MAD

DECEMBER 2019

PROJECT ID: 1007-12-78

COUNTY: DANE

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 = 670

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

ILLINOIS STATE LINE - MADISON

USH 12/18 INTCHG / CORE NB / EARLY WORK

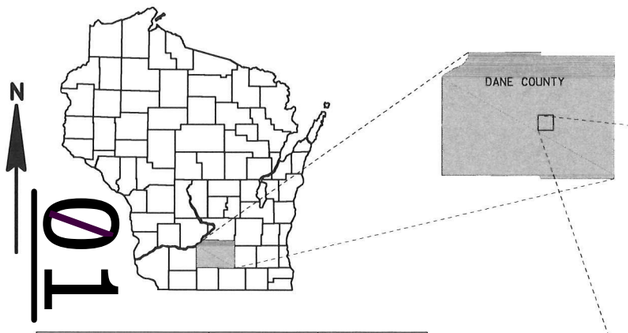
IH 39

DANE COUNTY

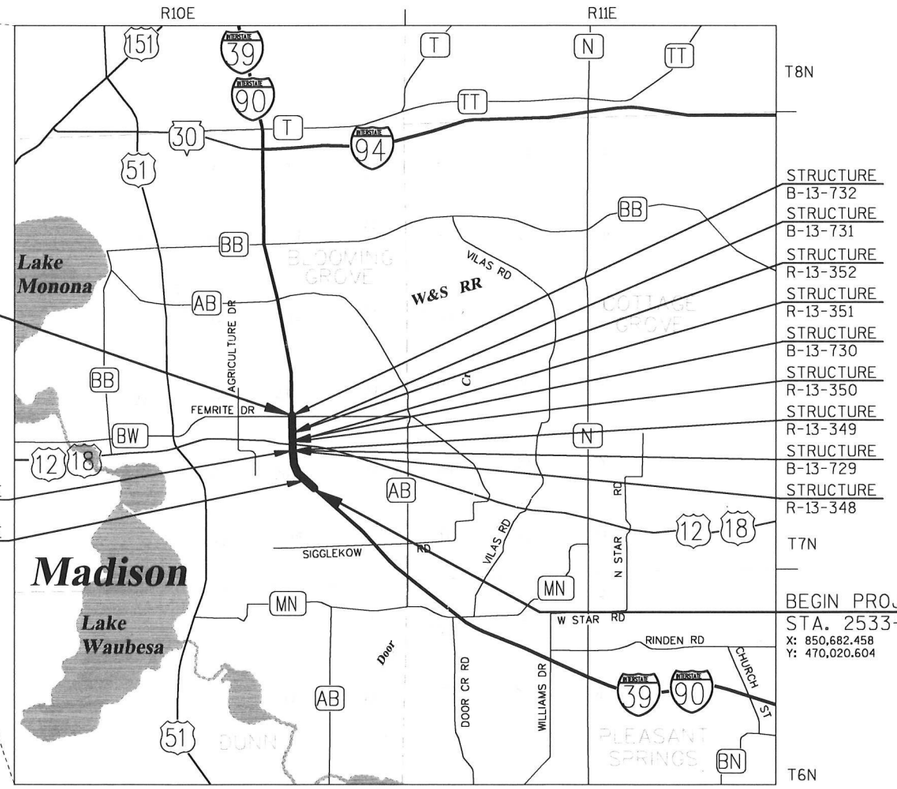
STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
1007-12-78	WISC 2019732	1

STATE PROJECT NUMBER

1007-12-78



DESIGN DESIGNATION			IH 39 SOUTH OF USH 12/18	IH 39 NORTH OF USH 12/18
A.A.D.T.	(2020)	=	60,400	93,800
A.A.D.T.	(2040)	=	72,000	116,000
D.H.V.	(2040)	=	4,000	6,325
D.D.	(%)	=	55/45	58/42
T.	(%)	=	24.7	12.4
DESIGN SPEED	(MPH)	=	70	70
ESALS		=	45,000,000	31,000,000



LAYOUT

SCALE 0 1 MI.

TOTAL NET LENGTH OF CENTERLINE = 0.157 MI.

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
- 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

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COUNTY COORDINATES, DANE COUNTY, NAD83 (2007), IN U.S. SURVEY FEET. VALUES ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

ELEVATIONS SHOWN ON THIS PLAN ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988, NAVD88 (2007).

ORIGINAL PLANS PREPARED BY:

OES
An Oneida ESC Group Company

WISCONSIN
ZACHARY M. FREEMAN
E-37609
McFARLAND, WI
PROFESSIONAL ENGINEER

DATE: 7-22-2019 (Professional Engineer Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	WisDOT/DANE PARTNERS
Designer	OES, LLC
Project Manager	MARK VESPERMAN
Regional Examiner	JAMES BUSCHKOPF
Regional Supervisor	SCOTT SCHOENMANN

APPROVED FOR THE DEPARTMENT

DATE: 7/22/2019 Scott Schoenmann (Signature)

E

UTILITY CONTACT LIST

ANR PIPELINE – GAS/PETROLEUM
TODD BRISTER
W3925 PIPELINE LANE
EDEN, WI 53019
PHONE: (920) 477–2235
EMAIL: TODD_BRISTER@TRANSCANADA.COM

ATC MANAGEMENT, INC. – ELECTRICITY–TRANSMISSION
ALEX METZ
5303 FEN OAK DRIVE
MADISON, WI 53718
PHONE: (608) 877–7105
EMAIL: AMETZ@ATCLLC.COM

AT&T WISCONSIN – COMMUNICATION LINE
CAROL ANASON
316 W WASHINGTON AVE
MADISON, WI 53701
PHONE: (608) 252–2385
EMAIL: CA2624@ATT.COM

CHARTER COMMUNICATIONS – COMMUNICATION LINE
LUKAS LACROSSE
2701 DANIELS ST
MADISON, WI 53718
PHONE: (608) 274–3822
EMAIL: LUKAS.LACROSSE@CHARTER.COM

CITY OF MADISON ENGINEERING – COMMUNICATION LINE/STREET LIGHTING
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MADISON, WI 53701–2986
PHONE: (608) 235–3649
EMAIL: MBENZSCHAWEL@CITYOFMADISON.COM
TROY VANT
PHONE: (608) 295–1975

CITY OF MADISON ENGINEERING – SEWER
GREG FRIES
210 MARTIN LUTHER KING JR BLVD, RM 115
MADISON, WI 53703
PHONE: (608) 266–4751
EMAIL: GFRIES@CI.MADISON.WI.US

FLINT HILLS RESOURCES – GAS/PETROLEUM
DREW SUYDAM
N4240 HWY 26
WAUPUN, WI 53963
PHONE: (920) 948–4665
EMAIL: DREW.SUYDAM@FHR.COM

MADISON GAS AND ELECTRIC – ELECTRICITY
JANE ROSSING
PO BOX 1231
MADISON, WI 53701–1231
PHONE: (608) 252–7099
EMAIL: GROSSING@MGE.COM

MADISON GAS AND ELECTRIC – GAS/PETROLEUM
ROGER AHLES
623 RAILROAD ST.
MADISON, WI 53703
PHONE: (608) 252–5682
EMAIL: RAHLES@MGE.COM

MADISON METROPOLITAN SEWERAGE DISTRICT – SEWER
ERIC HJELLEN
1610 MOORLAND RD
MADISON, WI 53713
PHONE: (608) 222–1202
EMAIL: ERICH@MADSEWER.ORG

MADISON WATER UTILITY – WATER
ADAM WIEDERHOEFT
119 E OLIN AVE
MADISON, WI 53713–1431
PHONE: (608) 266–9121
EMAIL: AWIEDERHOEFT@MADISONWATER.ORG

METROPOLITAN UNIFIED FIBER NETWORK (MUFN) – COMMUNICATION LINE
MIKE BENZSCHAWEL
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MADISON, WI 53701–2986
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TROY VANT
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WISCONSIN DEPARTMENT OF ADMINISTRATION – COMMUNICATION LINE
TODD PALMER
5830 FEMRITE DR.
MADISON, WI 53718
PHONE: (608) 224–4010
EMAIL: TODDA.PALMER@WISCONSIN.GOV

WISCONSIN DEPARTMENT OF TRANSPORTATION – COMMUNICATION LINE
DEAN BEEKMAN
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KYLE HEMP
PHONE: (608) 246–5367
EMAIL: KYLE.HEMP@DOT.WI.GOV

ORDER OF SHEETS – SECTION 2

GENERAL NOTES AND CONTACTS
PROJECT OVERVIEW
TYPICAL SECTIONS
CONSTRUCTION DETAILS
REMOVALS
PLAN DETAILS
EROSION CONTROL
STORM SEWER PLAN
PERMANENT SIGNING AND PAVEMENT MARKING
TRAFFIC CONTROL
TRAFFIC CONTROL DETOUR
ALIGNMENT DIAGRAM

CONSULTANT DESIGN

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ONEIDA ENGINEERING SOLUTIONS, LLC
5100 EASTPARK BLVD, SUITE 300
MADISON, WI 53718
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EMAIL: ZFREEMAN@OESLLC.COM

WISDOT PROJECT MANAGER

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CELL: (608) 516–1792
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DNR AREA LIAISON

ERIC HEGGELUND
DEPARTMENT OF NATURAL RESOURCES
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FITCHBURG, WI 53711–5397
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EMAIL: ERIC.HEGGELUND@WISCONSIN.GOV

STANDARD ABBREVIATIONS

ABUT	ABUTMENT
AC	ACRE
ADT	AVERAGE DAILY DAILY TRAFFIC
AECPRC	APRON ENDWALL FOR CULVERT PIPE REINFORCED CONCRETE
AECPCS	APRON ENDWALL FOR CULVERT PIPE CORRUGATED STEEL
AGG	AGGREGATE
ASPH	ASPHALTIC
AVG	AVERAGE
BC	BACK OF CURB
BF	BACK FACE
BM	BENCH MARK
BR	BRIDGE
Δ	CENTRAL ANGLE OR DELTA
CE	COMMERCIAL ENTRANCE
CF	CUBIC–FOOT
C&G	CURB AND GUTTER
CL OR C/L OR ℄	CENTER LINE
CONC	CONCRETE
COB	CENTER OF BARRIER
CPCM	CULVERT PIPE CORRUGATED METAL
CPRC	CULVERT PIPE REINFORCED CONCRETE
CPRCHE	CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL
CPCS	CULVERT PIPE CORRUGATED STEEL
CR	CREEK
CWT	HUNDREDWEIGHT
CY	CUBIC–YARD
D	DEGREE OF CURVE
DG	DITCH GRADE
DHV	DESIGN HOUR VOLUME
DISCH	DISCHARGE
DWY	DRIVEWAY
EAT	STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL
EBS	EXCAVATION BELOW SUBGRADE
EL	ELEVATION
ENT	ENTRANCE
EOR	END POINT OF RADIUS
ESALS	EQUIVALENT SINGLE AXLE LOADS
EXC	EXCAVATION
EXIST	EXISTING
FC	FACE OF CURB
FE	FIELD ENTRANCE
FERT	FERTILIZE
FF	FACE TO FACE
FL	FLOWLINE
FO	FIBER OPTIC
HMA	HOT MIX ASPHALT
HYD	HYDRANT
ID	INSIDE DIAMETER
INV	INVERT
IP	IRON PIPE OR PIN
L	LENGTH OF CURVE
LC	LONG CHORD OF CURVE
LF	LINEAR FOOT
LHF	LEFT–HAND FORWARD
LS	LUMP SUM
LT	LEFT
MAN	MANHOLE
MCE	MARKERS CULVERT END
MIN	MINIMUM
M/L	MATCHLINE
MOR	MID–POINT OF RADIUS
NB	NORTHBOUND
NC	NORMAL CROWN
NO	NUMBER
OBLIT	OBLITERATE
PAVT	PAVEMENT
PC	POINT–OF CURVE
PE	PRIVATE ENTRANCE
PI	POINT OF INTERSECTION
PLE	PERMANENT LIMITED EASEMENT
PT	POINT OF TANGENT
PVRC	POINT OF VERTICAL REVERSE CURVE
QOR	QUARTER POINT OF RADIUS
R	RADIUS OF CURVE
RDWY	ROADWAY
RES	RESIDENCE OR RESIDENTIAL
REQ'D	REQUIRED
RHF	RIGHT–HAND FORWARD
R/L	REFERENCE LINE
RT	RIGHT
R/W	RIGHT OF WAY
SALV	SALVAGE
SAN	SANITARY
SB	SOUTHBOUND
SDD	STANDARD DETAIL DRAWING
SE	SUPERELEVATION
SF	SQUARE FOOT
SS	STORM SEWER
SSPRC	STORM SEWER PIPE REINFORCED CONCRETE
STA	STATION
SY	SQUARE YARD
T	TANGENT LENGTH
T	TRUCKS (PERCENT OF)
TC	TOP OF CURB
TLE	TEMPORARY LIMITED EASEMENT
TN	TOWN
TYP	TYPICAL
VAR	VARIES OR VARIABLE
VC	VERTICAL CURVE
VCL	VERTICAL CURVE LENGTH
VPC	POINT OF VERTICAL CURVE
VPI	POINT OF VERTICAL INTERSECTION
VPT	POINT OF VERTICAL TANGENT
W	WALL
X	EAST GRID COORDINATE
Y	NORTH GRID COORDINATE
YD	YARD

GENERAL NOTES:

1. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN.
2. THE CONTRACTOR SHALL NOTIFY DIGGERS HOTLINE AND AFFECTED UTILITIES PRIOR TO THE START OF WORK. ANY LOCAL MUNICIPAL UTILITY WHICH IS NOT A MEMBER OF THE DIGGERS HOTLINE MUST BE CONTACTED SEPARATELY.
3. PRIOR TO ORDERING DRAINAGE PIPES AND STRUCTURES, THE CONTRACTOR SHALL VERIFY RELATED DRAINAGE INFORMATION IN THE PLANS WITH THE ENGINEER.
4. INLET AND DISCHARGE ELEVATIONS FOR DRAINAGE STRUCTURES SHOWN ON THE PLAN MAY BE ADJUSTED BY THE ENGINEER TO FIT FIELD CONDITIONS.
5. TEMPORARY STORAGE OF ANY EQUIPMENT OR EXCAVATED MATERIAL WILL NOT BE PERMITTED IN WETLANDS, FLOODWAY OR FLOODPLAIN OF ANY WETLANDS, UNLESS APPROVED BY ENGINEER.
6. PLACE EROSION CONTROL DEVICES IN SEQUENCE WITH CONSTRUCTION OPERATIONS OR AS DETERMINED BY THE ENGINEER. EROSION CONTROL FEATURES ARE SHOWN IN APPROXIMATE LOCATIONS WITH EXACT LOCATIONS TO BE DETERMINED BY THE ENGINEER.
7. DO NOT USE FERTILIZER WITHIN 20 FEET OF NAVIGABLE WATERWAYS OR WETLANDS.
8. 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 WITHIN 5 DAYS AFTER PLACEMENT OF SALVAGED TOPSOIL OR TOPSOIL.
9. NO TREES OR SHRUBS SHALL BE REMOVED WITHOUT APPROVAL OF THE ENGINEER.
10. COVER ALL SIGNS IN CONFLICT WITH TRAFFIC CONTROL "IN USE" AS SHOWN IN THE PLANS OR AS DIRECTED BY THE ENGINEER.
11. THE REMOVAL OF ANY DOWEL BARS, TIE BARS, REINFORCEMENT, OR TERMINAL ANCHORS FOUND IN EXISTING PAVEMENT WILL BE INCIDENTAL TO THE CONTRACT.
12. BROKEN CONCRETE CONTAINING RE–BAR SHALL NOT BE USED AS RIPRAP.
13. RESHAPING AND SEEDING OF ANY PREVIOUSLY GRASSED AREAS WHICH ARE DISTURBED BY CONSTRUCTION OPERATIONS OUTSIDE OF THE ENGINEER DETERMINED CONSTRUCTION LIMITS ARE INCIDENTAL TO THE CONTRACT.
14. ALL TYPES OF ASPHALTIC PAVEMENT SHALL BE CONSTRUCTED WITH THE FOLLOWING LAYERS AND GRADATIONS:

TOTAL LAYER PAVEMENT THICKNESS	LAYERS	HMA PAVEMENT ITEM
6.75"	2.50" UPPER 4.25" LOWER	4 HT 58–28 V 2 HT 58–28 S
5.25"	2.00" UPPER 3.25" LOWER	4 HT 58–28 H 2 HT 58–28 S
5.00" SHOULDER	2.25" UPPER 2.75" LOWER	4 HT 58–28 H 2 HT 58–28 S
4.00" SHOULDER	4.00" SINGLE	4 HT 58–28 H

TO OBTAIN LOCATION OF PARTICIPANTS' UNDERGROUND FACILITIES BEFORE YOU DIG IN WISCONSIN

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

NOTES: WIS. STATUTE 182.0175 (1974) REQUIRES MIN. OF 3 WORK DAYS NOTICE BEFORE YOU EXCAVATE.

2

2

N

WETLANDS (TYP)

EXISTING BRIDGE STRUCTURE B-13-464

EXISTING BRIDGE STRUCTURE B-13-466

EXISTING SIGN STRUCTURE S-13-136

EXISTING BRIDGE STRUCTURE B-13-461

EXISTING SIGN STRUCTURE S-13-135

EXISTING BRIDGE STRUCTURE B-13-462

PROPOSED RETAINING WALL STRUCTURE R-13-334

PROPOSED RETAINING WALL R-13-348

PROPOSED BRIDGE STRUCTURE B-13-729

PROPOSED RETAINING WALL R-13-349

EXISTING BRIDGE STRUCTURE B-13-467

PROPOSED BRIDGE STRUCTURE B-13-732

EXISTING BRIDGE STRUCTURE B-13-463

PROPOSED BRIDGE STRUCTURE B-13-731

PROPOSED RETAINING WALL R-13-352

PROPOSED RETAINING WALL R-13-351

PROPOSED BRIDGE STRUCTURE B-13-730

PROPOSED RETAINING WALL R-13-350

EXISTING BRIDGE STRUCTURE B-13-465

END PROJECT 1007-12-78
STA 2584+00.00

BEGIN PROJECT 1007-12-78
STA 2533+97.70

STA BACK = 1200+83.12'XSB'
STA AHEAD = 1198+27.13'XSB'

STA AHEAD = 103+52.06'XEB'
STA BACK = 103+64.06'XEB'

PENNITO CREEK

AGRICULTURE DITCH #4

EVAN ACRES ROAD

MILLPOND ROAD

SAVANNAH ROAD

OHMEDA DRIVE

FEMRITE DRIVE

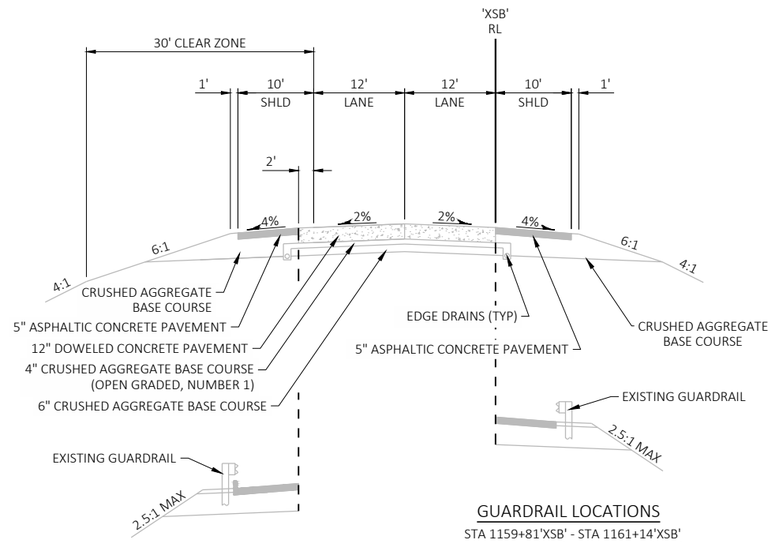
MEIER ROAD

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	PROJECT OVERVIEW	SHEET 3	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0202_PO.DWG
LAYOUT NAME - 01

PLOT DATE : 7/29/2019 8:48 AM PLOT BY : KYLE CORNELIUS PLOT NAME : PLOT SCALE : 1 IN: 600 FT

WISDOT/CADDS SHEET 42



GUARDRAIL LOCATIONS

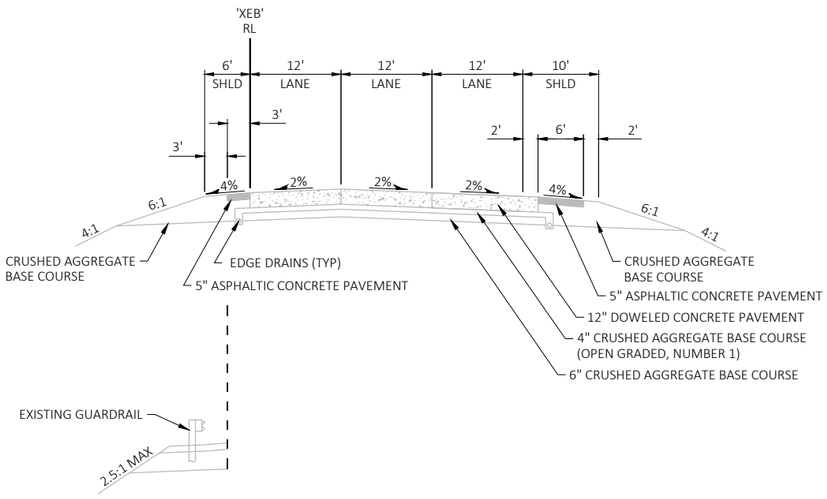
STA 1159+81'XSB' - STA 1161+14'XSB'
STA 1162+82'XSB' - STA 1166+20'XSB'
STA 1167+57'XSB' - STA 1168+27'XSB'
STA 1175+75'XSB' - STA 1179+06'XSB'

GUARDRAIL LOCATIONS

STA 1159+81'XSB' - STA 1161+14'XSB'
STA 1162+82'XSB' - STA 1163+50' XSB'
STA 1167+57'XSB' - STA 1168+28'XSB'
STA 1168+28'XSB' - STA 1176+21'XSB'

TYPICAL EXISTING SECTION - IH 39

STA 1142+24'XSB' - STA 1173+84'XSB'

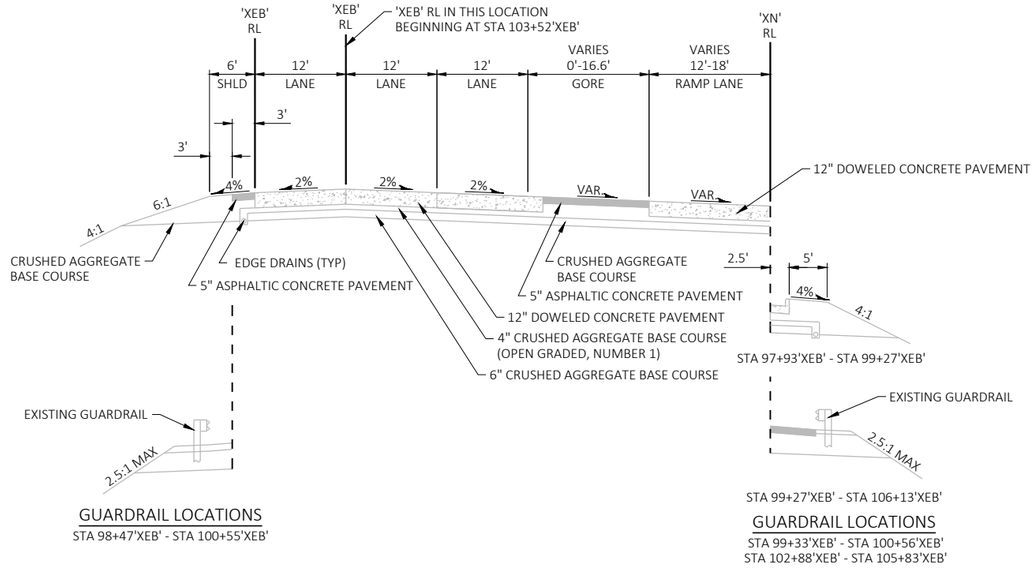


GUARDRAIL LOCATIONS

STA 88+16'XEB' - STA 91+06'XEB'

TYPICAL EXISTING SECTION - USH 12/18 EB

STA 87+38'XEB' - STA 97+93'XEB'



STA 97+93'XEB' - STA 99+27'XEB'

STA 99+27'XEB' - STA 106+13'XEB'

GUARDRAIL LOCATIONS

STA 98+47'XEB' - STA 100+55'XEB'

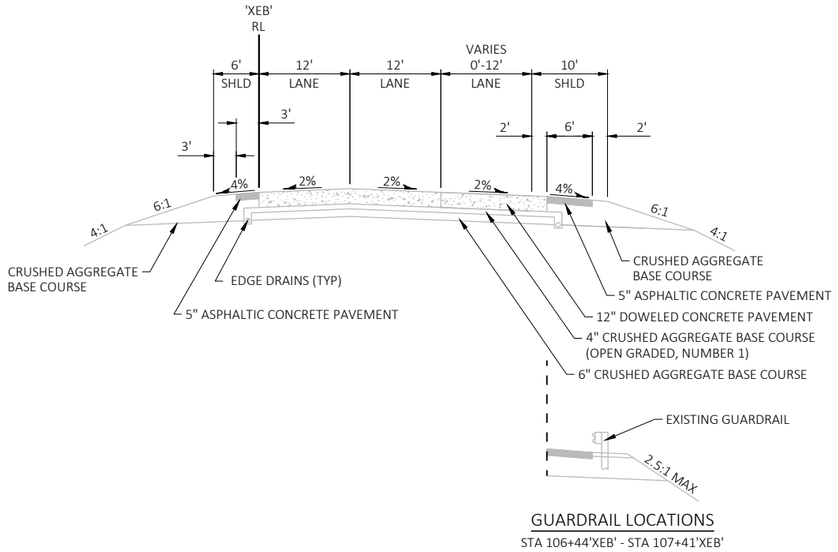
GUARDRAIL LOCATIONS

STA 99+33'XEB' - STA 100+56'XEB'
STA 102+88'XEB' - STA 105+83'XEB'

TYPICAL EXISTING SECTION - USH 12/18 EB

STA 97+93'XEB' - STA 106+13'XEB'

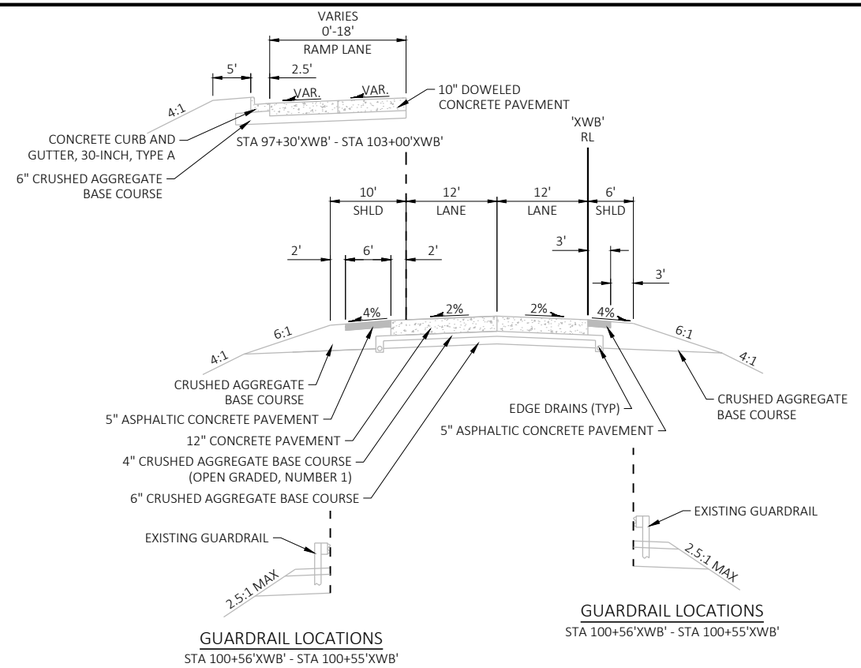
PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	TYPICAL SECTIONS - EXISTING	SHEET 4	E



GUARDRAIL LOCATIONS
STA 106+44'XEB' - STA 107+41'XEB'

TYPICAL EXISTING SECTION - USH 12/18 EB

STA 106+13'XEB' - STA 113+34'XEB'

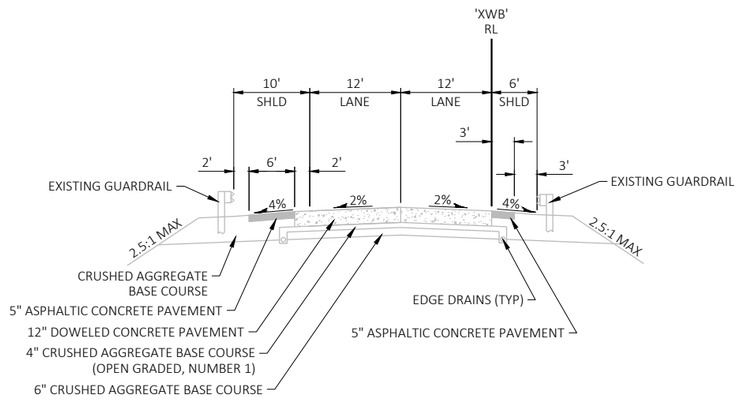


GUARDRAIL LOCATIONS
STA 100+56'XWB' - STA 100+55'XWB'

GUARDRAIL LOCATIONS
STA 100+56'XWB' - STA 100+55'XWB'

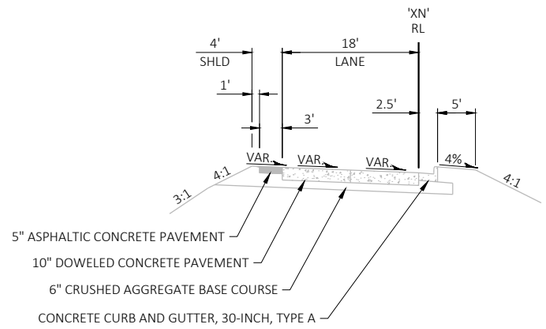
TYPICAL EXISTING SECTION - USH 12/18 WB

STA 90+67'XWB' - STA 100+55'XWB'



TYPICAL EXISTING SECTION - USH 12/18 WB

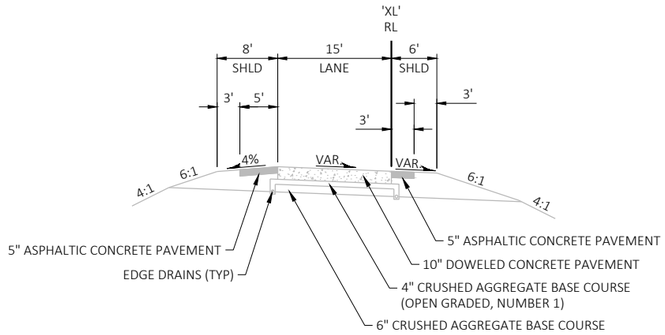
STA 100+55'XWB' - STA 104+09'XWB'



TYPICAL EXISTING SECTION - SB TO EB RAMP

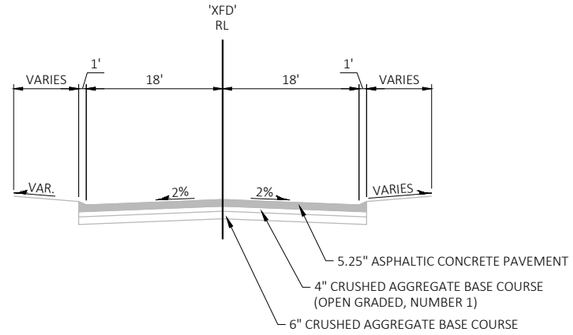
STA 10+00'XN' - STA 26+21'XN'

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	TYPICAL SECTIONS - EXISTING	SHEET 5	E



TYPICAL EXISTING SECTION - NB TO WB RAMP

STA 17+90'XL' - STA 24+05'XL'



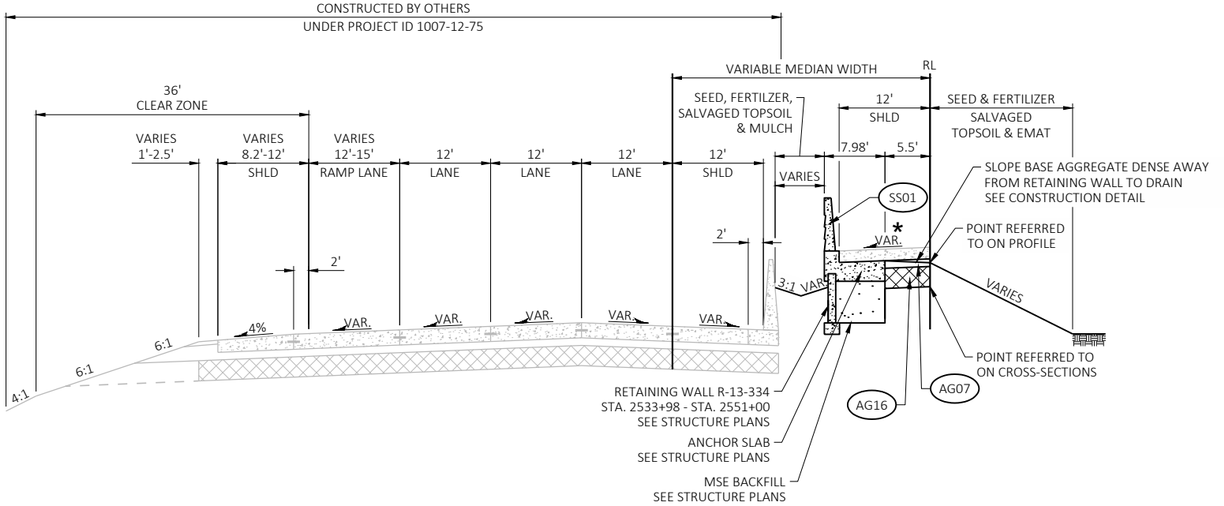
TYPICAL EXISTING SECTION - FEMRITE DR

STA 45+31'XFD' - STA 56+50'XFD'

2

LEGEND

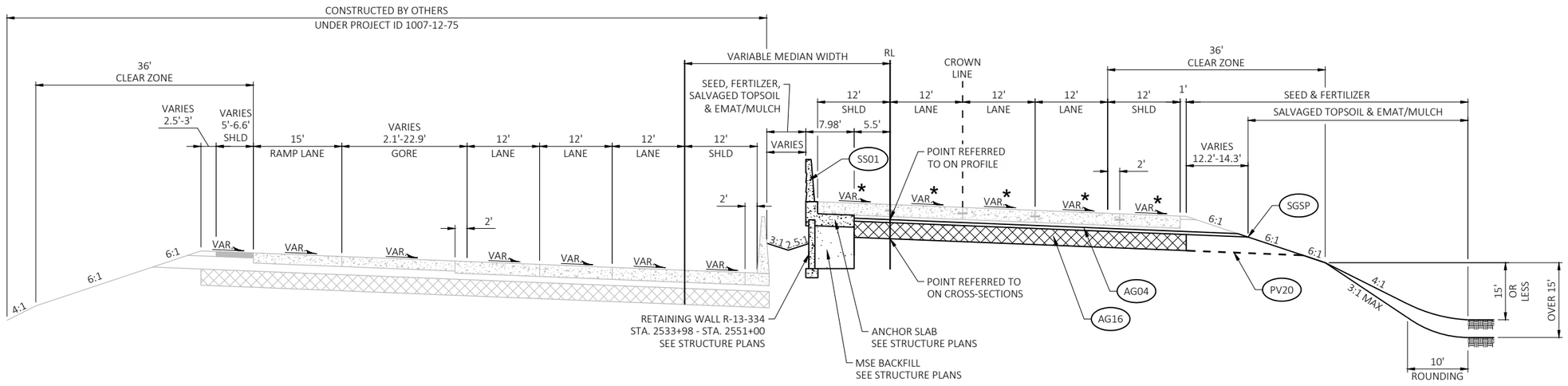
- (AG04) 4" BASE AGGREGATE DENSE 1 1/4-INCH
- (AG07) VARYING DEPTH BASE AGGREGATE DENSE 1 1/4-INCH
- (AG16) 16" SELECT CRUSHED MATERIAL
- (PV20) CONSTRUCT RELIEF TRENCHES AT DITCH SAG POINTS OR EVERY 250' (SEE CONSTRUCTION DETAIL)
- (SGSP) SUBGRADE SHOULDER POINT (SHOWN ON PLAN DETAIL SHEETS)
- (SS01) SINGLE SLOPE 42SS PARAPET MODIFIED (SEE STRUCTURE PLANS)



TYPICAL FINISHED SECTION - IH 39

STA 2533+98 - STA 2537+00

* IH 39 NB 12 1/2-INCH CONCRETE PAVEMENT AND MINUMUM 2" OF BASE AGGREGATE DENSE 1 1/4-INCH TO BE CONSTRUCTED IN FUTURE PROJECT



TYPICAL FINISHED SECTION - IH 39

STA 2537+00 - STA 2540+72

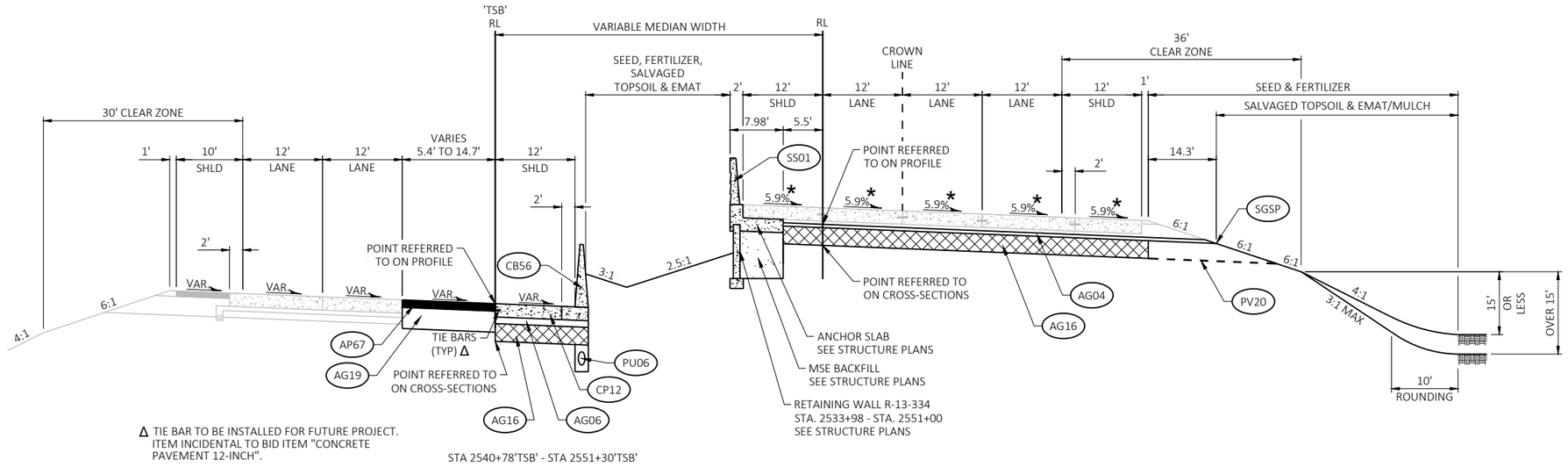
* IH 39 NB 12 1/2-INCH CONCRETE PAVEMENT AND MINUMUM 2" OF BASE AGGREGATE DENSE 1 1/4-INCH TO BE CONSTRUCTED IN FUTURE PROJECT

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	TYPICAL SECTIONS - FINISHED	SHEET 7	E

2

LEGEND

- AG04 — 4" BASE AGGREGATE DENSE 1 1/4-INCH
- AG06 — 6" BASE AGGREGATE DENSE 1 1/4-INCH
- AG16 — 16" SELECT CRUSHED MATERIAL
- AG19 — 19" BASE AGGREGATE DENSE 1 1/4-INCH
- AP67 — HMA PAVEMENT 6.75-INCH
  2.5" UPPER LAYER 4 HT 58-28 V
  4.25" LOWER LAYER 2 HT 58-28 S
- CB56 — CONCRETE BARRIER TYPE S56C
  (ROADSIDE RETAINING WALL)
- CP12 — CONCRETE PAVEMENT 12-INCH,
  DOWELED AND TINED
- PU06 — PIPE UNDERDRAIN 6-INCH
- PV20 — CONSTRUCT RELIEF TRENCHES AT DITCH
  SAG POINTS OR EVERY 250'
  (SEE CONSTRUCTION DETAIL)
- SGSP — SUBGRADE SHOULDER POINT
  (SHOWN ON PLAN DETAIL SHEETS)
- SS01 — SINGLE SLOPE 42SS PARAPET MODIFIED
  (SEE STRUCTURE PLANS)



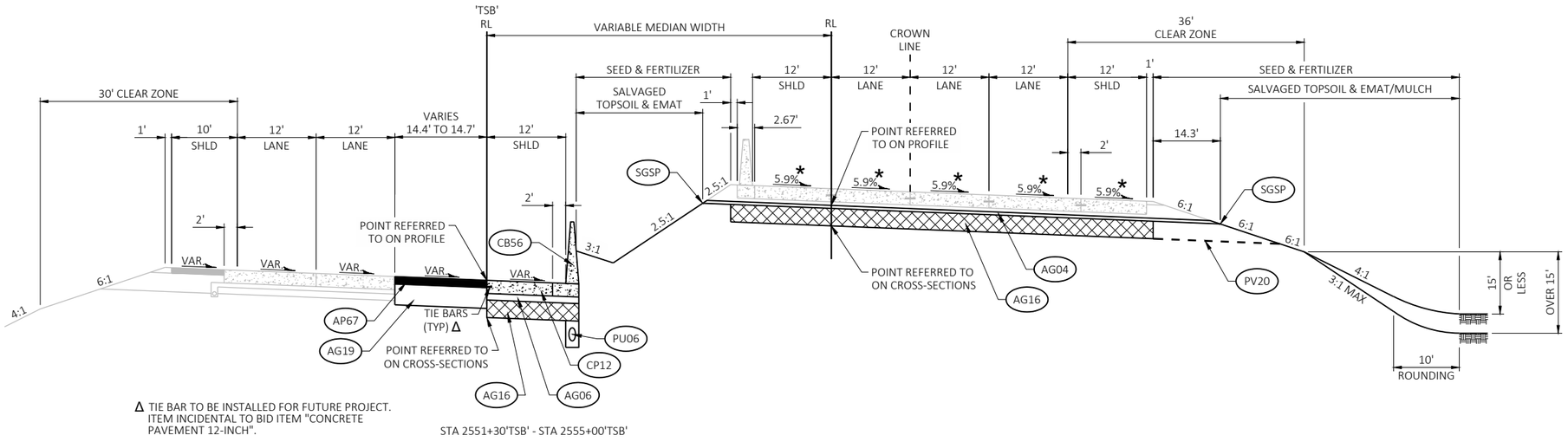
Δ TIE BAR TO BE INSTALLED FOR FUTURE PROJECT.
ITEM INCIDENTAL TO BID ITEM "CONCRETE
PAVEMENT 12-INCH".

STA 2540+78'TSB' - STA 2551+30'TSB'

TYPICAL FINISHED SECTION - IH 39

STA 2540+72 - STA 2551+00

* IH 39 NB 12 1/2-INCH CONCRETE PAVEMENT AND MINUMUM 2" OF BASE
AGGREGATE DENSE 1 1/4-INCH TO BE CONSTRUCTED IN FUTURE PROJECT



Δ TIE BAR TO BE INSTALLED FOR FUTURE PROJECT.
ITEM INCIDENTAL TO BID ITEM "CONCRETE
PAVEMENT 12-INCH".

STA 2551+30'TSB' - STA 2555+00'TSB'

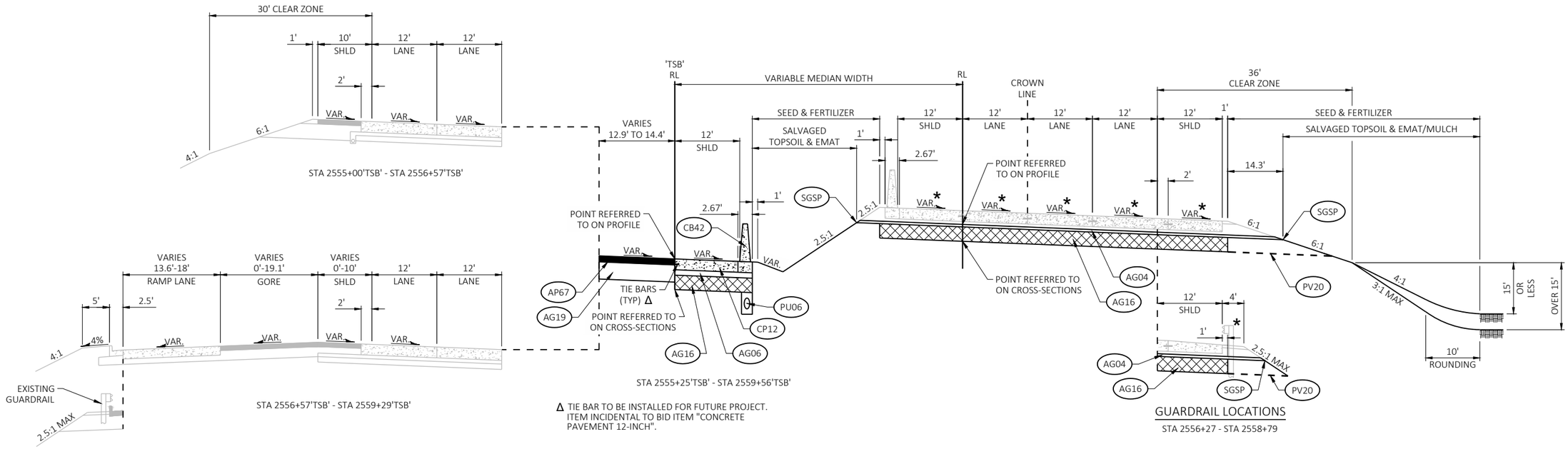
TYPICAL FINISHED SECTION - IH 39

STA 2551+00 - STA 2554+60

* IH 39 NB 12 1/2-INCH CONCRETE PAVEMENT, CONCRETE BARRIER TYPE
S42, AND MINUMUM 2" OF BASE AGGREGATE DENSE 1 1/4-INCH TO BE
CONSTRUCTED IN FUTURE PROJECT

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	TYPICAL SECTIONS - FINISHED	SHEET 8	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0203_TS.DWG
LAYOUT NAME - 05
PLOT DATE : 9/25/2019 11:46 AM
PLOT BY : KYLE CORNELIUS
PLOT NAME :
PLOT SCALE : 1 IN:20 FT
WISDOT/CADDS SHEET 42



GUARDRAIL LOCATIONS

STA 2558+25'TSB' - STA 2559+29'TSB'

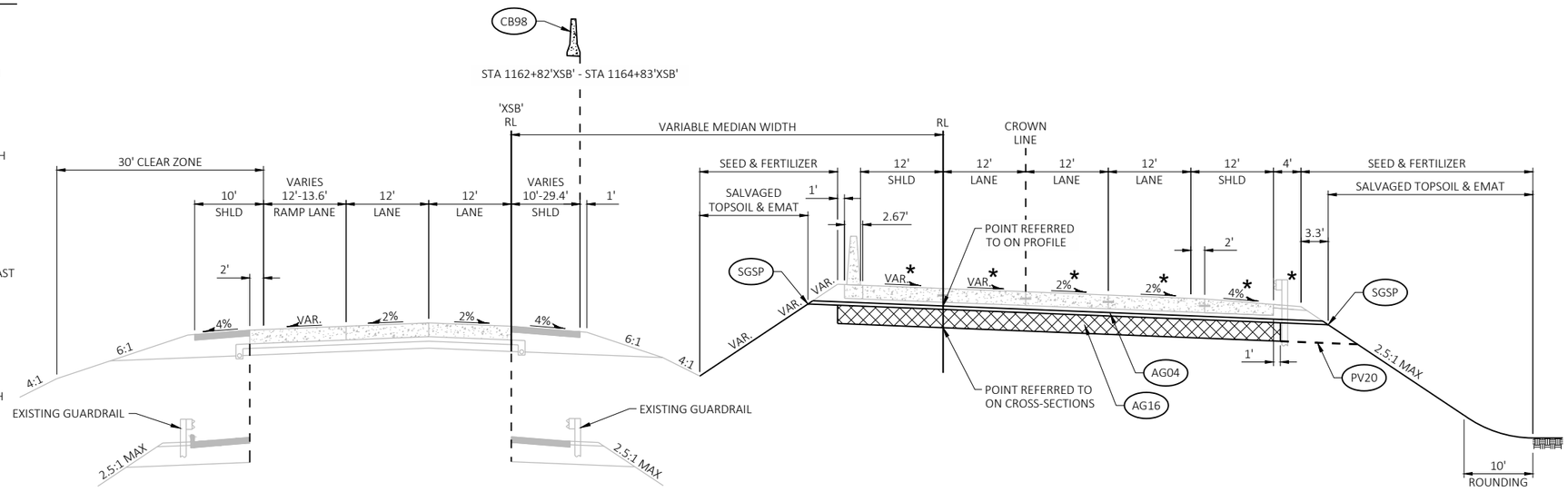
LEGEND

- (AG04) 4" BASE AGGREGATE DENSE 1 1/4-INCH
- (AG06) 6" BASE AGGREGATE DENSE 1 1/4-INCH
- (AG16) 16" SELECT CRUSHED MATERIAL
- (AG19) 19" BASE AGGREGATE DENSE 1 1/4-INCH
- (AP67) HMA PAVEMENT 6.75-INCH
  2.5" UPPER LAYER 4 HT 58-28 V
  4.25" LOWER LAYER 2 HT 58-28 S
- (CB42) CONCRETE BARRIER TYPE S42
- (CB98) CONCRETE BARRIER TEMPORARY PRECAST INSTALLED
- (CP12) CONCRETE PAVEMENT 12-INCH, DOWELED AND TINED
- (PU06) PIPE UNDERDRAIN 6-INCH
- (PV20) CONSTRUCT RELIEF TRENCHES AT DITCH SAG POINTS OR EVERY 250' (SEE CONSTRUCTION DETAIL)
- (SGSP) SUBGRADE SHOULDER POINT (SHOWN ON PLAN DETAIL SHEETS)

TYPICAL FINISHED SECTION - IH 39

STA 2554+60 - STA 2558+79

* IH 39 NB 12 1/2-INCH CONCRETE PAVEMENT, CONCRETE BARRIER TYPE S42, GUARDRAIL, AND MINUMUM 2" OF BASE AGGREGATE DENSE 1 1/4-INCH TO BE CONSTRUCTED IN FUTURE PROJECT



GUARDRAIL LOCATIONS

STA 1162+81'XSB' - STA 1163+30'XSB'
STA 1163+30'XSB' - STA 1164+83'XSB' (NO CURB & GUTTER)

GUARDRAIL LOCATIONS

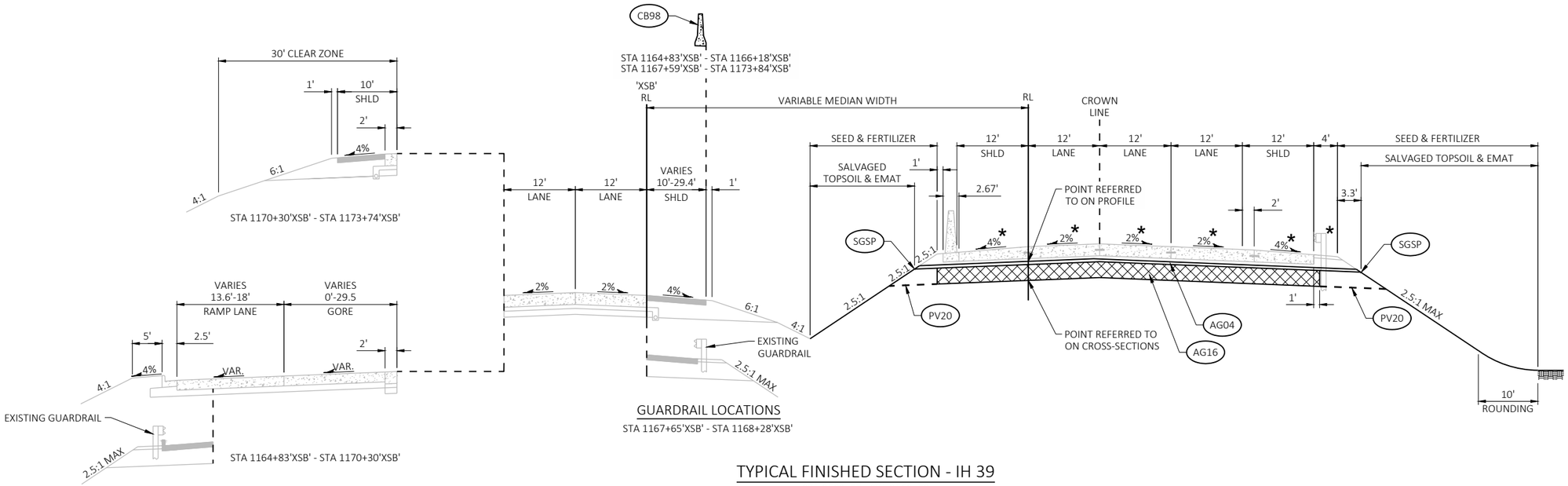
STA 1162+82'XSB' - STA 1163+50'XSB'

TYPICAL FINISHED SECTION - IH 39

STA 2560+65 - STA 2562+77

* IH 39 NB 12 1/2-INCH CONCRETE PAVEMENT, CONCRETE BARRIER TYPE S42, GUARDRAIL, AND MINUMUM 2" OF BASE AGGREGATE DENSE 1 1/4-INCH TO BE CONSTRUCTED IN FUTURE PROJECT

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	TYPICAL SECTIONS - FINISHED	SHEET 9	E



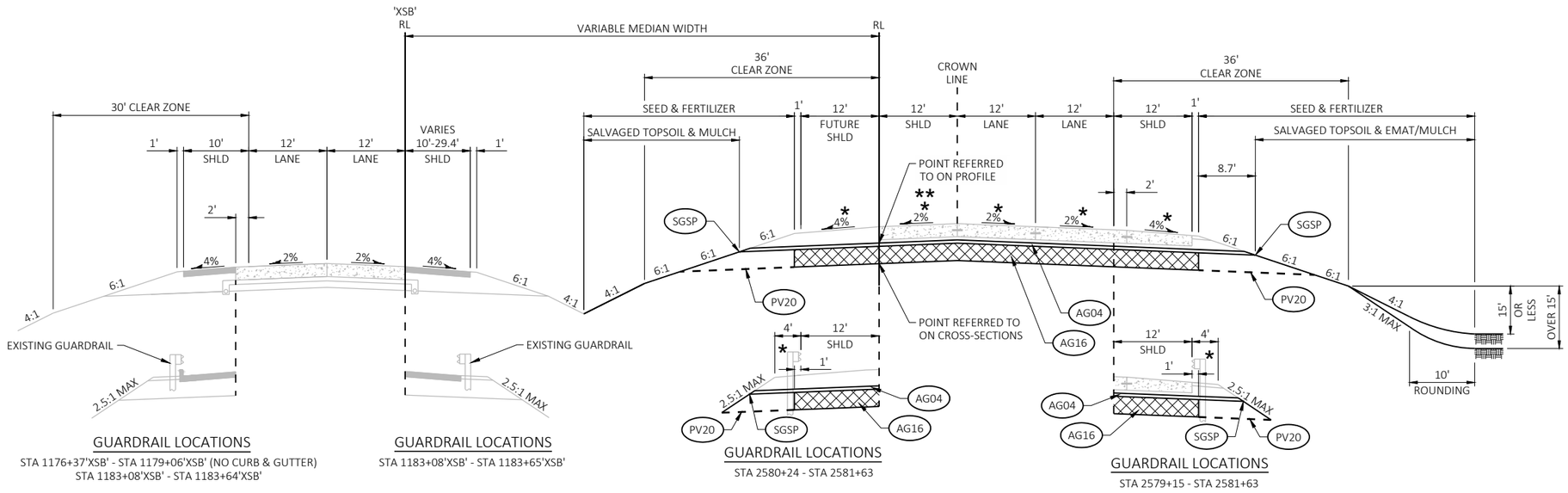
TYPICAL FINISHED SECTION - IH 39

STA 2562+77 - STA 2563+73
STA 2565+60 - STA 2571+64

* IH 39 NB 12 1/2-INCH CONCRETE PAVEMENT, CONCRETE BARRIER TYPE S42, GUARDRAIL, AND MINUMUM 2" OF BASE AGGREGATE DENSE 1 1/4-INCH TO BE CONSTRUCTED IN FUTURE PROJECT

LEGEND

- AG04 — 4" BASE AGGREGATE DENSE 1 1/4-INCH
- AG16 — 16" SELECT CRUSHED MATERIAL
- CB98 — CONCRETE BARRIER TEMPORARY PRECAST INSTALLED
- PV20 — CONSTRUCT RELIEF TRENCHES AT DITCH SAG POINTS OR EVERY 250' (SEE CONSTRUCTION DETAIL)
- SGSP — SUBGRADE SHOULDER POINT (SHOWN ON PLAN DETAIL SHEETS)



TYPICAL FINISHED SECTION - IH 39

STA 2574+28 - STA 2581+63

* IH 39 NB 12 1/2-INCH CONCRETE PAVEMENT, GUARDRAIL AND MINUMUM 2" OF BASE AGGREGATE DENSE 1 1/4-INCH TO BE CONSTRUCTED IN FUTURE PROJECT

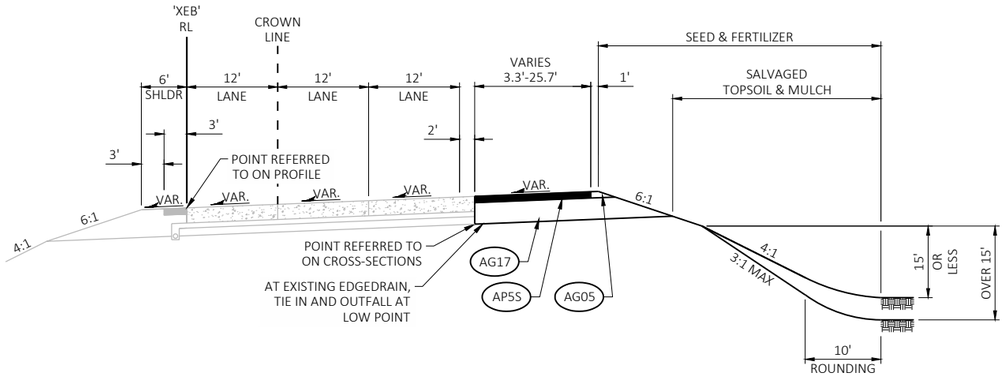
** SHOULDER AT 2% CROSS SLOPE FOR FUTURE THIRD LANE

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	TYPICAL SECTIONS - FINISHED	SHEET 10	E

2

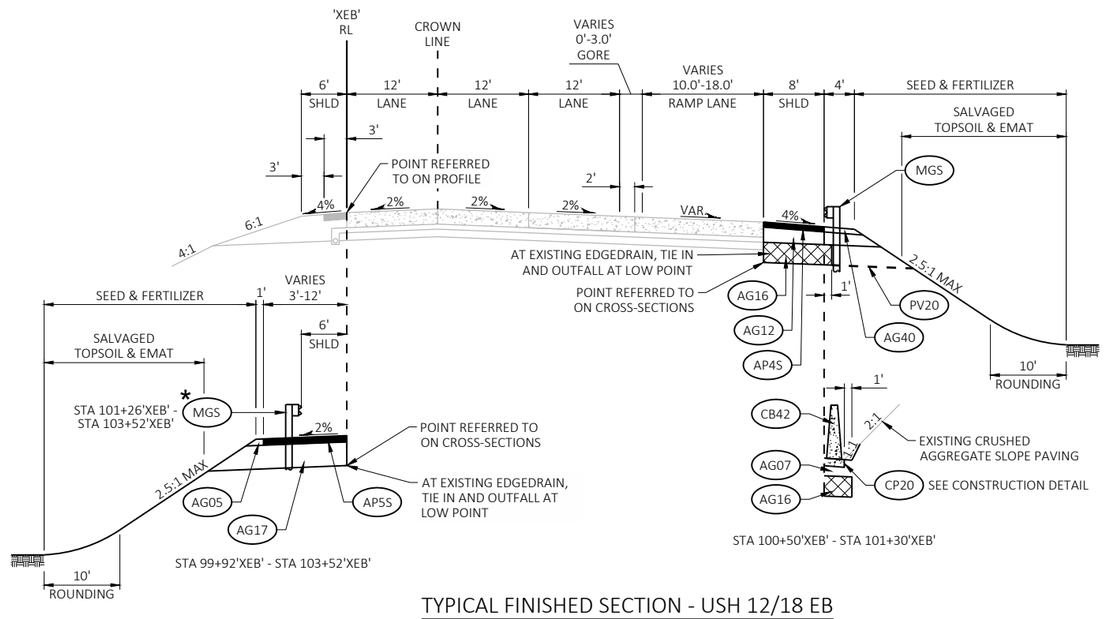
LEGEND

- AG05 — 5" BASE AGGREGATE DENSE 3/4-INCH
- AG07 — VARIABLE DEPTH BASE AGGREGATE DENSE 1 1/4-INCH
- AG12 — 12" BASE AGGREGATE DENSE 1 1/4-INCH
- AG16 — 16" SELECT CRUSHED MATERIAL
- AG17 — 17" BASE AGGREGATE DENSE 1 1/4-INCH
- AG40 — 4" BASE AGGREGATE DENSE 3/4-INCH
- AP4S — HMA PAVEMENT 4-INCH SHOULDER
  SINGLE LAYER 4 HT 58-28 H
- AP5S — HMA PAVEMENT 5-INCH SHOULDER
  2.25" UPPER LAYER 4 HT 58-28 H
  2.75" LOWER LAYER 2 HT 58-28 S
- CB42 — CONCRETE BARRIER TYPE S42
- CP20 — 6" CONCRETE PAD
  (SEE CONSTRUCTION DETAIL)
- MGS — MGS GUARDRAIL SYSTEM
- PV20 — CONSTRUCT RELIEF TRENCHES AT DITCH SAG POINTS OR EVERY 250'
  (SEE CONSTRUCTION DETAIL)



TYPICAL FINISHED SECTION - USH 12/18 EB

STA 87+38'XEB' - STA 99+33'XEB'
SEE TRAFFIC CONTROL SHEETS FOR DETAILS
WORK AREA 1 - STAGE 1B



TYPICAL FINISHED SECTION - USH 12/18 EB

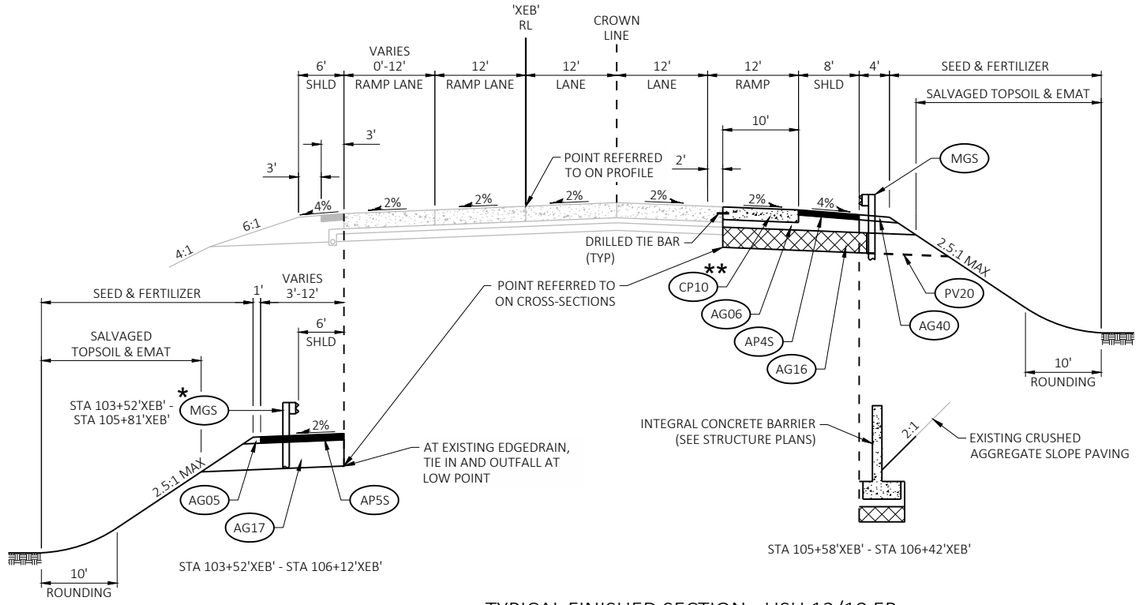
STA 99+33'XEB' - STA 103+52'XEB'
* GUARDRAIL POSTS TO BE CORED THROUGH HMA PAVEMENT, SEE SDD 14B28 (INCIDENTAL TO GUARDRAIL INSTALLATION)

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	TYPICAL SECTIONS - FINISHED	SHEET 11	E

2

LEGEND

- AG05 — 5" BASE AGGREGATE DENSE 3/4-INCH
- AG06 — 6" BASE AGGREGATE DENSE 1 1/4-INCH
- AG12 — 12" BASE AGGREGATE DENSE 1 1/4-INCH
- AG16 — 16" SELECT CRUSHED MATERIAL
- AG17 — 17" BASE AGGREGATE DENSE 1 1/4-INCH
- AG40 — 4" BASE AGGREGATE DENSE 3/4-INCH
- AP4S — HMA PAVEMENT 4-INCH SHOULDER
  SINGLE LAYER 4 HT 58-28 H
- AP5S — HMA PAVEMENT 5-INCH SHOULDER
  2.25" UPPER LAYER 4 HT 58-28 H
  2.75" LOWER LAYER 2 HT 58-28 S
- CP10 — CONCRETE PAVEMENT 10-INCH, DOWELED AND TINED
- MGS — MGS GUARDRAIL SYSTEM
- PV20 — CONSTRUCT RELIEF TRENCHES AT DITCH SAG POINTS OR EVERY 250'
  (SEE CONSTRUCTION DETAIL)
- SE — SAFETY EDGE

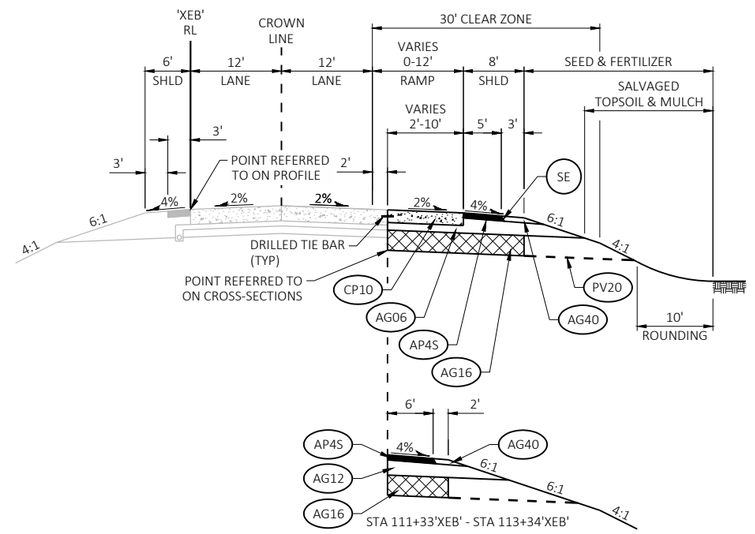


TYPICAL FINISHED SECTION - USH 12/18 EB

STA 103+52'XEB' - STA 106+42'XEB'

* GUARDRAIL POSTS TO BE CORED THROUGH HMA PAVEMENT, SEE SDD 14B28 (INCIDENTAL TO GUARDRAIL INSTALLATION)

** CONCRETE PAVEMENT BEGINS AT STA 103+83'XEB'



TYPICAL FINISHED SECTION - USH 12/18 EB

STA 106+42'XEB' - STA 113+34'XEB'

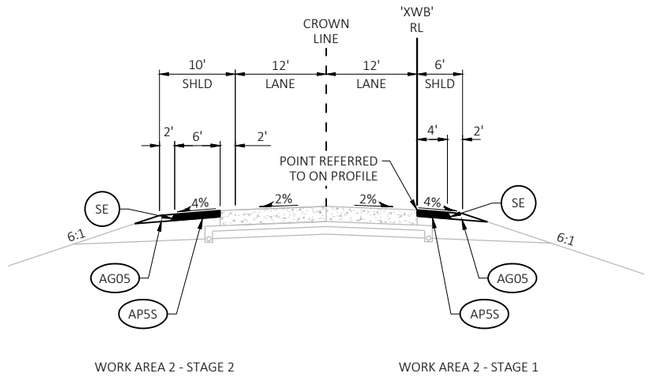
PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	TYPICAL SECTIONS - FINISHED	SHEET 12	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0203_TS.DWG
LAYOUT NAME - 09
PLOT DATE : 9/25/2019 11:46 AM
PLOT BY : KYLE CORNELIUS
PLOT NAME :
PLOT SCALE : ##########

2

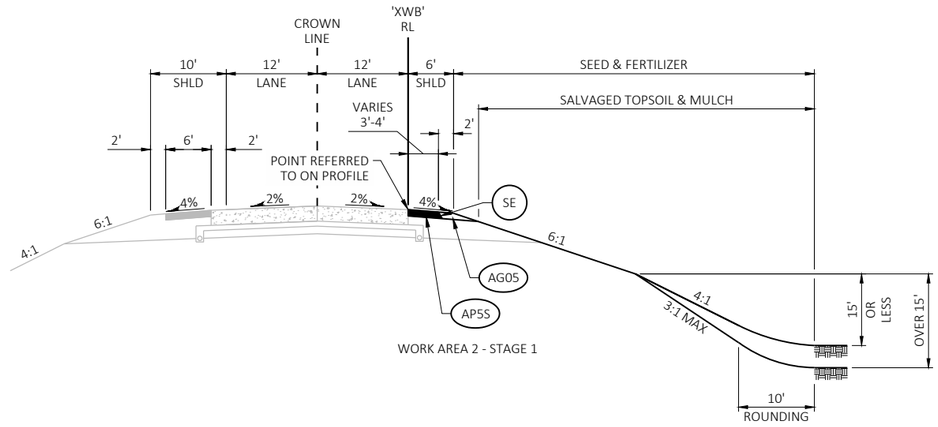
LEGEND

- AG05 — 5" BASE AGGREGATE DENSE 3/4-INCH
- AP5S — HMA PAVEMENT 5-INCH SHOULDER
  2.25" UPPER LAYER 4 HT 58-28 H
  2.75" LOWER LAYER 2 HT 58-28 S
- SE — SAFETY EDGE



TYPICAL FINISHED SECTION - USH 12/18 WB

STA 90+67'XWB' - STA 96+97'XWB'



TYPICAL FINISHED SECTION - USH 12/18 WB

STA 96+97'XWB' - STA 100+55'XWB'

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	TYPICAL SECTIONS - FINISHED	SHEET 13	E

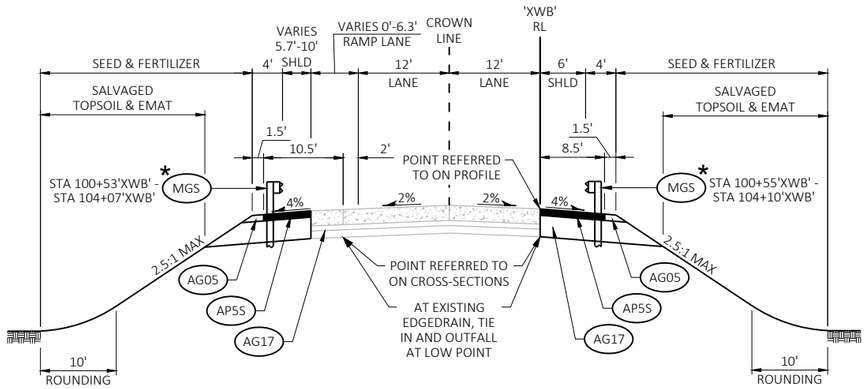
FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0203_TS.DWG
LAYOUT NAME - 10

PLOT DATE : 9/25/2019 11:46 AM PLOT BY : KYLE CORNELIUS PLOT NAME : PLOT SCALE : ##########

2

LEGEND

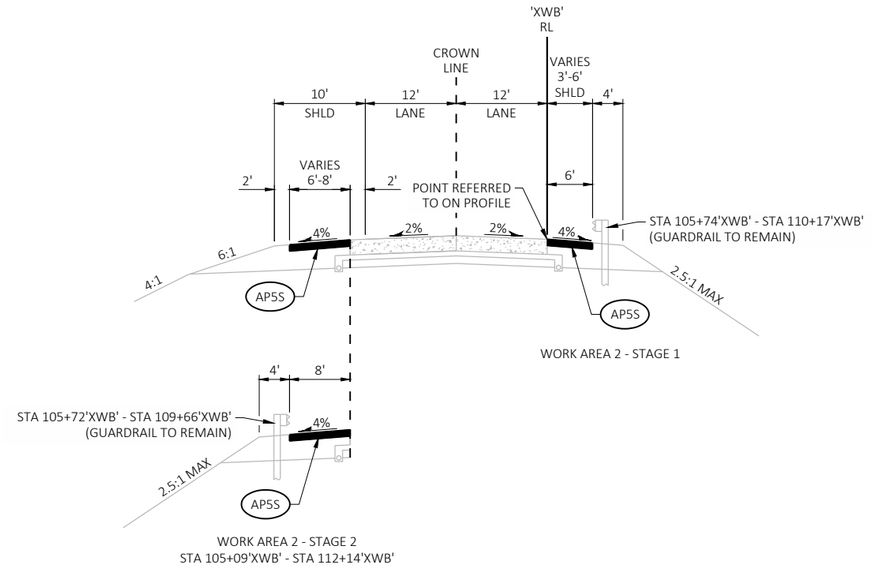
- AG05 — 5" BASE AGGREGATE DENSE 3/4-INCH
- AG17 — 17" BASE AGGREGATE DENSE 1-1/4-INCH
- AP5S — HMA PAVEMENT 5-INCH SHOULDER
  2.25" UPPER LAYER 4 HT 58-28 H
  2.75" LOWER LAYER 2 HT 58-28 S
- MGS — MGS GUARDRAIL SYSTEM



TYPICAL FINISHED SECTION - USH 12/18 WB

STA 100+55'XWB' - STA 105+09'XWB'

* GUARDRAIL POSTS TO BE CORED THROUGH HMA PAVEMENT, SEE SDD "GUARDRAIL MOW STRIP"(14B28) (INCIDENTAL TO GUARDRAIL INSTALLATION)



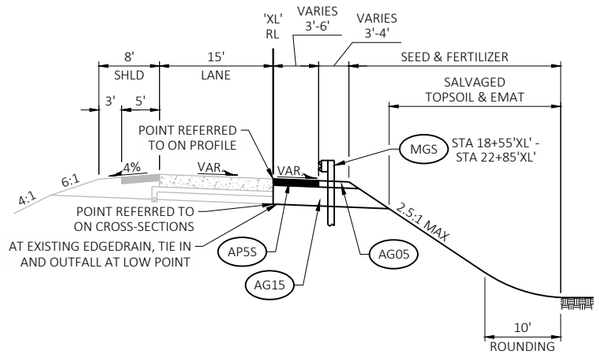
TYPICAL FINISHED SECTION - USH 12/18 WB

STA 105+09'XWB' - STA 112+46'XWB'

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	TYPICAL SECTIONS - FINISHED	SHEET 14	E

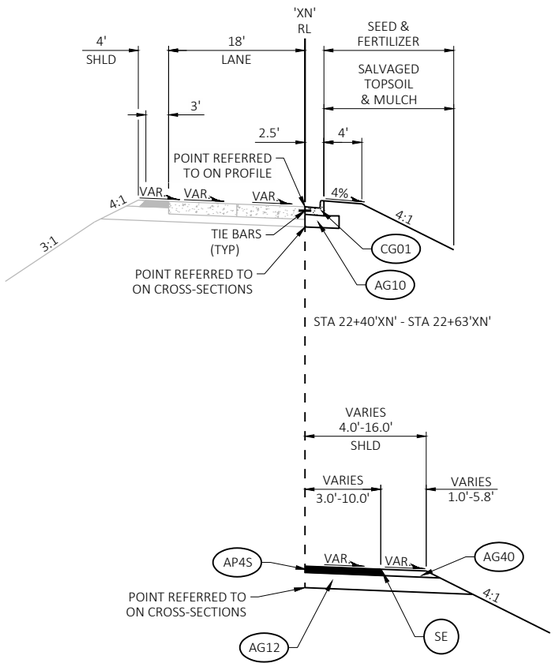
LEGEND

- AG05 — 5" BASE AGGREGATE DENSE 3/4-INCH
- AG10 — 10" BASE AGGREGATE DENSE 1 1/4-INCH
- AG12 — 12" BASE AGGREGATE DENSE 1 1/4-INCH
- AG15 — 15" BASE AGGREGATE DENSE 1 1/4-INCH
- AG40 — 4" BASE AGGREGATE DENSE 3/4-INCH
- AG52 — 5.25" BASE AGGREGATE DENSE 3/4-INCH
- AP4S — HMA PAVEMENT 4-INCH SHOULDER
  SINGLE LAYER 4 HT 58-28 H
- AP5S — HMA PAVEMENT 5-INCH SHOULDER
  2.25" UPPER LAYER 4 HT 58-28 H
  2.75" LOWER LAYER 2 HT 58-28 S
- AP52 — HMA PAVEMENT 5.25-INCH
  2.0" UPPER LAYER 4 HT 58-28 H
  3.25" LOWER LAYER 2 HT 58-28 S
- CG01 — CONCRETE CURB AND GUTTER
  30-INCH TYPE A
- MGS — MGS GUARDRAIL SYSTEM
- SE — SAFETY EDGE



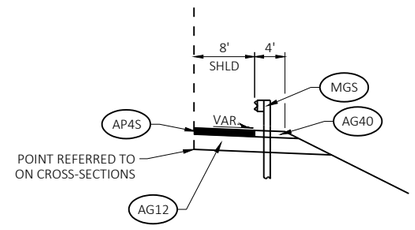
TYPICAL FINISHED SECTION - NB TO WB RAMP

STA 17+75'XL' - STA 24+05'XL'



STA 22+40'XN' - STA 22+63'XN'

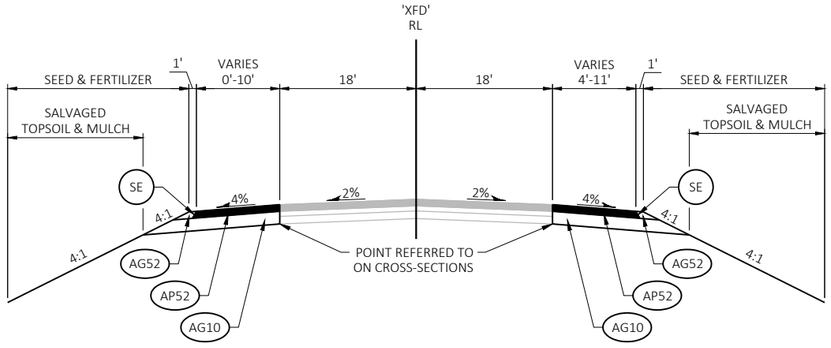
STA 22+63'XN' - STA 24+73'XN'



STA 24+73'XN' - STA 26+21'XN'

TYPICAL FINISHED SECTION - SB TO EB RAMP

STA 22+40'XN' - STA 26+21'XN'



WORK AREA 5 - STAGE 1

STA 48+50'XFD' - STA 56+50'XFD'

WORK AREA 4 - STAGE 1

TYPICAL FINISHED SECTION - FEMRITE DR

STA 47+00'XFD' - STA 56+50'XFD'

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	TYPICAL SECTIONS - FINISHED	SHEET 15	E

2

IH 39 NB PROPOSED RL

SUPERELEVATION TRANSITION EVENT POINTS		RATE			
		LEFT OF CROWNLINE		RIGHT OF CROWNLINE	
LOCATION	STATION	LEFT SHOULDER	LEFT LANE	RIGHT LANES	RIGHT SHOULDER
CURVE 1					
END NORMAL SHOULDER	2533+38.47'	-4.00%	-2.00%	-2.00%	-4.00%
END NORMAL CROWN	2533+38.47'	-4.00%	-2.00%	-2.00%	-4.00%
LEVEL CROWN	2534+58.47'	0.00%	0.00%	-2.00%	-4.00%
REVERSE CROWN	2535+78.47'	2.00%	2.00%	-2.00%	-4.00%
LOW SHOULDER MATCH	2536+98.47'	4.00%	4.00%	-4.00%	-4.00%
BEGIN FULL SUPER	2538+12.47'	5.90%	5.90%	-5.90%	-5.90%
END FULL SUPER	2556+17.80'	5.90%	5.90%	-5.90%	-5.90%
LOW SHOULDER MATCH	2557+31.80'	4.00%	4.00%	-4.00%	-4.00%
REVERSE CROWN	2558+51.80'	2.00%	2.00%	-2.00%	-4.00%
START SOUTH STRUCTURAL SUPPORT SLAB	2558+79.05'	1.55%	1.55%	-2.00%	-4.00%
END NORTH STRUCTURAL SUPPORT SLAB	2560+64.55'	1.55%	1.55%	-2.00%	-4.00%
LEVEL CROWN	2561+57.30'	0.00%	0.00%	-2.00%	-4.00%
BEGIN NORMAL CROWN	2562+77.30'	-4.00%	-2.00%	-2.00%	-4.00%
BEGIN NORMAL SHOULDER	2562+77.30'	-4.00%	-2.00%	-2.00%	-4.00%

IH 39 SB (TSB) PROPOSED RL

SUPERELEVATION TRANSITION EVENT POINTS		RATE
LOCATION	STATION	RIGHT SHOULDER
CURVE 1		
END NORMAL SHOULDER	2534+08.94'TSB'	-4.00%
END NORMAL CROWN	2534+08.94'TSB'	-4.00%
LEVEL CROWN	2535+28.94'TSB'	-4.00%
REVERSE CROWN	2536+48.94'TB'	-4.00%
LOW SHOULDER MATCH	2537+68.94'TSB'	-4.00%
BEGIN FULL SUPER	2538+82.94'TSB'	-5.90%
END FULL SUPER	2557+49.87'TSB'	-5.90%
LOW SHOULDER MATCH	2558+35.53'TSB'	-4.00%
REVERSE CROWN	2559+25.70'TSB'	-4.00%

USH 12/18 WB (XWB) PROPOSED RL

SUPERELEVATION TRANSITION EVENT POINTS		RATE			
LOCATION	STATION	LEFT SHOULDER	LEFT LANE	RIGHT LANE	RIGHT SHOULDER
CURVE 2					
END NORMAL SHOULDER	108+83.59'XEB'	-4.00%	-2.00%	-2.00%	-4.00%
END NORMAL CROWN	108+83.59'XEB'	-4.00%	-2.00%	-2.00%	-4.00%
LEVEL CROWN	109+63.59'XEB'	0.00%	0.00%	-2.00%	-4.00%
REVERSE CROWN	110+43.59'XEB'	2.00%	2.00%	-2.00%	-4.00%
LOW SHOULDER MATCH	111+23.59'XEB'	4.00%	4.00%	-4.00%	-4.00%
BEGIN FULL SUPER	111+47.59'XEB'	4.60%	4.60%	-4.60%	-4.60%
END FULL SUPER	117+95.79'XEB'	4.60%	4.60%	-4.60%	-4.60%
LOW SHOULDER MATCH	118+19.79'XEB'	4.00%	4.00%	-4.00%	-4.00%
REVERSE CROWN	118+99.79'XEB'	2.00%	2.00%	-2.00%	-4.00%
LEVEL CROWN	119+79.79'XEB'	0.00%	0.00%	-2.00%	-4.00%
END NORMAL CROWN	120+59.79'XEB'	-4.00%	-2.00%	-2.00%	-4.00%
END NORMAL SHOULDER	120+59.79'XEB'	-4.00%	-2.00%	-2.00%	-4.00%

USH 12/18 EB (XEB) PROPOSED RL

SUPERELEVATION TRANSITION EVENT POINTS		RATE	
LOCATION	STATION	LANE	RIGHT SHOULDER
CURVE 1			
END NORMAL SHOULDER	77+55.96'XEB'	-2.00%	-4.00%
END NORMAL CROWN	77+55.96'XEB'	-2.00%	-4.00%
LEVEL CROWN	78+35.96'XEB'	-2.00%	-4.00%
REVERSE CROWN	79+15.96'XEB'	-2.00%	-4.00%
LOW SHOULDER MATCH	79+95.96'XEB'	-4.00%	-4.00%
BEGIN FULL SUPER	80+59.96'XEB'	-5.60%	-5.60%
END FULL SUPER	86+63.70'XEB'	-5.60%	-5.60%
LOW SHOULDER MATCH	87+27.70'XEB'	-4.00%	-4.00%
REVERSE CROWN	88+07.70'XEB'	-2.00%	-2.00%
LEVEL CROWN	88+87.70'XEB'	0.00%	0.00%
CURVE 2			
LEVEL CROWN	89+57.37'XEB'	0.00%	0.00%
REVERSE CROWN	90+37.37'XEB'	2.00%	2.00%
LOW SHOULDER MATCH	91+17.37'XEB'	4.00%	4.00%
BEGIN FULL SUPER	91+89.37'XEB'	5.80%	5.80%
END FULL SUPER	96+88.75'XEB'	5.80%	5.80%
LOW SHOULDER MATCH	97+60.75'XEB'	4.00%	4.00%
REVERSE CROWN	98+40.75'XEB'	2.00%	2.00%
LEVEL CROWN	99+20.75'XEB'	0.00%	0.00%
END NORMAL CROWN	100+00.75'XEB'	-2.00%	-4.00%
END NORMAL SHOULDER	100+00.75'XEB'	-2.00%	-4.00%

IH 39 SB TO USH 12/18 EB (XN) PROPOSED RL

SUPERELEVATION TRANSITION EVENT POINTS		RATE		
LOCATION	STATION	LEFT SHOULDER	LANE	RIGHT SHOULDER
CURVE 6				
END FULL SUPER	25+56.86'XN'	-	-8.00%	-8.00%
END ALIGNMENT	26+20.86'XN'	-	-5.33%	-5.33%
	99+32.66'XEB'	-		
LOW SHOULDER MATCH	99+64.66'XEB'	-	-4.00%	-4.00%
REVERSE CROWN	100+12.66'XEB'	-	-2.00%	-4.00%
LEVEL CROWN	100+60.66'XEB'	-	-2.00%	-4.00%
END NORMAL CROWN	101+08.66'XEB'	-	-2.00%	-4.00%
END NORMAL SHOULDER	101+08.66'XEB'	-	-2.00%	-4.00%

IH 39 NB TO USH 12/18 WB (XL) PROPOSED RL

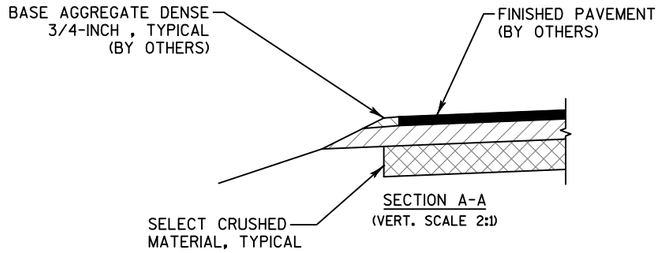
SUPERELEVATION TRANSITION EVENT POINTS		RATE		
LOCATION	STATION	LEFT SHOULDER	LANE	RIGHT SHOULDER
BEGIN CONSTRUCTION	17+75.00'XL'	-	-8.00%	-8.00%
END CONSTRUCTION	24+04.93'XL'	-	-8.00%	-8.00%

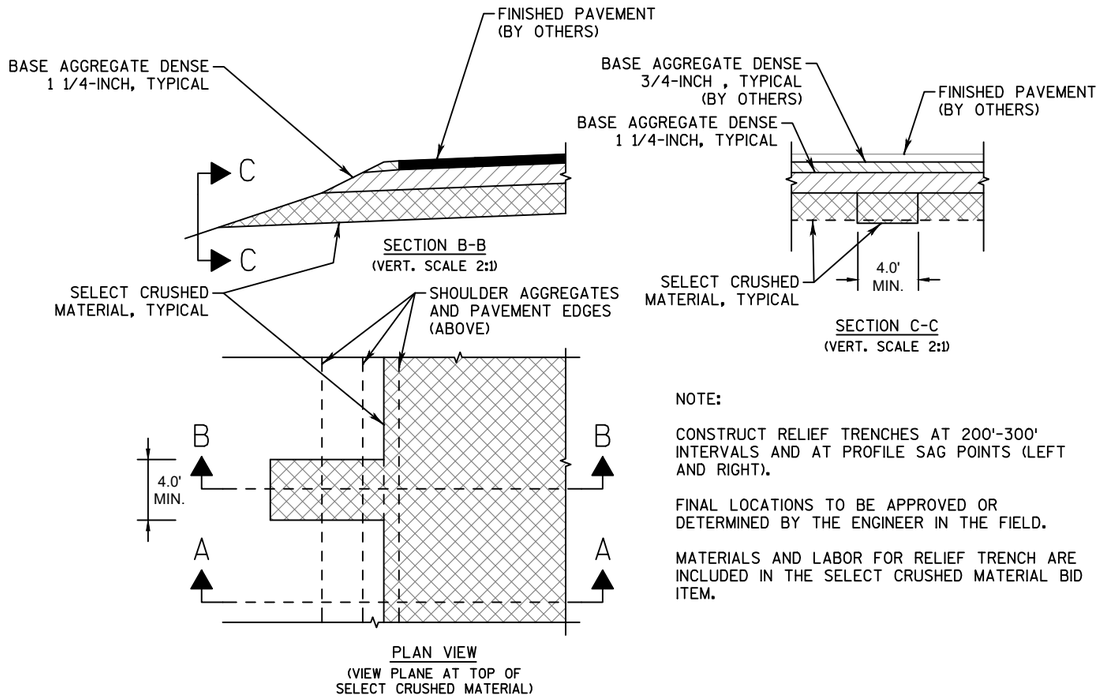
FEMRITE DRIVE (FD) PROPOSED RL

SUPERELEVATION TRANSITION EVENT POINTS		RATE			
		LEFT OF CROWNLINE		RIGHT OF CROWNLINE	
LOCATION	STATION	LEFT SHOULDER	LEFT LANE	RIGHT LANES	RIGHT SHOULDER
BEGIN CONSTRUCTION	47+00.00'FD'	-4.00%	-2.00%	-2.00%	-4.00%
END CONSTRUCTION	56+50.00'FD'	-4.00%	-2.00%	-2.00%	-4.00%

2

PROJECT NO: 1007-12-78 | HWY: IH 39 | COUNTY: DANE | PLAN: SUPERELEVATION TABLES | SHEET 16 | E





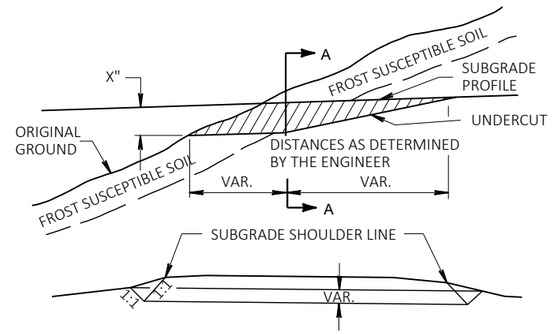
NOTE:

CONSTRUCT RELIEF TRENCHES AT 200'-300' INTERVALS AND AT PROFILE SAG POINTS (LEFT AND RIGHT).

FINAL LOCATIONS TO BE APPROVED OR DETERMINED BY THE ENGINEER IN THE FIELD.

MATERIALS AND LABOR FOR RELIEF TRENCH ARE INCLUDED IN THE SELECT CRUSHED MATERIAL BID ITEM.

RELIEF TRENCH



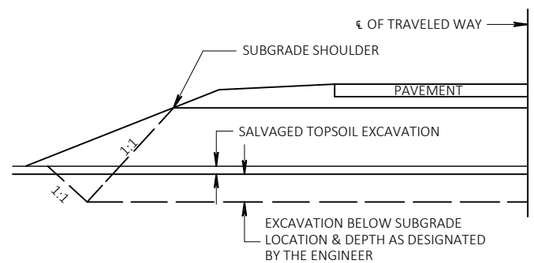
SECTION A-A
CROSS SECTION SHOWING UNDERCUT

NOTE: EXACT LOCATIONS AND EXTENT OF E.B.S. SECTIONS SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.

BACKFILL E.B.S. WITH SELECT BORROW.

THE FILL SECTION WITHIN 100' OF THE MOUTH OF THE CUT MUST BE KEPT 2' BELOW SUBGRADE UNTIL E.B.S. IS COMPLETED.

DETAIL FOR EXCAVATION BELOW SUBGRADE AT CUTS

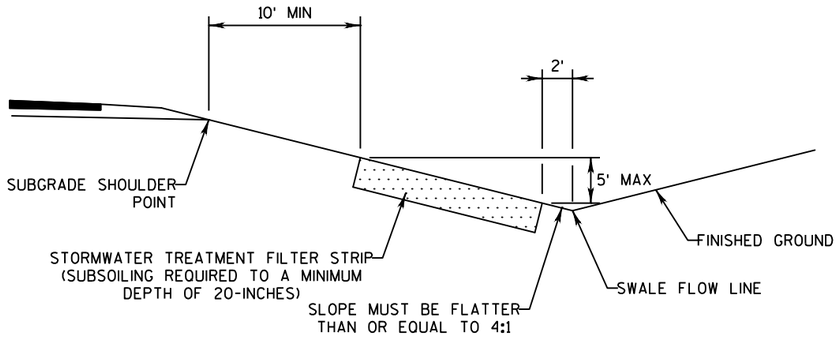


DETAIL FOR EXCAVATION BELOW SUBGRADE

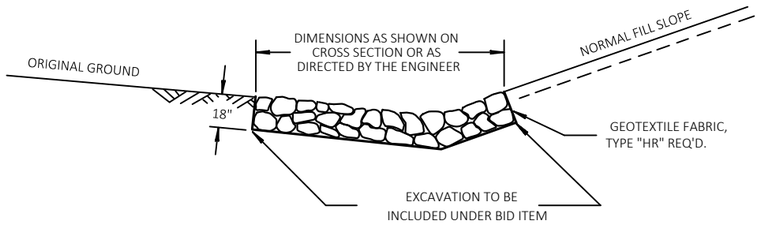
RUNOFF COEFFICIENT TABLE

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											

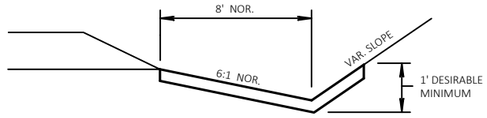
TOTAL PROJECT AREA = 160 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 25.8 ACRES



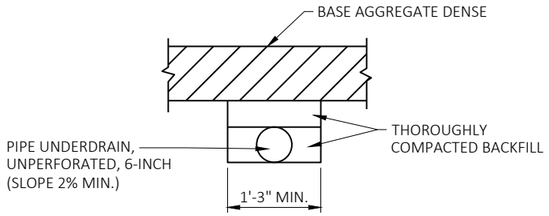
STORMWATER TREATMENT FILTER STRIP



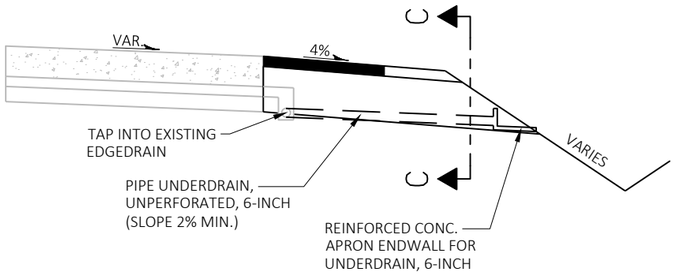
DETAIL FOR RIPRAP MEDIUM IN DITCHES



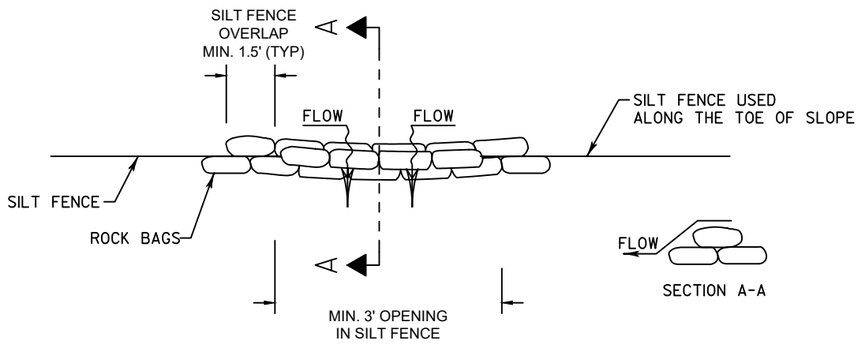
EROSION MAT DETAIL FOR DITCHES



TRENCH FOR OUTFALL PIPE

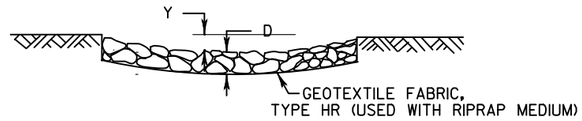


EDGEDRAIN OUTLET



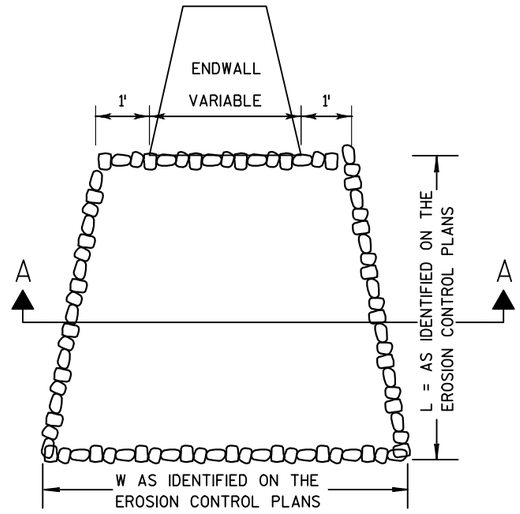
SILT FENCE RELIEF

PAID AS ROCK BAGS



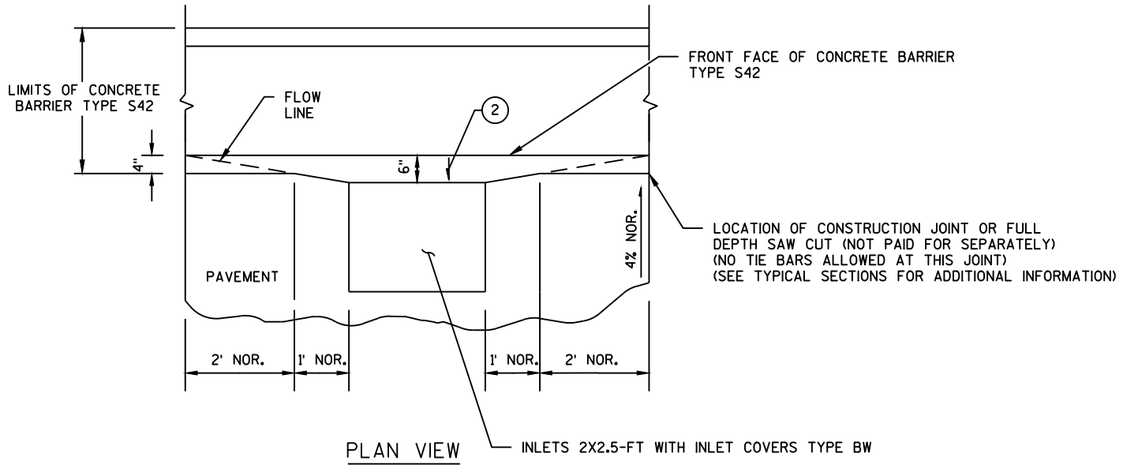
SECTION A-A

D = 18" FOR RIPRAP MEDIUM
Y = 0' FOR TYPICAL CULVERT DISCHARGE INTO DITCH
= 12" FOR CULVERT DISCHARGE DOWN EMBANKMENT SLOPE

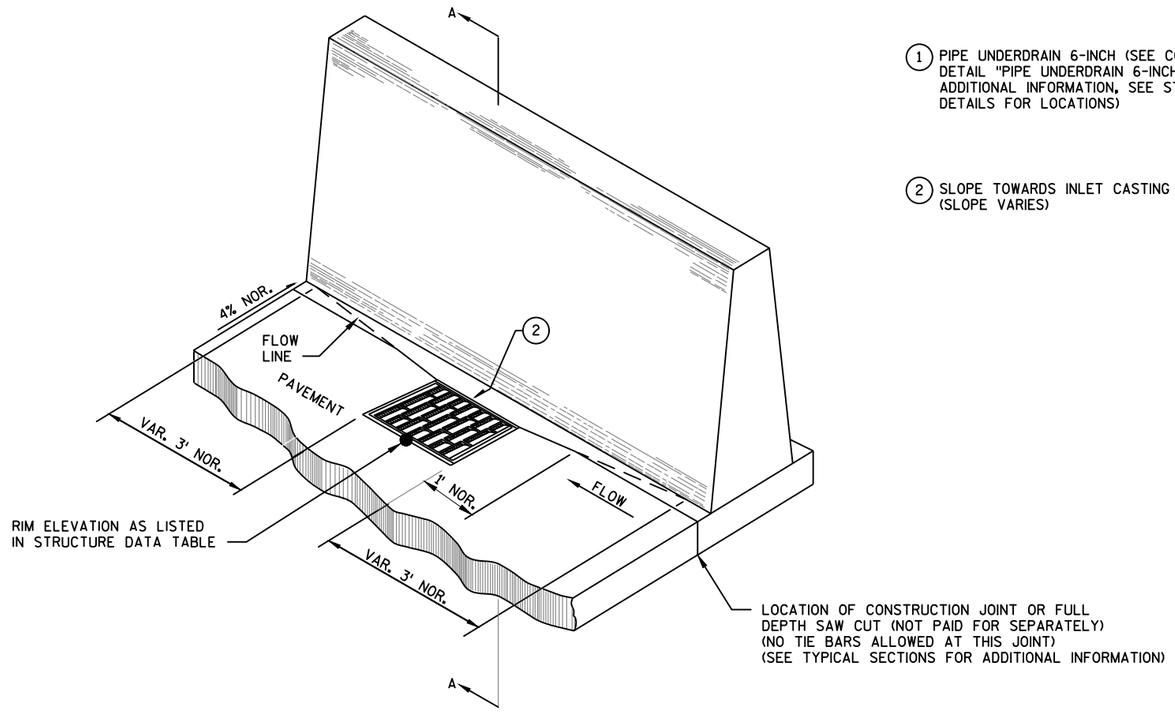


RIPRAP TREATMENT AT APRON ENDWALLS

(SEE EROSION CONTROL PLANS FOR APPROXIMATE LOCATIONS)

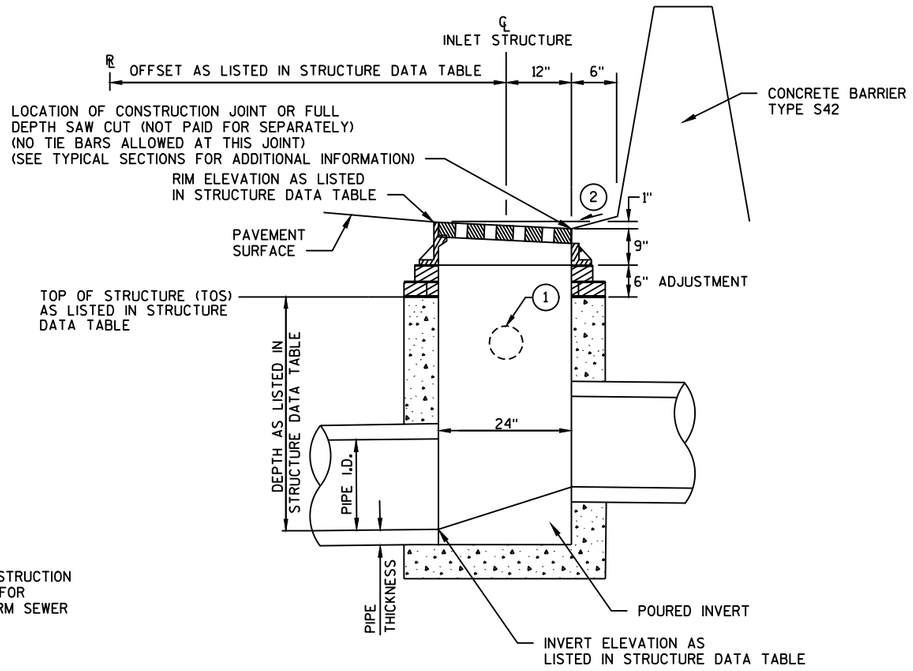


PLAN VIEW



(1) PIPE UNDERDRAIN 6-INCH (SEE CONSTRUCTION DETAIL "PIPE UNDERDRAIN 6-INCH" FOR ADDITIONAL INFORMATION. SEE STORM SEWER DETAILS FOR LOCATIONS)

(2) SLOPE TOWARDS INLET CASTING (SLOPE VARIES)



SECTION A-A

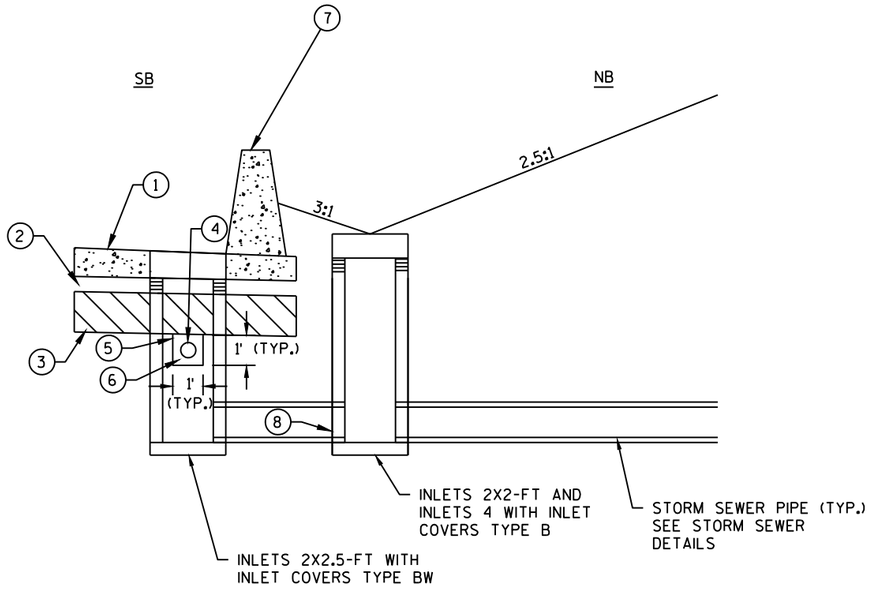
(INLETS 2X2.5-FT WITH INLET COVERS TYPE BW SHOWN)

SEE SDD "INLETS 2X2-FT, 2X2.5-FT, 2X3-FT, & 2.5X3-FT FOR ADDITIONAL INFORMATION.

FOR DETAILS AND DIMENSIONS OF INLET PLACEMENT FOR THE S56C BARRIER, SEE STANDARD DETAIL DRAWING 14B41 "SINGLE SLOPE ROADSIDE RETAINING WALL - PLACEMENT AND DRAINAGE".

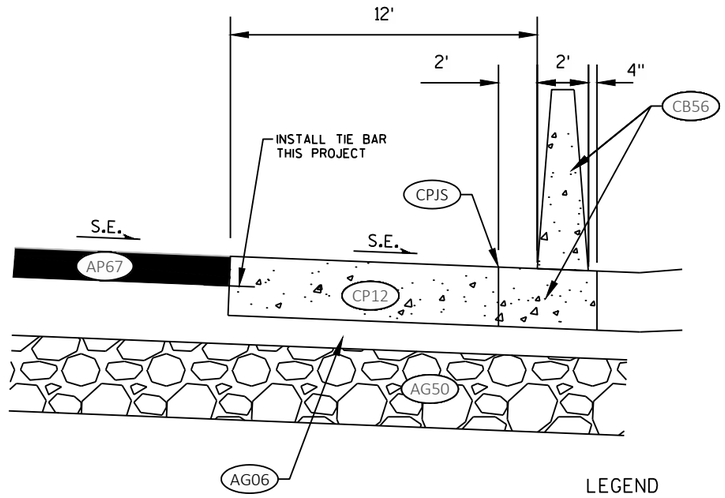
CONCRETE BARRIER TYPE S42 AT INLETS 2X2.5-FT DETAIL

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	PLAN: CONSTRUCTION DETAILS	SHEET 20	E

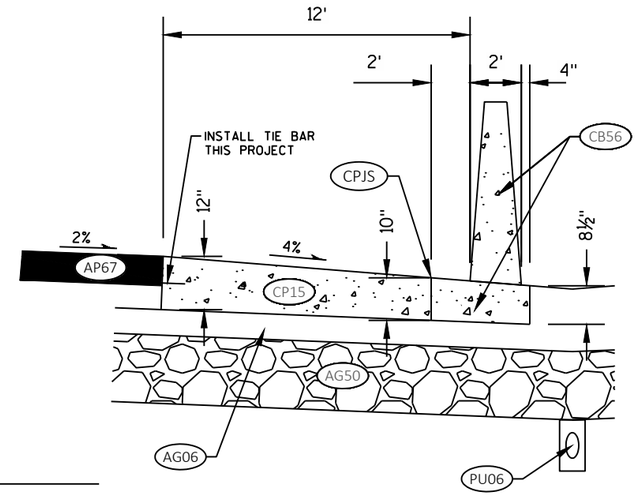


1. TRAPEZOIDAL SHOULDER (PAID SEPARATELY)
2. BASE AGGREGATE DENSE 1 1/4-INCH, 6-INCH (PAID SEPARATELY)
3. SELECT CRUSHED MATERIAL, 16-INCH (PAID SEPARATELY)
4. PIPE UNDERDRAIN 6-INCH (SEE STORM SEWER DETAILS FOR LOCATIONS)
5. GEOTEXTILE TYPE DF SCHEDULE A (PAID SEPARATELY)
6. BACKFILL (INCIDENTAL TO "PIPE UNDERDRAIN 6-INCH")
7. CONCRETE BARRIER TYPE S56C OR S42 (PAID SEPARATELY)
8. MEDIAN INLETS PLACED AT LOW POINTS. SEE STORM SEWER DETAILS FOR LOCATIONS.

PIPE UNDERDRAIN 6-INCH



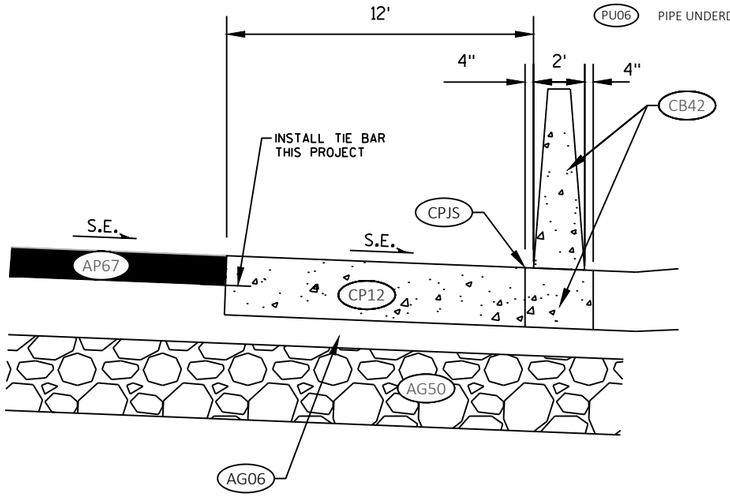
DETAIL OF SUPERELEVATED SHOULDER - CONCRETE BARRIER TYPE S56C IN MEDIAN



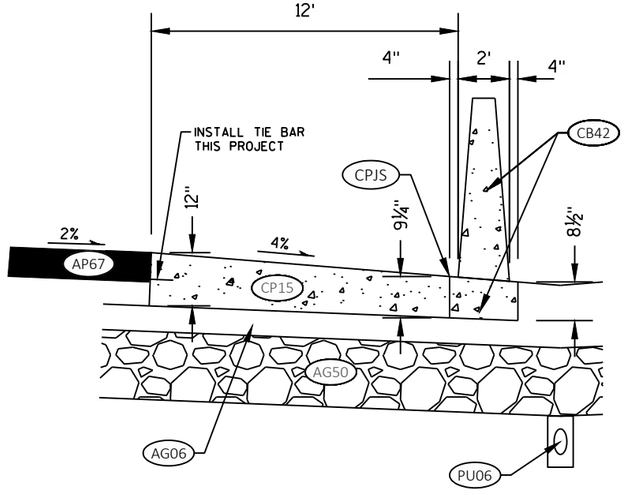
DETAIL OF TRAPEZOIDAL SHOULDER - CONCRETE BARRIER TYPE S56C IN MEDIAN

LEGEND

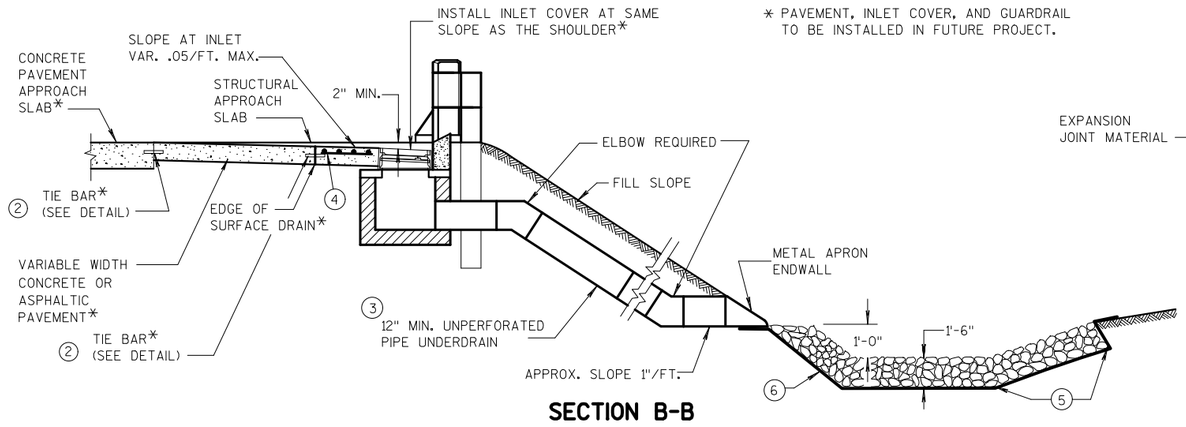
AG06	6" BASE AGGREGATE DENSE 1 1/4-INCH
AG50	16" SELECT CRUSHED MATERIAL
AP67	HMA PAVEMENT 6.75-INCH
CB42	CONCRETE BARRIER TYPE S42
CB56	CONCRETE BARRIER TYPE S56C (ROADSIDE RETAINING WALL)
CP12	CONCRETE PAVEMENT 12-INCH, DOWELED AND TINED
CP15	TRAPEZOIDAL SHOULDER (PAID FOR AS CONCRETE PAVEMENT 12-INCH)
CPJS	CONCRETE PAVEMENT JOINT SEALING
PU06	PIPE UNDERDRAIN 6-INCH



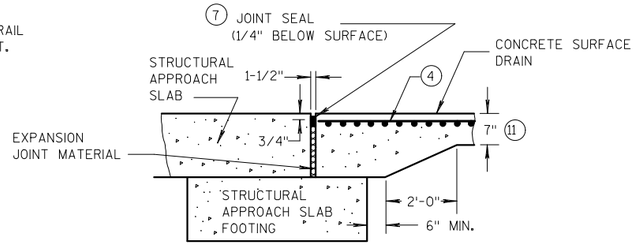
DETAIL OF SUPERELEVATED SHOULDER - CONCRETE BARRIER TYPE S42 IN MEDIAN



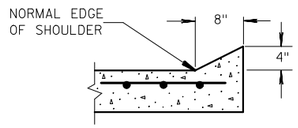
DETAIL OF TRAPEZOIDAL SHOULDER - CONCRETE BARRIER TYPE S42 IN MEDIAN



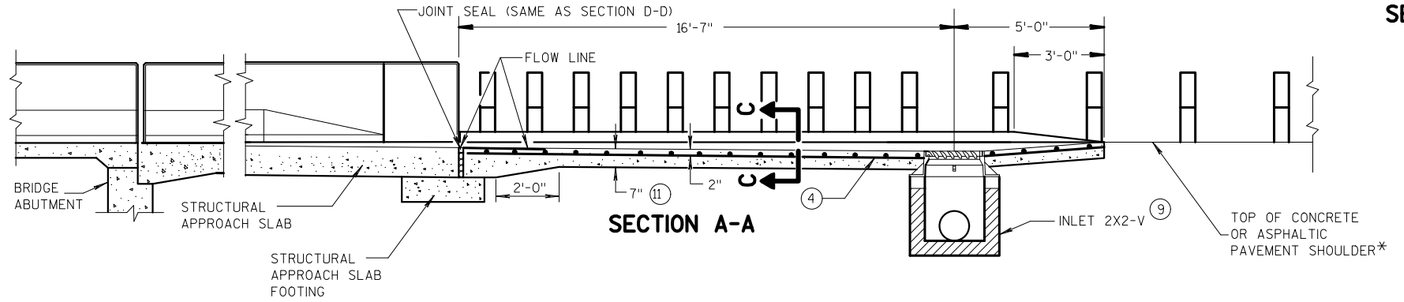
SECTION B-B



SECTION D-D



SECTION C-C



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.

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

(1) NO. 4 X 2'-0" TIE BARS SPACED AT 3'-0" CENTERS TO BE USED ONLY WHEN ADJACENT TO P.C. CONCRETE.

(2) STANDARD LONGITUDINAL JOINT WITH TIE BARS TO BE USED ONLY WHEN ADJACENT TO P.C. CONCRETE. SEE SDD 'CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES'.

(3) THE PIPE UNDERDRAIN MAY BE ANY OF THE MATERIALS LISTED IN THE STANDARD SPECIFICATIONS SECTION 612.2 EXCEPT DRAIN TILE.

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

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

(6) GEOTEXTILE FABRIC, TYPE 'HR'

(7) HOT POURED SEALANT UNLESS OTHERWISE SPECIFIED.

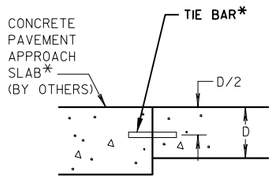
(8) THIS DIMENSION MAY VARY DEPENDING ON THE SPACING OF POSTS FOR THE STEEL PLATE BEAM GUARD. THE TYPICAL LOCATION FOR THE SURFACE DRAIN IS WHERE THE POST SPACING IS 3'-1 1/2".

(9) SEE SDD 'INLET AND MANHOLE COVERS' AND 'INLETS 2X2-FT, 2X2.5-FT, 2X3-FT, & 2.5X3-FT' FOR DETAILS.

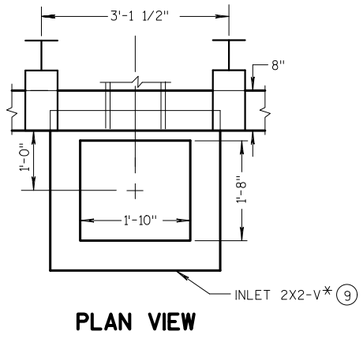
(10) SEE SDD 'MGS THRIE BEAM TRANSITION' FOR MGS POST SPACING DETAILS. MGS ITEMS TO BE INSTALLED BY OTHERS IN FUTURE CONTRACT.

(11) WHEN CONCRETE SHOULDERS ARE PROPOSED, THICKNESS OF CONCRETE SURFACE DRAIN SHALL MATCH THICKNESS OF CONCRETE SHOULDER.

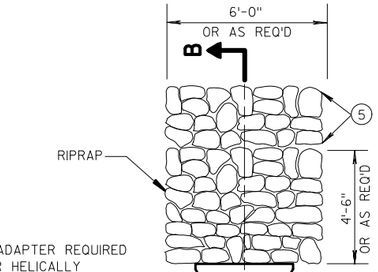
CONCRETE SURFACE DRAINS DROP INLET DETAIL

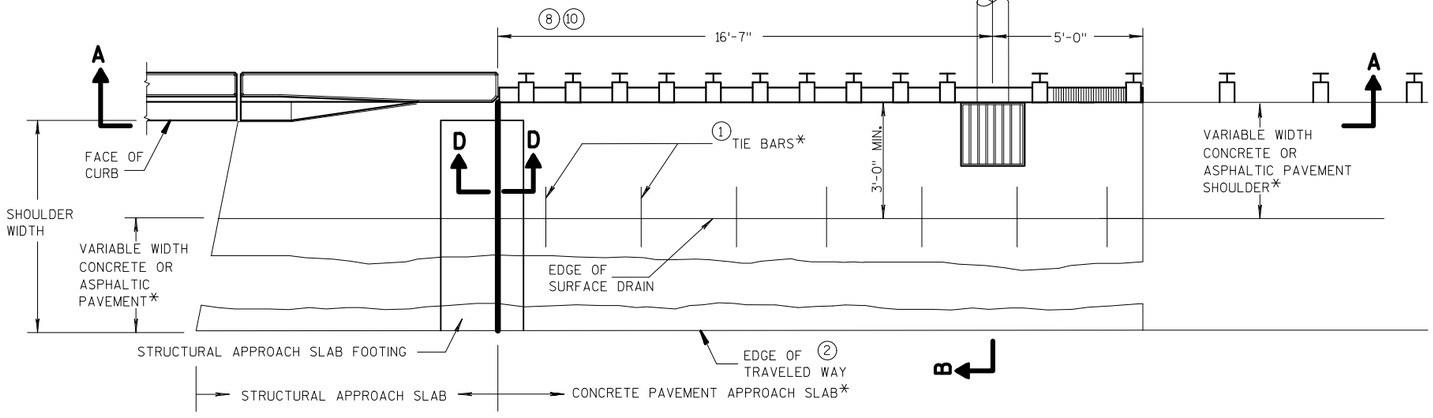


TIE BAR DETAIL



PLAN VIEW

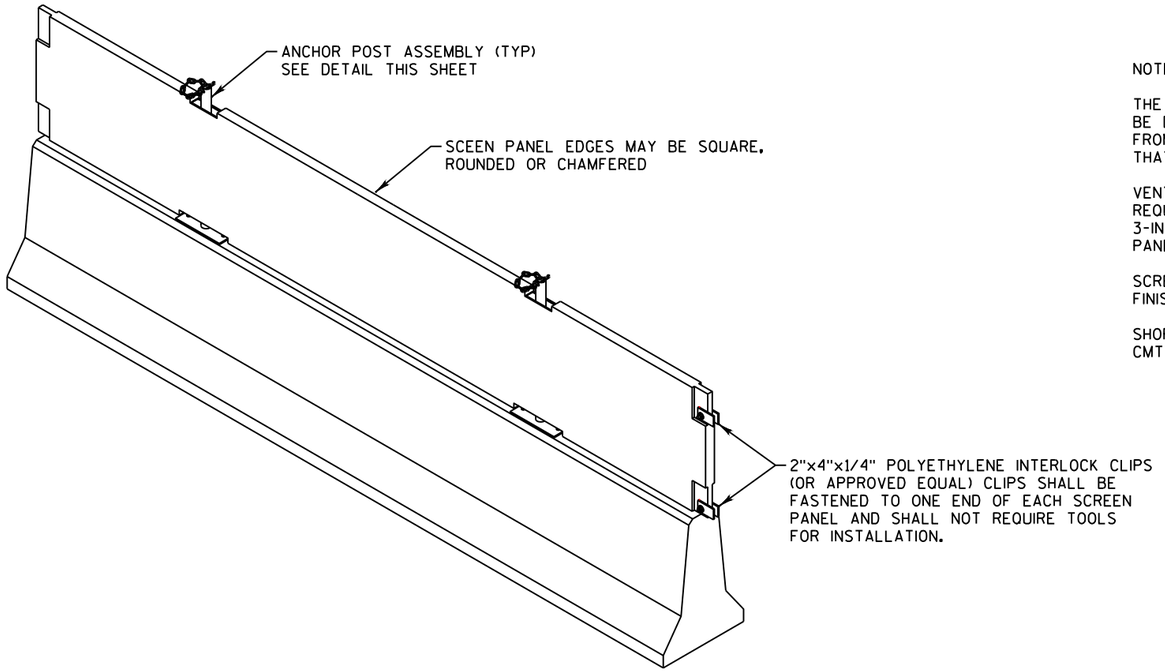




PLAN VIEW

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	PLAN: CONSTRUCTION DETAILS	SHEET	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0210_CD.DWG
LAYOUT NAME - 06
PLOT DATE : 9/25/2019 12:01 PM
PLOT BY : KYLE CORNELIUS
PLOT NAME :
PLOT SCALE : 1 IN:10 FT
WISDOT/CADDS SHEET 42



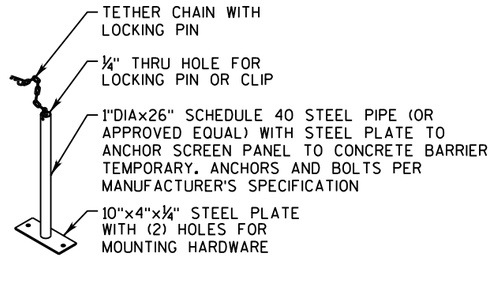
NOTE:

THE DESIGN OF THIS ITEM, WHICH INCLUDES ALL ASPECTS SHOWN, SHALL BE DESIGNED SO THAT THE SCREEN IS CAPABLE OF REMAINING IN PLACE FROM TRAFFIC GUSTS, WIND GUSTS, AND OTHER OUTDOOR ELEMENTS THAT MAY MOVE OR DISPLACE THE SCREEN.

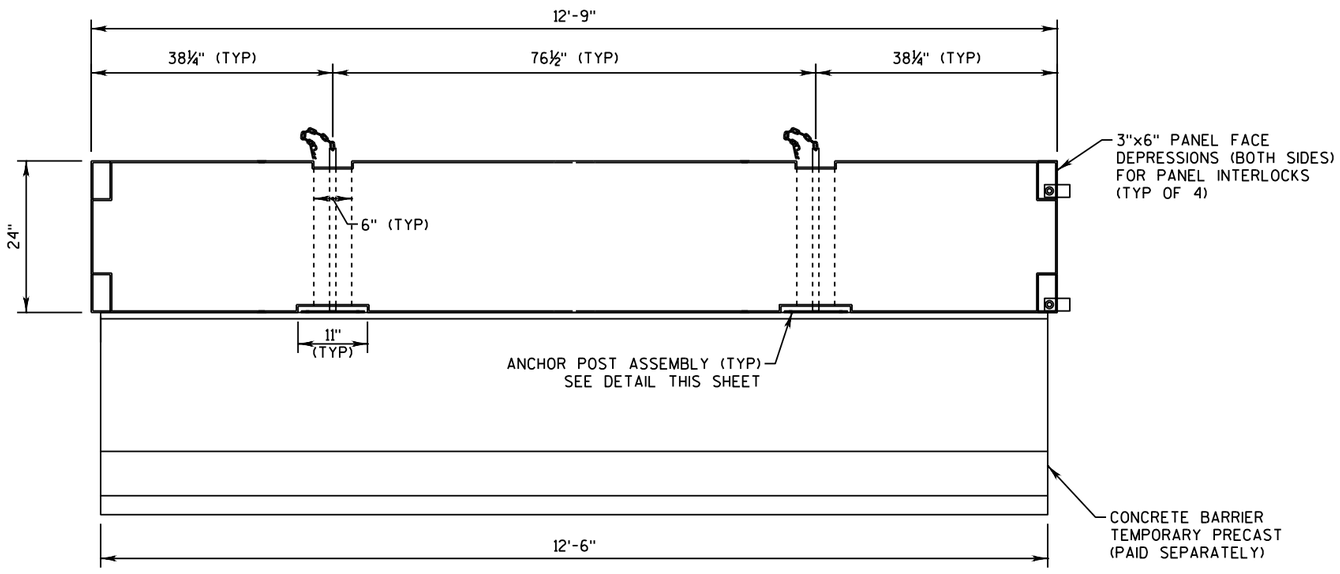
VENT HOLES THROUGH THE SCREEN PANEL ARE PERMITTED BUT NOT REQUIRED. IF VENT HOLES ARE USED, THE HOLES SHALL NOT EXCEED 3-INCHES IN DIAMETER AND SHALL BE LIMITED TO 24 OR LESS PER PANEL.

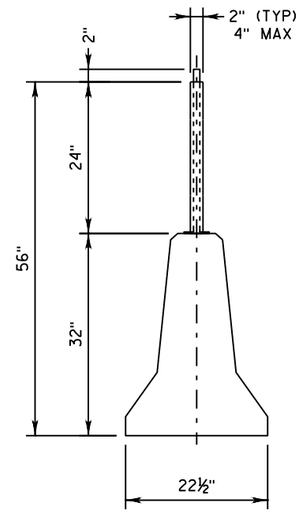
SCREEN PANELS SHALL HAVE A NON-REFLECTIVE MAT OR FLAT GRAY FINISH OR PAINTED SURFACE.

SHOP DRAWINGS WITH A FULL SIZE SAMPLE SHALL BE PROVIDED TO THE CMT (CORRIDOR MANAGEMENT TEAM) FOR APPROVAL PRIOR TO USE.

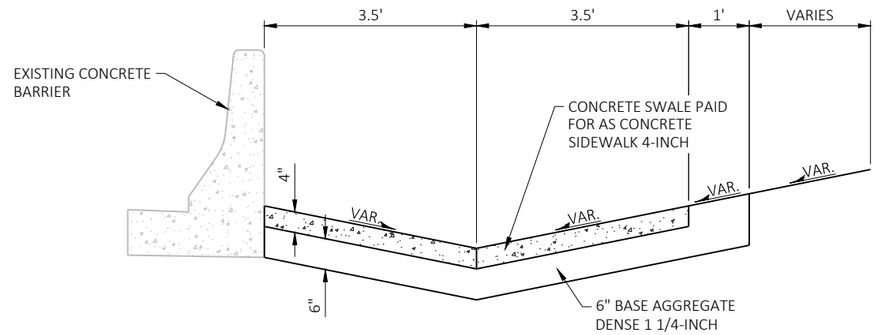


ANCHOR POST ASSEMBLY





TRAFFIC CONTROL GAWK SCREEN

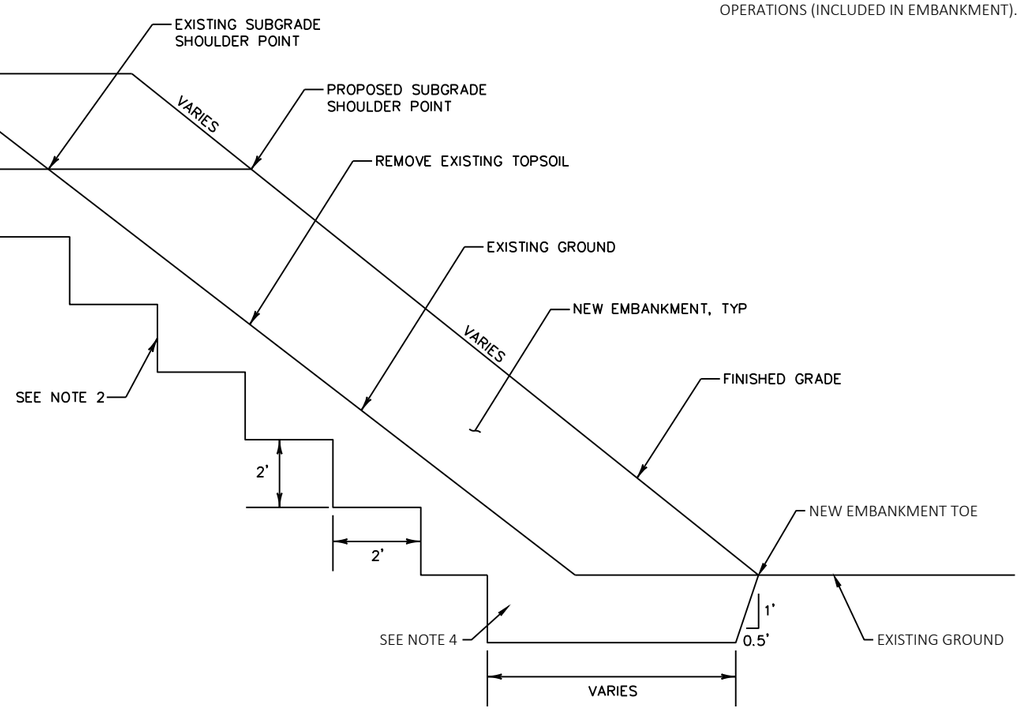


CONCRETE SWALE

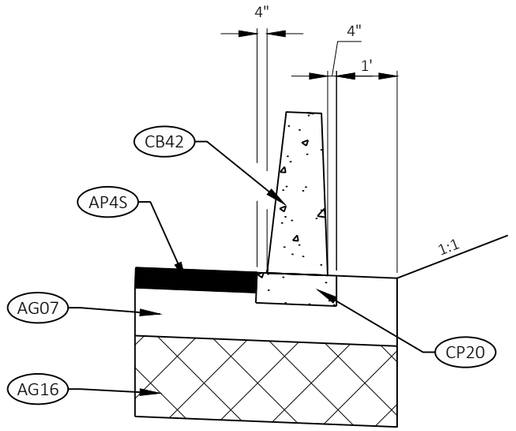
STA 17+90'XL' - STA 18+57'XL'

NOTES:

1. EMBANKMENT PLACED IN LAYERS AND COMPACTED PER SPECIFICATIONS.
2. BENCH AS REQUIRED TO FACILITATE CONSTRUCTION FILLING OPERATIONS (2' BENCH DEPTH, INCLUDED IN EMBANKMENT)
3. EBS AS REQUIRED IN THE PLANS OR DIRECTED BY THE ENGINEER SHALL BE PAID UNDER THE ITEM "EXCAVATION COMMON"
4. KEY INTO EXISTING GROUND TO FACILITATE FILLING OPERATIONS (INCLUDED IN EMBANKMENT).



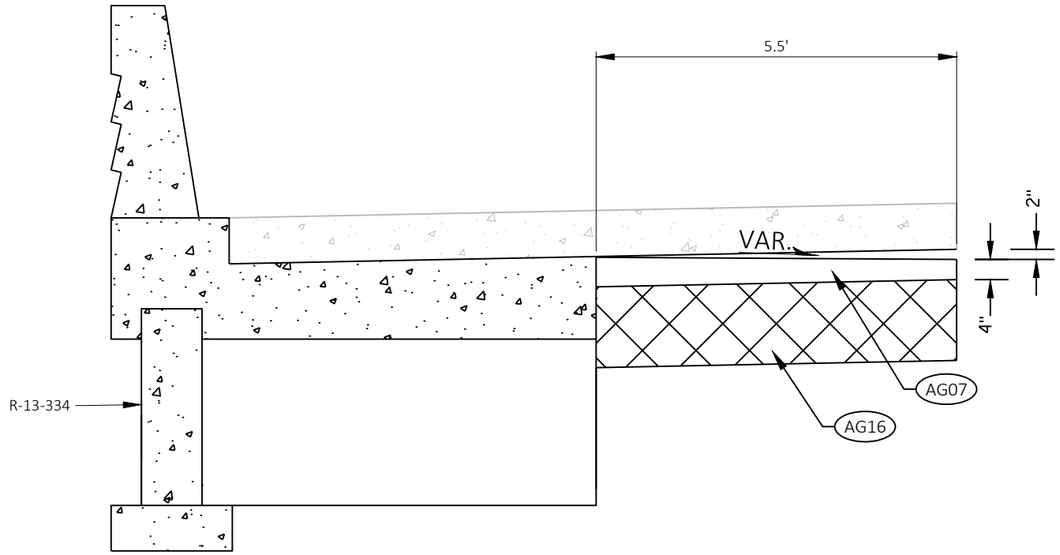
DETAIL FOR STEPPED EMBANKMENT



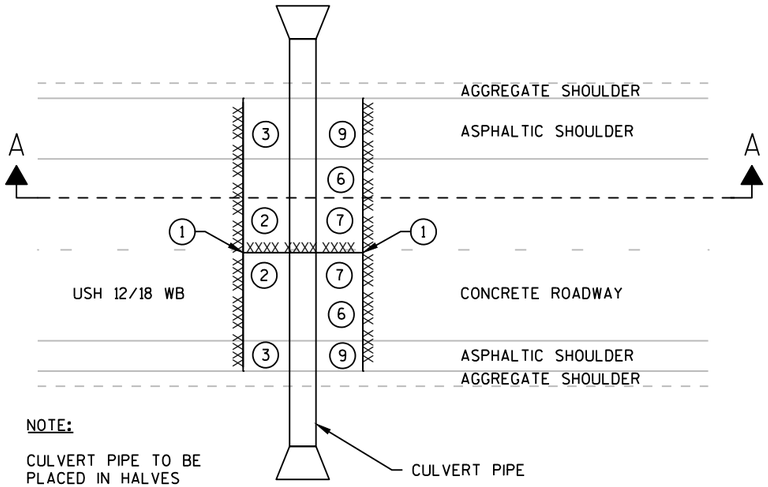
DETAIL OF OUTSIDE SHOULDERS -
CONCRETE BARRIER TYPE S42 UNDER IH 39 SB

LEGEND

AG07	VARYING DEPTH BASE AGGREGATE DENSE 1 1/4-INCH
AG16	16" SELECT CRUSHED MATERIAL
AP4S	HMA PAVEMENT 4-INCH SHOULDER SINGLE LAYER 4 HT 58-28 H
CB42	CONCRETE BARRIER TYPE S42
CP20	6" CONCRETE PAD (SEE SDD 14B32a) (PAID FOR AS "CONCRETE PAVEMENT 6-INCH")



DETAIL OF BASE AGGREGATE SLOPE
STA 2533+98 - STA 2537+00



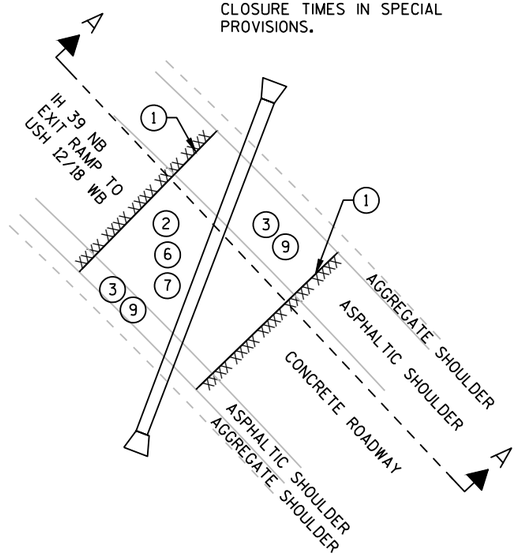
NOTE:

CULVERT PIPE TO BE PLACED IN HALVES WHILE ONE LANE IS OPEN TO TRAFFIC.

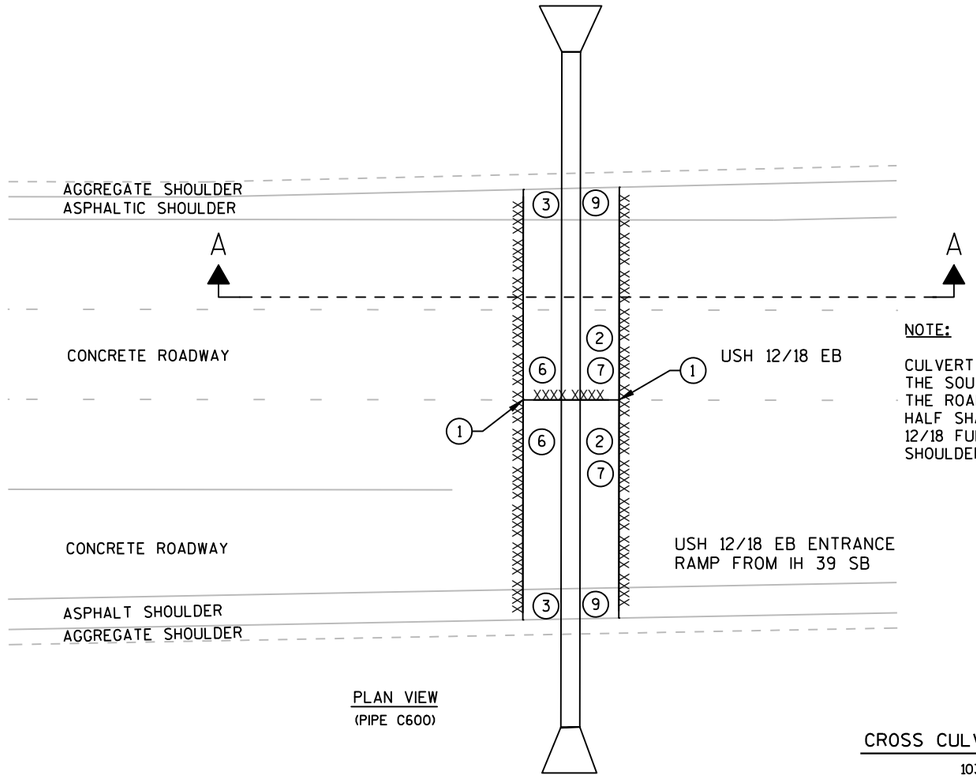
PLAN VIEW
(PIPE C800)

NOTE:

CULVERT PIPE TO BE PLACED WHILE THE RAMP IS CLOSED TO TRAFFIC, FOLLOW LANE AND SHOULDER CLOSURE TIMES IN SPECIAL PROVISIONS.



PLAN VIEW
(PIPE C900)



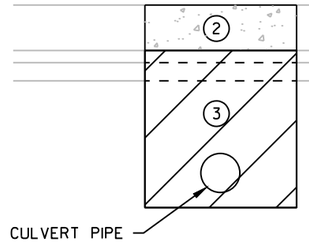
PLAN VIEW
(PIPE C600)

NOTE:

CULVERT PIPE C600 TO BE PLACED IN HALVES. THE SOUTH HALF SHALL BE CONSTRUCTED WHILE THE ROADWAY IS OPEN TO TRAFFIC, THE NORTH HALF SHALL BE CONSTRUCTED DURING THE USH 12/18 FULL FREEWAY CLOSURE. FOLLOW LANE AND SHOULDER CLOSURE TIMES IN SPECIAL PROVISIONS.

CROSS CULVERT PAVEMENT REPLACEMENT

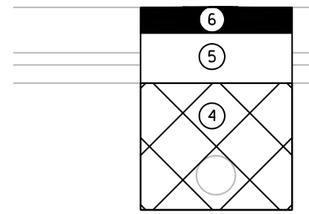
103+25 'XEB' (PIPE C600)
102+60 'XWB' (PIPE C800)
21+04 'XL' (PIPE C900)



SECTION A-A
(REMOVALS)

NOTE:

REMOVAL OF EXISTING ASPHALTIC SHOULDER INCIDENTAL TO EXCAVATION FOR CULVERT.

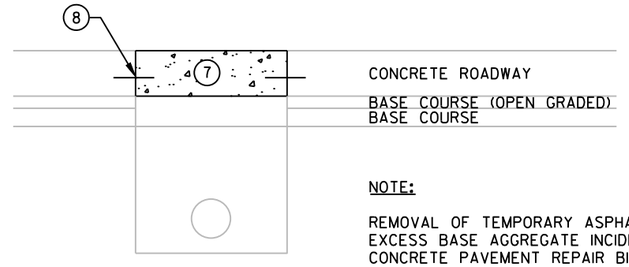


SECTION A-A
(TEMP PAVEMENT)

NOTE:

OPEN GRADED MATERIAL NOT NEEDED FOR FOR PAVEMENT REPLACEMENT AREAS.

ROADWAY MUST BE OPEN TO TRAFFIC BY THE HOURS SPECIFIED IN THE SPECIALS.



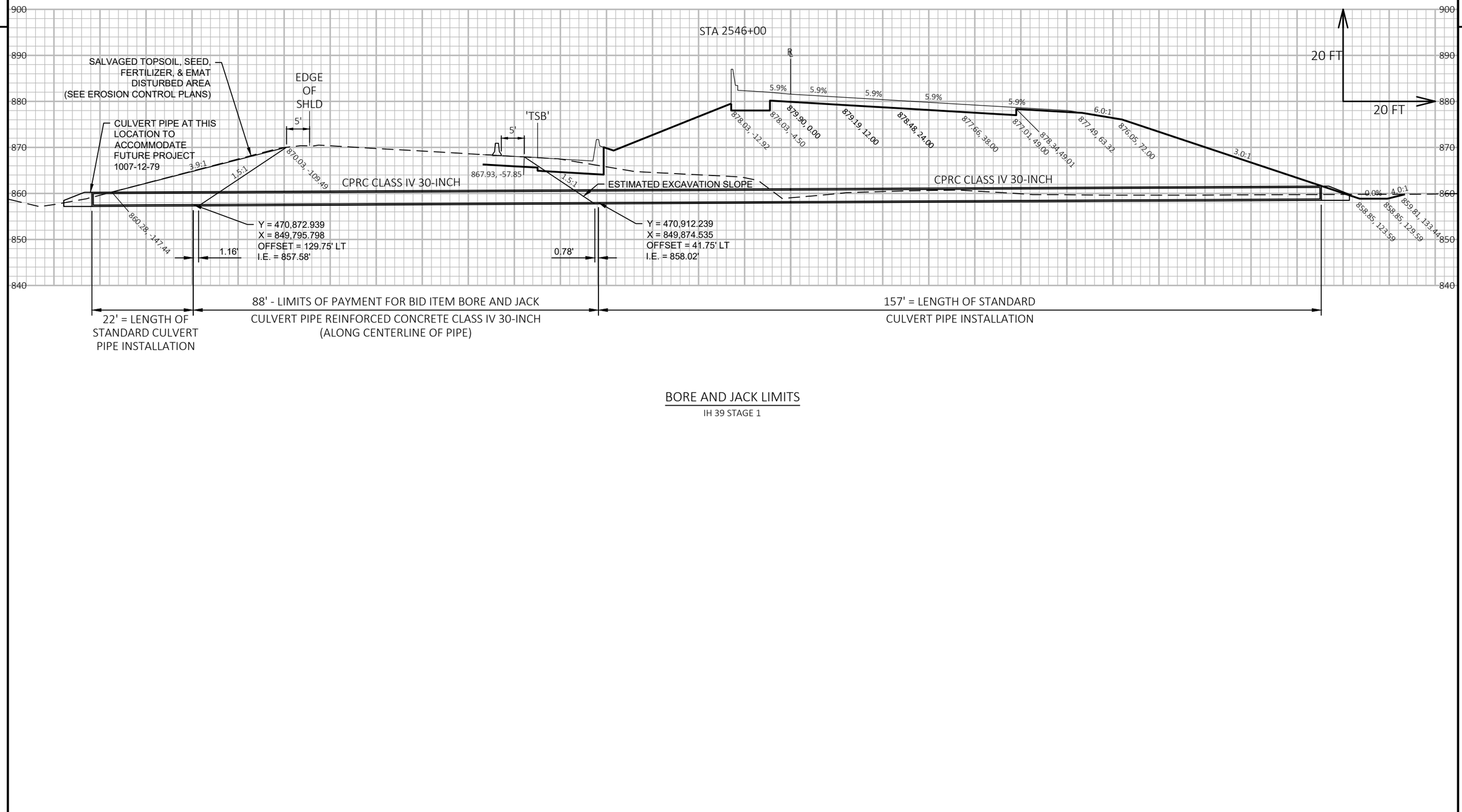
SECTION A-A
(PERMANENT ROADWAY)

NOTE:

REMOVAL OF TEMPORARY ASPHALT AND EXCESS BASE AGGREGATE INCIDENTAL TO CONCRETE PAVEMENT REPAIR BID ITEM

LEGEND

1. SAWING CONCRETE (PAID SEPARATELY)
2. REMOVING PAVEMENT (PAID SEPARATELY)
3. EXCAVATION FOR CULVERT (INCIDENTAL TO CULVERT)
4. CULVERT BACKFILL (INCIDENTAL TO CULVERT)
5. 17" BASE AGGREGATE DENSE 1 1/4 INCH (C600 & C800) (PAID SEPARATELY)
   15" BASE AGGREGATE DENSE 1 1/4 INCH (C900) (PAID SEPARATELY)
6. 5" ASPHALTIC SURFACE TEMPORARY (PAID SEPARATELY)
7. 12" CONCRETE PAVEMENT REPAIR SHES (C600 & C800) (PAID SEPARATELY)
   10" CONCRETE PAVEMENT REPLACEMENT SHES (C900) (PAID SEPARATELY)
   (INCLUDES REMOVAL OF ASPHALTIC PATCH AND EXCESS BASE AGGREGATE)
8. DRILLED DOWEL BARS (PAID SEPARATELY)
9. HMA PAVEMENT 4 INCH SHOULDER (C600 SOUTH SHOULDER) (PAID SEPARATELY)
   HMA PAVEMENT 5 INCH SHOULDER (PAID SEPARATELY)



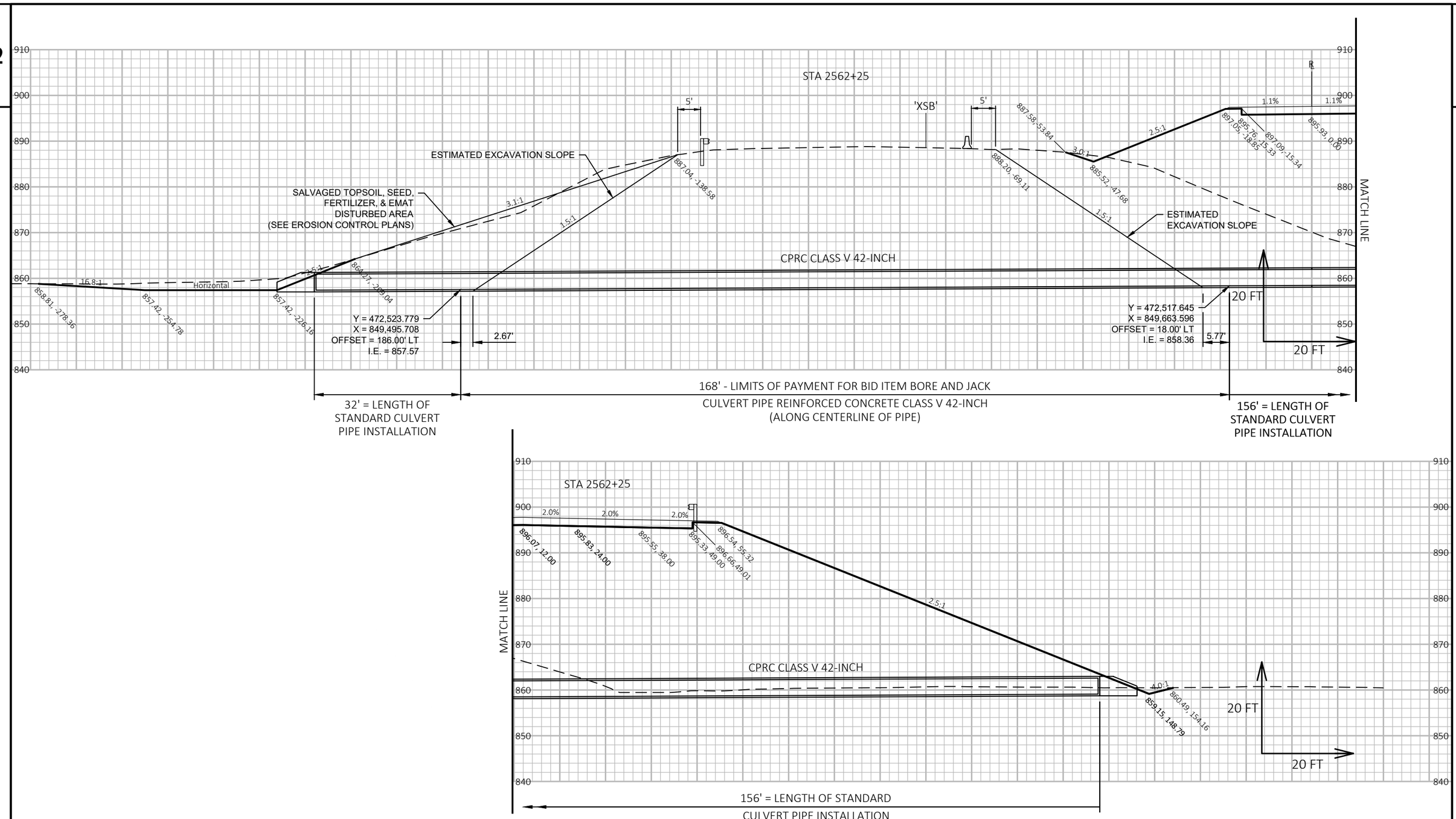
BORE AND JACK LIMITS

IH 39 STAGE 1

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	PLAN: CONSTRUCTION DETAILS	SHEET 27	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0210_CD_BORE_JACK_30IN.DWG
LAYOUT NAME - 11

PLOT DATE : 9/24/2019 5:07 PM PLOT BY : KYLE CORNELIUS PLOT NAME : PLOT SCALE : 1 IN:20 FT



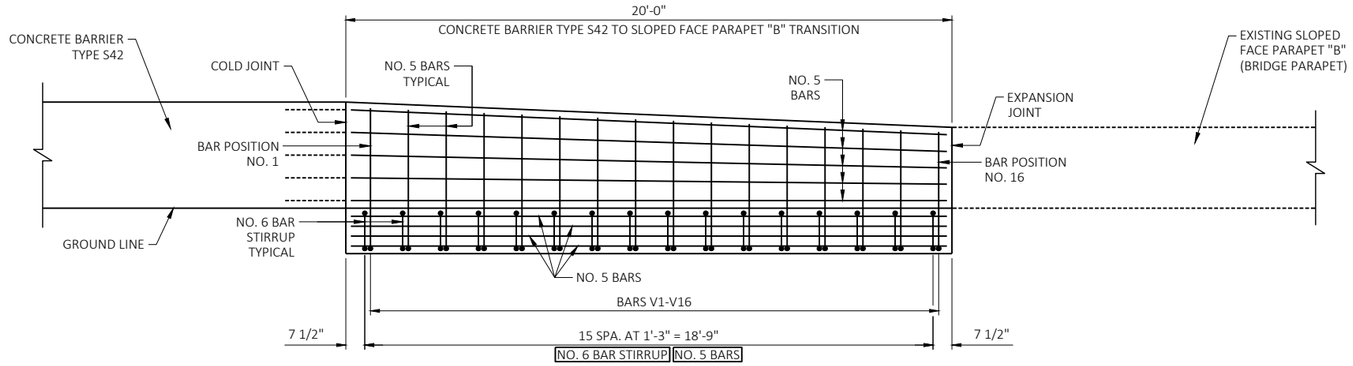
BORE AND JACK LIMITS

IH 39 STAGE 1

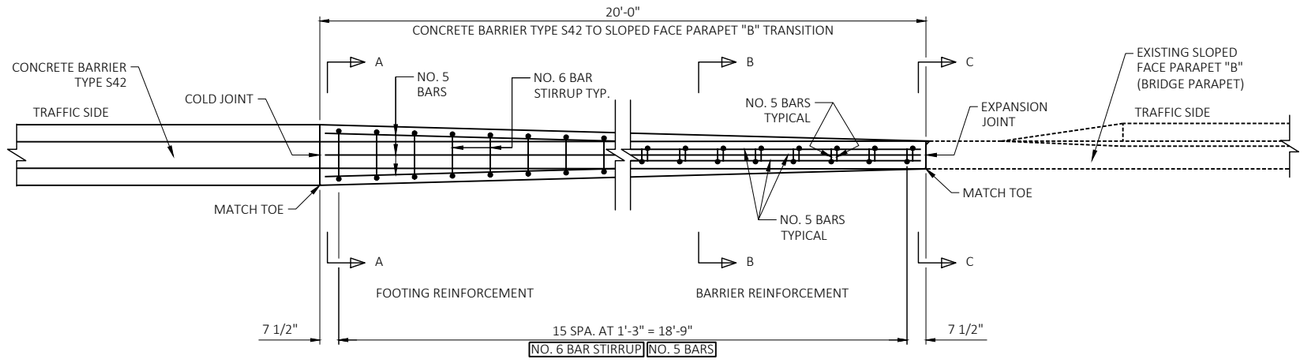
PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	PLAN: CONSTRUCTION DETAILS	SHEET 28	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0210_CD_BORE_JACK_42IN.DWG
LAYOUT NAME - 12

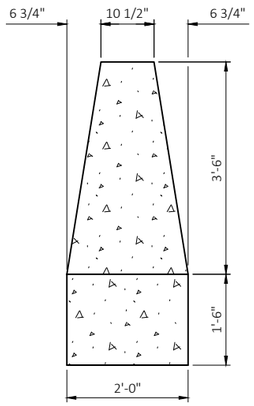
PLOT DATE : 9/24/2019 5:09 PM PLOT BY : KYLE CORNELIUS PLOT NAME : PLOT SCALE : 1 IN:20 FT



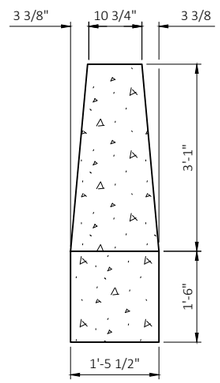
ELEVATION VIEW



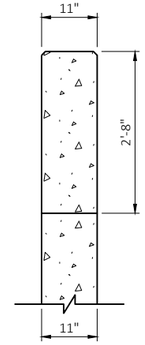
PLAN VIEW



SECTION A-A



SECTION B-B



SECTION C-C

NOTES:

CONSTRUCT PER SECTION 603 OF THE STANDARD SPECIFICATION.

SPLICES OF LONGITUDINAL BARS TO BE 2' LONG AND FIRMLY TIED AND FASTENED TOGETHER UNLESS NOTED OTHERWISE.

4,000 PSI CONCRETE AIR ENTRAINMENT PER SECTION 501 OF THE STANDARD SPECIFICATIONS.

USE 3/4" BEVEL OR 1" RADIUS ON ALL EXPOSED SHARP EDGES UNLESS NOTED OTHERWISE.

THE NUMBER IN BAR DESIGNATION REPRESENTS THE BAR'S LOCATION.

2" CLEAR COVER TYPICAL.

PROVIDE 3-FOOT LAP OF LONGITUDINAL REINFORCING AT COLD JOINTS. LAPS TO BE FIRMLY TIED.

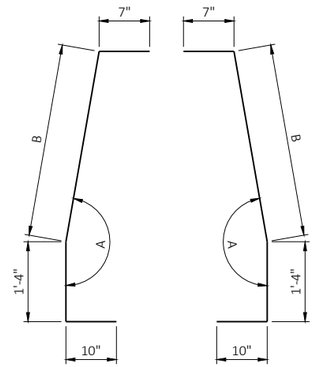
PAID FOR AS CONCRETE BARRIER TYPE S42

CONCRETE BARRIER TRANSITION
TYPE S42 TO SLOPE FACED PARAPET "B"

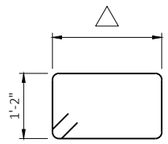
PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	CONSTRUCTION DETAILS	SHEET 29	E

BAR CHART
BARS V1 - V16

BAR	A	B
V1	171°–20'	3'–3"
V2	171°–20'	3'–3"
V3	171°–49'	3'–2"
V4	172°–20'	3'–1"
V5	173°–03'	3'–1"
V6	173°–37'	3'–0"
V7	174°–22'	3'–0"
V8	174°–13'	2'–11"
V9	174°–51'	2'–10"
V10	175°–38'	2'–10"
V11	176°–20'	2'–9"
V12	177°–03'	2'–8"
V13	177°–03'	2'–8"
V14	177°–50'	2'–7"
V15	178°–42'	2'–7"
V16	180°–00'	2'–6"

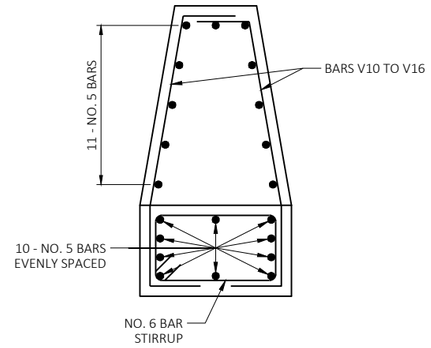


BAR BENDING DETAIL
FOR BARS V1 - V16



STIRRUP BAR
BENDING DETAIL

△ VARIES 1'-8" TO 7" OVER 16 BARS



BAR DETAIL
BARS V1 - V16

CONCRETE BARRIER TRANSITION
TYPE S42 TO SLOPE FACED PARAPET "B"

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	CONSTRUCTION DETAILS	SHEET 30	E

REMOVAL PLAN LEGEND

- REMOVING PAVEMENT
- REMOVING CONCRETE BARRIER
- REMOVING STORM SEWER
- REMOVING GUARDRAIL
- REMOVING INLET
- CLEARING AND GRUBBING
- REMOVING DELINEATORS & MARKERS

2

2

EB TO SB RAMP

IH 39 SB

2532'TSB' 2534'TSB' 2536'TSB' 2538'TSB' 2540'TSB' 2542'TSB' 2544'TSB' 2546'TSB'

2532 2534 2536 2538 2540 2542 2544

ABANDONING CULVERT PIPES

REMOVE PAVEMENT
UPON COMPLETION OF
PROJECT 1007-12-75

BEGIN PROJECT 1007-12-78
STA 2533+97.70

EXISTING IH 39 NB

SLOPE INTERCEPT, TYP

MATCH LINE 2546+00

STA 2538+00 - STA 2544+00, RT
CLEARING AND GRUBBING REQUIRED

SIGN STRUCTURE S-13-136
TO REMAIN

SB TO EB RAMP

IH 39 SB

2546'TSB' 2548'TSB' 2550'TSB' 2552'TSB' 2554'TSB' 2556'TSB' 2558'TSB'

2546 2548 2550 2552 2554 2556 2558 2560

MATCH LINE 2549+00

MATCH LINE 2560+25

USH 12/18 EB

SLOPE INTERCEPT, TYP

STA 2545+00 - STA 2549+00, RT
CLEARING AND GRUBBING REQUIRED

STA 2549+00 - STA 2560+00, RT
CLEARING AND GRUBBING COMPLETED IN PROJECT 1007-12-74

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	REMOVALS	SHEET 31	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0211_RM.DWG
LAYOUT NAME - 01

PLOT DATE : 9/24/2019 4:00 PM PLOT BY : KYLE CORNELIUS PLOT NAME : PLOT SCALE : 1 IN:100 FT

2

REMOVAL PLAN LEGEND

- REMOVING ASPHALTIC SURFACE
- REMOVING PAVEMENT
- REMOVING STORM SEWER
- REMOVING GUARDRAIL
- CLEARING AND GROUBBING
- REMOVING DELINEATORS & MARKERS

USH 12/18 WB

100'XWB'

102'XEB'

102'XWB'

IH 39 SB

NB TO WB RAMP

18'XL'

22'XL'

FOXL'

MATCH LINE 2560+25

MATCH LINE 2575+00

ABANDONING CULVERT PIPES

ABANDONING SEWER

ABANDONING SEWER

2562 2564 2566 2568 2570 2572 2574

SLOPE INTERCEPT, TYP

STA 2560+00 - STA 2567+00, RT
CLEARING AND GRUBBING REQUIRED

STA 2569+00 - STA 2571+00, RT
CLEARING AND GRUBBING REQUIRED

STA 2572+00 - STA 2579+00, RT
CLEARING AND GRUBBING REQUIRED

STA 2576+00 - STA 2577+00, LT
CLEARING AND GRUBBING REQUIRED

SB TO WB RAMP

FEMRITE DR

IH 39 SB

MATCH LINE 2575+00

2576 2578 2580 2582 2584 2586 2588 2590

END PROJECT 1007-12-78
STA 2584+00.00

SLOPE INTERCEPT, TYP

IH 39 NB

STA 2573+00 - STA 2579+00, RT
CLEARING AND GRUBBING REQUIRED

STA 2580+00 - STA 2581+00, RT
CLEARING AND GRUBBING REQUIRED

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	REMOVALS	SHEET 32	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0211_RM.DWG
LAYOUT NAME - 02

PLOT DATE : 9/24/2019 4:00 PM PLOT BY : KYLE CORNELIUS PLOT NAME : PLOT SCALE : 1 IN:100 FT

REMOVAL PLAN LEGEND

REMOVING ASPHALTIC SURFACE

2

2

84'XEB'

86'XEB'

88'XEB'

90'XEB'

USH 12/18 EB

MATCH LINE 90+50'XEB'

SLOPE INTERCEPT, TYP

N

HO

SIGN

BM 755B

92'XEB'

94'XEB'

96'XEB'

MATCH LINE 90+50'XEB'

MATCH LINE 96+50'XEB'

USH 12/18 EB

SLOPE INTERCEPT, TYP

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	REMOVALS	SHEET 33	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0211_RM.DWG
LAYOUT NAME - 03

PLOT DATE : 9/24/2019 4:01 PM PLOT BY : KYLE CORNELIUS PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 42

REMOVAL PLAN LEGEND

- REMOVING ASPHALTIC SURFACE
- REMOVING PAVEMENT
- REMOVING CONCRETE BARRIER
- REMOVING STORM SEWER
- REMOVING CURB AND GUTTER
- REMOVING GUARDRAIL
- REMOVING INLET
- CLEARING AND GRUBBING
- REMOVING DELINEATORS & MARKERS

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	REMOVALS	SHEET 34	E

2

REMOVAL PLAN LEGEND

- REMOVING ASPHALTIC SURFACE
- REMOVING PAVEMENT
- REMOVING STORM SEWER
- REMOVING GUARDRAIL
- CLEARING AND GRUBBING
- REMOVING DELINEATORS & MARKERS

N

WB TO SB RAMP

POST

MH

USH 12/18 WB

92'XWB'

94'XWB'

96'XWB'

98'X

MATCH LINE 98+00'XWB'

2

IH 39 SB

2566

POST

MH

INL

W

100'XWB'

102'XWB'

104'XWB'

SLOPE INTERCEPT, TYP

ABANDONING SEWER

IH 39 NB

MATCH LINE 98+00'XWB'

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	REMOVALS	SHEET 35	E

2

REMOVAL PLAN LEGEND

- REMOVING PAVEMENT
- REMOVING STORM SEWER
- REMOVING GUARDRAIL
- CLEARING AND GRUBBING
- REMOVING DELINEATORS & MARKERS

N

2574

2572

2570

IH 39 NB

IH 39 SB

NB TO WB RAMP

20'XL'

22'XL'

18'XL'

24'XL'

ABANDONING SEWER

SLOPE INTERCEPT, TYP

RIPRAP

RIPRAP

POST

POST

INL

INL

INL

HW

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	REMOVALS	SHEET 36	E

2

2

PLAN DETAIL LEGEND

SS01 SINGLE SLOPE PARAPET 42SS MODIFIED (SEE STRUCTURE PLANS)

ATC

IH 39 SB WORK IS DONE BY OTHERS
UNDER PROJECT ID 1007-12-75

FLINT HILLS RESOURCES

DELINEATED WETLANDS, TYP

WORK BY OTHERS

EB TO SB RAMP

IH 39 SB

BEGIN RETAINING WALL R-13-334
STA 2533+97.70

RL 'TSB'

2531'TSB' 2532'TSB' 2533'TSB' 2534'TSB' 2535'TSB' 2536'TSB'

+97.70
-13.48' LT

+97.70
-5.50' LT

SS01

7.98'

5.5'

2531 2532 2533 2534 2535 2536

RL

PROPOSED IH 39 NB

EDGE OF SELECT CRUSHED MATERIAL, TYP

MATCH LINE 2536+25

BEGIN PROJECT 1007-12-78
STA 2533+97.70

MG&E

WISDOT - ITS

SLOPE INTERCEPT, TYP

EXISTING IH 39 NB

EXISTING R/W, TYP

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	PLAN DETAILS - IH 39	SHEET 37	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0212_PD.DWG
LAYOUT NAME - 01

PLOT DATE : 9/24/2019 5:15 PM PLOT BY : KYLE CORNELIUS PLOT NAME : PLOT SCALE : 1 IN:40 FT

2

2

ATC

EXISTING R/W, TYP

MG&E

DELINEATED WETLANDS, TYP

POST

IH 39 SB WORK IS DONE BY OTHERS
UNDER PROJECT ID 1007-12-75

POST

WORK BY OTHERS

WORK BY OTHERS

EB TO SB RAMP

+77.60'TSB'
-5.43' LT

BEGIN CONSTRUCTION
STA 2540+77.60'TSB'

+77.60'TSB'
0.00'

VARIES
5.4'-14.7'

AP67

2541'TSB'

2542'TSB'

RETAINING WALL R-13-334
(SEE STRUCTURE PLANS)

RL 'TSB'

IH 39 SB

2537'TSB'

2538'TSB'

2539'TSB'

2540'TSB'

867.76
867.17
867.75
867.16
867.74
867.15
867.72
867.13
867.70
867.11
867.69
867.10
867.67
867.08

CP12

10'

4'

+77.60'TSB'
14.00' RT

SS01

PU06

CB56

7.98'

5.5'

2537
2538
2539
2540
2541
2542

RL

PROPOSED IH 39 NB

AG02

PIPE UNDERDRAIN TO BE INSTALLED
BELOW CONCRETE BARRIER AS
SHOWN IN TYPICAL SECTIONS

MATCH LINE 2536+25

MATCH LINE 2542+25

EDGE OF SELECT CRUSHED MATERIAL, TYP

SUBGRADE SHOULDER POINT, TYP

SLOPE INTERCEPT, TYP

EXISTING IH 39 NB

POST

PLAN DETAIL LEGEND

AG02	BASE AGGREGATE DENSE 1 1/4-INCH
AP67	6.75-INCH HMA PAVEMENT
CB56	CONCRETE BARRIER TYPE S56C (ROADSIDE RETAINING WALL)
CP12	CONCRETE PAVEMENT 12-INCH
PU06	PIPE UNDERDRAIN 6-INCH
SS01	SINGLE SLOPE PARAPET 42SS MODIFIED (SEE STRUCTURE PLANS)

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	PLAN DETAILS - IH 39	SHEET 38	E

2

EB TO SB RAMP

EB TO SB RAMP WORK IS DONE BY
OTHERS UNDER PROJECT ID 1007-12-75

BORE AND JACK CULVERT PIPE
SEE CONSTRUCTION DETAIL

IH 39 SB

RETAINING WALL R-13-334
(SEE STRUCTURE PLANS)

RL 'TSB'

AP67

VARIES
5.4'-14.7'

2543'TSB' 2544'TSB' 2545'TSB' 2546'TSB' 2547'TSB' 2548'TSB'

867.66 867.64 867.61 867.60 867.58 867.56 867.55 867.53 867.52 867.51 867.53 867.56 867.62 867.70 867.79 867.91 868.05 868.21 868.39 868.59 868.81 869.05 869.32
867.07 867.05 867.04 867.02 867.01 866.99 866.97 866.96 866.94 866.93 866.92 866.94 866.97 867.03 867.11 867.20 867.32 867.46 867.62 867.80 868.00 868.22 868.46 868.73

CP12

CB56

PU06

SS01

10'

4'

7.98'

5.5'

2543 2544 2545 2546 2547 2548

PIPE UNDERDRAIN TO BE INSTALLED
BELOW CONCRETE BARRIER AS
SHOWN IN TYPICAL SECTIONS

RL

PROPOSED IH 39 NB

AG02

MATCH LINE 2542+25

MATCH LINE 2548+25

EDGE OF SELECT CRUSHED MATERIAL, TYP

SUBGRADE SHOULDER POINT, TYP

SLOPE INTERCEPT, TYP

DELINEATED WETLANDS, TYP

PLAN DETAIL LEGEND

AG02	BASE AGGREGATE DENSE 1 1/4-INCH	CP12	CONCRETE PAVEMENT 12-INCH
AP67	6.75-INCH HMA PAVEMENT	PU06	PIPE UNDERDRAIN 6-INCH
CB56	CONCRETE BARRIER TYPE S56C (ROADSIDE RETAINING WALL)	SS01	SINGLE SLOPE PARAPET 42SS MODIFIED (SEE STRUCTURE PLANS)

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	PLAN DETAILS - IH 39	SHEET 39	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0212_PD.DWG
LAYOUT NAME - 03

PLOT DATE : 9/24/2019 5:16 PM PLOT BY : KYLE CORNELIUS PLOT NAME : PLOT SCALE : 1 IN:40 FT

2

2

PLAN DETAIL LEGEND

AG02	BASE AGGREGATE DENSE 1 1/4-INCH
AP67	6.75-INCH HMA PAVEMENT
CB56	CONCRETE BARRIER TYPE S56C (ROADSIDE RETAINING WALL)
CP12	CONCRETE PAVEMENT 12-INCH
PU06	PIPE UNDERDRAIN 6-INCH
SS01	SINGLE SLOPE PARAPET 42SS MODIFIED (SEE STRUCTURE PLANS)

N

POST

IH 39 SB

VARIES 5.4'-14.7'

RL 'TSB'

AP67

CP12

CB56

10'

4'

2549'TSB' 2550'TSB' 2551'TSB' 2552'TSB' 2553'TSB' 2554'TSB'

869.60 869.01 869.90 869.31 870.23 869.64 870.57 869.98 870.94 870.35 871.32 870.73 871.73 871.14 872.15 871.56 872.60 872.01 873.07 872.48 873.56 872.97 874.07 873.48 874.60 874.01 875.15 874.56 875.71 875.12 876.27 875.68 876.83 876.24 877.39 876.80 877.95 877.36 878.50 877.91 879.03 878.44 879.55 878.96 880.06 879.47 880.54 879.95 881.02 880.43

PIPE UNDERDRAIN TO BE INSTALLED BELOW CONCRETE BARRIER AS SHOWN IN TYPICAL SECTIONS

PU06

END RETAINING WALL R-13-334
STA 2551+00.00

+00.00
-13.48' LT

SS01

7.98'

5.5'

+00.00
-5.50' LT

2549 2550 2551 2552 2553 2554

RL

PROPOSED IH 39 NB

AG02

MATCH LINE 2548+25

MATCH LINE 2554+25

EDGE OF SELECT CRUSHED MATERIAL, TYP

SUBGRADE SHOULDER POINT, TYP

DELINEATED WETLANDS, TYP

SLOPE INTERCEPT, TYP

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	PLAN DETAILS - IH 39	SHEET 40	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0212_PD.DWG
LAYOUT NAME - 04

PLOT DATE : 9/24/2019 5:17 PM PLOT BY : KYLE CORNELIUS PLOT NAME : PLOT SCALE : 1 IN:40 FT

RIPRAP

SB TO EB RAMP

EXISTING BRIDGE STRUCTURE
B-13-466 TO REMAIN

EXISTING SIGN STRUCTURE
S-13-136 TO REMAIN

USH 12/18 EB

IH 39 SB

END FULL SUPER

LOW SHOULDER MATCH

REVERSE CROWN

END CONSTRUCTION
STA 2559+68.82'TSB'

VARIES
5.4"-14.7"

AP67

RL 'TSB'

RL 'XSB'

1162'XSB'

2555'TSB' 2556'TSB' 2557'TSB' 2558'TSB' 2559'TSB'

881.47 881.91 882.34 882.75 883.14 883.52 883.88 884.23 884.56 884.88 885.18 885.47 885.74 885.99 886.23 886.45 886.66 886.85 887.03 887.19 887.30

880.88 881.32 881.65 882.06 882.45 882.83 883.20 883.54 883.87 884.19 884.49 884.78 885.11 885.43 885.73 885.98 886.19 886.38 886.44 886.53 886.66

10' 4' 11.67' 2.67'

CP12 CB42 PU06 CB56

+00.00'TSB' 10.00' RT

+24.50'TSB' 11.67' RT

+53.82'TSB' -12.90' LT

+53.82'TSB' 0.00'

+56.16'TSB' 16.58' RT

+68.82'TSB' 16.00' RT

+86.16'TSB' 12.00' RT

+36.16'TSB' 15.71' RT

CONCRETE BARRIER HEIGHT TRANSITION (56" TO 42"). SEE SDD "42-INCH TO 56-INCH SINGLE SLOPE BARRIER HEIGHT TRANSITION" (14B39E)

PIPE UNDERDRAIN TO BE INSTALLED BELOW CONCRETE BARRIER AS SHOWN IN TYPICAL SECTIONS

CONCRETE BARRIER TRANSITION, (SEE CONSTRUCTION DETAIL)

2555 2556 2557 2558 2559 2560

RL

AG02

PROPOSED IH 39 NB

STRUCTURAL APPROACH SLAB

MATCH LINE 2554+25

MATCH LINE 2560+25

MGS GUARDRAIL TO BE INSTALLED WITH FUTURE PROJECT

+76.52 48.00' RT

+21.52 49.00' RT

EDGE OF SELECT CRUSHED MATERIAL, TYP

SUBGRADE SHOULDER POINT, TYP

CONCRERTE SURFACE DRAINS DROP INLET (SEE CONSTRUCTION DETAIL)

BRIDGE STRUCTURE B-13-729
(SEE STRUCTURE PLANS)

RETAINING WALL R-13-348
(SEE STRUCTURE PLANS)

WISDOT - ITS

SLOPE INTERCEPT, TYP

NOTE: SEE "PLAN DETAILS - USH 12/18" FOR USH 12/18 DETAILS

PLAN DETAIL LEGEND

AG02	BASE AGGREGATE DENSE 1 1/4-INCH
AP67	6.75-INCH HMA PAVEMENT
CB42	CONCRETE BARRIER TYPE S42
CB56	CONCRETE BARRIER TYPE S56C (ROADSIDE RETAINING WALL)
CP12	CONCRETE PAVEMENT 12-INCH
PU06	PIPE UNDERDRAIN 6-INCH

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	PLAN DETAILS - IH 39	SHEET 41	E

2

PLAN DETAIL LEGEND	
AG02	BASE AGGREGATE DENSE 1 1/4-INCH
CB98	CONCRETE BARRIER TEMPORARY PRECAST INSTALLED

BORE AND JACK CULVERT PIPE
SEE CONSTRUCTION DETAIL

WISDOT - ITS

EXISTING BRIDGE STRUCTURE
B-13-466 TO REMAIN

EXISTING BRIDGE STRUCTURE
B-13-464 TO REMAIN

IH 39 SB

WB TO SB RAMP

RL 'XSB'

1163'XSB' 1164'XSB' 1165'XSB' 1166'XSB' 1167'XSB' 1168'XSB'

STORM SEWER ITEMS
TO BE INSTALLED WITH
FUTURE PROJECT

+83.21'XSB'
29.50' RT

+87.00'XSB'
9.00' RT

CB98

+13.50'XSB'
9.00' RT

+17.77'XSB'
29.50' RT

REMOVE EXISTING CMCP AND REPLACE
WITH 12" UNPERFORATED PIPE
UNDERDRAIN FOR TEMPORARY
DRAINAGE (SEE CONSTRUCTION DETAIL).
PERMANENT INLET AND PIPE TO BE
INSTALLED WITH FUTURE PROJECT.

STORM SEWER ITEMS TO BE
INSTALLED WITH FUTURE PROJECT

CB98

+59.10'XSB'
29.50' RT

CONCRETE SURFACE DRAINS DROP INLET
(SEE CONSTRUCTION DETAIL)

+69.54
-14.33' LT

MATCH LINE 2560+25

2561 2562 2563 2564 2565 2566

MATCH LINE 2566+25

STRUCTURAL
APPROACH SLAB

RL

PROPOSED IH 39 NB

AG02

MGS GUARDRAIL TO BE INSTALLED
WITH FUTURE PROJECT

STRUCTURAL
APPROACH SLAB

AG02

MGS GUARDRAIL TO
BE INSTALLED WITH
FUTURE PROJECT

EDGE OF SELECT CRUSHED
MATERIAL, TYP

SUBGRADE SHOULDER
POINT, TYP

CONCRETE SURFACE DRAINS DROP INLET
(SEE CONSTRUCTION DETAIL)

BRIDGE STRUCTURE B-13-730
(SEE STRUCTURE PLANS)

BRIDGE STRUCTURE B-13-729
(SEE STRUCTURE PLANS)

RETAINING WALL R-13-349
(SEE STRUCTURE PLANS)

RETAINING WALL R-13-350
(SEE STRUCTURE PLANS)

RETAINING WALL R-13-351
(SEE STRUCTURE PLANS)

NOTE: SEE "PLAN DETAILS - USH 12/18"
FOR USH 12/18 DETAILS

SLOPE INTERCEPT, TYP

NOTE: SEE "PLAN DETAILS - USH 12/18"
FOR USH 12/18 DETAILS

USH 12/18 WB

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	PLAN DETAILS - IH 39	SHEET 42	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0212_PD.DWG
LAYOUT NAME - 06
PLOT DATE : 9/27/2019 11:33 AM
PLOT BY : KYLE CORNELIUS
PLOT NAME :
PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 42

2

2

PLAN DETAIL LEGEND	
AG02	BASE AGGREGATE DENSE 1 1/4-INCH
CB98	CONCRETE BARRIER TEMPORARY PRECAST INSTALLED

N

POST

POST

POST

WB TO SB RAMP

WISDOT - ITS

MH

EXISTING BRIDGE STRUCTURE
B-13-461 TO REMAIN

INL

INL

IH 39 SB

RL 'XSB'

1169'XSB'

1170'XSB'

1171'XSB'

1172'XSB'

1173'XSB'

1174'XSB'

+64.00'XSB'
9.00' RT

CB98

+77.50'XSB'
9.00' RT

+83.63'XSB'
29.50' RT

STORM SEWER ITEMS TO BE
INSTALLED WITH FUTURE PROJECT

REMOVE EXISTING CMCP AND REPLACE WITH
12" UNPERFORATED PIPE UNDERDRAIN FOR
TEMPORARY DRAINAGE (SEE CONSTRUCTION
DETAIL). PERMANENT INLET AND PIPE TO BE
INSTALLED WITH FUTURE PROJECT.

MATCH LINE 2566+25

2567

2568

2569

2570

2571

2572

MATCH LINE 2572+25

RL

PROPOSED IH 39 NB

AG02

STRUCTURAL
APPROACH SLAB

MGS GUARDRAIL TO BE INSTALLED
WITH FUTURE PROJECT

EDGE OF SELECT CRUSHED MATERIAL, TYP

SUBGRADE SHOULDER POINT, TYP

RETAINING WALL R-13-352
(SEE STRUCTURE PLANS)

BRIDGE STRUCTURE B-13-731
(SEE STRUCTURE PLANS)

SLOPE INTERCEPT, TYP

DELINEATED WETLANDS, TYP

NOTE: SEE "PLAN DETAILS
- NB TO WB RAMP" FOR
NB TO WB RAMP DETAILS

NB TO WB RAMP

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	PLAN DETAILS - IH 39	SHEET 43	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0212_PD.DWG
LAYOUT NAME - 07

PLOT DATE : 9/27/2019 11:34 AM PLOT BY : KYLE CORNELIUS PLOT NAME : PLOT SCALE : 1 IN:40 FT

PLAN DETAIL LEGEND	
AG02	BASE AGGREGATE DENSE 1 1/4-INCH

NOTE: SEE "PLAN DETAILS - NB TO WB RAMP" FOR NB TO WB RAMP DETAILS

EXISTING BRIDGE STRUCTURE B-13-461 TO REMAIN

POST

RL 'XSB'

IH 39 SB

1175'XSB' 1176'XSB' 1177'XSB' 1178'XSB' 1179'XSB' 1180'XSB'

NB TO WB RAMP

CONCRETE SURFACE DRAINS DROP INLET (SEE CONSTRUCTION DETAIL)

MATCH LINE 2572+25

2573 2574 2575 2576 2577 2578

MATCH LINE 2578+25

RL

PROPOSED IH 39 NB

STRUCTURAL APPROACH SLAB

AG02

CONCRETE SURFACE DRAINS DROP INLET (SEE CONSTRUCTION DETAIL)

+09.61
49.00' RT

EDGE OF SELECT CRUSHED MATERIAL, TYP

SUBGRADE SHOULDER POINT, TYP

BRIDGE STRUCTURE B-13-731 (SEE STRUCTURE PLANS)

SLOPE INTERCEPT, TYP

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	PLAN DETAILS - IH 39	SHEET 44	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0212_PD.DWG
LAYOUT NAME - 08

PLOT DATE : 9/24/2019 5:19 PM PLOT BY : KYLE CORNELIUS PLOT NAME : PLOT SCALE : 1 IN:40 FT

PLAN DETAIL LEGEND	
AG02	BASE AGGREGATE DENSE 1 1/4-INCH

SB TO WB RAMP

IH 39 SB

RL 'XSB'

1181'XSB' 1182'XSB' 1183'XSB' 1184'XSB' 1185'XSB' 1186'XSB'

50'XFD'

INL

INL

EXISTING SIGN STRUCTURE
S-13-135 TO REMAIN

MG&E

CITY OF MADISON

FEMRITE DR

EXISTING BRIDGE STRUCTURE
B-13-462 TO REMAIN

AT&T

MG&E

CHARTER COMMUNICATIONS

WISCONSIN
DOA

+19.01
-13.00' LT

+74.01
-12.00' LT

AT&T

CITY OF MADISON

51'XFD'

MATCH LINE 2578+25

2579 2580 2581 2582 2583 2584

AG02

MGS GUARDRAIL TO BE INSTALLED
WITH FUTURE PROJECT

RL

PROPOSED IH 39 NB

STRUCTURAL
APPROACH SLAB

STRUCTURAL
APPROACH SLAB

END PROJECT 1007-12-78
STA 2584+00.00

+69.67
48.00' RT

EDGE OF SELECT
CRUSHED MATERIAL,
TYP

SUBGRADE
SHOULDER
POINT, TYP

BRIDGE STRUCTURE B-13-732
(SEE STRUCTURE PLANS)

EXISTING BRIDGE STRUCTURE
B-13-463 TO REMAIN

52'XFD'

REMOVE EXISTING CMCP AND REPLACE
WITH 12" UNPERFORATED PIPE
UNDERDRAIN FOR TEMPORARY
DRAINAGE (SEE CONSTRUCTION DETAIL).
PERMANENT INLET AND PIPE TO BE
INSTALLED WITH FUTURE PROJECT.

NOTE: SEE "PLAN DETAILS - FEMRITE DR"
FOR FEMRITE DR DETAILS

SLOPE INTERCEPT, TYP

EXISTING IH 39 NB

EB TO NB RAMP

53'XFD'

INL

POST

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	PLAN DETAILS - IH 39	SHEET 45	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0212_PD.DWG
LAYOUT NAME - 09

PLOT DATE : 9/24/2019 5:20 PM PLOT BY : KYLE CORNELIUS PLOT NAME : PLOT SCALE : 1 IN:40 FT

2

PLAN DETAIL LEGEND

AG01	BASE AGGREGATE DENSE 3/4-INCH
AP5S	5.0-INCH HMA PAVEMENT SHOULDER
SW01	SAWING ASPHALT

N

USH 12/18 WB

85'XWB' 86'XWB' 87'XWB'

DELINEATED WETLANDS, TYP

ATC

85'XEB' 86'XEB' 87'XEB' 88'XEB' 89'XEB' 90'X

MATCH LINE 90+00'XEB'

BEGIN CONSTRUCTION
STA 87+38.36'XEB'

USH 12/18 EB

+38.36'XEB'
38.00' RT

+38.36'XEB'
44.00' RT

+38.36'XEB'
46.00' RT

SW01

AP5S

AG01

6'

2'

SW01

REMOVE REMAINING TEMPORARY
WIDENING ASPHALT

SLOPE INTERCEPT, TYP

NOTE: SEE TRAFFIC CONTROL
SHEETS FOR WIDENING DETAILS

POST POST

2

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	PLAN DETAILS - USH 12/18	SHEET 46	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0212_PD_US-12.DWG
LAYOUT NAME - 01

PLOT DATE : 9/25/2019 12:43 PM PLOT BY : KYLE CORNELIUS PLOT NAME : PLOT SCALE : 1 IN:40 FT

2

PLAN DETAIL LEGEND	
AG01	BASE AGGREGATE DENSE 3/4-INCH
AP5S	5.0-INCH HMA PAVEMENT SHOULDER
SW01	SAWING ASPHALT

N

MATCH LINE 90+00'XEB'

MATCH LINE STA 95+50'XEB'

SIGN

BM 755B

EXISTING SIGN STRUCTURE
S-13-151 TO REMAIN

DELINEATED WETLANDS, TYP

91'XEB'

92'XEB'

93'XEB'

94'XEB'

95'XEB'

USH 12/18 EB

+12.04'XEB'
44.00' RT

+12.04'XEB'
46.00' RT

SW01

AP5S

AG01

6"

2"

REMOVE REMAINING TEMPORARY
WIDENING ASPHALT

SLOPE INTERCEPT, TYP

NOTE: SEE TRAFFIC CONTROL
SHEETS FOR WIDENING DETAILS

ATC

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	PLAN DETAILS - USH 12/18	SHEET 47	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0212_PD_US-12.DWG
LAYOUT NAME - 02

PLOT DATE : 9/25/2019 12:44 PM PLOT BY : KYLE CORNELIUS PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

PLAN DETAIL LEGEND

AG01	BASE AGGREGATE DENSE 3/4-INCH	MGS1	MGS GUARDRAIL 3
AP4S	4.0-INCH HMA PAVEMENT SHOULDER	MGS2	MGS THRIE BEAM TRANSITION
AP5S	5.0-INCH HMA PAVEMENT SHOULDER	MGS3	MGS GUARDRAIL TERMINAL EAT
CB42	CONCRETE BARRIER TYPE S42	SW01	SAWING ASPHALT
CG01	CONCRETE CURB AND GUTTER 30-INCH TYPE A	SW02	SAWING CONCRETE

N

IH 39 SB

3'XSB'

EXISTING BRIDGE STRUCTURE
B-13-466 TO REMAIN

RETAINING WALL R-13-349
(SEE STRUCTURE PLANS)

MATCH LINE STA 95+50'XEB'

MATCH LINE STA 101+40'XEB'

96'XEB' 97'XEB' 98'XEB' 99'XEB' 100'XEB' 101'XEB'

'XEB' RL

SW01 AP5S

+92.24'XEB' -4.00' LT

+92.24'XEB' 0.78' RT

4.78'

8'

MGS2 AG01

+28.90'XEB' -7.15' LT

SEE SDD "MIDWEST GUARDRAIL SYSTEM (MGS) THRIE BEAM TRANSITION" (14B45-5f) FOR THRIE BEAM CONNECTION DETAILS

GUARDRAIL POSTS TO BE CORED THROUGH HMA PAVEMENT AFTER STAGE 2, SEE SDD "GUARDRAIL MOW STRIP" (14B28) (INCIDENTAL TO GUARDRAIL INSTALLATION)

USH 12/18 EB

+66.08'XEB' 44.00' RT
+66.08'XEB' 46.00' RT
+75.00'XEB' 38.00' RT
+79.49'XEB' 44.00' RT
+78.49'XEB' 46.00' RT
+78.49'XEB' 51.21' RT
+79.49'XEB' 52.00' RT
+32.66'XEB' 38.00' RT
+32.66'XEB' 39.96' RT

6' 2' 4' 12'

SW01 AP5S AG01

+42.07'XN' -22.00' LT
+42.07'XN' -21.00' LT
+42.09'XN' -17.07' LT

AP4S

25'XN' 26'XN'

NOTE: SEE TRAFFIC CONTROL SHEETS FOR WIDENING DETAILS

REMOVE REMAINING TEMPORARY WIDENING ASPHALT

SB TO EB RAMP

24'XN'

'XN' RL

+68.16'XN' 3.00' RT

+73.16'XN' 10.00' RT

+73.16'XN' 16.00' RT

MGS3

+98.16'XN' 13.33' RT

+23.16'XN' 8.00' RT

+23.16'XN' 12.00' RT

MGS1

+32.66'XEB' 57.00' RT

+32.77'XEB' 69.00' RT

+32.74'XEB' 65.00' RT

AG01 AP4S MGS2

+50.03'XEB' 64.99' RT

+50.06'XEB' 66.65' RT

CB42

+30.03'XEB' 63.39' RT

+30.06'XEB' 65.05' RT

WISDOT ITS

AT EXISTING EDGEDRAIN, TIE IN AND OUTFALL AT LOW POINT, SEE CONSTRUCTION DETAIL

BEGIN CONSTRUCTION
STA 22+40.00'XN'

SW02 AG01

23'XN'

+93.16'XN' 4.00' RT
+70.92'XN' 3.00' RT
+70.92'XN' 4.00' RT
+63.00'XN' 3.00' RT
+63.00'XN' 4.00' RT

+54.91'XN' 0.00'

+40.00'XN' 0.00'

SW02 CG01

+40.00'XN' 2.50' RT

22'XN'

ASPHALTIC FLUMES, SEE SDD "CONCRETE SURFACE DRAINS AND ASPHALTIC FLUMES (08D4)

SLOPE INTERCEPT, TYP

DELINEATED WETLANDS, TYP

NOTE: SEE "PLAN DETAILS - IH 39" FOR IH 39 DETAILS

1161'XSB'

1160'XSB'

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	PLAN DETAILS - USH 12/18	SHEET 48	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0212_PD_US-12.DWG
LAYOUT NAME - 03
PLOT DATE : 9/25/2019 12:44 PM PLOT BY : KYLE CORNELIUS PLOT NAME : PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 42

PLAN DETAIL LEGEND

AG01	BASE AGGREGATE DENSE 3/4-INCH	MGS1	MGS GUARDRAIL 3
AP4S	4.0-INCH HMA PAVEMENT SHOULDER	MGS2	MGS THRIE BEAM TRANSITION
AP5S	5.0-INCH HMA PAVEMENT SHOULDER	SW01	SAWING ASPHALT
CP10	CONCRETE PAVEMENT 10-INCH	SW02	SAWING CONCRETE

N

PROPOSED IH 39 NB

EXISTING IH 39 NB

NOTE: SEE TRAFFIC CONTROL SHEETS FOR ADDITIONAL DETAILS

GUARDRAIL POSTS TO BE CORED THROUGH HMA PAVEMENT AFTER STAGE 2, SEE SDD "GUARDRAIL MOW STRIP" (14B28) (INCIDENTAL TO GUARDRAIL INSTALLATION)

BRIDGE STRUCTURE B-13-729 (SEE STRUCTURE PLANS)

RETAINING WALL R-13-349 (SEE STRUCTURE PLANS)

SEE CONSTRUCTION DETAIL

EXISTING BRIDGE STRUCTURE B-13-467 TO REMAIN

EXISTING SIGN STRUCTURE S-13-152 TO REMAIN

SEE SDD "MIDWEST GUARDRAIL SYSTEM (MGS) THRIE BEAM TRANSITION" (14B45-5d) FOR THRIE BEAM CONNECTION DETAILS

+50.00'XEB' -10.00' LT

+18.66'XEB' -10.00' LT

+68.92'XEB' -18.00' LT

+84.28'XEB' -27.49' LT

+78.61'XEB' -31.97' LT

+78.61'XEB' -27.85' LT

+58.48'XEB' -27.46' LT

+12.24'XEB' -26.69' LT

+12.24'XEB' -23.92' LT

102'XEB'

103'XEB'

104'XEB'

105'XEB'

106'XEB'

107'XEB'

'XEB' RL

EB TO NB RAMP

USH 12/18 EB

STA BACK = 103+64.06

STA AHEAD = 103+52.06

SB TO EB RAMP

+20.00'XEB'

+30.00'XEB'

+82.66'XEB' 26.00' RT

+82.66'XEB' 36.00' RT

+82.74'XEB' 44.00' RT

+82.78'XEB' 48.00' RT

+58.10'XEB' 43.55' RT

+58.12'XEB' 48.00' RT

+42.10'XEB' 42.41' RT

+42.13'XEB' 44.00' RT

+72.13'XEB' 41.00' RT

AT EXISTING EDGEDRAIN, TIE IN AND OUTFALL AT LOW POINT, SEE CONSTRUCTION DETAIL

WISDOT ITS

INTEGRAL CONCRETE BARRIER, (SEE STRUCTURE PLANS)

SLOPE INTERCEPT, TYP

DELINEATED WETLANDS, TYP

RETAINING WALL R-13-348 (SEE STRUCTURE PLANS)

WEAK

NOTE: SEE "PLAN DETAILS - IH 39" FOR IH 39 DETAILS

MATCH LINE STA 101+40'XEB'

MATCH LINE STA 107+50'XEB'

1160'XNB'

1159'XNB'

1158'XNB'

2561

2560

2559

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	PLAN DETAILS - USH 12/18	SHEET 49	E

2

2

PLAN DETAIL LEGEND	
AG01	BASE AGGREGATE DENSE 3/4-INCH
AP4S	4.0-INCH HMA PAVEMENT SHOULDER
CP10	CONCRETE PAVEMENT 10-INCH
SW01	SAWING ASPHALT
SW02	SAWING CONCRETE

N

MATCH LINE STA 107+50'XEB'

EB TO NB RAMP

END CONSTRUCTION
STA 113+33.53'XEB'

108'XEB' 109'XEB' 110'XEB' 111'XEB' 112'XEB' 113'XEB'

'XEB' RL

USH 12/18 EB

+29.63'XEB'
26.00' RT

+32.66'XEB'
36.00' RT

SB TO EB RAMP

SW02 CP10 10'

AP4S 3' AG01 5'

+32.74'XEB'
41.00' RT

+32.79'XEB'
44.00' RT

WISDOT ITS

SLOPE INTERCEPT, TYP

+72.66'XEB'
28.00' RT

4' 2'

+32.66'XEB'
26.00' RT

+32.66'XEB'
28.00' RT

6'

SW01

+33.53'XEB'
26.00' RT

+33.53'XEB'
32.00' RT

+33.53'XEB'
34.00' RT

2'

+02.74'XEB'
32.00' RT

+32.79'XEB'
34.00' RT

WISDOT - ITS

NB TO EB RAMP

DELINEATED WETLANDS, TYP

EXISTING R/W, TYP

MH FO TRANSFORMER POST CP 702B

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	PLAN DETAILS - USH 12/18	SHEET 50	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0212_PD_US-12.DWG
LAYOUT NAME - 05
PLOT DATE : 9/25/2019 12:45 PM PLOT BY : KYLE CORNELIUS PLOT NAME : PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 42

2

PLAN DETAIL LEGEND	
AP5S	5.0-INCH HMA PAVEMENT SHOULDER
SW01	SAWING ASPHALT

N

WB TO SB RAMP

BEGIN CONSTRUCTION
STA 90+67.07'XFD'

+67.07'XWB'
-32.00' LT
SW01
+67.07'XWB'
-26.00' LT

6'
2'

AP5S
AG01

USH 12/18 WB

90'XWB' 91'XWB' 92'XWB' 93'XWB' 94'XWB' 95'XWB'

+67.07'XWB'
0.00'
SW01
+67.07'XWB'
4.00' RT

4'
2'

AP5S
AG01

MATCH LINE 95+50'XWB'

ATC

DELINEATED WETLANDS, TYP

POST
TNEL
FO
OH

2

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	PLAN DETAILS - USH 12/18	SHEET 51	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0212_PD_US-12.DWG
LAYOUT NAME - 06

PLOT DATE : 9/25/2019 12:46 PM PLOT BY : KYLE CORNELIUS PLOT NAME : PLOT SCALE : 1 IN:40 FT

2

PLAN DETAIL LEGEND	
AG01	BASE AGGREGATE DENSE 3/4-INCH
AP5S	5.0-INCH HMA PAVEMENT SHOULDER
MGS1	MGS GUARDRAIL 3
MGS2	MGS THRIE BEAM TRANSITION

N

MATCH LINE 95+50'XWB'

MATCH LINE STA 101+50'XWB'

WB TO SB RAMP

USH 12/18 WB

WB TO SB RAMP

IH 39 SB

PROPOSED IH 39 NB

POST

MH

FO

INL

+15.96'XWB' -45.33' LT

+14.15'XWB' -40.92' LT

+19.45'XWB' -32.00' LT

+97.35'XWB' -28.00' LT

+97.36'XWB' -26.00' LT

+80.26'XWB' 3.00' RT

+80.26'XWB' 4.00' RT

+57.79'XWB' 3.00' RT

+57.79'XWB' 10.00' RT

+55.43'XWB' -38.00' LT

+55.57'XWB' -36.50' LT

+55.66'XWB' -30.25' LT

+44.77'XWB' -28.00' LT

96'XWB' 97'XWB' 98'XWB' 99'XWB' 100'XWB' 101'XWB'

1168'XSB' 1167'XSB' 1166'XSB' 1165'XSB'

2566 2565 2564 2563

AG01 AP5S MGS1 MGS2

6" 2" 4' 2' 3'

BRIDGE STRUCTURE B-13-730
(SEE STRUCTURE PLANS)

EXISTING BRIDGE STRUCTURE
B-13-464 TO REMAIN

SEE SDD "MIDWEST GUARDRAIL SYSTEM (MGS) THRIE BEAM TRANSITION" (14B45-5d) FOR THRIE BEAM CONNECTION DETAILS

GUARDRAIL POSTS TO BE CORED THROUGH HMA PAVEMENT AFTER STAGE 2, SEE SDD "GUARDRAIL MOW STRIP" (14B28) (INCIDENTAL TO GUARDRAIL INSTALLATION)

SLOPE INTERCEPT, TYP

DELINEATED WETLANDS, TYP

WISDOT - ITS

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	PLAN DETAILS - USH 12/18	SHEET 52	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0212_PD_US-12.DWG
LAYOUT NAME - 07

PLOT DATE : 9/25/2019 12:47 PM PLOT BY : KYLE CORNELIUS PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

PLAN DETAIL LEGEND

AG01	BASE AGGREGATE DENSE 3/4-INCH
AP5S	5.0-INCH HMA PAVEMENT SHOULDER
MGS1	MGS GUARDRAIL 3
MGS3	MGS GUARDRAIL TERMINAL EAT
SW01	SAWING ASPHALT
SW02	SAWING CONCRETE

N

NB TO WB RAMP

27'XL'

1165'XNB'

1164'XNB'

1163'XNB'

1162'XNB'

INL

INL

EXISTING SIGN STRUCTURE
S-13-139 TO REMAIN

EXISTING BRIDGE STRUCTURE
B-13-465 TO REMAIN

BRIDGE STRUCTURE B-13-730
(SEE STRUCTURE PLANS)

RETAINING WALL R-13-351
(SEE STRUCTURE PLANS)

SLOPE INTERCEPT, TYP

SEE CONSTRUCTION DETAIL

MATCH LINE STA 101+50'XWB'

MATCH LINE STA 107+50'XWB'

USH12/18 WB

'XWB' RL

102'XWB'

103'XWB'

104'XWB'

105'XWB'

106'XWB'

107'XWB'

MGS1

AG01

SW01

AP5S

SW02

MGS3

8.5'

4'

1.5'

10.5'

6'

8'

3'

+82.95'XWB'
-39.33' LT

+07.95'XWB'
-42.00' LT

+57.95'XWB'
-34.00' LT

+57.95'XWB'
-38.00' LT

+07.95'XWB'
-36.00' LT

+08.52'XWB'
-37.50' LT

+08.50'XWB'
-36.50' LT

+08.45'XWB'
-31.71' LT

+74.37'XWB'
-34.00' LT

+74.35'XWB'
-32.00' LT

+55.00'XWB'

+65.00'XWB'

+60.31'XWB'
6.00' RT

+60.31'XWB'
10.00' RT

+85.31'XWB'
11.28' RT

+10.31'XWB'
8.00' RT

+10.31'XWB'
14.00' RT

+08.55'XWB'
8.50' RT

+08.50'XWB'
9.50' RT

+08.55'XWB'
3.03' RT

+76.40'XWB'
3.00' RT

+76.40'XWB'
6.00' RT

AT EXISTING EDGEDRAIN, TIE IN
AND OUTFALL AT LOW POINT,
SEE CONSTRUCTION DETAIL

GUARDRAIL POSTS TO BE CORED THROUGH
HMA PAVEMENT AFTER STAGE 2, SEE SDD
"MIDWEST GUARDRAIL SYSTEM (MGS)
THRIE BEAM TRANSITION (14B28)
(INCIDENTAL TO GUARDRAIL INSTALLATION)

NOTE: SEE TRAFFIC CONTROL
SHEETS FOR ADDITIONAL DETAILS

RETAINING WALL R-13-350
(SEE STRUCTURE PLANS)

PROPOSED IH 39 NB

EXISTING IH 39 NB

RIPRAP

NOTE: SEE "PLAN DETAILS - IH 39"
FOR IH 39 DETAILS

2

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	PLAN DETAILS - USH 12/18	SHEET 53	E

2

PLAN DETAIL LEGEND	
AP5S	5.0-INCH HMA PAVEMENT SHOULDER
SW01	SAWING ASPHALT

N

MATCH LINE STA 107+50'XWB'

USH 12/18 WB

AP5S

8'

108'XWB'

109'XWB'

110'XWB'

111'XWB'

112'XWB'

113'XWB'

6'

3'

+13.81'XWB'
-34.00' LT

+13.81'XWB'
-26.00' LT

SW01

END CONSTRUCTION
STA 112+46.26'XWB'

+46.26'XWB'
0.00'

+46.26'XWB'
3.00' RT

+97.65'XWB'
3.00' RT

+97.65'XWB'
6.00' RT

DELINEATED WETLAND, TYP

EB TO NB RAMP

RIPRAP

INL

FO

MH

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	PLAN DETAILS - USH 12/18	SHEET 54	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0212_PD_US-12.DWG
LAYOUT NAME - 09

PLOT DATE : 9/25/2019 12:48 PM PLOT BY : KYLE CORNELIUS PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

PLAN DETAIL LEGEND

AG01	BASE AGGREGATE DENSE 3/4-INCH	MGS3	MGS GUARDRAIL TERMINAL EAT
AP5S	5.0-INCH HMA PAVEMENT SHOULDER	SW01	SAWING ASPHALT
MGS1	MGS GUARDRAIL 3	SW02	SAWING CONCRETE
MGS2	MGS THRIE BEAM TRANSITION		

2

2

N

BRIDGE STRUCTURE B-13-731
(SEE STRUCTURE PLANS)

EXISTING BRIDGE STRUCTURE
B-13-461 TO REMAIN

SEE CONSTRUCTION DETAIL

STA 18+22.46'XL' =
STA 1174+65.50'XSB'

+57.40'XL'
0.00'

MGS2

19'XL'

+57.40'XL'
6.50' RT

+90.00'XL'
6.50' RT

18'XL'

+57.40'XL'
10.00' RT

1'

1'

CONCRETE SWALE
SEE CONSTRUCTION DETAIL

BEGIN CONSTRUCTION
STA 17+75.00'XL'

SEE SDD "MIDWEST GUARDRAIL SYSTEM (MGS) THRIE BEAM TRANSITION (14B45-5d) FOR THRIE BEAM CONNECTION DETAILS

RETAINING WALL R-13-352
(SEE STRUCTURE PLANS)

AT EXISTING EDGEDRAIN, TIE IN AND OUTFALL AT LOW POINT, SEE CONSTRUCTION DETAIL

+10.95'XL'

SW01

+32.91'XL'

SW02

'XL' RL

MGS1

21'XL'

20'XL'

AP5S

AG01

SW01

6'

4'

22'XL'

NB TO WB RAMP

MGS3

23'XL'

+34.93'XL'
6.00' RT

+34.93'XL'
10.00' RT

+59.93'XL'
11.33' RT

+84.93'XL'
6.00' RT

+84.93'XL'
8.00' RT

+84.93'XL'
14.00' RT

+14.93'XL'
3.00' RT

24'XL'

END CONSTRUCTION
STA 24+04.93'XL'

SW01

+04.93'XL'
3.00' RT

+04.93'XL'
6.00' RT

SLOPE INTERCEPT, TYP

DELINEATED
WETLANDS, TYP

RIPRAP

EXISTING IH 39 NB

PROPOSED IH 39 NB

IH 39 SB

INL

INL

2574

2573

2572

2571

2570

1175'XSB'

1174'XSB'

1173'XSB'

1170'XNB'

1169'XNB'

NOTE: SEE "PLAN DETAILS - IH 39"
FOR IH 39 DETAILS

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	PLAN DETAILS - NB TO WB RAMP	SHEET 55	E

PLAN DETAIL LEGEND	
AG01	BASE AGGREGATE DENSE 3/4-INCH
AP52	5.25-INCH HMA PAVEMENT SHOULDER
SW01	SAWING ASPHALT

N

EXISTING R/W, TYP

EXISTING BRIDGE STRUCTURE
B-13-462 TO REMAIN

BRIDGE STRUCTURE B-13-732
(SEE STRUCTURE PLANS)

BEGIN CONSTRUCTION
STA 47+00.00'XFD'

FEMRITE DR

+99.90'XFD'
-29.00' LT

+00.00'XFD'
-28.00' LT

+49.80'XFD'
-18.98' LT

+50.00'XFD'
-18.00' LT

AG01

AP52

SW01

+00.00'XFD'
18.00' RT

+00.00'XFD'
29.00' RT

+00.00'XFD'
30.00' RT

1.5'

1.5'

10'

1'

46'XFD' 47'XFD' 48'XFD' 49'XFD' 50'XFD' 51'XFD'

1186'XSB'

1185'XSB'

1184'XSB'

1183'XSB'

2584

2583

2582

2581

CHARTER COMMUNICATIONS

CITY OF MADISON

AT&T

MG&E

CITY OF MADISON

AT&T

MG&E

STA 50+00.00'XFD' =
STA 1184+51.90'XSB'

STA 51+15.35'XFD' =
STA 2582+55.94

MATCH LINE 51+50'XFD'

WISDOT - ITS

SLOPE INTERCEPT, TYP

WISDOT - ITS

EXISTING SIGN STRUCTURE
S-13-135 TO REMAIN

SB TO WB RAMP

IH 39 SB

PROPOSED IH 39 NB

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	PLAN DETAILS - FEMRITE DR	SHEET 56	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0212_PD_US-12.DWG
LAYOUT NAME - 11

PLOT DATE : 9/25/2019 12:49 PM PLOT BY : KYLE CORNELIUS PLOT NAME : PLOT SCALE : 1 IN:40 FT

2

2

PLAN DETAIL LEGEND	
AG01	BASE AGGREGATE DENSE 3/4-INCH
AP52	5.25-INCH HMA PAVEMENT SHOULDER
SW01	SAWING ASPHALT

N

MATCH LINE 51+50'XFD'

BRIDGE STRUCTURE B-13-732
(SEE STRUCTURE PLANS)

1183'XNB'

INL

POST

EXISTING R/W, TYP

EXISTING BRIDGE STRUCTURE
B-13-463 TO REMAIN

WISDOT - ITS

CHARTER COMMUNICATIONS

CITY OF MADISON

AT&T

+50.01'XFD'
-29.00' LT

+50.00'XFD'
-28.00' LT

AG01

AP52

1'

10'

SLOPE INTERCEPT, TYP

+49.87'XFD'
-23.91' LT

+49.88'XFD'
-22.91' LT

SW01

+49.90'XFD'
-19.39' LT

+99.95'XFD'
-18.00' LT

FEMRITE DR

52'XFD'

53'XFD'

54'XFD'

55'XFD'

56'XFD'

57'XFD'

1182'XNB'

STA 52+32.09'XFD' =
STA 1181+94.72'XNB'

+00.05'XFD'
18.00' RT

+50.10'XFD'
16.61' RT

SW01

+50.12'XFD'
20.29' RT

+50.12'XFD'
21.29' RT

11'

AP52

1'

AG01

+50.00'XFD'
29.00' RT

+50.01'XFD'
30.00' RT

END CONSTRUCTION
STA 56+50.12'XFD'

SIGN

SIGN

SIGN

MG&E

CITY OF MADISON

AT&T

MG&E

1181'XNB'

EXISTING IH 39 NB

EB TO NB RAMP

1070'XNB'

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	PLAN DETAILS - FEMRITE DR	SHEET 57	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0212_PD_US-12.DWG
LAYOUT NAME - 12
PLOT DATE : 9/25/2019 12:50 PM
PLOT BY : KYLE CORNELIUS
PLOT NAME :
PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 42

2

EROSION CONTROL LEGEND

- EROSION MAT URBAN CL I TYPE B
- EROSION MAT CL I TYPE A
- EROSION MAT CL II TYPE B
- COMPOST TUBES
- SILT FENCE
- EROSION BALE, BARRIER
- RIP RAP OR STONE DITCH CHECK
- SLOPE INTERCEPT
- INLET PROTECTION (TYPE)
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECK
- SURFACE WATER FLOW
- SILT FENCE RELIEF (SEE CONSTRUCTION DETAIL)

EB TO SB RAMP

IH 39 SB

RETAINING WALL STRUCTURE R-13-334

RL 'TSB'

2534+00'TSB' 2535+00'TSB' 2536+00'TSB' 2537+00'TSB' 2538+00'TSB' 2539+00'TSB' 2540+00'TSB'

2534 2535 2536 2537 2538 2539 2540

RL

PROPOSED IH 39 NB

MATCH LINE 2540+50

SUBGRADE SHOULDER POINT, TYP

EDGE OF SELECT CRUSHED MATERIAL, TYP

STORMWATER TREATMENT FILTER STRIP

1135+00'XNB' 1136+00'XNB' 1137+00'XNB' 1138+00'XNB' 1139+00'XNB' 1140+00'XNB' 1141+00'XNB'

EXISTING IH 39 NB

SLOPE INTERCEPT, TYP

DELINEATED WETLANDS, TYP

EXISTING R/W, TYP

HO POST MP MH TRANSFORMER

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	EROSION CONTROL	SHEET 58	E

FILE NAME : V:\TRANS-MD\410818 BIC CONTRACT 4\C3D\SHEETSPLAN\1007-12-78\02\0220_EC.DWG
LAYOUT NAME - 01

PLOT DATE : 9/17/2019 12:18 PM PLOT BY : RESHESKE, CARRIE PLOT NAME : PLOT SCALE : 1 IN:50 FT

2

EROSION CONTROL LEGEND

- EROSION MAT URBAN CL I TYPE B
- EROSION MAT CL I TYPE A
- EROSION MAT CL II TYPE B
- COMPOST TUBES
- SILT FENCE
- EROSION BALE, BARRIER
- RIP RAP OR STONE DITCH CHECK
- SLOPE INTERCEPT
- INLET PROTECTION (TYPE)
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECK
- SURFACE WATER FLOW
- SILT FENCE RELIEF (SEE CONSTRUCTION DETAIL)

N

EXISTING R/W, TYP

EB TO SB RAMP

IH 39 SB

RETAINING WALL STRUCTURE R-13-334

RIPRAP MEDIUM (L=14', W=7')

RL 'TSB'

2541+00'TSB'

2542+00'TSB'

2543+00'TSB'

2544+00'TSB'

2545+00'TSB'

2546+00'TSB'

2547+00'TSB'

2548+00'TSB'

2541

2542

2543

2544

2545

2546

2547

RL

PROPOSED IH 39 NB

MATCH LINE 2540+50

MATCH LINE 2548+00

EDGE OF SELECT CRUSHED MATERIAL, TYP

SUBGRADE SHOULDER POINT, TYP

STORMWATER TREATMENT FILTER STRIP

RIPRAP MEDIUM (L=12', W=6')

RIPRAP MEDIUM (L=12', W=6')

RIPRAP MEDIUM (L=14', W=7')

RIPRAP MEDIUM (L=14', W=7')

SLOPE INTERCEPT, TYP

DELINEATED WETLANDS, TYP

NOTE:
PLACE SILT FENCE TWO FEET FROM SLOPE INTERCEPT ADJACENT TO WETLANDS.

42+00'XNB'

EXISTING IH 39

1143+00'XNB'

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	EROSION CONTROL	SHEET 59	E

FILE NAME : V:\TRANS-MD\410818 BIC CONTRACT 4\C3D\SHEETSPLAN\1007-12-78\02\0220_EC.DWG
LAYOUT NAME - 02

PLOT DATE : 9/17/2019 12:18 PM PLOT BY : RESHESKE, CARRIE PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 42

2

2

EROSION CONTROL LEGEND

- EROSION MAT URBAN CL I TYPE B
- EROSION MAT CL I TYPE A
- EROSION MAT CL II TYPE B
- COMPOST TUBES
- SILT FENCE
- EROSION BALE, BARRIER
- RIP RAP OR STONE DITCH CHECK
- SLOPE INTERCEPT
- INLET PROTECTION (TYPE)
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECK
- SURFACE WATER FLOW
- SILT FENCE RELIEF (SEE CONSTRUCTION DETAIL)

N

POST

IH 39 SB

RL 'TSB'

2549+00'TSB'

2550+00'TSB'

2551+00'TSB'

2552+00'TSB'

2553+00'TSB'

2554+00'TSB'

2555+00'TSB'

B

2549

2550

2551

2552

2553

2554

2555

RL

RETAINING WALL STRUCTURE R-13-334

PROPOSED IH 39 NB

SUBGRADE SHOULDER POINT, TYP

EDGE OF SELECT CRUSHED MATERIAL, TYP

MATCH LINE 2548+00

MATCH LINE 2555+50

RIPRAP MEDIUM (L=14', W=6')

RIPRAP MEDIUM (L=12', W=6')

F

NOTE:
PLACE SILT FENCE TWO FEET FROM SLOPE INTERCEPT ADJACENT TO WETLANDS.

RIPRAP HEAVY (L=36', W=6')

SLOPE INTERCEPT, TYP

DELINEATED WETLANDS, TYP

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	EROSION CONTROL	SHEET 60	E

EROSION CONTROL LEGEND

- EROSION MAT URBAN CL I TYPE B
- EROSION MAT CL I TYPE A
- EROSION MAT CL II TYPE B
- COMPOST TUBES
- SILT FENCE
- EROSION BALE, BARRIER
- RIP RAP OR STONE DITCH CHECK
- SLOPE INTERCEPT
- INLET PROTECTION (TYPE)
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECK
- SURFACE WATER FLOW
- SILT FENCE RELIEF (SEE CONSTRUCTION DETAIL)

RIPRAP

RIPRAP HEAVY (L=20', W=10')

N

EXISTING BRIDGE STRUCTURE B-13-466

SB TO EB RAMP

IH 39 SB

RL 'XSB'

1160+00'XSB'

1161+00'XSB'

1162+00'XSB'

1163+00'XSB'

1164+00'XSB'

1165+00'

2557+00'TSB'

2558+00'TSB'

2559+00'TSB'

DELINEATED WETLANDS, TYP

2556

2557

2558

2559

2560

2561

2562

RL

PROPOSED IH 39 NB

SUBGRADE SHOULDER POINT, TYP

EDGE OF SELECT CRUSHED MATERIAL, TYP

RIPRAP HEAVY (L=38', W=6')

RIPRAP MEDIUM (L=8', W=6')

BRIDGE STRUCTURE B-13-729

RIPRAP HEAVY (L=47', W=6')

SLOPE INTERCEPT, TYP

US 12/18 EB

RIPRAP HEAVY (L=55', W=6')

RIPRAP HEAVY (L=90', W=6')

WEAK

MATCH LINE 2555+50

MATCH LINE 2563+00

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	EROSION CONTROL	SHEET 61	E

FILE NAME : V:\TRANS-MD\410818 BIC CONTRACT 4\C3D\SHEETSPLAN\1007-12-78\02\0220_EC.DWG
LAYOUT NAME - 04

PLOT DATE : 9/17/2019 12:18 PM PLOT BY : RESHESKE, CARRIE PLOT NAME : PLOT SCALE : 1 IN:50 FT

2

2

EROSION CONTROL LEGEND

- EROSION MAT URBAN CL I TYPE B
- EROSION MAT CL I TYPE A
- EROSION MAT CL II TYPE B
- COMPOST TUBES
- SILT FENCE
- EROSION BALE, BARRIER
- RIP RAP OR STONE DITCH CHECK
- SLOPE INTERCEPT
- INLET PROTECTION (TYPE)
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECK
- SURFACE WATER FLOW
- SILT FENCE RELIEF (SEE CONSTRUCTION DETAIL)

US 12/18 WB

BRIDGE STRUCTURE B-13-464

WB TO SB RAMP

IH 39 SB

RL 'XSB'

XSB' 1166+00'XSB' 1167+00'XSB' 1168+00'XSB' 1169+00'XSB' 1170+00'XSB' 1171+00'XSB' 1172+00'XSB'

RIPRAP MEDIUM (L=8', W=6')

RIPRAP MEDIUM (L=8', W=6')

RIPRAP HEAVY (L=18', W=9')

RIPRAP MEDIUM (L=8', W=6')

RIPRAP HEAVY (L=50', W=6')

RIPRAP HEAVY (L=86', W=6')

RIPRAP HEAVY (L=46', W=6')

RIPRAP HEAVY (L=39', W=6')

MATCH LINE 2563+00

63 2564 2565 2566 2567 2568 2569 2570

MATCH LINE 2570+60

RL

PROPOSED IH 39 NB

BRIDGE STRUCTURE B-13-730

SUBGRADE SHOULDER POINT, TYP

EDGE OF SELECT CRUSHED MATERIAL, TYP

SLOPE INTERCEPT, TYP

NOTE:
PLACE SILT FENCE TWO FEET FROM SLOPE INTERCEPT ADJACENT TO WETLANDS.

DELINEATED WETLANDS, TYP

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	EROSION CONTROL	SHEET 62	E

FILE NAME : V:\TRANS-MD\410818 BIC CONTRACT 4\C3D\SHEETSPLAN\1007-12-78\02\0220_EC.DWG
LAYOUT NAME - 05

PLOT DATE : 9/17/2019 12:18 PM PLOT BY : RESHESKE, CARRIE PLOT NAME : PLOT SCALE : 1 IN:50 FT

2

EROSION CONTROL LEGEND

- EROSION MAT URBAN CL I TYPE B
- EROSION MAT CL I TYPE A
- EROSION MAT CL II TYPE B
- COMPOST TUBES
- SILT FENCE
- EROSION BALE, BARRIER
- RIP RAP OR STONE DITCH CHECK
- SLOPE INTERCEPT
- INLET PROTECTION (TYPE)
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECK
- SURFACE WATER FLOW
- SILT FENCE RELIEF (SEE CONSTRUCTION DETAIL)

N

EXISTING BRIDGE STRUCTURE B-13-461

IH 39 SB

RL 'XSB'

1174+00'XSB'

1175+00'XSB'

1176+00'XSB'

1177+00'XSB'

1178+00'XSB'

1179+00'XSB'

1180+00

INL

POST

SS

W

MATCH LINE 2570+50

2571

2572

2573

2574

2575

2576

2577

RIPRAP MEDIUM (L=8', W=6')

RIPRAP MEDIUM (L=8', W=6')

RL

SUBGRADE SHOULDER POINT, TYP

EDGE OF SELECT CRUSHED MATERIAL, TYP

PROPOSED IH 39 NB

MATCH LINE 2578+00

NB TO WB RAMP

RIPRAP HEAVY (L=84', W=6')

RIPRAP HEAVY (L=18', W=9')

RIPRAP MEDIUM (L=8', W=6')

RIPRAP MEDIUM (L=47', W=7')

BRIDGE STRUCTURE B-13-731

SLOPE INTERCEPT, TYP

pt: 1176+61.68 XNB

1177+00'XNB

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	EROSION CONTROL	SHEET 63	E

FILE NAME : V:\TRANS-MD\410818 BIC CONTRACT 4\C3D\SHEETSPLAN\1007-12-78\02\0220_EC.DWG
LAYOUT NAME - 06

PLOT DATE : 9/19/2019 9:28 AM PLOT BY : RESHESKE, CARRIE PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 42

2

2

N

EXISTING R/W, TYP

EXISTING BRIDGE STRUCTURE B-13-462

BRIDGE STRUCTURE B-13-732

FEMRITE DR

SB TO WB RAMP

IH 39 SB

RL 'XSB'

XSB'

1181+00'XSB'

1182+00'XSB'

1183+00'XSB'

1184+00'XSB'

1185+00'XSB'

1186+00'XSB'

1187+00'XSB'

MATCH LINE 2578+00

2578

2579

2580

2581

RL

PROPOSED IH 39 NB

SUBGRADE SHOULDER POINT, TYP

EDGE OF SELECT CRUSHED MATERIAL, TYP

RIPRAP MEDIUM
(L=31', W=7')

SLOPE INTERCEPT, TYP

RIPRAP MEDIUM
(L=8', W=6')

PC: 1183+80 XNB'

1184+00'XNB'

1183+00'XNB'

1182+00'XNB'

1181+00'XNB'

1180+00'XNB'

1179+00'XNB'

1178+00'XNB'

EXISTING IH 39 NB

EB TO NB RAMP

EXISTING BRIDGE
STRUCTURE B-13-463

INL

INL

INL

POST

EROSION CONTROL LEGEND

- EROSION MAT URBAN CL I TYPE B
- EROSION MAT CL I TYPE A
- EROSION MAT CL II TYPE B
- COMPOST TUBES
- SILT FENCE
- EROSION BALE, BARRIER
- RIP RAP OR STONE DITCH CHECK
- SLOPE INTERCEPT
- INLET PROTECTION (TYPE)
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECK
- SURFACE WATER FLOW
- SILT FENCE RELIEF (SEE CONSTRUCTION DETAIL)

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	EROSION CONTROL	SHEET 64	E

FILE NAME : V:\TRANS-MD\410818 BIC CONTRACT 4\C3D\SHEETSPLAN\1007-12-78\02\0220_EC.DWG
LAYOUT NAME - 07

PLOT DATE : 9/17/2019 12:19 PM PLOT BY : RESHESKE, CARRIE PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 42

EROSION CONTROL LEGEND

- EROSION MAT URBAN CL I TYPE B
- EROSION MAT CL I TYPE A
- EROSION MAT CL II TYPE B
- COMPOST TUBES
- SILT FENCE
- EROSION BALE, BARRIER
- RIP RAP OR STONE DITCH CHECK
- SLOPE INTERCEPT
- INLET PROTECTION (TYPE)
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECK
- SURFACE WATER FLOW
- SILT FENCE RELIEF (SEE CONSTRUCTION DETAIL)

2

WEAK

F

N

93+00'XEB'

94+00'XEB'

95+00'XEB'

96+00'XEB'

97+00'XEB'

98+00'XEB'

99+00'XEB'

100+00'XEB'

RL 'XEB'

MATCH LINE 100+50'XEB'

US 12/18 EB

SB TO EB RAMP

26+00'XN'

25+00'XN'

24+00'XN'

23+00'XN'

22+00'XN'

RL 'XN'

POST

MH

RIPRAP

SLOPE INTERCEPT, TYP

DELINEATED WETLANDS, TYP

SS

INLET

NOTE:
PLACE SILT FENCE TWO FEET FROM SLOPE INTERCEPT ADJACENT TO WETLANDS.

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	EROSION CONTROL	SHEET 65	E

FILE NAME : V:\TRANS-MD\410818 BIC CONTRACT 4\C3D\SHEETSPLAN\1007-12-78\02\0220_EC.DWG
LAYOUT NAME - 08

PLOT DATE : 9/17/2019 12:19 PM PLOT BY : RESHESKE, CARRIE PLOT NAME : PLOT SCALE : 1 IN:50 FT

2

EROSION CONTROL LEGEND

- EROSION MAT URBAN CL I TYPE B
- EROSION MAT CL I TYPE A
- EROSION MAT CL II TYPE B
- COMPOST TUBES
- SILT FENCE
- EROSION BALE, BARRIER
- RIP RAP OR STONE DITCH CHECK
- SLOPE INTERCEPT
- INLET PROTECTION (TYPE)
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECK
- SURFACE WATER FLOW
- SILT FENCE RELIEF (SEE CONSTRUCTION DETAIL)

N

MATCH LINE 100+50'XEB'

MATCH LINE 108+00'XEB'

1164+00'XSB'

1163+00'XSB'

1162+00'XSB'

1161+00'XSB'

1160+00'XSB'

1161+00'XNB'

1160+00'XNB'

1159+00'XNB'

1158+00'XNB'

1157+00'XNB'

2562

2561

2560

2559

2558

101+00'XEB'

102+00'XEB'

103+00'XEB'

104+00'XEB'

105+00'XEB'

106+00'XEB'

107+00'XEB'

108+0

RIPRAP MEDIUM (L=14', W=7')

RL 'XEB'

EB TO NB RAMP

US 12/18 EB

XXXX XXXX XXXX XXXX XXXX XXXX XXXX XXXX XXXX XXXX XXXX XXXX XXXX XXXX XXXX XXXX XXXX XXXX XXXX XXXX XXXX

IH 39 SB

PROPOSED IH 39 NB

2559+00'TSB'

WEAK

WEAK

INL

INL

SS

MH

MH

MH

POST

MP

DELINEATED WETLANDS, TYP

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	EROSION CONTROL	SHEET 66	E

FILE NAME : V:\TRANS-MD\410818 BIC CONTRACT 4\C3D\SHEETSPLAN\1007-12-78\02\0220_EC.DWG
LAYOUT NAME - 09

PLOT DATE : 9/17/2019 12:19 PM PLOT BY : RESHESKE, CARRIE PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 42

2

2

EROSION CONTROL LEGEND

- EROSION MAT URBAN CL I TYPE B
- EROSION MAT CL I TYPE A
- EROSION MAT CL II TYPE B
- COMPOST TUBES
- SILT FENCE
- EROSION BALE, BARRIER
- RIP RAP OR STONE DITCH CHECK
- SLOPE INTERCEPT
- INLET PROTECTION (TYPE)
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECK
- SURFACE WATER FLOW
- SILT FENCE RELIEF (SEE CONSTRUCTION DETAIL)

N

MATCH LINE 108+00'XEB'

EB TO NB RAMP

MH

108+00'XEB' 109+00'XEB' 110+00'XEB' 111+00'XEB' 112+00'XEB' 113+00'XEB' 114+00'XEB' 115+00'XEB'

US 12/18 EB

RL 'XEB'

XXXX XXXX

MH

MH

TRANSFORMER

SLOPE INTERCEPT, TYP

NOTE:
PLACE SILT FENCE TWO FEET FROM SLOPE INTERCEPT ADJACENT TO WETLANDS.

DELINEATED WETLANDS, TYP

MH

NB TO EB RAMP

POST

CP 702B

TRANSFORMER

MP

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	EROSION CONTROL	SHEET 67	E

FILE NAME : V:\TRANS-MD\410818 BIC CONTRACT 4\C3D\SHEETSPLAN\1007-12-78\02\0220_EC.DWG
LAYOUT NAME - 10

PLOT DATE : 9/17/2019 12:19 PM PLOT BY : RESHESKE, CARRIE PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 42

LEGEND:
XX.XX.XX SHEET NUMBER.SYSTEM NUMBER.STRUCTURE NUMBER

01.01 STORM SEWER SYSTEM CAN'T BE INSTALLED UNTIL STORM SEWER SYSTEM FROM 1007-12-75 PROJECT IS COMPLETED

EXISTING INLET (TYP.)

STA 2526+15.00, 16.0' LT
INLETS 2x2-B
01.01.05

STA 2526+04.58, 16.0' LT
INLETS 2x2-B
01.01.03

STA 2525+95.00, 10.5' LT
INLETS 2x2.5-BW
01.01.01

STA 2526+04.58, 10.5' LT
INLETS 2x2.5-BW
01.01.02

01.01.06 STA 2526+25.08, 16.0' LT
INLETS 4-B

01.01.04 STA 2526+15.00, 10.5' LT
INLETS 2x2.5-BW

IH 39 SB

IH 39 NB

2525+00'TSB'

2526+00'TSB'

2527+00'TSB'

2525+00

2526+00

2527+00

POST

N

01.02 STORM SEWER SYSTEM CAN'T BE INSTALLED UNTIL STORM SEWER SYSTEM FROM 1007-12-75 PROJECT IS COMPLETED

EB TO SB RAMP

EXISTING INLET (TYP.)

IH 39 SB

2538+00'TSB'

2539+00'TSB'

2538+00

2539+00

IH 39 NB

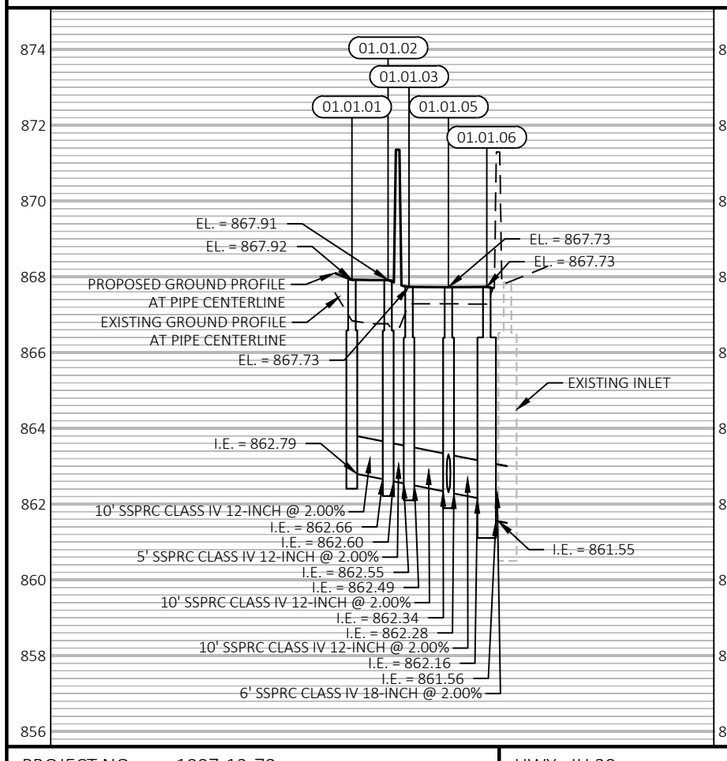
R-13-334

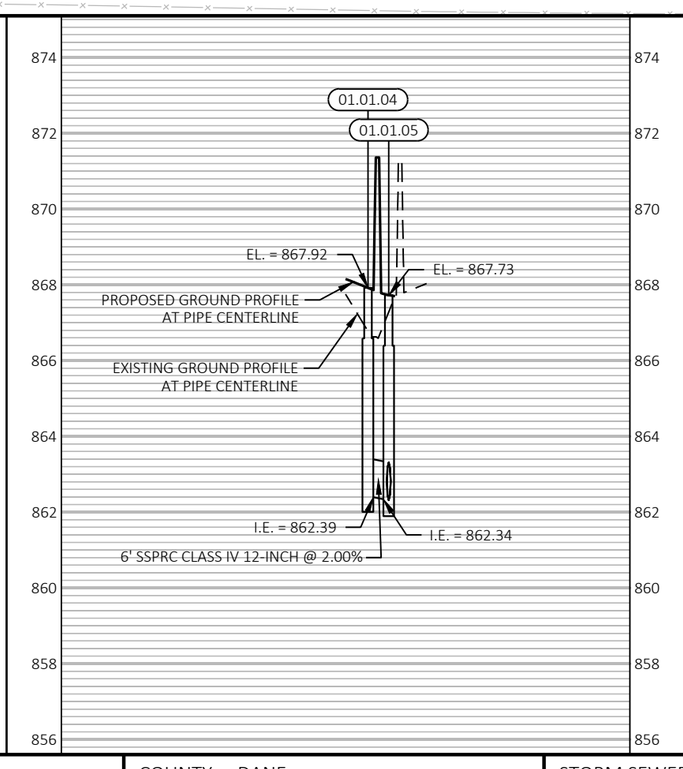
STA 2538+25.00'TSB', 16.4' RT
INLETS 2x2-B
01.02.01

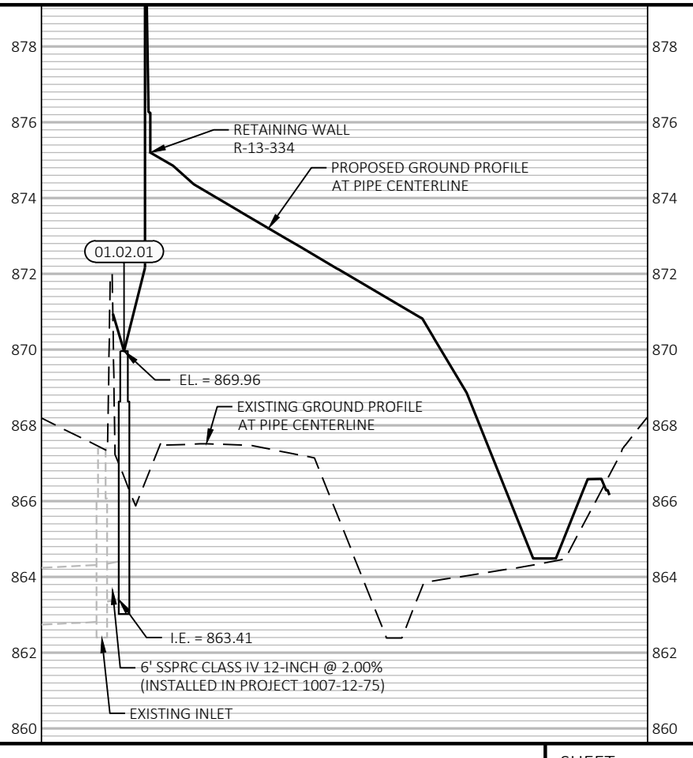
EDGE OF SELECT CRUSHED MATERIAL, TYP

SUBGRADE SHOULDER POINT, TYP

NOTES:
1) OFFSET GIVEN IS TO CENTER OF STRUCTURE FOR INLETS.
2) STRUCTURE TOP GRADE GIVEN IS FINISHED CASTING GRADE.
3) SEE CONSTRUCTION DETAIL FOR UNDERDRAIN CONNECTION INFORMATION.

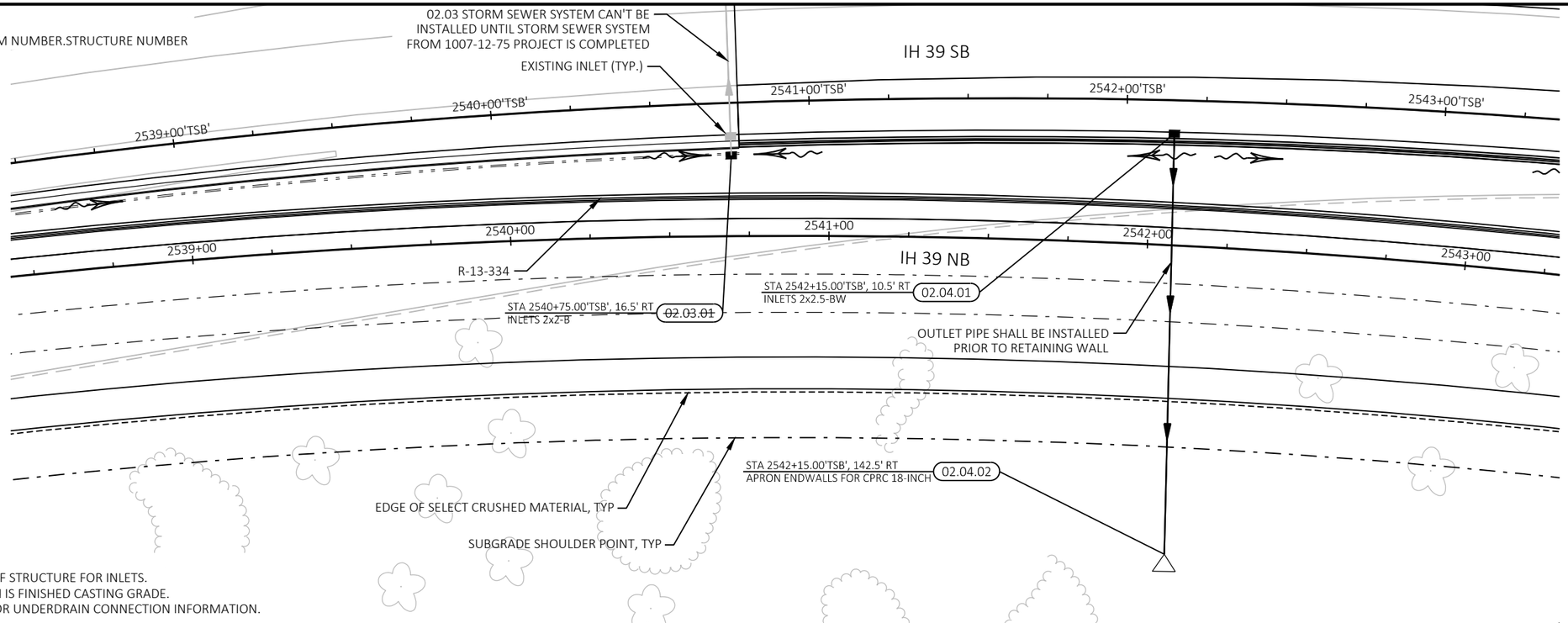




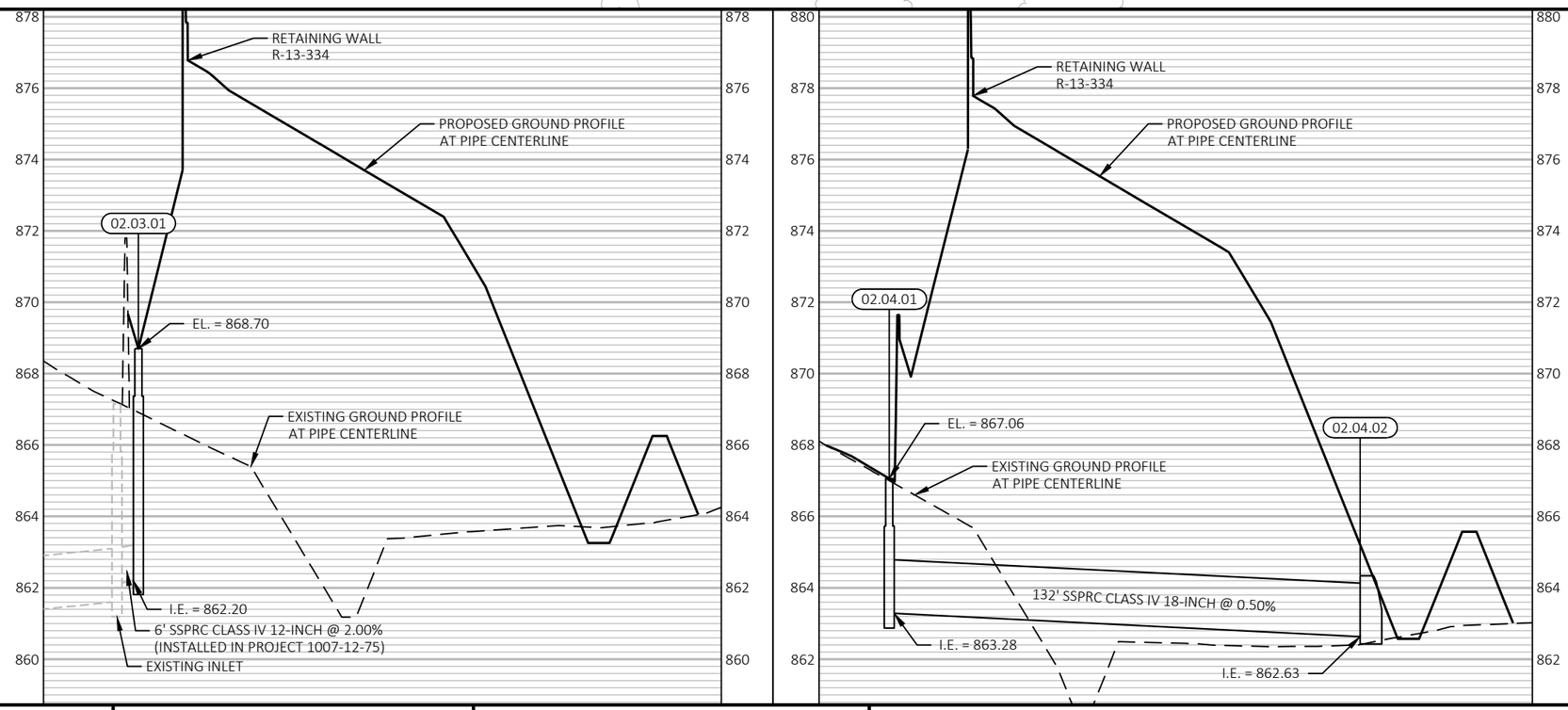


PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	STORM SEWER	SHEET 68 E

LEGEND:
XX.XX.XX SHEET NUMBER.SYSTEM NUMBER.STRUCTURE NUMBER

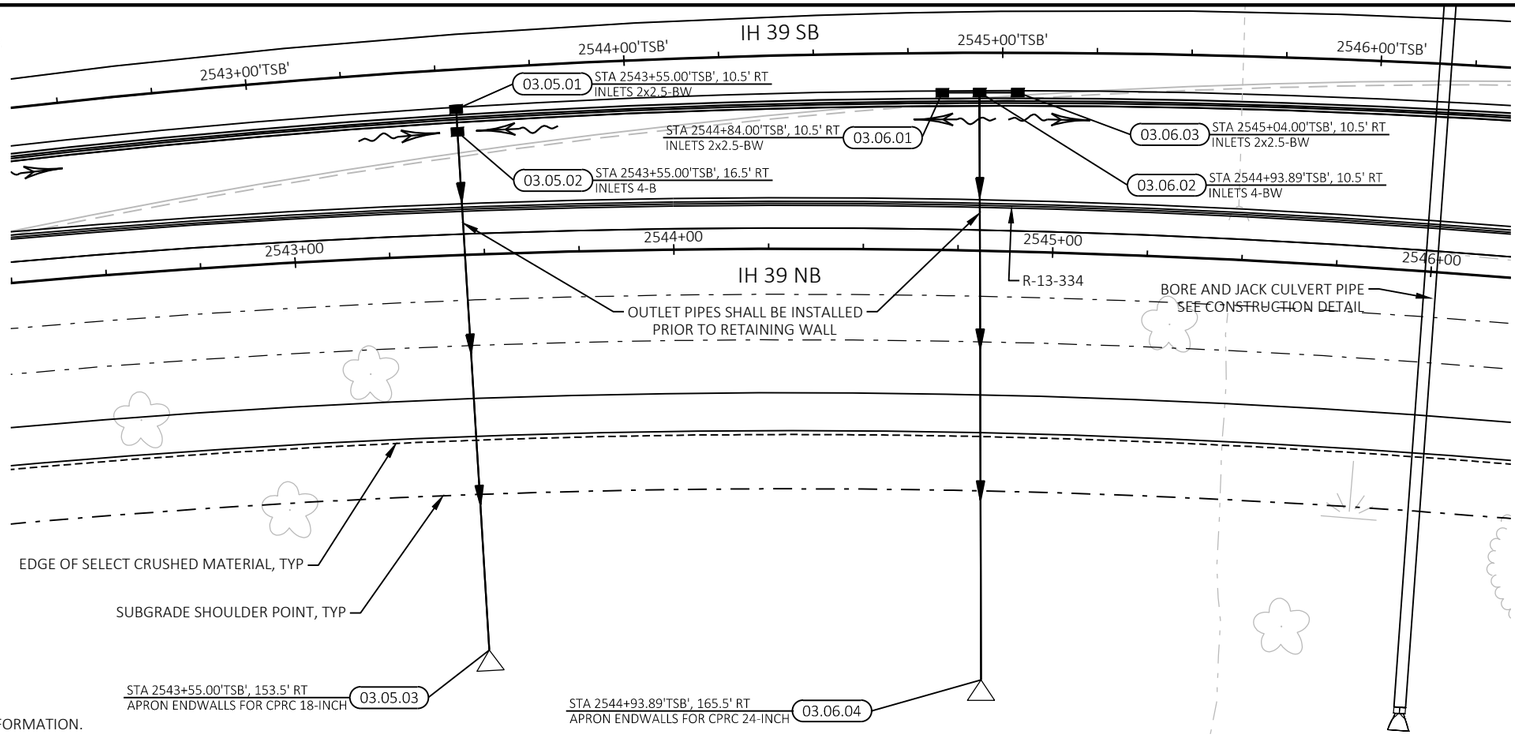


NOTES:
1) OFFSET GIVEN IS TO CENTER OF STRUCTURE FOR INLETS.
2) STRUCTURE TOP GRADE GIVEN IS FINISHED CASTING GRADE.
3) SEE CONSTRUCTION DETAIL FOR UNDERDRAIN CONNECTION INFORMATION.

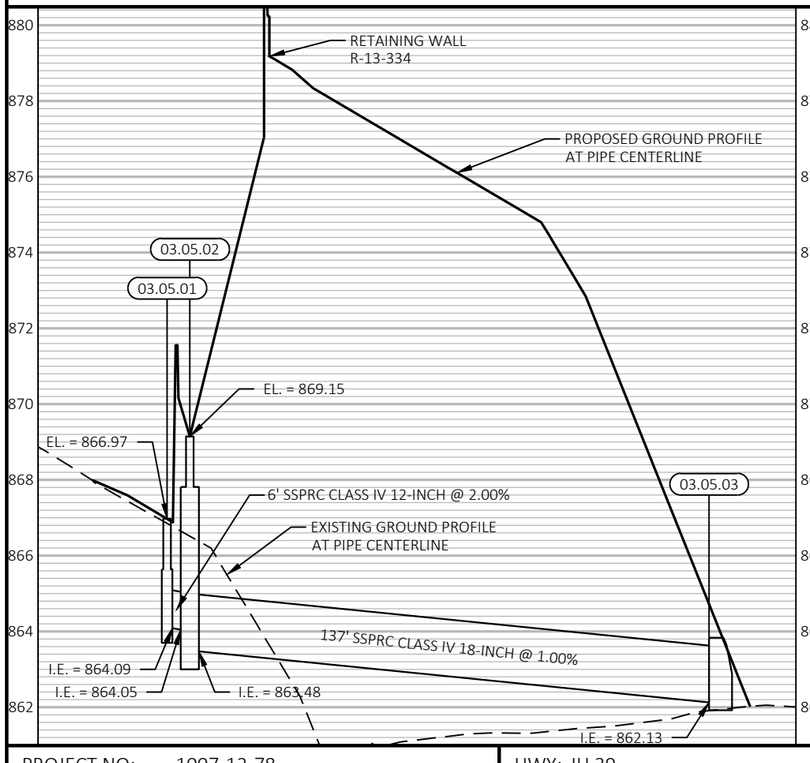


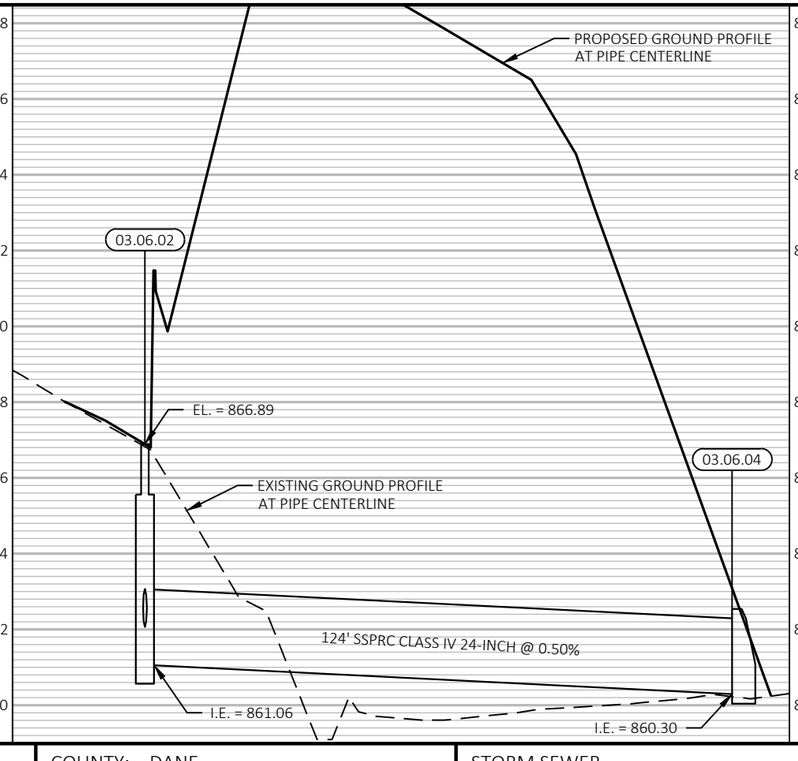
PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	STORM SEWER	SHEET 69	E

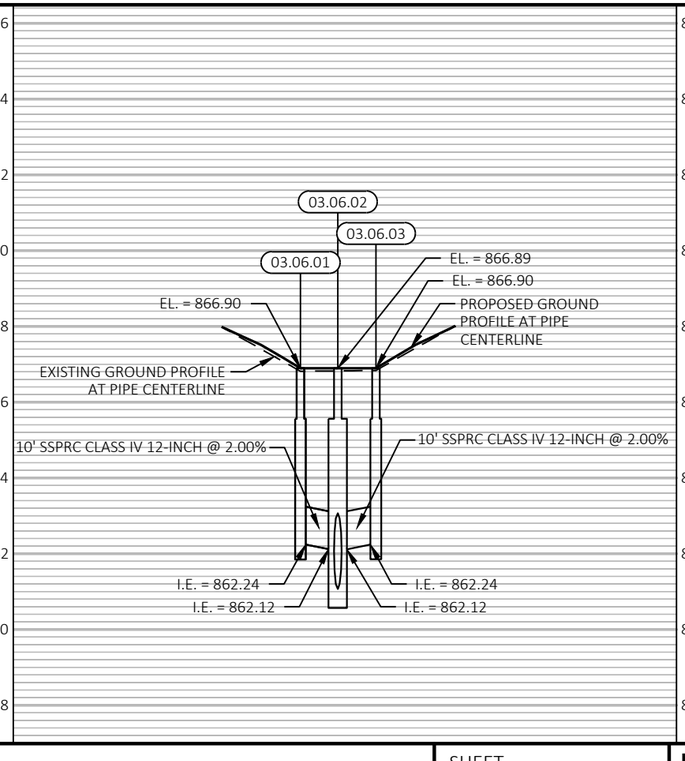
LEGEND:
XX.XX.XX SHEET NUMBER.SYSTEM NUMBER.STRUCTURE NUMBER



NOTES:
1) OFFSET GIVEN IS TO CENTER OF STRUCTURE FOR INLETS.
2) STRUCTURE TOP GRADE GIVEN IS FINISHED CASTING GRADE.
3) SEE CONSTRUCTION DETAIL FOR UNDERDRAIN CONNECTION INFORMATION.







PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	STORM SEWER	SHEET 70	E

LEGEND:
XX.XX.XX SHEET NUMBER.SYSTEM NUMBER.STRUCTURE NUMBER

2545+00'TSB' 2546+00'TSB' 2547+00'TSB' 2548+00'TSB' 2549+00'TSB' 2550+00'TSB'

IH 39 SB

04.07.04 STA 2546+50.00'TSB', 10.5' RT
INLETS 2x2.5-BW

04.07.03 STA 2546+60.00'TSB', 16.5' RT
INLETS 2x2-B

STA 2546+40.00'TSB', 16.5' RT
INLETS 2x2-B 04.07.01

04.07.02 STA 2546+50.00'TSB', 16.5' RT
INLETS 4-B

04.08.01 STA 2548+50.00'TSB', 10.5' RT
INLETS 2x2.5-BW

04.08.02 STA 2548+50.00'TSB', 16.5' RT
INLETS 4-B

2545+00 2546+00 2547+00 2548+00 2549+00 2550+00

IH 39 NB

OUTLET PIPES SHALL BE INSTALLED
PRIOR TO RETAINING WALL

R-13-334

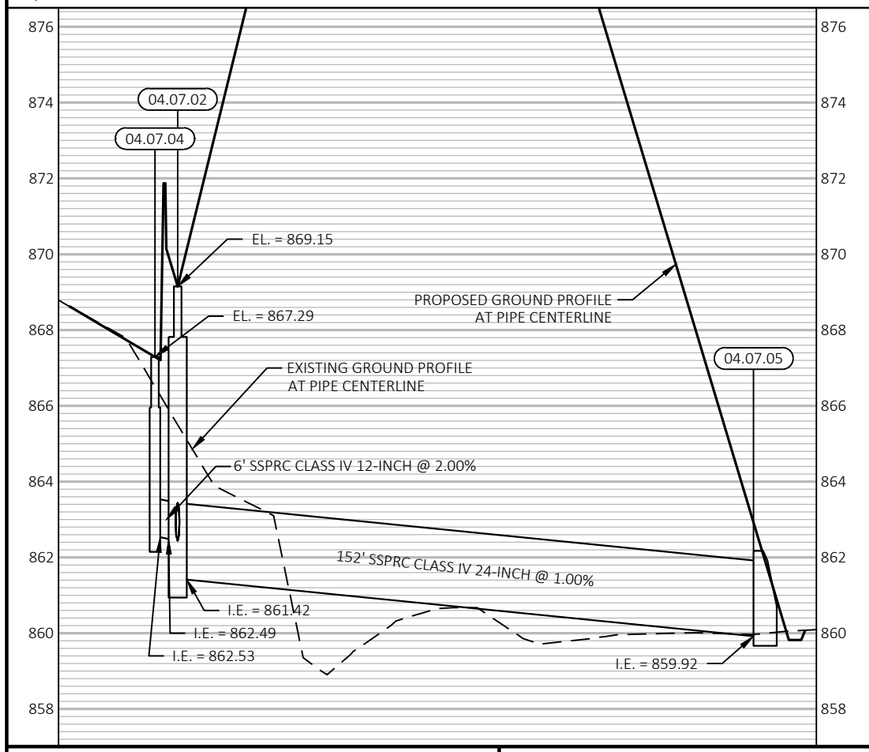
EDGE OF SELECT CRUSHED MATERIAL, TYP

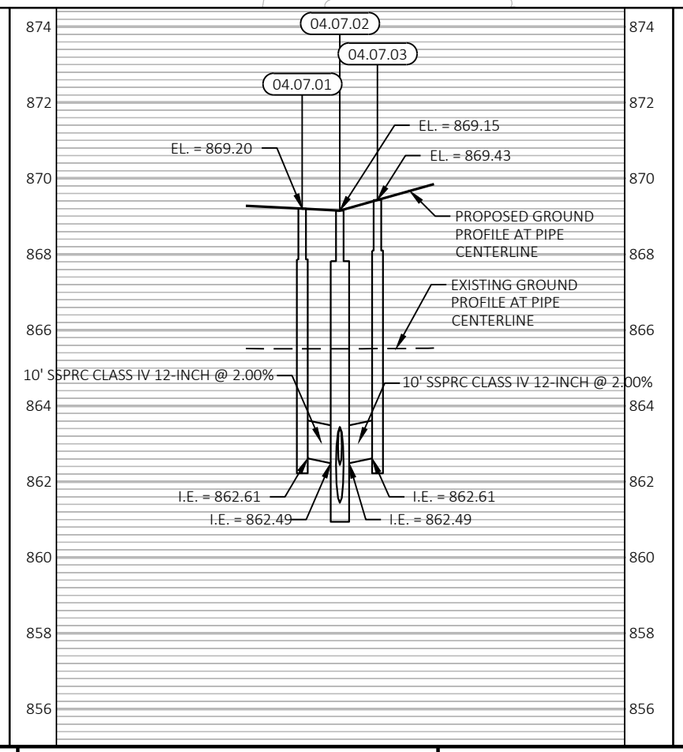
SUBGRADE SHOULDER POINT, TYP

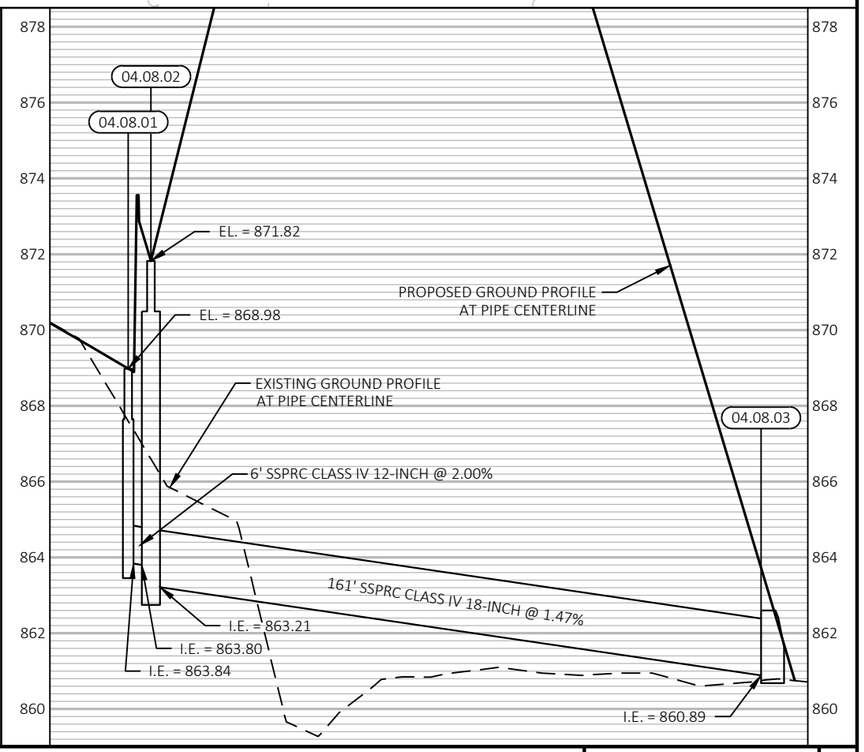
STA 2546+50.00'TSB', 168.5' RT
APRON ENDWALLS FOR CPRC 24-INCH 04.07.05

04.08.03 STA 2548+50.00'TSB', 177.5' RT
APRON ENDWALLS FOR CPRC 18-INCH

NOTES:
1) OFFSET GIVEN IS TO CENTER OF STRUCTURE FOR INLETS.
2) STRUCTURE TOP GRADE GIVEN IS FINISHED CASTING GRADE.
3) SEE CONSTRUCTION DETAIL FOR UNDERDRAIN CONNECTION INFORMATION.







PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	STORM SEWER	SHEET 71	E

LEGEND:
XX.XX.XX SHEET NUMBER.SYSTEM NUMBER.STRUCTURE NUMBER

05.09.01 STA 2551+00.00'TSB', 10.5' RT
INLETS 2x2.5-BW

05.10.01 STA 2554+00.00'TSB', 10.5' RT
INLETS 2x2.5-BW

05.10.02 STA 2554+00.00'TSB', 16.5' RT
INLETS 4-B

05.11.01 STA 2557+00.00'TSB', 10.5' RT
INLETS 2x2.5-BW

05.09.02 STA 2551+00.00'TSB', 177.5' RT
APRON ENDWALLS FOR CPRC 18-INCH

05.10.03 STA 2554+00.00'TSB', 172.5' RT
APRON ENDWALLS FOR CPRC 18-INCH

05.11.02 STA 2557+00.00'TSB', 171.5' RT
APRON ENDWALLS FOR CPRC 18-INCH

END R-13-334

OUTLET PIPE SHALL BE INSTALLED PRIOR TO RETAINING WALL

EDGE OF SELECT CRUSHED MATERIAL, TYP

SUBGRADE SHOULDER POINT, TYP

IH 39 NB

IH 39 SB

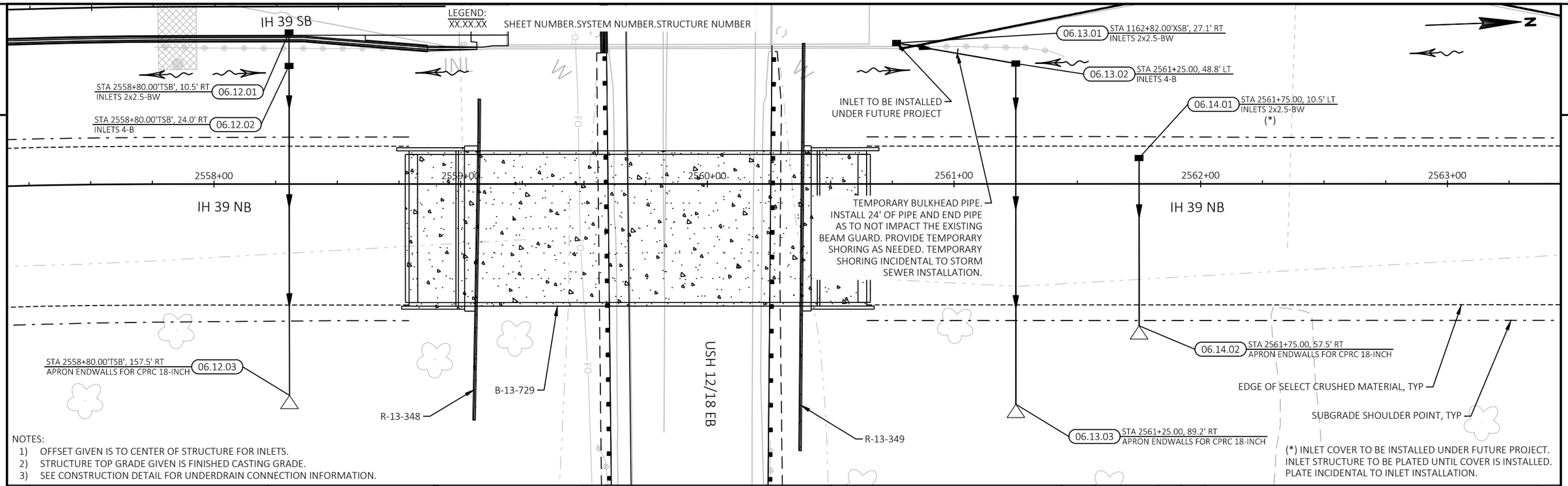
NOTES:
1) OFFSET GIVEN IS TO CENTER OF STRUCTURE FOR INLETS.
2) STRUCTURE TOP GRADE GIVEN IS FINISHED CASTING GRADE.
3) SEE CONSTRUCTION DETAIL FOR UNDERDRAIN CONNECTION INFORMATION.

05.09.01
EL. = 872.94
PROPOSED GROUND PROFILE AT PIPE CENTERLINE
EXISTING GROUND PROFILE AT PIPE CENTERLINE
167' SSPRC CLASS IV 18-INCH @ 1.00%
I.E. = 867.24
05.09.02
I.E. = 865.58

05.10.02
05.10.01
EL. = 879.44
EL. = 879.18
PROPOSED GROUND PROFILE AT PIPE CENTERLINE
EXISTING GROUND PROFILE AT PIPE CENTERLINE
6' SSPRC CLASS IV 12-INCH @ 2.00%
156' SSPRC CLASS IV 18-INCH @ 1.00%
I.E. = 873.73
I.E. = 874.30
I.E. = 874.34
05.10.03
I.E. = 872.19

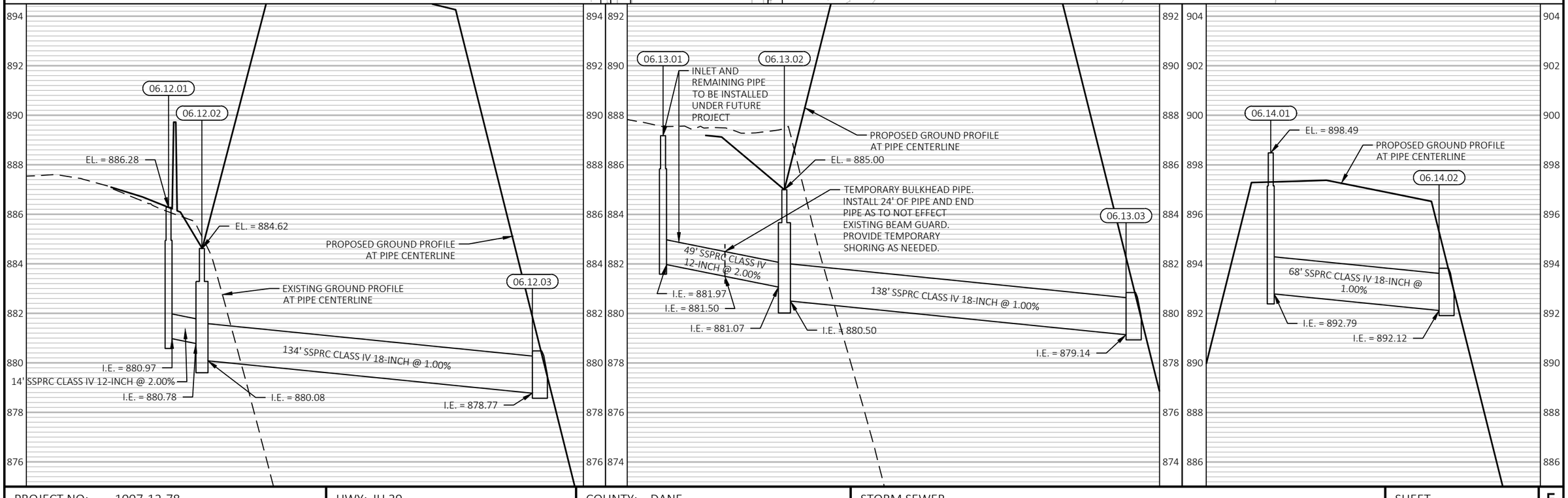
05.11.01
EL. = 884.26
PROPOSED GROUND PROFILE AT PIPE CENTERLINE
EXISTING GROUND PROFILE AT PIPE CENTERLINE
161' SSPRC CLASS IV 18-INCH @ 1.00%
I.E. = 878.74
05.11.02
I.E. = 877.14

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	STORM SEWER	SHEET 72 E



NOTES:
1) OFFSET GIVEN IS TO CENTER OF STRUCTURE FOR INLETS.
2) STRUCTURE TOP GRADE GIVEN IS FINISHED CASTING GRADE.
3) SEE CONSTRUCTION DETAIL FOR UNDERDRAIN CONNECTION INFORMATION.

(*) INLET COVER TO BE INSTALLED UNDER FUTURE PROJECT. INLET STRUCTURE TO BE PLATED UNTIL COVER IS INSTALLED. PLATE INCIDENTAL TO INLET INSTALLATION.



PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	STORM SEWER	SHEET 73	E

LEGEND:
XX.XX.XX SHEET NUMBER.SYSTEM NUMBER.STRUCTURE NUMBER

INLET TO BE INSTALLED UNDER FUTURE PROJECT

07.16.01 STA 1167+58.00'XSB', 27.1' RT
INLETS 2x2.5-BW

07.16.02 STA 2566+00.00, 49.9' LT
INLETS 4-B

TEMPORARY BULKHEAD PIPE. INSTALL 24' OF PIPE AND END PIPE AS TO NOT IMPACT THE EXISTING BEAM GUARD. PROVIDE TEMPORARY SHORING AS NEEDED. TEMPORARY SHORING INCIDENTAL TO STORM SEWER INSTALLATION.

STA 2565+73.00, 10.5' LT
INLETS 2x2.5-BW
(*)
07.15.01

US 12/18 WB

2565+00 2566+00 2567+00 2568+00 2569+00 2570+00

IH 39 NB

INLET TO BE INSTALLED UNDER FUTURE PROJECT

STA 1170+75.00'XSB', 40.3' RT
INLETS 4-B
07.17.02

07.17.01 STA 1170+75.00'XSB', 22.5' RT
INLETS 2x2.5-BW

TEMPORARY BULKHEAD PIPE. INSTALL 8' OF PIPE. PROVIDE TEMPORARY SHORING AS NEEDED.

B-13-730

R-13-351

07.16.03 STA 2566+00.00, 93.1' RT
APRON ENDWALLS FOR CPRC 18-INCH

EDGE OF SELECT CRUSHED MATERIAL, TYP

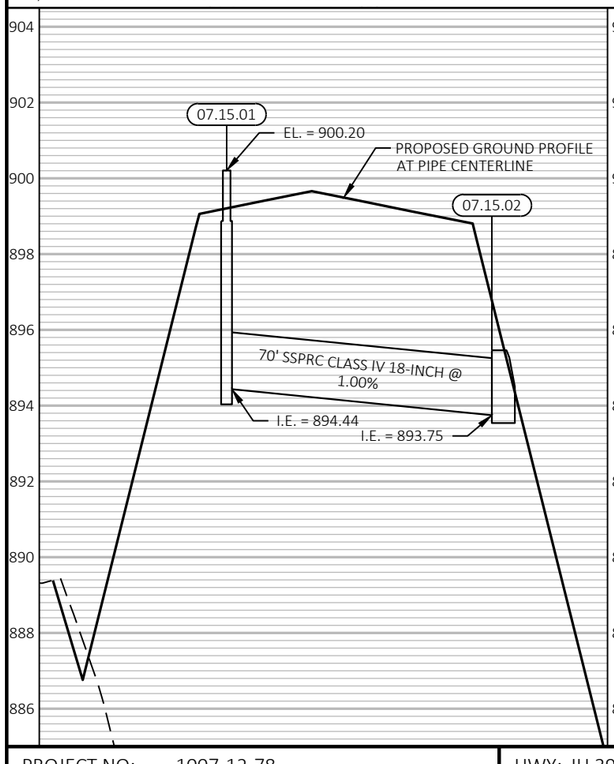
SUBGRADE SHOULDER POINT, TYP

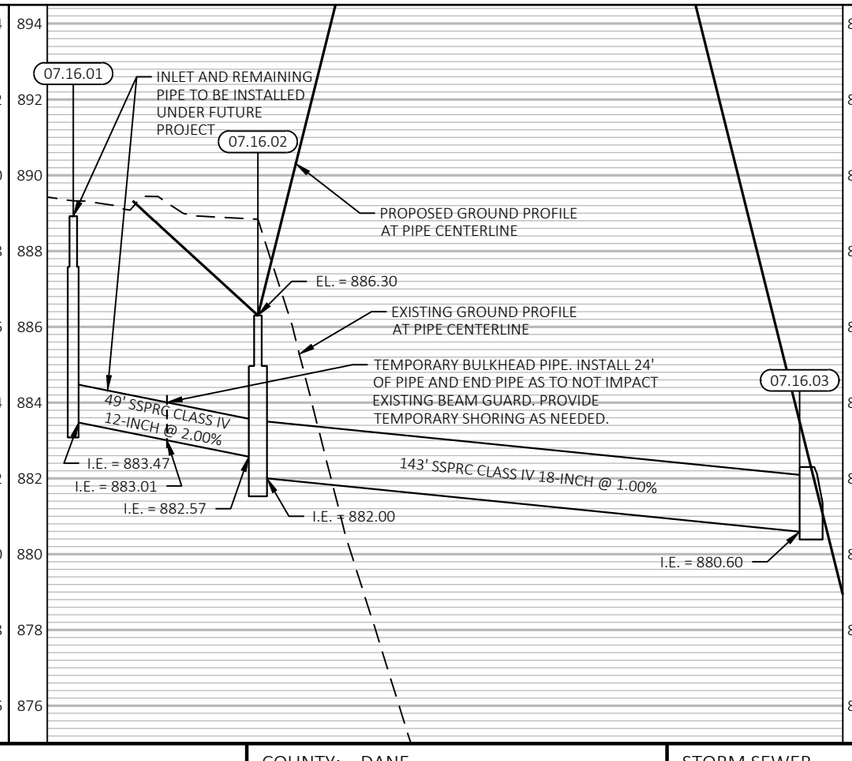
07.15.02 STA 2565+73.00, 59.5' RT
APRON ENDWALLS FOR CPRC 18-INCH

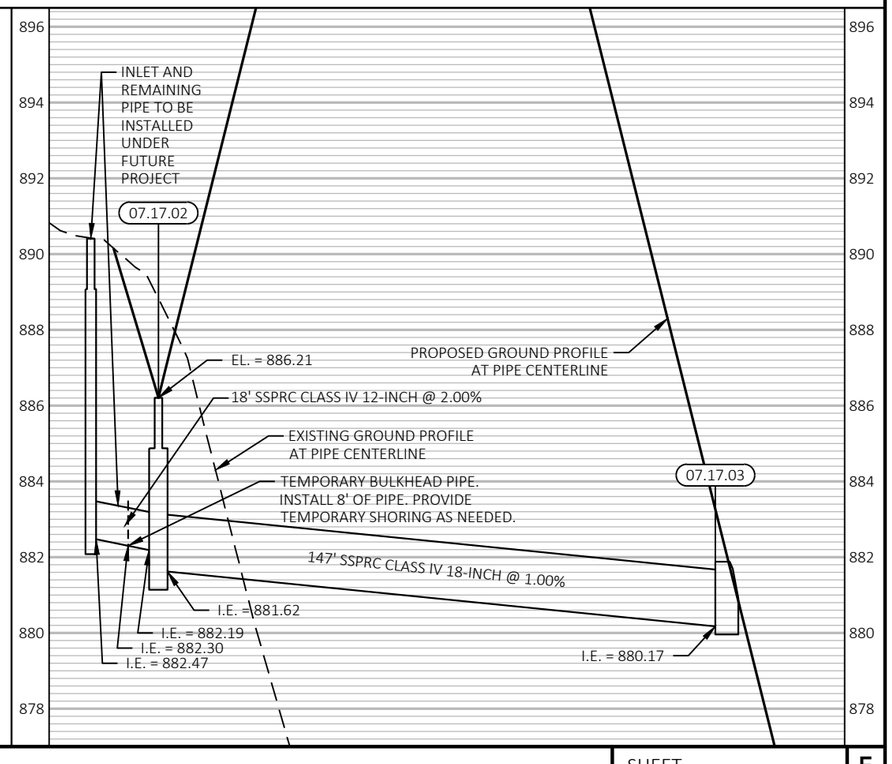
07.17.03 STA 1170+75.00'XSB', 187.3' RT
APRON ENDWALLS FOR CPRC 18-INCH

NOTES:
1) OFFSET GIVEN IS TO CENTER OF STRUCTURE FOR INLETS.
2) STRUCTURE TOP GRADE GIVEN IS FINISHED CASTING GRADE.
3) SEE CONSTRUCTION DETAIL FOR UNDERDRAIN CONNECTION INFORMATION.

(*) INLET COVER TO BE INSTALLED UNDER FUTURE PROJECT. INLET STRUCTURE TO BE PLATED UNTIL COVER IS INSTALLED. PLATE INCIDENTAL TO INLET INSTALLATION.





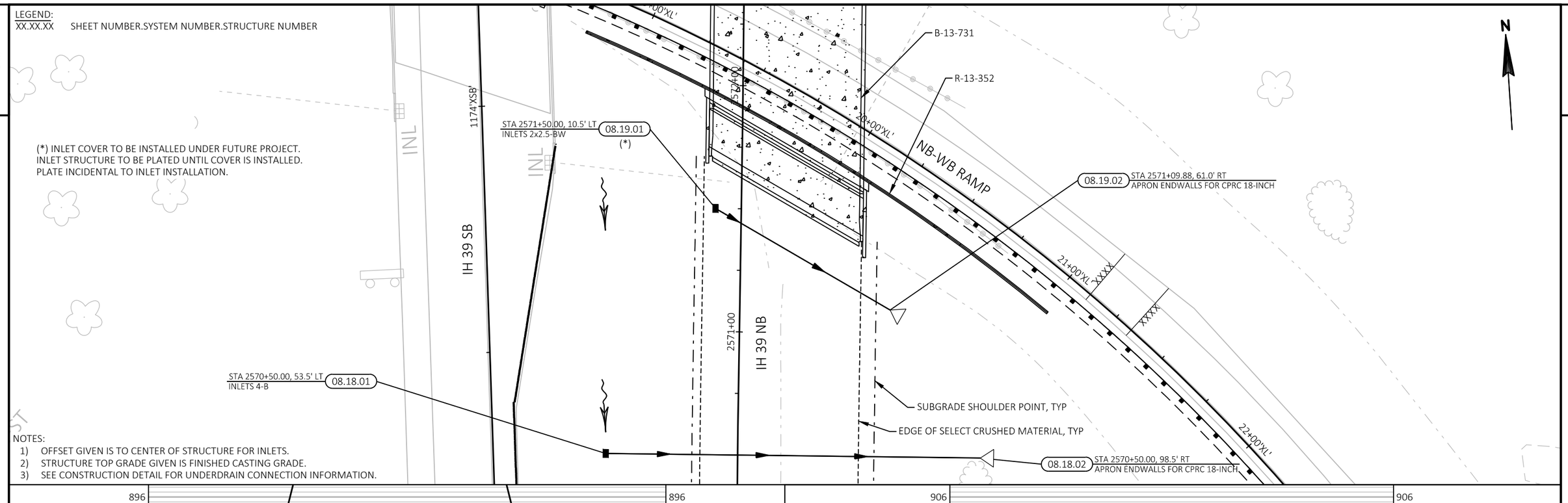


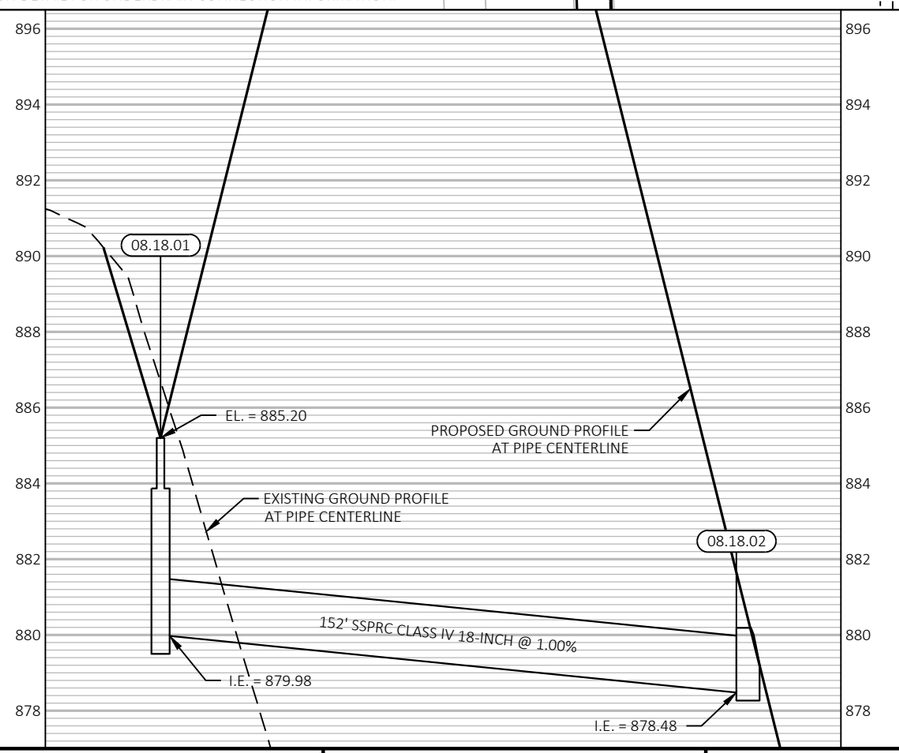
PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	STORM SEWER	SHEET 74	E

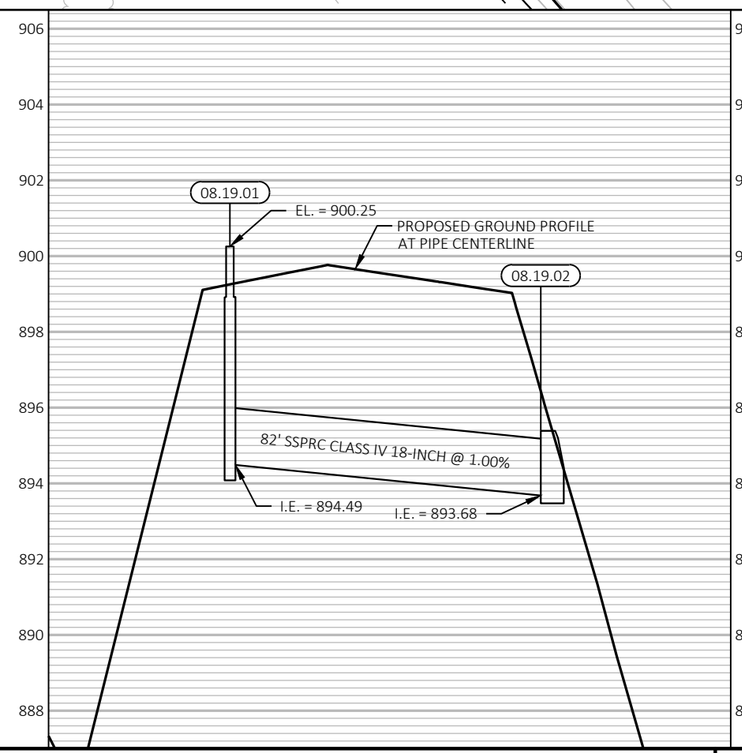
LEGEND:
XX.XX.XX SHEET NUMBER.SYSTEM NUMBER.STRUCTURE NUMBER

(*) INLET COVER TO BE INSTALLED UNDER FUTURE PROJECT.
INLET STRUCTURE TO BE PLATED UNTIL COVER IS INSTALLED.
PLATE INCIDENTAL TO INLET INSTALLATION.

NOTES:
1) OFFSET GIVEN IS TO CENTER OF STRUCTURE FOR INLETS.
2) STRUCTURE TOP GRADE GIVEN IS FINISHED CASTING GRADE.
3) SEE CONSTRUCTION DETAIL FOR UNDERDRAIN CONNECTION INFORMATION.







PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	STORM SEWER	SHEET 75	E

PAVEMENT MARKING LEGEND

1. MARKING LINE EPOXY 4-INCH (WHITE)
2. MARKING LINE EPOXY 4-INCH (YELLOW)
3. MARKING LINE EPOXY 8-INCH (WHITE)
4. MARKING LINE EPOXY 4-INCH (WHITE) (12.5 FT LINE 37.5 FT SKIP)
5. MARKING LINE EPOXY 8-INCH (WHITE) (3.0 FT LINE 9.0 FT SKIP)
99. DELINEATOR ASSEMBLY (YELLOW)

x00-00 DENOTES SIGN NUMBER
- SIGN COUNT SEQUENCE PER PAGE
- PAGE NUMBER
- WORK CODE: R=REMOVE, W=WORK BY OTHERS, M=MOVE

N

EB TO SB RAMP

MATCH EXISTING EDGELINES

2540'TSB'

2538'TSB'

BEGIN SB MARKING
STA 2540+78'TSB'

2542'TSB'

2544'TSB'

2546'TSB'

2548'TSB'

2550'TSB'

2552'TSB'

+99'TSB'

IH 39 SB

MATCH LINE STA 2553+00

SB TO EB RAMP

+08'TSB'

+32'TSB'

2554'TSB'

2556'TSB'

2558'TSB'

M01-01

E
90
MILE
142
4

EXIT 142 B

Chicago

Cambridge

EAST

EXISTING SIGN TO REMAIN

USH 12/18 EB

USH 12/18 WB

26'XN'

14'XN'

12'XN'

100'XEB'

102'XEB'

98'XWB'

100'XWB'

102'XWB'

+52'XSB'

1162'XSB'

1164'XSB'

1166'XSB'

1168'XSB'

END XSB MARKING
STA 1166+25'XSB'

RIPRAP

POST

INL

MH

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	PERMANENT SIGNING AND PAVEMENT MARKING	SHEET 76	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0245_PM.DWG
LAYOUT NAME - 01

PLOT DATE : 9/24/2019 2:03 PM PLOT BY : KYLE CORNELIUS PLOT NAME : PLOT SCALE : 1 IN:100 FT

PAVEMENT MARKING LEGEND

1. MARKING LINE EPOXY 4-INCH (WHITE)
2. MARKING LINE EPOXY 4-INCH (YELLOW)
3. MARKING LINE EPOXY 8-INCH (WHITE)
4. MARKING LINE EPOXY 4-INCH (WHITE) (12.5 FT LINE 37.5 FT SKIP)
5. MARKING LINE EPOXY 8-INCH (WHITE) (3.0 FT LINE 9.0 FT SKIP)
98. DELINEATOR ASSEMBLY (WHITE)

x00-00 DENOTES SIGN NUMBER
- SIGN COUNT SEQUENCE PER PAGE
- PAGE NUMBER
- WORK CODE: R=REMOVE, W=WORK BY OTHERS, M=MOVE

BEGIN EB MARKING
STA 87+38'XEB'

MATCH EXISTING CYCLE

MATCH EXISTING EDGELINES

88'XEB' 90'XEB' 92'XEB' 94'XEB' 96'XEB' 98'XEB' 100'XEB' 102'XEB'

+39'XEB' +43'XEB'

LEFT EXIT 267 B
NORTH 39 WEST 90 TO 94
Milwaukee
Wis Dells
EXIT ONLY

EXISTING SIGN TO REMAIN

USH 12/18 EB

IH 39 SB

1164'XSB' 1162'XSB' 1158'TSB'

MATCH LINE STA 103+00

+35'XN' 26'XN' +21'XN' +39'XEB' +21'XN'

SB TO EB RAMP

24'XN'

+71'XN' +40'XN'

EB TO SB RAMP

M02-01

M02-02
EXIT
45 MPH

NB TO WB RAMP

LEFT EXIT 267 B
NORTH 39 WEST 90 TO 94
Milwaukee
Wis Dells
EXIT ONLY

12 18 EAST
Cambridge

EXISTING SIGN TO REMAIN

EB TO NB RAMP

MATCH LINE STA 103+00

+59'XEB' +59'XEB' +12'XEB' +13'XEB' +13'XEB' +83'XEB' +83'XEB' +38'XEB'

104'XEB' 106'XEB' 108'XEB' 110'XEB' 112'XEB' 114'XEB' 116'XEB' 118'XEB'

+49'XEB' +33'XEB' +33'XEB' +39'XEB' +93'XEB' +91'XEB' +39'XEB'

EXISTING SIGN TO REMAIN

EXISTING SIGN TO REMAIN
ALTERNATE INTERSTATE 39

EXISTING SIGN TO REMAIN
ALTERNATE SOUTH INTERSTATE 94

NB TO EB RAMP

END EB MARKING
STA 118+59'XEB'

MATCH EXISTING CYCLE

USH 12/18 EB

N

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	PERMANENT SIGNING AND PAVEMENT MARKING	SHEET 77	E

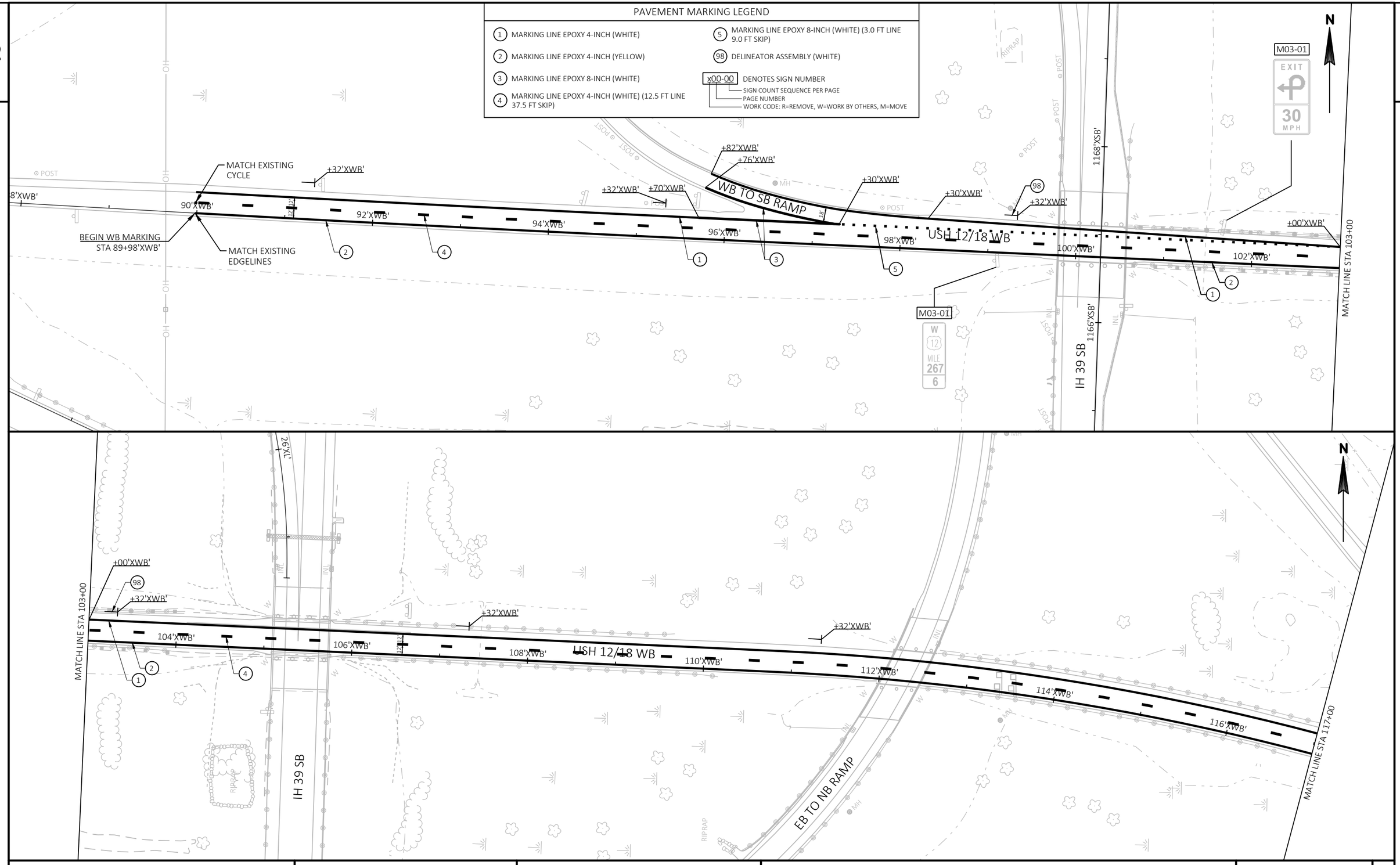
FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0245_PM.DWG
LAYOUT NAME - 02

PLOT DATE : 9/24/2019 2:03 PM PLOT BY : KYLE CORNELIUS PLOT NAME : PLOT SCALE : 1 IN:100 FT

PAVEMENT MARKING LEGEND

1. MARKING LINE EPOXY 4-INCH (WHITE)
2. MARKING LINE EPOXY 4-INCH (YELLOW)
3. MARKING LINE EPOXY 8-INCH (WHITE)
4. MARKING LINE EPOXY 4-INCH (WHITE) (12.5 FT LINE 37.5 FT SKIP)
5. MARKING LINE EPOXY 8-INCH (WHITE) (3.0 FT LINE 9.0 FT SKIP)
98. DELINEATOR ASSEMBLY (WHITE)

x00-00 DENOTES SIGN NUMBER
- SIGN COUNT SEQUENCE PER PAGE
- PAGE NUMBER
- WORK CODE: R=REMOVE, W=WORK BY OTHERS, M=MOVE



PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	PERMANENT SIGNING AND PAVEMENT MARKING	SHEET 78	E

PAVEMENT MARKING LEGEND

1. MARKING LINE EPOXY 4-INCH (WHITE)
2. MARKING LINE EPOXY 4-INCH (YELLOW)
3. MARKING LINE EPOXY 8-INCH (WHITE)
4. MARKING LINE EPOXY 4-INCH (WHITE) (12.5 FT LINE 37.5 FT SKIP)
5. MARKING LINE EPOXY 8-INCH (WHITE) (3.0 FT LINE 9.0 FT SKIP)

WB TO NB RAMP

USH 12/18 WB

MATCH LINE STA 117+00

±13'XWB'

±95'XWB'

±37'XWB'

±00'XWB'

118'XWB' 120'XWB' 122'XWB' 124'XWB' 126'XWB' 128'XWB' 130'XWB' 132'

MATCH LINE STA 132+00

USH 12/18 EB

124'XEB' 126'XEB' 128'XEB' 130'XEB'

MATCH LINE STA 132+00

±00'XWB'

±00'XWB'

134'XWB' 136'XWB' 138'XWB' 140'XWB' 142'XWB' 144'XWB' 146'XWB'

MATCH EXISTING EDGELINES

MATCH EXISTING CYCLE

END WB MARKING
STA 138+55'XWB'

MATCH EXISTING EDGELINES

USH 12/18 EB

134'XEB' 136'XEB' 138'XEB' 140'XEB' 142'XEB' 144'XEB' 146'XEB'

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	PERMANENT SIGNING AND PAVEMENT MARKING	SHEET 79	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0245_PM.DWG
LAYOUT NAME - 04
PLOT DATE : 9/24/2019 2:04 PM
PLOT BY : KYLE CORNELIUS
PLOT NAME :
PLOT SCALE : ##########
WISDOT/CADDS SHEET 42

2

PAVEMENT MARKING LEGEND

1. MARKING LINE EPOXY 4-INCH (WHITE)
2. MARKING LINE EPOXY 4-INCH (YELLOW)
4. MARKING LINE EPOXY 4-INCH (WHITE) (12.5 FT LINE 37.5 FT SKIP)

N

SB TO WB RAMP

NB TO WB RAMP

14'XL'

16'XL'

18'XL'

20'XL'

22'XL'

24'XL'

26'XL'

117.6'X58'

117.4'X58'

117.2'X58'

IH 39 SB

EXISTING IH 39 NB

BEGIN NB TO WB MARKING
STA 18+57'XL'

MATCH EXISTING
EDGELINES

END NB TO WB MARKING
STA 24+05'XL'

RIPRAP

N

FEMRITE DR

34'XFD'

36'XFD'

38'XFD'

40'XFD'

42'XFD'

44'XFD'

46'XFD'

+00'XFD'

+31'XFD'

+31'XFD'

+62'XFD'

+77'XFD'

MATCH EXISTING
CYCLE

MATCH EXISTING
EDGELINES

DOUBLE
YELLOW

BEGIN FEMRITE DR MARKING
STA 38+37'XFD'

MATCH LINE STA 48+00

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	PERMANENT SIGNING AND PAVEMENT MARKING	SHEET 80	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0245_PM.DWG
LAYOUT NAME - 05

PLOT DATE : 9/24/2019 2:05 PM PLOT BY : KYLE CORNELIUS PLOT NAME : PLOT SCALE : ###########

2

2

PAVEMENT MARKING LEGEND

1. MARKING LINE EPOXY 4-INCH (WHITE)
2. MARKING LINE EPOXY 4-INCH (YELLOW)
6. MARKING LINE EPOXY 4-INCH (YELLOW) (12.5 FT LINE 37.5 FT SKIP)
7. MARKING ARROW EPOXY (WHITE)

x00-00 DENOTES SIGN NUMBER
- SIGN COUNT SEQUENCE PER PAGE
- PAGE NUMBER
- WORK CODE: R=REMOVE, W=WORK BY OTHERS, M=MOVE

N

IH 39 SB

IH 39 NB

1188'XSB'

1186'XSB'

1184'XSB'

1182'XSB'

1180'XSB'

MATCH LINE STA 48+00

M04-01
END
CENTER LANE
ONLY

M04-02
END
CENTER LANE
ONLY

MATCH EXISTING EDGELINES

MATCH EXISTING CYCLE

FEMRITE DR

END FEMRITE DR MARKING
STA 58+32'XFD'

ATLAS CT

50'XFD'

52'XFD'

54'XFD'

56'XFD'

58'XFD'

60'XFD'

62'XFD'

+35'XFD'

+16'XFD'

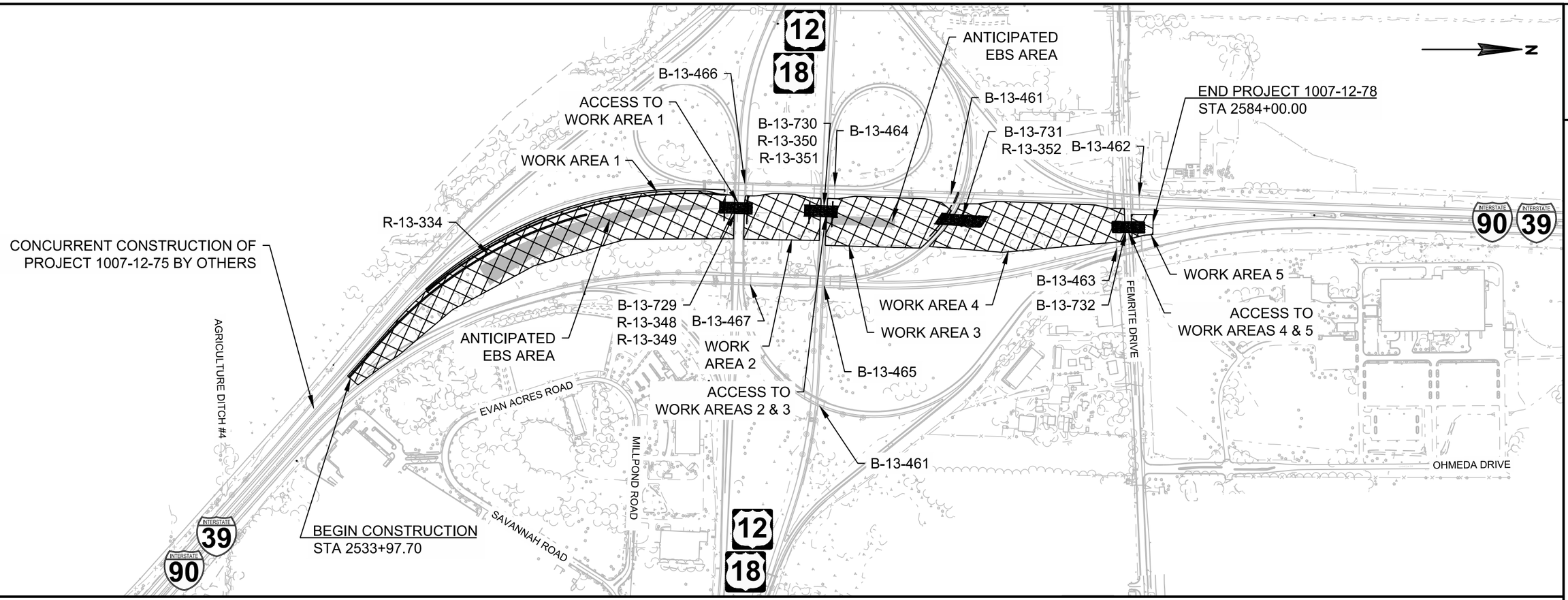
+00'XFD'

DOUBLE YELLOW

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	PERMANENT SIGNING AND PAVEMENT MARKING	SHEET 81	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0245_PM.DWG
LAYOUT NAME - 06

PLOT DATE : 9/24/2019 2:05 PM PLOT BY : KYLE CORNELIUS PLOT NAME : PLOT SCALE : ##########



LEGEND

TYPE III BARRICADE	CONCRETE BARRIER TEMPORARY PRECAST (CBTP)
TYPE III BARRICADE WTH ATTACHED SIGN	
TRAFFIC CONTROL DRUM	CC — CRASH CUSHIONS TEMPORARY
TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT	DIRECTION OF ROADWAY TRAFFIC
FLASHING ARROW BOARD	DIRECTION OF CONSTRUCTION TRAFFIC
SIGN ON PERMANENT SUPPORT	PCMS — PORTABLE CHANGEABLE MESSAGE BOARD
SIGN ON TEMPORARY SUPPORT	WORK ZONE
TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)	WORK AREA
	SHOULDER WIDENING

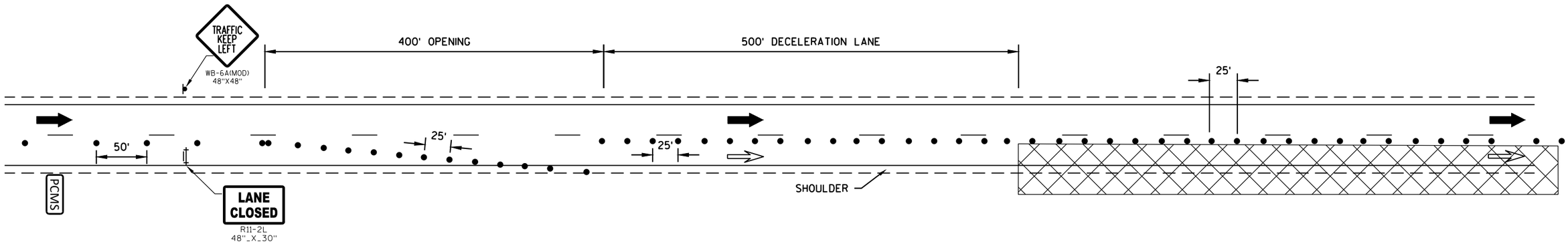
GENERAL NOTES: TRAFFIC CONTROL

1. ALL TRAFFIC CONTROL SIGNING, PLACEMENT OF TRAFFIC CONTROL DEVICES, LANE CLOSURES, AND STAGING CHANGES SHALL BE COORDINATED WITH THE CONCURRENT PROJECT 1007-12-75 TO THE SOUTH.
2. THE FOLLOWING NOTES ARE APPLICABLE TO ALL STAGES. SEE THE STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS FOR ADDITIONAL TRAFFIC CONTROL AND CONSTRUCTION STAGING REQUIREMENTS.
3. PORTABLE CHANGEABLE MESSAGE SIGNS (PCMS) SHALL BE LOCATED BY WISDOT SOUTHWEST REGION TRAFFIC SECTION.
4. THE EXACT NUMBER, LOCATION AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS OR AS DIRECTED BY THE ENGINEER IN THE FIELD.
5. ALL "WO" OR "W" DIAMOND SHAPED WARNING SIGNS, SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.
6. ALL DRUMS IN TAPERS SHALL HAVE A TRAFFIC CONTROL WARNING LIGHTS TYPE C, STEADY BURN.
7. MOUNT ALL PORTABLE TRAFFIC CONTROL SIGNS AT A MINIMUM HEIGHT OF 5 FEET, MEASURED FROM THE BOTTOM OF THE SIGN, ABOVE THE EDGE OF PAVEMENT.
8. 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.
9. ALL SHORT TERM LANE CLOSURE SIGNS SHALL BE REMOVED OR COVERED AND ALL ARROW BOARDS AND DEVICES REMOVED BEYOND THE SHOULDER WHEN THE WORK IS NOT IN PROGRESS AND THE LANE IS RESTORED TO A SAFE OPERATING CONDITION. DRUMS ADJACENT TO GUARDRAIL SHOULD BE STORED BEHIND THE GUARDRAIL IN LOCATIONS WHERE PRACTICAL.
10. TRAFFIC CONTROL SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.
11. DIMENSIONS TO CONCRETE BARRIER TEMPORARY PRECAST ARE TO THE FACE OF THE BARRIER ADJACENT TO TRAFFIC. STATION/OFFSET CALL-OUTS TO CONCRETE BARRIER TEMPORARY PRECAST ARE TO THE CENTER OF THE BARRIER.
12. PROVIDE A MINIMUM OF 1' CLEAR FROM EDGE OF TRAVEL LANE TO THE TOE OF THE CONCRETE BARRIER TEMPORARY PRECAST.
13. WITHIN 2 FEET OF TRAVEL LANE (EXCEPT ON LOCAL ROADS), EXISTING SHOULDER SHALL BE REPLACED WITH NEW PAVEMENTS IN THE SAME NIGHT. NO AGGREGATE SHOULDERS SHALL BE PERMITTED ADJACENT TO TRAVEL LANES.
14. IH 39/90, USH 12/18, ALL RAMPS WITHIN THE BELTLINE INTERCHANGE, AND ALL DETOUR ROUTES ARE OSOW ROUTES THAT MUST MAINTAIN A 16' MINIMUM CLEAR ROADWAY WIDTH AT ALL TIMES DURING CONSTRUCTION.

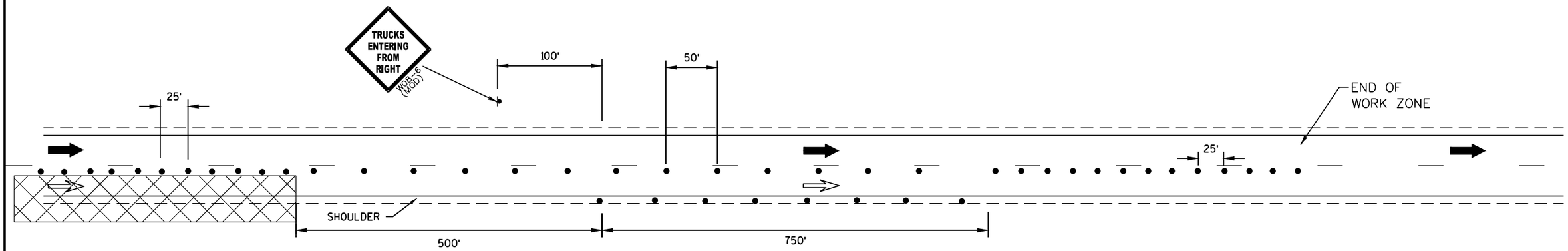
PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	TRAFFIC CONTROL - WORK AREA OVERVIEW AND GENERAL NOTES	SHEET 82	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0250_TC_OV.DWG
LAYOUT NAME - 01
PLOT DATE : 7/31/2019 6:22 PM
PLOT BY : CHAD EVEN
PLOT NAME :
PLOT SCALE : 1 IN: 600 FT
WISDOT/CADDS SHEET 42

2



FOR CONSTRUCTION TRAFFIC EXITING LIVE TRAFFIC LANES



FOR CONSTRUCTION TRAFFIC RE-ENTERING LIVE TRAFFIC LANES

NOTE:
SPACING AND LOCATIONS OF DEVICES IN THE FIELD SUBJECT TO REVIEW AND APPROVAL BY THE ENGINEER

SEE OTHER TRAFFIC CONTROL DETAILS AND STANDARD DETAIL DRAWINGS FOR LANE CLOSURE DETAILS

PORTABLE MESSAGE SIGN MESSAGES SHOULD READ:

FRAME 1	FRAME 2
TRUCKS EXITING RIGHT	DO NOT FOLLOW TRUCKS

DETAIL FOR CONSTRUCTION ACCESS AT LANE CLOSURES

NIGHT TRAFFIC ONLY

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

TRAFFIC CONTROL DEVICES NOT IN USE SHALL BE LAYED DOWN OR REMOVED, TURNING OF DEVICES TO OBSCURE THE MESSAGE WILL NOT BE ALLOWED.

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 WITH A MINIMUM 5' MOUNTING HEIGHT.

COORDINATE SIGN LAYOUT WITH CONCURRENT PROJECT 1007-12-78 BY OTHERS.

REMOVE PAVEMENT MARKINGS IF LANE CLOSURE IS TO BE IN PLACE FOR LONGER THAN 7 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.

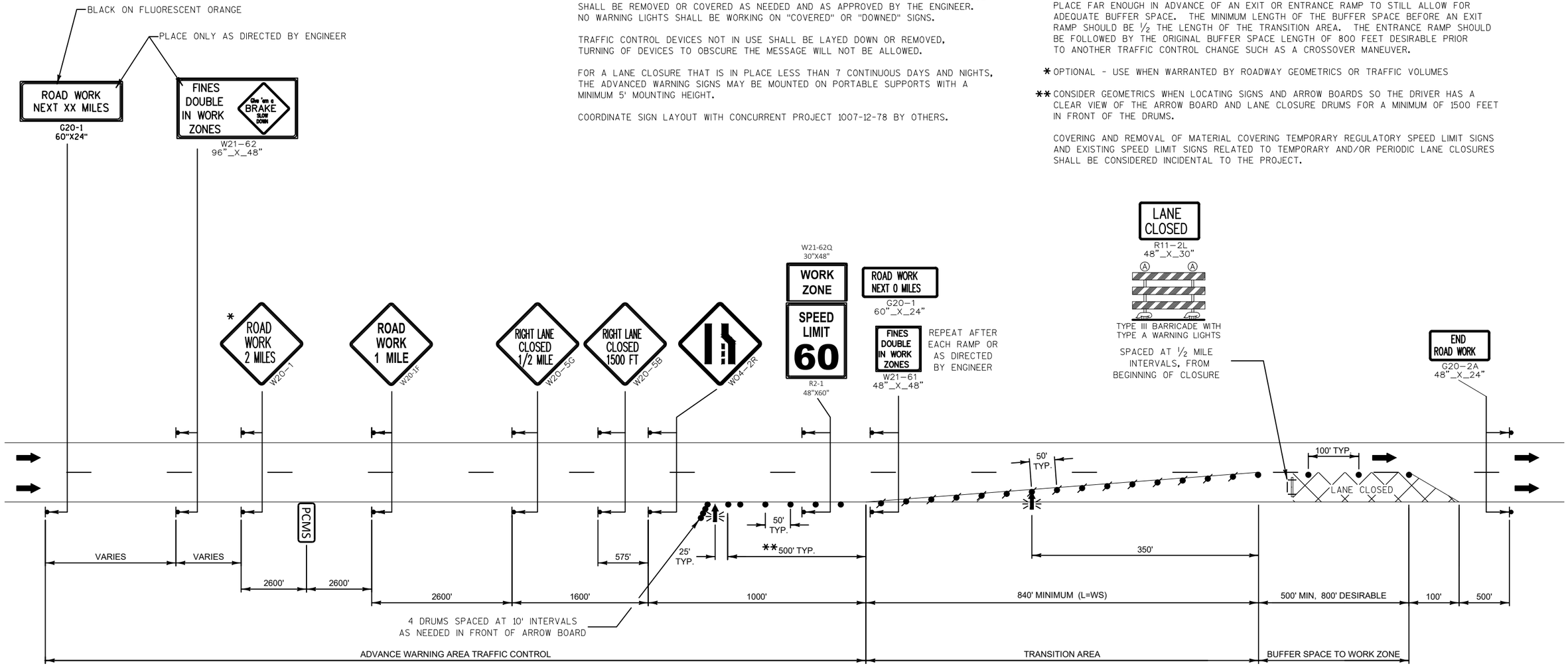
IF LANE CLOSURE IS MORE THAN 1 MILE, PLACE A TYPE III BARRICADE APPROXIMATELY EVERY ½ MILE ACROSS THE CLOSED LANE TO HELP ENFORCE THE DRUM LINE.

ADJUSTMENTS IN BUFFER SPACE NEED TO BE INCORPORATED WHEN THE LANE CLOSURE OCCURS NEAR AN INTERCHANGE EXIT OR ENTRANCE RAMP. 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 ½ 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.

* OPTIONAL - USE WHEN WARRANTED BY ROADWAY GEOMETRICS OR TRAFFIC VOLUMES

** 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 OF 1500 FEET IN FRONT OF THE DRUMS.

COVERING AND REMOVAL OF MATERIAL COVERING TEMPORARY REGULATORY SPEED LIMIT SIGNS AND EXISTING SPEED LIMIT SIGNS RELATED TO TEMPORARY AND/OR PERIODIC LANE CLOSURES SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT.



DETAIL FOR ADVANCE TEMPORARY SIGNING FOR LANE CLOSURE - NB OR SB IH 39

(SEE TRAFFIC CONTROL PLANS FOR LOCATIONS)
(COORDINATE SIGN LAYOUT WITH CONCURRENT PROJECTS 1007-12-75 BY OTHERS)

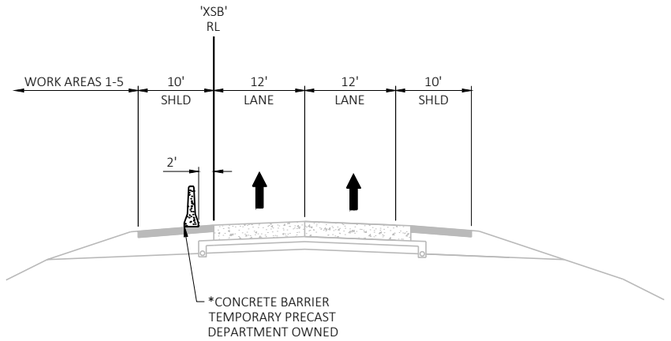
PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	TRAFFIC CONTROL - DETAILS	SHEET 84	E

CONSTRUCTION STAGING TYPICALS

SB IH 39/90

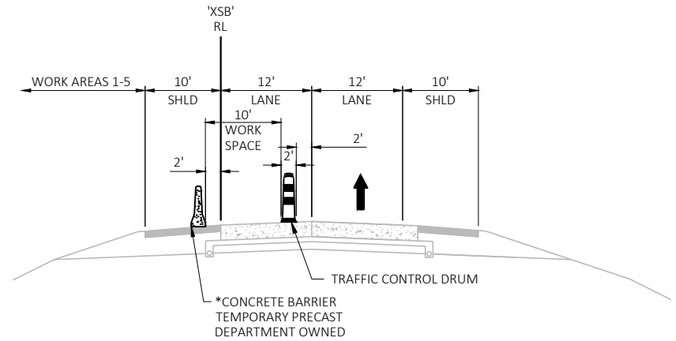
(LOOKING SOUTH)

* CONCRETE BARRIER TEMPORARY PRECAST DEPARTMENT OWNED TO BE DELIVERED AND INSTALLED BY OTHERS UNDER 1007-12-75. (STA 1141+12'XSB - STA 1175+08'XSB')



ALL STAGES

(SHOULDER CLOSURE)



ALL STAGES

(NIGHTTIME LANE CLOSURE)

2

LEGEND

TYPE III BARRICADE	CONCRETE BARRIER TEMPORARY PRECAST (CBTP)
TYPE III BARRICADE WTH ATTACHED SIGN	
TRAFFIC CONTROL DRUM	CC — CRASH CUSHIONS TEMPORARY
TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT	DIRECTION OF ROADWAY TRAFFIC
FLASHING ARROW BOARD	DIRECTION OF CONSTRUCTION TRAFFIC
SIGN ON PERMANENT SUPPORT	PCMS — PORTABLE CHANGEABLE MESSAGE BOARD
SIGN ON TEMPORARY SUPPORT	WORK ZONE
TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)	WORK AREA
	SHOULDER WIDENING

SHEET 1

NOTE:
PLACE TRAFFIC CONTROL FOR SHOULDER CLOSURE PRIOR TO BEGINNING WORK.

THIS SHEET SHOWS THE IH 39 SB SHOULDER CLOSURE.
SEE SUPPLEMENTAL PLAN SHEETS 'TRAFFIC CONTROL - IH 39 SB NIGHTTIME LANE CLOSURE' AND 'TRAFFIC CONTROL - IH 39 SB RAMP CLOSURES' FOR LAYOUT OF ADDITIONAL DEVICES ON IH 39 SB.

SHEET 1 TIES INTO STAGE 1 OF PROJECT 1007-12-75.
SHEET 1A TIES INTO STAGE 2 OF PROJECT 1007-12-75.
SHEETS 2-5 ARE THE SAME FOR BOTH CONFIGURATIONS.

ACCESS WORK AREA 1 FROM USH 12/18 EB.
ACCESS WORK AREAS 2 & 3 FROM USH 12/18 WB.
ACCESS WORK AREAS 4 & 5 FROM FEMRITE DRIVE.

TEMPORARY PAVEMENT MARKINGS AND TRAFFIC STAGING SWITCHES ARE SHOWN IN PLAN 1007-12-75.

* CBTP DEPARTMENT OWNED TO BE DELIVERED AND INSTALLED BY OTHERS UNDER THE 1007-12-75 PROJECT.

N

COORDINATE TRAFFIC CONTROL WITH PROJECT 1007-12-75, CBTP PLACED UNDER PROJECT 1007-12-75

+81.85, 3.00' RT

*CBTP DEPARTMENT OWNED
STA 1141+12'XSB' - STA 1175+08'XSB'
WITH GAWK SCREEN
(SEE CONSTRUCTION DETAIL)

USH 12/18 EB OFF RAMP TO IH 39 SB

1136'XSB' 1138'XSB' 1140'XSB' 1142'XSB' 1144'XSB' 1146'XSB' 1148'XSB' 1150'XSB'

2534 2536 2538 2540 2542 2544 2546 2548

CBTP

IH 39 SB

IH 39 NB

WORK AREA 1

R-13-334

MATCHLINE STA 2548+80

POST MP MH HO RIPRAP

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	TRAFFIC CONTROL - IH 39 SB SHOULDER CLOSURE	SHEET	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0252_TC_SB SHOULDER CLOSURE.DWG
LAYOUT NAME - 01

PLOT DATE : 9/30/2019 10:33 AM PLOT BY : KYLE CORNELIUS PLOT NAME : PLOT SCALE : 1 IN:100 FT

2

LEGEND

TYPE III BARRICADE	CONCRETE BARRIER TEMPORARY PRECAST (CBTP)
TYPE III BARRICADE WTH ATTACHED SIGN	
TRAFFIC CONTROL DRUM	CC — CRASH CUSHIONS TEMPORARY
TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT	DIRECTION OF ROADWAY TRAFFIC
FLASHING ARROW BOARD	DIRECTION OF CONSTRUCTION TRAFFIC
SIGN ON PERMANENT SUPPORT	PCMS — PORTABLE CHANGEABLE MESSAGE BOARD
SIGN ON TEMPORARY SUPPORT	WORK ZONE
TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)	WORK AREA
	SHOULDER WIDENING

SHEET 1A

NOTE:
PLACE TRAFFIC CONTROL FOR SHOULDER CLOSURE PRIOR TO BEGINNING WORK.

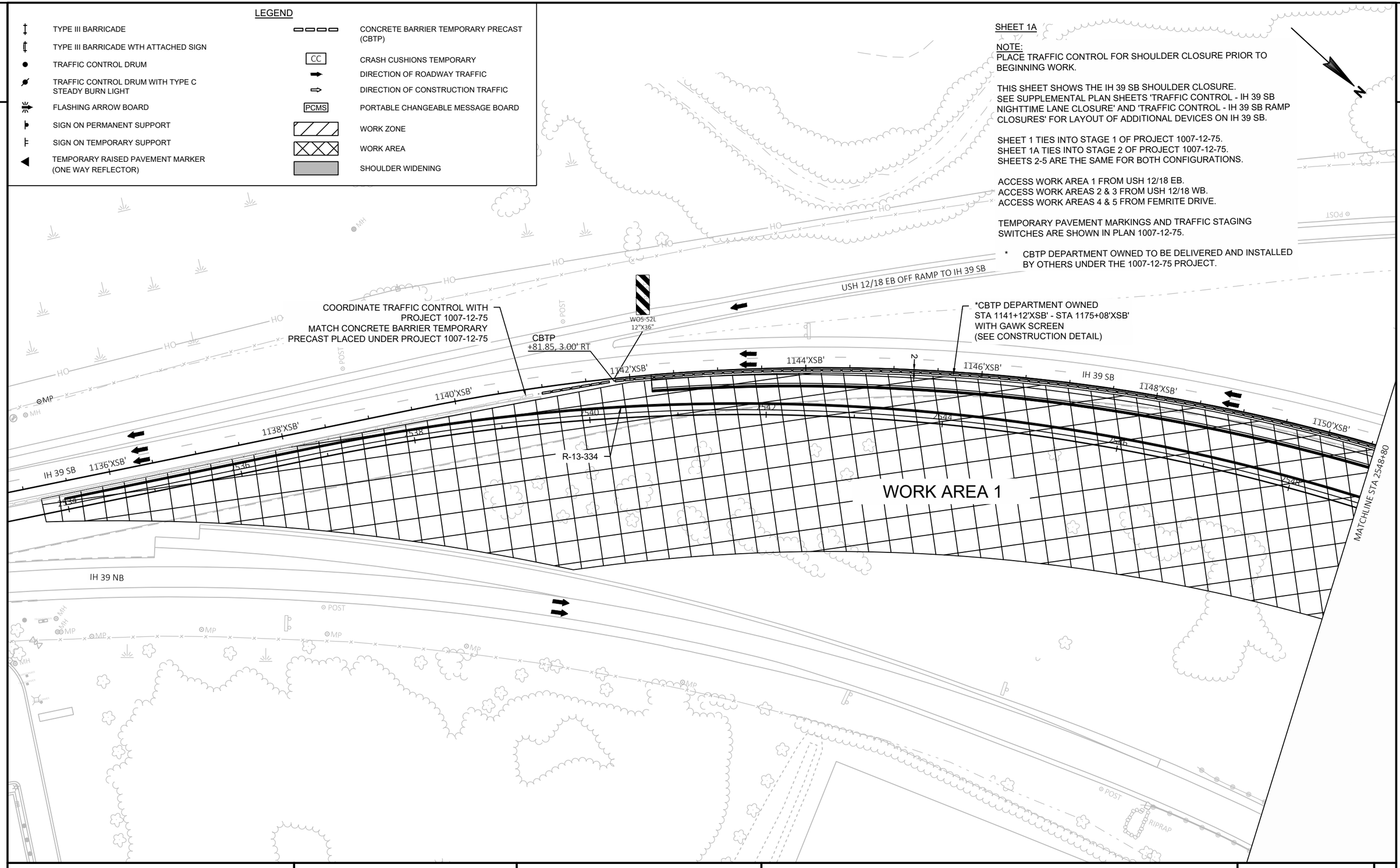
THIS SHEET SHOWS THE IH 39 SB SHOULDER CLOSURE.
SEE SUPPLEMENTAL PLAN SHEETS 'TRAFFIC CONTROL - IH 39 SB NIGHTTIME LANE CLOSURE' AND 'TRAFFIC CONTROL - IH 39 SB RAMP CLOSURES' FOR LAYOUT OF ADDITIONAL DEVICES ON IH 39 SB.

SHEET 1 TIES INTO STAGE 1 OF PROJECT 1007-12-75.
SHEET 1A TIES INTO STAGE 2 OF PROJECT 1007-12-75.
SHEETS 2-5 ARE THE SAME FOR BOTH CONFIGURATIONS.

ACCESS WORK AREA 1 FROM USH 12/18 EB.
ACCESS WORK AREAS 2 & 3 FROM USH 12/18 WB.
ACCESS WORK AREAS 4 & 5 FROM FEMRITE DRIVE.

TEMPORARY PAVEMENT MARKINGS AND TRAFFIC STAGING SWITCHES ARE SHOWN IN PLAN 1007-12-75.

* CBTP DEPARTMENT OWNED TO BE DELIVERED AND INSTALLED BY OTHERS UNDER THE 1007-12-75 PROJECT.



PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	TRAFFIC CONTROL - IH 39 SB SHOULDER CLOSURE	SHEET 87	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0252_TC_SB SHOULDER CLOSURE.DWG
LAYOUT NAME - 01A
PLOT DATE : 9/30/2019 10:34 AM PLOT BY : KYLE CORNELIUS PLOT NAME : PLOT SCALE : 1 IN:100 FT

2

LEGEND

TYPE III BARRICADE	CONCRETE BARRIER TEMPORARY PRECAST (CBTP)
TYPE III BARRICADE WTH ATTACHED SIGN	
TRAFFIC CONTROL DRUM	CC — CRASH CUSHIONS TEMPORARY
TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT	DIRECTION OF ROADWAY TRAFFIC
FLASHING ARROW BOARD	DIRECTION OF CONSTRUCTION TRAFFIC
SIGN ON PERMANENT SUPPORT	PCMS — PORTABLE CHANGEABLE MESSAGE BOARD
SIGN ON TEMPORARY SUPPORT	WORK ZONE
TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)	WORK AREA
	SHOULDER WIDENING

SHEET 2

NOTE:
PLACE TRAFFIC CONTROL FOR SHOULDER CLOSURE PRIOR TO BEGINNING WORK.

THIS SHEET SHOWS THE IH 39 SB SHOULDER CLOSURE.
SEE SUPPLEMENTAL PLAN SHEETS 'TRAFFIC CONTROL - IH 39 SB NIGHTTIME LANE CLOSURE' AND 'TRAFFIC CONTROL - IH 39 SB RAMP CLOSURES' FOR LAYOUT OF ADDITIONAL DEVICES ON IH 39 SB.

SHEET 1 TIES INTO STAGE 1 OF PROJECT 1007-12-75.
SHEET 1A TIES INTO STAGE 2 OF PROJECT 1007-12-75.
SHEETS 2-5 ARE THE SAME FOR BOTH CONFIGURATIONS.

ACCESS WORK AREA 1 FROM USH 12/18 EB.
ACCESS WORK AREAS 2 & 3 FROM USH 12/18 WB.
ACCESS WORK AREAS 4 & 5 FROM FEMRITE DRIVE.

* CBTP DEPARTMENT OWNED TO BE DELIVERED AND INSTALLED BY OTHERS UNDER THE 1007-12-75 PROJECT.

EXIT 142 B
INTERSTATE 39 INTERSTATE 90 Chicago
12 18 EAST Cambridge

EXIT RAMP TO USH 12/18 EB
RIPRAP
EXISTING BRIDGE B-13-466
*CBTP DEPARTMENT OWNED STA 1141+12'XSB' - 1175+08'XSB' WITH GAWK SCREEN (SEE CONSTRUCTION DETAIL)
IH 39/90
IH 39 SB
1152'XSB'
1154'XSB'
1156'XSB'
1158'XSB'
1160'XSB'
1162'XSB'
1164'XSB'
2550
2552
2554
2556
2558
2560
2562
WORK AREA 1
WORK AREA 2
MATCHLINE STA 2548+80
MATCHLINE STA 2563+50
R-13-334
R-13-348
R-13-349
B-13-729
USH 12/18 EB
USH 12/18
EXISTING BRIDGE B-13-467
IH 39 NB
EXIT RAMP TO USH 12/18 EB

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	TRAFFIC CONTROL - IH 39 SB SHOULDER CLOSURE	SHEET 88	E

2

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)
- CONCRETE BARRIER TEMPORARY PRECAST (CBTP)
- CC — CRASH CUSHIONS TEMPORARY
- DIRECTION OF ROADWAY TRAFFIC
- DIRECTION OF CONSTRUCTION TRAFFIC
- PCMS — PORTABLE CHANGEABLE MESSAGE BOARD
- WORK ZONE
- WORK AREA
- SHOULDER WIDENING

SHEET 3

NOTE:
PLACE TRAFFIC CONTROL FOR SHOULDER CLOSURE PRIOR TO BEGINNING WORK.

THIS SHEET SHOWS THE IH 39 SB SHOULDER CLOSURE.
SEE SUPPLEMENTAL PLAN SHEETS 'TRAFFIC CONTROL - IH 39 SB NIGHTTIME LANE CLOSURE' AND 'TRAFFIC CONTROL - IH 39 SB RAMP CLOSURES' FOR LAYOUT OF ADDITIONAL DEVICES ON IH 39 SB.

ALSO SEE PLAN SHEET 'TRAFFIC CONTROL - IH 39 SB RAMP CLOSURES' FOR LAYOUT OF DEVICES WHEN THE SB CLOSING RAMPS.

ACCESS WORK AREA 1 FROM USH 12/18 EB.
ACCESS WORK AREAS 2 & 3 FROM USH 12/18 WB.
ACCESS WORK AREAS 4 & 5 FROM FEMRITE DRIVE.

* CBTP DEPARTMENT OWNED TO BE DELIVERED AND INSTALLED BY OTHERS UNDER THE 1007-12-75 PROJECT.

N

IH 39 SB EXIT RAMP TO USH 12/18 WB

IH 39 SB ON RAMP FROM USH 12/18 WB

USH 12/18 WB

EXISTING BRIDGE B-13-464

*CBTP DEPARTMENT OWNED STA 1141+12'XSB' - 1175+08'XSB' WITH GAWK SCREEN (SEE CONSTRUCTION DETAIL)

CBTP +75.83, 3.00' RT

WO5-52L 12"X36"

EXISTING BRIDGE B-13-461

CBTP +07.89, 29.31' RT

IH 39 SB

1166'XSB' 1168'XSB' 1170'XSB' 1172'XSB' 1174'XSB' 1176'XSB' 1178'XSB'

100 (TYP)

MATCHLINE STA 2563+50

2564 2566 2568 2570 2572 2574 2576

WORK AREA 2

WORK AREA 3

WORK AREA 4

MATCHLINE STA 2577+60

R-13-350 B-13-730 R-13-351 B-13-731 R-13-352

USH 12/18 WB

IH 39 NB OFF RAMP TO USH 12/18 WB

EXISTING BRIDGE B-13-465

IH 39 NB

RIPRAP

POST

INL

MH

STOP

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	TRAFFIC CONTROL - IH 39 SB SHOULDER CLOSURE	SHEET 89 E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0252_TC_SB SHOULDER CLOSURE.DWG
LAYOUT NAME - 03

PLOT DATE : 9/30/2019 10:34 AM PLOT BY : KYLE CORNELIUS PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)
- CONCRETE BARRIER TEMPORARY PRECAST (CBTP)
- CRASH CUSHIONS TEMPORARY (CC)
- DIRECTION OF ROADWAY TRAFFIC
- DIRECTION OF CONSTRUCTION TRAFFIC
- PORTABLE CHANGEABLE MESSAGE BOARD (PCMS)
- WORK ZONE
- WORK AREA
- SHOULDER WIDENING

SHEET 4

PLACE TRAFFIC CONTROL FOR SHOULDER CLOSURE PRIOR TO BEGINNING WORK.

THIS SHEET SHOWS THE IH 39 SB SHOULDER CLOSURE.
SEE SUPPLEMENTAL PLAN SHEETS 'TRAFFIC CONTROL - IH 39 SB NIGHTTIME LANE CLOSURE' AND 'TRAFFIC CONTROL - IH 39 SB RAMP CLOSURES' FOR LAYOUT OF ADDITIONAL DEVICES ON IH 39 SB.

ACCESS WORK AREA 1 FROM USH 12/18 EB.
ACCESS WORK AREAS 2 & 3 FROM USH 12/18 WB.
ACCESS WORK AREAS 4 & 5 FROM FEMRITE DRIVE.

N

EXISTING BRIDGE B-13-462

IH 39 SB EXIT RAMP TO USH 12/18 WB

IH 39 SB

1180'XSB' 1182'XSB' 1184'XSB' 1186'XSB' 1188'XSB' 1190'XSB' 1192'XSB'

100 (TYP)

50 (TYP)

WORK AREA 4

2578 2580

WORK AREA 5

MATCHLINE STA 2577+60

MATCHLINE STA 2591+75

FEMRITE DR

B-13-732

IH 39 NB

END ROAD WORK
G20-2A
48"X24"

IH 39 NB

IH 39 NB ON RAMP FROM USH 12/18

EXISTING BRIDGE B-13-463

FEMRITE DRIVE

2

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	TRAFFIC CONTROL - IH 39 SB SHOULDER CLOSURE	SHEET 90	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0252_TC_SB SHOULDER CLOSURE.DWG
LAYOUT NAME - 04
PLOT DATE : 9/30/2019 10:35 AM PLOT BY : KYLE CORNELIUS PLOT NAME : PLOT SCALE : Custom
WISDOT/CADDS SHEET 42

2

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)
- CONCRETE BARRIER TEMPORARY PRECAST (CBTP)
- CC — CRASH CUSHIONS TEMPORARY
- DIRECTION OF ROADWAY TRAFFIC
- DIRECTION OF CONSTRUCTION TRAFFIC
- PCMS — PORTABLE CHANGEABLE MESSAGE BOARD
- WORK ZONE
- WORK AREA
- SHOULDER WIDENING

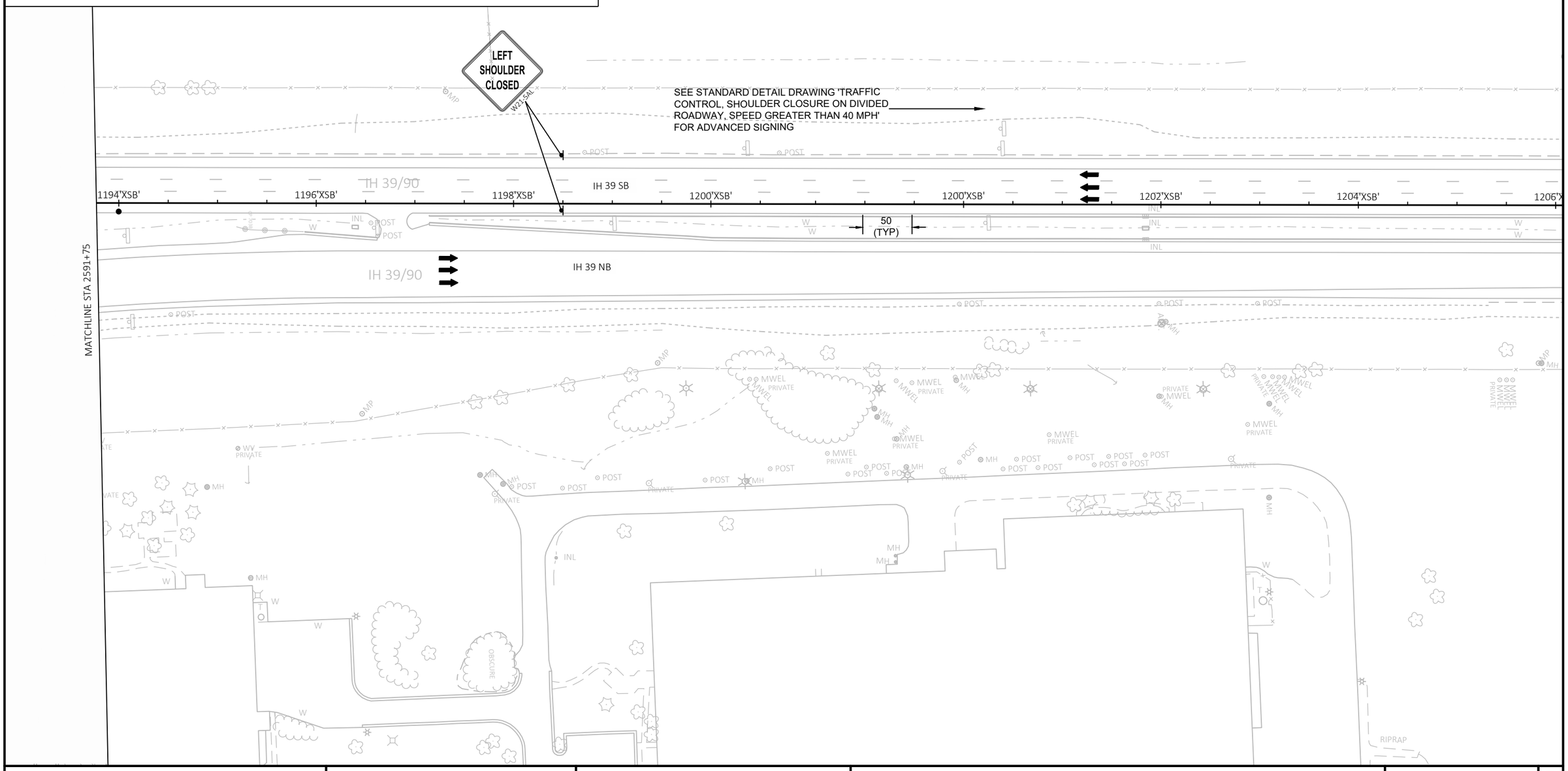
SHEET 5

PLACE TRAFFIC CONTROL FOR SHOULDER CLOSURE PRIOR TO BEGINNING WORK.

THIS SHEET SHOWS THE IH 39 SB SHOULDER CLOSURE.
SEE SUPPLEMENTAL PLAN SHEETS 'TRAFFIC CONTROL - IH 39 SB NIGHTTIME LANE CLOSURE' AND 'TRAFFIC CONTROL - IH 39 SB RAMP CLOSURES' FOR LAYOUT OF ADDITIONAL DEVICES ON IH 39 SB.

ACCESS WORK AREA 1 FROM USH 12/18 EB.
ACCESS WORK AREAS 2 & 3 FROM USH 12/18 WB.
ACCESS WORK AREAS 4 & 5 FROM FEMRITE DRIVE.

N



PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	TRAFFIC CONTROL - IH 39 SB SHOULDER CLOSURE	SHEET 91	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0252_TC_SB SHOULDER CLOSURE.DWG
LAYOUT NAME - 05
PLOT DATE : 9/30/2019 10:35 AM PLOT BY : KYLE CORNELIUS PLOT NAME : PLOT SCALE : Custom

2

LEGEND

TYPE III BARRICADE	CONCRETE BARRIER TEMPORARY PRECAST (CBTP)
TYPE III BARRICADE WTH ATTACHED SIGN	
TRAFFIC CONTROL DRUM	CC — CRASH CUSHIONS TEMPORARY
TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT	DIRECTION OF ROADWAY TRAFFIC
FLASHING ARROW BOARD	DIRECTION OF CONSTRUCTION TRAFFIC
SIGN ON PERMANENT SUPPORT	PCMS — PORTABLE CHANGEABLE MESSAGE BOARD
SIGN ON TEMPORARY SUPPORT	WORK ZONE
TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)	WORK AREA
	SHOULDER WIDENING

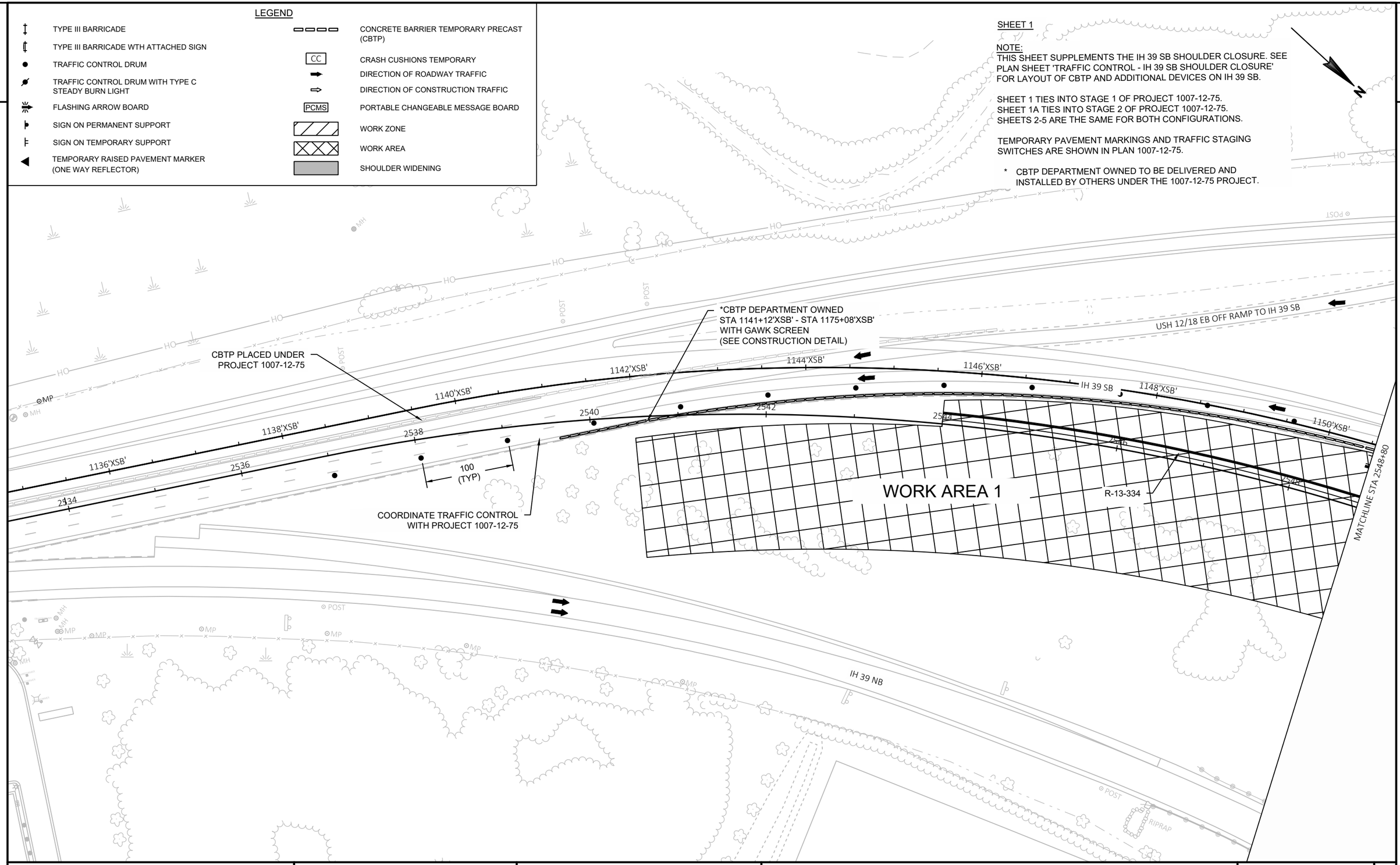
SHEET 1

NOTE:
THIS SHEET SUPPLEMENTS THE IH 39 SB SHOULDER CLOSURE. SEE PLAN SHEET 'TRAFFIC CONTROL - IH 39 SB SHOULDER CLOSURE' FOR LAYOUT OF CBTP AND ADDITIONAL DEVICES ON IH 39 SB.

SHEET 1 TIES INTO STAGE 1 OF PROJECT 1007-12-75.
SHEET 1A TIES INTO STAGE 2 OF PROJECT 1007-12-75.
SHEETS 2-5 ARE THE SAME FOR BOTH CONFIGURATIONS.

TEMPORARY PAVEMENT MARKINGS AND TRAFFIC STAGING SWITCHES ARE SHOWN IN PLAN 1007-12-75.

* CBTP DEPARTMENT OWNED TO BE DELIVERED AND INSTALLED BY OTHERS UNDER THE 1007-12-75 PROJECT.



PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	TRAFFIC CONTROL - IH 39 SB NIGHTTIME LANE CLOSURE	SHEET 92	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0252_TC_SB NIGHTTIME LANE CLOSURE.DWG
LAYOUT NAME - 01
PLOT DATE : 9/30/2019 10:39 AM PLOT BY : KYLE CORNELIUS PLOT NAME : PLOT SCALE : 1 IN:100 FT

2

LEGEND

TYPE III BARRICADE	CONCRETE BARRIER TEMPORARY PRECAST (CBTP)
TYPE III BARRICADE WTH ATTACHED SIGN	
TRAFFIC CONTROL DRUM	CC — CRASH CUSHIONS TEMPORARY
TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT	DIRECTION OF ROADWAY TRAFFIC
FLASHING ARROW BOARD	DIRECTION OF CONSTRUCTION TRAFFIC
SIGN ON PERMANENT SUPPORT	PCMS — PORTABLE CHANGEABLE MESSAGE BOARD
SIGN ON TEMPORARY SUPPORT	WORK ZONE
TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)	WORK AREA
	SHOULDER WIDENING

SHEET 1A

NOTE:
THIS SHEET SUPPLEMENTS THE IH 39 SB SHOULDER CLOSURE. SEE PLAN SHEET 'TRAFFIC CONTROL - IH 39 SB SHOULDER CLOSURE' FOR LAYOUT OF CBTP AND ADDITIONAL DEVICES ON IH 39 SB.

SHEET 1 TIES INTO STAGE 1 OF PROJECT 1007-12-75.
SHEET 1A TIES INTO STAGE 2 OF PROJECT 1007-12-75.
SHEETS 2-5 ARE THE SAME FOR BOTH CONFIGURATIONS.

TEMPORARY PAVEMENT MARKINGS AND TRAFFIC STAGING SWITCHES ARE SHOWN IN PLAN 1007-12-75.

* CBTP DEPARTMENT OWNED TO BE DELIVERED AND INSTALLED BY OTHERS UNDER THE 1007-12-75 PROJECT.

N

COORDINATE TRAFFIC CONTROL WITH PROJECT 1007-12-75 AND MATCH CBTP PLACED UNDER PROJECT 1007-12-75

WQS-52L 12"X36"

*CBTP DEPARTMENT OWNED
STA 1141+12'XSB' - STA 1175+08'XSB'
WITH GAWK SCREEN
(SEE CONSTRUCTION DETAIL)

USH 12/18 EB OFF RAMP TO IH 39 SB

IH 39 SB

IH 39 NB

1136'XSB'
1138'XSB'
1140'XSB'
1142'XSB'
1144'XSB'
1146'XSB'
1148'XSB'
1150'XSB'

100 (TYP)

R-13-334

WORK AREA 1

MATCHLINE STA 2548+80

RIPRAP

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	TRAFFIC CONTROL - IH 39 SB NIGHTTIME LANE CLOSURE	SHEET 93	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0252_TC_SB NIGHTTIME LANE CLOSURE.DWG
LAYOUT NAME - 01A

PLOT DATE : 9/30/2019 10:39 AM PLOT BY : KYLE CORNELIUS PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

2

LEGEND

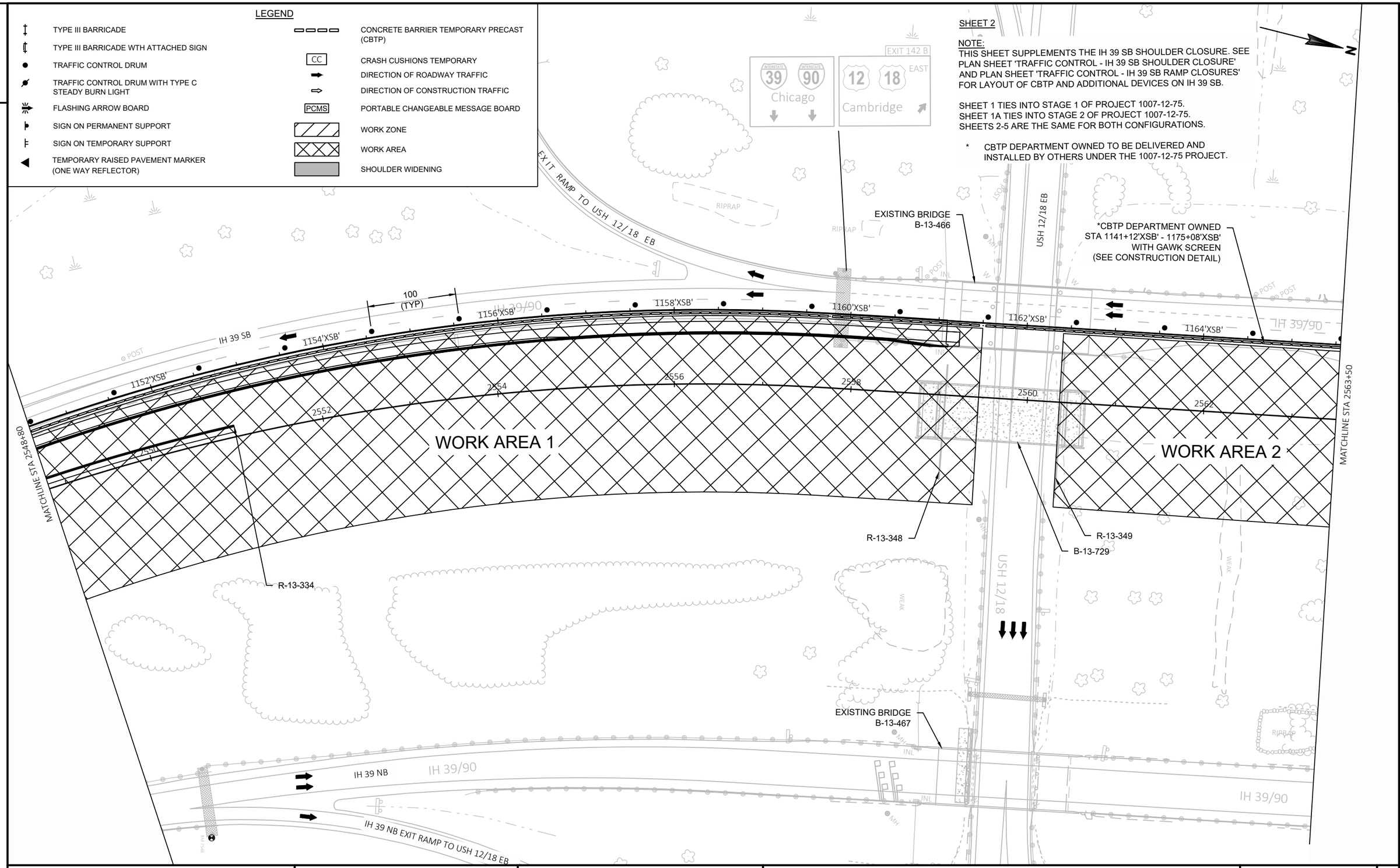
TYPE III BARRICADE	CONCRETE BARRIER TEMPORARY PRECAST (CBTP)
TYPE III BARRICADE WTH ATTACHED SIGN	
TRAFFIC CONTROL DRUM	CRASH CUSHIONS TEMPORARY (CC)
TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT	DIRECTION OF ROADWAY TRAFFIC
FLASHING ARROW BOARD	DIRECTION OF CONSTRUCTION TRAFFIC
SIGN ON PERMANENT SUPPORT	PORTABLE CHANGEABLE MESSAGE BOARD (PCMS)
SIGN ON TEMPORARY SUPPORT	WORK ZONE
TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)	WORK AREA
	SHOULDER WIDENING

SHEET 2

NOTE:
THIS SHEET SUPPLEMENTS THE IH 39 SB SHOULDER CLOSURE. SEE PLAN SHEET 'TRAFFIC CONTROL - IH 39 SB SHOULDER CLOSURE' AND PLAN SHEET 'TRAFFIC CONTROL - IH 39 SB RAMP CLOSURES' FOR LAYOUT OF CBTP AND ADDITIONAL DEVICES ON IH 39 SB.

SHEET 1 TIES INTO STAGE 1 OF PROJECT 1007-12-75.
SHEET 1A TIES INTO STAGE 2 OF PROJECT 1007-12-75.
SHEETS 2-5 ARE THE SAME FOR BOTH CONFIGURATIONS.

* CBTP DEPARTMENT OWNED TO BE DELIVERED AND INSTALLED BY OTHERS UNDER THE 1007-12-75 PROJECT.



PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	TRAFFIC CONTROL - IH 39 SB NIGHTTIME LANE CLOSURE	SHEET 94 E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0252_TC_SB NIGHTTIME LANE CLOSURE.DWG
LAYOUT NAME - 02
PLOT DATE : 9/30/2019 10:39 AM PLOT BY : KYLE CORNELIUS PLOT NAME : PLOT SCALE : 1 IN:100 FT

2

LEGEND

TYPE III BARRICADE	CONCRETE BARRIER TEMPORARY PRECAST (CBTP)
TYPE III BARRICADE WTH ATTACHED SIGN	
TRAFFIC CONTROL DRUM	CRASH CUSHIONS TEMPORARY
TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT	DIRECTION OF ROADWAY TRAFFIC
FLASHING ARROW BOARD	DIRECTION OF CONSTRUCTION TRAFFIC
SIGN ON PERMANENT SUPPORT	PORTABLE CHANGEABLE MESSAGE BOARD
SIGN ON TEMPORARY SUPPORT	WORK ZONE
TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)	WORK AREA
	SHOULDER WIDENING

SHEET 3

NOTE:
THIS SHEET SUPPLEMENTS THE IH 39 SB SHOULDER CLOSURE. SEE PLAN SHEET 'TRAFFIC CONTROL - IH 39 SB SHOULDER CLOSURE' FOR LAYOUT OF CBTP AND ADDITIONAL DEVICES ON IH 39 SB.

ALSO SEE PLAN SHEET 'TRAFFIC CONTROL - IH 39 SB RAMP CLOSURES' FOR LAYOUT OF DEVICES WHEN THE SB CLOSING RAMPS.

* CBTP DEPARTMENT OWNED TO BE DELIVERED AND INSTALLED BY OTHERS UNDER THE 1007-12-75 PROJECT.

N

IH 39 SB EXIT RAMP TO USH 12/18 WB

IH 39 SB ON RAMP FROM USH 12/18 WB

USH 12/18 WB

EXISTING BRIDGE B-13-464

*CBTP DEPARTMENT OWNED STA 1141+12'XSB' - 1175+08'XSB' WITH GAWK SCREEN (SEE CONSTRUCTION DETAIL)

WO5-52L 12"X36"

100 (TYP)

EXISTING BRIDGE B-13-461

IH 39 SB

1166'XSB' 1168'XSB' 1170'XSB' 1172'XSB' 1174'XSB' 1176'XSB' 1178'XSB'

MATCHLINE STA 2563+50

2564 2566 2568 2570 2572 2574 2576

WORK AREA 2

WORK AREA 3

WORK AREA 4

MATCHLINE STA 2577+60

R-13-350 B-13-730 R-13-351 R-13-352 B-13-731

USH 12/18 WB

IH 39 NB OFF RAMP TO USH 12/18 WB

EXISTING BRIDGE B-13-465

IH 39 NB

RIPRAP

POST

INL

W

2

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	TRAFFIC CONTROL - IH 39 SB NIGHTTIME LANE CLOSURE	SHEET 95	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0252_TC_SB NIGHTTIME LANE CLOSURE.DWG
LAYOUT NAME - 03

PLOT DATE : 9/30/2019 10:40 AM PLOT BY : KYLE CORNELIUS PLOT NAME : PLOT SCALE : 1 IN:100 FT

2

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)
- CONCRETE BARRIER TEMPORARY PRECAST (CBTP)
- CRASH CUSHIONS TEMPORARY (CC)
- DIRECTION OF ROADWAY TRAFFIC
- DIRECTION OF CONSTRUCTION TRAFFIC
- PORTABLE CHANGEABLE MESSAGE BOARD (PCMS)
- WORK ZONE
- WORK AREA
- SHOULDER WIDENING

SHEET 4

NOTE:
THIS SHEET SUPPLEMENTS THE IH 39 SB SHOULDER CLOSURE. SEE PLAN SHEET 'TRAFFIC CONTROL - IH 39 SB SHOULDER CLOSURE' FOR LAYOUT OF CBTP AND ADDITIONAL DEVICES ON IH 39 SB.

N

EXISTING BRIDGE B-13-462

IH 39 SB EXIT RAMP TO USH 12/18 WB

IH 39 SB

1180'XSB' 1182'XSB' 1184'XSB' 1186'XSB' 1188'XSB' 1190'XSB' 1192'XSB'

100 (TYP)

50 (TYP)

WORK AREA 4

2578 2580

WORK AREA 5

MATCHLINE STA 2577+60

MATCHLINE STA 2591+75

FEMRITE DRIVE

B-13-732

IH 39 NB

END ROAD WORK
G20-2A
48"X24"

IH 39 NB

IH 39 NB RAMP FROM USH 12/18

EXISTING BRIDGE B-13-463

RIPRAP

FLAG

SIGN

2

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	TRAFFIC CONTROL - IH 39 SB NIGHTTIME LANE CLOSURE	SHEET 96	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0252_TC_SB NIGHTTIME LANE CLOSURE.DWG
LAYOUT NAME - 04

PLOT DATE : 9/30/2019 10:40 AM PLOT BY : KYLE CORNELIUS PLOT NAME : PLOT SCALE : Custom

WISDOT/CADDS SHEET 42

2

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)
- CONCRETE BARRIER TEMPORARY PRECAST (CBTP)
- CC — CRASH CUSHIONS TEMPORARY
- DIRECTION OF ROADWAY TRAFFIC
- DIRECTION OF CONSTRUCTION TRAFFIC
- PCMS — PORTABLE CHANGEABLE MESSAGE BOARD
- WORK ZONE
- WORK AREA
- SHOULDER WIDENING

SHEET 5

NOTE:
THIS SHEET SUPPLEMENTS THE IH 39 SB SHOULDER CLOSURE. SEE PLAN SHEET 'TRAFFIC CONTROL - IH 39 SB SHOULDER CLOSURE' FOR LAYOUT OF CBTP AND ADDITIONAL DEVICES ON IH 39 SB.

N

2

SEE TRAFFIC CONTROL DETAIL DRAWING 'DETAIL FOR ADVANCE TEMPORARY SIGNING FOR LANE CLOSURE' FOR ADVANCED SIGNING LAYOUT

IH 39/90

IH 39 SB

IH 39 NB

1194'XSB' 1196'XSB' 1198'XSB' 1200'XSB' 1200'XSB' 1202'XSB' 1204'XSB' 1206'X

50 (TYP)

50 (TYP)

MATCHLINE STA 2591+75

MP MH POST MWEL PRIVATE WV PRIVATE INL W OBSCURE RIPRAP

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	TRAFFIC CONTROL - IH 39 SB NIGHTTIME LANE CLOSURE	SHEET	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0252_TC_SB NIGHTTIME LANE CLOSURE.DWG
LAYOUT NAME - 05

PLOT DATE : 9/30/2019 10:40 AM PLOT BY : KYLE CORNELIUS PLOT NAME : PLOT SCALE : Custom

2

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)
- CONCRETE BARRIER TEMPORARY PRECAST (CBTP)
- CC — CRASH CUSHIONS TEMPORARY
- DIRECTION OF ROADWAY TRAFFIC
- DIRECTION OF CONSTRUCTION TRAFFIC
- PCMS — PORTABLE CHANGEABLE MESSAGE BOARD
- WORK ZONE
- WORK AREA
- SHOULDER WIDENING

NOTE:
THIS SHEET SUPPLEMENTS THE IH 39 SB SHOULDER CLOSURE. SEE PLAN SHEET 'TRAFFIC CONTROL - IH 39 SB SHOULDER CLOSURE' FOR LAYOUT OF CBTP AND ADDITIONAL DEVICES ON IH 39 SB.

PLACE A MINIMUM 7 DAYS PRIOR TO RAMP CLOSURE

PCMS

EXIT 142B

COVER SIGN

RAMP CLOSED
R11-2R
48"X30"

IH 39 SB OFF RAMP TO USH 12/18 EB

TEMP MARKING MATCH EXISTING
+74.98, -24.00' LT

EXIT 30 MPH

COVER SIGN

25 (TYP)

TEMPORARY PAVEMENT MARKING PAINT 4-INCH (WHITE)

TEMP MARKING
+90.00, -36.00' LT

EXIT 142 B

INTERSTATE 39 INTERSTATE 90 Chicago

US 12 US 18 EAST

RAMP CLOSED
COVER SIGN
G20-64
144"X30"

ALTERNATE US 90 ALTERNATE INTERSTATE 39

COVER SIGNS WHEN EXIT RAMP IS CLOSED. SIGNS LOCATED AT APPROXIMATE STATION 1173+40'XSB'

RAMP CLOSED 1000 FT
W20-53C

IH 39 SB ON RAMP FROM USH 12/18 WB

1158'XSB' 1160'XSB' 1162'XSB' 1164'XSB' IH 39 SB 1166'XSB' 1168'XSB' 1170'XSB' 1172'XSB'

2556 2558 2560 2562 2564 2566 2568 2570

WORK AREA 1

WORK AREA 2

WORK AREA 3

R-13-348

R-13-349

B-13-729

R-13-350

B-13-730

R-13-351

USH 12/18 EB

USH 12/18 WB

IH 39 NB OFF RAMP TO USH 12/18 WB

RIPRAP

WEAK

POST

MH

INL

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	TRAFFIC CONTROL - IH 39 SB RAMP CLOSURES	SHEET 98	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0252_TC_SB RAMP CLOSURES.DWG
LAYOUT NAME - 01

PLOT DATE : 8/1/2019 10:43 AM PLOT BY : CHAD EVEN PLOT NAME : PLOT SCALE : Custom

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)
- CONCRETE BARRIER TEMPORARY PRECAST (CBTP)
- CC — CRASH CUSHIONS TEMPORARY
- DIRECTION OF ROADWAY TRAFFIC
- DIRECTION OF CONSTRUCTION TRAFFIC
- PCMS — PORTABLE CHANGEABLE MESSAGE BOARD
- WORK ZONE
- WORK AREA
- SHOULDER WIDENING

N

NOTE:
THIS SHEET SUPPLEMENTS THE IH 39 SB SHOULDER CLOSURE. SEE PLAN SHEET 'TRAFFIC CONTROL - IH 39 SB SHOULDER CLOSURE' FOR LAYOUT OF CBTP AND ADDITIONAL DEVICES ON IH 39 SB.

SEE WB TRAFFIC CONTROL FOR LAYOUT OF DEVICES FOR RAMP CLOSURE

PLACE A MINIMUM 7 DAYS PRIOR TO RAMP CLOSURE

PCMS

IH 39 SB OFF RAMP TO USH 12/18 EB

EXIT 142B

COVER SIGN

RAMP CLOSED
R11-2R
48"X30"

TEMP MARKING MATCH EXISTING
+74.98, -24.00' LT

EXIT 30 MPH

COVER SIGN

EXIT 142 B

Chicago

RAMP CLOSED
COVER SIGN
G20-64
144"X30"

TEMPORARY PAVEMENT MARKING
PAINT 4-INCH (WHITE)

25 (TYP)

TEMP MARKING MATCH EXISTING
+25.00, -24.00' LT

25 (TYP)

RAMP CLOSED 1000 FT
W20-53C

IH 39 SB ON RAMP FROM USH 12/18 WB

COVER SIGNS WHEN EXIT RAMP IS CLOSED. SIGNS LOCATED AT APPROXIMATE STATION 1173+40'XSB'

1158'XSB' 1160'XSB' 1162'XSB' 1164'XSB' IH 39 SB 1166'XSB' 1168'XSB' 1170'XSB' 1172'XSB'

2556 2558 2560 2562 2564 2566 2568 2570

WORK AREA 1

WORK AREA 2

WORK AREA 3

R-13-348

R-13-349

B-13-729

R-13-350

B-13-730

R-13-351

USH 12/18 EB

USH 12/18 WB

IH 39 NB OFF RAMP TO USH 12/18 WB

NOTE:
THIS SHEET SUPPLEMENTS THE IH 39 SB SHOULDER CLOSURE. SEE PLAN SHEET 'TRAFFIC CONTROL - IH 39 SB SHOULDER CLOSURE' FOR LAYOUT OF ADDITIONAL DEVICES ON IH 39 SB.

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	TRAFFIC CONTROL - IH 39 SB RAMP CLOSURES	SHEET 99	E

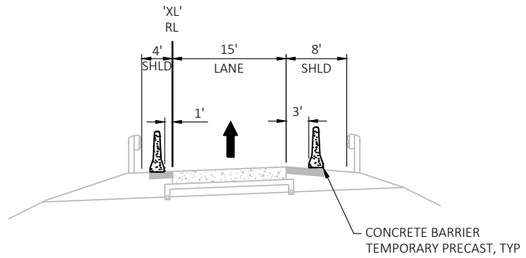
FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0252_TC_SB RAMP CLOSURES.DWG
LAYOUT NAME - 02

PLOT DATE : 8/1/2019 10:43 AM PLOT BY : CHAD EVEN PLOT NAME : PLOT SCALE : 1 IN:100 FT

CONSTRUCTION STAGING TYPICALS

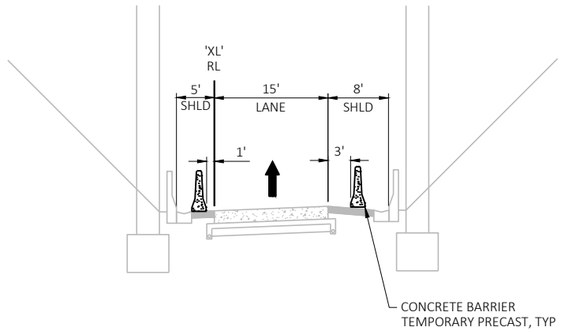
NORTH TO WEST RAMP

(LOOKING NORTH TO WEST)



ALL STAGES

(SOUTH OF EXISTING STRUCTURES B-13-461)



ALL STAGES

(AT EXISTING STRUCTURE B-13-461)

2

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)
- CONCRETE BARRIER TEMPORARY PRECAST (CBTP)
- CC — CRASH CUSHIONS TEMPORARY
- DIRECTION OF ROADWAY TRAFFIC
- DIRECTION OF CONSTRUCTION TRAFFIC
- PCMS — PORTABLE CHANGEABLE MESSAGE BOARD
- WORK ZONE
- WORK AREA
- SHOULDER WIDENING

NOTE:
PLACE TRAFFIC CONTROL FOR IH 39 NB TO USH 12/18 WB RAMP SHOULDER CLOSURE PRIOR TO BEGINNING WORK IN WORK AREA 3 AND 4.

ACCESS WORK AREA 3 FROM USH 12/18 WB.
ACCESS WORK AREA 4 FROM FEMRITE DRIVE.

N

WORK AREA 4

B-13-731

CBTP
+20.00, -21.00' LT

EXISTING BRIDGE
B-13-461

CBTP
+98.94, -21.02' LT

20'XL'

18'XL'

22'XL'

CBTP
+31.00, 2.00' RT

R-13-352

W05-52L
12"X36"

CBTP
+68.00, 2.00' RT

CBTP
+24.00, 9.10' RT

24'XL'

16'XL'

IH 39 NB OFF RAMP
TO USH 12/18 WB

14'XL'

WORK AREA 3

26'XL'

IH 39 SB OFF RAMP TO USH 12/18 WB

END
ROAD WORK
G20-2A
48"X24"

12'XL'

USH 12/ 18 WB OFF RAMP TO IH 39 SB

IH 39 SB

EXISTING BRIDGE
B-13-465

SEE SDD "TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH FOR SHOULDER CLOSURE ADVANCED SIGNING.

USH 12/18 WB

IH 39 NB

IH 39 NB

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	TRAFFIC CONTROL - IH 39 NB TO USH 12 WB	SHEET 101	E

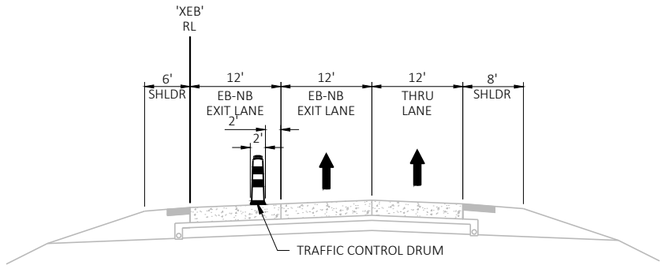
FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0252_TC_S2_NB-WB.DWG
LAYOUT NAME - 01

PLOT DATE : 7/31/2019 6:31 PM PLOT BY : CHAD EVEN PLOT NAME : PLOT SCALE : 1 IN:100 FT

CONSTRUCTION STAGING TYPICALS

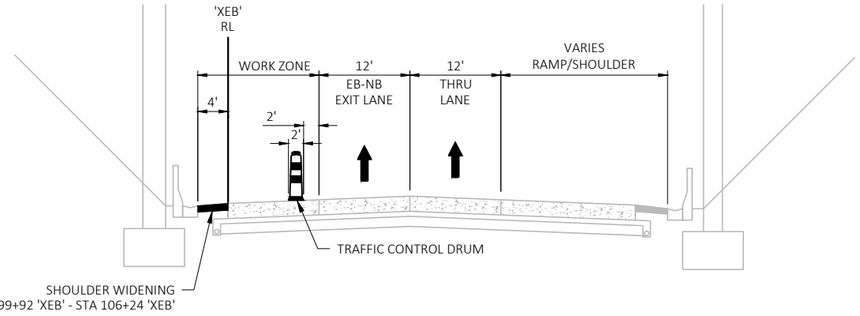
WORK AREA 1 - EB US 12/18

(LOOKING EAST)



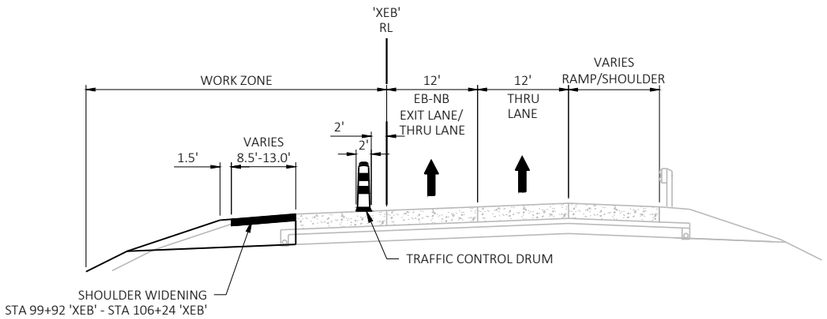
STAGE 1A

(WEST OF EXISTING SB STRUCTURE B-13-466)



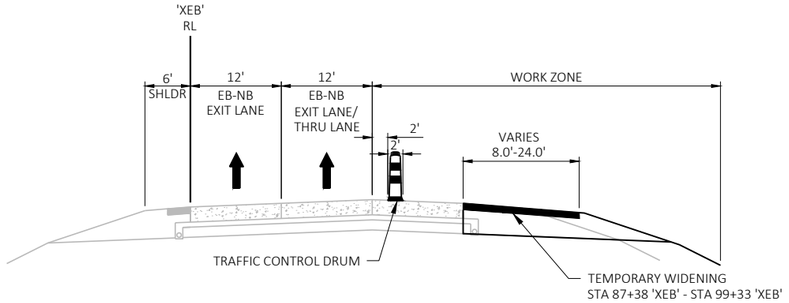
STAGE 1A

(AT EXISTING STRUCTURES B-13-466 & B-13-467)



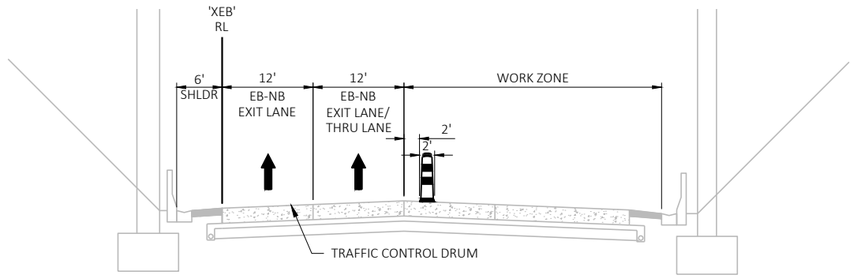
STAGE 1A

(BETWEEN EXISTING STRUCTURES B-13-466 & B-13-467)



STAGE 1B

(WEST OF EXISTING SB STRUCTURE B-13-466)



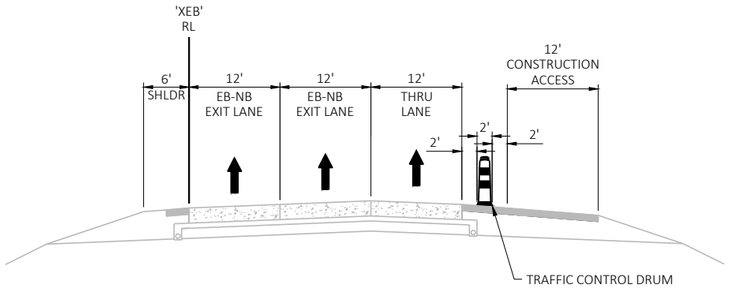
STAGE 1B

(AT EXISTING STRUCTURE B-13-466)

CONSTRUCTION STAGING TYPICALS

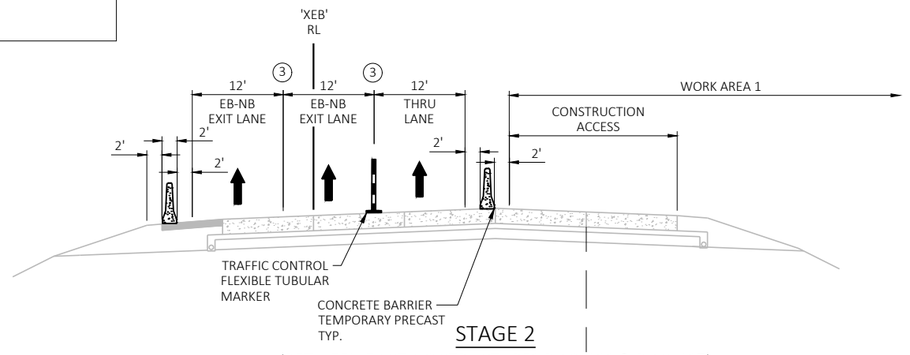
WORK AREA 1 - EB US 12/18

(LOOKING EAST)



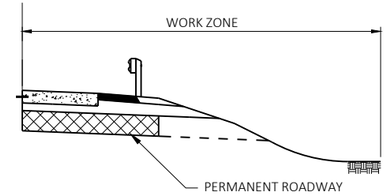
STAGE 2

(WEST OF EXISTING SB STRUCTURE B-13-466)



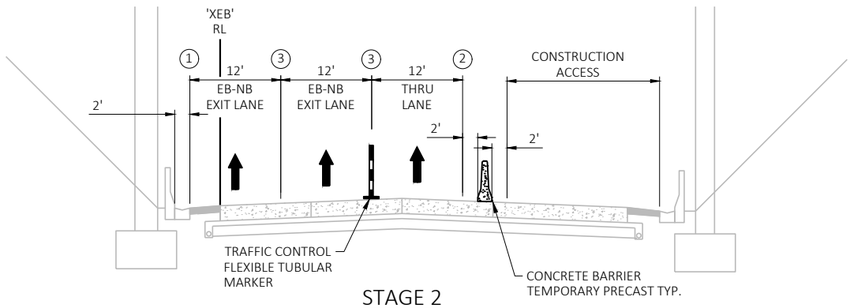
STAGE 2

(BETWEEN EXISTING STRUCTURES B-13-466 & B-13-467)



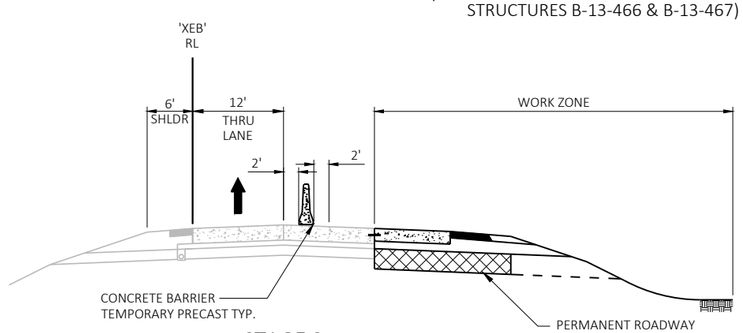
(PERMANENT ROADWAY BETWEEN EXISTING STRUCTURES B-13-466 & B-13-467)

1. TEMPORARY MARKING LINE PAINT 4-INCH YELLOW
2. TEMPORARY MARKING LINE PAINT 4-INCH WHITE
3. TEMPORARY MARKING LINE PAINT 4-INCH WHITE WITH TEMPORARY MARKING RAISED PAVEMENT MARKER TYPE I



STAGE 2

(AT EXISTING SB STRUCTURE B-13-466)



STAGE 2

(EAST OF EXISTING NB STRUCTURE B-13-467)

2

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)
- CONCRETE BARRIER TEMPORARY PRECAST (CBTP)
- CC — CRASH CUSHIONS TEMPORARY
- DIRECTION OF ROADWAY TRAFFIC
- DIRECTION OF CONSTRUCTION TRAFFIC
- PCMS — PORTABLE CHANGEABLE MESSAGE BOARD
- WORK ZONE
- WORK AREA
- SHOULDER WIDENING

N

SEE STANDARD DETAIL DRAWING 'TRAFFIC CONTROL, LANE CLOSURE' FOR ADVANCED SIGNING

USH 12/18

USH 12/18 WB

USH 12/18 EB

50' (TYP)

50' (TYP)

64'XEB' 66'XEB' 68'XEB' 70'XEB' 72'XEB' 74'XEB' 76'XEB'

MATCHLINE STA 77+50'XEB'

AGRICULTURE DR

OBSCURE

SIGN

GUY

GTST

MH

OH

POST

MP

WV

INL

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	TRAFFIC CONTROL - WORK AREA 1 - STAGE 1A (USH 12 EB)	SHEET 104	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0252_TC_S1_EB.DWG
LAYOUT NAME - 01

PLOT DATE : 7/31/2019 6:32 PM PLOT BY : CHAD EVEN PLOT NAME : PLOT SCALE : 1 IN:100 FT

2

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)
- CONCRETE BARRIER TEMPORARY PRECAST (CBTP)
- CC — CRASH CUSHIONS TEMPORARY
- DIRECTION OF ROADWAY TRAFFIC
- DIRECTION OF CONSTRUCTION TRAFFIC
- PCMS — PORTABLE CHANGEABLE MESSAGE BOARD
- WORK ZONE
- WORK AREA
- SHOULDER WIDENING

N

IH 39 SB EXIT RAMP

USH 12/18 WB

USH 12/18

USH 12/18 EB

IH 39 SB ENTRANCE RAMP

LEFT EXIT 267 B
NORTH 39 WEST 90 TO 94
Milwaukee
Wis Dells
EXIT ONLY

TRUCKS EXITING DO NOT FOLLOW
W08-6A (MOD)

MATCHLINE STA 77+50'XEB'

MATCHLINE STA 92+00'XEB'

78'XEB' 80'XEB' 82'XEB' 84'XEB' 86'XEB' 88'XEB' 90'XEB' 92'

50' (TYP)

100' (TYP)

LANE CLOSED
R11-2L
48"X30"

+38.36, 35.97' RT

2

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	TRAFFIC CONTROL - WORK AREA 1 - STAGE 1A (USH 12 EB)	SHEET 105	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0252_TC_S1_EB.DWG
LAYOUT NAME - 02

PLOT DATE : 7/31/2019 6:33 PM PLOT BY : CHAD EVEN PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)
- CONCRETE BARRIER TEMPORARY PRECAST (CBTP)
- CRASH CUSHIONS TEMPORARY (CC)
- DIRECTION OF ROADWAY TRAFFIC
- DIRECTION OF CONSTRUCTION TRAFFIC
- PORTABLE CHANGEABLE MESSAGE BOARD (PCMS)
- WORK ZONE
- WORK AREA
- SHOULDER WIDENING

NOTE:
1. PLACE TRAFFIC CONTROL DRUMS ON SHOULDER AT 50' SPACING DURING DAYTIME HOURS
2. PLACE TEMPORARY BARRIER WALL AS SHOWN IN STAGE 1B UPON COMPLETION OF STAGE 1A WORK

USH 12/18 WB
USH 12/18
IH 39/90
IH 39 SB
IH 39 SB EXIT RAMP
USH 12/18 EB
MATCHLINE STA 92+00'XEB'
MATCHLINE STA 105+50'XEB'
SHOULDER DROP-OFF W08-9A
LANE CLOSED R11-2L 48"X30"
94'XEB'
96'XEB'
98'XEB'
100' (TYP)
100'XEB'
102'XEB'
104'XEB'
SHOULDER WIDENING +92.24, -4.00' LT
SHOULDER WIDENING +28.90, -4.00' LT
SHOULDER WIDENING +92.24, 0.78' RT
SHOULDER WIDENING +28.90, -7.15' LT
SHOULDER WIDENING +49.63, 0.34' RT
REMOVE GUARDRAIL
EXISTING BRIDGE B-13-466
LEFT EXIT 267 B
NORTH 39 WEST 90 TO 94
Milwaukee
Wis Dells
EXIT ONLY
12 18 EAST
Cambridge
POST
MH
INL
RIPRAP
WEAK
OH

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	TRAFFIC CONTROL - WORK AREA 1 - STAGE 1A (USH 12 EB)	SHEET 106	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0252_TC_S1_EB.DWG
LAYOUT NAME - 03
PLOT DATE : 7/31/2019 6:33 PM
PLOT BY : CHAD EVEN
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 42

2

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)
- CONCRETE BARRIER TEMPORARY PRECAST (CBTP)
- CRASH CUSHIONS TEMPORARY (CC)
- DIRECTION OF ROADWAY TRAFFIC
- DIRECTION OF CONSTRUCTION TRAFFIC
- PORTABLE CHANGEABLE MESSAGE BOARD (PCMS)
- WORK ZONE
- WORK AREA
- SHOULDER WIDENING

USH 12/18 WB

N

USH 12/18

IH 39 NB

IH 39 NB ENTRANCE RAMP

SHOULDER WIDENING
+78.58, -29.43' LT

SHOULDER WIDENING
+78.71, -25.29' LT

SHOULDER WIDENING
+12.11, -26.68' LT

SHOULDER WIDENING
+12.24, -23.92' LT

100'
(TYP)

END
ROAD WORK
G20-2A
48"X24"

MATCHLINE STA 105+50'XEB'

106'XEB' 108'XEB' 110'XEB' 112'XEB' 114'XEB' 116'XEB' 118'XEB' 120'XEB'

USH 12/18 EB

EXISTING BRIDGE
B-13-467

IH 39 NB EXIT RAMP

CANOPY

CANOPY

RIPRAP

POST

MH

MP

SIGN

WEAK

2

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	TRAFFIC CONTROL - WORK AREA 1 - STAGE 1A (USH 12 EB)	SHEET 107	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0252_TC_S1_EB.DWG
LAYOUT NAME - 04

PLOT DATE : 7/31/2019 6:33 PM PLOT BY : CHAD EVEN PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)
- CONCRETE BARRIER TEMPORARY PRECAST (CBTP)
- CC — CRASH CUSHIONS TEMPORARY
- DIRECTION OF ROADWAY TRAFFIC
- DIRECTION OF CONSTRUCTION TRAFFIC
- PCMS — PORTABLE CHANGEABLE MESSAGE BOARD
- WORK ZONE
- WORK AREA
- SHOULDER WIDENING

N

AGRICULTURE DR

USH 12/18

USH 12/18 WB

USH 12/18 EB

64'XEB' 66'XEB' 68'XEB' 70'XEB' 72'XEB' 74'XEB' 76'XEB'

MATCHLINE STA 77+50'XEB'

50' (TYP)

50' (TYP)

SEE STANDARD DETAIL DRAWING 'TRAFFIC CONTROL, LANE CLOSURE' FOR ADVANCED SIGNING

PCMS MESSAGE

12/18 EB MIDDLE LANE ONLY	39/90 SB RIGHT LANE ONLY
FRAME A	FRAME B

PLACE DURING NIGHTTIME WORK

PLACE PCMS SIGN AFTER ENTRANCE RAMP FROM USH 51

2

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	TRAFFIC CONTROL - WORK AREA 1 - STAGE 1B (USH 12 EB)	SHEET 108 E

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)
- CONCRETE BARRIER TEMPORARY PRECAST (CBTP)
- CC — CRASH CUSHIONS TEMPORARY
- DIRECTION OF ROADWAY TRAFFIC
- DIRECTION OF CONSTRUCTION TRAFFIC
- PCMS — PORTABLE CHANGEABLE MESSAGE BOARD
- WORK ZONE
- WORK AREA
- SHOULDER WIDENING

N

IH 39 SB EXIT RAMP

USH 12/18 WB

LEFT EXIT 267 B
NORTH 39 WEST 90 TO 94
Milwaukee
Wis Dells
EXIT ONLY

USH 12/18

LANE CLOSED
R11-2L
48"X30"

82'XEB'
84'XEB'
86'XEB'
88'XEB'
90'XEB'
92'XEB'
80'XEB'
78'XEB'
MATCHLINE STA 77+50'XEB'
MATCHLINE STA 92+00'XEB'

50 (TYP)
100' (TYP)
50 (TYP)

TRUCKS EXITING DO NOT FOLLOW
W08-6aT(MOD)

SHOULDER DROP-OFF
W08-9A

USH 12/18 EB

8'
36'
18'

SHOULDER WIDENING
+38.36, 35.97' RT

SHOULDER WIDENING
+38.36, 44.00' RT

SHOULDER WIDENING
+18.69, 44.00' RT

SHOULDER WIDENING
+38.36, 54.00' RT

IH 39 SB ENTRANCE RAMP

OH, POST, GUY, SIGN, WEAK

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	TRAFFIC CONTROL - WORK AREA 1 - STAGE 1B (USH 12 EB)	SHEET 109	E

2

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)
- CONCRETE BARRIER TEMPORARY PRECAST (CBTP)
- CRASH CUSHIONS TEMPORARY (CC)
- DIRECTION OF ROADWAY TRAFFIC
- DIRECTION OF CONSTRUCTION TRAFFIC
- PORTABLE CHANGEABLE MESSAGE BOARD (PCMS)
- WORK ZONE
- WORK AREA
- SHOULDER WIDENING

N

USH 12/18

USH 12/18 WB

IH 39/90

IH 39 SB

TEMPORARY MARKING LINE
PAINT 4-INCH (YELLOW)

CONNECT CBTP TO
EXISTING BARRIER
(END OF STAGE 1A)

TEMP MARKING
+27.47, 0.00'

LANE
CLOSED
R11-2L
48"X30"

MATCHLINE STA 92+00'XEB'

94'XEB'

96'XEB'

98'XEB'

100'XEB'

102'XEB'

104'XEB'

MATCHLINE STA 105+50'XEB'

USH 12/18 EB

18

36

100'
(TYP)

SHOULDER WIDENING
+32.55, 36.70' RT

SHOULDER WIDENING
+32.66, 39.96' RT

SHOULDER WIDENING
+51.68, 63.73' RT

SHOULDER WIDENING
+50.56, 60.00' RT

SHOULDER WIDENING
+50.56, 54.00' RT

EXISTING BRIDGE
B-13-466

IH 39 SB EXIT RAMP

RAMP CLOSED SEE TRAFFIC CONTROL
IH 39 SB RAMP CLOSURES SHEETS FOR
LAYOUT OF TRAFFIC CONTROL DEVICES.

RAMP
CLOSED
R11-2R
48"X30"

LEFT
EXIT 267 B

NORTH 39 WEST 90 TO 94
Milwaukee
Wis Dells
EXIT ONLY

12 18 EAST
Cambridge

WEAK

RIPRAP

POST

INL

MH

OH

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	TRAFFIC CONTROL - WORK AREA 1 - STAGE 1B (USH 12 EB)	SHEET 110	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0252_TC_S1_EB.DWG
LAYOUT NAME - 07

PLOT DATE : 7/31/2019 6:34 PM PLOT BY : CHAD EVEN PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)
- CONCRETE BARRIER TEMPORARY PRECAST (CBTP)
- CRASH CUSHIONS TEMPORARY (CC)
- DIRECTION OF ROADWAY TRAFFIC
- DIRECTION OF CONSTRUCTION TRAFFIC
- PORTABLE CHANGEABLE MESSAGE BOARD (PCMS)
- WORK ZONE
- WORK AREA
- SHOULDER WIDENING

USH 12/18 WB

IH 39 NB

IH 39 NB ENTRANCE RAMP

CONNECT CBTP TO EXISTING BARRIER (END OF STAGE 1A)

TEMPORARY MARKING LINE PAINT 4-INCH (YELLOW)

TEMP MARKING +71.10, -24.53' LT

END ROAD WORK
G20-2A
48"X24"

MATCHLINE STA 105+50'XEB'

106'XEB' 108'XEB' 110'XEB' 112'XEB' 114'XEB' 116'XEB' 118'XEB' 120'XEB'

USH 12/18 EB

USH 12/18

EXISTING BRIDGE B-13-467

IH 39 NB EXIT RAMP

CANOPY

CANOPY

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	TRAFFIC CONTROL - WORK AREA 1 - STAGE 1B (USH 12 EB)	SHEET 111	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0252_TC_S1_EB.DWG
LAYOUT NAME - 08

PLOT DATE : 7/31/2019 6:35 PM PLOT BY : CHAD EVEN PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

2

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)
- CONCRETE BARRIER TEMPORARY PRECAST (CBTP)
- CC — CRASH CUSHIONS TEMPORARY
- DIRECTION OF ROADWAY TRAFFIC
- DIRECTION OF CONSTRUCTION TRAFFIC
- PCMS — PORTABLE CHANGEABLE MESSAGE BOARD
- WORK ZONE
- WORK AREA
- SHOULDER WIDENING

PCMS MESSAGE:

FRAME A	FRAME B
NEW TRAFFIC PATTERN	39/90 NB USE LT 2 LANES

(IN PLACE A MINIMUM OF 7 CALENDAR DAYS AFTER TRAFFIC PATTERN SWITCH)

PLACE 500' WEST OF OVERHEAD SIGN ON LEFT SIDE OF ROADWAY

N

IH 39 SB EXIT RAMP

USH 12/18 WB

TRAFFIC KEEP LEFT
W108-6A (MOD)

LEFT EXIT 267 B
NORTH 39 WEST 90 TO 94
Milwaukee
Wis Dells
LEFT TWO LANES
COVER SIGN
FIXED MESSAGE SIGN EB3

82'XEB' 84'XEB' 86'XEB' 88'XEB' 90'XEB' 92'XEB'
80'XEB'
78'XEB'

USH 12/18 EB

50' (TYP)

LANE CLOSED
R11-2L
48"X30"

25 (TYP)

TRUCKS EXITING DO NOT FOLLOW
W108-6A (MOD)

MATCHLINE STA 92+00'XEB'

ADVANCED WARNING AREA
(SEE STANDARD DETAIL DRAWING "SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEED GREATER THAN 40 M.P.H." FOR ADVANCED SIGNING

IH 39 SB ENTRANCE RAMP

HWY 12-18 EAST
USE RIGHT LANE ONLY
FIXED MESSAGE SIGN EB1

PCMS MESSAGE:

FRAME A	FRAME B
NEW TRAFFIC PATTERN	12/18 EB USE RT LANE

(IN PLACE A MINIMUM OF 7 CALENDAR DAYS AFTER TRAFFIC PATTERN SWITCH)

PLACE 500' WEST OF OVERHEAD SIGN ON RIGHT SIDE OF ROADWAY

LEFT EXIT 267 B
NORTH 39 WEST 90 TO 94
Milwaukee
Wis Dells
1/2 MILE
LEFT TWO LANES
COVER SIGN
FIXED MESSAGE SIGN EB2

12 18 EAST
Cambridge

EXIT 267 A
SOUTH 39 EAST 90
Janesville
Chicago

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	TRAFFIC CONTROL - WORK AREA 1 - STAGE 2 (USH 12 EB)	SHEET 112 E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0252_TC_S2_EB.DWG
LAYOUT NAME - 01

PLOT DATE : 7/31/2019 6:36 PM PLOT BY : CHAD EVEN PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)
- CONCRETE BARRIER TEMPORARY PRECAST (CBTP)
- CRASH CUSHIONS TEMPORARY (CC)
- DIRECTION OF ROADWAY TRAFFIC
- DIRECTION OF CONSTRUCTION TRAFFIC
- PORTABLE CHANGEABLE MESSAGE BOARD (PCMS)
- WORK ZONE
- WORK AREA
- SHOULDER WIDENING

N

USH 12/18 WB

USH 12/18

IH 39/90

IH 39 SB

WORK AREA 2

R-13-350

B-13-730

R-13-349

EXISTING BRIDGE B-13-466

CBTP PLACED AT THE END OF STAGE 1A

TEMPORARY MARKING LINE PAINT 4-INCH (YELLOW)

MATCHLINE STA 92+00'XEB'

MATCHLINE STA 105+38'XEB'

STAY IN LANE R4-9 24"X30"

TEMP MARKING +66.08, 12.00' RT

TEMP MARKING +94.39, 12.00' RT

94'XEB'

96'XEB'

98'XEB'

100'XEB'

102'XEB'

104'XEB'

USH 12/18 EB

25' (TYP)

IH 39 SB EXIT RAMP

CBTP +00.00, 47.00' RT

CBTP +92.59, 39.00' RT

WO5-52R 12"X36"

PERMANENT ROADWAY SEE PLAN DETAILS FOR LAYOUT INFORMATION

R-13-348

B-13-729

USE TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER POSTS AND BASES TO DELINEATE RAMP TRAFFIC FROM THRU TRAFFIC (THIS LANE ONLY)

TEMPORARY MARKING LINE PAINT 4-INCH (WHITE) WITH RAISED MARKERS TYPE I

TEMPORARY MARKING LINE PAINT 4-INCH (WHITE)

RAMP CLOSED SEE TRAFFIC CONTROL IH 39 SB RAMP CLOSURE SHEETS FOR LAYOUT OF TRAFFIC CONTROL DEVICES.

RAMP CLOSED R11-2R 48"X30"

LEFT EXIT 267 B

NORTH 39 WEST 90 TO 94

Milwaukee

Wis Dells

EXIT ONLY

12 18 EAST

Cambridge

COVER SIGN WITH BLANK BOARD ADD FIXED MESSAGE SIGN EB4

WORK AREA 1

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)
- CONCRETE BARRIER TEMPORARY PRECAST (CBTP)
- CRASH CUSHIONS TEMPORARY (CC)
- DIRECTION OF ROADWAY TRAFFIC
- DIRECTION OF CONSTRUCTION TRAFFIC
- PORTABLE CHANGEABLE MESSAGE BOARD (PCMS)
- WORK ZONE
- WORK AREA
- SHOULDER WIDENING

USH 12/18 WB

IH 39 NB

IH 39 NB ENTRANCE RAMP

TEMPORARY MARKING LINE PAINT 4-INCH (WHITE) WITH TEMPORARY RAISED MARKER TYPE I

TEMP MARKING +12.47, -12.00' LT

TEMP MARKING +13.02, 0.00' LT

TRUCKS ENTERING FROM RIGHT W08-6 (MOD)

CBTP +37.50, 15.00' RT

TEMPORARY MARKING LINE PAINT 4-INCH (WHITE)

25' (TYP)

TEMP MARKING +88.00, 12.00' RT

106'XEB' 108'XEB' 110'XEB' 112'XEB' 114'XEB' 116'XEB' 118'XEB' 120'XEB'

USH 12/18 EB

MATCHLINE STA 105+38'XEB'

12'

12'

CBTP +12.33, 15.01' RT

WO5-52R 12"X36"

EXISTING BRIDGE B-13-467

TEMPORARY MARKING LINE PAINT 4-INCH (WHITE)

PERMANENT ROADWAY SEE PLAN DETAILS FOR LAYOUT INFORMATION

R1-2 36"X31"

50' (TYP)

USE TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER POSTS AND BASES TO DELINEATE RAMP TRAFFIC FROM THRU TRAFFIC (THIS LANE ONLY)

TRUCKS ENTERING FROM LEFT W08-6 (MOD)

IH 39 NB EXIT RAMP

CANOPY

SIGN

POST

RIPRAP

MH

MP

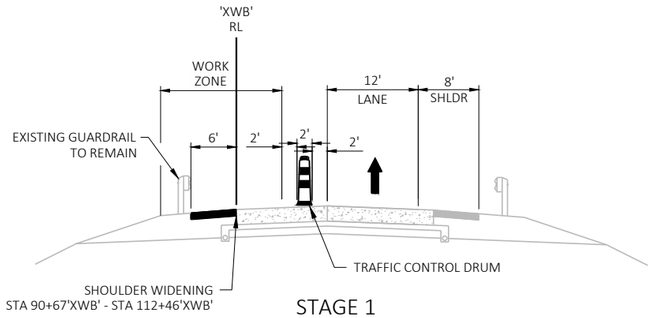
N

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	TRAFFIC CONTROL - WORK AREA 1 - STAGE 2 (USH 12 EB)	SHEET 114	E

CONSTRUCTION STAGING TYPICALS

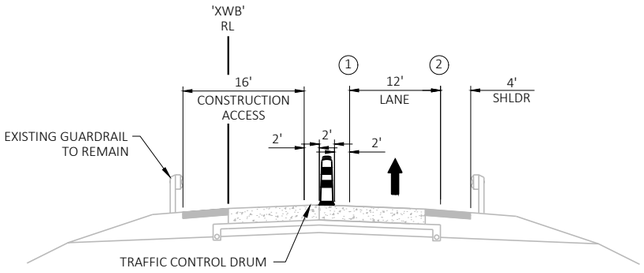
WORK AREA 2 - WB US 12/18

(LOOKING WEST)



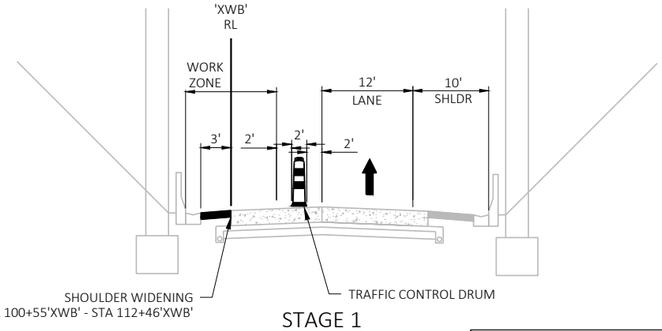
STAGE 1

(EAST OF EXISTING STRUCTURE B-13-465)



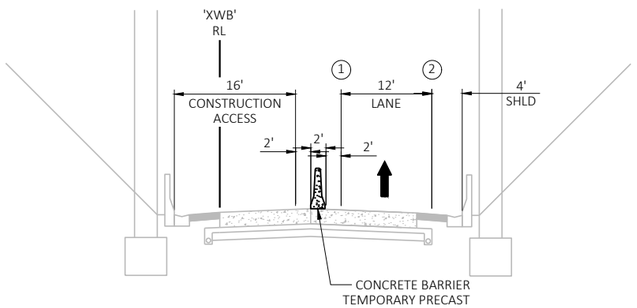
STAGE 2

(EAST OF EXISTING STRUCTURE B-13-465)



STAGE 1

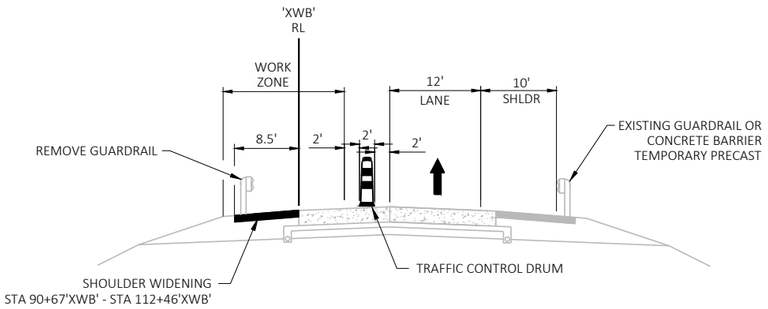
(AT EXISTING STRUCTURE B-13-465)



STAGE 2

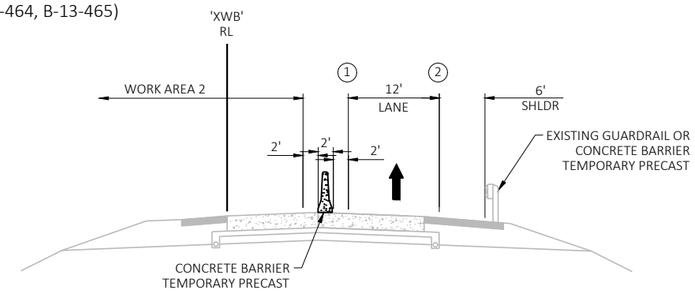
(AT EXISTING STRUCTURES B-13-464, B-13-465)

1. TEMPORARY MARKING LINE PAINT 4-INCH YELLOW
2. TEMPORARY MARKING LINE PAINT 4-INCH WHITE



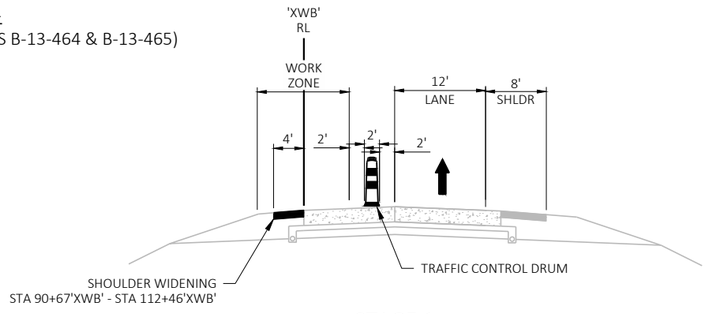
STAGE 1

(BETWEEN EXISTING STRUCTURES B-13-464 & B-13-465)



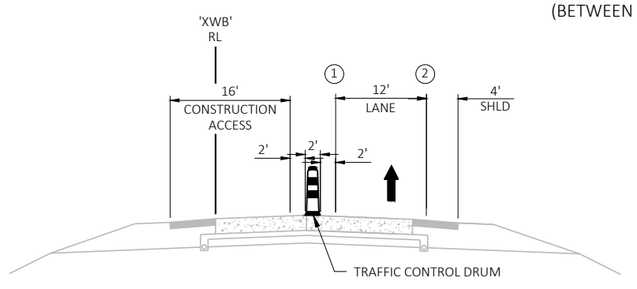
STAGE 2

(BETWEEN EXISTING STRUCTURES B-13-464 & B-13-465)



STAGE 1

(WEST OF EXISTING STRUCTURE B-13-464)



STAGE 2

(WEST OF EXISTING STRUCTURE B-13-464)

2

LEGEND

TYPE III BARRICADE	CONCRETE BARRIER TEMPORARY PRECAST (CBTP)
TYPE III BARRICADE WTH ATTACHED SIGN	
TRAFFIC CONTROL DRUM	CC — CRASH CUSHIONS TEMPORARY
TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT	DIRECTION OF ROADWAY TRAFFIC
FLASHING ARROW BOARD	DIRECTION OF CONSTRUCTION TRAFFIC
SIGN ON PERMANENT SUPPORT	PCMS — PORTABLE CHANGEABLE MESSAGE BOARD
SIGN ON TEMPORARY SUPPORT	WORK ZONE
TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)	WORK AREA
	SHOULDER WIDENING

N

USH 12/18 WB ON RAMP

USH 12/18 WB OFF RAMP TO IH 39 SB

USH 12/18 EB

USH 12/18 WB

USH 12/18 WB OFF RAMP TO IH 39 SB

80'XWB' 82'XWB' 84'XWB 86'XWB' 88'XWB' 90'XWB' 92'XWB' 94'XWB'

COVER SIGN

W01-4L

RIGHT LANE ENDS

COVER SIGN

100 (TYP)

4"

MATCHLINE STA 95+00'XWB'

END ROAD WORK
G20-2A
48"X24"

SHOULDER WIDENING
+67.07, 0.20' RT

SHOULDER WIDENING
+67.07, 4.00' RT

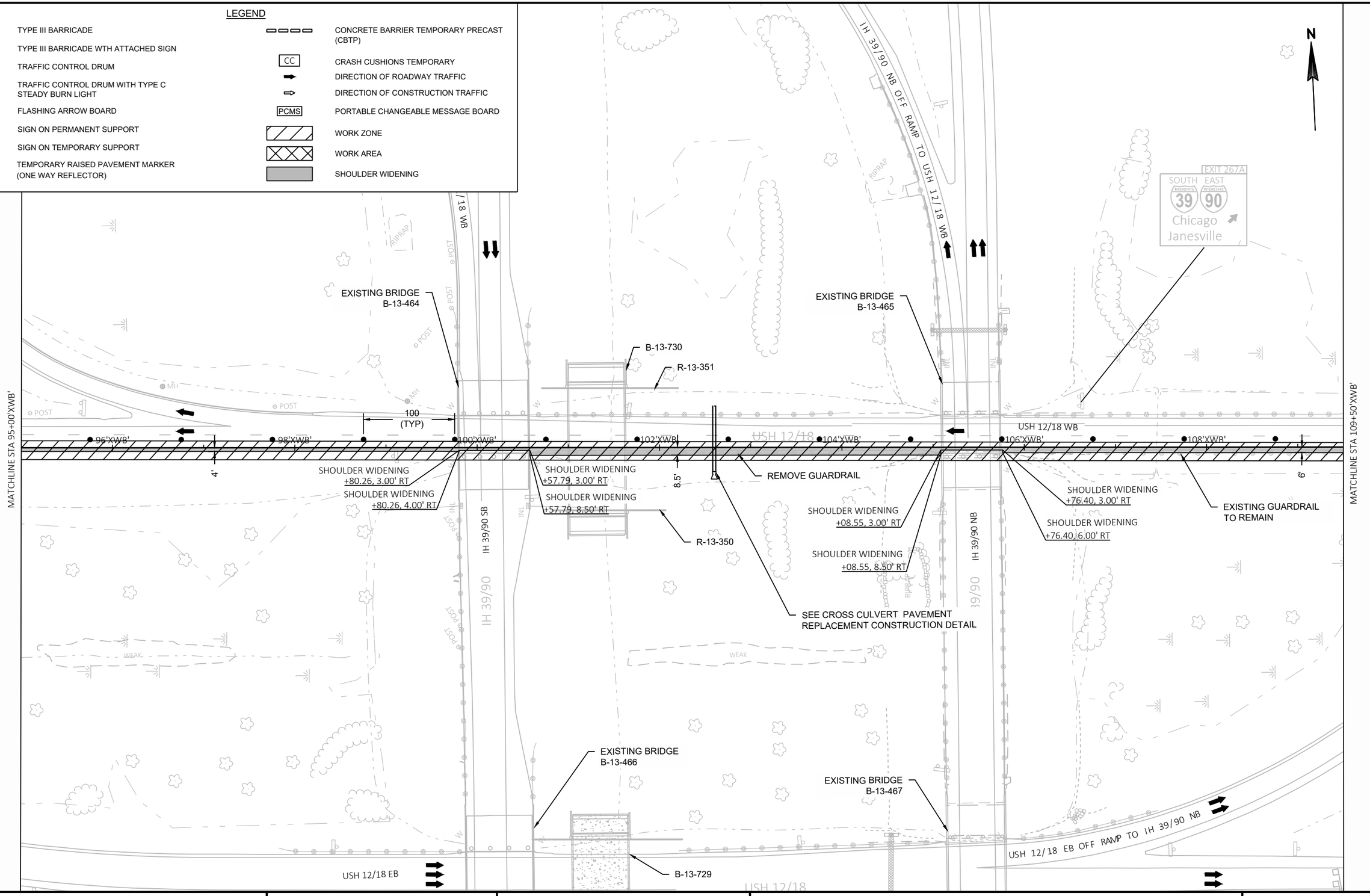
PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	TRAFFIC CONTROL - WORK AREA 2 - STAGE 1 (USH 12 WB)	SHEET E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0252_TC_S1_WB.DWG
LAYOUT NAME - 01
PLOT DATE : 7/31/2019 6:39 PM
PLOT BY : CHAD EVEN
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 42

2

LEGEND

TYPE III BARRICADE	CONCRETE BARRIER TEMPORARY PRECAST (CBTP)
TYPE III BARRICADE WTH ATTACHED SIGN	
TRAFFIC CONTROL DRUM	CC — CRASH CUSHIONS TEMPORARY
TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT	DIRECTION OF ROADWAY TRAFFIC
FLASHING ARROW BOARD	DIRECTION OF CONSTRUCTION TRAFFIC
SIGN ON PERMANENT SUPPORT	PCMS — PORTABLE CHANGEABLE MESSAGE BOARD
SIGN ON TEMPORARY SUPPORT	WORK ZONE
TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)	WORK AREA
	SHOULDER WIDENING



PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	TRAFFIC CONTROL - WORK AREA 2 - STAGE 1 (USH 12 WB)	SHEET 117 E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0252_TC_S1_WB.DWG
LAYOUT NAME - 02

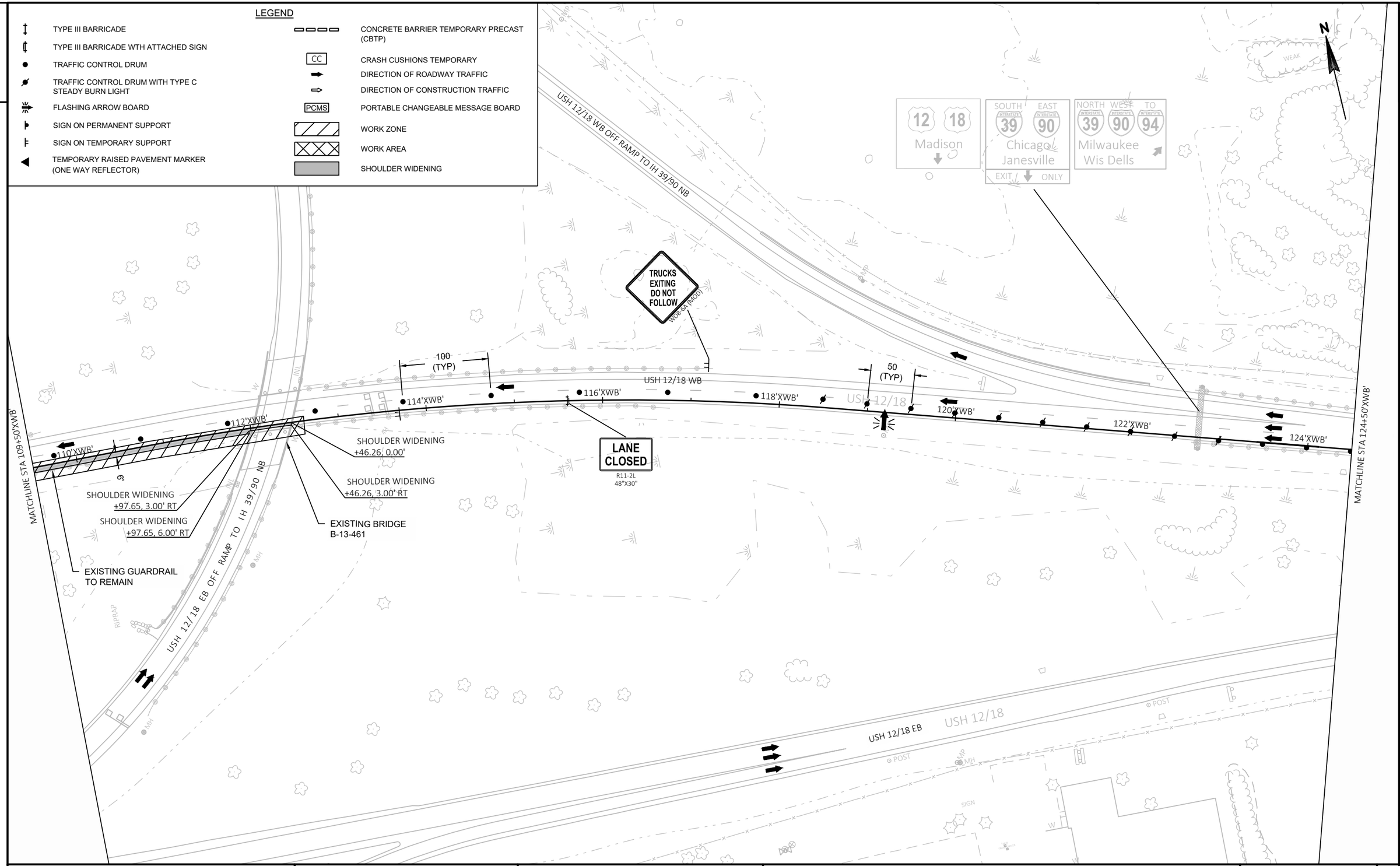
PLOT DATE : 7/31/2019 6:39 PM PLOT BY : CHAD EVEN PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

2

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)
- CONCRETE BARRIER TEMPORARY PRECAST (CBTP)
- CRASH CUSHIONS TEMPORARY (CC)
- DIRECTION OF ROADWAY TRAFFIC
- DIRECTION OF CONSTRUCTION TRAFFIC
- PORTABLE CHANGEABLE MESSAGE BOARD (PCMS)
- WORK ZONE
- WORK AREA
- SHOULDER WIDENING



PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	TRAFFIC CONTROL - WORK AREA 2 - STAGE 1 (USH 12 WB)	SHEET 118	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0252_TC_S1_WB.DWG
LAYOUT NAME - 03

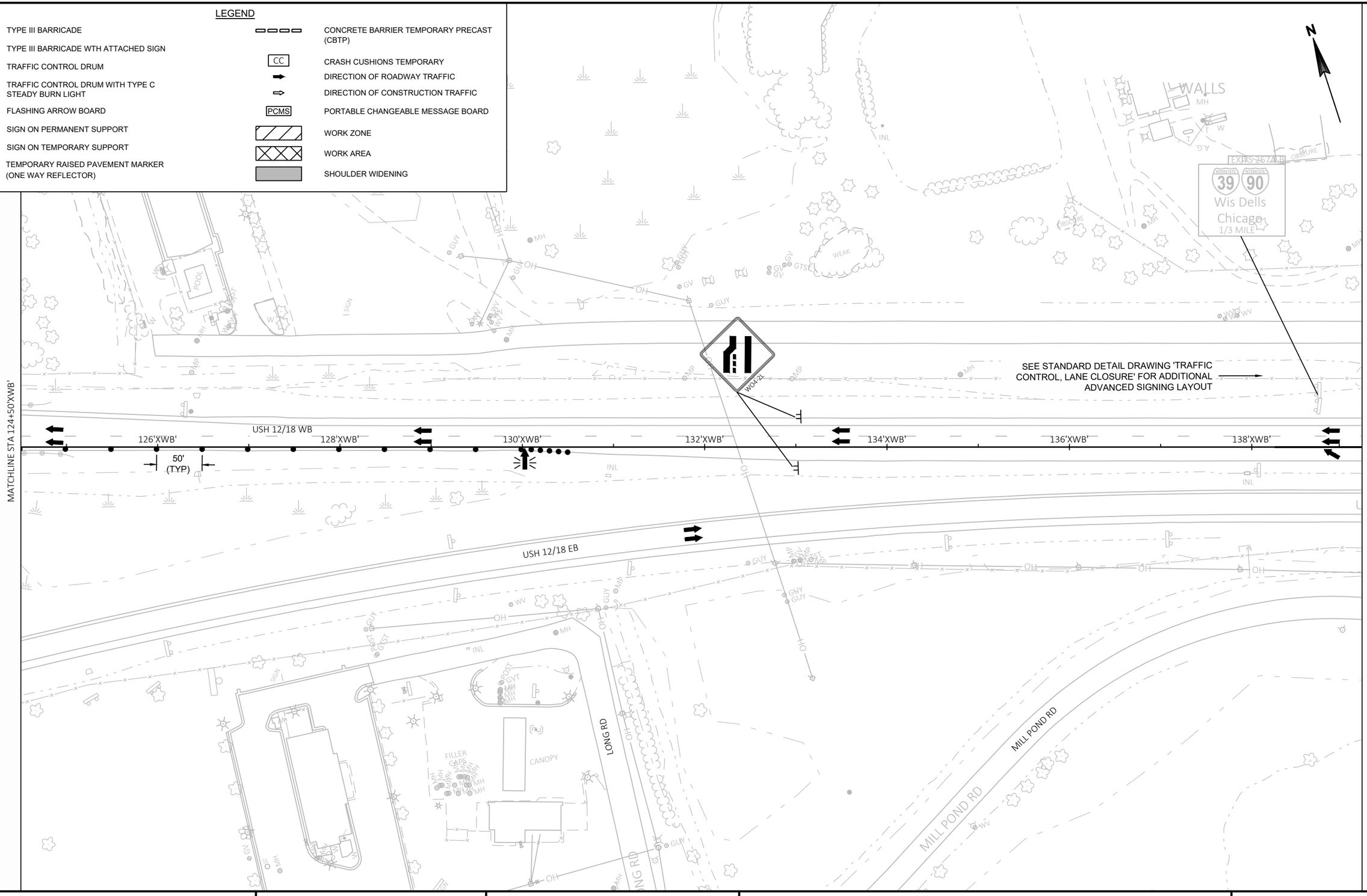
PLOT DATE : 7/31/2019 6:39 PM PLOT BY : CHAD EVEN PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

2

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)
- CONCRETE BARRIER TEMPORARY PRECAST (CBTP)
- CC — CRASH CUSHIONS TEMPORARY
- DIRECTION OF ROADWAY TRAFFIC
- DIRECTION OF CONSTRUCTION TRAFFIC
- PCMS — PORTABLE CHANGEABLE MESSAGE BOARD
- WORK ZONE
- WORK AREA
- SHOULDER WIDENING



PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	TRAFFIC CONTROL - WORK AREA 2 - STAGE 1 (USH 12 WB)	SHEET 119	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0252_TC_S1_WB.DWG
LAYOUT NAME - 04

PLOT DATE : 7/31/2019 6:40 PM PLOT BY : CHAD EVEN PLOT NAME : PLOT SCALE : 1 IN:100 FT

2

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)
- CONCRETE BARRIER TEMPORARY PRECAST (CBTP)
- CC — CRASH CUSHIONS TEMPORARY
- DIRECTION OF ROADWAY TRAFFIC
- DIRECTION OF CONSTRUCTION TRAFFIC
- PCMS — PORTABLE CHANGEABLE MESSAGE BOARD
- WORK ZONE
- WORK AREA
- SHOULDER WIDENING

N

ROAD WORK 1/2 MILE
W20.1G

MATCHLINE STA 139+25'XWB'

140'XWB' 142'XWB' 144'XWB' 146'XWB' 148'XWB' 150'XWB' 152'XWB' 154'XWB'

USH 12/18 WB

USH 12/18 EB

MILL POND RD

GOLF COURSE

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	TRAFFIC CONTROL - WORK AREA 2 - STAGE 1 (USH 12 WB)	SHEET 120	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0252_TC_S1_WB.DWG
LAYOUT NAME - 05

PLOT DATE : 7/31/2019 6:40 PM PLOT BY : CHAD EVEN PLOT NAME : PLOT SCALE : 1 IN:100 FT

2

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)
- CONCRETE BARRIER TEMPORARY PRECAST (CBTP)
- CC — CRASH CUSHIONS TEMPORARY
- DIRECTION OF ROADWAY TRAFFIC
- DIRECTION OF CONSTRUCTION TRAFFIC
- PCMS — PORTABLE CHANGEABLE MESSAGE BOARD
- WORK ZONE
- WORK AREA
- SHOULDER WIDENING

N

USH 12/18 WB ON RAMP

USH 12/18 WB OFF RAMP TO IH 39 SB

USH 12/18 WB

USH 12/18 EB

TRUCKS ENTERING FROM LEFT
W08-6 (MOD)

W01-4L

RIGHT LANE ENDS

COVER SIGN

COVER SIGN

TEMP MARKING
+98.53, -23.64' LT

TEMP MARKING
+67.00, -28.00' LT

TEMP MARKING
+67.00, -16.00' LT

80'XWB' 82'XWB' 84'XWB' 86'XWB' 88'XWB' 90'XWB' 92'XWB' 94'XWB'

25'
(TYP)

MARKING REMOVAL LINE 4-INCH

TEMPORARY MARKING LINE
PAINT 4-INCH (YELLOW)

TEMPORARY MARKING LINE
PAINT 4-INCH (WHITE)

SEE WORK AREA 3 STAGE 2
FOR TEMPORARY MARKING
LINE LAYOUT

END
ROAD WORK
G20-2A
48"X24"

MATCHLINE STA 95+00'XWB'

2

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	TRAFFIC CONTROL - WORK AREA 2 - STAGE 2 (USH 12 WB)	SHEET 121	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0252_TC_S2_WB.DWG
LAYOUT NAME - 01

PLOT DATE : 7/31/2019 6:41 PM PLOT BY : CHAD EVEN PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

2

LEGEND

TYPE III BARRICADE	CONCRETE BARRIER TEMPORARY PRECAST (CBTP)
TYPE III BARRICADE WTH ATTACHED SIGN	
TRAFFIC CONTROL DRUM	CC — CRASH CUSHIONS TEMPORARY
TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT	DIRECTION OF ROADWAY TRAFFIC
FLASHING ARROW BOARD	DIRECTION OF CONSTRUCTION TRAFFIC
SIGN ON PERMANENT SUPPORT	PCMS — PORTABLE CHANGEABLE MESSAGE BOARD
SIGN ON TEMPORARY SUPPORT	WORK ZONE
TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)	WORK AREA
	SHOULDER WIDENING

N

2

MATCHLINE STA 95+00'XWB'

TEMPORARY MARKING LINE PAINT 4-INCH (WHITE)

TEMP MARKING 8" +71.00, -28.00' LT

TEMP MARKING 8" +15.96, -45.33' LT

TEMPORARY MARKING LINE PAINT 8-INCH (WHITE)

MARKING REMOVAL LINE 8-INCH

TEMP MARKING 8" +97.35, -28.00' LT

TEMPORARY MARKING LINE PAINT 4-INCH (YELLOW)

EXISTING BRIDGE B-13-464

IH 39/90 SB

B-13-730

TEMP MARKING MATCH EXISTING +42.18, -27.92' LT

R-13-351

IF GUARDRAIL WAS REMOVED FOR WORK AREA 3, PLACE CBTP AND CONNECT TO EXISTING BARRIER

IH 39/90 NB OFF RAMP TO USH 12/18 WB

RIPRAP

EXIT 267A

SOUTH EAST

INTERSTATE 39 INTERSTATE 90

Chicago

Janesville

TEMPORARY MARKING LINE PAINT 4-INCH (WHITE)

SEE WORK AREA 2 STAGE 2 FOR TEMPORARY MARKING LAYOUT

25' (TYP)

96 XWB | 98 XWB | 100 XWB | 102 XWB | 104 XWB | 106 XWB | USH 12/18 WB | 108 XWB

CBTP +50.00, -13.00' LT

CBTP +00.00, -13.00' LT

MARKING REMOVAL LINE 4-INCH

SEE WORK AREA 3 STAGE 2 FOR TEMPORARY MARKING LINE LAYOUT

TEMPORARY MARKING LINE PAINT 4-INCH (WHITE)

TEMPORARY MARKING LINE PAINT 4-INCH (YELLOW)

R-13-350

IH 39/90 NB

EXISTING BRIDGE B-13-465

SEE WORK AREA 2 STAGE 2 FOR TEMPORARY MARKING LAYOUT

IH 39/90

WORK AREA 2

EXISTING BRIDGE B-13-466

EXISTING BRIDGE B-13-467

USH 12/18 EB OFF RAMP TO IH 39/90 NB

USH 12/18 EB

B-13-729

USH 12/18

MATCHLINE STA 109+50'XWB'

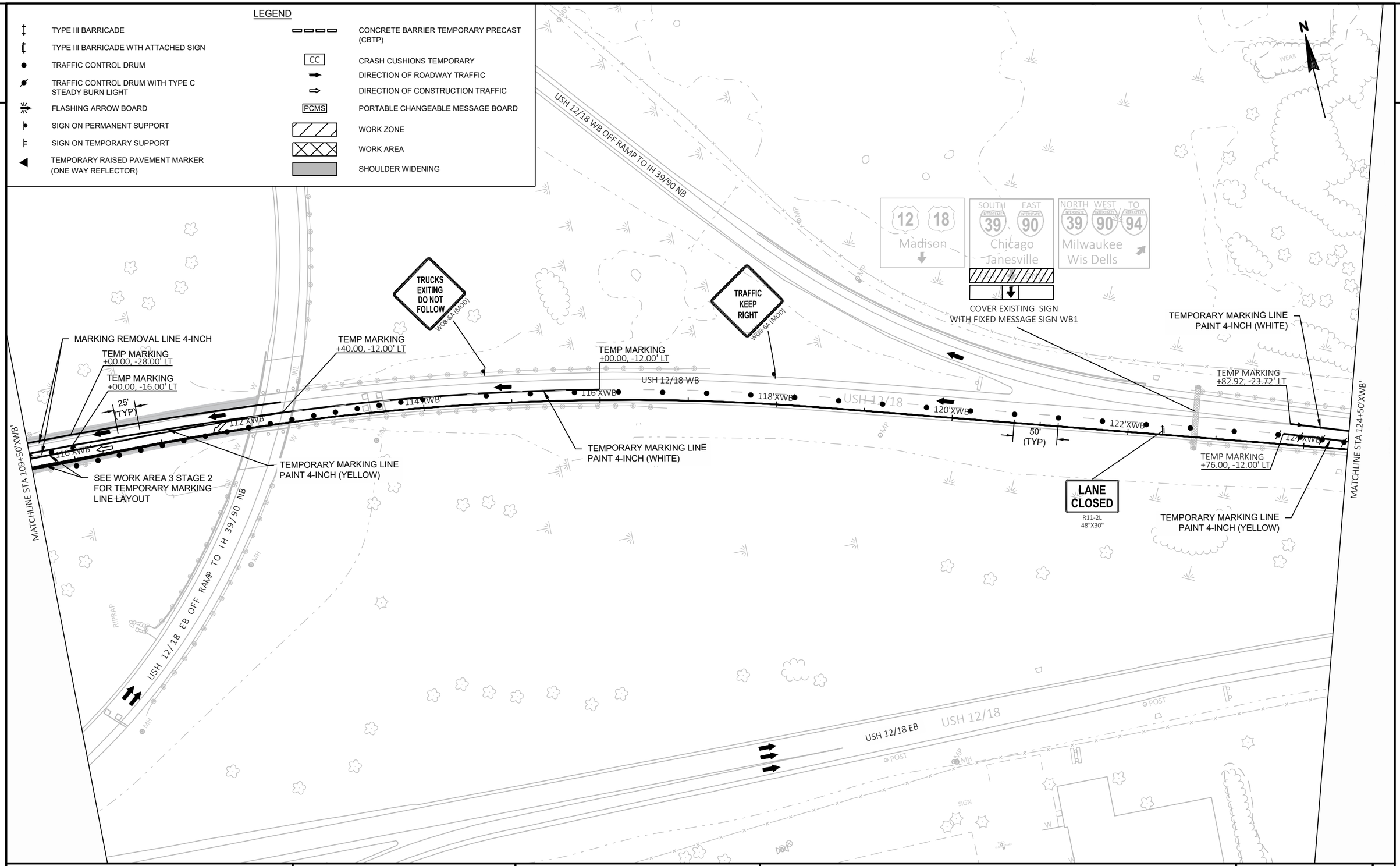
PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	TRAFFIC CONTROL - WORK AREA 2 - STAGE 2 (USH 12 WB)	SHEET E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0252_TC_S2_WB.DWG
LAYOUT NAME - 02
PLOT DATE : 7/31/2019 6:41 PM
PLOT BY : CHAD EVEN
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 42

2

LEGEND

TYPE III BARRICADE	CONCRETE BARRIER TEMPORARY PRECAST (CBTP)
TYPE III BARRICADE WTH ATTACHED SIGN	
TRAFFIC CONTROL DRUM	CRASH CUSHIONS TEMPORARY
TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT	DIRECTION OF ROADWAY TRAFFIC
FLASHING ARROW BOARD	DIRECTION OF CONSTRUCTION TRAFFIC
SIGN ON PERMANENT SUPPORT	PORTABLE CHANGEABLE MESSAGE BOARD
SIGN ON TEMPORARY SUPPORT	WORK ZONE
TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)	WORK AREA
	SHOULDER WIDENING



PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	TRAFFIC CONTROL - WORK AREA 2 - STAGE 2 (USH 12 WB)	SHEET 123	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0252_TC_S2_WB.DWG
LAYOUT NAME - 03

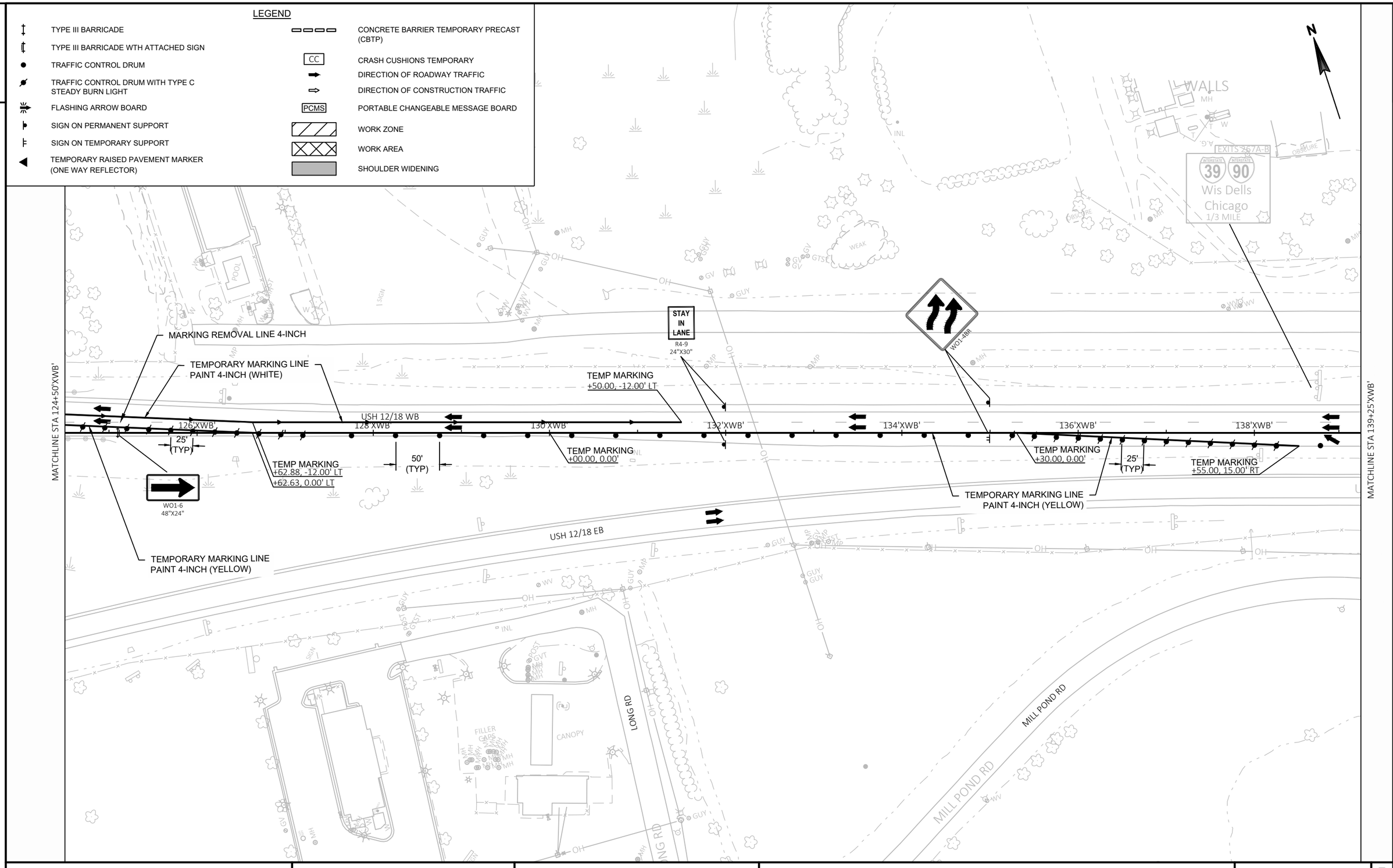
PLOT DATE : 10/10/2019 10:59 AM PLOT BY : CHAD EVEN PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

2

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)
- CONCRETE BARRIER TEMPORARY PRECAST (CBTP)
- CRASH CUSHIONS TEMPORARY (CC)
- DIRECTION OF ROADWAY TRAFFIC
- DIRECTION OF CONSTRUCTION TRAFFIC
- PORTABLE CHANGEABLE MESSAGE BOARD (PCMS)
- WORK ZONE
- WORK AREA
- SHOULDER WIDENING



PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	TRAFFIC CONTROL - WORK AREA 2 - STAGE 2 (USH 12 WB)	SHEET 124	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0252_TC_S2_WB.DWG
LAYOUT NAME - 04

PLOT DATE : 7/31/2019 6:42 PM PLOT BY : CHAD EVEN PLOT NAME : PLOT SCALE : 1 IN:100 FT

2

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)
- CONCRETE BARRIER TEMPORARY PRECAST (CBTP)
- CC — CRASH CUSHIONS TEMPORARY
- DIRECTION OF ROADWAY TRAFFIC
- DIRECTION OF CONSTRUCTION TRAFFIC
- PCMS — PORTABLE CHANGEABLE MESSAGE BOARD
- WORK ZONE
- WORK AREA
- SHOULDER WIDENING

I-39 I-90 NORTH
USE RIGHT LANE
FIXED MESSAGE SIGN WB2

I-39 I-90 SOUTH
HWY 12-18 WEST
USE LEFT LANE
FIXED MESSAGE SIGN WB3

ROAD WORK 1/2 MILE
W20-1G

MATCHLINE STA 139+25'XWB'

140'XWB' 142'XWB' 144'XWB' 146'XWB' 148'XWB' 150'XWB' 152'XWB' 154'XWB'

USH 12/18 WB

USH 12/18

USH 12/18 EB

50' (TYP)

MILL POND RD

GOLF COURSE

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	TRAFFIC CONTROL - WORK AREA 2 - STAGE 2 (USH 12 WB)	SHEET 125	E

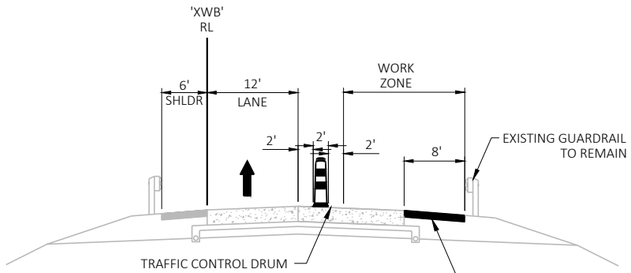
FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0252_TC_S2_WB.DWG
LAYOUT NAME - 05

PLOT DATE : 7/31/2019 6:42 PM PLOT BY : CHAD EVEN PLOT NAME : PLOT SCALE : 1 IN:100 FT

CONSTRUCTION STAGING TYPICALS

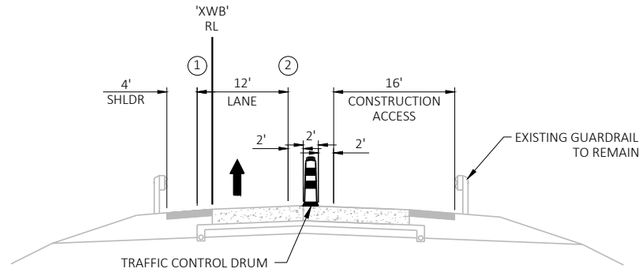
WORK AREA 3 - WB US 12/18

(LOOKING WEST)



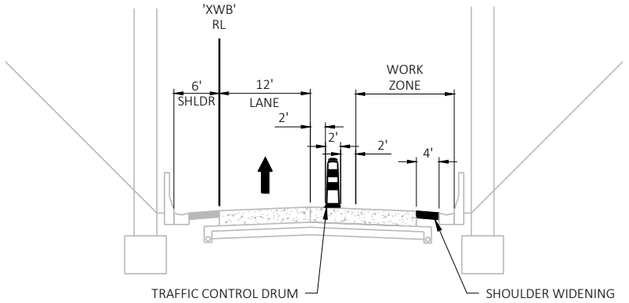
STAGE 1

(EAST OF EXISTING STRUCTURE B-13-465)



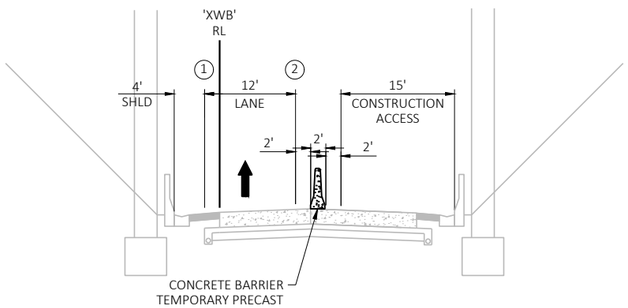
STAGE 2

(EAST OF EXISTING STRUCTURE B-13-465)



STAGE 1

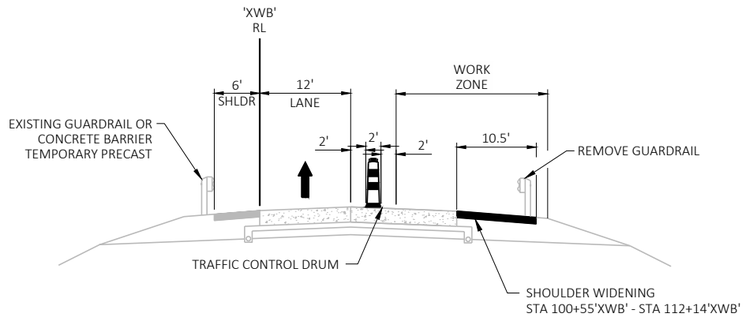
(AT EXISTING STRUCTURE B-13-465)



STAGE 2

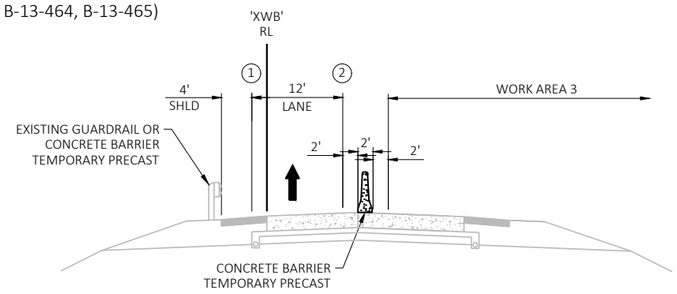
(AT EXISTING STRUCTURES B-13-464, B-13-465)

1. TEMPORARY MARKING LINE PAINT 4-INCH YELLOW
2. TEMPORARY MARKING LINE PAINT 4-INCH WHITE



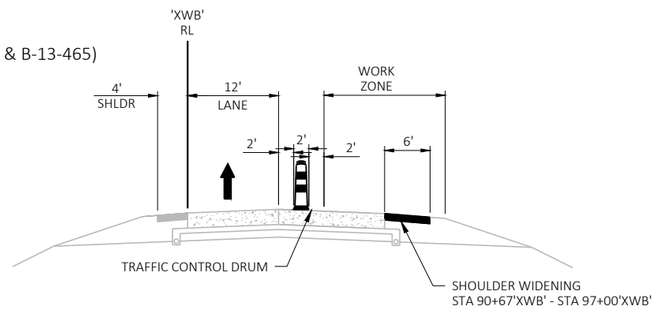
STAGE 1

(BETWEEN EXISTING STRUCTURES B-13-464 & B-13-465)



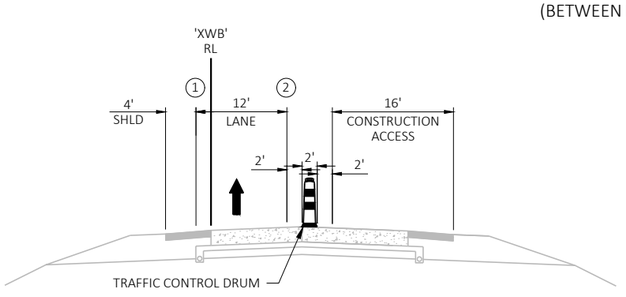
STAGE 2

(BETWEEN EXISTING STRUCTURES B-13-464 & B-13-465)



STAGE 1

(WEST OF EXISTING STRUCTURE B-13-464)



STAGE 2

(WEST OF EXISTING STRUCTURE B-13-464)

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	TRAFFIC CONTROL - CONSTRUCTION STAGING TYPICALS, WORK AREA 3 - USH 12/18 WB	SHEET 126	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0251_TC_TS.DWG
LAYOUT NAME - 03.1 WB

PLOT DATE : 9/24/2019 11:34 AM PLOT BY : CHAD EVEN PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 42

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)
- CONCRETE BARRIER TEMPORARY PRECAST (CBTP)
- CC — CRASH CUSHIONS TEMPORARY
- DIRECTION OF ROADWAY TRAFFIC
- DIRECTION OF CONSTRUCTION TRAFFIC
- PCMS — PORTABLE CHANGEABLE MESSAGE BOARD
- WORK ZONE
- WORK AREA
- SHOULDER WIDENING

N

USH 12/18 WB ON RAMP

USH 12/18 WB OFF RAMP TO IH 39 SB

SHOULDER WIDENING
+67.07, -32.00' LT

SHOULDER WIDENING
+67.07, -26.00' LT

RIGHT LANE ENDS

100' (TYP)

6'

80'XWB' 82'XWB' 84'XWB 86'XWB' 88'XWB' 90'XWB' 92'XWB' 94'XWB'

USH 12/18 WB

END ROAD WORK
G20-2A
48"X24"

USH 12/18 EB

USH 12/18 WB OFF RAMP TO IH 39 SB

MATCHLINE STA 95+00'XWB'

2

LEGEND

‡	TYPE III BARRICADE	▭▭▭	CONCRETE BARRIER TEMPORARY PRECAST (CBTP)
‡	TYPE III BARRICADE WTH ATTACHED SIGN		
●	TRAFFIC CONTROL DRUM	CC	CRASH CUSHIONS TEMPORARY
	TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT	➡	DIRECTION OF ROADWAY TRAFFIC
	FLASHING ARROW BOARD	⇨	DIRECTION OF CONSTRUCTION TRAFFIC
	SIGN ON PERMANENT SUPPORT	PCMS	PORTABLE CHANGEABLE MESSAGE BOARD
	SIGN ON TEMPORARY SUPPORT		WORK ZONE
◀	TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)		WORK AREA
			SHOULDER WIDENING

N

2

MATCHLINE STA 95+00'XWB'

MATCHLINE STA 109+50'XWB'

IH 39/90 NB OFF RAMP TO USH 12/18 WB

USH 12/18 WB

EXIT 267A

SOUTH EAST
39 90
Chicago
Janesville

EXIT 30 MPH

PLACE 7 DAYS PRIOR TO RAMP CLOSURE

PCMS

COVER SIGN

SHOULDER WIDENING +15.96, -45.33' LT

RAMP CLOSED
R11-2R
48"X30"

SHOULDER WIDENING +97.35, -28.08' LT

SHOULDER WIDENING +97.36, -26.00' LT

SHOULDER WIDENING +55.57, -36.50' LT

SHOULDER WIDENING +55.66, -30.25' LT

COVER SIGN

R-13-351

REMOVE GUARDRAIL

SEE CROSS CULVERT PAVEMENT REPLACEMENT CONSTRUCTION DETAIL

SHOULDER WIDENING +08.48, -36.50' LT

SHOULDER WIDENING +74.37, -34.00' LT

EXISTING GUARDRAIL TO REMAIN

6'

10.5'

8'

96'XWB'

98'XWB'

100'XWB'

102'XWB'

104'XWB'

106'XWB'

108'XWB'

REPLACE EXISTING PAVEMENT WITHIN GORE

SHOULDER WIDENING +19.45, -32.00' LT

EXISTING BRIDGE B-13-464

IH 39/90 SB

SHOULDER WIDENING +44.77, -28.00' LT

SHOULDER WIDENING +23.82, -28.00' LT

SHOULDER WIDENING +23.82, -26.00' LT

SHOULDER WIDENING +08.45, -31.71' LT

EXISTING BRIDGE B-13-465

IH 39/90 NB

SHOULDER WIDENING +74.35, -32.00' LT

25 (TYP)

RAMP CLOSED 1000 FT
W20-3C

R-13-350

B-13-730

RIPRAP

WEAK

IH 39/90

EXISTING BRIDGE B-13-466

B-13-729

EXISTING BRIDGE B-13-467

USH 12/18 EB

USH 12/18 EB OFF RAMP TO IH 39/90 NB

USH 12/18

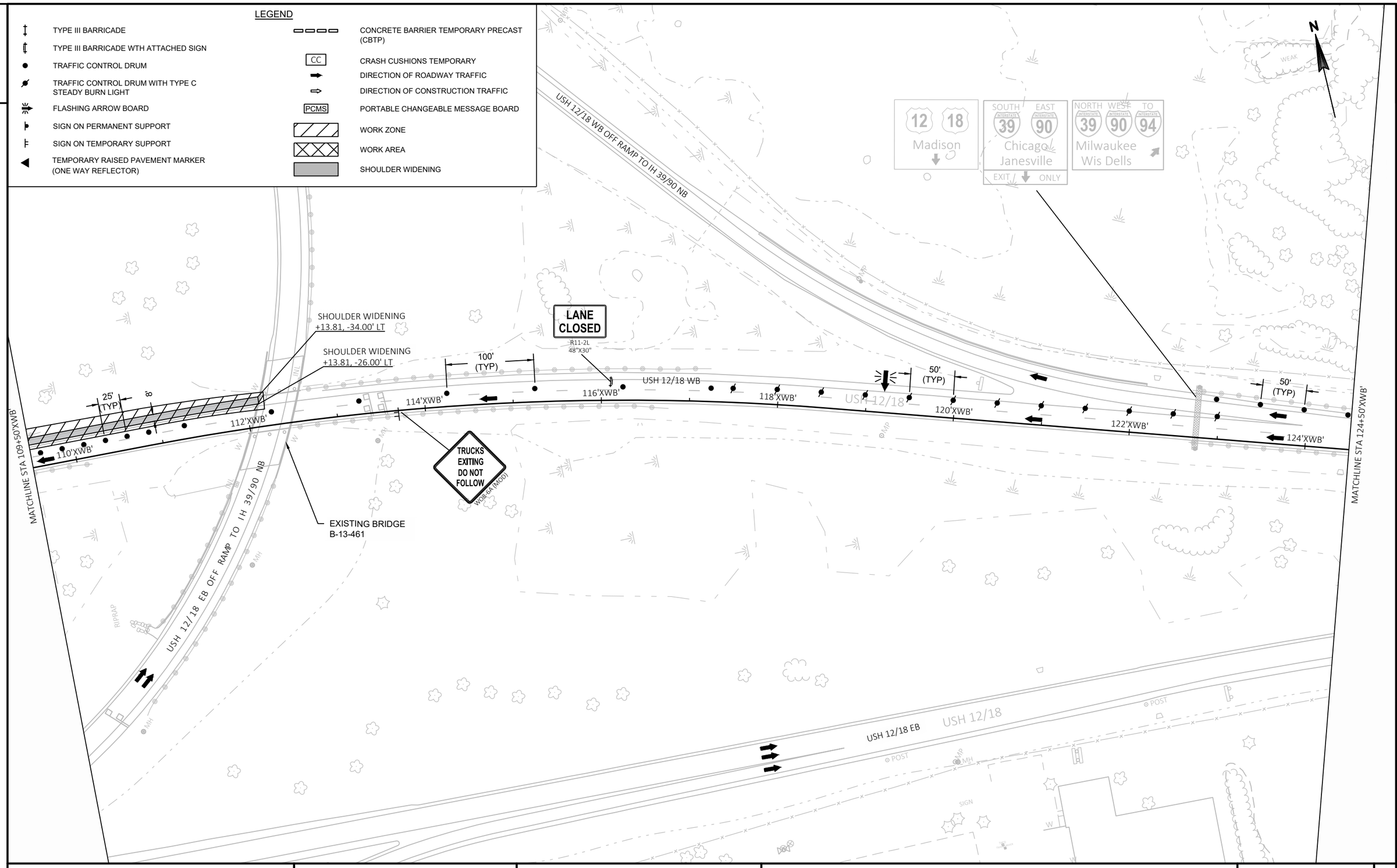
PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	TRAFFIC CONTROL - WORK AREA 3 - STAGE 1 (USH 12 WB)	SHEET 128	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0252_TC_S1_WB.DWG
LAYOUT NAME - 07
PLOT DATE : 7/31/2019 6:45 PM
PLOT BY : CHAD EVEN
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 42

2

LEGEND

TYPE III BARRICADE	CONCRETE BARRIER TEMPORARY PRECAST (CBTP)
TYPE III BARRICADE WTH ATTACHED SIGN	
TRAFFIC CONTROL DRUM	CC — CRASH CUSHIONS TEMPORARY
TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT	DIRECTION OF ROADWAY TRAFFIC
FLASHING ARROW BOARD	DIRECTION OF CONSTRUCTION TRAFFIC
SIGN ON PERMANENT SUPPORT	PCMS — PORTABLE CHANGEABLE MESSAGE BOARD
SIGN ON TEMPORARY SUPPORT	WORK ZONE
TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)	WORK AREA
	SHOULDER WIDENING



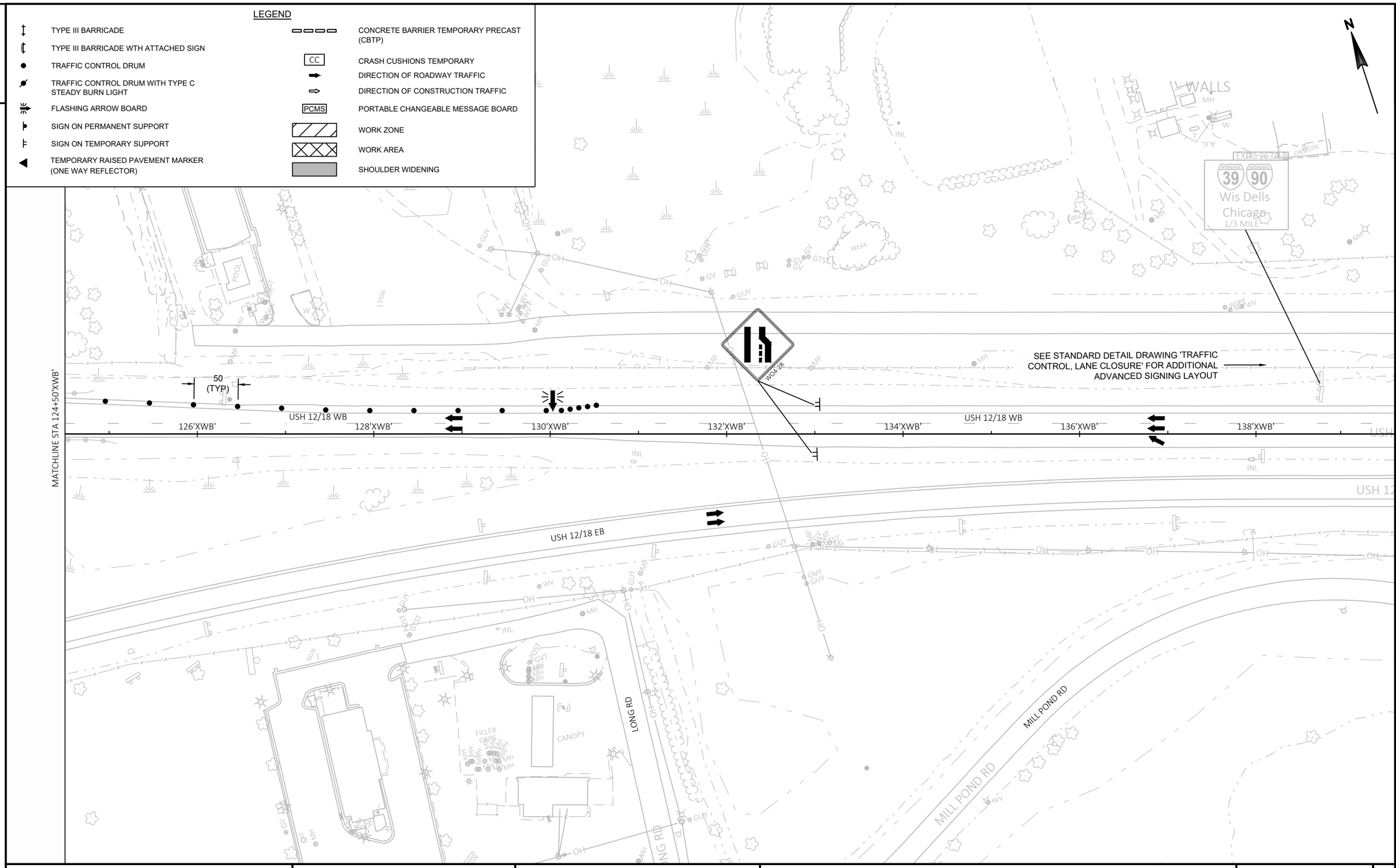
PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	TRAFFIC CONTROL - WORK AREA 3 - STAGE 1 (USH 12 WB)	SHEET 129	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0252_TC_S1_WB.DWG
LAYOUT NAME - 08

PLOT DATE : 7/31/2019 6:45 PM PLOT BY : CHAD EVEN PLOT NAME : PLOT SCALE : 1 IN:100 FT

LEGEND

TYPE III BARRICADE	CONCRETE BARRIER TEMPORARY PRECAST (CBTP)
TYPE III BARRICADE WTH ATTACHED SIGN	
TRAFFIC CONTROL DRUM	CC — CRASH CUSHIONS TEMPORARY
TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT	DIRECTION OF ROADWAY TRAFFIC
FLASHING ARROW BOARD	DIRECTION OF CONSTRUCTION TRAFFIC
SIGN ON PERMANENT SUPPORT	PCMS — PORTABLE CHANGEABLE MESSAGE BOARD
SIGN ON TEMPORARY SUPPORT	WORK ZONE
TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)	WORK AREA
	SHOULDER WIDENING



PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	TRAFFIC CONTROL - WORK AREA 3 - STAGE 1 (USH 12 WB)	SHEET 130	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0252_TC_S1_WB.DWG
LAYOUT NAME - 09
PLOT DATE : 7/31/2019 6:45 PM
PLOT BY : CHAD EVEN
PLOT NAME :
PLOT SCALE : 1 IN:100 FT

2

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)
- CONCRETE BARRIER TEMPORARY PRECAST (CBTP)
- CC — CRASH CUSHIONS TEMPORARY
- DIRECTION OF ROADWAY TRAFFIC
- DIRECTION OF CONSTRUCTION TRAFFIC
- PCMS — PORTABLE CHANGEABLE MESSAGE BOARD
- WORK ZONE
- WORK AREA
- SHOULDER WIDENING

N

USH 12/18 WB ON RAMP

USH 12/18 WB OFF RAMP TO IH 39 SB

USH 12/18 WB

USH 12/18 EB

USH 12/18 WB OFF RAMP TO IH 39 SB

SEE WORK AREA 2 STAGE 2
FOR TEMPORARY MARKING LAYOUT

COVER SIGN

RIGHT LANE ENDS

COVER SIGN

80'XWB' 82'XWB' 84'XWB 86'XWB' 88'XWB' 90'XWB' 92'XWB' 94'XWB

END ROAD WORK
G20-2A
48"X24"

TEMP MARKING
+67.00, 0.00' LT

TEMP MARKING
+67.00, -10.00' LT

TEMP MARKING
+67.00, 2.00' RT

25'
(TYP)

TEMPORARY MARKING LINE
PAINT 4-INCH (WHITE)

TEMPORARY MARKING LINE
PAINT 4-INCH (YELLOW)

TRUCKS ENTERING FROM RIGHT
W08-6 (MOD)

MATCHLINE STA 95+00'XWB'

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	TRAFFIC CONTROL - WORK AREA 3 - STAGE 2 (USH 12 WB)	SHEET 131	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0252_TC_S2_WB.DWG
LAYOUT NAME - 06

PLOT DATE : 7/31/2019 6:46 PM PLOT BY : CHAD EVEN PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

2

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)
- CONCRETE BARRIER TEMPORARY PRECAST (CBTP)
- CC — CRASH CUSHIONS TEMPORARY
- DIRECTION OF ROADWAY TRAFFIC
- DIRECTION OF CONSTRUCTION TRAFFIC
- PCMS — PORTABLE CHANGEABLE MESSAGE BOARD
- WORK ZONE
- WORK AREA
- SHOULDER WIDENING

N

WORK AREA 3

IH 39/90 NB OFF RAMP TO USH 12/18 WB

COVER SIGN
G20-64
36"X18"
RAMP CLOSED

SOUTH EAST INTERSTATE 39 90 Chicago Janesville

COVER SIGN
MO6-1
24"X24"

COVER SIGN

PLACE 7 DAYS PRIOR TO RAMP CLOSURE

EXIT 267A

PCMS

COVER SIGN

RAMP CLOSED
R11-2R
48"X30"

EXISTING BRIDGE
B-13-464

IH 39/90 SB

R-13-351

SEE WORK AREA 2 STAGE 2 FOR TEMPORARY MARKING LAYOUT

25 (TYP)

MATCHLINE STA 95+00'XWB'

96'XWB 98'XWB 100'XWB 102'XWB 104'XWB 106'XWB 108'XWB

USH 12/18 WB

CC

25' (TYP)

CBTP
+50.00, -13.00' LT

CBTP
+00.00, -13.00' LT

TEMPORARY MARKING LINE
PAINT 4-INCH (WHITE)

TEMPORARY MARKING LINE
PAINT 4-INCH (YELLOW)

SEE WORK AREA 2 STAGE 2 FOR TEMPORARY MARKING LAYOUT

COVER SIGN

EXIT 30 MPH

R-13-350

B-13-730

IF GUARDRAIL WAS REMOVED FOR WORK AREA 2, PLACE CBTP AND CONNECT TO EXISTING BARRIER

EXISTING BRIDGE
B-13-465

IH 39/90 NB

RAMP CLOSED 1000 FT
W20-53C

MATCHLINE STA 109+50'XWB'

WEAK

EXISTING BRIDGE
B-13-466

B-13-729

EXISTING BRIDGE
B-13-467

USH 12/18 EB

USH 12/18 EB OFF RAMP TO IH 39/90 NB

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	TRAFFIC CONTROL - WORK AREA 3 - STAGE 2 (USH 12 WB)	SHEET E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0252_TC_S2_WB.DWG
LAYOUT NAME - 07
PLOT DATE : 7/31/2019 6:47 PM
PLOT BY : CHAD EVEN
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 42

2

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)
- CONCRETE BARRIER TEMPORARY PRECAST (CBTP)
- CRASH CUSHIONS TEMPORARY (CC)
- DIRECTION OF ROADWAY TRAFFIC
- DIRECTION OF CONSTRUCTION TRAFFIC
- PORTABLE CHANGEABLE MESSAGE BOARD (PCMS)
- WORK ZONE
- WORK AREA
- SHOULDER WIDENING

N

USH 12/18 WB OFF RAMP TO IH 39/90 NB

12 18 Madison

SOUTH EAST 39 90 Chicago Janesville

NORTH WEST TO 39 90 94 Milwaukee Wis Dells

RAMP CLOSED

COVER SIGN G20-64 144"X30"

SEE WORK AREA 2 STAGE 2 FOR TEMPORARY MARKING LAYOUT

TEMP MARKING +40.00, -12.00' LT

TEMPORARY MARKING LINE PAINT 4-INCH (WHITE)

TEMP MARKING +00.00, -12.00' LT

TEMP MARKING +82.92, -23.72' LT

TEMPORARY MARKING LINE PAINT 4-INCH (WHITE)

25' (TYP)

110'XWB 112'XWB 114'XWB 116'XWB 118'XWB 120'XWB 122'XWB 124'XWB

USH 12/18 WB

USH 12/18

50' (TYP)

TEMP MARKING +40.00, 0.00' LT

TEMP MARKING +00.00, -10.00' LT

TEMP MARKING +00.00, 2.00' RT

TEMP MARKING +76.00, -12.00' LT

TEMPORARY MARKING LINE PAINT 4-INCH (WHITE)

TEMPORARY MARKING LINE PAINT 4-INCH (YELLOW)

TRAFFIC KEEP LEFT W08-6A (MOD)

TRUCKS EXITING DO NOT FOLLOW W08-6A (MOD)

W01-4L

LANE CLOSED R11-2L 48"X30"

TEMPORARY MARKING LINE PAINT 4-INCH (YELLOW)

MATCHLINE STA 109+50'XWB'

MATCHLINE STA 124+50'XWB'

USH 12/18 EB OFF RAMP TO IH 39/90 NB

USH 12/18 EB

USH 12/18

RIPRAP

MH

POST

SIGN

WEAK

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	TRAFFIC CONTROL - WORK AREA 3 - STAGE 2 (USH 12 WB)	SHEET 133	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0252_TC_S2_WB.DWG
LAYOUT NAME - 08

PLOT DATE : 7/31/2019 6:47 PM PLOT BY : CHAD EVEN PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

2

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)
- CONCRETE BARRIER TEMPORARY PRECAST (CBTP)
- CRASH CUSHIONS TEMPORARY (CC)
- DIRECTION OF ROADWAY TRAFFIC
- DIRECTION OF CONSTRUCTION TRAFFIC
- PORTABLE CHANGEABLE MESSAGE BOARD (PCMS)
- WORK ZONE
- WORK AREA
- SHOULDER WIDENING

N

WALLS MH

EXITS 257A-B

INTERSTATE 39 INTERSTATE 90 Wis Dells 1/3 MILE

COVER SIGN
BLANK SIGN
108"X30"

STAY IN LANE
R4-9
24"X30"

WO1-4RR

MATCHLINE STA 124+50'XWB'

TEMPORARY MARKING LINE
PAINT 4-INCH (WHITE)

TEMP MARKING
+50.00, -12.00' LT

USH 12/18 WB

126'XWB'
128'XWB'
130'XWB'
132'XWB'
134'XWB'
136'XWB'
138'XWB'

25'
(TYP)

TEMP MARKING
+00.00, 0.00'

TEMP MARKING
+62.88, -12.00' LT
+62.63, 0.00' LT

TEMP MARKING
+30.00, 0.00'

25'
(TYP)

TEMP MARKING
+55.00, 15.00' RT

WO1-6
48"X24"

TEMPORARY MARKING LINE
PAINT 4-INCH (YELLOW)

TEMPORARY MARKING LINE
PAINT 4-INCH (YELLOW)

USH 12/18 EB

MATCHLINE STA 139+25'XWB'

LONG RD

MILL POND RD

CANOPY

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	TRAFFIC CONTROL - WORK AREA 3 - STAGE 2 (USH 12 WB)	SHEET 134	E

2

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)
- CONCRETE BARRIER TEMPORARY PRECAST (CBTP)
- CC — CRASH CUSHIONS TEMPORARY
- DIRECTION OF ROADWAY TRAFFIC
- DIRECTION OF CONSTRUCTION TRAFFIC
- PCMS — PORTABLE CHANGEABLE MESSAGE BOARD
- WORK ZONE
- WORK AREA
- SHOULDER WIDENING

SEE USH 12/18 WB TO IH 39 SB DETOUR FOR ADDITIONAL FMS SIGN TO BE PLACED IN THIS STAGE

I-39 I-90 NORTH
USE RIGHT LANE
FIXED MESSAGE SIGN WB2

I-39 I-90 SOUTH
HWY 12-18 WEST
USE LEFT LANE
FIXED MESSAGE SIGN WB3

ROAD WORK 1/2 MILE
W20-1G

MATCHLINE STA 139+25'XWB'

USH 12/18 WB
USH 12/18 EB
USH 12/18

140'XWB' 142'XWB' 144'XWB' 146'XWB' 148'XWB' 150'XWB' 152'XWB' 154'XWB'

MILL POND RD
GOLF COURSE

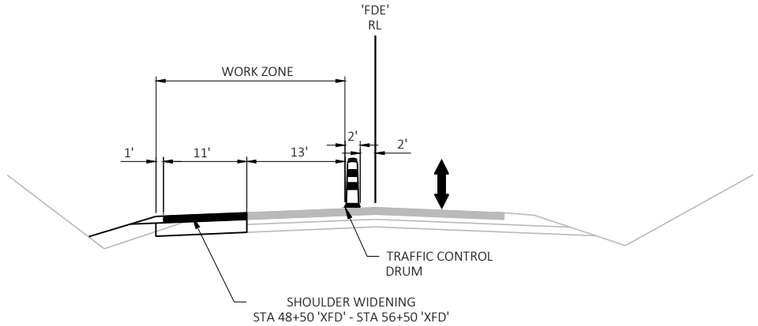
PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	TRAFFIC CONTROL - WORK AREA 3 - STAGE 2 (USH 12 WB)	SHEET 135 E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0252_TC_S2_WB.DWG
LAYOUT NAME - 10
PLOT DATE : 7/31/2019 6:48 PM PLOT BY : CHAD EVEN PLOT NAME : PLOT SCALE : 1 IN:100 FT

CONSTRUCTION STAGING TYPICALS

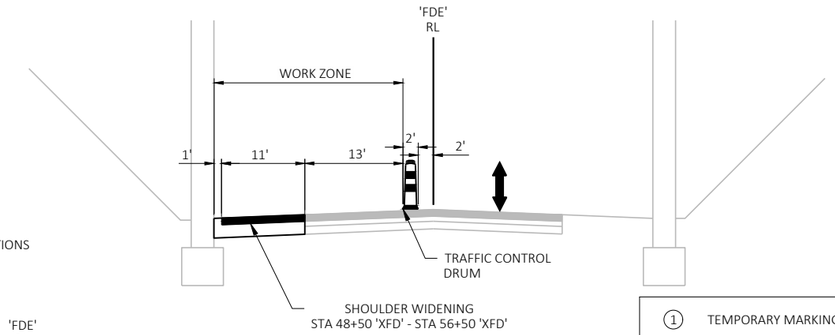
WORK AREAS 4 & 5 - FEMRITE DR

(LOOKING EAST)



STAGE 1A

(BETWEEN STRUCTURES B-13-462 & B-13-463)

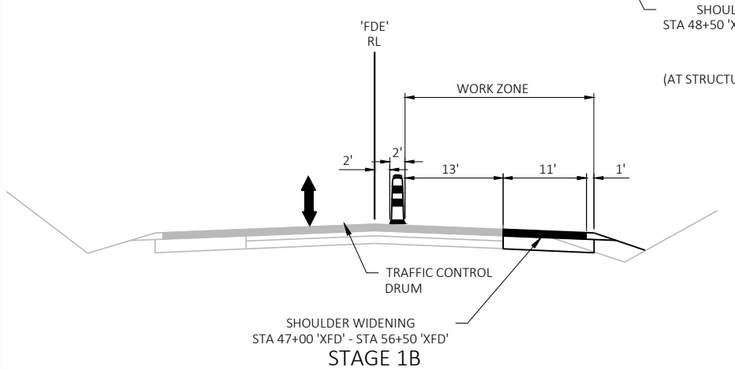


STAGE 1A

(AT STRUCTURES B-13-462 & B-13-463)

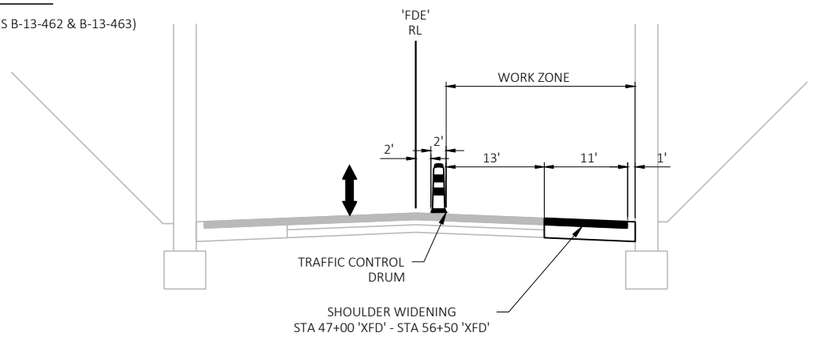
NOTE:

FEMRITE DRIVE TEMPORARY WIDENING
TO BE CONSTRUCTED UNDER FLAGGING OPERATIONS



STAGE 1B

(BETWEEN STRUCTURES B-13-462 & B-13-463)

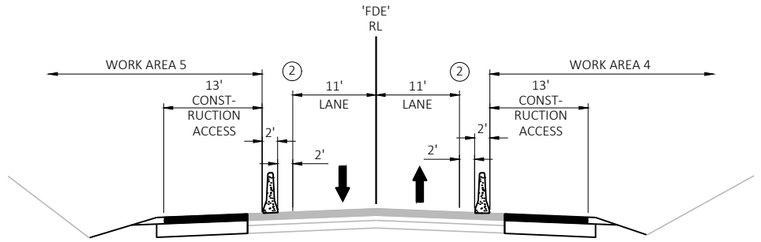


STAGE 1B

(AT STRUCTURES B-13-462 & B-13-463)

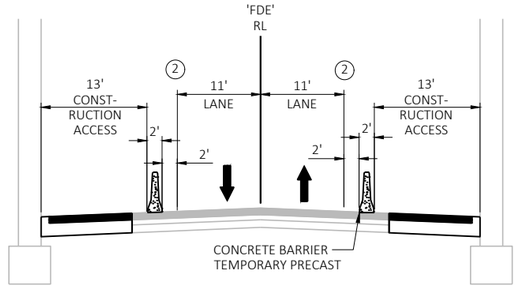
① TEMPORARY MARKING LINE PAINT 4-INCH YELLOW

② TEMPORARY MARKING LINE PAINT 4-INCH WHITE



STAGE 2

(BETWEEN STRUCTURES B-13-462 & B-13-463)



STAGE 2

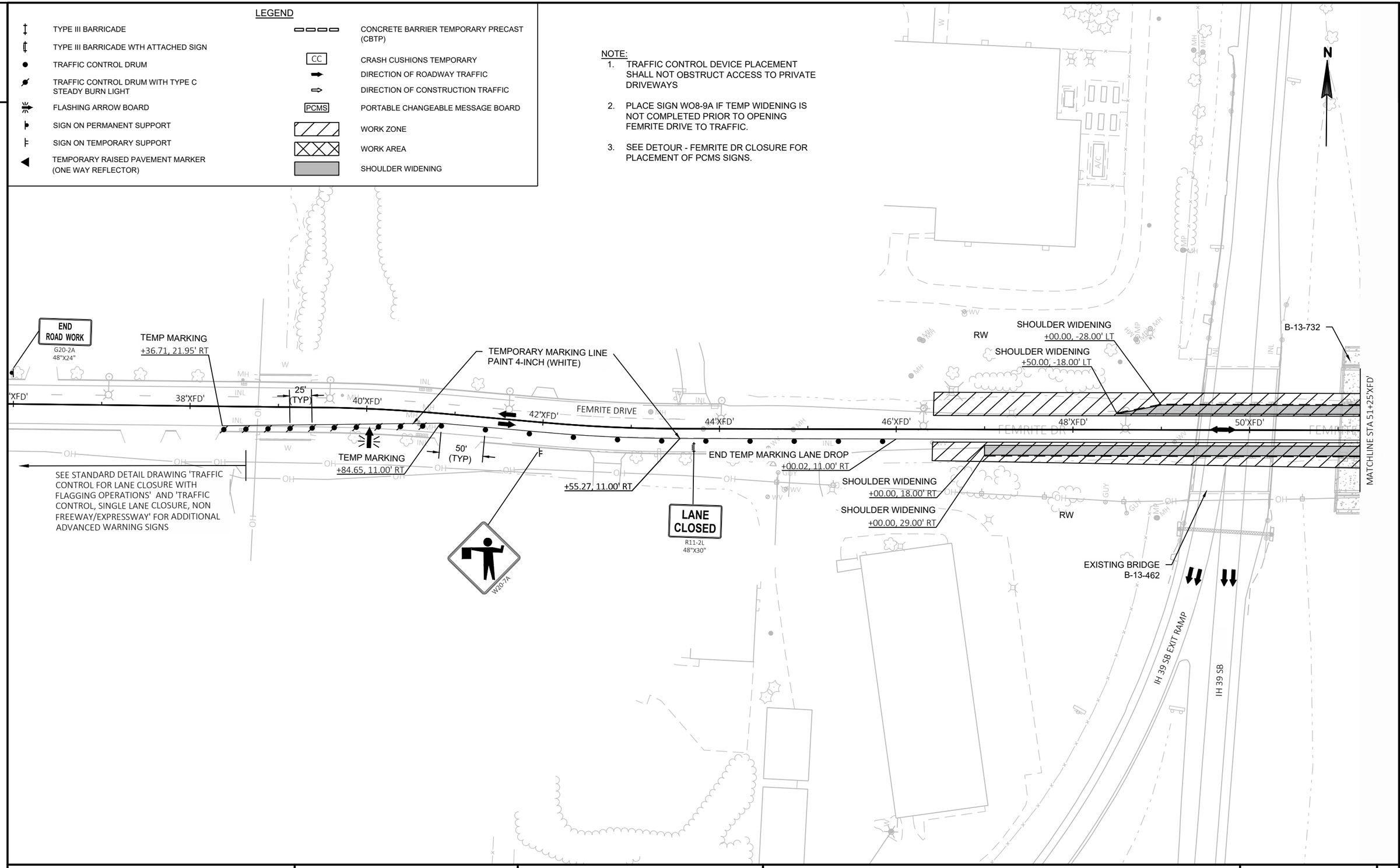
(AT STRUCTURES B-13-462 & B-13-463)

2

LEGEND

TYPE III BARRICADE	CONCRETE BARRIER TEMPORARY PRECAST (CBTP)
TYPE III BARRICADE WTH ATTACHED SIGN	
TRAFFIC CONTROL DRUM	CC — CRASH CUSHIONS TEMPORARY
TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT	DIRECTION OF ROADWAY TRAFFIC
FLASHING ARROW BOARD	DIRECTION OF CONSTRUCTION TRAFFIC
SIGN ON PERMANENT SUPPORT	PCMS — PORTABLE CHANGEABLE MESSAGE BOARD
SIGN ON TEMPORARY SUPPORT	WORK ZONE
TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)	WORK AREA
	SHOULDER WIDENING

NOTE:
1. TRAFFIC CONTROL DEVICE PLACEMENT SHALL NOT OBSTRUCT ACCESS TO PRIVATE DRIVEWAYS
2. PLACE SIGN WO8-9A IF TEMP WIDENING IS NOT COMPLETED PRIOR TO OPENING FEMRITE DRIVE TO TRAFFIC.
3. SEE DETOUR - FEMRITE DR CLOSURE FOR PLACEMENT OF PCMS SIGNS.



PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	TRAFFIC CONTROL - WORK AREAS 4 & 5 - STAGE 1 (FEMRITE DR)	SHEET 137	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0252_TC_S1_FEM.DWG
LAYOUT NAME - 01
PLOT DATE : 7/31/2019 6:50 PM
PLOT BY : CHAD EVEN
PLOT NAME :
PLOT SCALE : 1 IN:100 FT

2

LEGEND

TYPE III BARRICADE	CONCRETE BARRIER TEMPORARY PRECAST (CBTP)
TYPE III BARRICADE WTH ATTACHED SIGN	
TRAFFIC CONTROL DRUM	CC — CRASH CUSHIONS TEMPORARY
TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT	DIRECTION OF ROADWAY TRAFFIC
FLASHING ARROW BOARD	DIRECTION OF CONSTRUCTION TRAFFIC
SIGN ON PERMANENT SUPPORT	PCMS — PORTABLE CHANGEABLE MESSAGE BOARD
SIGN ON TEMPORARY SUPPORT	WORK ZONE
TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)	WORK AREA
	SHOULDER WIDENING

NOTE:
1. TRAFFIC CONTROL DEVICE PLACEMENT SHALL NOT OBSTRUCT ACCESS TO PRIVATE DRIVEWAYS
2. PLACE SIGN WO8-9A IF TEMP WIDENING IS NOT COMPLETED PRIOR TO OPENING FEMRITE DRIVE TO TRAFFIC.
3. SEE DETOUR - FEMRITE DR CLOSURE FOR PLACEMENT OF PCMS SIGNS.

N

OHMEDA DR

W20-7A

SEE STANDARD DETAIL DRAWING 'TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATIONS' FOR ADDITIONAL ADVANCED WARNING SIGNS

B-13-732

SHOULDER WIDENING
+50.00, -28.00' LT

SHOULDER WIDENING
+50.00, -21.51' LT

SHOULDER WIDENING
+50.00, -18.00' LT

TEMPORARY MARKING LINE
PAINT 4-INCH (YELLOW)

TEMP MARKING
+32.17, -6.07' LT

RW

MATCHLINE STA 51+25'XFD'

52'XFD' 54'XFD' 56'XFD' 58'XFD' 60'XFD' 62'XFD' 64'XFD' 66'XFD'

FEMRITE DRIVE

TEMP MARKING
+32.13, 5.93' RT

SHOULDER WIDENING
+50.00, 29.00' RT

SHOULDER WIDENING
+50.00, 18.00' RT

SHOULDER WIDENING
+50.00, 21.69' RT

RW

END ROAD WORK
G20-2A
48"X24"

EXISTING BRIDGE
B-13-463

IH 39 NB

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	TRAFFIC CONTROL - WORK AREAS 4 & 5 - STAGE 1 (FEMRITE DR)	SHEET 138	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0252_TC_S1_FEM.DWG
LAYOUT NAME - 02

PLOT DATE : 7/31/2019 6:50 PM PLOT BY : CHAD EVEN PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

2

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)
- CONCRETE BARRIER TEMPORARY PRECAST (CBTP)
- CRASH CUSHIONS TEMPORARY (CC)
- DIRECTION OF ROADWAY TRAFFIC
- DIRECTION OF CONSTRUCTION TRAFFIC
- PORTABLE CHANGEABLE MESSAGE BOARD (PCMS)
- WORK ZONE
- WORK AREA
- SHOULDER WIDENING

N

NOTE:
TRAFFIC CONTROL DEVICE PLACEMENT SHALL NOT OBSTRUCT ACCESS TO PRIVATE DRIVEWAYS

END ROAD WORK
G20-2A
48"X24"

TEMP MARKING
+36.71, 21.95' RT

TEMPORARY MARKING LINE
PAINT 4-INCH (WHITE)

FEMRITE DRIVE

34'XFD'
36'XFD'
38'XFD'
25' (TYP)
40'XFD'
42'XFD'
44'XFD'
46'XFD'
50' (TYP)
25' (TYP)

MATCHLINE STA 47+50'XFD'

TEMP MARKING
+84.65, 11.00' RT

LANE CLOSED
R11-2L
48"X30"

TRUCKS EXITING DO NOT FOLLOW
W08-6A(MOD)

SEE STANDARD DETAIL DRAWING 'TRAFFIC CONTROL, SINGLE LANE CLOSURE NON FREEWAY/EXPRESSWAY' FOR ADDITIONAL ADVANCED WARNING SIGNS

W04-2R

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	TRAFFIC CONTROL - WORK AREAS 4 & 5 - STAGE 2 (FEMRITE DR)	SHEET 139	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0252_TC_S2_FEM.DWG
LAYOUT NAME - 01
PLOT DATE : 7/31/2019 6:51 PM
PLOT BY : CHAD EVEN
PLOT NAME :
PLOT SCALE : 1 IN:100 FT

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)
- CONCRETE BARRIER TEMPORARY PRECAST (CBTP)
- CC — CRASH CUSHIONS TEMPORARY
- DIRECTION OF ROADWAY TRAFFIC
- DIRECTION OF CONSTRUCTION TRAFFIC
- PCMS — PORTABLE CHANGEABLE MESSAGE BOARD
- WORK ZONE
- WORK AREA
- SHOULDER WIDENING

N

EXISTING BRIDGE B-13-462

B-13-732

EXISTING BRIDGE B-13-463

WORK AREA 5

WORK AREA 4

TRUCKS ENTERING FROM RIGHT W08-6A (MOD)

TRUCKS EXITING DO NOT FOLLOW W08-6A (MOD)

WO5-52L 12"X36"

WO5-52R 12"X36"

CBTP +52.33, -14.00' LT

CBTP +48.43, -14.00' LT

CBTP +00.00, 14.00' RT

CBTP +49.19, 14.00' RT

TEMP MARKING +50.07, -10.98' LT

TEMP MARKING +59.24, 0.00' RT

TEMP MARKING +62.00, -11.00' LT

TEMP MARKING +50.18, 11.00' RT

TEMP MARKING +62.00, 11.00' RT

TEMP MARKING +32.22, -18.07' LT

TEMP MARKING +32.17, -6.07' LT

TEMP MARKING +32.13, 5.93' RT

TEMP MARKING +32.05, 17.93' RT

TEMPORARY MARKING LINE PAINT 4-INCH (YELLOW)

TEMPORARY MARKING LINE PAINT 4-INCH (WHITE)

SEE STANDARD DETAIL DRAWING 'TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 MPH OR LESS, TWO WAY UNDIVIDE ROAD OPEN TO TRAFFIC' FOR ADDITIONAL ADVANCED WARNING SIGNS

END ROAD WORK G20-2A 48"X24"

ROAD WORK 500 FT W20-1D

MATCHLINE STA 47+50'XFD'

48'XFD' 50'XFD' 52'XFD' 54'XFD' 56'XFD' 58'XFD' 60'XFD' 62'XFD'

25 (TYP)

FEMRITE DRIVE

IH 39 SB EXIT RAMP

IH 39 SB

IH 39 NB

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	TRAFFIC CONTROL - WORK AREAS 4 & 5 - STAGE 2 (FEMRITE DR)	SHEET 140	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0252_TC_S2_FEM.DWG
LAYOUT NAME - 02

PLOT DATE : 7/31/2019 6:51 PM PLOT BY : CHAD EVEN PLOT NAME : PLOT SCALE : 1 IN:100 FT

2

FEMRITE DRIVE FULL CLOSURE

N

USH 51

IH 39

AGRICULTURE DRIVE

CTH AB

MONONA DR

E BROADWAY

USH 12/18

USH 51

FEMRITE DRIVE

SIGGELKOW ROAD

PCMS

PLACE PCMS IN SOUTHEAST QUADRANT OF FEMRITE DR. AND USH 51

PCMS MESSAGE:

FEMRITE CLOSED AT I-39	USE ALT ROUTE
FRAME A	FRAME B

PLACE DURING FEMRITE CLOSURE

PLACE PCMS IN SOUTHEAST QUADRANT OF FEMRITE DR. AND AGRICULTURE DR.

PCMS MESSAGE:

FEMRITE CLOSED AT I-39	USE ALT ROUTE
FRAME A	FRAME B

PLACE DURING FEMRITE CLOSURE

PCMS MESSAGE:

FEMRITE DR TO CLOSE	DATE & TIME
FRAME A	FRAME B

(IN PLACE A MINIMUM OF 7 DAYS PRIOR TO FEMRITE CLOSURE)

PLACE PCMS IN NORTHWEST QUADRANT OF FEMRITE DR. AND CTH AB

PCMS MESSAGE:

FEMRITE CLOSED AT I-39	USE ALT ROUTE
FRAME A	FRAME B

PLACE DURING FEMRITE CLOSURE

NOTES

ADJUST NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

REMOVE OR COVER ALL SIGNS TEMPORARY OR EXISTING THAT CONFLICT WITH THE TRAFFIC CONTROL "IN USE" AS APPROVED BY THE ENGINEER.

SEE TRAFFIC CONTROL - WORK AREAS 4 & 5 - STAGE 1 (FEMRITE DR) PLAN SHEET FOR LAYOUT OF DEVICES ON FEMRITE DRIVE AT WORK ZONE.

LEGEND

WORK ZONE

PCMS — PORTABLE CHANGEABLE MESSAGE SIGN

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	TRAFFIC CONTROL - FEMRITE DRIVE FULL CLOSURE	SHEET 141 E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0270_DT_FEM.DWG
LAYOUT NAME - 01

PLOT DATE : 7/31/2019 6:51 PM PLOT BY : CHAD EVEN PLOT NAME : PLOT SCALE : 1 IN:2000 FT

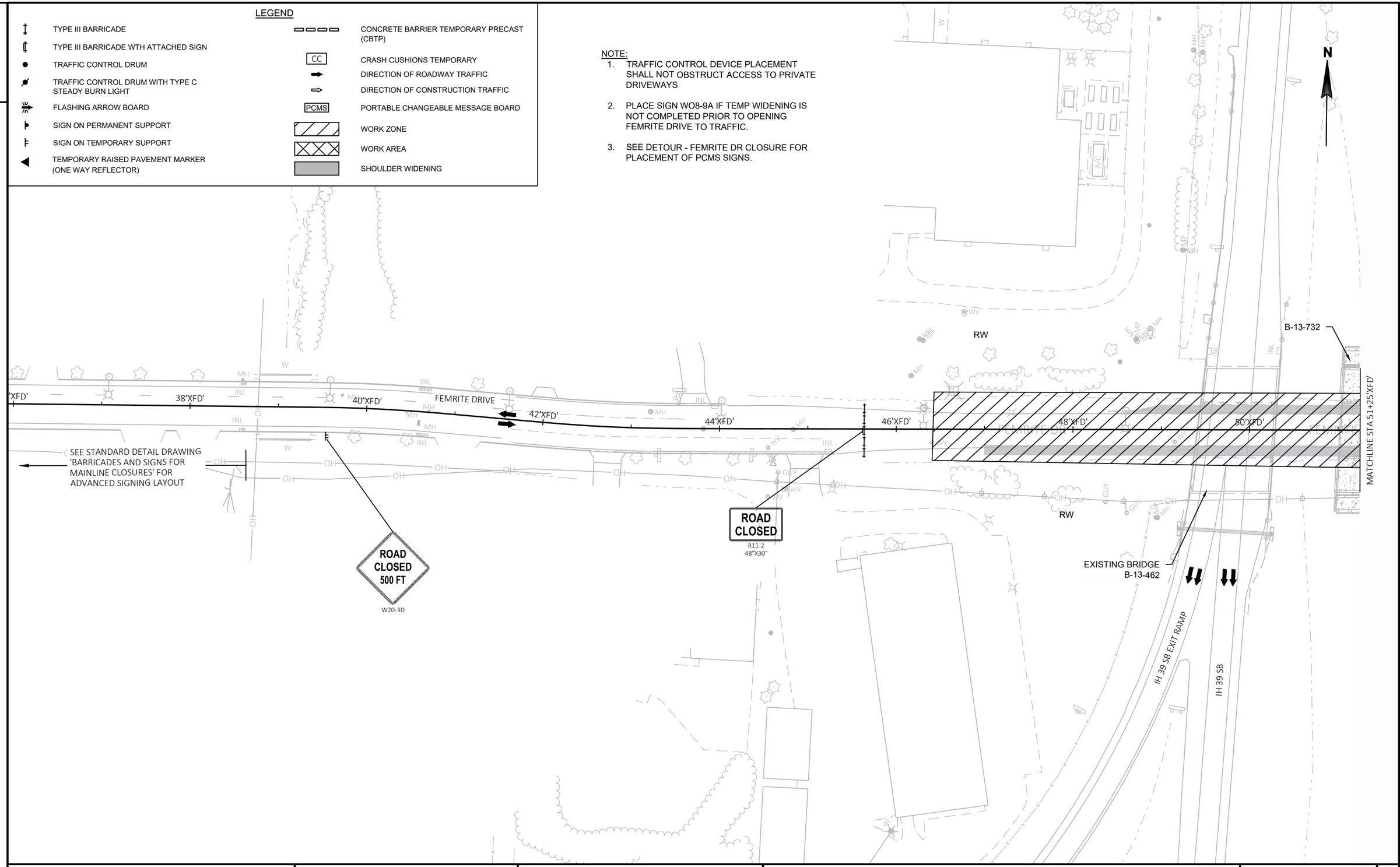
2

LEGEND

TYPE III BARRICADE	CONCRETE BARRIER TEMPORARY PRECAST (CBTP)
TYPE III BARRICADE WTH ATTACHED SIGN	
TRAFFIC CONTROL DRUM	CC — CRASH CUSHIONS TEMPORARY
TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT	DIRECTION OF ROADWAY TRAFFIC
FLASHING ARROW BOARD	DIRECTION OF CONSTRUCTION TRAFFIC
SIGN ON PERMANENT SUPPORT	PCMS — PORTABLE CHANGEABLE MESSAGE BOARD
SIGN ON TEMPORARY SUPPORT	WORK ZONE
TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)	WORK AREA
	SHOULDER WIDENING

NOTE:

1. TRAFFIC CONTROL DEVICE PLACEMENT SHALL NOT OBSTRUCT ACCESS TO PRIVATE DRIVEWAYS
2. PLACE SIGN WO8-9A IF TEMP WIDENING IS NOT COMPLETED PRIOR TO OPENING FEMRITE DRIVE TO TRAFFIC.
3. SEE DETOUR - FEMRITE DR CLOSURE FOR PLACEMENT OF PCMS SIGNS.



PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	TRAFFIC CONTROL - FEMRITE DRIVE FULL CLOSURE	SHEET 142	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0252_TC_FEM CLOSURE.DWG
LAYOUT NAME - 01

PLOT DATE : 7/31/2019 6:53 PM PLOT BY : CHAD EVEN PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

2

LEGEND

TYPE III BARRICADE	CONCRETE BARRIER TEMPORARY PRECAST (CBTP)
TYPE III BARRICADE WTH ATTACHED SIGN	
TRAFFIC CONTROL DRUM	CC — CRASH CUSHIONS TEMPORARY
TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT	DIRECTION OF ROADWAY TRAFFIC
FLASHING ARROW BOARD	DIRECTION OF CONSTRUCTION TRAFFIC
SIGN ON PERMANENT SUPPORT	PCMS — PORTABLE CHANGEABLE MESSAGE BOARD
SIGN ON TEMPORARY SUPPORT	WORK ZONE
TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)	WORK AREA
	SHOULDER WIDENING

NOTE:
1. TRAFFIC CONTROL DEVICE PLACEMENT SHALL NOT OBSTRUCT ACCESS TO PRIVATE DRIVEWAYS
2. PLACE SIGN WO8-9A IF TEMP WIDENING IS NOT COMPLETED PRIOR TO OPENING FEMRITE DRIVE TO TRAFFIC.
3. SEE DETOUR - FEMRITE DR CLOSURE FOR PLACEMENT OF PCMS SIGNS.

N

OHMEDA DR

ROAD CLOSED 500 FT
W20-3D

SEE STANDARD DETAIL DRAWING 'BARRICADES AND SIGNS FOR MAINLINE CLOSURES' FOR ADDITIONAL ADVANCED WARNING SIGNS

B-13-732

RW

ROAD CLOSED
R11-2
48"X30"

MATCHLINE STA 51+25'XFD'

52'XFD' 54'XFD' 56'XFD' 58'XFD' 60'XFD' 62'XFD' 64'XFD' 66'XFD'

FEMRITE DRIVE

ROAD CLOSED
0.1 MILES AHEAD
LOCAL TRAFFIC ONLY
R11-3
60"X30"

EXISTING BRIDGE
B-13-463

IH 39 NB

ATLA CT

RUINS

TANKS

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	TRAFFIC CONTROL - FEMRITE DRIVE FULL CLOSURE	SHEET 143	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0252_TC_FEM CLOSURE.DWG
LAYOUT NAME - 02

PLOT DATE : 7/31/2019 6:53 PM PLOT BY : CHAD EVEN PLOT NAME : PLOT SCALE : 1 IN:100 FT

GENERAL NOTES: TRAFFIC CONTROL AND DETOURS

SEE THE TRAFFIC CONTROL PLAN FOR APPLICATION OF THE DETOUR.

SEE SDD "BARRICADES AND SIGNS FOR MAINLINE CLOSURES" FOR ADDITIONAL DETAILS NOT SHOWN ON THIS PLAN.

THE EXACT NUMBER, LOCATION AND SPACING OF ALL SIGNS AND DEVICES SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MUTCD. ADJUSTMENTS TO FIT FIELD CONDITIONS SHALL BE APPROVED BY THE ENGINEER.

ALL SIGNS INAPPROPRIATE TO THE STATUS OF THE TRAFFIC CONTROL PLAN, INCLUDING PRE-EXISTING SIGNING IN THE VICINITY, SHALL BE COVERED OR REMOVED AS SPECIFIED IN THE PLANS AND/OR AS DIRECTED BY THE ENGINEER.

ALL"W" AND "WO" SIGNS SHALL BE 48"X48" UNLESS OTHERWISE NOTED AND SHALL HAVE REFLECTIVE FLORESCENT DIAMOND GRADE SHEETING.

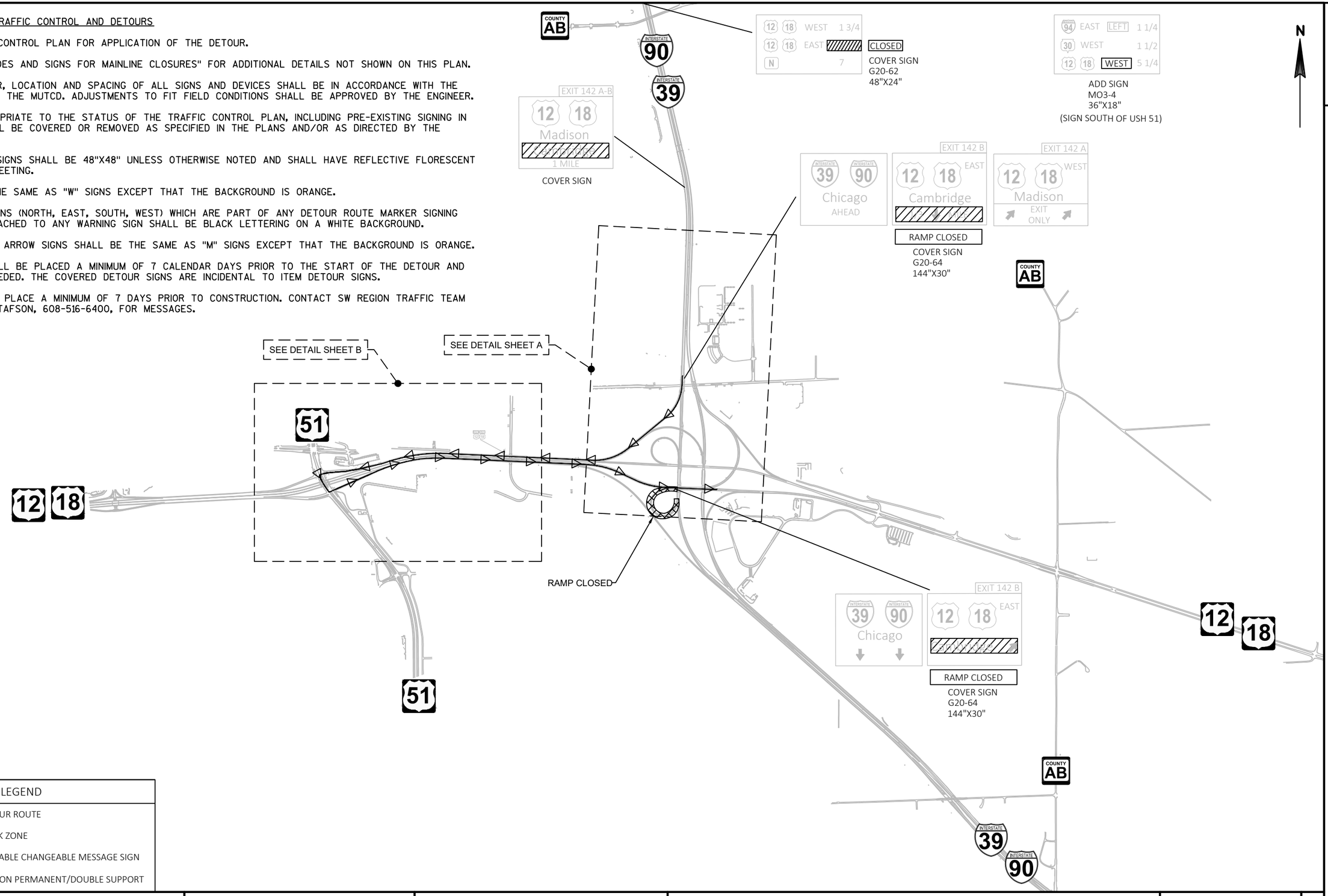
"WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THAT THE BACKGROUND IS ORANGE.

ALL M3 SERIES SIGNS (NORTH, EAST, SOUTH, WEST) WHICH ARE PART OF ANY DETOUR ROUTE MARKER SIGNING ASSEMBLY OR ATTACHED TO ANY WARNING SIGN SHALL BE BLACK LETTERING ON A WHITE BACKGROUND.

ALL MO5 AND MO6 ARROW SIGNS SHALL BE THE SAME AS "M" SIGNS EXCEPT THAT THE BACKGROUND IS ORANGE.

DETOUR SIGNS SHALL BE PLACED A MINIMUM OF 7 CALENDAR DAYS PRIOR TO THE START OF THE DETOUR AND COVERED UNTIL NEEDED. THE COVERED DETOUR SIGNS ARE INCIDENTAL TO ITEM DETOUR SIGNS.

PCMS SHALL BE IN PLACE A MINIMUM OF 7 DAYS PRIOR TO CONSTRUCTION. CONTACT SW REGION TRAFFIC TEAM LEADER, JEFF GUSTAFSON, 608-516-6400, FOR MESSAGES.



LEGEND	
	DETOUR ROUTE
	WORK ZONE
PCMS	PORTABLE CHANGEABLE MESSAGE SIGN
	SIGN ON PERMANENT/DOUBLE SUPPORT

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	DETOUR PLAN - IH 39 SB TO USH 12/18 EB RAMP CLOSURE	SHEET E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0270_DT.DWG
LAYOUT NAME - SB-EB
PLOT DATE : 10/11/2019 10:56 AM PLOT BY : CHAD EVEN PLOT NAME : PLOT SCALE : 1 IN:2000 FT

DETAIL SHEET A

PCMS MESSAGE:

RAMP TO CLOSE	DATE & TIME
FRAME A	FRAME B

(IN PLACE A MINIMUM OF 7 DAYS PRIOR TO RAMP CLOSURE)

RAMP CLOSED

PCMS

MO4-5 36"X18" | TO TO | MO4-5 36"X18"
M3-2 36"X18" | EAST EAST | M3-2 36"X18"
M1-54 36"X36" | 12 18 | M1-54 36"X36"
MO6-2 30"X30" | MO6-2 30"X30"

MO4-5 36"X18" | TO TO | MO4-5 36"X18"
M3-2 36"X18" | EAST EAST | M3-2 36"X18"
M1-54 36"X36" | 12 18 | M1-54 36"X36"
MO5-2R 30"X30" | MO5-2R 30"X30"

HWY 12-18 EAST
RAMP CLOSED
USE EXIT 142A

G20-56
120"X54"

IH 39 SB

IH 39 NB

USH 12/18 EB

USH 12/18 WB

FEMRITE DRIVE

INTERSTATE 39 INTERSTATE 90

12 18

LEGEND

- DETOUR ROUTE
- WORK ZONE
- PCMS — PORTABLE CHANGEABLE MESSAGE SIGN
- SIGN ON PERMANENT/DOUBLE SUPPORT

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	DETOUR PLAN - IH 39 SB TO USH 12/18 EB RAMP CLOSURE	SHEET E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0270_DT.DWG
LAYOUT NAME - SB-EB_1
PLOT DATE : 10/11/2019 10:56 AM PLOT BY : CHAD EVEN PLOT NAME : PLOT SCALE : 1 IN:400 FT
WISDOT/CADDS SHEET 42

DETAIL SHEET B

2

N

MO4-5 36"X18" | TO | TO | MO4-5 36"X18"
M3-2 36"X18" | EAST | EAST | M3-2 36"X18"
M1-54 36"X36" | 12 | 18 | M1-54 36"X36"
MO6-1 30"X30" | ← | ← | MO6-1 30"X30"

MO4-5 36"X18" | TO | TO | MO4-5 36"X18"
M3-2 36"X18" | EAST | EAST | M3-2 36"X18"
M1-54 36"X36" | 12 | 18 | M1-54 36"X36"
R3-54L 36"X36" | USE LEFT LANE | USE LEFT LANE | R3-54L 36"X36"

MO4-5 36"X18" | TO | TO | MO4-5 36"X18"
M3-2 36"X18" | EAST | EAST | M3-2 36"X18"
M1-54 36"X36" | 12 | 18 | M1-54 36"X36"
MO6-2 30"X30" | ↗ | ↗ | MO6-2 30"X30"

MO4-5 36"X18" | TO | TO | MO4-5 36"X18"
M3-2 36"X18" | EAST | EAST | M3-2 36"X18"
M1-54 36"X36" | 12 | 18 | M1-54 36"X36"
MO5-2R 30"X30" | ↗ | ↗ | MO5-2R 30"X30"

MO4-5 36"X18" | TO | TO | MO4-5 36"X18"
M3-2 36"X18" | EAST | EAST | M3-2 36"X18"
M1-54 36"X36" | 12 | 18 | M1-54 36"X36"

WEST | WEST
12 | 18

MO4-5 36"X18" | TO | TO | MO4-5 36"X18"
M3-2 36"X18" | EAST | EAST | M3-2 36"X18"
M1-54 36"X36" | 12 | 18 | M1-54 36"X36"

TO | MO4-5 36"X18"
EAST | M3-2 36"X18"
12 | M1-54 36"X36"
18 | M1-54 36"X36"
MO5-1L 30"X30" | ↰

51

12 18

12 18

51

LEGEND

- DETOUR ROUTE
- WORK ZONE
- PCMS — PORTABLE CHANGEABLE MESSAGE SIGN
- SIGN ON PERMANENT/DOUBLE SUPPORT

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	DETOUR PLAN - IH 39 SB TO USH 12/18 RAMP CLOSURE	SHEET 146	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0270_DT.DWG
LAYOUT NAME - SB-EB_2

PLOT DATE : 10/11/2019 10:56 AM PLOT BY : CHAD EVEN PLOT NAME : PLOT SCALE : 1 IN:400 FT

GENERAL NOTES: TRAFFIC CONTROL AND DETOURS

SEE THE TRAFFIC CONTROL PLAN FOR APPLICATION OF THE DETOUR.

SEE SDD "BARRICADES AND SIGNS FOR MAINLINE CLOSURES" FOR ADDITIONAL DETAILS NOT SHOWN ON THIS PLAN.

THE EXACT NUMBER, LOCATION AND SPACING OF ALL SIGNS AND DEVICES SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MUTCD. ADJUSTMENTS TO FIT FIELD CONDITIONS SHALL BE APPROVED BY THE ENGINEER.

ALL SIGNS INAPPROPRIATE TO THE STATUS OF THE TRAFFIC CONTROL PLAN, INCLUDING PRE-EXISTING SIGNING IN THE VICINITY, SHALL BE COVERED OR REMOVED AS SPECIFIED IN THE PLANS AND/OR AS DIRECTED BY THE ENGINEER.

ALL"W" AND "WO" SIGNS SHALL BE 48"X48" UNLESS OTHERWISE NOTED AND SHALL HAVE REFLECTIVE FLORESCENT DIAMOND GRADE SHEETING.

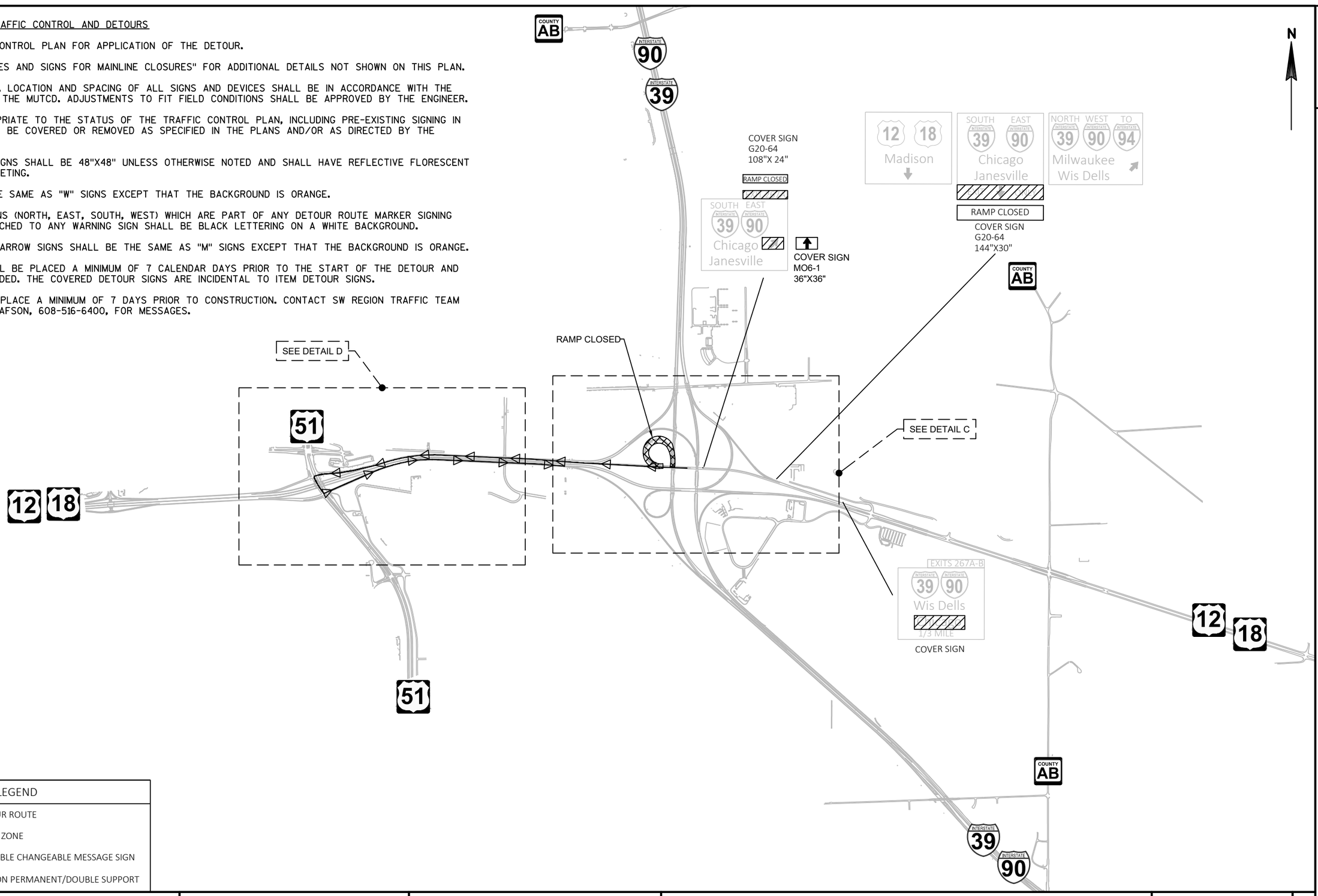
"WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THAT THE BACKGROUND IS ORANGE.

ALL M3 SERIES SIGNS (NORTH, EAST, SOUTH, WEST) WHICH ARE PART OF ANY DETOUR ROUTE MARKER SIGNING ASSEMBLY OR ATTACHED TO ANY WARNING SIGN SHALL BE BLACK LETTERING ON A WHITE BACKGROUND.

ALL M05 AND M06 ARROW SIGNS SHALL BE THE SAME AS "M" SIGNS EXCEPT THAT THE BACKGROUND IS ORANGE.

DETOUR SIGNS SHALL BE PLACED A MINIMUM OF 7 CALENDAR DAYS PRIOR TO THE START OF THE DETOUR AND COVERED UNTIL NEEDED. THE COVERED DETOUR SIGNS ARE INCIDENTAL TO ITEM DETOUR SIGNS.

PCMS SHALL BE IN PLACE A MINIMUM OF 7 DAYS PRIOR TO CONSTRUCTION. CONTACT SW REGION TRAFFIC TEAM LEADER, JEFF GUSTAFSON, 608-516-6400, FOR MESSAGES.



LEGEND	
	DETOUR ROUTE
	WORK ZONE
PCMS	PORTABLE CHANGEABLE MESSAGE SIGN
	SIGN ON PERMANENT/DOUBLE SUPPORT

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	DETOUR PLAN - USH 12/18 WB TO IH 39 SB RAMP CLOSURE	SHEET E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0270_DT.DWG
LAYOUT NAME - WB-SB

PLOT DATE : 10/11/2019 10:56 AM PLOT BY : CHAD EVEN PLOT NAME : PLOT SCALE : 1 IN:2000 FT

2

DETAIL SHEET C

PCMS MESSAGE:

RAMP TO CLOSE	DATE & TIME
FRAME A	FRAME B

(IN PLACE A MINIMUM OF 7 DAYS PRIOR TO RAMP CLOSURE)

RAMP CLOSED

PCMS

MO4-5 36"X18" | TO | TO | MO4-5 36"X18"
M3-3 24"X12" | SOUTH | EAST | M3-2 36"X18"
M1-1 36"X36" | I-39 | I-90 | M1-1 36"X36"

MO4-5 36"X18" | TO | TO | MO4-5 36"X18"
M3-3 24"X12" | SOUTH | EAST | M3-2 36"X18"
M1-1 36"X36" | I-39 | I-90 | M1-1 36"X36"
MO6-1 30"X30" | ↑ | ↑ | MO6-1 30"X30"

I-39 I-90 SOUTH
RAMP CLOSED
USE EXIT 266

G20-56 120"X54"

FEMRITE DRIVE

USH 12/18 WB

USH 12/18 EB

IH 39 SB

IH 39 NB

N

2

LEGEND

- DETOUR ROUTE
- WORK ZONE
- PCMS — PORTABLE CHANGEABLE MESSAGE SIGN
- SIGN ON PERMANENT/DOUBLE SUPPORT

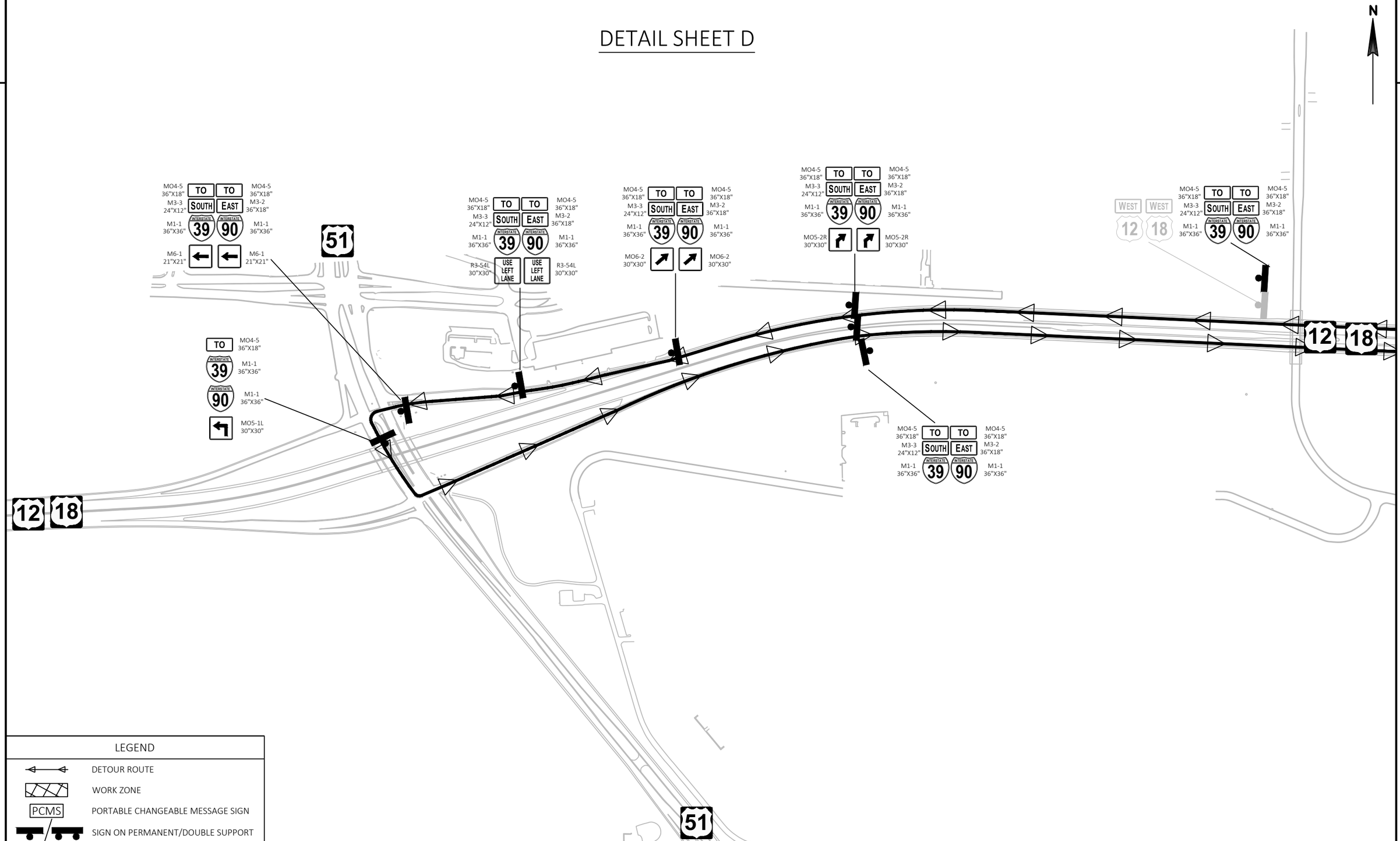
PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	DETOUR PLAN - USH 12/18 WB TO IH 39 SB RAMP CLOSURE	SHEET 148	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0270_DT.DWG
LAYOUT NAME - WB-SB_1

PLOT DATE : 10/11/2019 10:56 AM PLOT BY : CHAD EVEN PLOT NAME : PLOT SCALE : 1 IN:400 FT

DETAIL SHEET D

2



PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	DETOUR PLAN - USH 12/18 WB TO IH 39 SB RAMP CLOSURE	SHEET 149	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0270_DT.DWG
LAYOUT NAME - WB-SB_2

PLOT DATE : 10/11/2019 10:56 AM PLOT BY : CHAD EVEN PLOT NAME : PLOT SCALE : 1 IN:400 FT

2

NB I-39/90 TO WB USH 12/18 RAMP CLOSURE

NIGHTTIME CLOSURE ONLY

N

IH 39

CTH N

USH 12/18

USH 12/18

USH 12/18

PCMS

PCMS

PCMS

PCMS

PCMS

PCMS

PCMS

PCMS MESSAGE:

RAMP TO CLOSE	DATE & TIME
FRAME A	FRAME B

(IN PLACE A MINIMUM OF 7 CALENDAR DAYS PRIOR TO RAMP CLOSURE)

CLOSE NB I-39/90 TO WB USH 12/18 RAMP. REFER TO S.D.D. "TRAFFIC CONTROL EXIT RAMP CLOSURE" FOR TRAFFIC CONTROL DEVICES AND ADDITIONAL SIGNING.

PCMS MESSAGE:

DETOUR TO WEST 12/18	EXIT 272 3 MILES
FRAME A	FRAME B

PLACE DURING FREEWAY CLOSURE

PCMS MESSAGE:

WB 12/18 RAMP CLOSED	FOLLOW EAST 12/18
FRAME A	FRAME B

PLACE DURING FREEWAY CLOSURE

PCMS MESSAGE:

DETOUR TO WEST 12/18	LEFT TO WEST 12/18
FRAME A	FRAME B

PLACE DURING FREEWAY CLOSURE

PCMS MESSAGE:

DETOUR TO WEST 12/18	THIS EXT TURN LEFT
FRAME A	FRAME B

PLACE DURING FREEWAY CLOSURE

PCMS MESSAGE:

RAMP TO WB 12/18 CLOSED	4 MILES AHEAD
FRAME A	FRAME B

PLACE DURING FREEWAY CLOSURE

IH 39

CTH N

LEGEND	
◁ ◁	DETOUR ROUTE
	WORK ZONE
PCMS	PORTABLE CHANGEABLE MESSAGE SIGN

NOTES

ADJUST NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

REMOVE OR COVER ALL SIGNS TEMPORARY OR EXISTING THAT CONFLICT WITH THE TRAFFIC CONTROL "IN USE" AS APPROVED BY THE ENGINEER.

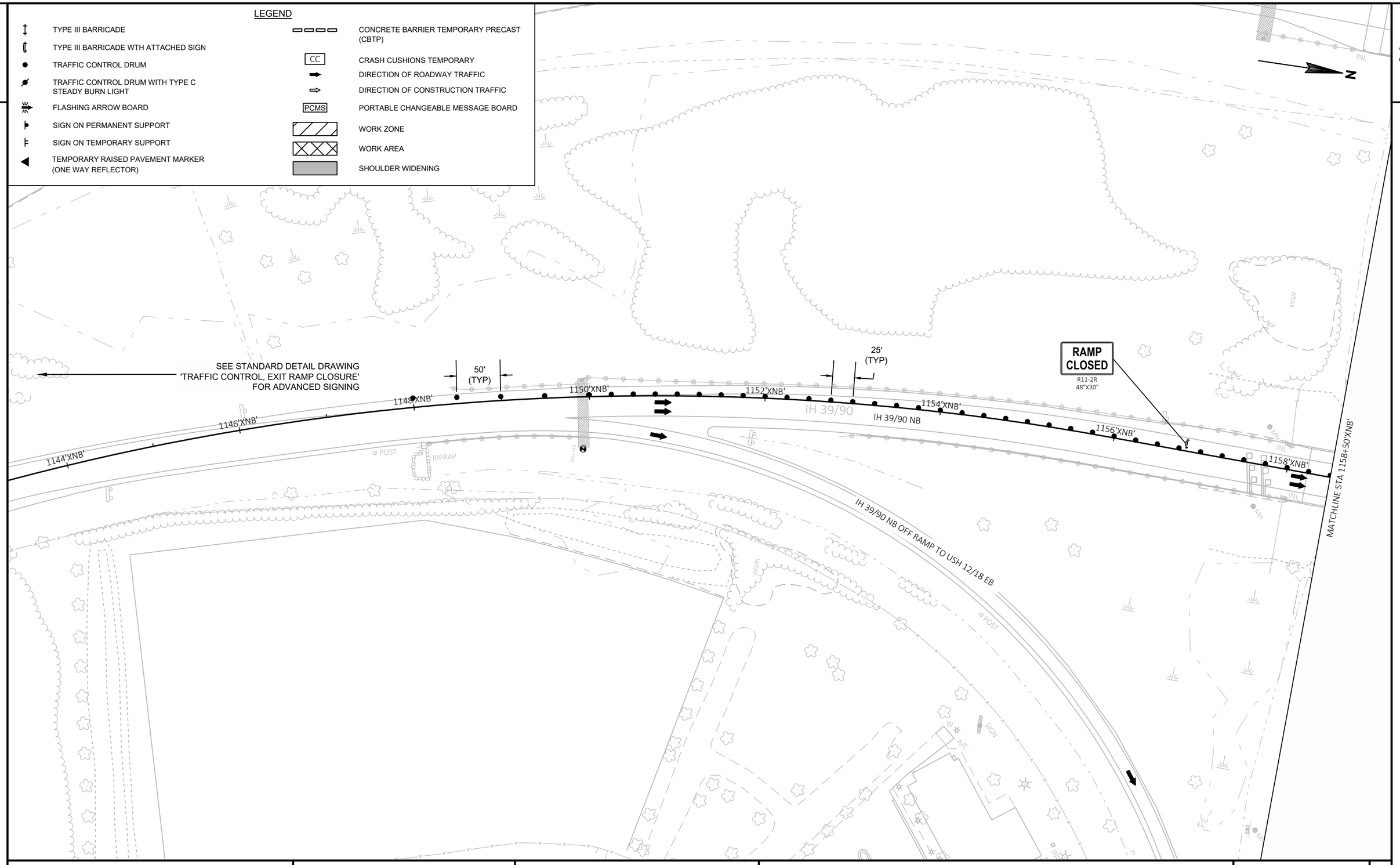
PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	DETOUR - NB TO WB RAMP CLOSURE	SHEET 150	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0270_DT_NB-WB.DWG
LAYOUT NAME - 01

PLOT DATE : 8/1/2019 9:43 AM PLOT BY : CHAD EVEN PLOT NAME : PLOT SCALE : 1 IN:2000 FT

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)
- CONCRETE BARRIER TEMPORARY PRECAST (CBTP)
- CRASH CUSHIONS TEMPORARY (CC)
- DIRECTION OF ROADWAY TRAFFIC
- DIRECTION OF CONSTRUCTION TRAFFIC
- PORTABLE CHANGEABLE MESSAGE BOARD (PCMS)
- WORK ZONE
- WORK AREA
- SHOULDER WIDENING



PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	DETOUR - NB TO WB RAMP CLOSURE	SHEET 151	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0252_TC_NB-WB CLOSURE.DWG
LAYOUT NAME - 01

PLOT DATE : 8/1/2019 9:44 AM PLOT BY : CHAD EVEN PLOT NAME : PLOT SCALE : 1 IN:100 FT

2

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)
- CONCRETE BARRIER TEMPORARY PRECAST (CBTP)
- CC — CRASH CUSHIONS TEMPORARY
- DIRECTION OF ROADWAY TRAFFIC
- DIRECTION OF CONSTRUCTION TRAFFIC
- PCMS — PORTABLE CHANGEABLE MESSAGE BOARD
- WORK ZONE
- WORK AREA
- SHOULDER WIDENING

N

WORK ZONE

R-13-352

B-13-731

SEE CROSS CULVERT PAVEMENT REPLACEMENT CONSTRUCTION DETAIL

RAMP CLOSED
R11-2R
48"X30"

IH 39 NB OFF RAMP TO USH 12/18 WB

24'XL

26'XL

22'XL

MATCHLINE STA 1158+50'XNB'

1160'XNB'

1162'XNB'

1164'XNB'

1166'XNB'

1168'XNB'

1170'XNB'

1172'XNB'

IH 39/90 NB

IH 39/90

25'
(TYP)

EXISTING BRIDGE
B-13-467

EXISTING BRIDGE
B-13-465

USH 12/18

USH 12/18 EB

USH 12/18 WB

USH 12/18 EB EXIT RAMP TO IH 39 NB

RIPRAP

POST

MH

INL

WEAK

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	DETOUR - NB TO WB RAMP CLOSURE	SHEET 152	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0252_TC_NB-WB CLOSURE.DWG
LAYOUT NAME - 02

PLOT DATE : 8/1/2019 9:45 AM PLOT BY : CHAD EVEN PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

EB USH 12/18 FULL FREEWAY & EB USH 12/18 TO NB IH 39/90 RAMP CLOSURE

NIGHTTIME CLOSURE ONLY

PLACE PCMS 0.5 MI PRIOR TO MONONA DRIVE EXIT

PCMS MESSAGE:
- NB 39/90 RAMP CLOSED (FRAME A)
- 3 MILES AHEAD (FRAME B)
- PLACE DURING FREEWAY CLOSURE

PCMS MESSAGE:
- EAST 12/18 CLOSED (FRAME A)
- 2 MILES AHEAD (FRAME B)
- PLACE DURING FREEWAY CLOSURE

PCMS MESSAGE:
- DETOUR TO NORTH I-39/90 (FRAME A)
- FOLLOW HWY 30 EAST (FRAME B)
- PLACE DURING FREEWAY CLOSURE

PCMS MESSAGE:
- DETOUR TO NORTH I-39/90 (FRAME A)
- FOLLOW US 51 NORTH (FRAME B)
- PLACE DURING FREEWAY CLOSURE

PCMS MESSAGE:
- DETOUR TO NORTH I-39/90 (FRAME A)
- 4 MILES AHEAD ON RIGHT (FRAME B)
- PLACE DURING FREEWAY CLOSURE

PCMS MESSAGE:
- EAST 12/18 CLOSED (FRAME A)
- FOLLOW SOUTH I-39/90 (FRAME B)
- PLACE DURING FREEWAY CLOSURE

PCMS MESSAGE:
- NB 39/90 RAMP CLOSED (FRAME A)
- USE ALT ROUTE (FRAME B)
- PLACE DURING FREEWAY CLOSURE

CLOSE EB US 12/18 TO NB I-39/90 RAMP. REFER TO S.D.D. "TRAFFIC CONTROL EXIT RAMP CLOSURE" FOR TRAFFIC CONTROL DEVICES AND ADDITIONAL SIGNING.

ONCE TRAFFIC IS ON EB STH 30, EXISTING SIGNS WILL DIRECT TRAFFIC BACK ONTO NB I-39/90.

MONONA DR
E BROADWAY
USH 12/18
FEMRITE DR
USH 51
STH 30
IH 39
IH 39/90/94
IH 94

LEGEND
- DETOUR ROUTE
- WORK ZONE
- PCMS — PORTABLE CHANGEABLE MESSAGE SIGN

NOTES

ADJUST NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

REMOVE OR COVER ALL SIGNS TEMPORARY OR EXISTING THAT CONFLICT WITH THE TRAFFIC CONTROL "IN USE" AS APPROVED BY THE ENGINEER.

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	DETOUR - USH 12 EB FULL FREEWAY CLOSURE	SHEET 153 E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0270_DT_EB.DWG
LAYOUT NAME - 01

PLOT DATE : 8/1/2019 9:45 AM PLOT BY : CHAD EVEN PLOT NAME : PLOT SCALE : 1 IN:2000 FT

WISDOT/CADDS SHEET 42

EB 12/18 FULL FREEWAY &
EB US 12/18 TO NB I-39/90 RAMP CLOSURE

NIGHTTIME CLOSURE ONLY

2

2

USH 12/18

PCMS

PCMS

PCMS

PCMS

PCMS

PCMS

PCMS

PCMS

USH 12/18

USH 12/18

USH 12/18

USH 12/18

FEMRITE DR

CTH N

CTH N

CTH N

IH 39

IH 39

SIGGELKOW RD

N

PCMS MESSAGE:

RAMP TO CLOSE	DATE & TIME
FRAME A	FRAME B

(IN PLACE A MINIMUM OF 7 CALENDAR DAYS PRIOR TO RAMP CLOSURE)

PCMS MESSAGE:

DETOUR TO EAST 12/18	EXIT 147 4 MILES
FRAME A	FRAME B

PLACE DURING FREEWAY CLOSURE

PCMS MESSAGE:

RAMP TO CLOSE	DATE & TIME
FRAME A	FRAME B

(IN PLACE A MINIMUM OF 7 CALENDAR DAYS PRIOR TO RAMP CLOSURE)

PCMS MESSAGE:

RAMP TO EAST 12/18	4 MILES AHEAD
FRAME A	FRAME B

PLACE DURING FREEWAY CLOSURE

PCMS MESSAGE:

DETOUR TO EAST 12/18	FOLLOW NORTH I-39/90
FRAME A	FRAME B

PLACE DURING FREEWAY CLOSURE

PCMS MESSAGE:

DETOUR TO EAST 12/18	THIS EXIT TURN LEFT
FRAME A	FRAME B

PLACE DURING FREEWAY CLOSURE

NOTES

ADJUST NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

REMOVE OR COVER ALL SIGNS TEMPORARY OR EXISTING THAT CONFLICT WITH THE TRAFFIC CONTROL "IN USE" AS APPROVED BY THE ENGINEER.

LEGEND	
◁ ◁	DETOUR ROUTE
	WORK ZONE
PCMS	PORTABLE CHANGEABLE MESSAGE SIGN

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	DETOUR - USH 12 EB FULL FREEWAY CLOSURE	SHEET 154	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0270_DT_EB.DWG
LAYOUT NAME - 02

PLOT DATE : 8/1/2019 9:45 AM PLOT BY : CHAD EVEN PLOT NAME : PLOT SCALE : 1 IN:2000 FT

2

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)
- CONCRETE BARRIER TEMPORARY PRECAST (CBTP)
- CC — CRASH CUSHIONS TEMPORARY
- DIRECTION OF ROADWAY TRAFFIC
- DIRECTION OF CONSTRUCTION TRAFFIC
- PCMS — PORTABLE CHANGEABLE MESSAGE BOARD
- WORK ZONE
- WORK AREA
- SHOULDER WIDENING

N

USH 51 ON RAMP TO USH 12/18 WB

USH 12/18 WB

USH 12/18

USH 12/18 EB

USH 12/18

160'XEB' 162'XEB' 164'XEB' 166'XEB' 168'XEB' 170'XEB' 172'XEB' 174'XEB'

MATCHLINE STA 174+75'XEB'

SEE STANDARD DETAIL DRAWING 'TRAFFIC CONTROL, TWO LANE CLOSURE ON FREEWAY OR EXPRESSWAY, SHORT-TERM (LESS THAN 24 HOURS) TRAFFIC CONTROL DETAIL SHEET "TRAFFIC CONTROL ADVANCED WARNING AREA", FOR ADVANCED SIGNING

LEFT TWO LANES CLOSED 1500 FT
W20-5BB

W04-2L

USH 12/18 EB OFF RAMP TO USH 51

OBSCURE

SIGN

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	DETOUR - USH 12 EB FULL FREEWAY CLOSURE	SHEET 155	E

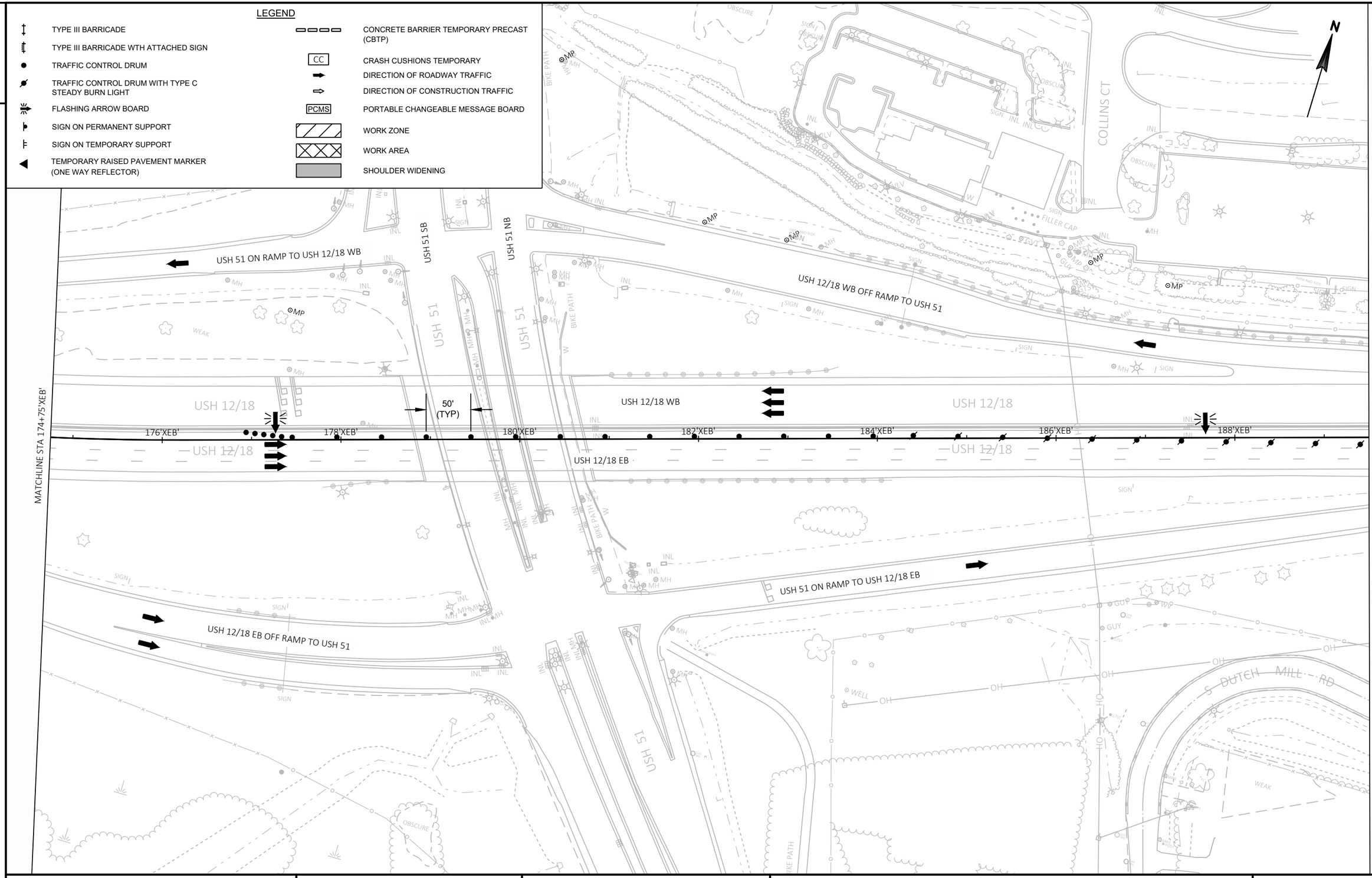
FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0252_TC_EB CLOSURE.DWG
LAYOUT NAME - 2

PLOT DATE : 8/1/2019 9:49 AM PLOT BY : CHAD EVEN PLOT NAME : PLOT SCALE : 1 IN:100 FT

2

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)
- CONCRETE BARRIER TEMPORARY PRECAST (CBTP)
- CC — CRASH CUSHIONS TEMPORARY
- DIRECTION OF ROADWAY TRAFFIC
- DIRECTION OF CONSTRUCTION TRAFFIC
- PCMS — PORTABLE CHANGEABLE MESSAGE BOARD
- WORK ZONE
- WORK AREA
- SHOULDER WIDENING



PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	DETOUR - USH 12 EB FULL FREEWAY CLOSURE	SHEET 156	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0252_TC_EB CLOSURE.DWG
LAYOUT NAME - 3

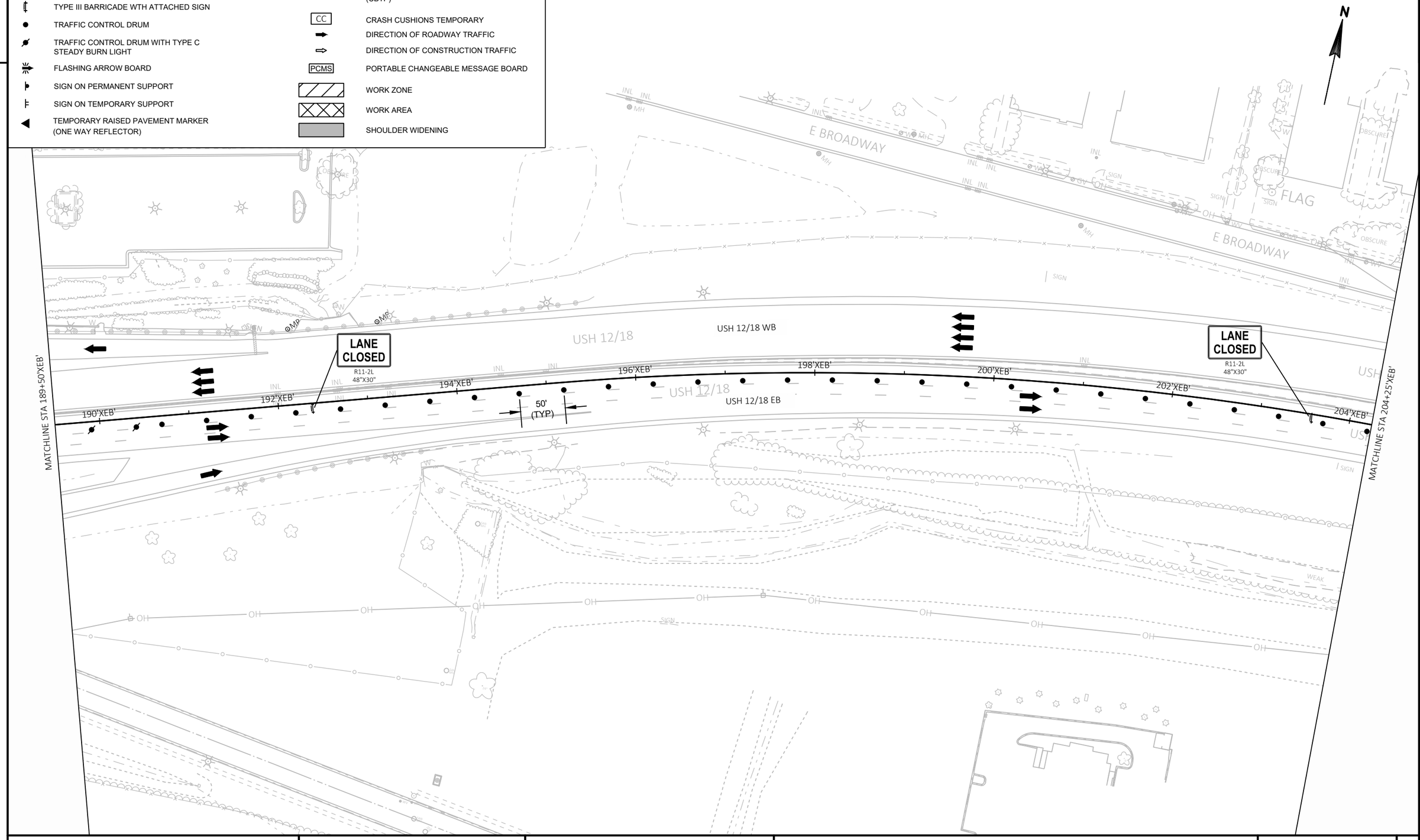
PLOT DATE : 8/1/2019 9:49 AM PLOT BY : CHAD EVEN PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

2

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)
- CONCRETE BARRIER TEMPORARY PRECAST (CBTP)
- CRASH CUSHIONS TEMPORARY (CC)
- DIRECTION OF ROADWAY TRAFFIC
- DIRECTION OF CONSTRUCTION TRAFFIC
- PORTABLE CHANGEABLE MESSAGE BOARD (PCMS)
- WORK ZONE
- WORK AREA
- SHOULDER WIDENING



PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	DETOUR - USH 12 EB FULL FREEWAY CLOSURE	SHEET	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0252_TC_EB CLOSURE.DWG
LAYOUT NAME - 4

PLOT DATE : 8/1/2019 9:49 AM PLOT BY : CHAD EVEN PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

2

LEGEND

TYPE III BARRICADE	CONCRETE BARRIER TEMPORARY PRECAST (CBTP)
TYPE III BARRICADE WTH ATTACHED SIGN	
TRAFFIC CONTROL DRUM	CC — CRASH CUSHIONS TEMPORARY
TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT	DIRECTION OF ROADWAY TRAFFIC
FLASHING ARROW BOARD	DIRECTION OF CONSTRUCTION TRAFFIC
SIGN ON PERMANENT SUPPORT	PCMS — PORTABLE CHANGEABLE MESSAGE BOARD
SIGN ON TEMPORARY SUPPORT	WORK ZONE
TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)	WORK AREA
	SHOULDER WIDENING

N

MATCHLINE STA 204+25'XEB'

MATCHLINE STA 60+72'XEB'

USH 12/18

USH 12/18 WB

USH 12/18 EB

206'XEB' 50'XEB' 52'XEB' 54'XEB' 56'XEB' 50' (TYP) 58'XEB' 60'XEB'

STA BACK = 206+77.24'XEB'
STA AHEAD = 48+49.58'XEB'

W10A-2L

LANE CLOSED
R11-2L
48"X30"

OBSCURE WEAK FLAG INL MH WV SIGN OH GUY MP

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	DETOUR - USH 12 EB FULL FREEWAY CLOSURE	SHEET 158	E

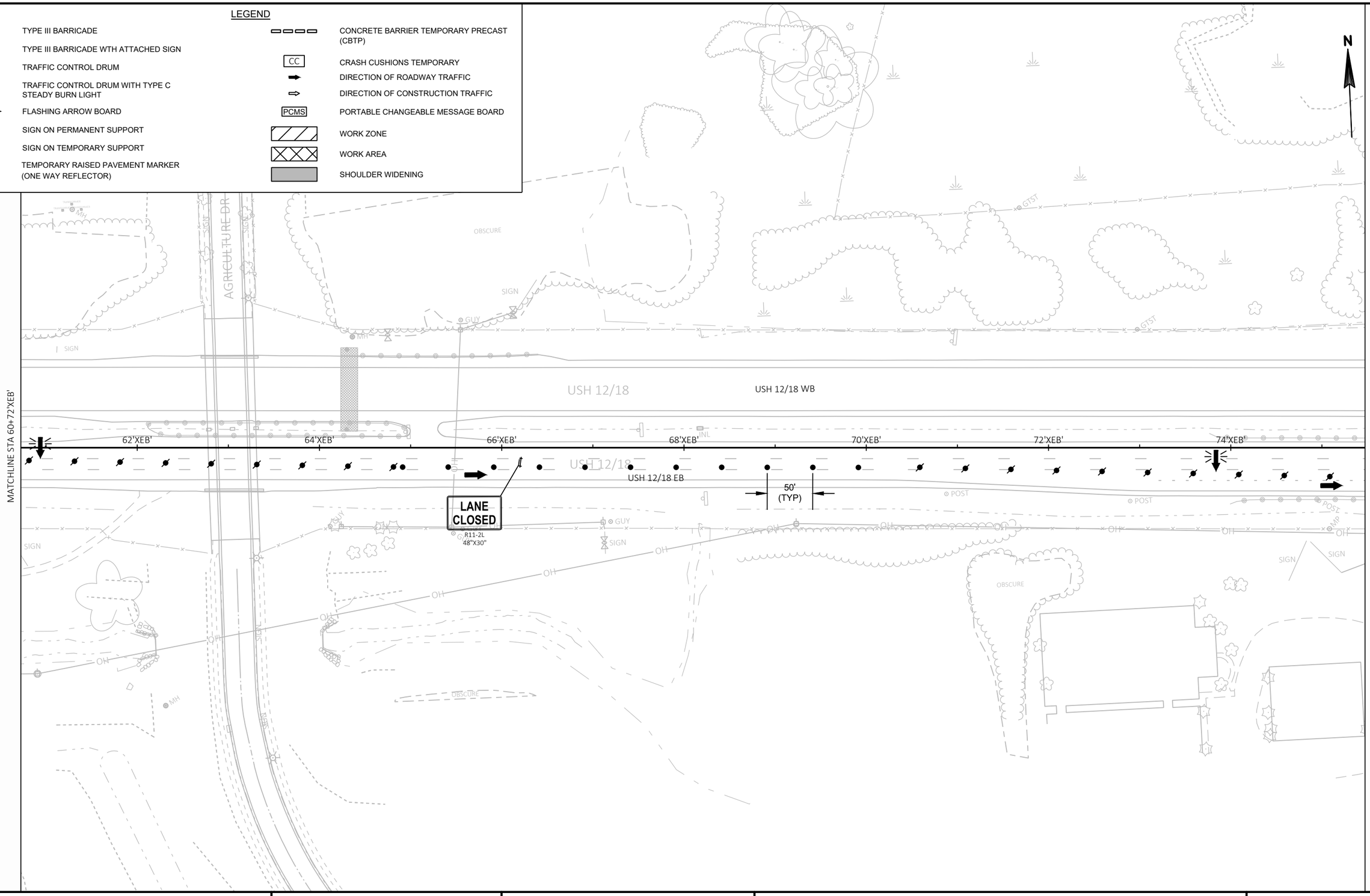
FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0252_TC_EB CLOSURE.DWG
LAYOUT NAME - 5

PLOT DATE : 8/1/2019 9:50 AM PLOT BY : CHAD EVEN PLOT NAME : PLOT SCALE : 1 IN:100 FT

2

LEGEND

TYPE III BARRICADE	CONCRETE BARRIER TEMPORARY PRECAST (CBTP)
TYPE III BARRICADE WTH ATTACHED SIGN	
TRAFFIC CONTROL DRUM	CC — CRASH CUSHIONS TEMPORARY
TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT	DIRECTION OF ROADWAY TRAFFIC
FLASHING ARROW BOARD	DIRECTION OF CONSTRUCTION TRAFFIC
SIGN ON PERMANENT SUPPORT	PCMS — PORTABLE CHANGEABLE MESSAGE BOARD
SIGN ON TEMPORARY SUPPORT	WORK ZONE
TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)	WORK AREA
	SHOULDER WIDENING



2

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	DETOUR - USH 12 EB FULL FREEWAY CLOSURE	SHEET 159	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0252_TC_EB CLOSURE.DWG
LAYOUT NAME - 6

PLOT DATE : 8/1/2019 9:50 AM PLOT BY : CHAD EVEN PLOT NAME : PLOT SCALE : 1 IN:100 FT

2

LEGEND

TYPE III BARRICADE	CONCRETE BARRIER TEMPORARY PRECAST (CBTP)
TYPE III BARRICADE WTH ATTACHED SIGN	
TRAFFIC CONTROL DRUM	CC — CRASH CUSHIONS TEMPORARY
TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT	DIRECTION OF ROADWAY TRAFFIC
FLASHING ARROW BOARD	DIRECTION OF CONSTRUCTION TRAFFIC
SIGN ON PERMANENT SUPPORT	PCMS — PORTABLE CHANGEABLE MESSAGE BOARD
SIGN ON TEMPORARY SUPPORT	WORK ZONE
TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)	WORK AREA
	SHOULDER WIDENING

N

IH 39 SB EXIT RAMP

USH 12/18 WB

ROAD CLOSED
R11-2
48"X30"

MATCHLINE STA 75+47'XEB'

76'XEB' 78'XEB' 80'XEB' 82'XEB' 84'XEB' 86'XEB' 88'XEB' 90'XEB'

USH 12/18 EB

50' (TYP)

USH 12/18 EB OFF RAMP TO IH 39 SB

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	DETOUR - USH 12 EB FULL FREEWAY CLOSURE	SHEET 160	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0252_TC_EB CLOSURE.DWG
LAYOUT NAME - 7

PLOT DATE : 8/1/2019 9:50 AM PLOT BY : CHAD EVEN PLOT NAME : PLOT SCALE : 1 IN:100 FT

2

2

USH 12/18

PCMS

PCMS

LONG RD

PCMS

MILL POND RD

PCMS

PCMS MESSAGE:

I-39/90 SB RAMP TO CLOSE	DATE & TIME
FRAME A	FRAME B

(IN PLACE A MINIMUM OF 7 CALENDAR DAYS PRIOR TO FREEWAY CLOSURE)

PCMS MESSAGE:

WEST 12/18 TO CLOSE	DATE & TIME
FRAME A	FRAME B

(IN PLACE A MINIMUM OF 7 CALENDAR DAYS PRIOR TO RAMP CLOSURE)

PCMS MESSAGE:

WB 12/18 SB I39 CLOSED	USE ALT ROUTE
FRAME A	FRAME B

PLACE DURING FREEWAY CLOSURE

WB US 12/18 FULL FREEWAY CLOSURE

NIGHTTIME CLOSURE ONLY

CTH AB

PCMS

PCMS MESSAGE:

WB 12/18 SB I39 CLOSED	USE ALT ROUTE
FRAME A	FRAME B

PLACE DURING FREEWAY CLOSURE

USH 12/18

PCMS

CTH N

N

PCMS MESSAGE:

WB 12/18 SB I39 CLOSED	4 MILES AHEAD
FRAME A	FRAME B

PLACE DURING FREEWAY CLOSURE

PCMS

PCMS

USH 12/18

PCMS MESSAGE:

DETOUR TO WEST 12/18	DETOUR TO I39 SOUTH
FRAME A	FRAME B

PLACE DURING FREEWAY CLOSURE

PCMS

PCMS MESSAGE:

WB 12/18 SB I39 CLOSED	THIS EXIT TURN LEFT
FRAME A	FRAME B

PLACE DURING FREEWAY CLOSURE

CTH AB

IH 39

ONCE TRAFFIC IS ON NB I-39/90, EXISTING SIGNS WILL DIRECT TRAFFIC BACK ONTO WB US 12/18.

PCMS MESSAGE:

DETOUR TO WEST 12/18	4 MILES AHEAD
FRAME A	FRAME B

PLACE DURING FREEWAY CLOSURE

CTH N

PCMS

PCMS MESSAGE:

DETOUR TO WEST 12/18	FOLLOW NB I-39/90 RAMP
FRAME A	FRAME B

PLACE DURING FREEWAY CLOSURE

PCMS

LEGEND

- DETOUR ROUTE
- WORK ZONE
- PCMS — PORTABLE CHANGEABLE MESSAGE SIGN

NOTES

ADJUST NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

REMOVE OR COVER ALL SIGNS TEMPORARY OR EXISTING THAT CONFLICT WITH THE TRAFFIC CONTROL "IN USE" AS APPROVED BY THE ENGINEER.

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	DETOUR - USH 12 WB FULL FREEWAY CLOSURE	SHEET 161	E

2

LEGEND

TYPE III BARRICADE	CONCRETE BARRIER TEMPORARY PRECAST (CBTP)
TYPE III BARRICADE WTH ATTACHED SIGN	
TRAFFIC CONTROL DRUM	CC — CRASH CUSHIONS TEMPORARY
TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT	DIRECTION OF ROADWAY TRAFFIC
FLASHING ARROW BOARD	DIRECTION OF CONSTRUCTION TRAFFIC
SIGN ON PERMANENT SUPPORT	PCMS — PORTABLE CHANGEABLE MESSAGE BOARD
SIGN ON TEMPORARY SUPPORT	WORK ZONE
TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)	WORK AREA
	SHOULDER WIDENING

USH 12/18 WB OFF RAMP TO IH 39/90 NB

116'XWB' 118'XWB' ~~USH 12/18~~ 120'XWB' 122'XWB' 124'XWB' 126'XWB' 128'XWB' USH 12/18 WB 130'XWB'

25' (TYP)

25' (TYP)

50' (TYP)

ROAD CLOSED
R11-2
48"X30"

LANE CLOSED
R11-2L
48"X30"

12 18 Madison

SOUTH 39 EAST 90 Chicago Janesville

EXIT ONLY

NORTH 39 WEST 90 TO 94 Milwaukee Wis Dells

USH 12/18 EB

USH 12/18

MATCHLINE STA 130+74'XWB'

2

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	DETOUR - USH 12 WB FULL FREEWAY CLOSURE	SHEET 162	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0252_TC_WB CLOSURE.DWG
LAYOUT NAME - 01

PLOT DATE : 8/1/2019 9:52 AM PLOT BY : CHAD EVEN PLOT NAME : PLOT SCALE : 1 IN:100 FT

2

LEGEND

TYPE III BARRICADE	CONCRETE BARRIER TEMPORARY PRECAST (CBTP)
TYPE III BARRICADE WTH ATTACHED SIGN	
TRAFFIC CONTROL DRUM	CC — CRASH CUSHIONS TEMPORARY
TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT	DIRECTION OF ROADWAY TRAFFIC
FLASHING ARROW BOARD	DIRECTION OF CONSTRUCTION TRAFFIC
SIGN ON PERMANENT SUPPORT	PCMS — PORTABLE CHANGEABLE MESSAGE BOARD
SIGN ON TEMPORARY SUPPORT	WORK ZONE
TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)	WORK AREA
	SHOULDER WIDENING

EXITS 267A-B
INTERSTATE 39 INTERSTATE 90
Wis Dells
Chicago
1/3 MILE

SCALE

N

MATCHLINE STA 130+74'XWB'

MATCHLINE STA 145+53'XWB'

132'XWB' 134'XWB' 136'XWB' 138'XWB' 140'XWB' 142'XWB' 144'XWB'

USH 12/18 WB

50 (TYP)

USH 12/18 EB

USH 12/18

LANE CLOSED
R11-2L
48"X30"

MILL POND RD

LONG RD

GOLF COURSE

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	DETOUR - USH 12 WB FULL FREEWAY CLOSURE	SHEET 163	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0252_TC_WB CLOSURE.DWG
LAYOUT NAME - 02

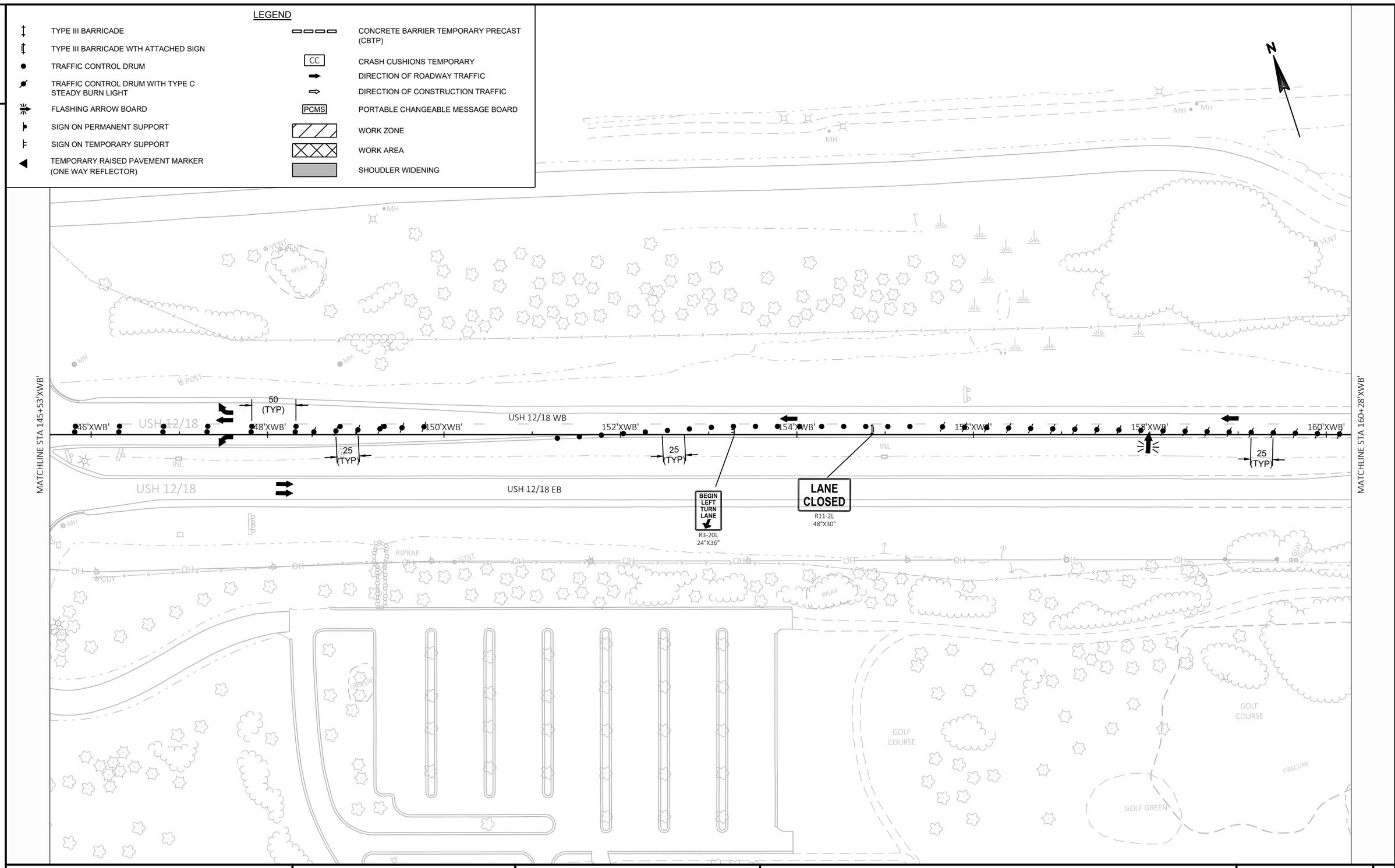
PLOT DATE : 8/1/2019 9:53 AM PLOT BY : CHAD EVEN PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

2

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)
- CONCRETE BARRIER TEMPORARY PRECAST (CBTP)
- CC — CRASH CUSHIONS TEMPORARY
- DIRECTION OF ROADWAY TRAFFIC
- DIRECTION OF CONSTRUCTION TRAFFIC
- PCMS — PORTABLE CHANGEABLE MESSAGE BOARD
- WORK ZONE
- WORK AREA
- SHOULDER WIDENING



PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	DETOUR - USH 12 WB FULL FREEWAY CLOSURE	SHEET	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0252_TC_WB CLOSURE.DWG
LAYOUT NAME - 03

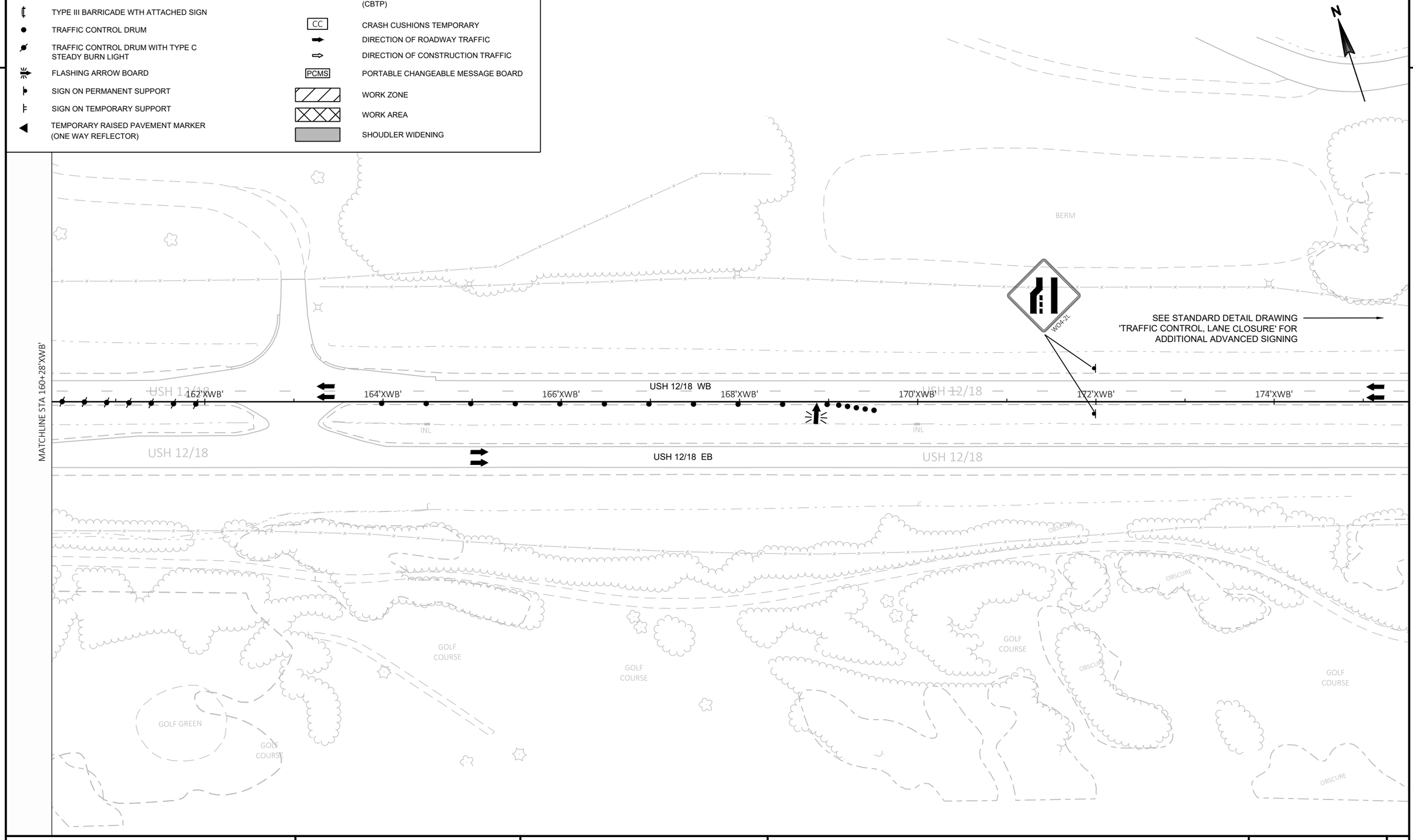
PLOT DATE : 8/1/2019 9:53 AM PLOT BY : CHAD EVEN PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

2

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)
- CONCRETE BARRIER TEMPORARY PRECAST (CBTP)
- CC — CRASH CUSHIONS TEMPORARY
- DIRECTION OF ROADWAY TRAFFIC
- DIRECTION OF CONSTRUCTION TRAFFIC
- PCMS — PORTABLE CHANGEABLE MESSAGE BOARD
- WORK ZONE
- WORK AREA
- SHOULDER WIDENING

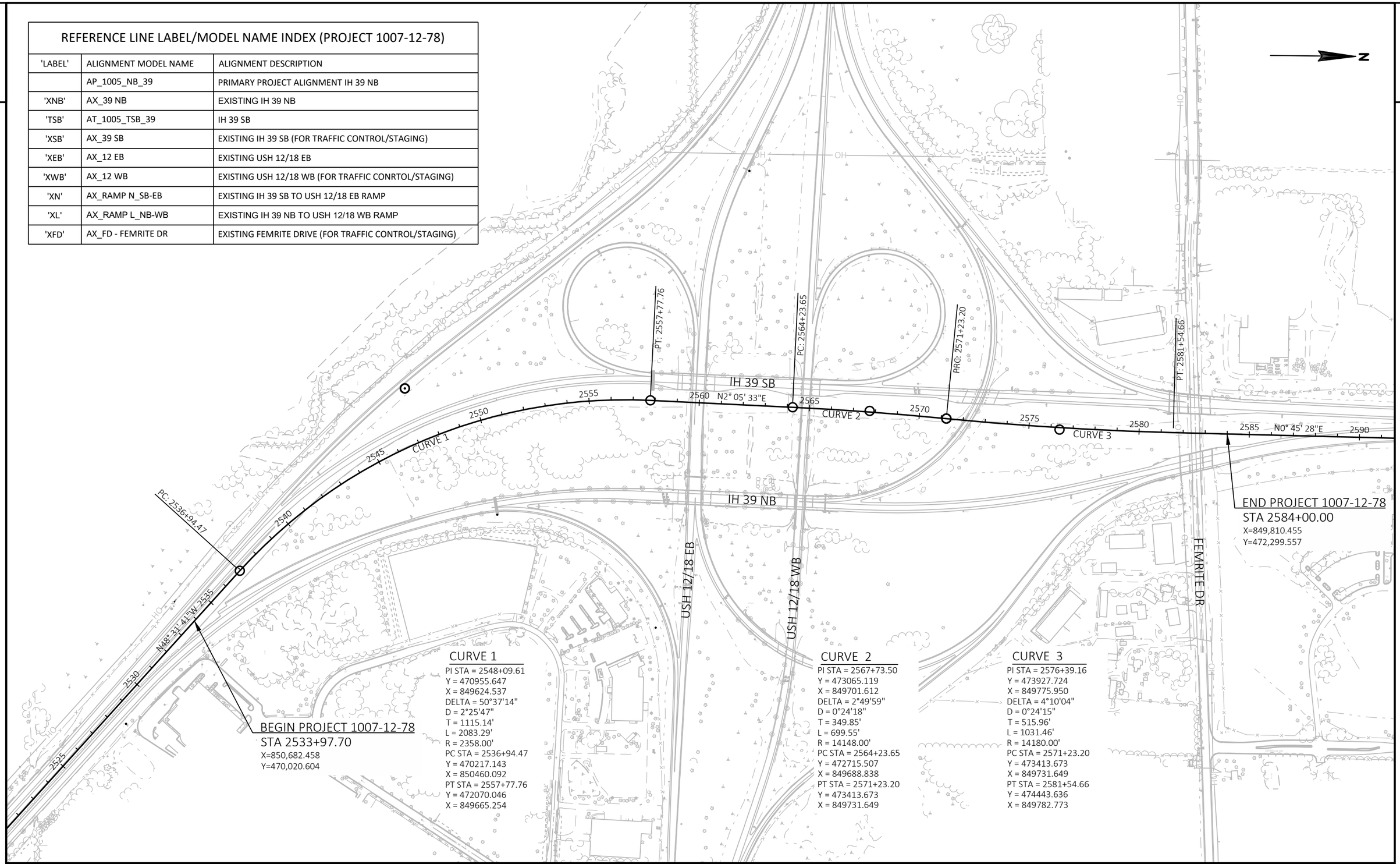


PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	DETOUR - USH 12 WB FULL FREEWAY CLOSURE	SHEET 165	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0252_TC_WB CLOSURE.DWG
LAYOUT NAME - 04

PLOT DATE : 8/1/2019 9:53 AM PLOT BY : CHAD EVEN PLOT NAME : PLOT SCALE : 1 IN:100 FT

REFERENCE LINE LABEL/MODEL NAME INDEX (PROJECT 1007-12-78)		
'LABEL'	ALIGNMENT MODEL NAME	ALIGNMENT DESCRIPTION
	AP_1005_NB_39	PRIMARY PROJECT ALIGNMENT IH 39 NB
'XNB'	AX_39 NB	EXISTING IH 39 NB
'TSB'	AT_1005_TSB_39	IH 39 SB
'XSB'	AX_39 SB	EXISTING IH 39 SB (FOR TRAFFIC CONTROL/STAGING)
'XEB'	AX_12 EB	EXISTING USH 12/18 EB
'XWB'	AX_12 WB	EXISTING USH 12/18 WB (FOR TRAFFIC CONRTOL/STAGING)
'XN'	AX_RAMP N_SB-EB	EXISTING IH 39 SB TO USH 12/18 EB RAMP
'XL'	AX_RAMP L_NB-WB	EXISTING IH 39 NB TO USH 12/18 WB RAMP
'XFD'	AX_FD - FEMRITE DR	EXISTING FEMRITE DRIVE (FOR TRAFFIC CONTROL/STAGING)



PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	ALIGNMENT DIAGRAM	SHEET 166	E

2

2

EB TO SB RAMP

IH 39 SB

PC: 1130+70.56'XNB'

1125'XNB'

N48° 30' 19"W

4109.31'

1130'XNB'

1135'XNB'

IH 39 NB

1140'XNB'

1145'XNB'

CURVE 1

1150'XNB'

NB TO EB RAMP

MATCH LINE STA 1154+50'XNB'

CURVE 1 'XNB'

PI STA = 1144+18.82'XNB'
Y = 470621.306
X = 850045.937
DELTA = 50°24'23"
D = 2°00'00"
T = 1348.26'
L = 2520.32'
R = 2864.79'
PC STA = 1130+70.56'XNB'
Y = 469728.015
X = 851055.811
PT STA = 1155+90.88'XNB'
Y = 471968.828
X = 850090.663

IH 39 SB

MATCH LINE STA 1154+50'XNB'

PT: 1155+90.88'XNB'

1155'XNB'

CURVE 1

1160'XNB'

N1° 54' 04"E

1052.40'

1165'XNB'

PC: 1166+43.29'XNB'

NB TO WB RAMP

1170'XNB'

IH 39 NB

CURVE 2

1175'XNB'

PT: 1176+61.68'XNB'

N13° 22' 30"W

707.11'

1180'XNB'

PC: 1183+68.80'XNB'

1185'XNB'

CURVE 3

USH 12/18 EB

USH 12/18 WB

EB TO NB RAMP

FEMRITE DR

CURVE 1 'XNB'

PI STA = 1144+18.82'XNB'
Y = 470621.306
X = 850045.937
DELTA = 50°24'23"
D = 2°00'00"
T = 1348.26'
L = 2520.32'
R = 2864.79'
PC STA = 1130+70.56'XNB'
Y = 469728.015
X = 851055.811
PT STA = 1155+90.88'XNB'
Y = 471968.828
X = 850090.663

CURVE 2 'XNB'

PI STA = 1171+55.52'XNB'
Y = 473532.606
X = 850142.566
DELTA = 15°16'33"
D = 1°30'00"
T = 512.24'
L = 1018.40'
R = 3819.72'
PC STA = 1166+43.29'XNB'
Y = 473020.651
X = 850125.574
PT STA = 1176+61.68'XNB'
Y = 474030.950
X = 850024.074

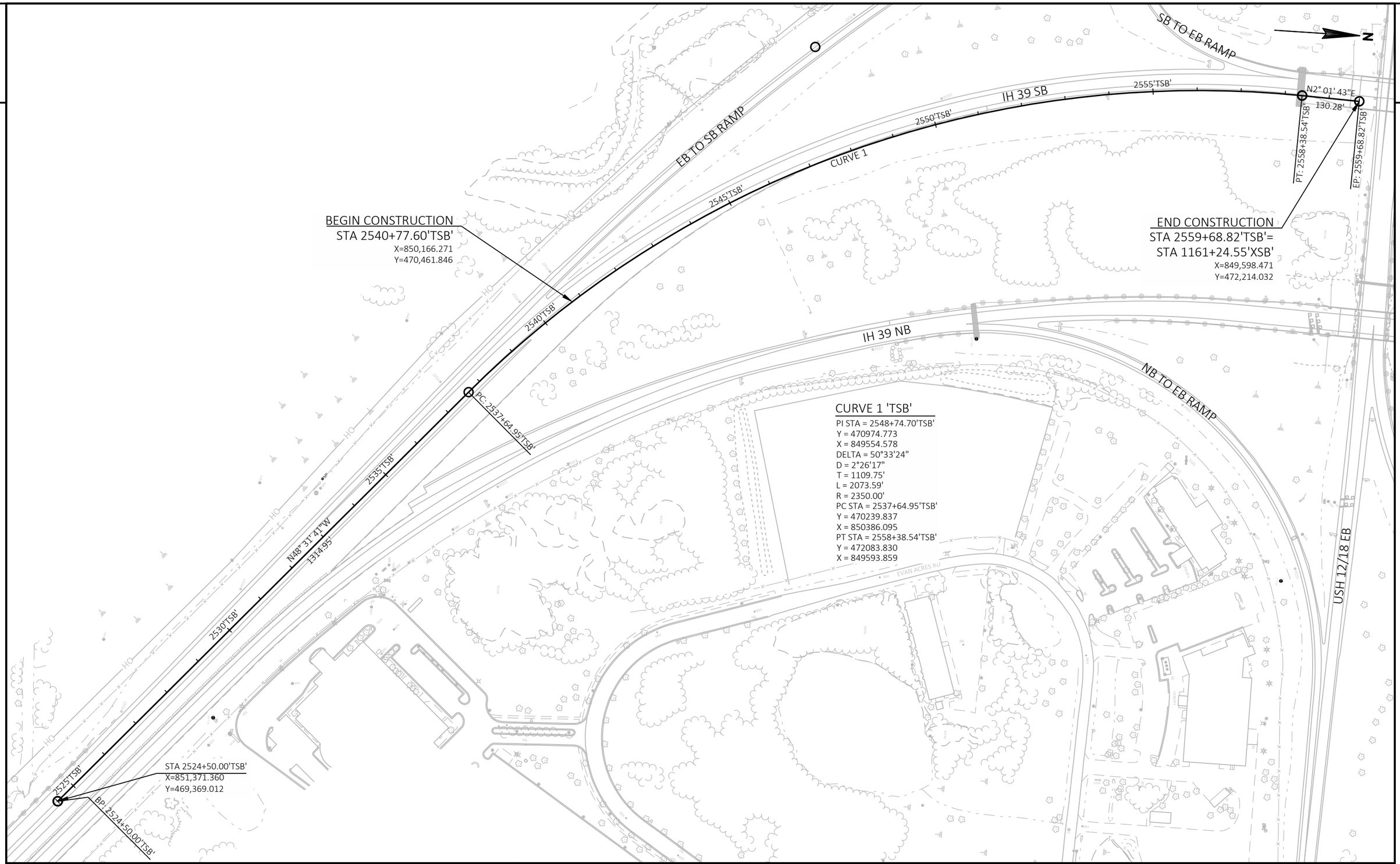
CURVE 3 'XNB'

PI STA = 1188+85.36'XNB'
Y = 475221.437
X = 849741.010
DELTA = 15°24'12"
D = 1°30'00"
T = 516.56'
L = 1026.90'
R = 3819.72'
PC STA = 1183+68.80'XNB'
Y = 474718.884
X = 849860.503
PT STA = 1193+95.69'XNB'
Y = 475737.678
X = 849759.295

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	ALIGNMENT DIAGRAM - XNB	SHEET 167	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0272_AD_XNB.DWG
LAYOUT NAME - 01
PLOT DATE : 7/31/2019 6:56 AM
PLOT BY : KYLE CORNELIUS
PLOT NAME :
PLOT SCALE : 1 IN:200 FT
WISDOT/CADDS SHEET 44

2



PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	ALIGNMENT DIAGRAM - TSB	SHEET 168	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0272_AD_TSB.DWG
LAYOUT NAME - 01
PLOT DATE : 7/31/2019 7:04 AM
PLOT BY : KYLE CORNELIUS
PLOT NAME :
PLOT SCALE : 1 IN:200 FT
WISDOT/CADDS SHEET 42

2

STA 1161+24.55'XSB'=
STA 2559+68.82'TSB'
X=849,586.478
Y=472,214.457

IH 39 SB

1162'XSB' 1164'XSB' N2° 01' 43"E 1166'XSB' 1168'XSB' 1170'XSB' 1172'XSB' 1174'XSB'

5850.68'

WB TO SB RAMP

USH 12/18 EB

USH 12/18 WB

NB TO WB RAMP

MATCH LINE 1174+50

2

MATCH LINE 1174+50

NB TO WB RAMP

SB TO WB RAMP

1176'XSB' 1178'XSB' IH 39 SB 1180'XSB' N2° 01' 43"E 1182'XSB' 1184'XSB' 1186'XSB' 1188'XSB'

5850.68'

FEMRITE DR

IH 39 NB

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	ALIGNMENT DIAGRAM - XSB	SHEET 169	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0272_AD_XSB.DWG
LAYOUT NAME - 01

PLOT DATE : 7/31/2019 7:10 AM PLOT BY : KYLE CORNELIUS PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

2

USH 12/18 WB

BEGIN CONSTRUCTION
STA 87+38.36'XEB'
X=848,289.745
Y=472,647.571

PT: 87+38.36'XEB'

CURVE 1

88'XEB'

S64° 40' 19"E
373.68'

90'XEB'

PC: 91+12.04'XEB'

92'XEB'

94'XEB'

96'XEB'

CURVE 2

PT: 97+66.08'XEB'

98'XEB'

S87° 23' 00"E
585.99'

100'XEB'

102'XEB'

MATCH LINE STA 102+00'XEB'

IH 39 SB

N

CURVE 1 'XEB'
PI STA = 83+66.84'XEB'
Y = 472810.793
X = 847944.880
DELTA = 22°42'33"
D = 3°00'56"
T = 381.54'
L = 753.06'
R = 1900.00'
PC STA = 79+85.30'XEB'
Y = 472828.226
X = 847563.738
PT STA = 87+38.36'XEB'
Y = 472647.571
X = 848289.745

CURVE 2 'XEB'
PI STA = 94+43.41'XEB'
Y = 472345.952
X = 848927.020
DELTA = 22°42'40"
D = 3°28'21"
T = 331.37'
L = 654.04'
R = 1650.00'
PC STA = 91+12.04'XEB'
Y = 472487.711
X = 848627.504
PT STA = 97+66.08'XEB'
Y = 472330.824
X = 849258.042

EB TO SB RAMP

SB TO EB RAMP

USH 12/18 EB

WEAK

POST

MH

RIPRAP

INL

2

N

MATCH LINE STA 102+00'XEB'

PI: 103+52.06'XEB'

STA 103+52.06'XEB'
X=849,843.418
Y=472,304.071

IH 39 NB

EB TO NB RAMP

END CONSTRUCTION
STA 113+33.53'XEB'
X=850,823.312
Y=472,247.276

XEB'

104'XEB'

106'XEB'

S87° 23' 00"E
1898.88'

108'XEB'

110'XEB'

112'XEB'

114'XEB'

116'XEB'

STA BACK = 103+64.06
STA AHEAD = 103+52.06

PI: 103+52.06'XEB'

USH 12/18 EB

STA 103+64.06'XEB'
X=849,842.870
Y=472,292.084

NB TO EB RAMP

CP 702B

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	ALIGNMENT DIAGRAM - XEB	SHEET 170	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0272_AD_XEB.DWG
LAYOUT NAME - 01

PLOT DATE : 7/31/2019 7:20 AM PLOT BY : KYLE CORNELIUS PLOT NAME : PLOT SCALE : 1 IN:100 FT

2

2

BEGIN CONSTRUCTION
STA 90+67.07'XWB'
X=848,645.756
Y=472,810.271

PC: 88+68.85'XWB'

WB TO SB RAMP

PT: 96+52.14'XWB'

IH 39 SB

N

MATCH LINE STA 103+00'XWB'

B' 90'XWB' 92'XWB' 94'XWB' USH 12/18 WB 96'XWB' 98'XWB' 100'XWB' S87° 23' 39"E 1434.12' 102'XWB'

CURVE 1

CURVE 1 'XWB'
PI STA = 92+60.50'XWB'
Y = 472798.871
X = 848838.854
DELTA = 0°41'03"
D = 0°05'14"
T = 391.65'
L = 783.29'
R = 65600.00'
PC STA = 88+68.85'XWB'
Y = 472821.348
X = 848447.850
PT STA = 96+52.14'XWB'
Y = 472781.066
X = 849230.099

MATCH LINE STA 103+00'XWB'

NB TO WB RAMP

IH 39 NB

N

PC: 110+86.26'XWB'

END CONSTRUCTION
STA 112+46.26'XWB'
X=850,822.283
Y=472,704.148

104'XWB' 106'XWB' USH 12/18 WB 108'XWB' S87° 23' 39"E 1434.12' 110'XWB' 112'XWB' 114'XWB' CURVE 2 116'XWB' 118'XW

EB TO NB RAMP

CURVE 2 'XWB'
PI STA = 114+74.02'XWB'
Y = 472698.236
X = 851050.091
DELTA = 15°21'44"
D = 1°59'34"
T = 387.75'
L = 770.85'
R = 2875.00'
PC STA = 110+86.26'XWB'
Y = 472715.864
X = 850662.740
PT STA = 96+52.14'XWB'
Y = 472578.619
X = 851418.932

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	ALIGNMENT DIAGRAM - XWB	SHEET 171	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0272_AD_XWB.DWG
LAYOUT NAME - 01
PLOT DATE : 7/31/2019 7:29 AM
PLOT BY : KYLE CORNELIUS
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44

2

N

USH 12/18 EB

BEGIN CONSTRUCTION
STA 22+40.00'XN'
X=849,064.338
Y=472,163.005

END CONSTRUCTION
STA 26+20.86'XN'
X=849,421.847
Y=472,266.278

PCC: 22+70.92'XN'

PCC: 25+20.93'XN'

EP: 26+20.86'XN'

22'XN'

24'XN'

26'XN'

20'XN'

18'XN'

16'XN'

14'XN'

12'XN'

CURVE 5

CURVE 6

CURVE 4

CURVE 3

CURVE 2

CURVE 1

EB TO SB RAMP

SB TO EB RAMP

IH 39 SB

PCC: 17+78.04'XN'

PCC: 11+85.09'XN'

PCC: 12+85.16'XN'

BP: 10+10.00'XN'

CURVE 5 'XN'
PI STA = 23+98.71'XN'
Y = 472253.451
X = 849194.683
DELTA = 29°14'01"
D = 11°41'35"
T = 127.79'
L = 250.01'
R = 490.00'
PC STA = 22+70.92'XN'
Y = 472181.775
X = 849088.888
PT STA = 25+20.93'XN'
Y = 472264.331
X = 849322.008

CURVE 6 'XN'
PI STA = 25+70.97'XN'
Y = 472268.591
X = 849371.864
DELTA = 7°32'01"
D = 7°32'20"
T = 50.04'
L = 99.93'
R = 760.00'
PC STA = 25+20.93'XN'
Y = 472264.331
X = 849322.008
PT STA = 26+20.86'XN'
Y = 472266.278
X = 849421.847

CURVE 4 'XN'
PI STA = 21+27.33'XN'
Y = 471985.858
X = 848799.715
DELTA = 104°35'33"
D = 21°13'14"
T = 349.29'
L = 492.88'
R = 270.00'
PC STA = 17+78.04'XN'
Y = 471755.372
X = 849062.166
PT STA = 22+70.92'XN'
Y = 472181.775
X = 849088.888

CURVE 1 'XN'
PI STA = 10+97.93'XN'
Y = 472015.076
X = 849540.389
DELTA = 13°12'00"
D = 7°32'20"
T = 87.93'
L = 175.09'
R = 760.00'
PC STA = 10+10.00'XN'
Y = 472102.955
X = 849543.504
PT STA = 11+85.09'XN'
Y = 471930.230
X = 849517.289

CURVE 3 'XN'
PI STA = 16+34.45'XN'
Y = 471524.886
X = 849324.617
DELTA = 104°35'33"
D = 21°13'14"
T = 349.29'
L = 492.88'
R = 270.00'
PC STA = 12+85.16'XN'
Y = 471836.940
X = 849481.546
PT STA = 17+78.04'XN'
Y = 471755.372
X = 849062.166

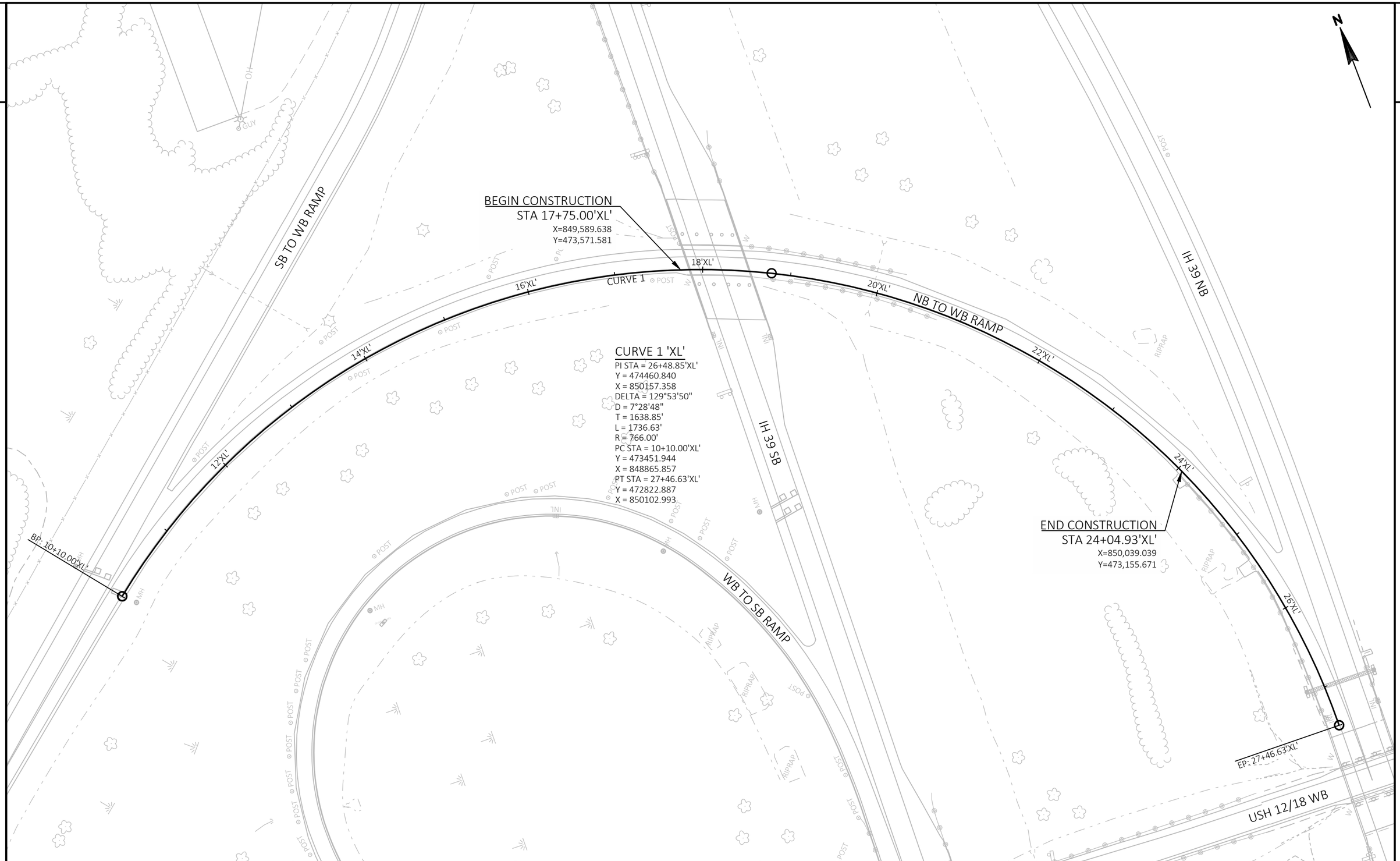
CURVE 2 'XN'
PI STA = 12+35.29'XN'
Y = 471881.791
X = 849504.101
DELTA = 11°28'02"
D = 11°27'33"
T = 50.20'
L = 100.07'
R = 500.00'
PC STA = 11+85.09'XN'
Y = 471930.230
X = 849517.289
PT STA = 12+85.16'XN'
Y = 471836.940
X = 849481.546

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	ALIGNMENT DIAGRAM - XN	SHEET 172	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0272_AD_XN.DWG
LAYOUT NAME - 01

PLOT DATE : 7/31/2019 7:33 AM PLOT BY : KYLE CORNELIUS PLOT NAME : PLOT SCALE : 1 IN:100 FT

2



PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	ALIGNMENT DIAGRAM - XL	SHEET 173	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0272_AD_XL.DWG
LAYOUT NAME - 01

PLOT DATE : 7/31/2019 7:39 AM PLOT BY : KYLE CORNELIUS PLOT NAME : PLOT SCALE : 1 IN:100 FT

2

2

BEGIN CONSTRUCTION
STA 47+00.00'XFD'
X=849,369.804
Y=474,510.495

STA 54+00.00'XFD'
X=850,068.544
Y=474,556.174

PC: 39+46.21'XFD'
PT: 40+84.65'XFD'
PC: 42+00.58'XFD'
PT: 43+55.27'XFD'

N88° 14' 59"E 910.53'
36'XFD'
38'XFD'
40'XFD'
CURVE 1
S87° 20' 37"E 115.93'
42'XFD'
CURVE 2
44'XFD'
46'XFD'
N87° 43' 58"E 1044.73'
48'XFD'
50'XFD'

FEMRITE DR

MATCH LINE STA 50+00

SB TO WB RAMP

IH 39 SB

N

CURVE 1 'XFD'

PI STA = 40+15.46'XFD'
Y = 474523.950
X = 848685.006
DELTA = 4°24'25"
D = 3°10'59"
T = 69.26'
L = 138.44'
R = 1800.00'
PC STA = 39+46.21'XFD'
Y = 474521.835
X = 848615.782
PT STA = 40+84.65'XFD'
Y = 474520.740
X = 848754.188

CURVE 2 'XFD'

PI STA = 42+77.97'XFD'
Y = 474511.780
X = 848947.299
DELTA = 4°55'26"
D = 3°10'59"
T = 77.39'
L = 154.69'
R = 1800.00'
PC STA = 42+00.58'XFD'
Y = 474515.367
X = 848869.991
PT STA = 43+55.27'XFD'
Y = 474514.842
X = 849024.630

END CONSTRUCTION
STA 56+50.00'XFD'
X=850,318.289
Y=474,567.458

PI: 54+00.00'XFD'

MATCH LINE STA 50+00

'XFD'
N87° 43' 58"E 1044.73'
52'XFD'
54'XFD'
56'XFD'
58'XFD'
60'XFD'
N87° 24' 47"E 1600.00'
62'XFD'
64'XFD'

FEMRITE DR

STA 54+00.00'XFD'
X=850,068.544
Y=474,556.174

EB TO NB RAMP

IH 39 NB

ATLA CT

N

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	ALIGNMENT DIAGRAM - XFD	SHEET 174	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0272_AD_XFD.DWG
LAYOUT NAME - 01

PLOT DATE : 7/31/2019 7:47 AM PLOT BY : KYLE CORNELIUS PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

1007-12-78

Line	Item	Item Description	Unit	Total	Qty
0002	201.0120	Clearing	ID	27.000	27.000
0004	201.0220	Grubbing	ID	27.000	27.000
0006	204.0100	Removing Pavement	SY	5,014.000	5,014.000
0008	204.0110	Removing Asphaltic Surface	SY	1,769.000	1,769.000
0010	204.0150	Removing Curb & Gutter	LF	390.000	390.000
0012	204.0157	Removing Concrete Barrier	LF	347.000	347.000
0014	204.0165	Removing Guardrail	LF	1,985.000	1,985.000
0016	204.0180	Removing Delineators and Markers	EACH	17.000	17.000
0018	204.0220	Removing Inlets	EACH	1.000	1.000
0020	204.0245	Removing Storm Sewer (size) 01. 12-Inch	LF	243.000	243.000
0022	204.0270	Abandoning Culvert Pipes	EACH	2.000	2.000
0024	204.0291.S	Abandoning Sewer	CY	38.000	38.000
0026	204.9060.S	Removing (item description) 01. Apron Endwall	EACH	1.000	1.000
0028	205.0100	Excavation Common	CY	32,580.000	32,580.000
0030	206.1000	Excavation for Structures Bridges (structure) 702. B-13-731	LS	1.000	1.000
0032	206.1000	Excavation for Structures Bridges (structure) 703. B-13-732	LS	1.000	1.000
0034	206.1000	Excavation for Structures Bridges (structure) 710. B-13-467	LS	1.000	1.000
0036	206.3000	Excavation for Structures Retaining Walls (structure) 704. R-13-348	LS	1.000	1.000
0038	206.3000	Excavation for Structures Retaining Walls (structure) 705. R-13-349	LS	1.000	1.000
0040	206.3000	Excavation for Structures Retaining Walls (structure) 706. R-13-350	LS	1.000	1.000
0042	206.3000	Excavation for Structures Retaining Walls (structure) 707. R-13-351	LS	1.000	1.000
0044	206.3000	Excavation for Structures Retaining Walls (structure) 708. R-13-352	LS	1.000	1.000
0046	208.1100	Select Borrow	CY	16,850.000	16,850.000
0048	209.1500	Backfill Granular Grade 1	TON	1,000.000	1,000.000
0050	210.1500	Backfill Structure Type A	TON	4,095.000	4,095.000
0052	213.0100	Finishing Roadway (project) 01. 1007-12-78	EACH	1.000	1.000
0054	305.0110	Base Aggregate Dense 3/4-Inch	TON	1,063.000	1,063.000
0056	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	21,127.000	21,127.000
0058	310.0110	Base Aggregate Open-Graded	TON	33.000	33.000
0060	312.0110	Select Crushed Material	TON	32,629.000	32,629.000
0062	415.0060	Concrete Pavement 6-Inch	SY	24.000	24.000
0064	415.0100	Concrete Pavement 10-Inch	SY	709.000	709.000
0066	415.0120	Concrete Pavement 12-Inch	SY	2,284.000	2,284.000

1007-12-78

Line	Item	Item Description	Unit	Total	Qty
0068	416.0610	Drilled Tie Bars	EACH	306.000	306.000
0070	416.0620	Drilled Dowel Bars	EACH	167.000	167.000
0072	416.1110	Concrete Shoulder Rumble Strips	LF	1,891.000	1,891.000
0074	416.1715	Concrete Pavement Repair SHES	SY	90.000	90.000
0076	416.1725	Concrete Pavement Replacement SHES	SY	35.000	35.000
0078	455.0605	Tack Coat	GAL	569.000	569.000
0080	460.2000	Incentive Density HMA Pavement	DOL	2,160.000	2,160.000
0082	460.7222	HMA Pavement 2 HT 58-28 S	TON	1,843.000	1,843.000
0084	460.7424	HMA Pavement 4 HT 58-28 H	TON	1,162.000	1,162.000
0086	460.7624	HMA Pavement 4 HT 58-28 V	TON	360.000	360.000
0088	465.0110	Asphaltic Surface Patching	TON	20.000	20.000
0090	465.0125	Asphaltic Surface Temporary	TON	55.000	55.000
0092	465.0315	Asphaltic Flumes	SY	14.000	14.000
0094	465.0400	Asphaltic Shoulder Rumble Strips	LF	7,583.000	7,583.000
0096	501.1000.S	Ice Hot Weather Concreting	LB	29,300.000	29,300.000
0098	502.0100	Concrete Masonry Bridges	CY	1,405.000	1,405.000
0100	502.3200	Protective Surface Treatment	SY	1,220.000	1,220.000
0102	502.3210	Pigmented Surface Sealer	SY	1,775.000	1,775.000
0104	502.4206	Adhesive Anchors No. 6 Bar	EACH	42.000	42.000
0106	503.0137	Prestressed Girder Type I 36W-Inch	LF	868.000	868.000
0108	503.0155	Prestressed Girder Type I 54W-Inch	LF	1,996.000	1,996.000
0110	503.0172	Prestressed Girder Type I 72W-Inch	LF	2,457.000	2,457.000
0112	504.0500	Concrete Masonry Retaining Walls	CY	868.000	868.000
0114	505.0400	Bar Steel Reinforcement HS Structures	LB	61,110.000	61,110.000
0116	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	591,050.000	591,050.000
0118	505.0800.S	Bar Steel Reinforcement HS Stainless Structures	LB	8,600.000	8,600.000
0120	506.2605	Bearing Pads Elastomeric Non-Laminated	EACH	106.000	106.000
0122	506.4000	Steel Diaphragms (structure) 700. B-13-729	EACH	14.000	14.000
0124	506.4000	Steel Diaphragms (structure) 701. B-13-730	EACH	16.000	16.000
0126	506.4000	Steel Diaphragms (structure) 702. B-13-731	EACH	32.000	32.000
0128	506.4000	Steel Diaphragms (structure) 703. B-13-732	EACH	15.000	15.000
0130	509.5100.S	Polymer Overlay	SY	4,435.000	4,435.000
0132	511.1200	Temporary Shoring (structure) 704. R-13-348	SF	235.000	235.000
0134	511.1200	Temporary Shoring (structure) 705. R-13-349	SF	100.000	100.000
0136	511.1200	Temporary Shoring (structure) 706. R-13-350	SF	330.000	330.000
0138	511.1200	Temporary Shoring (structure) 707. R-13-351	SF	185.000	185.000
0140	511.2200	Temporary Shoring Left in Place (structure) 704. R-13-348	SF	655.000	655.000
0142	511.2200	Temporary Shoring Left in Place (structure) 705. R-13-349	SF	255.000	255.000

1007-12-78

Line	Item	Item Description	Unit	Total	Qty
0144	511.2200	Temporary Shoring Left in Place (structure) 706. R-13-350	SF	530.000	530.000
0146	511.2200	Temporary Shoring Left in Place (structure) 707. R-13-351	SF	340.000	340.000
0148	513.4091	Railing Tubular Screening	LF	790.000	790.000
0150	516.0500	Rubberized Membrane Waterproofing	SY	229.000	229.000
0152	517.1010.S	Concrete Staining (structure) 700. B-13-729	SF	5,410.000	5,410.000
0154	517.1010.S	Concrete Staining (structure) 701. B-13-730	SF	5,625.000	5,625.000
0156	517.1010.S	Concrete Staining (structure) 702. B-13-731	SF	9,320.000	9,320.000
0158	517.1010.S	Concrete Staining (structure) 703. B-13-732	SF	8,005.000	8,005.000
0160	517.1010.S	Concrete Staining (structure) 704. R-13-348	SF	2,035.000	2,035.000
0162	517.1010.S	Concrete Staining (structure) 705. R-13-349	SF	2,590.000	2,590.000
0164	517.1010.S	Concrete Staining (structure) 706. R-13-350	SF	1,775.000	1,775.000
0166	517.1010.S	Concrete Staining (structure) 707. R-13-351	SF	2,250.000	2,250.000
0168	517.1010.S	Concrete Staining (structure) 708. R-13-352	SF	3,095.000	3,095.000
0170	517.1010.S	Concrete Staining (structure) 709. R-13-334	SF	12,455.000	12,455.000
0172	521.1012	Apron Endwalls for Culvert Pipe Steel 12-Inch	EACH	8.000	8.000
0174	522.0124	Culvert Pipe Reinforced Concrete Class III 24-Inch	LF	288.000	288.000
0176	522.0136	Culvert Pipe Reinforced Concrete Class III 36-Inch	LF	92.000	92.000
0178	522.0424	Culvert Pipe Reinforced Concrete Class IV 24-Inch	LF	90.000	90.000
0180	522.0430	Culvert Pipe Reinforced Concrete Class IV 30-Inch	LF	187.000	187.000
0182	522.0536	Culvert Pipe Reinforced Concrete Class V 36-Inch	LF	76.000	76.000
0184	522.0542	Culvert Pipe Reinforced Concrete Class V 42-Inch	LF	188.000	188.000
0186	522.1018	Apron Endwalls for Culvert Pipe Reinforced Concrete 18-Inch	EACH	14.000	14.000
0188	522.1024	Apron Endwalls for Culvert Pipe Reinforced Concrete 24-Inch	EACH	8.000	8.000
0190	522.1030	Apron Endwalls for Culvert Pipe Reinforced Concrete 30-Inch	EACH	3.000	3.000
0192	522.1036	Apron Endwalls for Culvert Pipe Reinforced Concrete 36-Inch	EACH	4.000	4.000
0194	522.1042	Apron Endwalls for Culvert Pipe Reinforced Concrete 42-Inch	EACH	2.000	2.000
0196	550.1100	Piling Steel HP 10-Inch X 42 Lb	LF	2,940.000	2,940.000
0198	601.0409	Concrete Curb & Gutter 30-Inch Type A	LF	15.000	15.000
0200	602.0405	Concrete Sidewalk 4-Inch	SF	52.000	52.000
0202	603.1142	Concrete Barrier Type S42	LF	510.000	510.000
0204	603.1456	Concrete Barrier Type S56C	LF	1,415.000	1,415.000
0206	603.3559	Concrete Barrier Transition Type S42 to S56	EACH	1.000	1.000
0208	603.8000	Concrete Barrier Temporary Precast Delivered	LF	5,565.000	5,565.000
0210	603.8125	Concrete Barrier Temporary Precast Installed	LF	7,453.000	7,453.000

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Line	Item	Item Description	Unit	Total	Qty
0212	604.0400	Slope Paving Concrete	SY	150.000	150.000
0214	604.0500	Slope Paving Crushed Aggregate	SY	1,370.000	1,370.000
0216	606.0200	Riprap Medium	CY	107.000	107.000
0218	606.0300	Riprap Heavy	CY	291.000	291.000
0220	608.0412	Storm Sewer Pipe Reinforced Concrete Class IV 12-Inch	LF	175.000	175.000
0222	608.0418	Storm Sewer Pipe Reinforced Concrete Class IV 18-Inch	LF	1,854.000	1,854.000
0224	608.0424	Storm Sewer Pipe Reinforced Concrete Class IV 24-Inch	LF	276.000	276.000
0226	611.0606	Inlet Covers Type B	EACH	16.000	16.000
0228	611.0610	Inlet Covers Type BW	EACH	14.000	14.000
0230	611.3004	Inlets 4-FT Diameter	EACH	11.000	11.000
0232	611.3220	Inlets 2x2-FT	EACH	11.000	11.000
0234	611.3225	Inlets 2x2.5-FT	EACH	16.000	16.000
0236	612.0106	Pipe Underdrain 6-Inch	LF	2,080.000	2,080.000
0238	612.0206	Pipe Underdrain Unperforated 6-Inch	LF	100.000	100.000
0240	612.0212	Pipe Underdrain Unperforated 12-Inch	LF	552.000	552.000
0242	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	2,910.000	2,910.000
0244	612.0806	Apron Endwalls for Underdrain Reinforced Concrete 6-Inch	EACH	5.000	5.000
0246	614.0150	Anchor Assemblies for Steel Plate Beam Guard	EACH	12.000	12.000
0248	614.0905	Crash Cushions Temporary	EACH	7.000	7.000
0250	614.2300	MGS Guardrail 3	LF	1,963.000	1,963.000
0252	614.2500	MGS Thrie Beam Transition	LF	315.200	315.200
0254	614.2610	MGS Guardrail Terminal EAT	EACH	4.000	4.000
0256	616.0700.S	Fence Safety	LF	500.000	500.000
0258	618.0100	Maintenance And Repair of Haul Roads (project) 01. 1007-12-78	EACH	1.000	1.000
0260	619.1000	Mobilization	EACH	1.000	1.000
0262	624.0100	Water	MGAL	189.000	189.000
0264	625.0500	Salvaged Topsoil	SY	74,074.000	74,074.000
0266	627.0200	Mulching	SY	33,208.000	33,208.000
0268	628.1104	Erosion Bales	EACH	733.000	733.000
0270	628.1504	Silt Fence	LF	6,117.000	6,117.000
0272	628.1520	Silt Fence Maintenance	LF	6,117.000	6,117.000
0274	628.1905	Mobilizations Erosion Control	EACH	10.000	10.000
0276	628.1910	Mobilizations Emergency Erosion Control	EACH	6.000	6.000
0278	628.1920	Cleaning Sediment Basins	CY	97.000	97.000
0280	628.2002	Erosion Mat Class I Type A	SY	7,888.000	7,888.000
0282	628.2008	Erosion Mat Urban Class I Type B	SY	22,484.000	22,484.000

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Line	Item	Item Description	Unit	Total	Qty
0284	628.2023	Erosion Mat Class II Type B	SY	11,126.000	11,126.000
0286	628.6505	Soil Stabilizer Type A	ACRE	5.000	5.000
0288	628.6510	Soil Stabilizer Type B	ACRE	5.000	5.000
0290	628.7005	Inlet Protection Type A	EACH	3.000	3.000
0292	628.7010	Inlet Protection Type B	EACH	36.000	36.000
0294	628.7504	Temporary Ditch Checks	LF	345.000	345.000
0296	628.7555	Culvert Pipe Checks	EACH	45.000	45.000
0298	628.7560	Tracking Pads	EACH	4.000	4.000
0300	628.7570	Rock Bags	EACH	80.000	80.000
0302	629.0205	Fertilizer Type A	CWT	285.700	285.700
0304	630.0110	Seeding Mixture No. 10	LB	640.000	640.000
0306	630.0130	Seeding Mixture No. 30	LB	678.000	678.000
0308	630.0200	Seeding Temporary	LB	2,273.000	2,273.000
0310	630.0300	Seeding Borrow Pit	LB	5,120.000	5,120.000
0312	630.0500	Seed Water	MGAL	1,664.000	1,664.000
0314	633.0100	Delineator Posts Steel	EACH	9.000	9.000
0316	633.0500	Delineator Reflectors	EACH	18.000	18.000
0318	633.1000	Delineators Barrier Wall	EACH	9.000	9.000
0320	633.5200	Markers Culvert End	EACH	31.000	31.000
0322	638.2101	Moving Signs Type I	EACH	7.000	7.000
0324	642.5401	Field Office Type D	EACH	1.000	1.000
0326	643.0300	Traffic Control Drums	DAY	87,245.000	87,245.000
0328	643.0420	Traffic Control Barricades Type III	DAY	2,540.000	2,540.000
0330	643.0500	Traffic Control Flexible Tubular Marker Posts	EACH	25.000	25.000
0332	643.0600	Traffic Control Flexible Tubular Marker Bases	EACH	25.000	25.000
0334	643.0705	Traffic Control Warning Lights Type A	DAY	4,193.000	4,193.000
0336	643.0715	Traffic Control Warning Lights Type C	DAY	14,032.000	14,032.000
0338	643.0800	Traffic Control Arrow Boards	DAY	748.000	748.000
0340	643.0900	Traffic Control Signs	DAY	35,710.000	35,710.000
0342	643.0910	Traffic Control Covering Signs Type I	EACH	30.000	30.000
0344	643.0920	Traffic Control Covering Signs Type II	EACH	40.000	40.000
0346	643.1000	Traffic Control Signs Fixed Message	SF	180.500	180.500
0348	643.1050	Traffic Control Signs PCMS	DAY	291.000	291.000
0350	643.1055.S	Truck or Trailer Mounted Attenuator	DAY	4.000	4.000
0352	643.5000	Traffic Control	EACH	1.000	1.000
0354	645.0111	Geotextile Type DF Schedule A	SY	898.000	898.000
0356	645.0120	Geotextile Type HR	SY	654.000	654.000
0358	645.0220	Geogrid Type SR	SY	19,230.000	19,230.000
0360	646.1020	Marking Line Epoxy 4-Inch	LF	31,978.000	31,978.000
0362	646.3020	Marking Line Epoxy 8-Inch	LF	4,112.000	4,112.000

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Line	Item	Item Description	Unit	Total	Qty
0364	646.5020	Marking Arrow Epoxy	EACH	2.000	2.000
0366	646.9010	Marking Removal Line Water Blasting 4-Inch	LF	9,170.000	9,170.000
0368	646.9110	Marking Removal Line Water Blasting 8-Inch	LF	275.000	275.000
0370	649.0105	Temporary Marking Line Paint 4-Inch	LF	14,935.000	14,935.000
0372	649.0205	Temporary Marking Line Paint 8-Inch	LF	210.000	210.000
0374	649.0760	Temporary Marking Raised Pavement Marker Type I	EACH	50.000	50.000
0376	652.0125	Conduit Rigid Metallic 2-Inch	LF	100.000	100.000
0378	652.0225	Conduit Rigid Nonmetallic Schedule 40 2-Inch	LF	1,775.000	1,775.000
0380	653.0222	Junction Boxes 18x12x6-Inch	EACH	8.000	8.000
0382	690.0150	Sawing Asphalt	LF	1,223.000	1,223.000
0384	690.0250	Sawing Concrete	LF	1,099.000	1,099.000
0386	715.0415	Incentive Strength Concrete Pavement	DOL	910.000	910.000
0388	715.0502	Incentive Strength Concrete Structures	DOL	28,818.000	28,818.000
0390	715.0603	Incentive Strength Concrete Barrier	DOL	3,660.000	3,660.000
0392	715.0710	Optimized Aggregate Gradation Incentive	DOL	4,750.000	4,750.000
0394	ASP.1T0A	On-the-Job Training Apprentice at $5.00/HR	HRS	3,200.000	3,200.000
0396	ASP.1T0G	On-the-Job Training Graduate at $5.00/HR	HRS	6,000.000	6,000.000
0398	SPV.0035	Special 001. Roadway Embankment	CY	350,360.000	350,360.000
0400	SPV.0035	Special 700. High Performance Concrete (HPC) Masonry Structures	CY	2,530.000	2,530.000
0402	SPV.0060	Special 001. Baseline CPM Progress Schedule	EACH	1.000	1.000
0404	SPV.0060	Special 002. CPM Progress Schedule Updates and Accepted Revisions	EACH	12.000	12.000
0406	SPV.0060	Special 003. Test Pits	EACH	5.000	5.000
0408	SPV.0060	Special 004. Roadway Cleanup	EACH	9.000	9.000
0410	SPV.0060	Special 201. Install Department Furnished Crash Cushion Low Maintenance	EACH	1.000	1.000
0412	SPV.0060	Special 202. Repair State Owned Crash Cushion Low Maintenance	EACH	1.000	1.000
0414	SPV.0060	Special 203. Repair State Owned Energy Absorbing Terminal (EAT)	EACH	2.000	2.000
0416	SPV.0060	Special 204. Emergency Response to Traffic Incident Involving Guardrail or EAT	EACH	3.000	3.000
0418	SPV.0060	Special 205. Emergency Response to Pavement Repairs	EACH	2.000	2.000
0420	SPV.0060	Special 206. Emergency Response to Traffic Incident Involving Concrete Barrier Temporary	EACH	5.000	5.000
0422	SPV.0060	Special 207. Emergency Response to Traffic Incident Involving Crash Cushion	EACH	3.000	3.000
0424	SPV.0085	Special 700. Bar Steel Reinforcement HS Textured Coated Structures	LB	27,210.000	27,210.000
0426	SPV.0085	Special 701. Bar Steel Reinforcement HS Galvanized	LB	27,140.000	27,140.000

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Line	Item	Item Description	Unit	Total	Qty
		Structures			
0428	SPV.0090	Special 001. Concrete Pavement Joint Sealing	LF	2,426.000	2,426.000
0430	SPV.0090	Special 002. Bore and Jack Culvert Pipe Reinforced Concrete Class IV, 30-Inch	LF	88.000	88.000
0432	SPV.0090	Special 003. Bore and Jack Culvert Pipe Reinforced Concrete Class V, 42-Inch	LF	168.000	168.000
0434	SPV.0090	Special 150. Compost Tubes	LF	3,031.000	3,031.000
0436	SPV.0090	Special 200. Repair State Owned Guardrail	LF	400.000	400.000
0438	SPV.0090	Special 201. Traffic Control Gawk Screen Furnished	LF	3,496.000	3,496.000
0440	SPV.0090	Special 202. Traffic Control Gawk Screen Installed	LF	3,496.000	3,496.000
0442	SPV.0090	Special 203. Removing Department-Owned Concrete Barrier Precast	LF	2,438.000	2,438.000
0444	SPV.0090	Special 700. Piling CIP Concrete 12 3/4 x 0.50-Inch	LF	14,505.000	14,505.000
0446	SPV.0105	Special 001. Concrete Pavement Joint Layout Project 1007-12-78	LS	1.000	1.000
0448	SPV.0105	Special 002. Survey Project 1007-12-78 with optional AMG for Concrete Pavement and Base	LS	1.000	1.000
0450	SPV.0165	Special 150. Stormwater Treatment Filter Strip	SF	29,315.000	29,315.000
0452	SPV.0165	Special 700. Longitudinal Grooving Bridge Deck	SF	9,630.000	9,630.000
0454	SPV.0165	Special 704. Wall Concrete Panel Mechanically Stabilized Earth R-13-348	SF	2,100.000	2,100.000
0456	SPV.0165	Special 705. Wall Concrete Panel Mechanically Stabilized Earth R-13-349	SF	2,675.000	2,675.000
0458	SPV.0165	Special 706. Wall Concrete Panel Mechanically Stabilized Earth R-13-350	SF	1,835.000	1,835.000
0460	SPV.0165	Special 707. Wall Concrete Panel Mechanically Stabilized Earth R-13-351	SF	2,455.000	2,455.000
0462	SPV.0165	Special 708. Wall Concrete Panel Mechanically Stabilized Earth R-13-352	SF	3,205.000	3,205.000
0464	SPV.0165	Special 709. Wall Concrete Panel Mechanically Stabilized Earth R-13-334	SF	7,325.000	7,325.000

CLEARING AND GRUBBING

CATEGORY	STATION	-	STATION	O/S	201.0120 CLEARING STA	201.0220 GRUBBING STA
1000	2538+00	-	2544+00	RT	6	6
1000	2545+00	-	2549+00	RT	4	4
1000	2560+00	-	2567+00	RT	7	7
1000	2569+00	-	2571+00	RT	2	2
1000	2572+00	-	2579+00	LT/RT	7	7
1000	2580+00	-	2581+00	RT	1	1
				TOTAL:	**27**	**27**

REMOVING PAVEMENT

CATEGORY	STATION	-	STATION	LOCATION	204.0100* REMOVING PAVEMENT SY
1000	2533+98	-	2550+92	IH 39 NB	4,634
1000	103+82 'XEB'	-	108+42 'XEB'	US 12/18 EB, RT	255
				TOTALS:	**4,889**

*ADDITIONAL QUANTITIES ELSEWHERE

REMOVING ASPHALTIC SURFACE

CATEGORY	STATION	-	STATION	LOCATION	204.0110 REMOVING ASPHALTIC SURFACE SY
1000	89+19 'XEB'	-	97+79 'XEB'	US 12/18 EB, RT	887
1000	90+67 'XWB'	-	96+97 'XWB'	US 12/18 WB, LT	450
1000	90+67 'XWB'	-	100+58 'XWB'	US 12/18 WB, RT	432
				TOTALS:	**1,769**

REMOVING CONCRETE BARRIER

CATEGORY	STATION	-	STATION	LOCATION	204.0157 LF
1000	2539+52 'TSB'	-	2541+63 'TSB'	IH 39 SB, RT	211
1000	100+53 'XEB'	-	101+29 'XEB'	US 12/18 EB, RT	76
1000	105+84 'XEB'	-	106+44 'XEB'	US 12/18 EB, RT	60
				TOTALS:	**347**

REMOVING CURB AND GUTTER

CATEGORY	STATION	TO	STATION	O/S	ROADWAY	204.0150 LF
1000	2559+45 'TSB'	-	2559+56 'TSB'	RT	SB IH 39	11
1000	22+40 'XN'	-	26+20 'XN'	RT	EB TO SB RAMP	379
					TOTAL:	**390**

REMOVING GUARDRAIL

CATEGORY	STATION	-	STATION	LOCATION	204.0165 LF
1000	2558+25 'TSB'	-	2559+58 'TSB'	IH 39 SB, RT	133
1000	98+11 'XEB'	-	100+56 'XEB'	US 12/18 EB, RT	247
1000	102+86 'XEB'	-	105+91 'XEB'	US 12/18 EB, LT	292
1000	102+88 'XEB'	-	105+90 'XEB'	US 12/18 EB, RT	296
1000	106+56 'XEB'	-	107+53 'XEB'	US 12/18 EB, RT	97
1000	100+56 'XWB'	-	104+09 'XWB'	US 12/18 WB, RT	353
1000	100+56 'XWB'	-	104+10 'XWB'	US 12/18 WB, LT	353
1800	18+58 'XL'	-	20+74 'XL'	NB TO WB RAMP, RT	214
				TOTALS:	**1,985**

REMOVING DELINEATORS AND MARKERS

CATEGORY	STATION	OFFSET	TYPE	204.0180 REMOVING DELINEATORS AND MARKERS EACH
1000	2564+00	RT	CULVERT MARKER	1
1000	2571+60	LT	CULVERT MARKER	1
1000	2583+45	RT	CULVERT MARKER	1
1000	2545+64 'TSB'	RT	CULVERT MARKER	1
1000	99+37 'XEB'	RT	DELINEATOR	1
1000	103+21 'XEB'	RT	CULVERT MARKER	1
1000	107+53 'XEB'	RT	DELINEATOR	1
1000	107+55 'XEB'	RT	CULVERT MARKER	1
1000	110+34 'XEB'	RT	CULVERT MARKER	1
1000	95+09 'XWB'	LT	DELINEATOR	1
1000	97+78 'XWB'	LT	DELINEATOR	1
1000	101+46 'XWB'	RT	CULVERT MARKER	1
1000	101+47 'XWB'	LT	CULVERT MARKER	1
1000	103+32 'XWB'	RT	DELINEATOR	1
1000	103+32 'XWB'	LT	DELINEATOR	1
1000	19+93 'XL'	LT	CULVERT MARKER	1
1000	19+96 'XL'	RT	CULVERT MARKER	1
			TOTAL:	**17**

REMOVING INLETS

CATEGORY	STATION	OFFSET	DESCRIPTION	204.0220 EACH
1000	2559+49 'TSB'	16.7' RT	SURFACE DRAIN INLET	1
			TOTAL:	**1**

ABANDONING SEWER AND ABANDONING CULVERT PIPES

CATEGORY	STATION	OFFSET	204.0270 ABANDONING CULVERT PIPES EACH	204.0291.S ABANDONING SEWER CY	COMMENTS
1000	2545+64 'TSB'	LT/RT	1	-	AEW & 130' X 30" CMCP WITH 24" PLASTIC LINER
1000	1164+45 'XSB'	LT/RT	1	-	42-INCH CULVERT PIPE
1000	101+47 'XWB'	LT/RT	-	16	AEW & 30' X 36" RCCP
1000	19+95 'XL'	LT/RT	-	22	AEW & 39' X 30" CMCP WITH 24" PLASTIC LINER
		TOTAL:	**2**	**38**	

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REMOVING STORM SEWER

CATEGORY	STATION	OFFSET	204.0245.01 12-INCH LF
0010	2564+02	LT/RT	79
0010	2571+63	LT/RT	72
0010	2583+49	RT	19
0010	2559+49 'TSB'	RT	73
		TOTALS:	**243**

REMOVING APRON ENDWALL

CATEGORY	STATION	OFFSET	204.9060.S.01 EACH
1000	107+25 'XEB'	RT	1
		TOTALS:	**1**

FINISHING ROADWAY

LOCATION	213.0100.01 FINISHING ROADWAY 1007-12-78 EACH
PROJECT ID 1007-12-78 IH 39	1
TOTALS:	**1**

BASE AGGREGATE ITEMS

STATION	TO	STATION	ALIGNMENT	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
2533+98	-	2558+79	NB	EARLY STRUCTURE/EARLY FILL SECTION	0	3,175	12,157	32
2560+65	-	2563+73	NB	EARLY STRUCTURE/EARLY FILL SECTION	0	516	1,984	5
2565+60	-	2571+64	NB	EARLY STRUCTURE/EARLY FILL SECTION	0	993	3,818	10
2573+94	-	2581+63	NB	EARLY STRUCTURE/EARLY FILL SECTION	0	1,392	4,758	14
2540+78	-	2559+69	TSB	IH 39 SB, RT	0	734	1,858	7
2540+78	-	2559+69	TSB	IH 39 SB, LT	0	2,746	0	27
103+83	-	111+33	XEB	US 12/18 EB, RT	0	224	569	2
103+20	-	103+30	XEB	US 12/18 EB, RT	0	18	0	0
87+38	-	99+33	XEB	US 12/18 EB, RT	81	2,088	0	21
99+33	-	113+46	XEB	US 12/18 EB, RT	186	683	865	7
99+92	-	106+24	XEB	US 12/18 EB, LT	118	573	0	6
90+67	-	112+46	XWB	US 12/18 WB, RT	157	1,382	0	14
100+55	-	112+14	XWB	US 12/18 WB, LT	81	1,153	0	12
102+55	-	102+65	XWB	US 12/18 WB, LT	0	10	0	0
22+63	-	26+21	XN	SB TO EB RAMP, RT	47	166	0	2
17+90	-	18+57	XL	NB TO WB RAMP, RT	0	33	0	0
18+57	-	24+05	XL	NB TO WB RAMP, RT	72	274	0	3
21+11	-	21+33	XL	NB TO WB RAMP, LT	0	12	0	0
21+11	-	21+33	XL	NB TO WB RAMP, LT	0	15	0	0
47+00	-	56+50	XFD	FEMRITE DR, RT	121	575	0	6
48+50	-	56+50	XFD	FEMRITE DR, LT	102	420	0	4
				UNDISTRIBUTED	97	1,718	-	17
				TOTALS:	**1,063**	**18,902**	**26,009**	**189**

*ADDITIONAL QUANTITIES ELSEWHERE
** WATER CONVERSION IS 1 MGAL/100 TON OF BASE AGGREGATE DENSE MATERIAL. USE WATER FOR BASE COMPACTION AND DUST CONTROL.

EARTHWORK SUMMARY

Work Area	LOCATION	STATION		STATION	205.0100 EXCAVATION COMMON (1) CUT(2) CY	205.0100 EXCAVATION COMMON (1) EBS (3) CY	FILL CY	208.1100 SELECT BORROW (4) CY	645.0220 GEOGRID TYPE SR SY	SPV.0035.001 ROADWAY EMBANKMENT (5) CY	MASS ORDINATE +/- (6) CY
N/A	USH 12/18 EB - RIGHT SHOULDER	87+38'XEB'	-	99+33'XEB'	1,140	0	600	0	0	600	540
	IH 39 SB TO USH 12/18 EB - RIGHT SHOULDER	22+40'XN'	-	26+21'XN'	310	0	180	0	0	180	130
	USH 12/18 EB - IH 39 SB TO USH 12/18 ENTRANCE LANE/SHOULDER	99+33'XEB'	-	113+34'XEB'	2,550	0	420	0	0	420	2,130
	BEGIN PROJECT GRADING		GRADING		3	0	160	0	0	160	-157
1	IH 39 NB - WORK AREA 1	2533+98	-	2558+79	480	7,220	167,900	7,220	10,600	167,900 (7)	-160,200
	IH 39 SB - WORK AREA 1	2533+98'TSB'	-	2559+69'TSB'	4,270	0	21,500	0	0	21,500	-17,230
	USH 12/18 EB - SOUTH APPROACH		GRADING		3	0	1,280	0	0	1,280	-1,277
	USH 12/18 EB - NORTH APPROACH		GRADING		14	0	1,460	0	0	1,460	-1,446
	IH 39 SB - DITCH GRADING		GRADING		48	0	37	0	0	37	11
2	USH 12/18 EB - LEFT SHOULDER	99+92'XEB'	-	106+12'XEB'	700	0	48	0	0	48	652
	IH 39 NB - WORK AREA 2	2560+65	-	2563+73	1,240	0	42,700	0	0	42,700	-41,460
	USH 12/18 WB - RIGHT SHOULDER	100+58'XWB'	-	105+09'XWB'	940	0	790	0	0	790	150
	USH 12/18 WB - SOUTH APPROACH		GRADING		7	0	1,330	0	0	1,330	-1,323
	USH 12/18 WB - NORTH APPROACH		GRADING		2	0	1,650	0	0	1,650	-1,648
	USH 12/18 WB - LEFT SHOULDER	100+55'XWB'	-	105+09'XWB'	720	0	200	0	0	200	520
3	IH 39 NB - WORK AREA 3	2565+60	-	2571+64	560	4,010	86,600	4,010	2,220	86,600	-82,030
	IH 39 NB TO USH 12/18 WB - RIGHT SHOULDER	17+75'XL'	-	24+05'XL'	450	0	74	0	0	74	376
	IH 39 NB TO USH 12/18 WB - SOUTH APPROACH		GRADING		1	0	1,280	0	0	1,280	-1,279
	IH 39 NB TO USH 12/18 WB - NORTH APPROACH		GRADING		0	0	2,550	0	0	2,550	-2,550
	IH 39 NB TO USH 12/18 WB - DITCH GRADING		GRADING		490	0	170	0	0	170	320
4	IH 39 NB - WORK AREA 4	2574+28	-	2581+63	840	0	58,300	0	0	58,300	-57,460
	FEMRITE DRIVE - SOUTH APPROACH		GRADING		23	0	630	0	0	630	-607
	FEMRITE DRIVE - RIGHT SHOULDER	47+00'FD'	-	56+50'FD'	560	0	54	0	0	54	506
5	FEMRITE DRIVE - LEFT SHOULDER	48+50'FD'	-	56+50'FD'	350	0	47	0	0	47	303
	FEMRITE DRIVE - NORTH APPROACH		GRADING		29	0	400	0	0	400	-371
	UNDISTRIBUTED				0	5,620	0	5,620	6,410	0	5,620
	Project ID: 1007-12-74/75	2549+00	-	2556+00	0	0	0	0	0	-40,000 (7)	0
	CATEGORY 1000 SUBTOTALS				15,730	16,850	390,360	16,850	19,230	350,360	-357,780
	PROJECT TOTALS				**15,730**	**16,850**	**390,360**	**16,850**	**19,230**	**350,360**	**-357,780**
					32,580						

1) EXCAVATION COMMON IS THE SUM OF THE CUT AND EBS EXCAVATION COLUMNS . ITEM NUMBER 205.0100.
2) CUT VOLUME INCLUDES CONCRETE AND ASPHALTIC SURFACE MATERIAL.
3) EBS EXCAVATION TO BE BACKFILLED WITH SELECT BORROW.
4) MARSH EXCAVATION TO BE BACKFILLED WITH ROADWAY EMBANKMENT EXCEPT AS NOTED IN NOTE 7. THE NEED FOR MARSH EXCAVATION IS TO BE DETERMINED IN THE FIELD BY THE PROJECT ENGINEER.
4) SELECT BORROW IS USED IN EBS EXCAVATION AREAS WHERE WATER IS ENCOUNTERED DURING EXCAVATION. PLACE SELECT BORROW TO AN ELEVATION 1' ABOVE THE WATER LINE.
5) ROADWAY EMBANKMENT = FILL + (EBS - SELECT BORROW)
6) MASS ORDINATE = (CUT + EBS - FILL). A POSITIVE MASS ORDINATE QUANTITY INDICATES AN EXCESS OF MATERIAL FOR THE STATION RANGE SHOWN AND A NEGATIVE MASS ORDINATE QUANTITY INDICATES A SHORTAGE OF MATERIAL FOR THE STATION RANGE SHOWN. STRUCTURE EXCAVATION IS NOT INCLUDED IN THIS CALCULATION. THE MASS ORDINATE IS FOR INFORMATION PURPOSES ONLY AS EXCAVATION COMMON AND ROADWAY EMBANKMENT ARE NOT BALANCED FOR QUANTITY PURPOSES AND DOES NOT GUARANTEE THE QUALITY OF EXCAVATION COMMON, AND IF IT CAN BE REUSED ON SITE.
7) EMBANKMENT PLACED IN THE FALL OF 2019 BY THE CONTRACTOR FROM PROJECT ID 1007-12-74/75. EMBANKMENT IS NOT SHOWN ON PROJECT PLANS OR CROSS SECTIONS. EMBANKMENT QUANTITY FOR WORK AREA 1 FROM STATION 2533+98 TO 2558+79 HAS NOT BEEN ADJUSTED TO ACCOUNT FOR THE ADDITIONAL QUANTITY. CONTACT REGION CONSTRUCTION ENGINEER MARK SPONEM AT (608) 245-2627 FOR ADDITIONAL INFORMATION AND COORDINATION.

CONCRETE PAVEMENT ITEMS

CATEGORY	STATION	-	STATION	LOCATION	415.0060 CONCRETE PAVEMENT 6-INCH SY	415.0110 CONCRETE PAVEMENT 10-INCH SY	415.0120 CONCRETE PAVEMENT 12-INCH SY	416.0610 DRILLED TIE BARS EACH	416.0620* DRILLED DOWEL BARS EACH	602.0405 CONCRETE SIDEWALK 4-INCH SF	REMARKS
1000	2540+78 'TSB'	-	2559+69 'TSB'	IH 39 SB, RT	-	-	2,201	-	7	-	SB SHOULDER
1000	103+83 'XEB'	-	111+33 'XEB'	US 12/18 EB, RT	24	673	-	300	5	-	EB LANE
1000	103+20 'XEB'	-	103+30 'XEB'	US 12/18 EB, RT	-	-	54	-	48	-	EB LANE
1000	102+55 'XWB'	-	102+65 'XWB'	US 12/18 WB, LT	-	-	29	-	26	-	WB LANE
1000	22+40 'XN'	-	22+55 'XN'	SB TO EB RAMP, RT	-	-	-	6	-	-	LANE
1000	17+90 'XL'	-	18+57 'XL'	NB TO WB RAMP, RT	-	-	-	-	-	52	SWALE
1000	21+11 'XL'	-	21+33 'XL'	NB TO WB RAMP, LT	-	36	-	-	15	-	NB TO WB LANE
				TOTALS:	**24**	**709**	**2,284**	**306**	**101**	**52**	

*ADDITIONAL QUANTITIES ELSEWHERE

ASPHALTIC FLUMES & EDGEDRAINS & DROP INLET ITEMS

CATEGORY	STATION	-	STATION	OFFSET	AEW OFFSET	GRATE ELEVATION	**TOP OF STRUCTURE ELEVATION	BOTTOM OF STRUCTURE ELEVATION	PIPE UNDERDRAIN OUTLET ELEVATION	STR DEPTH	465.0315 ASPHALTIC FLUMES SY	521.1012 APRON ENDWALLS FOR CULVERT PIPE STEEL 12-INCH EACH	611.3220* INLETS 2X2-FT EACH	612.0206 PIPE UNDERDRAIN UNPERFORATED 6-INCH LF	612.0212 PIPE UNDERDRAIN UNPERFORATED 12-INCH LF	612.0806 APRON ENDWALLS FOR UNDERDRAIN REINFORCED CONCRETE 6-INCH EACH
1000			2558+59	RT	119.1' RT	895.75	894.5	891.5	867.96	3	-	1	1	-	110	-
1000			2563+51	RT	140.0' RT	898.79	897.54	894.54	862.63	3	-	1	1	-	118	-
1000			2563+51	LT	40.0' LT	898.99	897.74	894.74	888.18	3	-	1	1	-	42	-
1000			2574+14	RT	135.8' RT	898.63	897.38	894.38	872.85	3	-	1	1	-	94	-
1000			2574+57	LT	48.4' LT	898.74	897.49	894.49	890.18	3	-	1	1	-	43	-
1000	2583+00	-	2583+51	RT	55.0' RT	-	-	-	870.71	-	-	1	-	-	52	-
1000	1166+10 'XSB'	-	1166+40 'XSB'	RT	85.0' RT	-	-	-	867.02	-	-	1	-	-	65	-
1000	1173+76 'XSB'	-	1173+90 'XSB'	RT	53.0' RT	-	-	-	882.92	-	-	1	-	-	28	-
1000			101+30 'XEB'	RT	-	-	-	-	-	-	-	-	-	20	-	1
1000			101+30 'XEB'	LT	-	-	-	-	-	-	-	-	-	20	-	1
1000			101+00 'XWB'	RT	-	-	-	-	-	-	-	-	-	20	-	1
1000			101+00 'XWB'	LT	-	-	-	-	-	-	-	-	-	20	-	1
1000	22+55 'XN'	-	22+63 'XN'	RT	-	-	-	-	-	-	14	-	-	-	-	-
1000			19+00 'XL'	RT		-	-	-	-	-	-	-	-	20	-	1
									TOTALS:		**14**	**8**	**5**	**100**	**552**	**5**

*ADDITIONAL QUANTITIES ELSEWHERE. INLETS TO BE PLATED WITH THIS CONTRACT. THE INLET COVERS ARE TO BE PROVIDED AND INSTALLED IN FUTURE PROJECT
**REFLECTS CASTING HEIGHT AND 6-INCH ADJUSTMENT

RUMBLE STRIPS

CATEGORY	STATION	-	STATION	LOCATION	416.1110 CONCRETE SHOULDER RUMBLE STRIPS LF	465.0400 ASPHALTIC SHOULDER RUMBLE STRIPS LF	COMMENTS
1000	2540+78 'TSB'	-	2559+69 'TSB'	IH 39 SB, RT	1,891	-	MEDIAN SHOULDER
1000	87+38 'XEB'	-	126+10 'XEB'	US 12/18 EB, RT	-	3,872	MEDIAN SHOULDER
1000	99+92 'XEB'	-	106+24 'XEB'	US 12/18 EB, LT	-	632	OUTSIDE SHOULDER
1000	89+87 'XWB'	-	112+46 'XWB'	US 12/18 WB, RT	-	2,259	MEDIAN SHOULDER
1000	100+55 'XWB'	-	105+08 'XWB'	US 12/18 WB, LT	-	453	OUTSIDE SHOULDER
1000	18+57 'XL'	-	22+24 'XL'	NB TO WB RAMP, RT	-	367	MEDIAN SHOULDER
				TOTALS:	**1,891**	**7,583**	

ASPHALTIC PAVEMENT ITEMS

CATEGORY	STATION	-	STATION	LOCATION	LOWER LAYER THICKNESS IN	UPPER LAYER THICKNESS IN	455.0605 TACK COAT GAL	460.7222 HMA PAVEMENT 2 HT 58-28 S TON	460.7424 HMA PAVEMENT 4 HT 58-28 H TON	460.7624 HMA PAVEMENT 4 HT 58-28 V TON	465.0110 ASPHALTIC SURFACE PATCHING TON	REMARKS
1000	2540+78 'TSB'	-	2559+54 'TSB'	IH 39 SB, LT	4.25	2.50	130	610	0	360	0	TEMP SB CONNECTION
1000	87+38 'XEB'	-	99+33 'XEB'	US 12/18 EB, RT	3.00	2.00	99	330	220	0	0	SHOULDER WIDENING
1000	99+33 'XEB'	-	113+46 'XEB'	US 12/18 EB, RT	4.00	0.00	51	0	230	0	0	SHOULDER
1000	99+92 'XEB'	-	106+24 'XEB'	US 12/18 EB, LT	2.75	2.25	27	80	70	0	0	SHOULDER WIDENING
1000	90+67 'XWB'	-	96+97 'XWB'	US 12/18 WB, LT	2.75	2.25	23	70	60	0	0	SHOULDER WIDENING
1000	90+67 'XWB'	-	112+46 'XWB'	US 12/18 WB, RT	2.75	2.25	65	200	160	0	0	SHOULDER WIDENING
1000	100+55 'XWB'	-	112+14 'XWB'	US 12/18 WB, LT	2.75	2.25	55	170	140	0	0	SHOULDER WIDENING
1000	22+63 'XN'	-	26+21 'XN'	SB TO EB RAMP, RT	4.00	0.00	12	0	50	0	0	SHOULDER
1000	18+57 'XL'	-	24+05 'XL'	NB TO WB RAMP, RT	2.75	2.25	16	50	40	0	0	SHOULDER
1000	21+11 'XL'	-	21+33 'XL'	NB TO WB RAMP, LT	2.75	2.25	1	3	2	0	0	SHOULDER
1000	47+00 'XFD'	-	56+50 'XFD'	FEMRITE DR, RT	3.25	2.00	52	190	110	0	0	SHOULDER WIDENING
1000	48+50 'XFD'	-	56+50 'XFD'	FEMRITE DR, LT	3.25	2.00	38	140	80	0	0	SHOULDER WIDENING
1000			UNDISTRIBUTED				--	--	--	--	20	
				TOTALS:			**569**	**1,843**	**1,162**	**360**	**20**	

CULVERT ITEMS

									522.0124	522.0136	522.0424	522.0430	522.0536	522.0542	522.1024*	522.1030	522.1036	522.1042	633.5200*	SPV.0090.002	SPV.0090.003
			INLET			OUTLET			CULVERT PIPE REINFORCED CONCRETE						APRON ENDWALLS FOR CULVERT PIPE				MARKERS	BORE AND JACK CULVERT PIPE REINFORCED CONCRETE	
									CLASS III		CLASS IV		CLASS V		REINFORCED CONCRETE				CULVERT	CLASS IV	CLASS V
CATEGORY	PIPE NAME	STATION	OFFSET	ELEV. FT	STATION	OFFSET	ELEV. FT	SLOPE %	24-INCH LF	36-INCH LF	24-INCH LF	30-INCH LF	36-INCH LF	42-INCH LF	24-INCH EACH	30-INCH EACH	36-INCH EACH	42-INCH EACH	END EACH	30-INCH LF	42-INCH LF
1000	C200	2546+00	115.3' RT	858.80	2546+00	151.8' LT	857.47	0.50	-	-	-	179	-	-	-	2	-	-	2	88	-
1000	C300	2562+25	138' RT	859.10	2562+25	218' LT	857.42	0.47	-	-	-	-	-	188	-	-	-	2	2	-	168
1000	C400	2575+00	53' LT	886.90	2575+00	91' RT	885.50	0.97	144	-	-	-	-	-	2	-	-	-	2	-	-
1000	C500	2579+00	48' LT	884.90	2579+00	96' RT	883.50	0.97	144	-	-	-	-	-	2	-	-	-	2	-	-
1000	C600	103+25 'XEB'	67.6' RT	860.50	103+25 'XEB'	22.4' LT	860.05	0.50	-	-	90	-	-	-	2	-	-	-	2	-	-
1000	C700	107+25 'XEB'	55.3' RT	863.85	107+25 'XEB'	47.2' RT	863.76	1.12	-	-	-	8	-	-	-	1	-	-	1	-	-
1000	C800	102+60 'XWB'	47.5' LT	861.50	102+60 'XWB'	28.5' RT	861.00	0.66	-	-	-	-	76	-	-	-	2	-	2	-	-
1000	C900	21+03 'XL'	54.3' LT	867.00	21+40 'XL'	29.7' RT	866.00	1.09	-	92	-	-	-	-	-	-	2	-	2	-	-
						TOTALS:			**288**	**92**	**90**	**187**	**76**	**188**	**6**	**3**	**4**	**2**	**15**	**88**	**168**

*ADDITIONAL QUANTITIES ELSEWHERE

CULVERT PAVEMENT ITEMS

CATEGORY	PIPE NAME	STATION	204.0100* REMOVING PAVEMENT SY	305.0120* BASE AGGREGATE DENSE 1 1/4 INCH TON	465.0125 ASPHALTIC SURFACE TEMPORARY TON	416.0620* DRILLED DOWEL BARS EACH	416.1715 CONCRETE PAVEMENT REPAIR SHES SY	416.1725 CONCRETE PAVEMENT REPLACEMENT SHES SY	690.0150* SAWING ASPHALT LF	690.0150* SAWING CONCRETE LF
1000	C600	103+25 'XEB'	60	90	20	30	60	-	22	100
1000	C800	102+60 'XWB'	30	60	15	22	30	-	24	50
1000	C900	21+04 'XL'	35	75	20	14	-	35	24	30
		TOTALS:	**125**	**225**	**55**	**66**	**90**	**35**	**70**	**180**

*ADDITIONAL QUANTITIES ELSEWHERE

CONCRETE CURB & GUTTER

CATEGORY	STATION	-	STATION	LOCATION	601.0409 30-INCH TYPE A LF
1000	22+40 'XN'	-	22+55 'XN'	EB TO SB RAMP, RT	15
				TOTALS:	**15**

3

STORM SEWER PIPE SCHEDULE

	PIPE LOCATION			INVERT			522.1018 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE	522.1024* APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE	608.0412 STORM SEWER PIPE REINFORCED CONCRETE CLASS IV	608.0418 STORM SEWER PIPE REINFORCED CONCRETE CLASS IV	608.0424 STORM SEWER PIPE REINFORCED CONCRETE CLASS IV	633.5200* MARKERS CULVERT END
CATEGORY	FROM	TO	LOCATION	INLET	DISCHARGE	SLOPE	18-INCH EACH	24-INCH EACH	12-INCH LF	18-INCH LF	24-INCH LF	EACH
1000	01.01.01	01.01.02	NB	862.79	862.66	2.00%	--	--	10	--	--	--
1000	01.01.02	01.01.03	NB	862.60	862.55	2.00%	--	--	5	--	--	--
1000	01.01.03	01.01.05	NB	862.49	862.34	2.00%	--	--	10	--	--	--
1000	01.01.04	01.01.05	NB	862.39	862.34	2.00%	--	--	6	--	--	--
1000	01.01.05	01.01.06	NB	862.28	862.16	2.00%	--	--	10	--	--	--
1000	01.01.06	EX STR	NB	861.56	861.55	2.00%	--	--	--	6	--	--
1000	01.02.01	EX STR	TSB	863.41	EX	2.00%	--	--	--	--	--	--
1000	02.03.01	EX STR	TSB	862.20	EX	2.00%	--	--	--	--	--	--
1000	02.04.01	02.04.02	TSB	863.28	862.63	0.50%	1	--	--	132	--	1
1000	03.05.01	03.05.02	TSB	864.09	864.05	2.00%	--	--	6	--	--	--
1000	03.05.02	03.05.03	TSB	863.48	862.13	1.00%	1	--	--	137	--	1
1000	03.06.01	03.06.02	TSB	862.24	862.12	2.00%	--	--	10	--	--	--
1000	03.06.02	03.06.03	TSB	862.12	862.24	2.00%	--	--	10	--	--	--
1000	03.06.02	03.06.04	TSB	861.06	860.30	0.50%	--	1	--	--	124	1
1000	04.07.01	04.07.02	TSB	862.61	862.49	2.00%	--	--	10	--	--	--
1000	04.07.02	04.07.03	TSB	862.49	862.61	2.00%	--	--	10	--	--	--
1000	04.07.02	04.07.04	TSB	862.49	862.53	2.00%	--	--	6	--	--	--
1000	04.07.02	04.07.05	TSB	861.42	859.92	1.00%	--	1	--	--	152	1
1000	04.08.01	04.08.02	TSB	863.84	863.80	2.00%	--	--	6	--	--	--
1000	04.08.02	04.08.03	TSB	863.21	860.89	1.47%	1	--	--	161	--	1
1000	05.09.01	05.09.02	TSB	867.24	865.58	1.00%	1	--	--	167	--	1
1000	05.10.01	05.10.02	TSB	874.34	874.30	2.00%	--	--	6	--	--	--
1000	05.10.02	05.10.03	TSB	873.73	872.19	1.00%	1	--	--	156	--	1
1000	05.11.01	05.11.02	TSB	878.74	877.14	1.00%	1	--	--	161	--	1
1000	06.12.01	06.12.02	TSB	880.97	880.78	2.00%	--	--	14	--	--	--
1000	06.12.02	06.12.03	TSB	880.08	878.77	1.00%	1	--	--	134	--	1
1000	BULKHEAD	06.13.02	XSB	881.50	881.07	2.00%	--	--	24	--	--	--
1000	06.13.02	06.13.03	NB	880.50	879.14	1.00%	1	--	--	138	--	1
1000	06.14.01	06.14.02	NB	892.79	892.12	1.00%	1	--	--	68	--	1
1000	07.15.01	07.15.02	NB	894.44	893.75	1.00%	1	--	--	70	--	1
1000	BULKHEAD	07.16.02	XSB	883.01	882.57	2.00%	--	--	24	--	--	--
1000	07.16.02	07.16.03	NB	882.00	880.60	1.00%	1	--	--	143	--	1
1000	BULKHEAD	07.17.02	XSB	882.30	882.19	2.00%	--	--	8	--	--	--
1000	07.17.02	07.17.03	XSB	881.62	880.17	1.00%	1	--	--	147	--	1
1000	08.18.01	08.18.02	NB	879.98	878.48	1.00%	1	--	--	152	--	1
1000	08.19.01	08.19.02	NB	894.49	893.68	1.00%	1	--	--	82	--	1
						TOTALS:	**14**	**2**	**175**	**1854**	**276**	**16**

*ADDITIONAL QUANTITIES ELSEWHERE

STORM SEWER STRUCTURE SCHEDULE

CATEGORY	STRUCTURE NUMBER	(1) STATION	(1) OFFSET FT	(1) OFFSET LOCATION	CASTING HEIGHT INCHES	ADJUSTING RINGS HEIGHT INCHES	RIM ELEVATION	(2) TOP OF STRUCTURE ELEVATION	BOTTOM OF STRUCTURE ELEVATION	(3) DEPTH OF STRUCTURE FT	611.3004 INLETS 4-FT DIAMETER EACH	611.3220* INLETS 2x2-FT EACH	611.3225*** INLETS 2x2.5-FT EACH	611.0606** INLET COVERS TYPE B EACH	611.0610** INLET COVERS TYPE BW EACH
1000	01.01.01	2525+95	10.5 LT	NB	10.00	6.00	867.92	866.59	862.62	3.97	--	--	1	--	1
1000	01.01.02	2526+04.58	10.5 LT	NB	10.00	6.00	867.91	866.58	862.43	4.15	--	--	1	--	1
1000	01.01.03	2526+04.58	16.0 LT	NB	10.00	6.00	867.73	866.40	862.32	4.08	--	1	--	1	--
1000	01.01.04	2526+15	10.5 LT	NB	10.00	6.00	867.92	866.59	862.22	4.37	--	--	1	--	1
1000	01.01.05	2526+15	16.0 LT	NB	10.00	6.00	867.73	866.40	862.11	4.29	--	1	--	1	--
1000	01.01.06	2526+25.08	16.0 LT	NB	10.00	6.00	867.73	866.40	861.35	5.05	1	--	--	1	--
1000	01.02.01	2538+25	16.4 RT	TSB	10.00	6.00	869.96	868.63	863.24	5.39	--	1	--	1	--
1000	02.03.01	2540+75	16.5 RT	TSB	10.00	6.00	868.70	867.37	862.03	5.34	--	1	--	1	--
1000	02.04.01	2542+15	10.5 RT	TSB	10.00	6.00	867.06	865.73	863.07	2.66	--	--	1	--	1
1000	02.04.02	2542+15	142.5 RT	TSB	--	--	--	--	--	--	--	--	--	--	--
1000	03.05.01	2543+55	10.5 RT	TSB	10.00	6.00	866.97	865.64	863.92	1.72	--	--	1	--	1
1000	03.05.02	2543+55	16.5 RT	TSB	10.00	6.00	869.15	867.82	863.27	4.55	1	--	--	1	--
1000	03.05.03	2543+55	153.5 RT	TSB	--	--	--	--	--	--	--	--	--	--	--
1000	03.06.01	2544+84	10.5 RT	TSB	10.00	6.00	866.90	865.57	862.07	3.50	--	--	1	--	1
1000	03.06.02	2544+94	10.5 RT	TSB	10.00	6.00	866.89	865.56	860.81	4.75	1	--	--	--	1
1000	03.06.03	2545+04	10.5 RT	TSB	10.00	6.00	866.90	865.57	862.07	3.50	--	--	1	--	1
1000	03.06.04	2544+94	165.5 RT	TSB	--	--	--	--	--	--	--	--	--	--	--
1000	04.07.01	2546+40	16.5 RT	TSB	10.00	6.00	869.20	867.87	862.44	5.43	--	1	--	1	--
1000	04.07.02	2546+50	16.5 RT	TSB	10.00	6.00	869.15	867.82	861.17	6.65	1	--	--	1	--
1000	04.07.03	2546+60	16.5 RT	TSB	10.00	6.00	869.43	868.10	862.44	5.66	--	1	--	1	--
1000	04.07.04	2546+50	10.5 RT	TSB	10.00	6.00	867.29	865.96	862.36	3.60	--	--	1	--	1
1000	04.07.05	2546+50	168.5 RT	TSB	--	--	--	--	--	--	--	--	--	--	--
1000	04.08.01	2548+50	10.5 RT	TSB	10.00	6.00	868.98	867.65	863.67	3.98	--	--	1	--	1
1000	04.08.02	2548+50	16.5 RT	TSB	10.00	6.00	871.82	870.49	863.00	7.49	1	--	--	1	--
1000	04.08.03	2548+50	177.5 RT	TSB	--	--	--	--	--	--	--	--	--	--	--
1000	05.09.01	2551+00	10.5 RT	TSB	10.00	6.00	872.94	871.61	867.03	4.58	--	--	1	--	1
1000	05.09.02	2551+00	177.5 RT	TSB	--	--	--	--	--	--	--	--	--	--	--
1000	05.10.01	2554+00	10.5 RT	TSB	10.00	6.00	879.44	878.11	874.17	3.94	--	--	1	--	1
1000	05.10.02	2554+00	16.5 RT	TSB	10.00	6.00	879.18	877.85	873.52	4.33	1	--	--	1	--
1000	05.10.03	2554+00	172.5 RT	TSB	--	--	--	--	--	--	--	--	--	--	--
1000	05.11.01	2557+00	10.5 RT	TSB	10.00	6.00	884.26	882.93	878.53	4.40	--	--	1	--	1
1000	05.11.02	2557+00	171.5 RT	TSB	--	--	--	--	--	--	--	--	--	--	--
1000	06.12.01	2558+80	10.5 RT	TSB	10.00	6.00	886.28	884.95	880.80	4.15	--	--	1	--	1
1000	06.12.02	2558+80	25.0 RT	TSB	10.00	6.00	884.62	883.29	879.87	3.42	1	--	--	1	--
1000	06.12.03	2558+80	157.5 RT	TSB	--	--	--	--	--	--	--	--	--	--	--
1000	06.13.01	1162+82	27.1 RT	XSB	--	--	--	--	--	--	--	--	***	--	***
1000	06.13.02	2561+25	48.8 LT	NB	10.00	6.00	885.00	883.67	880.29	3.38	1	--	--	1	--
1000	06.13.03	2561+25	89.2 RT	NB	--	--	--	--	--	--	--	--	--	--	--
1000	06.14.01	2561+75	10.5 LT	NB	10.00	6.00	898.49	897.16	892.58	4.58	--	--	1	--	**
1000	06.14.02	2561+75	57.5 RT	NB	--	--	--	--	--	--	--	--	--	--	--

*ADDITIONAL QUANTITIES ELSEWHERE

**INLETS TO BE PLATED WITH THIS CONTRACT. THE INLET COVERS ARE TO BE PROVIDED AND INSTALLED IN FUTURE PROJECT

***INLETS STRUCTURES AND COVERS TO BE PROVIDED AND INSTALLED IN FUTURE PROJECT

NOTES:

1) STATIONS AND OFFSETS ARE TO THE CENTER OF THE STRUCTURE.

2) TOP OF STRUCTURE ELEVATION = RIM ELEVATION - CASTING HEIGHT - ADJUSTING RINGS HEIGHT.

3) DEPTH OF STRUCTURE = TOP OF STRUCTURE ELEVATION - BOTTOM OF STRUCTURE ELEVATION.

STORM SEWER STRUCTURE SCHEDULE - CONTINUED

CATEGORY	STRUCTURE NUMBER	(1) STATION	(1) OFFSET FT	(1) OFFSET LOCATION	CASTING HEIGHT INCHES	ADJUSTING RINGS HEIGHT INCHES	RIM ELEVATION	(2) TOP OF STRUCTURE ELEVATION	BOTTOM OF STRUCTURE ELEVATION	(3) DEPTH OF STRUCTURE FT	611.3004 INLETS 4-FT DIAMETER EACH	611.3220* INLETS 2x2-FT EACH	611.3225*** INLETS 2x2.5-FT EACH	611.0606** INLET COVERS TYPE B EACH	611.0610** INLET COVERS TYPE BW EACH
1000	07.15.01	2565+73	10.5 LT	NB	10.00	6.00	900.20	898.87	894.23	4.64	--	--	1	--	**
1000	07.15.02	2565+73	59.5 RT	NB	--	--	--	--	--	--	--	--	--	--	--
1000	07.16.01	1167+58	27.1 RT	XSB	--	--	--	--	--	--	--	--	***	--	***
1000	07.16.02	2566+00	49.9 LT	NB	10.00	6.00	886.30	884.97	881.79	3.18	1	--	--	1	--
1000	07.16.03	2566+00	93.1 RT	NB	--	--	--	--	--	--	--	--	--	--	--
1000	07.17.01	1170+75	22.5 RT	XSB	--	--	--	--	--	--	--	--	***	--	***
1000	07.17.02	1170+75	40.3 RT	XSB	10.00	6.00	886.21	884.88	881.41	3.47	1	--	--	1	--
1000	07.17.03	1170+75	187.3 RT	XSB	--	--	--	--	--	--	--	--	--	--	--
1000	08.18.01	2570+50	53.5 LT	NB	10.00	6.00	885.20	883.87	879.77	4.10	1	--	--	1	--
1000	08.18.02	2570+50	98.5 RT	NB	--	--	--	--	--	--	--	--	--	--	--
1000	08.19.01	2571+50	10.5 LT	NB	10.00	6.00	900.25	898.92	894.28	4.64	--	--	1	--	**
1000	08.19.02	2571+10	61.0 RT	NB	--	--	--	--	--	--	--	--	--	--	--
										TOTALS:	**11**	**6**	**16**	**16**	**14**

*ADDITIONAL QUANTITIES ELSEWHERE

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***INLETS STRUCTURES AND COVERS TO BE PROVIDED AND INSTALLED IN FUTURE PROJECT

NOTES:

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CONCRETE BARRIER

CATEGORY	STATION	-	STATION	LOCATION	603.1142 CONCRETE BARRIER TYPE S42 LF	603.1456 CONCRETE BARRIER TYPE S56C LF	603.3559 CONCRETE BARRIER TRANSITION TYPE S42 TO S56 EACH	SPV.0090.001 CONCRETE PAVEMENT JOINT SEALING LF
1000	2540+78 'TSB'	-	2555+00 'TSB'	IH 39 SB, RT	-	1,415	-	1,890
1000	2555+00 'TSB'	-	2555+25 'TSB'	IH 39 SB, RT	-	-	1	25
1000	2555+25 'TSB'	-	2559+56 'TSB'	IH 39 SB, RT	430	-	-	431
1000	100+50 'XEB'	-	101+30 'XEB'	US 12/18 EB, RT	80	-	-	80
				TOTALS:	**510**	**1,415**	**1**	**2,426**

PIPE UNDERDRAIN

CATEGORY	STATION	-	STATION	LOCATION	310.0100 BASE AGGREGATE OPEN GRADED TON	612.0106 PIPE UNDERDRAIN 6-INCH LF	645.0111 GEOTEXTILE FABRIC TYPE DF SCH A SY
1000	2540+78 'TSB'	-	2559+69 'TSB'	IH 39 SB, RT	30	1,891	630
1000			UNDISTRIBUTED		3	189	63
				TOTALS:	**33**	**2,080**	**693**

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GUARDRAIL

CATEGORY	STATION	-	STATION	LOCATION	614.2300 MGS GUARDRAIL 3 LF	614.2500 MGS THRIE BEAM TRANSITION LF	614.2610 MGS GUARDRAIL TERMINAL EAT EACH	COMMENTS
1000	24+73 'XN'	-	26+21 'XN'	SB TO EB RAMP, RT	137.5	-	1	
1000	99+33 'XEB'	-	100+52 'XEB'	US 12/18 EB, RT	87.5	39.4	-	
1000	101+26 'XEB'	-	105+81 'XEB'	US 12/18 EB, LT	375	78.8	-	CORING INCIDENTAL TO GUARDRAIL INSTALLATION
1000	101+27 'XEB'	-	105+61 'XEB'	US 12/18 EB, RT	350	78.8	-	CORING INCIDENTAL TO GUARDRAIL INSTALLATION
1000	100+55 'XWB'	-	104+08 'XWB'	US 12/18 WB, LT	312.5	39.4	1	CORING INCIDENTAL TO GUARDRAIL INSTALLATION
1000	100+58 'XWB'	-	104+09 'XWB'	US 12/18 WB, RT	312.5	39.4	1	CORING INCIDENTAL TO GUARDRAIL INSTALLATION
1000	18+55 'XL'	-	22+85 'XL'	NB TO WB RAMP, RT	387.5	39.4	1	
				TOTALS:	**1,963**	**315.2**	**4**	

FENCE SAFETY

CATEGORY	STATION	-	STATION	LOCATION	616.0700.S* FENCE SAFETY LF
1000			UNDISTRIBUTED		500
				TOTALS:	**500**

MAINTENANCE AND REPAIR OF HAUL ROADS

LOCATION	618.0100.01 MAINTENANCE AND REPAIR OF HAUL ROADS 1007-12-78 EACH
PROJECT ID 1007-12-78 IH 39	1
TOTALS:	**1**

MOBILIZATION

LOCATION	619.1000 MOBILIZATION EACH
PROJECT ID 1007-12-78 IH 39	1
TOTALS:	**1**

RIPRAP

STA	OFFSET	ALIGN	606.0200 RIPRAP MEDIUM CY	606.0300 RIPRAP HEAVY CY	645.0120 GEOTEXTILE TYPE HR SY	REMARKS
2542+15	RT	TSB	4	--	8	STORM SEWER DISCHARGE END
2543+55	RT	TSB	4	--	8	STORM SEWER DISCHARGE END
2544+94	RT	TSB	5	--	11	STORM SEWER DISCHARGE END
2546+17	LT	TSB	5	--	11	CULVERT DISCHARGE END
2546+50	RT	TSB	5	--	11	STORM SEWER DISCHARGE END
2548+50	RT	TSB	4	--	8	STORM SEWER DISCHARGE END
2551+00	RT	TSB	5	--	9	STORM SEWER DISCHARGE END
2554+00	RT	TSB	--	16	24	STORM SEWER DISCHARGE END
2557+00	RT	TSB	--	21	31	STORM SEWER DISCHARGE END
2558+59	RT		3	--	5	DROP INLET DISCHARGE END
2559+00	RT	TSB	--	17	25	STORM SEWER DISCHARGE END
2561+25	RT		--	24	37	STORM SEWER DISCHARGE END
2561+75	RT		--	40	60	STORM SEWER DISCHARGE END
1164+30	LT	XSB	--	15	22	CULVERT DISCHARGE END
2563+51	RT		3	--	5	DROP INLET DISCHARGE END
2563+51	LT		3	--	5	DROP INLET DISCHARGE END
1166+40	RT	XSB	3	--	5	DROP INLET DISCHARGE END
2564+30	RT		--	12	18	STORM SEWER DISCHARGE END
2565+73	RT		--	38	57	STORM SEWER DISCHARGE END
2566+00	RT		--	22	33	STORM SEWER DISCHARGE END
2568+75	RT		--	20	31	STORM SEWER DISCHARGE END
2570+50	RT		--	17	26	STORM SEWER DISCHARGE END
2570+65	RT		--	12	18	STORM SEWER DISCHARGE END
2571+10	RT		--	37	56	STORM SEWER DISCHARGE END
1173+90	RT	XSB	3	--	5	DROP INLET DISCHARGE END
2574+14	RT		3	--	5	DROP INLET DISCHARGE END
2574+57	LT		3	--	5	DROP INLET DISCHARGE END
2575+00	RT		18	--	37	CULVERT DISCHARGE END
2579+00	RT		12	--	24	CULVERT DISCHARGE END
2583+00	RT		3	--	5	DROP INLET DISCHARGE END
103+25	LT	XEB	5	--	24	CULVERT DISCHARGE END
102+60	RT	XWB	9	--	11	CULVERT DISCHARGE END
21+40	RT	XL	9	--	11	CULVERT DISCHARGE END
CATEGORY 1000 PROJECT TOTAL			**107**	**291**	**654**	

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EROSION CONTROL MOBILIZATION

LOCATION	628.1905 MOBILIZATION EROSION CONTROL EACH	628.1910 EMERGENCY MOBILIZATION EROSION CONTROL EACH
PROJECT 1007-12-78 IH 39	10	6
CATEGORY 1000 PROJECT TOTAL	**10**	**6**

EROSION MAT

STA	TO	STA	OFFSET	628.2002 EROSION MAT CLASS I TYPE A SY	628.2008 EROSION MAT URBAN CLASS I TYPE B SY	628.2023 EROSION MAT CLASS II TYPE B SY
2534+00	-	2559+05	RT	2464	7606	1219
2534+00	-	2559+05	LT	2090	5096	--
2560+23	-	2564+00	RT	--	--	3568
2560+23	-	2564+00	LT	396	1662	--
2565+33	-	2571+58	RT	--	--	5328
2565+33	-	2572+15	LT	1177	2191	--
2573+00	-	2581+60	RT	410	3885	--
2574+50	-	2581+60	LT	635	--	--
UNDISTRIBUTED				717	2044	1011
CATEGORY 1000 PROJECT TOTAL				**7888**	**22484**	**11126**

EROSION CONTROL

STA	TO	STA	OFFSET	ALIGN	628.1104 EROSION BALES EACH	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENACE LF	628.1920 CLEANING SEDIMENT BASINS CY	628.7005 INLET PROTECTION TYPE A EACH	628.7010 INLET PROTECTION TYPE B EACH	628.7504 TEMPORARY DITCH CHECKS LF	628.7555 CULVERT PIPE CHECKS EACH	628.7560 TRACKING PADS EACH	628.7570 ROCK BAGS EACH	SPV.0090.150 COMPOST TUBES LF
2537+50	-	2559+05	RT		278	2098	2098	36	--	--	180	5	--	60	1307
2538+00	-	2559+05	LT		--	--	--	--	--	22	--	--	--	--	--
2560+23	-	2564+00	RT		--	--	--	8	--	--	28	8	--	--	353
2560+23	-	2564+00	LT		76	188	188	--	1	2	--	--	--	10	--
2565+33	-	2571+58	RT		101	432	432	4	--	--	8	--	--	--	588
2565+33	-	2572+15	LT		--	--	--	12	1	6	24	--	--	--	--
2573+00	-	2581+60	RT		--	--	--	16	--	--	32	--	--	--	507
2574+50	-	2581+60	LT		--	--	--	12	--	--	42	6	--	--	--
22+00	-	26+20	RT	XN	139	496	496	--	--	--	--	--	--	--	--
102+00	-	103+25	RT	XEB	--	172	172	--	--	--	--	8	--	--	--
102+00	-	103+25	LT	XEB	--	195	195	--	--	--	--	--	--	--	--
107+00	-	110+50	RT	XEB	73	512	512	--	--	--	--	--	--	--	--
US 12/18 WB					--	477	477	--	--	--	--	7	--	--	--
NB TO WB RAMP					--	625	625	--	--	--	--	7	--	--	--
FEMRITE DR					--	366	366	--	--	--	--	--	--	--	--
UNDISTRIBUTED					67	556	556	9	1	6	31	4	4	10	276
CATEGORY 1000 PROJECT TOTAL					**733**	**6117**	**6117**	**97**	**3**	**36**	**345**	**45**	**4**	**80**	**3031**

LANDSCAPING

CATEGORY	STATION	TO	STATION	O/S	ALIGNMENT	625.0500 SALVAGED TOPSOIL SY	627.0200 MULCHING SY	628.6505 SOIL STABILIZER TYPE A ACRE	628.6510 SOIL STABILIZER TYPE B ACRE	629.0205 FERTILIZER TYPE A CWT	630.0110 SEEDING MIXTURE NO. 10 LB	630.0130 SEEDING MIXTURE NO. 30 LB	630.0200 SEEDING TEMPORARY LB	630.0300 SEEDING BORROW PIT LB	630.0500** SEED WATER MGAL
1000	2537+50	-	2559+05	RT	NB	20,015	8,719	--	--	12.6	221	65	540	--	450
1000	2538+00	-	2559+05	LT	NB	7,618	798	--	--	4.8	--	137	206	--	171
1000	2560+23	-	2564+00	RT	NB	4,432	825	--	--	2.8	52	10	120	--	100
1000	2560+23	-	2564+00	LT	NB	1,434	--	--	--	0.9	--	26	39	--	32
1000	2565+33	-	2571+58	RT	NB	6,297	969	--	--	4.0	72	18	170	--	141
1000	2565+33	-	2572+15	LT	NB	3,605	239	--	--	2.3	--	65	97	--	81
1000	2573+00	-	2581+60	RT	NB	6,568	1,903	--	--	4.1	71	23	177	--	148
1000	2574+50	-	2581+60	LT	NB	3,868	3,233	--	--	2.4	--	70	104	--	87
1000	22+00	-	26+20	RT	XN	958	958	--	--	0.6	5	11	26	--	22
1000	87+37	-	113+00	RT	XEB	6,445	6,445	--	--	4.1	48	52	174	--	145
1000	101+25	-	106+00	LT	XEB	724	724	--	--	0.5	3	9	20	--	16
1000	100+55	-	105+00	LT	XWB	1,396	1,396	--	--	0.9	17	12	38	--	31
1000	100+57	-	105+00	RT	XWB	1,904	1,904	--	--	1.2	17	12	51	--	43
1000	17+75	-	24+00	RT	XL	956	956	--	--	0.6	4	12	26	--	21
1000	47+00	-	56+00	RT	XFD	696	696	--	--	0.4	1	12	19	--	16
1000	48+50	-	56+00	LT	XFD	425	425	--	--	0.3	1	8	11	--	10
1000	BORROW SITE*					--	--	--	--	217.2	--	--	--	4,655	--
1000					UNDISTRIBUTED	6,734	3,019	5.0	5.0	26.0	128	136	455	465	151
					TOTALS:	**74,074**	**33,208**	**5.0**	**5.0**	**285.7**	**640**	**678**	**2,273**	**5,120**	**1,664**

* BORROW PIT QUANTITIES ARE ESTIMABED AND NOT DETERMINED FOR A PARTICULAR SITE
**QUANTITY BASED ON 4 WEEKS OF WATERING

DELINEATOR ITEMS

CATEGORY	STATION	-	STATION	LOCATION	633.0100 DELINEATOR POSTS STEEL EACH	633.0500 DELINEATOR REFLECTORS EACH	633.1000 DELINEATORS BARRIER WALL EACH
1000	2540+78 'TSB'	-	2559+69 'TSB'	IH 39 SB, RT	--	5	5
1000	87+38 'XEB'	-	111+39 'XEB'	US 12/18 EB, RT	5	7	2
1000	103+32 'XWB'	-	110+16 'XWB'	US 12/18 WB, RT	4	6	2
				TOTALS:	**9**	**18**	**9**

MOVING SIGNS

CATEGORY	SIGN #	SIGN CODE	LOCATION	638.2101 MOVING SIGNS TYPE I EACH
1000	M01-01		IH 39 SB	1
1000	M02-01		US 12/18 EB	1
1000	M02-02		US 12/18 EB	1
1000	M03-01		US 12/18 WB	1
1000	M03-02		US 12/18 WB	1
1000	M04-01		FEMRITE DR	1
1000	M04-02		FEMRITE DR	1
			TOTALS:	**7**

ATTENUATORS

CATEGORY	LOCATION	643.1055.S* TRUCK OR TRAILOR-MOUNTED ATTENUATOR DAYS
1000	UNDISTRIBUTED	4
	TOTALS:	**4**

*AS DIRECTED BY ENGINEER

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MARKING LINE

CATEGORY	STATION	-	STATION	LOCATION	646.1020 EPOXY 4-INCH EDGELINE WHITE LF	646.1020 EPOXY 4-INCH EDGELINE YELLOW LF	646.1020 EPOXY 4-INCH 12.5' SKIPS WHITE LF	646.1020 EPOXY 4-INCH 12.5' SKIPS YELLOW LF	646.3020 EPOXY 8-INCH EDGELINE WHITE LF	646.3020 EPOXY 8-INCH 3' SKIPS WHITE LF	646.5020 MARKING ARROW EPOXY WHITE EACH
1000	2540+78 'TSB'	-	2559+69 'TSB'	IH 39 SB	1,692	1,901	478	-	228	34	-
1000	1161+25 'XSB'	-	1166+16 'XSB'	IH 39 SB	501	501	125	-	-	125	-
1000	87+38 'XEB'	-	118+59 'XEB'	US 12/18 EB	2,377	2,886	783	-	2,087	575	-
1000	89+98 'XWB'	-	138+55 'XWB'	US 12/18 WB	4,129	4,854	1,214	-	696	366	-
1000	22+40 'XN'	-	26+21 'XN'	SB TO EB RAMP	584	-	-	-	-	-	-
1000	18+57 'XL'	-	24+05 'XL'	NB TO WB RAMP	559	548	-	-	-	-	-
1000	38+37 'XFD'	-	58+32 'XFD'	FEMRITE DR	3,991	4,392	314	149	-	-	2
				TOTALS:	**13,833**	**15,082**	**2,914**	**149**	**3,011**	**1,101**	**2**

SAWING

CATEGORY	STATION	-	STATION	LOCATION	690.0150* SAWING ASPHALT LF	690.0250* SAWING CONCRETE LF
1000	87+38 'XEB'	-	97+79 'XEB'	RT	6	-
1000	89+19 'XEB'	-	97+79 'XEB'	RT	917	-
1000			99+92 'XEB'	LT	4	-
1000	103+83 'XEB'	-	108+30 'XEB'	RT	-	457
1000			106+12 'XEB'	LT	3	-
1000			113+34 'XEB'	RT	6	-
1000			90+67 'XWB'	RT	3	-
1000			90+67 'XWB'	LT	6	-
1000			112+14 'XWB'	LT	6	-
1000			112+46 'XWB'	RT	3	-
1000			22+40 'XN'	RT	-	3
1000	22+40 'XN'	-	26+15 'XN'	RT	-	375
1000			18+57 'XL'	RT	3	-
1000			22+24 'XL'	RT	3	-
1000	47+00 'XFD'	-	47+77 'XFD'	RT	81	-
1000			56+50 'XFD'	LT	3	-
1000			56+50 'XFD'	RT	4	-
	UNDISTRIBUTED				105	84
				TOTALS:	**1,153**	**919**

*ADDITIONAL QUANTITIES ELSEWHERE

EMERGENCY RESPONSE AND REPAIR ITEMS

LOCATION	CATEGORY	LOCATION	SPV.0060.004 ROADWAY CLEANUP EACH	SPV.0060.201 INSTALL DEPARTMENT FURNISHED CRASH CUSHION LOW MAINTENANCE EACH	SPV.0060.202 REPAIR STATE OWNED CRASH CUSHION LOW MAINTENANCE EACH	SPV.0060.203 REPAIR STATE OWNED ENERGY ABSORBING TERMINAL (EAT) EACH	SPV.0060.204 EMERGENCY RESPONSE TO TRAFFIC INCIDENT INVOLVING GUARDRAIL OR EAT EACH	SPV.0060.205 EMERGENCY RESPONSE TO PAVEMENT REPAIRS EACH	SPV.0060.206 EMERGENCY RESPONSE TO TRAFFIC INCIDENT INVOLVING CONCRETE BARRIER TEMPORARY PRECAST EACH	SPV.0060.207 EMERGENCY RESPONSE TO TRAFFIC INCIDENT INVOLVING CRASH CUSHION EACH	SPV.0090.200 REPAIR STATE OWNED GUARDRAIL LF
PROJECT ID 1007-12-78	1000	UNDISTRIBUTED	9	0	1	2	3	2	5	3	400
	CATEGORY 1000 SUB TOTALS:		**9**	**0**	**1**	**2**	**3**	**2**	**5**	**3**	**400**
	1800	UNDISTRIBUTED		1	0	0	0	0	0	0	0
	CATEGORY 1800 SUB TOTALS:			**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
	TOTALS:		**9**	**1**	**1**	**2**	**3**	**2**	**5**	**3**	**400**

CONCRETE BARRIER & CRASH CUSHIONS TEMPORARY

LOCATION	STA	TO	STA	603.8000 CONCRETE BARRIER TEMPORARY PRECAST DELIVERED LF	603.8125 CONCRETE BARRIER TEMPORARY PRECAST INSTALLED LF	SPV.0090.203 REMOVING DEPARTMENT-OWNED CONCRETE BARRIER PRECAST LF	614.0905 CRASH CUSHIONS TEMPORARY EACH	** BACK WIDTH	** OBJECT MARKING PATTERN	** CRASH TEST LEVEL	** TRAFFIC DIRECTION	** TRAFFIC LOCATION	** CRASH CUSHION SHIELDS	** FOR INFORMATION ONLY COMMENTS
IH 39/90 SB														
STAGE 2	1140+95	-	1150+00	--	913	--	--							CONNECTS TO CBTP FOR STAGE 2 OF PROJECT 1007-12-75
END OF PROJECT	1141+12	-	1162+83	--	--	2,438	--							CBTP TO BE REMOVED OFF SITE
END OF PROJECT	1162+83	-	1173+84	--	975	--	--							CBTP TO REMAIN THROUGH WINTER SEASON
IH 39/90 SB SUBTOTALS				--	1,888	2,438	--							
IH 39/90 NB TO USH 12/18 WB RAMP														
STAGE 1	18+20	-	21+99	380	380	--	--							
	21+99			--	--	--	1	4	OM-3R	TL-3	UNIDIRECTIONAL	L	TEMPORARY CONC. BARRIER	
STAGE 1	18+31	-	24+10	580	580	--	--							
STAGE 2				--	--	--	--							
IH 39/90 NB TO USH 12/18 WB RAMP SUBTOTALS				960	960	--	1							
WORK AREA 1, STAGE 1B														
USH 12/18 EB	101+27	-	105+90	465	465	--	--							THRIE BEAM CONNECTIONS AT TO EX. PARAPETS ON BOTH ENDS
	--													
WORK AREA 1, STAGE 2														
USH 12/18 EB	99+00	-	113+38	1,440	1,440	--	--							
	99+00			--	--	--	1	4	OM-3R	TL-3	UNIDIRECTIONAL	L	TEMPORARY CONC. BARRIER	
WORK AREA 1 SUBTOTALS				1,905	1,905	--	1							
WORK AREA 2, STAGE 1														
USH 12/18 WB	100+58		105+09	450	450	--	--							THRIE BEAM CONNECTIONS AT TO EX. PARAPETS ON BOTH ENDS
WORK AREA 2, STAGE 2														
USH 12/18 WB	96+50	-	106+00	950	950	--	--							
	106+00			--	--	--	1	4	OM-3R	TL-3	UNIDIRECTIONAL	L	TEMPORARY CONC. BARRIER	
WORK AREA 2 SUBTOTALS				1,400	1,400	--	1							
WORK AREA 3, STAGE 1														
USH 12/18 WB	100+56	-	105+08	455	455	--	--							THRIE BEAM CONNECTIONS AT TO EX. PARAPETS ON BOTH ENDS
WORK AREA 3, STAGE 2														
USH 12/18 WB	96+50	-	106+00	--	--	--	--							CBTP FOR THIS AREA IS ACCOUNTED FOR IN WORK AREA, STAGE 2 (USH 12/18 WB)
WORK AREA 3 SUBTOTALS				455	455	--	--							
WORK AREAS 4 & 5, STAGE 2														
FEMRITE DR	49+52			--	--	--	1	4	OM-3R	TL-2	BIDIRECTIONAL	L	TEMPORARY CONC. BARRIER	
	49+52	-	53+48	395	395	--	--							
	53+82			--	--	--	1	4	OM-3R	TL-2	BIDIRECTIONAL	L	TEMPORARY CONC. BARRIER	
	49+00			--	--	--	1	4	OM-3R	TL-2	BIDIRECTIONAL	L	TEMPORARY CONC. BARRIER	
	49+00	-	53+49	450	450	--	--							
	53+49			--	--	--	1	4	OM-3R	TL-2	BIDIRECTIONAL	L	TEMPORARY CONC. BARRIER	
WORK AREAS 4 & 5 SUBTOTALS				845	845	--	4							
CATEGORY 1000 PROJECT TOTAL				**5,565**	**7,453**	**--**	**7**							
CATEGORY 1800 PROJECT TOTAL				**--**	**--**	**2,438**	**--**							

TRAFFIC CONTROL ITEMS

CATEGORY	LOCATION	* STAGE DURATION	643.0300 TRAFFIC CONTROL DRUMS		643.0420 TRAFFIC CONTROL BARRICADES TYPE III		643.0500 TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER POSTS	643.0600 BASES	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A		643.0715 TRAFFIC CONTROL WARNING LIGHTS TYPE C		643.0800 TRAFFIC CONTROL ARROW BOARDS		643.0900 TRAFFIC CONTROL SIGNS		643.0910 COVERING SIGNS TYPE I			643.0920 TRAFFIC CONTROL COVERING SIGNS TYPE II			643.1050 TRAFFIC CONTROL SIGNS PCMS	
		DAYS	EACH*	DAYS	EACH*	DAYS	EACH	EACH	EACH*	DAYS	EACH*	DAYS	EACH*	DAYS	EACH*	DAYS	EACH	# CYCLES	SIGNS	EACH	# CYCLES	SIGNS	EACH*	DAYS
1000	IH 39 SB																							
	SHOULDER CLOSURE	223	25	5,575	--	--	--	--	--	--	--	--	1	223	10	2,230	--	--	--	--	--	--	--	--
	NIGHTTIME CLOSURE	60	110	6,600	--	--	--	--	--	--	16	960	2	120	14	840	--	--	--	--	--	--	--	--
	SB-EB RAMP CLOSURE	100	25	2,500	4	400	--	--	6	600	12	1,200	--	--	9	900	1	1	1	4	1	4	--	--
	WB-SB RAMP CLOSURE	100	65	6,500	4	400	--	--	6	600	--	--	--	--	9	900	2	1	2	2	1	2	--	--
	IH 39 SB SUBTOTAL			21,175		800	--	--		1,200		2,160		343		4,870			3			6		--
	IH 39 NB TO USH 12/18 WB RAMP																							
	NB-WB RAMP	223	25	5,575	--	--	--	--	--	--	--	--	--	--	6	1,338	--	--	--	--	--	--	--	--
	IH 39 NB TO USH 12/18 WB RAMP SUBTOTAL			5,575		--	--	--		--		--		--		1,338	--	--	--			--		--
	WORK AREA 1, STAGE 1A																							
	USH 12/18 EB	3	65	195	2	6	--	--	4	12	14	42	2	6	11	33	--	--	--	--	--	--	--	--
	WORK AREA 1, STAGE 1B																							
	USH 12/18 EB	4	80	320	1	4	--	--	3	12	12	48	1	4	9	36	--	--	--	--	--	--	1	4
	SB-EB RAMP CLOSURE	4	25	100	4	16	--	--	6	24	12	48	--	--	9	36	--	--	--	--	--	--	1	7
	WORK AREA 1, STAGE 2																							
	USH 12/18 EB	100	90	9,000	1	100	21	21	2	200	--	--	1	100	19	1,900	3	1	3	--	--	--	3	21
	WORK AREA 1 SUBTOTAL			9,295		122	21	21		236		90		106		1,969			3			--		32
	WORK AREA 2, STAGE 1																							
	USH 12/18 WB	5	60	300	1	5	--	--	2	10	10	50	2	10	11	55	--	--	--	2	5	10	--	--
	WORK AREA 2, STAGE 2																							
	USH 12/18 WB	100	115	11,500	2	200	--	--	4	400	28	2,800	--	--	14	1,400	2	1	2	2	1	2	1	7
	WORK AREA 2 SUBTOTAL			11,800		205	--	--		410		2,850		10		1,455			2			12		7
	WORK AREA 3, STAGE 1																							
	USH 12/18 WB	5	110	550	1	5	--	--	2	10	12	60	2	10	12	60	--	--	--	--	--	--	--	--
	WB-SB RAMP CLOSURE	5	--	--	4	20	--	--	6	30	--	--	--	--	2	10	--	--	--	2	5	10	1	7
	WORK AREA 3, STAGE 2																							
	USH 12/18 WB	100	140	14,000	6	600	--	--	10	1,000	37	3,700	--	--	18	1,800	4	1	4	2	1	2	1	7
	WORK AREA 3 SUBTOTAL			14,550		625	--	--		1,040		3,760		10		1,870			4			12		14
	WORK AREAS 4 & 5, STAGE 1																							
	FEMRITE DRIVE	8	25	200	1	8	--	--	2	16	10	80	1	8	12	96	--	--	--	--	--	--	--	--
	WORK AREAS 4 & 5, STAGE 2																							
	FEMRITE DRIVE	100	45	4,500	1	100	--	--	2	200	20	2,000	1	100	16	1,600	--	--	--	--	--	--	--	--
	WORK AREAS 4 & 5 SUBTOTAL			4,700		108	--	--		216		2,080		108		1,696			--			--		--
	FEMRITE DRIVE FULL CLOSURE																							
	FEMRITE DRIVE	5	--	--	14	112	--	--	20	160	--	--	--	--	10	80	--	--	--	--	--	--	--	--
	ADVANCED NOTICE	21	15	315	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	2	14
	TEMPORAY WIDENING	2	20	40	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	3	6
	STRUCTURE WORK	3	20	60	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	5	15
	FEMRITE DR FULL CLOSURE SUBTOTAL			415		112	--	--		160		--		--		80			--			--		35

TRAFFIC CONTROL ITEMS

CATEGORY	LOCATION	* STAGE DURATION	643.0300 TRAFFIC CONTROL DRUMS		643.0420 TRAFFIC CONTROL BARRICADES TYPE III		643.0500 TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER POSTS	643.0600 BASES	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A		643.0715 TRAFFIC CONTROL WARNING LIGHTS TYPE C		643.0800 TRAFFIC CONTROL ARROW BOARDS		643.0900 TRAFFIC CONTROL SIGNS		643.0910 COVERING SIGNS TYPE I			643.0920 TRAFFIC CONTROL COVERING SIGNS TYPE II			643.1050 TRAFFIC CONTROL SIGNS PCMS	
		DAYS	EACH*	DAYS	EACH*	DAYS	EACH	EACH	EACH*	DAYS	EACH*	DAYS	EACH*	DAYS	EACH*	DAYS	EACH	# CYCLES	SIGNS	EACH	# CYCLES	SIGNS	EACH*	DAYS
	USH 12/18 EB FREEWAY CLOSURE																							
	ADVANCED NOTICE	14	15	210	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	2	14
	STRUCTURE WORK	3	200	600	9	27	--	--	14	42	39	117	4	12	15	45	--	--	--	--	--	--	11	33
	USH 12/18 EB FREEWAY CLOSURE SUBTOTAL			810		27	--	--		42		117		12		45			--			--		47
	USH 12/18 WB FREEWAY CLOSURE																							
	ADVANCED NOTICE	14	15	210	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	2	14
	FREEWAY CLOSURE	3	160	480	7	21	--	--	11	33	55	165	3	9	11	33	--	--	--	--	--	--	12	36
	WORK AREA 4 SUBTOTAL			690		21	--	--		33		165		9		33			--			--		50
	IH 39/90 NB TO USH 12/18 WB RAMP CLOSURE																							
	ADVANCED NOTICE	21	10	210	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1	7
	STRUCTURE WORK	3	115	345	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	5	15
	ROADWAY ITEMS	2	115	230	5	10	--	--	8	16	--	--	--	--	7	14	--	--	--	--	--	--	5	10
	WORK AREA 4 SUBTOTAL			785		10	--	--		16		--		--		14			--			--		32
	DETOUR SIGNING																							
	IH 39/90 SB TO USH 12/18 EB	100	--	--	--	--	--	--	--	--	--	--	--	--	76	7,600	4	1	4	--	--	--	1	7
	USH 12/18 WB TO IH 39/90 SB	100	--	--	--	--	--	--	--	--	--	--	--	--	76	7,600	4	1	4	--	--	--	1	7
	DETOUR SUBTOTALS			--		--	--	--		--		--		--		15,200			8			--		14
	UNDISTRIBUTED			17,450		510	4	4		840		2,810		150		7,140			10			10		60
	PROJECT TOTALS			87,245		2,540	25	25		4,193		14,032		748		35,710			30			40		291

TRAFFIC CONTROL GAWK SCREEN

CATEGORY	STATION	-	STATION	LOCATION	SPV.0090.201 TRAFFIC CONTROL GAWK SCREEN FURNISHED LF	SPV.0090.202 TRAFFIC CONTROL GAWK SCREEN INSTALLED LF	COMMENTS
1000	1140+12 'XSB'	-	1175+08 'XSB'	IH 39 SB, RT	3496	3496	CBTP ALONG SB MEDIAN SHOULDER
				TOTALS:	**3,496**	**3,496**	

TEMPORARY PAVEMENT MARKINGS

CATEGORY	LOCATION	ROADWAY	STATIONS	646.9010 MARKING REMOVAL LINE WATER BLASTING 4-INCH LF	646.9110 MARKING REMOVAL LINE WATER BLASTING 8-INCH LF	649.0105 TEMPORARY MARKING LINE PAINT 4-INCH YELLOW LF	649.0105 TEMPORARY MARKING LINE PAINT 4-INCH WHITE LF	649.0205 TEMPORARY MARKING LINE PAINT 8-INCH WHITE LF	649.0760 TEMPORARY MARKING RAISED PAVEMENT MARKER TYPE I EACH
1000	IH 39 SB								
		SB-EB RAMP CLOSURE	1159'XSB'+75 - 1162'XSB'+90	130	--	--	315	--	--
		WB-SB RAMP CLOSURE	1159'XSB'+75 - 1166'XSB'+25	--	--	--	650	--	--
		IH 39 SB SUBTOTAL		130	--	--	965	--	--
	WORK AREA 1, STAGE 2								
		USH 12/18 EB	97'XEB'+66 - 106'XEB'+25	225	--	--	860	--	17
		USH 12/18 EB	97'XEB'+66 - 106'XEB'+25	225	--	--	860	--	17
		USH 12/18 EB	97'XEB'+66 - 116'XEB'+00	650	--	--	1,835	--	--
		WORK AREA 1 SUBTOTAL		1,100	--	--	3,555	--	34
	WORK AREA 2, STAGE 2								
		USH 12/18 WB	89'XWB'+99 - 138'XWB'+55	1,305	275	3,455	2,450	210	16
		WORK AREA 2 SUBTOTAL		1,305	275	3,455	2,450	210	16
	WORK AREA 3, STAGE 2								
		USH 12/18 WB	90'XWB'+67 - 138'XWB'+55	2,535	--	2,175	2,335	--	--
		WORK AREA 3 SUBTOTAL		2,535	--	2,175	2,335	--	--
	WORK AREAS 4 & 5, STAGE 2								
		FEMRITE DRIVE	38'XFD'+37 - 58'XFD'+32 RT	1,175	--	--	--	--	--
		FEMRITE DRIVE	48'XFD'+00 - 58'XFD'+32 LT	1,035	--	--	--	--	--
		FEMRITE DRIVE	53'XFD'+60 - 58'XFD'+32	1,890	--	--	--	--	--
		WORK AREAS 4 & 5 SUBTOTAL		4,100	--	--	--	--	--
	PROJECT TOTALS			9,170	275	5,630	9,305	210	50
						14,935			

TRAFFIC CONTROL SIGNS FIXED MESSAGE

CATEGORY	SIGN NO.	FT		FT	643.1000 SF
1000	EB1	12.0	X	3.5	42.00
	EB2	11.0	X	1.5	16.50
	EB3	11.0	X	1.5	16.50
	EB4	3.5	x	2.5	8.75
	WB1	3.5	X	2.5	8.75
	WB2	11.0	X	3.5	38.50
	WB3	11.0	X	4.5	49.50
	PROJECT TOTALS				180.50

TEST PITS

LOCATION	SPV.0060.003 TEST PITS EACH	312.0110* SELECT CRUSHED MATERIAL TON
PROJECT ID 1007-12-78 IH 39	5	50
TOTALS:	**5**	**50**

*ADDITIONAL QUANTITIES ELSEWHERE

CONCRETE PAVEMENT JOINT LAYOUT

LOCATION	SPV.0105.001 CONCRETE PAVEMENT JOINT LAYOUT PROJECT 1007-12-78 LS
PROJECT ID 1007-12-78 IH 39	1
TOTALS:	**1**

CPM PROGRESS SCHEDULE

PROJECT	SPV.0060.001 BASELINE CPM PROGRESS SCHEDULE EACH	SPV.0060.002 CPM PROGRESS SCHEDULE UPDATES AND ACCEPTED REVISIONS EACH
1007-12-78	1	12
TOTALS:	**1**	**12**

CONSTRUCTION STAKING

PROJECT	SPV.0105.002 SURVEY PROJECT 1007-12-78 WITH OPTIONAL AMG FOR CONCRETE PAVEMENT AND BASE COURSE LS
1007-12-78	1
TOTALS:	**1**

STORMWATER TREATMENT ITEMS

PROJECT NUMBER	CATEGORY	BEGINNING STATION	ENDING STATION	LT/RT	SPV.0165.150 STORMWATER TREATMENT FILTER STRIP SF	REMARKS
1007-12-78	1000	2537+67	2544+67	RT	13,438	
	1000	1176+16 'XSB'	1183+11 'XSB'	RT	15,877	
			TOTALS:		**29,315**	

BENCHMARKS				
NO.	STATION	ELEV.	OFFSET	DESCRIPTION
754B	2549+42.18	874.38	431.8' RT	CHISELED SQUARE ON EAST SIGN BASE

STORCK ROAD FARM LLC
CITY OF MADISON
CITY OF MADISON
ATC TOWER (TO REMAIN)
SB TO EB RAMP
FLINT HILLS RESOURCES
CAUTION
CAUTION
CAUTION
ATC TOWER (TO REMAIN)
MG&E
MADISON METROPOLITAN SEWER DISTRICT
BORE AND JACK CULVERT PIPE, SEE CONSTRUCTION DETAIL
RETAINING WALL STRUCTURE R-13-334
IH 39 SB
2545'TSB'
2550'TSB'
2540'TSB'
2535'TSB'
2530'TSB'
2545
2550
2555'TSB'
2555
2540
2535
2530
MATCH LINE STA 2558+00
DELINEATED WETLANDS, TYP
SLOPE INTERCEPT, TYP
IH 39 NB
WISDOT - ITS
EXISTING R/W, TYP
BM #754B
THE UNITED STATES OF AMERICA IN TRUST FOR THE WISCONSIN WINNEBAGO TRIBE
WISCONSIN WINNEBAGO TRIBE
WISCONSIN WINNEBAGO TRIBE
HO-CHUNK NATION LAND RECORDS OFFICE

BEGIN PROJECT 1007-12-78
STA 2533+97.70

VCL = 300.00
K = 471.75
VCL = 430.00
K = 568.52

VPC STA 2541+00.00
VPC EL 877.34
VPI STA 2542+50.00
VPI EL 878.30
VPT STA 2544+00.00
VPT EL 880.22
VPI STA 2556+00.00
VPI EL 895.55
VPC STA 2553+85.00
VPC EL 892.80
STA 2543+25.00
EL 862.00
STA 2535+00.00
EL 867.00
STA 2537+00.00
EL 865.75
STA 2538+00.00
EL 864.62
STA 2550+75.00
EL 862.04
STA 2545+50.00
EL 859.10
STA 2546+00.00
EL 858.85
STA 2546+50.00
EL 860.19

ROADWAY PROFILE AT NB REFERENCE LINE
EARLY FILL PROFILE AT NB REFERENCE LINE
PROPOSED RETAINING WALL FINISHED GRADE R-13-334 (SEE STRUCTURE PLANS)
EXISTING GROUND AT NB REFERENCE LINE
14.5"
1.28%
0.64%
-0.62%
-1.13%
-0.50%
-0.50%
2.68%
0.50%
PROPOSED DITCH PROFILE RIGHT
PROPOSED DITCH PROFILE RIGHT
PROPOSED DITCH PROFILE RIGHT
STA. 2546+00.00, 1 - 30-INCH CPRC CLASS IV REQ'D
NB EARLY FILL PROFILE ELEVATION
NB EXISTING PROFILE ELEVATION

930 920 910 900 890 880 870 860 850

867.93 868.37 867.89 867.40 866.92 868.93 871.64 868.66 872.28 868.39 872.92 868.01 873.56 867.66 874.20 867.01 874.85 866.23 875.49 865.48 876.13 863.91 876.88 861.91 877.84 859.66 879.01 860.58 880.29 859.06 881.56 859.18 882.84 859.28 884.12 859.66 885.40 860.32 886.68 860.77 887.95 861.00 889.23 861.59 890.51 863.24 891.78 864.37 892.95 866.00 893.94 866.58 894.75

2528 2530 2535 2540 2545 2550 2555 2558

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	PLAN AND PROFILE: IH 39 NB	SHEET 199 E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0501_PP_NB.DWG
LAYOUT NAME - 01
PLOT DATE : 9/25/2019 12:29 PM
PLOT BY : KYLE CORNELIUS
PLOT NAME :
PLOT SCALE : 1 IN:200 FT

MATCH LINE STA 2558+00

USH 12/18 EB

USH 12/18 WB

IH 39 SB

IH 39 NB

BRIDGE STRUCTURE B-13-466

WISDOT - ITS

BORE AND JACK PIPE, SEE CONSTRUCTION DETAIL

BRIDGE STRUCTURE B-13-464

STA 2564+68.29 = STA 101+13.06'XWB'

WISDOT - ITS

STA 2572+10.49 = STA 19+40.55'XL'

BRIDGE STRUCTURE B-13-461

1165'XSB'

1170'XSB'

1175'XSB'

1180'XSB'

1185'XSB'

1190'XSB'

KW FEMRITE LLC

WI DEPT OF ADMIN DIV FACILITIES MGMT

BRIDGE STRUCTURE B-13-462

WISDOT - ITS

WISDOT - ITS

WISCONSIN DOA

FEMRITE DR

CHARTER COMMUNICATIONS

CITY OF MADISON

STA 2582+55.94 = STA 51+15.35'XFD'

BRIDGE STRUCTURE B-13-732

MG&E

CAUTION

BRIDGE STRUCTURE B-13-463

AT&T

MG&E HIGH PRESSURE GAS

CAUTION

AT&T

WISDOT - ITS

BOLLIG PROPERTIES

DATEX OHMEDA

RETAINING WALL R-13-348

RETAINING WALL R-13-350

STA 2560+19.69 = STA 101+82.56'XEB'

RETAINING WALL R-13-349

BRIDGE STRUCTURE B-13-729

BRIDGE STRUCTURE B-13-467

WISDOT - ITS

RETAINING WALL R-13-351

BRIDGE STRUCTURE B-13-730

BRIDGE STRUCTURE B-13-465

DELINEATED WETLANDS, TYP

BRIDGE STRUCTURE B-13-731

RETAINING WALL R-13-352

SLOPE INTERCEPT, TYP

EXISTING R/W, TYP

END PROJECT 1007-12-78
STA 2584+00.00

5

5

STA 2560+19.69
STRUCTURE B-13-729 REQ'D
1-SPAN (72W GIRDERS)
ROADWAY WIDTH: 60'-0"
TOTAL LENGTH: 145'-6"
90° SKEW

STA 2564+68.29
STRUCTURE B-13-730 REQ'D
1-SPAN (72W GIRDERS)
ROADWAY WIDTH: 60'-8"
TOTAL LENGTH: 146'-6"
90° SKEW

VCL = 580.00
K = 567.83

STA 2572+10.49
STRUCTURE B-13-731 REQ'D
2-SPAN (54W GIRDERS)
ROADWAY WIDTH: 60'-0"
TOTAL LENGTH: 223'-10½"
30° SKEW

VCL = 400.00
K = 829.60

STA 2582+55.94
STRUCTURE B-13-732 REQ'D
3-SPAN (36W GIRDERS)
ROADWAY WIDTH: 60'-0"
TOTAL LENGTH: 146'-6"
3° SKEW

VPT STA 2558+15.00
VPT EL 896.67

STA 2560+64.54
EL 885.40
STA 2561+25.00
EL 885.00

PROPOSED ROADWAY PROFILE AT NB REFERENCE LINE
EARLY FILL PROFILE AT NB REFERENCE LINE

STA 2563+73.07
EL 886.30

VPC STA 2565+70.00
VPC EL 900.61

STA 2565+59.42
EL 887.00
STA 2566+00.00
EL 886.30
STA 2567+25.00
EL 887.00

VPI STA 2568+60.00
VPI EL 902.12

14.5"

STA 2570+50.00
EL 885.20
STA 2571+71.21
EL 886.00
VPT STA 2571+50.00
VPT EL 900.67

VPC STA 2574+50.00
VPC EL 899.17

STA 2574+34.26
EL 888.80
STA 2575+00.00
EL 887.00

VPI STA 2576+50.00
VPI EL 898.17

STA 2576+75.00
EL 889.20

VPT STA 2578+50.00
VPT EL 896.21

STA 2579+00.00
EL 885.00

STA. 2579+00.00,
1 - 24-INCH CPRC
CLASS III REQ'D

STA 2581+64.02
EL 887.50

STA 2558+79.04
EL 866.06

STA 2560+64.54
EL 859.95

STA 2562+25.00
EL 859.15

STA 2563+73.06
EL 860.60

STA 2565+29.95
EL 861.60

STA 2565+60.07
EL 862.35

STA 2570+60.00
EL 864.90

STA 2572+03.41
EL 868.14

STA 2573+99.10
EL 870.65

STA 2576+50.00
EL 874.00

STA 2578+50.00
EL 875.00

STA 2579+25.00
EL 879.00

STA 2581+67.16
EL 883.00

STA 2560+51.24
EL 860.00

STA 2564+16.05
EL 860.85

0.52%
-0.66%
0.52%
-1.72%
0.56%
-0.55%
0.66%
-0.50%
-2.74%
1.26%
-1.87%
0.95%
-0.98%
1.65%
5.33%
0.50%
1.33%
1.28%
0.51%
2.50%
0.98%
0.58%
-0.50%
-0.36%

23'-8 5/8" +/- MIN CLEAR
24'-5 1/2" +/- MIN CLEAR
20'-3 1/4" +/- MIN CLEAR
16'-4 7/8" +/- MIN CLEAR

PROPOSED DITCH PROFILE LEFT
PROPOSED DITCH PROFILE RIGHT
PROPOSED DITCH PROFILE LEFT
PROPOSED DITCH PROFILE LEFT
PROPOSED DITCH PROFILE RIGHT
PROPOSED DITCH PROFILE RIGHT
PROPOSED DITCH PROFILE RIGHT

STA. 2562+25.00,
1 - 42-INCH CPRC CLASS V REQ'D

STA. 2575+00.00,
1 - 24-INCH CPRC CLASS III REQ'D

NB EARLY FILL PROFILE ELEVATION
NB EXISTING PROFILE ELEVATION

EXISTING GROUND AT NB REFERENCE LINE

930 920 910 900 890 880 870 860 850

868.93 895.91 865.38 896.43 869.60 896.95 870.01 897.47 870.43 897.99 870.84 898.51 867.92 899.03 871.77 899.55 872.46 899.93 871.57 900.13 870.02 900.16 869.17 900.01 868.48 899.69 870.11 899.21 868.49 898.71 872.73 898.21 874.22 897.70 873.40 897.08 874.83 896.33 878.13 895.47 878.15 894.51 877.59 893.52 879.05 892.54 874.39 871.34 883.23 886.87 888.97 888.75

2558 2560 2565 2570 2575 2580 2585 2588

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	PLAN AND PROFILE: IH 39 NB	SHEET 200 E

BENCHMARKS				
NO.	STATION	ELEV.	OFFSET	DESCRIPTION
754B	2549+42.18	874.38	431.8' RT	CHISELED SQUARE ON EAST SIGN BASE

STORCK ROAD FARM LLC
CITY OF MADISON
CITY OF MADISON
ATC TOWER (TO REMAIN)
FLINT HILLS RESOURCES
CAUTION
CAUTION
CAUTION
ATC TOWER (TO REMAIN)
MG&E
MADISON METROPOLITAN SEWER DISTRICT
END CONSTRUCTION 1007-12-75
(CONSTRUCTED BY OTHERS)
BORE AND JACK CULVERT PIPE, SEE CONSTRUCTION DETAIL
RETAINING WALL STRUCTURE R-13-334
IH 39 SB
IH 39 NB
BRIDGE STRUCTURE B-13-466
USH 12/18 EB
DELINEATED WETLANDS, TYP
SLOPE INTERCEPT, TYP
BRIDGE STRUCTURE B-13-729
RETAINING WALL R-13-348
END CONSTRUCTION STA 2559+68.82'TSB'
STA 2560+19.69 = STA 101+82.56'XEB'
WISDOT - ITS
EXISTING R/W, TYP
BM #754B
RETAINING WALL R-13-349
THE UNITED STATES OF AMERICA IN TRUST FOR THE WISCONSIN WINNEBAGO TRIBE
WISCONSIN WINNEBAGO TRIBE
WISCONSIN WINNEBAGO TRIBE
HO-CHUNK NATION LAND RECORDS
BEGIN CONSTRUCTION STA 2540+77.60'TSB'

PROPOSED MEDIAN DITCH PROFILE
EXISTING GROUND AT TSB REFERENCE LINE
PROPOSED PROFILE AT TSB REFERENCE LINE
TSB PROPOSED PROFILE ELEVATION
TSB EXISTING PROFILE ELEVATION
STA. 2546+17.04'TSB', 1 - 30-INCH CPRC CLASS IV REQ'D SKEW 1° RHF
VCL = 700.00
K = 303.76
VCL = 670.00
K = 401.99

STA 2534+00.00'TSB' EL 872.10
STA 2533+97.70'TSB' EL 872.08
STA 2540+77.60'TSB' EL 867.76
STA 2540+75.00'TSB' EL 868.70
STA 2542+25.00'TSB' EL 870.00
STA 2543+55.00'TSB' EL 869.15
STA 2545+00.00'TSB' EL 869.90
VPC STA 2544+75.00'TSB' VPC EL 867.52
STA 2546+50.00'TSB' EL 869.15
STA 2547+00.00'TSB' EL 870.55
VPI STA 2548+25.00'TSB' VPI EL 867.30
STA 2549+00.00'TSB' EL 872.25
STA 2550+50.00'TSB' EL 874.60
STA 2551+50.00'TSB' EL 876.95
VPT STA 2551+75.00'TSB' VPT EL 875.15
STA 2553+00.00'TSB' EL 878.00
VPC STA 2552+95.00'TSB' VPC EL 877.84
STA 2555+00.00'TSB' EL 880.35
VPI STA 2556+30.00'TSB' VPI EL 885.35
STA 2557+75.00'TSB' EL 883.00
STA 2558+25.00'TSB' EL 884.55
STA 2558+45.00'TSB' EL 884.80
STA 2558+80.00'TSB' EL 884.62
VPT STA 2559+65.00'TSB' VPT EL 887.28
STA 2559+28.59'TSB' EL 885.10
STA 2559+68.82'TSB' EL 887.30

-0.50% 0.75% 0.87% -0.65% 0.52% -0.50% 2.80% 0.85% 1.57% 2.35% 0.70% 2.24% 1.18% 0.96% 3.10% 1.25% 0.51% 0.99% 0.58%
-0.06%

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	PLAN AND PROFILE: IH 39 TSB	SHEET 201 E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0501_PP_TSB.DWG
LAYOUT NAME - 03
PLOT DATE : 8/1/2019 12:50 PM
PLOT BY : MATTHEW WISWELL
PLOT NAME :
PLOT SCALE : 1 IN:200 FT
WISDOT/CADDS SHEET 44

CITY OF MADISON ENGINEER STORMWATER UTILITY 533

CITY OF MADISON ENGINEER STORMWATER UTILITY 533

CITY OF MADISON ENGINEER STORMWATER UTILITY 533

EXISTING R/W, TYP

P.L.

P.L.

WEAK

96'XEB'

98'XEB'

22'XN'

24'XN'

20'XN'

26'XN'

SLOPE INTERCEPT, TYP

WISDOT - ITS

USH 12/18 EB

SB TO EB RAMP

100'XEB'

STA 100+98.44'XEB' =
STA 1162+25.80'XSB'

IH 39 SB

1166'XSB'

1164'XSB'

1162'XSB'

2564

PROPOSED IH 39 NB

2562

2560

BRIDGE STRUCTURE B-13-729

BRIDGE STRUCTURE B-13-466

STA 101+82.56'XEB' =
STA 2560+19.69

RETAINING WALL R-13-349

RETAINING WALL R-13-348

BEGIN CONSTRUCTION
STA 22+40'XN'

EXISTING GROUND AT XN REFERENCE LINE

XN EXISTING PROFILE ELEVATION

16'XN'	18'XN'	20'XN'	22'XN'	24'XN'	26'XN'	28'XN'	30'XN'	31'XN'
872.62	871.42	870.28	869.22	868.34	867.48	866.85	866.08	865.68	865.26	864.98	864.84	864.84	864.84	864.99	865.19	865.41	865.31	865.08	864.96

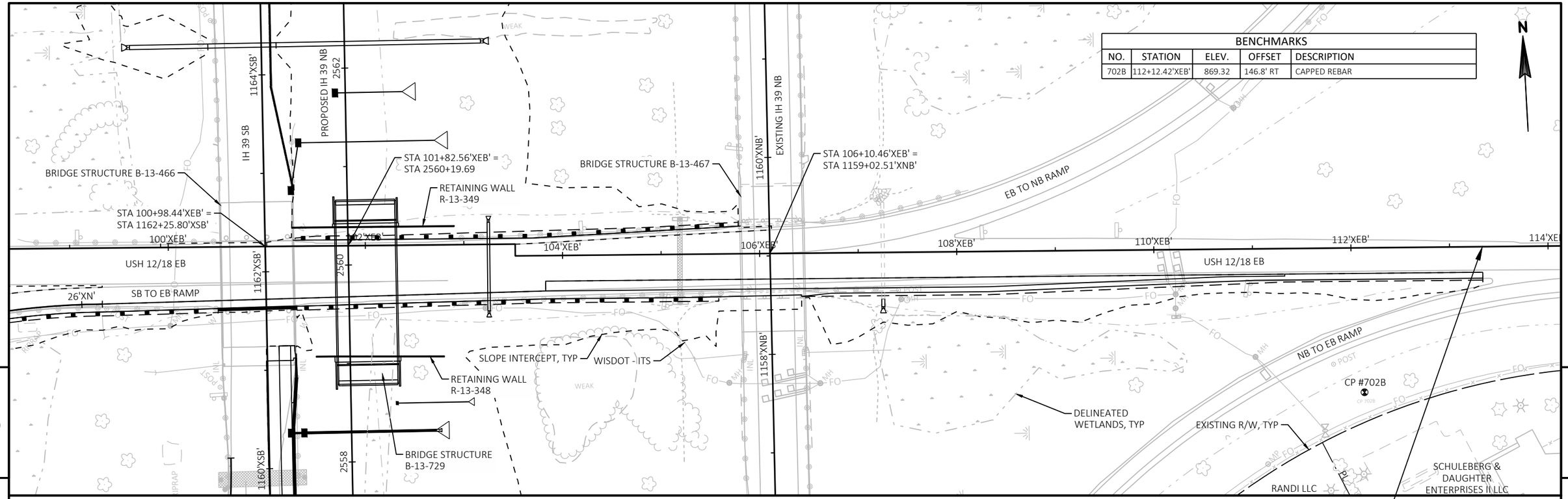
900 890 880 870 860

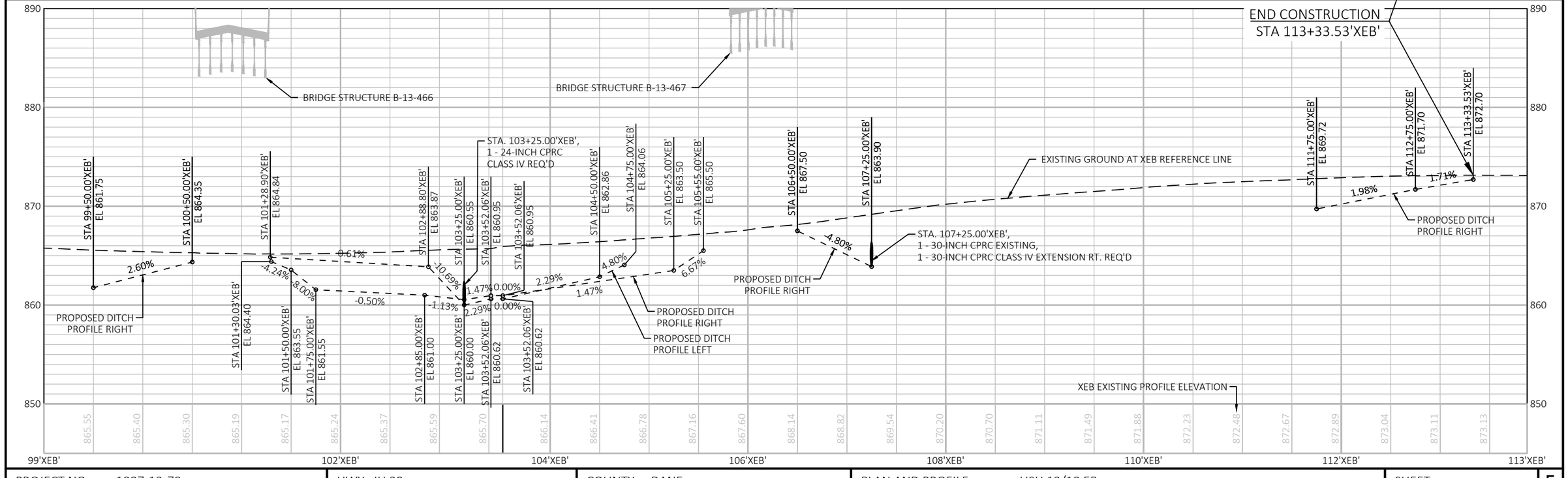
PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	PLAN AND PROFILE: SB TO EB RAMP	SHEET 202	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0501_PP_SB-EB.DWG
LAYOUT NAME - 04

PLOT DATE : 8/1/2019 12:22 PM PLOT BY : MATTHEW WISWELL PLOT NAME : PLOT SCALE : 1 IN:100 FT

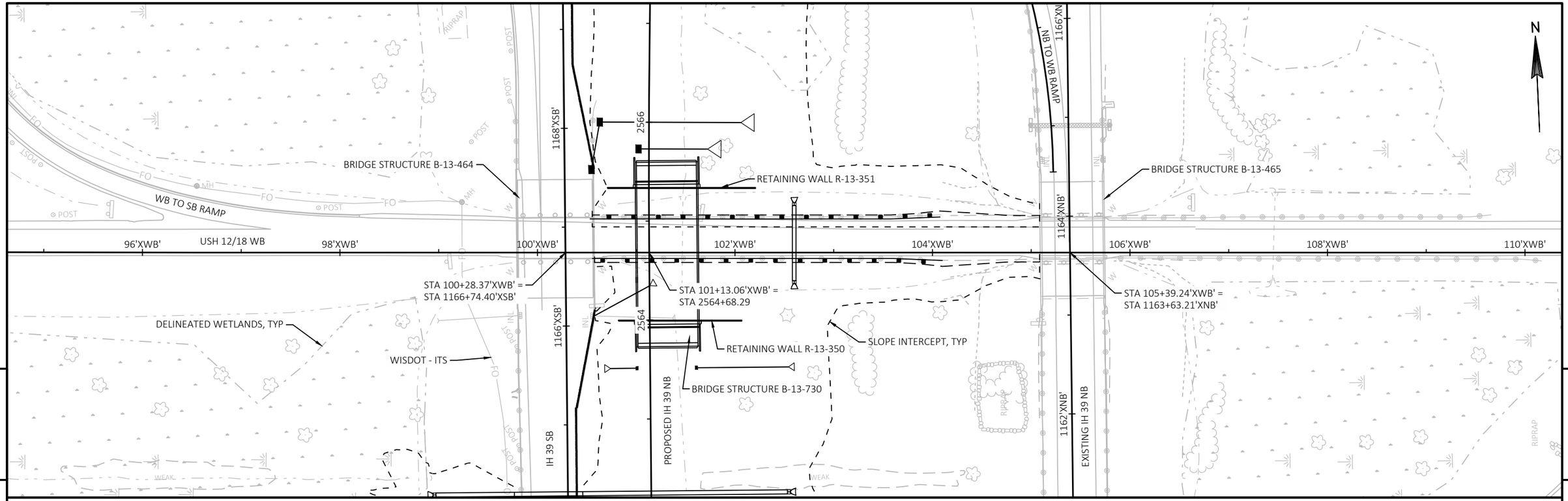
BENCHMARKS				
NO.	STATION	ELEV.	OFFSET	DESCRIPTION
702B	112+12.42'XEB'	869.32	146.8' RT	CAPPED REBAR





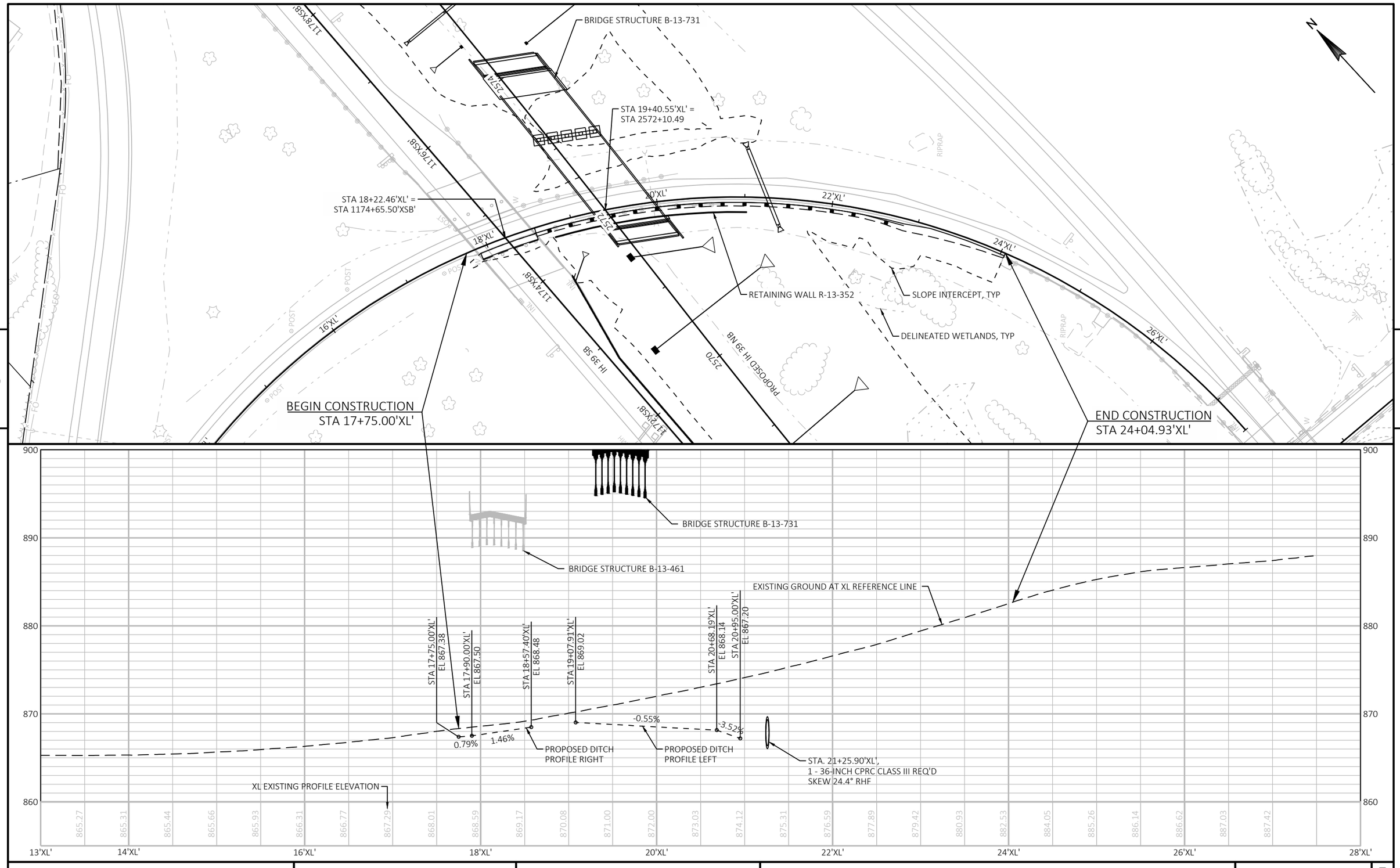
PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	PLAN AND PROFILE: USH 12/18 EB	SHEET 203	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0501_PP_SB-EB.DWG
LAYOUT NAME - 05
PLOT DATE : 8/1/2019 12:24 PM
PLOT BY : MATTHEW WISWELL
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44



PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	PLAN AND PROFILE: USH 12/18 WB	SHEET 204	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0501_PP_WB.DWG
LAYOUT NAME - 06
PLOT DATE : 9/6/2019 12:31 PM PLOT BY : MATTHEW WISWELL PLOT NAME : PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44



PROJECT NO: 1007-12-80	HWY: IH 39	COUNTY: DANE	PLAN AND PROFILE: NB TO WB RAMP	SHEET 205	E

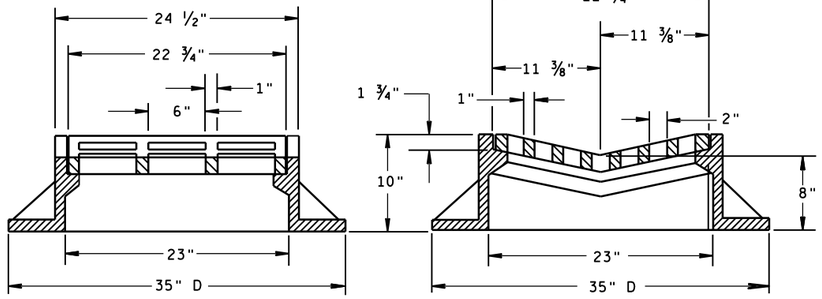
Standard Detail Drawing List

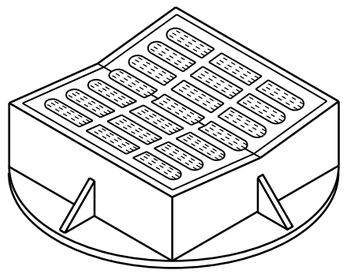
08A05-19B	INLET COVERS TYPE B, B-A, C, MS, MS-A, & WM
08A05-19D	INLET COVER TYPE BW, MANHOLE COVERS, TYPE K, J, J-S, L & M
08C06-02	INLETS 3-FT AND 4-FT DIAMETER
08C07-02	INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT
08D01-20A	CONCRETE CURB & GUTTER
08D01-20B	CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS
08D03-07	CONCRETE SURFACE DRAINS DROP INLET TYPE AT STRUCTURES
08D04-05	CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
08E14-01	TRACKING PAD
08E15-01	CULVERT PIPE CHECK
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
08F04-07	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
08F06-04	REINFORCED CONCRETE APRON ENDWALL FOR PIPE UNDERDRAIN
12A03-10	NAME PLATE (STRUCTURES)
13A03-06	CONCRETE PAVEMENT SHOULDERS
13A05-05A	SHOULDER RUMBLE STRIP, MILLING
13A05-05B	SHOULDER RUMBLE STRIP, MILLING
13B02-09A	CONCRETE PAVEMENT APPROACH SLAB
13C01-19	CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES
13C09-15A	CONCRETE PAVEMENT REPAIR AND REPLACEMENT
13C09-15B	CONCRETE PAVEMENT REPAIR AND REPLACEMENT
13C09-15C	CONCRETE PAVEMENT REPAIR AND REPLACEMENT
13C11-12A	RURAL DOWELED CONCRETE PAVEMENT
13C11-12B	RURAL DOWELED CONCRETE PAVEMENT
13C18-07A	CONCRETE PAVEMENT JOINTING
13C18-07B	CONCRETE PAVEMENT STEEL REINFORCEMENT
13C18-07C	CONCRETE PAVEMENT JOINT TYPES
13C18-07D	CONCRETE PAVEMENT JOINT TYPES AT UTILITY FIXTURES
13C18-07F	CONCRETE PAVEMENT INTERSECTION BOXOUT FOR INTEGRAL CURB AND GUTTER
13C18-07G	CONCRETE PAVEMENT JOINTING ACCELERATION/DECELERATION LANE
14B07-15A	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-15B	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-15C	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-15D	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-15E	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-15F	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-15G	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-15H	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-15I	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B08-02A	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-02B	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-02C	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-02D	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-02E	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B28-03	GUARDRAIL MOW STRIP
14B29-01	SAFETY EDGE
14B32-06A	CONCRETE BARRIER SINGLE SLOPE (CBSS)
14B32-06B	CONCRETE BARRIER SINGLE SLOPE (CBSS)
14B32-06C	CONCRETE BARRIER SINGLE SLOPE (CBSS)
14B32-06D	CONCRETE BARRIER SINGLE SLOPE (CBSS)
14B33-01G	CONCRETE BARRIER SINGLE SLOPE 42" THRIE BEAM ANCHOR
14B33-01H	CONCRETE BARRIER SINGLE SLOPE 42" THRIE BEAM ANCHOR
14B39-01E	42-INCH SSCB TO 56-INCH SSCB HEIGHT TRANSITION
14B41-03A	SINGLE SLOPE ROADSIDE RETAINING WALL
14B41-03B	SINGLE SLOPE ROADSIDE RETAINING WALL
14B42-06A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-06B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-06C	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)

6

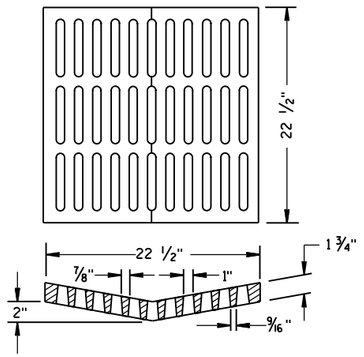
Standard Detail Drawing List

14B45-05D	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05F	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05I	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05J	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
15A03-02A	FLEXIBLE MARKER POST FOR CULVERT END
15A03-02B	FLEXIBLE MARKER POST FOR CULVERT END
15A04-04B	DELINEATOR BRACKET WITH REFLECTIVE SHEETING
15A04-04C	DELINEATOR POST WITH REFLECTIVE SHEETING
15C02-07A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-07B	BARRICADES AND SIGNS FOR VARIOUS CLOSURES
15C02-07C	DETOUR SIGNING FOR MAINLINE CLOSURES
15C02-07D	ON RAMP LANE CLOSURE
15C02-07E	OFF RAMP LANE CLOSURE
15C05-05	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 M.P.H. OR LESS
15C08-19A	LONGITUDINAL MARKING (MAINLINE)
15C08-19B	PAVEMENT MARKING (TURN LANES)
15C11-07A	CHANNELIZING DEVICES FLEXIBLE TUBULAR MARKER POST
15C11-07B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15C31-03A	PAVEMENT MARKING (RAMPS AND GORES)
15C31-03C	PAVEMENT MARKING FOR PARALLEL ON-RAMP AND PARALLEL OFF-RAMP
15C34-03	STANDARD APPLICATION FOR TEMPORARY RAISED PAVEMENT MARKER, TYPE 2
15D12-07A	TRAFFIC CONTROL, LANE CLOSURE
15D12-07B	TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION
15D14-03	TRAFFIC CONTROL, TWO LANE CLOSURE ON FREEWAY OR EXPRESSWAY, SHORT-TERM (LESS THAN 24 HOURS)
15D15-05E	TRAFFIC CONTROL, PARALLEL EXIT RAMP WITHIN LANE CLOSURE
15D16-04	TRAFFIC CONTROL, EXIT RAMP CLOSURE
15D27-03	TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH
15D38-02A	TEMPORARY TRAFFIC CONTROL SIGN MOUNTING
15D38-02B	ATTACHMENT OF SIGNS TO POSTS
15D39-02	TRAFFIC CONTROL, DROP-OFF SIGNING
15D41-01	TRAFFIC CONTROL, MULTIPLE LANE SHIFT, MULTILANE DIVIDED ROAD



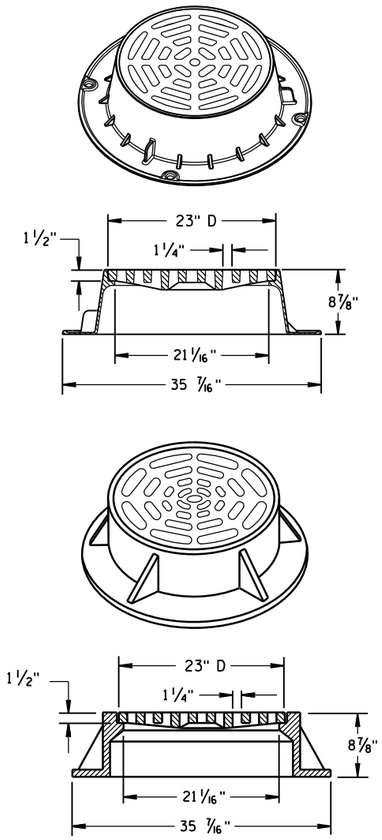


TYPE "B"



ALTERNATIVE GRATE FOR TYPE "B" COVER

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



TYPE "C"

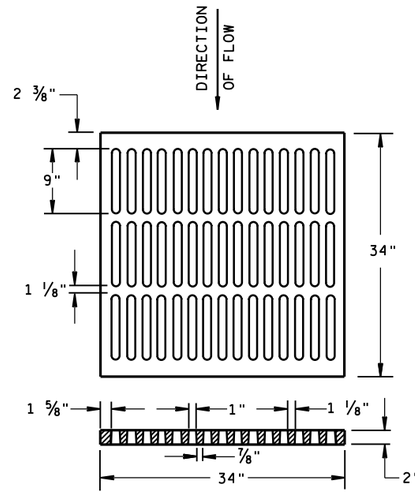
NOTE: EITHER CASTING IS ACCEPTABLE

GENERAL NOTES

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

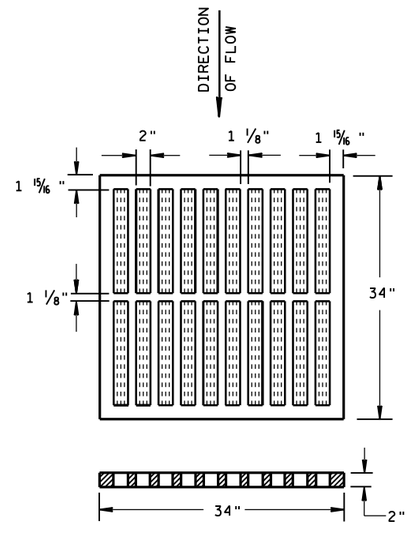
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR CATCH BASIN, MANHOLE AND INLET COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

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



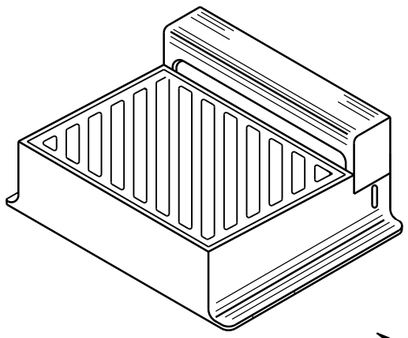
ALTERNATIVE TYPE "MS"

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

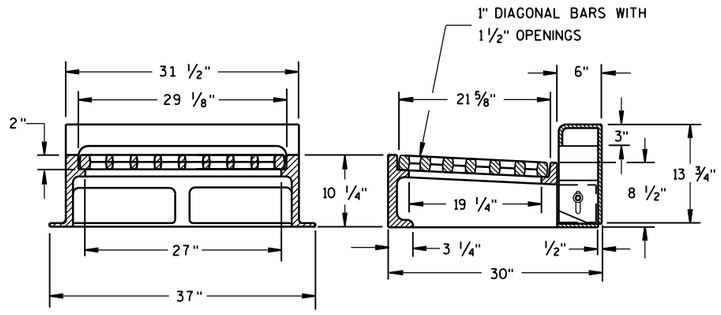


TYPE "MS"

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



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



NOTE: CURB BOX HEIGHT ADJUSTABLE 6" TO 9"

TYPE "WM"

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

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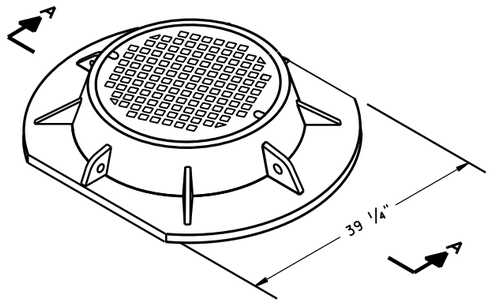
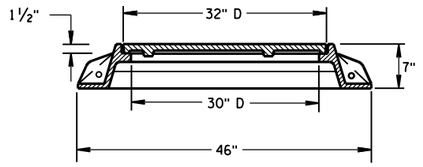
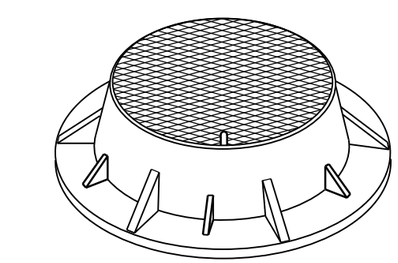
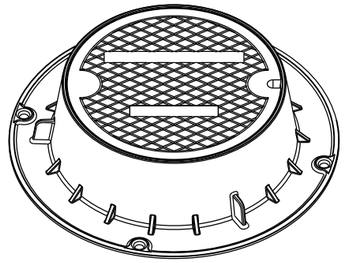
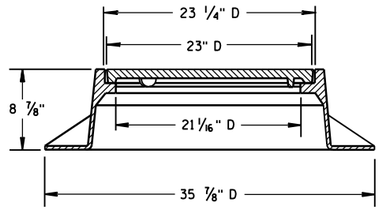


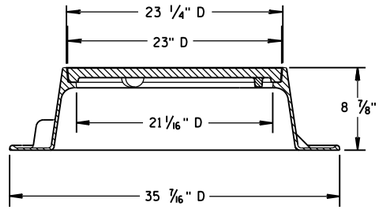


SECTION A-A
TYPE "K"









TYPE "J"
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 MANHOLE COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

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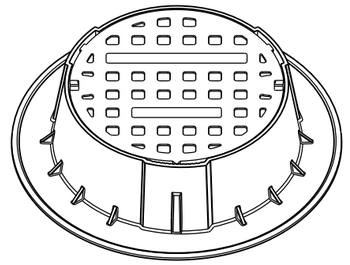
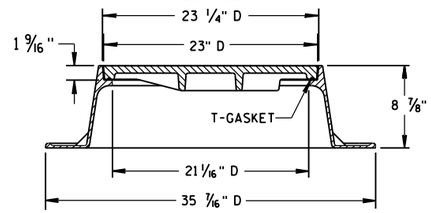
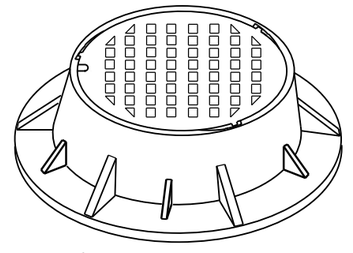
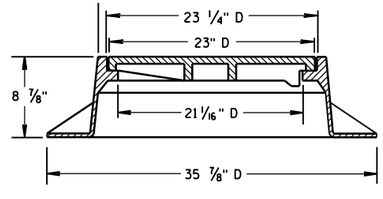
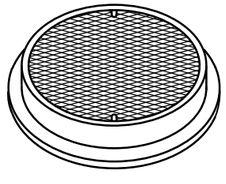


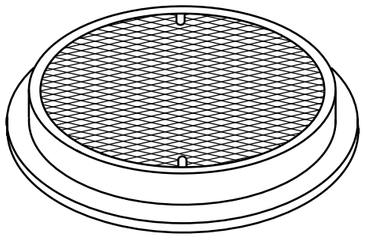


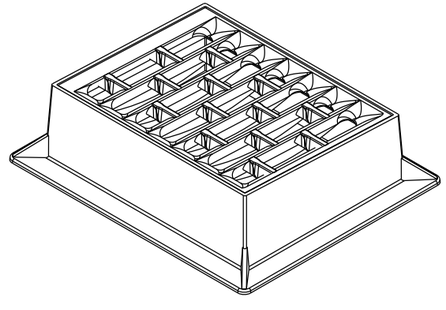


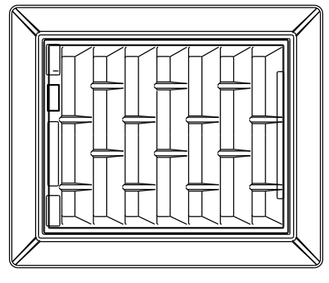


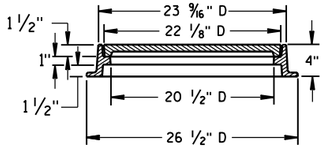
TYPE "J" SPECIAL
TYPE "B" NON-ROCKING SELF-SEAL LID
(NOTED AS TYPE J-S ON THE DRAINAGE TABLE)
NOTE: EITHER CASTING IS ACCEPTABLE



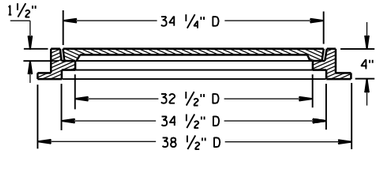




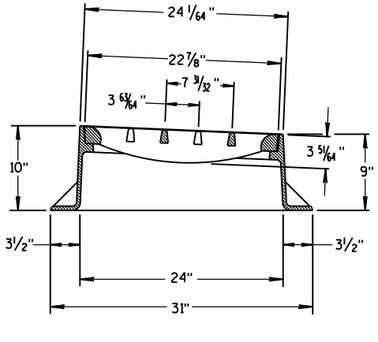


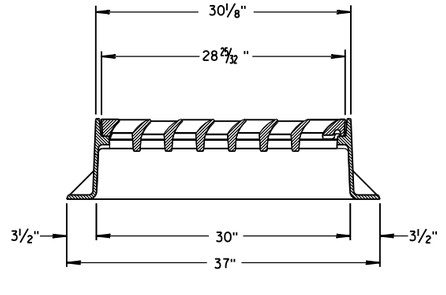


TYPE "L"



TYPE "M"





INLET COVER TYPE "BW"

INLET COVER TYPE BW
MANHOLE COVERS, TYPE K, J, J-S, L & M

STATE OF WISCONSIN
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11/27/2013
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/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER

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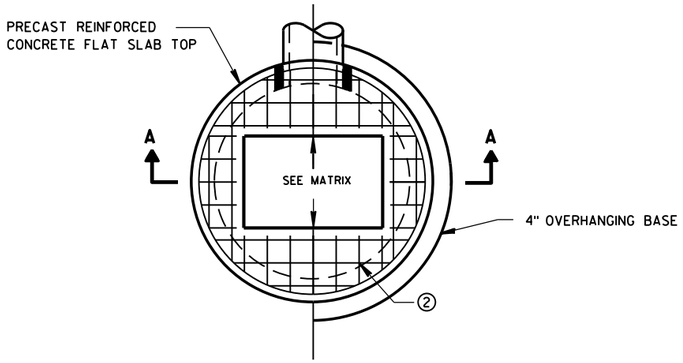
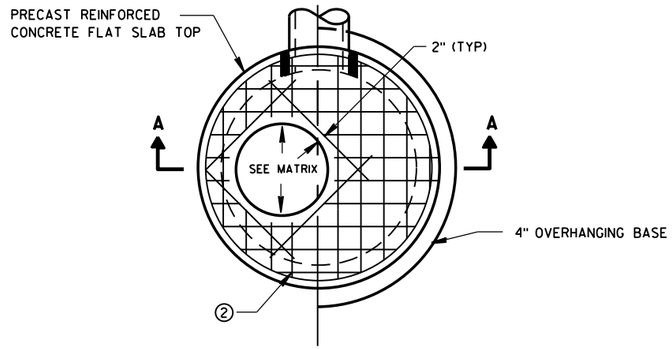
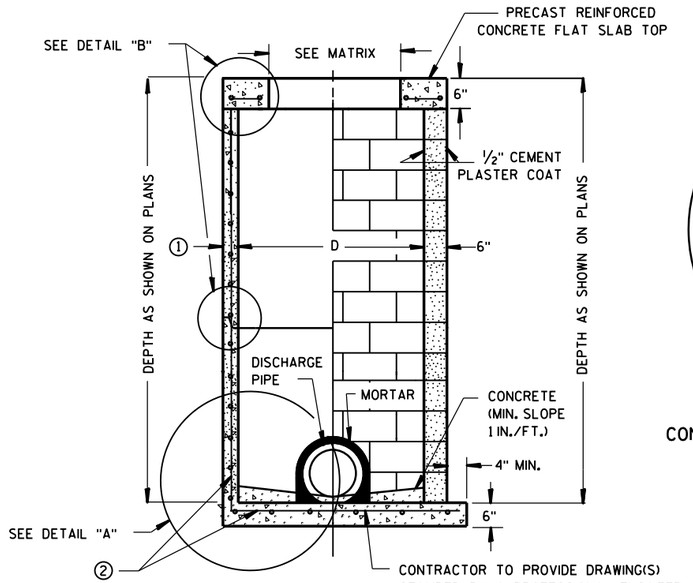
S.D.D. 8 A 5-19d



PLAN VIEW RECTANGULAR OPENING



PLAN VIEW CIRCULAR OPENING

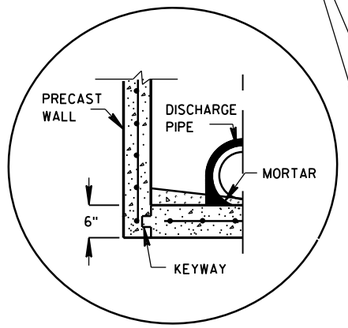


SECTION A-A

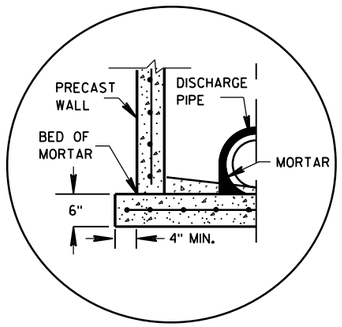
PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

CONCRETE BLOCK WITH CAST-IN-PLACE OR PRECAST REINFORCED CONCRETE BASE ②

CIRCULAR INLETS W/ FLAT TOP

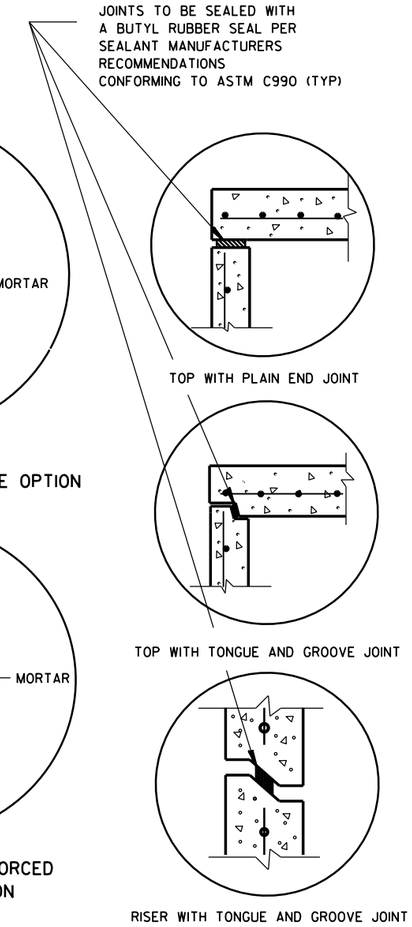


PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

DETAIL "A"



DETAIL "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.

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 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.

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.

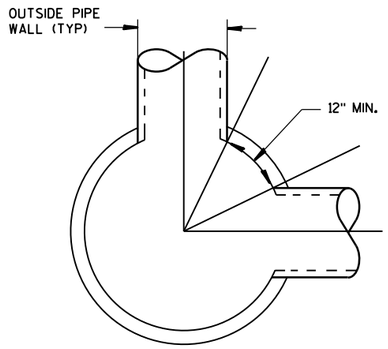
FOR ADDITIONAL CONFIGURATIONS, MAINTAIN A MINIMUM OF 12 INCHES AS MEASURED FROM THE INSIDE OF THE STRUCTURE WALL BETWEEN THE OUTSIDE PIPE WALLS OF ADJACENT PIPES. SEE DETAIL "C".

① MINIMUM WALL THICKNESS SHALL BE 4-IN FOR 3-FT DIAMETER AND 5-IN FOR 4-FT DIAMETER PRECAST INLETS.

② FOR PRECAST CATCH BASINS PROVIDE REINFORCING STEEL IN ACCORDANCE TO AASHTO M199.

INLET COVER OPENING MATRIX

	INLET COVER TYPE	ALL A'S	ALL B'S	BW	C	F	ALL H'S	S	T	V	WM	Z
INLET SIZE	OPENING SIZE (FT)											
3-FT	2 DIA.				X							X
	2X2	X	X					X		X		
4-FT	2 DIA.				X							X
	2X2	X	X					X		X		
	2X2.5			X				X	X	X	X	
	2X3						X					
	2.5X3					X						



DETAIL "C"

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

INLETS 3-FT AND 4-FT DIAMETER

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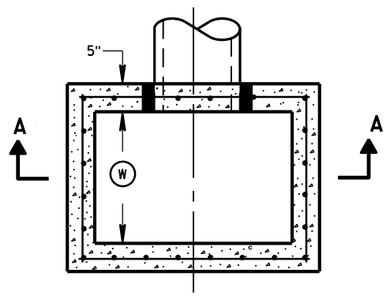
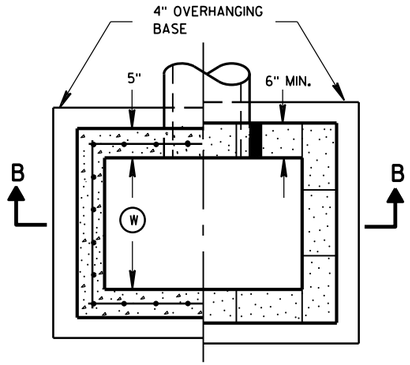
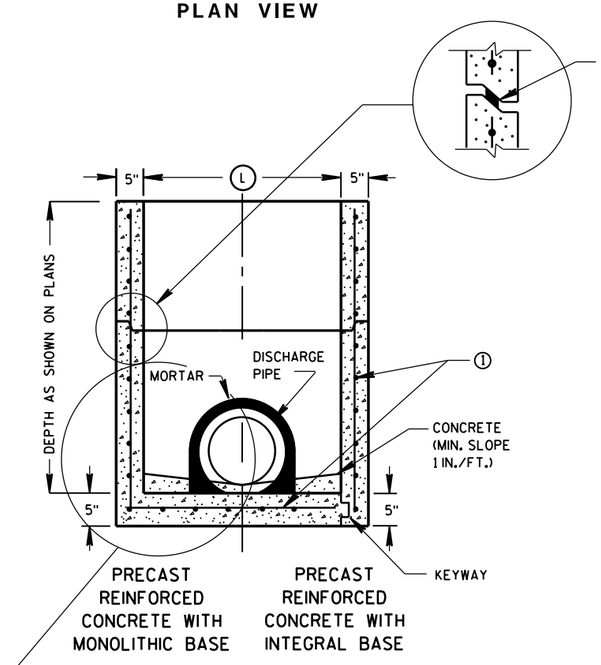
INLETS 3-FT AND 4-FT DIAMETER



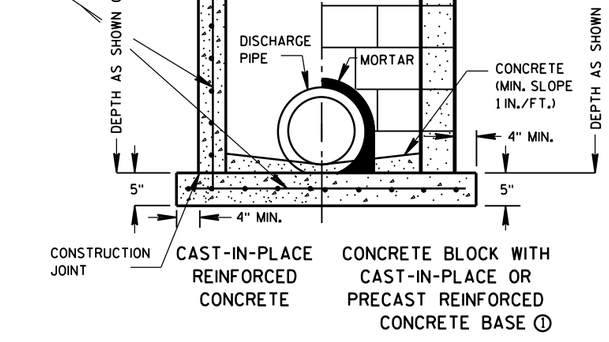
PLAN VIEW



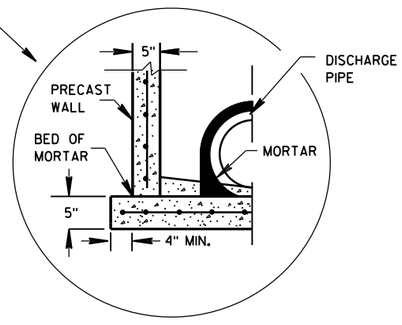
PLAN VIEW



SECTION A-A



SECTION B-B



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

GENERAL NOTES

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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 INCH CLEARANCE ON EACH SIDE OF THE OUTSIDE WALL OF THE PIPE. SEE DETAIL "A". ASSUMES PIPE ENTERS PERPENDICULAR TO THE STRUCTURE.

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

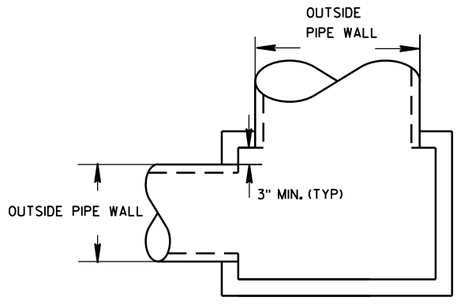
② CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.

INLET COVER MATRIX

INLET SIZE		INLET COVER TYPE	ALL A'S	ALL B'S	BW	F	ALL H'S	S	T	V	WM
	WIDTH (W) (FT)	LENGTH (L) (FT)									
2X2-FT	2	2	X	X				X		X	
2X2.5-FT	2	2.5			X			X	X	X	X
2X3-FT	2	3					X				
2.5X3-FT	2.5	3				X					

PIPE MATRIX

INLET SIZE	MAXIMUM INSIDE PIPE DIAMETER	
	WIDTH (IN)	LENGTH (IN)
2X2-FT	12	12
2X2.5-FT	12	18
2X3-FT	12	24
2.5X3-FT	18	24



DETAIL "A"

INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT

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DEPARTMENT OF TRANSPORTATION

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DATE
/S/ Rodney Taylor
ROADWAY STANDARDS D IT
UNIT SUPERVIS
FHWA

INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT

6

S.D.D. 8 C 7-2

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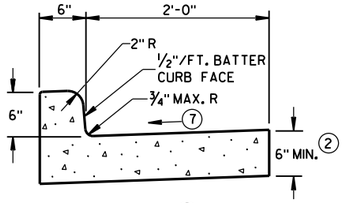
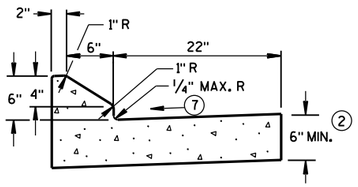
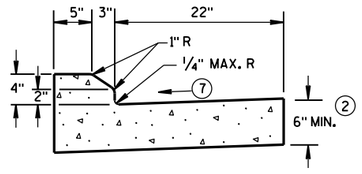
S.D.D. 8 C 7-2



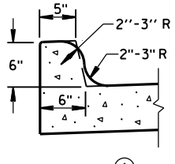
TYPES A (1) & D



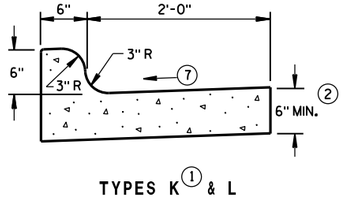
6" SLOPED CURB TYPES G (1) & J



4" SLOPED CURB TYPES G (1) & J

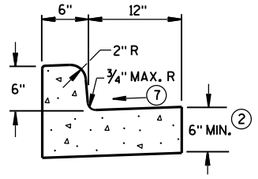


TYPES K (1) & L
(OPTIONAL CURB SHAPE)



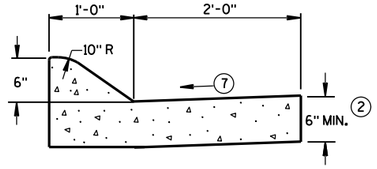
TYPES K (1) & L

CONCRETE CURB & GUTTER 30"

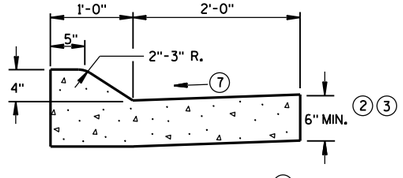


TYPES A (1) & D

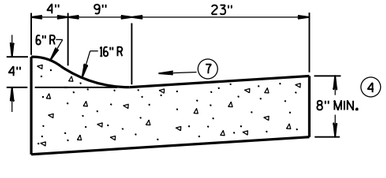
CONCRETE CURB & GUTTER 18"



6" SLOPED CURB TYPES A (1) & D

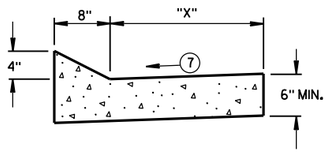


4" SLOPED CURB TYPES A (1) & D



4" SLOPED CURB TYPES R (1) & T (5)

CONCRETE CURB & GUTTER 36"



TYPES TBT & TBTT (1)

CONCRETE CURB & GUTTER

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

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS 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 & GUTTER SHALL CONFORM TO THE DETAILS SHOWN FOR CONCRETE CURB & GUTTER INCLUDING THE TRANSVERSE GUTTER SLOPE.

WHERE THE TRANSVERSE JOINTS IN THE PAVEMENT ARE REQUIRED TO BE SEALED, THE JOINTS IN THE INTEGRAL CURB AND GUTTER SHALL BE SEALED TO THE FACE OF CURB WITH THE SAME TYPE OF SEALANT. THE COST OF FURNISHING AND INSTALLING THIS SEALANT SHALL BE INCIDENTAL TO THE ITEM CONCRETE CURB AND GUTTER.

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 GUTTER 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) THE FACE OF CURB IS 6" FROM THE BACK OF CURB.

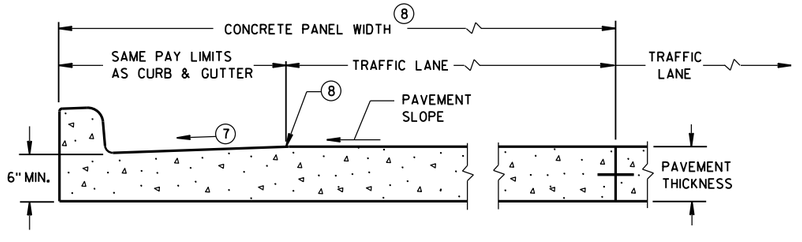
(6) WHEN REVERSE SLOPE GUTTER IS REQUIRED, THE LOCATION(S) WILL BE SHOWN ELSEWHERE IN THE PLAN.

(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.

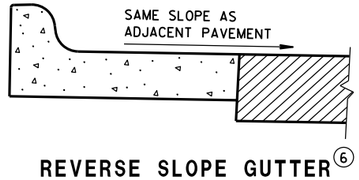
PAVEMENT THICKNESS AND MAXIMUM CONCRETE PANEL WIDTH TABLE

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



PARTIAL SECTION OF PAVEMENT * WITH INTEGRAL CURB & GUTTER

* BIKE LANE IS NOT SHOWN.

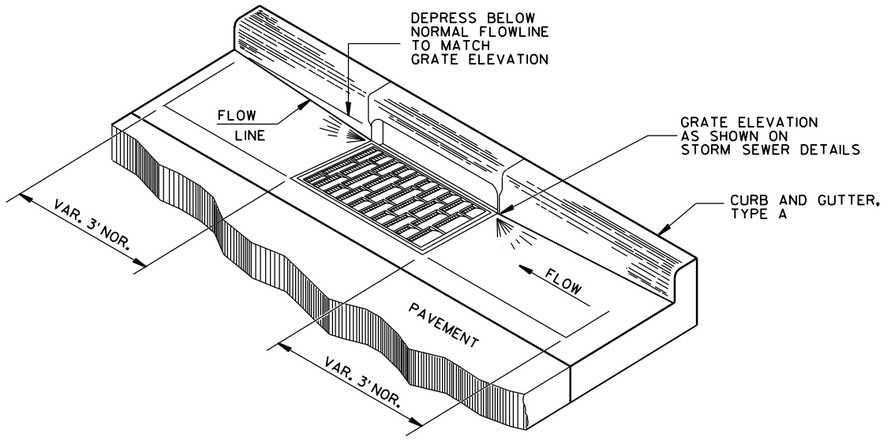


REVERSE SLOPE GUTTER (6)
(TYPICAL FOR ALL CURB & GUTTER TYPES)

CONCRETE CURB & GUTTER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

S.D.D. 8 D 1-20a



DETAIL OF CURB AND GUTTER AT INLETS

(TYPE H INLET COVER SHOWN)

GENERAL NOTES

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

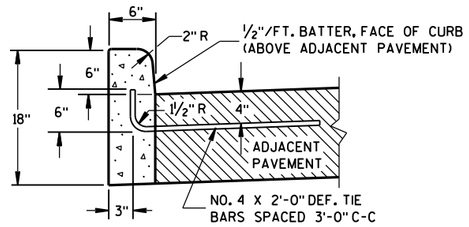
PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

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

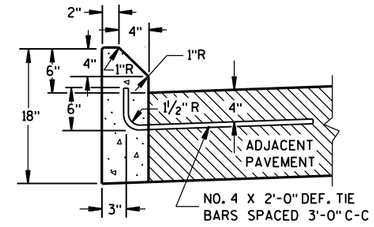
(1) TIE BARS ARE REQUIRED FOR CURB AND GUTTER TYPES A, G, K, R AND TBTT.

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

(9) REFER TO SDD 8D18 AND SDD 8D19 FOR ADDITIONAL DRIVEWAY ENTRANCE CURB DETAILS.

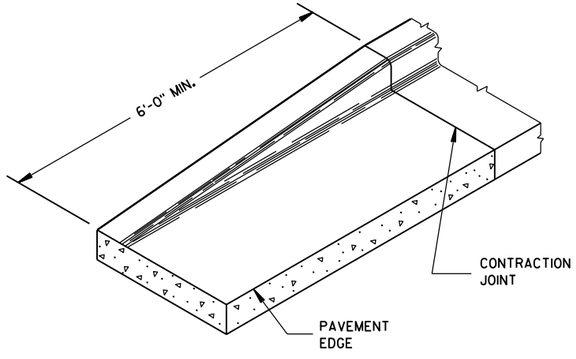


TYPES A(1) & D

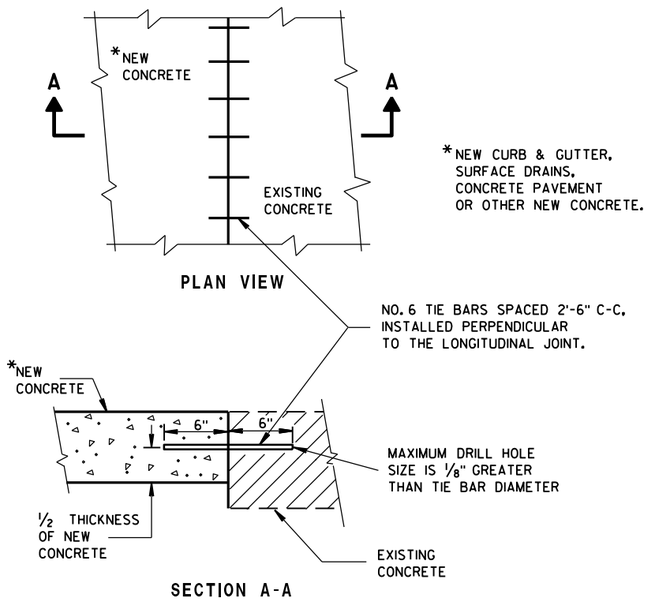


TYPES G(1) & J

CONCRETE CURB



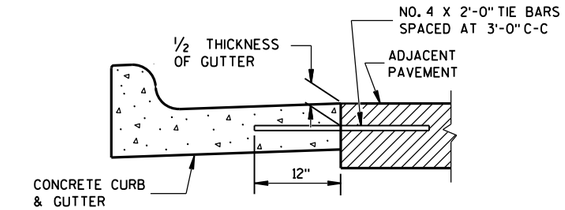
END SECTION CURB & GUTTER



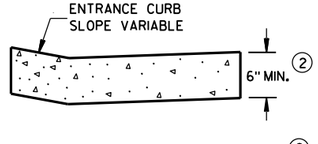
PLAN VIEW

SECTION A-A

TIE BARS DRILLED INTO EXISTING PAVEMENT



TYPICAL TIE BAR LOCATION (1)



DRIVEWAY ENTRANCE CURB (9)

(WHEN DIRECTED BY THE ENGINEER)

CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2017 — DATE
/S/ Rodney Taylor
ROADWAY STANDARDS UNIT SUPERVISOR
213
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FHWA

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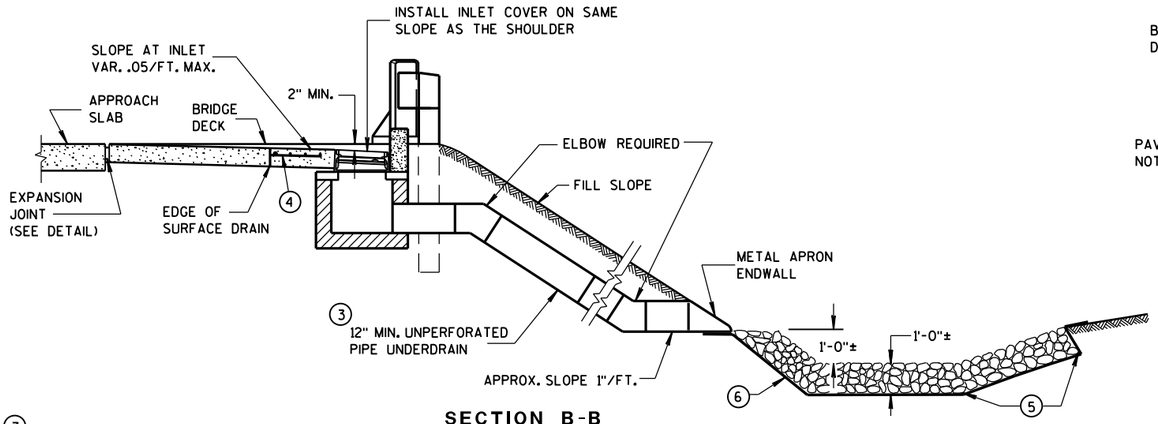
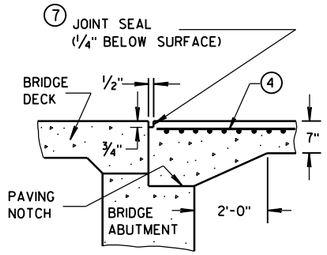
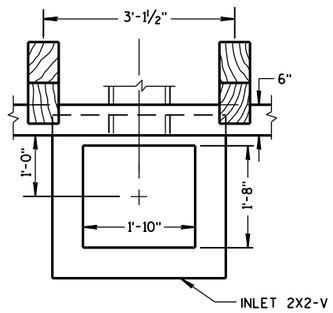
S.D.D. 8 D 1-20b



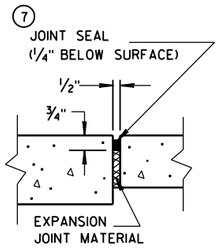
SECTION B-B



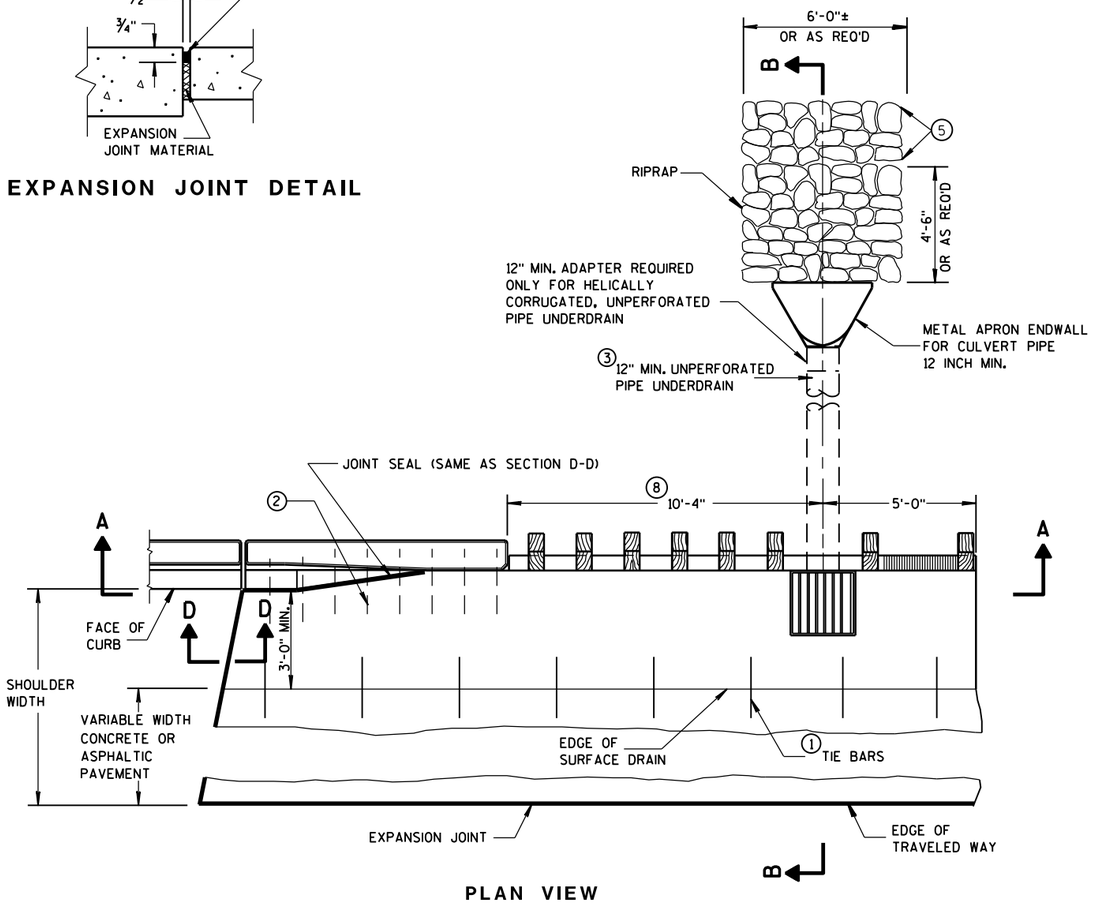
SECTION D-D



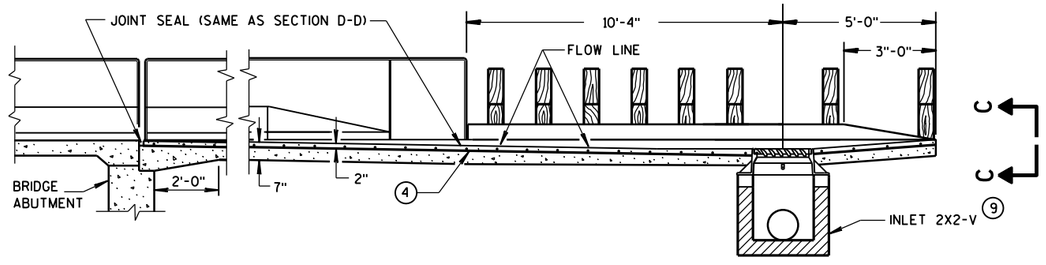
PLAN VIEW



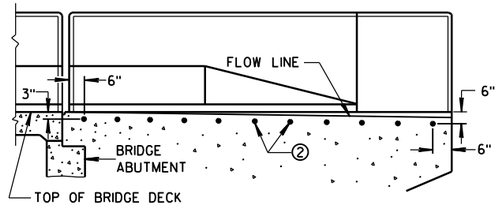
EXPANSION JOINT DETAIL



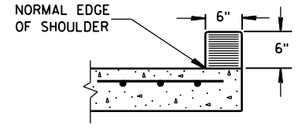
PLAN VIEW



SECTION A-A



LOCATION OF TIE BARS IN WINGWALL



SECTION C-C

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) NO. 4 X 2'-0" TIE BARS SPACED AT 3'-0" CENTERS TO BE USED ONLY WHEN ADJACENT TO P.C. CONCRETE.

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

(3) THE PIPE UNDERDRAIN MAY BE ANY ONE OF THE SIX MATERIALS LISTED IN THE STANDARD SPECIFICATIONS SECTION 612.2 EXCEPT DRAIN TILE.

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

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

(6) GEOTEXTILE FABRIC.

(7) HOT POURED SEALANT UNLESS OTHERWISE SPECIFIED.

(8) THIS DIMENSION MAY VARY DEPENDING ON THE SPACING OF POSTS FOR THE STEEL PLATE BEAM GUARD. THE TYPICAL LOCATION FOR THE SURFACE DRAIN IS WHERE THE POST SPACING WIDENS TO 3'-1½".

(9) SEE CURRENT STANDARD DETAIL DRAWINGS 8A5 AND 8C7 FOR DETAILS.

CONCRETE SURFACE DRAINS DROP INLET TYPE AT STRUCTURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2017 — DATE
/S/ Rodney Taylor
ROADWAY STANDARDS UNIT SUPERV... ...ENT
FHWA

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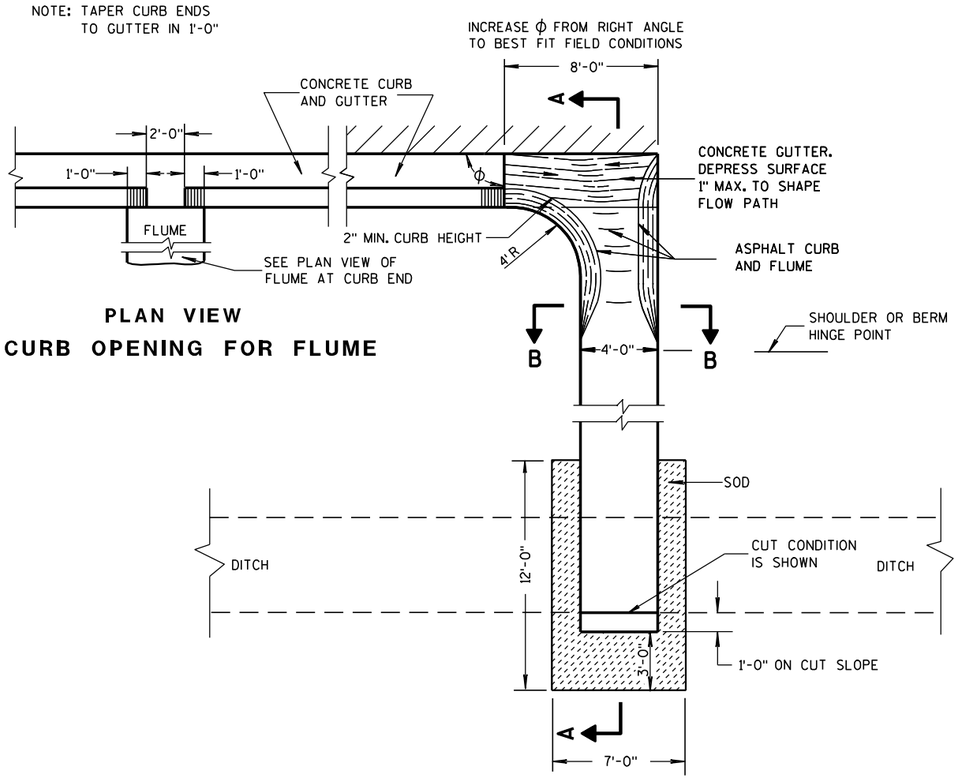
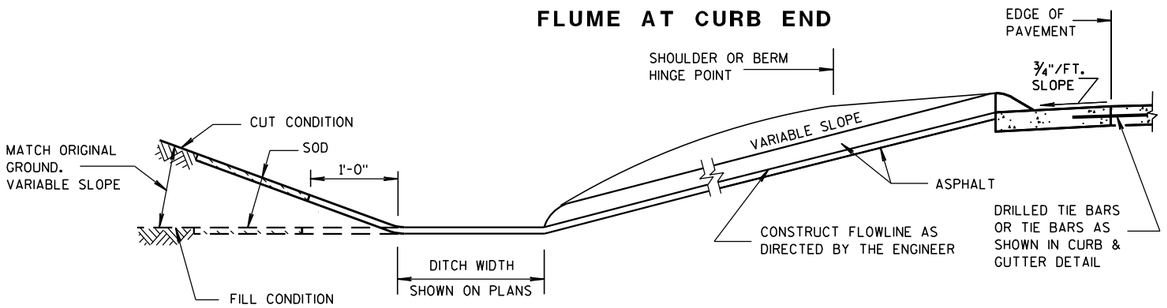
S.D.D. 8 D 3-7

ASPHALTIC FLUME

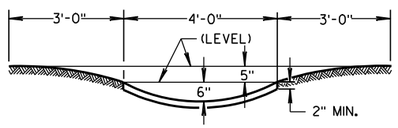


PLAN VIEW
CURB OPENING FOR FLUME

PLAN VIEW
FLUME AT CURB END



SECTION A-A



SECTION B-B

GENERAL NOTES

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

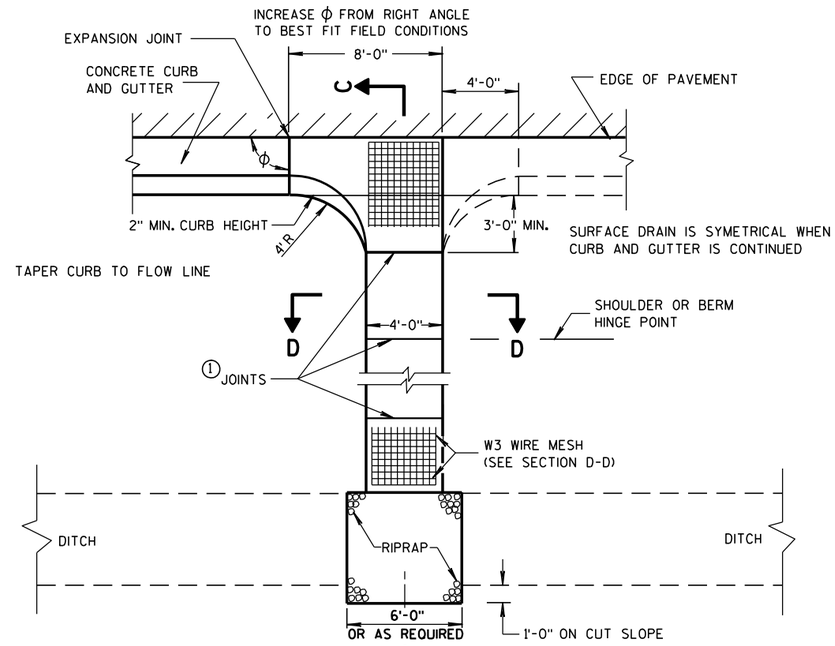
WELDED STEEL WIRE FABRIC SHALL BE IN ACCORDANCE WITH AASHTO SPECIFICATION M55.

① JOINTS SHALL BE $\frac{1}{8}$ TO $\frac{1}{4}$ INCH WIDE BY $1\frac{1}{2}$ INCHES DEEP AND SPACED AT UNIFORM INTERVALS OF APPROXIMATELY 4 FEET.

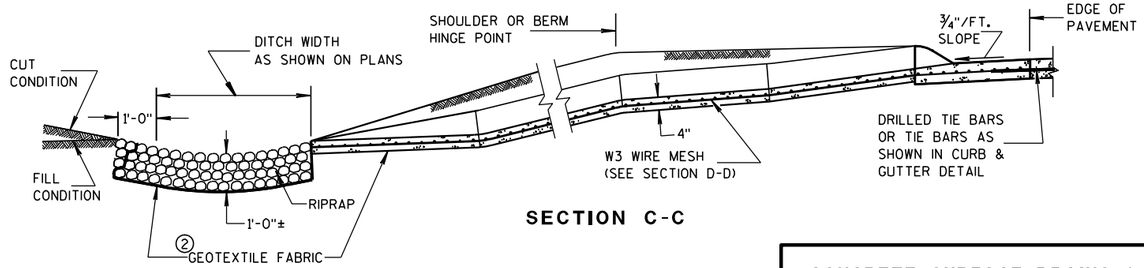
② GEOTEXTILE FABRIC TYPE "R" SHALL UNDERLAY THE FULL LENGTH AND WIDTH OF THE CONCRETE SURFACE DRAIN AND RIPRAP.

③ CONCRETE SURFACE DRAIN WITHOUT CURB AND GUTTER MAY BE USED ON BACKSLOPES WHEN SPECIFIED

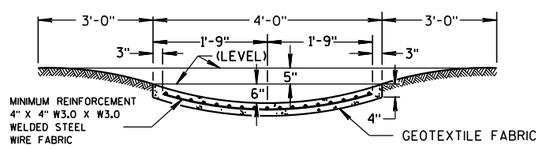
③ CONCRETE SURFACE DRAIN



PLAN VIEW



SECTION C-C



SECTION D-D

CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
9-4-08 DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER
215
MENT
FHWA

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S.D.D. 8 D 4-5

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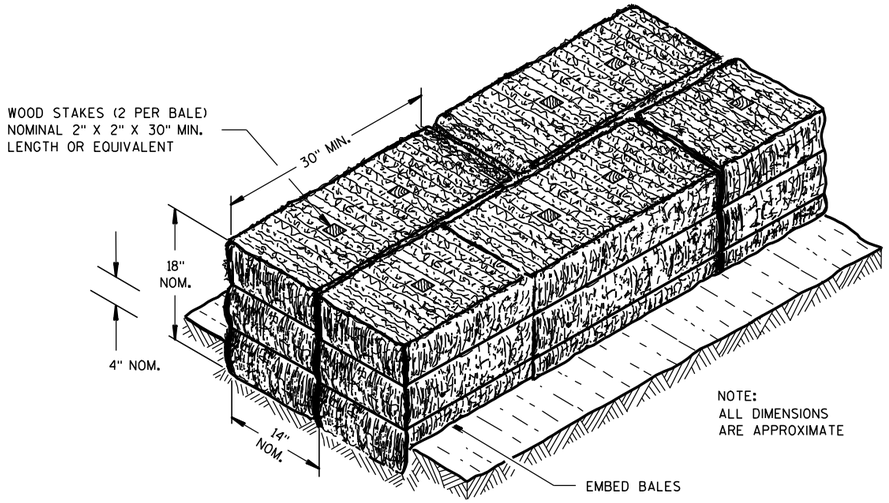
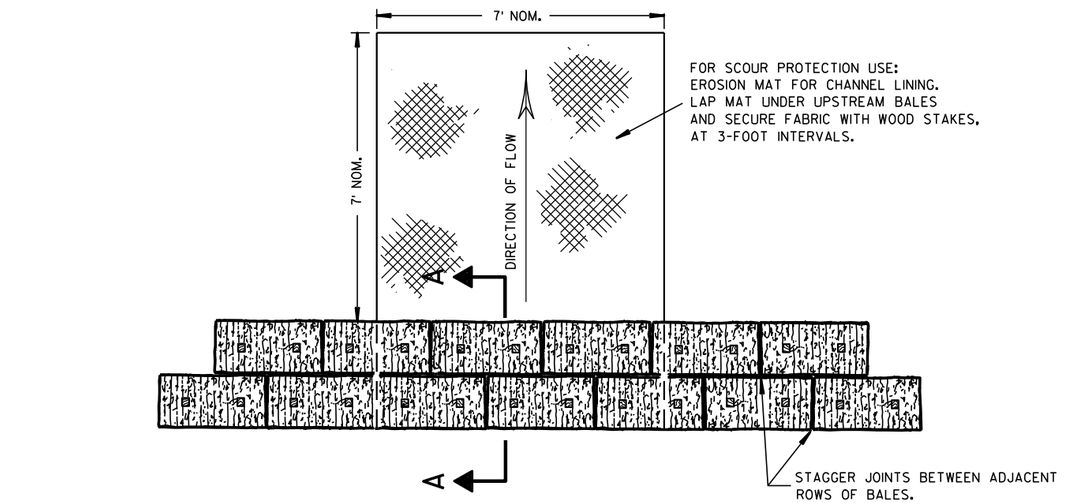
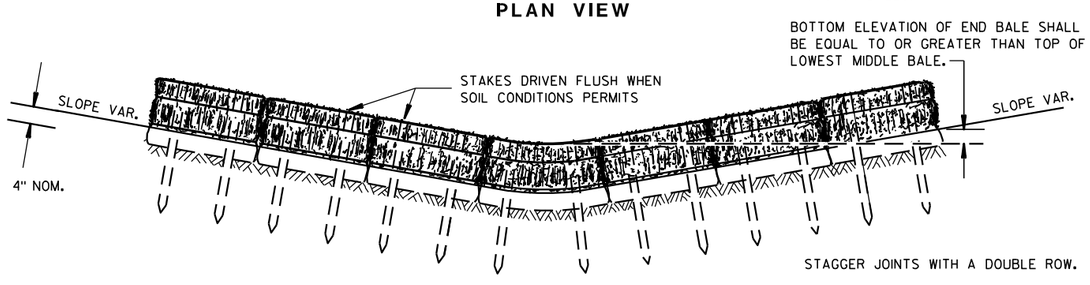
S.D.D. 8 D 4-5



SECTION A-A



PLAN VIEW



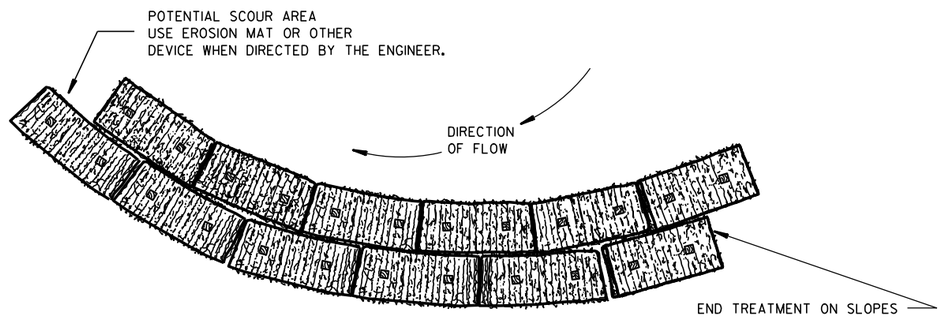
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES ①

GENERAL NOTES

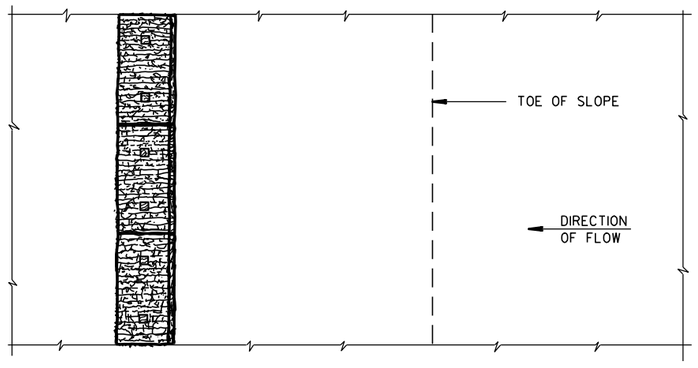
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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.

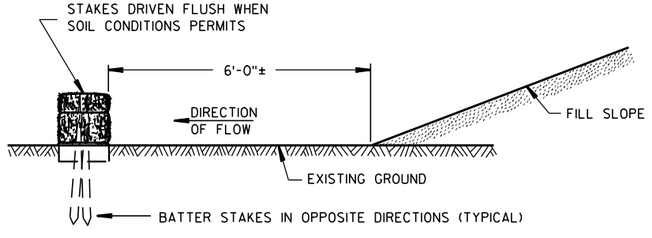


PLAN VIEW

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

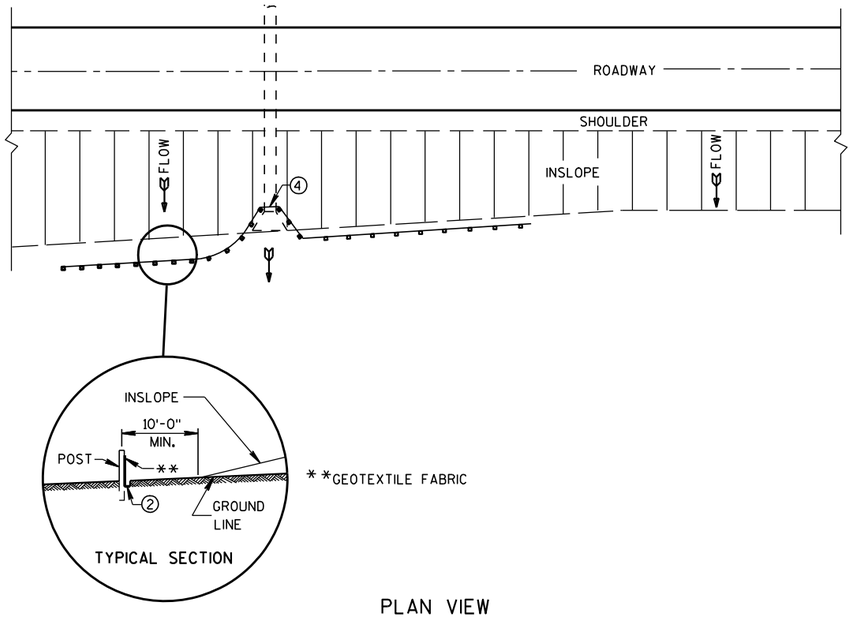
APPROVED
6/04/02 — DATE
/S/ Beth Cannestra — CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6

S.D.D. 8 E 8-3

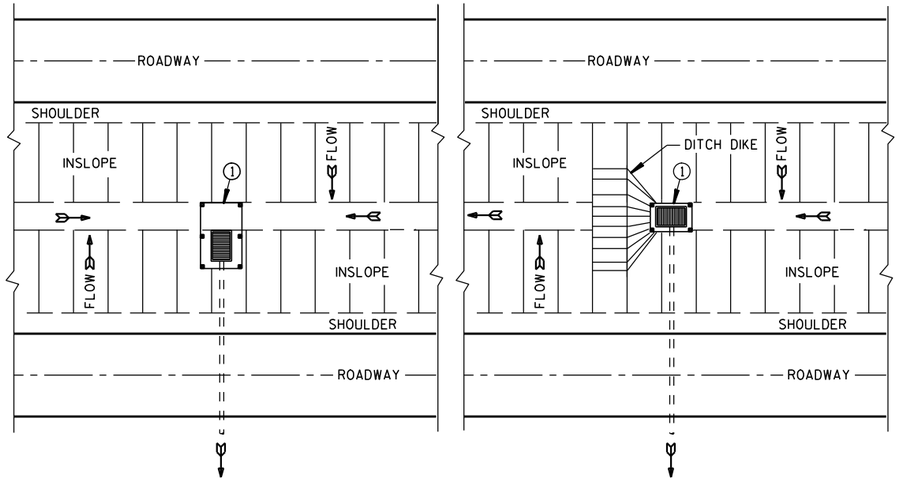
6

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.

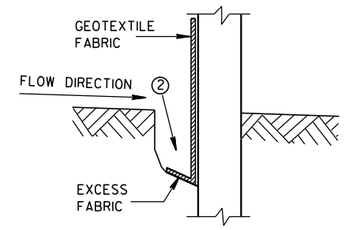
① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.

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.

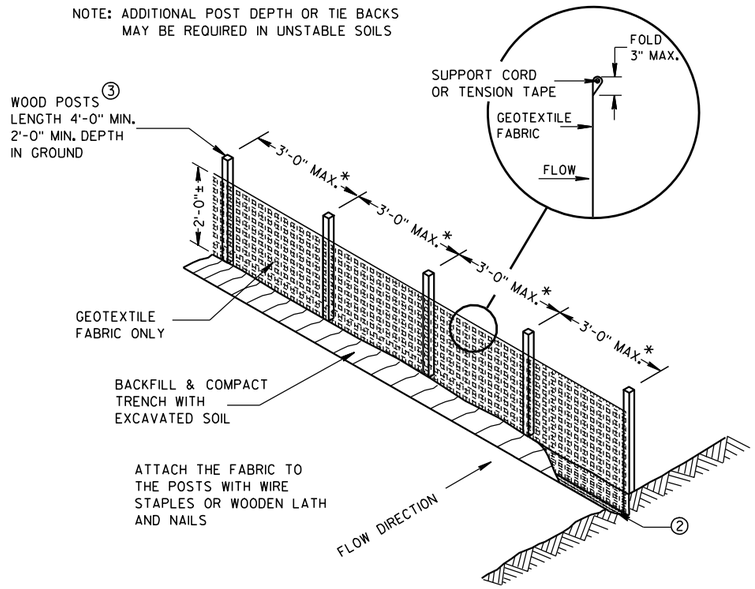
③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1⅛" X 1⅛" OF OAK OR HICKORY.

④ SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.

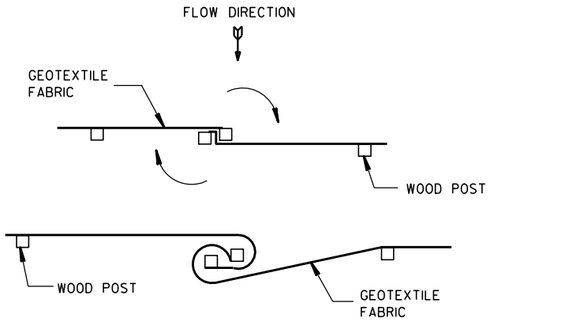
⑤ CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



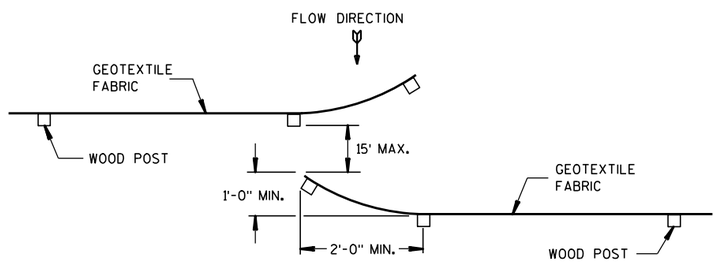
TRENCH DETAIL



SILT FENCE

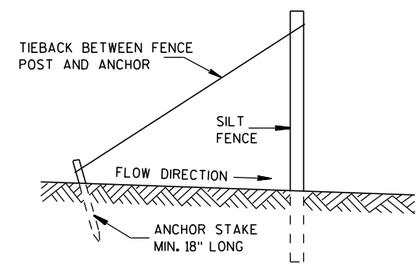


TWIST METHOD



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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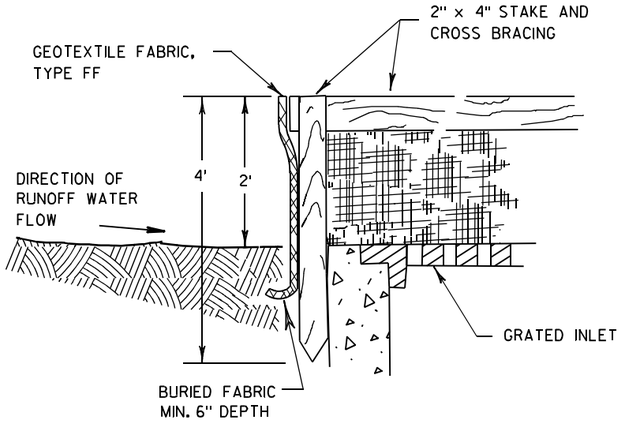
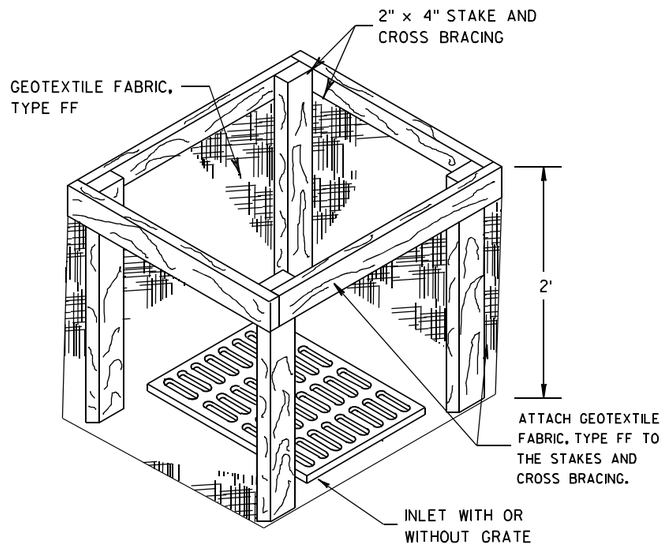
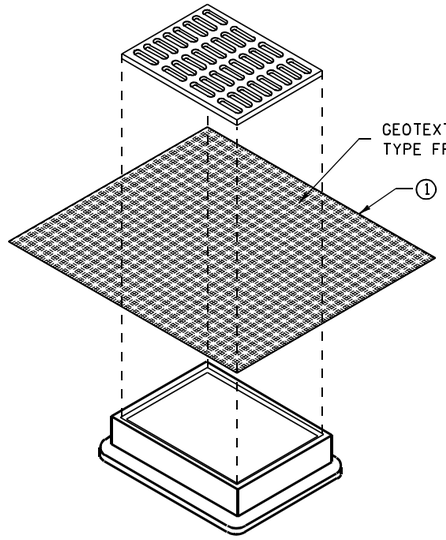
S.D.D. 8 E 9-6



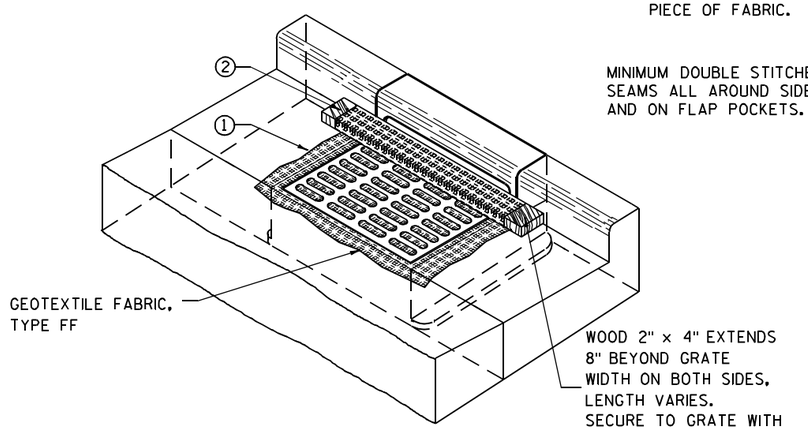


INLET PROTECTION, TYPE A

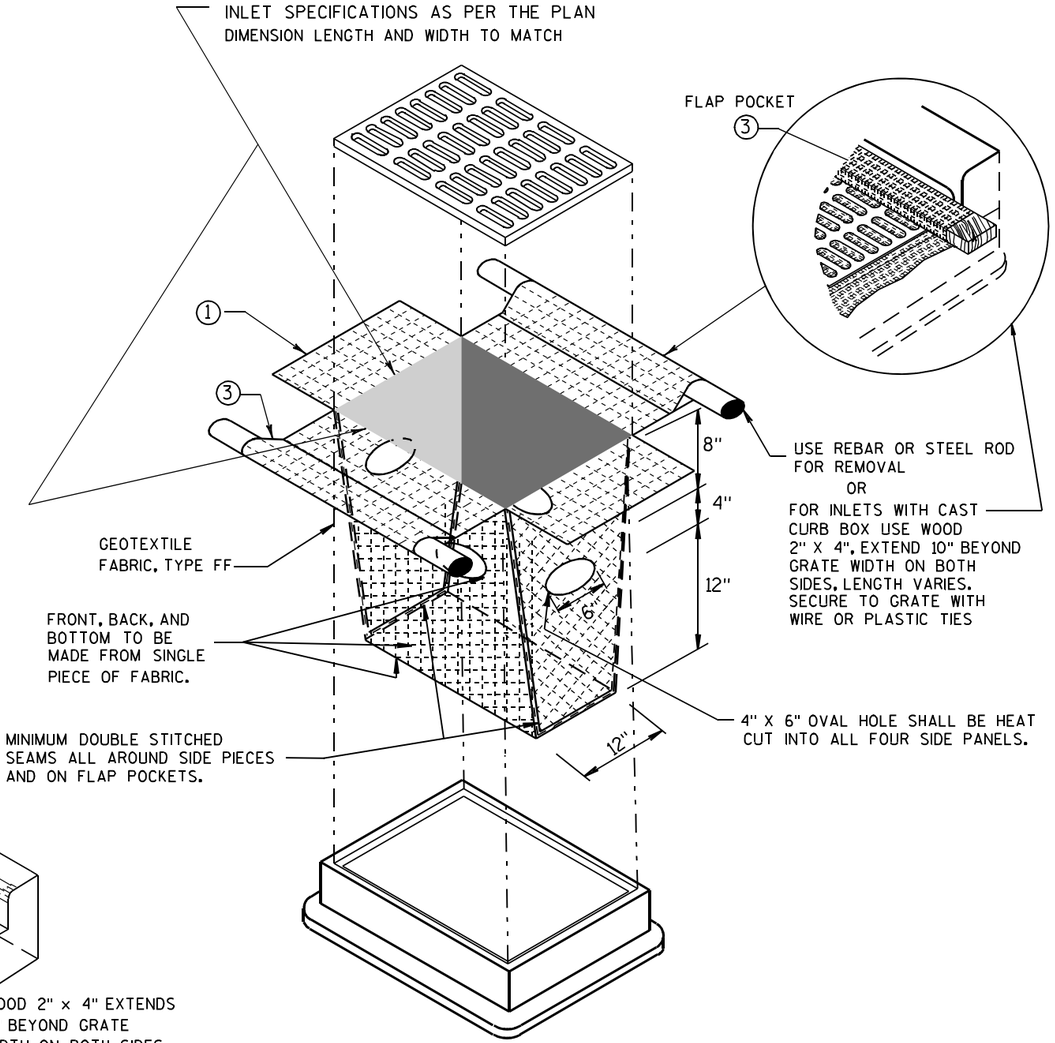


INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)

(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

6

S.D.D. 8 E 10-2

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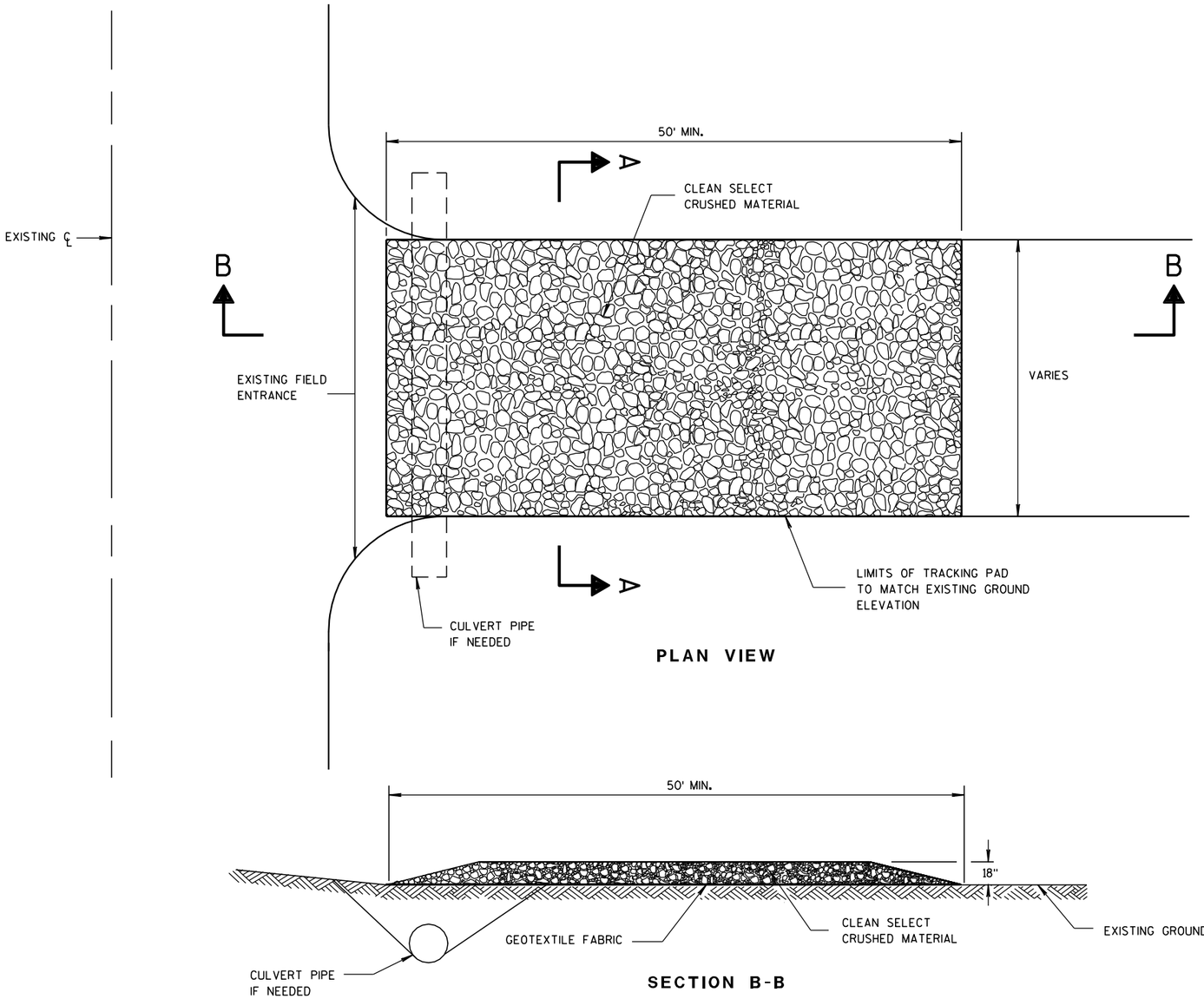
S.D.D. 8 E 10-2



PLAN VIEW

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.

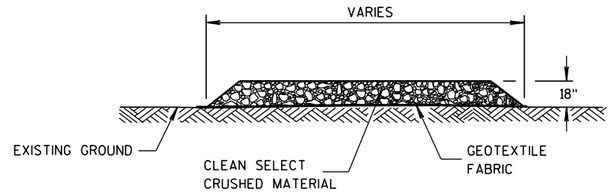
TRACKING PAD TO BE REMOVED AFTER CONSTRUCTION IS COMPLETED.

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

TRACKING PAD

TRACKING PAD

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
3/24/2011 — DATE
/S/ Jerry H. Zoda — ROADWAY STANDARDS ENGINEER
FHWA

6

S.D.D. 8 E 14-1

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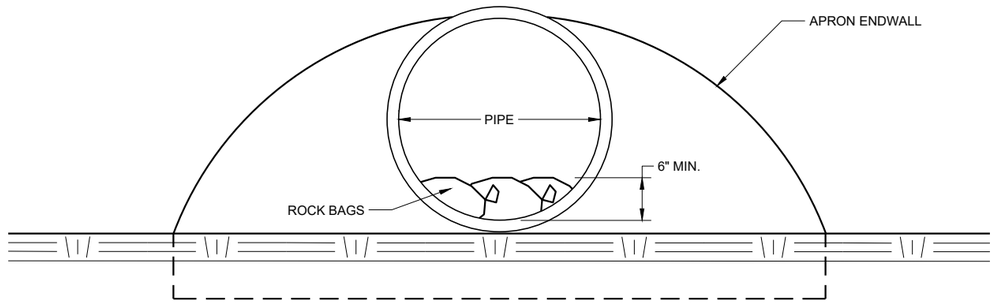
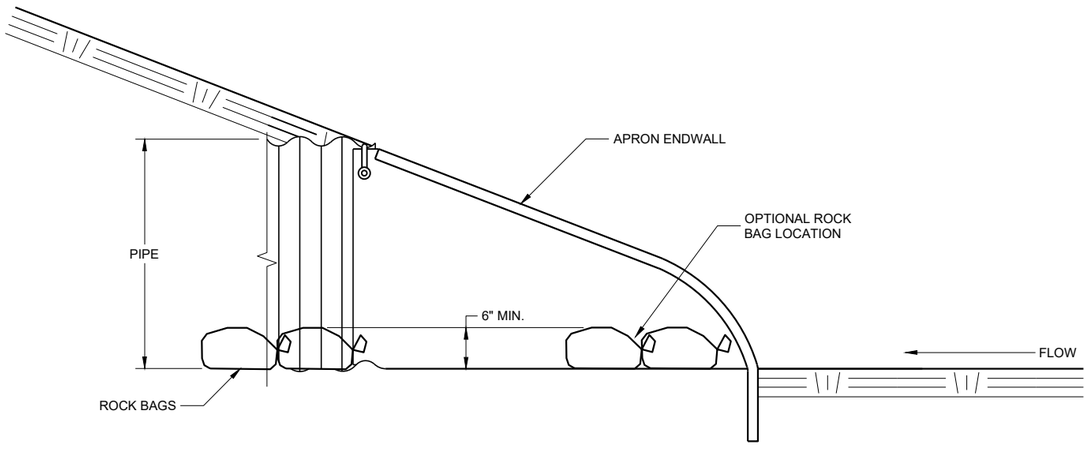
S.D.D. 8 E 14-1



END VIEW



SIDE VIEW

CULVERT PIPE CHECK

(INSTALL ON INLET END ONLY)

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

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SDD 08E15 - 01

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SDD 08E15 - 01

METAL APRON ENDWALLS

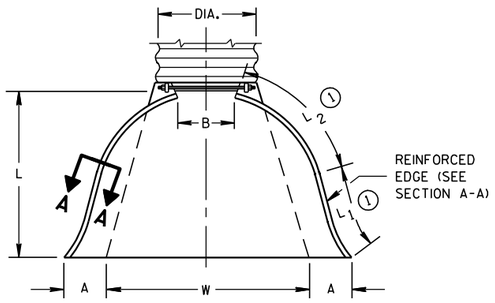
PIPE DIA. (IN.)	MIN. THICK. (Inches) STEEL	MIN. THICK. (Inches) ALUM.	DIMENSIONS (Inches) A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")	APPROX. SLOPE	BODY
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1	1 Pc.
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1	1 Pc.
18	.064	.060	8	10	6	31	15	28 1/4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

× EXCEPT CENTER PANEL SEE GENERAL NOTES

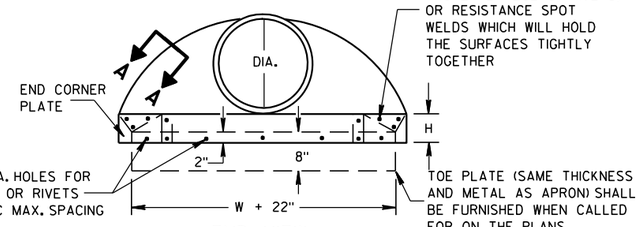
REINFORCED CONCRETE APRON ENDWALLS

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

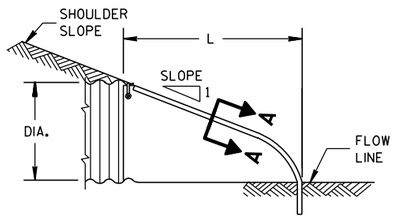
*MINIMUM
**MAXIMUM



PLAN VIEW

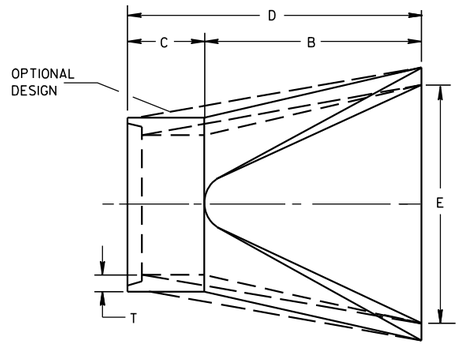


END VIEW

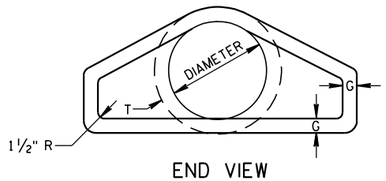


SIDE ELEVATION

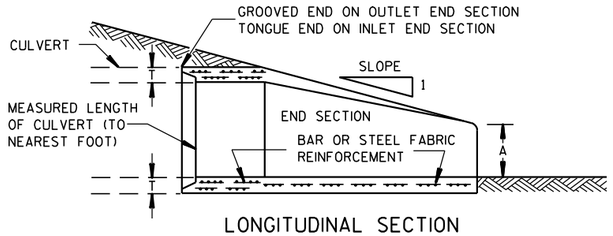
METAL ENDWALLS



PLAN

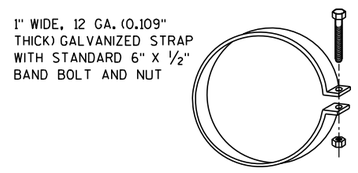


END VIEW



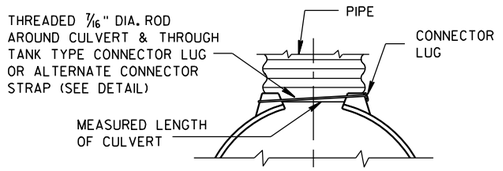
LONGITUDINAL SECTION

CONCRETE ENDWALLS

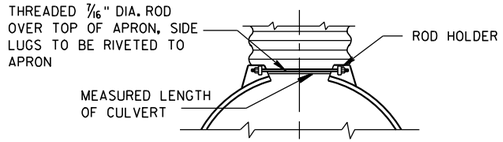


ALTERNATE FOR TYPE 1 CONNECTION

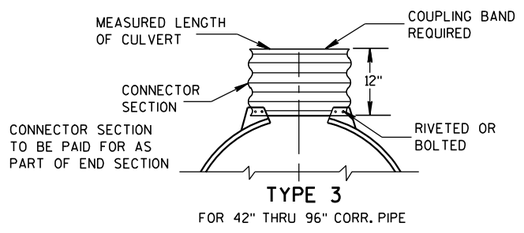
END SECTION CONNECTOR STRAP



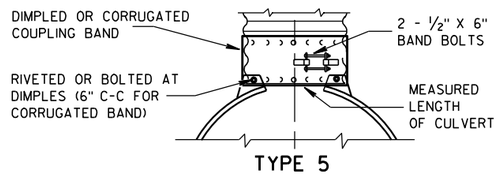
TYPE 1
FOR 12" THRU 24" CORR. PIPE



TYPE 2
FOR 30" THRU 96" CORR. PIPE



TYPE 3
FOR 42" THRU 96" CORR. PIPE



TYPE 5
ALTERNATE FOR:
ALL SIZES CORRUGATED CIRCULAR PIPE

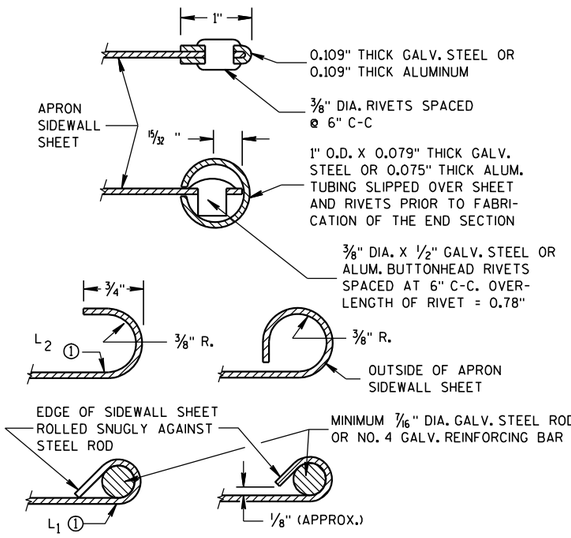
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL. AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

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

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

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

CONNECTION DETAILS



SECTION A-A

GENERAL NOTES

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

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

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

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

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

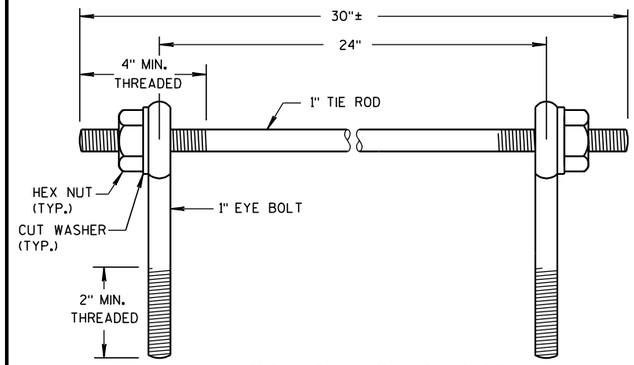
① FOR PIPE SIZES UP TO 60" DIAMETER, A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

APRON ENDWALLS FOR CULVERT PIPE

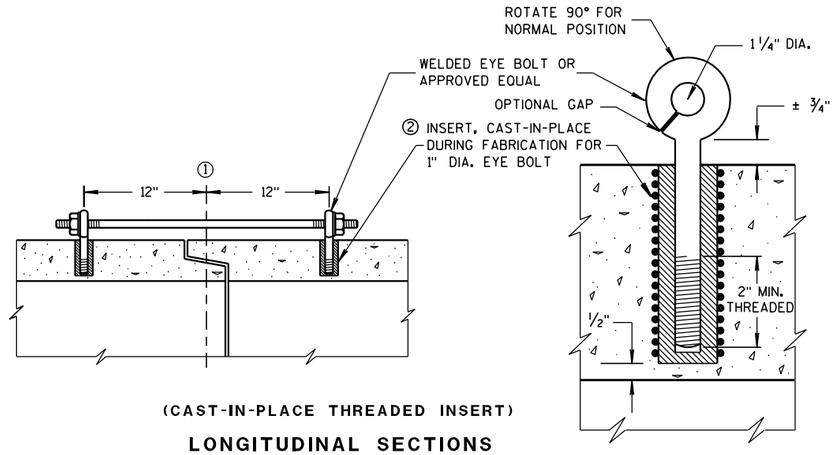
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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



EYE BOLTS AND TIE ROD



(CAST-IN-PLACE THREADED INSERT)

LONGITUDINAL SECTIONS

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

GENERAL NOTES

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

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

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

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

① ℄ OF TONGUE AND GROOVE OR BELL AND SPIGOT JOINTS.

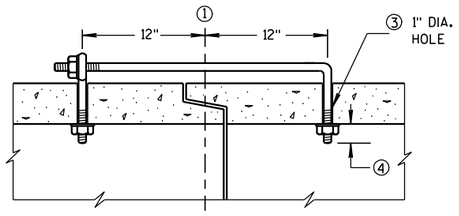
② THE INSIDE OF THE THREADED INSERTS SHALL BE CLEAN TO ALLOW THE INSERTION OF THREADED EYE BOLTS.

③ HOLES SHALL BE CAST-IN-PLACE OR DRILLED 12 INCHES FROM ℄ OF TONGUE AND GROOVE.

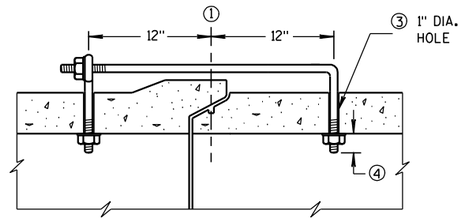
④ BOLT PROJECTION INSIDE OF PIPE SHALL NOT EXCEED 2 INCHES.

⑤ OPENING TO BE ROD DIAMETER PLUS 1 INCH.

⑥ LENGTH ADEQUATE TO EXTEND TO WITHIN 1/2 INCH OF THE INNER SURFACE OF THE PIPE.



(TONGUE & GROOVE PIPE)

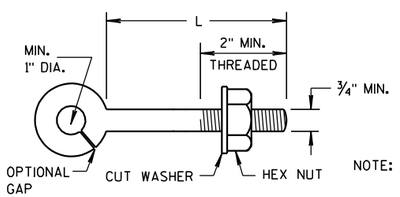


(MODIFIED BELL PIPE)

LONGITUDINAL SECTION

EYE BOLT DIMENSION TABLE

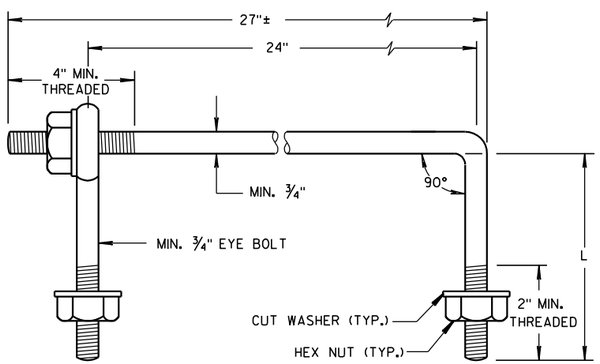
PIPE SIZE	L = LENGTH	
	TONGUE & GROOVE PIPE	MODIFIED BELL PIPE
18" TO 24"	4 1/2"	6 1/4"
30"	5"	7"
36"	5 1/2"	7"
42"	6"	
48"	6 1/2"	
60"	7 1/2"	
66"	8"	



NOTE:

EYE BOLT

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



EYE BOLT AND TIE ROD

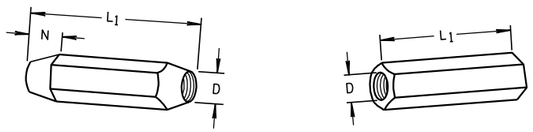
(JOINT TIES FOR 18" TO 66" DIA. CONCRETE PIPE)

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

ADJUSTABLE TIE ROD TABLE

PIPE DIAMETER	TIE ROD DIAMETER	D	L_1	N
12-60	5/8	5/8	5	1/2
66-84	3/4	3/4	5	1/2
90-108	1	1	7	1 1/16

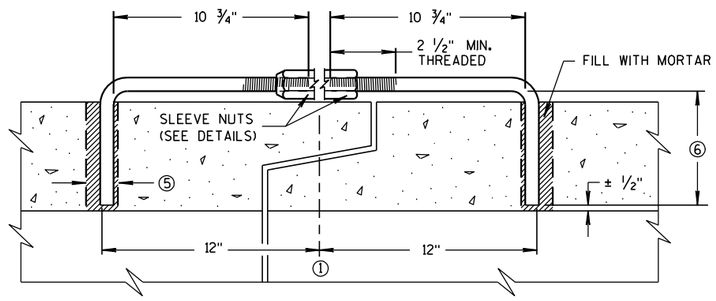
DIMENSIONS SHOWN ARE IN INCHES



TAPERED PLAIN

RIGHT AND LEFT THREADS

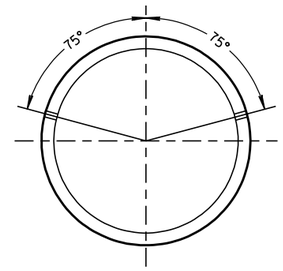
SLEEVE NUTS



LONGITUDINAL SECTION

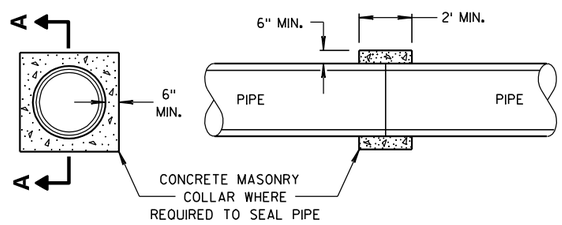
(JOINT TIES FOR 12" TO 108" DIA. CONCRETE PIPE)

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
6/5/2012 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
222
FHWA

6

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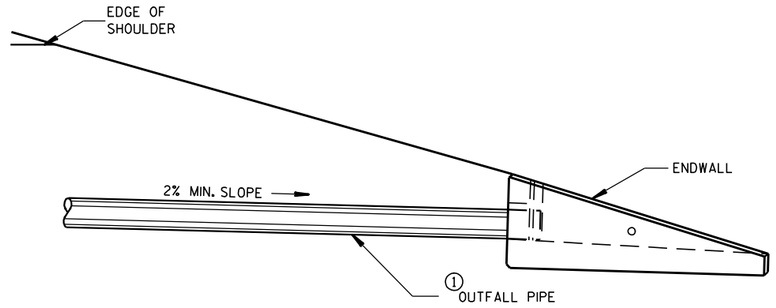
DIMENSIONS IN INCHES											
PIPE DIA.	A	B	C	D	E	F	G	H	J	L	Z
**4	6	12	5 1/4	9	8	32	36	11	2 3/8	6 1/2	4
6	8	14	7 1/4	11	10	42	44	13	3 5/8	8 1/2	6

**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.

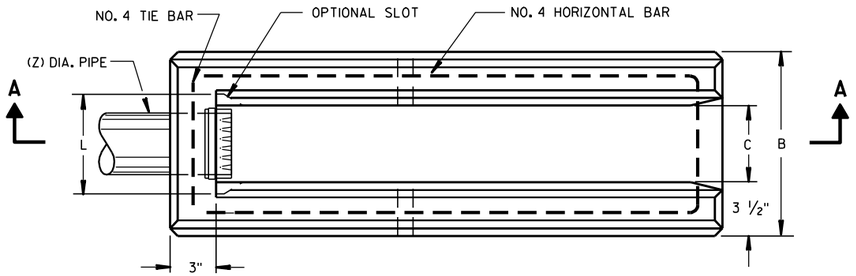
THE UNDERDRAIN PIPE SHALL BE FULLY INSERTED AND SEALED INTO THE ENDWALL WITH CEMENT MORTAR PRIOR TO BACKFILLING AROUND THE STRUCTURE.

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.

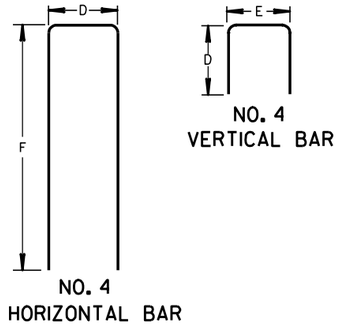
① THE OUTFALL PIPE UNDERDRAIN AND FITTINGS SHALL CONFORM TO THE REQUIREMENTS OF THE SPECIFICATION FOR POLY (VINYL CHORIDE) (PVC) PLASTIC DRAIN, WASTE AND VENT PIPE AND FITTINGS, ASTM DESIGNATION: D 2665, SCHEDULE 40 PVC OR THE STANDARD SPECIFICATION FOR TYPE PSM POLY (VINYL CHORIDE) (PVC) SEWER PIPE 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.

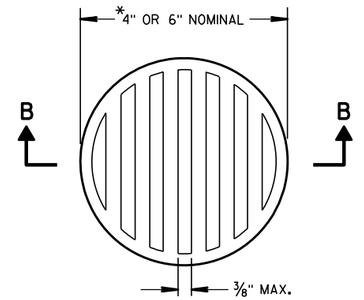
② THE RODENT SHIELD SHALL BE A PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALLY AVAILABLE AS A FLOOR STRAINER. A PIPE COUPLING IS REQUIRED FOR THE ATTACHMENT OF THIS SHIELD TO THE OUTFALL PIPE. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X 1-INCH STAINLESS STEEL SHEET METAL SCREWS.



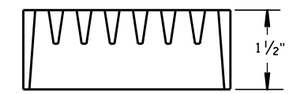
PLAN VIEW



BAR STEEL REINFORCEMENT DETAILS



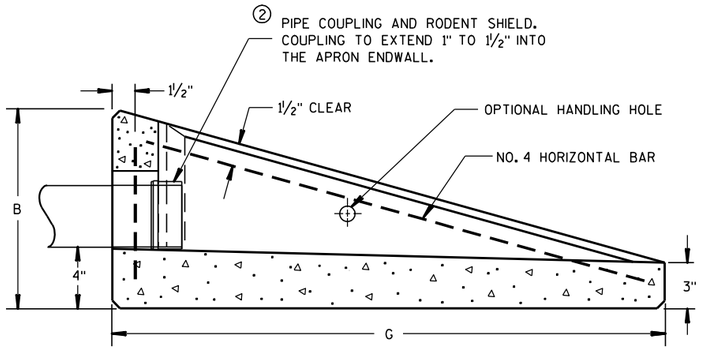
NOTE: ORIENT SHIELD SO SLOTS ARE VERTICAL.



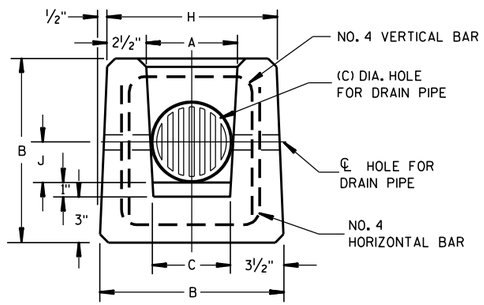
SECTION B-B

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

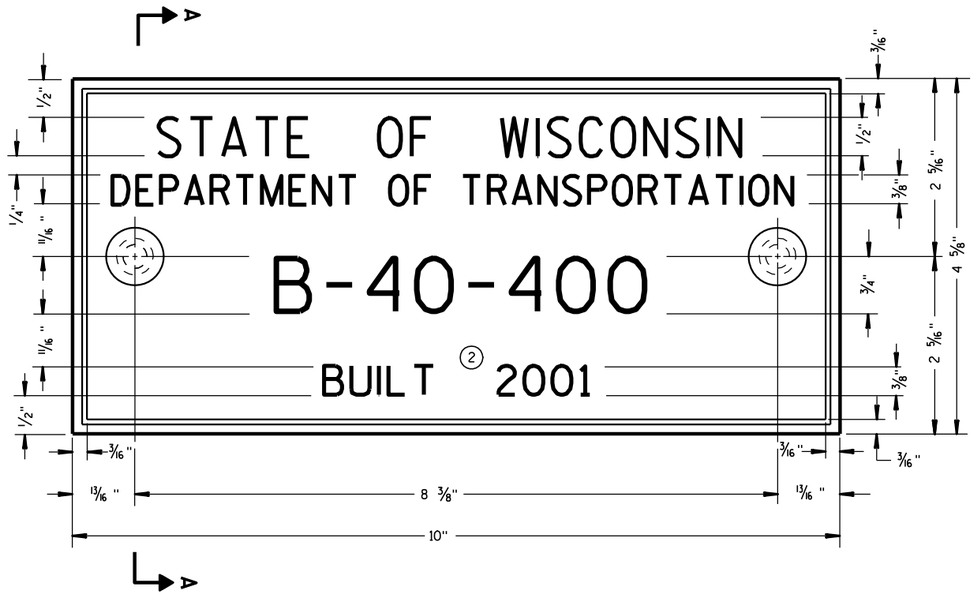
REINFORCED CONCRETE APRON ENDWALL FOR PIPE UNDERDRAIN

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

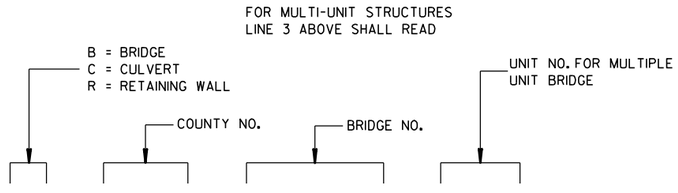
APPROVED
3/10/98 DATE
/S/ Rory L. Rhinesmith
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6

S.D.D. 8 F 6-4



TYPICAL NAME PLATE
(BRIDGES, CULVERTS, AND RETAINING WALLS)



NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES

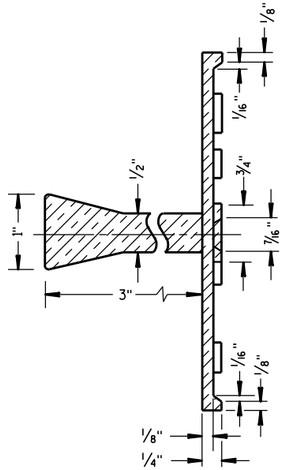
GENERAL NOTES

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.

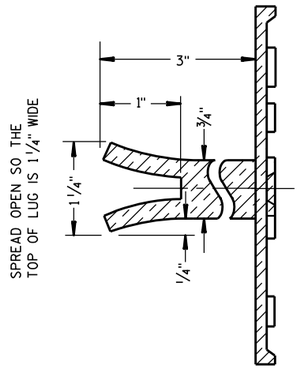
THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

(1) EPOXY RESIN SHALL BE FROM AN APPROVED MANUFACTURER AND USED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

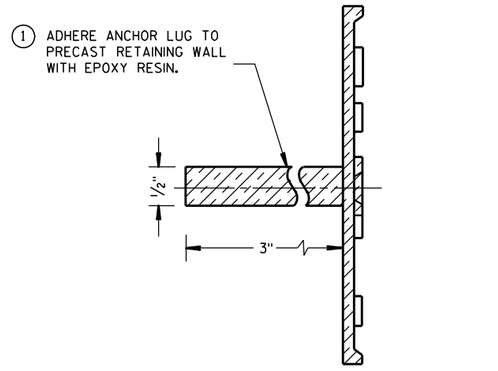
(2) REHABILITATION OF AN EXISTING STRUCTURE SHOULD USE THE DATE OF ORIGINAL STRUCTURE CONSTRUCTION.



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

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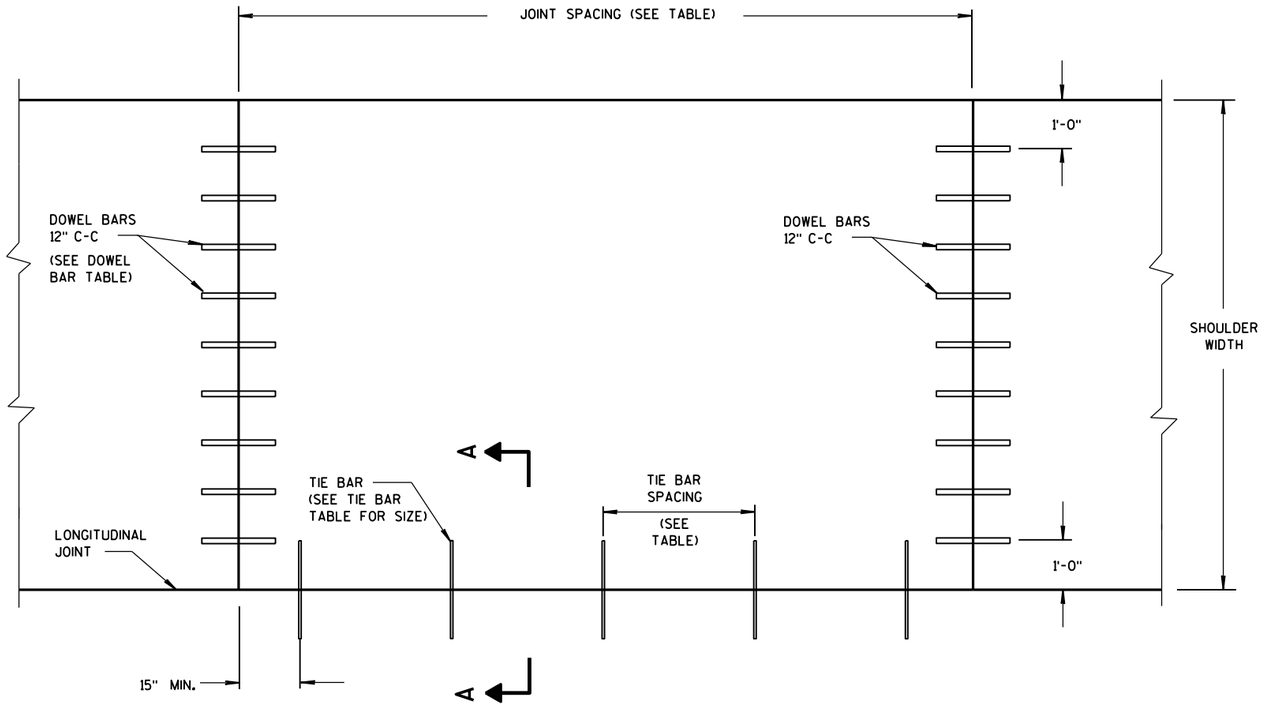
S.D.D. 12 A 3-10



PLAN VIEW

CONCRETE PAVEMENT SHOULDER

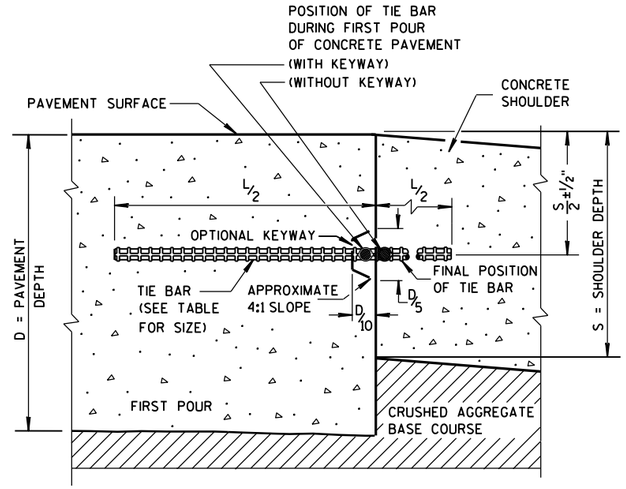
GENERAL NOTES

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.

TRANSVERSE JOINT DETAILS ARE SHOWN ELSEWHERE IN THE PLAN.

FINISH THE SHOULDER PAVEMENT CONFORMING TO SUBSECTION 415.3.8 OF THE STANDARD SPECIFICATIONS.

TIE BARS SHALL CONFORM TO SUBSECTION 505.2.4 OF THE STANDARD SPECIFICATIONS.



SECTION A-A

LONGITUDINAL CONSTRUCTION JOINT

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" MINUMUM SPACING FROM TRANSVERSE JOINTS; SPACING BETWEEN TIE BARS WILL BE 30" AT TRANSVERSE JOINTS.

PAVEMENT DEPTH, DOWEL BAR SIZE AND JOINT SPACING TABLE

PAVEMENT DEPTH (D)	DOWEL BAR DIAMETER***	CONTRACTION JOINT SPACING
5 ½", 6", 6 ½"	NONE	12'
7", 7 ½"	1"	14'
8", 8 ½"	1 ¼"	15'
9", 9 ½"	1 ¼"	15'
10" & ABOVE	1 ½"	15'

*** FOR DOWELED CONCRETE SHOULDERS WITH TRAPEZOIDAL CROSS SECTIONS, CHOSE THE APPROPRIATE DOWEL BAR DIAMETER BASED ON THE SMALLER PAVEMENT DEPTH (LIKELY THE OUTSIDE EDGE OF THE SHOULDER). IF USING BASKETS, USE BASKETS FOR THE AVERAGE THICKNESS OF THE CROSS SECTION.

CONCRETE PAVEMENT SHOULDERS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2015 — DATE
/S/ Peter Kemp, P.E. — PAVEMENT SUPERINTENDENT
FHWA

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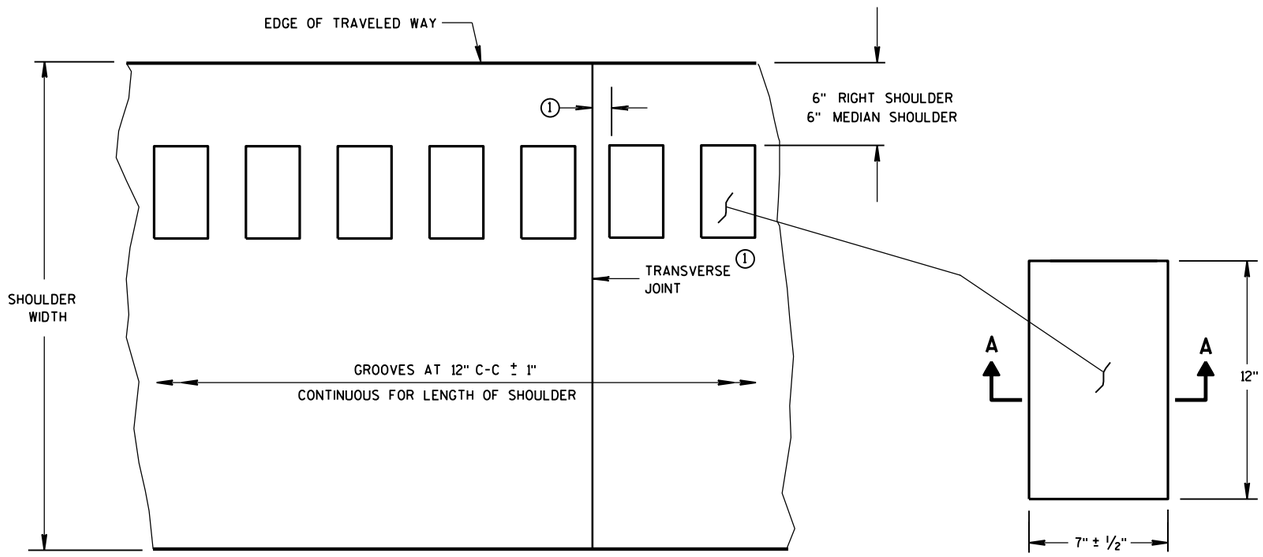
S.D.D. 13 A 3-6



PLAN VIEW
SHOULDER WITH GROOVES

PLAN VIEW
(SINGLE GROOVE)

PLACEMENT DETAIL FOR MILLED RUMBLE STRIP

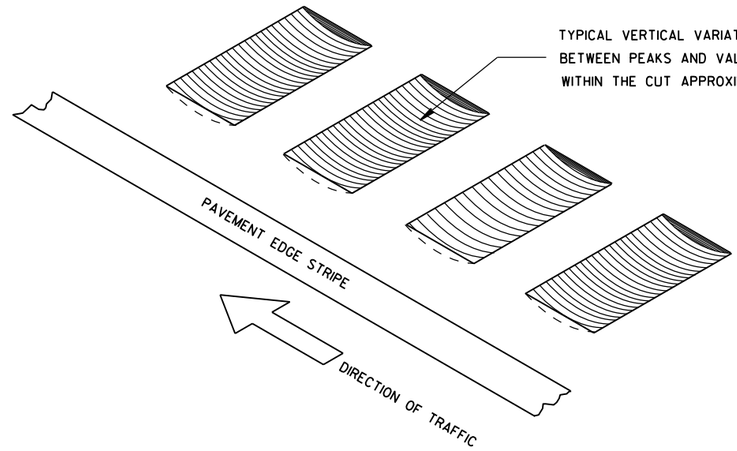
GENERAL NOTES

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

RUMBLE STRIPS ON EXPRESSWAYS

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

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



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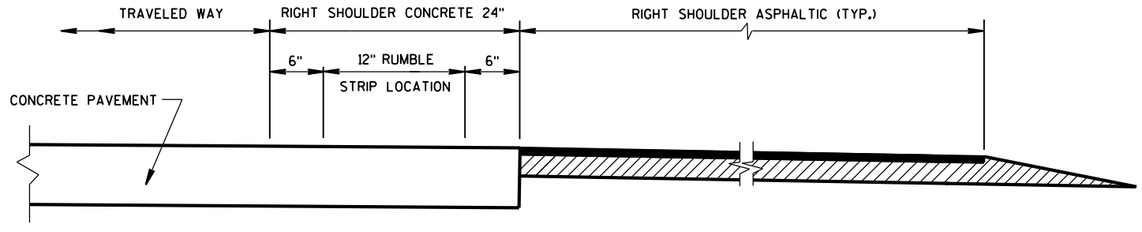
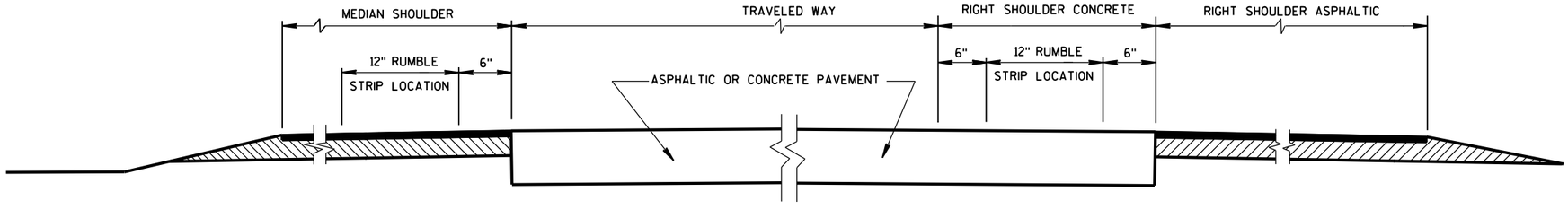


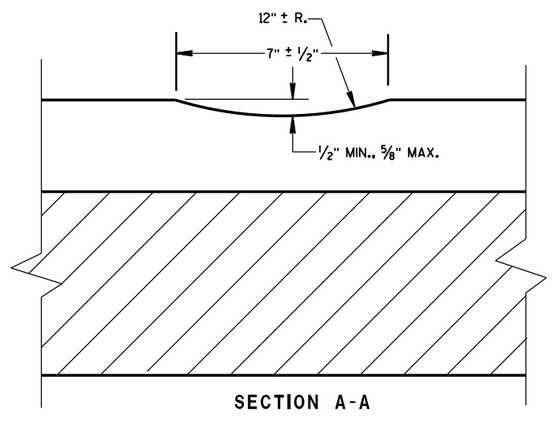
SECTION VIEW
CONCRETE PAVEMENT EXTENDS INTO RIGHT SHOULDER)



SECTION VIEW

TYPICAL LOCATIONS OF SHOULDER RUMBLE STRIPS IN RURAL DIVIDED HIGHWAYS

(ONE ROADWAY IS SHOWN)



SECTION A-A

SHOULDER RUMBLE STRIP, MILLING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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

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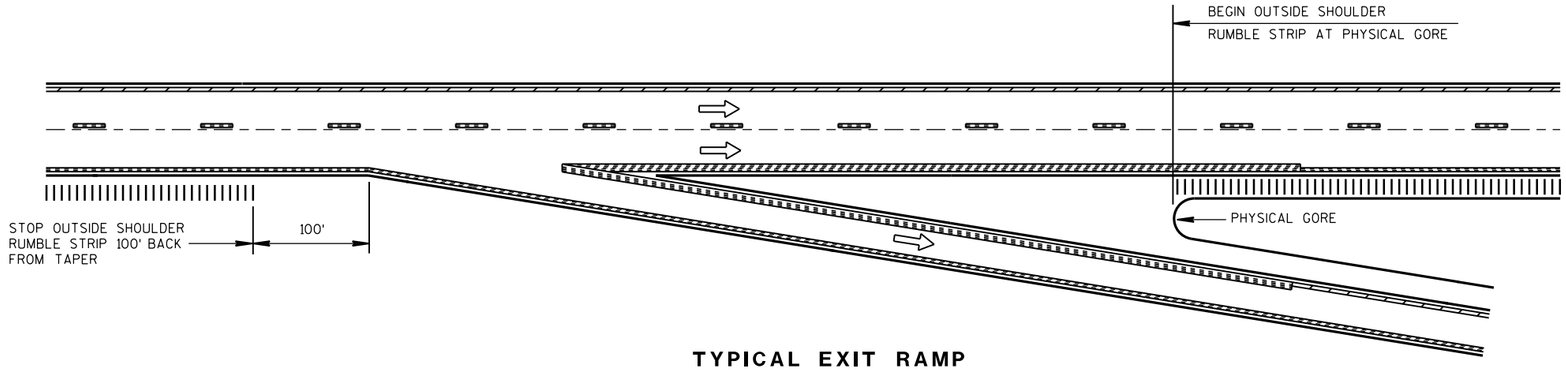
S.D.D. 13 A 5-5a



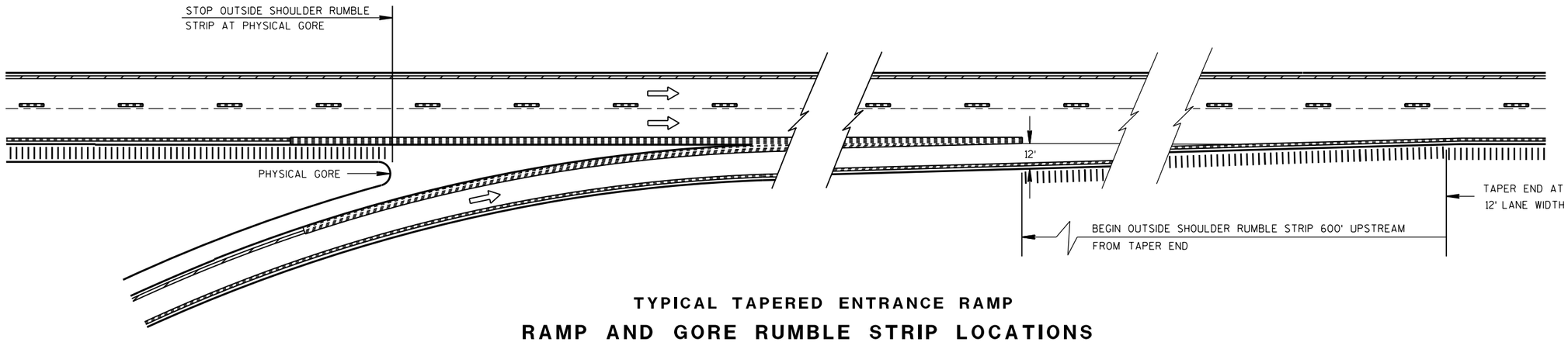
TYPICAL EXIT RAMP

NOTES:

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

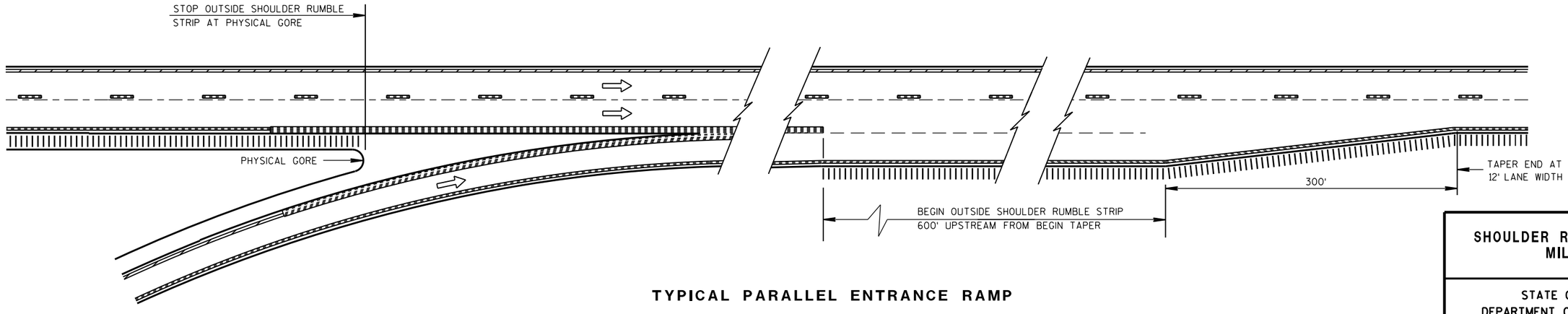
PAVEMENT MARKING DETAILS AND SPECIFICATIONS ARE PROVIDED ELSEWHERE IN THE CONTRACT.

NOTE:
ARROW SYMBOL (⇨)
SHOWS DIRECTION OF TRAVEL



TYPICAL TAPERED ENTRANCE RAMP

RAMP AND GORE RUMBLE STRIP LOCATIONS



TYPICAL PARALLEL ENTRANCE RAMP

RAMP AND GORE RUMBLE STRIP LOCATIONS

SHOULDER RUMBLE STRIP, MILLING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
12/17/2012 DATE
/S/ Jerry H. Zoga
ROADWAY STANDARDS ENGINEER
227
FHWA

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

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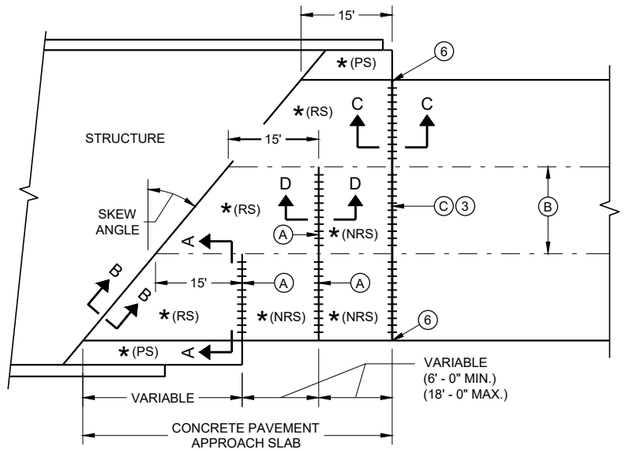


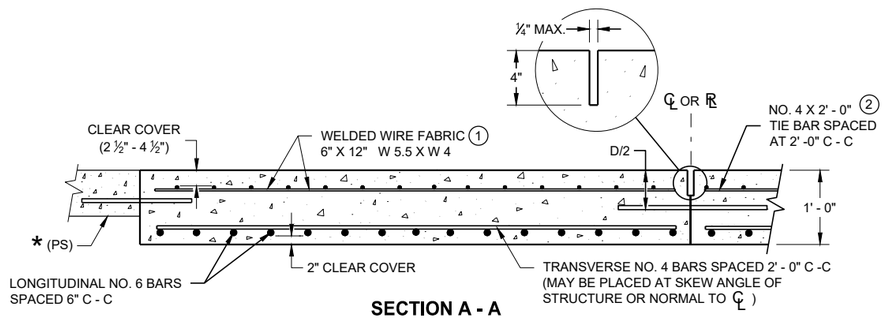
SKEWED APPROACH
(PAVEMENT MORE THAN TWO LANES)

* (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

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 MEETING THE REQUIREMENTS OF ASTM D6690.

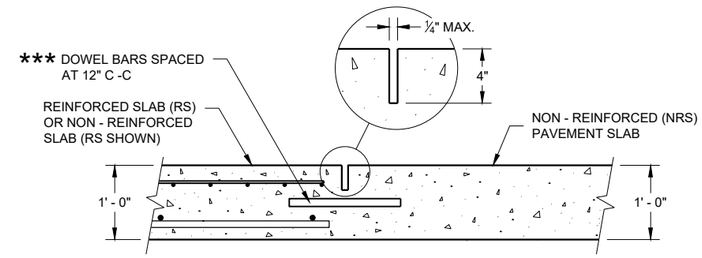
(5) PLACE EXPANSION CAP ON THE END OF THE DOWEL THAT IS NOT TACK WELDED TO THE BASKET. DO NOT FORCE DOWEL BAR PAST THE DOWEL STOP.

(6) EXTEND EXPANSION JOINT THROUGH ANY ADJACENT TIED CONCRETE.

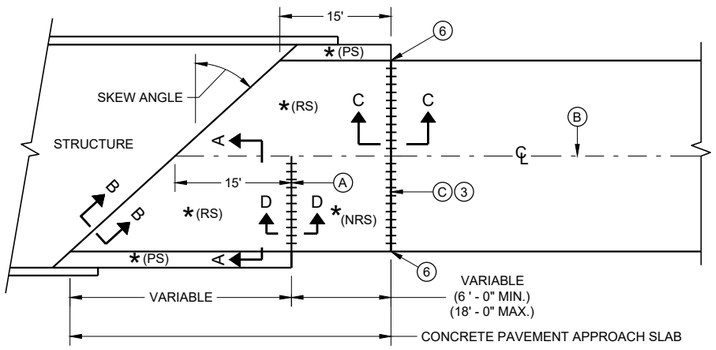
(A) STANDARD CONTRACTION JOINT NORMAL TO ℄ OR ℞.

(B) STANDARD LONGITUDINAL JOINT WITH TIE BARS.

(C) 1 ½" EXPANSION JOINT WITH DOWEL BARS NORMAL TO ℄ OR ℞

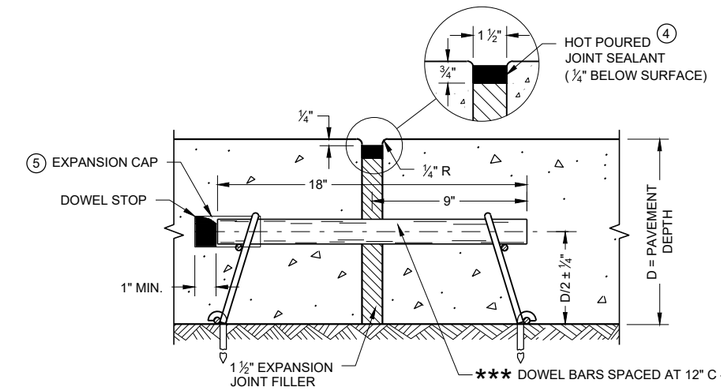


SECTION D - D
CONTRACTION JOINT

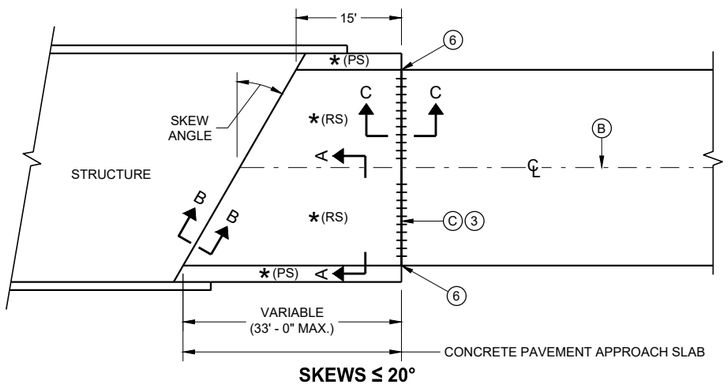


SKEWS > 20°
(PAVEMENT WIDTH ≤ 30')

SECTION B - B
BEND DETAIL
BOTTOM REINFORCEMENT

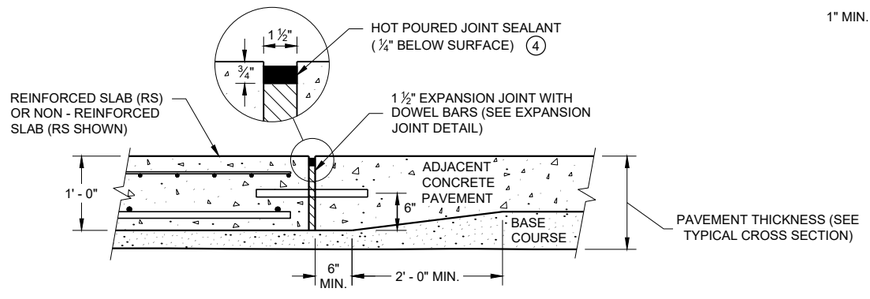


EXPANSION JOINT DETAIL



SKEWS ≤ 20°
(PAVEMENT WIDTH ≤ 30')

APPROACH SLAB AND ADJACENT PAVEMENT



SECTION C - C
TRANSITION DETAIL
APPROACH SLAB TO ADJACENT PAVEMENT

CONCRETE PAVEMENT APPROACH SLAB

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2018
DATE

/S/ Peter Kemp P.E.
PAVEMENT SUPERVISO

FHWA

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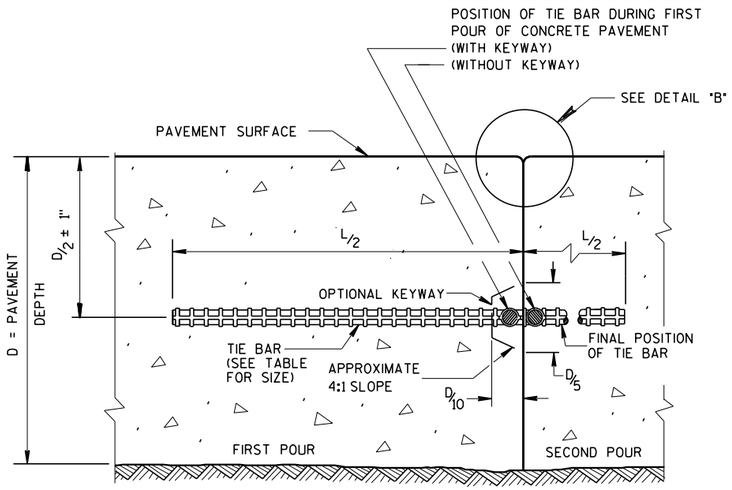
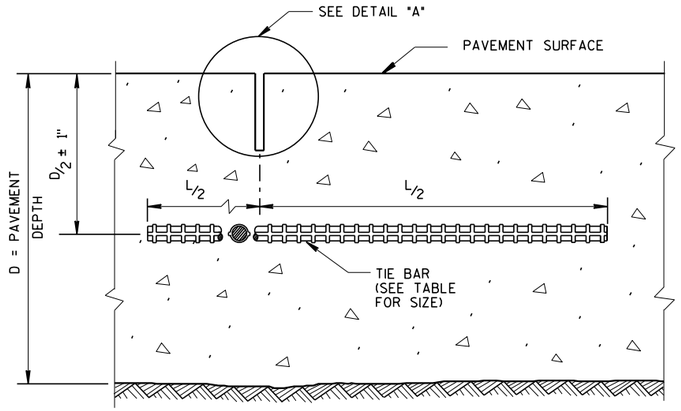
SDD 13B02 - 09a



CONSTRUCTION JOINT



SAWED JOINT

GENERAL NOTES

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

CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.

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

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

PLAN VIEW

SECTION A-A

LONGITUDINAL CONSTRUCTION JOINT TIE BARS ANCHORED INTO EXISTING PAVEMENT

DETAIL "A"

DETAIL "B"

DETAIL "C"

TIE BAR TABLE

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

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

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

PLAN VIEW
SHOWING LOCATION OF TIE BARS

CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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S.D.D. 13 C 1-19

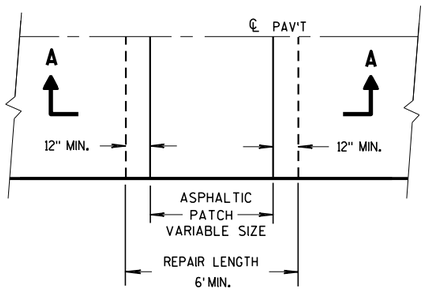
GENERAL NOTES

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

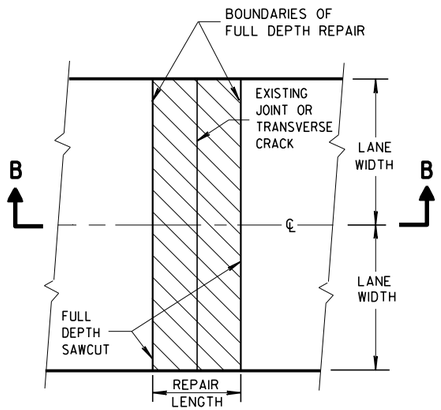
PROVIDE A 6-FOOT MINIMUM DISTANCE FROM BOUNDARIES OF CONCRETE REPAIR AREAS TO ADJACENT TRANSVERSE JOINT OR CRACK IN THE SAME LANE.

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

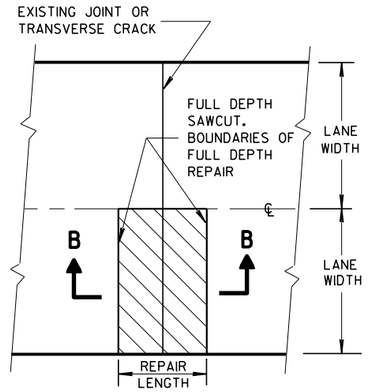
(1) DOWEL BARS MIGHT NOT EXIST.



PLAN VIEW

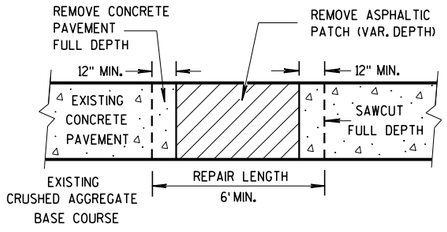


PLAN VIEW
(DOUBLE LANE REPAIR)



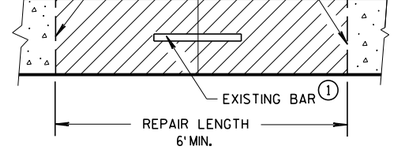
PLAN VIEW
(SINGLE LANE REPAIR)

FULL DEPTH CONCRETE PAVEMENT REMOVAL



SECTION A-A

HMA PATCH REMOVAL



SECTION B-B

CONCRETE REMOVAL

CONCRETE PAVEMENT REPAIR AND REPLACEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

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

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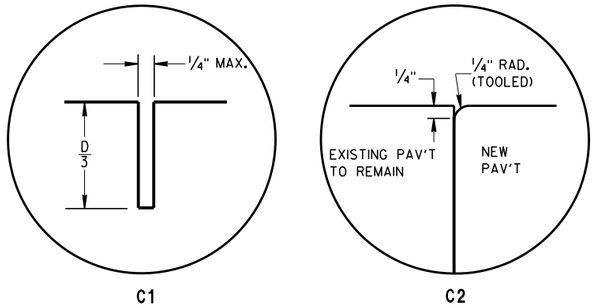
S.D.D. 13 C 9-15a



C1 C2

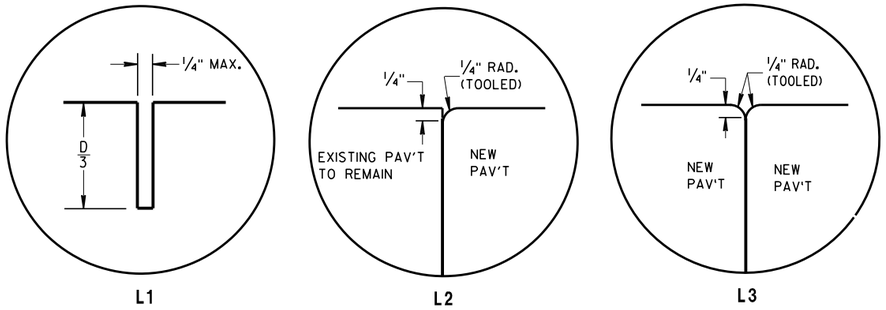
TRANSVERSE JOINTS

TIE BAR TABLE

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

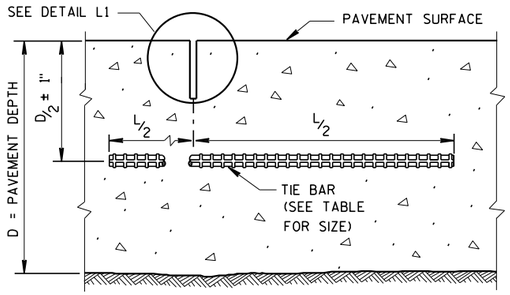
* SUBSTITUTE BENT BARS AT LONGITUDINAL JOINTS WHEN EQUIPMENT LIMITATIONS DURING CONSTRUCTION WARRANT (e.g. AUXILIARY LANES OR TURN LANES)

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



L1 L2 L3

LONGITUDINAL JOINTS



SECTION C-C

SAWED LONGITUDINAL JOINT

GENERAL NOTES

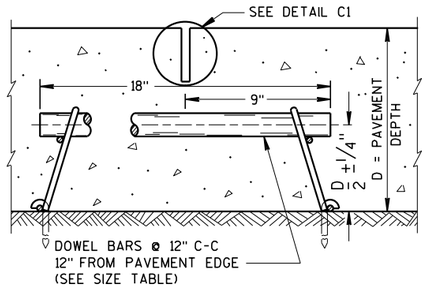
INSTALL DOWEL BARS PARALLEL TO THE PAVEMENT CENTERLINE AND PAVEMENT SURFACE.

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

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

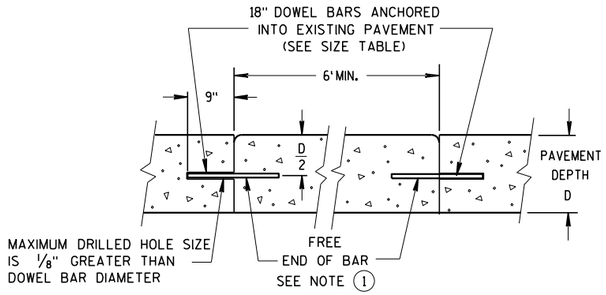
FOR MULTI-LANE CONCRETE PAVEMENT REPLACEMENTS, PROVIDE A MINIMUM DISTANCE OF 15 INCHES FROM ALL TRANSVERSE JOINTS OR EDGES OF REPLACEMENT TO THE CENTER OF THE TIE BAR NEAREST THAT JOINT OR EDGE.

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

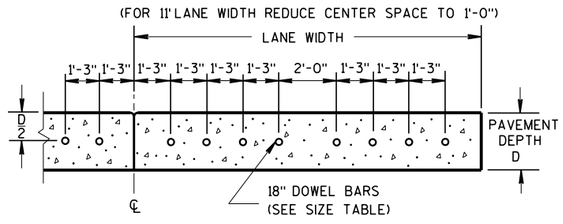


SECTION F-F

CONTRACTION JOINT



SECTION D-D

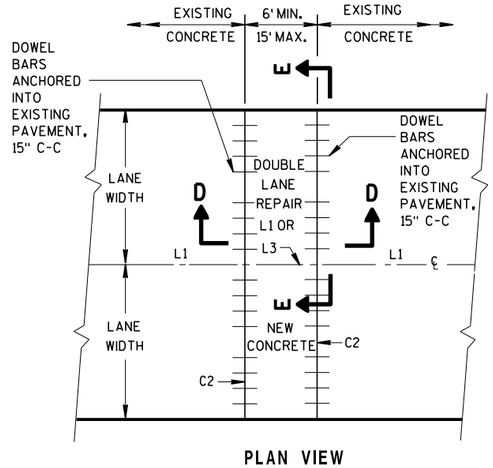


SECTION E-E

DRILLED DOWEL BAR CONSTRUCTION JOINT

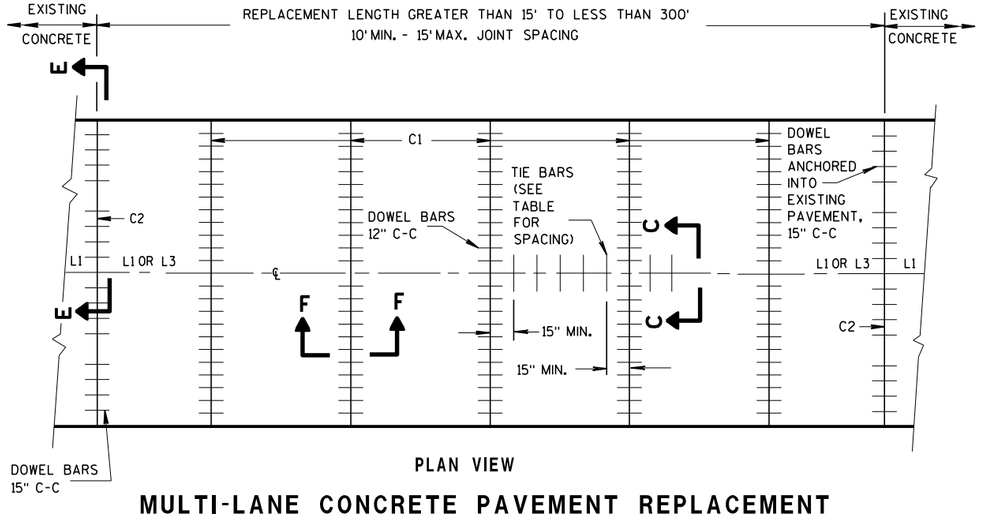
PAVEMENT DEPTH, DOWEL BAR SIZE AND JOINT SPACING TABLE

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



PLAN VIEW

MULTI-LANE CONCRETE PAVEMENT REPAIR



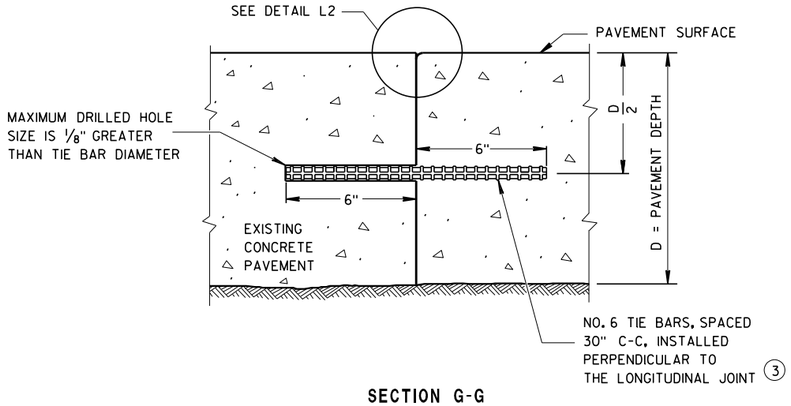
PLAN VIEW

MULTI-LANE CONCRETE PAVEMENT REPLACEMENT

CONCRETE PAVEMENT REPAIR AND REPLACEMENT

6

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



SECTION G-G

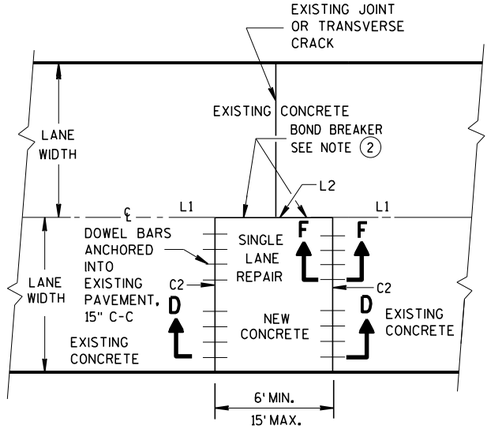
TIE BARS ANCHORED INTO EXISTING PAVEMENT

GENERAL NOTES

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

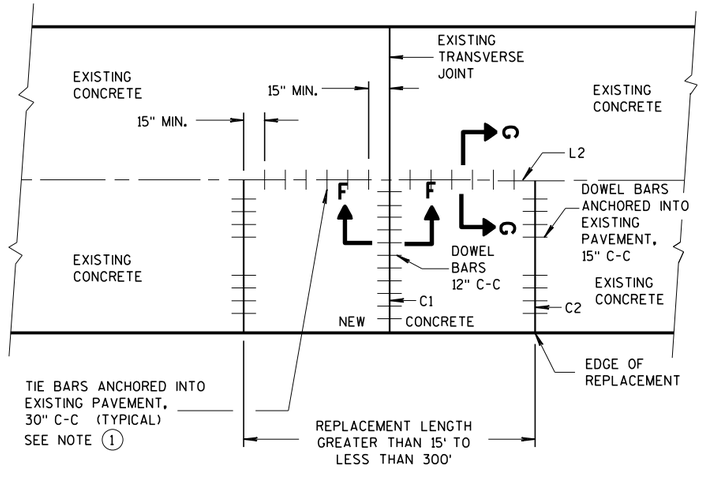
(2) USE AN ENGINEER-APPROVED BOND BREAKER (E.G. RELEASE AGENT, CURING COMPOUND) FOR SINGLE LANE REPAIRS UP TO 15 FEET IN LENGTH.

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



PLAN VIEW

SINGLE LANE CONCRETE PAVEMENT REPAIR



PLAN VIEW

SINGLE LANE CONCRETE PAVEMENT REPLACEMENT

CONCRETE PAVEMENT REPAIR AND REPLACEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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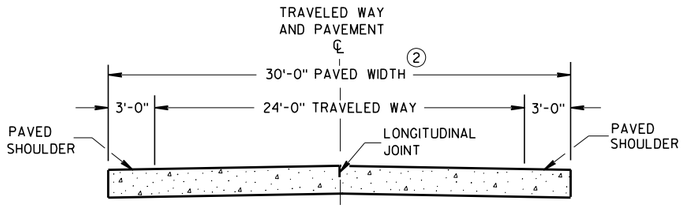
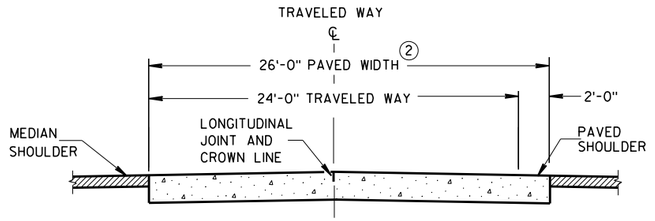
S.D.D. 13 C 9-15c

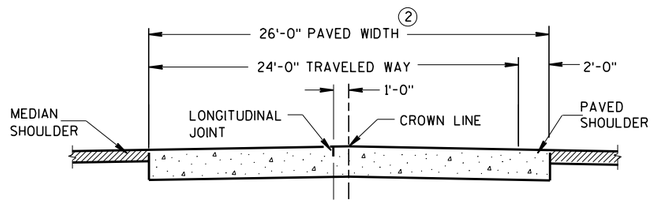


SECTION A-A ①

TWO-LANE TWO-WAY HIGHWAY



SECTION B-B



ALTERNATIVE SECTION B-B

①

DIVIDED HIGHWAY

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 AND A MAXIMUM OF 18 INCHES FROM THE FREE EDGE OF PAVEMENT.

CONSTRUCTION JOINTS

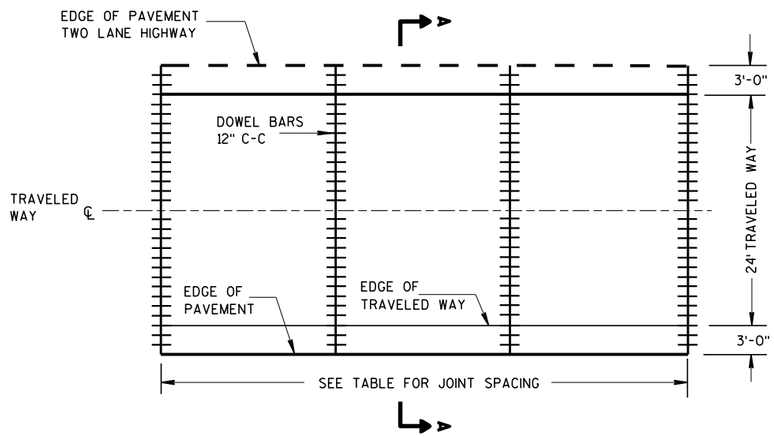
LOCATE CONSTRUCTION JOINTS A MINIMUM OF 6 FEET FROM THE NEAREST CONTRACTION JOINT AND ALIGN PARALLEL TO CONTRACTION JOINTS.

① REFER TO TYPICAL CROSS SECTIONS FOR ADDITIONAL DETAILS.

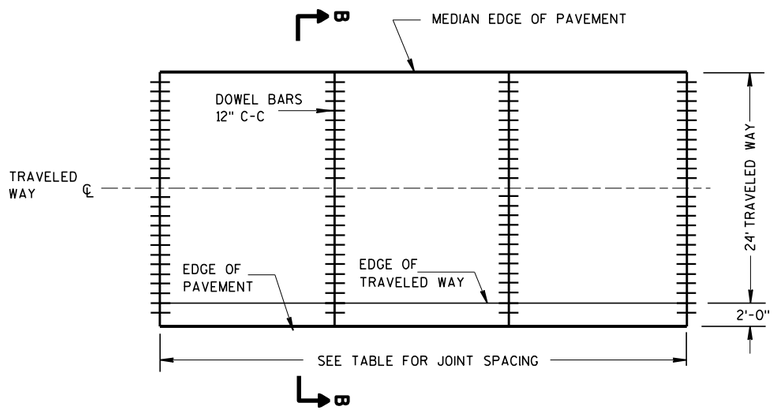
② MEASURE THE ENTIRE PAVED WIDTH INCLUDING THE PORTION(S) LABELED PAVED SHOULDER AS CONCRETE PAVEMENT.

PAVEMENT DEPTH, DOWEL BAR SIZE AND JOINT SPACING TABLE

PAVEMENT DEPTH (D)	DOWEL BAR DIAMETER	CONTRACTION JOINT SPACING
5 ½", 6", 6 ½"	NONE	12'
7", 7 ½"	1"	14'
8", 8 ½"	1 ¼"	15'
9", 9 ½"	1 ¼"	15'
10" & ABOVE	1 ½"	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

6

S.D.D. 13 C 11-12a

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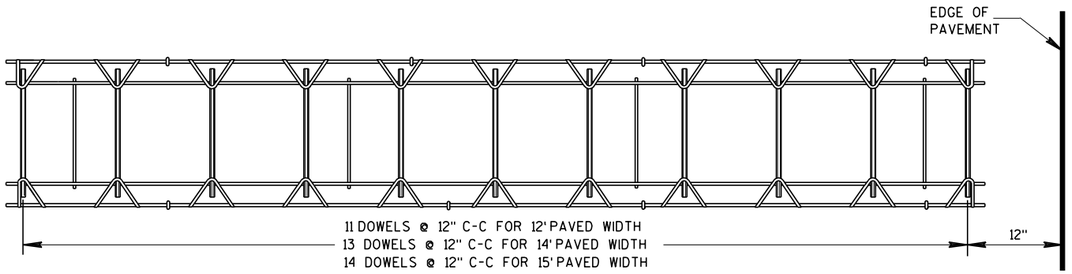
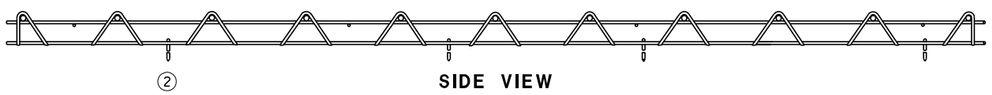
S.D.D. 13 C 11-12a



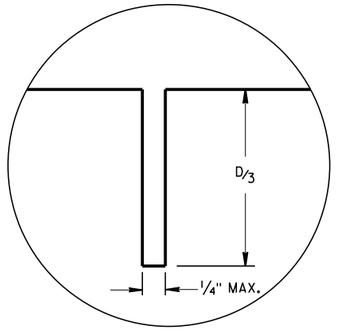
PLAN VIEW



SIDE VIEW

(NORMAL TO CENTERLINE)

CONTRACTION JOINT DOWEL ASSEMBLY ①



JOINT DETAIL

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 CONSTRUCTING 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.

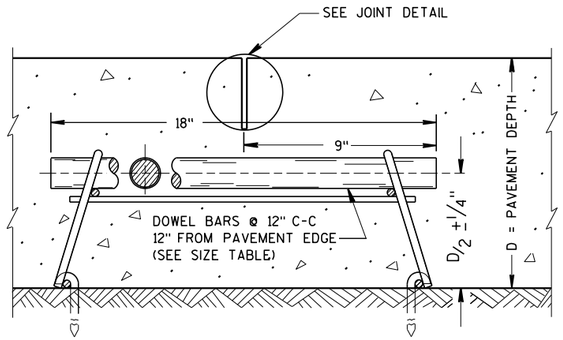
③ FORM OR SAW CONSTRUCTION JOINTS. PROVIDE A 1/4-INCH RADIUS AT FORMED JOINTS.

④ PROVIDE A SMOOTH VERTICAL FACE FOR THE ENTIRE DEPTH OF THE PAVEMENT WHEN FORMING CONSTRUCTION JOINTS.

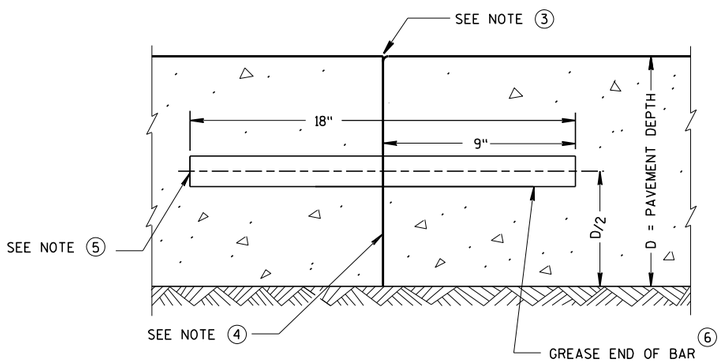
⑤ INSTALL DOWEL BARS AT CONSTRUCTION JOINTS BY FORMING OR DRILLING. INSTALL FORMED DOWEL BARS 12 INCHES C-C AND 12 INCHES FROM PAVEMENT EDGE. REMOVE EXCESS CONCRETE FROM THE FREE END OF THE DOWEL BAR IF DOWEL BARS ARE FORMED THROUGH A HEADER BOARD. INSTALL DRILLED DOWEL BARS ACCORDING TO *DRILLED DOWEL BAR CONSTRUCTION JOINT* DETAIL.

⑥ APPLY A THIN UNIFORM COATING OF SURFACE TREATMENT TO THE FREE END OF DOWEL BARS TO PREVENT BONDING.

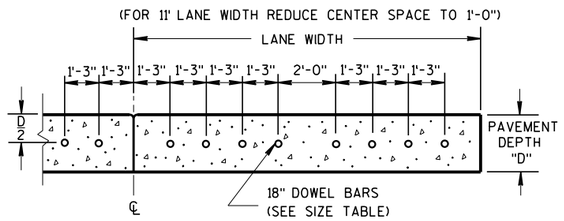
⑦ ANCHOR DOWEL BARS INTO DRILLED HOLES WITH AN EPOXY. MAXIMUM DRILLED HOLE SIZE IS 1/8-INCH GREATER THAN DOWEL BAR DIAMETER, 9 INCHES IN LENGTH.



DOWELED CONTRACTION JOINT



TRANSVERSE CONSTRUCTION JOINT



DRILLED DOWEL BAR CONSTRUCTION JOINT ⑦

RURAL DOWELED CONCRETE PAVEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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S.D.D. 13 C 11-12b

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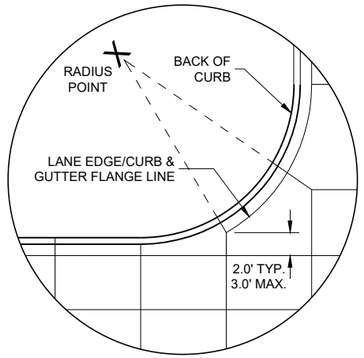
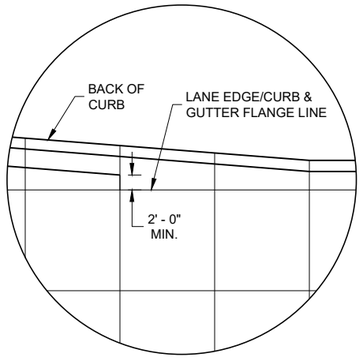
S.D.D. 13 C 11-12b



DETAIL "A"



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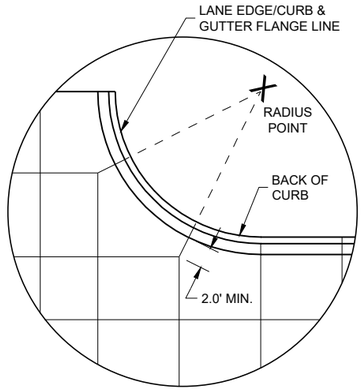

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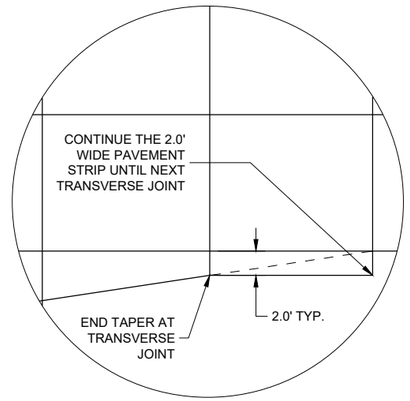


DETAIL "D"

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.

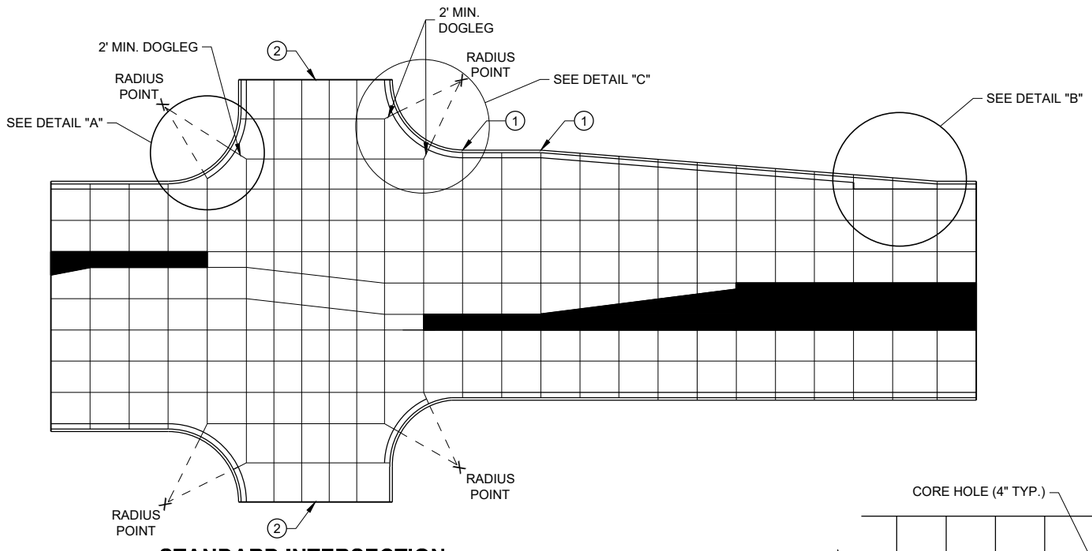
AVOID ANGLES LESS THAN 60° BY DOGLEGGING JOINTS THROUGH CURVE RADIUS POINTS. USE 90° ANGLES WHEN POSSIBLE.

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 WITHEDGE OF RADIUS.

(3) THE ENGINEER MAY APPROVE SLIGHT VARIATIONS FROM THESE JOINTING DETAILS.

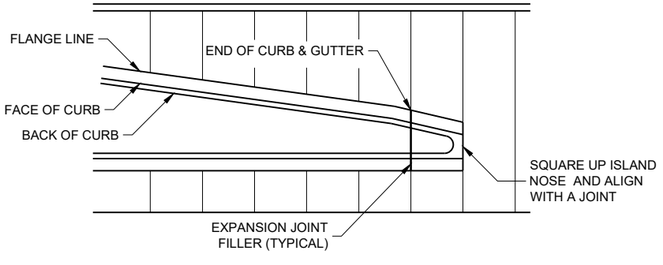


STANDARD INTERSECTION

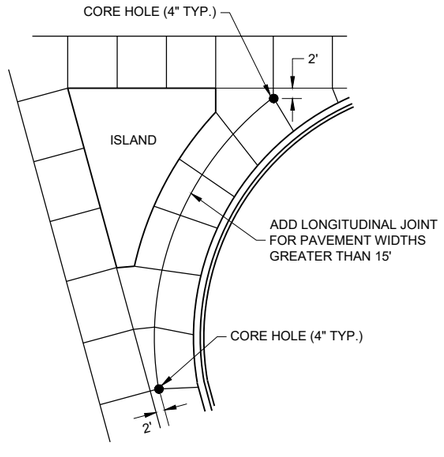
PAVEMENT DEPTH AND JOINT SPACING TABLE

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
DEPARTMENT OF TRANSPORTATION

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SDD 13C18 - 07a

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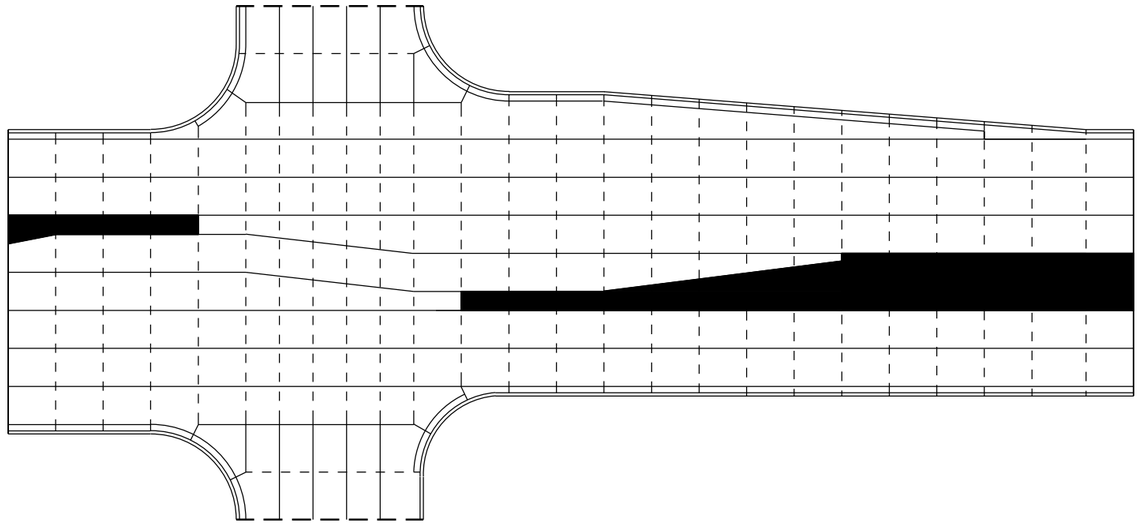
LEGEND

POTENTIAL DOWELED EXPANSION JOINT

DOWELED JOINT

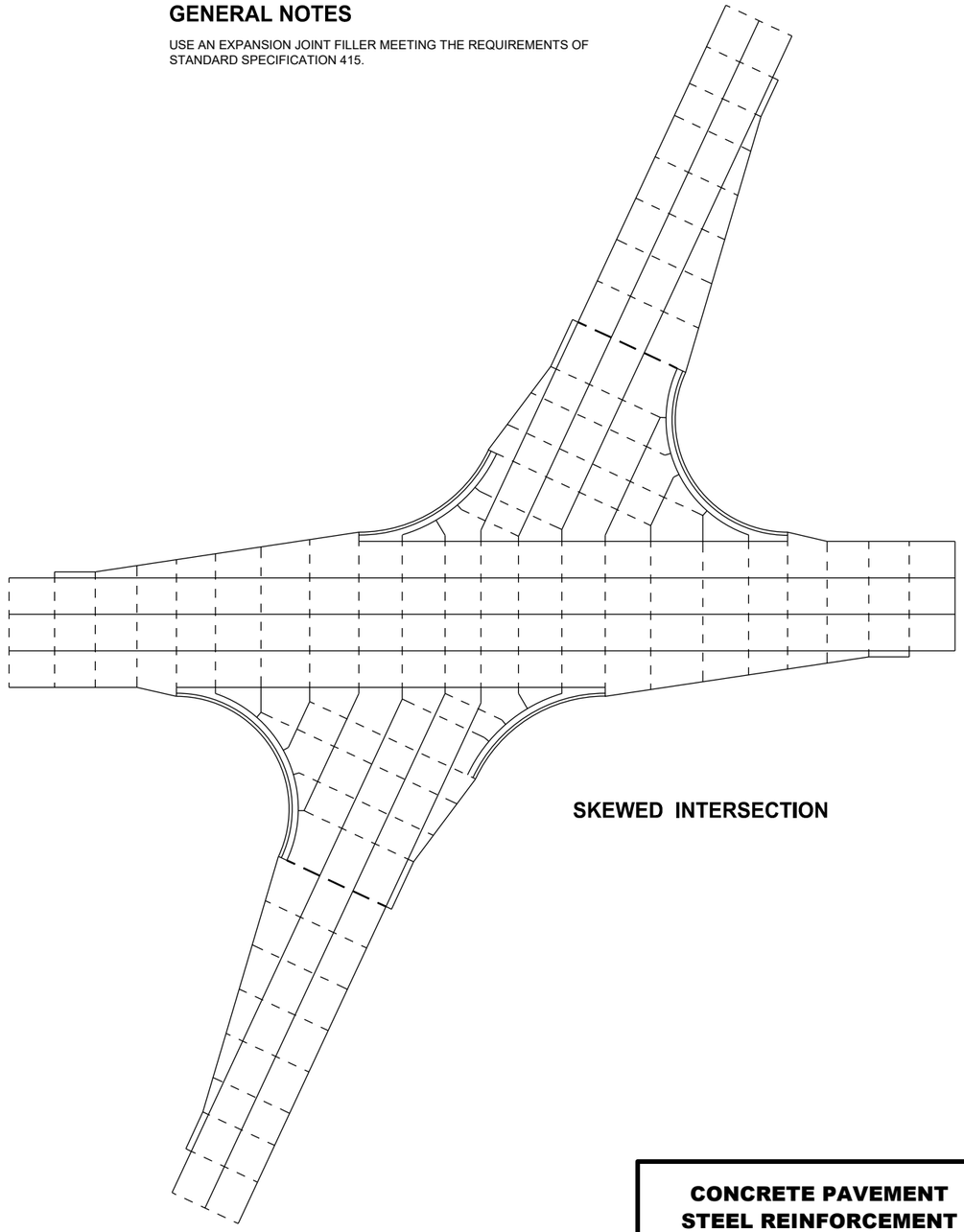
TIED JOINT



STANDARD INTERSECTION

GENERAL NOTES

USE AN EXPANSION JOINT FILLER MEETING THE REQUIREMENTS OF STANDARD SPECIFICATION 415.



SKEWED INTERSECTION

6

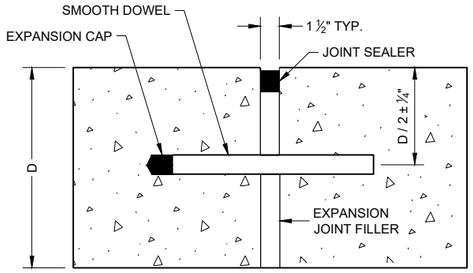
SDD 13C18 - 07b

CONCRETE PAVEMENT STEEL REINFORCEMENT

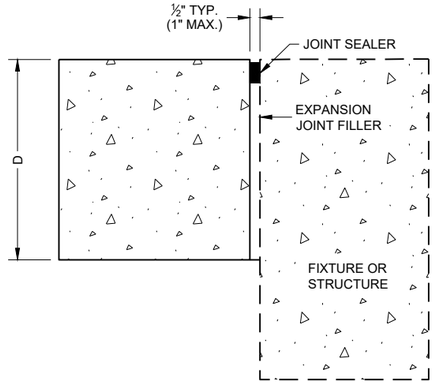
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 13C18 - 07b



DOWELED TRANSVERSE (1)



UNTIED - LONGITUDINAL

EXPANSION JOINTS

TIE BAR TABLE

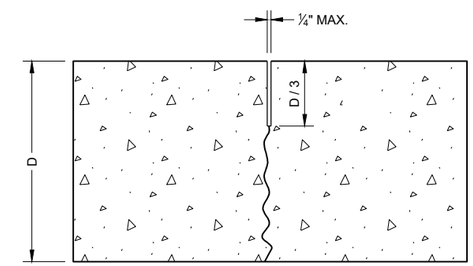
PAVEMENT DEPTH (D)	TIE BAR SIZE	TIE BAR LENGTH (L)	MAX. TIE BAR SPACING
< 10 ½"	NO. 4	30"	36"
≥ 10 ½"	NO. 5	36"	36"
	NO. 4*	30"	24"**

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

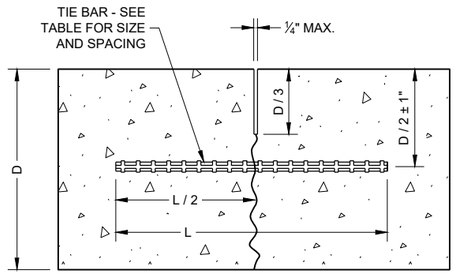
** CONFORM TO 15" MINIMUM SPACING FROM TRANSVERSE JOINTS; SPACING BETWEEN TIE BARS WILL BE 30" AT TRANSVERSE JOINTS.

GENERAL NOTES

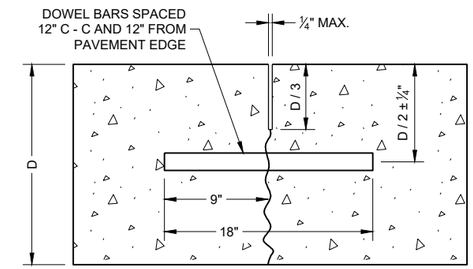
1. USE DOWELED EXPANSION JOINTS ON SIDE ROADS AT INTERSECTIONS (TO ISOLATETHE SIDE ROAD FROM THE THROUGH STREET) IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH.
2. SPACE CONTRACTION JOINTS IN ACCORDANCE WITH SDD 13C4, 13C11 OR 13C13.
3. LOCATE CONSTRUCTION JOINTS A MINIMUM 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

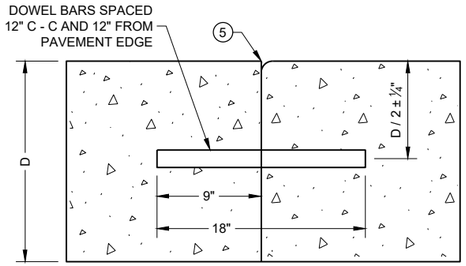


TIED LONGITUDINAL

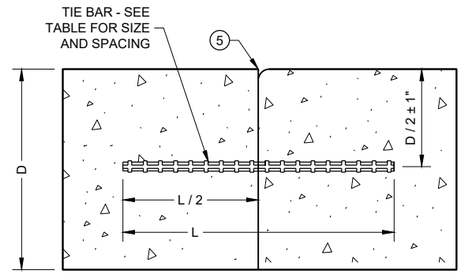


DOWELED TRANSVERSE

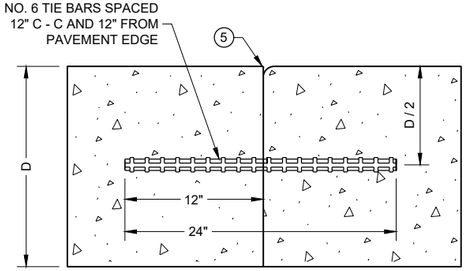
CONTRACTION JOINTS (2)



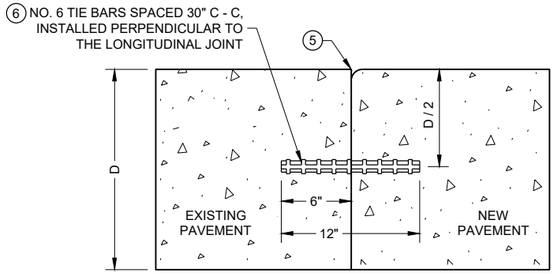
DOWELED TRANSVERSE (3)



TIED LONGITUDINAL



TIED TRANSVERSE (3)
(FOR USE ON NON-DOWELED PAVEMENTS ONLY)



TIED LONGITUDINAL TO EXISTING

CONSTRUCTION JOINTS (4)

CONCRETE PAVEMENT JOINT TYPES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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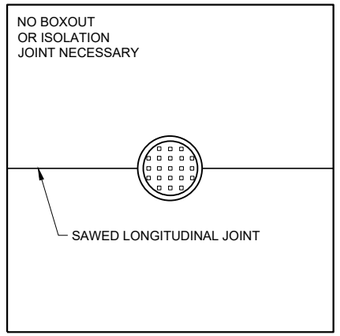
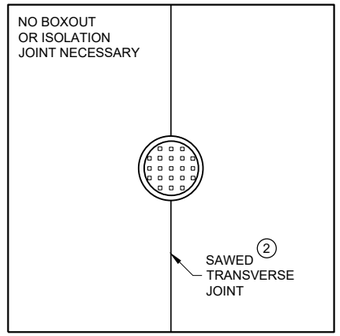
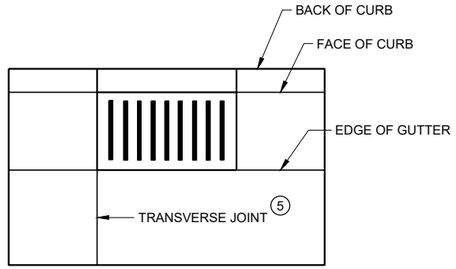
SDD 13C18 - 07c



MANHOLE WITH LONGITUDINAL JOINT



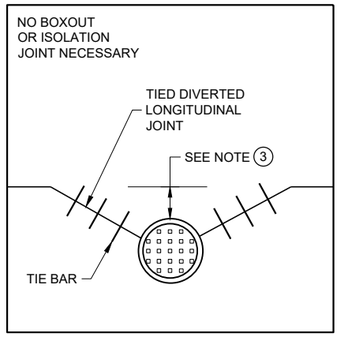
MANHOLE WITH TRANSVERSE JOINT



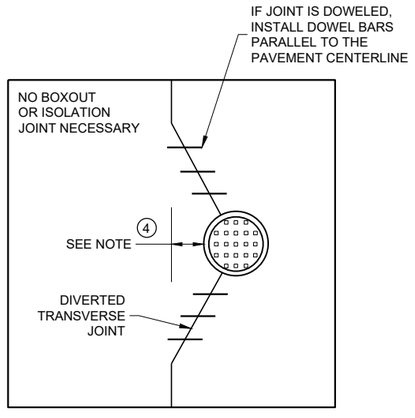
INLET WITH TRANSVERSE JOINT

GENERAL NOTES

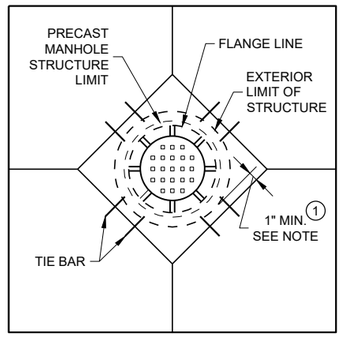
1. USE BOXOUTS WHEN UTILITY STRUCTURE IS IN THE PATH OF CONSTRUCTION JOINTS. PROVIDE A 1 FOOT MINIMUM CLEARANCE BETWEEN THE EXTERIOR LIMIT OF THE STRUCTURE TO THE DIAMOND BOXOUT.
2. ADJUST TRANSVERSE JOINT TO INTERSECT MANHOLE IF POSSIBLE.
3. IF DISTANCE BETWEEN THE LONGITUDINAL JOINT AND THE EDGE OF 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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2018
DATE

/S/ Peter Kemp P.E.
PAVEMENT SUPERVISO

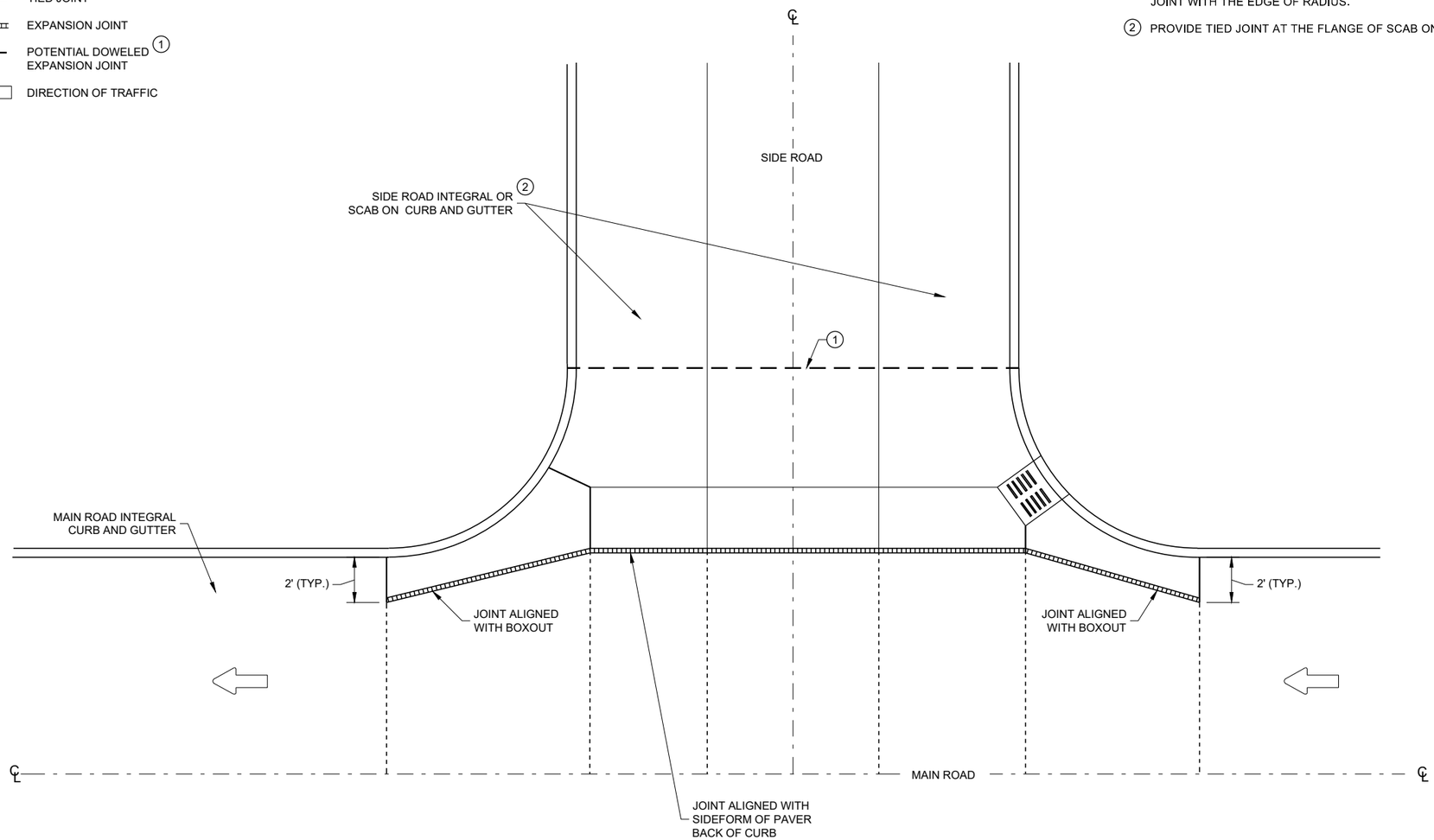
FHWA

6

SDD 13C18 - 07d

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

6

SDD 13C18 - 07f

6

SDD 13C18 - 07f

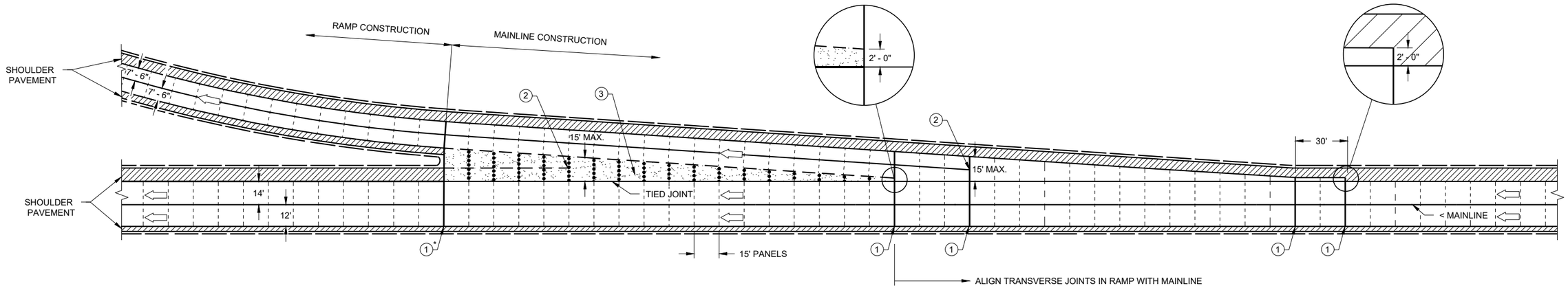
CONCRETE PAVEMENT INTERSECTION BOXOUT FOR INTEGRAL CURB AND GUTTER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

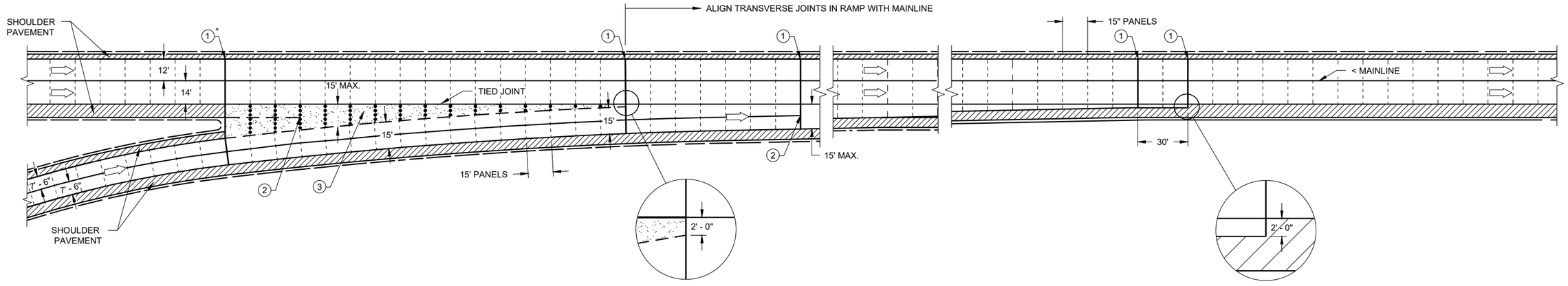
APPROVED
November 2018
DATE

/S/ Peter Kemp P.E.
ROADWAY STANDARDS DEVE ENGINEER

FHWA



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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2018
DATE

/S/ Peter Kemp P.E.
ROADWAY STANDARDS DEVE ENGINEER

FHWA

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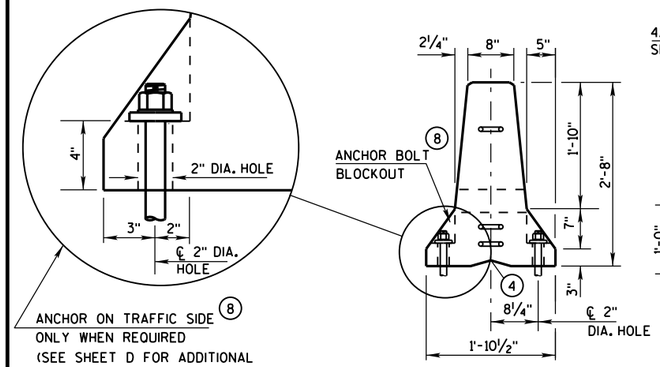
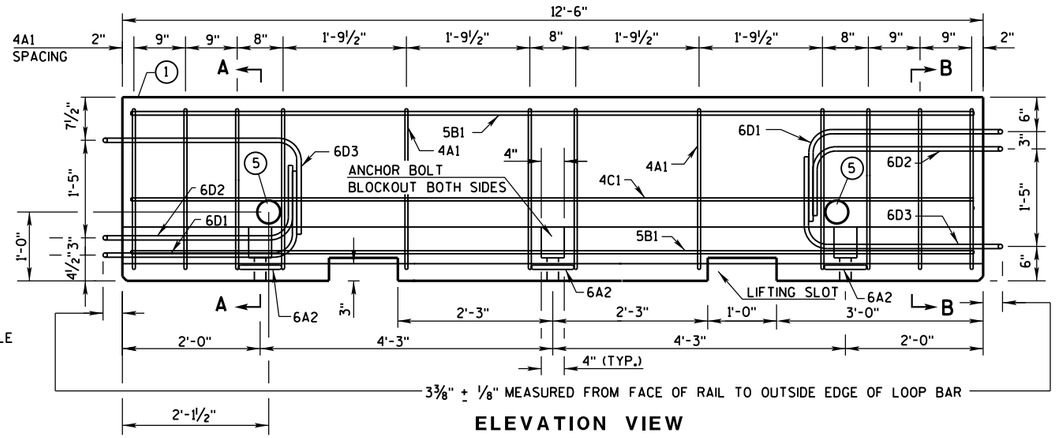
SDD13C18 - 07g

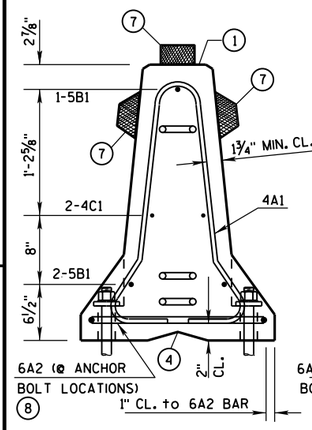
SDD13C18 - 07g



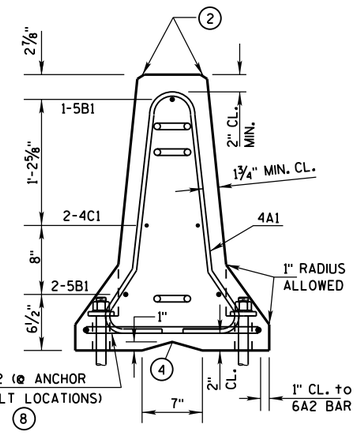
END VIEW



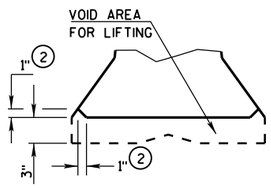
ELEVATION VIEW



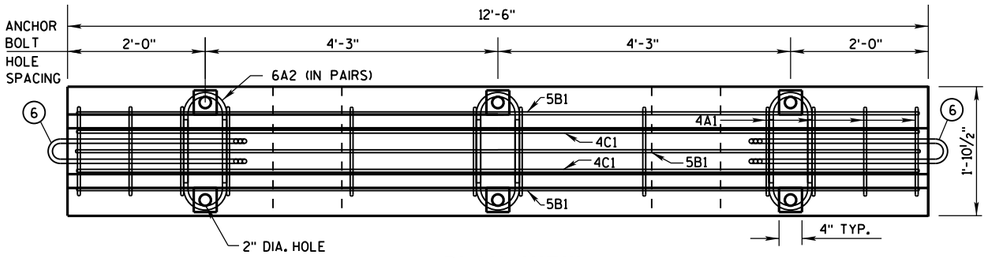
SECTION A-A
(STIRRUP PLACEMENT)



SECTION B-B
(STIRRUP PLACEMENT)

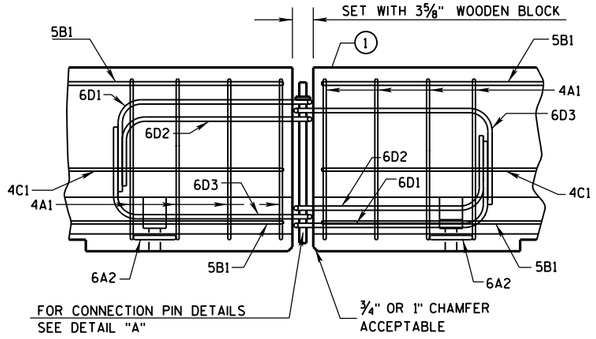


DETAIL "B"
LIFTING SLOT DETAIL

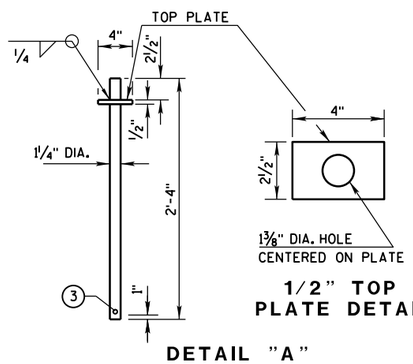


PLAN VIEW

DETAILS OF BARRIER SECTION

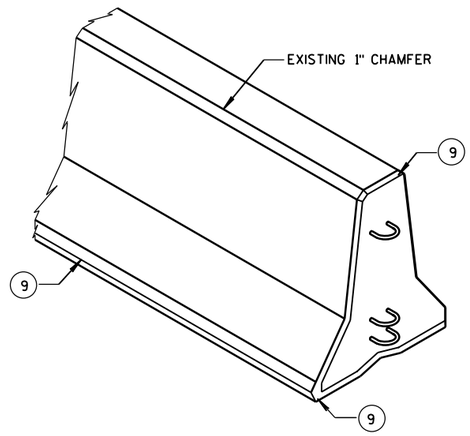


DETAILS OF BARRIER CONNECTION



1/2" TOP
PLATE DETAIL

DETAIL "A"
CONNECTION PIN
(A36 STEEL (10.9 LB EACH))



GENERAL NOTES

THESE GENERAL NOTES APPLY TO SHEETS 14B7-15(a) THRU 14B7-15(i).

DO NOT INTERMIX CONCRETE BARRIER TEMPORARY PRCAST, 12'-6" (CBTP12.5) WITH OTHER TEMPORARY CONCRETE BARRIERS.

USE ASTM A-615, GRADE 60, DEFORMED STEEL BARS FOR BARS 4A1, 6A2, 5B1 AND 4C1 IN THE BARRIER SECTION AND FOR 4V1, 4V2, 4V3, 4V4, 4V5, 4V6, 4F1, 4F2 AND 5F3 IN THE BARRIER TAPER SECTION.

LOOP BARS 6D1, 6D2 AND 6D3 SHALL BE ¾" SMOOTH STEEL BARS WITH A MINIMUM YIELD STRENGTH OF 60 KSI, A TENSILE STRENGTH OF NOT LESS THAN 1.25 TIMES THE YIELD STRENGTH BUT A MINIMUM OF 80 KSI, A MINIMUM 14% ELONGATION IN 8 INCHES AND PASSING A 180 DEGREE BEND TEST USING A 3-½" PIN BEND DIAMETER FOR BEND TESTS. THE LOOPS SHALL BE INSTALLED WITHIN ⅛" OF THE PLAN DIMENSION.

CONSTRUCT LIFTING SLOTS AS SPECIFIED ON THE PLANS TO FACILITATE THE DRAINAGE OF WATER AFTER INSTALLATION.

PLACE BARRIER ON A PAVED SURFACE. REMOVE ALL LOOSE DIRT AND SAND FROM THE ROADWAY SURFACE PRIOR TO PLACEMENT OF THE BARRIER.

INSTALL MECHANICAL OR ADHESIVE ANCHORS PER MANUFACTURER'S RECOMMENDATIONS. PROVIDE MANUFACTURER'S INFORMATION TO PROJECT ENGINEER.

(1) MARK ONE END OF EACH BARRIER PERMANENTLY BY FORMING INTO THE BARRIER THE FOLLOWING INFORMATION:
- a. TYPE: WI CBTP
- b. MANUFACTURER
- c. DATE MANUFACTURED (MONTH AND YEAR)

(2) 1" CHAMFER TO PREVENT SPALLING.

(3) A ⅜" HOLE IN THE CONNECTION PIN, AT THE LOCATION SHOWN, IS ACCEPTABLE, BUT NOT REQUIRED..

(4) "V" NOTCH IS OPTIONAL.

(5) THE 4" DIAMETER, 11 GAUGE STEEL, ROUND MECHANICAL TUBING SLEEVE FOR LIFTING (OPTIONAL).

(6) NEVER USE LOOP BARS (6D1, 6D2 OR 6D3) TO LIFT, MOVE OR REPOSITION THE BARRIER.

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

(8) SEE SHEET D FOR HOW TO ANCHOR BARRIER. SEE SHEET E FOR WHEN TO ANCHOR BARRIER.

(9) 1" CHAMFER OPTIONAL.

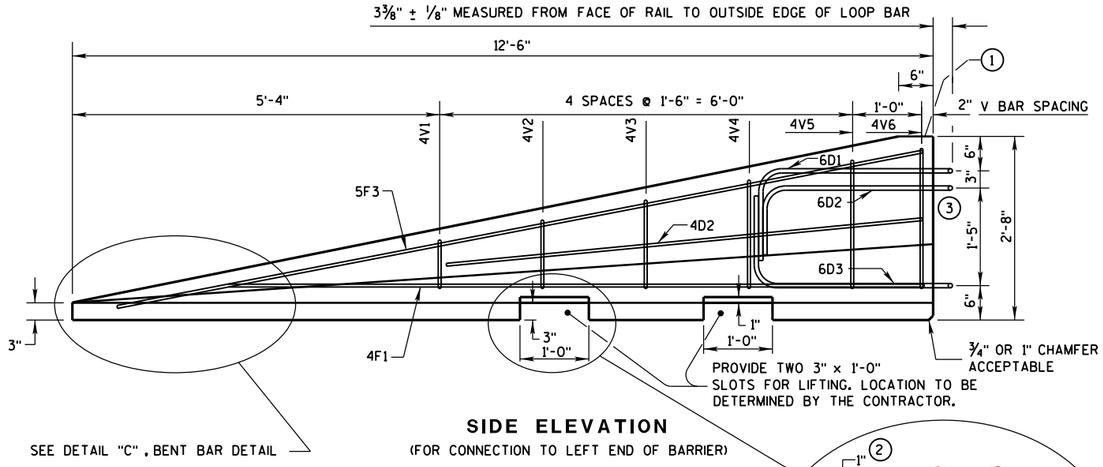
f'c = 4,000 psi

CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"

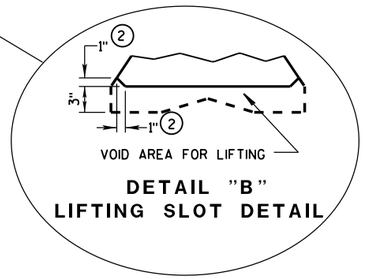
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

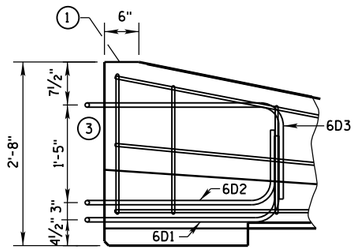
S.D.D. 14 B 7-15a



SIDE ELEVATION
(FOR CONNECTION TO LEFT END OF BARRIER)



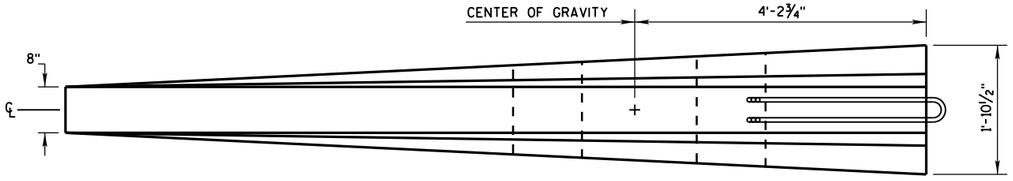
DETAIL "B"
LIFTING SLOT DETAIL



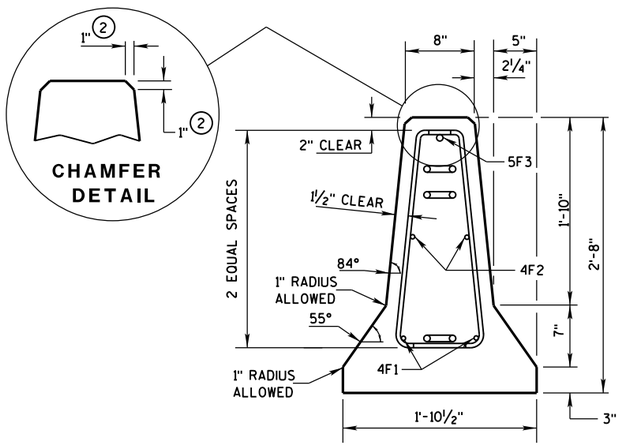
SIDE ELEVATION
LOOP BAR ASSEMBLY INVERTED
FOR OPPOSITE END.
(FOR CONNECTION TO RIGHT END OF BARRIER)

GENERAL NOTES

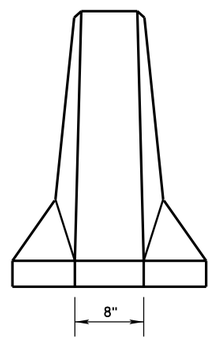
1. MARK ONE END OF EACH BARRIER PERMANENTLY BY FORMING INTO THE BARRIER THE FOLLOWING INFORMATION:
   a. TYPE WICBTP
   b. MANUFACTURER
   c. DATE MANUFACTURED (MONTH AND YEAR)
2. 1" CHAMFER TO PREVENT SPALLING.
3. NEVER USE LOOP BARS (6D1, 6D2 OR 6D3) TO LIFT, MOVE OR REPOSITION THE BARRIER.



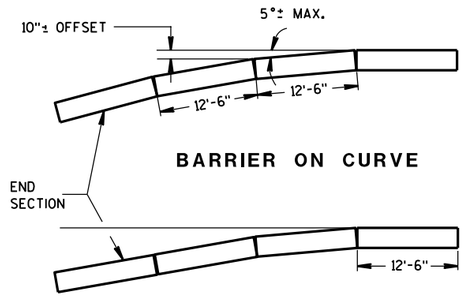
PLAN VIEW



END SECTION



FRONT ELEVATION



BARRIER ON CURVE

FLARE AT BARRIER END

POSTED SPEED, (MPH)	FLARE RATE
40 OR LESS	6:1
45 OR GREATER	8:1

DETAILS OF BARRIER TAPER SECTION

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

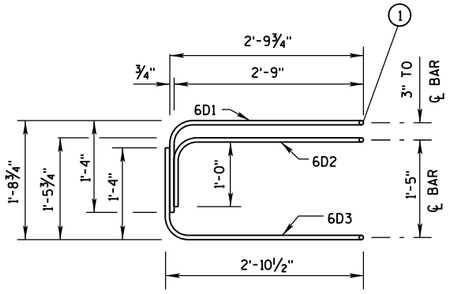
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6
S.D.D. 14 B 7-15b

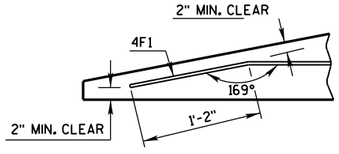
BARRIER TAPER SECTION BILL OF MATERIALS

(PER 12'-6" BARRIER TAPER SECTION)

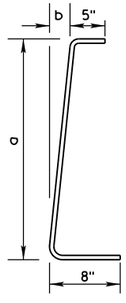
BAR	BAR SIZE	NO. OF BARS	LENGTH FT.
4V1	4	2	1'-11"
4V2	4	2	2'-2"
4V3	4	2	2'-6"
4V4	4	2	2'-9"
4V5	4	2	3'-2"
4V6	4	2	3'-4"
4F1	4	2	12'-0"
4F2	4	2	7'-6"
5F3	5	1	11'-9"
LOOP ASSEMBLY			
6D1	6	1	8'-5"
6D2	6	1	7'-7"
6D3	6	1	8'-6"



ELEVATION
LOOP BAR ASSEMBLY



DETAIL "C"
BENT BAR DETAIL



BAR	a	b
V1	10"	1"
V2	1'-1"	1¼"
V3	1'-5"	1⅝"
V4	1'-8"	1⅞"
V5	2'-0½"	2⅜"
V6	2'-3"	2¾"

4V BARS
2 AT EACH SIZE REQUIRED
FOR STIRRUP ASSEMBLY

TAPER BARRIER SECTION

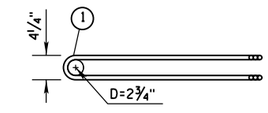
GENERAL NOTES

(1) NEVER USE LOOP BARS (6D1, 6D2 OR 6D3) TO LIFT, MOVE OR REPOSITION THE BARRIER.

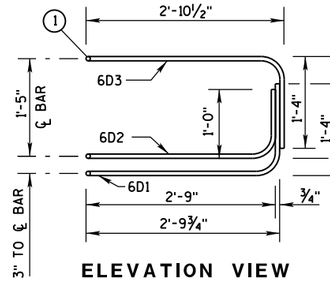
BARRIER SECTION BILL OF MATERIALS

(PER 12'-6" BARRIER SECTION)

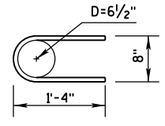
BAR	BAR SIZE	NO. OF BARS	LENGTH FT.
4A1	4	12	6'-0"
6A2	6	6	2'-11"
5B1	5	3	12'-2"
4C1	4	2	12'-2"
LOOP ASSEMBLY			
6D1	6	2	8'-5"
6D2	6	2	7'-7"
6D3	6	2	8'-6"



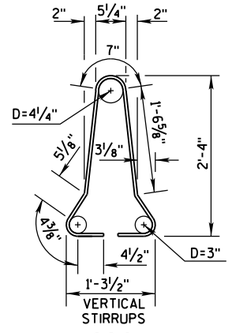
PLAN VIEW
LOOP BAR ASSEMBLY
(MARKED END SHOWN, INVERT FOR OTHER END)



ELEVATION VIEW



6A2



4A1

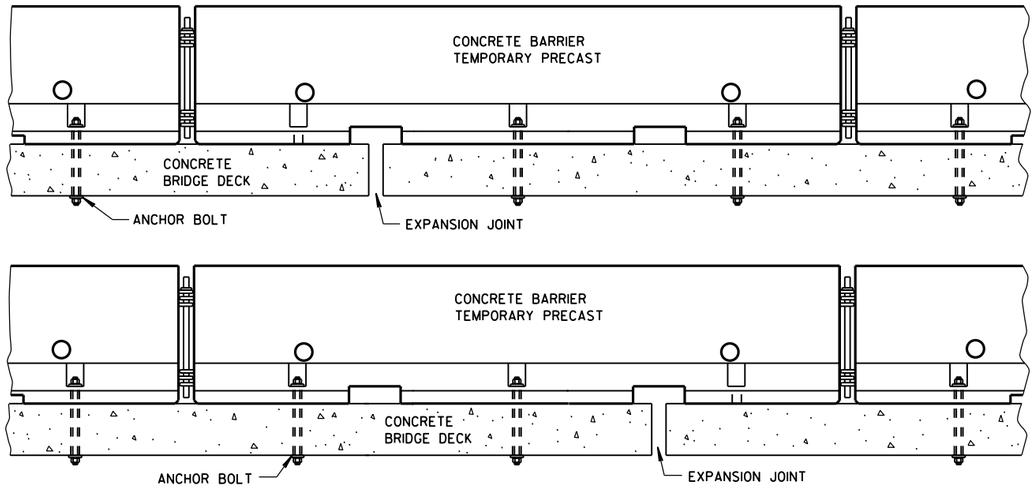
BARRIER SECTION

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

S.D.D. 14 B 7-15c



TREATMENT AT BRIDGE DECK EXPANSION JOINTS

(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.)

GENERAL NOTES

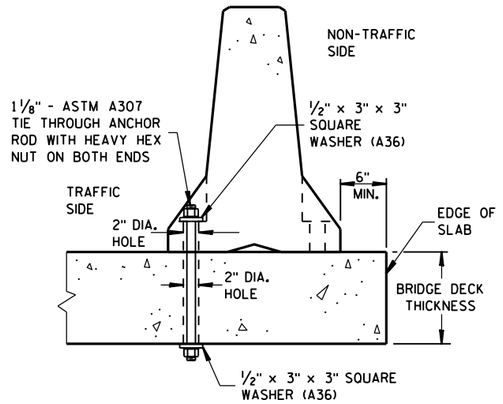
SEE SHEET E FOR WHEN TO ANCHOR. OTHER PARTS OF THE PLAN MAY SHOW ADDITIONAL LOCATIONS REQUIRING ANCHORING.

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

(1) 1⅛" DIAMENTER A307 THREADED ROD. ½" X 3" X 3" SQUARE PLATE WASHER WITH ASTM A36 STEEL. ASTM A563A HEAVY HEX NUT.

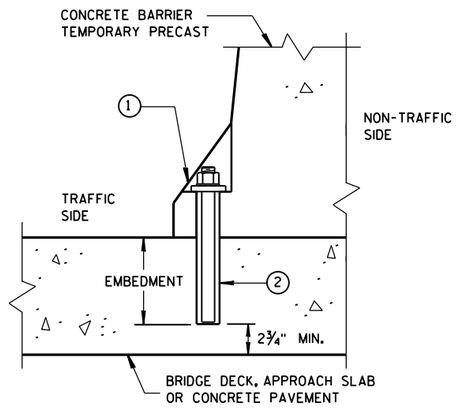
(2) ADHESIVE ANCHORS WITH A MINIMUM BOND STRENGTH OF 1,800 PSI AND 5¼" EMBEDMENT. SEE 603.2 AND 603.3.1.2 OF THE WISCONSIN STANDARD SPECIFICATIONS FOR MORE INFORMATION ON ADHESIVE ANCHORS.

(3) ASPHALT SURFACE SHOWN. CONTRACTOR MAY DRILL THROUGH CONCRETE PAVEMENT AND THAN DRIVE ASPHALT ANCHOR PIN.



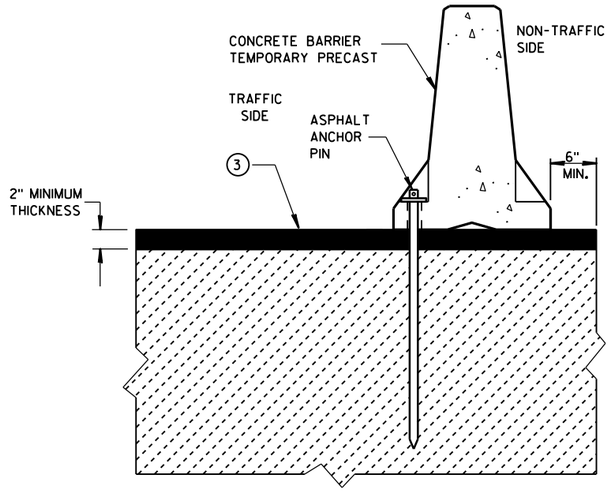
THROUGH BOLTED ANCHOR INSTALLATION ON BRIDGE DECK

(DO NOTUSE ON CONCRETE BRIDGE DECK WITH ASPHALT OVERLAY)

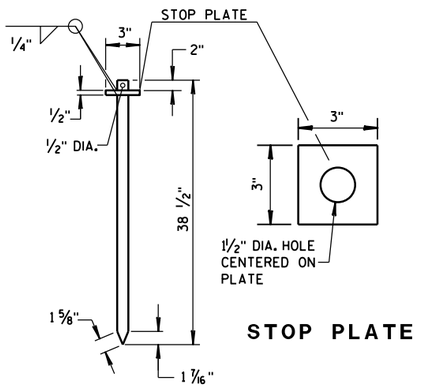


REMOVABLE ADHESIVE ANCHOR INSTALLATION ON CONCRETE BRIDGE DECK, CONCRETE APPROACH SLAB, OR CONCRETE PAVEMENT

(DO NOT USE ON CONCRETE WITH AN ASPHALTIC OVERLAY)

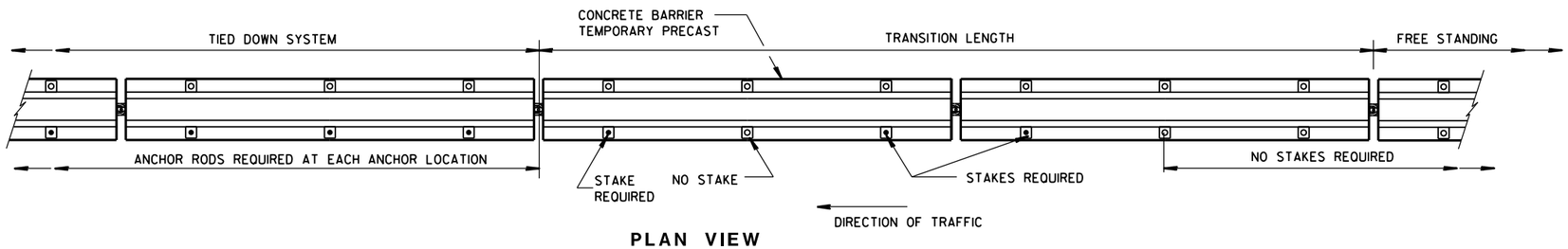


STAKE DOWN INSTALLATION FOR ASPHALTIC SURFACE



ASPHALT ANCHOR PIN

(ASTM A36 STEEL)



PLAN VIEW

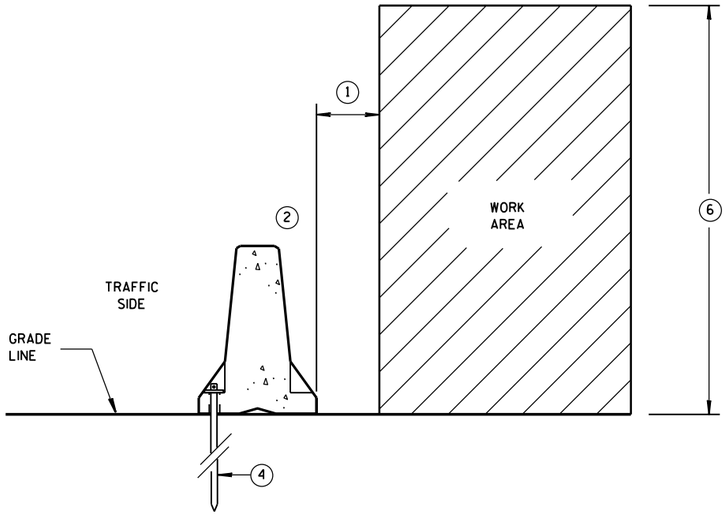
FREE STANDING TRANSITION TO TIED-DOWN SYSTEM

(PLACE TRANSITION IN A TANGENT SECTION OF BARRIER PARALLEL TO THE ROADWAY. IF TRANSITION OCCURS ON STRUCTURAL SLAB, ANCHOR AS SHOWN.)

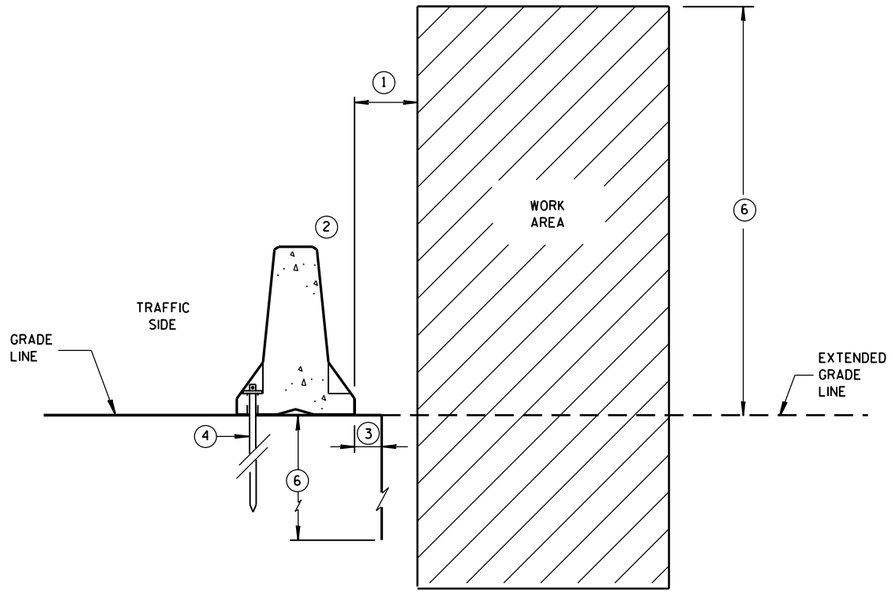
CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6
S.D.D. 14 B 7-15d



ANCHORED BARRIER SPACE REQUIREMENTS FOR HAZARDS EXTENDED ABOVE THE GRADE LINE

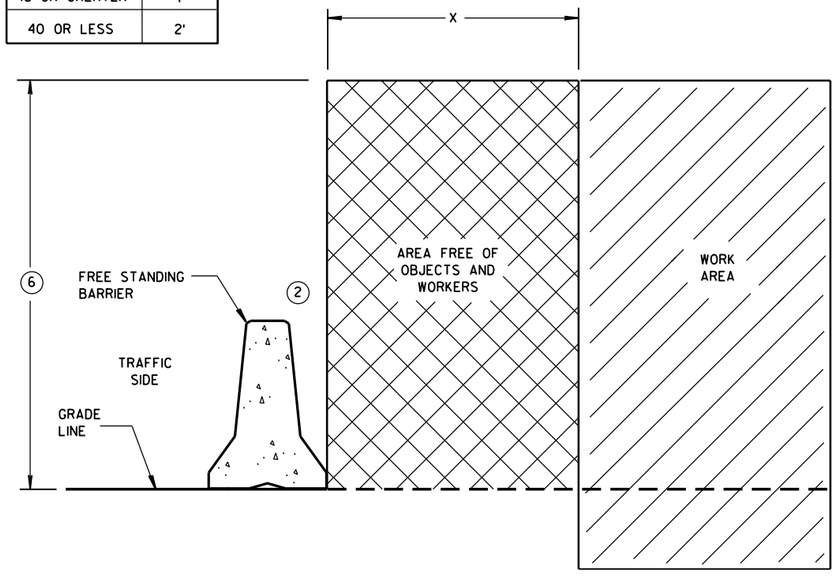


ANCHORED BARRIER SPACE REQUIREMENTS ON VERTICAL DROP OFFS

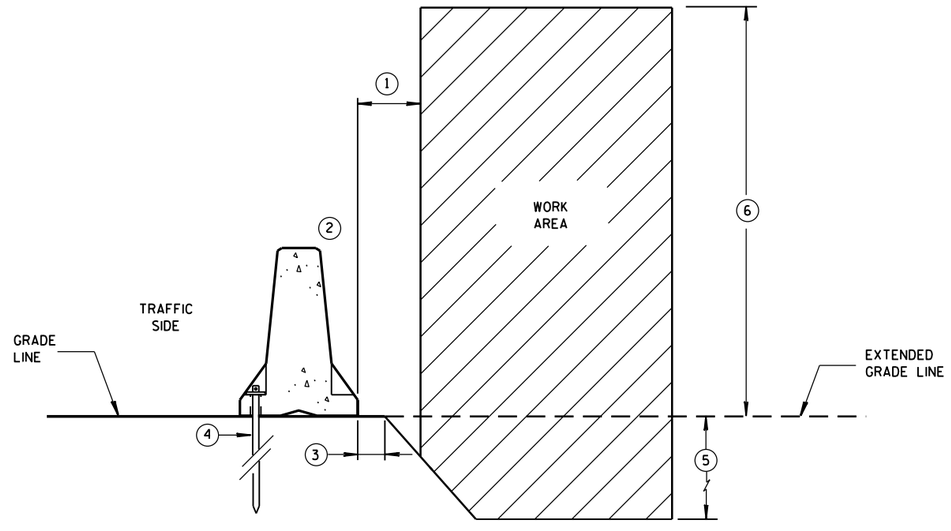
GENERAL NOTES

1. WHEN OBJECTS EXTEND ABOVE THE GRADE, A MINIMUM OF 1 FOOT IS REQUIRED FROM BACK OF BARRIER TO OBJECT. SEE OTHER DETAILS FOR FOR THE MINIMUM OFFSET FROM BACK OF BARRIER TO SLOPES OR VERTICAL DROPS.
2. OBJECTS ARE NOT TO BE PLACED ON, MOUNTED TO, OR LEANED AGAINST THE BARRIER WITHOUT PERMISSION OF THE PROJECT ENGINEER.
3. SEE OTHER DETAIL ON SHEET "D" FOR SPACE REQUIREMENTS.
4. SEE BOLT THROUGH DECK, REMOVABLE ADHESIVE ANCHOR, OR A STAKE DOWN FOR ASPHALTIC SURFACE TREATMENT DETAILS. ASPHALTIC ANCHOR SHOWN.
5. DEPTH OF 3 FEET OR MORE.
6. Y = 6'-6".

POSTED SPEED MPH	X
45 OR GREATER	4'
40 OR LESS	2'



FREE STANDING BARRIER SPACE REQUIREMENTS



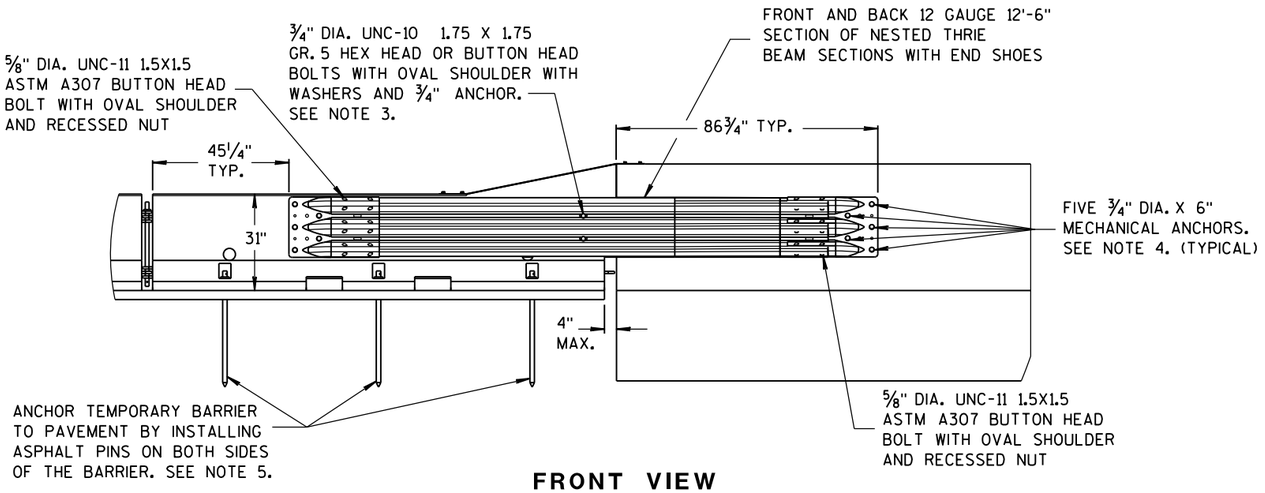
ANCHORED BARRIER SPACE REQUIREMENTS ON SLOPES

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

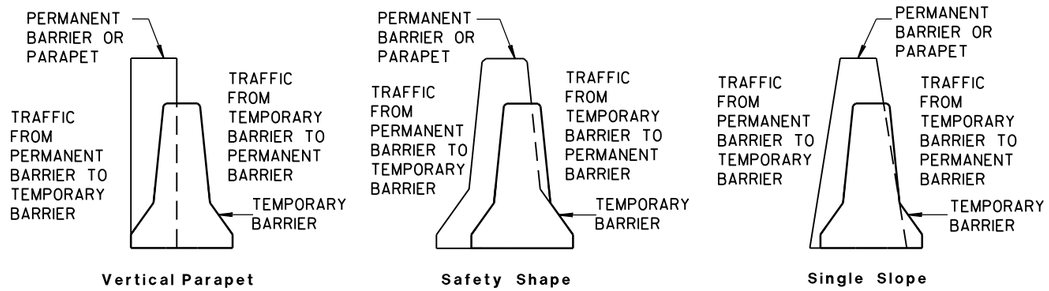
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

S.D.D. 14 B 7-15e



FRONT VIEW

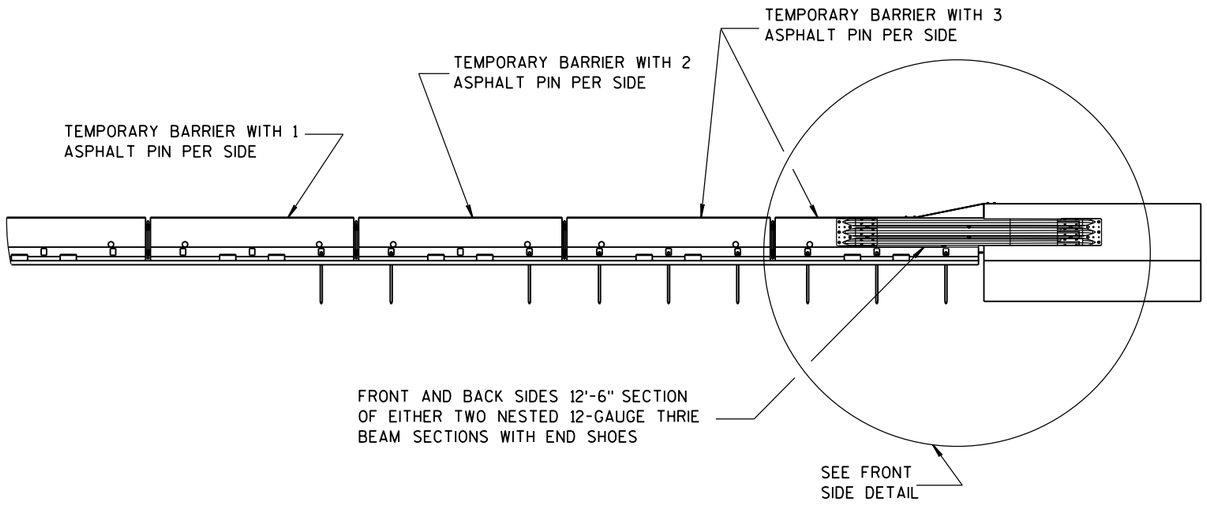


TEMPORARY BARRIER PLACEMENT FOR BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM

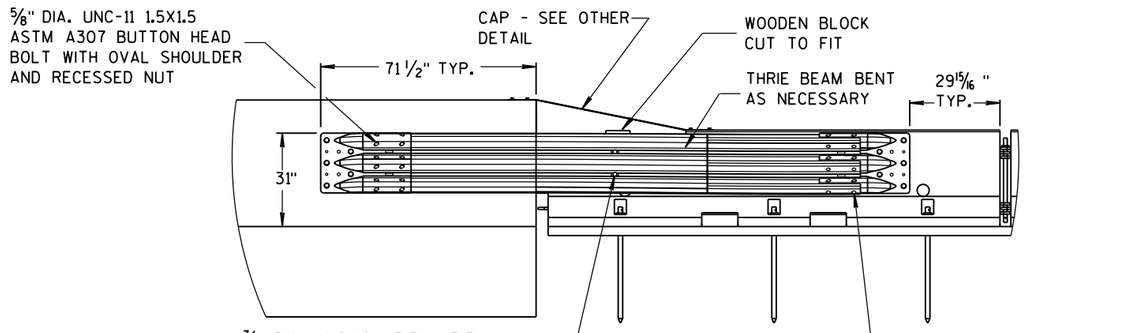
NOTES

NESTED THRIE BEAM IS REQUIRED ON BOTH SIDES OF THE TEMPORARY BARRIER FOR ALL INSTALLATIONS REGARDLESS OF TRAFFIC.

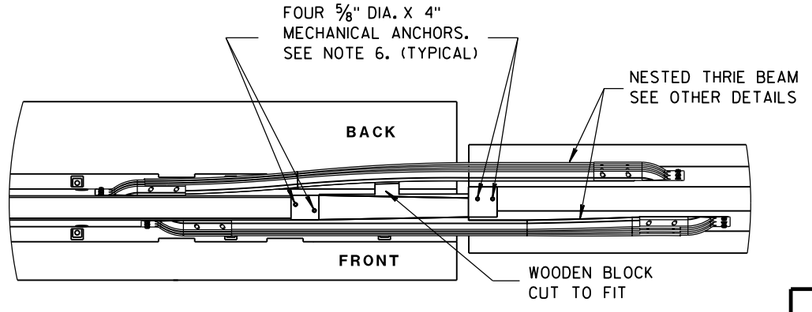
1. CAP END PLATE PLACED FLUSH WITH UPSTREAM END OF PERMANENT BARRIER OR PARAPET.
2. THRIE BEAM PIECES ARE OFFSET 15 1/4" TO PREVENT INTERFERENCE FROM THE ANCHORS ON OPPOSING SIDES.
3. MINIMUM MECHANICAL OR ADHESIVE ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 9.48 KIPS AND ULTIMATE SHEAR LOAD 10.48 KIPS.
4. MINIMUM MECHANICAL OR ADHESIVE ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 17.9 KIPS AND ULTIMATE SHEAR LOAD 21.96 KIPS.
5. MAY BE USED ON CONCRETE OR ASPHALT PAVEMENTS. ASPHALT OPTION SHOWN. FOR CONCRETE OPTION SEE OTHER DETAILS.
6. MINIMUM MECHANICAL OR ADHESIVE ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 12.14 KIPS AND ULTIMATE SHEAR LOAD 17.5 KIPS.



FRONT VIEW



BACK VIEW



PLAN VIEW

BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

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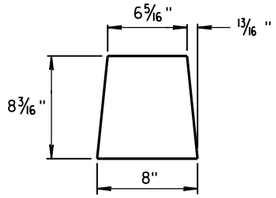
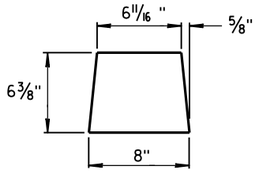
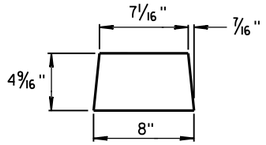
S.D.D. 14 B 7-15f



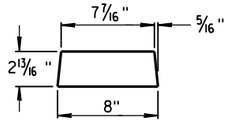
GUSSET 1



GUSSET 2

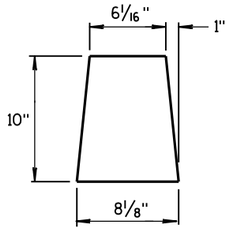


GUSSET 3

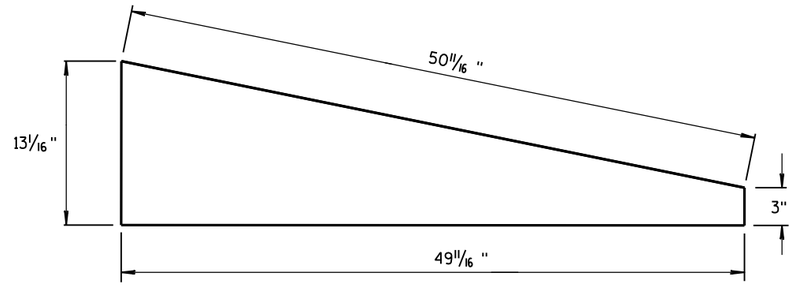


GUSSET 4

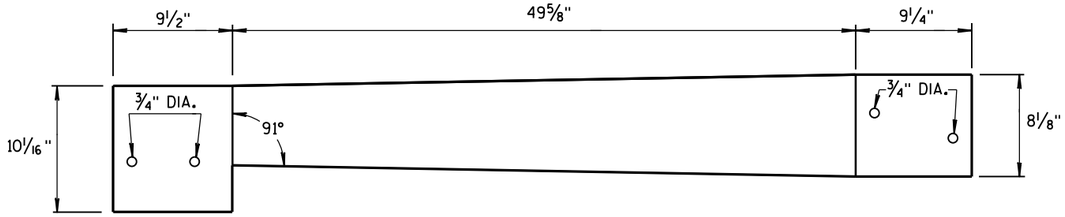
GUSSETS

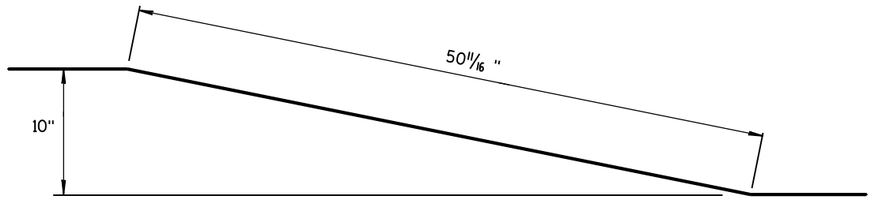


END PLATE



SIDE PLATE

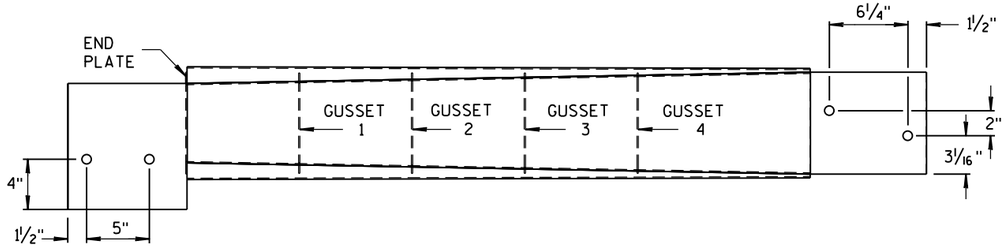


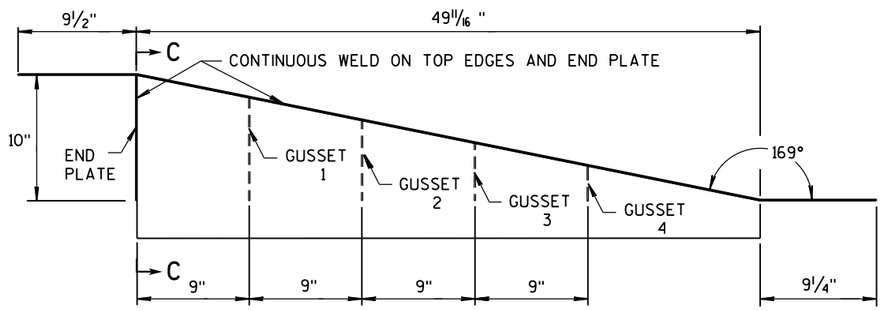


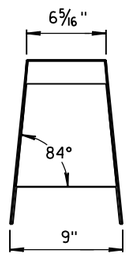
TOP PLATE

SIDE, TOP AND END PLATES FOR CAP FROM TEMPORARY CONCRETE BARRIER TO 42" PERMANENT CONCRETE BARRIER

SIDE PLATES, TOP PLATE, END PLATE AND GUSSETS ARE 12 GAUGE ASTM A36 GALVANIZED STEEL.







SECTION C-C

NOTES

1. FOUR GUSSETS AND END PLATE ARE STITCH WELDED ON THREE SIDES.
2. TWO TRIANGULAR SIDE PLATES ARE STITCH WELDED TO TOP PLATE, END PLATE, AND GUSSETS.

CAP DETAILS FOR TEMPORARY CONCRETE BARRIER TO 42" PERMANENT CONCRETE BARRIER

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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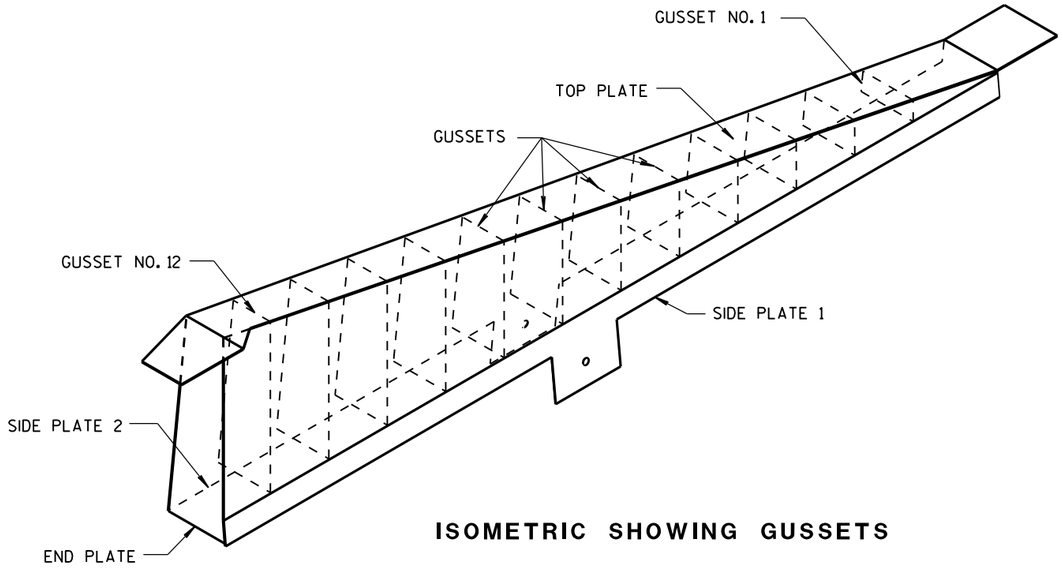
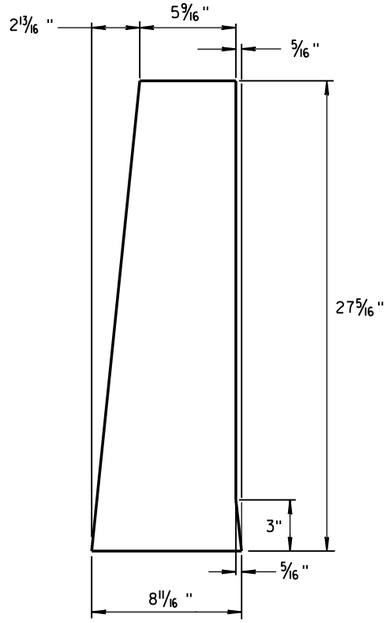
S.D.D. 14 B 7-15g

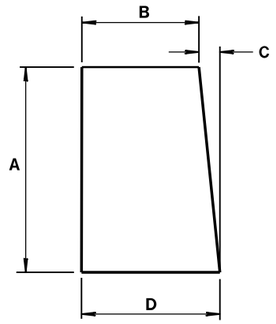


ISOMETRIC SHOWING GUSSETS



END PLATE

1/8" STEEL PLATE



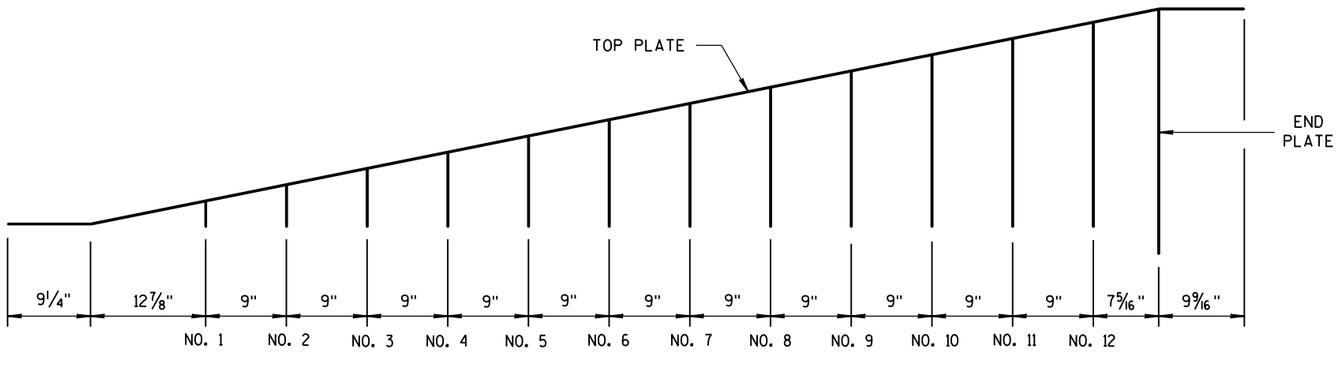
GUSSETS 1 - 12

ALL GUSSETS 1/8" STEEL PLATE

GUSSET DIMENSIONS				
GUSSET NO.	A	B	C	D
1	2 7/8"	7 3/4"	1/4"	8
2	4 11/16 "	7 9/16 "	1/2"	8
3	6 1/2"	7 3/8"	11/16 "	8 1/16 "
4	8 5/16 "	7 3/16 "	7/8"	8 1/16 "
5	10 1/8"	7"	1 1/16 "	8 1/16 "
6	11 15/16 "	6 13/16 "	1 1/4"	8 1/16 "
7	13 3/4"	6 5/8"	1 7/16 "	8 1/16 "
8	15 9/16 "	6 7/16 "	1 9/16 "	8 1/16 "
9	17 3/8"	6 1/4"	1 13/16 "	8 1/16 "
10	19 3/16 "	6 1/16 "	1 15/16 "	8 1/16 "
11	21"	5 7/8"	2 3/16 "	8 1/16 "
12	22 13/16 "	5 11/16 "	2 5/16 "	8 1/16 "

SIDE PLATES, TOP PLATE, END PLATE AND GUSSETS ARE 12 GAUGE ASTM A36 STEEL AND GALVANIZED.

GUSSETS AND END PLATE ARE STITCH WELDED ON 3 SIDES. TWO TRIANGULAR SIDE PLATES ARE STITCH WELDED TO TOP PLATE, END PLATE AND GUSSETS.



GUSSET LOCATION

CAP DETAILS FOR TEMPORARY CONCRETE BARRIER TO 56" PERMANENT CONCRETE BARRIER

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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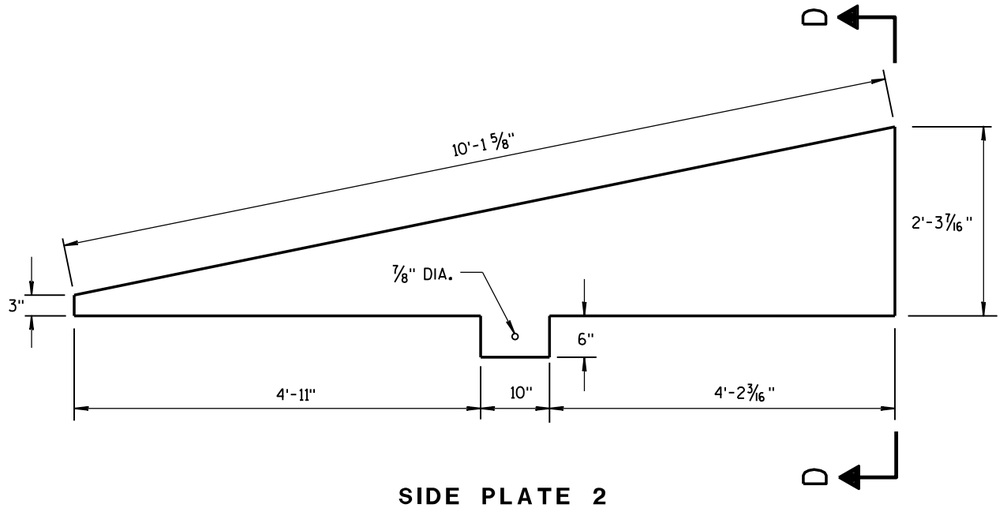
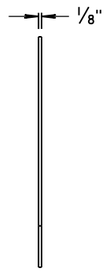
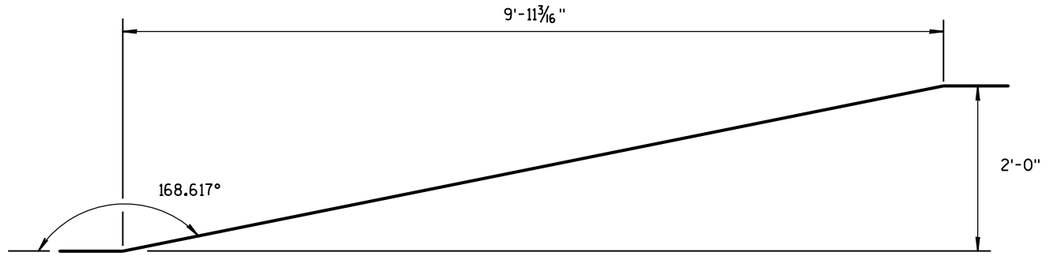
S.D.D. 14 B 7-15h



SIDE PLATE 2

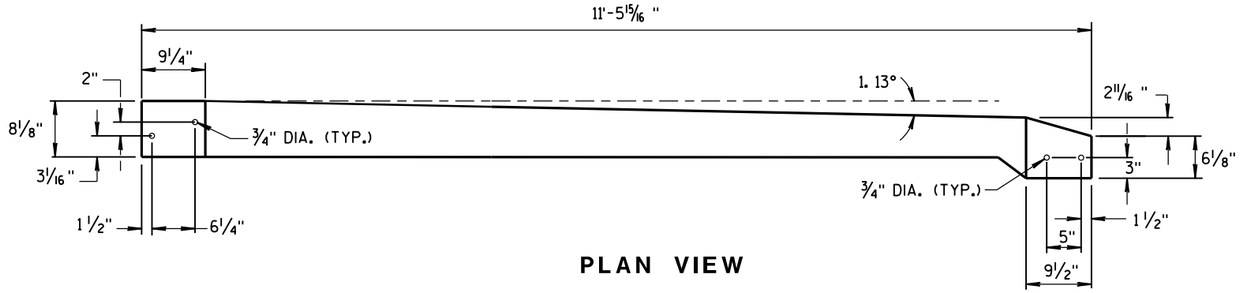


END VIEW



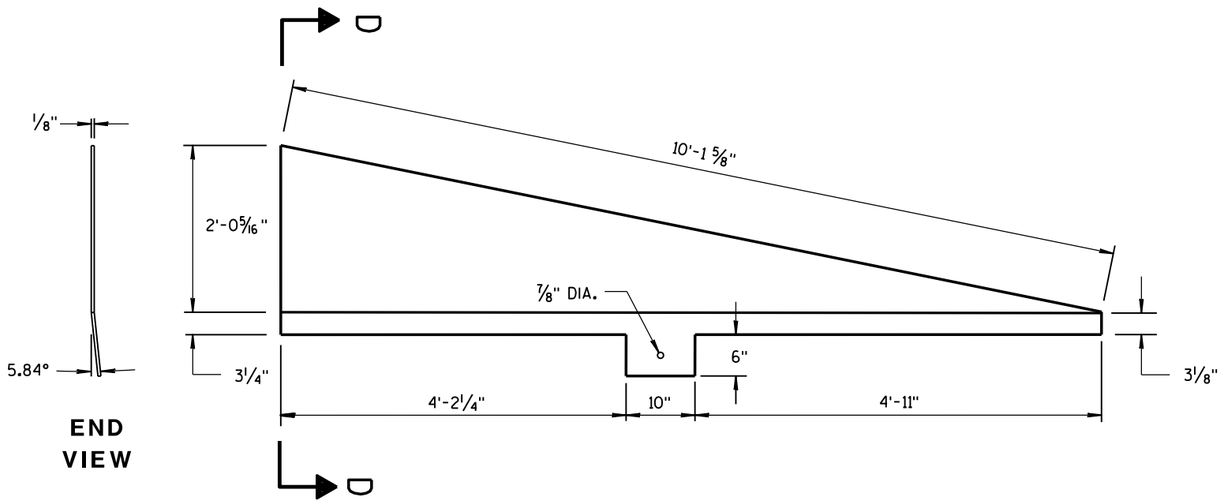
SIDE VIEW

TOP PLATE



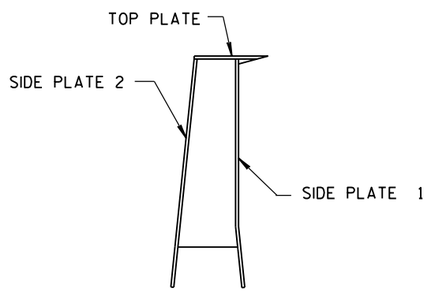
PLAN VIEW

TOP PLATE



END VIEW

SIDE PLATE 1



SECTION D-D

CAP DETAILS FOR TEMPORARY CONCRETE BARRIER TO 56" PERMANENT CONCRETE BARRIER

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2017
DATE

/S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT ENGINEER

FHWA

UNIT SUPERV 249 ENT

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S.D.D. 14 B 7-15i

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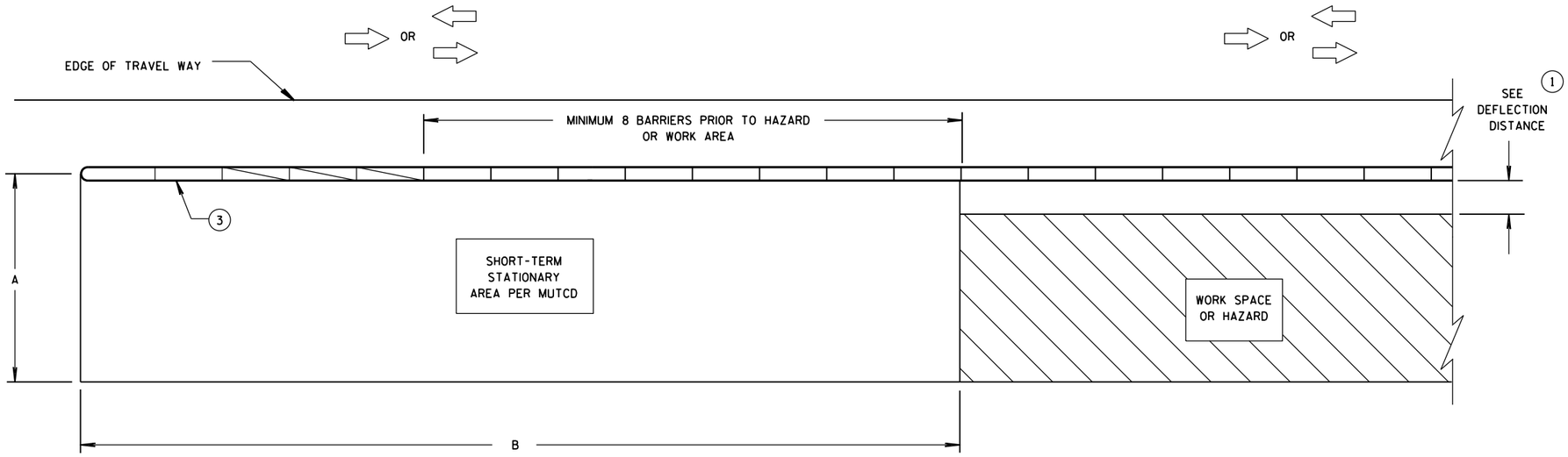
S.D.D. 14 B 7-15i



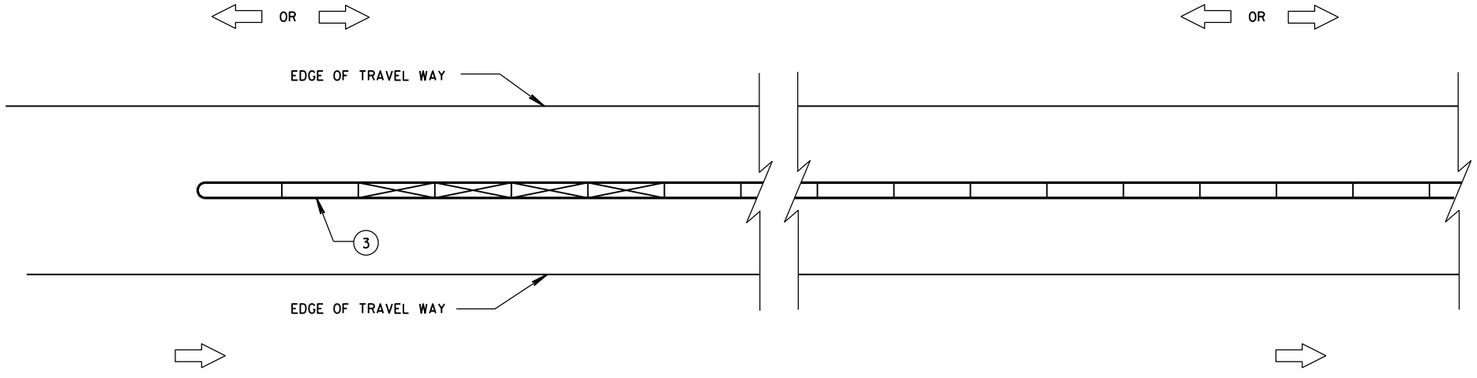
CRASH CUSHION/SAND BARREL ARRAY AND TEMPORARY BARRIER INSTALLATION FOR TRAFFIC ON ONE SIDE OF BARRIER

DIMENSION A TABLE (2)

FACILITY	POSTED SPEED MPH	DIMENSION A	
		MIN. FT	MAX. FT
FREEWAY/EXPRESSWAY	ALL	15	20
NON-FREEWAY/EXPRESSWAY	GREATER THAN OR EQUAL TO 45	10	15
NON-FREEWAY/EXPRESSWAY	LESS THAN 45	8	10
AADT LESS THAN 1,500	ALL	8	10

DIMENSION B TABLE (2)

POSTED SPEEDS MPH	DIMENSION B FT
20	115
25	155
30	200
35	250
40	305
45	360
50	425
55	495
60	570
65	645



CRASH CUSHION/SAND BARREL ARRAY AND TEMPORARY BARRIER INSTALLATION FOR TRAFFIC ON BOTH SIDES OF BARRIER

LEGEND

- DIRECTION OF TRAVEL
- CRASH CUSHION OR SAND BARREL ARRAY
- SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS
- SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS
- 3 PINS PLACED ON TRAFFIC SIDE OF BARRIER
- PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET
- FREE STANDING TEMPORARY BARRIER

GENERAL NOTES

SEE STANDARD DETAIL DRAWING 14B7 FOR MORE INFORMATION.

DETAILS PROVIDE A GENERAL LAYOUT OF TEMPORARY CONCRETE BARRIER, CRASH CUSHIONS, SAND BARREL ARRAYS AND TIE DOWN TRANSITIONS. DETAILS PROVIDED MAY NOT FIT ALL POSSIBLE SITUATIONS OR SITE CONDITIONS. SEE OTHER SECTIONS OF THE CONTRACT OR PROJECT ENGINEER FOR MORE DETAILS.

ADDITIONAL TEMPORARY BARRIER MAY BE REQUIRED TO PROTECT TRAVELING PUBLIC FROM HAZARDS, CONTRACTOR'S OPERATIONS OR TO CONTROL TRAFFIC.

TEMPORARY BARRIER MAY BE REQUIRED TO BE ANCHORED TO PAVEMENT OR BRIDGE DECK.

FOR DETAILS ON CRASH CUSHION OR SAND BARREL ARRAYS SEE OTHER SECTIONS OF THE PLAN AND MANUFACTURE'S DETAILS.

SLOPES LEADING TO TEMPORARY BARRIER, CRASH CUSHION OR SAND BARREL ARRAY ARE 10:1 OR LESS.

(1) FOR DEFLECTION INFORMATION SEE STANDARD DETAIL DRAWING 14B7.

(2) VALUES PROVIDED MAY NOT FIT ALL POSSIBLE SITUATIONS OR SITE CONDITIONS. SEE OTHER SECTIONS OF THE CONTRACT OR PROJECT ENGINEER FOR MORE DETAILS.

(3) ANCHOR TEMPORARY BARRIER ACCORDING TO CRASH CUSHION OR SAND BARREL MANUFACTURER'S RECOMMENDATIONS. IF MANUFACTURER'S RECOMMENDATIONS ARE NOT PROVIDED, ANCHOR 3 PINS ON TRAFFIC SIDE.

CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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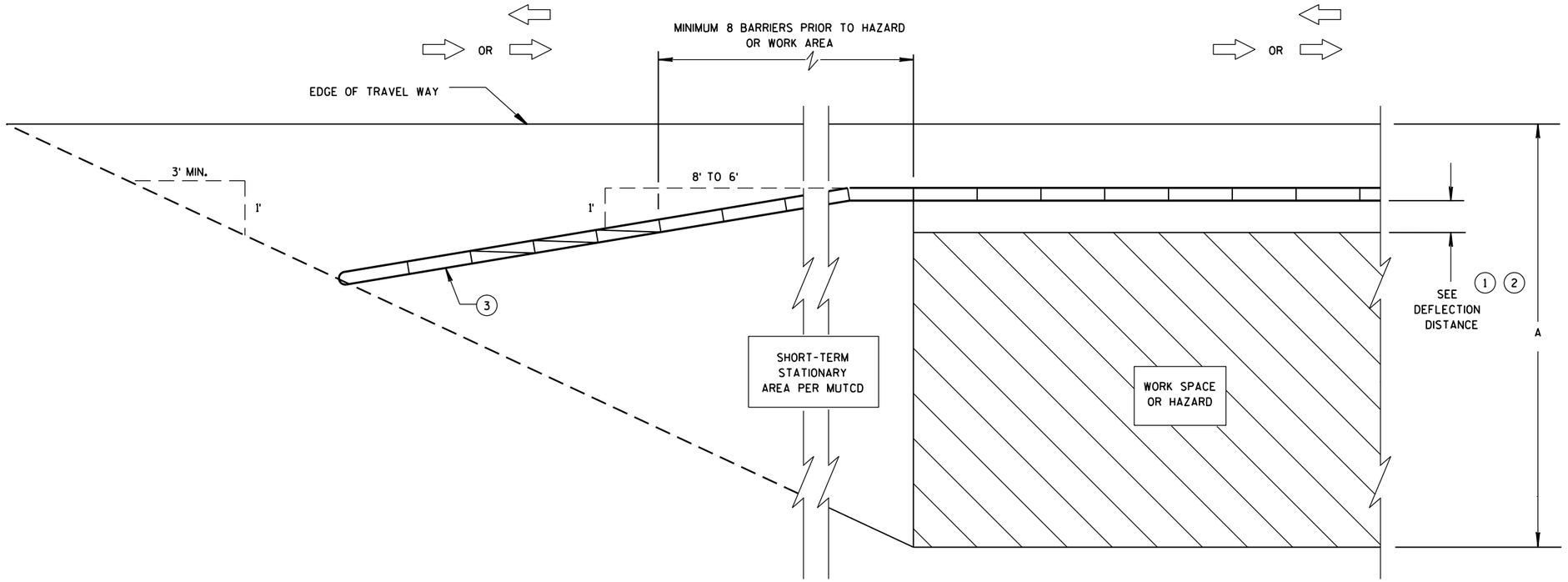
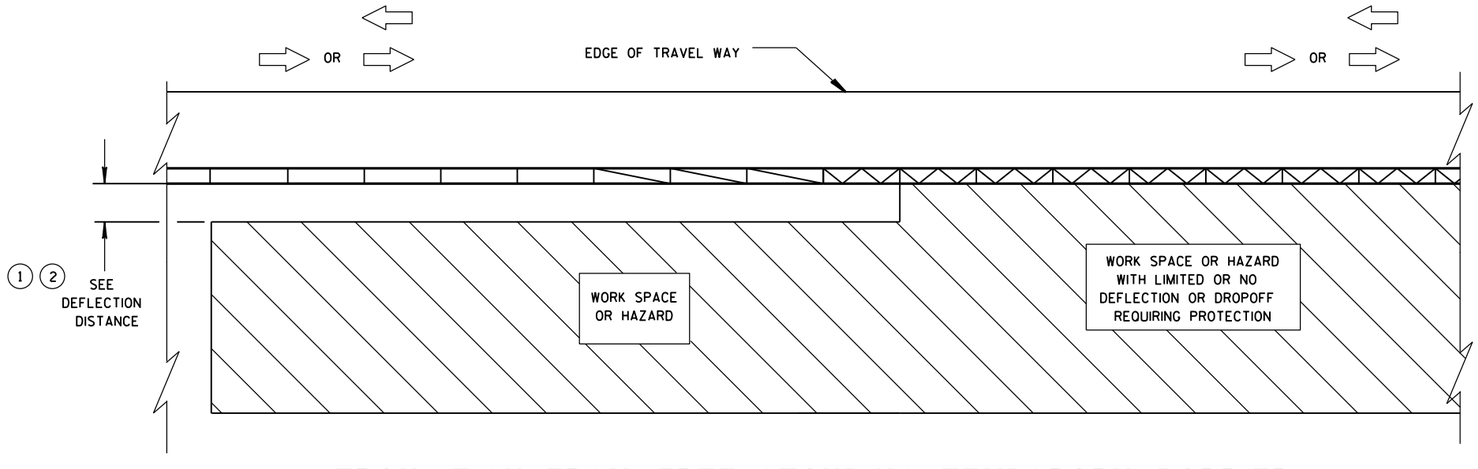


CRASH CUSHION/SAND BARREL ARRAY AND TEMPORARY BARRIER INSTALLATION FOR TRAFFIC ON ONE SIDE - FLARED INSTALLATION



TRANSITION FROM FREE STANDING TEMPORARY BARRIER TO ANCHORED BARRIER

LEGEND

- DIRECTION OF TRAVEL
- CRASH CUSHION OR SAND BARREL ARRAY
- SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS
- SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS
- 3 PINS PLACED ON TRAFFIC SIDE OF BARRIER
- PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET
- FREE STANDING TEMPORARY BARRIER

CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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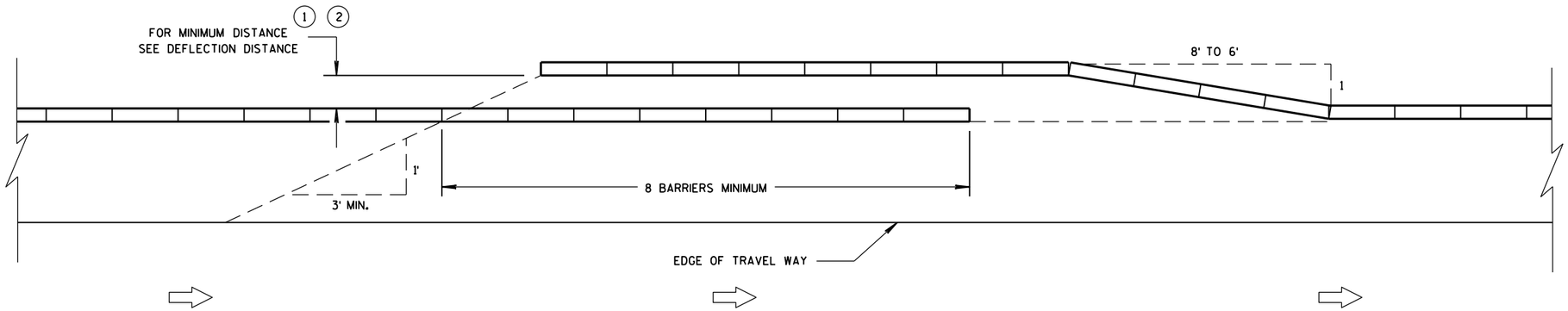
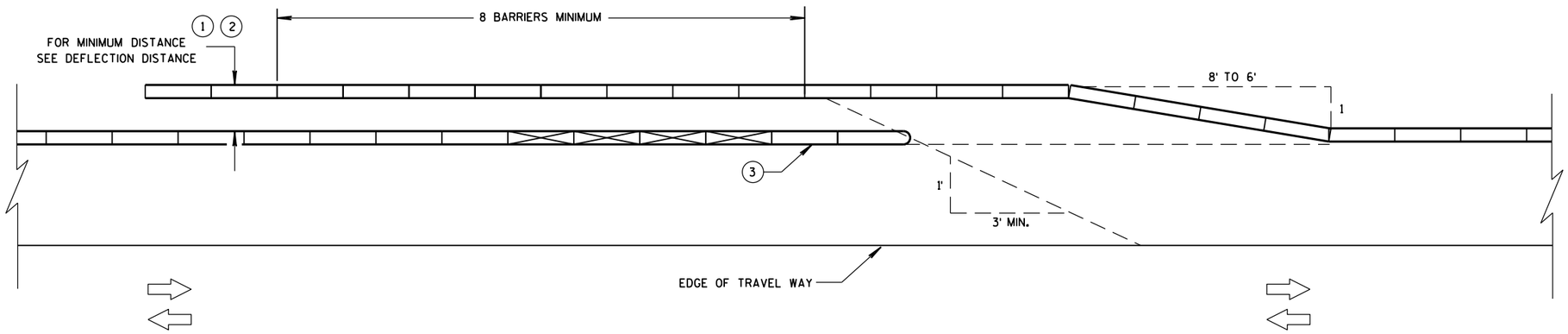
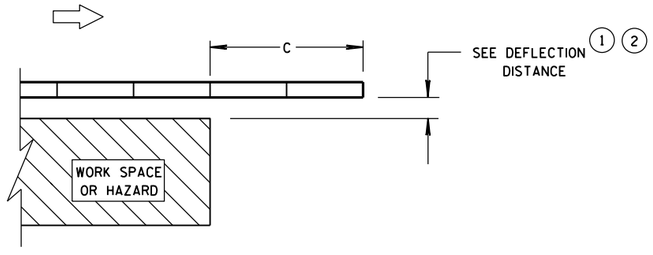
S.D.D. 14 B 8-2b



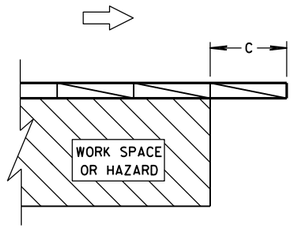
TEMPORARY BARRIER OVERLAP - ONE-WAY TRAFFIC



TEMPORARY BARRIER OVERLAP - TWO-WAY TRAFFIC



ENDING TEMPORARY BARRIER DOWNSTREAM - UNANCHORED



ENDING TEMPORARY BARRIER DOWNSTREAM - ANCHORED

LEGEND

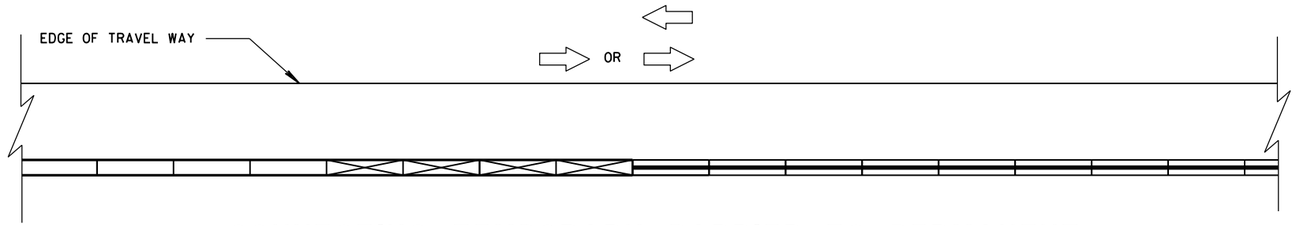
- DIRECTION OF TRAVEL
- CRASH CUSHION OR SAND BARREL ARRAY
- SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS
- SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS
- 3 PINS PLACED ON TRAFFIC SIDE OF BARRIER
- PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET
- FREE STANDING TEMPORARY BARRIER

CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS

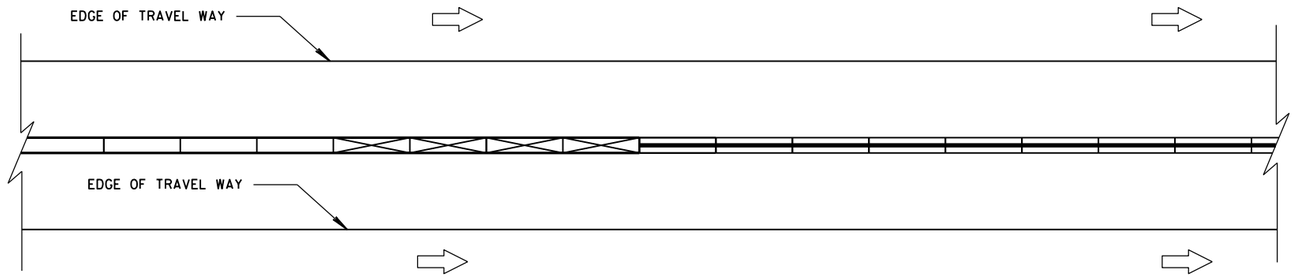
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

S.D.D. 14 B 8-2c



CONNECTING TEMPORARY BARRIER TO PERMANENT
CONCRETE BARRIER-TRAFFIC ON ONE SIDE



CONNECTING TEMPORARY BARRIER TO PERMANENT
CONCRETE BARRIER-TRAFFIC ON BOTH SIDES

LEGEND

DIRECTION OF TRAVEL

CRASH CUSHION OR
SAND BARREL ARRAY

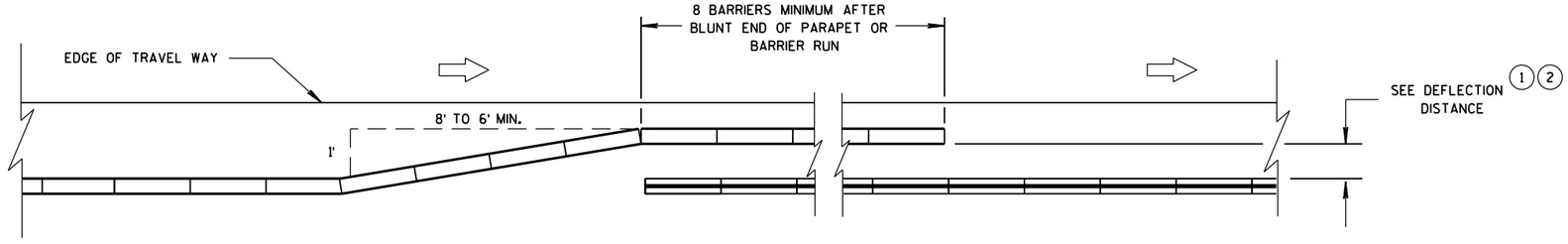
SEE FREE STANDING TRANSITION
TO TIED-DOWN SYSTEM DETAILS

SEE BI-DIRECTIONAL TRANSITION
TO TIED-DOWN SYSTEM DETAILS

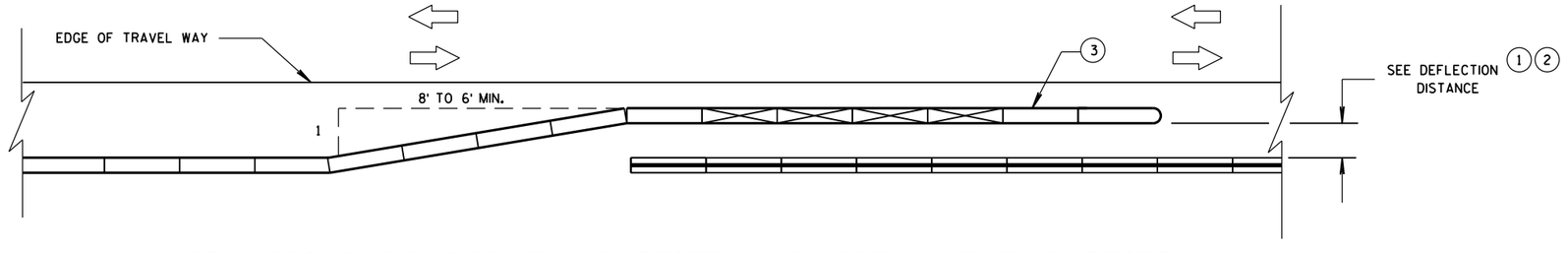
3 PINS PLACED ON
TRAFFIC SIDE OF BARRIER

PERMANENT CONCRETE BARRIER
OR CONCRETE PARAPET

FREE STANDING TEMPORARY
BARRIER



OVERLAPPING TEMPORARY BARRIER AND PERMANENT BARRIER -
ONE WAY TRAFFIC



OVERLAPPING TEMPORARY BARRIER AND PERMANENT BARRIER -
TWO WAY TRAFFIC

CRASH CUSHION/SAND BARREL
ARRAY AND OTHER TEMPORARY
BARRIER LAYOUT DETAILS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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S.D.D. 14 B 8-2d

LEGEND

DIRECTION OF TRAVEL

CRASH CUSHION OR SAND BARREL ARRAY

SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS

SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS

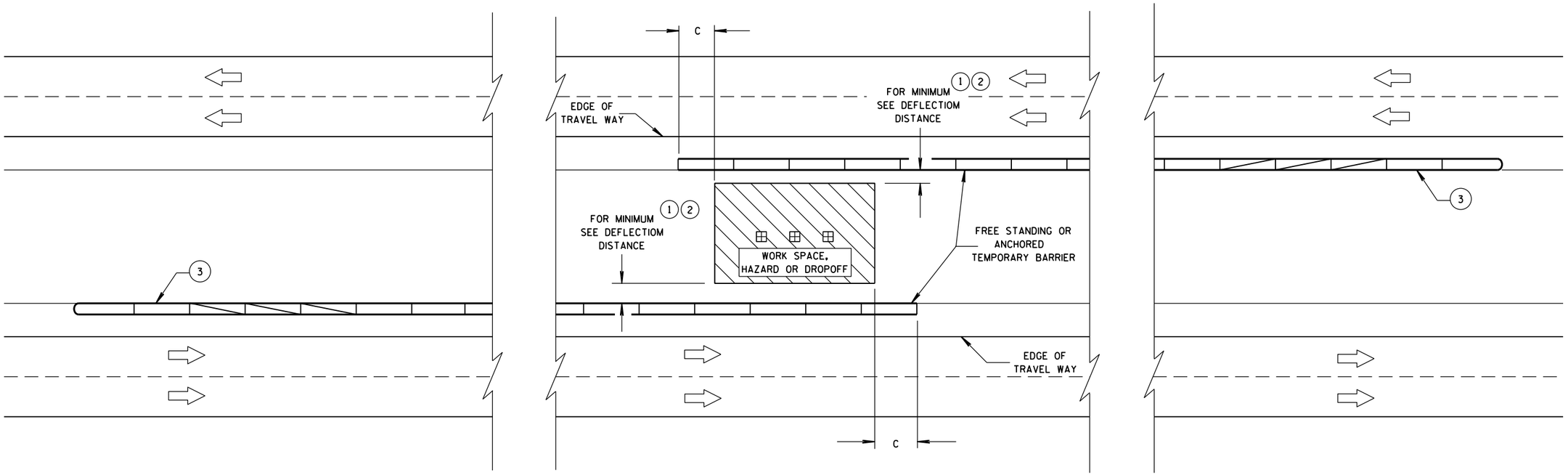
3 PINS PLACED ON TRAFFIC SIDE OF BARRIER

PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET

FREE STANDING TEMPORARY BARRIER

DIMENSION C TABLE (2)

AVAILABLE DEFLECTION DISTANCE	MINIMUM LENGTH OF BARRIER BEYOND HAZARD FT
GREATER THAN 8'	12.5
LESS THAN OR EQUAL TO 8' BUT GREATER THAN 4'	50
LESS THAN OR EQUAL TO 4'	100



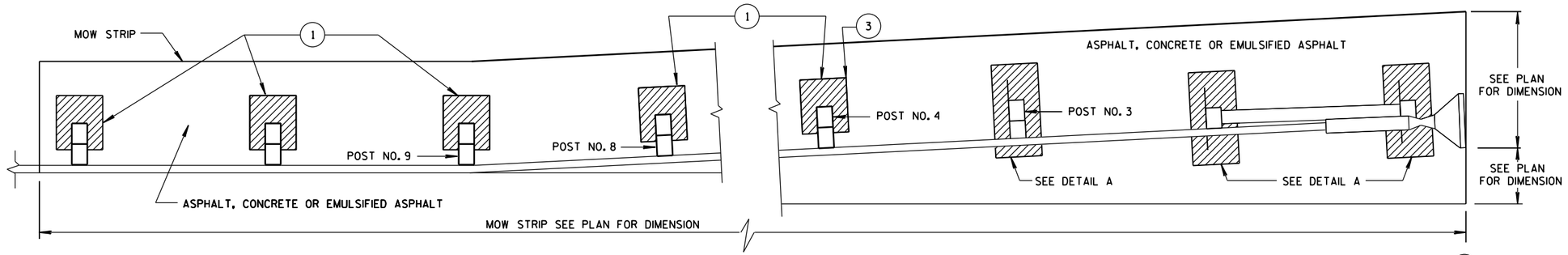
CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2015
DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINNER
FHWA

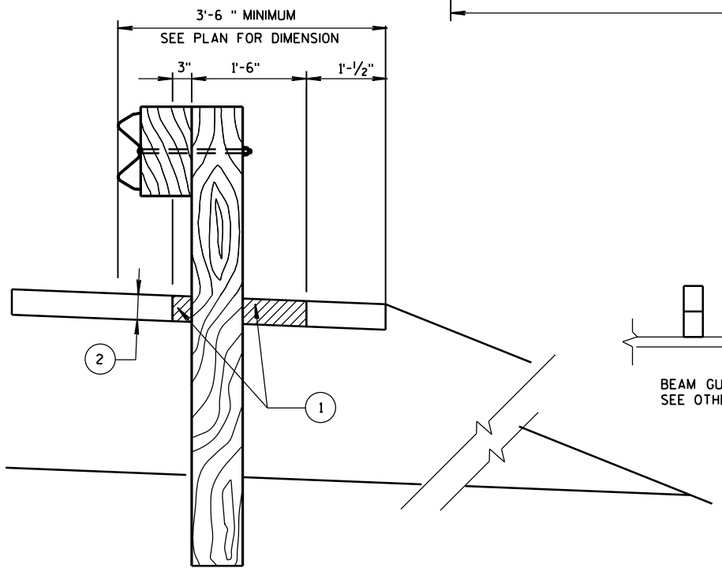
6

S.D.D. 14 B 8-2e

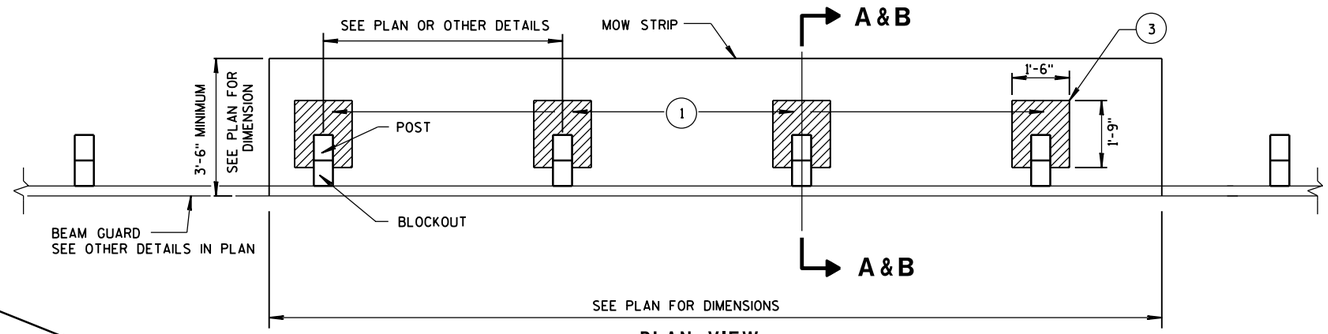


PLAN VIEW

MOW STRIP LAYOUT FOR ENERGY ABORBING TERMINAL

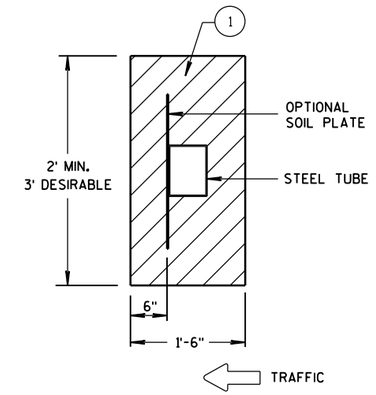


SECTION A-A

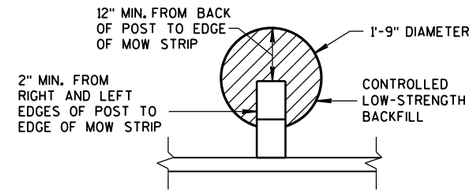


PLAN VIEW

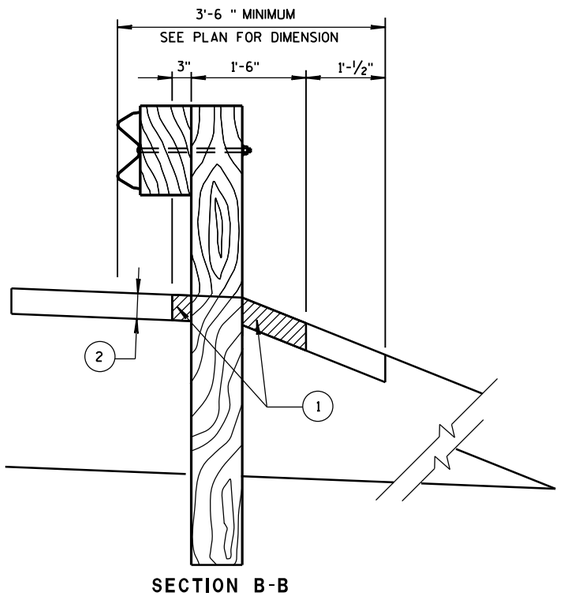
MOW STRIP FOR TYPICAL BLOCKOUT LAYOUT



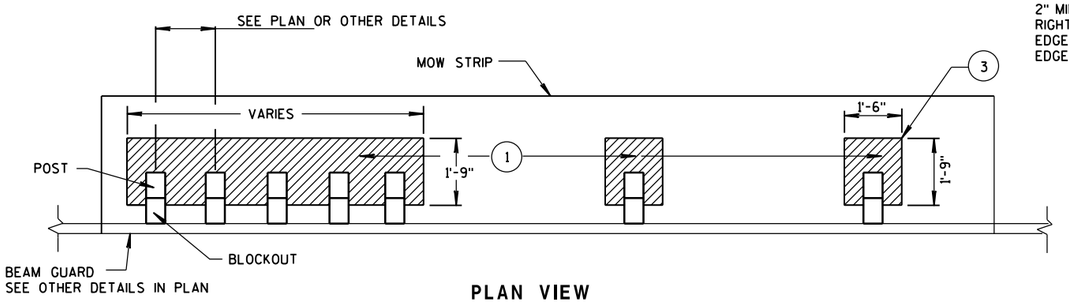
DETAIL A



ALTERNATIVE HMA
MOW STRIP DESIGN



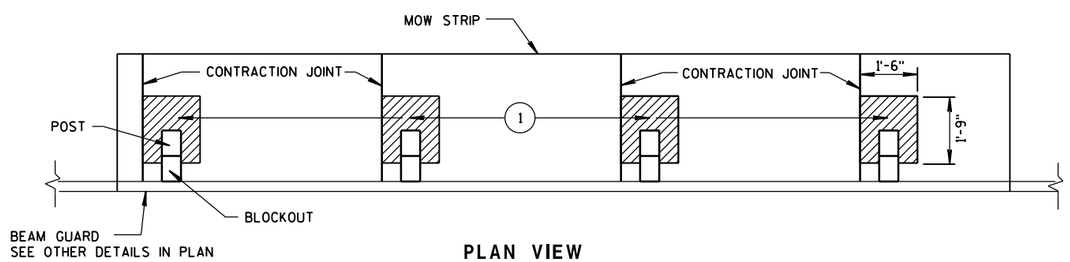
SECTION B-B



PLAN VIEW

MOW STRIP FOR TIGHT SPACING LAYOUT

1. CONTROLLED LOW-STRENGTH BACKFILL OR EMULSIFIED ASPHALT.
2. DEPTH OF MOW STRIP:
   ASPHALT - 4"
   CONCRETE - 4"
   EMULSIFIED ASPHALT - 1" OR LESS
3. FOR EMULSIFIED ASPHALT MOW STRIP LEAVE OUTS NOT REQUIRED. (TYPICAL FOR ALL POSTS.)



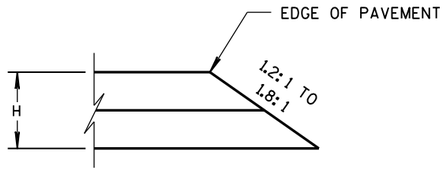
PLAN VIEW

JOINT PLACEMENT FOR CONCRETE MOW STRIP

GUARDRAIL MOW STRIP

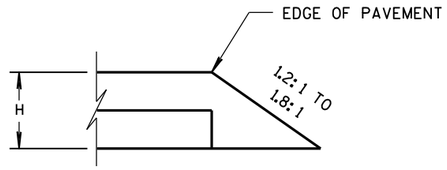
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2014
DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA



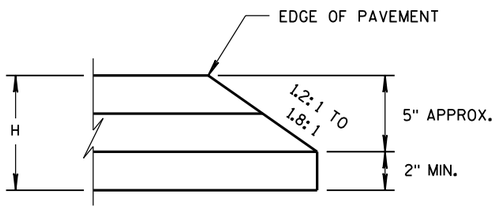
CONSTRUCTED WITH FINAL TWO LAYERS

FOR H 5" OR LESS



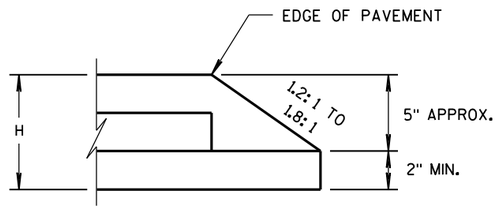
CONSTRUCTED WITH FINAL LAYER

FOR H 5" OR LESS



CONSTRUCTED WITH FINAL TWO LAYERS

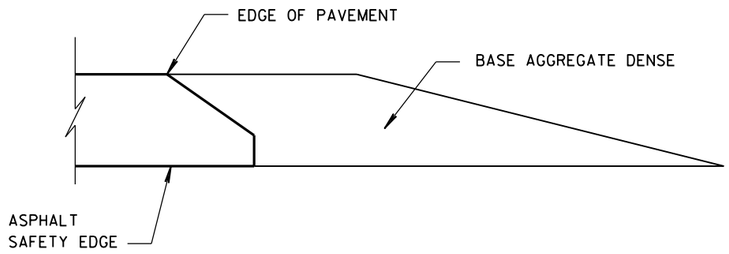
FOR H GREATER THAN 5"



CONSTRUCTED WITH FINAL LAYER

FOR H GREATER THAN 5"

HMA PAVEMENT AND HMA OVERLAYS



FINISHED SHOULDER AGGREGATE PLACEMENT

6

6

S.D.D. 14 B 29-1

S.D.D. 14 B 29-1

SAFETY EDGE SM

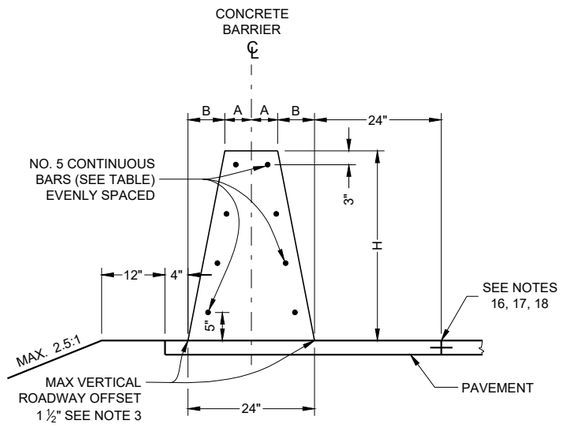
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

11/30/2012
DATE

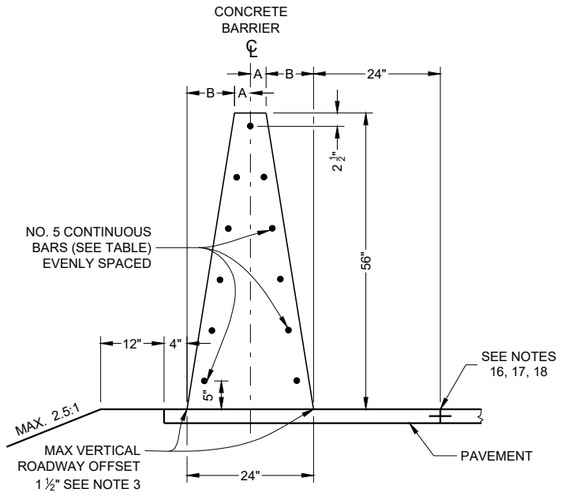
/S/ Jerry H. Zoda
ROADWAY STANDARDS DEVELOPMENT ENGINEER

FHWA



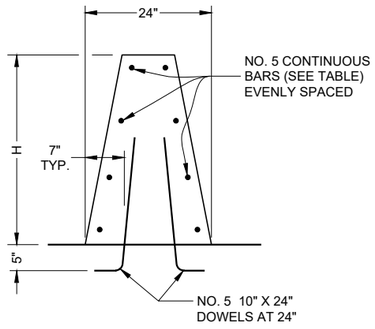
32 - INCH, 36 - INCH OR 42 - INCH SINGLE SLOPE CONCRETE BARRIER

(TYPE S32, TYPE S36, TYPE S42)



56 - INCH SINGLE SLOPE CONCRETE BARRIER

(TYPE S56)

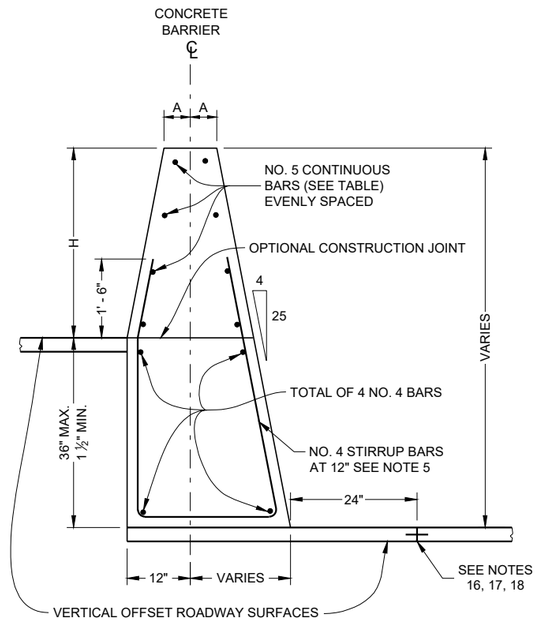


SINGLE SLOPE CONCRETE BARRIER ON BRIDGE

(NON OUTER PARAPET APPLICATION)

GENERAL NOTES

1. WHERE THE CONCRETE BARRIER IS ADDED TO THE FACE OF EXISTING CONCRETE STRUCTURE, MATCH EXISTING WEEP HOLES.
2. EXPANSION JOINTS IN CONCRETE BARRIER SHALL BE LOCATED AT ALL DECK AND PRINCIPAL WALL JOINTS. EXPANSION JOINT FILLER MATERIAL SHALL BE THE SAME SIZE AS JOINT OF ½" MINIMUM.
3. WHERE VERTICAL ROADWAY OFFSET IS GREATER THAT 1", USE TYPE A.
4. PLACE BARRIER PERPENDICULAR TO SHOULDER GRADE, UNLESS INDICATED IN PLAN.
5. EXCEPT IN ANCHORS, VERTICAL REINFORCING STIRRUP NOT REQUIRED FOR ROADWAY OFFSETS LESS THAN 1' - 0".
6. FOR TYPE S32, TYPE S36, TYPE S42 AND TYPE S56 MONLITHIC FOOTING OR DOWELED FOOTING 2 - #8 X 8" @ 2'- 0".
7. STAGGER LAPPING OF LONGITUDINAL STEEL. MINIMUM OVERLAP OF STEEL 2 FEET. BARS AT LAPS TO BE FIRMLY TIED OR CONNECTED.
8. 4000 PSI CONCRETE AIR ENTRAINMENT PER STANDARD SPECIFICATION 501.
9. WHEN SWITCHING BETWEEN SLIP FORM AND CAST - IN - PLACE OPERATIONS, EXTEND LONGITUDINAL STEEL 3 FEET BEYOND SLIP FORMING CUT - OFF POINT. EXPOSED STEEL INTO NEXT POURS REINFORCEMENT. LAPS TO BE FIRMLY TIED.
10. USE ¾" BEVEL OR 1" RADIUS ON ALL EXPOSED SHARP EDGES UNLESS OTHERWISE NOTED.
11. 2" CLEAR COVER TYPICAL
12. COLD-JOINTS MAY BE USED BETWEEN ANCHOR INSTALLATIONS. WHEN A COLD JOINT IS NEEDED, 3 FEET OF LAP OF LONGITUDINAL STEEL IS REQUIRED. LAPS TO BE FIRMLY TIED.
13. IN TYPE S32, TYPE S36, TYPE S42 AND TYPE S56 NO ADDITIONAL VERTICAL STEEL IS NEEDED. IN TYPE S32A, TYPE S36A, TYPE S42A AND TYPE S56A REQUIRES VERTICAL STEEL. SEE OTHER DETAIL.
14. IN TYPE S32, TYPE S36, TYPE S42 AND TYPE S56 DEPTH OF FOOTING 10". IN TYPE S32A, TYPE S36A, TYPE S42A AND TYPE S56A MATCH TOTAL HEIGHT OF SINGLE SLOPE BARRIER RETAINING WALL.
15. FOR ALL BARRIER TYPES SHOWN, ANCHOR IS REQUIRED AT CONCRETE BARRIER ENDS AND AT INTERRUPTIONS IN CONCRETE BARRIER. ANCHOR MAY BE AS SHOWN ON DRAWING OR DETAILS SHOWN ON S.D.D. 14B33. ANCHORS INCIDENTAL TO CBSS.
16. CONCRETE PAD UNDER CBSS MAY BE PLACED INTEGRAL WITH BARRIER, PLACED SEPARATELY OR PLACED WITH CONCRETE SHOULDER AND SAWED FULL DEPTH. SAWING OF CONCRETE SHOULDER IS INCIDENTAL TO CONCRETE BARRIER BID ITEM. CONCRETE PAD MINIMUM DEPTH IS 6 INCHES, OR EQUAL TO THE DEPTH OF THE CONCRETE SHOULDER.
17. CONSTRUCTION JOINTS MAY BE ELIMINATED WHEN CONCRETE SHOULDER IS LESS THAN 10'.
18. SEE SDD 13C1 FOR DETAILS TYING BARRIER FOOTING TO ADJACENT CONCRETE.
19. PROVIDE A 1" DEEP, ," WIDE CONTRACTION JOINT IN BARRIER FOOTING AND BARRIER. JOINT IS TO MATCH ADJACENT CONCRETE JOINTS. IF ADJACENT TO ASPHALT CONTRACTION JOINT IS REQUIRED EVERY 15'.

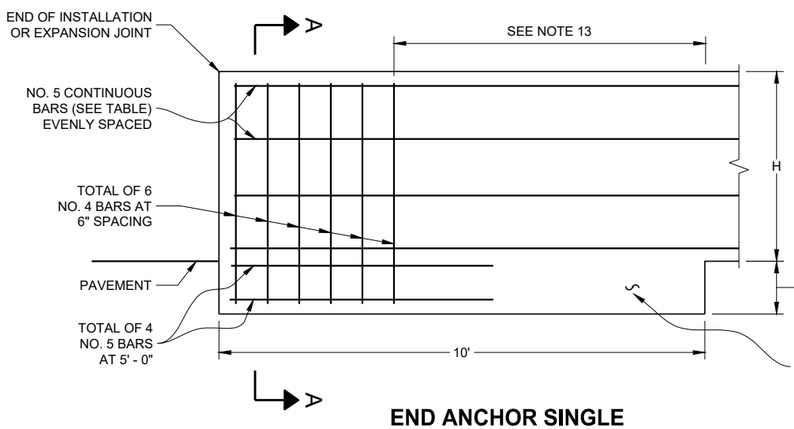


SINGLE SLOPE CONCRETE BARRIER AND RETAINING WALL

(TYPE S32A, TYPE S36A, TYPE S42A, TYPE S56A)

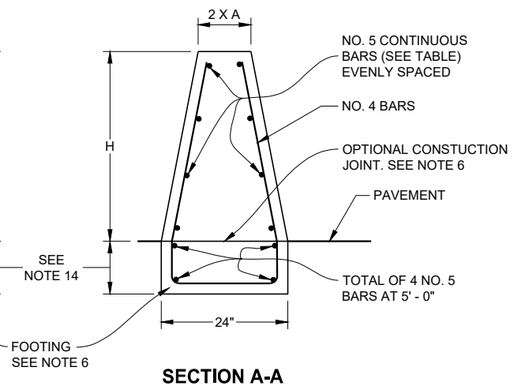
(BETWEEN ADJACENT ROADWAYS)

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

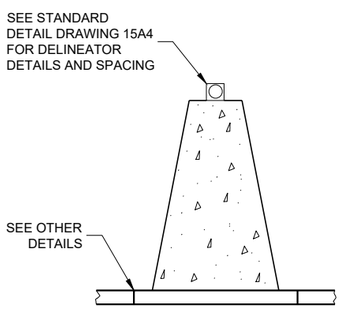


END ANCHOR SINGLE SLOPE CONCRETE BARRIER

(AT CONSTRUCTION JOINT)



SECTION A-A



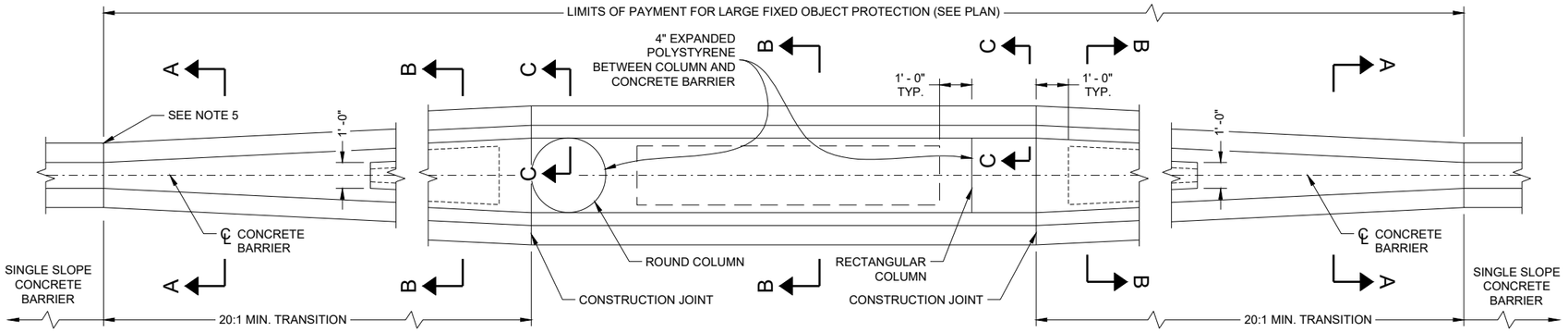
DELINEATION

CONCRETE BARRIER SINGLE SLOPE (CBSS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

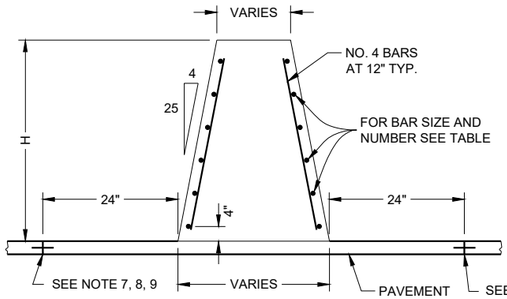
6

SDD 14B32 - 06a

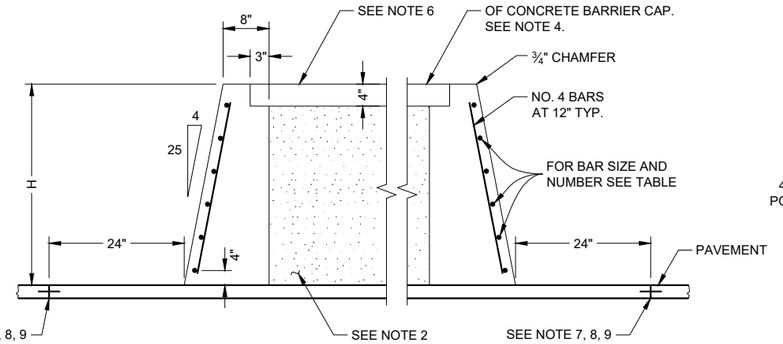


BARRIER HEIGHT H INCHES	BAR SIZE	NUMBER OF BARS EACH
32	4	6
36	4	6
42	5	6
56	5	6

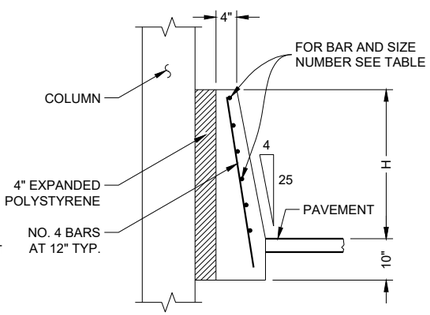
LARGE FIXED OBJECTS PROTECTION
(TYPE S32, TYPE S36, TYPE S42, TYPE S56)



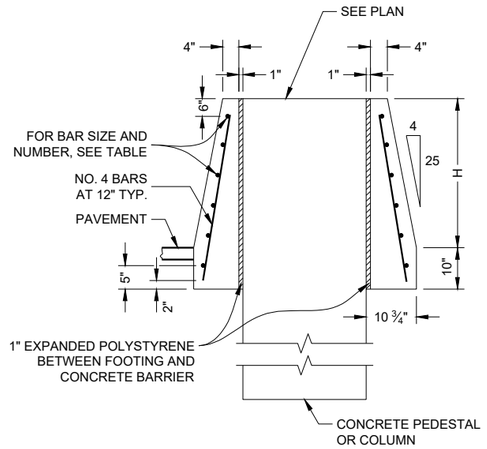
SECTION A - A



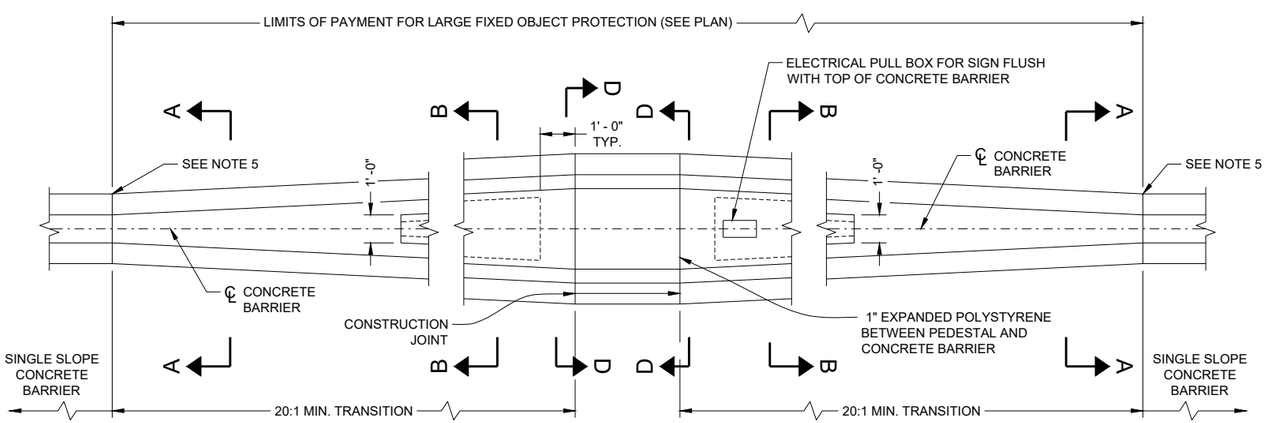
SECTION B - B



SECTION C - C



SECTION D - D



SMALL FIXED OBJECTS PROTECTION
(TYPE S32, TYPE S36, TYPE S42, TYPE S56)

GENERAL NOTES

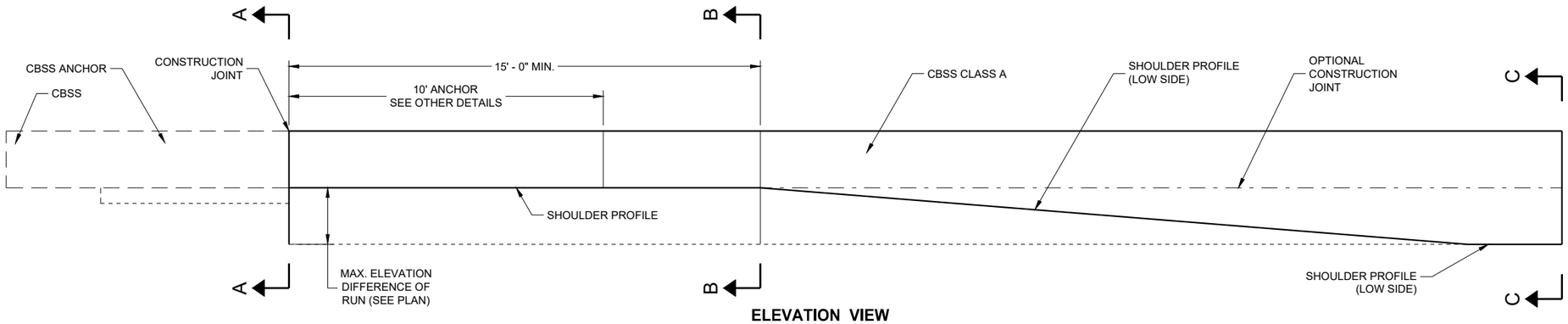
1. INSTALL 1 INCH DIAMETER DRAIN PIPE EVERY 20 FEET OF CROSS SECTION B -B. MINIMUM ONE DRAIN CAVITY.
2. BETWEEN CONCRETE BARRIER WALLS FILL WITH FOUNDATION BACKFILL.
3. REINFORCING STEEL SHALL EXTEND CONTINUOUS THROUGH CONSTRUCTION JOINTS.
4. ADJUST HEIGHT OF CONCRETE BARRIER WALL ON LOW SIDE OF OFFSET OR SUPERELEVATED ROADWAYS TO PROVIDE LEVEL GRADE ACROSS TOP OF CONCRETE CAP.
5. IF FIXED OBJECT PROTECTION IS INSTALLED FIRST, USE COLD JOINTS. IF CBSS PLACED FIRST, USE EXPANSION JOINT.
6. USE NO. 3 BAR SPACED 12 INCHES CENTER TO CENTER (PLACED IN EACH DIRECTION) OR EQUIVALENT WIRE MESH.
7. CONCRETE PAD UNDER CBSS MAY BE PLACED INTEGRAL WITH BARRIER, PLACED SEPARATELY OR PLACED ITH CONCRETE SHOULDER AND SAWED FULL DEPTH. SAWING OF CONCRETE SHOULDER IS INCIDENTAL TO CONCRETE BARRIER BID ITEM. CONCRETE PAD MINIMUM DEPTH IS 6 INCHES, OR EQUAL TO THE DEPTH OF THE CONCRETE SHOULDER.
8. CONSTRUCTION JOINTS MAY BE ELIMINATED WHEN CONCRETE SHOULDER IS LESS THAN 10',
9. SEE SDD 13C1 FOR DETAILS TYING BARRIER FOOTING TO ADJACENT CONCRETE.

CONCRETE BARRIER SINGLE SLOPE (CBSS)

SDD 14B32 - 06b
6

GENERAL NOTES

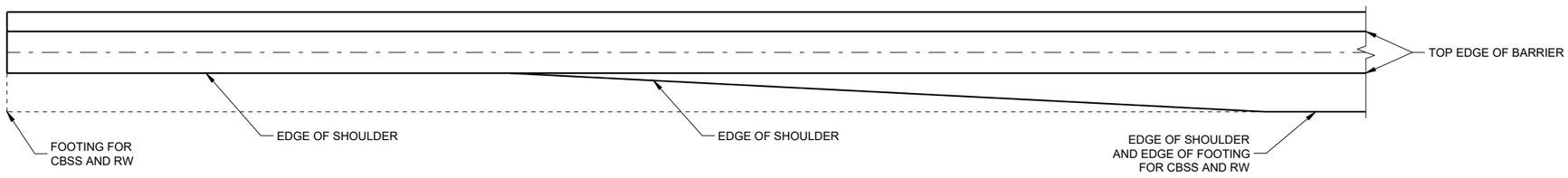
1. SAWING OF CONCRETE SHOULDER IS INCIDENTAL TO CONCRETE BARRIER BID ITEM. SEE SDD 13C18 FOR JOINT DEPTH AND WIDTH. CONCRETE PAD MINIMUM DEPTH IS 6 INCHES, OR EQUAL TO THE DEPTH OF THE CONCRETE SHOULDER.
2. CONSTRUCTION JOINTS MAY BE ELIMINATED WHEN CONCRETE SHOULDER IS LESS THAN 10',
3. SEE SDD 13C1 FOR DETAILS TYING BARRIER FOOTING TO ADJACENT CONCRETE.



ELEVATION VIEW

TRANSITION TO CBSS CLASS A

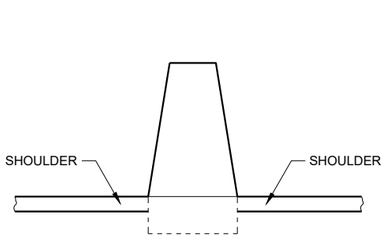
(TYPE S32A, TYPE S36A TYPE S42A TYPE S56A)



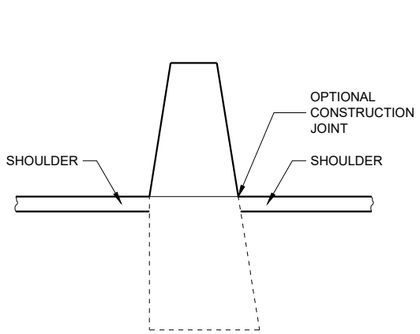
PLAN VIEW

TRANSITION TO CBSS CLASS A

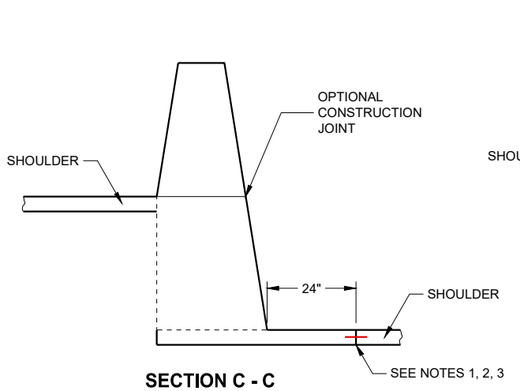
(TYPE S32A, TYPE S36A TYPE S42A TYPE S56A)



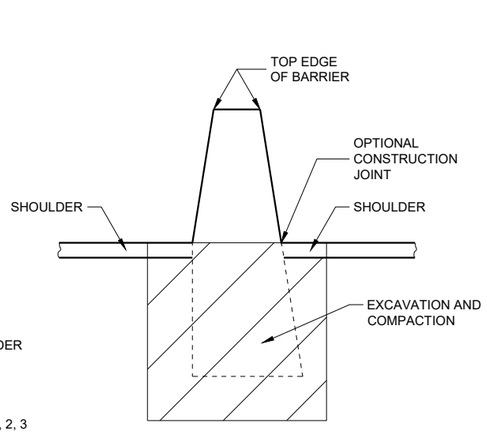
SECTION A - A



SECTION B - B



SECTION C - C



CONCRETE BARRIER SINGLE SLOPE (CBSS)

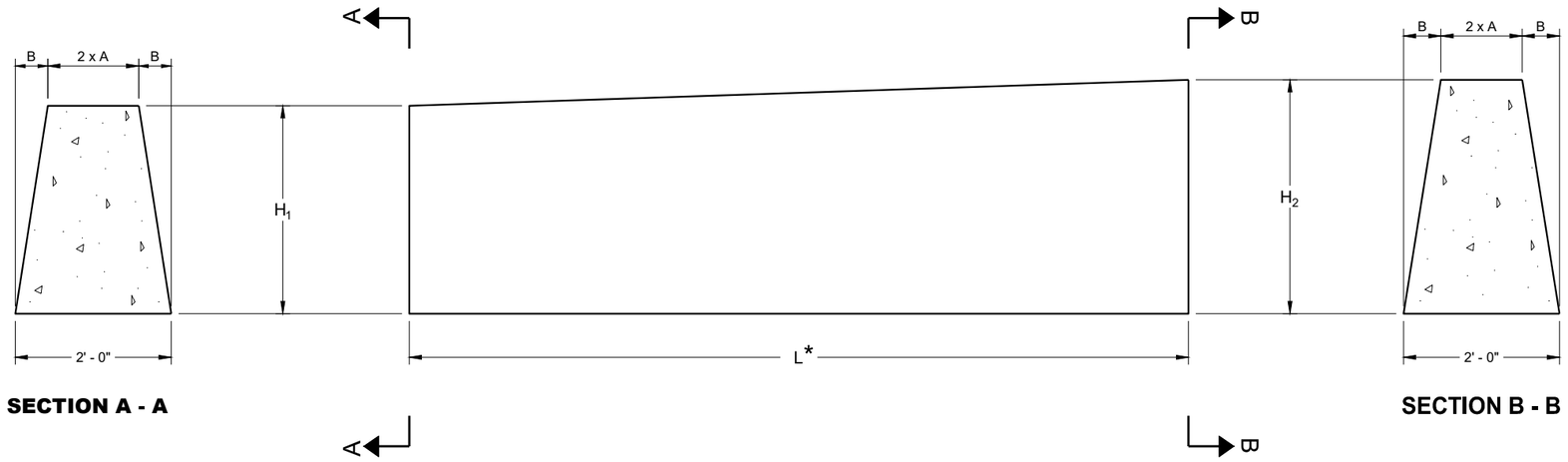
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 14B32 - 06c

6

SDD 14B32 - 06c



SECTION A - A

SECTION B - B

DOUBLE COLD JOINT HEIGHT TRANSITION

BARRIER DIMENSIONS

BARRIER HEIGHT INCHES	A INCHES	B INCHES
32	7	5
36	6 ¼	5 ¾
42	5 ¼	6 ¾
56	3	9

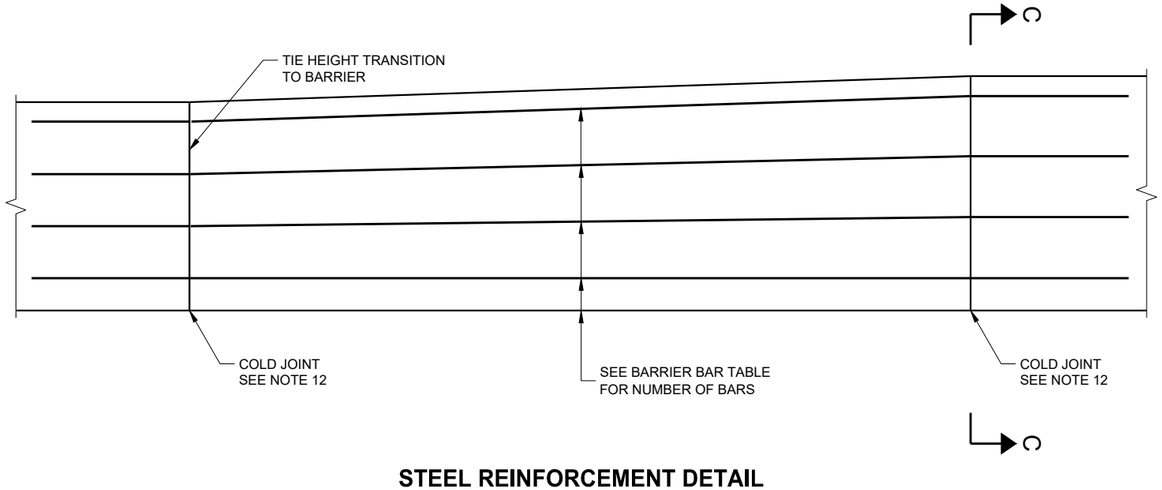
MULTIPLE HEIGHT TRANSITIONS MAY BE USED IN SEQUENCE TO GET TO APPROPRIATE HEIGHT.

USE COLD JOINT TO CONNECT MULTIPLE HEIGHT TRANSITIONS.

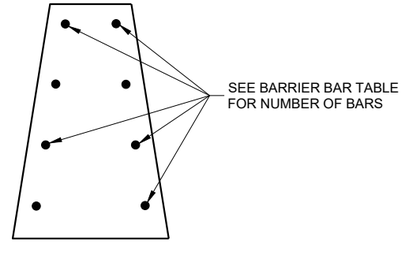
BARRIER BARS

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

* LENGTH OF DOUBLE COLD JOINT INCLUDED IN THE TOTAL LENGTH OF CBSS.



STEEL REINFORCEMENT DETAIL



SECTION C-C

CONCRETE BARRIER SINGLE SLOPE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2018
DATE

/S/ Rodney Taylor
ROADWAY STANDARDS DEVE
UNIT SUPERVISOR

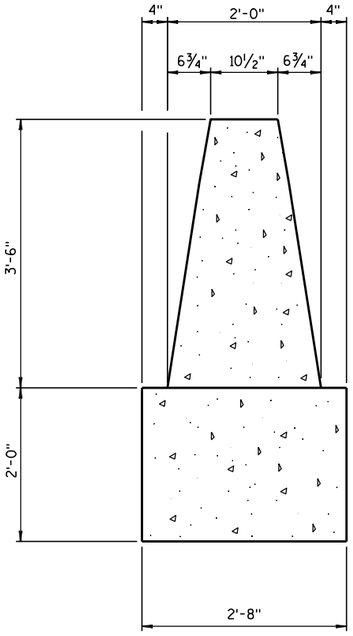
FHWA

6

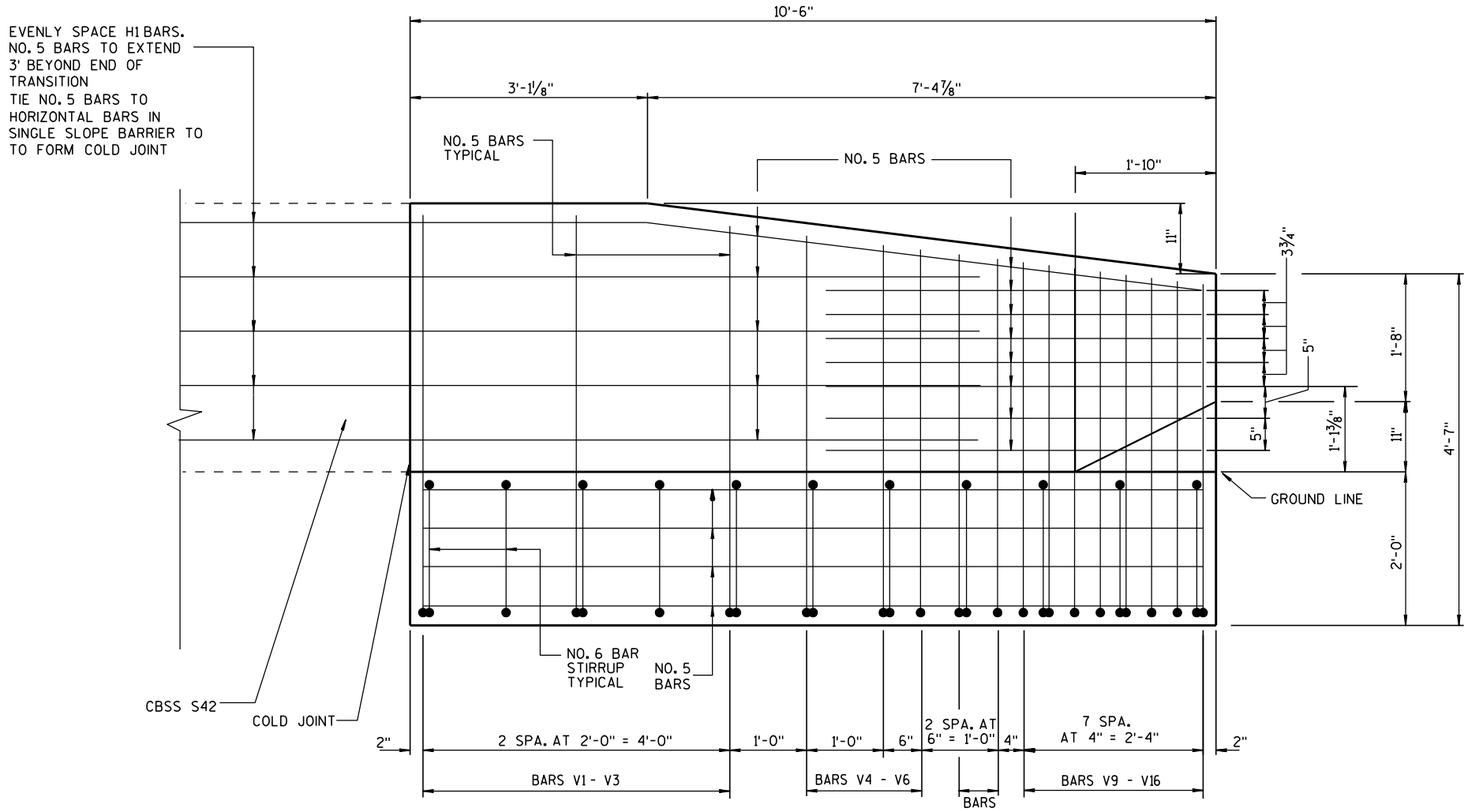
SDD 14B32 - 06d

6

SDD 14B32 - 06d

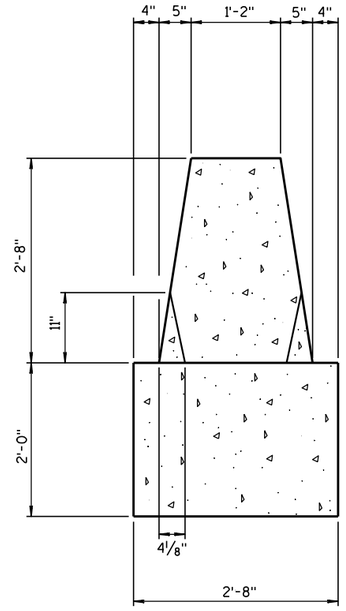


SECTION A-A

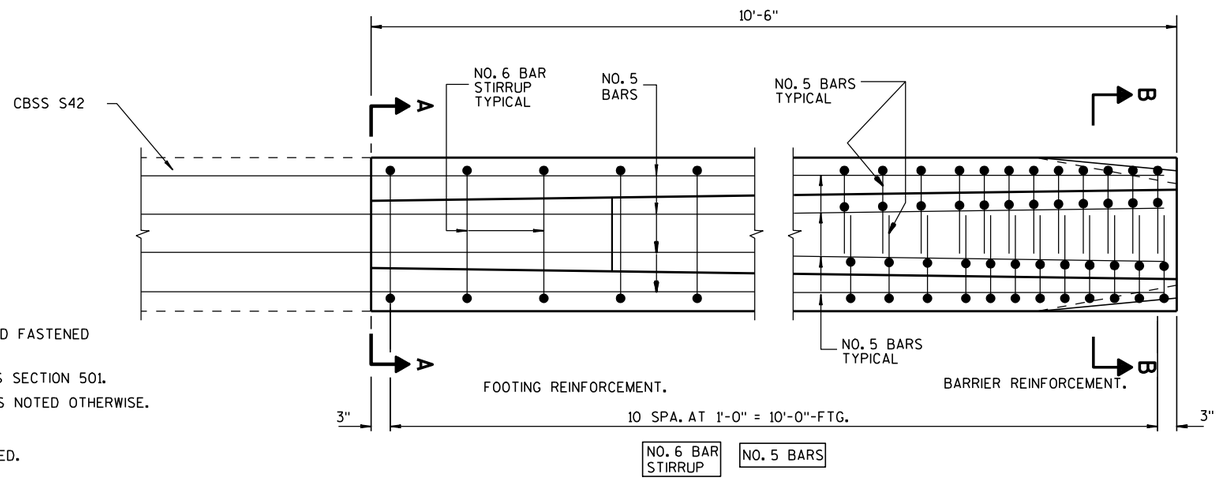


SEE SECTIONS ① THRU ⑯

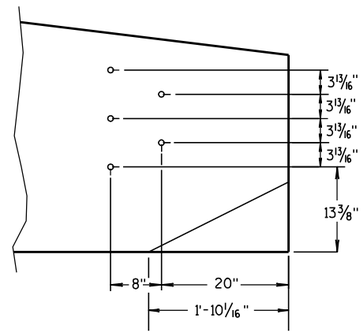
ELEVATION VIEW



SECTION B-B



PLAN VIEW



PVC PIPE LOCATIONS

GENERAL NOTES

CONSTRUCT PER STANDARD SPECIFICATION 603.

SPLICES OF LONGITUDINAL BARS TO BE 2'LONG AND FIRMLY TIED AND FASTENED TOGETHER UNLESS NOTED OTHERWISE.

4000 PSI CONCRETE AIR ENTRAINMENT PER STANDARD SPECIFICATIONS SECTION 501.

USE ¾" BEVEL OR 1" RADIUS ON ALL EXPOSED SHARP EDGES UNLESS NOTED OTHERWISE.

THRIE BEAM ANCHOR INCIDENTAL TO CONCRETE BARRIER ITEM.

INSTALL SCHEDULE 40 PVC PIPE 1" DIAMETER AT LOCATIONS INDICATED.

EXTEND PVC PIPE COMPLETELY THROUGH BARRIER.

CUT ENDS OF PVC PIPE FLUSH WITH FINISHED FACE of BARRIER.

THE NUMBER IN BAR DESIGNATION REPRESENTS THE BARS LOCATION.

2" CLEAR COVER TYPICAL.

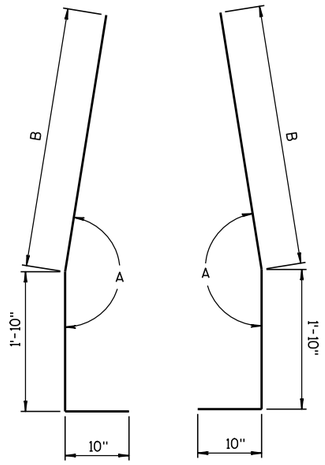
CONCRETE BARRIER SINGLE SLOPE 42" THRIE BEAM ANCHOR

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
S.D.D. 14 B 33-1g

BAR CHART
SECTIONS V1 - V11

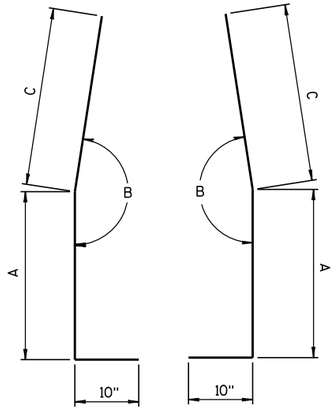
BAR	A	B
V1	170°-50'	3'-4½"
V2	171°-20'	3'-4½"
V3	171°-30'	3'-2½"
V4	171°-25'	3'-1½"
V5	171°-15'	3'-0"
V6	171°-15'	2'-11"
V7	171°-20'	2'-10½"
V8	171°-10'	2'-9½"
V9	171°-10'	2'-9"
V10	171°-05'	2'-8½"
V11	171°-10'	2'-8"



BAR BENDING DETAIL
FOR BARS V1 - V11

BAR CHART
SECTIONS V12 - V13

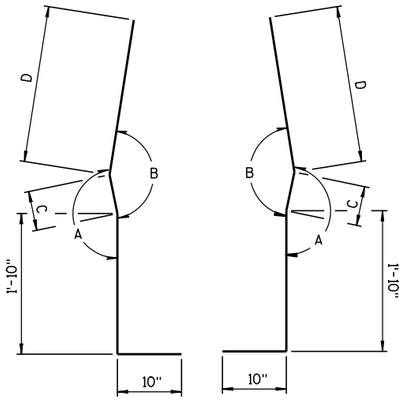
BAR	A	B	C
V12	2'-2"	171°-15'	2'-3½"
V13	2'-7"	171°-05'	1'-10"



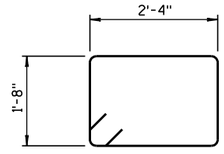
BAR BENDING DETAIL
FOR BARS V12 - V13

BAR CHART
SECTIONS V14 - V16

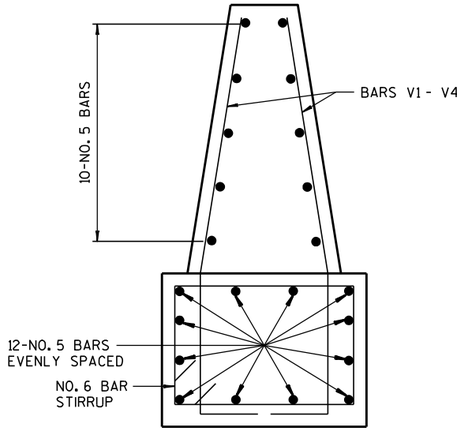
BAR	A	B	C	D
V14	168°-15'	159°-15'	6"	2'-0"
V15	169°-20'	161°-00'	8"	1'-10"
V16	168°-40'	160°-10'	10"	1'-8"



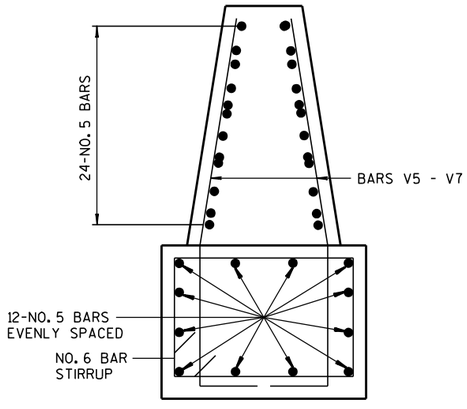
BAR BENDING DETAIL
FOR BARS V14 - V16



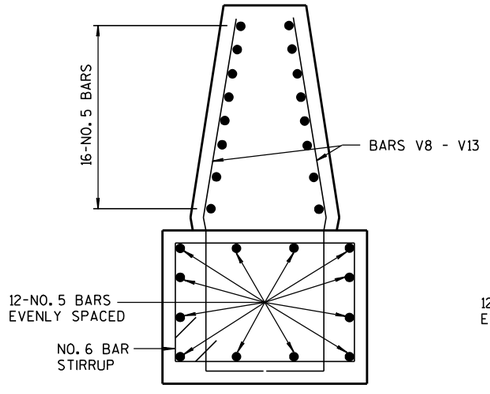
STIRRUP BAR
BENDING DETAIL



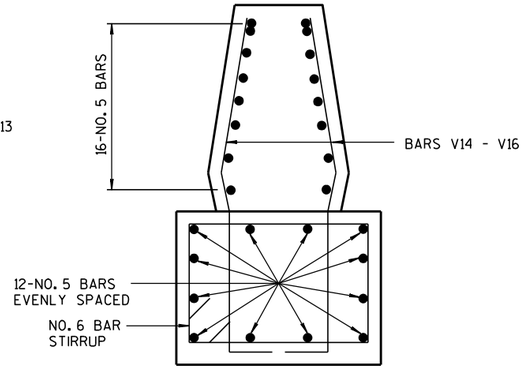
BAR DETAIL
SECTIONS V1 - V4



BAR DETAIL
SECTIONS V5 - V7



BAR DETAIL
SECTIONS V8 - V13



BAR DETAIL
SECTIONS V14 - V16

CONCRETE BARRIER
SINGLE SLOPE 42"
THRIE BEAM ANCHOR

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

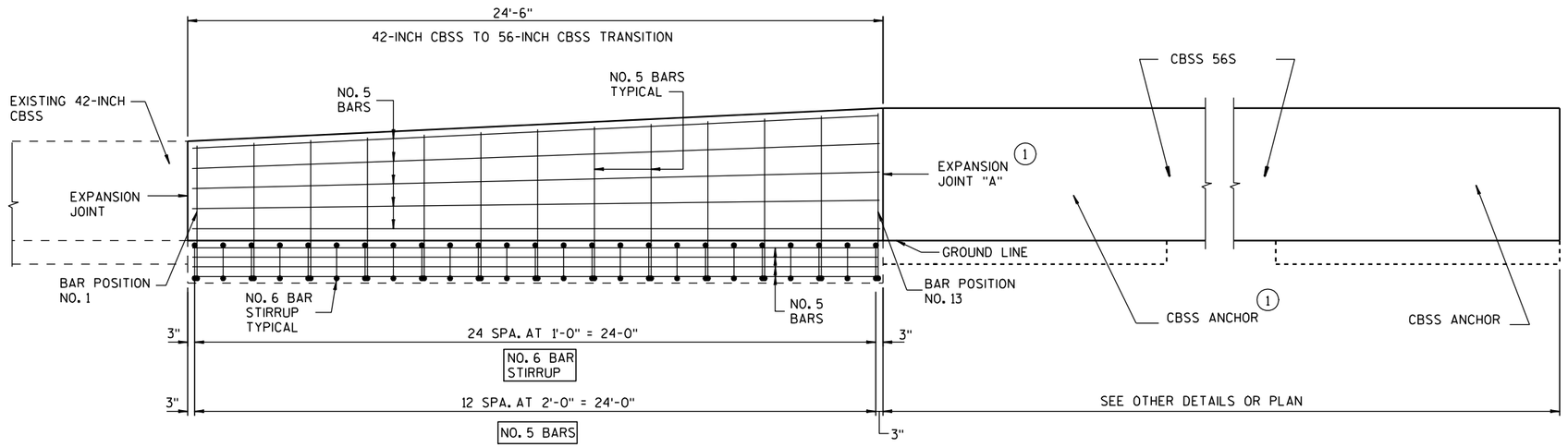
APPROVED
6-3-2010 DATE
/S/ Jerry H. Z---
ROADWAY STANDARDS ENGINEER
FHWA

6

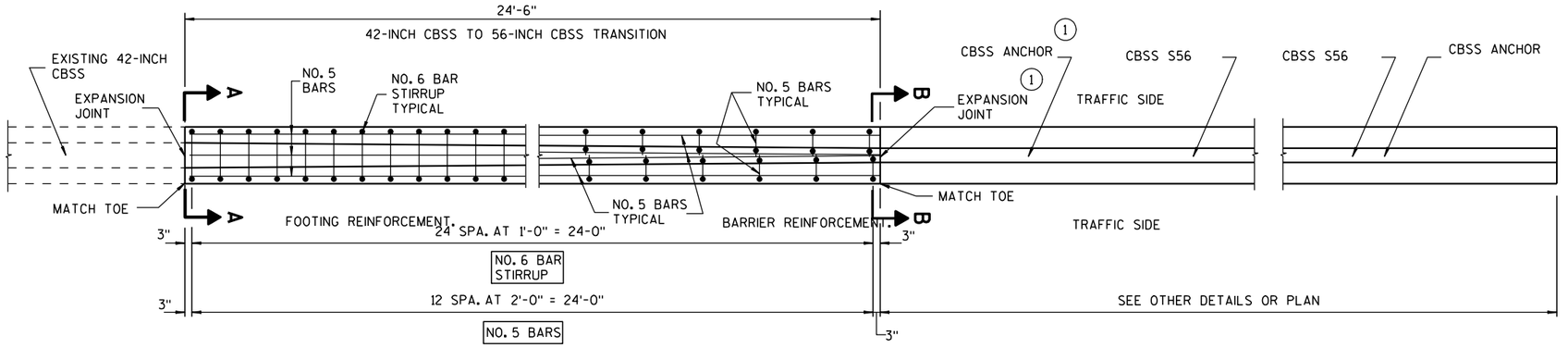
S.D.D. 14 B 33-1h

6

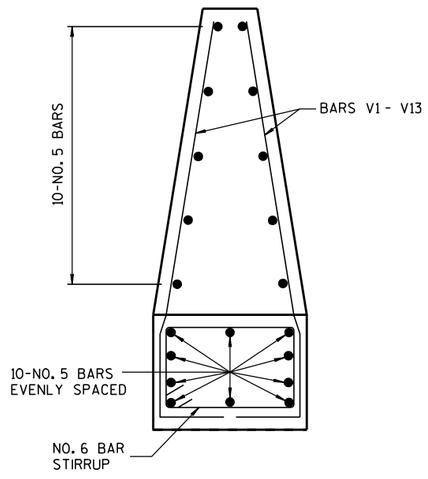
S.D.D. 14 B 33-1h



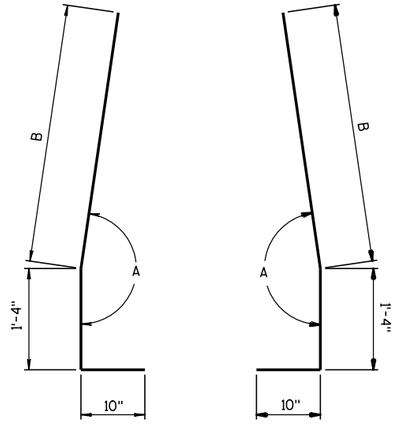
ELEVATION VIEW



PLAN VIEW



BAR DETAIL
BAR POSITION NO. 1 - NO. 13



BAR BENDING DETAIL
FOR BARS V1 - V13

BAR CHART SECTIONS V1 - V13

BAR	A	B
V1	170°-50'	3'-4½"
V2	170°-50'	3'-6"
V3	170°-55'	3'-7"
V4	171°	3'-8"
V5	170°-55'	3'-9½"
V6	170°-50'	3'-10½"
V7	170°-50'	3'-11½"

BAR	A	B
V8	170°-55'	4'-0½"
V9	170°-50'	4'-2"
V10	170°-50'	4'-3"
V11	170°-50'	4'-4½"
V12	170°-55'	4'-5½"
V13	170°-50'	4'-6½"

GENERAL NOTES

CONSTRUCT PER STANDARD SPECIFICATION 603.

SPLICES OF LONGITUDINAL BARS TO BE 2'LONG AND FIRMLY TIED AND FASTENED TOGETHER UNLESS NOTED OTHERWISE.

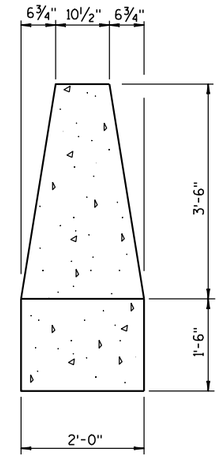
4000 PSI CONCRETE AIR ENTRAINMENT PER STANDARD SPECIFICATIONS 501.

USE ¾" BEVEL OR 1" RADIUS ON ALL EXPOSED SHARP EDGES UNLESS NOTED OTHERWISE.

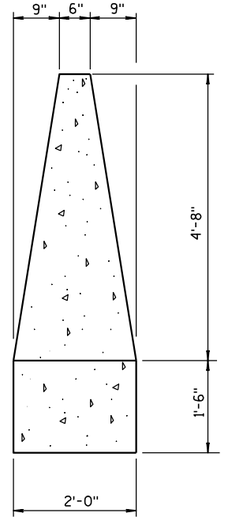
THE NUMBER IN BAR DESIGNATION REPRESENTS THE BARS LOCATION.

2" CLEAR COVER TYPICAL.

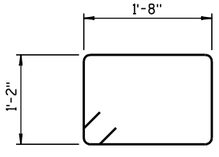
(1) EXPANSION JOINT "A" MAY BE REPLACED WITH A COLD-JOINT PROVIDED THAT 3 FEET OF LAP OF LONGITUDINAL STEEL IS PROVIDED. IF COLD-JOINT IS USED ANCHOR NOT REQUIRED.



SECTION A-A



SECTION B-B



STIRRUP BAR
BENDING DETAIL

42-INCH SINGLE SLOPE CONCRETE BARRIER TO 56-INCH SINGLE SLOPE CONCRETE BARRIER HEIGHT TRANSITION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
6-3-2010 DATE
/S/ Jerry H. [illegible]
ROADWAY STANDARDS ENGINEER
FHWA

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S.D.D. 14 B 39-1e

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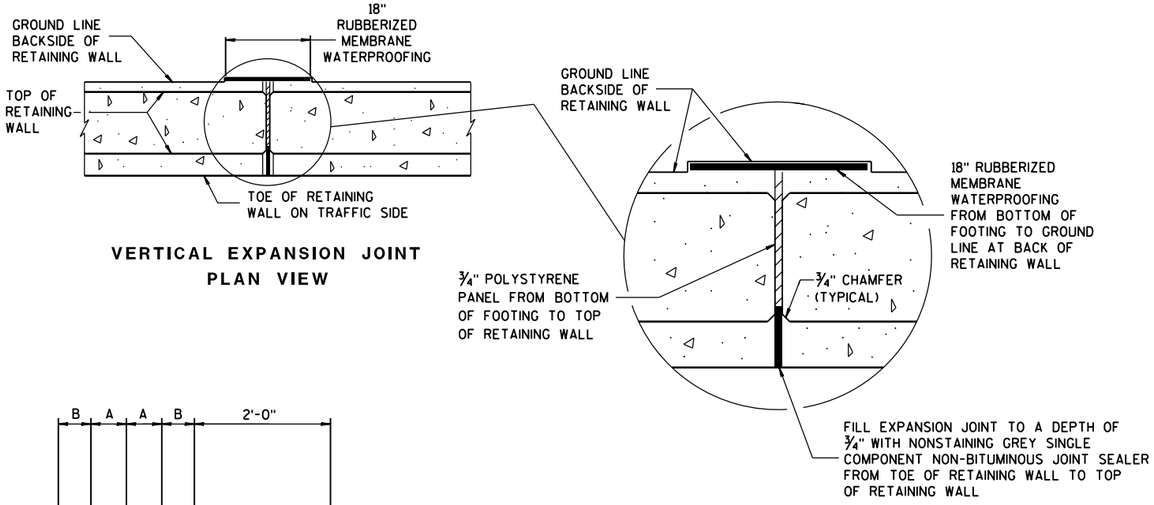
S.D.D. 14 B 39-1e



VERTICAL EXPANSION JOINT
PLAN VIEW

DELINEATION

GENERAL NOTES

PROVIDE EXPANSION JOINTS WHERE THERE ARE EXISTING EXPANSION JOINTS OR AT THE END OF EACH POUR.

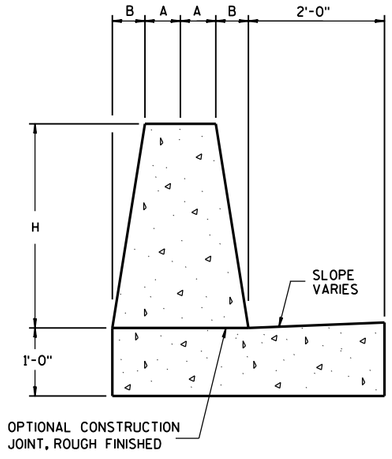
NO HORIZONTAL STEEL CROSSES EXPANSION JOINTS.

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.

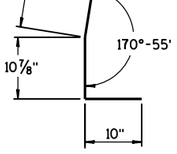
ALL STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR.



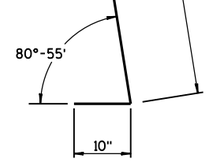
ROADSIDE RETAINING WALL

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



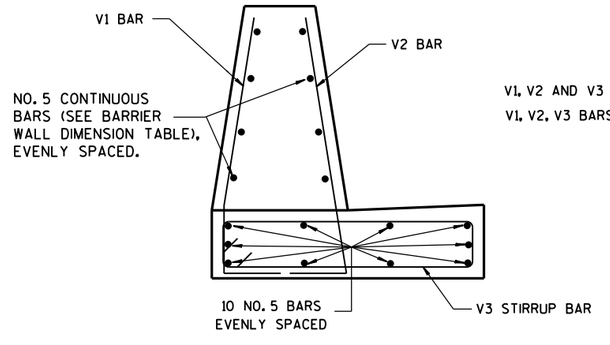
V1 BAR
BENDING DETAIL



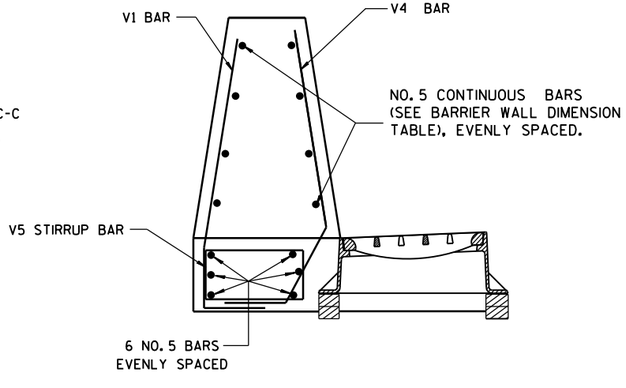
V2 BAR
BENDING DETAIL

BAR CHART
ROADSIDE RETAINING WALL

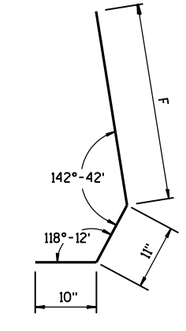
BARRIER HEIGHT	V1 BAR D	V2 BAR E	V4 BAR F
32"	2'-5½"	3'-4½"	2'-6½"
36"	2'-9½"	3'-9¾"	2'-10¾"
42"	3'-3½"	4'-2½"	3'-4¾"
56"	4'-5¾"	5'-4¾"	4'-6¾"



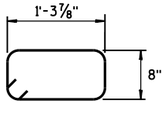
ROADSIDE RETAINING WALL
NORMAL BAR PLACEMENT



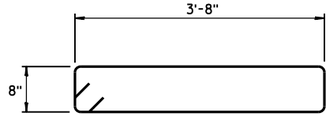
ROADSIDE RETAINING WALL
BAR PLACEMENT NEAR
INLET



V4 BAR
BENDING DETAIL



V5 STIRRUP BAR
BENDING DETAIL



V3 STIRRUP BAR
BENDING DETAIL

SINGLE SLOPE
ROADSIDE RETAINING WALL

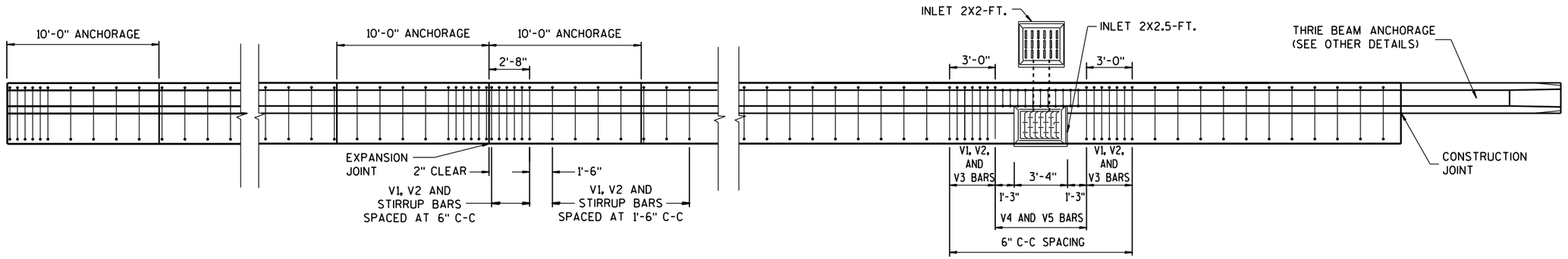
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

S.D.D. 14 B 41-3a

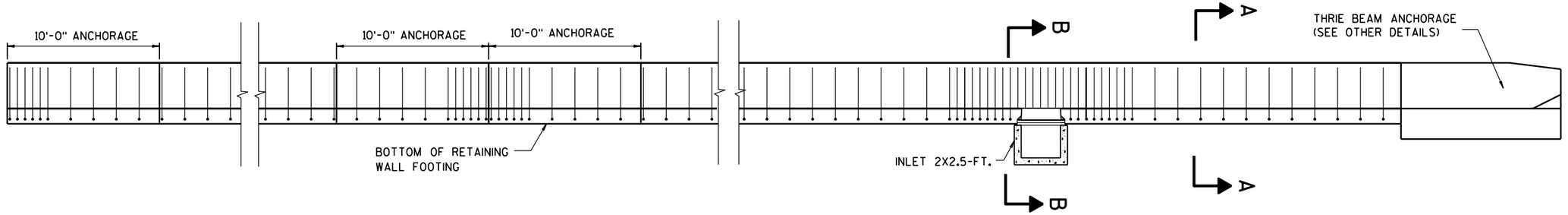
6

S.D.D. 14 B 41-3a



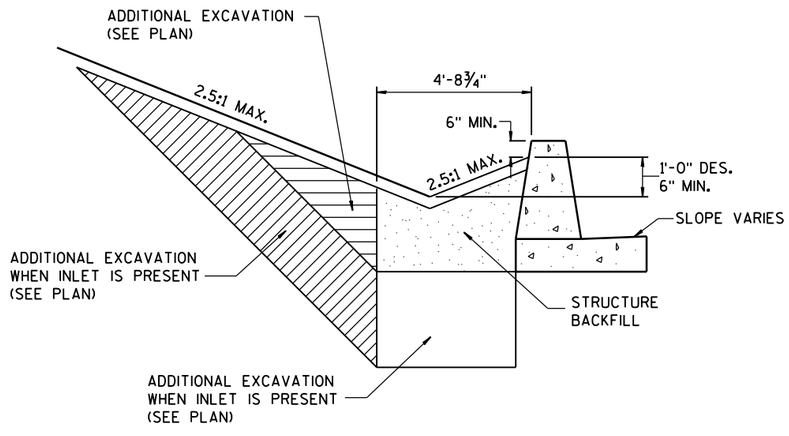
PLAN VIEW

NOTE: HORIZONTAL BARS ARE NOT SHOWN. SEE OTHER DETAILS FOR HORIZONTAL BARS.

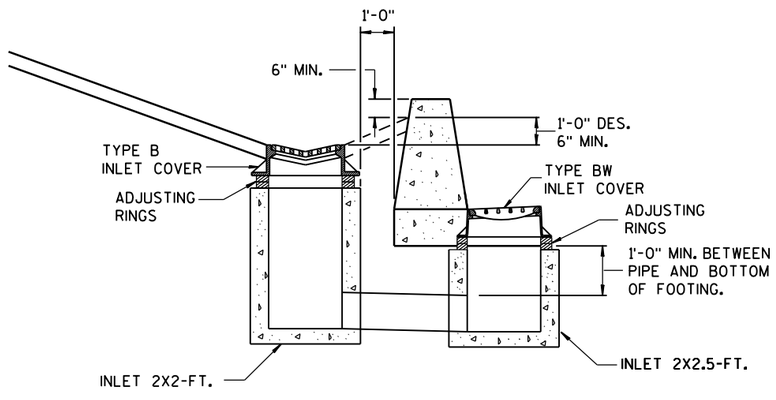


ELEVATION VIEW

NOTE: HORIZONTAL BARS ARE NOT SHOWN. SEE OTHER DETAILS FOR HORIZONTAL BARS.

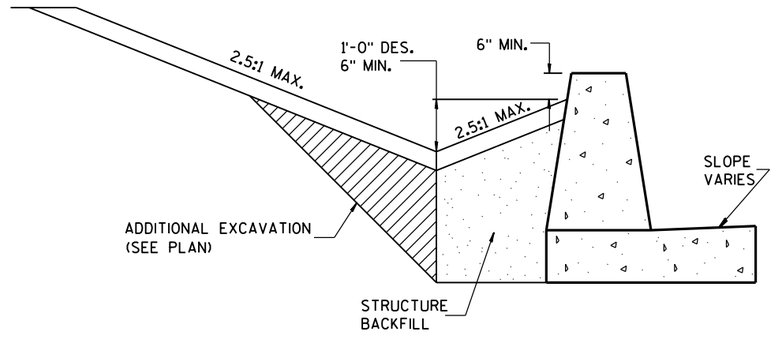


SECTION A-A



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...
ENT
FHWA

6

S.D.D. 14 B 41-3b

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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.

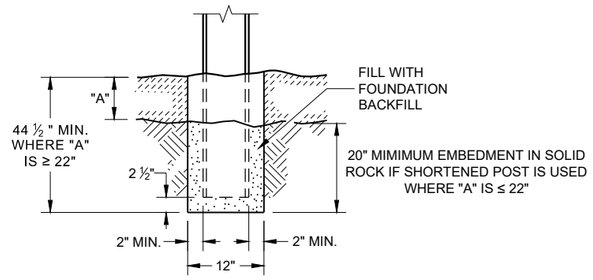
(3) IF ROCK IS ENCOUNTERED DURING EXCAVATION, PROVIDE A HOLE 12 INCHES IN DIAMETER EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE APPROXIMATELY 2 1/2" INCHES OF GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE. CUT THE POSTS THE TO LENGTH AMD INSTALL. BACKFILL WITH EXCAVATED MATERIAL AND COMPACT. BACKFILL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

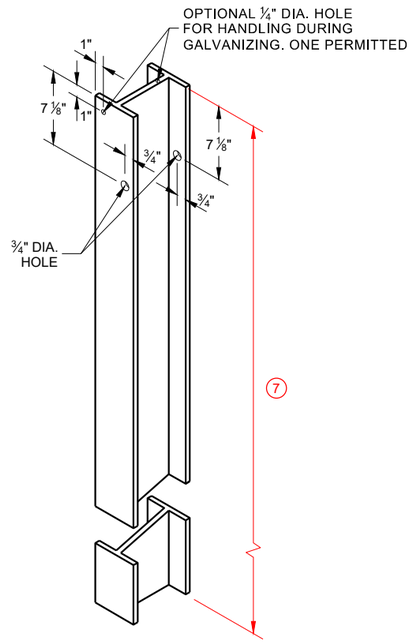
(5) FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS ±1". FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27 ¾" TO 32".

(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.

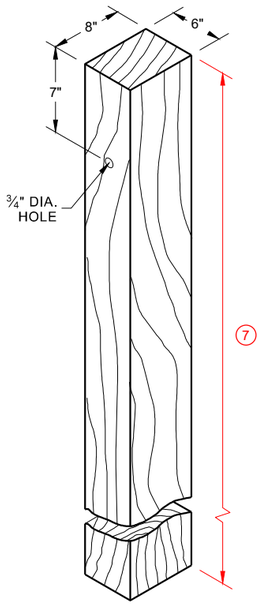
(7) TOTAL POST LENGTH FOR TYPE K IS 7' - 0".
TOTAL POST LENGTH FOR OTHER MGS TYPES IS 6' - 0".



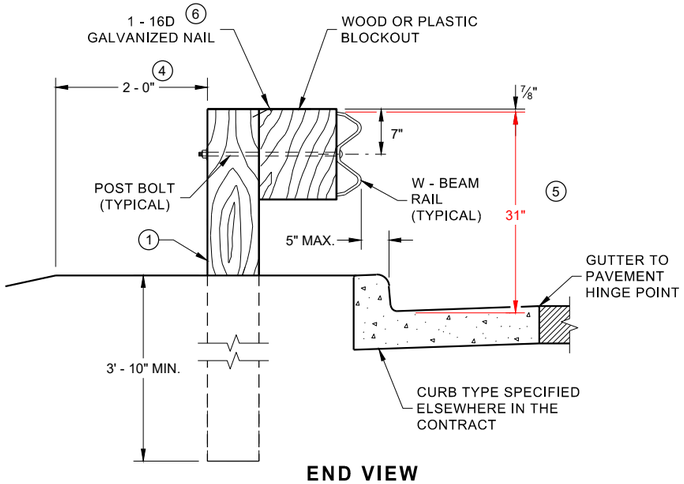
END VIEW
SETTING STEEL OR WOOD POST IN ROCK (3)



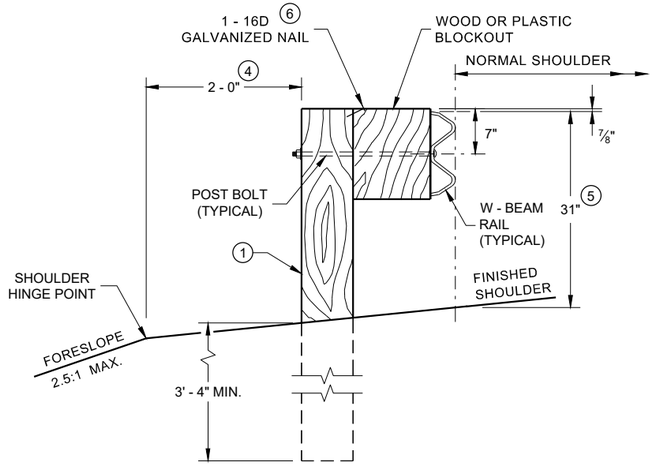
STEEL POST & HOLE PUNCHING DETAIL (W 6 X 9) (1)



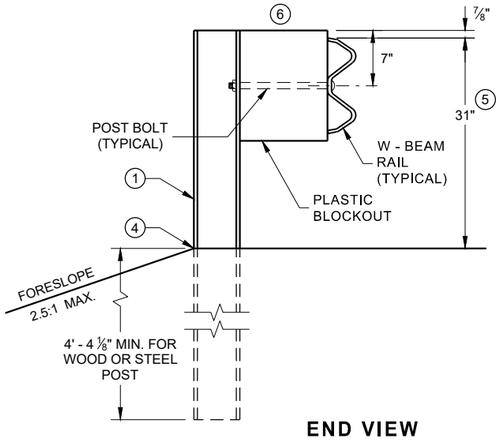
WOOD POST (6" X 8") NOMINAL (1)



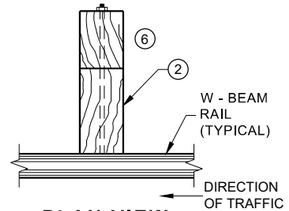
END VIEW
LOCATED ALONG A CURBED ROADWAY



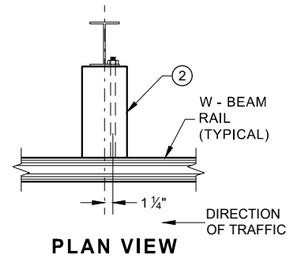
END VIEW
LOCATED ALONG A ROADWAY SHOULDER STANDARD INSTALLATION



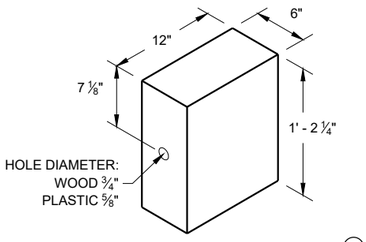
END VIEW
MGS LONGER POST AT HALFPOST SPACING W BEAM (K)



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

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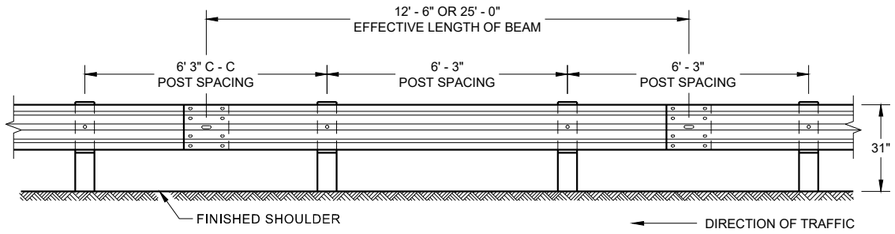
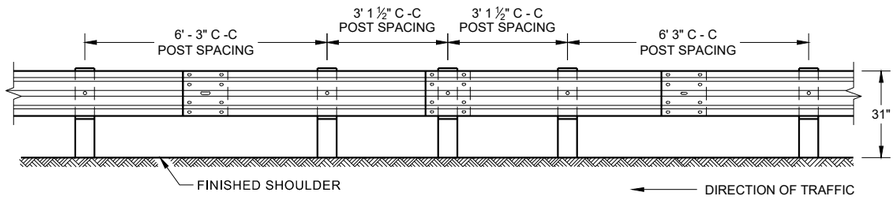
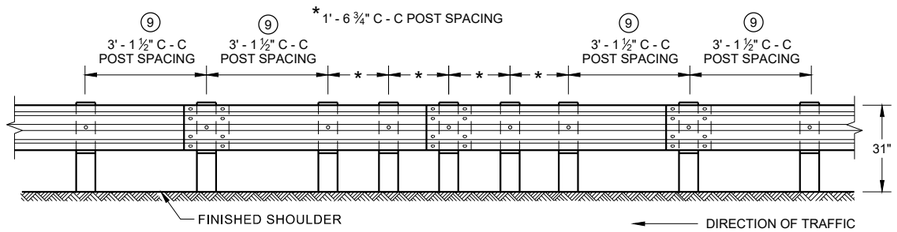


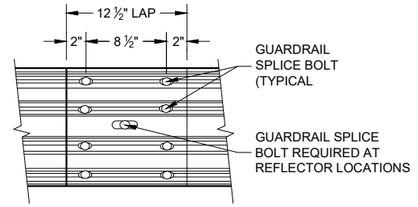
FRONT VIEW
POST SPACING STANDARD INSTALLATION



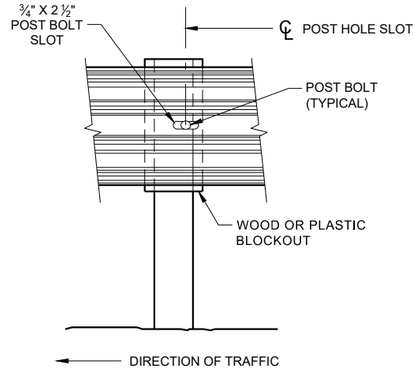
FRONT VIEW
HALF POST SPACING (HS) AND HALF POST SPACING WITH LONGER POSTS (K)



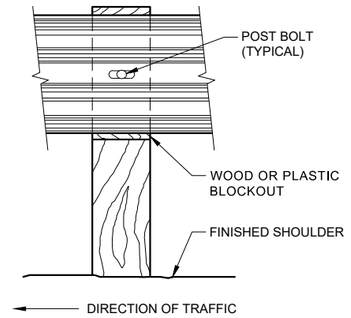
FRONT VIEW
QUARTER POST SPACING (QS)



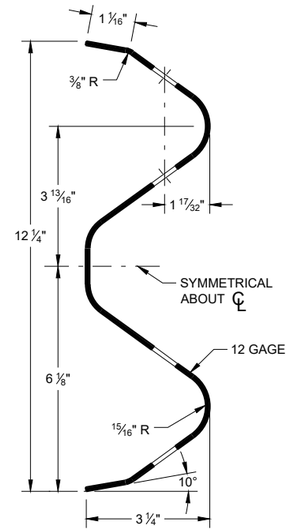
FRONT VIEW
MID-SPAN BEAM SPLICE



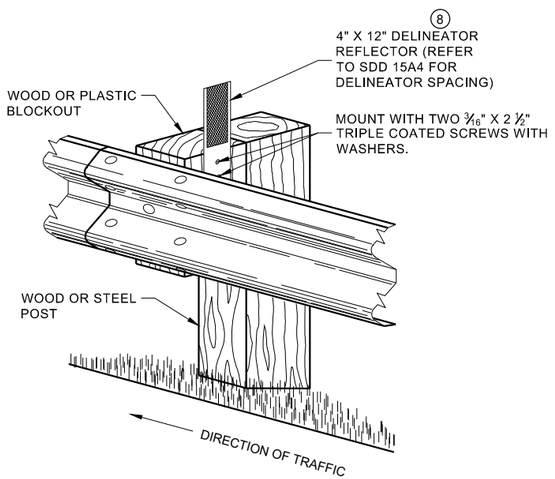
FRONT VIEW AT STEEL POST



FRONT VIEW AT WOOD POST



SECTION THRU W-BEAM RAIL



ONE SIDED REFLECTOR DETAIL AND TYPICAL INSTALLATION

GENERAL NOTES

⑧ DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL. RAIL SPLICE LOCATIONS ARE THE ONLY ACCEPTABLE LOCATIONS FOR REFLECTORS.

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

POST BOLTS ARE A ¾" DIAMETER ASTM A307 GUARDRAIL BOLT. A POST BOLT REQUIRES ⅝" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT AND ⅝" DIAMETER F844 FLAT WASHER. POST BOLTS MAY BE LONGER IF MULTIPLE BLOCKOUTS ARE BEING USED.

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

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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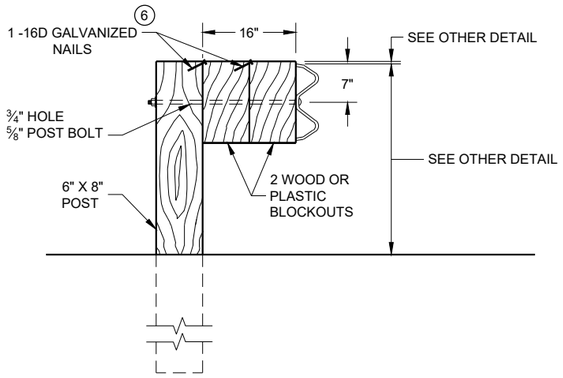
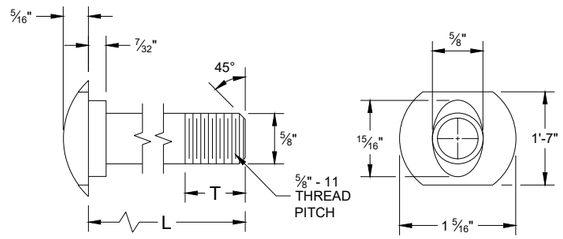


DETAIL FOR 16" BLOCKOUT DEPTH

IT IS ACCEPTABLE TO USE BLOCKOUTS UP TO 16" DEEP TO INCREASE THE POST OFFSET TO AVOID UNDERGROUND OBSTACLES. THERE IS NO LIMIT TO THE NUMBER OF POSTS THAT CAN HAVE ADDITIONAL BLOCKOUTS UP TO 16" DEEP.

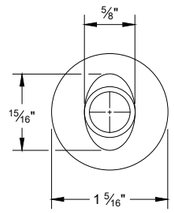
NOTE:

1. ALL FILLETS SHALL HAVE A MINIMUM RADIUS OF 3⁄16".
2. IF THE BOLT EXTENDS MORE THAN ¼" FROM THE NUT THE BOLT SHOULD BE TRIMMED BACK.

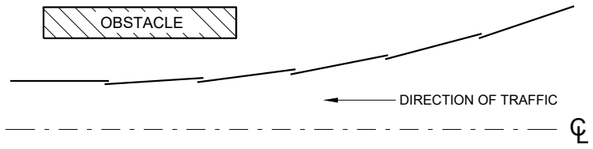


POST BOLT TABLE

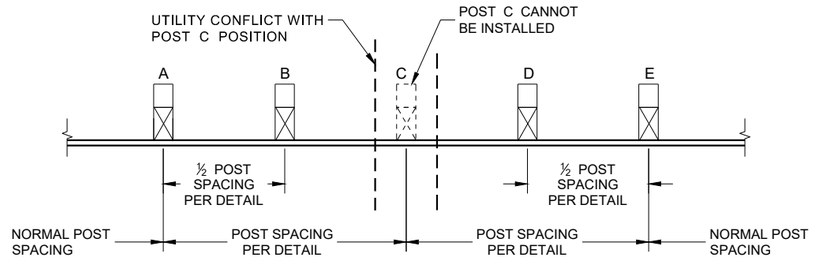
L	T (MIN.)
1 ¼"	1 ⅛"
2"	1 ¾"
10"	4"
14"	4 1⁄16"
18"	4"
21"	4 1⁄16"
25"	4"



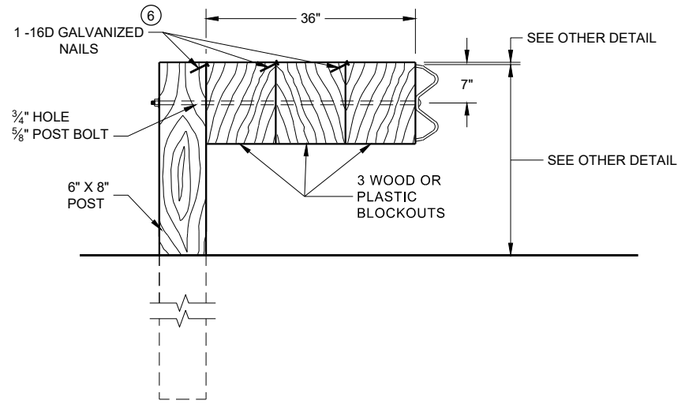
ALTERNATE BOLT HEAD



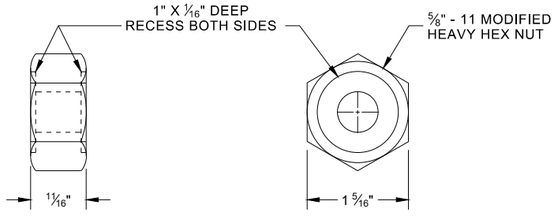
PLAN VIEW
BEAM LAPPING DETAIL



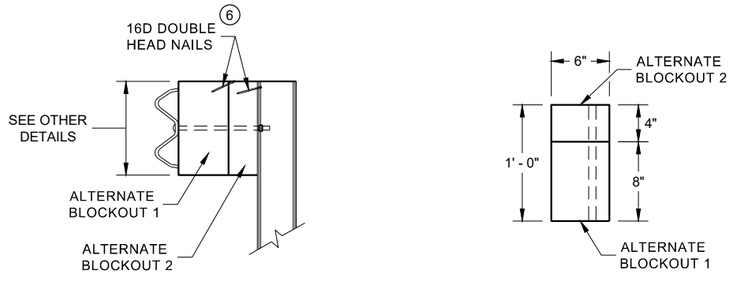
POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION



DETAIL FOR 36" BLOCKOUT DEPTH



POST BOLT, SPLICE BOLT AND RECESS NUT



SIDE VIEW

PLAN VIEW

ALTERNATE WOOD BLOCKOUT DETAIL

NOTES: UNDER SPECIAL CIRCUMSTANCES, SUCH AS AVOIDING OBSTACLES THAT ARE NOT RELOCATED, IT IS ACCEPTABLE TO INSTALL ADDITIONAL BLOCKOUTS TO OBTAIN UP TO 36" DEPTH FOR ONE OR TWO POSTS IN A SECTION OF GUARDRAIL.

DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.

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

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

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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.

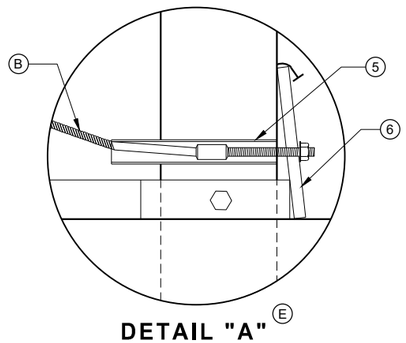
SEE SDD 14B42 FOR MORE INFORMATION.

* DO NOT ATTACH BLOCKOUTS TO POST 1 AND 2.

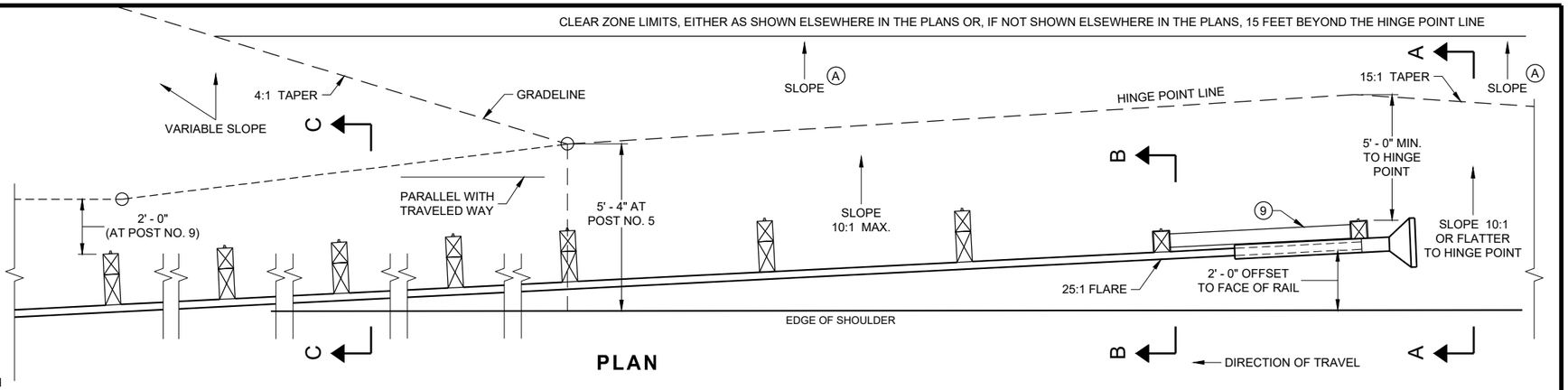
DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

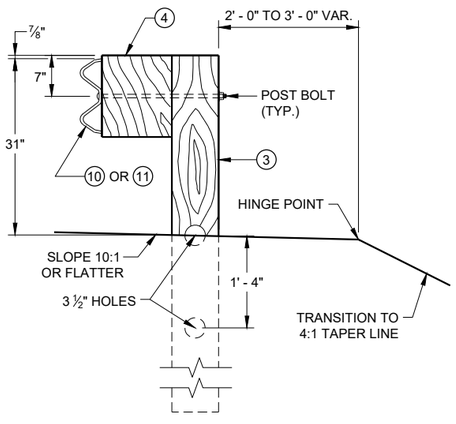
SEE MANUFACTURER'S DRAWING FOR SPLICE LOCATION, HARDWARE DIMENSIONS AND INSTALLATION INSTRUCTIONS.

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.

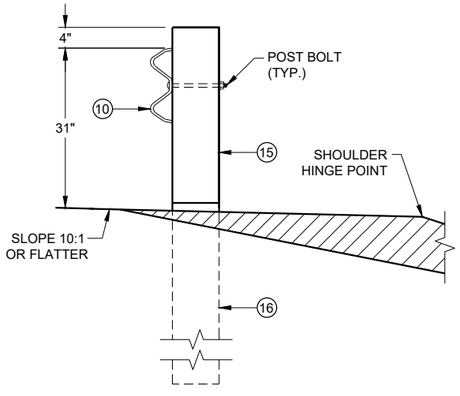


DETAIL "A" (E)

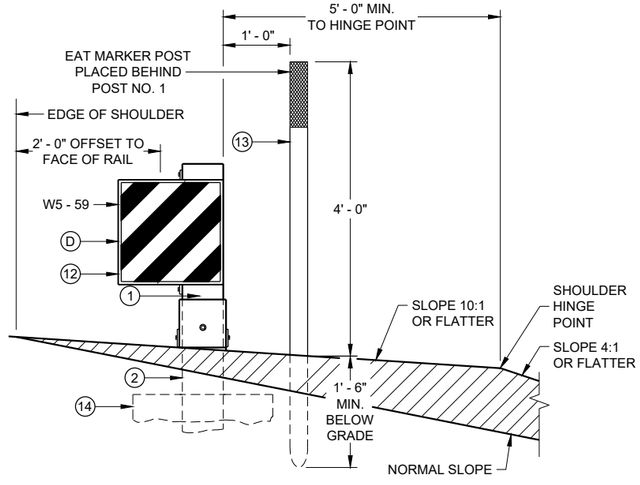




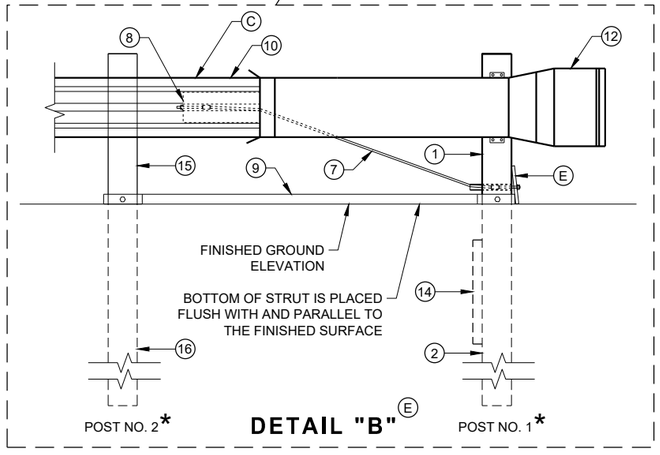
SECTION C - C
TYPICAL AT POST NOS. 3 - 9



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

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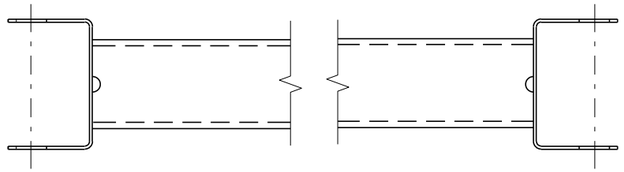
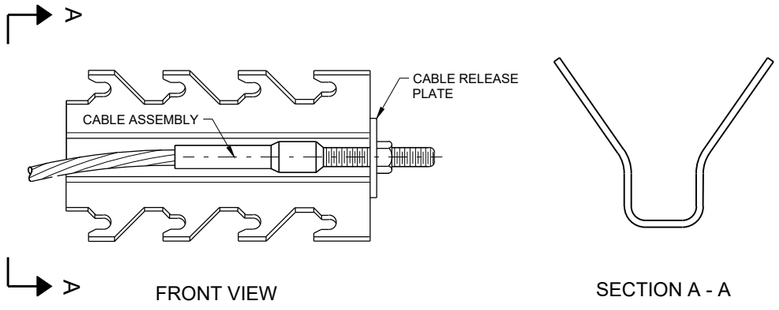


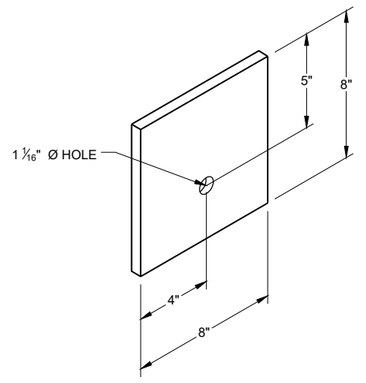
GENERIC GROUND STRUT ⑨ Ⓔ

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 Ⓔ

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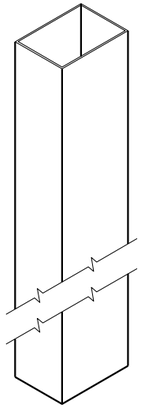
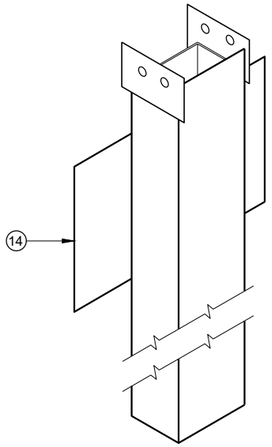
MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL (MGS)

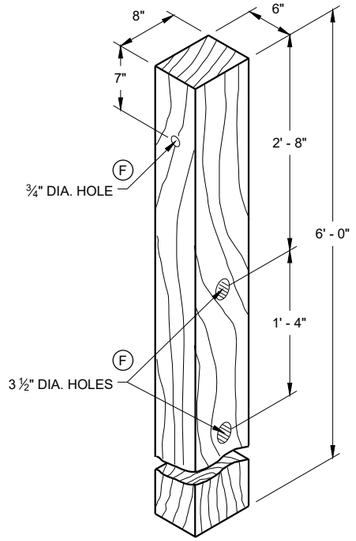
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



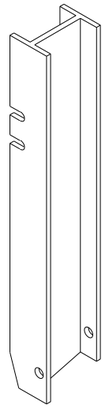
UPPER POST NO. 1 (1) (E)



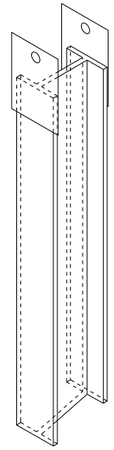
LOWER POST NO. 1 (2) (E)



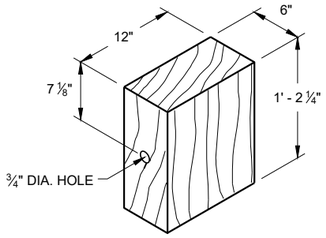
WOOD CRT POST (3) (E)
POSTS NUMBER 3-9



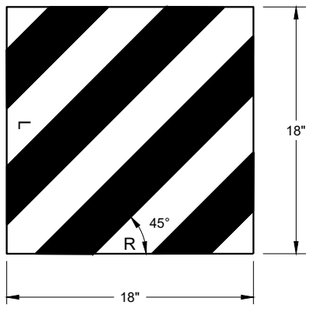
UPPER POST NO. 2 (15) (E)



LOWER POST NO. 2 (16) (E)



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



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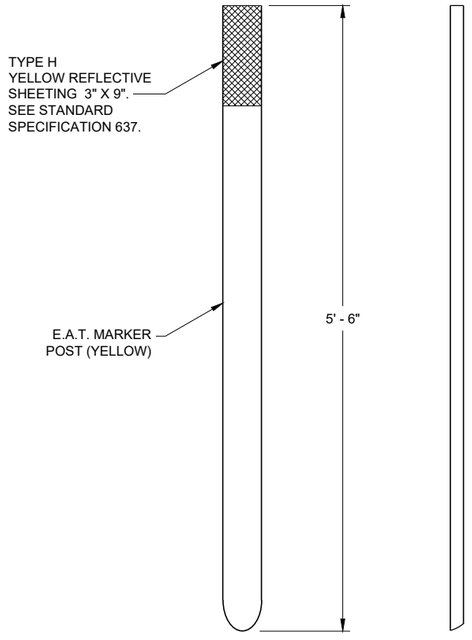
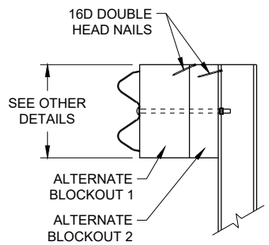
REFLECTIVE SHEETING DETAIL (E)

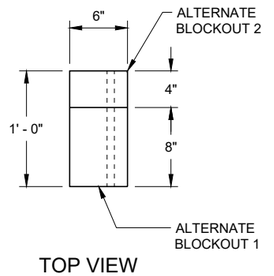


FRONT VIEW SIDE VIEW

E.A.T. MARKER POST (13)



SIDE VIEW



TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL

MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

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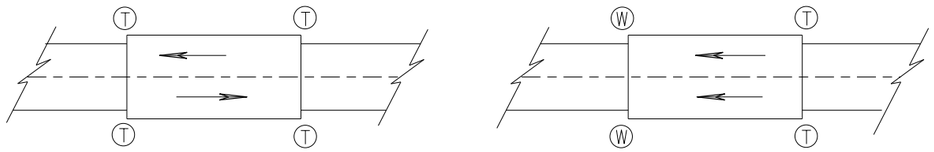
SDD 14B44 - 04c



TWO WAY TRAFFIC

ONE WAY TRAFFIC

(T) THRIE BEAM CONNECTION

(W) W-BEAM CONNECTION WHEN REQUIRED

TYPICAL LOCATIONS OF THRIE BEAM AND W-BEAM CONNECTIONS TO BRIDGE

GENERAL NOTES

IF ROCK IS ENCOUNTERED, REMOVE ROCK TO FULL DEPTH OF POST PLUS 2½", AND 12" DIAMETER AROUND POST. SEE 14B42 FOR MORE DETAILS.

TRANSITION USES STEEL POSTS ONLY.

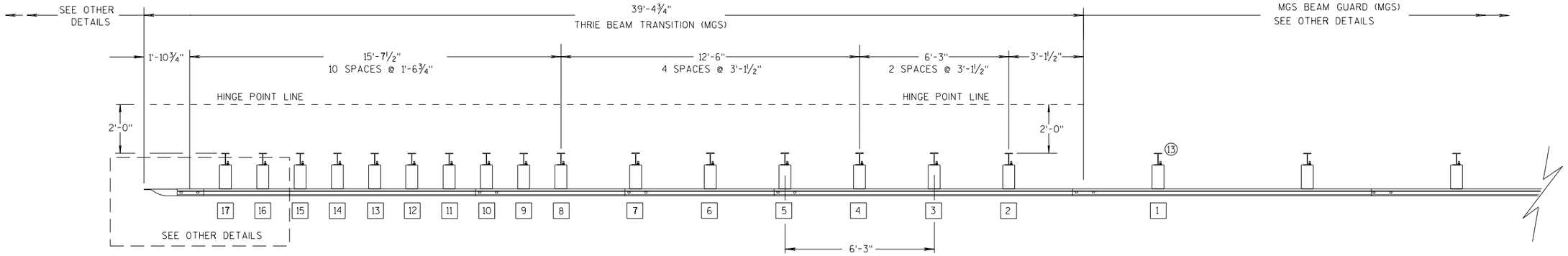
SEE STANDARD DETAIL DRAWING 14 B 42 FOR MORE INFORMATION.

POST 2 THROUGH 17 USES STEEL POST ONLY

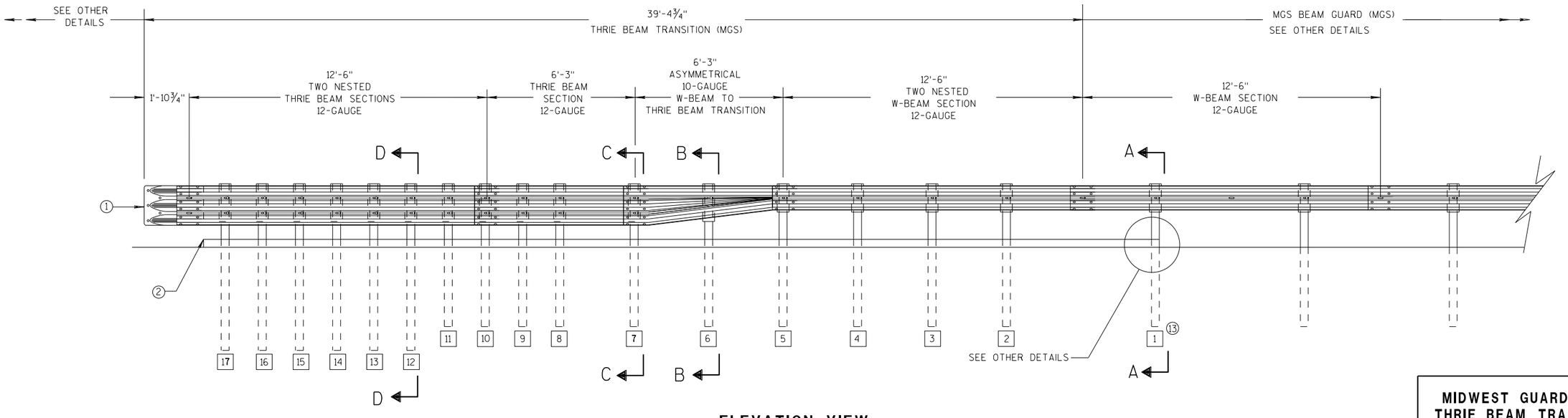
(1) BRIDGE RAILING TYPE "W" DOES NOT REQUIRE A TERMINAL CONNECTOR.

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

(13) STEEL OR WOOD POST IS ACCEPTABLE AT POST 1. SEE SDD14B42



PLAN VIEW



ELEVATION VIEW

MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR 272

6

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

6

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

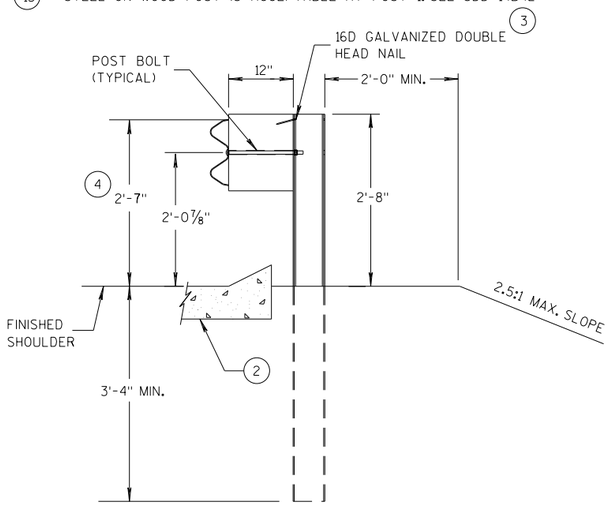
GENERAL NOTES

(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.

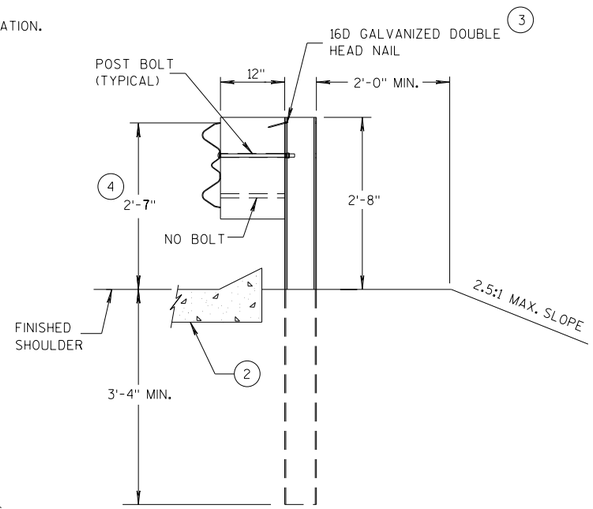
(4) TOLERANCE FOR TOP OF W-BEAM RAIL IS ± 1".

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



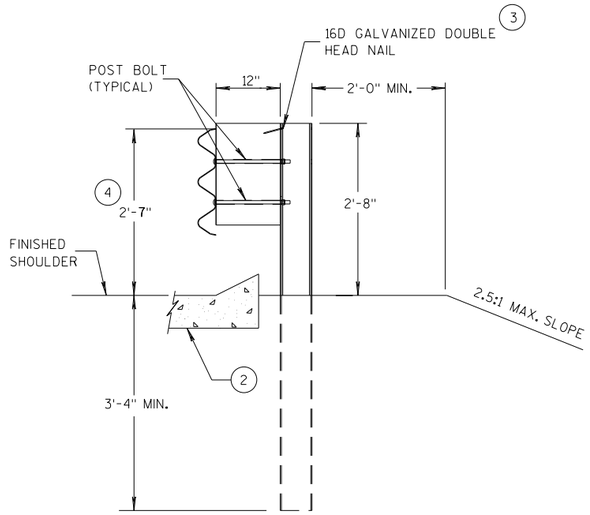
SECTION A-A (13)

POSTS 1-5



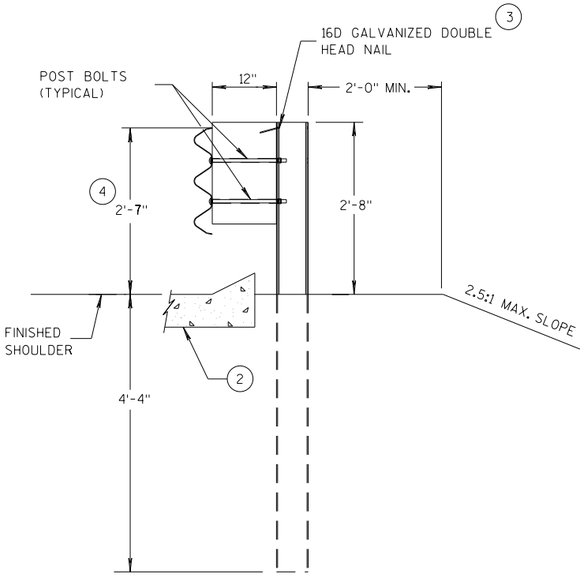
SECTION B-B

POST 6



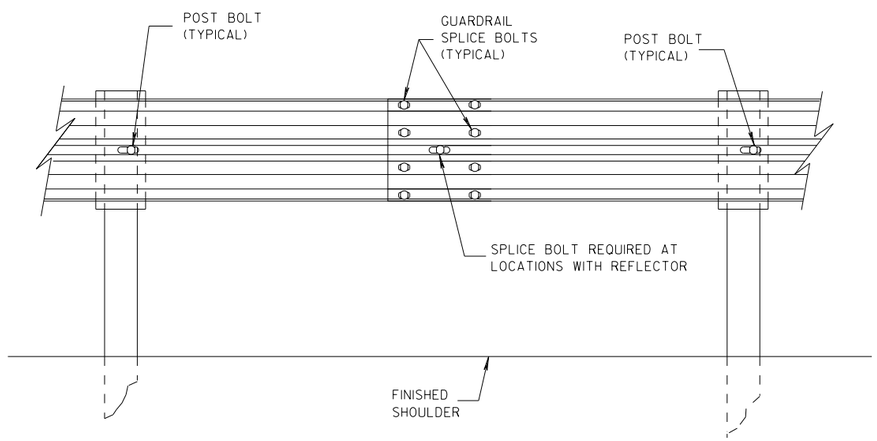
SECTION C-C

POSTS 7-11



SECTION D-D

POSTS 12-17



SPLICE DETAIL

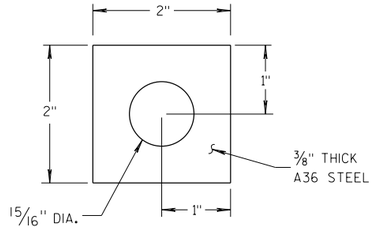
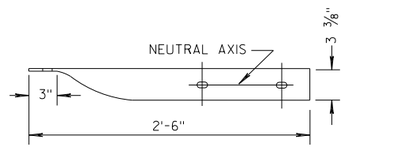
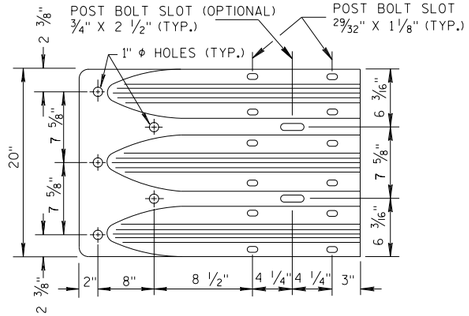
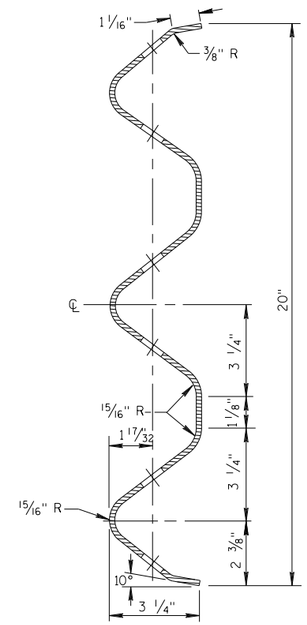


PLATE WASHER DETAIL





THRIE BEAM TERMINAL CONNECTOR



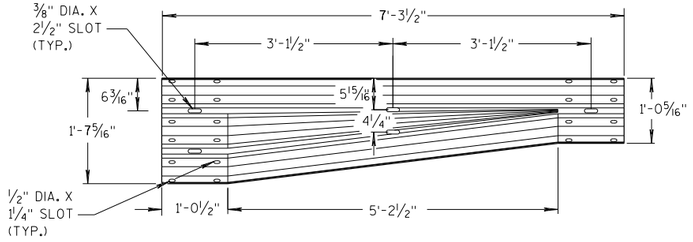
SECTION THRU THRIE BEAM RAIL ELEMENT

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

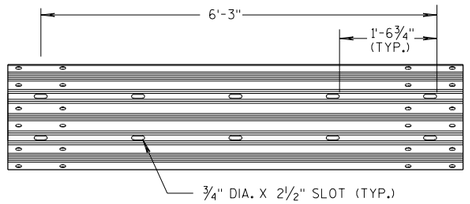
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOF

6

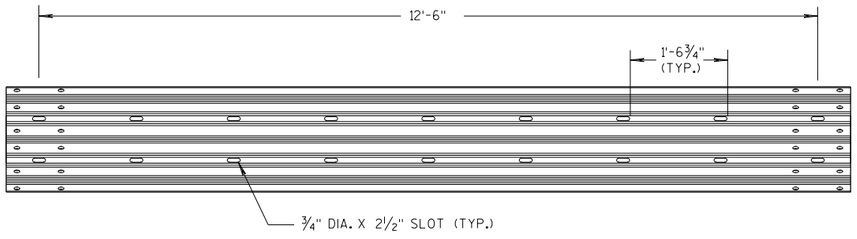
S.D.D. 14 B 45-5b



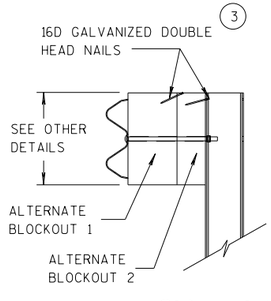
W-BEAM TO THRIE BEAM TRANSITION SECTION



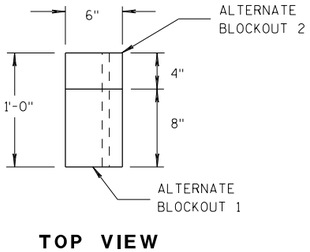
6'-3" THRIE BEAM SECTION



12'-6" THRIE BEAM SECTION

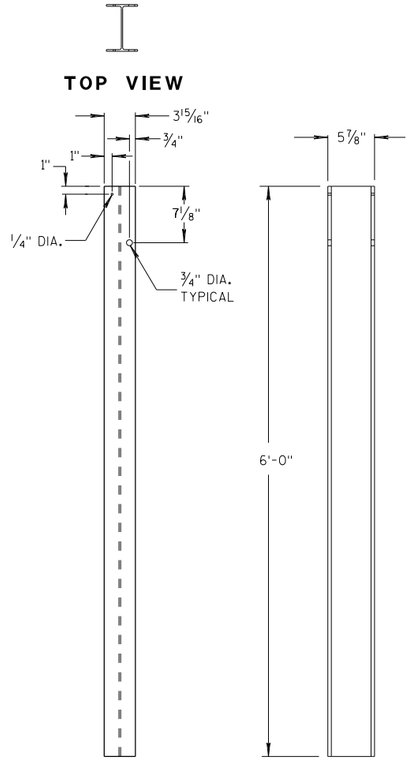


SIDE VIEW



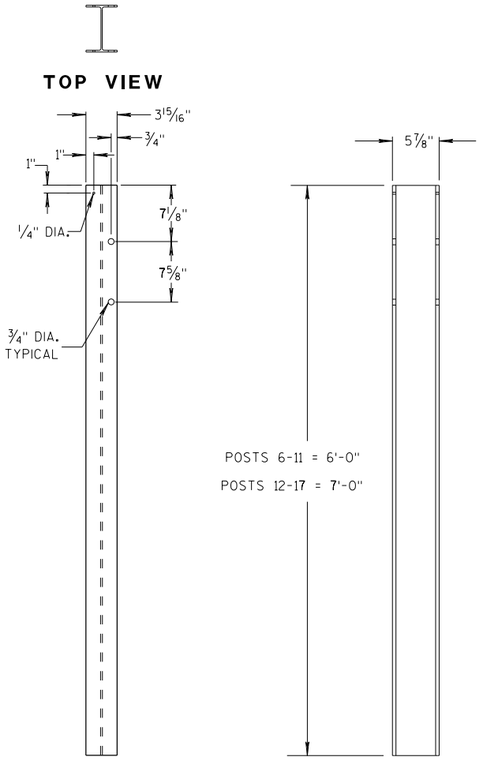
TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL



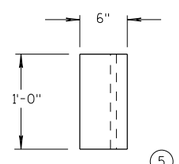
FRONT VIEW SIDE VIEW

STEEL POSTS 1-5 (13)

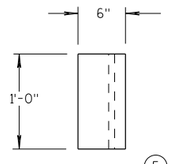


FRONT VIEW SIDE VIEW

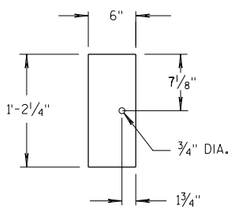
STEEL POSTS 6-17



TOP VIEW (5)

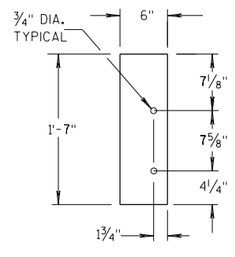


TOP VIEW (5)



FRONT VIEW

BLOCKOUT POSTS 1-5



FRONT VIEW

BLOCKOUT POSTS 6-17

GENERAL NOTES

STEEL POSTS ARE W6X9 OR W6X8.5.

BOLT HOLES FOR POST ARE ON FRONT AND OF SIDE OF POST.

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

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

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

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR 274

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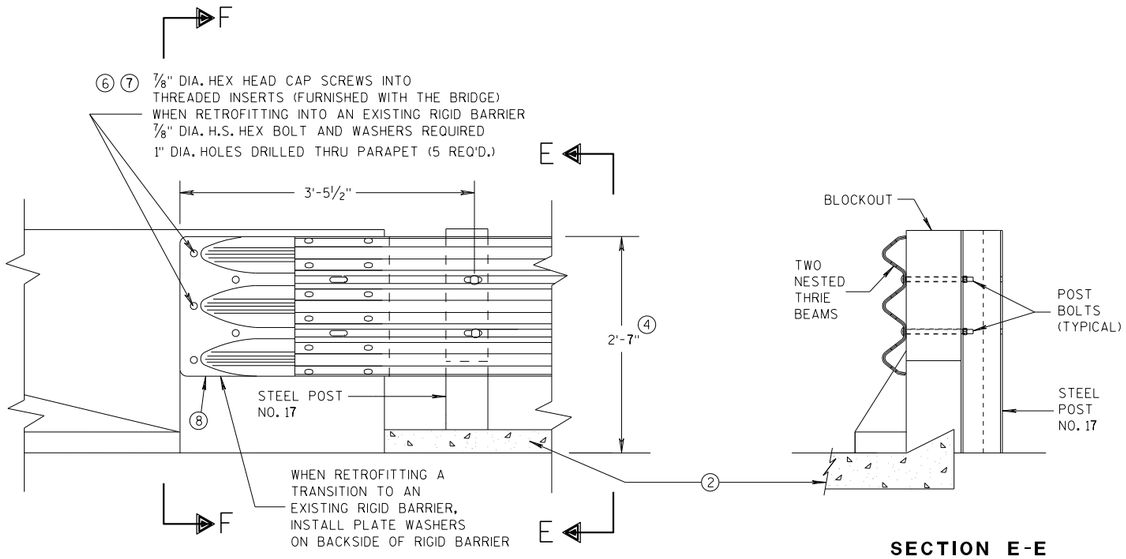
S.D.D. 14 B 45-5c



FRONT VIEW

SECTION E-E

THRIE BEAM CONNECTION TO BRIDGE PARAPET WITH SQUARE ENDS

GENERAL NOTES

THESE ARE TYPICAL CONNECTION DETAILS. ADJUST THE POSTION OF CONNECTIONS TO EXISTING BRIDGES TO FIT THE ACTUAL BRIDGE AND SITE DIMENSIONS.

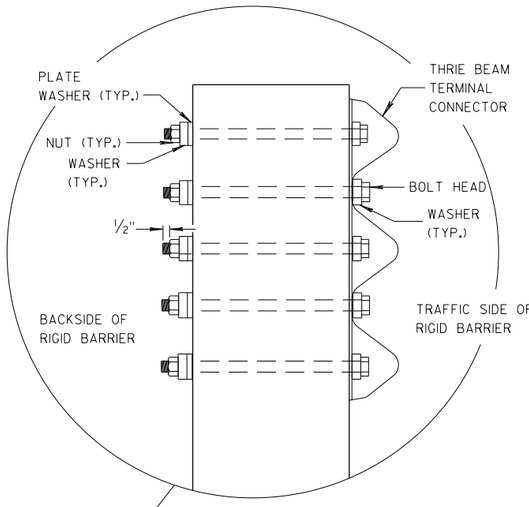
② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.

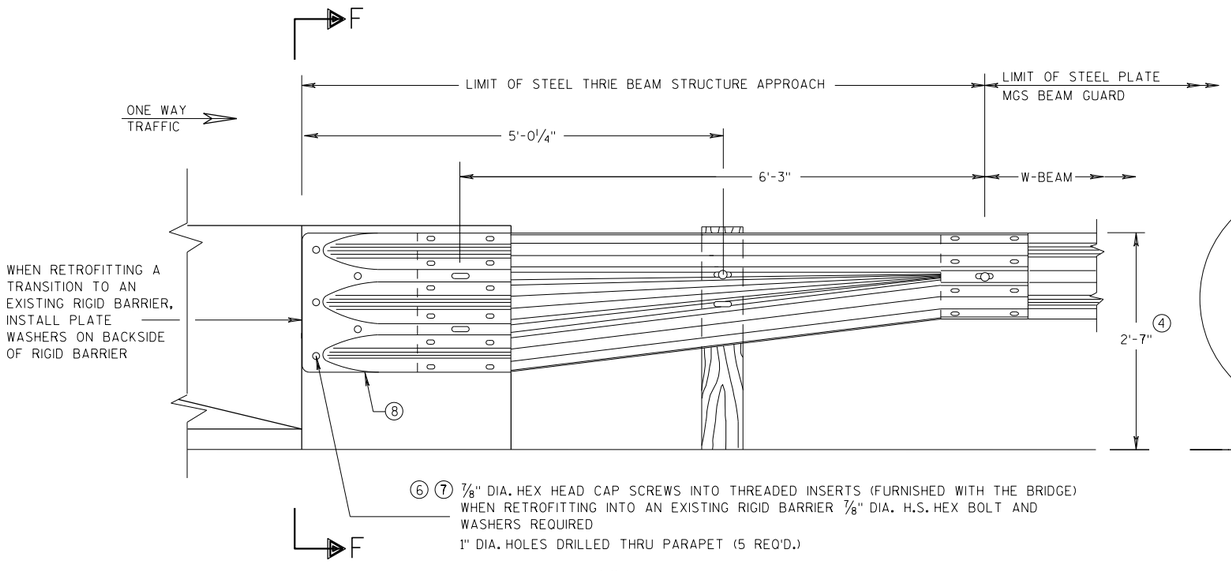
④ TOLERANCE FOR TOP OF BEAM IS ± 1".

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

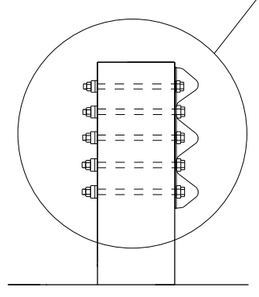
⑦ BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/8" 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".

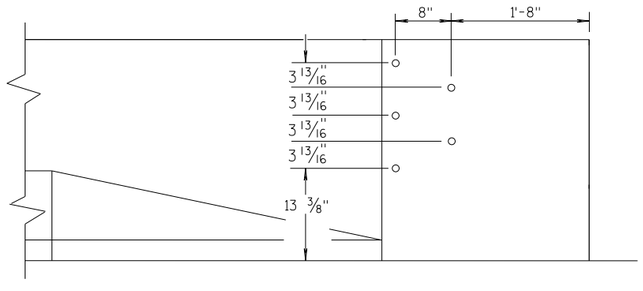




FRONT VIEW



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
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FHWA

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

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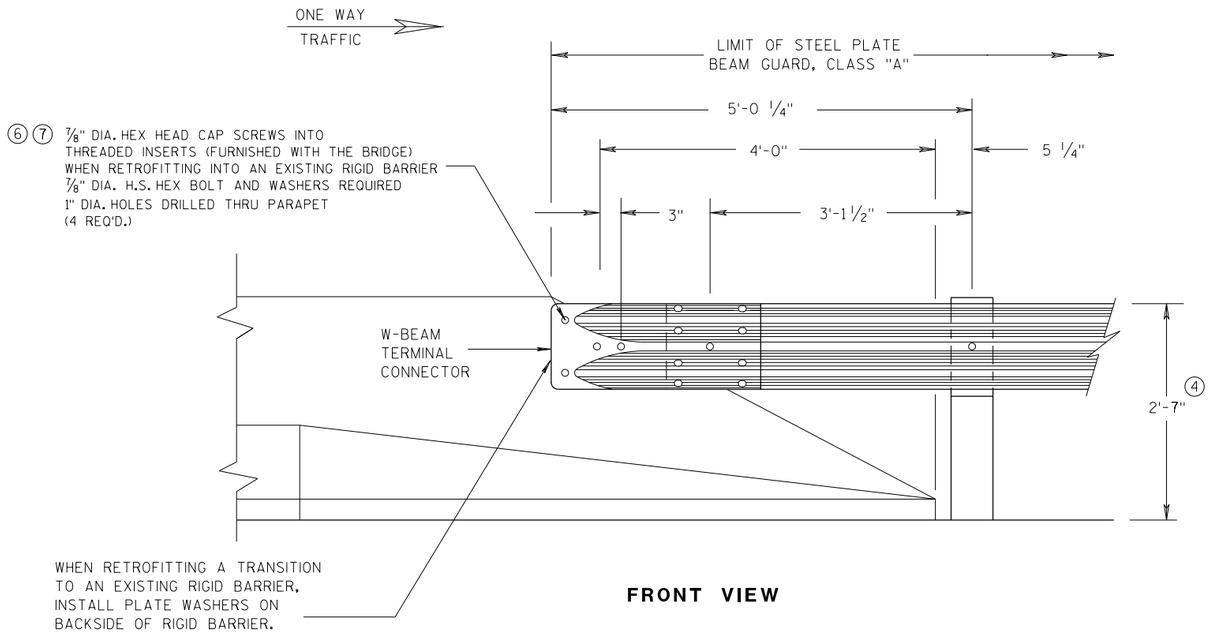
S.D.D. 14 B 45-5d



FRONT VIEW

W BEAM CONNECTION TO PARAPETS WITH SLOPED ENDS

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

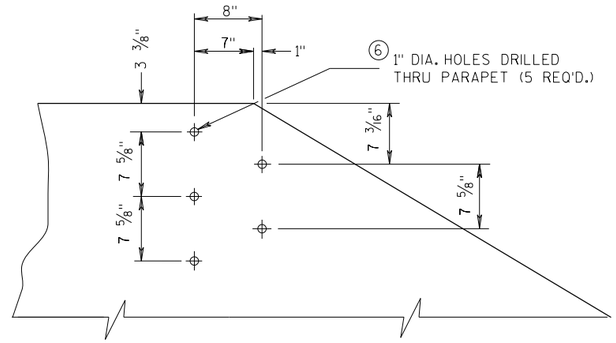
GENERAL NOTES

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

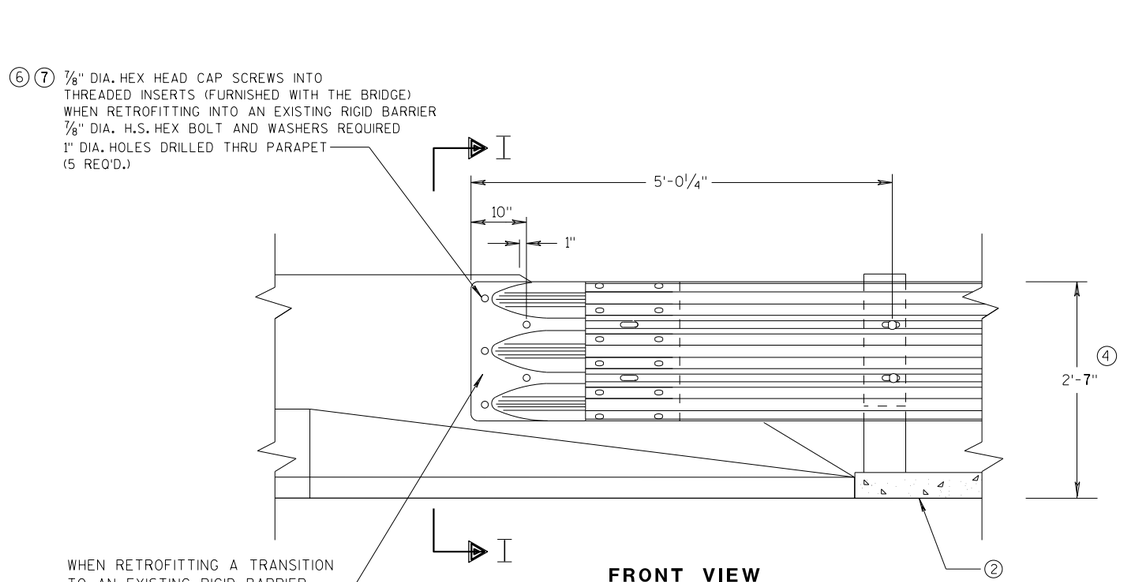
④ TOLERANCE FOR TOP OF BEAM IS ± 1".

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

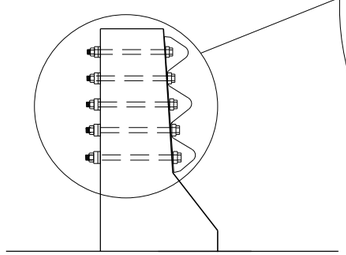
⑦ BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/8" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.



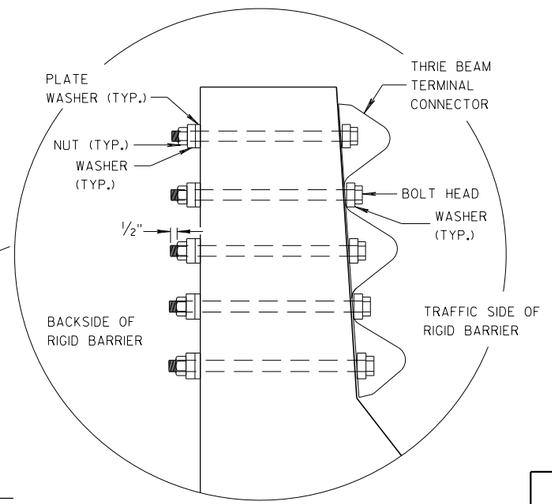
DRILL HOLE LOCATION AND PATTERN
FOR THRIE BEAM CONNECTION



FRONT VIEW



SECTION I-I



THRIE BEAM CONNECTION TO BRIDGE PARAPETS WITH SLOPED ENDS

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
07/2018 — DATE
/S/ Rodney Taylor
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FHWA

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

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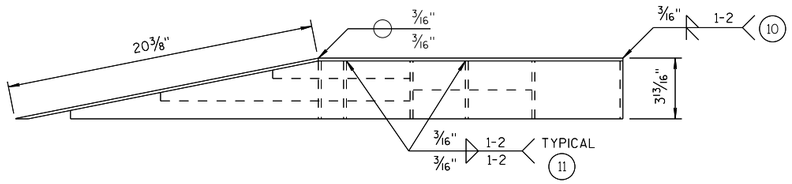

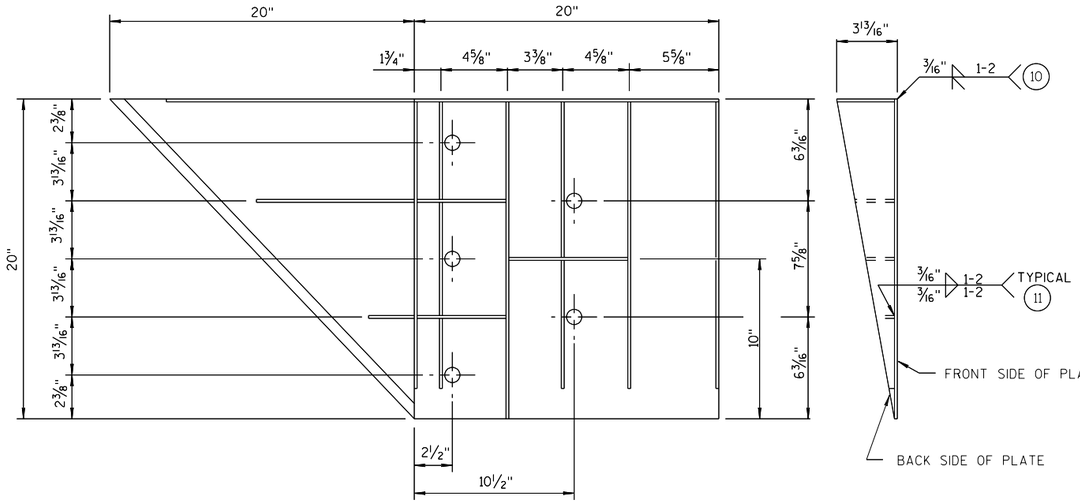

WELDING INSTRUCTION

(VIEWED FROM BACK SIDE OF PLATE)

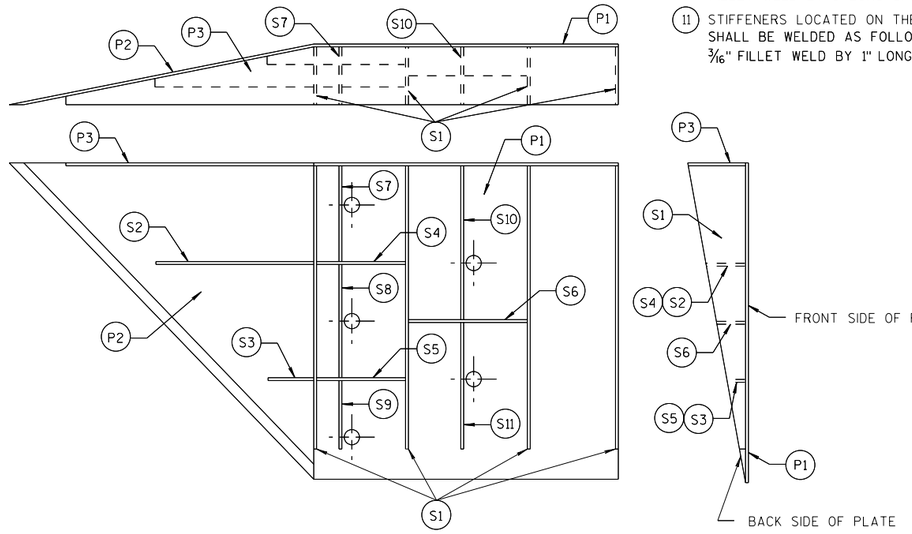

PLATE AND STIFFENER IDENTIFICATION

(VIEWED FROM BACK SIDE OF PLATE)

GENERAL NOTES

COVER PLATE PANELS ARE 3/16" THICK.

ALL STIFFENERS ARE 1/4" THICK.

CONNECTOR PLATE SHALL BE FABRICATED FROM ASTM GRADE A36 STEEL AND GALVANIZED.

FOR GALVANIZED REQUIREMENTS, SEE SECTION 614 OF THE STANDARD SPECIFICATIONS.

ALL HOLE DIAMETERS SHALL BE 1".

FOR OPPOSITE SIDE INSTALLATION MIRROR DRAWINGS.

(10) STIFFENERS LOCATED AT THE OUTSIDE EDGES OF THE COVER PLATES SHALL BE WELDED AS FOLLOWS:
SINGLE BEVEL GROOVE WELD ON EXTERNAL SIDES AND 3/16" FILLET WELD BY 1" LONG SPACED AT 2" ON INTERNAL SIDES.

(11) STIFFENERS LOCATED ON THE INSIDE OF THE COVER PLATE SHALL BE WELDED AS FOLLOWS:
3/16" FILLET WELD BY 1" LONG SPACED AT 2".

CONNECTOR PLATE DIMENSION (PER ASSEMBLY)

PLATE	QUANTITY	SHAPE	SIZE (A x B x C x D)	THICKNESS
P1	1		20" x 20"	3/16"
P2	1		20" x 20" x 28 9/16"	3/16"
P3	1		39" x 3 5/8" x 20" x 19 5/16"	3/16"
S1	4		18 7/16" x 3 5/8" x 18 3/4"	1/4"
S2	1		10 1/4" x 2 7/16" x 10 3/8" x 1/2"	1/4"
S3	1		3" x 1 1/16" x 3 1/8" x 1/2"	1/4"
S4	1		6 1/8" x 2 7/16"	1/4"
S5	1		6 1/8" x 1 1/16"	1/4"
S6	1		7 3/4" x 1 3/4"	1/4"
S7	1		2 9/16" x 6" x 3 5/8" x 5 7/8"	1/4"
S8	1		1 5/32" x 7 1/2" x 2 1/2" x 7 3/8"	1/4"
S9	1		6 1/16" x 6 3/16" x 1 3/32"	1/4"
S10	1		1 7/8" x 9 7/8" x 3 5/8" x 9 11/16"	1/4"
S11	1		8 1/2" x 8 3/4" x 1 13/16"	1/4"

SINGLE SLOPE CONNECTION PLATE

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
7/2018
DATE
FHWA

/S/ Rodney Taylor
ROADWAY STANDARDS I
UNIT SUPERVI

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

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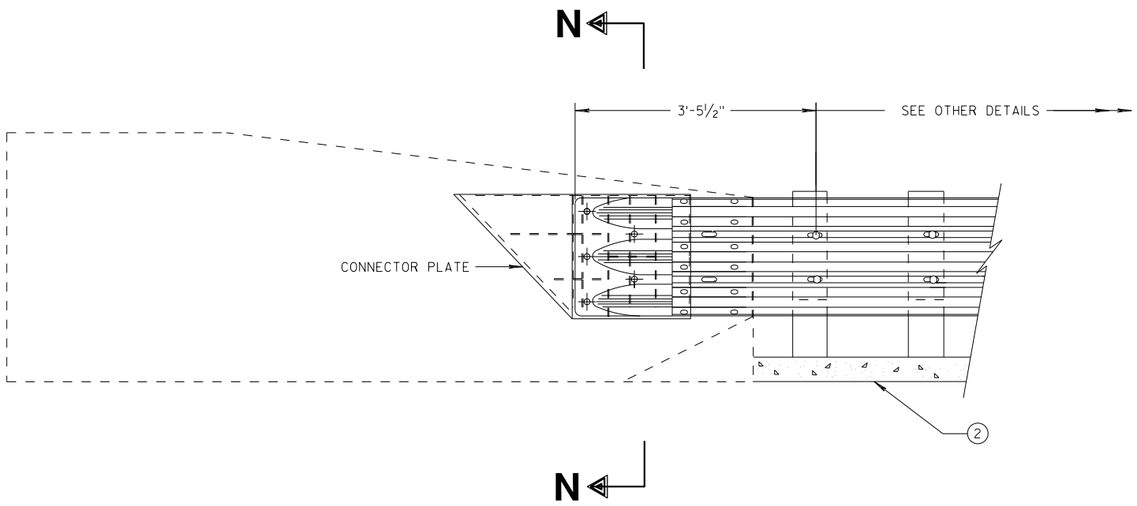
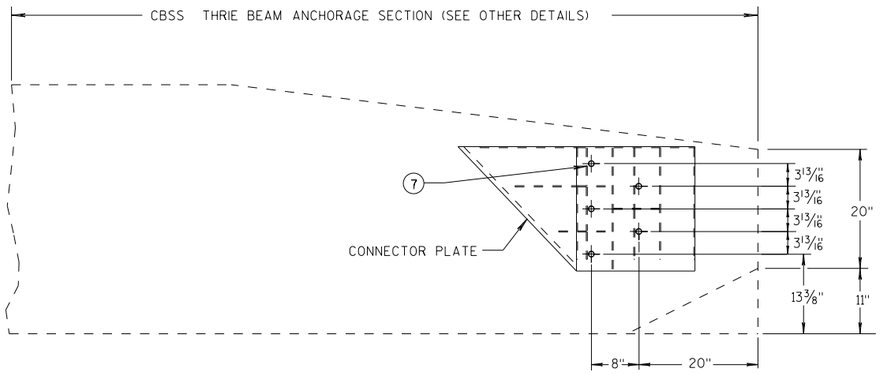
S.D.D. 14 B 45-5i



THRIE BEAM CONNECTION TO SINGLE SLOPE BARRIER



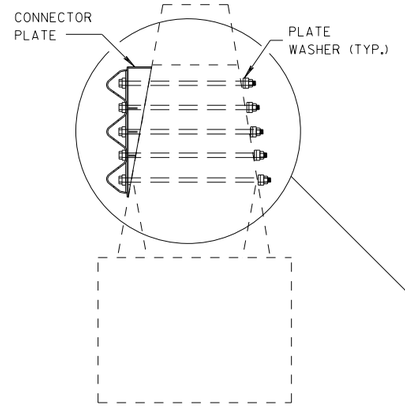
SINGLE SLOPE CONNECTION PLATE PLACEMENT

GENERAL NOTES

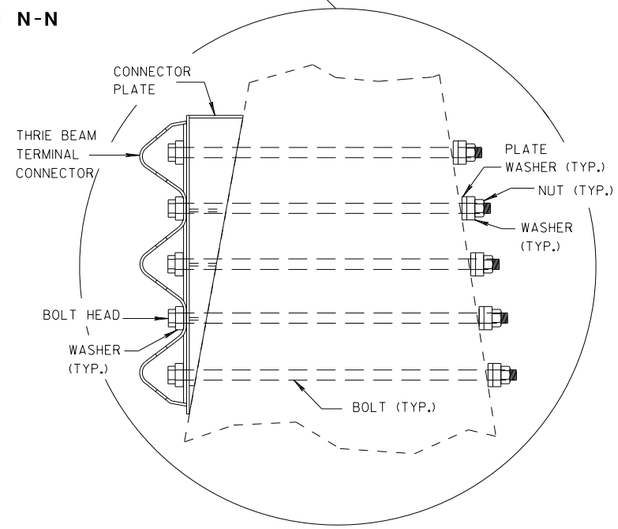
CONNECTOR PLATE, DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

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

(7) BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X ⅝" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.



SECTION N-N



MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
7/2018
DATE
FHWA

/S/ Rodney Taylor
ROADWAY STANDARDS DI
UNIT SUPERVIS

6

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

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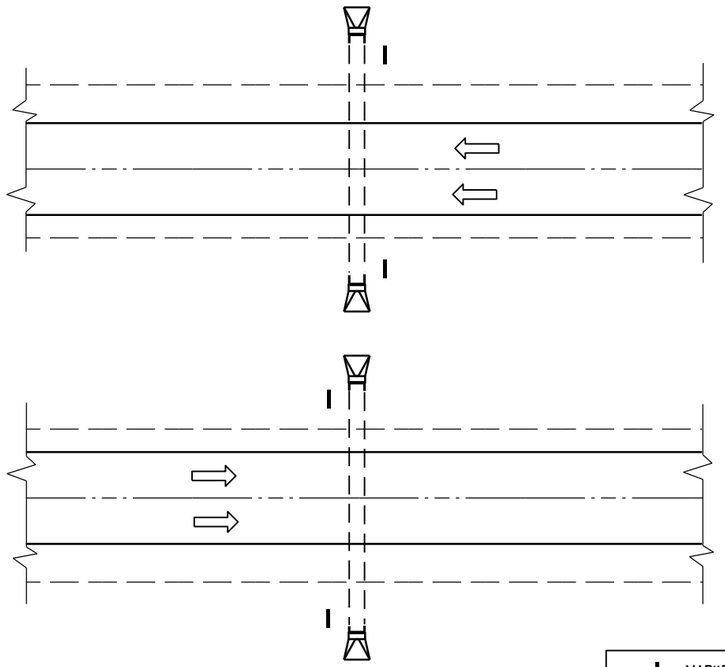
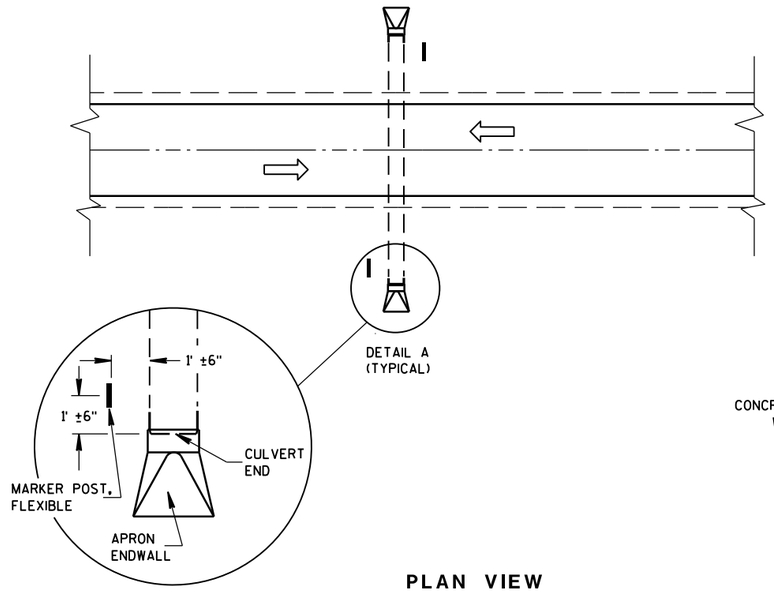
S.D.D. 14 B 45-5j



PLAN VIEW

DIVIDED HIGHWAY



DETAIL A
(TYPICAL)

PLAN VIEW

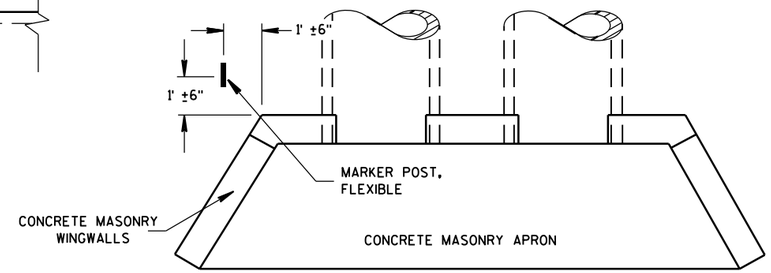
UNDIVIDED HIGHWAY

MARKER POST, FLEXIBLE

DIRECTION OF TRAFFIC FLOW

GENERAL NOTES

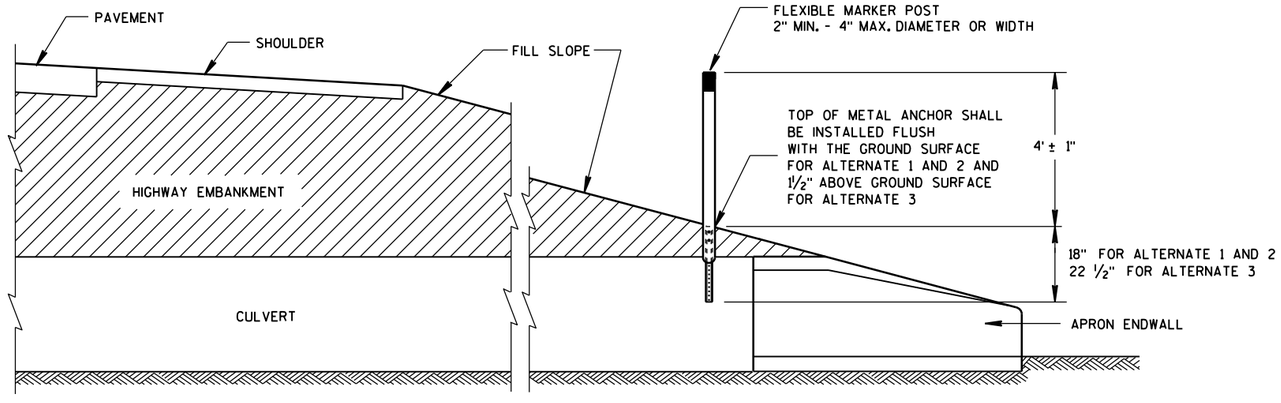
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.



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

6

S.D.D. 15 A 3-2a

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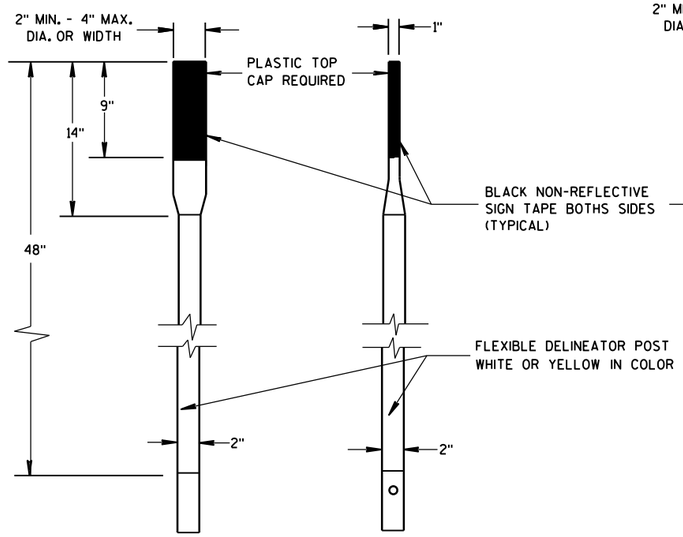
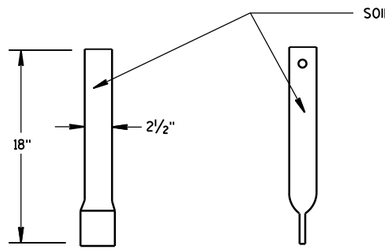
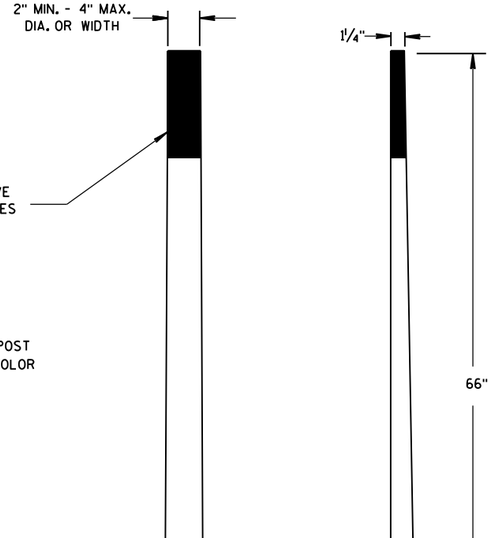
S.D.D. 15 A 3-2a





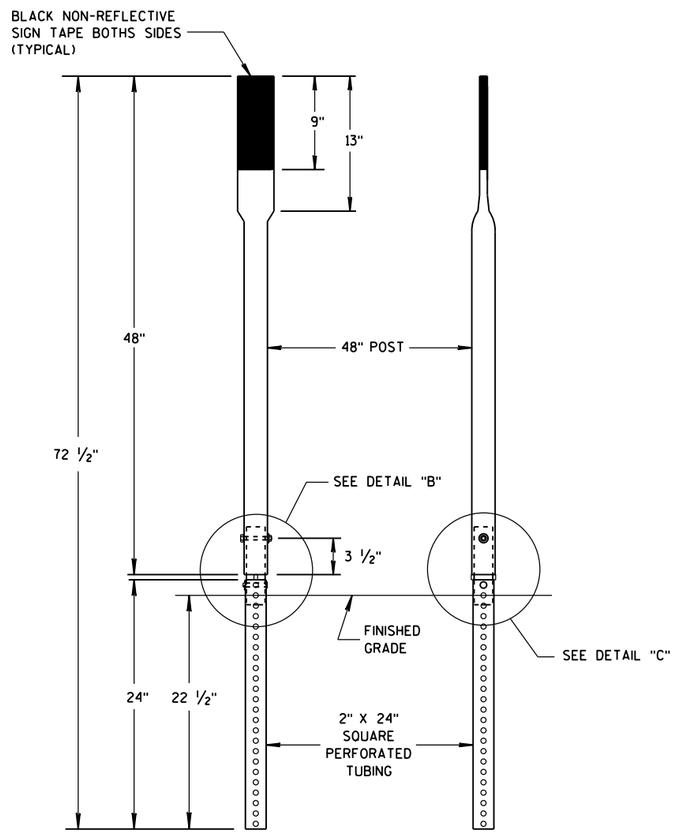
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

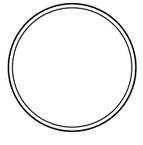
ALTERNATE 2



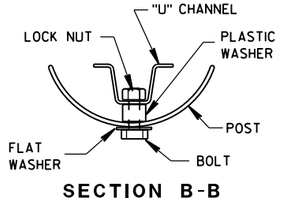
FRONT VIEW SIDE VIEW

ALTERNATE 3

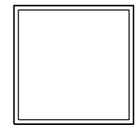
FLEXIBLE MARKER POSTS



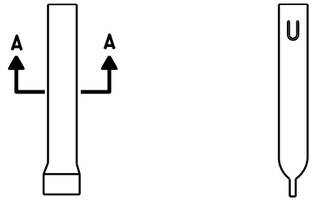
SECTION A-A



SECTION B-B

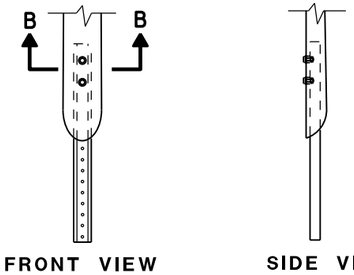


SECTION C-C



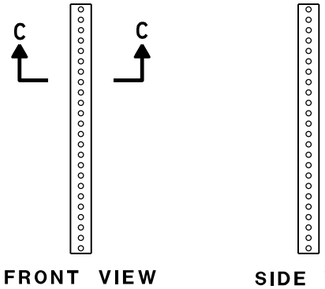
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

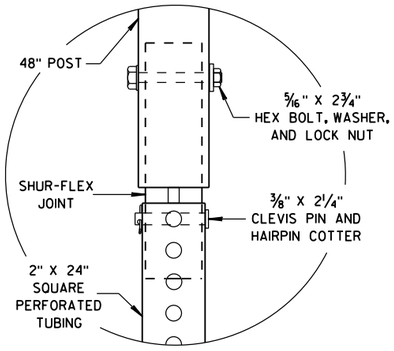
ALTERNATE 2



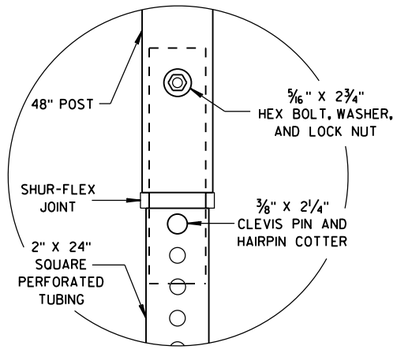
FRONT VIEW SIDE VIEW

ALTERNATE 3

FLEXIBLE MARKER POST ANCHORS



DETAIL B



DETAIL C

FLEXIBLE MARKER POST
FOR CULVERT END

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

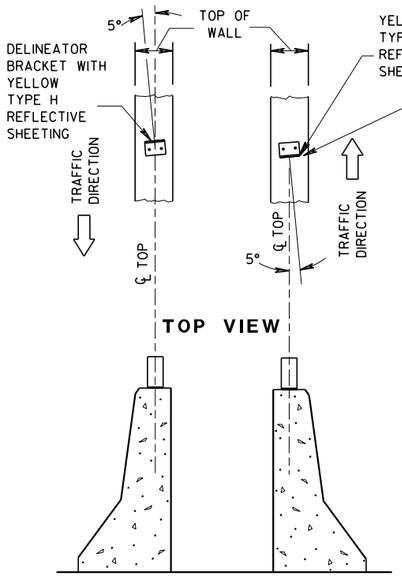
APPROVED
10/1/2012 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
FHWA

6

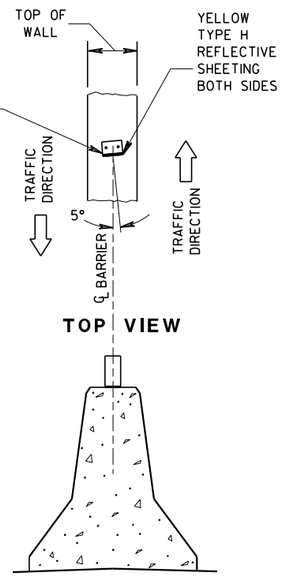
S.D.D. 15 A 3-2b

6

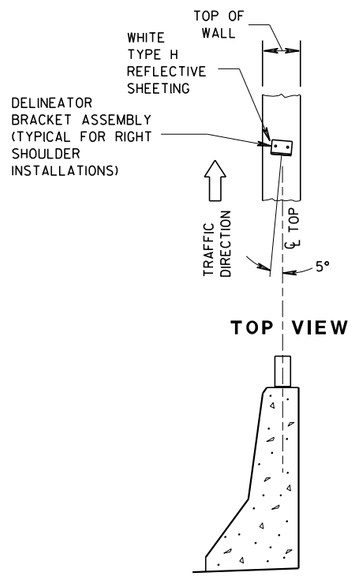
S.D.D. 15 A 3-2b



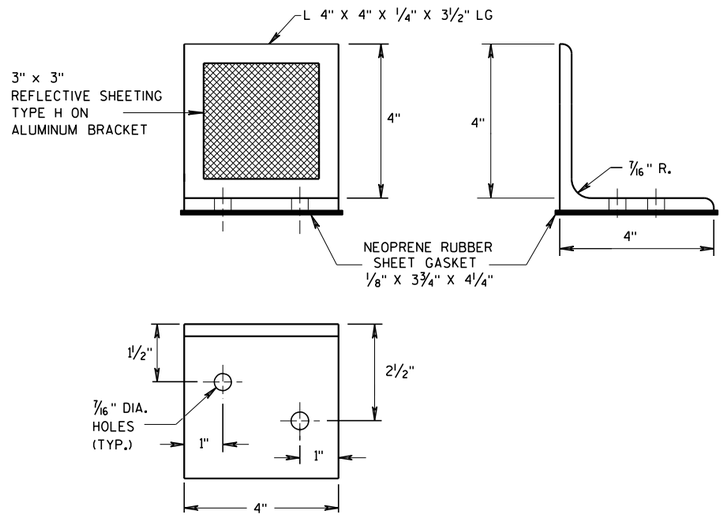
DOUBLE BARRIERS IN MEDIAN



MEDIAN BARRIER

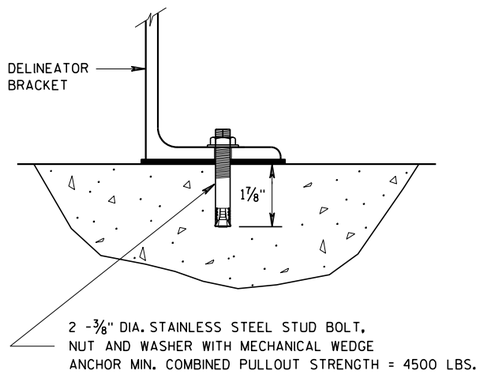


BARRIER LOCATED
TO RT. OF TRAFFIC FLOW



DELINEATOR BRACKET

LOCATION AND AIMING DETAILS FOR DELINEATOR BRACKETS MOUNTED ON CONCRETE BARRIERS



DELINEATOR BRACKET
MOUNTING DETAIL

REFLECTOR SPACING TABLE

REFLECTOR SPACING	MINIMUM NUMBER OF REFLECTORS
100' C-C	3

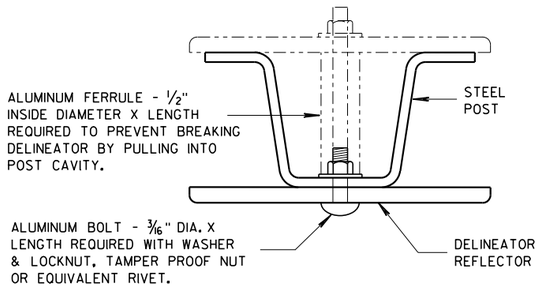
DELINEATOR BRACKET
WITH REFLECTIVE SHEETING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

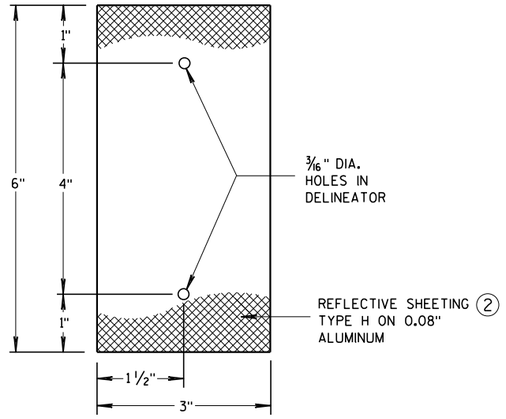
APPROVED
March 2018 /S/ Matthew P. Rauch
DATE STATE SIGNING AND MARKING ENGINEER
FHWA

6

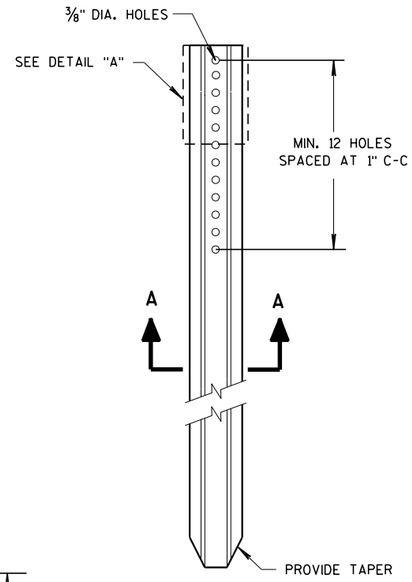
S.D.D. 15 A 4-4b



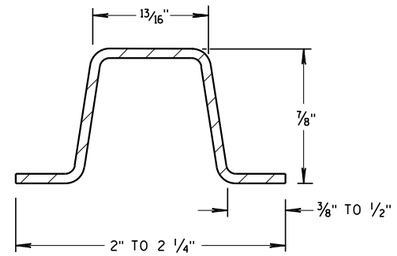
MOUNTING DETAIL
FOR DELINEATOR REFLECTOR



DETAIL "A"
3" X 6" DELINEATOR REFLECTOR



DELINEATOR POST



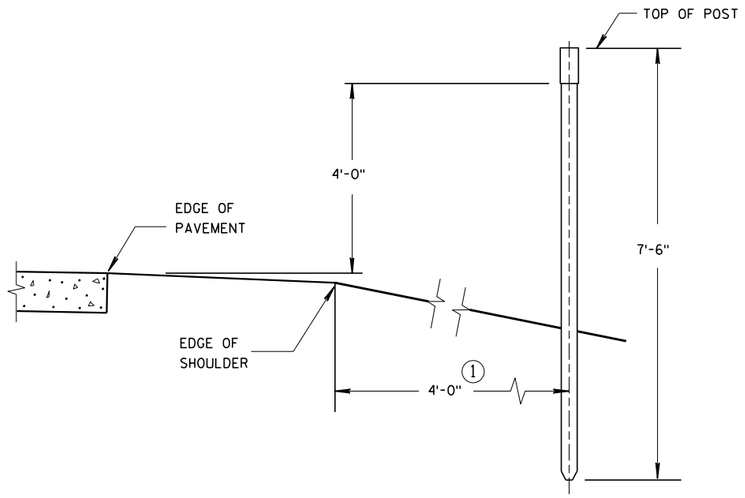
SECTION A-A

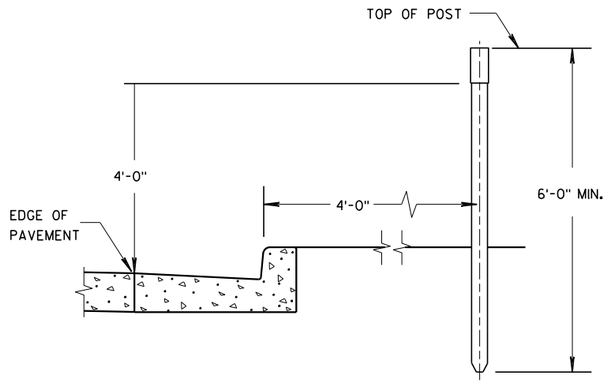
WEIGHT 1.12 LBS PER FT. ± 0.1 LB.

REFLECTOR SPACING TABLE

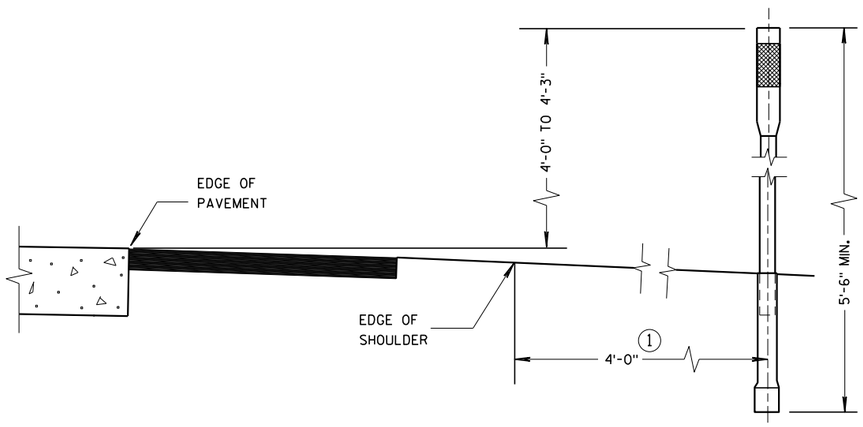
REFLECTOR SPACING	LOCATION
400'	MAINLINE
100'	RAMPS *

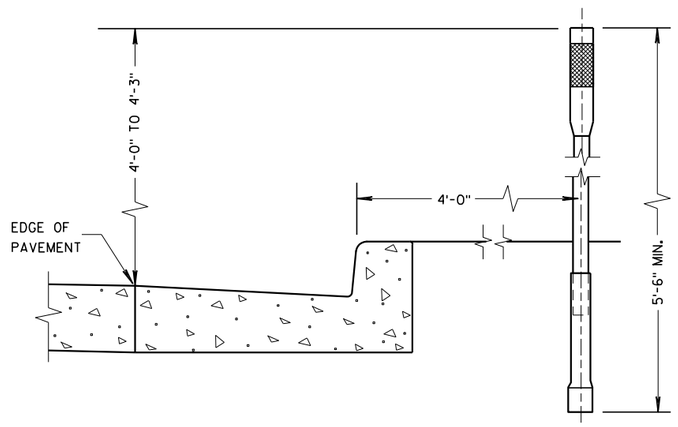
* START AT BEGINNING OF RAMP TAPER AND END AT END OF RAMP TAPER.





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 THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

(1) DELINEATORS SHALL BE PLACED AT A CONSTANT DISTANCE FROM THE EDGE OF THE SHOULDER FOR THE LENGTH OF THE INSTALLATION.

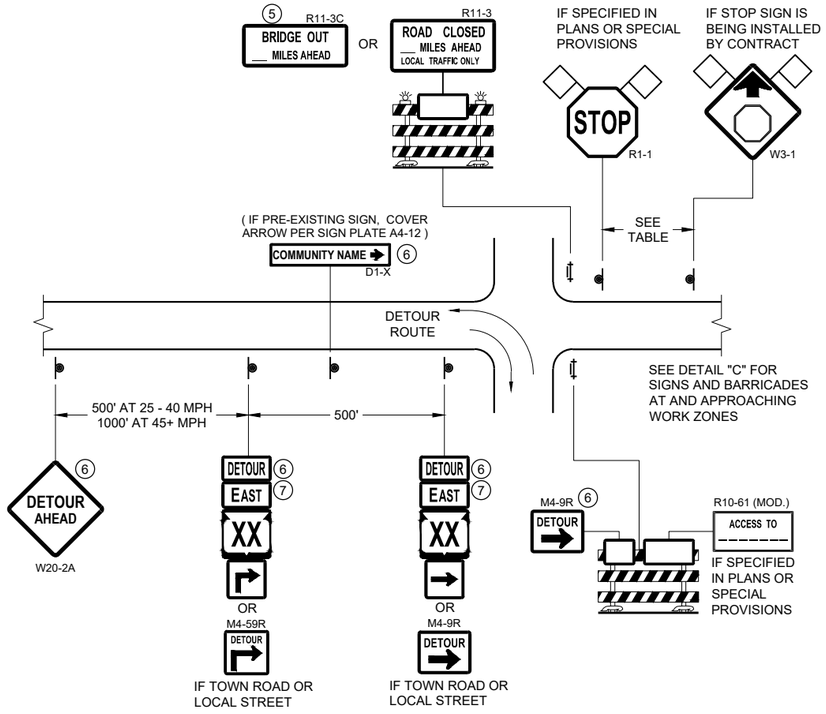
(2) FURNISH TYPE H SHEETING FROM THE APPROVED PRODUCTS LIST.

DELINEATOR POST
WITH REFLECTIVE SHEETING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

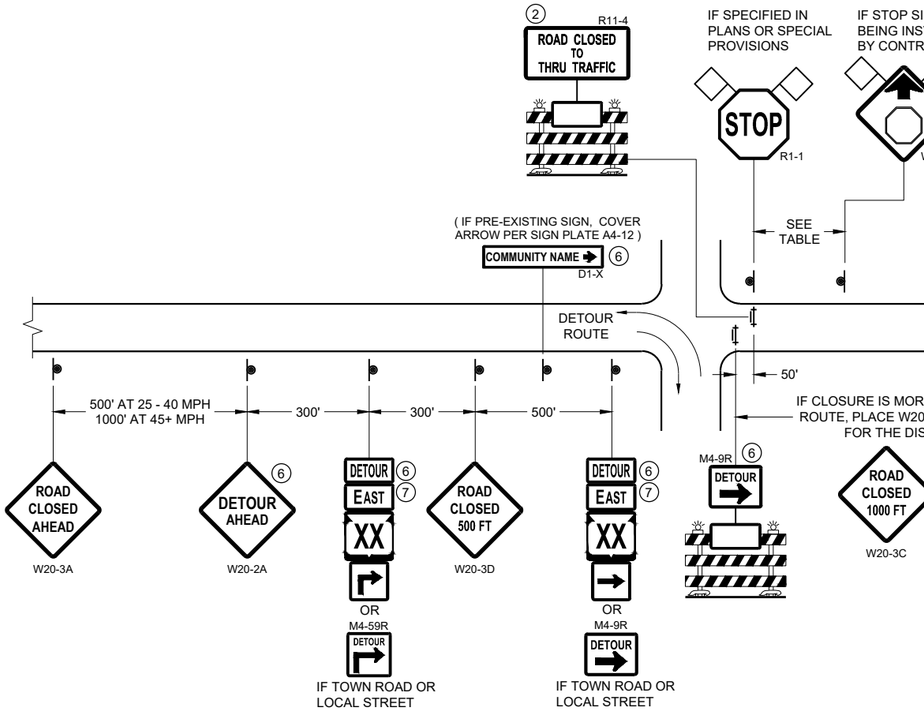
APPROVED
March 2018 /S/ Matthew P Rauch
DATE STATE SIGNING AND M[illegible] ENGINEER
FHWA

6
S.D.D. 15 A 4-4c



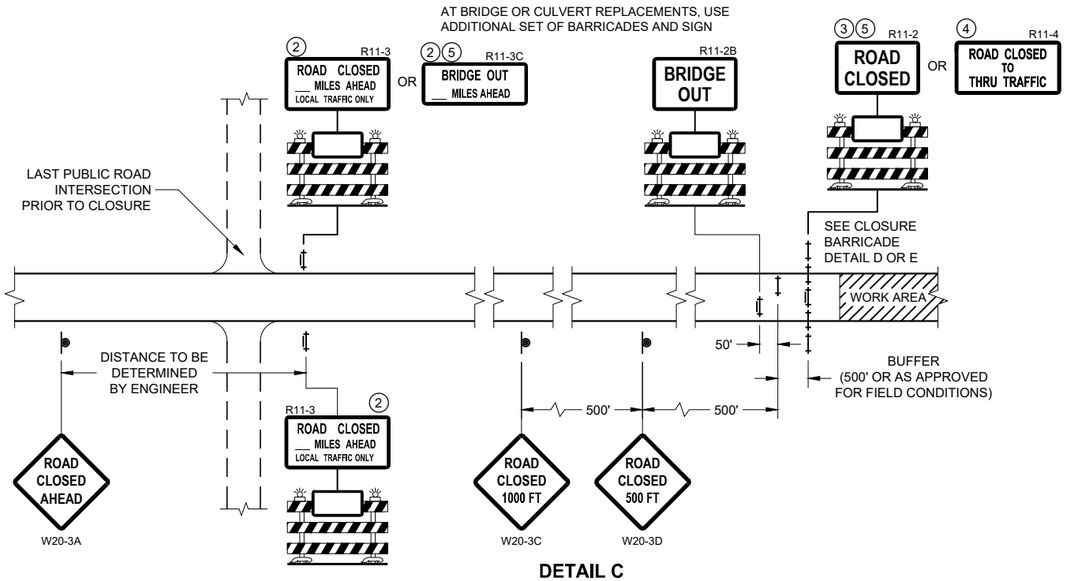
DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR

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
DEPARTMENT OF TRANSPORTATION

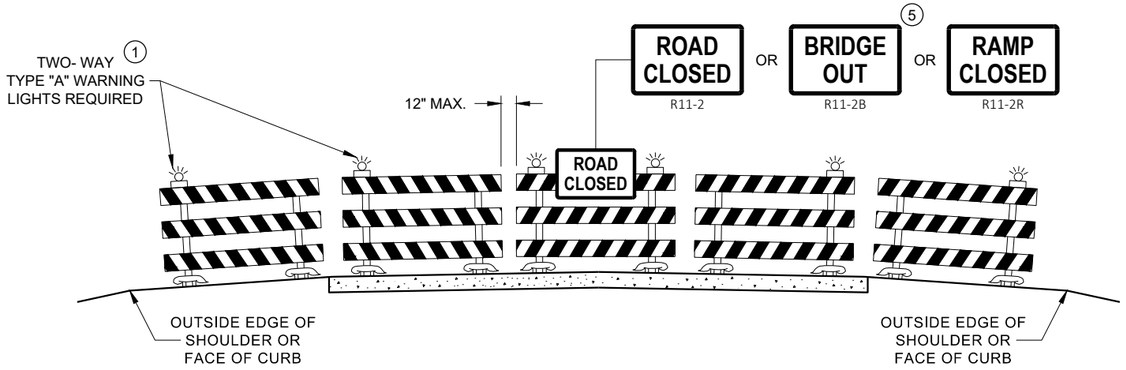
APPROVED
November 2018
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

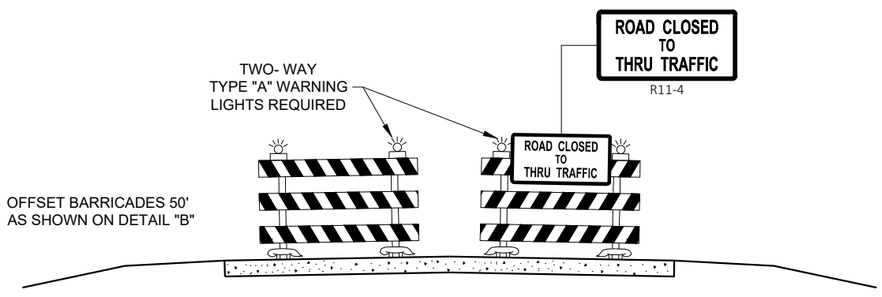
6

SDD 15C02 - 07a

SDD 15C02 - 07a



DETAIL D
ROAD CLOSURE BARRICADE DETAIL
APPROACH VIEW



DETAIL E
LANE CLOSURE BARRICADE DETAIL
APPROACH VIEW

SEE SDD 15C2 - SHEET "a" FOR LEGEND

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

(1) TWO WARNING LIGHTS SHALL BE PROVIDED ON THE CENTER BARRICADE AND A MINIMUM OF ONE WARNING LIGHT SHALL BE PROVIDED ON EACH OF THE OTHER BARRICADES WITHIN THE ROADWAY LIMITS. SPACING OF THE WARNING LIGHTS SHALL BE UNIFORM TO THE EDGE OF ROADWAY AS SHOWN (APPROX. 8 FOOT LIGHT SPACING.

(2) THESE SIGNS AND BARRICADES ARE NOT REQUIRED IF ROAD CLOSURE BEGINS AT AN INTERSECTION.

(3) FOR ROAD CLOSURE WITHOUT LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL "D".

(4) FOR ROAD CLOSURE WITH LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL "E".

(5) FOR BRIDGE OR CULVERT REPLACEMENTS, SUBSTITUTE "BRIDGE OUT" INSTEAD OF "ROAD CLOSED" ON R11 - 2 AND R11 - 3 SIGNS.

(6) INSTALL DETOUR AND COMMUNITY GUIDE SIGNS AND ARROWS ONLY IF SPECIFIED IN THE CONTRACT. IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. MODIFY EXISTING SIGNS WHERE POSSIBLE. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. IF DETOUR SIGNS ARE BEING INSTALLED BY OTHERS, PLACE THE CONTRACTED TRAFFIC CONTROL SIGNS TO ALLOW FOR PLACEMENT OF ALL WARNING, DETOUR AND GUIDE SIGNS AS SHOWN.

(7) "EAST" CARDINAL DIRECTION MARKERS AND RIGHT TURN ARROWS ARE SHOWN. USE OTHER CARDINAL DIRECTIONS AND ARROWS AS APPROPRIATE.

BARRICADES AND SIGNS FOR VARIOUS CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2018
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEE
FHWA

6

SDD 15C02 - 07b

THIS DRAWING PROVIDES GENERAL GUIDANCE ON TYPICAL DETOUR SIGN LAYOUT AND SPACING. SEE PROJECT DETOUR SIGNING SHEETS FOR SPECIFIC DETAILS FOR EACH PROJECT.

LEGEND

- SIGN ON PERMANENT SUPPORT
- WORK AREA
- DETOUR — M4 - 8
- EAST — M3 - X
- XX — M1 - 4 OR XX — M1 - 6 OR COUNTY X — M1 - 5A
- M05 - 1 OR M06 - 1 OR M06 - 1

GENERAL NOTES

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

IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. MODIFY EXISTING SIGNS WHERE POSSIBLE.

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

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

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

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

SIGN SIZES SHALL BE AS FOLLOWS:

- 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" (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS)
- M05-1 AND M06-1 SHALL BE 21" X 21" (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS)
- M4-9 AND M4-59 SHALL BE 30" X 24"
- M4-8a SHALL BE 24" X 18"
- G20-51 SHALL BE 60" X 24"
- W20-2A SHALL BE 48" X 48"
- D1-X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.

* OPTIONAL SIGNS. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS.

** FOR A TOWN ROAD OR LOCAL STREET DETOURED ONTO A STATE TRUNK HIGHWAY, PLACE A ROAD NAME PLAQUE ABOVE THE M4-9 SIGN AS SPECIFIED IN THE CONTRACT.

M3-X 24" X 12"
M1-X 24" X 24"
DETOUR AHEAD
W20-2A
USE ON STATE TRUNK, U.S. OR INTERSTATE HIGHWAYS, OR AS SPECIFIED IN THE CONTRACT

500' AT 25-40 MPH
1000' AT 45+ MPH

500'

DETOUR EAST XX *

D1-X COMMUNITY NAME *
(IF PRE-EXISTING SIGN, COVER ARROW PER SIGN PLATE A4-12)

M4-8a END DETOUR WEST XX *

DETOUR EAST XX / WEST XX

DETOUR ROUTE

WORK AREA

DETOUR EAST XX

WEST XX OR M4-9L DETOUR ** IF TOWN ROAD OR LOCAL STREET

500'

DETOUR NEXT X MILES * G20-51

DETOUR WEST XX * OR M4-59L DETOUR ** IF TOWN ROAD OR LOCAL STREET

SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS AND DETAIL A OR B ON SDD SHEET 15C02 - SHEET "a"

MATCH POINT

* M4-59L DETOUR ** OR DETOUR EAST XX * IF TOWN ROAD OR LOCAL STREET

D1-X COMMUNITY NAME *
(IF PRE-EXISTING SIGN, COVER ARROW PER SIGN PLATE A4-12)

500'

M4-9L DETOUR ** OR DETOUR EAST XX IF TOWN ROAD OR LOCAL STREET

DETOUR WEST XX

DETOUR WEST XX OR M4-9R DETOUR ** IF TOWN ROAD OR LOCAL STREET

DETOUR WEST XX * OR M4-59R * DETOUR ** IF TOWN ROAD OR LOCAL STREET

500'

DETOUR ROUTE

500' AT 25 - 40 MPH
1000' AT 45+ MPH

500'

M3-X 24" X 12"
M1-X 24" X 24"
DETOUR AHEAD
W20-2A
USE ON STATE TRUNK, U.S. OR INTERSTATE HIGHWAYS, OR AS SPECIFIED IN THE CONTRACT

DETOUR EAST XX *

D1-X COMMUNITY NAME *
(IF PRE-EXISTING SIGN, COVER ARROW PER SIGN PLATE A4-12)

DETOUR EAST XX

500'

DETOUR EAST XX

D1-X COMMUNITY NAME *
(IF PRE-EXISTING SIGN, COVER ARROW PER SIGN PLATE A4-12)

DETOUR EAST XX *

PLACE SIGNS BEYOND INTERSECTIONS WITH STATE OR COUNTY TRUNK HIGHWAYS OR AT 4 MILE MAXIMUM SPACING (4 BLOCKS IF URBAN AREA)

500' AT 25 - 40 MPH
1000' AT 45+ MPH

DETOUR EAST XX *

M3-X 24" X 12"
M1-X 24" X 24"
DETOUR AHEAD
W20-2A
USE ON STATE TRUNK, U.S. OR INTERSTATE HIGHWAYS, OR AS SPECIFIED IN THE CONTRACT

DETAIL F
DETOUR SIGNING

DETOUR SIGNING FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2018
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

SDD 15C02 - 07c

SDD 15C02 - 07c

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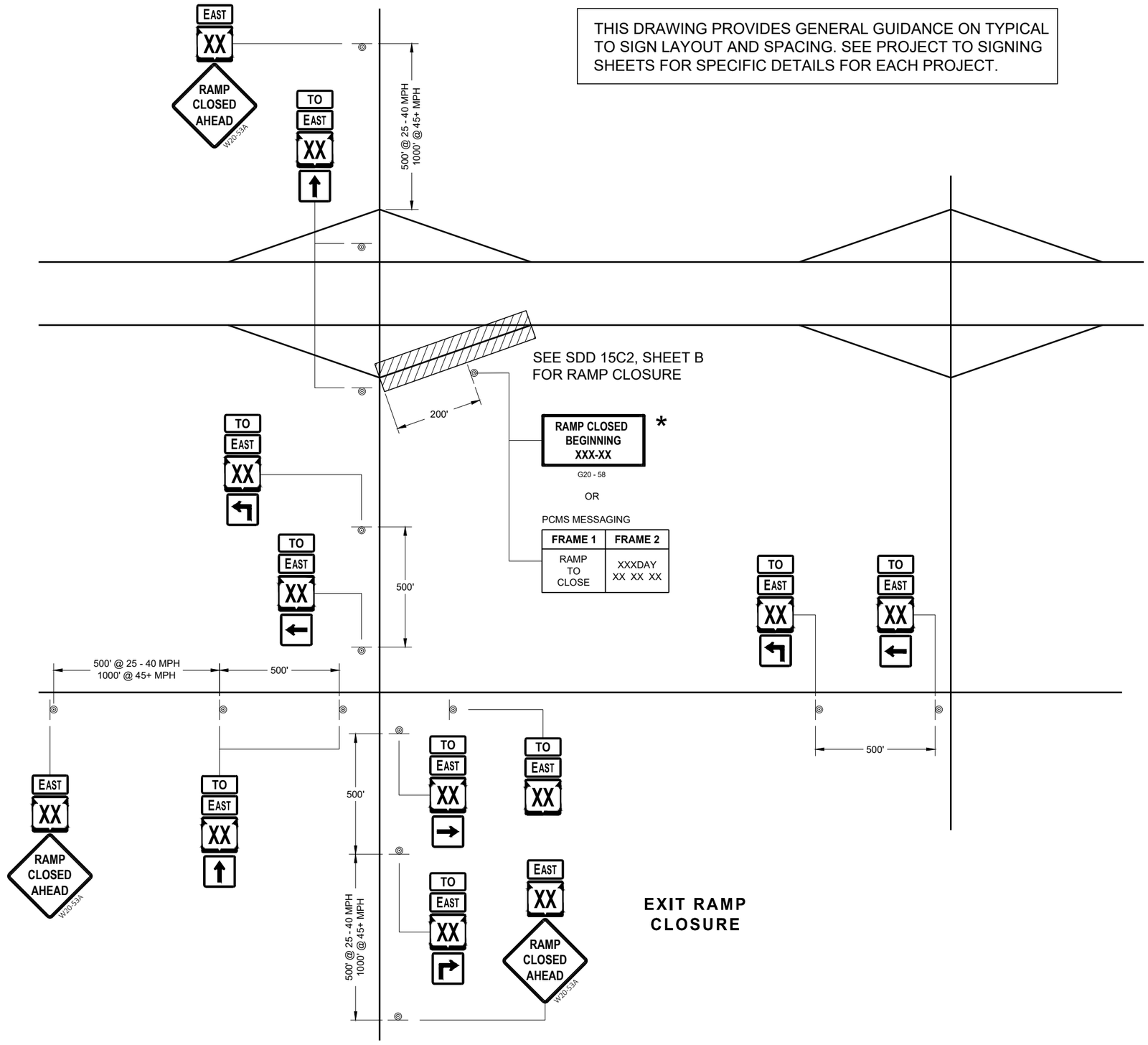

THIS DRAWING PROVIDES GENERAL GUIDANCE ON TYPICAL TO SIGN LAYOUT AND SPACING. SEE PROJECT TO SIGNING SHEETS FOR SPECIFIC DETAILS FOR EACH PROJECT.

LEGEND

SIGN ON PERMANENT SUPPORT

TO EAST — MO4 - 5, M3 - X

XX M1 - 6 OR XX M1 - 4 OR INTERSTATE XX M1 - 1

M05 - 1 OR M06 - 1 OR M06 - 1

GENERAL NOTES

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

IF THERE ARE ANY ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE TO ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. SEE SPECIFIC PROJECT TO SIGNING DETAIL SHEETS. MODIFY EXISTING SIGNS WHERE POSSIBLE.

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

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

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

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

SIGN SIZES SHALL BE AS FOLLOW:
- M3 - X SHALL BE 24" X 12". (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS).
- MO4 - 5 SHALL BE 24" X 12". (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS).
- M1 - 1, M1 - 4, AND M1 - 6 SHALL BE 24" X 24" (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS).
- MO5 - 1, MO5 - 2, AND MO6 - 1, SHALL BE 21" X 21". (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS).
- W20 - 53A SHALL BE 48" X 48"

* PLACE "RAMP CLOSED BEGINNING" SIGN 7 CALENDAR DAYS PRIOR TO CLOSURE OR AS DIRECTED BY THE ENGINEER. SEE WISCONSIN STANDARD SIGN PLATES

ON RAMP LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2018 DATE
/S/ Andrew Heidtke WORK ZONE ENGINEE

FHWA

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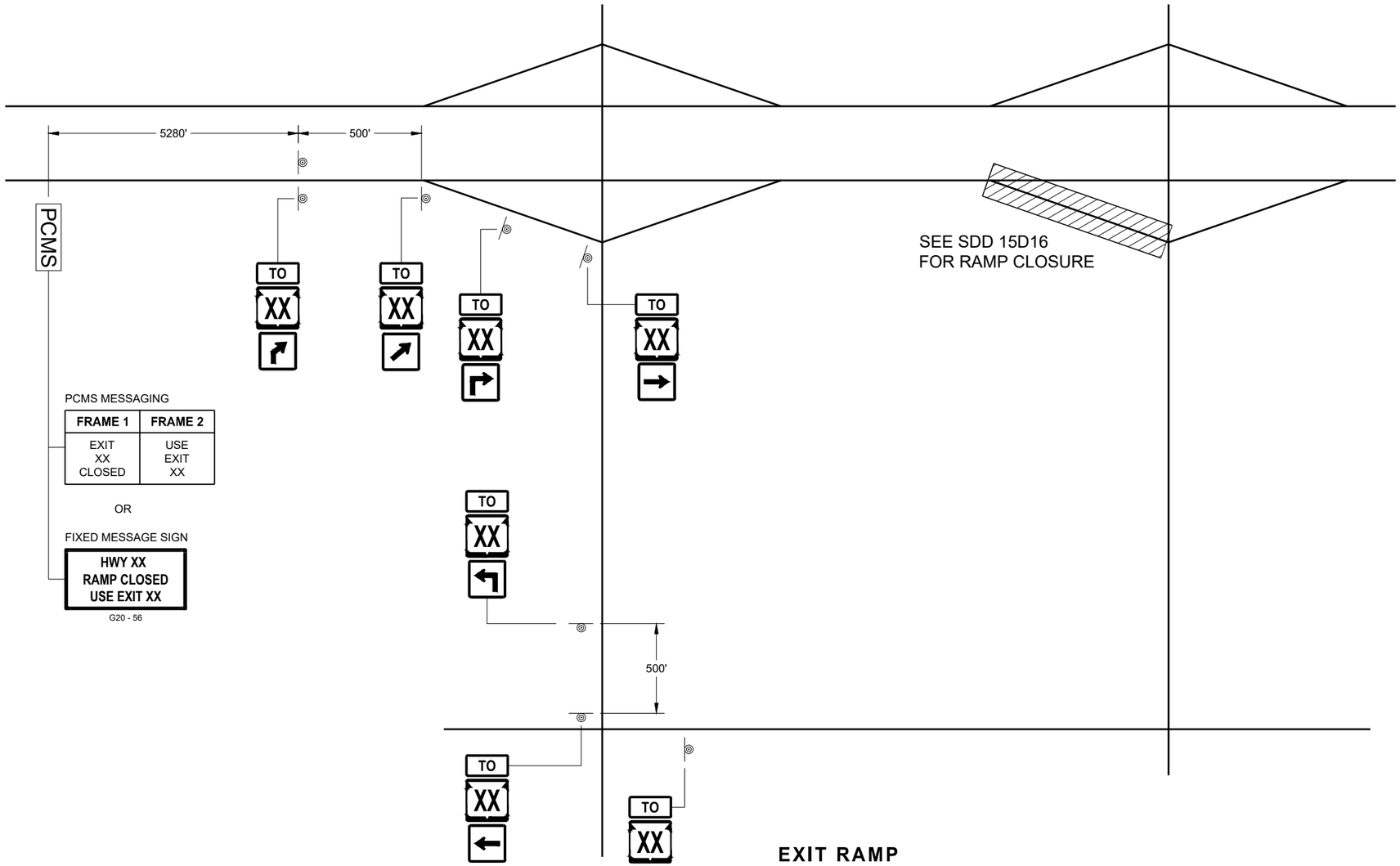
SDD 15C02 - 07d

SDD 15C02 - 07d

THIS DRAWING PROVIDES GENERAL GUIDANCE ON TYPICAL TO SIGN LAYOUT AND SPACING. SEE PROJECT TO SIGNING SHEETS FOR SPECIFIC DETAILS FOR EACH PROJECT.



PCMS MESSAGING

FRAME 1	FRAME 2
EXIT XX CLOSED	USE EXIT XX

OR

FIXED MESSAGE SIGN

HWY XX
RAMP CLOSED
USE EXIT XX

G20 - 56

EXIT RAMP CLOSURE

LEGEND

SIGN ON PERMANENT SUPPORT

PCMS PORTABLE CHANGEABLE MESSAGE SIGN

TO MO4 - 5

XX M1 - 4 OR XX M1 - 6 OR COUNTY X M1 - 5A

M05 - 1 OR M05 - 2 OR M06 - 1 OR M06 - 2

GENERAL NOTES

SEE SDD 15D16 "TRAFFIC CONTROL, EXIT RAMP CLOSURE" DETAIL FOR TRAFFIC CONTROL AT EXIT RAMP CLOSURE.

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

IF THERE ARE ANY ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE TO ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. SEE SPECIFIC PROJECT TO SIGNING DETAIL SHEETS. MODIFY EXISTING SIGNS WHERE POSSIBLE.

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

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

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

SIGN SIZES SHALL BE AS FOLLOW:

MO4 - 5 SHALL BE 24" X 12". (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS).
M1 - 4, M1 - 5A, AND M1 - 6 SHALL BE 24" X 24" (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS).
MO5 - 1, MO5 - 2, AND MO6 - 1, SHALL BE 21" X 21". (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS).

OFF RAMP LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

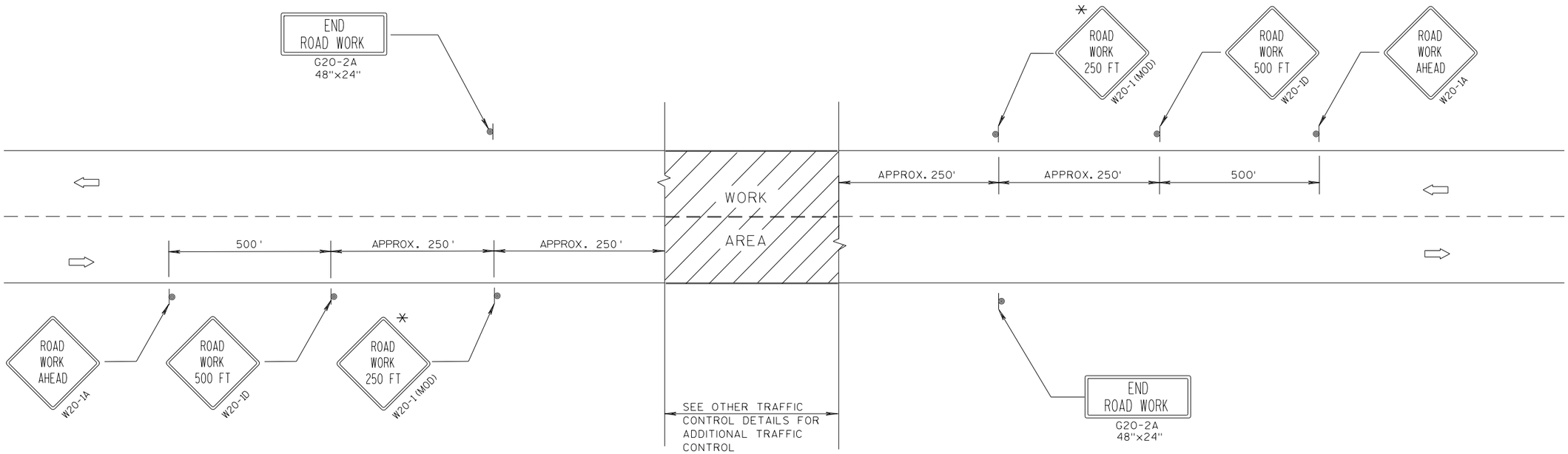
APPROVED
November 2018 DATE
/S/ Andrew Heidtke WORK ZONE ENGINEE

FHWA

SDD 15C02 - 07e

SDD 15C02 - 07e

TYPICAL SIDEROAD APPROACH WARNING SIGN DETAIL



GENERAL NOTES

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

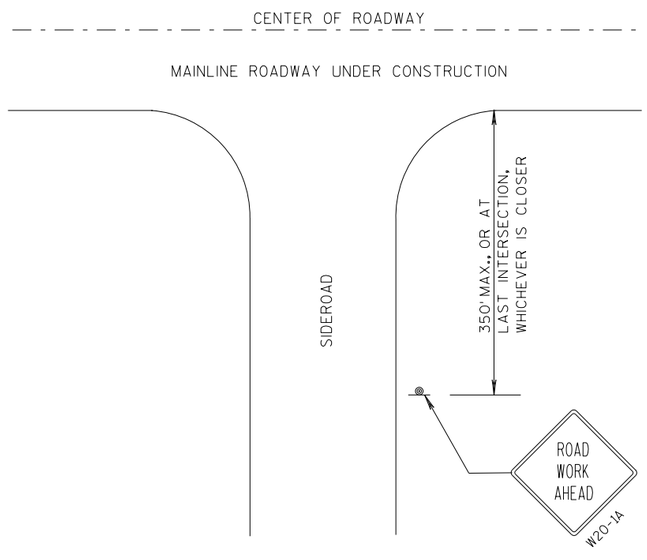
THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS, 36"x36" SIGNS MAY BE USED INSTEAD OF 48"x48" SIGNS.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 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 RE-ESTABLISHED.

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



LEGEND

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

TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 M.P.H. OR LESS TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

7/2018
DATE

/S/ Andrew Heldtke
WORK ZONE ENGI

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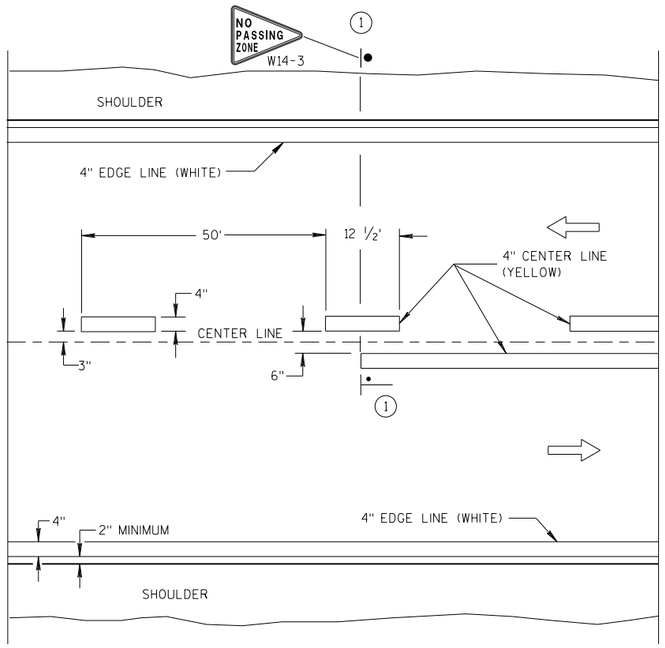
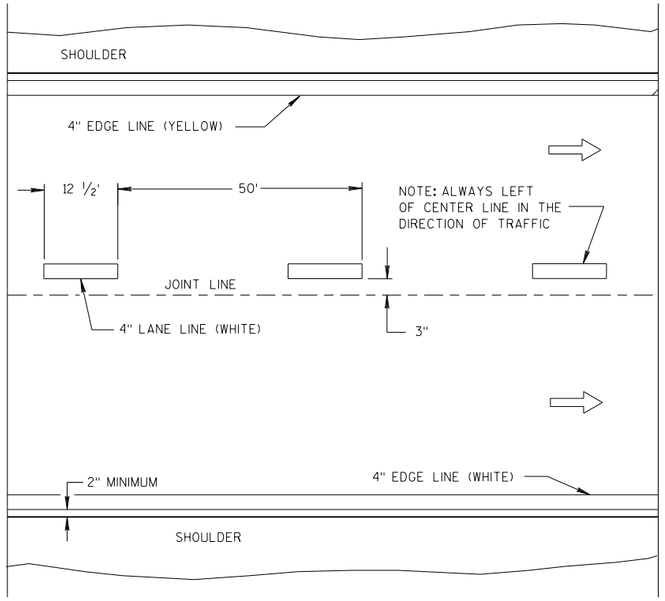
S.D.D. 15 C 5-5



TWO WAY TRAFFIC



ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING

GENERAL NOTES

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

(1) LOCATE THE NO PASSING ZONE W14-3 SIGN WITHIN 50 FEET OF THE "T" MARKING.

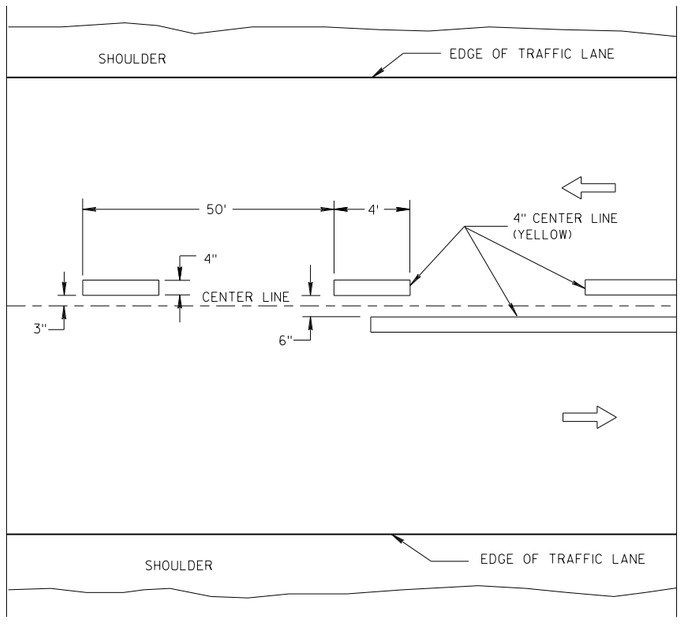
NOTE

ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL

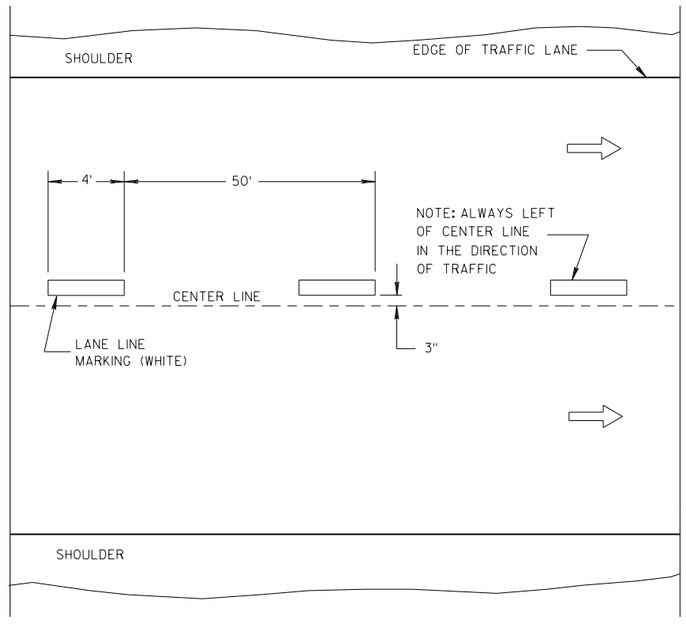
LEGEND

"T" MARKING

POST MOUNTED SIGN



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY PAVEMENT MARKING

LONGITUDINAL MARKING (MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

7/2018 DATE

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

FHWA

6

S.D.D. 15 C 8-19a

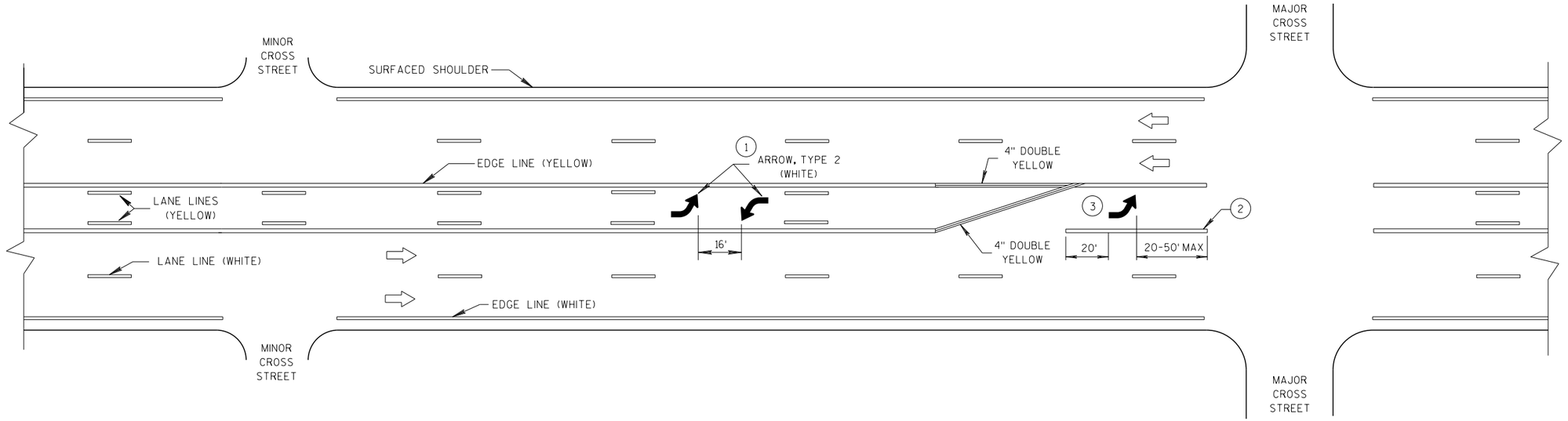
6

S.D.D. 15 C 8-19a

GENERAL NOTES

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

DIRECTION OF TRAFFIC



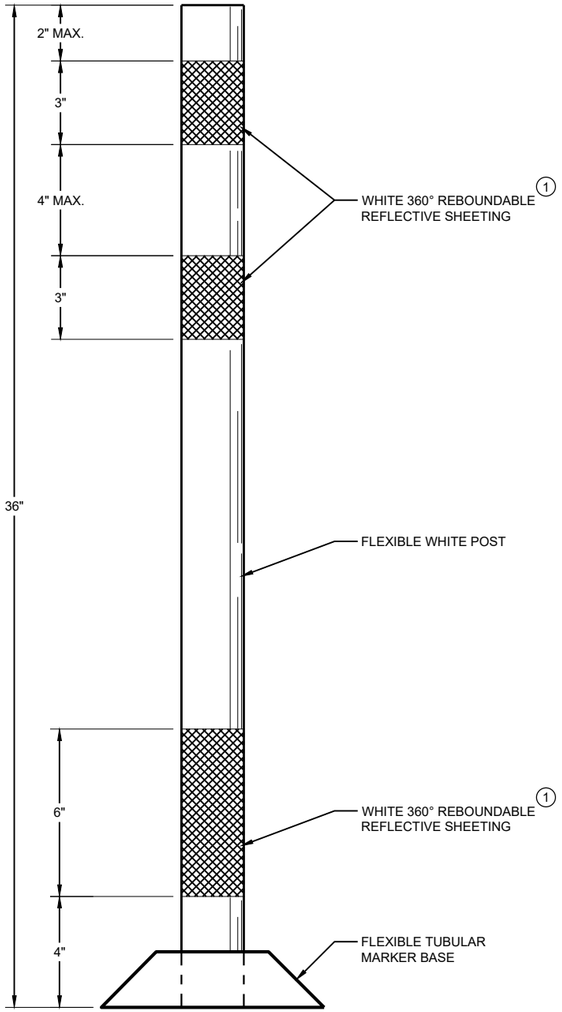
TWO WAY LEFT TURN LANE

PAVEMENT MARKING (TURN LANES)

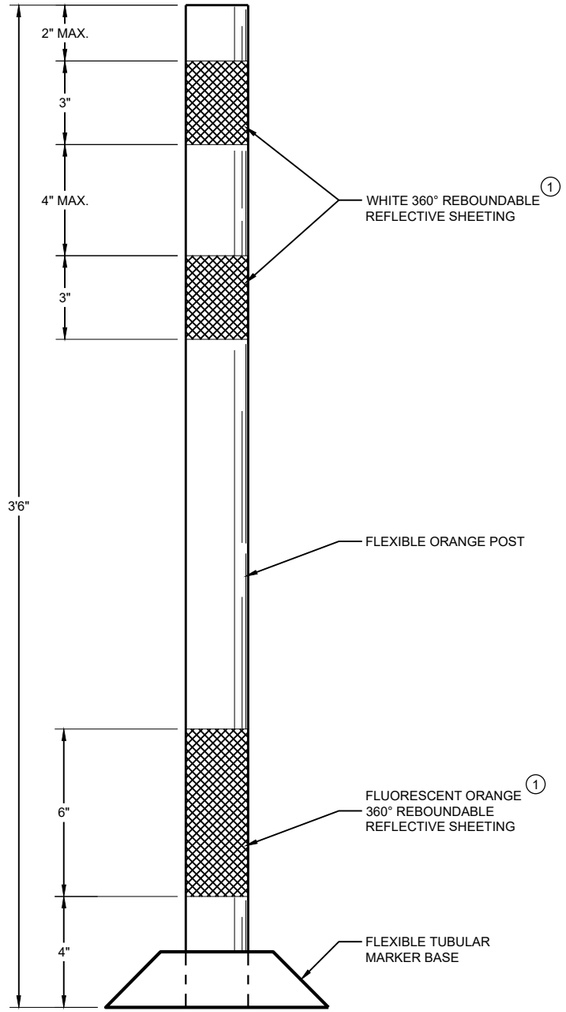
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

S.D.D. 15 C 8-19b



FLEXIBLE TUBULAR MARKER POST PERMANENT CROSSOVER



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 - 07a

CHANNELIZING DEVICES FLEXIBLE TUBULAR MARKER POST

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2017
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

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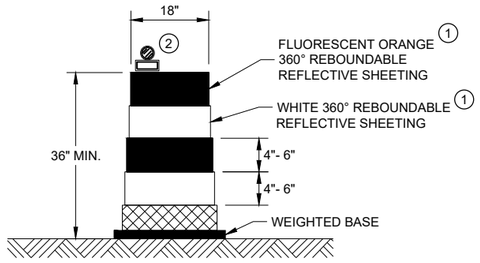
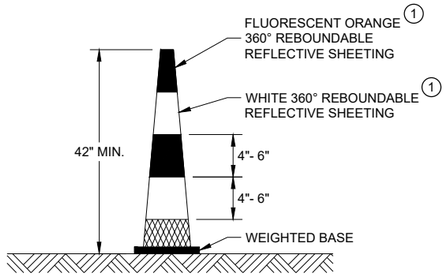
SDD 15C11 - 07a

GENERAL NOTES

1. REFLECTIVE SHEETING SHALL FOLLOW THE REQUIREMENTS IN THE APPROVED PRODUCTS LISTING FOR SIGN SHEETING.
2. LOCATION OF WARNING LIGHTS WHEN SHOWN ON THE PLAN.

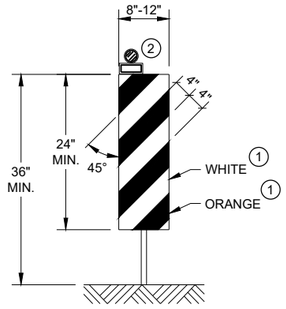


DRUM



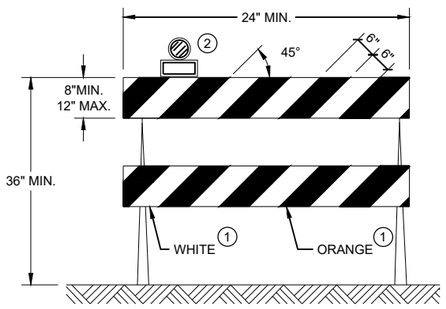
42" CONE

DO NOT USE IN TAPERS
½ SPACING OF DRUMS



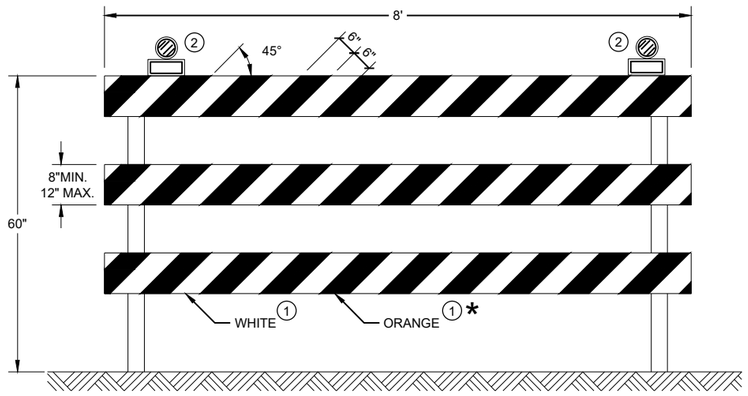
VERTICAL PANEL

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



TYPE II BARRICADE

FOR RAILS LESS THAN 36" LONG, 4" WIDE STRIPES
MAY BE USED. ALL STRIPES SHALL SLOPE DOWNWARD
TO THE TRAFFIC SIDE FOR CHANNELIZATION.



TYPE III BARRICADE

IF SIGN MOUNTED, DO NOT COVER MORE THAN 50% OF THE TOP
TWO RAILS OR 33% OF THE TOTAL AREA OF THE THREE RAILS.

* IF USED FOR A PERMANENT APPLICATION USE RED SHEETING.

CHANNELIZING DEVICES
DRUMS, CONES, BARRICADES
AND VERTICAL PANELS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2017
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

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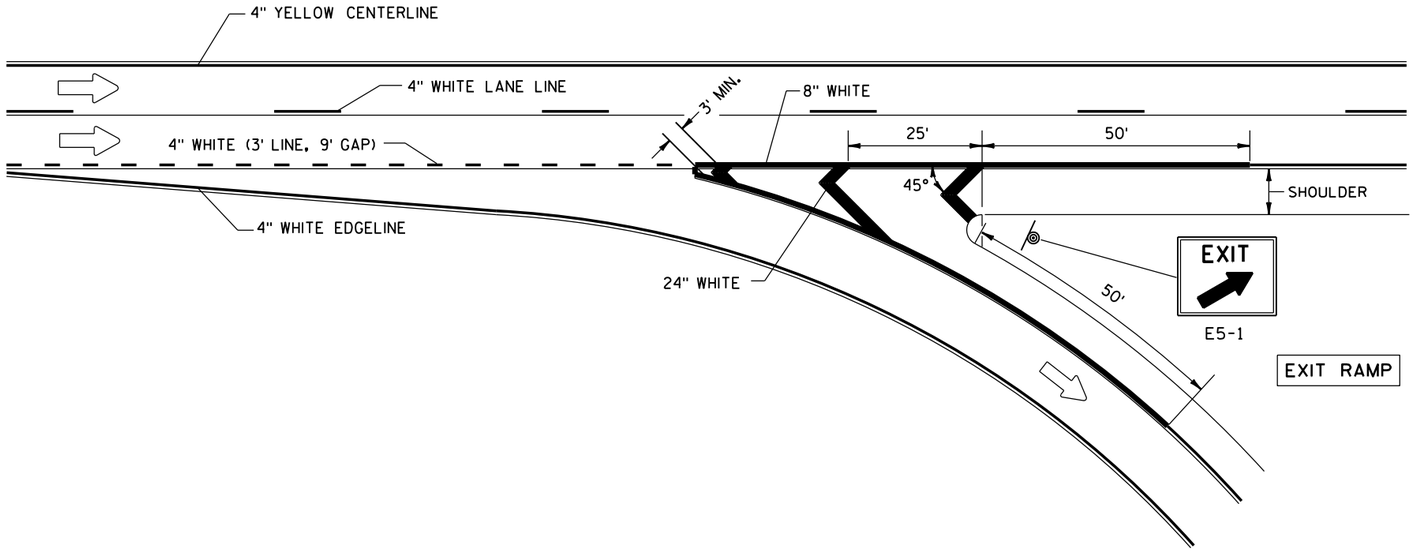
SDD 15C11 - 07b

6

SDD 15C11 - 07b



PAVEMENT MARKING FOR EXIT RAMP

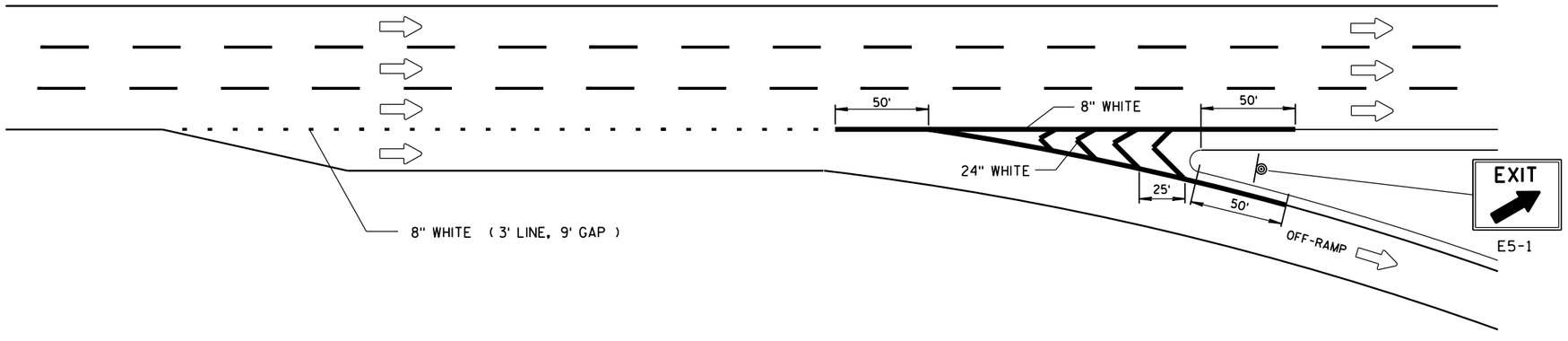
GENERAL NOTES

PLACE GROOVE 3 INCHES LEFT OF JOINT.

LEGEND

DIRECTION OF TRAVEL

SIGN ON PERMANENT SUPPORT



SERVICE INTERCHANGE PAVEMENT MARKING FOR PARALLEL EXIT-RAMP

6

S.D.D. 15 C 31-3a

PAVEMENT MARKING (RAMPS AND GORES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

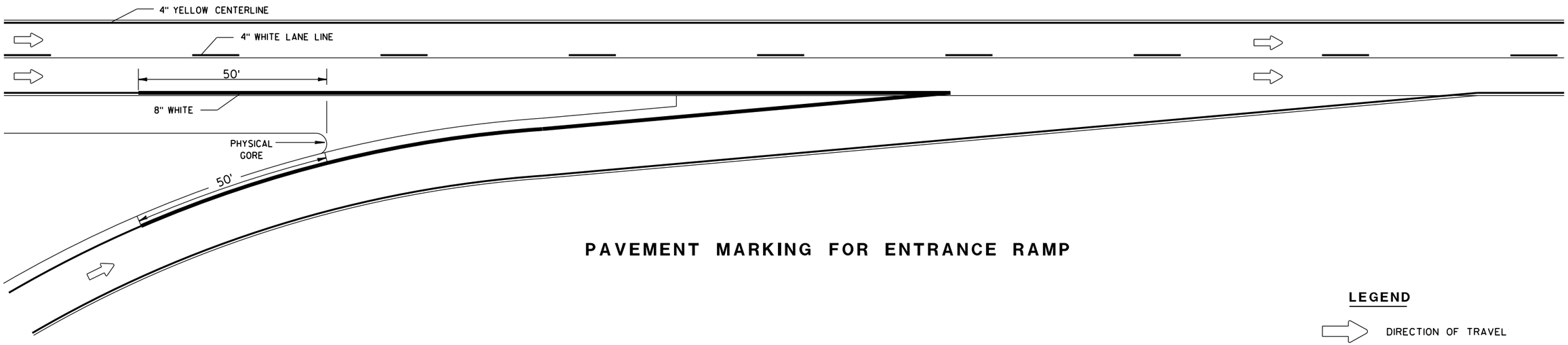
6

S.D.D. 15 C 31-3a

GENERAL NOTES

PLACE GROOVE 3 INCHES LEFT OF JOINT.

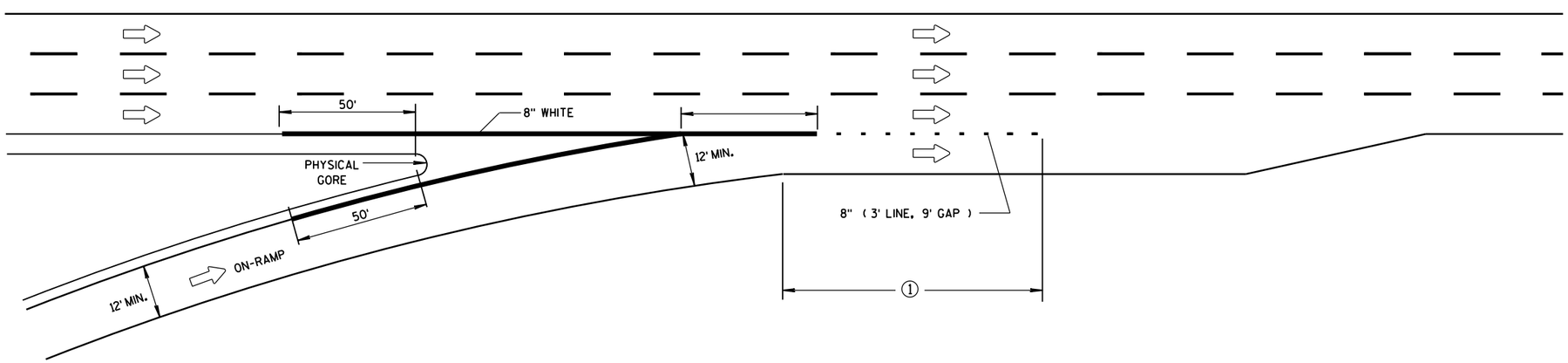
① ½ LENGTH OF FULL WIDTH ACCELERATION LANE.



PAVEMENT MARKING FOR ENTRANCE RAMP

LEGEND

DIRECTION OF TRAVEL



SERVICE INTERCHANGE PAVEMENT MARKING FOR PARALLEL ENTRANCE-RAMP

PAVEMENT MARKING FOR PARALLEL ON-RAMP AND PARALLEL OFF-RAMP

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

Sept., 2017
DATE

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

FHWA

6

S.D.D. 15 C 31-3c

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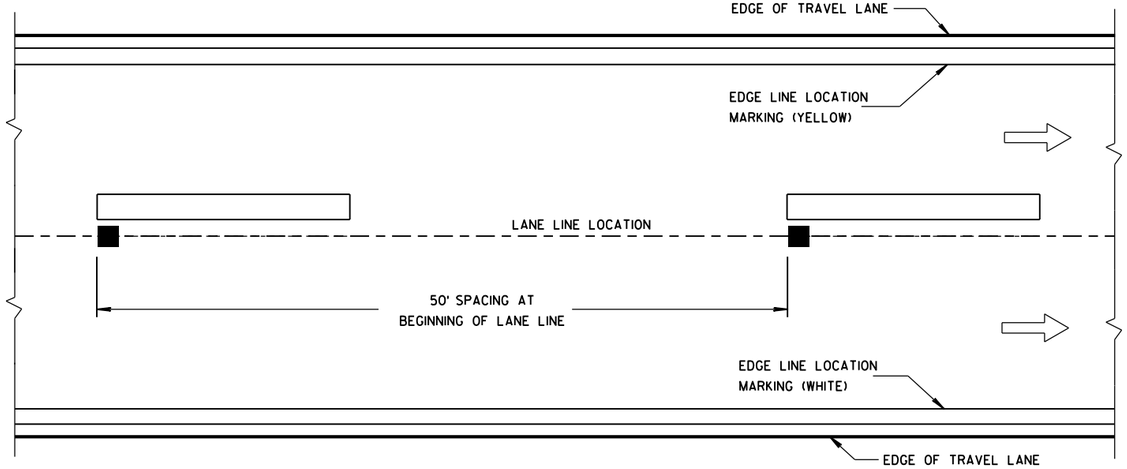
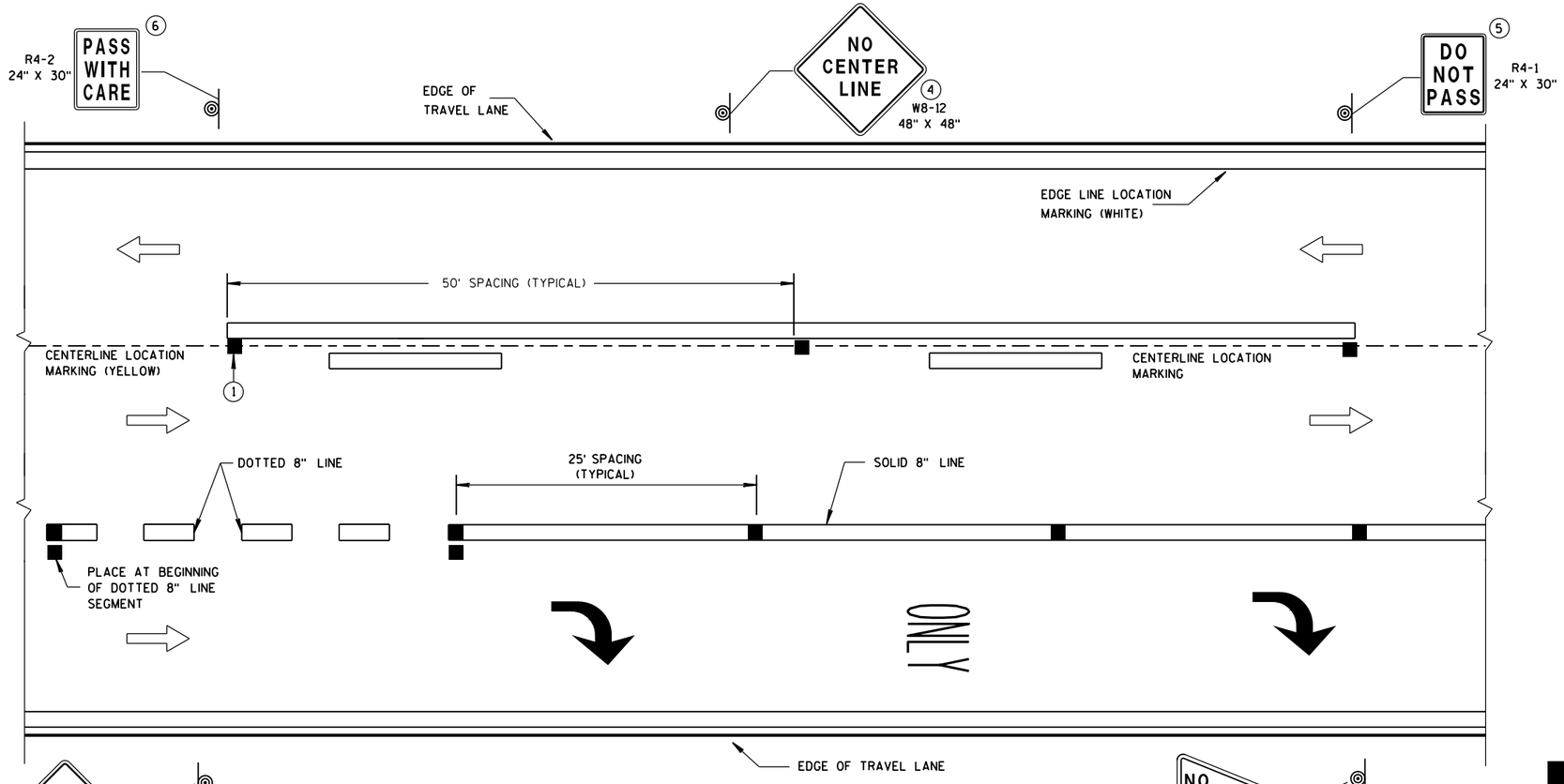
S.D.D. 15 C 31-3c



LONGITUDINAL PLACEMENT 4-INCH LANE LINE



LONGITUDINAL PLACEMENT 4-INCH CENTERLINE AND 8-INCH CHANNEL LINE

GENERAL NOTES

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

COLOR OF TEMPORARY RAISED PAVEMENT MARKERS, TYPE II SHALL MATCH THE COLOR OF THE MARKING THEY SUPPLEMENT.

PLACEMENT OF TEMPORARY RAISED PAVEMENT MARKERS ON EDGE LINES ARE OPTIONAL. IF PLACED ON EDGE LINES, MAXIMUM SPACING SHALL BE 50 FEET.

PROVIDE SINGLE OR MULTI-COVER TEMPORARY RAISED PAVEMENT MARKERS AS SHOWN ON PLAN.

MARK T's ON PAVEMENT FOR RE-ESTABLISHING NO PASSING ZONES.

SAME DAY TEMPORARY PAVEMENT MARKING MAY BE USED IN LIEU OF TEMPORARY RAISED PAVEMENT MARKERS, TYPE II.

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

IF TEMPORARY SAME DAY PAVEMENT MARKING IS USED, ENSURE PROPOSED PAVEMENT MARKINGS ARE PLACED IN THE EXACT LOCATIONS AS THE EXISTING MARKINGS, USING A MINIMAL AMOUNT OF TEMPORARY RAISED PAVEMENT MARKERS, TYPE II OR OTHER METHODS AS APPROVED BY THE ENGINEER.

IF ROADWAY IS DETOURED DURING CONSTRUCTION, THE DO NOT PASS, PASS WITH CARE AND NO CENTERLINE SIGNS MAY BE OMITTED, PROVIDED A LIQUID MARKING IS INSTALLED BEFORE THE ROADWAY IS REOPENED TO TRAFFIC.

(1) FOR DOUBLE SOLID YELLOW, PLACE THE MARKERS BETWEEN THE LINES.

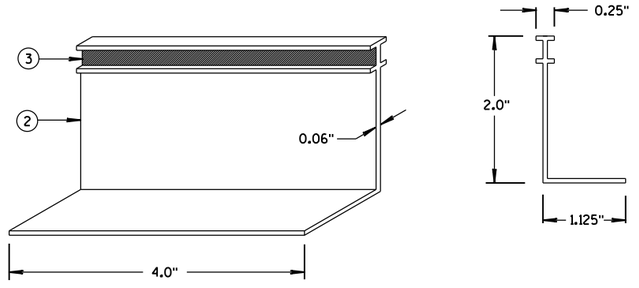
(2) MARKERS SHALL BE OF POLYURETHANE MATERIAL.

(3) MARKERS SHALL HAVE A MINIMUM SIZE REFLECTIVE SURFACE OF 4 INCH WIDTH X 0.25 INCH HEIGHT.

(4) NO CENTER LINE SIGNS SHALL BE PLACED AT THE BEGINNING OF PROJECT, AT TWO-MILE INTERVALS AND AFTER STATE AND COUNTY HIGHWAY INTERSECTIONS.

(5) DO NOT PASS SIGNS SHALL BE INSTALLED AT THE BEGINNING OF NO PASSING ZONES. ADDITIONAL DO NOT PASS SIGNS SHALL BE INSTALLED AT ONE MILE INTERVALS AND AFTER STATE AND COUNTY HIGHWAY INTERSECTIONS WITHIN THE NO PASSING ZONE.

(6) PASS WITH CARE SIGNS SHALL BE PLACED AT THE DOWNSTREAM END OF NO PASSING ZONES.



ISOMETRIC VIEW

SIDE VIEW

TEMPORARY RAISED PAVEMENT MARKER, TYPE II

LEGEND

- TEMPORARY RAISED PAVEMENT MARKER, TYPE II
- SIGN ON PORTABLE OR PERMANENT SUPPORT
- DIRECTION OF TRAVEL

STANDARD APPLICATION FOR TEMPORARY RAISED PAVEMENT MARKERS, TYPE II

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
6-2017 — DATE
/S/ Matthew R. Rauch
STATE SIGNING AND MAR[illegible] — [illegible]INEER
FHWA

6

S.D.D. 15 C 34-3

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 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.

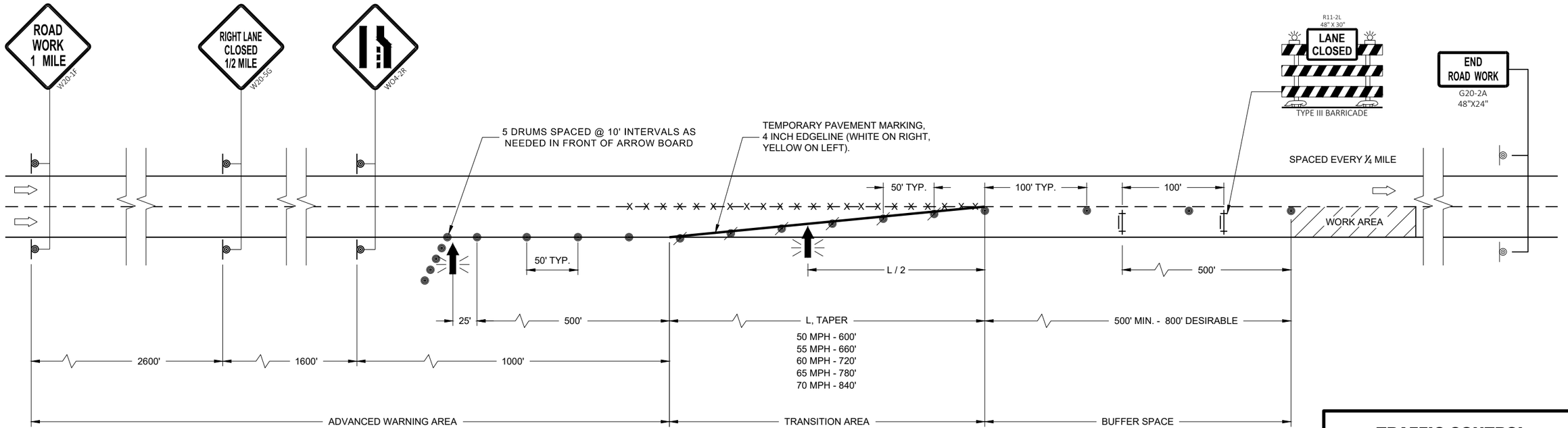
WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

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

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



TRAFFIC CONTROL LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2018
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

6

SDD 15D12 - 07a

6

SDD 15D12 - 07a

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.

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

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

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

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

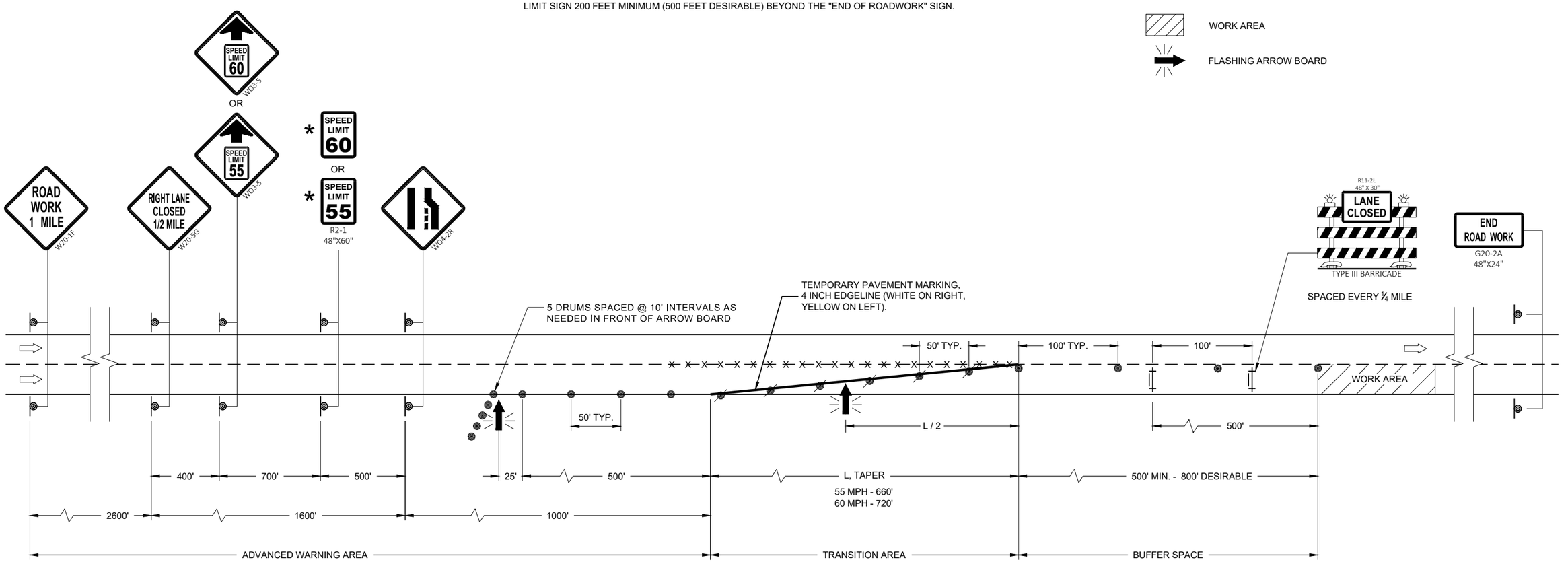
IF THE HORIZONTAL ALIGNMENT IS SUCH THAT A CURVE MAY REQUIRE ADDITIONAL DELINEATION, THE DEVICE SPACING MAY BE DECREASED TO 50 FEET.

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

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

LEGEND

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



TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2018 — DATE
/S/ Andrew Heidtke — WORK ZONE ENGINEER
FHWA

SDD 15D12 - 07b

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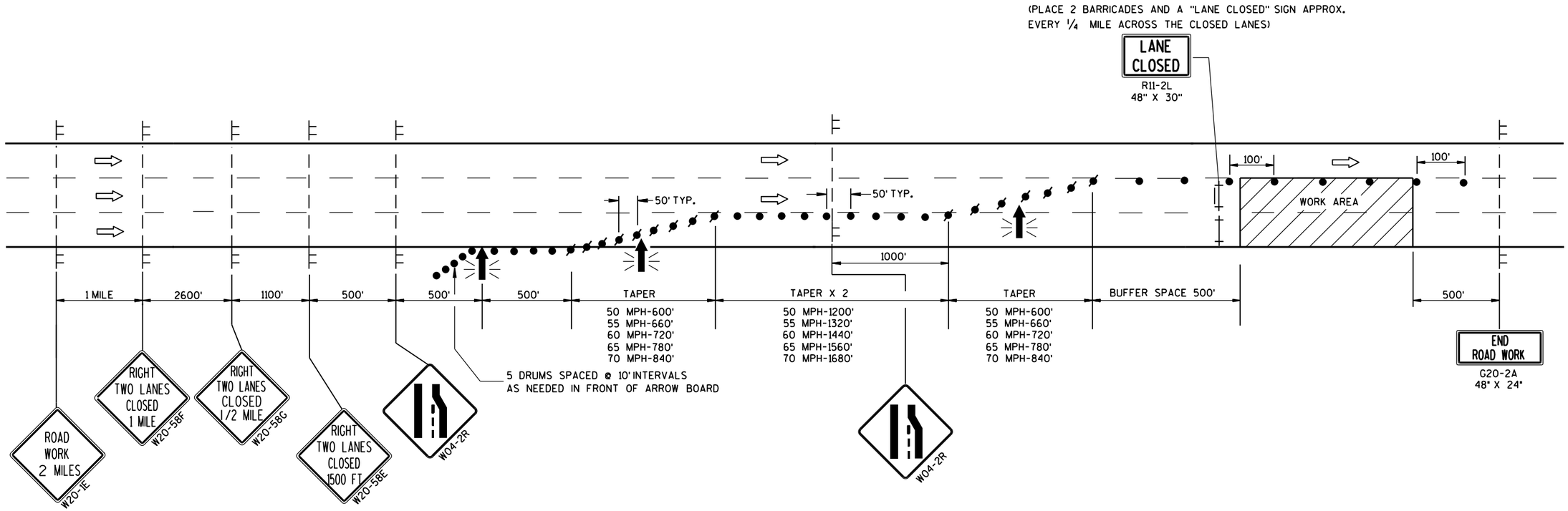
SDD 15D12 - 07b



LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL DRUM
- FLASHING ARROW BOARD
- DIRECTION OF TRAFFIC
- WORK AREA

GENERAL NOTES

THIS DETAIL IS TYPICAL FOR CLOSING THE RIGHT TWO LANES. FOR CLOSING THE LEFT TWO LANES, 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.

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

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

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

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

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

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

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.

TRAFFIC CONTROL, TWO LANE CLOSURE ON FREEWAY OR EXPRESSWAY, SHORT TERM (LESS THAN 24 HOURS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
July 14, 2015 — DATE
/S/ Peter Amakobe Atepe — STATEWIDE WORK ZO[illegible]FIC SAFETY ENGI[illegible]
FHWA

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LEGEND

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

GENERAL NOTES

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

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

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

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

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

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

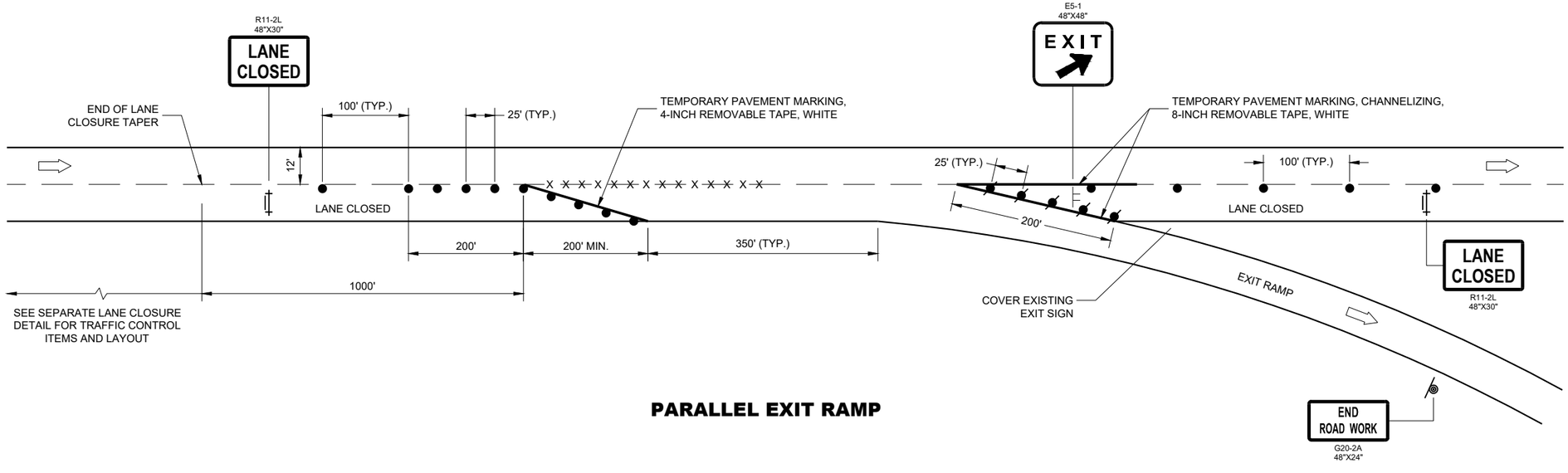
SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONSECUTIVE DAYS AND NIGHTS OR THAT WILL BE PLACED IN A CLOSED LANE, MAY BE MOUNTED ON PORTABLE SUPPORTS.

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

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

REMOVE PAVEMENT MARKINGS AND PLACE TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE 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.



PARALLEL EXIT RAMP

TRAFFIC CONTROL, PARALLEL EXIT RAMP WITHIN LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2019 — DATE
/S/ Andrew Heidtke — WORK ZONE ENGINEER

FHWA

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SDD 15D15 - 05e

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SDD15D15 - 05e

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, REMOVABLE TAPE IF RAMP CLOSURE IS TO BE IN PLACE 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

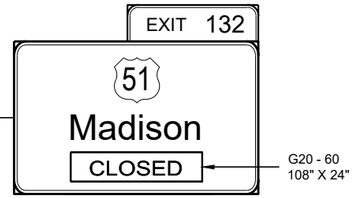
WORK AREAS WITH A DROP OFF ALONG THE EDGE OF AN OPEN TRAVEL LANE SHALL BE LEVELED WITH TEMPORARY FILL WHEN THE CONTRACTOR IS NOT WORKING ADJACENT TO THE TRAVEL LANE. DRUMS SHALL BE PLACED ENTIRELY OUTSIDE THE TRAVEL LANE, ALLOWING THE FULL UNOBSTRUCTED LANE WIDTH, WHEN WORK IS NOT IN PROGRESS.

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.

* 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.

** 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.

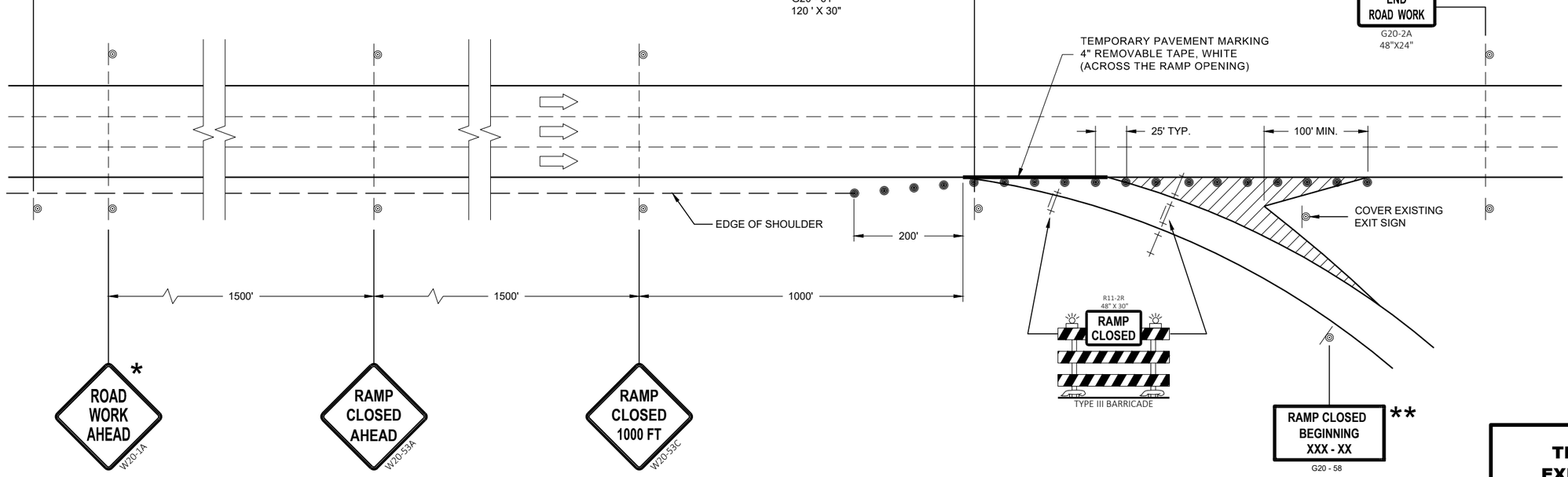
OR



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
November 2018
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

SDD 15D16 - 04

6

SDD 15D16 - 04

LEGEND

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

GENERAL NOTES

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

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

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

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

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

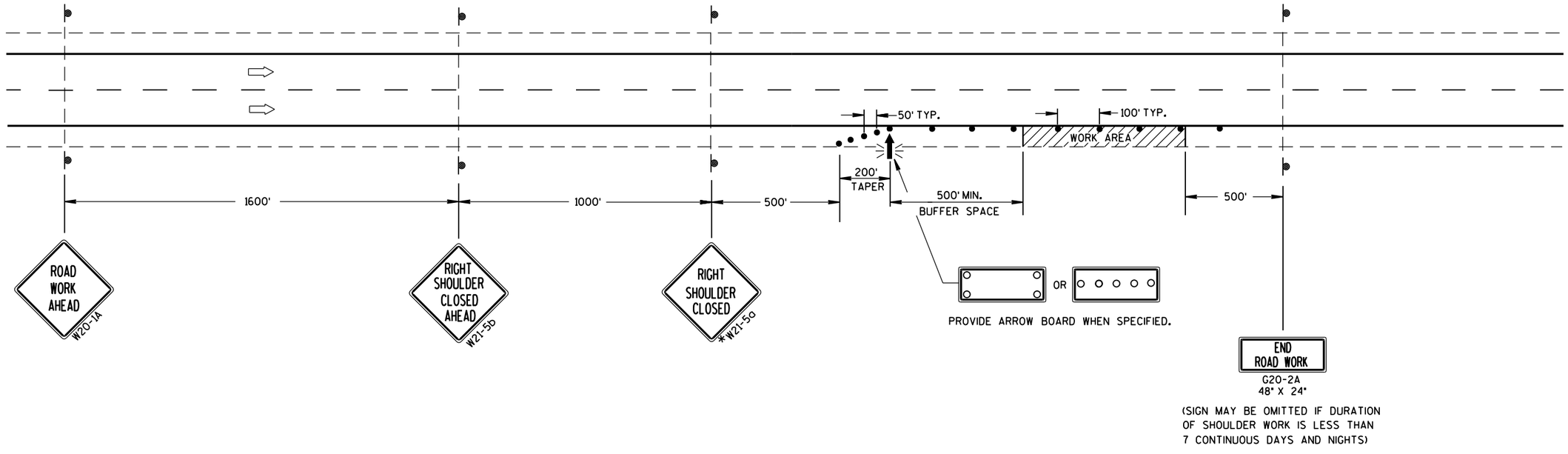
SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

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

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

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

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



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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

June 2016 — DATE

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

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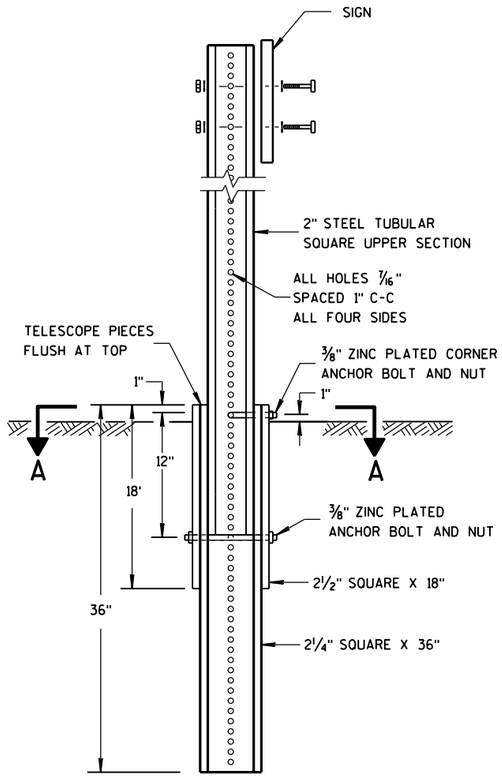
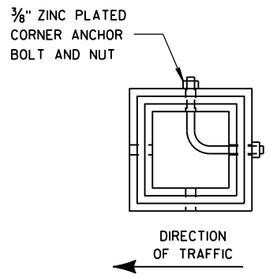
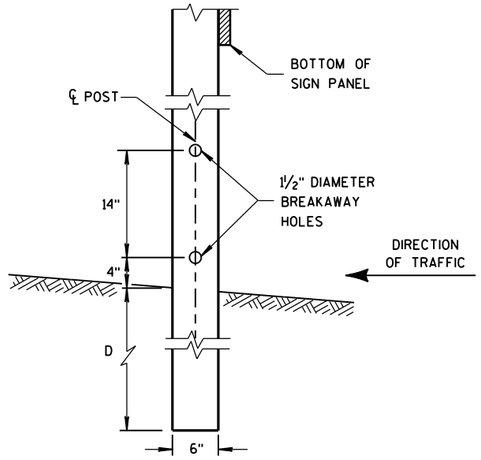


DETAIL OF TUBULAR STEEL SIGN POST



SECTION A-A



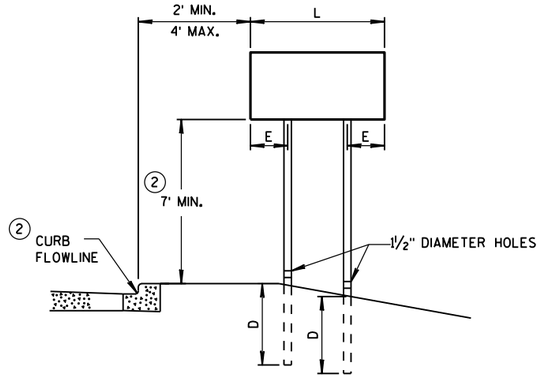
4"x6" WOOD POST MODIFICATION

GENERAL NOTES

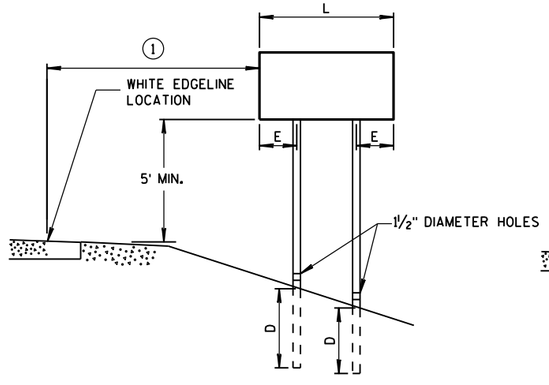
(1) 6 FEET FROM THE EDGE OF PAVEMENT (EDGE LINE LOCATION) UNLESS OTHERWISE DIRECTED BY THE PROJECT ENGINEER. LATERAL OFFSET SHOULD BE ADJUSTED TO AVOID THE DITCH FLOWLINE.

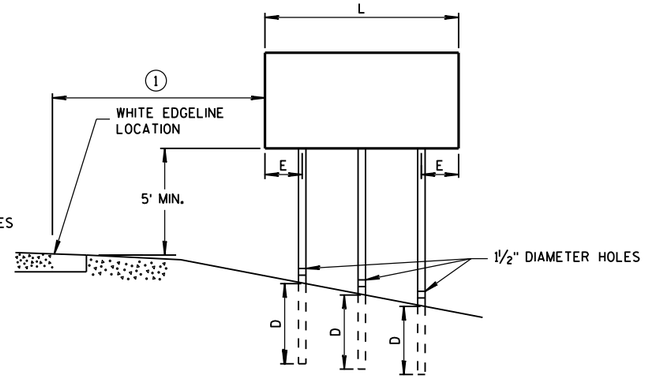
(2) THE EXISTENCE OF CURB AND GUTTER DOES NOT IN ITSELF MANDATE THE VERTICAL CLEARANCE ILLUSTRATED. THAT HEIGHT IS TYPICALLY MEASURED WHERE THERE IS SIDEWALK ADJACENT TO THE ROADWAY OR PARKING IS PERMITTED. IN THE ABSENCE OF SIDEWALK, VERTICAL CLEARANCE IS MEASURED FROM THE TOP OF THE CURB. IF NO SIDEWALK AND NO PARKING, VERTICAL CLEARANCE MAY BE REDUCED TO 5 FOOT MINIMUM. OFFSET OF SIGNS IS MEASURED FROM THE CURB FLOWLINE.

(3) FOR SIGNS REQUIRING 4 POSTS, SPACE INTERMEDIATE POSTS EVENLY.



URBAN AREA





RURAL AREA

POST MOUNTING DETAIL FOR TEMPORARY TRAFFIC CONTROL FIXED MESSAGE SIGNS

TUBULAR STEEL POSTS

AREA OF SIGN INSTALLATION (SQ. FT.)	NUMBER OF REQUIRED TUBULAR STEEL 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).

SIGNS LARGER THAN 27 SQ. FT. SHALL NOT BE MOUNTED ON TUBULAR STEEL POSTS.

WOOD POST EMBEDMENT DEPTH

AREA OF SIGN INSTALLATION (SQ. FT.)	D (MIN)
20 OR LESS	4'
GREATER THAN 20	5'

4" X 6" WOOD POST

POST SPACING REQUIREMENTS		NUMBER OF WOOD POSTS REQUIRED
L	E	
48" OR LESS AND LESS THAN 20 SQ. FT.	-	1
LESS THAN 60"	12"	2
60" TO 120"	L/5	2
GREATER THAN 120" LESS THAN 168"	12"	3
168" AND GREATER	12"	4

SEE NOTE (3)

TEMPORARY TRAFFIC CONTROL SIGN MOUNTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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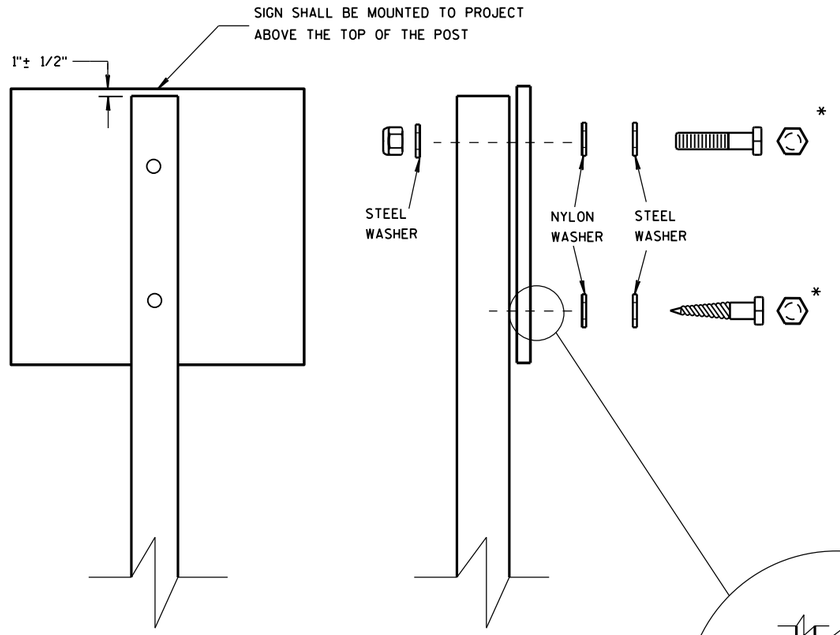
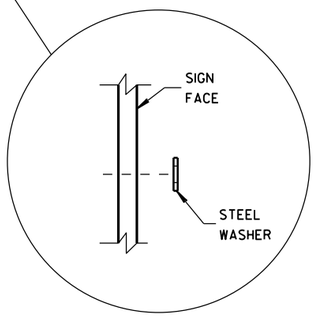
S.D.D. 15 D 38-2a





WASHER PLACEMENT WHEN SIGN HAS OTHER THAN TYPE H OR TYPE F FACE

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.

WOOD POSTS (4" x 4" or 4" x 6")

LAG SCREWS - 3/8" X 3"

MACHINE BOLTS - 5/16" X 6-1/2" OR 7" LENGTH W/ NUTS

SQUARE STEEL POSTS (2" x 2")

MACHINE BOLTS - 3/8" X 3-1/4" LENGTH W/ NUTS

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 FOR ALL TYPE H SIGNS

* 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. FOR A SINGLE POST INSTALLATION, ALL SIGNS GREATER THAN 9 SQ. FT. REQUIRE THE USE OF 3 FASTENERS.

6

6

S.D.D. 15 D 38-2b

S.D.D. 15 D 38-2b

ATTACHMENT OF SIGNS TO POSTS

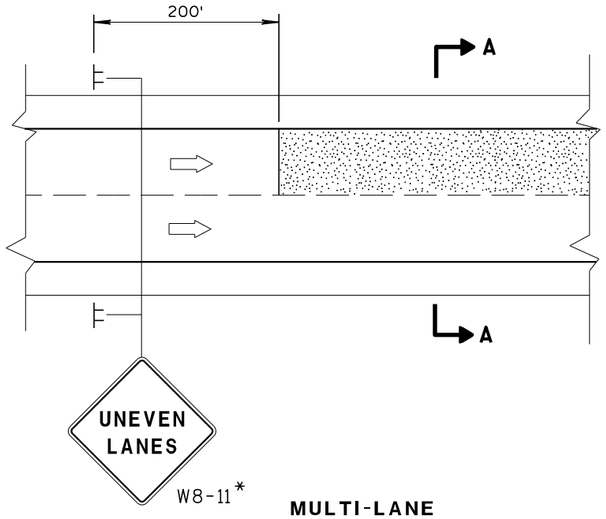
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

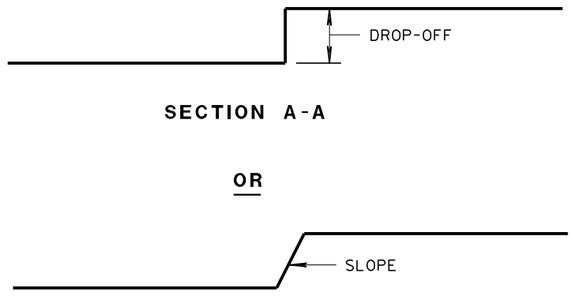
June 2017
DATE

/S/ Andrew Heldtke
WORK ZONE ENG

FHWA



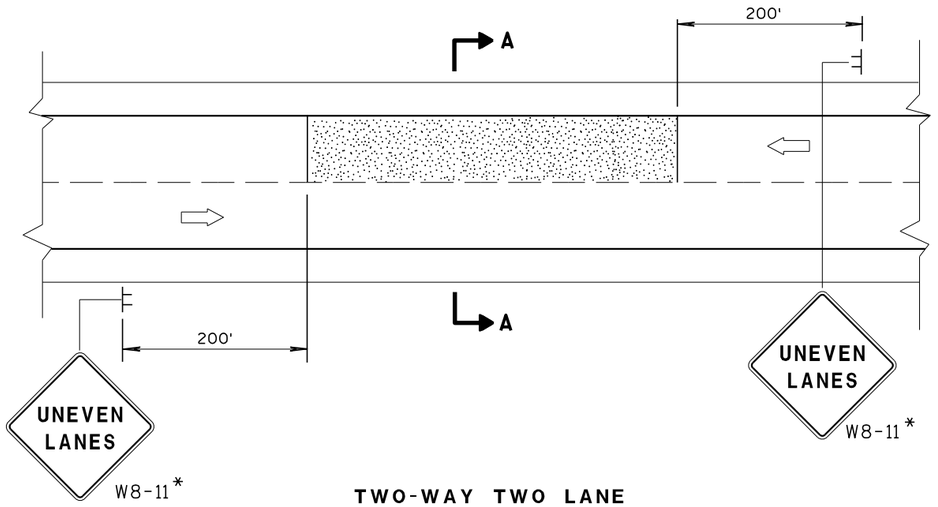
MULTI-LANE



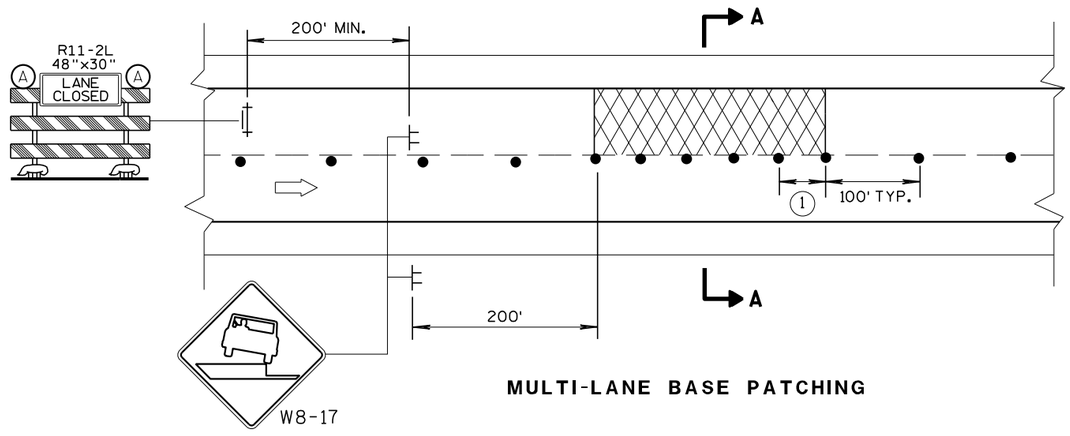
SECTION A-A

OR

SECTION A-A

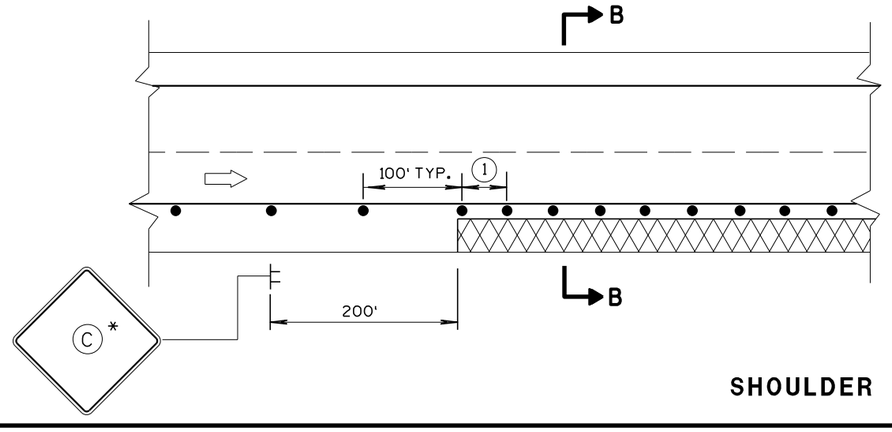


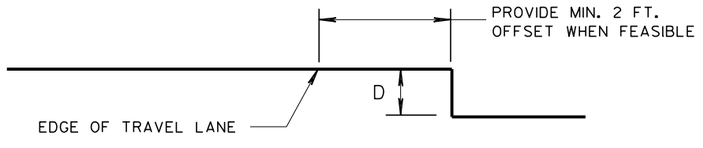
TWO-WAY TWO LANE



MULTI-LANE BASE PATCHING

ADJACENT LANE DROP-OFFS





SECTION B-B

SHOULDER DROP-OFFS

GENERAL NOTES

FOR SPOT LOCATIONS USE ENGINEERING JUDGEMENT WHEN PLACING ADDITIONAL SIGNS.

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

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

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

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

(1) USE CLOSER SPACING WHEN DELINEATING DROP-OFF.

LEGEND

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

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

TRAFFIC CONTROL, DROP-OFF SIGNING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2018 — DATE
/S/ Andrew H — WORK ZONE EN
FHWA

6

S.D.D. 15 D 39-2

6

S.D.D. 15 D 39-2

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

L, TAPER LENGTH (MPH)							
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 DESIREABLE) 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.

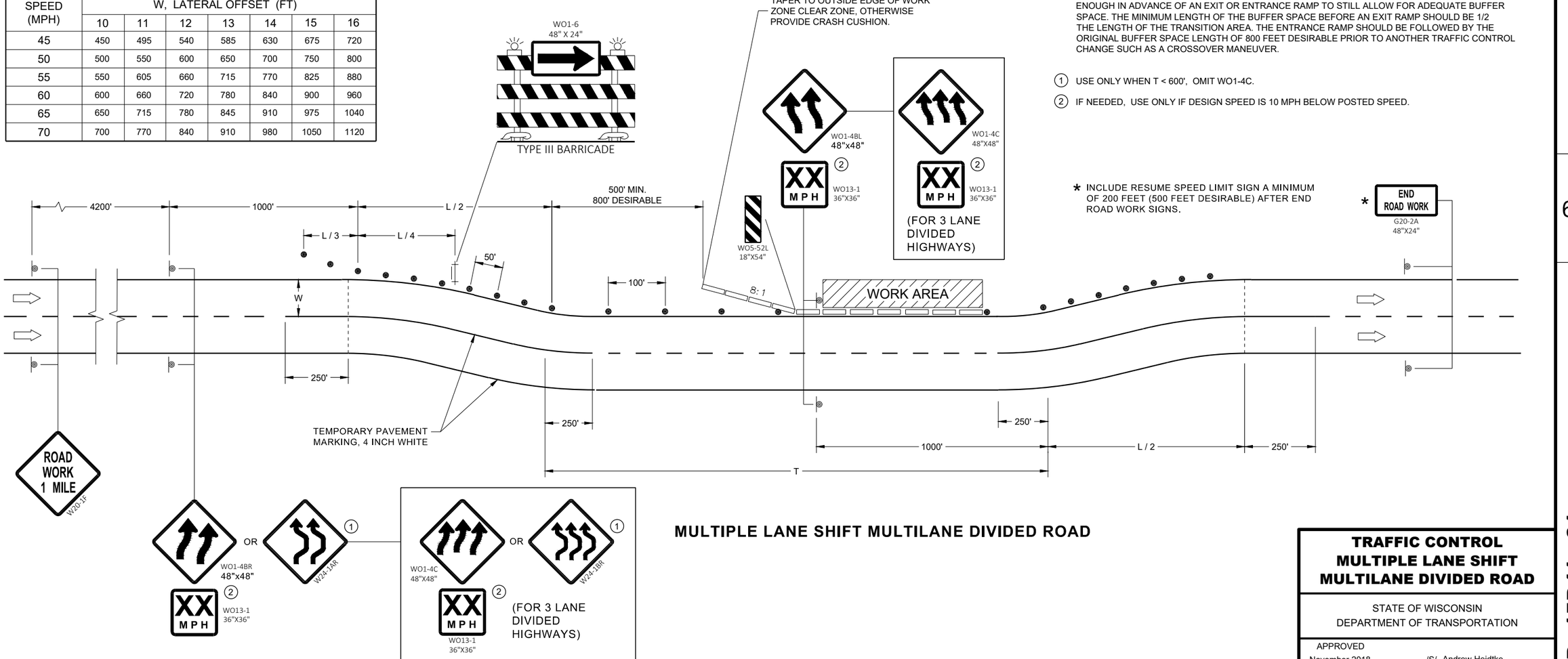
REMOVE PAVEMENT MARKINGS IF LANE CLOSURE IS TO BE IN PLACE FOR LONGER THAN 4 OR MORE DAYS AND NIGHTS.

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.



MULTIPLE LANE SHIFT MULTILANE DIVIDED ROAD

TRAFFIC CONTROL
MULTIPLE LANE SHIFT
MULTILANE DIVIDED ROAD

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2018 — DATE
/S/ Andrew Heidtke — WORK ZONE ENGINEER

FHWA

305

6

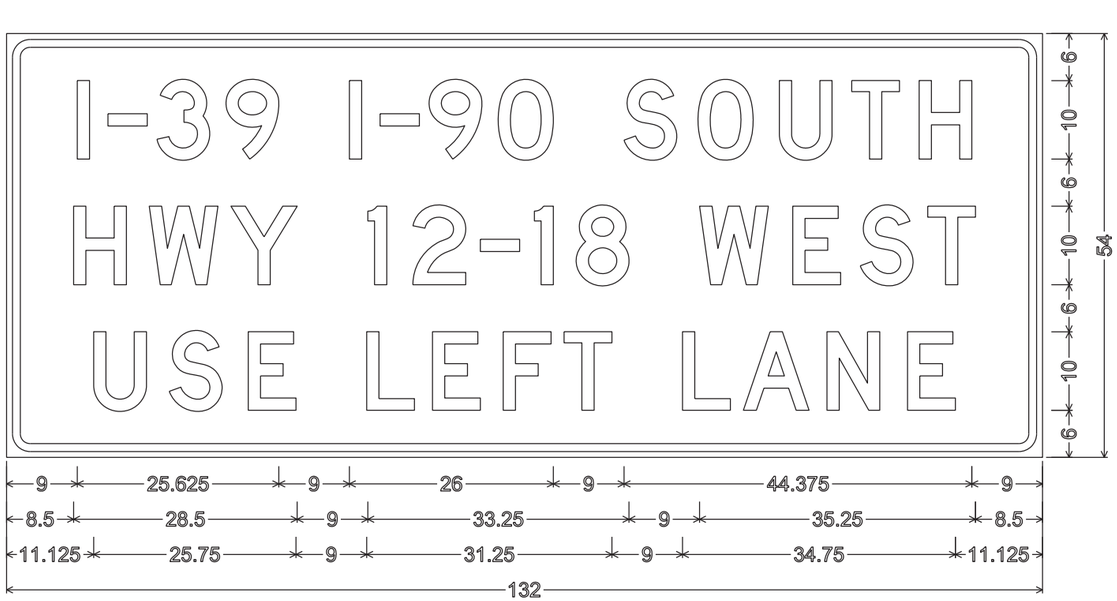
SDD 15D41 - 01

6

SDD 15D41 - 01

NOTES

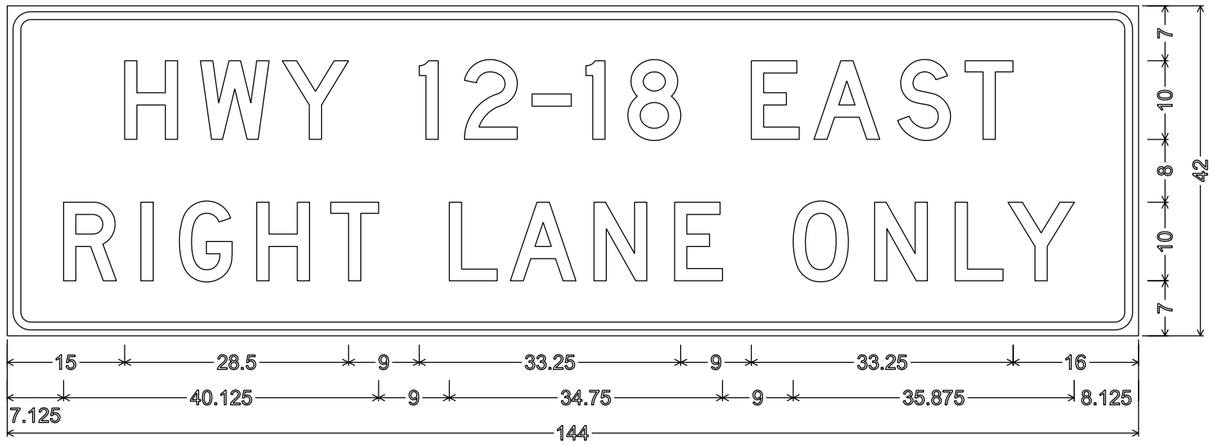
1. All Signs Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - D



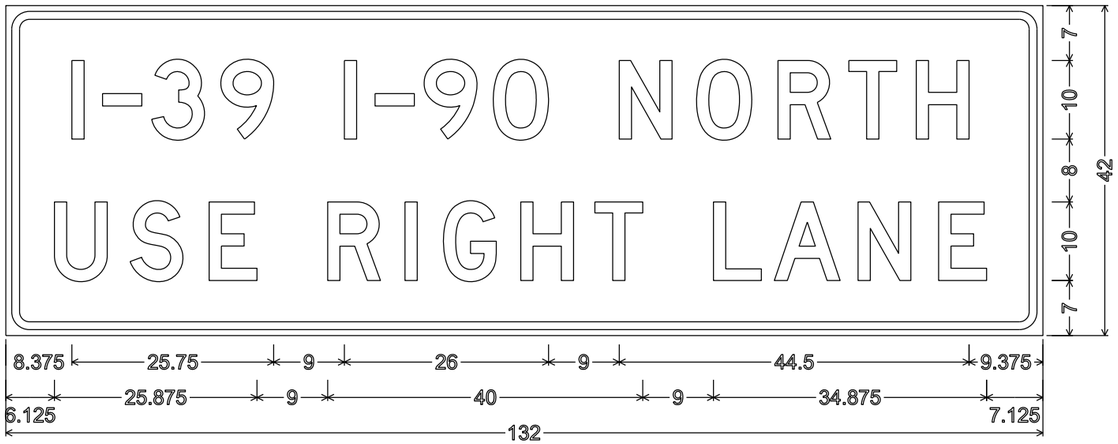
3.000" Radius, 1.000" Border, 0.750" Indent

7

7



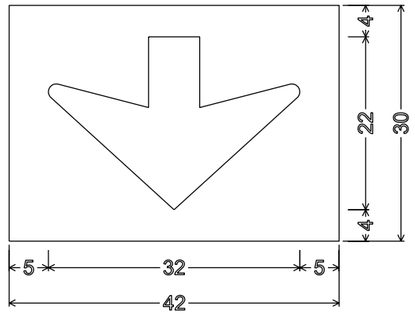
3.000" Radius, 1.000" Border, 0.750" Indent



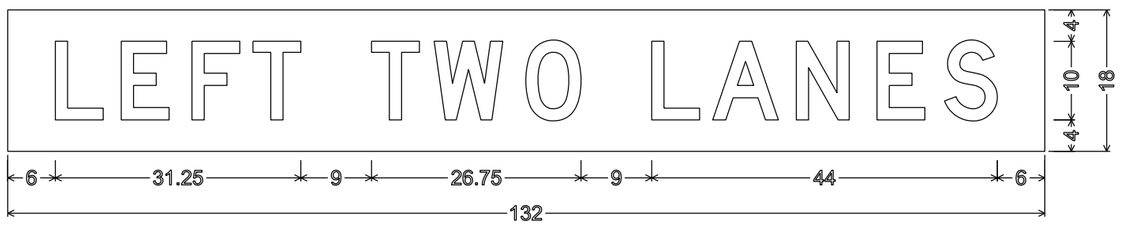
3.000" Radius, 1.000" Border, 0.750" Indent

NOTES

1. All Signs Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - D

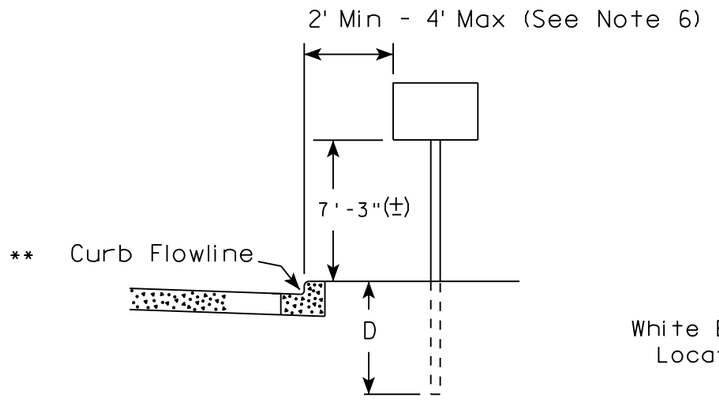


No border

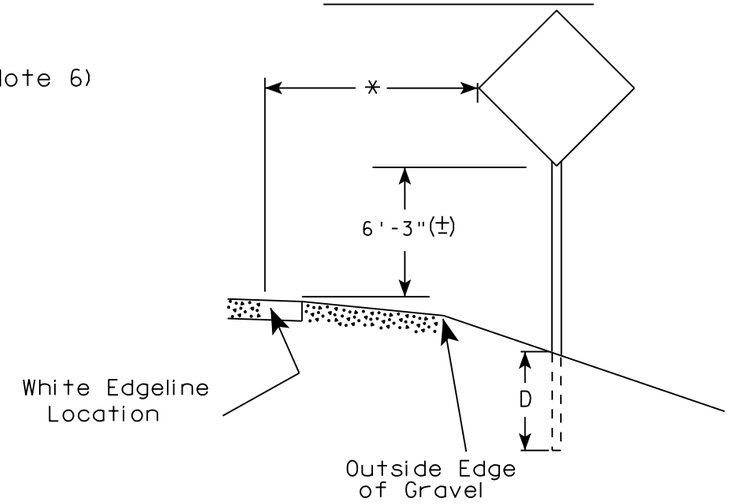


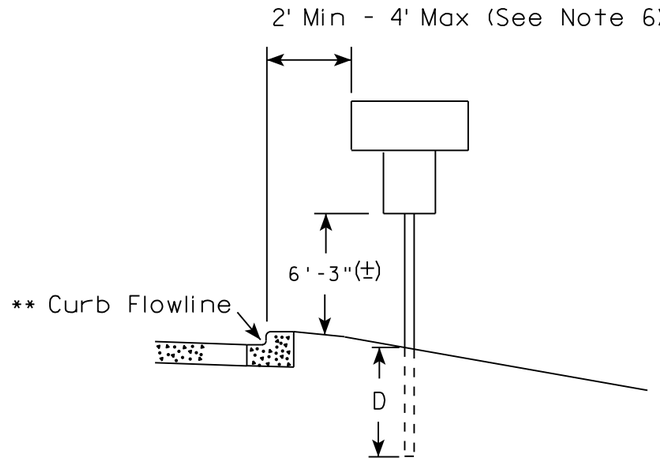
No border

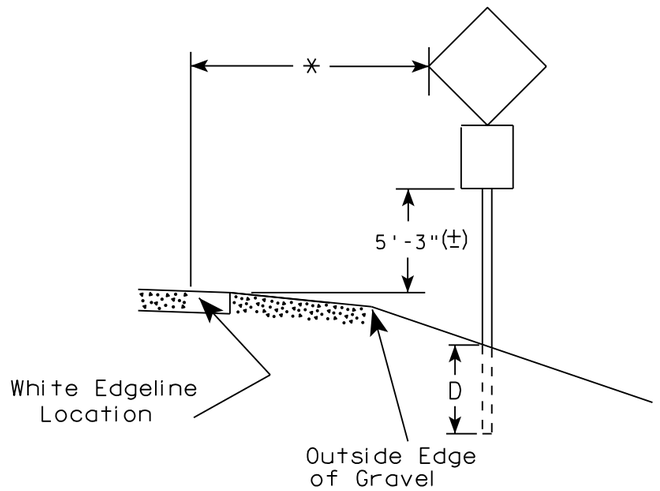
URBAN AREA



RURAL AREA (See Note 2)







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

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

GENERAL NOTES

1. Signs wider than 4 feet or 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.
2. If signs are mounted on barrier wall, see A4-10 sign plate.
3. For expressways and freeways, mounting height is 7'- 3" (±) or 6'-3" (±) depending upon existence of a sub-sign.
4. J-Assemblies are considered to be one sign for mounting height.
5. Minimum mounting height for signs mounted on traffic signal poles is 5'- 3" (±).
6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
7. The (±) tolerance for mounting height is 3 inches.
8. Folding signs shall be mounted at a height of 5'-3" (±) or as directd by the Engineer.
9. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), 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" (±).

POST EMBEDMENT DEPTH

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

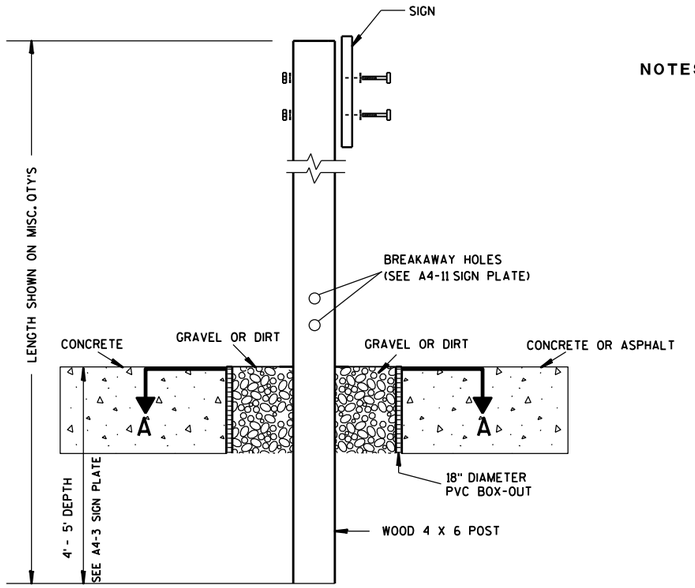
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 8/21/17 PLATE NO. A4-3.21

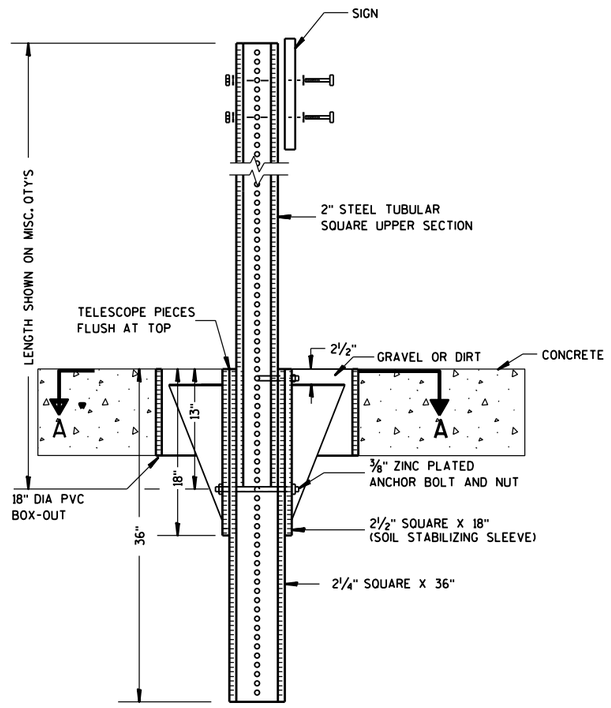
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 308	E



ELEVATION VIEW

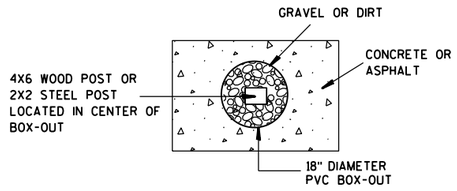
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

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



ELEVATION VIEW

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



PLAN VIEW

FOR NEW CONCRETE/ASPHALT INSTALLATIONS

SIGN POST BOX-OUTS A4-3B

WISCONSIN DEPT OF TRANSPORTATION

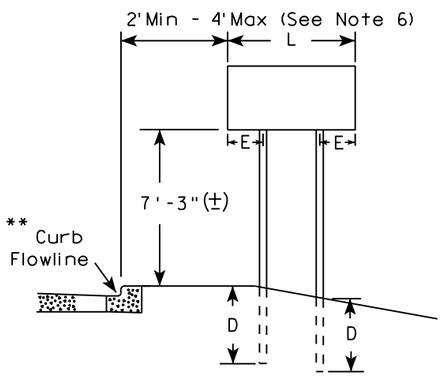
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 1/27/14 PLATE NO. A4-3B.1

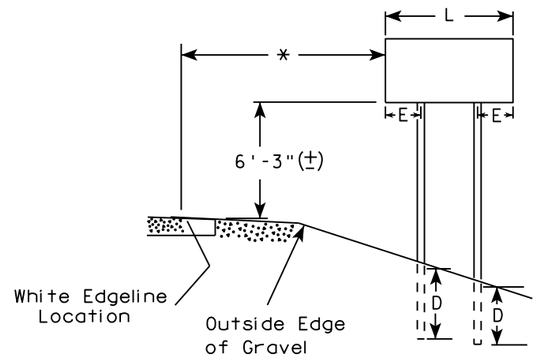
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

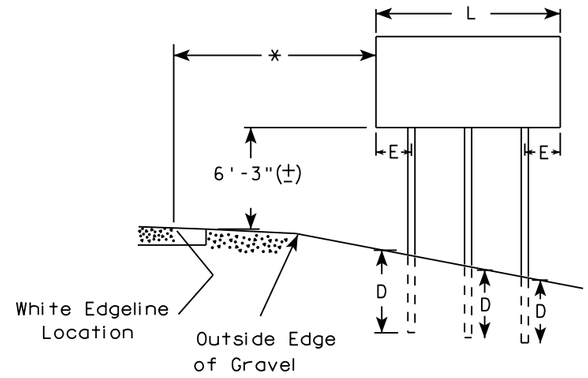
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A43B.DGN PLOT DATE : 27-JAN-2014 09:48 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 13.659812:1.000000 WISDOT/CADDS SHEET 42

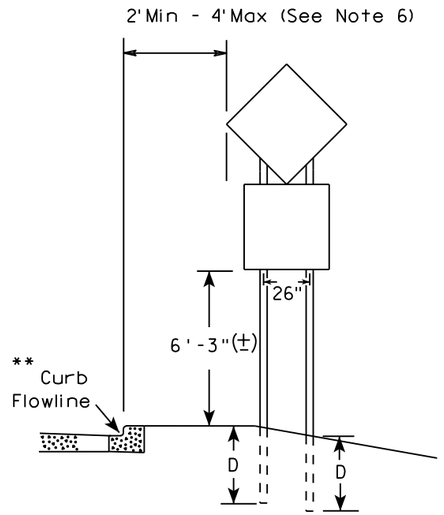
URBAN AREA



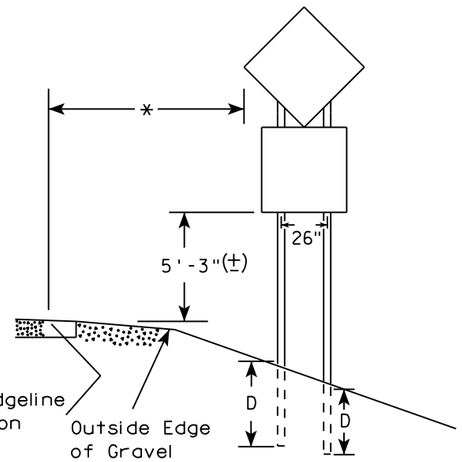
RURAL AREA (See Note 3)







48" DIAMOND WARNING SIGN



48" DIAMOND WARNING SIGN

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

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

GENERAL NOTES

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

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

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

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

POST EMBEDMENT DEPTH

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

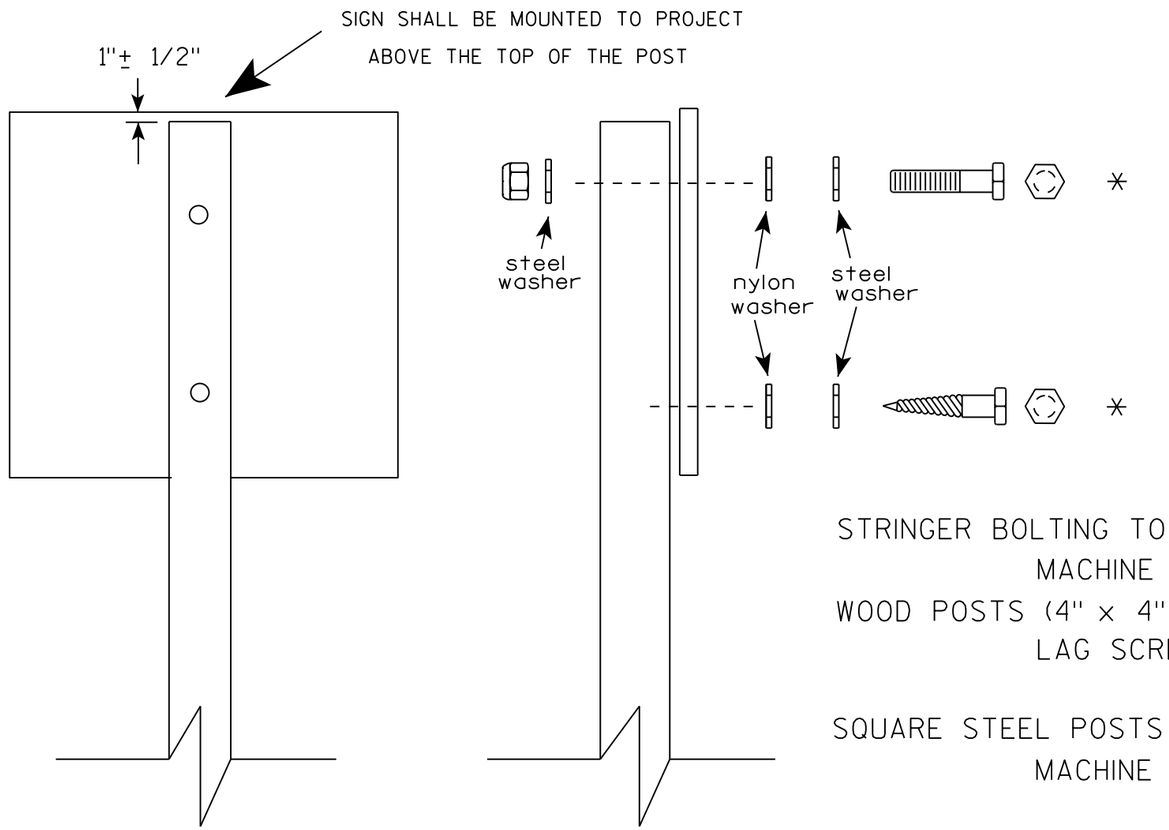
TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 8/21/17 PLATE NO. A4-4.15

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 310	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 4" or 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

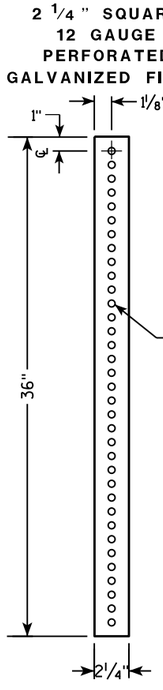
DATE 8/11/16 PLATE NO. A4-8.8

PROJECT NO: SHEET NO: E

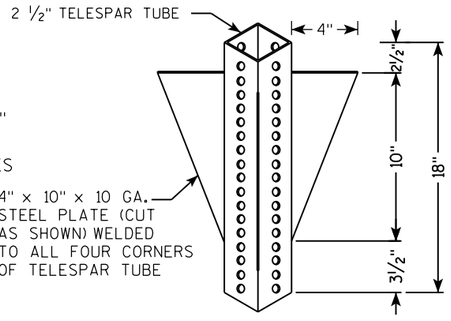
FILE NAME : C:\CAEfiles\Projects\tr_stdplate\A48.DGN PLOT DATE : 11-AUG-2016 11:35 PLOT BY : $$ plotuser $$

TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM

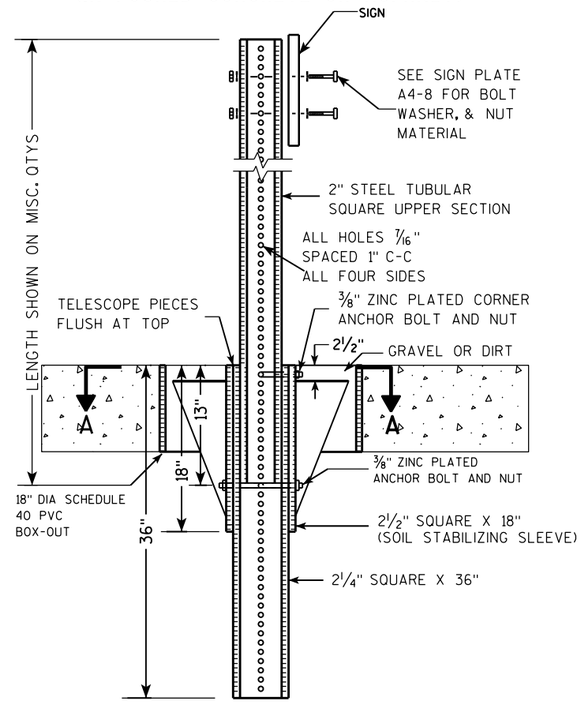
2 1/4 " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



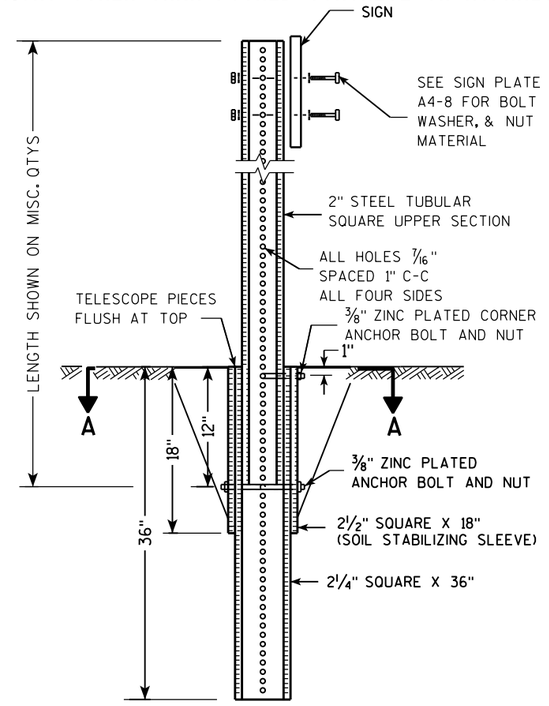
2 1/2 " SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH

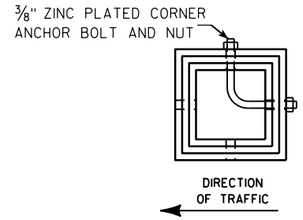


DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



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).

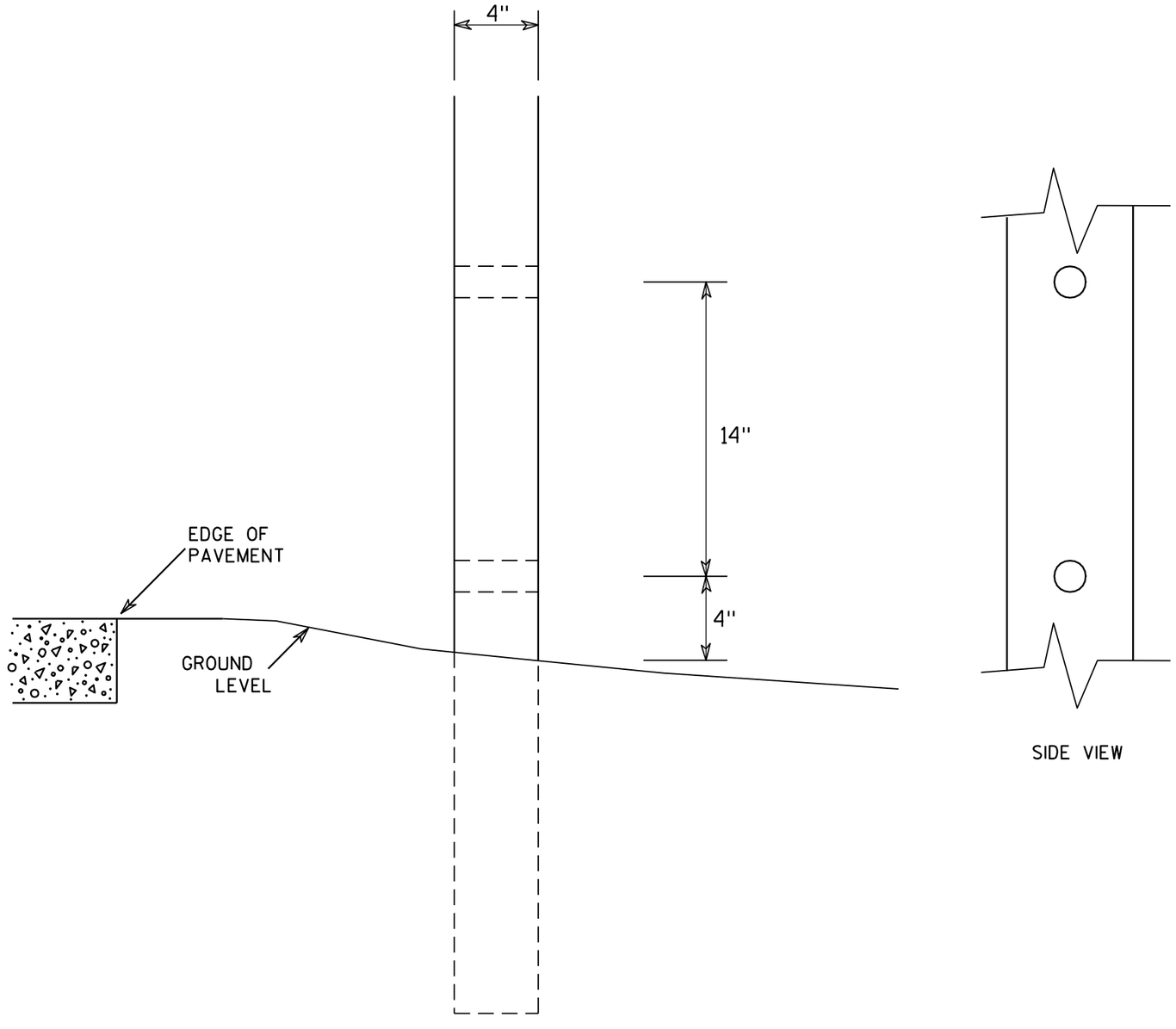
TUBULAR STEEL
SIGN POST
A4-9

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/05/15 PLATE 312 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.

4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

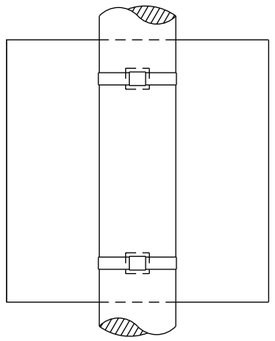
APPROVED Chester J Spang for State Traffic Engineer

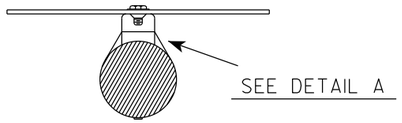
DATE 3/27/97 PLATE NO. A4-11.2

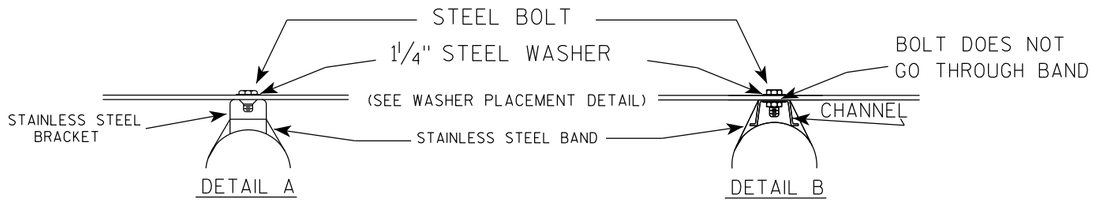
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 313	E

BANDING

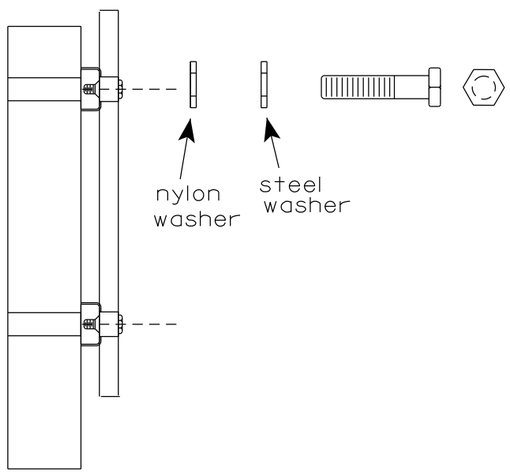
SINGLE SIGN







WASHER PLACEMENT

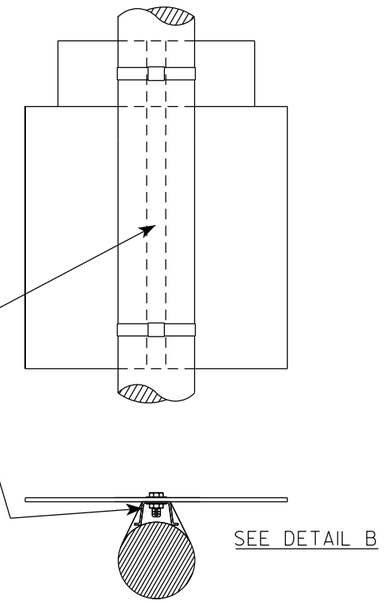


WASHERS (ALL POSTS) -
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON
FOR ALL TYPE H SIGNS

GENERAL NOTES

1. Any sign over 3 feet in width shall use the V-Block banding method. See A5-10 standard plate.
2. Signs 3 feet or greater in height shall have three bracket bands installed. Signs less than 3 feet in height shall have two bracket bands installed.
3. Banding and assembly bracket shall be stainless steel. All bands shall be ¾" in width and 0.025" thickness.
4. ALL SIGN MOUNTING BOLTS AND WASHERS SHALL BE EITHER:
   a. Hot dip or mechanically galvanized in accordance with ASTM Designation: A 153, Class D
   b. Electro-galvanized in accordance with ASTM designation: B 633, Type III, SC 3

"J" ASSEMBLY



STANDARD SIGN
SIGN BANDING DETAILS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

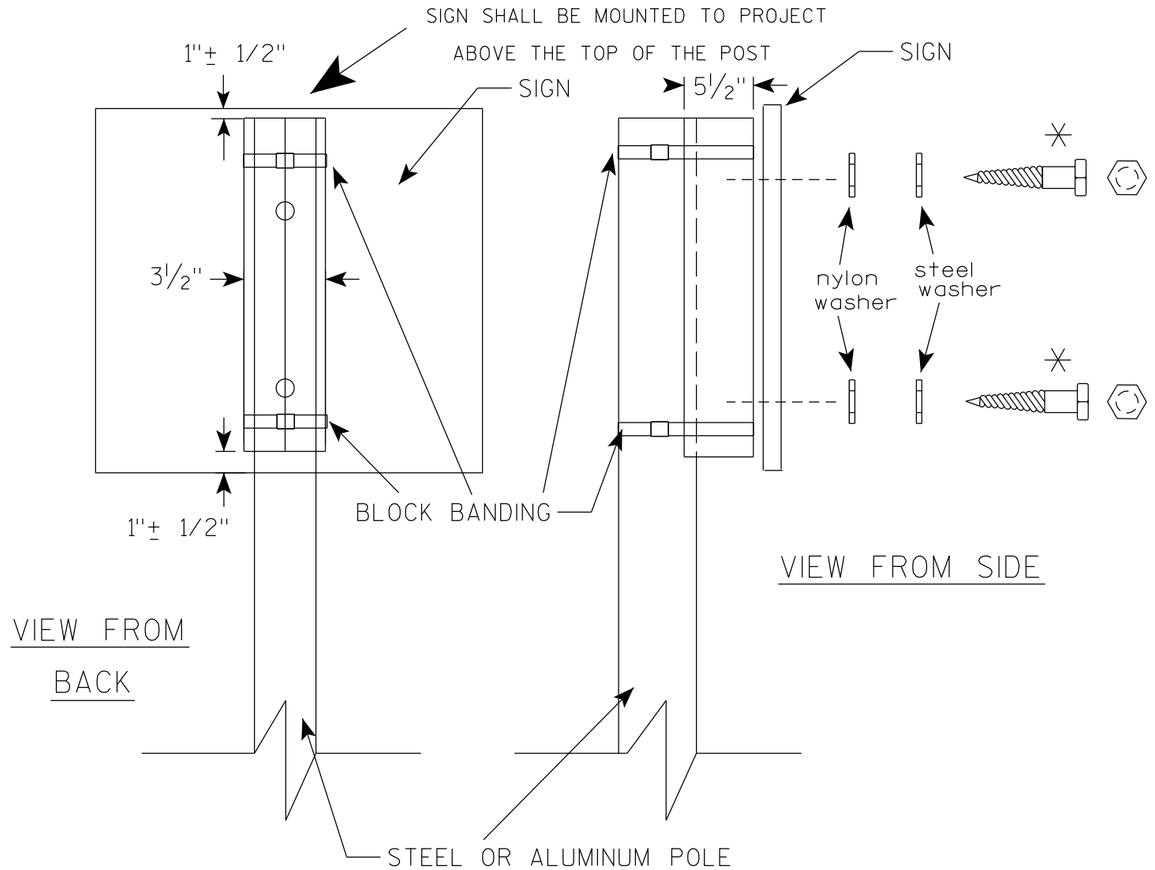
DATE 6/10/19 PLATE NO. A5-9.4

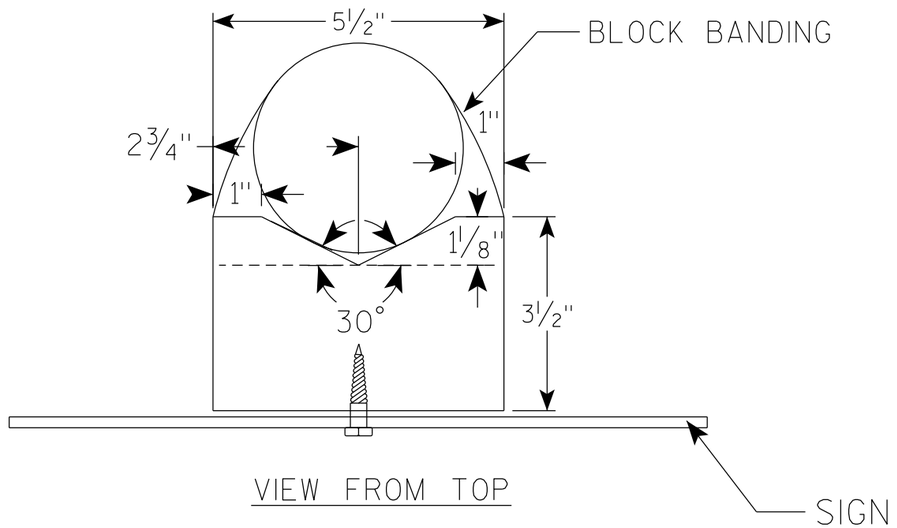
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 314	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\A59.dgn PLOT DATE : 10-JUN 2019 4:10 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 42

7

7





GENERAL NOTES

1. WOOD 4"X6" POST MATERIAL SHALL CONFORM TO 507.2.2 OF THE WisDOT STANDARD SPECIFICATIONS
2. BLOCK BANDING AND CLIPS SHALL BE STAINLESS STEEL, ¾" WIDTH AND 0.025" THICKNESS
3. SIGNS 3' OR GREATER IN HEIGHT SHALL UTILIZE 3 BLOCK BANDS. SIGNS UNDER 3' IN HEIGHT SHALL UTILIZE 2 BLOCK BANDS
4. ACTUAL NUMBER OF FASTENERS PER SIGN VARIES WITH THE SIGN AREA, BUT NORNALLY THERE ARE TWO. FOR SIGNS GREATER THAN 9 S.F. 3 FASTENERS SHALL BE USED.
5. ALL SIGN MOUNTING BOLTS AND WASHERS SHALL BE EITHER:
   a. Hot dip or mechanically galvanized in accordance with ASTM Designation: A 153, Class D
   b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3
6. ALL BOLTS SHALL HAVE HEXAGONAL HEADS.
7. STEEL WASHERS SHALL BE 1¼" O.D. X ⅜" I.D. X 1/16"
8. NYLON WASHERS SHALL BE 1¼" O.D. X ⅜" I.D. X .080 FOR TYPE H OR TYPE F FACE SIGN

✳ LAG BOLTS SHALL BE ⅜" X 2½"

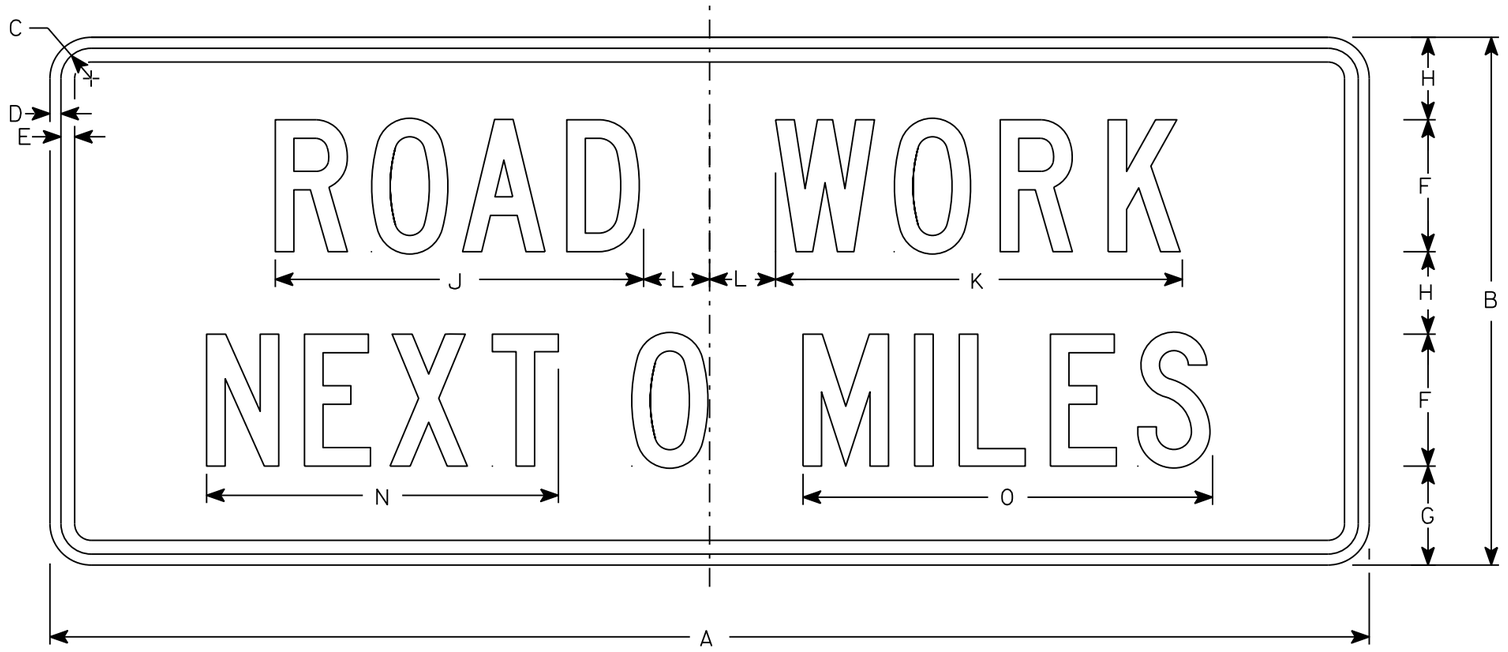
BLOCK BANDING DETAIL (V-BLOCK OPTION)

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 6/10/19 PLATE NO. A5-10.2

PROJECT NO:				SHEET NO: 315	E



G20-1

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. Round distance to nearest whole Mile and 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																											
2	60	24	1 3/8	1/2	5/8	6	4 1/2	3 3/4		16 3/4	18 1/2	3		16	18 5/8												10
3																											
4	60	24	1 3/8	1/2	5/8	6	4 1/2	3 3/4		16 3/4	18 1/2	3		16	18 5/8												10
5																											

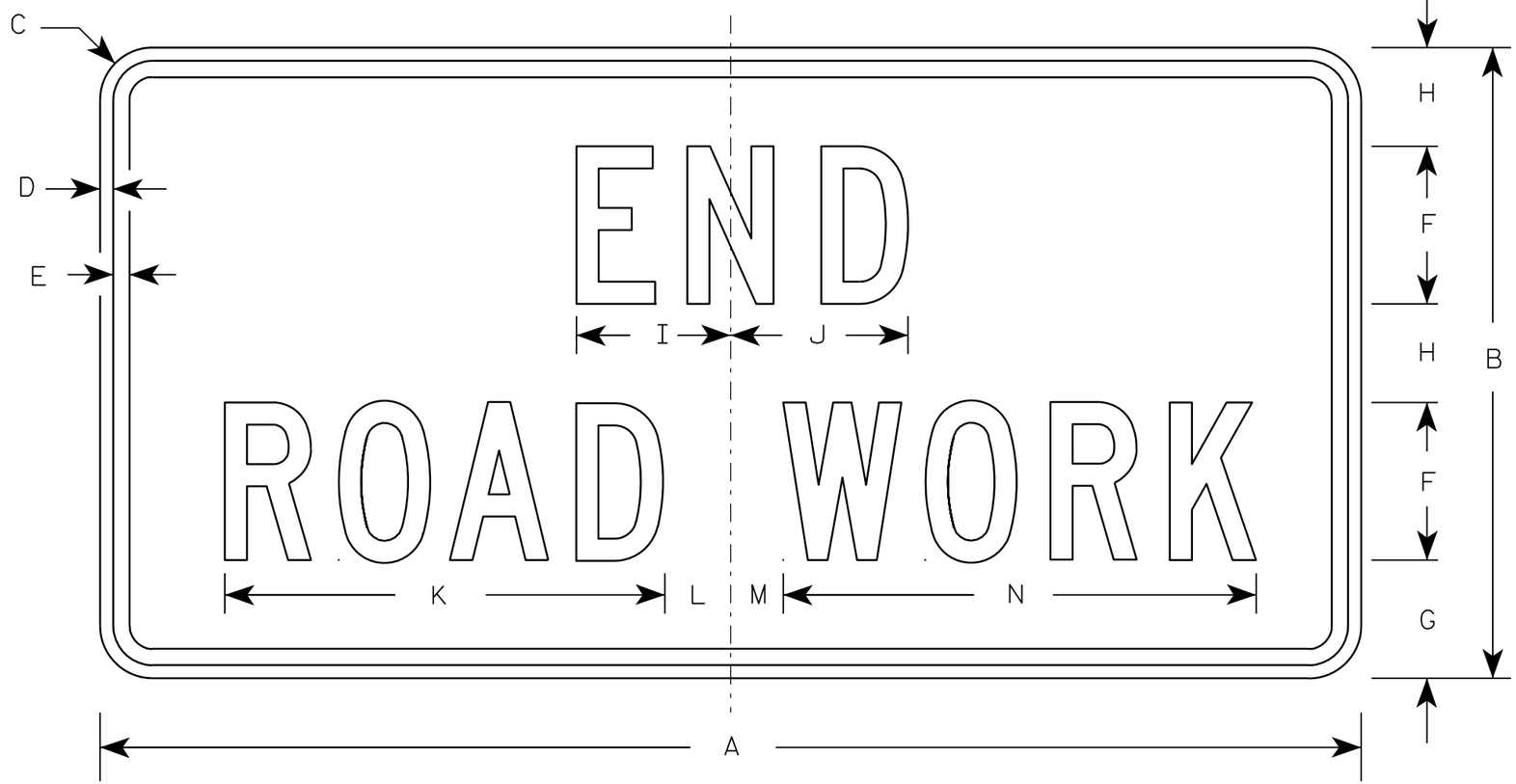
STANDARD SIGN
G20-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/14/17 PLATE NO. G20-1.8

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 316 | E



G20-2A

NOTES

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

Metric equivalent for this sign is:

SIZE	
1	900 mm X 450 mm
2	1200 mm X 600 mm
3	1200 mm X 600 mm
4	1200 mm X 600 mm
5	1200 mm X 600 mm

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.	Area m2
1	36	18	1 1/8	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	0.41
2	48	24	1 1/2	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	0.72
3	48	24	1 1/2	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	0.72
4	48	24	1 1/2	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	0.72
5	48	24	1 1/2	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	0.72

STANDARD SIGN
G20-2A

WISCONSIN DEPT OF TRANSPORTATION

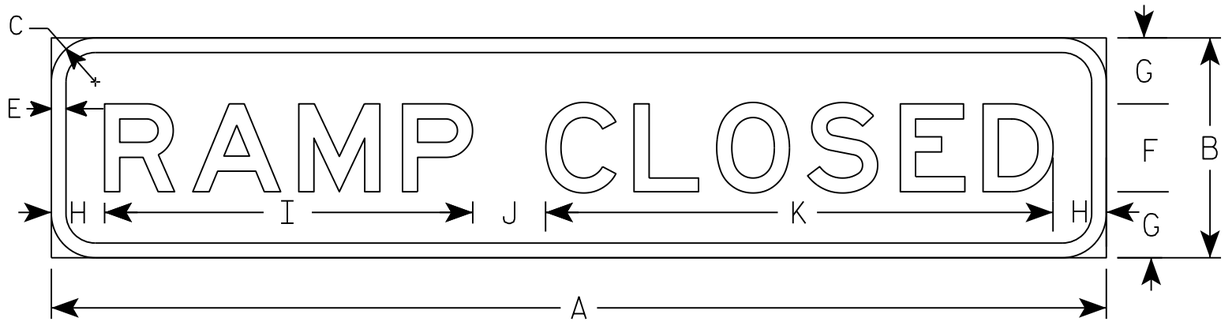
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 9/30/09 PLATE NO. G20-2A.8

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 317	E

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - E



G20-64

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2																											
3																											
4	144	30	6		2	12	9	7 1/4	50 1/4	10	69 1/4																30.0
5																											

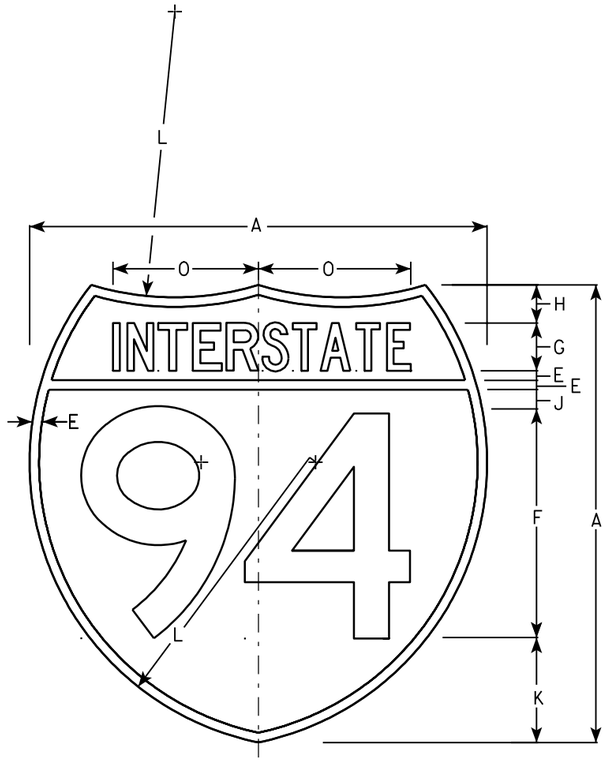
STANDARD SIGN
G20-64

WISCONSIN DEPT OF TRANSPORTATION

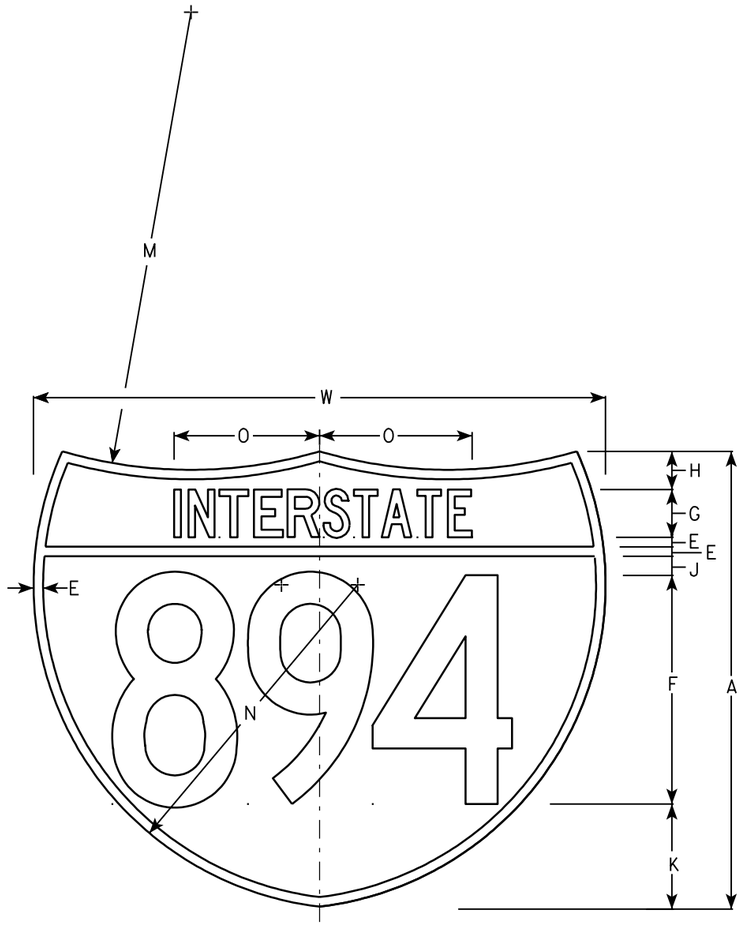
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/13/18 PLATE NO. G20-64.1

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 318 E



M1-1



M1-1A

NOTES

1. Sign is Type II - See Note 6 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Top Red - Bottom Blue (See Note 6)
   Message - White - See Note 6
3. Message Series - See note 5
4. Substitute appropriate numerals & ajust spacing as per plate A10-1.
5. M1-1 - Numerals - D
   Interstate - C
   M1-1A - All copy - C
6. Permanent Signs
   Message - Type H Reflective
   Detour or other temporary signs
   Background - Reflective
   Message - Reflective

Metric equivalent for these signs are:

SIZE	M1-1	SIZE	M1-1A
1			
2	600 mm X 600 mm	2	600 mm X 750 mm
3	900 mm X 900 mm	3	900 mm X 1125 mm
4	900 mm X 900 mm	4	900 mm X 1125 mm
5	900 mm X 900 mm	5	900 mm X 1125 mm

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	M1-1 Area sq. ft.	M1-1A Area sq. ft.	M1-1 Area m2	M1-1A Area m2
1																													
2	24				1/2	12	2 1/2	2		1	5 1/2	15	24	17	7 7/8								30			3.13	3.91	.36	.46
3	36				3/4	18	3 3/4	3		1 1/2	8 1/4	22 1/2	36	25 1/2	11 3/4								45			7.03	8.79	.81	1.05
4	36				3/4	18	3 3/4	3		1 1/2	8 1/4	22 1/2	36	25 1/2	11 3/4								45			7.03	8.79	.81	1.05
5	36				3/4	18	3 3/4	3		1 1/2	8 1/4	22 1/2	36	25 1/2	11 3/4								45			7.03	8.79	.81	1.05

INTERSTATE ROUTE MARKER
M1-1 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

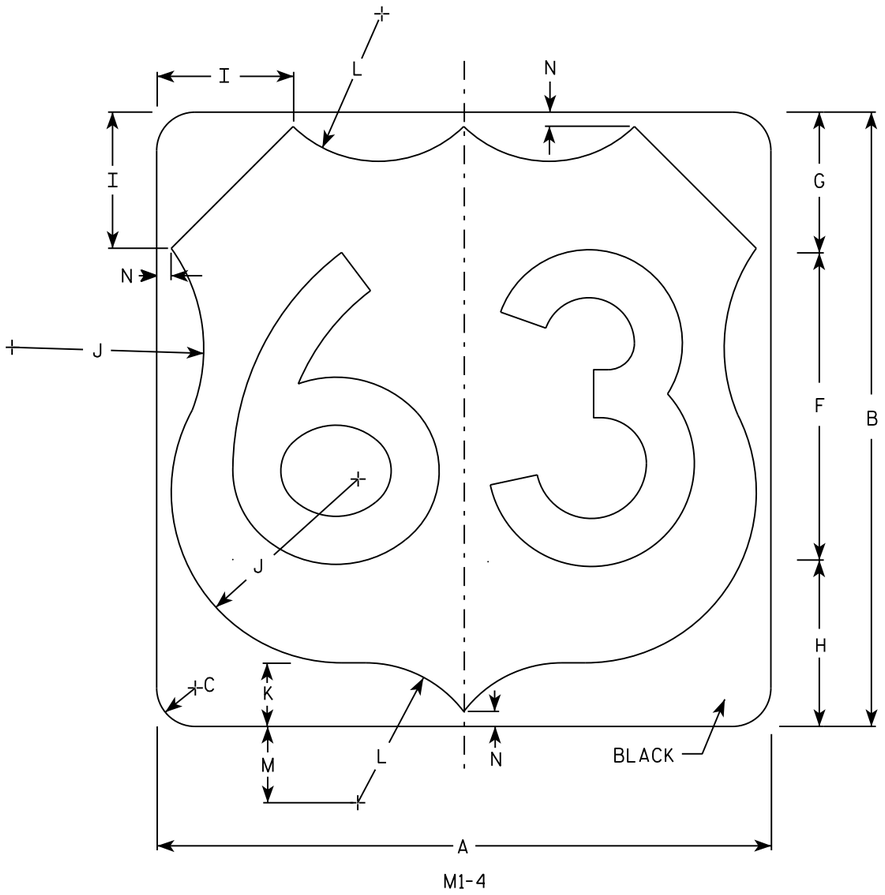
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 08/23/05 PLATE NO. M1-1.8

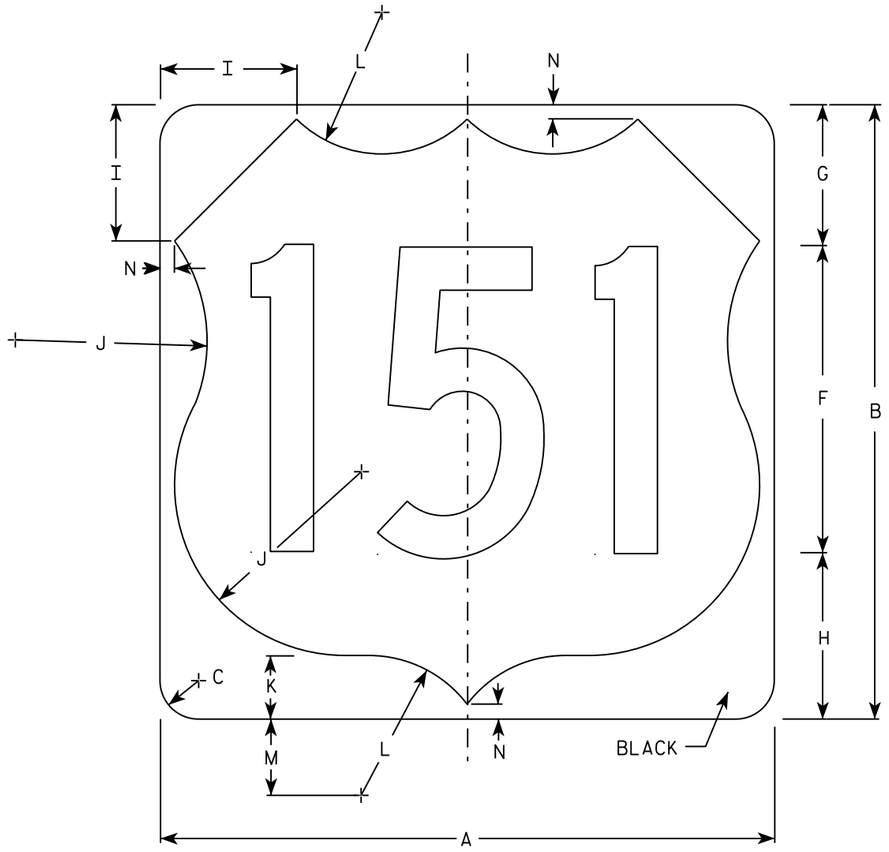
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 319	E

NOTES

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



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
3	36	36	2 1/4			18	8 1/4	9 1/4	7 1/4	11 1/4	3 3/4	8 1/4	4 1/2	3/4													9.0
4	36	36	2 1/4			18	8 1/4	9 1/4	7 1/4	11 1/4	3 3/4	8 1/4	4 1/2	3/4													9.0
5	36	36	2 1/4			18	8 1/4	9 1/4	7 1/4	11 1/4	3 3/4	8 1/4	4 1/2	3/4													9.0

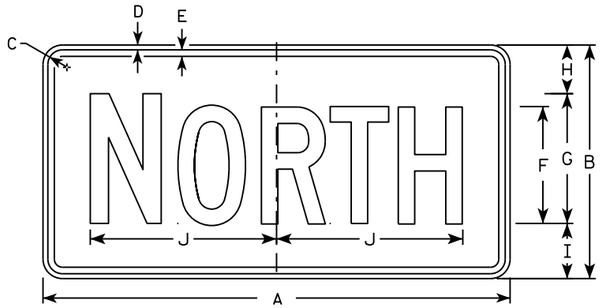
USH MARKER
M1-4 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

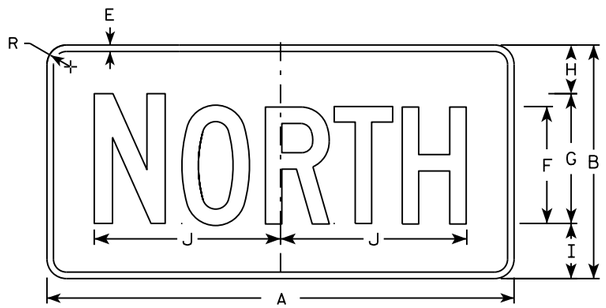
APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 320	E



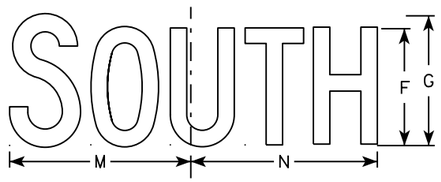
M3-1
MM3-1
MP3-1



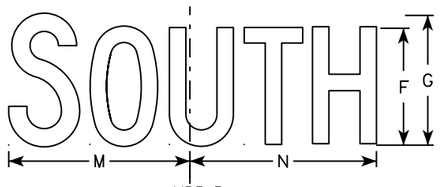
MB3-1
MK3-1
MN3-1

M3-2
MM3-2
MP3-2

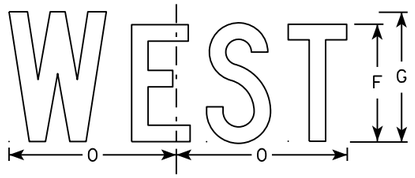
MB3-2
MK3-2
MN3-2



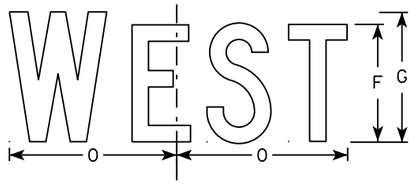
M3-3
MM3-3
MP3-3



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
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																											
2	24	12	1 1/8	3/8	3/8	6	7	2 1/4	2 3/4	10 1/4	7 7/8	8 3/8	10 1/4	9 3/4	8 3/4			1 1/2									2.00
3	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5
4	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5
5	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5

STANDARD SIGNS
M3-1 thur M3-4
SERIES

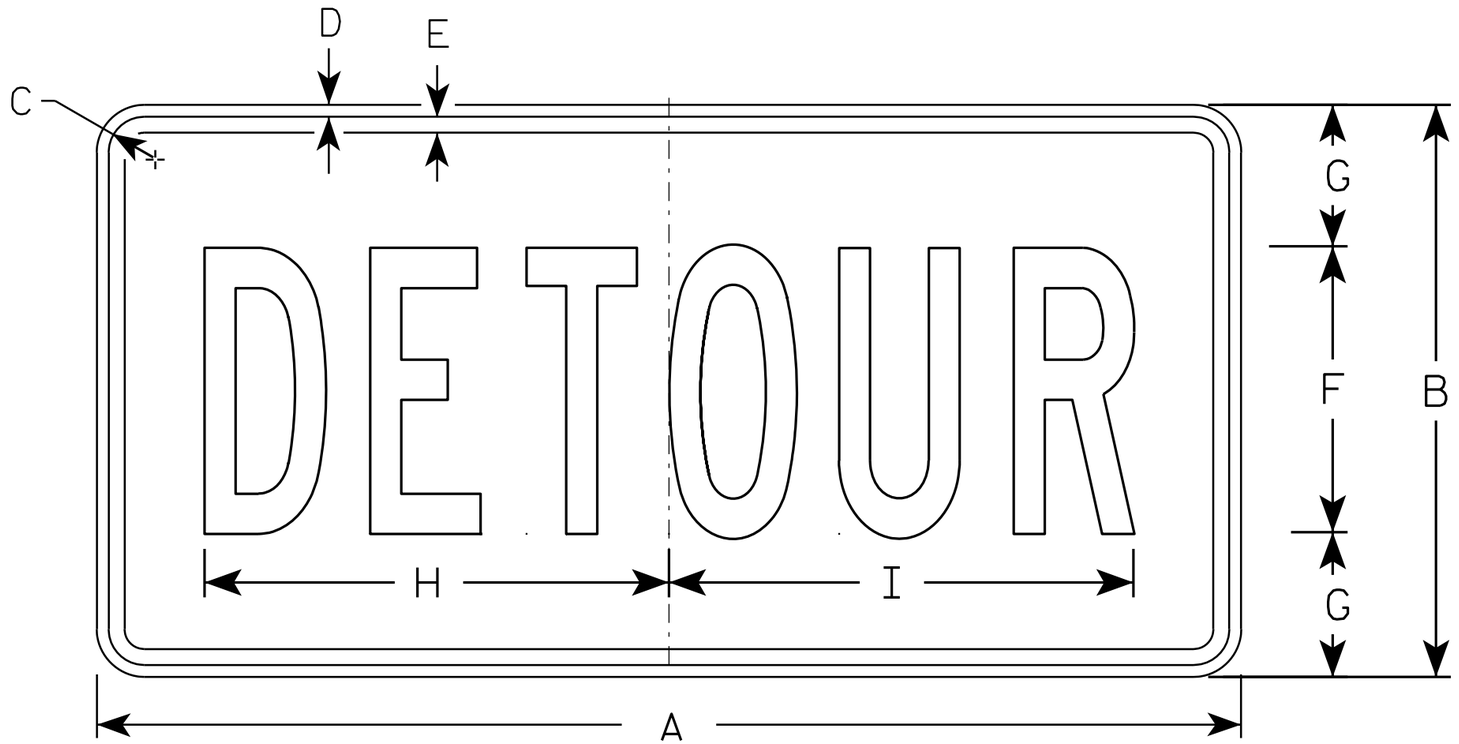
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew P Rauch for State Traffic Engineer

DATE 10/15/15 PLATE NO M3-1.14

PROJECT NO: | HWY: | COUNTY: | SHEET NO: E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\M31.DGN PLOT DATE : 01-DEC-2015 17:54 PLOT BY : $$ plotuser $$ PLOT NAME : PLOT SCALE : 11.675051:1.000000



M4-8

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - B
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																											
2	24	12	1 1/8	3/8	3/8	6	3	10	10 1/4																		2.0
3	36	18	1 1/8	3/8	1/2	9	4 1/2	14 5/8	14 1/2																		4.5
4																											
5																											

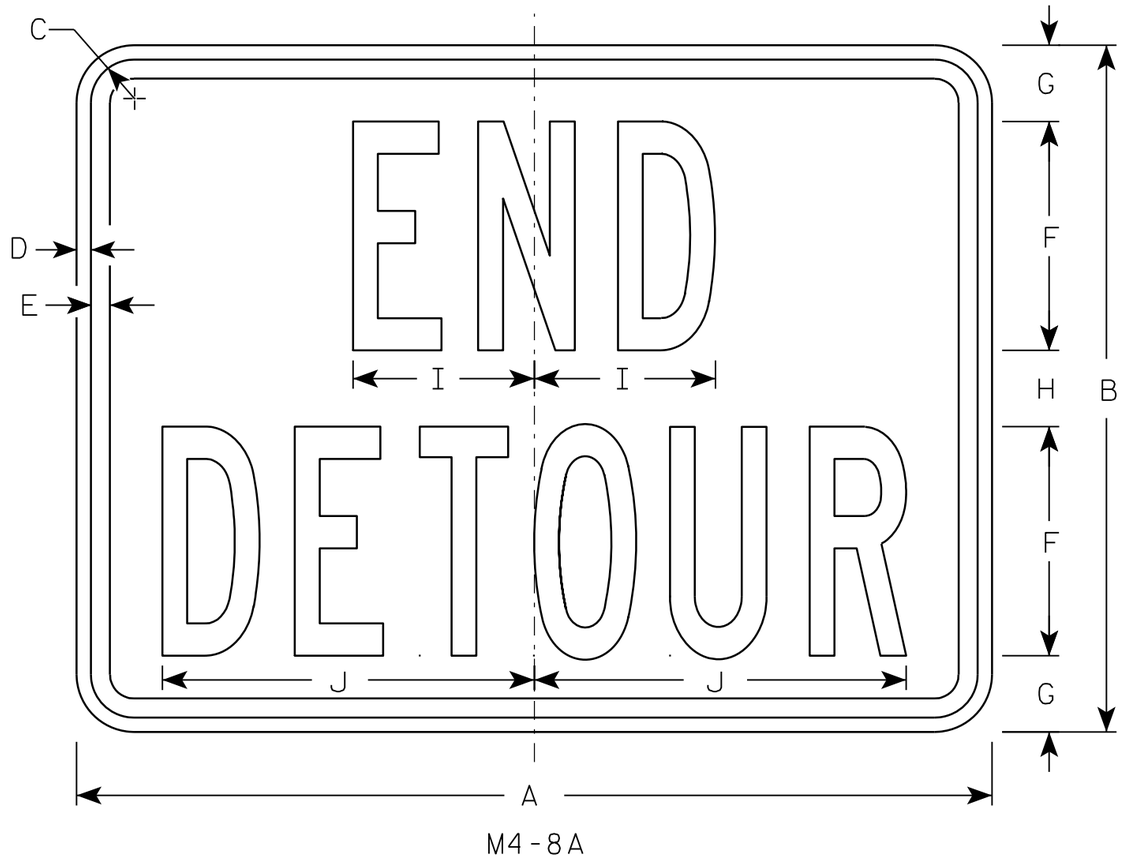
STANDARD SIGN
M4-8

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/10/10 PLATE NO. M4-8.2

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 322	E



M4-8A

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - B
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																											
2	24	18	1 1/8	3/8	1/2	6	2	2	4 3/4	9 3/4																	3.0
3	30	24	1 1/8	3/8	1/2	8	2 1/2	3	6 3/4	13																	5.0
4																											
5																											

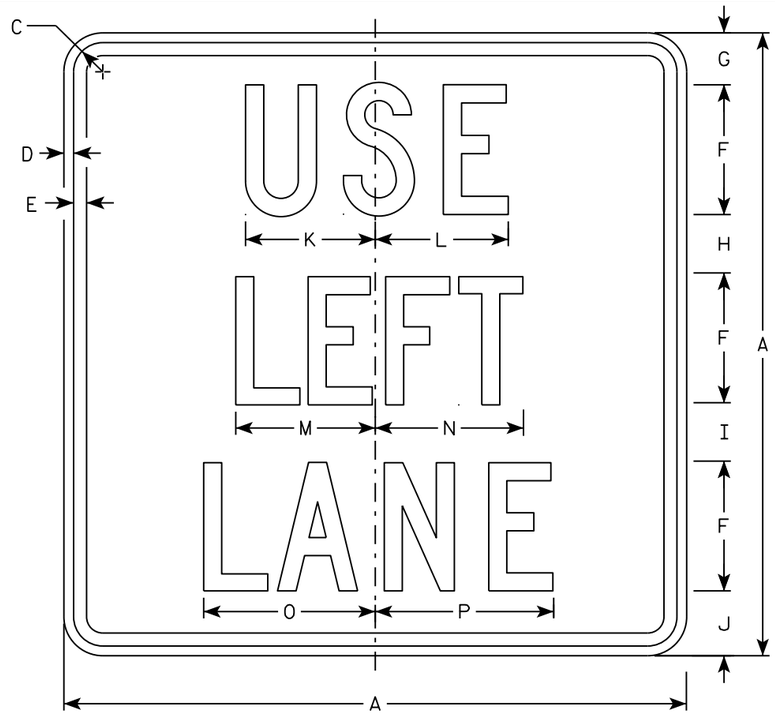
STANDARD SIGN
M4-8A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/9/11 PLATE NO. M4-8A.2

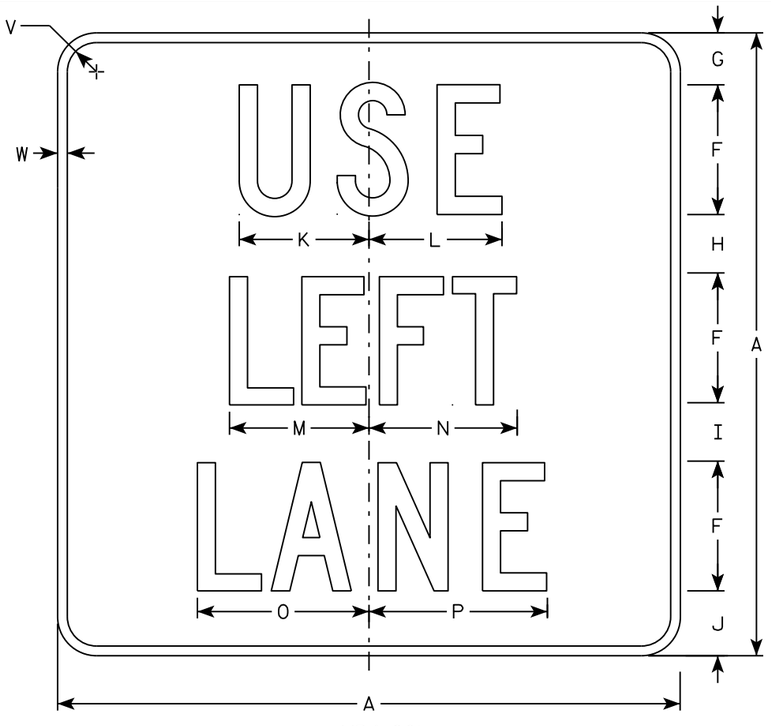
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 323	E



M4-20L

A

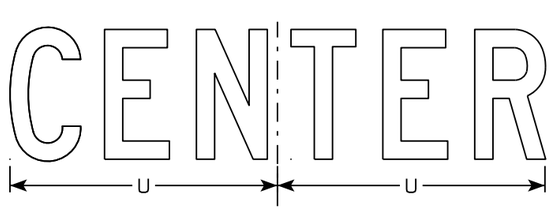
M4-20L
MM4-20L
M04-20L
MP4-20L



MB4-20L

A

MB4-20L
MK4-20L
MN4-20L
MR4-20L



M4-20C
MB4-20C
MK4-20C
MM4-20C
MN4-20C
M04-20C
MP4-20C
MR4-20C

M4-20R
MB4-20R
MK4-20R
MM4-20R
MN4-20R
M04-20R
MP4-20R
MR4-20R

NOTES

1. Sign is Type II - Type H except as Shown
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. M4-20 Background - White
   Message - Black
   MB4-20 Background - Blue
   Message - White
   MK4-20 Background - Green
   Message - White
   MM4-20 Background - White
   Message - Green
   MN4-20 Background - Brown
   Message - White
   M04-20 Background - Orange - Type F Reflective
   Message - Black
   MP4-20 Background - White
   Message - Blue
   MR4-20 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																											
2	24		1 1/8	3/8	1/2	5	2	2 1/4	2 1/4	2 1/2	5	5 1/8	5 3/8	5 3/4	6 5/8	6 7/8			7	7 5/8	10 1/4	1 1/2	1/2				4.0
3	36		1 5/8	5/8	3/4	7	4	3	3 1/2	4 1/2	7 1/2	7 3/4	8	8 5/8	9 7/8	10 1/4			10 3/8	11 3/8	14 3/8	1 7/8	1/2				9.0
4																											
5																											

STANDARD SIGN
M4-20

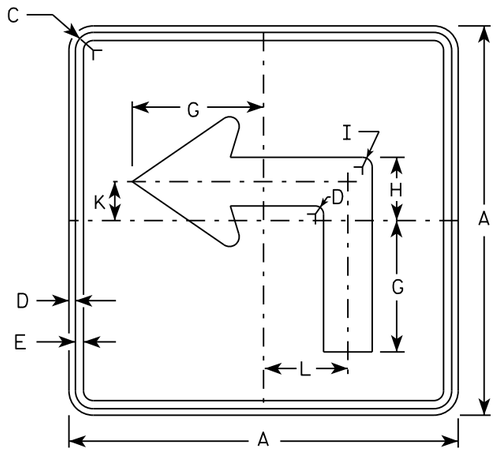
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

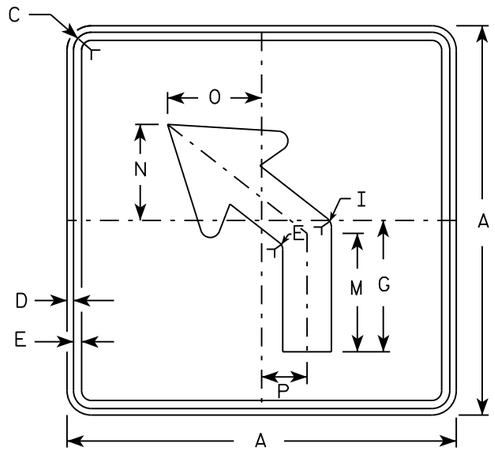
DATE 10/15/15 PLATE NO M4-20.5

PROJECT NO: | HWY: | COUNTY: | SHEET NO: E

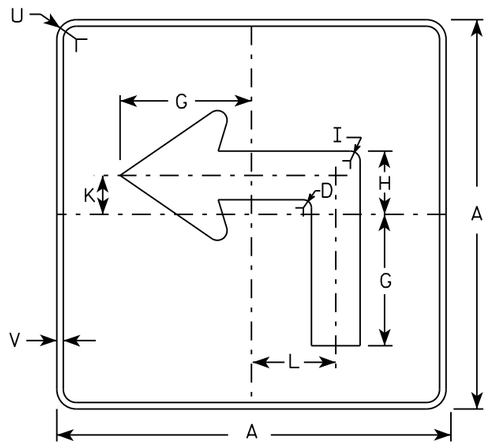
FILE NAME : C:\CAEfiles\Projects\tr_stdplate\M420.DGN PLOT DATE : 01-DEC-2015 18:03 PLOT BY : $$ plotuser $$ PLOT NAME : PLOT SCALE : 5.837526:1.000000



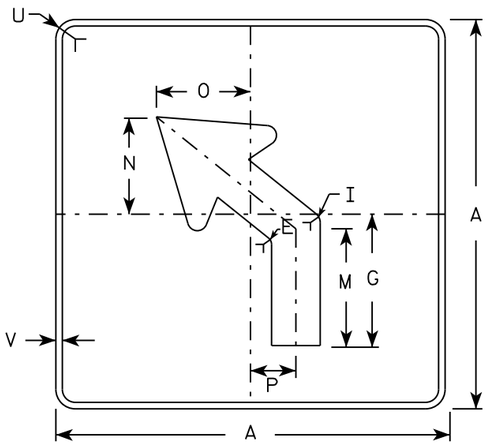
M5-1L
MM5-1L
MO5-1L
MP5-1L



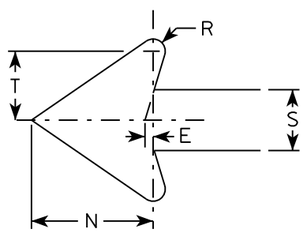
M5-2L
MM5-2L
MO5-2L
MP5-2L



MB5-1L
MK5-1L
MN5-1L
MR5-1L



MB5-2L
MK5-2L
MN5-2L
MR5-2L



NOTES

1. Signs are Type II - Type H reflective except as shown
2. Color:
   Background - See note 4
   Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. M5-1 and M5-2 Background - White
   Message - Black
   MB5-1 and MB5-2 Background - Blue
   Message - White
   MK5-1 and MK5-2 Background - Green
   Message - White
   MM5-1 and MM5-2 Background - White
   Message - Green
   MN5-1 and MN5-2 Background - Brown
   Message - White
   MO5-1 and MO5-2 Background - Orange - Type F Reflective
   Message - Black
   MP5-1 and MP5-2 Background - White - Type H Reflective
   Message - Blue
   MR5-1 and MR5-2 Background - Brown
   Message - Yellow
5. M5-1R same as M5-1L except arrow points right.
6. M5-2R same as M5-2L except arrow tilts right.

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	21		1 1/8	3/8	3/8		7	3 3/8	5/8		2 1/8	4 1/2	6 3/8	5 1/4	5	2 1/2		1/2	2 5/8	3	1 1/2	1/2					3.06
3	30		1 3/8	1/2	5/8		10 1/8	4 7/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4	1 7/8	1/2					6.25
4	30		1 3/8	1/2	5/8		10 1/8	4 7/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4	1 7/8	1/2					6.25
5	30		1 3/8	1/2	5/8		10 1/8	4 7/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4	1 7/8	1/2					6.25

STANDARD SIGN
M5-1 & M5-2

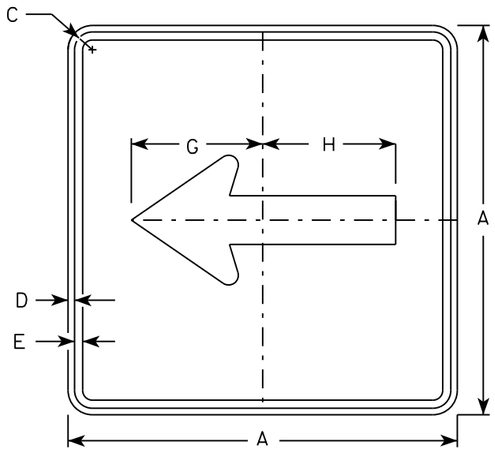
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

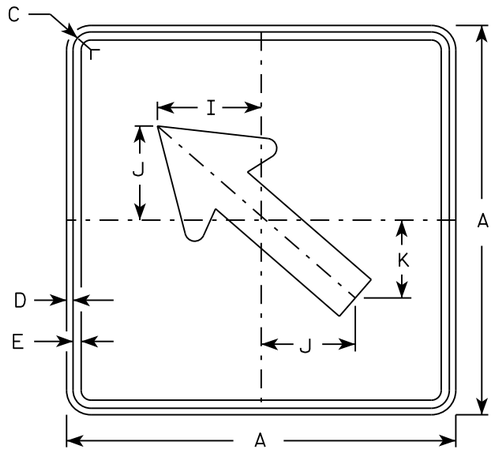
DATE 10/15/15 PLATE NO. M5-1.13

PROJECT NO: | HWY: | COUNTY: | SHEET NO: E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\M51.DGN PLOT DATE : 01-DEC-2015 18:07 PLOT BY : $$ plotuser $$ PLOT NAME : PLOT SCALE : 11.675051:1.000000



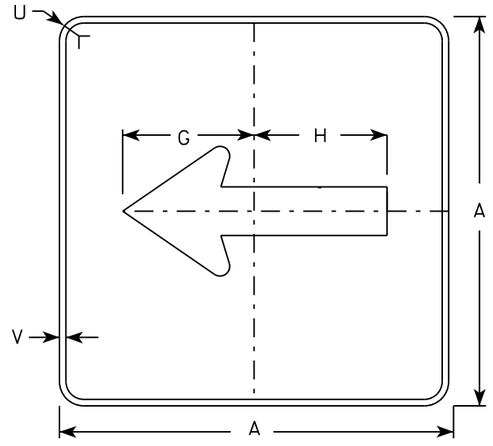
M6-1
MM6-1
MO6-1
MP6-1



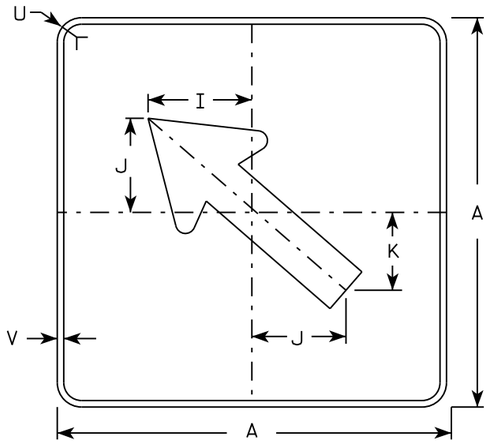
M6-2
MM6-2
MO6-2
MP6-2

NOTES

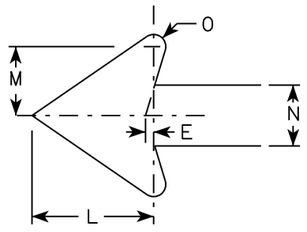
1. Signs are Type II - Type H except as Shown
2. Color:
   Background - See note 4
   Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. M6-1 and M6-2 Background - 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



MB6-1
MK6-1
MN6-1
MR6-1



MB6-2
MK6-2
MN6-2
MR6-2



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	21		1 1/8	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 1/2	1/2						3.06
3	30		1 3/8	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 7/8	1/2						6.25
4	30		1 3/8	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 7/8	1/2						6.25
5	30		1 3/8	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 7/8	1/2						6.25

STANDARD SIGN
M6-1 & M6-2
SERIES

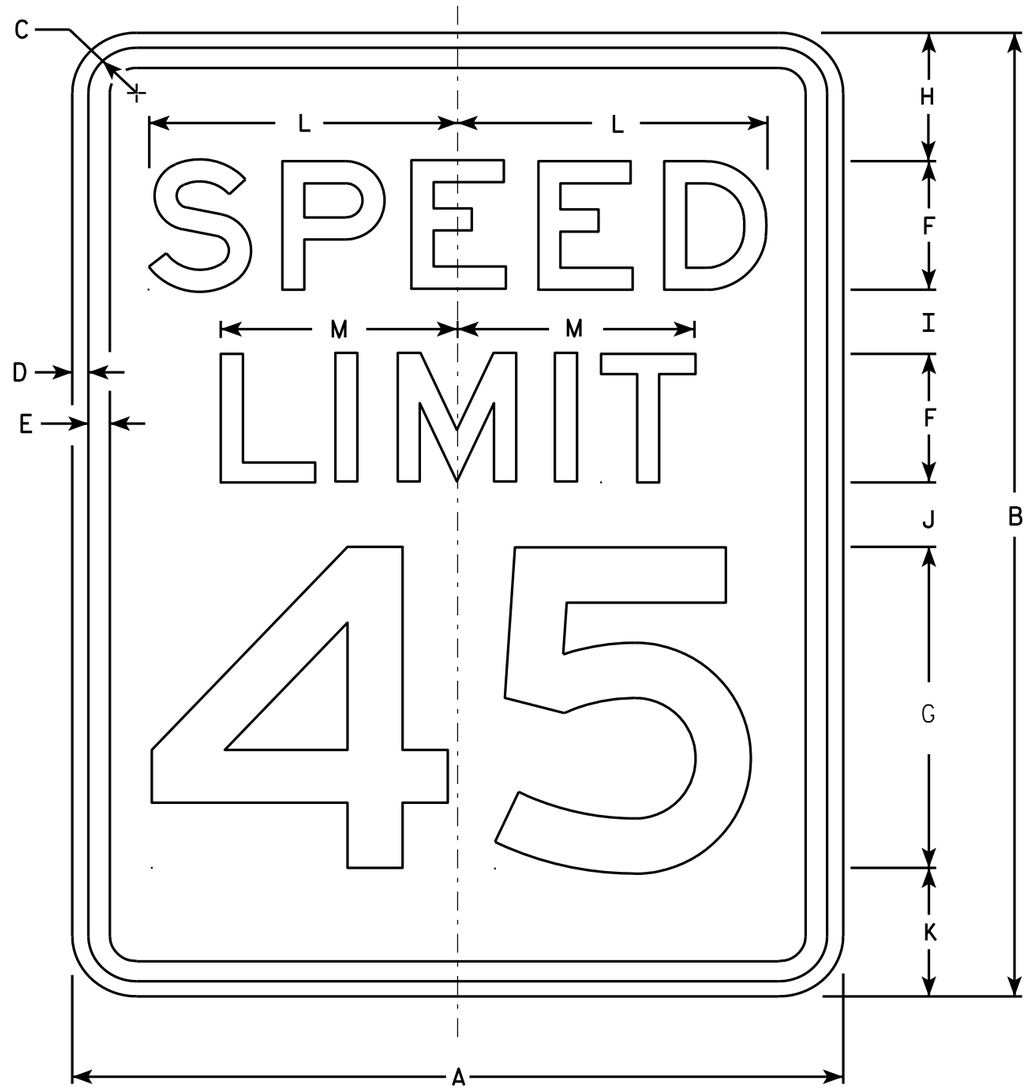
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/15/15 PLATE 326 M6-1.15

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\M61.DGN PLOT DATE : 01-DEC-2015 17:57 PLOT BY : $$ plotuser $$ PLOT NAME : PLOT SCALE : 11.675051:1.000000



R2-1

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - E
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 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 1/8	3/8	1/2	3	8	3	2	2	3	7 1/4	5 1/2														3.0
2S	24	30	1 1/8	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 3/8	1/2	5/8	5	12	5	2 1/2	2 1/2	4	12	9 1/4														7.5
3	36	48	1 3/8	1/2	5/8	6	14	6	5	5	6	14 3/8	11														12.0
4	36	48	1 3/8	1/2	5/8	6	14	6	5	5	6	14 3/8	11														12.0
5	48	60	2 1/4	3/4	1	8	20	6	4 1/2	6 3/4	6 3/4	19 1/4	14 5/8														20.0

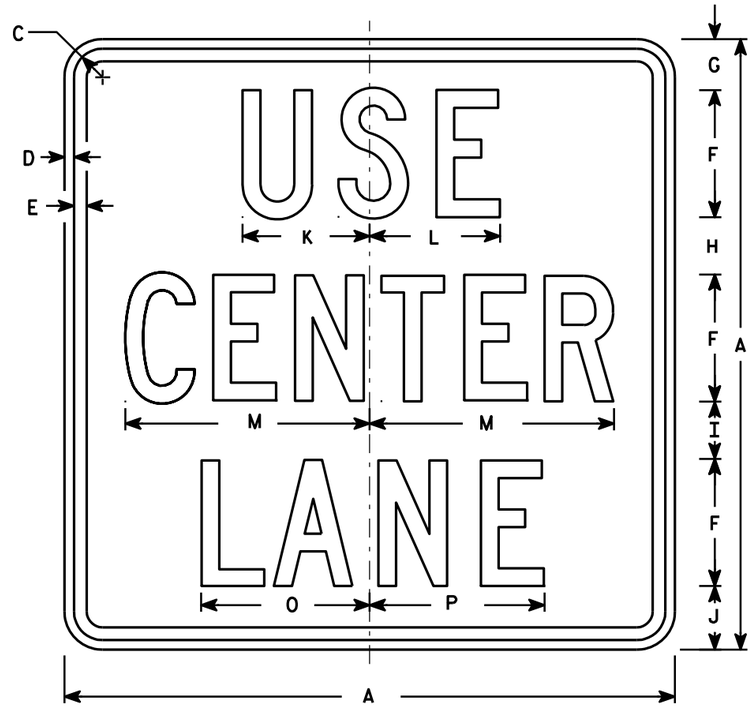
STANDARD SIGN
R2-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/26/10 PLATE NO. R2-1.13

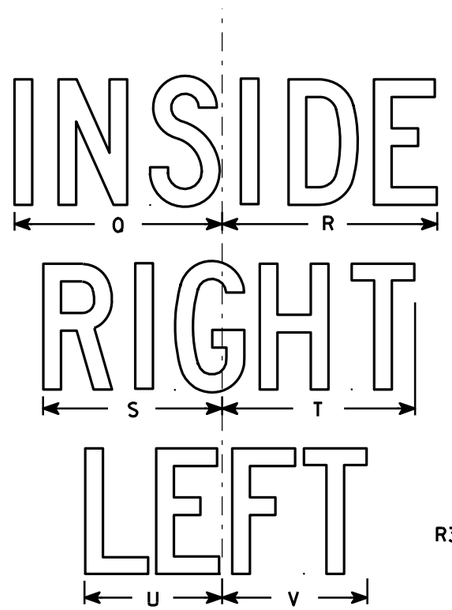
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 327	E



R3-54C

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - 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.



R3-54I

R3-54R

R3-54L

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	O	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24		1 1/8	3/8	1/2	5	2	2 1/4	2 1/4	2 1/2	5	5 1/8	9 5/8		6 5/8	6 7/8	8 1/8	8 1/2	7	7 5/8	5 3/8	5 3/4					4.0
2M	24		1 1/8	3/8	1/2	5	2	2 1/4	2 1/4	2 1/2	5	5 1/8	9 5/8		6 5/8	6 7/8	8 1/8	8 1/2	7	7 5/8	5 3/8	5 3/4					4.0
3	36		1 5/8	5/8	3/4	7	4	3	3 1/2	4 1/2	7 1/2	7 3/4	14 3/8		9 7/8	10 1/4	12 1/8	12 3/4	10 3/8	11 3/8	8	8 5/8					9.0
4																											
5																											

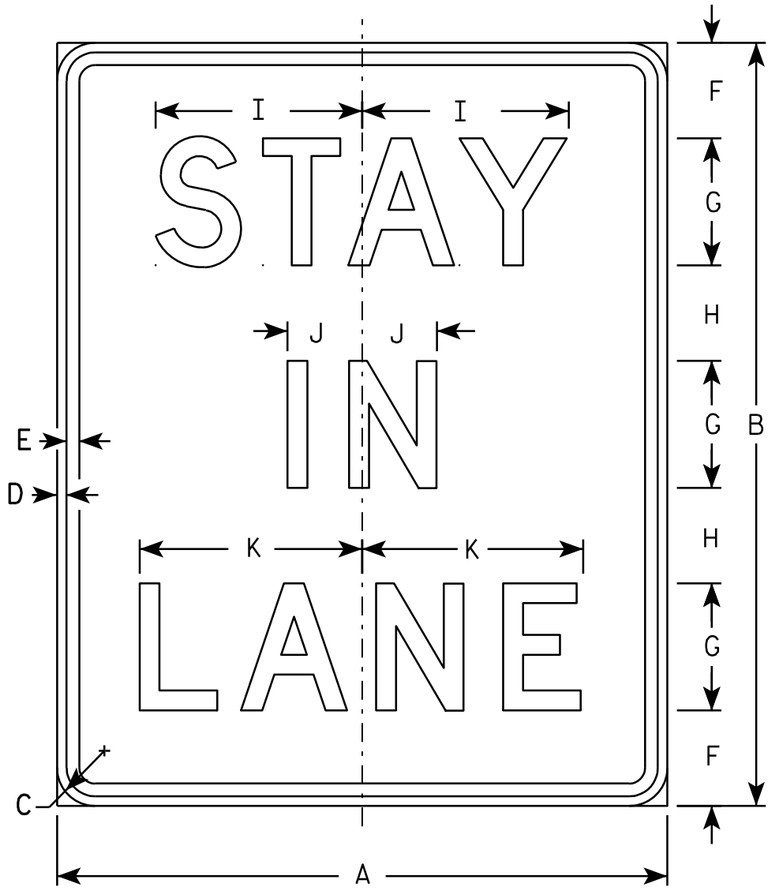
STANDARD SIGN
R3-54C, I ,L & R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/24/2011 PLATE NO. R3-54.8

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 328 | E



R4-9

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - WHITE
   Message - BLACK
3. Message Series - 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	18	24	1 1/8	3/8	3/8	3	4	3	6 1/2	2 3/8	7																3.0
2S	24	30	1 1/8	3/8	1/2	3 5/8	5	3 7/8	8 1/8	3	8 3/4																5.0
2M	24	30	1 1/8	3/8	1/2	3 5/8	5	3 7/8	8 1/8	3	8 3/4																5.0
3	36	48	1 3/8	1/2	5/8	8 1/4	7	5 1/4	11 3/8	4 1/8	12 1/4																12.0
4	36	48	1 3/8	1/2	5/8	8 1/4	7	5 1/4	11 3/8	4 1/8	12 1/4																12.0
5	48	60	2 1/4	3/4	1	7 1/2	10	7 1/2	16 1/4	5 7/8	17 1/2																20.0

STANDARD SIGN
R4-9

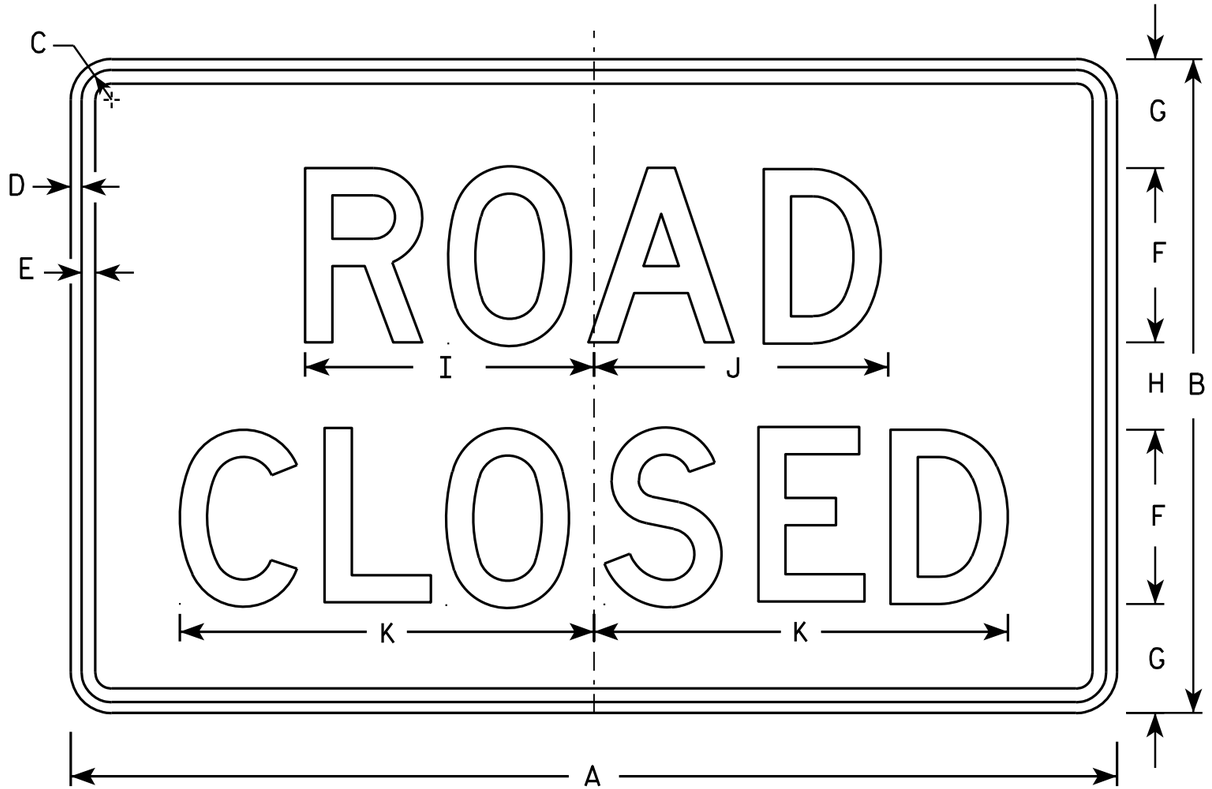
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/25/2011 PLATE NO. R4-9.2

PROJECT NO:

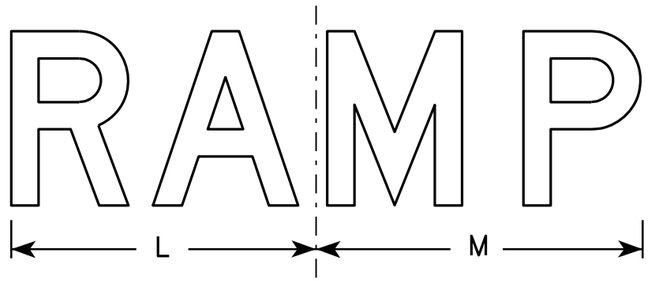
SHEET NO: 329 E



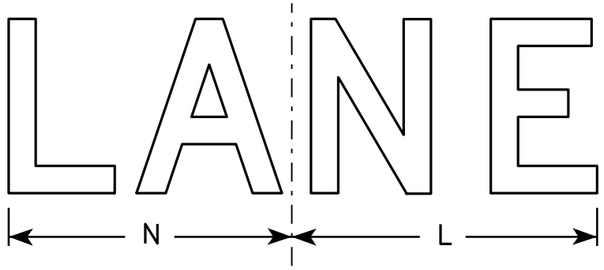
R11-2

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 - 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



R11-2L

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

STANDARD SIGN
R11-2

WISCONSIN DEPT OF TRANSPORTATION

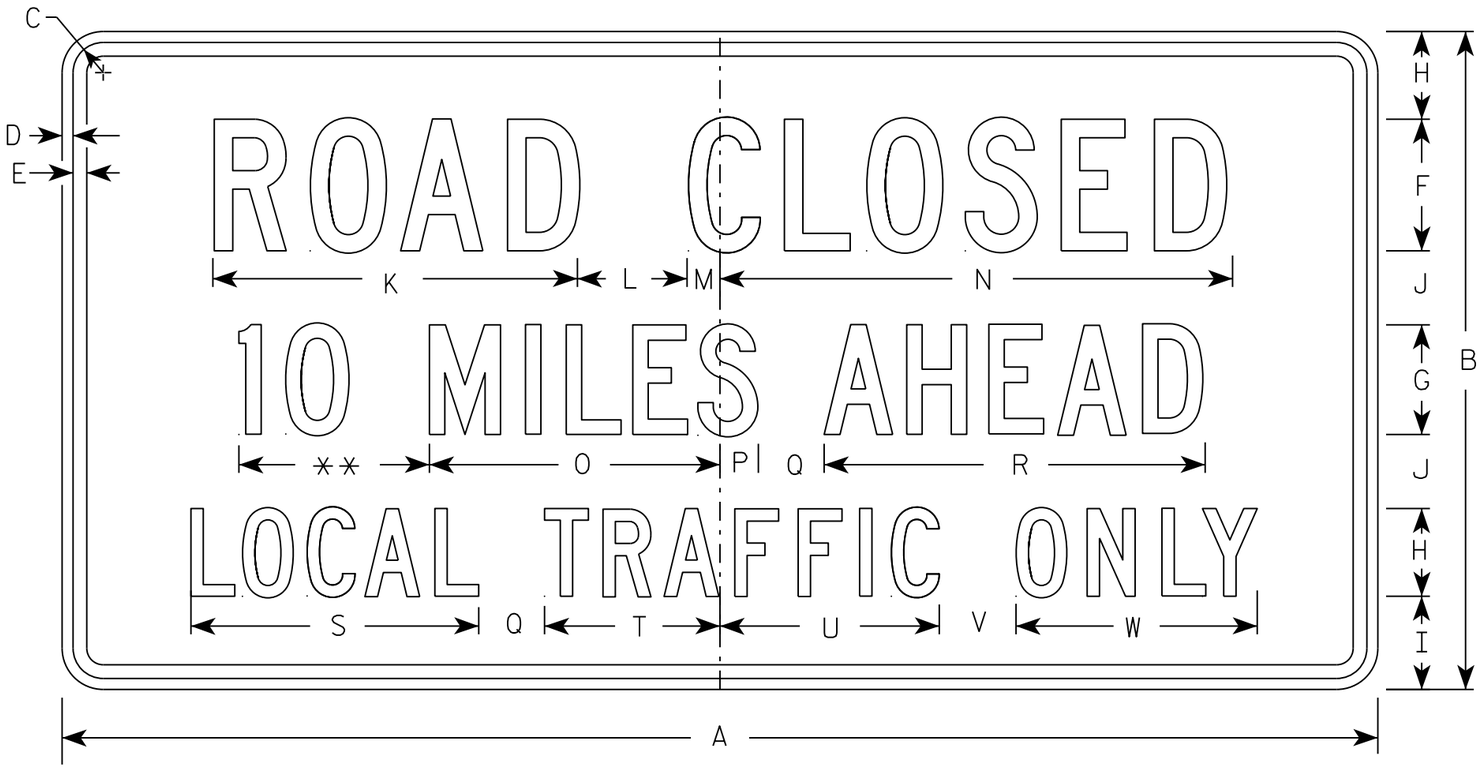
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/1/11 PLATE NO. R11-2.10

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 330	E

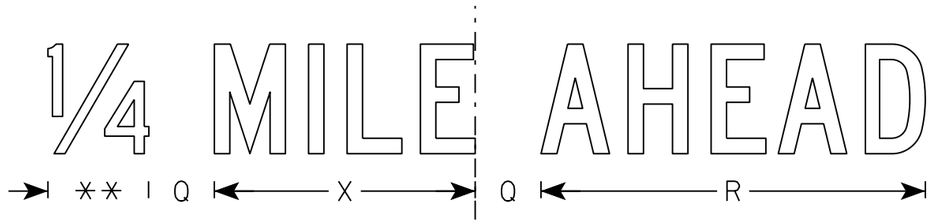
NOTES

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 3/8	1/2	5/8	4	3	2 1/2	2	2	11 1/8	3	1 1/8	15 1/4	8	1 1/2	2	10 3/4	8 3/8	4 3/4	6 1/2	2	6 3/4	7 1/8			4.5
2S	60	30	1 3/8	1/2	5/8	6	5	4	4 1/4	3 3/8	16 5/8	5	1 1/2	23	13 1/4	1 3/4	3	17 3/8	13 1/8	8	10	3 1/2	11	11 7/8			12.5
2M	60	30	1 3/8	1/2	5/8	6	5	4	4 1/4	3 3/8	16 5/8	5	1 1/2	23	13 1/4	1 3/4	3	17 3/8	13 1/8	8	10	3 1/2	11	11 7/8			12.5
3																											
4																											
5																											

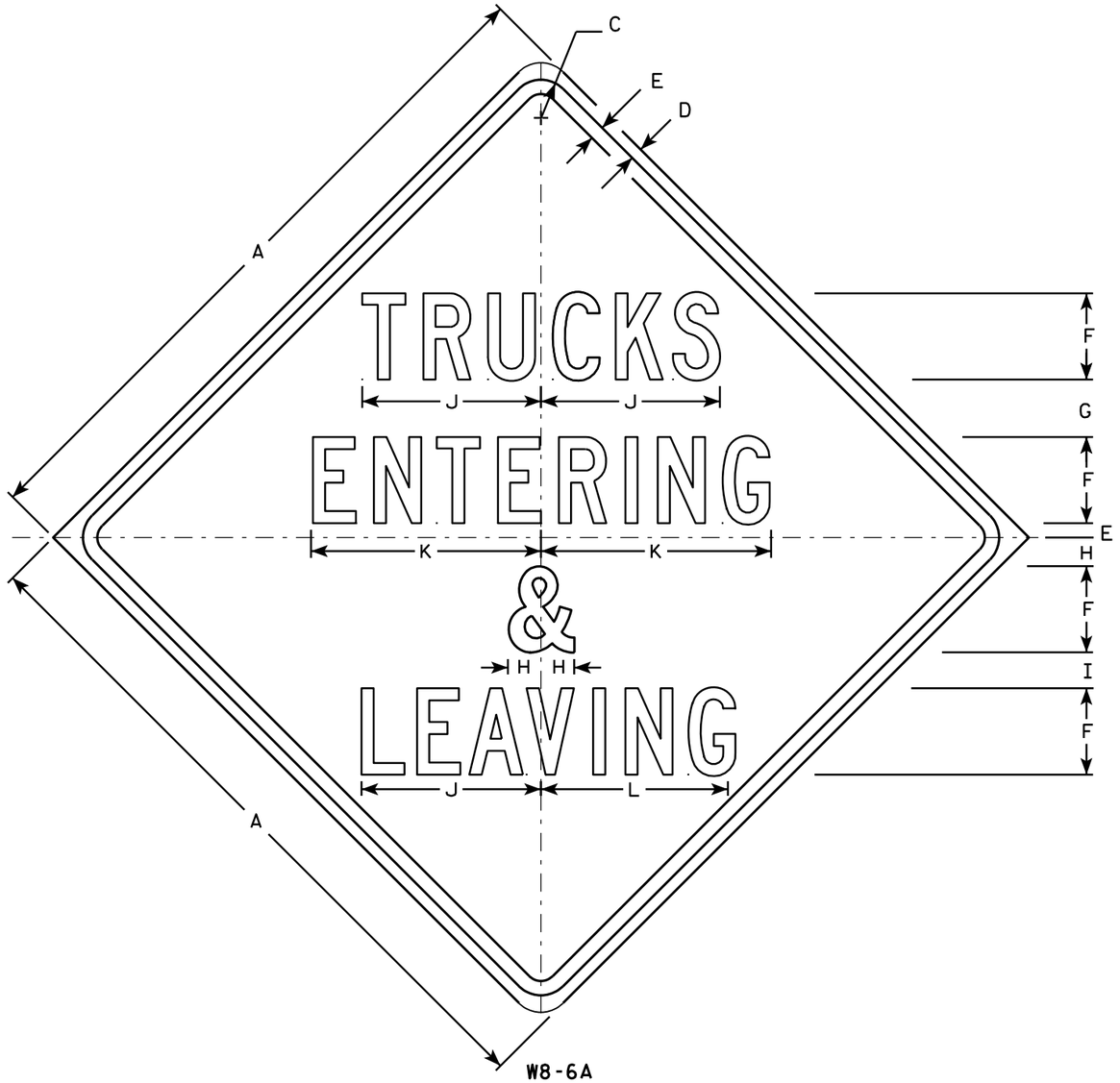
STANDARD SIGN
R11-3

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/15/17 PLATE NO. R11-3.8

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 331	E



NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. 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		1 3/8	1/2	5/8	4 1/2	3	1 1/2	1 7/8	9 3/8	12	9 3/4															9
2S	48		2 1/4	3/4	1	6	4	2	2 1/2	12 1/2	16	13															16
2M	48		2 1/4	3/4	1	6	4	2	2 1/2	12 1/2	16	13															16
3	48		2 1/4	3/4	1	6	4	2	2 1/2	12 1/2	16	13															16
4	48		2 1/4	3/4	1	6	4	2	2 1/2	12 1/2	16	13															16
5	48		2 1/4	3/4	1	6	4	2	2 1/2	12 1/2	16	13															16

STANDARD SIGN
W8-6A

WISCONSIN DEPT OF TRANSPORTATION

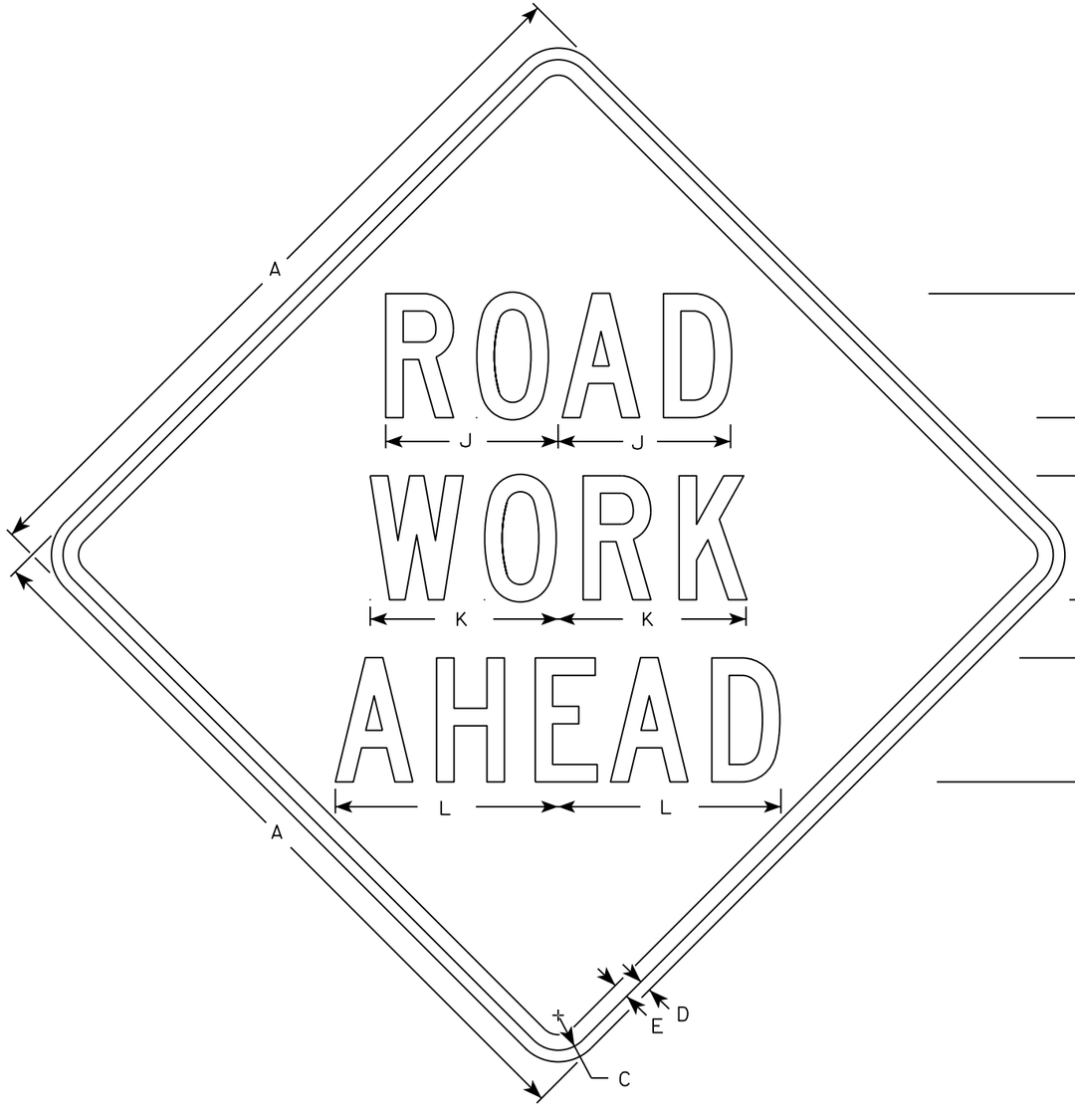
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/23/11 PLATE NO. W8-6A.2

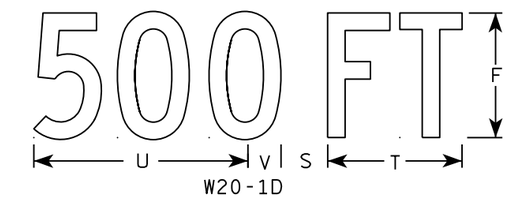
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 332 | E

7

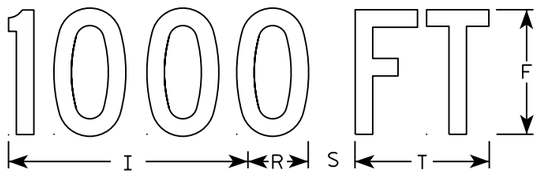
FILE NAME : C:\Users\PROJECTS\tr_stdplate\W86A.DGN PLOT DATE : 23-MAR-2011 10:02 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 10.136330:1.000000 WISDOT/CADDS SHEET 42



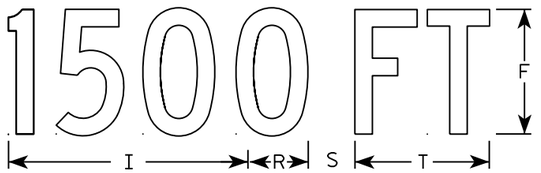
W20-1A



W20-1D

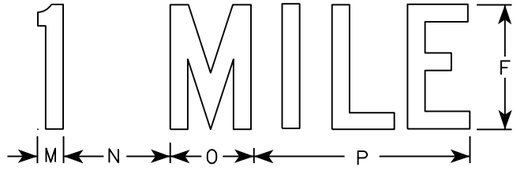


W20-1C

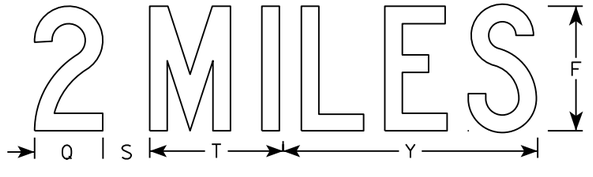


W20-1B

W20-1G



W20-1F



W20-1E

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		1 3/8	1/2	5/8	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		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		2 1/4	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		2 1/4	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		2 1/4	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		2 1/4	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		2 1/4	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, F & G

WISCONSIN DEPT OF TRANSPORTATION

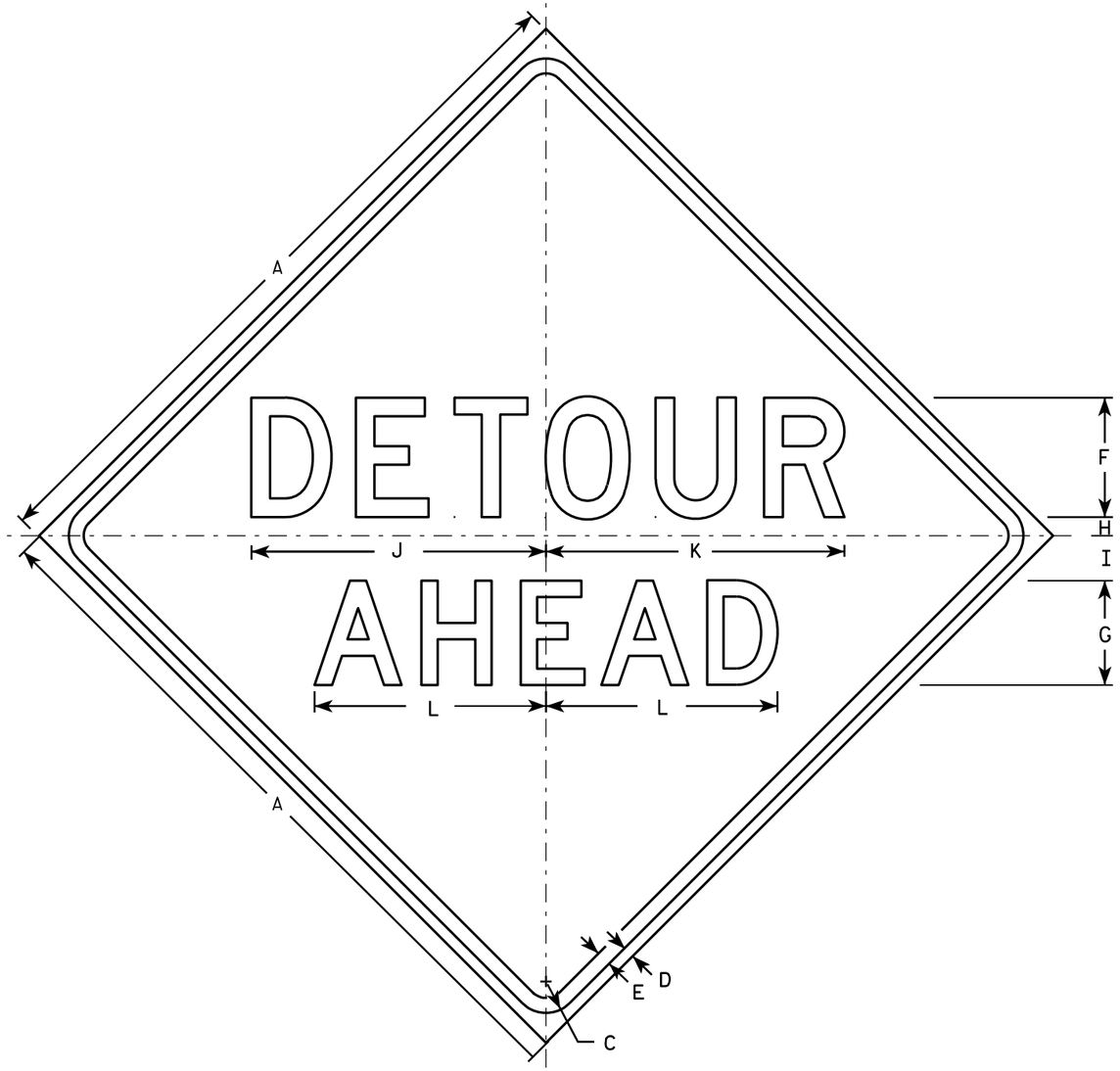
APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 5/07/15 PLATE NO. W20-1.10

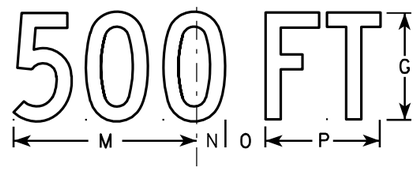
PROJECT NO:

SHEET NO: E

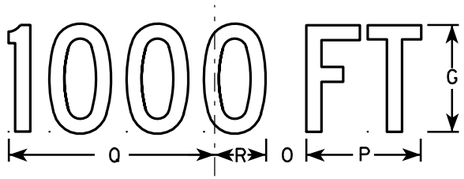
FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W201.DGN PLOT DATE : 01-DEC-2015 18:24 PLOT BY : $$ plotuser $$



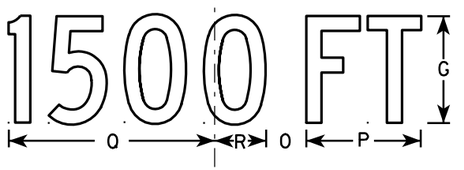
W20-2A



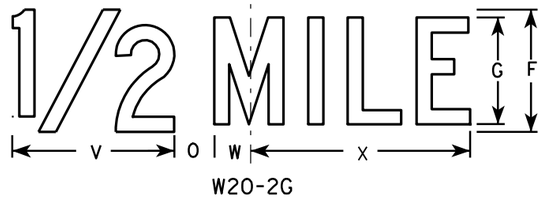
W20-2D



W20-2C



W20-2B



W20-2G

W20-2F

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - See note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Line 1 is Series D.
   Line 2 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		1 5/8	5/8	3/4	6	5	1	2 1/4	14 3/4	15	11 5/8	9	1 3/8	1 7/8	5 5/8	10 1/8	2 1/2	1 1/8	4 1/2	3 1/2	8	1 3/4	10 3/4			9.0
2S	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
2M	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
3	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
4	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
5	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0

STANDARD SIGN
W20-2A,B,C,D,F & G

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

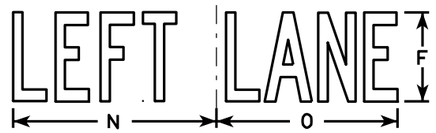
DATE 3/18/11 PLATE NO. W20-2.6

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 334 | E

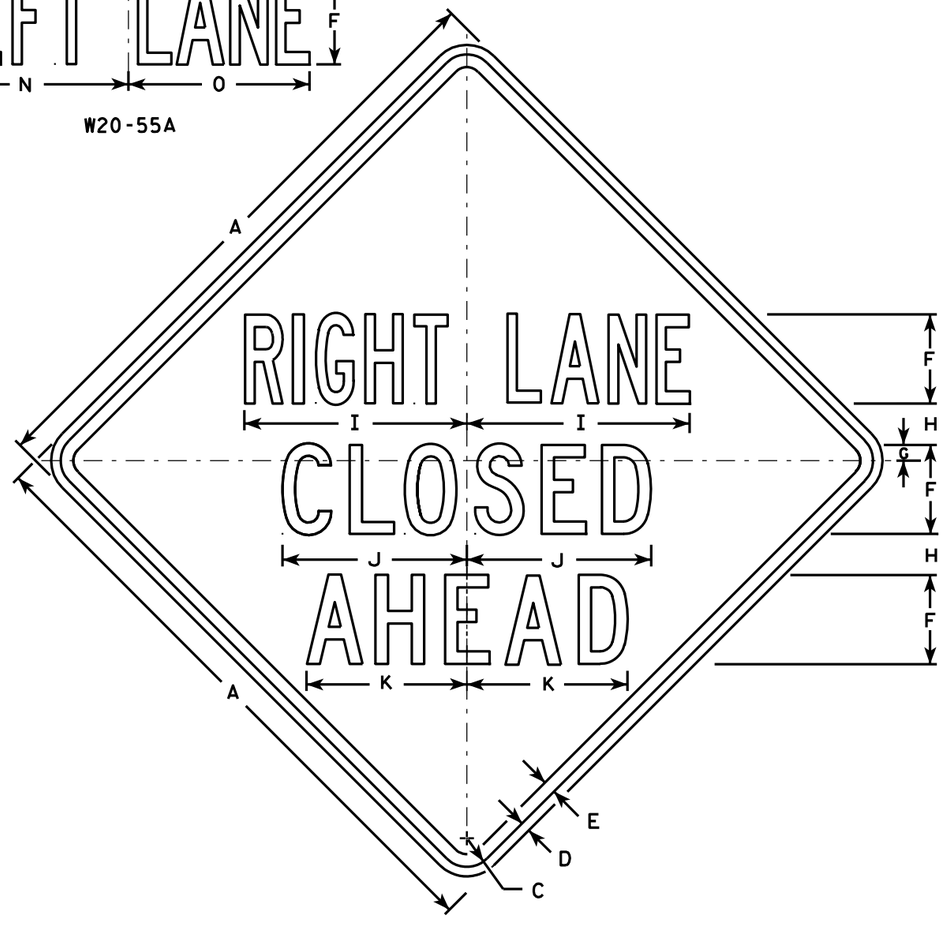
7

FILE NAME : C:\Users\PROJECTS\tr_stdplate\W202.DGN PLOT DATE : 18-MAR-2011 10:00 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 9.931739:1.000000
WISDOT/CADDS SHEET 42

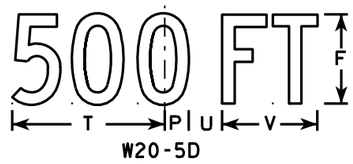
W20-56A



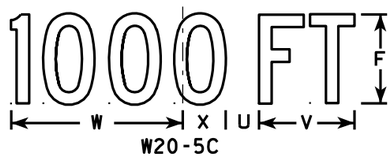
W20-55A



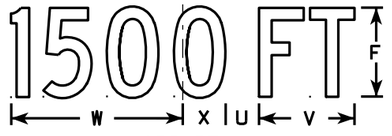
W20-5A



W20-5D



W20-5C



W20-5B

W20-5G

W20-5F

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - See Note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. " _____ 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	1 5/8	5/8	3/4	5	1/8	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 1/8	5 5/8	10 1/8	2 1/2	1 3/4	8	9.0
2S	48	8	2 1/4	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	2 1/4	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	2 1/4	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	2 1/4	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	2 1/4	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

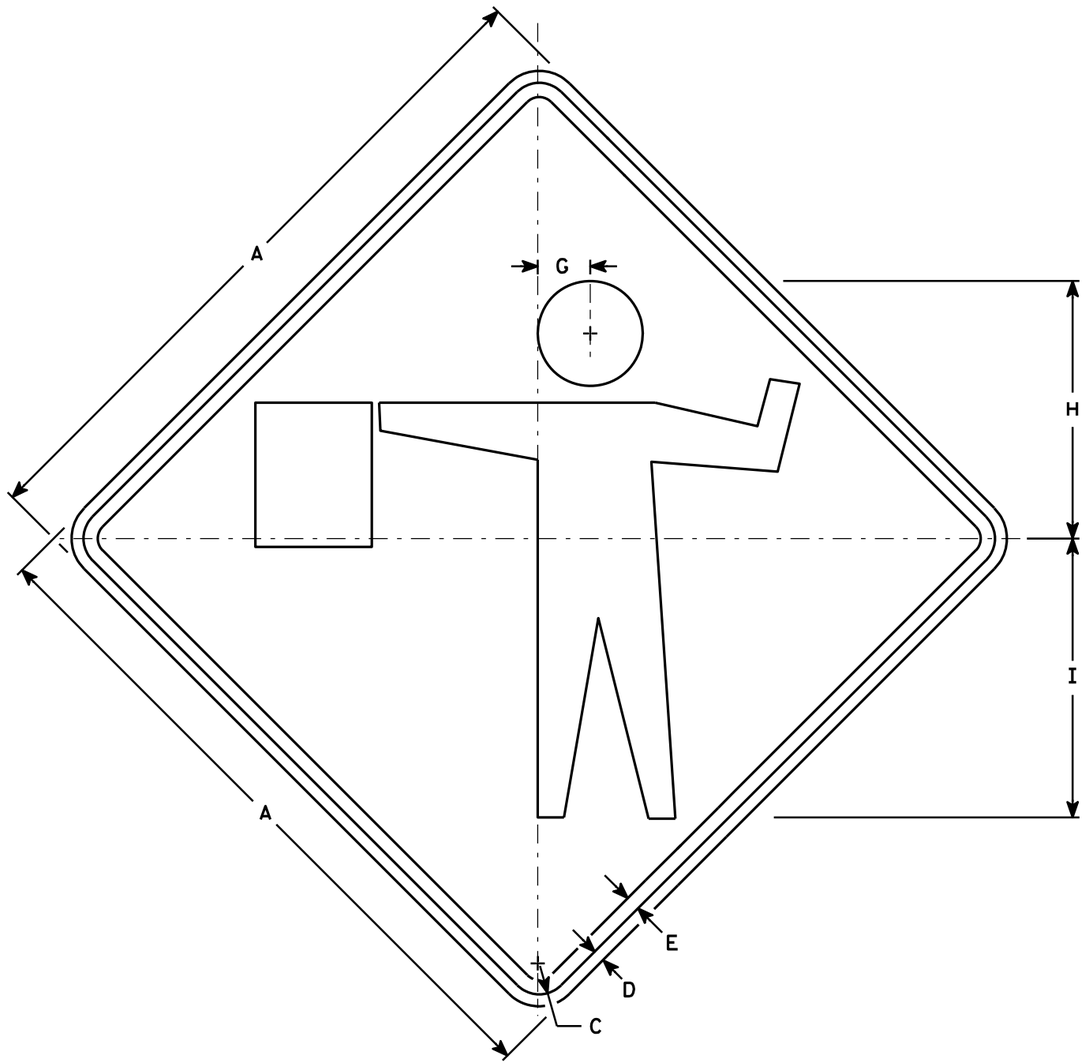
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/18/11 PLATE NO. W20-5.11

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 335	E

7

FILE NAME : C:\Users\PROJECTS\tr_stdplate\W205.DGN PLOT DATE : 18-MAR-2011 12:15 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 11.918087:1.000000
WISDOT/CADDS SHEET 42



W20-7A

NOTES

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4		2 3/4	13 1/2	14 5/8																		9.00
2S	48		2 1/4	3/4	1		3 3/4	18	19 1/2																		16.00
2M	48		2 1/4	3/4	1		3 3/4	18	19 1/2																		16.00
3	48		2 1/4	3/4	1		3 3/4	18	19 1/2																		16.00
4	48		2 1/4	3/4	1		3 3/4	18	19 1/2																		16.00
5	48		2 1/4	3/4	1		3 3/4	18	19 1/2																		16.00

STANDARD SIGN
W20-7A

WISCONSIN DEPT OF TRANSPORTATION

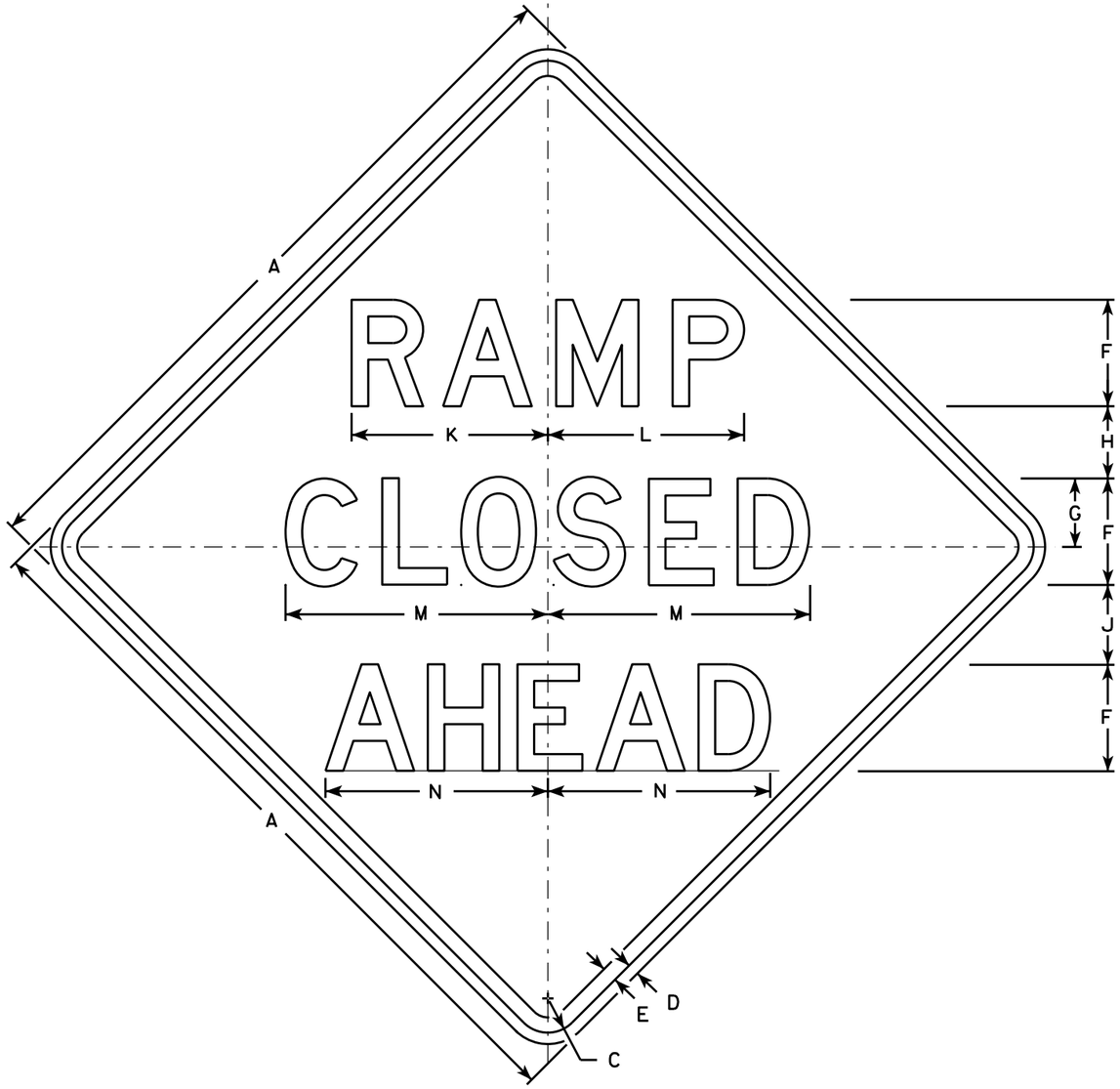
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/18/11 PLATE NO. W20-7A.5

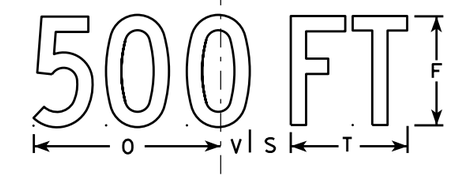
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 336 | E

7

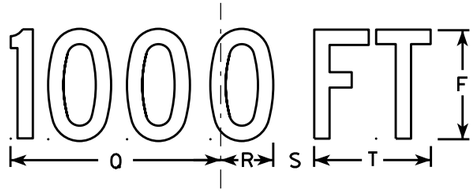
FILE NAME : C:\Users\PROJECTS\tr_stdplate\W207A.DGN PLOT DATE : 18-MAR-2011 13:14 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 7.945391:1.000000 WISDOT/CADDS SHEET 42



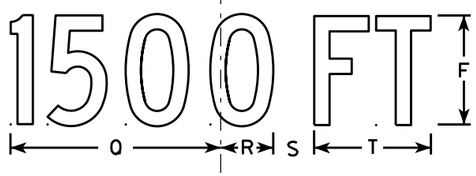
W20-53A



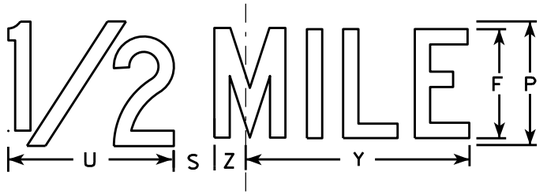
W20-53D



W20-53C



W20-53B



W20-53G

W20-53F

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - see note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. 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		1 5/8	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		2 1/4	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		2 1/4	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		2 1/4	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		2 1/4	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		2 1/4	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

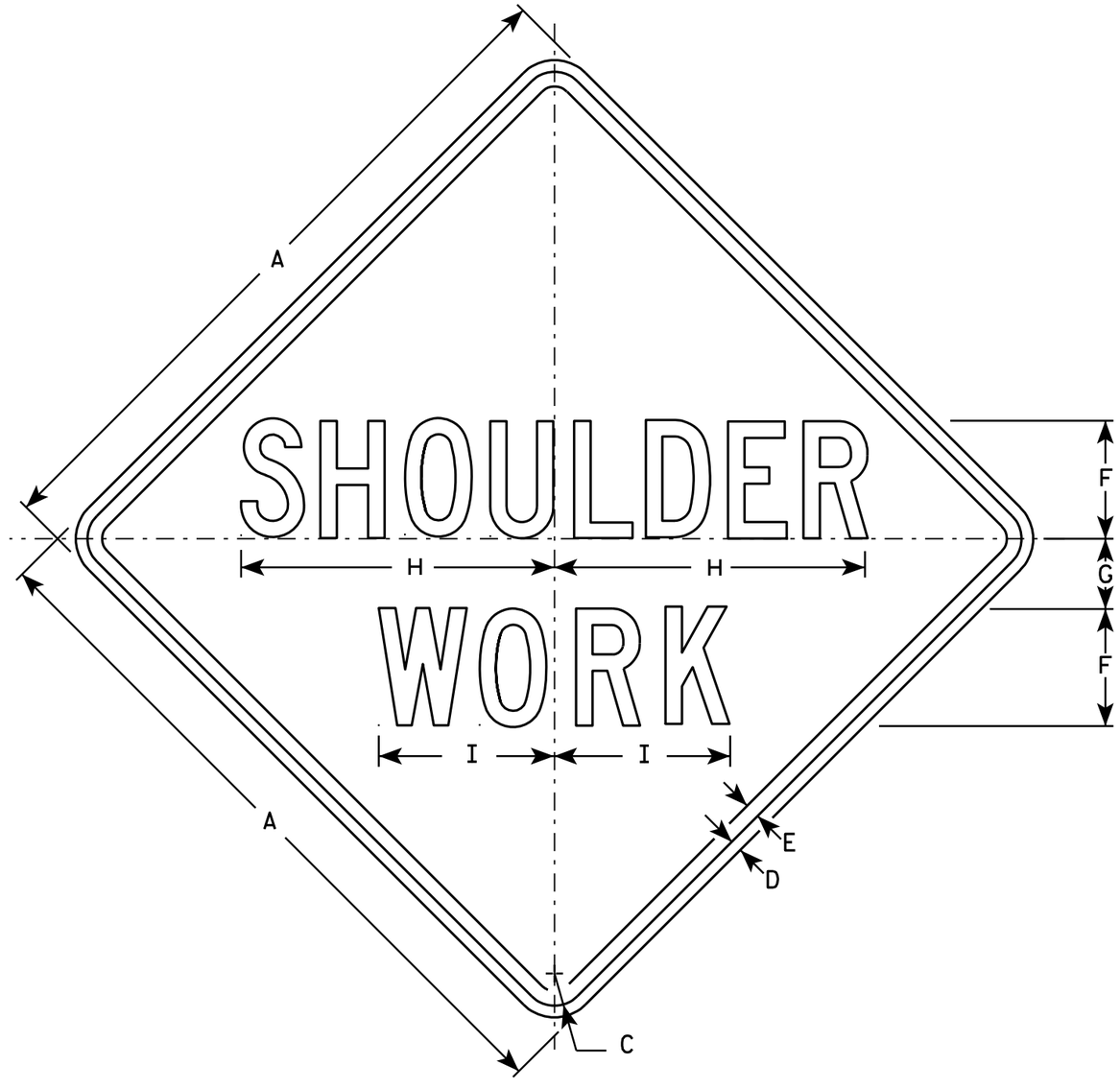
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/27/15 PLATE NO. W20-53.1

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W2053.DGN PLOT DATE : 27-MAY-2015 19:40 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 9.729210:1.000000
WISDOT/CADDS SHEET 42



W21-5

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - 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	24		1 1/8	3/8	1/2	4	2 1/2	10 3/4	6																		4.0
2S	30		1 3/8	1/2	5/8	5	3	13 3/8	7 1/2																		6.25
2M	30		1 3/8	1/2	5/8	5	3	13 3/8	7 1/2																		6.25
3	36		1 5/8	5/8	3/4	6	3 1/2	16	9																		9.0
4	48		2 1/4	3/4	1	8	5	21 3/8	11 1/4																		16.0
5	48		2 1/4	3/4	1	8	5	21 3/8	11 1/4																		16.0

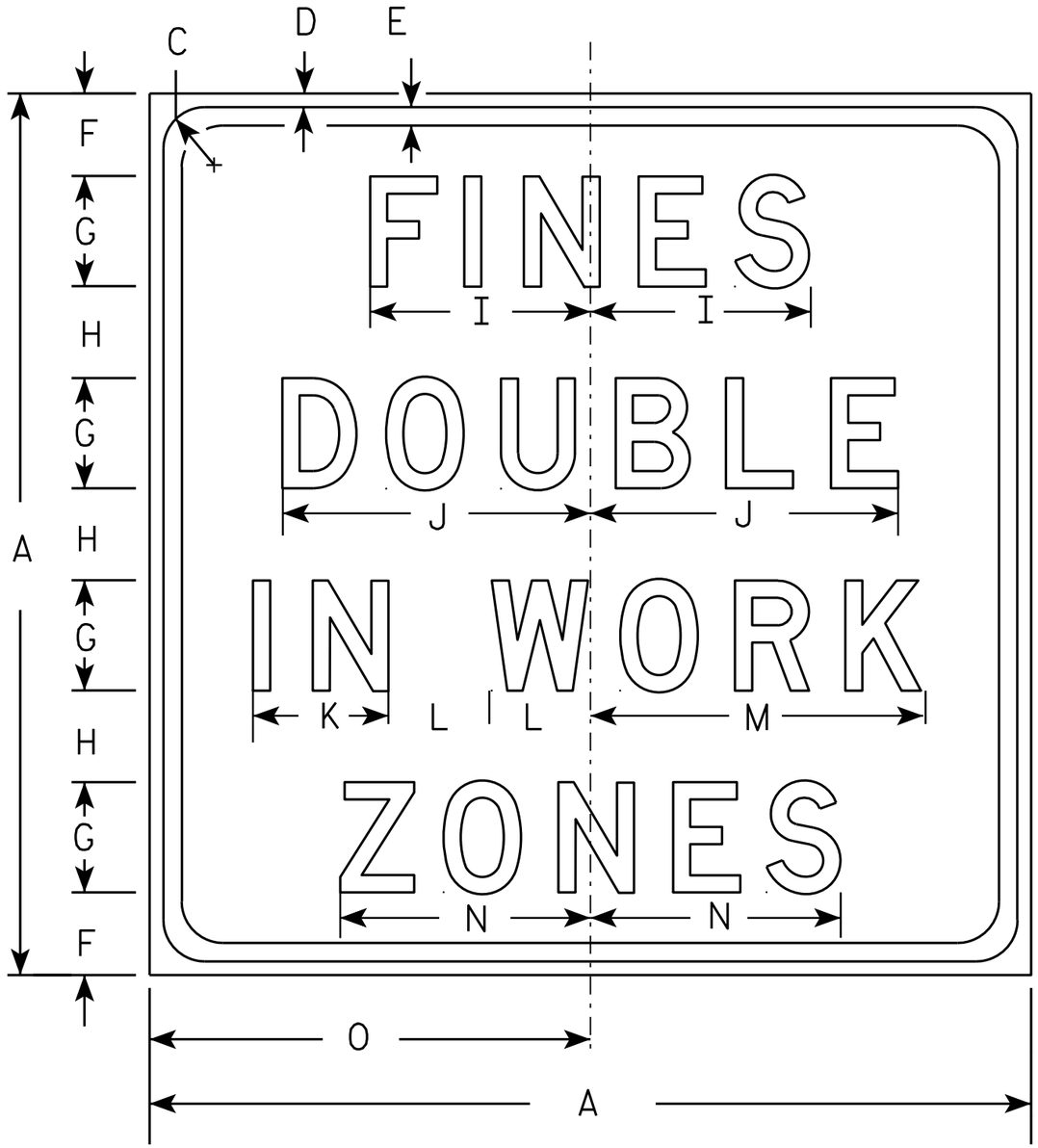
STANDARD SIGN
W21-5

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/21/11 PLATE NO. W21-5.5

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 338	E



W21-61

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - 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	24		1 1/8	3/8	1/2	2 1/4	3	2 1/2	6	8 3/8	3 3/4	2 3/4	9 1/8	6 7/8	12												4.0
2S	36		1 5/8	5/8	3/4	3 3/8	4 1/2	3 3/4	9	12 5/8	5 1/2	4 1/8	13 3/4	10 1/4	18												9.0
2M	36		1 5/8	5/8	3/4	3 3/8	4 1/2	3 3/4	9	12 5/8	5 1/2	4 1/8	13 3/4	10 1/4	18												9.0
3	48		2 1/4	3/4	1	4 1/2	6	5	12	16 3/4	7 3/8	5 1/2	18 1/4	13 5/8	24												16.0
4																											
5																											

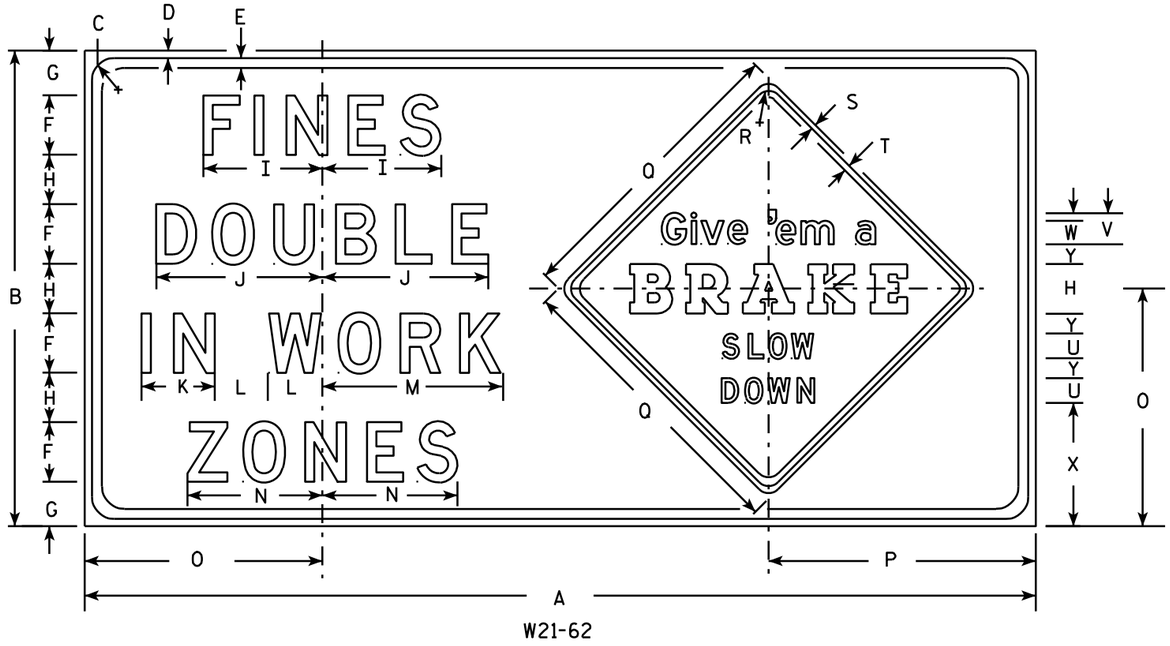
STANDARD SIGN
W21-61

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 3/21/11 PLATE NO. W21-61.4

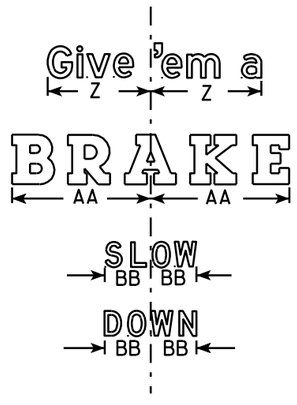
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 339 | E



W21-62

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 - (See Note 5)
   Message - Black
3. Message Series -
   Fines Double Message - All lines are Series D
   Give 'em a Brake -
   Line one is Series E, line two is a Special Graphic Series and lines three and four are Series D.
4. The base material shall be plywood. Corners may be square or rounded, but borders shall be rounded as shown. The base material for Give 'em a Brake sign can be a seperate sheet of aluminum with the corners and borders rounded as shown. This seperate panel shall then be attached to the plywood with aluminum or stainless steel sheet metal screws.
5. Background for the Give 'em a Brake sign shall be Type F reflective orange.



W21-62P

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	AA	BB	CC	DD	Area sq. ft.
1																															
2S																															
2M																															
3	96	48	2 1/4	3/4	1	6	4 1/2	5	12	16 3/4	7 3/8	5 1/2	18 1/4	13 5/8	24	27	30	1 3/8	1/2	5/8	2 1/2	3 1/8	2 3/8	12 1/2	2	10 3/4	14	4 5/8	34 1/2	4	32.0
4																															
5																															

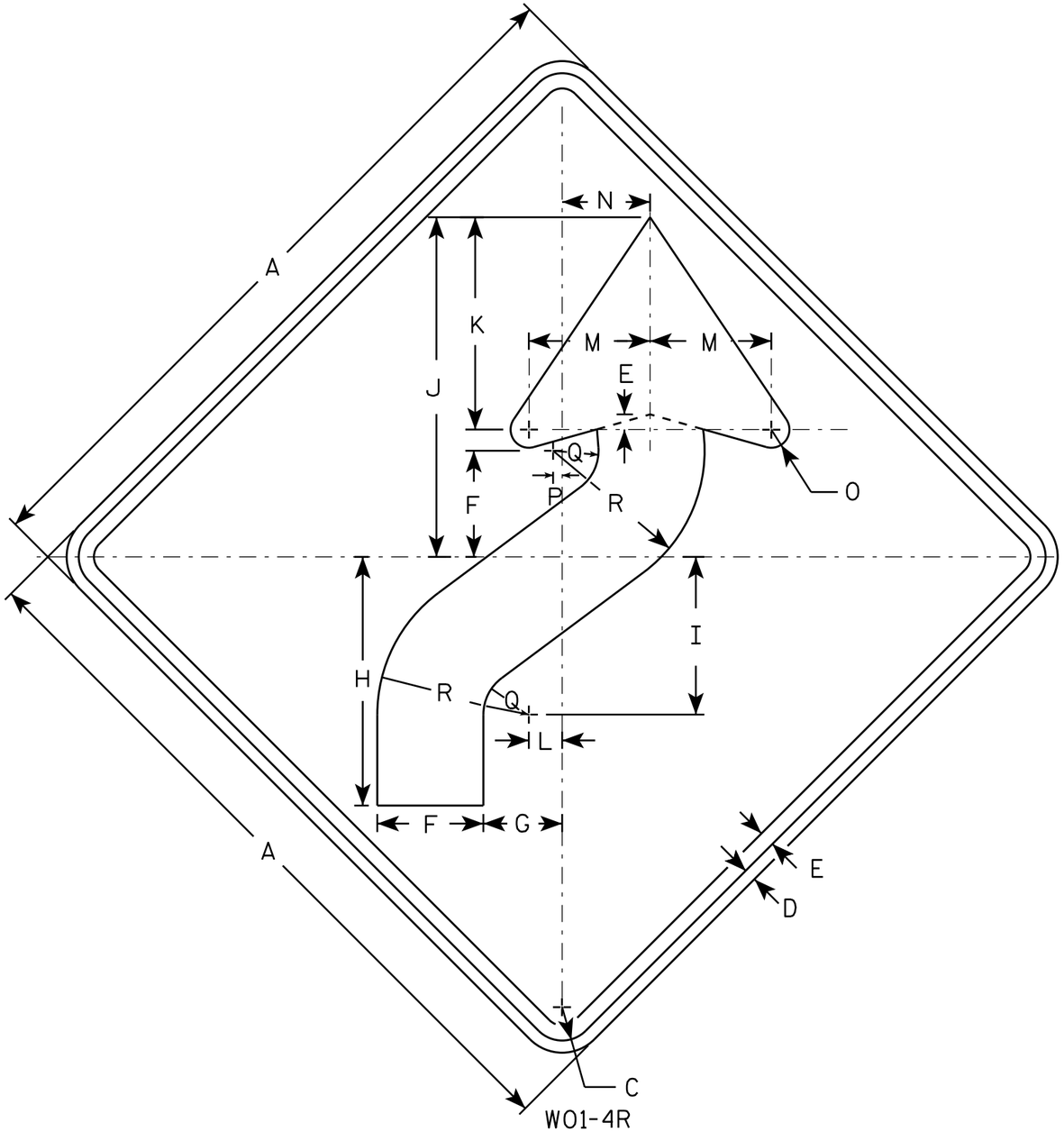
STANDARD SIGN
W21-62

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/21/11 PLATE NO. W21-62.5

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 340	E



W01-4R

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. W01-4L is the same as W01-4R except the arrow is reversed along the vertical centerline.

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

STANDARD SIGN
W01-4

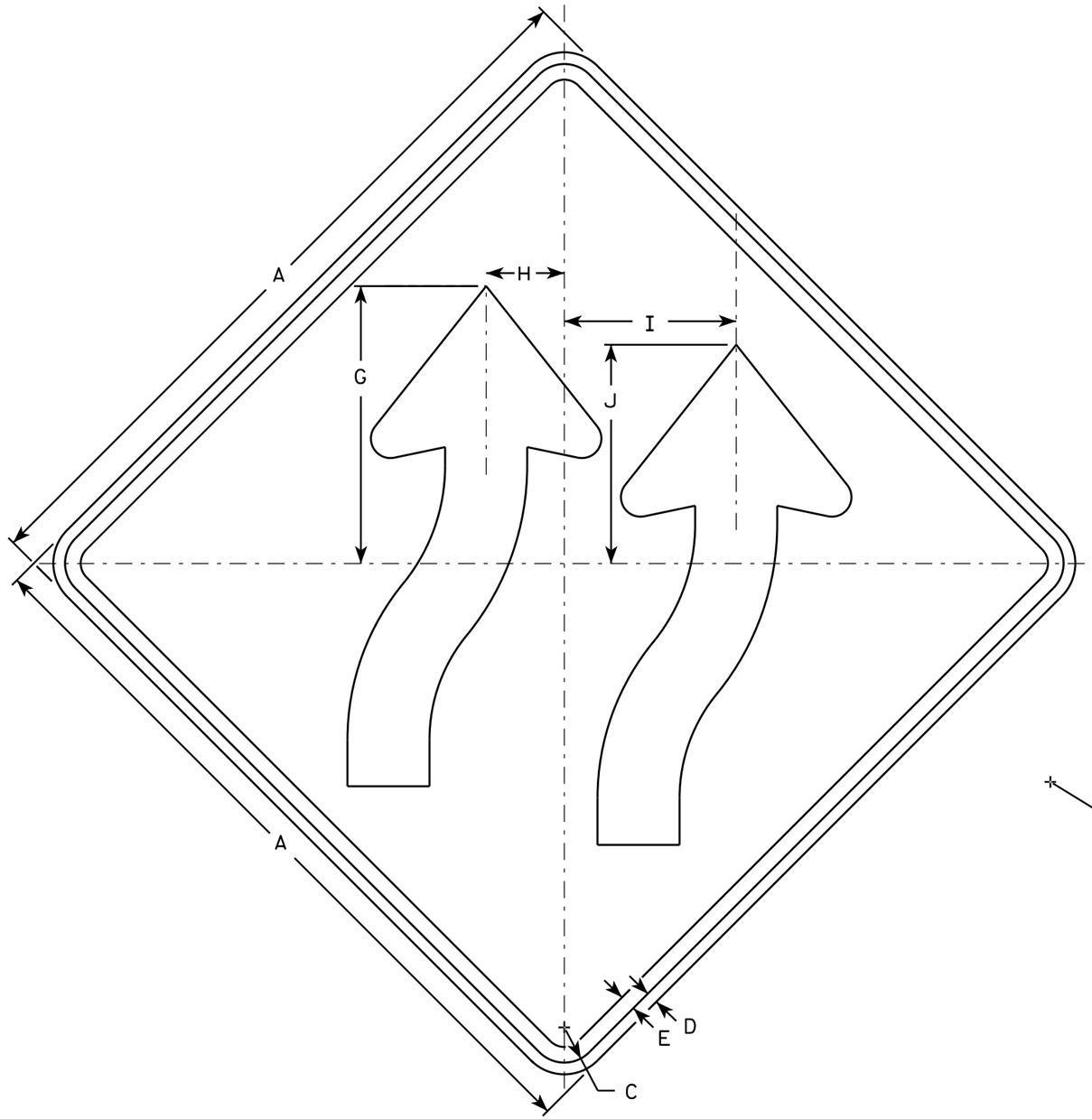
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

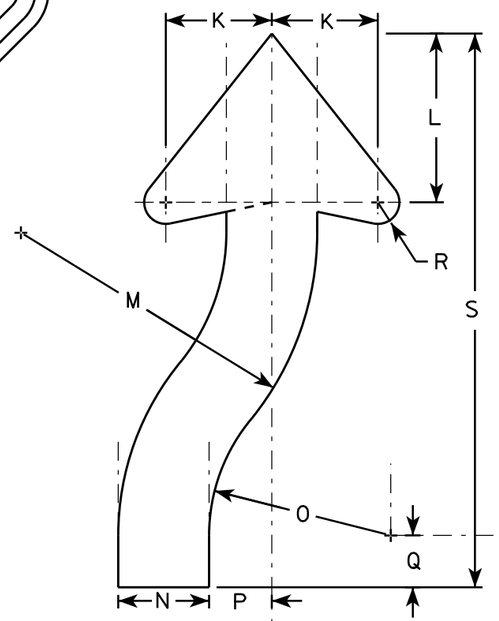
DATE 11/18/13 PLATE NO W01-4.1

PROJECT NO: | HWY: | COUNTY: | SHEET NO: E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W014.DGN PLOT DATE : 28-FEB-2014 11:35 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 6.755110:1.000000
WISDOT/CADDS SHEET 42



W01-4bR



NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. W01-4bL is the same as W014-bR exept arrows are 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		1 5/8	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		2 1/4	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		2 1/4	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		2 1/4	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		2 1/4	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		2 1/4	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

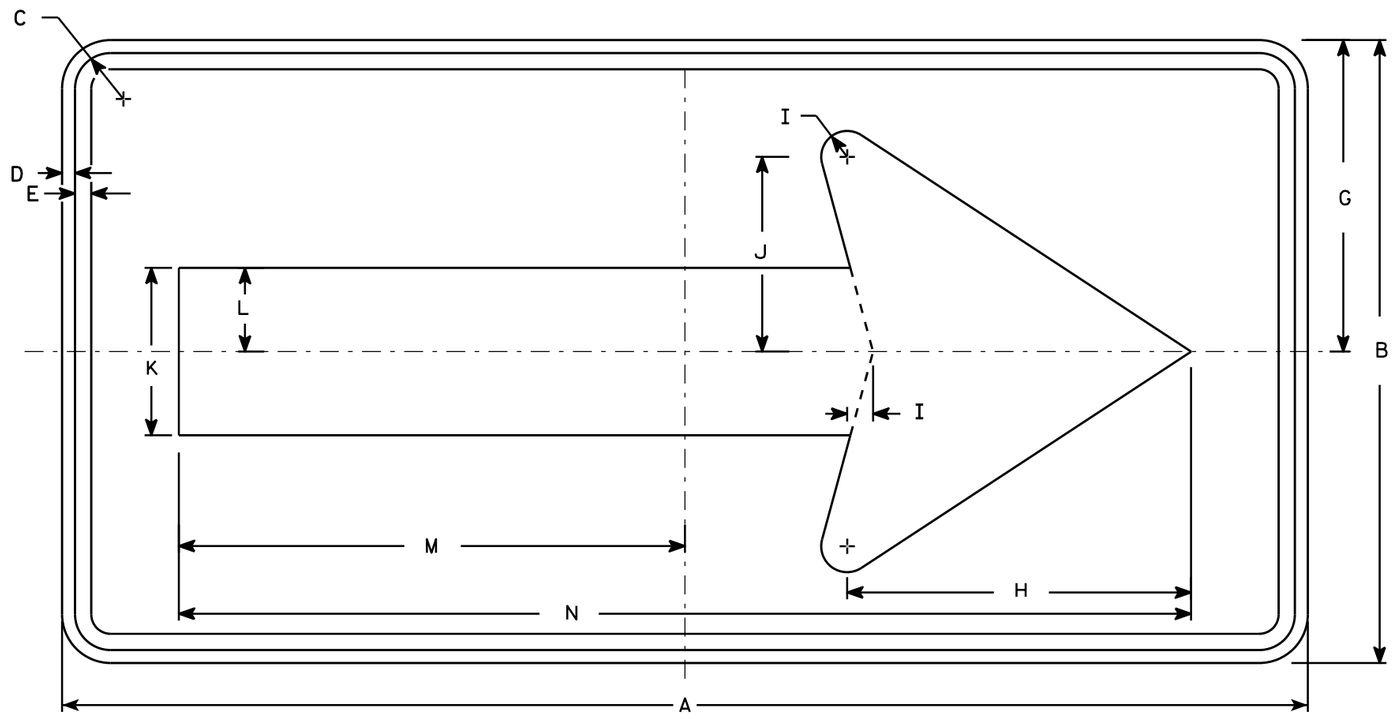
STANDARD SIGN
W01-4b

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/18/13 PLATE NO. W01-4b.1

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



W01-6

NOTES

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

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

STANDARD SIGN
W01-6

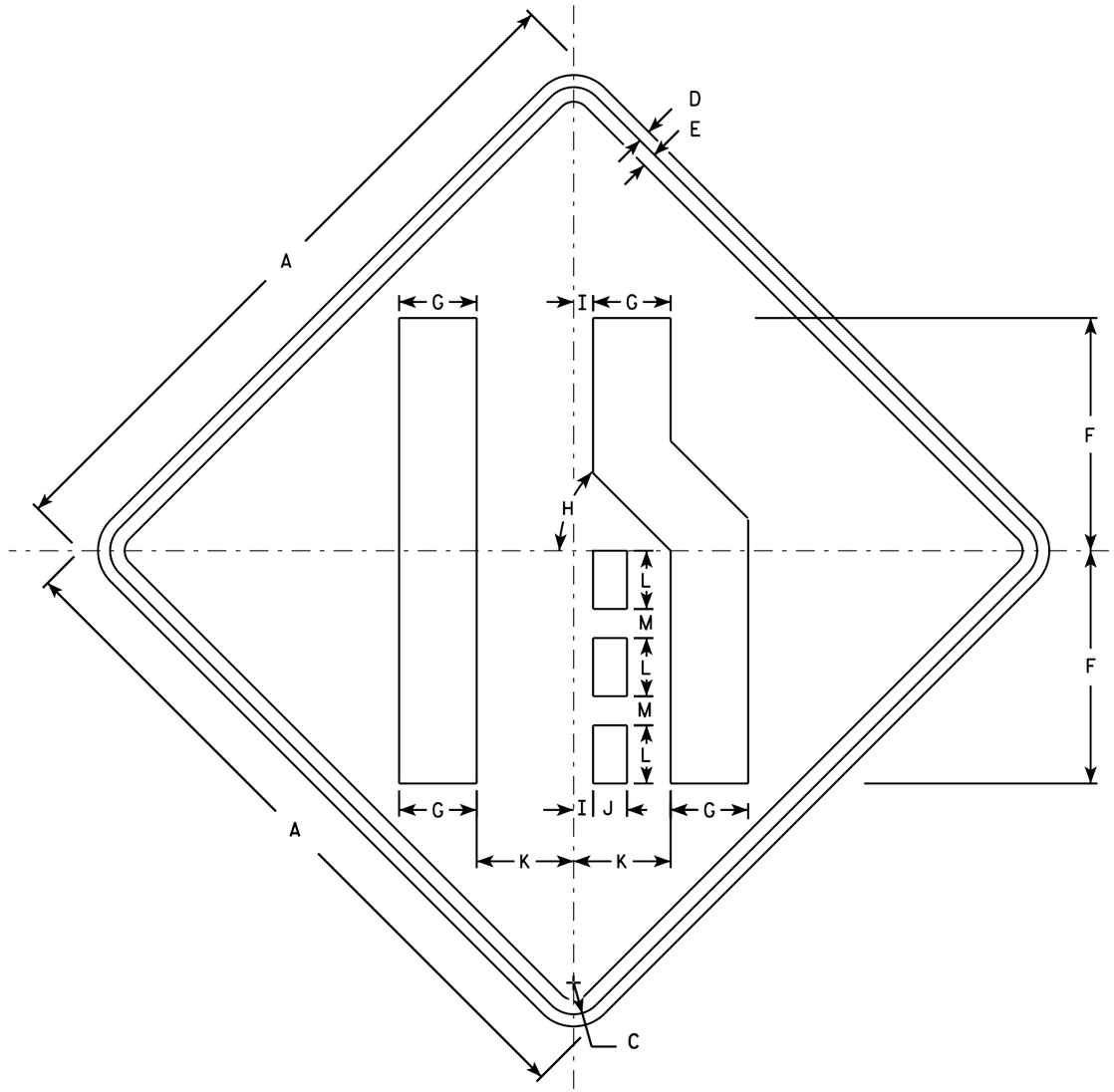
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO: | HWY: | COUNTY: | SHEET NO: E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W016.DGN PLOT DATE : 28-FEB-2014 11:37 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 5.837526:1.000000 WISDOT/CADDS SHEET 42



W04-2R

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. 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		1 5/8	5/8	3/4	12	4	45°	1	1 3/4	5	3	1 1/2														9.0
2S	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
2M	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
3	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
4	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
5	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0

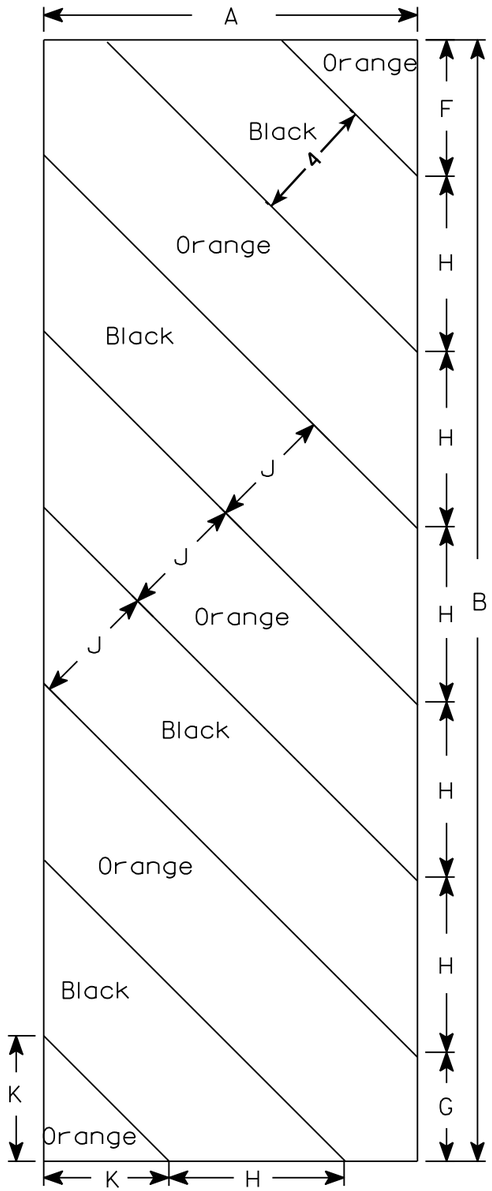
STANDARD SIGN
W04-2

WISCONSIN DEPT OF TRANSPORTATION

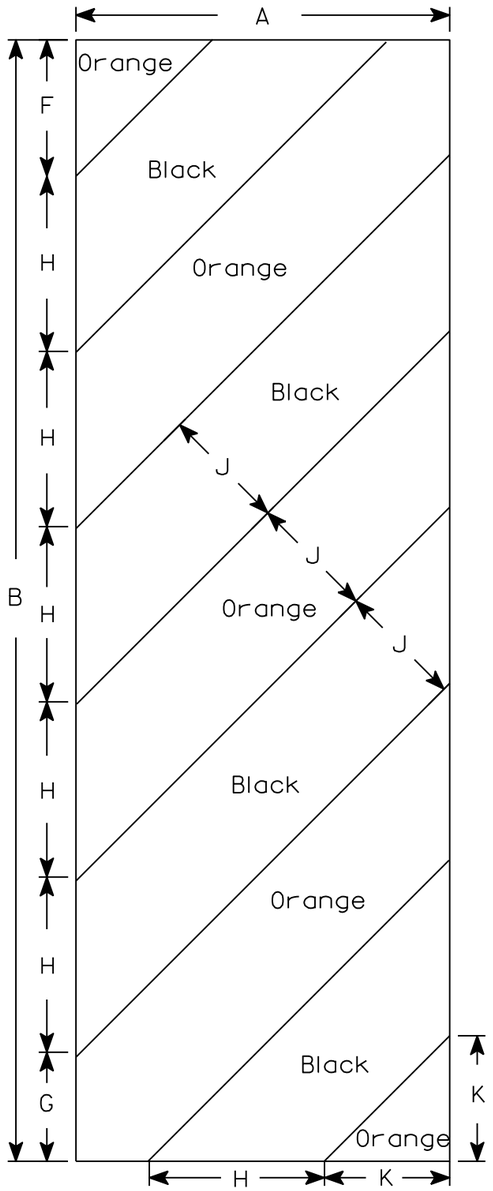
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/20/13 PLATE 344 W04-2.1

PROJECT NO: | SHEET NO: E



W05-52L



W05-52R

NOTES

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

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	12	36				4 3/8	3 1/2	5 5/8	45°	4	4																3.0
2M	12	36				4 3/8	3 1/2	5 5/8	45°	4	4																3.0
3	18	54				6	5 1/2	8 1/2	45°	6	6 9/16																6.75
4																											
5																											

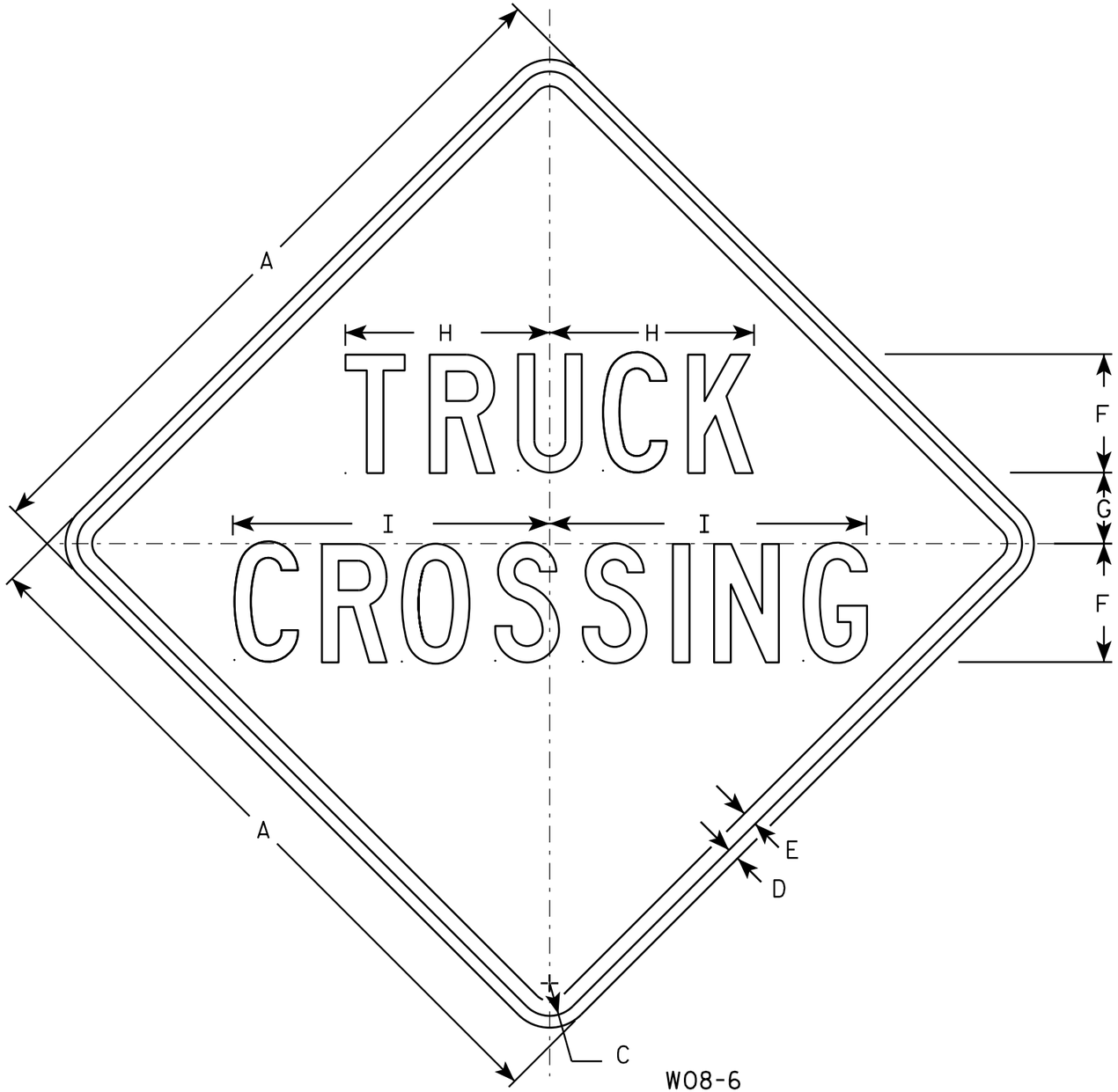
STANDARD SIGN
W05-52L & W05-52R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/20/13 PLATE W05-52.1

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



W08-6

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - 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		1 5/8	5/8	3/4	6	3 1/2	10 3/8	16																		9.0
2S	48		2 1/4	3/4	1	8	5	13 3/4	21 1/4																		16.0
2M	48		2 1/4	3/4	1	8	5	13 3/4	21 1/4																		16.0
3	48		2 1/4	3/4	1	8	5	13 3/4	21 1/4																		16.0
4	48		2 1/4	3/4	1	8	5	13 3/4	21 1/4																		16.0
5	48		2 1/4	3/4	1	8	5	13 3/4	21 1/4																		16.0

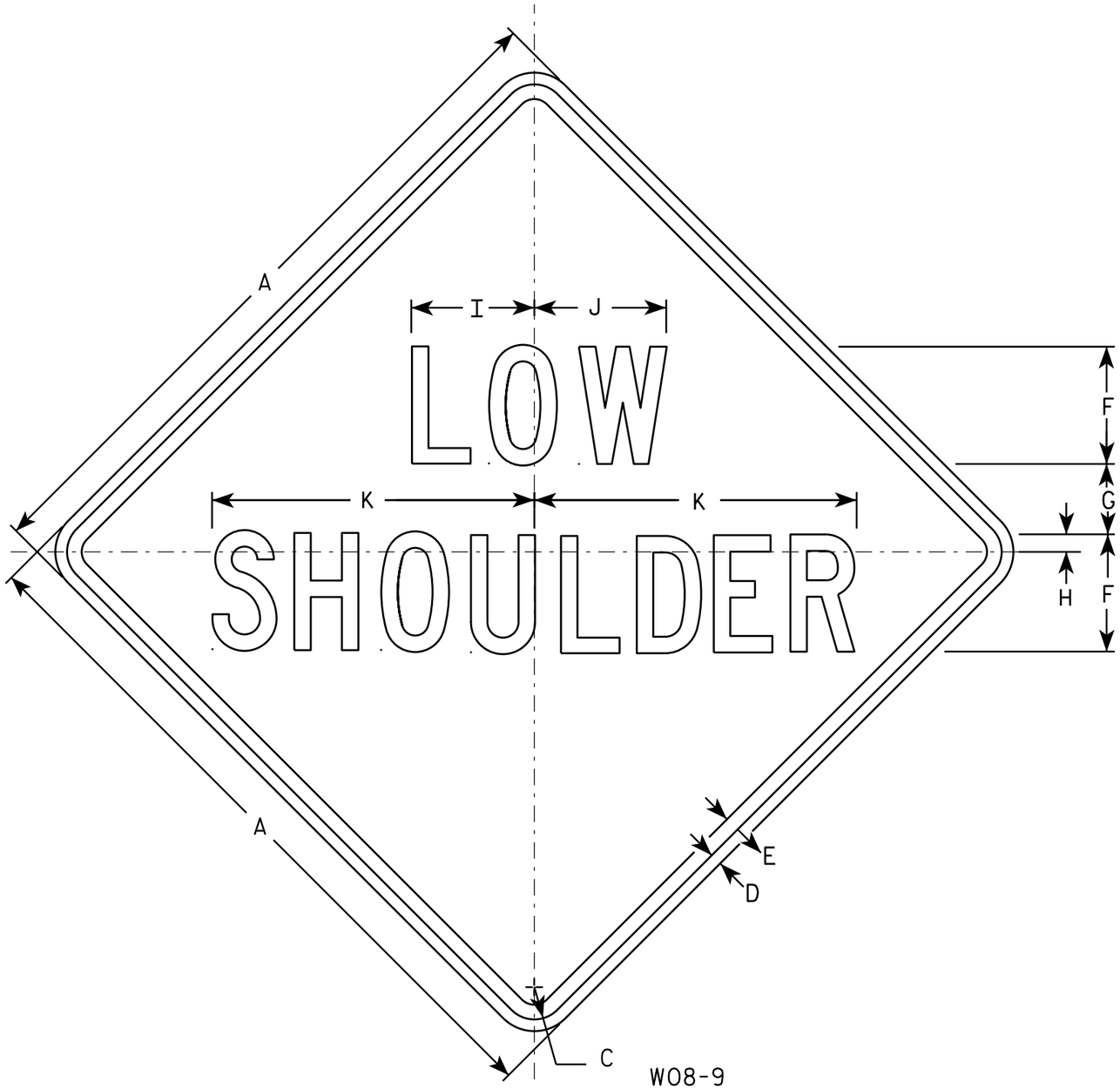
STANDARD SIGN
W08-6

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/20/13 PLATE 346 W08-6.1

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



W08-9

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - 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		1 5/8	5/8	3/4	6	3 1/2	1	6 1/4	6 3/4	16 1/2																9.0
2S	48		2 1/4	3/4	1	8	5	1 1/4	8 1/4	9	21 7/8																16.0
2M	48		2 1/4	3/4	1	8	5	1 1/4	8 1/4	9	21 7/8																16.0
3	48		2 1/4	3/4	1	8	5	1 1/4	8 1/4	9	21 7/8																16.0
4	48		2 1/4	3/4	1	8	5	1 1/4	8 1/4	9	21 7/8																16.0
5	48		2 1/4	3/4	1	8	5	1 1/4	8 1/4	9	21 7/8																16.0

STANDARD SIGN
W08-9

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/20/13 PLATE W08-9.1

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\W089.DGN PLOT DATE : 20-NOV-2013 14:06 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 6.755110:1.000000
WISDOT/CADDS SHEET 42

$PRFNAME$
U:\41-0660.0X - IH-39 Dane Partners General Bridge Information\B-13-467 Crash Wall Modifications

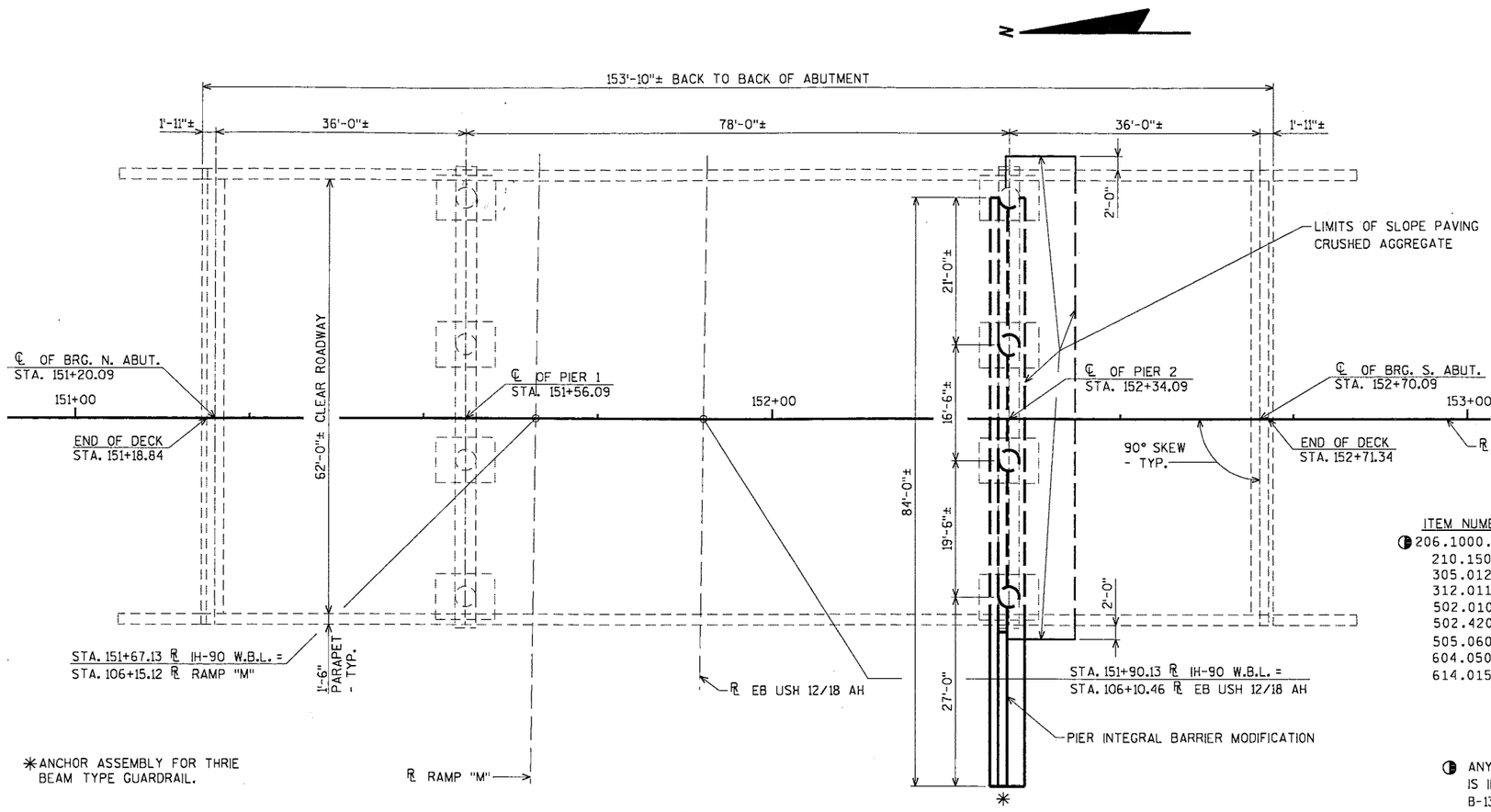
DATE:
DATE:
DATE:

CHECKED BY:
BACK CHECKED BY:
CORRECTED BY:

8

STATE PROJECT NUMBER

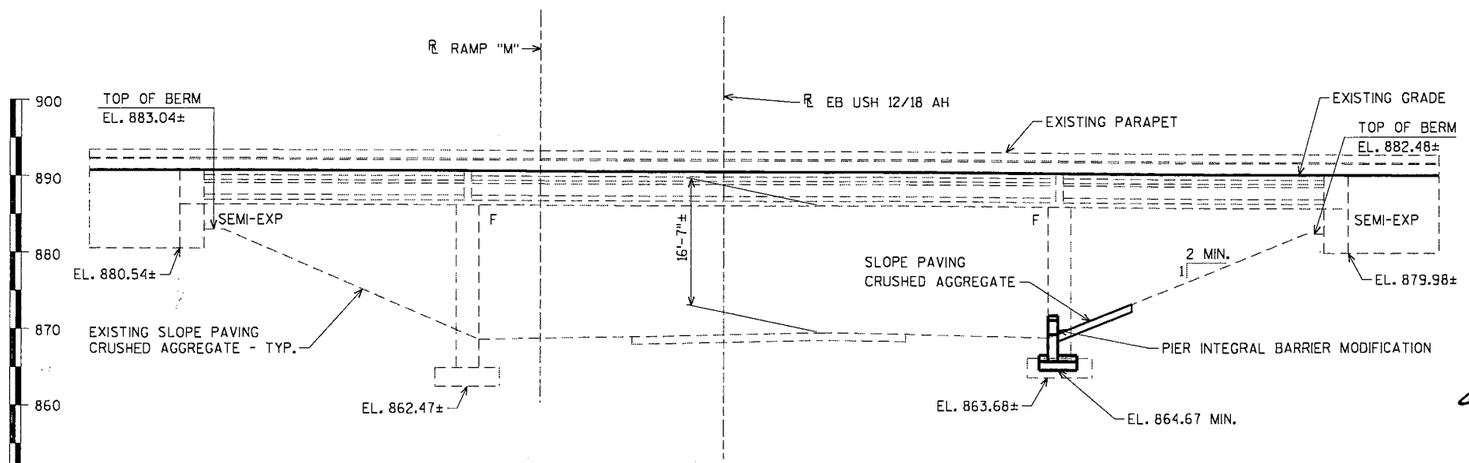
1007-12-78



✳ANCHOR ASSEMBLY FOR THRIE BEAM TYPE GUARDRAIL.

PLAN

THREE-SPAN-45" PRESTRESSED CONCRETE GIRDER BRIDGE
PIER INTEGRAL BARRIER MODIFICATION



ELEVATION

(LOOKING EAST)

DESIGN DATA

LIVE LOAD:
DESIGN LOADING: HS-20

MATERIAL PROPERTIES:

CONCRETE MASONRY	f'_c =	4,000 p.s.i.
HIGH STRENGTH BAR STEEL REINFORCEMENT (GRADE 60)	f_y =	60,000 p.s.i.

TOTAL ESTIMATED QUANTITIES

ITEM NUMBER	BID ITEMS	AMOUNT
◑ 206.1000.710	EXCAVATION FOR STRUCTURES BRIDGES B-13-467	1 LS
210.1500	BACKFILL STRUCTURE TYPE A	500 TONS
305.0120	BASE AGGREGATE DENSE 1¼-INCH	25 TON
312.0110	SELECT CRUSHED MATERIAL	30 TON
502.0100	CONCRETE MASONRY BRIDGES	32 CY
502.4206	ADHESIVE ANCHORS NO. 6 BAR	42 EACH
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	4,200 LB
604.0500	SLOPE PAVING CRUSHED AGGREGATE	115 SY
614.0150	ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	1 EACH

NON-BID ITEMS

FILLER	½ SIZE

◑ ANY SLOPE PROTECTION OR TEMPORARY SHORING REQUIRED FOR EXCAVATION IS INCLUDED IN THE BID ITEM "EXCAVATION FOR STRUCTURES BRIDGES B-13-467".

LIST OF DRAWINGS

1. GENERAL PLAN
2. PIER INTEGRAL BARRIER
3. PIER BARRIER DETAILS & BILL OF BARS

WISCONSIN
CHRISTOPHER B. McMAHON
E-29454
EAU CLAIRE
WI
PROFESSIONAL ENGINEER
7/29/19

BRIDGE OFFICE CONTACT:
WILLIAM DREHER
(608)-266-8489

CONSULTANT CONTACT:
CHRIS MCMAHON
(715)-834-3161

NO.	DATE	REVISION	BY

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Ockwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher SDR 08/27/19
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-13-467

WESTBOUND IH 90 OVER E.B. U.S.H. 12/18

COUNTY	TOWN/~~CITY/VILLAGE~~
DANE	BLOOMING GROVE

DESIGN SPEC. REHABILITATION N/A

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
CBM	---	CJM	CBM

GENERAL PLAN

SHEET 348 - 3

I.D.

DATE:

8

7/25/2019

PENTABLE:BRequ_shd_util.tbl

$PRFNAME$
U:\41-0660.0X - IH-39 Dane Partners General Bridge Information\B-13-467 Crash Wall Modifications\Structures\B-13-467_details.D

STATE PROJECT NUMBER

1007-12-78

GENERAL NOTES

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

BARRIER AND FOOTING SHALL CONSIST OF CAST IN PLACE CONSTRUCTION. NO JOINTS SHALL BE ALLOWED IN THE BARRIER. CONSTRUCTION JOINTS WILL ONLY BE ALLOWED IN THE FOOTING AT LOCATIONS SHOWN IN THE "PLAN VIEW".

DO NOT CUT OR DRILL INTO EXISTING COLUMN BAR STEEL.

USE 2-INCH MINIMUM CLEARANCE, EXCEPT AT FOOTINGS PROVIDE 3-INCH BAR CLEARANCE FROM BOTTOM OF FOOTING TO BOTTOM TRANSVERSE REINFORCEMENT.

PLACE REINFORCEMENT SUCH THAT IT WILL NOT CONFLICT WITH THE ANCHOR ASSEMBLY FOR THRIE BEAM ATTACHMENT.

PROVIDE ¾" BEVEL OR 1-INCH RADIUS ON BARRIER EDGES, TOP, AND ENDS.

DRAWINGS SHALL NOT BE SCALED.

DIMENSIONS ARE BASED ON ORIGINAL STRUCTURE PLANS.

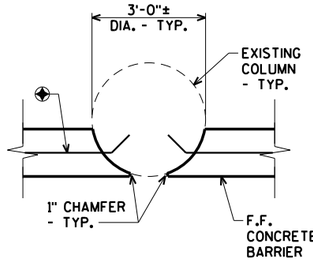
THE FIRST DIGIT OF A THREE DIGIT BAR NO. AND THE FIRST TWO DIGITS OF A FOUR DIGIT BAR NO. SIGNIFIES THE BAR SIZE.

THE EXISTING GROUNDLINE SHALL BE THE UPPER LIMIT FOR EXCAVATION FOR STRUCTURES.

JOINT FILLER SHALL CONFORM TO THE REQUIREMENTS OF A.A.S.H.T.O. DESIGNATION M 153, TYPE I, II OR III OR A.A.S.H.T.O. DESIGNATION M 213.

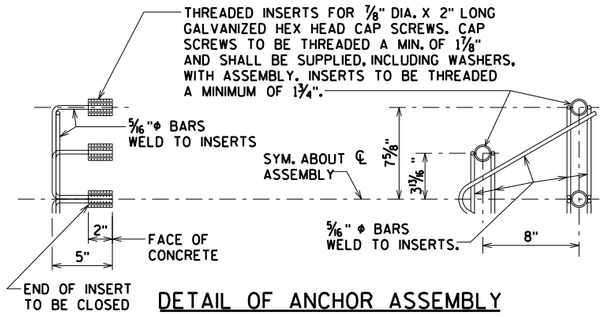
⊕ ADHESIVE ANCHORS NO. 6 BAR (S613) EMBED 8" IN CONCRETE

⚠ 12" SELECT CRUSHED MATERIAL MAY BE ELIMINATED IF IT IS DETERMINED BY THE ENGINEER THAT THE EXISTING MATERIAL IS COMPACTED, GRANULAR MATERIAL.



SECTION C

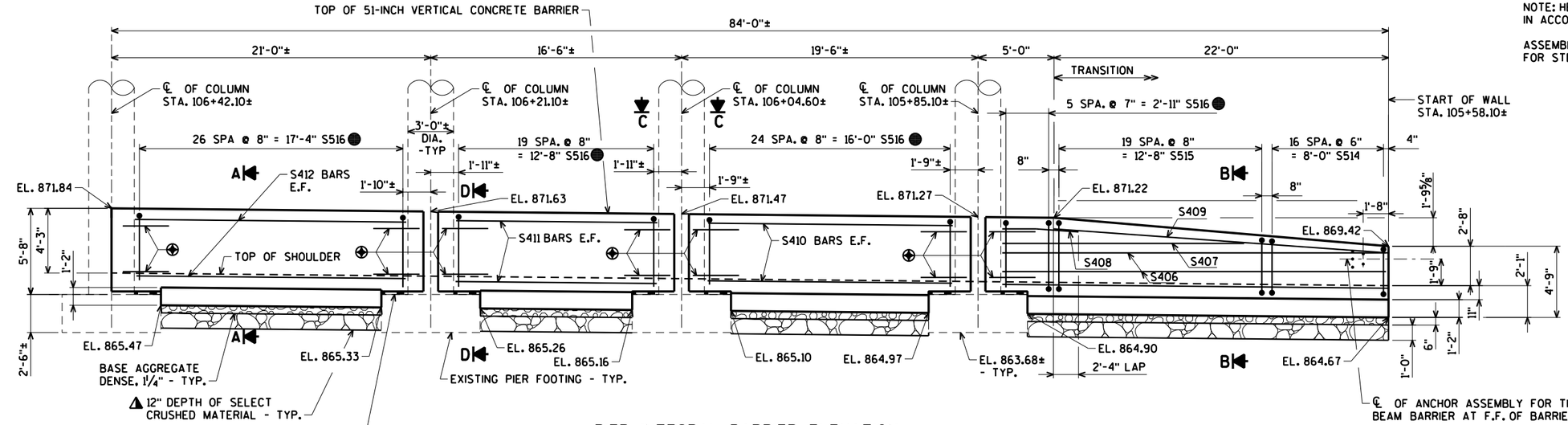
F.F. OF BARRIER IS FLUSH WITH FACE OF COLUMN.



DETAIL OF ANCHOR ASSEMBLY

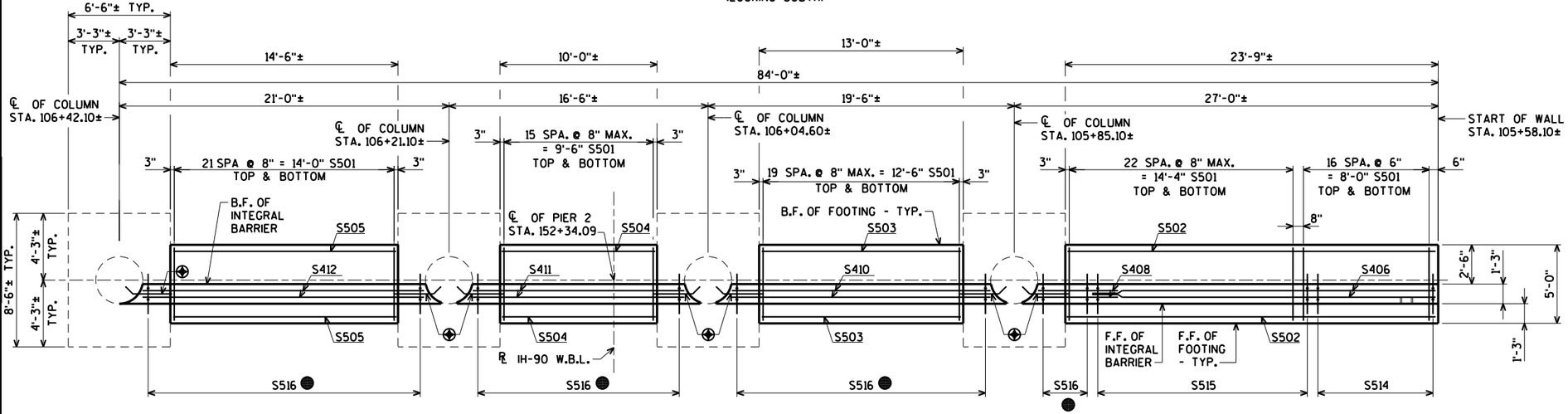
NOTE: HEX HEAD CAP SCREWS & WASHERS TO BE GALVANIZED IN ACCORDANCE WITH AASHTO M232 CLASS C.

ASSEMBLY SHALL BE BID ITEM "ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD", EACH.



PIER INTEGRAL BARRIER ELEVATION

(LOOKING SOUTH)



PIER INTEGRAL BARRIER PLAN

● CUT S516 BAR LEGS 2" CLEAR ON TOP OF EXISTING PIER FOOTINGS. COST TO CUT BARS IS INCLUDED IN THE COST OF "BAR STEEL REINFORCEMENT HS COATED STRUCTURES".

SEE SHEET 3 FOR SECTIONS A, B, & D.

B.F. DENOTES BACK FACE

F.F. DENOTES FRONT FACE

E.F. DENOTES EACH FACE

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-467

DRAWN BY	CJM	PLANS CK'D.	CBM

PIER INTEGRAL BARRIER

SHEET 2 OF 3
349

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

8

8

$PRFNAME$
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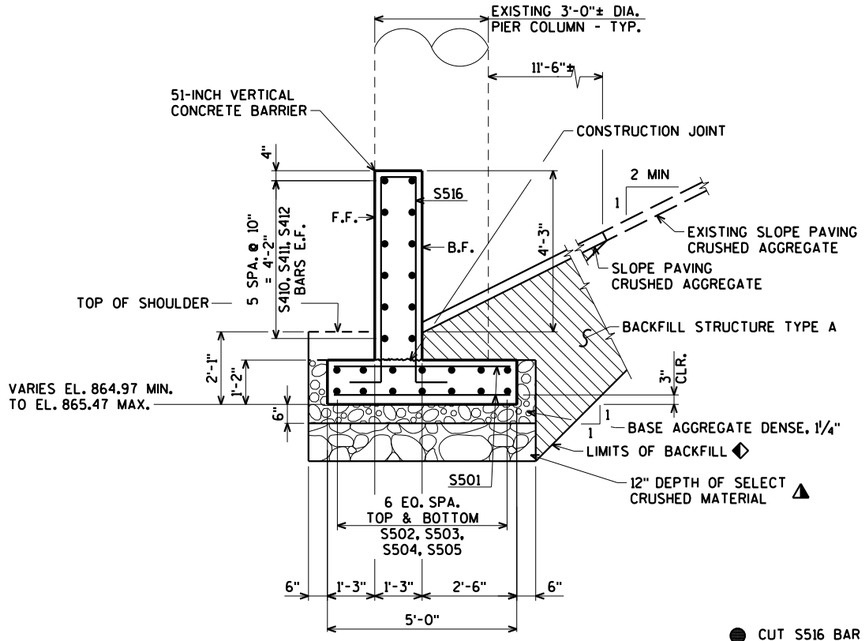
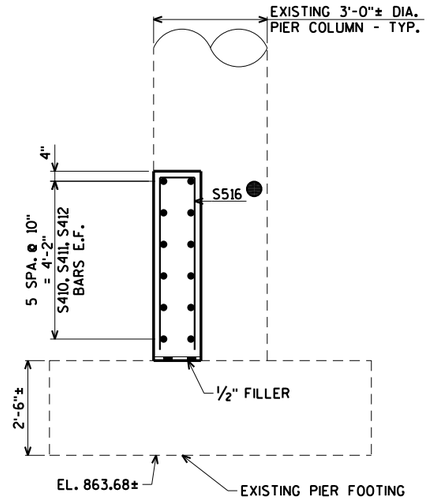


SECTION A
BETWEEN COLUMNS



SECTION D
OVER EXISTING PIER FOOTINGS

BILL OF BARS

	BAR NO.	COATED BAR	NO. REQ'D.	LENGTH	BENT BAR	BUNDLED BAR SERIES	4,200# COATED LOCATION
	S501	X	196	4-8			FOOTING TRANS. TOP & BOT.
	S502	X	14	23-5			FOOTING LONG. TOP & BOT.
	S503	X	14	12-8			FOOTING LONG. TOP & BOT.
	S504	X	14	9-8			FOOTING LONG. TOP & BOT.
	S505	X	14	14-2			FOOTING LONG. TOP & BOT.
	S406	X	8	25-2			BARRIER HORIZ. TRANSITION E.F.
	S407	X	2	17-2			BARRIER HORIZ. TRANSITION E.F.
	S408	X	2	5-6	X		BARRIER HORIZ. TRANSITION E.F.
	S409	X	2	21-8			BARRIER HORIZ. TRANSITION E.F.
	S410	X	12	16-2			BARRIER HORIZ. E.F.
	S411	X	12	13-2			BARRIER HORIZ. E.F.
	S412	X	12	17-8			BARRIER HORIZ. E.F.
⊕	S613	X	42	3-2	X		PIER COLUMN ANCHORS
	S514	X	17	11-3	X	⊗	BARRIER VERT.
	S515	X	20	12-9	X	⊗	BARRIER VERT.
●	S516	X	78	13-11	X		BARRIER VERT.

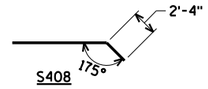
⊗ LENGTH SHOWN FOR BAR IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS. BENDING DIMENSIONS ARE OUT TO OUT OF BARS.

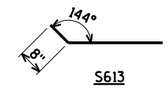
● CUT S516 BAR LEGS 2" CLEAR ON TOP OF EXISTING PIER FOOTINGS. COST TO CUT BARS IS INCLUDED IN THE COST OF "BAR STEEL REINFORCEMENT HS COATED STRUCTURES".

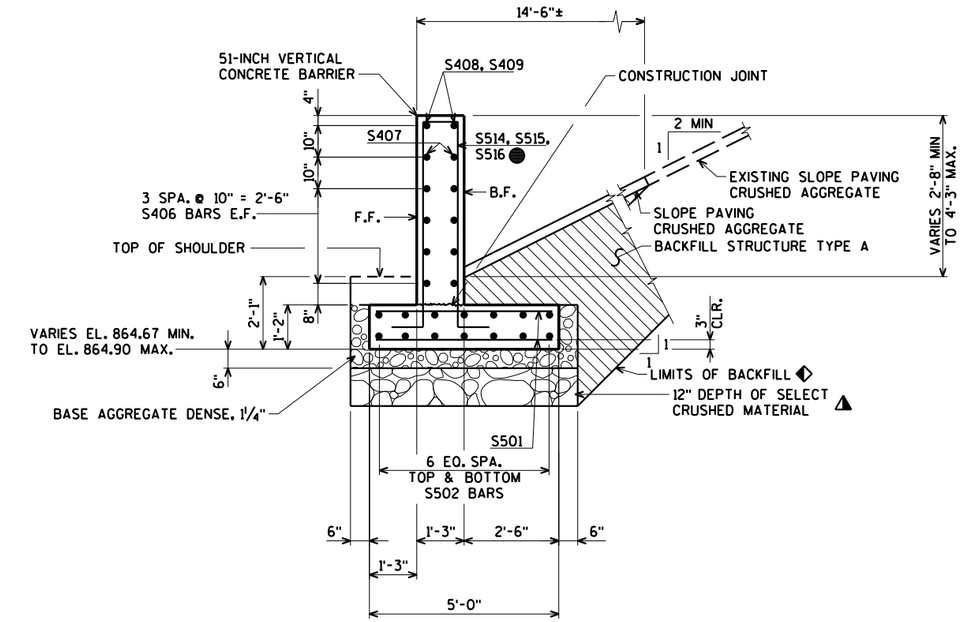
⊕ ADHESIVE ANCHORS NO. 6 BAR (S613) EMBED 8" IN CONCRETE

◆ BACKFILL PAY LIMITS. BACKFILL BEYOND PAY LIMITS SHALL BE INCLUDED WITH EXCAVATION FOR STRUCTURES. LIMITS OF EXCAVATION SHALL BE DETERMINED BY THE CONTRACTOR.

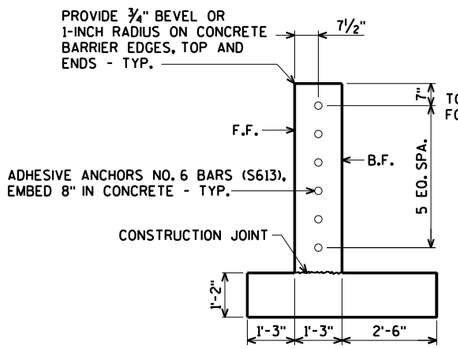
▲ 12" SELECT CRUSHED MATERIAL MAY BE ELIMINATED IF IT IS DETERMINED BY THE ENGINEER THAT THE EXISTING MATERIAL IS COMPACTED, GRANULAR MATERIAL.



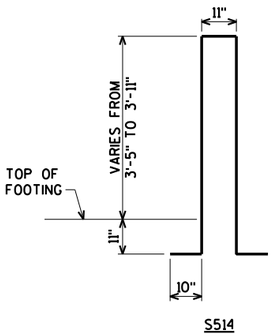




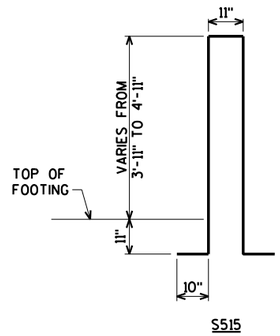
SECTION B
TRANSITION REGION



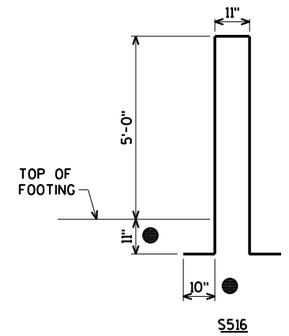
ADHESIVE ANCHOR LAYOUT



S514



S515



S516

B.F. DENOTES BACK FACE

F.F. DENOTES FRONT FACE

E.F. DENOTES EACH FACE

BAR SERIES TABLE

BAR MARK	NO REQ'D.	LENGTH
S514	1 SERIES OF 17	10'-9" TO 11'-9"
S515	1 SERIES OF 20	11'-9" TO 13'-9"

BUNDLE AND TAG EACH SERIES SEPARATELY.

FOR LOCATIONS OF SECTIONS A, B AND D, SEE SHEET 2.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-467

DRAWN BY CJM | PLANS CK'D. CBM

PIER BARRIER DETAILS & BILL OF BARS

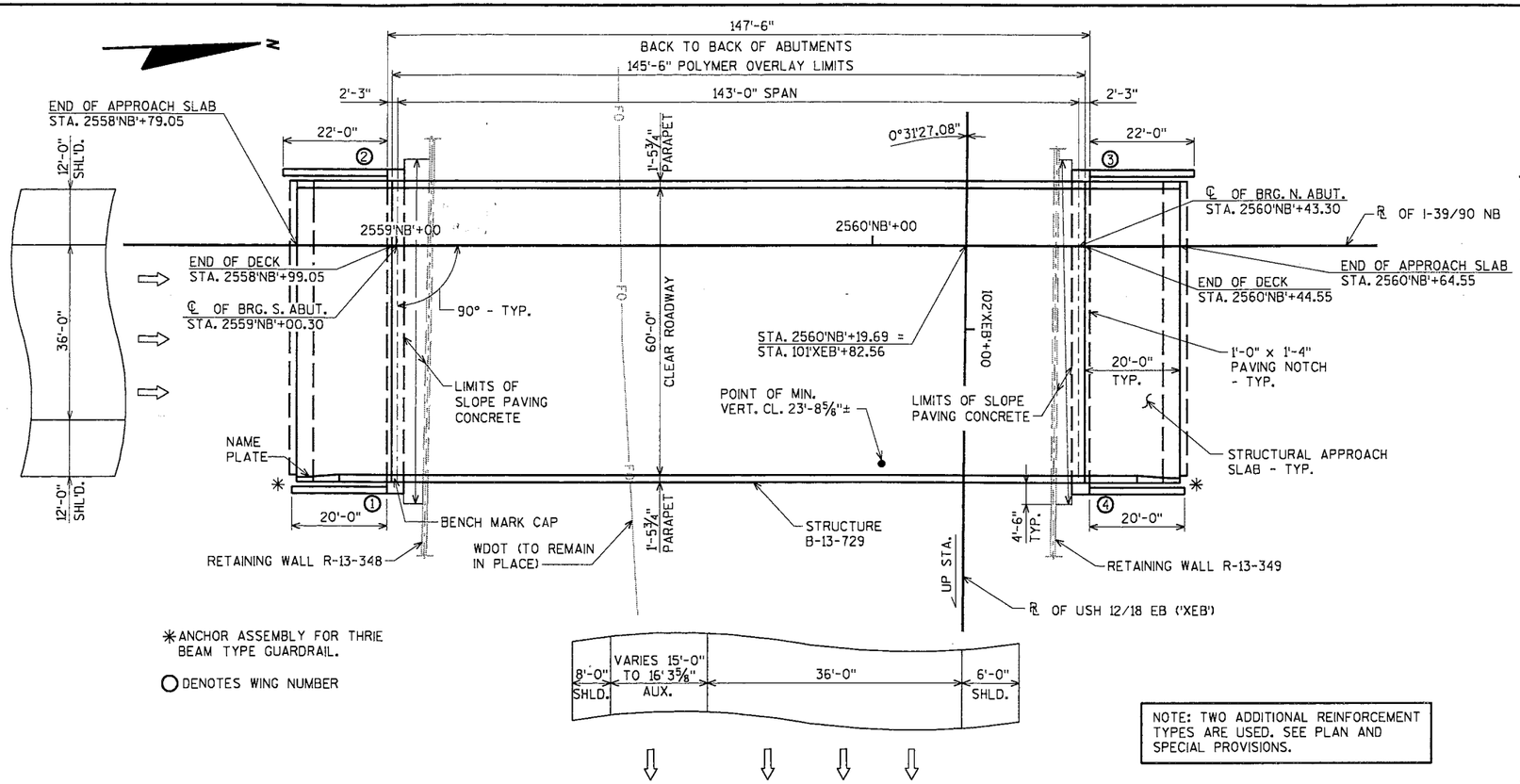
SHEET 3 OF 3
350

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

$PRFNAME$
U:±41-0660.0X - IH-39 Dane Partners General Bridge Information:B-13-729 - 139.NB over USH 12&18

STATE PROJECT NUMBER

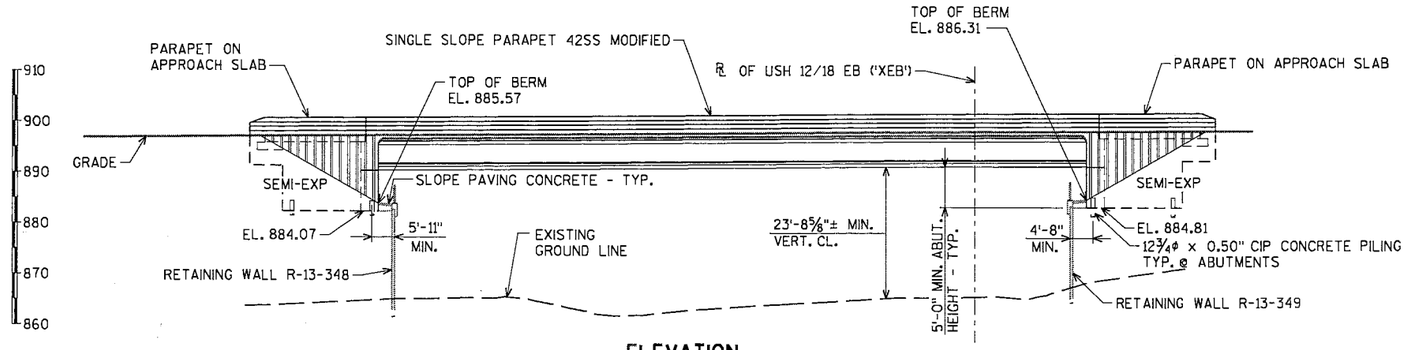
1007-12-78



NOTE: TWO ADDITIONAL REINFORCEMENT TYPES ARE USED. SEE PLAN AND SPECIAL PROVISIONS.

PLAN

SINGLE SPAN - 72W" PRESTRESSED CONCRETE GIRDER BRIDGE



ELEVATION

(NORMAL TO ℞ OF USH 12/18 EB ('XEB'))

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HL-93
INVENTORY RATING FACTOR: 1.21
OPERATING RATING FACTOR: 1.98
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV) = 250 KIPS

STRUCTURE IS DESIGNED FOR A FUTURE WEARING SURFACE OF 20 #/S.F.

RATING BASED ON PLACEMENT OF 5 p.s.f. POLYMER OVERLAY UNDER THIS CONTRACT.

MATERIAL PROPERTIES:

CONCRETE MASONRY	SUPERSTRUCTURE (HPC DECK, PARAPET, DIAPHRAGM, APPROACH SLAB) f'_c	=	4,000 p.s.i.
	ALL OTHER (INCL. APPROACH SLAB FOOTING) f'_c	=	3,500 p.s.i.
HIGH STRENGTH BAR STEEL REINFORCEMENT (GRADE 60) f_y		=	60,000 p.s.i.
STRUCTURAL CARBON STEEL ASTM A709 (GRADE 36) f_y		=	36,000 p.s.i.
72W" PRESTRESSED GIRDER CONCRETE MASONRY f'_c		=	8,000 p.s.i.
STRANDS - 0.6" DIA. WITH ULTIMATE TENSILE STRENGTH OF		=	270,000 p.s.i.
STEEL PILING SHELLS ASTM A252 (GRADE 3) f_y		=	45,000 p.s.i.

FOUNDATION DATA:

ABUTMENTS TO BE SUPPORTED ON 12¾" ø x 0.50" CIP CONCRETE PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 210 TONS ‡ PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED LENGTH 60'-0" AT SOUTH ABUTMENT. ESTIMATED LENGTH 55'-0" AT NORTH ABUTMENT.

‡ 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 DRIVEN PILE CAPACITY.

TRAFFIC DATA:

I-39/90 NB	USH 12/18 EB
A.A.D.T. = 60,400 (2020)	A.A.D.T. = 46,300 (2020)
A.A.D.T. = 72,000 (2040)	A.A.D.T. = 54,500 (2040)
R.D.S. = 70 M.P.H.	R.D.S. = 60 M.P.H.

FOR TYPICAL SECTION SEE SHEET 2

LIST OF DRAWINGS

1. GENERAL PLAN
2. TYPICAL SECTION AND DETAILS
3. QUANTITIES AND GENERAL NOTES
4. TYPICAL SECTIONS AND PROFILES
5. SUBSURFACE EXPLORATION
6. SOUTH ABUTMENT
7. SOUTH ABUTMENT PILE LAYOUT
8. SOUTH ABUTMENT WING 1 DETAILS
9. SOUTH ABUTMENT WING 2 DETAILS
10. SOUTH ABUTMENT DETAILS
11. NORTH ABUTMENT
12. NORTH ABUTMENT PILE LAYOUT
13. NORTH ABUTMENT WING 3 DETAILS
14. NORTH ABUTMENT WING 4 DETAILS
15. NORTH ABUTMENT DETAILS
16. ABUTMENT RUSTICATION AND CONCRETE STAINING DETAILS
17. ALTERNATE CONSTRUCTION JOINT
18. 72W" PRESTRESSED GIRDER DETAILS
19. 72W" PRESTRESSED GIRDER DETAILS
20. STEEL DIAGHRAGM
21. SUPERSTRUCTURE
22. SUPERSTRUCTURE PLAN
23. SUPERSTRUCTURE DETAILS
24. SUPERSTRUCTURE CONDUIT DETAILS
25. SUPERSTRUCTURE CORNER DETAILS & BILL OF BARS
26. SOUTH STRUCTURAL APPROACH SLAB
27. NORTH STRUCTURAL APPROACH SLAB
28. STRUCTURAL APPROACH SLAB DETAILS
29. SINGLE SLOPE PARAPET 42SS MODIFIED
30. SINGLE SLOPE PARAPET 42SS MODIFIED
31. SLOPE PAVING CONCRETE

DATE:
DATE:
DATE:
CHECKED BY:
BACK CHECKED BY:
CORRECTED BY:

WISCONSIN
CHRISTOPHER B. McMAHON
E-29454
EAU CLAIRE
PROFESSIONAL ENGINEER
8/27/19

BRIDGE OFFICE CONTACT:
WILLIAM DREHER
(608)-266-8489

CONSULTANT CONTACT:
CHRIS MCMAHON
(715)-834-3161

NO.	DATE	REVISION	BY

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher SDR 08/29/19
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-13-729

I-39/90 NB OVER USH 12/18 EB

COUNTY	TOWN/~~CITY/VILLAGE~~
DANE	BLOOMING GROVE

DESIGN SPEC.
AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
AEB	ZSS	JLB/CLS	CBM

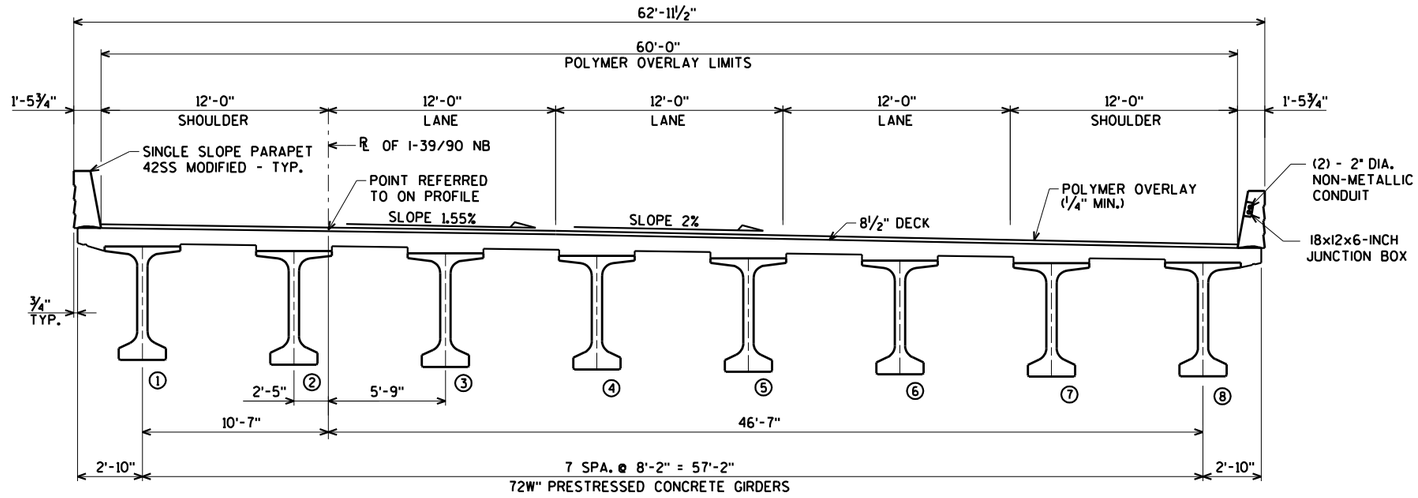
GENERAL PLAN

SHT 351 F 31

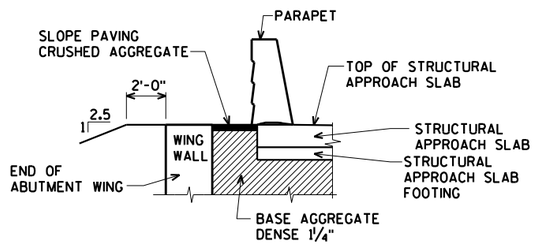
I.D.
DATE:

8

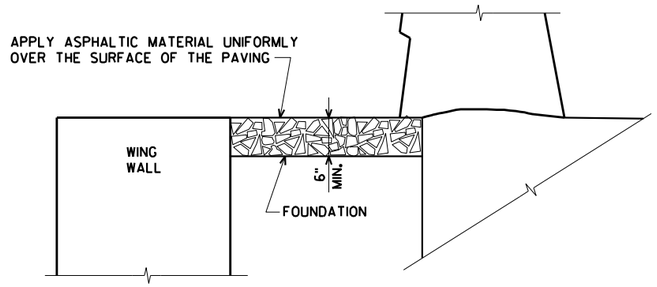
8



TYPICAL SECTION THRU BRIDGE
(LOOKING NORTH)



TYPICAL FILL SECTION AT WING TIPS



SLOPE PAVING CRUSHED AGGREGATE DETAIL
ROUND STONE WILL NOT BE ACCEPTED

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

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-729

DRAWN BY JLB/CLS | PLANS CK'D. CBM

TYPICAL SECTION AND DETAILS

SHEET 2 OF 31
352

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$PRFNAME$
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$PRFNAME$
U:\41-0660.0X - IH-39 Dane Partners General Bridge Information\B-13-729 - I39_NB over USH 12&18 EB\bridge\B-13-729 ty quan.dgn

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	S. STR. APR. SLAB	S. ABUT.	N. ABUT.	N. STR. APR. SLAB	SUPER.	TOTAL
210.1500	BACKFILL STRUCTURE TYPE A	TON	-----	435	435	-----	-----	870
305.0120	BASE AGGREGATE DENSE 1¼-INCH	TON	245	-----	-----	245	-----	490
501.1000.S	ICE HOT WEATHER CONCRETING	LB	645	640	640	645	3,475	6,045
502.0100	CONCRETE MASONRY BRIDGES	CY	18	85	85	18	-----	206
502.3200	PROTECTIVE SURFACE TREATMENT	SY	150	-----	-----	150	-----	300
502.3210	PIGMENTED SURFACE SEALER	SY	20	-----	-----	20	145	185
503.0172	PRESTRESSED GIRDER TYPE I 72W-INCH	LF	-----	-----	-----	-----	1,152	1,152
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	-----	5,490	5,490	-----	-----	10,980
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	14,290	3,910	3,910	14,290	7,660	44,060
505.0800.S	BAR STEEL REINFORCEMENT HS STAINLESS STRUCTURES	LB	1,070	-----	-----	1,070	-----	2,140
506.2605	BEARING PADS ELASTOMERIC NON-LAMINATED	EACH	-----	8	8	-----	-----	16
506.4000.700	STEEL DIAPHRAGMS B-13-729	EACH	-----	-----	-----	-----	14	14
509.5100.S	POLYMER OVERLAY	SY	-----	-----	-----	-----	970	970
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	-----	19	19	-----	-----	38
517.1010.S.700	CONCRETE STAINING B-13-729	SF	140	640	640	140	3,850	5,410
604.0400	SLOPE PAVING CONCRETE	SY	-----	40	30	-----	-----	70
604.0500	SLOPE PAVING CRUSHED AGGREGATE	SY	5	-----	-----	5	-----	10
614.0150	ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	1	-----	-----	1	-----	2
652.0125	CONDUIT RIGID METALLIC 2-INCH	LF	6	-----	-----	6	13	25
652.0225	CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH	LF	65	-----	-----	65	280	410
653.0222	JUNCTION BOXES 18 X 12 X 6-INCH	EACH	-----	-----	-----	-----	2	2
SPV.0035.700	HIGH PERFORMANCE CONCRETE (HPC) MASONRY STRUCTURES	CY	68	-----	-----	68	463	599
SPV.0090.700	PILING CIP CONCRETE 12¾ X 0.50-INCH	LF	-----	1,140	1,045	-----	-----	2,185
SPV.0085.700	BAR STEEL REINFORCEMENT HS TEXTURED COATED STRUCTURES	LB	-----	-----	-----	-----	27,210	27,210
SPV.0085.701	BAR STEEL REINFORCEMENT HS GALVANIZED STRUCTURES	LB	-----	-----	-----	-----	27,140	27,140
SPV.0165.700	LONGITUDINAL GROOVING BRIDGE DECK	SF	1,200	-----	-----	1,200	-----	2,400
	NON-BID ITEMS	SIZE	-----	-----	-----	-----	-----	½" & ¾"
	FILLER							

◈ HIGH PERFORMANCE CONCRETE (HPC) MASONRY STRUCTURES SHALL INCLUDE ALL SUPERSTRUCTURE CONCRETE AND ALL STRUCTURAL APPROACH SLAB CONCRETE, EXCEPT THE STRUCTURAL APPROACH SLAB FOOTING CONCRETE.

● PILING TO BE ASTM A252 (GRADE 3) WITH A f_y = 45,000 p.s.i.

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

THE FIRST DIGIT OF A THREE DIGIT BAR NO. OR THE FIRST TWO DIGITS OF A FOUR DIGIT BAR NO. SIGNIFIES THE BAR SIZE.

JOINT FILLER SHALL CONFORM TO THE REQUIREMENTS OF A.A.S.H.T.O. DESIGNATION M 153, TYPE I, II, OR III OR A.A.S.H.T.O. DESIGNATION M 213.

AT THE BACKFACE OF ABUTMENTS ALL VOLUME WHICH CANNOT BE PLACED BEFORE ABUTMENT CONSTRUCTION AND IS NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH BACKFILL STRUCTURE TYPE A.

THE BACKFILL QUANTITIES ARE BASED ON THE PAY LIMITS SHOWN ON THE PLANS AND MAY NOT REFLECT ACTUAL PLACED QUANTITIES. "BACKFILL STRUCTURE TYPE A" REQUIRED DIRECTLY BEHIND ABUTMENTS AND ABUTMENT WINGS FOR 3 FEET. BACKFILL PLACED BEYOND PAY LIMITS OR EXCEEDING PLAN QUANTITIES SHALL BE INCIDENTAL TO BACKFILL STRUCTURE TYPE A.

EXCAVATION BELOW THE ABUTMENT AND ABUTMENT BEDDING MATERIALS REQUIRES ENGINEER APPROVAL.

THE HAUNCH CONCRETE QUANTITY IS BASED ON THE AVERAGE HAUNCH SHOWN ON THE PRESTRESSED GIRDER DETAILS SHEET.

BEVEL EXPOSED EDGES OF CONCRETE ¾" UNLESS OTHERWISE NOTED.

POLYMER OVERLAY AND PIGMENTED SURFACE SEALER IS TO BE APPLIED AS SHOWN IN DETAIL ON THIS SHEET.

ELASTOMERIC BEARING PADS NEED NOT BE INDIVIDUALLY MOLDED PROVIDED THE CUT EDGES ARE SMOOTH AND TRUE.

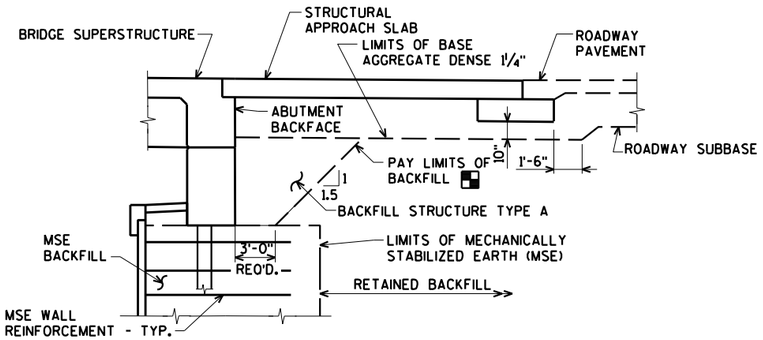
THE RUSTICATIONS IN THE ABUTMENTS ARE INCLUDED IN THE BID ITEM "CONCRETE MASONRY BRIDGES".

THE RUSTICATIONS AT THE BACK FACE OF THE PARAPETS ARE INCLUDED IN THE BID ITEM "HIGH PERFORMANCE CONCRETE (HPC) MASONRY STRUCTURES"

THE SLOPE OF THE FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH SLOPE PAVING MATERIAL TO THE EXTENT SHOWN ON THE GENERAL PLAN SHEET AND IN THE ABUTMENT DETAILS.

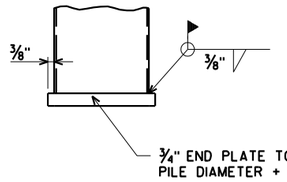
DECK SURFACE PREPARATION IS INCLUDED IN THE BID ITEM "POLYMER OVERLAY".

PROTECTIVE SURFACE TRATMENT TO BE APPLIED ONLY TO THE STRUCTURAL APPROACH SLABS AND THE PAVING NOTCHES.

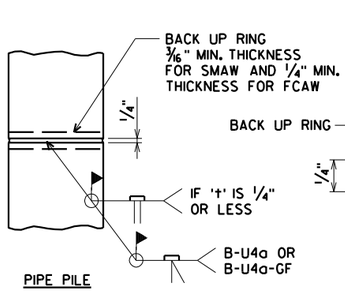


BACKFILL STRUCTURE LIMITS

■ BACKFILL PAY LIMITS. BACKFILL BEYOND BACKFILL PAY LIMITS SHALL BE INCLUDED WITH BACKFILL STRUCTURE TYPE A. LIMITS OF EXCAVATION SHALL BE DETERMINED BY THE CONTRACTOR.

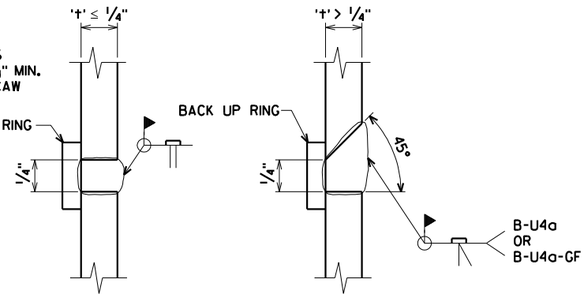


END PLATE DETAIL FOR CIP PILING

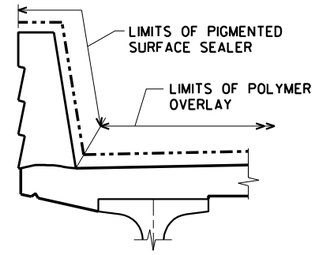


PILE SPLICE DETAIL

CAST-IN-PLACE PILE SHELL MATERIAL SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.



CIP PILE WELD DETAIL



POLYMER OVERLAY AND PIGMENTED SURFACE SEALER DETAILS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-729

DRAWN BY JLB/CLS | PLANS CK'D. CBM

QUANTITIES AND GENERAL NOTES

SHEET 3 OF 31
353

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
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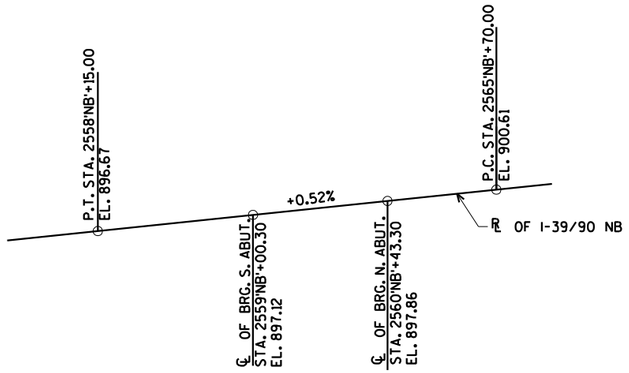
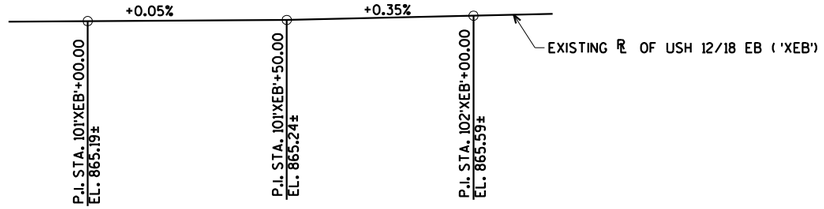
$PRFNAME$
U:±41-0660.0X - IH-39 Dane Partners General Bridge Information±B-13-729 - I39_NB over USH 12&18 EB±bridge±B-13-729 ty quan.dgn

STATE PROJECT NUMBER

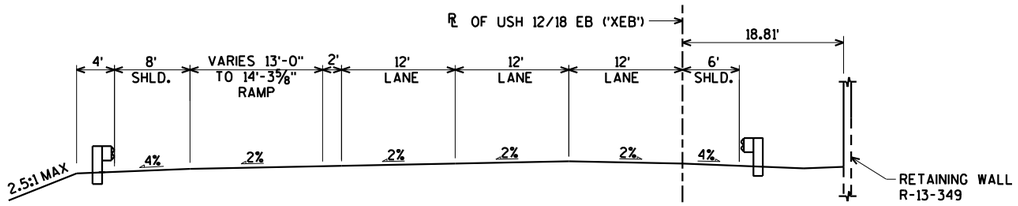
1007-12-78



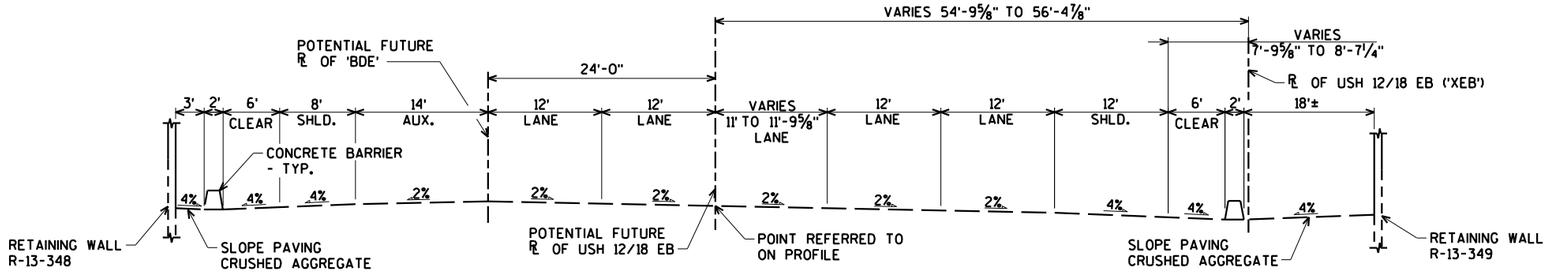
PROFILE GRADE LINE
(℄ OF I-39/90 NB)



PROFILE GRADE LINE
(℄ OF USH 12/18 EB ('XEB'))



TYPICAL FINISHED SECTION OF USH 12/18 EB
(LOOKING WEST)



POTENTIAL FUTURE TYPICAL FINISHED SECTION USH 12/18 EB
(LOOKING WEST)

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-729

DRAWN BY JLB/CLS | PLANS CK'D. CBM

TYPICAL SECTIONS AND PROFILES

SHEET 4 OF 31
354

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
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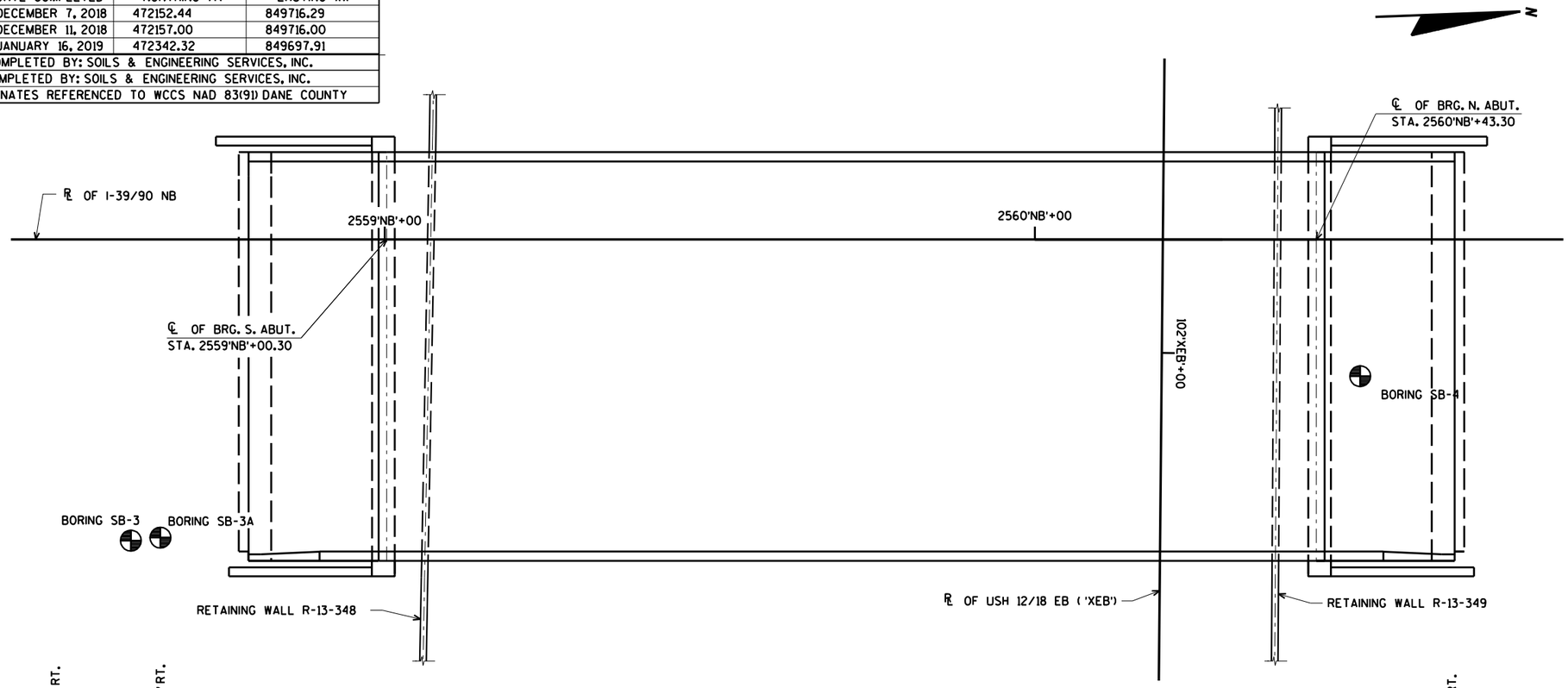
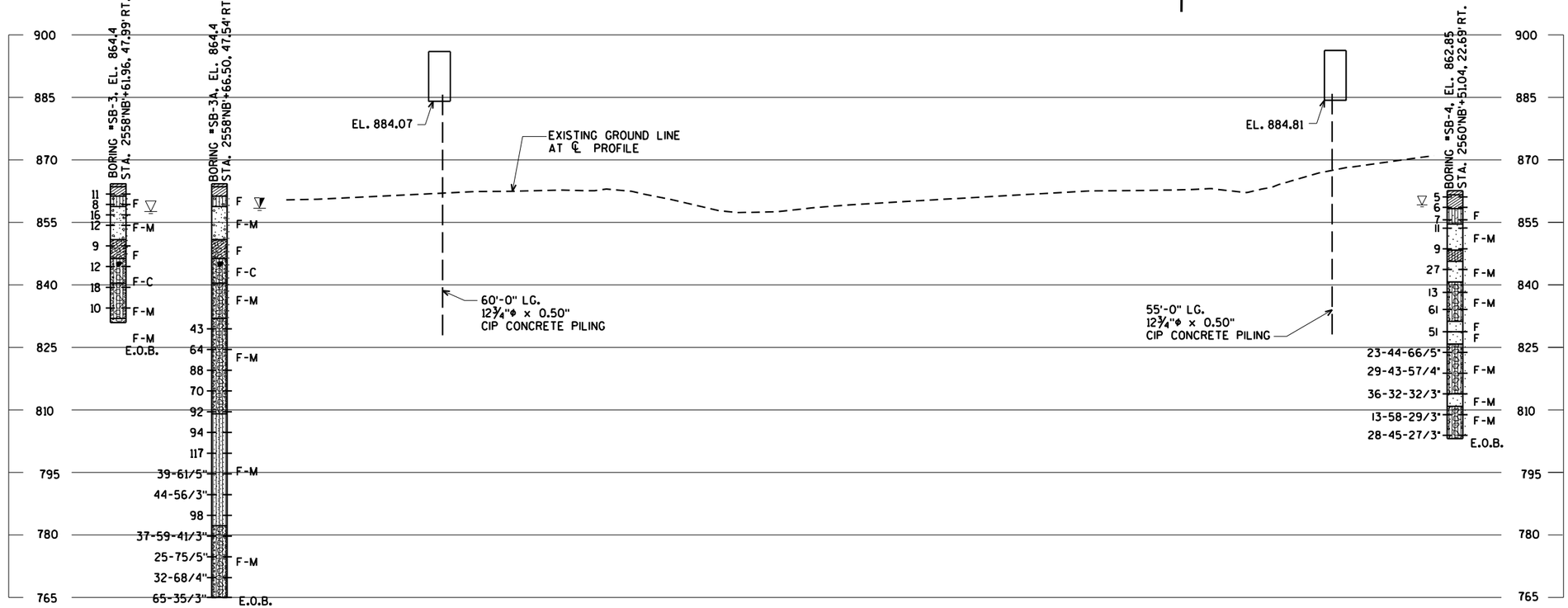
$PRFNAME$
U:±41-0660.0X - IH-39 Dane Partners General Bridge Information±B-13-729 - I39_NB over USH 12&18 EB±bridge±B-13-729 soils.dgn

BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
SB-3	DECEMBER 7, 2018	472152.44	849716.29
SB-3A	DECEMBER 11, 2018	472157.00	849716.00
SB-4	JANUARY 16, 2019	472342.32	849697.91
BORINGS COMPLETED BY: SOILS & ENGINEERING SERVICES, INC.			
REPORT COMPLETED BY: SOILS & ENGINEERING SERVICES, INC.			
ALL COORDINATES REFERENCED TO WCCS NAD 83(91) DANE COUNTY			





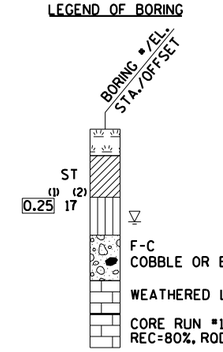
STATE PROJECT NUMBER

1007-12-78

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-13-729

DRAWN BY CJM/CLS | PLANS CK'D. CBM

SUBSURFACE EXPLORATION

SHEET 5 OF 31
355

8

8

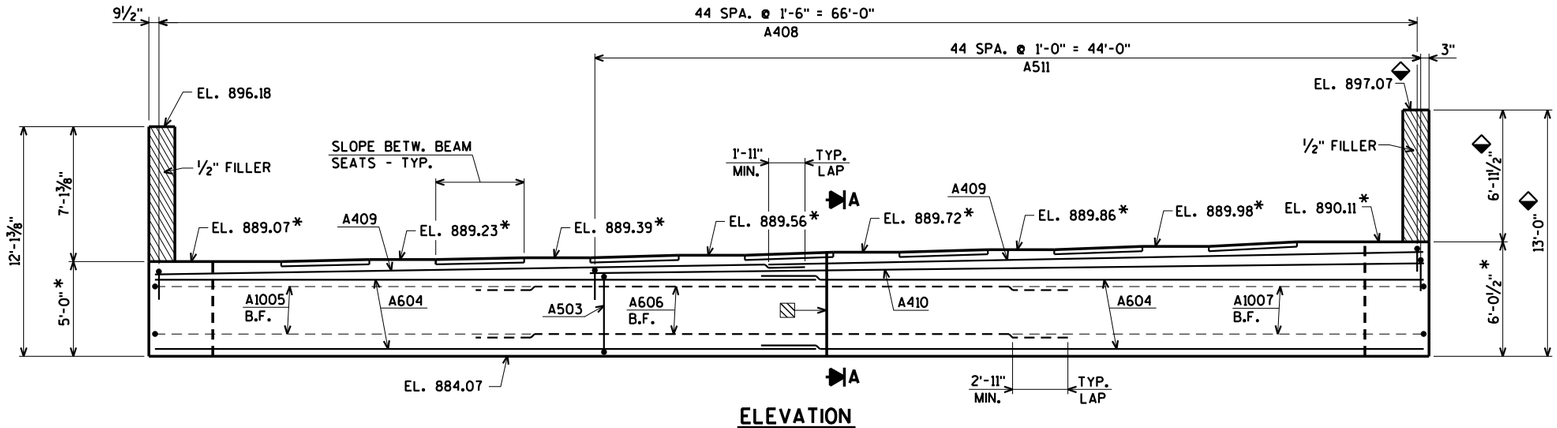
8/20/2019

PENTABLE:BReau_shd_util.tbl

NOTE: 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.)

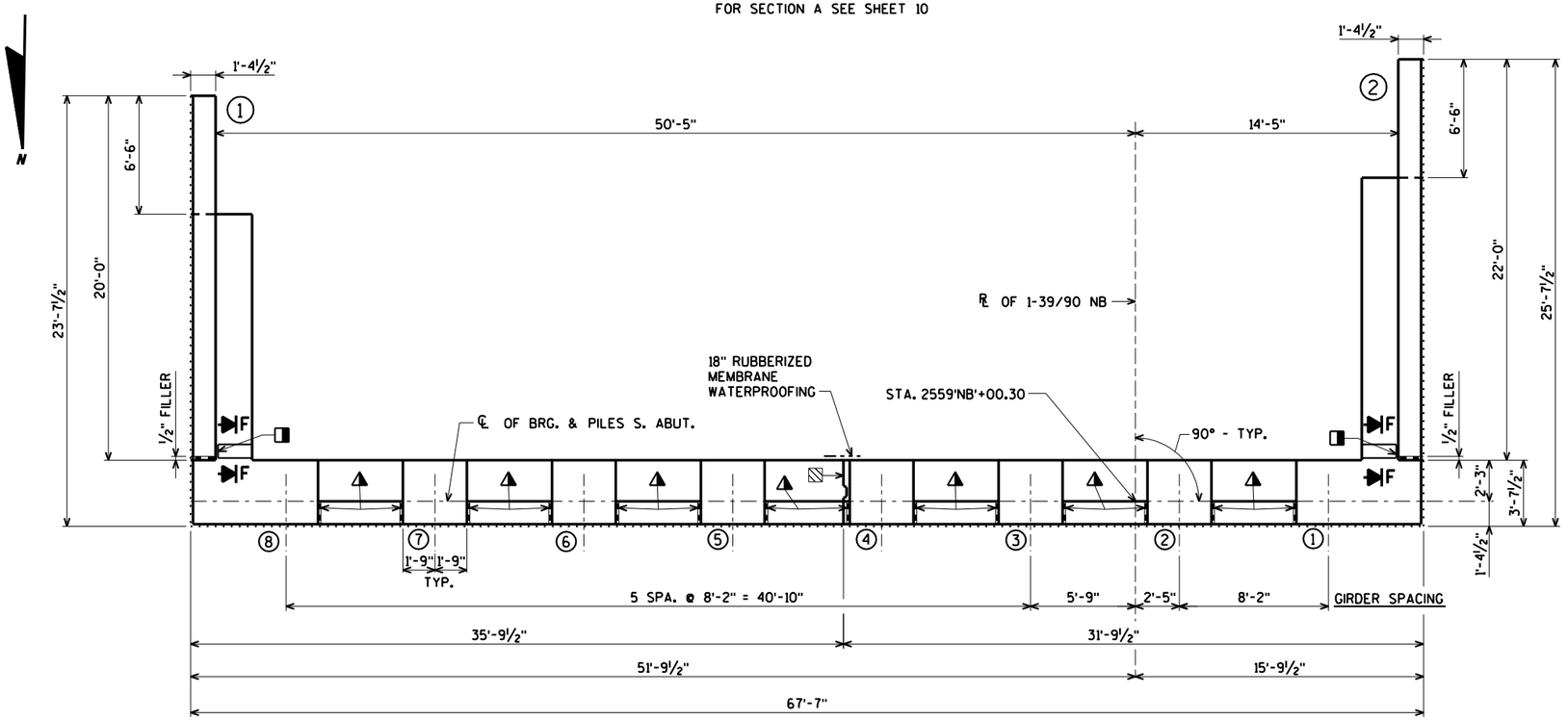
STATE PROJECT NUMBER

1007-12-78



ELEVATION
(LOOKING SOUTH)

FOR SECTION A SEE SHEET 10



PLAN

*ELEVATIONS AND DIMENSIONS TAKEN AT ℄ OF BRG. & PILES S. ABUT.

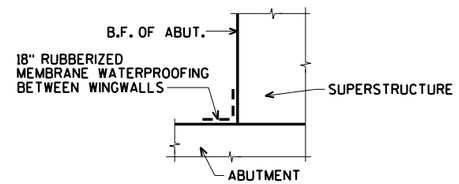
◆ TOP OF ABUTMENT DIAPHRAGM SLOPES DOWN FROM EDGE OF DECK TO THE WING. SEE SHEET 23 FOR DETAILS.

▨ VERT. CONST. JT. - KEYWAY FORMED BY A SURFACED BEVELED 2" x 8". BEVEL EXPOSED EDGES ¾". FOR ALTERNATE CONST. JT. DETAILS SEE SHEET 17

◨ 18" RUBBERIZED MEMBRANE WATERPROOFING FROM BRIDGE SEAT TO TOP OF WING.

◭ ¾" CORK FILLER ON VERTICAL BEAM SEAT FACES THAT RUN PARALLEL WITH GIRDER.

B.F. DENOTES BACK FACE



SECTION F

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-729

DRAWN BY CLS | PLANS CK'D. CBM

SOUTH ABUTMENT

SHEET 6 OF 31
356

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

8/20/2019
PENTABLE:BReou_shd_util.tbl

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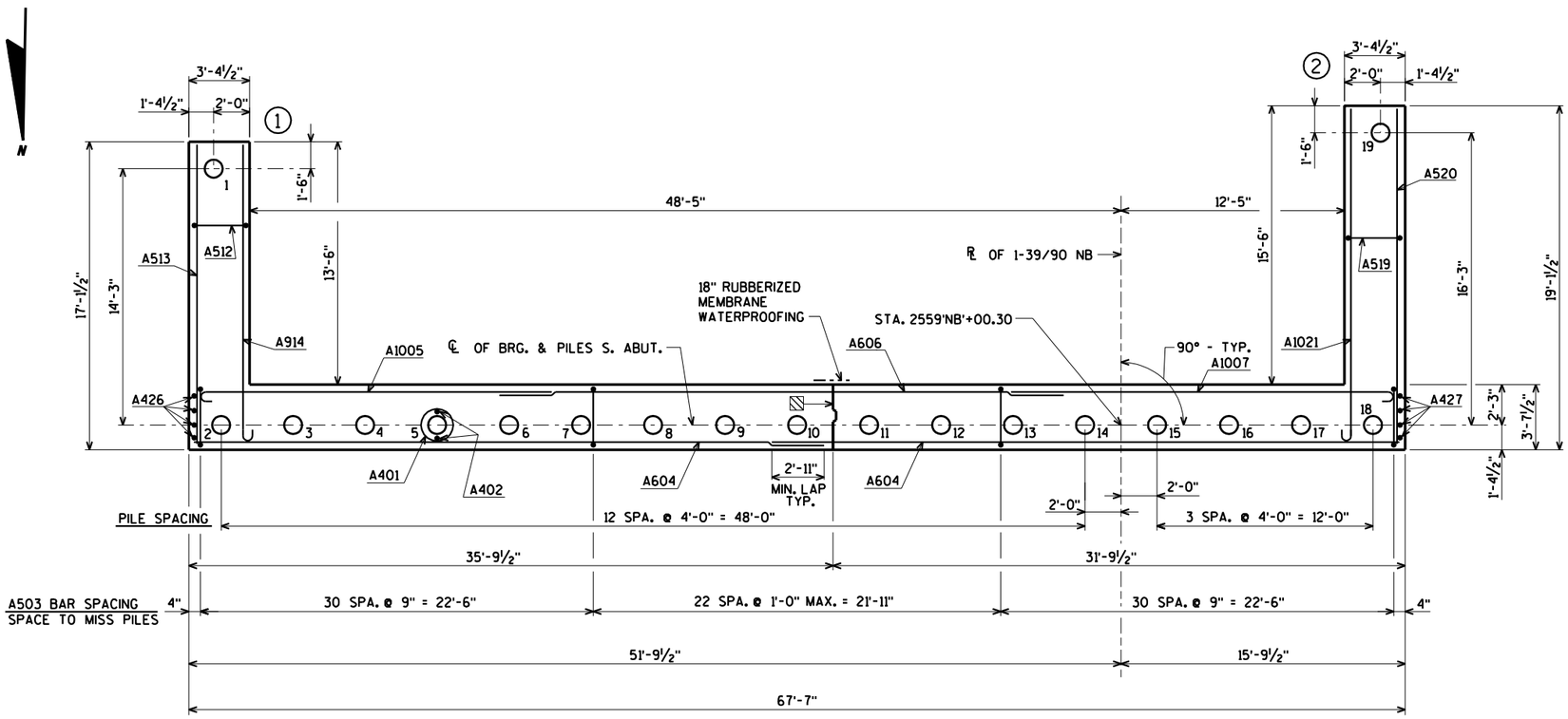
U:±41-0660.0X - IH-39 Dane Partners General Bridge Information±B-13-729 - I39_NB over USH 12&18 EB±bridge±B-13-729 s abut.dgn

STATE PROJECT NUMBER

1007-12-78



PILE LAYOUT

NOTE:
DRIVE PILING BEFORE CONSTRUCTING RETAINING WALL R-13-348

▨ VERT. CONST. JT. - KEYWAY FORMED BY A SURFACED BEVELED 2" x 8". BEVEL EXPOSED EDGES ¾". FOR ALTERNATE CONST. JT. DETAILS SEE SHEET 17.

FOR PILE SPLICE DETAIL SEE SHEET 3.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-729

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ORIGINAL PLANS PREPARED BY
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SOUTH ABUTMENT PILE LAYOUT

SHEET 7 OF 31
357

8/20/2019
PENTABLE:BReau_shd_util.tbl

U:±41-0660.0X - IH-39 Dane Partners General Bridge Information±B-13-729 - I39_NB over USH 12&18 EB±bridge±B-13-729 s abut.dgn

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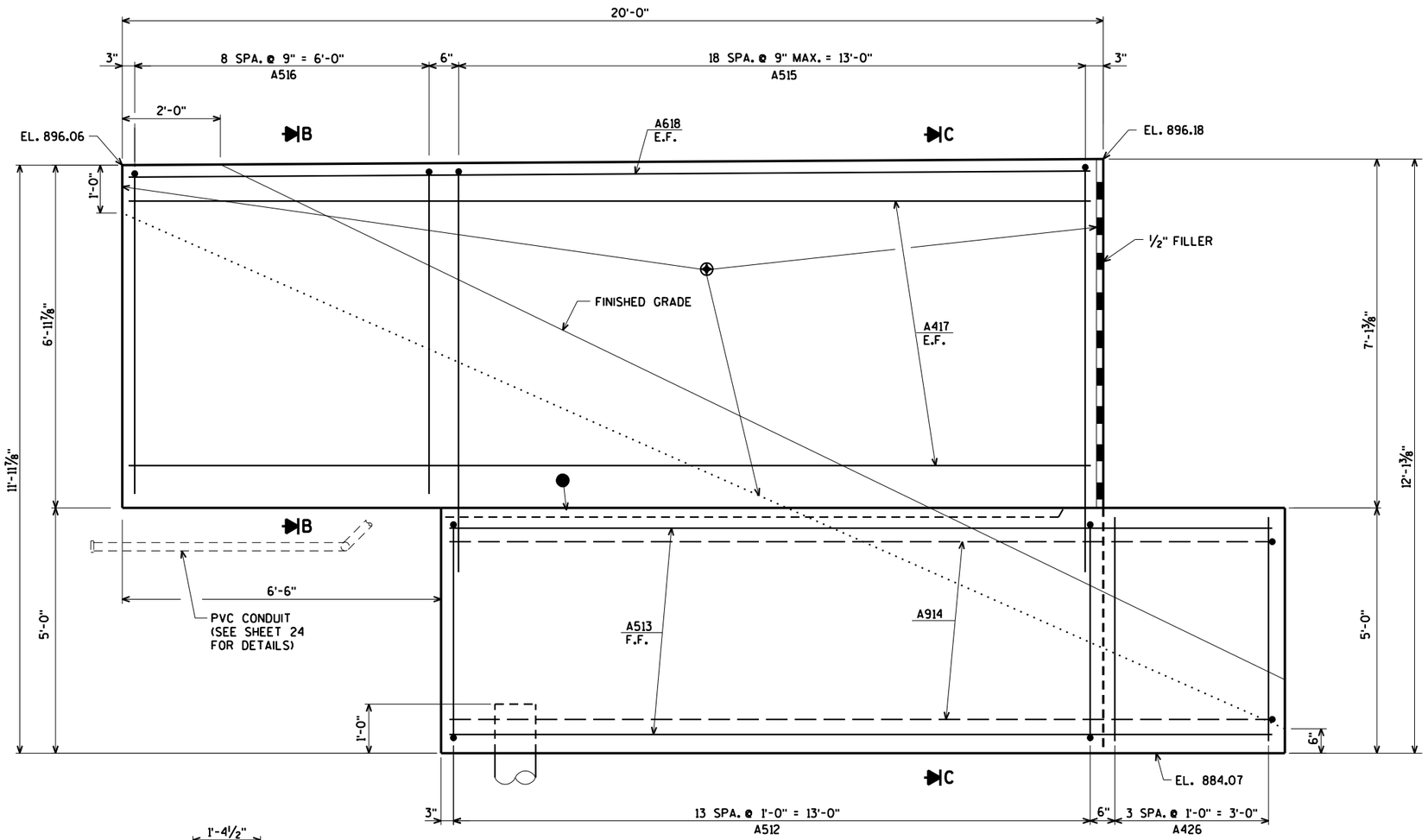
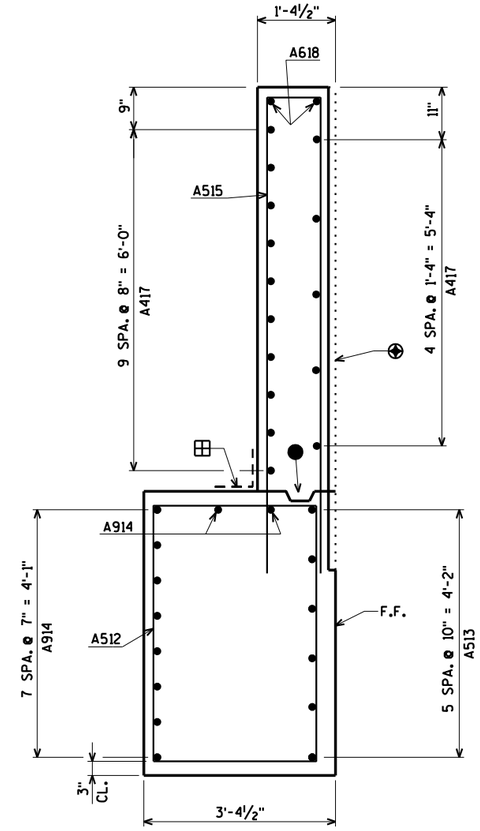
U:\41-0660.0X - IH-39 Dane Partners General Bridge Information\B-13-729 - I39_NB over USH 12&18 EB\bridge\B-13-729 s abut.dgn

STATE PROJECT NUMBER

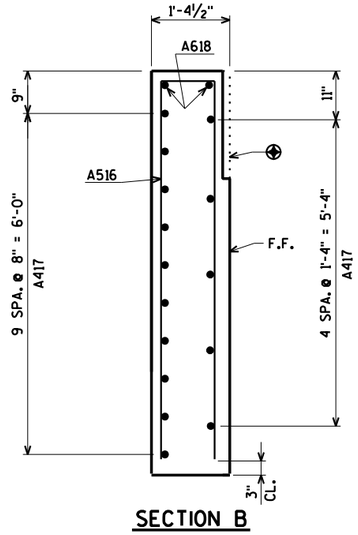
1007-12-78



ELEVATION - WING 1



SECTION C



SECTION B

FOR PILE SPLICE DETAIL SEE SHEET 3.

⊕ LIMITS OF RUSTICATIONS.
FOR DETAILS SEE SHEET 16

● OPT. CONST. JOINT FORMED
BY A BEVELED 2" x 6" KEYWAY.

⊞ 18" RUBBERIZED MEMBRANE WATERPROOFING
SEAL ALL HORIZONTAL AND VERTICAL JOINTS
ON BACKFACE OF ABUTMENT.

F.F. DENOTES FRONT FACE

E.F. DENOTES EACH FACE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-729

DRAWN BY CLS | PLANS CK'D. CBM

SOUTH ABUTMENT
WING 1 DETAILS

SHEET 8 OF 31
358

ORIGINAL PLANS PREPARED BY
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3433 Oakwood Hills Parkway
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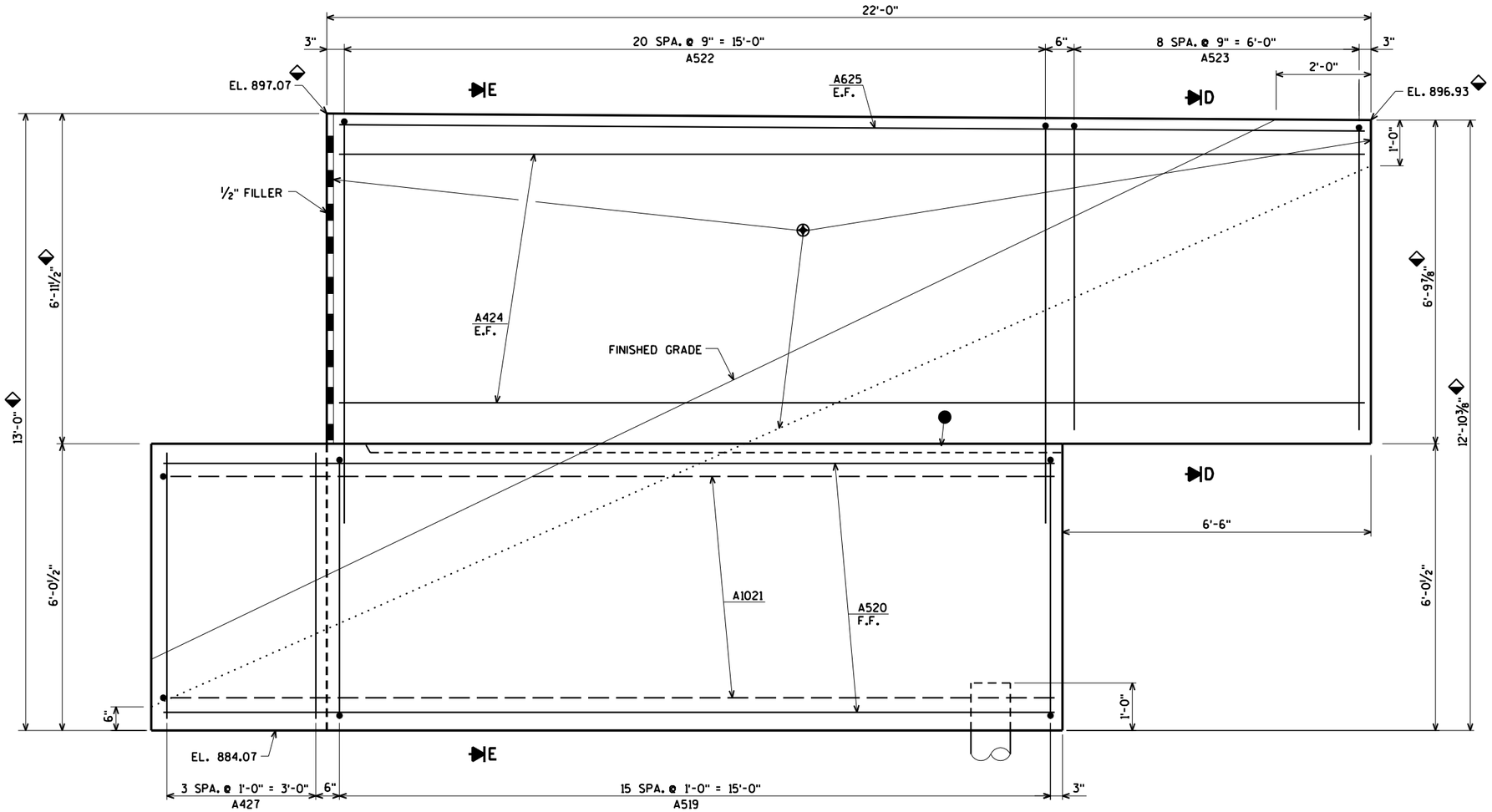
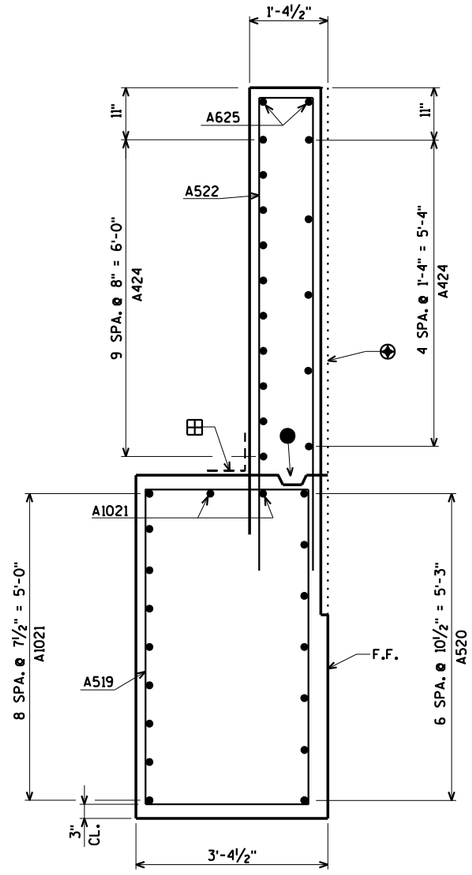
STATE PROJECT NUMBER

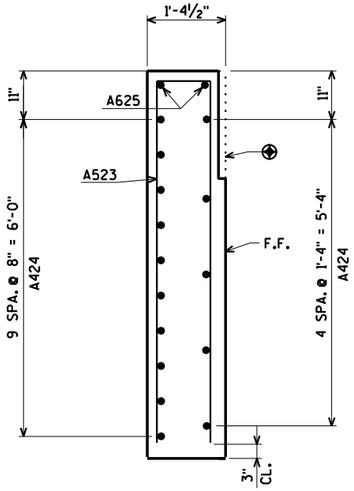
1007-12-78



ELEVATION - WING 2



SECTION E



SECTION D

FOR PILE SPLICE DETAIL SEE SHEET 3.

⊕ LIMITS OF RUSTICATIONS. FOR DETAILS SEE SHEET 16

● OPT. CONST. JOINT FORMED BY A BEVELED 2" x 6" KEYWAY.

⊞ 18" RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE OF ABUTMENT.

◈ TOP OF ABUTMENT DIAPHRAGM SLOPES DOWN FROM EDGE OF DECK TO THE WING. SEE SHEET 23 FOR DETAILS.

F.F. DENOTES FRONT FACE

E.F. DENOTES EACH FACE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-729

DRAWN BY CLS | PLANS CK'D. CBM

SOUTH ABUTMENT WING 2 DETAILS

SHEET 9 OF 31
359

ORIGINAL PLANS PREPARED BY
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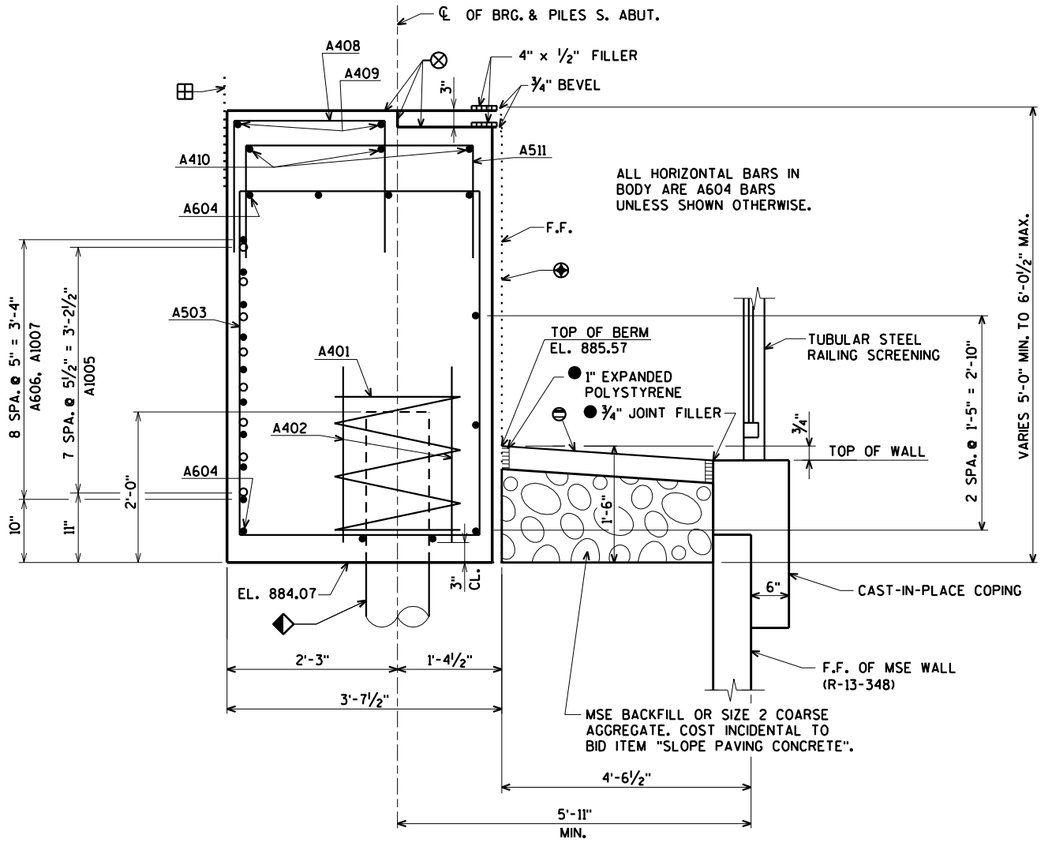
U:±41-0660.0X - IH-39 Dane Partners General Bridge Information±B-13-729 - I39_NB over USH 12&18 EB±bridge±B-13-729 s abut.dgn

STATE PROJECT NUMBER

1007-12-78



SECTION A

NOTE:
DRIVE PILING BEFORE CONSTRUCTING RETAINING WALL R-13-348

⊕ LIMITS OF RUSTICATIONS. FOR DETAILS SEE SHEET 16

⊞ 18" RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE OF ABUTMENT.

FOR PILE SPLICE DETAIL SEE SHEET 3

F.F. DENOTES FRONT FACE

B.F. DENOTES BACK FACE

E.F. DENOTES EACH FACE

⊖ 4" SLOPE PAVING CONCRETE

● SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF FILLER AND EXPANDED POLYSYRENE WITH NON-STAINING GREY NON-BITUMINOUS JOINT SEALER (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE).

◆ ABUTMENT TO BE SUPPORTED ON 12¾" ϕ x 0.50" CIP CONCRETE PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 210 TONS PER PILE. ESTIMATED LENGTH 60'-0".

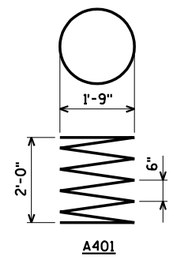
FOR LOCATION OF SECTION A SEE SHEET 6

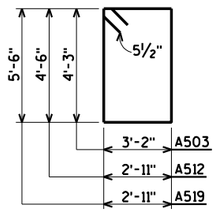
⊗ STEEL TROWEL TOP SURFACE OF ABUTMENT. PLACE MULTIPLE LAYERS OF POLYETHYLENE SHEETS OVER ENTIRE ABUTMENT TOP BEFORE PLACING BEARING AND/OR SUPERSTRUCTURE. TOTAL THICKNESS OF SHEETS SHALL BE AT LEAST 0.03".

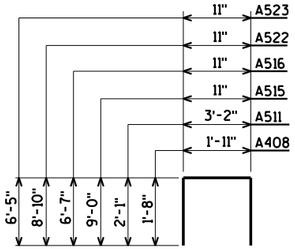
BILL OF BARS

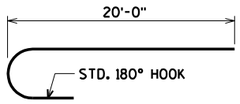
BAR NO.	COATED BAR	NO. REQ'D.	LENGTH	BENT BAR	BUNDLED BAR SERIES	3,910# COATED 5,490# UNCOATED LOCATION
A401		17	28-0	X		BODY ⊕ PILES
A402		34	2-3			BODY ⊕ PILES
A503		83	15-5	X		BODY VERT.
A604		20	35-1			BODY HORIZ.
A1005		8	21-5	X		BODY HORIZ. B.F. ⊕ WING 1
A606		9	31-1			BODY HORIZ. B.F.
A1007		9	23-5	X		BODY HORIZ. B.F. ⊕ WING 2
A408		45	5-1	X		BODY VERT.
A409		4	34-7			BODY HORIZ.
A410		3	44-6			BODY HORIZ.
A511		45	7-1	X		BODY VERT.
A512	X	14	15-5	X		WING 1 VERT.
A513	X	6	16-8			WING 1 HORIZ. F.F.
A914	X	10	17-11	X		WING 1 HORIZ.
A515	X	19	18-8	X		WING 1 VERT.
A516	X	9	13-10	X		WING 1 VERT.
A417	X	15	19-8			WING 1 HORIZ. E.F.
A618	X	2	19-8			WING 1 HORIZ. TOP E.F.
A519	X	16	17-5	X		WING 2 VERT.
A520	X	7	18-8			WING 2 HORIZ. F.F.
A1021	X	11	20-1	X		WING 2 HORIZ.
A522	X	21	18-4	X		WING 2 VERT.
A523	X	9	13-6	X		WING 2 VERT.
A424	X	15	21-8			WING 2 HORIZ. E.F.
A625	X	2	21-8			WING 2 HORIZ. TOP E.F.
A426	X	4	4-7			BODY VERT. END ⊕ WING 1
A427	X	4	5-7			BODY VERT. END ⊕ WING 2

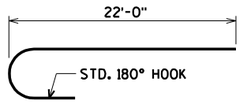
BENDING DIMENSIONS ARE OUT TO OUT OF BARS.

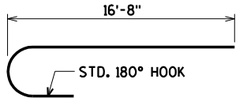


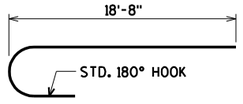












NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-729

DRAWN BY CLS | PLANS CK'D. CBM

SOUTH ABUTMENT DETAILS

SHEET 10 OF 31
360

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

8/20/2019
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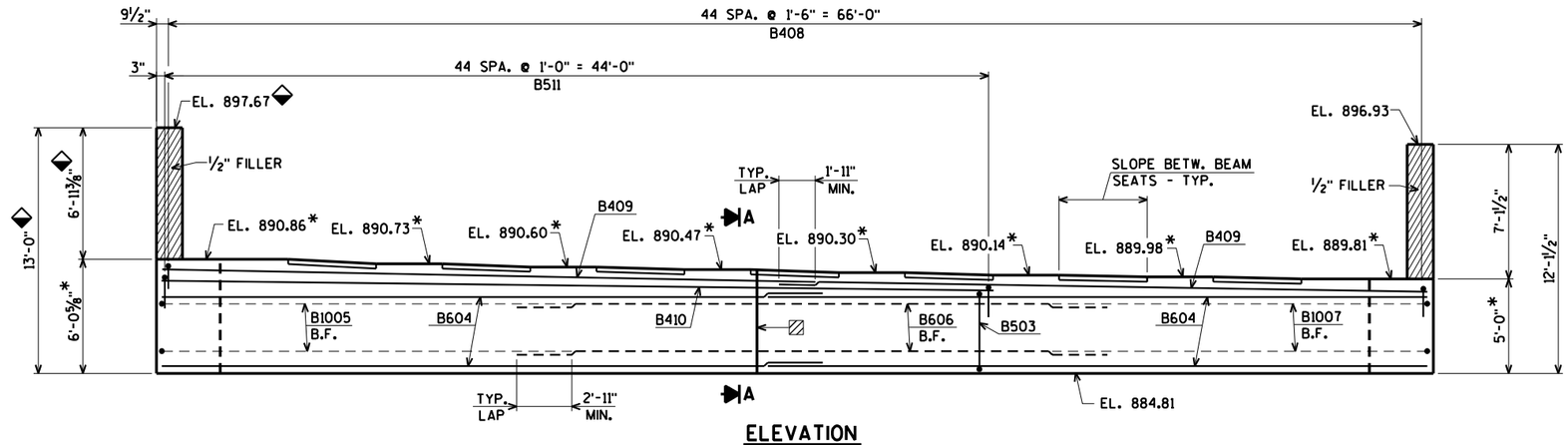
NOTE: SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE.)

STATE PROJECT NUMBER

1007-12-78



ELEVATION
(LOOKING NORTH)

FOR SECTION A SEE SHEET 15

*ELEVATIONS AND DIMENSIONS TAKEN AT ℄ OF BRG. & PILES N. ABUT.

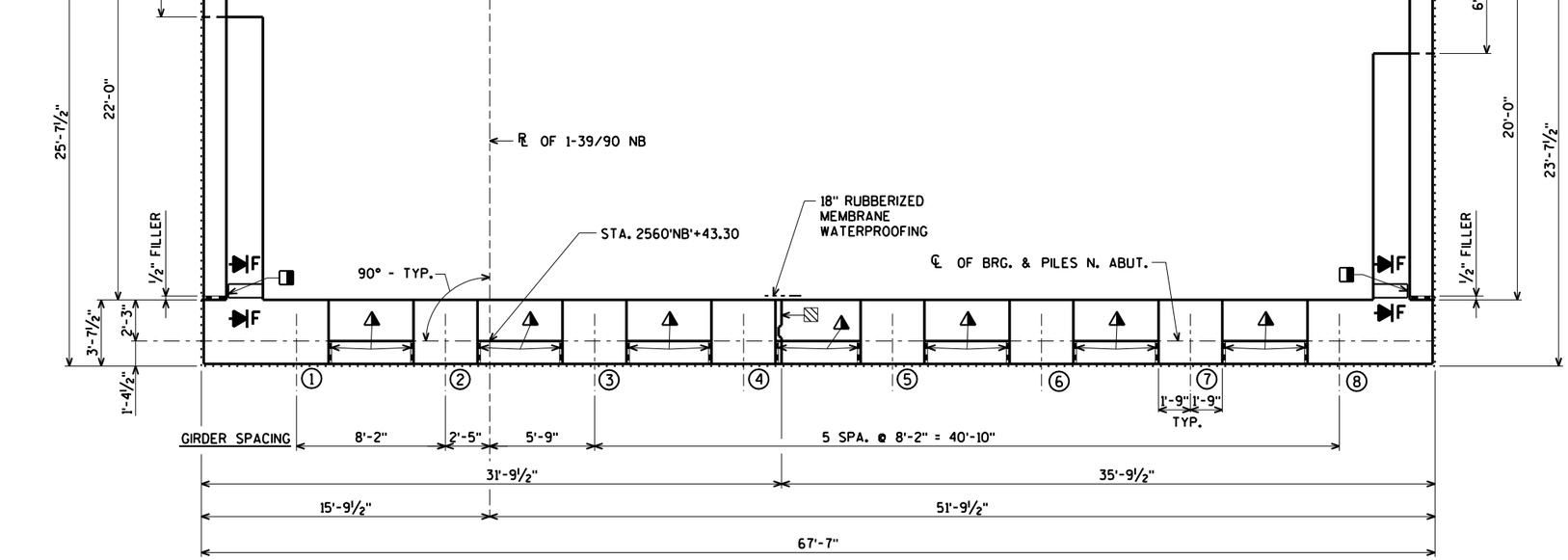
◆ TOP OF ABUTMENT DIAPHRAGM SLOPES DOWN FROM EDGE OF DECK TO THE WING. SEE SHEET 23 FOR DETAILS.

▨ VERT. CONST. JT. - KEYWAY FORMED BY A SURFACED BEVELED 2" x 8". BEVEL EXPOSED EDGES ¾". FOR ALTERNATE CONST. JT. DETAILS SEE SHEET 17

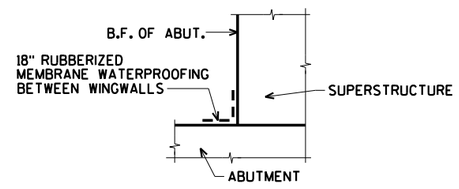
◨ 18" RUBBERIZED MEMBRANE WATERPROOFING FROM BRIDGE SEAT TO TOP OF WING.

◭ ¾" CORK FILLER ON VERTICAL BEAM SEAT FACES THAT RUN PARALLEL WITH GIRDER.

B.F. DENOTES BACK FACE



PLAN



SECTION F

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-729

DRAWN BY CLS | PLANS CK'D. CBM

NORTH ABUTMENT

SHEET 11 OF 31
361

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

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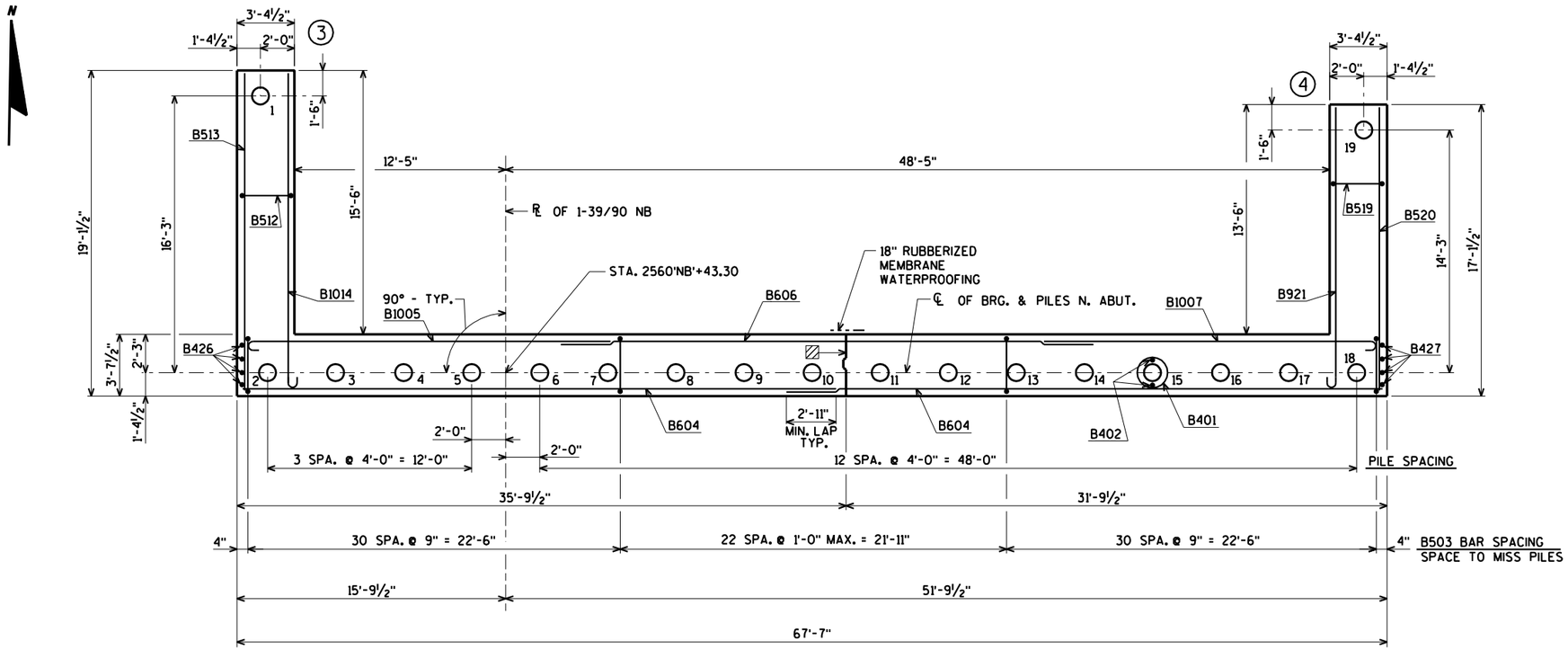
U:\41-0660.0X - IH-39 Dane Partners General Bridge Information\B-13-729 - I39_NB over USH 12&18 EB\bridge\B-13-729 n abut.dgn

STATE PROJECT NUMBER

1007-12-78



PILE LAYOUT

NOTE:
DRIVE PILING BEFORE CONSTRUCTING RETAINING WALL R-13-349

▨ VERT. CONST. JT. - KEYWAY FORMED BY A SURFACED BEVELED 2" x 8". BEVEL EXPOSED EDGES ¾". FOR ALTERNATE CONST. JT. DETAILS SEE SHEET 17.

FOR PILE SPLICE DETAIL SEE SHEET 3.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-729

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NORTH ABUTMENT PILE LAYOUT

SHEET 12 OF 31
362

8/20/2019
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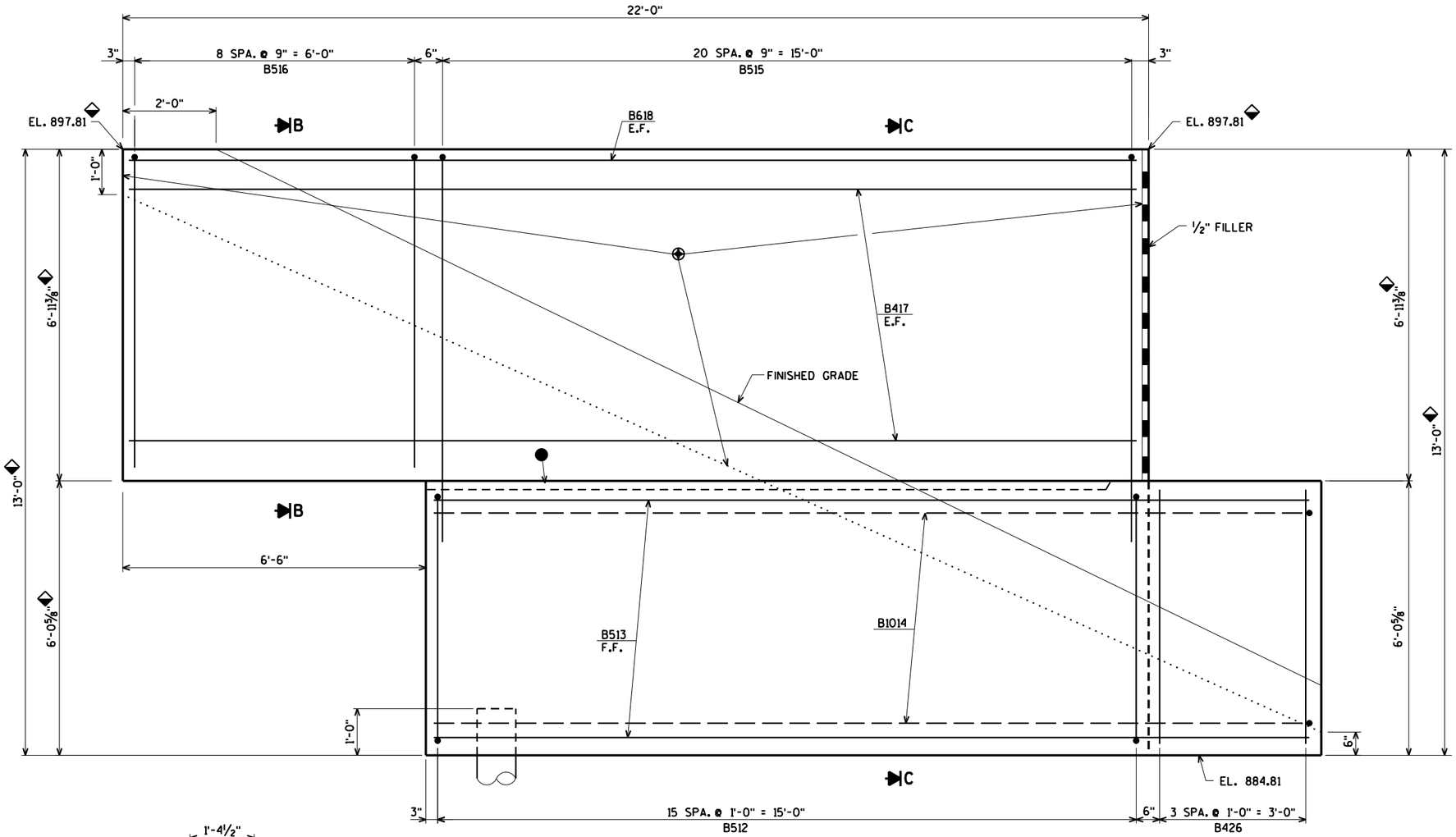
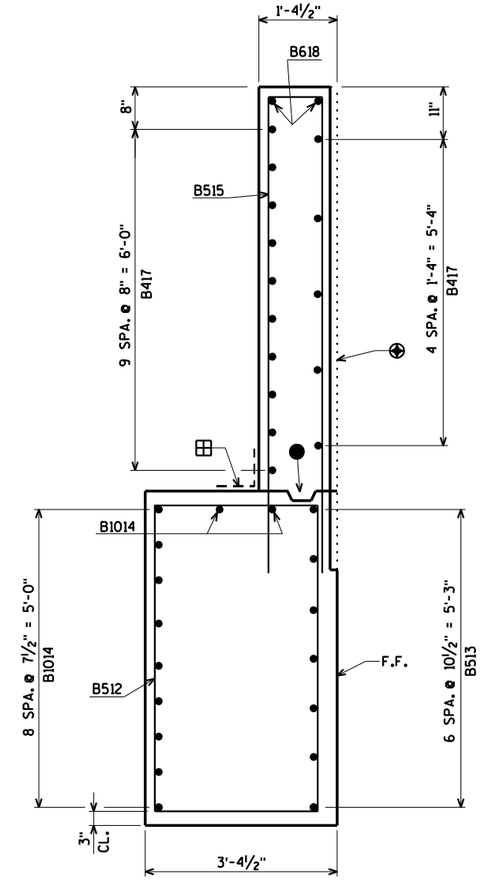
STATE PROJECT NUMBER

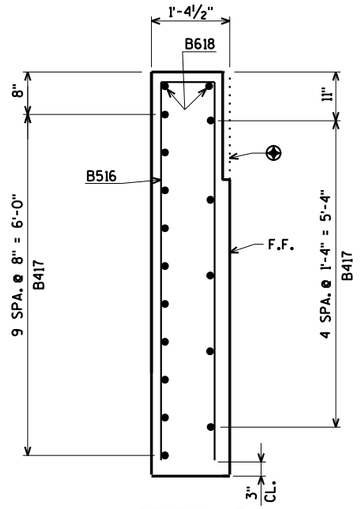
1007-12-78



ELEVATION - WING 3



SECTION C



SECTION B

FOR PILE SPLICE DETAIL SEE SHEET 3.

⊕ LIMITS OF RUSTICATIONS.
FOR DETAILS SEE SHEET 16

● OPT. CONST. JOINT FORMED
BY A BEVELED 2" x 6" KEYWAY.

⊞ 18" RUBBERIZED MEMBRANE WATERPROOFING
SEAL ALL HORIZONTAL AND VERTICAL JOINTS
ON BACKFACE OF ABUTMENT.

◈ TOP OF ABUTMENT DIAPHRAGM SLOPES
DOWN FROM EDGE OF DECK TO THE
WING. SEE SHEET 23 FOR DETAILS.

F.F. DENOTES FRONT FACE

E.F. DENOTES EACH FACE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-729

DRAWN BY CLS | PLANS CK'D. CBM

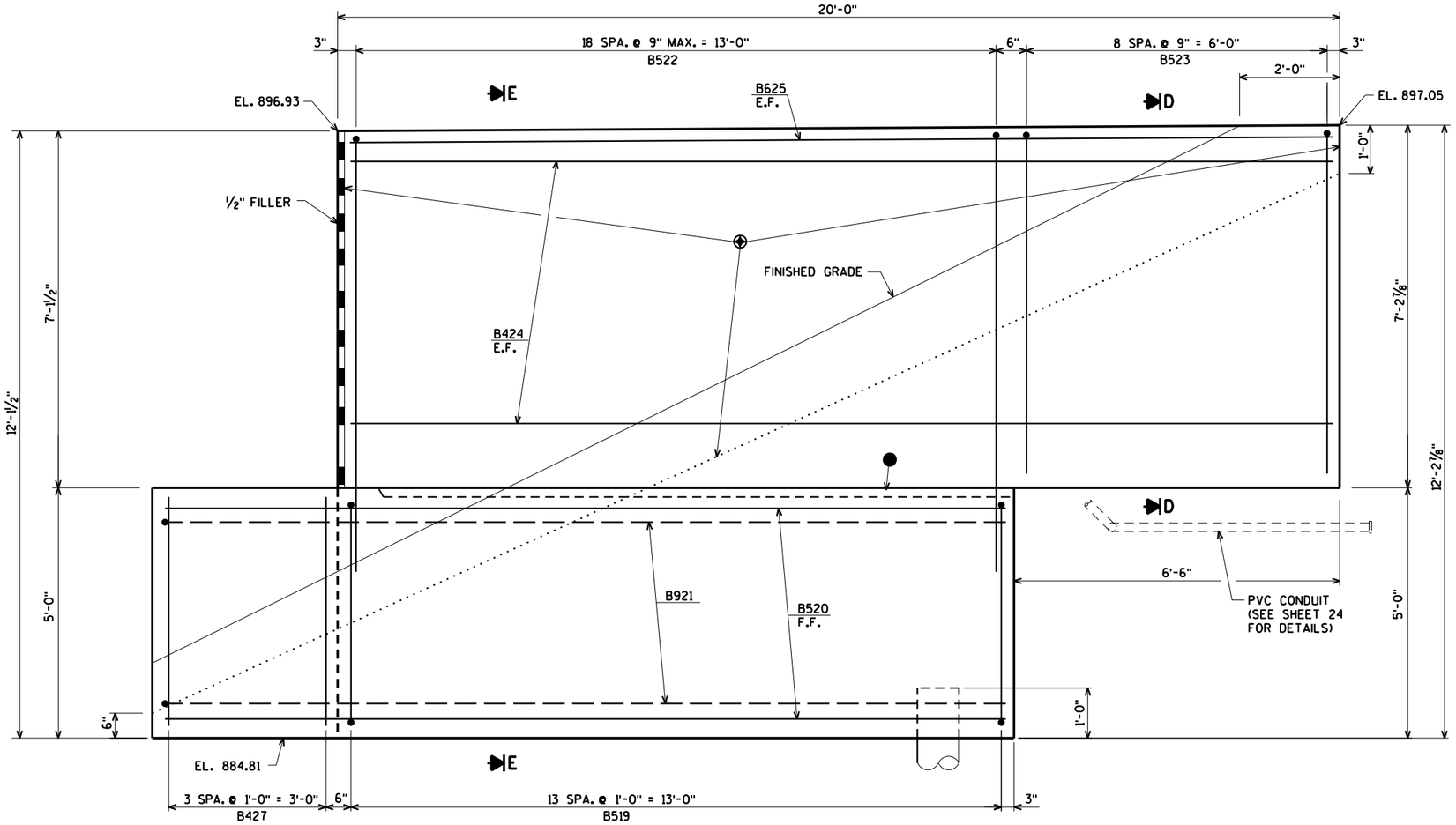
NORTH ABUTMENT
WING 3 DETAILS

SHEET 13 OF 31
363

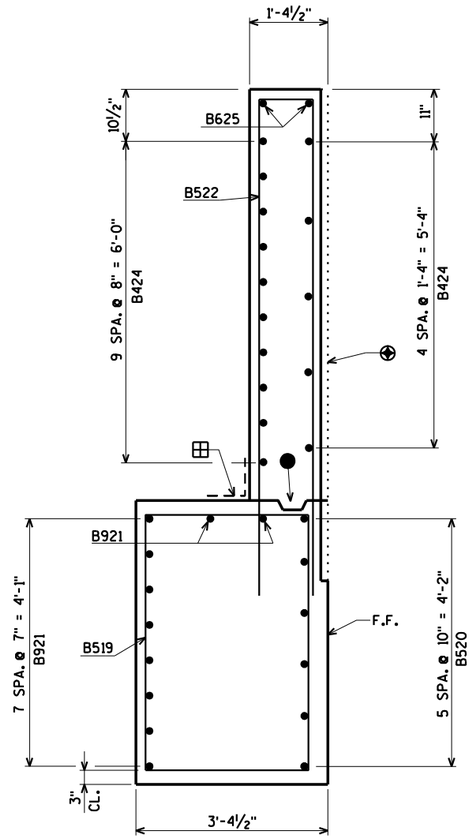
ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

STATE PROJECT NUMBER

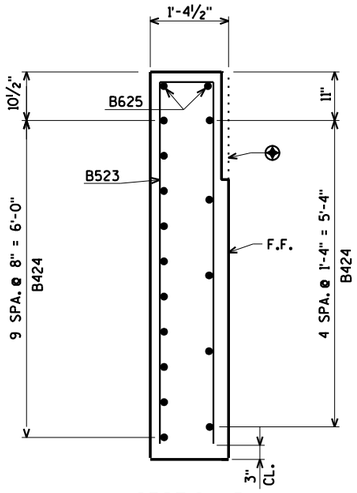
1007-12-78



ELEVATION - WING 4



SECTION E



SECTION D

FOR PILE SPLICE DETAIL SEE SHEET 3.

⊕ LIMITS OF RUSTICATIONS.
FOR DETAILS SEE SHEET 16

● OPT. CONST. JOINT FORMED
BY A BEVELED 2" x 6" KEYWAY.

⊞ 18" RUBBERIZED MEMBRANE WATERPROOFING
SEAL ALL HORIZONTAL AND VERTICAL JOINTS
ON BACKFACE OF ABUTMENT.

F.F. DENOTES FRONT FACE

E.F. DENOTES EACH FACE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-729

DRAWN BY CLS | PLANS CK'D. CBM

NORTH ABUTMENT
WING 4 DETAILS

SHEET 14 OF 31
364

ORIGINAL PLANS PREPARED BY
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3433 Oakwood Hills Parkway
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STATE PROJECT NUMBER

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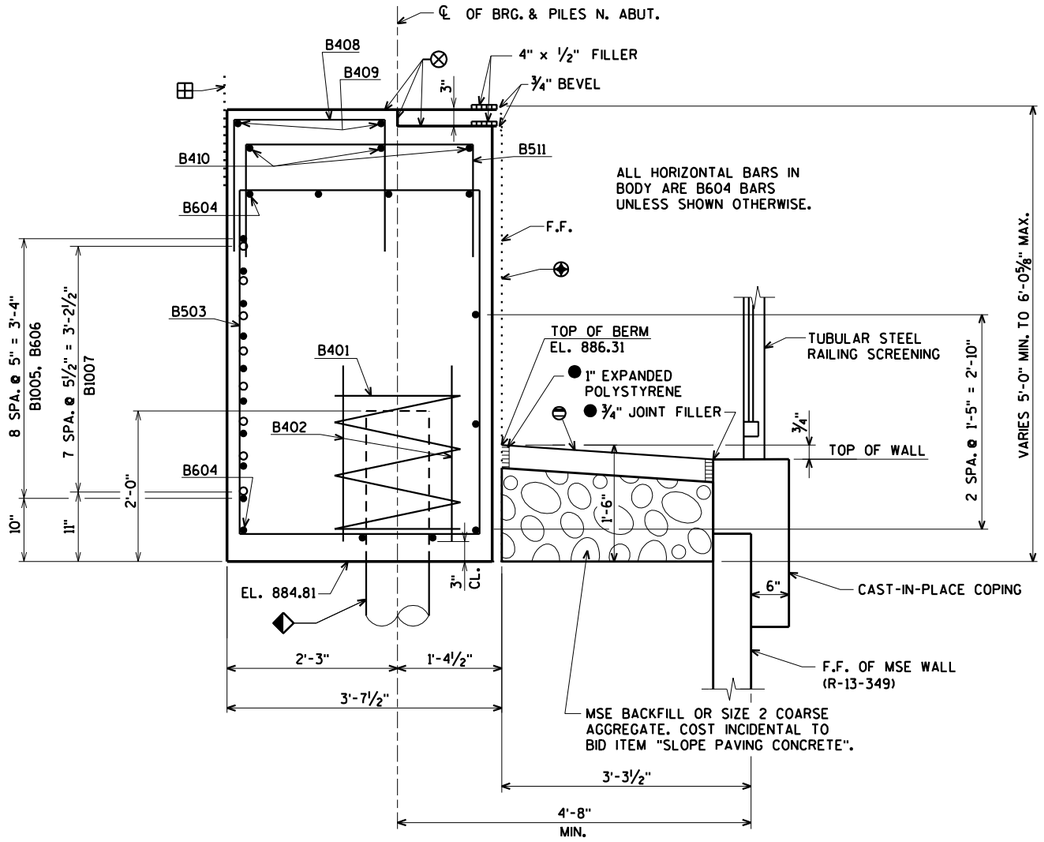


SECTION A

NOTE:
DRIVE PILING BEFORE CONSTRUCTING RETAINING WALL R-13-349

⊕ LIMITS OF RUSTICATIONS. FOR DETAILS SEE SHEET 16

⊞ 18" RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE OF ABUTMENT.

FOR PILE SPLICE DETAIL SEE SHEET 3

F.F. DENOTES FRONT FACE

B.F. DENOTES BACK FACE

E.F. DENOTES EACH FACE

⊖ 4" SLOPE PAVING CONCRETE

● SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF FILLER AND EXPANDED POLYSYRENE WITH NON-STAINING GREY NON-BITUMINOUS JOINT SEALER (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE).

◆ ABUTMENT TO BE SUPPORTED ON 12¾" ϕ x 0.50" CIP CONCRETE PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 210 TONS PER PILE. ESTIMATED LENGTH 55'-0".

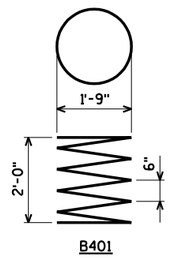
FOR LOCATION OF SECTION A SEE SHEET 11

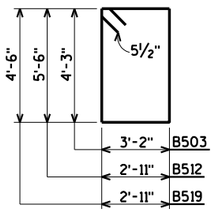
⊗ STEEL TROWEL TOP SURFACE OF ABUTMENT. PLACE MULTIPLE LAYERS OF POLYETHYLENE SHEETS OVER ENTIRE ABUTMENT TOP BEFORE PLACING BEARING AND/OR SUPERSTRUCTURE. TOTAL THICKNESS OF SHEETS SHALL BE AT LEAST 0.03".

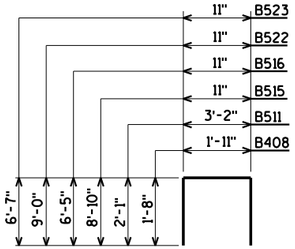
BILL OF BARS

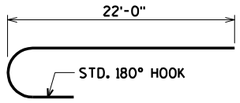
BAR NO.	COATED BAR	NO. REQ'D.	LENGTH	BENT BAR	BUNDLED BAR SERIES	3,910# COATED 5,490# UNCOATED LOCATION
B401		17	28-0	X		BODY ℄ PILES
B402		34	2-3			BODY ℄ PILES
B503		83	15-5	X		BODY VERT.
B604		20	35-1			BODY HORIZ.
B1005		9	23-5	X		BODY HORIZ. B.F. ℄ WING 3
B606		9	31-1			BODY HORIZ. B.F.
B1007		8	21-5	X		BODY HORIZ. B.F. ℄ WING 4
B408		45	5-1	X		BODY VERT.
B409		4	34-7			BODY HORIZ.
B410		3	44-6			BODY HORIZ.
B511		45	7-1	X		BODY VERT.
B512	X	16	17-5	X		WING 3 VERT.
B513	X	7	18-8			WING 3 HORIZ. F.F.
B1014	X	11	20-1	X		WING 3 HORIZ.
B515	X	21	18-4	X		WING 3 VERT.
B516	X	9	13-6	X		WING 3 VERT.
B417	X	15	21-8			WING 3 HORIZ. E.F.
B618	X	2	21-8			WING 3 HORIZ. TOP E.F.
B519	X	14	15-5	X		WING 4 VERT.
B520	X	6	16-8			WING 4 HORIZ. F.F.
B921	X	10	17-11	X		WING 4 HORIZ.
B522	X	19	18-8	X		WING 4 VERT.
B523	X	9	13-10	X		WING 4 VERT.
B424	X	15	19-8			WING 4 HORIZ. E.F.
B625	X	2	19-8			WING 4 HORIZ. TOP E.F.
B426	X	4	5-7			BODY VERT. END ℄ WING 3
B427	X	4	4-7			BODY VERT. END ℄ WING 4

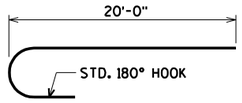
BENDING DIMENSIONS ARE OUT TO OUT OF BARS.

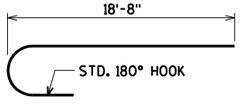


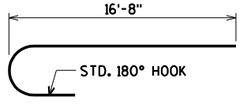












NO.	DATE	REVISION	BY

STATE OF WISCONSIN
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STRUCTURE B-13-729

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NORTH ABUTMENT DETAILS

SHEET 15 OF 31
365

ORIGINAL PLANS PREPARED BY
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Eau Claire, WI 54701
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8/20/2019
PENTABLE:BReau_shd_util.tbl

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U:±41-0660.0X - IH-39 Dane Partners General Bridge Information±B-13-729 - 139_NB over USH 12&18 EB±bridge±B-13-729 n abut.dgn

$PRFNAME$
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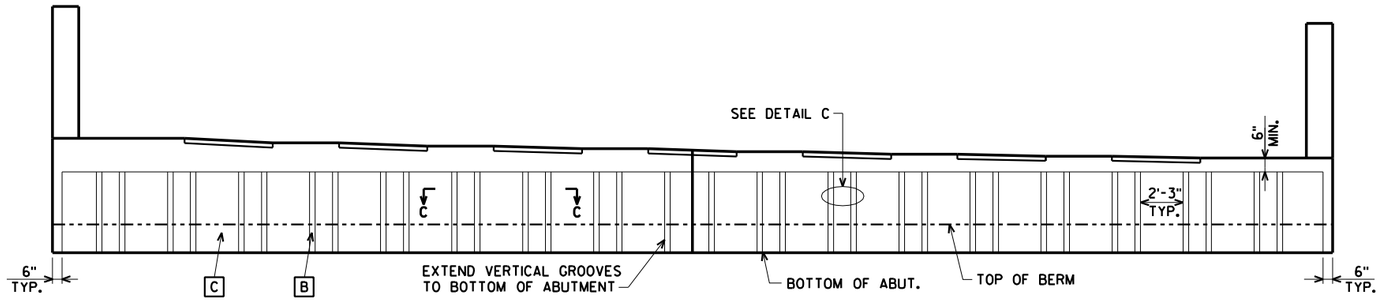
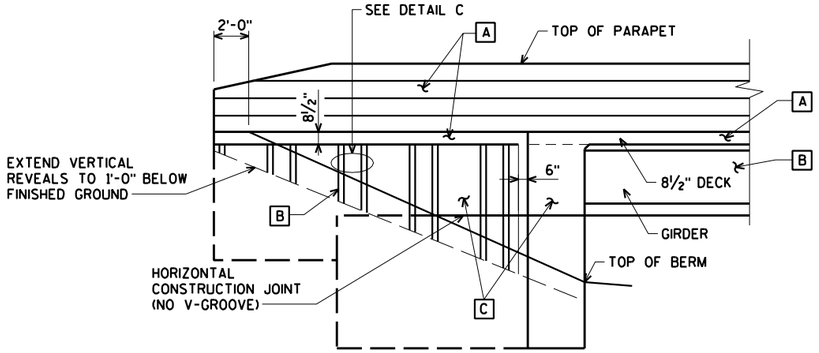


TYPICAL ABUTMENT

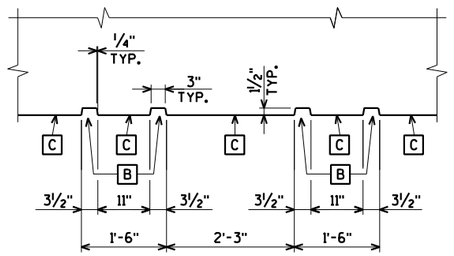
(NORTH ABUTMENT SHOWN, SOUTH ABUTMENT SIMILAR)

CONCRETE STAINING SCHEDULE

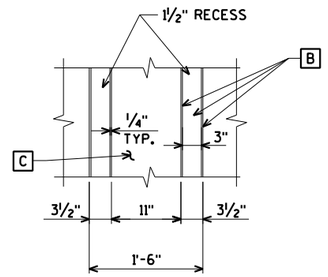
MARK	AMS STD. COLOR NUMBER	LOCATION
A	36642	PARAPET, EDGE OF DECK, BOTTOM OF OVERHANGS, WINGWALLS
B	30104	EXTERIOR GIRDER, REVEALS
C	30372	ABUTMENT AND WINGWALL



TYPICAL WINGWALL PARALLEL TO ROADWAY



SECTION C-C



DETAIL C

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STRUCTURE B-13-729

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ABUTMENT RUSTICATION AND CONCRETE STAINING DETAILS

SHEET 16 OF 31
366

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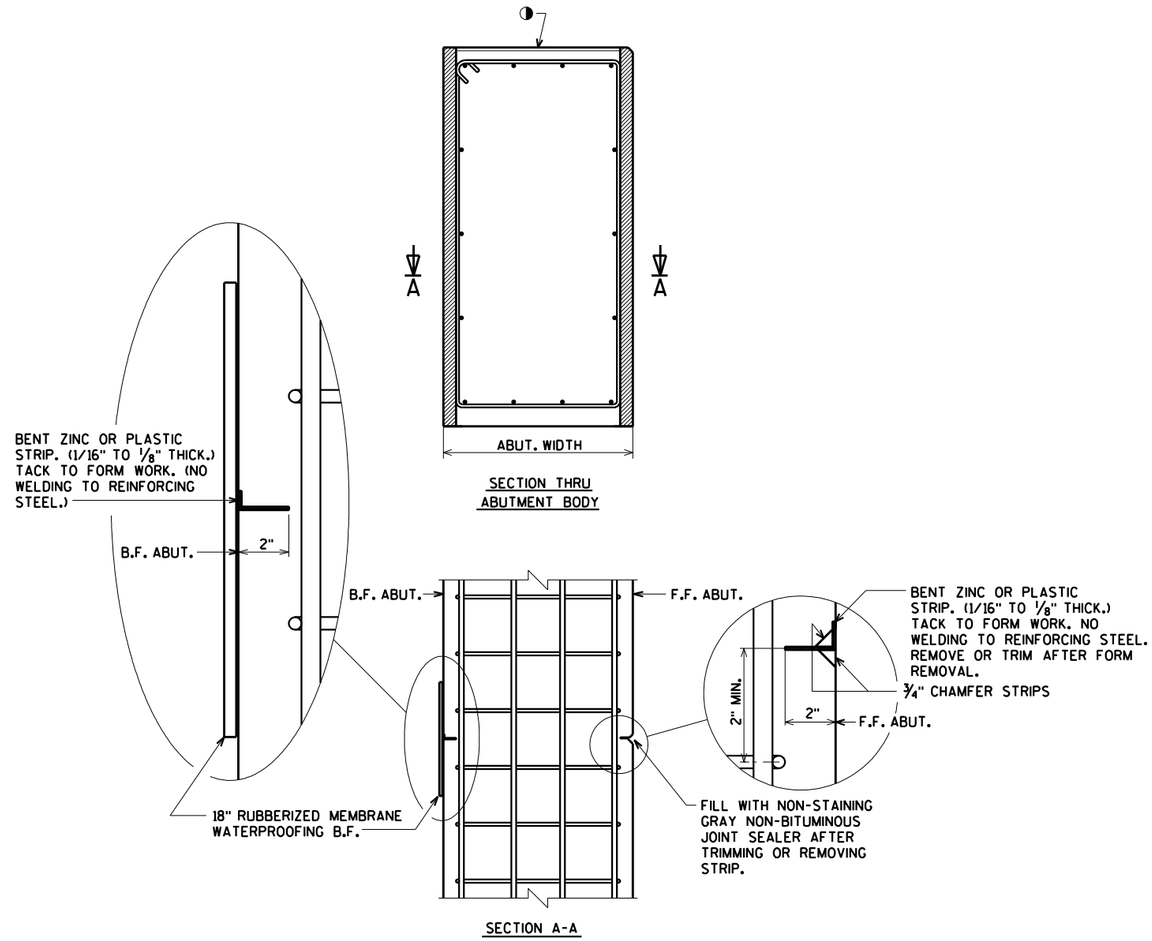
STATE PROJECT NUMBER
1007-12-78



SECTION THRU ABUTMENT BODY

SECTION A-A

ALTERNATE CONSTRUCTION JOINT AT ABUTMENT

NOTES

PARTIAL ZINC OR PLASTIC BULKHEAD MAY BE USED AS ALTERNATE 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.

◑ USE A JOINT TOOL TO CONSTRUCT A CONTRACTION JOINT APPROXIMATELY 1/2" DEEP.

F.F. DENOTES FRONT FACE

B.F. DENOTES BACK FACE

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STRUCTURE B-13-729

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ALTERNATE CONSTRUCTION JOINT

SHEET 17 OF 31
367

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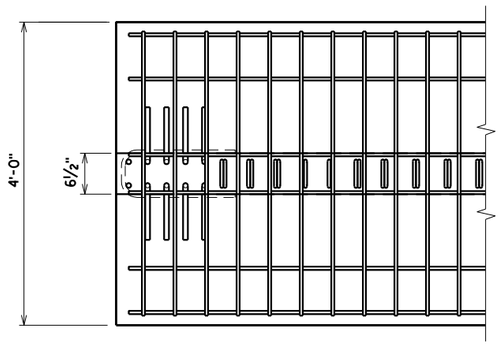
STATE PROJECT NUMBER
1007-12-78



TOP FLANGE

GIRDER NOTES

TOP OF GIRDER TO BE ROUGH FLOATED AND BROOMED TRANSVERSELY, EXCEPT THE OUTSIDE 15" OF GIRDER, WHICH SHALL RECEIVE A SMOOTH FINISH. AN APPROVED CONCRETE SEALER SHALL BE APPLIED TO ALL SMOOTH SURFACES INCLUDING THE OUTSIDE 15" 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.

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.

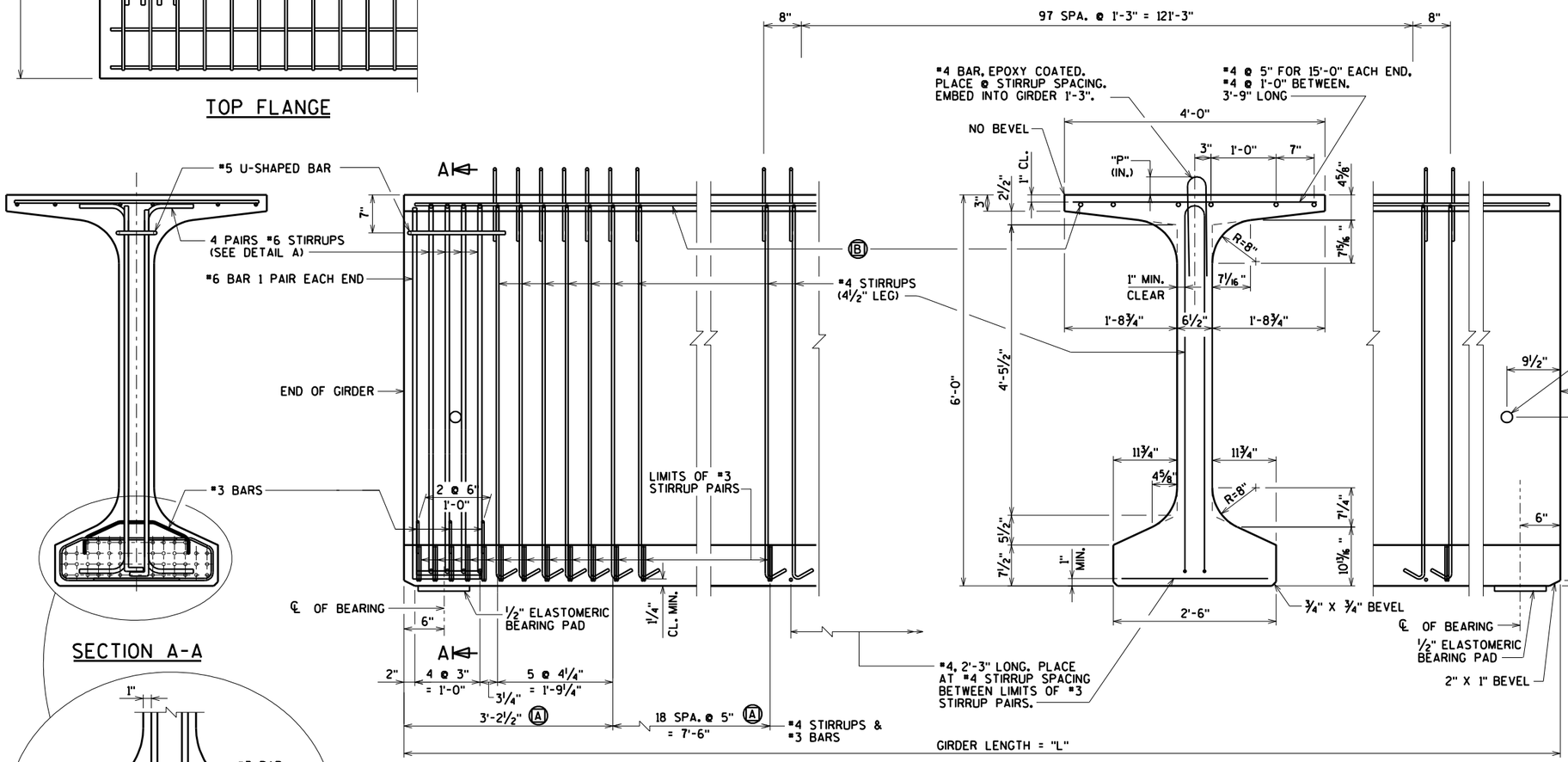
ALL GIRDERS SHALL BE CAST FULL LENGTH AS SHOWN.

SPACING SHOWN FOR #4 STIRRUPS IS FOR GRADE 60 REINFORCEMENT.

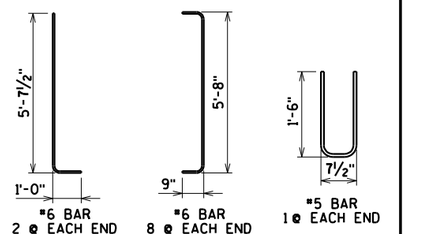
AN EQUIVALENT OF WELDED WIRE FABRIC (WWF) ASTM A1064 MAY BE SUBSTITUTED FOR THE STIRRUP REINFORCEMENT SHOWN, UPON APPROVAL OF THE STRUCTURES MAINTENANCE SECTION. IF USED, WWF SUBSTITUTION DETAILS SHALL BE SUBMITTED ELECTRONICALLY TO THE WISDOT FABRICATION LIBRARY AND ACCEPTED PRIOR TO THE SHOP DRAWING SUBMITTAL.

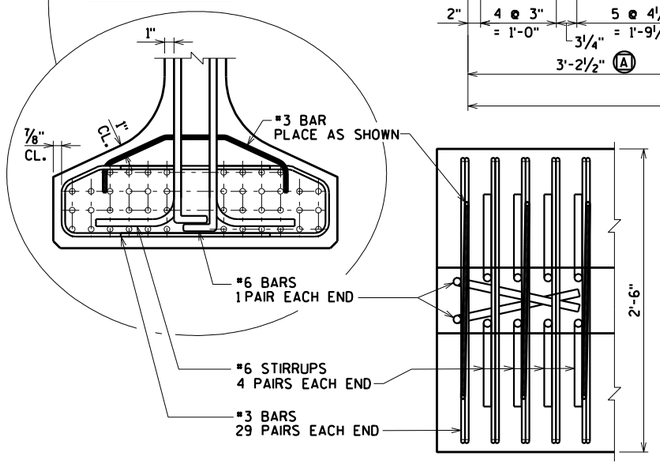
PRESTRESSING STRANDS SHALL BE 0.6" DIA. -7 WIRE LOW-RELAXATION STRANDS WITH AN ULTIMATE STRENGTH OF 270,000 PSI.

FOR DIAPHRAGM INSERT & CONNECTION DETAILS SEE "STEEL DIAPHRAGM" SHEET.



SECTION A-A





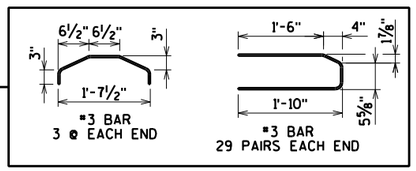
DETAIL A
BOTTOM FLANGE

SIDE VIEW & TYP. SECTION IN SPAN

Ⓐ DETAIL TYP. AT EACH END

Ⓑ 6 #4 BARS, FULL LENGTH. MIN. LAP = 2'-4"

EPOXY COATED FOR GIRDERS 1 & 8.
TEXTURED EPOXY COATED FOR GIRDERS 2-4.
GALVANIZED FOR GIRDERS 5-7.



GIRDER DATA

SPAN	GIRDER	GIRDER LENGTH "L"	DEAD LOAD DEFL. (IN.) 1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	CONC. STRGTH. f'c (p.s.i.)	"P" IST ⅓ OF GIRDER	"P" MID ⅓ OF GIRDER	"P" END ⅓ OF GIRDER	DIA. OF STRAND (IN.)	DRAPED PATTERN TOTAL NO. OF STRANDS	f'ci (P.S.I.) *	(IN.) "A"	"B" MIN.	"B" MAX.	"C"	UNDRAPED PATTERN TOTAL NO. OF STRANDS	f'ci (P.S.I.) *
1	1 & 8	144'-0"	0.8	1.4	2.0	2.3	2.4	2.3	2.0	1.4	0.8	8,000	10"	8"	10"	0.6	48	6,400	67	20.5	23.5	5		
1	2-7	144'-0"	0.8	1.5	2.1	2.5	2.6	2.5	2.1	1.5	0.8	8,000	10"	8"	10"	0.6	48	6,400	67	20.5	23.5	5		

* MINIMUM CYLINDER STRENGTH OF CONCRETE @ TIME OF TRANSFER OF PRESTRESS FORCE.

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STATE OF WISCONSIN
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STRUCTURE B-13-729

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72W" PRESTRESSED GIRDER DETAILS

SHEET 18 OF 31
368

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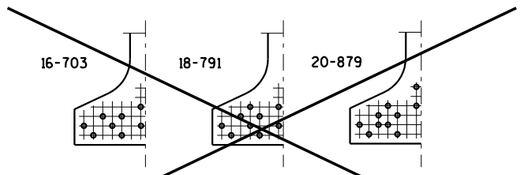
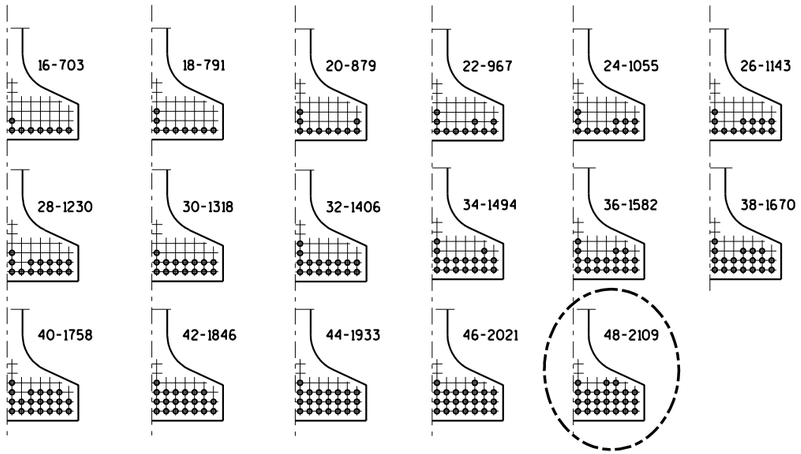


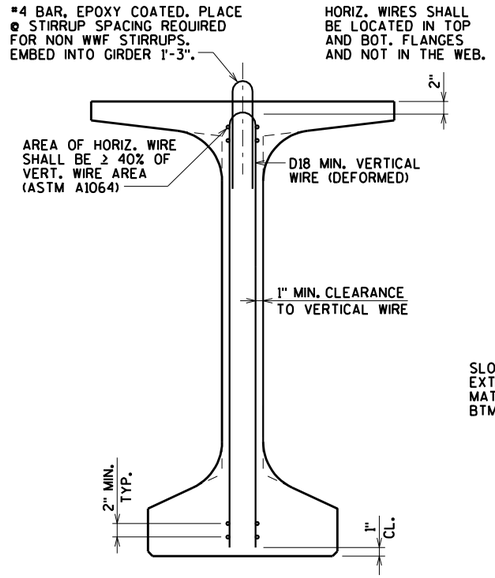
STANDARD ARRANGEMENTS TO RAISE CENTER OF GRAVITY TO AVOID DRAPING OF STRANDS

0.6"Φ STRANDS



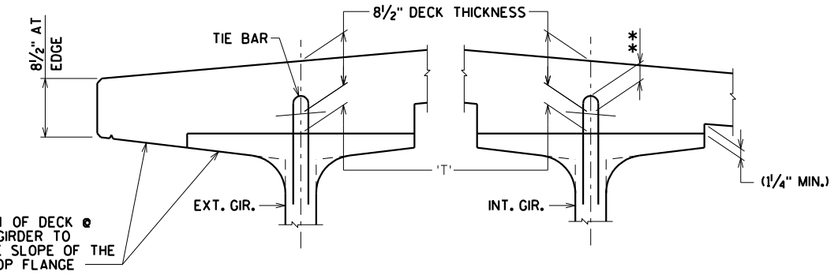
ARRANGEMENT AT ℄ SPAN - FOR GIRDERS WITH DRAPED STRANDS

0.6"Φ STRANDS



SECTION THRU GIRDER

SHOWING WELDED WIRE FABRIC (WWF) STIRRUPS
ASTM A1064 (FY = 70 KSI)



DECK HAUNCH DETAIL

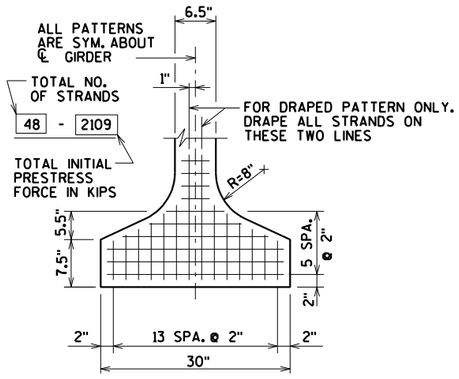
IF 1¼" MINIMUM HAUNCH HEIGHT AT EDGE OF GIRDER CANNOT BE MAINTAINED, THE GRADE LINE MAY BE REVISED BY THE ENGINEER AT THE OPTION OF THE CONTRACTOR. THE PLAN DECK THICKNESS SHALL BE HELD. NOTIFY THE STRUCTURES SECTION IF THE GRADE LINE IS RAISED FROM THE PLAN PROFILE BY MORE THAN ½" OR,

** IF 3" MINIMUM DECK EMBEDMENT OF TIE BAR CANNOT BE OBTAINED.

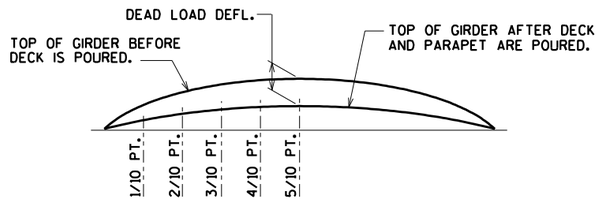
TO DETERMINE 'T', ELEV. OF TOP OF GIR'S. AT ℄ OF SUBSTRUCTURE UNITS & AT 1/10 POINTS OF EACH SPAN SHALL BE TAKEN. THEN FOLLOW THIS PROCESS:

TOP OF DECK ELEV. AT FINAL GRADE
- TOP OF GIRDER ELEVATION
+ DEAD LOAD DEFLECTION
- DECK THICKNESS
= HAUNCH HEIGHT 'T'

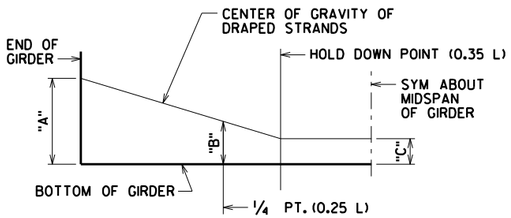
NOTE: AN AVERAGE HAUNCH ('T') OF 4¼" WAS USED IN THE QUANTITY "HIGH PERFORMANCE CONCRETE (HPC) MASONRY STRUCTURES".



TYP. STRAND PATTERN



DEAD LOAD DEFLECTION DIAGRAM



DRAPED STRAND PROFILE

* THE THEORETICAL INITIAL CAMBER VALUE AT THE TIME OF STRAND RELEASE AT MIDSPAN

SPAN	CAMBER (IN.) *
1	4.9

THESE VALUES ARE NOT TO BE USED IN DETERMINING 'T', USE ACTUAL GIRDER SHOTS.
THESE VALUES ARE FOR INFORMATIONAL PURPOSES ONLY.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-729

DRAWN BY CLS | PLANS CK'D. CBM

72W" PRESTRESSED GIRDER DETAILS

SHEET 19 OF 31
369

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STATE PROJECT NUMBER

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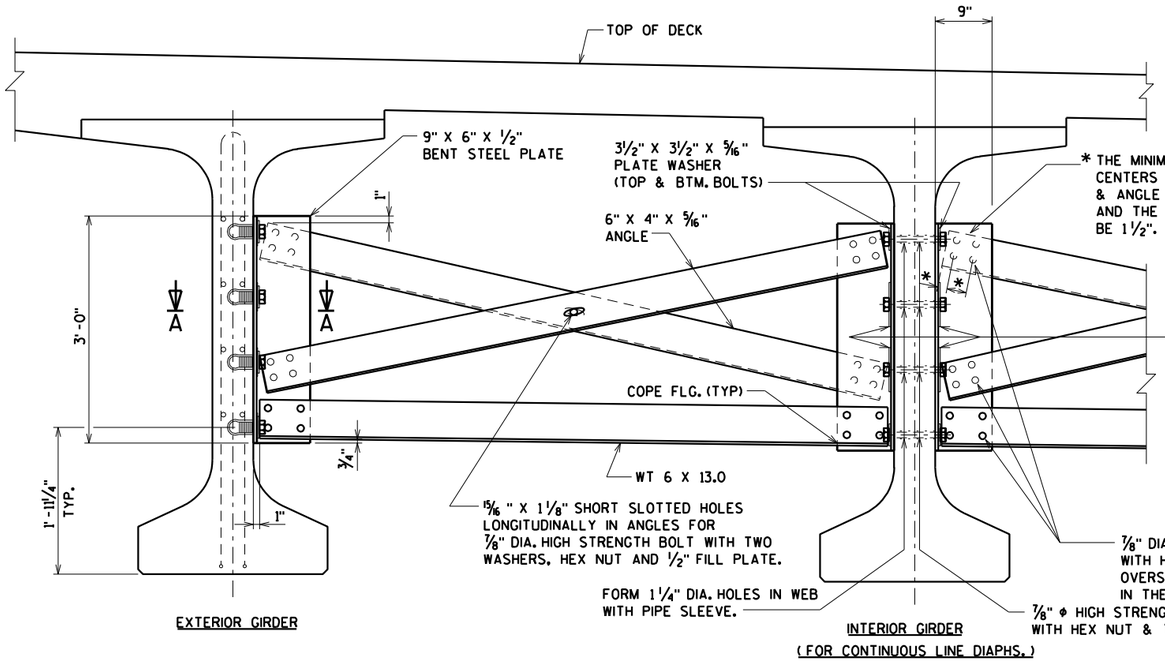
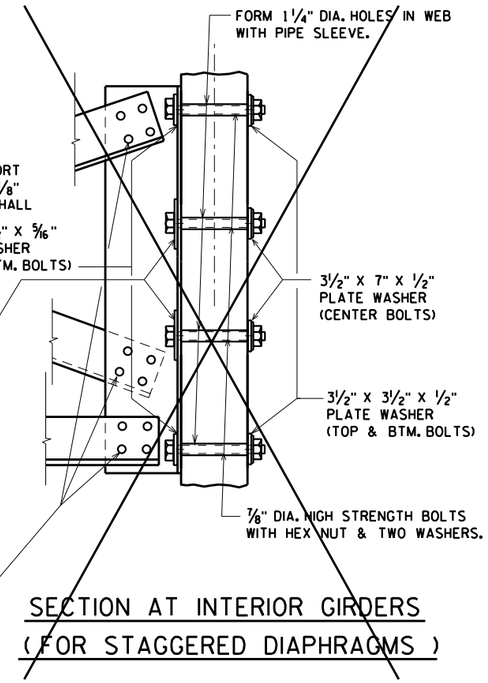
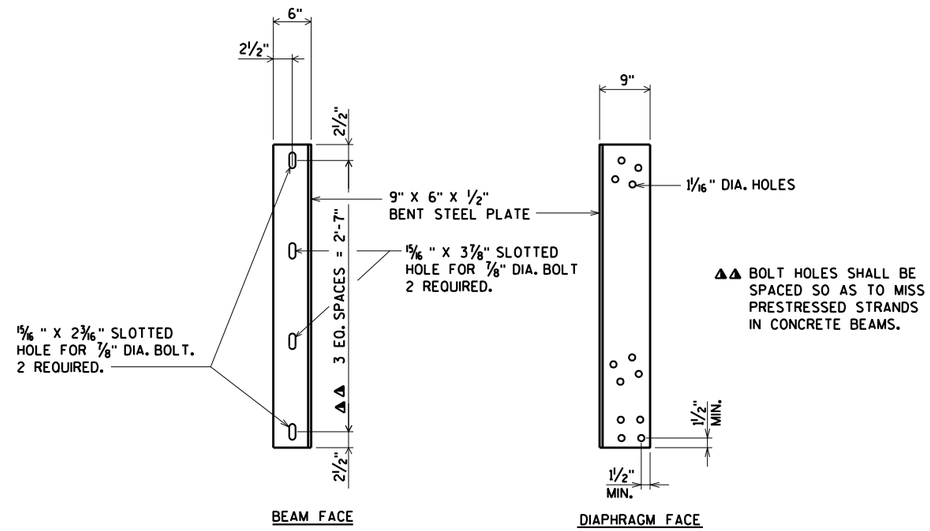


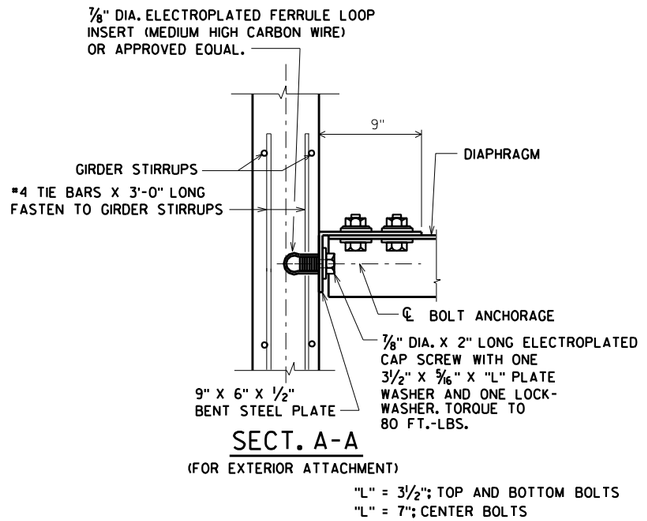
PART TRANSVERSE SECTION AT DIAPHRAGM



SECTION AT INTERIOR GIRDERS (FOR STAGGERED DIAPHRAGMS)



DIAPHRAGM SUPPORT



SECT. A-A

(FOR EXTERIOR ATTACHMENT)

"L" = 3½"; TOP AND BOTTOM BOLTS
"L" = 7"; CENTER BOLTS

NOTES

ALL DIAPHRAGM MATERIAL NOT EMBEDDED IN THE CONCRETE GIRDER SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "STEEL DIAPHRAGMS B-13-729", 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.

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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-729

DRAWN BY CLS | PLANS CK'D. CBM

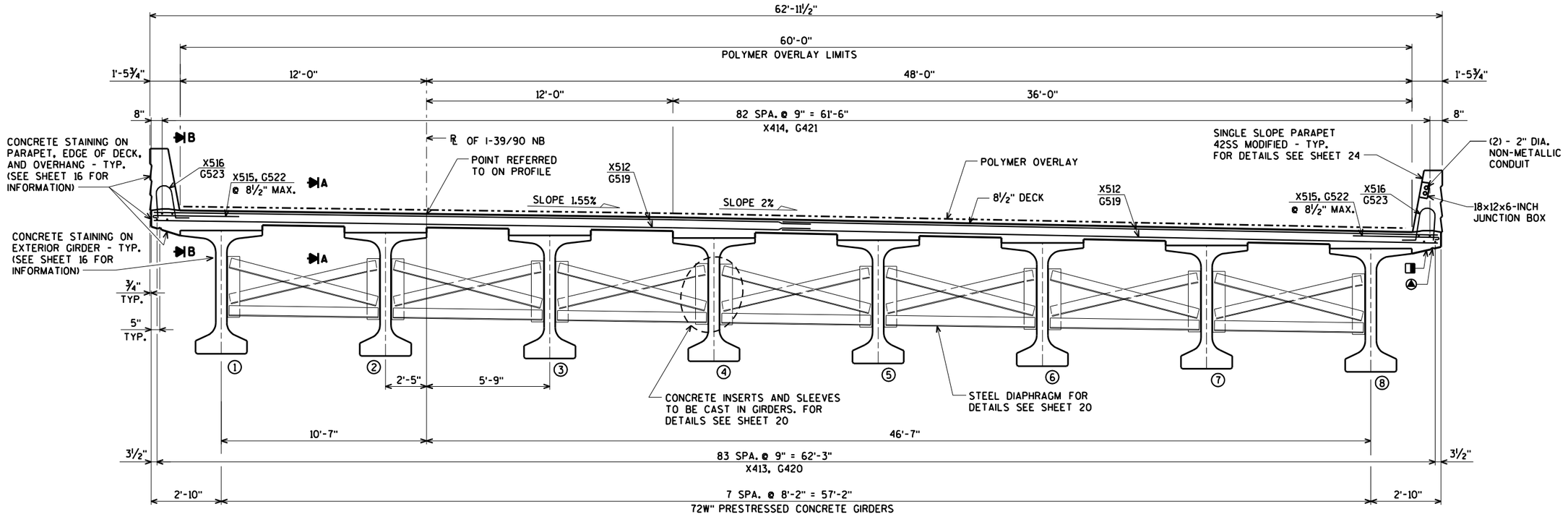
STEEL DIAPHRAGM

SHEET 20 OF 31
370

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

STATE PROJECT NUMBER

1007-12-78

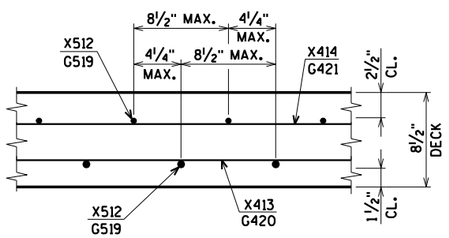


TYPICAL SECTION THRU BRIDGE

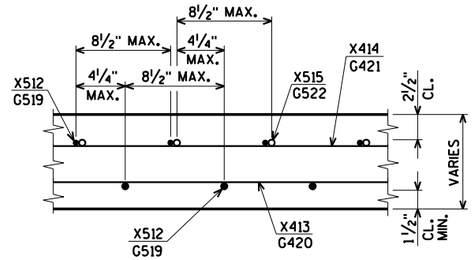
(LOOKING NORTH)

▲ ¾" V-GROOVE REQ'D. EXTEND V-GROOVE TO 6" FROM FRONT FACE OF ABUTMENT DIAPHRAGMS - TYP.

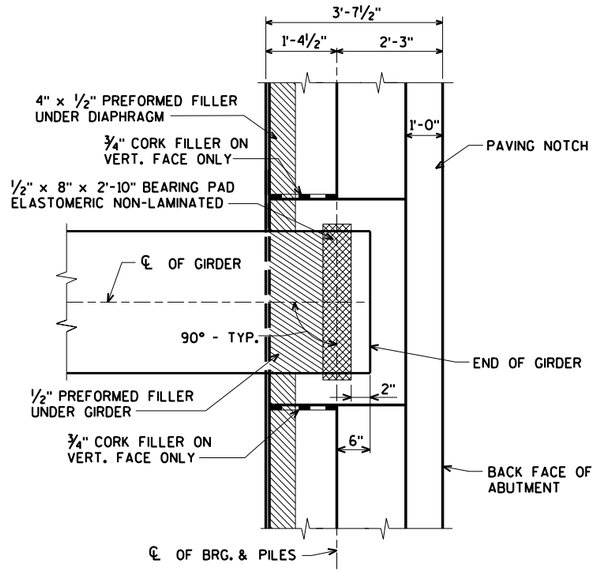
◨ SLOPE BOTTOM OF DECK AT EXTERIOR GIRDER TO MATCH THE SLOPE OF THE BOTTOM OF TOP FLANGE - TYP.



SECTION A



SECTION B



BEARING PAD DETAILS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-729

DRAWN BY CLS | PLANS CK'D. CBM

SUPERSTRUCTURE

SHEET 21 OF 31
371

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
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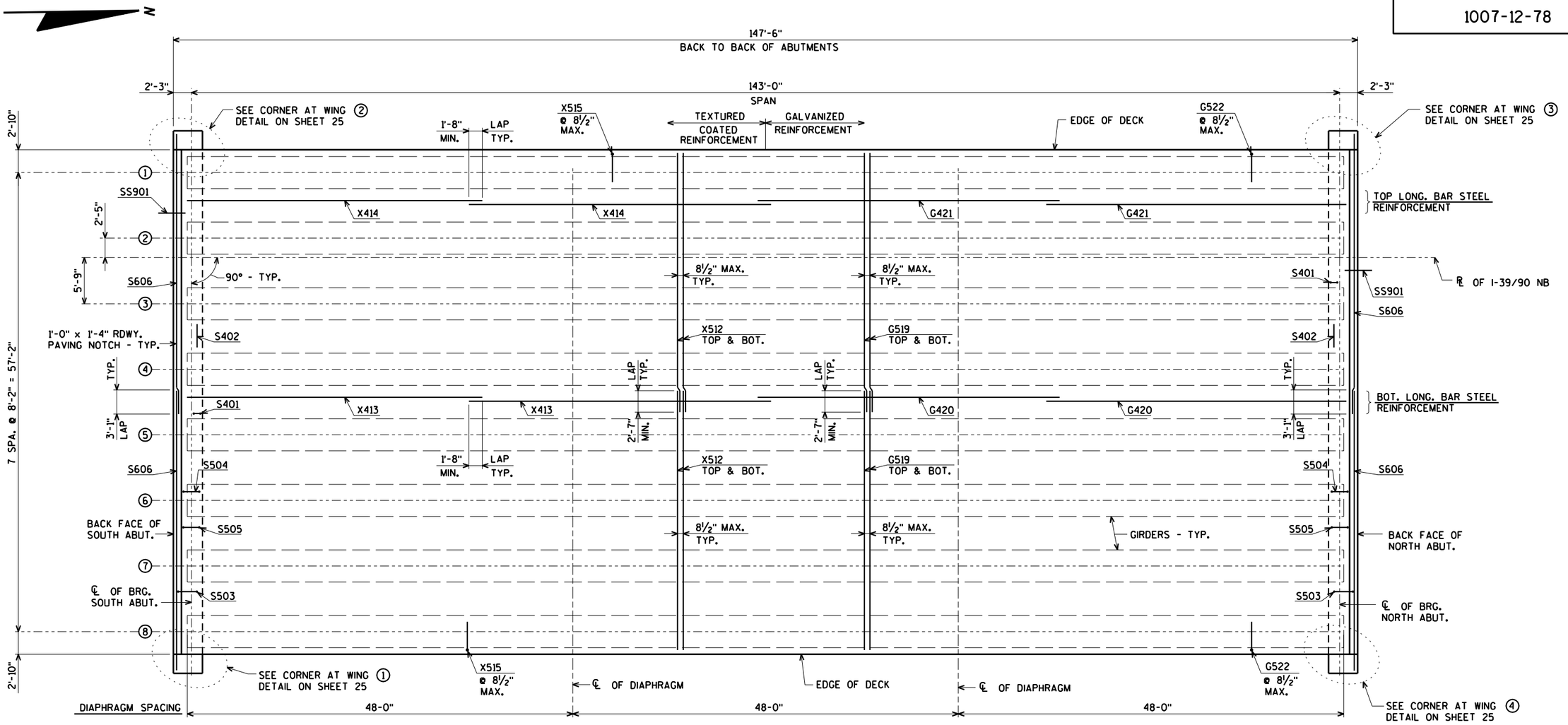
U:±41-0660.0X - IH-39 Dane Partners General Bridge Information±B-13-729 - I39_NB over USH 12&18 EB±bridge±B-13-729 sup.dgn

STATE PROJECT NUMBER

1007-12-78



PLAN

TOP OF DECK ELEVATIONS

LOCATION	℄ BEARING 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.	℄ BEARING N. ABUT.
W. EDGE OF DECK	897.32	897.40	897.47	897.55	897.62	897.70	897.77	897.85	897.92	898.00	898.07
GIRDER 1	897.28	897.36	897.43	897.51	897.58	897.66	897.73	897.81	897.88	897.96	898.03
GIRDER 2	897.15	897.23	897.30	897.38	897.45	897.53	897.60	897.68	897.75	897.83	897.90
℄ I-39/90 NB	897.12	897.19	897.26	897.34	897.41	897.49	897.56	897.63	897.71	897.78	897.86
GIRDER 3	897.03	897.10	897.18	897.25	897.33	897.40	897.47	897.55	897.62	897.70	897.77
***	896.93	897.01	897.08	897.16	897.23	897.31	897.38	897.46	897.53	897.61	897.68
GIRDER 4	896.89	896.97	897.04	897.12	897.19	897.27	897.34	897.42	897.49	897.57	897.64
GIRDER 5	896.73	896.80	896.88	896.95	897.03	897.10	897.17	897.25	897.32	897.40	897.47
GIRDER 6	896.56	896.64	896.71	896.79	896.86	896.94	897.01	897.09	897.16	897.24	897.31
GIRDER 7	896.40	896.48	896.55	896.63	896.70	896.78	896.85	896.93	897.00	897.08	897.15
GIRDER 8	896.24	896.31	896.39	896.46	896.54	896.61	896.68	896.76	896.83	896.91	896.98
E. EDGE OF DECK	896.18	896.26	896.33	896.41	896.48	896.56	896.63	896.71	896.78	896.86	896.93

*** POINT WHERE CROSS SLOPE CHANGES

PARAPET NOT SHOWN FOR CLARITY

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-729

DRAWN BY CLS | PLANS CK'D. CBM

SUPERSTRUCTURE PLAN

SHEET 22 OF 31
372

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
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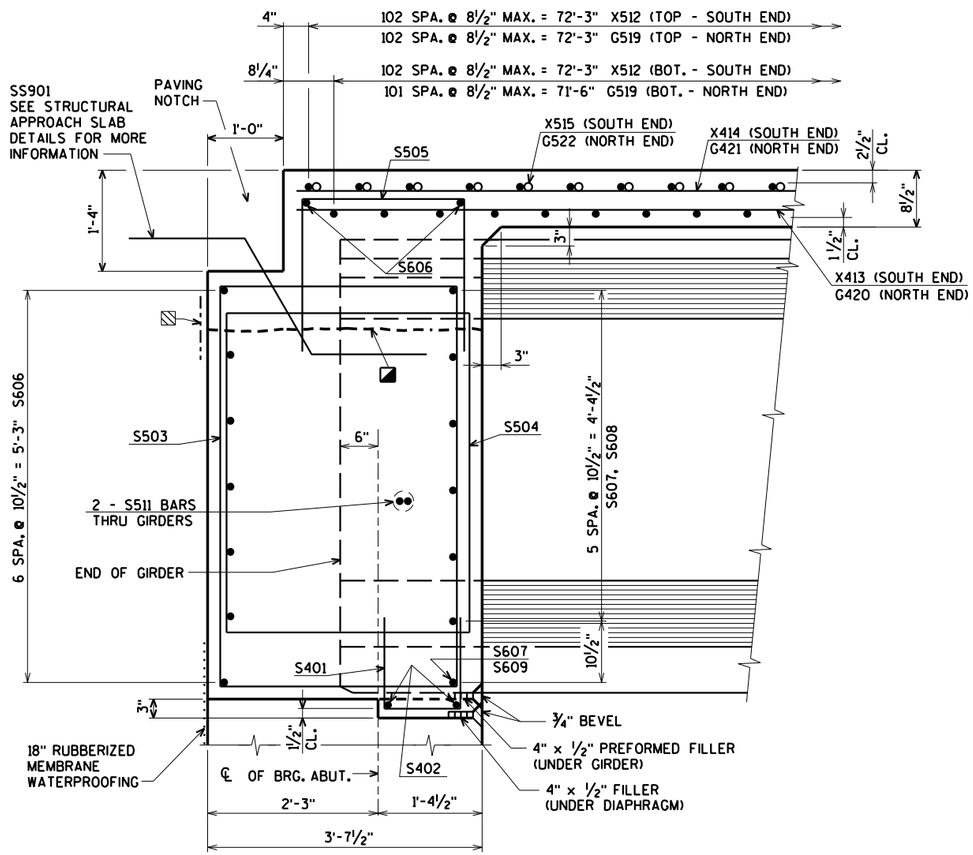
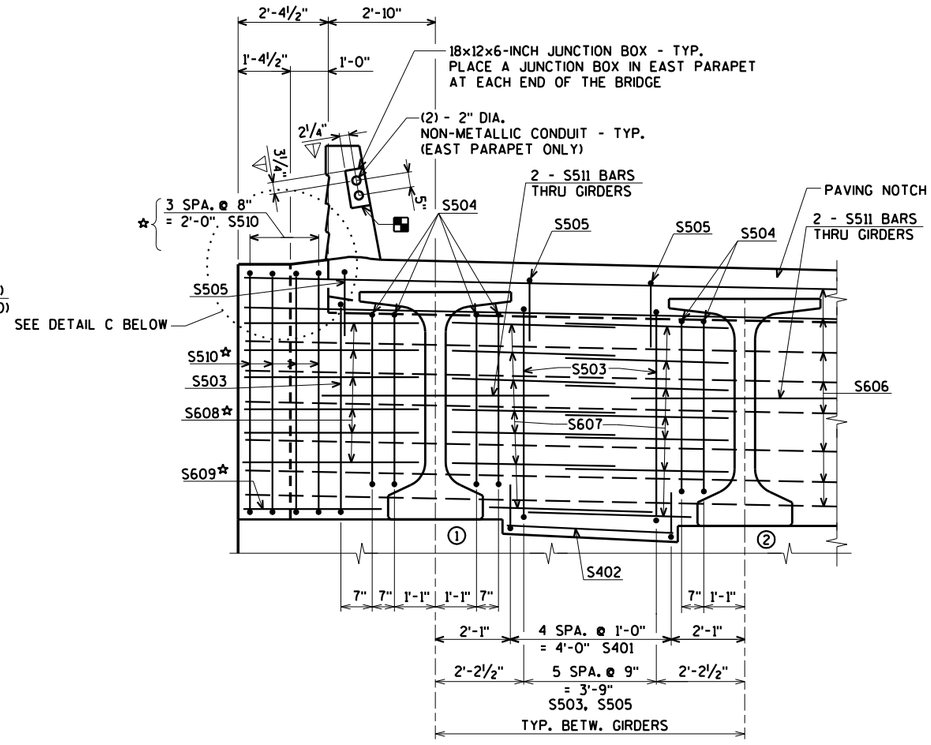
U:±41-0660.0X - IH-39 Dane Partners General Bridge Information±B-13-729 - I39_NB over USH 12&18 EB±bridge±B-13-729 sup.dgn

STATE PROJECT NUMBER

1007-12-78

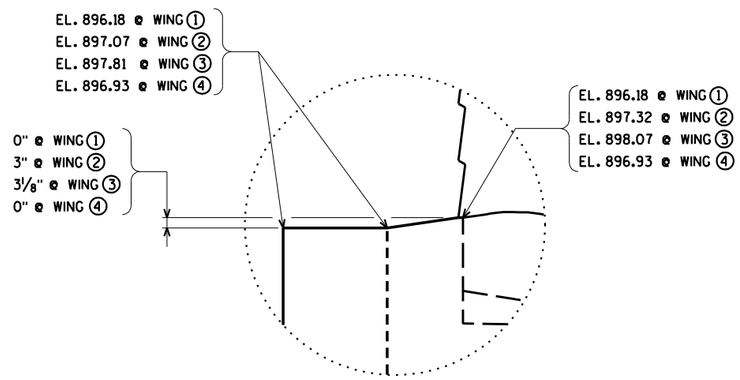


PART LONGITUDINAL SECTION



PART TRANSVERSE SECTION AT ABUTMENT DIAPHRAGM

(LOOKING NORTH AT BEAMS ① & ②, OTHER LOCATIONS SIMILAR)



DETAIL C

◪ OPTIONAL CONST. JOINT. 1'-2" BELOW TOP OF GIRDER. IF USED, DECK POUR MUST BE WITHIN 2 WEEKS FROM THE TIME OF THE DIAPHRAGM POUR.

▨ 18" RUBBERIZED MEMBRANE WATERPROOFING IF CONST. JT. IS USED. COST INCLUDED WITH BID ITEM "HIGH PERFORMANCE CONCRETE (HPC) MASONRY STRUCTURES"

☆ SEE SUPERSTRUCTURE CORNER DETAILS ON SHEET 25

◪ CUT OUT 1"± OF GASKET AT BOTTOM OF JUNCTION BOX COVER TO ALLOW FOR DRAINAGE.

▽ LOCATION OF CONDUIT IS MEASURED FROM OUTSIDE EDGE OF JUNCTION BOX.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-729

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SUPERSTRUCTURE DETAILS

SHEET 23 OF 31
373

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
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U:±41-0660.0X - IH-39 Dane Partners General Bridge Information±B-13-729 - 139_NB over USH 12&18 EB±bridge±B-13-729 sup.dgn

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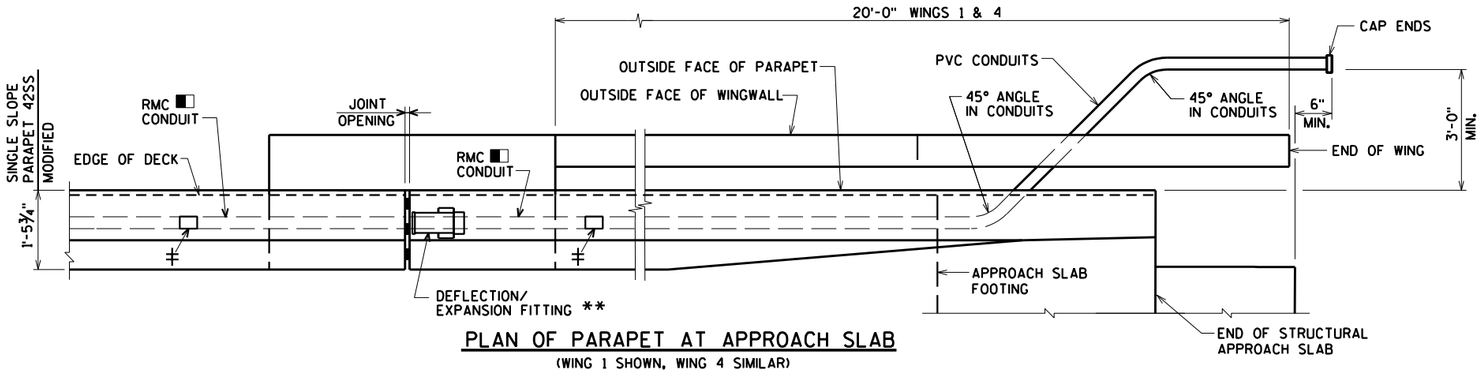
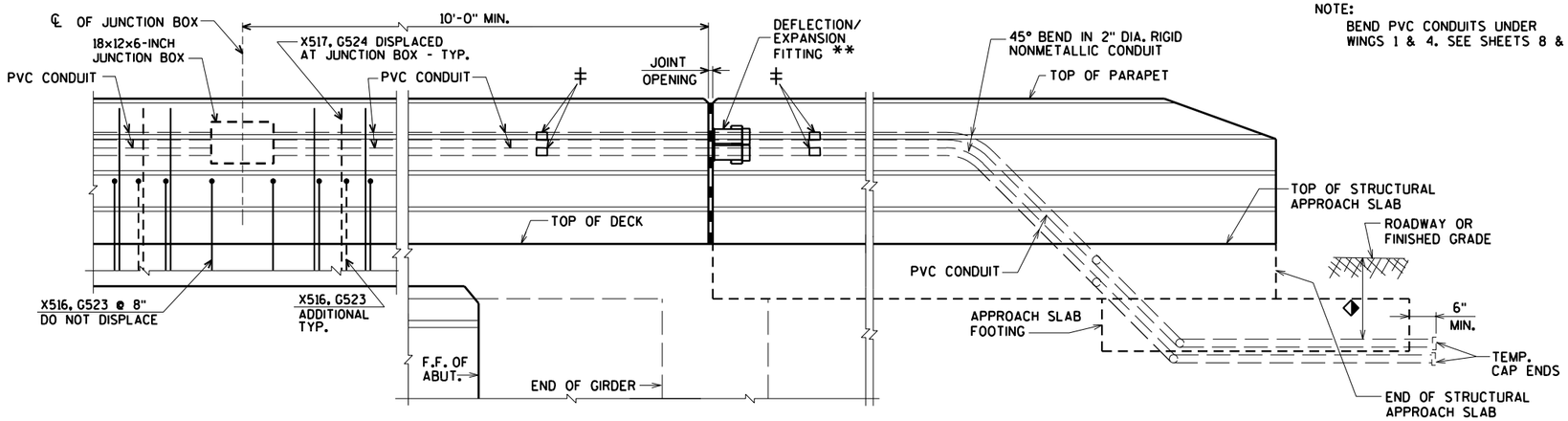
U:\41-0660.0X - IH-39 Dane Partners General Bridge Information\B-13-729 - I39_NB over USH 12&18 EB\bridge\B-13-729 sup.dgn



PLAN OF PARAPET AT APPROACH SLAB

(WING 1 SHOWN, WING 4 SIMILAR)

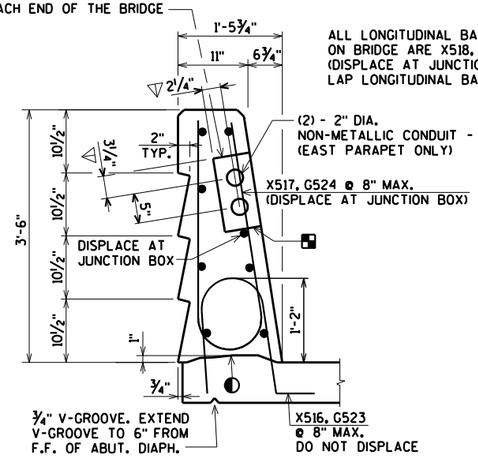


NOTE:
BEND PVC CONDUITS UNDER WINGS 1 & 4. SEE SHEETS 8 & 14.

OUTSIDE ELEVATION OF PARAPET AT APPROACH SLAB

(WING 4 SHOWN, WING 1 SIMILAR)

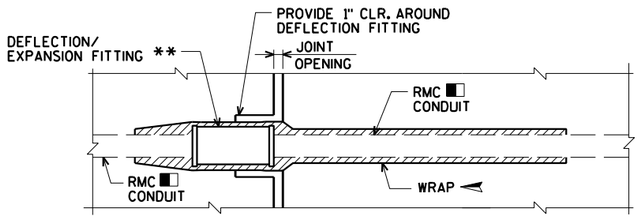
18x12x6-INCH JUNCTION BOX - TYP. PLACE A JUNCTION BOX IN EAST PARAPET AT EACH END OF THE BRIDGE



ALL LONGITUDINAL BARS IN PARAPET ON BRIDGE ARE X518, G525 BARS. (DISPLACE AT JUNCTION BOX) LAP LONGITUDINAL BARS A MIN. OF 1'-9".

SECTION THRU PARAPET ON BRIDGE

◐ CONST. JOINT - STRIKE OFF AS SHOWN.



DEFLECTION/EXPANSION FITTING

THIS DETAIL ACCOMMODATES A MAXIMUM OF ¾" TOTAL MOVEMENT AND UP TO 30 DEGREES OF ANGULAR MISALIGNMENT IN ANY DIRECTION.
BOND JUMPER NOT SHOWN FOR CLARITY
(CONCRETE TO CONCRETE FITTING)

LEGEND

‡ NONMETALLIC CONDUIT TO METALLIC CONDUIT ADAPTOR FITTING (UL OR NRTL LISTED FOR ELECTRICAL USE SHALL BE USED)

■ USE 2" DIA. RIGID METALLIC (RMC) CONDUIT AT FITTINGS. PROVIDE RMC FOR 3'-0" MIN. ON EACH SIDE OF JOINT OPENINGS UNLESS NOTED OTHERWISE.

◅ SPONGE RUBBER WRAP TO BE AASHTO M153, TYPE 1 OR EQUIVALENT - ¼" MINIMUM THICKNESS. PROVIDE WRAP FOR THE ENTIRE LENGTH OF THE FITTING OR AS SHOWN. SPONGE RUBBER WRAP INCIDENTAL TO "CONDUIT RIGID METALLIC 2-INCH"

** DEFLECTION/EXPANSION FITTING REQUIREMENTS (IF USED):
- UP TO ¾" CONDUIT CONTRACTION OR EXPANSION AND UP TO 30 DEGREES OF ANGULAR MISALIGNMENT IN ANY DIRECTION WITH BONDING JUMPER

PVC = POLYVINYL CHLORIDE (RIGID NONMETALLIC) CONDUIT

RMC = RIGID METALLIC CONDUIT

▪ CUT OUT 1"± OF GASKET AT BOTTOM OF JUNCTION BOX COVER TO ALLOW FOR DRAINAGE.

▽ LOCATION OF CONDUIT IS MEASURED FROM OUTSIDE EDGE OF JUNCTION BOX.

NOTES

◆ 2'-0" MIN. CONDUIT COVER UNDER ROADWAYS. 1'-6" OTHERWISE. CONDUIT COVER SHOULD NOT EXCEED 3'-0".

CONDUIT SHALL BE EMBEDDED 2" CLEAR.

USE 2" DIA. RIGID NONMETALLIC CONDUIT (PVC) UNLESS NOTED OTHERWISE.

CONDUIT FITTINGS, CONDUIT BENDS, AND ADAPTER FITTINGS INCIDENTAL TO CONDUIT WORK.

CONDUIT BENDS SHALL CONFORM TO THE NATIONAL ELECTRIC CODE.

PROVIDE JUNCTION BOXES FROM THE APPROVED PRODUCTS LIST.

F.F. DENOTES FRONT FACE.

8

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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-729

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SUPERSTRUCTURE CONDUIT DETAILS

SHEET 24 OF 31
374

ORIGINAL PLANS PREPARED BY
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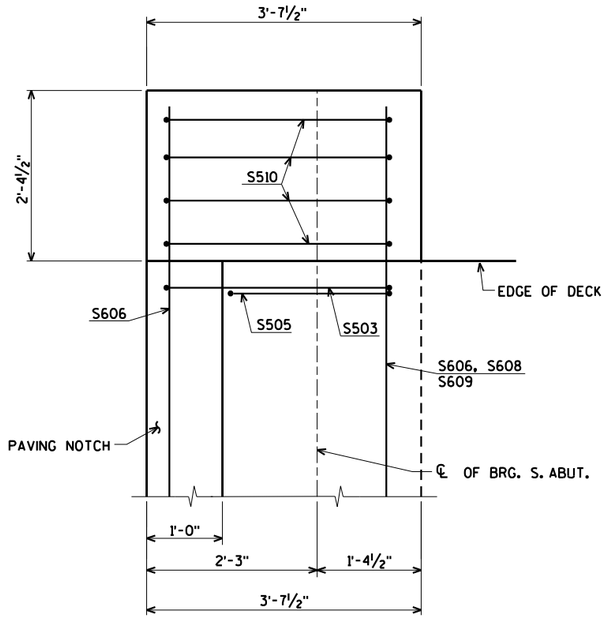
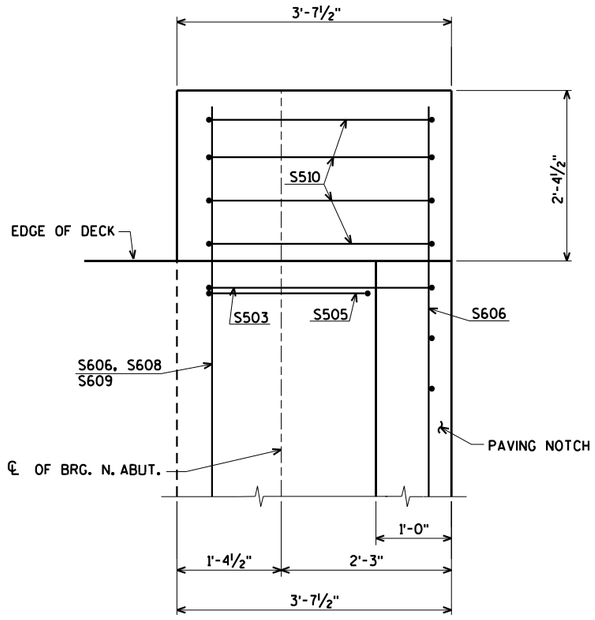
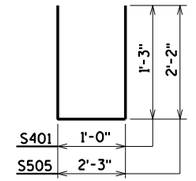
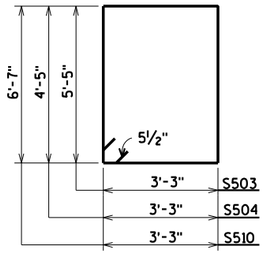


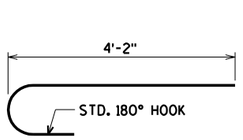
CORNER AT WING 2 DETAIL



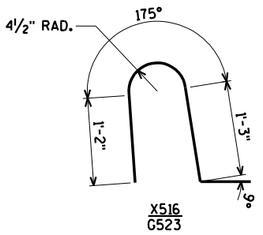
CORNER AT WING 3 DETAIL



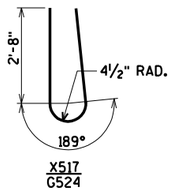




X515
G522



X516
G523



X517
G524

BILL OF BARS

BAR NO.	COATED BAR	NO. REQ'D.	LENGTH	BENT BAR	BUNDLED BAR SERIES	7,660# COATED LOCATION
S401	X	70	3-4	X		DIAPH. ℄ ABUT. VERT. ℄ NOTCH
S402	X	28	4-4			DIAPH. ℄ ABUT. HORIZ. ℄ NOTCH
S503	X	88	17-10	X		DIAPH. ℄ ABUT. VERT.
S504	X	64	15-10	X		DIAPH. ℄ ABUT. VERT. ℄ GIRDERS
S505	X	88	6-4	X		DIAPH. ℄ ABUT. VERT.
S606	X	36	35-2			DIAPH. ℄ ABUT. HORIZ.
S607	X	196	5-2			DIAPH. ℄ ABUT. HORIZ. BETW. GDRS.
S608	X	24	4-6			DIAPH. ℄ ABUT. HORIZ. ℄ CORNERS
S609	X	4	3-7			DIAPH. ℄ ABUT. HORIZ. ℄ CORNERS
S510	X	16	20-2	X		DIAPH. ℄ ABUT. VERT. CORNERS
S511	X	32	6-0			DIAPH. ℄ ABUT. HORIZ. THRU GDRS.

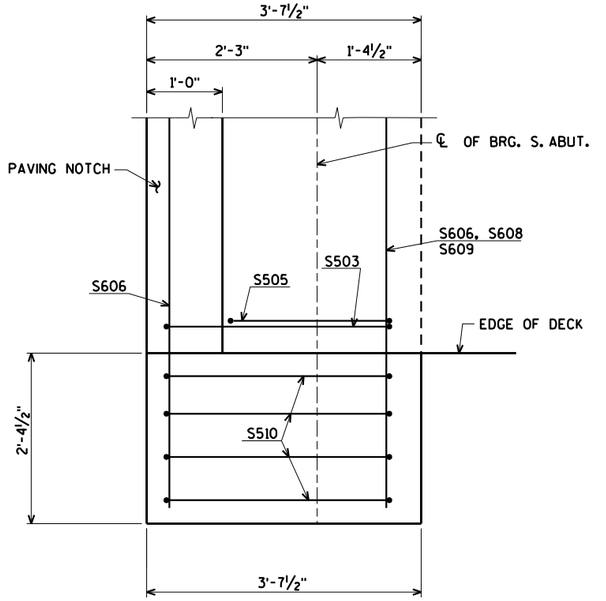
BILL OF BARS

BAR NO.	COATED BAR	NO. REQ'D.	LENGTH	BENT BAR	BUNDLED BAR SERIES	27,210# TEXTURED COATED LOCATION
X512	X	412	32-7			DECK TRANS. TOP & BOT.
X413	X	168	37-7			DECK LONG. BOT.
X414	X	166	37-7			DECK LONG. TOP
X515	X	206	4-9	X		DECK TRANS. TOP ℄ EDGES
X516	X	221	4-5	X		DECK ℄ PARAPET
X517	X	219	6-8	X		PARAPET VERT.
X518	X	32	37-8			PARAPET HORIZ.

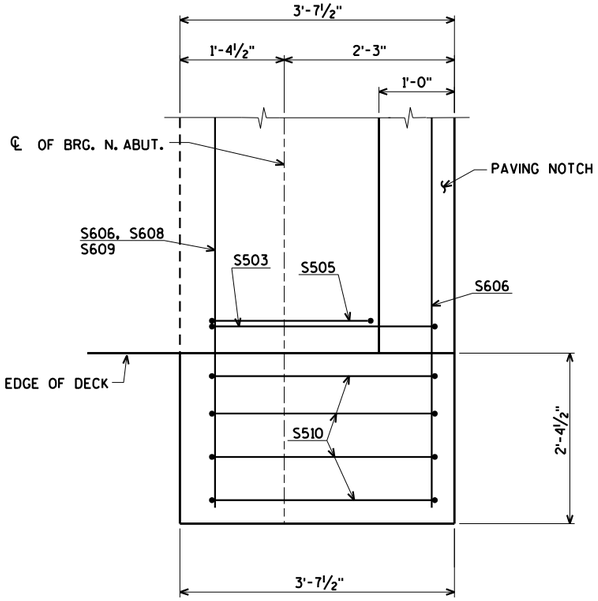
BILL OF BARS

BAR NO.	COATED BAR	NO. REQ'D.	LENGTH	BENT BAR	BUNDLED BAR SERIES	27,140# GALVANIZED LOCATION
G519	X	410	32-7			DECK TRANS. TOP & BOT.
G420	X	168	37-7			DECK LONG. BOT.
G421	X	166	37-7			DECK LONG. TOP
G522	X	206	4-9	X		DECK TRANS. TOP ℄ EDGES
G523	X	221	4-5	X		DECK ℄ PARAPET
G524	X	219	6-8	X		PARAPET VERT.
G525	X	32	37-8			PARAPET HORIZ.

BENDING DIMENSIONS ARE OUT TO OUT OF BARS.



CORNER AT WING 1 DETAIL



CORNER AT WING 4 DETAIL

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-729

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SUPERSTRUCTURE CORNER DETAILS & BILL OF BARS

SHEET 25 OF 31
375

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

8/5/2019
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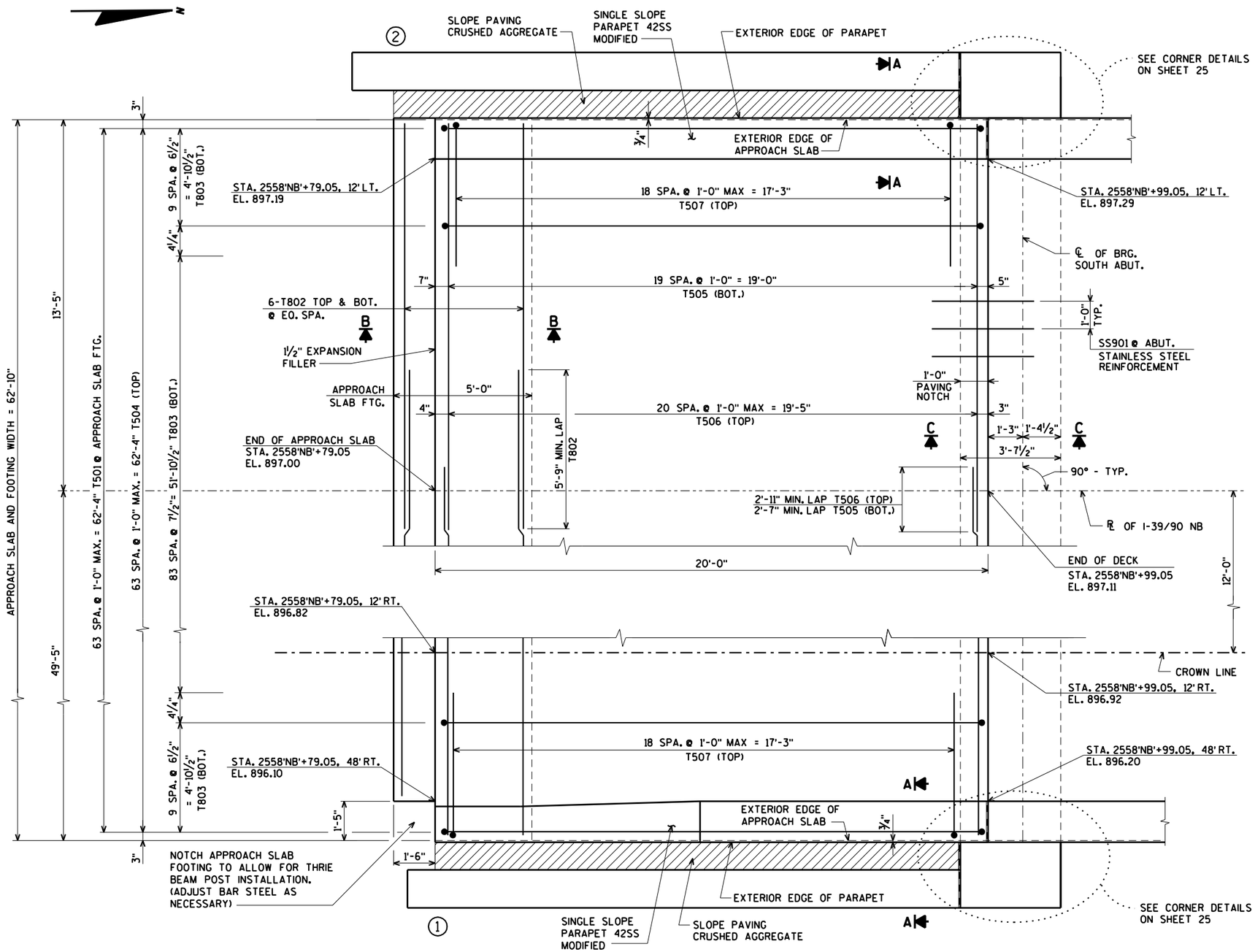

APPROACH SLAB PLAN

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

FOR DETAILS OF SECTIONS A, B, AND C, SEE SHEET 28

WORK THIS SHEET WITH SHEET 28

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-729

DRAWN BY CLS | PLANS CK'D. CBM

SOUTH STRUCTURAL APPROACH SLAB

SHEET 26 OF 31
376

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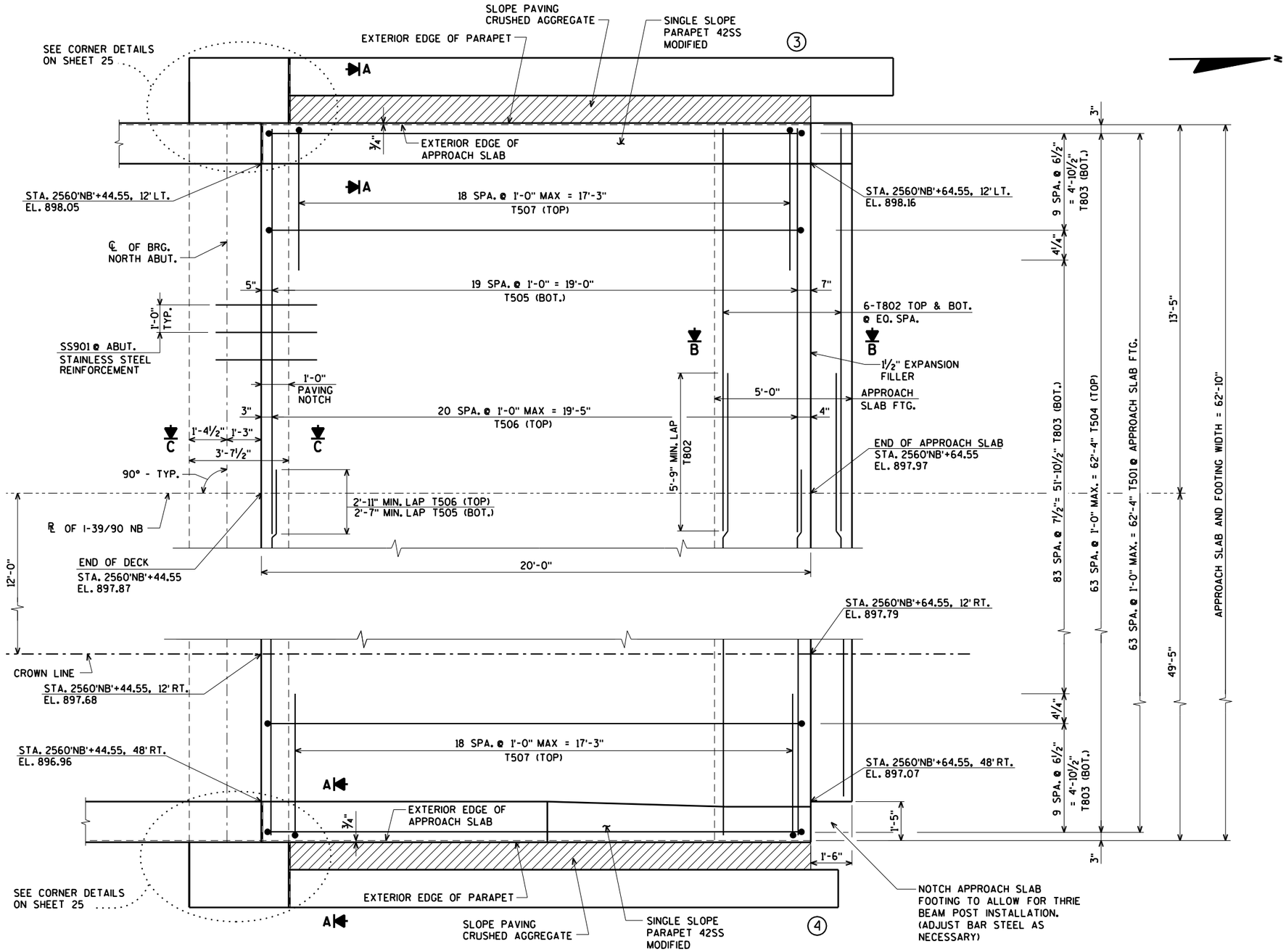
7/24/2019
PENTABLE:BRegu_shd_util.tbl

U:±41-0660.0X - IH-39 Dane Partners General Bridge Information±B-13-729 - I39_NB over USH 12&18 EB±bridge±B-13-729 appr slab.dgn

STATE PROJECT NUMBER

1007-12-78



APPROACH SLAB PLAN

FOR DETAILS OF SECTIONS A, B, AND C, SEE SHEET 28

WORK THIS SHEET WITH SHEET 28

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-729

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NORTH STRUCTURAL APPROACH SLAB

SHEET 27 OF 31
377

ORIGINAL PLANS PREPARED BY
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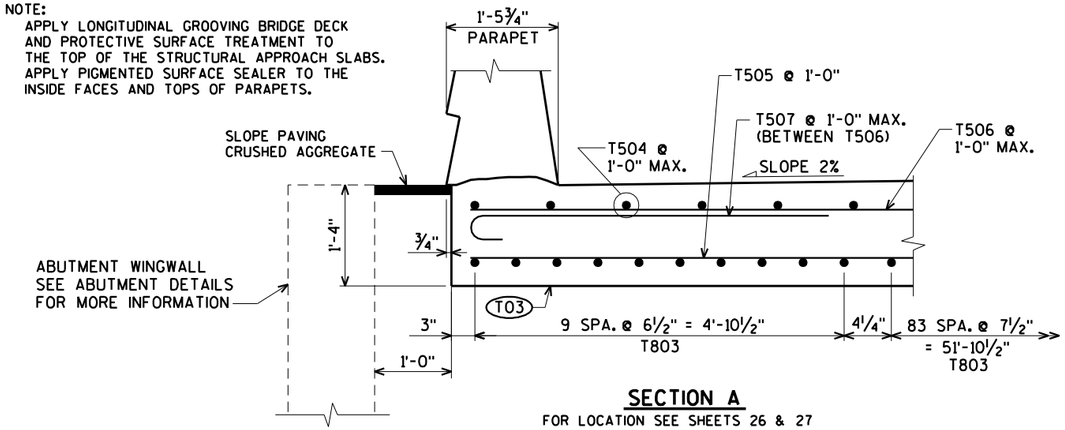
PENTABLE:BReau_shd_util.tbl

U:±41-0660.0X - IH-39 Dane Partners General Bridge Information±B-13-729 - I39_NB over USH 12&18 EB±bridge±B-13-729 appr slab.dgn

STATE PROJECT NUMBER
1007-12-78

NOTE:
APPLY LONGITUDINAL GROOVING BRIDGE DECK AND PROTECTIVE SURFACE TREATMENT TO THE TOP OF THE STRUCTURAL APPROACH SLABS. APPLY PIGMENTED SURFACE SEALER TO THE INSIDE FACES AND TOPS OF PARAPETS.



SECTION A

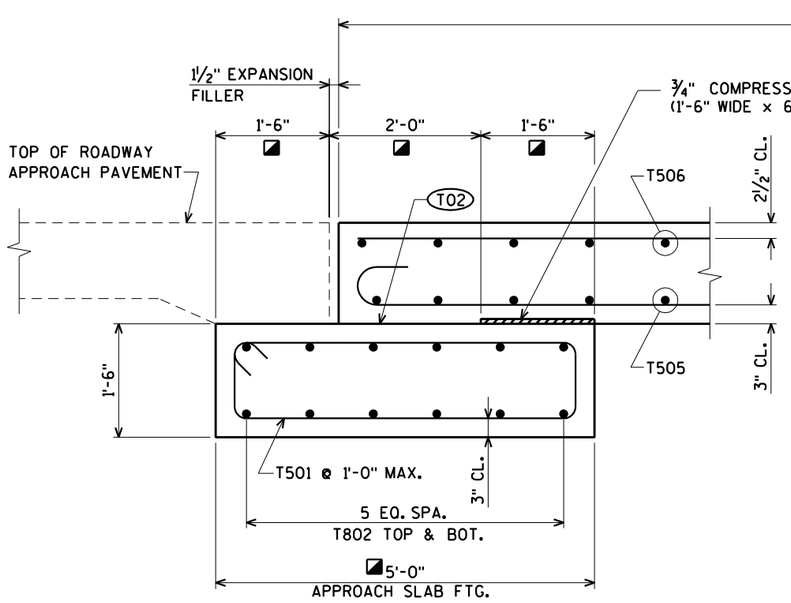
FOR LOCATION SEE SHEETS 26 & 27
(EAST PARAPET SHOWN, WEST PARAPET SIMILAR)

BILL OF BARS

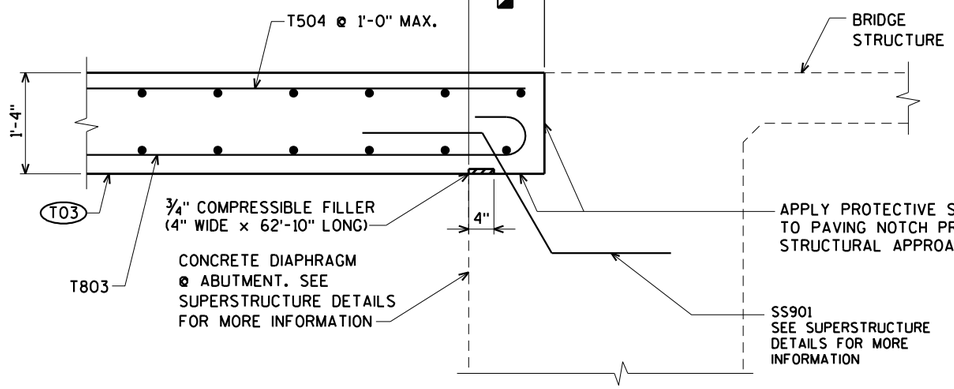
BAR NO.	COATED BAR	NO. REQ'D.	LENGTH	BENT BAR	BUNDLED BAR SERIES	1,070# STAINLESS STEEL (PER APPROACH SLAB) LOCATION
SS901		63	5-0	X		CONC. ABUT. DIAPH. TO APPROACH SLAB

BAR NO.	COATED BAR	NO. REQ'D.	LENGTH	BENT BAR	BUNDLED BAR SERIES	13,180# COATED (PER APPROACH SLAB) LOCATION
T501	X	64	12-2	X		APPROACH SLAB FTG. - STIRRUP
T802	X	24	34-2			APPROACH SLAB FTG. - TRANS.
T803	X	104	21-4	X		APPROACH SLAB - LONG. - BOT.
T504	X	64	19-6			APPROACH SLAB - LONG - TOP
T505	X	40	32-7			APPROACH SLAB - TRANS. - BOT.
T506	X	42	32-9			APPROACH SLAB - TRANS. - TOP
T507	X	38	4-1	X		APPROACH SLAB - TRANS. - TOP

BENDING DIMENSIONS ARE OUT TO OUT OF BARS.



SECTION B



SECTION C

SECTION THRU APPROACH SLAB

◪ MEASURED NORMAL TO ABUTMENT

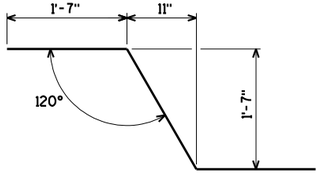
(T02) STEEL TROWEL TOP SURFACE OF FOOTING AND PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHYLENE SHEETS OVER THE ENTIRE TOP OF FOOTING.

(T03) PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHYLENE SHEETS OVER THE ENTIRE TOP OF SUBGRADE BENEATH SLAB.

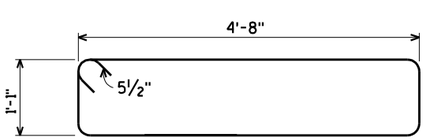
POLYETHYLENE SHEETS ARE INCLUDED WITH "HIGH PERFORMANCE CONCRETE (HPC) MASONRY STRUCTURES".

ALL STRUCTURAL APPROACH SLAB CONCRETE, EXCEPT FOR THE STRUCTURAL APPROACH SLAB FOOTING, PAID FOR UNDER "HIGH PERFORMANCE CONCRETE (HPC) MASONRY STRUCTURES". STRUCTURAL APPROACH SLAB FOOTING TO BE PAID UNDER "CONCRETE MASONRY BRIDGES".

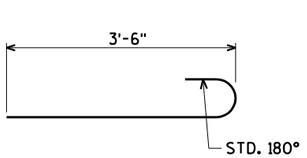
WORK THIS SHEET WITH SHEETS 26 & 27



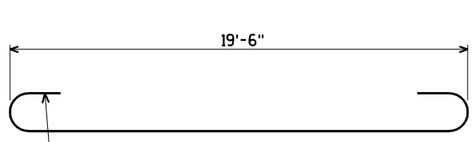
SS901



T501



T507



T803

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-729

DRAWN BY CLS | PLANS CK'D. CBM

STRUCTURAL APPROACH SLAB DETAILS

SHEET 28 OF 31
378

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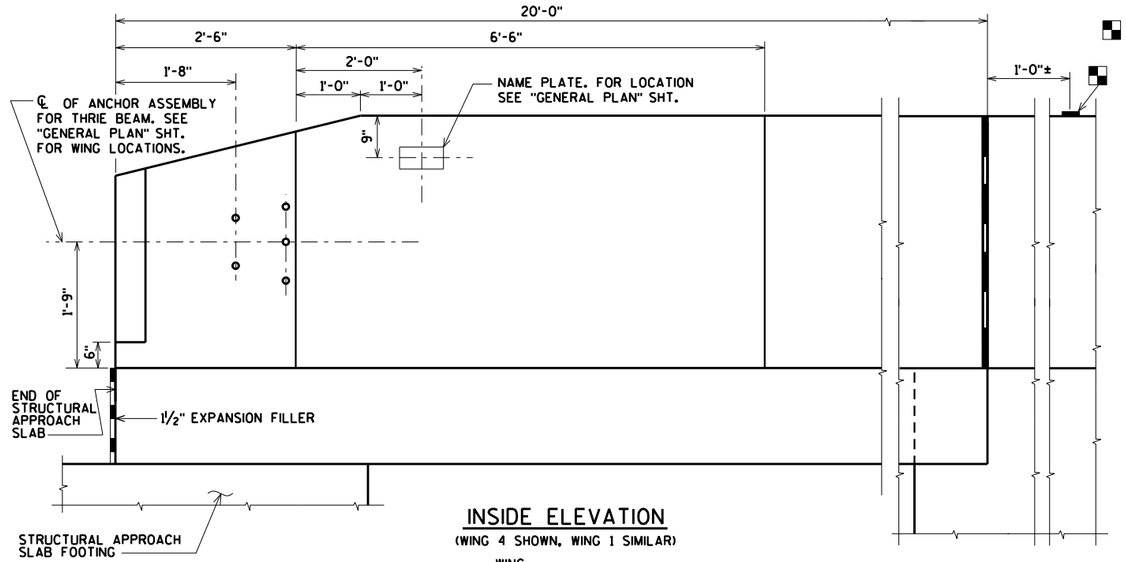
7/29/2019
PENTABLE:BRequ_shd_util.tbl

U:±41-0660.0X - IH-39 Dane Partners General Bridge Information±B-13-729 - I39_NB over USH 12&18 EB±bridge±B-13-729 appr slab.dgn

$PRFNAME$
U:\41-0660.0X - IH-39 Dane Partners General Bridge Information\B-13-729 - I39_NB over USH 12&18 EB\bridge\B-13-729 para.dgn

STATE PROJECT NUMBER

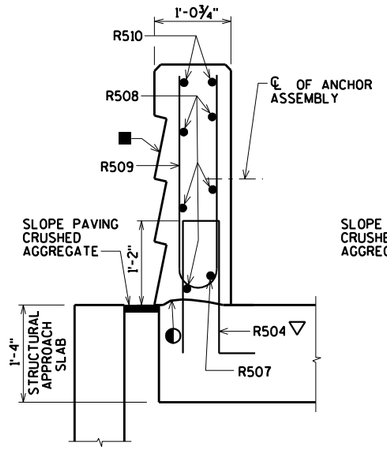
1007-12-78



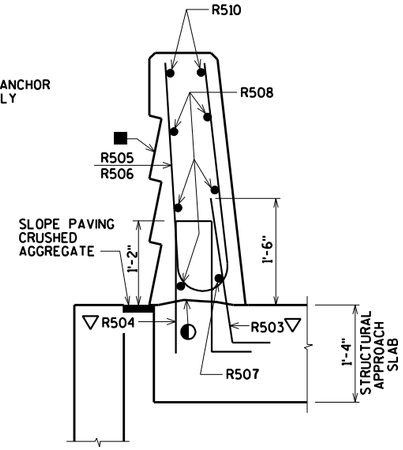
INSIDE ELEVATION

(WING 4 SHOWN, WING 1 SIMILAR)

■ BENCH MARK CAP (WHEN SUPPLIED) (NEAR WING 1)



SECTION A



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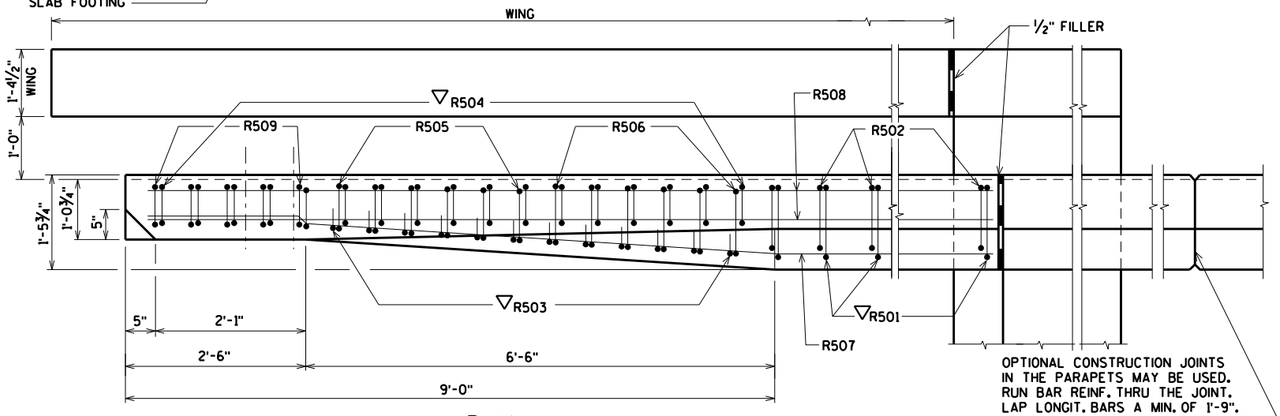
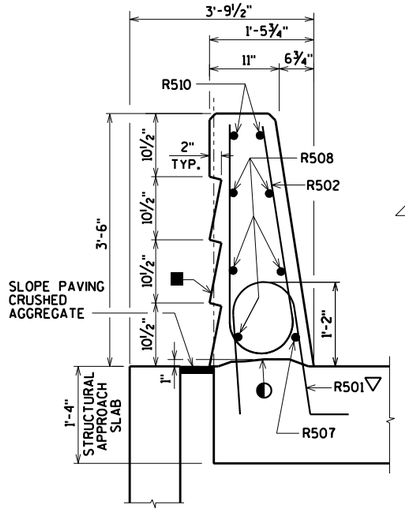


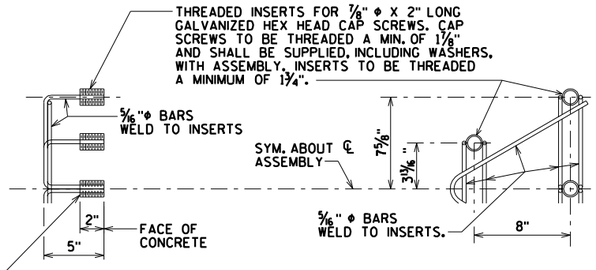
OPTIONAL CONSTRUCTION JOINTS IN THE PARAPETS MAY BE USED. RUN BAR REINF. THRU THE JOINT. LAP LONGIT. BARS A MIN. OF 1'-9". MIN. JOINT SPACING OF 80'-0". DEFINE CONST. JOINT WITH A ¾" 'V' GROOVE.

PLAN

(WING 4 SHOWN, WING 1 SIMILAR)



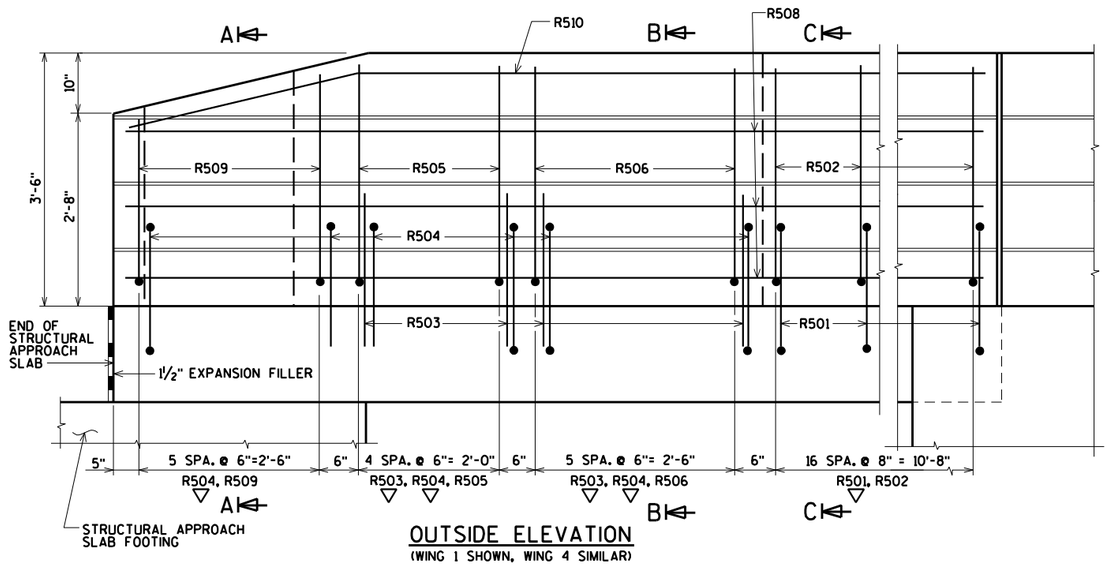
SECTION C



DETAIL OF ANCHOR ASSEMBLY

NOTE: HEX HEAD CAP SCREWS & WASHERS TO BE GALVANIZED IN ACCORDANCE WITH AASHTO M232 CLASS C.

ASSEMBLY SHALL BE BID ITEM "ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD", EACH.



OUTSIDE ELEVATION

(WING 1 SHOWN, WING 4 SIMILAR)

■ CONCRETE STAINING ON PARAPET (SEE SHEET 16 FOR INFORMATION)

◐ CONST. JOINT - STRIKE OFF AS SHOWN.

▽ R501, R503 AND R504 BARS TO BE TIED TO STRUCTURAL APPROACH SLAB STEEL BEFORE STRUCTURAL APPROACH SLAB IS POURED.

WORK THIS SHEET WITH SHEET 30.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-729

DRAWN BY CLS | PLANS CK'D. CBM

SINGLE SLOPE PARAPET 42SS MODIFIED

SHEET 29 OF 31
379

ORIGINAL PLANS PREPARED BY
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U:±41-0660.0X - IH-39 Dane Partners General Bridge Information±B-13-729 - 139_NB over USH 12&18 EB±bridge±B-13-729 para.dgn

STATE PROJECT NUMBER
1007-12-78

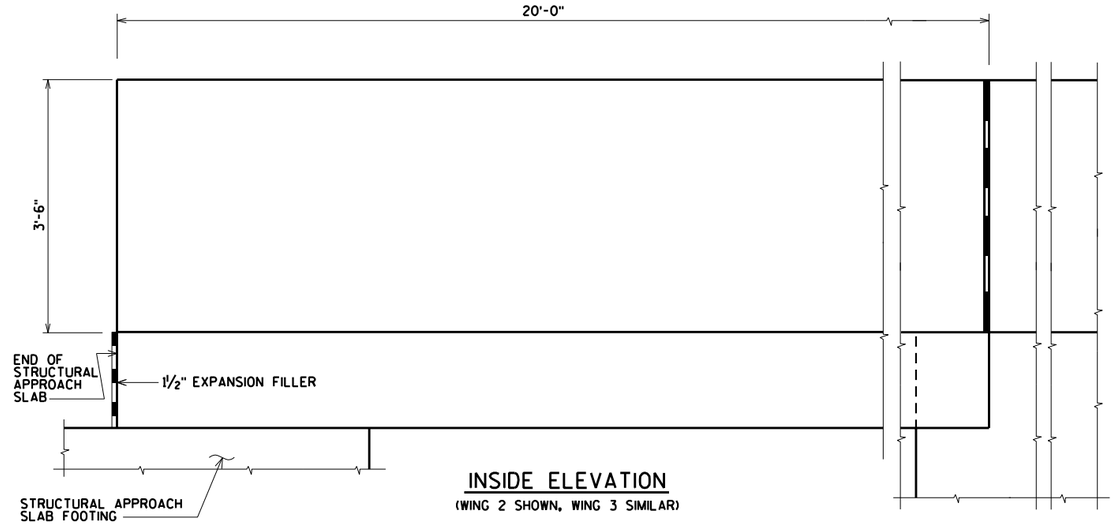
1,110# COATED SOUTH STRUCTURAL APPROACH SLAB
1,110# COATED NORTH STRUCTURAL APPROACH SLAB

BILL OF BARS

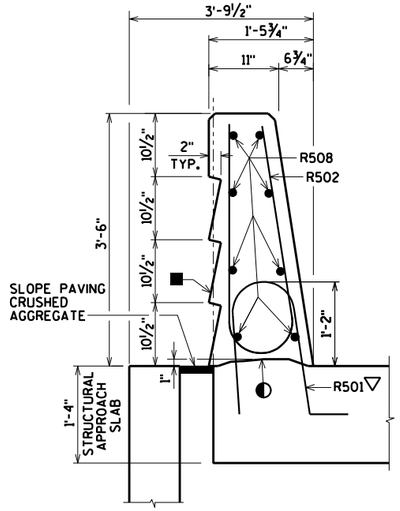
FOR STRUCTURAL APPROACH SLAB PARAPETS

BAR MARK	COAT	SOUTH STRUCT. APPR. SLAB	NORTH STRUCT. APPR. SLAB	LENGTH	BENT	BAR SERIES	LOCATION
R501	X	47	47	4-5	X		PARAPET VERT.
R502	X	47	47	6-8	X		PARAPET VERT.
R503	X	11	11	2-9	X		PARAPET VERT.
R504	X	17	17	5-4	X		PARAPET VERT.
R505	X	5	5	6-5	X		PARAPET VERT.
R506	X	6	6	6-6	X		PARAPET VERT.
R507	X	1	1	19-8	X		PARAPET HORIZ.
R508	X	13	13	19-8			PARAPET HORIZ.
R509	X	6	6	5-5	X	▲	PARAPET VERT.
R510	X	2	2	19-8	X		PARAPET HORIZ

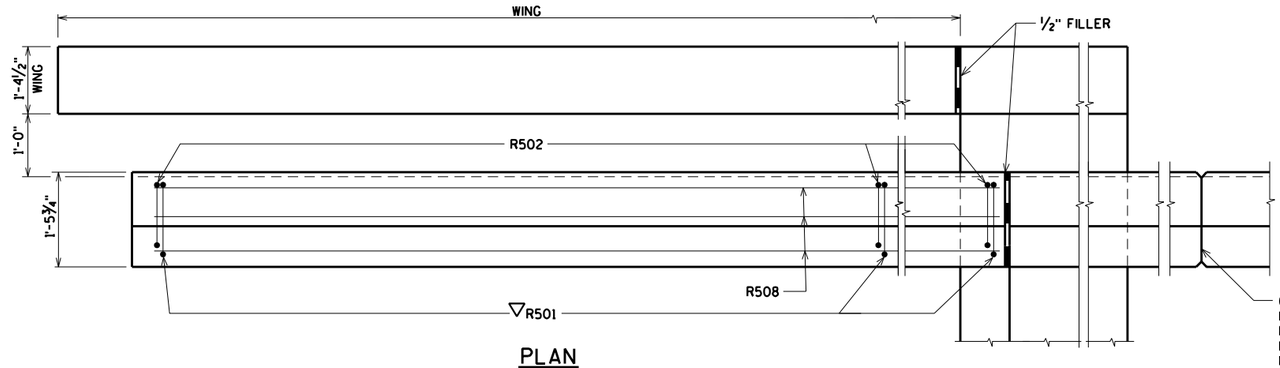
BENDING DIMENSIONS ARE OUT TO OUT OF BARS.



INSIDE ELEVATION
(WING 2 SHOWN, WING 3 SIMILAR)

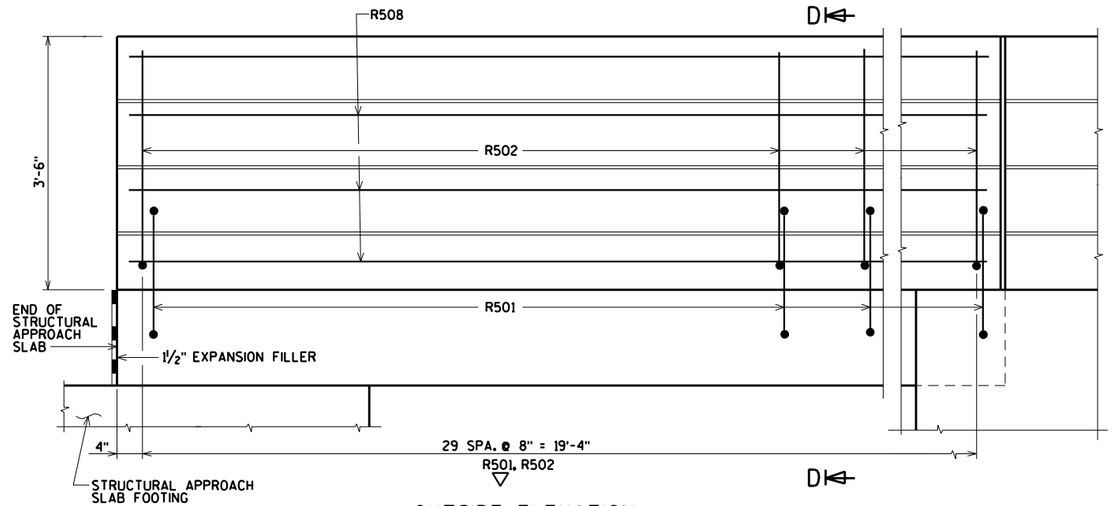


SECTION D

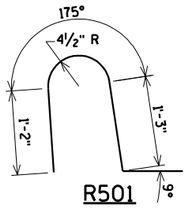


PLAN
(WING 2 SHOWN, WING 3 SIMILAR)

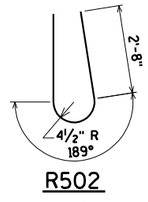
OPTIONAL CONSTRUCTION JOINTS IN THE PARAPETS MAY BE USED. RUN BAR REINF. THRU THE JOINT. LAP LONGIT. BARS A MIN. OF 1'-9". MIN. JOINT SPACING OF 80'-0". DEFINE CONST. JOINT WITH A ¾" 'V' GROOVE.



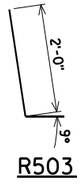
OUTSIDE ELEVATION
(WING 3 SHOWN, WING 2 SIMILAR)



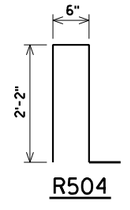
R501



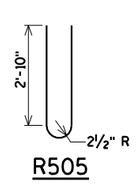
R502



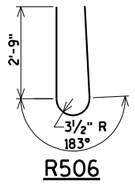
R503



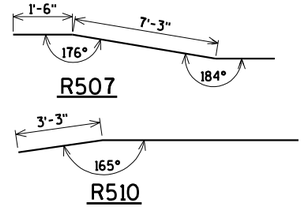
R504



R505

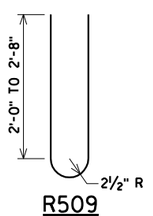


R506



R507

R510



R509

BAR SERIES TABLE

BAR MARK	NO REQ'D.	LENGTH
R509	2 SERIES OF 6	4'-9" TO 6'-1"

BUNDLE AND TAG EACH SERIES SEPARATELY.

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

■ CONCRETE STAINING ON PARAPET (SEE SHEET 16 FOR INFORMATION)

◐ CONST. JOINT - STRIKE OFF AS SHOWN.

▽ R501, R503 AND R504 BARS TO BE TIED TO STRUCTURAL APPROACH SLAB STEEL BEFORE STRUCTURAL APPROACH SLAB IS POURED.

WORK THIS SHEET WITH SHEET 29.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-729

DRAWN BY CLS | PLANS CK'D. CBM

SINGLE SLOPE PARAPET 42SS MODIFIED

SHEET 30 OF 31
380

ORIGINAL PLANS PREPARED BY
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Eau Claire, WI 54701
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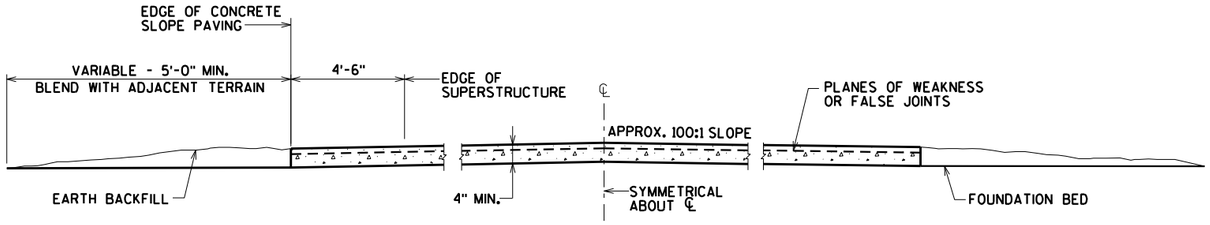
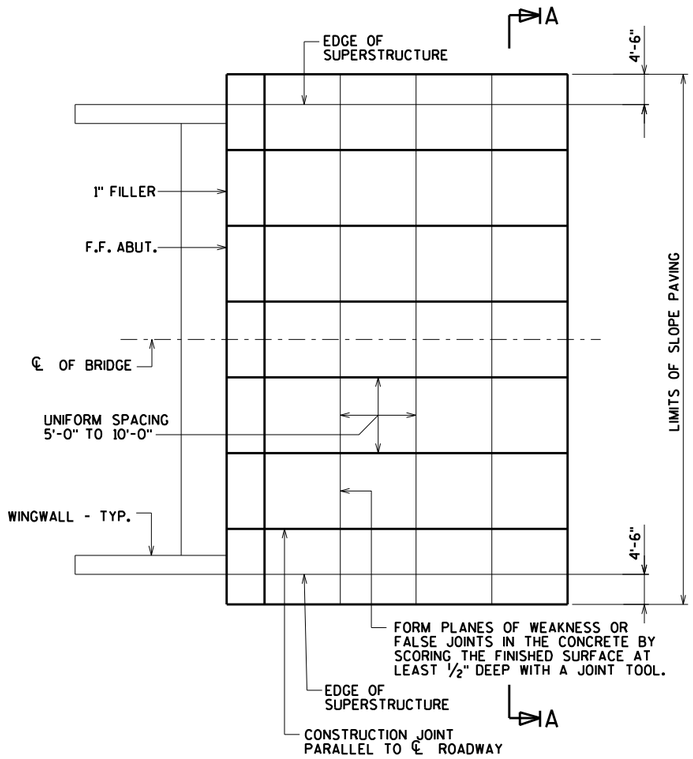
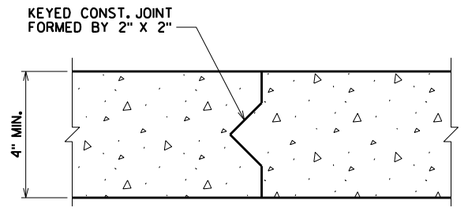
U:\41-0660.0X - IH-39 Dane Partners General Bridge Information\B-13-729 - 139_NB over USH 12&18 EB\bridge\B-13-729 slope pav.dgn



SECTION A-A



PLAN



CONSTRUCTION JOINT DETAIL

F.F. DENOTES FRONT FACE

NOTE

BID ITEM SHALL BE "SLOPE PAVING CONCRETE"

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-729

DRAWN BY CLS | PLANS CK'D. CBM

SLOPE PAVING CONCRETE

SHEET 31 OF 31
381

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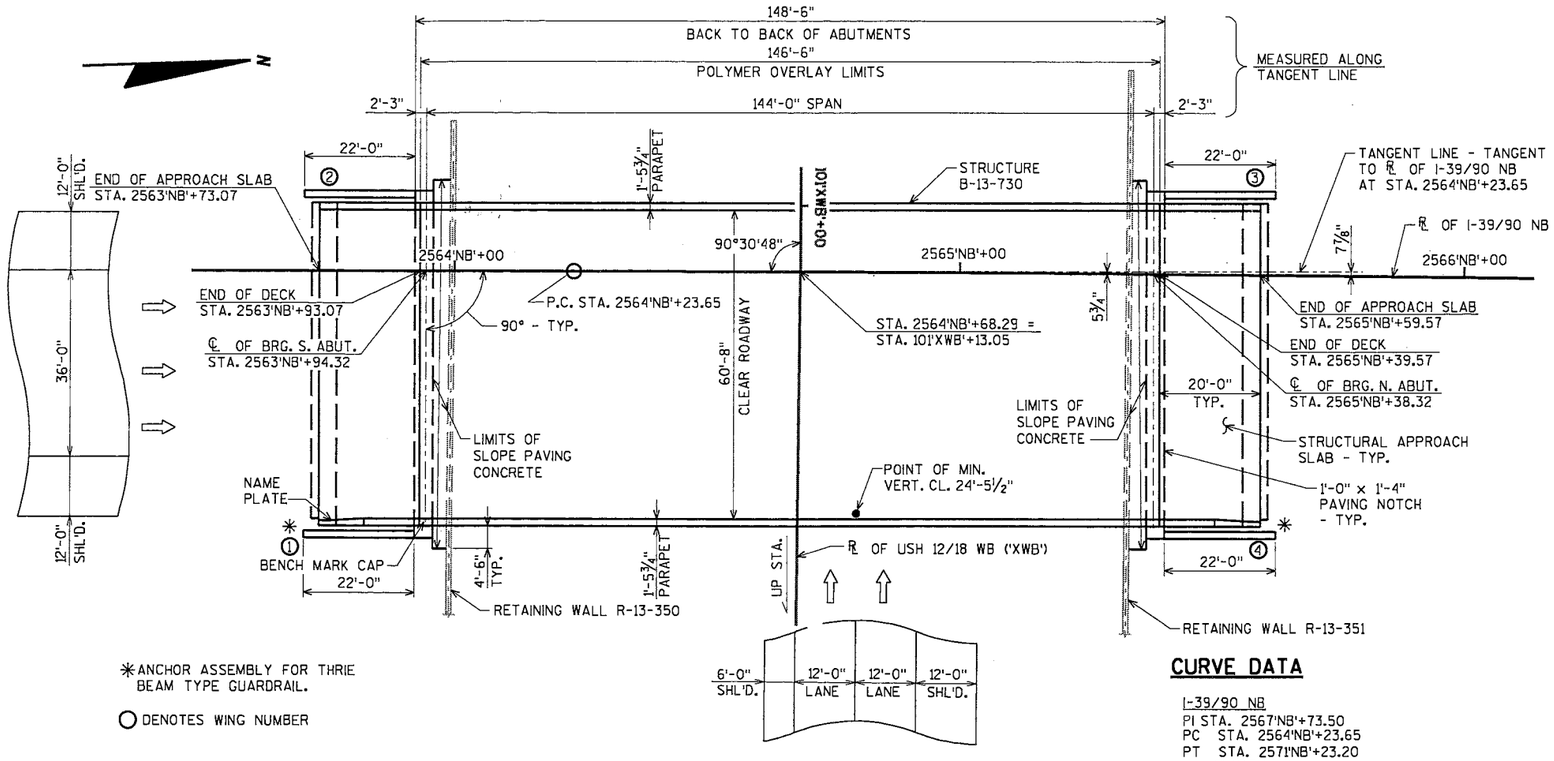
LI:±41-0660.0X - IH-39 Dane Partners General Bridge Information±B-13-730 - I39_NB over USH 12&18

STATE PROJECT NUMBER

1007-12-78



✳ANCHOR ASSEMBLY FOR THRIE BEAM TYPE GUARDRAIL.

○ DENOTES WING NUMBER

PLAN

SINGLE SPAN - 72W" PRESTRESSED CONCRETE GIRDER BRIDGE

CURVE DATA

I-39/90 NB
PI STA. 2567'NB'+73.50
PC STA. 2564'NB'+23.65
PT STA. 2571'NB'+23.20
△ = 2°49'58.77"
D = 0°24'17.91
R = 14,180.00'
T = 349.85'
L = 699.55'
S.E. = NORMAL CROWN

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HL-93
INVENTORY RATING FACTOR: 1.10
OPERATING RATING FACTOR: 2.12
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV) = 250 KIPS

STRUCTURE IS DESIGNED FOR A FUTURE WEARING SURFACE OF 20 #/S.F.

RATING BASED ON PLACEMENT OF 5 p.s.f. POLYMER OVERLAY UNDER THIS CONTRACT.

MATERIAL PROPERTIES:

CONCRETE MASONRY	SUPERSTRUCTURE (HPC DECK, PARAPET, DIAPHRAGM, APPROACH SLAB)	f'_c =	4,000 p.s.i.
	ALL OTHER (INCL. APPROACH SLAB FOOTING)	f'_c =	3,500 p.s.i.
HIGH STRENGTH BAR STEEL REINFORCEMENT (GRADE 60)		f_y =	60,000 p.s.i.
STRUCTURAL CARBON STEEL ASTM A709 (GRADE 36)		f_y =	36,000 p.s.i.
72W" PRESTRESSED GIRDER CONCRETE MASONRY		f'_c =	8,000 p.s.i.
STRANDS - 0.6" DIA. WITH ULTIMATE TENSILE STRENGTH OF			270,000 p.s.i.
STEEL PILING SHELLS ASTM A252 (GRADE 3)		f_y =	45,000 p.s.i.

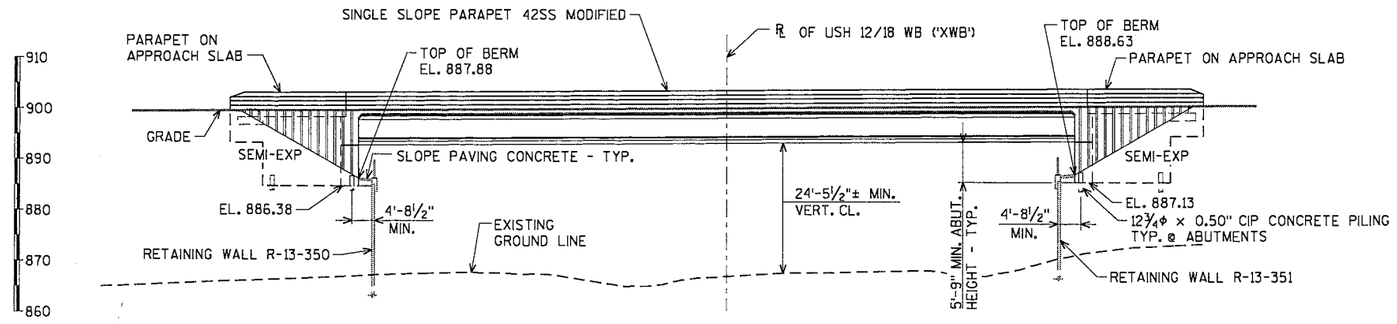
FOUNDATION DATA:

ABUTMENTS TO BE SUPPORTED ON 12¾" ϕ x 0.50" CIP CONCRETE PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 210 TONS ‡ PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED LENGTH 85'-0" AT SOUTH ABUTMENT. ESTIMATED LENGTH 100'-0" AT NORTH ABUTMENT.

‡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 DRIVEN PILE CAPACITY.

TRAFFIC DATA:

I-39/90 NB	USH 12/18 WB	USH 12/18 EB
A.A.D.T. = 60,400 (2020)	A.A.D.T. = 19,300 (2020)	A.A.D.T. = 46,300 (2020)
A.A.D.T. = 72,000 (2040)	A.A.D.T. = 24,400 (2040)	A.A.D.T. = 54,500 (2040)
R.D.S. = 70 M.P.H.	R.D.S. = 60 M.P.H.	R.D.S. = 60 M.P.H.



ELEVATION

(NORMAL TO ℄ OF USH 12/18 WB ('XWB'))

FOR TYPICAL SECTION SEE SHEET 2

LIST OF DRAWINGS

1. GENERAL PLAN
2. TYPICAL SECTION AND DETAILS
3. QUANTITIES AND GENERAL NOTES
4. TYPICAL SECTIONS AND PROFILES
5. SUBSURFACE EXPLORATION
6. SOUTH ABUTMENT
7. SOUTH ABUTMENT PILE LAYOUT
8. SOUTH ABUTMENT WING 1 DETAILS
9. SOUTH ABUTMENT WING 2 DETAILS
10. SOUTH ABUTMENT DETAILS
11. NORTH ABUTMENT
12. NORTH ABUTMENT PILE LAYOUT
13. NORTH ABUTMENT WING 3 DETAILS
14. NORTH ABUTMENT WING 4 DETAILS
15. NORTH ABUTMENT DETAILS
16. ABUTMENT RUSTICATION AND CONCRETE STAINING DETAILS
17. ALTERNATE CONSTRUCTION JOINT
18. 72W" PRESTRESSED GIRDER DETAILS
19. 72W" PRESTRESSED GIRDER DETAILS
20. STEEL DIAGHRAGM
21. SUPERSTRUCTURE
22. SUPERSTRUCTURE PLAN
23. SUPERSTRUCTURE DETAILS
24. SUPERSTRUCTURE CONDUIT DETAILS
25. SUPERSTRUCTURE CORNER DETAILS & BILL OF BARS
26. SOUTH STRUCTURAL APPROACH SLAB
27. NORTH STRUCTURAL APPROACH SLAB
28. STRUCTURAL APPROACH SLAB DETAILS
29. SINGLE SLOPE PARAPET 42SS MODIFIED
30. SINGLE SLOPE PARAPET 42SS MODIFIED
31. SLOPE PAVING CONCRETE

WISCONSIN
CHRISTOPHER B. McMAHON
E-29454
EAU CLAIRE
PROFESSIONAL ENGINEER
8/27/19

BRIDGE OFFICE CONTACT:
WILLIAM DREHER
(608)-266-8489

CONSULTANT CONTACT:
CHRIS MCMAHON
(715)-834-3161

NO.	DATE	REVISION	BY

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AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher SDR 08/29/19
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE B-13-730

I-39/90 NB OVER USH 12/18 WB

COUNTY	TOWN/~~CITY/VILLAGE~~
DANE	BLOOMING GROVE

DESIGN SPEC. AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
JLB	AEB	JLB/CLS	CBM

GENERAL PLAN

SHT 382 31

DATE:
CHECKED BY:
BACK CHECKED BY:
CORRECTED BY:

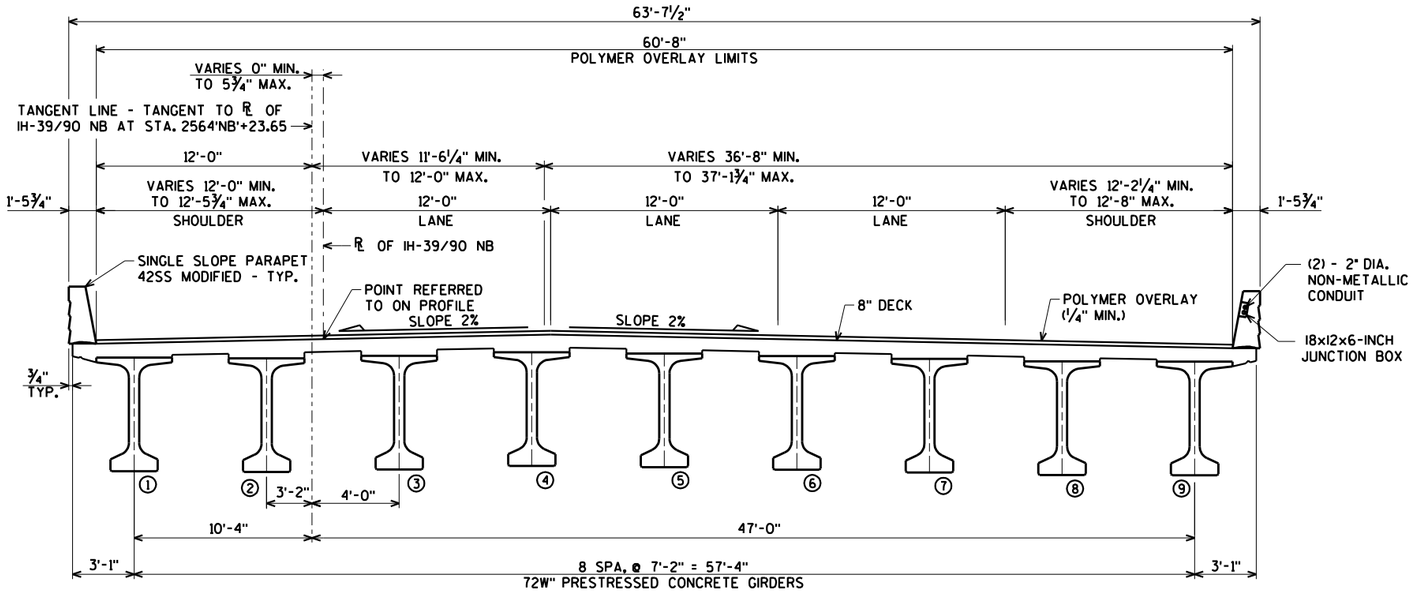
8

8

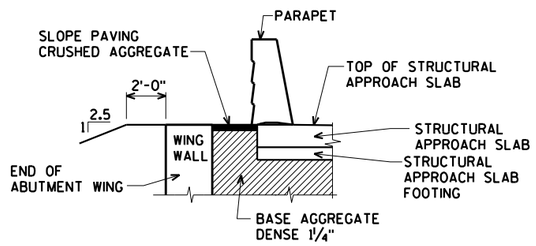
8/19/2019

PENTABLE:BRegu_shd_util.tbl

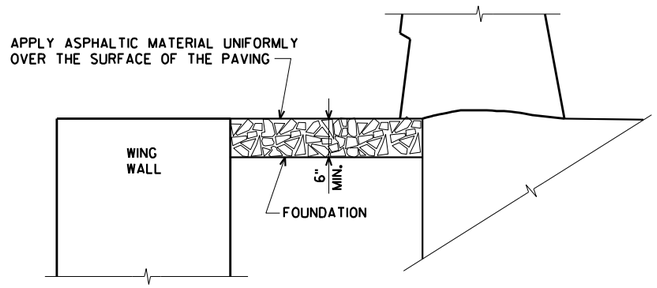
I.D.



TYPICAL SECTION THRU BRIDGE
(LOOKING NORTH)



TYPICAL FILL SECTION AT WING TIPS



SLOPE PAVING CRUSHED AGGREGATE DETAIL
ROUND STONE WILL NOT BE ACCEPTED

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

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-730

DRAWN BY JLB/CLS | PLANS CK'D. CBM

TYPICAL SECTION AND DETAILS

SHEET 2 OF 31
383

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U:\41-0660.0X - IH-39 Dane Partners General Bridge Information\B-13-730 - I39_NB over USH 12&18 WB\bridge\B-13-730 ty gn.dgn

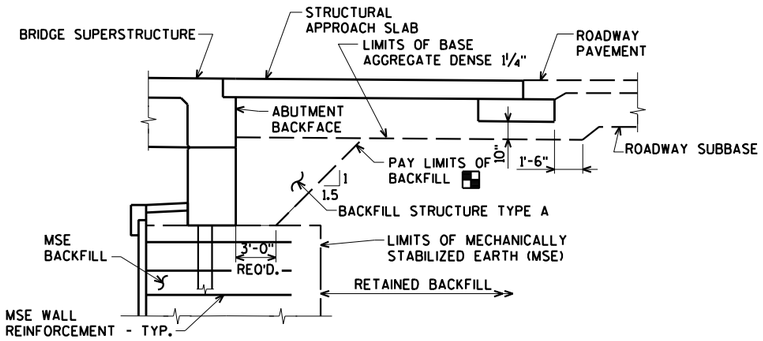
$PRFNAME$
U:\41-0660.0X - IH-39 Dane Partners General Bridge Information\B-13-730 - I39_NB over USH 12&18 WB\bridge\B-13-730 ty gn.dgn

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	S. STR. APR. SLAB	S. ABUT.	N. ABUT.	N. STR. APR. SLAB	SUPER.	TOTAL
210.1500	BACKFILL STRUCTURE TYPE A	TON	-----	490	490	-----	-----	980
305.0120	BASE AGGREGATE DENSE 1¼-INCH	TON	250	-----	-----	250	-----	500
501.1000.S	ICE HOT WEATHER CONCRETING	LB	655	700	705	655	3,430	6,145
502.0100	CONCRETE MASONRY BRIDGES	CY	18	93	94	18	-----	223
502.3200	PROTECTIVE SURFACE TREATMENT	SY	155	-----	-----	155	-----	310
502.3210	PIGMENTED SURFACE SEALER	SY	20	-----	-----	20	150	190
503.0172	PRESTRESSED GIRDER TYPE I 72W-INCH	LF	-----	-----	-----	-----	1,305	1,305
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	-----	5,840	5,840	-----	-----	11,680
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	14,370	4,380	4,390	14,370	62,830	100,340
505.0800.S	BAR STEEL REINFORCEMENT HS STAINLESS STRUCTURES	LB	1,090	-----	-----	1,090	-----	2,180
506.2605	BEARING PADS ELASTOMERIC NON-LAMINATED	EACH	-----	9	9	-----	-----	18
506.4000.701	STEEL DIAPHRAGMS B-13-730	EACH	-----	-----	-----	-----	16	16
509.5100.S	POLYMER OVERLAY	SY	-----	-----	-----	-----	990	990
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	-----	20	20	-----	-----	40
517.1010.S.701	CONCRETE STAINING B-13-730	SF	140	705	705	140	3,935	5,625
604.0400	SLOPE PAVING CONCRETE	SY	-----	25	25	-----	-----	50
604.0500	SLOPE PAVING CRUSHED AGGREGATE	SY	5	-----	-----	5	-----	10
614.0150	ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	1	-----	-----	1	-----	2
652.0125	CONDUIT RIGID METALLIC 2-INCH	LF	6	-----	-----	6	13	25
652.0225	CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH	LF	65	-----	-----	65	280	410
653.0222	JUNCTION BOXES 18 X 12 X 6-INCH	EACH	-----	-----	-----	-----	2	2
SPV.0035.700	HIGH PERFORMANCE CONCRETE (HPC) MASONRY STRUCTURES	CY	69	-----	-----	69	457	595
SPV.0090.700	PILING CIP 12¾ X 0.50-INCH	LF	-----	1,700	2,000	-----	-----	3,700
SPV.0165.700	LONGITUDINAL GROOVING BRIDGE DECK	SF	1,215	-----	-----	1,215	-----	2,430
	NON-BID ITEMS	SIZE	-----	-----	-----	-----	-----	½" & ¾"
	FILLER							

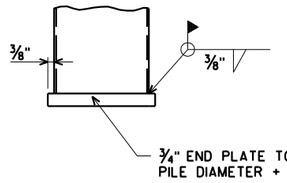
◈ HIGH PERFORMANCE CONCRETE (HPC) MASONRY STRUCTURES SHALL INCLUDE ALL SUPERSTRUCTURE CONCRETE AND ALL STRUCTURAL APPROACH SLAB CONCRETE, EXCEPT THE STRUCTURAL APPROACH SLAB FOOTING CONCRETE.

● PILING TO BE ASTM A252 (GRADE 3) WITH A f_y = 45,000 p.s.i.

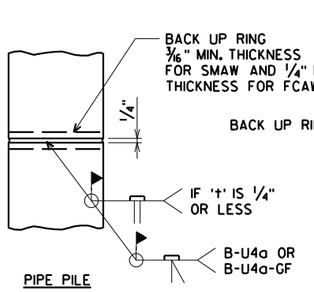


BACKFILL STRUCTURE LIMITS

■ BACKFILL PAY LIMITS. BACKFILL BEYOND BACKFILL PAY LIMITS SHALL BE INCLUDED WITH BACKFILL STRUCTURE TYPE A. LIMITS OF EXCAVATION SHALL BE DETERMINED BY THE CONTRACTOR.

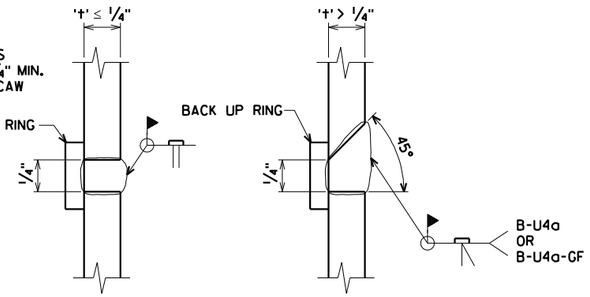


END PLATE DETAIL FOR CIP PILING



PILE SPLICE DETAIL

CAST-IN-PLACE PILE SHELL MATERIAL SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.



CIP PILE WELD DETAIL

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

THE FIRST DIGIT OF A THREE DIGIT BAR NO. OR THE FIRST TWO DIGITS OF A FOUR DIGIT BAR NO. SIGNIFIES THE BAR SIZE.

JOINT FILLER SHALL CONFORM TO THE REQUIREMENTS OF A.A.S.H.T.O. DESIGNATION M 153, TYPE I, II, OR III OR A.A.S.H.T.O. DESIGNATION M 213.

AT THE BACKFACE OF ABUTMENTS ALL VOLUME WHICH CANNOT BE PLACED BEFORE ABUTMENT CONSTRUCTION AND IS NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH BACKFILL STRUCTURE TYPE A.

THE BACKFILL QUANTITIES ARE BASED ON THE PAY LIMITS SHOWN ON THE PLANS AND MAY NOT REFLECT ACTUAL PLACED QUANTITIES. "BACKFILL STRUCTURE TYPE A" REQUIRED DIRECTLY BEHIND ABUTMENTS AND ABUTMENT WINGS FOR 3 FEET. BACKFILL PLACED BEYOND PAY LIMITS OR EXCEEDING PLAN QUANTITIES SHALL BE INCIDENTAL TO BACKFILL STRUCTURE TYPE A

EXCAVATION BELOW THE ABUTMENT AND ABUTMENT BEDDING MATERIALS REQUIRES ENGINEER APPROVAL.

THE HAUNCH CONCRETE QUANTITY IS BASED ON THE AVERAGE HAUNCH SHOWN ON THE PRESTRESSED GIRDER DETAILS SHEET.

BEVEL EXPOSED EDGES OF CONCRETE ¾" UNLESS OTHERWISE NOTED.

POLYMER OVERLAY AND PIGMENTED SURFACE SEALER IS TO BE APPLIED AS SHOWN IN DETAIL ON THIS SHEET.

ELASTOMERIC BEARING PADS NEED NOT BE INDIVIDUALLY MOLDED PROVIDED THE CUT EDGES ARE SMOOTH AND TRUE.

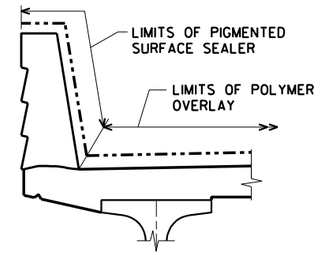
THE RUSTICATIONS IN THE ABUTMENTS ARE INCLUDED IN THE BID ITEM "CONCRETE MASONRY BRIDGES".

THE RUSTICATIONS AT THE BACK FACE OF THE PARAPETS ARE INCLUDED IN THE BID ITEM "HIGH PERFORMANCE CONCRETE (HPC) MASONRY STRUCTURES"

THE SLOPE OF THE FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH SLOPE PAVING MATERIAL TO THE EXTENT SHOWN ON THE GENERAL PLAN SHEET AND IN THE ABUTMENT DETAILS.

DECK SURFACE PREPARATION IS INCLUDED IN THE BID ITEM "POLYMER OVERLAY".

PROTECTIVE SURFACE TREATMENT TO BE APPLIED ONLY TO THE STRUCTURAL APPROACH SLABS AND THE PAVING NOTCHES.



POLYMER OVERLAY AND PIGMENTED SURFACE SEALER DETAILS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-730

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QUANTITIES AND GENERAL NOTES

SHEET 3 OF 31
384

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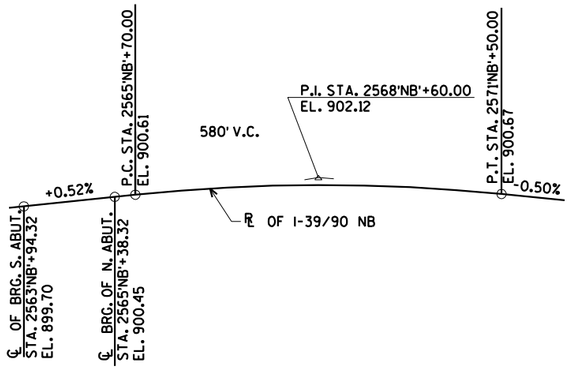
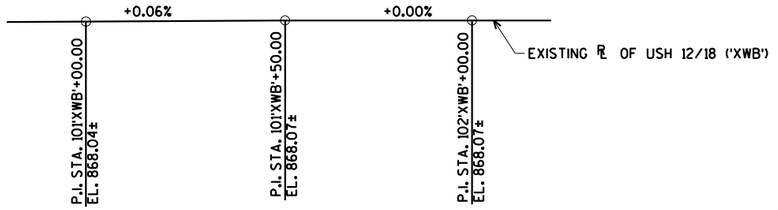
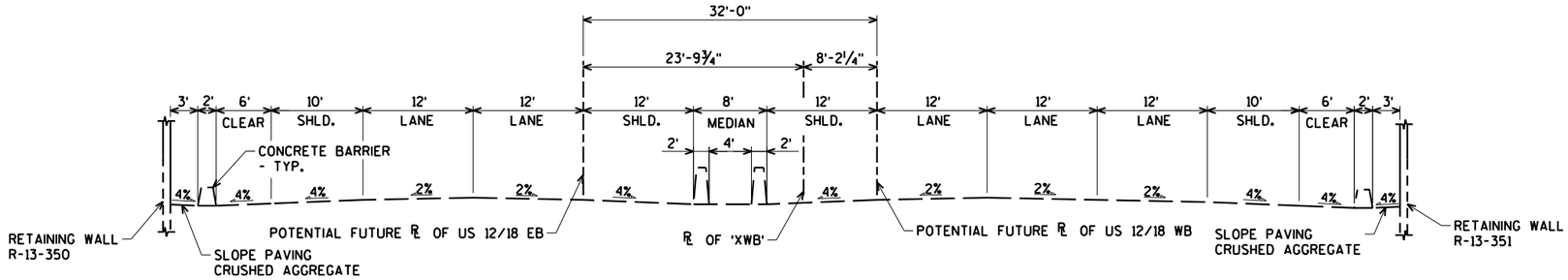


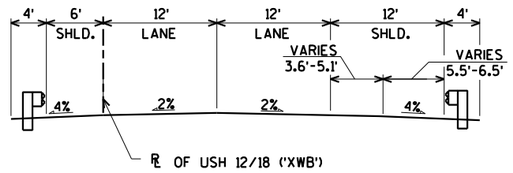
PROFILE GRADE LINE
(℄ OF I-39/90 NB)



PROFILE GRADE LINE
(℄ OF USH 12/18 ('XWB'))



POTENTIAL FUTURE TYPICAL FINISHED SECTION USH 12/18 EB/WB
(LOOKING WEST)



TYPICAL EXISTING SECTION USH 12/18 WB
(LOOKING WEST)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-730

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TYPICAL SECTIONS AND PROFILES

SHEET 4 OF 31
385

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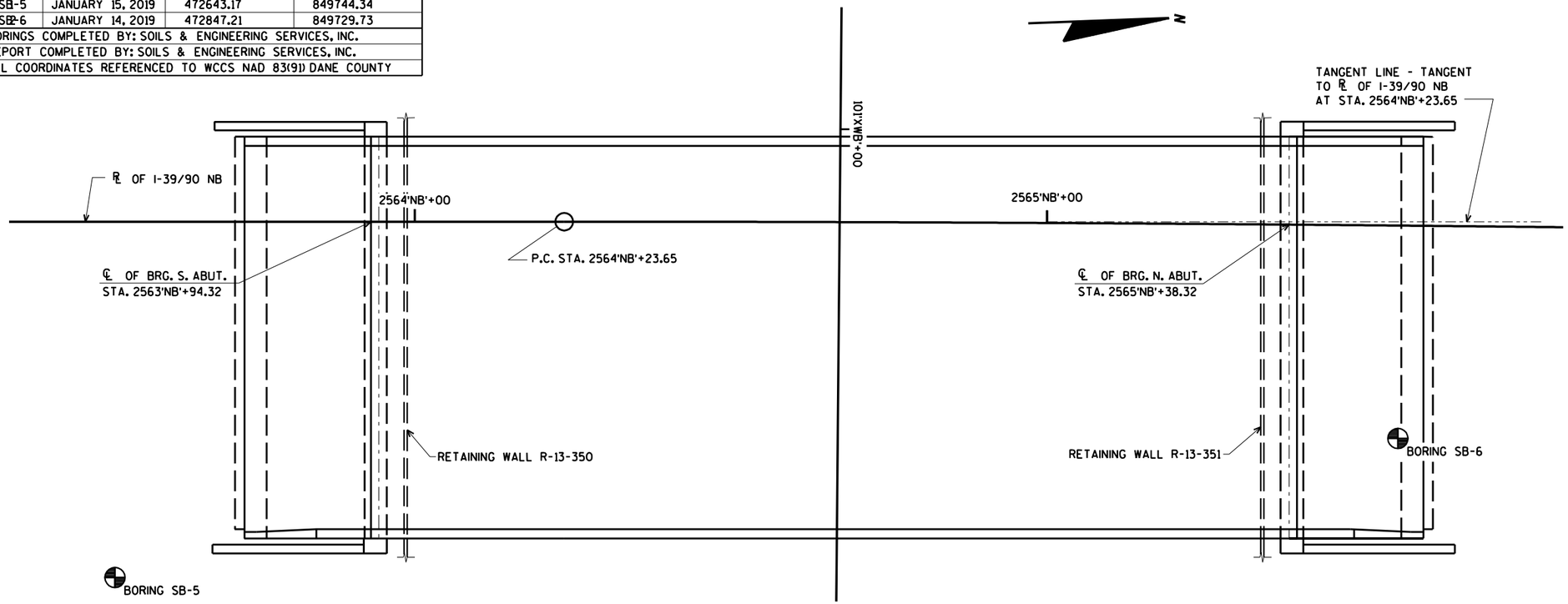
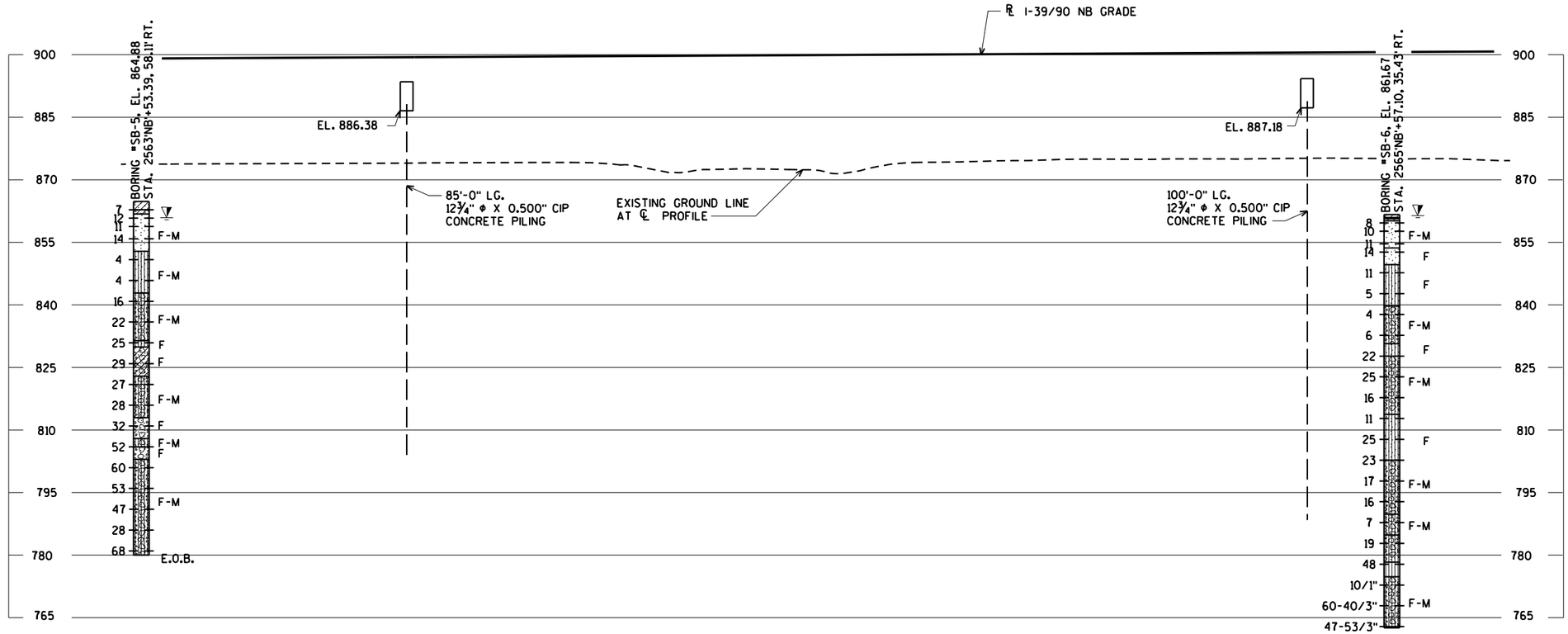
U:\41-0660.0X - IH-39 Dane Partners General Bridge Information\B-13-730 - I39_NB over USH 12&18 WB\bridge\B-13-730 ty gn.dgn

$PRFNAME$
U:\41-0660.0X - IH-39 Dane Partners General Bridge Information\B-13-730 - I39_NB over USH 12&18 WB\Bridge\B-13-730 soils.dgn

BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
SB-5	JANUARY 15, 2019	472643.17	849744.34
SB-6	JANUARY 14, 2019	472847.21	849729.73

BORINGS COMPLETED BY: SOILS & ENGINEERING SERVICES, INC.
REPORT COMPLETED BY: SOILS & ENGINEERING SERVICES, INC.
ALL COORDINATES REFERENCED TO WCCS NAD 83(91) DANE COUNTY





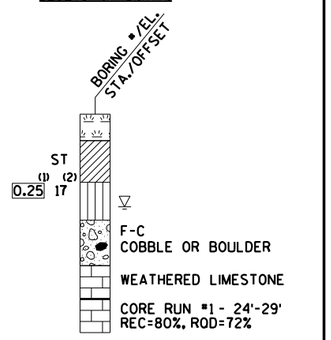
STATE PROJECT NUMBER

1007-12-78

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-13-730

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SUBSURFACE EXPLORATION

SHEET 5 OF 31
386

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8

8/20/2019

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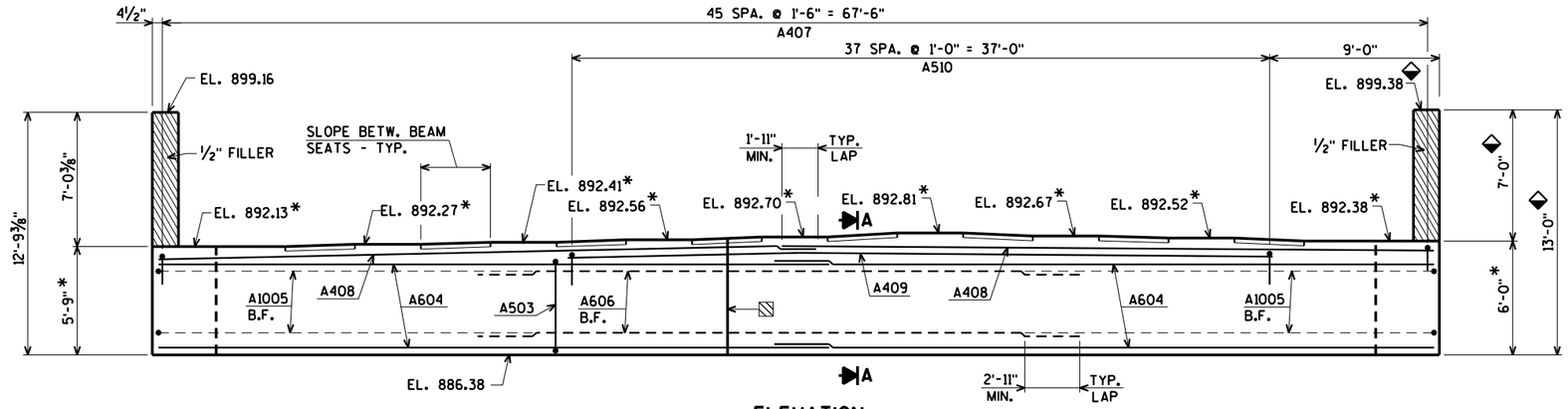
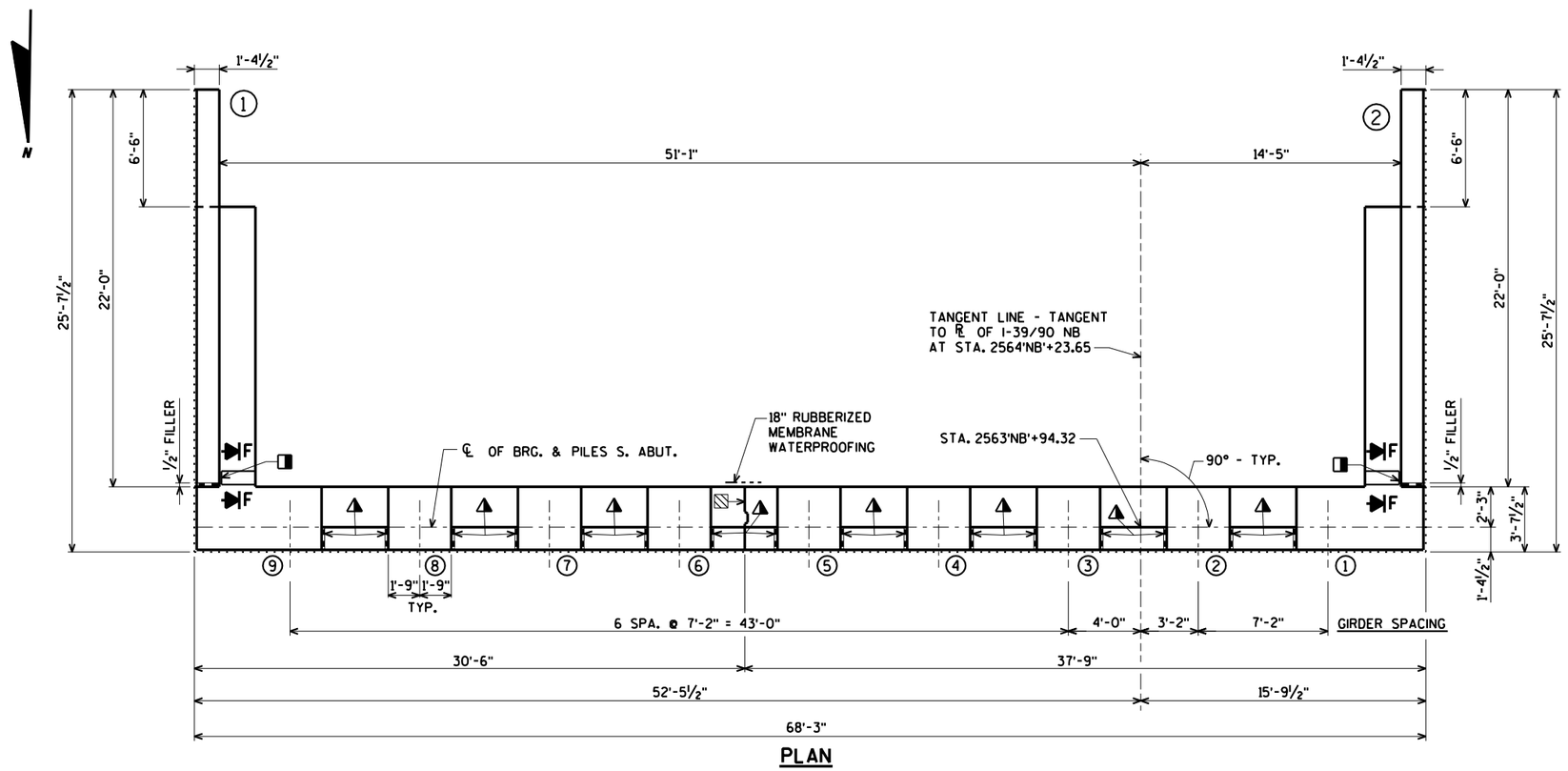
NOTE: SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE.)

STATE PROJECT NUMBER

1007-12-78



ELEVATION
(LOOKING SOUTH)
FOR SECTION A SEE SHEET 10



PLAN

*ELEVATIONS AND DIMENSIONS TAKEN AT ℄ OF BRG. & PILES S. ABUT.

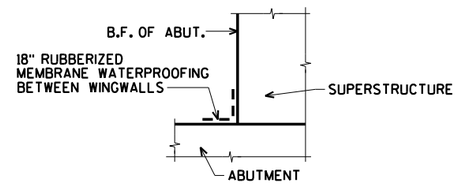
◆ TOP OF ABUTMENT DIAPHRAGM SLOPES DOWN FROM EDGE OF DECK TO THE WING. SEE SHEET 23 FOR DETAILS.

▨ VERT. CONST. JT. - KEYWAY FORMED BY A SURFACED BEVELED 2" x 8". BEVEL EXPOSED EDGES ¾". FOR ALTERNATE CONST. JT. DETAILS SEE SHEET 17

▮ 18" RUBBERIZED MEMBRANE WATERPROOFING FROM BRIDGE SEAT TO TOP OF WING.

◭ ¾" CORK FILLER ON VERTICAL BEAM SEAT FACES THAT RUN PARALLEL WITH GIRDER.

B.F. DENOTES BACK FACE



SECTION F

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-730

DRAWN BY CLS | PLANS CK'D. CBM

SOUTH ABUTMENT

SHEET 6 OF 31
387

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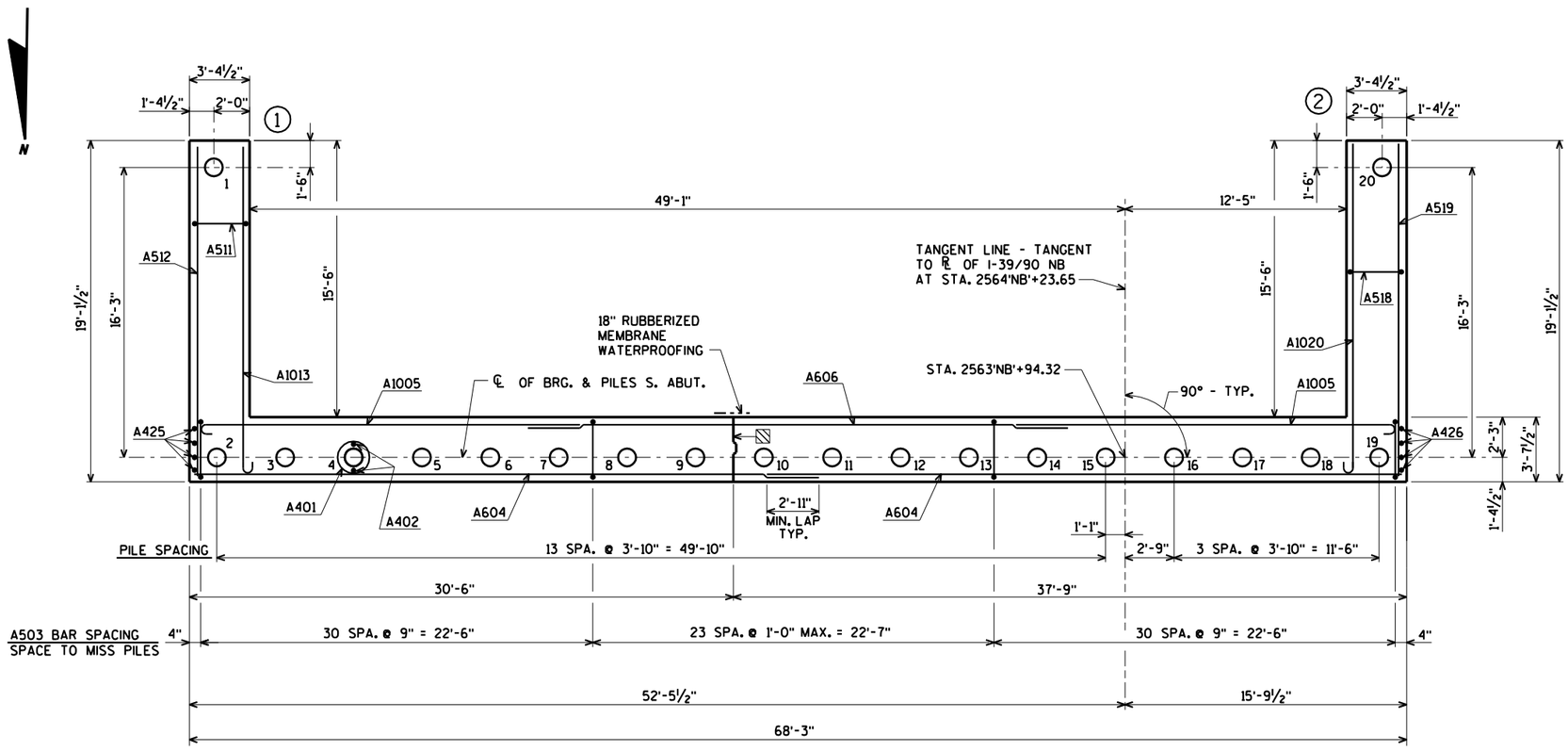
U:±41-0660.0X - IH-39 Dane Partners General Bridge Information±B-13-730 - 139_NB over USH 12&18 WB±bridge±B-13-730 sa.dgn

STATE PROJECT NUMBER
1007-12-78



PILE LAYOUT

NOTE:
DRIVE PILING BEFORE CONSTRUCTING RETAINING WALL R-13-350

▨ VERT. CONST. JT. - KEYWAY FORMED BY A SURFACED BEVELED 2" x 8". BEVEL EXPOSED EDGES ¾". FOR ALTERNATE CONST. JT. DETAILS SEE SHEET 17.

FOR PILE SPLICE DETAIL SEE SHEET 3.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-730

DRAWN BY CLS | PLANS CK'D. CBM

SOUTH ABUTMENT PILE LAYOUT

SHEET 7 OF 31
388

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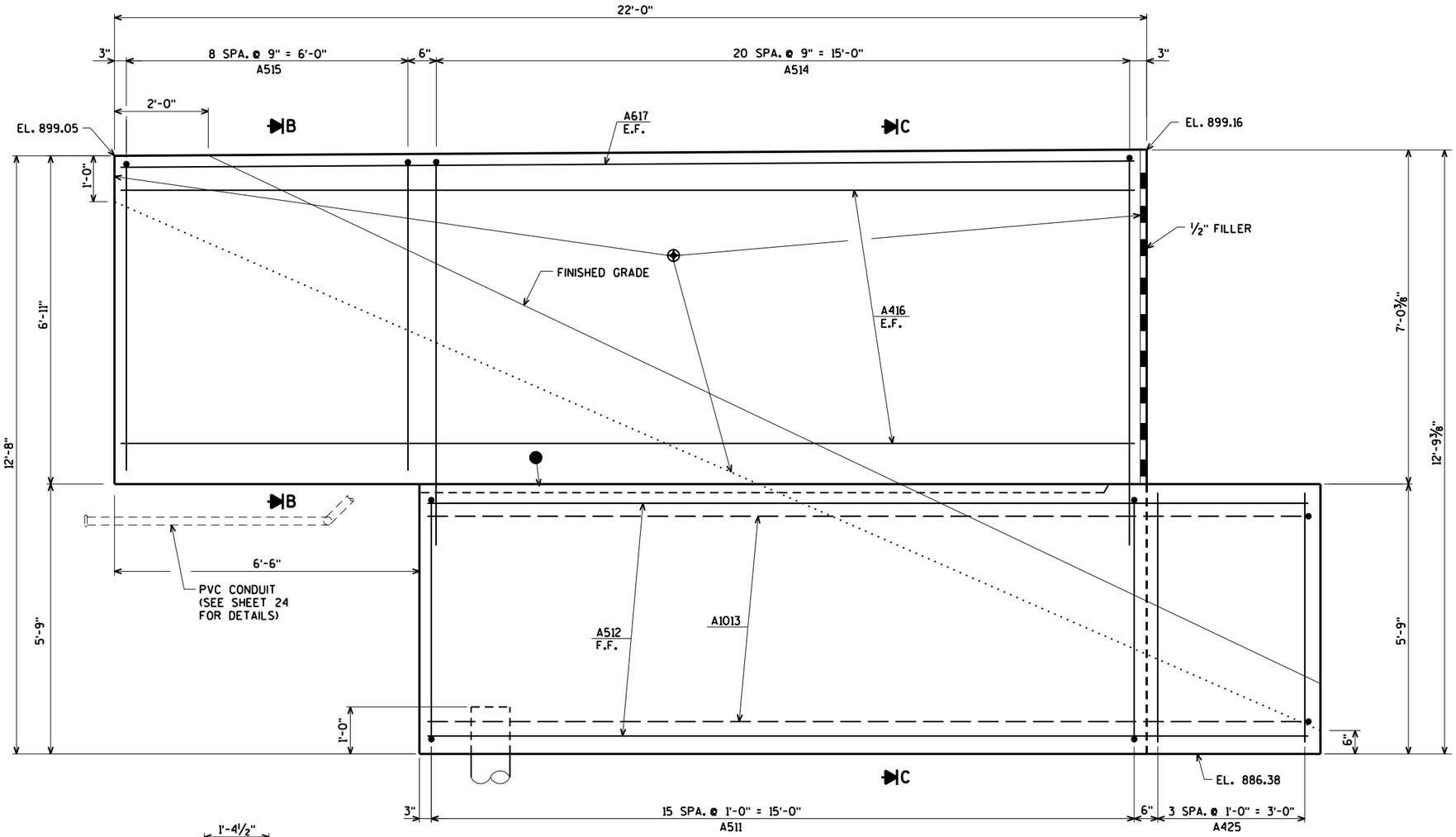
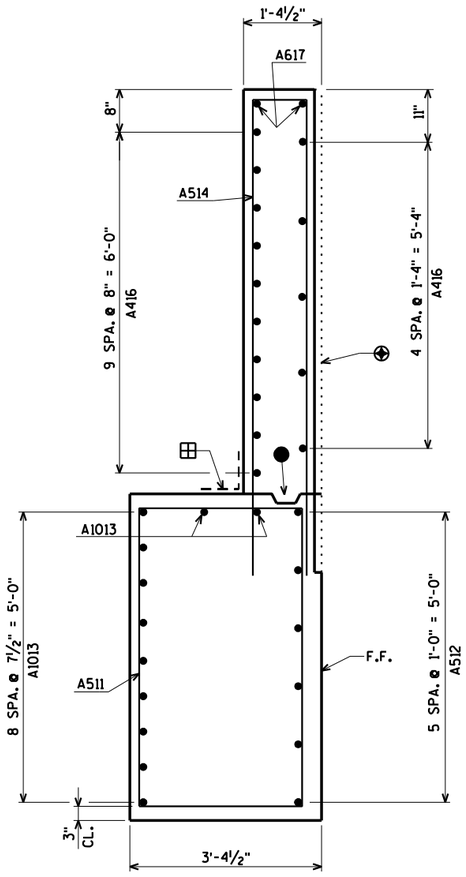
STATE PROJECT NUMBER

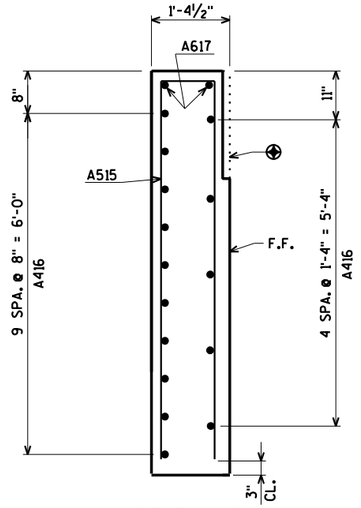
1007-12-78



ELEVATION - WING 1



SECTION C



SECTION B

FOR PILE SPLICE DETAIL SEE SHEET 3.

⊕ LIMITS OF RUSTICATIONS.
FOR DETAILS SEE SHEET 16

● OPT. CONST. JOINT FORMED
BY A BEVELED 2" x 6" KEYWAY.

⊞ 18" RUBBERIZED MEMBRANE WATERPROOFING
SEAL ALL HORIZONTAL AND VERTICAL JOINTS
ON BACKFACE OF ABUTMENT.

F.F. DENOTES FRONT FACE

E.F. DENOTES EACH FACE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-730

DRAWN BY CLS | PLANS CK'D. CBM

SOUTH ABUTMENT
WING 1 DETAILS

SHEET 8 OF 31
389

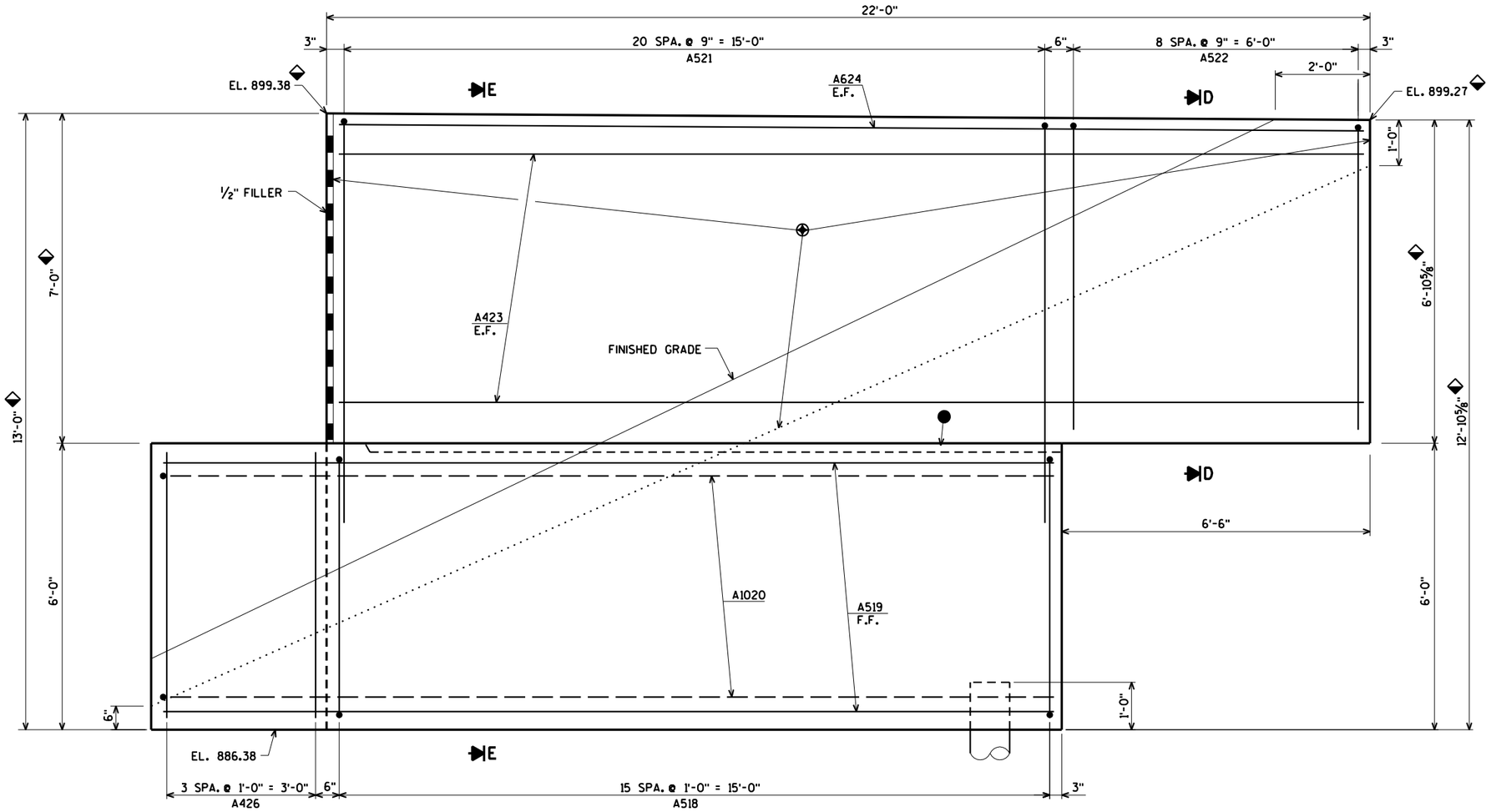
ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

8

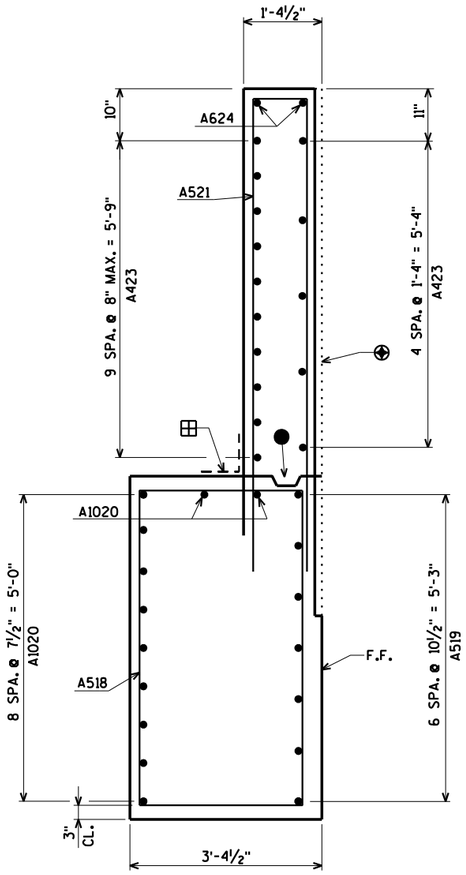
8

STATE PROJECT NUMBER

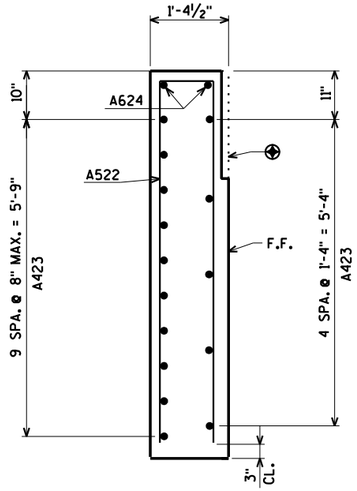
1007-12-78



ELEVATION - WING 2



SECTION E



SECTION D

FOR PILE SPLICE DETAIL SEE SHEET 3.

⊕ LIMITS OF RUSTICATIONS. FOR DETAILS SEE SHEET 16

● OPT. CONST. JOINT FORMED BY A BEVELED 2" x 6" KEYWAY.

⊞ 18" RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE OF ABUTMENT.

◆ TOP OF ABUTMENT DIAPHRAGM SLOPES DOWN FROM EDGE OF DECK TO THE WING. SEE SHEET 23 FOR DETAILS.

F.F. DENOTES FRONT FACE

E.F. DENOTES EACH FACE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-730

DRAWN BY CLS | PLANS CK'D. CBM

SOUTH ABUTMENT WING 2 DETAILS

SHEET 9 OF 31
390

ORIGINAL PLANS PREPARED BY
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3433 Oakwood Hills Parkway
Eau Claire, WI 54701
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7/25/2019
PENTABLE:BRdau_shd_util.tbl

U:±41-0660.0X - IH-39 Dane Partners General Bridge Information±B-13-730 - 139_NB over USH 12&18 WB±bridge±B-13-730 sa.dgn

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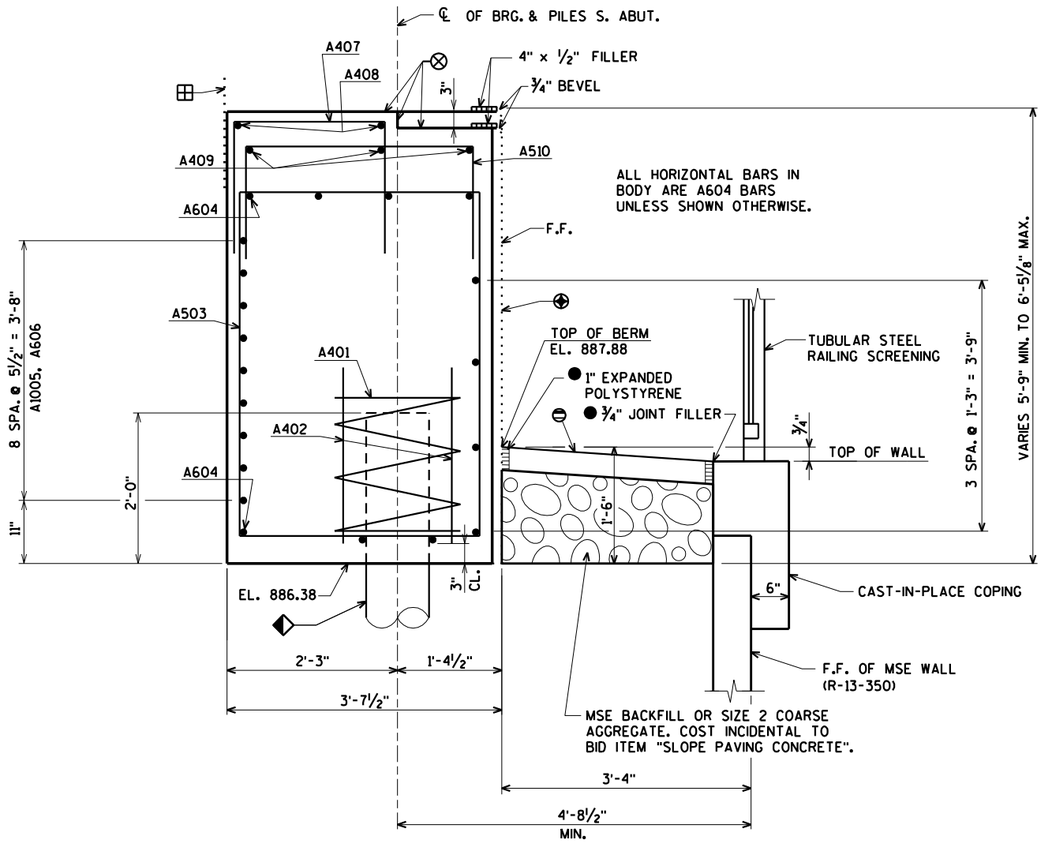
STATE PROJECT NUMBER

1007-12-78



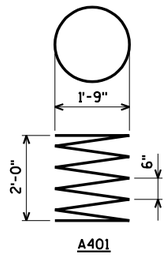
SECTION A

NOTE:
DRIVE PILING BEFORE CONSTRUCTING RETAINING WALL R-13-350

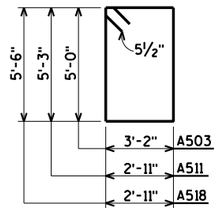
BILL OF BARS

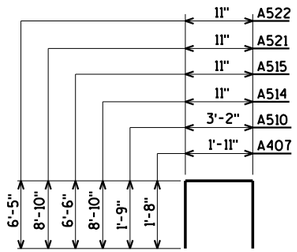
BAR NO.	COATED BAR	NO. REQ'D.	LENGTH	BENT BAR	BUNDLED BAR SERIES	4,380# COATED 5,840# UNCOATED — LOCATION
A401		18	28-0	X		BODY @ PILES
A402		36	2-3			BODY @ PILES
A503		84	16-11	X		BODY VERT.
A604		22	35-5			BODY HORIZ.
A1005		18	23-5	X		BODY HORIZ. B.F. @ WINGS
A606		9	29-9			BODY HORIZ. B.F.
A407		46	5-1	X		BODY VERT.
A408		4	34-11			BODY HORIZ.
A409		3	37-6			BODY HORIZ.
A510		38	6-5	X		BODY VERT.
A511	X	16	16-11	X		WING 1 VERT.
A512	X	6	18-8			WING 1 HORIZ. F.F.
A1013	X	11	20-1	X		WING 1 HORIZ.
A514	X	21	18-4	X		WING 1 VERT.
A515	X	9	13-8	X		WING 1 VERT.
A416	X	15	21-8			WING 1 HORIZ. E.F.
A617	X	2	21-8			WING 1 HORIZ. TOP E.F.
A518	X	16	17-5	X		WING 2 VERT.
A519	X	7	18-8			WING 2 HORIZ. F.F.
A1020	X	11	20-1	X		WING 2 HORIZ.
A521	X	21	18-4	X		WING 2 VERT.
A522	X	9	13-6	X		WING 2 VERT.
A423	X	15	21-8			WING 2 HORIZ. E.F.
A624	X	2	21-8			WING 2 HORIZ. TOP E.F.
A425	X	4	5-4			BODY VERT. END @ WING 1
A426	X	4	5-7			BODY VERT. END @ WING 2

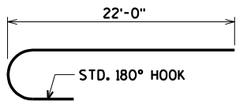
BENDING DIMENSIONS ARE OUT TO OUT OF BARS.



A401







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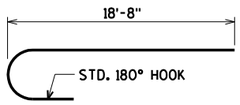

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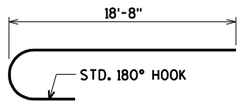

A1020

⊕ LIMITS OF RUSTICATIONS. FOR DETAILS SEE SHEET 16

⊞ 18" RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE OF ABUTMENT.

FOR PILE SPLICE DETAIL SEE SHEET 3

F.F. DENOTES FRONT FACE

B.F. DENOTES BACK FACE

E.F. DENOTES EACH FACE

⊖ 4" SLOPE PAVING CONCRETE

● SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF FILLER AND EXPANDED POLYSYRENE WITH NON-STAINING GREY NON-BITUMINOUS JOINT SEALER (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE).

◆ ABUTMENT TO BE SUPPORTED ON 12¾" ϕ x 0.50" CIP CONCRETE PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 210 TONS PER PILE. ESTIMATED LENGTH 85'-0".

FOR LOCATION OF SECTION A SEE SHEET 6

⊗ STEEL TROWEL TOP SURFACE OF ABUTMENT. PLACE MULTIPLE LAYERS OF POLYETHYLENE SHEETS OVER ENTIRE ABUTMENT TOP BEFORE PLACING BEARING AND/OR SUPERSTRUCTURE. TOTAL THICKNESS OF SHEETS SHALL BE AT LEAST 0.03".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-730

DRAWN BY CLS | PLANS CK'D. CBM

SOUTH ABUTMENT DETAILS

SHEET 10 OF 31
391

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
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www.AyresAssociates.com

8/20/2019
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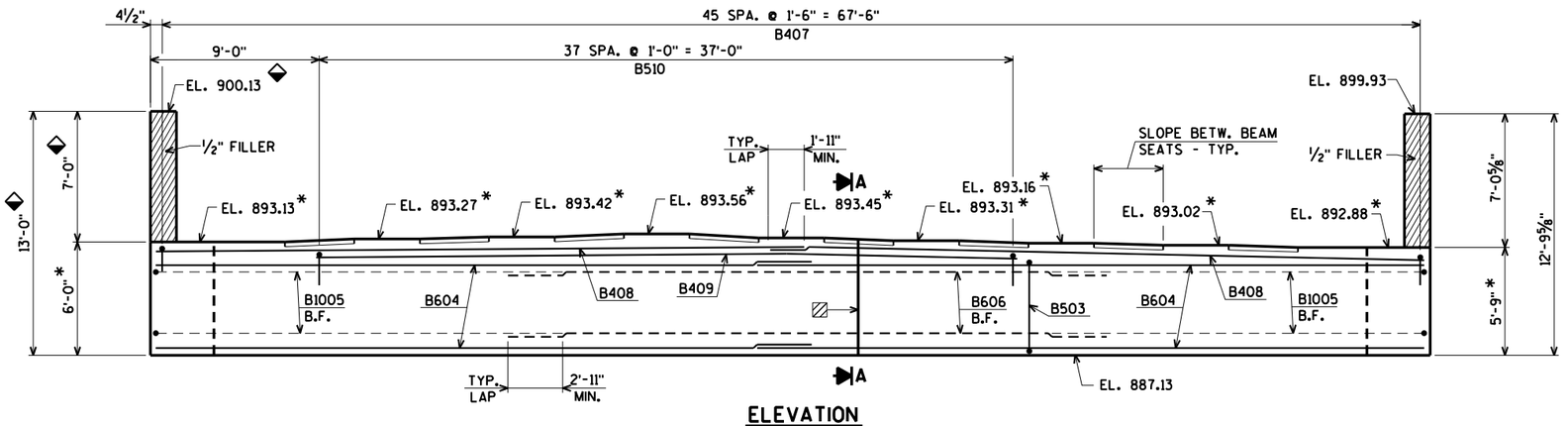
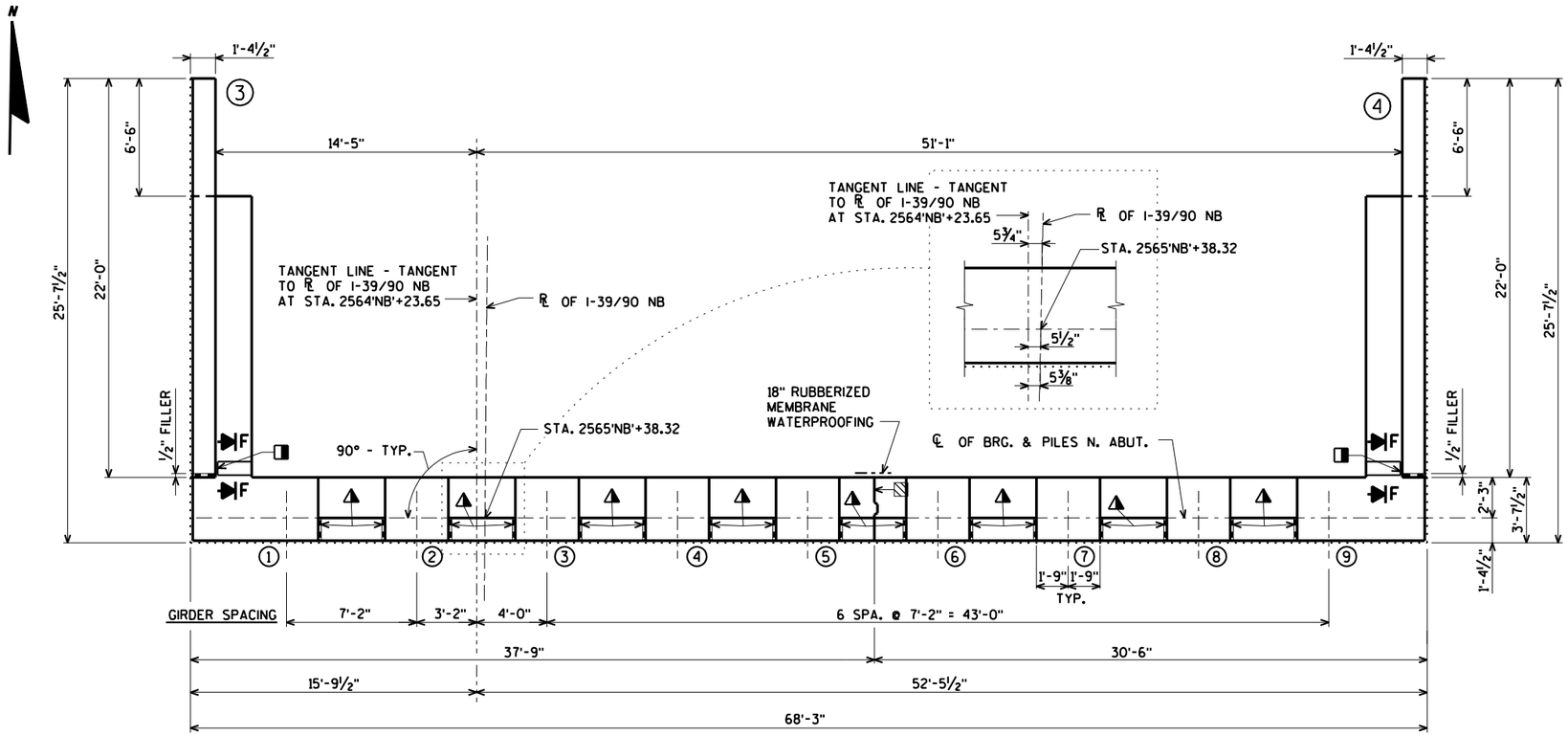
NOTE: SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE.)

STATE PROJECT NUMBER

1007-12-78



ELEVATION
(LOOKING NORTH)
FOR SECTION A SEE SHEET 15



PLAN

*ELEVATIONS AND DIMENSIONS TAKEN AT ℄ OF BRG. & PILES N. ABUT.

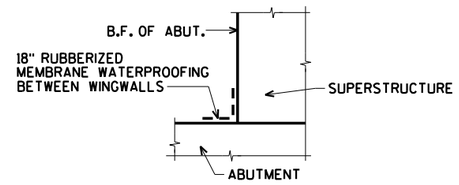
◆ TOP OF ABUTMENT DIAPHRAGM SLOPES DOWN FROM EDGE OF DECK TO THE WING. SEE SHEET 23 FOR DETAILS.

▨ VERT. CONST. JT. - KEYWAY FORMED BY A SURFACED BEVELED 2" x 8". BEVEL EXPOSED EDGES ¾". FOR ALTERNATE CONST. JT. DETAILS SEE SHEET 17

◨ 18" RUBBERIZED MEMBRANE WATERPROOFING FROM BRIDGE SEAT TO TOP OF WING.

◭ ¾" CORK FILLER ON VERTICAL BEAM SEAT FACES THAT RUN PARALLEL WITH GIRDER.

B.F. DENOTES BACK FACE



SECTION F

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-730

DRAWN BY CLS | PLANS CK'D. CBM

NORTH ABUTMENT

SHEET 11 OF 31
392

ORIGINAL PLANS PREPARED BY
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PENTABLE:BRequ_shd_util.tbl

U:±41-0660.0X - IH-39 Dane Partners General Bridge Information±B-13-730 - I39_NB over USH 12&18 WB±bridge±B-13-730 na.dgn

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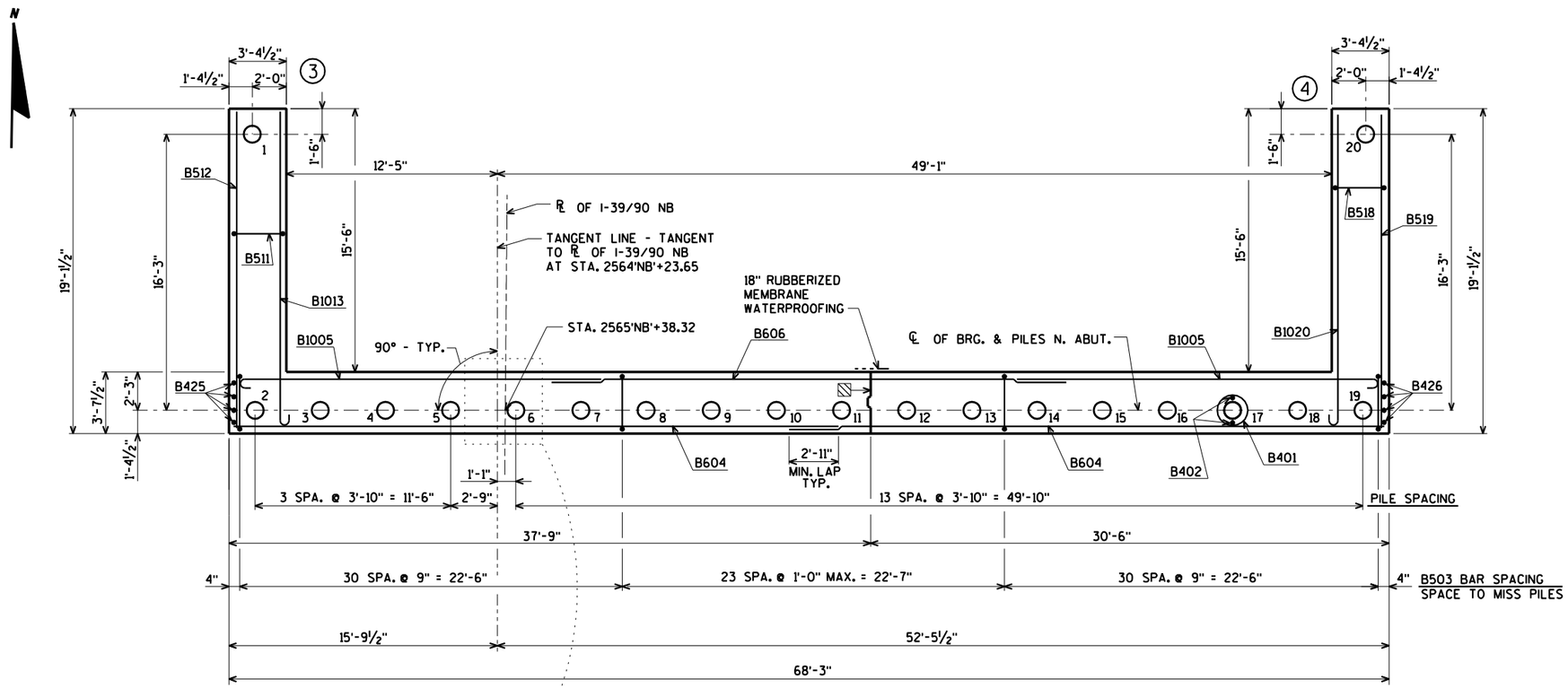
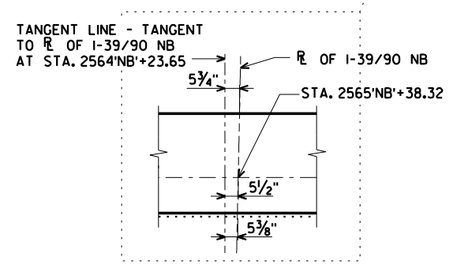
STATE PROJECT NUMBER

1007-12-78



PILE LAYOUT



NOTE:
DRIVE PILING BEFORE CONSTRUCTING
RETAINING WALL R-13-351

▨ VERT. CONST. JT. - KEYWAY FORMED BY A SURFACED BEVELED 2" x 8". BEVEL EXPOSED EDGES ¾". FOR ALTERNATE CONST. JT. DETAILS SEE SHEET 17.

FOR PILE SPLICE DETAIL SEE SHEET 3.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-730

DRAWN BY CLS | PLANS CK'D. CBM

NORTH ABUTMENT
PILE LAYOUT

SHEET 12 OF 31
393

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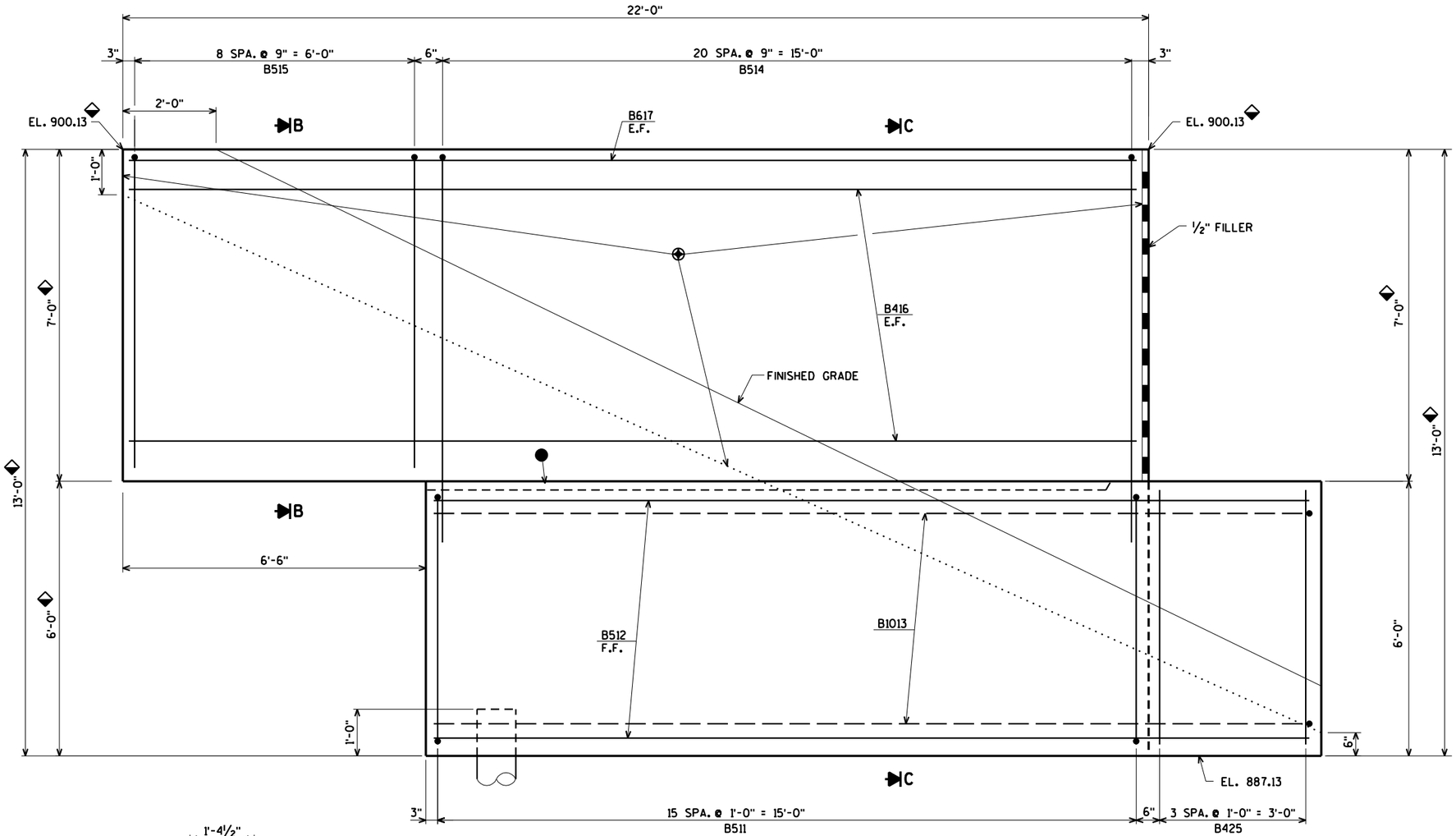
U:±41-0660.0X - IH-39 Dane Partners General Bridge Information±B-13-730 - 139_NB over USH 12&18 WB±bridge±B-13-730 na.dgn

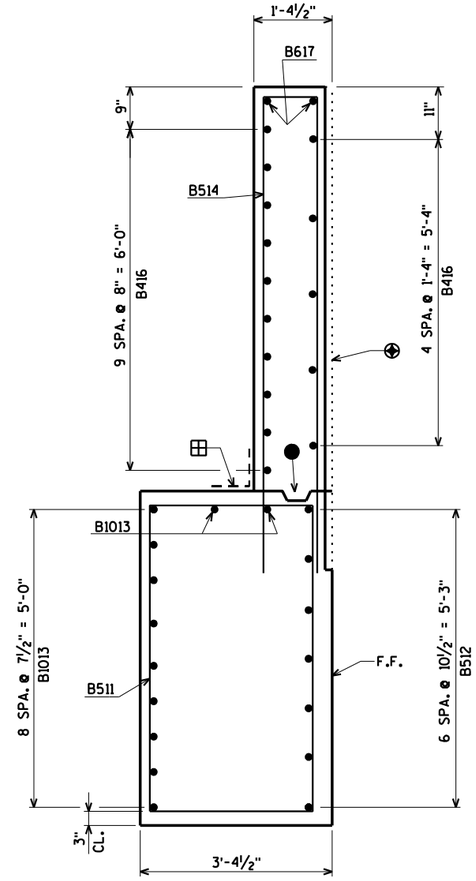
$PRFNAME$
U:±41-0660.0X - IH-39 Dane Partners General Bridge Information±B-13-730 - I39_NB over USH 12&18 WB±bridge±B-13-730 na.dgn

STATE PROJECT NUMBER

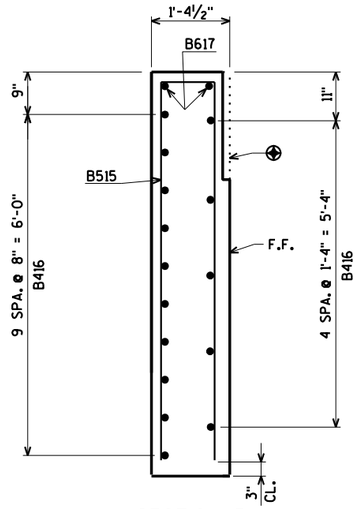
1007-12-78



ELEVATION - WING 3



SECTION C



SECTION B

FOR PILE SPLICE DETAIL SEE SHEET 3.

⊕ LIMITS OF RUSTICATIONS.
FOR DETAILS SEE SHEET 16

● OPT. CONST. JOINT FORMED
BY A BEVELED 2" x 6" KEYWAY.

⊞ 18" RUBBERIZED MEMBRANE WATERPROOFING
SEAL ALL HORIZONTAL AND VERTICAL JOINTS
ON BACKFACE OF ABUTMENT.

◈ TOP OF ABUTMENT DIAPHRAGM SLOPES
DOWN FROM EDGE OF DECK TO THE
WING. SEE SHEET 23 FOR DETAILS.

F.F. DENOTES FRONT FACE

E.F. DENOTES EACH FACE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-730

DRAWN BY CLS | PLANS CK'D. CBM

NORTH ABUTMENT
WING 3 DETAILS

SHEET 13 OF 31
394

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
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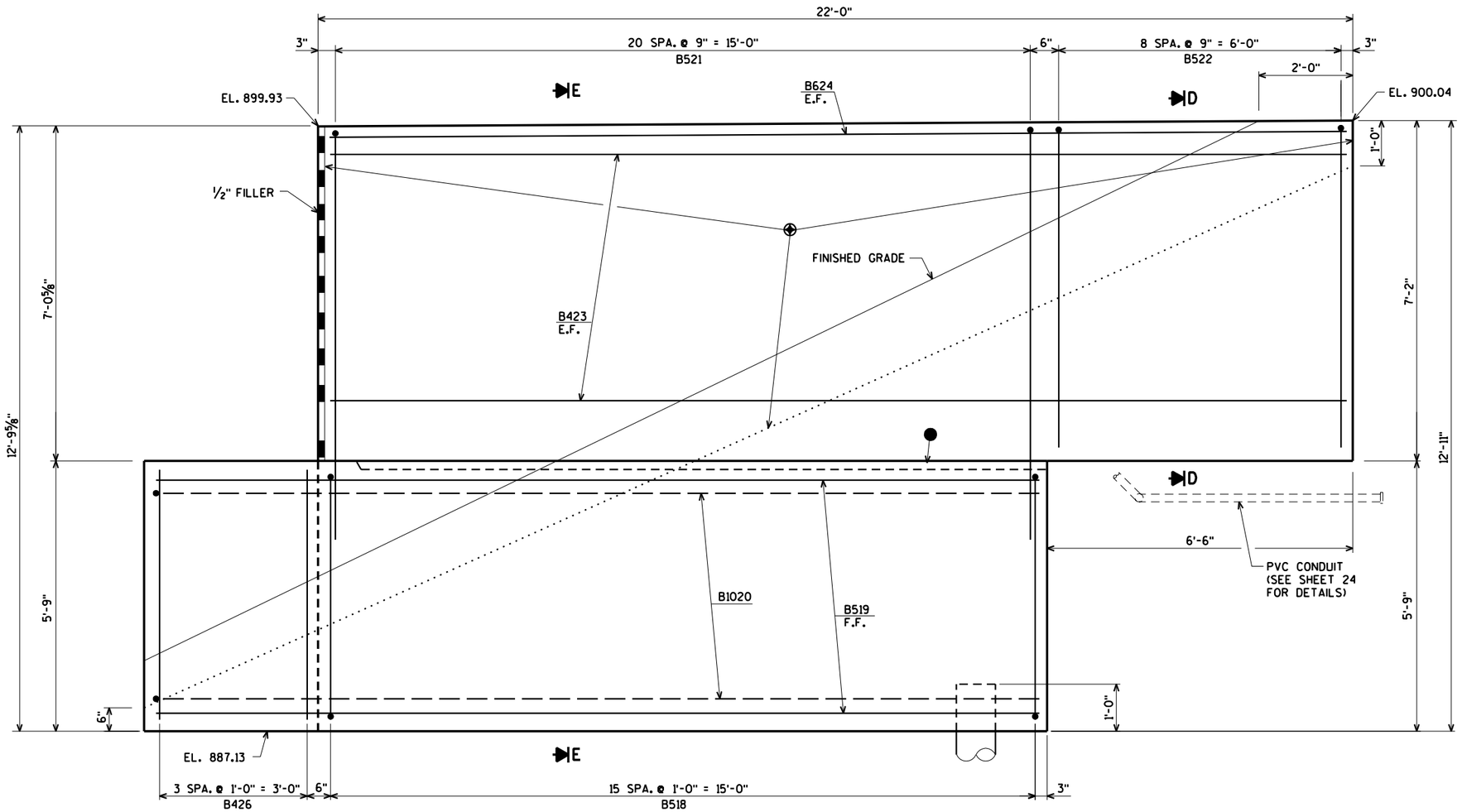
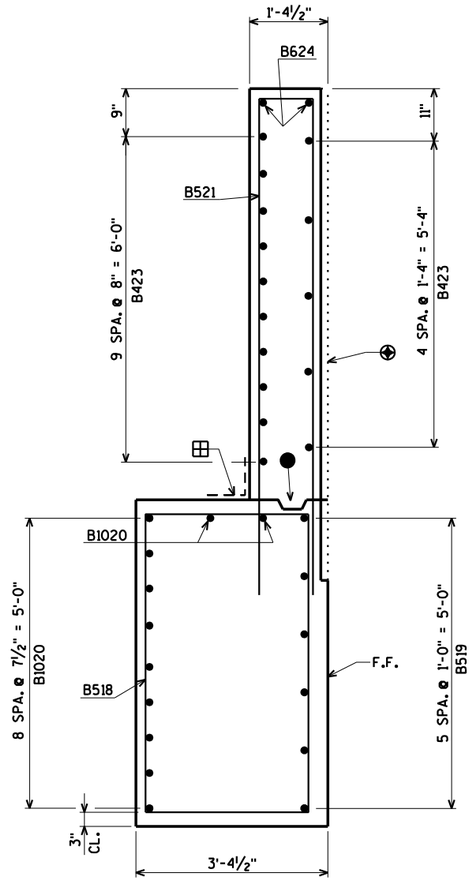
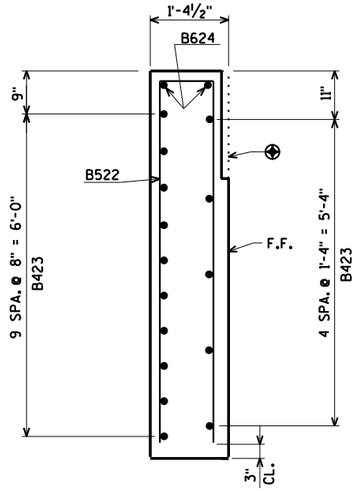


ELEVATION - WING 4



SECTION E



SECTION D

FOR PILE SPLICE DETAIL SEE SHEET 3.

⊕ LIMITS OF RUSTICATIONS.
FOR DETAILS SEE SHEET 16

● OPT. CONST. JOINT FORMED
BY A BEVELED 2" x 6" KEYWAY.

⊞ 18" RUBBERIZED MEMBRANE WATERPROOFING
SEAL ALL HORIZONTAL AND VERTICAL JOINTS
ON BACKFACE OF ABUTMENT.

◈ TOP OF ABUTMENT DIAPHRAGM SLOPES
DOWN FROM EDGE OF DECK TO THE
WING. SEE SHEET 23 FOR DETAILS.

F.F. DENOTES FRONT FACE

E.F. DENOTES EACH FACE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-730

DRAWN BY CLS | PLANS CK'D. CBM

NORTH ABUTMENT
WING 4 DETAILS

SHEET 14 OF 31
395

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U:±41-0660.0X - IH-39 Dane Partners General Bridge Information±B-13-730 - 139_NB over USH 12&18 WB±bridge±B-13-730 na.dgn

STATE PROJECT NUMBER
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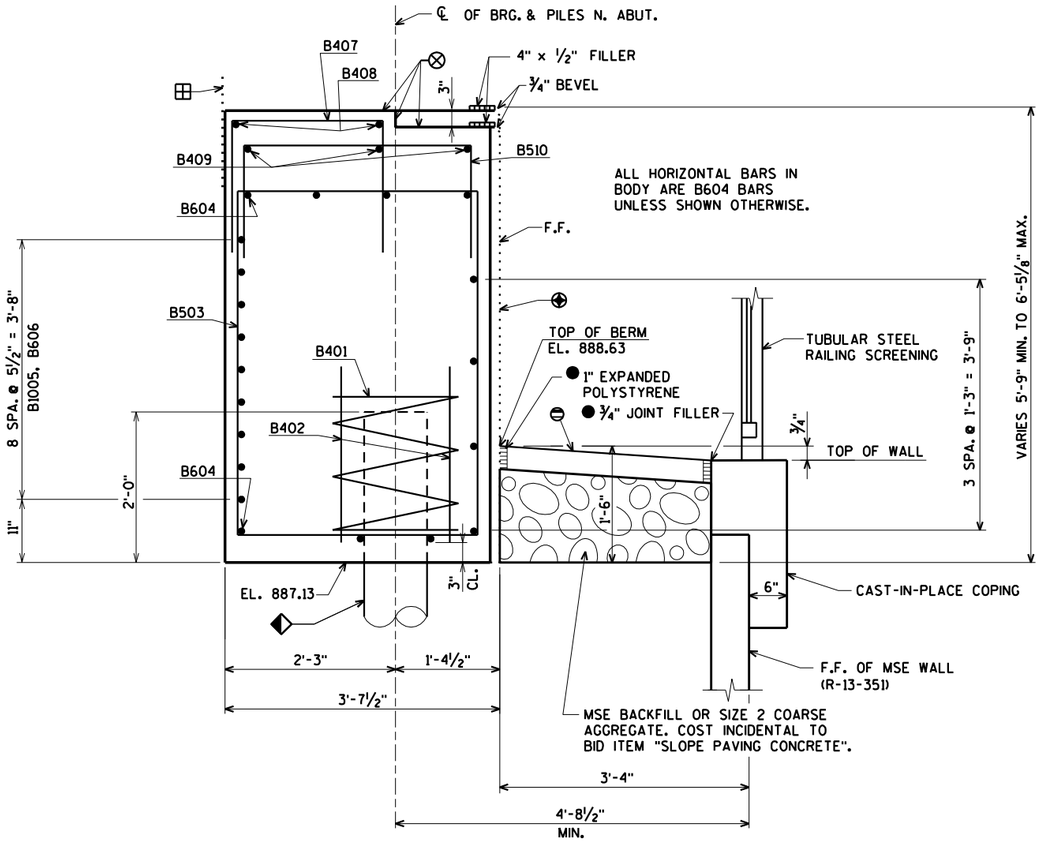


SECTION A

NOTE:
DRIVE PILING BEFORE CONSTRUCTING RETAINING WALL R-13-351

⊕ LIMITS OF RUSTICATIONS. FOR DETAILS SEE SHEET 16

⊞ 18" RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE OF ABUTMENT.

FOR PILE SPLICE DETAIL SEE SHEET 3

F.F. DENOTES FRONT FACE

B.F. DENOTES BACK FACE

E.F. DENOTES EACH FACE

⊖ 4" SLOPE PAVING CONCRETE

● SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF FILLER AND EXPANDED POLYSYRENE WITH NON-STAINING GREY NON-BITUMINOUS JOINT SEALER (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE).

◆ ABUTMENT TO BE SUPPORTED ON 12¾" ϕ x 0.50" CIP CONCRETE PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 210 TONS PER PILE. ESTIMATED LENGTH 100'-0".

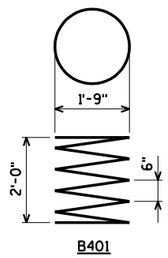
FOR LOCATION OF SECTION A SEE SHEET 11

⊗ STEEL TROWEL TOP SURFACE OF ABUTMENT. PLACE MULTIPLE LAYERS OF POLYETHYLENE SHEETS OVER ENTIRE ABUTMENT TOP BEFORE PLACING BEARING AND/OR SUPERSTRUCTURE. TOTAL THICKNESS OF SHEETS SHALL BE AT LEAST 0.03".

BILL OF BARS

BAR NO.	COATED BAR	NO. REQ'D.	LENGTH	BENT BAR	BUNDLED BAR SERIES	4,390# COATED 5,840# UNCOATED LOCATION
B401		18	28-0	X		BODY ℄ PILES
B402		36	2-3			BODY ℄ PILES
B503		84	16-11	X		BODY VERT.
B604		22	35-5			BODY HORIZ.
B1005		18	23-5	X		BODY HORIZ. B.F. ℄ WINGS
B606		9	29-9			BODY HORIZ. B.F.
B407		46	5-1	X		BODY VERT.
B408		4	34-11			BODY HORIZ.
B409		3	37-6			BODY HORIZ.
B510		38	6-5	X		BODY VERT.
B511	X	16	17-5	X		WING 3 VERT.
B512	X	7	18-8			WING 3 HORIZ. F.F.
B1013	X	11	20-1	X		WING 3 HORIZ.
B514	X	21	18-4	X		WING 3 VERT.
B515	X	9	13-10	X		WING 3 VERT.
B416	X	15	21-8			WING 3 HORIZ. E.F.
B617	X	2	21-8			WING 3 HORIZ. TOP E.F.
B518	X	16	16-11	X		WING 4 VERT.
B519	X	6	18-8			WING 4 HORIZ. F.F.
B1020	X	11	20-1	X		WING 4 HORIZ.
B521	X	21	18-8	X		WING 4 VERT.
B522	X	9	14-0	X		WING 4 VERT.
B423	X	15	21-8			WING 4 HORIZ. E.F.
B624	X	2	21-8			WING 4 HORIZ. TOP E.F.
B425	X	4	5-7			BODY VERT. END ℄ WING 3
B426	X	4	5-4			BODY VERT. END ℄ WING 4

BENDING DIMENSIONS ARE OUT TO OUT OF BARS.



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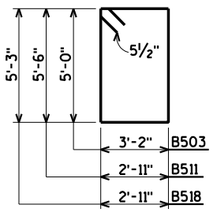
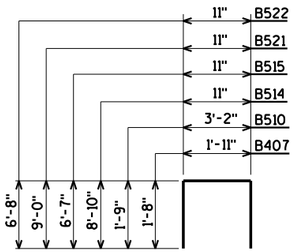
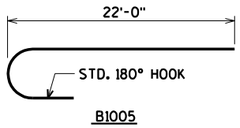
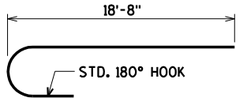






B1005



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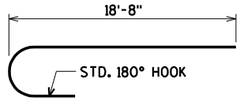

B1020

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-730

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NORTH ABUTMENT DETAILS

SHEET 15 OF 31
396

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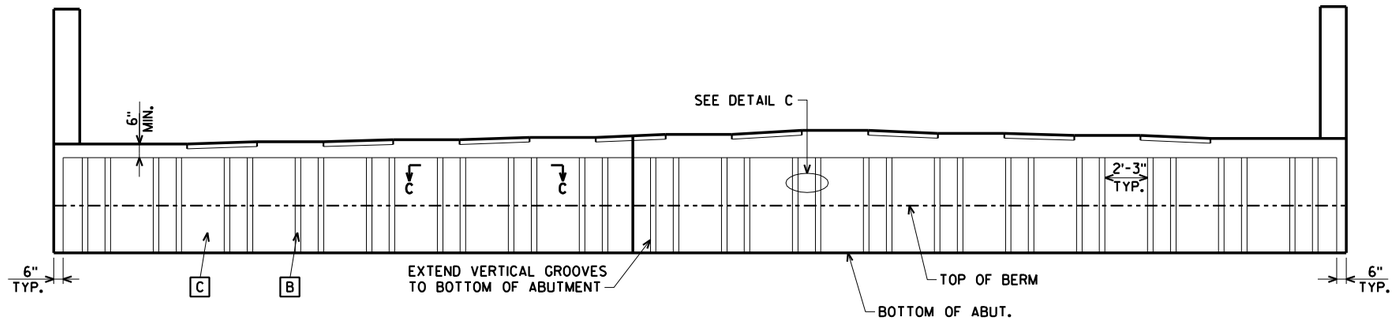
U:±41-0660.0X - IH-39 Dane Partners General Bridge Information±B-13-730 - 139_NB over USH 12&18 WB±bridge±B-13-730 na.dgn

$PRFNAME$
U:\41-0660.0X - IH-39 Dane Partners General Bridge Information\B-13-730 - I39_NB over USH 12&18 WB\bridge\B-13-730 ARCH TREA

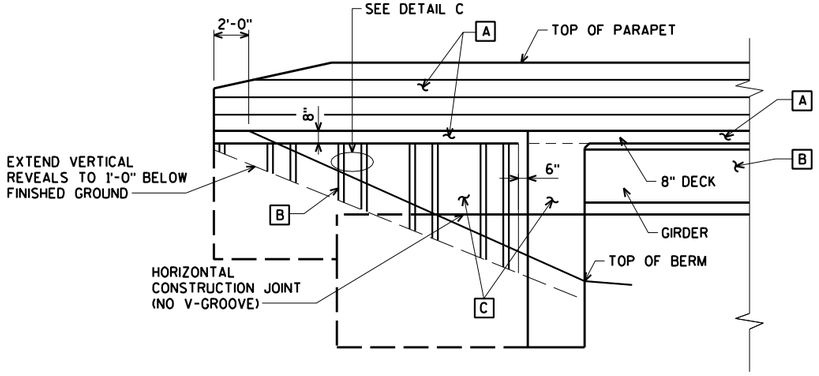
STATE PROJECT NUMBER

1007-12-78



TYPICAL ABUTMENT

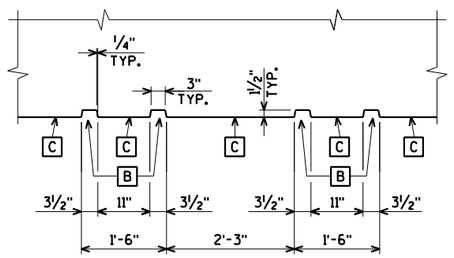
(NORTH ABUTMENT SHOWN, SOUTH ABUTMENT SIMILAR)



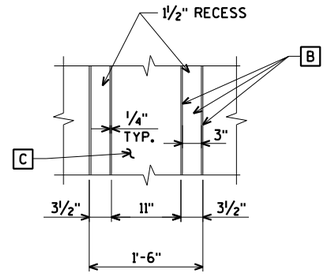
TYPICAL WINGWALL PARALLEL TO ROADWAY

CONCRETE STAINING SCHEDULE

MARK	AMS STD. COLOR NUMBER	LOCATION
A	36642	PARAPET, EDGE OF DECK, BOTTOM OF OVERHANGS, WINGWALLS
B	30104	EXTERIOR GIRDER, REVEALS
C	30372	ABUTMENT AND WINGWALL



SECTION C-C



DETAIL C

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STRUCTURE B-13-730

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ABUTMENT RUSTICATION AND CONCRETE STAINING DETAILS

SHEET 16 OF 31
397

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STATE PROJECT NUMBER
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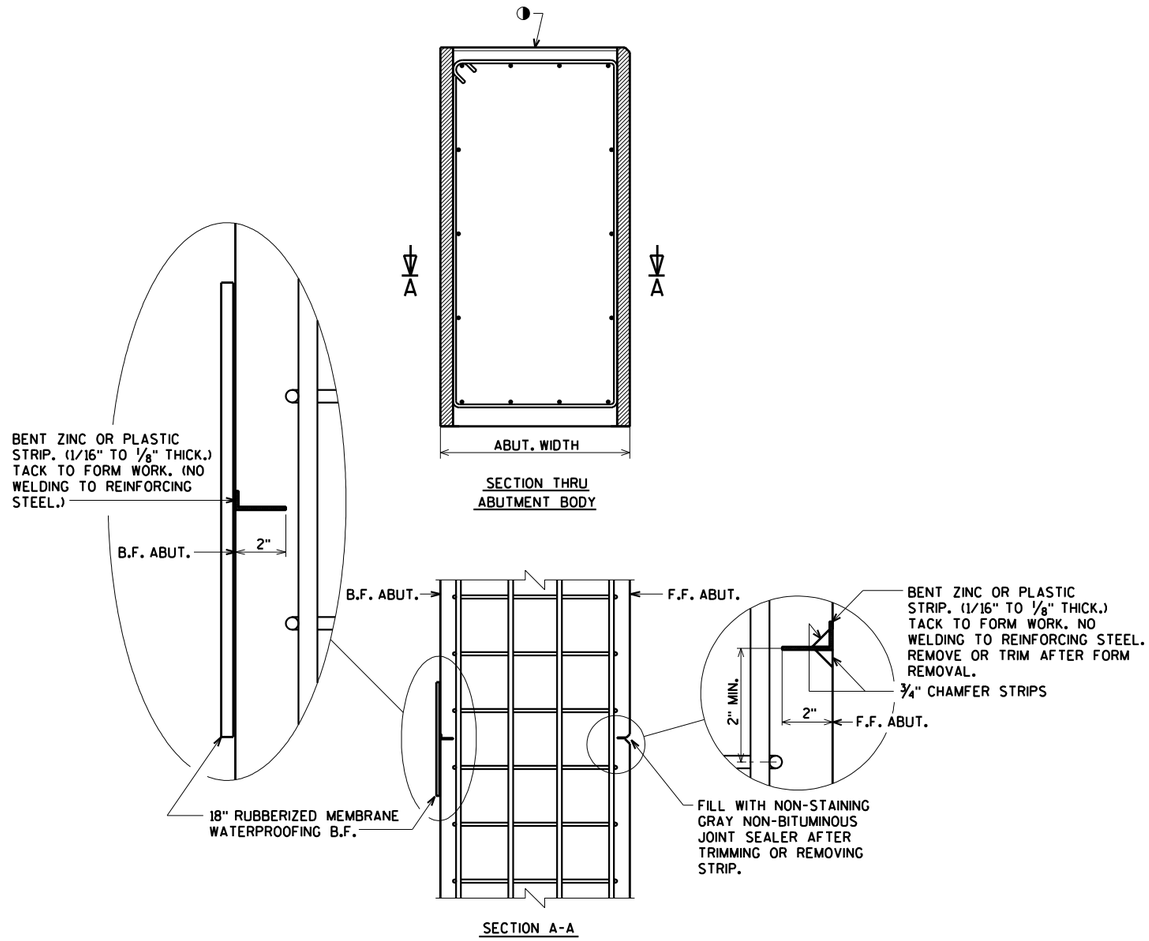

SECTION THRU ABUTMENT BODY

SECTION A-A

ALTERNATE CONSTRUCTION JOINT AT ABUTMENT

NOTES

PARTIAL ZINC OR PLASTIC BULKHEAD MAY BE USED AS ALTERNATE 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.

◑ USE A JOINT TOOL TO CONSTRUCT A CONTRACTION JOINT APPROXIMATELY 1/2" DEEP.

F.F. DENOTES FRONT FACE

B.F. DENOTES BACK FACE

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DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-730

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ALTERNATE CONSTRUCTION JOINT

SHEET 17 OF 31
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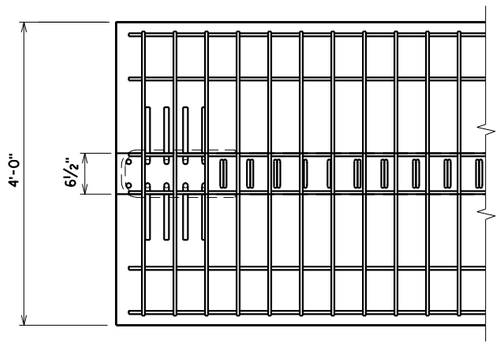


TOP FLANGE

GIRDER NOTES

TOP OF GIRDER TO BE ROUGH FLOATED AND BROOMED TRANSVERSELY, EXCEPT THE OUTSIDE 15" OF GIRDER, WHICH SHALL RECEIVE A SMOOTH FINISH. AN APPROVED CONCRETE SEALER SHALL BE APPLIED TO ALL SMOOTH SURFACES INCLUDING THE OUTSIDE 15" 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.

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.

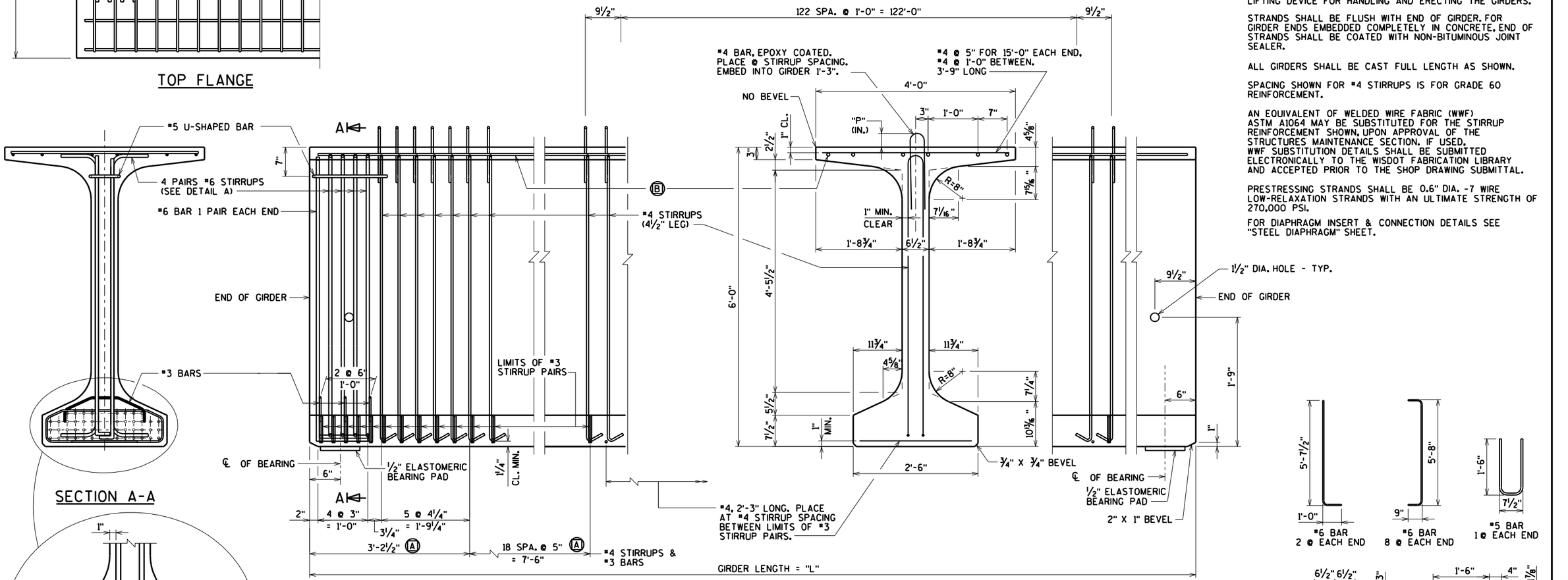
ALL GIRDERS SHALL BE CAST FULL LENGTH AS SHOWN.

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 MAINTENANCE SECTION. IF USED, WWF SUBSTITUTION DETAILS SHALL BE SUBMITTED ELECTRONICALLY TO THE WISDOT FABRICATION LIBRARY AND ACCEPTED PRIOR TO THE 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.

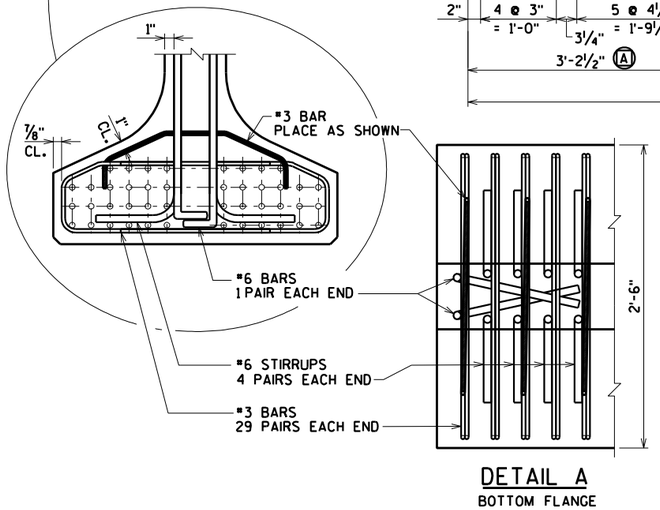


SECTION A-A

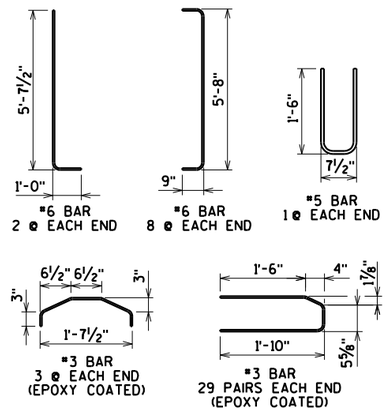
SIDE VIEW & TYP. SECTION IN SPAN

Ⓐ DETAIL TYP. AT EACH END

Ⓑ 6 #4 BARS, FULL LENGTH. MIN. LAP = 2'-4"



DETAIL A
BOTTOM FLANGE



GIRDER DATA

SPAN	GIRDER	GIRDER LENGTH "L"	DEAD LOAD DEFL. (IN.)									CONC. STRGTH. f'c (p.s.i.)	"P" IST ⅓ OF GIRDER	"P" MID ⅓ OF GIRDER	"P" END ⅓ OF GIRDER	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 & 9	145'-0"	0.7	1.4	2.0	2.3	2.4	2.3	2.0	1.4	0.7	8,000	10"	8"	10"	0.6	46	6,400	67	20.5	23.5	5		
1	2-8	145'-0"	0.7	1.4	1.9	2.2	2.3	2.2	1.9	1.4	0.7	8,000	10"	8"	10"	0.6	46	6,400	67	20.5	23.5	5		

* MINIMUM CYLINDER STRENGTH OF CONCRETE @ TIME OF TRANSFER OF PRESTRESS FORCE.

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STATE OF WISCONSIN
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STRUCTURE B-13-730

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72W" PRESTRESSED GIRDER DETAILS

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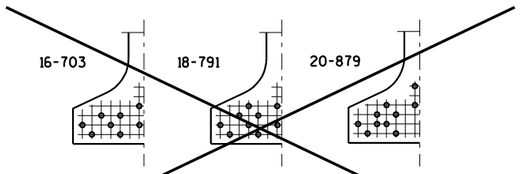
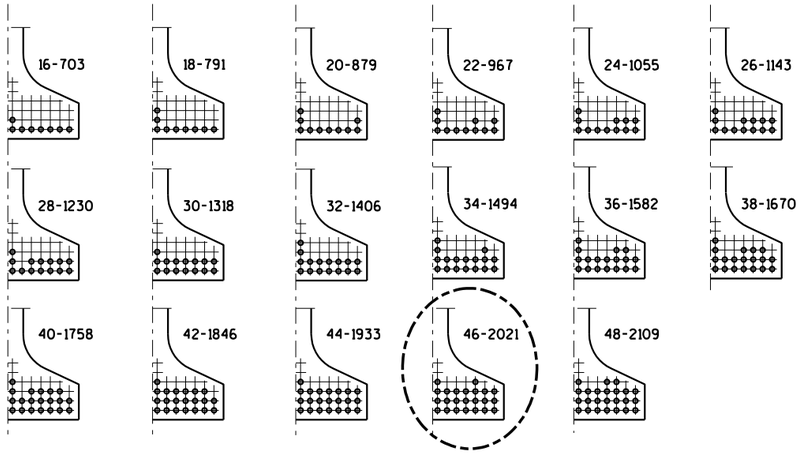


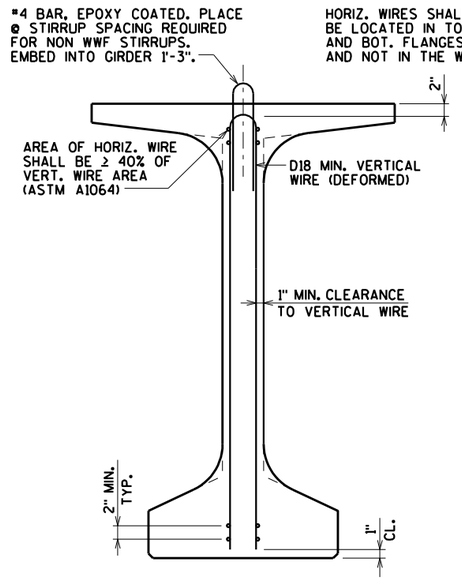
STANDARD ARRANGEMENTS TO RAISE CENTER OF GRAVITY TO AVOID DRAPING OF STRANDS

0.6"Φ STRANDS



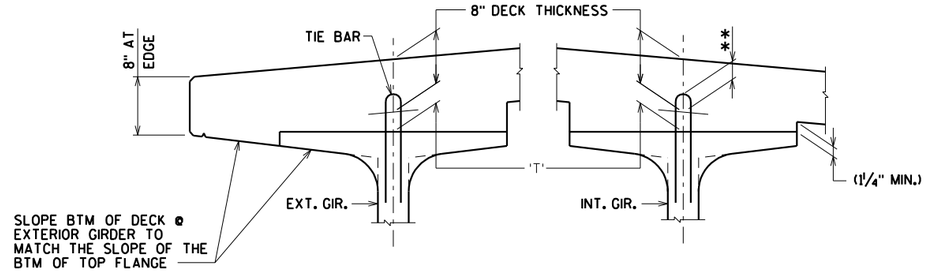
ARRANGEMENT AT ℄ SPAN - FOR GIRDERS WITH DRAPED STRANDS

0.6"Φ STRANDS



SECTION THRU GIRDER

SHOWING WELDED WIRE FABRIC (WWF) STIRRUPS
ASTM A1064 (FY = 70 KSI)



DECK HAUNCH DETAIL

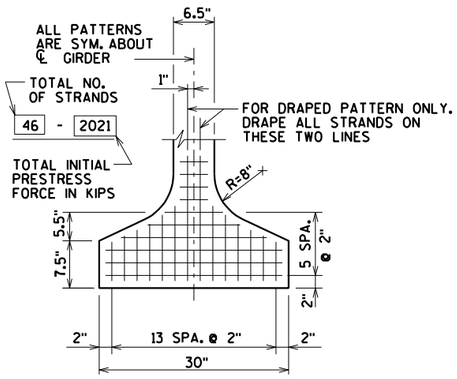
IF 1¼" MINIMUM HAUNCH HEIGHT AT EDGE OF GIRDER CANNOT BE MAINTAINED, THE GRADE LINE MAY BE REVISED BY THE ENGINEER AT THE OPTION OF THE CONTRACTOR. THE PLAN DECK THICKNESS SHALL BE HELD. NOTIFY THE STRUCTURES SECTION IF THE GRADE LINE IS RAISED FROM THE PLAN PROFILE BY MORE THAN ½" OR,

** IF 3" MINIMUM DECK EMBEDMENT OF TIE BAR CANNOT BE OBTAINED.

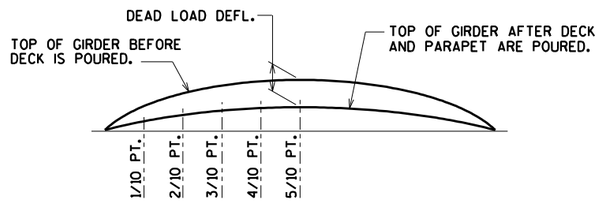
TO DETERMINE 'T', ELEV. OF TOP OF GIR'S. AT ℄ OF SUBSTRUCTURE UNITS & AT 1/10 POINTS OF EACH SPAN SHALL BE TAKEN. THEN FOLLOW THIS PROCESS:

TOP OF DECK ELEV. AT FINAL GRADE
\- TOP OF GIRDER ELEVATION
\+ DEAD LOAD DEFLECTION
\- DECK THICKNESS
= HAUNCH HEIGHT 'T'

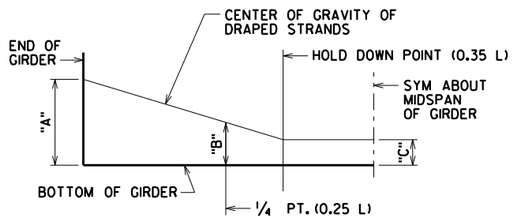
NOTE: AN AVERAGE HAUNCH ('T') OF 4" WAS USED IN THE QUANTITY "HIGH PERFORMANCE CONCRETE (HPC) MASONRY STRUCTURES".



TYP. STRAND PATTERN



DEAD LOAD DEFLECTION DIAGRAM



DRAPED STRAND PROFILE

* THE THEORETICAL INITIAL CAMBER VALUE AT THE TIME OF STRAND RELEASE AT MIDSPAN

SPAN	CAMBER (IN.) *
1	4.6

THESE VALUES ARE NOT TO BE USED IN DETERMINING 'T', USE ACTUAL GIRDER SHOTS.
THESE VALUES ARE FOR INFORMATIONAL PURPOSES ONLY.

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-730

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72W" PRESTRESSED GIRDER DETAILS

SHEET 19 OF 31
400

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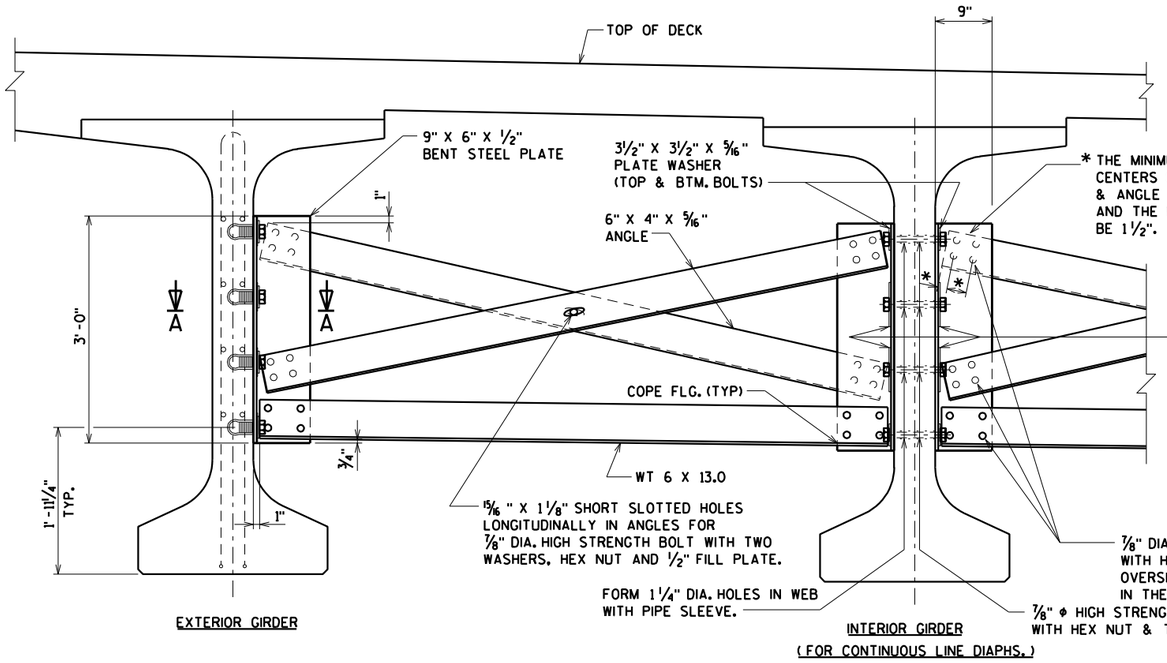
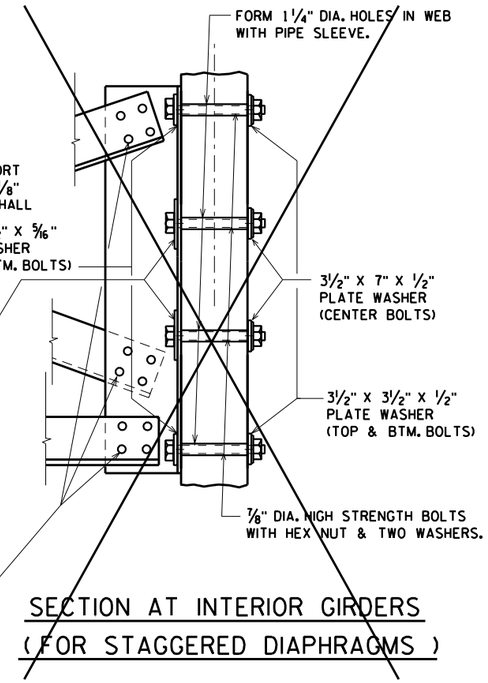
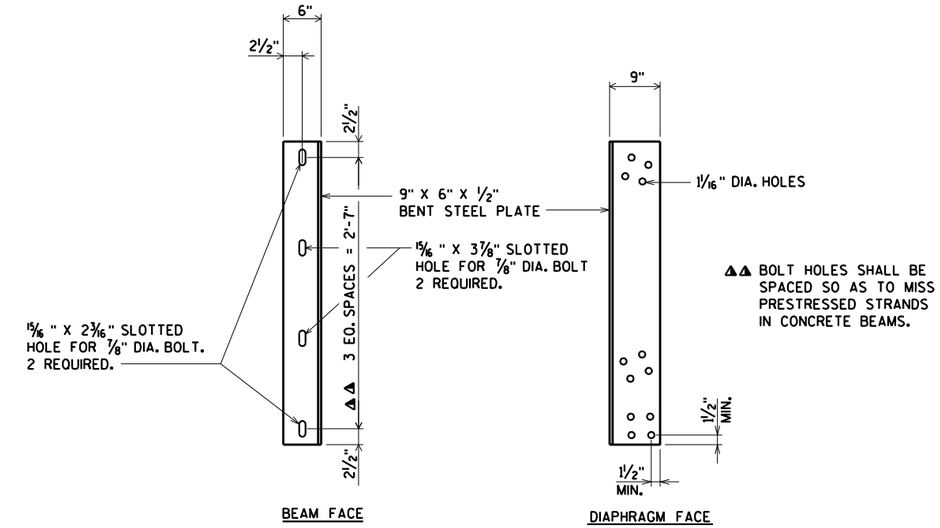


PART TRANSVERSE SECTION AT DIAPHRAGM

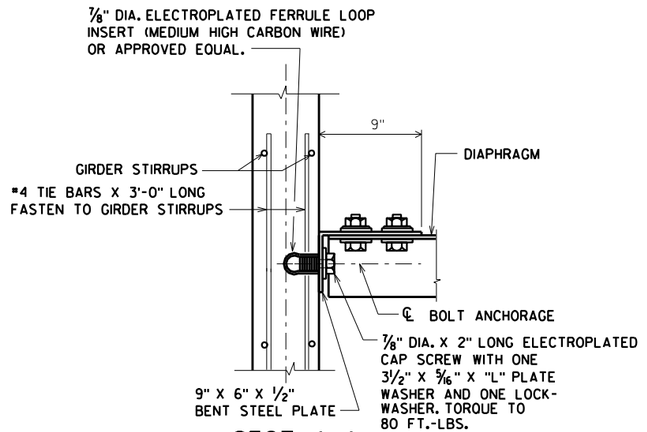


SECTION AT INTERIOR GIRDERS
(FOR STAGGERED DIAPHRAGMS)



▲▲ BOLT HOLES SHALL BE SPACED SO AS TO MISS PRESTRESSED STRANDS IN CONCRETE BEAMS.

DIAPHRAGM SUPPORT



SECT. A-A
(FOR EXTERIOR ATTACHMENT)

"L" = 3 1/2"; TOP AND BOTTOM BOLTS
"L" = 7"; CENTER BOLTS

NOTES

ALL DIAPHRAGM MATERIAL NOT EMBEDDED IN THE CONCRETE GIRDER SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "STEEL DIAPHRAGMS B-13-730", 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 1/4 TURN, UNLESS NOTED OTHERWISE. HIGH STRENGTH BOLTS FOR WEB CONNECTION SHALL MEET THE REQUIREMENTS FOR ASTM A325 OR ASTM A449.

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STRUCTURE B-13-730

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STEEL DIAPHRAGM

SHEET 20 OF 31
401

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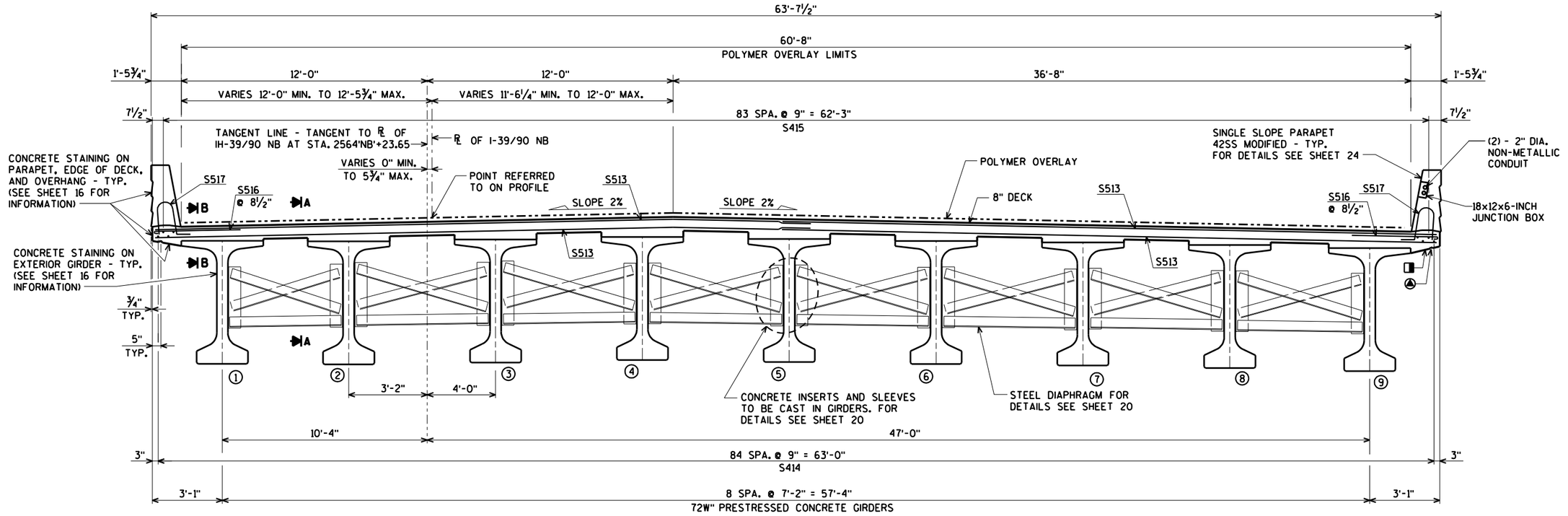
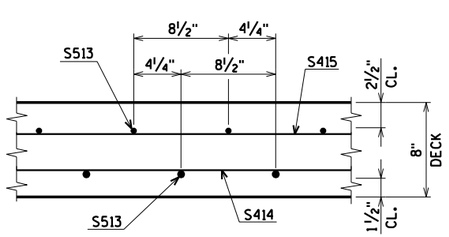


TYPICAL SECTION THRU BRIDGE

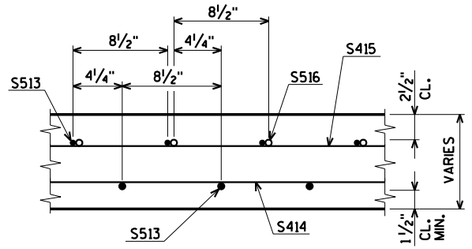
(LOOKING NORTH)

▲ ¾" V-GROOVE REQ'D. EXTEND V-GROOVE TO 6" FROM FRONT FACE OF ABUTMENT DIAPHRAGMS - TYP.

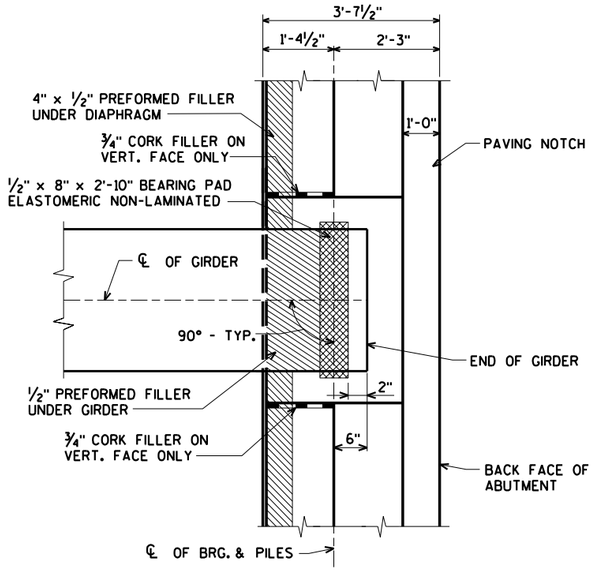
◨ SLOPE BOTTOM OF DECK AT EXTERIOR GIRDER TO MATCH THE SLOPE OF THE BOTTOM OF TOP FLANGE - TYP.



SECTION A



SECTION B



BEARING PAD DETAILS

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-730

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SUPERSTRUCTURE

SHEET 21 OF 31
402

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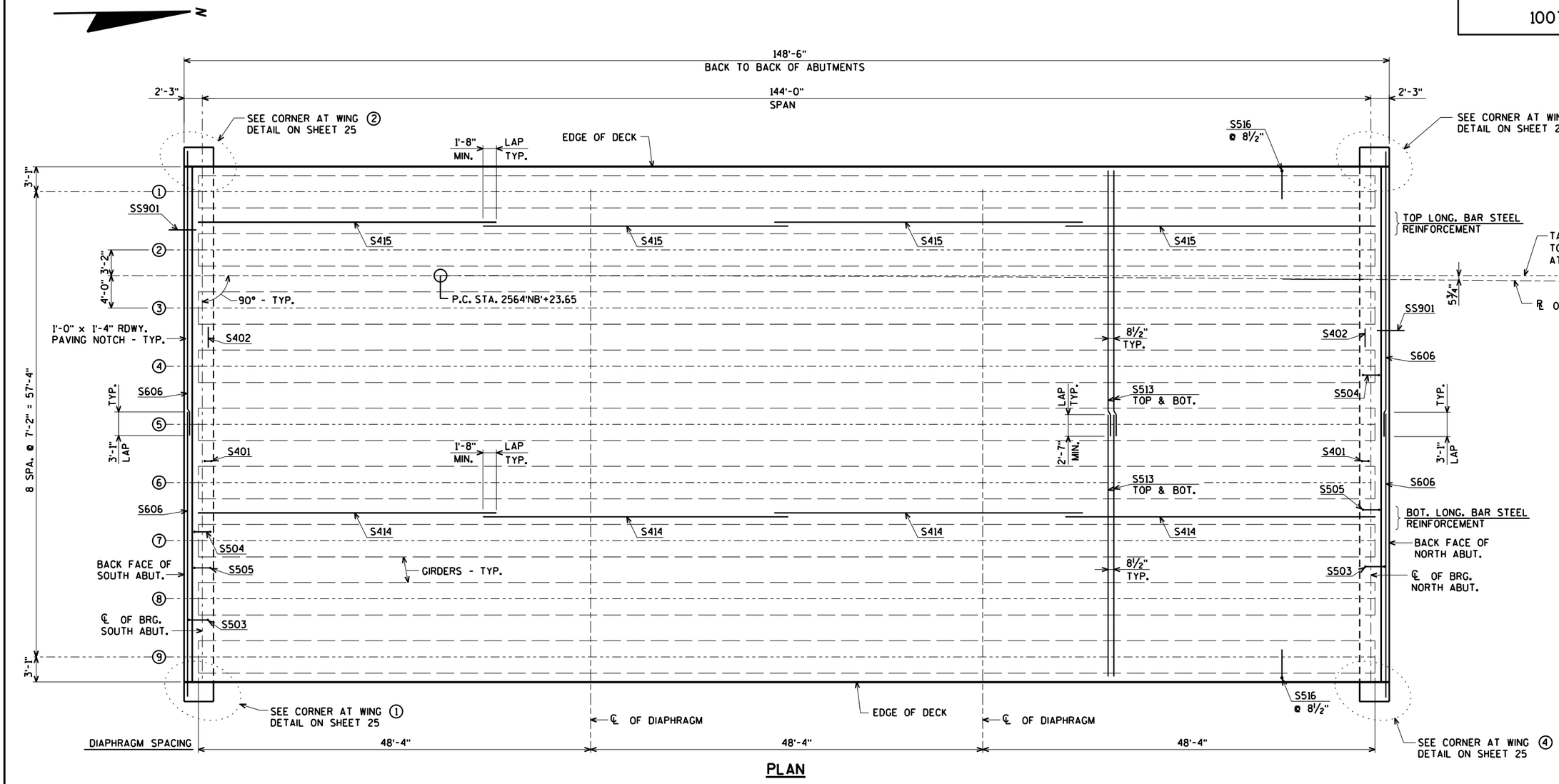


PLAN

TOP OF DECK ELEVATIONS

LOCATION	℄ BEARING 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.	℄ BEARING N. ABUT.
W. EDGE OF DECK	899.43	899.51	899.58	899.66	899.73	899.81	899.88	899.96	900.03	900.11	900.18
GIRDER 1	899.49	899.57	899.64	899.72	899.79	899.87	899.94	900.02	900.09	900.17	900.24
GIRDER 2	899.63	899.71	899.78	899.86	899.93	900.01	900.08	900.16	900.23	900.31	900.38
℄ I-39/90 NB	899.70	899.78	899.85	899.92	900.00	900.07	900.15	900.22	900.30	900.37	900.45
GIRDER 3	899.78	899.86	899.93	900.01	900.08	900.16	900.23	900.31	900.38	900.46	900.53
GIRDER 4	899.92	900.00	900.07	900.15	900.22	900.30	900.37	900.45	900.52	900.60	900.67
CROWN	899.94	900.02	900.09	900.17	900.24	900.32	900.39	900.47	900.54	900.62	900.69
GIRDER 5	899.81	899.89	899.96	900.04	900.11	900.19	900.26	900.34	900.41	900.49	900.56
GIRDER 6	899.67	899.75	899.82	899.90	899.97	900.05	900.12	900.20	900.27	900.35	900.42
GIRDER 7	899.52	899.60	899.67	899.75	899.82	899.90	899.97	900.05	900.13	900.20	900.27
GIRDER 8	899.38	899.46	899.53	899.61	899.68	899.76	899.83	899.91	899.98	900.06	900.13
GIRDER 9	899.24	899.32	899.39	899.47	899.54	899.62	899.69	899.77	899.84	899.92	899.99
E. EDGE OF DECK	899.17	899.25	899.32	899.40	899.47	899.55	899.62	899.70	899.77	899.85	899.92

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-730

DRAWN BY CLS | PLANS CK'D. CBM

SUPERSTRUCTURE PLAN

SHEET 22 OF 31
403

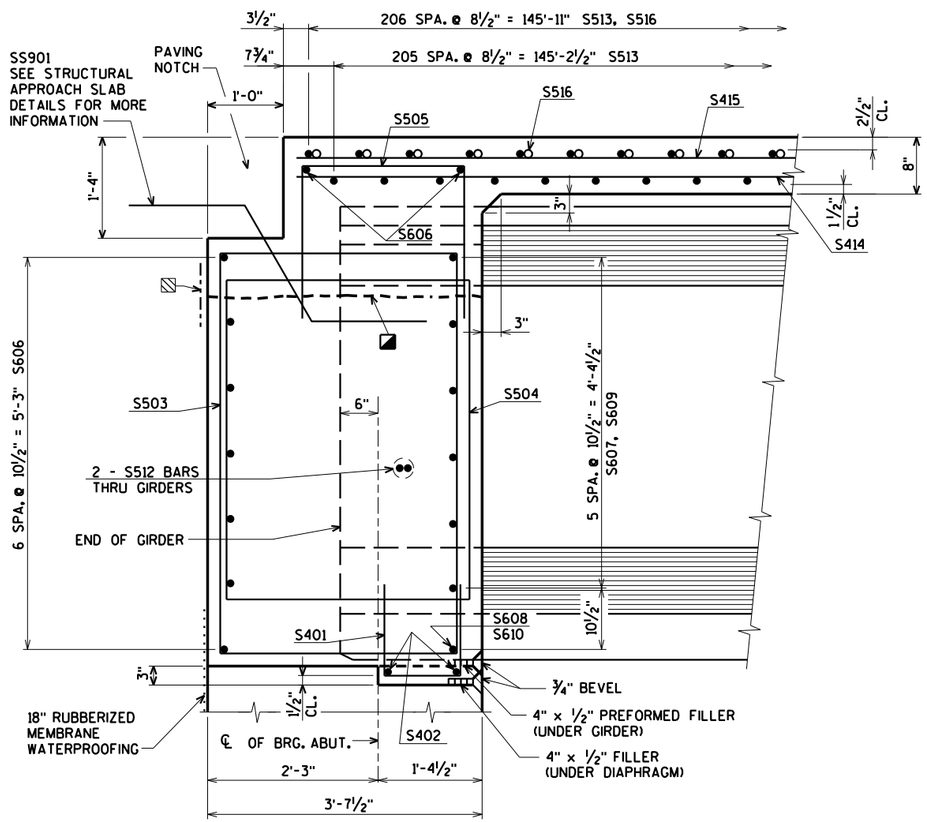
ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

7/25/2019
PENTABLE:BReou_shd_util.tbl

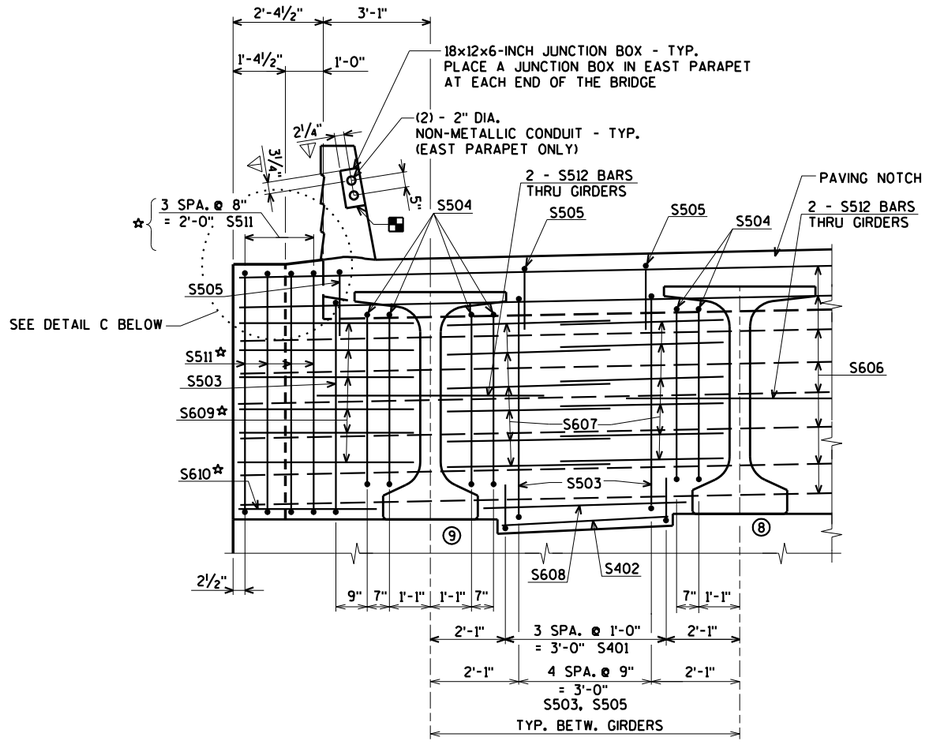
U:±41-0660.0X - IH-39 Dane Partners General Bridge Information±B-13-730 - 139_NB over USH 12&18 WB±bridge±B-13-730 sup.dgn

STATE PROJECT NUMBER

1007-12-78

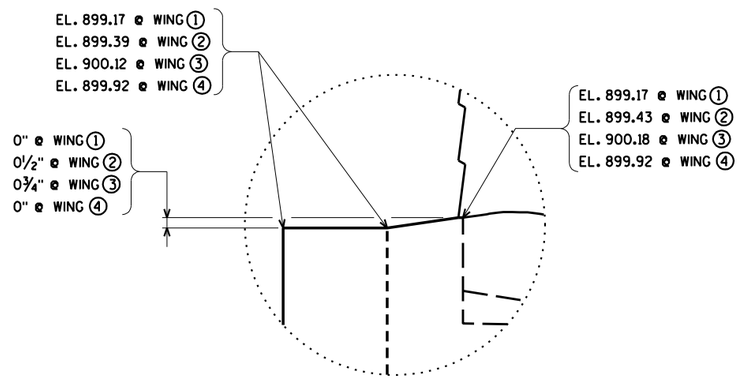


PART LONGITUDINAL SECTION



PART TRANSVERSE SECTION AT ABUTMENT DIAPHRAGM

(LOOKING SOUTH AT BEAMS ⑧ & ⑨. OTHER LOCATIONS SIMILAR)



DETAIL C

◪ OPTIONAL CONST. JOINT. 1'-2" BELOW TOP OF GIRDER. IF USED, DECK POUR MUST BE WITHIN 2 WEEKS FROM THE TIME OF THE DIAPHRAGM POUR.

▨ 18" RUBBERIZED MEMBRANE WATERPROOFING IF CONST. JT. IS USED. COST INCLUDED WITH BID ITEM "HIGH PERFORMANCE CONCRETE (HPC) MASONRY STRUCTURES"

☆ SEE SUPERSTRUCTURE CORNER DETAILS ON SHEET 25

◪ CUT OUT 1"± OF GASKET AT BOTTOM OF JUNCTION BOX COVER TO ALLOW FOR DRAINAGE.

▽ LOCATION OF CONDUIT IS MEASURED FROM OUTSIDE EDGE OF JUNCTION BOX.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-730

DRAWN BY CLS | PLANS CK'D. CBM

SUPERSTRUCTURE DETAILS

SHEET 23 OF 31
404

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
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PENTABLE:BReau_shd_util.tbl

U:±41-0660.0X - IH-39 Dane Partners General Bridge Information±B-13-730 - 139_NB over USH 12&18 WB±bridge±B-13-730 sup.dgn

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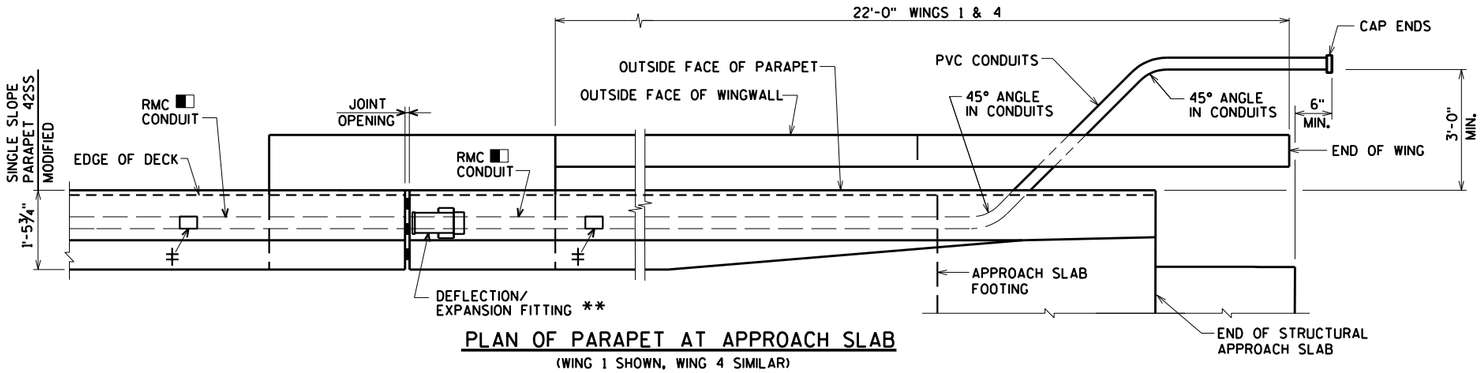
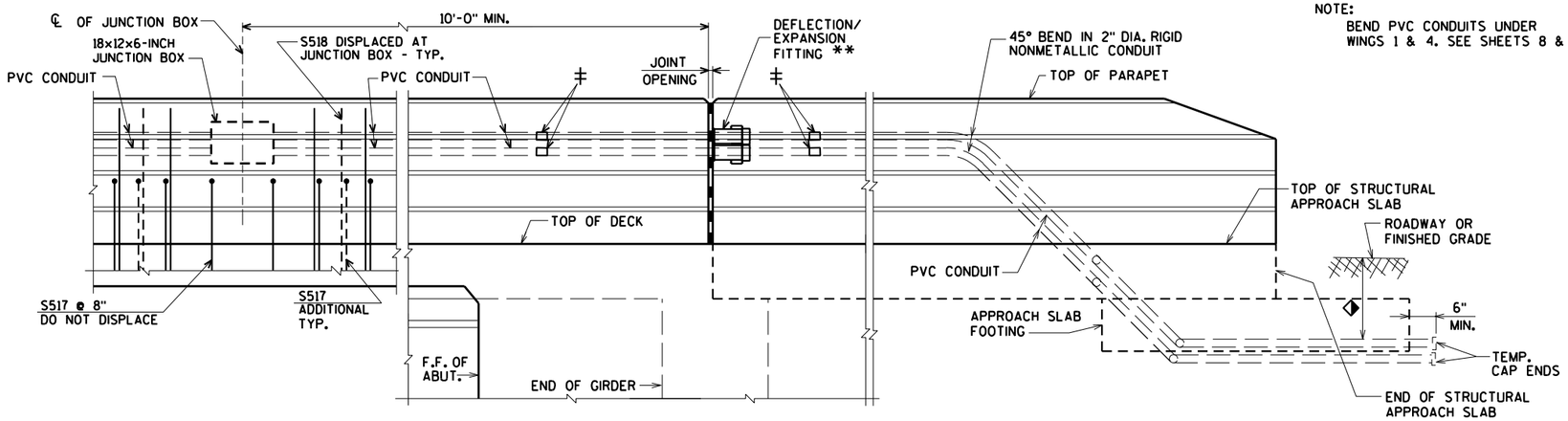
U:\41-0660.0X - IH-39 Dane Partners General Bridge Information\B-13-730 - I39_NB over USH 12&18 WB\bridge\B-13-730 sup.dgn



PLAN OF PARAPET AT APPROACH SLAB

(WING 1 SHOWN, WING 4 SIMILAR)



NOTE:
BEND PVC CONDUITS UNDER WINGS 1 & 4. SEE SHEETS 8 & 14.

OUTSIDE ELEVATION OF PARAPET AT APPROACH SLAB

(WING 4 SHOWN, WING 1 SIMILAR)

LEGEND

‡ NONMETALLIC CONDUIT TO METALLIC CONDUIT ADAPTOR FITTING (UL OR NRTL LISTED FOR ELECTRICAL USE SHALL BE USED)

■ USE 2" DIA. RIGID METALLIC (RMC) CONDUIT AT FITTINGS. PROVIDE RMC FOR 3'-0" MIN. ON EACH SIDE OF JOINT OPENINGS UNLESS NOTED OTHERWISE.

◅ SPONGE RUBBER WRAP TO BE AASHTO M153, TYPE 1 OR EQUIVALENT - ¼" MINIMUM THICKNESS. PROVIDE WRAP FOR THE ENTIRE LENGTH OF THE FITTING OR AS SHOWN. SPONGE RUBBER WRAP INCIDENTAL TO "CONDUIT RIGID METALLIC 2-INCH"

** DEFLECTION/EXPANSION FITTING REQUIREMENTS (IF USED):
- UP TO ¾" CONDUIT CONTRACTION OR EXPANSION AND UP TO 30 DEGREES OF ANGULAR MISALIGNMENT IN ANY DIRECTION WITH BONDING JUMPER

PVC = POLYVINYL CHLORIDE (RIGID NONMETALLIC) CONDUIT

RMC = RIGID METALLIC CONDUIT

◪ CUT OUT 1"± OF GASKET AT BOTTOM OF JUNCTION BOX COVER TO ALLOW FOR DRAINAGE.

▽ LOCATION OF CONDUIT IS MEASURED FROM OUTSIDE EDGE OF JUNCTION BOX.

NOTES

◆ 2'-0" MIN. CONDUIT COVER UNDER ROADWAYS. 1'-6" OTHERWISE. CONDUIT COVER SHOULD NOT EXCEED 3'-0".

CONDUIT SHALL BE EMBEDDED 2" CLEAR.

USE 2" DIA. RIGID NONMETALLIC CONDUIT (PVC) UNLESS NOTED OTHERWISE.

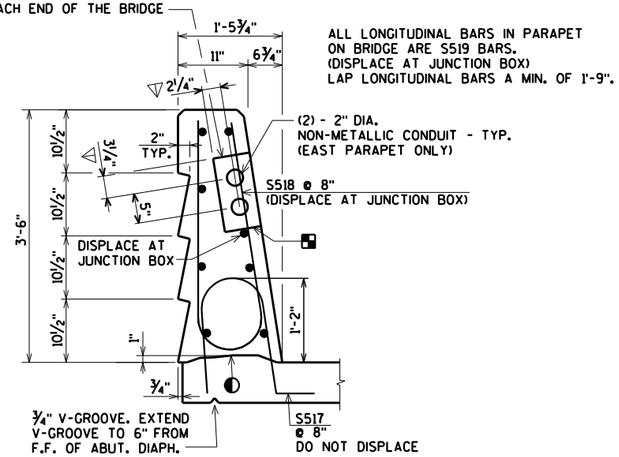
CONDUIT FITTINGS, CONDUIT BENDS, AND ADAPTER FITTINGS INCIDENTAL TO CONDUIT WORK.

CONDUIT BENDS SHALL CONFORM TO THE NATIONAL ELECTRIC CODE.

PROVIDE JUNCTION BOXES FROM THE APPROVED PRODUCTS LIST.

F.F. DENOTES FRONT FACE.

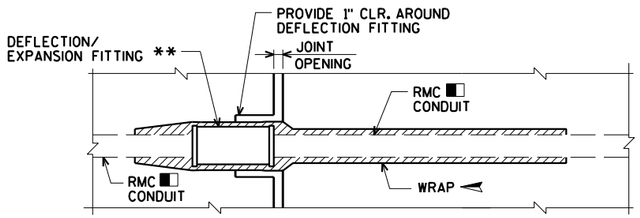
18x12x6-INCH JUNCTION BOX - TYP. PLACE A JUNCTION BOX IN EAST PARAPET AT EACH END OF THE BRIDGE



ALL LONGITUDINAL BARS IN PARAPET ON BRIDGE ARE S519 BARS. (DISPLACE AT JUNCTION BOX) LAP LONGITUDINAL BARS A MIN. OF 1'-9".

SECTION THRU PARAPET ON BRIDGE

◐ CONST. JOINT - STRIKE OFF AS SHOWN.



DEFLECTION/EXPANSION FITTING

THIS DETAIL ACCOMMODATES A MAXIMUM OF ¾" TOTAL MOVEMENT AND UP TO 30 DEGREES OF ANGULAR MISALIGNMENT IN ANY DIRECTION.
BOND JUMPER NOT SHOWN FOR CLARITY
(CONCRETE TO CONCRETE FITTING)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-730

DRAWN BY CLS | PLANS CK'D. CBM

SUPERSTRUCTURE CONDUIT DETAILS

SHEET 24 OF 31
405

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

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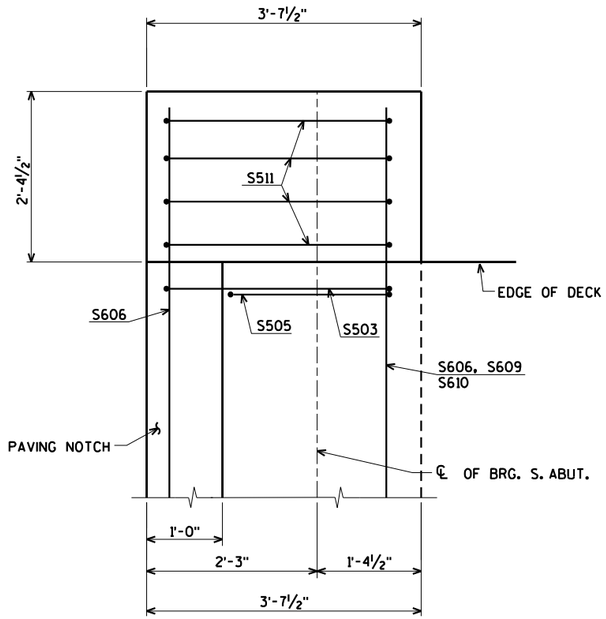
8

STATE PROJECT NUMBER
1007-12-78

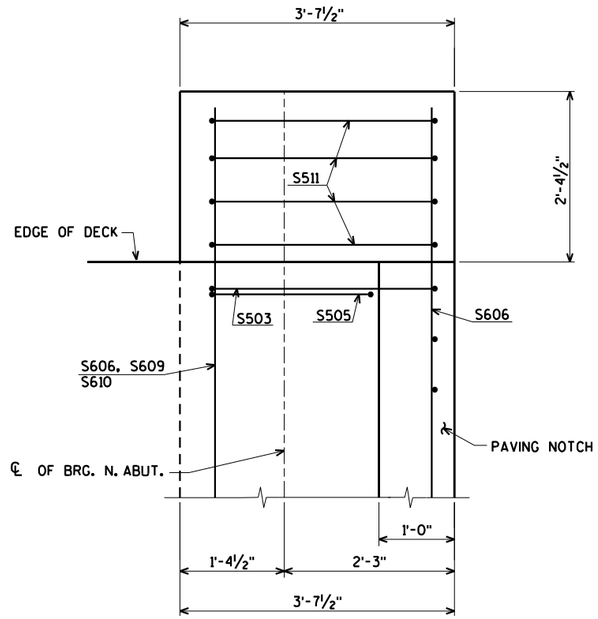
BILL OF BARS

BAR NO.	COATED BAR	NO. REQ'D.	LENGTH	BENT BAR	BUNDLED BAR SERIES	62,830# COATED LOCATION
S401	X	64	3-4	X		DIAPH. @ ABUT. VERT. @ NOTCH
S402	X	32	3-4			DIAPH. @ ABUT. HORIZ. @ NOTCH
S503	X	84	17-10	X		DIAPH. @ ABUT. VERT.
S504	X	72	15-10	X		DIAPH. @ ABUT. VERT. @ GIRDERS
S505	X	84	6-4	X		DIAPH. @ ABUT. VERT.
S606	X	36	35-6			DIAPH. @ ABUT. HORIZ.
S607	X	192	4-8			DIAPH. @ ABUT. HORIZ. BETW. GDRS.
S608	X	16	4-4			DIAPH. @ ABUT. HORIZ. BETW. GDRS.
S609	X	24	4-9			DIAPH. @ ABUT. HORIZ. @ CORNERS
S610	X	4	3-10			DIAPH. @ ABUT. HORIZ. @ CORNERS
S511	X	16	20-4	X		DIAPH. @ ABUT. VERT. CORNERS
S512	X	32	6-0			DIAPH. @ ABUT. HORIZ. THRU GDRS.
S513	X	826	32-11			DECK TRANS. TOP & BOT.
S414	X	340	37-10			DECK LONG. BOT.
S415	X	336	37-10			DECK LONG. TOP
S516	X	414	5-0	X		DECK TRANS. TOP @ EDGES
S517	X	444	4-5	X		DECK @ PARAPET
S518	X	440	6-8	X		PARAPET VERT.
S519	X	48	49-11			PARAPET HORIZ.

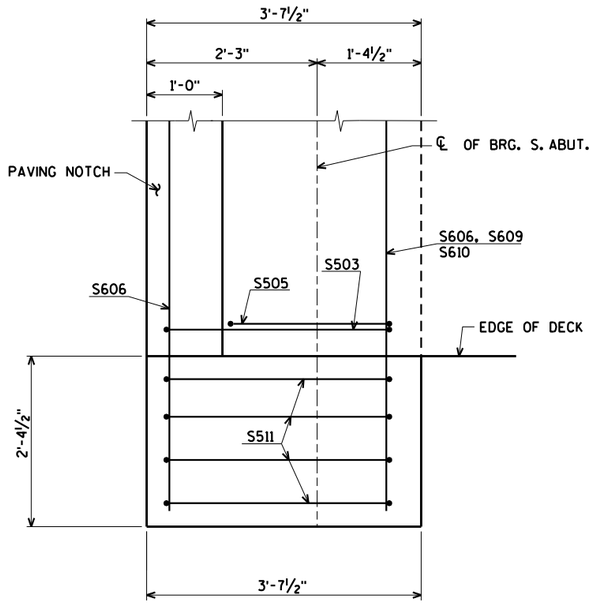
BENDING DIMENSIONS ARE OUT TO OUT OF BARS.



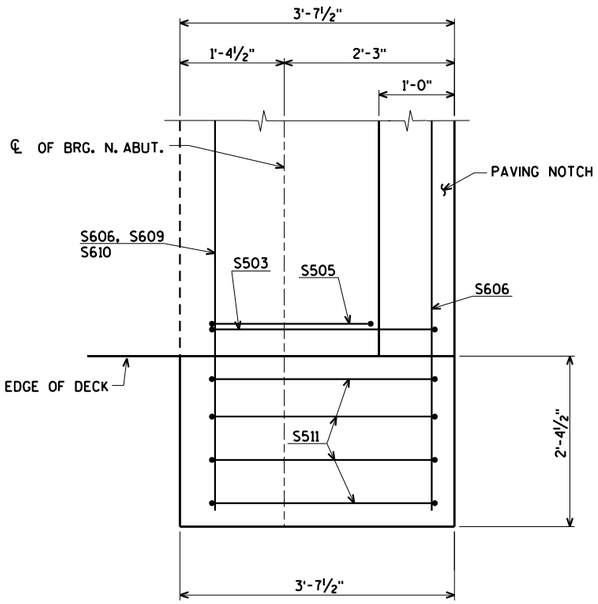
CORNER AT WING 2 DETAIL



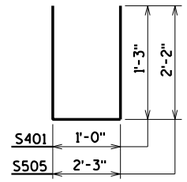
CORNER AT WING 3 DETAIL

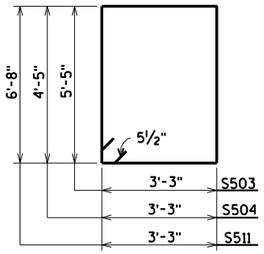


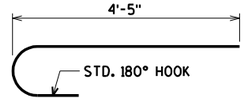
CORNER AT WING 1 DETAIL



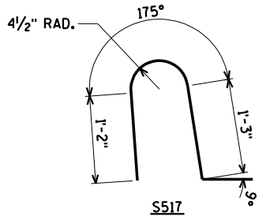
CORNER AT WING 4 DETAIL







S516



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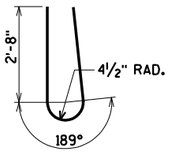

S518

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-730

DRAWN BY CLS | PLANS CK'D. CBM

SUPERSTRUCTURE CORNER DETAILS & BILL OF BARS

SHEET 25 OF 31
406

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

8

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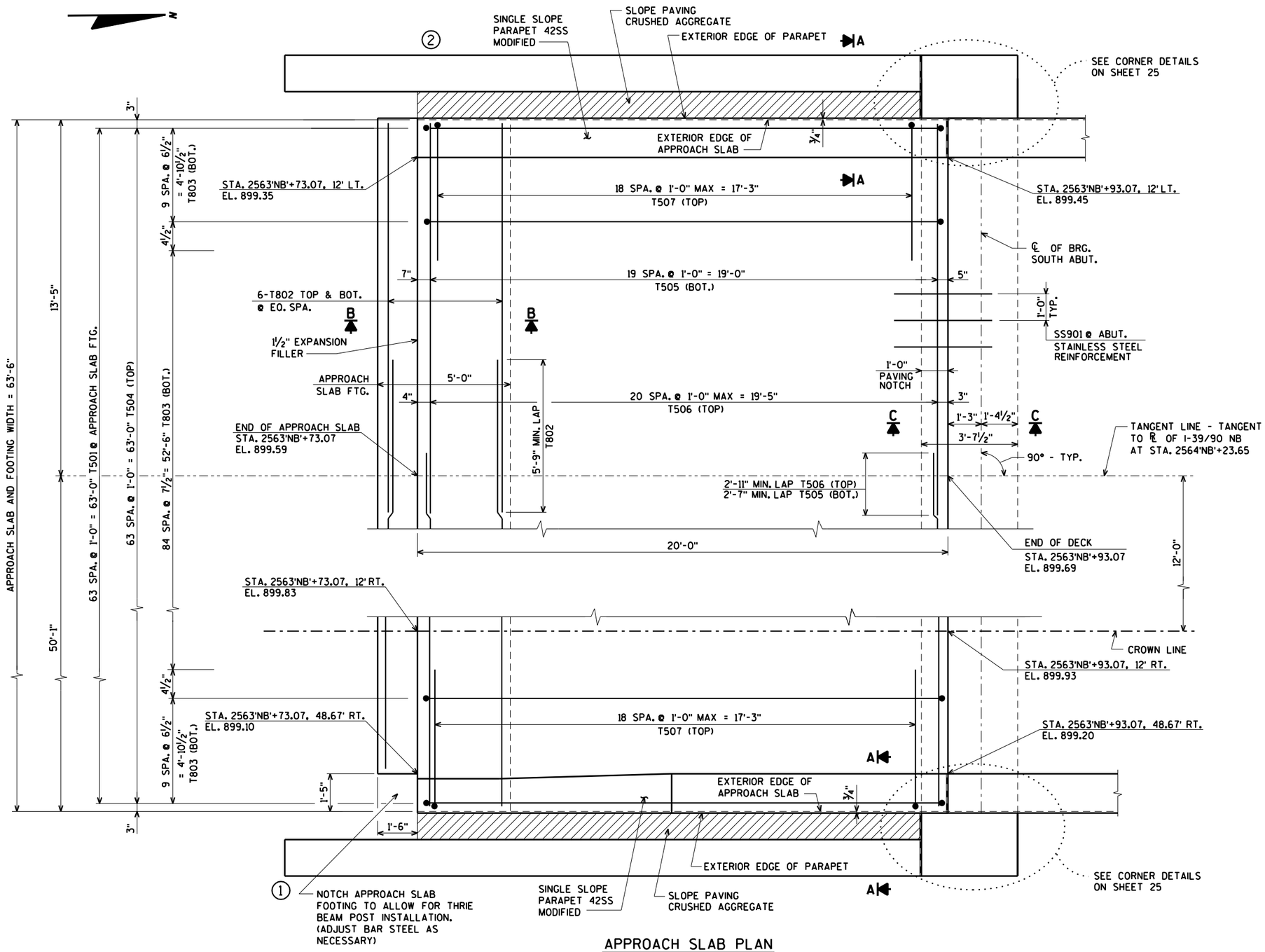
7/25/2019
PENTABLE:BReau_shd_util.tbl

U:\41-0660.0X - IH-39 Dane Partners General Bridge Information\B-13-730 - I39_NB over USH 12&18 WB\bridge\B-13-730 sup.dgn

STATE PROJECT NUMBER

1007-12-78



APPROACH SLAB PLAN

FOR DETAILS OF SECTIONS A, B, AND C, SEE SHEET 28

WORK THIS SHEET WITH SHEET 28

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-730

DRAWN BY CLS | PLANS CK'D. CBM

SOUTH STRUCTURAL APPROACH SLAB

SHEET 26 OF 31
407

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

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7/25/2019
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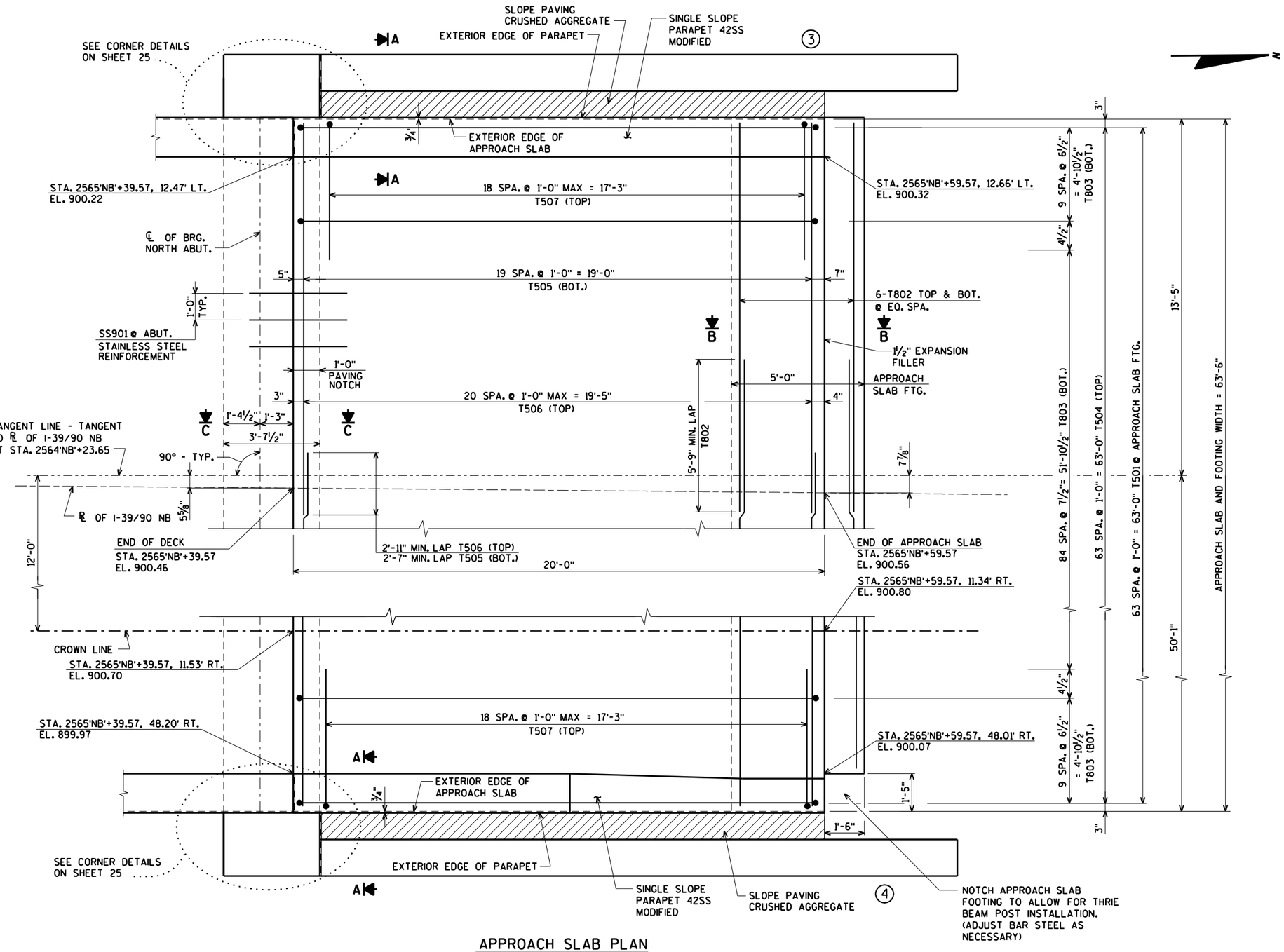
U:±41-0660.0X - IH-39 Dane Partners General Bridge Information±B-13-730 - I39_NB over USH 12&18 WB±bridge±B-13-730 appr slab.dgn

STATE PROJECT NUMBER

1007-12-78



APPROACH SLAB PLAN

FOR DETAILS OF SECTIONS A, B, AND C, SEE SHEET 28

WORK THIS SHEET WITH SHEET 28

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-730

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NORTH STRUCTURAL APPROACH SLAB

SHEET 27 OF 31
408

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AYRES ASSOCIATES
3433 Oakwood Hills Parkway
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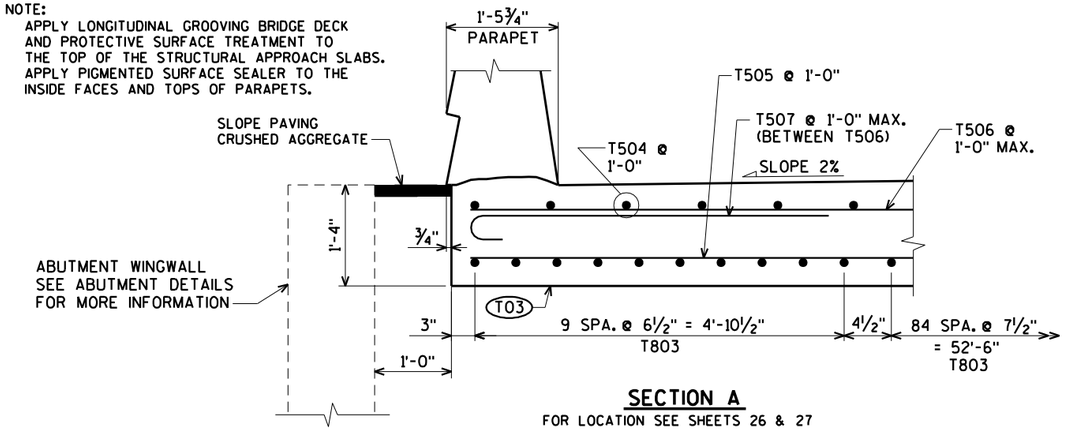
STATE PROJECT NUMBER
1007-12-78

NOTE:
APPLY LONGITUDINAL GROOVING BRIDGE DECK AND PROTECTIVE SURFACE TREATMENT TO THE TOP OF THE STRUCTURAL APPROACH SLABS. APPLY PIGMENTED SURFACE SEALER TO THE INSIDE FACES AND TOPS OF PARAPETS.



SECTION A

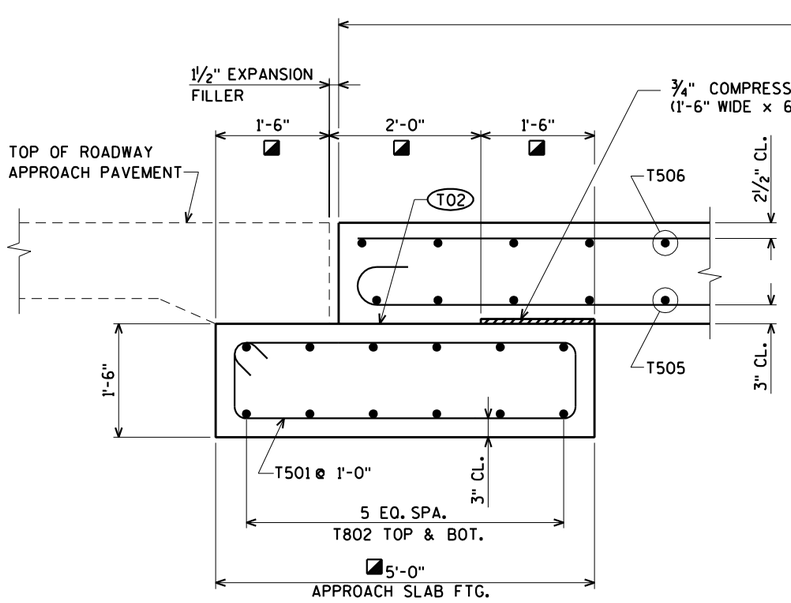
FOR LOCATION SEE SHEETS 26 & 27

BILL OF BARS

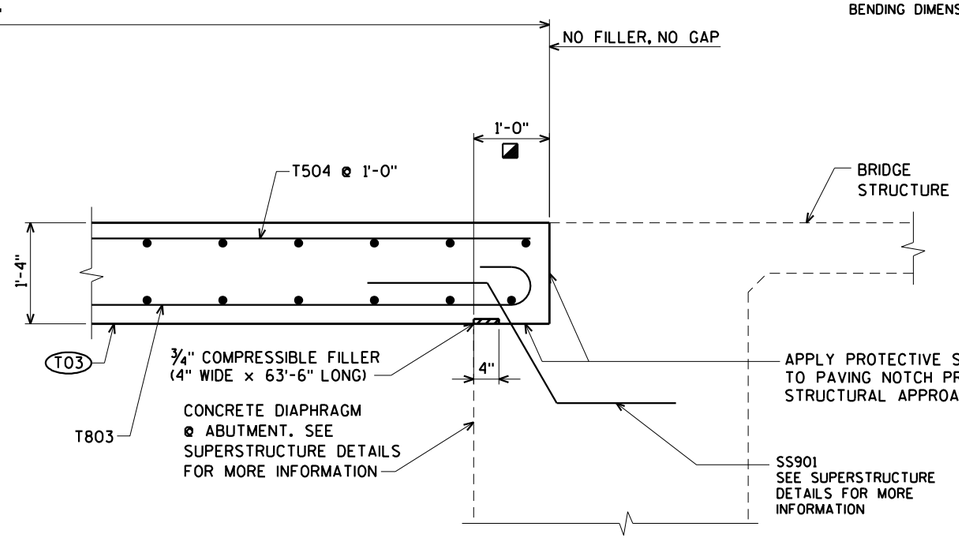
BAR NO.	COATED BAR	NO. REQ'D.	LENGTH	BENT BAR	BUNDLED BAR SERIES	1,090# STAINLESS STEEL (PER APPROACH SLAB) LOCATION
SS901		64	5-0	X		CONC. ABUT. DIAPH. TO APPROACH SLAB

BAR NO.	COATED BAR	NO. REQ'D.	LENGTH	BENT BAR	BUNDLED BAR SERIES	13,260# COATED (PER APPROACH SLAB) LOCATION
T501	X	64	12-2	X		APPROACH SLAB FTG. - STIRRUP
T802	X	24	34-6			APPROACH SLAB FTG. - TRANS.
T803	X	105	21-4	X		APPROACH SLAB - LONG. - BOT.
T504	X	64	19-6			APPROACH SLAB - LONG - TOP
T505	X	40	32-7			APPROACH SLAB - TRANS. - BOT.
T506	X	42	32-9			APPROACH SLAB - TRANS. - TOP
T507	X	38	4-1	X		APPROACH SLAB - TRANS. - TOP

BENDING DIMENSIONS ARE OUT TO OUT OF BARS.



SECTION B



SECTION C

SECTION THRU APPROACH SLAB

◪ MEASURED NORMAL TO ABUTMENT

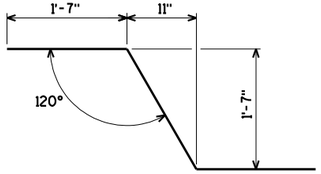
(T02) STEEL TROWEL TOP SURFACE OF FOOTING AND PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHYLENE SHEETS OVER THE ENTIRE TOP OF FOOTING.

(T03) PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHYLENE SHEETS OVER THE ENTIRE TOP OF SUBGRADE BENEATH SLAB.

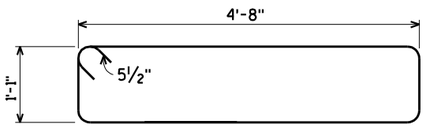
POLYETHYLENE SHEETS ARE INCLUDED WITH "HIGH PERFORMANCE CONCRETE (HPC) MASONRY STRUCTURES".

ALL STRUCTURAL APPROACH SLAB CONCRETE, EXCEPT FOR THE STRUCTURAL APPROACH SLAB FOOTING, PAID FOR UNDER "HIGH PERFORMANCE CONCRETE (HPC) MASONRY STRUCTURES". STRUCTURAL APPROACH SLAB FOOTING TO BE PAID UNDER "CONCRETE MASONRY BRIDGES".

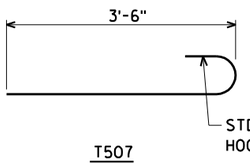
WORK THIS SHEET WITH SHEETS 26 & 27



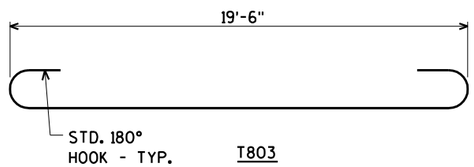
SS901



T501



T507



T803

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-730

DRAWN BY CLS | PLANS CK'D. CBM

STRUCTURAL APPROACH SLAB DETAILS

SHEET 28 OF 31
409

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
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www.AyresAssociates.com

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7/29/2019
PENTABLE:BRequ_shd_util.tbl

U:±41-0660.0X - IH-39 Dane Partners General Bridge Information±B-13-730 - 139_NB over USH 12&18 WB±bridge±B-13-730 appr slab.dgn

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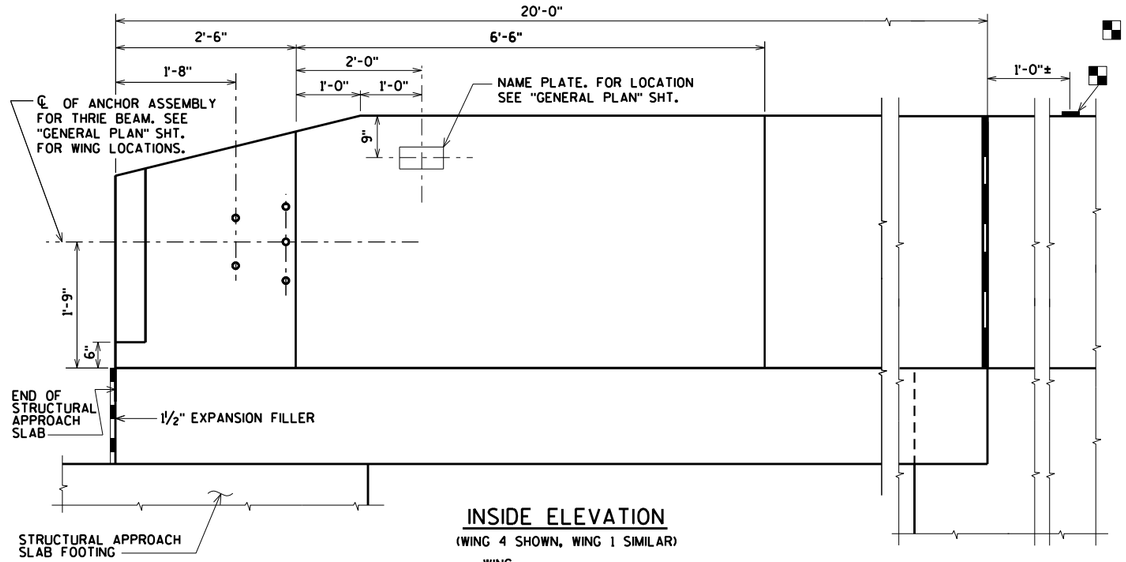
U:\41-0660.0X - IH-39 Dane Partners General Bridge Information\B-13-730 - I39_NB over USH 12&18 WB\bridge\B-13-730 para.dgn

STATE PROJECT NUMBER

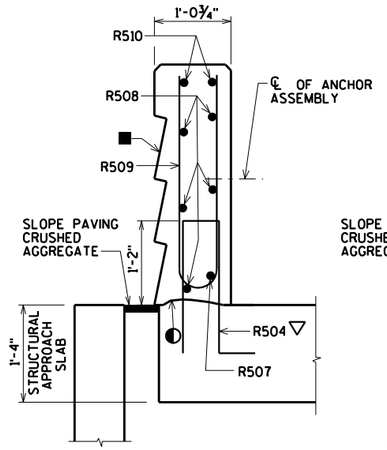
1007-12-78



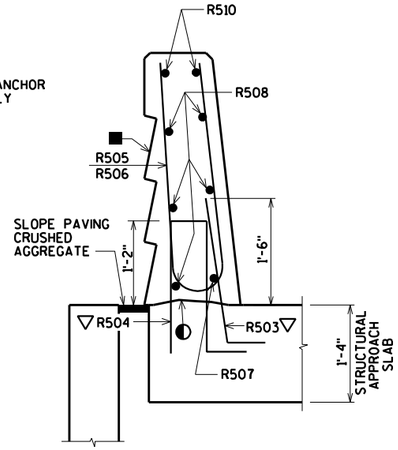
INSIDE ELEVATION

(WING 4 SHOWN, WING 1 SIMILAR)

■ BENCH MARK CAP (WHEN SUPPLIED) (NEAR WING 1)



SECTION A



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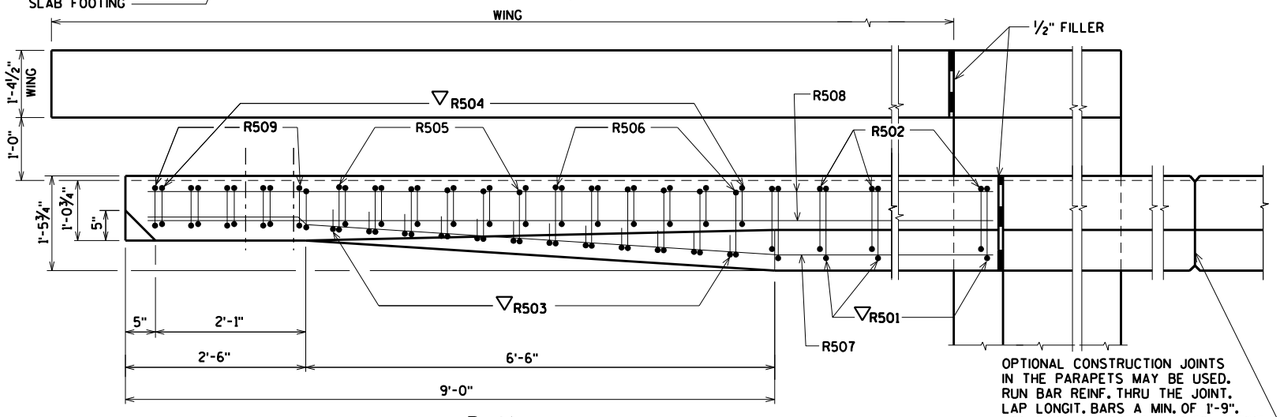
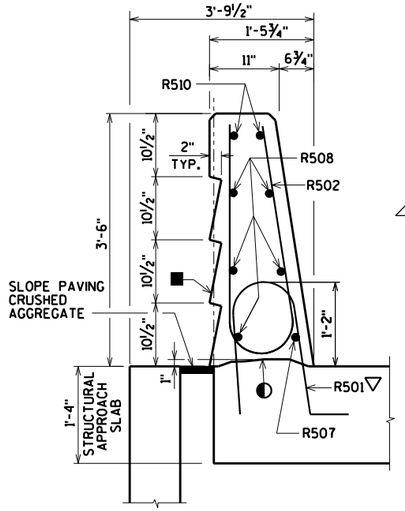


PLAN

(WING 4 SHOWN, WING 1 SIMILAR)

OPTIONAL CONSTRUCTION JOINTS IN THE PARAPETS MAY BE USED. RUN BAR REINF. THRU THE JOINT. LAP LONGIT. BARS A MIN. OF 1'-9". MIN. JOINT SPACING OF 80'-0". DEFINE CONST. JOINT WITH A ¾" 'V' GROOVE.



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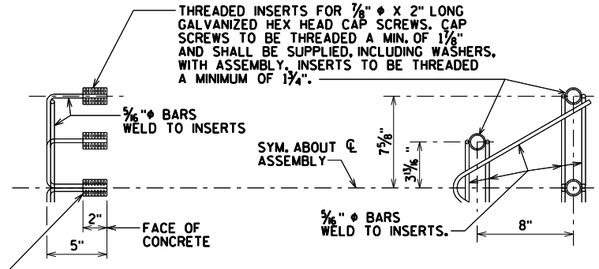
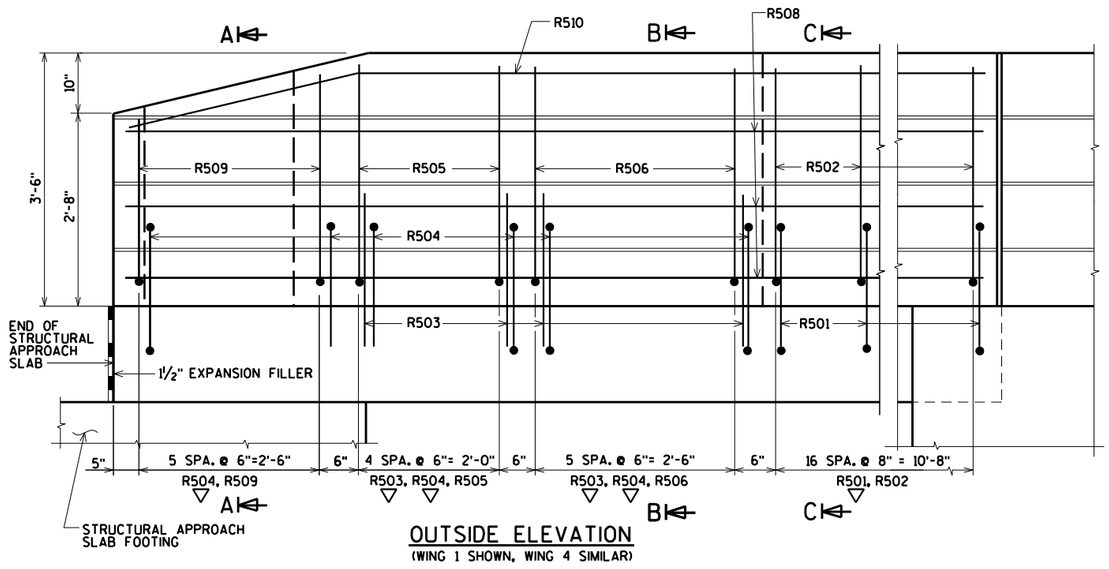


DETAIL OF ANCHOR ASSEMBLY

NOTE: HEX HEAD CAP SCREWS & WASHERS TO BE GALVANIZED IN ACCORDANCE WITH AASHTO M232 CLASS C.

ASSEMBLY SHALL BE BID ITEM "ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD", EACH.



OUTSIDE ELEVATION

(WING 1 SHOWN, WING 4 SIMILAR)

■ CONCRETE STAINING ON PARAPET (SEE SHEET 16 FOR INFORMATION)

◐ CONST. JOINT - STRIKE OFF AS SHOWN.

▽ R501, R503 AND R504 BARS TO BE TIED TO STRUCTURAL APPROACH SLAB STEEL BEFORE STRUCTURAL APPROACH SLAB IS POURED.

WORK THIS SHEET WITH SHEET 30.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-730

DRAWN BY CLS | PLANS CK'D. CBM

SINGLE SLOPE PARAPET 42SS MODIFIED

SHEET 29 OF 31
410

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

$PRFNAME$
U:±41-0660.0X - IH-39 Dane Partners General Bridge Information±B-13-730 - 139_NB over USH 12&18 WB±bridge±B-13-730 para.dgn

STATE PROJECT NUMBER
1007-12-78

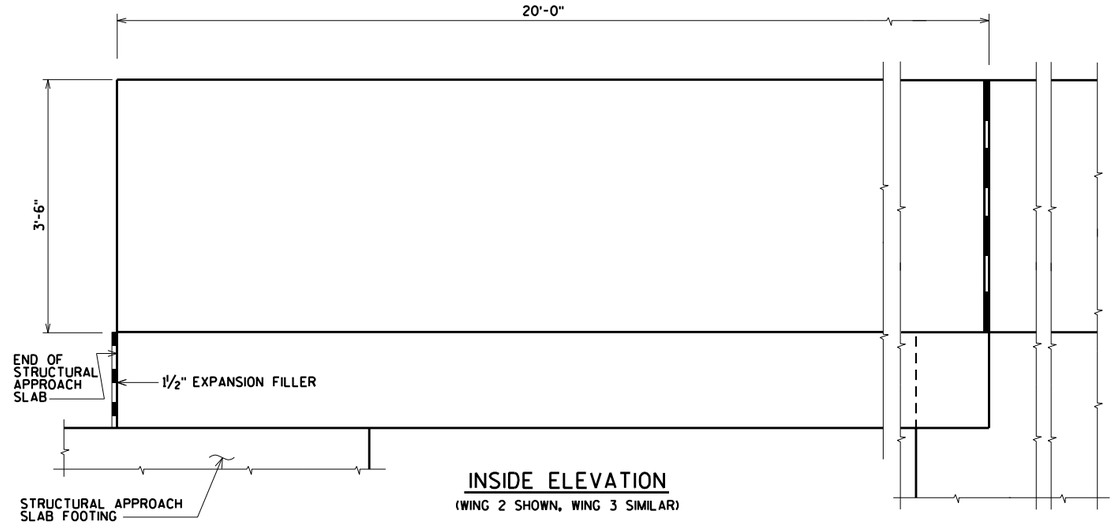
1.110" COATED SOUTH STRUCTURAL APPROACH SLAB
1.110" COATED NORTH STRUCTURAL APPROACH SLAB

BILL OF BARS

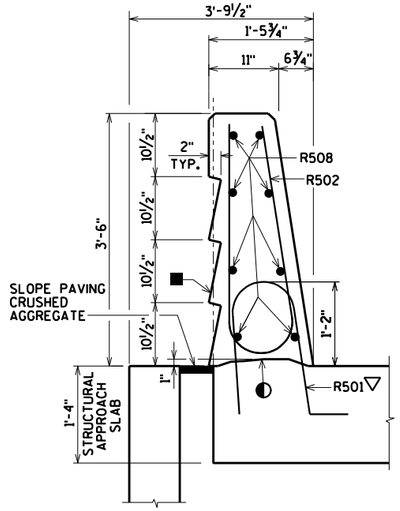
FOR STRUCTURAL APPROACH SLAB PARAPETS

BAR MARK	COAT	SOUTH STRUCT. APPR. SLAB	NORTH STRUCT. APPR. SLAB	LENGTH	BENT	BAR SERIES	LOCATION
R501	X	47	47	4-5	X		PARAPET VERT.
R502	X	47	47	6-8	X		PARAPET VERT.
R503	X	11	11	2-9	X		PARAPET VERT.
R504	X	17	17	5-4	X		PARAPET VERT.
R505	X	5	5	6-5	X		PARAPET VERT.
R506	X	6	6	6-6	X		PARAPET VERT.
R507	X	1	1	19-8	X		PARAPET HORIZ.
R508	X	13	13	19-8			PARAPET HORIZ.
R509	X	6	6	5-5	X	▲	PARAPET VERT.
R510	X	2	2	19-8	X		PARAPET HORIZ

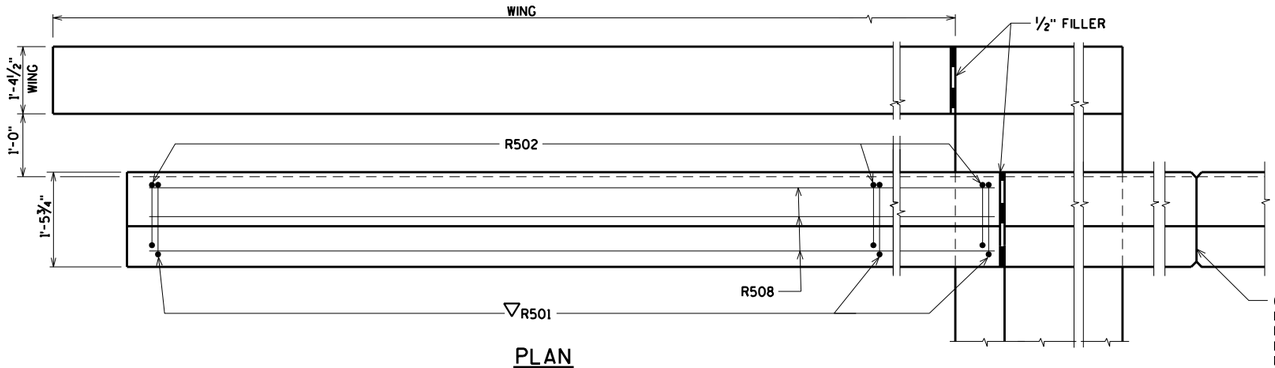
BENDING DIMENSIONS ARE OUT TO OUT OF BARS.



INSIDE ELEVATION
(WING 2 SHOWN, WING 3 SIMILAR)

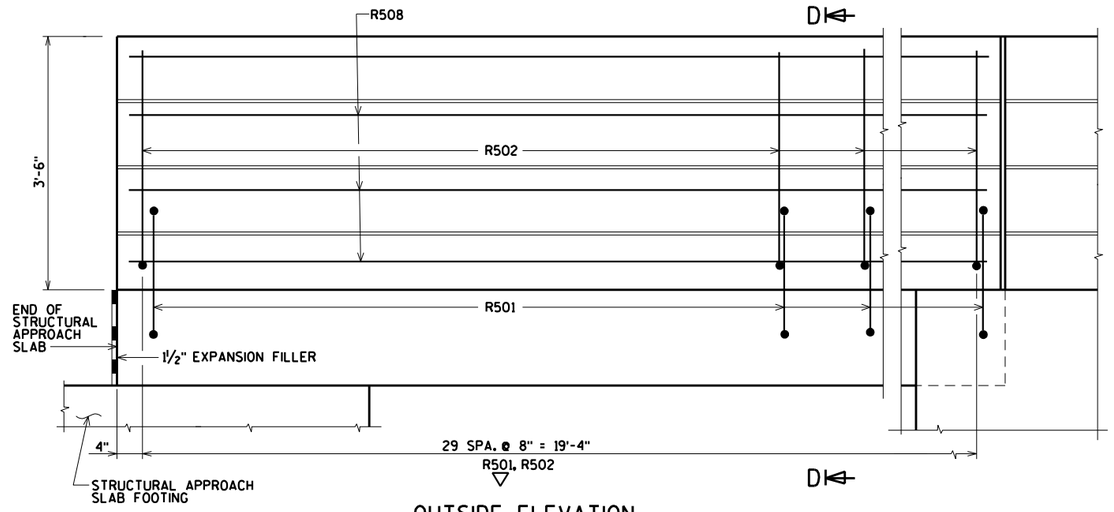


SECTION D

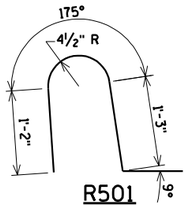


PLAN
(WING 2 SHOWN, WING 3 SIMILAR)

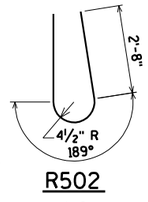
OPTIONAL CONSTRUCTION JOINTS IN THE PARAPETS MAY BE USED. RUN BAR REINF. THRU THE JOINT. LAP LONGIT. BARS A MIN. OF 1'-9". MIN. JOINT SPACING OF 80'-0". DEFINE CONST. JOINT WITH A ¾" 'V' GROOVE.



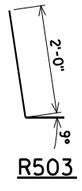
OUTSIDE ELEVATION
(WING 3 SHOWN, WING 2 SIMILAR)



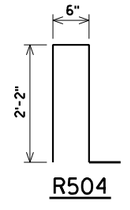
R501



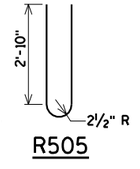
R502



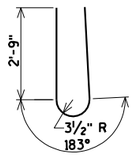
R503



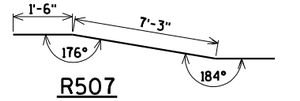
R504



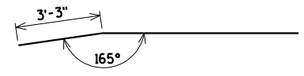
R505



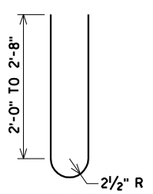
R506



R507



R510



R509

BAR SERIES TABLE

BAR MARK	NO REQ'D.	LENGTH
R509	2 SERIES OF 6	4'-9" TO 6'-1"

BUNDLE AND TAG EACH SERIES SEPARATELY.

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

■ CONCRETE STAINING ON PARAPET (SEE SHEET 16 FOR INFORMATION)

◐ CONST. JOINT - STRIKE OFF AS SHOWN.

▽ R501, R503 AND R504 BARS TO BE TIED TO STRUCTURAL APPROACH SLAB STEEL BEFORE STRUCTURAL APPROACH SLAB IS POURED.

WORK THIS SHEET WITH SHEET 29.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-730

DRAWN BY CLS | PLANS CK'D. CBM

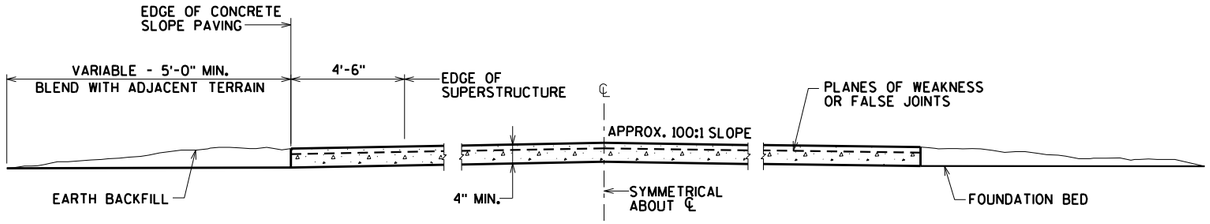
SINGLE SLOPE PARAPET 42SS MODIFIED

SHEET 30 OF 31
411

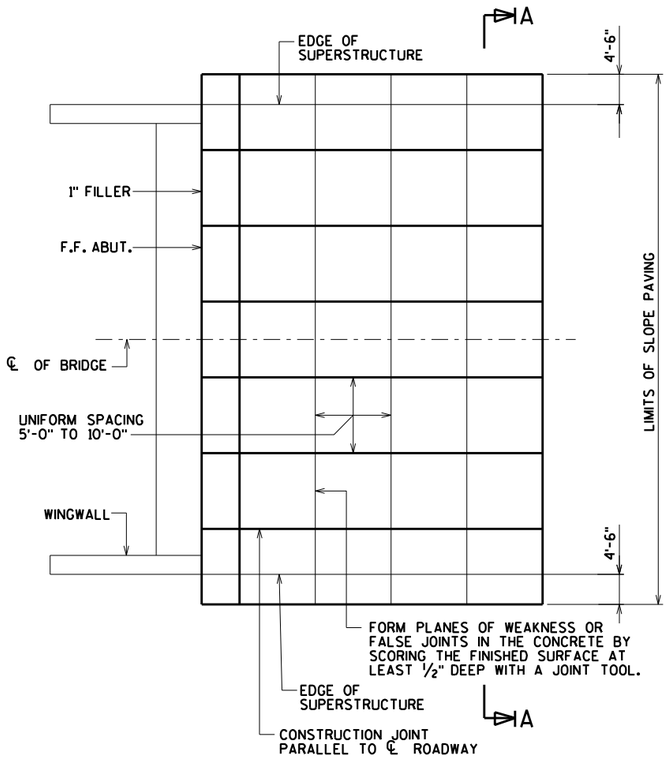
ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

PENTABLE:BRequ_shd_util.tbl

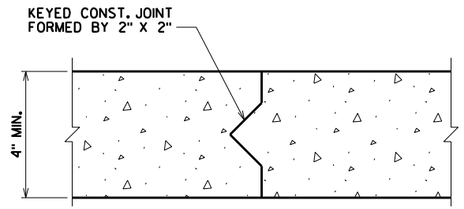
$PRFNAME$
U:\41-0660.0X - IH-39 Dane Partners General Bridge Information\B-13-730 - I39_NB over USH 12&18 WB\bridge\B-13-730 slope pav.dgn



SECTION A-A



PLAN



CONSTRUCTION JOINT DETAIL

F.F. DENOTES FRONT FACE

NOTE

BID ITEM SHALL BE "SLOPE PAVING CONCRETE"

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-730

DRAWN BY CLS | PLANS CK'D. CBM

SLOPE PAVING CONCRETE

SHEET 31 OF 31
412

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
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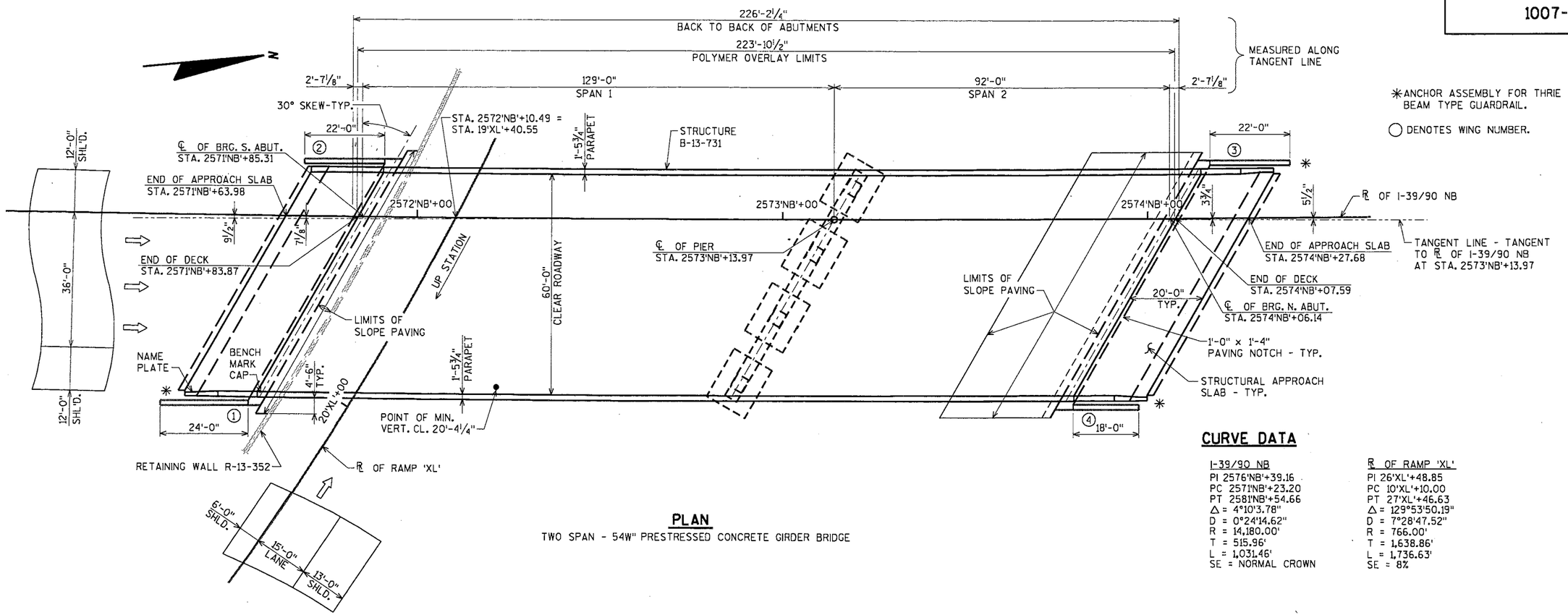
U:\41-0660.0X - I-39 Dane Partners General Bridge Information\B-13-731 - I39_NB over Off Ramp:

DATE:
DATE:
DATE:
CHECKED BY:
BACK CHECKED BY:
CORRECTED BY:

STATE PROJECT NUMBER
1007-12-78

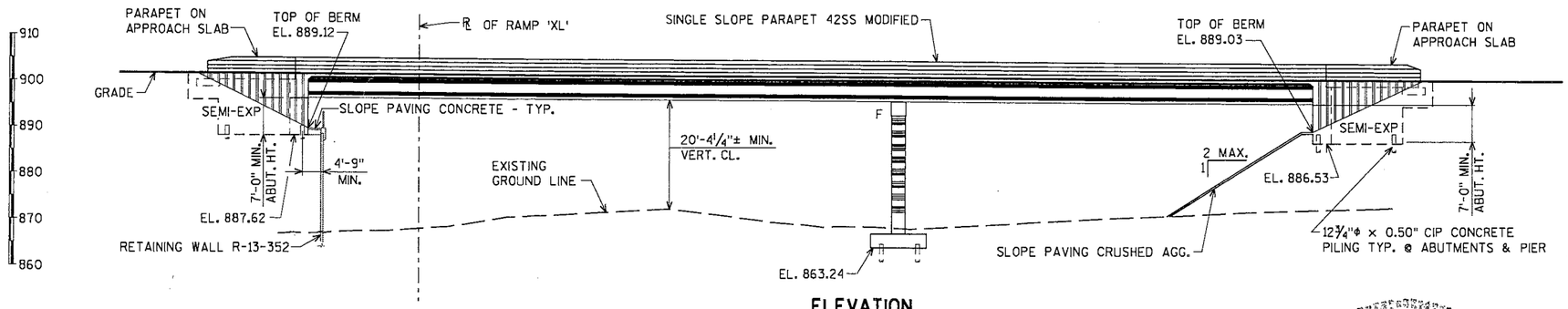


PLAN

TWO SPAN - 54W" PRESTRESSED CONCRETE GIRDER BRIDGE

CURVE DATA

I-39/90 NB	℄ OF RAMP 'XL'
PI 2576'NB'+39.16	PI 26'XL'+48.85
PC 2571'NB'+23.20	PC 10'XL'+10.00
PT 2581'NB'+54.66	PT 27'XL'+46.63
△ = 4°10'3.78"	△ = 129°53'50.19"
D = 0°24'14.62"	D = 7°28'47.52"
R = 14,180.00'	R = 766.00'
T = 515.96'	T = 1,638.86'
L = 1,031.46'	L = 1,736.63'
SE = NORMAL CROWN	SE = 8%



ELEVATION

(NORMAL TO ℄ OF RAMP TO USH 12/18 WB ('XL'))

FOR TYPICAL SECTIONS AND DESIGN DATA SEE SHEET 2

LIST OF DRAWINGS

1. GENERAL PLAN
2. TYPICAL SECTIONS AND DESIGN DATA
3. QUANTITIES AND GENERAL NOTES
4. TYPICAL SECTIONS AND PROFILES
5. SUBSURFACE EXPLORATION
6. SOUTH ABUTMENT
7. SOUTH ABUTMENT PILE LAYOUT
8. SOUTH ABUTMENT WING 1 DETAILS
9. SOUTH ABUTMENT WING 2 DETAILS
10. SOUTH ABUTMENT DETAILS
11. NORTH ABUTMENT
12. NORTH ABUTMENT PILE LAYOUT
13. NORTH ABUTMENT WING 3 DETAILS
14. NORTH ABUTMENT WING 4 DETAILS
15. NORTH ABUTMENT DETAILS
16. ABUTMENT RUSTICATION AND CONCRETE STAINING DETAILS
17. ALTERNATE CONSTRUCTION JOINT
18. PIER
19. PIER FOOTINGS
20. PIER COLUMNS AND CONCRETE STAINING
21. PIER CAP
22. PIER DETAILS
23. 54W" PRESTRESSED GIRDER DETAILS
24. 54W" PRESTRESSED GIRDER DETAILS
25. STEEL INTER. DIAGHRAGM DETAILS
26. SUPERSTRUCTURE
27. SUPERSTRUCTURE DETAILS
28. SUPERSTRUCTURE GIRDER LAYOUT
29. SUPERSTRUCTURE PLAN
30. TRANSVERSE DECK STEEL LAYOUT
31. SUPERSTRUCTURE DIAPHRAGM DETAILS
32. SUPERSTRUCTURE CONDUIT DETAILS
33. SUPERSTRUCTURE CORNER DETAILS & BILL OF BARS
34. SOUTH STRUCTURAL APPROACH SLAB
35. NORTH STRUCTURAL APPROACH SLAB
36. STRUCTURAL APPROACH SLAB DETAILS
37. SINGLE SLOPE PARAPET 42SS MODIFIED
38. SINGLE SLOPE PARAPET 42SS MODIFIED
39. SLOPE PAVING CONCRETE
40. SLOPE PAVING CRUSHED AGGREGATE

WISCONSIN
CHRISTOPHER B. McMAHON
E-29454
EAU CLAIRE
WI
PROFESSIONAL ENGINEER
8/27/19

BRIDGE OFFICE CONTACT:
WILLIAM DREHER
(608)-266-8489

CONSULTANT CONTACT:
CHRIS MCMAHON
(715)-834-3161

NO.	DATE	REVISION	BY

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher SDR 08/29/19
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-13-731

I-39/90 NB OVER RAMP TO USH-12/18 WB

COUNTY	TOWN/~~CITY/VILLAGE~~
DANE	BLOOMING GROVE

DESIGN SPEC.
AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
AEB	ZSS	JLB/CLP	CBM

GENERAL PLAN

SHT 413 OF 40

I.D.

DATE:

8/20/2019

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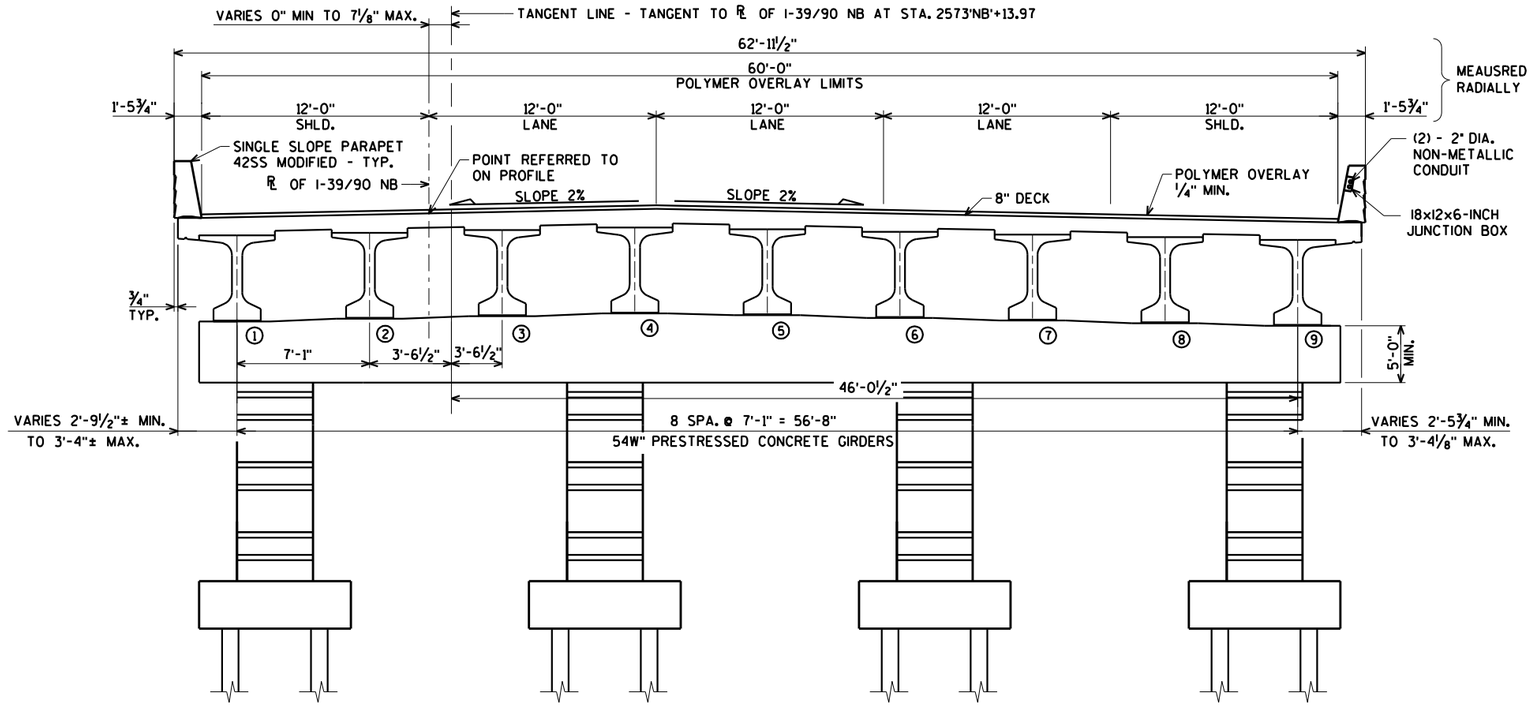
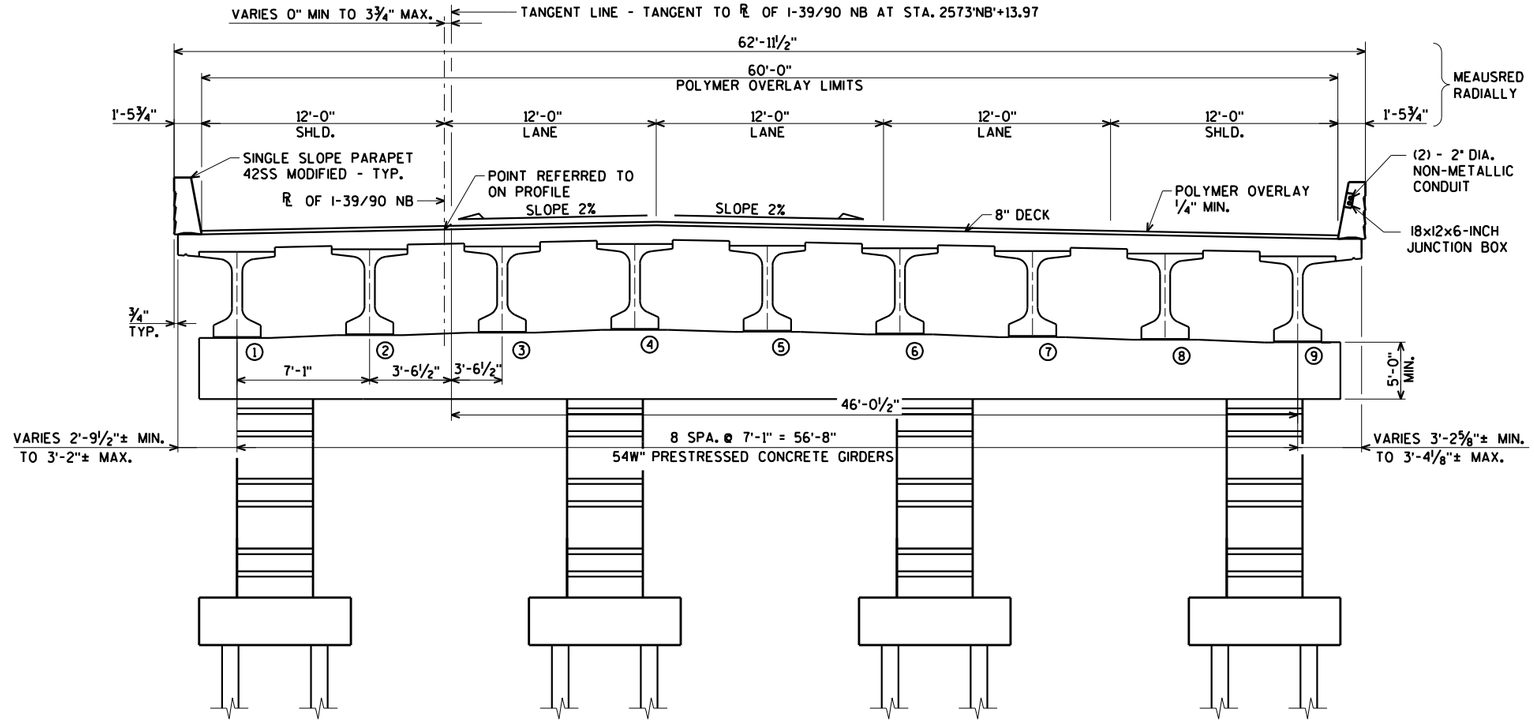


TYPICAL SECTION THRU BRIDGE (SPAN 1)
(LOOKING NORTH)



TYPICAL SECTION THRU BRIDGE (SPAN 2)
(LOOKING NORTH)

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HL-93
INVENTORY RATING FACTOR: 1.14
OPERATING RATING FACTOR: 1.74
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV) = 250 KIPS

STRUCTURE IS DESIGNED FOR A FUTURE WEARING SURFACE OF 20 #/S.F.

RATING BASED ON PLACEMENT OF 5 p.s.f. POLYMER OVERLAY UNDER THIS CONTRACT.

MATERIAL PROPERTIES:

CONCRETE MASONRY	SUPERSTRUCTURE (HPC DECK, PARAPET, DIAPHRAGM, APPROACH SLAB)	f'_c =	4,000 p.s.i.
	ALL OTHER (INCL. APPROACH SLAB FOOTING)	f'_c =	3,500 p.s.i.
HIGH STRENGTH BAR STEEL REINFORCEMENT (GRADE 60)		f_y =	60,000 p.s.i.
STRUCTURAL CARBON STEEL ASTM A709 (GRADE 36)		f_y =	36,000 p.s.i.
54W" PRESTRESSED GIRDER CONCRETE MASONRY		f'_c =	8,000 p.s.i.
STRANDS - 0.6" DIA. WITH ULTIMATE TENSILE STRENGTH OF		=	270,000 p.s.i.
STEEL PILING SHELLS ASTM A252 (GRADE 3)		f_y =	45,000 p.s.i.

FOUNDATION DATA:

SOUTH ABUTMENT TO BE SUPPORTED ON 12¾" ϕ x 0.50" CIP CONCRETE PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 210 TONS ‡ PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED LENGTH 100'-0".

NORTH ABUTMENT TO BE SUPPORTED ON 12¾" ϕ x 0.50" CIP CONCRETE PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 210 TONS ‡ PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED LENGTH 70'-0".

PIER TO BE SUPPORTED ON 12¾" ϕ x 0.50" CIP CONCRETE PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 210 TONS ‡ PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED LENGTH 70'-0".

‡ 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 DRIVEN PILE CAPACITY.

TRAFFIC DATA:

I-39/90 NB	EXISTING OFF-RAMP TO USH-12/18 WB
A.A.D.T. = 60,400 (2020)	A.A.D.T. = 10,000 (2020)
A.A.D.T. = 72,000 (2040)	A.A.D.T. = 11,100 (2040)
R.D.S. = 70 M.P.H.	R.D.S. = 50 M.P.H.

STATE PROJECT NUMBER

1007-12-78

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-731

DRAWN BY JLB/CLP | PLANS CK'D. CBM

TYPICAL SECTIONS AND DESIGN DATA

SHEET 2 OF 40
414

ORIGINAL PLANS PREPARED BY
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3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

8/20/2019

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$PRFNAME$
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STATE PROJECT NUMBER

1007-12-78

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	S. STR. APR. SLAB	S. ABUT.	PIER	N. ABUT.	N. STR. APR. SLAB	SUPER.	TOTAL
206.1000.702	EXCAVATION FOR STRUCTURES BRIDGES B-13-731	LS	-----	-----	-----	-----	-----	-----	1
210.1500	BACKFILL STRUCTURE TYPE A	TON	-----	515	-----	520	-----	-----	1,035
305.0120	BASE AGGREGATE DENSE 1¼-INCH	TON	245	-----	-----	-----	250	-----	495
501.1000.S	ICE HOT WEATHER CONCRETING	LB	660	880	1,665	825	660	4,645	9,335
502.0100	CONCRETE MASONRY BRIDGES	CY	20	117	222	110	20	-----	489
502.3200	PROTECTIVE SURFACE TREATMENT	SY	155	-----	-----	-----	155	-----	310
502.3210	PIGMENTED SURFACE SEALER	SY	20	-----	-----	-----	20	225	265
503.0155	PRESTRESSED GIRDER TYPE I 54W-INCH	LF	-----	-----	-----	-----	-----	1,996	1,996
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	-----	6,650	7,400	6,400	-----	-----	20,450
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	15,100	4,480	30,460	3,570	15,190	128,550	197,350
505.0800.S	BAR STEEL REINFORCEMENT HS STAINLESS STRUCTURES	LB	1,070	-----	-----	-----	1,070	-----	2,140
506.2605	BEARING PADS ELASTOMERIC NON-LAMINATED	EACH	-----	9	18	9	-----	-----	36
506.4000.702	STEEL DIAPHRAGMS B-13-731	EACH	-----	-----	-----	-----	-----	32	32
509.5100.S	POLYMER OVERLAY	SY	-----	-----	-----	-----	-----	1,495	1,495
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	-----	21	-----	21	-----	-----	42
517.1010.S.702	CONCRETE STAINING B-13-731	SF	140	865	2,050	820	140	5,305	9,320
604.0400	SLOPE PAVING CONCRETE	SY	-----	30	-----	-----	-----	-----	30
604.0500	SLOPE PAVING CRUSHED AGGREGATE	SY	5	-----	-----	375	5	-----	385
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	-----	-----	-----	130	-----	-----	130
614.0150	ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	1	-----	-----	-----	2	-----	3
645.0111	GEOTEXTILE TYPE DF SCHEDULE A	SY	-----	-----	-----	75	-----	-----	75
652.0125	CONDUIT RIGID METALLIC 2-INCH	LF	6	-----	-----	-----	6	13	25
652.0225	CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH	LF	65	-----	-----	-----	65	435	565
653.0222	JUNCTION BOXES 18 X 12 X 6-INCH	EACH	-----	-----	-----	-----	-----	2	2
SPV.0035.700	HIGH PERFORMANCE CONCRETE (HPC) MASONRY STRUCTURES	CY	68	-----	-----	-----	68	619	755
SPV.0090.700	PILING CIP CONCRETE 12¾ X 0.50-INCH	LF	-----	1,900	5,600	1,120	-----	-----	8,620
SPV.0165.700	LONGITUDINAL GROOVING BRIDGE DECK	SF	1,195	-----	-----	-----	1,205	-----	2,400
	NON-BID ITEMS	SIZE	-----	-----	-----	-----	-----	-----	½" & ¾"
	FILLER								

⌖ HIGH PERFORMANCE CONCRETE (HPC) MASONRY STRUCTURES SHALL INCLUDE ALL SUPERSTRUCTURE CONCRETE AND ALL STRUCTURAL APPROACH SLAB CONCRETE, EXCEPT THE STRUCTURAL APPROACH SLAB FOOTING CONCRETE.

● PILING TO BE ASTM A252 (GRADE 3) WITH A fy = 45,000 p.s.i.

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

THE FIRST DIGIT OF A THREE DIGIT BAR NO. OR THE FIRST TWO DIGITS OF A FOUR DIGIT BAR NO. SIGNIFIES THE BAR SIZE.

JOINT FILLER SHALL CONFORM TO THE REQUIREMENTS OF A.A.S.H.T.O. DESIGNATION M 153, TYPE I, II, OR III OR A.A.S.H.T.O. DESIGNATION M 213.

THE EXISTING GROUNDLINE SHALL BE THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES BRIDGES B-13-731".

AT THE BACKFACE OF ABUTMENTS ALL VOLUME WHICH CANNOT BE PLACED BEFORE ABUTMENT CONSTRUCTION AND IS NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH BACKFILL STRUCTURE TYPE A.

THE BACKFILL QUANTITIES ARE BASED ON THE PAY LIMITS SHOWN ON THE PLANS AND MAY NOT REFLECT ACTUAL PLACED QUANTITIES. "BACKFILL STRUCTURE TYPE A" REQUIRED DIRECTLY BEHIND ABUTMENTS AND ABUTMENT WINGS FOR 3 FEET. BACKFILL PLACED BEYOND PAY LIMITS OR EXCEEDING PLAN QUANTITIES SHALL BE INCIDENTAL TO EXCAVATION FOR STRUCTURES.

EXCAVATION BELOW THE ABUTMENT AND ABUTMENT BEDDING MATERIALS REQUIRES ENGINEER APPROVAL.

THE HAUNCH CONCRETE QUANTITY IS BASED ON THE AVERAGE HAUNCH SHOWN ON THE PRESTRESSED GIRDER DETAILS SHEET.

BEVEL EXPOSED EDGES OF CONCRETE ¾" UNLESS OTHERWISE NOTED.

POLYMER OVERLAY AND PIGMENTED SURFACE SEALER IS TO BE APPLIED AS SHOWN IN DETAIL ON SHEET 3.

ELASTOMERIC BEARING PADS NEED NOT BE INDIVIDUALLY MOLDED PROVIDED THE CUT EDGES ARE SMOOTH AND TRUE.

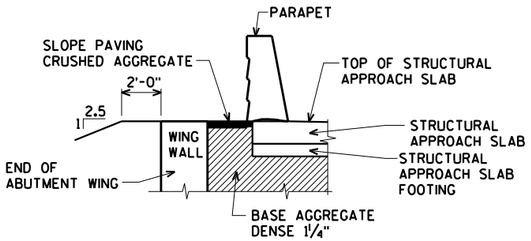
THE RUSTICATIONS IN THE ABUTMENTS AND PIER ARE INCLUDED IN THE BID ITEM "CONCRETE MASONRY BRIDGES".

THE RUSTICATIONS AT THE BACK FACE OF THE PARAPETS ARE INCLUDED IN THE BID ITEM "HIGH PERFORMANCE CONCRETE (HPC) MASONRY STRUCTURES"

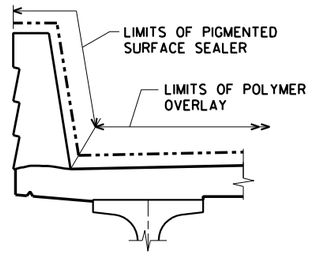
THE SLOPE OF THE FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH SLOPE PAVING MATERIAL TO THE EXTENT SHOWN ON THE GENERAL PLAN SHEET AND IN THE ABUTMENT DETAILS.

DECK SURFACE PREPARATION IS INCLUDED IN THE BID ITEM "POLYMER OVERLAY".

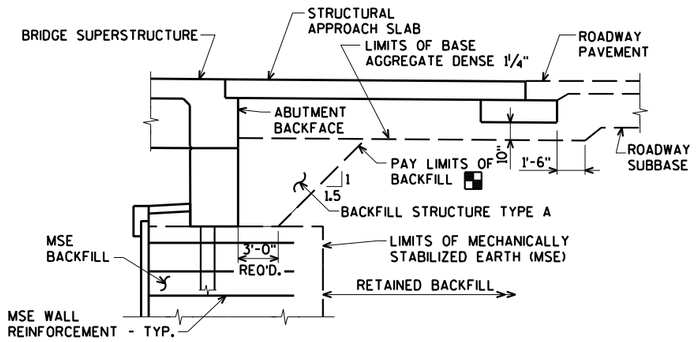
PROTECTIVE SURFACE TREATMENT TO BE APPLIED ONLY TO THE STRUCTURAL APPROACH SLABS AND THE PAVING NOTCHES.



TYPICAL FILL SECTION AT WING TIPS

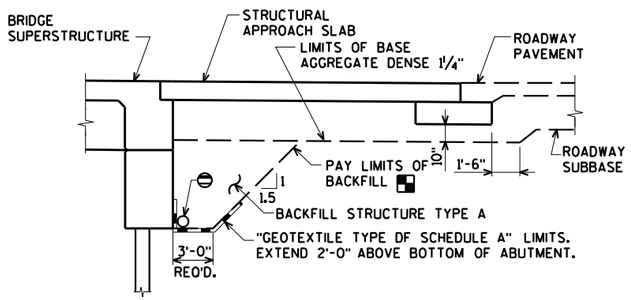


POLYMER OVERLAY AND PIGMENTED SURFACE SEALER DETAILS



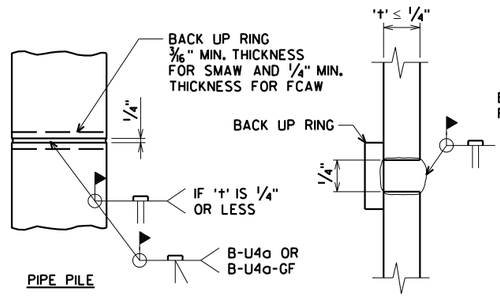
BACKFILL STRUCTURE LIMITS SOUTH ABUTMENT

■ BACKFILL PAY LIMITS. BACKFILL BEYOND BACKFILL PAY LIMITS SHALL BE INCLUDED WITH EXCAVATION FOR STRUCTURES. LIMITS OF EXCAVATION SHALL BE DETERMINED BY THE CONTRACTOR.



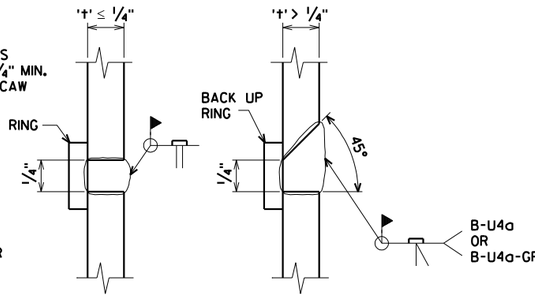
BACKFILL STRUCTURE LIMITS NORTH ABUTMENT

⊖ PIPE UNDERDRAIN WRAPPED 6-INCH. SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN AS DETAILED ON SHEET 15.

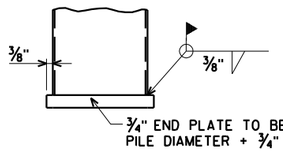


PILE SPLICE DETAIL

CAST-IN-PLACE PILE SHELL MATERIAL SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.



CIP PILE WELD DETAIL



END PLATE DETAIL FOR CIP PILING

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STRUCTURE B-13-731

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QUANTITIES AND GENERAL NOTES

SHEET 3 OF 40
415

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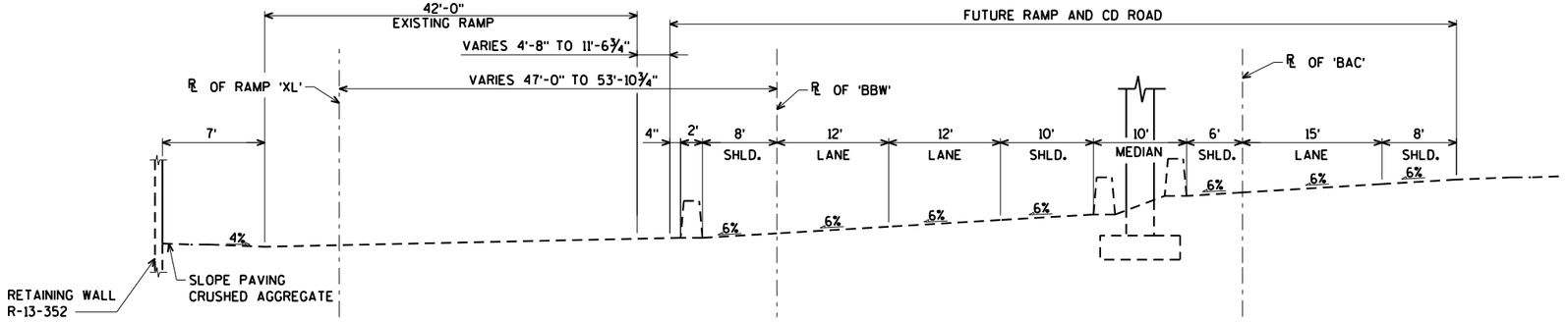
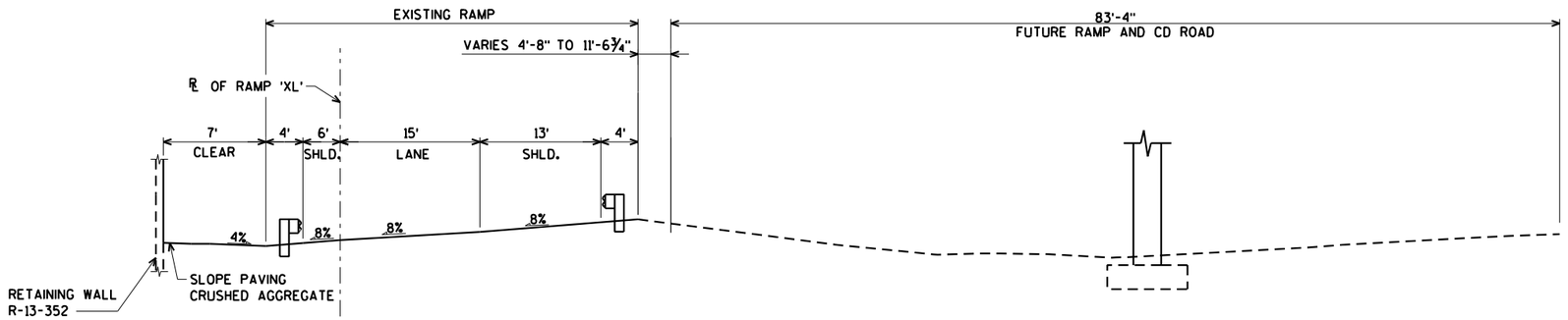


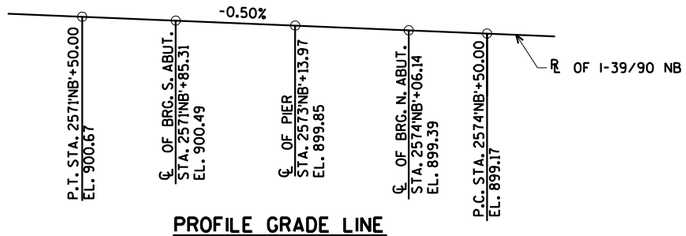
POTENTIAL FINISHED TYPICAL SECTION OF RAMP TO USH 12/18 WB AND CD ROAD

(LOOKING WEST)

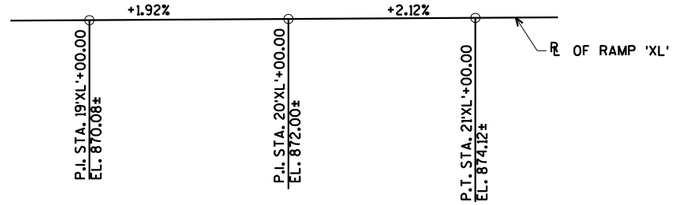


TYPICAL EXISTING FINISHED SECTION OF RAMP TO USH 12/18 WB ('XL')

(LOOKING WEST)



PROFILE GRADE LINE
(℄ OF I-39/90 NB)



PROFILE GRADE LINE
(℄ OF RAMP 'XL')

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STRUCTURE B-13-731

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TYPICAL SECTIONS AND PROFILES

SHEET 4 OF 40
416

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$PRFNAME$
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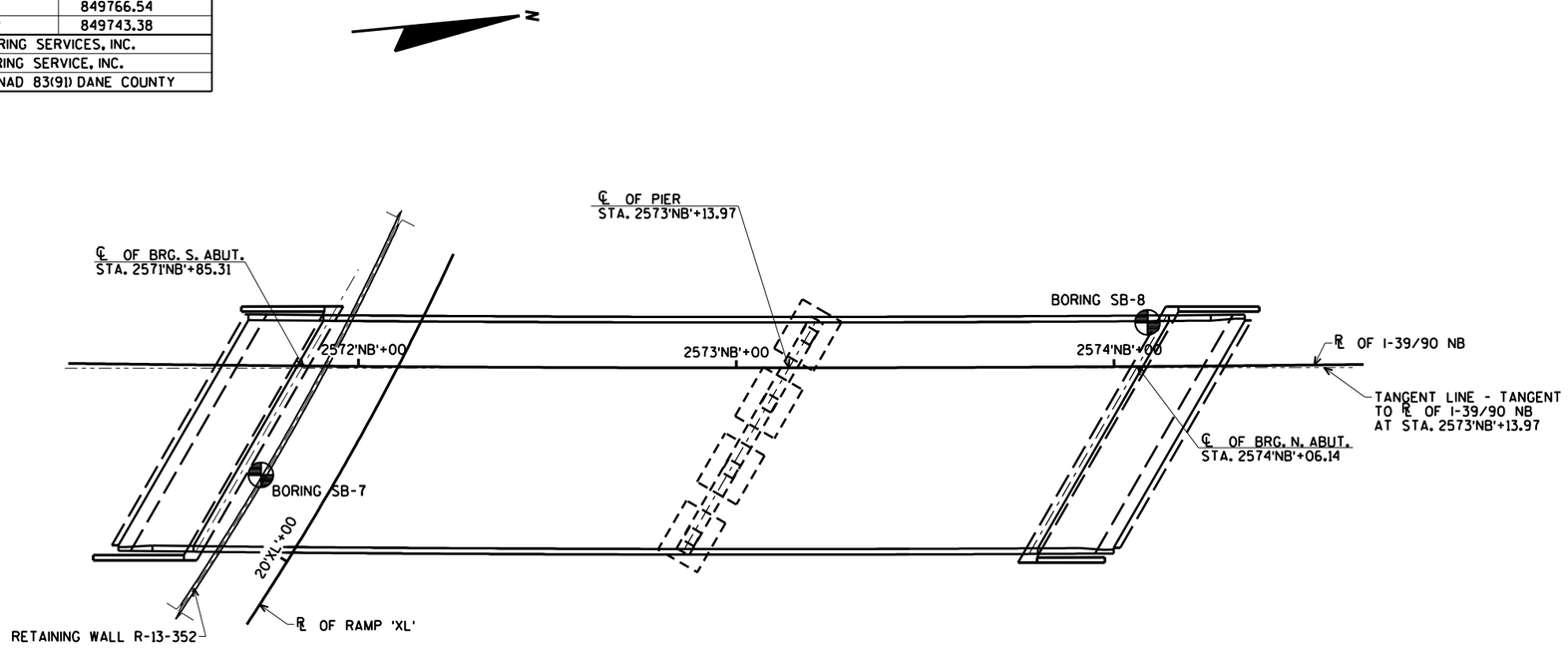
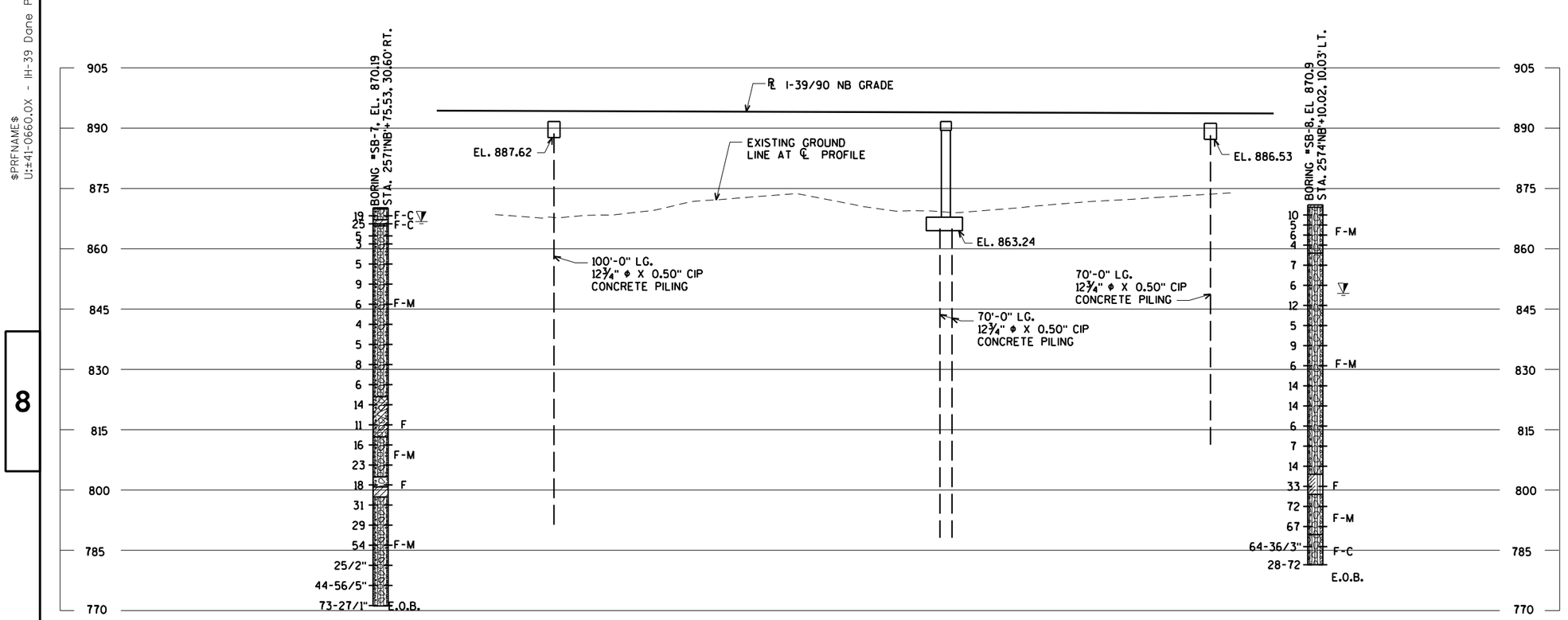
BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
SB-7	JANUARY 10, 2019	473463.30	849766.54
SB-8	JANUARY 9, 2019	473700.32	849743.38
BORINGS COMPLETED BY: SOILS & ENGINEERING SERVICES, INC.			
REPORT COMPLETED BY: SOILS & ENGINEERING SERVICE, INC.			
ALL COORDINATES REFERENCED TO WCCS NAD 83(91) DANE COUNTY			





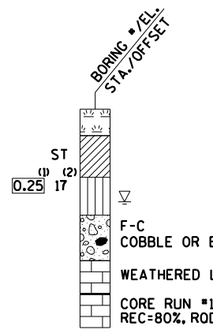
STATE PROJECT NUMBER

1007-12-78

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.

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STRUCTURE B-13-731

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SUBSURFACE EXPLORATION

SHEET 5 OF 40
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STATE PROJECT NUMBER

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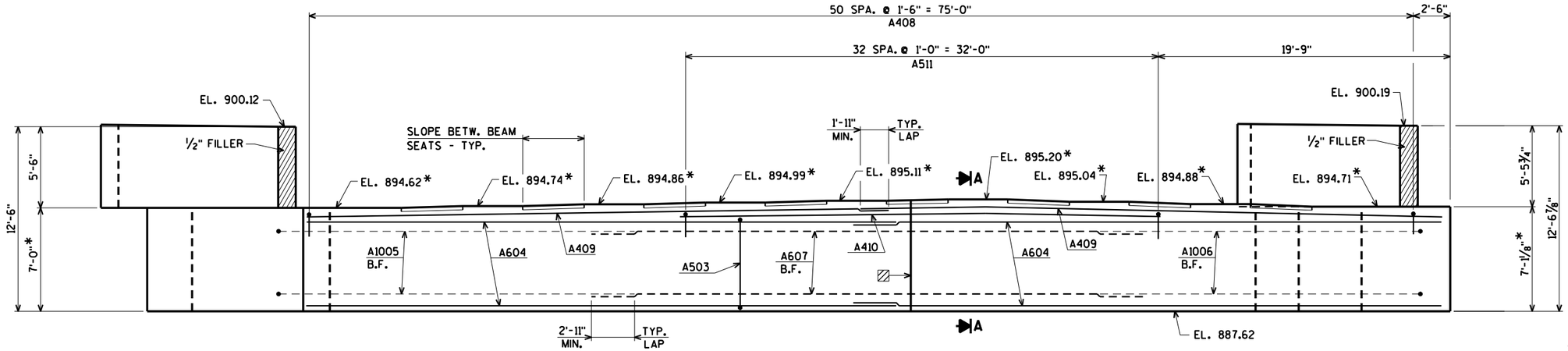
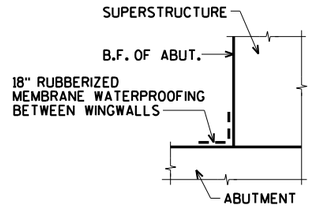
NOTE: SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE.)

*ELEVATIONS AND DIMENSIONS TAKEN AT ℄ OF BRG. & PILES S. ABUT.

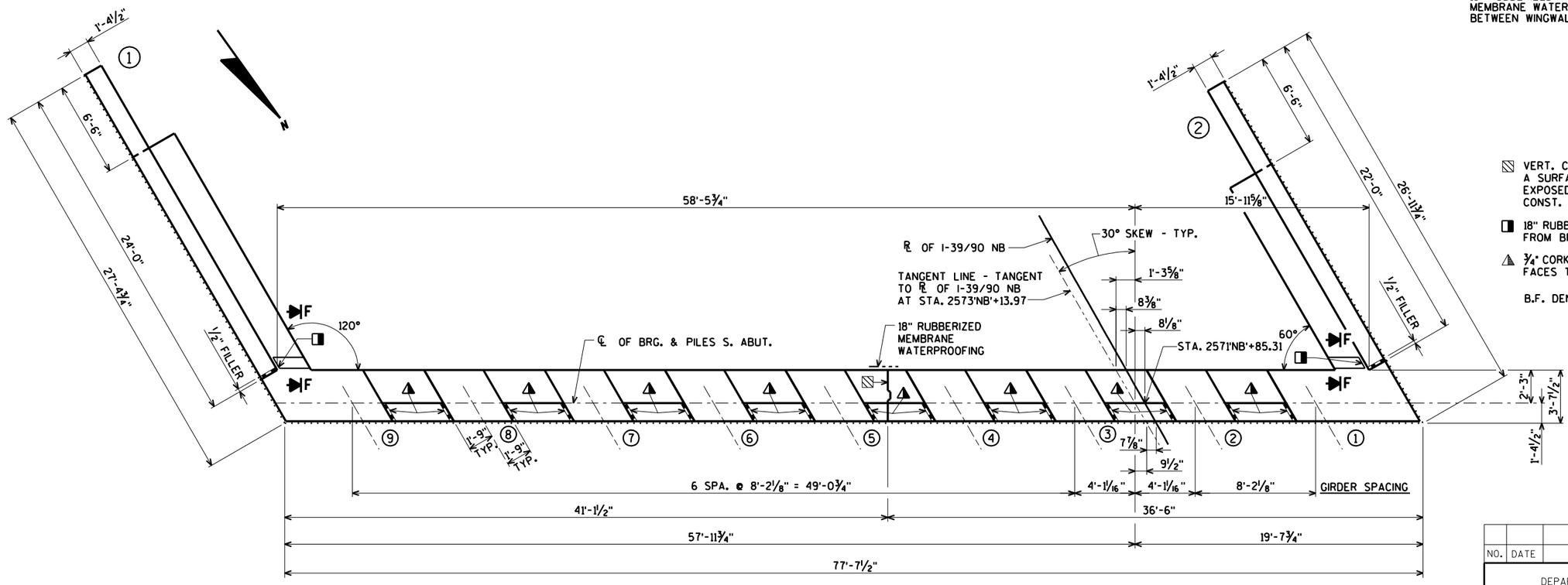


ELEVATION
(LOOKING SOUTH)

FOR SECTION A SEE SHEET 10



SECTION F



PLAN

▨ VERT. CONST. JT. - KEYWAY FORMED BY A SURFACED BEVELED 2" x 8". BEVEL EXPOSED EDGES ¾". FOR ALTERNATE CONST. JT. DETAILS SEE SHEET 17.

▮ 18" RUBBERIZED MEMBRANE WATERPROOFING FROM BRIDGE SEAT TO TOP OF WING.

▲ ¾" CORK FILLER ON VERTICAL BEAM SEAT FACES THAT RUN PARALLEL WITH GIRDER.

B.F. DENOTES BACK FACE

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STRUCTURE B-13-731

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SOUTH ABUTMENT

SHEET 6 OF 40
418

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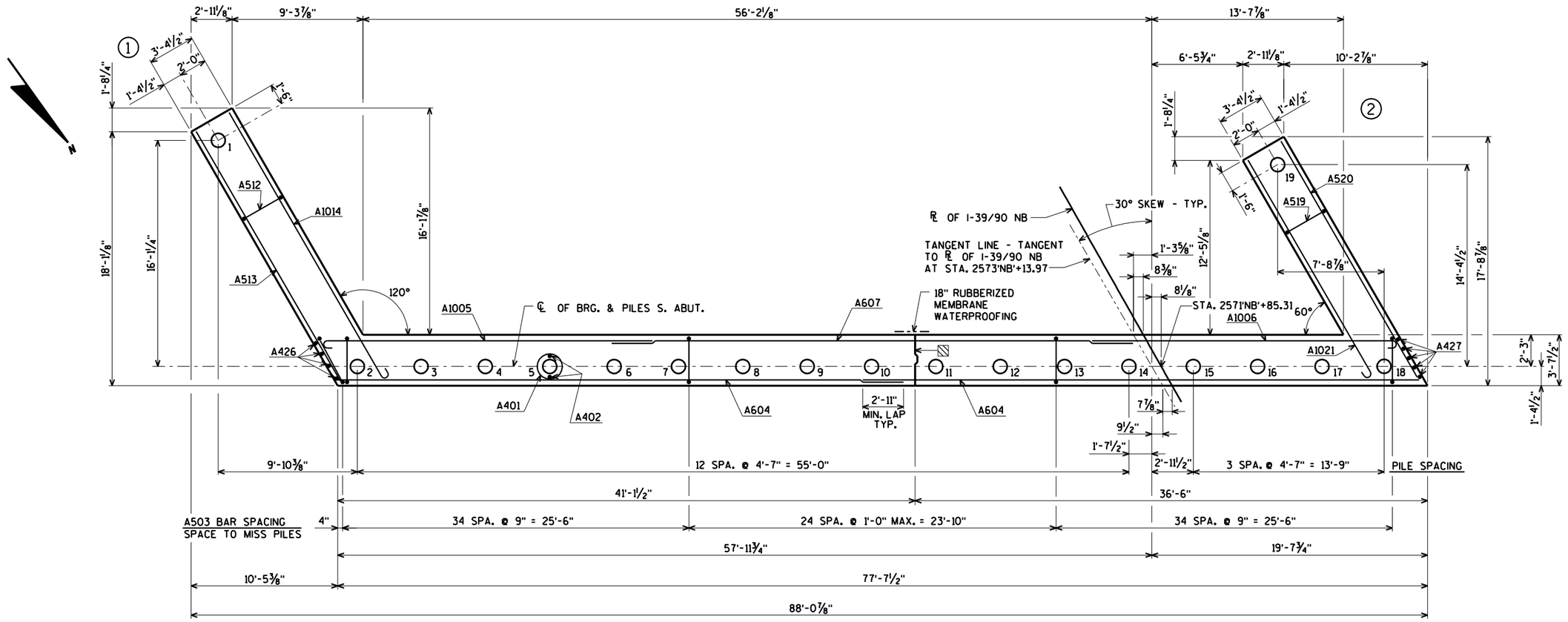

PILE LAYOUT

NOTE:
DRIVE PILING BEFORE CONSTRUCTING RETAINING WALL R-13-352

▨ VERT. CONST. JT. - KEYWAY FORMED BY A SURFACED BEVELED 2" x 8". BEVEL EXPOSED EDGES ¾". FOR ALTERNATE CONST. JT. DETAILS SEE SHEET 17.

FOR PILE SPLICE DETAIL SEE SHEET 3.

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STATE OF WISCONSIN
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STRUCTURE B-13-731

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SOUTH ABUTMENT PILE LAYOUT

SHEET 7 OF 40
419

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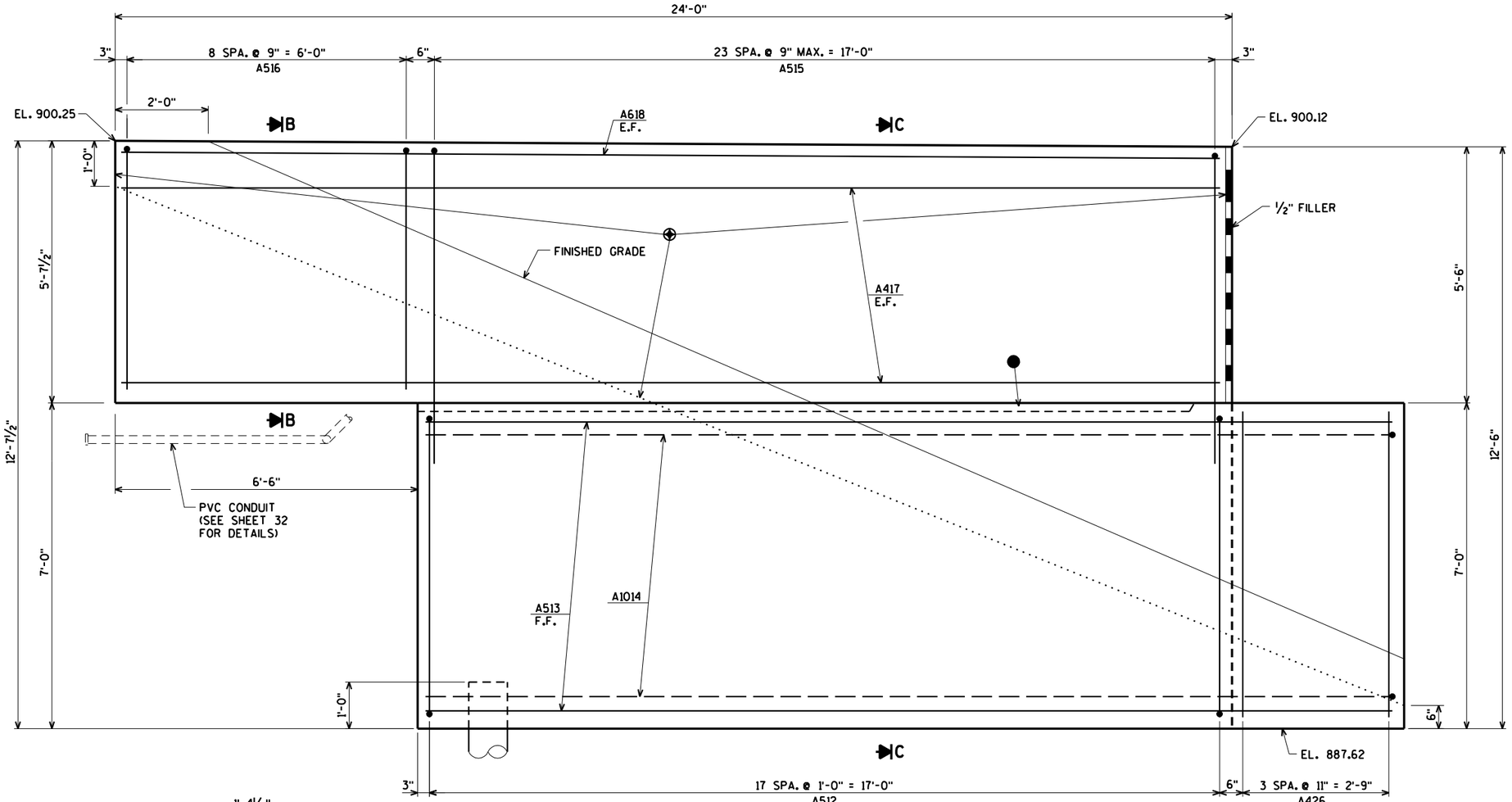
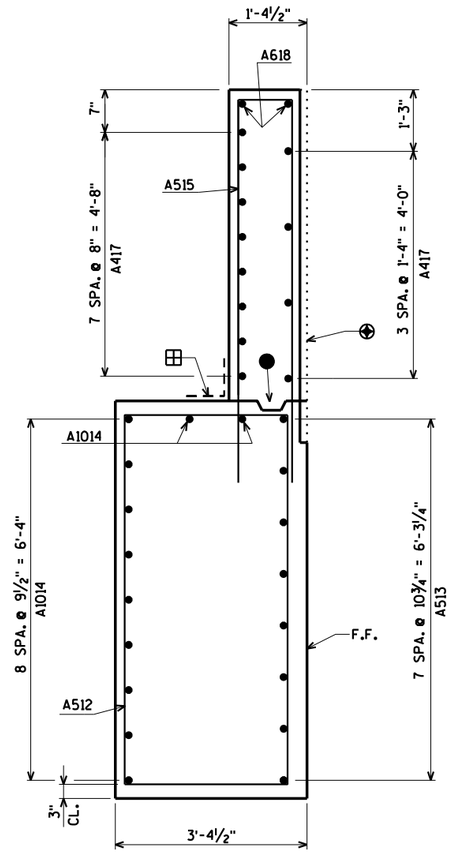
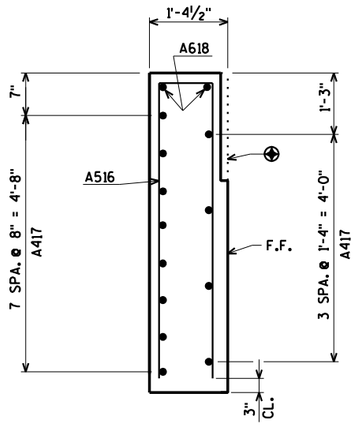


ELEVATION - WING 1



SECTION C



SECTION B

FOR PILE SPLICE DETAIL SEE SHEET 3.

⊕ LIMITS OF RUSTICATIONS.
FOR DETAILS SEE SHEET 16

● OPT. CONST. JOINT FORMED
BY A BEVELED 2" x 6" KEYWAY.

⊞ 18" RUBBERIZED MEMBRANE WATERPROOFING
SEAL ALL HORIZONTAL AND VERTICAL JOINTS
ON BACKFACE OF ABUTMENT.

F.F. DENOTES FRONT FACE

E.F. DENOTES EACH FACE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-731

DRAWN BY CLP | PLANS CK'D. CBM

SOUTH ABUTMENT
WING 1 DETAILS

SHEET 8 OF 40
420

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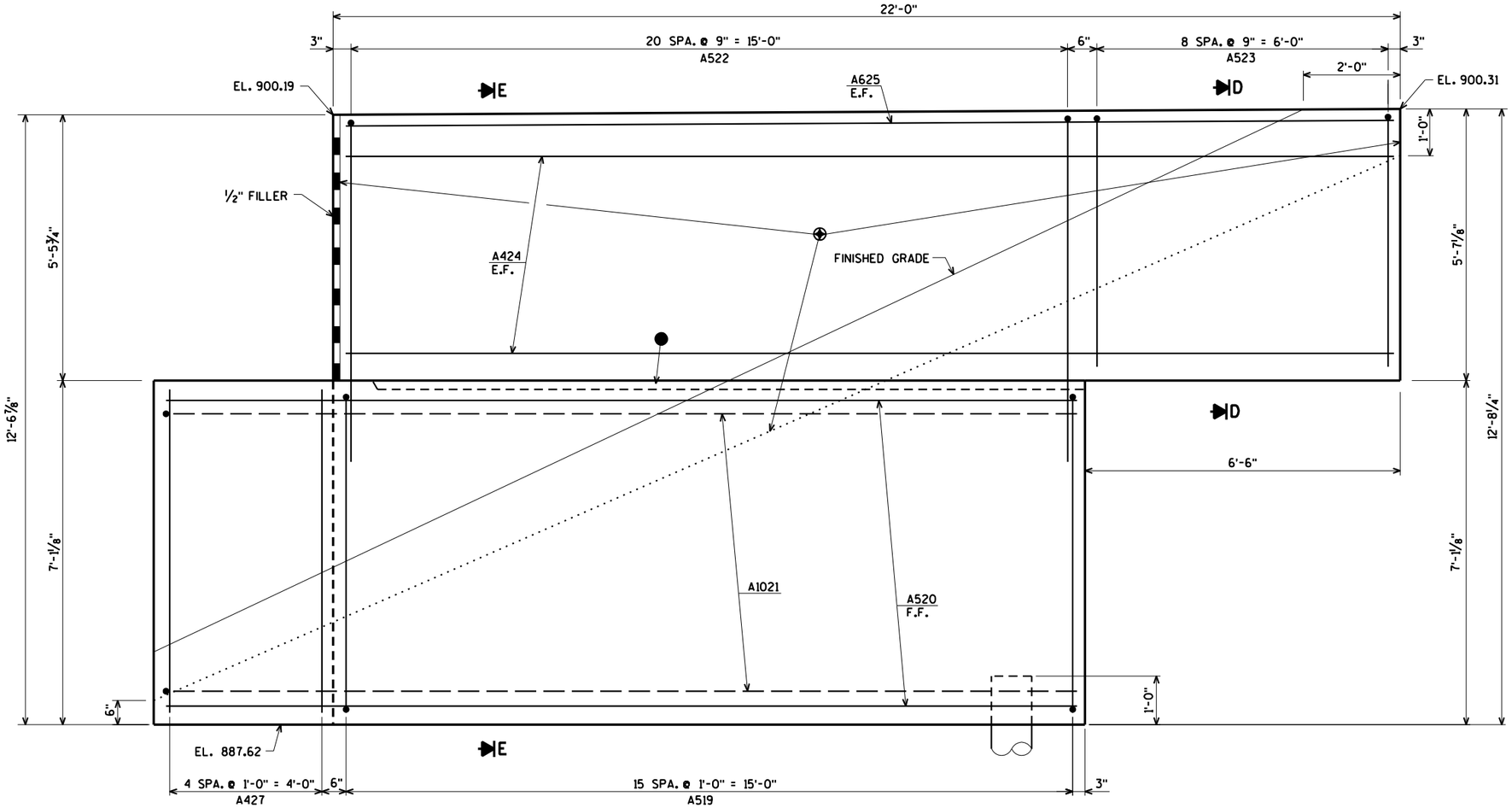
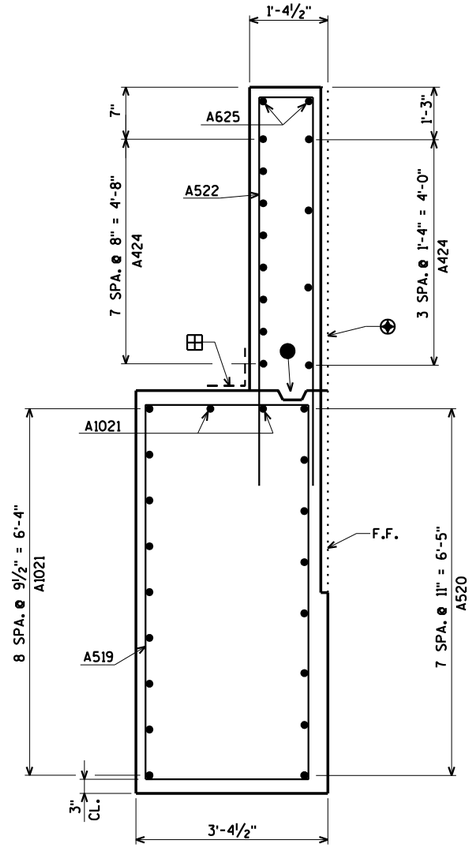
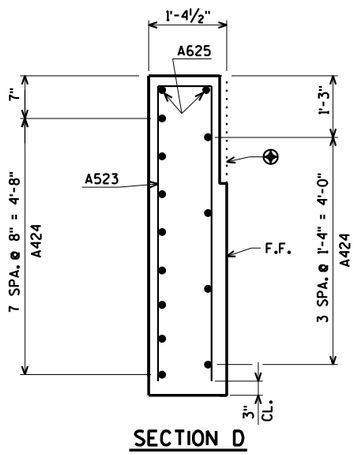


ELEVATION - WING 2



SECTION E



SECTION D

FOR PILE SPLICE DETAIL SEE SHEET 3.

⊕ LIMITS OF RUSTICATIONS.
FOR DETAILS SEE SHEET 16

● OPT. CONST. JOINT FORMED
BY A BEVELED 2" x 6" KEYWAY.

⊞ 18" RUBBERIZED MEMBRANE WATERPROOFING
SEAL ALL HORIZONTAL AND VERTICAL JOINTS
ON BACKFACE OF ABUTMENT.

F.F. DENOTES FRONT FACE

E.F. DENOTES EACH FACE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-731

DRAWN BY CLP | PLANS CK'D. CBM

SOUTH ABUTMENT
WING 2 DETAILS

SHEET 9 OF 40
421

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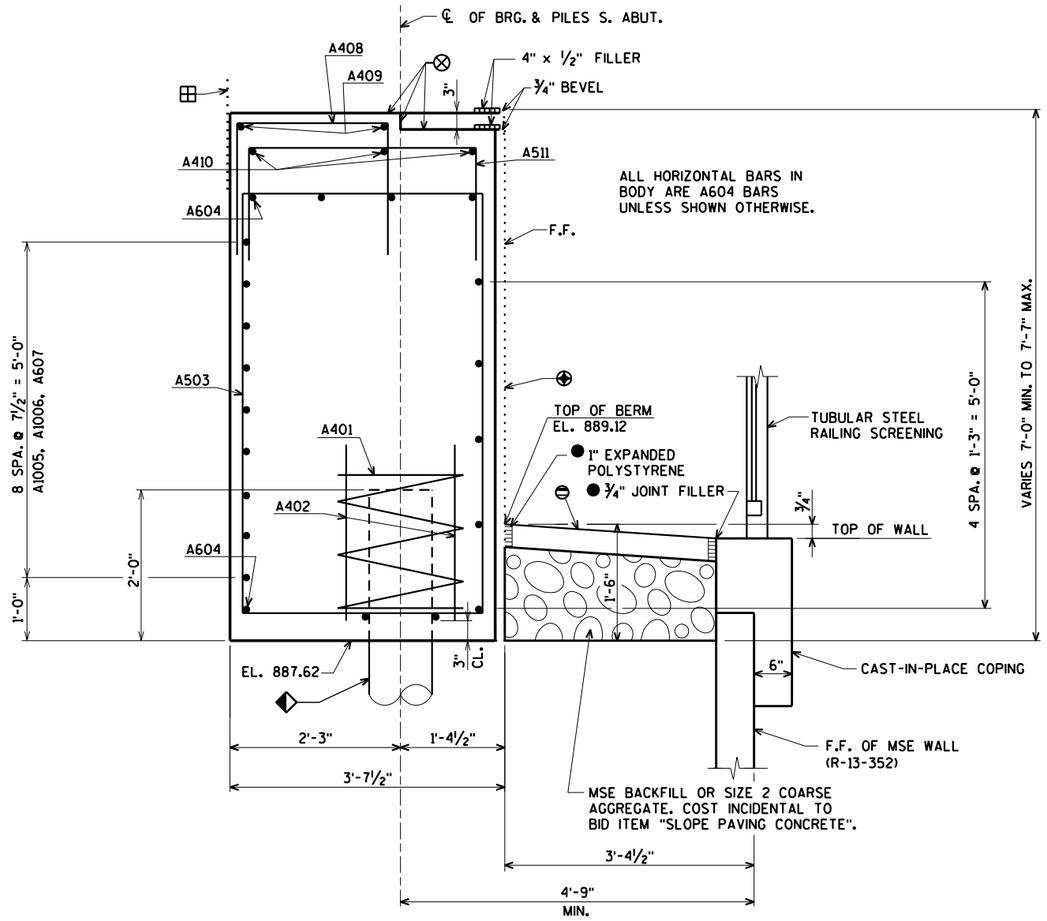
PENTABLE:BReau_shd_util.tbl

U:±41-0660.0X - IH-39 Dane Partners General Bridge Information±B-13-731 - 139_NB over Off Ramp±bridge±B-13-731 sa.dgn



SECTION A

NOTE:
DRIVE PILING BEFORE CONSTRUCTING RETAINING WALL R-13-352

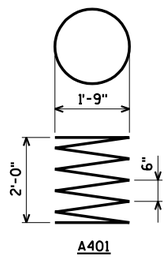
STATE PROJECT NUMBER

1007-12-78

BILL OF BARS

BAR NO.	COATED BAR	NO. REQ'D.	LENGTH	BENT BAR	BUNDLED BAR SERIES	4,480# COATED 6,650# UNCOATED LOCATION
A401		17	28-0	X		BODY @ PILES
A402		34	2-3			BODY @ PILES
A503		93	19-5	X		BODY VERT.
A604		24	40-0			BODY HORIZ.
A1005		9	25-5	X		BODY HORIZ. B.F. @ WING 1
A1006		9	23-5	X		BODY HORIZ. B.F. @ WING 2
A607		9	37-1			BODY HORIZ. B.F.
A408		51	5-1	X		BODY VERT.
A409		4	39-7			BODY HORIZ.
A410		3	32-6			BODY HORIZ.
A511		33	6-5	X		BODY VERT.
A512	X	18	19-7	X		WING 1 VERT.
A513	X	8	20-6			WING 1 HORIZ. F.F.
A1014	X	11	22-1	X		WING 1 HORIZ.
A515	X	24	15-6	X		WING 1 VERT.
A516	X	9	11-0	X		WING 1 VERT.
A417	X	12	23-8			WING 1 HORIZ. E.F.
A618	X	2	23-8			WING 1 HORIZ. TOP E.F.
A519	X	16	19-9	X		WING 2 VERT.
A520	X	8	20-0			WING 2 HORIZ. F.F.
A1021	X	11	19-7	X		WING 2 HORIZ.
A522	X	21	15-6	X		WING 2 VERT.
A523	X	9	10-10	X		WING 2 VERT.
A424	X	12	21-8			WING 2 HORIZ. E.F.
A625	X	2	21-8			WING 2 HORIZ. TOP E.F.
A426	X	4	6-7			BODY VERT. END @ WING 1
A427	X	5	6-8			BODY VERT. END @ WING 2

BENDING DIMENSIONS ARE OUT TO OUT OF BARS.



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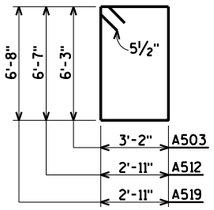

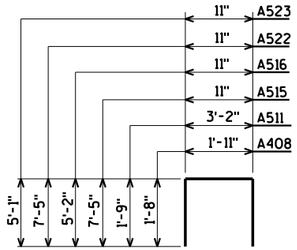

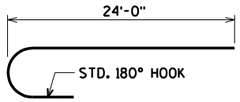

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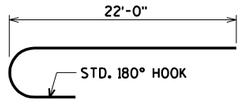

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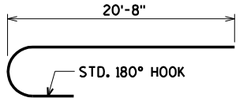

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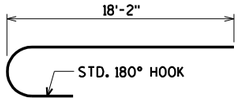

A1021

⊕ LIMITS OF RUSTICATIONS.
FOR DETAILS SEE SHEET 16

⊞ 18" RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE OF ABUTMENT.

FOR PILE SPLICE DETAIL
SEE SHEET 3

F.F. DENOTES FRONT FACE

B.F. DENOTES BACK FACE

E.F. DENOTES EACH FACE

⊖ 4" SLOPE PAVING CONCRETE

● SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF FILLER AND EXPANDED POLYSYRENE WITH NON-STAINING GREY NON-BITUMINOUS JOINT SEALER (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE).

◆ ABUTMENT TO BE SUPPORTED ON 12¾" ϕ × 0.50" CIP CONCRETE PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 210 TONS PER PILE.
ESTIMATED LENGTH 100'-0".

FOR LOCATION OF SECTION A SEE SHEET 6

⊗ STEEL TROWEL TOP SURFACE OF ABUTMENT. PLACE MULTIPLE LAYERS OF POLYETHYLENE SHEETS OVER ENTIRE ABUTMENT TOP BEFORE PLACING BEARING AND/OR SUPERSTRUCTURE. TOTAL THICKNESS OF SHEETS SHALL BE AT LEAST 0.03".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-731

DRAWN BY CLP | PLANS CK'D. CBM

SOUTH ABUTMENT DETAILS

SHEET 10 OF 40
422

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

8/20/2019
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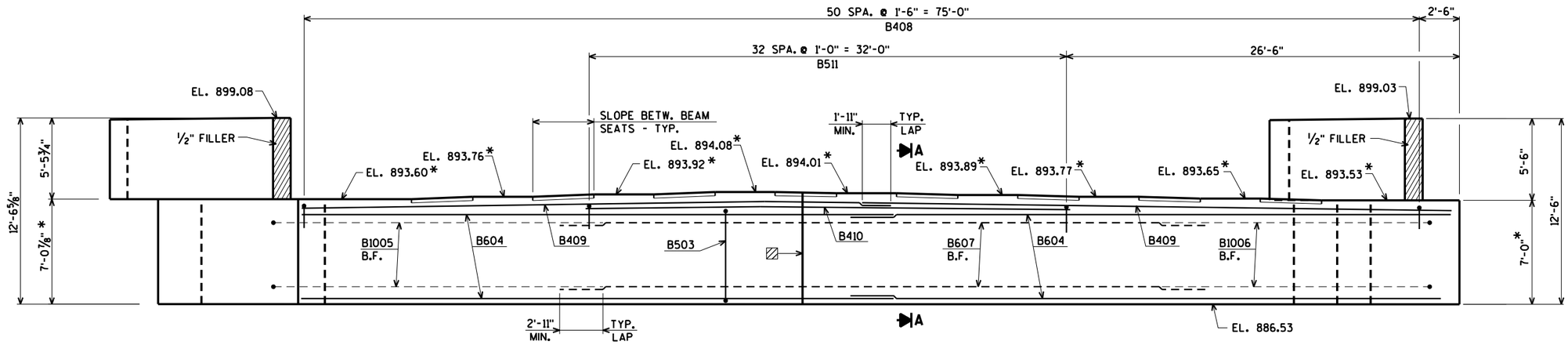
STATE PROJECT NUMBER
1007-12-78

NOTE: 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.)

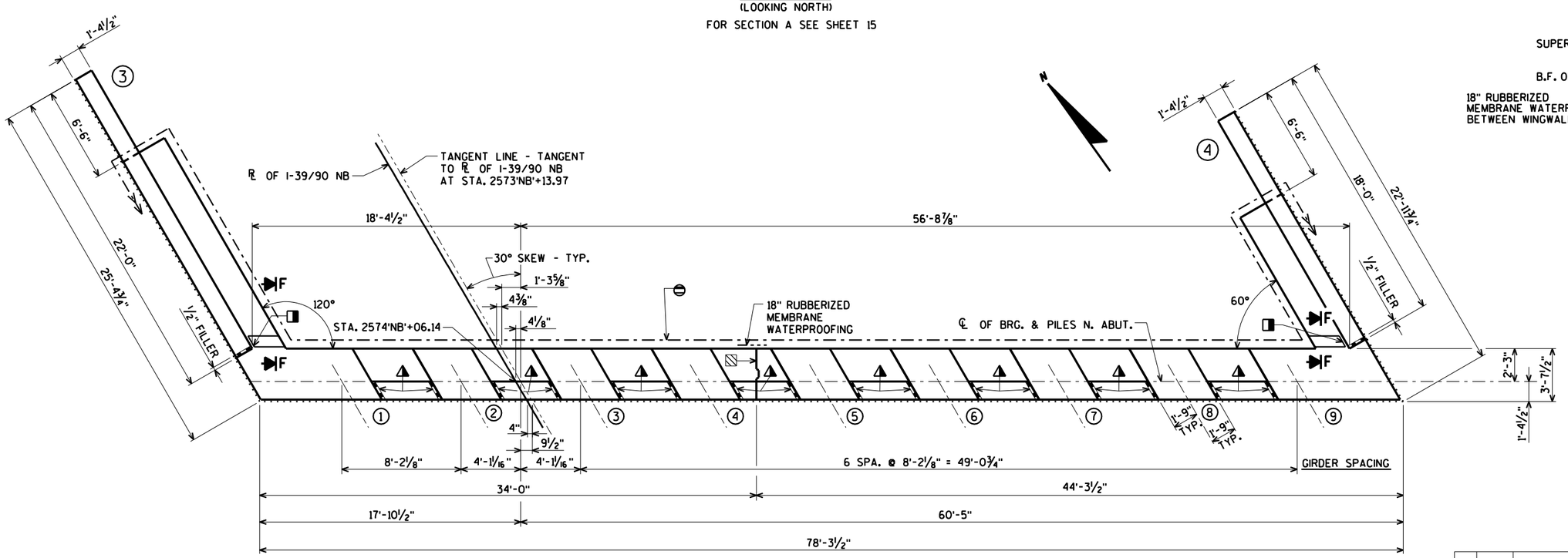
*ELEVATIONS AND DIMENSIONS TAKEN AT ℄ OF BRG. & PILES N. ABUT.



ELEVATION

(LOOKING NORTH)

FOR SECTION A SEE SHEET 15



PLAN

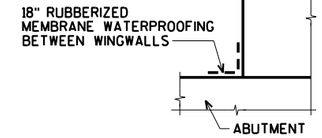
▨ VERT. CONST. JT. - KEYWAY FORMED BY A SURFACED BEVELED 2" × 8". BEVEL EXPOSED EDGES ¾". FOR ALTERNATE CONST. JT. DETAILS SEE SHEET 17.

◨ 18" RUBBERIZED MEMBRANE WATERPROOFING FROM BRIDGE SEAT TO TOP OF WING.

◭ ¾" CORK FILLER ON VERTICAL BEAM SEAT FACES THAT RUN PARALLEL WITH GIRDER.

⊖ PIPE UNDERDRAIN WRAPPED 6-INCH. SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT END OF PIPE UNDERDRAIN. SEE DETAIL ON SHEET 15.

B.F. DENOTES BACK FACE



SECTION F

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-731

DRAWN BY CLP | PLANS CK'D. CBM

NORTH ABUTMENT

SHEET 11 OF 40
423

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

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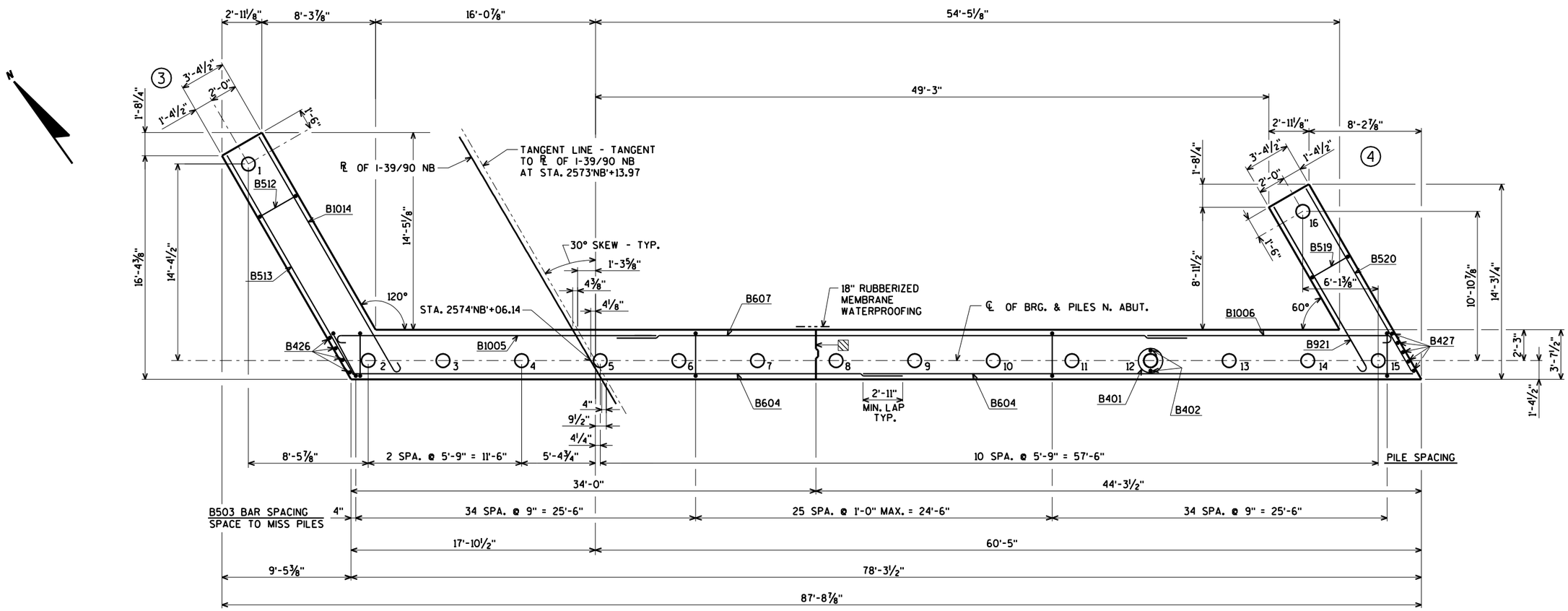
7/23/2019
PENTABLE:BReau_shd_util.tbl

U:±41-0660.0X - IH-39 Dane Partners General Bridge Information±B-13-731 - 139_NB over Off Ramp±bridge±B-13-731na.dgn

STATE PROJECT NUMBER

1007-12-78



PILE LAYOUT

▨ VERT. CONST. JT. - KEYWAY FORMED BY A SURFACED BEVELED 2" x 8". BEVEL EXPOSED EDGES ¾". FOR ALTERNATE CONST. JT. DETAILS SEE SHEET 17.

FOR PILE SPLICE DETAIL SEE SHEET 3.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-731

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NORTH ABUTMENT PILE LAYOUT

SHEET 12 OF 40
424

ORIGINAL PLANS PREPARED BY
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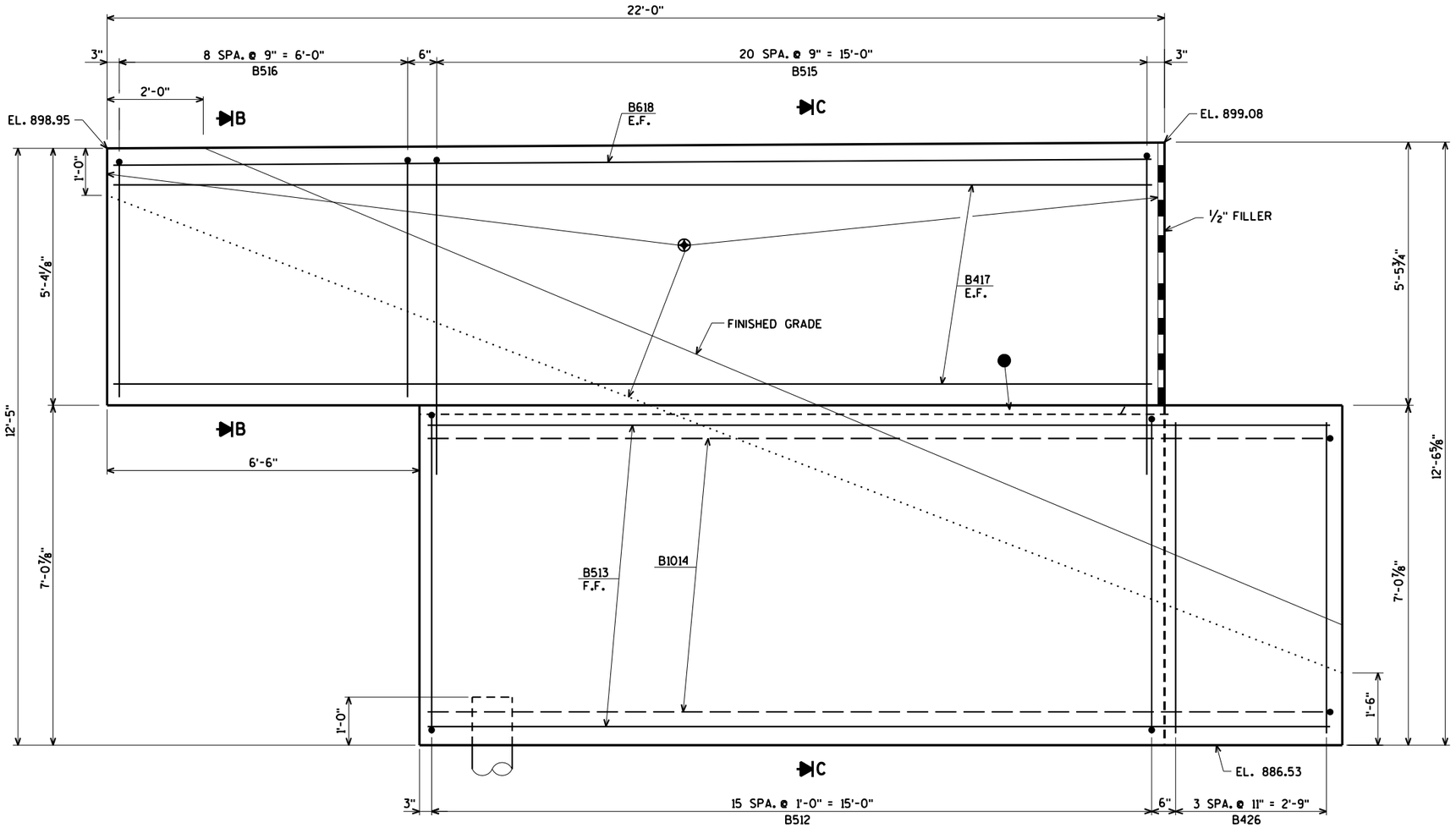
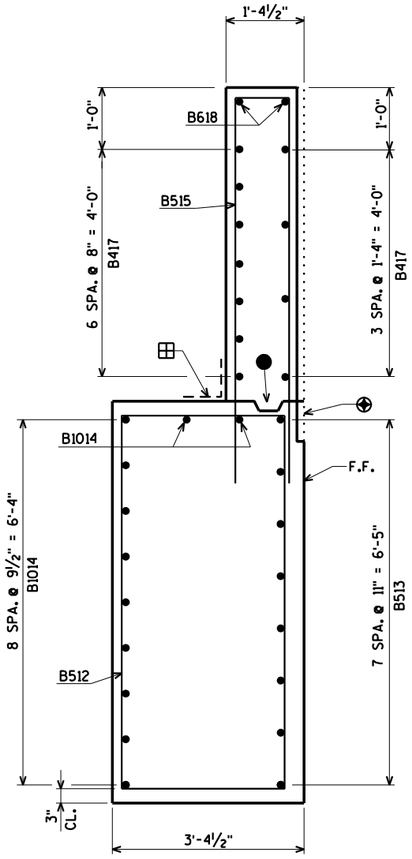
$PRFNAME$
U:\41-0660.0X - IH-39 Dane Partners General Bridge Information\B-13-731 - I 39_NB over Off Ramp\bridge\B-13-731na.dgn

STATE PROJECT NUMBER

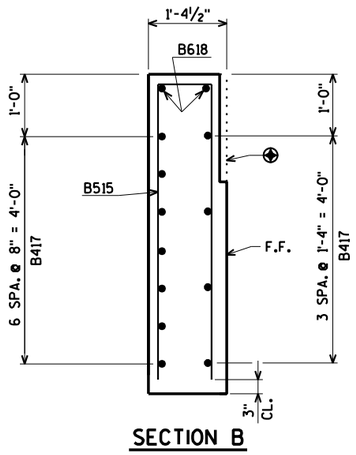
1007-12-78



ELEVATION - WING 3



SECTION C



SECTION B

FOR PILE SPLICE DETAIL SEE SHEET 3.

⊕ LIMITS OF RUSTICATIONS.
FOR DETAILS SEE SHEET 16

● OPT. CONST. JOINT FORMED
BY A BEVELED 2" x 6" KEYWAY.

⊞ 18" RUBBERIZED MEMBRANE WATERPROOFING
SEAL ALL HORIZONTAL AND VERTICAL JOINTS
ON BACKFACE OF ABUTMENT.

F.F. DENOTES FRONT FACE

E.F. DENOTES EACH FACE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-731

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NORTH ABUTMENT
WING 3 DETAILS

SHEET 13 OF 40
425

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STATE PROJECT NUMBER

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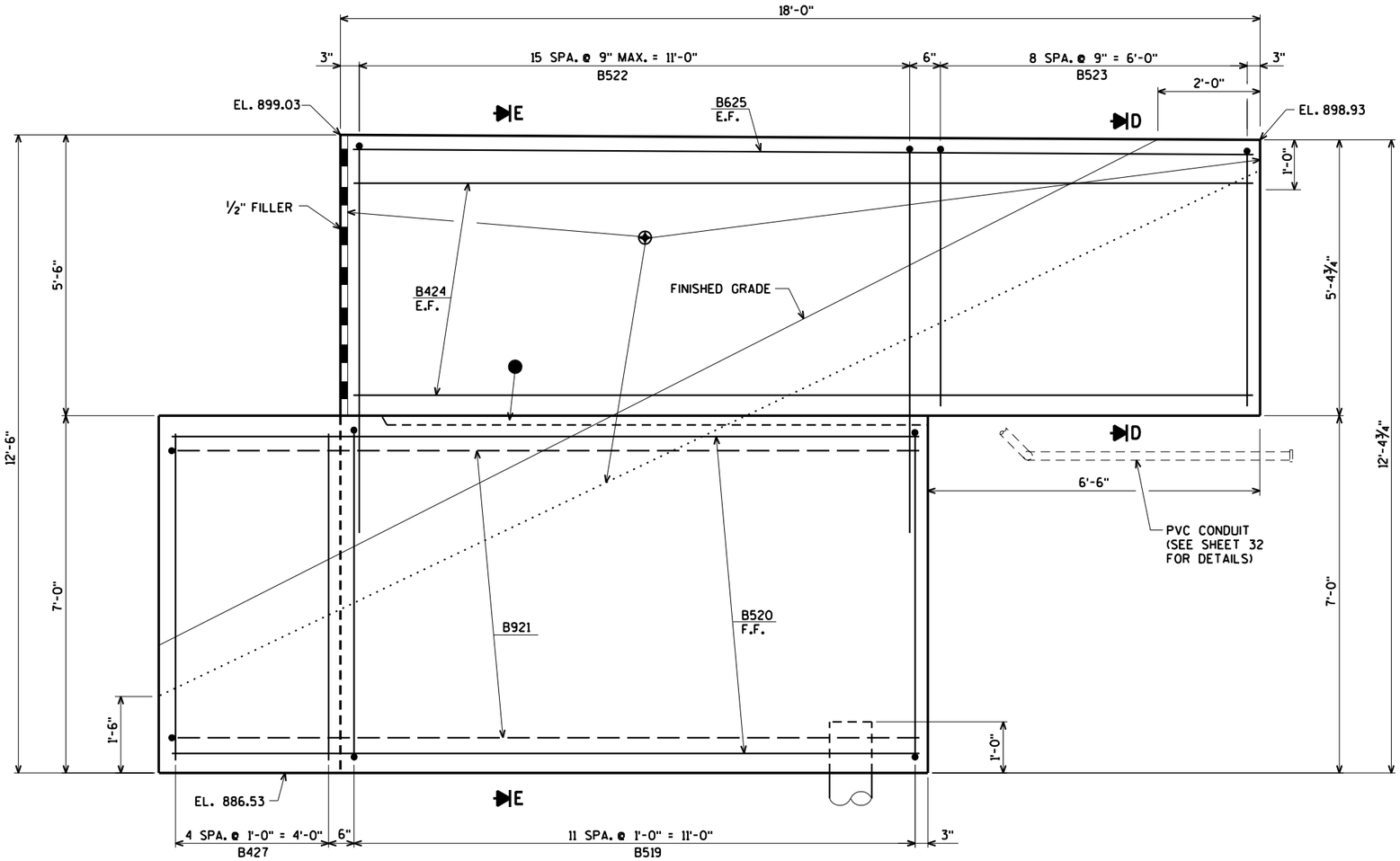
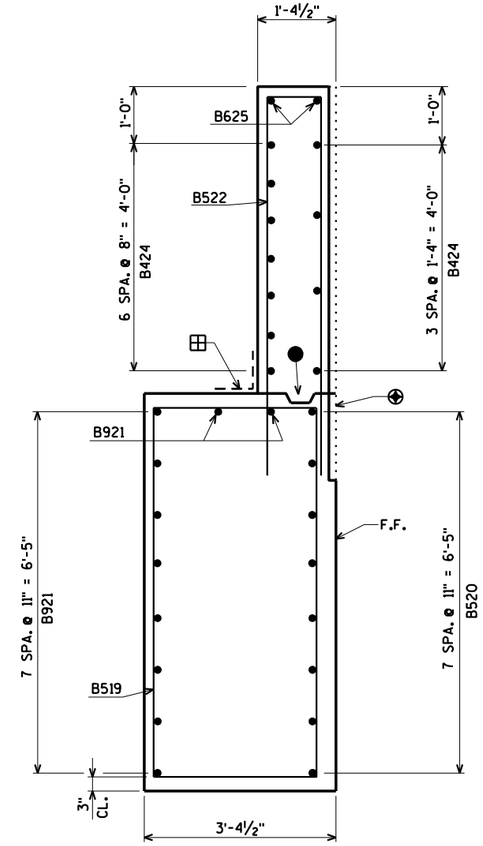
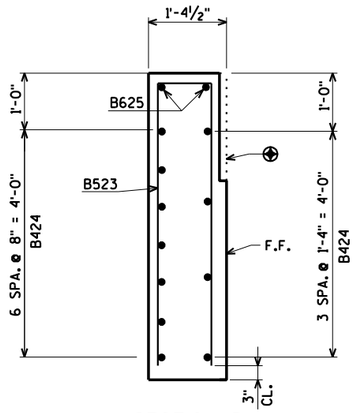


ELEVATION - WING 4



SECTION E



SECTION D

FOR PILE SPLICE DETAIL SEE SHEET 3.

⊕ LIMITS OF RUSTICATIONS.
FOR DETAILS SEE SHEET 16

● OPT. CONST. JOINT FORMED
BY A BEVELED 2" x 6" KEYWAY.

⊞ 18" RUBBERIZED MEMBRANE WATERPROOFING
SEAL ALL HORIZONTAL AND VERTICAL JOINTS
ON BACKFACE OF ABUTMENT.

F.F. DENOTES FRONT FACE

E.F. DENOTES EACH FACE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-731

DRAWN BY CLP | PLANS CK'D. CBM

NORTH ABUTMENT
WING 4 DETAILS

SHEET 14 OF 40
426

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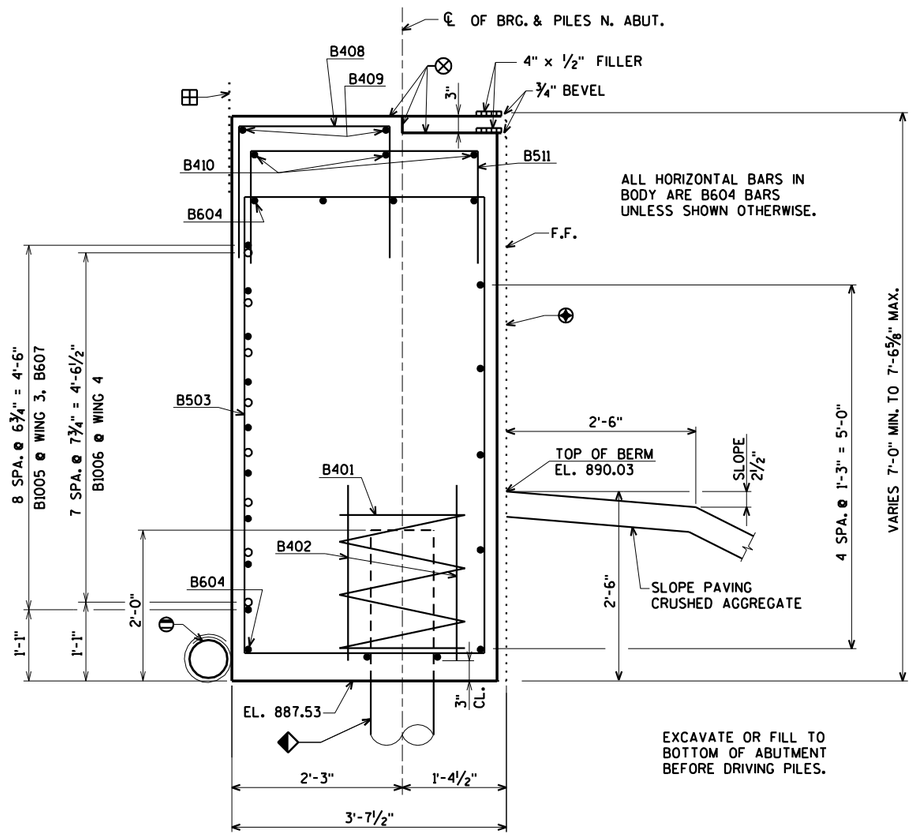
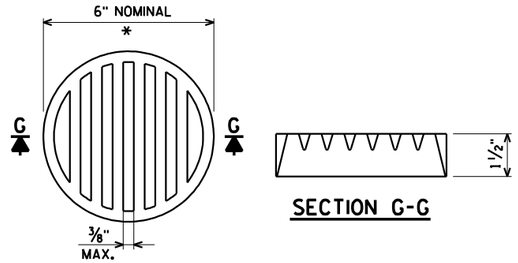
STATE PROJECT NUMBER

1007-12-78



SECTION A

EXCAVATE OR FILL TO BOTTOM OF ABUTMENT BEFORE DRIVING PILES.



SECTION G-G

* 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 INCLUDED WITH THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".

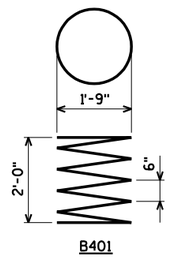
THE RODENT SHIELD SHALL BE PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALLY AVAILABLE AS A FLOOR STRAINER. A PIPE COUPLING IS REQUIRED FOR THE ATTACHMENT OF THIS SCREEN TO THE EXPOSED END OF THE PIPE UNDERDRAIN. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 x 1-INCH SHEET METAL SCREWS.

RODENT SHIELD DETAIL

BILL OF BARS

BAR NO.	COATED BAR	NO. REQ'D.	LENGTH	BENT BAR	BUNDLED BAR SERIES	3,570# COATED 6,400# UNCOATED LOCATION
B401		14	28-0	X		BODY @ PILES
B402		28	2-3			BODY @ PILES
B503		94	19-5	X		BODY VERT.
B604		24	40-5			BODY HORIZ.
B1005		9	23-5	X		BODY HORIZ. B.F. @ WING 3
B1006		8	19-5	X		BODY HORIZ. B.F. @ WING 4
B607		9	43-9			BODY HORIZ. B.F.
B408		51	5-1	X		BODY VERT.
B409		4	39-11			BODY HORIZ.
B410		3	32-6			BODY HORIZ.
B511		33	6-5	X		BODY VERT.
B512	X	16	19-7	X		WING 3 VERT.
B513	X	8	18-6			WING 3 HORIZ. F.F.
B1014	X	11	20-1	X		WING 3 HORIZ.
B515	X	21	15-4	X		WING 3 VERT.
B516	X	9	10-6	X		WING 3 VERT.
B417	X	11	21-8			WING 3 HORIZ. E.F.
B618	X	2	21-8			WING 3 HORIZ. TOP E.F.
B519	X	12	19-7	X		WING 4 VERT.
B520	X	8	16-0			WING 4 HORIZ. F.F.
B921	X	10	15-5	X		WING 4 HORIZ.
B522	X	16	15-4	X		WING 4 VERT.
B523	X	9	10-6	X		WING 4 VERT.
B424	X	11	17-8			WING 4 HORIZ. E.F.
B625	X	2	17-8			WING 4 HORIZ. TOP E.F.
B426	X	4	6-7			BODY VERT. END @ WING 3
B427	X	5	6-7			BODY VERT. END @ WING 4

BENDING DIMENSIONS ARE OUT TO OUT OF BARS.



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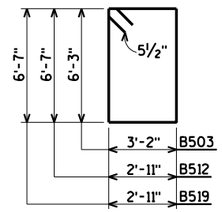

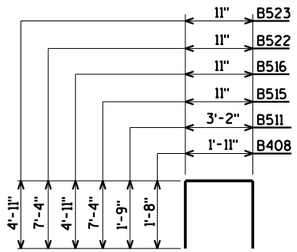

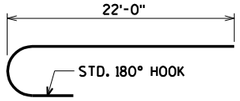

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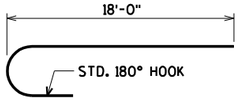

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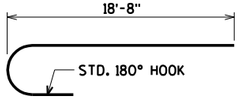

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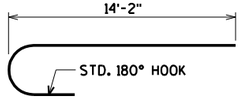

B921

⊕ LIMITS OF RUSTICATIONS. FOR DETAILS SEE SHEET 16

⊞ 18" RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE OF ABUTMENT.

FOR PILE SPLICE DETAIL SEE SHEET 3

F.F. DENOTES FRONT FACE

B.F. DENOTES BACK FACE

E.F. DENOTES EACH FACE

⊖ PIPE UNDERDRAIN WRAPPED 6-INCH. SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT END OF PIPE UNDERDRAIN. SEE DETAIL ON THIS SHEET.

◆ ABUTMENT TO BE SUPPORTED ON 12¾" ϕ x 0.50" CIP CONCRETE PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 210 TONS PER PILE. ESTIMATED LENGTH 70'-0".

FOR LOCATION OF SECTION A SEE SHEET 11.

⊗ STEEL TROWEL TOP SURFACE OF ABUTMENT. PLACE MULTIPLE LAYERS OF POLYETHYLENE SHEETS OVER ENTIRE ABUTMENT TOP BEFORE PLACING BEARING AND/OR SUPERSTRUCTURE. TOTAL THICKNESS OF SHEETS SHALL BE AT LEAST 0.03".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-731

DRAWN BY CLP | PLANS CK'D. CBM

NORTH ABUTMENT DETAILS

SHEET 15 OF 40
427

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

8/20/2019
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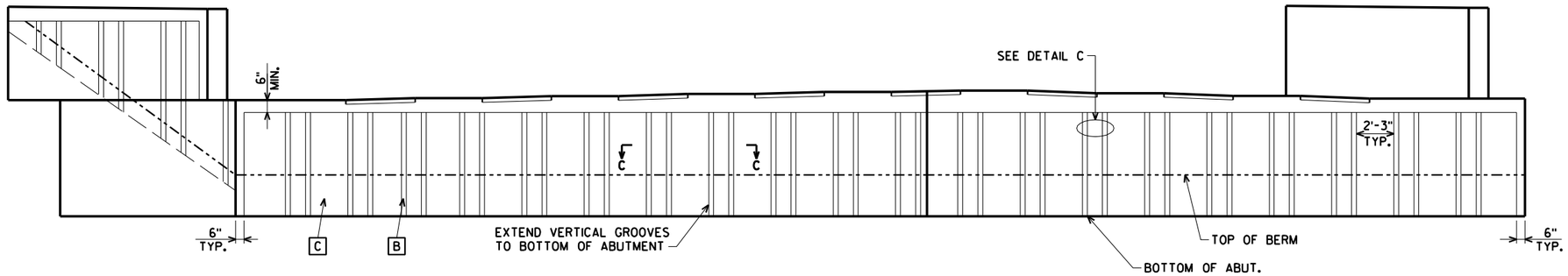
U:±41-0660.0X - IH-39 Dane Partners General Bridge Information±B-13-731 - 139_NB over Off Ramp±bridge±B-13-731 na.dgn

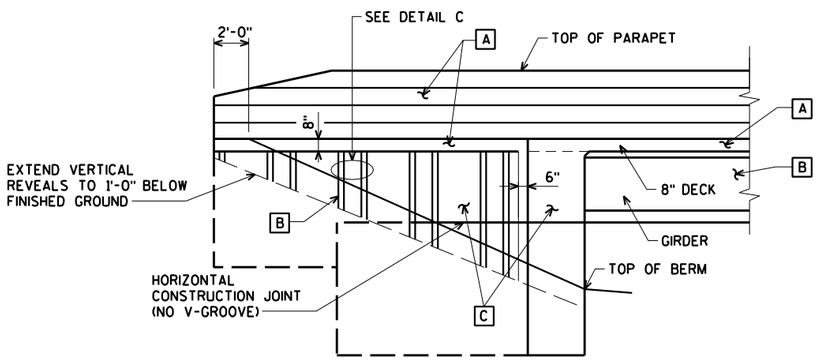


TYPICAL ABUTMENT

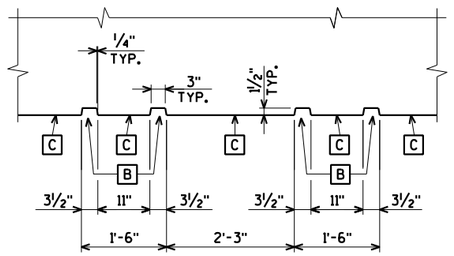
(SOUTH ABUTMENT SHOWN, NORTH ABUTMENT SIMILAR)

CONCRETE STAINING SCHEDULE

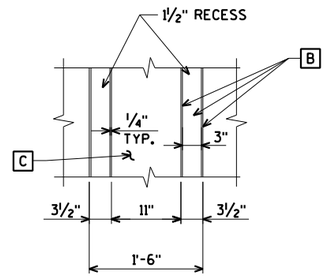
MARK	AMS STD. COLOR NUMBER	LOCATION
A	36642	PARAPET, EDGE OF DECK, BOTTOM OF DECK OVERHANGS, WINGWALLS
B	30140	EXTERIOR GIRDER, REVEALS
C	30372	PIER, ABUTMENTS, AND WINGWALLS



TYPICAL WINGWALL PARALLEL TO ROADWAY



SECTION C-C



DETAIL C

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-731

DRAWN BY CLP | PLANS CK'D. CBM

ABUTMENT RUSTICATION AND CONCRETE STAINING DETAILS

SHEET 16 OF 40
428

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$PRFNAME$
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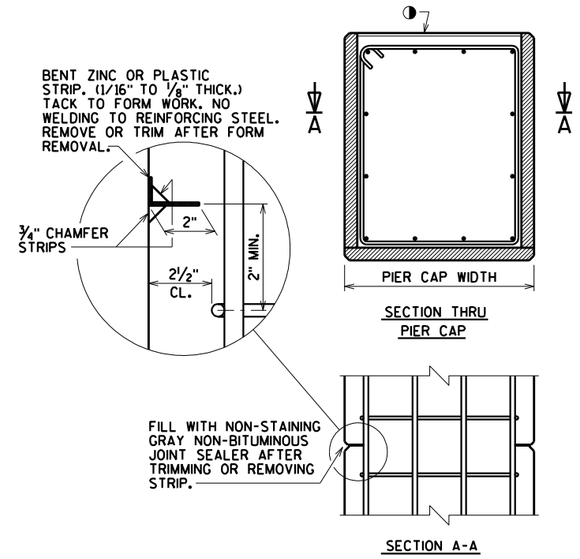
7/23/2019

PENTABLE:BReau_shd_util.tbl

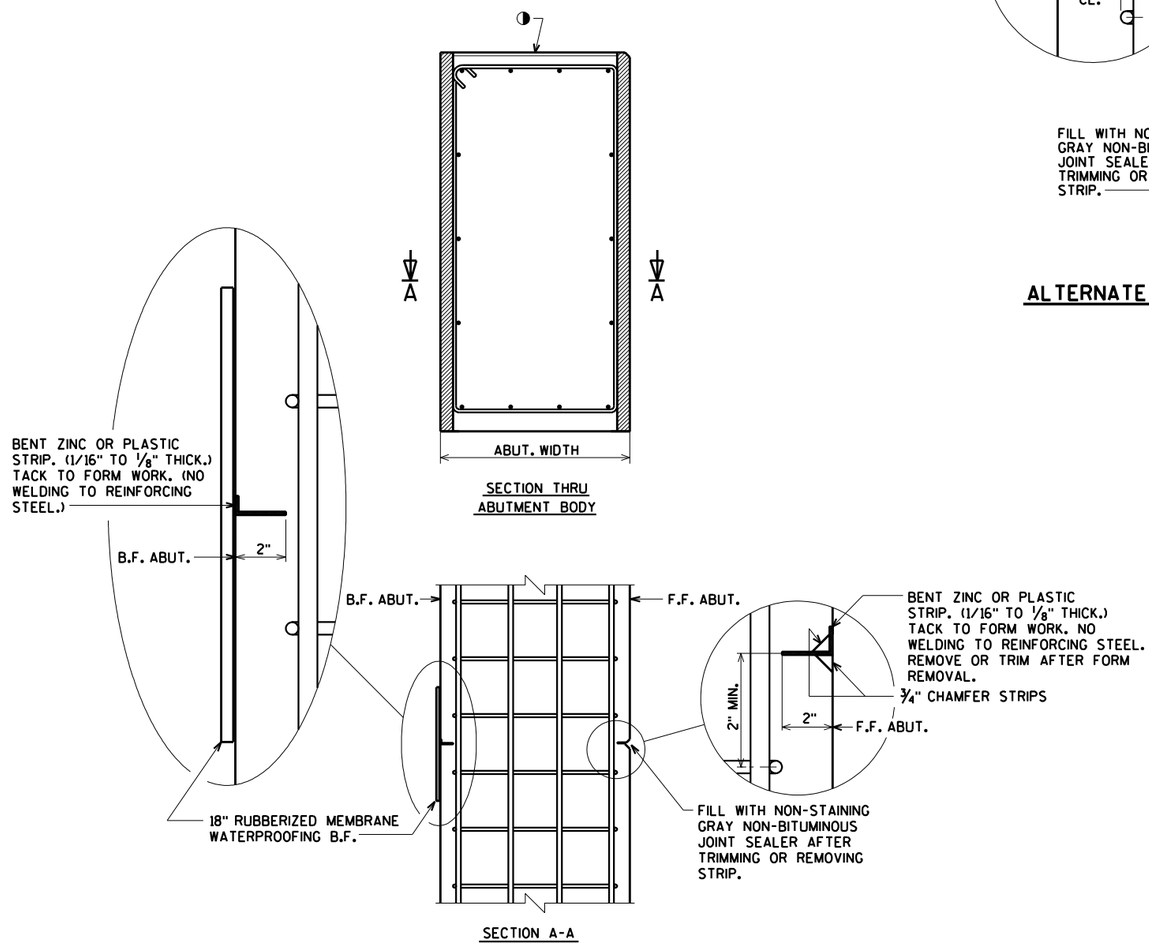
$PRFNAME$
U:±41-0660.0X - IH-39 Dane Partners General Bridge Information±B-13-731 - I39_NB over Off Ramp±bridge±B-13-731 ARCH TREAT.dgn

STATE PROJECT NUMBER

1007-12-78



ALTERNATE CONSTRUCTION JOINT AT PIER CAP



ALTERNATE CONSTRUCTION JOINT AT ABUTMENT

NOTES

PARTIAL ZINC OR PLASTIC BULKHEAD MAY BE USED AS ALTERNATE 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.

◑ USE A JOINT TOOL TO CONSTRUCT A CONTRACTION JOINT APPROXIMATELY 1/2" DEEP.

F.F. DENOTES FRONT FACE

B.F. DENOTES BACK FACE

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
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STRUCTURE B-13-731

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ALTERNATE CONSTRUCTION JOINT

SHEET 17 OF 40
429

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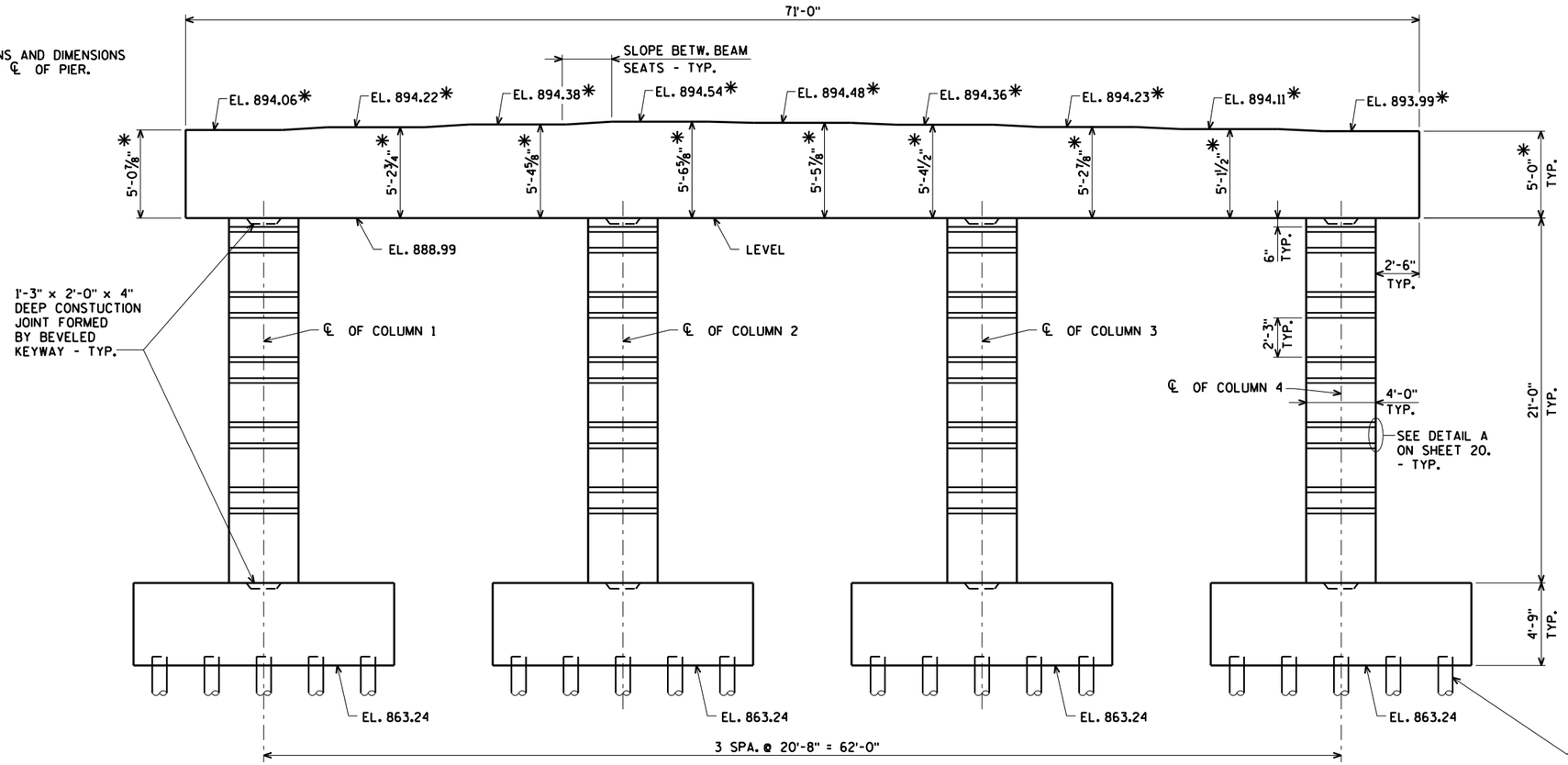
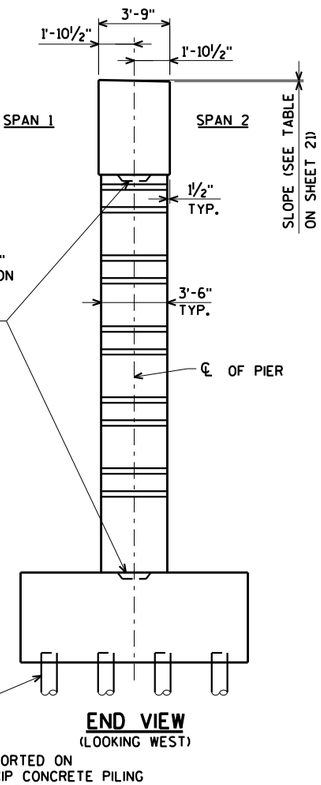
* ELEVATIONS AND DIMENSIONS TAKEN AT ℄ OF PIER.

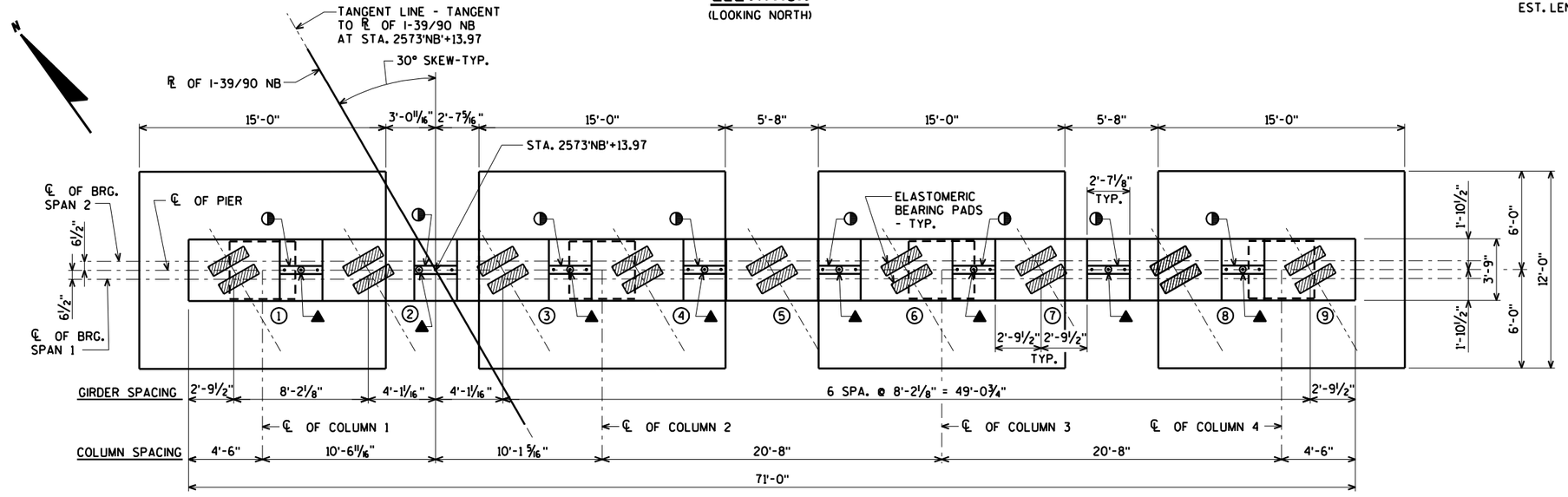


ELEVATION
(LOOKING NORTH)



END VIEW
(LOOKING WEST)

PIER TO BE SUPPORTED ON 12 3/4" ϕ x 0.50" CIP CONCRETE PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 210 TONS/PILE. EST. LENGTH 70'-0".



PLAN

◑ KEYED CONSTRUCTION JOINT. FORMED BY SURFACED BEVELED 2" X 6" BETWEEN BEAM SEATS.

▲ P519 BARS AT 1'-0" CENTERS, BETWEEN BEAM SEATS. EMBED 1'-0" INTO CAP CONCRETE.

RUSTICATIONS ON THE PIER COLUMNS ARE INCLUDED IN THE BID ITEM "CONCRETE MASONRY BRIDGES".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-731

DRAWN BY CLP | PLANS CK'D. CBM

PIER

SHEET 18 OF 40
430

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STATE PROJECT NUMBER
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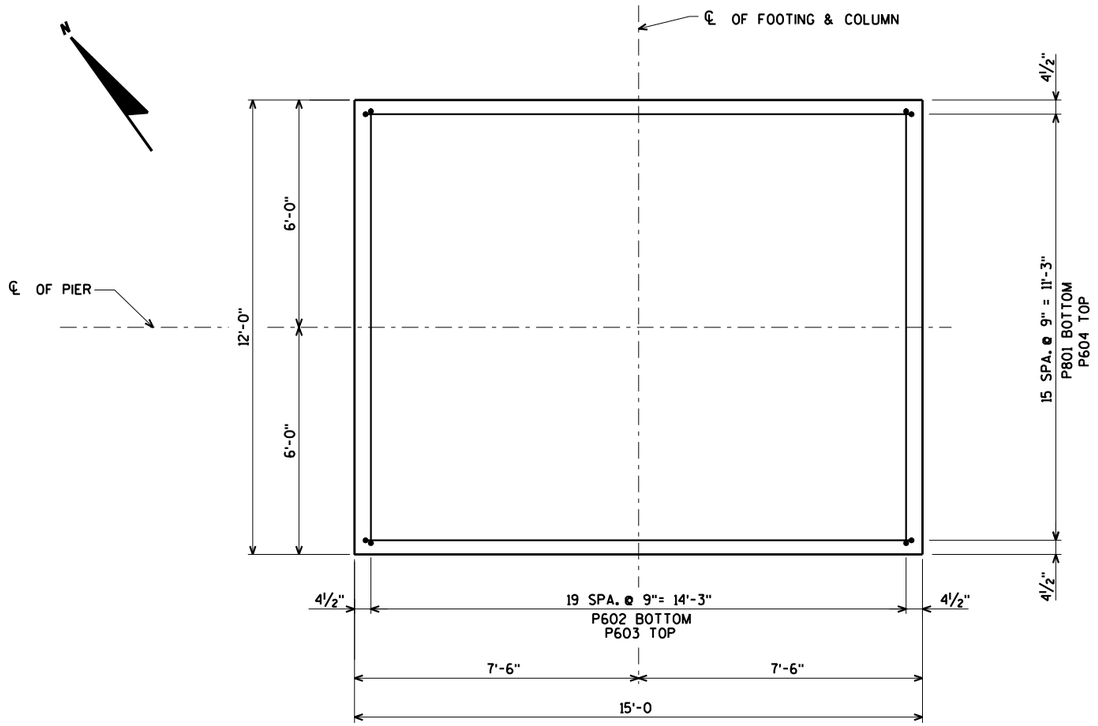
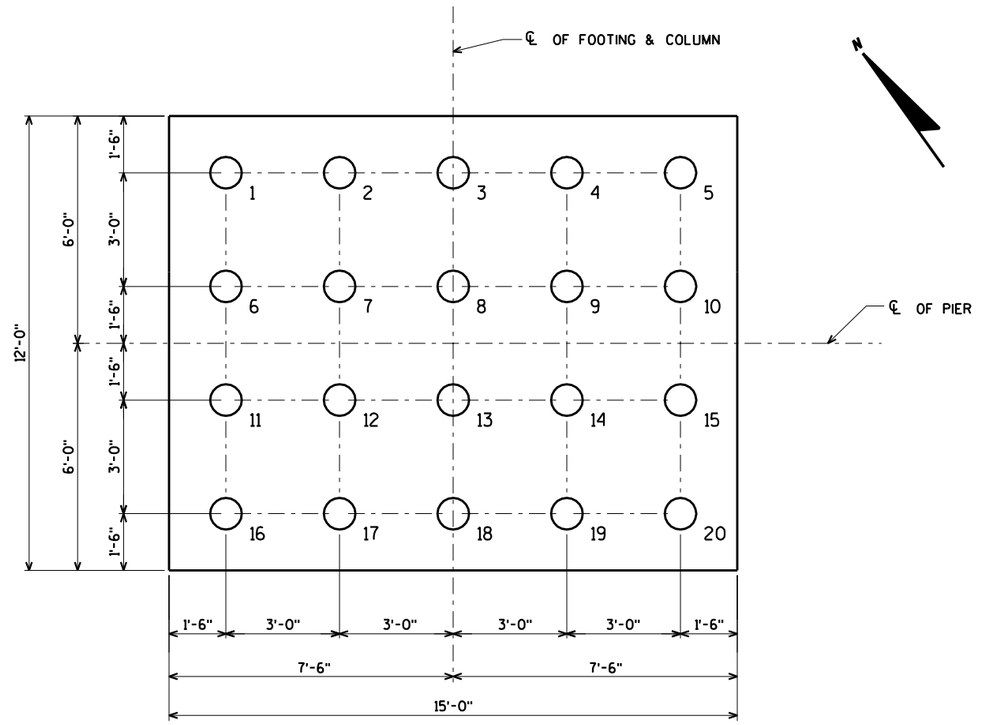


TYPICAL FOOTING REINFORCEMENT PLAN

(4 FOOTINGS REQUIRED)



TYPICAL FOOTING PILE LAYOUT

(4 FOOTINGS REQUIRED)

8

8

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STRUCTURE B-13-731

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PIER FOOTINGS

SHEET 19 OF 40
431

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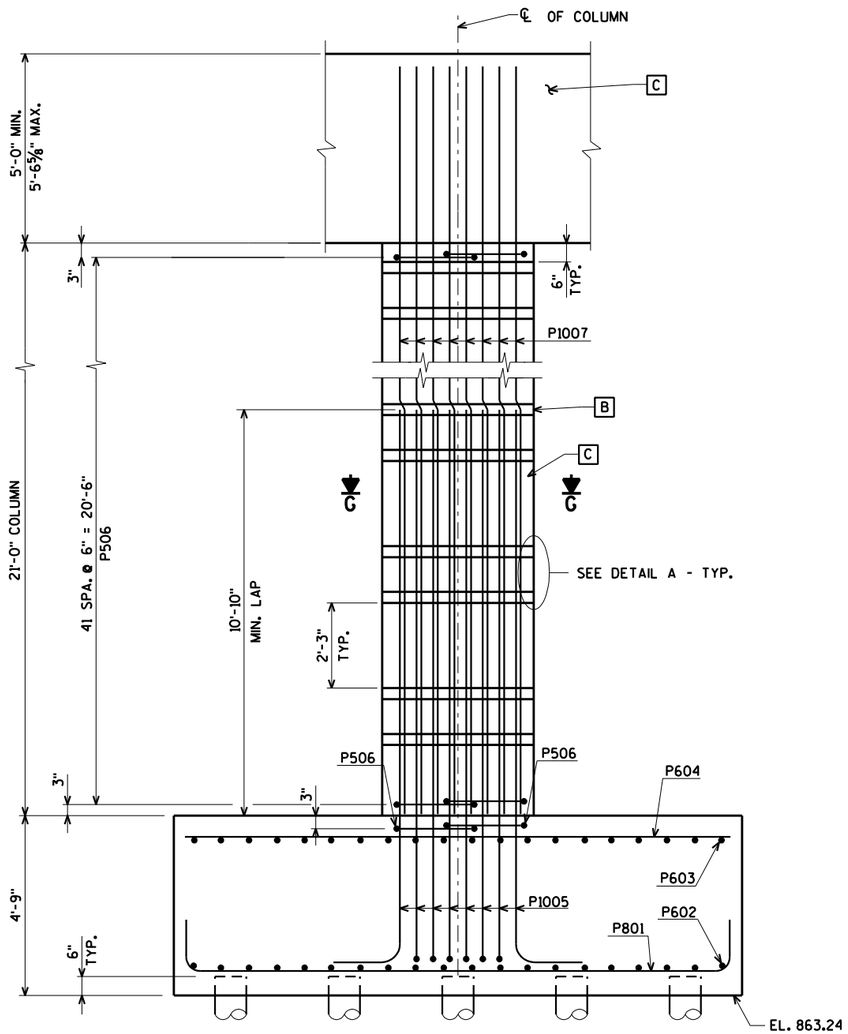
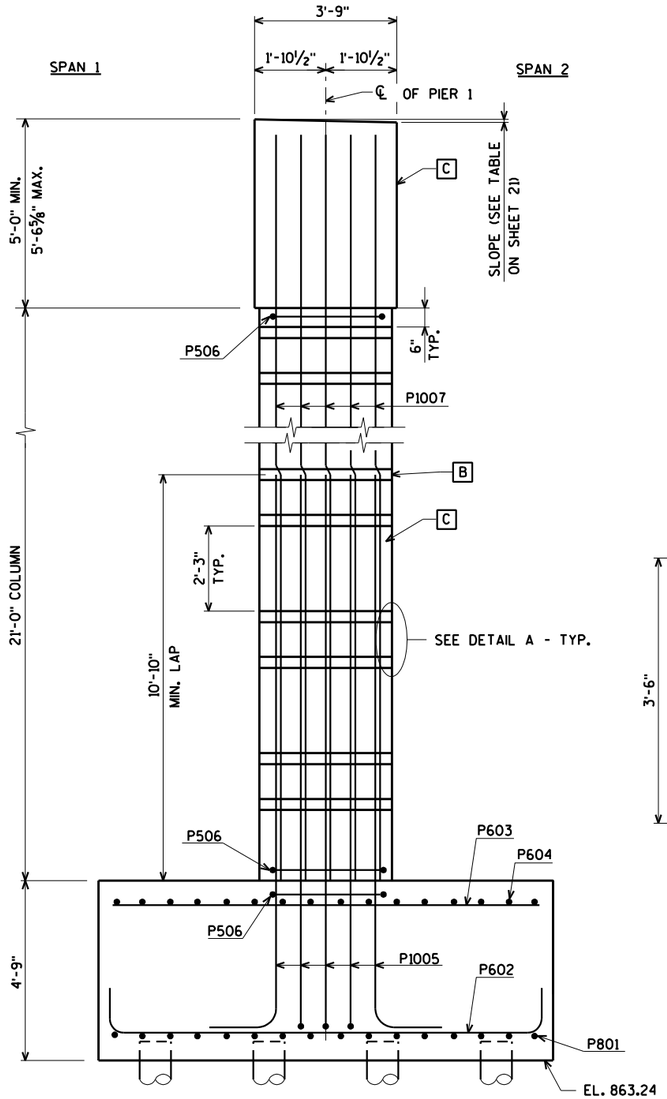
CONCRETE STAINING SCHEDULE

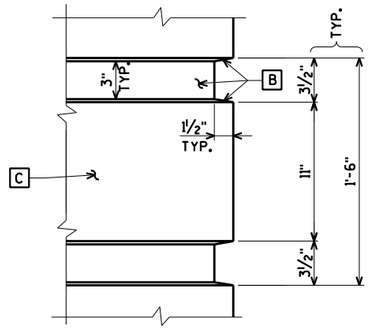
MARK	FEDERAL COLOR NUMBER	LOCATION
B	30140	REVEALS
C	30372	PIER COLUMNS & CAP



COLUMN ELEVATION

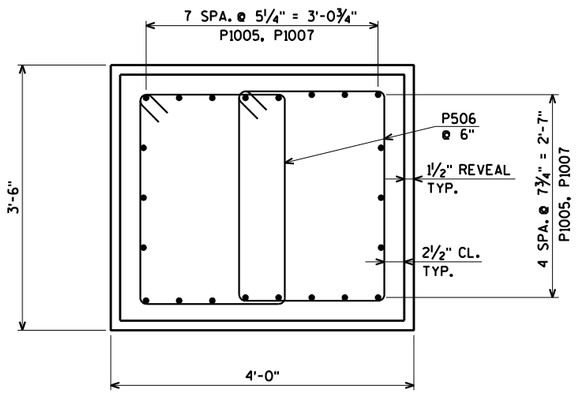


COLUMN ELEVATION - END VIEW
(LOOKING WEST)



DETAIL A

RUSTICATIONS ON THE PIER COLUMNS ARE INCLUDED IN THE BID ITEM "CONCRETE MASONRY BRIDGES".



SECTION G

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-731

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PIER COLUMNS AND CONCRETE STAINING

SHEET 20 OF 40
432

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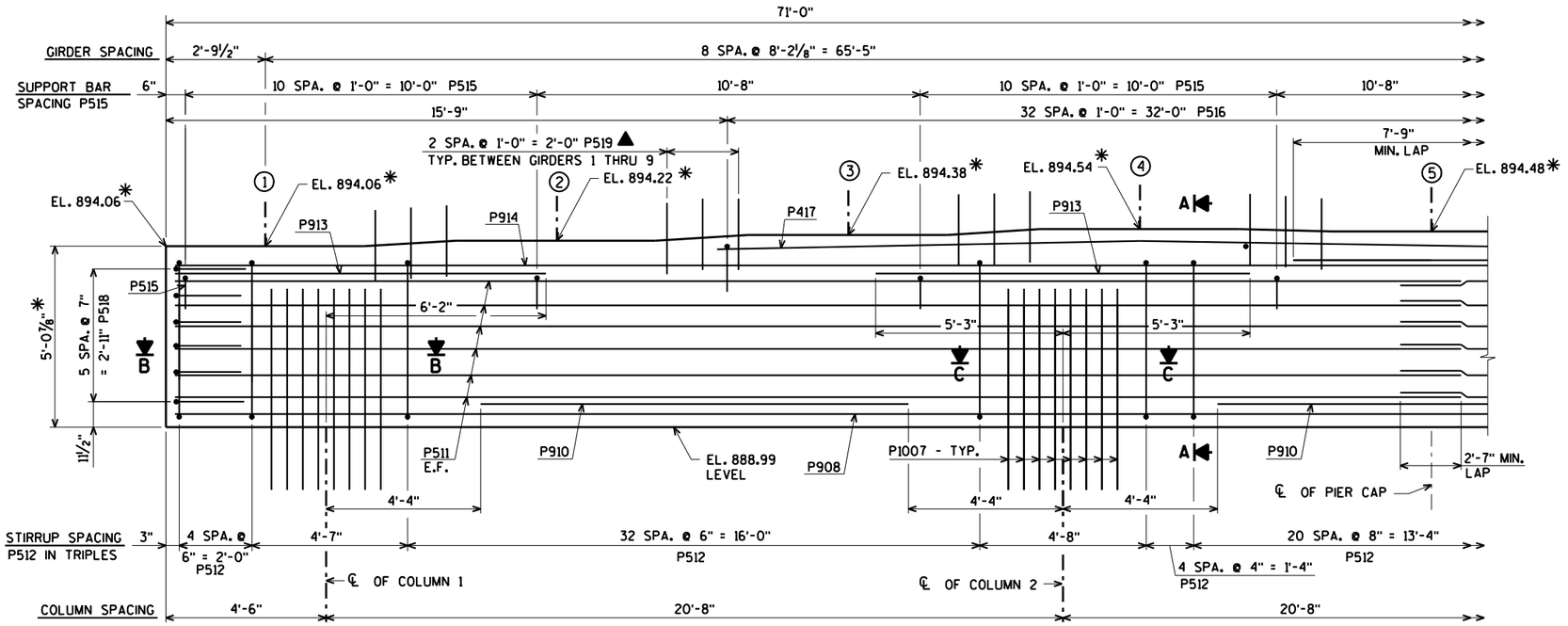
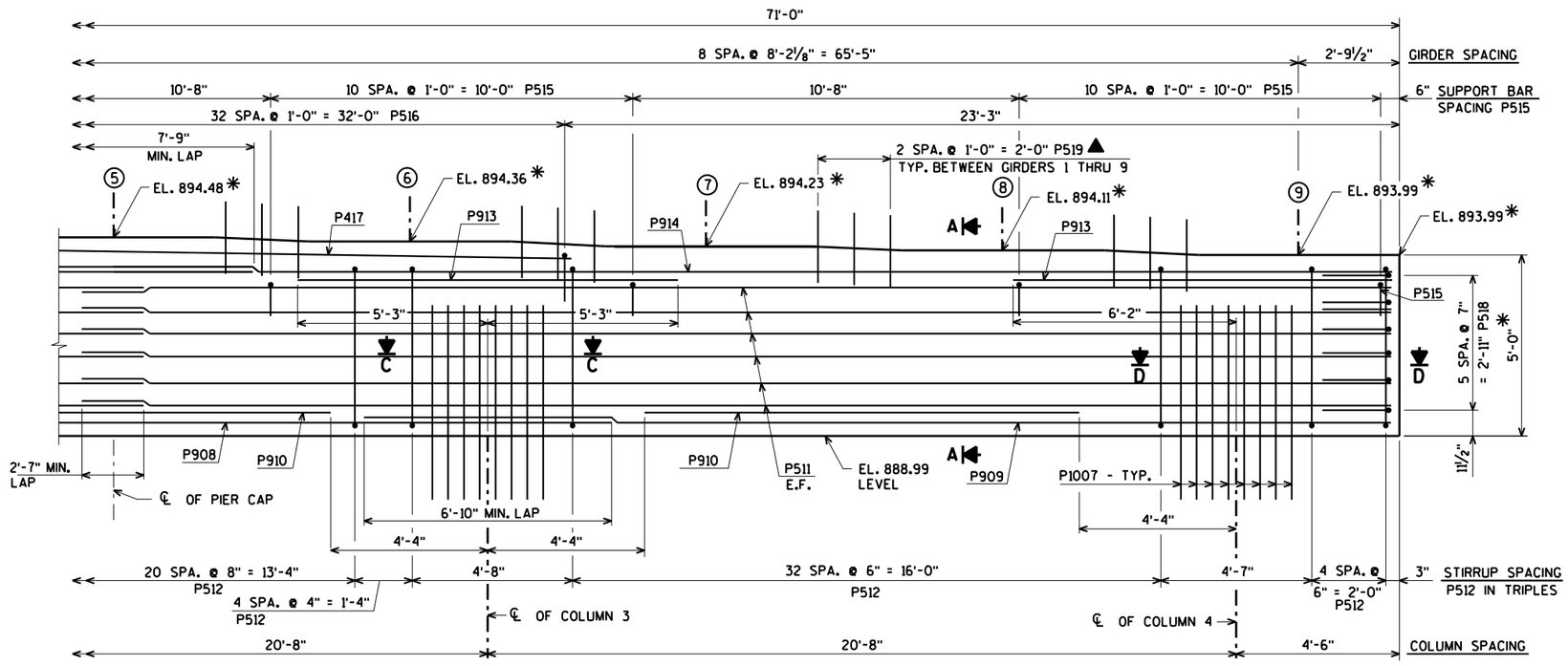


ELEVATION - CAP PART SECTION
(LOOKING NORTH)



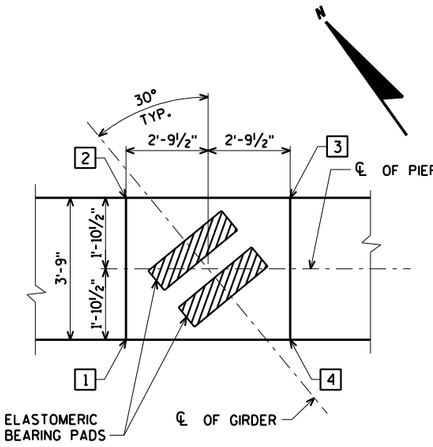
ELEVATION - CAP PART SECTION
(LOOKING NORTH)

* ELEVATIONS AND DIMENSIONS TAKEN AT ℄ OF PIER.

PIER BEAM SEAT ELEVATION CORRECTIONS ▨

GIRDER	ELEVATION CORRECTION AT POINTS			
	1	2	3	4
1 - 9	+0.01	-0.02	-0.01	+0.02

▨ VALUES ARE IN FEET. ADD THESE VALUES TO THE SEAT ELEVATIONS SHOWN TO OBTAIN ELEVATIONS OF POINTS 1, 2, 3 & 4.



SLOPING BEAM SEAT DETAILS
(SEATS @ GIRDERS 2 THRU 8 SHOWN, GIRDERS 1 & 9 SIMILAR)

FOR SECTIONS A THRU D, SEE SHEET 22.

FOR DEPTH OF CAP AT BEAM SEATS ALONG ℄ PIER, SEE SHEET 18.

▲ EMBED P519 BARS 1'-0" INTO CAP CONCRETE.

E.F. DENOTES EACH FACE

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-731

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PIER CAP

SHEET 21 OF 40
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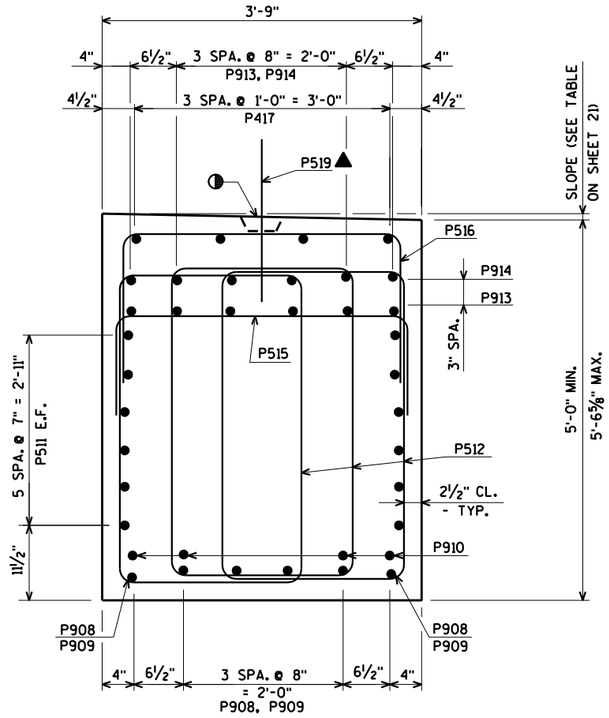
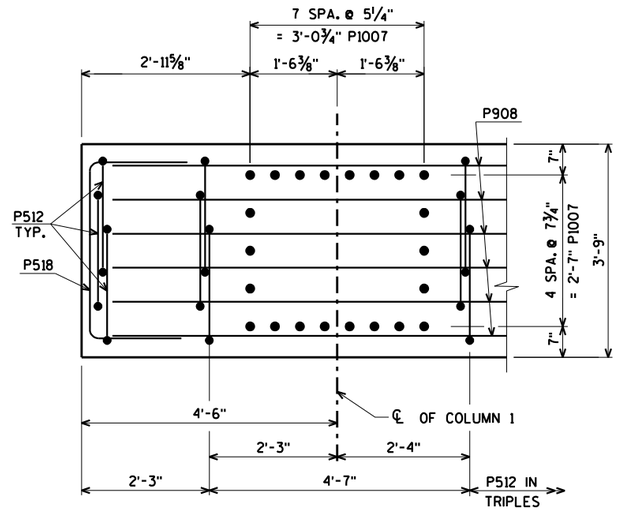


SECTION A
(LOOKING WEST)

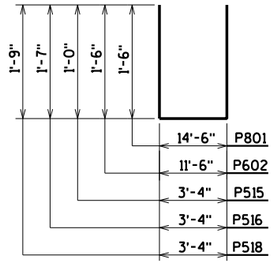


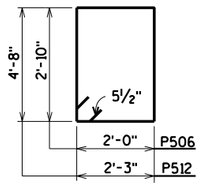
SECTION B

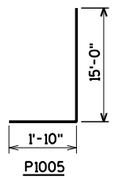
BILL OF BARS

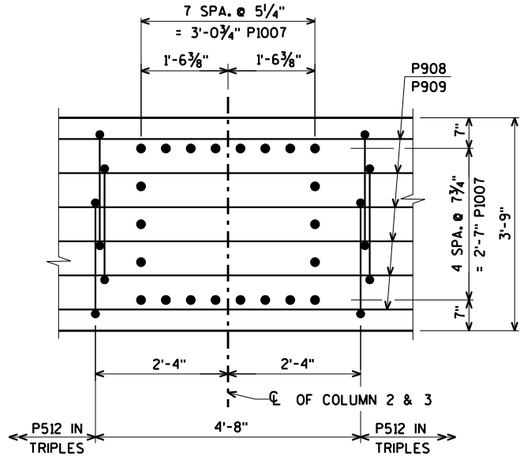
BAR NO.	COATED BAR	NO. REQ'D.	LENGTH	BENT BAR	BUNDLED BAR SERIES	30,460# COATED 7,400# UNCOATED LOCATION
P801		64	17-1	X		PIER FOOTING BOT.
P602		80	14-2	X		PIER FOOTING BOT.
P603		80	11-6			PIER FOOTING TOP
P604		64	14-6			PIER FOOTING TOP
P1005	X	88	16-7	X		COLUMN DOWELS VERT.
P506	X	344	10-4	X		COLUMN TIES
P1007	X	88	25-4			COLUMN VERT.
P908	X	6	49-2			CAP HORIZ. BOT.
P909	X	6	28-5			CAP HORIZ. BOT.
P910	X	12	12-0			CAP HORIZ. BOT.
P511	X	24	36-8			CAP HORIZ. E.F.
P512	X	315	14-6	X		CAP STIRRUP VERT.
P913	X	24	10-6			CAP HORIZ. TOP
P914	X	12	39-3			CAP HORIZ. TOP
P515	X	44	5-1	X		CAP VERT. TOP SUPPORT BARS
P516	X	33	6-3	X		CAP VERT. TOP
P417	X	4	32-6			CAP HORIZ. TOP
P518	X	12	6-7	X		CAP HORIZ. ENDS
P519	X	24	2-0			CAP VERT. TOP BTWN. BEAM SEATS

BENDING DIMENSIONS ARE OUT TO OUT OF BARS.

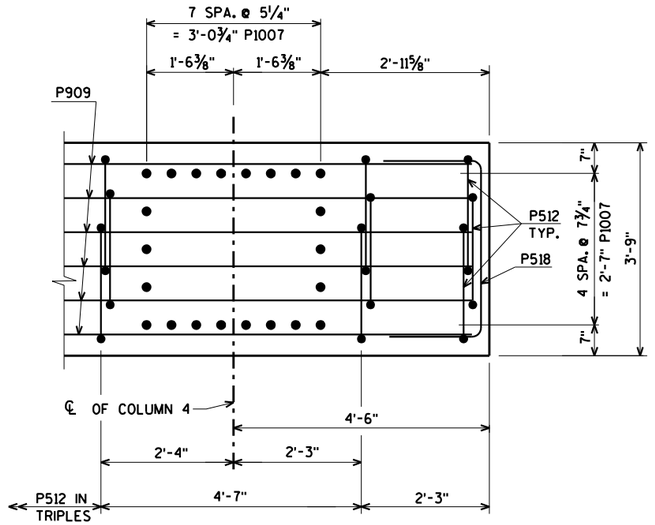








SECTION C



SECTION D

◑ KEYED CONSTRUCTION JOINT FORMED BY A SURFACED BEVELED 2" x 6" BETWEEN BEAM SEATS.

▲ EMBED P519 BARS 1'-0" INTO CAP CONCRETE.

FOR LOCATIONS OF SECTIONS A THRU D, SEE SHEET 21.

E.F. DENOTES EACH FACE

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-731

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PIER DETAILS

SHEET 22 OF 40
434

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STATE PROJECT NUMBER

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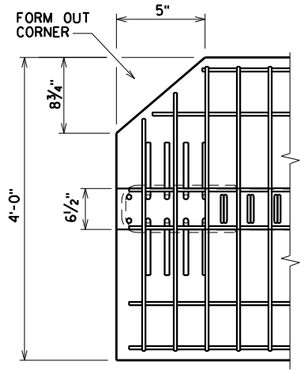


TOP FLANGE

NOTES

TOP OF GIRDER TO BE ROUGH FLOATED AND BROOMED TRANSVERSELY, EXCEPT THE OUTSIDE 15" OF GIRDER, WHICH SHALL RECEIVE A SMOOTH FINISH. AN APPROVED CONCRETE SEALER SHALL BE APPLIED TO ALL SMOOTH SURFACES INCLUDING THE OUTSIDE 15" 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. 503.3.3 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.

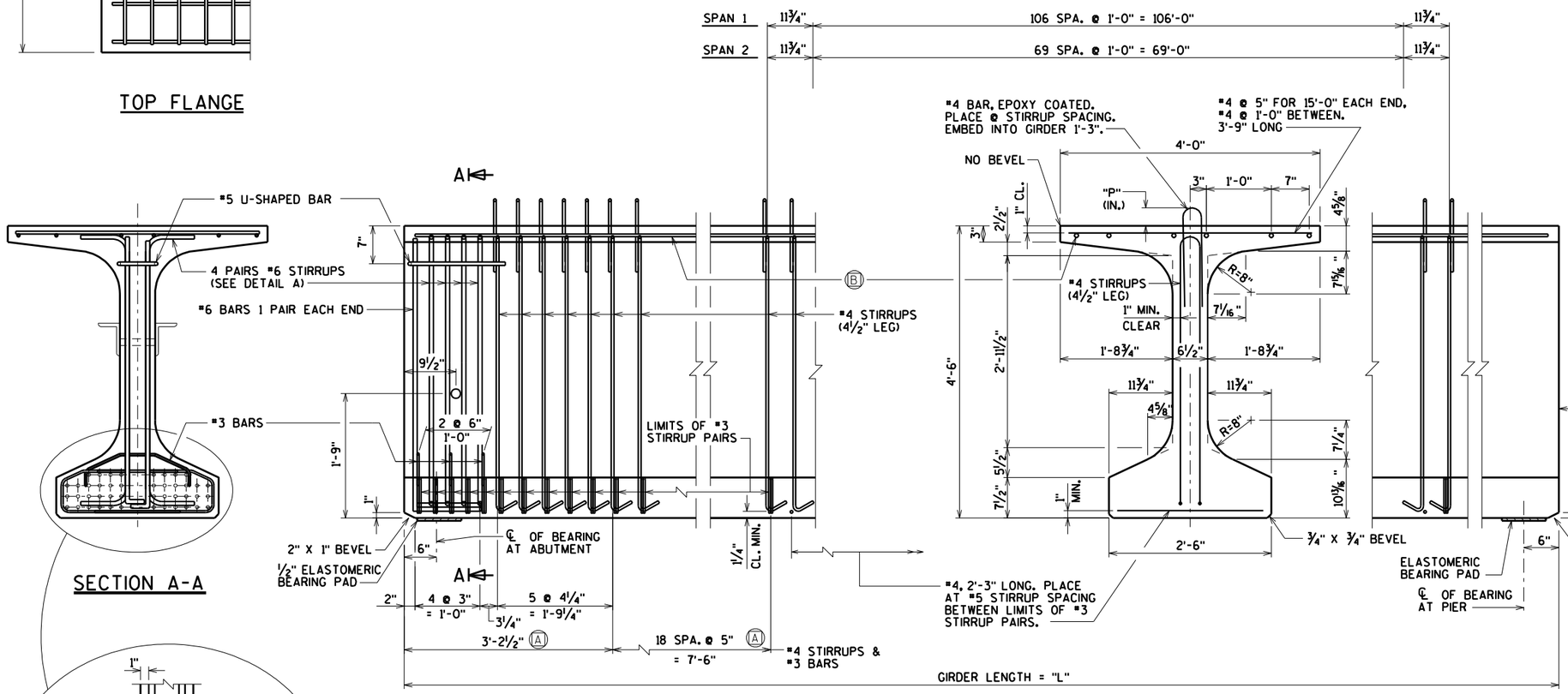
ALL GIRDERS SHALL BE CAST FULL LENGTH AS SHOWN.

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 DEVELOPMENT 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 INTER. DIAPHRAGM DETAILS" SHEET.

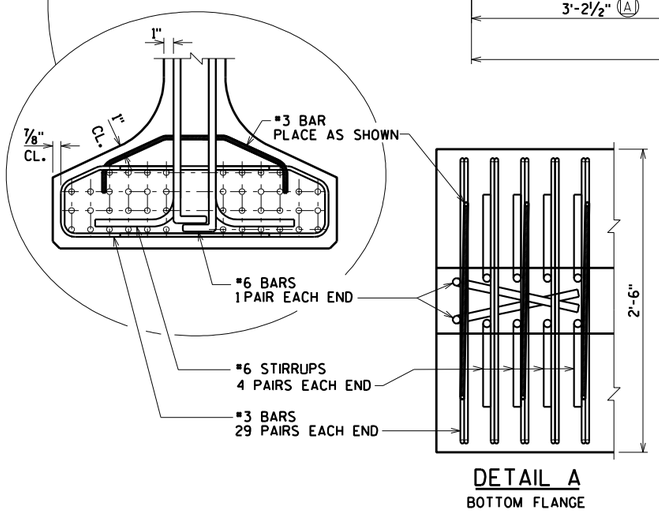


SECTION A-A

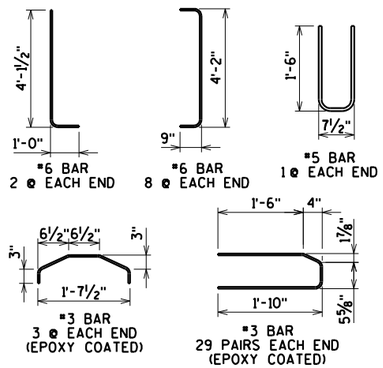
SIDE VIEW & TYP. SECTION IN SPAN

Ⓐ DETAIL TYP. AT EACH END

Ⓑ 6 #4 BARS, FULL LENGTH, MIN. LAP = 2'-4"



DETAIL A
BOTTOM FLANGE



* MINIMUM CYLINDER STRENGTH OF CONCRETE @ TIME OF TRANSFER OF PRESTRESS FORCE.

GIRDER DATA

SPAN	GIRDER	GIRDER LENGTH "L"	DEAD LOAD DEFL. (IN.) 1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	CONC. STRGTH. f'c (p.s.i.)	"P" IST 1/3 OF GIRDER	"P" MID 1/3 OF GIRDER	"P" END 1/3 OF GIRDER	DIA. OF STRAND (IN.)	DRAPED PATTERN TOTAL NO. OF STRANDS	f'ci (P.S.I.) *	(IN.) "A"	"B" MIN.	"B" MAX.	"C"	UNDRAPED PATTERN TOTAL NO. OF STRANDS	f'ci (P.S.I.) *
1	1 & 9	129'-4½"	0.8	1.6	2.2	2.6	2.7	2.6	2.2	1.6	0.8	8,000	9"	7"	9"	0.6	42	6,400	49	16	19	5		
1	2 - 8	129'-4½"	0.8	1.6	2.2	2.6	2.7	2.6	2.2	1.6	0.8	8,000	9"	7"	9"	0.6	42	6,400	49	16	19	5		
2	1 & 9	92'-4½"	0.2	0.4	0.6	0.7	0.7	0.7	0.6	0.4	0.2	8,000	9"	9"	9"	0.6	20	6,400	50	15.5	18.5	4		
2	2 - 8	92'-4½"	0.2	0.4	0.6	0.6	0.7	0.6	0.6	0.4	0.2	8,000	9"	9"	9"	0.6	20	6,400	50	15.5	18.5	4		

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-731

DRAWN BY CLP | PLANS CK'D. CBM

54W" PRESTRESSED GIRDER DETAILS

SHEET 23 OF 40
435

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
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1-17
G54W

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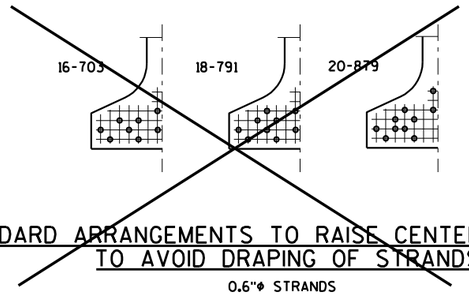
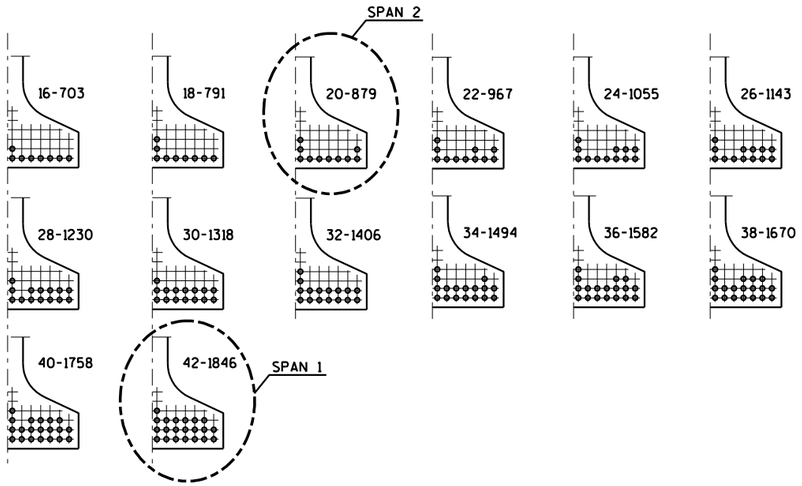
STATE PROJECT NUMBER

1007-12-78



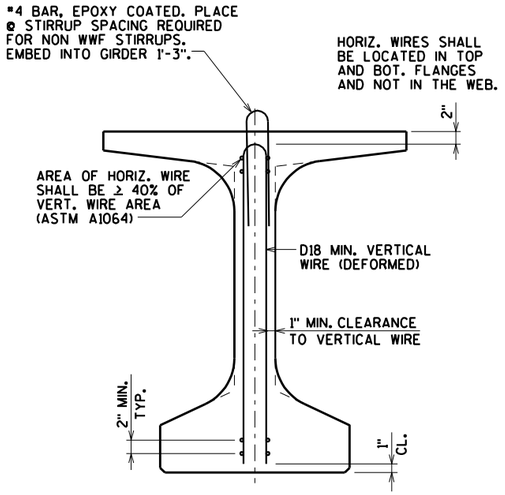
STANDARD ARRANGEMENTS TO RAISE CENTER OF GRAVITY TO AVOID DRAPING OF STRANDS

0.6"Φ STRANDS



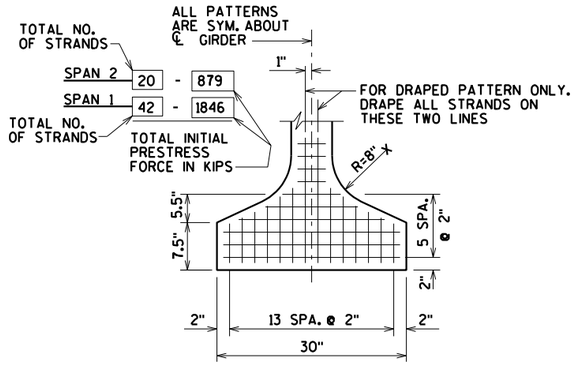
ARRANGEMENT AT ℄ SPAN - FOR GIRDERS WITH DRAPED STRANDS

0.6"Φ STRANDS

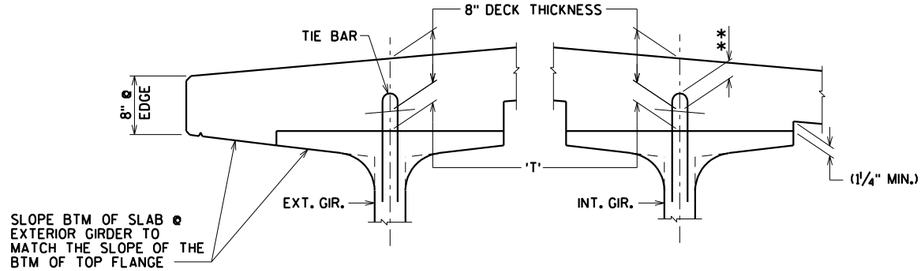


SECTION THRU GIRDER

SHOWING WELDED WIRE FABRIC (WWF) STIRRUPS
ASTM A1064 (FY = 70 KSI)



TYP. STRAND PATTERN



DECK HAUNCH DETAIL

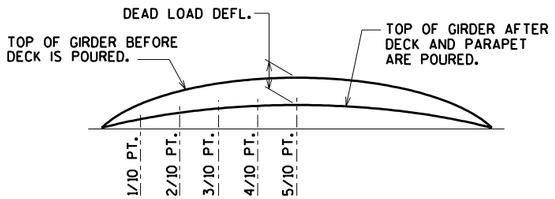
IF 1¼" MINIMUM HAUNCH HEIGHT AT EDGE OF GIRDER CANNOT BE MAINTAINED, THE GRADE LINE MAY BE REVISED BY THE ENGINEER AT THE OPTION OF THE CONTRACTOR. THE PLAN DECK THICKNESS SHALL BE HELD. NOTIFY THE STRUCTURES SECTION IF THE GRADE LINE IS RAISED FROM THE PLAN PROFILE BY MORE THAN ½" OR,

** IF 3" MINIMUM DECK EMBEDMENT OF TIE BAR CANNOT BE OBTAINED.

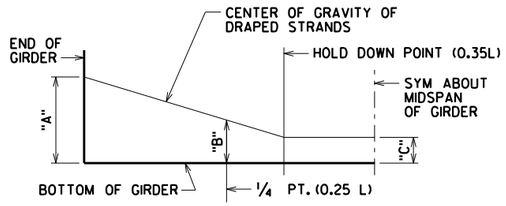
TO DETERMINE 'T', ELEV. OF TOP OF GIR'S. AT ℄ OF SUBSTRUCTURE UNITS & AT 1/10 POINTS OF EACH SPAN SHALL BE TAKEN. THEN FOLLOW THIS PROCESS:

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 3⅞" WAS USED IN THE QUANTITY "HIGH PERFORMANCE CONCRETE (HPC) MASONRY STRUCTURES".



DEAD LOAD DEFLECTION DIAGRAM



DRAPED STRAND PROFILE

* THE THEORETICAL INITIAL CAMBER VALUE AT THE TIME OF STRAND RELEASE AT MIDSPAN

SPAN	CAMBER (IN.) *
1	4.7
2	1.2

THESE VALUES ARE NOT TO BE USED IN DETERMINING 'T'. USE ACTUAL GIRDER SHOTS.
THESE VALUES ARE FOR INFORMATIONAL PURPOSES ONLY.

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DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-731

DRAWN BY CLP | PLANS CK'D. CBM

54W" PRESTRESSED GIRDER DETAILS

SHEET 24 OF 40
436

ORIGINAL PLANS PREPARED BY
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STATE PROJECT NUMBER

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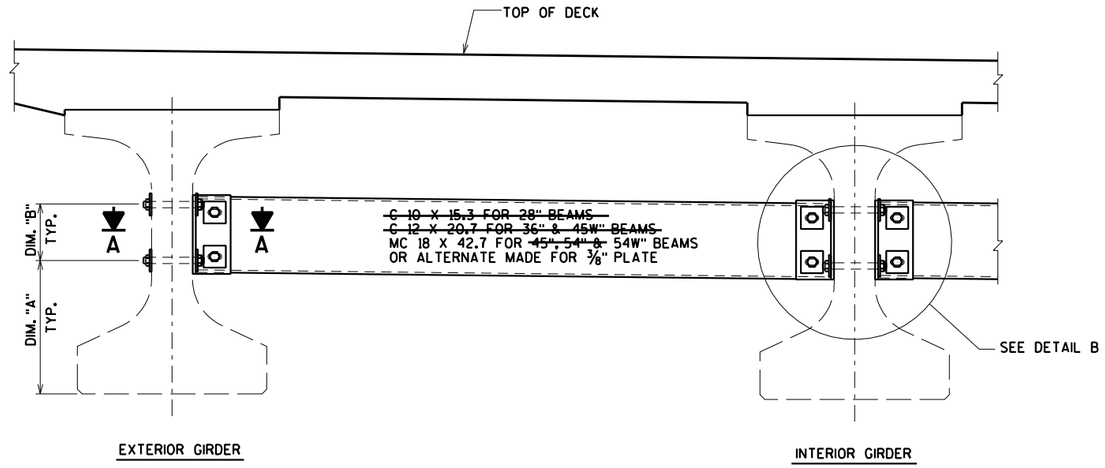
TABLE

GIRDER HEIGHT	DIM. "A"	DIM. "B"	DIM. "L"	* DIM. "X"
54W"	1'-9 1/8"	1'-5 7/8"	1'-9 1/2"	4 1/4"



PART TRANSVERSE SECTION AT DIAPHRAGM

NOTES

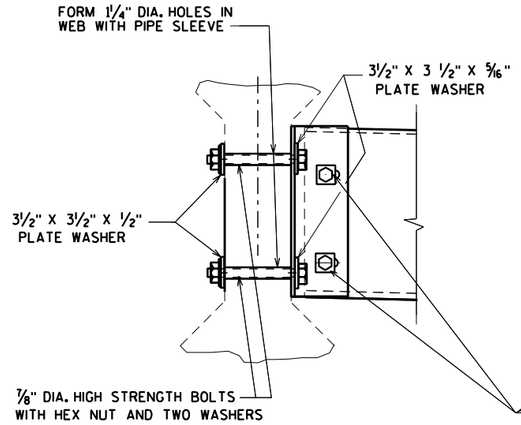
ALL DIAPHRAGM MATERIAL NOT EMBEDDED IN THE CONCRETE GIRDER SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "STEEL DIAPHRAGMS B-13-731", EACH.

EACH DIAPHRAGM BETWEEN GIRDERS SHALL CONSTITUTE ONE UNIT.

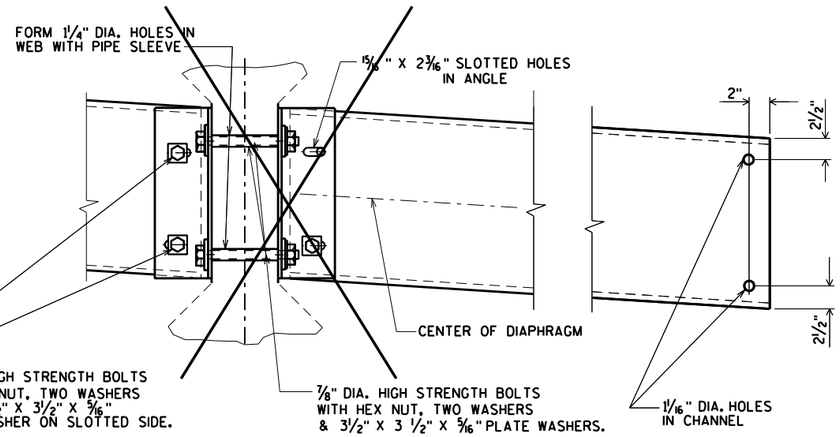
ALL DIAPHRAGM STRUCTURAL STEEL SHALL BE ASTM A709 GRADE 36.

ALL DIAPHRAGM MATERIAL INCLUDING BOLTS, NUTS, AND WASHERS SHALL BE GALVANIZED AFTER FABRICATION.

STEEL DIAPHRAGM TO CONCRETE WEB CONNECTION SHALL BE SNUG-TIGHT PLUS 1/4 TURN, UNLESS NOTED OTHERWISE. HIGH STRENGTH BOLTS FOR WEB CONNECTION SHALL MEET THE REQUIREMENTS FOR ASTM A325 OR ASTM A449.

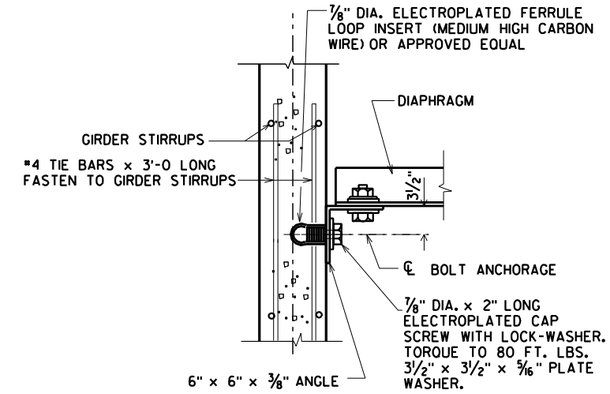


(FOR STAGGERED DIAPHRAGMS)



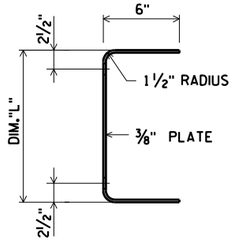
(FOR CONTINUOUS LINE OF DIAPHRAGMS)

DETAIL B

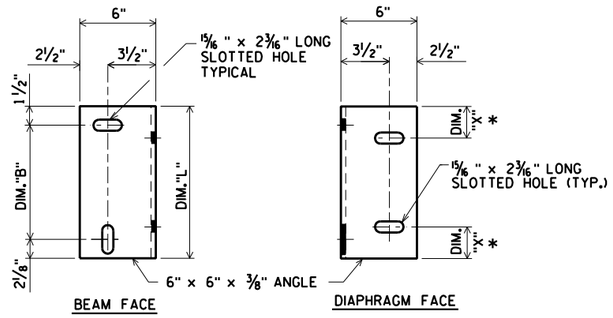


SECT. A-A

(FOR EXTERIOR ATTACHMENT)

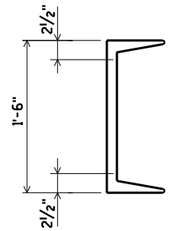


SECTION THRU ALTERNATE DIAPHRAGM



DIAPHRAGM SUPPORT

*DIM. "X" = 2 1/2" FOR ALTERNATE PLATE DIAPHRAGM



MC 18 x 42.7
SECTION THRU DIAPHRAGM

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-731

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STEEL INTER. DIAPHRAGM DETAILS

SHEET 25 OF 40
437

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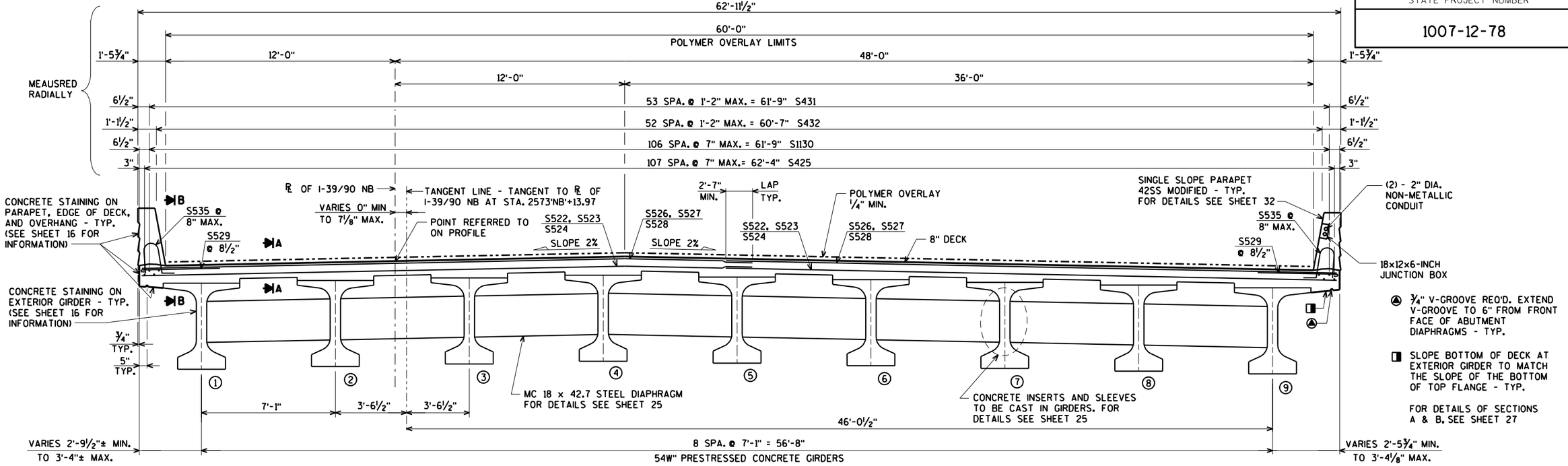


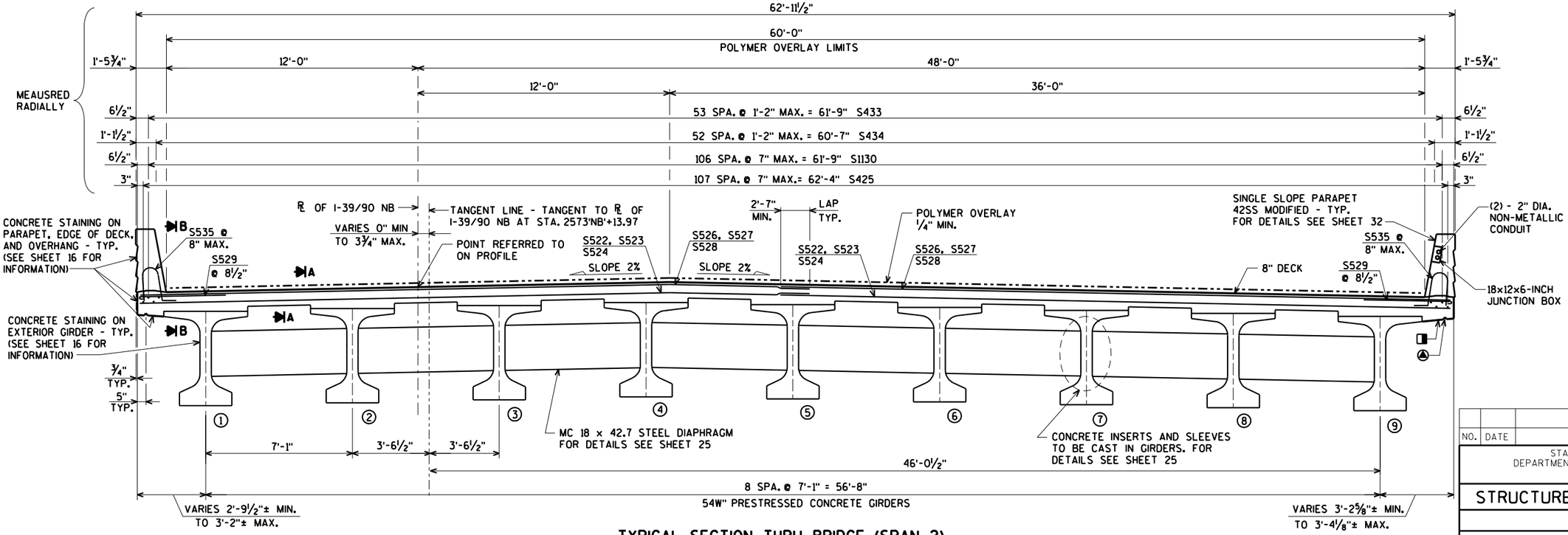
▲ ¾" V-GROOVE REQ'D. EXTEND V-GROOVE TO 6" FROM FRONT FACE OF ABUTMENT DIAPHRAGMS - TYP.

◨ SLOPE BOTTOM OF DECK AT EXTERIOR GIRDER TO MATCH THE SLOPE OF THE BOTTOM OF TOP FLANGE - TYP.

FOR DETAILS OF SECTIONS A & B, SEE SHEET 27

TYPICAL SECTION THRU BRIDGE (SPAN 1)

(LOOKING NORTH)



TYPICAL SECTION THRU BRIDGE (SPAN 2)

(LOOKING NORTH)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-731

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SUPERSTRUCTURE

SHEET 26 OF 40
438

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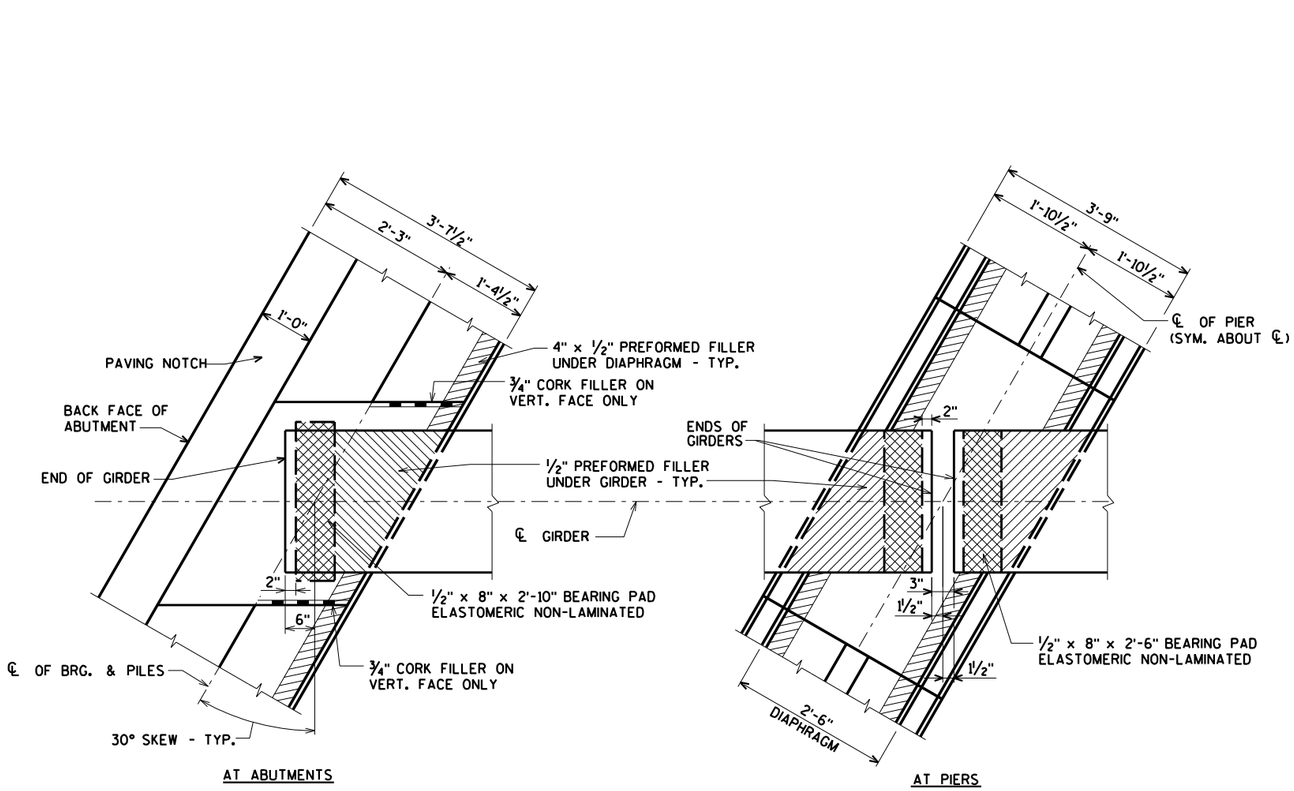
STATE PROJECT NUMBER

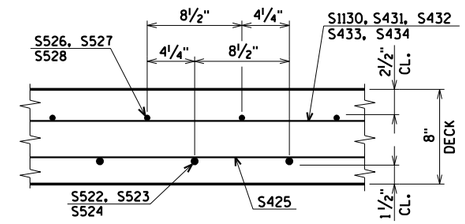
1007-12-78

TOP OF DECK ELEVATIONS

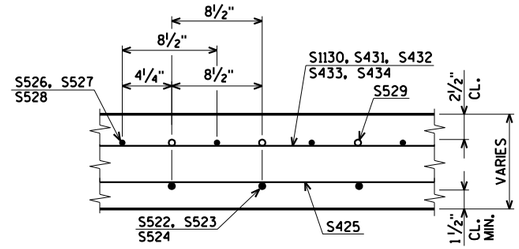
LOCATION	℄ BEARING S. ABUT.	0.1 PT.	0.2 PT.	0.3 PT.	0.4 PT.	0.5 PT.	0.6 PT.	0.7 PT.	0.8 PT.	0.9 PT.	℄ PIER	0.1 PT.	0.2 PT.	0.3 PT.	0.4 PT.	0.5 PT.	0.6 PT.	0.7 PT.	0.8 PT.	0.9 PT.	℄ BEARING N. ABUT.
W. EDGE OF DECK	900.19	900.12	900.06	899.99	899.93	899.87	899.80	899.74	899.67	899.61	899.54	899.50	899.45	899.40	899.36	899.31	899.27	899.22	899.17	899.13	899.08
GIRDER 1	900.26	900.20	900.13	900.06	900.00	899.93	899.87	899.80	899.74	899.67	899.61	899.56	899.52	899.47	899.42	899.38	899.33	899.29	899.24	899.20	899.15
GIRDER 2	900.43	900.36	900.29	900.23	900.16	900.09	900.03	899.96	899.90	899.83	899.77	899.72	899.68	899.63	899.59	899.54	899.49	899.45	899.40	899.36	899.31
℄ OF I-39/90 NB	900.49	900.43	900.36	900.30	900.24	900.17	900.11	900.04	899.98	899.91	899.85	899.80	899.76	899.71	899.67	899.62	899.57	899.53	899.48	899.44	899.39
GIRDER 3	900.59	900.52	900.45	900.39	900.32	900.26	900.19	900.13	900.06	900.00	899.93	899.88	899.84	899.79	899.75	899.70	899.65	899.61	899.56	899.52	899.47
GIRDER 4	900.75	900.68	900.62	900.55	900.48	900.42	900.35	900.29	900.22	900.16	900.09	900.04	900.00	899.95	899.91	899.86	899.81	899.77	899.72	899.68	899.63
CROWN	900.77	900.70	900.64	900.57	900.51	900.45	900.38	900.32	900.25	900.19	900.12	900.08	900.03	899.99	899.94	899.89	899.85	899.80	899.76	899.71	899.66
GIRDER 5	900.66	900.60	900.53	900.47	900.41	900.35	900.28	900.22	900.16	900.09	900.03	899.98	899.93	899.89	899.84	899.80	899.75	899.70	899.66	899.61	899.56
GIRDER 6	900.54	900.47	900.41	900.35	900.29	900.22	900.16	900.10	900.03	899.97	899.91	899.86	899.82	899.77	899.72	899.68	899.63	899.58	899.53	899.49	899.44
GIRDER 7	900.41	900.35	900.29	900.23	900.16	900.10	900.04	899.98	899.91	899.85	899.78	899.73	899.69	899.64	899.60	899.55	899.50	899.46	899.41	899.37	899.32
GIRDER 8	900.29	900.23	900.17	900.10	900.04	899.98	899.92	899.85	899.79	899.73	899.66	899.61	899.57	899.52	899.48	899.43	899.38	899.34	899.29	899.25	899.20
GIRDER 9	900.17	900.11	900.04	899.98	899.92	899.86	899.79	899.73	899.67	899.61	899.54	899.50	899.45	899.40	899.36	899.31	899.27	899.22	899.17	899.13	899.08
E. EDGE OF DECK	900.12	900.06	900.00	899.93	899.87	899.80	899.74	899.68	899.61	899.55	899.48	899.44	899.39	899.35	899.30	899.25	899.21	899.16	899.12	899.07	899.03



BEARING PAD DETAILS



SECTION A



SECTION B

FOR LOCATION OF SECTIONS A & B, SEE SHEET 26

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-731

DRAWN BY CLP | PLANS CK'D. CBM

SUPERSTRUCTURE DETAILS

SHEET 27 OF 40
439

ORIGINAL PLANS PREPARED BY
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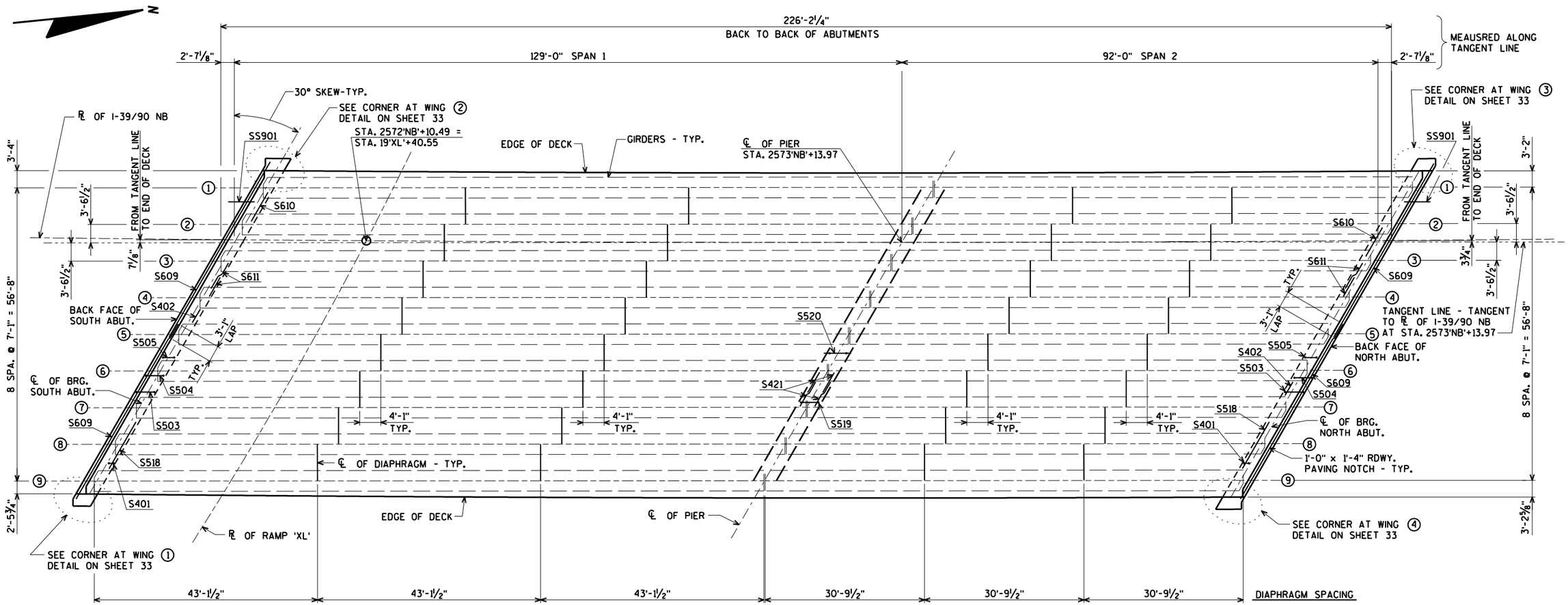
STATE PROJECT NUMBER

1007-12-78



PLAN

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-731

DRAWN BY CLP | PLANS CK'D. CBM

SUPERSTRUCTURE GIRDER LAYOUT

SHEET 28 OF 40
440

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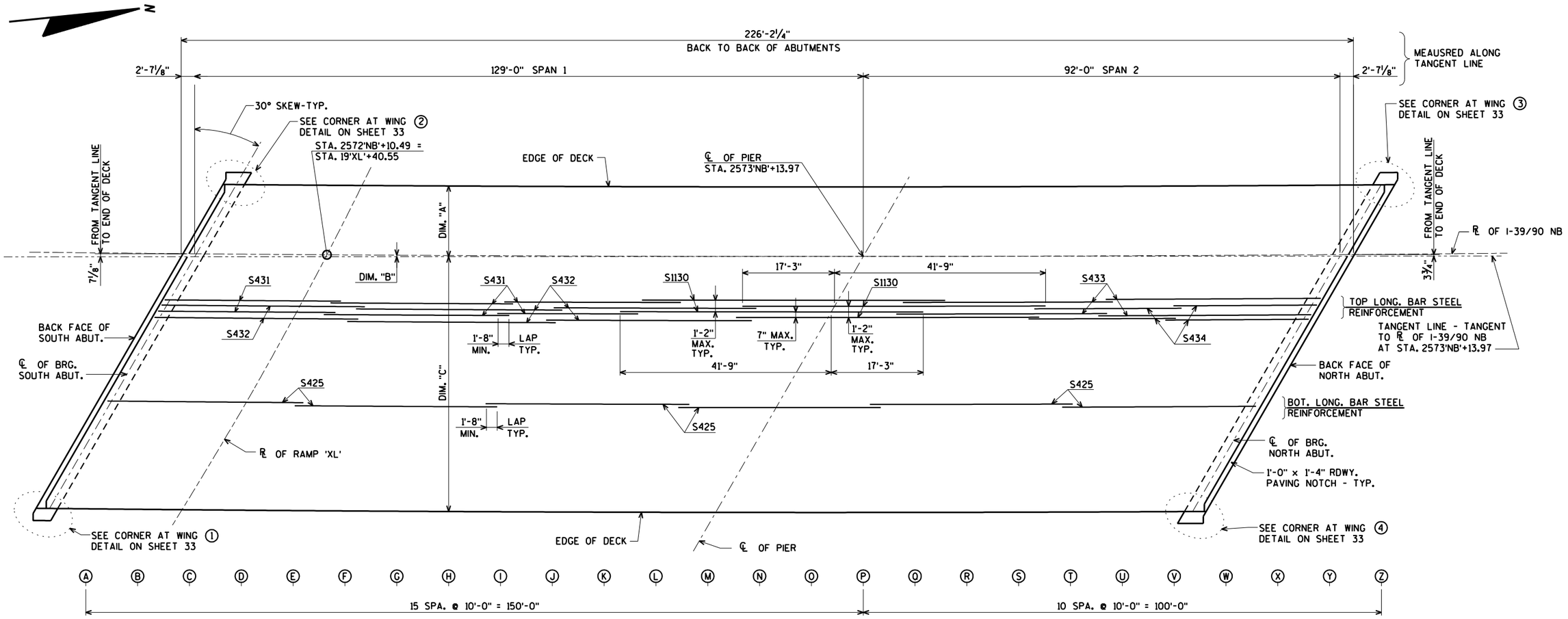

PLAN

EDGE OF DECK OFFSETS

	A	B	C	D	E	F	G	H	I	J	K	L	M
DIM. "A"	---	---	---	13'-11⅛"	13'-10⅛"	13'-9¼"	13'-8⅜"	13'-7¾"	13'-7⅛"	13'-6½"	13'-6"	13'-5⅝"	13'-5⅜"
DIM. "B"	---	---	7⅛"	6⅛"	5⅛"	4¼"	3⅜"	2¾"	2⅛"	1½"	1"	⅝"	⅜"
DIM. "C"	48'-7½"	48'-8¾"	48'-9⅞"	48'-10⅞"	48'-11⅞"	49'-0¾"	49'-1⅝"	49'-2¼"	49'-2⅞"	49'-3½"	49'-4"	49'-4⅜"	49'-4⅝"

	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
DIM. "A"	13'-5⅛"	13'-5"	13'-5"	13'-5"	13'-5⅛"	13'-5⅜"	13'-5⅝"	13'-6"	13'-6½"	13'-7⅛"	13'-7¾"	13'-8⅜"	13'-9¼"
DIM. "B"	⅛"	0"	0"	0"	⅛"	⅜"	⅝"	1"	1½"	2⅛"	2¾"	3⅜"	---
DIM. "C"	49'-4⅞"	49'-5"	49'-5"	49'-5"	49'-4⅞"	49'-4⅝"	49'-4⅜"	49'-4"	49'-3½"	---	---	---	---

NOTES:

DIM. "A" IS MEASURED FROM WEST EDGE OF DECK TO TANGENT LINE.

DIM. "B" IS MEASURED FROM ℄ OF I-39/90 NB TO TANGENT LINE.

DIM. "C" IS MEASURED FROM TANGENT LINE TO EAST EDGE OF DECK.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-731

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SUPERSTRUCTURE PLAN

SHEET 29 OF 40
441

ORIGINAL PLANS PREPARED BY
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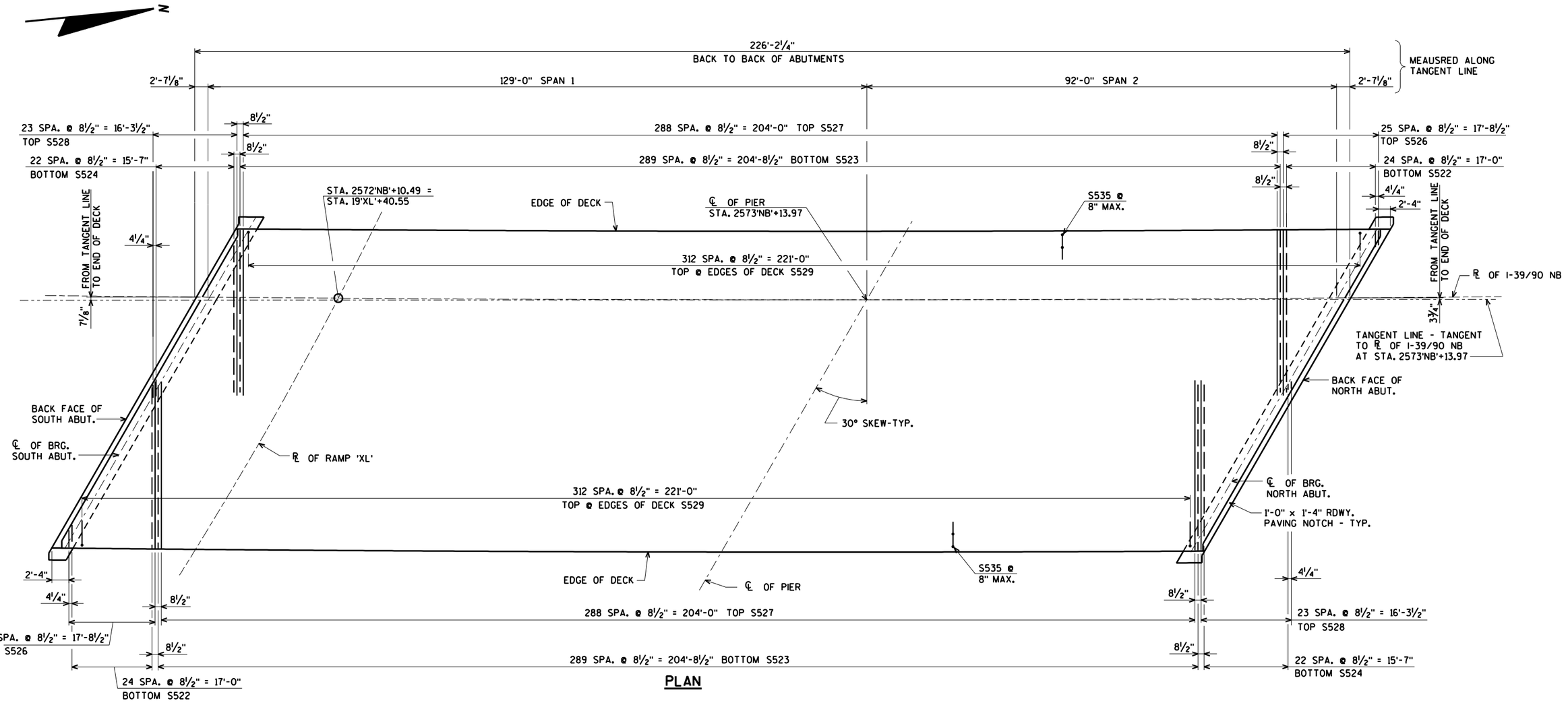

PLAN

8/5/2019
PENTABLE:BReau_shd_util.tbl

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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-731

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TRANSVERSE DECK STEEL LAYOUT

SHEET 30 OF 40
442

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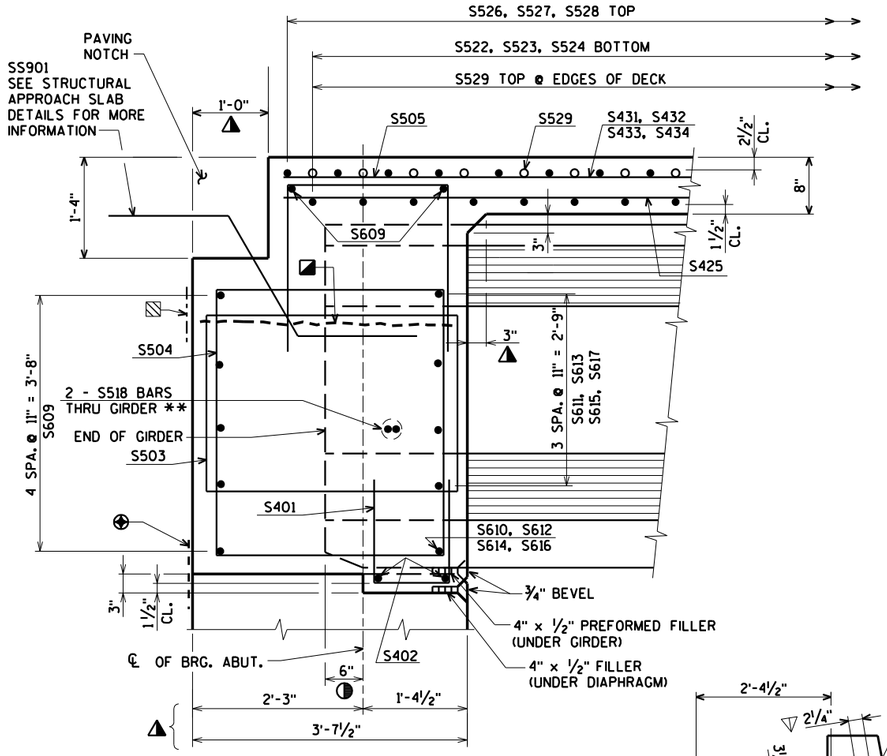
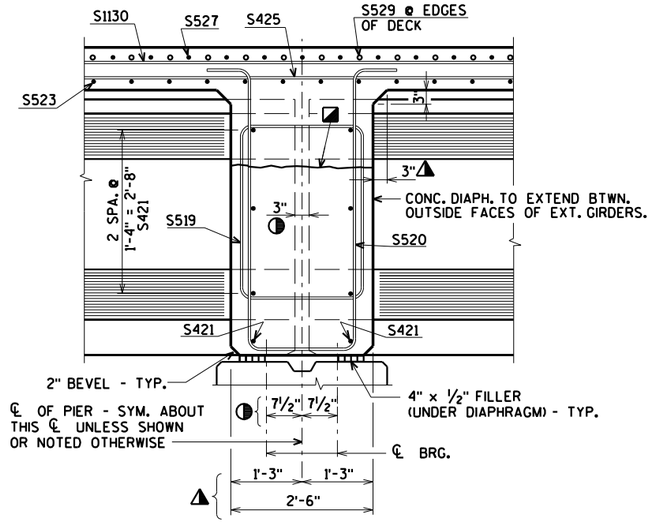
STATE PROJECT NUMBER
1007-12-78



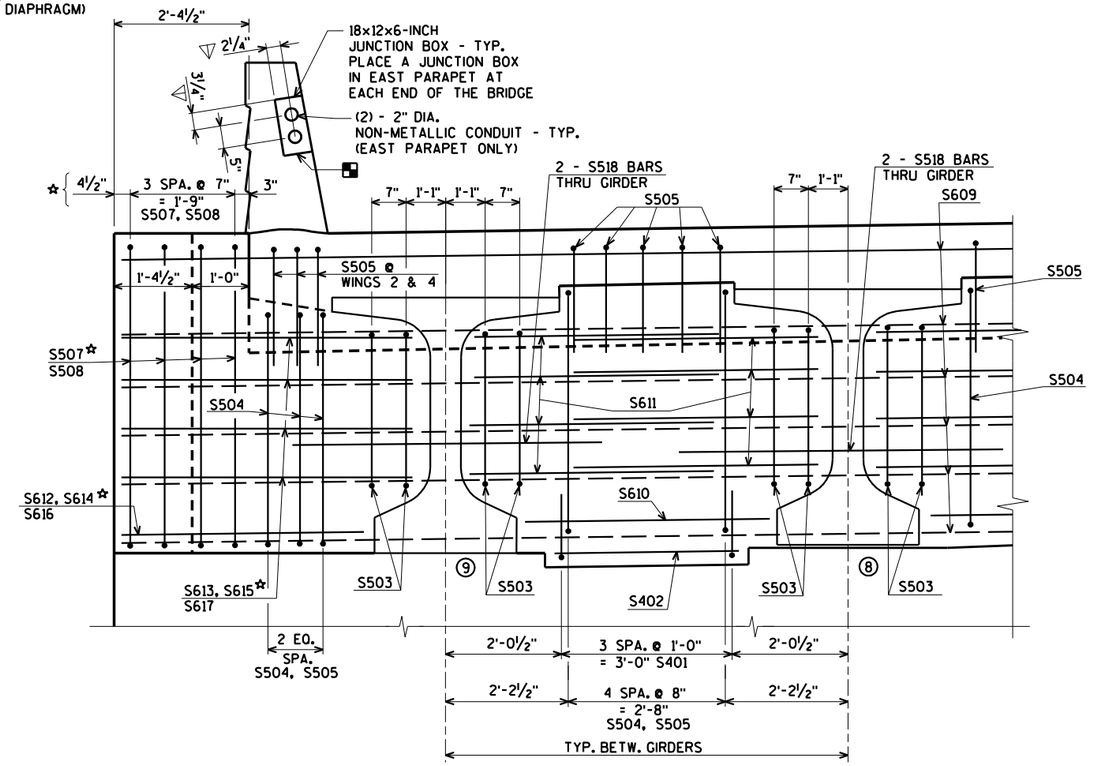
PART LONGITUDINAL SECTION ABUTMENT DIAPHRAGM

** PLACED SYM. ABOUT ℄ OF GIRDERS. FIELD BEND BARS ALONG SKEW.



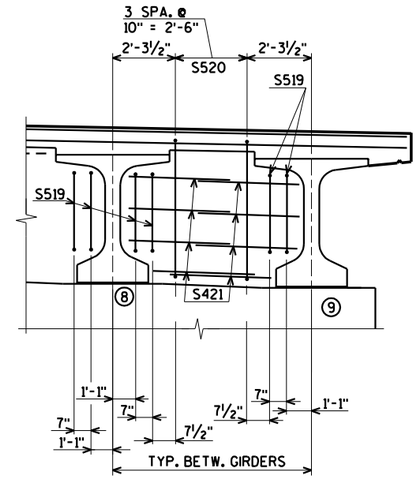
PART LONGITUDINAL SECTION DETAIL PIER DIAPHRAGM

- CUT OUT 1"± OF GASKET AT BOTTOM OF JUNCTION BOX COVER TO ALLOW FOR DRAINAGE.
- LOCATION OF CONDUIT IS MEASURED FROM OUTSIDE EDGE OF JUNCTION BOX.
- ☆ SEE SUPERSTRUCTURE CORNER DETAILS ON SHEET 33
- ⊕ 18" RUBBERIZED MEMBRANE WATERPROOFING
- ◑ DIMENSIONS MEASURED ALONG ℄ OF GIRDER.
- ◭ DIMENSIONS MEASURED NORMAL TO ℄ OF SUBSTRUCTURE UNIT.
- ◪ OPTIONAL CONSTRUCTION JOINT 1'-2" BELOW TOP OF GIRDER. IF USED, DECK POUR MUST BE WITHIN 2 WEEKS FROM THE TIME OF THE DIAPHRAGM POUR.
- ▨ 18" RUBBERIZED MEMBRANE WATERPROOFING IF CONST. JT. IS USED. COST INCLUDED WITH BID ITEM "HIGH PERFORMANCE CONCRETE (HPC) MASONRY STRUCTURES"



PART TRANSVERSE SECTION AT ABUTMENT DIAPHRAGM

(LOOKING SOUTH AT BEAMS ⑧ & ⑨, OTHER LOCATIONS SIMILAR)



PART TRANSVERSE SECTION AT PIER DIAPHRAGM

(LOOKING NORTH AT BEAMS ⑧ & ⑨, OTHER LOCATIONS SIMILAR)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-731

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SUPERSTRUCTURE DIAPHRAGM DETAILS

SHEET 31 OF 40
443

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
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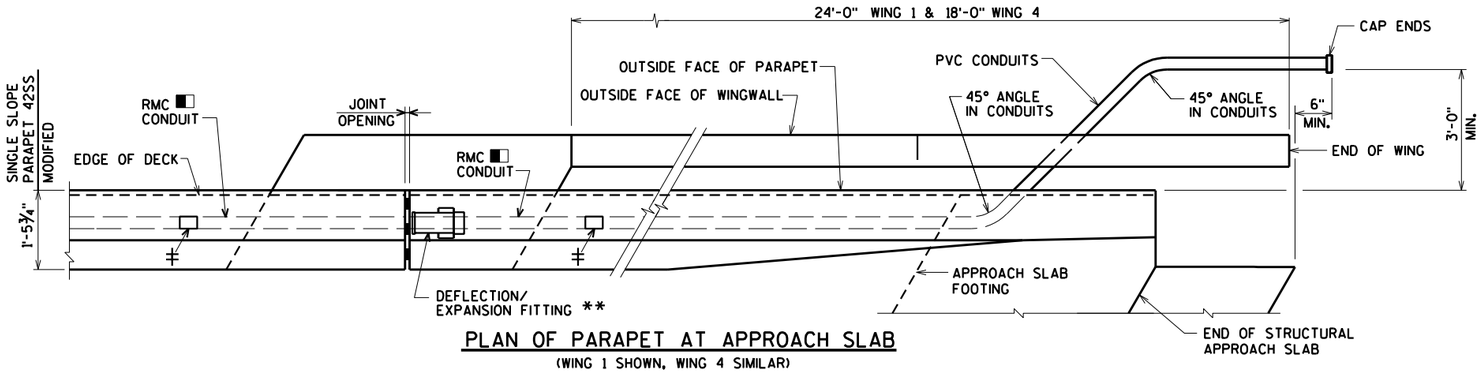
7/23/2019
PENTABLE:BReau_shd_util.tbl

$PRFNAME$
U:\41-0660.0X - IH-39 Dane Partners General Bridge Information\B-13-731 - I39_NB over Off Ramp\bridge\B-13-731 sup.dgn

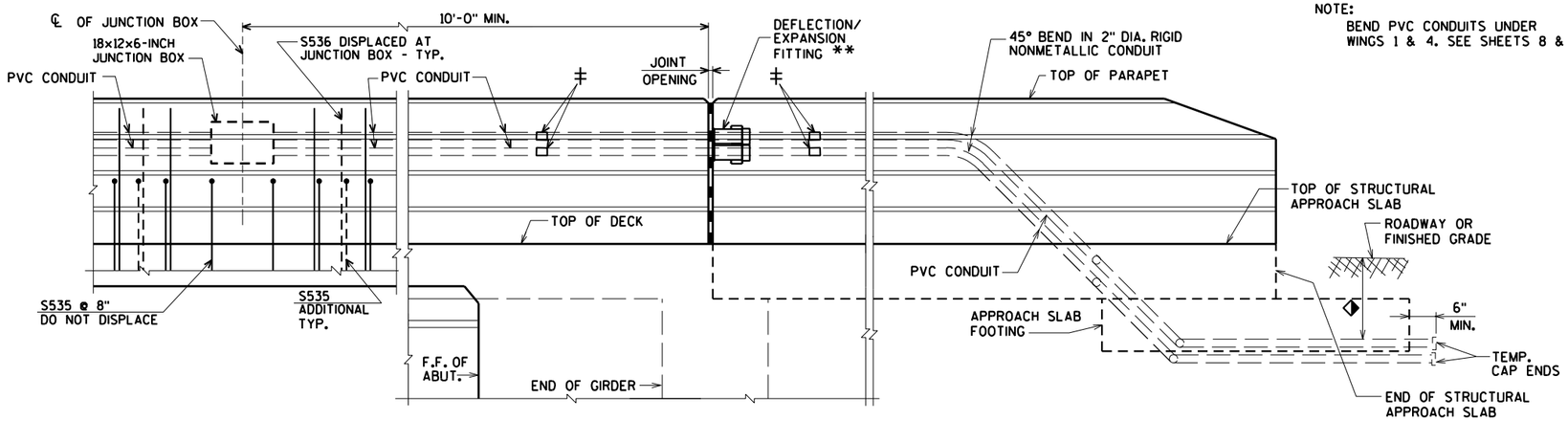
STATE PROJECT NUMBER

1007-12-78



PLAN OF PARAPET AT APPROACH SLAB

(WING 1 SHOWN, WING 4 SIMILAR)



NOTE:
BEND PVC CONDUITS UNDER WINGS 1 & 4. SEE SHEETS 8 & 14.

OUTSIDE ELEVATION OF PARAPET AT APPROACH SLAB

(WING 4 SHOWN, WING 1 SIMILAR)

LEGEND

‡ NONMETALLIC CONDUIT TO METALLIC CONDUIT ADAPTOR FITTING (UL OR NRTL LISTED FOR ELECTRICAL USE SHALL BE USED)

■ USE 2" DIA. RIGID METALLIC (RMC) CONDUIT AT FITTINGS. PROVIDE RMC FOR 3'-0" MIN. ON EACH SIDE OF JOINT OPENINGS UNLESS NOTED OTHERWISE.

◅ SPONGE RUBBER WRAP TO BE AASHTO M153, TYPE 1 OR EQUIVALENT - ¼" MINIMUM THICKNESS. PROVIDE WRAP FOR THE ENTIRE LENGTH OF THE FITTING OR AS SHOWN. SPONGE RUBBER WRAP INCIDENTAL TO "CONDUIT RIGID METALLIC 2-INCH"

** DEFLECTION/EXPANSION FITTING REQUIREMENTS (IF USED):
- UP TO ¾" CONDUIT CONTRACTION OR EXPANSION AND UP TO 30 DEGREES OF ANGULAR MISALIGNMENT IN ANY DIRECTION WITH BONDING JUMPER

PVC = POLYVINYL CHLORIDE (RIGID NONMETALLIC) CONDUIT

RMC = RIGID METALLIC CONDUIT

▪ CUT OUT 1"± OF GASKET AT BOTTOM OF JUNCTION BOX COVER TO ALLOW FOR DRAINAGE.

▽ LOCATION OF CONDUIT IS MEASURED FROM OUTSIDE EDGE OF JUNCTION BOX.

NOTES

◆ 2'-0" MIN. CONDUIT COVER UNDER ROADWAYS. 1'-6" OTHERWISE. CONDUIT COVER SHOULD NOT EXCEED 3'-0".

CONDUIT SHALL BE EMBEDDED 2" CLEAR.

USE 2" DIA. RIGID NONMETALLIC CONDUIT (PVC) UNLESS NOTED OTHERWISE.

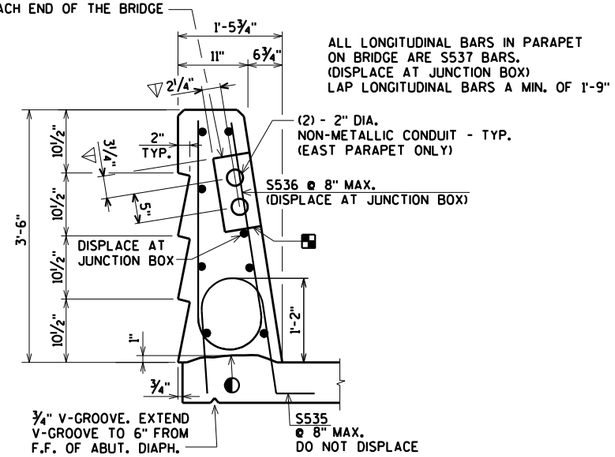
CONDUIT FITTINGS, CONDUIT BENDS, AND ADAPTER FITTINGS INCIDENTAL TO CONDUIT WORK.

CONDUIT BENDS SHALL CONFORM TO THE NATIONAL ELECTRIC CODE.

PROVIDE JUNCTION BOXES FROM THE APPROVED PRODUCTS LIST.

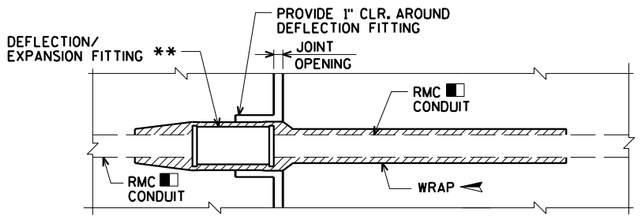
F.F. DENOTES FRONT FACE.

18x12x6-INCH JUNCTION BOX - TYP. PLACE A JUNCTION BOX IN EAST PARAPET AT EACH END OF THE BRIDGE



SECTION THRU PARAPET ON BRIDGE

◐ CONST. JOINT - STRIKE OFF AS SHOWN.



DEFLECTION/EXPANSION FITTING

THIS DETAIL ACCOMMODATES A MAXIMUM OF ¾" TOTAL MOVEMENT AND UP TO 30 DEGREES OF ANGULAR MISALIGNMENT IN ANY DIRECTION. BOND JUMPER NOT SHOWN FOR CLARITY (CONCRETE TO CONCRETE FITTING)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-731

DRAWN BY CLP | PLANS CK'D. CBM

SUPERSTRUCTURE CONDUIT DETAILS

SHEET 32 OF 40
444

ORIGINAL PLANS PREPARED BY
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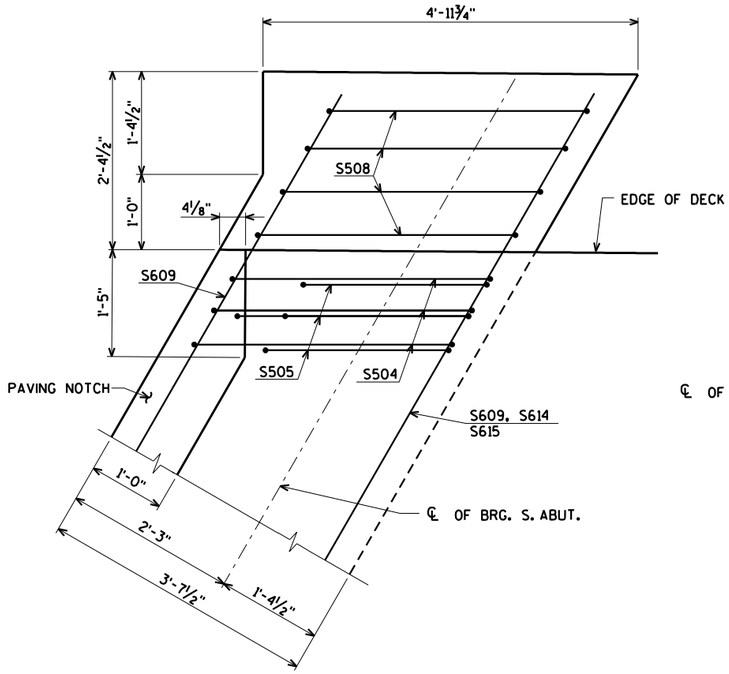
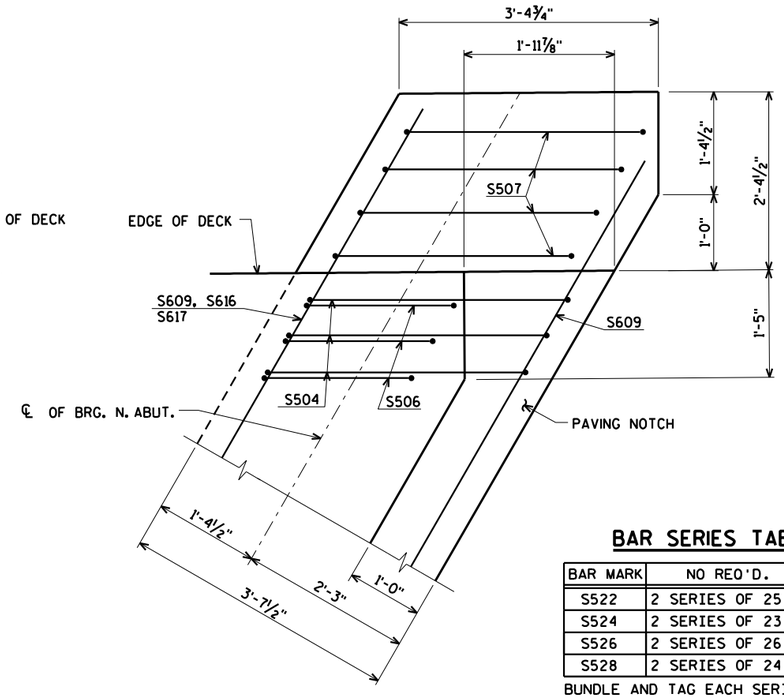
8

8

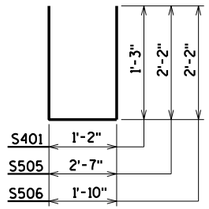
STATE PROJECT NUMBER
1007-12-78



CORNER AT WING 2 DETAIL



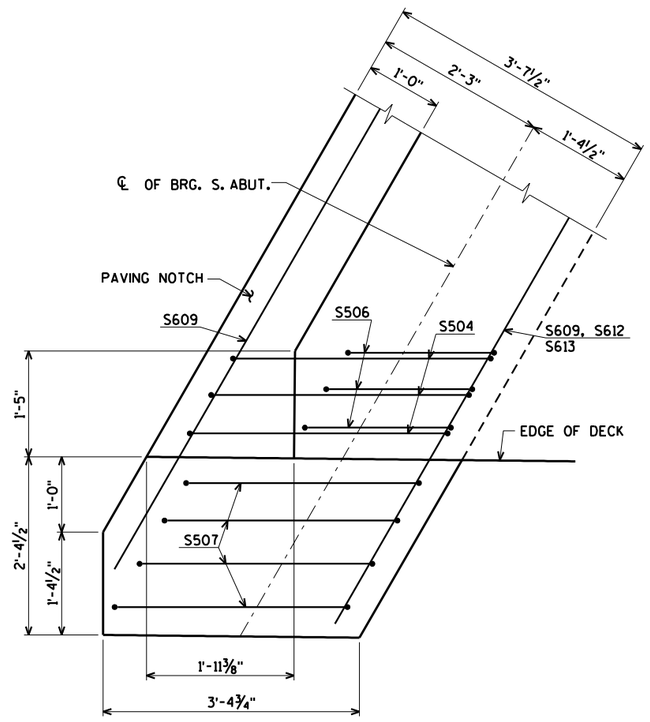
CORNER AT WING 3 DETAIL



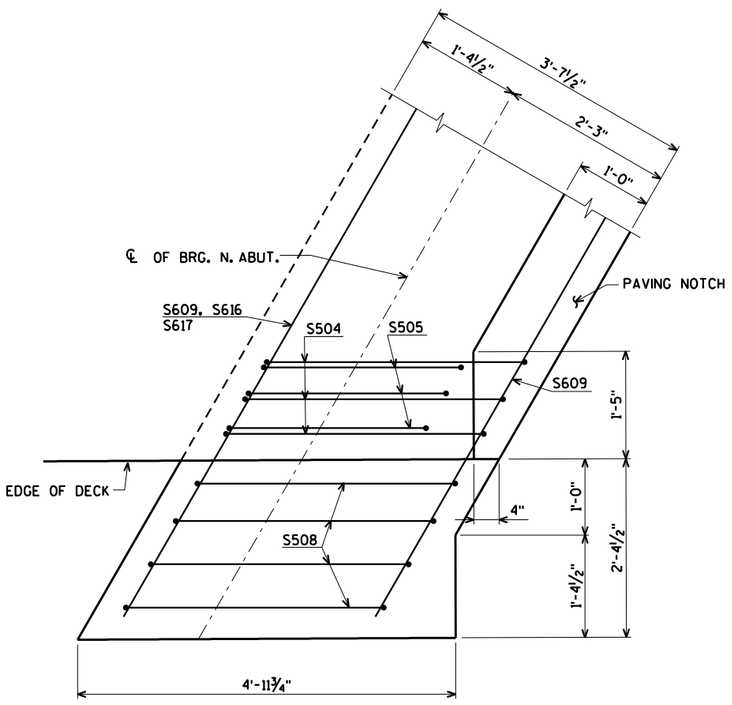
BAR SERIES TABLE

BAR MARK	NO REQ'D.	LENGTH
S522	2 SERIES OF 25	2'-1" TO 31'-5"
S524	2 SERIES OF 23	3'-6" TO 30'-6"
S526	2 SERIES OF 26	1'-6" TO 32'-2"
S528	2 SERIES OF 24	2'-3" TO 30'-5"

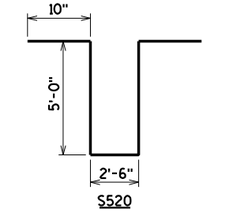
BUNDLE AND TAG EACH SERIES SEPARATELY.

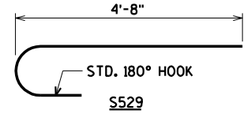


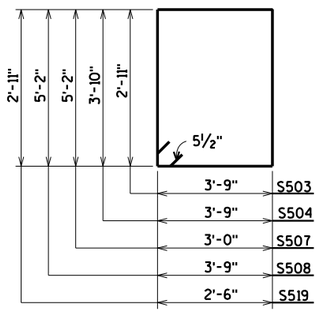
CORNER AT WING 1 DETAIL

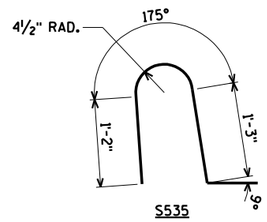


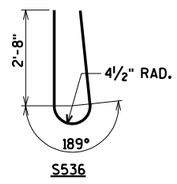
CORNER AT WING 4 DETAIL











BILL OF BARS

BAR NO.	COATED BAR	NO. REQ'D.	LENGTH	BENT BAR	BUNDLED BAR SERIES	128,550# COATED LOCATION
S401	X	64	3-6	X		DIAPH. @ ABUT. VERT. @ NOTCH
S402	X	32	3-9			DIAPH. @ ABUT. HORIZ. @ NOTCH
S503	X	72	13-10	X		DIAPH. @ ABUT. VERT.
S504	X	92	15-8	X		DIAPH. @ ABUT. VERT.
S505	X	86	6-8	X		DIAPH. @ ABUT. VERT. & CORNERS 2 & 4
S506	X	6	5-11	X		DIAPH. @ ABUT. VERT. CORNERS 1 & 3
S507	X	8	16-10	X		DIAPH. @ ABUT. VERT. CORNERS 1 & 3
S508	X	8	18-4	X		DIAPH. @ ABUT. VERT. CORNERS 2 & 4
S609	X	28	40-6			DIAPH. @ ABUT. HORIZ.
S610	X	16	4-10			DIAPH. @ ABUT. HORIZ. BETW. GDRS.
S611	X	128	5-2			DIAPH. @ ABUT. HORIZ. BETW. GDRS.
S612	X	1	3-9			DIAPH. @ ABUT. HORIZ. @ CORNER 1
S613	X	4	4-6			DIAPH. @ ABUT. HORIZ. @ CORNER 1
S614	X	1	4-9			DIAPH. @ ABUT. HORIZ. CORNER 2
S615	X	4	5-6			DIAPH. @ ABUT. HORIZ. CORNER 2
S616	X	2	4-6			DIAPH. @ ABUT. HORIZ. CORNERS 3 & 4
S617	X	8	5-3			DIAPH. @ ABUT. HORIZ. CORNERS 3 & 4
S518	X	36	6-0			DIAPH. @ ABUT. HORIZ. THRU GDRS.
S519	X	32	11-4	X		DIAPH. @ PIER VERT.
S520	X	32	13-8	X		DIAPH. @ PIER VERT.
S421	X	128	4-1			DIAPH. @ PIER HORIZ.
S522	X	50	16-9			⊗ DECK TRANS. BOT.
S523	X	580	32-7			DECK TRANS. BOT.
S524	X	46	17-0			⊗ DECK TRANS. BOT.
S425	X	648	38-8			DECK LONG. BOT.
S526	X	52	16-10			⊗ DECK TRANS. TOP
S527	X	578	32-7			DECK TRANS. TOP
S528	X	48	16-4			⊗ DECK TRANS. TOP
S529	X	626	5-3	X		DECK TRANS. TOP @ EDGES OF DECK
S1130	X	107	59-0			DECK LONG. TOP @ PIER
S431	X	162	31-2			DECK LONG. TOP SPAN 1
S432	X	159	39-4			DECK LONG. TOP SPAN 1
S433	X	108	39-8			DECK LONG. TOP SPAN 2
S434	X	106	27-5			DECK LONG. TOP SPAN 2
S535	X	674	4-5	X		DECK @ PARAPET
S536	X	670	6-8	X		PARAPET VERT.
S537	X	96	38-9			PARAPET HORIZ.

BENDING DIMENSIONS ARE OUT TO OUT OF BARS.

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

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-731

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ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
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SUPERSTRUCTURE
CORNER DETAILS
& BILL OF BARS

SHEET 33 OF 40
445

8

8

7/23/2019 7/23/2019 PENTABLE:BRequ_shd_util.tbl
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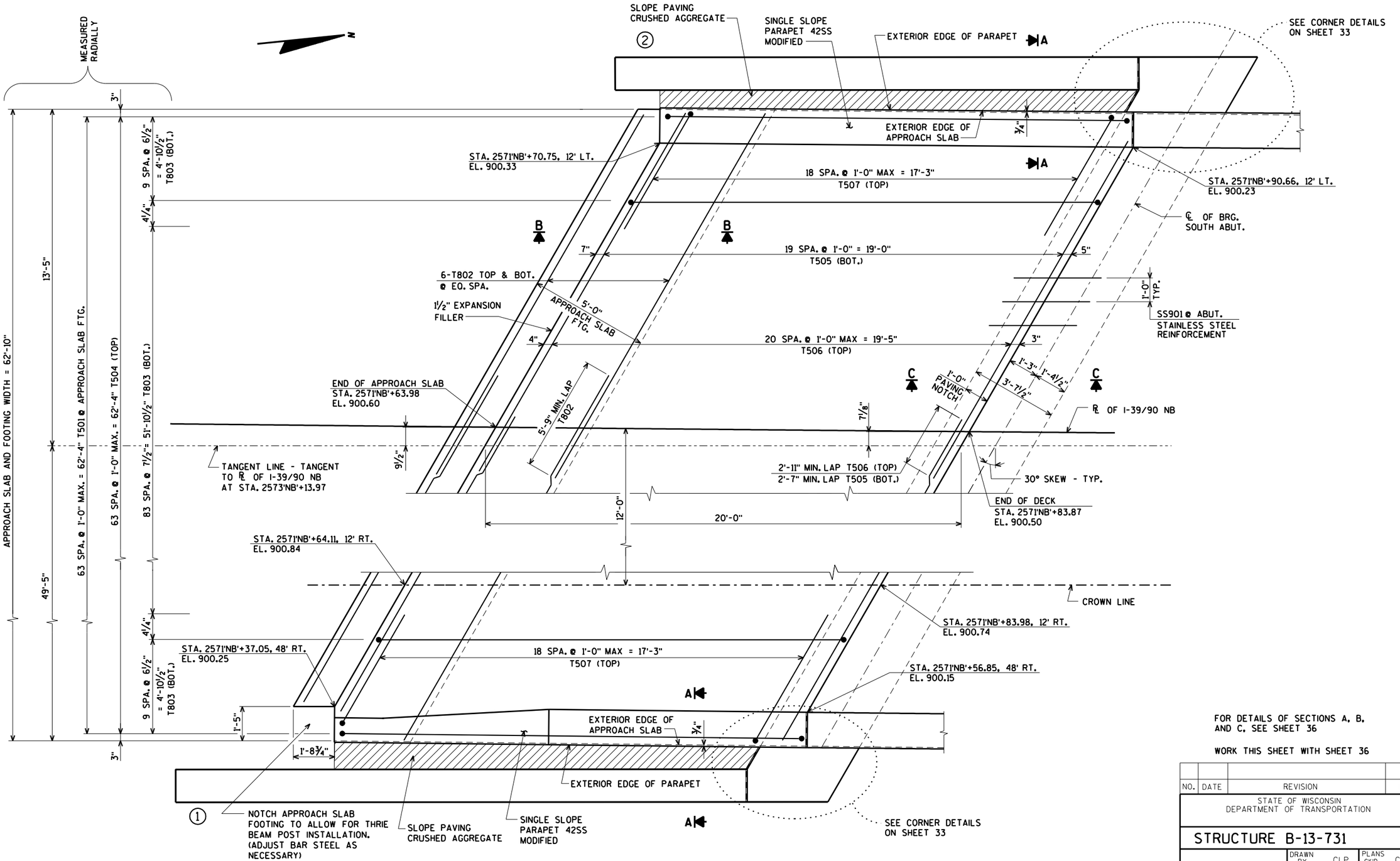
STATE PROJECT NUMBER

1007-12-78



APPROACH SLAB PLAN

FOR DETAILS OF SECTIONS A, B, AND C, SEE SHEET 36

WORK THIS SHEET WITH SHEET 36

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-731

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SOUTH STRUCTURAL APPROACH SLAB

SHEET 34 OF 40
446

ORIGINAL PLANS PREPARED BY
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7/24/2019
PENTABLE:BRegu_shd_util.tbl

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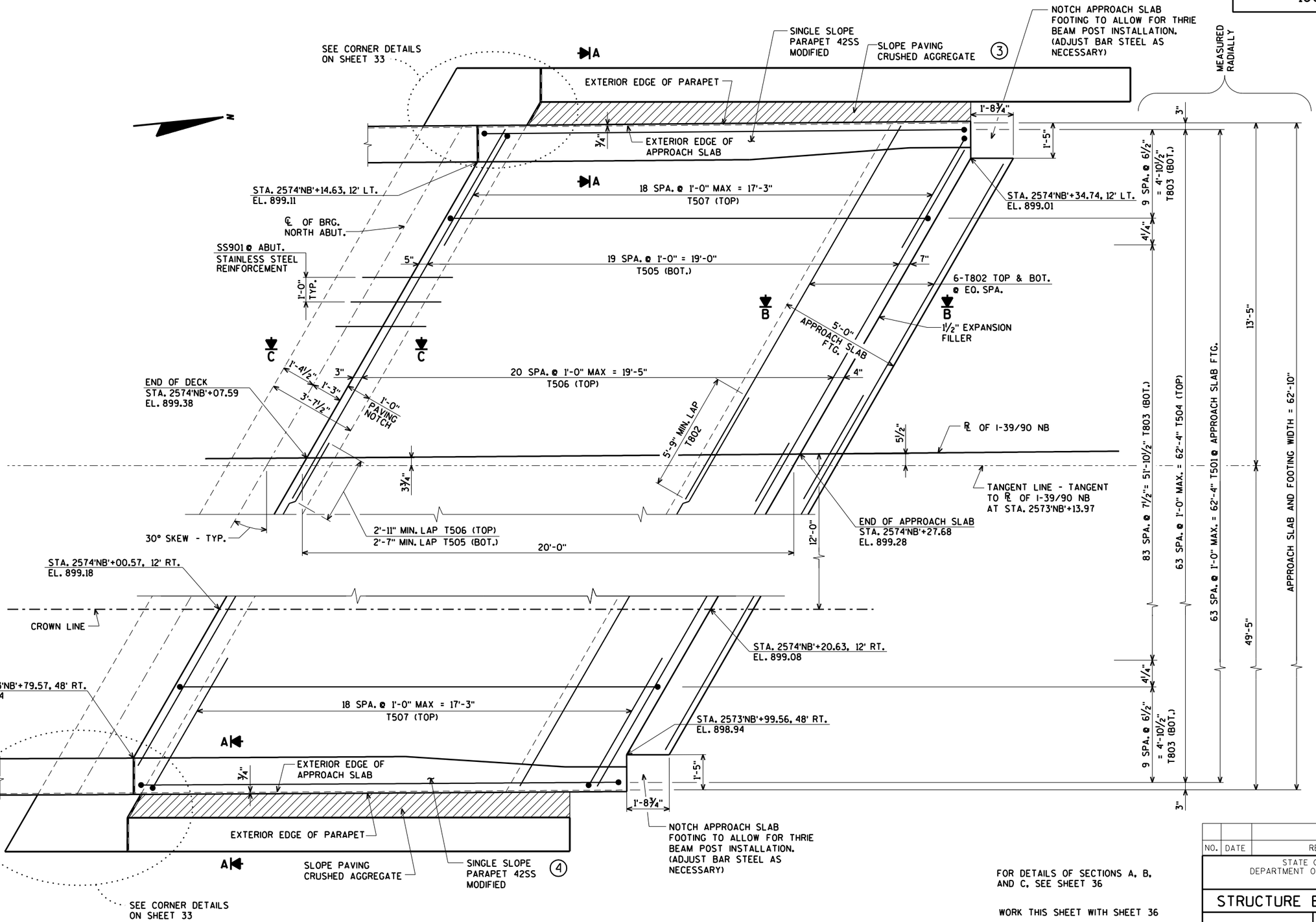
STATE PROJECT NUMBER

1007-12-78



APPROACH SLAB PLAN

FOR DETAILS OF SECTIONS A, B, AND C, SEE SHEET 36

WORK THIS SHEET WITH SHEET 36

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-731

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NORTH STRUCTURAL APPROACH SLAB

SHEET 35 OF 40
447

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7/24/2019
PENTABLE:BReau_shd_util.tbl

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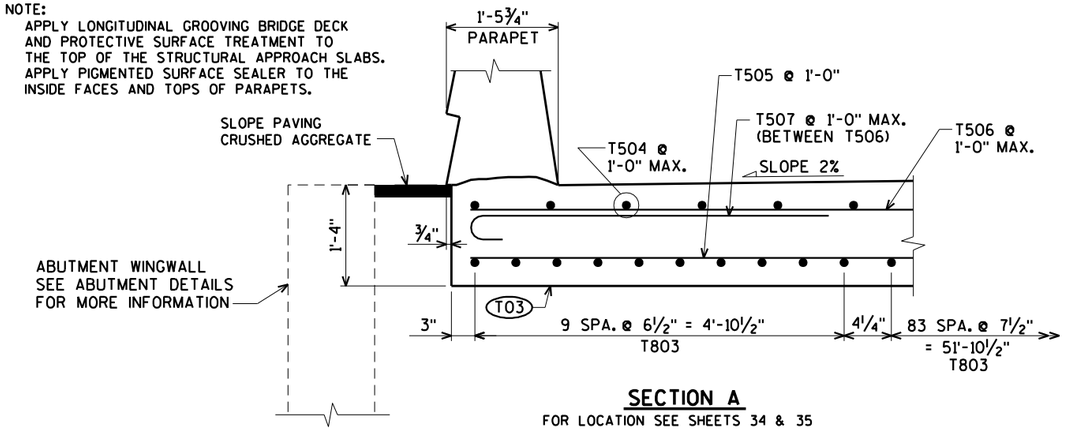
STATE PROJECT NUMBER
1007-12-78

NOTE:
APPLY LONGITUDINAL GROOVING BRIDGE DECK AND PROTECTIVE SURFACE TREATMENT TO THE TOP OF THE STRUCTURAL APPROACH SLABS. APPLY PIGMENTED SURFACE SEALER TO THE INSIDE FACES AND TOPS OF PARAPETS.



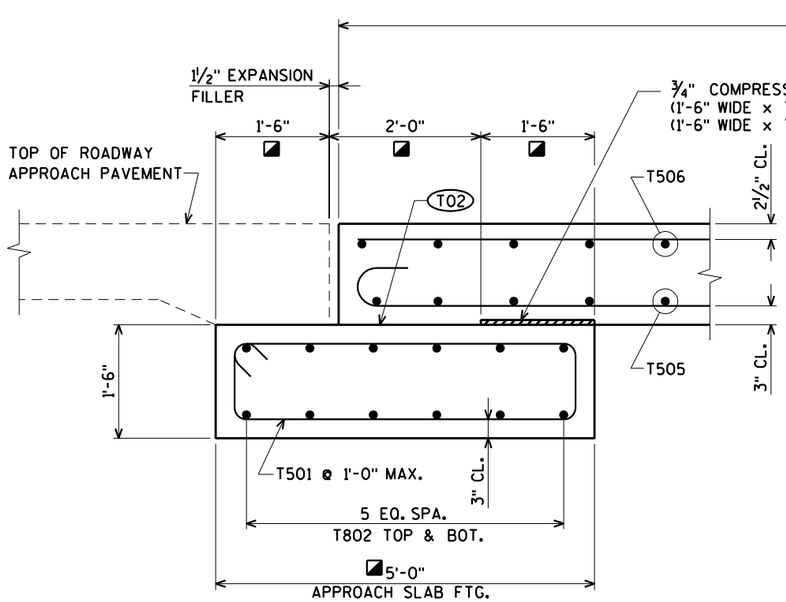
SECTION A
FOR LOCATION SEE SHEETS 34 & 35

BILL OF BARS

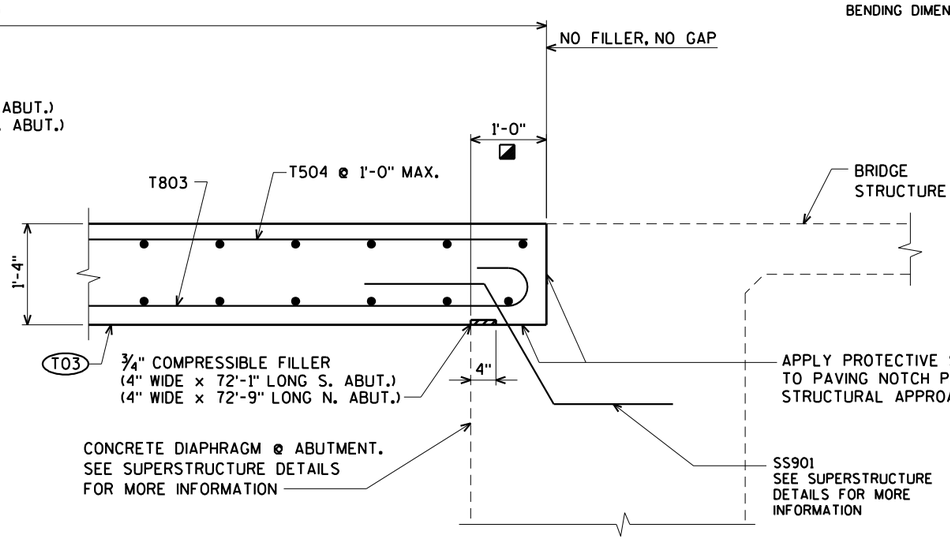
BAR NO.	COATED BAR	NO. REQ'D.	LENGTH	BENT BAR	BUNDLED BAR SERIES	1,070* STAINLESS STEEL (PER APPROACH SLAB) LOCATION
SS901		63	5-0	X		CONC. ABUT. DIAPH. TO APPROACH SLAB

BAR NO.	COATED BAR	NO. REQ'D.	LENGTH	BENT BAR	BUNDLED BAR SERIES	14,000* COATED (PER APPROACH SLAB) LOCATION
T501	X	64	13-6	X		APPROACH SLAB FTG. - STIRRUP
T802	X	24	39-0			APPROACH SLAB FTG. - TRANS.
T803	X	104	21-4	X		APPROACH SLAB - LONG. - BOT.
T504	X	64	19-6			APPROACH SLAB - LONG - TOP
T505	X	40	37-5			APPROACH SLAB - TRANS. - BOT.
T506	X	42	37-7			APPROACH SLAB - TRANS. - TOP
T507	X	38	4-1	X		APPROACH SLAB - TRANS. - TOP

BENDING DIMENSIONS ARE OUT TO OUT OF BARS.



SECTION B



SECTION C

SECTION THRU APPROACH SLAB

◪ MEASURED NORMAL TO ABUTMENT

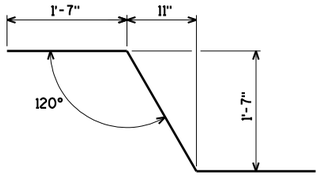
(T02) STEEL TROWEL TOP SURFACE OF FOOTING AND PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHYLENE SHEETS OVER THE ENTIRE TOP OF FOOTING.

(T03) PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHYLENE SHEETS OVER THE ENTIRE TOP OF SUBGRADE BENEATH SLAB.

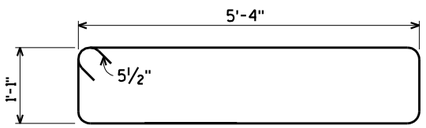
POLYETHYLENE SHEETS ARE INCLUDED WITH "HIGH PERFORMANCE CONCRETE (HPC) MASONRY STRUCTURES".

ALL STRUCTURAL APPROACH SLAB CONCRETE, EXCEPT FOR THE STRUCTURAL APPROACH SLAB FOOTING, PAID FOR UNDER "HIGH PERFORMANCE CONCRETE (HPC) MASONRY STRUCTURES". STRUCTURAL APPROACH SLAB FOOTING TO BE PAID UNDER "CONCRETE MASONRY BRIDGES".

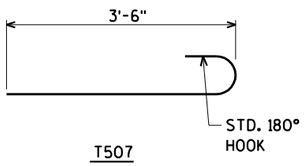
WORK THIS SHEET WITH SHEETS 34 & 35



SS901



T501



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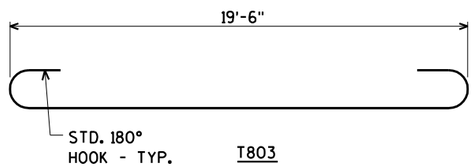

T803

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-731

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STRUCTURAL APPROACH SLAB DETAILS

SHEET 36 OF 40
448

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$PRFNAME$
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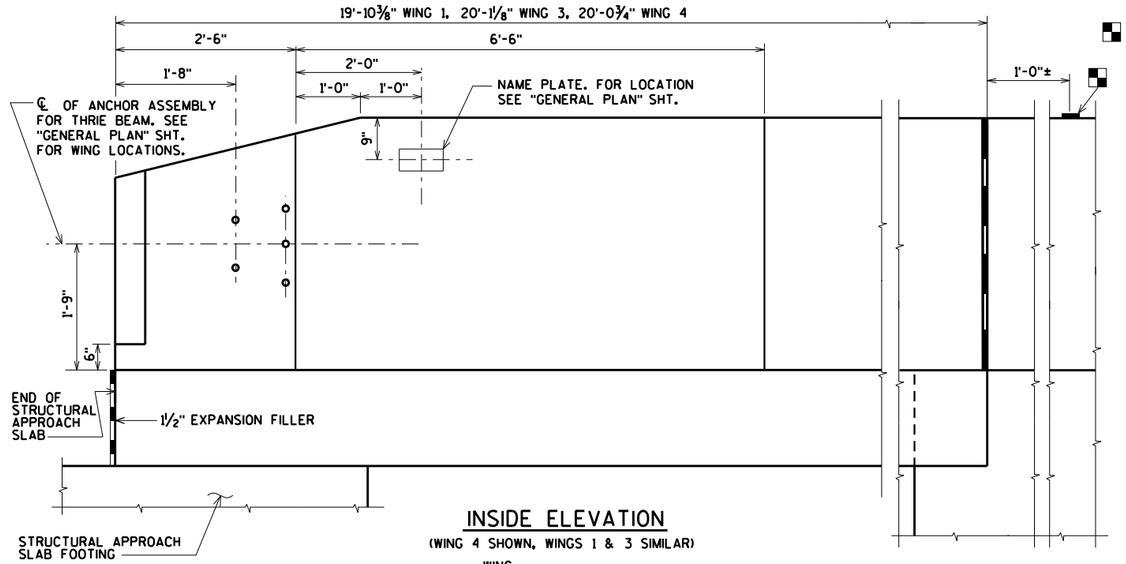
STATE PROJECT NUMBER

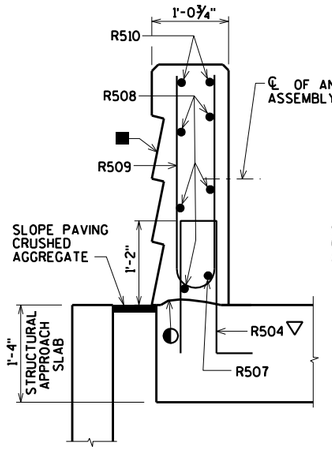
1007-12-78



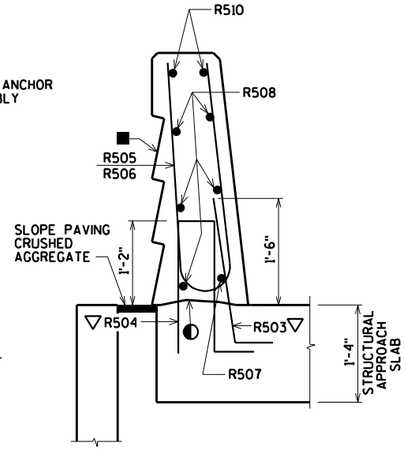
INSIDE ELEVATION

(WING 4 SHOWN, WINGS 1 & 3 SIMILAR)

BENCH MARK CAP (WHEN SUPPLIED) (NEAR WING 1)



SECTION A



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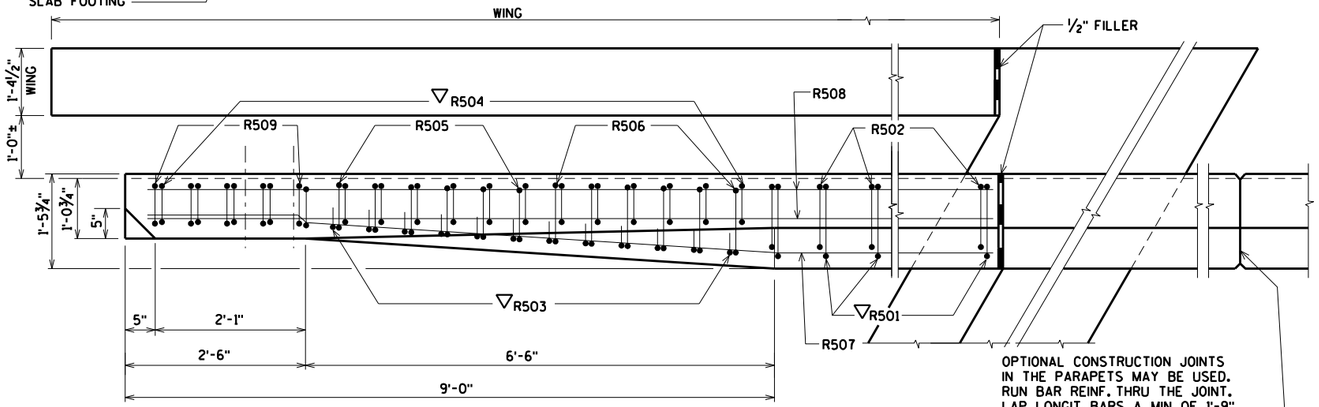
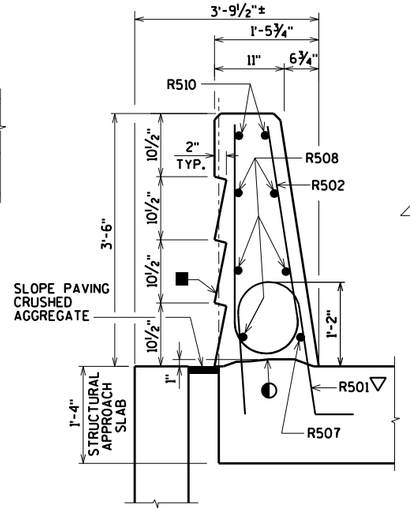


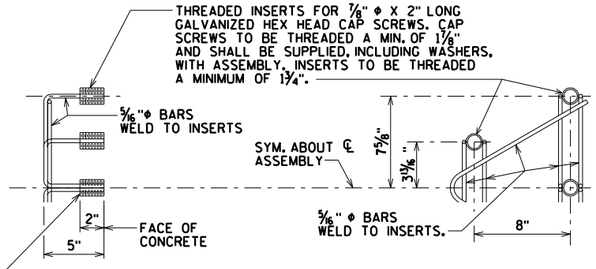
PLAN

(WING 4 SHOWN, WINGS 1 & 3 SIMILAR)

OPTIONAL CONSTRUCTION JOINTS IN THE PARAPETS MAY BE USED. RUN BAR REINF. THRU THE JOINT. LAP LONGIT. BARS A MIN. OF 1'-9". MIN. JOINT SPACING OF 80'-0". DEFINE CONST. JOINT WITH A ¾" 'V' GROOVE.



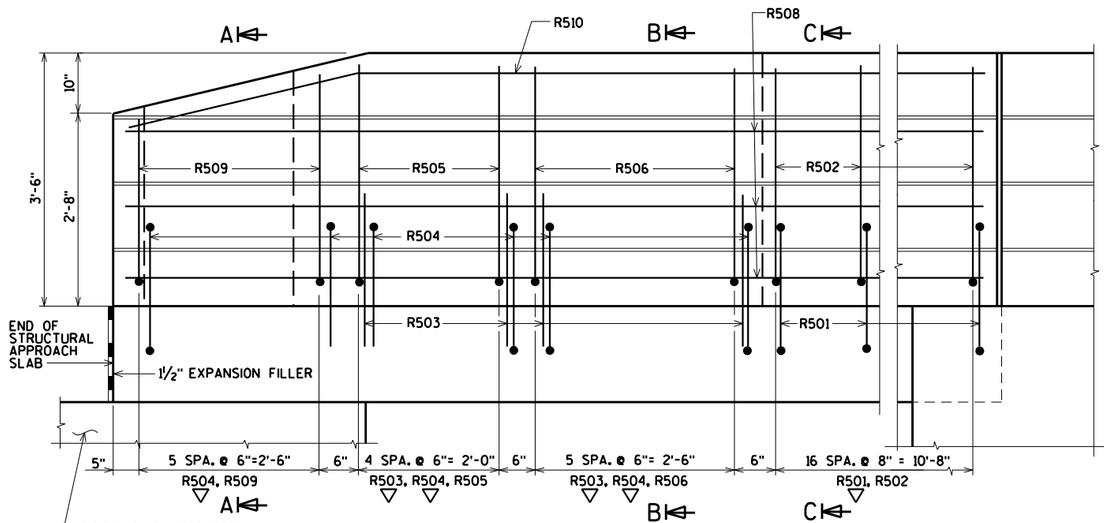
SECTION C



DETAIL OF ANCHOR ASSEMBLY

NOTE: HEX HEAD CAP SCREWS & WASHERS TO BE GALVANIZED IN ACCORDANCE WITH AASHTO M232 CLASS C.

ASSEMBLY SHALL BE BID ITEM "ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD", EACH.



OUTSIDE ELEVATION

(WINGS 1 & 3 SHOWN, WING 4 SIMILAR)

■ CONCRETE STAINING ON PARAPET (SEE SHEET 16 FOR INFORMATION)

◐ CONST. JOINT - STRIKE OFF AS SHOWN.

▽ R501, R503 AND R504 BARS TO BE TIED TO STRUCTURAL APPROACH SLAB STEEL BEFORE STRUCTURAL APPROACH SLAB IS POURED.

WORK THIS SHEET WITH SHEET 38.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-731

DRAWN BY	CLP	PLANS CK'D.	CBM

SINGLE SLOPE PARAPET 42SS MODIFIED

SHEET 37 OF 40
449

ORIGINAL PLANS PREPARED BY
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STATE PROJECT NUMBER
1007-12-78

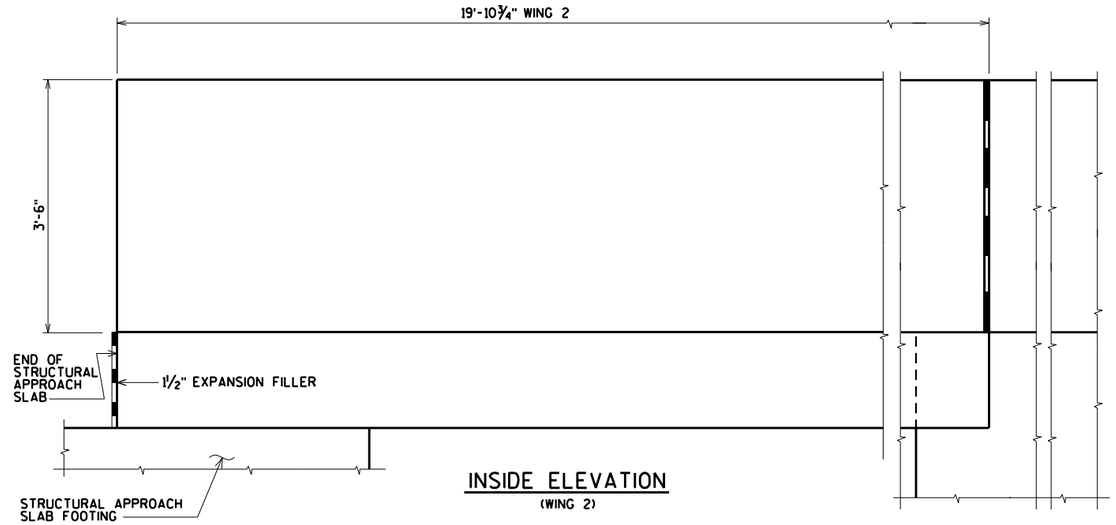
1,100* COATED SOUTH STRUCTURAL APPROACH SLAB
1,190* COATED NORTH STRUCTURAL APPROACH SLAB

BILL OF BARS

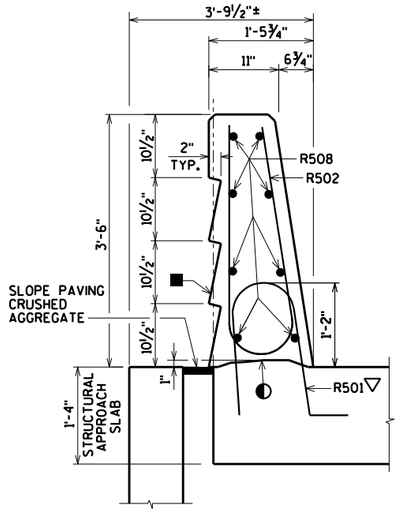
FOR STRUCTURAL APPROACH SLAB PARAPETS

BAR MARK	COAT	SOUTH STRUCT. APPR. SLAB	NORTH STRUCT. APPR. SLAB	LENGTH	BENT	BAR SERIES	LOCATION
R501	X	47	34	4-5	X		PARAPET VERT.
R502	X	47	34	6-8	X		PARAPET VERT.
R503	X	11	22	2-9	X		PARAPET VERT.
R504	X	17	34	5-4	X		PARAPET VERT.
R505	X	5	10	6-5	X		PARAPET VERT.
R506	X	6	12	6-6	X		PARAPET VERT.
R507	X	1	2	19-6	X		PARAPET HORIZ.
R508	X	13	10	19-6			PARAPET HORIZ.
R509	X	6	12	5-5	X	⚠	PARAPET VERT.
R510	X	2	4	19-6	X		PARAPET HORIZ

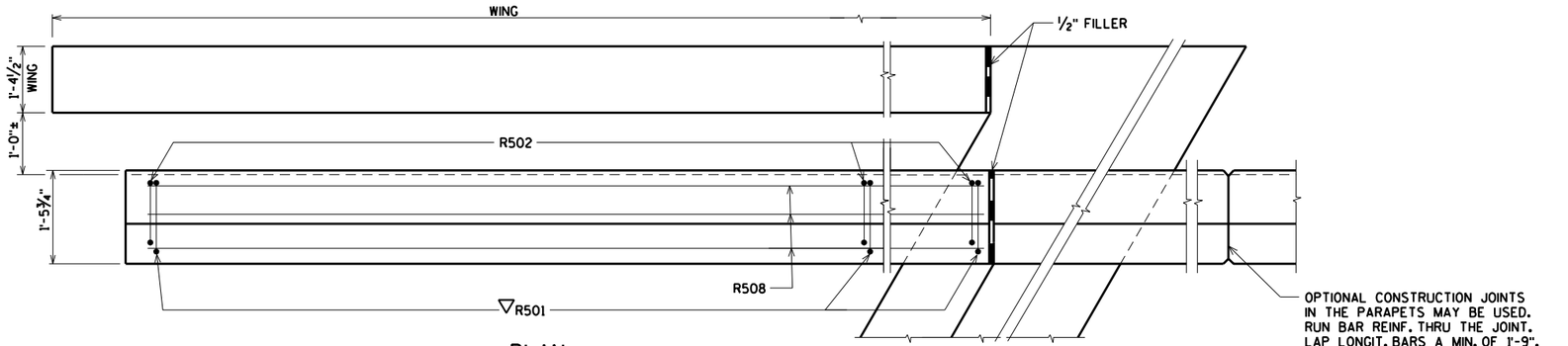
BENDING DIMENSIONS ARE OUT TO OUT OF BARS.



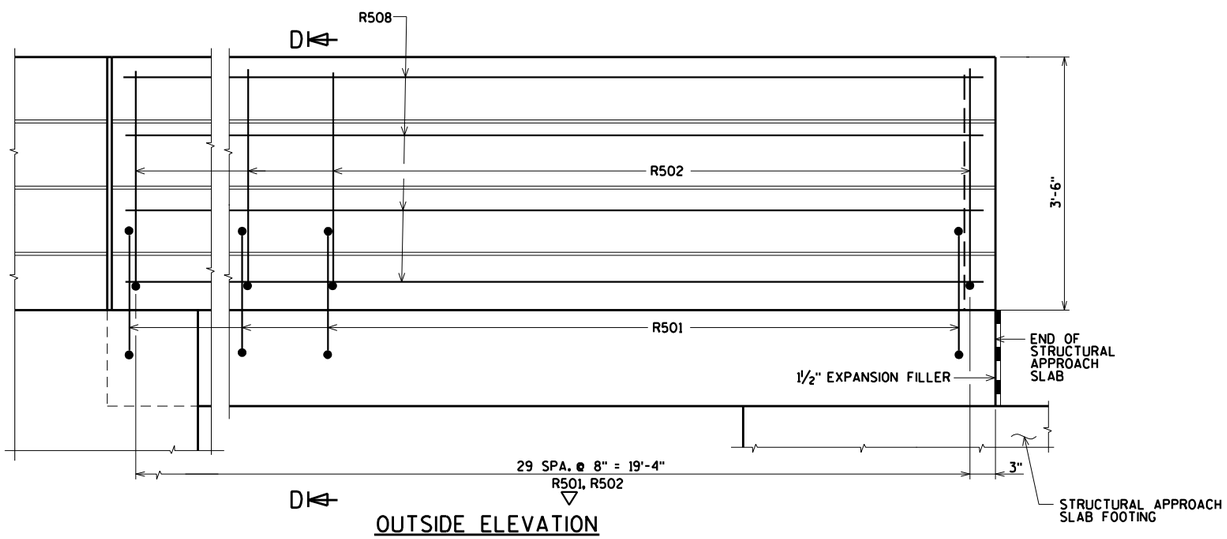
INSIDE ELEVATION
(WING 2)



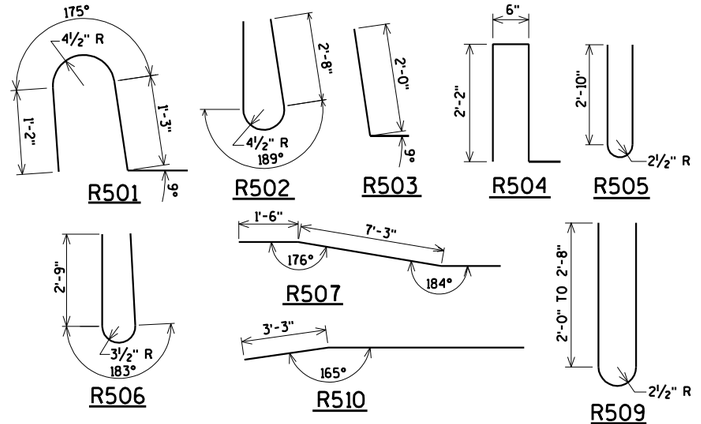
SECTION D



PLAN
(WING 2)



OUTSIDE ELEVATION
(WING 2)



BAR SERIES TABLE

BAR MARK	NO REQ'D.	LENGTH
R509	3 SERIES OF 6	4'-9" TO 6'-1"

BUNDLE AND TAG EACH SERIES SEPARATELY.

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

■ CONCRETE STAINING ON PARAPET (SEE SHEET 16 FOR INFORMATION)

◐ CONST. JOINT - STRIKE OFF AS SHOWN.

▽ R501, R503 AND R504 BARS TO BE TIED TO STRUCTURAL APPROACH SLAB STEEL BEFORE STRUCTURAL APPROACH SLAB IS POURED.

WORK THIS SHEET WITH SHEET 37.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-731

DRAWN BY CLP | PLANS CK'D. CBM

SINGLE SLOPE PARAPET 42SS MODIFIED

SHEET 38 OF 40
450

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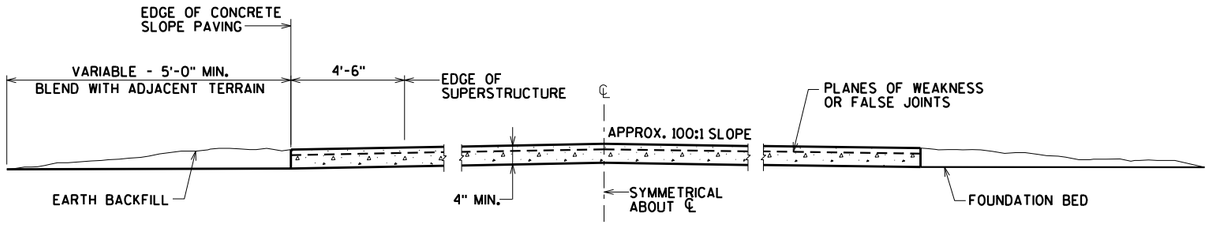
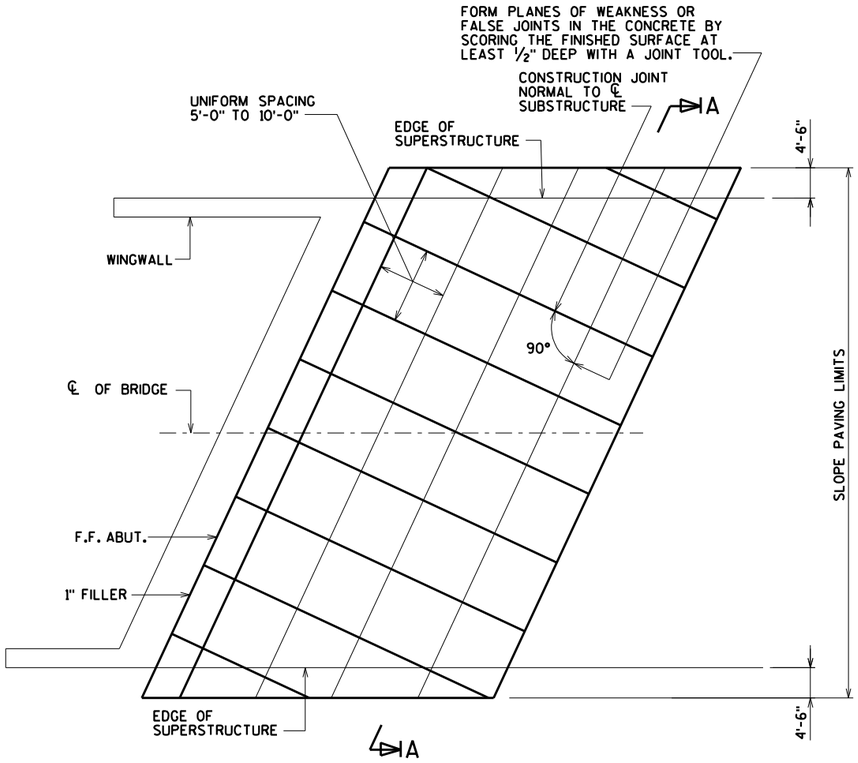
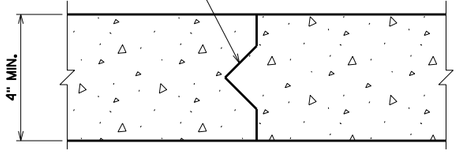


SECTION A-A



PLAN



CONSTRUCTION JOINT DETAIL

F.F. DENOTES FRONT FACE

NOTES

BID ITEM SHALL BE "SLOPE PAVING CONCRETE" REQUIRED AT THE SOUTH ABUTMENT

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-731

DRAWN BY CLP | PLANS CK'D. CBM

SLOPE PAVING CONCRETE

SHEET 39 OF 40
451

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U:\41-0660.0X - IH-39 Dane Partners General Bridge Information\B-13-731 - I39_NB over Off Ramp\bridge\B-13-731 slope pav CON.dgn

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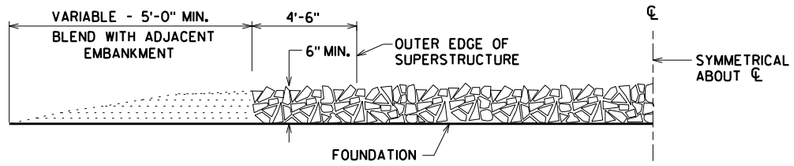
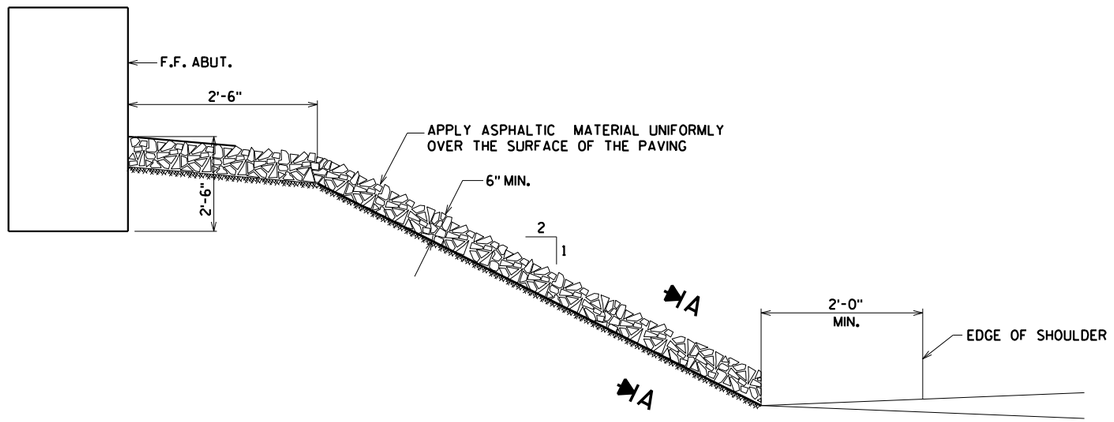
STATE PROJECT NUMBER

1007-12-78



SECTION A



STANDARD CROSS SECTION

ROUND STONE WILL NOT BE ACCEPTED

GENERAL NOTES

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

WOOD FORMS MAY BE LEFT IN PLACE WHEN OF A QUALITY ACCEPTABLE TO THE ENGINEER.

REQUIRED AT THE NORTH ABUTMENT.

F.F. DENOTES FRONT FACE.

8

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-731

DRAWN BY CLP | PLANS CK'D. CBM

SLOPE PAVING CRUSHED AGGREGATE

SHEET 40 OF 40
452

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U:±41-0660.0X - IH-39 Dane Partners General Bridge Information±B-13-732 - I39_NB over Femrite

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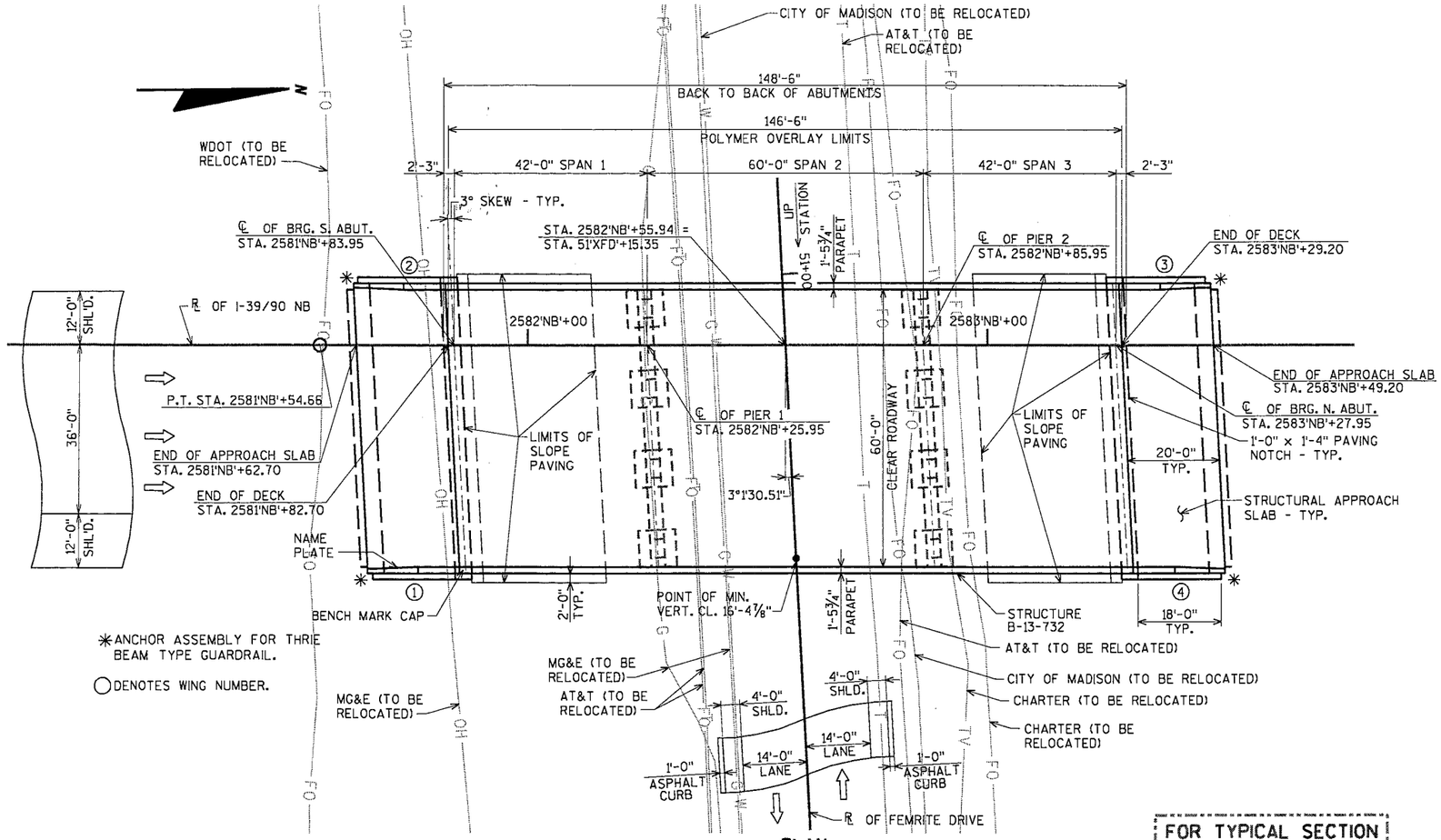
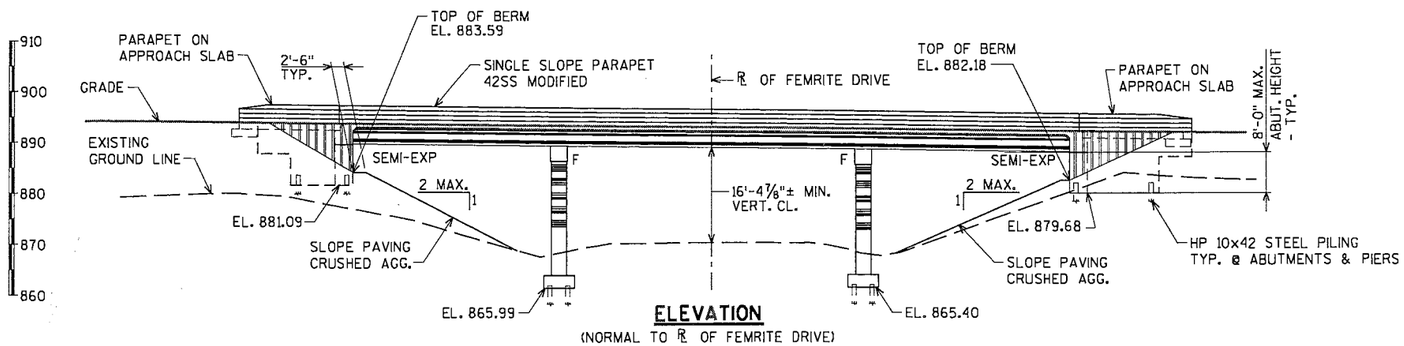


PLAN

THREE SPAN - 36W" PRESTRESSED CONCRETE GIRDER BRIDGE

FOR TYPICAL SECTION SEE SHEET 2



ELEVATION

(NORMAL TO ℄ OF FEMRITE DRIVE)

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HL-93
INVENTORY RATING FACTOR: 1.39
OPERATING RATING FACTOR: 1.81
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV) = 250 KIPS

STRUCTURE IS DESIGNED FOR A FUTURE WEARING SURFACE OF 20 #/S.F.

RATING BASED ON PLACEMENT OF 5 p.s.f. POLYMER OVERLAY UNDER THIS CONTRACT.

MATERIAL PROPERTIES:

CONCRETE MASONRY — SUPERSTRUCTURE (HPC DECK, PARAPET, DIAPHRAGM, APPROACH SLAB)	f'_c =	4,000 p.s.i.
CONCRETE MASONRY — ALL OTHER (INCL. APPROACH SLAB FOOTING)	f'_c =	3,500 p.s.i.
HIGH STRENGTH BAR STEEL REINFORCEMENT (GRADE 60)	f_y =	60,000 p.s.i.
STRUCTURAL CARBON STEEL ASTM A709 (GRADE 36)	f_y =	36,000 p.s.i.
36W" PRESTRESSED GIRDER CONCRETE MASONRY	f'_c =	8,000 p.s.i.
STRANDS - 0.6" DIA. WITH ULTIMATE TENSILE STRENGTH OF	=	270,000 p.s.i.

FOUNDATION DATA:

SOUTH ABUTMENT TO BE SUPPORTED ON HP 10 x 42 STEEL PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 180 TONS ‡ PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED LENGTH 50'-0".

PIERS TO BE SUPPORTED ON HP 10 x 42 STEEL PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 180 TONS ‡ PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED LENGTH 25'-0" AT PIERS 1 AND 2.

NORTH ABUTMENT TO BE SUPPORTED ON HP 10 x 42 STEEL PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 180 TONS ‡ PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED LENGTH 45'-0".

‡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 DRIVEN PILE CAPACITY.

TRAFFIC DATA:

I-39/90 NB	FEMRITE DRIVE
A.A.D.T. = 60,400 (2009)	A.A.D.T. = 3,800 (2020)
A.A.D.T. = 72,000 (2040)	A.A.D.T. = 9,800 (2040)
R.D.S. = 70 M.P.H.	R.D.S. = 40 M.P.H.

LIST OF DRAWINGS

1. GENERAL PLAN
2. TYPICAL SECTIONS AND NOTES
3. QUANTITIES AND DETAILS
4. SUBSURFACE EXPLORATION
5. SOUTH ABUTMENT
6. SOUTH ABUTMENT PILE LAYOUT
7. SOUTH ABUTMENT WING 1 DETAILS
8. SOUTH ABUTMENT WING 2 DETAILS
9. SOUTH ABUTMENT DETAILS
10. NORTH ABUTMENT
11. NORTH ABUTMENT PILE LAYOUT
12. NORTH ABUTMENT WING 3 DETAILS
13. NORTH ABUTMENT WING 4 DETAILS
14. NORTH ABUTMENT DETAILS
15. ABUTMENT RUSTICATION AND CONCRETE STAINING DETAILS
16. ALTERNATE CONSTRUCTION JOINT
17. PIER 1
18. PIER 1 FOOTINGS
19. PIER 1 COLUMNS AND CONCRETE STAINING
20. PIER 1 CAP
21. PIER 1 DETAILS
22. PIER 2
23. PIER 2 FOOTINGS
24. PIER 2 COLUMNS AND CONCRETE STAINING
25. PIER 2 CAP
26. PIER 2 DETAILS
27. 36W" PRESTRESSED GIRDER DETAILS
28. 36W" PRESTRESSED GIRDER DETAILS
29. STEEL INTER. DIAGHRAGM DETAILS
30. SUPERSTRUCTURE
31. SUPERSTRUCTURE PLAN
32. SUPERSTRUCTURE DETAILS
33. SUPERSTRUCTURE CORNER DETAILS
34. SUPERSTRUCTURE CONDUIT DETAILS
35. SUPERSTRUCTURE BILL OF BARS AND DETAILS
36. SOUTH STRUCTURAL APPROACH SLAB
37. NORTH STRUCTURAL APPROACH SLAB
38. STRUCTURAL APPROACH SLAB DETAILS
39. SINGLE SLOPE PARAPET 42SS MODIFIED
40. SLOPE PAVING CRUSHED AGGREGATE

WISCONSIN
CHRISTOPHER B. McMAHON
E-29454
EAU CLAIRE
WI
PROFESSIONAL ENGINEER
8/27/19

BRIDGE OFFICE CONTACT:
WILLIAM DREHER
(608)-266-8489

CONSULTANT CONTACT:
CHRIS MCMAHON
(715)-834-3161

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher SDR 08/29/19
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-13-732

I-39/90 NB OVER FEMRITE DRIVE

COUNTY: DANE
TOWN/~~CITY~~/VILLAGE: BLOOMING GROVE

DESIGN SPEC.: AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
AEB	JLB	JLB/CLS	CBM

GENERAL PLAN

SHT 453 F 40

DATE:
CHECKED BY:
BACK CHECKED BY:
CORRECTED BY:

8

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STATE PROJECT NUMBER

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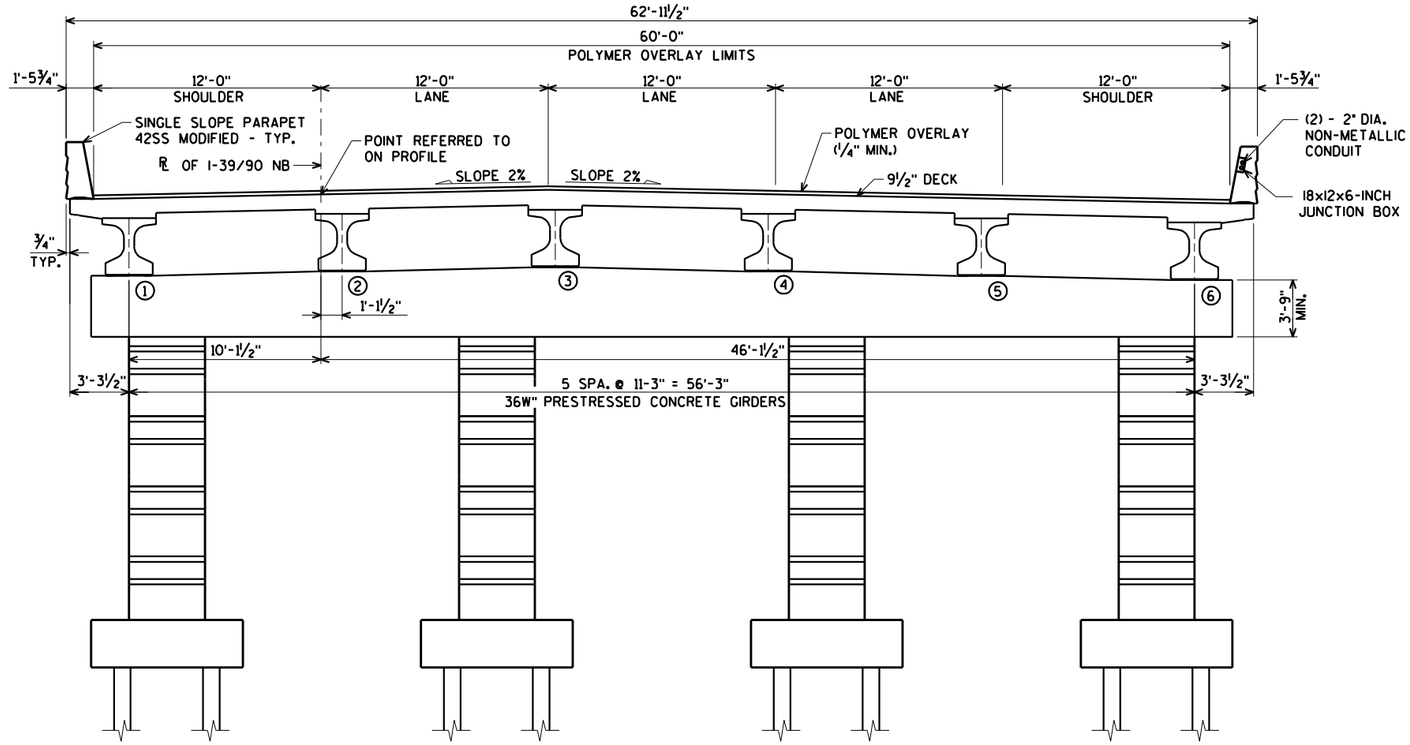


TYPICAL SECTION THRU BRIDGE
(LOOKING NORTH)

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

THE FIRST DIGIT OF A THREE DIGIT BAR NO. OR THE FIRST TWO DIGITS OF A FOUR DIGIT BAR NO. SIGNIFIES THE BAR SIZE.

JOINT FILLER SHALL CONFORM TO THE REQUIREMENTS OF A.A.S.H.T.O. DESIGNATION M 153, TYPE I, II, OR III OR A.A.S.H.T.O. DESIGNATION M 213.

THE EXISTING GROUNDLINE SHALL BE THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES BRIDGES B-13-732".

AT THE BACKFACE OF ABUTMENTS ALL VOLUME WHICH CANNOT BE PLACED BEFORE ABUTMENT CONSTRUCTION AND IS NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH BACKFILL STRUCTURE TYPE A.

THE BACKFILL QUANTITIES ARE BASED ON THE PAY LIMITS SHOWN ON THE PLANS AND MAY NOT REFLECT ACTUAL PLACED QUANTITIES. "BACKFILL STRUCTURE TYPE A" REQUIRED DIRECTLY BEHIND ABUTMENTS AND ABUTMENT WINGS FOR 3 FEET. BACKFILL PLACED BEYOND PAY LIMITS OR EXCEEDING PLAN QUANTITIES SHALL BE INCIDENTAL TO EXCAVATION FOR STRUCTURES.

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 HAUNCH CONCRETE QUANTITY IS BASED ON THE AVERAGE HAUNCH SHOWN ON THE PRESTRESSED GIRDER DETAILS SHEET.

BEVEL EXPOSED EDGES OF CONCRETE ¾" UNLESS OTHERWISE NOTED.

POLYMER OVERLAY AND PIGMENTED SURFACE SEALER IS TO BE APPLIED AS SHOWN IN DETAIL ON SHEET 3.

ELASTOMERIC BEARING PADS NEED NOT BE INDIVIDUALLY MOLDED PROVIDED THE CUT EDGES ARE SMOOTH AND TRUE.

THE SLOPE OF THE FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH SLOPE PAVING MATERIAL TO THE EXTENT SHOWN ON THE GENERAL PLAN SHEET AND IN THE ABUTMENT DETAILS.

THE RUSTIFICATIONS IN THE ABUTMENTS AND PIERS ARE INCLUDED IN THE BID ITEM "CONCRETE MASONRY BRIDGES".

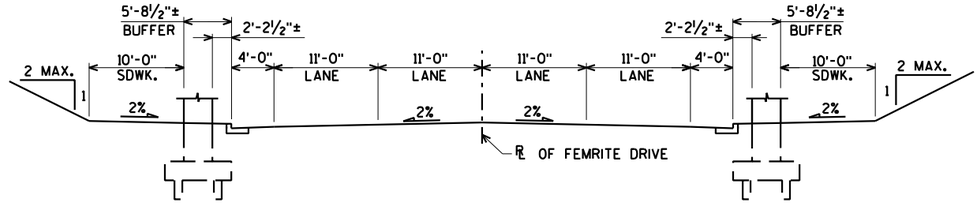
THE RUSTIFICATIONS AT THE BACK FACE OF THE PARAPETS ARE INCLUDED IN THE BID ITEM "HIGH PERFORMANCE CONCRETE (HPC) MASONRY STRUCTURES"

DECK SURFACE PREPARATION IS INCLUDED IN THE BID ITEM "POLYMER OVERLAY".

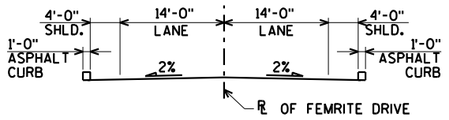
PROTECTIVE SURFACE TREATMENT TO BE APPLIED ONLY TO THE STRUCTURAL APPROACH SLABS AND THE PAVING NOTCHES.

PROFILE GRADE LINE
(℄ OF I-39/90 NB)

PROFILE GRADE LINE
(FEMRITE DRIVE)



POTENTIAL FUTURE TYPICAL FINISHED SECTION FEMRITE DRIVE
(LOOKING WEST)



EXISTING TYPICAL SECTION FEMRITE DRIVE
(LOOKING WEST)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-732

DRAWN BY JLB/CLS | PLANS CK'D. CBM

TYPICAL SECTIONS AND NOTES

SHEET 2 OF 40
454

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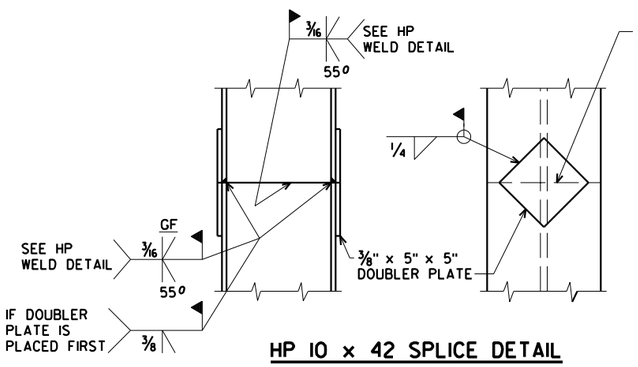
U:\41-0660.0X - IH-39 Dane Partners General\Bridge Information\B-13-732 - I39_NB over Femrite Drive\bridge\B-13-732 gp.dgn

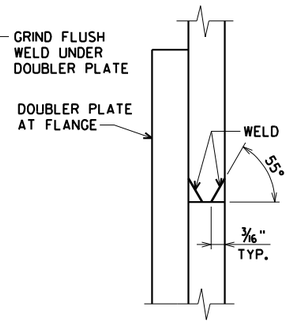
TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	S. STR. APR. SLAB	S. ABUT.	PIER 1	PIER 2	N. ABUT.	N. STR. APR. SLAB	SUPER.	TOTAL
206.1000.703	EXCAVATION FOR STRUCTURES BRIDGES B-13-732	LS	-----	-----	-----	-----	-----	-----	-----	1
210.1500	BACKFILL STRUCTURE TYPE A	TON	-----	355	-----	-----	355	-----	-----	710
305.0120	BASE AGGREGATE DENSE 1¼-INCH	TON	245	-----	-----	-----	-----	245	-----	490
501.1000.S	ICE HOT WEATHER CONCRETING	LB	645	735	840	840	730	645	3,340	7,775
502.0100	CONCRETE MASONRY BRIDGES	CY	18	98	112	112	97	18	-----	455
502.3200	PROTECTIVE SURFACE TREATMENT	SY	150	-----	-----	-----	-----	150	-----	300
502.3210	PIGMENTED SURFACE SEALER	SY	20	-----	-----	-----	-----	20	150	190
503.0137	PRESTRESSED GIRDER TYPE I 36W-INCH	LF	-----	-----	-----	-----	-----	-----	868	868
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	-----	5,480	3,520	3,520	5,480	-----	-----	18,000
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	14,370	2,830	20,640	20,640	2,830	14,370	73,520	149,200
505.0800.S	BAR STEEL REINFORCEMENT HS STAINLESS STRUCTURES	LB	1,070	-----	-----	-----	-----	1,070	-----	2,140
506.2605	BEARING PADS ELASTOMERIC NON-LAMINATED	EACH	-----	6	12	12	6	-----	-----	36
506.4000.703	STEEL DIAPHRAGMS B-13-732	EACH	-----	-----	-----	-----	-----	-----	15	15
509.5100.S	POLYMER OVERLAY	SY	-----	-----	-----	-----	-----	-----	980	980
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	-----	17	-----	-----	17	-----	-----	34
517.1010.S.703	CONCRETE STAINING B-13-732	SF	140	705	1,450	1,450	705	140	3,415	8,005
550.1100	PILING STEEL HP 10-INCH x 42 LB	LF	-----	600	900	900	540	-----	-----	2,940
604.0500	SLOPE PAVING CRUSHED AGGREGATE	SY	-----	240	-----	-----	240	-----	-----	480
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	-----	105	-----	-----	105	-----	-----	210
614.0150	ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	2	-----	-----	-----	-----	2	-----	4
645.0111	GEOTEXTILE TYPE DF SCHEDULE A	SY	-----	65	-----	-----	65	-----	-----	130
652.0125	CONDUIT RIGID METALLIC 2-INCH	LF	6	-----	-----	-----	-----	6	13	25
652.0225	CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH	LF	55	-----	-----	-----	-----	55	280	390
653.0222	JUNCTION BOXES 18 X 12 X 6-INCH	EACH	-----	-----	-----	-----	-----	-----	2	2
SPV.0035.700	HIGH PERFORMANCE CONCRETE (HPC) MASONRY STRUCTURES	CY	68	-----	-----	-----	-----	68	445	581
SPV.0165.700	LONGITUDINAL GROOVING BRIDGE DECK	SF	1,200	-----	-----	-----	-----	1,200	-----	2,400
	NON-BID ITEMS	SIZE	-----	-----	-----	-----	-----	-----	-----	½" & ¾"
	FILLER									

✦ HIGH PERFORMANCE CONCRETE (HPC) MASONRY STRUCTURES SHALL INCLUDE ALL SUPERSTRUCTURE CONCRETE AND ALL STRUCTURAL APPROACH SLAB CONCRETE, EXCEPT THE STRUCTURAL APPROACH SLAB FOOTING CONCRETE.

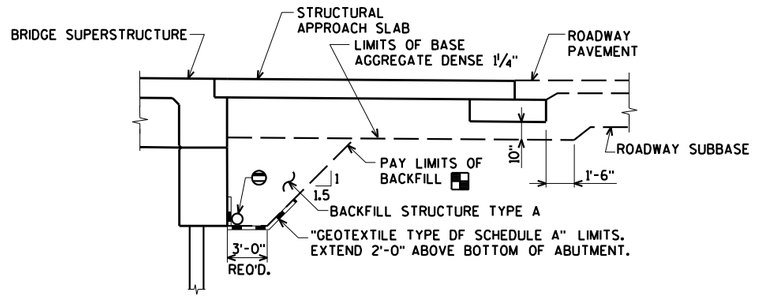


HP 10 x 42 SPLICE DETAIL



HP WELD DETAIL

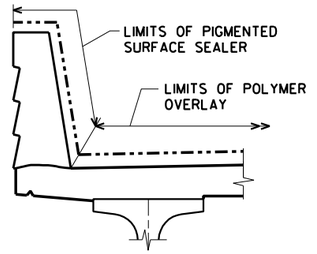
FLANGE SHOWN, WEB SIMILAR



BACKFILL STRUCTURE LIMITS

■ BACKFILL PAY LIMITS. BACKFILL BEYOND BACKFILL PAY LIMITS SHALL BE INCLUDED WITH 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 AS DETAILED ON SHEET 9.



POLYMER OVERLAY AND PIGMENTED SURFACE SEALER DETAILS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-732

DRAWN BY JLB/CLS | PLANS CK'D. CBM

QUANTITIES AND DETAILS

SHEET 3 OF 40
455

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

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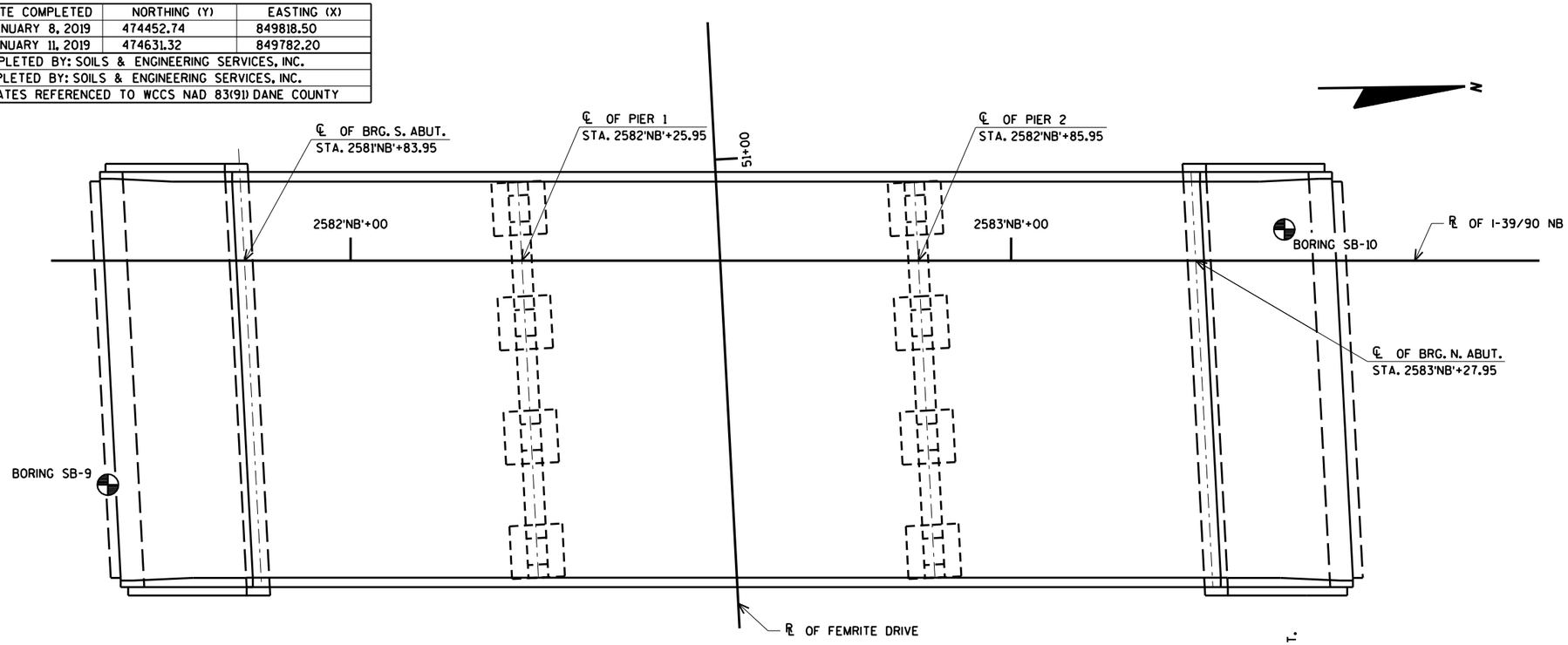
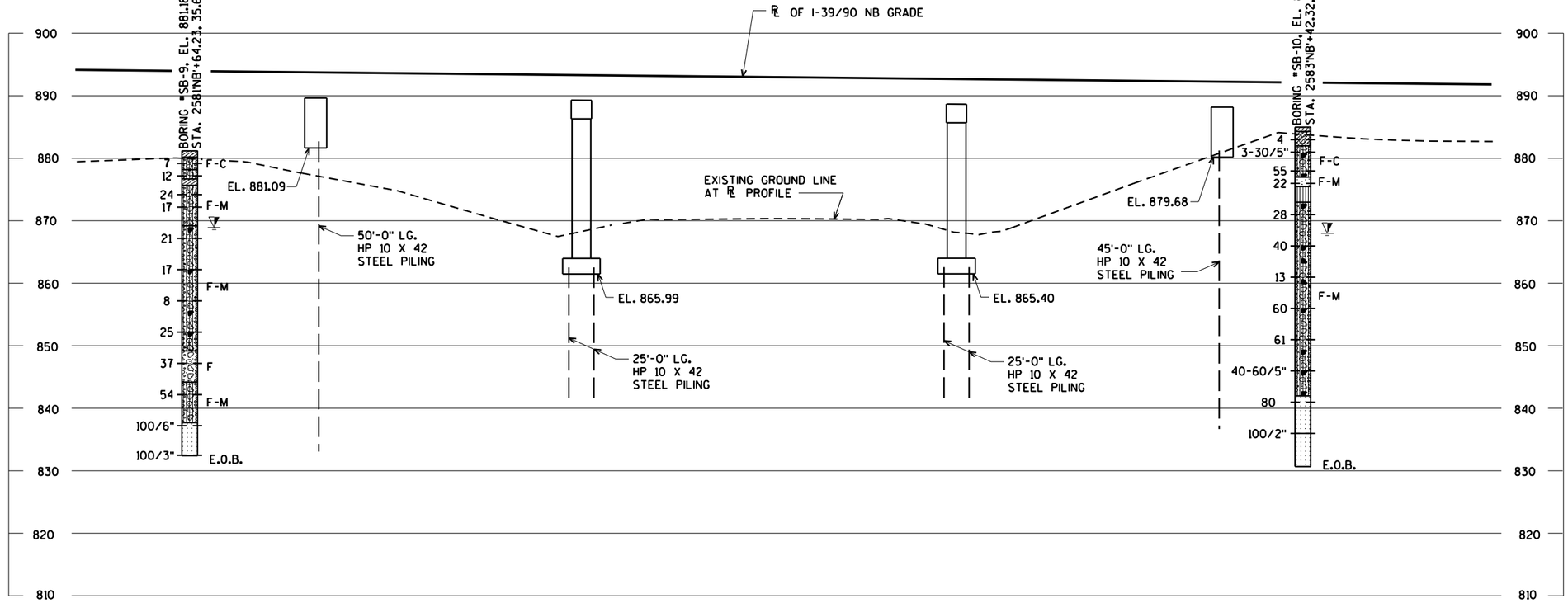
8

BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
SB-9	JANUARY 8, 2019	474452.74	849818.50
SB-10	JANUARY 11, 2019	474631.32	849782.20
BORINGS COMPLETED BY: SOILS & ENGINEERING SERVICES, INC.			
REPORT COMPLETED BY: SOILS & ENGINEERING SERVICES, INC.			
ALL COORDINATES REFERENCED TO WCCS NAD 83(91) DANE COUNTY			





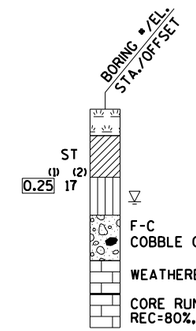
STATE PROJECT NUMBER

1007-12-78

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-13-732

DRAWN BY CJM/CLS | PLANS CK'D. CBM

SUBSURFACE EXPLORATION

SHEET 4 OF 40
456

8

8

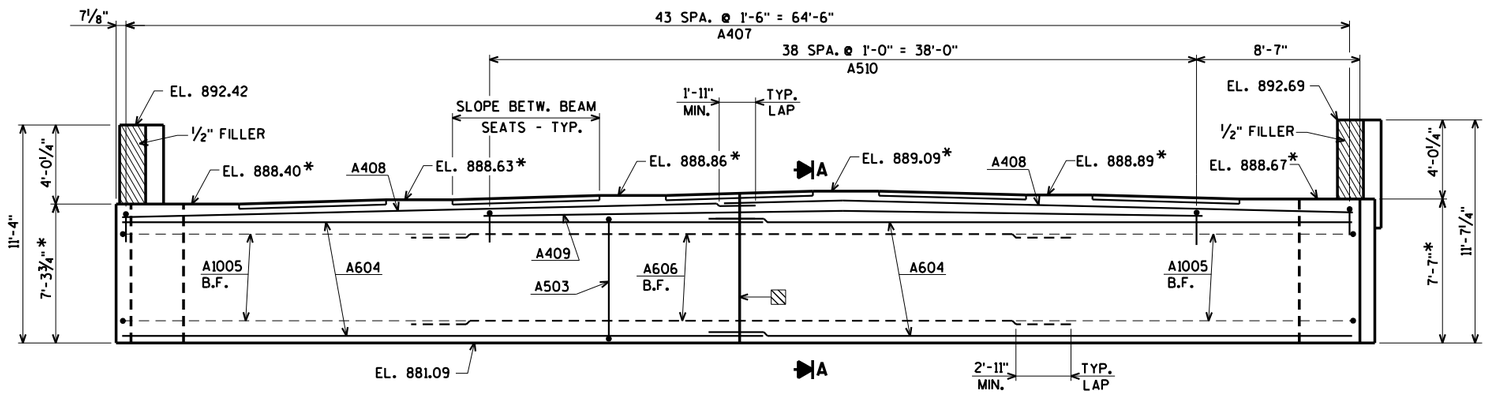
$PRFNAME$
U:\41-0660.0X - IH-39 Dane Partners General Bridge Information\B-13-732 - 139_NB over Femrite Drive\bridge\B-13-732 soils.

NOTE: 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.)

*ELEVATIONS AND DIMENSIONS TAKEN AT ℄ OF BRG. & PILES S. ABUT.

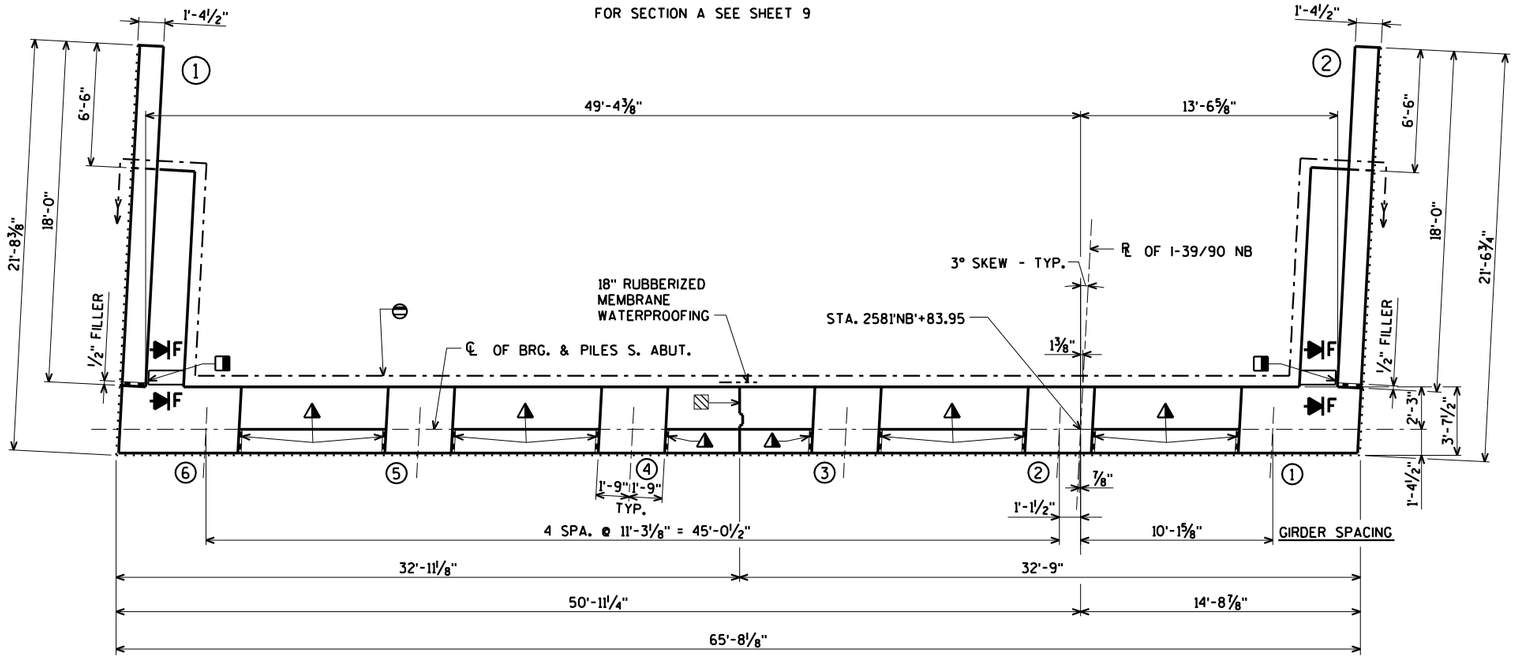
STATE PROJECT NUMBER

1007-12-78

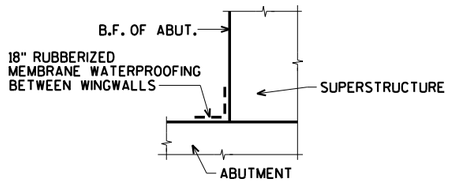


ELEVATION
(LOOKING SOUTH)

FOR SECTION A SEE SHEET 9



PLAN



SECTION F

▨ VERT. CONST. JT. - KEYWAY FORMED BY A SURFACED BEVELED 2" × 8". BEVEL EXPOSED EDGES ¾". FOR ALTERNATE CONST. JT. DETAILS SEE SHEET 16

◨ 18" RUBBERIZED MEMBRANE WATERPROOFING FROM BRIDGE SEAT TO TOP OF WING.

▲ ¾" CORK FILLER ON VERTICAL BEAM SEAT FACES THAT RUN PARALLEL WITH GIRDER.

⊖ PIPE UNDERDRAIN WRAPPED 6-INCH. SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT END OF PIPE UNDERDRAIN. SEE DETAIL ON SHEET 9.

B.F. DENOTES BACK FACE

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-732

DRAWN BY CLS | PLANS CK'D. CBM

SOUTH ABUTMENT

SHEET 5 OF 40
457

ORIGINAL PLANS PREPARED BY
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7/24/2019
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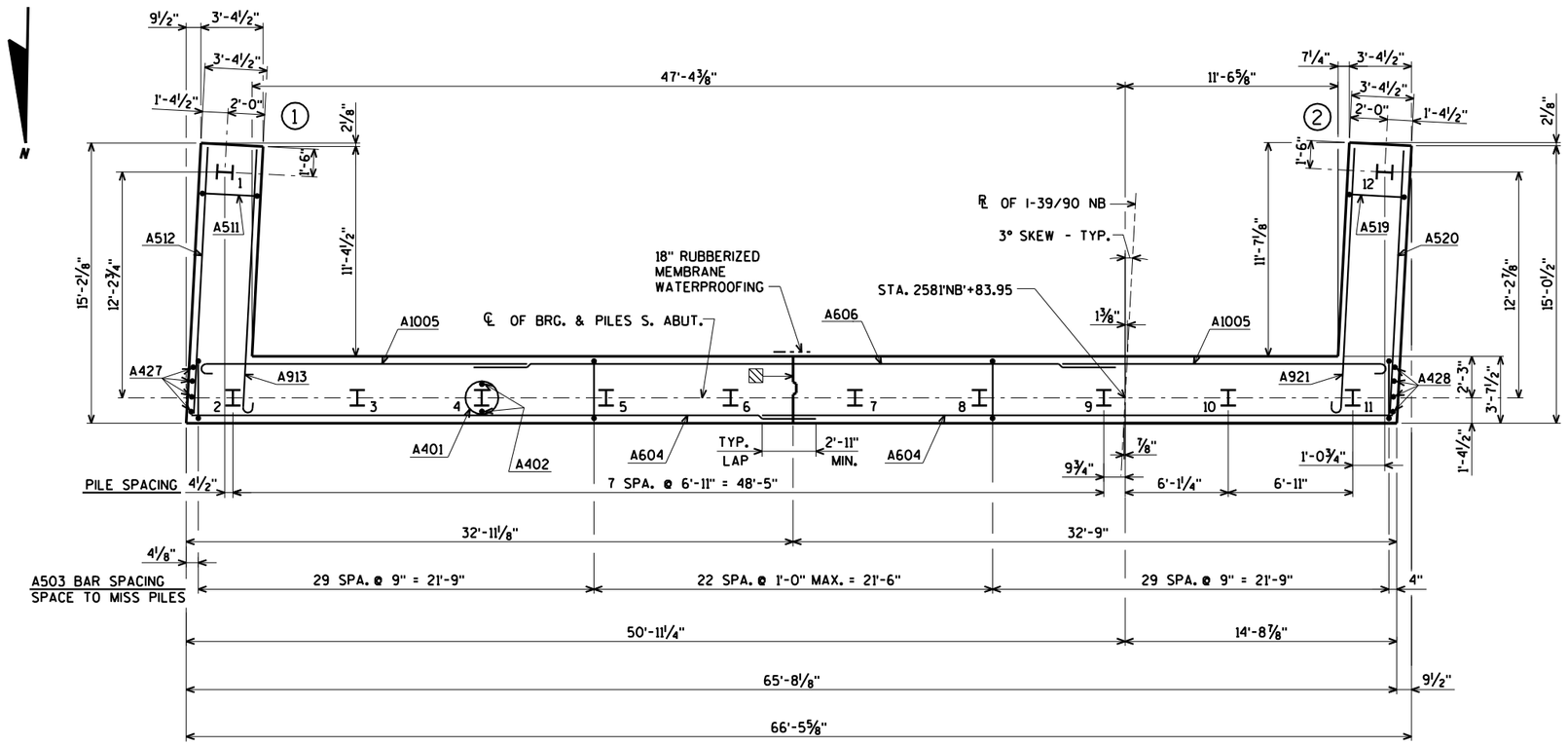
U:±41-0660.0X - IH-39 Dane Partners General Bridge Information±B-13-732 - I39_NB over Femrite Drive±bridge±B-13-732 s abut.dgn

STATE PROJECT NUMBER

1007-12-78



PILE LAYOUT

▨ VERT. CONST. JT. - KEYWAY FORMED BY A SURFACED BEVELED 2" x 8". BEVEL EXPOSED EDGES ¾". FOR ALTERNATE CONST. JT. DETAILS SEE SHEET 16

FOR PILE SPLICE DETAIL SEE SHEET 3.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-732

DRAWN BY CLS | PLANS CK'D. CBM

SOUTH ABUTMENT PILE LAYOUT

SHEET 6 OF 40
458

ORIGINAL PLANS PREPARED BY
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6/25/2019
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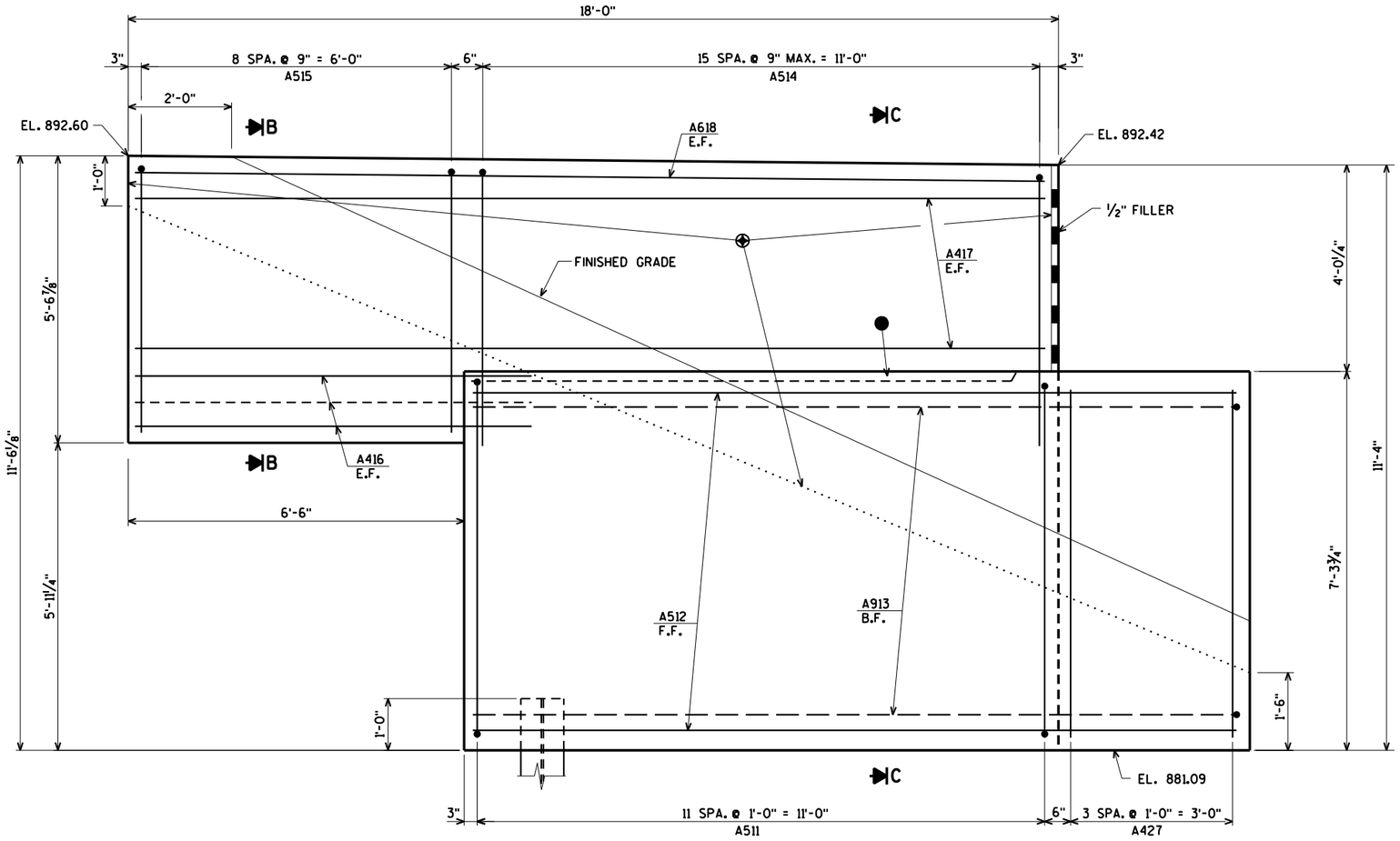
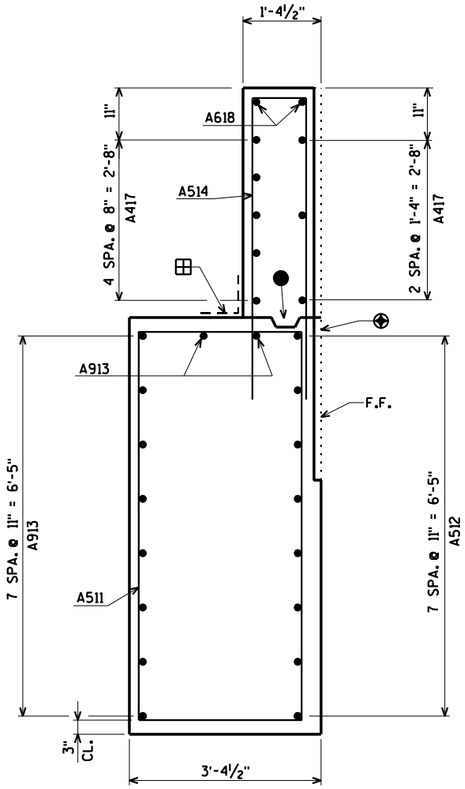
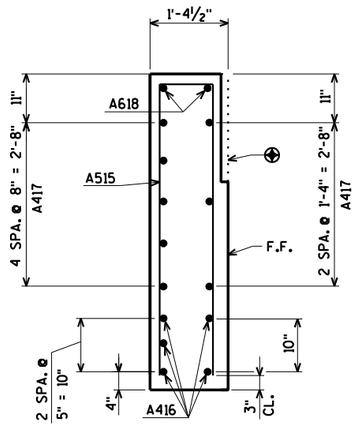


ELEVATION - WING 1



SECTION C



SECTION B

FOR PILE SPLICE DETAIL SEE SHEET 3.

⊕ LIMITS OF RUSTICATIONS.
FOR DETAILS SEE SHEET 15

● OPT. CONST. JOINT FORMED
BY A BEVELED 2" x 6" KEYWAY.

⊞ 18" RUBBERIZED MEMBRANE WATERPROOFING
SEAL ALL HORIZONTAL AND VERTICAL JOINTS
ON BACKFACE OF ABUTMENT.

F.F. DENOTES FRONT FACE

B.F. DENOTES BACK FACE

E.F. DENOTES EACH FACE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-732

DRAWN BY CLS | PLANS CK'D. CBM

SOUTH ABUTMENT
WING 1 DETAILS

SHEET 7 OF 40
459

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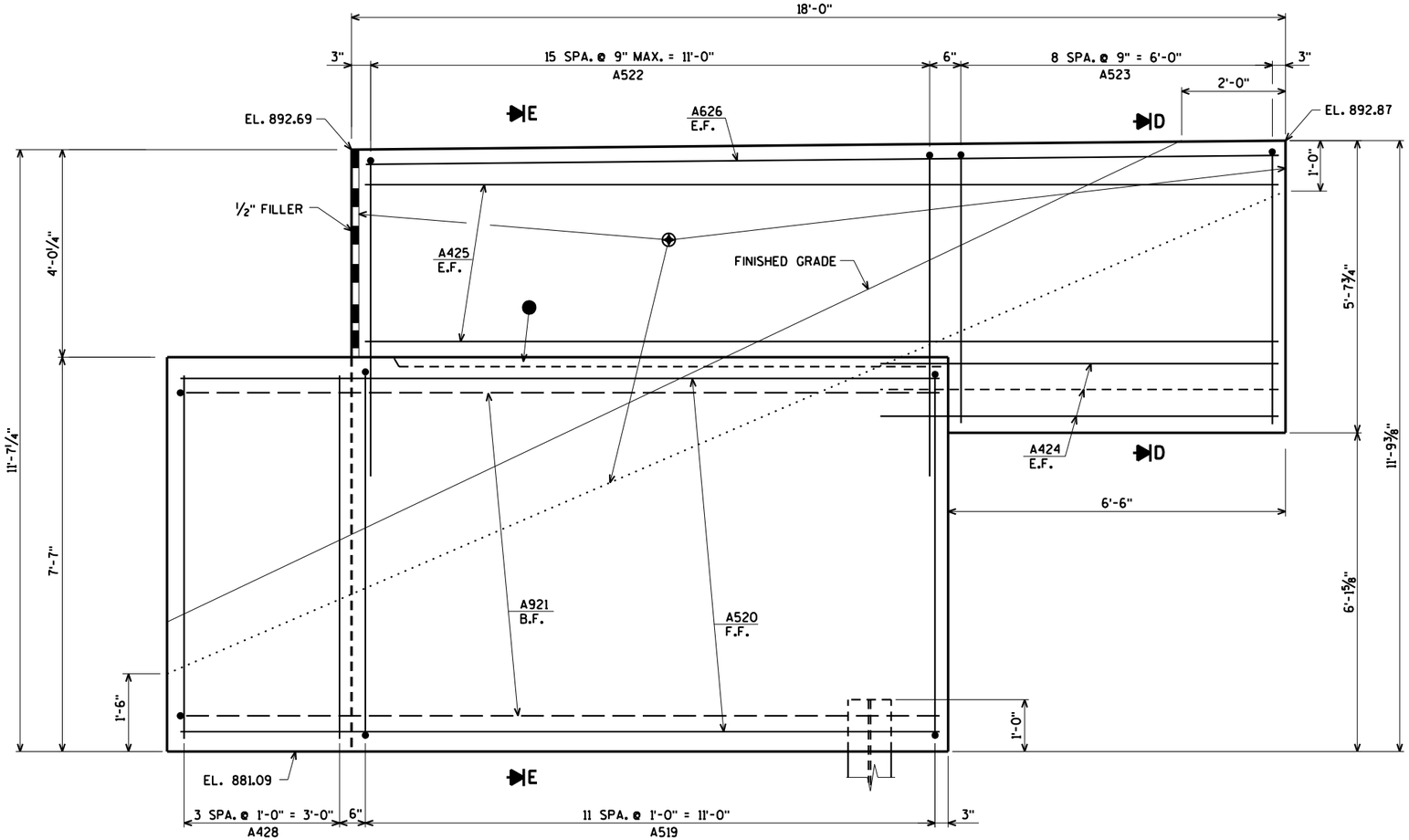
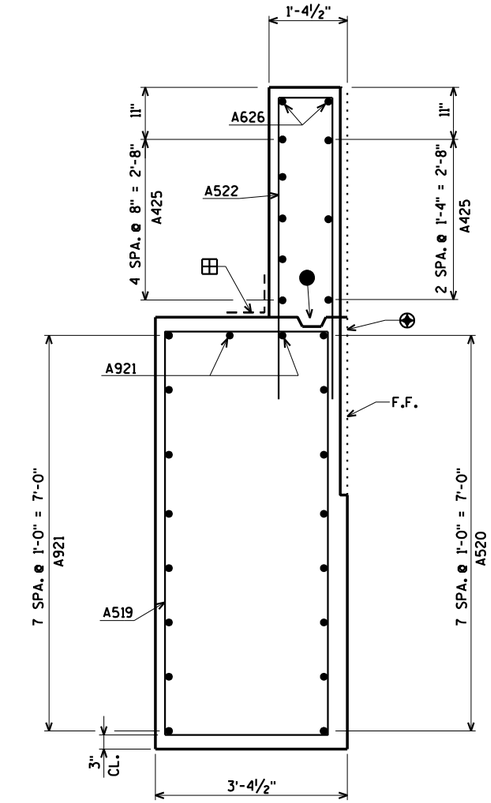
STATE PROJECT NUMBER

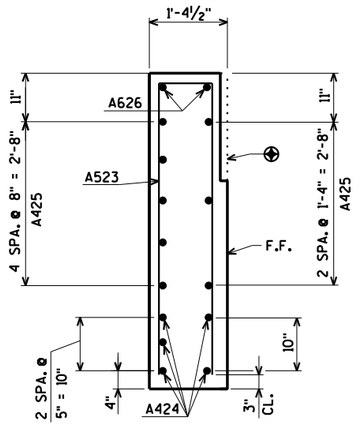
1007-12-78



ELEVATION - WING 2



SECTION E



SECTION D

FOR PILE SPLICE DETAIL SEE SHEET 3.

⊕ LIMITS OF RUSTICATIONS.
FOR DETAILS SEE SHEET 15

● OPT. CONST. JOINT FORMED
BY A BEVELED 2" x 6" KEYWAY.

⊞ 18" RUBBERIZED MEMBRANE WATERPROOFING
SEAL ALL HORIZONTAL AND VERTICAL JOINTS
ON BACKFACE OF ABUTMENT.

F.F. DENOTES FRONT FACE

B.F. DENOTES BACK FACE

E.F. DENOTES EACH FACE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-732

DRAWN BY CLS | PLANS CK'D. CBM

SOUTH ABUTMENT
WING 2 DETAILS

SHEET 8 OF 40
460

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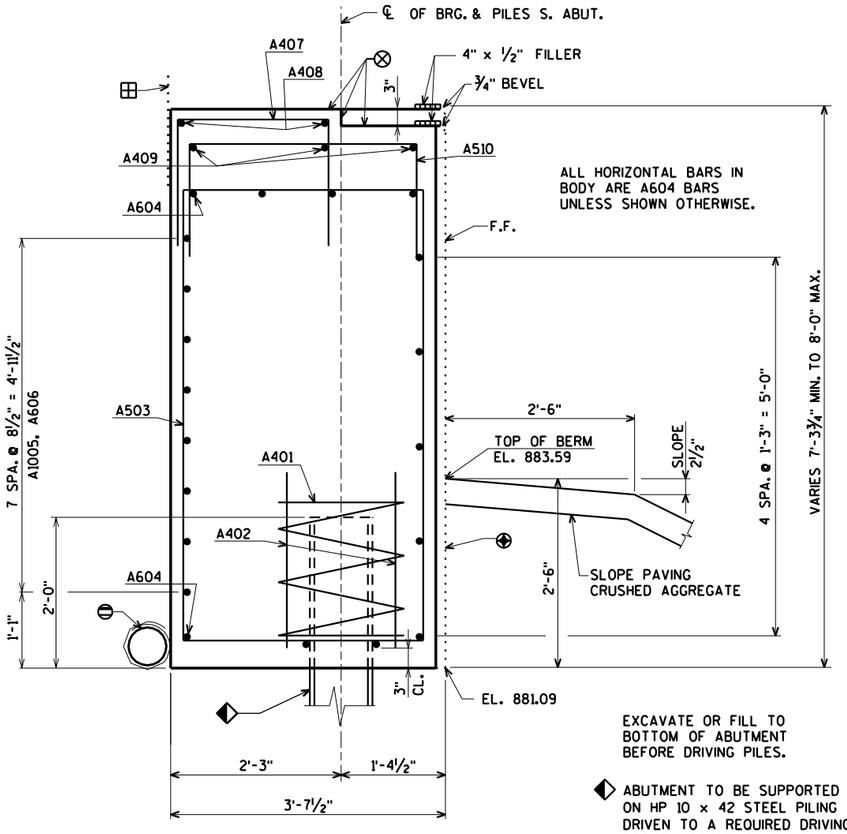
STATE PROJECT NUMBER
1007-12-78



SECTION A

EXCAVATE OR FILL TO BOTTOM OF ABUTMENT BEFORE DRIVING PILES.

◆ ABUTMENT TO BE SUPPORTED ON HP 10 x 42 STEEL PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 180 TONS PER PILE. ESTIMATED LENGTH 50'-0".

FOR LOCATION OF SECTION A SEE SHEET 5

⊕ LIMITS OF RUSTICATIONS. FOR DETAILS SEE SHEET 15

⊞ 18" RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE OF ABUTMENT.

FOR PILE SPLICE DETAIL SEE SHEET 3

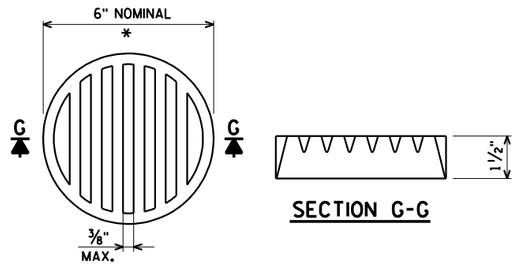
F.F. DENOTES FRONT FACE

B.F. DENOTES BACK FACE

E.F. DENOTES EACH FACE

⊖ PIPE UNDERDRAIN WRAPPED 6-INCH. SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT END OF PIPE UNDERDRAIN. SEE DETAIL ON THIS SHEET.

⊗ STEEL TROWEL TOP SURFACE OF ABUTMENT. PLACE MULTIPLE LAYERS OF POLYETHYLENE SHEETS OVER ENTIRE ABUTMENT TOP BEFORE PLACING BEARING AND/OR SUPERSTRUCTURE. TOTAL THICKNESS OF SHEETS SHALL BE AT LEAST 0.03".



SECTION G-G

* 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 INCLUDED WITH THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".

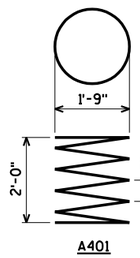
THE RODENT SHIELD SHALL BE PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALLY AVAILABLE AS A FLOOR STRAINER. A PIPE COUPLING IS REQUIRED FOR THE ATTACHMENT OF THIS SCREEN TO THE EXPOSED END OF THE PIPE UNDERDRAIN. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 x 1-INCH SHEET METAL SCREWS.

RODENT SHIELD DETAIL

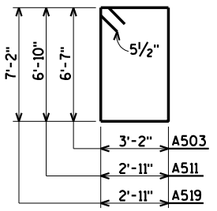
BILL OF BARS

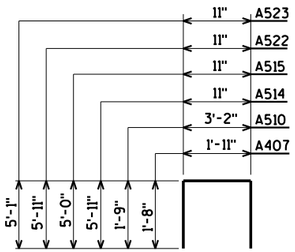
BAR NO.	COATED BAR	NO. REQ'D.	LENGTH	BENT BAR	BUNDLED BAR SERIES	2,830# COATED 5,480# UNCOATED LOCATION
A401		10	28-0	X		BODY @ PILES
A402		20	2-3			BODY @ PILES
A503		81	20-1	X		BODY VERT.
A604		24	34-2			BODY HORIZ.
A1005		16	19-5	X		BODY HORIZ. B.F. @ WINGS
A606		8	35-2			BODY HORIZ. B.F.
A407		44	5-1	X		BODY VERT.
A408		4	33-7			BODY HORIZ.
A409		3	38-6			BODY HORIZ.
A510		39	6-5	X		BODY VERT.
A511	X	12	20-1	X		WING 1 VERT.
A512	X	8	14-8			WING 1 HORIZ. F.F.
A913	X	10	15-9	X		WING 1 HORIZ. B.F.
A514	X	16	12-6	X		WING 1 VERT.
A515	X	9	10-8	X		WING 1 VERT.
A416	X	5	7-9			WING 1 HORIZ. E.F.
A417	X	8	17-8			WING 1 HORIZ. E.F.
A618	X	2	17-8			WING 1 HORIZ. TOP E.F.
A519	X	12	20-9	X		WING 2 VERT.
A520	X	8	14-7			WING 2 HORIZ. F.F.
A921	X	10	15-9	X		WING 2 HORIZ. B.F.
A522	X	16	12-6	X		WING 2 VERT.
A523	X	9	10-10	X		WING 2 VERT.
A424	X	5	7-9			WING 2 HORIZ. E.F.
A425	X	8	17-8			WING 2 HORIZ. E.F.
A626	X	2	17-8			WING 2 HORIZ. TOP E.F.
A427	X	4	6-10			BODY VERT. END @ WING 1
A428	X	4	7-2			BODY VERT. END @ WING 2

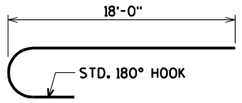
BENDING DIMENSIONS ARE OUT TO OUT OF BARS.



A401







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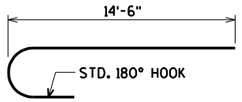

A913, A921

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-732

DRAWN BY CLS | PLANS CK'D. CBM

SOUTH ABUTMENT DETAILS

SHEET 9 OF 40
461

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

6/25/2019
PENTABLE:BReau_shd_util.tbl

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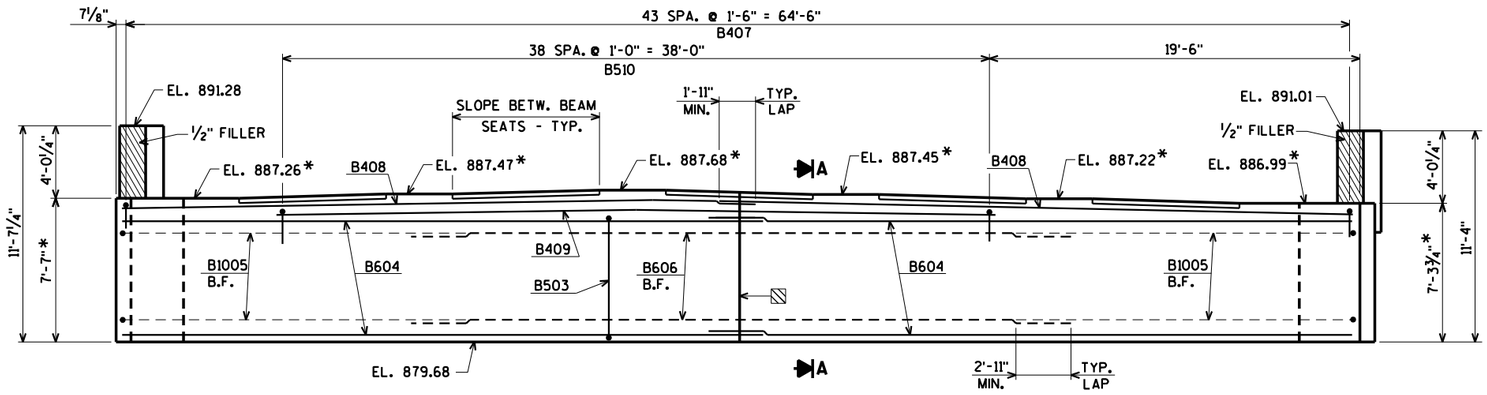
NOTE: SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE.)

*ELEVATIONS AND DIMENSIONS TAKEN AT ℄ OF BRG. & PILES N. ABUT.

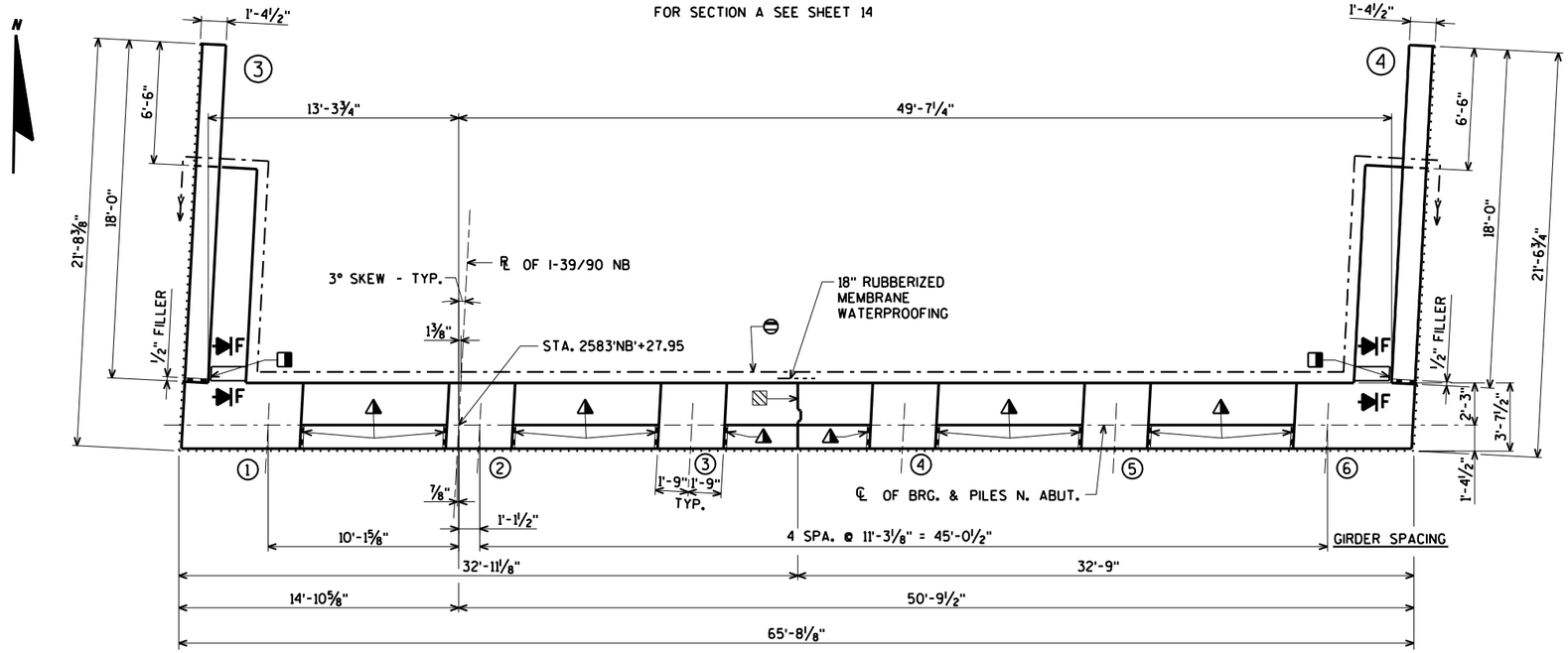
STATE PROJECT NUMBER

1007-12-78

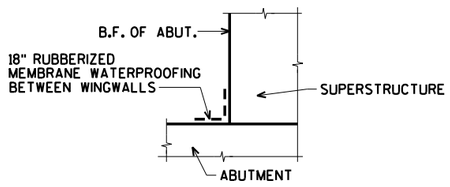


ELEVATION
(LOOKING NORTH)

FOR SECTION A SEE SHEET 14



PLAN



SECTION F

▨ VERT. CONST. JT. - KEYWAY FORMED BY A SURFACED BEVELED 2" x 8". BEVEL EXPOSED EDGES ¾". FOR ALTERNATE CONST. JT. DETAILS SEE SHEET 16

◨ 18" RUBBERIZED MEMBRANE WATERPROOFING FROM BRIDGE SEAT TO TOP OF WING.

◭ ¾" CORK FILLER ON VERTICAL BEAM SEAT FACES THAT RUN PARALLEL WITH GIRDER.

⊖ PIPE UNDERDRAIN WRAPPED 6-INCH. SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT END OF PIPE UNDERDRAIN. SEE DETAIL ON SHEET 9.

B.F. DENOTES BACK FACE

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-732

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NORTH ABUTMENT

SHEET 10 OF 40
462

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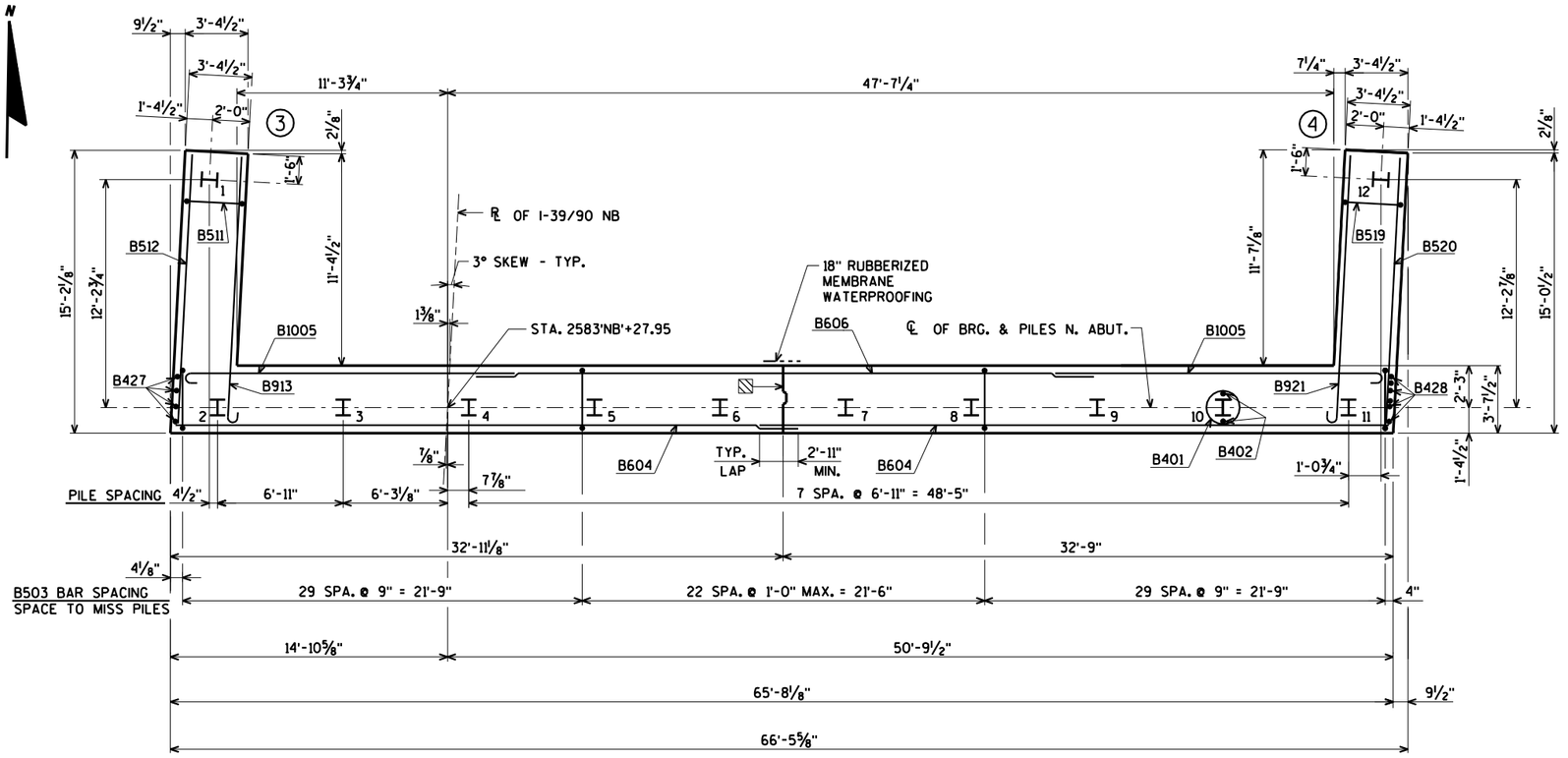
PENTABLE:BReau_shd_util.tbl

U:±41-0660.0X - IH-39 Dane Partners General Bridge Information±B-13-732 - I39_NB over Femrite Drive±bridge±B-13-732 n abut.dgn

STATE PROJECT NUMBER

1007-12-78



PILE LAYOUT

▨ VERT. CONST. JT. - KEYWAY FORMED BY A SURFACED BEVELED 2" x 8". BEVEL EXPOSED EDGES ¾". FOR ALTERNATE CONST. JT. DETAILS SEE SHEET 16

FOR PILE SPLICE DETAIL SEE SHEET 3.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-732

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NORTH ABUTMENT
PILE LAYOUT

SHEET 11 OF 40
463

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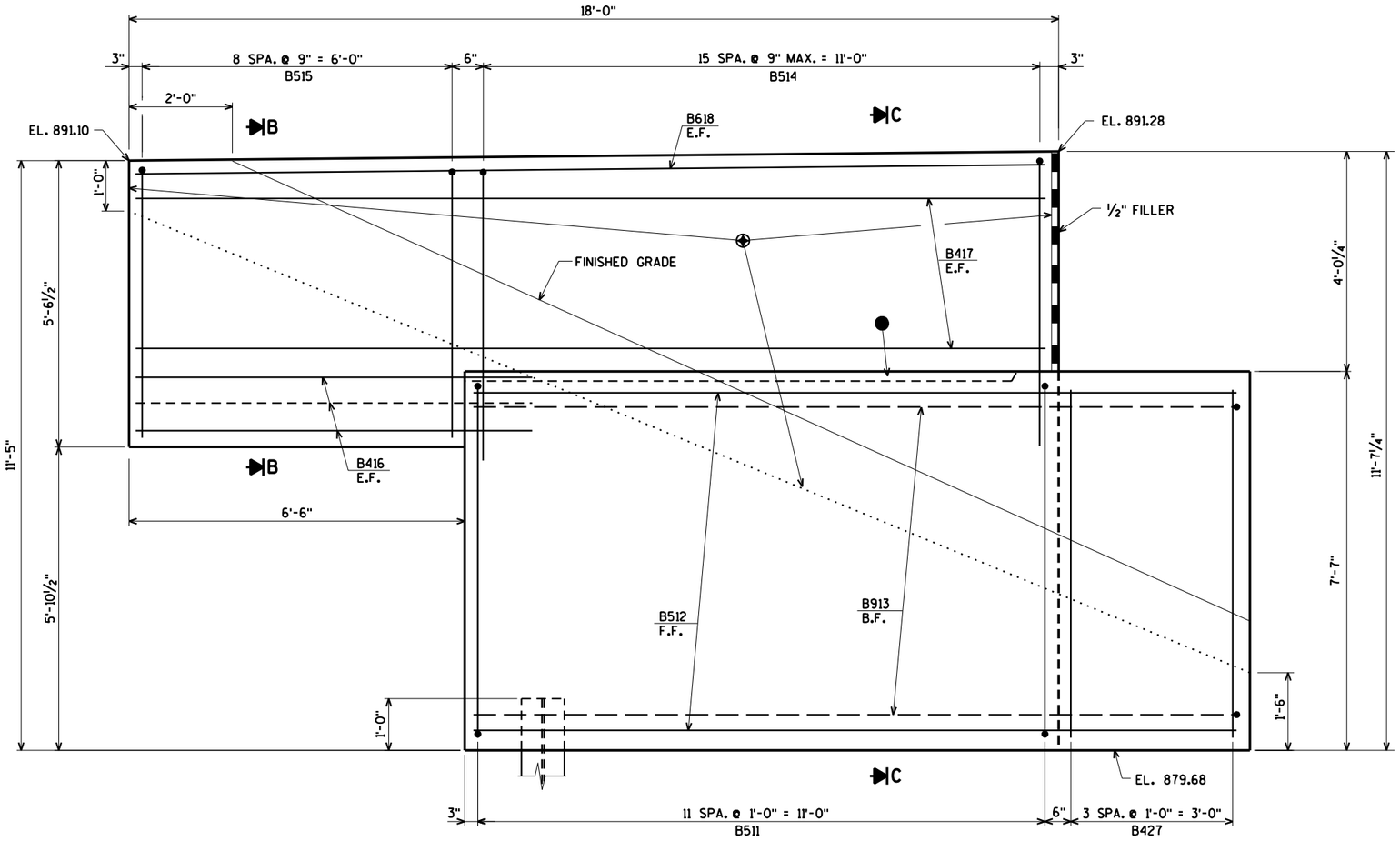
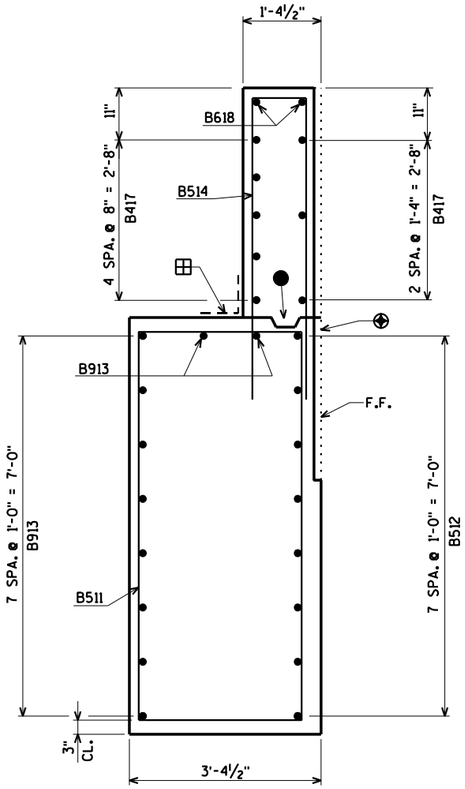
PENTABLE:BReau_shd_util.tbl

U:±41-0660.0X - IH-39 Dane Partners General Bridge Information±B-13-732 - 139_NB over Femrite Drive±bridge±B-13-732 n abut.dgn

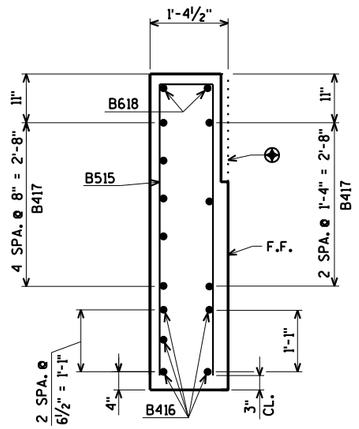
$PRFNAME$
U:\41-0660.0X - IH-39 Dane Partners General Bridge Information\B-13-732 - I39_NB over Femrite Drive\bridge\B-13-732 n abut.



ELEVATION - WING 3



SECTION C



SECTION B

FOR PILE SPLICE DETAIL SEE SHEET 3.

⊕ LIMITS OF RUSTICATIONS. FOR DETAILS SEE SHEET 15

● OPT. CONST. JOINT FORMED BY A BEVELED 2" x 6" KEYWAY.

⊞ 18" RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE OF ABUTMENT.

F.F. DENOTES FRONT FACE

B.F. DENOTES BACK FACE

E.F. DENOTES EACH FACE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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NORTH ABUTMENT WING 3 DETAILS

SHEET 12 OF 40
464

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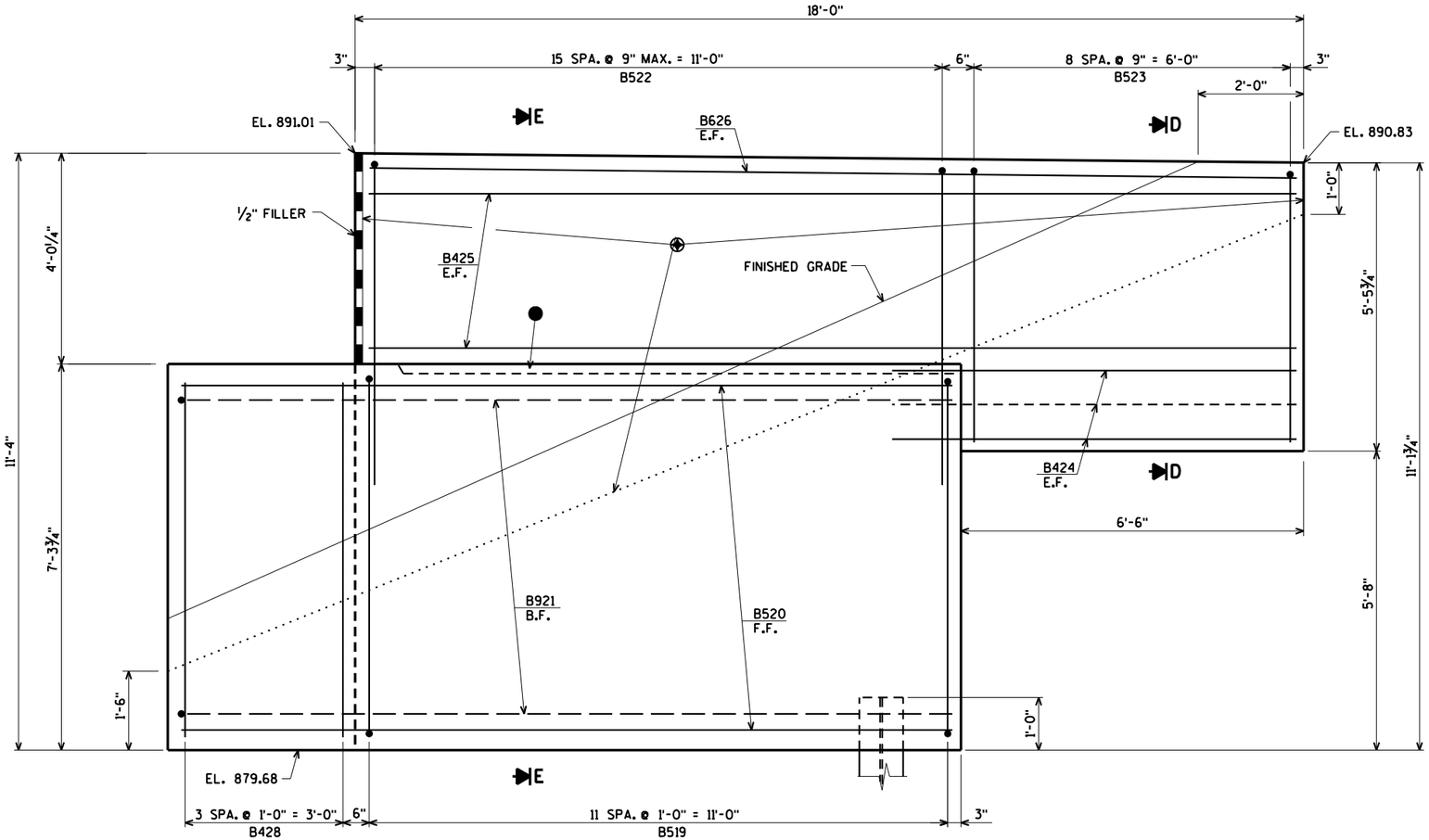
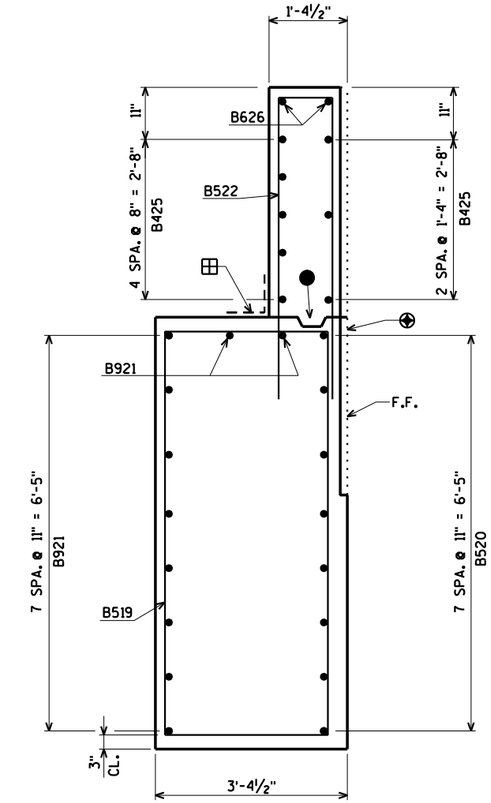
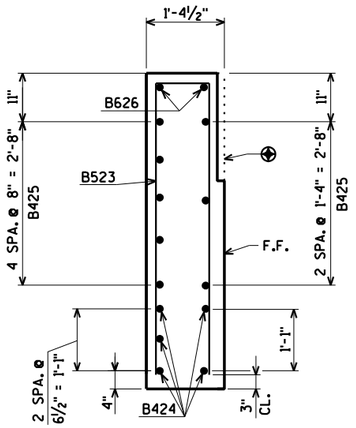


ELEVATION - WING 4



SECTION E



SECTION D

FOR PILE SPLICE DETAIL SEE SHEET 3.

⊕ LIMITS OF RUSTICATIONS. FOR DETAILS SEE SHEET 15

● OPT. CONST. JOINT FORMED BY A BEVELED 2" x 6" KEYWAY.

⊞ 18" RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE OF ABUTMENT.

F.F. DENOTES FRONT FACE

B.F. DENOTES BACK FACE

E.F. DENOTES EACH FACE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-732

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NORTH ABUTMENT WING 4 DETAILS

SHEET 13 OF 40
465

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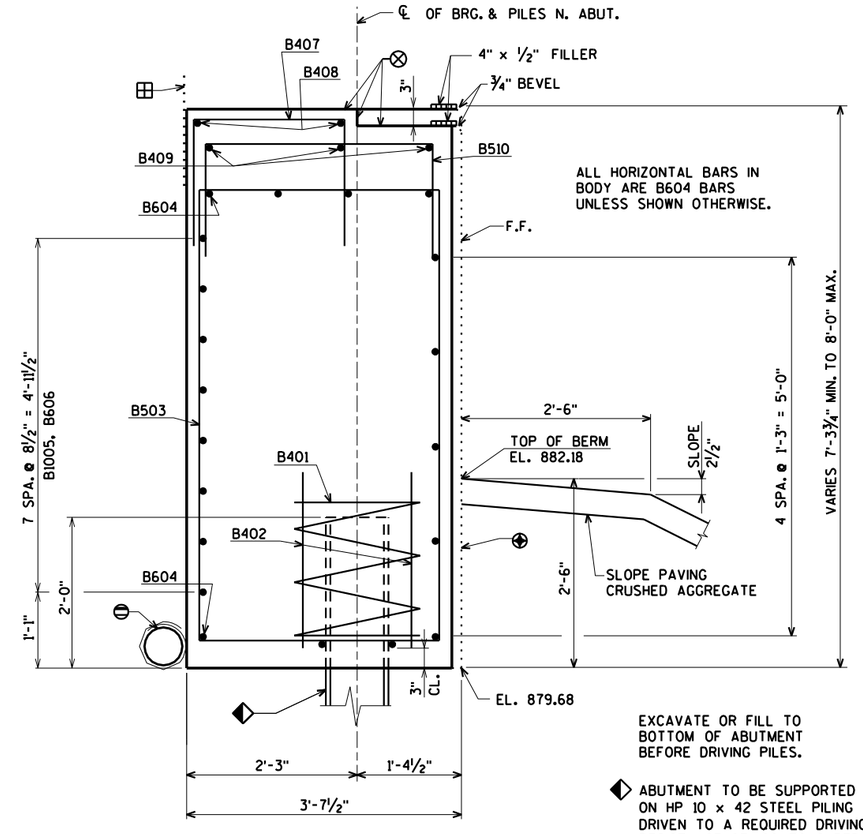
U:±41-0660.0X - IH-39 Dane Partners General Bridge Information±B-13-732 - 139_NB over Femrite Drive±bridge±B-13-732 n abut.dgn



SECTION A

EXCAVATE OR FILL TO BOTTOM OF ABUTMENT BEFORE DRIVING PILES.

◆ ABUTMENT TO BE SUPPORTED ON HP 10 x 42 STEEL PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 180 TONS PER PILE. ESTIMATED LENGTH 45'-0".

FOR LOCATION OF SECTION A SEE SHEET 10

◈ LIMITS OF RUSTICATIONS. FOR DETAILS SEE SHEET 15

⊞ 18" RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE OF ABUTMENT.

FOR PILE SPLICE DETAIL SEE SHEET 3

F.F. DENOTES FRONT FACE

B.F. DENOTES BACK FACE

E.F. DENOTES EACH FACE

⊖ PIPE UNDERDRAIN WRAPPED 6-INCH. SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT END OF PIPE UNDERDRAIN. SEE DETAIL ON SHEET 9.

⊗ STEEL TROWEL TOP SURFACE OF ABUTMENT. PLACE MULTIPLE LAYERS OF POLYETHYLENE SHEETS OVER ENTIRE ABUTMENT TOP BEFORE PLACING BEARING AND/OR SUPERSTRUCTURE. TOTAL THICKNESS OF SHEETS SHALL BE AT LEAST 0.03".

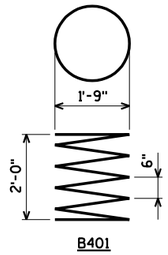
STATE PROJECT NUMBER

1007-12-78

BILL OF BARS

BAR NO.	COATED BAR	NO. REQ'D.	LENGTH	BENT BAR	BUNDLED BAR SERIES	2,830# COATED 5,480# UNCOATED LOCATION
B401		10	28-0	X		BODY @ PILES
B402		20	2-3			BODY @ PILES
B503		81	20-1	X		BODY VERT.
B604		24	34-2			BODY HORIZ.
B1005		16	19-5	X		BODY HORIZ. B.F. @ WINGS
B606		8	35-2			BODY HORIZ. B.F.
B407		44	5-1	X		BODY VERT.
B408		4	33-7			BODY HORIZ.
B409		3	38-6			BODY HORIZ.
B510		39	6-5	X		BODY VERT.
B511	X	12	20-9	X		WING 3 VERT.
B512	X	8	14-8			WING 3 HORIZ. F.F.
B913	X	10	15-9	X		WING 3 HORIZ. B.F.
B514	X	16	12-6	X		WING 3 VERT.
B515	X	9	10-8	X		WING 3 VERT.
B416	X	5	7-9			WING 3 HORIZ. E.F.
B417	X	8	17-8			WING 3 HORIZ. E.F.
B618	X	2	17-8			WING 3 HORIZ. TOP E.F.
B519	X	12	20-1	X		WING 4 VERT.
B520	X	8	14-7			WING 4 HORIZ. F.F.
B921	X	10	15-9	X		WING 4 HORIZ. B.F.
B522	X	16	12-6	X		WING 4 VERT.
B523	X	9	10-6	X		WING 4 VERT.
B424	X	5	7-9			WING 4 HORIZ. E.F.
B425	X	8	17-8			WING 4 HORIZ. E.F.
B626	X	2	17-8			WING 4 HORIZ. TOP E.F.
B427	X	4	7-2			BODY VERT. END @ WING 3
B428	X	4	6-10			BODY VERT. END @ WING 4

BENDING DIMENSIONS ARE OUT TO OUT OF BARS.



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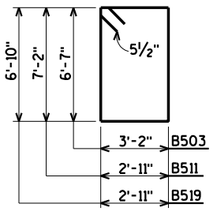

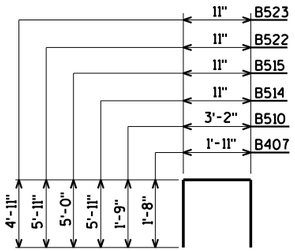

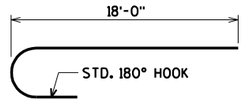

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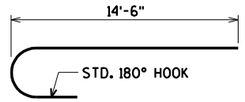

B913, B921

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-732

DRAWN BY CLS | PLANS CK'D. CBM

NORTH ABUTMENT DETAILS

SHEET 14 OF 40
466

ORIGINAL PLANS PREPARED BY
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3433 Oakwood Hills Parkway
Eau Claire, WI 54701
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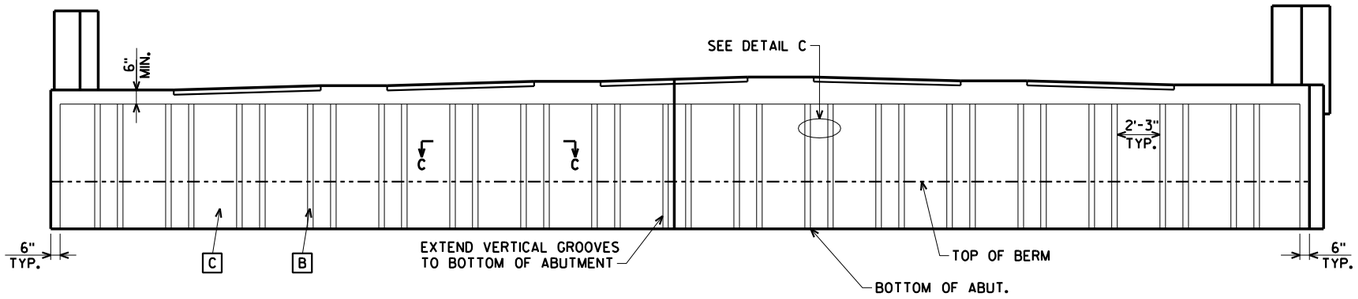
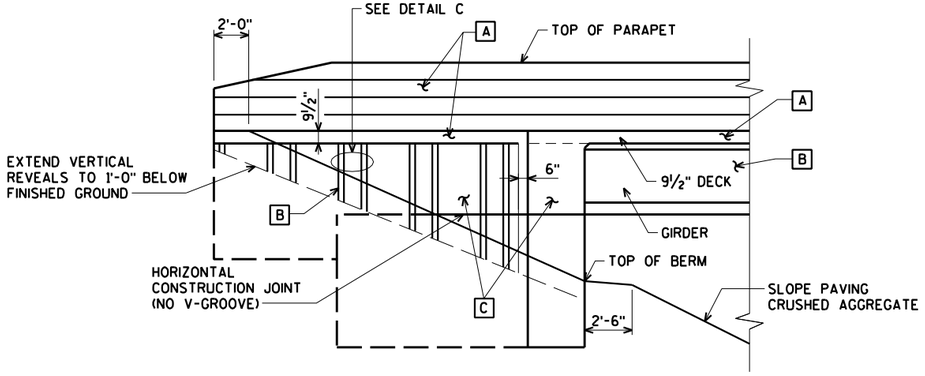
6/25/2019
PENTABLE:BRequ_shd_util.tbl

$PRFNAME$
U:\41-0660.0X - IH-39 Dane Partners General Bridge Information\B-13-732 - 139_NB over Femrite Drive\bridge\B-13-732 ARCH TR



TYPICAL ABUTMENT

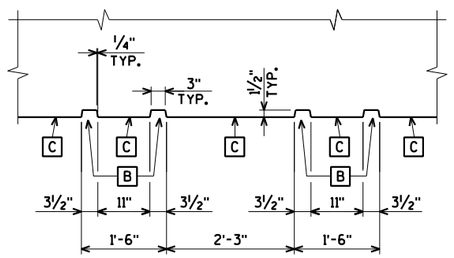
(NORTH ABUTMENT SHOWN, SOUTH ABUTMENT SIMILAR)



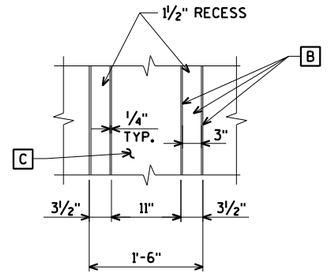
TYPICAL WINGWALL PARALLEL TO ROADWAY

CONCRETE STAINING SCHEDULE

MARK	AMS STD. COLOR NUMBER	LOCATION
A	36642	PARAPET, EDGE OF DECK, BOTTOM OF DECK OVERHANGS, WINGWALLS
B	30140	EXTERIOR GIRDER, REVEALS
C	30372	PIERS, ABUTMENTS, AND WINGWALLS



SECTION C-C



DETAIL C

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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-732

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ABUTMENT RUSTICATION AND CONCRETE STAINING DETAILS

SHEET 15 OF 40
467

ORIGINAL PLANS PREPARED BY
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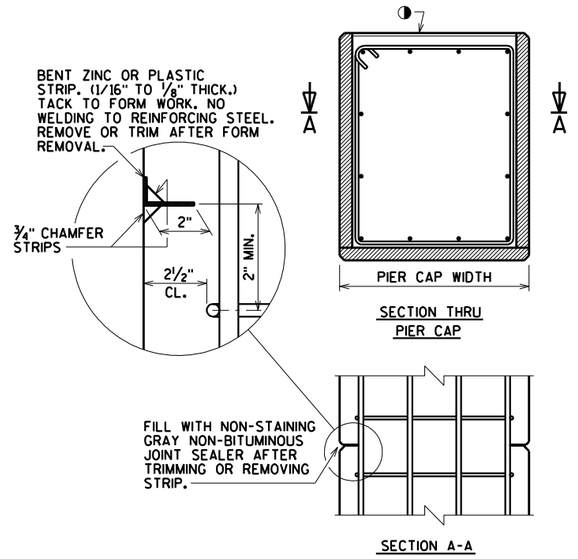
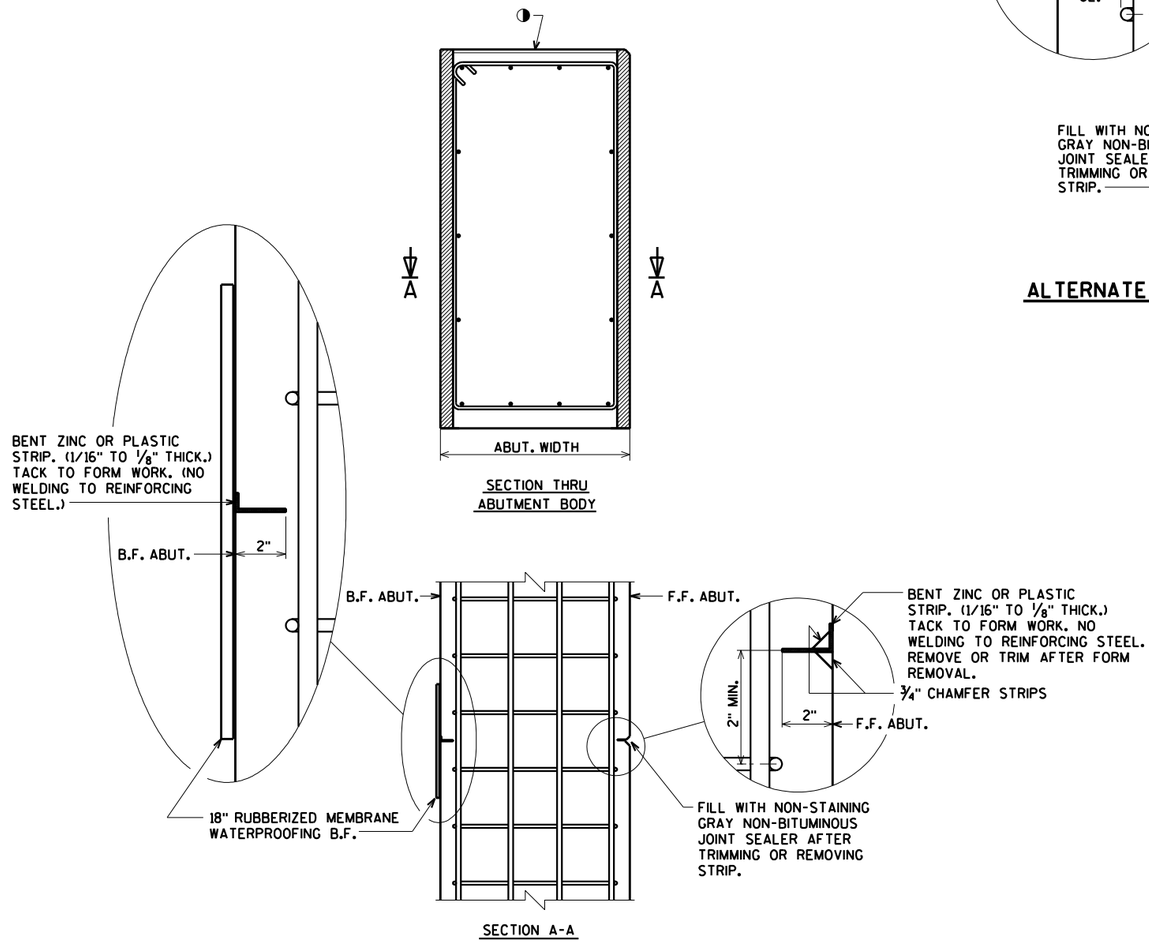
U:±41-0660.0X - IH-39 Dane Partners General Bridge Information±B-13-732 - 139_NB over Femrite Drive±bridge±B-13-732 ARCH TR



ALTERNATE CONSTRUCTION JOINT AT PIER CAP



ALTERNATE CONSTRUCTION JOINT AT ABUTMENT

NOTES

PARTIAL ZINC OR PLASTIC BULKHEAD MAY BE USED AS ALTERNATE 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.

◑ USE A JOINT TOOL TO CONSTRUCT A CONTRACTION JOINT APPROXIMATELY 1/2" DEEP.

F.F. DENOTES FRONT FACE

B.F. DENOTES BACK FACE

NO.	DATE	REVISION	BY

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STRUCTURE B-13-732

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ALTERNATE CONSTRUCTION JOINT

SHEET 16 OF 40
468

ORIGINAL PLANS PREPARED BY
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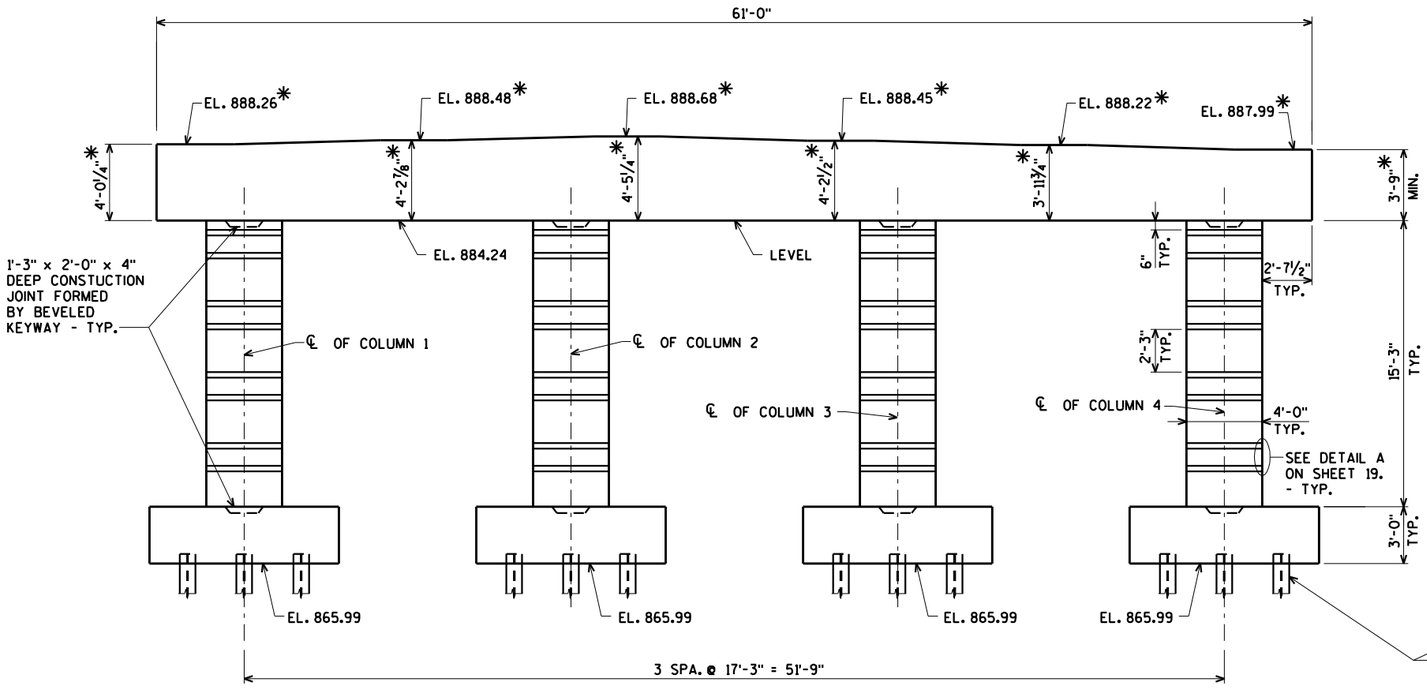
6/24/2019

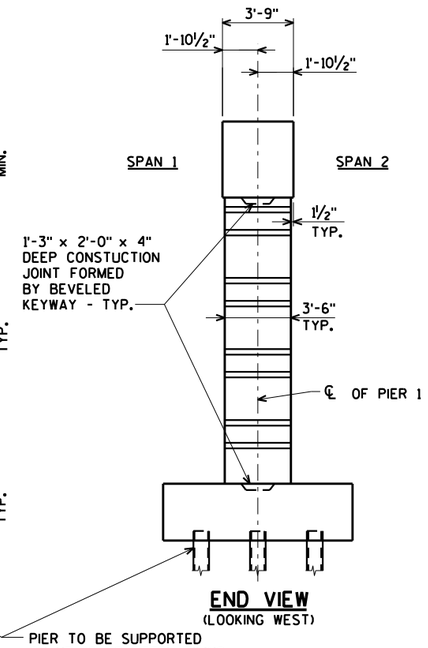
STATE PROJECT NUMBER

1007-12-78

✱ ELEVATIONS AND DIMENSIONS TAKEN AT ℄ OF PIER.

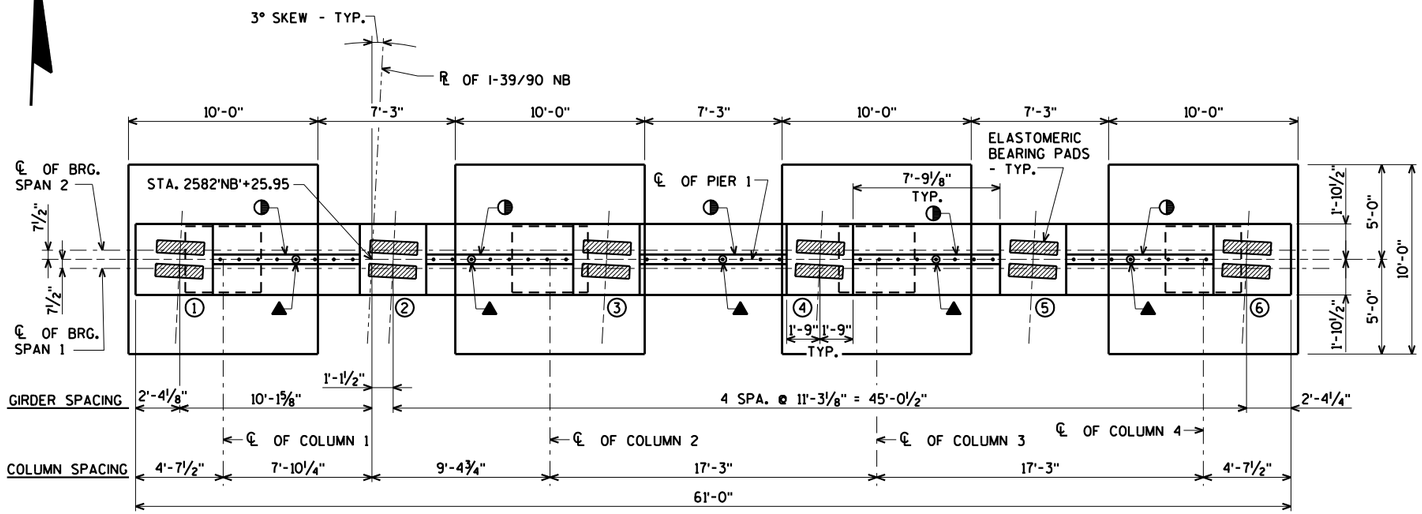


ELEVATION
(LOOKING NORTH)



END VIEW
(LOOKING WEST)

PIER TO BE SUPPORTED ON HP 10x42 STEEL PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 180 TONS/PILE. EST. LENGTH 25'-0".



PLAN

◑ KEYED CONSTRUCTION JOINT, FORMED BY SURFACED BEVELED 2" X 6" BETWEEN BEAM SEATS.

▲ P517 BARS AT 1'-0" CENTERS, BETWEEN BEAM SEATS. EMBED 1'-0" INTO CAP CONCRETE.

RUSTICATIONS ON THE PIER COLUMNS ARE INCLUDED IN THE BID ITEM "CONCRETE MASONRY BRIDGES".

NO.	DATE	REVISION	BY

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DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-732

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PIER 1

SHEET 17 OF 40
469

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

6/24/2019
PENTABLE:BReau_shd_util.tbl

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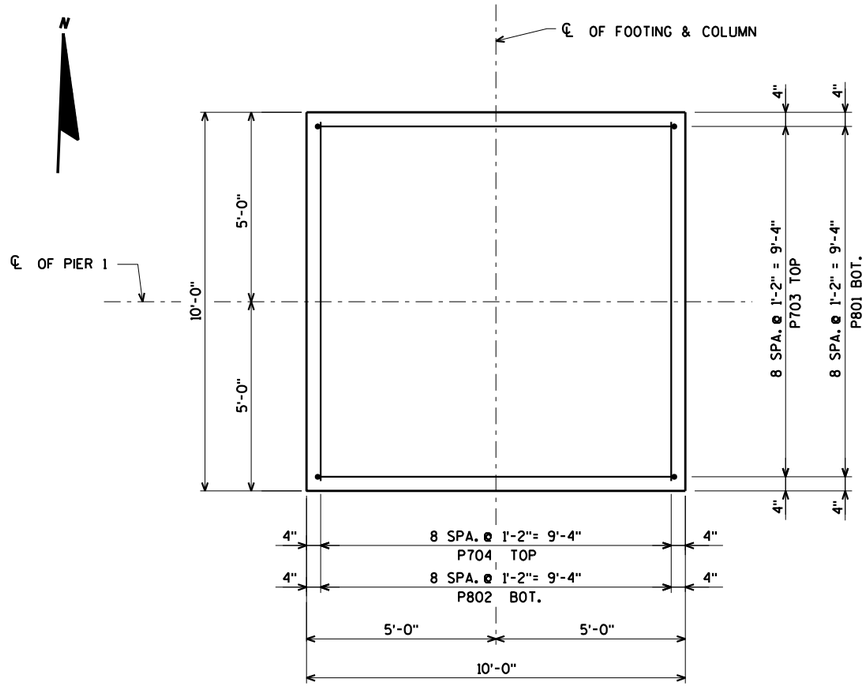
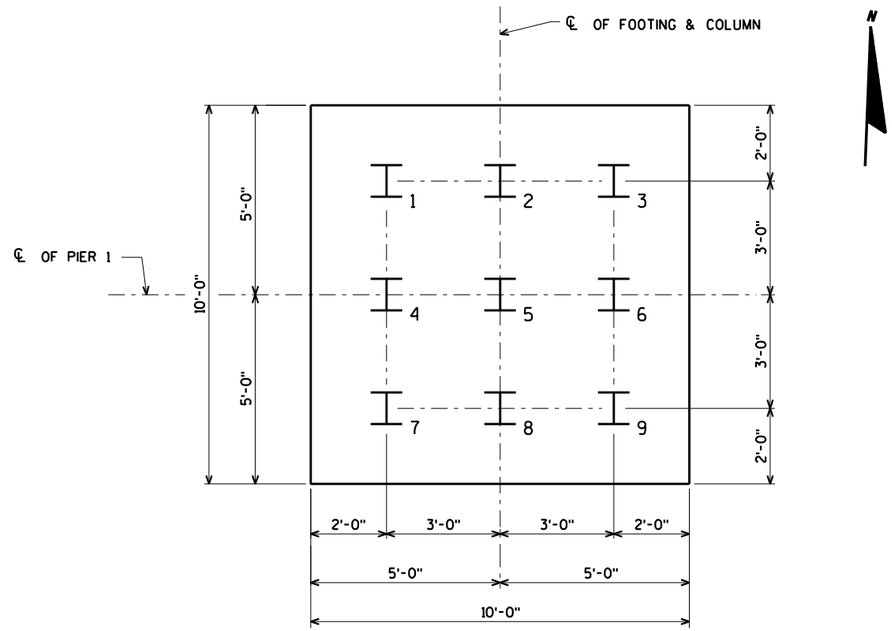
U:±41-0660.0X - IH-39 Dane Partners General Bridge Information±B-13-732 - I39_NB over Femrite Drive±bridge±B-13-732 pier 1.dgn



TYPICAL FOOTING REINFORCEMENT PLAN

(4 FOOTINGS REQUIRED)



TYPICAL FOOTING PILE LAYOUT

(4 FOOTINGS REQUIRED)

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-732

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ORIGINAL PLANS PREPARED BY

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PIER 1 FOOTINGS

SHEET 18 OF 40
470

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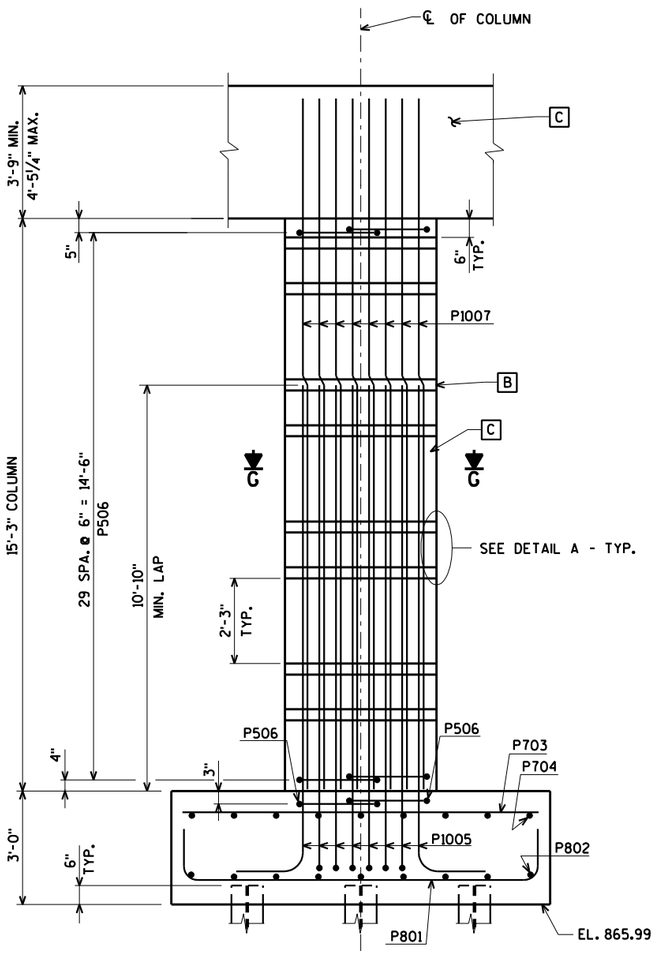
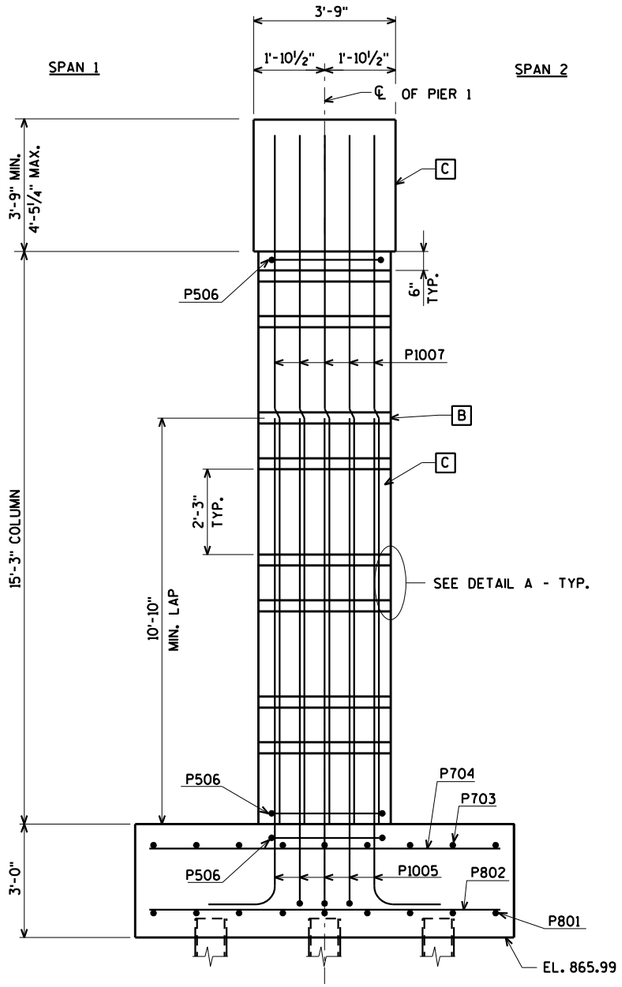
U:±41-0660.0X - IH-39 Dane Partners General Bridge Information±B-13-732 - I39_NB over Femrite Drive±bridge±B-13-732 pier 1.dgn

CONCRETE STAINING SCHEDULE

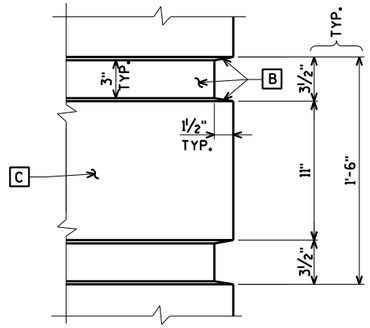
MARK	AMS STD. COLOR NUMBER	LOCATION
B	30140	REVEALS
C	30372	PIER COLUMNS & CAP



COLUMN ELEVATION

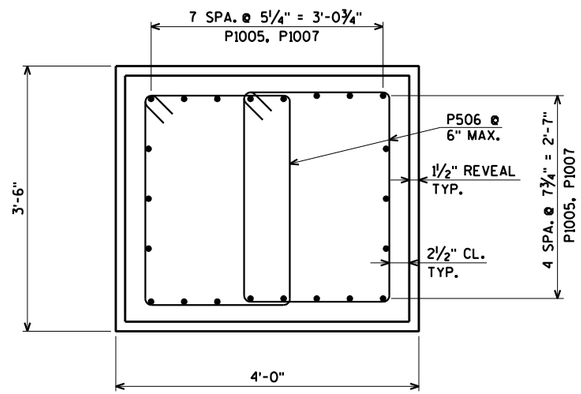


COLUMN ELEVATION - END VIEW
(LOOKING WEST)



DETAIL A

RUSTICATIONS ON THE PIER COLUMNS ARE INCLUDED IN THE BID ITEM "CONCRETE MASONRY BRIDGES".



SECTION G

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-732

DRAWN BY CLS | PLANS CK'D. CBM

PIER 1 COLUMNS AND CONCRETE STAINING

SHEET 19 OF 40
471

ORIGINAL PLANS PREPARED BY
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$PRFNAME$
U:\41-0660.0X - IH-39 Dane Partners General Bridge Information\B-13-732 - 139_NB over Femrite Drive\bridge\B-13-732 pier 1.dgn

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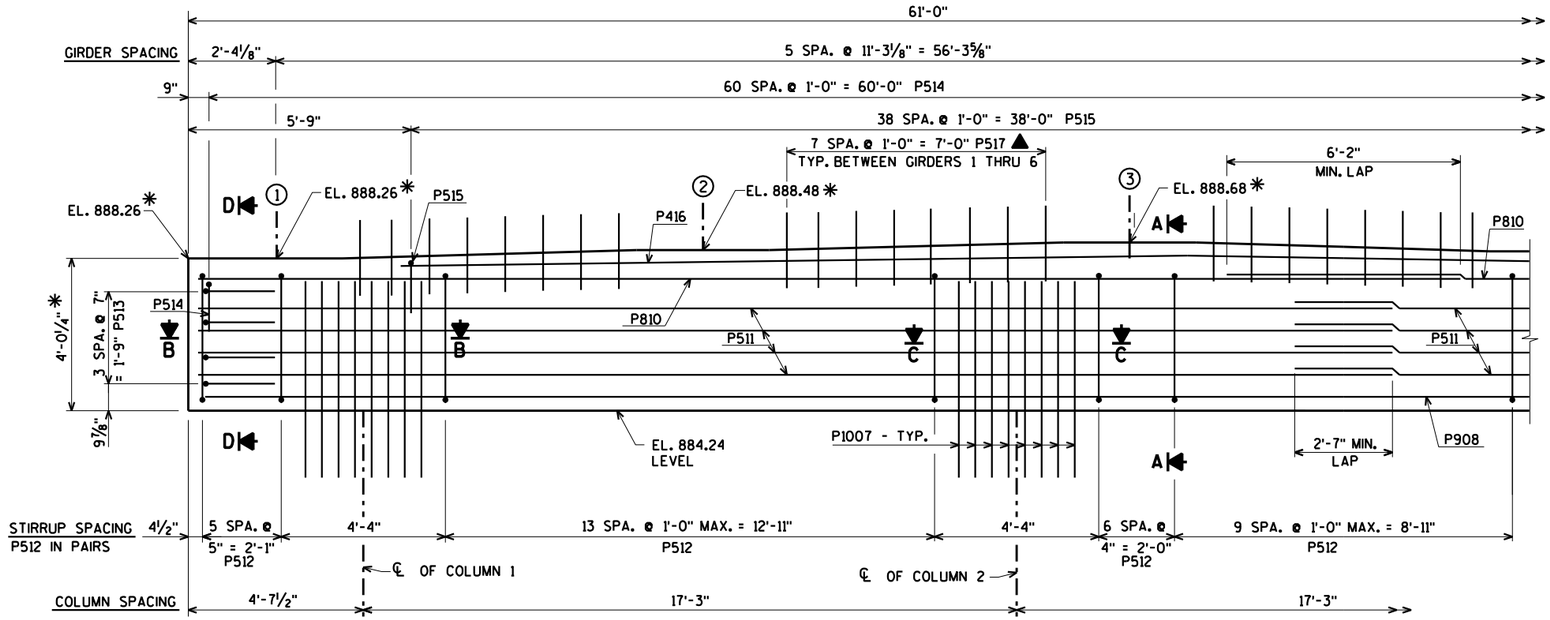
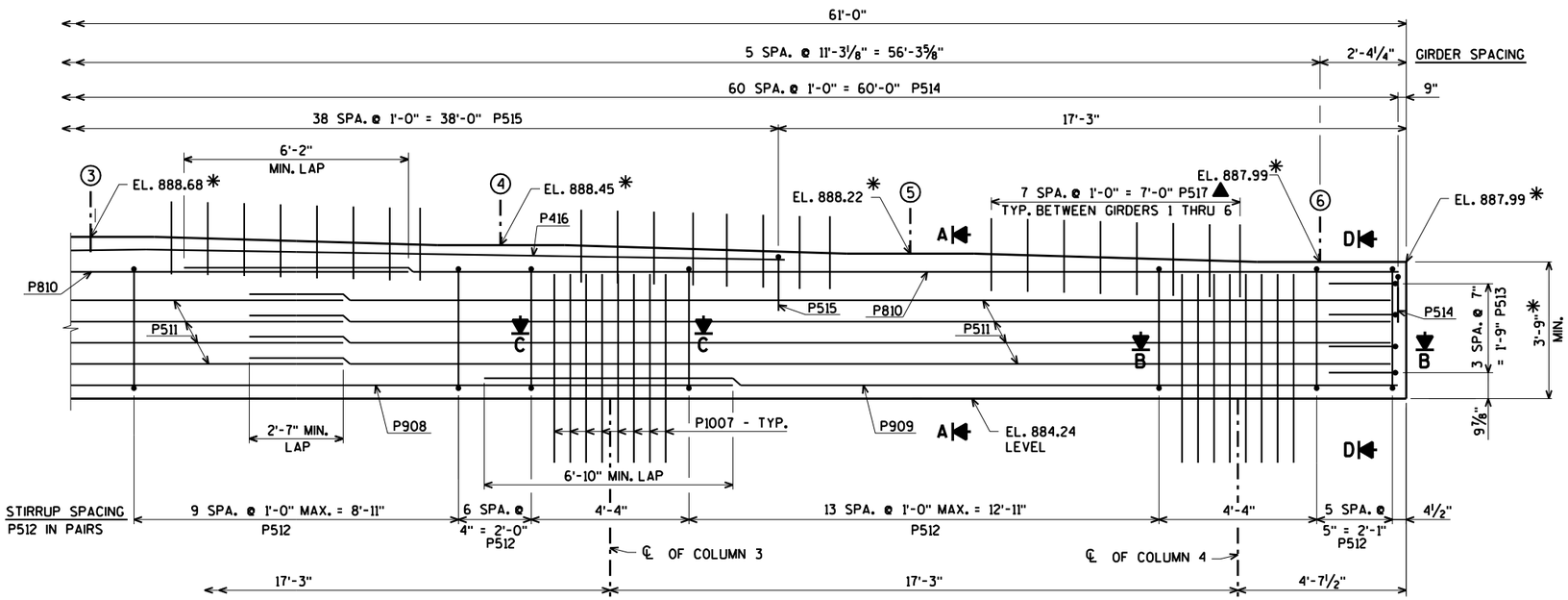
STATE PROJECT NUMBER

1007-12-78



ELEVATION - CAP PART SECTION

(LOOKING NORTH)



ELEVATION - CAP PART SECTION

(LOOKING NORTH)

* FOR ELEVATIONS AND DIMENSIONS TAKEN AT ℄ OF PIER.

FOR SECTIONS A THRU D, SEE SHEET 21.

FOR DEPTH OF CAP AT BEAM SEATS ALONG ℄ PIER, SEE SHEET 17.

▲ EMBED P517 BARS 1'-0" INTO CAP CONCRETE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-732

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PIER 1 CAP

SHEET 20 OF 40
472

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6/24/2019
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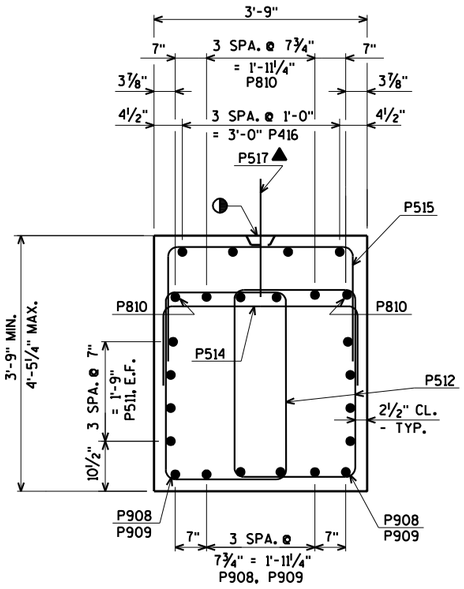
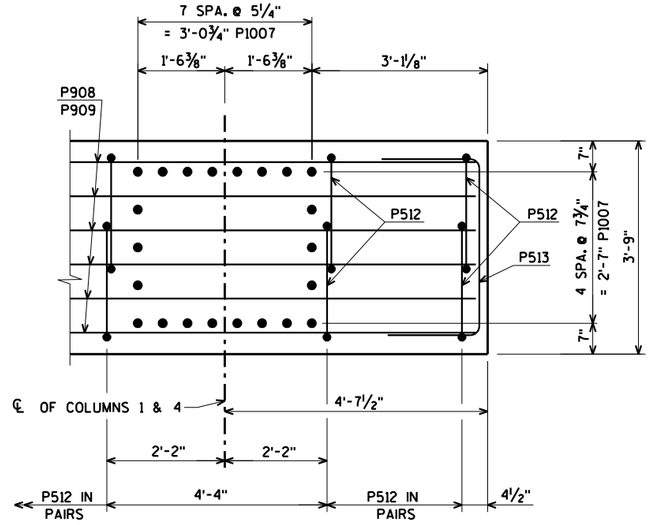
U:±41-0660.0X - IH-39 Dane Partners General Bridge Information±B-13-732 - 139_NB over Femrite Drive±bridge±B-13-732 pier 1.dgn

STATE PROJECT NUMBER
1007-12-78



SECTION A



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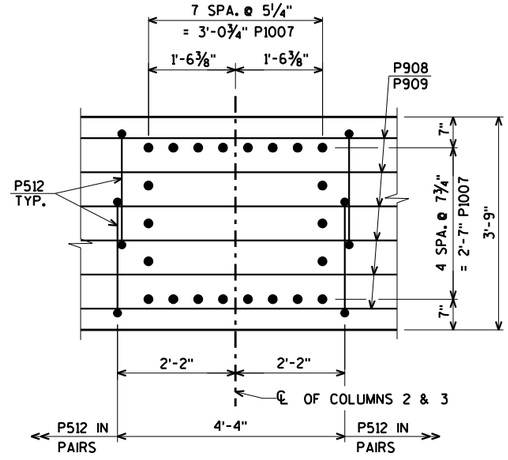
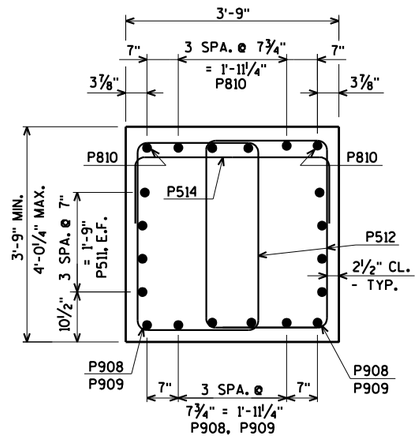


SECTION C

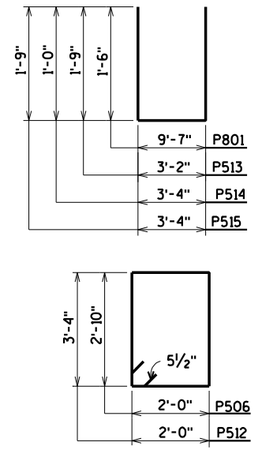


SECTION D

BILL OF BARS

BAR NO.	COATED BAR	NO. REQ'D.	LENGTH	BENT BAR	BUNDLED BAR SERIES	20,640# COATED 3,520# UNCOATED LOCATION
P801		36	12-2	X		PIER FOOTING BOT.
P802		36	9-8			PIER FOOTING BOT.
P703		36	9-8			PIER FOOTING TOP
P704		36	9-8			PIER FOOTING TOP
P1005	X	88	14-10	X		COLUMN DOWELS VERT.
P506	X	248	10-4	X		COLUMN TIES
P1007	X	88	18-8			COLUMN VERT.
P908	X	6	42-2			CAP HORIZ. BOT.
P909	X	6	25-4			CAP HORIZ. BOT.
P810	X	12	33-5			CAP HORIZ. TOP
P511	X	16	31-8			CAP HORIZ.
P512	X	124	11-4	X		CAP STIRRUP VERT.
P513	X	8	6-5	X		CAP HORIZ. ENDS
P514	X	61	5-2	X		CAP VERT.
P515	X	39	6-7	X		CAP VERT. TOP
P416	X	4	38-6			CAP HORIZ. TOP
P517	X	40	2-0			CAP VERT. TOP BTWN. BEAM SEATS

BENDING DIMENSIONS ARE OUT TO OUT OF BARS.



◑ KEYED CONSTRUCTION JOINT FORMED BY A SURFACED BEVELED 2" x 6" BETWEEN BEAM SEATS.

▲ EMBED P517 BARS 1'-0" INTO CAP CONCRETE.

FOR LOCATIONS OF SECTIONS A THRU D, SEE SHEET 20.

E.F. DENOTES EACH FACE

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-732

DRAWN BY CLS | PLANS CK'D. CBM

PIER 1 DETAILS

SHEET 21 OF 40
473

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
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Eau Claire, WI 54701
www.AyresAssociates.com

7/24/2019
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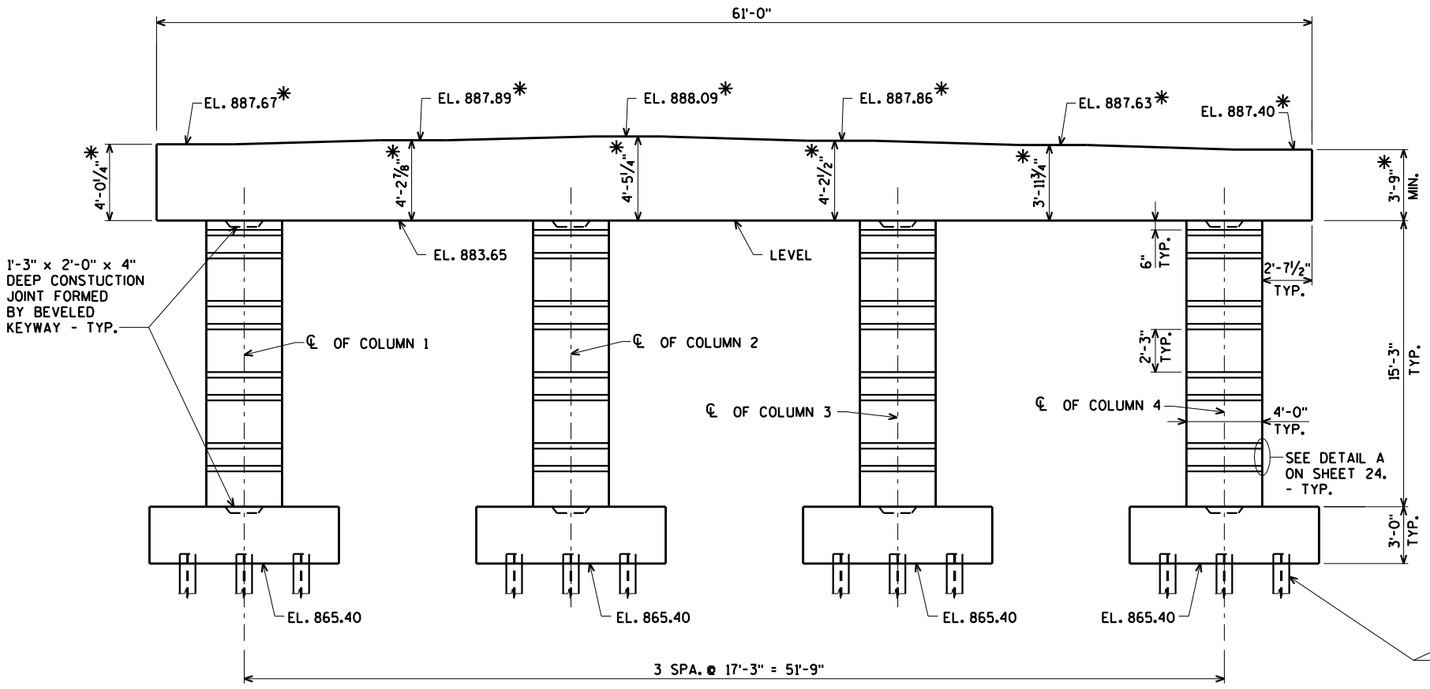
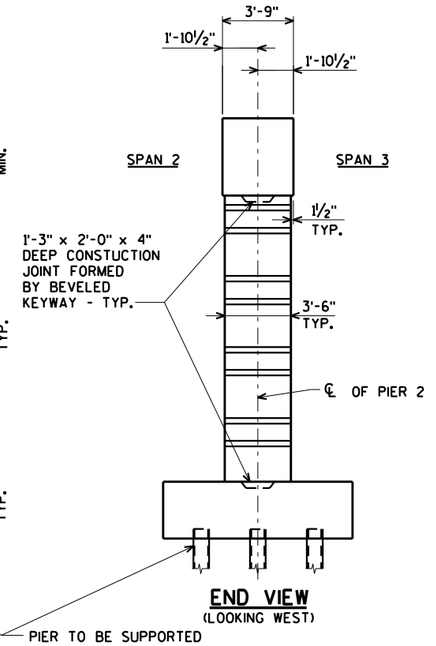
STATE PROJECT NUMBER

1007-12-78

✱ ELEVATIONS AND DIMENSIONS TAKEN AT ℄ OF PIER.

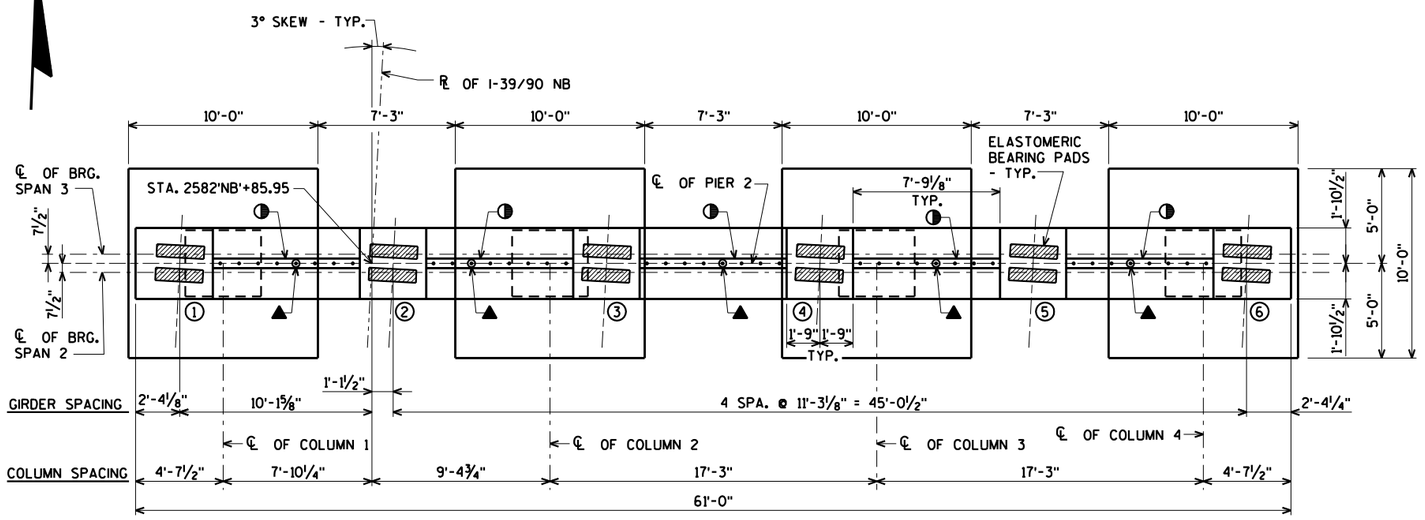


ELEVATION
(LOOKING NORTH)



END VIEW
(LOOKING WEST)

PIER TO BE SUPPORTED ON HP 10x42 STEEL PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 180 TONS/PILE. EST. LENGTH 25'-0".



PLAN

◑ KEYED CONSTRUCTION JOINT. FORMED BY SURFACED BEVELED 2" X 6" BETWEEN BEAM SEATS.

▲ P537 BARS AT 1'-0" CENTERS, BETWEEN BEAM SEATS. EMBED 1'-0" INTO CAP CONCRETE.

RUSTICATIONS ON THE PIER COLUMNS ARE INCLUDED IN THE BID ITEM "CONCRETE MASONRY BRIDGES".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-732

DRAWN BY CLS | PLANS CK'D. CBM

PIER 2

SHEET 22 OF 40
474

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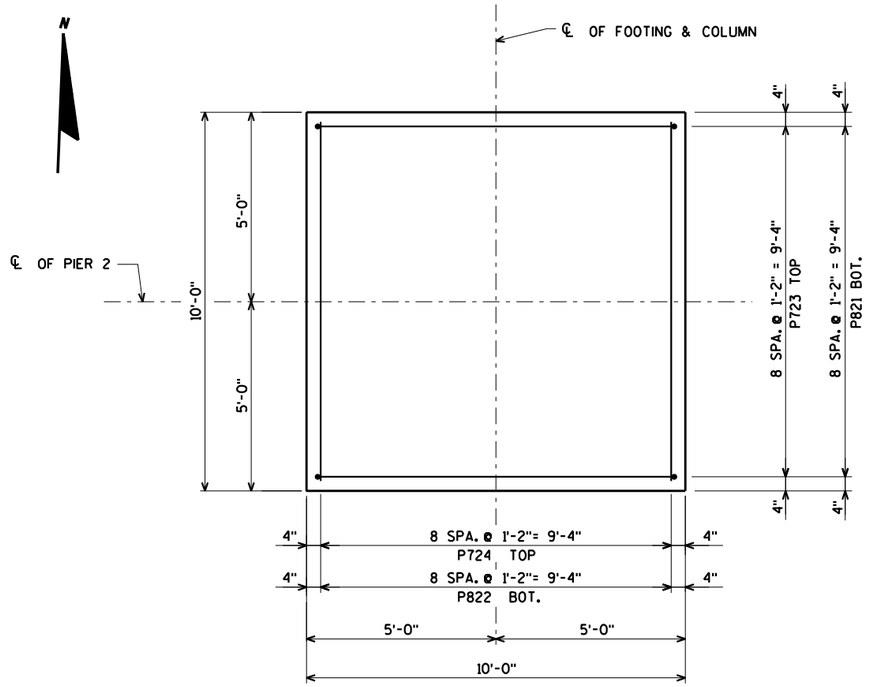
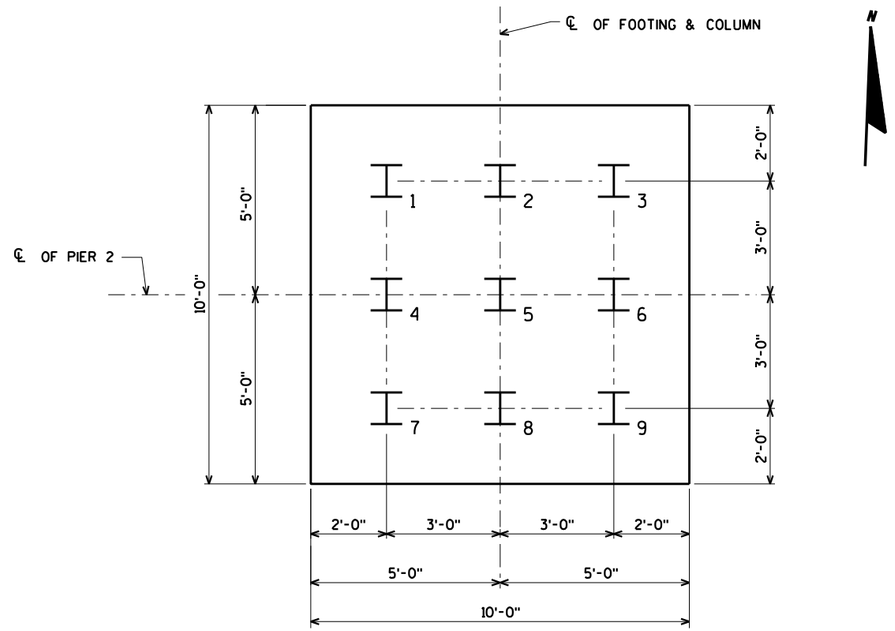
U:±41-0660.0X - IH-39 Dane Partners General Bridge Information±B-13-732 - 139_NB over Femrite Drive±bridge±B-13-732 pier 2.dgn

STATE PROJECT NUMBER
1007-12-78



TYPICAL FOOTING REINFORCEMENT PLAN

(4 FOOTINGS REQUIRED)



TYPICAL FOOTING PILE LAYOUT

(4 FOOTINGS REQUIRED)

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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-732

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PIER 2 FOOTINGS

SHEET 23 OF 40
475

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U:±41-0660.0X - IH-39 Dane Partners General Bridge Information±B-13-732 - I39_NB over Femrite Drive±bridge±B-13-732 pier 2.dgn

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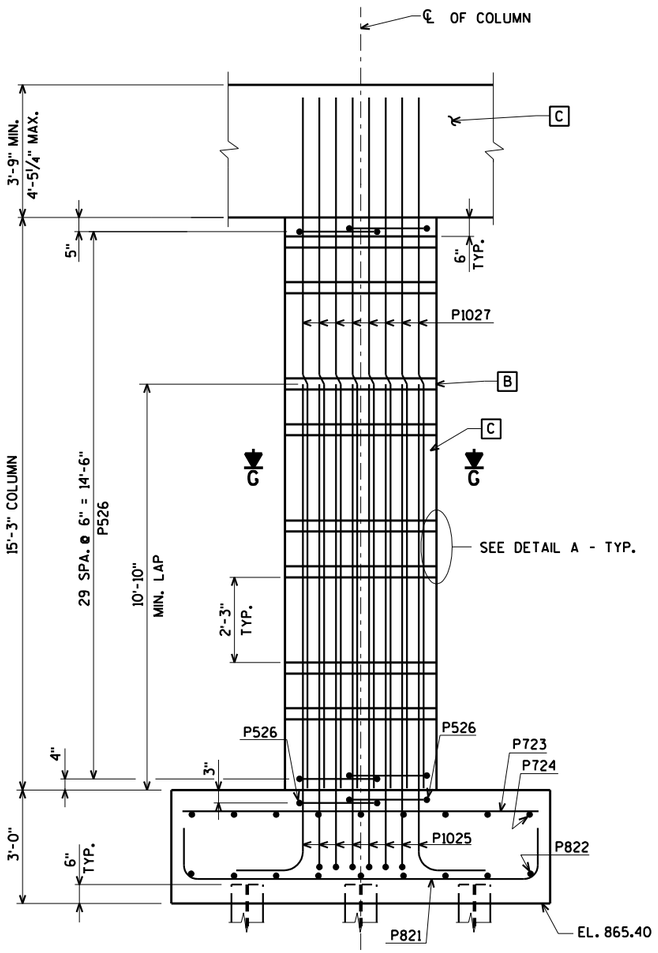
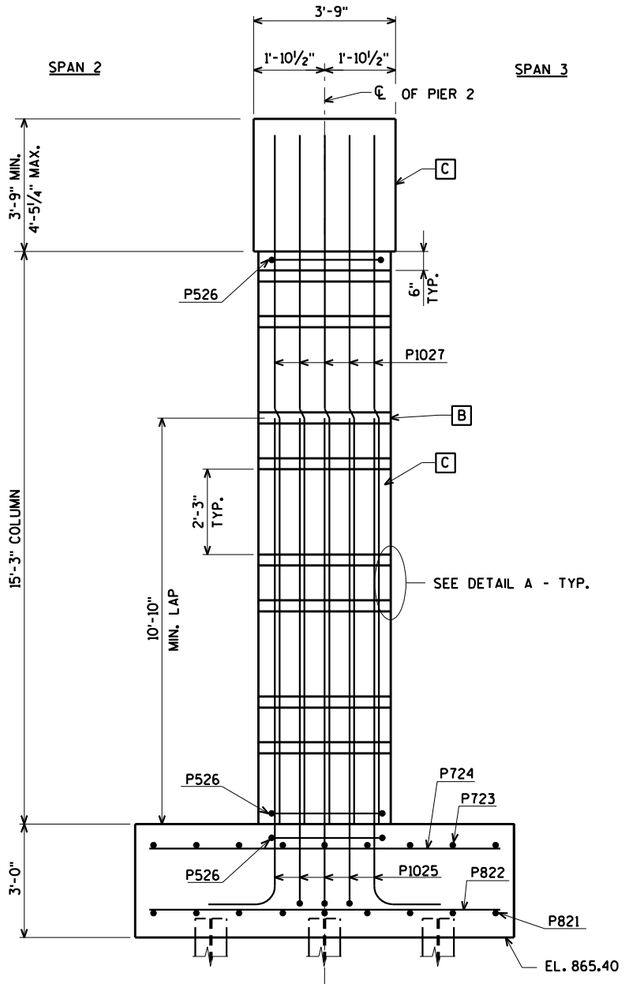
U:\41-0660.0X - IH-39 Dane Partners General Bridge Information\B-13-732 - I39_NB over Femrite Drive\bridge\B-13-732 pier 2.dgn

CONCRETE STAINING SCHEDULE

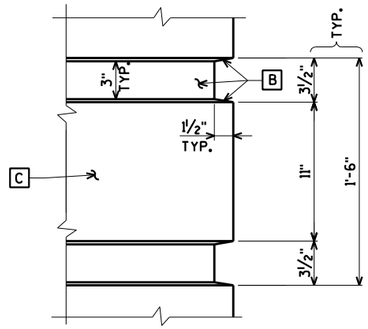
MARK	AMS STD. COLOR NUMBER	LOCATION
B	30140	REVEALS
C	30372	PIER COLUMNS & CAP



COLUMN ELEVATION

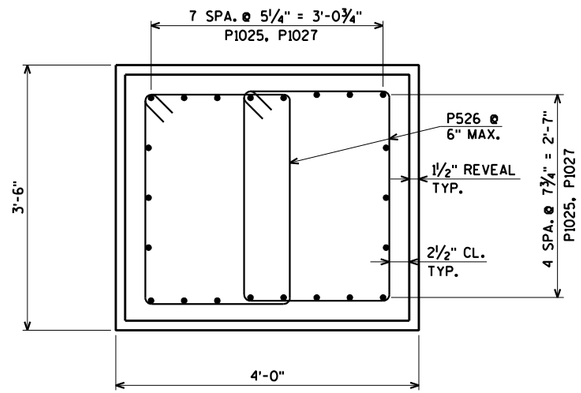


COLUMN ELEVATION - END VIEW
(LOOKING WEST)



DETAIL A

RUSTICATIONS ON THE PIER COLUMNS ARE INCLUDED IN THE BID ITEM "CONCRETE MASONRY BRIDGES".



SECTION G

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-732

DRAWN BY CLS | PLANS CK'D. CBM

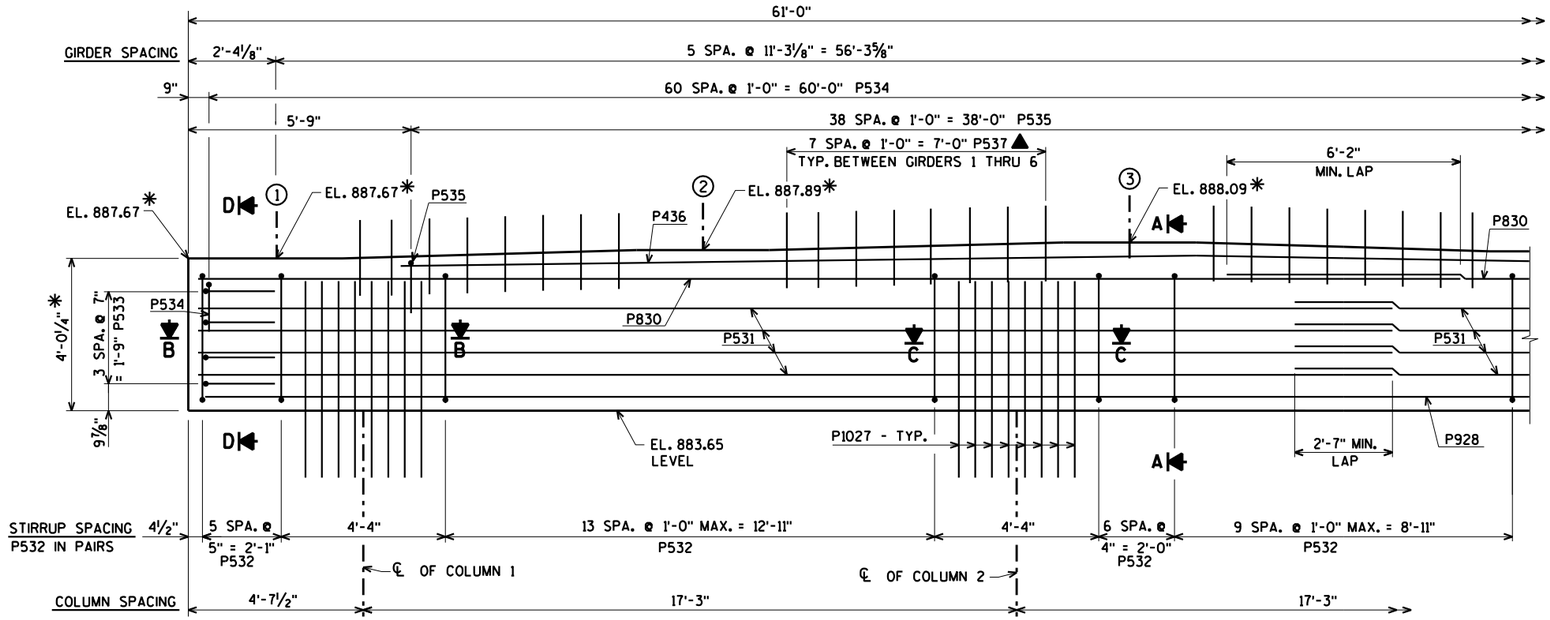
PIER 2 COLUMNS AND CONCRETE STAINING

SHEET 24 OF 40
476

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

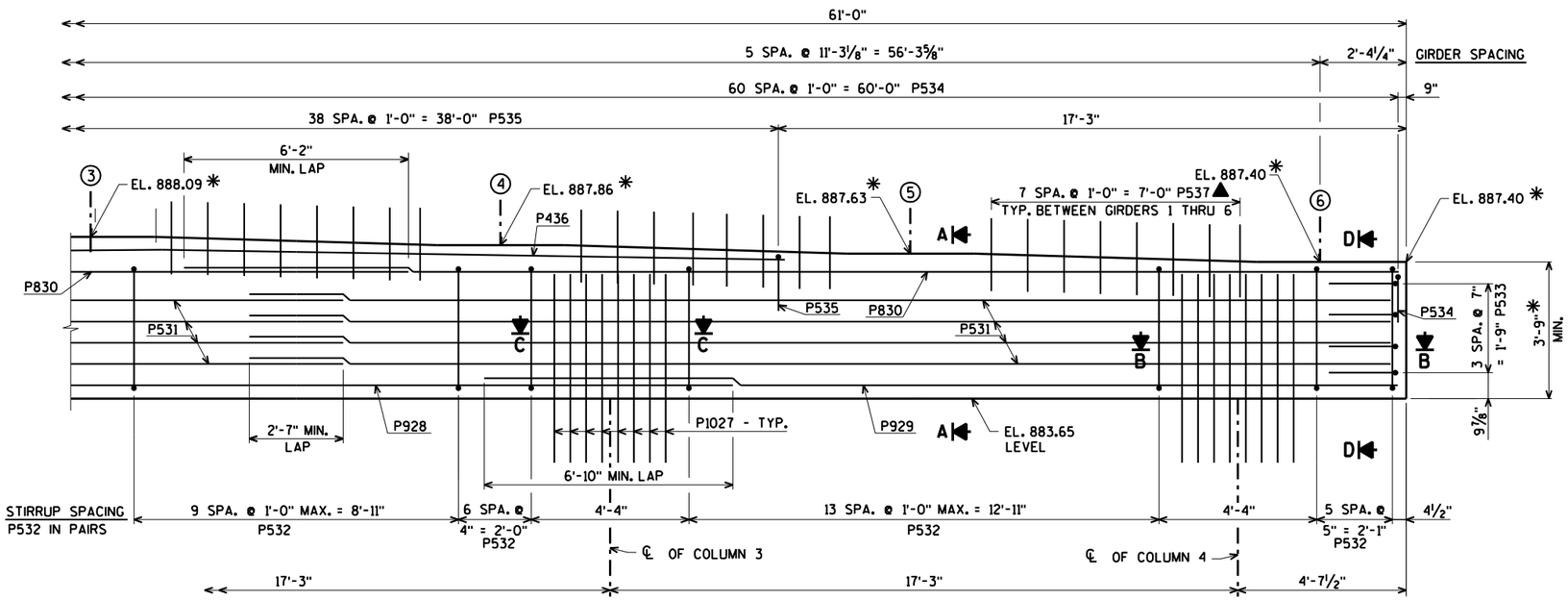
STATE PROJECT NUMBER

1007-12-78



ELEVATION - CAP PART SECTION

(LOOKING NORTH)



ELEVATION - CAP PART SECTION

(LOOKING NORTH)

* FOR ELEVATIONS AND DIMENSIONS TAKEN AT ℄ OF PIER.

FOR SECTIONS A THRU D, SEE SHEET 26.

FOR DEPTH OF CAP AT BEAM SEATS ALONG ℄ PIER, SEE SHEET 22.

▲ EMBED P537 BARS 1'-0" INTO CAP CONCRETE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-732

DRAWN BY CLS | PLANS CK'D. CBM

PIER 2 CAP

SHEET 25 OF 40
477

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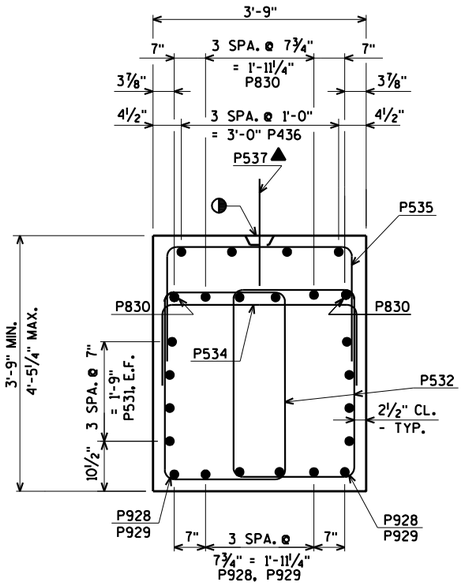
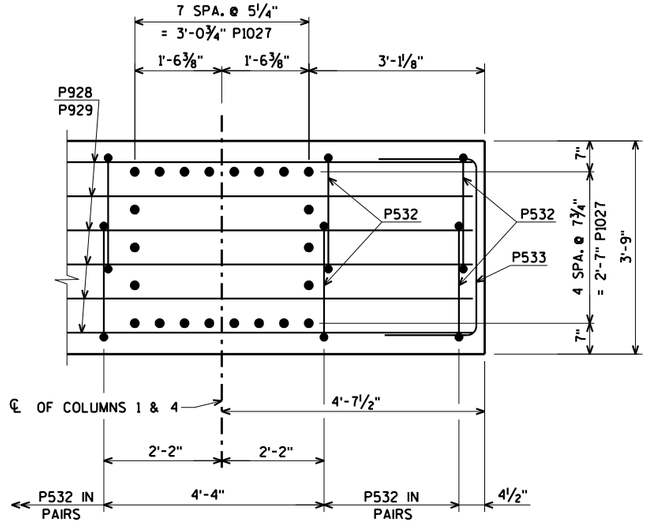
STATE PROJECT NUMBER

1007-12-78



SECTION A



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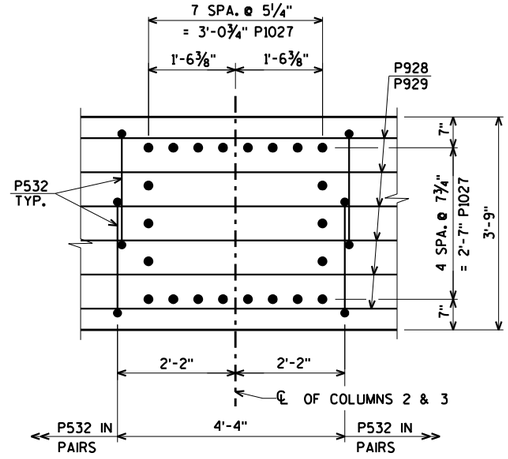

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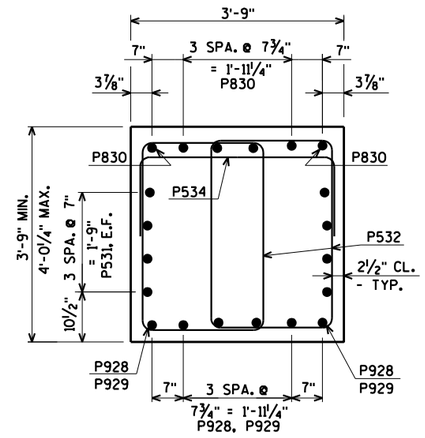
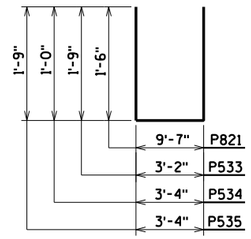


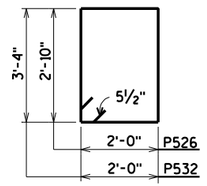
SECTION D

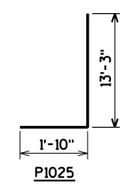
BILL OF BARS

BAR NO.	COATED BAR	NO. REQ'D.	LENGTH	BENT BAR	BUNDLED BAR SERIES	20,640* COATED 3,520* UNCOATED LOCATION
P821		36	12-2	X		PIER FOOTING BOT.
P822		36	9-8			PIER FOOTING BOT.
P723		36	9-8			PIER FOOTING TOP
P724		36	9-8			PIER FOOTING TOP
P1025	X	88	14-10	X		COLUMN DOWELS VERT.
P526	X	248	10-4	X		COLUMN TIES
P1027	X	88	18-8			COLUMN VERT.
P928	X	6	42-2			CAP HORIZ. BOT.
P929	X	6	25-4			CAP HORIZ. BOT.
P830	X	12	33-5			CAP HORIZ. TOP
P531	X	16	31-8			CAP HORIZ.
P532	X	124	11-4	X		CAP STIRRUP VERT.
P533	X	8	6-5	X		CAP HORIZ. ENDS
P534	X	61	5-2	X		CAP VERT.
P535	X	39	6-7	X		CAP VERT. TOP
P436	X	4	38-6			CAP HORIZ. TOP
P537	X	40	2-0			CAP VERT. TOP BTWN. BEAM SEATS

BENDING DIMENSIONS ARE OUT TO OUT OF BARS.







◑ KEYED CONSTRUCTION JOINT FORMED BY A SURFACED BEVELED 2" x 6" BETWEEN BEAM SEATS.

▲ EMBED P537 BARS 1'-0" INTO CAP CONCRETE.

FOR LOCATIONS OF SECTIONS A THRU D, SEE SHEET 25.

E.F. DENOTES EACH FACE

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-732

DRAWN BY CLS | PLANS CK'D. CBM

PIER 2 DETAILS

SHEET 26 OF 40
478

ORIGINAL PLANS PREPARED BY
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3433 Oakwood Hills Parkway
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www.AyresAssociates.com

7/24/2019
PENTABLE:BRequ_shd_util.tbl

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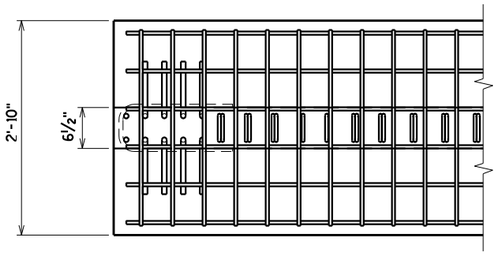
U:±41-0660.0X - IH-39 Dane Partners General Bridge Information±B-13-732 - I39_NB over Femrite Drive±bridge±B-13-732 pier 2.dgn

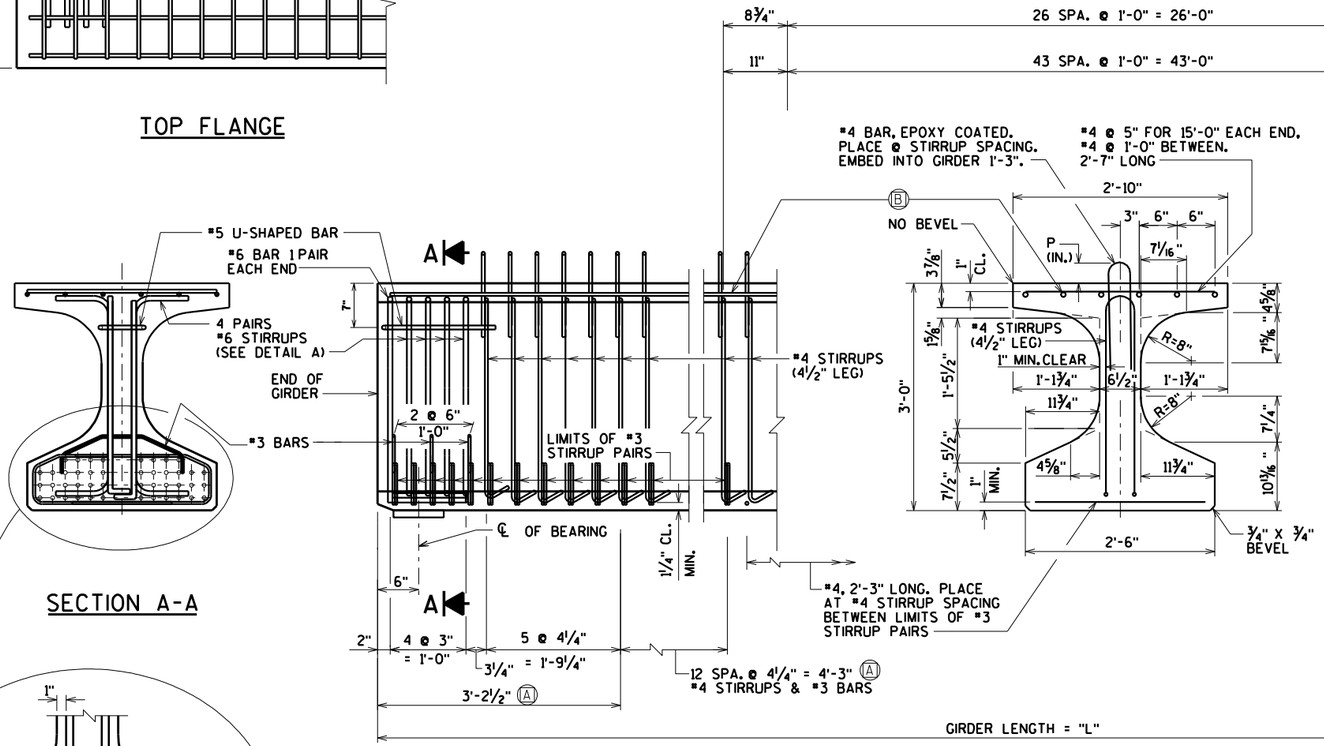
$PRFNAME$
U:\41-0660.0X - IH-39 Dane Partners General Bridge Information\B-13-732 - I39_NB over Femrite Drive\bridge\B-13-732 36W.dgn

STATE PROJECT NUMBER

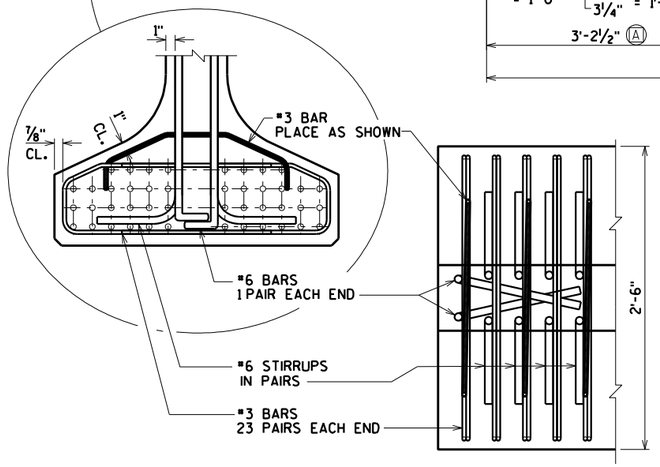
1007-12-78



TOP FLANGE



SECTION A-A



DETAIL A
BOTTOM FLANGE

SIDE VIEW & TYPICAL SECTION IN SPAN

Ⓐ DETAIL TYP. AT EACH END

Ⓑ 6 #5 BARS, FULL LENGTH, MIN. LAP = 2'-11"

GIRDER NOTES

TOP OF GIRDER TO BE ROUGH FLOATED AND BROOMED TRANSVERSELY, EXCEPT THE 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 SECTION 503.3.3 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.~~

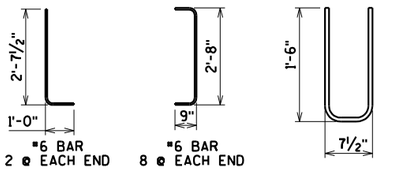
ALL GIRDERS SHALL BE CAST FULL LENGTH AS SHOWN.

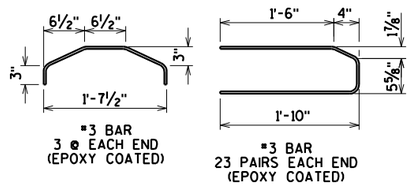
SPACING SHOWN FOR #4 STIRRUPS IS FOR GRADE 60 REINFORCEMENT.

AN EQUIVALENT OF WELDED WIRE FABRIC (WWF) ASTM A1064 MAY BE SUBSTITUTED FOR THE STIRRUP REINFORCEMENT SHOWN, UPON APPROVAL OF THE STRUCTURES MAINTENANCE SECTION. IF USED, WWF SUBSTITUTION DETAILS SHALL BE SUBMITTED ELECTRONICALLY TO THE WISDOT FABRICATION LIBRARY AND ACCEPTED PRIOR TO THE 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 INTER. DIAPHRAGM DETAILS" SHEET.





* MINIMUM CYLINDER STRENGTH OF CONCRETE @ TIME OF TRANSFER OF PRESTRESS FORCE.

GIRDER DATA

SPAN	GIRDER	GIRDER LENGTH "L"	DEAD LOAD DEFL. (IN.) 1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	CONC. STRGTH. f'c (p.s.i.)	"P" IST 1/3 OF GIRDER	"P" MID 1/3 OF GIRDER	"P" END 1/3 OF GIRDER	DIA. OF STRAND (IN.)	DRAPED PATTERN TOTAL NO. OF STRANDS	f'ci (P.S.I.) *	(IN.) "A"	"B" MIN.	"B" MAX.	"C"	UNDRAPED PATTERN TOTAL NO. OF STRANDS	f'ci (P.S.I.) *
1 & 3	1 & 6	42'-4½"	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	8,000	8"	8"	8"	0.60							16	6,400
1 & 3	2-5	42'-4½"	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.1	8,000	8"	8"	8"	0.60							16	6,400
2	1 & 6	59'-9"	0.2	0.3	0.4	0.5	0.5	0.5	0.4	0.3	0.2	8,000	8"	8"	8"	0.60							16	6,400
2	2-5	59'-9"	0.2	0.4	0.5	0.6	0.6	0.6	0.5	0.4	0.2	8,000	8"	8"	8"	0.60							16	6,400

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-732

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36W" PRESTRESSED GIRDER DETAILS

SHEET 27 OF 40
479

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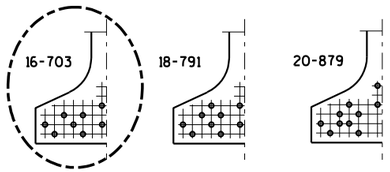
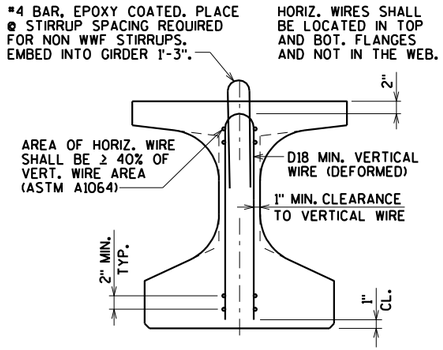


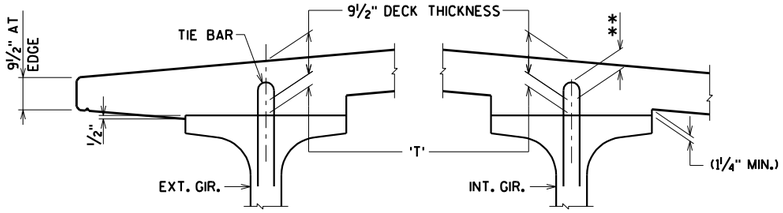
STANDARD ARRANGEMENTS TO RAISE CENTER OF GRAVITY TO AVOID DRAPING OF STRANDS

0.6"Φ STRANDS



SECTION THRU GIRDER

SHOWING WELDED WIRE FABRIC (WWF) STIRRUPS
ASTM A1064 (FY = 70 KSI)



DECK HAUNCH DETAIL

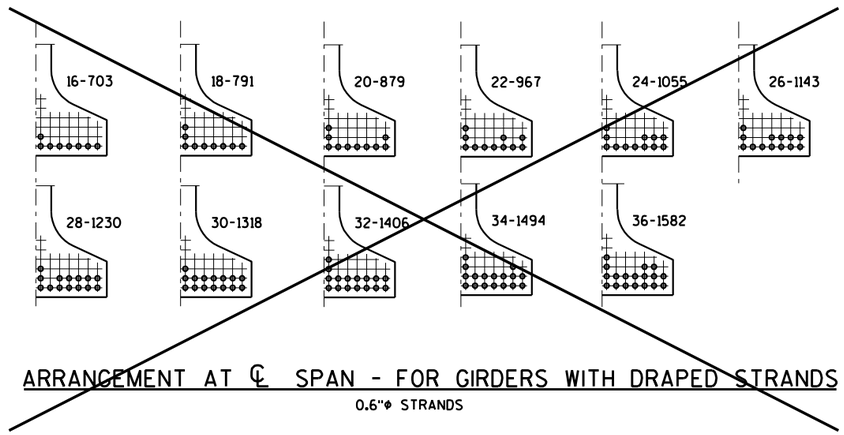
IF 1¼" MINIMUM HAUNCH HEIGHT AT EDGE OF GIRDER CANNOT BE MAINTAINED, THE GRADE LINE MAY BE REVISED BY THE ENGINEER AT THE OPTION OF THE CONTRACTOR. THE PLAN DECK THICKNESS SHALL BE HELD. NOTIFY THE STRUCTURES SECTION IF THE GRADE LINE IS RAISED FROM THE PLAN PROFILE BY MORE THAN ½" OR,

** IF 3" MINIMUM DECK EMBEDMENT OF TIE BAR CANNOT BE OBTAINED.

TO DETERMINE 'T', ELEV. OF TOP OF GIR'S. AT ℄ OF SUBSTRUCTURE UNITS & AT 1/10 POINTS OF EACH SPAN SHALL BE TAKEN. THEN FOLLOW THIS PROCESS:

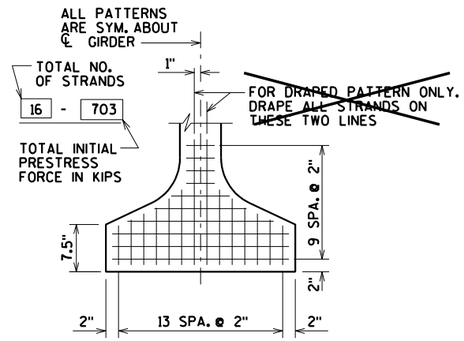
TOP OF DECK ELEV. AT FINAL GRADE
- TOP OF GIRDER ELEVATION
+ DEAD LOAD DEFLECTION
- DECK THICKNESS
= HAUNCH HEIGHT 'T'

NOTE: AN AVERAGE HAUNCH ('T') OF 2¾" WAS USED IN THE QUANTITY "HIGH PERFORMANCE CONCRETE (HPC) MASONRY STRUCTURES".

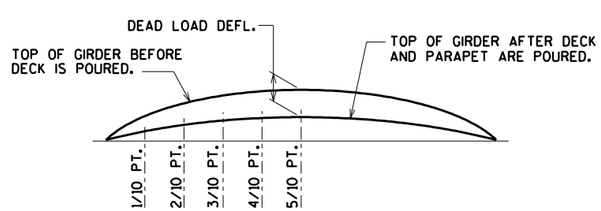


ARRANGEMENT AT ℄ SPAN - FOR GIRDERS WITH DRAPED STRANDS

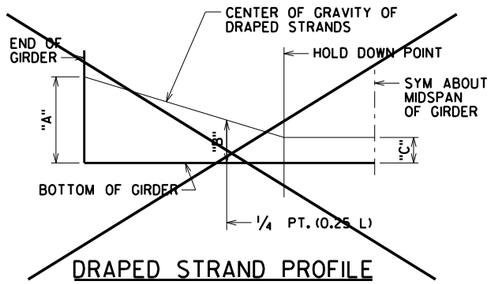
0.6"Φ STRANDS



TYP. STRAND PATTERN



DEAD LOAD DEFLECTION DIAGRAM



DRAPED STRAND PROFILE

*THE THEORETICAL INITIAL CAMBER VALUE AT THE TIME OF STRAND RELEASE AT MIDSPAN

SPAN	CAMBER (IN.) *
1	0.6
2	1.0
3	0.6

THESE VALUES ARE NOT TO BE USED IN DETERMINING 'T', USE ACTUAL GIRDER SHOTS.
THESE VALUES ARE FOR INFORMATIONAL PURPOSES ONLY.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-732

DRAWN BY CLS | PLANS CK'D. CBM

36W" PRESTRESSED GIRDER DETAILS

SHEET 28 OF 40
480

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STATE PROJECT NUMBER

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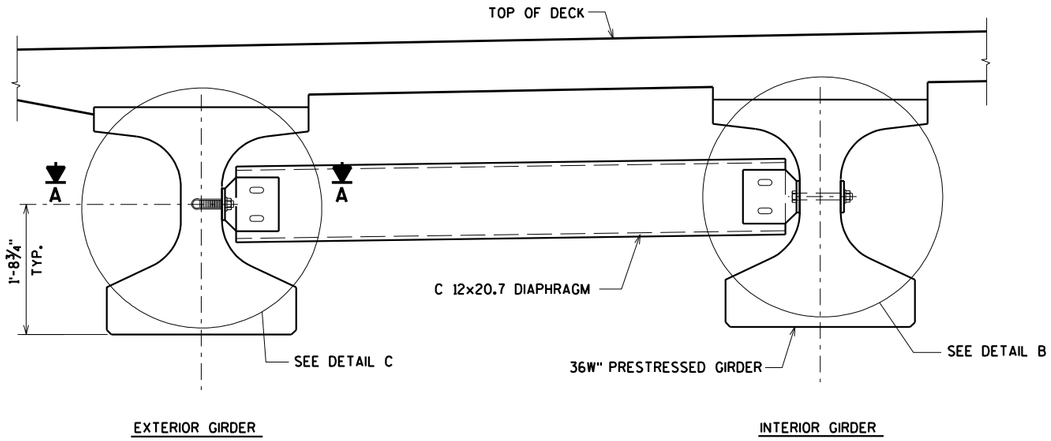


PART TRANSVERSE SECTION AT DIAPHRAGM

NOTES

ALL DIAPHRAGM MATERIAL NOT EMBEDDED IN THE CONCRETE GIRDER SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "STEEL DIAPHRAGMS B-13-732", EACH.

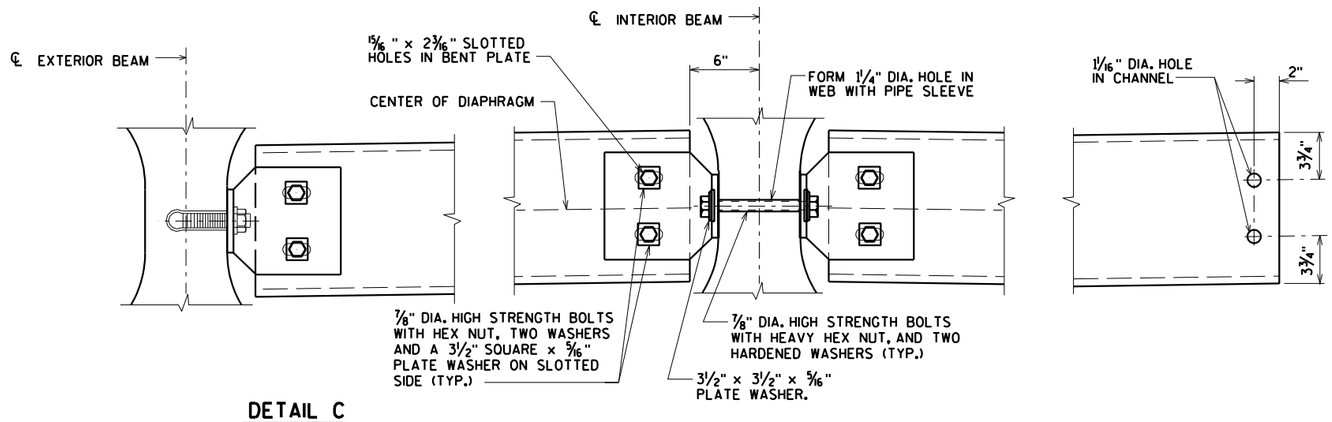
EACH DIAPHRAGM BETWEEN GIRDERS SHALL CONSTITUTE ONE UNIT.

ALL DIAPHRAGM STRUCTURAL STEEL SHALL BE ASTM A709 GRADE 36.

ALL DIAPHRAGM MATERIAL INCLUDING BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED AFTER FABRICATION.

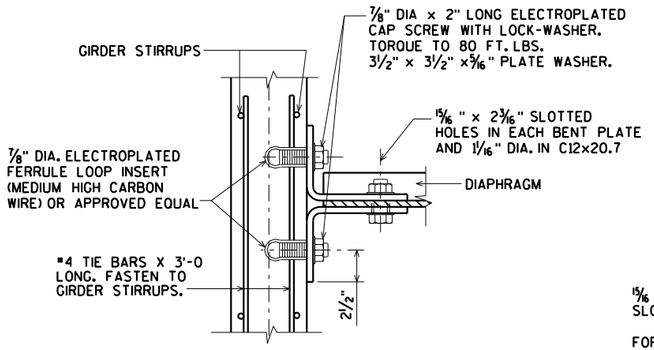
STEEL DIAPHRAGM TO CONCRETE WEB CONNECTION SHALL BE SNUG-TIGHT PLUS ¼ TURN UNLESS NOTED OTHERWISE. HIGH STRENGTH BOLTS FOR WEB CONNECTION SHALL MEET THE REQUIREMENTS FOR ASTM A325 OR ASTM A449.

FOR DIAPHRAGM SPACING SEE SHEET 31.

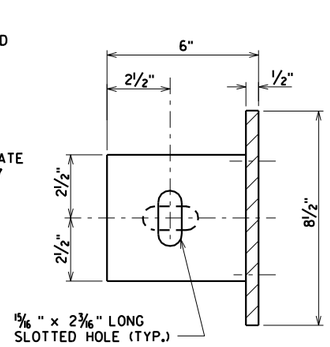


DETAIL C

DETAIL B

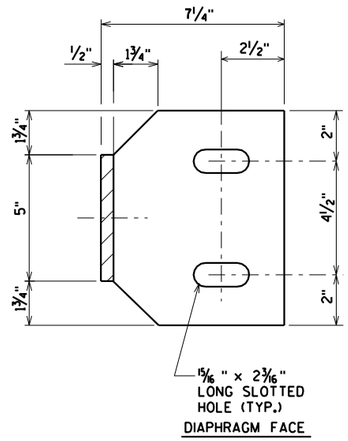


SECTION A-A
(FOR EXTERIOR ATTACHMENT)

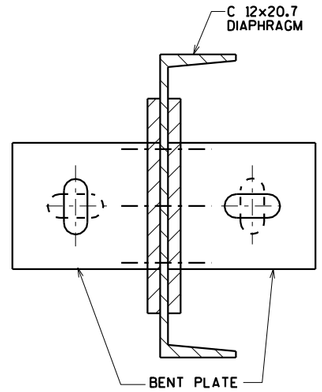


FOR EACH PAIR OF ANGLES ON A GIVEN BEAM FACE, ONE SLOTTED HOLE TO BE VERTICAL AND ONE TO BE HORIZONTAL.

BEAM FACE



DIAPHRAGM FACE



ATTACHMENT TO CHANNEL

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-732

DRAWN BY CLS | PLANS CK'D. CBM

STEEL INTER. DIAPHRAGM DETAILS

SHEET 29 OF 40
481

ORIGINAL PLANS PREPARED BY
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Eau Claire, WI 54701
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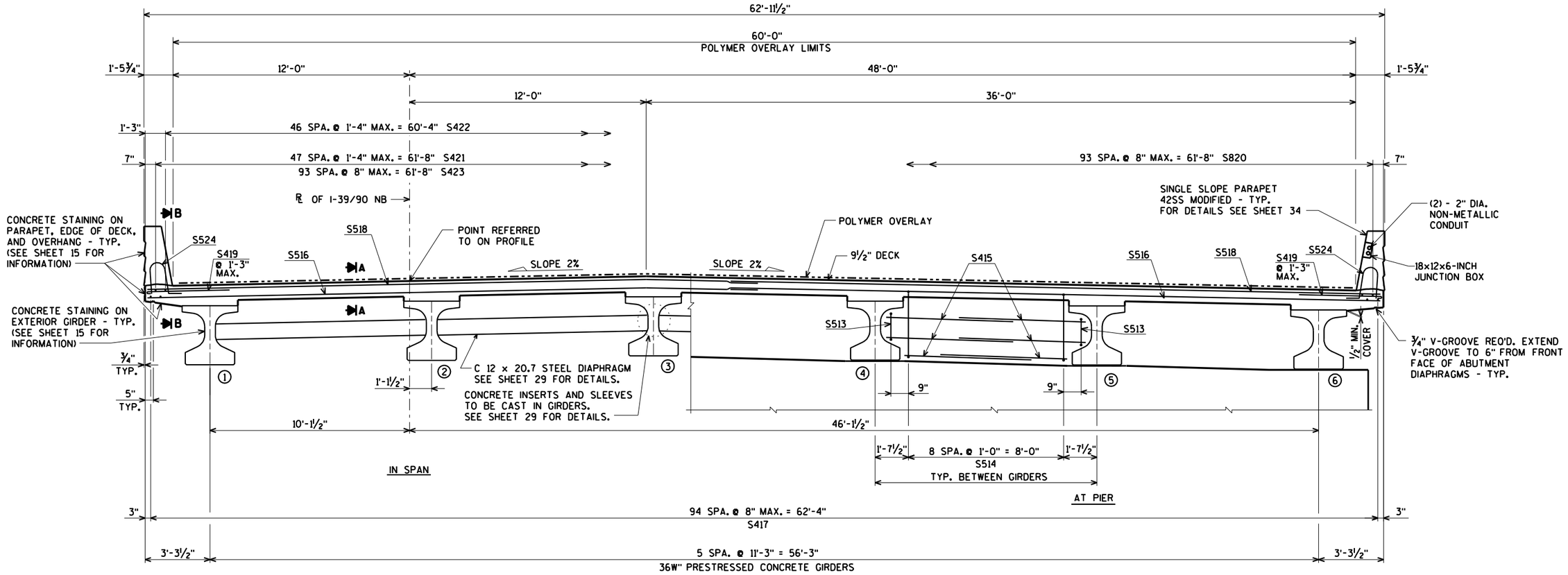
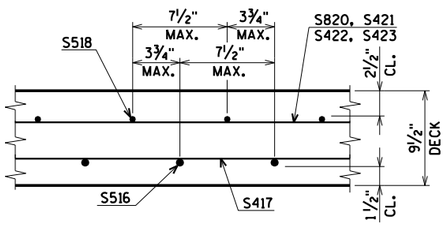
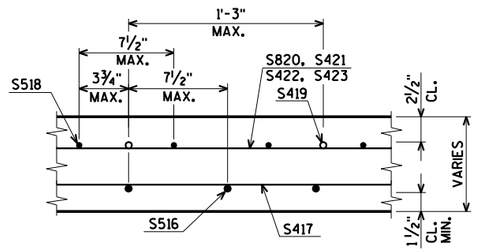


TYPICAL SECTION THRU BRIDGE

(LOOKING NORTH)



SECTION A



SECTION B

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-732

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SUPERSTRUCTURE

SHEET 30 OF 40
482

ORIGINAL PLANS PREPARED BY

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8/20/2019
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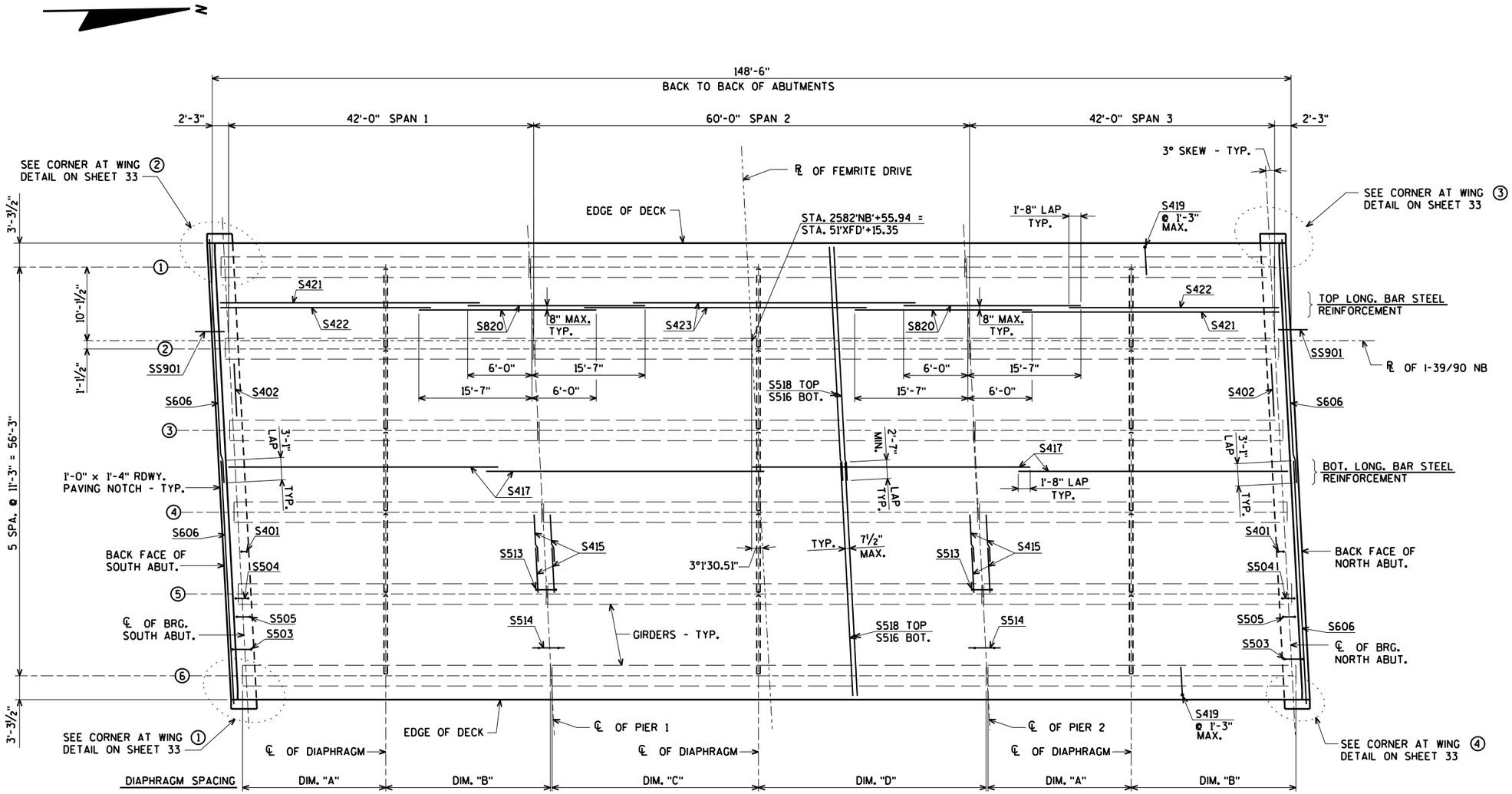
STATE PROJECT NUMBER

1007-12-78



PLAN

TABLE OF DIAPHRAGM DIMENSIONS

GIRDER	DIM. 'A'	DIM. 'B'	DIM. 'C'	DIM. 'D'
1	22'-8"	19'-8½"	31'-4¼"	28'-4¾"
2	22'-0⅞"	20'-3⅝"	30'-9⅛"	28'-11⅞"
3	21'-5¾"	20'-10¾"	30'-2"	29'-7"
4	20'-10¾"	21'-5¾"	29'-7"	30'-2"
5	20'-3⅝"	22'-0⅞"	28'-11⅞"	30'-9⅛"
6	19'-8½"	22'-8"	28'-4¾"	31'-4¼"

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-732

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SUPERSTRUCTURE PLAN

SHEET 31 OF 40
483

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7/24/2019
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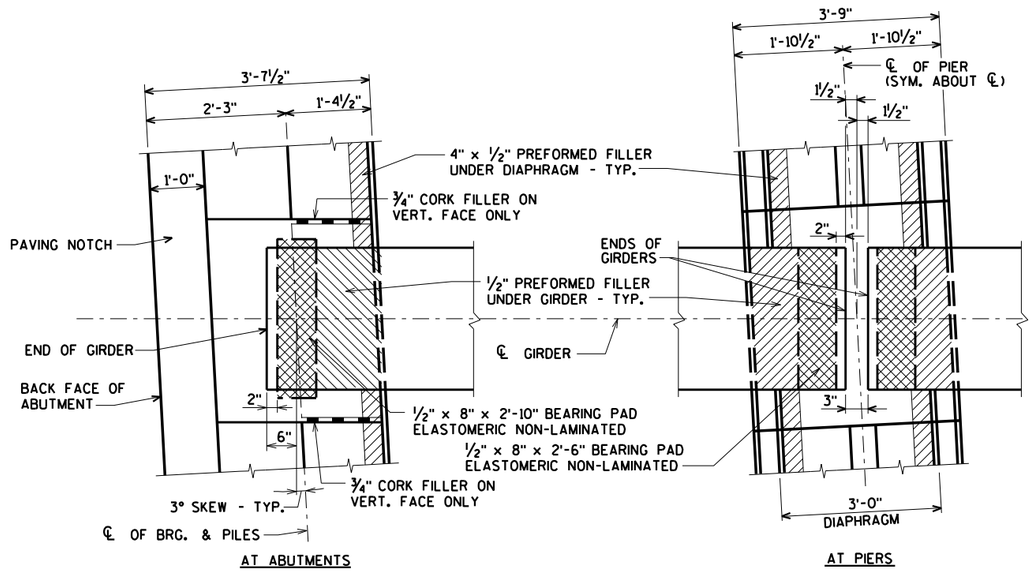
STATE PROJECT NUMBER
1007-12-78

TOP OF DECK ELEVATIONS

LOCATION	℄ BEARING 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	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
W. EDGE OF DECK	892.69	892.65	892.61	892.57	892.53	892.49	892.45	892.40	892.36	892.32	892.28	892.22	892.16	892.10	892.05	891.99	891.93	891.87	891.81	891.75	891.69
GIRDER 1	892.73	892.69	892.65	892.61	892.56	892.52	892.48	892.44	892.40	892.36	892.32	892.26	892.20	892.14	892.08	892.02	891.96	891.90	891.85	891.79	891.73
℄ I-39/90 NB	892.93	892.89	892.85	892.81	892.76	892.72	892.68	892.64	892.60	892.56	892.51	892.46	892.40	892.34	892.28	892.22	892.16	892.10	892.05	891.99	891.92
GIRDER 2	892.95	892.91	892.87	892.83	892.78	892.74	892.70	892.66	892.62	892.58	892.54	892.48	892.42	892.36	892.30	892.24	892.18	892.12	892.06	892.01	891.95
CROWN	893.15	893.11	893.07	893.03	892.99	892.95	892.91	892.86	892.82	892.78	892.74	892.68	892.62	892.56	892.50	892.45	892.39	892.33	892.27	892.21	892.15
GIRDER 3	893.15	893.11	893.07	893.03	892.99	892.95	892.91	892.86	892.82	892.78	892.74	892.68	892.62	892.56	892.50	892.45	892.39	892.33	892.27	892.21	892.15
GIRDER 4	892.92	892.88	892.84	892.80	892.76	892.72	892.67	892.63	892.59	892.55	892.51	892.45	892.39	892.33	892.27	892.21	892.16	892.10	892.04	891.98	891.92
GIRDER 5	892.69	892.65	892.61	892.57	892.53	892.49	892.44	892.40	892.36	892.32	892.28	892.22	892.16	892.10	892.04	891.98	891.92	891.87	891.81	891.75	891.69
GIRDER 6	892.46	892.42	892.38	892.34	892.30	892.25	892.21	892.17	892.13	892.09	892.05	891.99	891.93	891.87	891.81	891.75	891.69	891.64	891.58	891.52	891.46
E. EDGE OF DECK	892.42	892.38	892.34	892.30	892.26	892.22	892.17	892.13	892.09	892.05	892.01	891.95	891.89	891.83	891.77	891.71	891.66	891.60	891.54	891.48	891.42

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.	℄ BEARING N. ABUT.
W. EDGE OF DECK	891.69	891.65	891.61	891.57	891.53	891.49	891.44	891.40	891.36	891.32	891.28
GIRDER 1	891.73	891.69	891.64	891.60	891.56	891.52	891.48	891.44	891.40	891.36	891.32
℄ I-39/90 NB	891.92	891.89	891.84	891.80	891.76	891.72	891.68	891.64	891.60	891.56	891.51
GIRDER 2	891.95	891.91	891.86	891.82	891.78	891.74	891.70	891.66	891.62	891.58	891.53
CROWN	892.15	892.11	892.07	892.03	891.99	891.94	891.90	891.86	891.82	891.78	891.74
GIRDER 3	892.15	892.11	892.07	892.03	891.99	891.94	891.90	891.86	891.82	891.78	891.74
GIRDER 4	891.92	891.88	891.84	891.80	891.75	891.71	891.67	891.63	891.59	891.55	891.51
GIRDER 5	891.69	891.65	891.61	891.57	891.52	891.48	891.44	891.40	891.36	891.32	891.28
GIRDER 6	891.46	891.42	891.38	891.33	891.29	891.25	891.21	891.17	891.13	891.09	891.05
E. EDGE OF DECK	891.42	891.38	891.34	891.30	891.25	891.21	891.17	891.13	891.09	891.05	891.01



BEARING PAD DETAILS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-732

DRAWN BY CLS | PLANS CK'D. CBM

SUPERSTRUCTURE DETAILS

SHEET 32 OF 40
484

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
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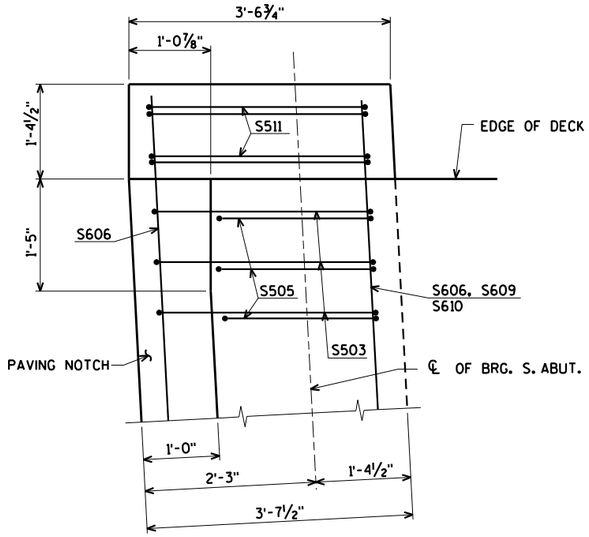
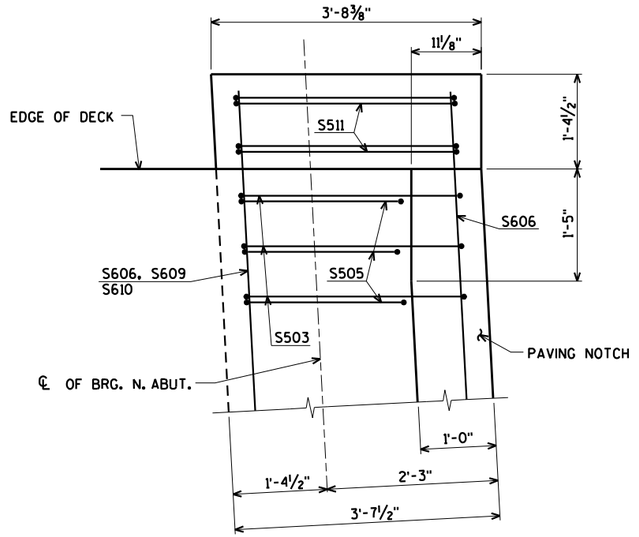
U:±41-0660.0X - IH-39 Dane Partners General Bridge Information±B-13-732 - 139_NB over Femrite Drive±bridge±B-13-732 sup.dgn



CORNER AT WING 2 DETAIL



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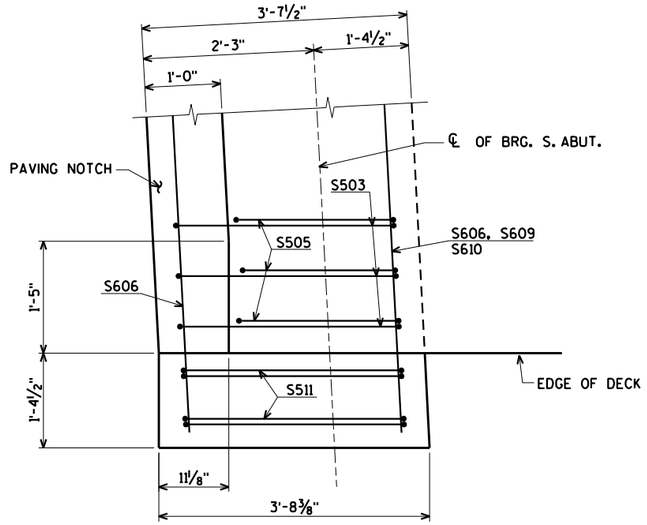
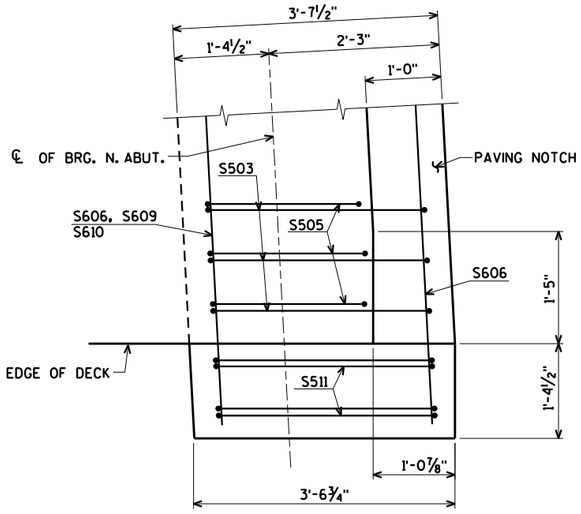


CORNER AT WING 1 DETAIL



CORNER AT WING 4 DETAIL

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-732

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SUPERSTRUCTURE CORNER DETAILS

SHEET 33 OF 40
485

ORIGINAL PLANS PREPARED BY
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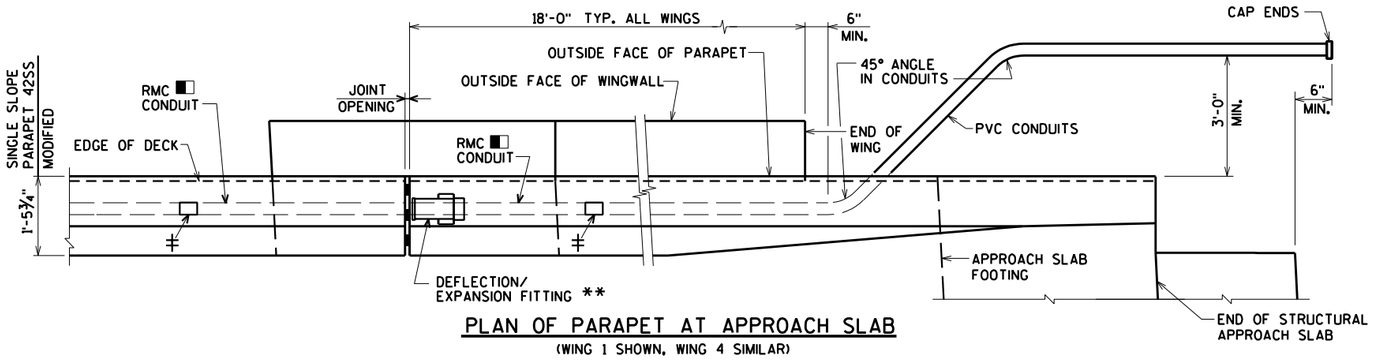
$PRFNAME$
U:\41-0660.0X - IH-39 Dane Partners General Bridge Information\B-13-732 - 139_NB over Femrite Drive\bridge\B-13-732 sup.dgn

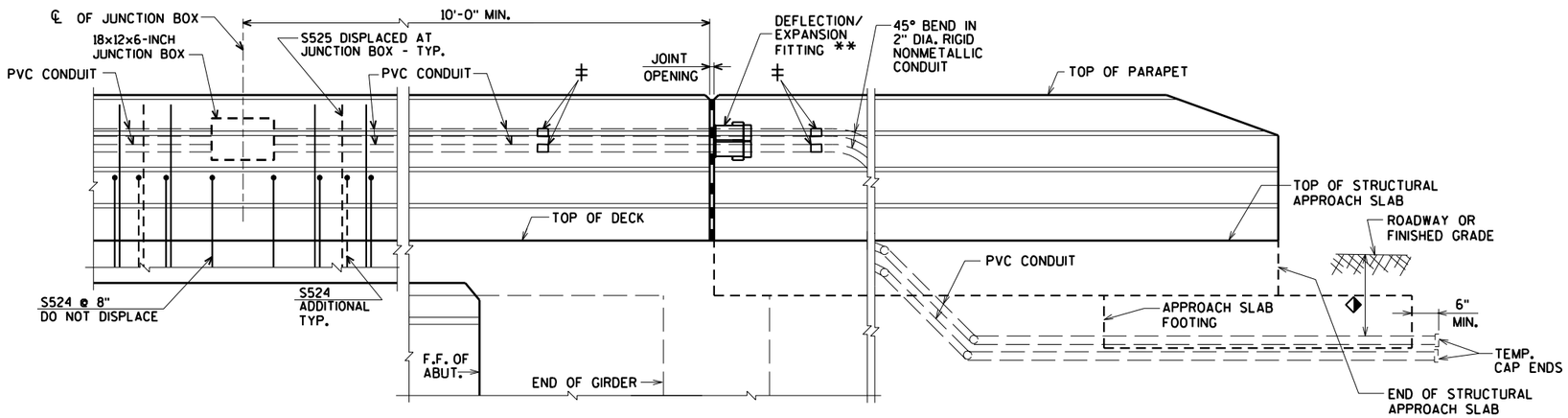
STATE PROJECT NUMBER

1007-12-78



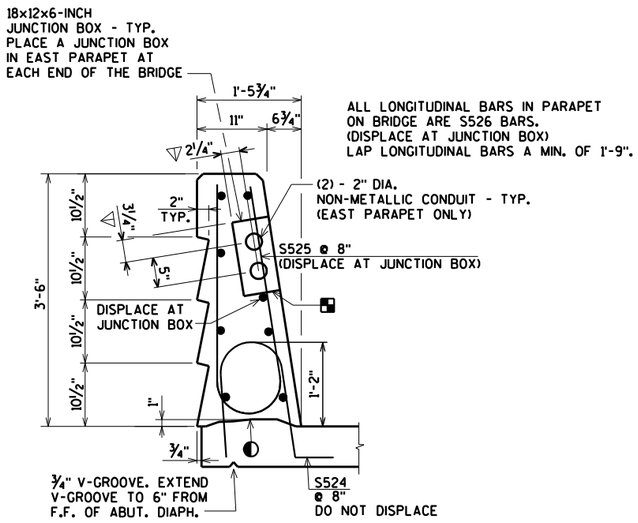
PLAN OF PARAPET AT APPROACH SLAB

(WING 1 SHOWN, WING 4 SIMILAR)



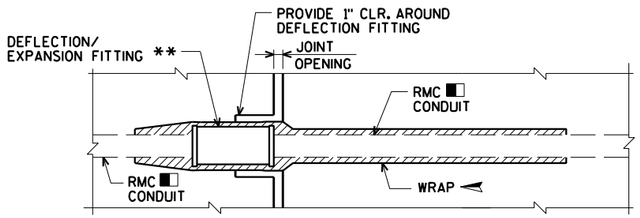
OUTSIDE ELEVATION OF PARAPET AT APPROACH SLAB

(WING 4 SHOWN, WING 1 SIMILAR)



SECTION THRU PARAPET ON BRIDGE

◐ CONST. JOINT - STRIKE OFF AS SHOWN.



DEFLECTION/EXPANSION FITTING

THIS DETAIL ACCOMMODATES A MAXIMUM OF ¾" TOTAL MOVEMENT AND UP TO 30 DEGREES OF ANGULAR MISALIGNMENT IN ANY DIRECTION. BOND JUMPER NOT SHOWN FOR CLARITY (CONCRETE TO CONCRETE FITTING)

LEGEND

‡ NONMETALLIC CONDUIT TO METALLIC CONDUIT ADAPTOR FITTING (UL OR NRTL LISTED FOR ELECTRICAL USE SHALL BE USED)

◧ USE 2" DIA. RIGID METALLIC (RMC) CONDUIT AT FITTINGS. PROVIDE RMC FOR 3'-0" MIN. ON EACH SIDE OF JOINT OPENINGS UNLESS NOTED OTHERWISE.

◅ SPONGE RUBBER WRAP TO BE AASHTO M153, TYPE 1 OR EQUIVALENT - ¼" MINIMUM THICKNESS. PROVIDE WRAP FOR THE ENTIRE LENGTH OF THE FITTING OR AS SHOWN. SPONGE RUBBER WRAP INCIDENTAL TO "CONDUIT RIGID METALLIC 2-INCH"

** DEFLECTION/EXPANSION FITTING REQUIREMENTS (IF USED):
- UP TO ¾" CONDUIT CONTRACTION OR EXPANSION AND UP TO 30 DEGREES OF ANGULAR MISALIGNMENT IN ANY DIRECTION WITH BONDING JUMPER

PVC = POLYVINYL CHLORIDE (RIGID NONMETALLIC) CONDUIT

RMC = RIGID METALLIC CONDUIT

◩ CUT OUT 1"± OF GASKET AT BOTTOM OF JUNCTION BOX COVER TO ALLOW FOR DRAINAGE.

▽ LOCATION OF CONDUIT IS MEASURED FROM OUTSIDE EDGE OF JUNCTION BOX.

NOTES

◆ 2'-0" MIN. CONDUIT COVER UNDER ROADWAYS. 1'-6" OTHERWISE. CONDUIT COVER SHOULD NOT EXCEED 3'-0".

CONDUIT SHALL BE EMBEDDED 2" CLEAR.

USE 2" DIA. RIGID NONMETALLIC CONDUIT (PVC) UNLESS NOTED OTHERWISE.

CONDUIT FITTINGS, CONDUIT BENDS, AND ADAPTER FITTINGS INCIDENTAL TO CONDUIT WORK.

CONDUIT BENDS SHALL CONFORM TO THE NATIONAL ELECTRIC CODE.

PROVIDE JUNCTION BOXES FROM THE APPROVED PRODUCTS LIST.

F.F. DENOTES FRONT FACE.

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-732

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SUPERSTRUCTURE CONDUIT DETAILS

SHEET 34 OF 40
486

ORIGINAL PLANS PREPARED BY
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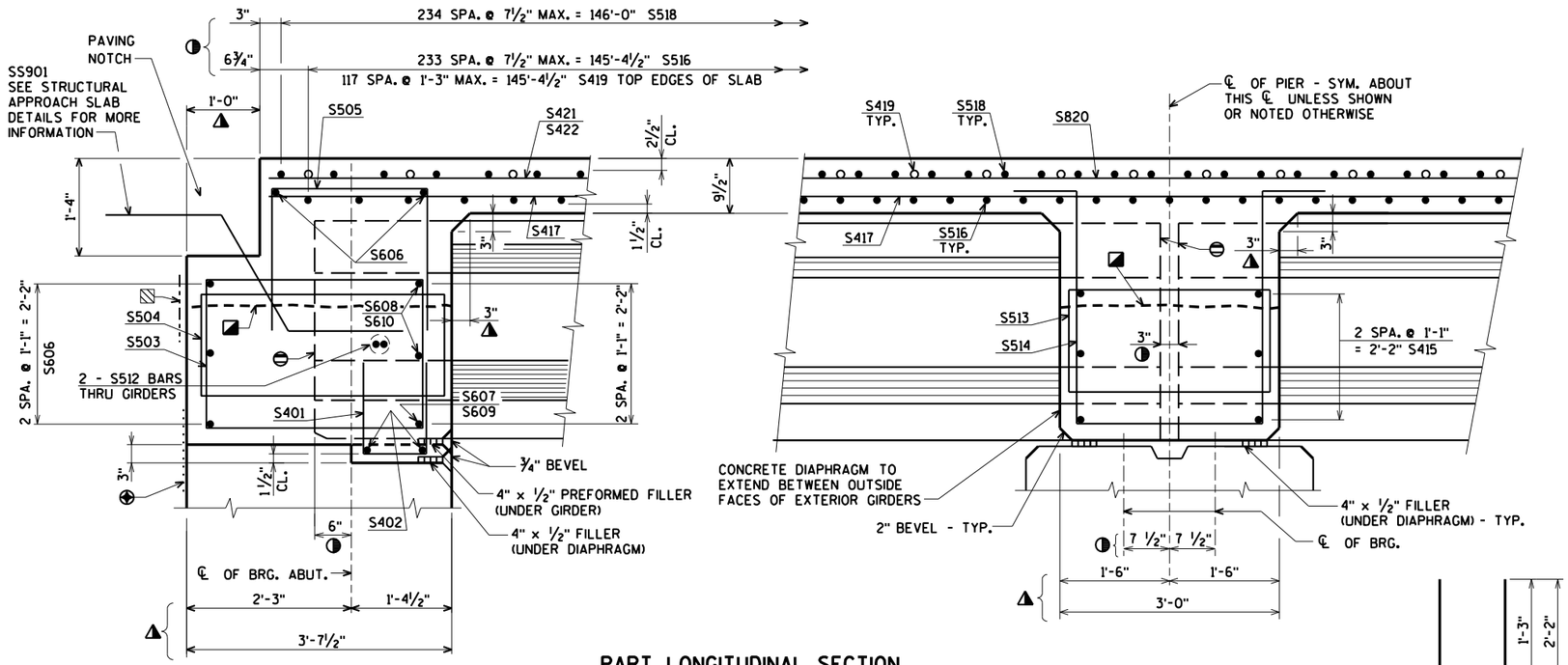
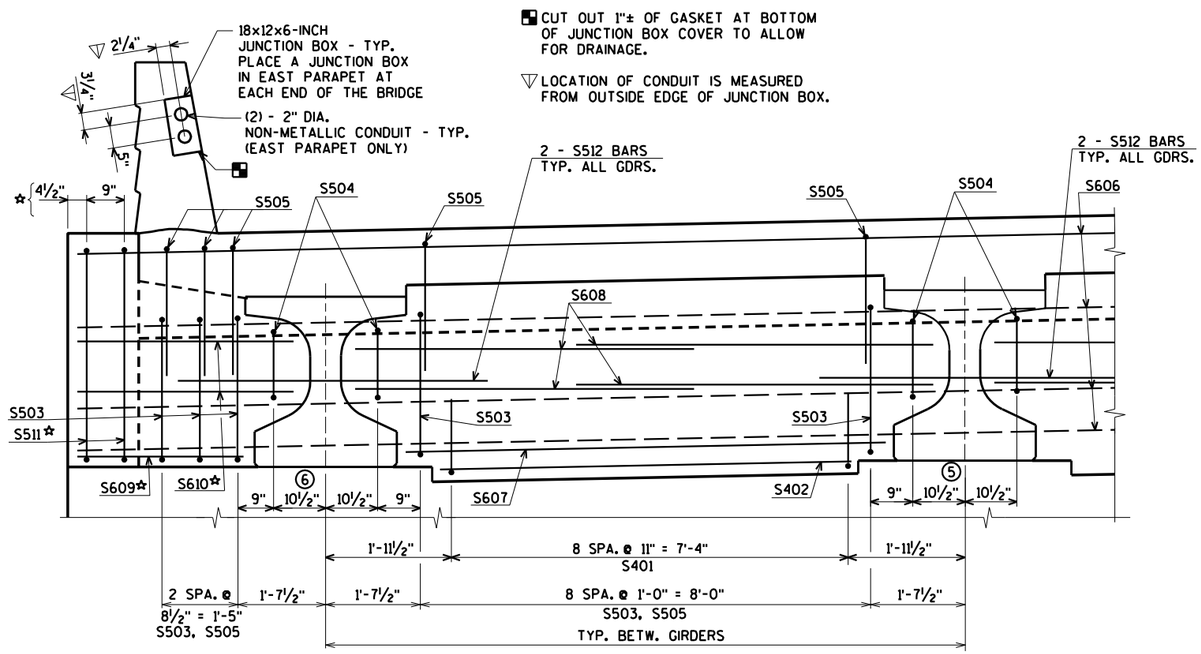
STATE PROJECT NUMBER
1007-12-78

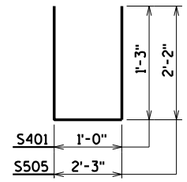


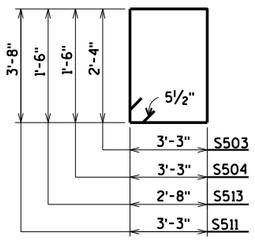
PART LONGITUDINAL SECTION

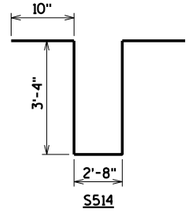


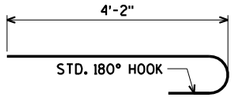
PART TRANSVERSE SECTION AT ABUTMENT DIAPHRAGM

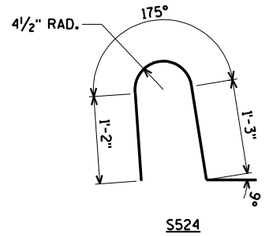
(LOOKING SOUTH AT BEAMS ⑤ & ⑥. OTHER LOCATIONS SIMILAR)

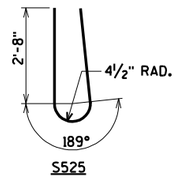












BILL OF BARS

BAR NO.	COATED BAR	NO. REQ'D.	LENGTH	BENT BAR	BUNDLED BAR SERIES	73,520# COATED LOCATION
S401	X	90	3-4	X		DIAPH. @ ABUT. VERT. @ NOTCH
S402	X	20	7-5			DIAPH. @ ABUT. HORIZ. @ NOTCH
S503	X	102	11-9	X		DIAPH. @ ABUT. VERT.
S504	X	24	10-1	X		DIAPH. @ ABUT. VERT.
S505	X	102	6-4	X		DIAPH. @ ABUT. VERT.
S606	X	20	34#3			DIAPH. @ ABUT. HORIZ.
S607	X	10	8-5			DIAPH. @ ABUT. HORIZ. BETW. GDRS.
S608	X	40	6-9			DIAPH. @ ABUT. HORIZ. BETW. GDRS.
S609	X	4	3-1			DIAPH. @ ABUT. HORIZ. @ CORNERS
S610	X	8	3-11			DIAPH. @ ABUT. HORIZ. @ CORNERS
S511	X	8	14-5	X		DIAPH. @ ABUT. VERT. CORNERS
S512	X	24	6-0			DIAPH. @ ABUT. HORIZ. THRU GDRS.
S513	X	20	8-11	X		DIAPH. @ PIER VERT.
S514	X	90	10-6	X		DIAPH. @ PIER VERT.
S415	X	120	6-1			DIAPH. @ PIER HORIZ.
S516	X	468	32-7			DECK TRANS. BOT.
S417	X	380	37-10			DECK LONG. BOT.
S518	X	470	32-7			DECK TRANS. TOP
S419	X	236	4-8	X		DECK TRANS. TOP @ EDGES
S820	X	188	21-7			DECK LONG. TOP @ PIER
S421	X	96	38-9			DECK LONG. TOP SPANS 1 & 3
S422	X	94	29-2			DECK LONG. TOP SPANS 1 & 3
S423	X	94	38-11			DECK LONG. TOP SPAN 2
S524	X	444	4-5	X		DECK @ PARAPET
S525	X	440	6-8	X		PARAPET VERT.
S526	X	64	38-6			PARAPET HORIZ.

BENDING DIMENSIONS ARE OUT TO OUT OF BARS.

☆ SEE SUPERSTRUCTURE CORNER DETAILS ON SHEET 33

⊖ END OF GIRDER

⊕ 18" RUBBERIZED MEMBRANE WATERPROOFING

◑ DIMENSIONS MEASURED ALONG ℄ OF GIRDER.

◭ DIMENSIONS MEASURED NORMAL TO ℄ OF SUBSTRUCTURE UNIT.

◪ OPTIONAL CONSTRUCTION JOINT 1'-2" BELOW TOP OF GIRDER. IF USED, DECK POUR MUST BE WITHIN 2 WEEKS FROM THE TIME OF THE DIAPHRAGM POUR.

▨ 18" RUBBERIZED MEMBRANE WATERPROOFING IF CONST. JT. IS USED. COST INCLUDED WITH BID ITEM "HIGH PERFORMANCE CONCRETE (HPC) MASONRY STRUCTURES"

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-732

DRAWN BY CLS | PLANS CK'D. CBM

SUPERSTRUCTURE BILL OF BARS AND DETAILS

SHEET 35 OF 40
487

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
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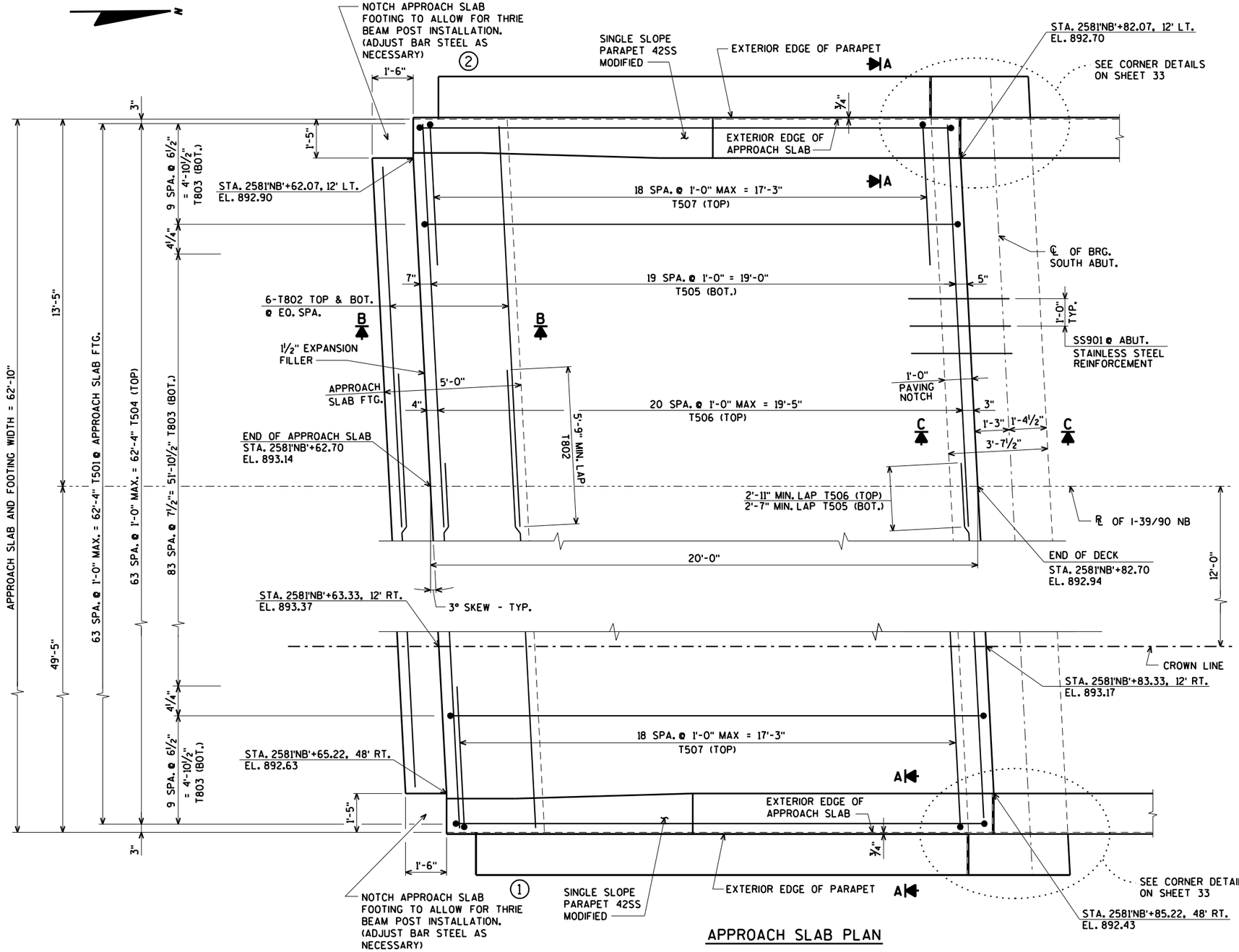

APPROACH SLAB PLAN

FOR DETAILS OF SECTIONS A, B, AND C, SEE SHEET 38

WORK THIS SHEET WITH SHEET 38

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-732

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SOUTH STRUCTURAL APPROACH SLAB

SHEET 36 OF 40
488

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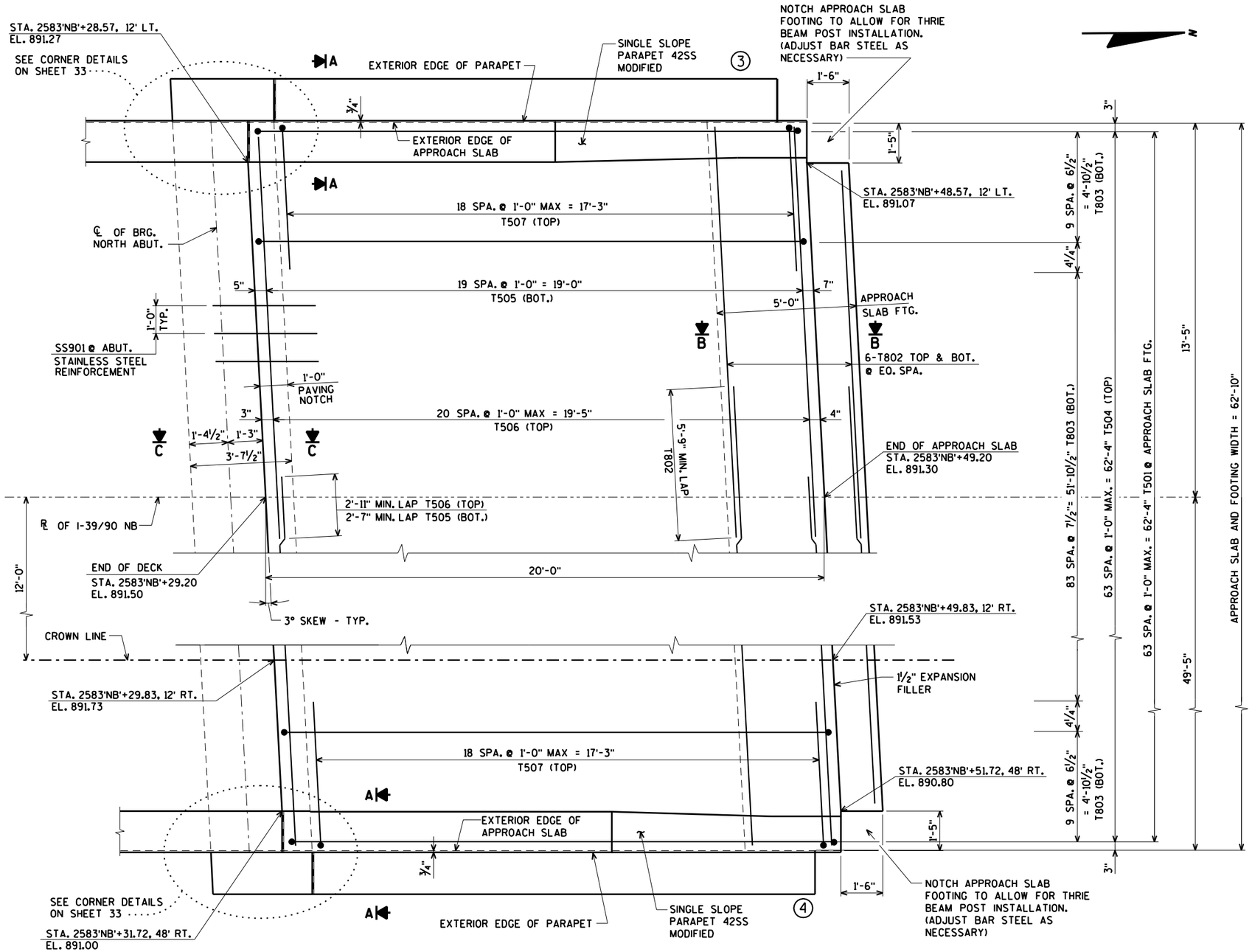
U:±41-0660.0X - IH-39 Dane Partners General Bridge Information±B-13-732 - 139_NB over Femrite Drive±bridge±B-13-732 appr slab.dgn

STATE PROJECT NUMBER

1007-12-78



APPROACH SLAB PLAN

FOR DETAILS OF SECTIONS A, B, AND C, SEE SHEET 38

WORK THIS SHEET WITH SHEET 38

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-732

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NORTH STRUCTURAL APPROACH SLAB

SHEET 37 OF 40
489

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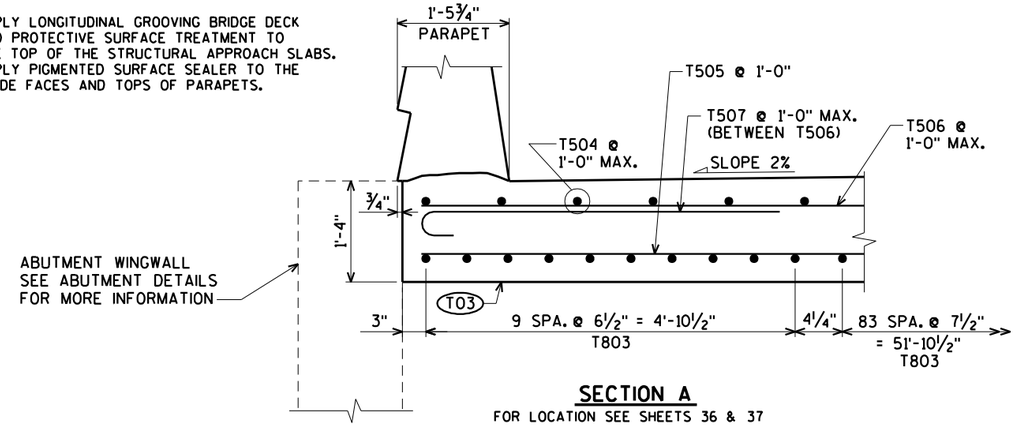
STATE PROJECT NUMBER
1007-12-78

NOTE:
APPLY LONGITUDINAL GROOVING BRIDGE DECK AND PROTECTIVE SURFACE TREATMENT TO THE TOP OF THE STRUCTURAL APPROACH SLABS. APPLY PIGMENTED SURFACE SEALER TO THE INSIDE FACES AND TOPS OF PARAPETS.



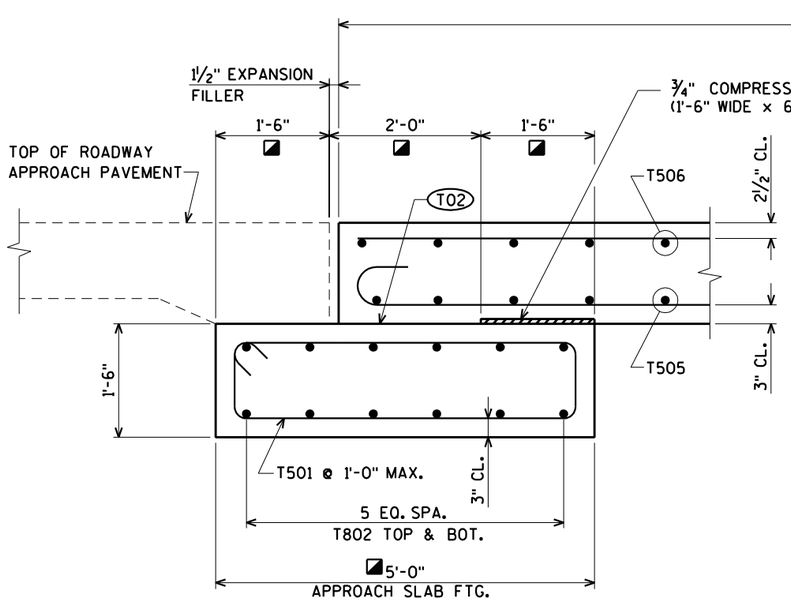
SECTION A
FOR LOCATION SEE SHEETS 36 & 37

BILL OF BARS

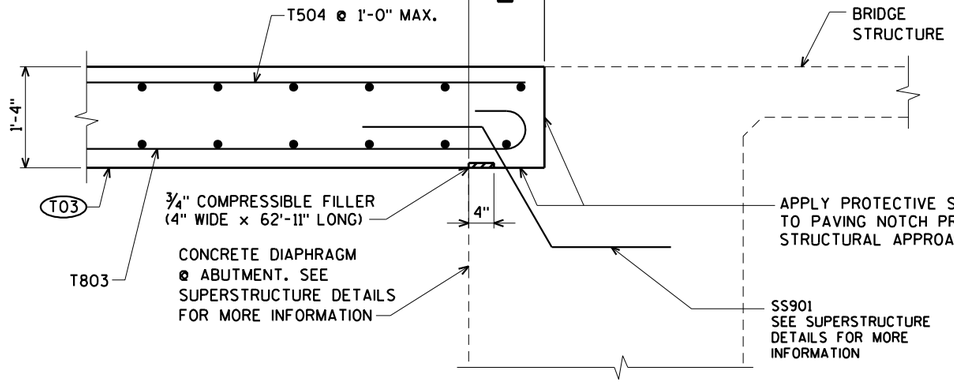
BAR NO.	COATED BAR	NO. REQ'D.	LENGTH	BENT BAR	BUNDLED BAR SERIES	1.070" STAINLESS STEEL (PER APPROACH SLAB) LOCATION
SS901		63	5-0	X		CONC. ABUT. DIAPH. TO APPROACH SLAB

BAR NO.	COATED BAR	NO. REQ'D.	LENGTH	BENT BAR	BUNDLED BAR SERIES	13,180" COATED (PER APPROACH SLAB) LOCATION
T501	X	64	12-2	X		APPROACH SLAB FTG. - STIRRUP
T802	X	24	34-2			APPROACH SLAB FTG. - TRANS.
T803	X	104	21-4	X		APPROACH SLAB - LONG. - BOT.
T504	X	64	19-6			APPROACH SLAB - LONG - TOP
T505	X	40	32-7			APPROACH SLAB - TRANS. - BOT.
T506	X	42	32-9			APPROACH SLAB - TRANS. - TOP
T507	X	38	4-1	X		APPROACH SLAB - TRANS. - TOP

BENDING DIMENSIONS ARE OUT TO OUT OF BARS.



SECTION B



SECTION C

SECTION THRU APPROACH SLAB

◪ MEASURED NORMAL TO ABUTMENT

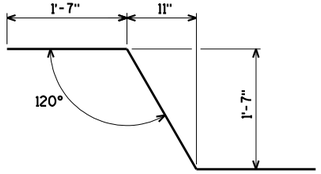
(T02) STEEL TROWEL TOP SURFACE OF FOOTING AND PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHYLENE SHEETS OVER THE ENTIRE TOP OF FOOTING.

(T03) PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHYLENE SHEETS OVER THE ENTIRE TOP OF SUBGRADE BENEATH SLAB.

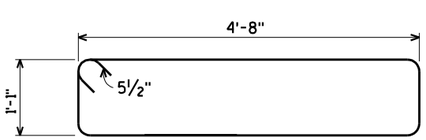
POLYETHYLENE SHEETS ARE INCLUDED WITH "HIGH PERFORMANCE CONCRETE (HPC) MASONRY STRUCTURES".

ALL STRUCTURAL APPROACH SLAB CONCRETE, EXCEPT FOR THE STRUCTURAL APPROACH SLAB FOOTING, PAID FOR UNDER "HIGH PERFORMANCE CONCRETE (HPC) MASONRY STRUCTURES". STRUCTURAL APPROACH SLAB FOOTING TO BE PAID UNDER "CONCRETE MASONRY BRIDGES".

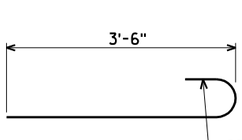
WORK THIS SHEET WITH SHEETS 36 & 37



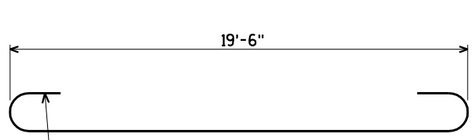
SS901



T501



T507



T803

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-732

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STRUCTURAL APPROACH SLAB DETAILS

SHEET 38 OF 40
490

ORIGINAL PLANS PREPARED BY
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STATE PROJECT NUMBER
1007-12-78

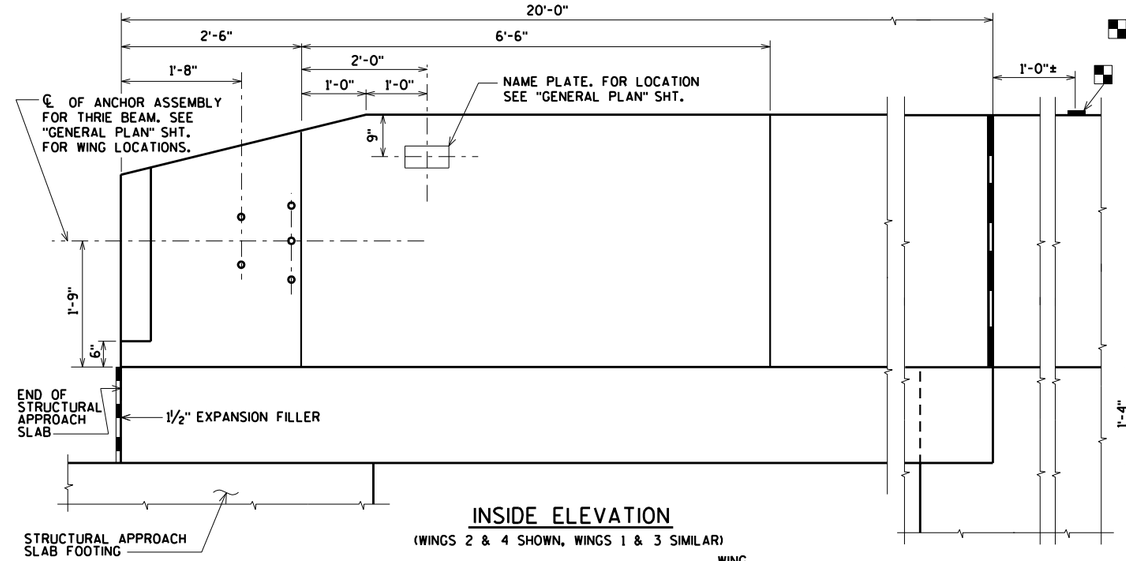
1,190# COATED SOUTH STRUCTURAL APPROACH SLAB
1,190# COATED NORTH STRUCTURAL APPROACH SLAB

BILL OF BARS

FOR STRUCTURAL APPROACH SLAB PARAPETS

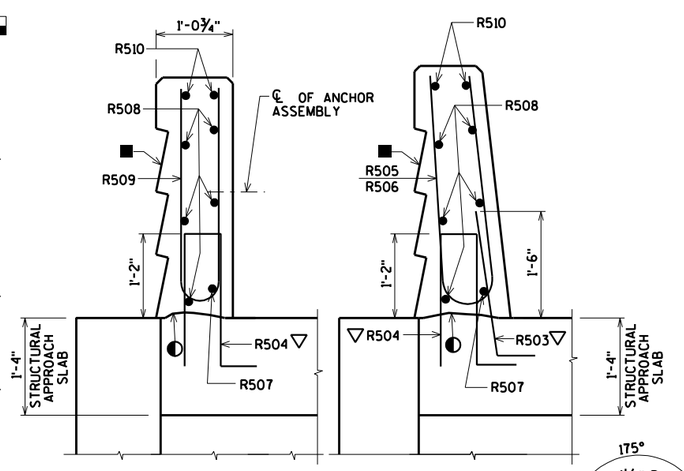
BAR MARK	COAT	SOUTH STRUCT. APPR. SLAB	NORTH STRUCT. APPR. SLAB	LENGTH	BENT	BAR SERIES	LOCATION
R501	X	34	34	4-5	X		PARAPET VERT.
R502	X	34	34	6-8	X		PARAPET VERT.
R503	X	22	22	2-9	X		PARAPET VERT.
R504	X	34	34	5-4	X		PARAPET VERT.
R505	X	10	10	6-5	X		PARAPET VERT.
R506	X	12	12	6-6	X		PARAPET VERT.
R507	X	2	2	19-8	X		PARAPET HORIZ.
R508	X	10	10	19-8			PARAPET HORIZ.
R509	X	12	12	5-5	X	▲	PARAPET VERT.
R510	X	4	4	19-8	X		PARAPET HORIZ

BENDING DIMENSIONS ARE OUT TO OUT OF BARS.



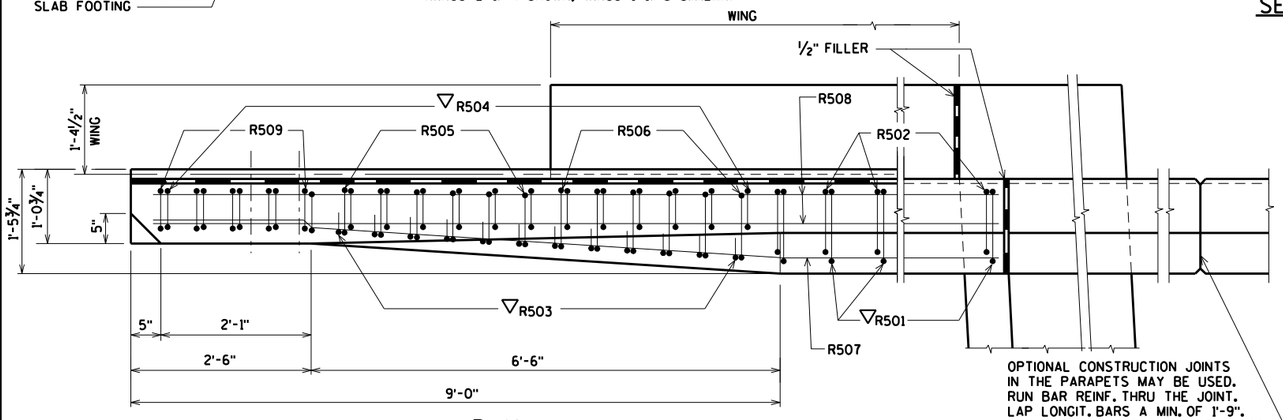
INSIDE ELEVATION

(WINGS 2 & 4 SHOWN, WINGS 1 & 3 SIMILAR)



SECTION A

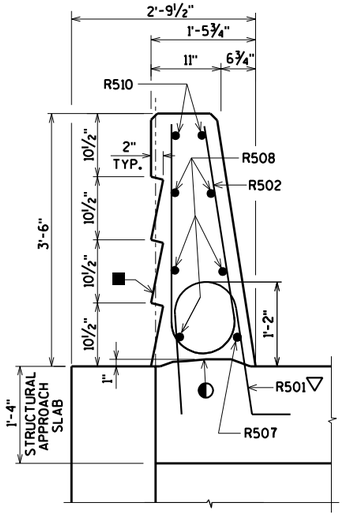
SECTION B



OPTIONAL CONSTRUCTION JOINTS IN THE PARAPETS MAY BE USED. RUN BAR REINF. THRU THE JOINT. LAP LONGIT. BARS A MIN. OF 1'-9". MIN. JOINT SPACING OF 80'-0". DEFINE CONST. JOINT WITH A ¾" 'V' GROOVE.

PLAN

(WINGS 2 & 4 SHOWN, WINGS 1 & 3 SIMILAR)



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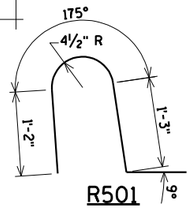
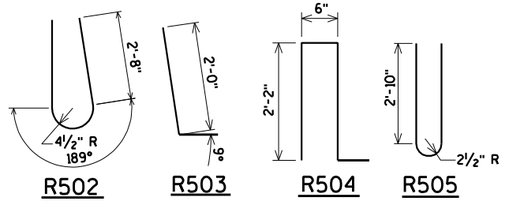
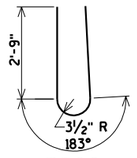
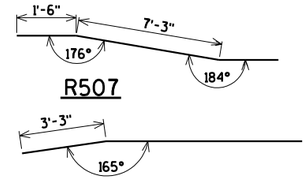
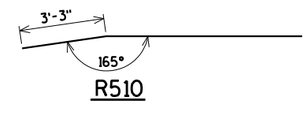
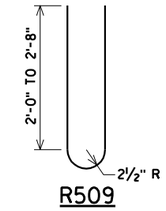


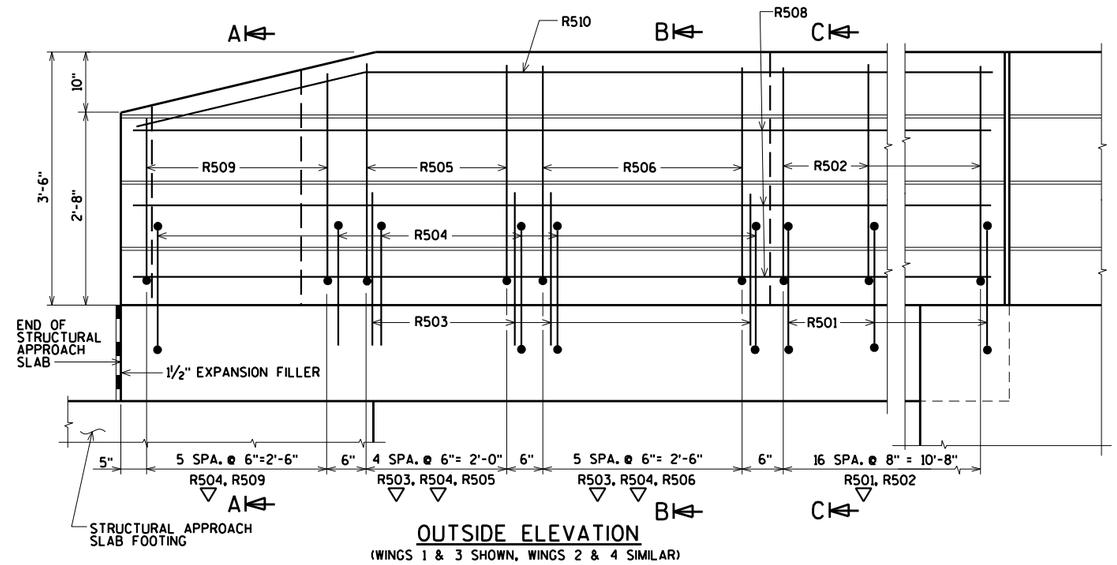






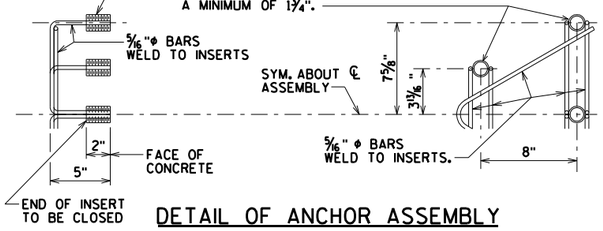






OUTSIDE ELEVATION

(WINGS 1 & 3 SHOWN, WINGS 2 & 4 SIMILAR)



DETAIL OF ANCHOR ASSEMBLY

NOTE: HEX HEAD CAP SCREWS & WASHERS TO BE GALVANIZED IN ACCORDANCE WITH AASHTO M232 CLASS C.

ASSEMBLY SHALL BE BID ITEM "ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD", EACH.

BAR SERIES TABLE

BAR MARK	NO REQ'D.	LENGTH
R509	4 SERIES OF 6	4'-9" TO 6'-1"

BUNDLE AND TAG EACH SERIES SEPARATELY.

◐ CONST. JOINT - STRIKE OFF AS SHOWN.

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

▽ R501, R503 AND R504 BARS TO BE TIED TO STRUCTURAL APPROACH SLAB STEEL BEFORE STRUCTURAL APPROACH SLAB IS POURED.

■ CONCRETE STAINING ON PARAPET (SEE SHEET 15 FOR INFORMATION)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-732

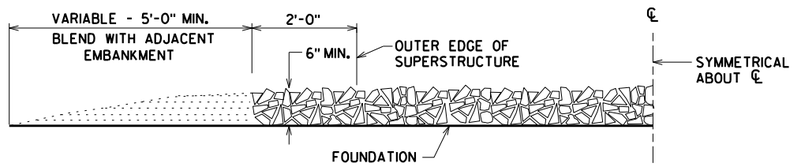
DRAWN BY CLS | PLANS CK'D. CBM

SINGLE SLOPE PARAPET 42SS MODIFIED

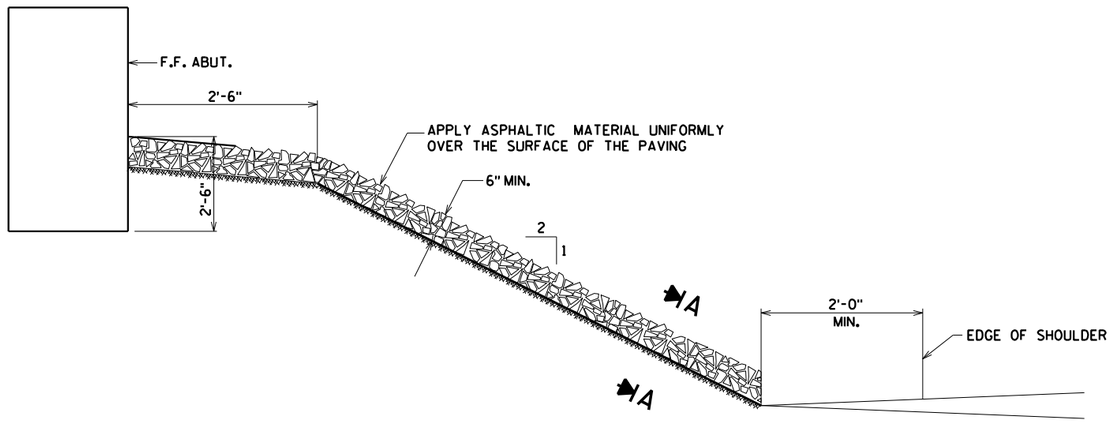
SHEET 39 OF 40
491

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

$PRFNAME$
U:\41-0660.0X - IH-39 Dane Partners General Bridge Information\B-13-732 - I39_NB over Femrite Drive\bridge\B-13-732 slopePAV.dgn



SECTION A



STANDARD CROSS SECTION

ROUND STONE WILL NOT BE ACCEPTED

GENERAL NOTES

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

WOOD FORMS MAY BE LEFT IN PLACE WHEN OF A QUALITY ACCEPTABLE TO THE ENGINEER.

F.F. DENOTES FRONT FACE.

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-732

DRAWN BY CLS | PLANS CK'D. CBM

SLOPE PAVING CRUSHED AGGREGATE

SHEET 40 OF 40
492

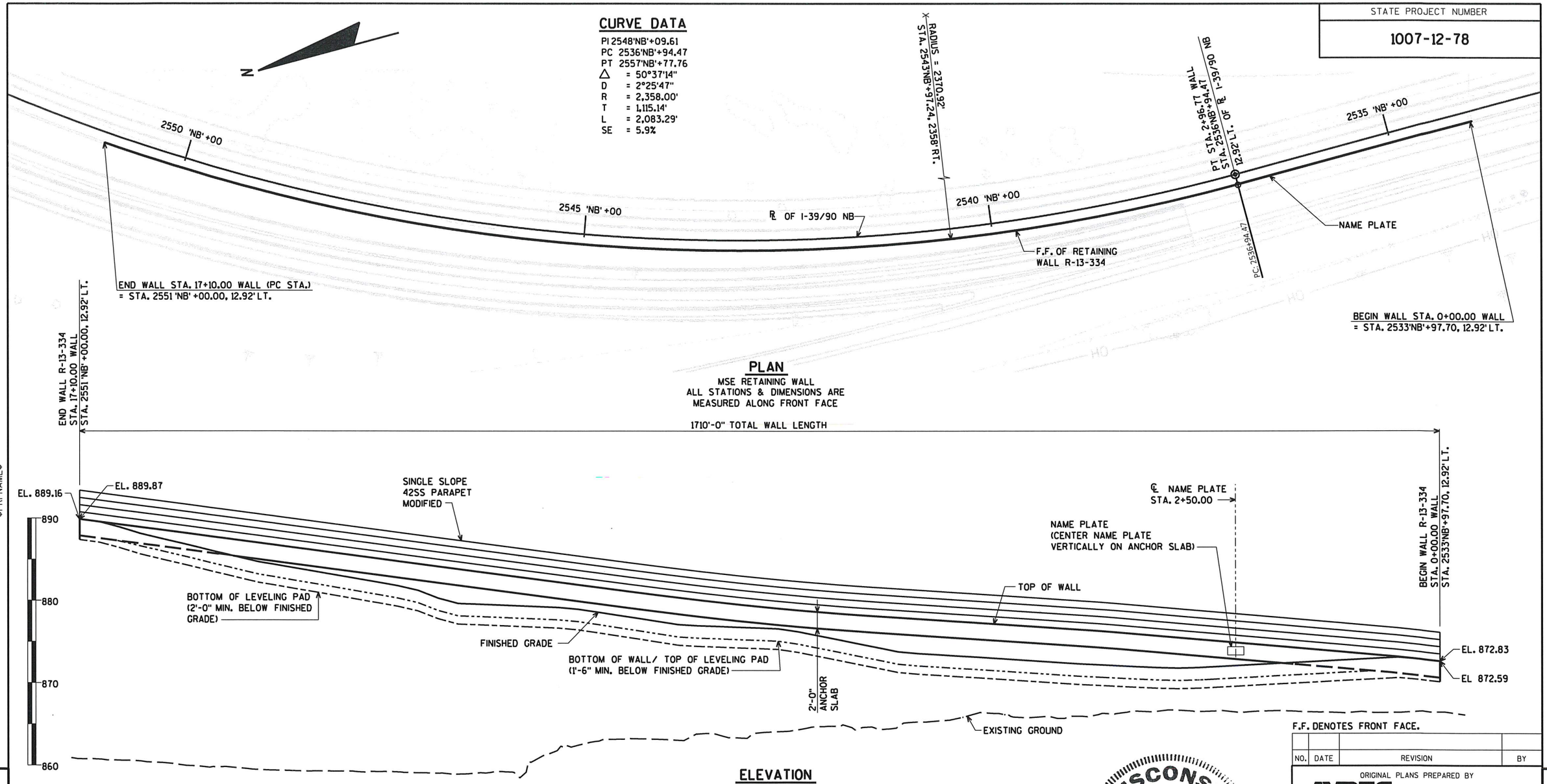
ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

STATE PROJECT NUMBER

1007-12-78

CURVE DATA

PI 2548'NB'+09.61
PC 2536'NB'+94.47
PT 2557'NB'+77.76
△ = 50°37'14"
D = 2°25'47"
R = 2,358.00'
T = 1,115.14'
L = 2,083.29'
SE = 5.9%



PLAN

MSE RETAINING WALL
ALL STATIONS & DIMENSIONS ARE MEASURED ALONG FRONT FACE

ELEVATION

LOOKING EAST @ F.F. OF WALL
SEE GEOMETRY TABLE ON SHEET 2 FOR FINISHED GRADE ELEVATIONS.

F.F. DENOTES FRONT FACE.

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	TOTAL
502.3210	PIGMENTED SURFACE SEALER	SY	945
504.0500	CONCRETE MASONRY RETAINING WALLS	CY	868
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	95,900
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	75
517.1010.S.709	CONCRETE STAINING R-13-334	SF	12,455
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	1,720
SPV.0165.709	WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH R-13-334	SF	7,325
	NON-BID ITEMS		
	NON-BITUMINOUS JOINT SEALER	SIZE	1"
	EXPANDED POLYSTYRENE	SIZE	1"
	CORK FILLER	SIZE	1"

LIST OF DRAWINGS

1. GENERAL PLAN
2. DESIGN DATA AND NOTES
3. SOIL PARAMETERS
4. RETAINING WALL DETAILS
5. ANCHOR SLAB DETAILS
6. ANCHOR SLAB DETAILS
7. ANCHOR SLAB & PARAPET ELEV. & PLAN
8. SUBSURFACE EXPLORATION

FOR DESIGN DATA SEE SHEET 2

WISCONSIN
KAREN L. WALDERA
E-39158
TAYLOR
WI
PROFESSIONAL ENGINEER
7-30-19

BRIDGE OFFICE CONTACT:
WILLIAM DREHER
(608)-266-8489

CONSULTANT CONTACT:
KAREN WALDERA
(715)-834-3161

NO.	DATE	REVISION	BY

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher SDR 08/29/19
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE R-13-334

I-39/90 NB MEDIAN RETAINING WALL

COUNTY DANE | TOWN/~~CITY/VILLAGE~~ BLOOMING GROVE

DESIGN SPEC. AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
CBM	CJM	CJM	KLW

GENERAL PLAN

SHEET 493

DATE:

PENTABLE:BRequ_shd_util.tbl
$PRFNAME$
DATE:
DATE:
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CHECKED BY:
BACK CHECKED BY:
CORRECTED BY:

8

8

$PRFNAME$
V:\Structures-EC\41-0660.0X - IH-39 Dane Partners General Bridge Information\RETAINING WALLS\R-13-334\Retaining Wall\Final\R-13-

STATE PROJECT NUMBER

1007-12-78

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

APPLY PIGMENTED SURFACE SEALER TO THE EXPOSED SURFACE OF THE ANCHOR SLAB AND TOP AND INSIDE FACE OF THE PARAPET.

THE QUANTITY OF CONCRETE MASONRY FOR THE CAST-IN-PLACE ANCHOR SLAB AND PARAPET IS INCLUDED IN THE BID ITEM "CONCRETE MASONRY RETAINING WALLS".

ALL REFERENCE LINE STATIONS FOR R-13-334 ARE ALONG THE FRONT FACE OF WALL (UNLESS SHOWN OTHERWISE).

BEVEL EXPOSED EDGES OF CONCRETE ¾" UNLESS 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.

JOINT FILLER SHALL CONFORM TO THE REQUIREMENTS OF AASHTO DEGISNATION M153, TYPE I, II, OR III OR AASHTO DEGISNATION M213.

THE PLAN QUANTITY FOR THE BID ITEM "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH" IS BASED ON A WALL HEIGHT MEASURED FROM THE TOP OF THE WALL TO A CONSTANT DEPTH 1'-6" BELOW FINISHED GRADE.

DESIGN NOTES

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 CONCRETE PANEL MECHANICALLY STABILIZED EARTH".

PLANS, ELEVATIONS AND DETAILS SHOWN ON THESE DRAWINGS ARE INTENDED TO INDICATE WALL LOCATIONS, LENGTHS, HEIGHTS, AND DETAILS COMMON TO ANY 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 IN THESE PLANS.

DESIGN RETAINING WALL FOR A LIVE LOAD SURCHARGE OF 240 PSF.

DESIGN THE MSE WALL FOR A SUCTION LOAD OF 20 PSF ACTING ON THE PRECAST WALL PANELS.

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.

DESIGN RETAINING WALL TO PROVIDE A FINISHED GRADE SLOPE BEHIND THE WALL AS SHOWN IN THESE PLANS AND THE ROADWAY CROSS SECTIONS.

DESIGN FOR RETAINING WALL TO PROVIDE FOR FINISHED GRADE SLOPED BEHIND WALL AS SHOWN.

WALL EXTERNAL & OVERALL STABILITY EVALUATION

DIMENSIONS	EVALUATED LOCATIONS								
WALL HEIGHT (FEET)	2.24	4.93	5.65	5.30	4.43	4.56	4.49	3.57	2.21
EXPOSED WALL HEIGHT (FEET)	0.74	3.43	4.15	3.80	2.93	3.06	2.99	2.07	0.71
MINIMUM LENGTH OF REINFORCEMENT (FEET) ■	8	8	8	8	8	8	8	8	8
WALL STATION	1+02.30	3+02.33	5+03.43	7+04.52	9+05.62	11+06.71	13+07.81	15+08.91	17+10.00
BORING USED	RW-8	RW-9	RW-10	RW-11	RW-12	RW-13	RW-14	RW-15	RW-16
CAPACITY TO DEMAND RATIO (CDR)									
SLIDING (CDR>1.0)	2.4	1.7	1.6	1.7	1.8	1.8	1.8	2.0	2.4
ECCENTRICITY (CDR>1.0)	9.5	3.7	3.0	3.3	4.2	4.0	4.1	5.4	9.5
OVERALL STABILITY (CDR>1.0) ☆	--	--	6.3	--	--	--	--	--	--
BEARING RESISTANCE (CDR>1.0)	2.7	1.7	1.8	2.0	2.0	1.8	1.8	2.3	2.9
FACTORED BEARING RESISTANCE (PSF)	2,300	2,400	2,800	2,900	2,600	2,400	2,400	2,600	2,500

■ 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 REINFORCMENT LENGTHS BASED ON OVERALL STABILITY PERFORMED BY THE WALL DESIGNER. COMPOUND STABILITY IS THE CONTRACTORS RESPONSIBILITY.

ALLOWABLE WALL SYSTEMS

WALL CONCRETE PANEL MSE

MATERIAL PROPERTIES

CONCRETE MASONRY (ANCHOR SLAB & PARAPET)__ f'_c = 4,000 p.s.i.
BAR STEEL REINFORCEMENT, GRADE 60_____ f_y = 60,000 p.s.i.

TRAFFIC DATA

IH 39/90 NB

A.A.D.T. = 60,400 (2009)
A.A.D.T. = 72,000 (2040)
R.D.S = 70 MPH

GEOMETRY TABLE

WALL STATION	ROADWAY STATION	OFFSET TO F.F. OF WALL (FT.)	TOP OF WALL ELEV.	FINISHED GRADE ELEV.
0+00.00	2533 'NB'+ 97.70	12.92	872.83	872.59
0+52.30	2534 'NB'+ 50.00	12.92	873.17	873.08
1+02.30	2535 'NB'+ 00.00	12.92	873.57	872.83
1+52.30	2535 'NB'+ 50.00	12.92	873.99	872.57
2+02.30	2536 'NB'+ 00.00	12.92	874.41	872.32
2+52.30	2536 'NB'+ 50.00	12.92	874.83	872.07
3+02.33	2537 'NB'+ 00.00	12.92	875.25	871.82
3+52.61	2537 'NB'+ 50.00	12.92	875.67	871.83
4+02.88	2538 'NB'+ 00.00	12.92	876.09	872.05
4+53.15	2538 'NB'+ 50.00	12.92	876.44	872.28
5+03.43	2539 'NB'+ 00.00	12.92	876.76	872.61
5+53.70	2539 'NB'+ 50.00	12.92	877.08	872.93
6+03.97	2540 'NB'+ 00.00	12.92	877.40	873.23
6+54.25	2540 'NB'+ 50.00	12.92	877.72	873.53
7+04.52	2541 'NB'+ 00.00	12.92	878.05	874.25
7+54.80	2541 'NB'+ 50.00	12.92	878.39	875.22
8+05.07	2542 'NB'+ 00.00	12.92	878.79	876.19
8+55.34	2542 'NB'+ 50.00	12.92	879.25	876.65
9+05.62	2543 'NB'+ 00.00	12.92	879.75	876.82
9+55.89	2543 'NB'+ 50.00	12.92	880.31	877.05
10+06.17	2544 'NB'+ 00.00	12.92	880.92	877.80
10+56.44	2544 'NB'+ 50.00	12.92	881.56	878.55
11+06.71	2545 'NB'+ 00.00	12.92	882.20	879.14
11+56.99	2545 'NB'+ 50.00	12.92	882.84	879.34
12+07.26	2546 'NB'+ 00.00	12.92	883.48	879.53
12+57.54	2546 'NB'+ 50.00	12.92	884.12	880.27
13+07.81	2547 'NB'+ 00.00	12.92	884.76	881.77
13+58.08	2547 'NB'+ 50.00	12.92	885.40	882.61
14+08.36	2548 'NB'+ 00.00	12.92	886.04	883.44
14+58.63	2548 'NB'+ 50.00	12.92	886.67	884.27
15+08.91	2549 'NB'+ 00.00	12.92	887.31	885.24
15+59.18	2549 'NB'+ 50.00	12.92	887.95	886.41
16+09.45	2550 'NB'+ 00.00	12.92	888.59	887.56
16+59.73	2550 'NB'+ 50.00	12.92	889.23	888.52
17+10.00	2551 'NB'+ 00.00	12.92	889.87	889.16

F.F. DENOTES FRONT FACE.

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-13-334

DRAWN BY CJM | PLANS CK'D. KLW

DESIGN DATA AND NOTES

SHEET 2 OF 8
494

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

$PRFNAME$
V:±Structures-EC±41-0660.OX - IH-39 Dane Partners General Bridge Information±RETAINING WALLS±R-13-334±Retaining Wall±Final±R-13-

STATE PROJECT NUMBER

1007-12-78

SOIL PARAMETERS

STRATUM LOCATIONS AND SOIL DESCRIPTIONS	TOTAL UNIT WEIGHT (PCF)	FRICTION ANGLE (DEGREES)	COHESION (PCF)
CONCRETE PAVEMENTS, SIDEWALKS, WALL PANELS	145	--	--
CRUSHED AGGREGATE BASE COURSE	135	42	0
GRANULAR BACKFILL (REINFORCING ZONE OR BACKFILL)	120	30	0
RETAINED SOIL ⊛	135	30	0
BORING RW-8			
SILTY SAND WITH GRAVEL EL. 867.0 - EL. 865.5 ⊠	135	33	0
SILTY SAND WITH GRAVEL EL. 865.5 - EL. 860.0 ⊠	143	36	0
ORGANIC SILT EL. 860.0 - EL. 859.0 ⊠	120	27	0
FAT CLAY EL. 859.0 - EL. 855.0 ⊠	107	0	700
POORLY GRADED SAND EL. 855.0 - EL. 852.0 ⊠	125	40	0
BORING RW-9			
SILTY SAND WITH GRAVEL EL. 867.1 - EL. 865.6 ⊠	135	33	0
SILTY SAND WITH GRAVEL AND COBBLES EL. 865.6 - EL. 860.6 ⊠	143	38	0
LEAN CLAY EL. 860.6 - EL. 855.1 ⊠	134	0	3,500
POORLY-GRADED SAND EL. 855.1 - EL. 852.1 ⊠	125	32	0
BORING RW-10			
LEAN CLAY WITH SAND EL. 866.0 - EL. 865.5 ⊠	120	0	500
SILTY SAND WITH GRAVEL EL. 865.5 - EL. 860.5 ⊠	143	38	0
LEAN CLAY EL. 860.5 - EL. 858.5 ⊠	132	0	1,100
POORLY-GRADED SAND EL. 858.5 - EL. 854.0 ⊠	125	35	0
POORLY-GRADED SAND EL. 854.0 - EL. 851.0 ⊠	125	32	0
BORING RW-11			
LEAN CLAY WITH SAND EL. 865.6 - EL. 865.0 ⊠	120	0	500
SILTY SAND EL. 865.0 - EL. 861.6 ⊠	135	44	0
SILTY CLAYEY SAND EL. 861.6 - EL. 860.1 ⊠	143	28	0
LEAN CLAY EL. 860.1 - EL. 857.1 ⊠	132	0	1,000
POORLY-GRADED SAND EL. 857.1 - EL. 853.6 ⊠	125	35	0
POORLY-GRADED SAND EL. 853.6 - EL. 850.6 ⊠	125	33	0
BORING RW-12			
LEAN CLAY WITH SAND EL. 865.1 - EL. 864.4 ⊠	120	0	500
SILTY SAND WITH GRAVEL EL. 864.4 - EL. 861.6 ⊠	143	43	0
LEAN CLAY EL. 861.6 - EL. 859.1 ⊠	125	0	2,000
LEAN CLAY EL. 859.1 - EL. 858.9 ⊠	120	0	1,000
LEAN CLAY EL. 858.9 - EL. 856.1 ⊠	132	0	1,200
POORLY-GRADED SAND EL. 856.1 - EL. 853.1 ⊠	125	35	0
SILTY SAND EL. 853.1 - EL. 840.1 ⊠	125	31	0

SOIL PARAMETERS

STRATUM LOCATIONS AND SOIL DESCRIPTIONS	TOTAL UNIT WEIGHT (PCF)	FRICTION ANGLE (DEGREES)	COHESION (PCF)
BORING RW-13			
LEAN CLAY EL. 865.0 - EL. 864.3 ⊠	120	0	500
SILTY SAND WITH GRAVEL EL. 864.3 - EL. 862.0 ⊠	143	45	0
SILTY SAND WITH GRAVEL EL. 862.0 - EL. 859.5 ⊠	143	31	0
LEAN CLAY EL. 859.5 - EL. 859.0 ⊠	120	0	1,000
LEAN CLAY EL. 859.0 - EL. 858.0 ⊠	132	0	2,400
POORLY-GRADED SAND EL. 858.0 - EL. 857.8 ⊠	125	31	0
LEAN CLAY EL. 857.8 - EL. 857.0 ⊠	132	0	2,400
POORLY-GRADED SAND EL. 857.0 - EL. 854.0 ⊠	125	30	0
POORLY-GRADED SAND EL. 854.0 - EL. 850.0 ⊠	125	34	0
BORING RW-14			
LEAN CLAY EL. 866.1 - EL. 864.1 ⊠	120	0	500
SILTY SAND WITH GRAVEL EL. 864.1 - EL. 859.6 ⊠	143	36	0
LEAN CLAY EL. 859.6 - EL. 858.1 ⊠	143	0	2,000
LEAN CLAY EL. 858.1 - EL. 854.1 ⊠	120	0	900
POORLY-GRADED SAND WITH SILT EL. 854.1 - EL. 850.1 ⊠	132	31	0
POORLY-GRADED SAND EL. 850.1 - EL. 846.1 ⊠	125	34	0
BORING RW-15			
LEAN CLAY EL. 868.1 - EL. 867.1 ⊠	120	0	500
SILTY SAND WITH GRAVEL EL. 867.1 - EL. 860.1 ⊠	143	37	0
FAT CLAY EL. 860.1 - EL. 858.9 ⊠	125	0	1,800
ELASTIC SILT EL. 858.9 - EL. 857.6 ⊠	120	31	0
LEAN CLAY EL. 857.6 - EL. 851.6 ⊠	121	0	400
POORLY-GRADED SAND EL. 851.6 - EL. 848.1 ⊠	125	33	0
BORING RW-16			
LEAN CLAY EL. 869.1 - EL. 867.6 ⊠	120	0	500
SILTY SAND WITH GRAVEL EL. 867.6 - EL. 855.6 ⊠	143	39	0
LEAN CLAY EL. 855.6 - EL. 853.1 ⊠	132	0	600
POORLY-GRADED SAND EL. 853.1 - EL. 839.1 ⊠	125	33	0

⊛ DESIGN WALL FOR THESE VALUES

⊠ STRATUM LOCATIONS & SOIL DESCRIPTIONS AT EACH BORING LOCATION.

8

8

NO.	DATE	REVISION	BY

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DEPARTMENT OF TRANSPORTATION

STRUCTURE R-13-334

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SOIL PARAMTERS

SHEET 3 OF 8
495

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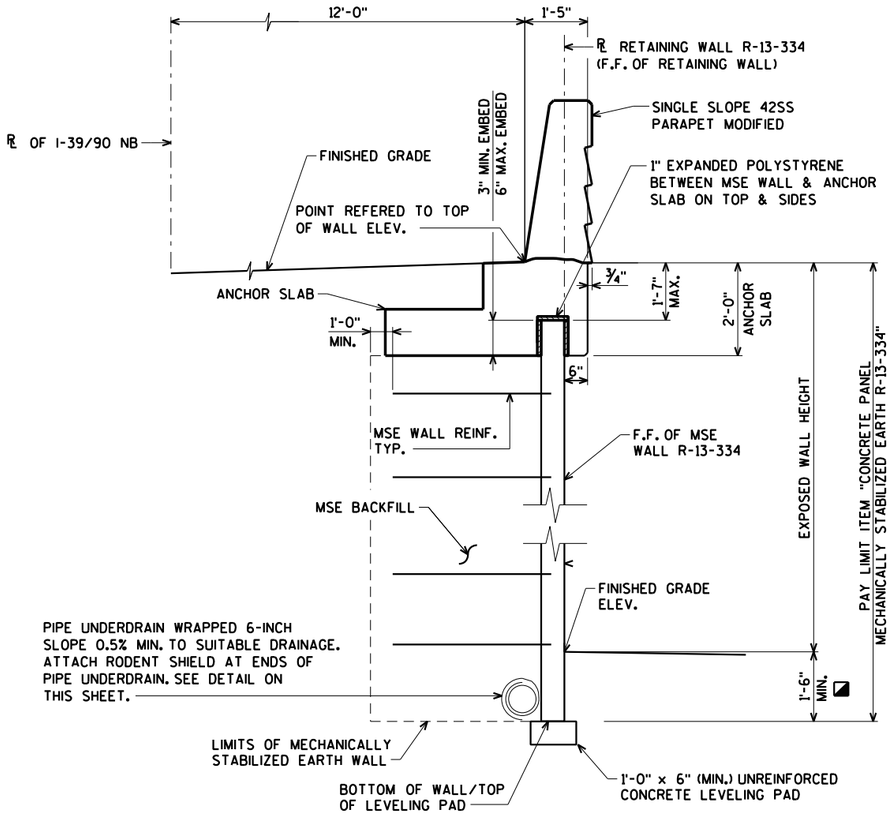
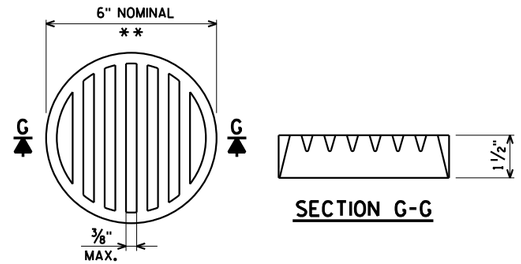


TYPICAL WALL SECTION

LOOKING SOUTH
STA. 0+00.00 TO STA. 17+10.00

◪ MINIMUM EMBEDMENT BASED ON SITE SPECIFIC PARAMETERS (1'-6" MINIMUM FOR ALL WALLS ON LEVEL GROUND). FIELD EMBEDMENTS SHALL MEET OR EXCEED THE MINIMUM EMBEDMENT. FIELD EMBEDMENTS BELOW MINIMUM SHALL NOT BE INCLUDED IN THE PAY LIMITS.



SECTION G-G

** 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.

RODENT SHIELD DETAIL

F.F. DENOTES FRONT FACE

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RETAINING WALL DETAILS

SHEET 4 OF 8
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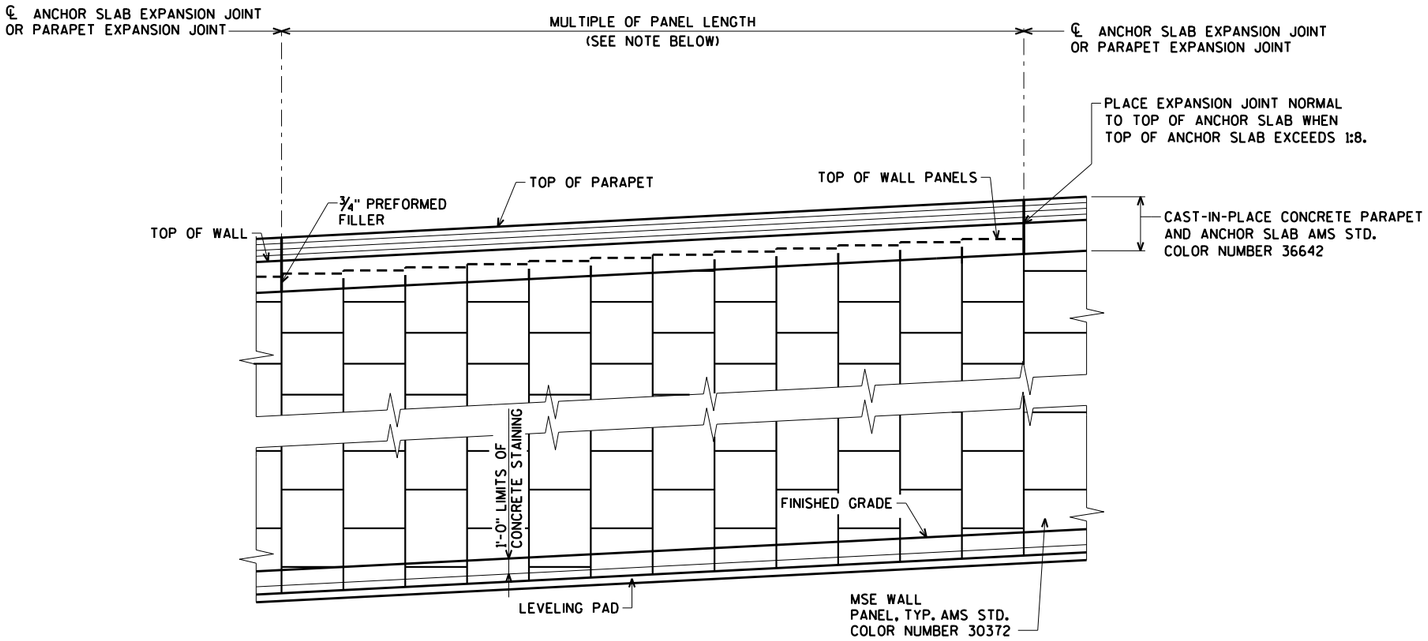
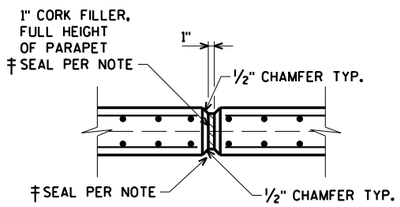


ANCHOR SLAB PARTIAL ELEVATION

(LOOKING AT F.F. WALL)

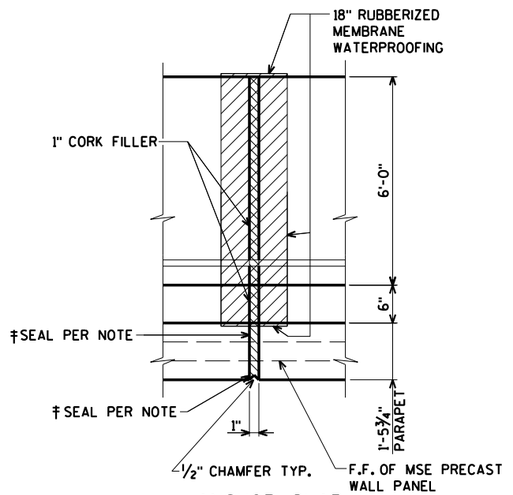
NOTE:
ALL JOINTS MUST COINCIDE WITH PANEL JOINT ON FRONT FACE.



△PARAPET EXPANSION JOINT DETAIL

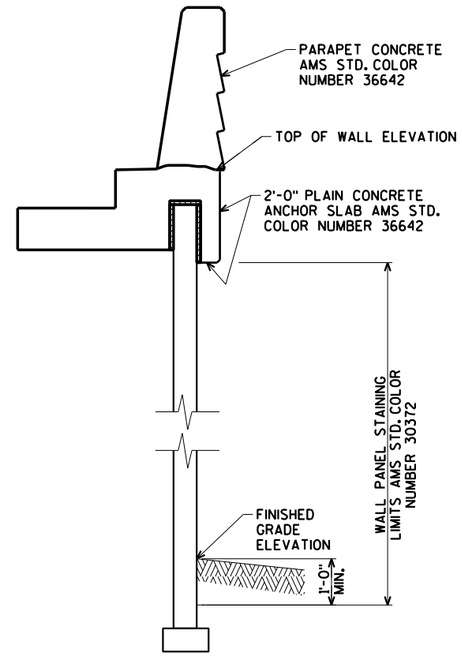
△ EXPANSION JOINTS TO BE SPACED AT A MINIMUM OF 20' AND A MAXIMUM OF 30'. LOCATE EXPANSION JOINTS OVER WALL JOINTS. DO NOT RUN BAR STEEL THRU JOINT, EXCEPT FOR DOWEL BARS. JOINT TO EXTEND FULL DEPTH OF PARAPET AND ANCHOR SLAB.

PROVIDE THE NUMBER OF BARS AND OVERALL LENGTH FOR QUANTITY PURPOSES ONLY. DO NOT DETAIL SPECIFIC BAR LENGTHS BETWEEN EXPANSION JOINTS ARE BASED ON UNKNOWN MSE PANEL LEGTHS AND CONFIGURATION.



△ANCHOR SLAB EXPANSION JOINT DETAIL

‡ SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF FILLER WITH NON STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE.)



SECTION THRU WALL

SHOWING CONCRETE STAINING

F.F. DENOTES FRONT FACE

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STRUCTURE R-13-334

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ANCHOR SLAB DETAILS

SHEET 5 OF 8
497

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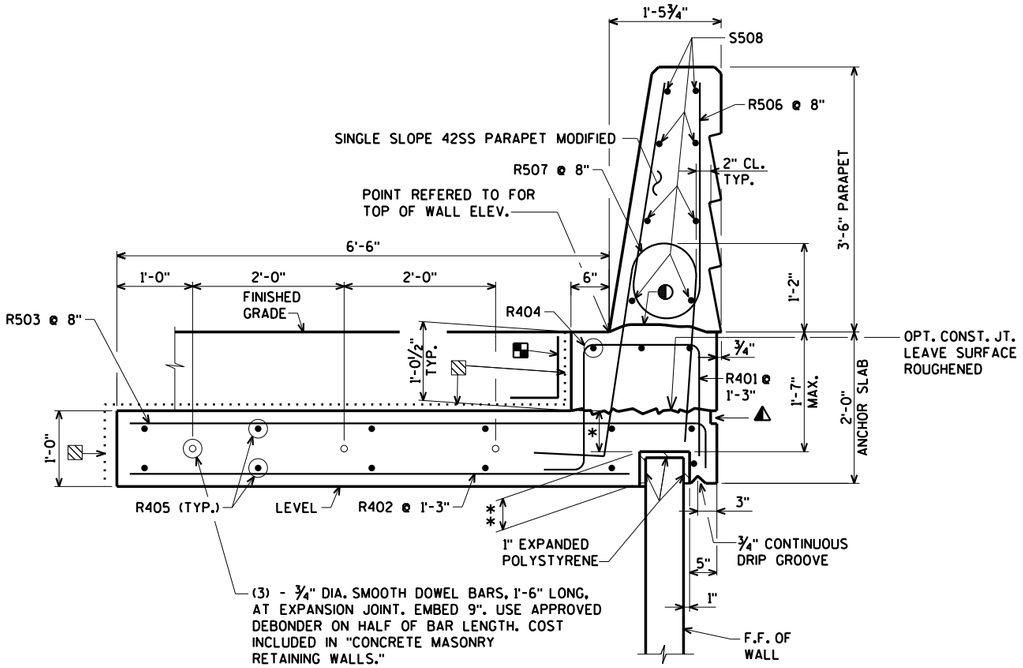
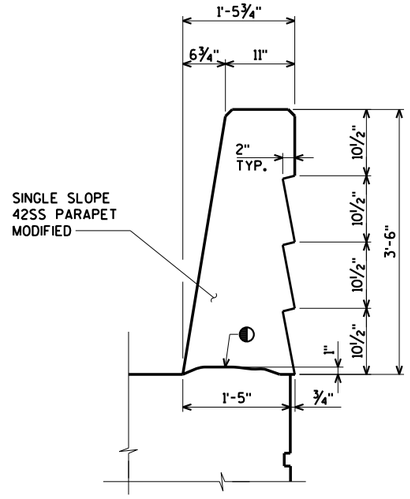
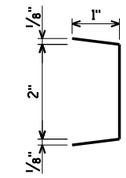


ANCHOR SLAB AND PARAPET DETAIL



PARAPET SECTION
(SHOWING DIMENSIONS)



RUSTICATION DETAIL

⚠ PROVIDE RUSTICATION IF OPT. CONST. JOINT IS USED.

▪ IF THE OPT. CONST. JOINT IS USED, PLACE 18" MEMBRANE WATERPROOFING ALONG THE ENTIRE LONGITUDINAL JOINT. THE MEMBRANE WATERPROOFING SEALING THE OPTIONAL CONST. JOINT IS INCIDENTAL TO "CONCRETE MASONRY RETAINING WALLS".

▨ 18" RUBBERIZED MEMBRANE WATERPROOFING TO BE PLACED ON THESE SURFACES AT EACH JOINT. (COVER WITH A COVERING TO BLOCK FROM SUNLIGHT. COVRING MATERIAL IS TO BE AHCHORED IN PLACE).

* 4" MIN.

** 3" MIN., 6" MAX.

◐ CONST. JOINT -STRIKE OFF AS SHOWN.

OPTIONAL CONSTRUCTION JOINTS IN THE PARAPET AND ANCHOR SLAB BETWEEN EXPANSION JOINTS MAY BE USED. RUN BAR RENIFORCEMENT TRHU THE JOINT.

LAP LONGITUDINAL #4 BARS A MINIMUM OF 1'-0".

ALL BAR STEEL SHALL BE EPOXY COATED.

CONCRETE QUANTITY BASED ON 3" PANEL EMBEDMENT.

BAR STEEL REINFORCEMENT SHALL BE EMBEDED 2" CLEAR UNLESS SHWON OR NOTED OTHERWISE.

F.F. DENOTES FRONT FACE.

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STRUCTURE R-13-334

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ANCHOR SLAB DETAILS

SHEET 6 OF 8
498

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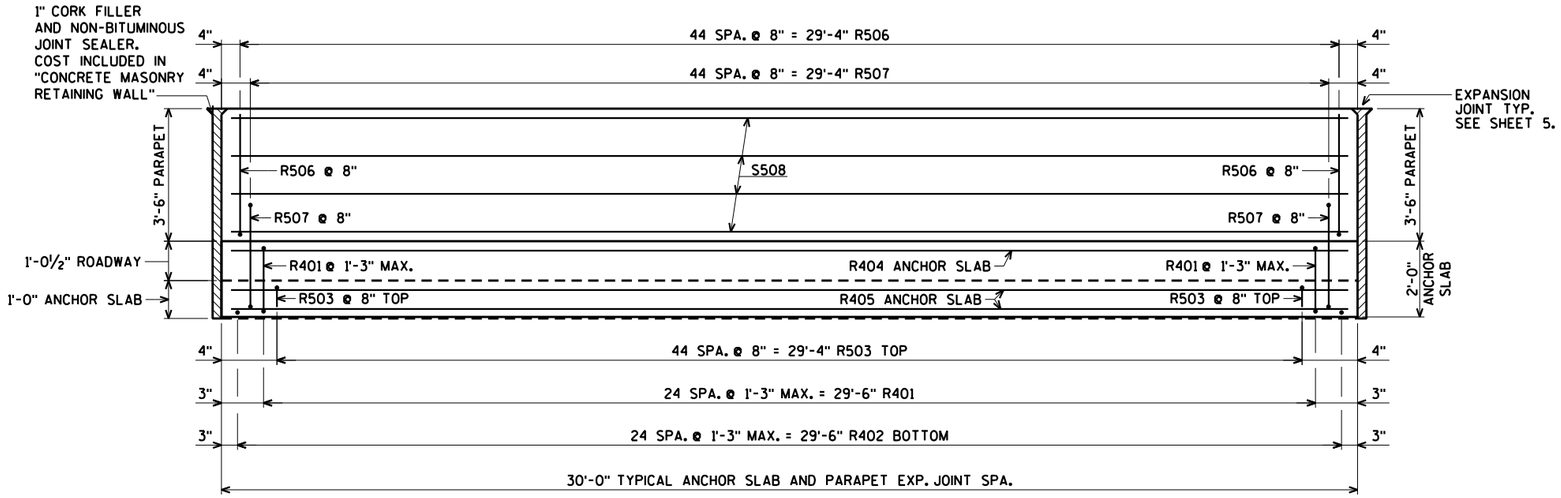
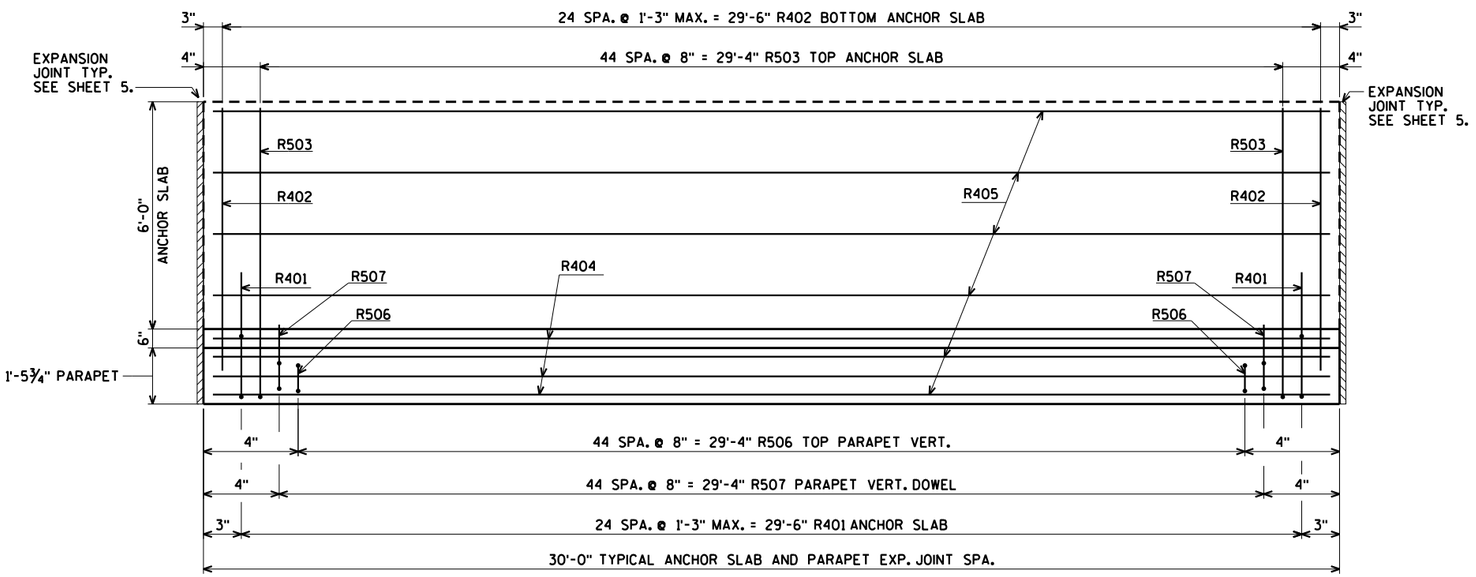


ELEVATION OF ANCHOR SLAB AND PARAPET

(LOOKING AT THE FRONT FACE OF WALL)
(ARCH. SURFACE TREATMENT NOT SHOWN FOR CLARITY)



PLAN OF ANCHOR SLAB AND PARAPET

DIMENSIMENSIONS ARE ALONG ℄ R-13-334

BILL OF BARS

BAR NO.	COATED BAR	NO. REQ'D.	LENGTH	BENT BAR	BUNDLED BAR SERIES	95,900# COATED LOCATION
R401	X	1425	5-3	X		ANCHOR SLAB TRANS.
◑ R402	X	1425	6-8			ANCHOR SLAB BOTTOM TRANS.
R503	X	2565	7-11	X		ANCHOR SLAB TOP TRANS.
R404	X	171	29-8			ANCHOR SLAB LONG.
R405	X	684	29-8			ANCHOR SLAB LONG.
R506	X	2565	6-8	X		PARAPET VERTICAL
R507	X	2565	5-5	X		PARAPET & ANCHOR SLAB VERT.
R508	X	456	29-8			PARAPET HORIZ.

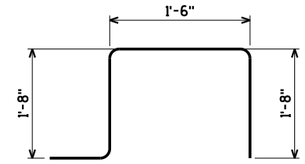
BENDING DIMENSIONS ARE OUT TO OUT OF BARS

◑ BAR LENGTH IS BASED ON 6" THICK MSE WALL PANEL. ADJUST BAR LENGTH IF THE WALL PANEL THICKNESS IS DIFFERENT.

LEGEND

F.F. DENOTES FRONT FACE.

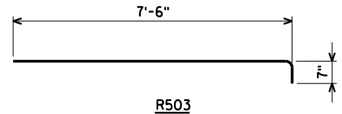
B.F. DENOTES BACK FACE.



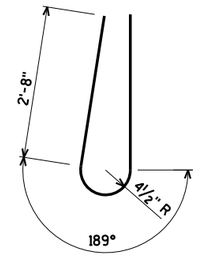
R401

NOTES

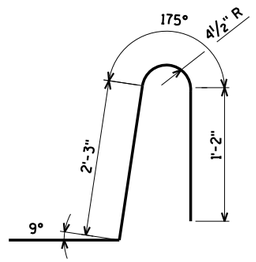
FOR ANCHOR SLAB AND PARAPET DETAIL SEE SHEET 6.



R503



R506



R507

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-13-334

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ANCHOR SLAB & PARAPET ELEV. & PLAN

SHEET 7 OF 8
499

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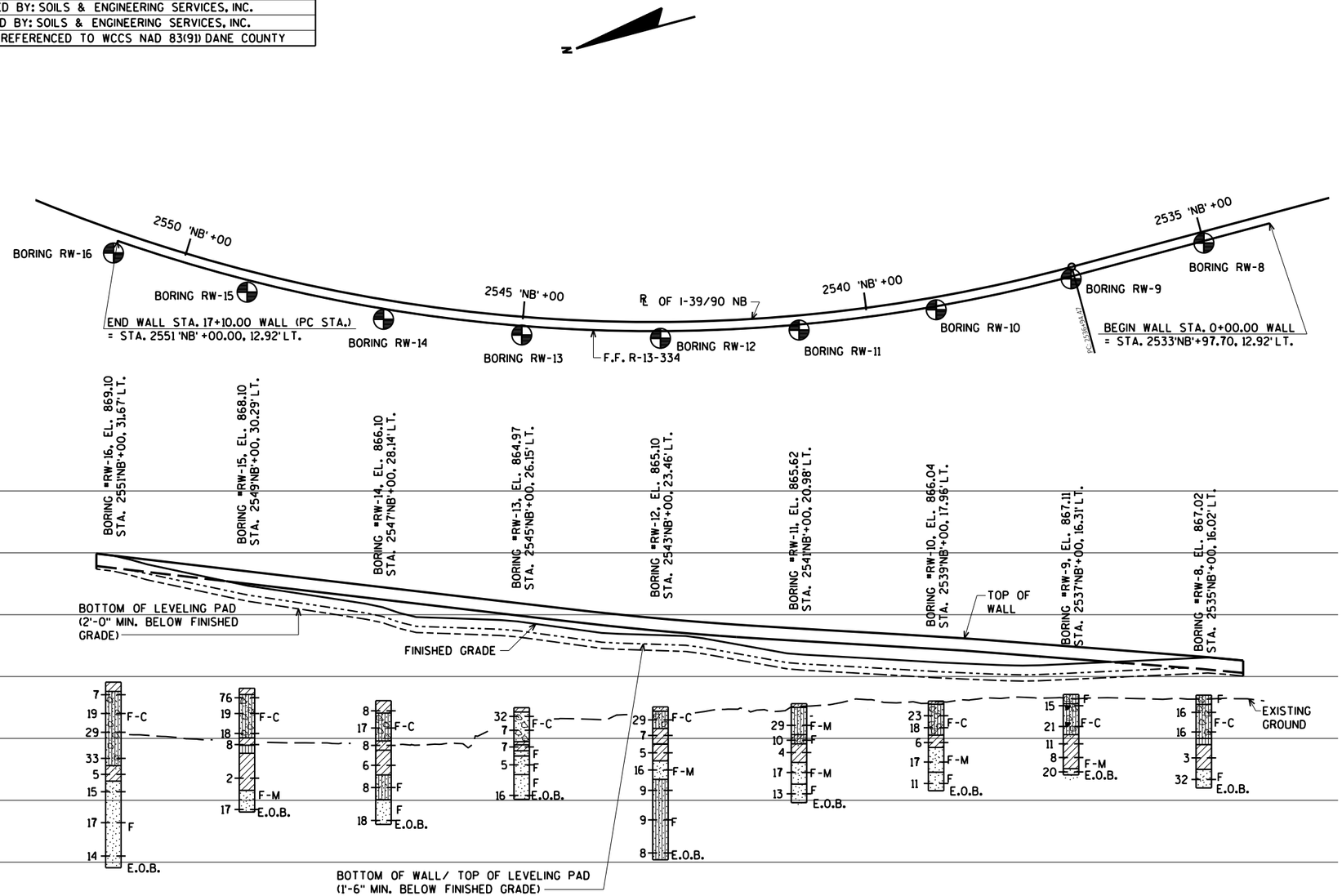
BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
RW-8	8/28/2018	470076.34	850595.21
RW-9	8/28/2018	470208.58	850445.16
RW-10	8/28/2018	470347.39	850299.22
RW-11	8/30/2018	470497.31	850164.41
RW-12	8/30/2018	470658.72	850043.02
RW-13	8/29/2018	470829.65	849935.59
RW-14	8/29/2018	417009.85	849843.43
RW-15	8/29/2018	471197.14	849766.72
RW-16	8/28/2018	471390.65	849706.83
BORINGS COMPLETED BY: SOILS & ENGINEERING SERVICES, INC.			
REPORT COMPLETED BY: SOILS & ENGINEERING SERVICES, INC.			
ALL COORDINATES REFERENCED TO WCCS NAD 83(91) DANE COUNTY			



STATE PROJECT NUMBER

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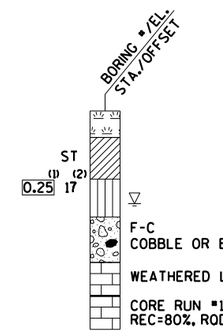
MATERIAL SYMBOLS

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.

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STRUCTURE R-13-334

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SUBSURFACE EXPLORATION

SHEET 8 OF 8

500

8

8

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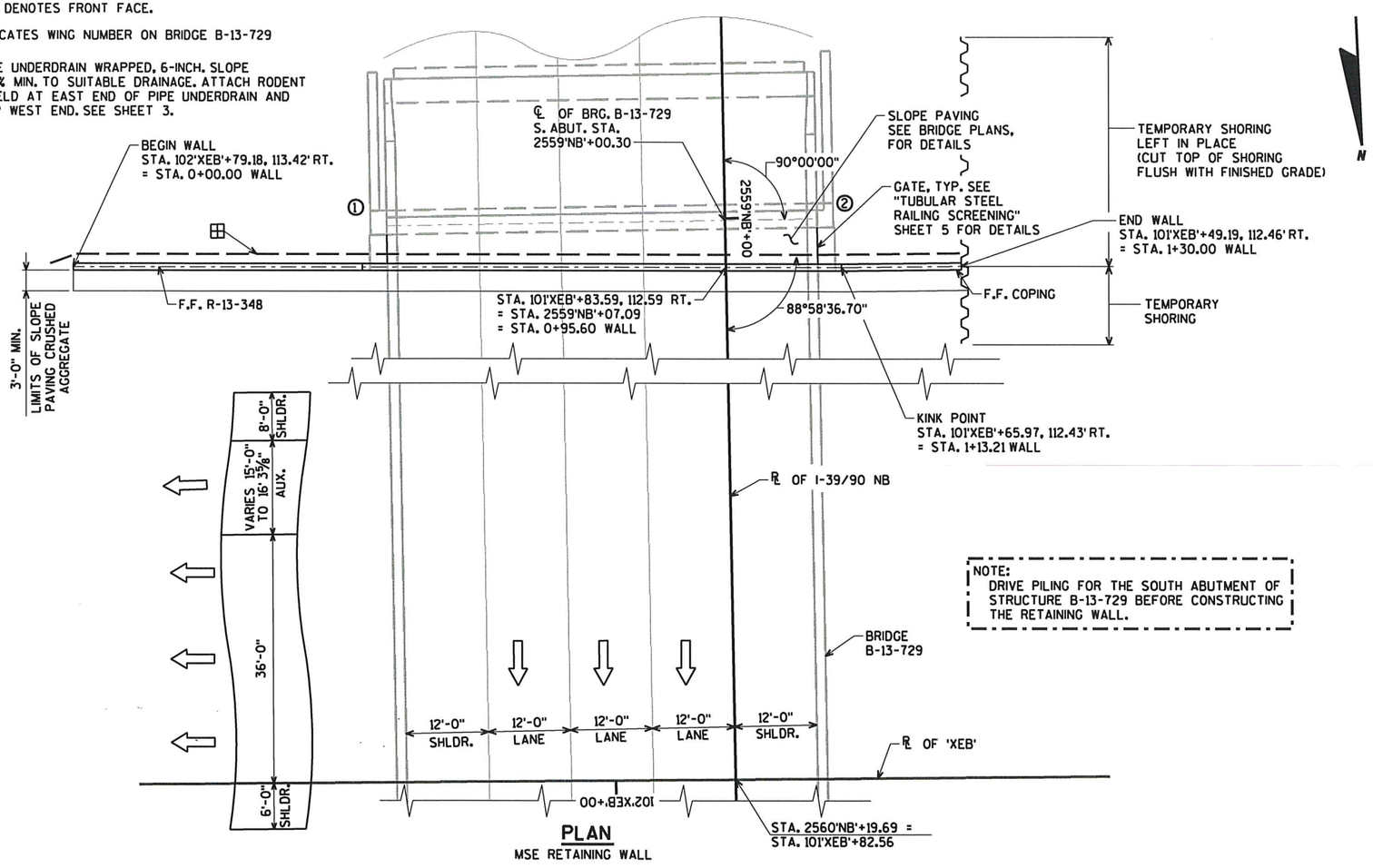
$PRFNAME$
V:\Structures-EC\41-0660.0X - IH-39 Dane Partners General Bridge Information\RETAINING WALLS\B
DATE:
DATE:
DATE:
CHECKED BY:
BACK CHECKED BY:
CORRECTED BY:

F.F. DENOTES FRONT FACE.

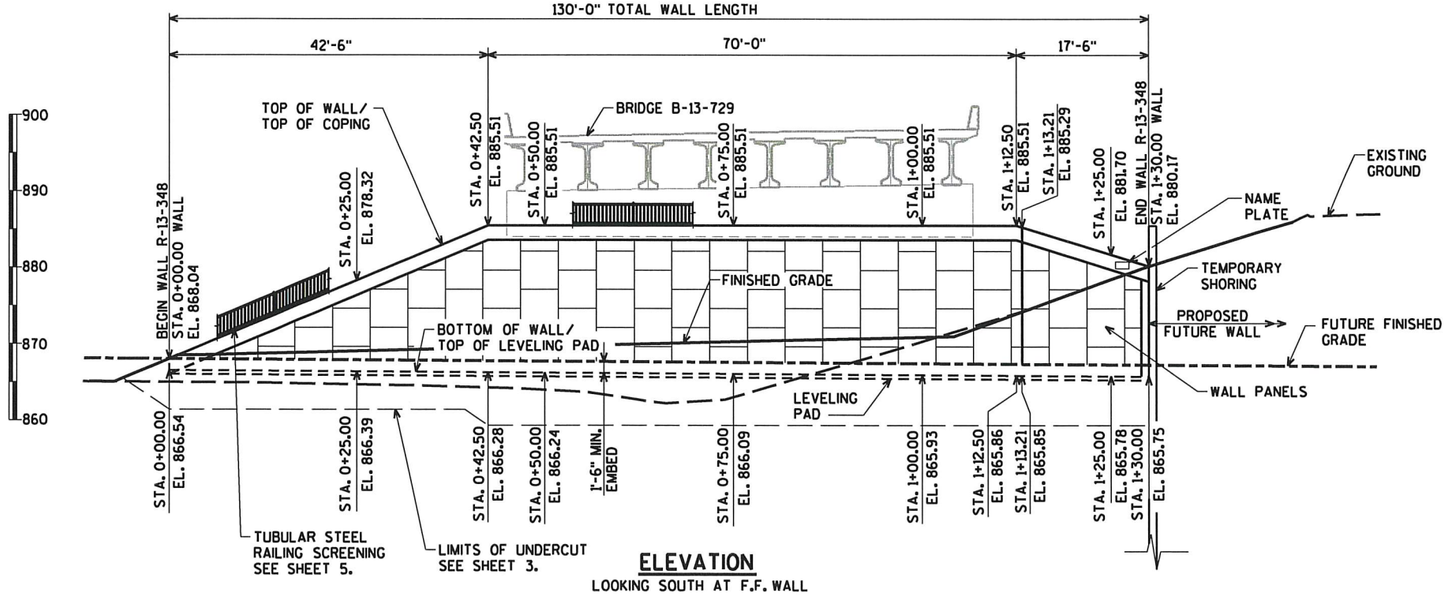
○ INDICATES WING NUMBER ON BRIDGE B-13-729

⊞ PIPE UNDERDRAIN WRAPPED, 6-INCH. SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT EAST END OF PIPE UNDERDRAIN AND CAP WEST END. SEE SHEET 3.



NOTE:
DRIVE PILING FOR THE SOUTH ABUTMENT OF STRUCTURE B-13-729 BEFORE CONSTRUCTING THE RETAINING WALL.

PLAN
MSE RETAINING WALL



ELEVATION
LOOKING SOUTH AT F.F. WALL

ALLOWABLE WALL SYSTEMS

WALL CONCRETE PANEL MSE

MATERIAL PROPERTIES

CONCRETE MASONRY (COPING) _____ f'_c = 3,500 P.S.I.

BAR STEEL REINFORCEMENT (GRADE 60) _____ f_y = 60,000 p.s.i.

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

BEVEL ALL EXPOSED EDGES OF CONCRETE ¾" UNLESS NOTED OTHERWISE.

BAR STEEL REINFORCEMENT SHALL HAVE 2" CLEAR COVER UNLESS OTHERWISE SHOWN OR NOTED.

ALL WALL STATIONING AND OFFSETS ARE GIVEN AT THE FRONT FACE OF THE WALL R-13-348.

THE EXISTING GROUND LINE IS THE UPPER LIMIT OF EXCAVATION FOR STRUCTURES.

COORDINATE THE CONSTRUCTION OF RETAINING WALL R-13-348 WITH THE SOUTH ABUTMENT OF BRIDGE B-13-729.

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

THE PLAN QUANTITY FOR THE ITEM "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH" IS BASED ON A WALL HEIGHT MEASURED FROM THE TOP OF WALL TO THE BOTTOM OF WALL BASED ON THE GEOMETRY TABLE.

THE QUANTITY OF CONCRETE MASONRY, COATED REINFORCING STEEL, AND RUBBERIZED MEMBRANE WATERPROOFING FOR THE CAST-IN-PLACE COPING IS INCIDENTAL TO BID ITEM "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH".

CONCRETE STAINING TO BE APPLIED TO EXPOSED AREAS OF COPING AND MSE WALL PANELS TO 1-FOOT ABOVE LEVELING PAD. COPING TO BE STAINED AMS STD. COLOR NUMBER 30140 AND WALL PANELS TO BE STAINED AMS STD. COLOR NUMBER 30372.

THE SOILS ENGINEER SHALL REVIEW THE FILL SUBSURFACE CONDITIONS PRIOR TO CONSTRUCTION OF THE WALL.

OVER-EXCAVATION BEYOND THE BOTTOM OF THE WALL IS PAID FOR UNDER THE BID ITEM "EXCAVATION FOR STRUCTURES RETAINING WALLS R-13-348".

LIST OF DRAWINGS

1. GENERAL PLAN
2. QUANTITIES & WALL DATA
3. WALL DETAILS
4. WALL DETAILS
5. TUBULAR STEEL RAILING SCREENING
6. SUBSURFACE EXPLORATION

BRIDGE OFFICE CONTACT:
WILLIAM DREHER
(608)-266-8489

CONSULTANT CONTACT:
KAREN WALDERA
(715)-834-3161

STATE PROJECT NUMBER
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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher SDR 08/29/19
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE R-13-348

MSE WALL ALONG B-13-729 S. ABUT.

COUNTY	TOWN/~~CITY/VILLAGE~~
DANE	BLOOMING GROVE

DESIGN SPEC.
AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
KLW	ZSS	JLB/ZSS	KLW

GENERAL PLAN

SHEET 501

8

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$PRFNAME$
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STATE PROJECT NUMBER

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WALL EXTERNAL & OVERALL STABILITY EVALUATION

DIMENSIONS	EVALUATED LOCATIONS		
WALL HEIGHT (FEET)	18.18	19.36	15.17
EXPOSED WALL HEIGHT (FEET)	16.68	17.86	13.67
MINIMUM LENGTH OF REINFORCEMENT (FEET) ▪	16	27	11
WALL STATION	0+40.00	0+65.00	1+27.50
BORING USED	SB-3/3A	SB-3/3A	RW-20 & SB-3/3A
LIVE LOAD SURCHARGE (PSF)	100	250	100
DEAD LOAD SURCHARGE (PSF)	0	1,863	0
CAPACITY TO DEMAND RATIO (CDR)			
SLIDING (CDR>1.0)	1.2	1.1	1.1
ECCENTRICITY (CDR>1.0)	2.1	2.0	1.5
OVERALL STABILITY (CDR>1.0) ☆	----	1.0	----
BEARING RESISTANCE (CDR>1.0)	1.1	1.0	3.0
FACTORED BEARING RESISTANCE (PSF)	5,400	7,500	13,700

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	TOTAL
206.3000.704	EXCAVATION FOR STRUCTURES RETAINING WALLS R-13-348	LS	1
● 209.1500	BACKFILL GRANULAR GRADE 1	TON	400
● 312.0110	SELECT CRUSHED MATERIAL	TON	1,880
511.1200.704	TEMPORARY SHORING R-13-348	SF	235
511.2200.704	TEMPORARY SHORING LEFT IN PLACE R-13-348	SF	655
513.4091	RAILING TUBULAR SCREENING	LF	130
517.1010.S.704	CONCRETE STAINING R-13-348	SF	2,035
604.0500	SLOPE PAVING CRUSHED AGGREGATE	SY	45
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	140
SPV.0165.704	WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH R-13-348	SF	2,100
	NON-BID ITEMS		
	PREFORMED JOINT FILLER	SIZE	½", ¾"
	NON-BITUMINOUS JOINT SEALER	SIZE	½", ¾"
	EXPANDED POLYSTYRENE	SIZE	1"

● REQUIRED FOR UNDERCUT. SEE DETAIL ON SHEET 3.

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 STABLIITY 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 REINFORCMENT LENGTHS BASED ON OVERALL STABILITY PERFORMED BY THE WALL DESIGNER. COMPOUND STABILITY IS THE CONTRACTORS RESPONSIBILITY.

⊗ STRATUM LOCATIONS & SOIL DESCRIPTIONS AT EACH BORING LOCATION.

F.F. DENOTES FRONT FACE

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 CONCRETE PANEL MECHANICALLY STABILIZED EARTH".

PLANS, ELEVATIONS, AND DETAILS SHOWN ON THESE PLANS 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 SHALL BE DESIGNED USING THE ELEVATIONS GIVEN ON SHEETS 1 AND 2.

DESIGN FOR RETAINING WALL TO PROVIDE FOR FINISHED GRADE SLOPED BEHIND WALL AS SHOWN.

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.

CONTRACTOR, WALL SUPPLIER, AND RAILING FABRICATOR SHALL COORDINATE RAILING POST SPACING, MSE PANELS, AND COPING JOINTS.

THE DESIGN OF THE WALL IN FRONT OF THE ABUTMENT SHALL INCLUDE THE HORIZONTAL EARTH LOADS AND 240 PSF LIVE LOAD SURCHARGE ACTING ON THE BACK OF THE ABUTMENT BELOW THE BEAM SEATS.

GEOMETRY TABLE

WALL STATION	ROADWAY STATION	OFFSET TO F.F. OF WALL	TOP OF WALL ELEV.	FINISHED GRADE ELEV.	BOTTOM OF WALL ELEV.
0+00.00	102'XEB'+79.18	113.42'	868.04	868.04	866.54
0+25.00	102'XEB'+54.18	113.20'	878.32	869.06	866.39
0+42.50	102'XEB'+36.68	113.05'	885.51	869.49	866.28
0+50.00	102'XEB'+29.18	112.98'	885.51	869.67	866.24
0+75.00	102'XEB'+04.18	112.77'	885.51	870.30	866.09
1+00.00	101'XEB'+79.18	112.55'	885.51	870.89	865.93
1+12.50	101'XEB'+66.69	112.44'	885.51	873.97	865.86
1+13.21	101'XEB'+65.97	112.43'	885.29	874.23	865.85
1+25.00	101'XEB'+54.19	112.45'	881.70	878.45	865.78
1+30.00	101'XEB'+49.19	112.46'	880.17	880.17	865.75

SOIL PARAMETERS

STRATUM LOCATIONS AND SOIL DESCRIPTIONS	TOTAL UNIT WEIGHT (PCF)	FRICTION ANGLE (DEGREES)	COHESION (PCF)
CONCRETE PAVEMENTS, SIDEWALKS, WALL PANELS	145	----	----
CRUSHED AGGREGATE BASE COURSE	135	42	0
SELECT CRUSHED MATERIAL	120	40	0
GRANULAR GRADE #1 OR #2	120	30	0
GRANULAR BACKFILL (REINFORCING ZONE OR BACKFILL)	120	30	0
RETAINED SOIL ⊛	135	30	0
BORING SB-3/3A			
LEAN CLAY EL. 864.4 - EL. 863.7 ⊗	125	0	1,000
LEAN CLAY EL. 863.7 - EL. 861.4 ⊗	125	0	1,000
POORLY-GRADED SAND WITH SILT EL. 861.4 - EL. 858.9 ⊗	125	31	0
POORLY-GRADED SAND EL. 858.9 - EL. 851.4 ⊗	125	34	0
LEAN CLAY EL. 851.4 - EL. 846.9 ⊗	132	0	2,000
SILTY GRAVEL WITH SAND AND COBBLES EL. 846.9 - EL. 840.9 ⊗	152	32	0
SILTY SAND WITH GRAVEL EL. 840.9 - EL. 832.4 ⊗	152	32	0
SILTY SAND WITH GRAVEL EL. 832.4 - EL. 822.4 ⊗	152	43	0
SILTY SAND WITH GRAVEL EL. 822.4 - EL. 809.4 ⊗	152	45	0
SILTY SAND EL. 809.4 - EL. 782.4 ⊗	152	45	0
SILTY SAND WITH GRAVEL EL. 782.4 - EL. 765.2 ⊗	152	45	0
BORING RW-20			
SANDY SILT EL. 878.7 - EL. 878.2 ⊗	120	25	0
SILTY SAND WITH GRAVEL EL. 878.2 - EL. 870.7 ⊗	143	31	0
SILTY SAND WITH GRAVEL AND COBBLES EL. 870.7 - EL. 861.7 ⊗	143	43	0
SILTY SAND EL. 861.7 - EL. 856.7 ⊗	143	30	0
POORLY-GRADED SAND WITH SILT EL. 856.7 - EL. 851.7 ⊗	125	33	0
POORLY-GRADED SAND EL. 851.7 - EL. 848.7 ⊗	125	32	0

⊛ DESIGN WALL FOR THESE VALUES

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-13-348

DRAWN BY JLB/ZSS | PLANS CK'D. KLW

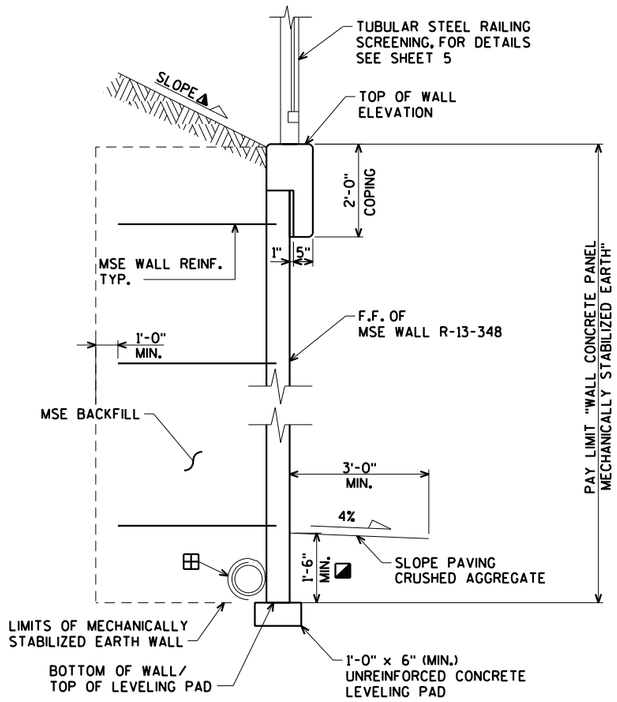
QUANTITIES & WALL DATA

SHEET 2 OF 6
502

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

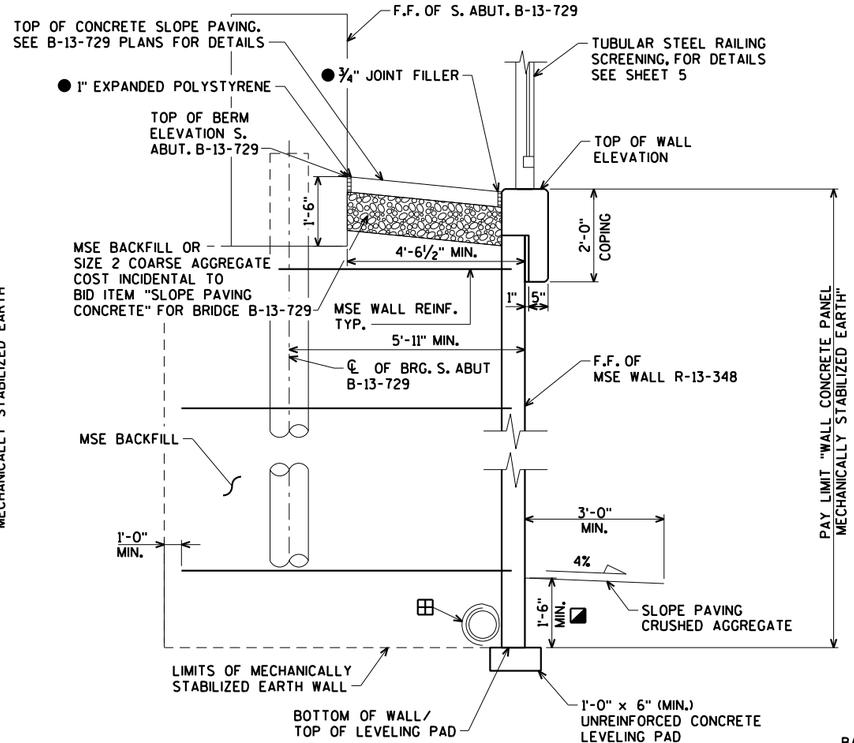
7/29/2019

PENTABLE:BReau_shd_util.tbl



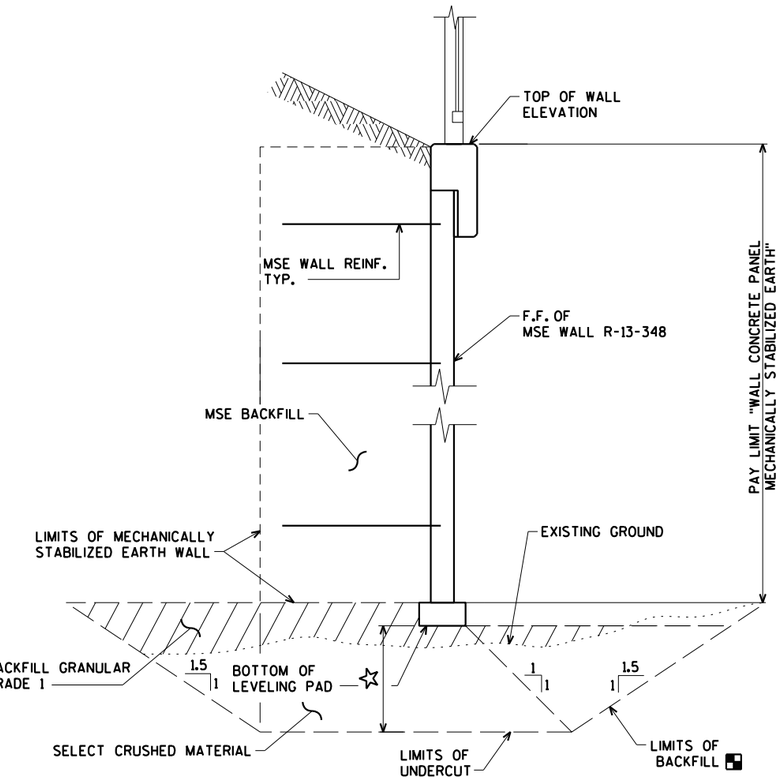
TYPICAL SECTION MSE WALL

LOOKING WEST
WALL STA. 0+00.00 TO 0+42.50, 1+12.50 TO 1+30.00



TYPICAL SECTION MSE WALL AT B-13-729

LOOKING WEST
WALL STA. 0+42.50 TO 1+12.50



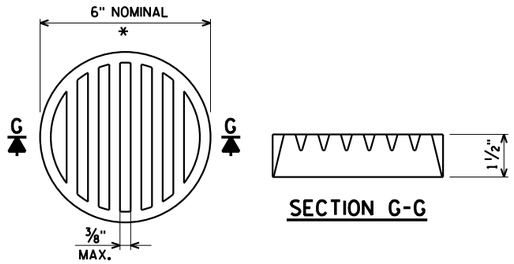
UNDERCUT/BACKFILL DETAIL

LOOKING WEST

ENTIRELY REMOVE THE BROWN LEAN CLAYS EXPOSING GRANULAR SAND WITH SILT SUBGRADE SOILS AT THE BOTTOM OF THE UNDERCUT EXCAVATION.

▪ BACKFILL PAY LIMITS. BACKFILL BEYOND BACKFILL PAY LIMITS SHALL BE INCIDENTAL TO WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH R-13-348. LIMITS OF EXCAVATION SHALL BE DETERMINED BY THE CONTRACTOR.

☆ UNDERCUT DEPTH VARIES ALONG WALL. (USE 1.5:1 SLOPE BETWEEN BOTTOM ELEVATIONS TO TRANSITION BETWEEN STATIONS AND ELEVATIONS LISTED BELOW.)
WALL STA. 0+00.00 TO 0+39.41, DEPTH VARIES = 4'-7¾" TO 4'-4⅞"
(BOTTOM EL. 861.40)
WALL STA. 0+42.50 TO 1+12.50, DEPTH VARIES= 6'-5⅜" TO 5'-11"
(BOTTOM EL. 859.34)



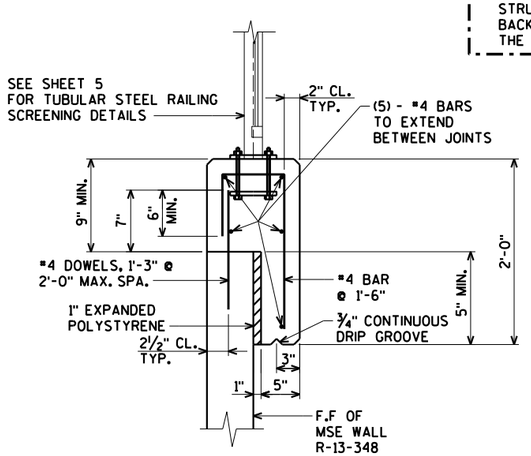
SECTION G-G

* 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.

RODENT SHIELD DETAIL



COPING DETAIL

NOTE:
DRIVE PILING FOR THE SOUTH ABUTMENT OF STRUCTURE B-13-729 AFTER UNDERCUT AND BACKFILL IS COMPLETED BUT BEFORE CONSTRUCTING THE RETAINING WALL.

F.F. DENOTES FRONT FACE

● SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF FILLER AND EXPANDED POLYSYRENE WITH NON-STAINING GREY NON-BITUMINOUS JOINT SEALER (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE).

◪ MINIMUM EMBEDMENT BASED ON SITE SPECIFIC PARAMETERS (1'-6" MINIMUM FOR ALL WALLS ON LEVEL GROUND). FIELD EMBEDMENTS SHALL MEET OR EXCEED THE MINIMUM EMBEDMENT. FIELD EMBEDMENTS BELOW MINIMUM EMBEDMENT SHALL NOT BE INCLUDED IN THE PAY LIMITS.

⊞ PIPE UNDERDRAIN WRAPPED 6-INCH. SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT EAST END OF PIPE UNDERDRAIN AND CAP WEST END. SEE DETAIL ON THIS SHEET.

▲ SLOPE BEHIND MSE WALL VARIES. SEE ROADWAY PLANS FOR MORE INFORMATION.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-13-348

DRAWN BY JLB/ZSS | PLANS CK'D. KLW

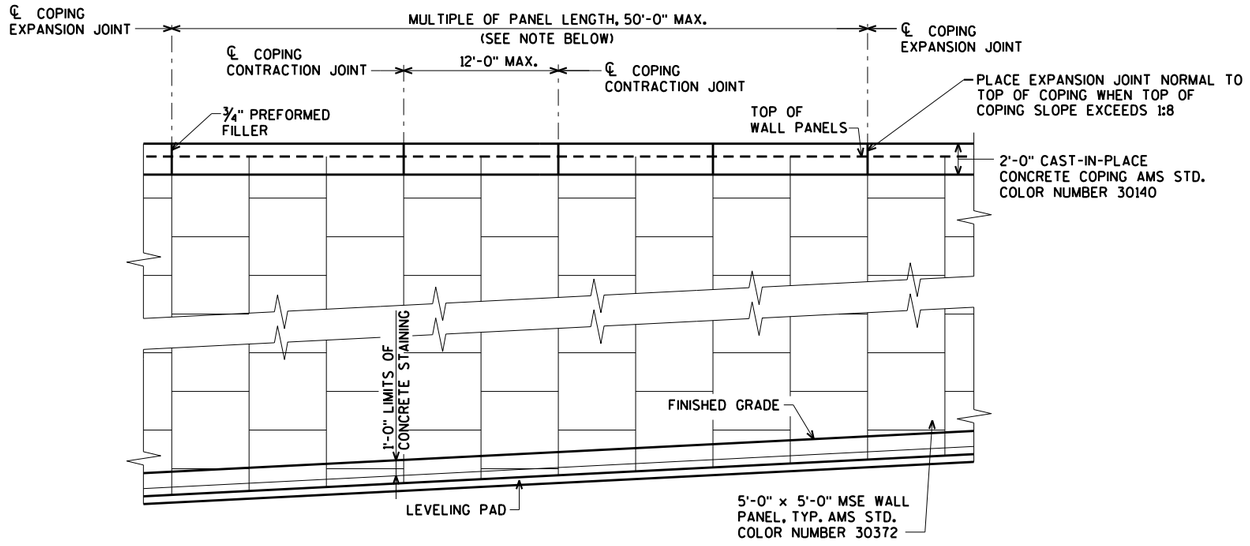
WALL DETAILS

SHEET 3 OF 6
503

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

8

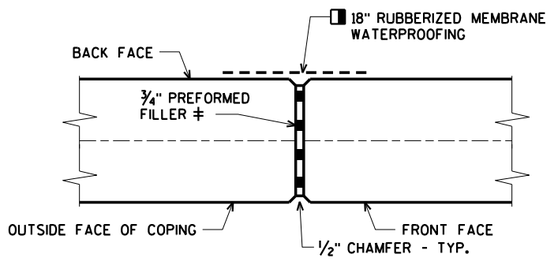
$PRFNAME$
V:\Structures-EC\41-0660.0X - IH-39 Dane Partners General Bridge Information\RETAINING WALLS\B-13-729\R-13-0348 South\Final\R-1



CAST-IN-PLACE COPING PARTIAL ELEVATION

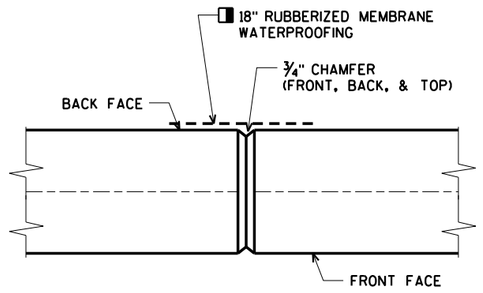
(LOOKING AT FRONT FACE OF WALL)

NOTE:
ALL JOINTS SHALL BE LOCATED AS SHOWN ON WALL ELEVATIONS AND MUST COINCIDE WITH PANEL JOINTS ON FRONT FACE.



COPING EXPANSION JOINT

DO NOT RUN BAR STEEL THRU JOINT
MAXIMUM SPACING OF JOINT = 50'

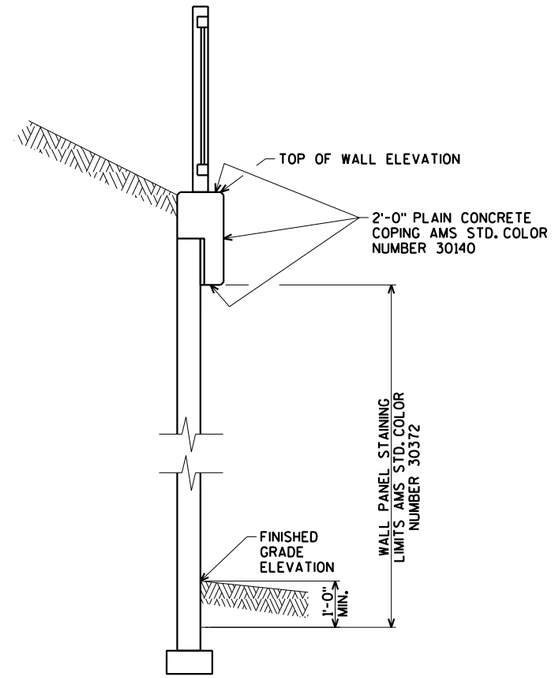


COPING CONTRACTION JOINT

DO NOT RUN BAR STEEL THRU JOINT
MAXIMUM SPACING OF JOINT = 12'

◨ MEMBRANE WATERPROOFING TO EXTEND FROM TOP OF COPING TO 6" BELOW TOP OF PANELS.

ǂ 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.)



SECTION THRU WALL

SHOWING CONCRETE STAINING

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-13-348

DRAWN BY JLB/ZSS | PLANS CK'D. KLW

WALL DETAILS

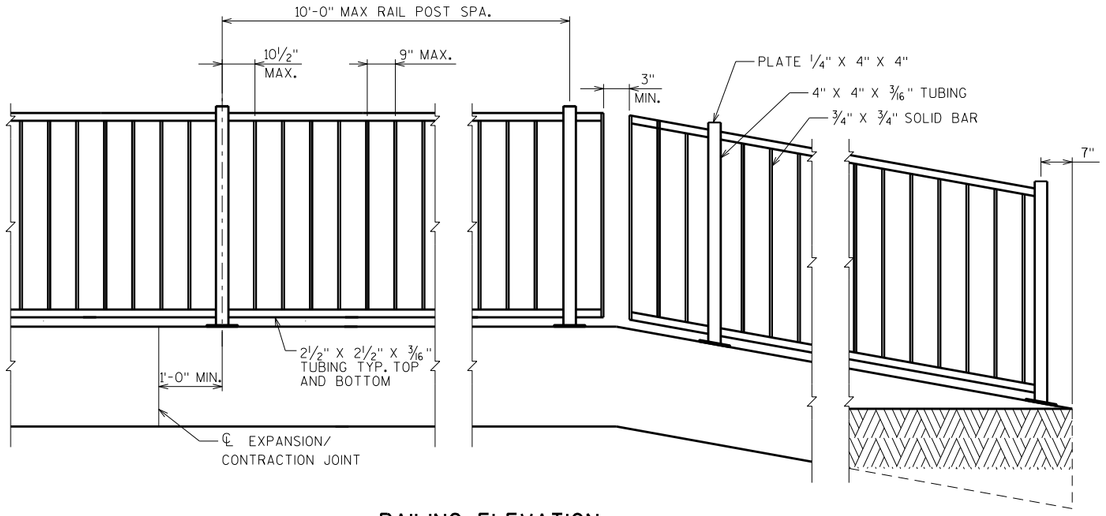
SHEET 4 OF 6
504

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

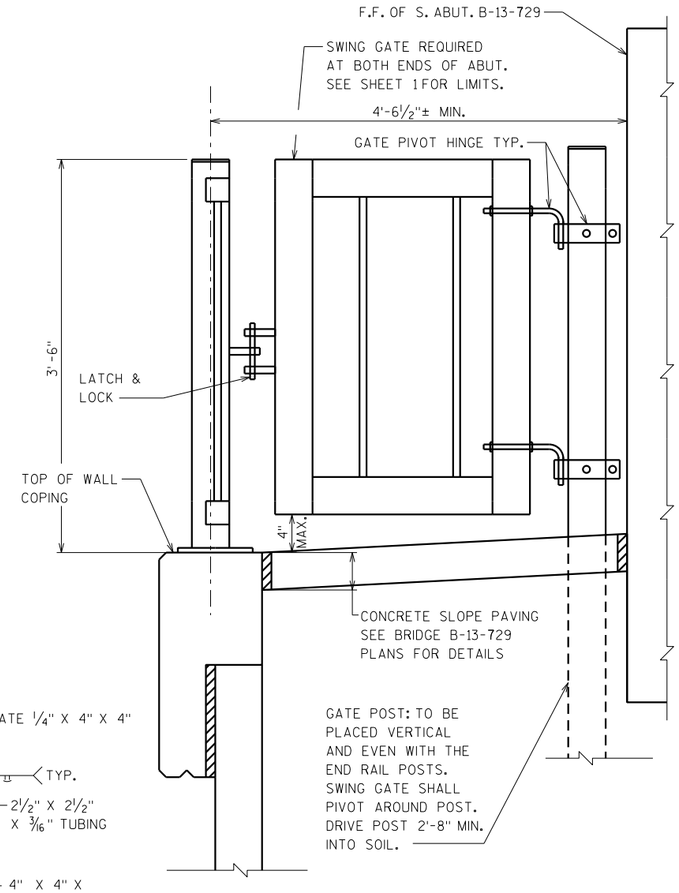
$PRFNAME$
V:\Structures-EC\41-0660.0X - IH-39 Dane Partners General Bridge Information\RETAINING WALLS\B-13-729\R-13-0348 South\Final\R-1

STATE PROJECT NUMBER

1007-12-18



RAILING ELEVATION



SECTION THRU WALL AT GATES

NOTE:
ALL POSTS, GATES AND ASSOCIATED HARDWARE SHALL BE PAINTED AMS STD. COLOR NO. 30140, BROWN SPECIAL (FEDERAL COLOR NO. 30140) AND SHALL BE PAID FOR UNDER THE BID ITEM "RAILING TUBULAR SCREENING".

NOTES

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.

STRUCTURAL TUBING SHALL CONFORM TO ASTM A500, GRADE B. PLATES, ANGLES, BARS AND SHIMS SHALL CONFORM TO ASTM A709, GRADE 36.

ANCHORAGES SHALL BE ACCURATELY PLACED TO PROVIDE CORRECT ALIGNMENT OF RAILING. SET POSTS NORMAL TO GRADE.

ALL POST SPACINGS ARE TAKEN HORIZONTAL ALONG CENTERLINE OF RAILING AT BASE OF POST.

STEEL SHIMS SHALL BE PROVIDED & USED UNDER BASE PLATES WHERE REQUIRED FOR ALIGNMENT, AND SHALL BE GALVANIZED.

CAULK AROUND PERIMETER OF BASE PLATES AND FILL PORTION OF SLOTTED HOLES AROUND ANCHOR BOLTS WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER.

CUT BOTTOM OF POST TO MAKE VERTICAL IN TRANSVERSE DIRECTION.

ANCHOR BOLTS, NUTS AND WASHERS SHALL BE EITHER STAINLESS STEEL OR ASTM 307. IF 307 IS USED, ANCHOR BOLTS, NUTS, AND WASHERS SHALL BE GALVANIZED. ✿

THE BID ITEM SHALL BE "RAILING TUBULAR SCREENING" WHICH SHALL INCLUDE ALL ITEMS SHOWN.

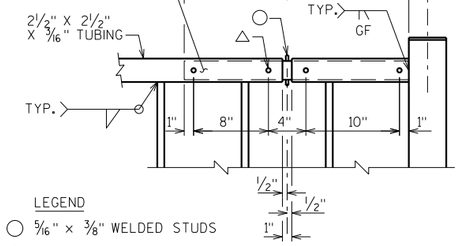
RAILING SHALL BE FABRICATED IN LENGTHS THAT INCLUDE NOT MORE THAN 3 POSTS.

VENT HOLES SHALL BE DRILLED IN MEMBERS AS REQUIRED TO FACILITATE GALVANIZING AND DRAINAGE.

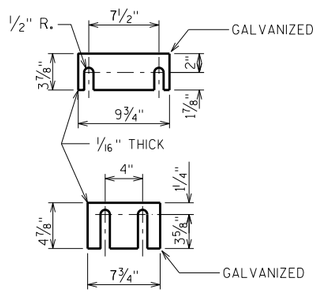
ALL RAILING MATERIAL SHALL BE GALVANIZED AFTER FABRICATION. PRIOR TO GALVANIZING THE STEEL RAILING SHALL BE GIVEN A NO. 6 BLAST CLEANING PER SSPC SPECIFICATIONS. PAINT OVER GALVANIZING WITH AN APPROVED TIE COAT AND TOP COAT AS SPECIFIED IN THE CONTRACT DOCUMENTS.

THE RAILING SHALL BE PAINTED AMS STD. COLOR NO. 30140, BROWN SPECIAL. (FEDERAL COLOR NO. 30140)

F.F. DENOTES FRONT FACE.

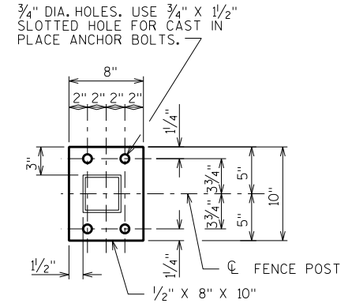


RAILING EXPANSION JOINT DETAIL

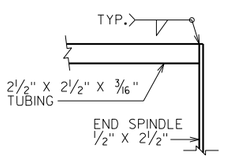


SHIM PLATE DETAILS

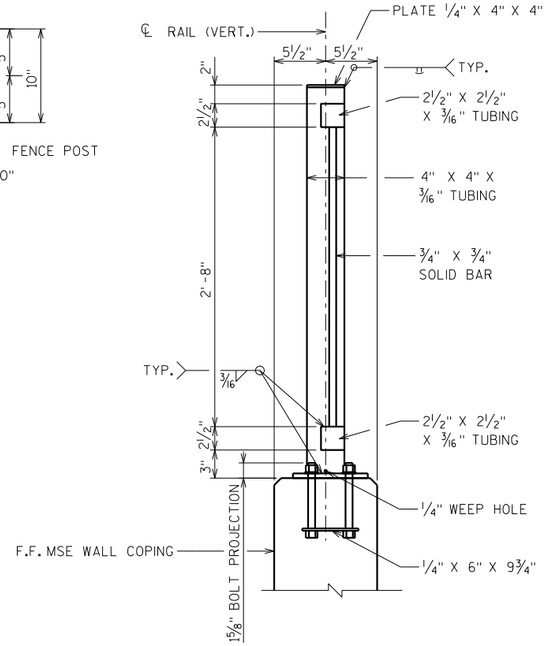
TWO SHIMS OF EACH SIZE REQUIRED PER POST



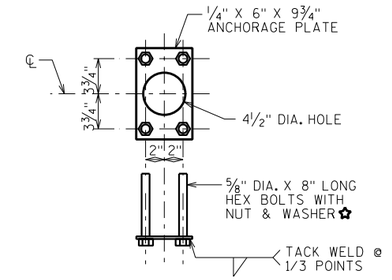
BASE PLATE



RAIL DETAIL



SECTION THRU RAILING



ANCHORAGE DETAIL

✿ALTERNATIVE ANCHORAGE: ADHESIVE ANCHORS ⅝-INCH. EMBED 7" IN CONCRETE. ADHESIVE ANCHORS SHALL CONFORM TO SECTION 502.2.12 OF THE STANDARD SPECIFICATIONS.

NOTE: ANCHOR PLATE NOT REQUIRED WHEN ADHESIVE ANCHORS ARE USED.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE R-13-348

DRAWN BY JLB/ZSS | PLANS CK'D. KLW

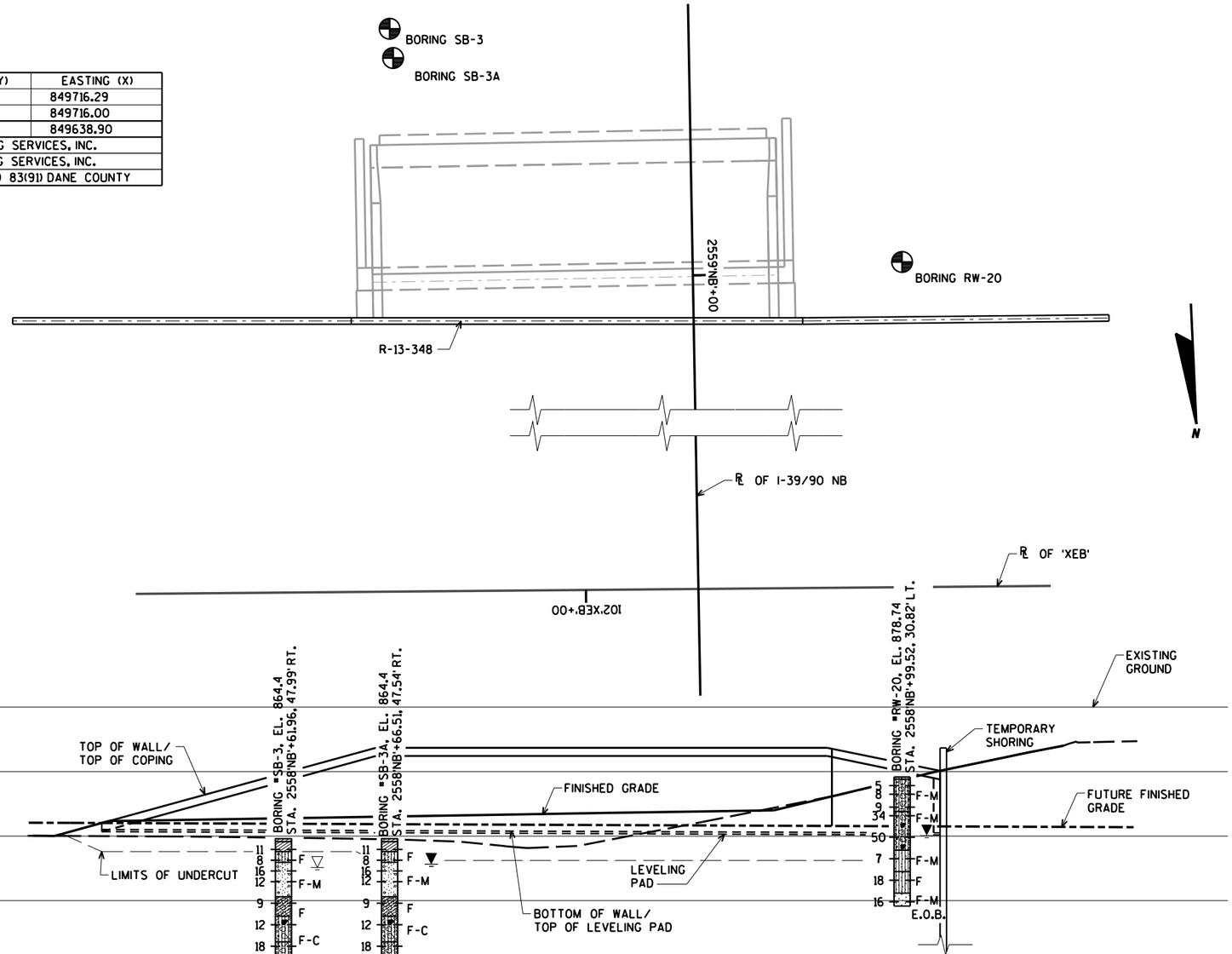
TUBULAR STEEL RAILING SCREENING

SHEET 5 OF 6
505

8

8

BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
SB-3	DECEMBER 7, 2018	472152.44	849716.29
SB-3A	DECEMBER 11, 2018	472157.00	849716.00
RW-20	APRIL 22, 2019	472192.85	849638.90
BORINGS COMPLETED BY: SOILS & ENGINEERING SERVICES, INC.			
REPORT COMPLETED BY: SOILS & ENGINEERING SERVICES, INC.			
ALL COORDINATES REFERENCED TO WCCS NAD 83(91) DANE COUNTY			



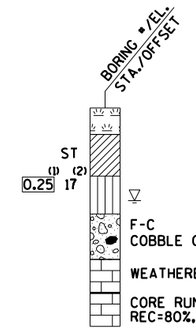
STATE PROJECT NUMBER

1007-12-78

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-13-348

DRAWN BY JLB/ZSS | PLANS CK'D. KLW

SUBSURFACE EXPLORATION

SHEET 6 OF 6
506

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$PRFNAME$
V:\Structures-EC\41-0660.0X - IH-39 Dane Partners General Bridge Information\RETAINING WALLS\B-13-729\R-13-0348 South\Fi

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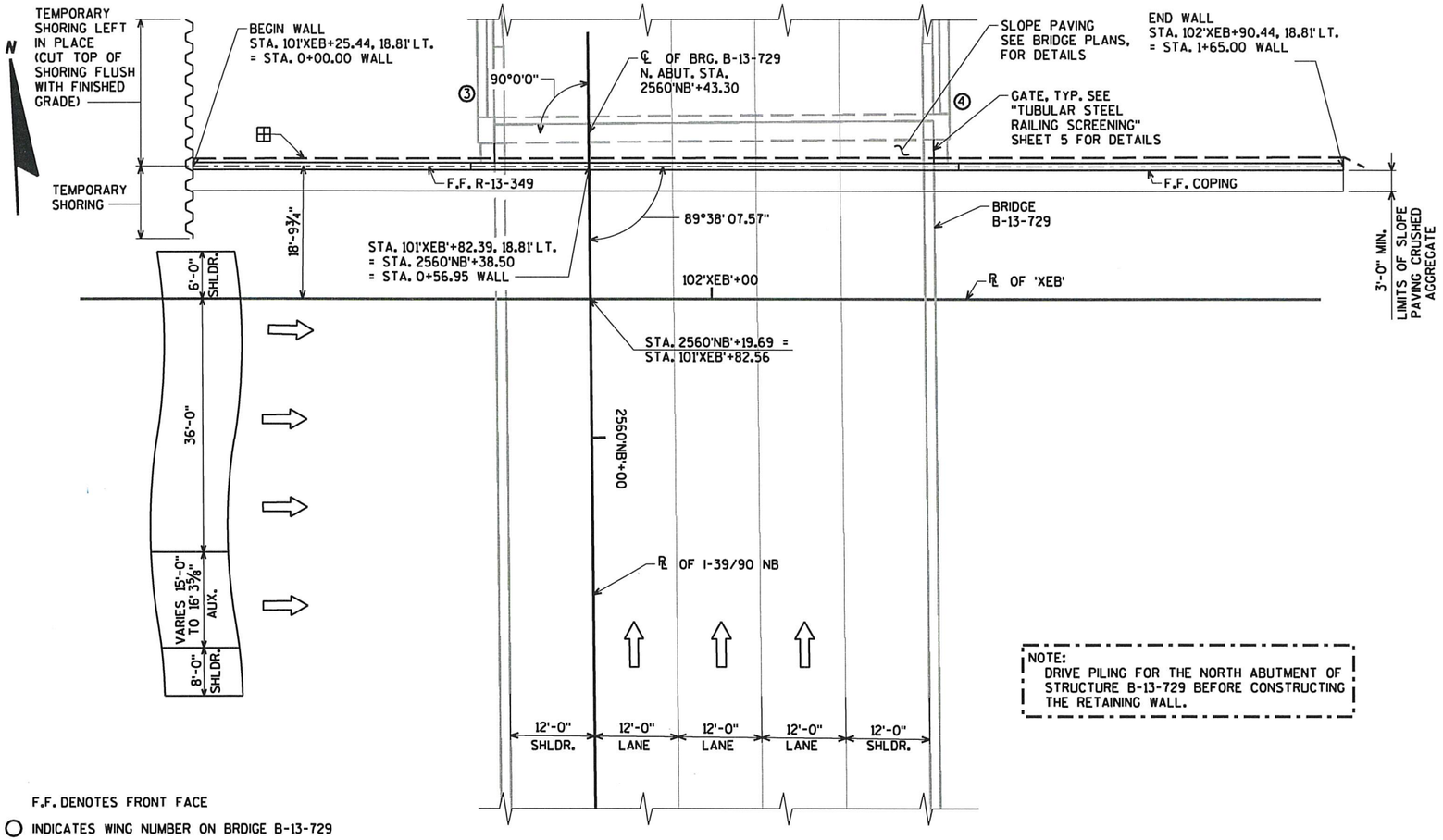


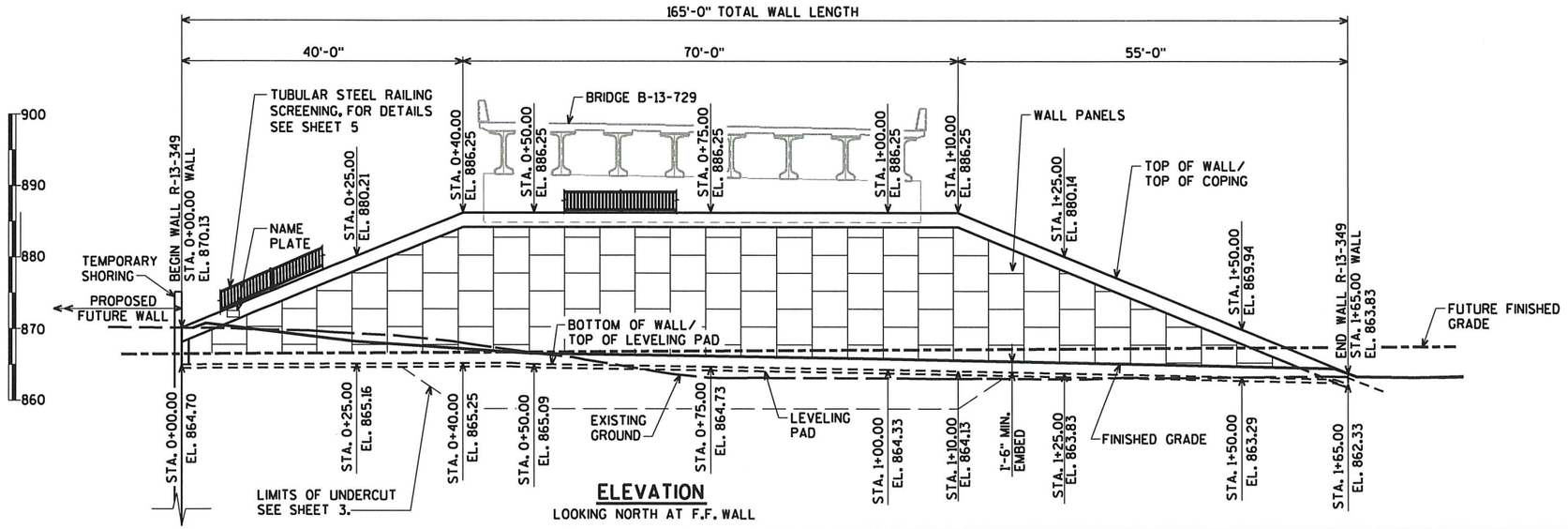
NOTE:
DRIVE PILING FOR THE NORTH ABUTMENT OF STRUCTURE B-13-729 BEFORE CONSTRUCTING THE RETAINING WALL.

F.F. DENOTES FRONT FACE

○ INDICATES WING NUMBER ON BRDIGE B-13-729

⊞ PIPE UNDERDRAIN WRAPPED, 6-INCH. SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT EAST END OF PIPE UNDERDRAIN AND CAP WEST END. SEE SHEET 3.

PLAN
MSE RETAINING WALL



ELEVATION
LOOKING NORTH AT F.F. WALL

STATE PROJECT NUMBER
1007-12-78

ALLOWABLE WALL SYSTEMS
WALL CONCRETE PANEL MSE

MATERIAL PROPERTIES
CONCRETE MASONRY (COPING) _____ f'_c = 3,500 P.S.I.

BAR STEEL REINFORCEMENT (GRADE 60) _____ f_y = 60,000 p.s.i.

GENERAL NOTES
DRAWINGS SHALL NOT BE SCALED.
BEVEL ALL EXPOSED EDGES OF CONCRETE ¾" UNLESS NOTED OTHERWISE.
BAR STEEL REINFORCEMENT SHALL HAVE 2" CLEAR COVER UNLESS OTHERWISE SHOWN OR NOTED.
ALL WALL STATIONING AND OFFSETS ARE GIVEN AT THE FRONT FACE OF THE WALL R-13-349.
THE EXISTING GROUND LINE IS THE UPPER LIMIT OF EXCAVATION FOR STRUCTURES.
COORDINATE THE CONSTRUCTION OF RETAINING WALL R-13-349 WITH THE NORTH ABUTMENT OF BRIDGE B-13-729.
ALL BAR STEEL REINFORCEMENT IN CAST-IN-PLACE CONCRETE IS TO BE EPOXY COATED.
THE PLAN QUANTITY FOR THE ITEM "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH" IS BASED ON A WALL HEIGHT MEASURED FROM THE TOP OF WALL TO THE BOTTOM OF WALL BASED ON THE GEOMETRY TABLE.
THE QUANTITY OF CONCRETE MASONRY, COATED REINFORCING STEEL AND RUBBERIZED MEMBRANE WATERPROOFING FOR THE CAST-IN-PLACE COPING IS INCIDENTAL TO BID ITEM "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH".
CONCRETE STAINING TO BE APPLIED TO EXPOSED AREAS OF COPING AND MSE WALL PANELS TO 1-FOOT ABOVE LEVELING PAD. COPING TO BE STAINED AMS STD. COLOR NUMBER 30140 AND WALL PANELS TO BE STAINED AMS STD. COLOR NUMBER 30372.
THE SOILS ENGINEER SHALL REVIEW THE FILL SUBSURFACE CONDITIONS PRIOR TO CONSTRUCTION OF THE WALL.
OVER-EXCAVATION BEYOND THE BOTTOM OF THE WALL IS PAID FOR UNDER THE BID ITEM "EXCAVATION FOR STRUCTURES RETAINING WALLS R-13-349".

LIST OF DRAWINGS
1. GENERAL PLAN
2. QUANTITIES & WALL DATA
3. WALL DETAILS
4. WALL DETAILS
5. TUBULAR STEEL RAILING SCREENING
6. SUBSURFACE EXPLORATION

BRIDGE OFFICE CONTACT:
WILLIAM DREHER
(608)-266-8489

CONSULTANT CONTACT:
KAREN WALDERA
(715)-834-3161

NO.	DATE	REVISION	BY

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher SDR 08/29/19
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE R-13-349

MSE WALL ALONG B-13-729 N. ABUT.

COUNTY	TOWN/~~CITY/VILLAGE~~
DANE	BLOOMING GROVE

DESIGN SPEC.
AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
KLW	ZSS	JLB/ZSS	KLW

GENERAL PLAN

SHEET 507 6

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STATE PROJECT NUMBER

1007-12-78

SOIL PARAMETERS

STRATUM LOCATIONS AND SOIL DESCRIPTIONS	TOTAL UNIT WEIGHT (PCF)	FRICTION ANGLE (DEGREES)	COHESION (PCF)
CONCRETE PAVEMENTS, SIDEWALKS, WALL PANELS	145	----	----
CRUSHED AGGREGATE BASE COURSE	135	42	0
SELECT CRUSHED MATERIAL	120	40	0
GRANULAR GRADE #1 OR #2	120	30	0
GRANULAR BACKFILL (REINFORCING ZONE OR BACKFILL)	120	30	0
RETAINED SOIL ⊛	135	30	0
BORING SB-4			
LEAN CLAY EL. 862.9 - EL. 861.9 ⊠	125	0	500
LEAN CLAY EL. 861.9 - EL. 858.7 ⊠	132	0	2,000
POORLY-GRADED SAND WITH SILT EL. 858.7 - EL. 854.9 ⊠	125	31	0
POORLY-GRADED SAND EL. 854.9 - EL. 848.7 ⊠	125	33	0
LEAN CLAY EL. 848.7 - EL. 845.9 ⊠	134	0	750
POORLY-GRADED SAND EL. 845.9 - EL. 840.9 ⊠	125	38	0
SILTY SAND WITH GRAVEL EL. 840.9 - EL. 835.9 ⊠	152	32	0
SILTY SAND WITH GRAVEL EL. 835.9 - EL. 831.4 ⊠	152	45	0
POORLY-GRADED SAND EL. 831.4 - EL. 828.9 ⊠	125	34	0
POORLY-GRADED SAND EL. 828.9 - EL. 825.9 ⊠	130	43	0
SILTY SAND WITH GRAVEL EL. 825.9 - EL. 813.9 ⊠	152	45	0
POORLY-GRADED SAND EL. 813.9 - EL. 810.9 ⊠	152	45	0
SILTY SAND WITH GRAVEL EL. 810.9 - EL. 803.2 ⊠	152	45	0
BORING RW-21			
SANDY SILT EL. 864.7- EL. 864.6 ⊠	120	25	0
SILTY GRAVEL WITH SAND EL. 864.6 - EL. 862.7 ⊠	143	33	0
SANDY LEAN CLAY WITH GRAVEL EL. 862.7 - EL. 861.7 ⊠	140	0	3,000
LEAN CLAY EL. 861.7 - EL. 858.2 ⊠	132	0	2,000
POORLY-GRADED SAND WITH SILT EL. 858.2 - EL. 852.7 ⊠	125	32	0
POORLY-GRADED SAND EL. 852.7 - EL. 847.7 ⊠	125	33	0
LEAN CLAY EL. 847.7 - EL. 840.7 ⊠	132	0	1,400
POORLY-GRADED SAND WITH SILT EL. 840.7 - EL. 837.7 ⊠	125	32	0
SILTY SAND WITH GRAVEL EL. 837.7 - EL. 835.2 ⊠	152	38	0
POORLY-GRADED SAND WITH SILT EL. 835.2 - EL. 834.7 ⊠	125	40	0

⊛ DESIGN WALL FOR THESE VALUES

WALL EXTERNAL & OVERALL STABILITY EVALUATION

DIMENSIONS	EVALUATED LOCATIONS		
WALL HEIGHT (FEET)	18.02	21.92	20.18
EXPOSED WALL HEIGHT (FEET)	16.52	20.42	18.68
MINIMUM LENGTH OF REINFORCEMENT (FEET) ◪	13	33	18
WALL STATION	0+32.50	1+00.00	1+15.00
BORING USED	RW-21 & SB-4	SB-4	SB-4
LIVE LOAD SURCHARGE (PSF)	100	240	100
DEAD LOAD SURCHARGE (PSF)	0	1,897	11
CAPACITY TO DEMAND RATIO (CDR)			
SLIDING (CDR>1.0)	1.1	1.2	1.2
ECCENTRICITY (CDR>1.0)	1.4	2.5	2.1
OVERALL STABILITY (CDR>1.0) ☆	----	1.2	----
BEARING RESISTANCE (CDR>1.0)	1.4	1.0	1.0
FACTORED BEARING RESISTANCE (PSF)	8,200	7,800	5,500

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	TOTAL
206.3000.705	EXCAVATION FOR STRUCTURES RETAINING WALLS R-13-349	LS	1
● 209.1500	BACKFILL GRANULAR GRADE 1	TON	145
● 312.0110	SELECT CRUSHED MATERIAL	TON	1,370
511.1200.705	TEMPORARY SHORING R-13-349	SF	100
511.2200.705	TEMPORARY SHORING LEFT IN PLACE R-13-349	SF	255
513.4091	RAILING TUBULAR SCREENING	LF	165
517.1010.S.705	CONCRETE STAINING R-13-349	SF	2,590
604.0500	SLOPE PAVING CRUSHED AGGREGATE	SY	55
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	175
SPV.0165.705	WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH R-13-349	SF	2,675
	NON-BID ITEMS		
	PREFORMED JOINT FILLER	SIZE	½", ¾"
	NON-BITUMINOUS JOINT SEALER	SIZE	½", ¾"
	EXPANDED POLYSTYRENE	SIZE	1"

● REQUIRED FOR UNDERCUT. SEE DETAIL ON SHEET 3.

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 REINFORCMENT LENGTHS BASED ON OVERALL STABILITY PERFORMED BY THE WALL DESIGNER. COMPOUND STABILITY IS THE CONTRACTORS RESPONSIBILITY.

⊠ STRATUM LOCATIONS & SOIL DESCRIPTIONS AT EACH BORING LOCATION.

F.F. DENOTES FRONT FACE

GEOMETRY TABLE

WALL STATION	ROADWAY STATION	OFFSET TO F.F. OF WALL	TOP OF WALL ELEV.	FINISHED GRADE ELEV.	BOTTOM OF WALL ELEV.
0+00.00	101'XEB'+25.44	18.81'	870.13	870.13	864.70
0+25.00	101'XEB'+50.44	18.81'	880.21	868.23	865.16
0+40.00	101'XEB'+65.44	18.81'	886.25	867.23	865.25
0+50.00	101'XEB'+75.44	18.81'	886.25	866.59	865.09
0+75.00	102'XEB'+00.44	18.81'	886.25	866.23	864.73
1+00.00	102'XEB'+25.44	18.81'	886.25	865.83	864.33
1+10.00	102'XEB'+35.44	18.81'	886.25	865.63	864.13
1+25.00	102'XEB'+50.44	18.81'	880.14	865.33	863.83
1+50.00	102'XEB'+75.44	18.81'	869.94	864.79	863.29
1+65.00	102'XEB'+90.44	18.81'	863.83	863.83	862.33

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 CONCRETE PANEL MECHANICALLY STABILIZED EARTH".

PLANS, ELEVATIONS, AND DETAILS SHOWN ON THESE PLANS 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 SHALL BE DESIGNED USING THE ELEVATIONS GIVEN ON SHEET 1& 2.

DESIGN FOR RETAINING WALL TO PROVIDE FOR FINISHED GRADE SLOPED BEHIND WALL AS SHOWN.

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.

CONTRACTOR, WALL SUPPLIER, AND RAILING FABRICATOR SHALL COORDINATE RAILING POST SPACING, MSE PANELS, AND COPING JOINTS.

THE DESIGN OF THE WALL IN FRONT OF THE ABUTMENT SHALL INCLUDE THE HORIZONTAL EARTH LOADS AND 240 PSF LIVE LOAD SURCHARGE ACTING ON THE BACK OF THE ABUTMENT BELOW THE BEAM SEATS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-13-349

DRAWN BY JLB/ZSS | PLANS CK'D. KLW

QUANTITIES & WALL DATA

SHEET 2 OF 6
508

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

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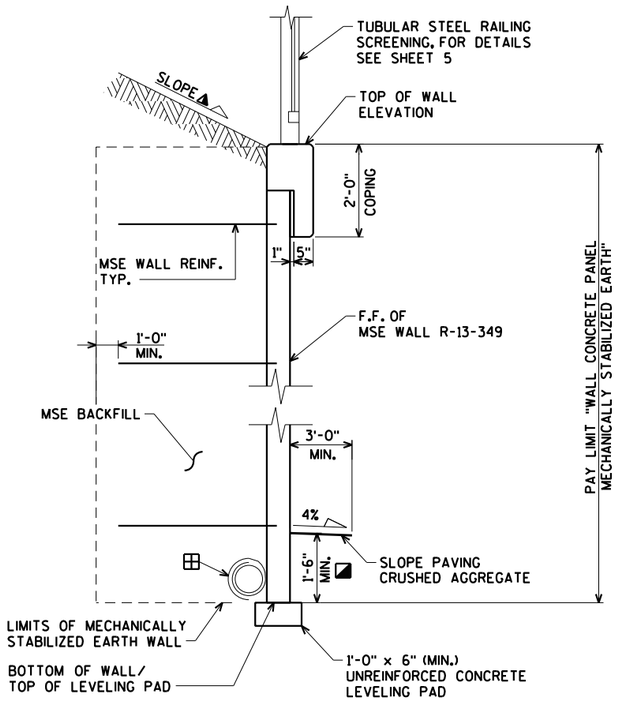
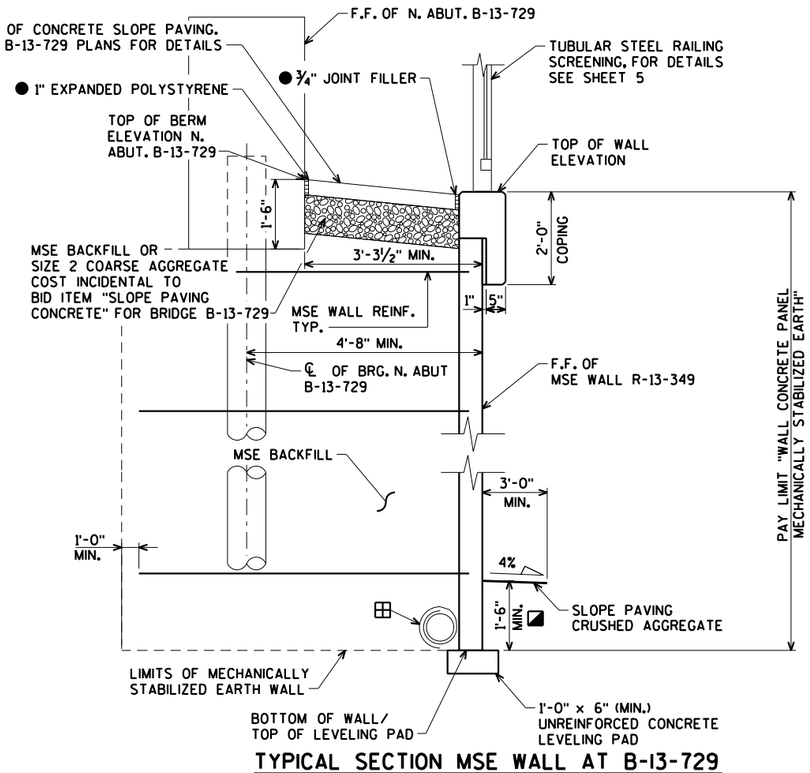
STATE PROJECT NUMBER

1007-12-78



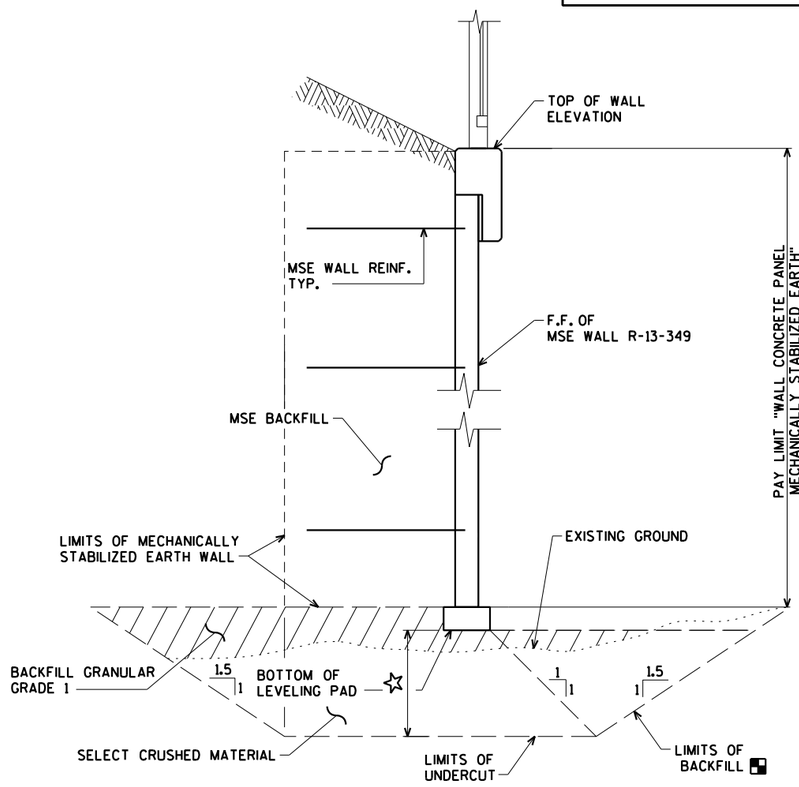
TYPICAL SECTION MSE WALL

LOOKING EAST
WALL STA. 0+00.00 TO 0+40.00, 1+10.00 TO 1+65.00



TYPICAL SECTION MSE WALL AT B-13-729

LOOKING EAST
WALL STA. 0+40.00 TO 1+10.00



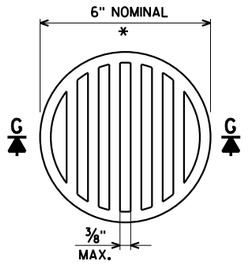
UNDERCUT/BACKFILL DETAIL

LOOKING EAST

ENTIRELY REMOVE THE GRAY LEAN CLAY BELOW THE RETAINING WALL FOUNDATION TO EXPOSE GRANULAR BROWN SAND WITH SILT AT THE BOTTOM OF THE EXCAVATION.

■ BACKFILL PAY LIMITS. BACKFILL BEYOND BACKFILL PAY LIMITS SHALL BE INCIDENTAL TO WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH R-13-349. LIMITS OF EXCAVATION SHALL BE DETERMINED BY THE CONTRACTOR.

☆ UNDERCUT DEPTH VARIES ALONG WALL. (USE 1.5:1 SLOPE BETWEEN BOTTOM ELEVATIONS.) WALL STA. 0+40.00 TO 1+10.00, DEPTH VARIES = 5'-10⅜" TO 4'-9" (BOTTOM EL. 858.88)



SECTION G-G

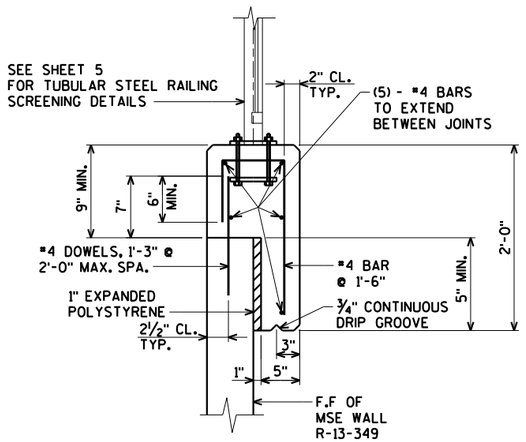
* DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING. ORIENT SO SLOTS ARE VERTICAL.

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.

RODENT SHIELD DETAIL

NOTE:
DRIVE PILING FOR THE NORTH ABUTMENT OF STRUCTURE B-13-729 AFTER UNDERCUT AND BACKFILL IS COMPLETED BUT BEFORE CONSTRUCTING THE RETAINING WALL.



COPING DETAIL

F.F. DENOTES FRONT FACE

● SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF FILLER AND EXPANDED POLYSYRENE WITH NON-STAINING GREY NON-BITUMINOUS JOINT SEALER (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE).

◪ MINIMUM EMBEDMENT BASED ON SITE SPECIFIC PARAMETERS (1'-6" MINIMUM FOR ALL WALLS ON LEVEL GROUND). FIELD EMBEDMENTS SHALL MEET OR EXCEED THE MINIMUM EMBEDMENT. FIELD EMBEDMENTS BELOW MINIMUM EMBEDMENT SHALL NOT BE INCLUDED IN THE PAY LIMITS.

⊞ PIPE UNDERDRAIN WRAPPED 6-INCH. SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT EAST END OF PIPE UNDERDRAIN AND CAP WEST END. SEE DETAIL ON THIS SHEET.

▲ SLOPE BEHIND MSE WALL VARIES. SEE ROADWAY PLANS FOR MORE INFORMATION.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-13-349

DRAWN BY JLB/ZSS | PLANS CK'D. KLW

WALL DETAILS

SHEET 3 OF 6
509

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
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www.AyresAssociates.com

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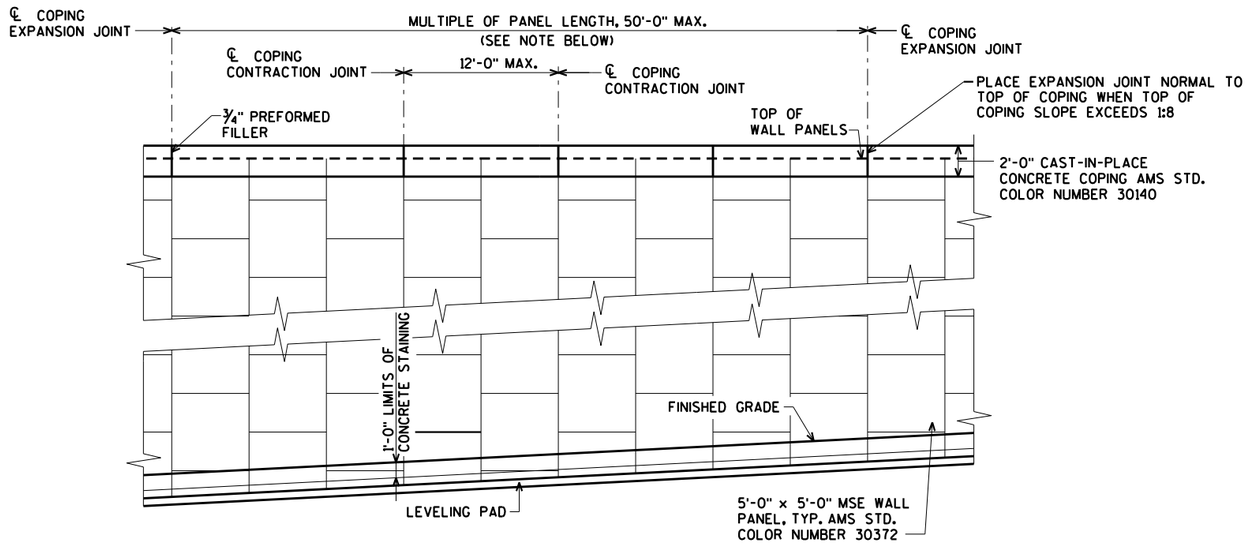
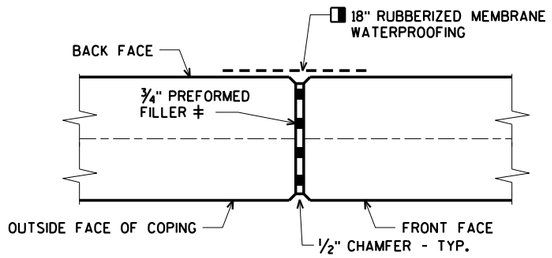


CAST-IN-PLACE COPING PARTIAL ELEVATION

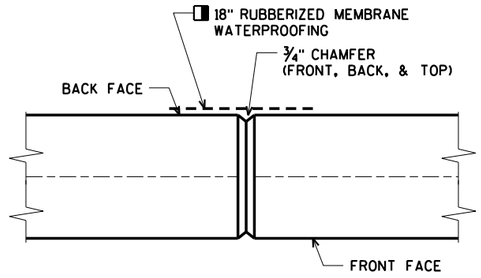
(LOOKING AT FRONT FACE OF WALL)

NOTE:
ALL JOINTS SHALL BE LOCATED AS SHOWN ON WALL ELEVATIONS AND MUST COINCIDE WITH PANEL JOINTS ON FRONT FACE.



COPING EXPANSION JOINT

DO NOT RUN BAR STEEL THRU JOINT
MAXIMUM SPACING OF JOINT = 50'

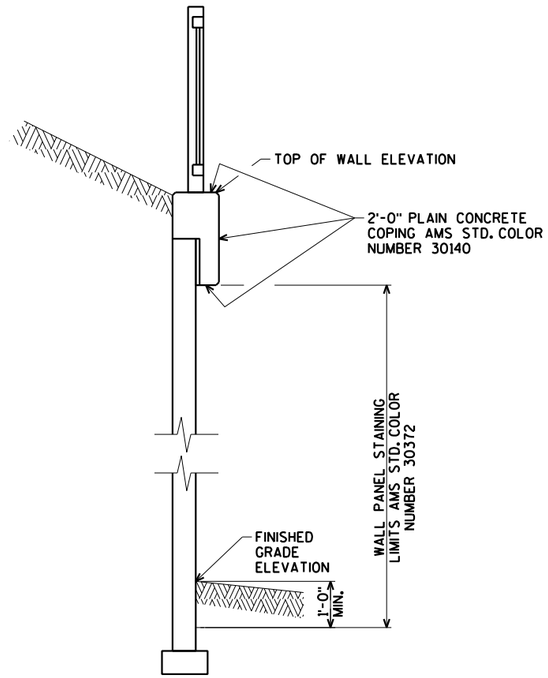


COPING CONTRACTION JOINT

DO NOT RUN BAR STEEL THRU JOINT
MAXIMUM SPACING OF JOINT = 12'

◨ 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.)



SECTION THRU WALL

SHOWING CONCRETE STAINING

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-13-349

DRAWN BY JLB/ZSS | PLANS CK'D. KLW

WALL DETAILS

SHEET 4 OF 6
510

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
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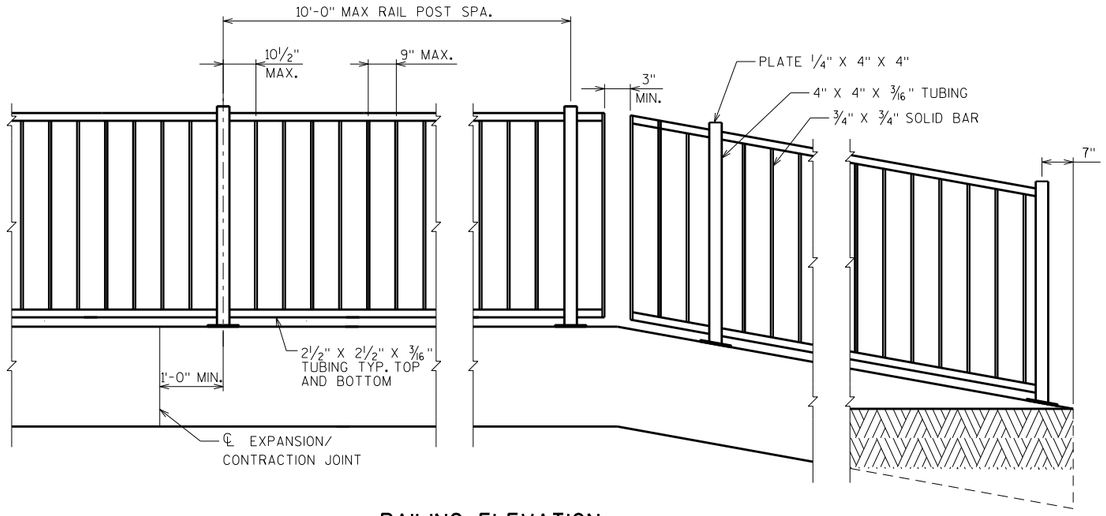
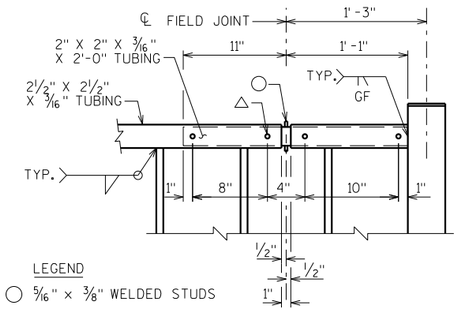
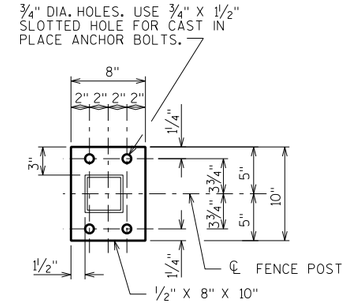


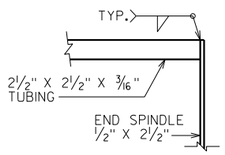
RAILING ELEVATION



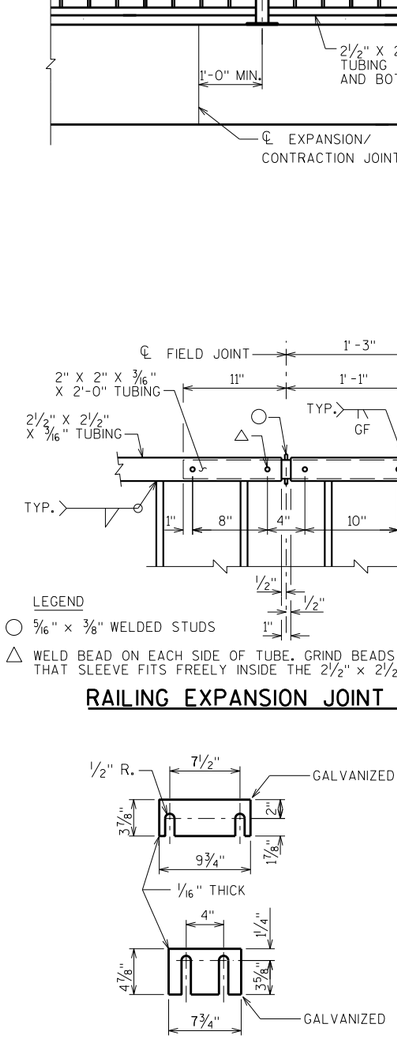
RAILING EXPANSION JOINT DETAIL



BASE PLATE

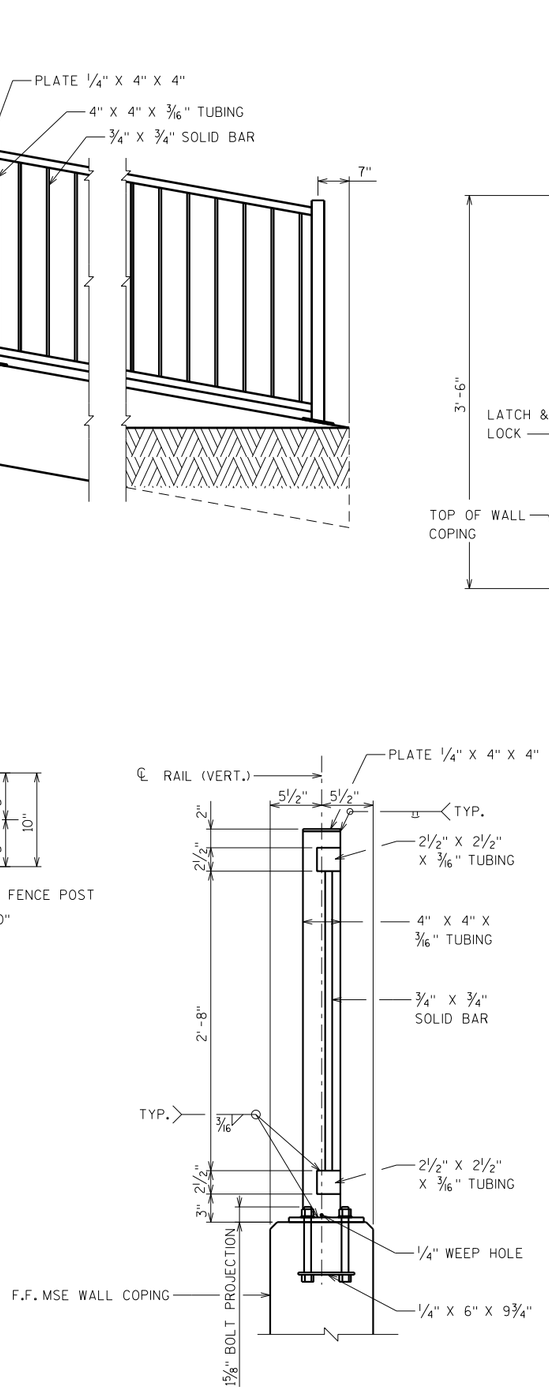


RAIL DETAIL

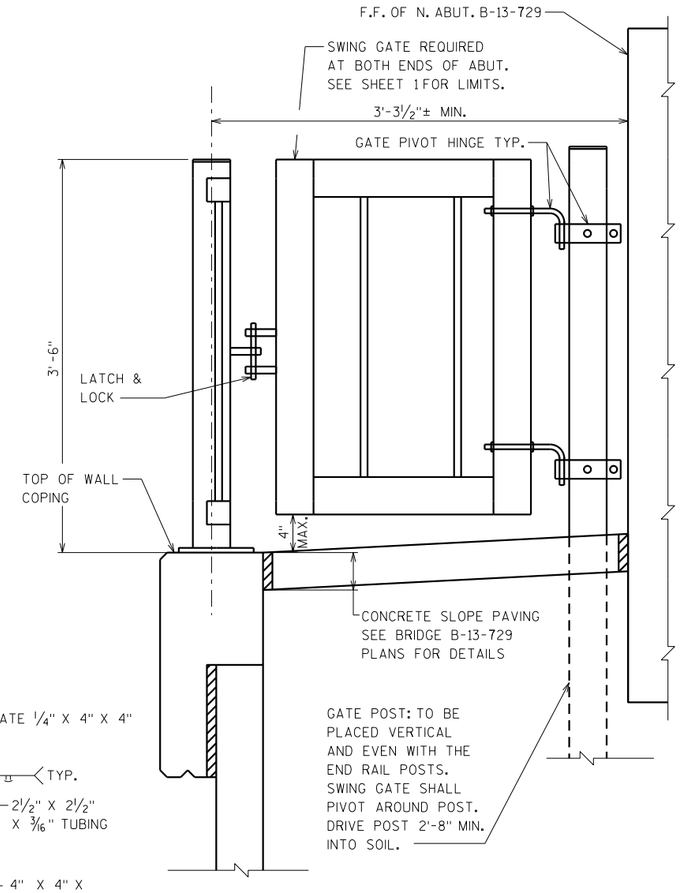


SHIM PLATE DETAILS

TWO SHIMS OF EACH SIZE REQUIRED PER POST



SECTION THRU RAILING



SECTION THRU WALL AT GATES

NOTE:
ALL POSTS, GATES AND ASSOCIATED HARDWARE SHALL BE PAINTED AMS STD. COLOR NO. 30140, BROWN SPECIAL (FEDERAL COLOR NO. 30140) AND SHALL BE PAID FOR UNDER THE BID ITEM "RAILING TUBULAR SCREENING".

NOTES

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.

STRUCTURAL TUBING SHALL CONFORM TO ASTM A500, GRADE B. PLATES, ANGLES, BARS AND SHIMS SHALL CONFORM TO ASTM A709, GRADE 36.

ANCHORAGES SHALL BE ACCURATELY PLACED TO PROVIDE CORRECT ALIGNMENT OF RAILING. SET POSTS NORMAL TO GRADE.

ALL POST SPACINGS ARE TAKEN HORIZONTAL ALONG CENTERLINE OF RAILING AT BASE OF POST.

STEEL SHIMS SHALL BE PROVIDED & USED UNDER BASE PLATES WHERE REQUIRED FOR ALIGNMENT, AND SHALL BE GALVANIZED.

CAULK AROUND PERIMETER OF BASE PLATES AND FILL PORTION OF SLOTTED HOLES AROUND ANCHOR BOLTS WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER.

CUT BOTTOM OF POST TO MAKE VERTICAL IN TRANSVERSE DIRECTION.

ANCHOR BOLTS, NUTS AND WASHERS SHALL BE EITHER STAINLESS STEEL OR ASTM 307. IF 307 IS USED, ANCHOR BOLTS, NUTS, AND WASHERS SHALL BE GALVANIZED. ✿

THE BID ITEM SHALL BE "RAILING TUBULAR SCREENING" WHICH SHALL INCLUDE ALL ITEMS SHOWN.

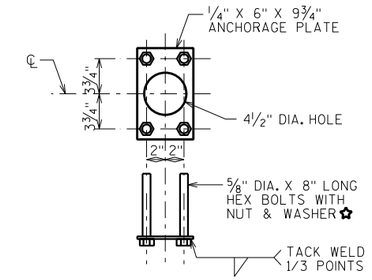
RAILING SHALL BE FABRICATED IN LENGTHS THAT INCLUDE NOT MORE THAN 3 POSTS.

VENT HOLES SHALL BE DRILLED IN MEMBERS AS REQUIRED TO FACILITATE GALVANIZING AND DRAINAGE.

ALL RAILING MATERIAL 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. 30140, BROWN SPECIAL. (FEDERAL COLOR NO. 30140)

F.F. DENOTES FRONT FACE.



ANCHORAGE DETAIL

✿ALTERNATIVE ANCHORAGE: ADHESIVE ANCHORS ⅝-INCH. EMBED 7" IN CONCRETE. ADHESIVE ANCHORS SHALL CONFORM TO SECTION 502.2.12 OF THE STANDARD SPECIFICATIONS.

NOTE: ANCHOR PLATE NOT REQUIRED WHEN ADHESIVE ANCHORS ARE USED.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE R-13-349

DRAWN BY JLB/ZSS | PLANS CK'D. KLW

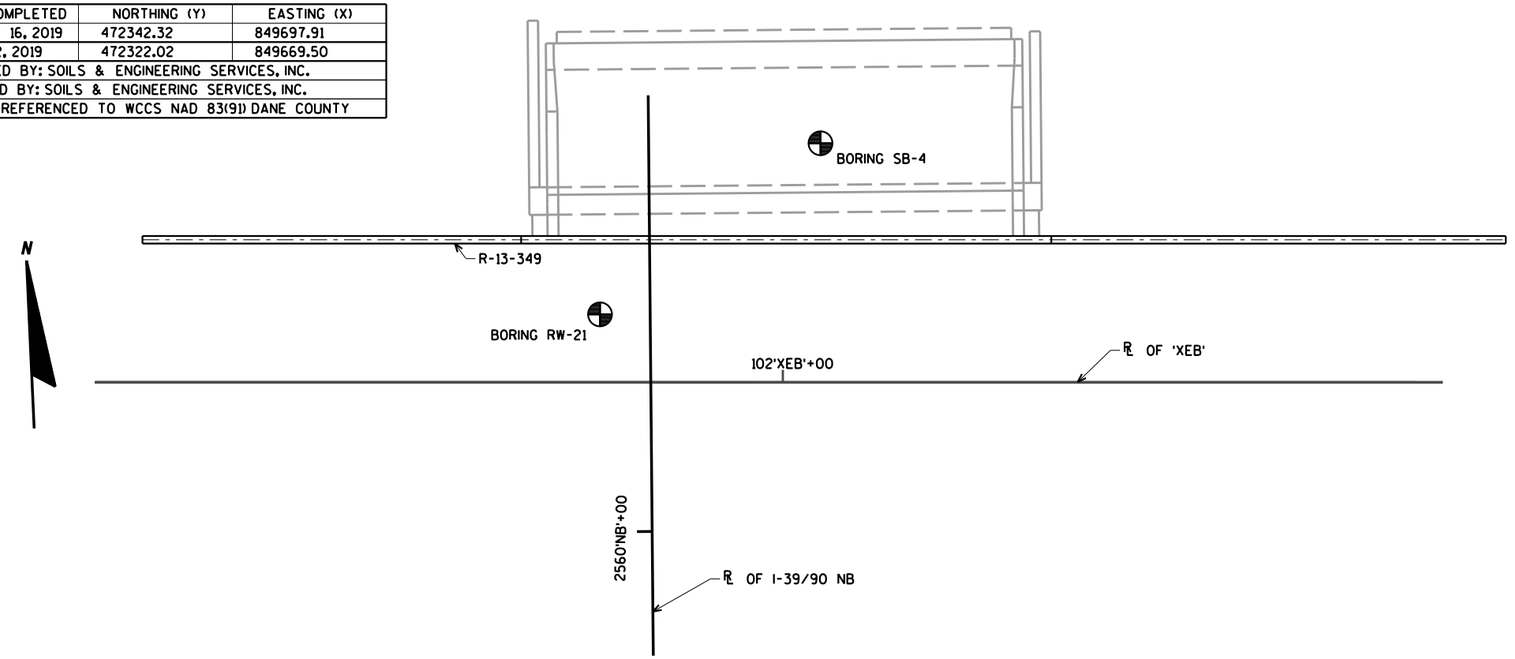
TUBULAR STEEL RAILING SCREENING

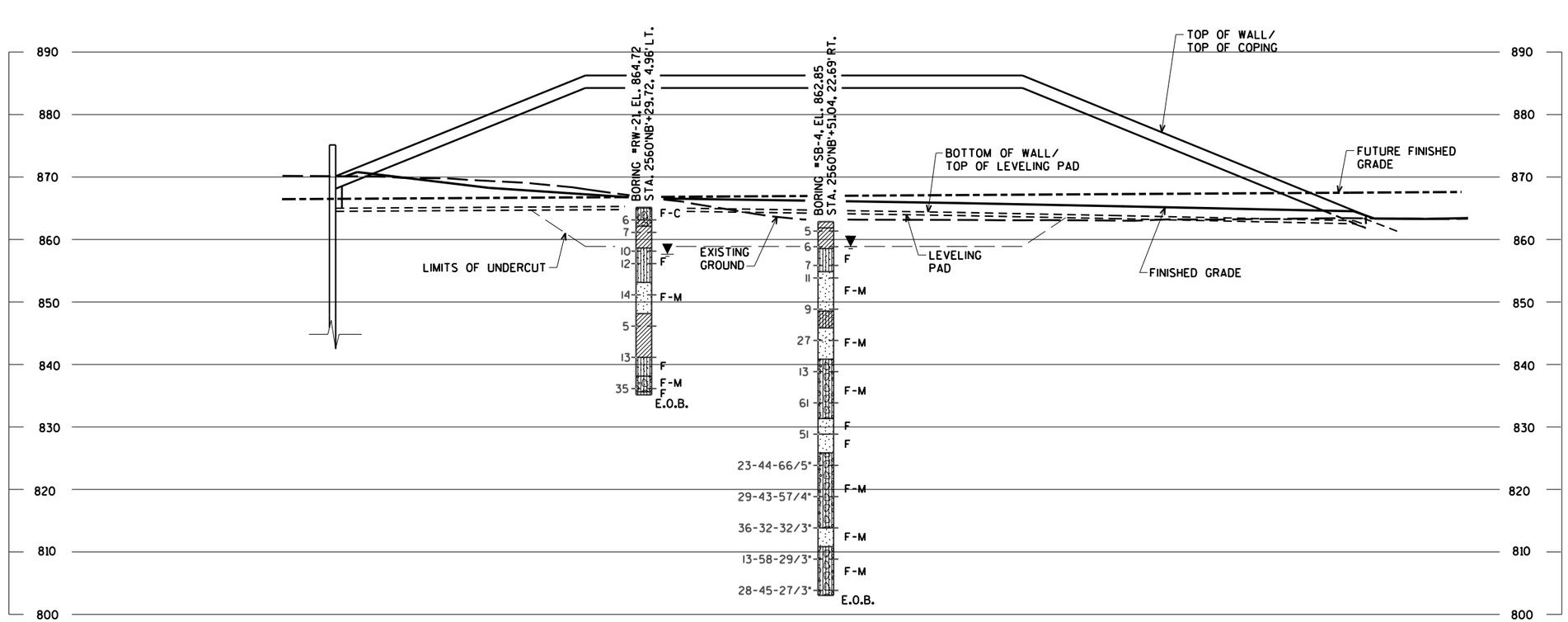
SHEET 5 OF 6
511

8

8

BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
SB-4	JANUARY 16, 2019	472342.32	849697.91
RW-21	APRIL 22, 2019	472322.02	849669.50
BORINGS COMPLETED BY: SOILS & ENGINEERING SERVICES, INC.			
REPORT COMPLETED BY: SOILS & ENGINEERING SERVICES, INC.			
ALL COORDINATES REFERENCED TO WCCS NAD 83(91) DANE COUNTY			





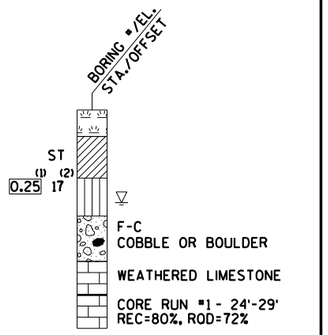
STATE PROJECT NUMBER

1007-12-78

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-13-349

DRAWN BY JLB/ZSS | PLANS CK'D. KLW

SUBSURFACE EXPLORATION

SHEET 6 OF 6
512

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7/9/2019

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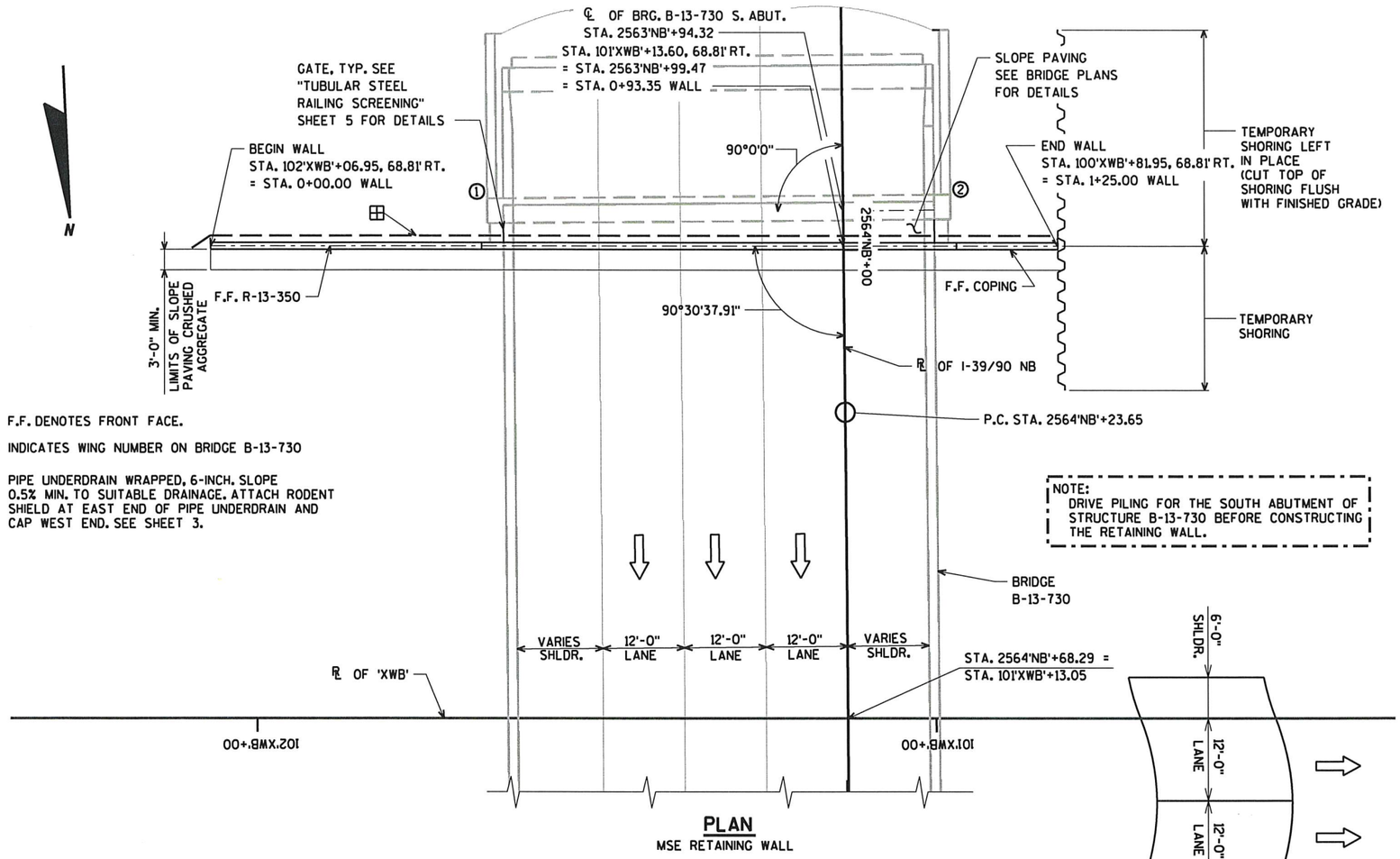
CHECKED BY:
BACK CHECKED BY:
CORRECTED BY:

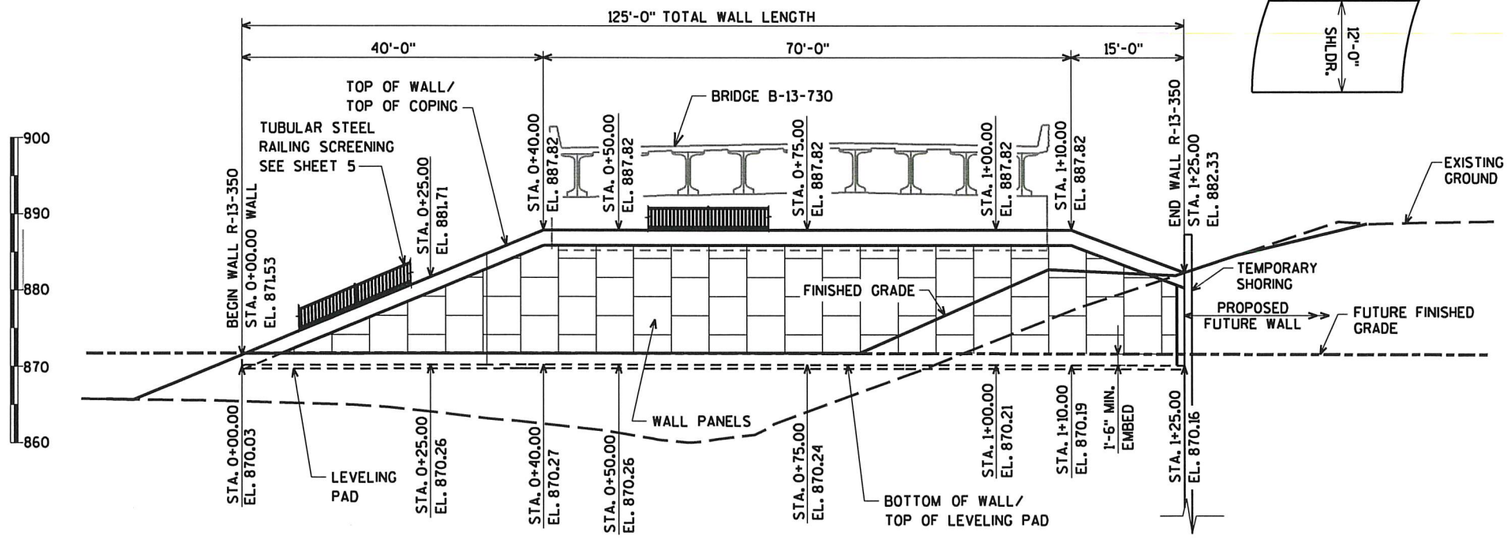


F.F. DENOTES FRONT FACE.

○ INDICATES WING NUMBER ON BRIDGE B-13-730

⊞ PIPE UNDERDRAIN WRAPPED, 6-INCH. SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT EAST END OF PIPE UNDERDRAIN AND CAP WEST END. SEE SHEET 3.

PLAN
MSE RETAINING WALL



ELEVATION
LOOKING SOUTH AT F.F. WALL

STATE PROJECT NUMBER

1007-12-78

ALLOWABLE WALL SYSTEMS

WALL CONCRETE PANEL MSE

MATERIAL PROPERTIES

CONCRETE MASONRY (COPING) _____ f'_c = 3,500 P.S.I.

BAR STEEL REINFORCEMENT (GRADE 60) _____ f_y = 60,000 p.s.i.

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.
BEVEL ALL EXPOSED EDGES OF CONCRETE ¾" UNLESS NOTED OTHERWISE.
BAR STEEL REINFORCEMENT SHALL HAVE 2" CLEAR COVER UNLESS OTHERWISE SHOWN OR NOTED.
ALL WALL STATIONING AND OFFSETS ARE GIVEN AT THE FRONT FACE OF THE WALL R-13-350.
THE EXISTING GROUND LINE IS THE UPPER LIMIT OF EXCAVATION FOR STRUCTURES.
COORDINATE THE CONSTRUCTION OF RETAINING WALL R-13-350 WITH THE SOUTH ABUTMENT OF BRIDGE B-13-730.
ALL BAR STEEL REINFORCEMENT IN CAST-IN-PLACE CONCRETE IS TO BE EPOXY COATED.
THE PLAN QUANTITY FOR THE ITEM "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH" IS BASED ON A WALL HEIGHT MEASURED FROM THE TOP OF WALL TO THE BOTTOM OF WALL BASED ON THE GEOMETRY TABLE.
THE QUANTITY OF CONCRETE MASONRY, COATED REINFORCING STEEL, AND RUBBERIZED MEMBRANE WATERPROOFING FOR THE CAST-IN-PLACE COPING IS INCIDENTAL TO BID ITEM "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH".
CONCRETE STAINING TO BE APPLIED TO EXPOSED AREAS OF COPING AND MSE WALL PANELS TO 1-FOOT ABOVE LEVELING PAD. COPING TO BE STAINED AMS STD. COLOR NUMBER 30140 AND WALL PANELS TO BE STAINED AMS STD. COLOR NUMBER 30372.
THE SOILS ENGINEER SHALL REVIEW THE FILL SUBSURFACE CONDITIONS PRIOR TO CONSTRUCTION OF THE WALL.
OVER-EXCAVATION BEYOND THE BOTTOM OF THE WALL IS PAID FOR UNDER THE BID ITEM "EXCAVATION FOR STRUCTURES RETAINING WALLS R-13-350".

LIST OF DRAWINGS

1. GENERAL PLAN
2. QUANTITIES & WALL DATA
3. WALL DETAILS
4. WALL DETAILS
5. TUBULAR STEEL RAILING SCREENING
6. SUBSURFACE EXPLORATION

BRIDGE OFFICE CONTACT:
WILLIAM DREHER
(608)-266-8489

CONSULTANT CONTACT:
KAREN WALDERA
(715)-834-3161

NO.	DATE	REVISION	BY

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher SDR 08/29/19
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE R-13-350

MSE WALL ALONG B-13-730 S. ABUT.

COUNTY	TOWN/~~CITY/VILLAGE~~
DANE	BLOOMING GROVE

DESIGN SPEC.
AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
KLW	ZSS	JLB/ZSS	KLW

GENERAL PLAN

SHEET 513 6

8

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$PRFNAME$
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WALL EXTERNAL & OVERALL STABILITY EVALUATION

DIMENSIONS	EVALUATED LOCATIONS		
WALL HEIGHT (FEET)	14.51	17.57	13.99
EXPOSED WALL HEIGHT (FEET)	16.01	17.07	12.49
MINIMUM LENGTH OF REINFORCEMENT (FEET) ■	11	25	10
WALL STATION	0+32.50	0+57.50	1+20.00
BORING USED	SB-5	SB-5	RW-22 & SB-5
LIVE LOAD SURCHARGE (PSF)	100	270	100
DEAD LOAD SURCHARGE (PSF)	0	1,944	0
CAPACITY TO DEMAND RATIO (CDR)			
SLIDING (CDR>1.0)	1.1	1.0	1.0
ECCENTRICITY (CDR>1.0)	1.6	1.9	1.4
OVERALL STABILITY (CDR>1.0) ☆	----	1.4	----
BEARING RESISTANCE (CDR>1.0)	1.5	1.4	3.0
FACTORED BEARING RESISTANCE (PSF)	6,800	10,100	13,600

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	TOTAL
206.3000.706	EXCAVATION FOR STRUCTURES RETAINING WALLS R-13-350	LS	1
511.1200.706	TEMPORARY SHORING R-13-350	SF	330
511.2200.706	TEMPORARY SHORING LEFT IN PLACE R-13-350	SF	530
513.4091	RAILING TUBULAR SCREENING	LF	125
517.1010.S.706	CONCRETE STAINING R-13-350	SF	1,775
604.0500	SLOPE PAVING CRUSHED AGGREGATE	SY	45
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	135
SPV.0165.706	WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH R-13-350	SF	1,835
	NON-BID ITEMS		
	PREFORMED JOINT FILLER	SIZE	½", ¾"
	NON-BITUMINOUS JOINT SEALER	SIZE	½", ¾"
	EXPANDED POLYSTYRENE	SIZE	1"

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 REINFORCMENT LENGTHS BASED ON OVERALL STABILITY PERFORMED BY THE WALL DESIGNER. COMPOUND STABILITY IS THE CONTRACTORS RESPONSIBILITY.

⊗ STRATUM LOCATIONS & SOIL DESCRIPTIONS AT EACH BORING LOCATION.

F.F. DENOTES FRONT FACE

GEOMETRY TABLE

WALL STATION	ROADWAY STATION	OFFSET TO F.F. OF WALL	TOP OF WALL ELEV.	FINISHED GRADE ELEV.	BOTTOM OF WALL ELEV.
0+00.00	102'XWB'+06.95	68.81'	871.53	871.53	870.03
0+25.00	101'XWB'+81.95	68.81'	881.71	871.76	870.26
0+40.00	101'XWB'+66.95	68.81'	887.82	871.77	870.27
0+50.00	101'XWB'+56.95	68.81'	887.82	871.76	870.26
0+75.00	101'XWB'+31.95	68.81'	887.82	871.74	870.24
1+00.00	101'XWB'+06.95	68.81'	887.82	879.69	870.21
1+10.00	100'XWB'+96.95	68.81'	887.82	882.59	870.19
1+25.00	100'XWB'+81.95	68.81'	882.33	882.33	870.16

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 CONCRETE PANEL MECHANICALLY STABILIZED EARTH".

PLANS, ELEVATIONS, AND DETAILS SHOWN ON THESE PLANS 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 SHALL BE DESIGNED USING THE ELEVATIONS GIVEN ON SHEETS 1 AND 2.

DESIGN FOR RETAINING WALL TO PROVIDE FOR FINISHED GRADE SLOPED BEHIND WALL AS SHOWN.

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.

CONTRACTOR, WALL SUPPLIER, AND RAILING FABRICATOR SHALL COORDINATE RAILING POST SPACING, MSE PANELS, AND COPING JOINTS.

THE DESIGN OF THE WALL IN FRONT OF THE ABUTMENT SHALL INCLUDE THE HORIZONTAL EARTH LOADS AND 240 PSF LIVE LOAD SURCHARGE ACTING ON THE BACK OF THE ABUTMENT BELOW THE BEAM SEATS.

SOIL PARAMETERS

STRATUM LOCATIONS AND SOIL DESCRIPTIONS	TOTAL UNIT WEIGHT (PCF)	FRICTION ANGLE (DEGREES)	COHESION (PCF)
CONCRETE PAVEMENTS, SIDEWALKS, WALL PANELS	145	----	----
CRUSHED AGGREGATE BASE COURSE	135	42	0
SELECT CRUSHED MATERIAL	120	40	0
GRANULAR BACKFILL (REINFORCING ZONE OR BACKFILL)	120	30	0
RETAINED SOIL ⊛	135	30	0
BORING SB-5			
LEAN CLAY WITH SAND EL. 864.9 - EL. 861.9 ⊗	120	0	2,000
POORLY-GRADED SAND EL. 861.9 - EL. 852.9 ⊗	125	33	0
SILTY SAND EL. 852.9 - EL. 842.9 ⊗	125	29	0
SILTY SAND WITH GRAVEL EL. 842.9 - EL. 837.4 ⊗	152	33	0
SILTY SAND WITH GRAVEL EL. 837.4 - EL. 831.4 ⊗	152	35	0
POORLY-GRADED SAND WITH SILT EL. 831.4 - EL. 829.9 ⊗	125	35	0
CLAYEY SAND WITH GRAVEL EL. 829.9 - EL. 822.9 ⊗	146	36	0
SILTY SAND WITH GRAVEL EL. 822.9 - EL. 812.9 ⊗	152	35	0
POORLY-GRADED SAND WITH GRAVEL EL. 812.9 - EL. 807.9 ⊗	125	36	0
SILTY SAND WITH GRAVEL EL. 807.9 EL. 805.9 ⊗	152	39	0
POORLY-GRADED SAND WITH GRAVEL EL. 805.9 - EL. 802.9 ⊗	152	41	0
SILTY SAND WITH GRAVEL EL. 802.9 - EL. 792.9 ⊗	152	41	0
SILTY SAND WITH GRAVEL EL. 792.9 - EL. 787.9 ⊗	152	38	0
SILTY SAND WITH GRAVEL EL. 787.9 - EL. 782.9 ⊗	152	34	0
SILTY SAND WITH GRAVEL EL. 782.9 - EL. 779.9 ⊗	152	41	0
BORING RW-22			
SANDY SILT EL. 881.7 - EL. 880.7 ⊗	120	25	0
SILTY SAND WITH GRAVEL EL. 880.7 - EL. 874.7 ⊗	143	31	0
SILTY SAND WITH GRAVEL EL. 874.7 - EL. 869.7 ⊗	143	35	0
SILTY SAND WITH GRAVEL AND COBBLES EL. 869.7 - EL. 865.2 ⊗	143	42	0
POORLY-GRADED SAND EL. 865.2 - EL. 862.7 ⊗	115	32	0
LEAN CLAY EL. 862.7 - EL. 859.7 ⊗	132	0	3,500
LEAN CLAY EL. 859.7 - EL. 857.2 ⊗	132	0	1,300
SANDY LEAN CLAY EL. 857.2 - EL. 856.2 ⊗	130	0	1,300
POORLY-GRADED SAND EL. 856.2 - EL. 851.7 ⊗	125	34	0

⊛ DESIGN WALL FOR THESE VALUES

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-13-350

DRAWN BY JLB/ZSS | PLANS CK'D. KLW

QUANTITIES & WALL DATA

SHEET 2 OF 6
514

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

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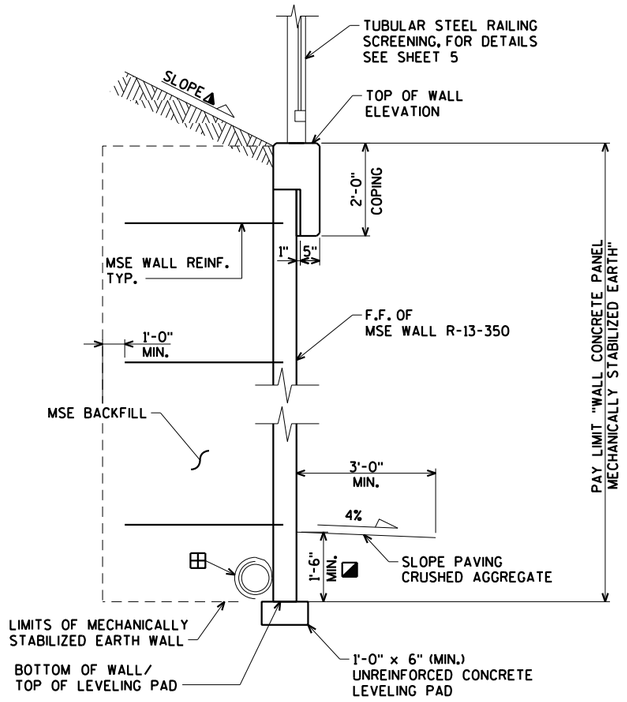
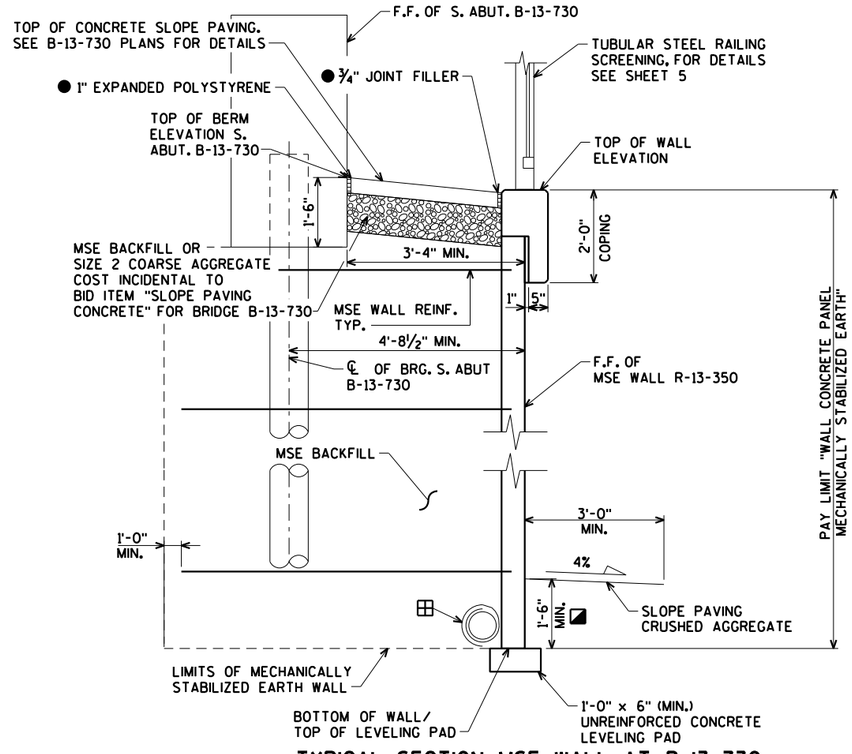
STATE PROJECT NUMBER

1007-12-78



TYPICAL SECTION MSE WALL

LOOKING WEST
WALL STA. 0+00.00 TO 0+40.00, 1+10.000 TO 1+25.00



TYPICAL SECTION MSE WALL AT B-13-730

LOOKING WEST
WALL STA. 0+40.00 TO 1+10.00

NOTE:
DRIVE PILING FOR THE SOUTH ABUTMENT OF STRUCTURE B-13-730 AFTER REMOVING TOPSOIL AND VEGETATION IS COMPLETED BUT BEFORE CONSTRUCTING THE RETAINING WALL.

ENTIRELY REMOVE ALL TOPSOIL AND VEGETATION TO EXPOSE THE GRANULAR SAND AND SILTY SAND AT THE BOTTOM OF THE EXCAVATION.

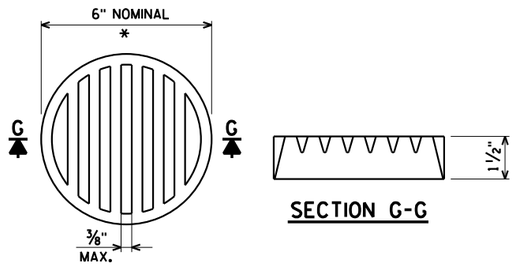
F.F. DENOTES FRONT FACE

● SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF FILLER AND EXPANDED POLYSYRENE WITH NON-STAINING GREY NON-BITUMINOUS JOINT SEALER (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE).

◪ MINIMUM EMBEDMENT BASED ON SITE SPECIFIC PARAMETERS (1'-6" MINIMUM FOR ALL WALLS ON LEVEL GROUND). FIELD EMBEDMENTS SHALL MEET OR EXCEED THE MINIMUM EMBEDMENT. FIELD EMBEDMENTS BELOW MINIMUM EMBEDMENT SHALL NOT BE INCLUDED IN THE PAY LIMITS.

⊞ PIPE UNDERDRAIN WRAPPED 6-INCH. SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT EAST END OF PIPE UNDERDRAIN AND CAP WEST END. SEE DETAIL ON THIS SHEET.

⚠ SLOPE BEHIND MSE WALL VARIES. SEE ROADWAY PLANS FOR MORE INFORMATION.



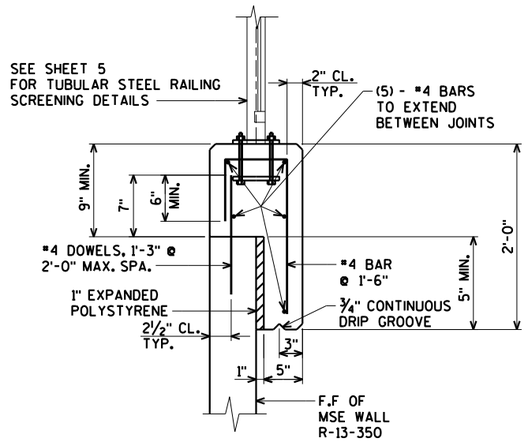
SECTION G-G

* 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.

RODENT SHIELD DETAIL



COPING DETAIL

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-13-350

DRAWN BY JLB/ZSS | PLANS CK'D. KLW

WALL DETAILS

SHEET 3 OF 6
515

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

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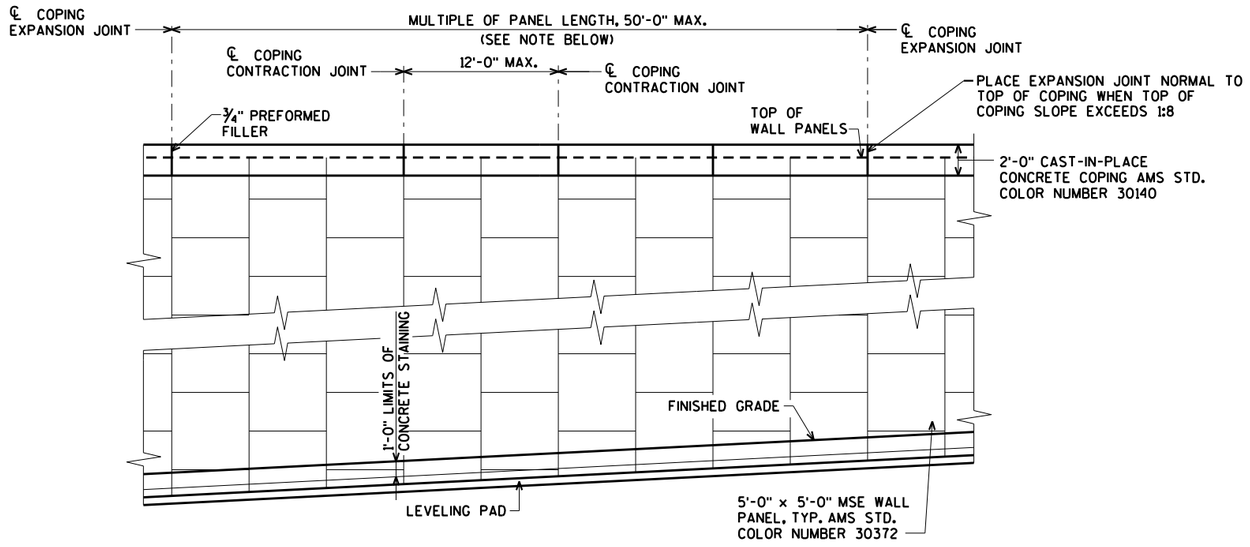
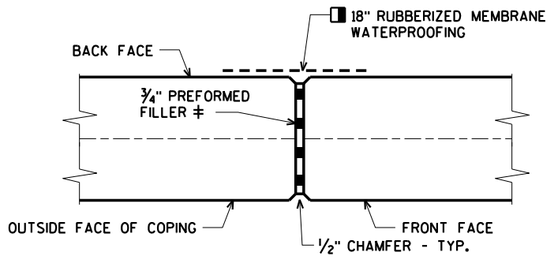
$PRFNAME$
V:±Structures-EC±41-0660.0X - IH-39 Dane Partners General Bridge Information±RETAINING WALLS±B-13-730±R-13-350 SOUTH±Final±R-13



CAST-IN-PLACE COPING PARTIAL ELEVATION

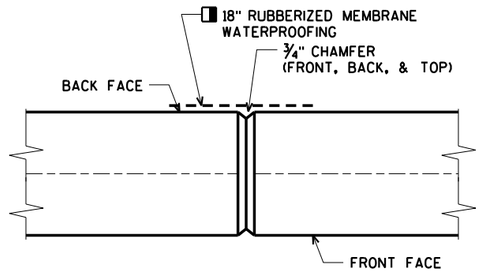
(LOOKING AT FRONT FACE OF WALL)

NOTE:
ALL JOINTS SHALL BE LOCATED AS SHOWN ON WALL ELEVATIONS AND MUST COINCIDE WITH PANEL JOINTS ON FRONT FACE.



COPING EXPANSION JOINT

DO NOT RUN BAR STEEL THRU JOINT
MAXIMUM SPACING OF JOINT = 50'

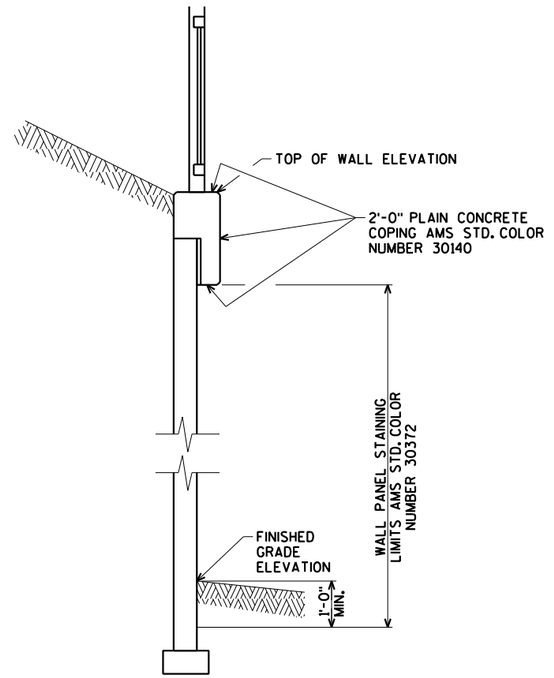


COPING CONTRACTION JOINT

DO NOT RUN BAR STEEL THRU JOINT
MAXIMUM SPACING OF JOINT = 12'

◨ 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.)



SECTION THRU WALL

SHOWING CONCRETE STAINING

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-13-350

DRAWN BY JLB/ZSS | PLANS CK'D. KLW

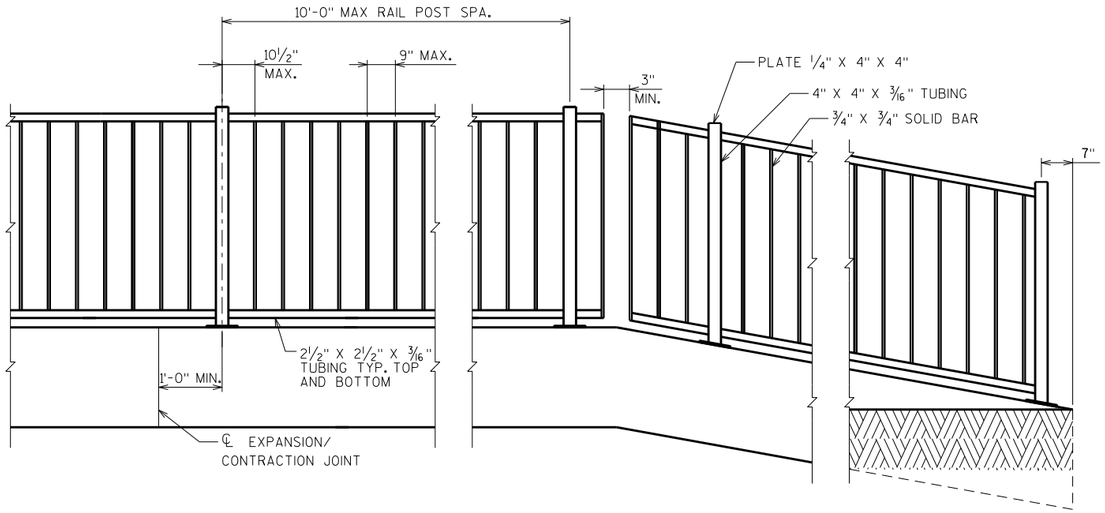
WALL DETAILS

SHEET 4 OF 6
516

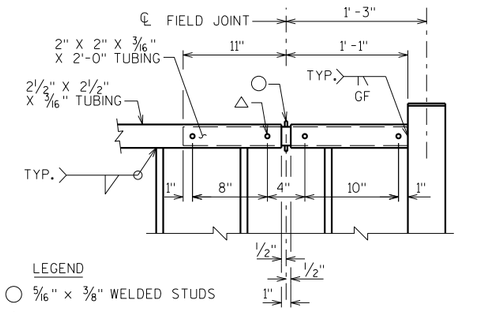
ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

STATE PROJECT NUMBER

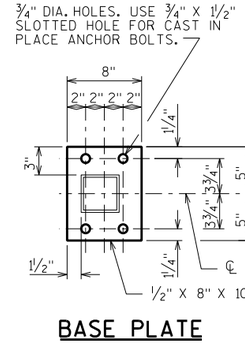
1007-12-18



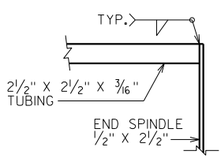
RAILING ELEVATION



RAILING EXPANSION JOINT DETAIL



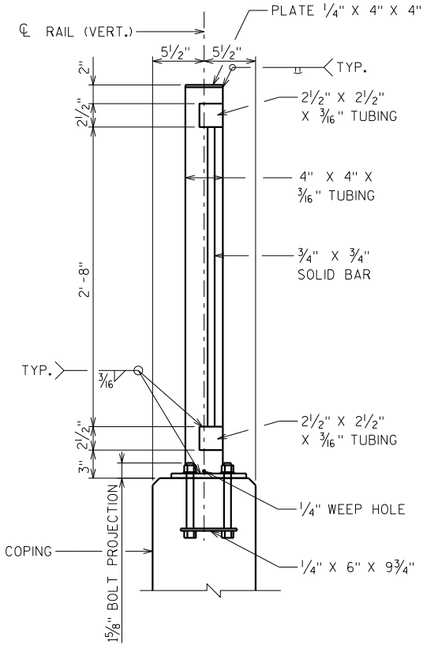
BASE PLATE



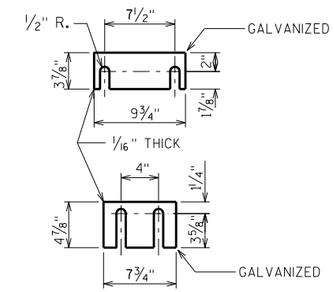
RAIL DETAIL

SECTION THRU WALL AT GATES

NOTE:
ALL POSTS, GATES AND ASSOCIATED HARDWARE SHALL BE PAINTED AMS STD. COLOR NO. 30140, BROWN SPECIAL (FEDERAL COLOR NO. 30140) AND SHALL BE PAID FOR UNDER THE BID ITEM "RAILING TUBULAR SCREENING".



SECTION THRU RAILING



SHIM PLATE DETAILS

TWO SHIMS OF EACH SIZE REQUIRED PER POST

NOTES

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.

STRUCTURAL TUBING SHALL CONFORM TO ASTM A500, GRADE B. PLATES, ANGLES, BARS AND SHIMS SHALL CONFORM TO ASTM A709, GRADE 36.

ANCHORAGES SHALL BE ACCURATELY PLACED TO PROVIDE CORRECT ALIGNMENT OF RAILING. SET POSTS NORMAL TO GRADE.

ALL POST SPACINGS ARE TAKEN HORIZONTAL ALONG CENTERLINE OF RAILING AT BASE OF POST.

STEEL SHIMS SHALL BE PROVIDED & USED UNDER BASE PLATES WHERE REQUIRED FOR ALIGNMENT, AND SHALL BE GALVANIZED.

CAULK AROUND PERIMETER OF BASE PLATES AND FILL PORTION OF SLOTTED HOLES AROUND ANCHOR BOLTS WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER.

CUT BOTTOM OF POST TO MAKE VERTICAL IN TRANSVERSE DIRECTION.

ANCHOR BOLTS, NUTS AND WASHERS SHALL BE EITHER STAINLESS STEEL OR ASTM 307. IF 307 IS USED, ANCHOR BOLTS, NUTS, AND WASHERS SHALL BE GALVANIZED. ✿

THE BID ITEM SHALL BE "RAILING TUBULAR SCREENING" WHICH SHALL INCLUDE ALL ITEMS SHOWN.

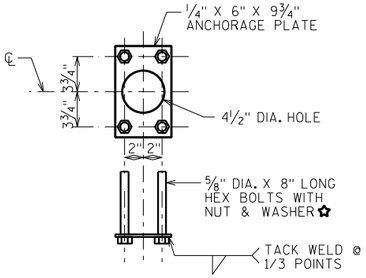
RAILING SHALL BE FABRICATED IN LENGTHS THAT INCLUDE NOT MORE THAN 3 POSTS.

VENT HOLES SHALL BE DRILLED IN MEMBERS AS REQUIRED TO FACILITATE GALVANIZING AND DRAINAGE.

ALL RAILING MATERIAL 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. 30140, BROWN SPECIAL. (FEDERAL COLOR NO. 30140)

F.F. DENOTES FRONT FACE.



ANCHORAGE DETAIL

✿ALTERNATIVE ANCHORAGE: ADHESIVE ANCHORS ⅝-INCH. EMBED 7" IN CONCRETE. ADHESIVE ANCHORS SHALL CONFORM TO SECTION 502.2.12 OF THE STANDARD SPECIFICATIONS.

NOTE: ANCHOR PLATE NOT REQUIRED WHEN ADHESIVE ANCHORS ARE USED.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE R-13-350

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TUBULAR STEEL RAILING SCREENING

SHEET 5 OF 6

517

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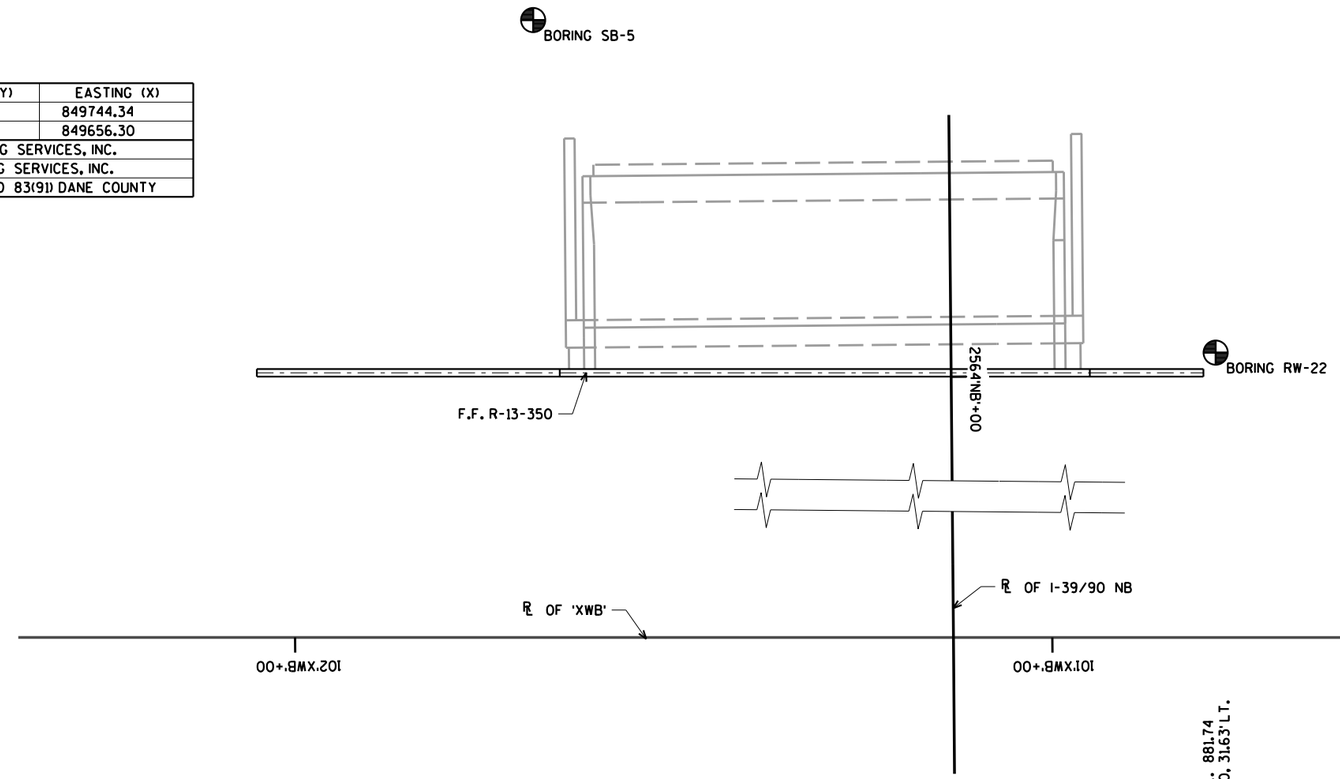
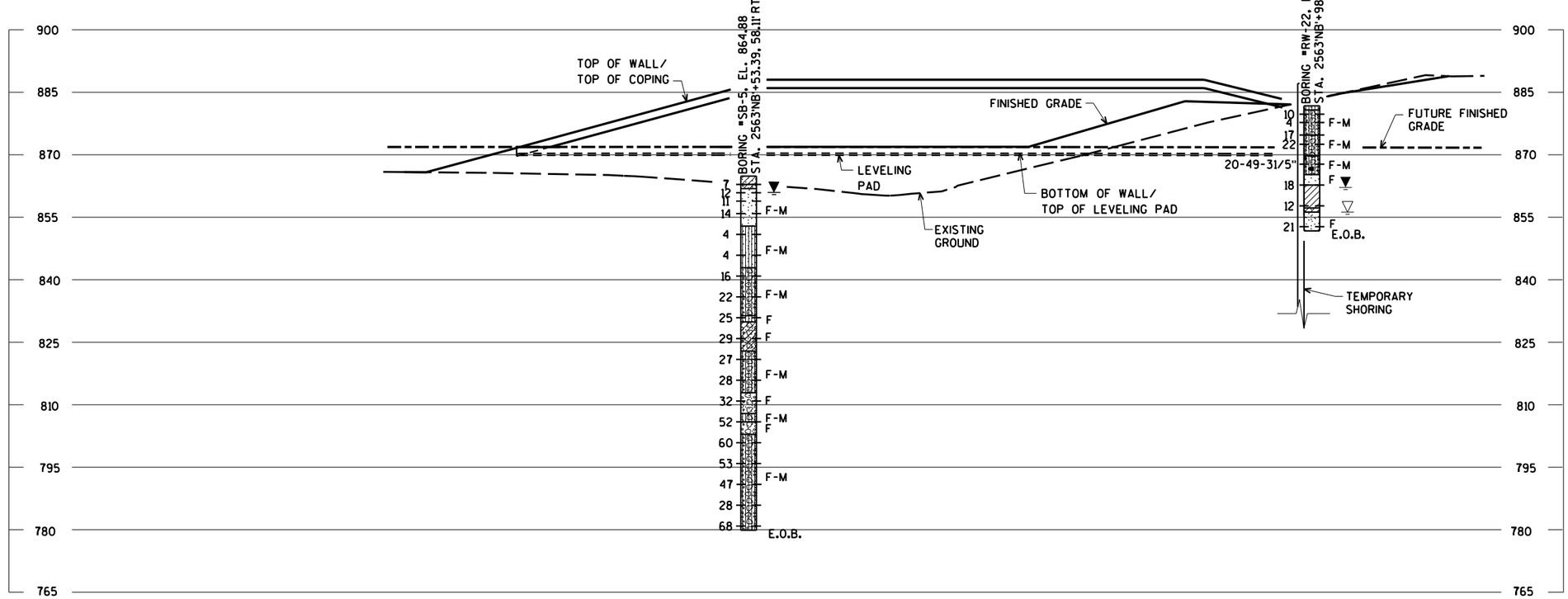
BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
SB-5	JANUARY 15, 2019	472643.17	849744.34
RW-22	APRIL 22, 2019	472691.13	849656.30
BORINGS COMPLETED BY: SOILS & ENGINEERING SERVICES, INC.			
REPORT COMPLETED BY: SOILS & ENGINEERING SERVICES, INC.			
ALL COORDINATES REFERENCED TO WCCS NAD 83(91) DANE COUNTY			





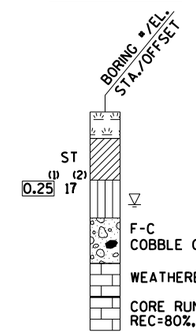
STATE PROJECT NUMBER

1007-12-78

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-13-350

DRAWN BY JLB/ZSS | PLANS CK'D. KLW

SUBSURFACE EXPLORATION

SHEET 6 OF 6
518

8

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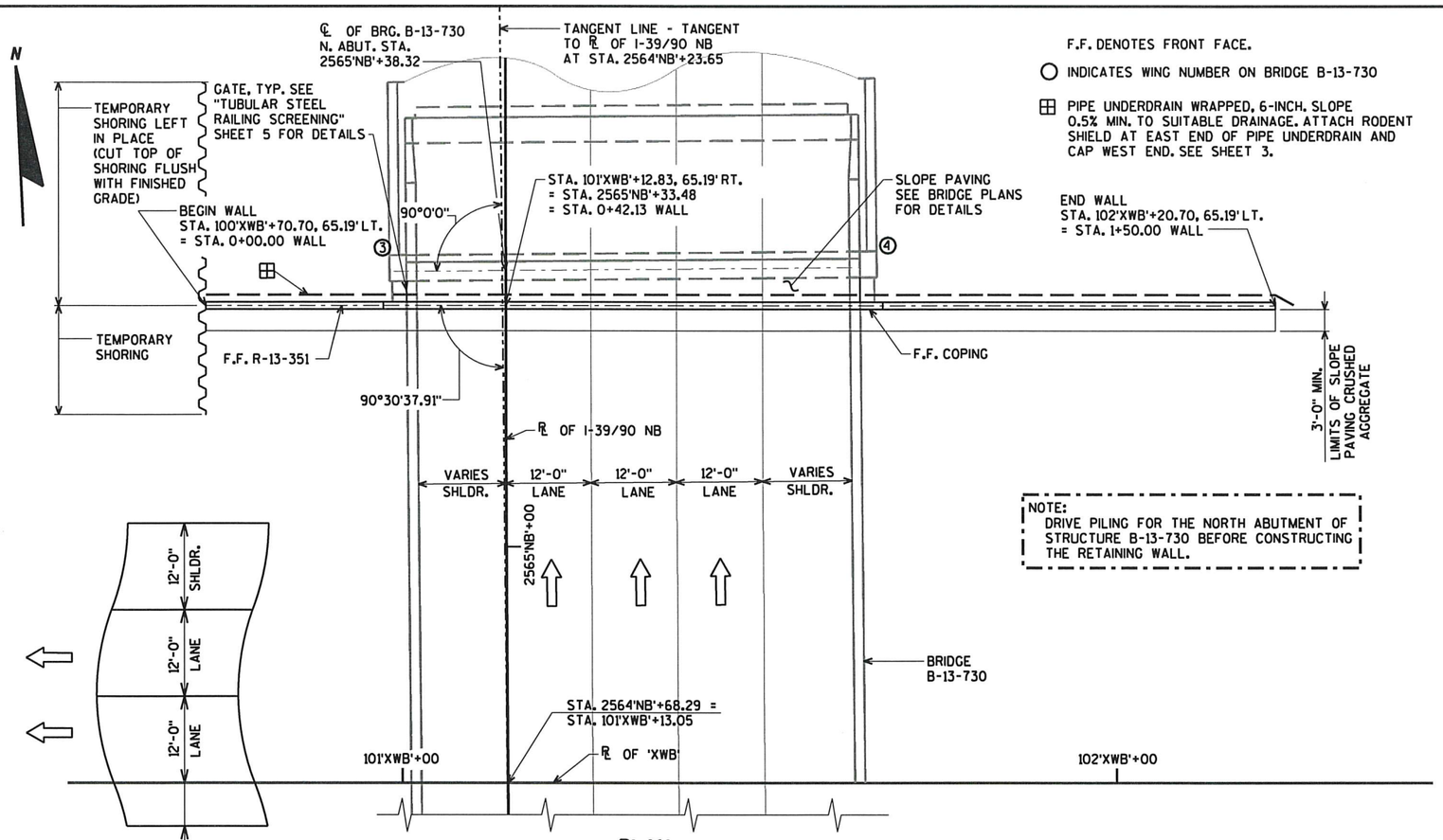
$PRFNAME$
V:\Structures-EC#41-0660.0X - IH-39 Dane Partners General Bridge Information\RETAINING WALLS\B
DATE:
DATE:
DATE:
CHECKED BY:
BACK CHECKED BY:
CORRECTED BY:



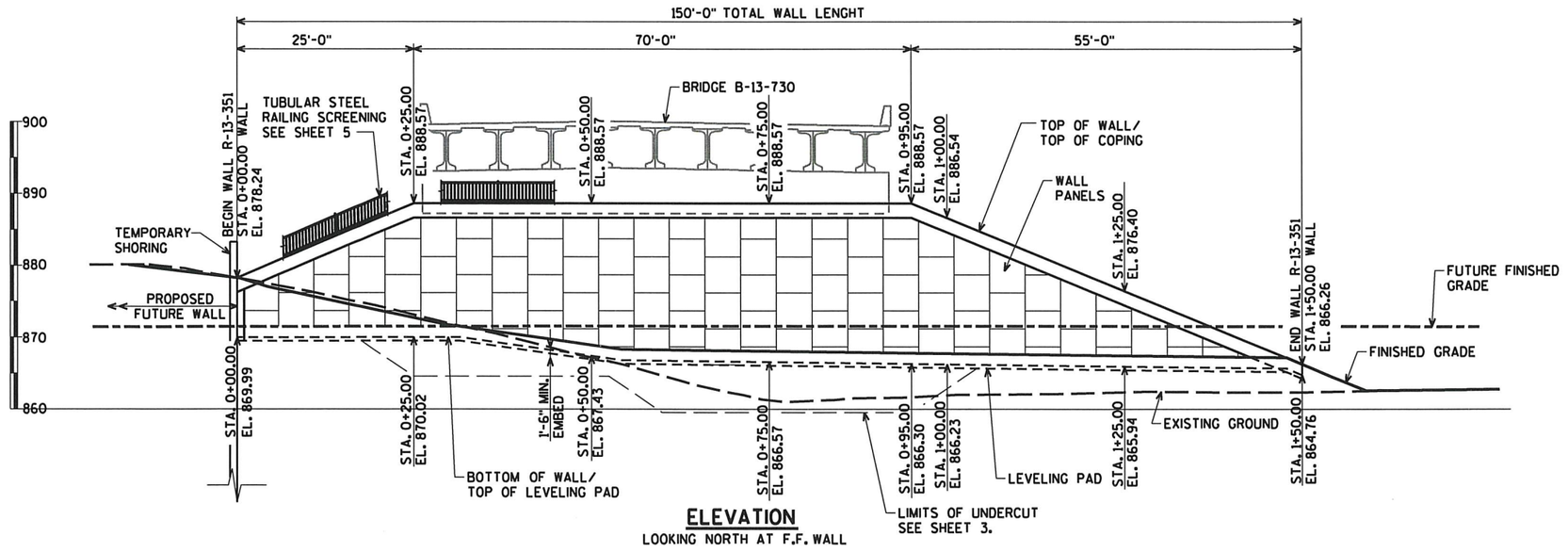
F.F. DENOTES FRONT FACE.

○ INDICATES WING NUMBER ON BRIDGE B-13-730

⊞ PIPE UNDERDRAIN WRAPPED, 6-INCH. SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT EAST END OF PIPE UNDERDRAIN AND CAP WEST END. SEE SHEET 3.

NOTE:
DRIVE PILING FOR THE NORTH ABUTMENT OF STRUCTURE B-13-730 BEFORE CONSTRUCTING THE RETAINING WALL.

PLAN
MSE RETAINING WALL



ELEVATION
LOOKING NORTH AT F.F. WALL

STATE PROJECT NUMBER

1007-12-78

ALLOWABLE WALL SYSTEMS

WALL CONCRETE PANEL MSE

MATERIAL PROPERTIES

CONCRETE MASONRY (COPING) _____ f'_c = 3,500 P.S.I.

BAR STEEL REINFORCEMENT (GRADE 60) _____ f_y = 60,000 p.s.i.

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.
BEVEL ALL EXPOSED EDGES OF CONCRETE ¾" UNLESS NOTED OTHERWISE.
BAR STEEL REINFORCEMENT SHALL HAVE 2" CLEAR COVER UNLESS OTHERWISE SHOWN OR NOTED.
ALL WALL STATIONING AND OFFSETS ARE GIVEN AT THE FRONT FACE OF THE WALL R-13-351.
THE EXISTING GROUND LINE IS THE UPPER LIMIT OF EXCAVATION FOR STRUCTURES.
COORDINATE THE CONSTRUCTION OF RETAINING WALL R-13-351 WITH THE NORTH ABUTMENT OF BRIDGE B-13-730.
ALL BAR STEEL REINFORCEMENT IN CAST-IN-PLACE CONCRETE IS TO BE EPOXY COATED.
THE PLAN QUANTITY FOR THE ITEM "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH" IS BASED ON A WALL HEIGHT MEASURED FROM THE TOP OF WALL TO THE BOTTOM OF WALL BASED ON THE GEOMETRY TABLE.
THE QUANTITY OF CONCRETE MASONRY, COATED REINFORCING STEEL, AND RUBBERIZED MEMBRANE WATERPROOFING FOR THE CAST-IN-PLACE COPING IS INCIDENTAL TO BID ITEM "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH".
CONCRETE STAINING TO BE APPLIED TO EXPOSED AREAS OF COPING AND MSE WALL PANELS TO 1-FOOT ABOVE LEVELING PAD. COPING TO BE STAINED AMS STD. COLOR NUMBER 30140 AND WALL PANELS TO BE STAINED AMS STD. COLOR NUMBER 30372.
THE SOILS ENGINEER SHALL REVIEW THE FILL SUBSURFACE CONDITIONS PRIOR TO CONSTRUCTION OF THE WALL.
OVER-EXCAVATION BEYOND THE BOTTOM OF THE WALL IS PAID FOR UNDER THE BID ITEM "EXCAVATION FOR STRUCTURES RETAINING WALLS R-13-351".

LIST OF DRAWINGS

1. GENERAL PLAN
2. QUANTITIES & WALL DATA
3. WALL DETAILS
4. WALL DETAILS
5. TUBULAR STEEL RAILING SCREENING
6. SUBSURFACE EXPLORATION

WISCONSIN
KAREN L. WALDERA
E-39158
TAYLOR
WI
PROFESSIONAL ENGINEER
7-30-19

NO.	DATE	REVISION	BY

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher SDR 08/29/19
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE R-13-351

MSE WALL ALONG B-13-730 N. ABUT.

COUNTY	TOWN/~~CITY/VILLAGE~~
DANE	BLOOMING GROVE

DESIGN SPEC.
AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
KLW	ZSS	JLB/ZSS	KLW

GENERAL PLAN

SHEET 519

BRIDGE OFFICE CONTACT:
WILLIAM DREHER
(608)-266-8489

CONSULTANT CONTACT:
KAREN WALDERA
(715)-834-3161

8

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STATE PROJECT NUMBER

1007-12-78

SOIL PARAMETERS

STRATUM LOCATIONS AND SOIL DESCRIPTIONS	TOTAL UNIT WEIGHT (PCF)	FRICTION ANGLE (DEGREES)	COHESION (PCF)
CONCRETE PAVEMENTS, SIDEWALKS, WALL PANELS	145	----	----
CRUSHED AGGREGATE BASE COURSE	135	42	0
SELECT CRUSHED MATERIAL	120	40	0
GRANULAR GRADE #1 OR #2	120	30	0
GRANULAR BACKFILL (REINFORCING ZONE OR BACKFILL)	120	30	0
RETAINED SOIL ⊛	135	30	0
BORING SB-6			
LEAN CLAY EL. 861.7 - EL. 861.0 ⊠	120	0	1,000
LEAN CLAY EL. 861.0 - EL. 860.2 ⊠	120	0	1,600
POORLY-GRADED SAND EL. 860.2 - EL. 853.7 ⊠	125	33	0
POORLY-GRADED SAND WITH SILT EL. 853.7 - EL. 849.7 ⊠	125	35	0
POORLY-GRADED SAND WITH SILT EL. 849.7 - EL. 844.7 ⊠	125	35	0
POORLY-GRADED SAND WITH SILT EL. 844.7 - EL. 839.7 ⊠	125	29	0
SILTY SAND WITH GRAVEL EL. 839.7 - EL. 830.7 ⊠	152	29	0
POORLY-GRADED SAND WITH SILT EL. 830.7 - EL. 827.7 ⊠	125	31	0
SILTY SAND WITH GRAVEL EL. 827.7 - EL. 819.7 ⊠	152	35	0
SILTY SAND WITH GRAVEL EL. 819.7 - EL. 813.7 ⊠	152	33	0
POORLY-GRADED SAND WITH SILT EL. 813.7 - EL. 808.7 ⊠	125	31	0
POORLY-GRADED SAND WITH SILT EL. 808.7 - EL. 802.7 ⊠	125	35	0
SILTY SAND WITH GRAVEL EL. 802.7 - EL. 799.7 ⊠	152	34	0
SILTY SAND WITH GRAVEL EL. 799.7 - EL. 789.7 ⊠	152	31	0
SILTY SAND WITH GRAVEL EL. 789.7 - EL. 784.7 ⊠	152	29	0
SILTY SAND WITH GRAVEL EL. 784.7 - EL. 778.2 ⊠	152	32	0
SILT EL. 778.2 - EL. 774.7 ⊠	141	38	0
SILTY SAND WITH GRAVEL EL. 774.7 - EL. 762.7 ⊠	152	45	0
POORLY-GRADED SAND EL. 762.7 - EL. 762.5 ⊠	152	45	0
BORING RW-23			
SANDY LEAN CLAY EL. 867.6 - EL. 867.0 ⊠	120	0	1,000
SANDY LEAN CLAY WITH GRAVEL EL. 867.0 - EL. 864.6 ⊠	125	0	1,500
LEAN CLAY EL. 864.6 - EL. 863.1 ⊠	140	0	3,900
SILTY SAND WITH GRAVEL EL. 863.1 - EL. 862.1 ⊠	143	37	0
LEAN CLAY EL. 862.1 - EL. 860.6 ⊠	132	0	2,200
POORLY-GRADED SAND EL. 860.6 - 850.6 ⊠	125	31	0
POORLY-GRADED SAND EL. 850.6 - EL. 845.6 ⊠	125	36	0
POORLY-GRADED SAND EL. 845.6 - EL. 838.6 ⊠	125	40	0
SILTY SAND WITH GRAVEL EL. 838.6 - EL. 835.6 ⊠	152	29	0
SILTY SAND WITH GRAVEL EL. 835.6 - EL. 832.6 ⊠	152	31	0

⊛ DESIGN WALL FOR THESE VALUES

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 CONCRETE PANEL MECHANICALLY STABILIZED EARTH".

PLANS, ELEVATIONS, AND DETAILS SHOWN ON THESE PLANS 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 SHALL BE DESIGNED USING THE ELEVATIONS GIVEN ON SHEETS 1 AND 2.

DESIGN FOR RETAINING WALL TO PROVIDE FOR FINISHED GRADE SLOPED BEHIND WALL AS SHOWN.

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.

CONTRACTOR, WALL SUPPLIER, AND RAILING FABRICATOR SHALL COORDINATE RAILING POST SPACING, MSE PANELS, AND COPING JOINTS.

THE DESIGN OF THE WALL IN FRONT OF THE ABUTMENT SHALL INCLUDE THE HORIZONTAL EARTH LOADS AND 240 PSF LIVE LOAD SURCHARGE ACTING ON THE BACK OF ABUTMENT BELOW THE BEAM SEATS.

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 REINFORCMENT LENGTHS BASED ON OVERALL STABILITY PERFORMED BY THE WALL DESIGNER. COMPOUND STABILITY IS THE CONTRACTORS RESPONSIBILITY.

⊠ STRATUM LOCATIONS & SOIL DESCRIPTIONS AT EACH BORING LOCATION.

F.F. DENOTES FRONT FACE

WALL EXTERNAL & OVERALL STABILITY EVALUATION

DIMENSIONS	EVALUATED LOCATIONS			
WALL HEIGHT (FEET)	10.72	19.09	22.08	17.95
EXPOSED WALL HEIGHT (FEET)	9.22	17.59	20.58	16.45
MINIMUM LENGTH OF REINFORCEMENT (FEET) ▪	8	26	27	15
WALL STATION	0+06.00	0+35.00	0+81.00	1+06.00
BORING USED	RW-23 & SB-6	RW-23 & SB-6	SB-6	SB-6
LIVE LOAD SURCHARGE (PSF)	100	250	240	100
DEAD LOAD SURCHARGE (PSF)	0	1,947	1,947	4
CAPACITY TO DEMAND RATIO (CDR)				
SLIDING (CDR>1.0)	1.0	1.0	1.0	1.2
ECCENTRICITY (CDR>1.0)	1.5	1.8	1.6	1.9
OVERALL STABILITY (CDR>1.0) ☆	----	----	1.3	----
BEARING RESISTANCE (CDR>1.0)	1.4	1.1	1.0	1.0
FACTORED BEARING RESISTANCE (PSF)	5,000	8,200	8,400	5,300

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	TOTAL
206.3000.707	EXCAVATION FOR STRUCTURES RETAINING WALL R-13-351	LS	1
209.1500	BACKFILL GRANULAR GRADE 1	TON	455
312.0110	SELECT CRUSHED MATERIAL	TON	705
511.1200.707	TEMPORARY SHORING R-13-351	SF	185
511.2200.707	TEMPORARY SHORING LEFT IN PLACE R-13-351	SF	340
513.4091	RAILING TUBULAR SCREENING	LF	150
517.1010.S.707	CONCRETE STAINING R-13-351	SF	2,250
604.0500	SLOPE PAVING CRUSHED AGGREGATE	SY	50
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	160
SPV.0165.707	WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH R-13-351	SF	2,455
	NON-BID ITEMS		
	PREFORMED JOINT FILLER	SIZE	½", ¾"
	NON-BITUMINOUS JOINT SEALER	SIZE	½", ¾"
	EXPANDED POLYSTYRENE	SIZE	1"

● REQUIRED FOR UNDERCUT. SEE DETAIL ON SHEET 3.

GEOMETRY TABLE

WALL STATION	ROAD STATION	OFFSET TO F.F. OF WALL	TOP OF WALL ELEV.	FINISHED GRADE ELEV.	BOTTOM OF WALL ELEV.
0+00.00	100'XWB'+70.70	65.19'	878.24	878.24	869.99
0+25.00	100'XWB'+95.70	65.19'	888.57	872.73	870.02
0+50.00	101'XWB'+20.70	65.19'	888.57	868.93	867.43
0+75.00	101'XWB'+45.70	65.19'	888.57	868.07	866.57
0+95.00	101'XWB'+65.70	65.19'	888.57	867.80	866.30
1+00.00	101'XWB'+70.70	65.19'	886.54	867.73	866.23
1+25.00	101'XWB'+95.70	65.19'	876.40	867.44	865.94
1+50.00	102'XWB'+20.70	65.19'	866.26	866.26	864.76

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

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DEPARTMENT OF TRANSPORTATION

STRUCTURE R-13-351

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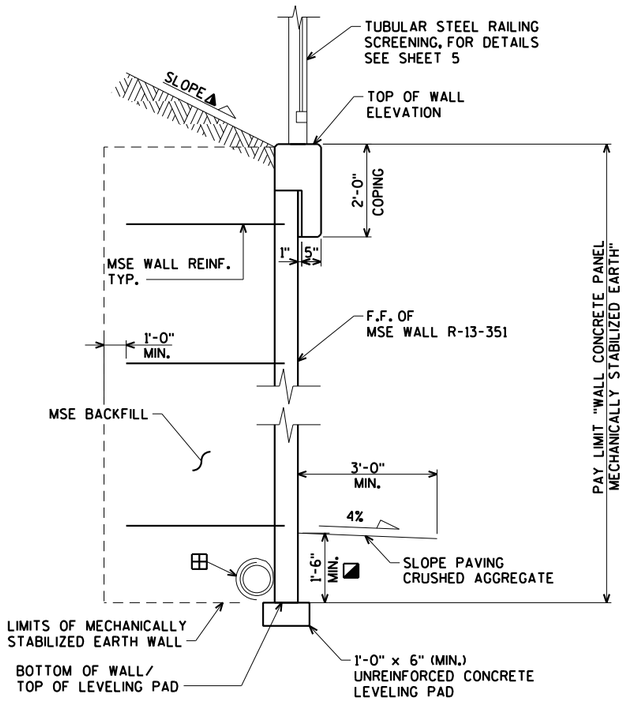
QUANTITIES & WALL DATA

SHEET 2 OF 6
520

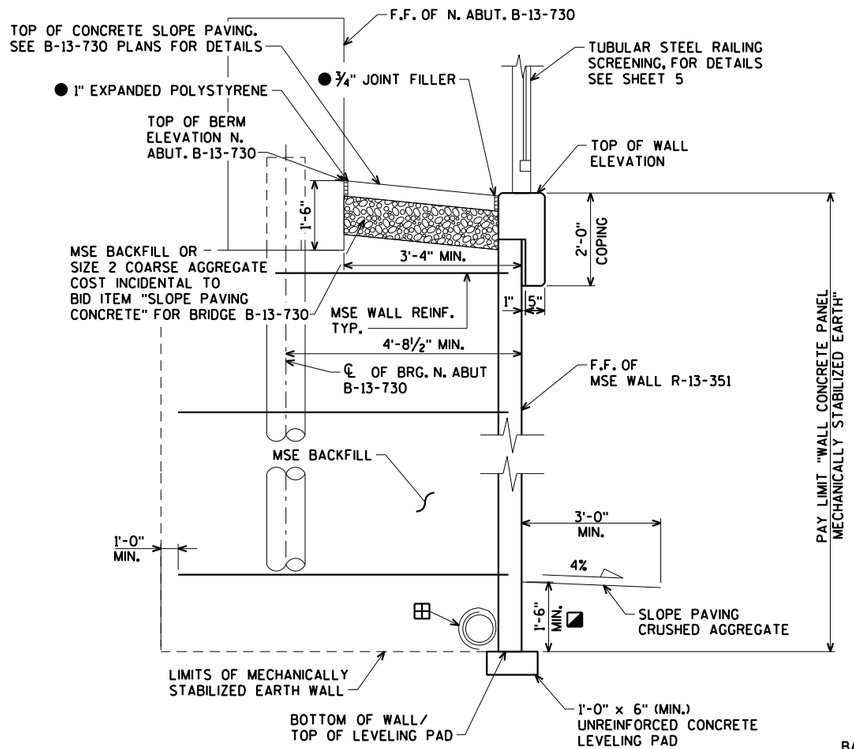
8

8



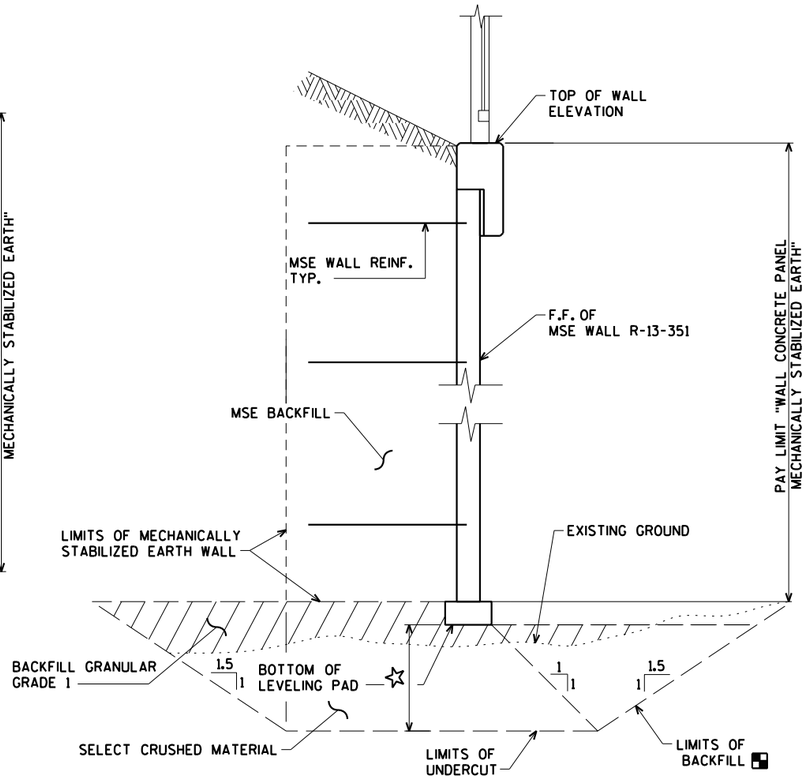
TYPICAL SECTION MSE WALL

LOOKING EAST
WALL STA. 0+00.00 TO 0+25.00, 0+95.00 TO 1+50.00



TYPICAL SECTION MSE WALL AT B-13-730

LOOKING EAST
WALL STA. 0+25.00 TO 0+95.00



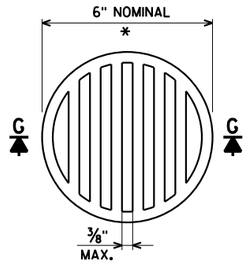
UNDERCUT/BACKFILL DETAIL

LOOKING WEST

ENTIRELY REMOVE THE EXISTING FILL MATERIAL TO EXPOSE NATIVE GRAYISH-BROWN LEAN CLAY AND BROWN SAND AT THE BOTTOM OF THE EXCAVATION.

▪ BACKFILL PAY LIMITS. BACKFILL BEYOND BACKFILL PAY LIMITS SHALL BE INCIDENTAL TO WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH R-13-351. LIMITS OF EXCAVATION SHALL BE DETERMINED BY THE CONTRACTOR.

☆ UNDERCUT DEPTH VARIES ALONG WALL. (USE 1.5:1 SLOPE BETWEEN BOTTOM ELEVATIONS TO TRANSITION BETWEEN STATIONS AND ELEVATIONS LISTED BELOW.)
WALL STA. 0+25.00 TO 0+52.47, DEPTH VARIES = 4'-11¼" TO 2'-0"
(BOTTOM EL. 864.58)
WALL STA. 0+60.00 TO 0+95.00, DEPTH VARIES = 6'-8⅜" TO 6'-2⅞"
(BOTTOM EL. 859.56)



SECTION G-G

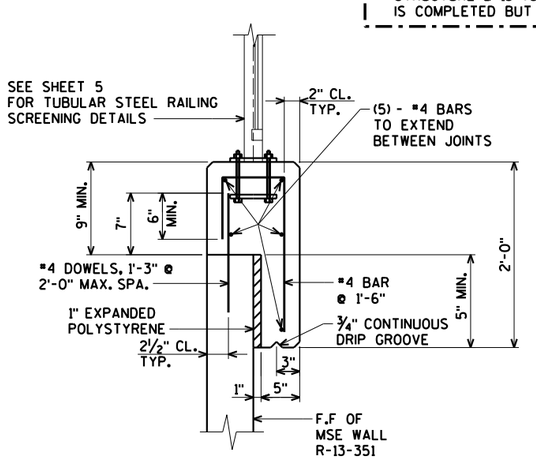
* DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING. ORIENT SO SLOTS ARE VERTICAL.

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.

RODENT SHIELD DETAIL

NOTE:
DRIVE PILING FOR THE NORTH ABUTMENT OF STRUCTURE B-13-730 AFTER UNDERCUT AND BACKFILL IS COMPLETED BUT BEFORE CONSTRUCTING THE RETAINING WALL.



COPING DETAIL

F.F. DENOTES FRONT FACE

● SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF FILLER AND EXPANDED POLYSYRENE WITH NON-STAINING GREY NON-BITUMINOUS JOINT SEALER (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE).

◪ MINIMUM EMBEDMENT BASED ON SITE SPECIFIC PARAMETERS (1'-6" MINIMUM FOR ALL WALLS ON LEVEL GROUND). FIELD EMBEDMENTS SHALL MEET OR EXCEED THE MINIMUM EMBEDMENT. FIELD EMBEDMENTS BELOW MINIMUM EMBEDMENT SHALL NOT BE INCLUDED IN THE PAY LIMITS.

⊞ PIPE UNDERDRAIN WRAPPED 6-INCH. SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT EAST END OF PIPE UNDERDRAIN AND CAP WEST END. SEE DETAIL ON THIS SHEET.

◮ SLOPE BEHIND MSE WALL VARIES. SEE ROADWAY PLANS FOR MORE INFORMATION.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-13-351

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WALL DETAILS

SHEET 3 OF 6
521

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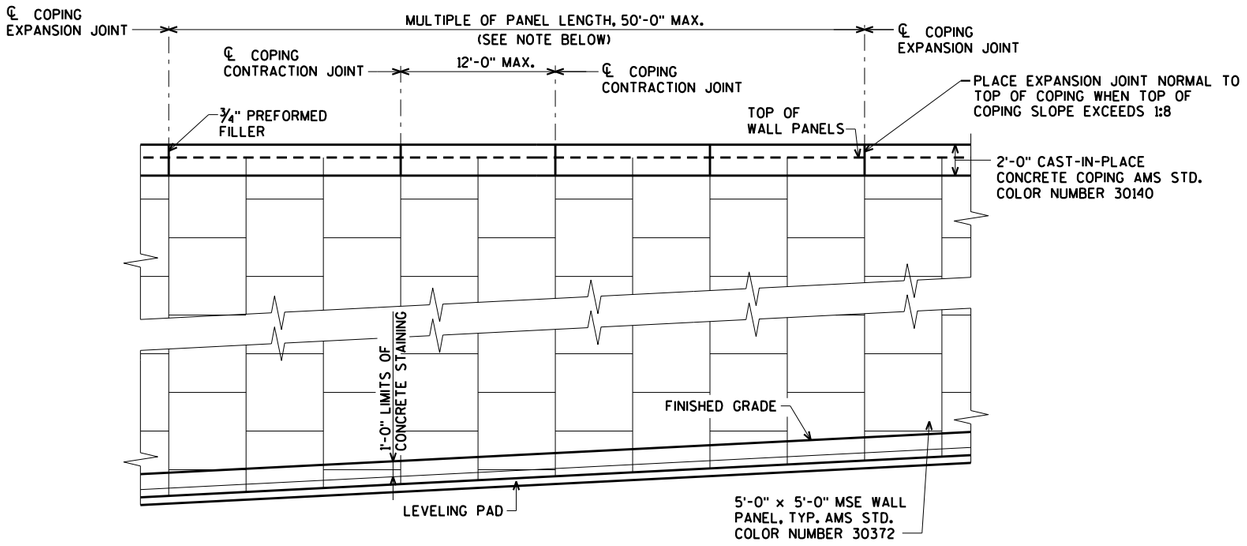
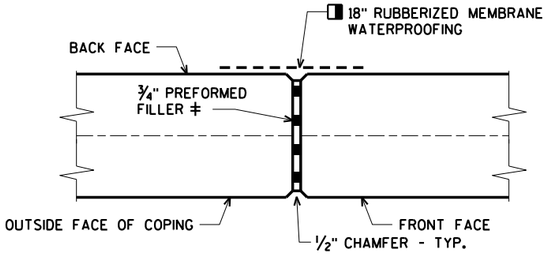


CAST-IN-PLACE COPING PARTIAL ELEVATION

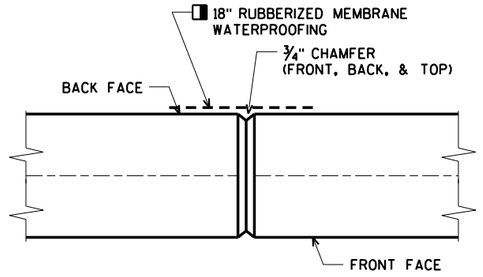
(LOOKING AT FRONT FACE OF WALL)

NOTE:
ALL JOINTS SHALL BE LOCATED AS SHOWN ON WALL ELEVATIONS AND MUST COINCIDE WITH PANEL JOINTS ON FRONT FACE.



COPING EXPANSION JOINT

DO NOT RUN BAR STEEL THRU JOINT
MAXIMUM SPACING OF JOINT = 50'

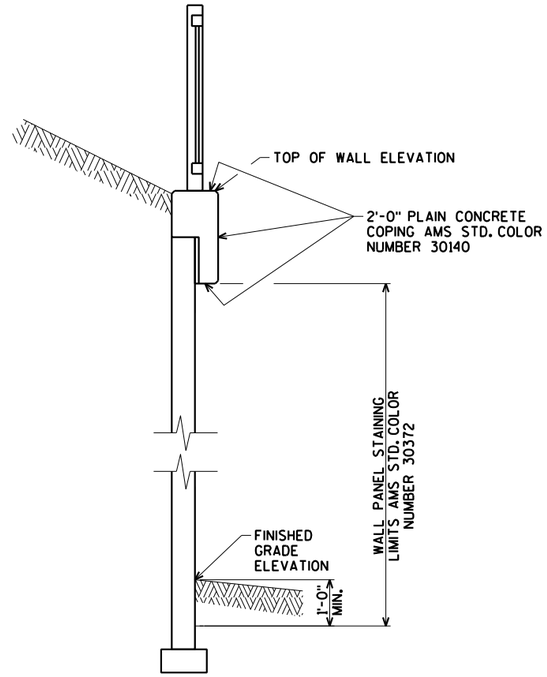


COPING CONTRACTION JOINT

DO NOT RUN BAR STEEL THRU JOINT
MAXIMUM SPACING OF JOINT = 12'

◨ 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.)



SECTION THRU WALL

SHOWING CONCRETE STAINING

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-13-351

DRAWN BY JLB/ZSS | PLANS CK'D. KLW

WALL DETAILS

SHEET 4 OF 6
522

ORIGINAL PLANS PREPARED BY
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3433 Oakwood Hills Parkway
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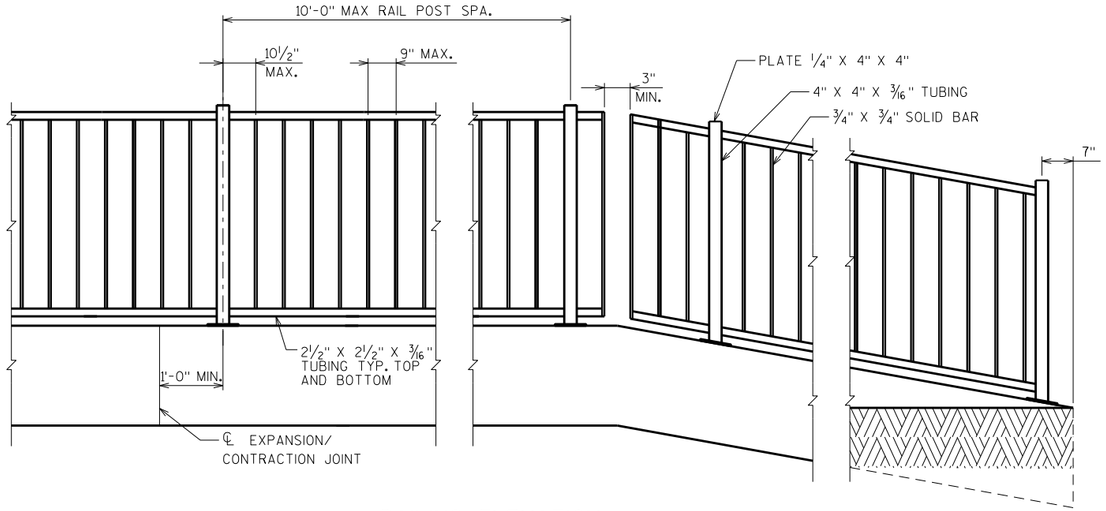
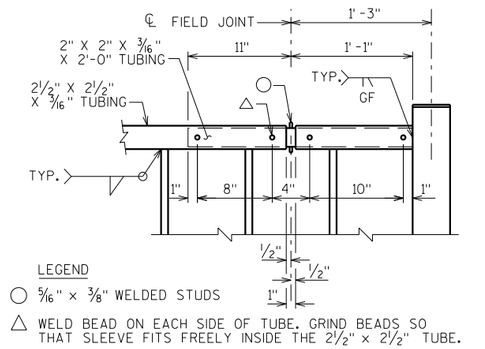
STATE PROJECT NUMBER

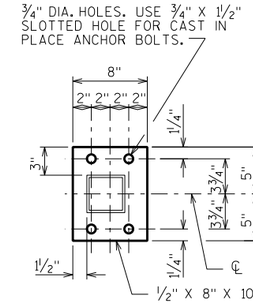
1007-12-18



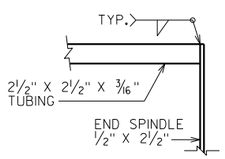
RAILING ELEVATION



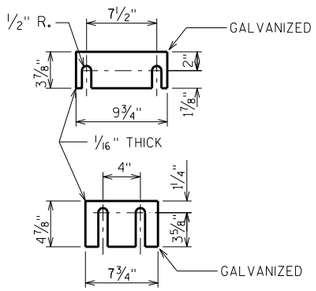
RAILING EXPANSION JOINT DETAIL



BASE PLATE

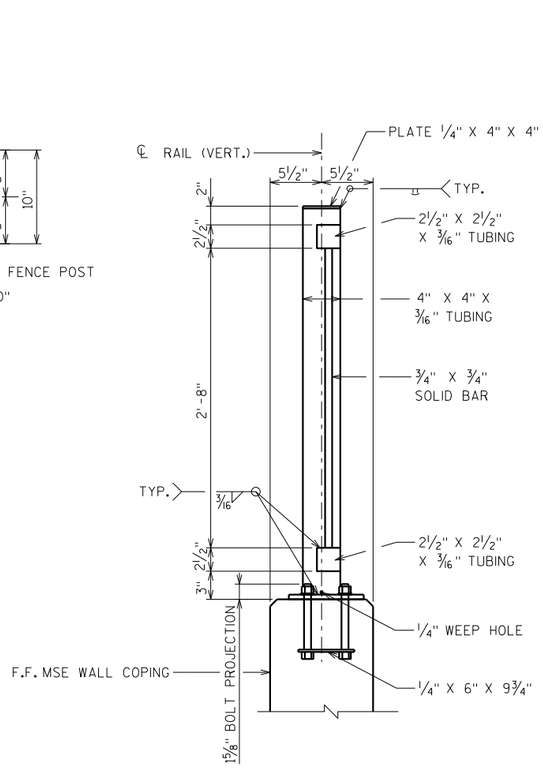


RAIL DETAIL

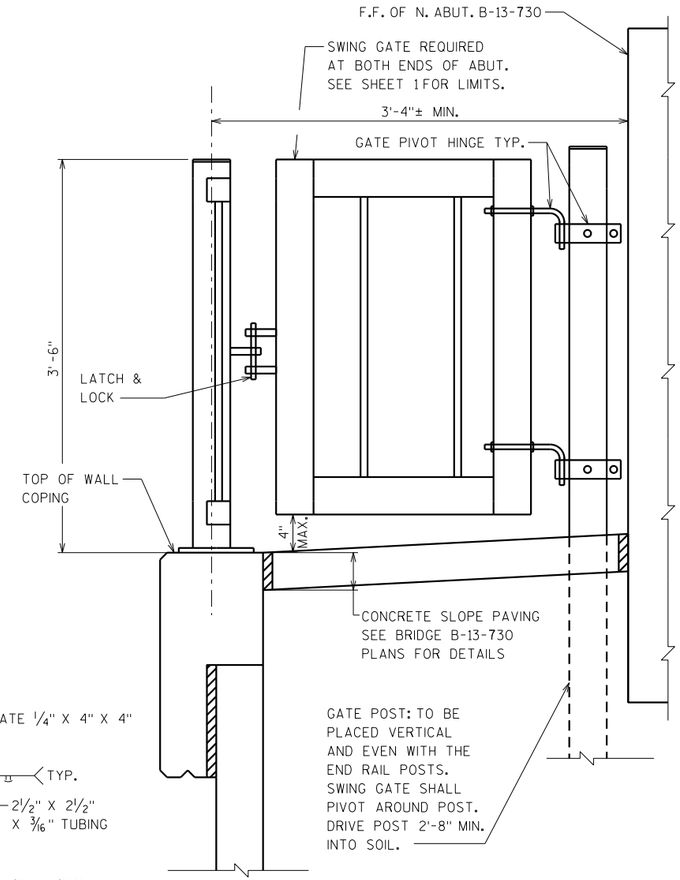


SHIM PLATE DETAILS

TWO SHIMS OF EACH SIZE REQUIRED PER POST



SECTION THRU RAILING



SECTION THRU WALL AT GATES

NOTE:
ALL POSTS, GATES AND ASSOCIATED HARDWARE SHALL BE PAINTED AMS STD. COLOR NO. 30140, BROWN SPECIAL (FEDERAL COLOR NO. 30140) AND SHALL BE PAID FOR UNDER THE BID ITEM "RAILING TUBULAR SCREENING".

NOTES

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.

STRUCTURAL TUBING SHALL CONFORM TO ASTM A500, GRADE B. PLATES, ANGLES, BARS AND SHIMS SHALL CONFORM TO ASTM A709, GRADE 36.

ANCHORAGES SHALL BE ACCURATELY PLACED TO PROVIDE CORRECT ALIGNMENT OF RAILING. SET POSTS NORMAL TO GRADE.

ALL POST SPACINGS ARE TAKEN HORIZONTAL ALONG CENTERLINE OF RAILING AT BASE OF POST.

STEEL SHIMS SHALL BE PROVIDED & USED UNDER BASE PLATES WHERE REQUIRED FOR ALIGNMENT, AND SHALL BE GALVANIZED.

CAULK AROUND PERIMETER OF BASE PLATES AND FILL PORTION OF SLOTTED HOLES AROUND ANCHOR BOLTS WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER.

CUT BOTTOM OF POST TO MAKE VERTICAL IN TRANSVERSE DIRECTION.

ANCHOR BOLTS, NUTS AND WASHERS SHALL BE EITHER STAINLESS STEEL OR ASTM 307. IF 307 IS USED, ANCHOR BOLTS, NUTS, AND WASHERS SHALL BE GALVANIZED. ✿

THE BID ITEM SHALL BE "RAILING TUBULAR SCREENING" WHICH SHALL INCLUDE ALL ITEMS SHOWN.

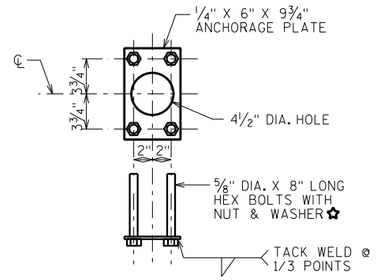
RAILING SHALL BE FABRICATED IN LENGTHS THAT INCLUDE NOT MORE THAN 3 POSTS.

VENT HOLES SHALL BE DRILLED IN MEMBERS AS REQUIRED TO FACILITATE GALVANIZING AND DRAINAGE.

ALL RAILING MATERIAL 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. 30140, BROWN SPECIAL. (FEDERAL COLOR NO. 30140)

F.F. DENOTES FRONT FACE.



ANCHORAGE DETAIL

✿ ALTERNATIVE ANCHORAGE: ADHESIVE ANCHORS ⅝-INCH. EMBED 7" IN CONCRETE. ADHESIVE ANCHORS SHALL CONFORM TO SECTION 502.2.12 OF THE STANDARD SPECIFICATIONS.

NOTE: ANCHOR PLATE NOT REQUIRED WHEN ADHESIVE ANCHORS ARE USED.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE R-13-351

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TUBULAR STEEL RAILING SCREENING

SHEET 5 OF 6

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8

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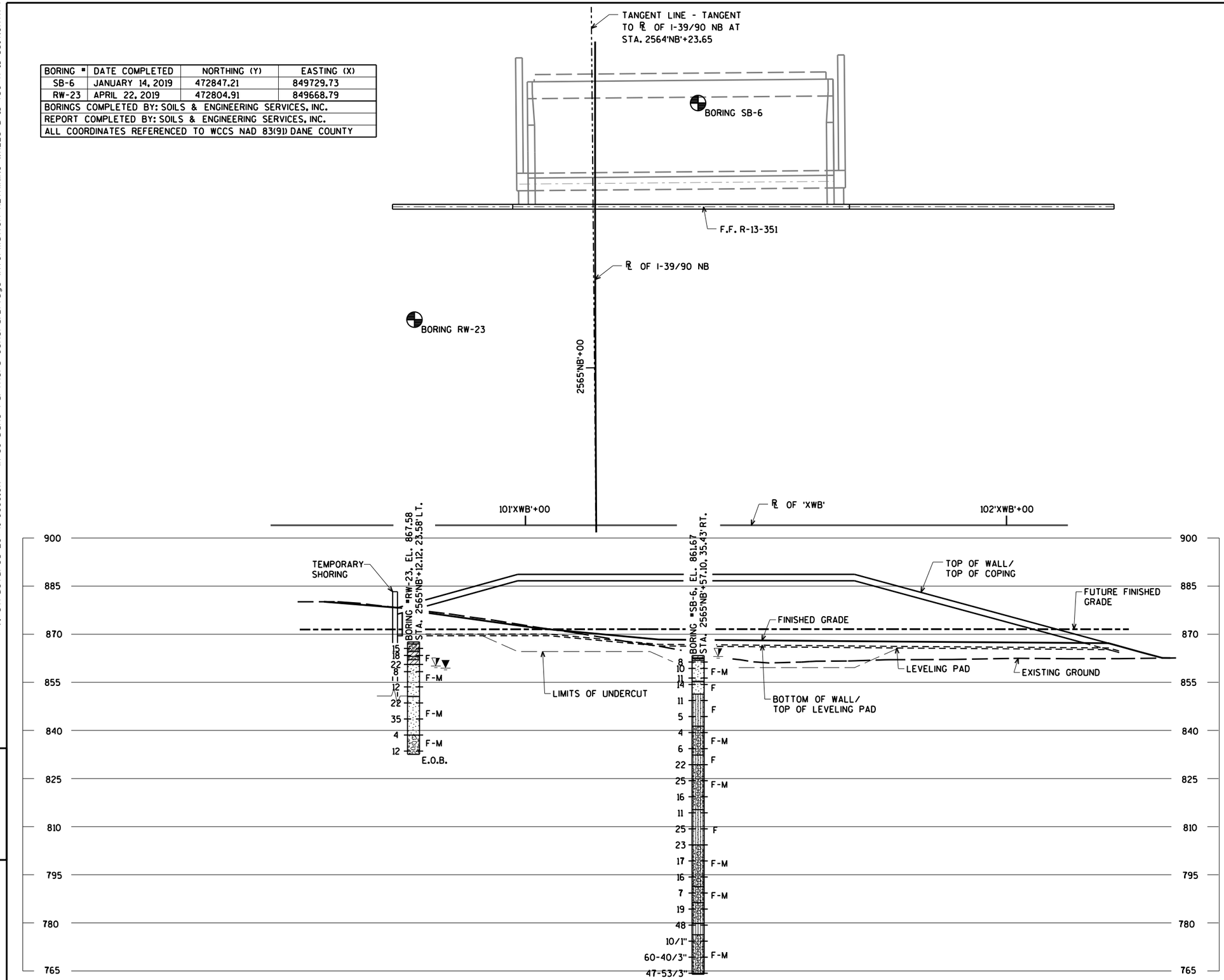
BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
SB-6	JANUARY 14, 2019	472847.21	849729.73
RW-23	APRIL 22, 2019	472804.91	849668.79
BORINGS COMPLETED BY: SOILS & ENGINEERING SERVICES, INC.			
REPORT COMPLETED BY: SOILS & ENGINEERING SERVICES, INC.			
ALL COORDINATES REFERENCED TO WCCS NAD 83(91) DANE COUNTY			



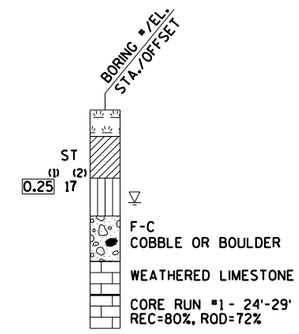
STATE PROJECT NUMBER

1007-12-78

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-13-351

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SUBSURFACE EXPLORATION

SHEET 6 OF 6
524

8

8

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BACK CHECKED BY:
CORRECTED BY:

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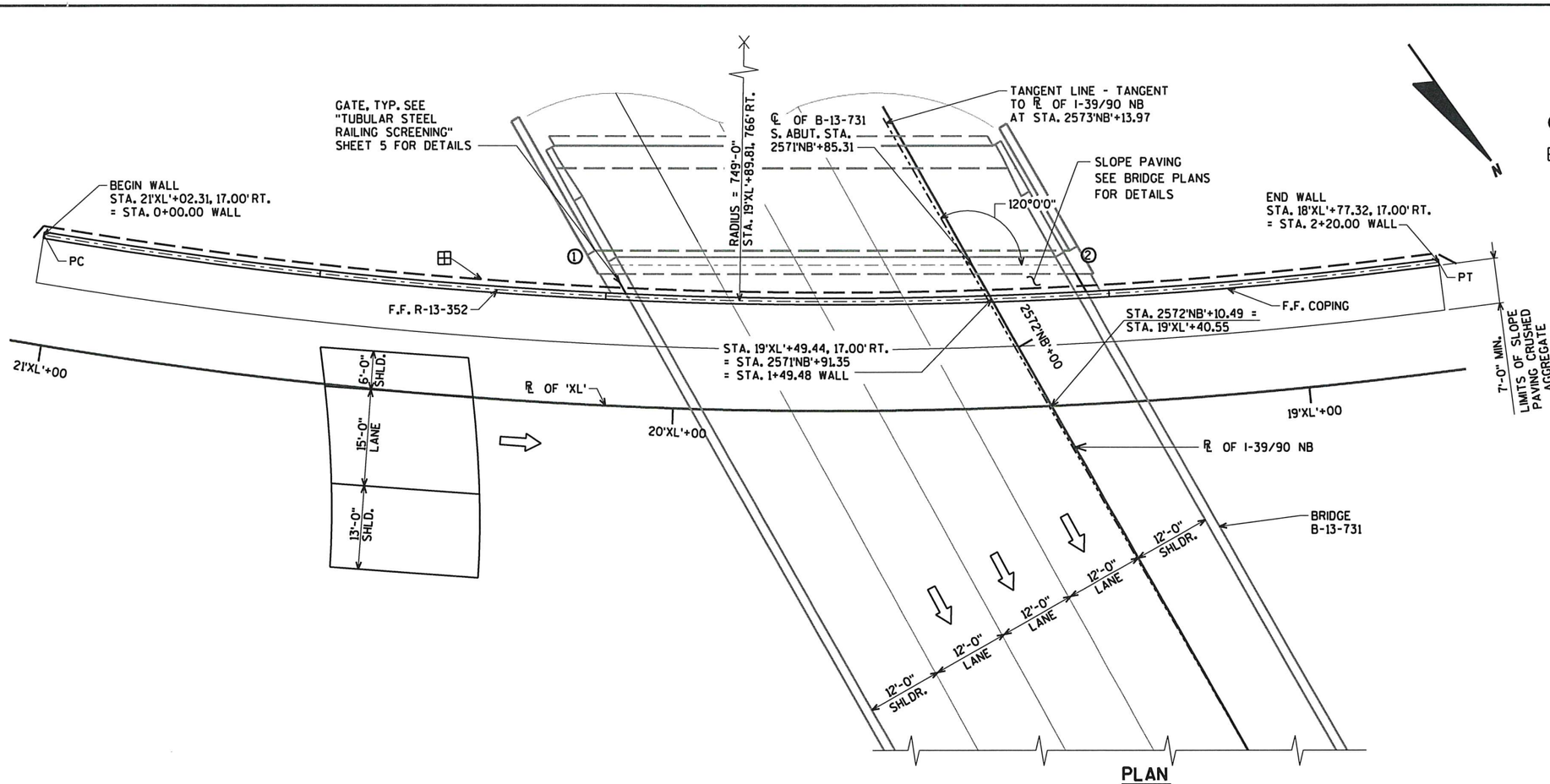
1007-12-78



F.F. DENOTES FRONT FACE.

○ INDICATES WING NUMBER ON BRIDGE B-13-731

⊞ PIPE UNDERDRAIN WRAPPED, 6-INCH. SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN. SEE SHEET 3.

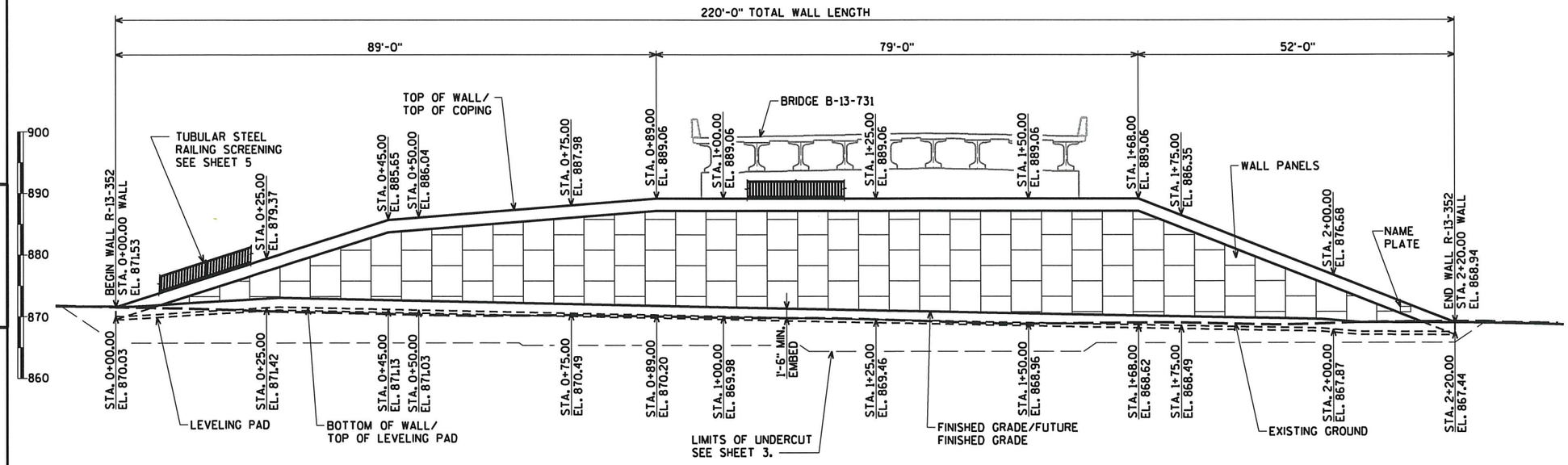
LIST OF DRAWINGS

1. GENERAL PLAN
2. QUANTITIES & WALL DATA
3. WALL DETAILS
4. WALL DETAILS
5. TUBULAR STEEL RAILING SCREENING
6. SUBSURFACE EXPLORATION

FOR GENERAL NOTES AND DESIGN DATA SEE SHEET 2

NOTE:
DRIVE PILING FOR THE SOUTH ABUTMENT OF STRUCTURE B-13-731 BEFORE CONSTRUCTING THE RETAINING WALL.

PLAN
MSE RETAINING WALL



ELEVATION
LOOKING SOUTH AT F.F. WALL

WISCONSIN
KAREN L. WALDERA
E-39158
TAYLOR
WI
PROFESSIONAL ENGINEER
1-30-19

BRIDGE OFFICE CONTACT:
WILLIAM DREHER
(608)-266-8489

CONSULTANT CONTACT:
KAREN WALDERA
(715)-834-3161

NO.	DATE	REVISION	BY

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher SDR 08/29/19
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE R-13-352

MSE WALL ALONG B-13-731 S. ABUT.

COUNTY	TOWN/~~CITY/VILLAGE~~
DANE	BLOOMING GROVE

DESIGN SPEC.
AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY	DESIGN CK'D.	DRAWN BY JLB/ZSS	PLANS CK'D. KLW

GENERAL PLAN

SHEET 525 6

8

8

7/25/2019 PENTABLE:BRegu_shd_util.tbl LD DATE:

$PRFNAME$
V:\Structures-EC\41-0660.0X - IH-39 Dane Partners General Bridge Information\RETAINING WALLS\B-13-731\R-13-352 SOUTH\Final\R-13-

STATE PROJECT NUMBER

1007-12-78

WALL EXTERNAL & OVERALL STABILITY EVALUATION

DIMENSIONS	EVALUATED LOCATIONS			
WALL HEIGHT (FEET)	14.52	18.86	19.90	16.41
EXPOSED WALL HEIGHT (FEET)	13.02	17.36	18.40	14.91
MINIMUM LENGTH OF REINFORCEMENT (FEET) ■	11	26	25	15
WALL STATION	0+45.00	0+89.00	1+40.00	1+79.00
BORING USED	SB-7	SB-7	SB-7	RW-24 & SB-7
LIVE LOAD SURCHARGE (PSF)	100	240	250	100
DEAD LOAD SURCHARGE (PSF)	0	1,848	1,854	23
CAPACITY TO DEMAND RATIO (CDR)				
SLIDING (CDR>1.0)	1.2	1.1	1.0	1.5
ECCENTRICITY (CDR>1.0)	1.7	1.9	1.7	2.4
OVERALL STABILITY (CDR>1.0) ☆	----	----	1.2	----
BEARING RESISTANCE (CDR>1.0)	1.0	1.0	1.4	1.0
FACTORED BEARING RESISTANCE (PSF)	4,000	7,400	10,500	3,800

SOIL PARAMETERS

STRATUM LOCATIONS AND SOIL DESCRIPTIONS	TOTAL UNIT WEIGHT (PCF)	FRICTION ANGLE (DEGREES)	COHESION (PCF)
CONCRETE PAVEMENTS, SIDEWALKS, WALL PANELS	145	----	----
CRUSHED AGGREGATE BASE COURSE	135	42	0
SELECT CRUSHED MATERIAL	120	40	0
GRANULAR GRADE #1 OR #2	120	30	0
GRANULAR BACKFILL (REINFORCING ZONE OR BACKFILL)	120	30	0
RETAINED SOIL ⊛	135	30	0
BORING SB-7			
LEAN CLAY WITH SAND EL. 870.2 - EL. 870.0 ⊗	120	30	0
SILTY SAND WITH GRAVEL EL. 870.0 - EL. 867.2 ⊗	120	31	0
SANDY LEAN CLAY EL. 867.2 - EL. 866.2 ⊗	125	0	800
SILTY SAND WITH GRAVEL EL. 866.2 - EL. 865.7 ⊗	120	31	0
SILTY SAND WITH GRAVEL EL. 865.7 - EL. 853.2 ⊗	152	29	0
SILTY SAND WITH GRAVEL EL. 853.2 - EL. 848.2 ⊗	152	31	0
SILTY SAND WITH GRAVEL EL. 848.2 - EL. 823.2 ⊗	152	29	0
CLAYEY SAND WITH GRAVEL EL. 823.2 - EL. 813.2 ⊗	146	31	0
SILTY SAND WITH GRAVEL EL. 813.2 - EL. 803.2 ⊗	152	32	0
POORLY-GRADED SAND WITH GRAVEL EL. 803.2 - EL. 800.7 ⊗	125	31	0
SANDY LEAN CLAY EL. 800.7 - EL. 798.2 ⊗	132	0	3,800
SILTY SAND WITH GRAVEL EL. 798.2 - EL. 788.2 ⊗	152	34	0
SILTY SAND WITH GRAVEL EL. 788.2 - EL. 783.2 ⊗	152	38	0
SILTY SAND WITH GRAVEL EL. 783.2 - EL. 771.1 ⊗	152	45	0
BORING RW-24			
LEAN CLAY WITH SAND EL. 868.6 - EL. 867.9 ⊗	120	0	500
SILTY GRAVEL WITH SAND EL. 867.9 - EL. 865.6 ⊗	120	30	0
SILTY SAND WITH GRAVEL EL. 865.6 - EL. 864.1 ⊗	152	31	0
SILTY SAND WITH GRAVEL EL. 864.1 - EL. 856.6 ⊗	152	31	0
SILTY SAND WITH GRAVEL EL. 856.6 - EL. 838.6 ⊗	152	29	0

⊛ DESIGN WALL FOR THESE VALUES

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	TOTAL
206.3000.708	EXCAVATION FOR STRUCTURES RETAINING WALLS R-13-352	LS	1
● 312.0110	SELECT CRUSHED MATERIAL	TON	2,585
513.4091	RAILING TUBULAR SCREENING	LF	220
517.1010.S.708	CONCRETE STAINING R-13-352	SF	3,095
604.0500	SLOPE PAVING CRUSHED AGGREGATE	SY	175
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	240
SPV.0165.708	WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH R-13-352	SF	3,205
	NON-BID ITEMS		
	PREFORMED JOINT FILLER	SIZE	½", ¾"
	NON-BITUMINOUS JOINT SEALER	SIZE	½", ¾"
	EXPANDED POLYSTYRENE	SIZE	1"

● REQUIRED FOR UNDERCUT. SEE DETAIL ON SHEET 3.

ALLOWABLE WALL SYSTEMS

WALL CONCRETE PANEL MSE

MATERIAL PROPERTIES

CONCRETE MASONRY (COPING)_____ f'_c = 3,500 P.S.I.

BAR STEEL REINFORCEMENT (GRADE 60)_____ f_y = 60,000 p.s.i.

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.
BEVEL ALL EXPOSED EDGES OF CONCRETE ¾" UNLESS NOTED OTHERWISE.
BAR STEEL REINFORCEMENT SHALL HAVE 2" CLEAR COVER UNLESS OTHERWISE SHOWN OR NOTED.
ALL WALL STATIONING AND OFFSETS ARE GIVEN AT THE FRONT FACE OF THE WALL R-13-352.
THE EXISTING GROUND LINE IS THE UPPER LIMIT OF EXCAVATION FOR STRUCTURES.
COORDINATE THE CONSTRUCTION OF RETAINING WALL R-13-352 WITH THE SOUTH ABUTMENT OF BRIDGE B-13-731.
ALL BAR STEEL REINFORCEMENT IN CAST-IN-PLACE CONCRETE IS TO BE EPOXY COATED.
THE PLAN QUANTITY FOR THE ITEM "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH" IS BASED ON A WALL HEIGHT MEASURED FROM THE TOP OF WALL TO THE BOTTOM OF WALL BASED ON GEOMETRY TABLE.
THE QUANTITY OF CONCRETE MASONRY, COATED REINFORCING STEEL, AND RUBBERIZED MEMBRANE WATERPROOFING FOR THE CAST-IN-PLACE COPING IS INCIDENTAL TO BID ITEM "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH".
CONCRETE STAINING TO BE APPLIED TO EXPOSED AREAS OF COPING AND MSE WALL PANELS TO 1-FOOT ABOVE LEVELING PAD. COPING TO BE STAINED AMS STD. COLOR NUMBER 30140 AND WALL PANELS TO BE STAINED AMS STD. COLOR NUMBER 30372.
THE SOILS ENGINEER SHALL REVIEW THE FILL SUBSURFACE CONDITIONS PRIOR TO CONSTRUCTION OF THE WALL.
OVER-EXCAVATION BEYOND THE BOTTOM OF THE WALL IS PAID FOR UNDER THE BID ITEM "EXCAVATION FOR STRUCTURES RETAINING WALLS R-13-352".

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 CONCRETE PANEL MECHANICALLY STABILIZED EARTH".
PLANS, ELEVATIONS, AND DETAILS SHOWN ON THESE PLANS 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 SHALL BE DESIGNED USING THE ELEVATIONS GIVEN ON SHEETS 1 AND 2.
DESIGN FOR RETAINING WALL TO PROVIDE FOR FINISHED GRADE SLOPED BEHIND WALL AS SHOWN.
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.
CONTRACTOR, WALL SUPPLIER, AND RAILING FABRICATOR SHALL COORDINATE RAILING POST SPACING, MSE PANELS, AND COPING JOINTS.
THE DESIGN OF THE WALL IN FRONT OF THE ABUTMENT SHALL INCLUDE THE HORIZONTAL EARTH LOADS AND 240 PSF LIVE LOAD SURCHARGE ACTING ON THE BACK OF THE ABUTMENT BELOW THE BEAM SEATS.

GEOMETRY TABLE

WALL STATION	ROADWAY STATION	OFFSET TO F.F. OF WALL	TOP OF WALL ELEV.	FINISHED GRADE ELEV.	BOTTOM OF WALL ELEV.
0+00.00	21'XL'+02.31	17.00'	871.53	871.53	870.03
0+25.00	20'XL'+76.74	17.00'	879.37	872.92	871.42
0+45.00	20'XL'+57.31	17.00'	885.65	872.63	871.13
0+50.00	20'XL'+51.17	17.00'	886.04	872.53	871.03
0+75.00	20'XL'+25.61	17.00'	887.98	871.99	870.49
0+89.00	20'XL'+11.29	17.00'	889.06	871.70	870.20
1+00.00	20'XL'+00.04	17.00'	889.06	871.48	869.98
1+25.00	19'XL'+74.47	17.00'	889.06	870.96	869.46
1+50.00	19'XL'+48.90	17.00'	889.06	870.46	868.96
1+68.00	19'XL'+30.50	17.00'	889.06	870.12	868.62
1+75.00	19'XL'+23.34	17.00'	886.35	869.99	868.49
2+00.00	18'XL'+97.77	17.00'	876.68	869.37	867.87
2+20.00	18'XL'+77.32	17.00'	868.94	868.94	867.44

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 REINFORCMENT LENGTHS BASED ON OVERALL STABILITY PERFORMED BY THE WALL DESIGNER. COMPOUND STABILITY IS THE CONTRACTORS RESPONSIBILITY.

⊗ STRATUM LOCATIONS & SOIL DESCRIPTIONS AT EACH BORING LOCATION.

F.F. DENOTES FRONT FACE

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-13-352

DRAWN BY JLB/ZSS | PLANS CK'D. KLW

QUANTITIES & WALL DATA

SHEET 2 OF 6
526

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
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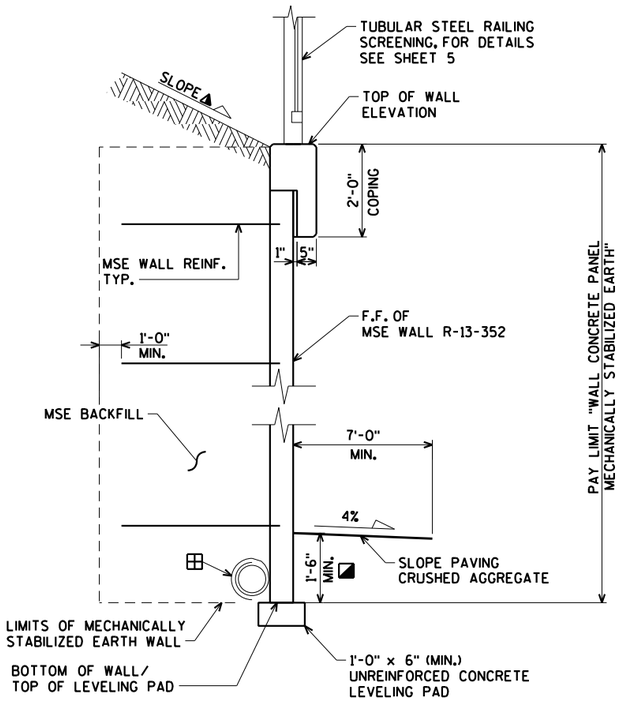
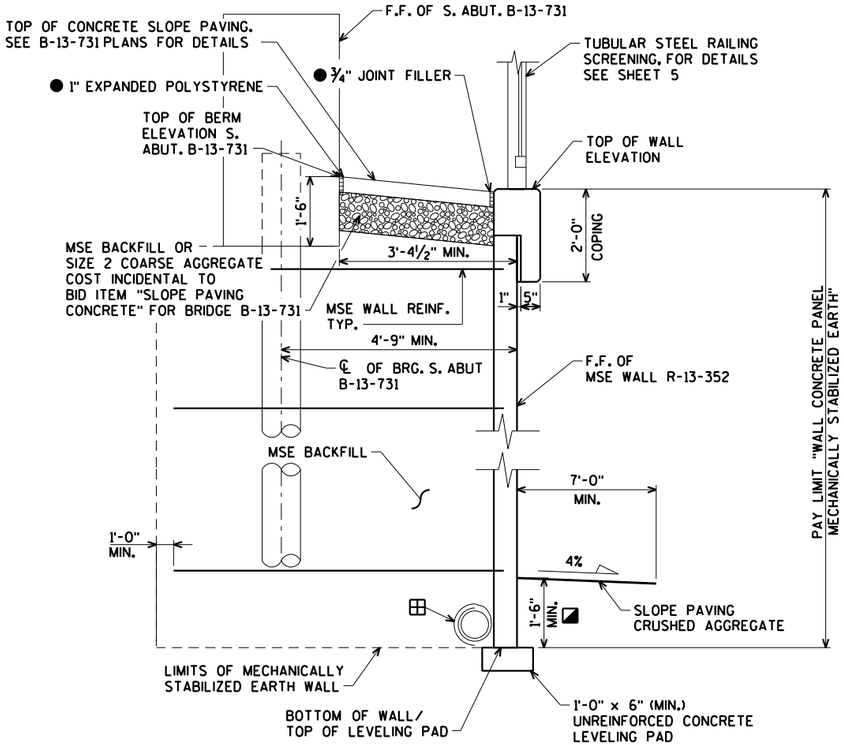


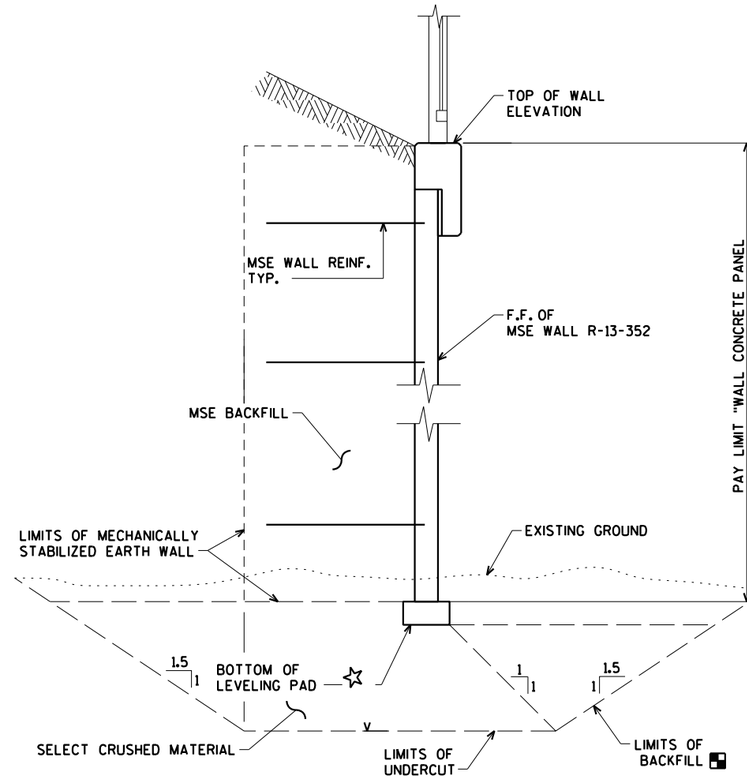
TYPICAL SECTION MSE WALL

LOOKING WEST
WALL STA. 0+00.00 TO 0+89.00, 1+68.00 TO 2+20.00



TYPICAL SECTION MSE WALL AT B-13-731

LOOKING WEST
WALL STA. 0+89.00 TO 1+68.00



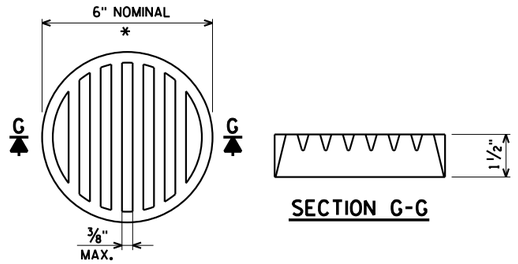
UNDERCUT/BACKFILL DETAIL

LOOKING WEST

ENTIRELY REMOVE THE GRANULAR AND COHESIVE FILL EXPOSING THE NATIVE BROWN SILTY SAND AND GRAVEL AT THE BOTTOM OF THE EXCAVATION.

▩ BACKFILL PAY LIMITS. BACKFILL BEYOND BACKFILL PAY LIMITS SHALL BE INCIDENTAL TO WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH R-13-352. LIMITS OF EXCAVATION SHALL BE DETERMINED BY THE CONTRACTOR.

☆ UNDERCUT DEPTH VARIES ALONG WALL. (USE 1.5:1 SLOPE BETWEEN BOTTOM ELEVATIONS TO TRANSITION BETWEEN STATIONS AND ELEVATIONS LISTED BELOW.)
WALL STA. 0+00.00 TO 0+66.40, DEPTH VARIES = 3'-9½" TO 5'-3¾"
(BOTTOM EL. 865.70)
WALL STA. 0+67.00 TO 1+12.50, DEPTH VARIES = 4'-10⅜" TO 3'-11"
(BOTTOM EL. 865.30)
WALL STA. 1+14.00 TO 1+59.00, DEPTH VARIES = 4'-10⅝" TO 3'-11⅞"
(BOTTOM EL. 864.30)
WALL STA. 1+61.00 TO 2+20.00, DEPTH VARIES = 2'-6½" TO 1'-2⅞"
(BOTTOM EL. 865.70)



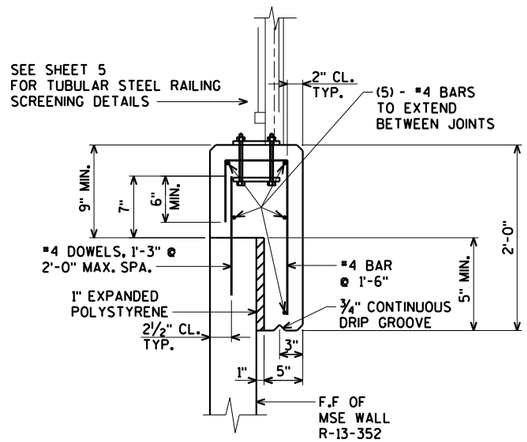
SECTION G-G

* 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.

RODENT SHIELD DETAIL



COPING DETAIL

F.F. DENOTES FRONT FACE

● SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF FILLER AND EXPANDED POLYSYRENE WITH NON-STAINING GREY NON-BITUMINOUS JOINT SEALER (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE).

◪ MINIMUM EMBEDMENT BASED ON SITE SPECIFIC PARAMETERS (1'-6" MINIMUM FOR ALL WALLS ON LEVEL GROUND). FIELD EMBEDMENTS SHALL MEET OR EXCEED THE MINIMUM EMBEDMENT. FIELD EMBEDMENTS BELOW MINIMUM EMBEDMENT SHALL NOT BE INCLUDED IN THE PAY LIMITS.

⊞ PIPE UNDERDRAIN WRAPPED 6-INCH. SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN. SEE DETAIL ON THIS SHEET.

▲ SLOPE BEHIND MSE WALL VARIES. SEE ROADWAY PLANS FOR MORE INFORMATION.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-13-352

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WALL DETAILS

SHEET 3 OF 6
527

ORIGINAL PLANS PREPARED BY
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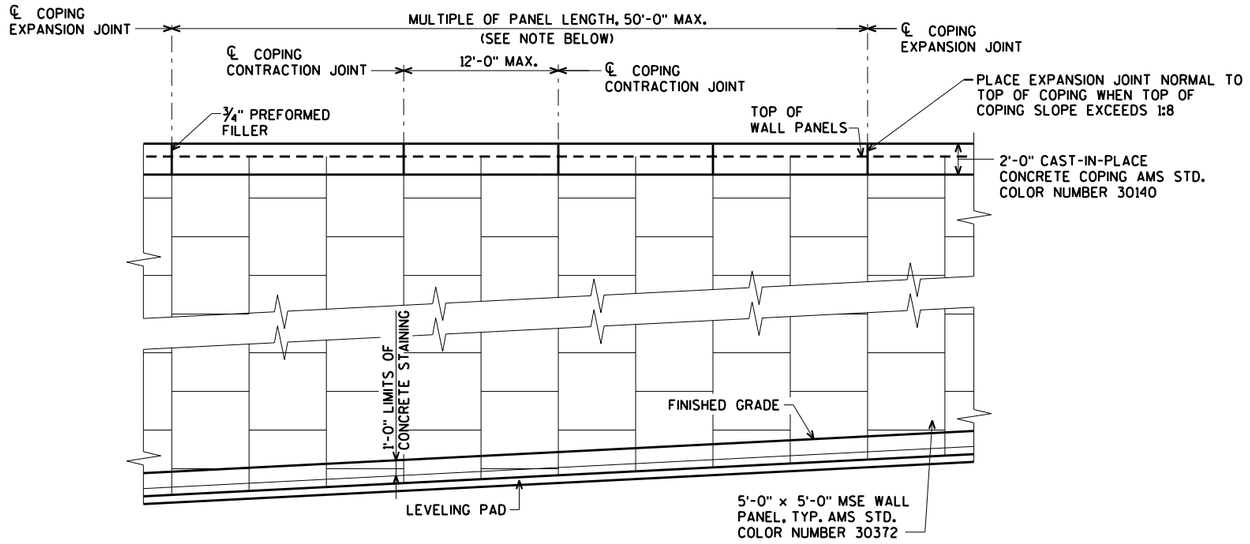
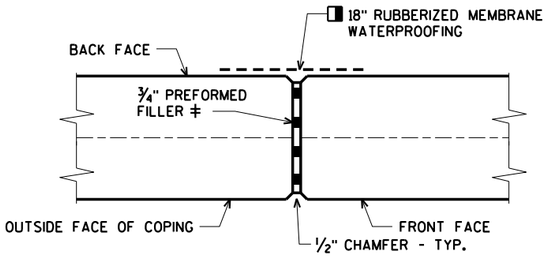


CAST-IN-PLACE COPING PARTIAL ELEVATION

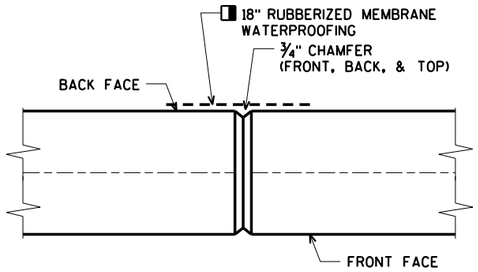
(LOOKING AT FRONT FACE OF WALL)

NOTE:
ALL JOINTS SHALL BE LOCATED AS SHOWN ON WALL ELEVATIONS AND MUST COINCIDE WITH PANEL JOINTS ON FRONT FACE.



COPING EXPANSION JOINT

DO NOT RUN BAR STEEL THRU JOINT
MAXIMUM SPACING OF JOINT = 50'

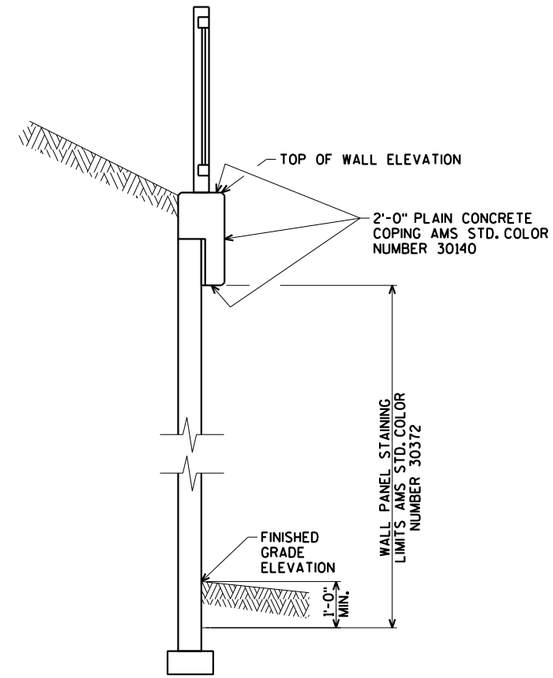


COPING CONTRACTION JOINT

DO NOT RUN BAR STEEL THRU JOINT
MAXIMUM SPACING OF JOINT = 12'

◨ MEMBRANE WATERPROOFING TO EXTEND FROM TOP OF COPING TO 6" BELOW TOP OF PANELS.

ǂ 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.)



SECTION THRU WALL

SHOWING CONCRETE STAINING

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-13-352

DRAWN BY JLB/ZSS | PLANS CK'D. KLW

WALL DETAILS

SHEET 4 OF 6
528

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
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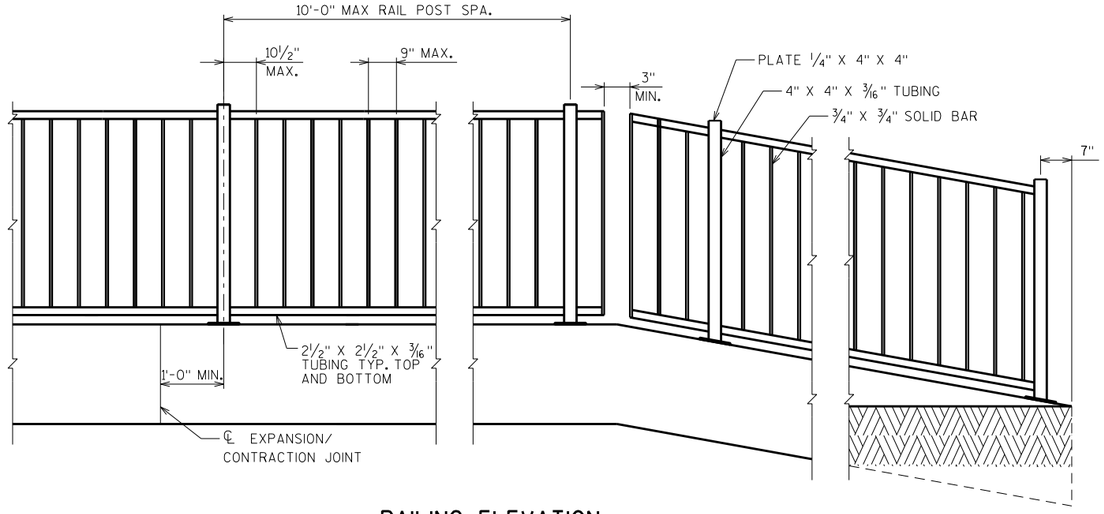
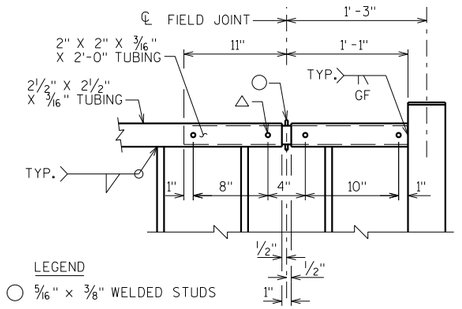
STATE PROJECT NUMBER

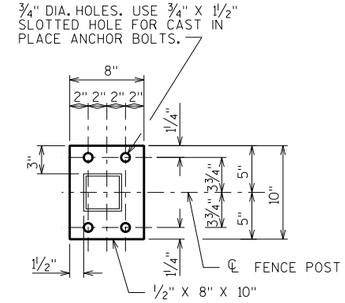
1007-12-18



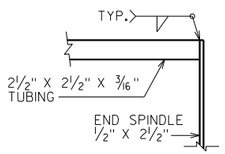
RAILING ELEVATION



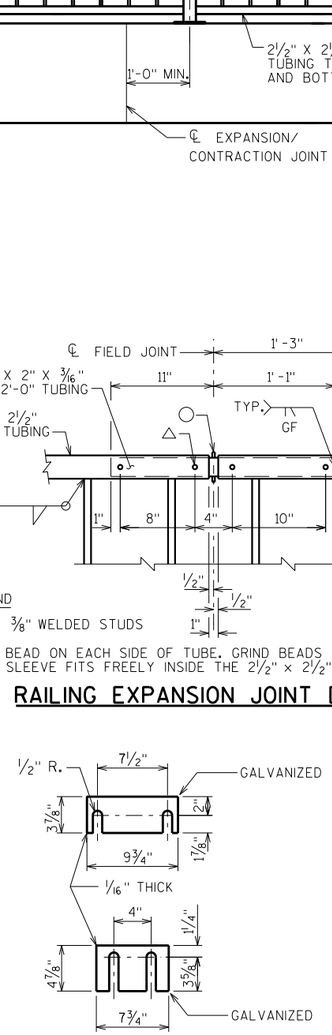
RAILING EXPANSION JOINT DETAIL



BASE PLATE

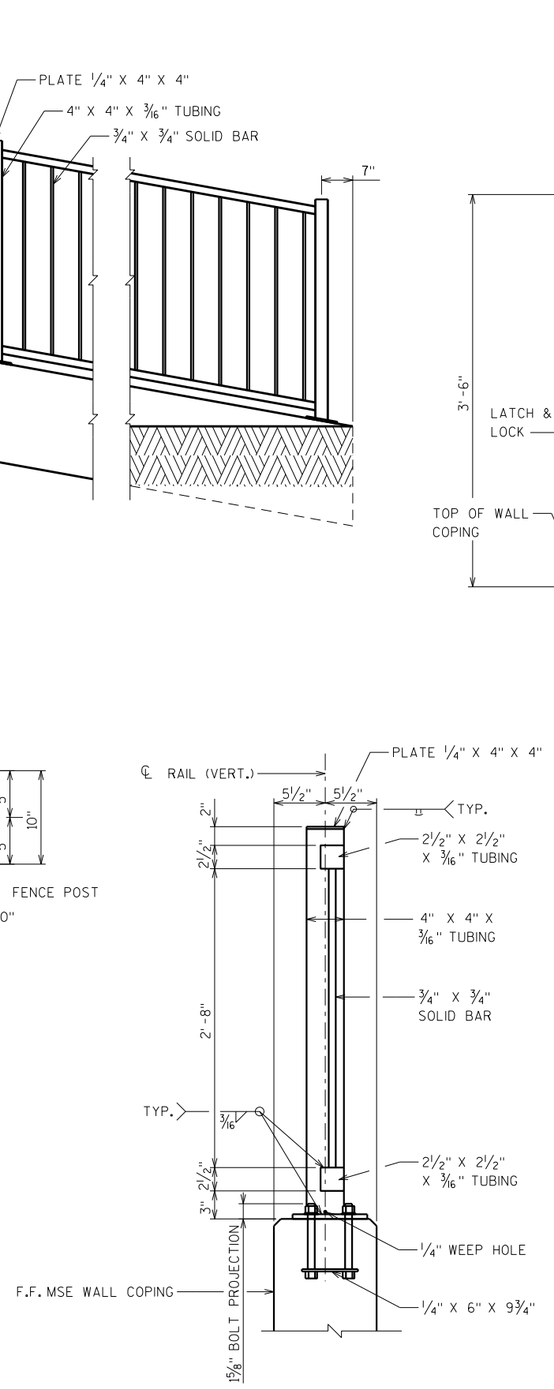


RAIL DETAIL

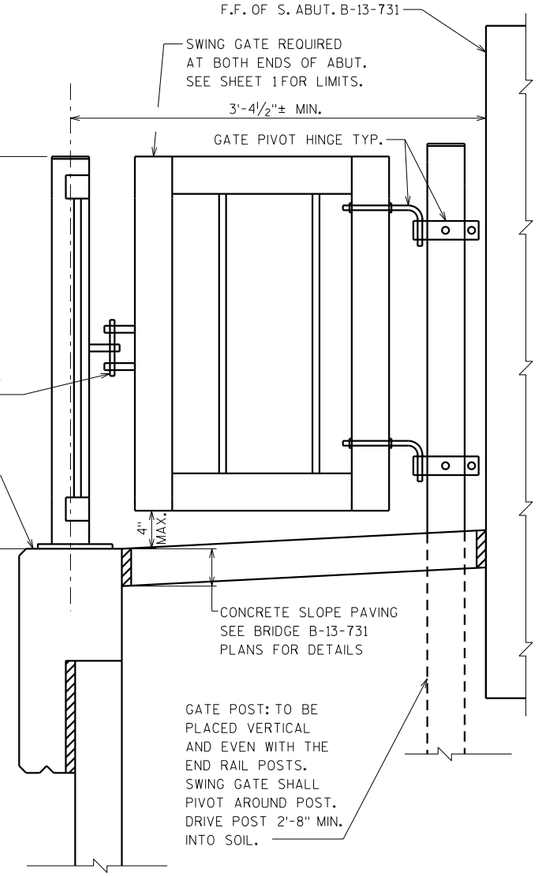


SHIM PLATE DETAILS

TWO SHIMS OF EACH SIZE REQUIRED PER POST



SECTION THRU RAILING



SECTION THRU WALL AT GATES

NOTE:
ALL POSTS, GATES AND ASSOCIATED HARDWARE SHALL BE PAINTED AMS STD. COLOR NO. 30140, BROWN SPECIAL (FEDERAL COLOR NO. 30140) AND SHALL BE PAID FOR UNDER THE BID ITEM "RAILING TUBULAR SCREENING".

NOTES

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.

STRUCTURAL TUBING SHALL CONFORM TO ASTM A500, GRADE B. PLATES, ANGLES, BARS AND SHIMS SHALL CONFORM TO ASTM A709, GRADE 36.

ANCHORAGES SHALL BE ACCURATELY PLACED TO PROVIDE CORRECT ALIGNMENT OF RAILING. SET POSTS NORMAL TO GRADE.

ALL POST SPACINGS ARE TAKEN HORIZONTAL ALONG CENTERLINE OF RAILING AT BASE OF POST.

STEEL SHIMS SHALL BE PROVIDED & USED UNDER BASE PLATES WHERE REQUIRED FOR ALIGNMENT, AND SHALL BE GALVANIZED.

CAULK AROUND PERIMETER OF BASE PLATES AND FILL PORTION OF SLOTTED HOLES AROUND ANCHOR BOLTS WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER.

CUT BOTTOM OF POST TO MAKE VERTICAL IN TRANSVERSE DIRECTION.

ANCHOR BOLTS, NUTS AND WASHERS SHALL BE EITHER STAINLESS STEEL OR ASTM 307. IF 307 IS USED, ANCHOR BOLTS, NUTS, AND WASHERS SHALL BE GALVANIZED. ✿

THE BID ITEM SHALL BE "RAILING TUBULAR SCREENING" WHICH SHALL INCLUDE ALL ITEMS SHOWN.

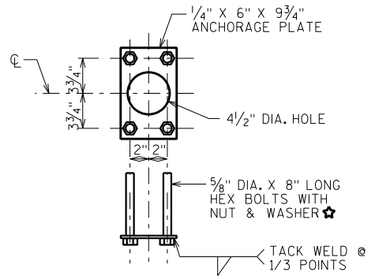
RAILING SHALL BE FABRICATED IN LENGTHS THAT INCLUDE NOT MORE THAN 3 POSTS.

VENT HOLES SHALL BE DRILLED IN MEMBERS AS REQUIRED TO FACILITATE GALVANIZING AND DRAINAGE.

ALL RAILING MATERIAL 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. 30140, BROWN SPECIAL. (FEDERAL COLOR NO. 30140)

F.F. DENOTES FRONT FACE.



ANCHORAGE DETAIL

✿ALTERNATIVE ANCHORAGE: ADHESIVE ANCHORS ⅝-INCH. EMBED 7" IN CONCRETE. ADHESIVE ANCHORS SHALL CONFORM TO SECTION 502.2.12 OF THE STANDARD SPECIFICATIONS.

NOTE: ANCHOR PLATE NOT REQUIRED WHEN ADHESIVE ANCHORS ARE USED.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE R-13-352

DRAWN BY JLB/ZSS | PLANS CK'D. KLW

TUBULAR STEEL RAILING SCREENING

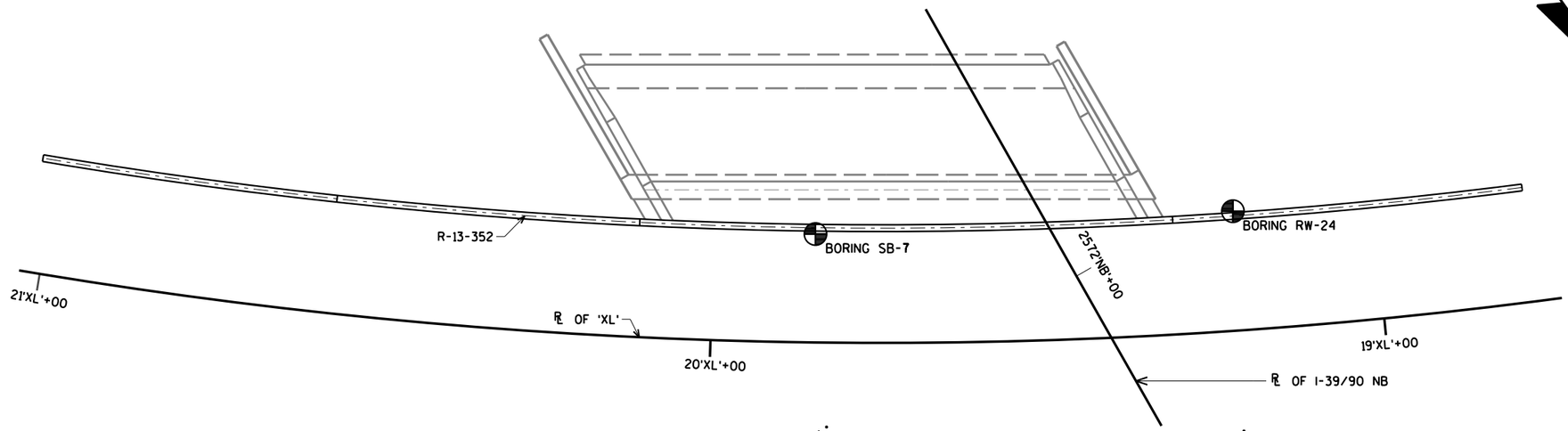
SHEET 5 OF 6

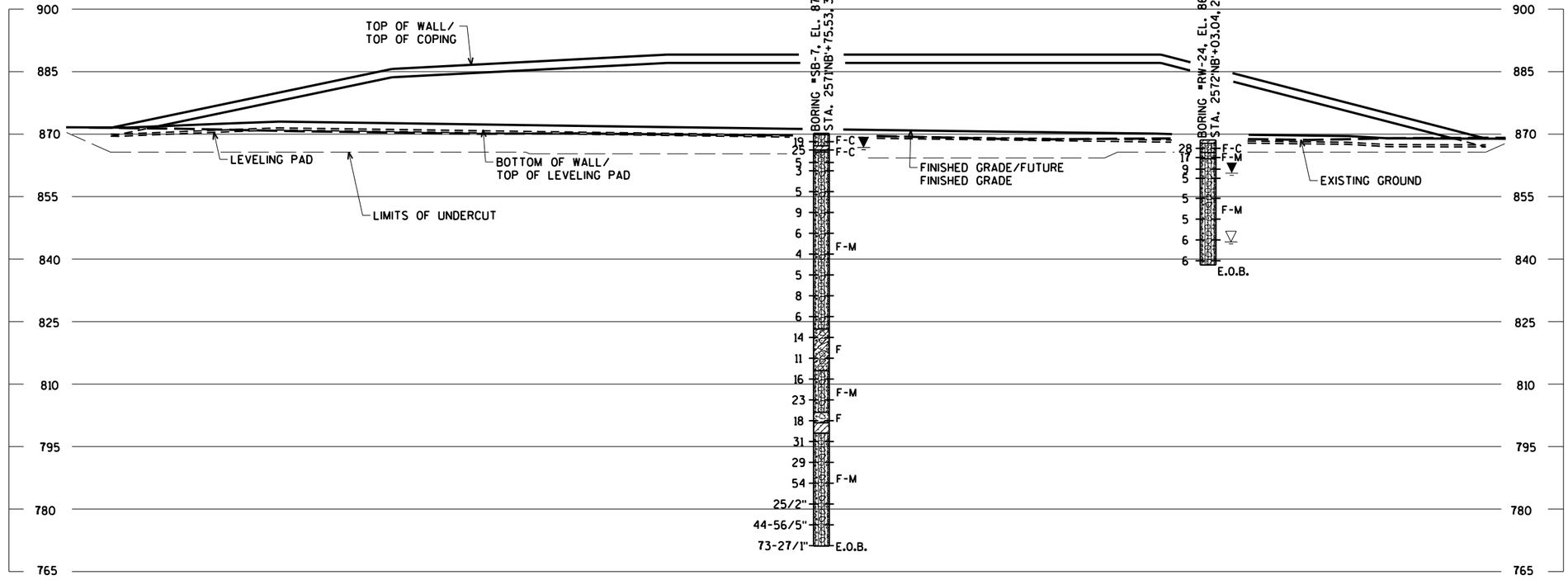
8

8

$PRFNAME$
V:\Structures-EC\41-0660.0X - IH-39 Dane Partners General Bridge Information\RETAINING WALLS\B-13-731\R-13-352 SOUTH\Final

BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
SB-7	JANUARY 10, 2019	473463.30	849766.54
RW-24	MARCH 27, 2019	473495.24	849713.44
BORINGS COMPLETED BY: SOILS & ENGINEERING SERVICES, INC.			
REPORT COMPLETED BY: SOILS & ENGINEERING SERVICE, INC.			
ALL COORDINATES REFERENCED TO WCCS NAD 83(91) DANE COUNTY			





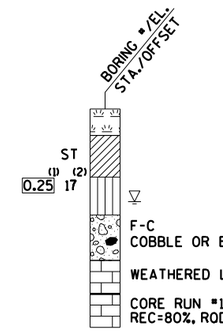
STATE PROJECT NUMBER

1007-12-78

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-13-352

DRAWN BY JLB/ZSS | PLANS CK'D. KLW

SUBSURFACE EXPLORATION

SHEET 6 OF 6

530

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PENTABLE:BReau_shd_util.tbl

USH 12/18 EB - RIGHT SHOULDER

STATION	CUT AREA (SQ. FT.)	CUT VOLUME (CU. YD.)	CUT REUSABLE VOLUME (CU. YD.)	FILL AREA (SQ. FT.)	FILL VOLUME (CU. YD.)	CUMULATIVE CUT (CU. YD.)	CUMULATIVE REUSABLE CUT (CU. YD.)	CUMULATIVE FILL (CU. YD.)	NET VOLUME (CU. YD.)
87+38.36 XEB	36.01			0.00					
87+50.00 XEB	35.96	15.51	15.51	0.00	0.00	15.51	15.51	0.00	15.51
88+00.00 XEB	34.55	65.29	65.29	0.00	0.00	80.80	80.80	0.00	80.80
88+07.70 XEB	33.52	9.71	9.71	0.00	0.00	90.51	90.51	0.00	90.51
88+50.00 XEB	29.06	49.02	49.02	0.00	0.00	139.53	139.53	0.00	139.53
88+87.70 XEB	25.76	38.27	38.27	0.00	0.00	177.80	177.80	0.00	177.80
89+00.00 XEB	26.71	11.95	11.95	0.00	0.00	189.75	189.75	0.00	189.75
89+50.00 XEB	34.70	56.86	56.86	0.00	0.00	246.61	246.61	0.00	246.61
89+57.30 XEB	30.93	8.87	8.87	0.00	0.00	255.48	255.48	0.00	255.48
90+00.00 XEB	24.12	43.53	43.53	0.12	0.09	299.01	299.01	0.09	298.92
90+37.37 XEB	23.79	33.16	33.16	0.46	0.40	332.17	332.17	0.50	331.67
90+50.00 XEB	23.67	11.10	11.10	0.50	0.22	343.27	343.27	0.72	342.55
91+00.00 XEB	22.40	42.66	42.66	52.80	49.35	385.93	385.93	50.07	335.85
91+17.37 XEB	21.60	14.15	14.15	64.28	37.66	400.08	400.08	87.73	312.35
91+50.00 XEB	23.65	27.34	27.34	53.07	70.91	427.42	427.42	158.64	268.78
91+89.37 XEB	24.46	35.08	35.08	53.56	77.74	462.50	462.50	236.38	226.11
92+00.00 XEB	24.90	9.72	9.72	48.37	20.07	472.22	472.22	256.45	215.77
92+50.00 XEB	24.99	46.19	46.19	30.04	72.60	518.41	518.41	329.05	189.36
93+00.00 XEB	25.29	46.56	46.56	1.54	29.24	564.97	564.97	358.29	206.67
93+50.00 XEB	24.92	46.49	46.49	1.74	3.04	611.46	611.46	361.33	250.13
94+00.00 XEB	26.15	47.29	47.29	1.02	2.56	658.74	658.74	363.88	294.86
94+50.00 XEB	26.33	48.59	48.59	1.18	2.04	707.34	707.34	365.92	341.41
95+00.00 XEB	25.22	47.73	47.73	31.38	30.15	755.07	755.07	396.07	359.00
95+50.00 XEB	25.57	47.03	47.03	34.38	60.89	802.10	802.10	456.96	345.14
96+00.00 XEB	25.76	47.53	47.53	33.40	62.76	849.62	849.62	519.72	329.91
96+50.00 XEB	27.25	49.08	49.08	22.11	51.40	898.71	898.71	571.12	327.59
96+88.75 XEB	29.63	40.82	40.82	6.30	20.39	939.52	939.52	591.50	348.02
97+00.00 XEB	30.79	12.59	12.59	3.14	1.97	952.11	952.11	593.47	358.64
97+50.00 XEB	41.27	66.72	66.72	0.20	3.09	1018.83	1018.83	596.56	422.27
97+60.75 XEB	43.44	16.86	16.86	0.00	0.04	1035.70	1035.70	596.60	439.09
98+00.00 XEB	25.32	49.98	49.98	0.00	0.00	1085.67	1085.67	596.60	489.07
98+40.75 XEB	13.39	29.21	29.21	0.00	0.00	1114.89	1114.89	596.60	518.28
98+50.00 XEB	11.45	4.26	4.26	0.00	0.00	1119.14	1119.14	596.60	522.54
99+00.00 XEB	4.91	15.15	15.15	0.00	0.00	1134.29	1134.29	596.60	537.69
99+20.75 XEB	3.91	3.39	3.39	0.00	0.00	1137.68	1137.68	596.60	541.08
99+32.66 XEB	3.59	1.65	1.65	0.00	0.00	1139.33	1139.33	596.60	542.73

USH 12/18 EB - LEFT SHOULDER

STATION	CUT AREA (SQ. FT.)	CUT VOLUME (CU. YD.)	CUT REUSABLE VOLUME (CU. YD.)	FILL AREA (SQ. FT.)	FILL VOLUME (CU. YD.)	CUMULATIVE CUT (CU. YD.)	CUMULATIVE REUSABLE CUT (CU. YD.)	CUMULATIVE FILL (CU. YD.)	NET VOLUME (CU. YD.)
99+92.24 XEB	7.53			0.00					
100+00.00 XEB	7.54	2.17	2.17	0.00	0.00	2.17	2.17	0.00	2.17
100+50.00 XEB	7.73	14.14	14.14	0.00	0.00	16.30	16.30	0.00	16.30
101+00.00 XEB	7.75	14.33	14.33	0.00	0.00	30.64	30.64	0.00	30.64
101+25.44 XEB	7.98	7.41	7.41	2.41	1.14	38.05	38.05	1.14	36.91
101+50.00 XEB	34.86	19.48	19.48	0.00	1.10	57.53	57.53	2.23	55.30
102+00.00 XEB	18.90	49.78	49.78	11.36	10.52	107.31	107.31	12.75	94.56
102+50.00 XEB	18.75	34.86	34.86	7.84	17.78	142.17	142.17	30.53	111.64
102+90.44 XEB	21.36	30.04	30.04	2.12	7.46	172.21	172.21	37.99	134.22
103+00.00 XEB	22.98	7.85	7.85	2.08	0.74	180.06	180.06	38.73	141.33
103+25.00 XEB	115.88	64.29	64.29	1.09	1.47	244.35	244.35	40.20	204.15
103+50.00 XEB	94.54	97.42	97.42	0.00	0.50	341.76	341.76	40.70	301.06
104+00.00 XEB	58.99	142.16	142.16	0.00	0.00	483.92	483.92	40.70	443.22
104+50.00 XEB	45.13	96.41	96.41	0.00	0.00	580.33	580.33	40.70	539.63
105+00.00 XEB	18.25	58.69	58.69	3.44	3.19	639.01	639.01	43.89	595.13
105+50.00 XEB	17.58	33.18	33.18	0.08	3.26	672.19	672.19	47.15	625.04
106+00.00 XEB	7.27	23.01	23.01	0.00	0.07	695.20	695.20	47.22	647.98
106+12.24 XEB	7.23	3.29	3.29	0.00	0.00	698.48	698.48	47.22	651.26

USH 12/18 WB - RIGHT SHOULDER

STATION	CUT AREA (SQ. FT.)	CUT VOLUME (CU. YD.)	CUT REUSABLE VOLUME (CU. YD.)	FILL AREA (SQ. FT.)	FILL VOLUME (CU. YD.)	CUMULATIVE CUT (CU. YD.)	CUMULATIVE REUSABLE CUT (CU. YD.)	CUMULATIVE FILL (CU. YD.)	NET VOLUME (CU. YD.)
100+57.79 XWB	21.72			0.00					
100+70.70 XWB	22.18	10.50	10.50	0.00	0.00	10.50	10.50	0.00	10.50
100+81.95 XWB	144.55	34.74	34.74	0.10	0.02	45.23	45.23	0.02	45.21
101+00.00 XWB	83.25	76.14	76.14	61.21	20.49	121.38	121.38	20.51	100.86
101+50.00 XWB	33.81	108.39	108.39	234.72	274.01	229.77	229.77	294.52	-64.76
102+00.00 XWB	28.75	57.93	57.93	132.08	339.63	287.69	287.69	634.15	-346.46
102+06.95 XWB	28.67	7.39	7.39	125.24	33.12	295.08	295.08	667.27	-372.19
102+20.70 XWB	29.53	14.82	14.82	66.60	48.85	309.90	309.90	716.12	-406.22
102+50.00 XWB	161.28	103.53	103.53	5.25	38.99	413.43	413.43	755.10	-341.67
102+60.00 XWB	264.80	78.90	78.90	3.08	1.54	492.34	492.34	756.65	-264.31
103+00.00 XWB	39.90	225.70	225.70	3.10	4.58	718.04	718.04	761.22	-43.18
103+50.00 XWB	35.25	69.58	69.58	0.46	3.30	787.62	787.62	764.52	23.10
103+57.95 XWB	32.54	9.98	9.98	1.75	0.33	797.60	797.60	764.85	32.75
103+60.31 XWB	31.98	2.82	2.82	2.19	0.17	800.42	800.42	765.02	35.40
103+82.95 XWB	30.54	26.21	26.21	2.81	2.10	826.64	826.64	767.12	59.52
103+85.31 XWB	30.54	2.67	2.67	2.64	0.24	829.31	829.31	767.35	61.95
104+00.00 XWB	31.92	16.99	16.99	2.56	1.41	846.30	846.30	768.77	77.53
104+07.95 XWB	29.65	9.06	9.06	2.60	0.76	855.36	855.36	769.53	85.83
104+10.31 XWB	29.07	2.57	2.57	2.35	0.22	857.93	857.93	769.74	88.18
104+50.00 XWB	20.09	36.13	36.13	6.77	6.70	894.06	894.06	776.45	117.61
105+00.00 XWB	19.52	36.68	36.68	0.00	6.27	930.74	930.74	782.72	148.02
105+08.50 XWB	20.89	6.36	6.36	0.00	0.00	937.10	937.10	782.72	154.38

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	COMPUTER EARTHWORK DATA	SHEET 531	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\090101_EW.DWG
LAYOUT NAME - 090101_ew
PLOT DATE : 7/30/2019 11:50 AM PLOT BY : MATTHEW WISWELL PLOT NAME :
WISDOT/CADDS SHEET 49

USH 12/18 WB - LEFT SHOULDER

STATION	CUT AREA (SQ. FT.)	CUT VOLUME (CU. YD.)	CUT REUSABLE VOLUME (CU. YD.)	FILL AREA (SQ. FT.)	FILL VOLUME (CU. YD.)	CUMULATIVE CUT (CU. YD.)	CUMULATIVE REUSABLE CUT (CU. YD.)	CUMULATIVE FILL (CU. YD.)	NET VOLUME (CU. YD.)
100+55.43 XWB	17.24			0.00					
100+57.79 XWB	16.95	1.50	1.50	0.18	0.01	1.50	1.50	0.01	1.49
100+70.70 XWB	17.60	8.26	8.26	19.95	4.81	9.76	9.76	4.82	4.94
100+81.95 XWB	26.60	9.21	9.21	1.48	4.46	18.97	18.97	9.29	9.68
101+00.00 XWB	38.68	21.82	21.82	0.00	0.49	40.79	40.79	9.78	31.01
101+50.00 XWB	32.65	66.05	66.05	58.27	53.95	106.83	106.83	63.73	43.10
102+00.00 XWB	35.84	63.42	63.42	30.93	82.59	170.25	170.25	146.33	23.92
102+06.95 XWB	35.40	9.17	9.17	31.10	7.98	179.42	179.42	154.31	25.11
102+20.70 XWB	35.40	18.03	18.03	27.33	14.88	197.45	197.45	169.19	28.26
102+50.00 XWB	59.30	51.38	51.38	0.00	14.83	248.83	248.83	184.02	64.81
102+60.00 XWB	91.87	27.99	27.99	0.00	0.00	276.82	276.82	184.02	92.81
103+00.00 XWB	43.61	100.36	100.36	0.00	0.00	377.18	377.18	184.02	193.16
103+50.00 XWB	56.95	93.11	93.11	0.03	0.03	470.29	470.29	184.05	286.25
103+57.95 XWB	55.45	16.54	16.54	0.08	0.02	486.83	486.83	184.06	302.77
103+60.31 XWB	55.09	4.84	4.84	0.18	0.01	491.67	491.67	184.07	307.59
103+82.95 XWB	55.66	46.44	46.44	1.94	0.89	538.10	538.10	184.96	353.14
103+85.31 XWB	56.38	4.90	4.90	1.95	0.17	543.00	543.00	185.13	357.87
104+00.00 XWB	57.68	31.03	31.03	1.27	0.88	574.03	574.03	186.01	388.02
104+07.95 XWB	61.09	17.48	17.48	0.72	0.29	591.50	591.50	186.30	405.20
104+10.31 XWB	53.80	5.03	5.03	0.96	0.07	596.53	596.53	186.37	410.16
104+50.00 XWB	30.00	61.59	61.59	3.60	3.35	658.13	658.13	189.73	468.40
105+00.00 XWB	24.14	50.13	50.13	0.00	3.33	708.26	708.26	193.06	515.20
105+08.50 XWB	25.59	7.83	7.83	0.00	0.00	716.08	716.08	193.06	523.02

FEMRITE DRIVE - RIGHT SHOULDER

STATION	CUT AREA (SQ. FT.)	CUT VOLUME (CU. YD.)	CUT REUSABLE VOLUME (CU. YD.)	FILL AREA (SQ. FT.)	FILL VOLUME (CU. YD.)	CUMULATIVE CUT (CU. YD.)	CUMULATIVE REUSABLE CUT (CU. YD.)	CUMULATIVE FILL (CU. YD.)	NET VOLUME (CU. YD.)
47+00.00 FD	11.68			1.47					
47+50.00 FD	10.25	20.31	20.31	1.76	2.99	20.31	20.31	2.99	17.31
48+00.00 FD	8.58	17.44	17.44	1.97	3.45	37.74	37.74	6.44	31.30
48+50.00 FD	7.63	15.01	15.01	3.39	4.96	52.75	52.75	11.41	41.34
49+00.00 FD	9.36	15.73	15.73	3.75	6.61	68.48	68.48	18.02	50.46
49+50.00 FD	17.83	25.18	25.18	0.00	3.47	93.66	93.66	21.49	72.17
50+00.00 FD	18.46	33.60	33.60	0.00	0.00	127.26	127.26	21.49	105.77
50+50.00 FD	10.89	27.18	27.18	4.63	4.29	154.44	154.44	25.78	128.66
51+00.00 FD	9.79	19.15	19.15	4.33	8.30	173.58	173.58	34.07	139.51
51+50.00 FD	10.16	18.47	18.47	3.58	7.32	192.06	192.06	41.40	150.66
52+00.00 FD	19.37	27.34	27.34	0.00	3.31	219.40	219.40	44.71	174.69
52+50.00 FD	26.83	42.78	42.78	0.00	0.00	262.18	262.18	44.71	217.46
53+00.00 FD	26.88	49.73	49.73	0.00	0.00	311.91	311.91	44.71	267.19
53+50.00 FD	61.85	82.16	82.16	2.50	2.31	394.06	394.06	47.03	347.04
54+00.00 FD	12.29	68.65	68.65	0.44	2.72	462.71	462.71	49.75	412.96
54+50.00 FD	11.67	22.19	22.19	0.99	1.32	484.90	484.90	51.07	433.82
55+00.00 FD	10.27	20.31	20.31	0.34	1.23	505.21	505.21	52.31	452.91
55+50.00 FD	8.83	17.69	17.69	0.37	0.66	522.90	522.90	52.96	469.94
56+00.00 FD	7.66	15.27	15.27	0.00	0.34	538.17	538.17	53.31	484.86
56+50.00 FD	6.11	12.75	12.75	0.00	0.00	550.92	550.92	53.31	497.61

IH 39 NB TO USH 12/18 WB - RIGHT SHOULDER

STATION	CUT AREA (SQ. FT.)	CUT VOLUME (CU. YD.)	CUT REUSABLE VOLUME (CU. YD.)	FILL AREA (SQ. FT.)	FILL VOLUME (CU. YD.)	CUMULATIVE CUT (CU. YD.)	CUMULATIVE REUSABLE CUT (CU. YD.)	CUMULATIVE FILL (CU. YD.)	NET VOLUME (CU. YD.)
17+75.00 XL	0.00			0.03					
18+00.00 XL	8.81	4.08	4.08	0.48	0.24	4.08	4.08	0.24	3.84
18+50.00 XL	7.35	14.96	14.96	3.23	3.44	19.04	19.04	3.67	15.37
18+77.32 XL	18.12	12.89	12.89	1.11	2.20	31.93	31.93	5.87	26.06
19+00.00 XL	17.83	15.10	15.10	3.20	1.81	47.03	47.03	7.68	39.35
19+50.00 XL	17.57	32.78	32.78	6.40	8.89	79.80	79.80	16.57	63.24
20+00.00 XL	17.16	32.16	32.16	6.49	11.94	111.96	111.96	28.50	83.46
20+50.00 XL	17.39	31.99	31.99	8.65	14.02	143.95	143.95	42.52	101.43
21+00.00 XL	16.22	31.12	31.12	1.64	9.53	175.07	175.07	52.05	123.03
21+02.31 XL	16.14	1.38	1.38	1.42	0.13	176.46	176.46	52.18	124.28
21+04.60 XL	16.06	1.37	1.37	1.46	0.12	177.82	177.82	52.30	125.52
21+25.97 XL	21.85	15.00	15.00	6.77	3.26	192.82	192.82	55.56	137.26
21+40.80 XL	36.07	15.91	15.91	0.00	1.86	208.73	208.73	57.42	151.32
21+50.00 XL	43.04	13.48	13.48	0.00	0.00	222.21	222.21	57.42	164.79
22+00.00 XL	19.20	57.63	57.63	2.28	2.11	279.84	279.84	59.53	220.31
22+34.93 XL	19.35	24.93	24.93	0.25	1.64	304.77	304.77	61.16	243.61
22+50.00 XL	20.10	11.01	11.01	0.51	0.21	315.79	315.79	61.38	254.41
22+59.93 XL	19.74	7.32	7.32	1.49	0.37	323.11	323.11	61.74	261.37
22+84.93 XL	20.00	18.40	18.40	8.16	4.47	341.51	341.51	66.21	275.30
23+00.00 XL	20.57	11.33	11.33	4.20	3.45	352.83	352.83	69.66	283.17
23+50.00 XL	20.98	38.47	38.47	0.00	3.89	391.31	391.31	73.55	317.75
24+00.00 XL	26.50	43.96	43.96	0.00	0.00	435.27	435.27	73.55	361.72
24+04.93 XL	25.66	4.76	4.76	0.00	0.00	440.03	440.03	73.55	366.47

FEMRITE DRIVE - LEFT SHOULDER

STATION	CUT AREA (SQ. FT.)	CUT VOLUME (CU. YD.)	CUT REUSABLE VOLUME (CU. YD.)	FILL AREA (SQ. FT.)	FILL VOLUME (CU. YD.)	CUMULATIVE CUT (CU. YD.)	CUMULATIVE REUSABLE CUT (CU. YD.)	CUMULATIVE FILL (CU. YD.)	NET VOLUME (CU. YD.)
48+50.00 FD	1.76			1.13					
49+00.00 FD	9.77	10.68	10.68	7.51	8.00	10.68	10.68	8.00	2.68
49+50.00 FD	14.80	22.75	22.75	0.00	6.95	33.43	33.43	14.95	18.47
50+00.00 FD	16.81	29.27	29.27	0.00	0.00	62.69	62.69	14.95	47.74
50+50.00 FD	14.67	29.15	29.15	0.88	0.81	91.84	91.84	15.77	76.07
51+00.00 FD	9.12	22.03	22.03	4.58	5.06	113.87	113.87	20.82	93.05
51+50.00 FD	8.47	16.29	16.29	4.11	8.05	130.16	130.16	28.87	101.29
52+00.00 FD	20.15	26.50	26.50	0.00	3.81	156.66	156.66	32.68	123.98
52+50.00 FD	19.20	36.44	36.44	0.00	0.00	193.09	193.09	32.68	160.42
53+00.00 FD	14.95	31.62	31.62	0.00	0.00	224.71	224.71	32.68	192.04
53+50.00 FD	9.63	22.76	22.76	2.90	2.69	247.47	247.47	35.36	212.11
54+00.00 FD	9.65	17.85	17.85	2.50	5.00	265.32	265.32	40.36	224.96
54+50.00 FD	10.40	18.56	18.56	0.97	3.21	283.89	283.89	43.57	240.31
55+00.00 FD	9.32	18.26	18.26	0.79	1.63	302.15	302.15	45.20	256.94
55+50.00 FD	8.58	16.57	16.57	0.35	1.06	318.72	318.72	46.26	272.46
56+00.00 FD	7.59	14.97	14.97	0.00	0.32	333.69	333.69	46.58	287.11
56+50.00 FD	5.91	12.50	12.50	0.00	0.00	346.19	346.19	46.58	299.61

PROJECT NO: 1007-12-78 | HWY: IH 39 | COUNTY: DANE | COMPUTER EARTHWORK DATA | SHEET 532 | E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\090101_EW.DWG
LAYOUT NAME - 090102_ew
PLOT DATE : 7/30/2019 11:50 AM PLOT BY : MATTHEW WISWELL PLOT NAME :
WISDOT/CADDS SHEET 49

IH 39 NB - WORK AREA 1

STATION	CUT AREA (SQ. FT.)	CUT VOLUME (CU. YD.)	CUT REUSABLE VOLUME (CU. YD.)	FILL AREA (SQ. FT.)	FILL VOLUME (CU. YD.)	CUMULATIVE CUT (CU. YD.)	CUMULATIVE REUSABLE CUT (CU. YD.)	CUMULATIVE FILL (CU. YD.)	NET VOLUME (CU. YD.)
2533+97.70	2.32			51.59					
2534+00.00	2.12	0.19	0.19	30.15	3.48	0.19	0.19	3.48	-3.29
2534+58.47	0.00	2.30	2.30	40.60	76.61	2.48	2.48	80.09	-77.60
2535+00.00	0.20	0.15	0.15	49.58	69.36	2.64	2.64	149.44	-146.80
2535+78.47	0.00	0.29	0.29	78.84	186.61	2.93	2.93	336.06	-333.13
2536+00.00	0.00	0.00	0.00	92.01	68.12	2.93	2.93	404.17	-401.25
2536+98.47	65.90	120.17	120.17	344.05	795.16	123.10	123.10	1199.34	-1076.24
2537+00.00	66.69	3.76	3.76	356.26	19.84	126.86	126.86	1219.18	-1092.32
2538+00.00	0.00	123.50	123.50	463.33	1517.76	250.36	250.36	2736.94	-2486.58
2538+12.47	0.00	0.00	0.00	477.77	217.32	250.36	250.36	2954.26	-2703.91
2539+00.00	4.25	6.89	6.89	611.41	1765.48	257.24	257.24	4719.74	-4462.50
2540+00.00	2.48	12.46	12.46	774.92	2567.28	269.71	269.71	7287.02	-7017.31
2541+00.00	1.91	8.13	8.13	938.40	3172.81	277.84	277.84	10459.84	-10182.00
2542+00.00	1.53	6.37	6.37	1122.15	3815.83	284.21	284.21	14275.67	-13991.46
2543+00.00	0.00	2.83	2.83	1317.24	4517.39	287.04	287.04	18793.06	-18506.02
2544+00.00	0.00	0.00	0.00	1554.68	5318.37	287.04	287.04	24111.43	-23824.39
2545+00.00	0.00	0.00	0.00	1819.79	6249.02	287.04	287.04	30360.45	-30073.41
2545+48.51	0.00	0.00	0.00	1988.40	3421.02	287.04	287.04	33781.47	-33494.43
2546+00.00	8.87	8.46	8.46	1922.34	3728.96	295.50	295.50	37510.44	-37214.94
2547+00.00	0.00	16.43	16.43	2069.53	7392.35	311.92	311.92	44902.79	-44590.86
2548+00.00	0.00	0.00	0.00	2214.57	7933.52	311.92	311.92	52836.31	-52524.38
2549+00.00	0.00	0.00	0.00	2416.62	8576.28	311.92	311.92	61412.58	-61100.66
2550+00.00	0.00	0.00	0.00	2509.99	9123.35	311.92	311.92	70535.94	-70224.01
2551+00.00	0.20	0.37	0.37	2722.34	9689.50	312.29	312.29	80225.44	-79913.14
2552+00.00	6.36	12.15	12.15	2818.85	10261.46	324.44	324.44	90486.90	-90162.45
2553+00.00	18.75	46.50	46.50	2921.48	10630.24	370.94	370.94	101117.14	-100746.20
2554+00.00	11.23	55.52	55.52	2952.18	10877.15	426.46	426.46	111994.29	-111567.83
2555+00.00	3.68	27.61	27.61	3157.40	11314.04	454.07	454.07	123308.32	-122854.25
2556+00.00	3.88	14.00	14.00	3219.62	11809.30	468.07	468.07	135117.62	-134649.55
2556+17.80	4.07	2.62	2.62	3255.99	2134.55	470.69	470.69	137252.17	-136781.48
2556+26.52	4.74	1.42	1.42	3285.17	1056.28	472.12	472.12	138308.45	-137836.33
2556+51.52	3.14	3.65	3.65	3330.95	3063.02	475.76	475.76	141371.47	-140895.70
2556+76.52	0.00	1.45	1.45	3258.78	3050.80	477.22	477.22	144422.27	-143945.05
2557+00.00	0.00	0.00	0.00	3203.04	2809.70	477.22	477.22	147231.96	-146754.75
2557+31.80	0.00	0.00	0.00	3134.60	3732.17	477.22	477.22	150964.13	-150486.91
2558+00.00	0.00	0.00	0.00	3081.86	7851.16	477.22	477.22	158815.29	-158338.07
2558+51.80	0.00	0.00	0.00	3104.75	5934.56	477.22	477.22	164749.85	-164272.63
2558+79.04	0.00	0.00	0.00	3130.10	3145.14	477.22	477.22	167894.99	-167417.77

IH 39 NB - WORK AREA 2

STATION	CUT AREA (SQ. FT.)	CUT VOLUME (CU. YD.)	CUT REUSABLE VOLUME (CU. YD.)	FILL AREA (SQ. FT.)	FILL VOLUME (CU. YD.)	CUMULATIVE CUT (CU. YD.)	CUMULATIVE REUSABLE CUT (CU. YD.)	CUMULATIVE FILL (CU. YD.)	NET VOLUME (CU. YD.)
2560+64.55	45.95			3568.40					
2561+00.00	172.62	143.49	143.49	3479.27	4626.66	143.49	143.49	4626.66	-4483.18
2561+57.30	179.73	373.88	373.88	3608.14	7520.53	517.37	517.37	12147.19	-11629.82
2562+00.00	69.68	197.22	197.22	3840.61	5890.03	714.59	714.59	18037.22	-17322.64
2562+25.00	11.39	37.53	37.53	4113.09	3682.27	752.12	752.12	21719.49	-20967.37
2562+77.30	59.61	68.76	68.76	3832.56	7695.51	820.89	820.89	29415.00	-28594.12
2563+00.00	134.67	81.67	81.67	3669.08	3153.47	902.56	902.56	32568.47	-31665.91
2563+73.06	113.60	335.90	335.90	3757.91	10048.44	1238.46	1238.46	42616.91	-41378.46

IH 39 NB - WORK AREA 3

STATION	CUT AREA (SQ. FT.)	CUT VOLUME (CU. YD.)	CUT REUSABLE VOLUME (CU. YD.)	FILL AREA (SQ. FT.)	FILL VOLUME (CU. YD.)	CUMULATIVE CUT (CU. YD.)	CUMULATIVE REUSABLE CUT (CU. YD.)	CUMULATIVE FILL (CU. YD.)	NET VOLUME (CU. YD.)
2565+60.07	22.99			4099.42					
2566+00.00	30.04	39.22	39.22	4102.13	6065.05	39.22	39.22	6065.05	-6025.83
2567+00.00	9.34	72.93	72.93	4152.10	15285.61	112.14	112.14	21350.66	-21238.52
2568+00.00	20.97	56.13	56.13	4108.92	15298.19	168.27	168.27	36648.84	-36480.57
2569+00.00	35.14	103.91	103.91	4050.48	15110.00	272.18	272.18	51758.84	-51486.66
2570+00.00	48.13	154.20	154.20	3925.43	14770.20	426.38	426.38	66529.05	-66102.66
2571+00.00	12.61	112.48	112.48	3788.80	14285.61	538.86	538.86	80814.66	-80275.79
2571+63.98	0.00	14.94	14.94	1025.30	5703.82	553.80	553.80	86518.47	-85964.67

IH 39 NB - WORK AREA 4

STATION	CUT AREA (SQ. FT.)	CUT VOLUME (CU. YD.)	CUT REUSABLE VOLUME (CU. YD.)	FILL AREA (SQ. FT.)	FILL VOLUME (CU. YD.)	CUMULATIVE CUT (CU. YD.)	CUMULATIVE REUSABLE CUT (CU. YD.)	CUMULATIVE FILL (CU. YD.)	NET VOLUME (CU. YD.)
2574+27.68	88.30			2048.71					
2574+50.00	94.78	75.67	75.67	3070.88	2116.10	75.67	75.67	2116.10	-2040.42
2575+00.00	113.07	192.45	192.45	3028.40	5647.48	268.13	268.13	7763.58	-7495.45
2576+00.00	58.70	318.09	318.09	2724.68	10653.85	586.22	586.22	18417.43	-17831.21
2577+00.00	29.32	163.00	163.00	2225.44	9166.89	749.22	749.22	27584.32	-26835.10
2578+00.00	7.11	67.46	67.46	1938.36	7710.74	816.68	816.68	35295.06	-34478.38
2579+00.00	0.09	13.33	13.33	1901.04	7110.00	830.02	830.02	42405.06	-41575.04
2579+14.61	0.00	0.02	0.02	1919.91	1033.78	830.04	830.04	43438.84	-42608.80
2579+39.61	0.00	0.00	0.00	1945.20	1789.40	830.04	830.04	45228.24	-44398.20
2579+64.61	0.00	0.00	0.00	1904.75	1782.38	830.04	830.04	47010.63	-46180.59
2580+00.00	0.00	0.00	0.00	1825.72	2444.84	830.04	830.04	49455.47	-48625.43
2580+24.01	0.00	0.00	0.00	1734.28	1582.88	830.04	830.04	51038.35	-50208.31
2580+49.01	0.00	0.00	0.00	1602.65	1544.88	830.04	830.04	52583.22	-51753.18
2580+74.01	0.00	0.00	0.00	1476.45	1425.51	830.04	830.04	54008.73	-53178.69
2581+00.00	0.00	0.00	0.00	1367.77	1368.91	830.04	830.04	55377.64	-54547.60
2581+62.70	0.00	0.00	0.00	1088.52	2852.03	830.04	830.04	58229.67	-57399.63

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	COMPUTER EARTHWORK DATA	SHEET 533	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\090101_EW.DWG
LAYOUT NAME - 090103_ew
PLOT DATE : 7/30/2019 11:50 AM PLOT BY : MATTHEW WISWELL PLOT NAME :
WISDOT/CADDS SHEET 49

IH 39 SB - WORK AREA 1

STATION	CUT AREA (SQ. FT.)	CUT VOLUME (CU. YD.)	CUT REUSABLE VOLUME (CU. YD.)	FILL AREA (SQ. FT.)	FILL VOLUME (CU. YD.)	CUMULATIVE CUT (CU. YD.)	CUMULATIVE REUSABLE CUT (CU. YD.)	CUMULATIVE FILL (CU. YD.)	NET VOLUME (CU. YD.)
2533+97.73 TSB	0.00			21.74					
2534+00.00 TSB	0.00	0.00	0.00	21.65	1.82	0.00	0.00	1.82	-1.82
2534+08.94 TSB	0.00	0.00	0.00	21.83	7.20	0.00	0.00	9.02	-9.02
2535+00.00 TSB	0.00	0.00	0.00	22.58	74.89	0.00	0.00	83.91	-83.91
2535+28.94 TSB	0.00	0.00	0.00	22.57	24.20	0.00	0.00	108.11	-108.11
2536+00.00 TSB	0.00	0.00	0.00	22.55	59.37	0.00	0.00	167.48	-167.48
2536+48.94 TSB	0.00	0.00	0.00	22.45	40.78	0.00	0.00	208.27	-208.27
2537+00.00 TSB	0.00	0.00	0.00	22.16	42.18	0.00	0.00	250.45	-250.45
2537+68.94 TSB	0.00	0.00	0.00	27.37	63.23	0.00	0.00	313.68	-313.68
2538+00.00 TSB	0.00	0.00	0.00	32.02	34.16	0.00	0.00	347.84	-347.84
2538+82.94 TSB	0.00	0.00	0.00	40.68	111.66	0.00	0.00	459.50	-459.50
2539+00.00 TSB	0.00	0.00	0.00	41.91	26.09	0.00	0.00	485.60	-485.60
2540+00.00 TSB	0.00	0.00	0.00	52.45	174.74	0.00	0.00	660.34	-660.34
2540+77.60 TSB	0.00	0.00	0.00	64.13	167.53	0.00	0.00	827.87	-827.87
2541+00.00 TSB	53.80	22.32	22.32	70.32	55.77	22.32	22.32	883.64	-861.32
2542+00.00 TSB	54.44	200.44	200.44	111.89	337.43	222.76	222.76	1221.06	-998.30
2543+00.00 TSB	56.33	205.13	205.13	139.85	466.19	427.89	427.89	1687.25	-1259.36
2544+00.00 TSB	58.69	213.00	213.00	182.79	597.48	640.89	640.89	2284.73	-1643.84
2545+00.00 TSB	62.15	223.78	223.78	240.77	784.37	864.67	864.67	3069.10	-2204.43
2545+63.50 TSB	62.37	146.43	146.43	257.01	585.35	1011.10	1011.10	3654.45	-2643.36
2546+00.00 TSB	61.85	83.96	83.96	262.86	351.39	1095.06	1095.06	4005.85	-2910.79
2546+17.00 TSB	61.44	38.81	38.81	264.79	166.11	1133.87	1133.87	4171.96	-3038.09
2547+00.00 TSB	58.48	184.32	184.32	320.59	899.75	1318.19	1318.19	5071.71	-3753.52
2548+00.00 TSB	54.94	210.04	210.04	370.11	1279.07	1528.23	1528.23	6350.78	-4822.55
2549+00.00 TSB	55.39	204.31	204.31	414.75	1453.44	1732.55	1732.55	7804.23	-6071.68
2550+00.00 TSB	58.27	210.48	210.48	429.06	1562.61	1943.03	1943.03	9366.84	-7423.81
2551+00.00 TSB	65.95	230.04	230.04	463.56	1653.00	2173.06	2173.06	11019.84	-8846.78
2552+00.00 TSB	64.25	241.11	241.11	366.05	1536.31	2414.18	2414.18	12556.15	-10141.98
2553+00.00 TSB	62.57	234.85	234.85	359.31	1343.26	2649.03	2649.03	13899.41	-11250.39
2554+00.00 TSB	63.19	232.89	232.89	351.40	1316.13	2881.92	2881.92	15215.54	-12333.63
2555+00.00 TSB	65.84	238.94	238.94	344.30	1288.33	3120.86	3120.86	16503.88	-13383.02
2556+00.00 TSB	65.10	242.48	242.48	311.25	1213.98	3363.34	3363.34	17717.86	-14354.52
2557+00.00 TSB	67.45	245.46	245.46	298.08	1128.39	3608.80	3608.80	18846.25	-15237.44
2557+49.87 TSB	65.43	122.72	122.72	325.01	575.44	3731.52	3731.52	19421.68	-15690.16
2558+00.00 TSB	65.18	121.25	121.25	280.07	561.72	3852.77	3852.77	19983.40	-16130.63
2558+35.53 TSB	63.91	84.94	84.94	271.19	362.71	3937.71	3937.71	20346.11	-16408.40
2559+00.00 TSB	70.86	160.90	160.90	278.76	656.58	4098.61	4098.61	21002.69	-16904.08
2559+25.70 TSB	78.64	71.15	71.15	275.81	263.93	4169.76	4169.76	21266.62	-17096.86
2559+68.82 TSB	40.49	95.14	95.14	0.00	220.26	4264.90	4264.90	21486.88	-17221.98

IH 39 SB TO USH 12/18 EB - RIGHT SHOULDER

STATION	CUT AREA (SQ. FT.)	CUT VOLUME (CU. YD.)	CUT REUSABLE VOLUME (CU. YD.)	FILL AREA (SQ. FT.)	FILL VOLUME (CU. YD.)	CUMULATIVE CUT (CU. YD.)	CUMULATIVE REUSABLE CUT (CU. YD.)	CUMULATIVE FILL (CU. YD.)	NET VOLUME (CU. YD.)
22+40.00 XN	6.98			2.09					
22+50.00 XN	6.41	2.48	2.48	12.71	2.74	2.48	2.48	2.74	-0.26
23+00.00 XN	25.57	29.61	29.61	2.97	14.52	32.09	32.09	17.26	14.83
23+50.00 XN	22.55	44.56	44.56	15.05	16.69	76.65	76.65	33.94	42.70
24+00.00 XN	23.98	43.08	43.08	11.37	24.46	119.73	119.73	58.41	61.32
24+50.00 XN	18.31	39.16	39.16	26.55	35.11	158.89	158.89	93.52	65.37
24+73.16 XN	22.70	17.59	17.59	30.33	24.40	176.48	176.48	117.91	58.56

IH 39 SB TO USH 12/18 EB - RIGHT SHOULDER (CONTINUED)

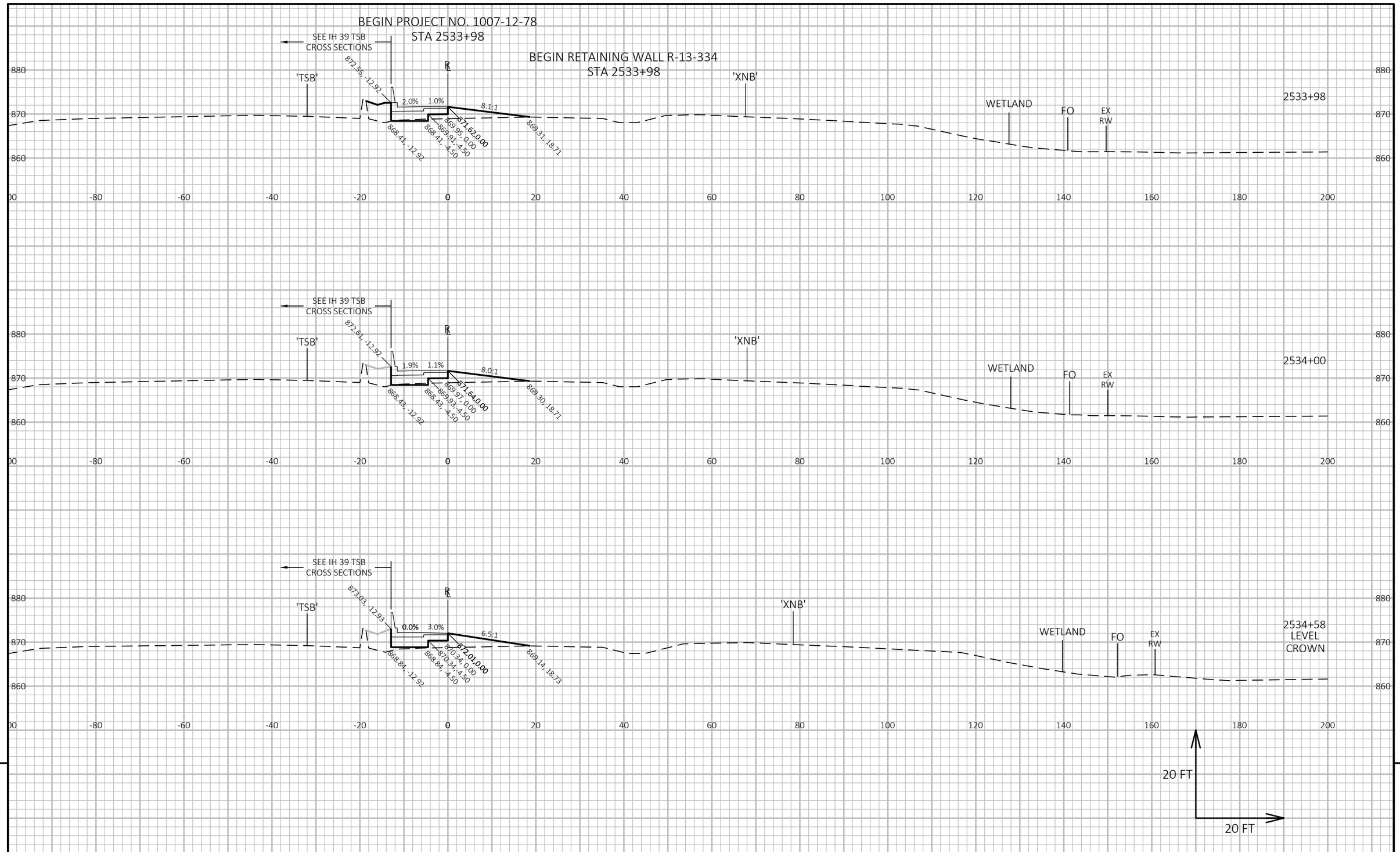
STATION	CUT AREA (SQ. FT.)	CUT VOLUME (CU. YD.)	CUT REUSABLE VOLUME (CU. YD.)	FILL AREA (SQ. FT.)	FILL VOLUME (CU. YD.)	CUMULATIVE CUT (CU. YD.)	CUMULATIVE REUSABLE CUT (CU. YD.)	CUMULATIVE FILL (CU. YD.)	NET VOLUME (CU. YD.)
24+98.16 XN	24.67	21.93	21.93	14.51	20.76	198.41	198.41	138.67	59.73
25+00.00 XN	24.78	1.68	1.68	14.03	0.97	200.09	200.09	139.65	60.45
25+20.93 XN	22.24	18.22	18.22	15.24	11.34	218.32	218.32	150.99	67.32
25+50.00 XN	24.57	25.20	25.20	10.97	14.11	243.52	243.52	165.10	78.41
25+56.86 XN	25.04	6.30	6.30	6.64	2.24	249.82	249.82	167.34	82.48
26+00.00 XN	26.83	41.44	41.44	0.00	5.30	291.26	291.26	172.64	118.61
26+20.85 XN	11.53	14.81	14.81	3.45	1.33	306.07	306.07	173.97	132.09

US 12 EB - IH 39 SB TO USH 12/18 EB ENTRANCE LANE/SHOULDER

STATION	CUT AREA (SQ. FT.)	CUT VOLUME (CU. YD.)	CUT REUSABLE VOLUME (CU. YD.)	FILL AREA (SQ. FT.)	FILL VOLUME (CU. YD.)	CUMULATIVE CUT (CU. YD.)	CUMULATIVE REUSABLE CUT (CU. YD.)	CUMULATIVE FILL (CU. YD.)	NET VOLUME (CU. YD.)
99+32.66 XEB	22.20			3.46					
99+50.00 XEB	26.41	15.61	15.61	3.08	2.10	15.61	15.61	2.10	13.51
99+64.66 XEB	26.76	14.43	14.43	3.82	1.87	30.04	30.04	3.97	26.07
100+00.00 XEB	31.27	37.98	37.98	0.46	2.80	68.02	68.02	6.77	61.25
100+00.75 XEB	31.00	0.87	0.87	0.31	0.01	68.89	68.89	6.79	62.10
100+12.66 XEB	30.33	13.52	13.52	0.00	0.07	82.41	82.41	6.85	75.56
100+50.00 XEB	27.08	39.70	39.70	0.00	0.00	122.11	122.11	6.85	115.26
100+80.75 XEB	26.64	30.59	30.59	0.00	0.00	152.70	152.70	6.85	145.85
101+00.00 XEB	26.56	18.96	18.96	0.00	0.00	171.67	171.67	6.85	164.81
101+49.19 XEB	110.10	124.49	124.49	0.00	0.00	296.15	296.15	6.85	289.30
101+50.00 XEB	112.30	3.34	3.34	0.00	0.00	299.49	299.49	6.85	292.64
102+00.00 XEB	52.38	152.48	152.48	76.02	70.39	451.97	451.97	77.24	374.73
102+50.00 XEB	49.35	94.19	94.19	58.77	124.81	546.17	546.17	202.05	344.12
102+79.18 XEB	58.95	58.52	58.52	30.01	47.97	604.69	604.69	250.02	354.67
103+00.00 XEB	75.25	51.74	51.74	0.00	11.57	656.43	656.43	261.59	394.84
103+25.00 XEB	79.51	71.65	71.65	0.00	0.00	728.08	728.08	261.59	466.49
103+50.00 XEB	73.86	71.00	71.00	0.00	0.00	799.08	799.08	261.59	537.49
104+00.00 XEB	86.72	148.69	148.69	0.00	0.00	947.77	947.77	261.59	686.18
104+50.00 XEB	67.62	142.91	142.91	0.00	0.00	1090.68	1090.68	261.59	829.08
105+00.00 XEB	59.25	117.47	117.47	0.24	0.22	1208.15	1208.15	261.81	946.33
105+50.00 XEB	88.84	137.12	137.12	0.00	0.22	1345.27	1345.27	262.04	1083.23
105+58.10 XEB	50.56	20.90	20.90	6.03	0.90	1366.17	1366.17	262.94	1103.23
106+00.00 XEB	51.56	79.25	79.25	3.36	7.29	1445.41	1445.41	270.23	1175.18
106+42.11 XEB	50.94	79.92	79.92	3.74	5.54	1525.33	1525.33	275.76	1249.57
106+50.00 XEB	48.99	14.61	14.61	0.00	0.55	1539.94	1539.94	276.31	1263.63
107+00.00 XEB	91.00	129.62	129.62	5.50	5.09	1669.56	1669.56	281.40	1388.16
107+25.00 XEB	44.53	62.75	62.75	48.06	24.80	1732.31	1732.31	306.20	1426.11
107+50.00 XEB	46.81	42.29	42.29	24.54	33.61	1774.60	1774.60	339.81	1434.79
108+00.00 XEB	43.62	83.73	83.73	2.64	25.17	1858.33	1858.33	364.98	1493.35
108+50.00 XEB	42.71	79.94	79.94	10.21	11.90	1938.26	1938.26	376.88	1561.39
109+00.00 XEB	39.37	76.00	76.00	9.79	18.52	2014.26	2014.26	395.39	1618.87
109+50.00 XEB	36.07	69.85	69.85	5.57	14.22	2084.12	2084.12	409.62	1674.50
110+00.00 XEB	34.28	65.14	65.14	1.21	6.28	2149.25	2149.25	415.89	1733.36
110+50.00 XEB	31.95	61.32	61.32	0.00	1.12	2210.58	2210.58	417.01	1793.56
111+00.00 XEB	30.55	57.87	57.87	0.00	0.00	2268.45	2268.45	417.01	1851.43
111+50.00 XEB	29.34	55.45	55.45	0.00	0.00	2323.90	2323.90	417.01	1906.89
112+00.00 XEB	37.94	62.30	62.30	0.00	0.00	2386.20	2386.20	417.01	1969.18
112+50.00 XEB	37.36	69.72	69.72	0.00	0.00	2455.92	2455.92	417.01	2038.91
113+00.00 XEB	26.11	58.77	58.77	0.00	0.00	2514.69	2514.69	417.01	2097.68
113+33.53 XEB	21.37	29.48	29.48	0.00	0.00	2544.17	2544.17	417.01	2127.16

BEGIN PROJECT NO. 1007-12-78
STA 2533+98

BEGIN RETAINING WALL R-13-334
STA 2533+98



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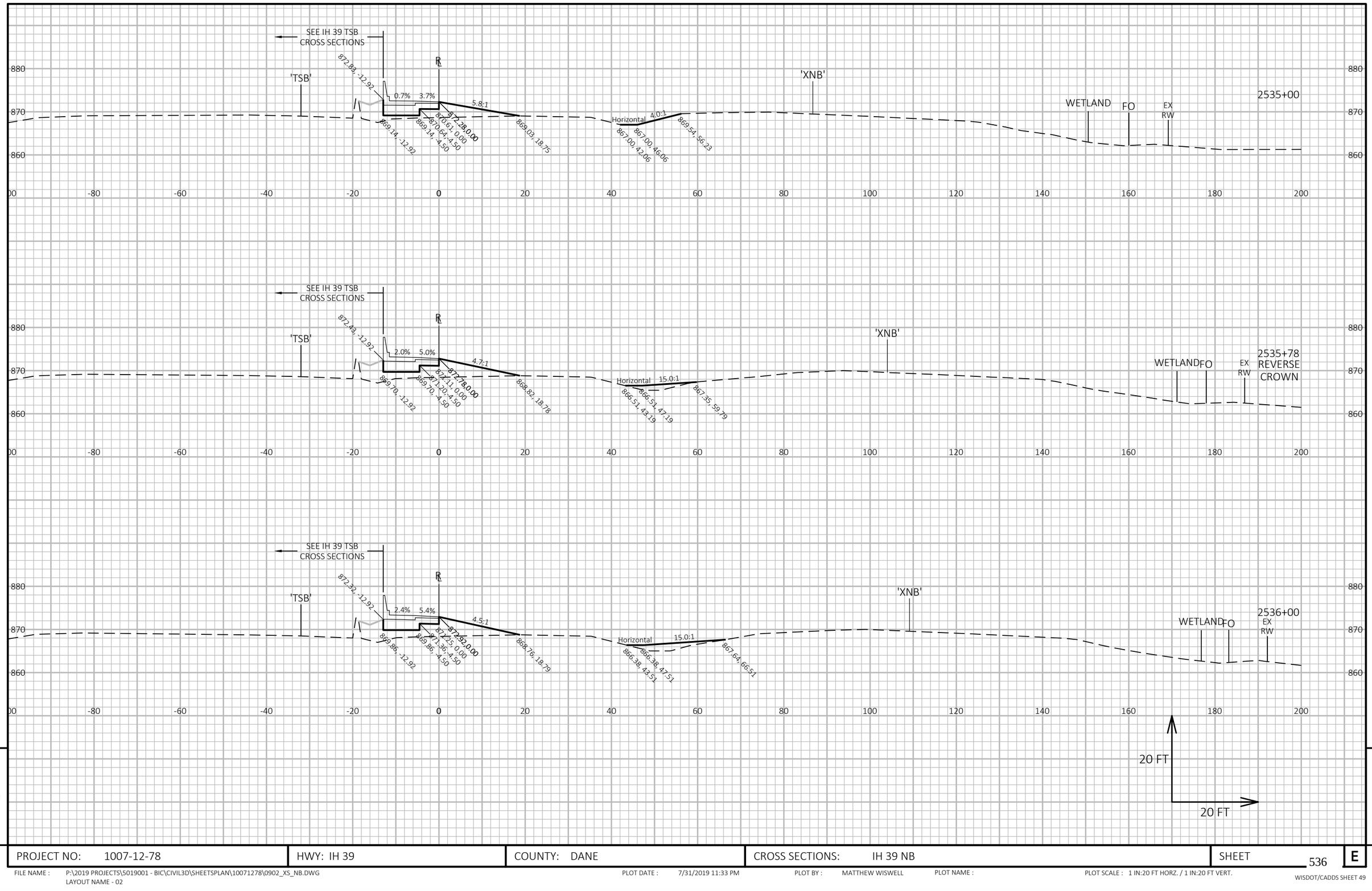
PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: IH 39 NB	SHEET 535	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0902_XS_NB.DWG
LAYOUT NAME - 01

PLOT DATE : 7/31/2019 11:33 PM PLOT BY : MATTHEW WISWELL PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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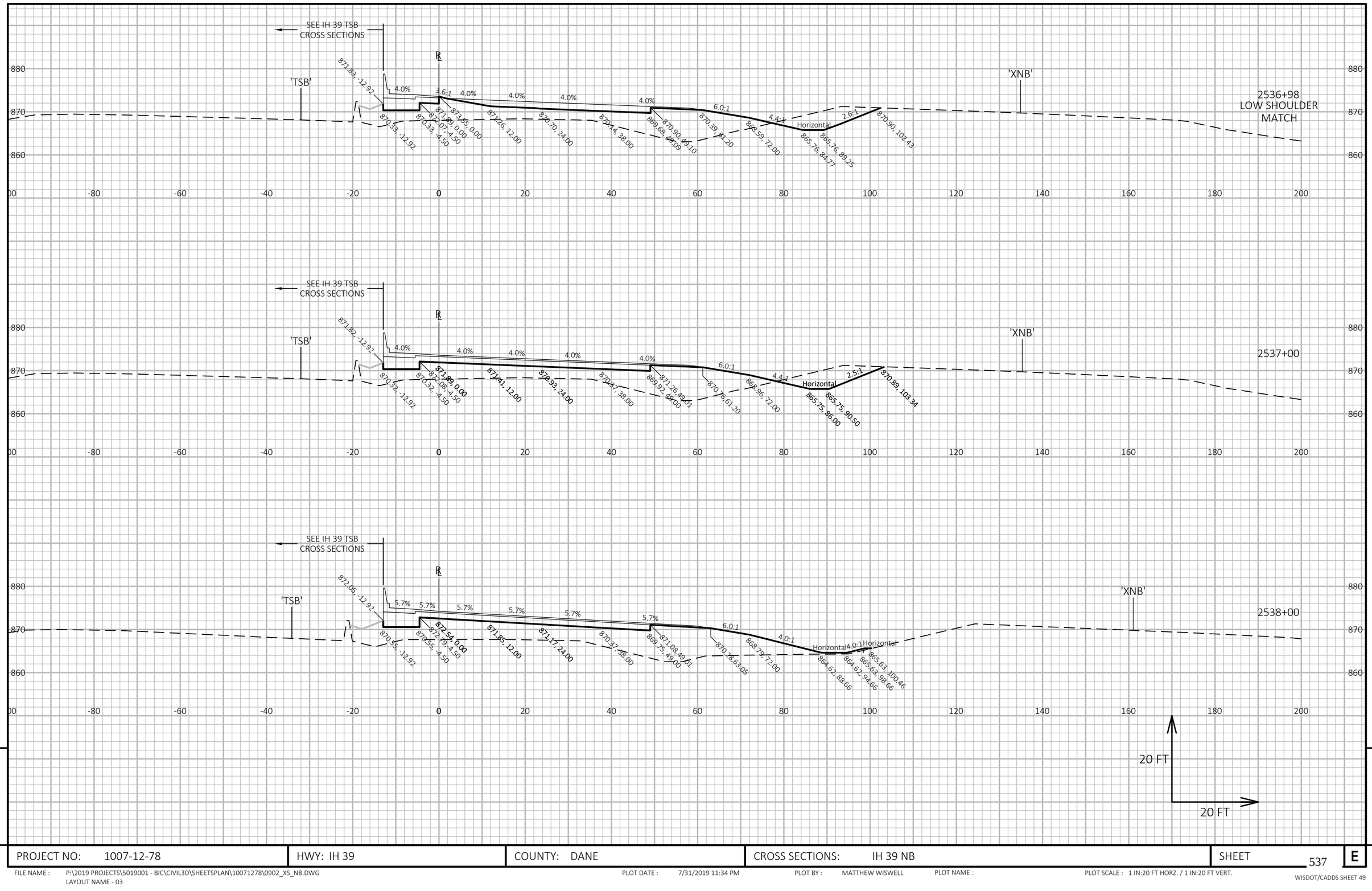
PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: IH 39 NB	SHEET 536	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0902_XS_NB.DWG
LAYOUT NAME - 02

PLOT DATE : 7/31/2019 11:33 PM PLOT BY : MATTHEW WISWELL PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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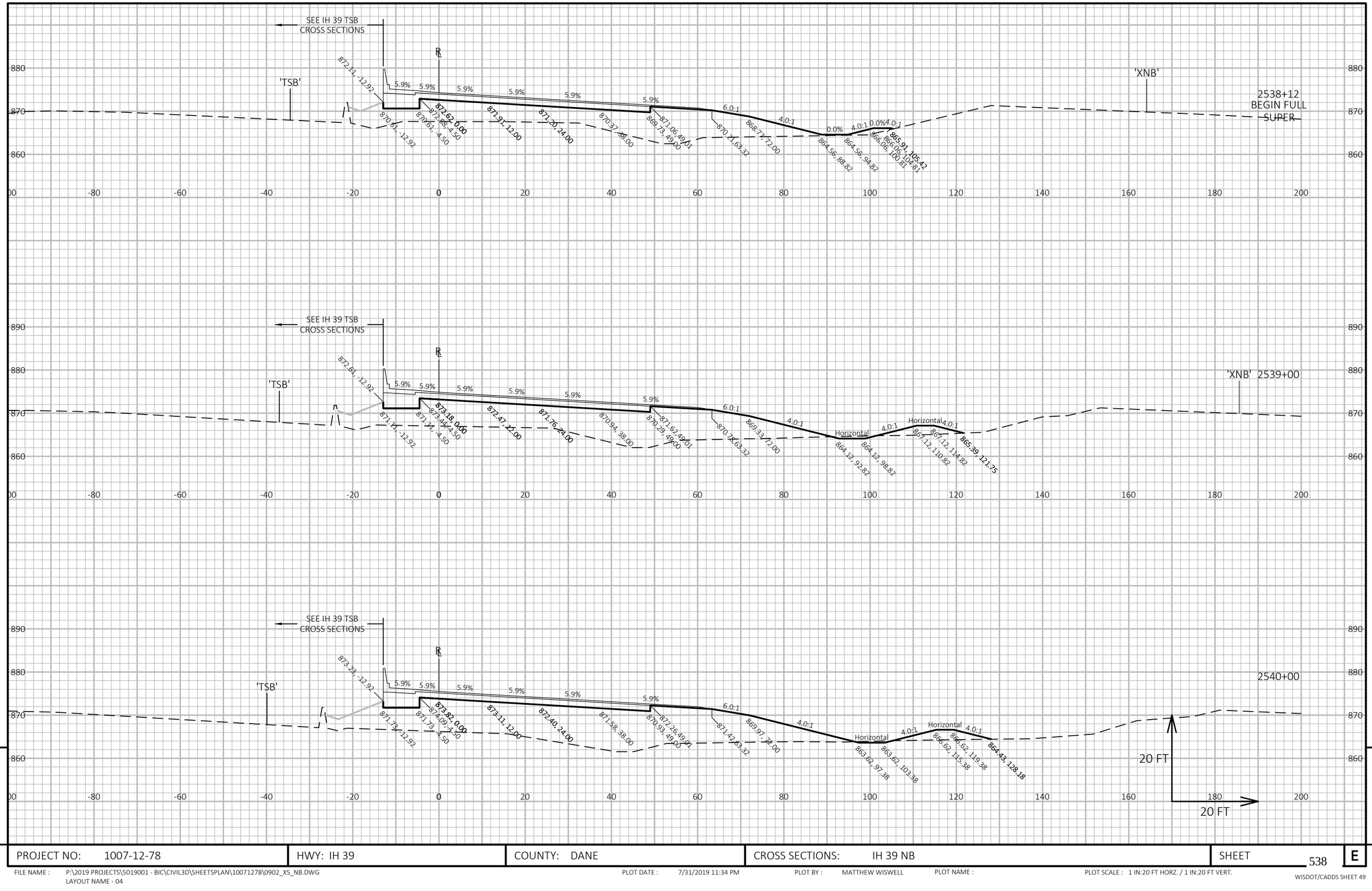
PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: IH 39 NB	SHEET 537	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0902_XS_NB.DWG
LAYOUT NAME - 03

PLOT DATE : 7/31/2019 11:34 PM PLOT BY : MATTHEW WISWELL PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: IH 39 NB	SHEET 538	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0902_XS_NB.DWG
LAYOUT NAME - 04

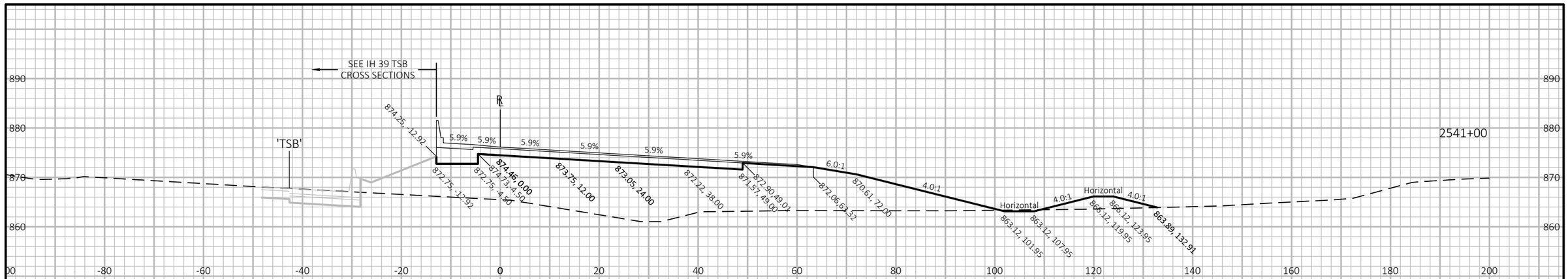
PLOT DATE : 7/31/2019 11:34 PM

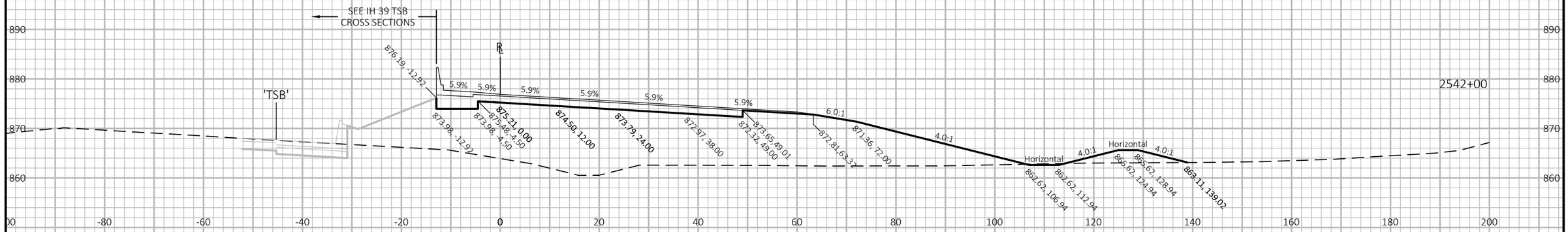
PLOT BY : MATTHEW WISWELL

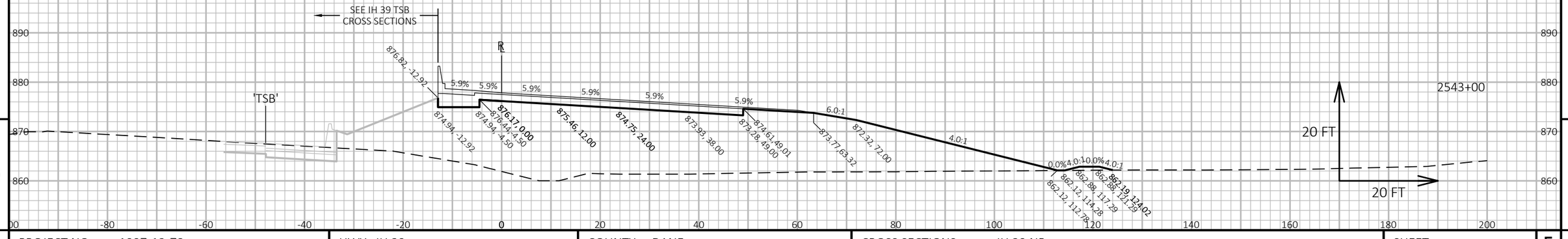
PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49







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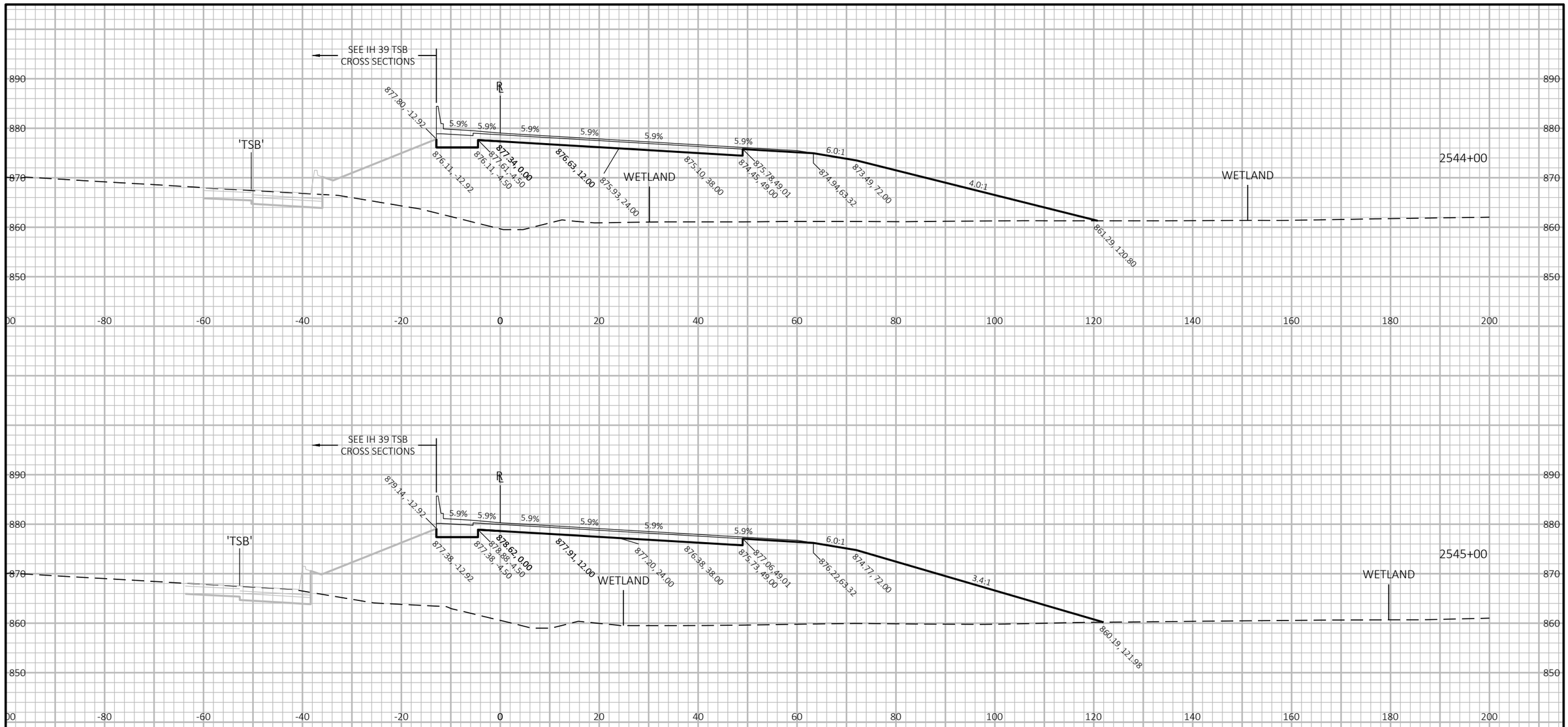
PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: IH 39 NB	SHEET 539	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0902_XS_NB.DWG
LAYOUT NAME - 05

PLOT DATE : 7/31/2019 11:34 PM PLOT BY : MATTHEW WISWELL PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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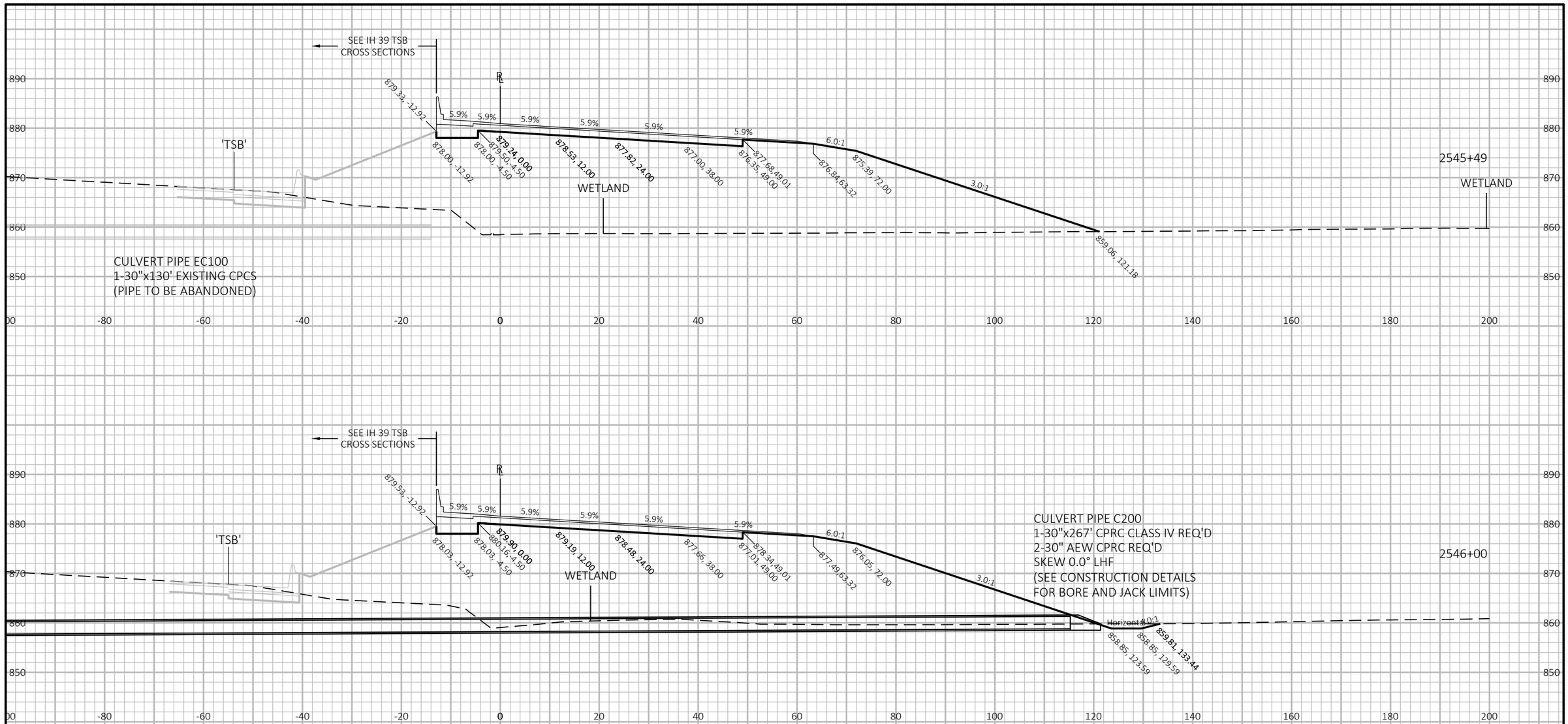
PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: IH 39 NB	SHEET 540	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0902_XS_NB.DWG
LAYOUT NAME - 06

PLOT DATE : 7/31/2019 11:35 PM PLOT BY : MATTHEW WISWELL PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



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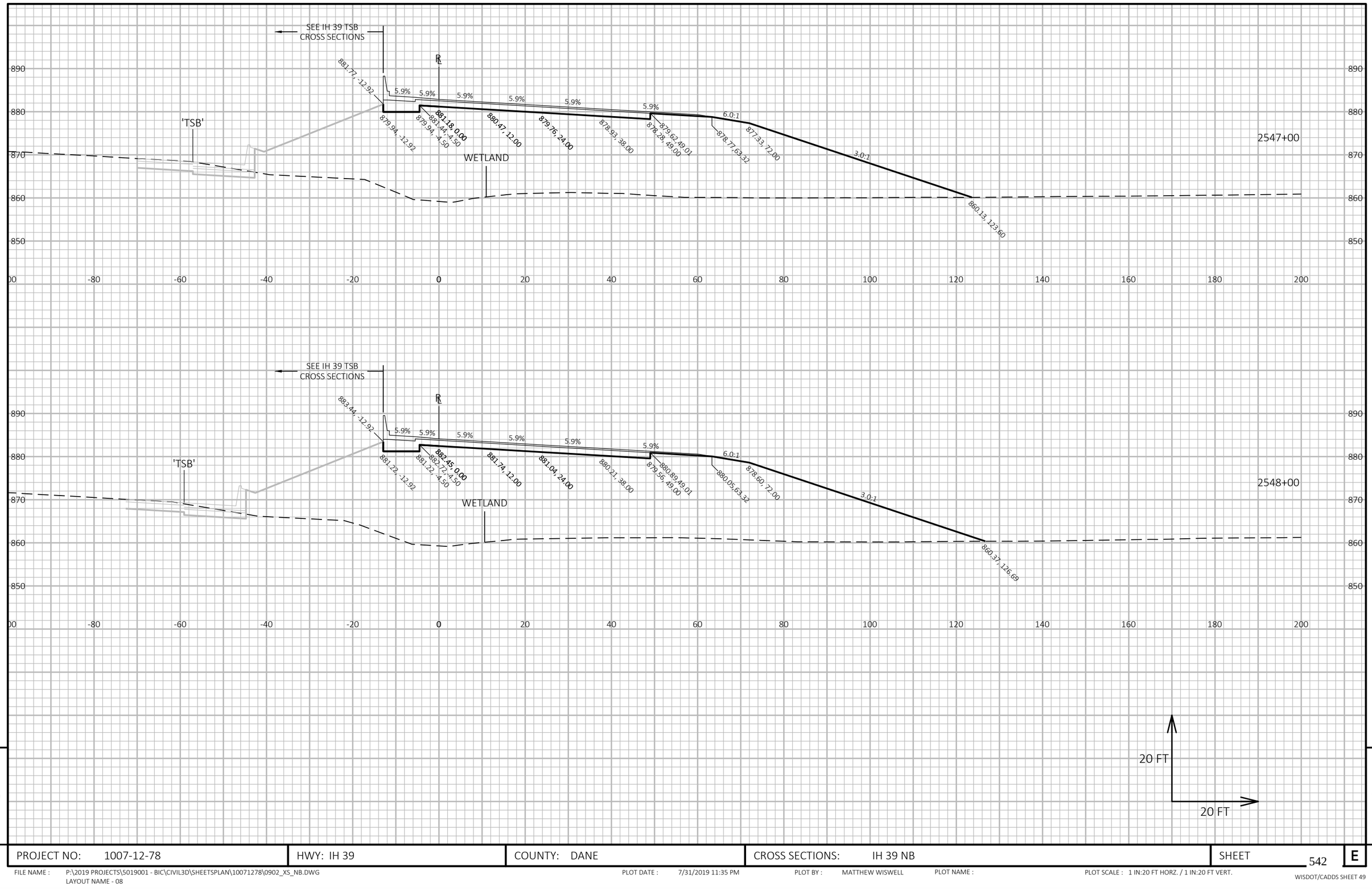
PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: IH 39 NB	SHEET 541	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0902_XS_NB.DWG
LAYOUT NAME - 07

PLOT DATE : 7/31/2019 11:35 PM PLOT BY : MATTHEW WISWELL PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



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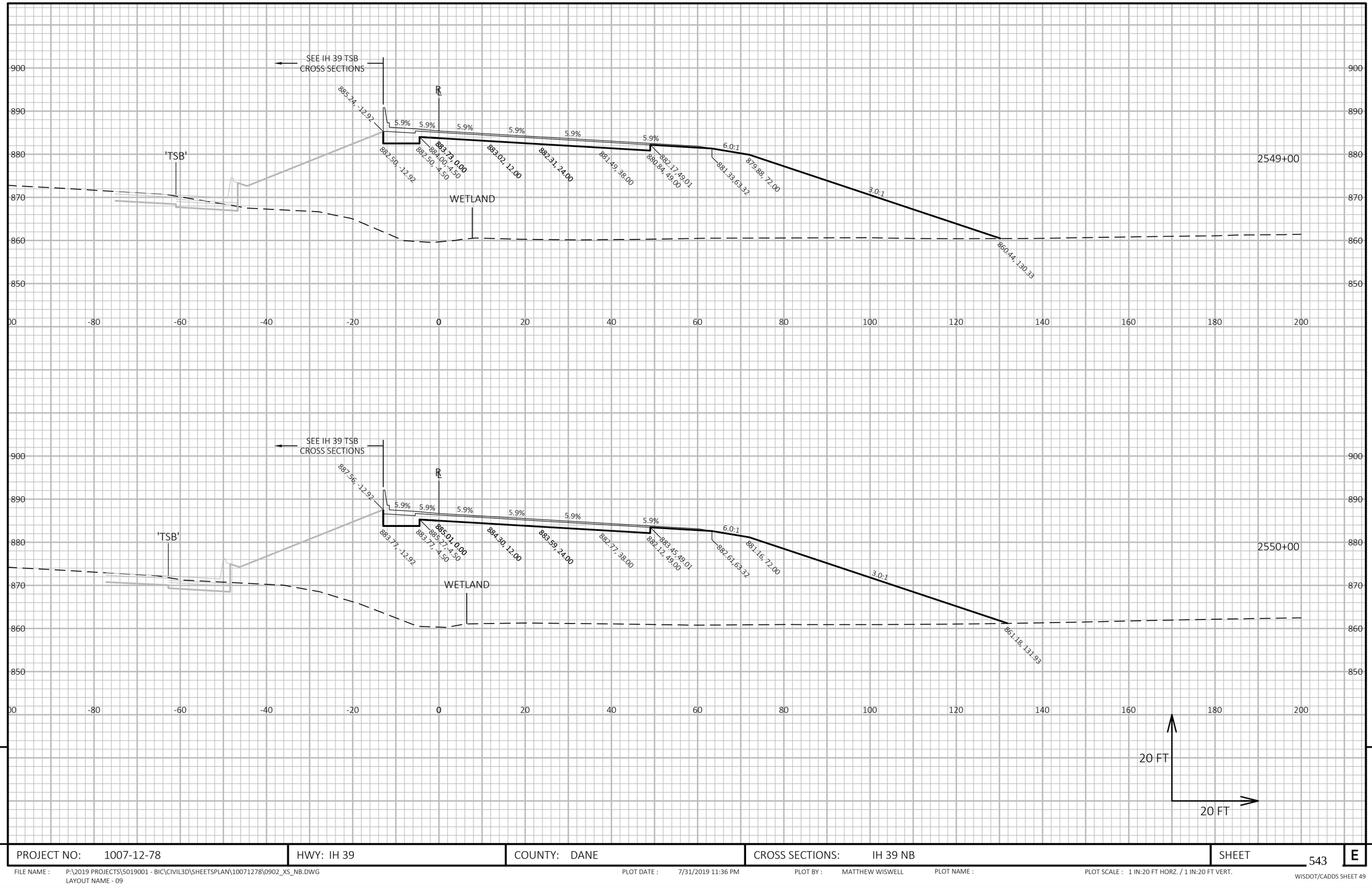
PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: IH 39 NB	SHEET 542	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0902_XS_NB.DWG
LAYOUT NAME - 08

PLOT DATE : 7/31/2019 11:35 PM PLOT BY : MATTHEW WISWELL PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



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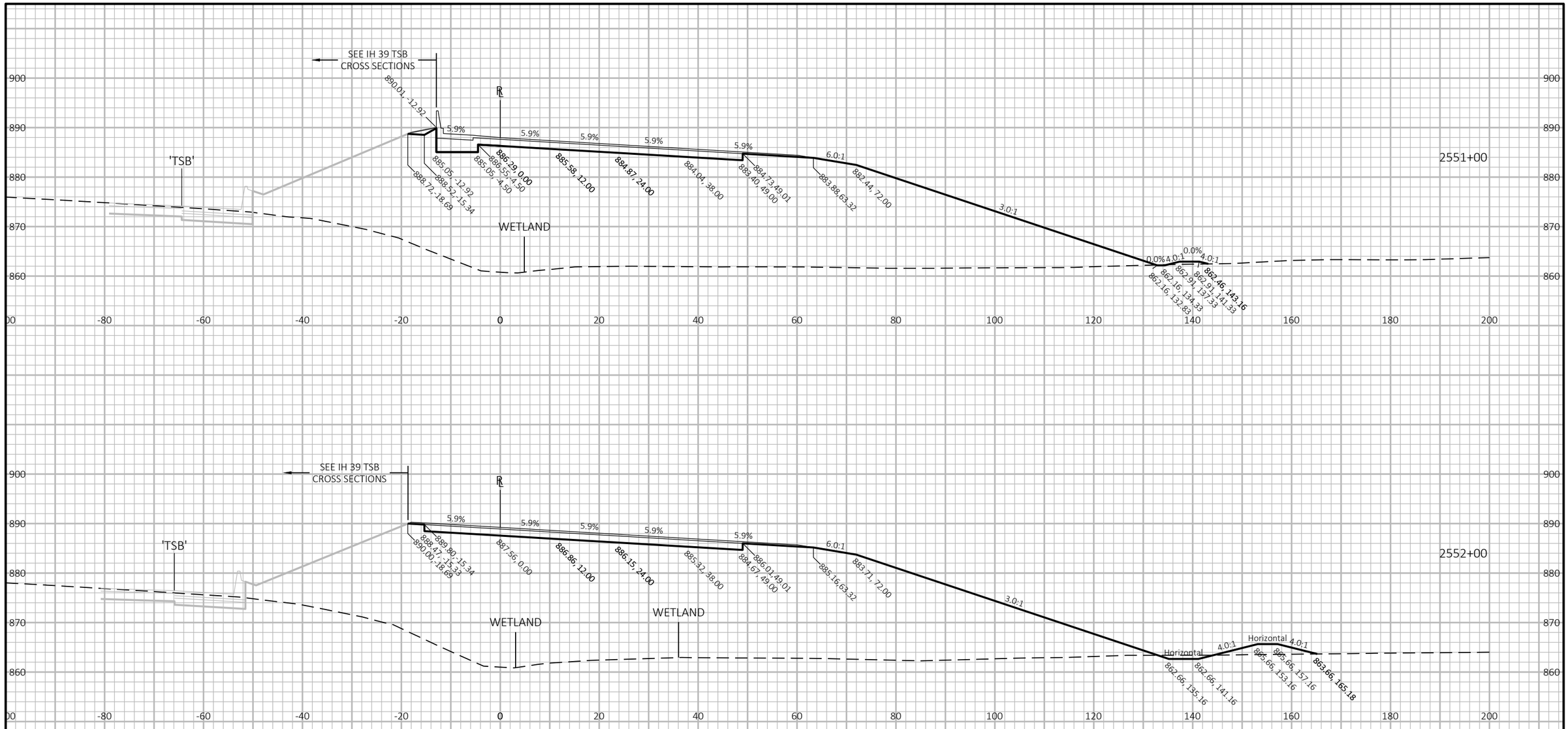
PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: IH 39 NB	SHEET 543	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0902_XS_NB.DWG
LAYOUT NAME - 09

PLOT DATE : 7/31/2019 11:36 PM PLOT BY : MATTHEW WISWELL PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

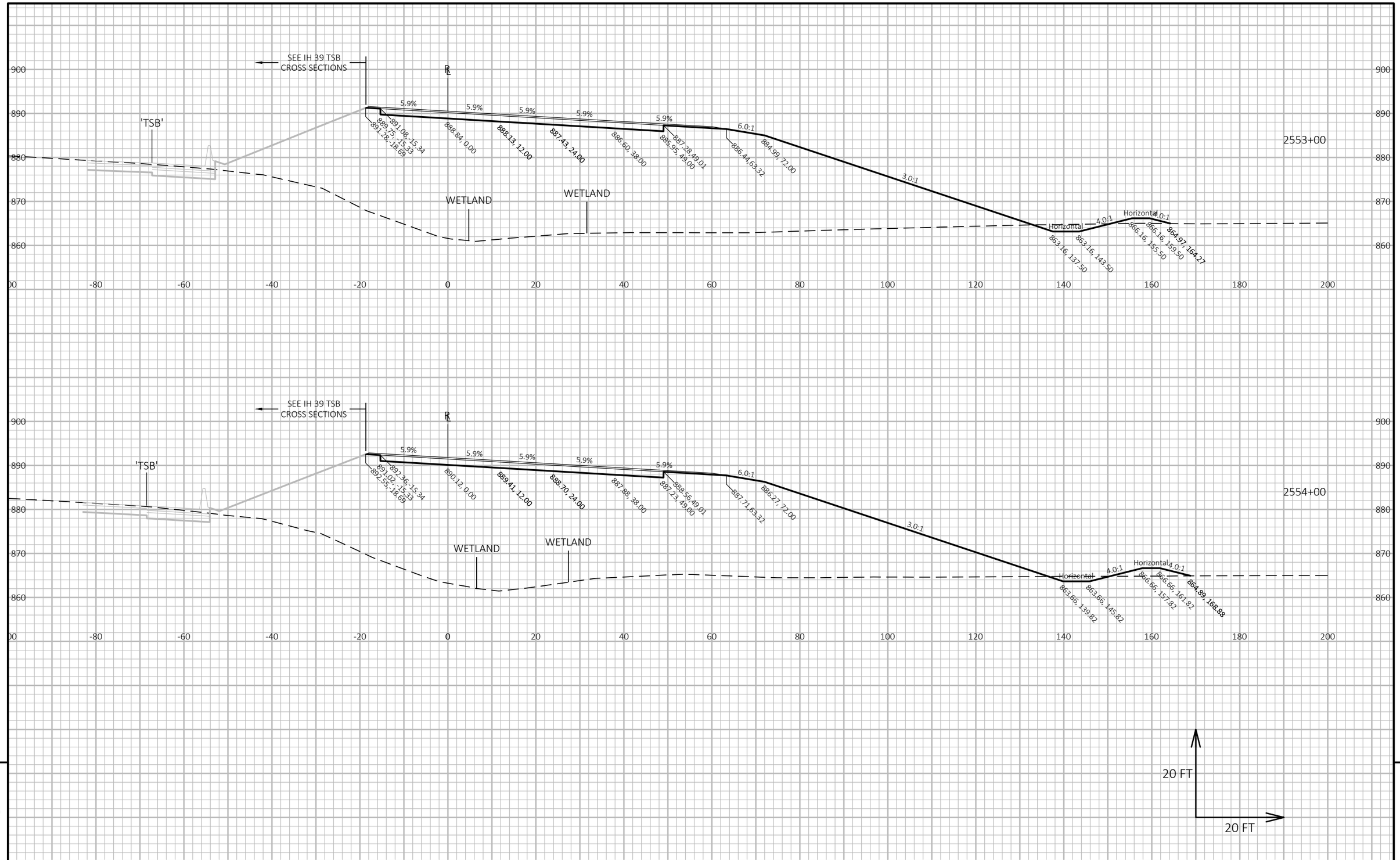


PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: IH 39 NB	SHEET 544	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0902_XS_NB.DWG
LAYOUT NAME - 10

PLOT DATE : 7/31/2019 11:36 PM PLOT BY : MATTHEW WISWELL PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

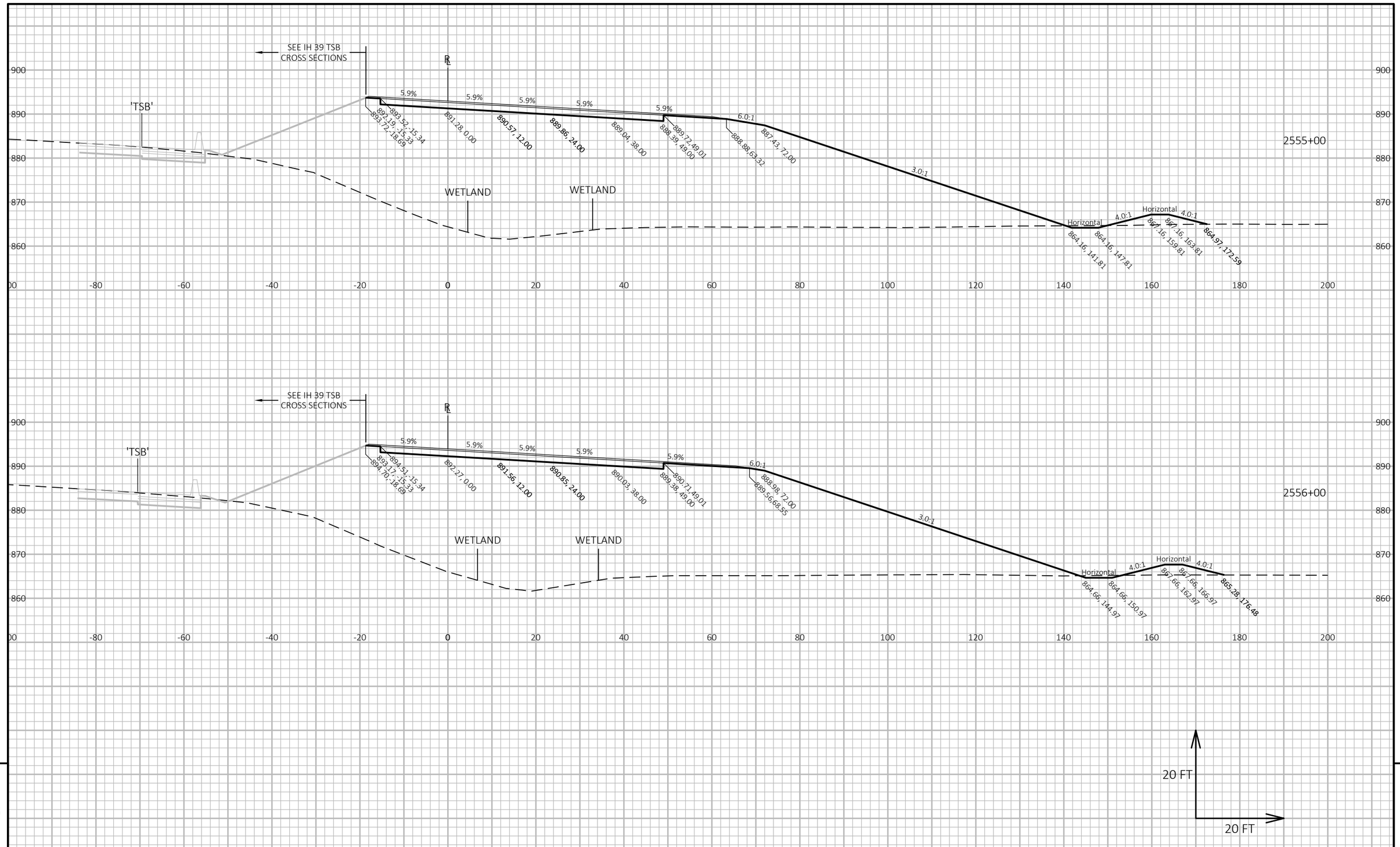


PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: IH 39 NB	SHEET 545	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0902_XS_NB.DWG
LAYOUT NAME - 11

PLOT DATE : 7/31/2019 11:37 PM PLOT BY : MATTHEW WISWELL PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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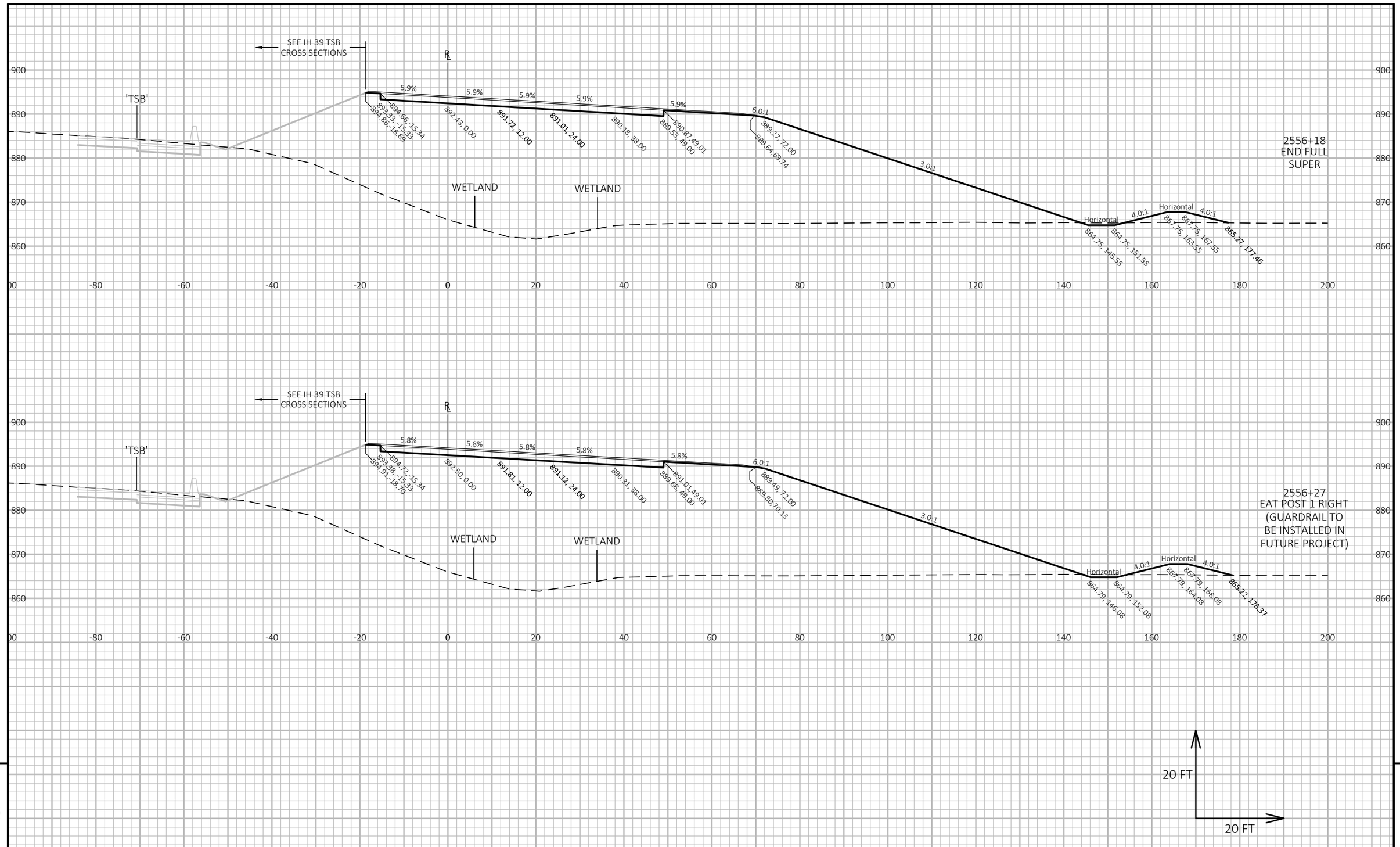
PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: IH 39 NB	SHEET 546	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0902_XS_NB.DWG
LAYOUT NAME - 12

PLOT DATE : 7/31/2019 11:37 PM PLOT BY : MATTHEW WISWELL PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



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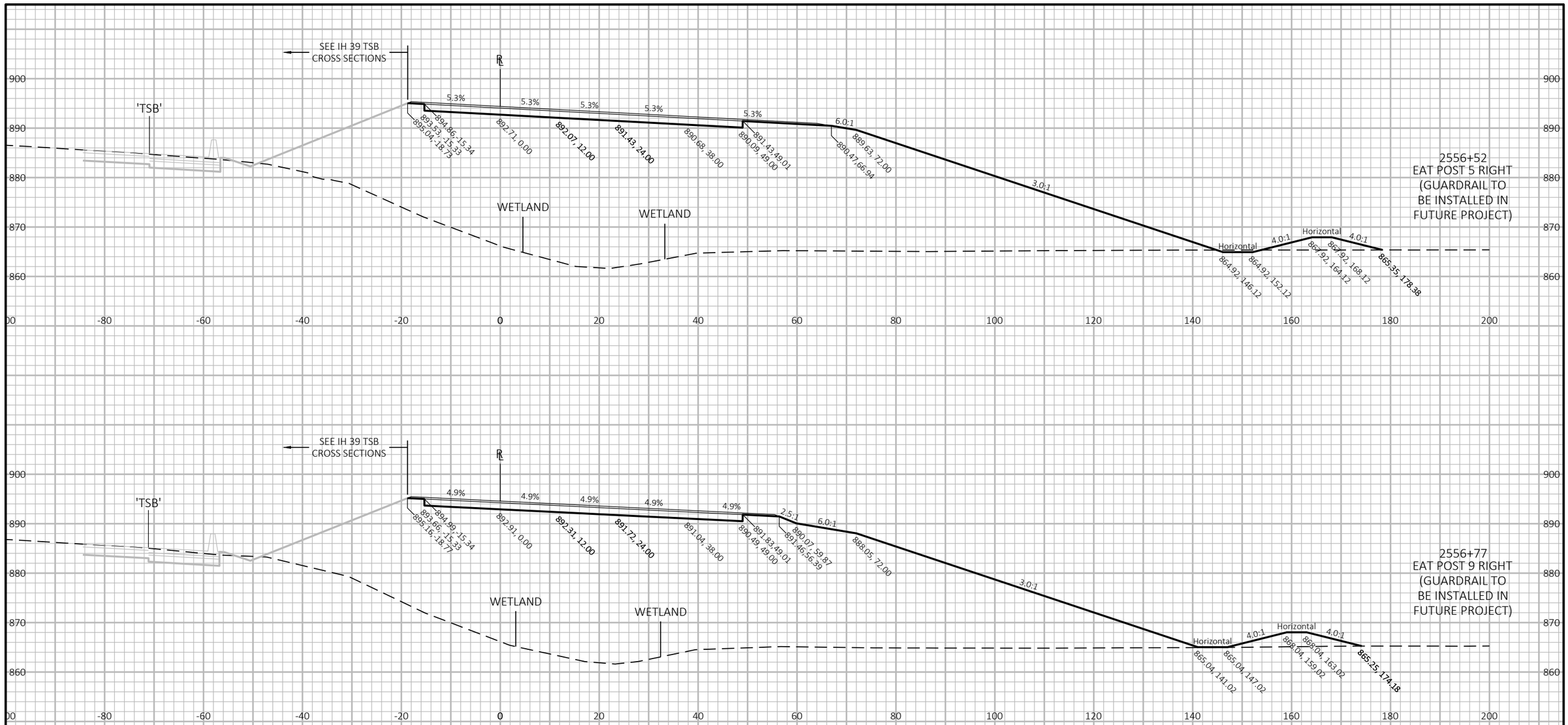
PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: IH 39 NB	SHEET 547	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0902_XS_NB.DWG
LAYOUT NAME - 13

PLOT DATE : 7/31/2019 11:37 PM PLOT BY : MATTHEW WISWELL PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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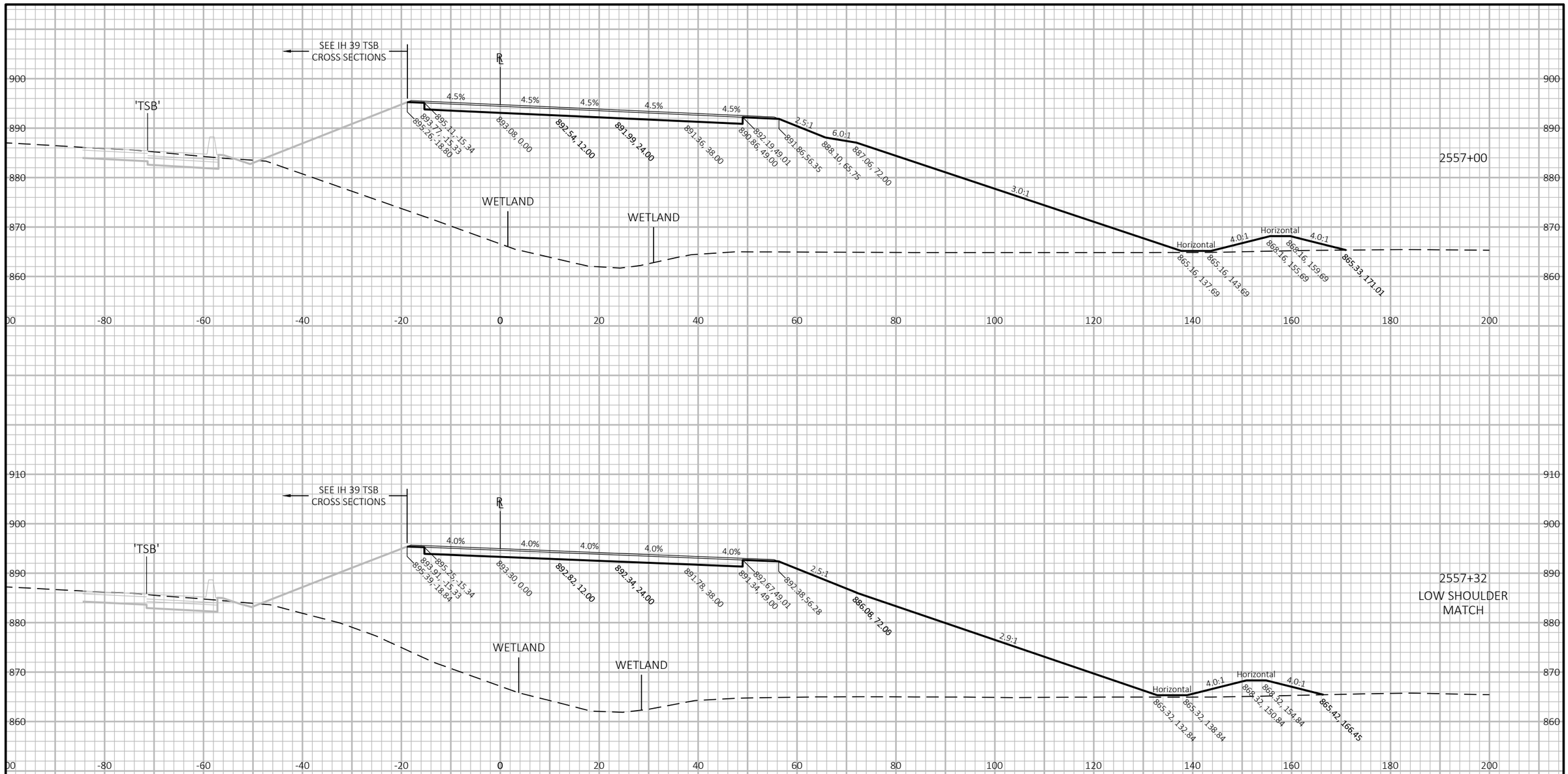
PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: IH 39 NB	SHEET 548	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0902_XS_NB.DWG
LAYOUT NAME - 14

PLOT DATE : 7/31/2019 11:38 PM PLOT BY : MATTHEW WISWELL PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

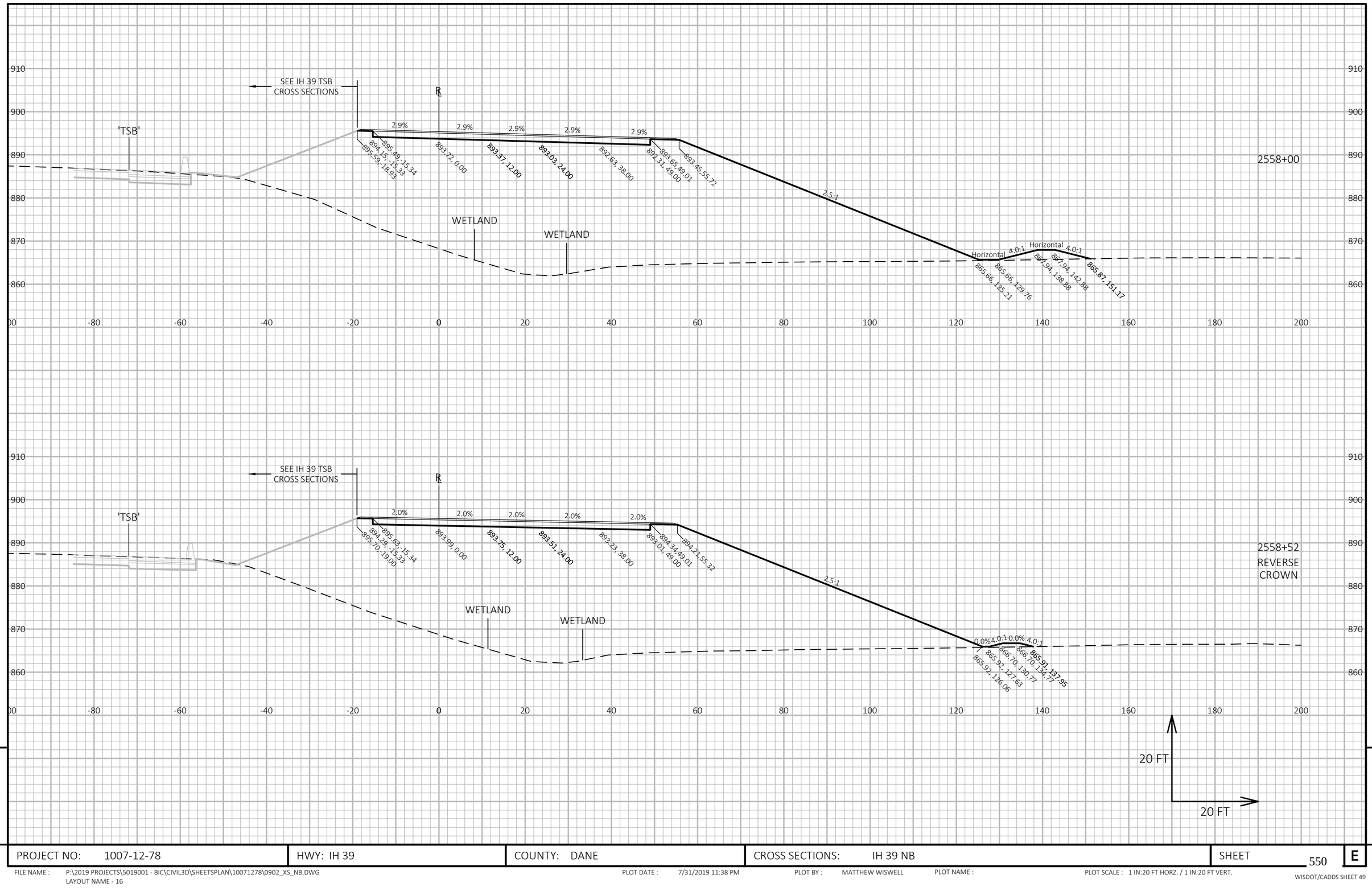


PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: IH 39 NB	SHEET 549	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0902_XS_NB.DWG
LAYOUT NAME - 15

PLOT DATE : 7/31/2019 11:38 PM PLOT BY : MATTHEW WISWELL PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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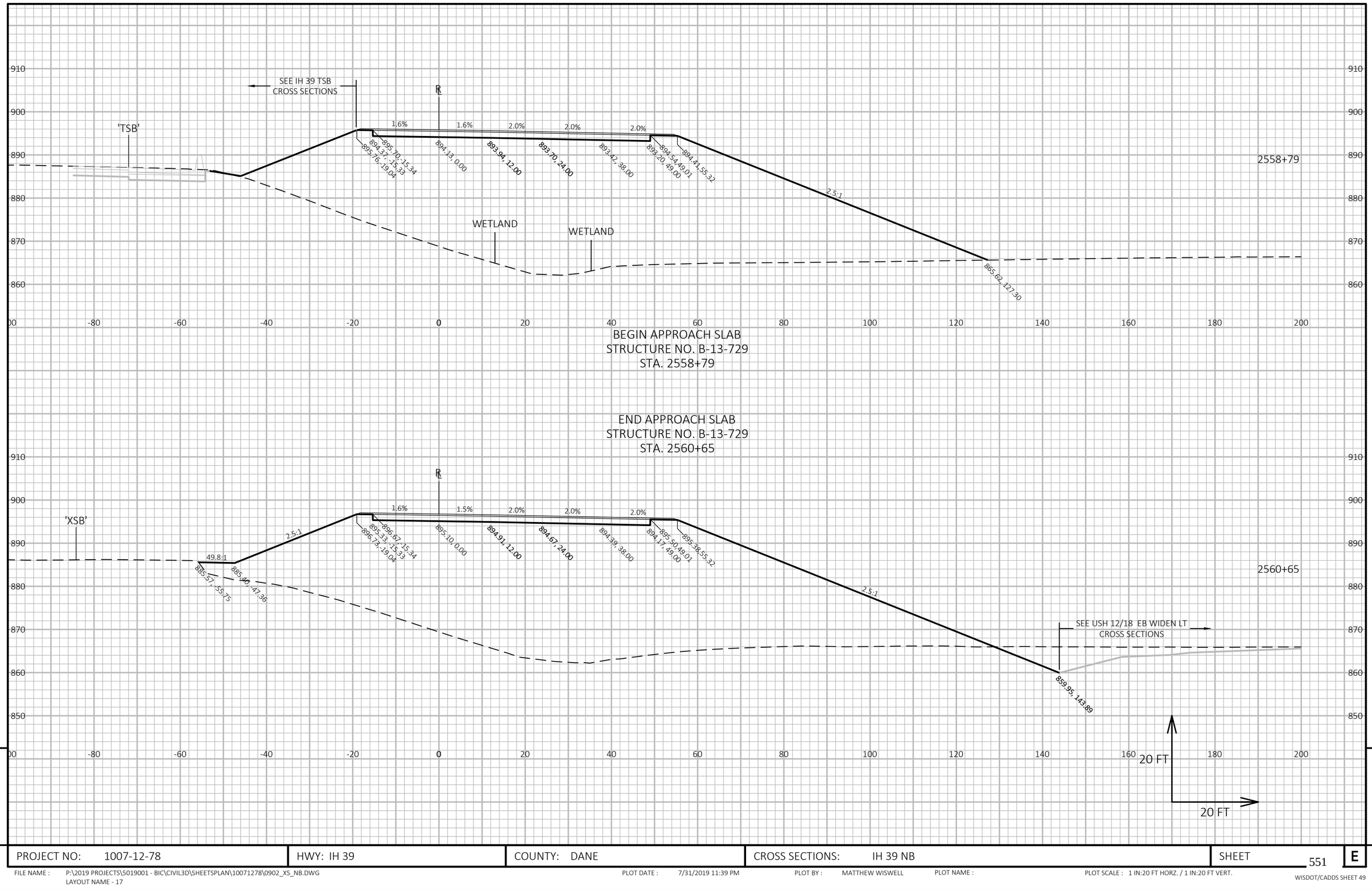
PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: IH 39 NB	SHEET 550	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0902_XS_NB.DWG
LAYOUT NAME - 16

PLOT DATE : 7/31/2019 11:38 PM PLOT BY : MATTHEW WISWELL PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



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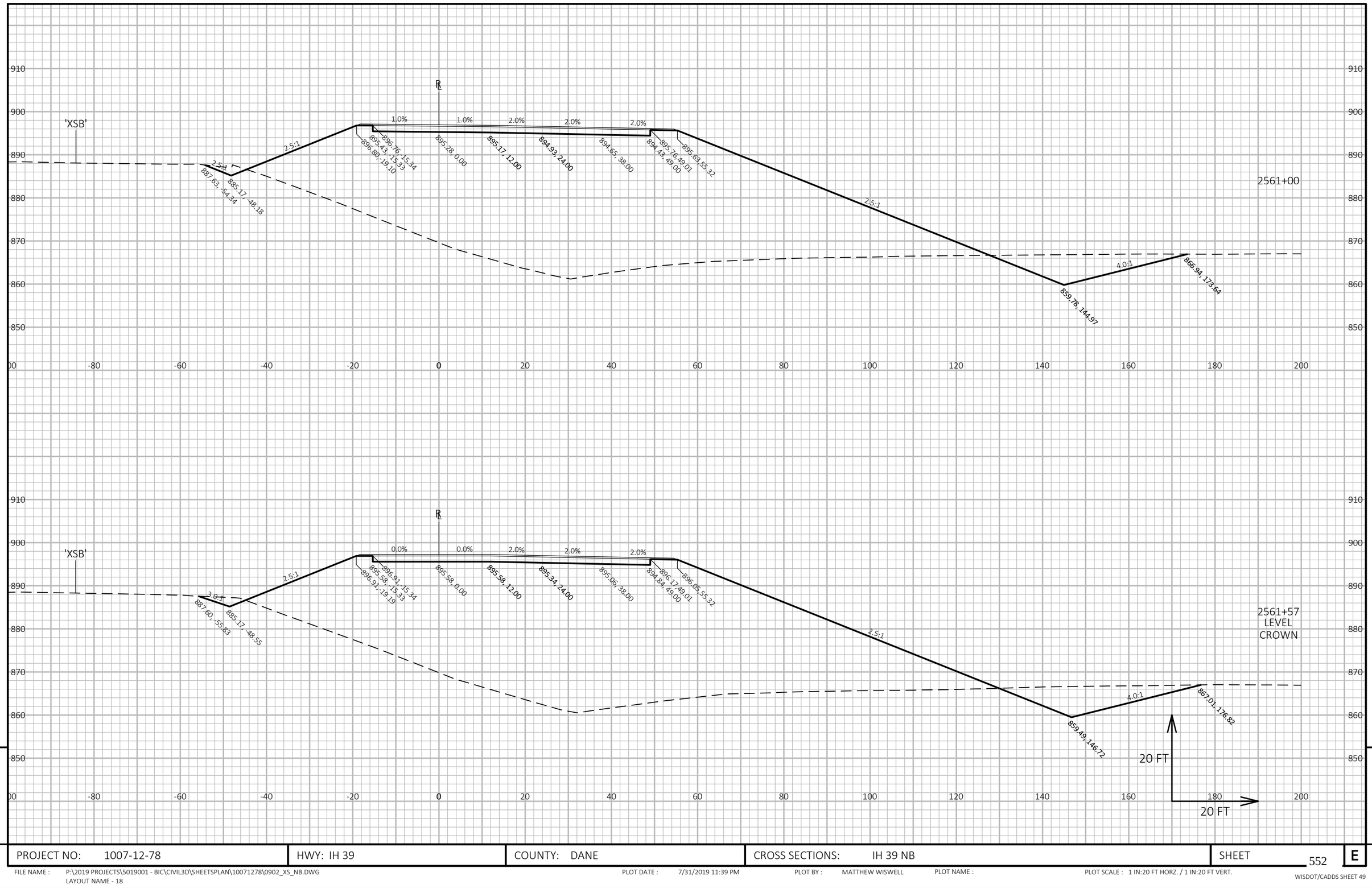
PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: IH 39 NB	SHEET 551	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0902_XS_NB.DWG
LAYOUT NAME - 17

PLOT DATE : 7/31/2019 11:39 PM PLOT BY : MATTHEW WISWELL PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



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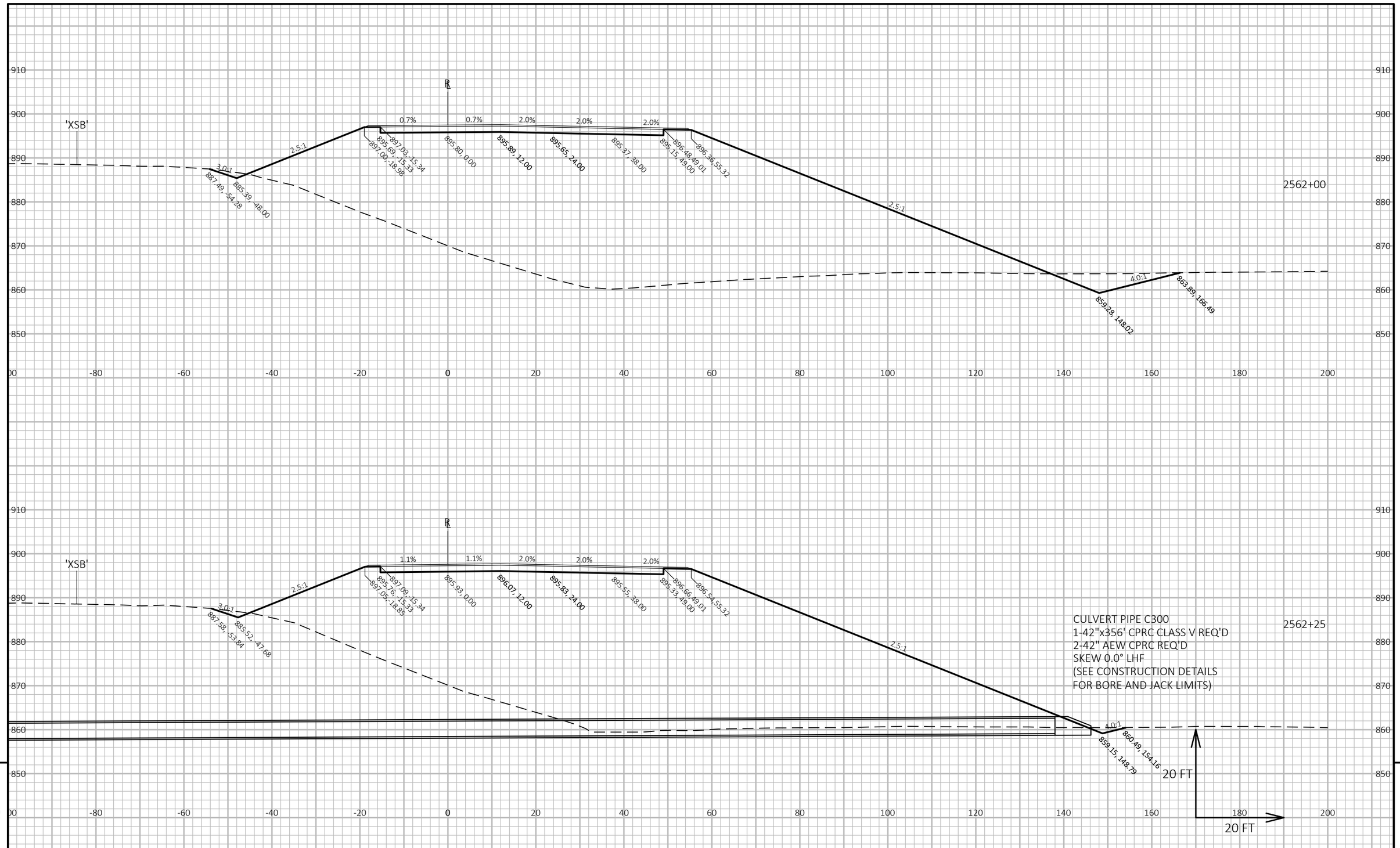
PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: IH 39 NB	SHEET 552	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0902_XS_NB.DWG
LAYOUT NAME - 18

PLOT DATE : 7/31/2019 11:39 PM PLOT BY : MATTHEW WISWELL PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

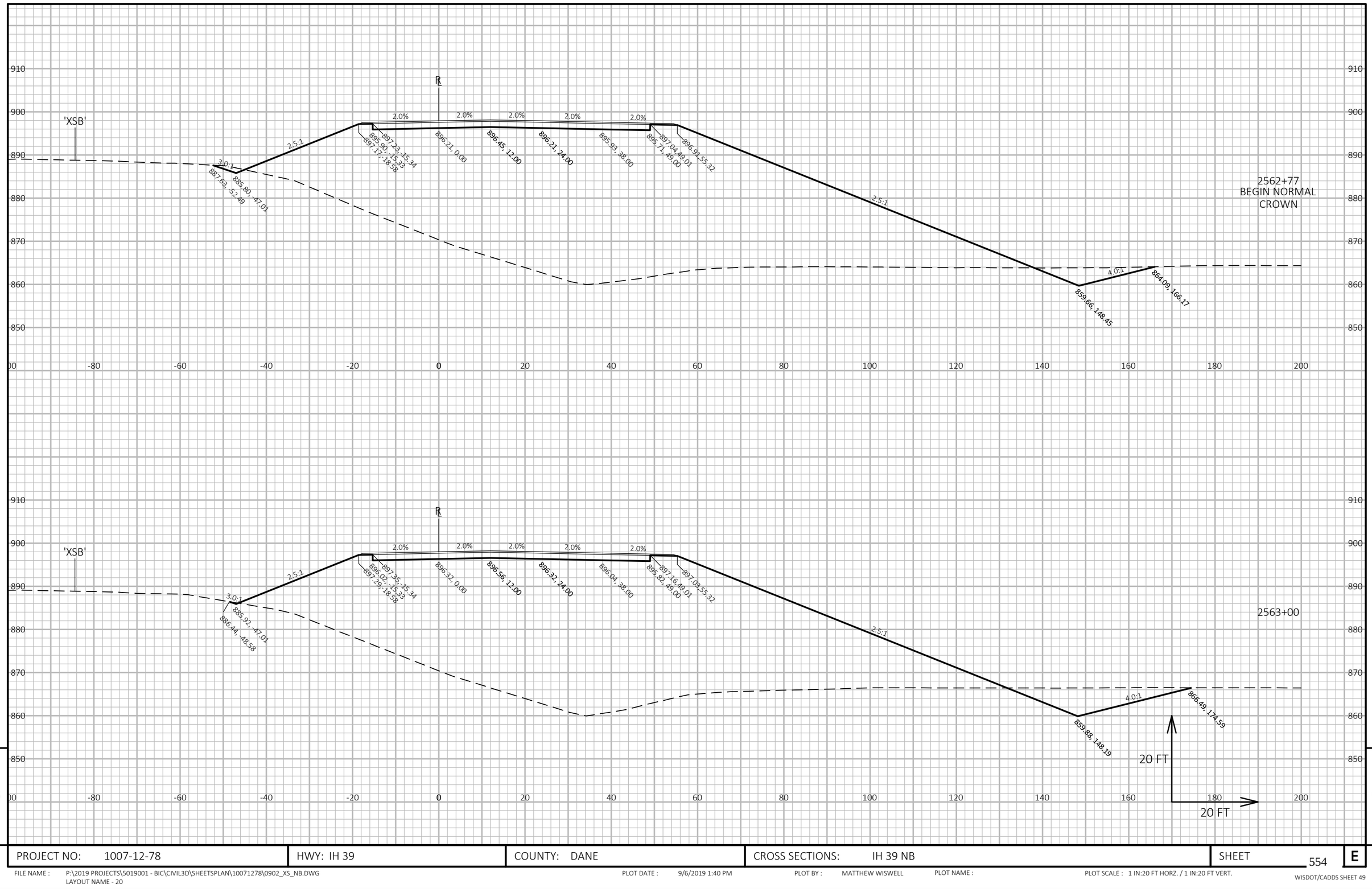


PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: IH 39 NB	SHEET 553	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0902_XS_NB.DWG
LAYOUT NAME - 19

PLOT DATE : 7/31/2019 11:39 PM PLOT BY : MATTHEW WISWELL PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

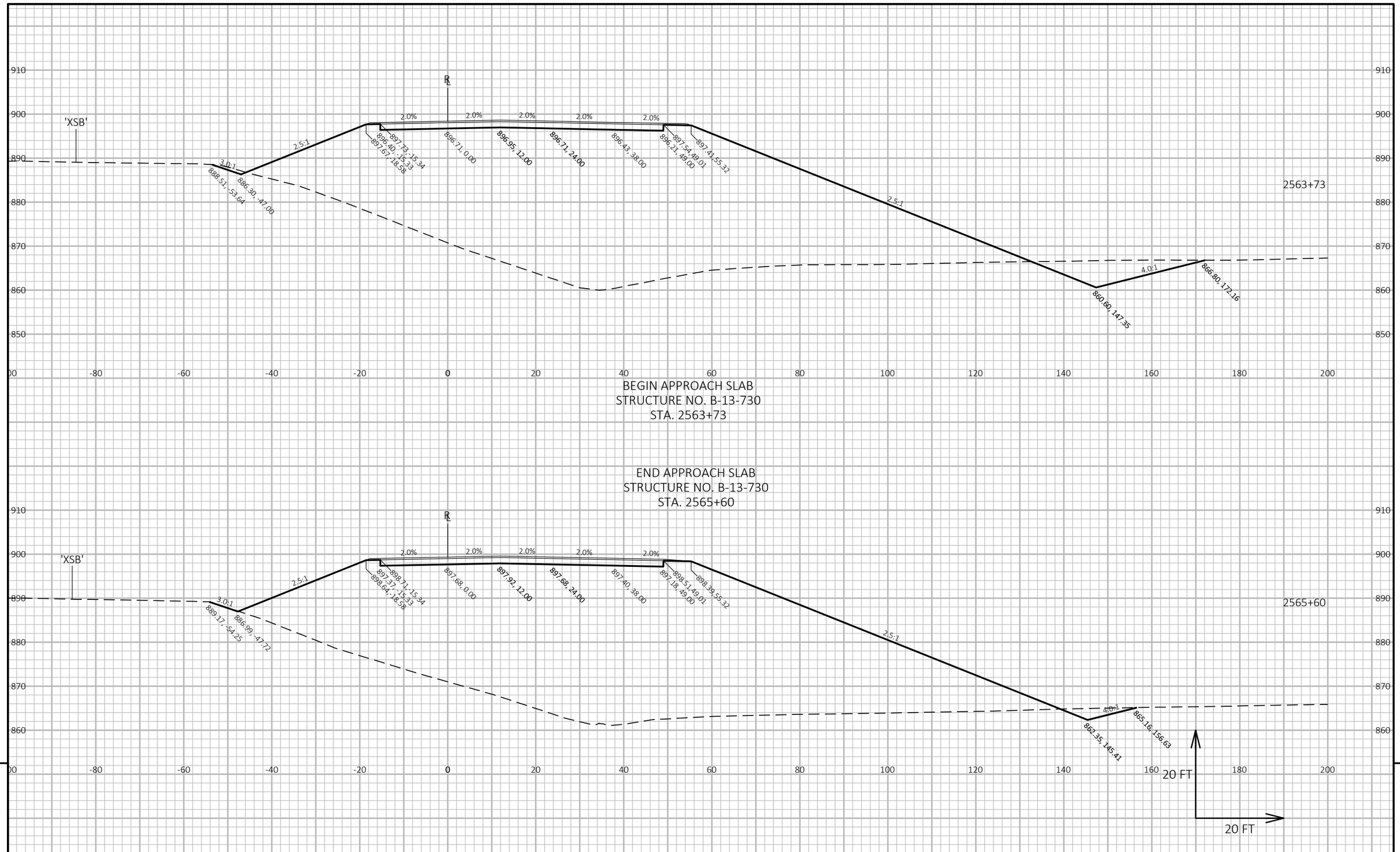


PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: IH 39 NB	SHEET 554 E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0902_XS_NB.DWG
LAYOUT NAME - 20

PLOT DATE : 9/6/2019 1:40 PM PLOT BY : MATTHEW WISWELL PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: IH 39 NB	SHEET 555	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0902_XS_NB.DWG
LAYOUT NAME - 21

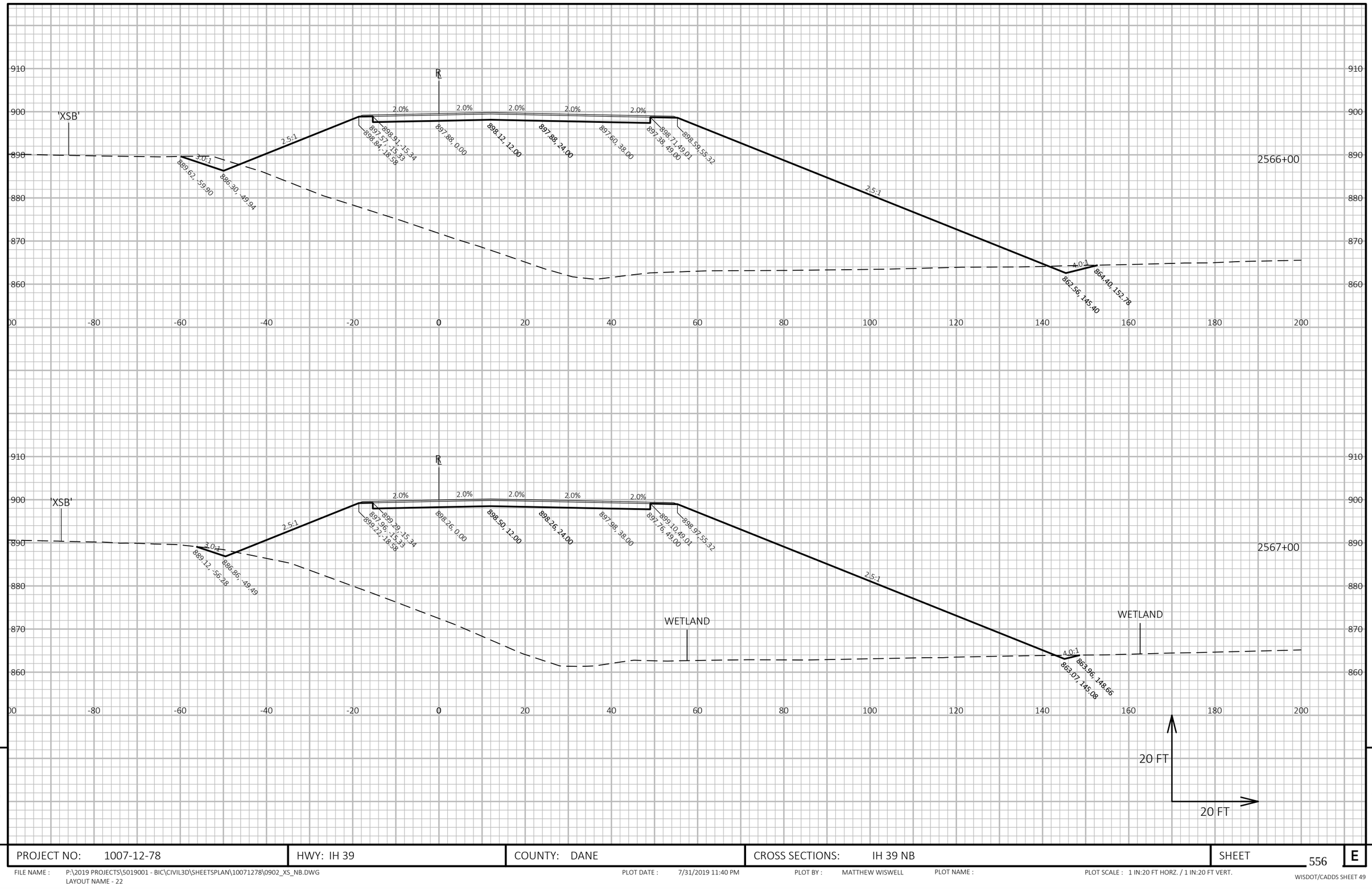
PLOT DATE : 9/6/2019 1:41 PM

PLOT BY : MATTHEW WISWELL

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

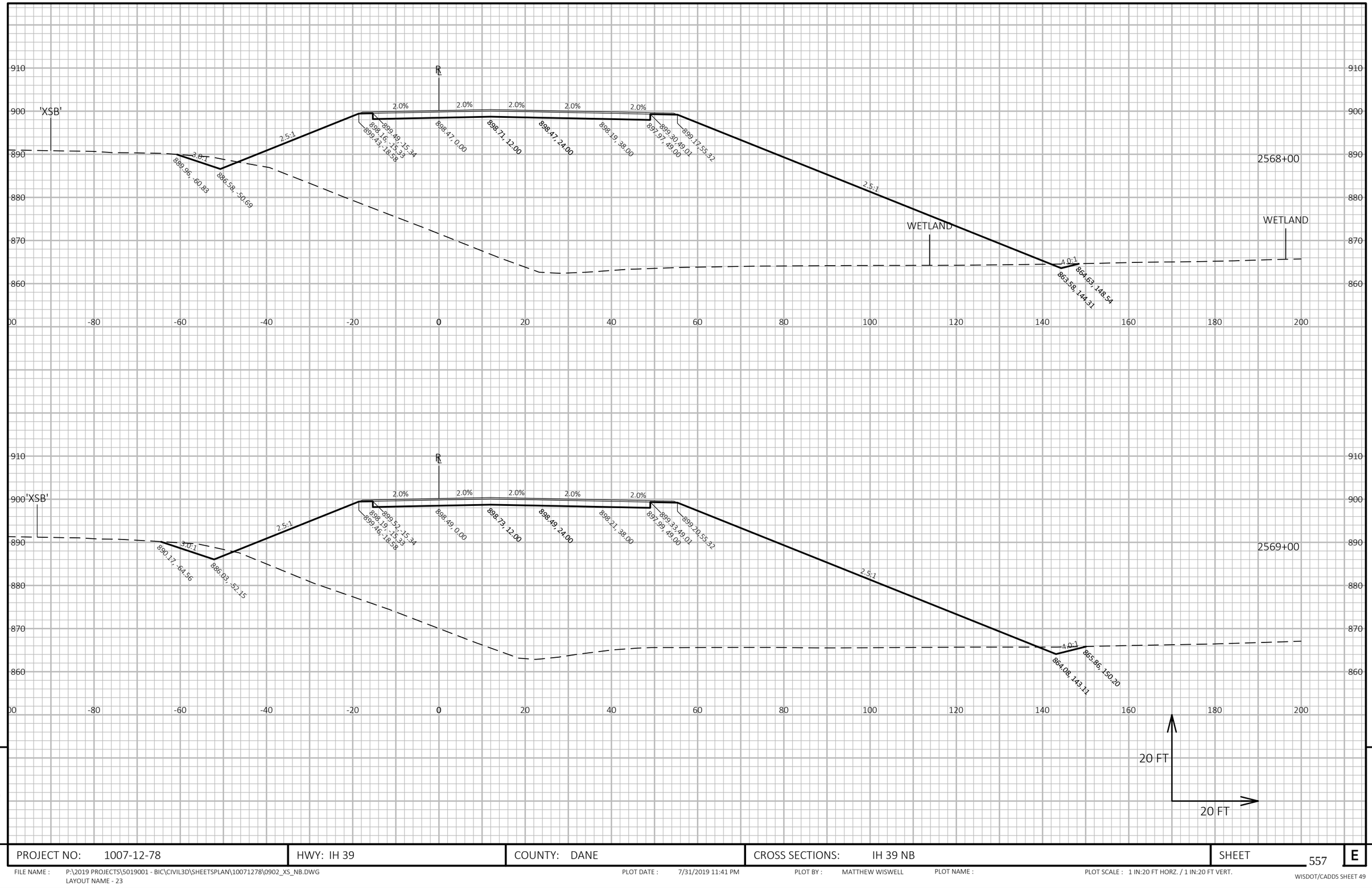


PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: IH 39 NB	SHEET 556	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0902_XS_NB.DWG
LAYOUT NAME - 22

PLOT DATE : 7/31/2019 11:40 PM PLOT BY : MATTHEW WISWELL PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

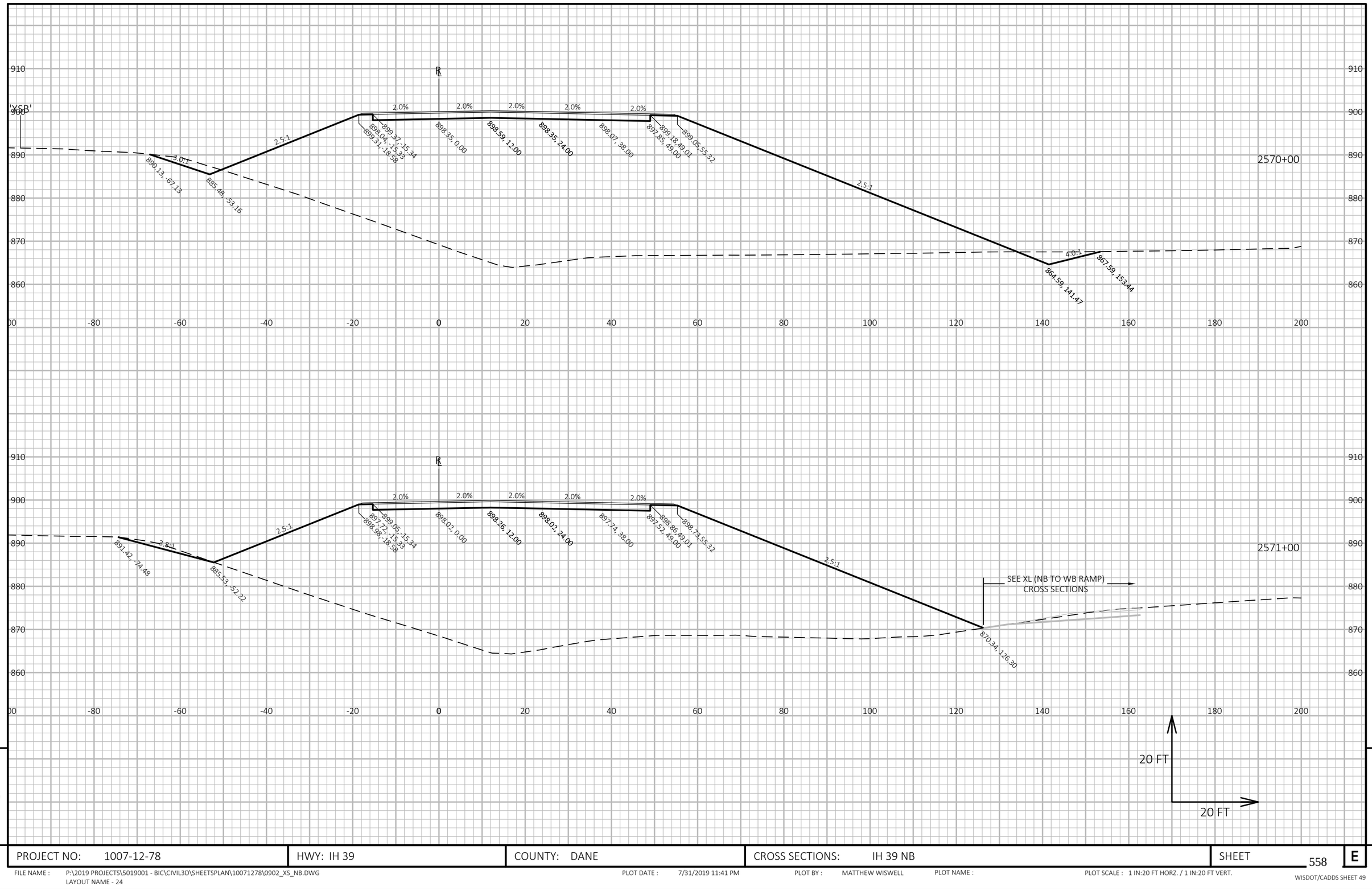


PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: IH 39 NB	SHEET 557	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0902_XS_NB.DWG
LAYOUT NAME - 23

PLOT DATE : 7/31/2019 11:41 PM PLOT BY : MATTHEW WISWELL PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

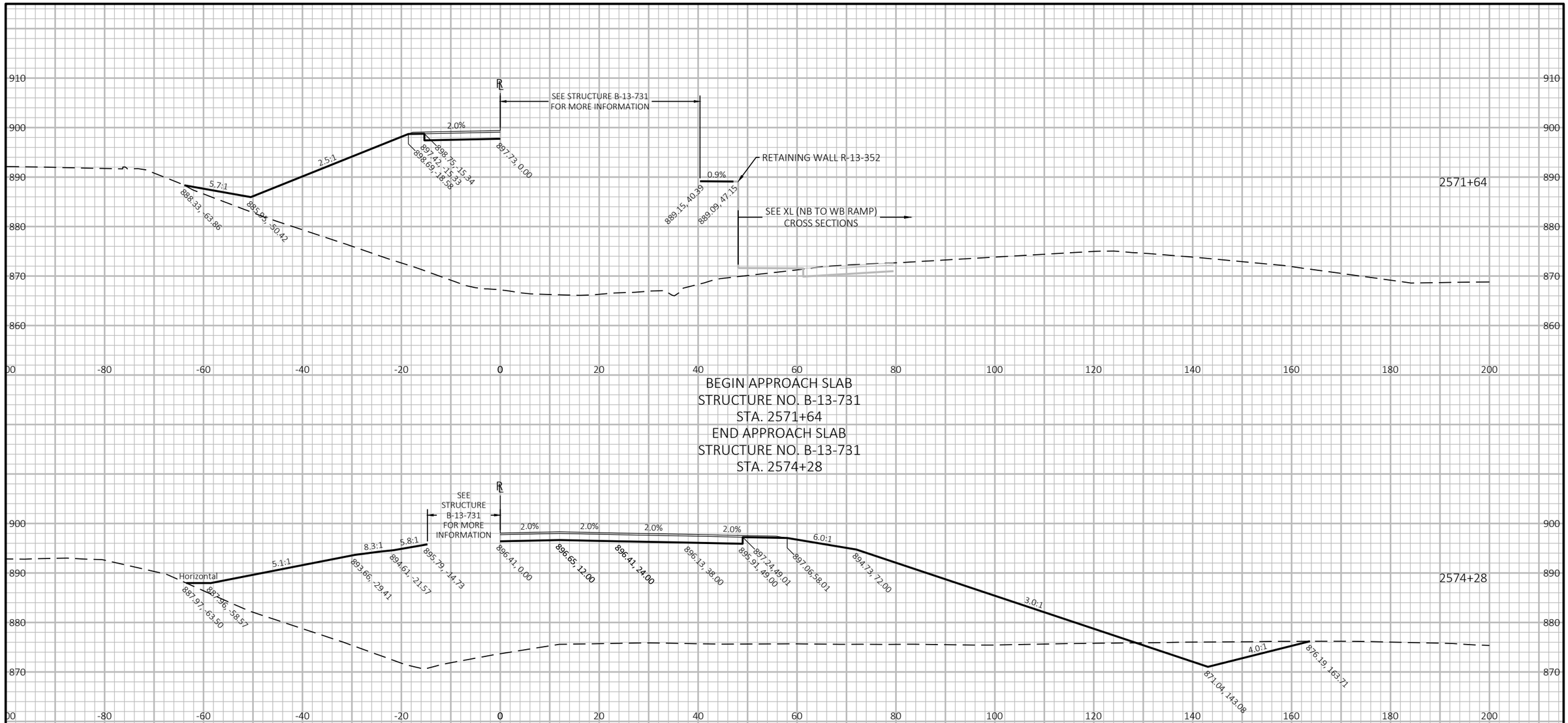


PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: IH 39 NB	SHEET 558	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0902_XS_NB.DWG
LAYOUT NAME - 24

PLOT DATE : 7/31/2019 11:41 PM PLOT BY : MATTHEW WISWELL PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

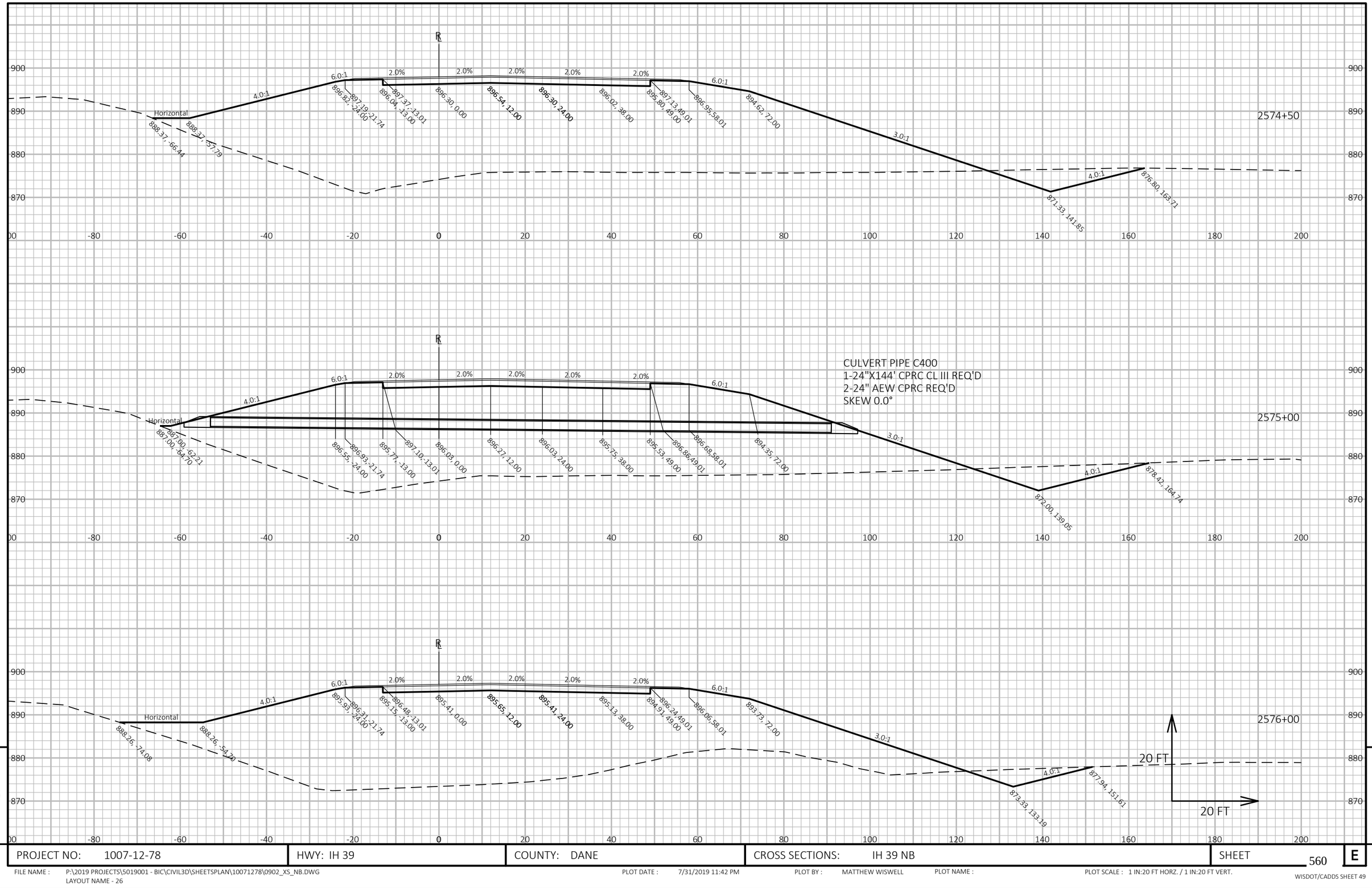


PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: IH 39 NB	SHEET 559	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0902_XS_NB.DWG
LAYOUT NAME - 25

PLOT DATE : 7/31/2019 11:41 PM PLOT BY : MATTHEW WISWELL PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

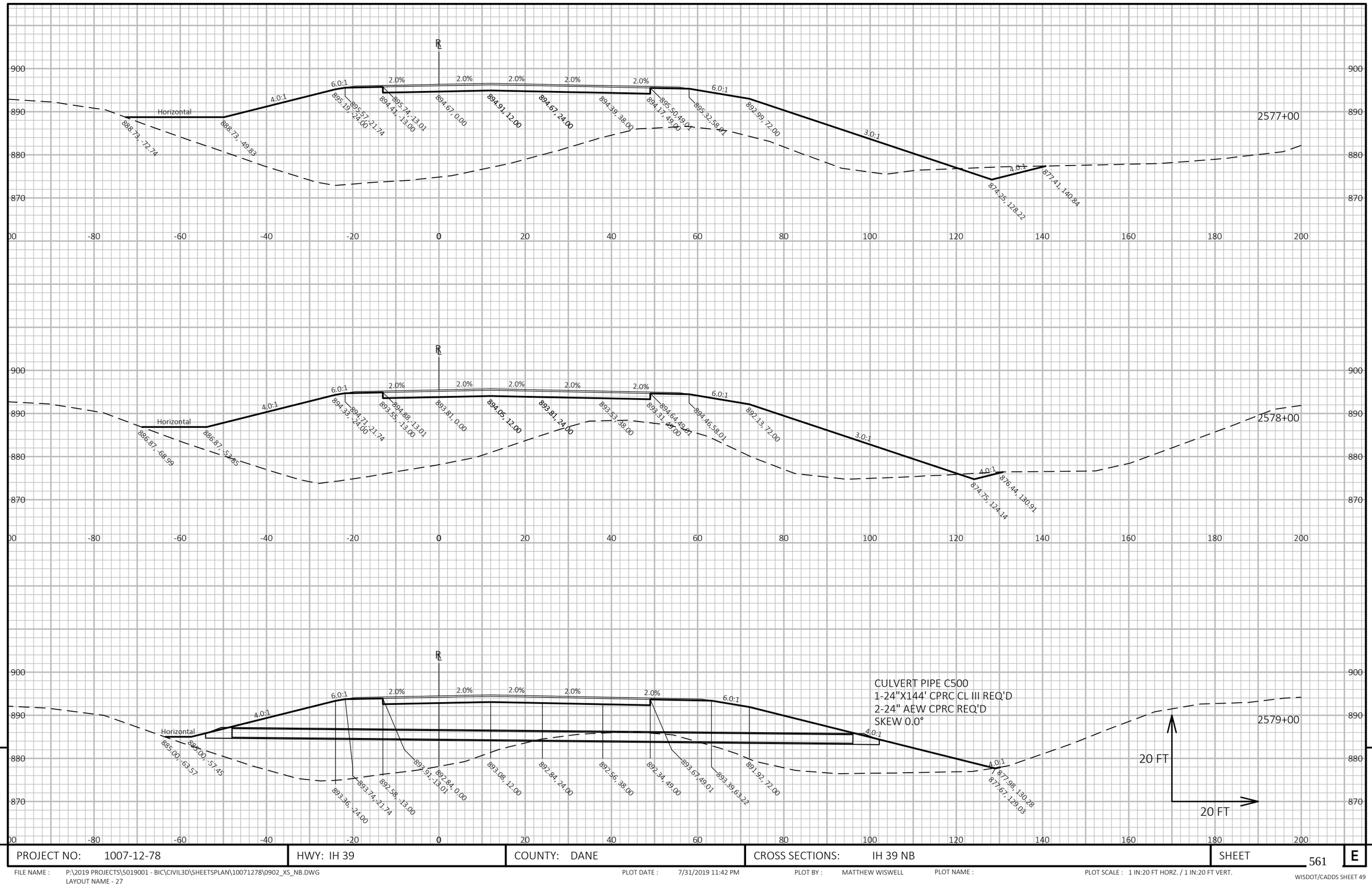


PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: IH 39 NB	SHEET 560 E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0902_XS_NB.DWG
LAYOUT NAME - 26

PLOT DATE : 7/31/2019 11:42 PM PLOT BY : MATTHEW WISWELL PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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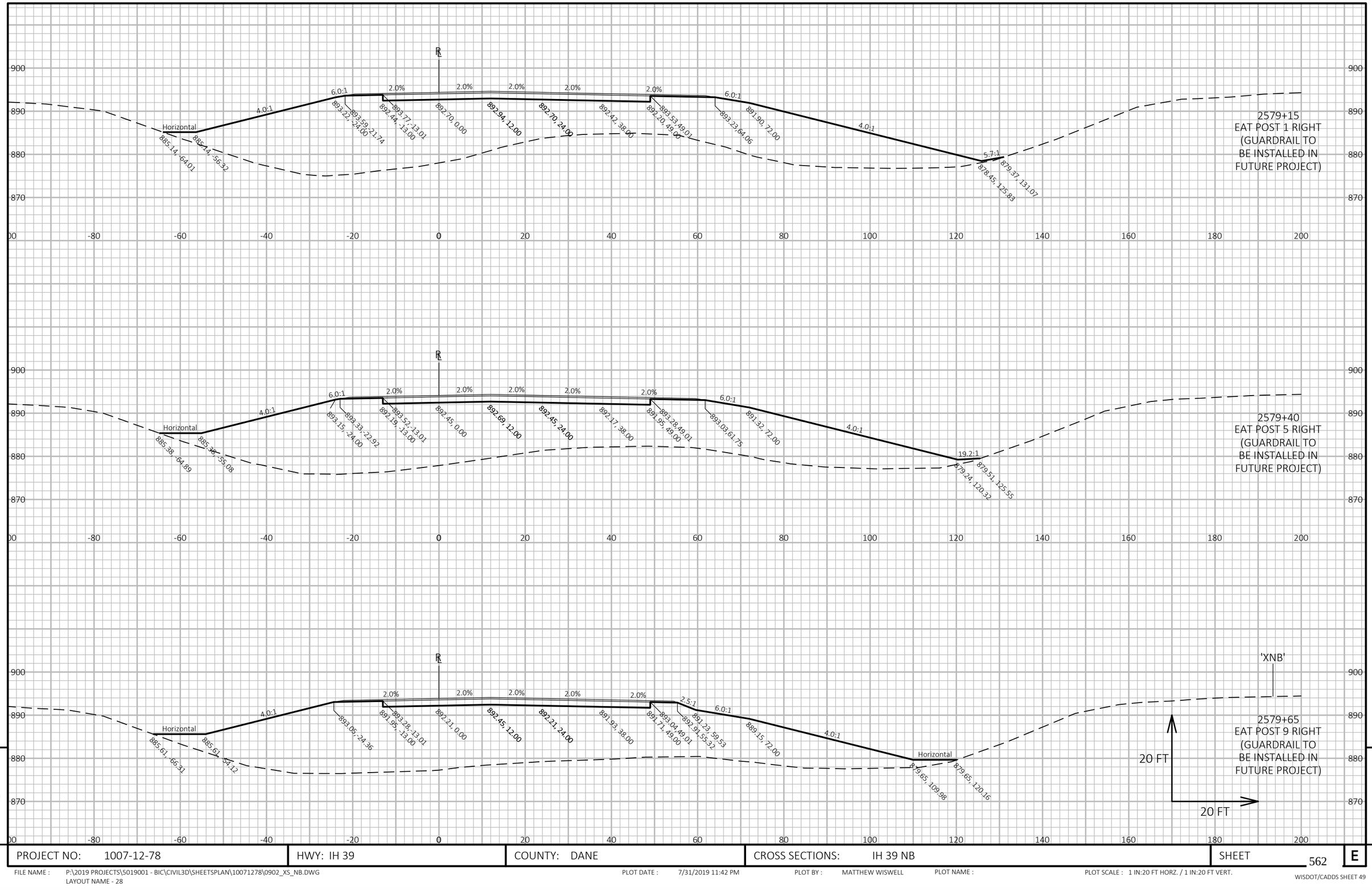
PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: IH 39 NB	SHEET 561	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0902_XS_NB.DWG
LAYOUT NAME - 27

PLOT DATE : 7/31/2019 11:42 PM PLOT BY : MATTHEW WISWELL PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: IH 39 NB	SHEET 562	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0902_XS_NB.DWG
LAYOUT NAME - 28

PLOT DATE : 7/31/2019 11:42 PM PLOT BY : MATTHEW WISWELL PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

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PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: IH 39 NB	SHEET 563	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0902_XS_NB.DWG
LAYOUT NAME - 29

PLOT DATE : 7/31/2019 11:43 PM PLOT BY : MATTHEW WISWELL PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

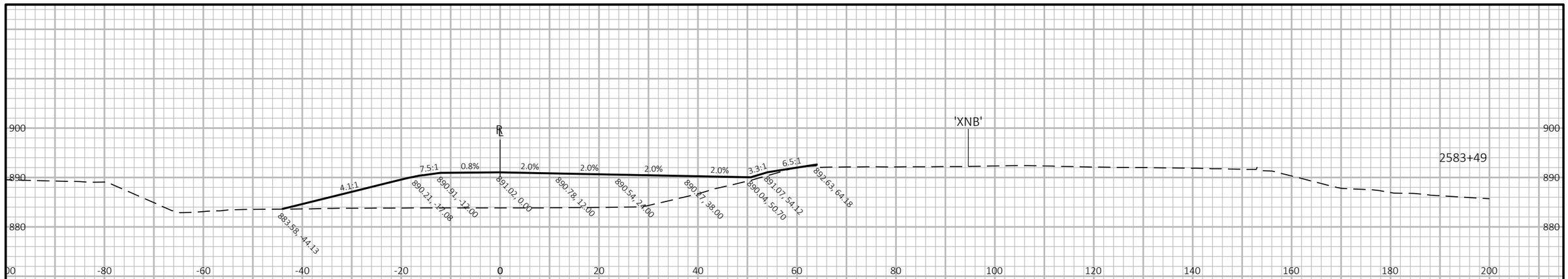
9 9

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: IH 39 NB	SHEET 564	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0902_XS_NB.DWG
LAYOUT NAME - 30

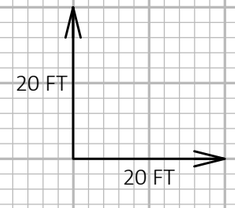
PLOT DATE : 7/31/2019 11:43 PM PLOT BY : MATTHEW WISWELL PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



END APPROACH SLAB
STRUCTURE NO. B-13-732
STA. 2583+49

END PROJECT 1007-12-78
STA 2584+00
MATCH EXISTING



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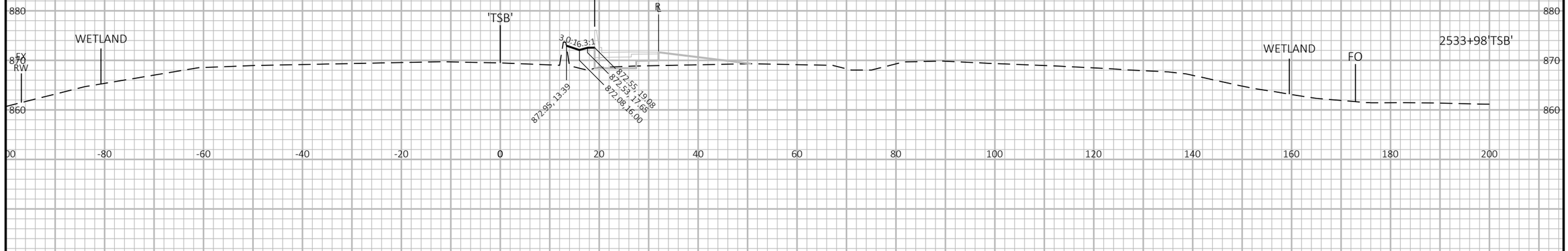
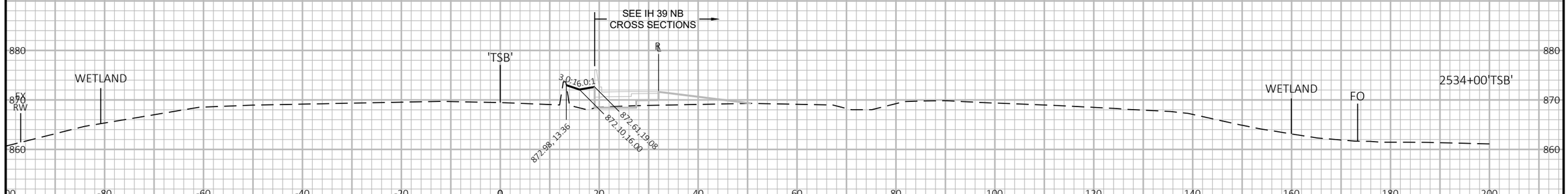
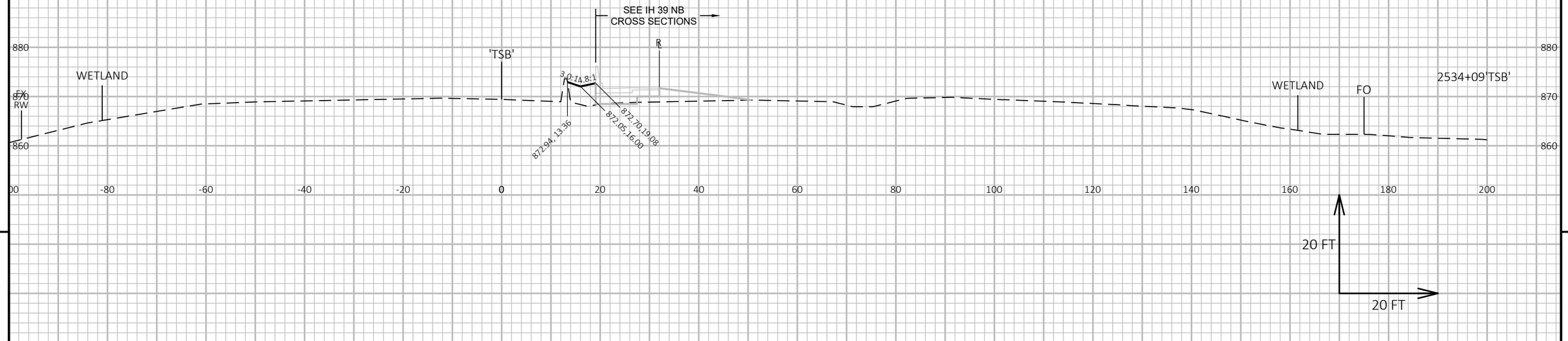
PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: IH 39 NB	SHEET 565	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0902_XS_NB.DWG
LAYOUT NAME - 31
PLOT DATE : 8/1/2019 10:47 AM
PLOT BY : MATTHEW WISWELL
PLOT NAME :
PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

BEGIN CONSTRUCTION
STA 2533+98'TSB'







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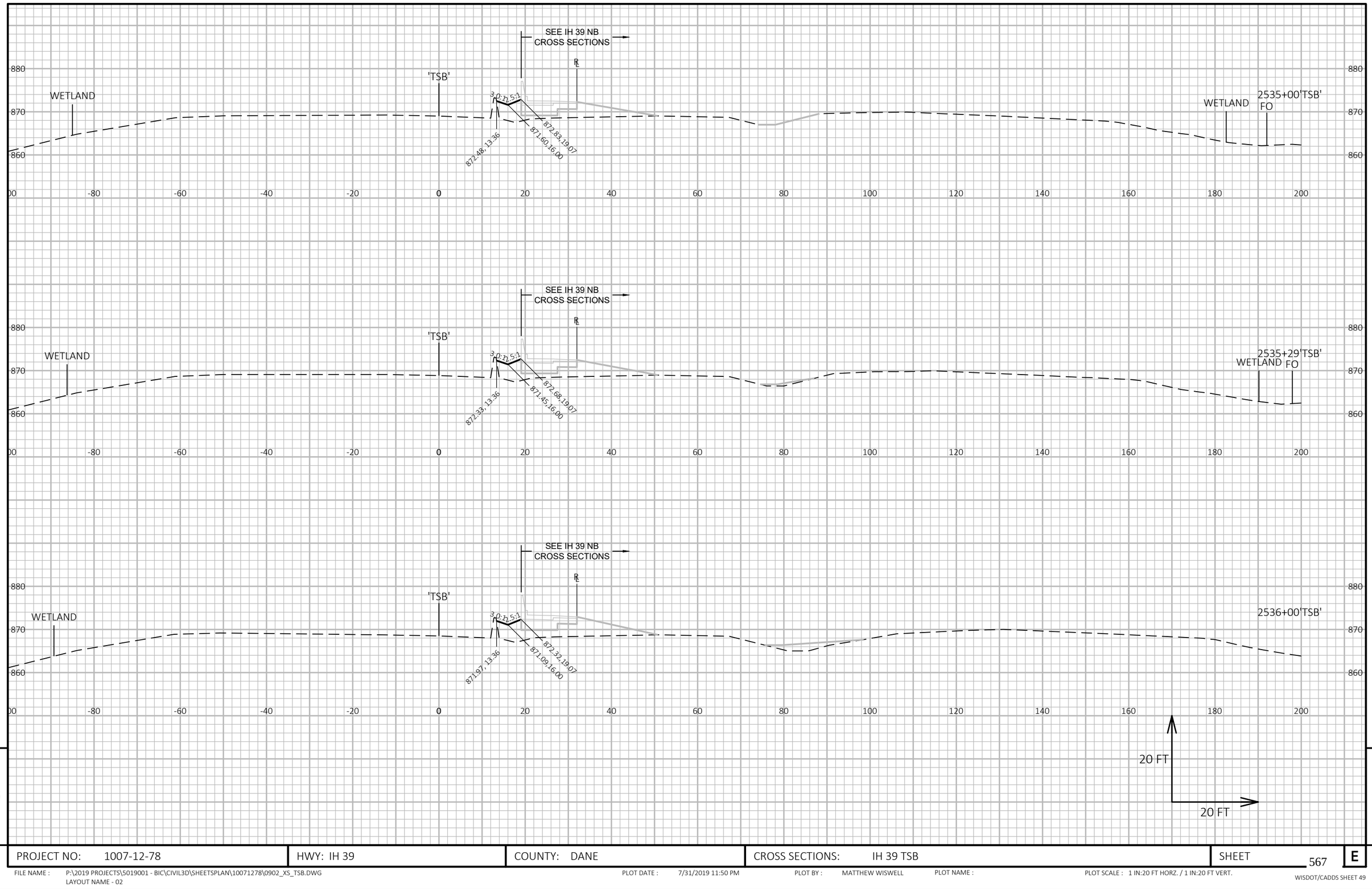
PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: IH 39 TSB	SHEET 566	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0902_XS_TSB.DWG
LAYOUT NAME - 01

PLOT DATE : 7/31/2019 11:50 PM PLOT BY : MATTHEW WISWELL PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



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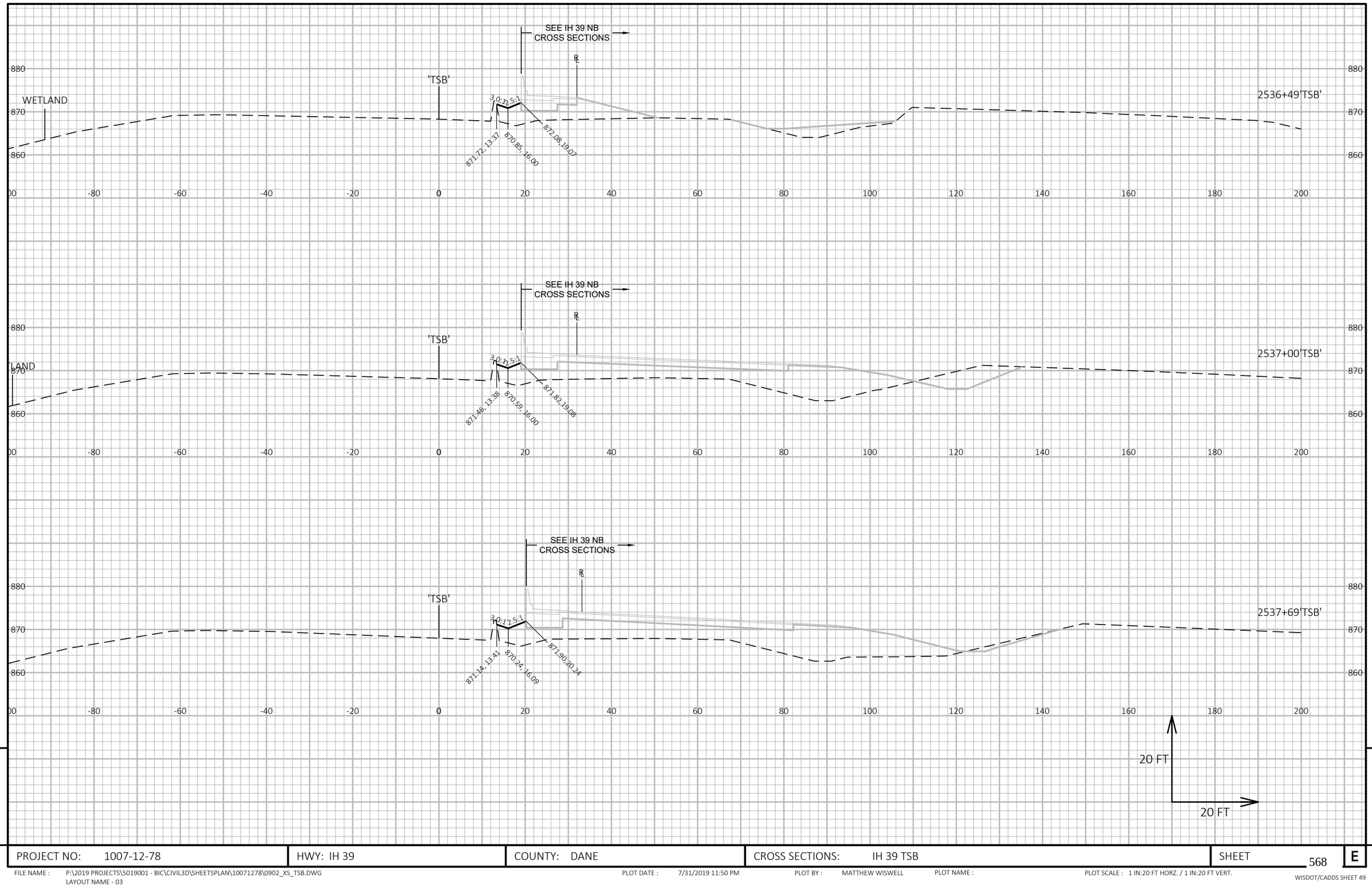
PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: IH 39 TSB	SHEET 567	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0902_XS_TSB.DWG
LAYOUT NAME - 02

PLOT DATE : 7/31/2019 11:50 PM PLOT BY : MATTHEW WISWELL PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



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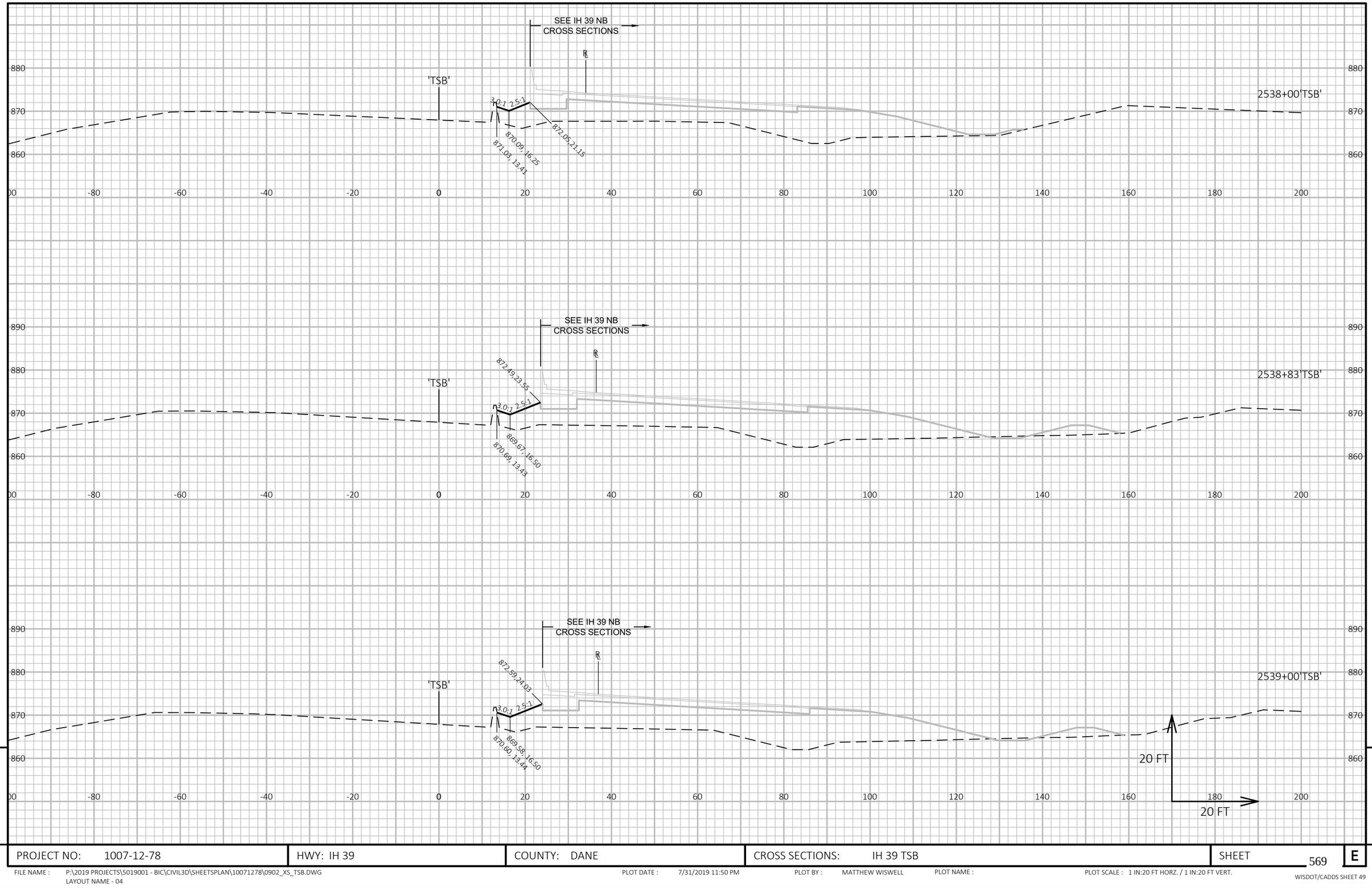
PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: IH 39 TSB	SHEET 568	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0902_XS_TSB.DWG
LAYOUT NAME - 03

PLOT DATE : 7/31/2019 11:50 PM PLOT BY : MATTHEW WISWELL PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



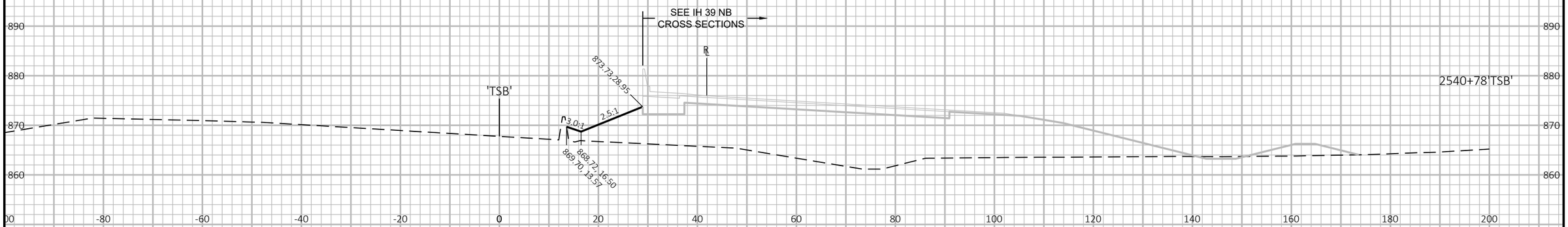
9

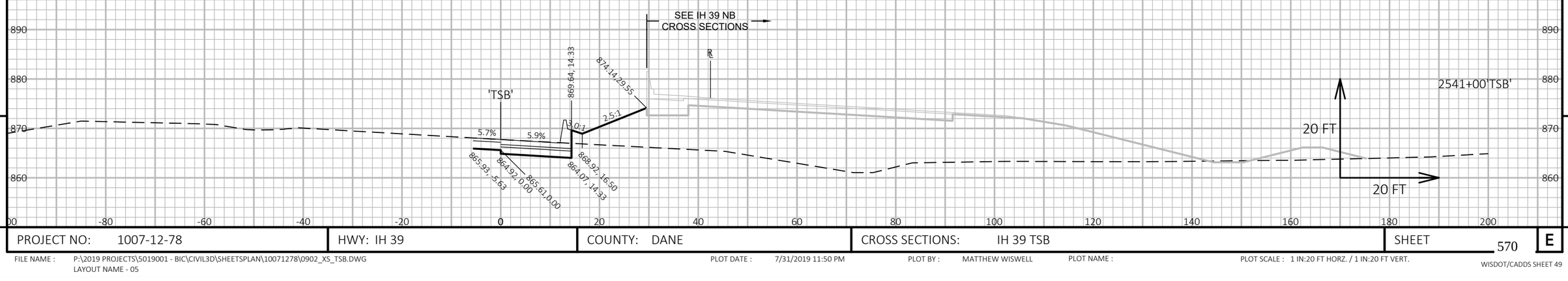
9

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: IH 39 TSB	SHEET 569	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0902_XS_TSB.DWG
LAYOUT NAME - 04

PLOT DATE : 7/31/2019 11:50 PM PLOT BY : MATTHEW WISWELL PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.





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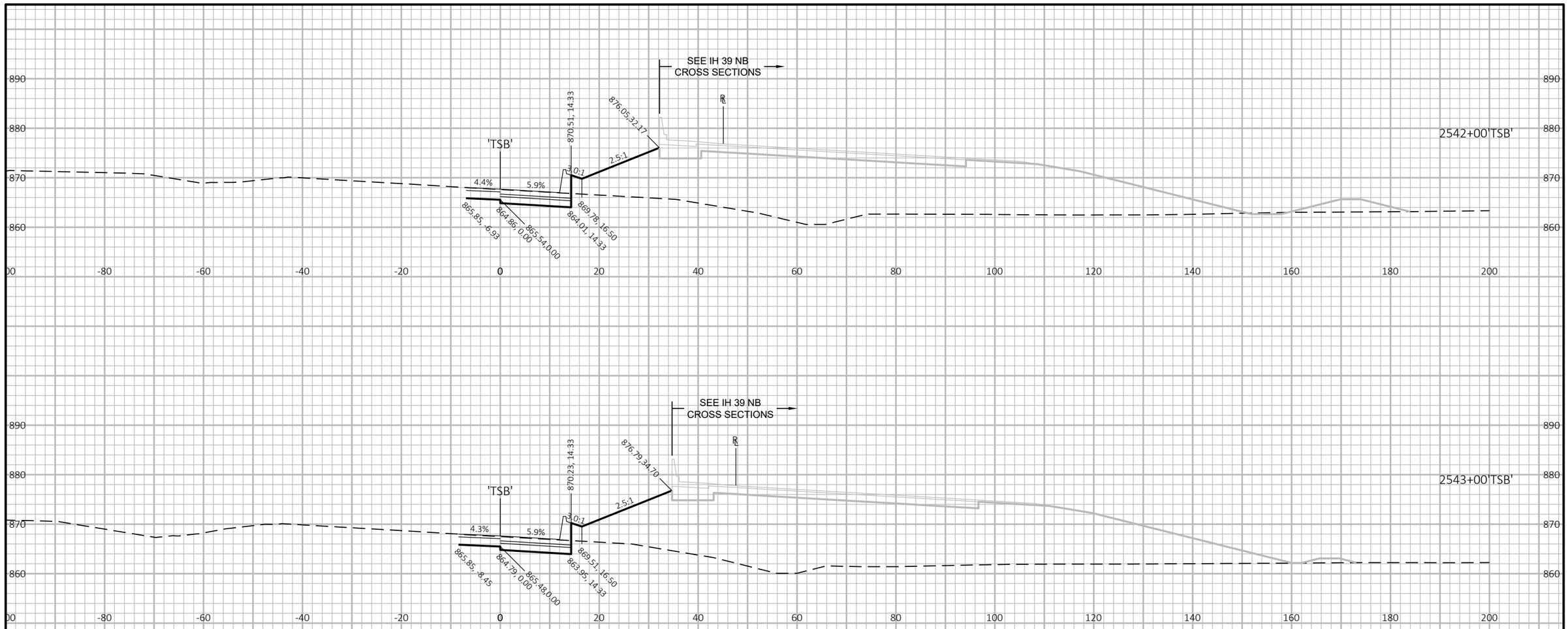
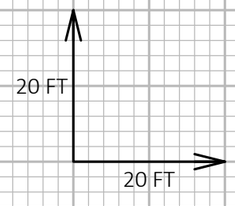
PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: IH 39 TSB	SHEET 570	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0902_XS_TSB.DWG
LAYOUT NAME - 05

PLOT DATE : 7/31/2019 11:50 PM PLOT BY : MATTHEW WISWELL PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49





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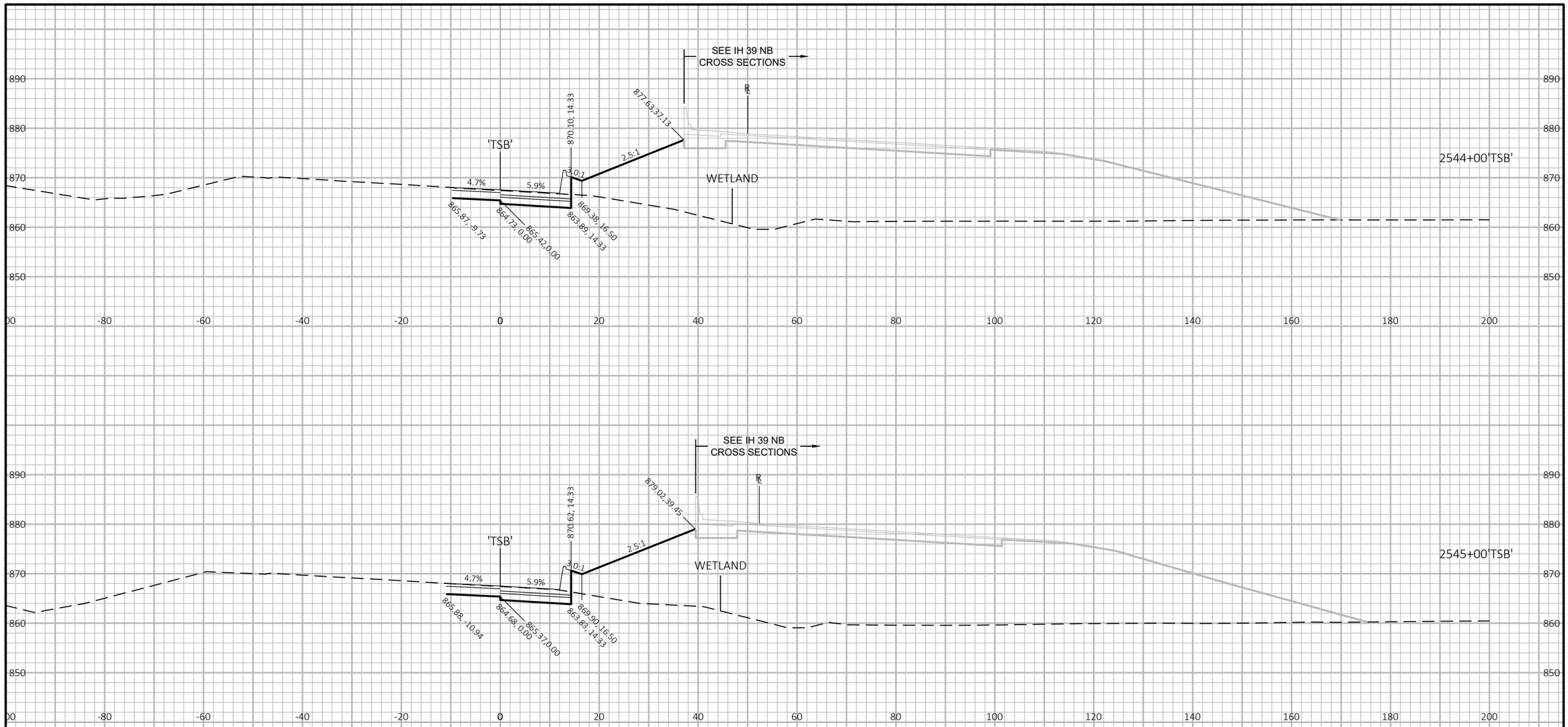
PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: IH 39 TSB	SHEET 571	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0902_XS_TSB.DWG
LAYOUT NAME - 06

PLOT DATE : 7/31/2019 11:51 PM PLOT BY : MATTHEW WISWELL PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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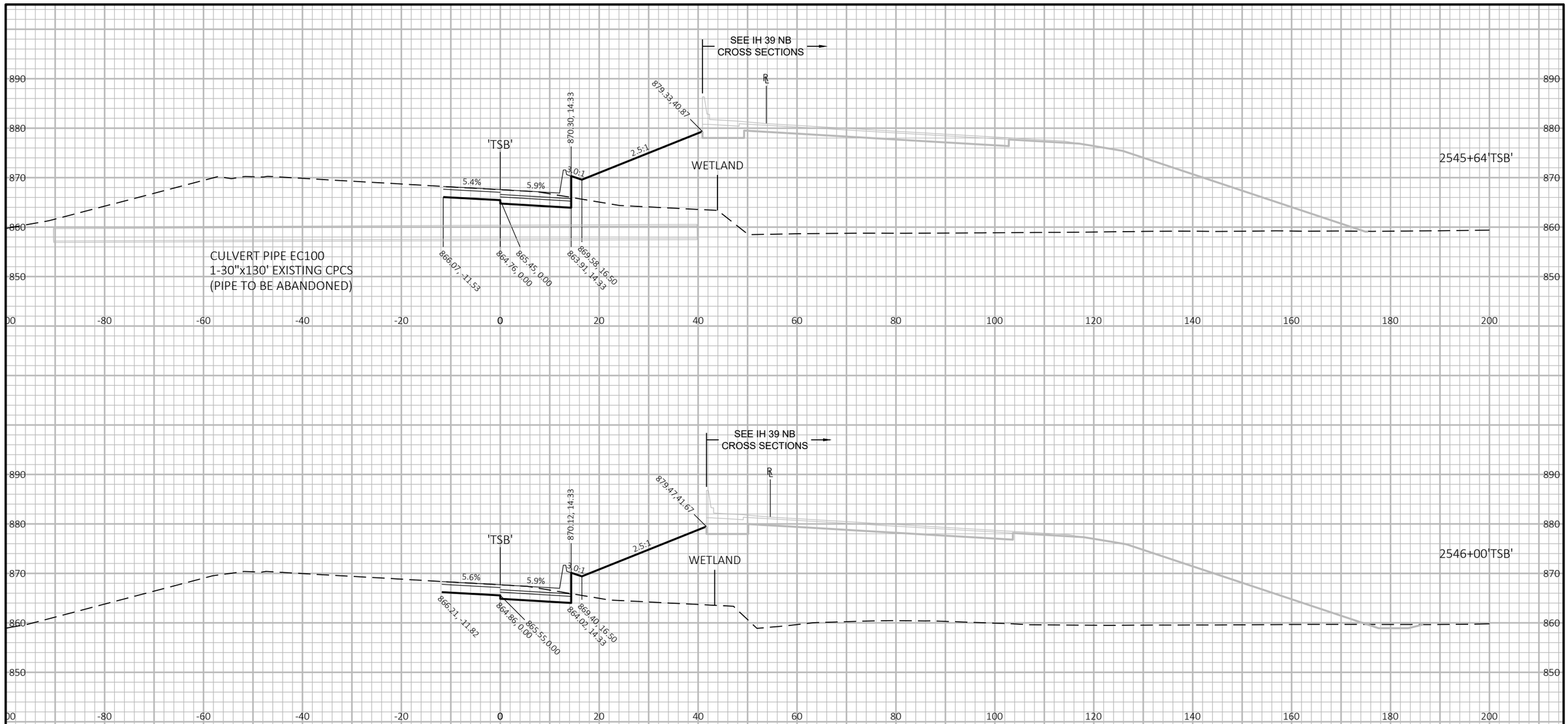
PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: IH 39 TSB	SHEET 572	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0902_XS_TSB.DWG
LAYOUT NAME - 07

PLOT DATE : 7/31/2019 11:51 PM PLOT BY : MATTHEW WISWELL PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



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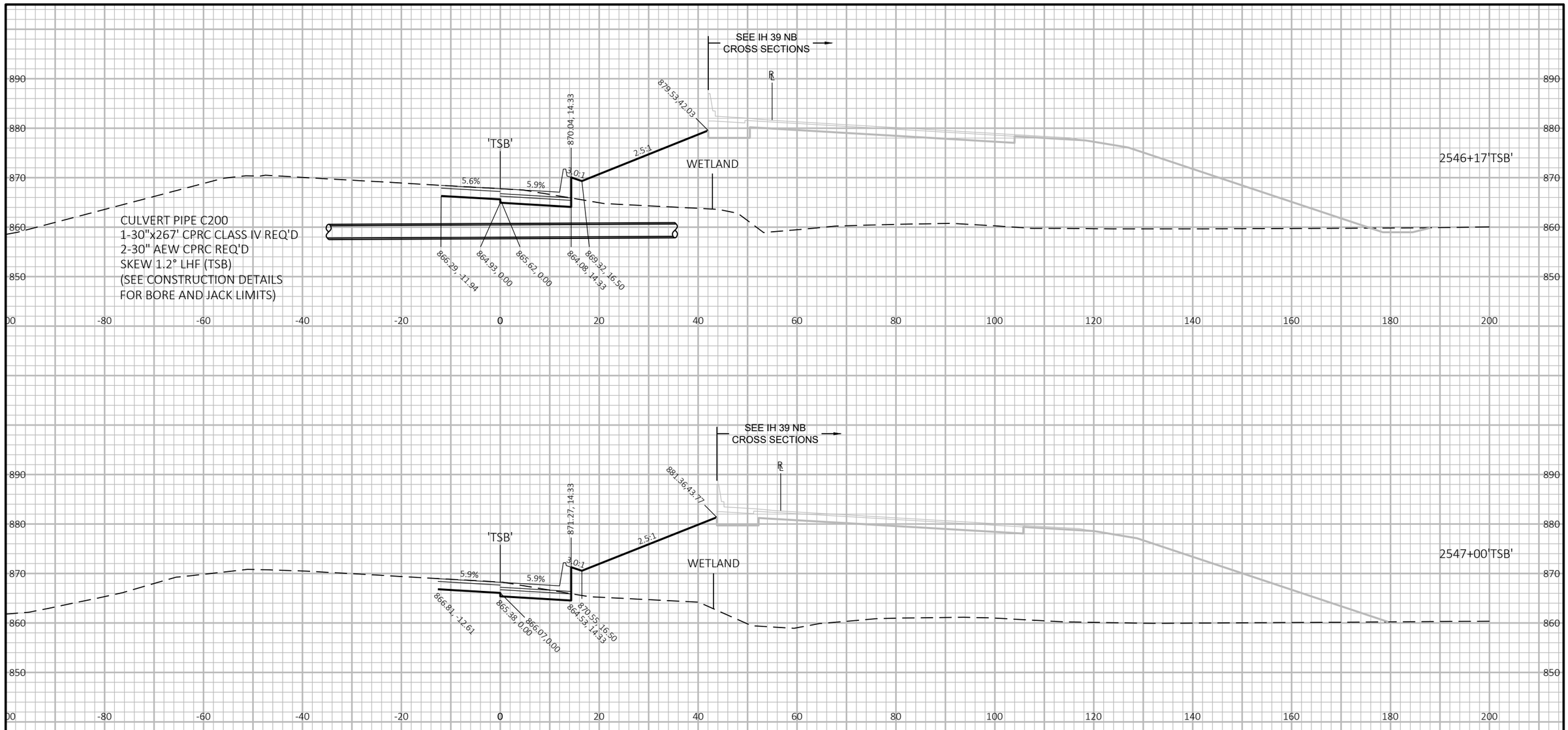
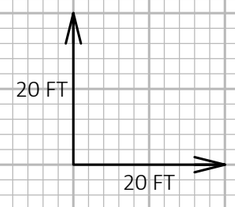
PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: IH 39 TSB	SHEET 573	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0902_XS_TSB.DWG
LAYOUT NAME - 08

PLOT DATE : 7/31/2019 11:51 PM PLOT BY : MATTHEW WISWELL PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.





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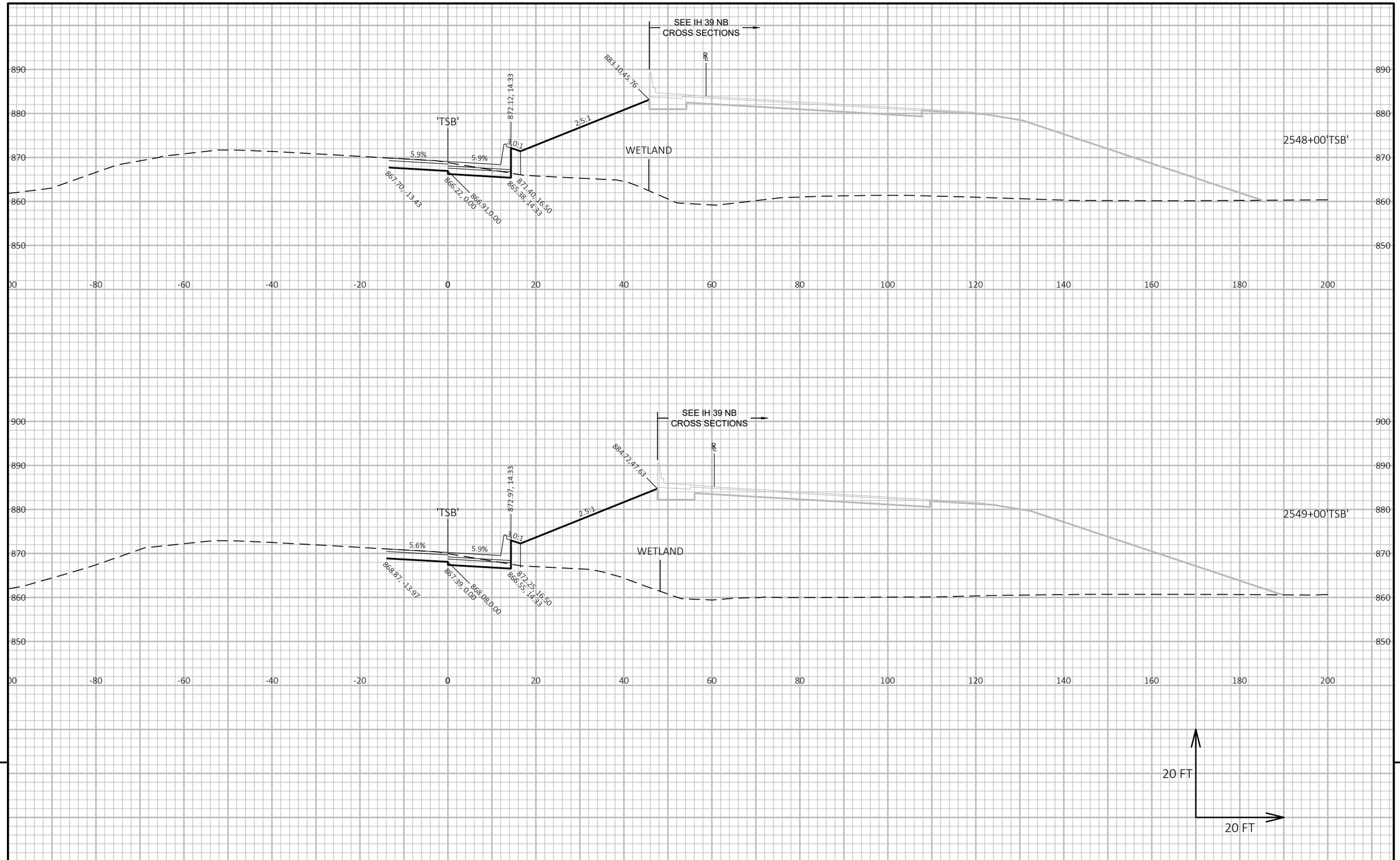
PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: IH 39 TSB	SHEET 574	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0902_XS_TSB.DWG
LAYOUT NAME - 09

PLOT DATE : 7/31/2019 11:51 PM PLOT BY : MATTHEW WISWELL PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

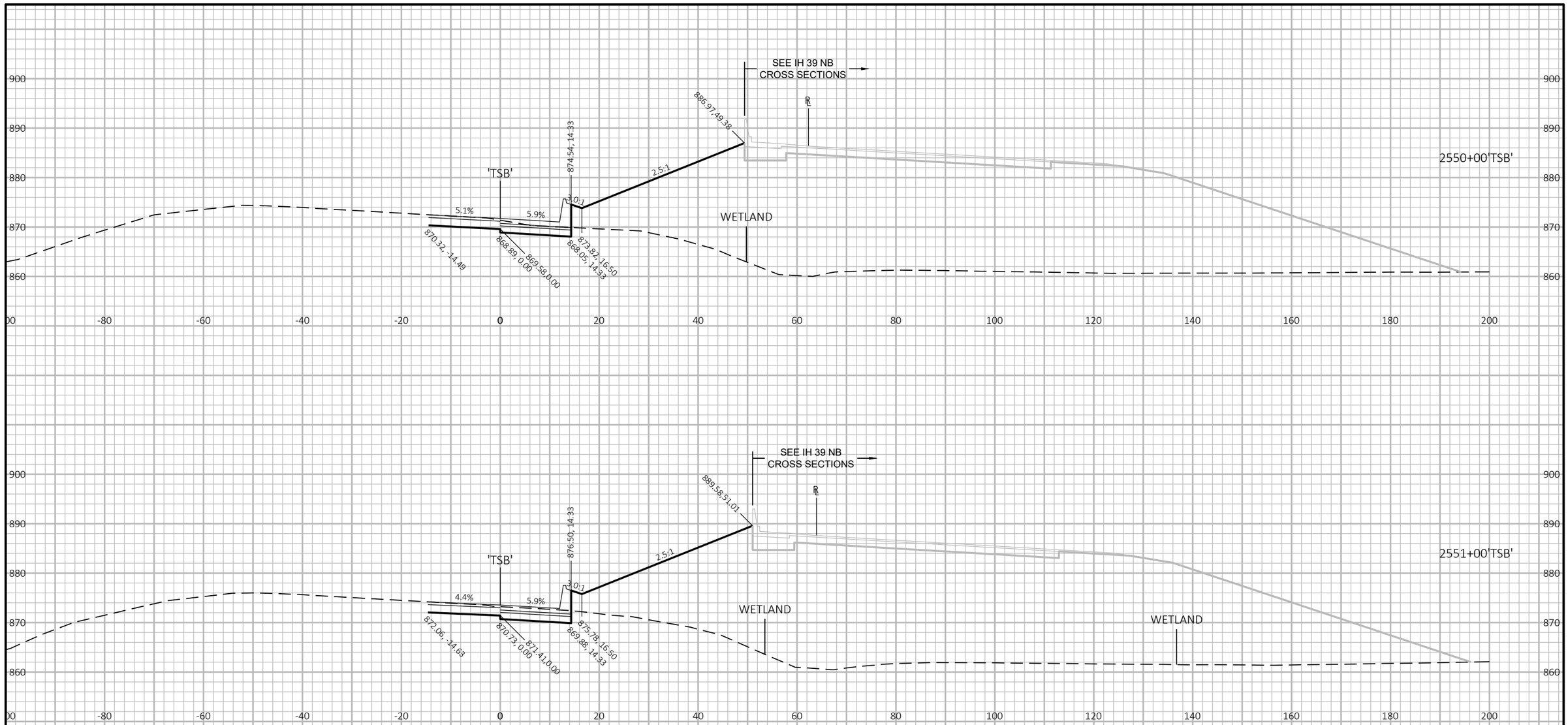


PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: IH 39 TSB	SHEET 575	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0902_XS_TSB.DWG
LAYOUT NAME - 10

PLOT DATE : 7/31/2019 11:51 PM PLOT BY : MATTHEW WISWELL PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

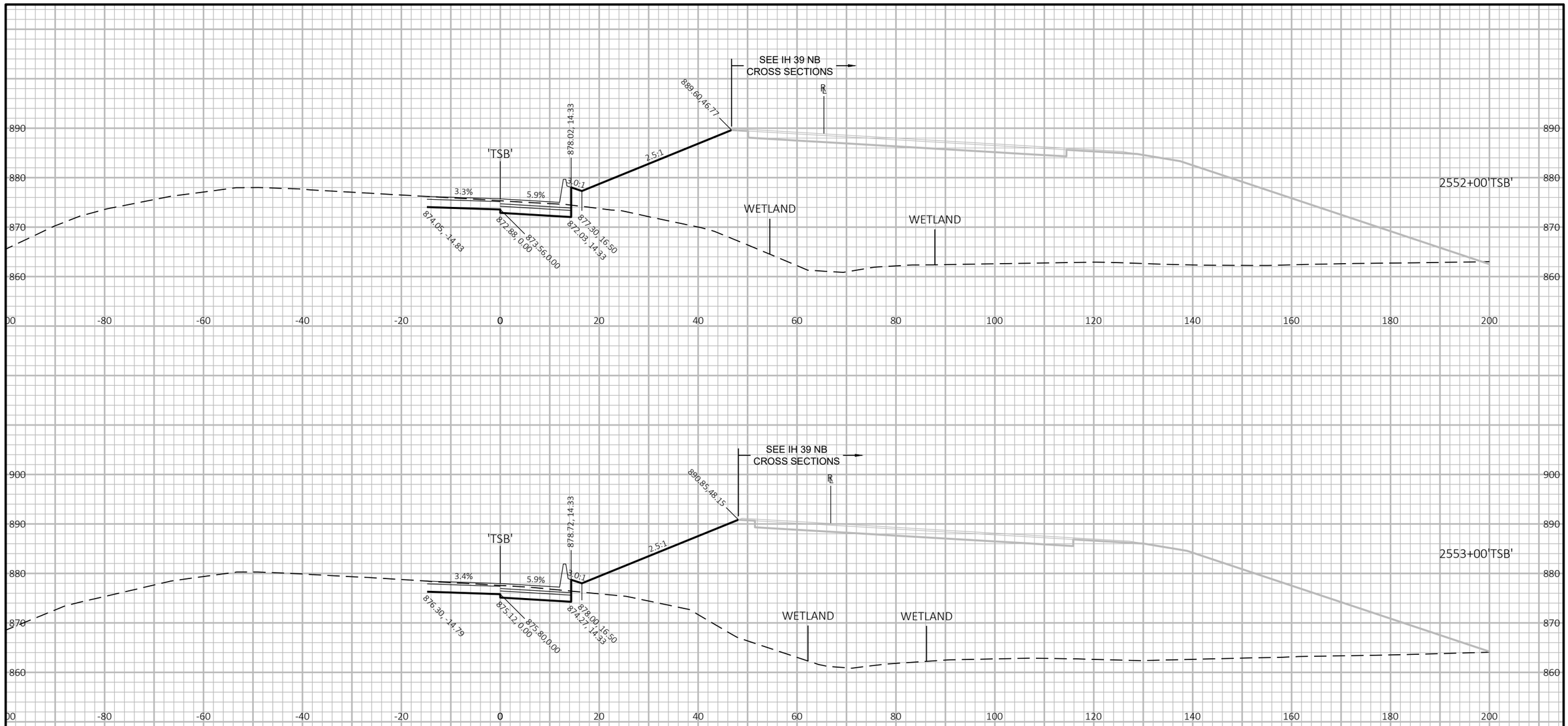


PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: IH 39 TSB	SHEET 576	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0902_XS_TSB.DWG
LAYOUT NAME - 11

PLOT DATE : 7/31/2019 11:51 PM PLOT BY : MATTHEW WISWELL PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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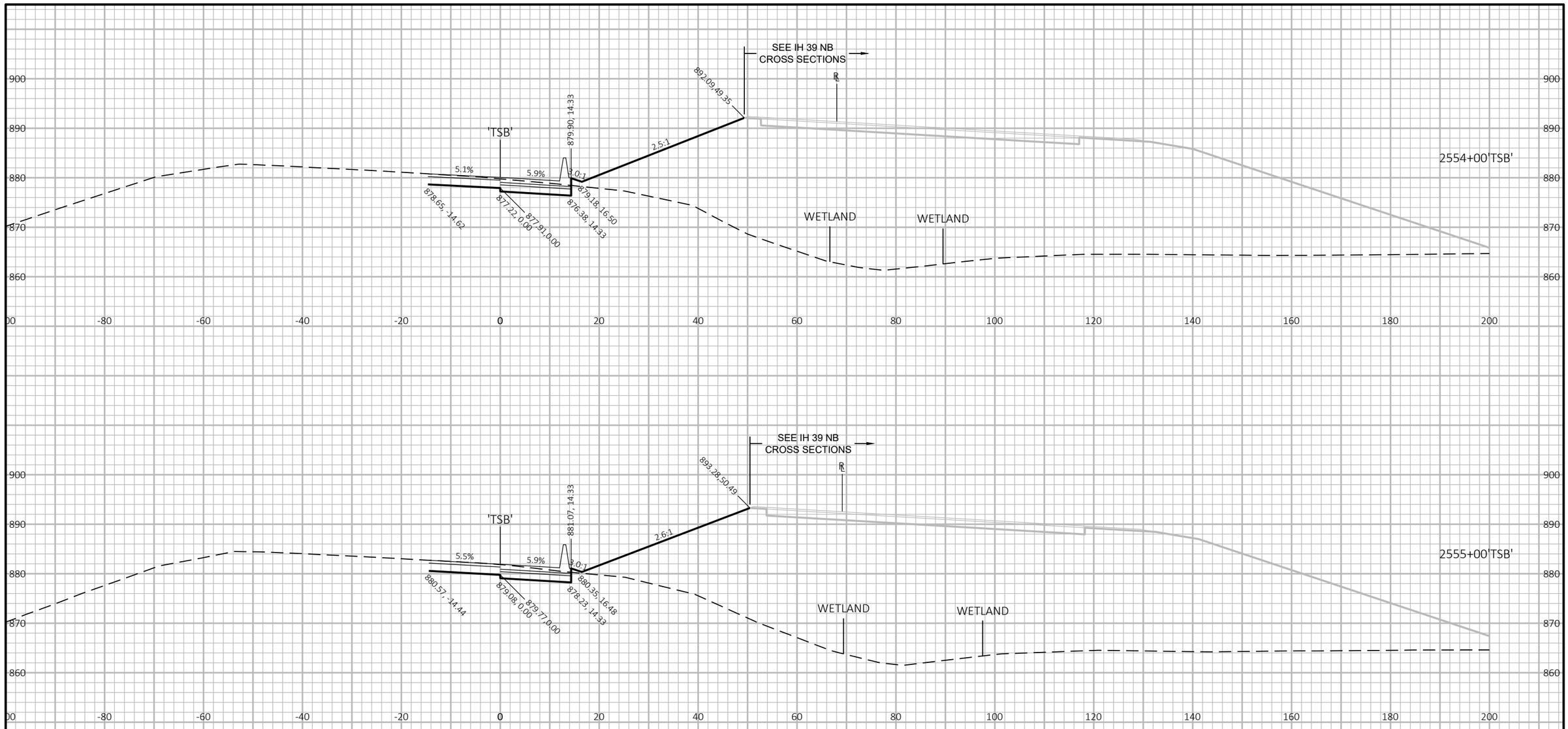
PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: IH 39 TSB	SHEET 577	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0902_XS_TSB.DWG
LAYOUT NAME - 12

PLOT DATE : 7/31/2019 11:51 PM PLOT BY : MATTHEW WISWELL PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

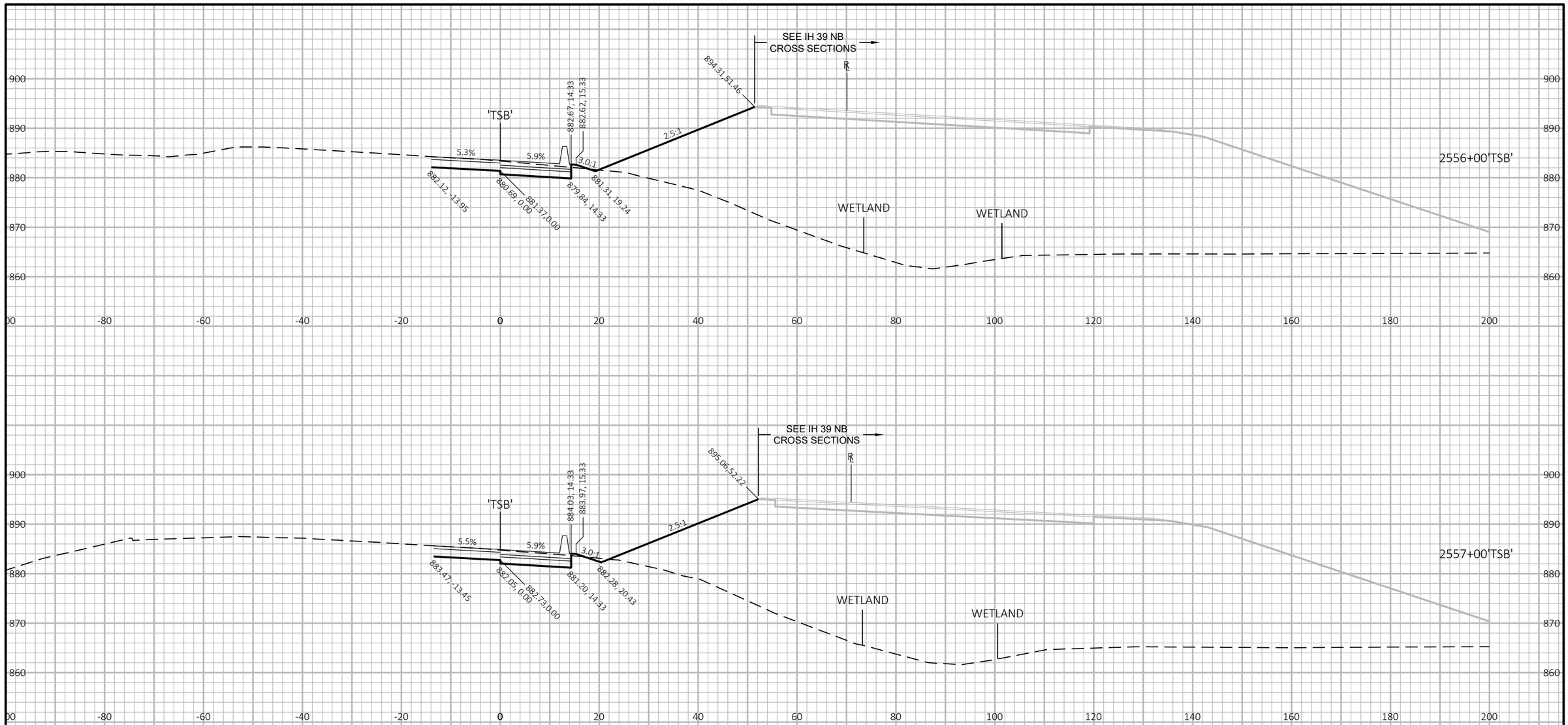


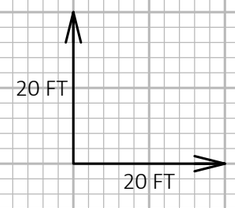
PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: IH 39 TSB	SHEET 578	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0902_XS_TSB.DWG
LAYOUT NAME - 13

PLOT DATE : 7/31/2019 11:51 PM PLOT BY : MATTHEW WISWELL PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49





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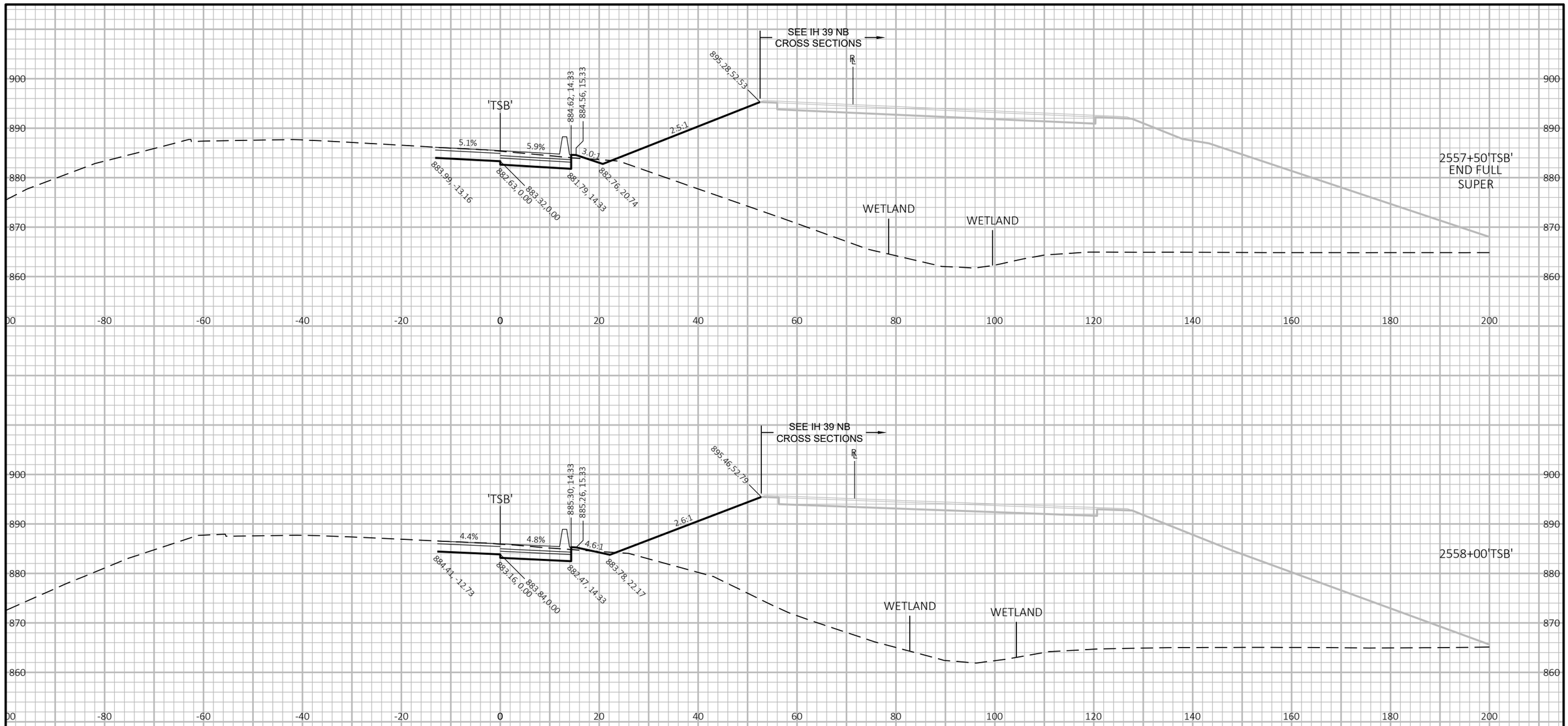
PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: IH 39 TSB	SHEET 579	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0902_XS_TSB.DWG
LAYOUT NAME - 14

PLOT DATE : 7/31/2019 11:51 PM PLOT BY : MATTHEW WISWELL PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

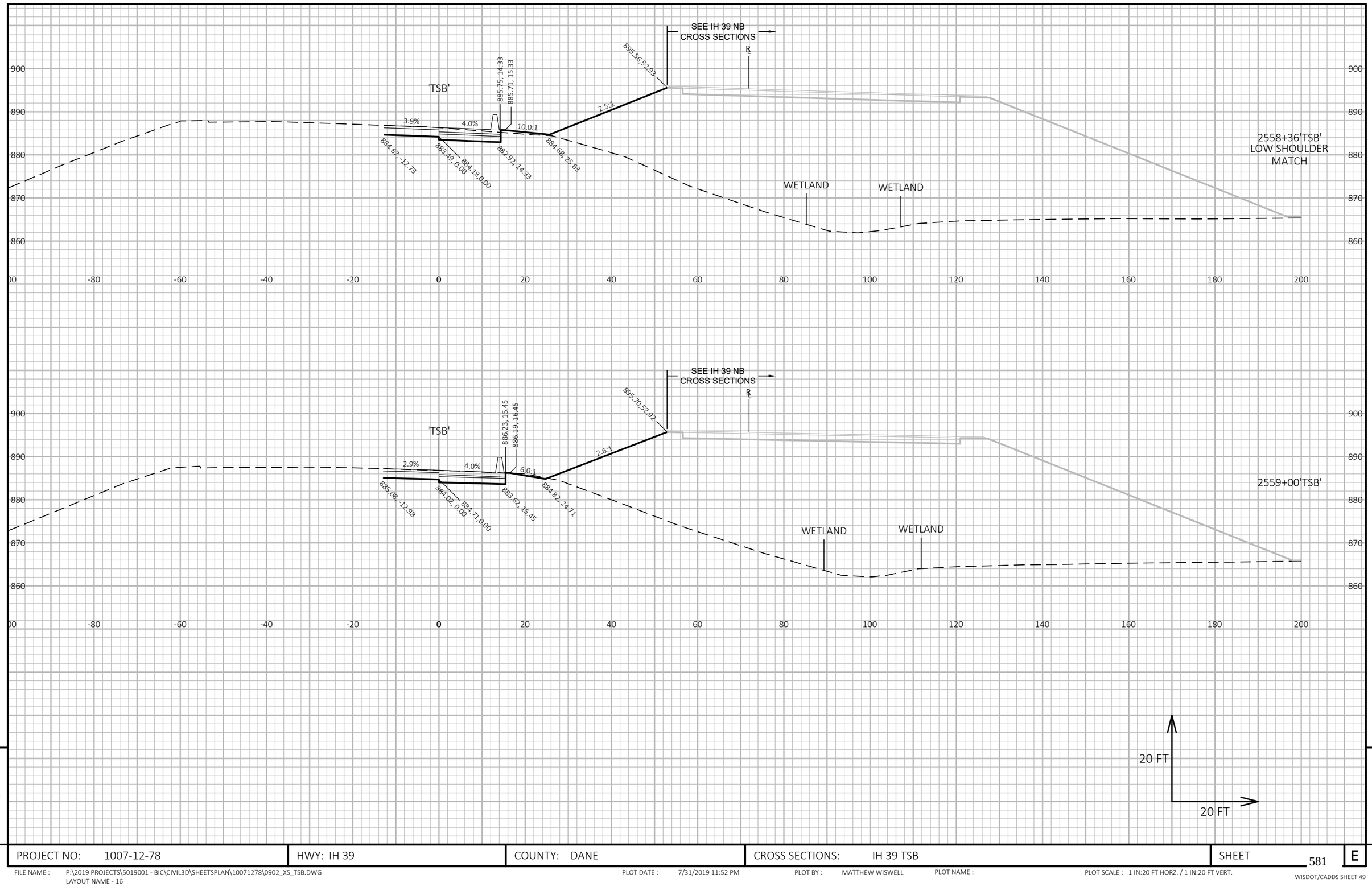


PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: IH 39 TSB	SHEET 580	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0902_XS_TSB.DWG
LAYOUT NAME - 15

PLOT DATE : 7/31/2019 11:52 PM PLOT BY : MATTHEW WISWELL PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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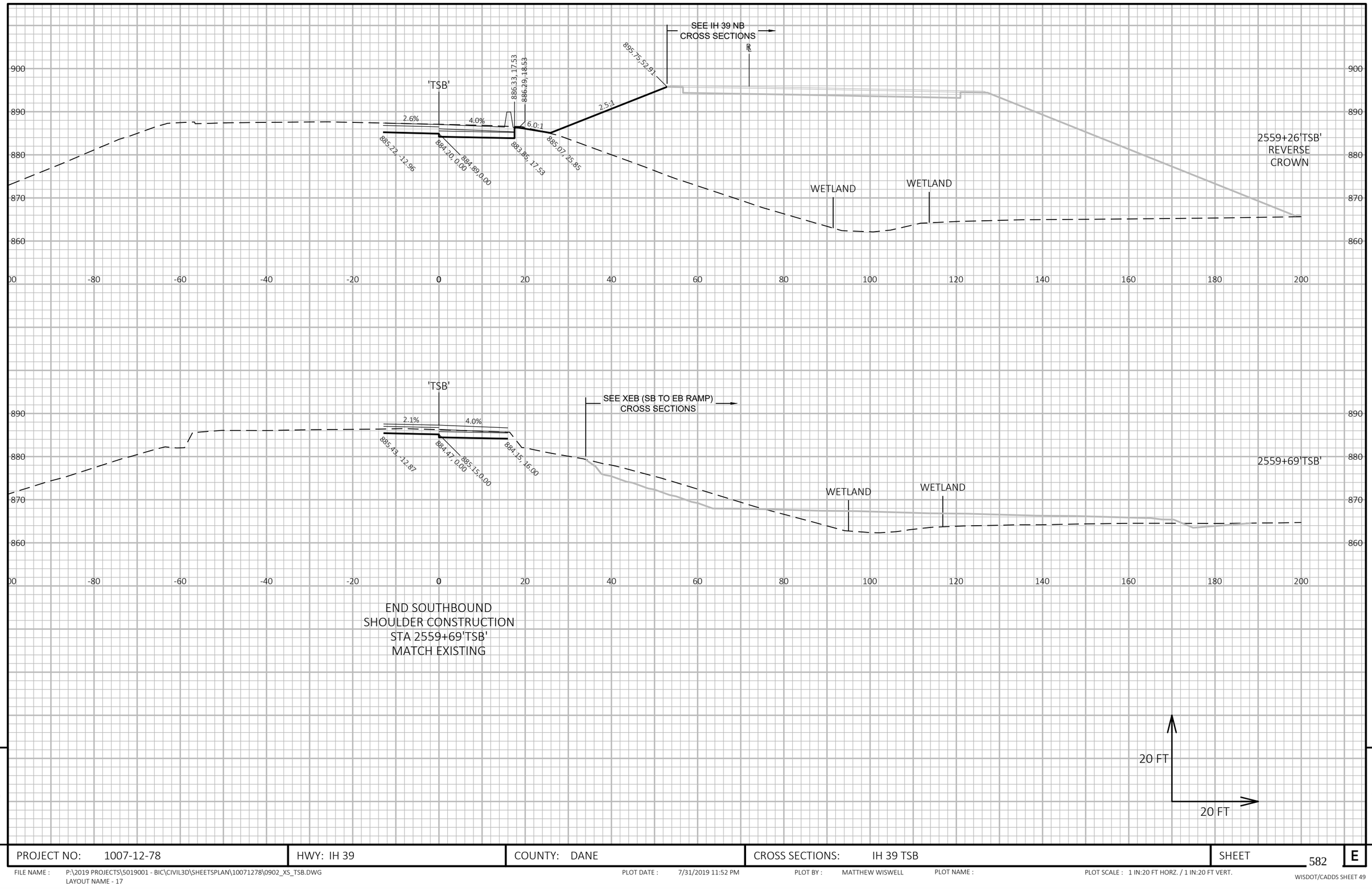
PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: IH 39 TSB	SHEET 581	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0902_XS_TSB.DWG
LAYOUT NAME - 16

PLOT DATE : 7/31/2019 11:52 PM PLOT BY : MATTHEW WISWELL PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: IH 39 TSB	SHEET 582	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0902_XS_TSB.DWG
LAYOUT NAME - 17

PLOT DATE : 7/31/2019 11:52 PM PLOT BY : MATTHEW WISWELL PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

BEGIN CONSTRUCTION
STA 87+38'XEB'
MATCH EXISTING

'XEB'

3.7%

6.0:1

864.45, 38.00

863.62, 60.18

861.32, 73.94

87+38'XEB'

870
860
850

-20 -10 0 10 20 30 40 50 60 70 80 90 100 110 120

'XEB'

3.4%

6.0:1

864.54, 38.00

863.79, 59.86

861.79, 71.85

87+50'XEB'

870
860
850

-20 -10 0 10 20 30 40 50 60 70 80 90 100 110 120

10 FT

10 FT

9

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PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: USH 12/18 EB WIDEN RT	SHEET 583	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0902_XS_XEB_WIDEN_RIGHT.DWG
LAYOUT NAME - 01

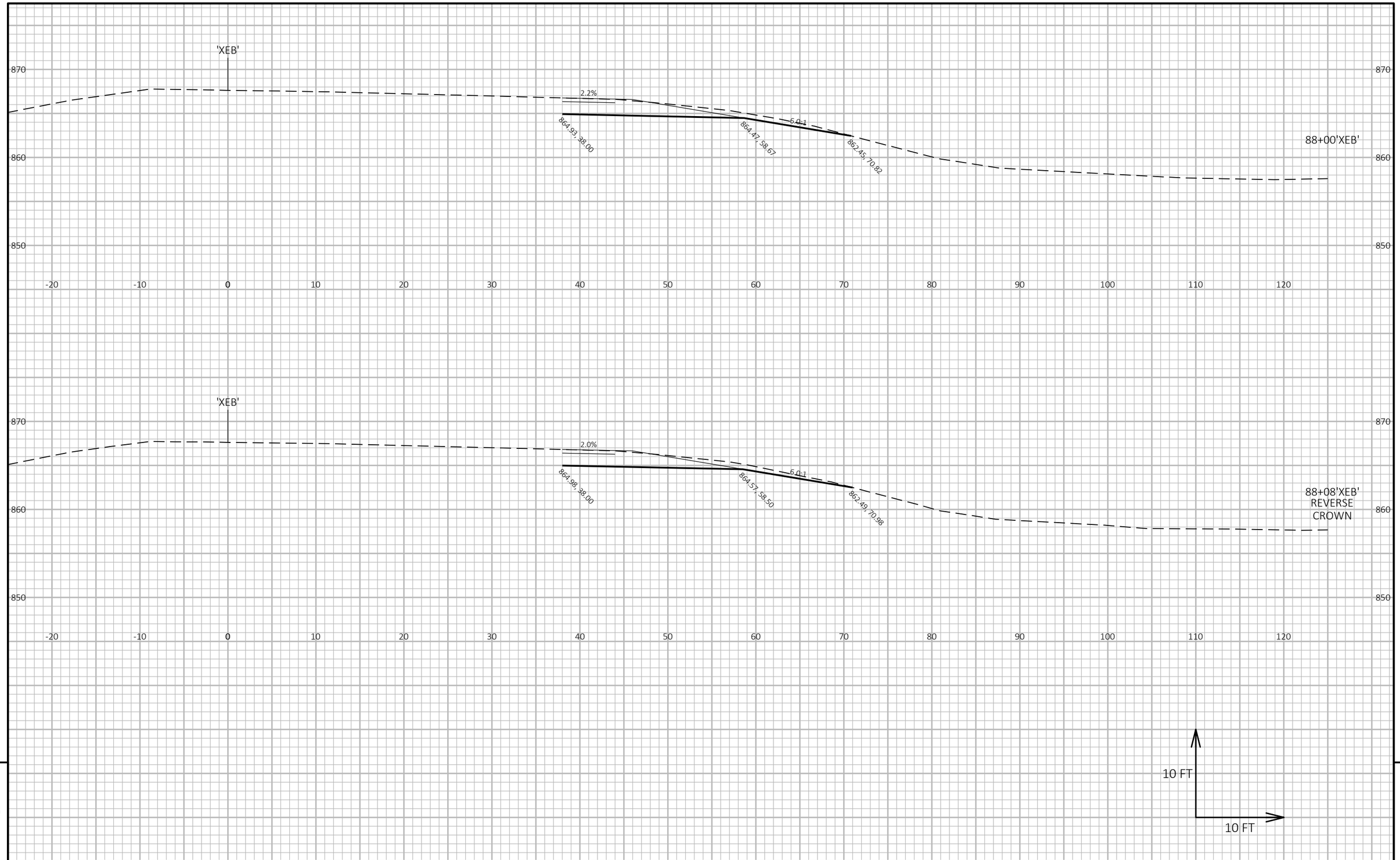
PLOT DATE : 8/1/2019 12:19 AM

PLOT BY : MATTHEW WISWELL

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: USH 12/18 EB WIDEN RT	SHEET 584	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0902_XS_XEB_WIDEN_RIGHT.DWG
LAYOUT NAME - 02

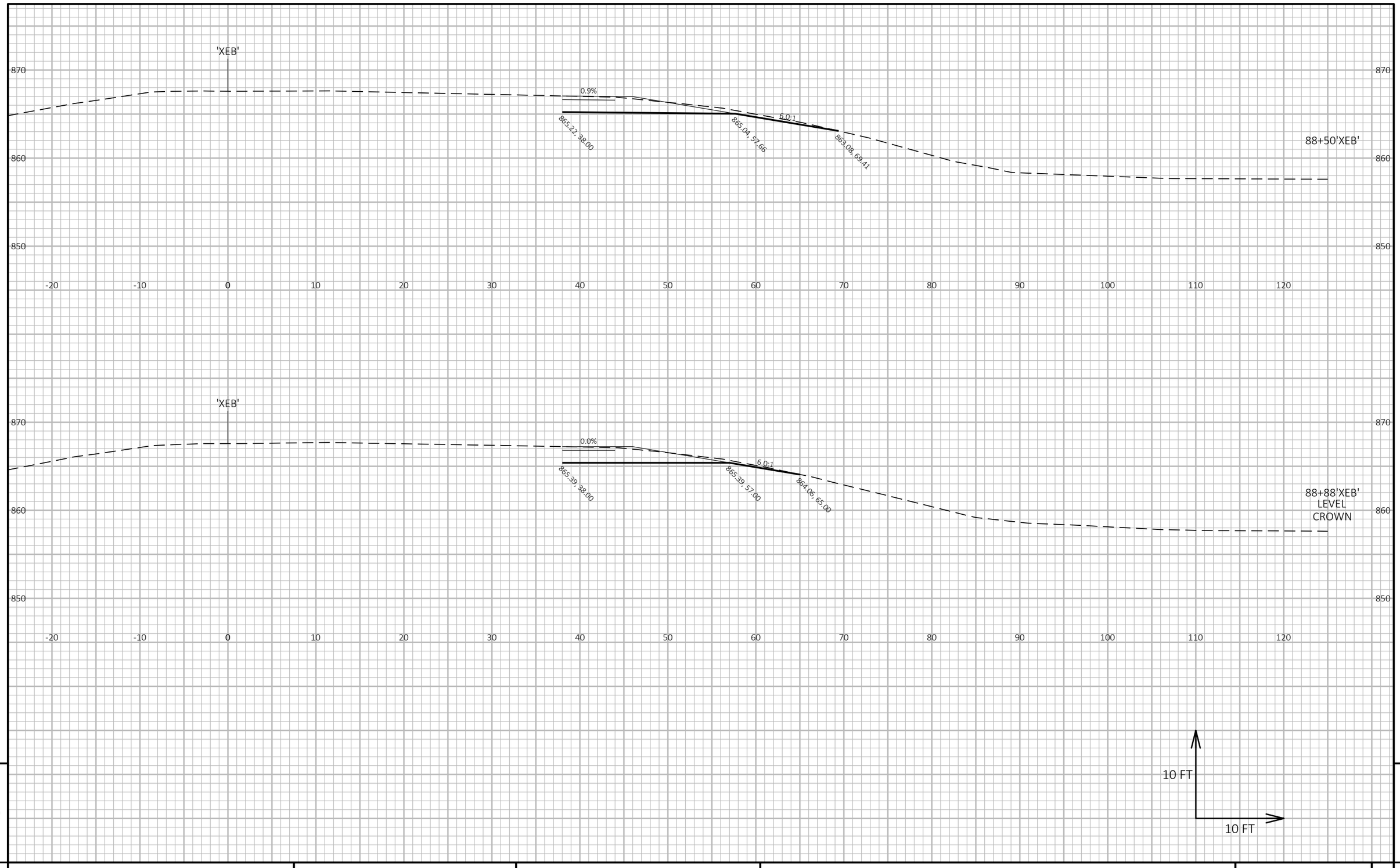
PLOT DATE : 8/1/2019 12:19 AM

PLOT BY : MATTHEW WISWELL

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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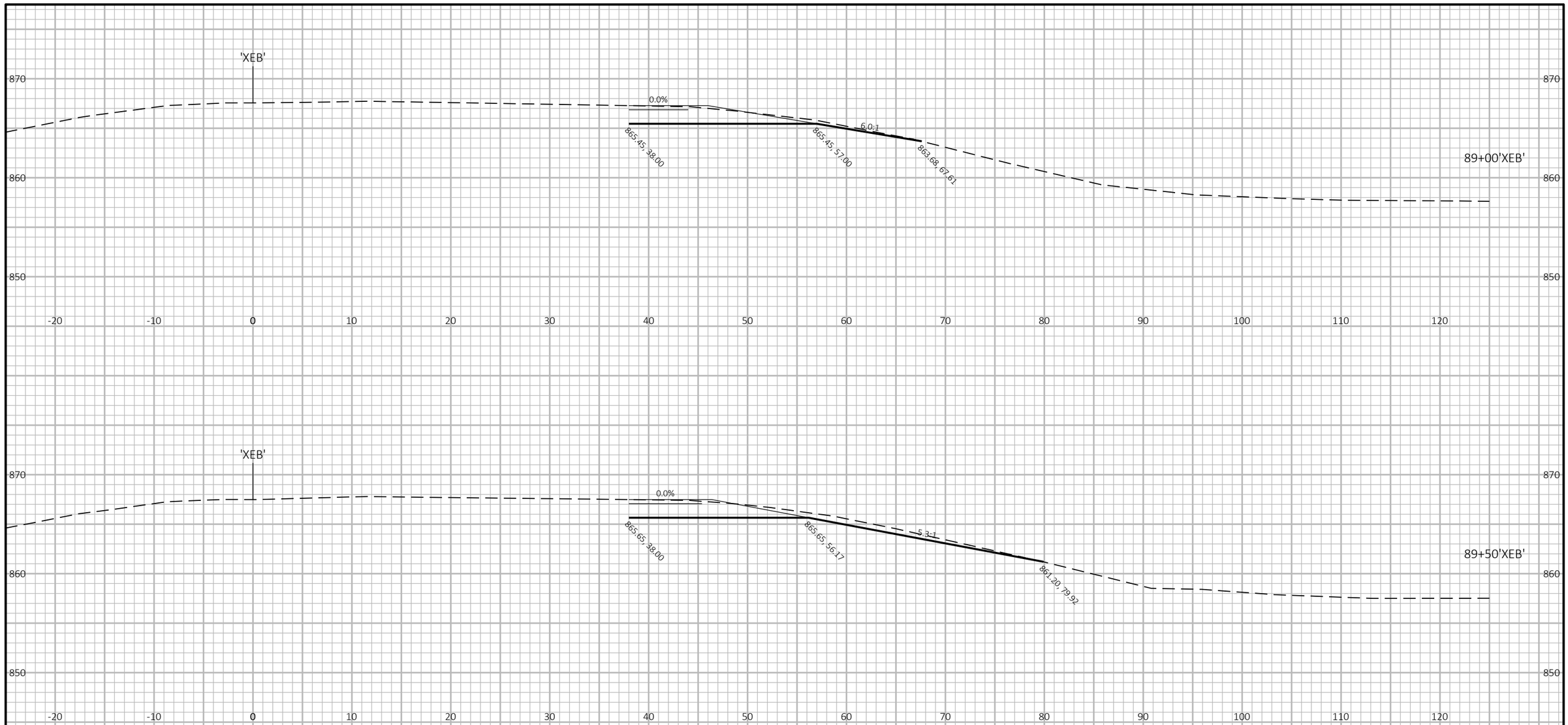
PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: USH 12/18 EB WIDEN RT	SHEET 585	E

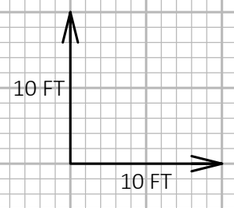
FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0902_XS_XEB_WIDEN_RIGHT.DWG
LAYOUT NAME - 03

PLOT DATE : 8/1/2019 12:19 AM PLOT BY : MATTHEW WISWELL PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49





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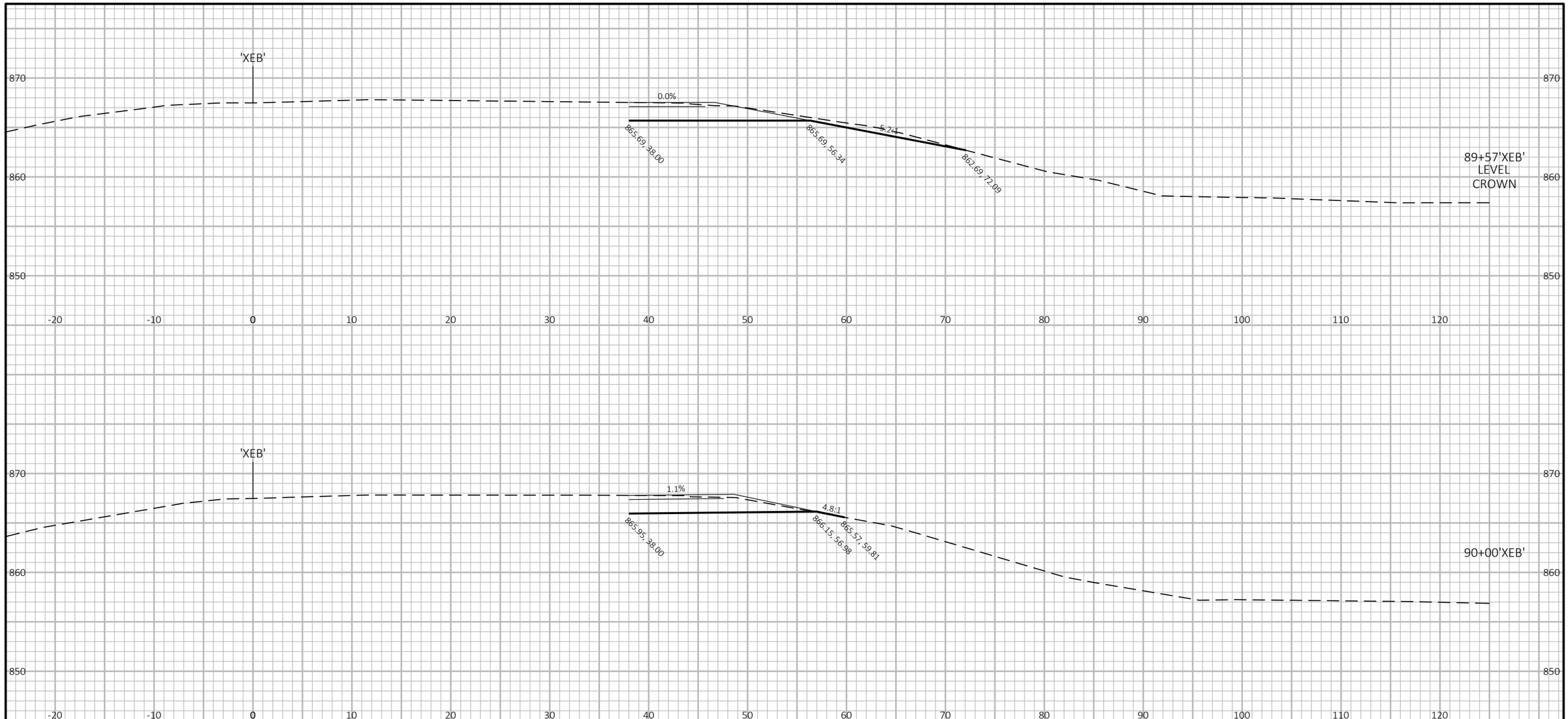
PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: USH 12/18 EB WIDEN RT	SHEET 586	E

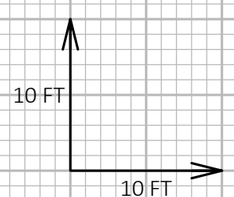
FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0902_XS_XEB_WIDEN_RIGHT.DWG
LAYOUT NAME - 04

PLOT DATE : 8/1/2019 12:19 AM PLOT BY : MATTHEW WISWELL PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49





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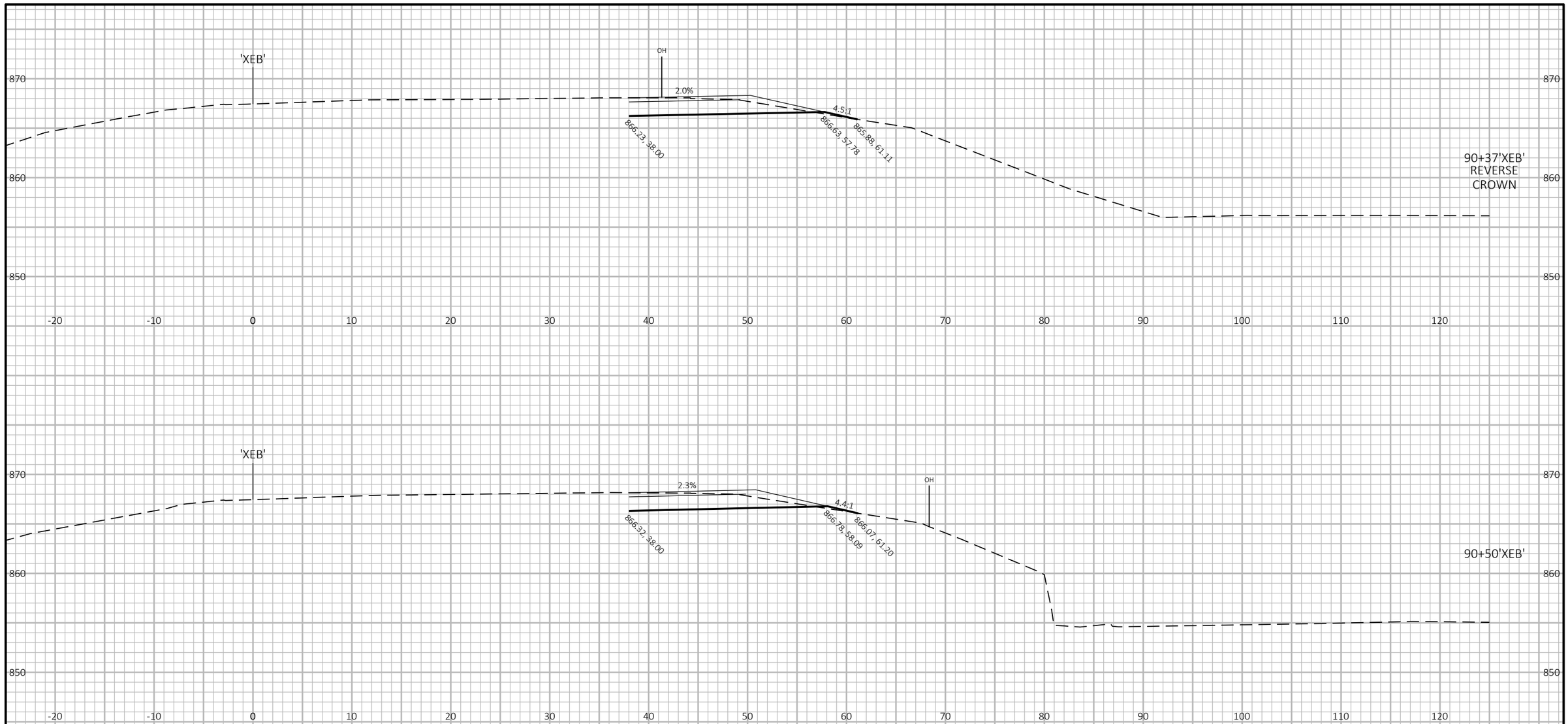
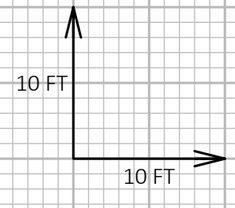
PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: USH 12/18 EB WIDEN RT	SHEET 587	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0902_XS_XEB_WIDEN_RIGHT.DWG
LAYOUT NAME - 05

PLOT DATE : 8/1/2019 12:19 AM PLOT BY : MATTHEW WISWELL PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49





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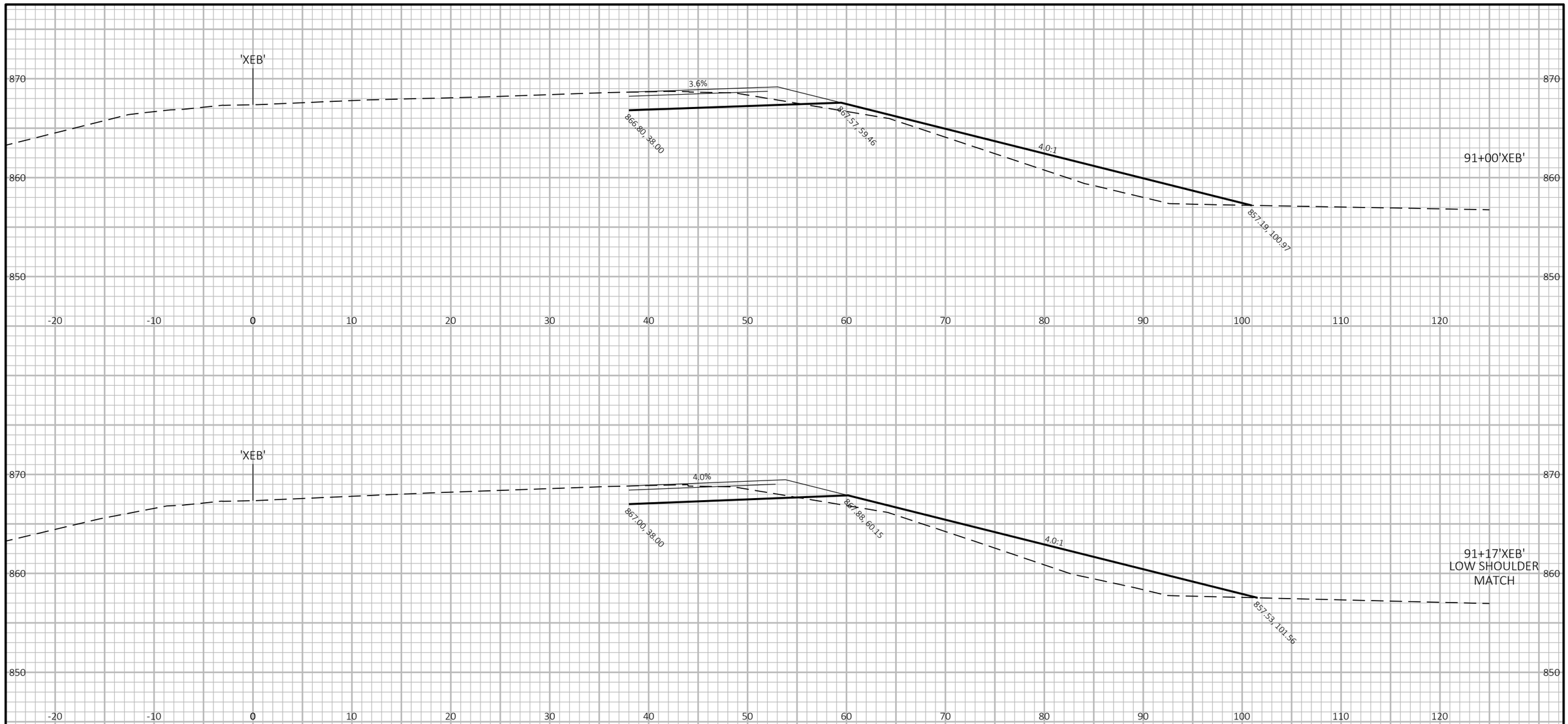
PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: USH 12/18 EB WIDEN RT	SHEET 588	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0902_XS_XEB_WIDEN_RIGHT.DWG
LAYOUT NAME - 06

PLOT DATE : 8/1/2019 12:19 AM PLOT BY : MATTHEW WISWELL PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.



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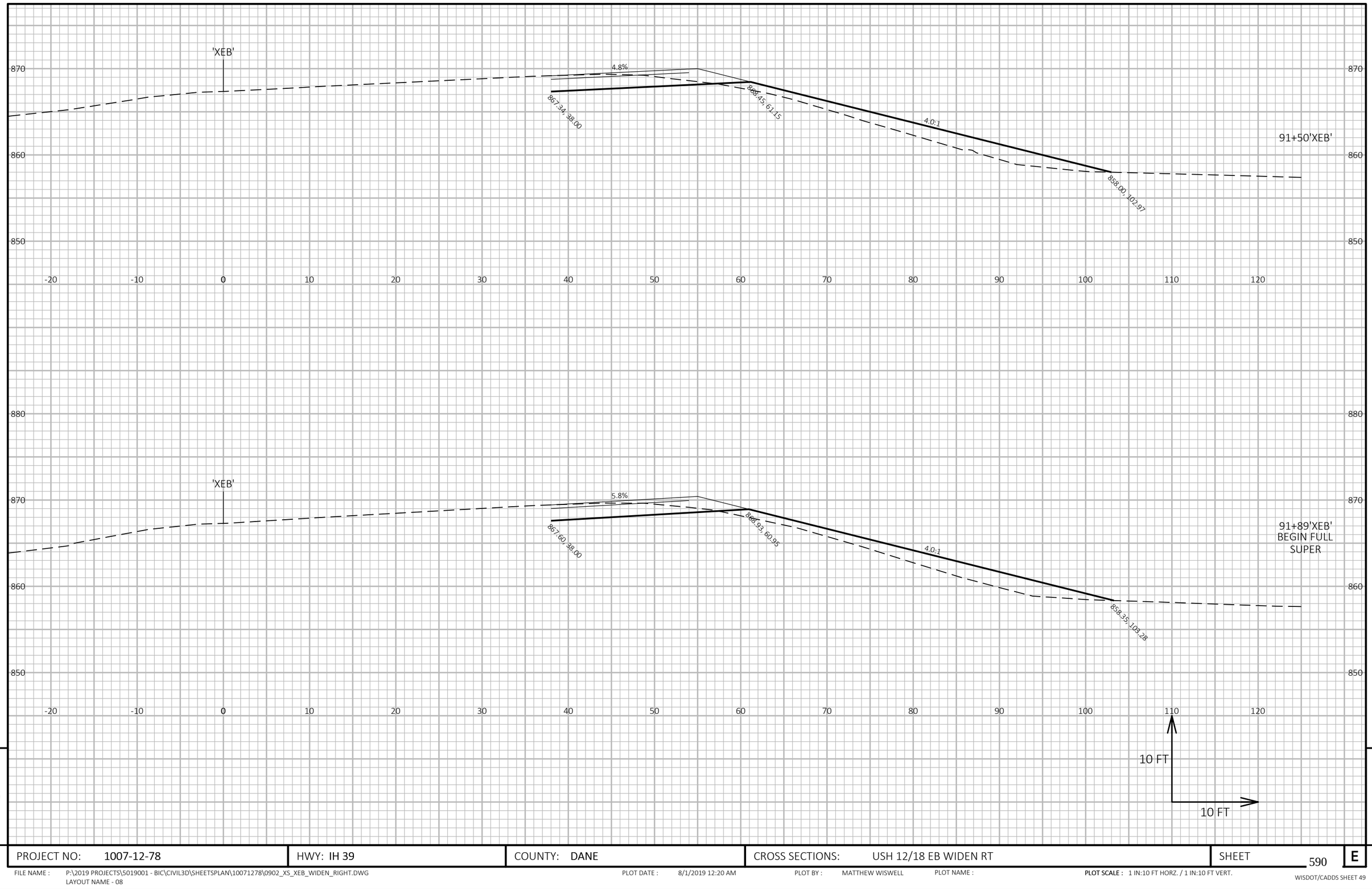
PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: USH 12/18 EB WIDEN RT	SHEET 589	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0902_XS_XEB_WIDEN_RIGHT.DWG
LAYOUT NAME - 07

PLOT DATE : 8/1/2019 12:19 AM PLOT BY : MATTHEW WISWELL PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.



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PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: USH 12/18 EB WIDEN RT	SHEET 590	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0902_XS_XEB_WIDEN_RIGHT.DWG
LAYOUT NAME - 08

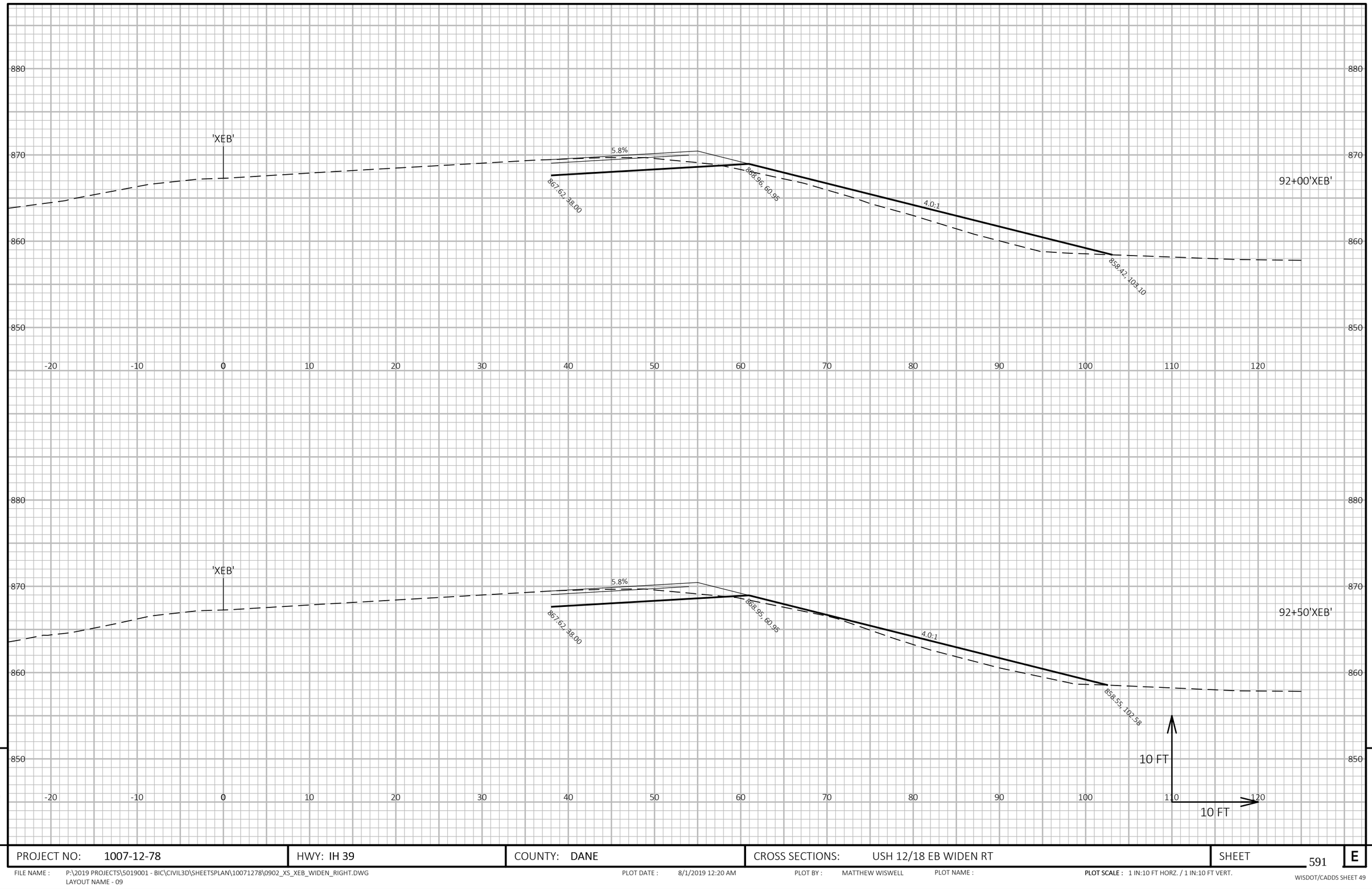
PLOT DATE : 8/1/2019 12:20 AM

PLOT BY : MATTHEW WISWELL

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: USH 12/18 EB WIDEN RT	SHEET 591	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0902_XS_XEB_WIDEN_RIGHT.DWG
LAYOUT NAME - 09

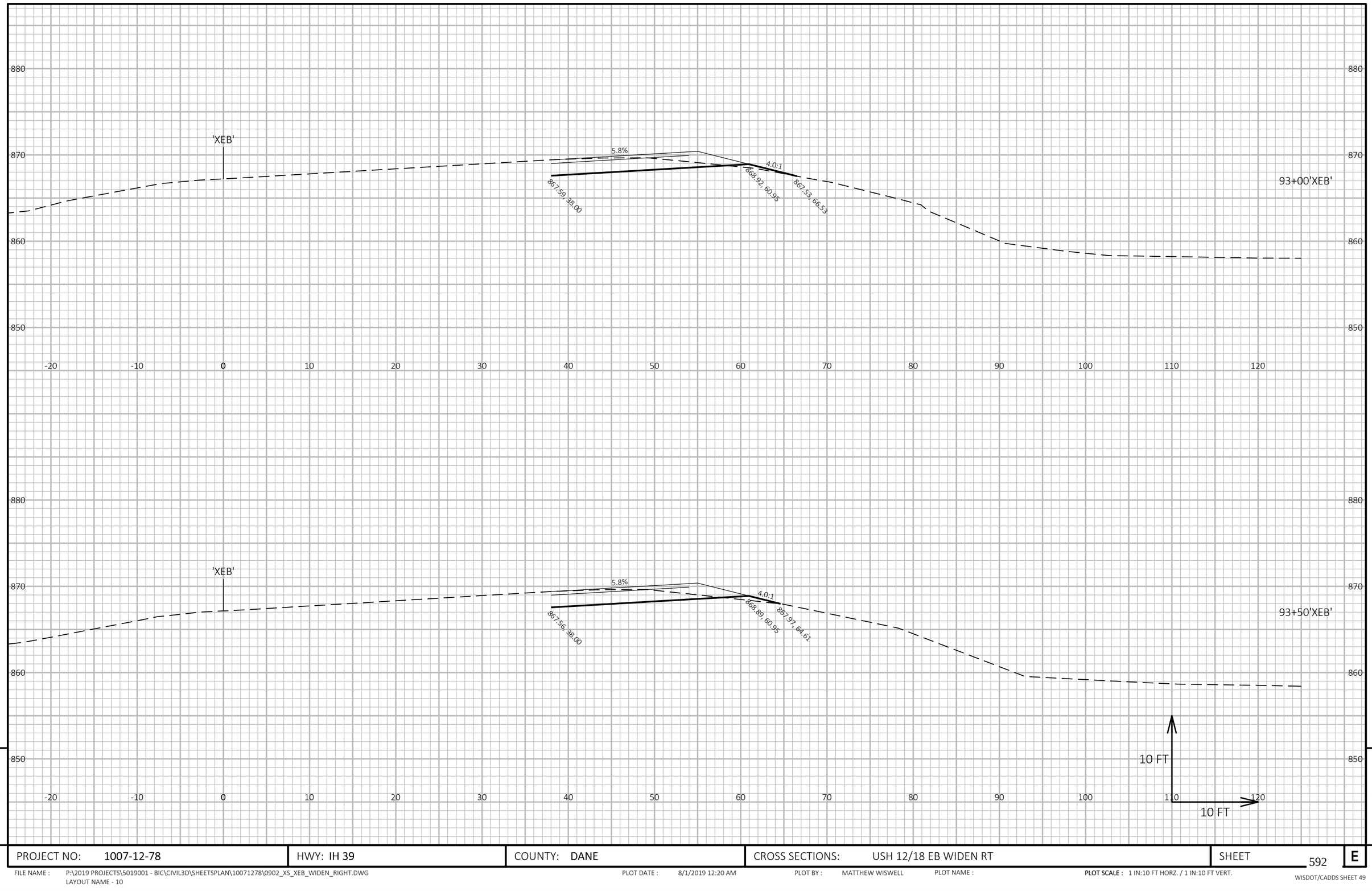
PLOT DATE : 8/1/2019 12:20 AM

PLOT BY : MATTHEW WISWELL

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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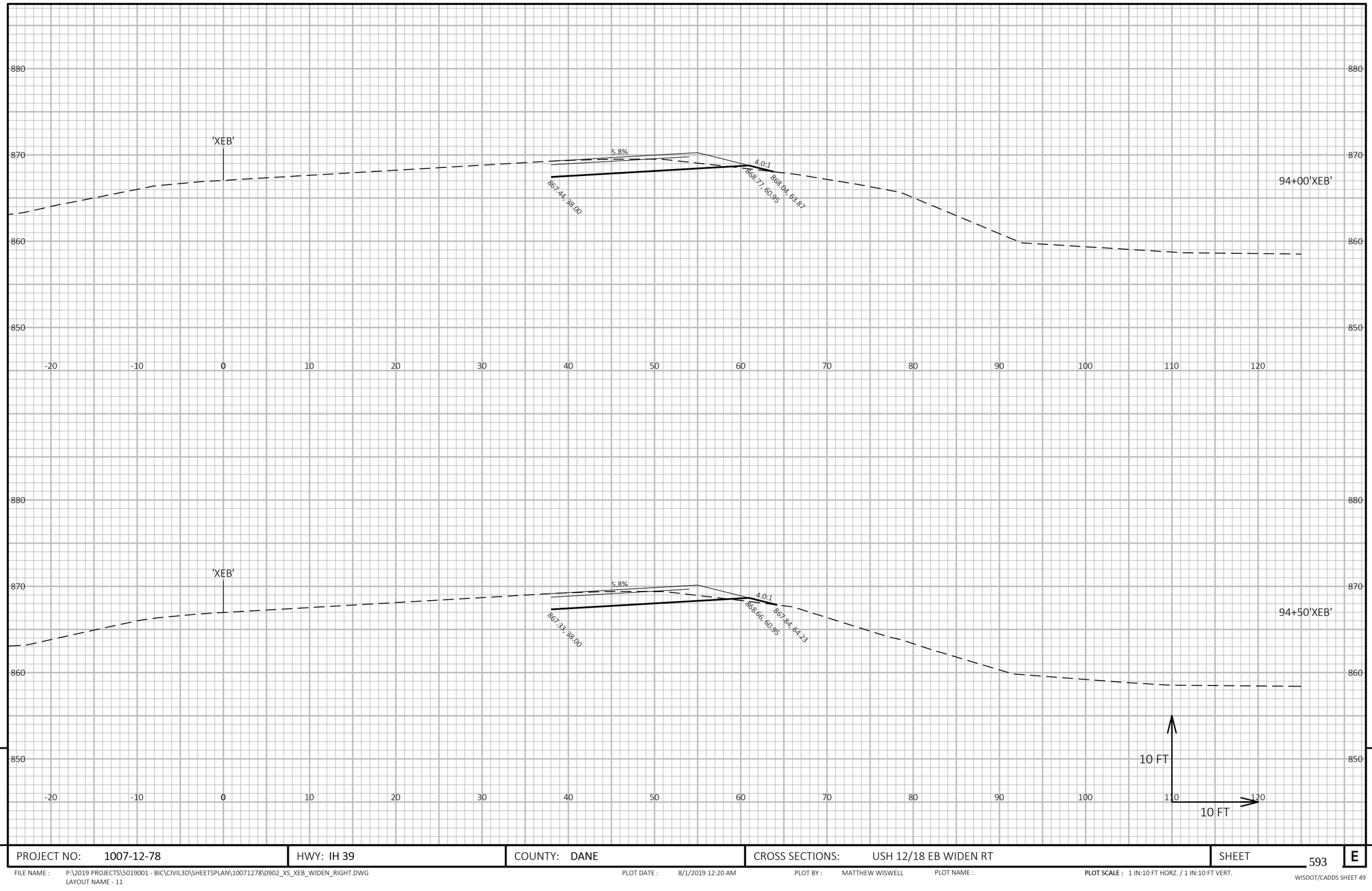
PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: USH 12/18 EB WIDEN RT	SHEET 592	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0902_XS_XEB_WIDEN_RIGHT.DWG
LAYOUT NAME - 10

PLOT DATE : 8/1/2019 12:20 AM PLOT BY : MATTHEW WISWELL PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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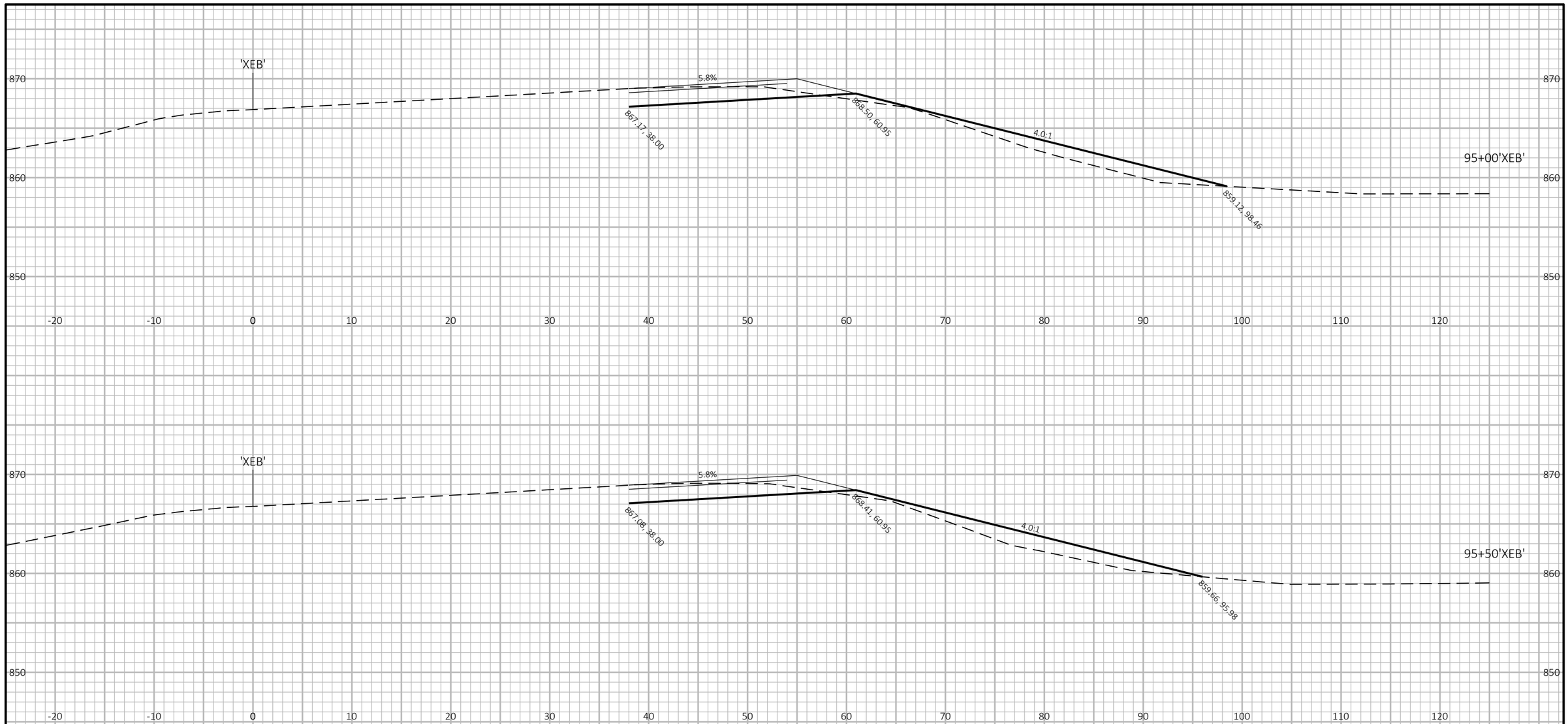
PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: USH 12/18 EB WIDEN RT	SHEET 593	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0902_XS_XEB_WIDEN_RIGHT.DWG
LAYOUT NAME - 11

PLOT DATE : 8/1/2019 12:20 AM PLOT BY : MATTHEW WISWELL PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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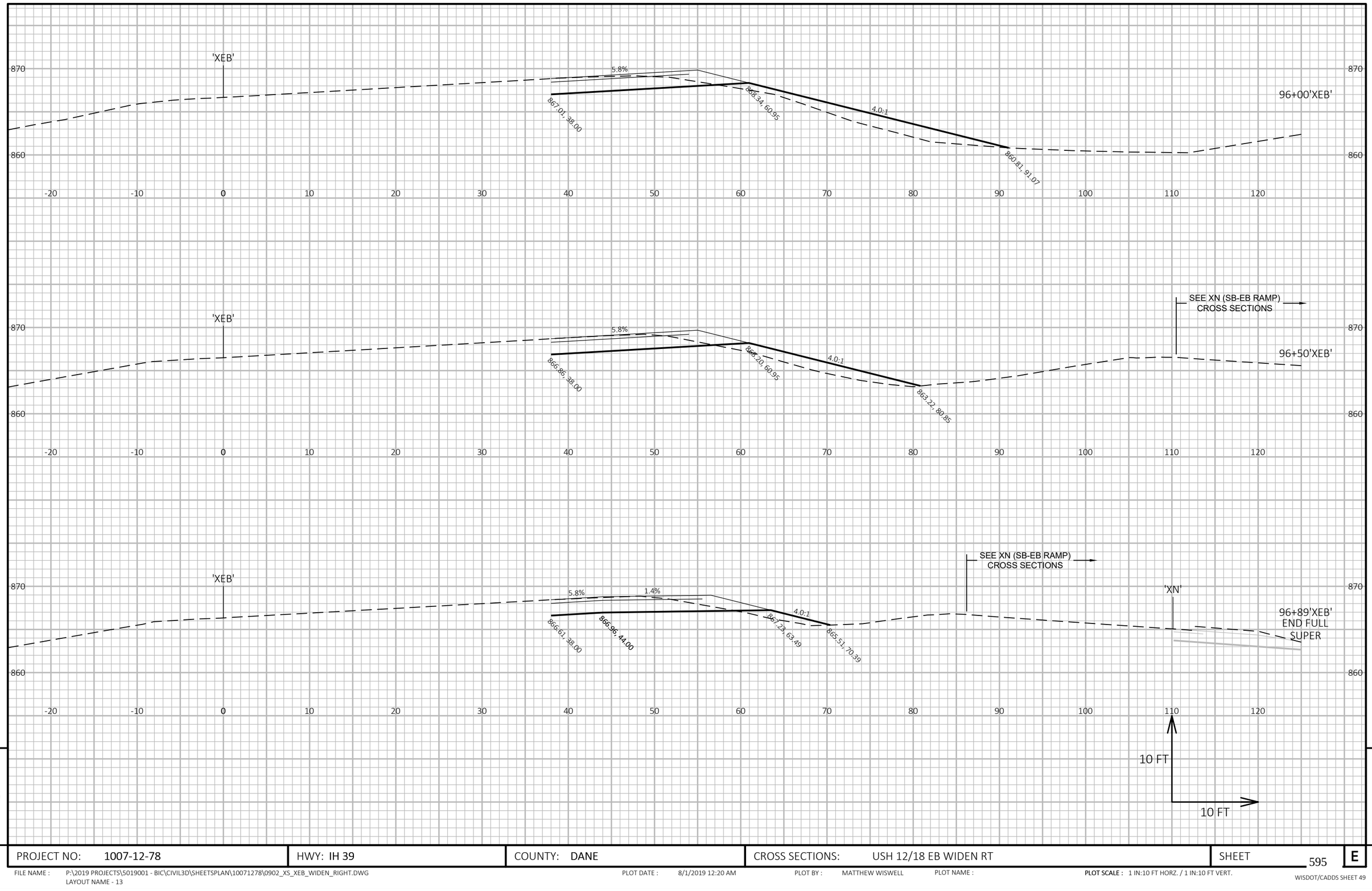
PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: USH 12/18 EB WIDEN RT	SHEET 594	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0902_XS_XEB_WIDEN_RIGHT.DWG
LAYOUT NAME - 12

PLOT DATE : 8/1/2019 12:20 AM PLOT BY : MATTHEW WISWELL PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.



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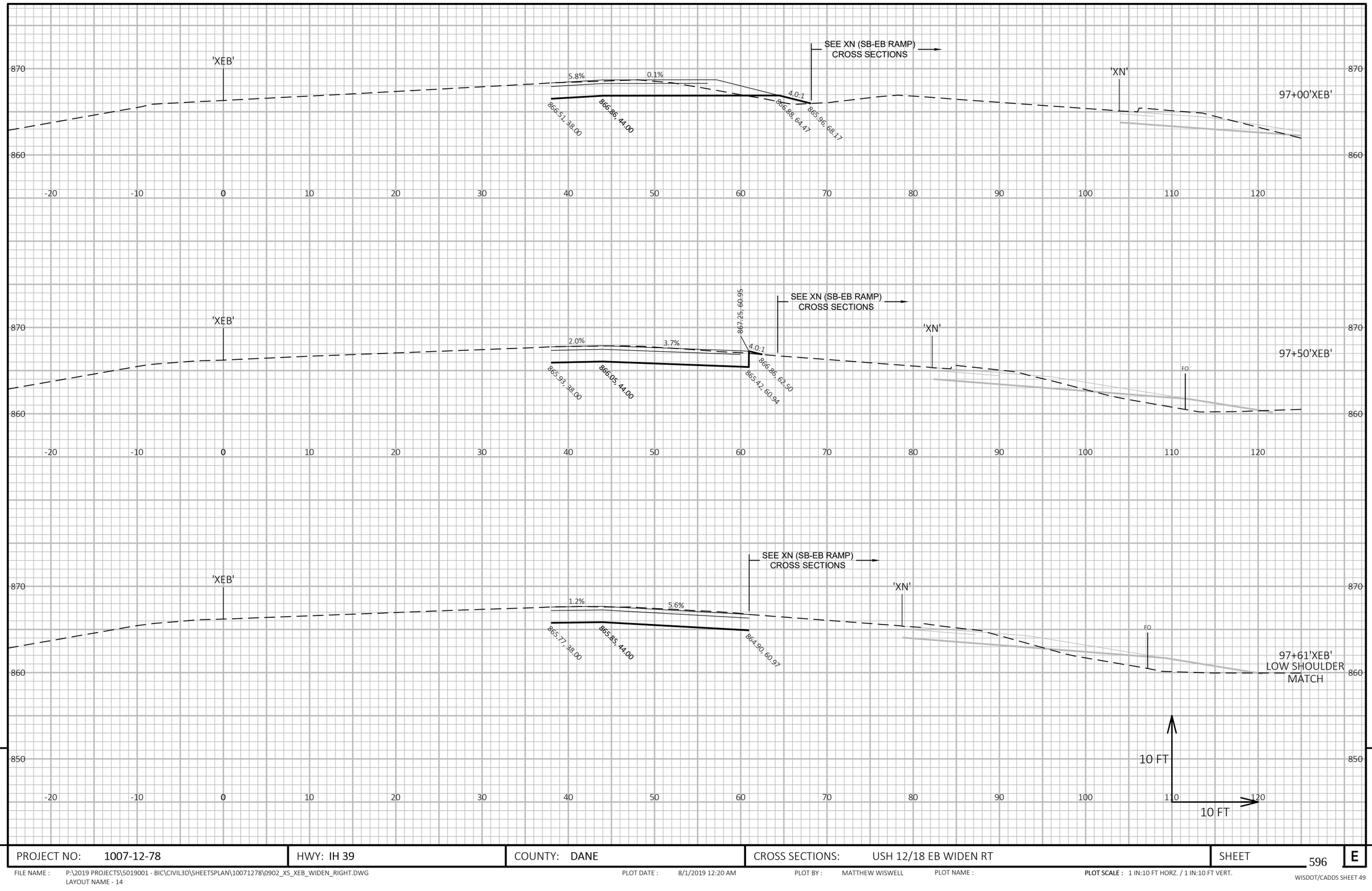
PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: USH 12/18 EB WIDEN RT	SHEET 595	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0902_XS_XEB_WIDEN_RIGHT.DWG
LAYOUT NAME - 13

PLOT DATE : 8/1/2019 12:20 AM PLOT BY : MATTHEW WISWELL PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

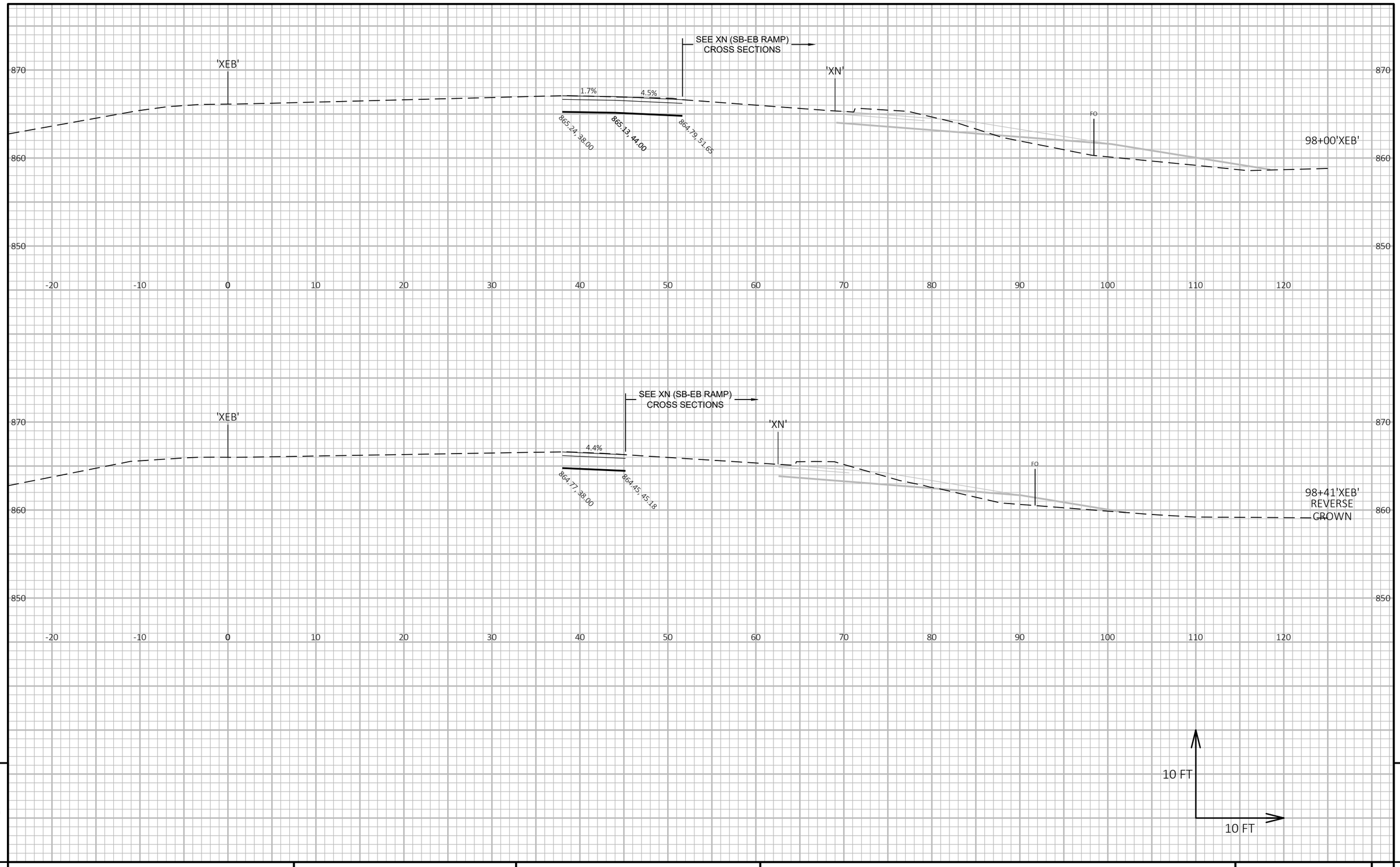


PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: USH 12/18 EB WIDEN RT	SHEET 596 E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0902_XS_XEB_WIDEN_RIGHT.DWG
LAYOUT NAME - 14

PLOT DATE : 8/1/2019 12:20 AM PLOT BY : MATTHEW WISWELL PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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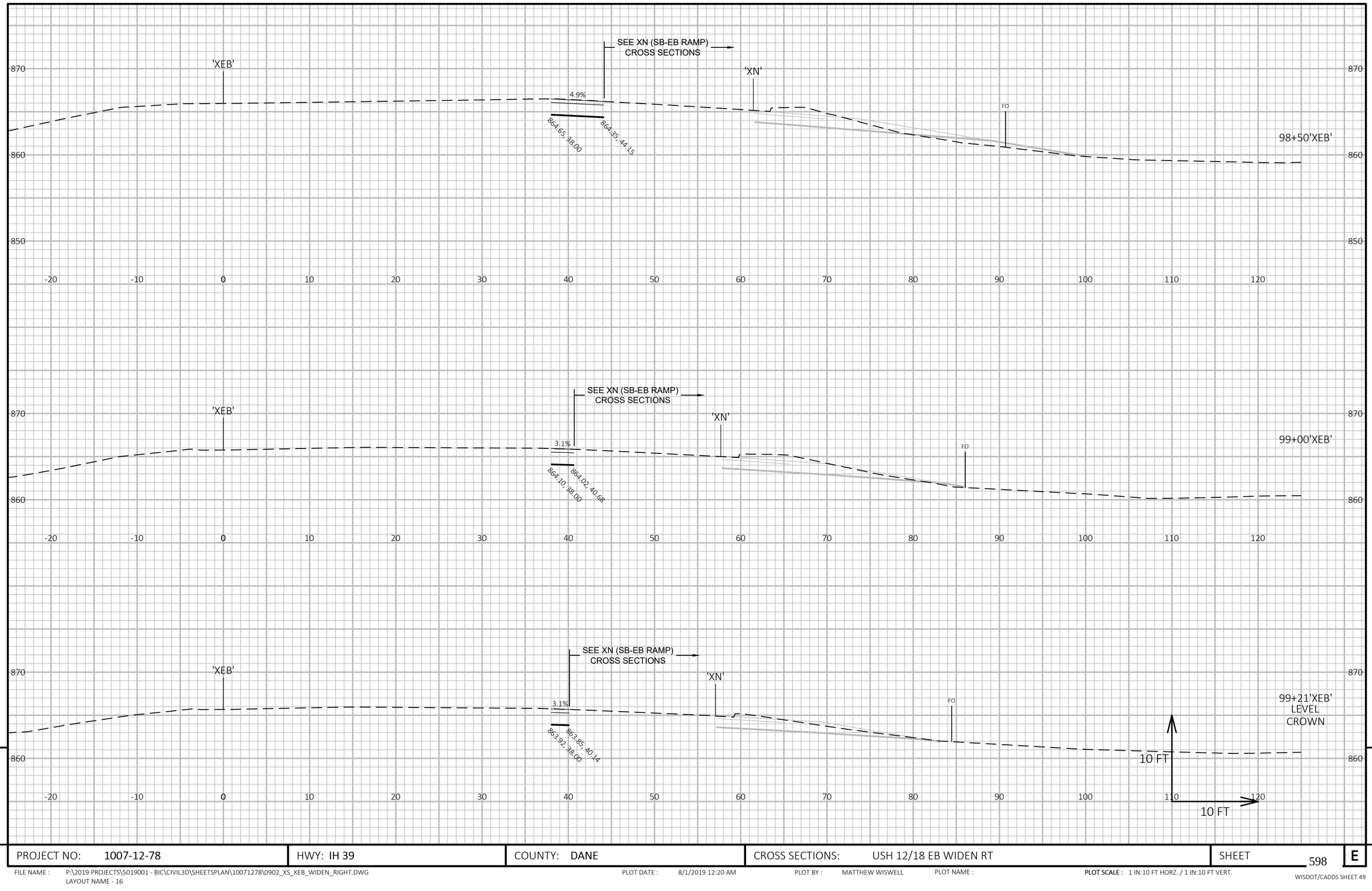
PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: USH 12/18 EB WIDEN RT	SHEET 597	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0902_XS_XEB_WIDEN_RIGHT.DWG
LAYOUT NAME - 15

PLOT DATE : 8/1/2019 12:20 AM PLOT BY : MATTHEW WISWELL PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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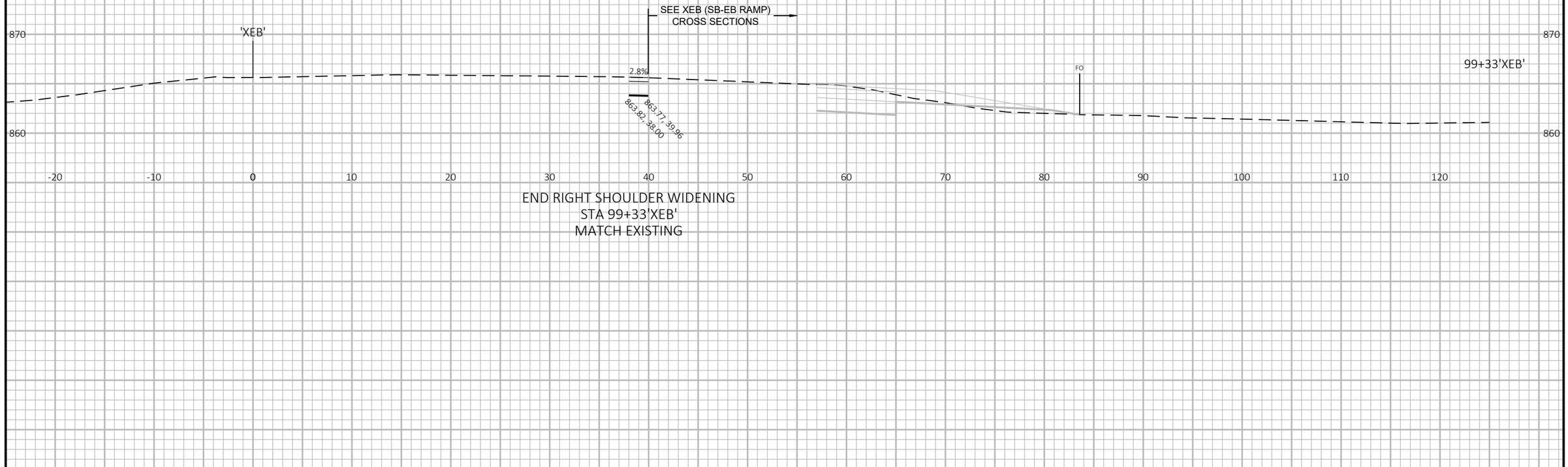
PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: USH 12/18 EB WIDEN RT	SHEET 598	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0902_XS_XEB_WIDEN_RIGHT.DWG
LAYOUT NAME - 16

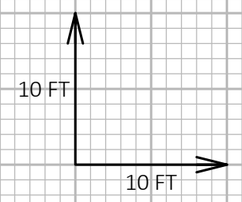
PLOT DATE : 8/1/2019 12:20 AM PLOT BY : MATTHEW WISWELL PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



END RIGHT SHOULDER WIDENING
STA 99+33'XEB'
MATCH EXISTING



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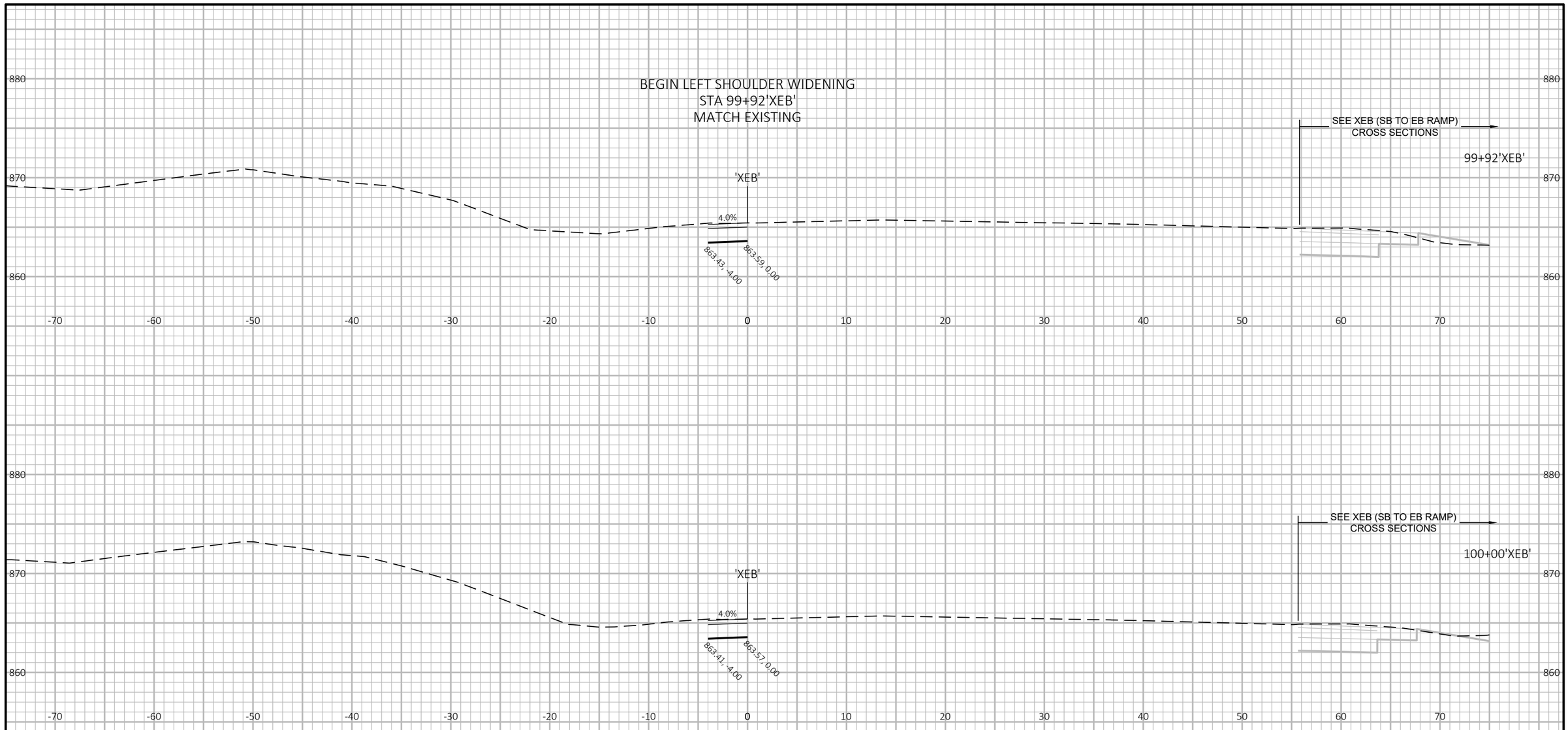
PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: USH 12/18 EB WIDEN RT	SHEET 599	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0902_XS_XEB_WIDEN_RIGHT.DWG
LAYOUT NAME - 17

PLOT DATE : 8/1/2019 12:20 AM PLOT BY : MATTHEW WISWELL PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



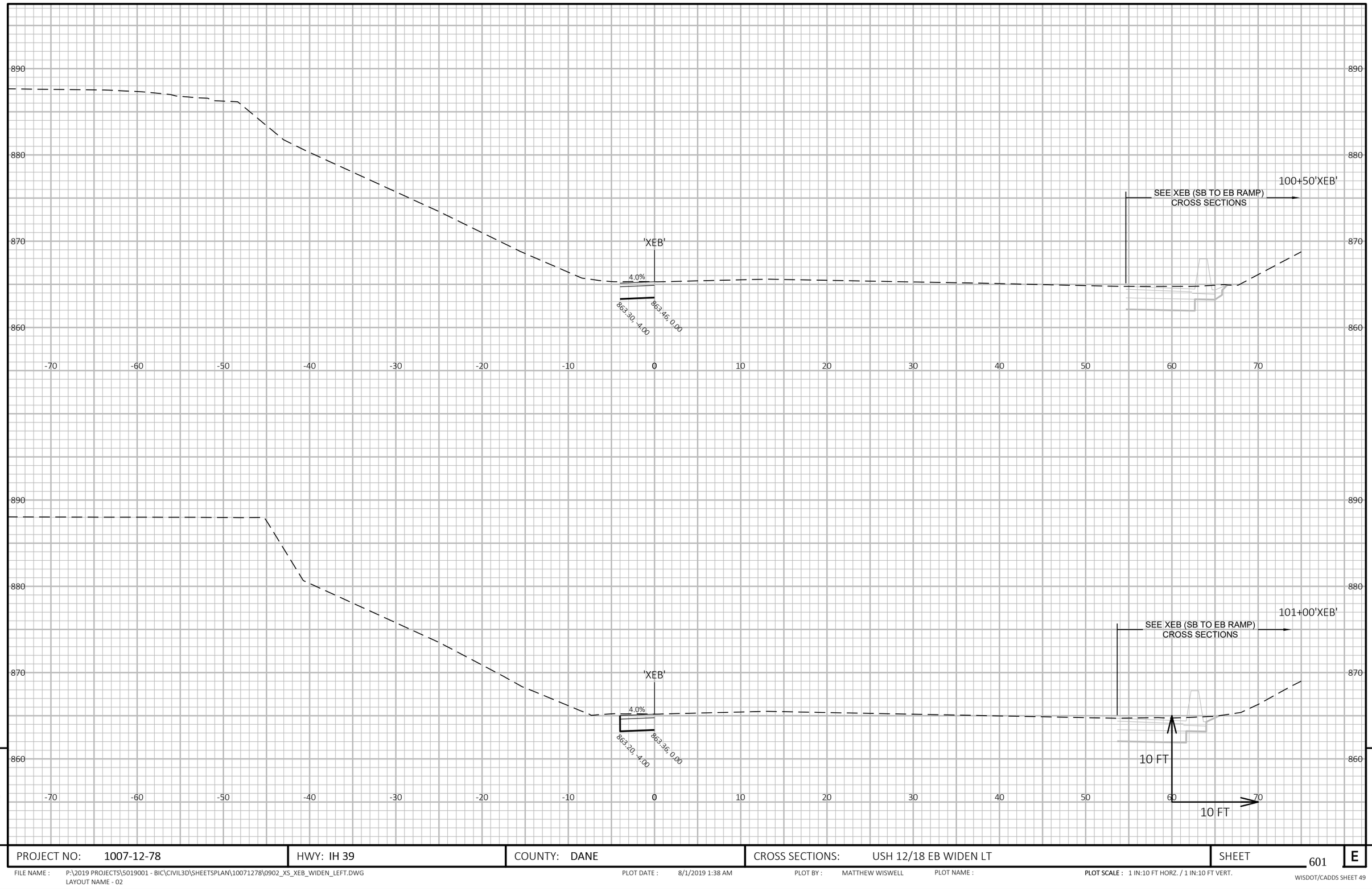
PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: USH 12/18 EB WIDEN LT	SHEET 600	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0902_XS_XEB_WIDEN_LEFT.DWG
LAYOUT NAME - 01

PLOT DATE : 8/1/2019 1:38 AM PLOT BY : MATTHEW WISWELL 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: 1007-12-78	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: USH 12/18 EB WIDEN LT	SHEET 601	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0902_XS_XEB_WIDEN_LEFT.DWG
LAYOUT NAME - 02

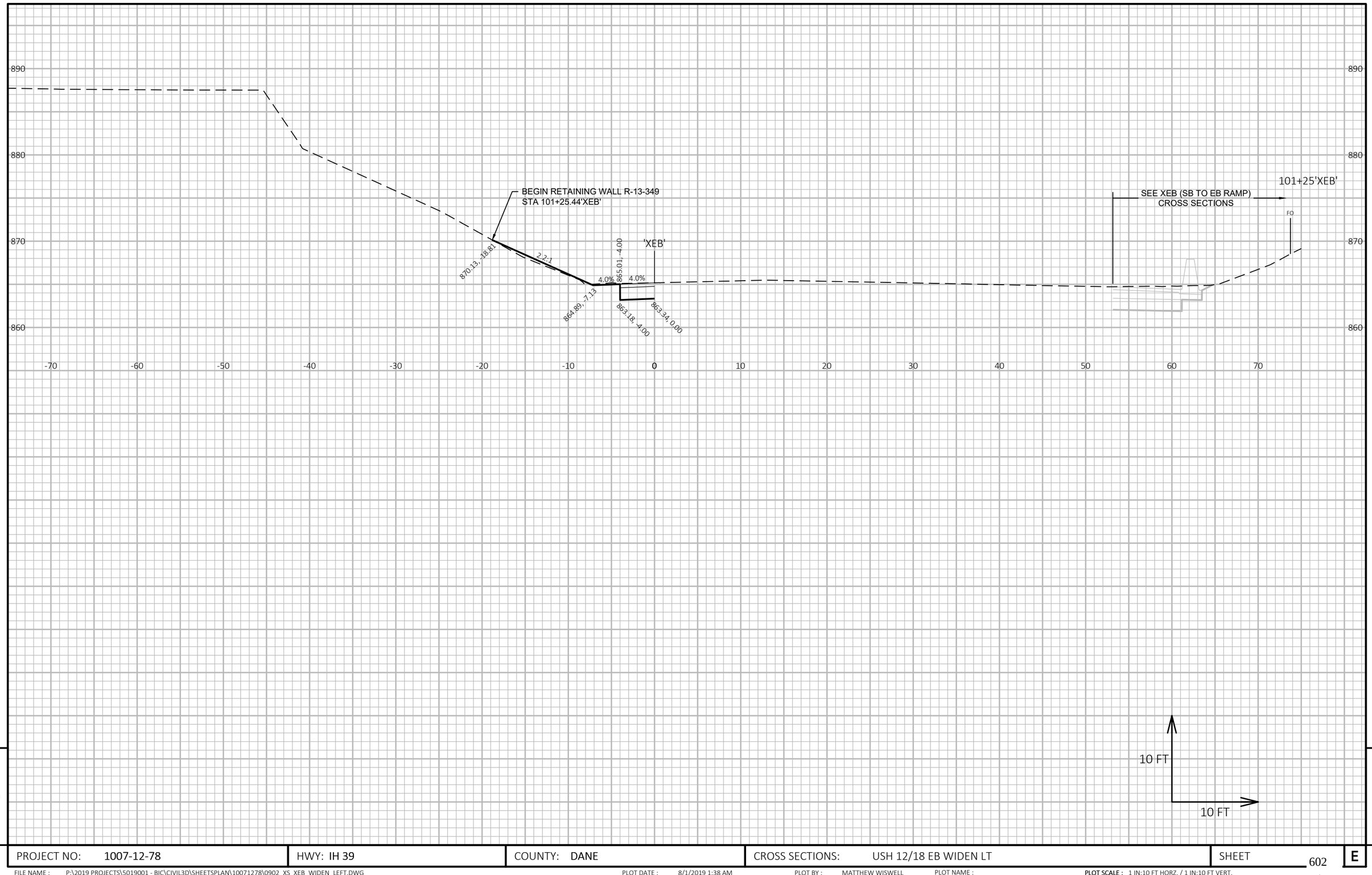
PLOT DATE : 8/1/2019 1:38 AM

PLOT BY : MATTHEW WISWELL

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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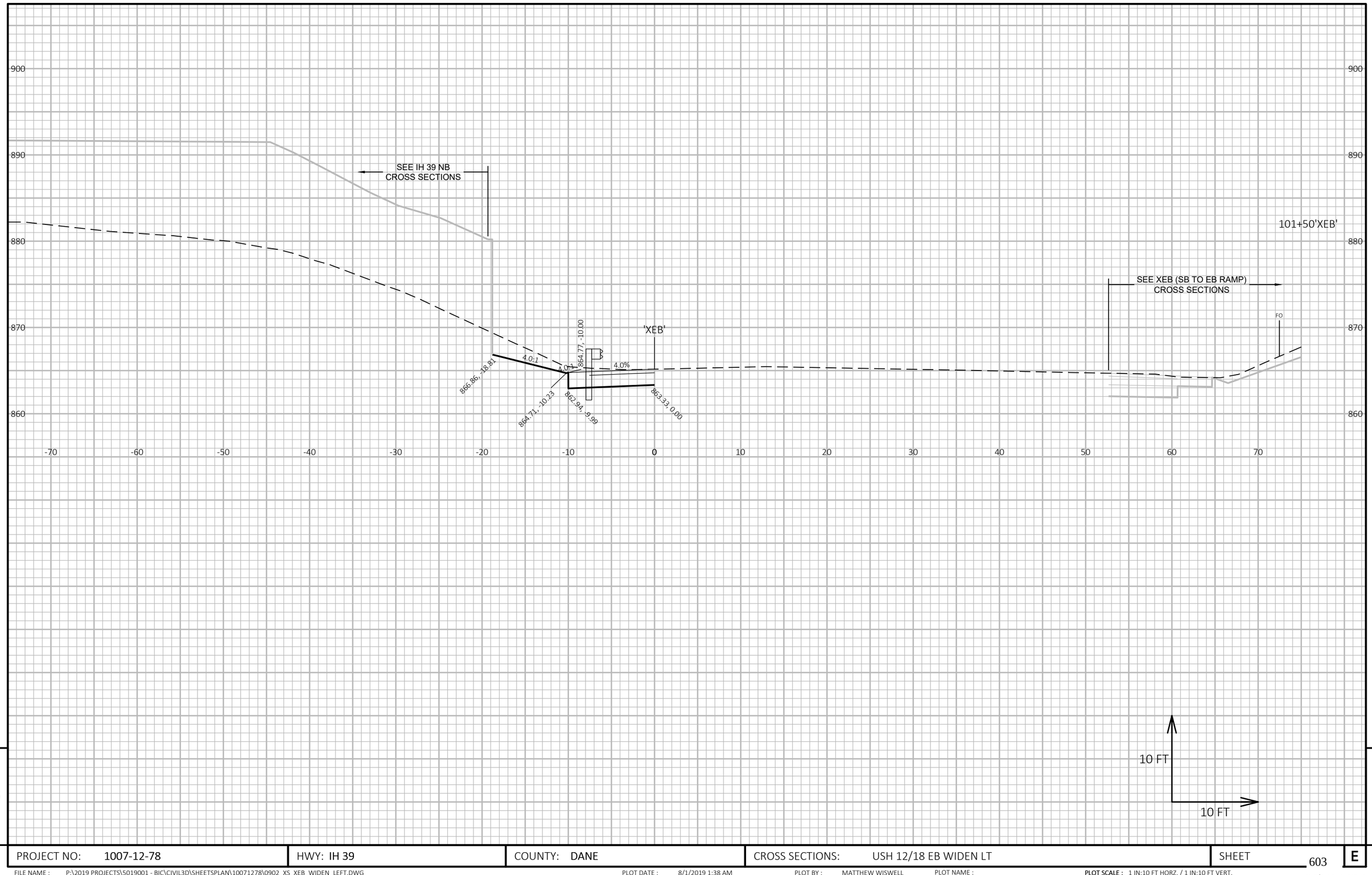
PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: USH 12/18 EB WIDEN LT	SHEET 602	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0902_XS_XEB_WIDEN_LEFT.DWG
LAYOUT NAME - 03

PLOT DATE : 8/1/2019 1:38 AM PLOT BY : MATTHEW WISWELL PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: USH 12/18 EB WIDEN LT	SHEET 603	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0902_XS_XEB_WIDEN_LEFT.DWG
LAYOUT NAME - 04

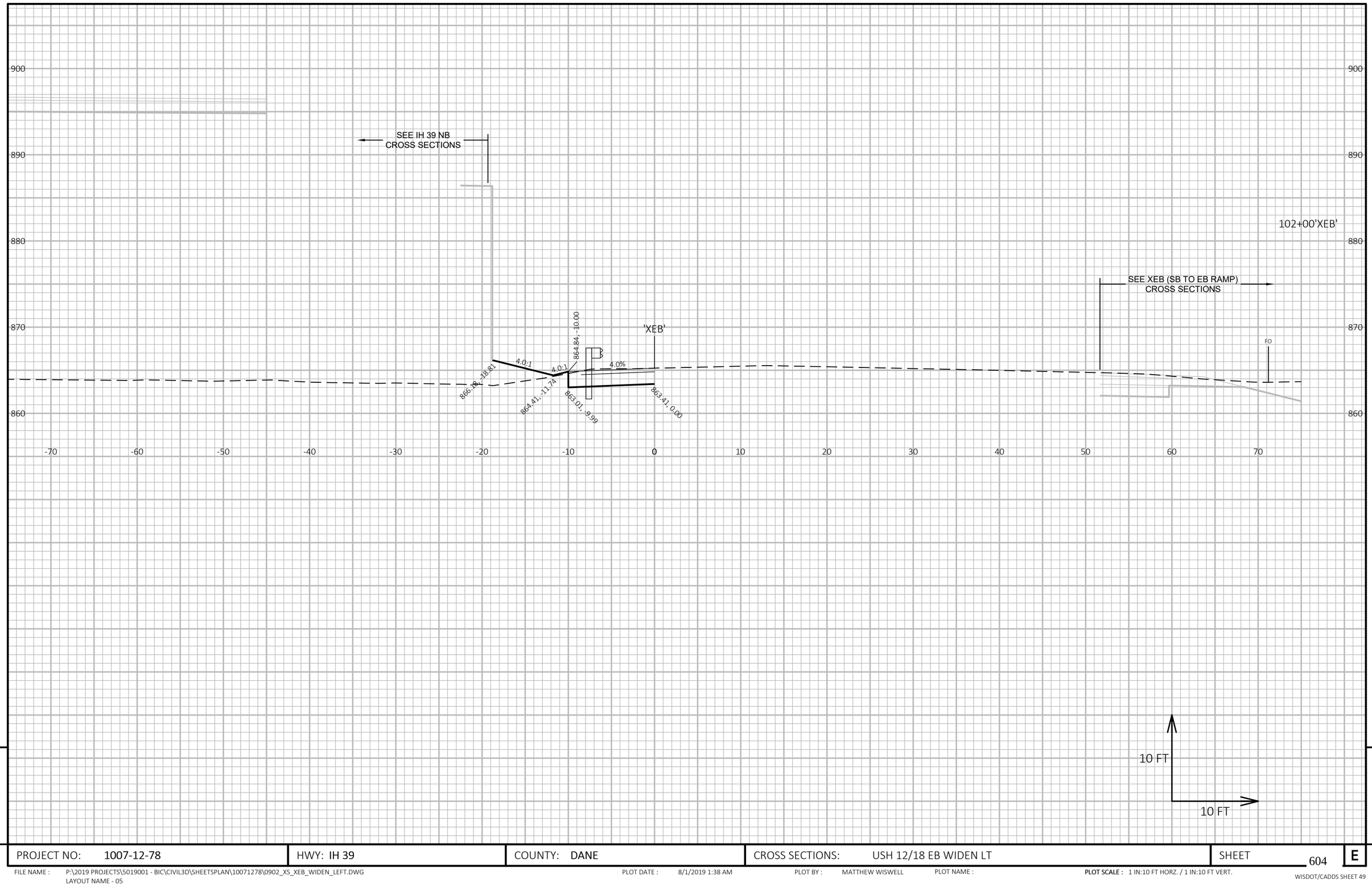
PLOT DATE : 8/1/2019 1:38 AM

PLOT BY : MATTHEW WISWELL

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: USH 12/18 EB WIDEN LT	SHEET 604	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0902_XS_XEB_WIDEN_LEFT.DWG
LAYOUT NAME - 05

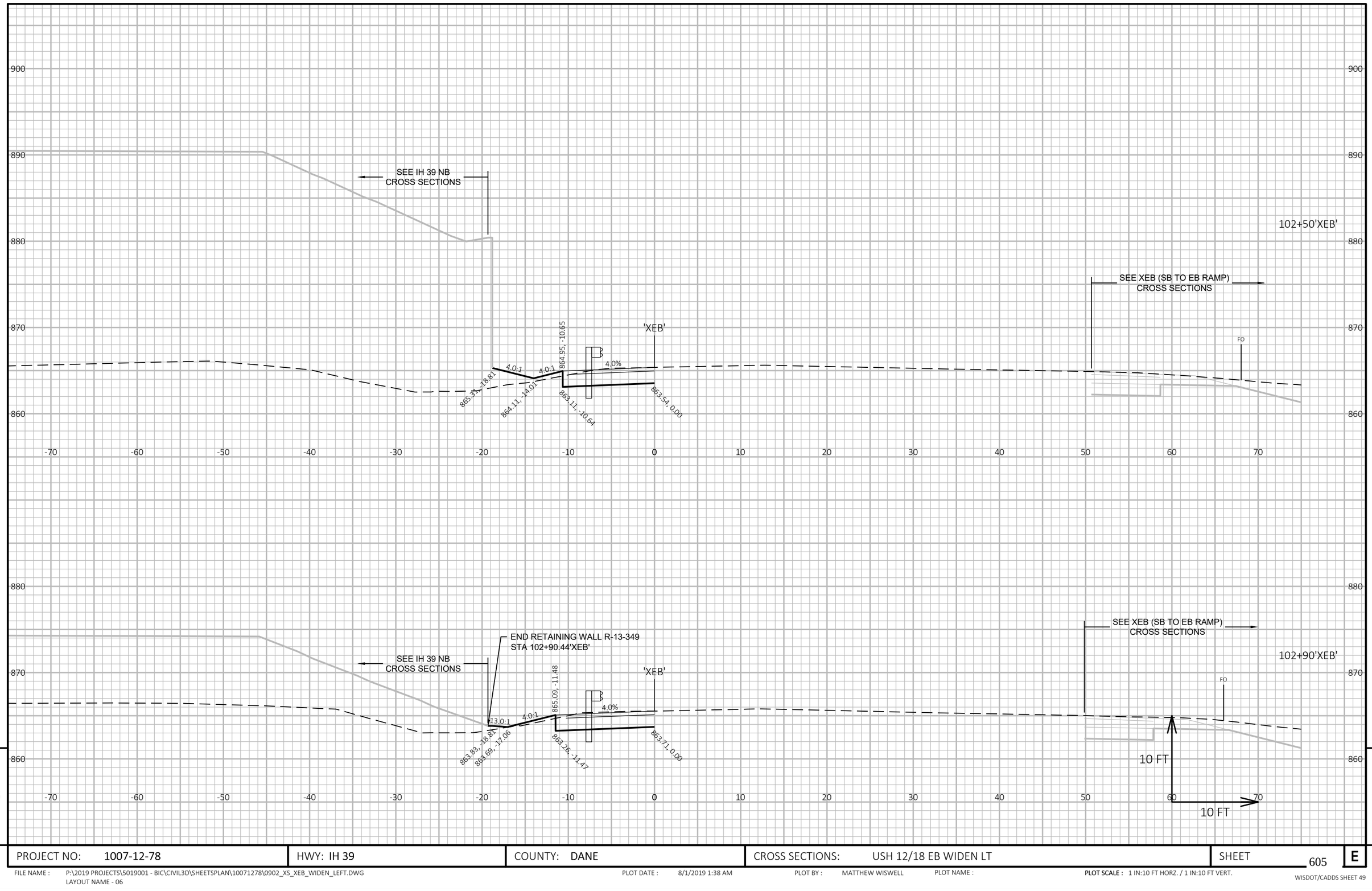
PLOT DATE : 8/1/2019 1:38 AM

PLOT BY : MATTHEW WISWELL

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: USH 12/18 EB WIDEN LT	SHEET 605	E

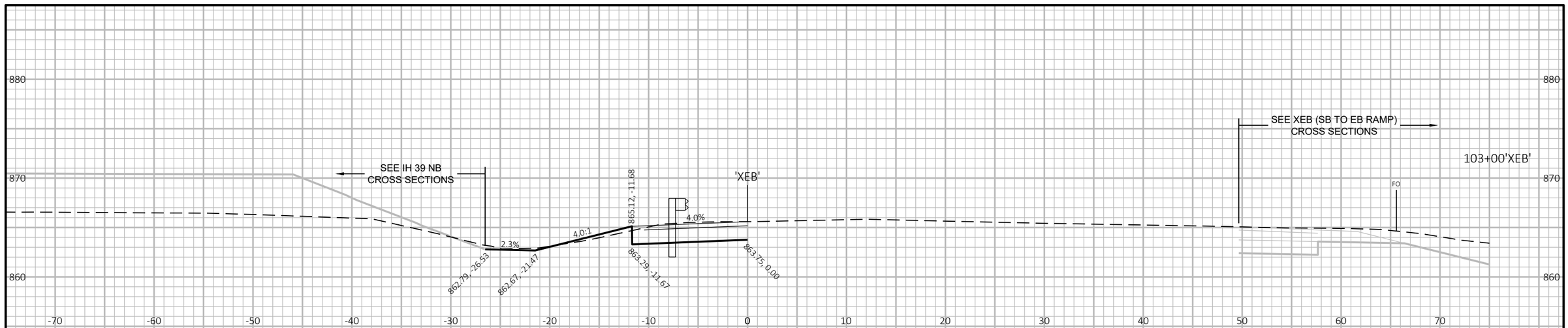
FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0902_XS_XEB_WIDEN_LEFT.DWG
LAYOUT NAME - 06

PLOT DATE : 8/1/2019 1:38 AM PLOT BY : MATTHEW WISWELL PLOT NAME :

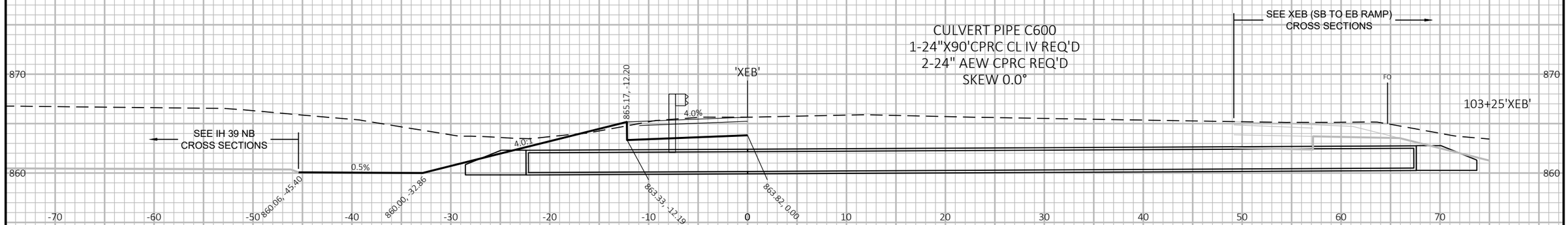
PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

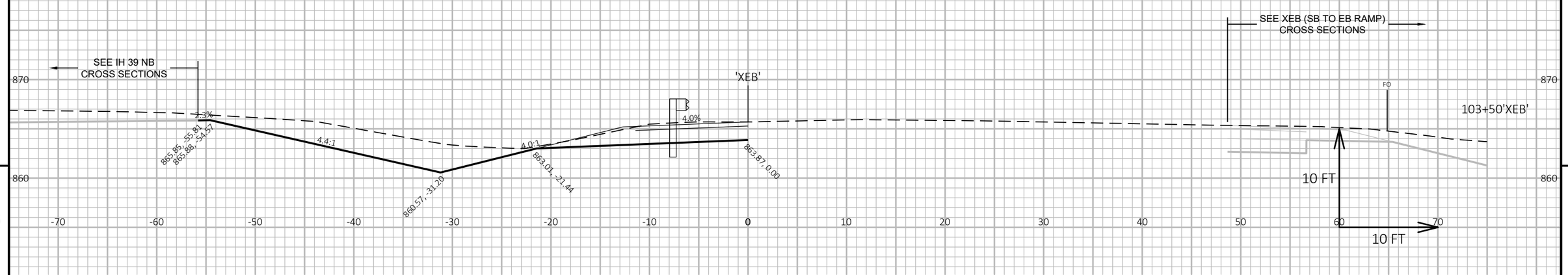
WISDOT/CADDS SHEET 49

9 9



CULVERT PIPE C600
1-24"X90'CPRC CL IV REQ'D
2-24" AEW CPRC REQ'D
SKEW 0.0°





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PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: USH 12/18 EB WIDEN LT	SHEET 606	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0902_XS_XEB_WIDEN_LEFT.DWG
LAYOUT NAME - 07

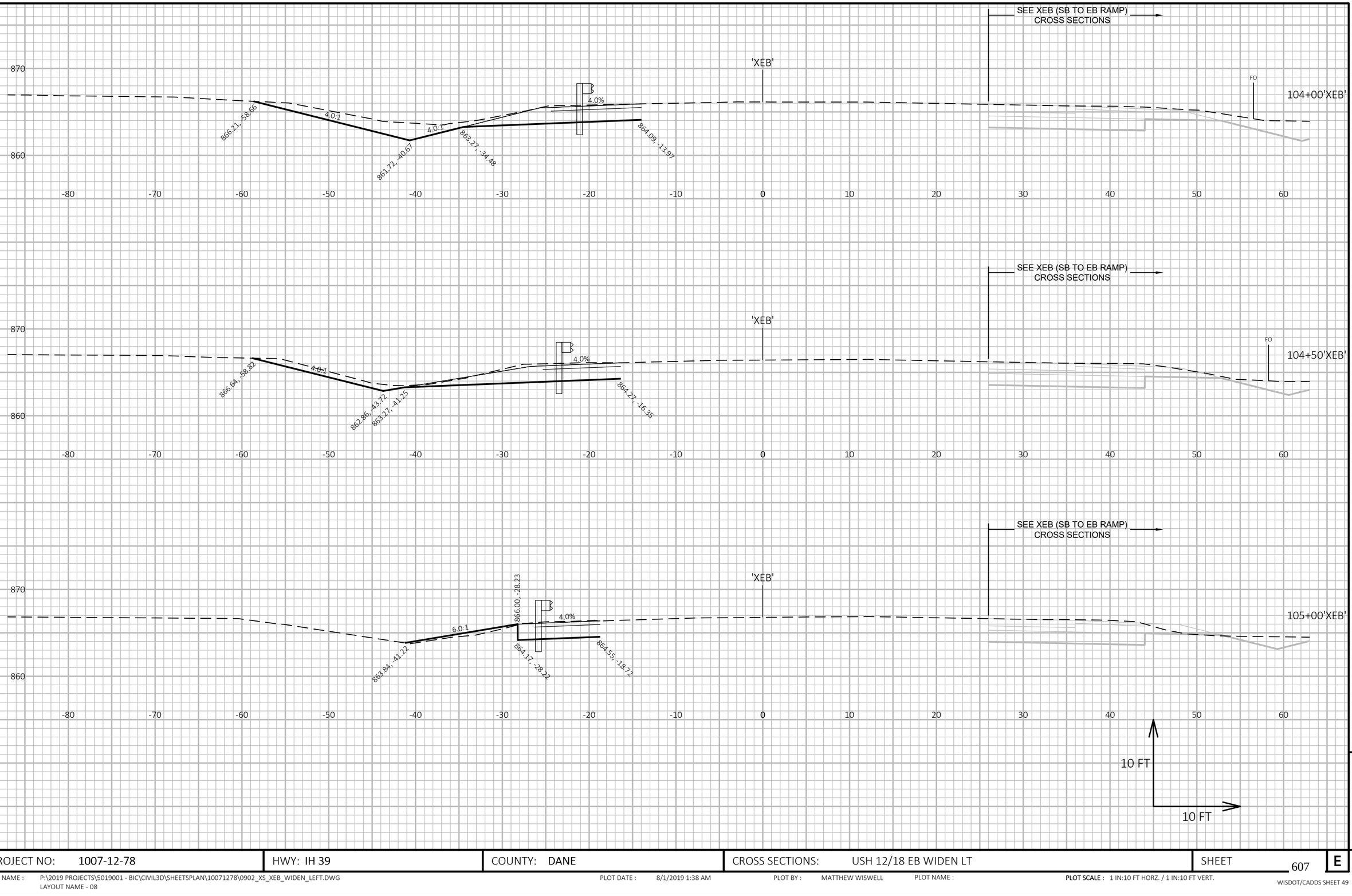
PLOT DATE : 8/1/2019 1:38 AM

PLOT BY : MATTHEW WISWELL

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: USH 12/18 EB WIDEN LT	SHEET 607	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0902_XS_XEB_WIDEN_LEFT.DWG
LAYOUT NAME - 08

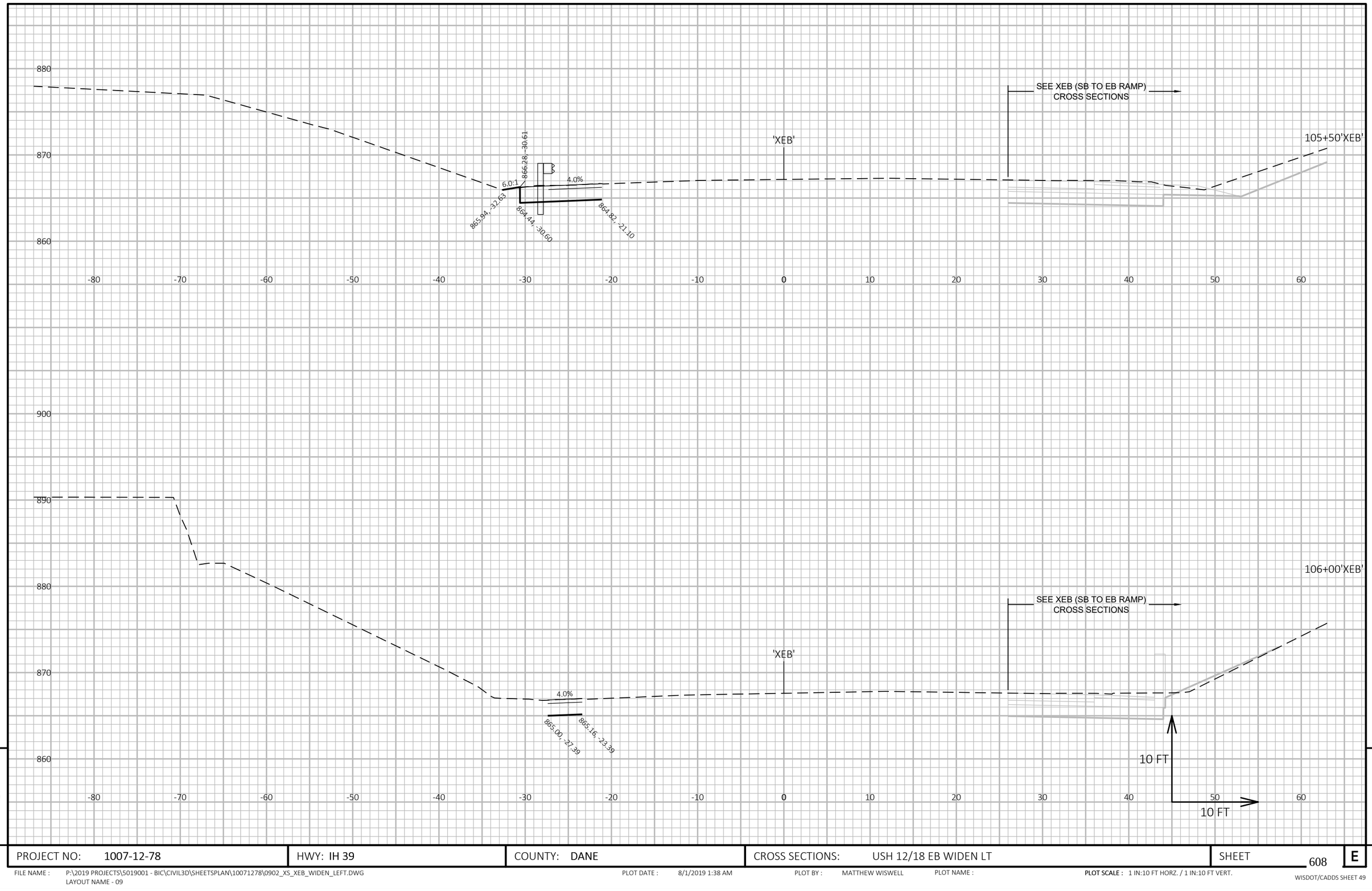
PLOT DATE : 8/1/2019 1:38 AM

PLOT BY : MATTHEW WISWELL

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: USH 12/18 EB WIDEN LT	SHEET 608	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0902_XS_XEB_WIDEN_LEFT.DWG
LAYOUT NAME - 09

PLOT DATE : 8/1/2019 1:38 AM PLOT BY : MATTHEW WISWELL PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

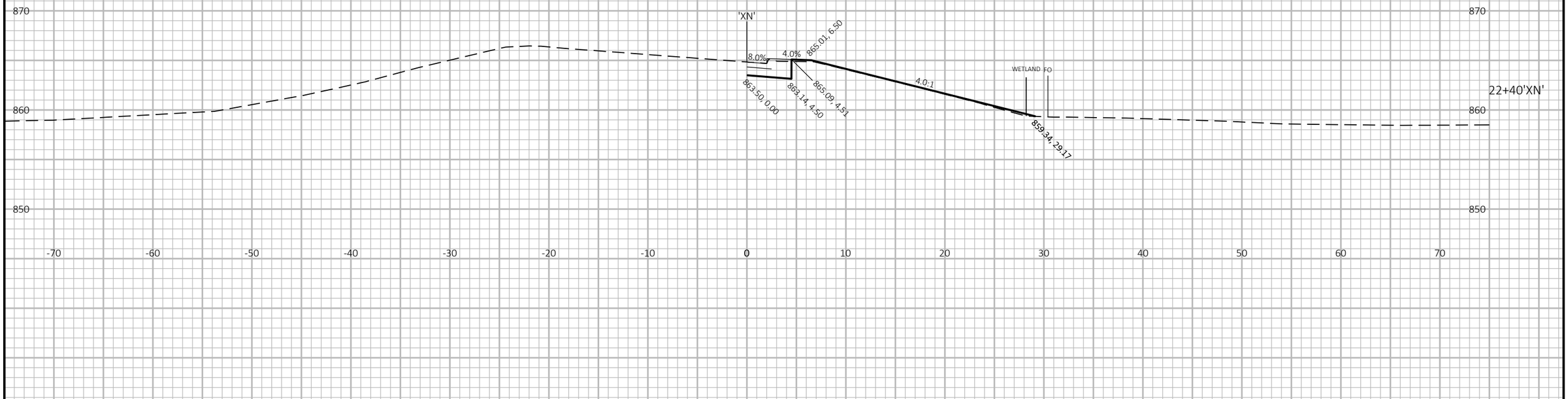
9

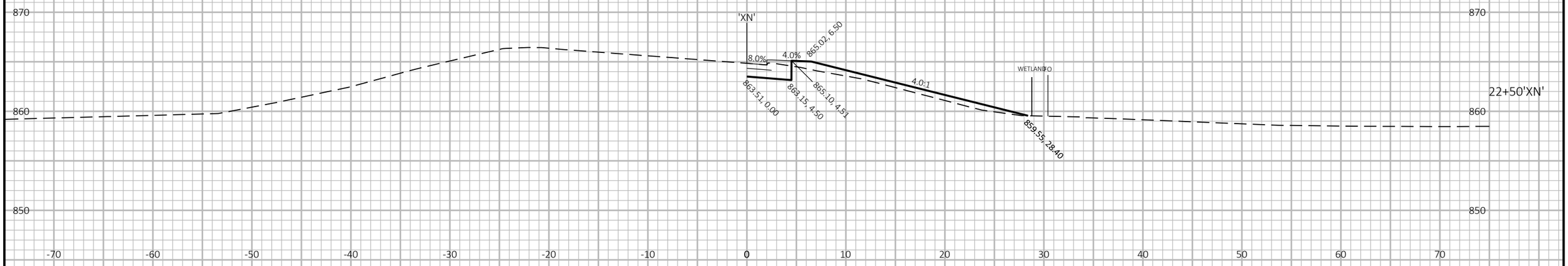
900
890
880
870
860
-80 -70 -60 -50 -40 -30 -20 -10 0 10 20 30 40 50 60
106+12'XEB'
SEE XEB (SB TO EB RAMP)
CROSS SECTIONS
'XEB'
4.0%
865.10, -27.92
865.26, -23.92
END LEFT SHOULDER WIDENING
STA 106+12'XEB'
MATCH EXISTING
10 FT
10 FT
9
9

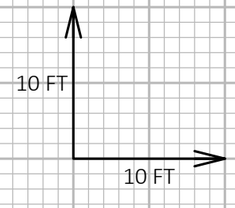
PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: USH 12/18 EB WIDEN LT	SHEET 609	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0902_XS_XEB_WIDEN_LEFT.DWG
LAYOUT NAME - 10
PLOT DATE : 8/1/2019 1:38 AM
PLOT BY : MATTHEW WISWELL
PLOT NAME :
PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.
WISDOT/CADDS SHEET 49

BEGIN CONSTRUCTION
STA 22+40'XN'
MATCH EXISTING







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PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: XN (SB TO EB RAMP)	SHEET 610	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0902_XS_SB-EB.DWG
LAYOUT NAME - 01

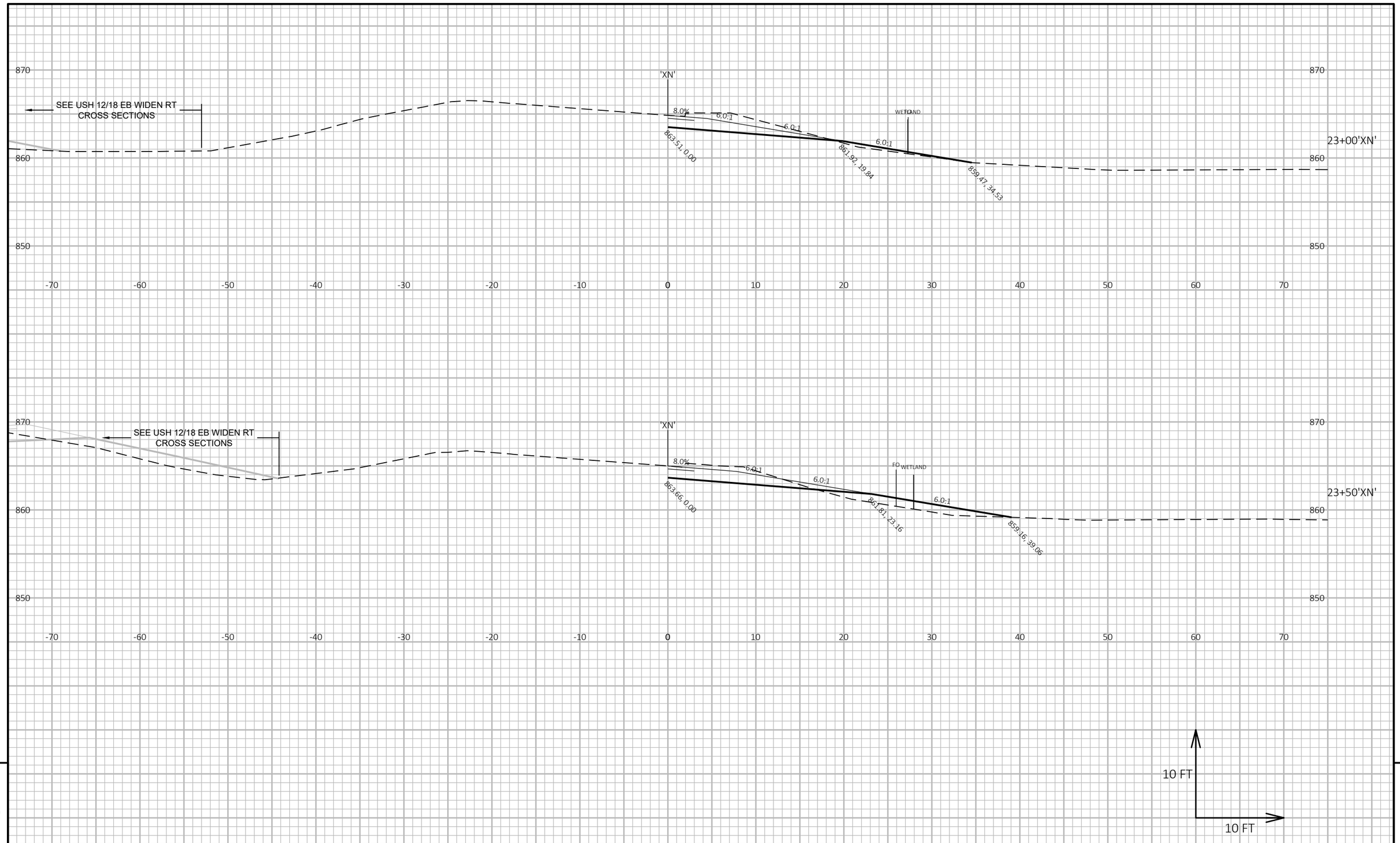
PLOT DATE : 8/1/2019 10:58 AM

PLOT BY : MATTHEW WISWELL

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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9

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: XN (SB TO EB RAMP)	SHEET 611	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0902_XS_SB-EB.DWG
LAYOUT NAME - 02

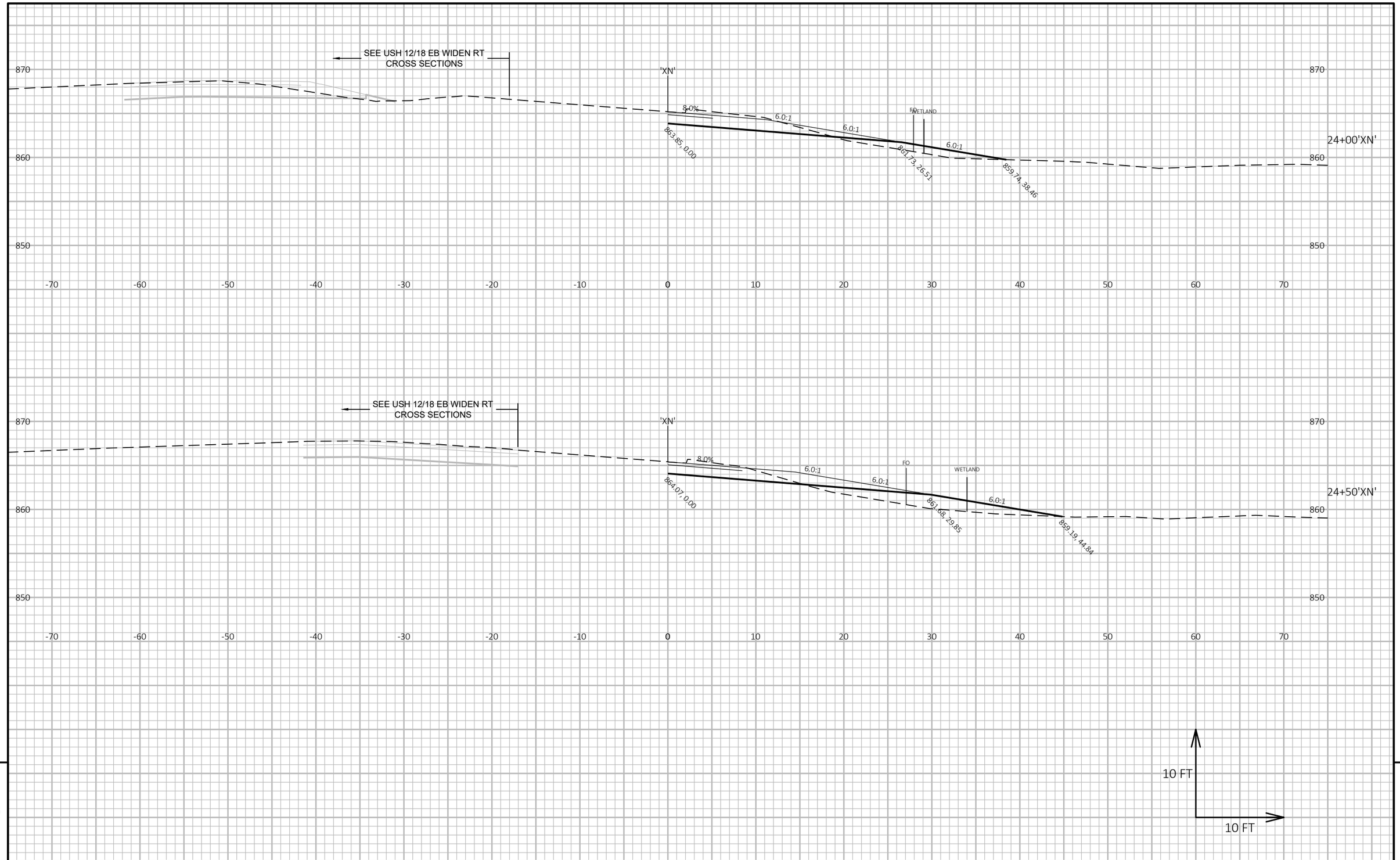
PLOT DATE : 8/1/2019 10:58 AM

PLOT BY : MATTHEW WISWELL

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: XN (SB TO EB RAMP)	SHEET 612	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0902_XS_SB-EB.DWG
LAYOUT NAME - 03

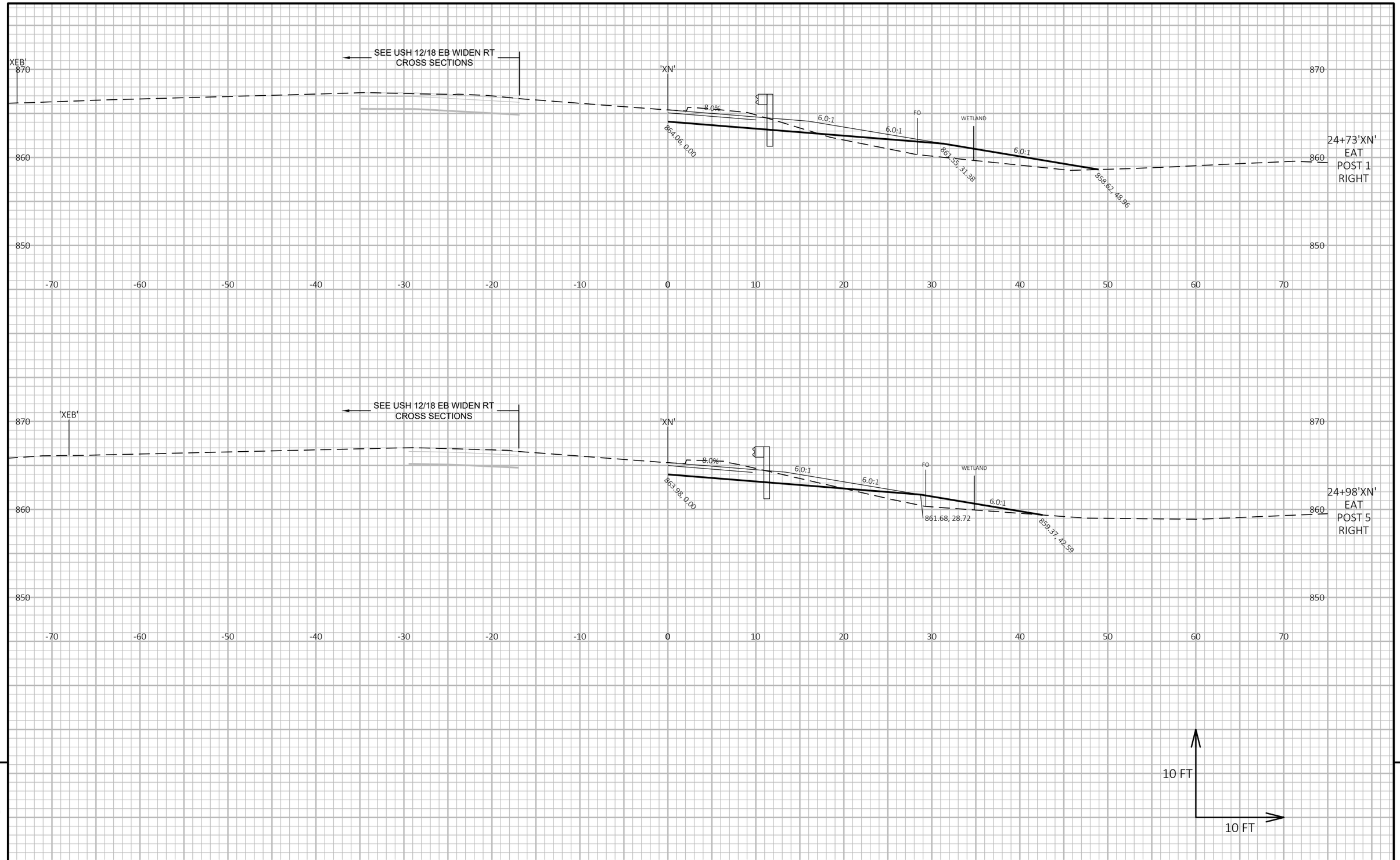
PLOT DATE : 8/1/2019 10:59 AM

PLOT BY : MATTHEW WISWELL

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: XN (SB TO EB RAMP)	SHEET 613	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0902_XS_SB-EB.DWG
LAYOUT NAME - 04

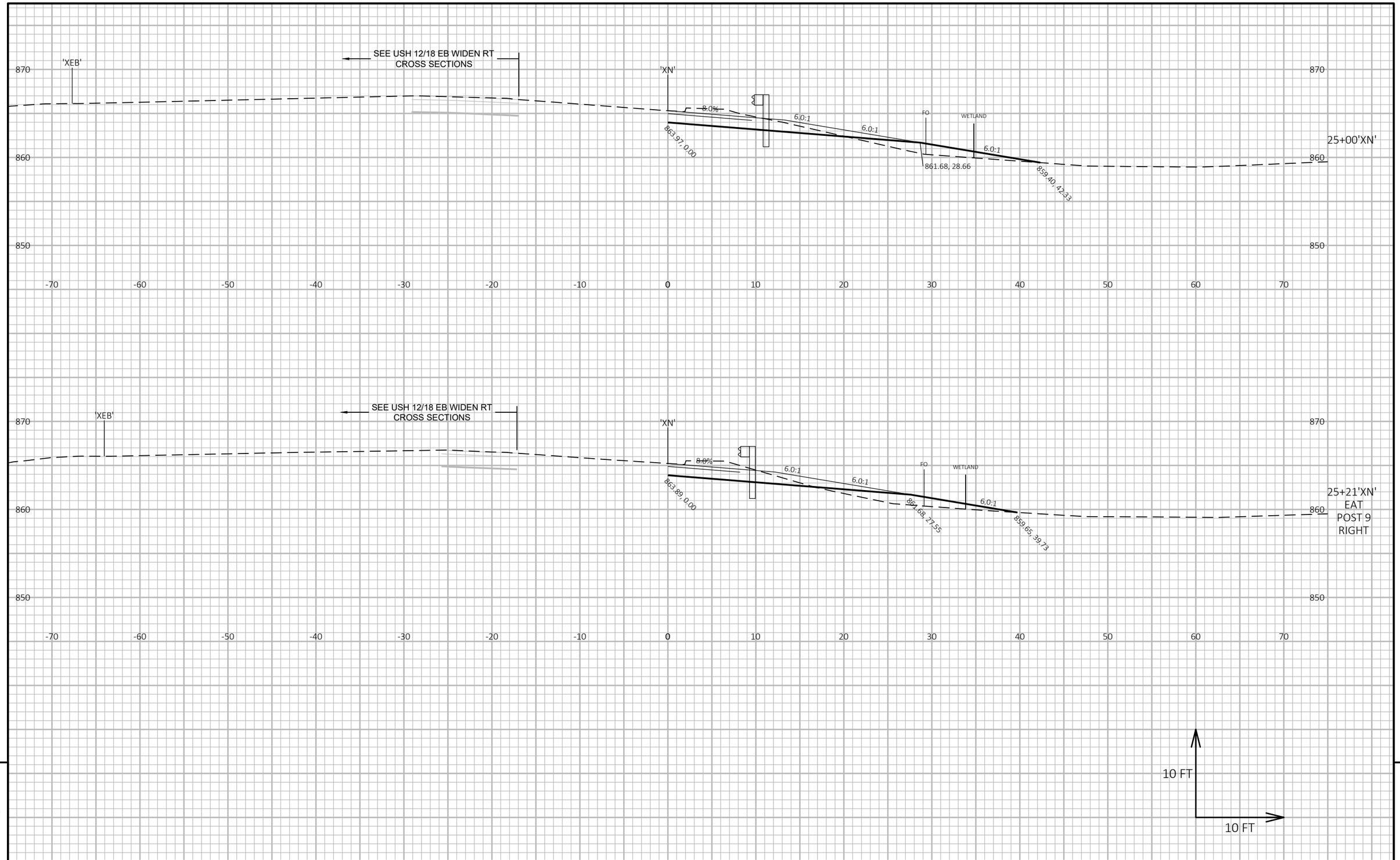
PLOT DATE : 8/1/2019 10:59 AM

PLOT BY : MATTHEW WISWELL

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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9

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: XN (SB TO EB RAMP)	SHEET 614	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0902_XS_SB-EB.DWG
LAYOUT NAME - 05

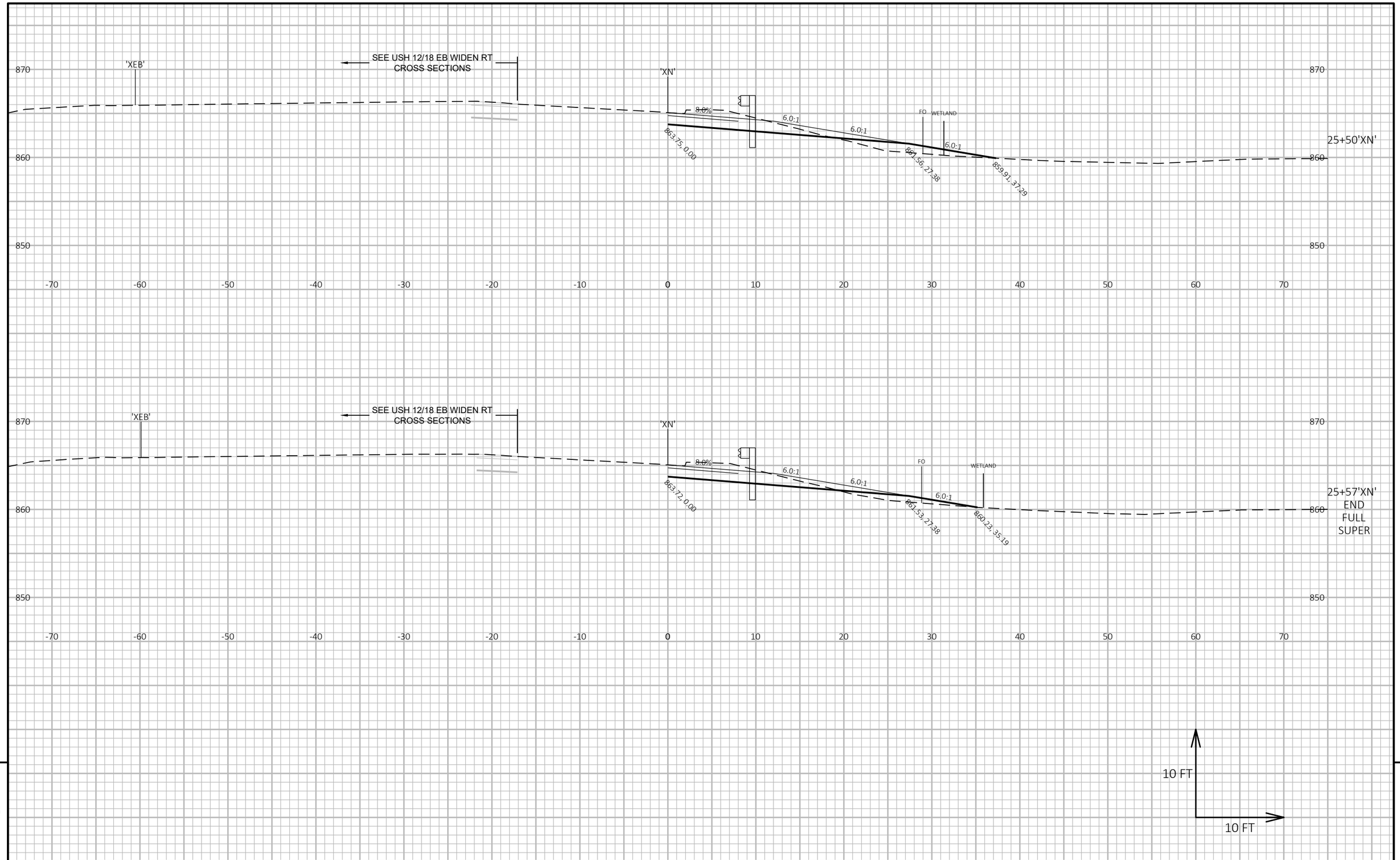
PLOT DATE : 8/1/2019 10:59 AM

PLOT BY : MATTHEW WISWELL

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: XN (SB TO EB RAMP)	SHEET 615	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0902_XS_SB-EB.DWG
LAYOUT NAME - 06

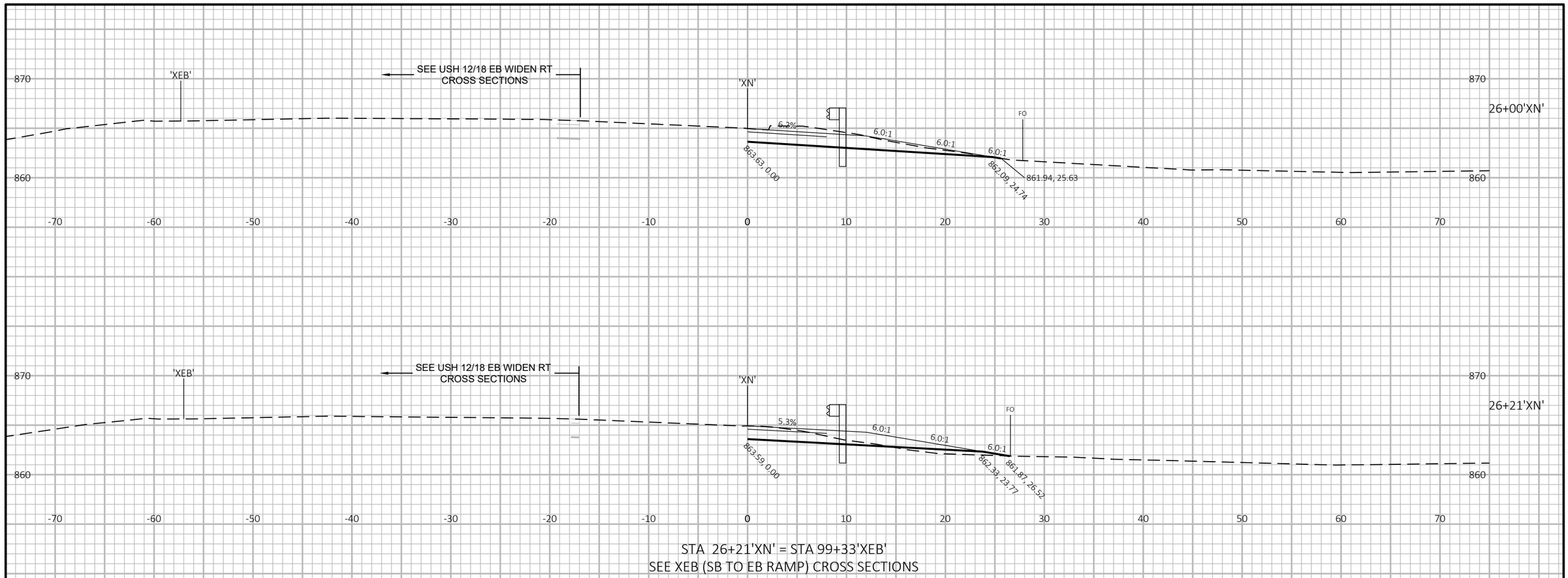
PLOT DATE : 8/1/2019 10:59 AM

PLOT BY : MATTHEW WISWELL

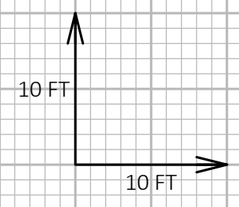
PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



STA 26+21'XN' = STA 99+33'XEB'
SEE XEB (SB TO EB RAMP) CROSS SECTIONS



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9

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: XN (SB TO EB RAMP)	SHEET 616	E

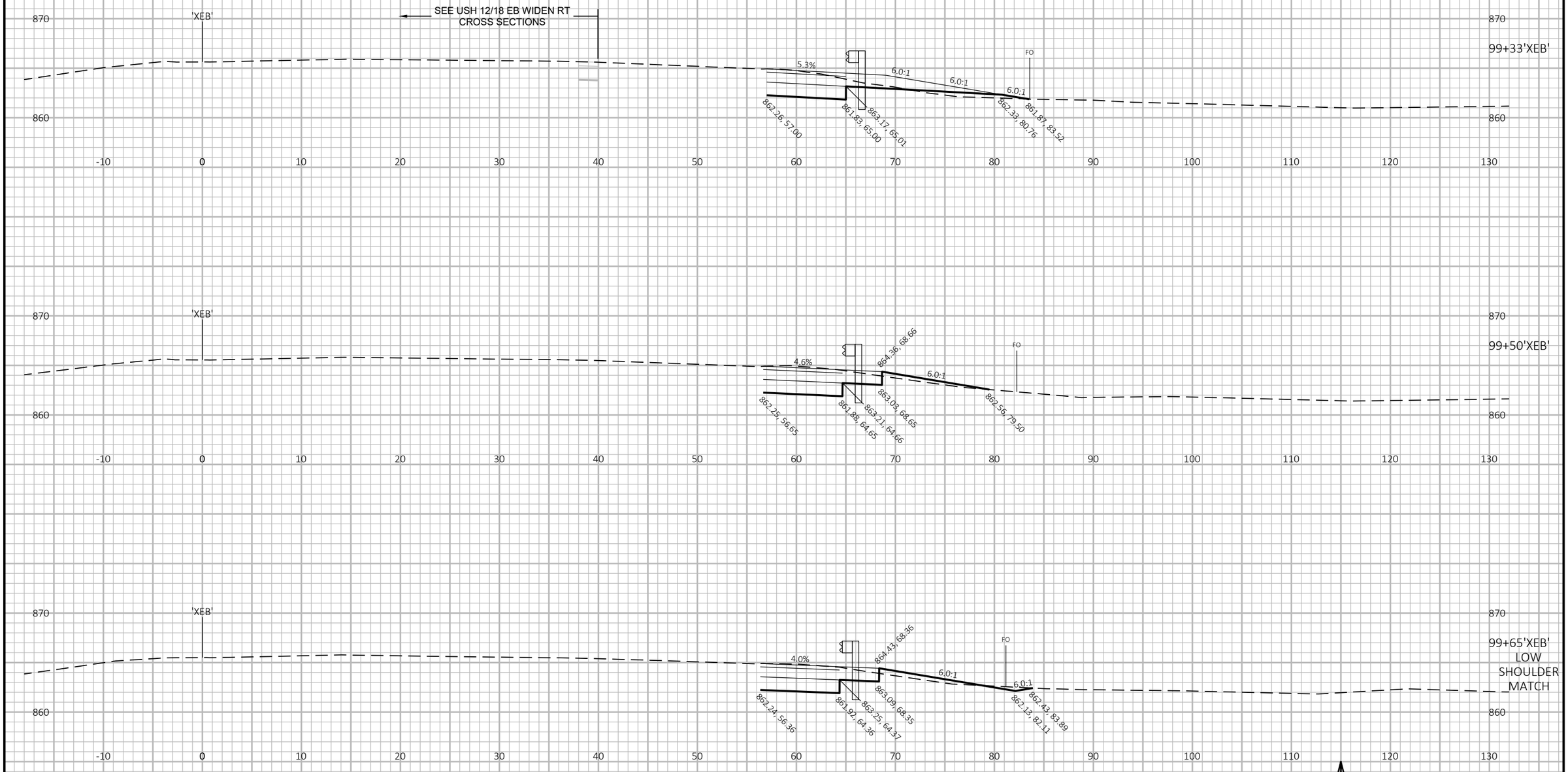
FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0902_XS_SB-EB.DWG
LAYOUT NAME - 07

PLOT DATE : 8/1/2019 10:59 AM PLOT BY : MATTHEW WISWELL PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

STA 99+33'XEB' = STA 26+21'XN'
SEE XN (SB TO EB RAMP) CROSS SECTIONS



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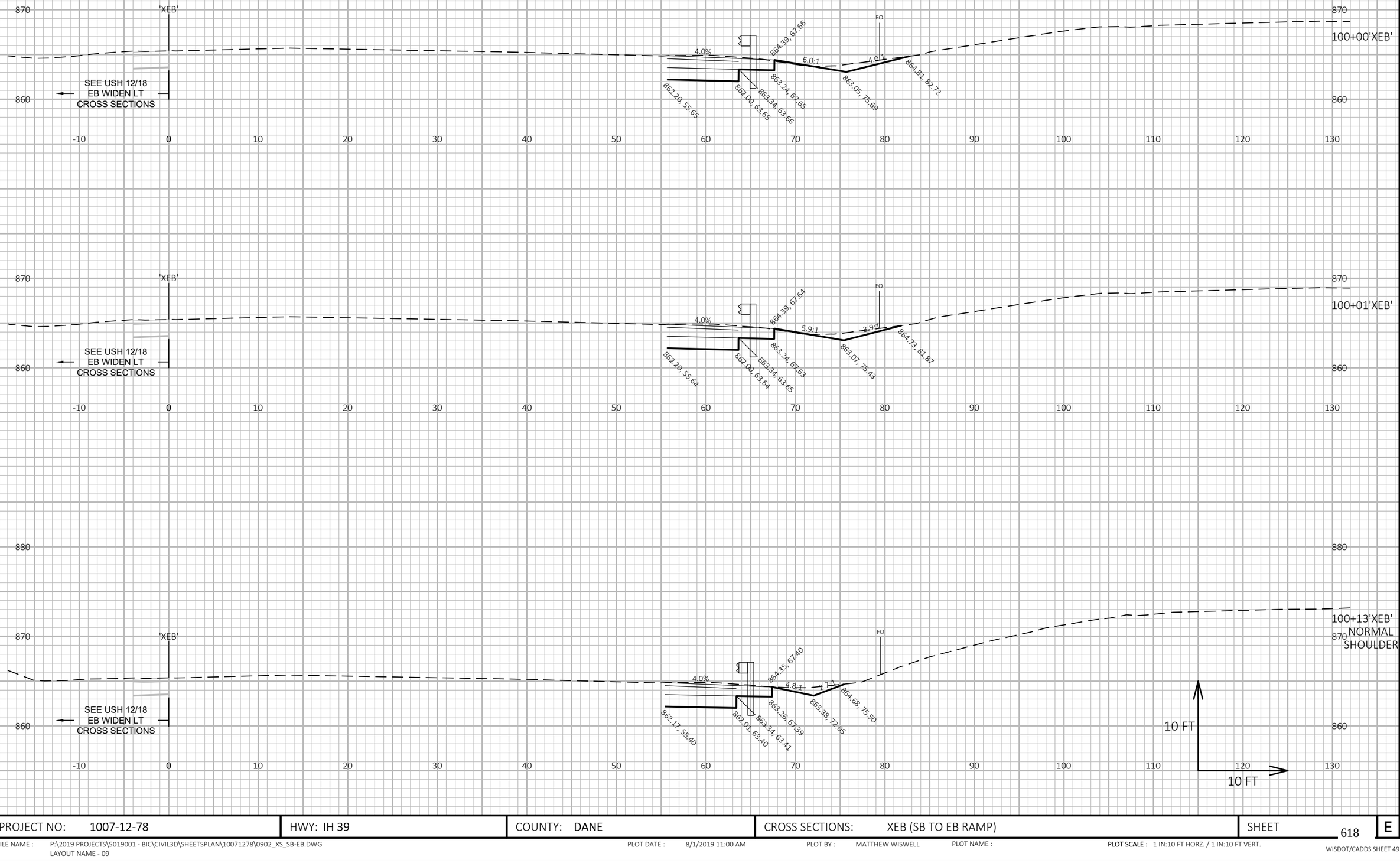
PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: XEB (SB TO EB RAMP)	SHEET 617	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0902_XS_SB-EB.DWG
LAYOUT NAME - 08

PLOT DATE : 8/1/2019 11:00 AM PLOT BY : MATTHEW WISWELL PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

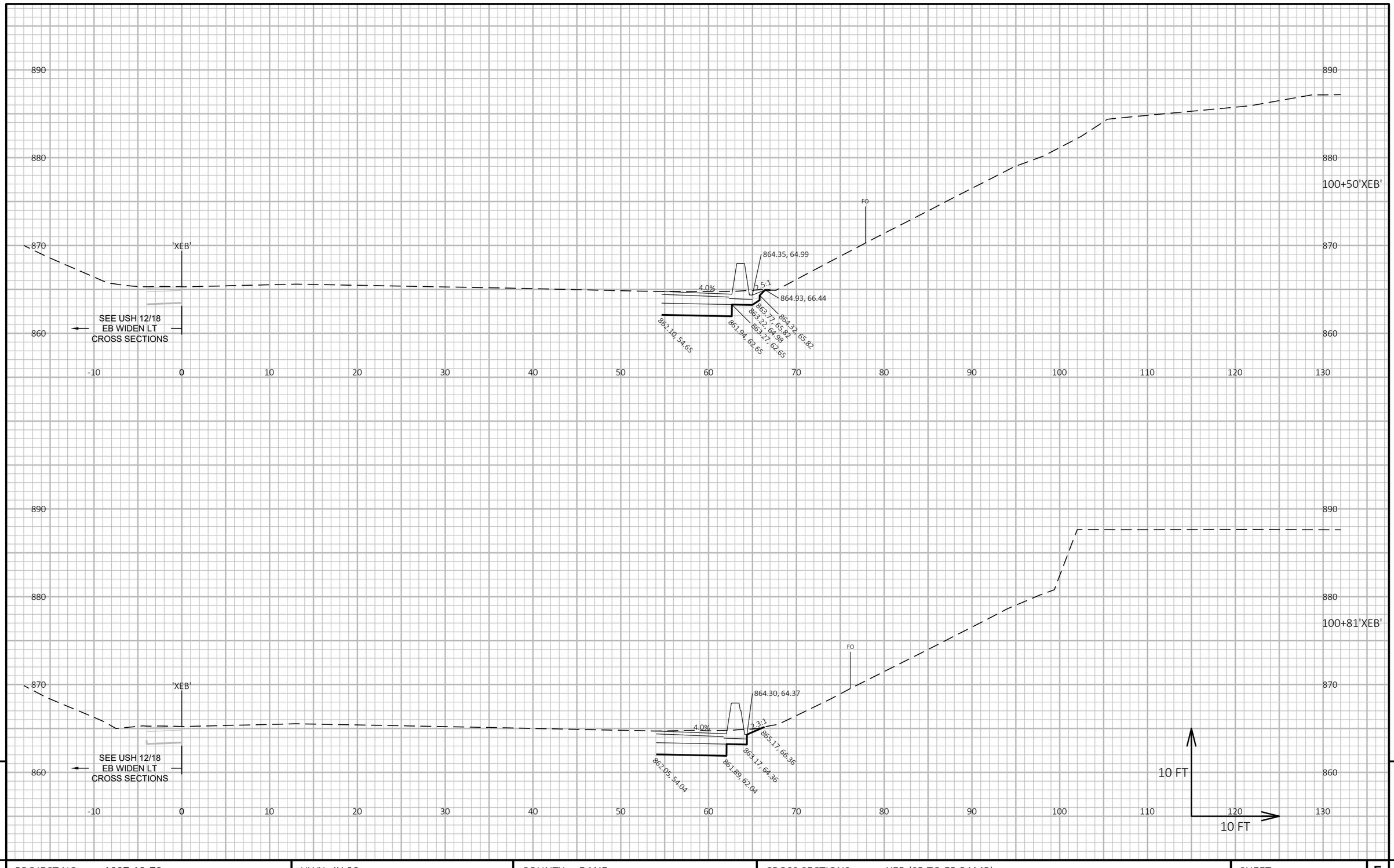


PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: XEB (SB TO EB RAMP)	SHEET 618	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0902_XS_SB-EB.DWG
LAYOUT NAME - 09

PLOT DATE : 8/1/2019 11:00 AM PLOT BY : MATTHEW WISWELL PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: XEB (SB TO EB RAMP)	SHEET 619	E

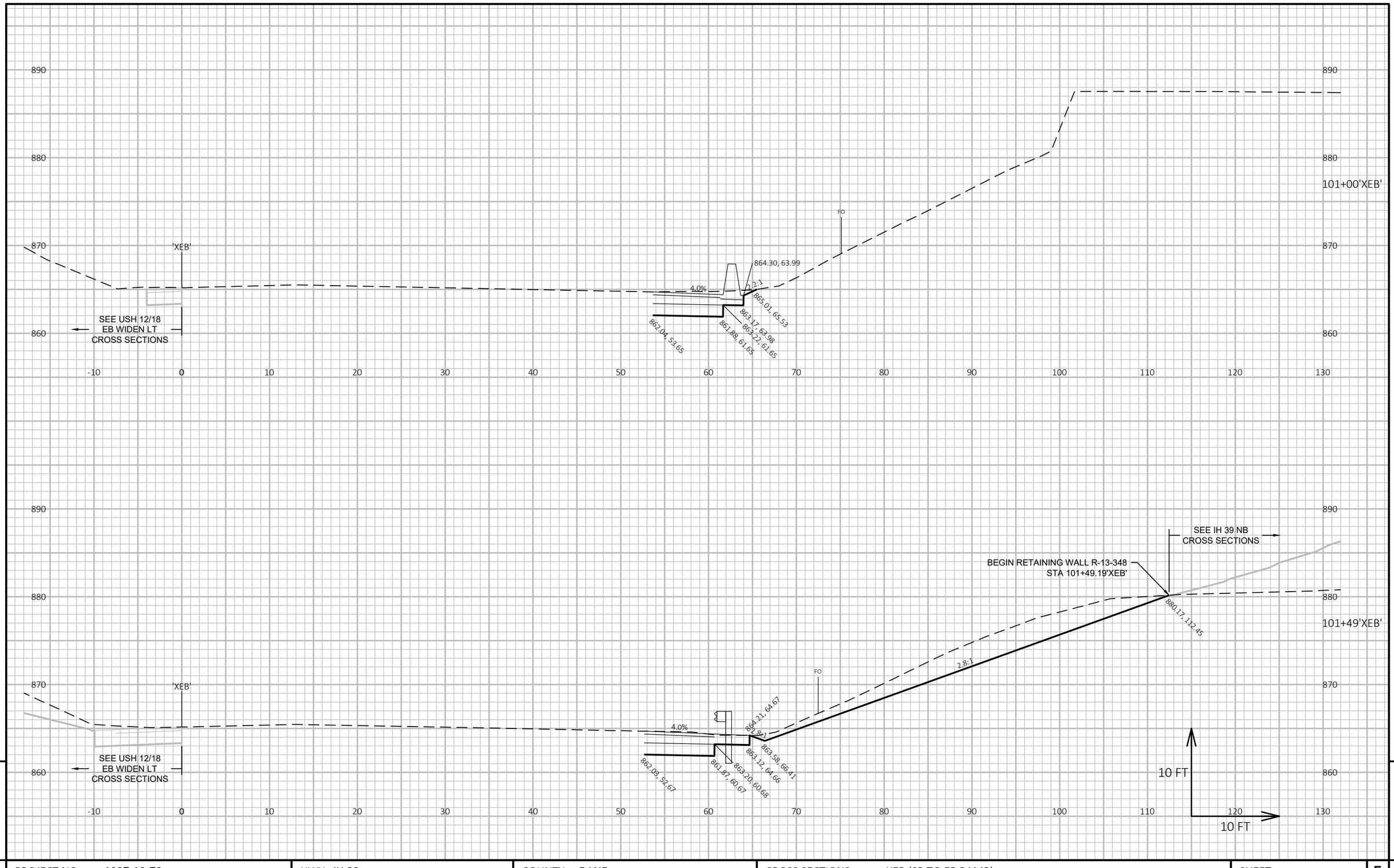
FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0902_XS_SB-EB.DWG
LAYOUT NAME - 10

PLOT DATE : 8/1/2019 11:01 AM

PLOT BY : MATTHEW WISWELL

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.



9

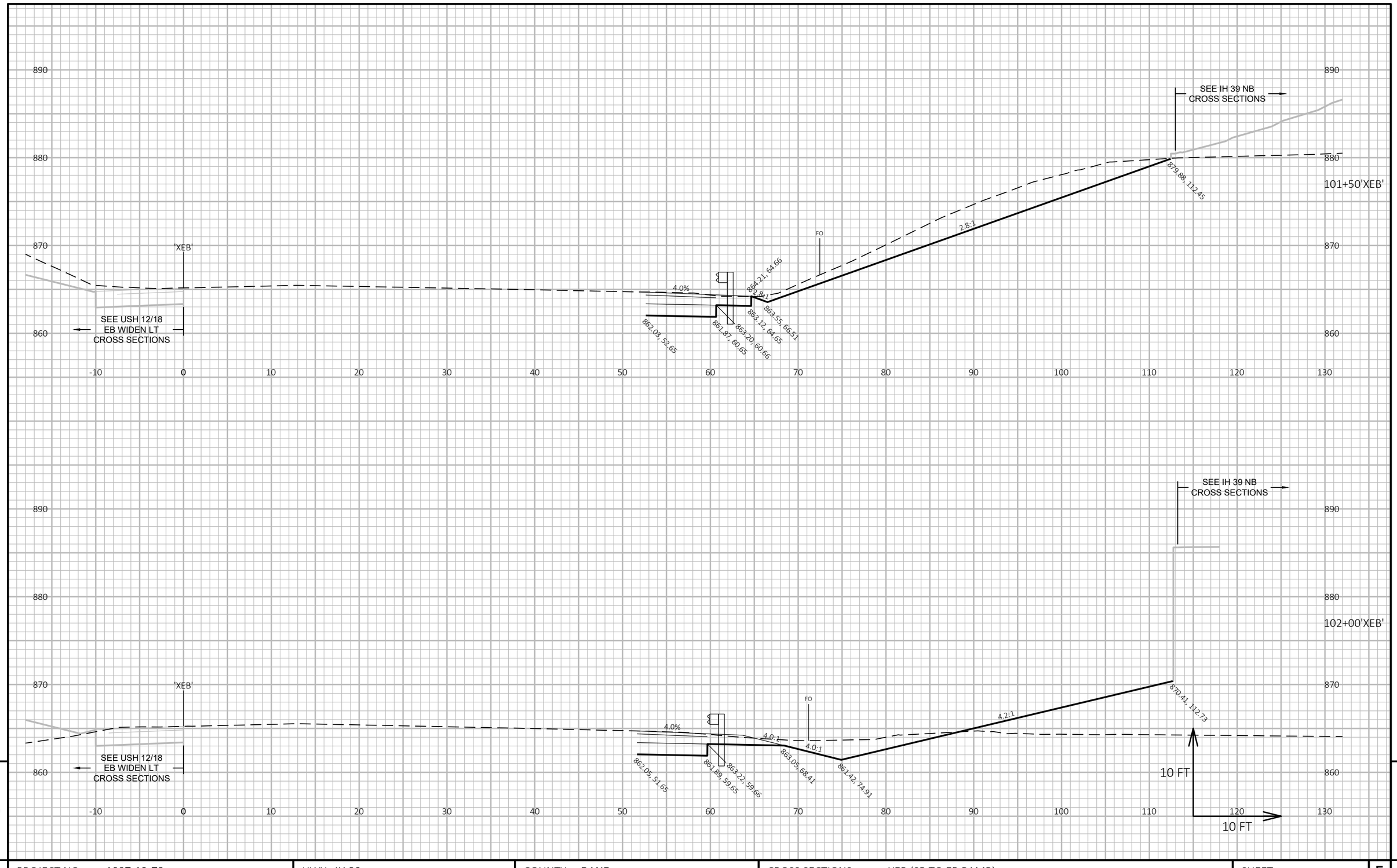
PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: XEB (SB TO EB RAMP)	SHEET 620	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0902_XS_SB-EB.DWG
LAYOUT NAME - 11

PLOT DATE : 8/1/2019 11:01 AM PLOT BY : MATTHEW WISWELL PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

9



9

9

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: XEB (SB TO EB RAMP)	SHEET 621	E

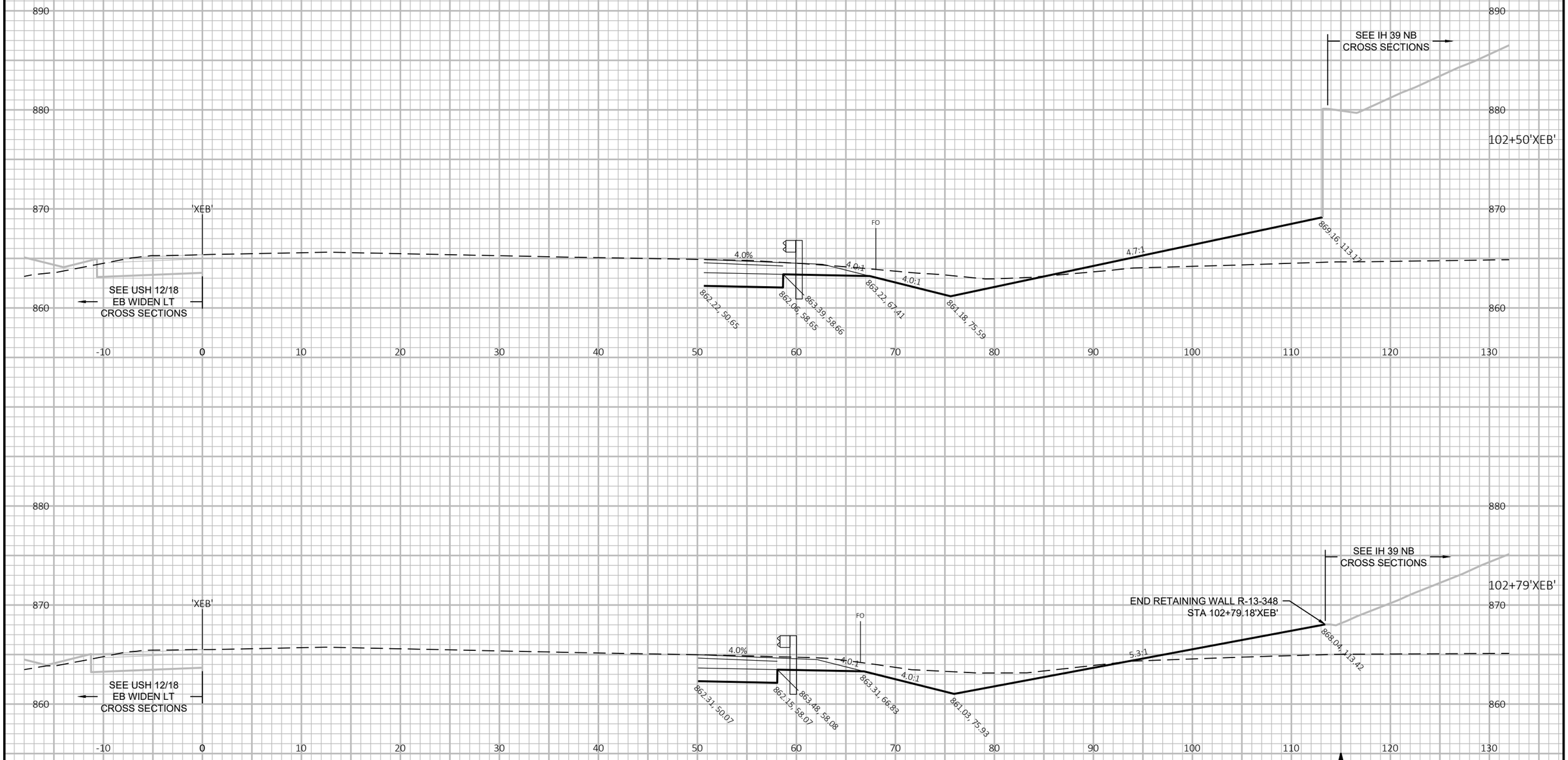
FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0902_XS_SB-EB.DWG
LAYOUT NAME - 12

PLOT DATE : 8/1/2019 11:01 AM

PLOT BY : MATTHEW WISWELL

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

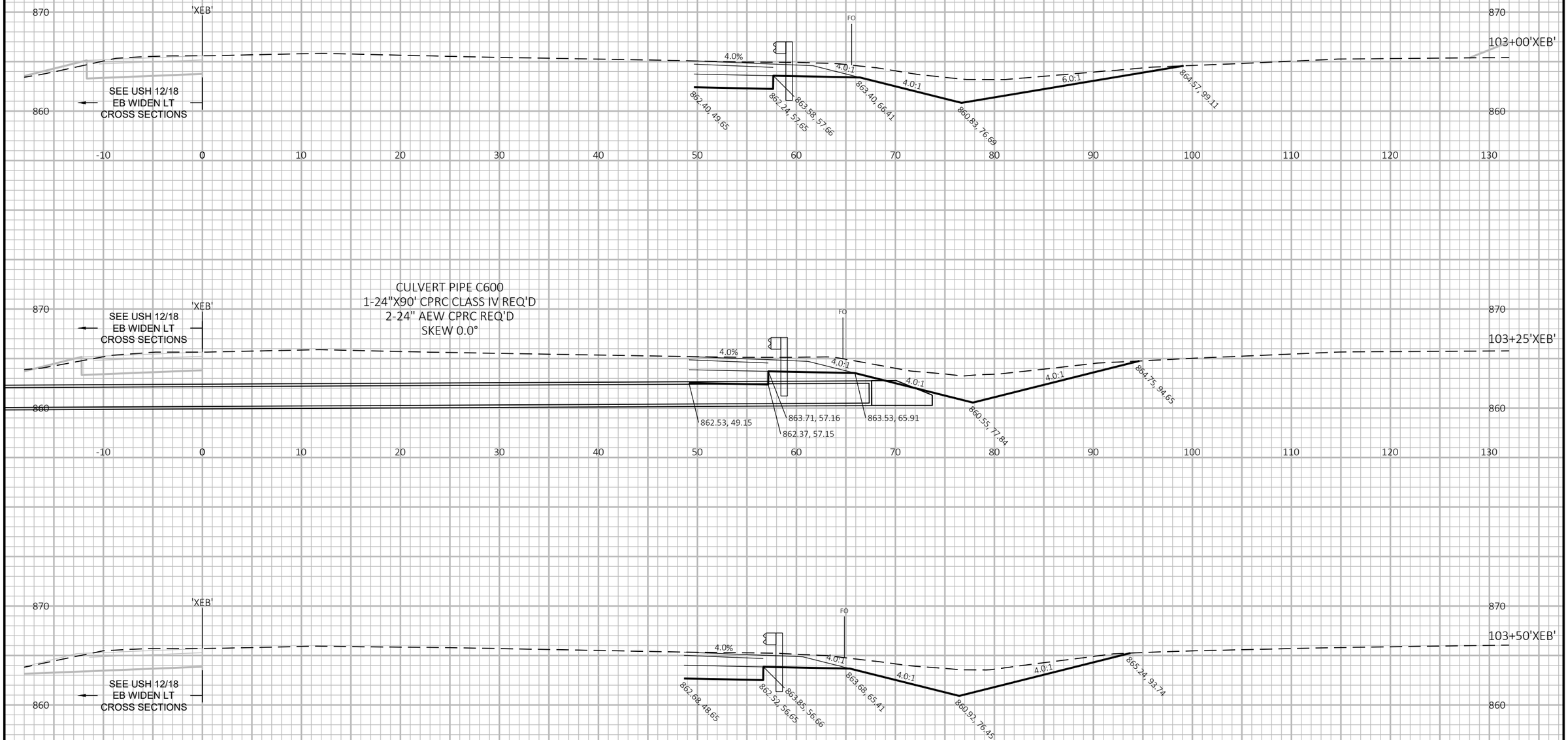


PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: XEB (SB TO EB RAMP)	SHEET 622	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0902_XS_SB-EB.DWG
LAYOUT NAME - 13

PLOT DATE : 8/1/2019 11:01 AM PLOT BY : MATTHEW WISWELL PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

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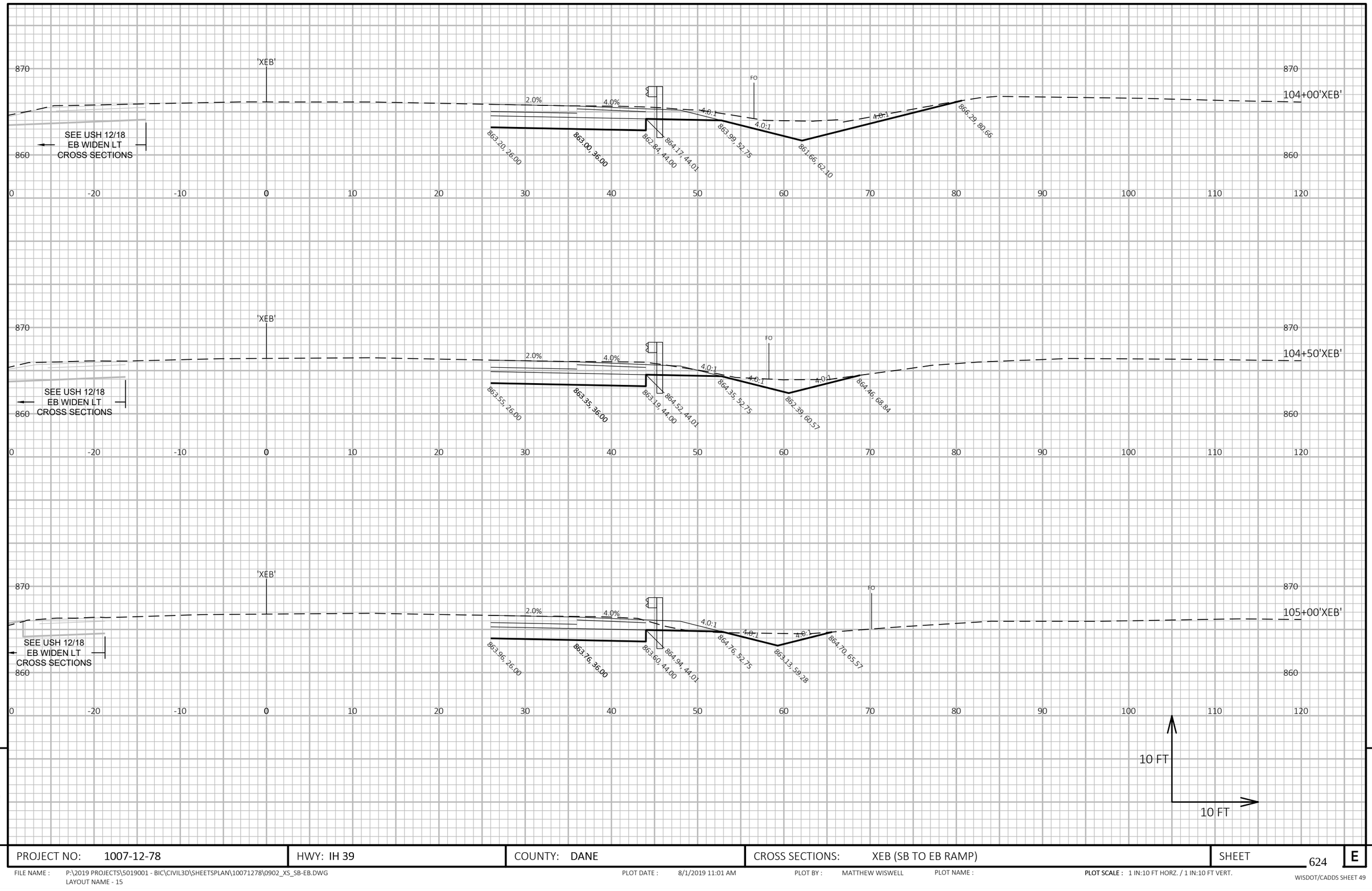
PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: XEB (SB TO EB RAMP)	SHEET 623	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0902_XS_SB-EB.DWG
LAYOUT NAME - 14

PLOT DATE : 8/1/2019 11:01 AM PLOT BY : MATTHEW WISWELL PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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9

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: XEB (SB TO EB RAMP)	SHEET 624	E

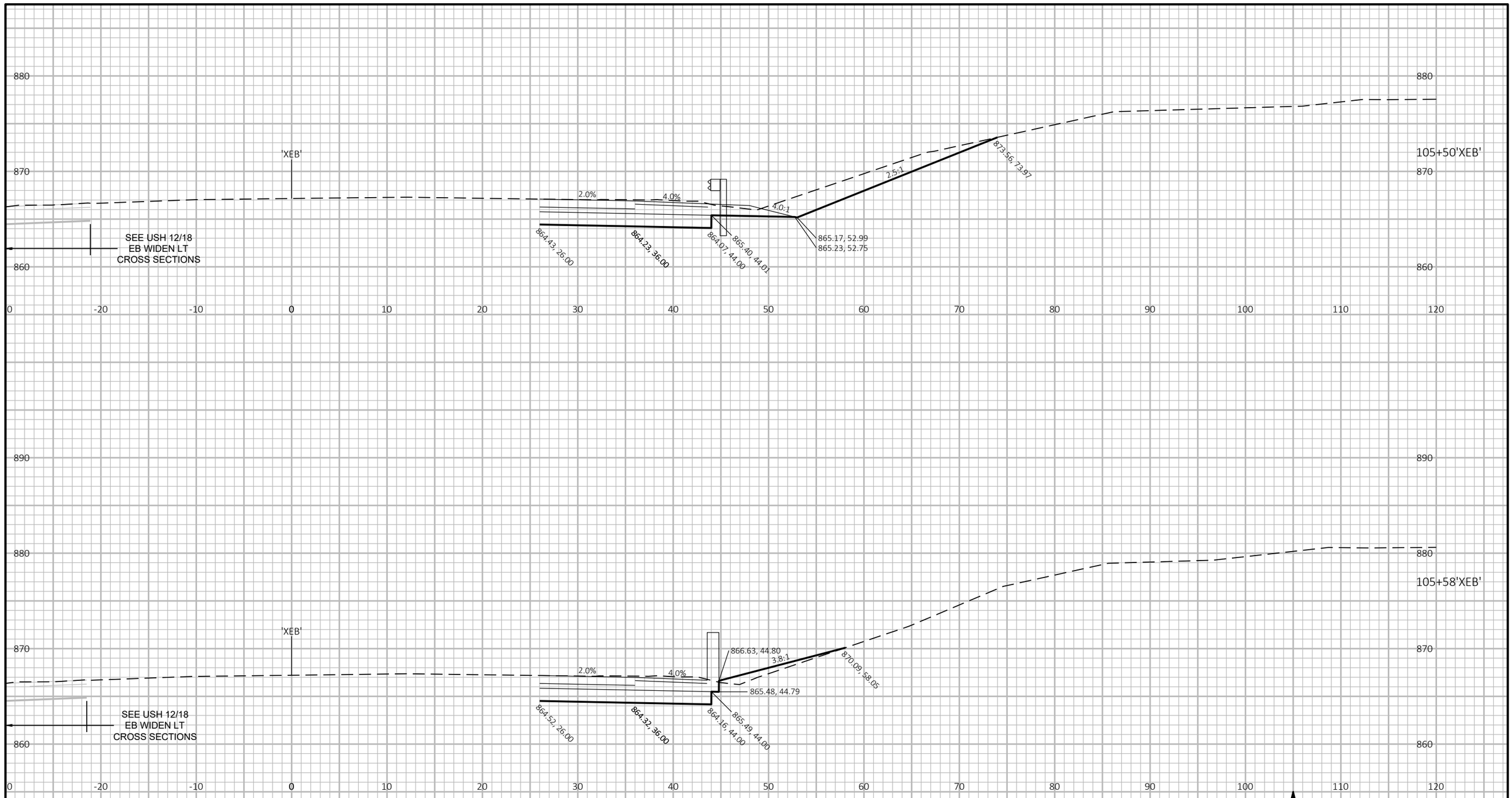
FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0902_XS_SB-EB.DWG
LAYOUT NAME - 15

PLOT DATE : 8/1/2019 11:01 AM

PLOT BY : MATTHEW WISWELL

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.



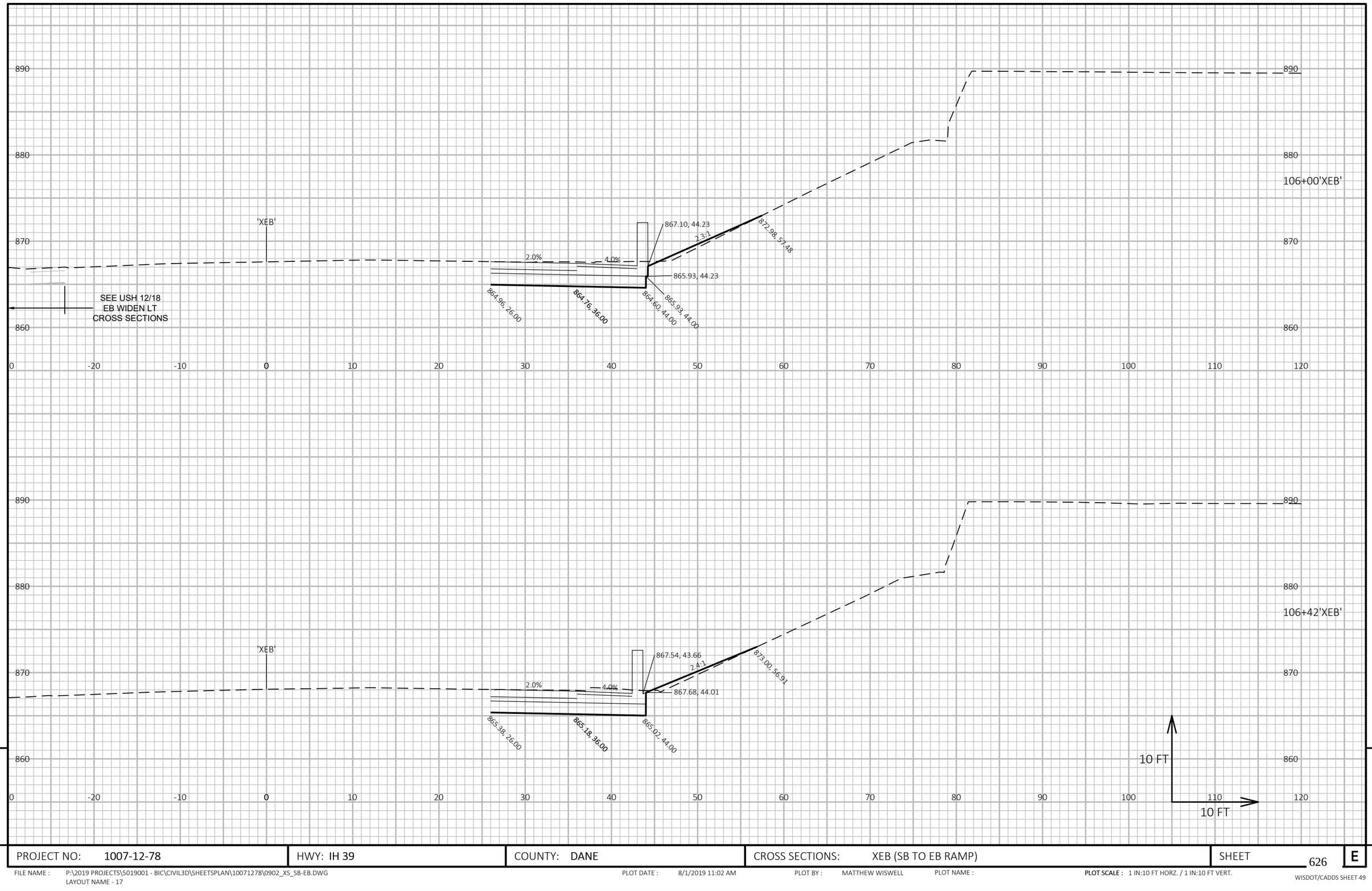
PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: XEB (SB TO EB RAMP)	SHEET 625	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0902_XS_SB-EB.DWG
LAYOUT NAME - 16

PLOT DATE : 8/1/2019 11:02 AM PLOT BY : MATTHEW WISWELL PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: XEB (SB TO EB RAMP)	SHEET 626	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0902_XS_SB-EB.DWG
LAYOUT NAME - 17

PLOT DATE : 8/1/2019 11:02 AM

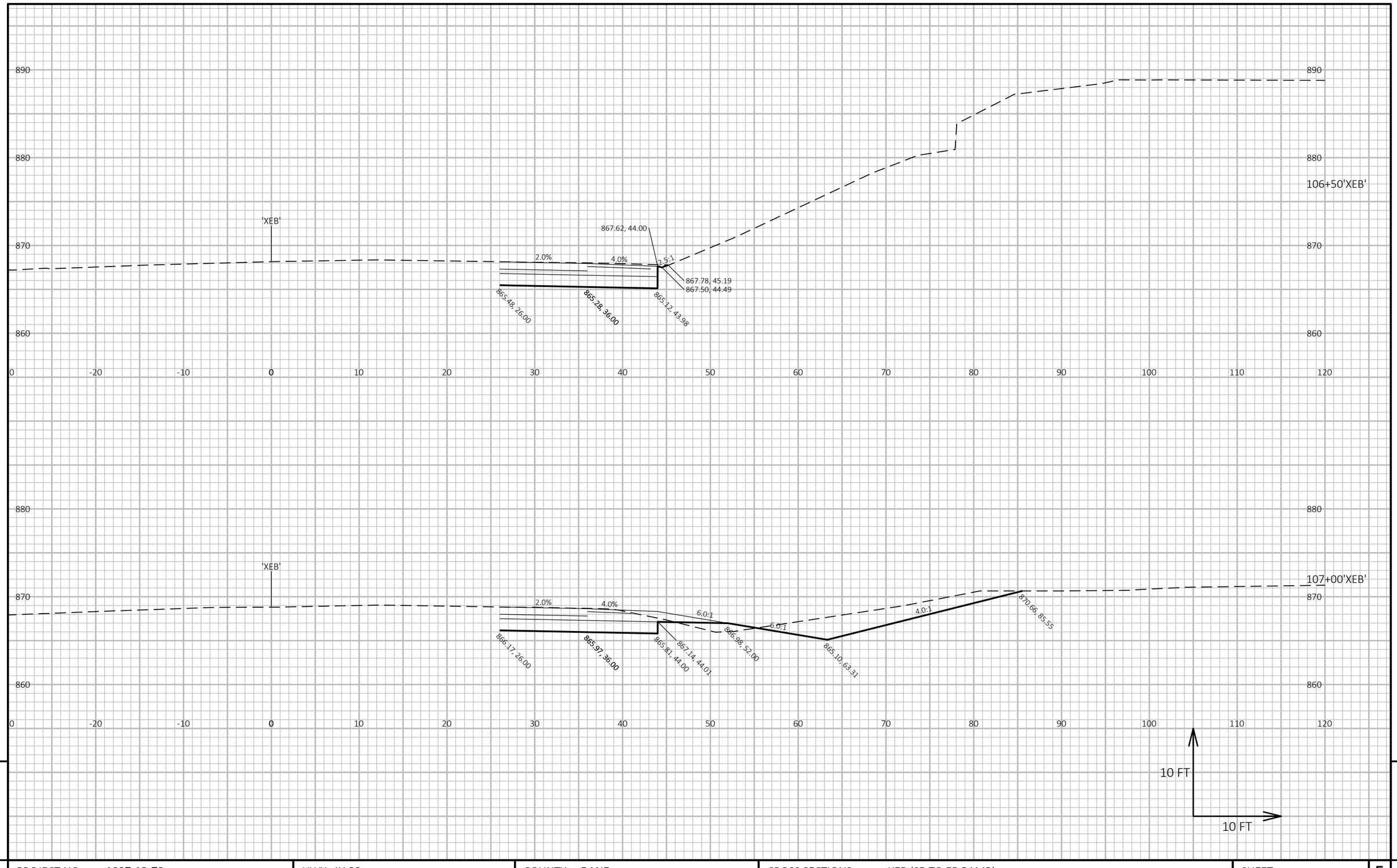
PLOT BY : MATTHEW WISWELL

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

9



PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: XEB (SB TO EB RAMP)	SHEET 627	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0902_XS_SB-EB.DWG
LAYOUT NAME - 18

PLOT DATE : 8/1/2019 11:02 AM

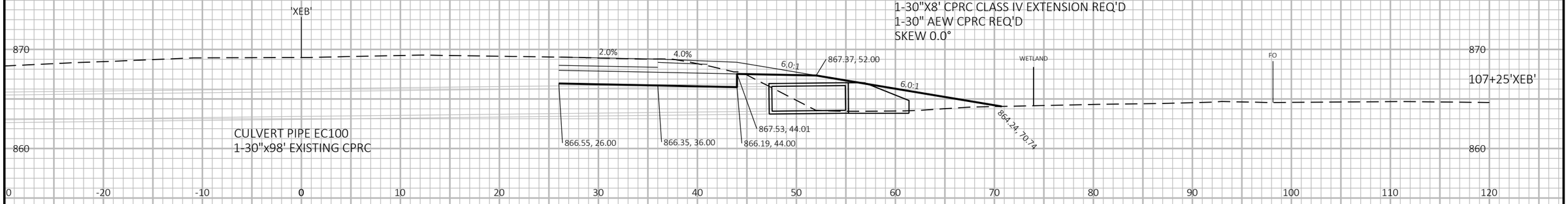
PLOT BY : MATTHEW WISWELL

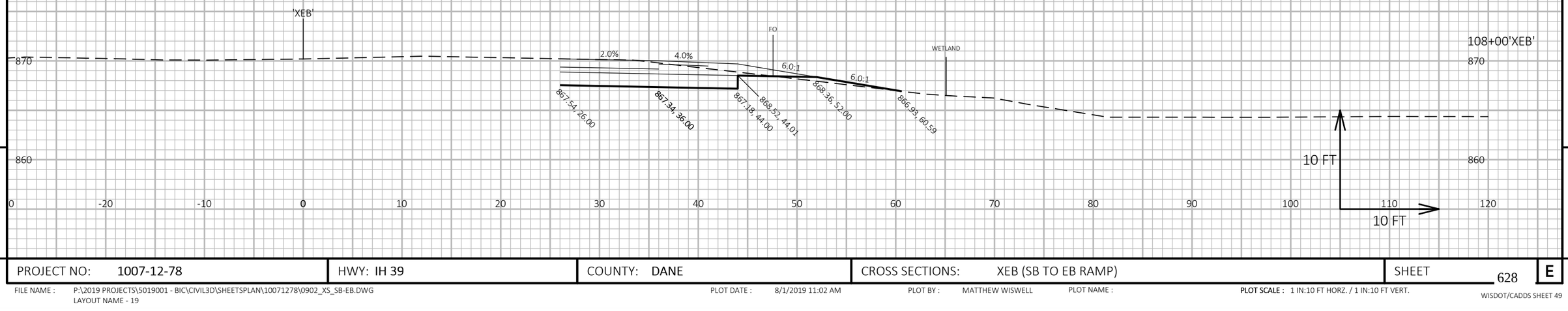
PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

CULVERT PIPE C700
1-30"X8' CPRC CLASS IV EXTENSION REQ'D
1-30" AEW CPRC REQ'D
SKEW 0.0°





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PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: XEB (SB TO EB RAMP)	SHEET 628	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0902_XS_SB-EB.DWG
LAYOUT NAME - 19

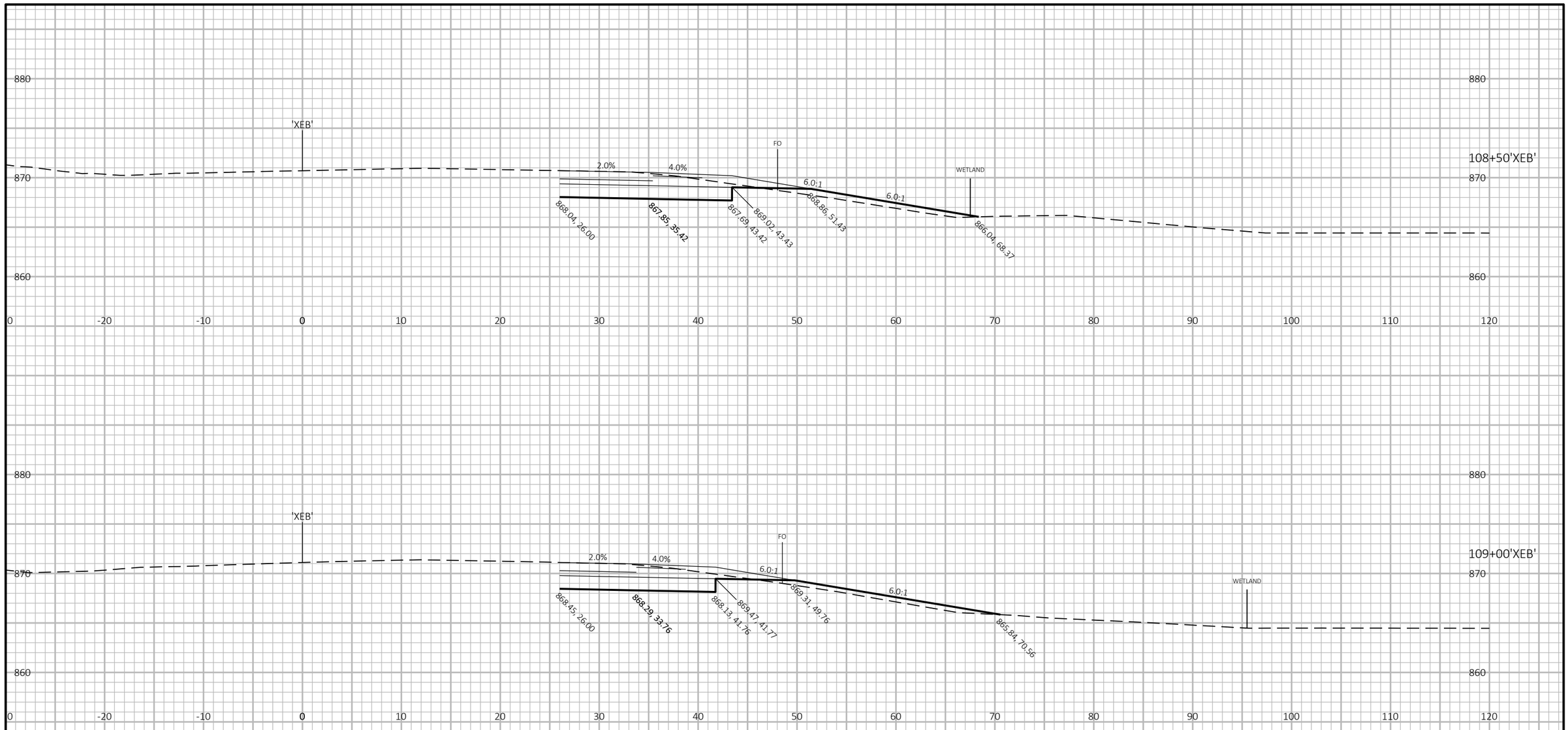
PLOT DATE : 8/1/2019 11:02 AM

PLOT BY : MATTHEW WISWELL

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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9

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: XEB (SB TO EB RAMP)	SHEET 629	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0902_XS_SB-EB.DWG
LAYOUT NAME - 20

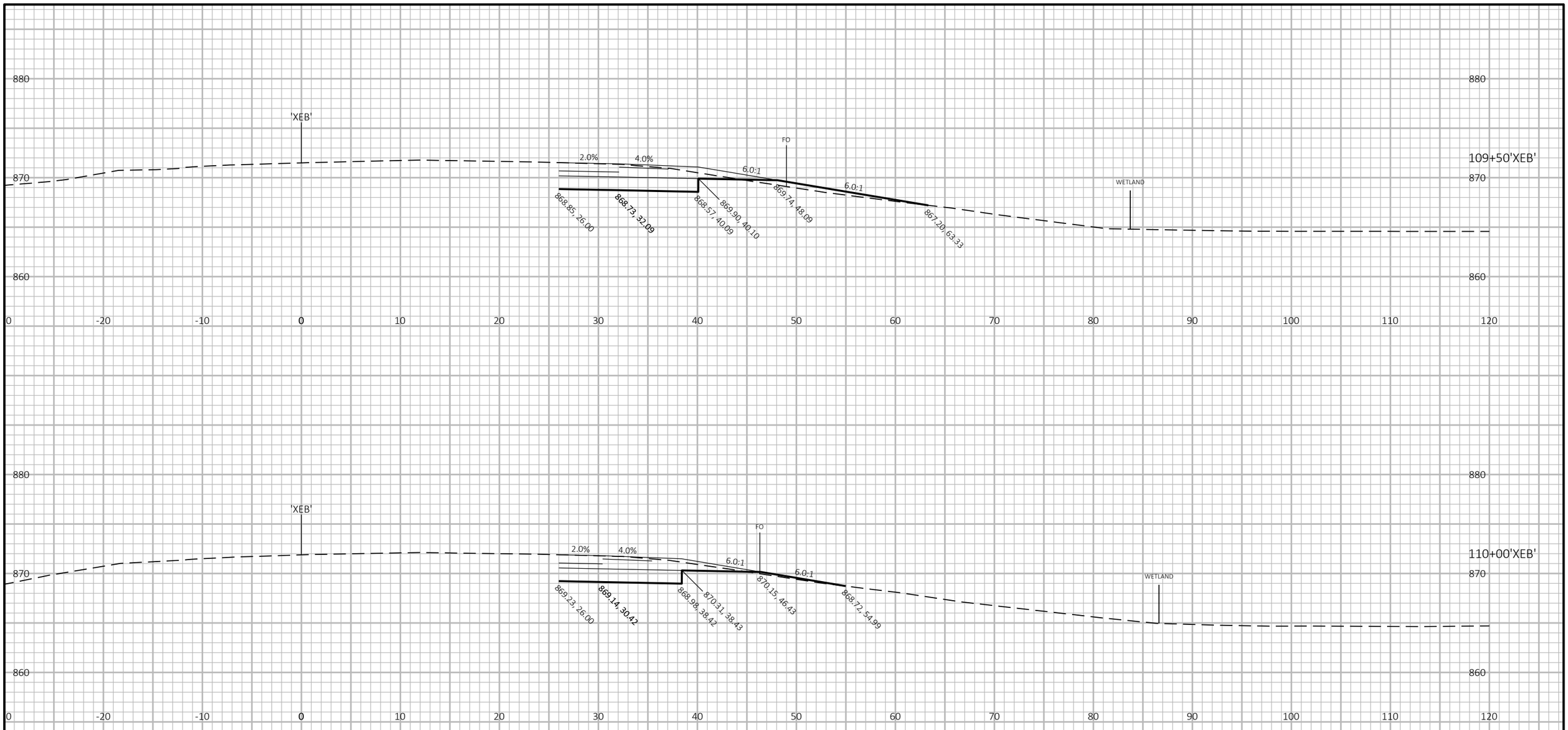
PLOT DATE : 8/1/2019 11:02 AM

PLOT BY : MATTHEW WISWELL

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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9

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: XEB (SB TO EB RAMP)	SHEET 630	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0902_XS_SB-EB.DWG
LAYOUT NAME - 21

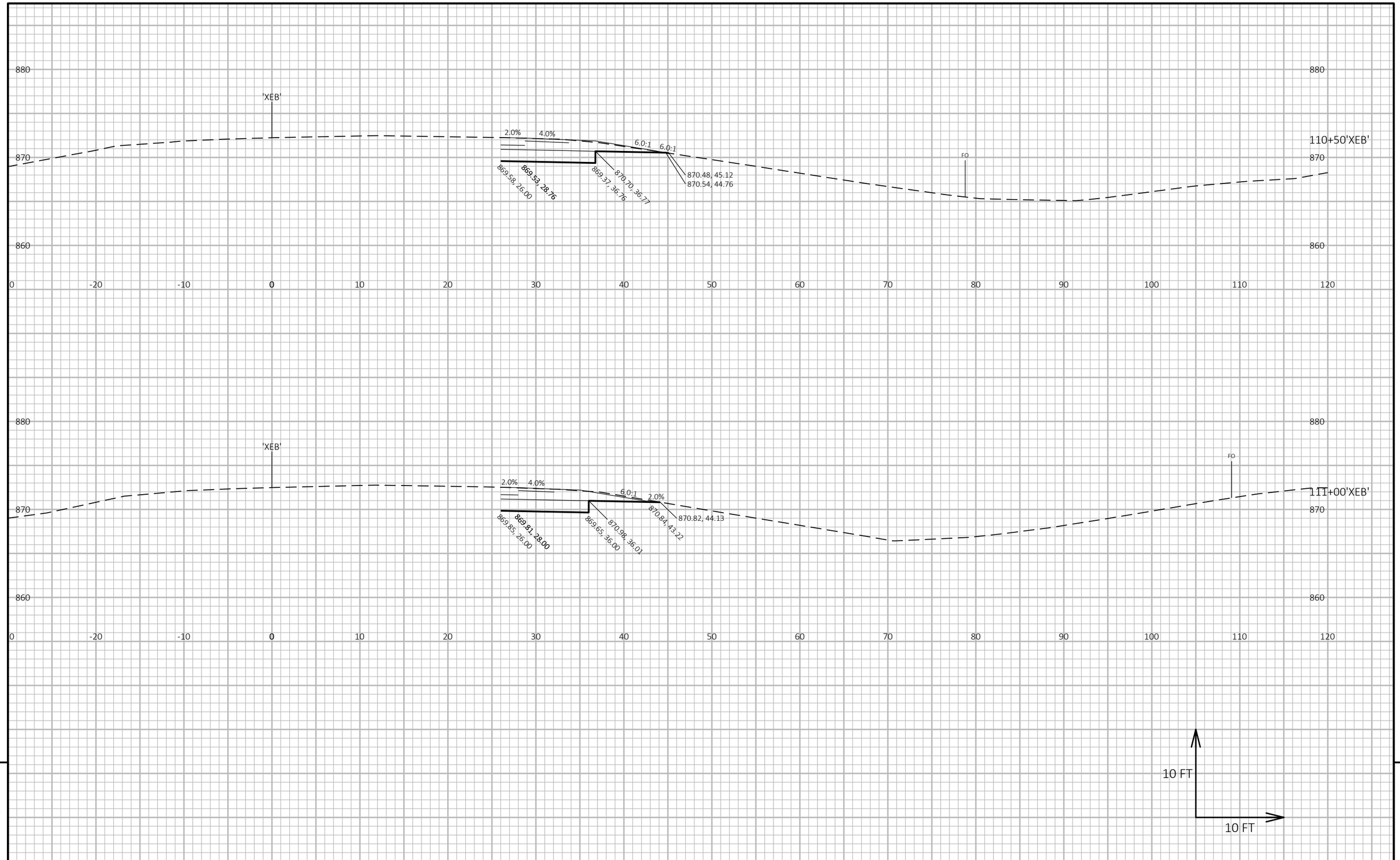
PLOT DATE : 8/1/2019 11:02 AM

PLOT BY : MATTHEW WISWELL

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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9

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: XEB (SB TO EB RAMP)	SHEET 631	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0902_XS_SB-EB.DWG
LAYOUT NAME - 22

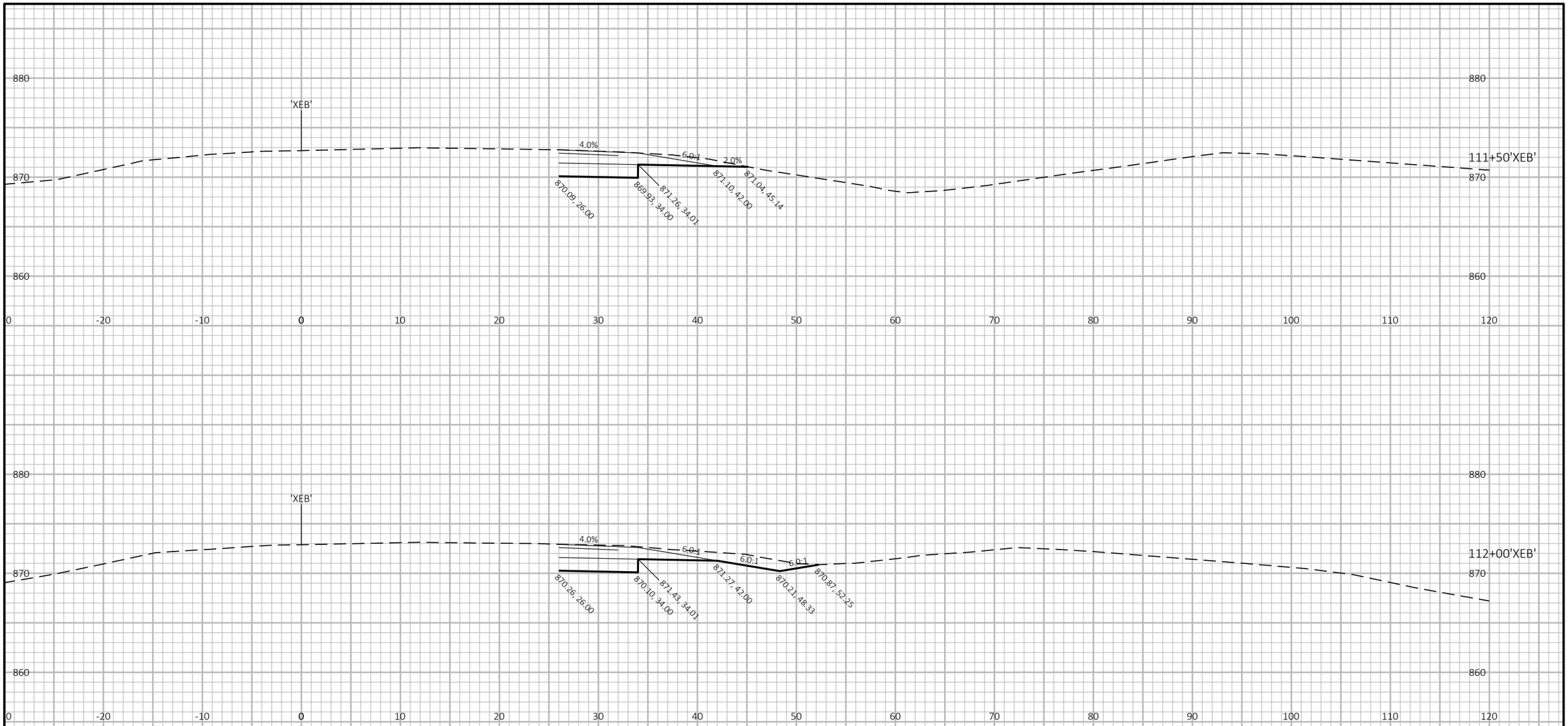
PLOT DATE : 8/1/2019 11:03 AM

PLOT BY : MATTHEW WISWELL

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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9

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: XEB (SB TO EB RAMP)	SHEET 632	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0902_XS_SB-EB.DWG
LAYOUT NAME - 23

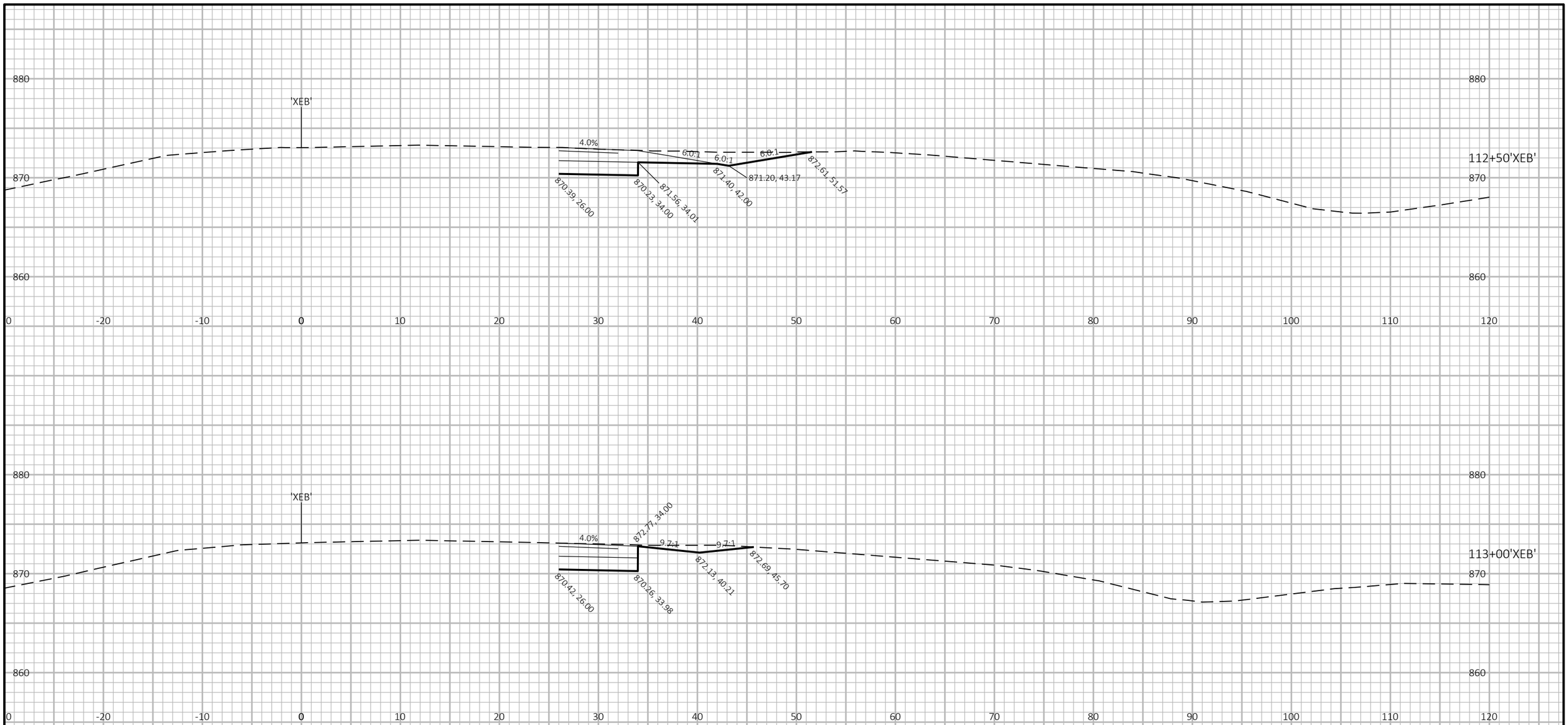
PLOT DATE : 8/1/2019 11:03 AM

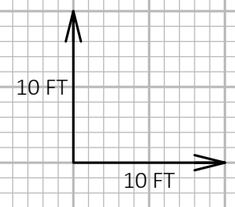
PLOT BY : MATTHEW WISWELL

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49





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9

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: XEB (SB TO EB RAMP)	SHEET 633	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0902_XS_SB-EB.DWG
LAYOUT NAME - 24

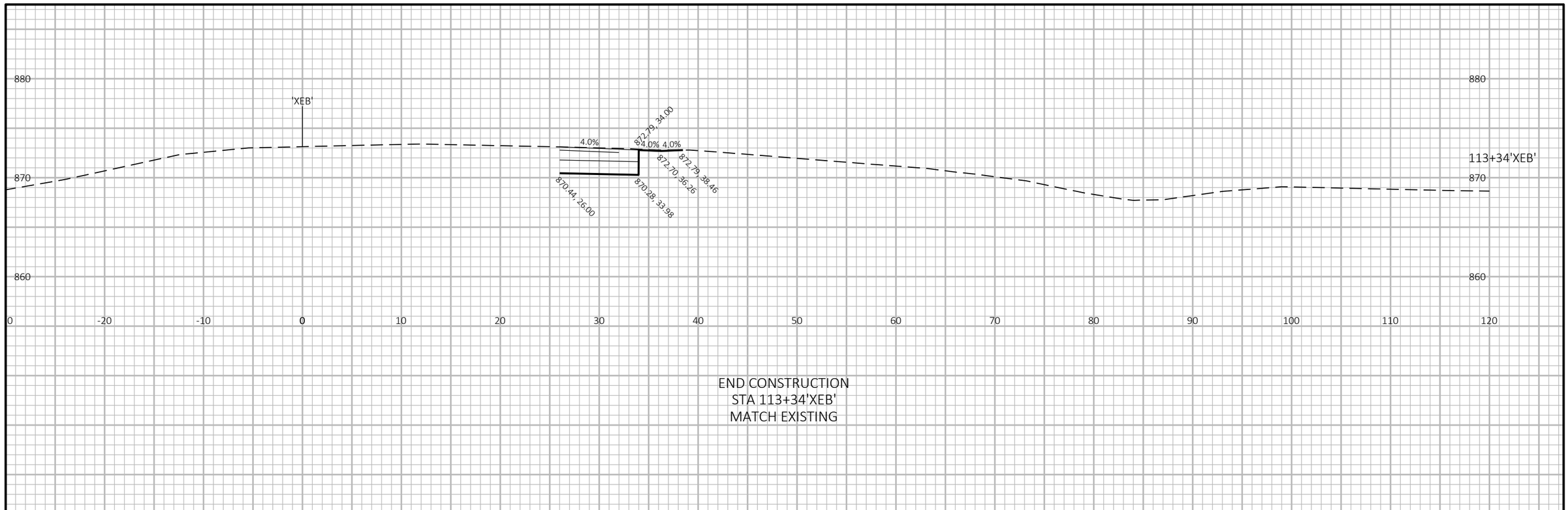
PLOT DATE : 8/1/2019 11:03 AM

PLOT BY : MATTHEW WISWELL

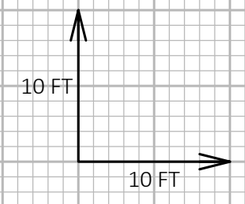
PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



END CONSTRUCTION
STA 113+34'XEB'
MATCH EXISTING



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9

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: XEB (SB TO EB RAMP)	SHEET 634	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0902_XS_SB-EB.DWG
LAYOUT NAME - 25

PLOT DATE : 8/1/2019 11:03 AM

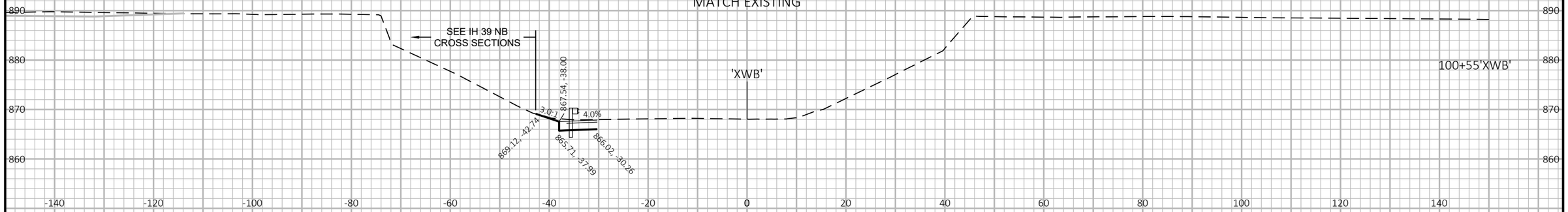
PLOT BY : MATTHEW WISWELL

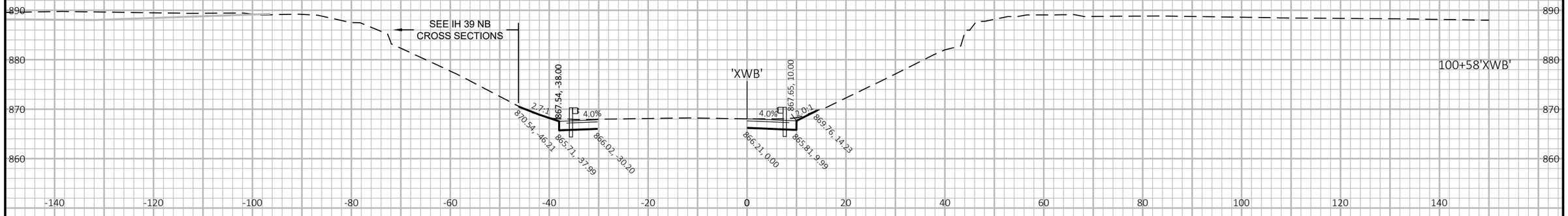
PLOT NAME :

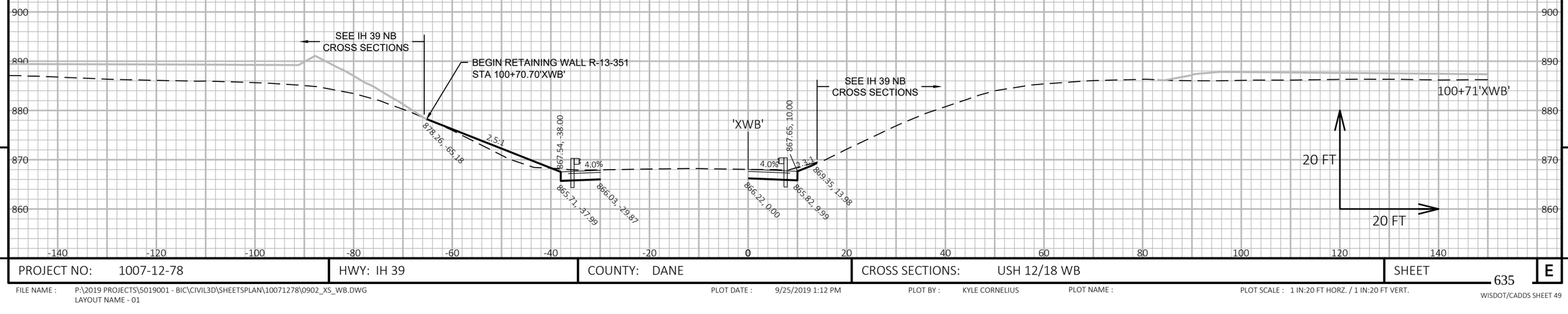
PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

BEGIN SHOULDER RECONSTRUCTION
STA 100+55'XWB'
MATCH EXISTING







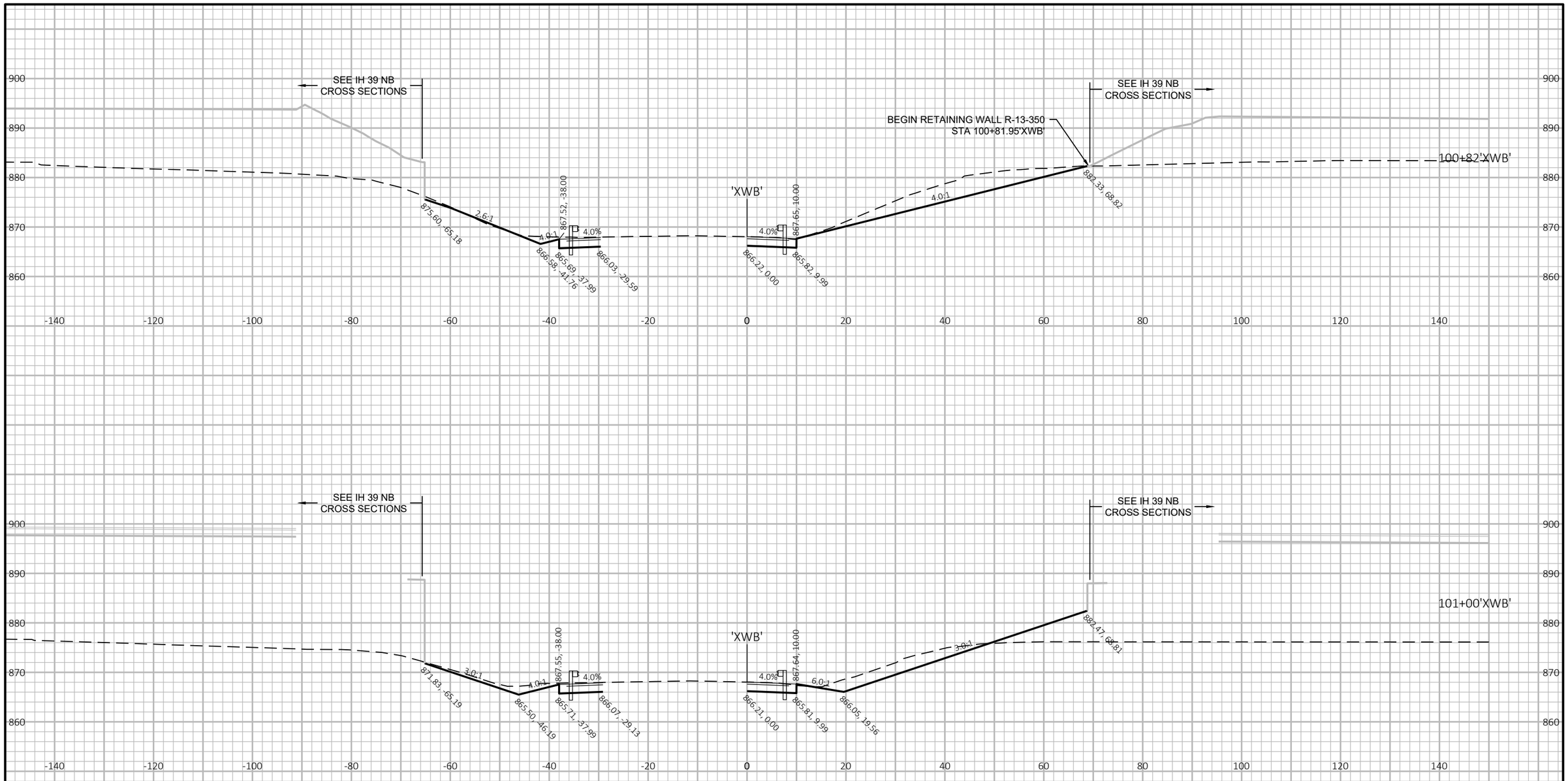
9

9

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: USH 12/18 WB	SHEET 635	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0902_XS_WB.DWG
LAYOUT NAME - 01

PLOT DATE : 9/25/2019 1:12 PM PLOT BY : KYLE CORNELIUS PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



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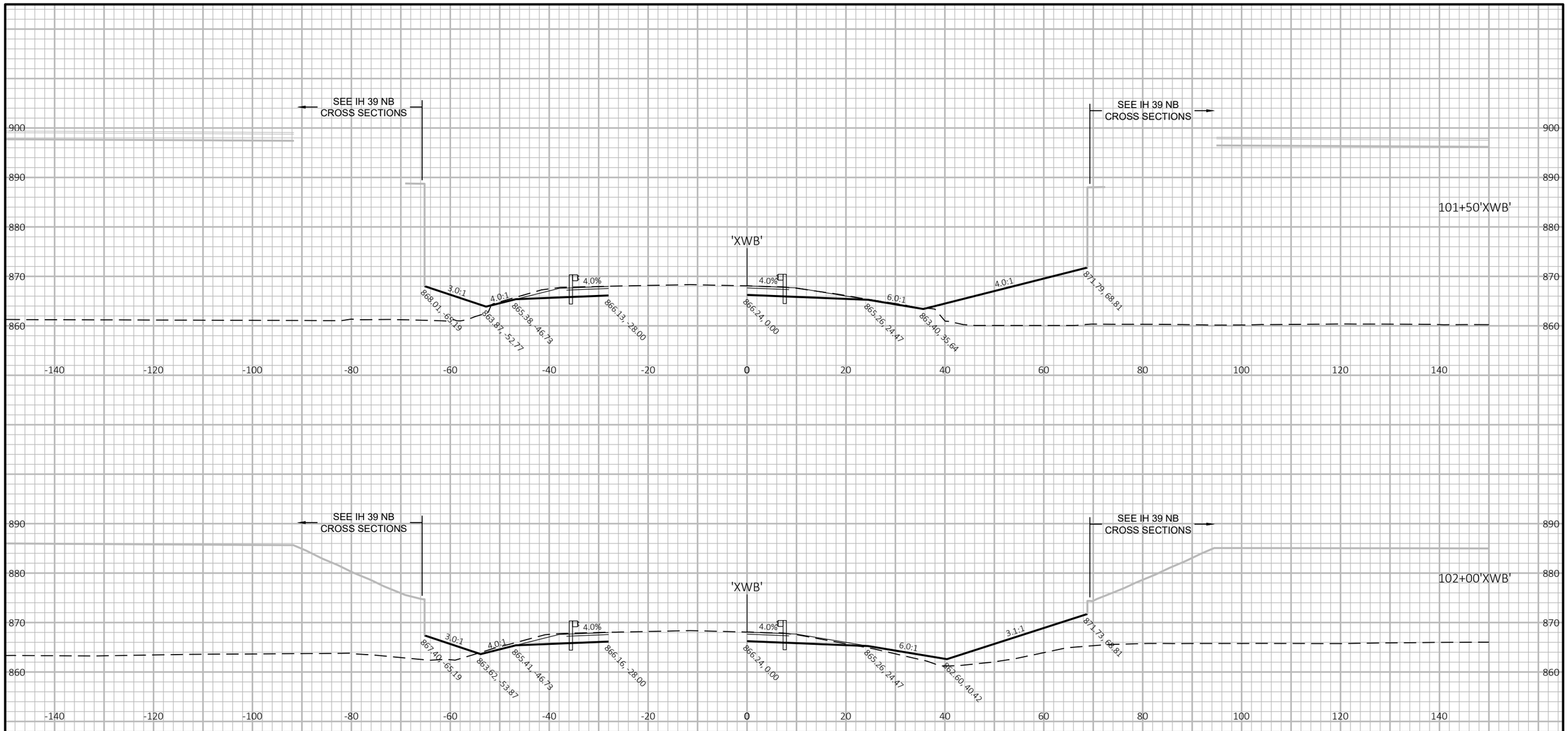
9

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: USH 12/18 WB	SHEET 636	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0902_XS_WB.DWG
LAYOUT NAME - 02

PLOT DATE : 9/25/2019 1:12 PM PLOT BY : KYLE CORNELIUS PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



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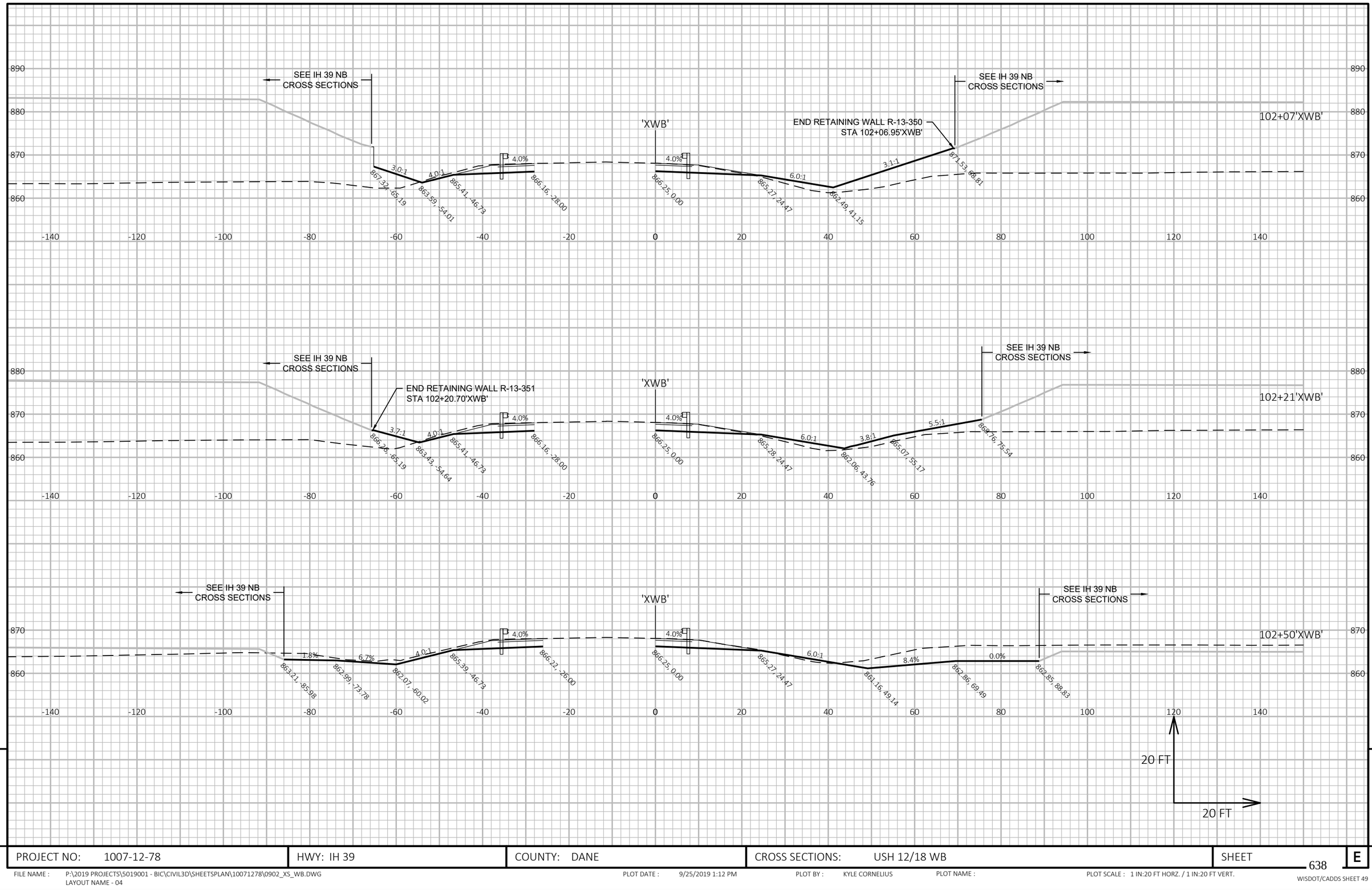
PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: USH 12/18 WB	SHEET 637	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0902_XS_WB.DWG
LAYOUT NAME - 03

PLOT DATE : 9/25/2019 1:12 PM PLOT BY : KYLE CORNELIUS PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

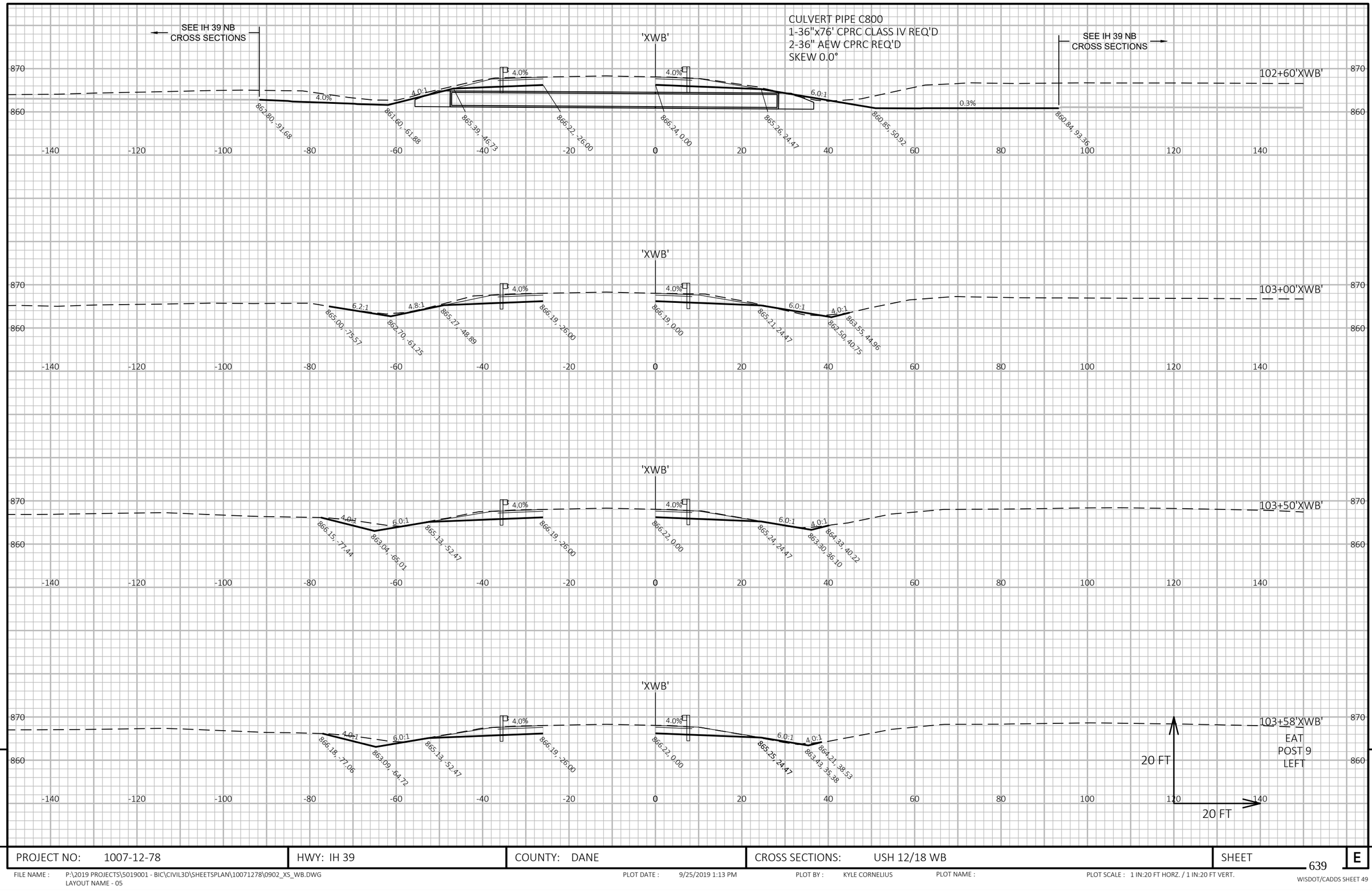


PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: USH 12/18 WB	SHEET 638 E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0902_XS_WB.DWG
LAYOUT NAME - 04

PLOT DATE : 9/25/2019 1:12 PM PLOT BY : KYLE CORNELIUS PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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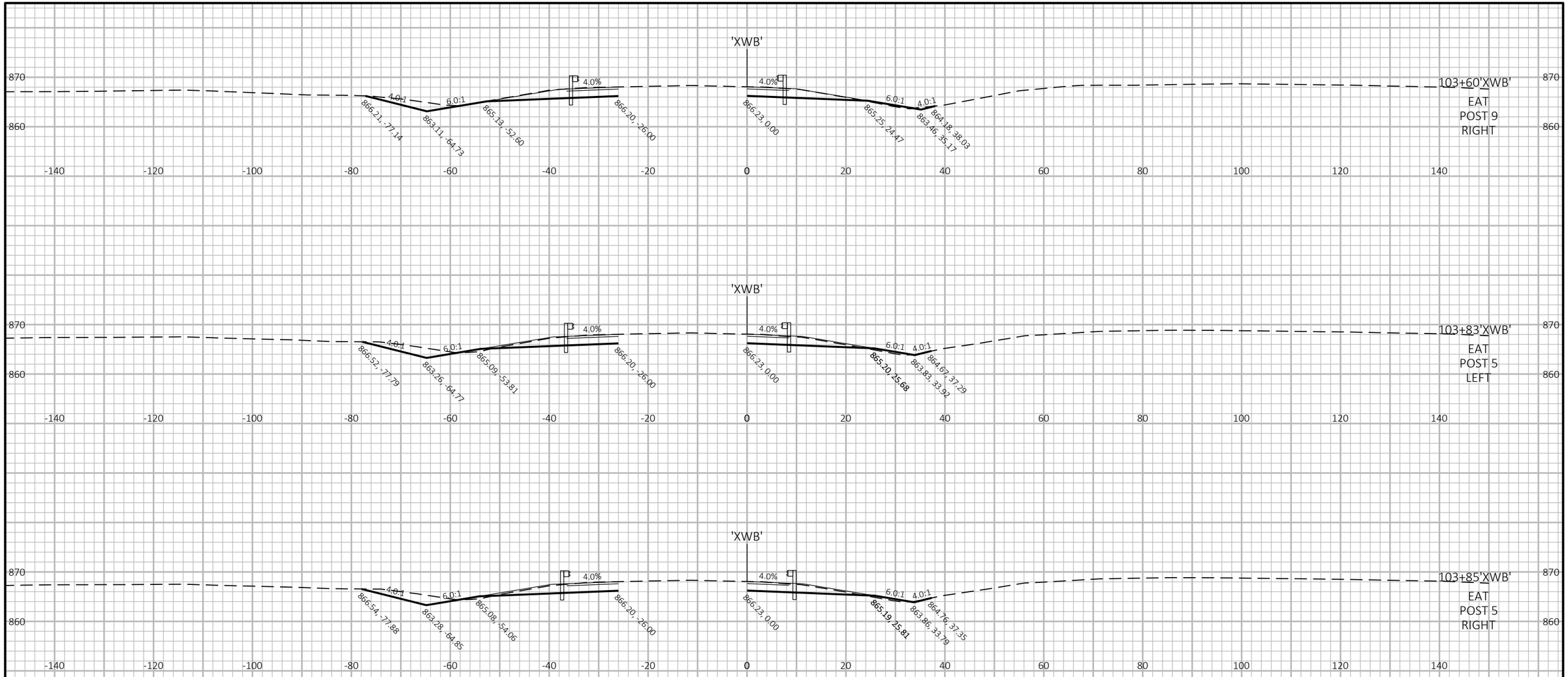
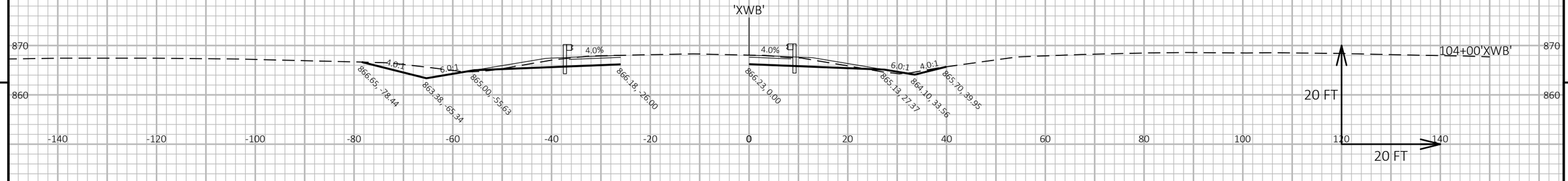
9

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: USH 12/18 WB	SHEET 639	E





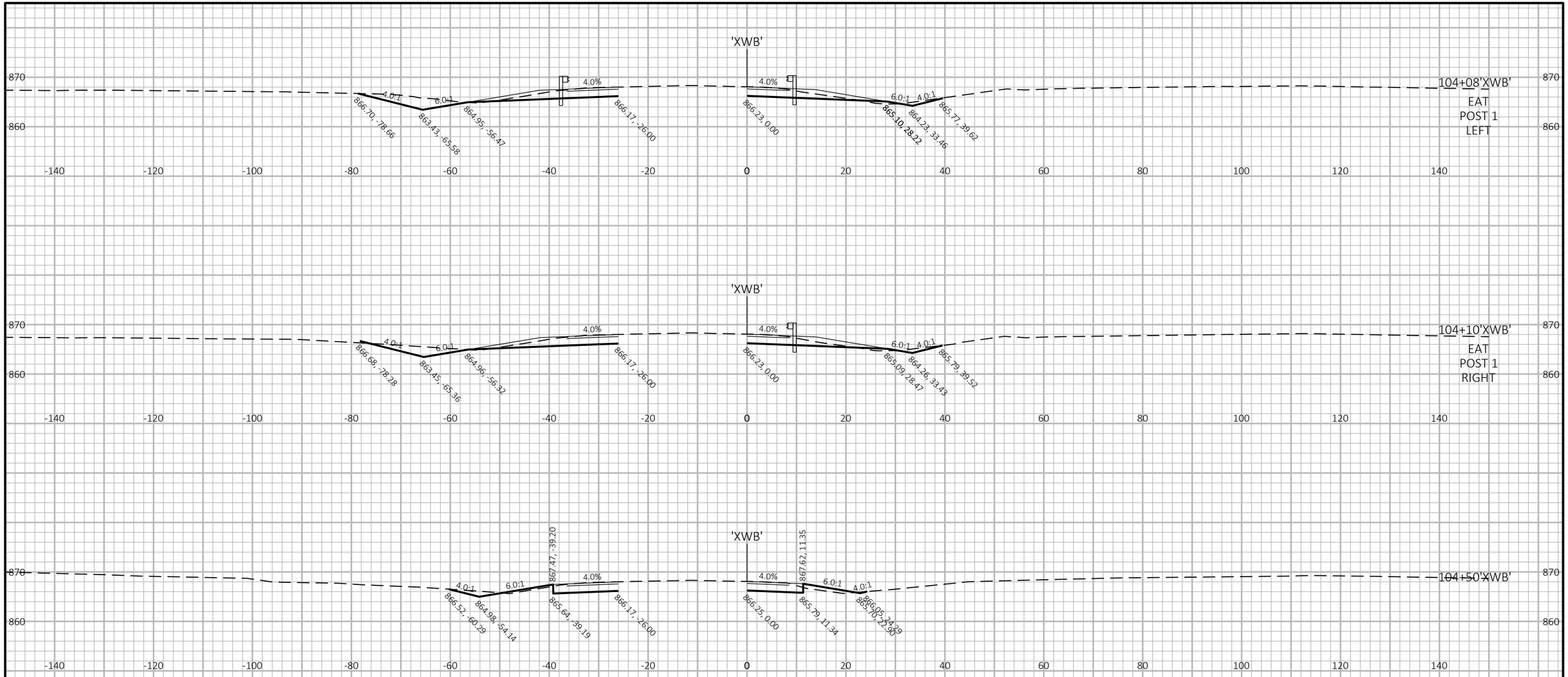
9

9

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: USH 12/18 WB	SHEET 640	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0902_XS_WB.DWG
LAYOUT NAME - 06

PLOT DATE : 9/25/2019 1:13 PM PLOT BY : KYLE CORNELIUS PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



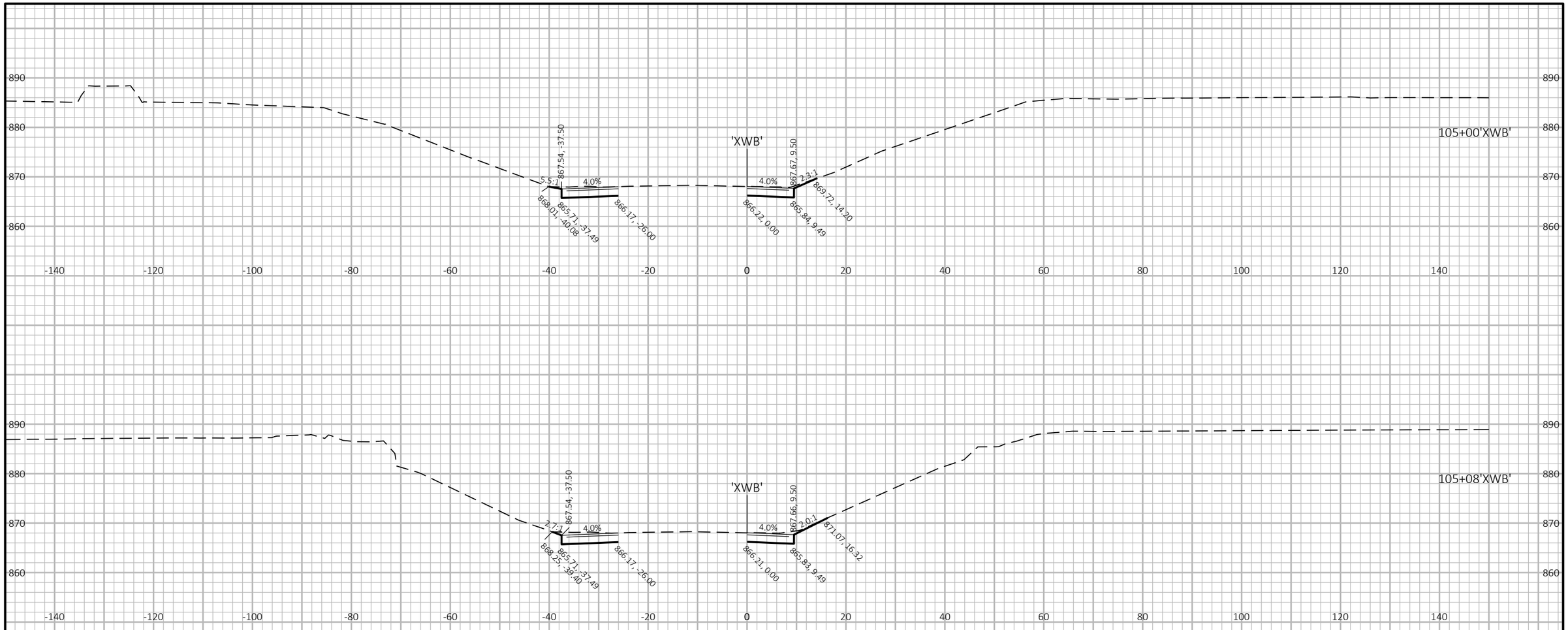
9

9

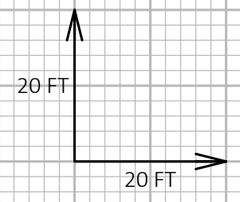
PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: USH 12/18 WB	SHEET 641	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0902_XS_WB.DWG
LAYOUT NAME - 07

PLOT DATE : 9/25/2019 1:13 PM PLOT BY : KYLE CORNELIUS PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



END SHOULDER RECONSTRUCTION
STA 105+08'XWB'
MATCH EXISTING



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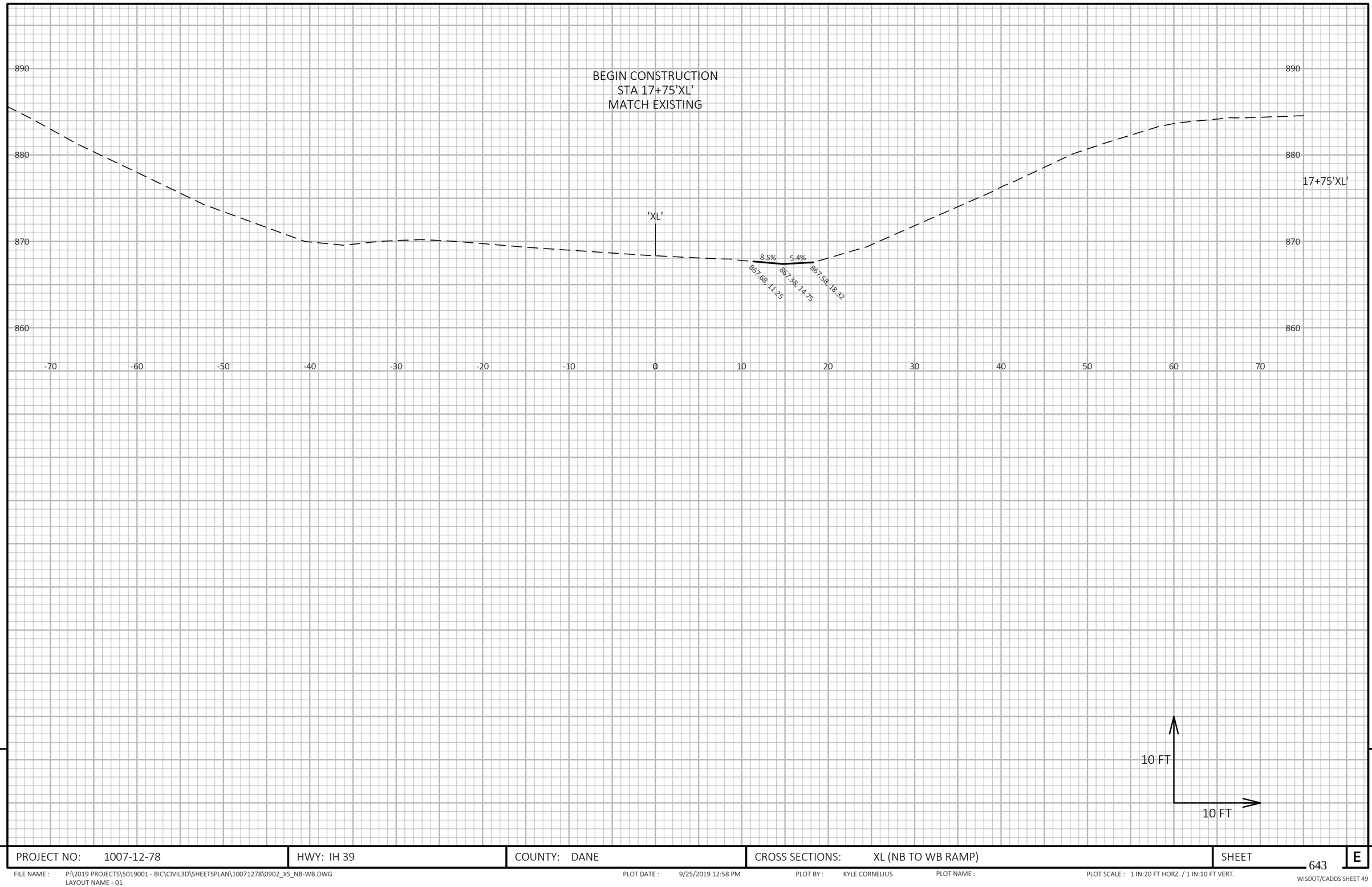
9

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: USH 12/18 WB	SHEET 642	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0902_XS_WB.DWG
LAYOUT NAME - 08

PLOT DATE : 9/25/2019 1:13 PM PLOT BY : KYLE CORNELIUS PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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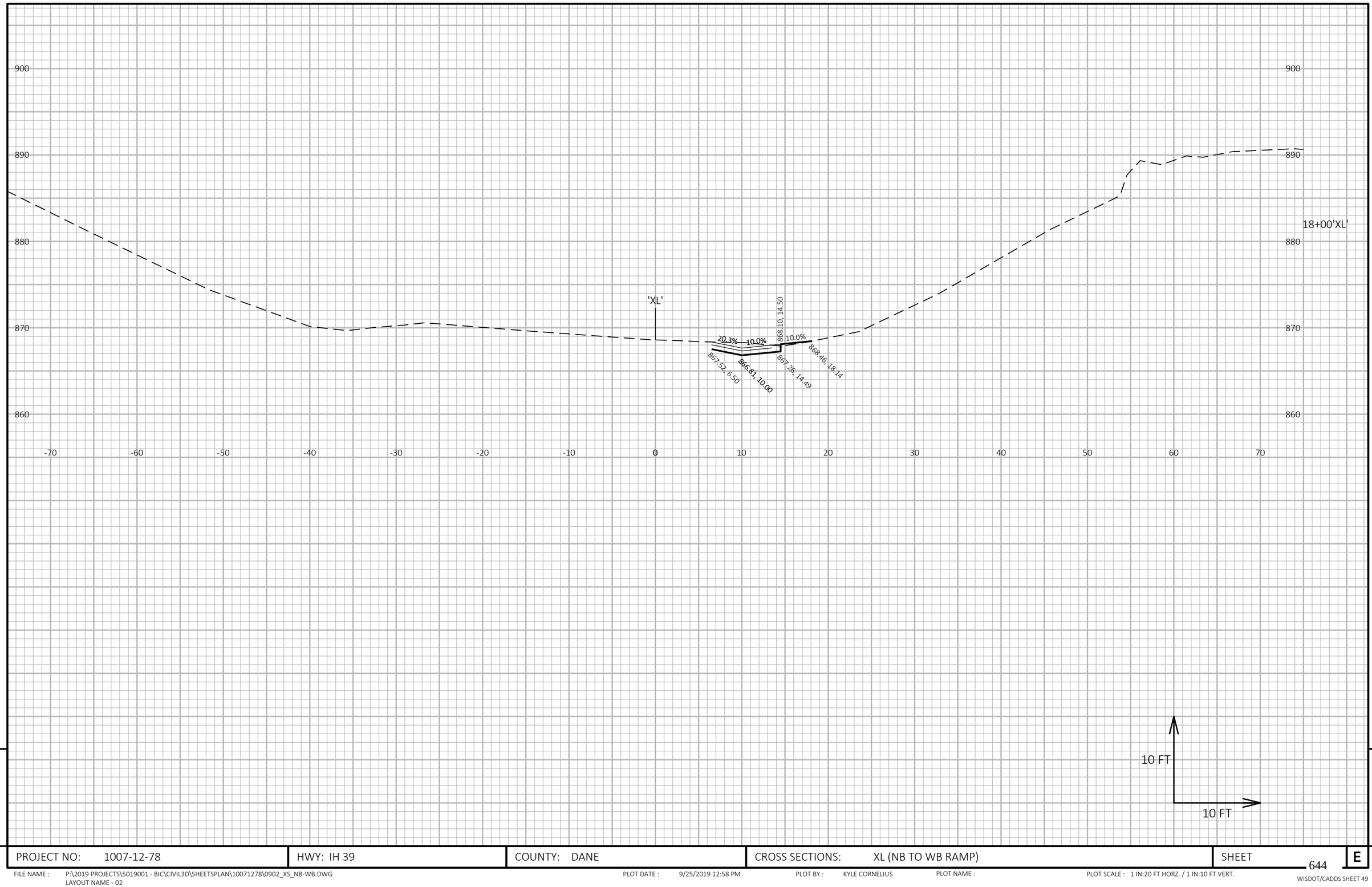
9

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: XL (NB TO WB RAMP)	SHEET 643	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0902_XS_NB-WB.DWG
LAYOUT NAME - 01

PLOT DATE : 9/25/2019 12:58 PM PLOT BY : KYLE CORNELIUS PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.



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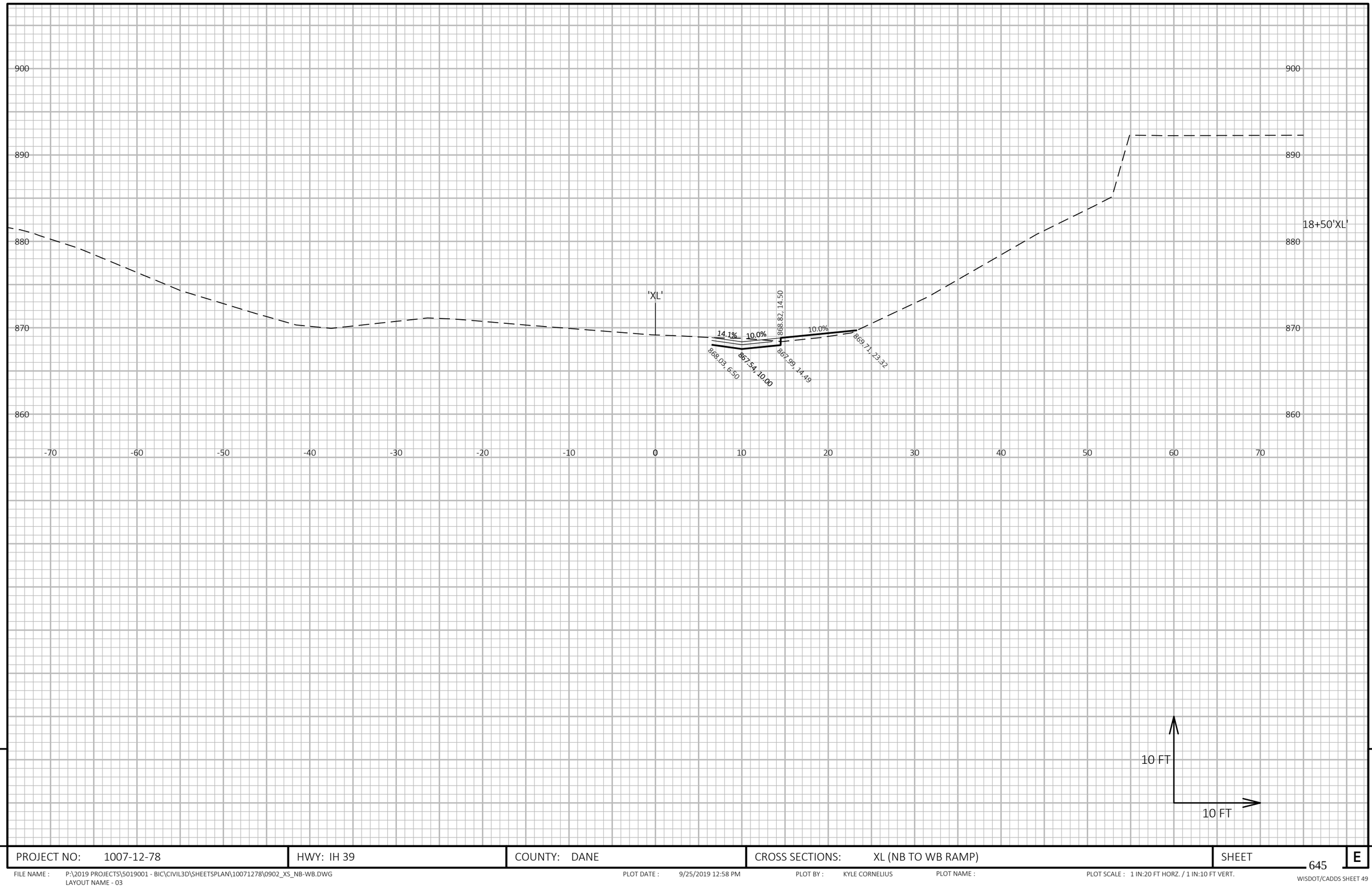
9

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: XL (NB TO WB RAMP)	SHEET 644	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0902_XS_NB-WB.DWG
LAYOUT NAME - 02

PLOT DATE : 9/25/2019 12:58 PM PLOT BY : KYLE CORNELIUS PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.



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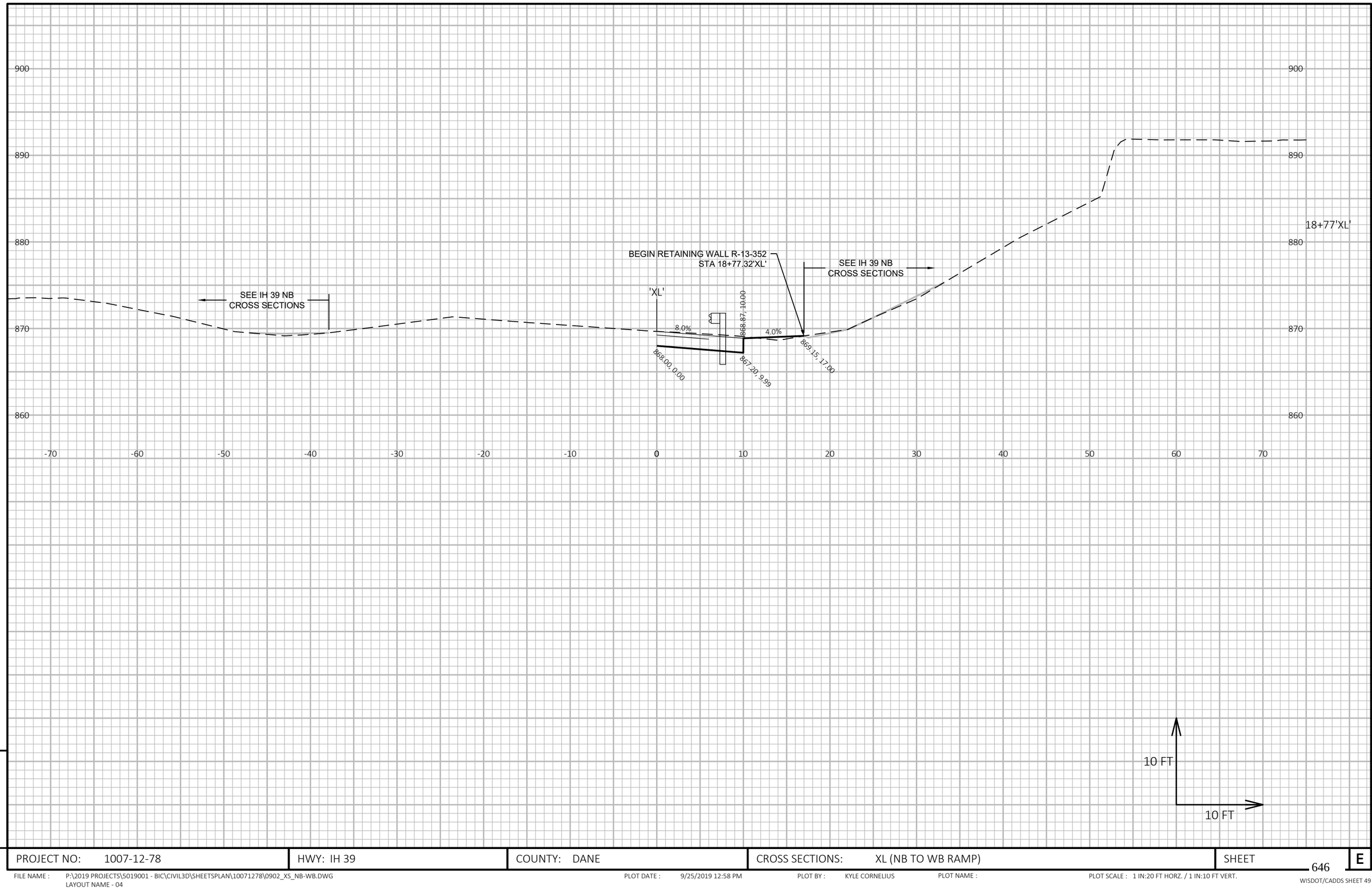
9

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: XL (NB TO WB RAMP)	SHEET 645	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0902_XS_NB-WB.DWG
LAYOUT NAME - 03

PLOT DATE : 9/25/2019 12:58 PM PLOT BY : KYLE CORNELIUS PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.



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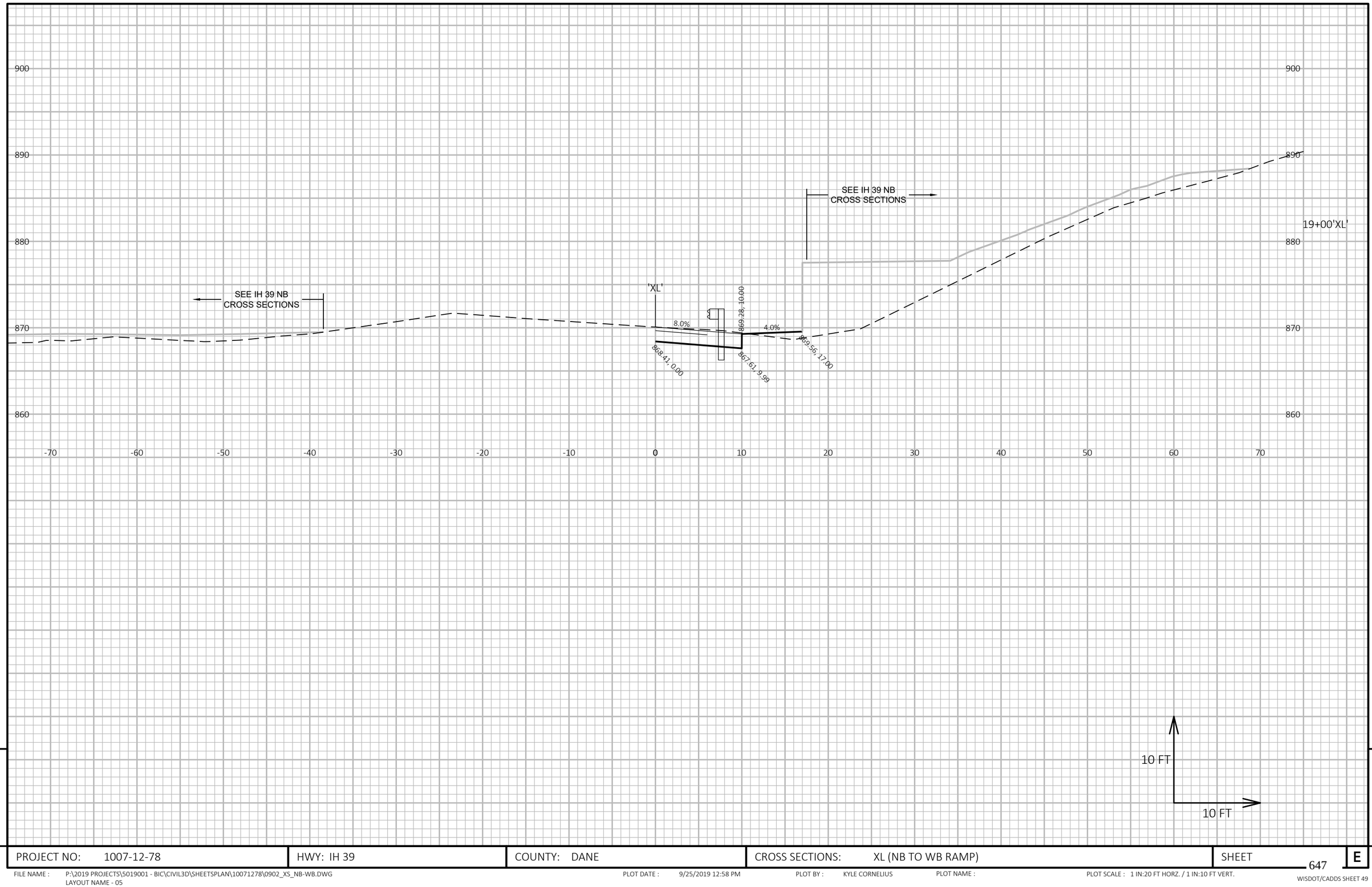
PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: XL (NB TO WB RAMP)	SHEET 646	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0902_XS_NB-WB.DWG
LAYOUT NAME - 04

PLOT DATE : 9/25/2019 12:58 PM PLOT BY : KYLE CORNELIUS PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.



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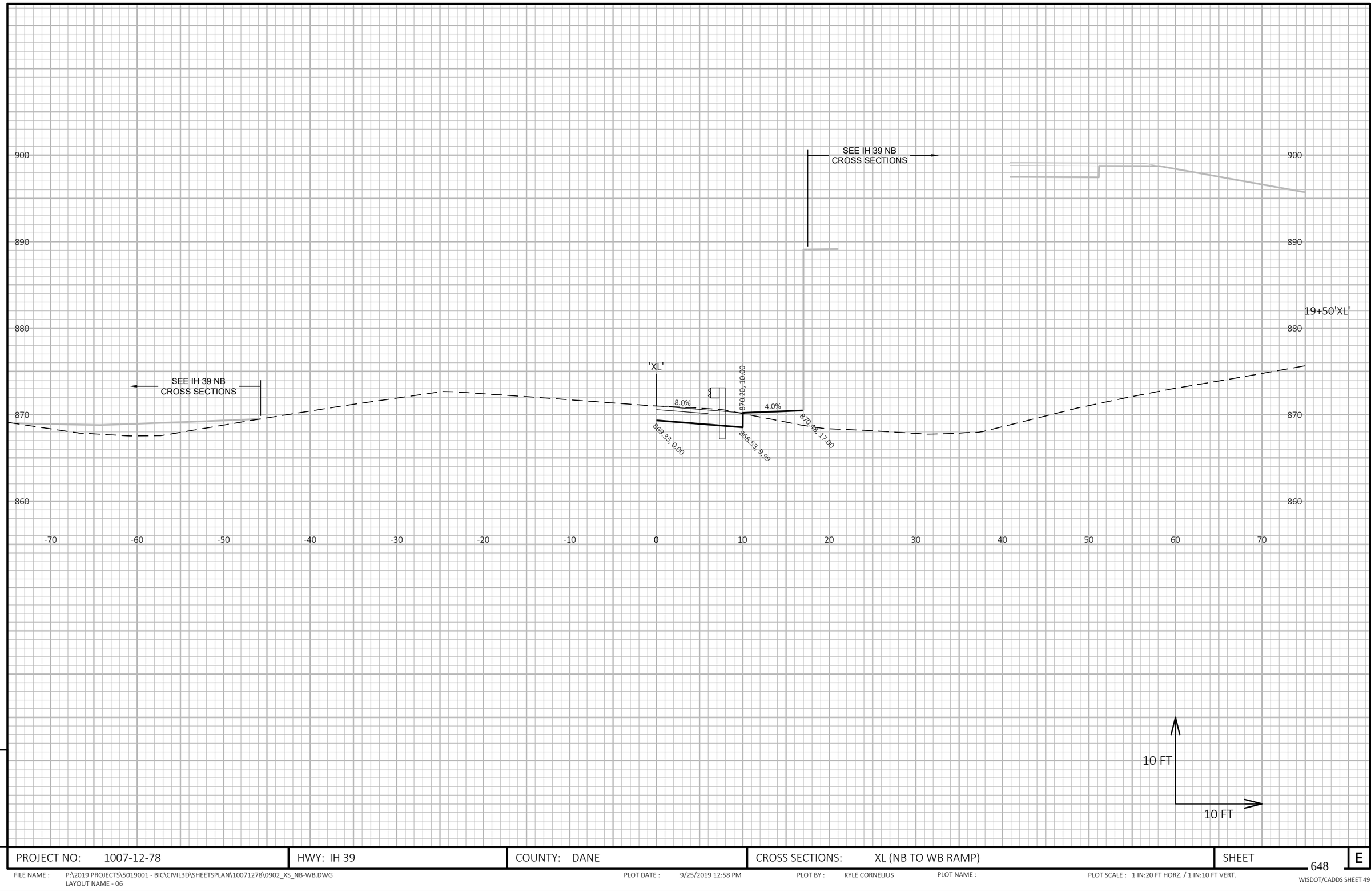
9

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: XL (NB TO WB RAMP)	SHEET 647	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0902_XS_NB-WB.DWG
LAYOUT NAME - 05

PLOT DATE : 9/25/2019 12:58 PM PLOT BY : KYLE CORNELIUS PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.



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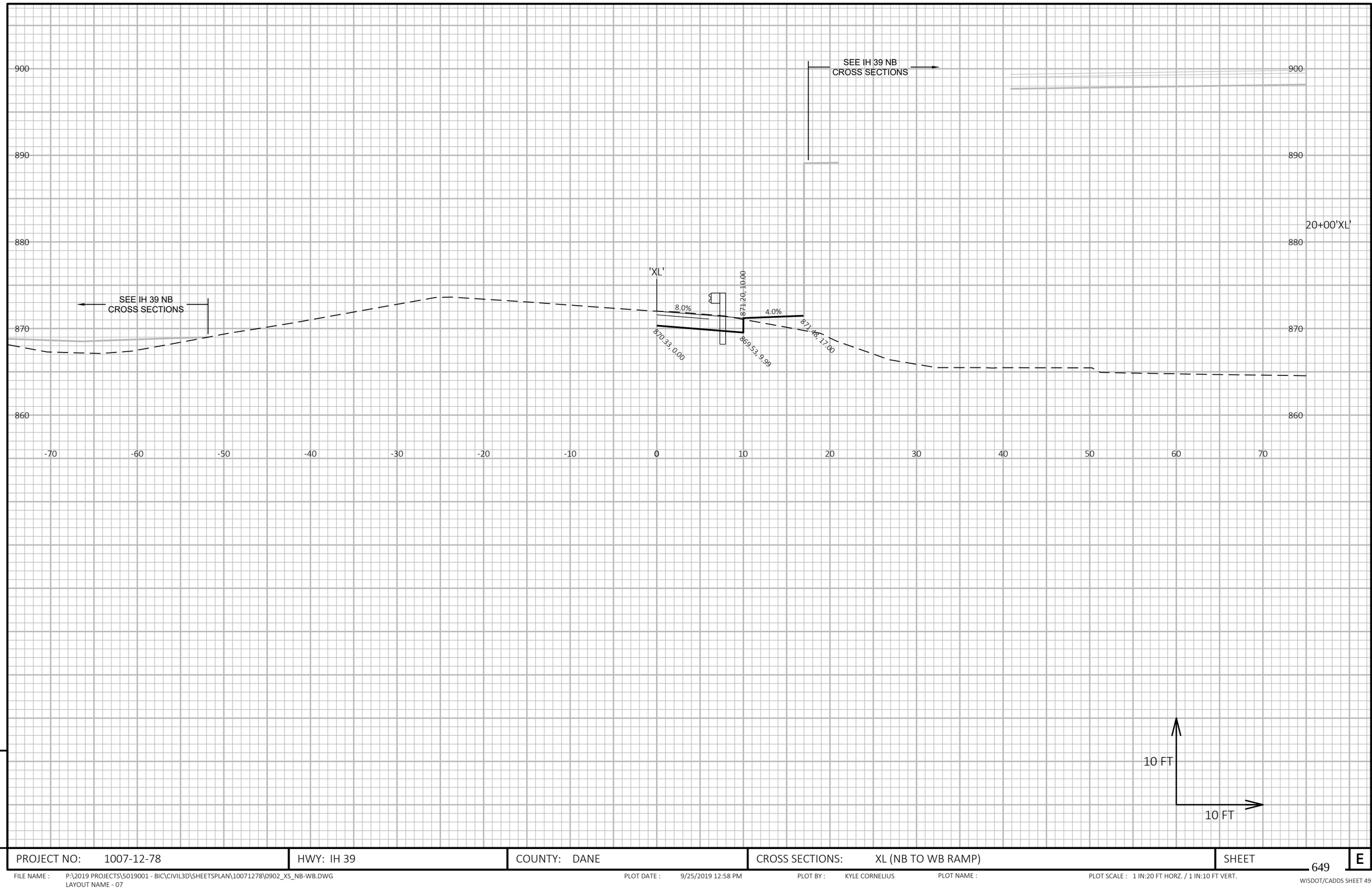
PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: XL (NB TO WB RAMP)	SHEET 648	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0902_XS_NB-WB.DWG
LAYOUT NAME - 06

PLOT DATE : 9/25/2019 12:58 PM PLOT BY : KYLE CORNELIUS PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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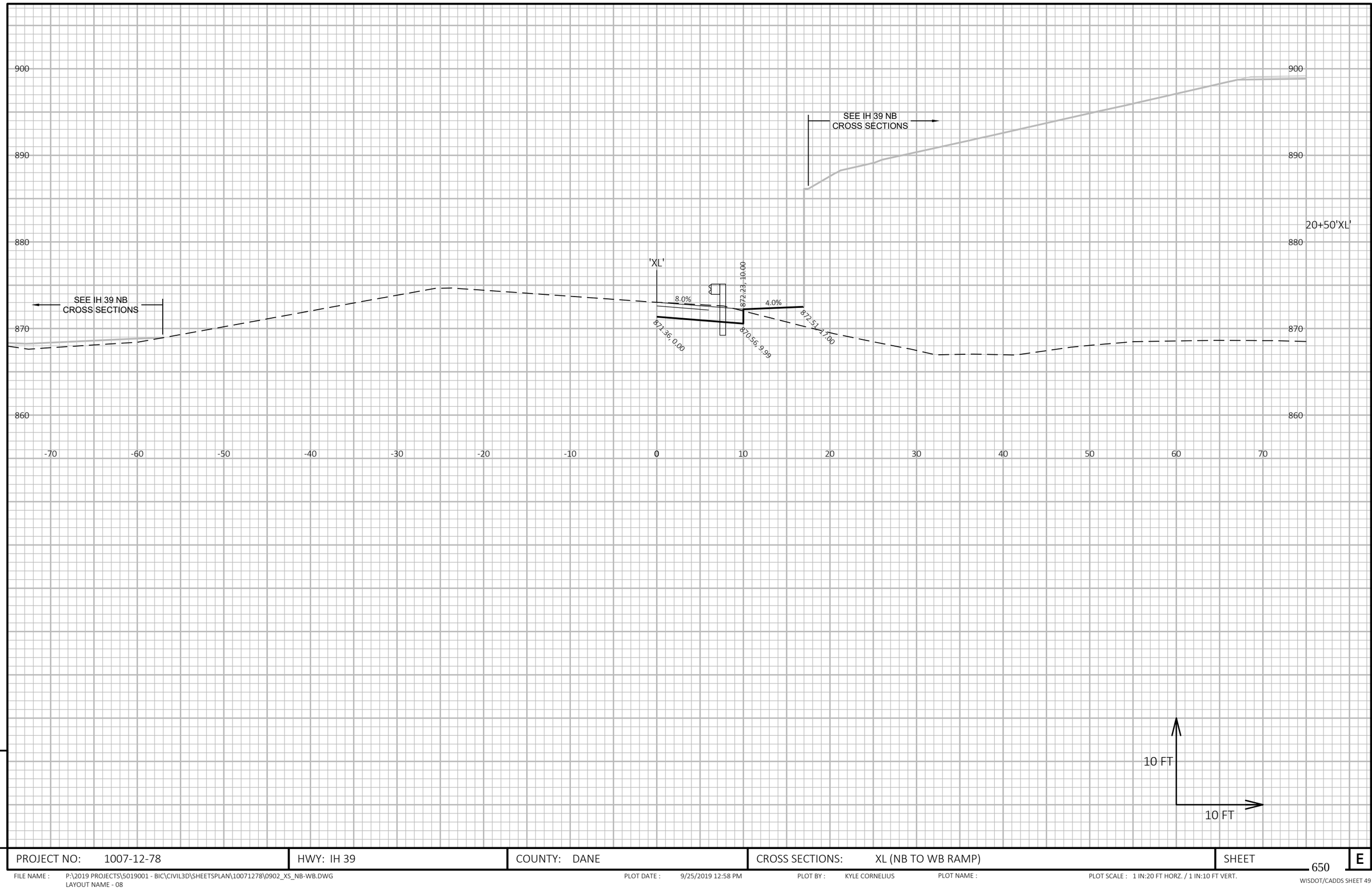
9

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: XL (NB TO WB RAMP)	SHEET 649	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0902_XS_NB-WB.DWG
LAYOUT NAME - 07

PLOT DATE : 9/25/2019 12:58 PM PLOT BY : KYLE CORNELIUS PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.



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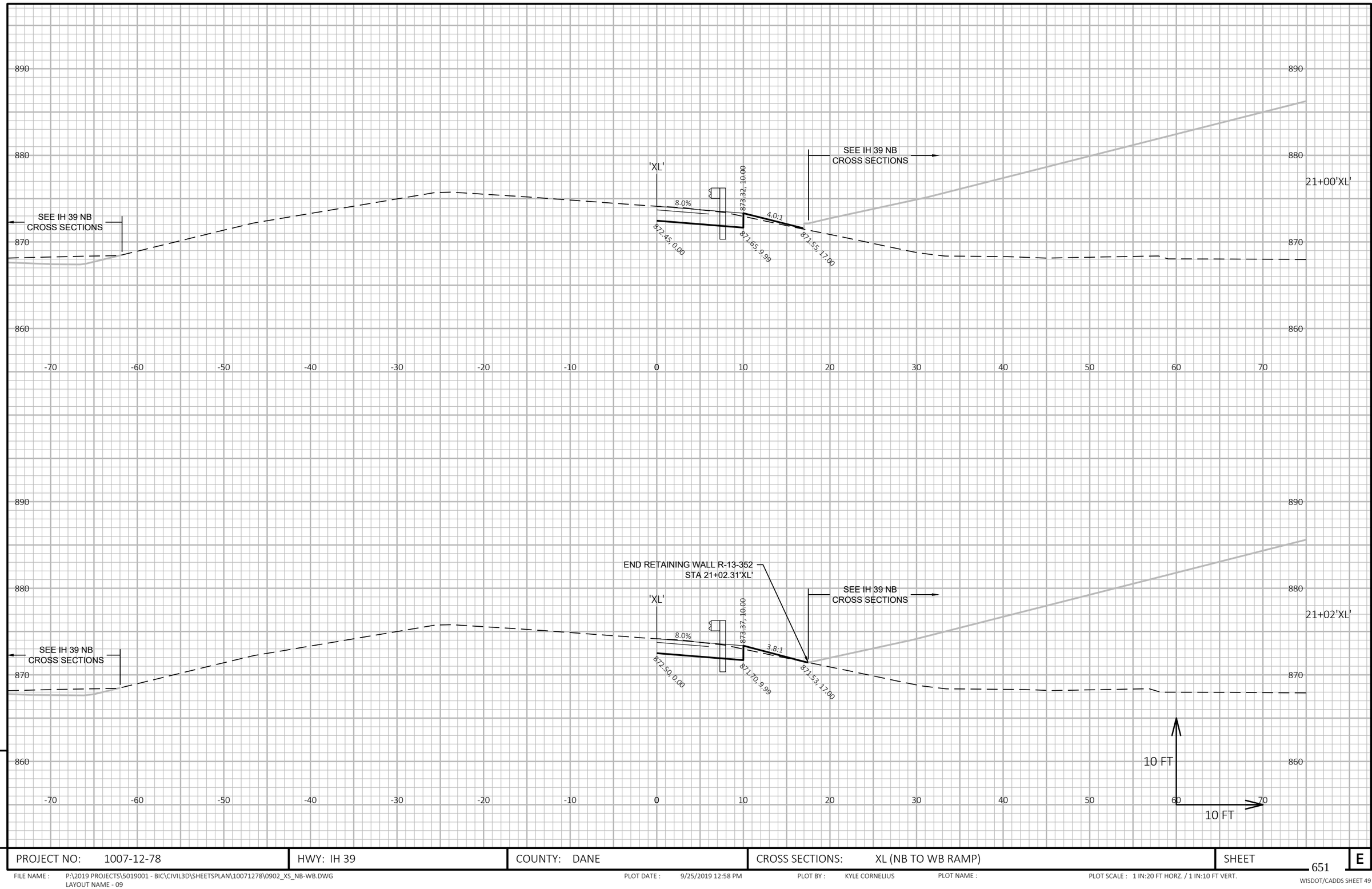
9

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: XL (NB TO WB RAMP)	SHEET 650	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0902_XS_NB-WB.DWG
LAYOUT NAME - 08

PLOT DATE : 9/25/2019 12:58 PM PLOT BY : KYLE CORNELIUS PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.



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PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: XL (NB TO WB RAMP)	SHEET 651	E

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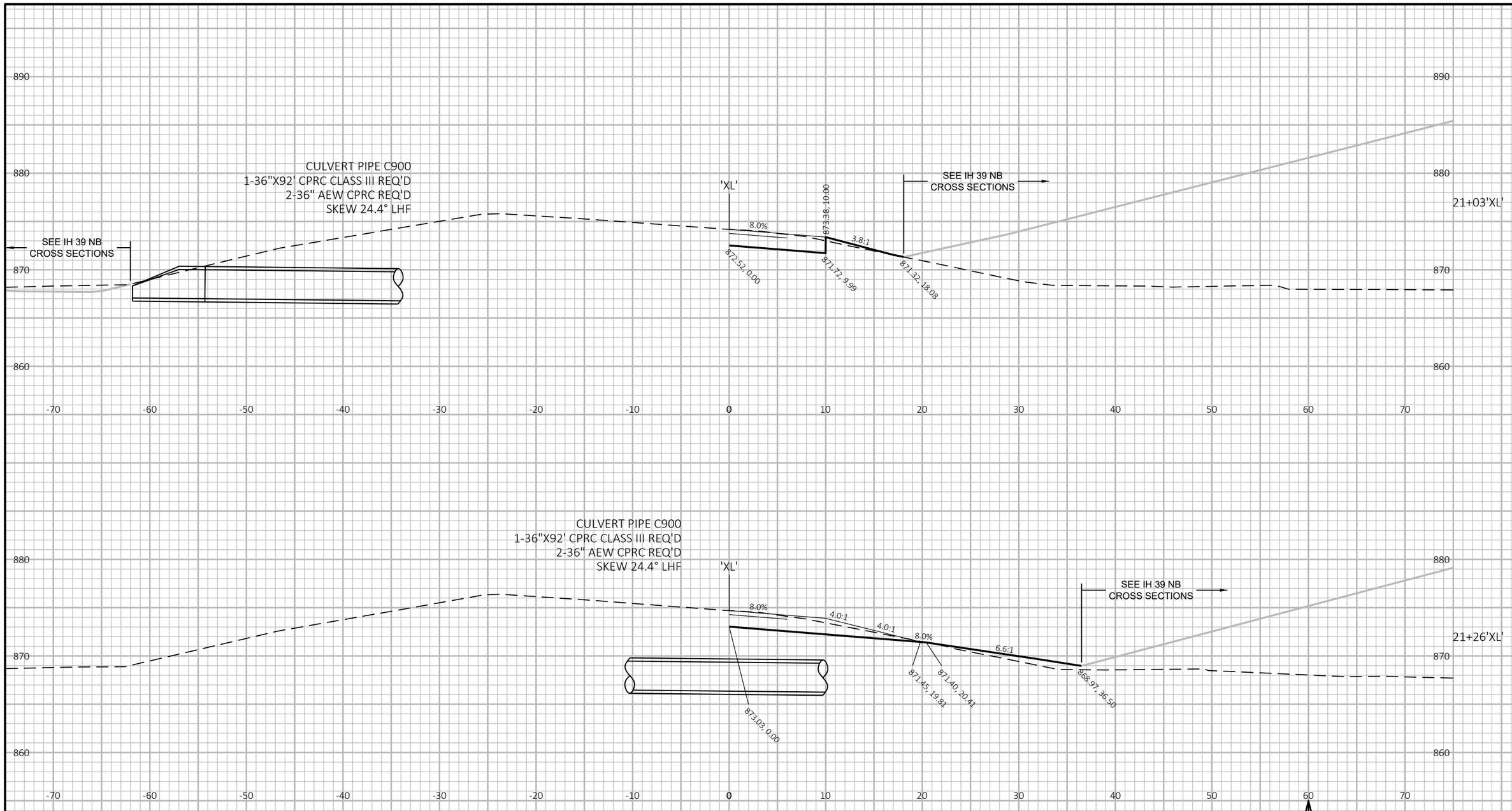
FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0902_XS_NB-WB.DWG
LAYOUT NAME - 09

PLOT DATE : 9/25/2019 12:58 PM PLOT BY : KYLE CORNELIUS PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.



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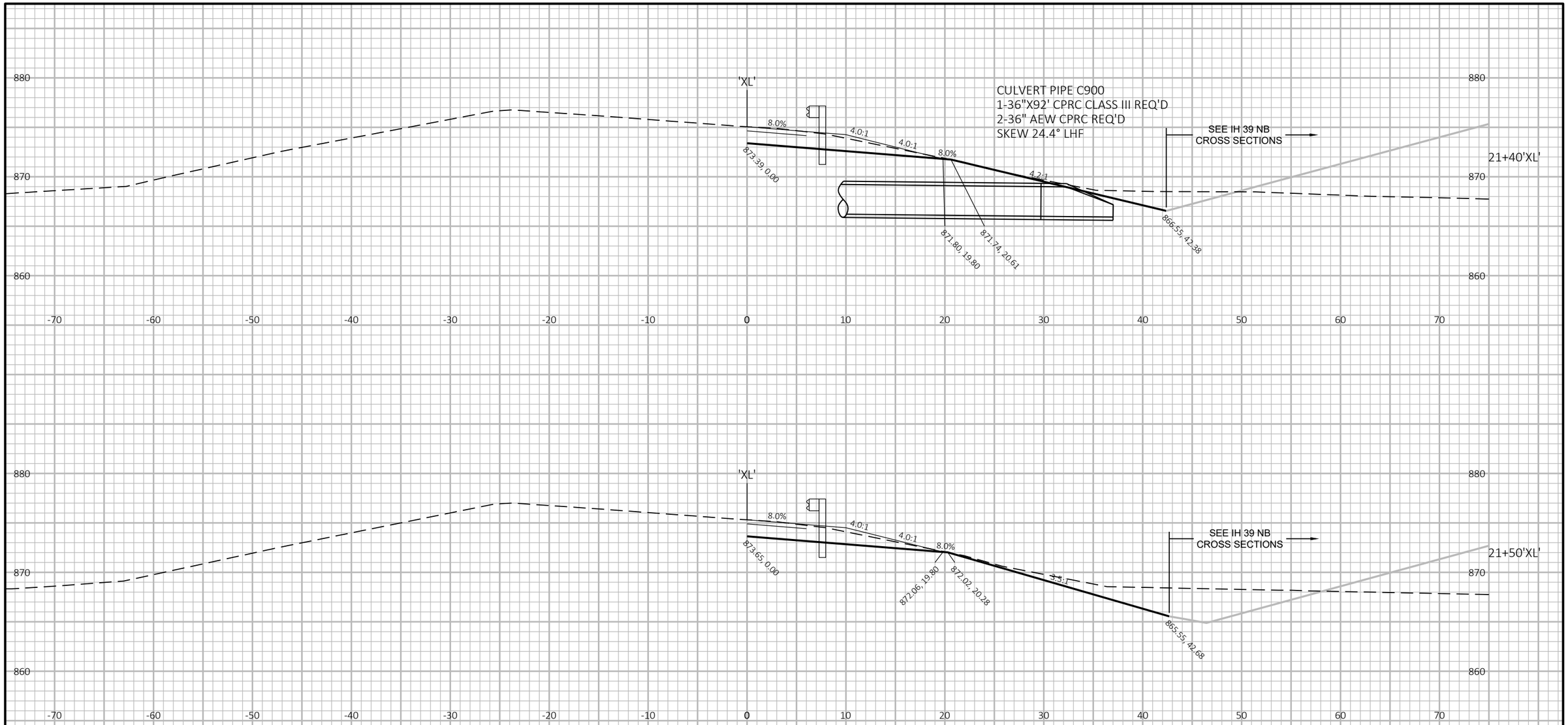
9

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: XL (NB TO WB RAMP)	SHEET 652	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0902_XS_NB-WB.DWG
LAYOUT NAME - 10

PLOT DATE : 9/25/2019 12:58 PM PLOT BY : KYLE CORNELIUS PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.



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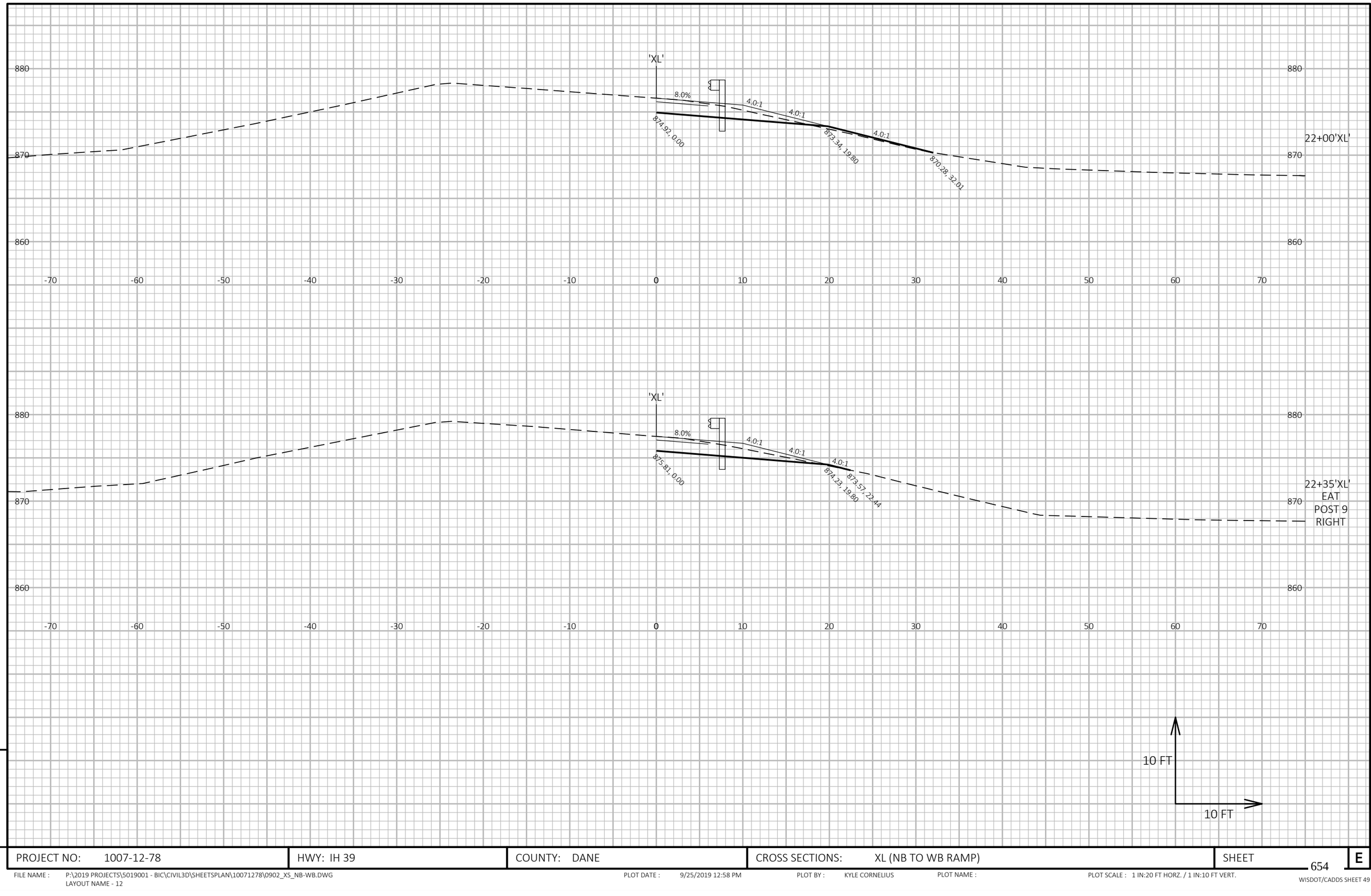
PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: XL (NB TO WB RAMP)	SHEET 653	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0902_XS_NB-WB.DWG
LAYOUT NAME - 11

PLOT DATE : 9/25/2019 12:58 PM PLOT BY : KYLE CORNELIUS PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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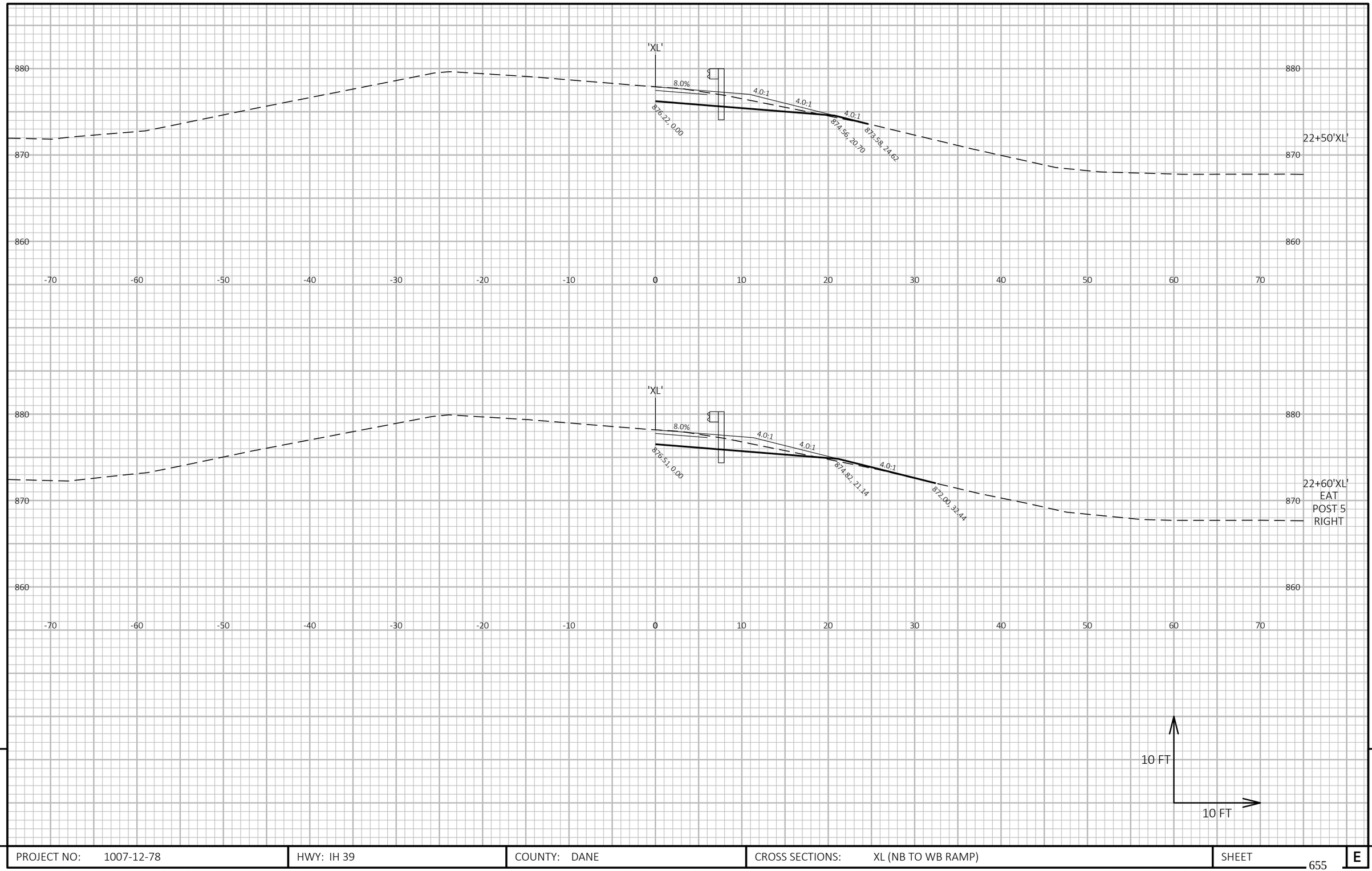
9

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: XL (NB TO WB RAMP)	SHEET 654	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0902_XS_NB-WB.DWG
LAYOUT NAME - 12

PLOT DATE : 9/25/2019 12:58 PM PLOT BY : KYLE CORNELIUS PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.



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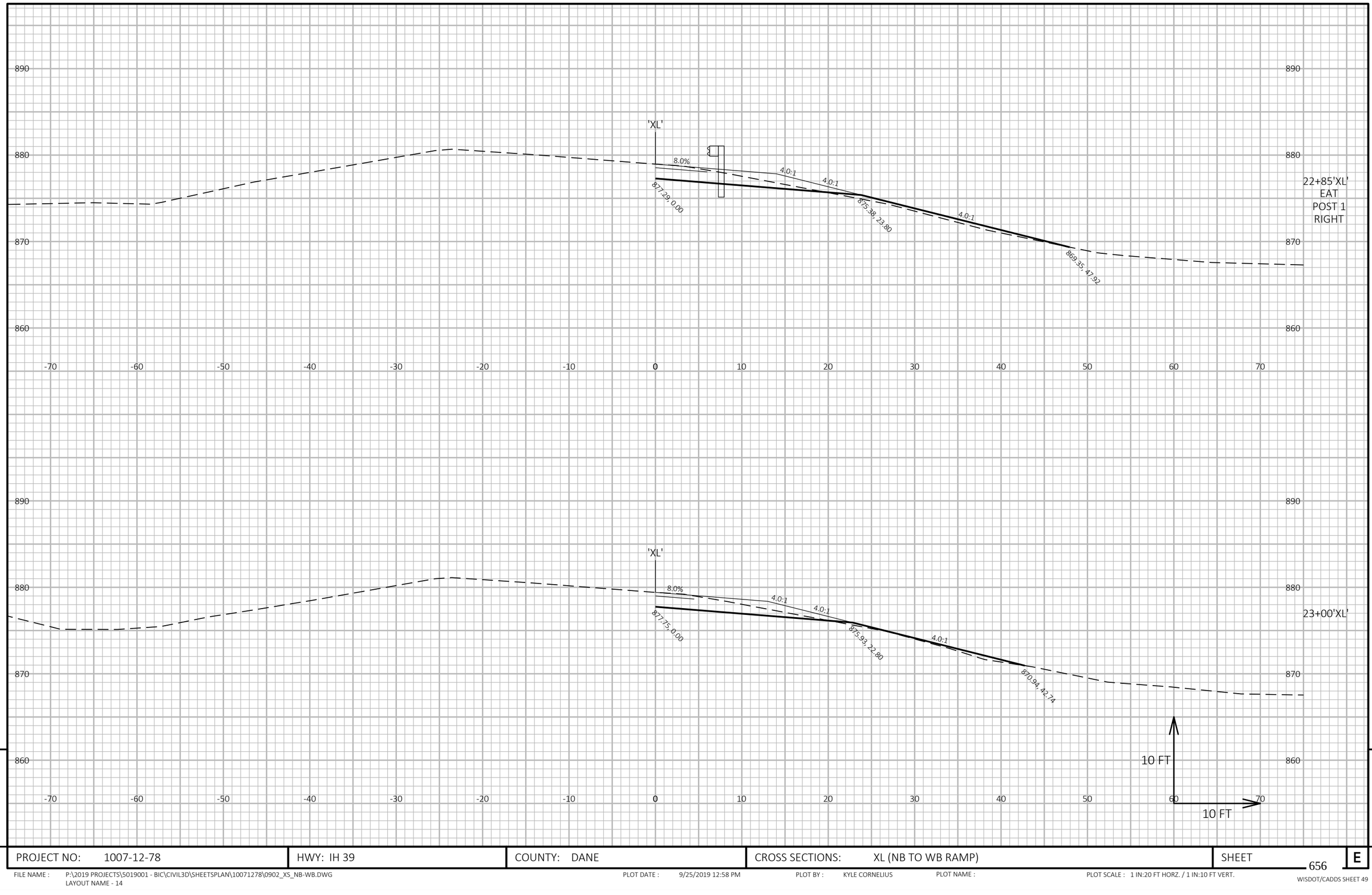
9

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: XL (NB TO WB RAMP)	SHEET 655	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0902_XS_NB-WB.DWG
LAYOUT NAME - 13

PLOT DATE : 9/25/2019 12:58 PM PLOT BY : KYLE CORNELIUS PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.



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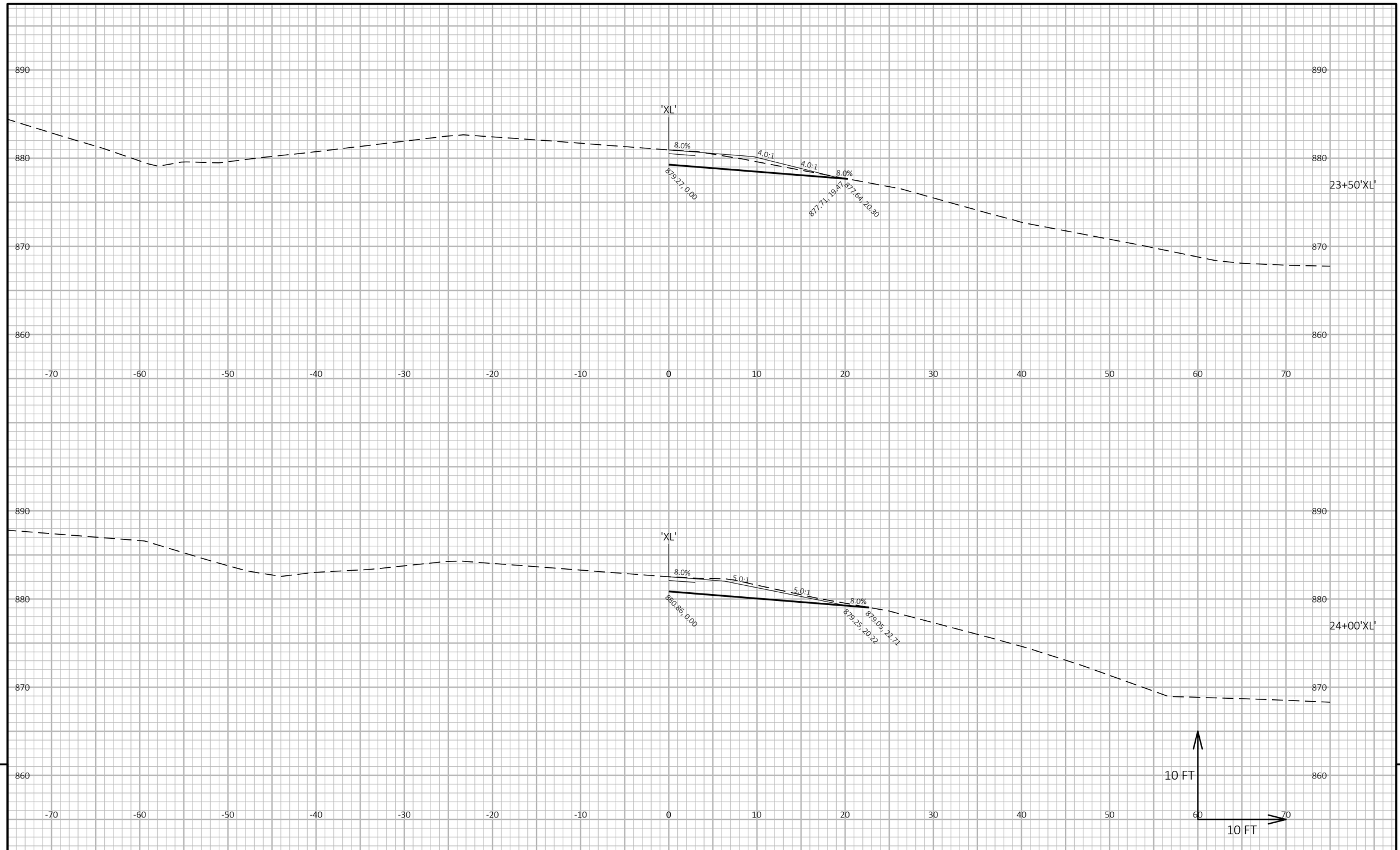
9

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: XL (NB TO WB RAMP)	SHEET 656	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0902_XS_NB-WB.DWG
LAYOUT NAME - 14

PLOT DATE : 9/25/2019 12:58 PM PLOT BY : KYLE CORNELIUS PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.



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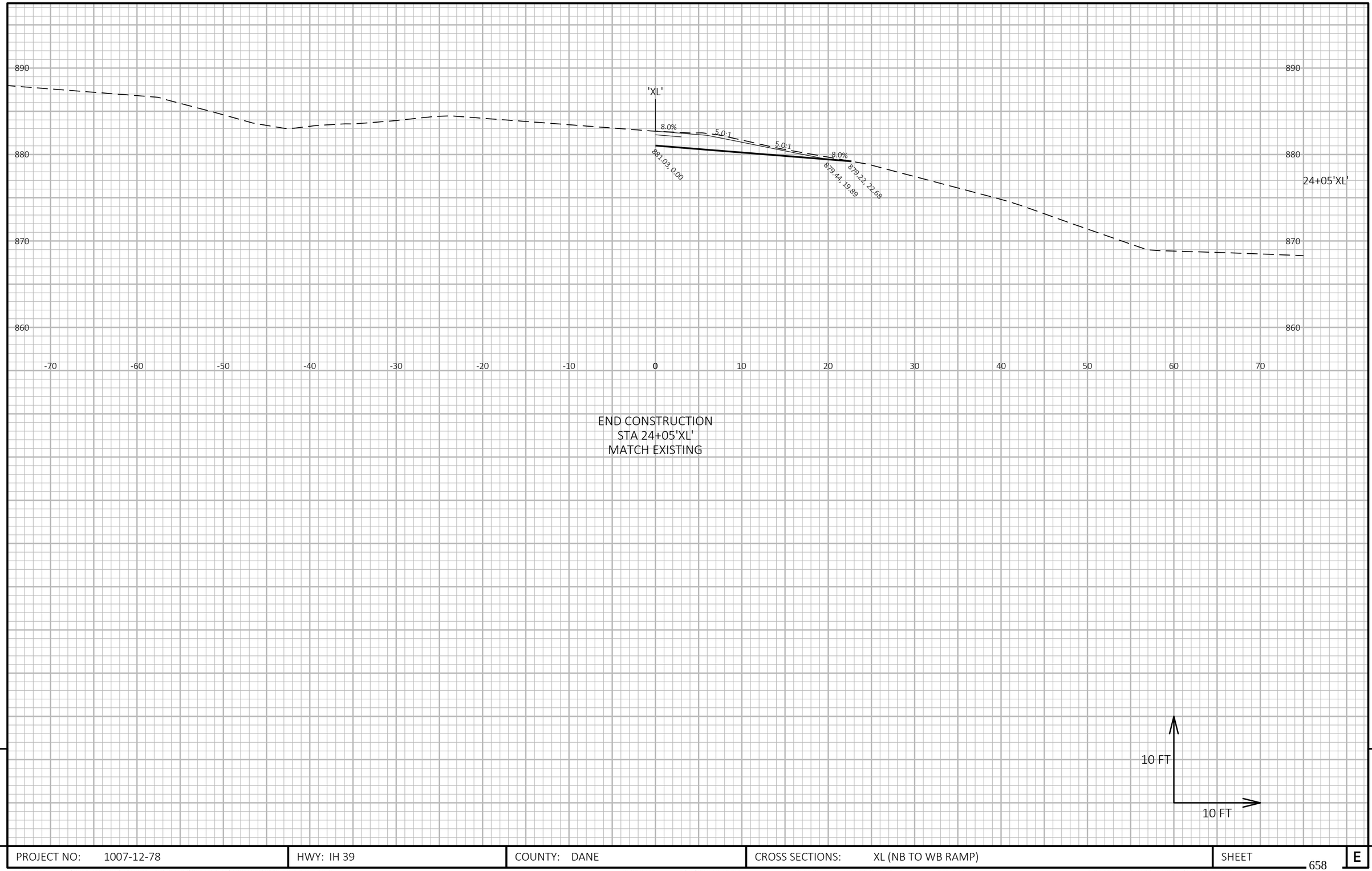
9

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: XL (NB TO WB RAMP)	SHEET 657	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0902_XS_NB-WB.DWG
LAYOUT NAME - 15

PLOT DATE : 9/25/2019 12:58 PM PLOT BY : KYLE CORNELIUS PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.



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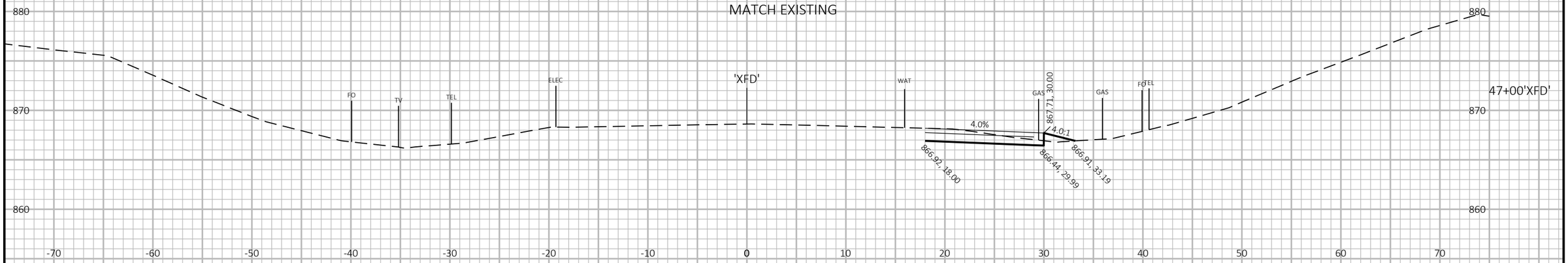
9

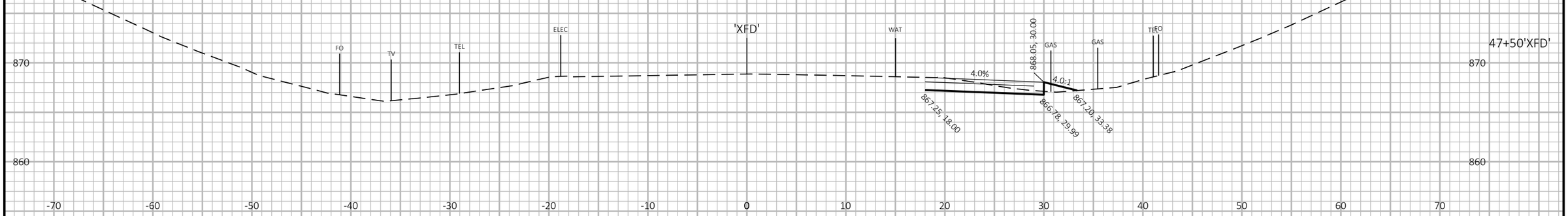
PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: XL (NB TO WB RAMP)	SHEET 658	E

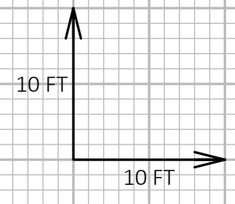
FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0902_XS_NB-WB.DWG
LAYOUT NAME - 16

PLOT DATE : 9/25/2019 12:58 PM PLOT BY : KYLE CORNELIUS PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

BEGIN CONSTRUCTION
STA 47+00'XFD'
MATCH EXISTING







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9

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: FEMRITE DR	SHEET 659	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0902_XS_FD.DWG
LAYOUT NAME - 01

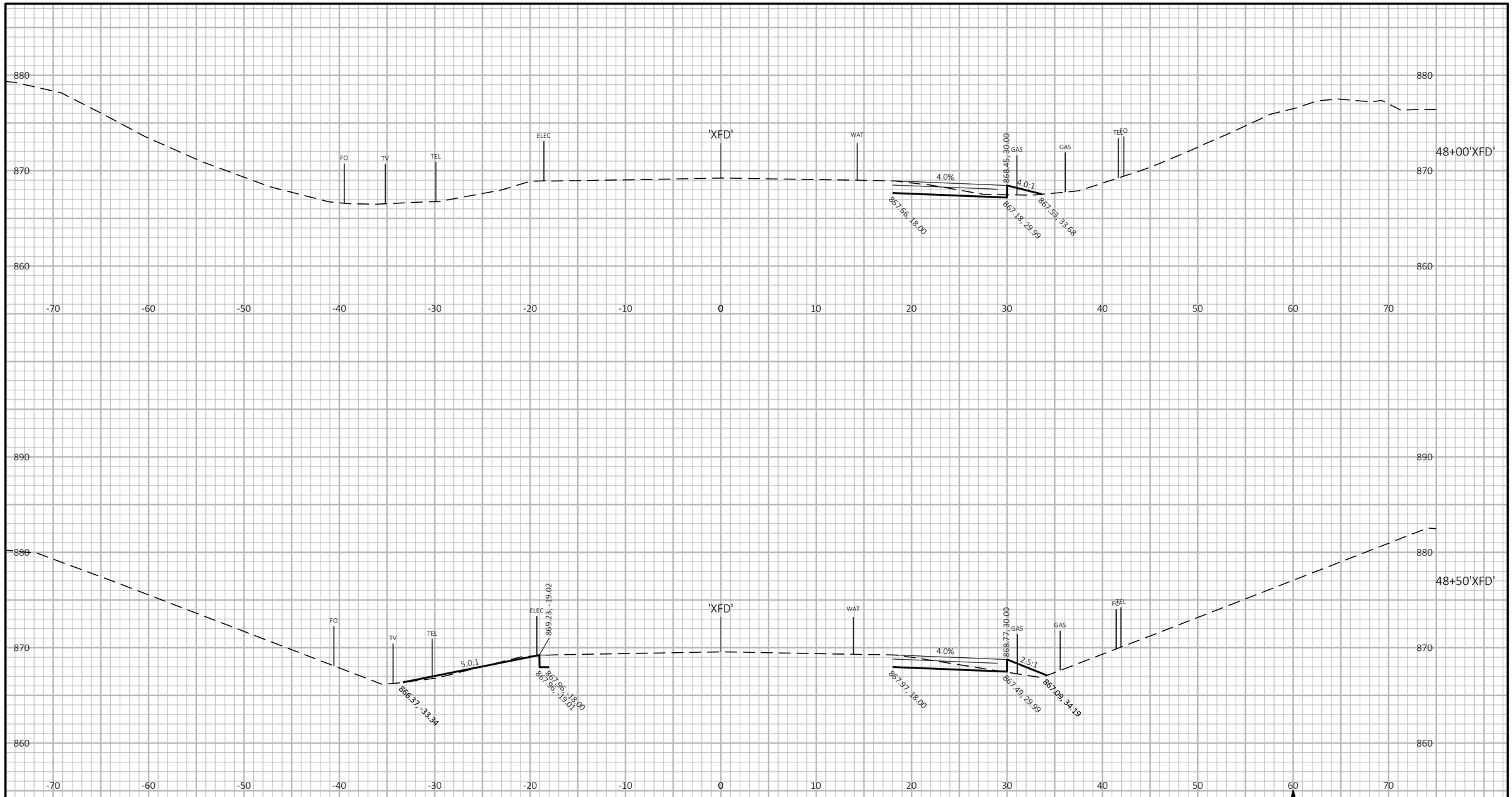
PLOT DATE : 8/1/2019 12:22 AM

PLOT BY : MATTHEW WISWELL

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: FEMRITE DR	SHEET 660	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0902_XS_FD.DWG
LAYOUT NAME - 02

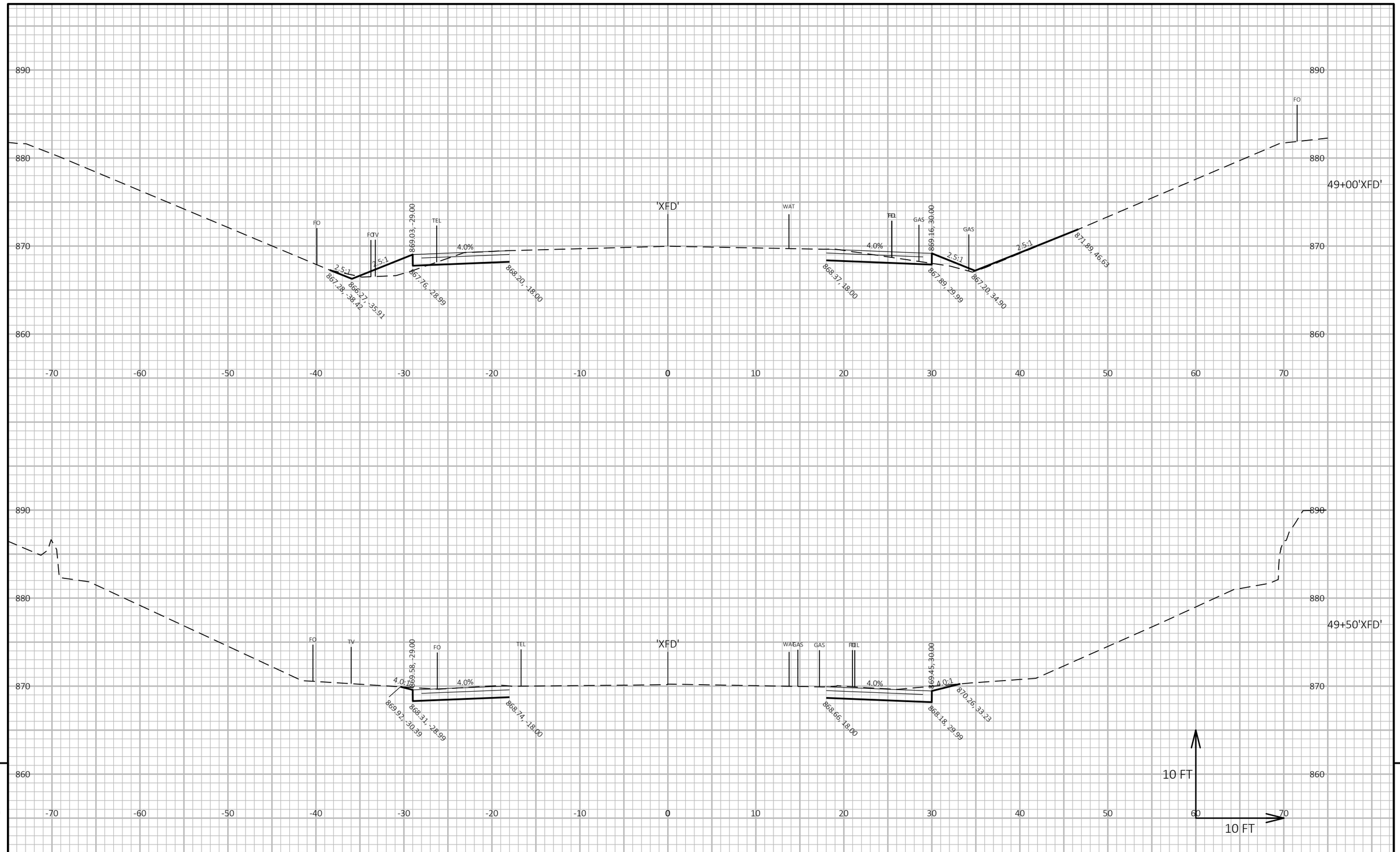
PLOT DATE : 8/1/2019 12:22 AM

PLOT BY : MATTHEW WISWELL

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: FEMRITE DR	SHEET 661	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0902_XS_FD.DWG
LAYOUT NAME - 03

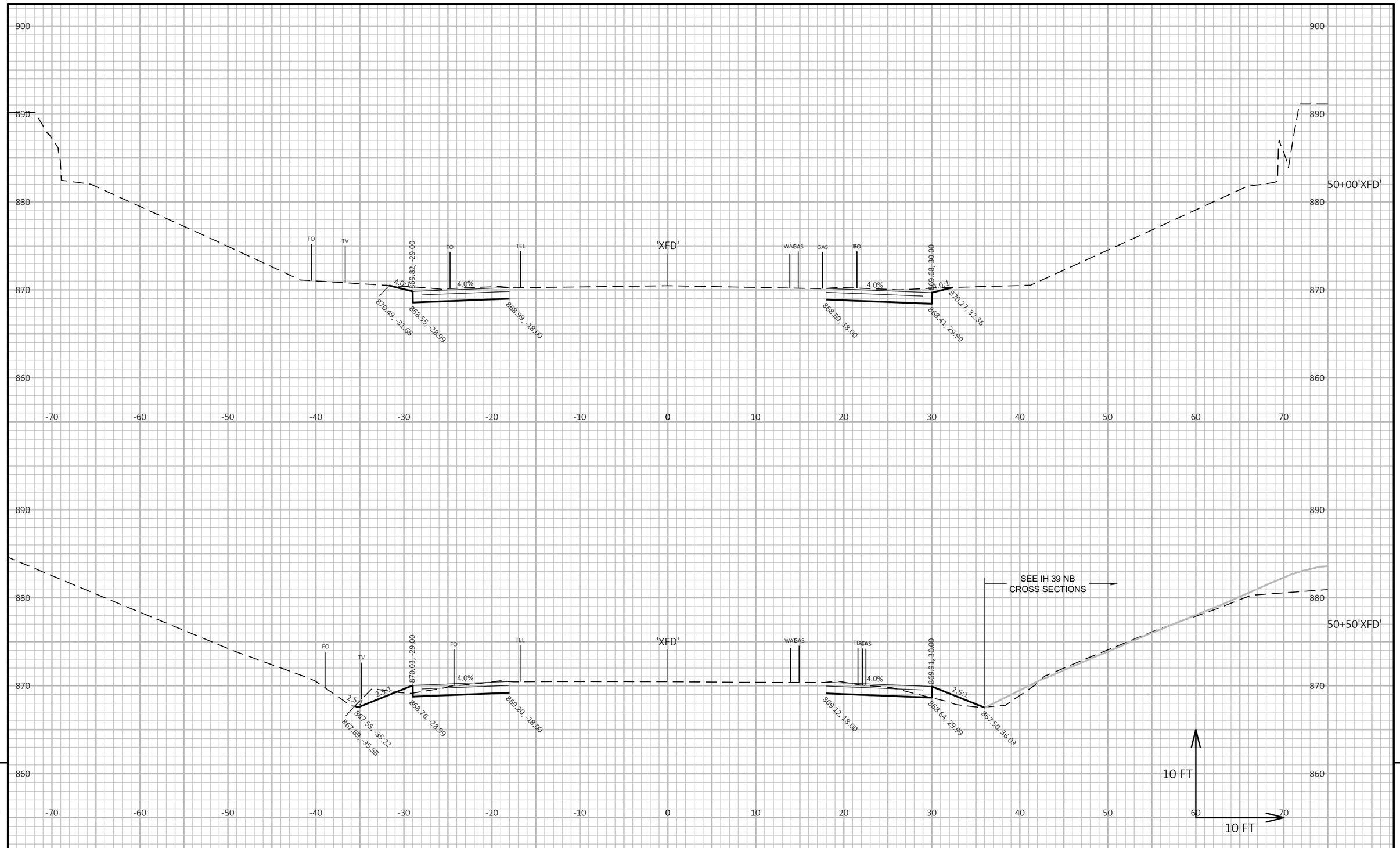
PLOT DATE : 8/1/2019 12:22 AM

PLOT BY : MATTHEW WISWELL

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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9

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: FEMRITE DR	SHEET 662	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0902_XS_FD.DWG
LAYOUT NAME - 04

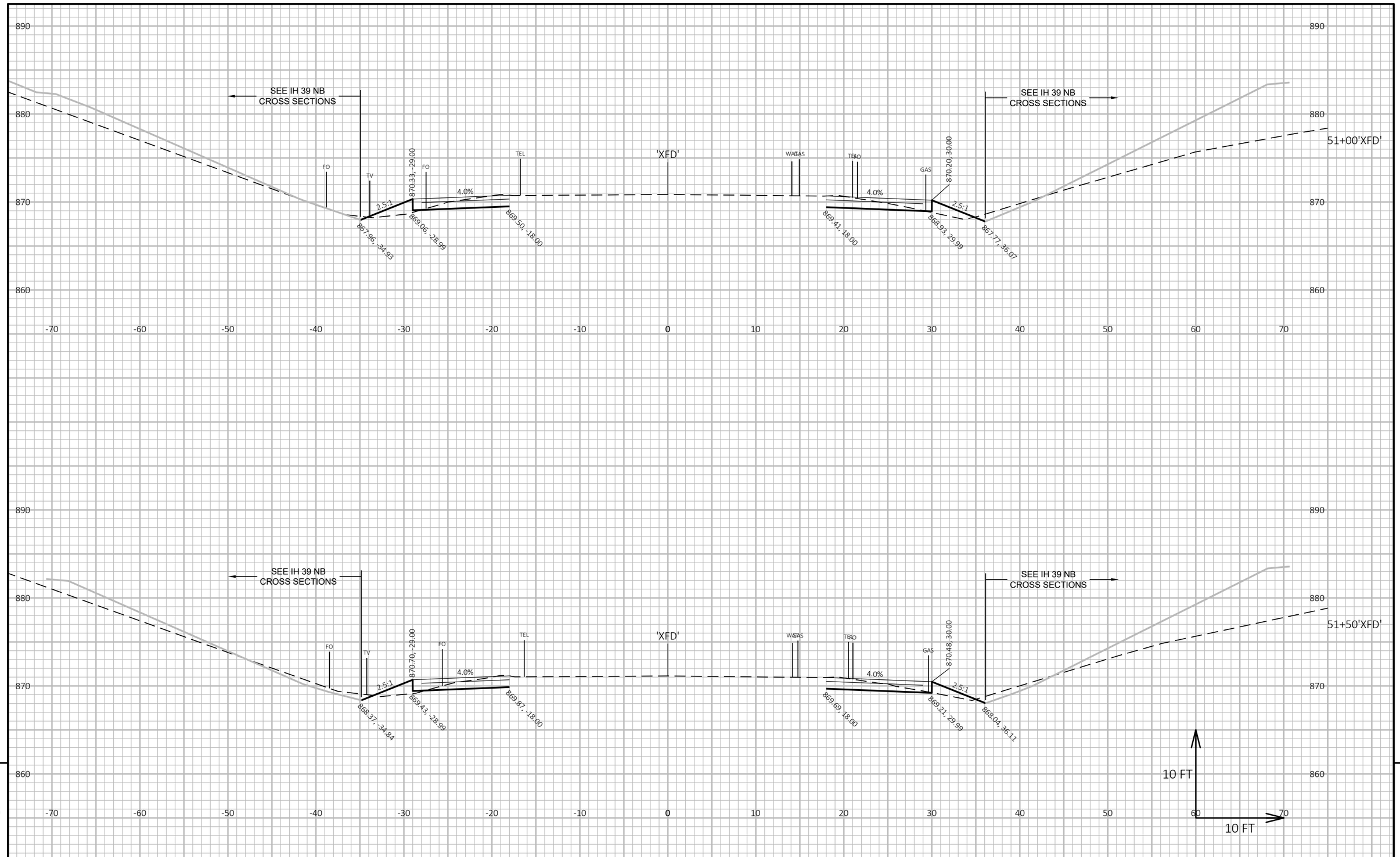
PLOT DATE : 8/1/2019 12:22 AM

PLOT BY : MATTHEW WISWELL

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: FEMRITE DR	SHEET 663	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0902_XS_FD.DWG
LAYOUT NAME - 05

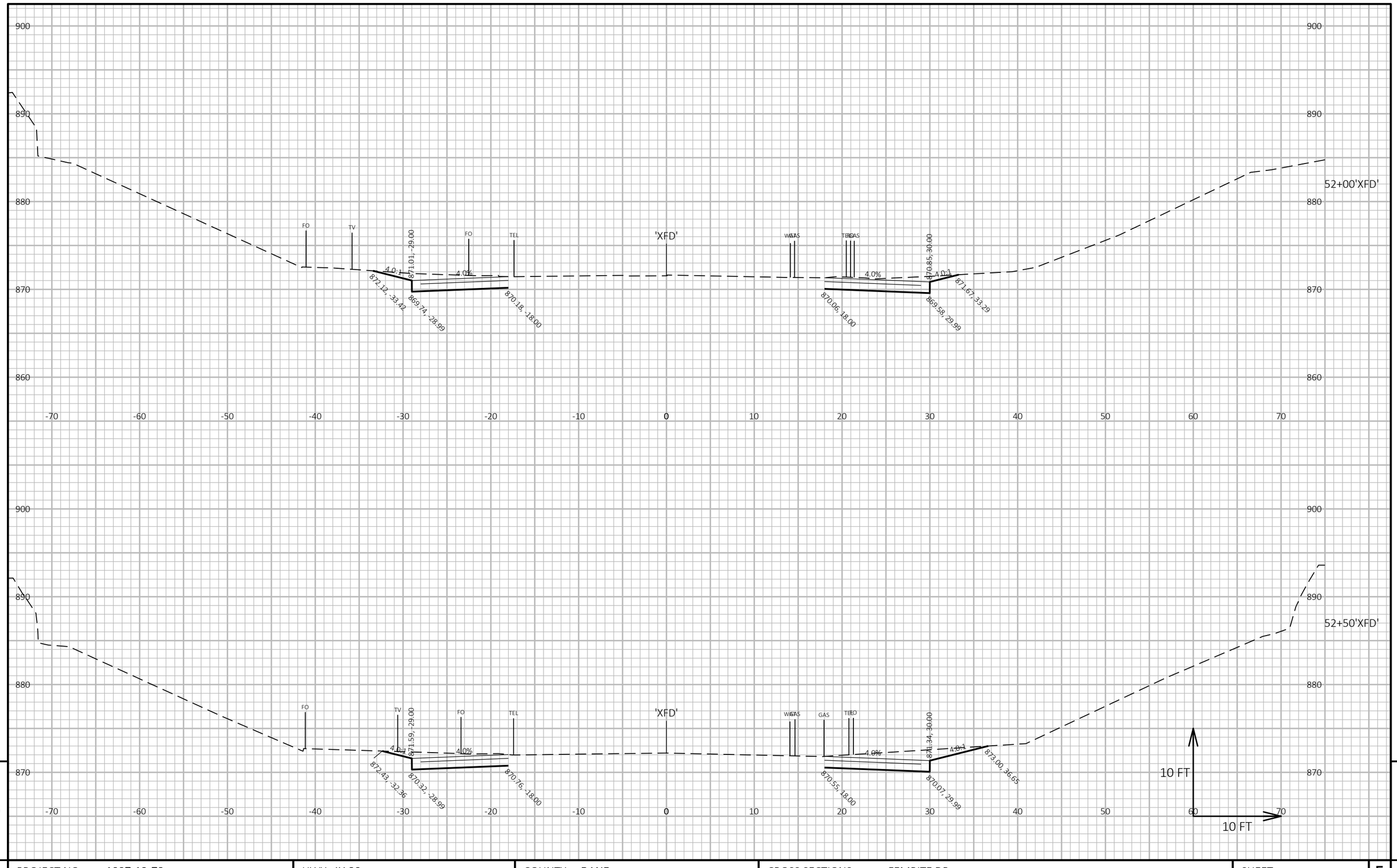
PLOT DATE : 8/1/2019 12:22 AM

PLOT BY : MATTHEW WISWELL

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: FEMRITE DR	SHEET 664	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0902_XS_FD.DWG
LAYOUT NAME - 06

PLOT DATE : 8/1/2019 12:22 AM

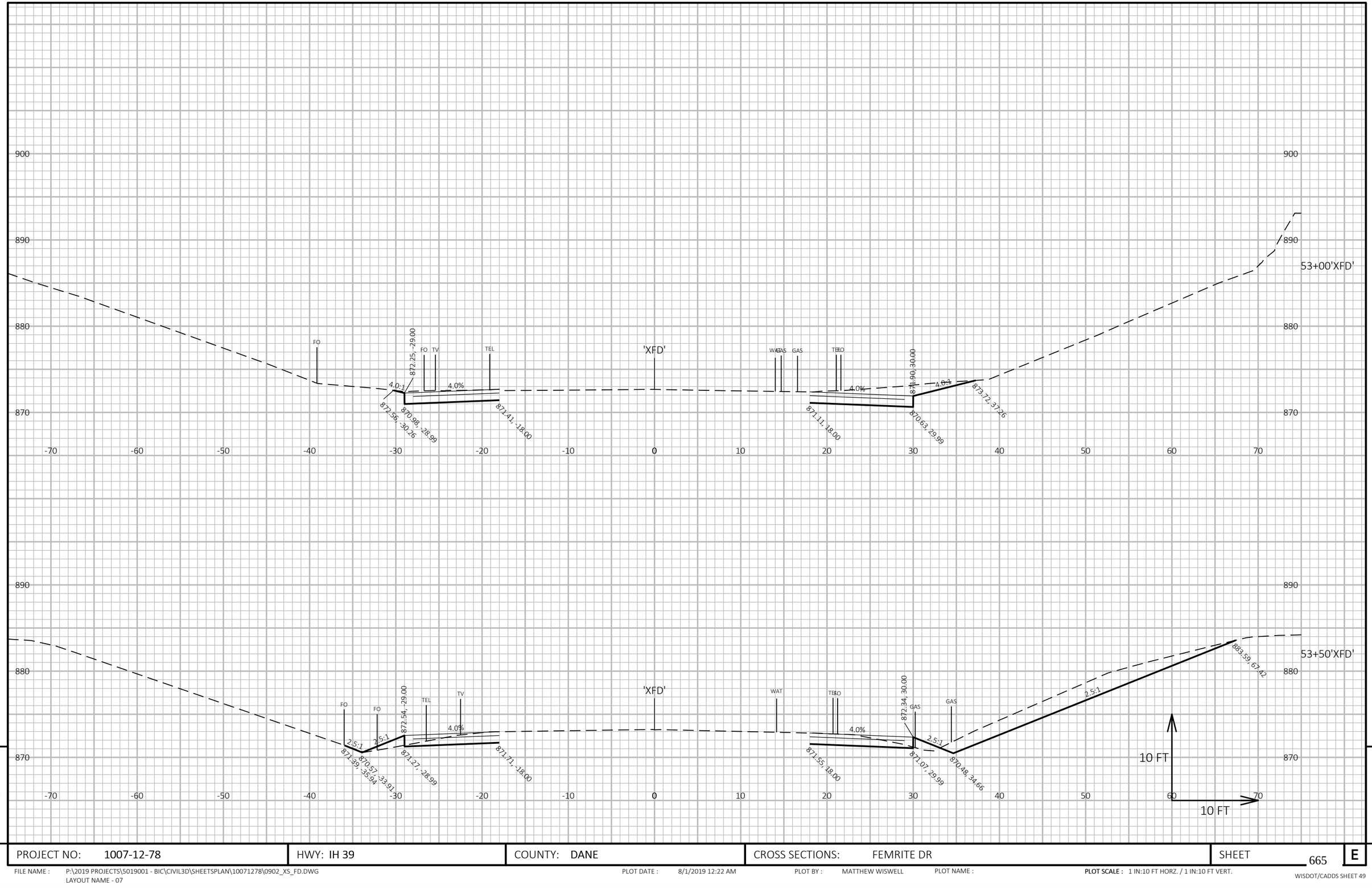
PLOT BY : MATTHEW WISWELL

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

9



9

9

PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: FEMRITE DR	SHEET 665	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0902_XS_FD.DWG
LAYOUT NAME - 07

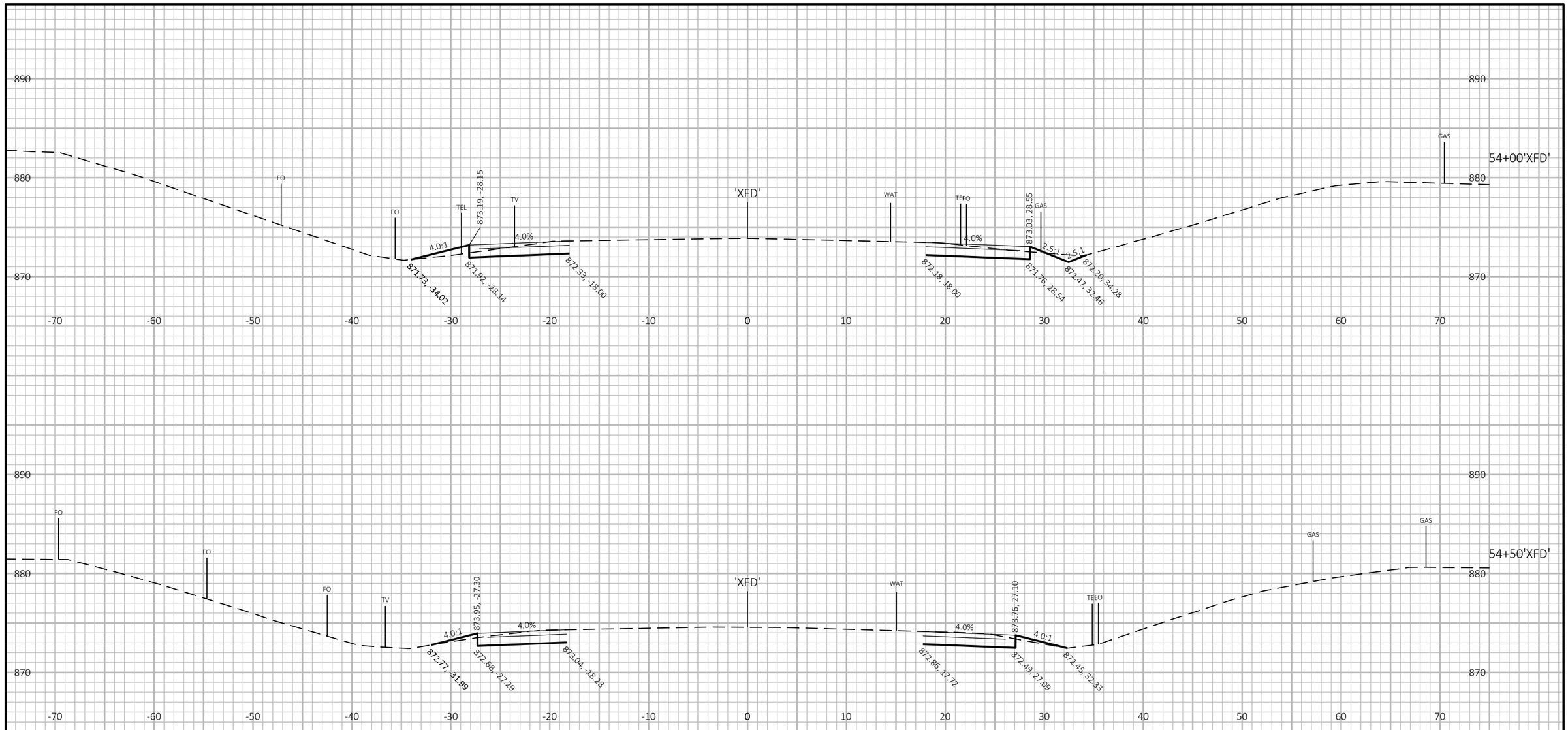
PLOT DATE : 8/1/2019 12:22 AM

PLOT BY : MATTHEW WISWELL

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: FEMRITE DR	SHEET 666	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0902_XS_FD.DWG
LAYOUT NAME - 08

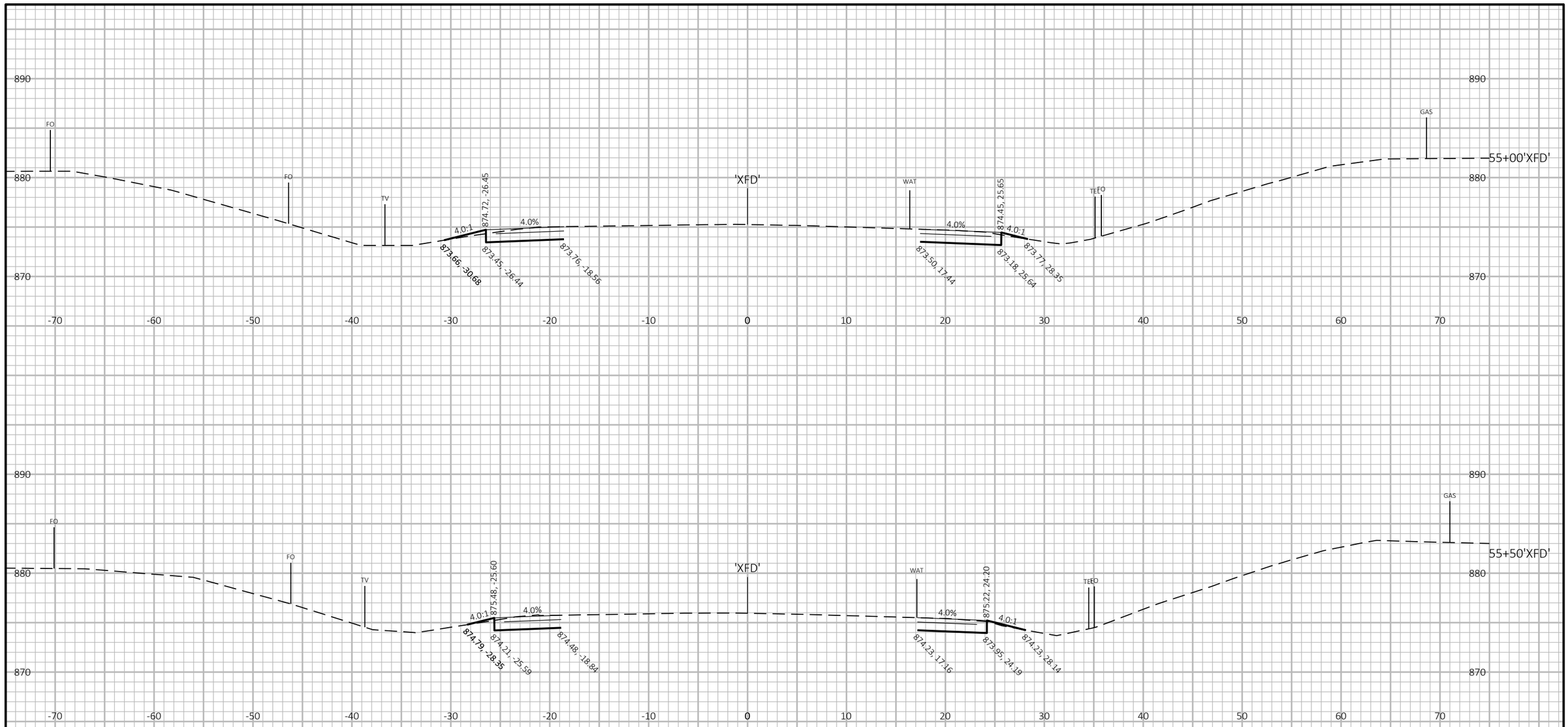
PLOT DATE : 8/1/2019 12:22 AM

PLOT BY : MATTHEW WISWELL

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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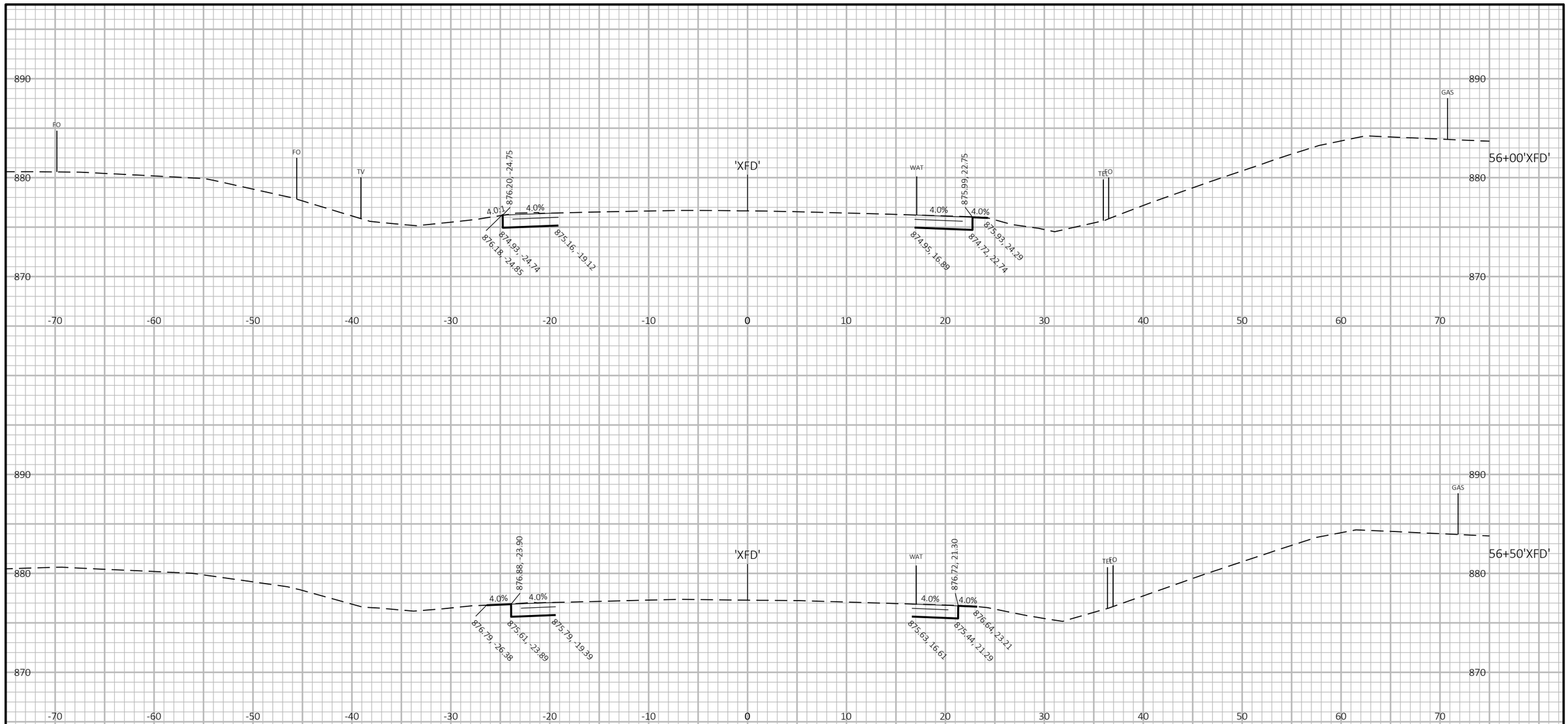
PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: FEMRITE DR	SHEET 667	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0902_XS_FD.DWG
LAYOUT NAME - 09

PLOT DATE : 8/1/2019 12:23 AM PLOT BY : MATTHEW WISWELL PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 1007-12-78	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: FEMRITE DR	SHEET 668	E

FILE NAME : P:\2019 PROJECTS\5019001 - BIC\CIVIL3D\SHEETSPLAN\10071278\0902_XS_FD.DWG
LAYOUT NAME - 10

PLOT DATE : 8/1/2019 12:23 AM PLOT BY : MATTHEW WISWELL 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