GRE

DECEMBER 2016

PROJECT ID: 1224-21-73

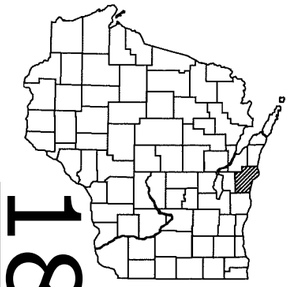
COUNTY: MANITOWOC

18

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
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 = 552



N

DESIGN DESIGNATION

A.A.D.T.	2017	=	26,900
A.A.D.T.	2037	=	31,300
D.H.V.		=	3,500
D.D.		=	58/42
T.		=	15.7%
DESIGN SPEED		=	70 MPH
ESALS		=	10,650,700

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

SHEBOYGAN - MANITOWOC

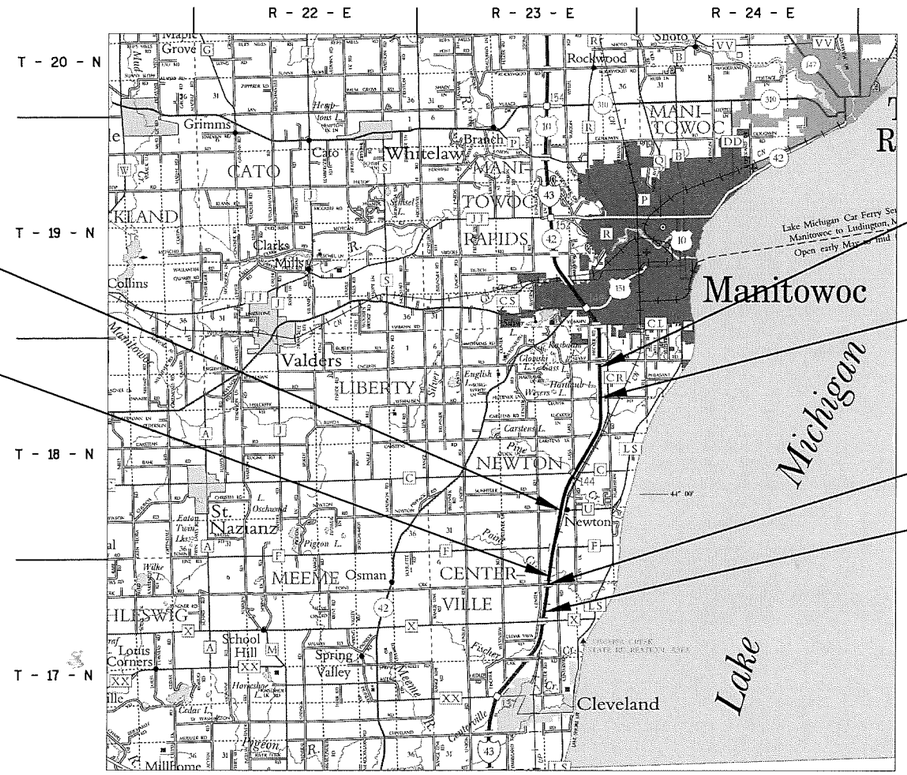
POINT CREEK ROAD - CLOVER ROAD

IH 43

MANITOWOC COUNTY

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
1224-21-73	WISC 2016477	1

STATE PROJECT NUMBER
1224-21-73



STRUCTURE B-36-0231
STA 1324+64.66'SB'

STRUCTURE B-36-0230
STA 1229+10.75'NB'

END PROJECT 1224-21-73
STA 1531+00.00
X = 221049.99
Y = 284190.94

STA 1503+10.30'NB'
END PAVING LIMITS

STA 1216+88.99'NB'
BEGIN PAVING LIMITS

BEGIN PROJECT 1224-21-73
STA 1188+51.00
X = 212397.57
Y = 251683.39

LAYOUT
SCALE 0 4 MI.

TOTAL NET LENGTH OF CENTERLINE = 6.487

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COUNTY COORDINATES, MANITOWOC 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.

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	NE REGION
Designer	S. PORTER
Project Manager	B. HAEN
Regional Examiner	
Regional Supervisor	C. KAROW

APPROVED FOR THE DEPARTMENT
DATE: 7/20/16 Brian Haen (Signature)

E

GENERAL NOTES

THE LOCATION OF EXISTING UTILITIES AS SHOWN ON THE PLANS ARE APPROXIMATE, THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN. THE CONTRACTOR SHALL NOTIFY DIGGERS HOTLINE AND ALL OTHER UTILITIES IN THE VICINITY OF THE PROJECT TO LOCATE THEIR FACILITIES AT LEAST 3 WORKING DAYS PRIOR TO BEGINNING WORK.

WETLANDS ARE PRESENT IN SEVERAL AREAS ADJACENT TO THE PROJECT. DO NOT OPERATE EQUIPMENT OUTSIDE OF THE SLOPE INTERCEPTS IN WETLAND AREAS UNLESS DIRECTED BY THE ENGINEER.

INLET AND DISCHARGE ELEVATIONS FOR DRAINAGE STRUCTURES SHOWN ON THE PLAN ARE APPROXIMATE AND SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.

EXISTING DRAINAGE DITCHES AND CULVERT PIPES WILL REMAIN FUNCTIONAL DURING EXCAVATION OPERATIONS.

ALL DISTURBED AREAS SHALL BE TOPSOILED/SALVAGE TOPSOILED, FERTILIZED, SEEDED, AND E-MATTED.

ALL CONTINUOUSLY REINFORCED CONCRETE REPAIRS ARE SEVEN (7) FEET IN LENGTH UNLESS OTHERWISE NOTED IN THE PLANS.

ALL SHOULDER BASE PATCH LENGTHS ADJACENT TO CONTINUOUSLY REINFORCED CONCRETE REPAIRS SHALL MATCH THE REPAIR LENGTHS UNLESS OTHERWISE NOTED IN THE PLANS. INDIVIDUAL SHOULDER BASE PATCHES NOT ADJACENT TO CONTINUOUSLY REINFORCED CONCRETE REPAIRS ARE SIX (6) FEET IN LENGTH UNLESS OTHERWISE NOTED IN THE PLANS.

ALL SHOULDER BASE PATCHES 6 FEET IN LENGTH REQUIRE, AT A MINIMUM, TWO (2) TIE BARS. SEE CONSTRUCTION DETAILS FOR MORE INFORMATION.

FOR BASE PATCHING ON EXISTING RAMPS, REFER TO THE CONSTRUCTION DETAILS FOR DRILLED DOWEL AND STANDARD DETAIL DRAWINGS FOR DRILLED TIE BAR SPACINGS.

CONCRETE BASE PATCH, CONCRETE BASE PATCH SHES AND CONTINUOUSLY REINFORCED CONCRETE REPAIR WILL BE FIELD LOCATED BY THE ENGINEER.

DNR AREA LIAISON

MATTHEW SCHAEVE
DEPARTMENT OF NATURAL RESOURCES
NORTHEAST REGION
2984 SHAWANO AVE
GREEN BAY, WI 54313
920-662-5472
MATTHEW.SCHAEVE@WISCONSIN.GOV

COUNTY SURVEYOR OR SURVEYS CONTACT PERSON

JOHN KROPP - MANITOWOC COUNTY
MANITOWOC COUNTY HWY OFFICE
3500 STH 310
MANITOWOC, WI 54220-9659
920-323-6512
jmkropp@att.net

CONTACT: CORMAC MCINNIS
WISDOT-NE REGION
944 VANDERPERREN WAY
GREEN BAY, WI 54304
920-492-5638
cormac.mcinnis@dot.wi.gov

UTILITIES

AT&T WISCONSIN - COMMUNICATION LINE
JOE KASSAB
221 WEST WASHINGTON ST
APPLETON, WI 54911
(920) 433-4200
Jk572k@att.com

CENTURYLINK COMMUNICATIONS, LLC - COMMUNICATION LINE
TED FROECHT
11111 DORSETT RD
MARYLAND HEIGHTS, MO 63043
(414) 416-5190

MCLEOD USA TELCOMMUNICATION SERVICES INC. - COMMUNICATION LINE
NATHAN BECKER
13935 BISHOPS DR
BROOKFIELD, WI 53005
(262) 792-7938 CELL: (414) 313-9032
nathan.becker@windstream.com

NSIGHT TELSERVICES - COMMUNICATION LINE
DOUGLAS STAHL
7520 ENGLISH LAKE RD
MANITOWOC, WI 54220
(920) 758-3603 CELL: (920) 323-4200
doug.stahl@nsight.com

WISCONSIN PUBLIC SERVICE CORPORATION - ELECTRICITY
JEFF PELISCHEK
700 N. ADAMS ST
P.O. BOX 19001
GREEN BAY, WI 54307
(920) 657-1816 CELL: (920) 323-4836
jspelischek@wisconsinpublicservice.com

WISCONSIN PUBLIC SERVICE CORPORATION - GAS/PETROLEUM
DON CONNER
700 N. ADAMS ST
P.O. BOX 19001
GREEN BAY, WI 54307
(920) 657-1862 CELL: (920) 655-6042
djconner@wisconsinpublicservice.com

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

2

N

COUNTY LINE RD

S CLEVELAND RD

NORTH AVE

INTERSTATE 43

WESTVIEW RD

CTH XX

CTH X

CENTER RD

FISHER CREEK RD

POINT CREEK RD

CTH F

NEWTON RD

CTH U

CTH C

CARSTENS LAKE RD

CLOVER RD

SILVER CREEK RD

VIEBAHN RD

USH 151

CALUMET AVE

W CUSTER ST

RR TRACKS

MIDDLE RD

CTH JJ

HOMESTEAD RD

CTH P

STH 310

USH 10

INTERSTATE 43

BEGIN PROJECT
STA 1188+51.00'NB'

BEGIN PAVING LIMITS
STA 1216+88.99'NB'

STA 1218+00.00'NB'
B-36-0046

STA 1229+50.00:
'NB'-REMOVE OLD STRUCTURE B-36-0014
'NB'-NEW STRUCTURE B-36-0230
'SB'- B-36-0047

WEIGH STATION

STA BACK = 1267+83.81'SB'
STA AHEAD = 1267+79.67'SB'
EQUATION

STA 1271+00.00:
'NB'-B-36-0048
'SB'-B-36-0040

EQUATION
STA BACK = 1286+39.20'SB'
STA AHEAD = 1286+40.21'SB'

STA 1325+00.00:
'NB'-B-36-0041
'SB'-REMOVE OLD STRUCTURE B-36-0049
'SB'-NEW STRUCTURE B-36-0231

STA BACK = 1375+82.73'SB'
STA AHEAD = 1375+60.80'SB'
EQUATION

STA 1382+50.00:
'NB'-B-36-0051
'SB'-B-36-0050

STA 1446+00.00:
'NB'-B-36-0053
'SB'-B-36-0052

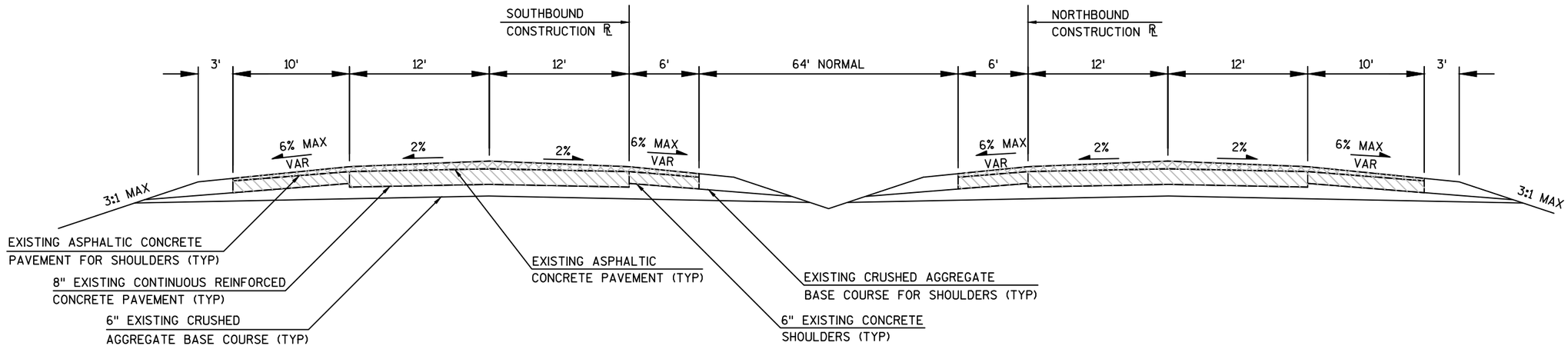
STA 1500+50.00:
'NB'-B-36-0057
'SB'-B-36-0056

STA BACK = 1474+18.95'SB'
STA AHEAD = 1474+55.64'SB'
EQUATION

END PAVING LIMITS
STA 1503+10.30'NB'

END PROJECT
STA 1531+00.00'NB'

PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	PROJECT OVERVIEW	SHEET 3	E



EXISTING TYPICAL SECTION FOR IH 43

STA 1216+88.98'NB' - STA 1501+10.30'NB'

SOUTHBOUND EXISTING ASPHALT OVERLAY DEPTHS

2"

STA. 1379+70'SB' - STA. 1385+83'SB'
STA. 1443+18'SB' - STA. 1448+13'SB'
STA. 1449+33'SB' - STA. 1501+07.31'SB'

4"

STA. 1329+47'SB' - STA. 1379+70'SB'
STA. 1385+83'SB' - STA. 1400+33'SB'
STA. 1448+13'SB' - STA. 1499+33'SB'

3"

STA. 1224+62'SB' - STA. 1234+27'SB'
STA. 1265+70'SB' - STA. 1275+87'SB'
STA. 1320+22'SB' - STA. 1329+47'SB'

6"

STA. 1216+72.29'SB' - STA. 1224+62'SB'
STA. 1234+27'SB' - STA. 1265+70'SB'
STA. 1275+87'SB' - STA. 1320+22'SB'
STA. 1400+33'SB' - STA. 1443+18'SB'

NORTHBOUND EXISTING ASPHALT OVERLAY DEPTHS

2"

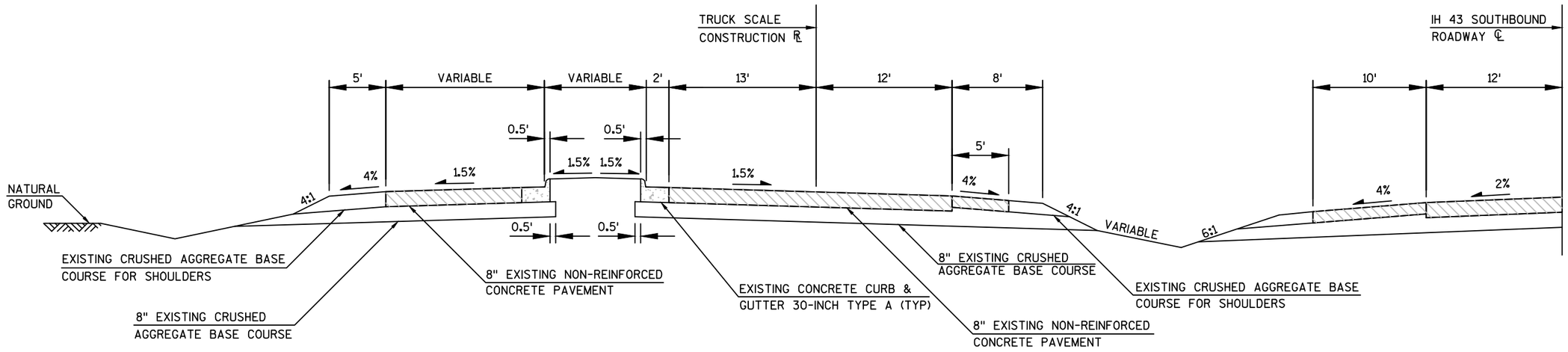
STA. 1321+95'NB' - STA. 1328+81'NB'
STA. 1378+91'NB' - STA. 1385+83'NB'
STA. 1443+65'NB' - STA. 1449+63'NB'
STA. 1498+33'NB' - STA. 1501+10.30'NB'

3"

STA. 1269+96'NB' - STA. 1276+10'NB'

6"

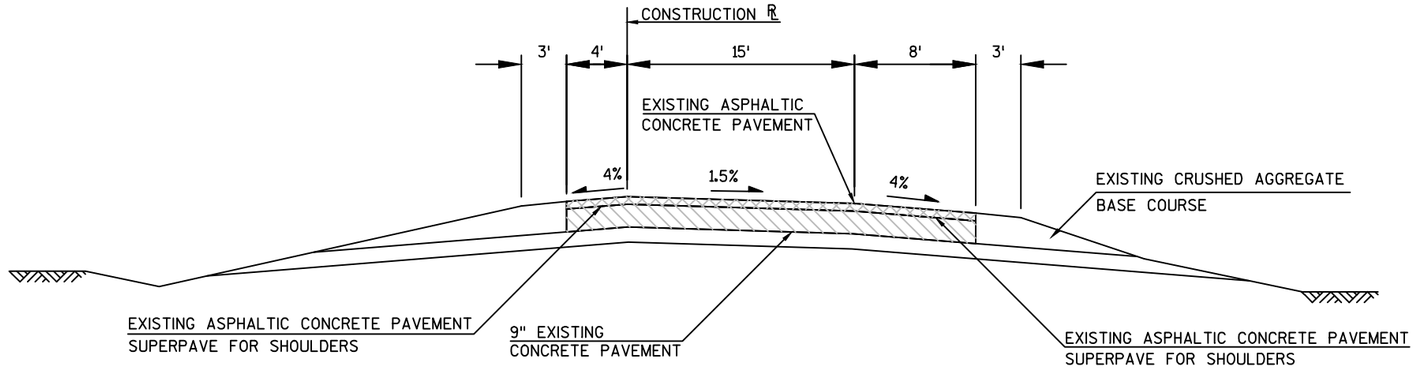
STA. 1216+88.98'NB' - STA. 1269+96'NB'
STA. 1276+10'NB' - STA. 1321+95'NB'
STA. 1328+81'NB' - STA. 1378+91'NB'
STA. 1385+83'NB' - STA. 1443+65'NB'
STA. 1449+63'NB' - STA. 1498+33'NB'



EXISTING TYPICAL SECTION FOR WEIGH STATION

STA. 1237+62.57'WS' - STA. 1249+44.84'WS'

PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	TYPICAL SECTIONS - IH 43	SHEET 4	E



EXISTING TYPICAL SECTION FOR RAMPS

(1) 6" EXISTING ASPHALTIC CONCRETE PAVEMENT

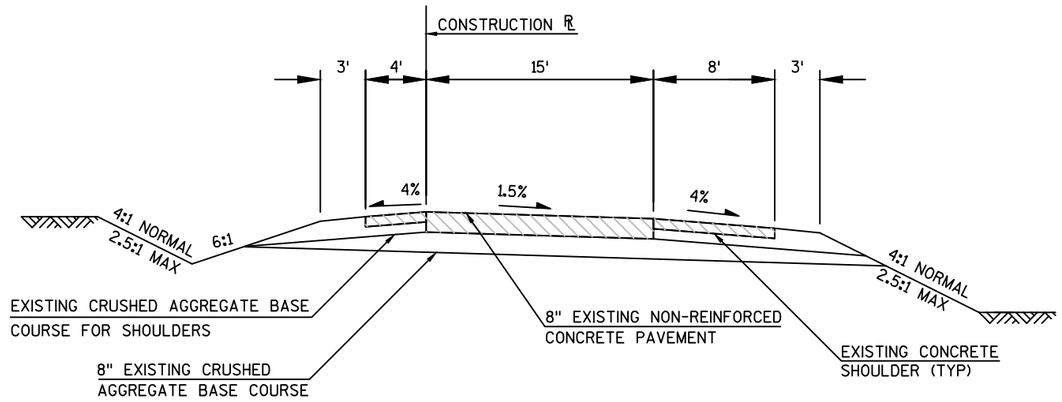
(2) 4" EXISTING ASPHALTIC CONCRETE PAVEMENT

WEIGH STATION RAMPS

(1) STA. 1226+88.45'WS' - STA. 1233+75.98'WS'
(1) STA. 1250+63.66'WS' - STA. 1254+25.70'WS'

CTH C RAMPS

(1) STA. 1369+46.66'SE' - STA. 1373+32.95'SE'
(2) STA. 1365+24.56'SW' - STA. 1372+92.20'SW'
(1) STA. 1393+87.57'NE' - STA. 1401+44.67'NE'
(2) STA. 1392+94.92'NW' - STA. 1396+01.99'NW'



EXISTING TYPCIAL SECTION FOR RAMPS

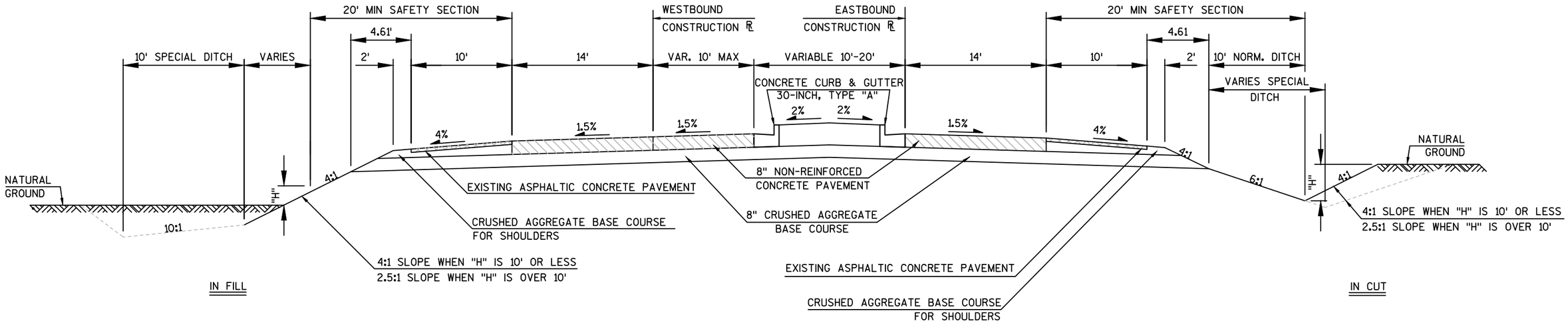
WEIGH STATION RAMPS

STA. 1233+75.98'WS' - STA. 1237+62.57'WS'
STA. 1244+49.84'WS' - STA. 1250+63.66'WS'

CTH C RAMPS

STA. 1373+32.95'SE' - STA. 1382+71.66'SE'
STA. 1372+92.20'SW' - STA. 1380+24.56'SW'
STA. 1385+25.88'NE' - STA. 1393+87.57'NE'
STA. 1382+20.16'NW' - STA. 1392+94.92'NW'

2



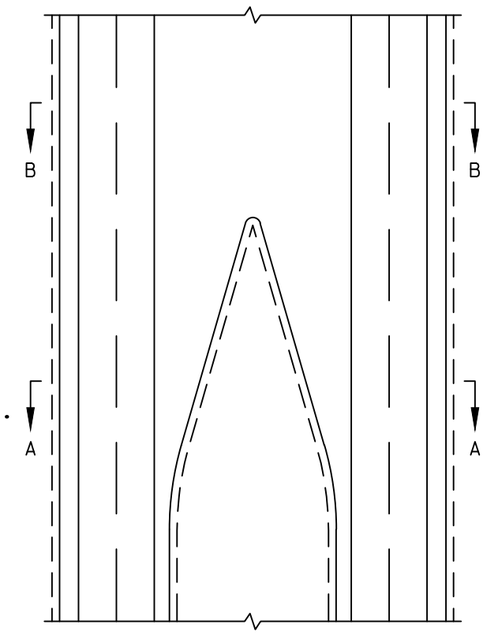
EXISTING TYPCIAL SECTION FOR CTH C

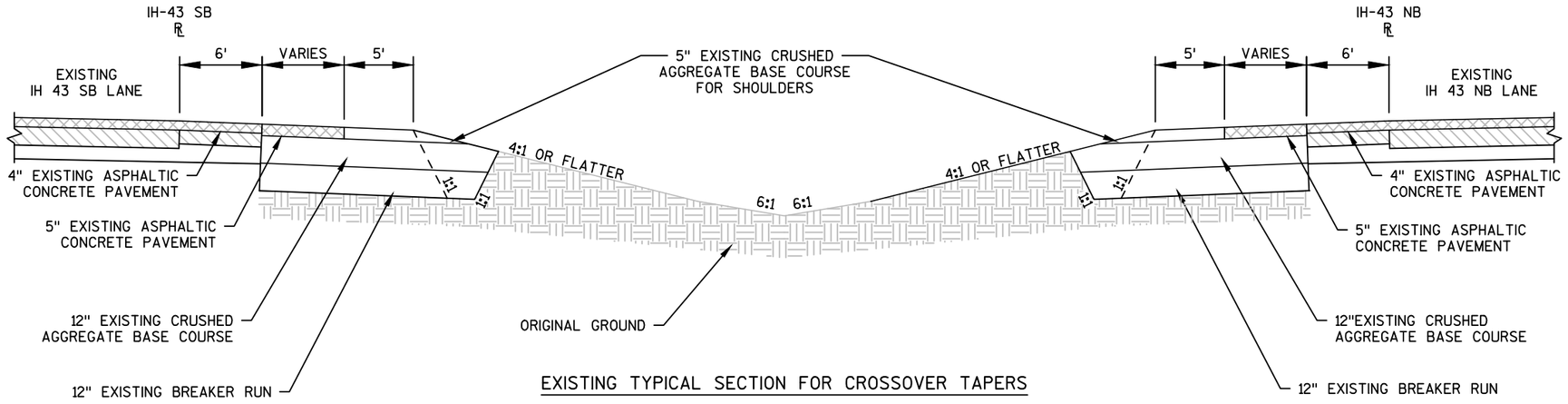
STA. 16+02.00'EB' - STA. 25+49.00'EB'

PROJECT NO:1224-21-73	HWY: IH 43	COUNTY:MANITOWOC	TYPICAL SECTIONS - CTH C	SHEET 6	E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\020301_TS.DWG PLOT DATE : 3/30/2016 11:10 AM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT
WISDOT/CADDS SHEET 42

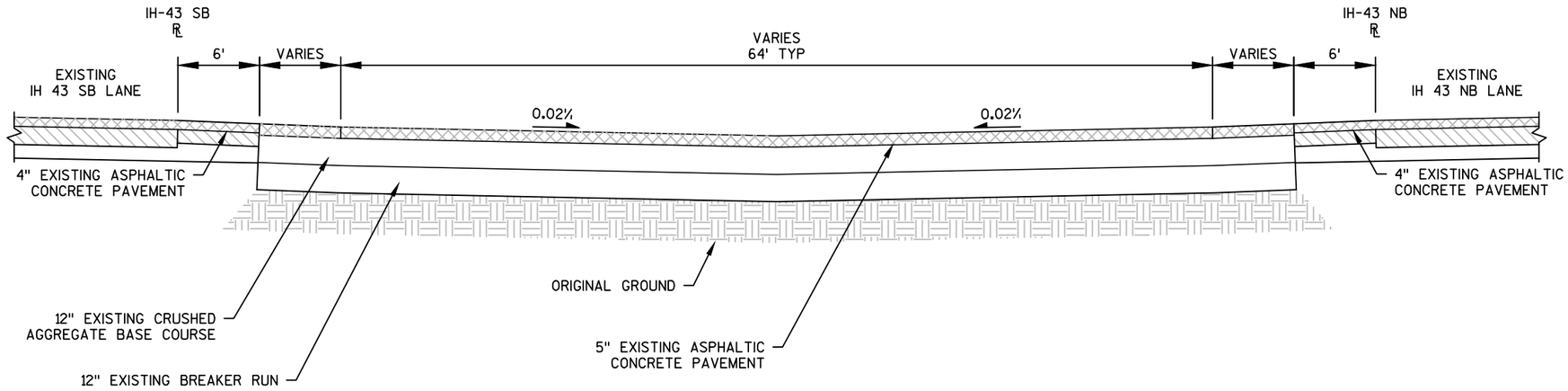
2





EXISTING TYPICAL SECTION FOR CROSSOVER TAPERS

SECTION A-A



EXISTING TYPICAL SECTION FOR CROSSOVERS

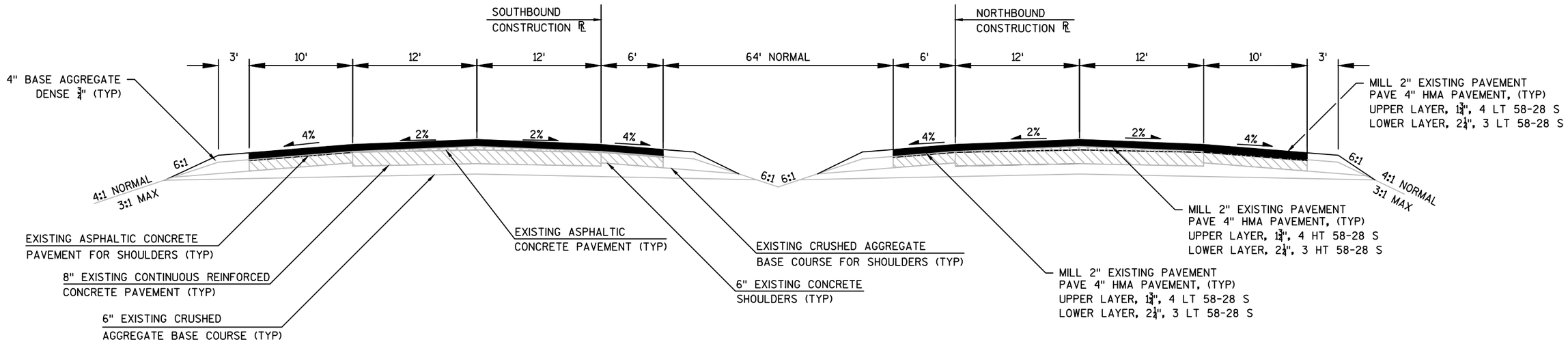
SECTION B-B

STA 1190+01.21'NB' - STA 1203+80.75'NB'
STA 1515+38.09'NB' - STA 1529+72.97'NB'

PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	TYPICAL SECTIONS - NORTH & SOUTH CROSSOVERS	SHEET 7	E

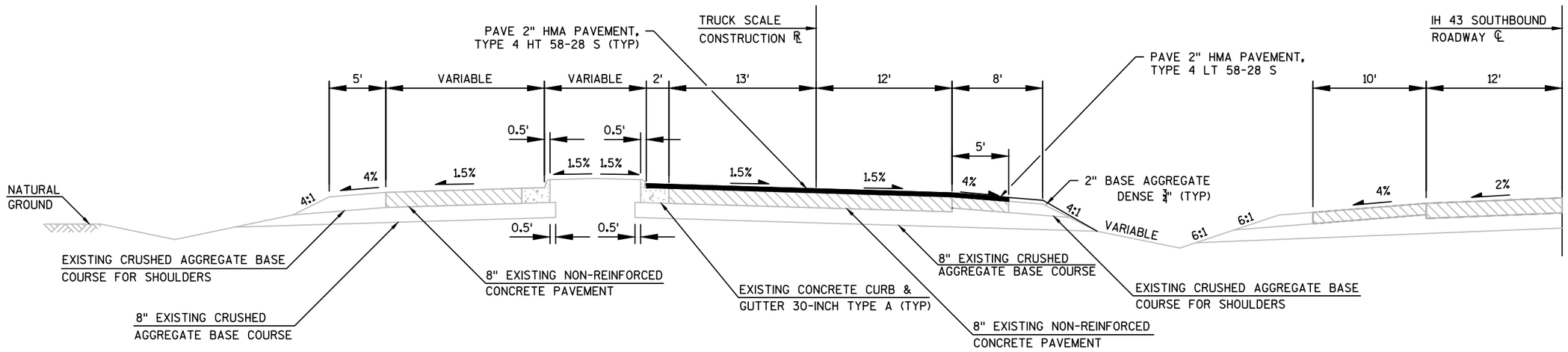
FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\020301_TS.DWG PLOT DATE : 4/13/2016 3:30 PM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 42



FINISHED TYPICAL SECTION FOR IH 43

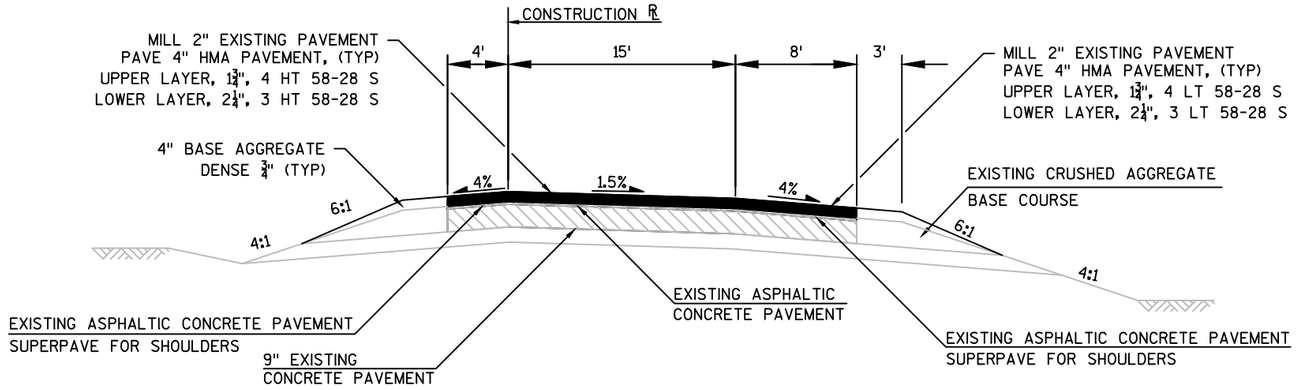
STA. 1216+88.99'NB' - STA. 1501+10.30'NB'



FINISHED TYPICAL SECTION FOR WEIGH STATION

STA. 1237+62.57'WS' - STA. 1249+44.84'WS'

PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	TYPICAL SECTIONS - IH 43	SHEET 8	E



FINISHED TYPICAL SECTION FOR RAMPS

① 6" EXISTING ASPHALTIC CONCRETE PAVEMENT

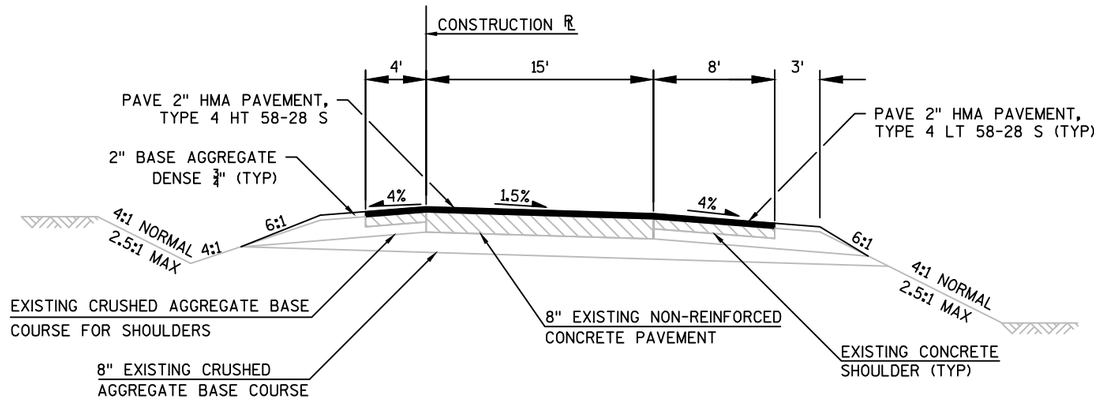
② 4" EXISTING ASPHALTIC CONCRETE PAVEMENT

WEIGH STATION RAMPS

① STA. 1226+88.45'WS' - STA. 1233+75.98'WS'
① STA. 1250+63.66'WS' - STA. 1254+25.70'WS'

CTH C RAMPS

① STA. 1369+46.66'SE' - STA. 1373+32.95'SE'
② STA. 1365+24.56'SW' - STA. 1372+92.20'SW'
① STA. 1393+87.57'NE' - STA. 1401+44.67'NE'
② STA. 1392+94.92'NW' - STA. 1396+01.99'NW'



FINISHED TYPICAL SECTION FOR RAMPS

WEIGH STATION RAMPS

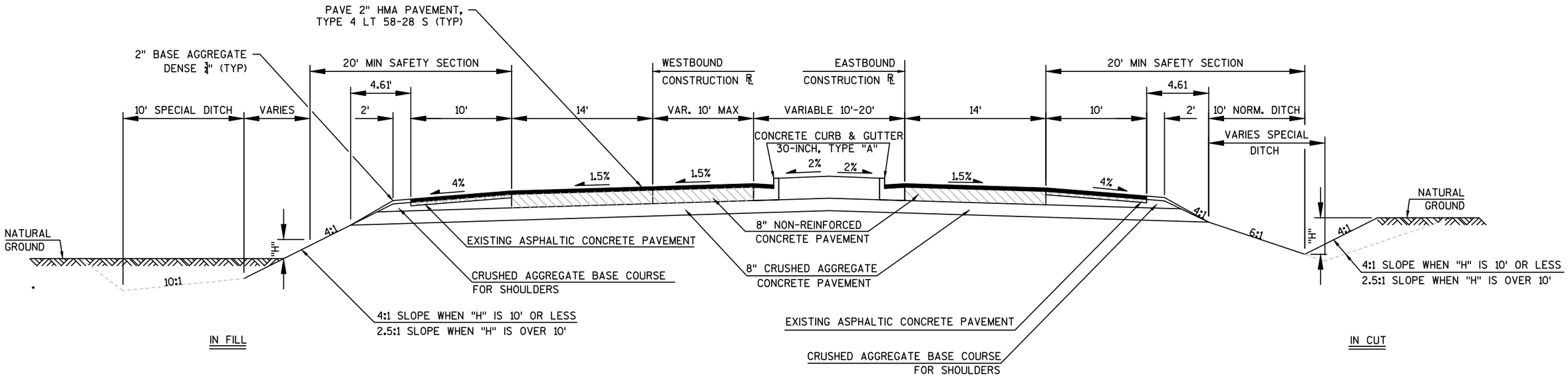
STA. 1233+75.98'WS' - STA. 1237+62.57'WS'
STA. 1244+49.84'WS' - STA. 1250+63.66'WS'

CTH C RAMPS

STA. 1373+32.95'SE' - STA. 1382+71.66'SE'
STA. 1372+92.20'SW' - STA. 1380+24.56'SW'
STA. 1385+25.88'NE' - STA. 1393+87.57'NE'
STA. 1382+20.16'NW' - STA. 1392+94.92'NW'

PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	TYPICAL SECTIONS - IH 43	SHEET 9	E

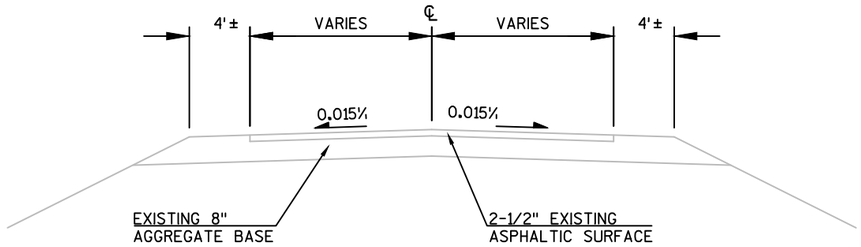
2



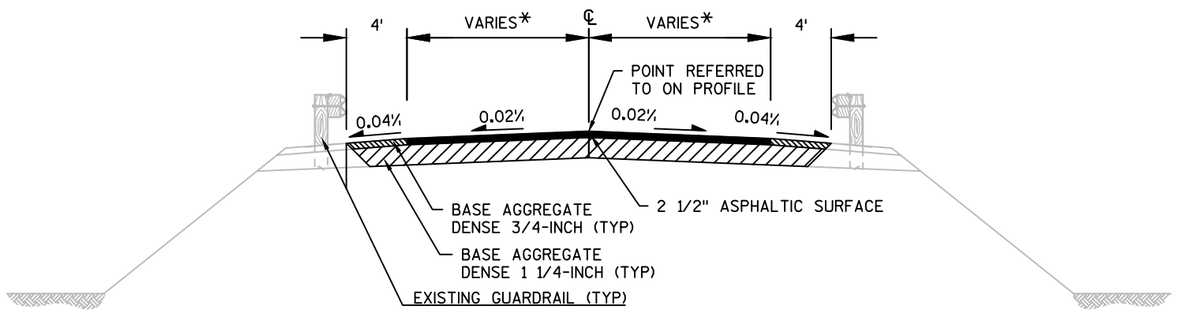
FINISHED TYPCIAL SECTION FOR CTH C

STA. 16+02.00'EB' - STA. 25+49.00'EB'

PROJECT NO:1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	TYPICAL SECTIONS - CTH C	SHEET 10	E

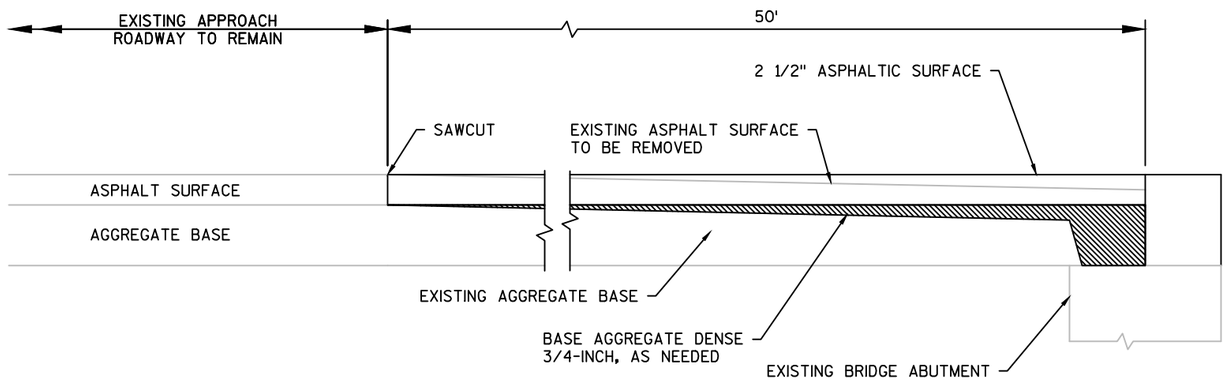


EXISTING TYPICAL SECTION-POINT CREEK ROAD



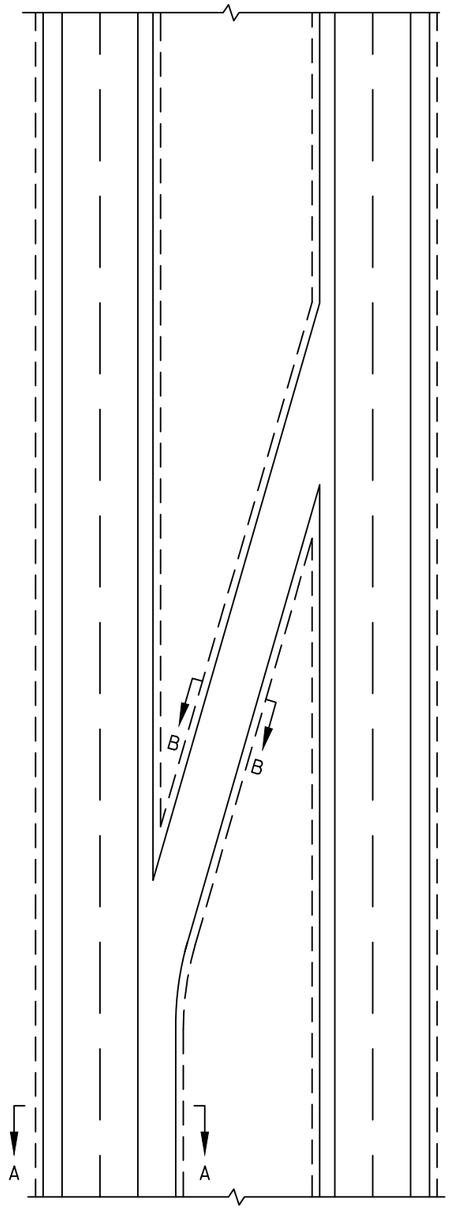
FINISHED TYPICAL SECTION-POINT CREEK RD

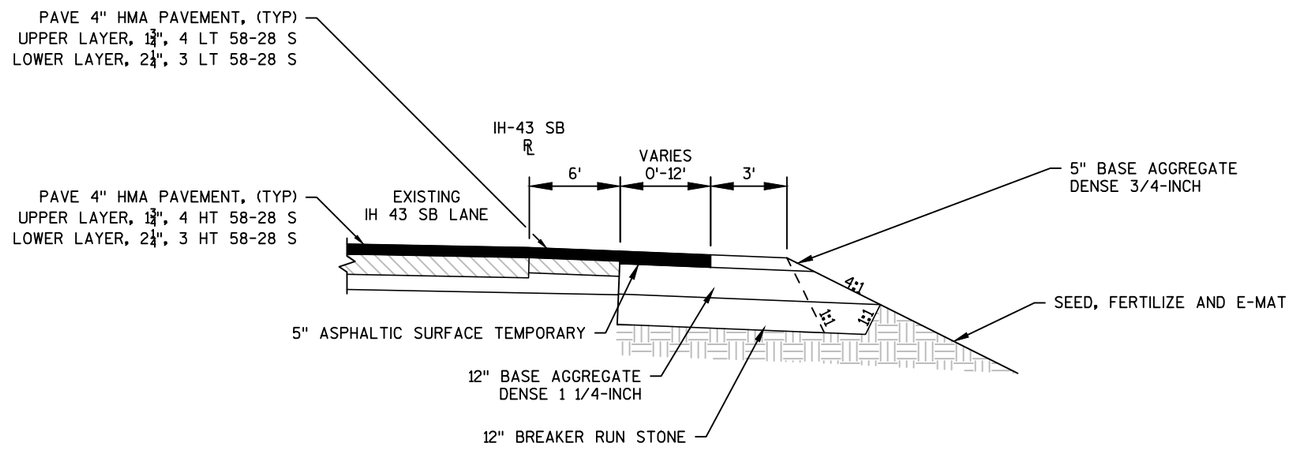
* TAPER FROM FULL WIDTH BETWEEN BARRIERS AT THE BRIDGE WINGWALLS TO MATCH EXISTING PAVED WIDTH AT THE PROJECT LIMITS.



TYPICAL APPROACH DETAIL

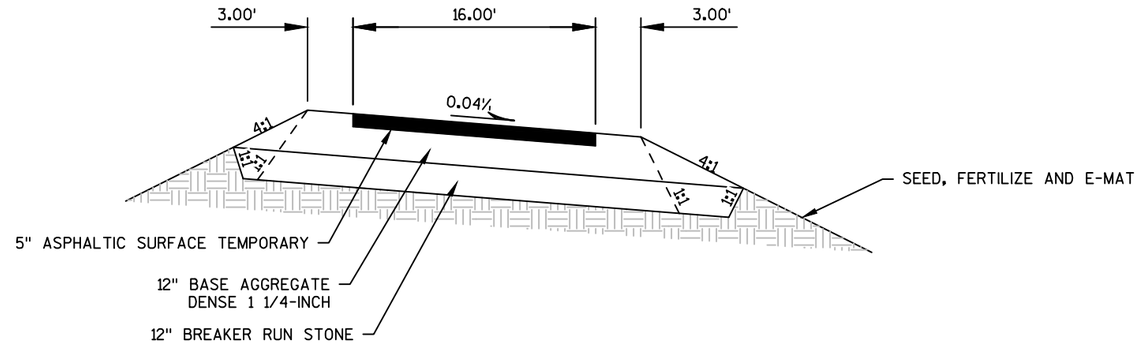
PROJECT NO:1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	TYPICAL SECTIONS - POINT CREEK ROAD	SHEET 11	E





FINISHED TYPICAL SECTION FOR CROSSOVER

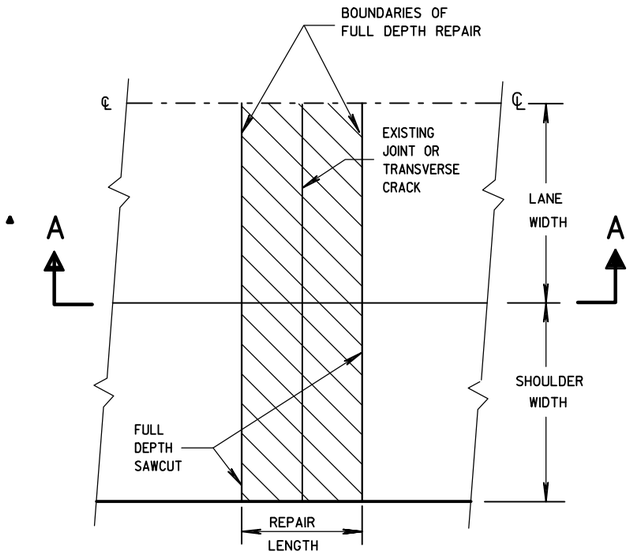
SECTION A-A



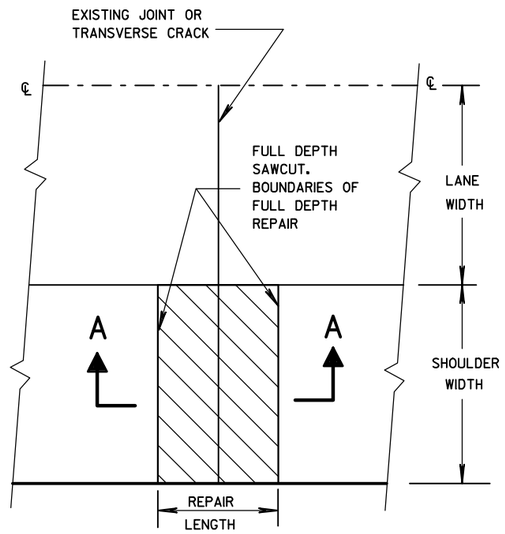
FINISHED TYPICAL SECTION FOR CROSSOVERS

SECTION B-B

PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	TYPICAL SECTIONS - IH 43 CROSSOVER	SHEET 12	E



PLAN VIEW
(SHOULDER WITH LANE REPAIR)



PLAN VIEW
(SHOULDER REPAIR)

FULL DEPTH CONCRETE PAVEMENT REMOVAL
(SEE NOTE)

NOTES

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

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

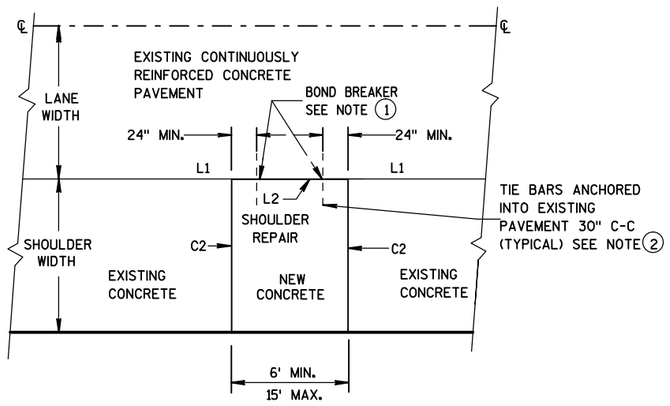
THE LENGHTH OF THE REPAIRS MAY VARY FROM THE DIMENSIONS SHOWN IF THE EXISTING CONCRETE PAVEMENT IS NONDOWELED AND THE PAVEMENT IS OVERLAID AFTER REPAIRING.

(1) USE AN ENGINEER-APPROVED BOND BREAKER FOR SHOULDER BASE PATCHES UP TO 15 FEET IN LENGTH.

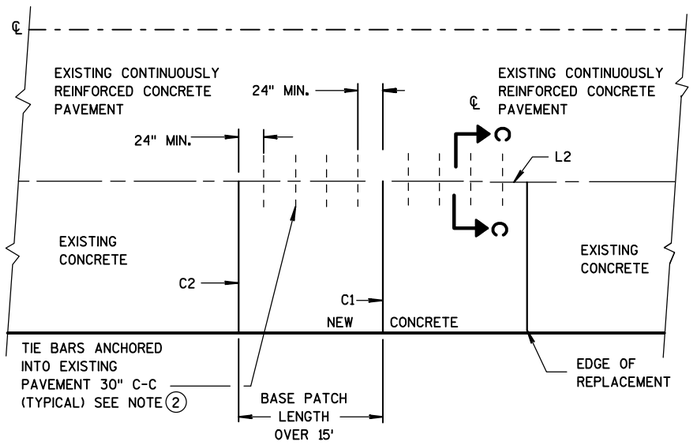
(2) WITH THE APPROVAL OF THE ENGINEER, FOR SHOULDER PAVEMENT REPLACEMENTS LESS THAN 30 FEET IN LENGTH, DRILLED TIE BARS MAY BE INSTALLED ON 6:1 SKEW HORIZONTALLY, DIRECTION OF SKEW ALTERNATING WITH EACH SUCCESSIVE BAR. DRIVE SKEWED TIE BARS TO A DEPTH OF 6 INCHES AND TO SUCH A DIAMETER AS TO PROVIDE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

(3) DOWEL BARS MIGHT NOT EXIST.

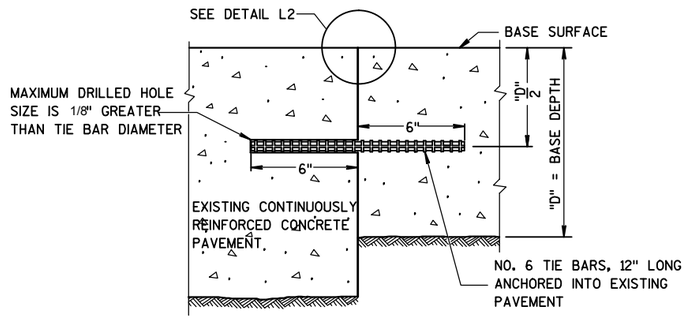
SEE SDD 13C14 BASE PATCHING CONCRETE AND 13A7 CONTINUOUSLY REINFORCED CONCRETE PAVEMENT REPAIR AND REPLACEMENT FOR MORE INFORMATION



PLAN VIEW
SHOULDER CONCRETE BASE PATCH
15' MAXIMUM LENGTH



PLAN VIEW
SHOULDER CONCRETE BASE PATCH
GREATER THAN 15' IN LENGTH



SECTION C-C

TIE BARS ANCHORED
INTO EXISTING PAVEMENT

NOTES

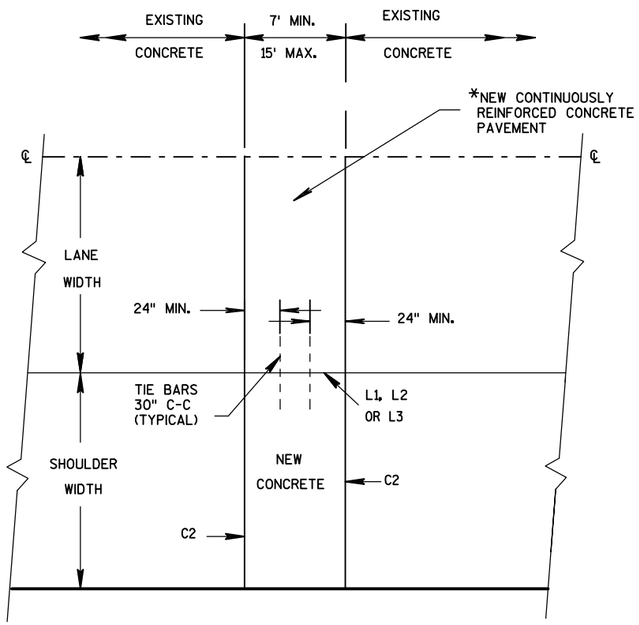
CONCRETE BASE PATCHES OF EXISTING NONDOWELED CONCRETE PAVEMENTS DO NOT NEED TO BE DOWELED.

DO NOT SEAL OR FILL JOINTS.

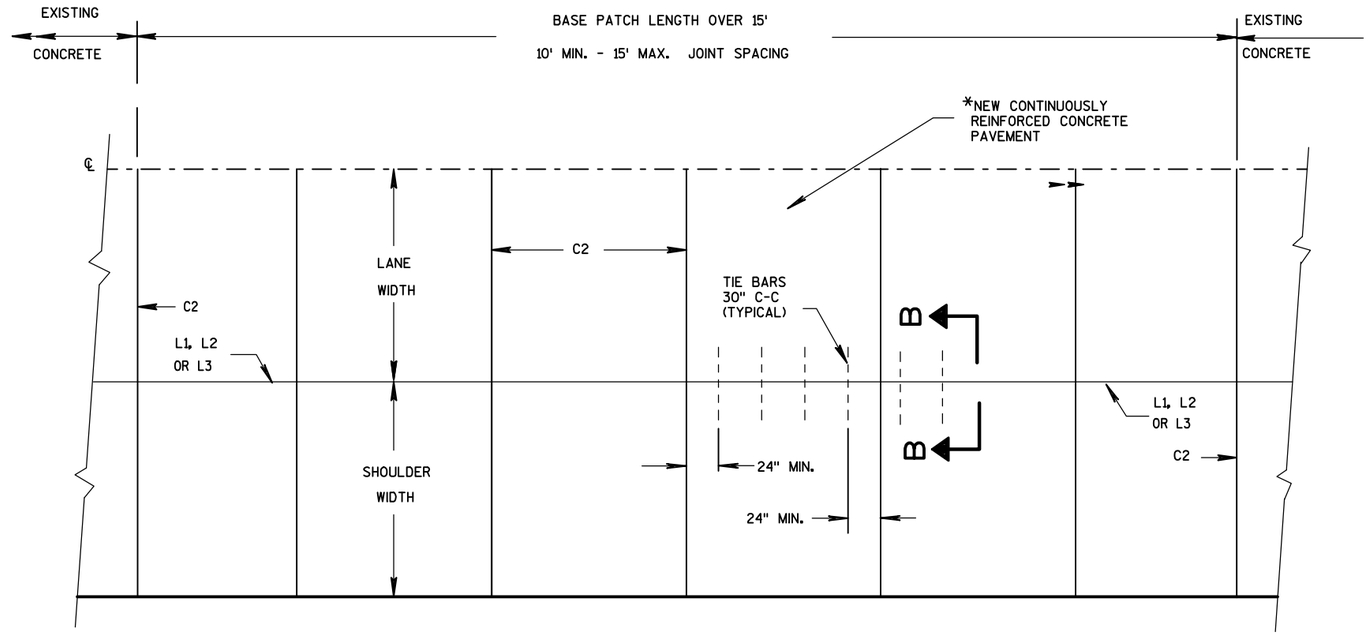
ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.

PROVIDE A MINIMUM DISTANCE OF 24 INCHES FROM AN EXISTING TRANSVERSE JOINT OR THE EDGE OF REPLACEMENT TO THE CENTER OF THE TIE BAR NEAREST THAT JOINT OR EDGE.

* SEE SDD 13C14 BASE PATCHING CONCRETE AND SDD 13A7 CONTINUOUSLY REINFORCED CONCRETE PAVEMENT REPAIR AND REPLACEMENT FOR MORE INFORMATION

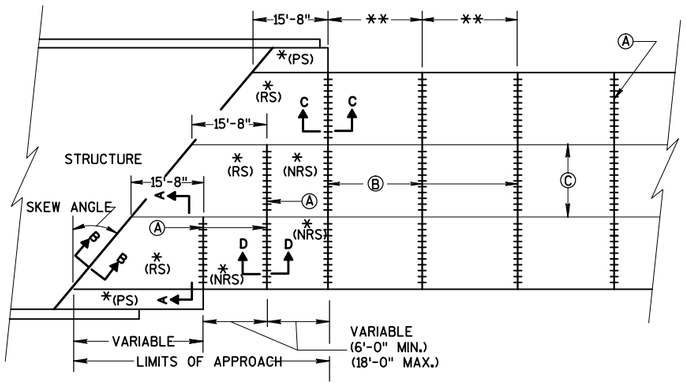


PLAN VIEW
SHOULDER WITH LANE CONCRETE BASE PATCH
15' MAXIMUM LENGTH

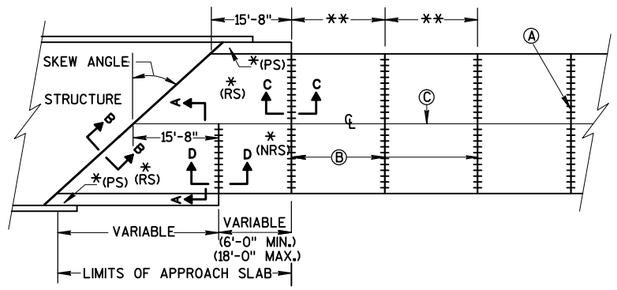


PLAN VIEW
SHOULDER WITH LANE CONCRETE BASE PATCH
GREATER THAN 15' IN LENGTH

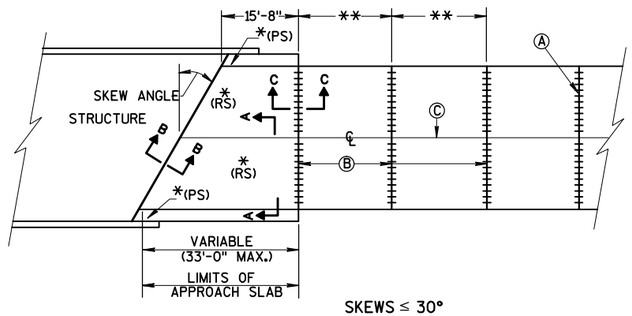
PROJECT NO:1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	PLAN: CONSTRUCTION DETAIL	SHEET 14	E



SKEWED APPROACH
(PAVEMENT MORE THAN 2 LANES)



SKEWS > 30°
(PAVEMENT WIDTH ≤ 30')



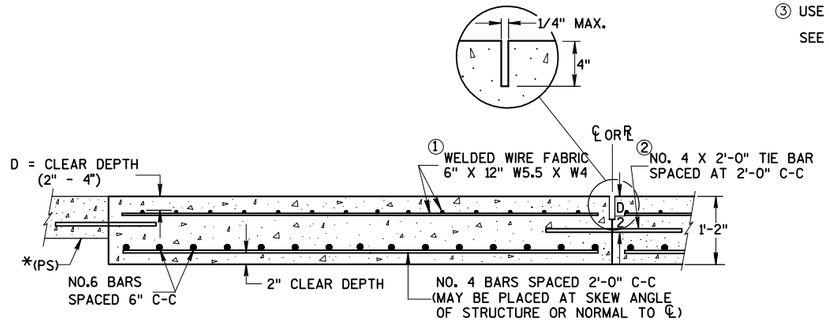
SKEWS ≤ 30°
(PAVEMENT WIDTH ≤ 30')

APPROACH SLAB AND ADJACENT PAVEMENT

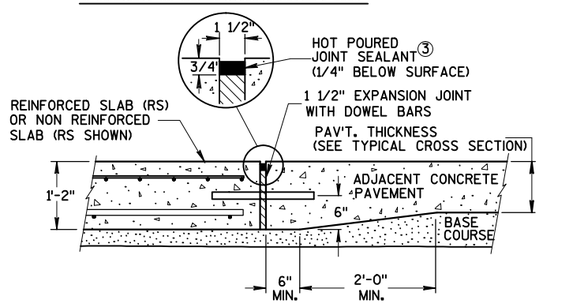
*(RS) = REINFORCED CONCRETE SLAB
*(PS) = PAVED CONCRETE SHOULDER: CONCRETE PAVEMENT, OR CONCRETE SURFACE DRAIN (SEE DETAILS ELSEWHERE IN THE PLAN)
*(NRS) = NON-REINFORCED CONCRETE SLAB

**STANDARD TRANSVERSE JOINT SPACING (SEE SDD 13C4, SDD 13C11, & SDD 13C13)

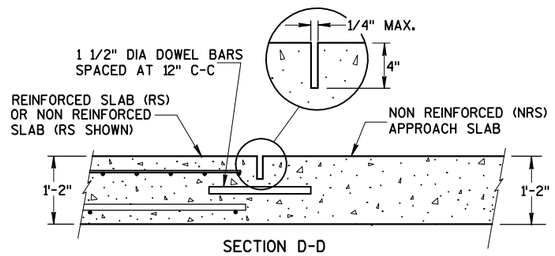
Ⓐ STANDARD CONTRACTION JOINT NORMAL TO ℄ OR ℄
Ⓑ 1 1/2" EXPANSION JOINT WITH DOWEL BARS NORMAL TO ℄ OR ℄
Ⓒ STANDARD LONGITUDINAL JOINT AND TIE BARS.



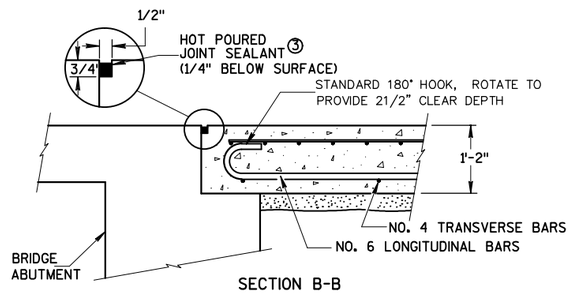
SECTION A-A
REINFORCEMENT POSITIONING DETAIL



SECTION C-C
TRANSITION DETAIL
APPROACH SLAB TO ADJACENT PAVEMENT



SECTION D-D
CONTRACTION JOINT



SECTION B-B
BEND DETAIL
BOTTOM REINFORCEMENT

NOTES

APPROACH SLABS ABUTTING AN HMA PAVEMENT OVER BASE COURSE DO NOT NEED TO BE DOWELED.

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.

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.

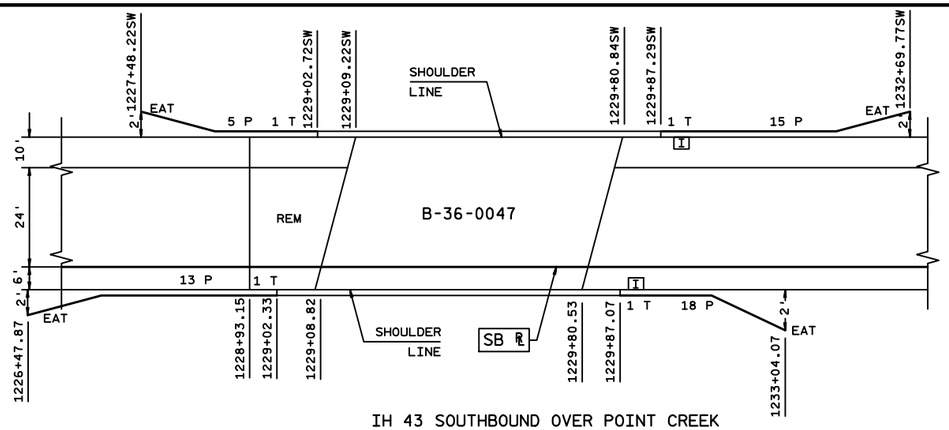
② THE CONTRACTOR MAY OMIT TIE BARS BETWEEN REINFORCED SLABS WHERE SLAB REINFORCEMENT BARS EXTEND ACROSS THE CENTERLINE OR REFERENCE LINE.

③ USE A JOINT SEALANT MEETING THE REQUIREMENTS OF ASTM D6690.

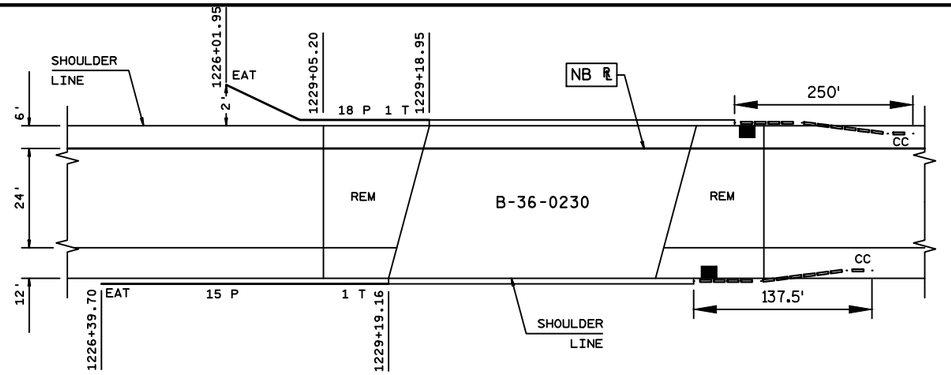
SEE SDD 13B2 CONCRETE BRIDGE APPROACH FOR MORE INFORMATION

CONCRETE PAVEMENT
APPROACH SLAB

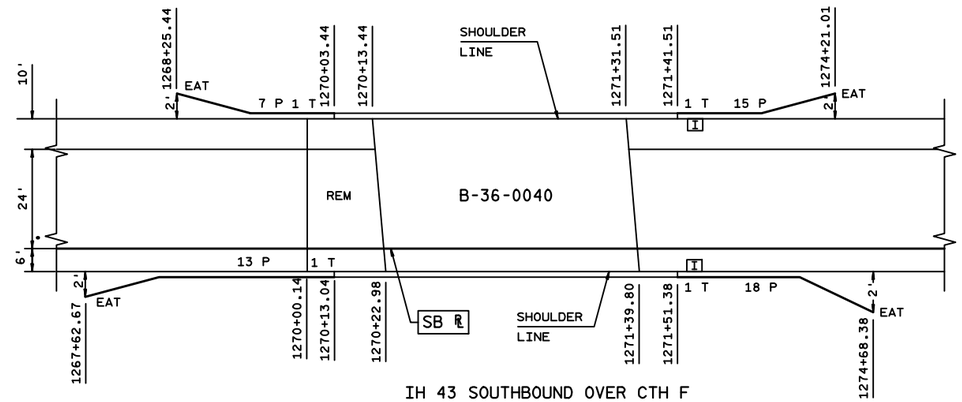
PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	PLAN: CONSTRUCTION DETAIL	SHEET 15	E



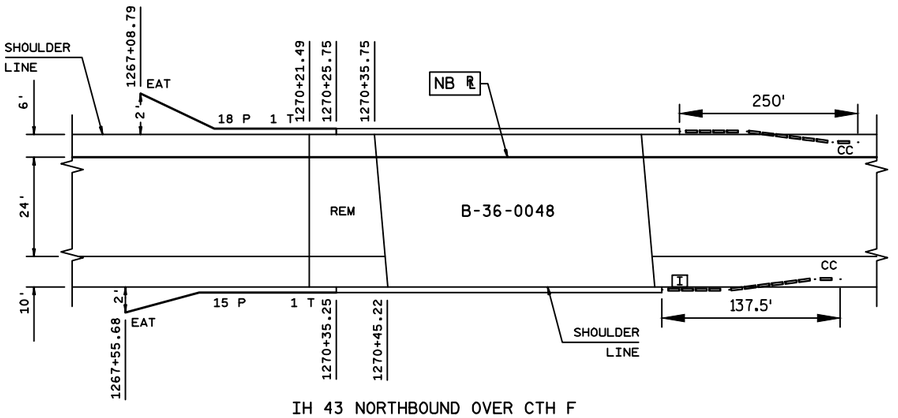
IH 43 SOUTHBOUND OVER POINT CREEK



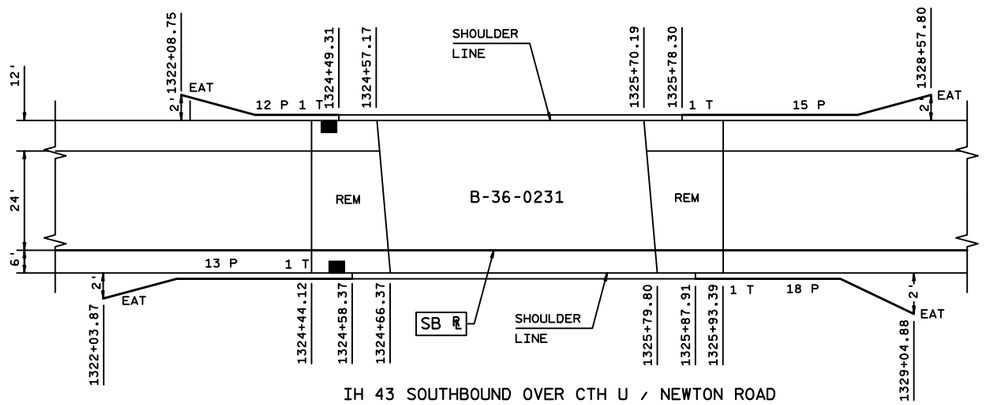
IH 43 NORHBOUND OVER POINT CREEK



IH 43 SOUTHBOUND OVER CTH F



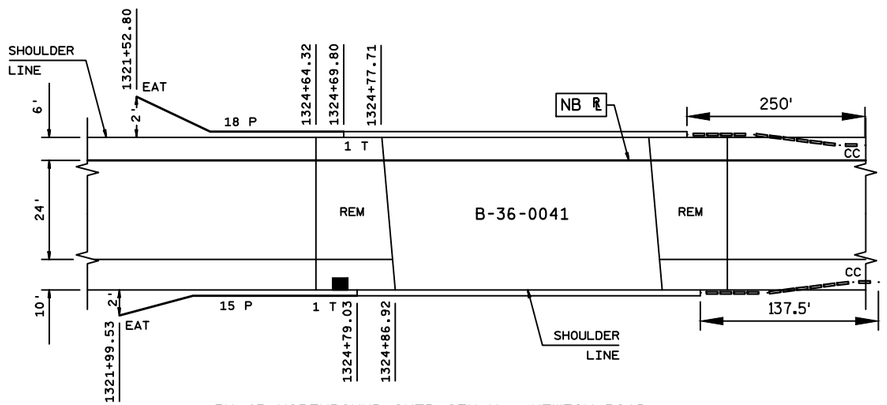
IH 43 NORTHBOUND OVER CTH F



IH 43 SOUTHBOUND OVER CTH U / NEWTON ROAD

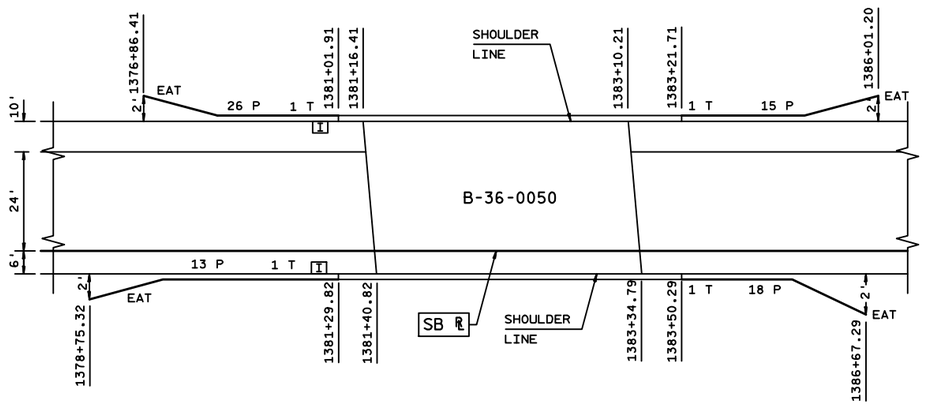
LEGEND

- ■ REMOVE AND REPLACE INLET
- [I] ADJUSTING/RECONSTRUCTING INLET
- REM = REMOVE AND REPLACE CONCRETE APPROACH SLAB AND SHOULDERS
- EAT = MGS ENERGY ABSORBING TERMINAL
- P = MGS PANELS AT 12.5 FT
- T = MGS THRIE BEAM TRANSITION
- A2 = MGS END TREATMENT, TYPE 2
- CC = TEMPORARY CRASH CUSHION
- TC = TEMPORARY THRIE BEAM CONNECTION
- ·═══· TEMPORARY PRECAST BARRIER

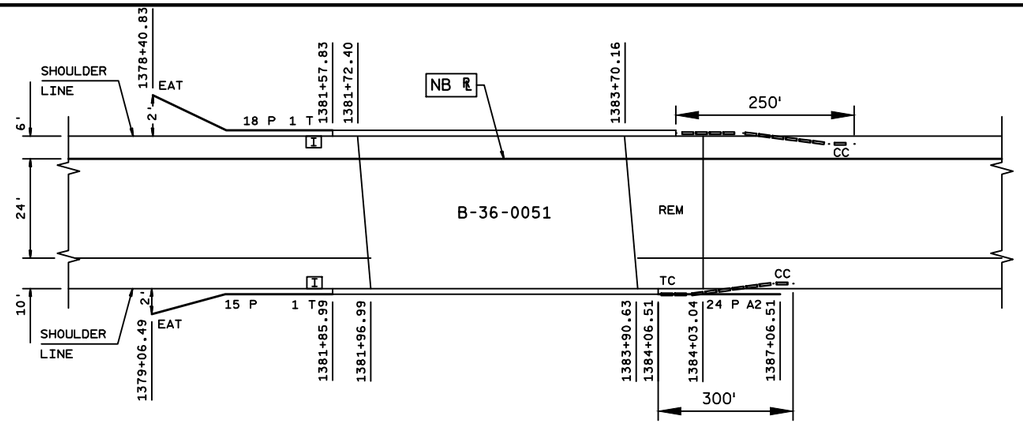


IH 43 NORTHBOUND OVER CTH U / NEWTON ROAD

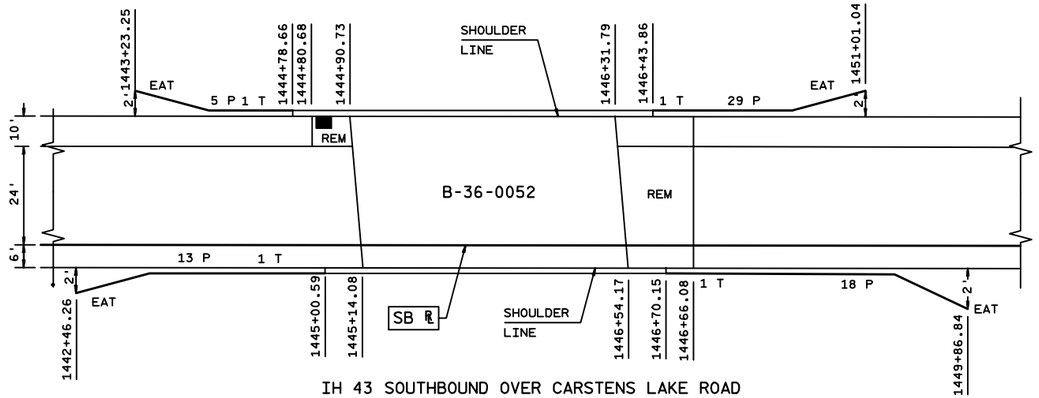
PROJECT NO:1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	PLAN: CONSTRUCTION DETAIL	SHEET 16	E



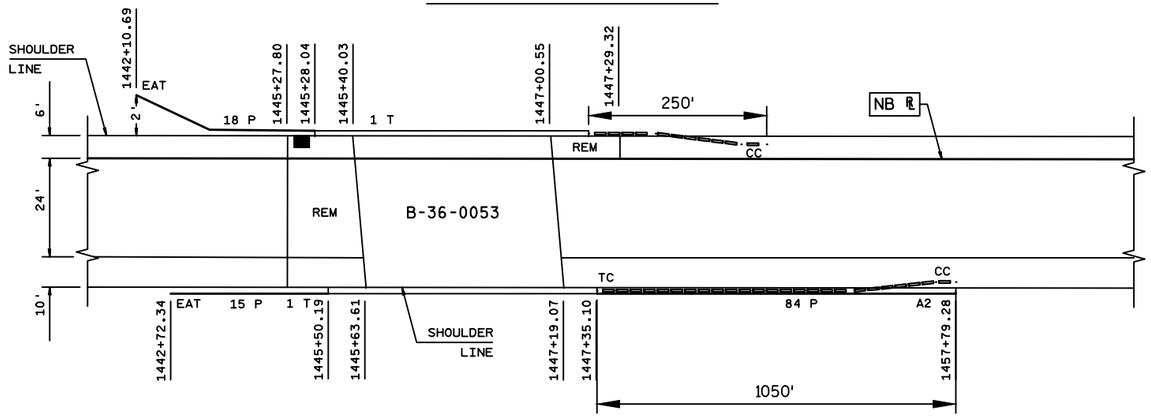
IH 43 SOUTHBOUND OVER CTH C



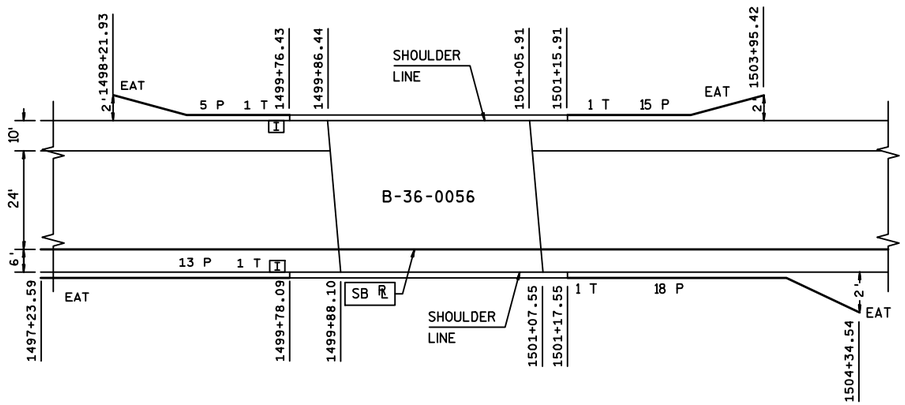
IH 43 NORTHBOUND OVER CTH C



IH 43 SOUTHBOUND OVER CARSTENS LAKE ROAD



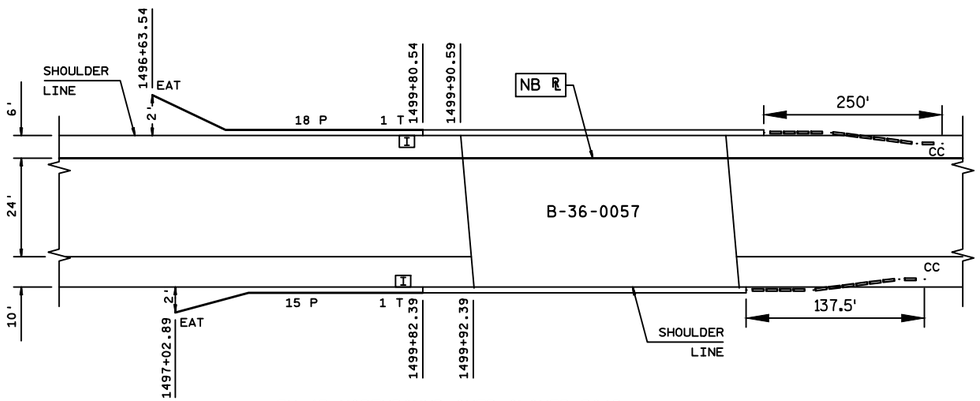
IH 43 NORTHBOUND OVER CARSTENS LAKE ROAD



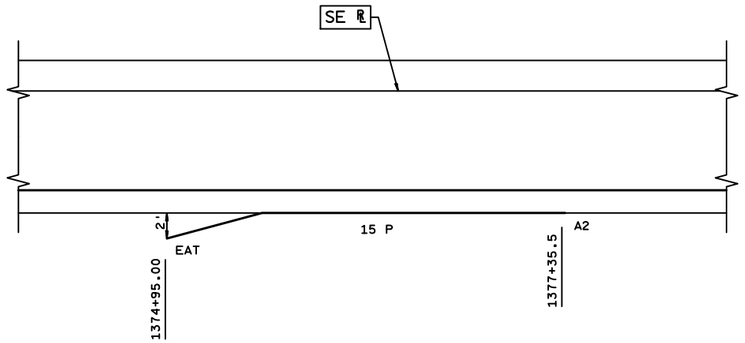
IH 43 SOUTHBOUND OVER CLOVER ROAD

LEGEND

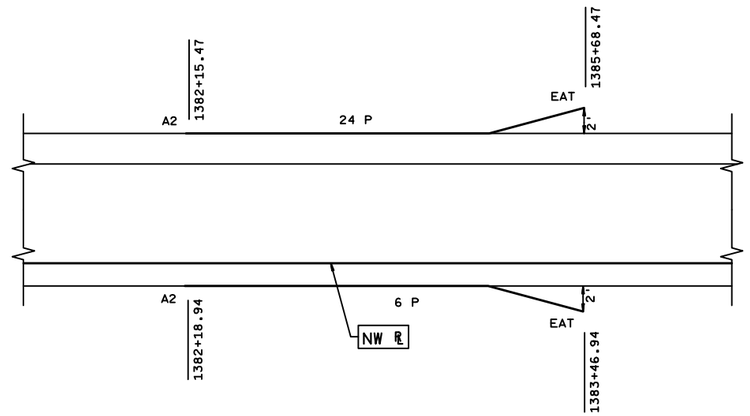
- ■ REMOVE AND REPLACE INLET
- [I] ADJUSTING/RECONSTRUCTING INLET
- REM = REMOVE AND REPLACE CONCRETE APPROACH SLAB AND SHOULDERS
- EAT = MGS ENERGY ABSORBING TERMINAL
- P = MGS PANELS AT 12.5 FT
- T = MGS THRIE BEAM TRANSITION
- A2 = MGS END TREATMENT, TYPE 2
- CC = TEMPORARY CRASH CUSHION
- TC = TEMPORARY THRIE BEAM CONNECTION
- ·▬▬· TEMPORARY PRECAST BARRIER



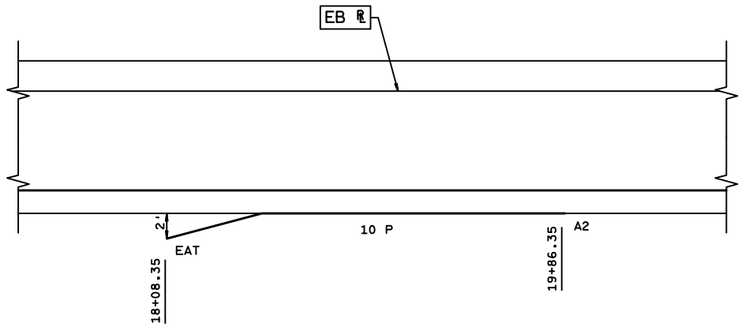
IH 43 NORTHBOUND OVER CLOVER ROAD



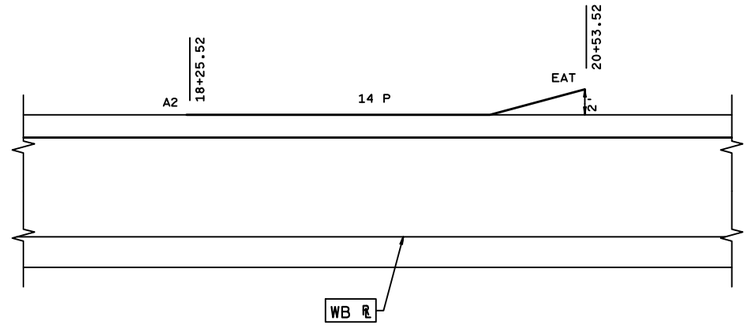
CTH C SE RAMP



CTH C NW RAMP



CTH C EB



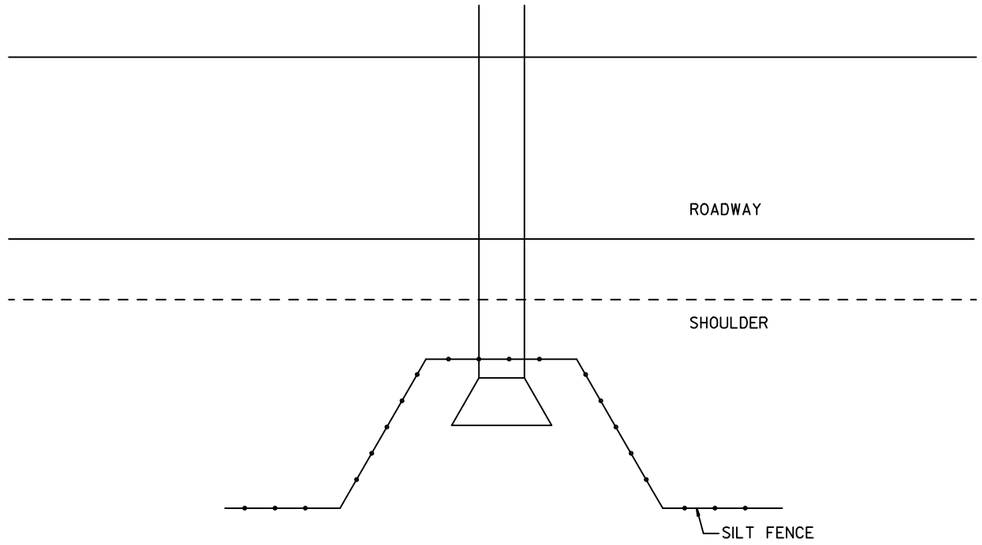
CTH C WB

LEGEND

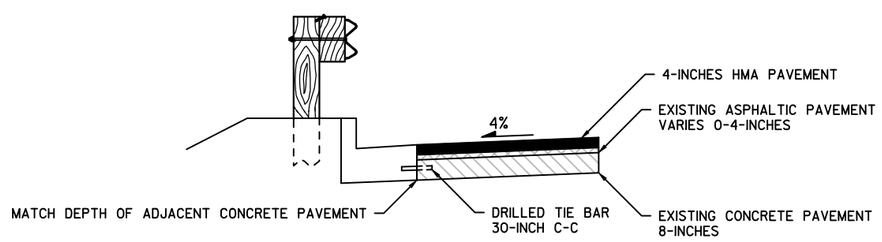
EAT = MGS ENERGY ABSORBING TERMINAL
P = MGS PANELS AT 12.5 FT
T = MGS THRIE BEAM TRANSITION
A2 = MGS END TREATMENT, TYPE 2

PROJECT NO:1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	PLAN: CONSTRUCTION DETAIL	SHEET 18	E

2

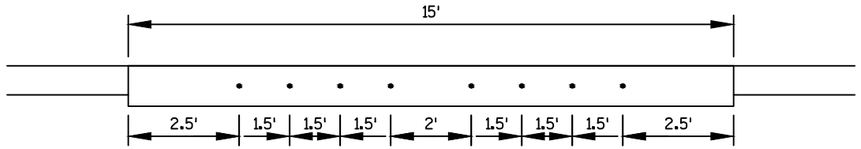


TYPICAL SILT FENCE DETAIL AT PIPE INLET



CURB AND GUTTER AT NEW INLETS ON IH 43

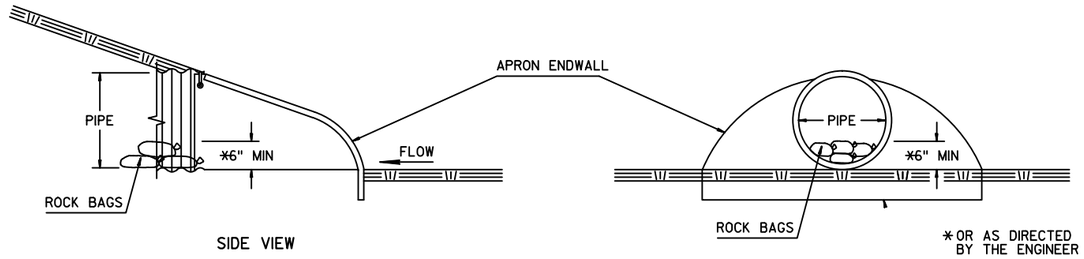
2



PROPOSED DOWEL BAR LAYOUT ON RAMPS

WEIGH STATION

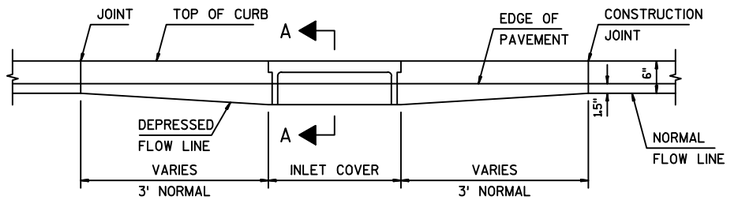
CTH C

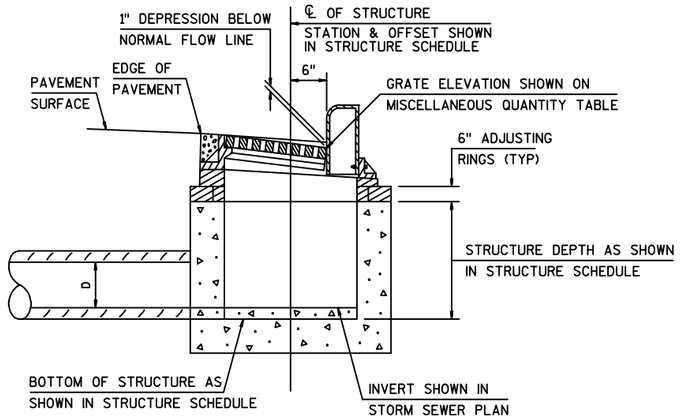


SIDE VIEW

END VIEW

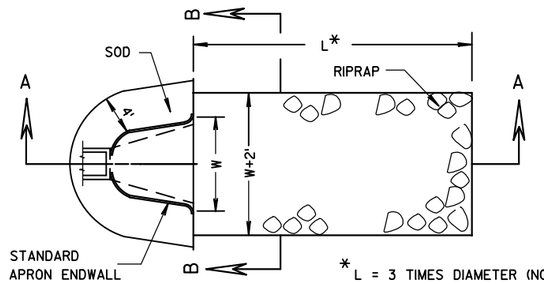
CULVERT PIPE CHECKS



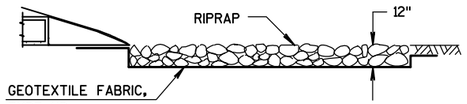


SECTION A-A

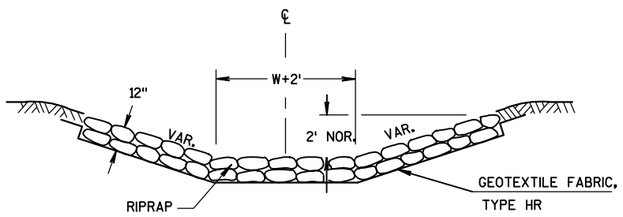
DETAIL OF CURB AND GUTTER AT INLETS



*L = 3 TIMES DIAMETER (NOR.) OR 10' MIN. OR AS DIRECTED BY THE ENGINEER

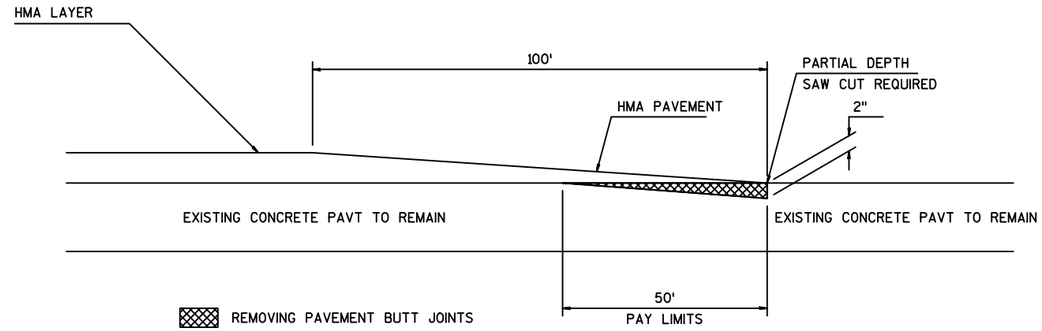


SECTION A-A



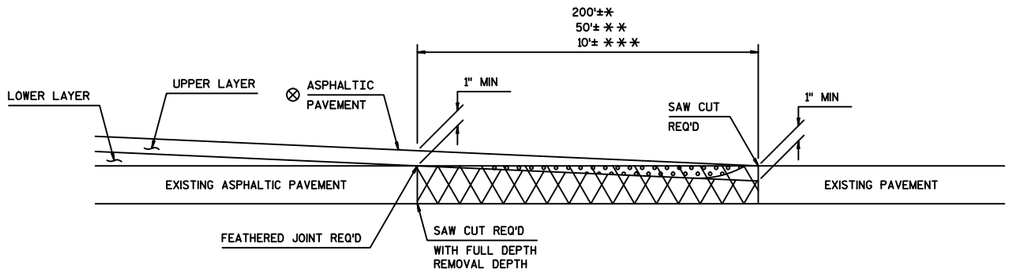
SECTION B-B

SOD, RIPRAP AND GEOTEXTILE FABRIC DETAIL AT APRON ENDWALLS



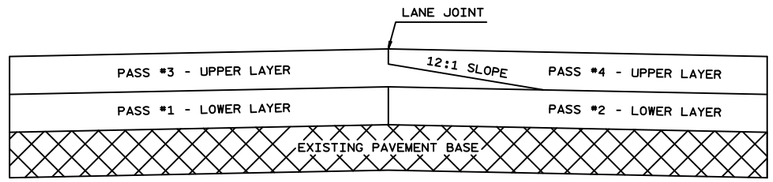
REMOVING PAVEMENT BUTT JOINT DETAIL

RAMPS



BUTT JOINT DETAIL FOR ASPHALTIC PAVEMENTS

* MAINLINE
** SIDEROADS
*** PRIVATE ENTRANCES

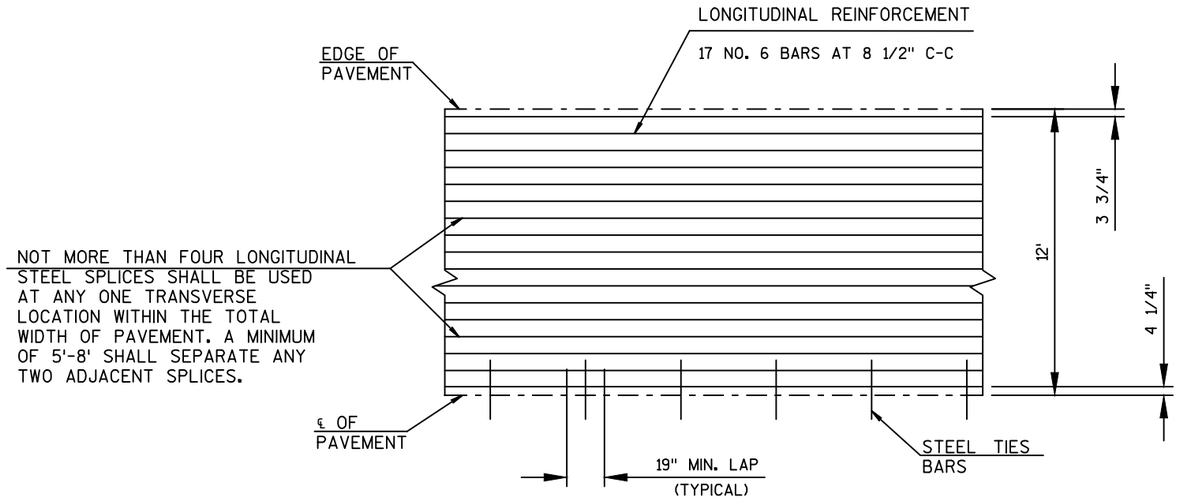


LOWER AND UPPER LAYERS

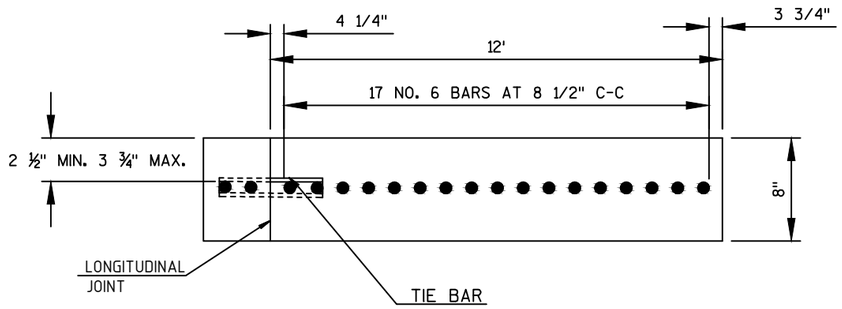
ASPHALT PAVEMENT LAYERING DETAIL

2

NOTE: SEE SDD 13A7 CONTINUOUSLY REINFORCED CONCRETE PAVEMENT REPAIR AND REPLACEMENT FOR MORE INFORMATION



REINFORCEMENT STEEL PLACEMENT



LONGITUDINAL CENTERLINE JOINT DETAIL

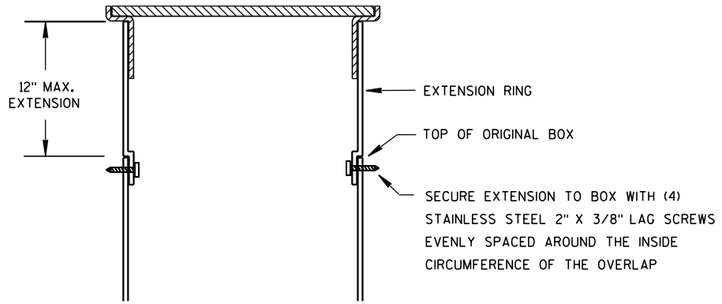
CONTINUOUSLY REINFORCED CONCRETE LONGITUDINAL BAR SPACING

TABLE OF NOMINAL DIMENSIONS AND WEIGHTS

DIMENSION IN INCHES		NON-CONDUCTIVE PULL BOX	
BOX DIAMETER ** (INSIDE)	A	24	24
BOX DIAMETER ** (OUTSIDE)	B	25	25
BOX LENGTH	C	36	42
COVER	D	25 1/2	25 1/2
FRAME	E	27	27
FRAME	F	25 3/4	25 3/4
FRAME	G	22 1/2	22 1/2
WEIGHT IN POUNDS *			
COVER		50	50

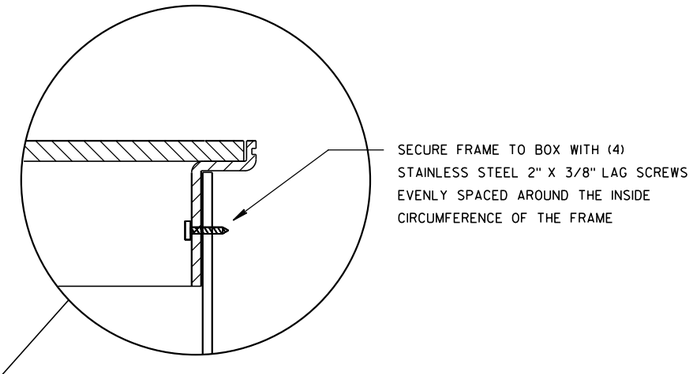
* THE ACTUAL WEIGHT OF THE COVER MAY VARY NOT TO EXCEED 100 LBS.

** DIAMETER VARIES FROM TOP TO BOTTOM WITH THE DIAMETER LARGER AT THE BOTTOM TO PREVENT FROST HEAVE

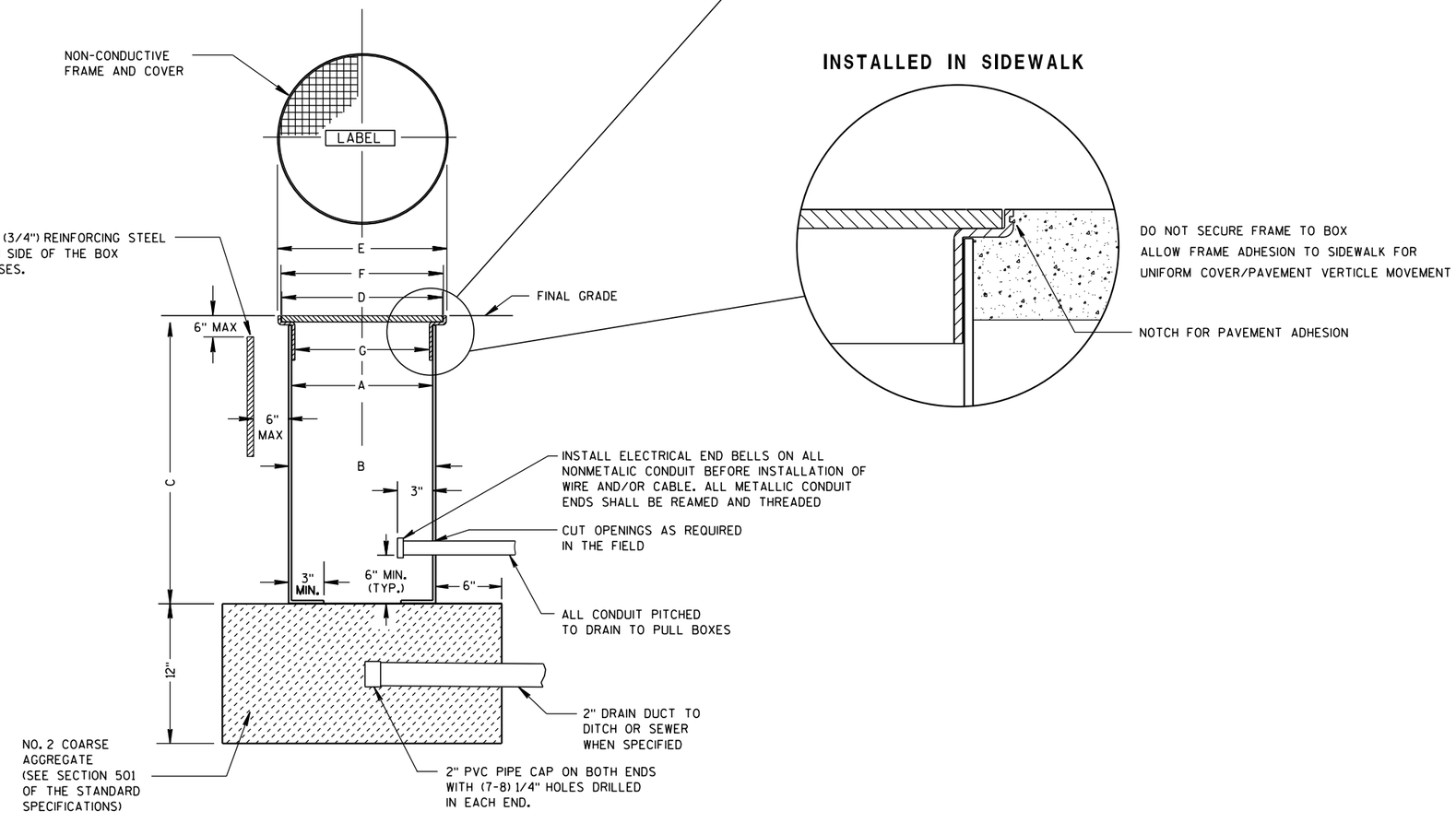


BOX EXTENSION

INSTALLED IN SOD OR CRUSHED AGGREGATE



INSTALLED IN SIDEWALK



NON-CONDUCTIVE PULL BOX

GENERAL NOTES

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

ALL BOXES, FRAMES AND COVERS SHALL BE SUITABLE FOR TIER 15 LOADING AS SPECIFIED IN ANSI/SCTE 77.

PROVIDE AN OPENING FOR TOOL ASSISTED COVER REMOVAL NOT LARGE ENOUGH TO PERMIT PASSAGE OF A SPHERE MORE THAN 1/2" DIAMETER

ENSURE COVER SURFACE IS SKID RESISTANT WITH A COEFFICIENT OF FRICTION OF AT LEAST 0.5 AND VERTICAL SURFACE DICONTINUITIES LESS THAN 1/4".

BOXES AND EXTENSIONS ARE TRIMMABLE FOR CUSTOM LENGTHS. TRIMMED PIECES SHALL MAINTAIN A UNIFORM LENGTH.

ENTRANCE HOLES INTO PULL BOXES SHALL BE CUT WITH A CIRCULAR HOLE SAW OR HYDRAULIC CONDUIT PUNCH. HOLE SIZE SHALL BE THE OUTSIDE DIAMETER OF THE CONDUIT THAT IS TO FIT IN THE OPENING PLUS NO MORE THAN 1/4".

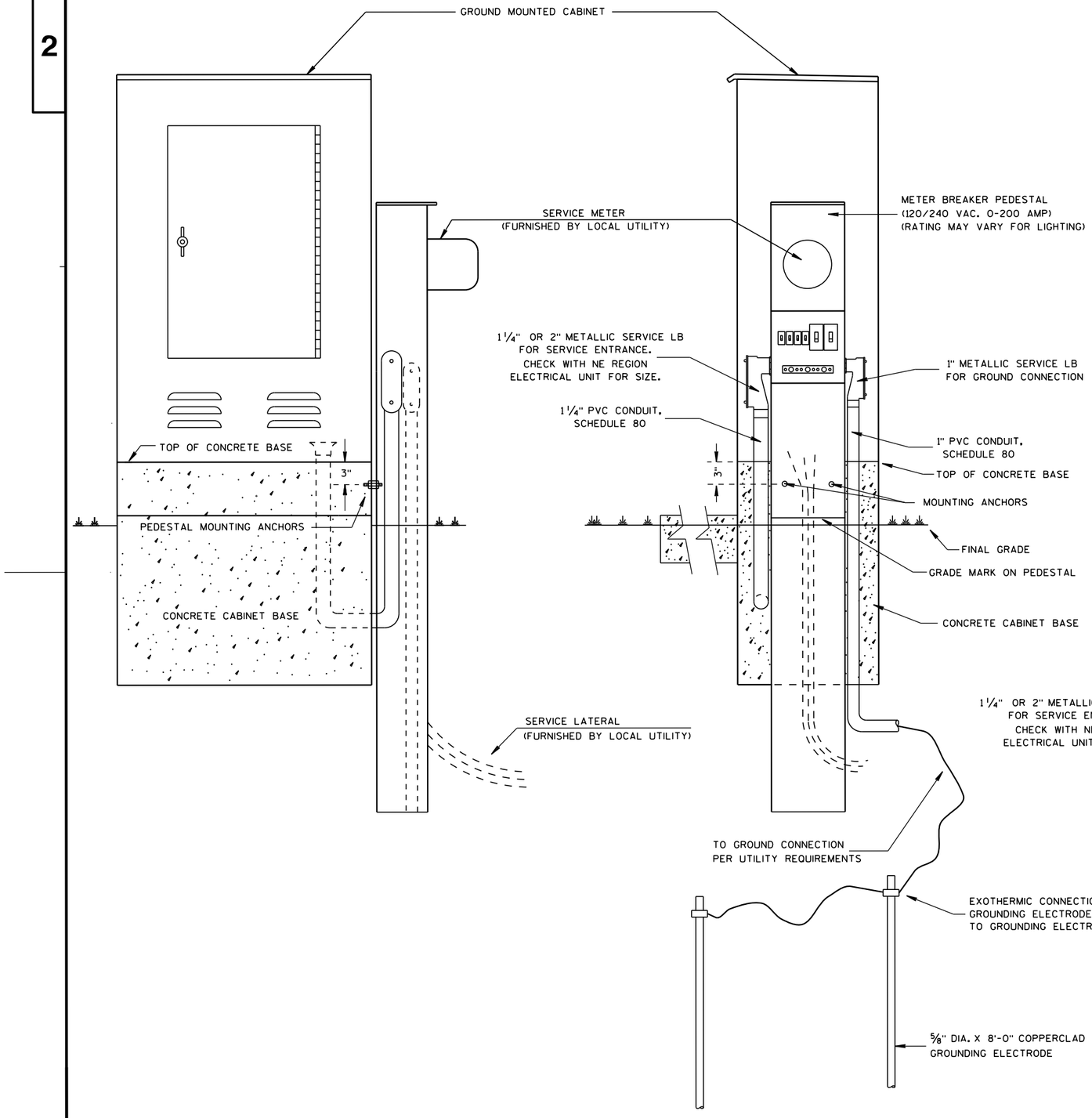
THE CONTRACTOR SHALL NOT INSTALL WIRE IN ANY PULL BOX UNTIL ITS INSTALLATION HAS BEEN INSPECTED AND ACCEPTED BY THE ENGINEER.

ALL METALLIC CONDUIT IN WHICH WIRE AND/OR CABLE IS TO BE INSTALLED, SHALL BE BUSHED BEFORE INSTALLATION OF THE WIRE AND/OR CABLE.

ENTIRE BOX MUST BE CONSTRUCTED OF NON-CONDUCTIVE MATERIALS WITH THE EXCEPTION OF STAINLESS STEEL FASTENERS.

WHEN A PULL BOX IS INSTALLED IN CRUSHED AGGREGATE SHOULDERS, PLACE IT 2-3 INCHES BELOW GRADE AND COVER IT WITH 2-3 INCHES OF CRUSHED AGGREGATE

LABEL ON COVER SHALL READ "ELECTRIC" FOR SIGNAL OR LIGHTING SYSTEMS. "WISDOT COMMUNICATIONS" FOR COMMUNICATIONS SYSTEMS.



GENERAL NOTES

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

THE EXACT LOCATION OF THE METER BREAKER PEDESTAL SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.

THE TYPE OF CONCRETE CABINET BASE TO BE INSTALLED SHALL BE AS CALLED FOR IN THE PLANS.

TO FACILITATE FLUSH MOUNTING OF THE METER BREAKER PEDESTAL AGAINST THE SIDE OF THE CABINET BASE (IF FLUSH MOUNTING POSSIBLE. CONFER WITH THE LOCAL UTILITY TO DETERMINE WHICH SIDE OF THE CONCRETE BASE THE ELECTRICAL SERVICE LATERAL WILL APPROACH. THEN FORM THAT INDICATED SIDE FOR FULL SIDE DEPTH.

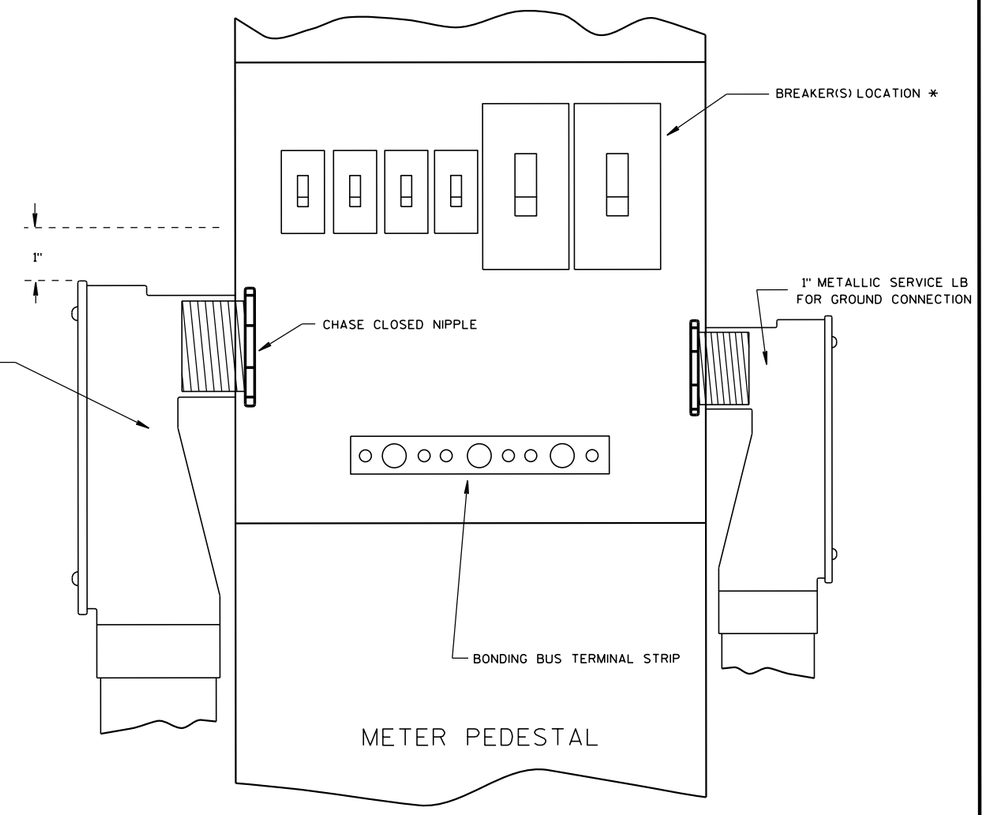
WHILE FLUSH MOUNTING IS THE MOST DESIRABLE MOUNTING CONFIGURATION UTILITY REQUIREMENTS MAY PRECLUDE THIS OPTION. CONTRACTOR MUST PROVIDE UTILITY APPROVED PEDESTAL AND INSTALL PER UTILITY AND MANUFACTURERS REQUIREMENTS.

SERVICE CONDUCTOR ENTRANCES SHALL BE RIGID METALLIC CONDUIT OR SCHEDULE 80 PVC, NIPPLES AND/OR CONDULETS AS REQUIRED. CONDUIT LB SHALL BE OF METALLIC SERVICE ENTRANCE TYPE.

SERVICE CONDUCTOR ENTRANCES SHALL BE SIZED AND LOCATED AS REQUIRED BY THE LOCAL UTILITY AND IN ACCORDANCE WITH APPROPRIATE ARTICLES OF THE LATEST ACCEPTED NATIONAL ELECTRICAL CODE.

IF MORE THAN ONE GROUNDING ELECTRODE IS REQUIRED, THE DISTANCE APART SHALL BE 6 FEET OR PER NEC.

* SOME PEDESTAL LIGHTING PLANS SHOW MAIN LUGS ONLY.



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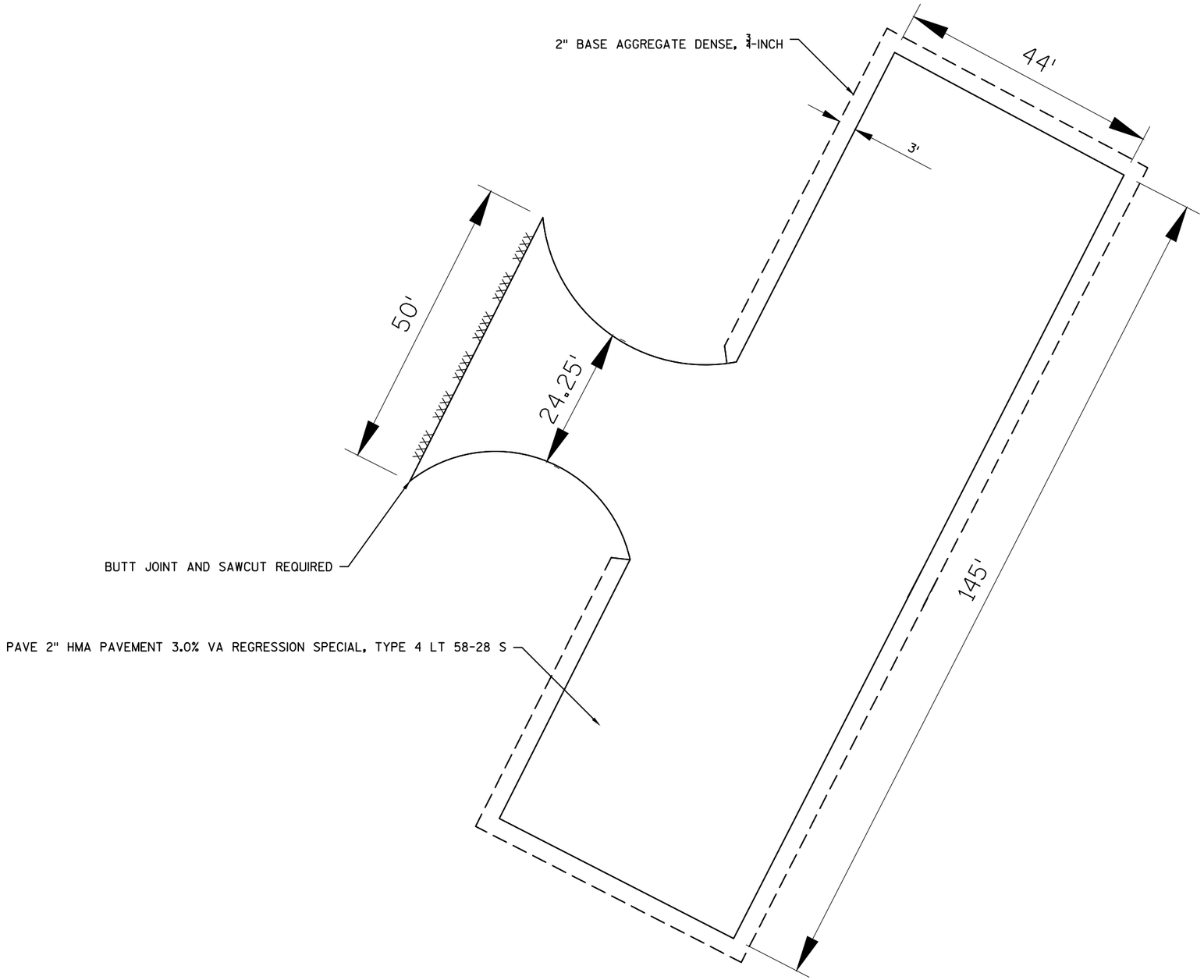
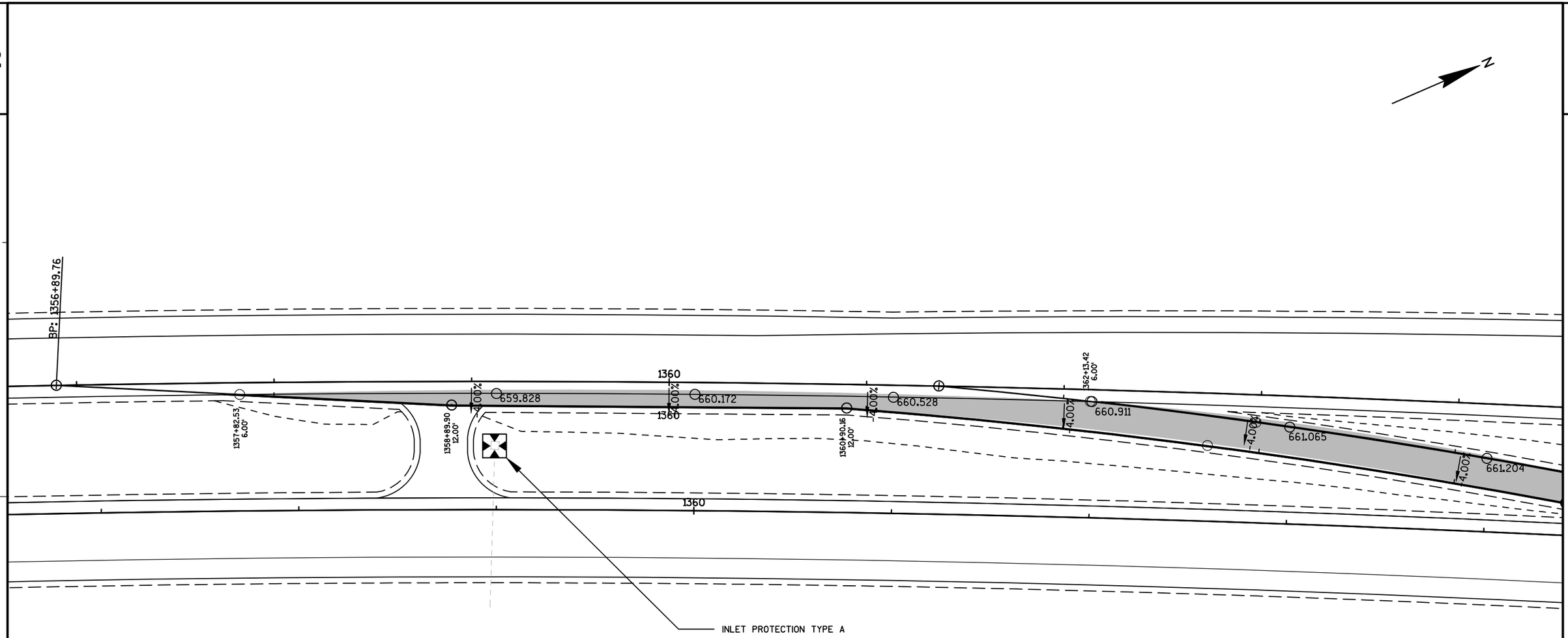


CTH C PARK & RIDE

LEGEND
XXX SAWCUT

PROJECT NO: 1124-21-73	HWY: IH 43	COUNTY: MANITOWOC	CONSTRUCTION DETAIL	SHEET 25	E

2



PROJECT NO:1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	IH 43 MIDDLE CROSSOVER	SHEET 26	E

2

2

N

INLET PROTECTION TYPE A

1365

1370

661.065

4.00"

661.204

4.00"

661.340

4.00"

661.478

1365

1365

1365

1365+37.72
-6.00"

1365+18.25
-6.00"

1370

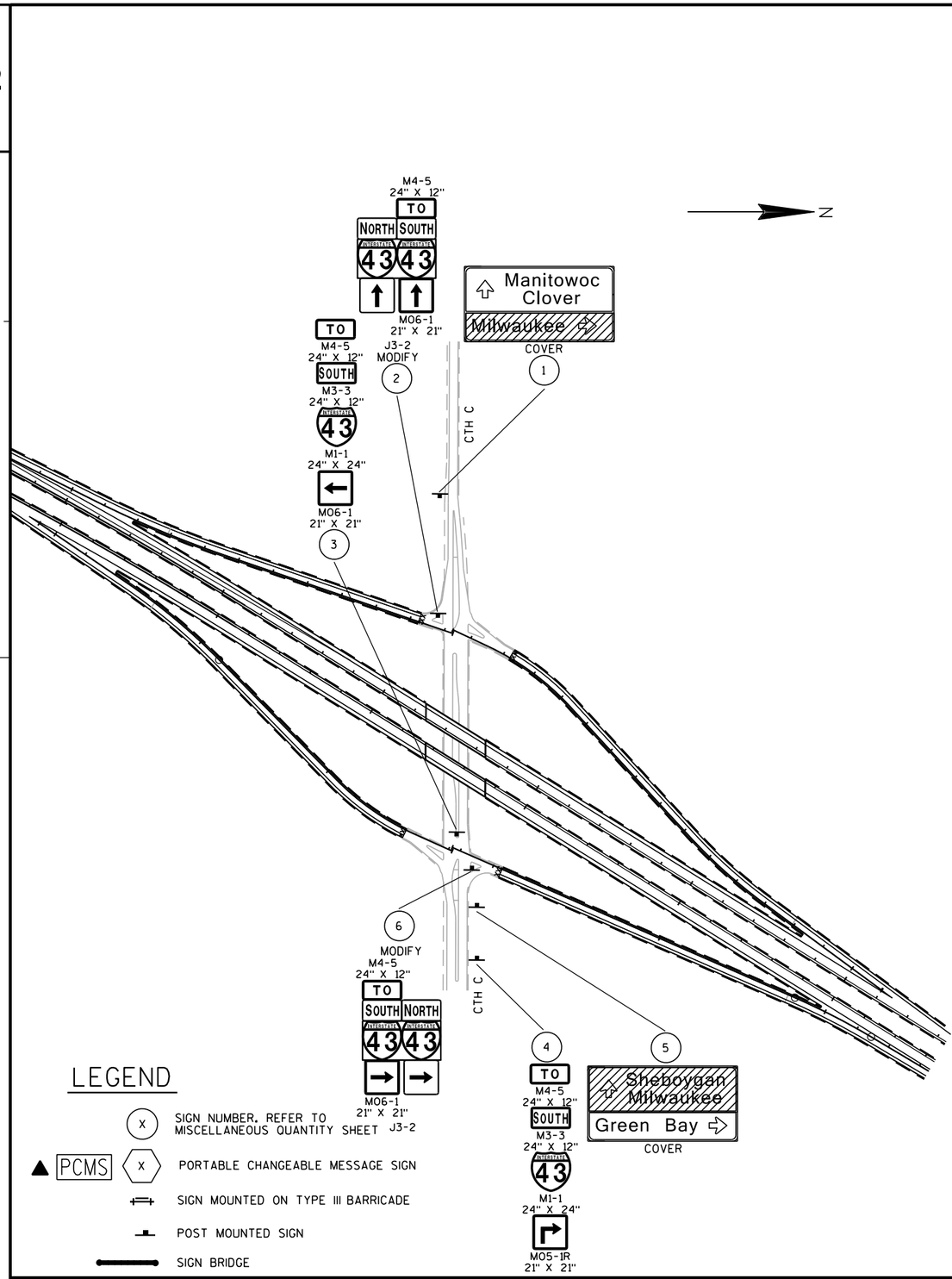
EP: 1369+31.11

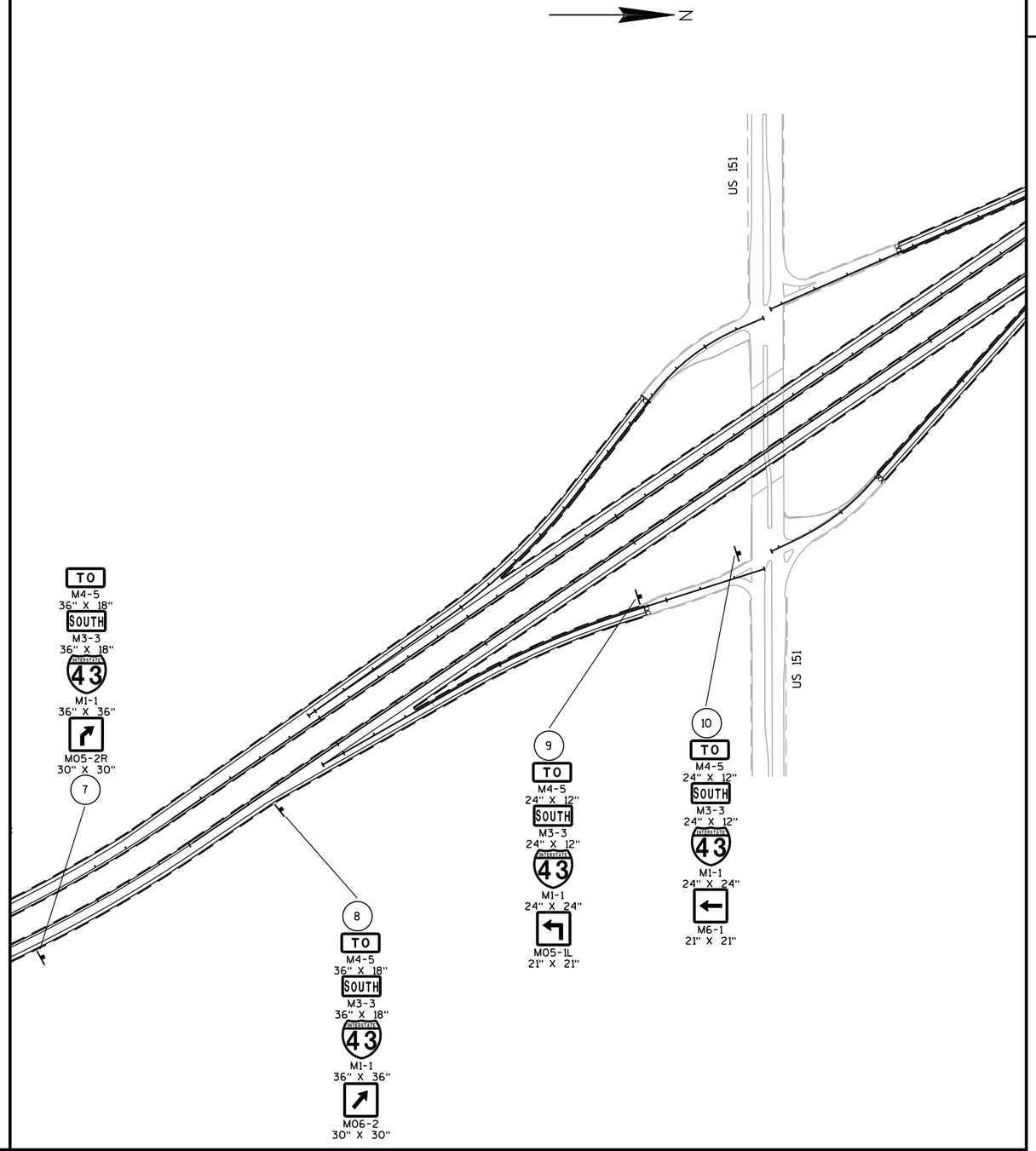
PROJECT NO:1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	IH 43 MIDDLE CROSSOVER	SHEET 27	E

FILE NAME : \\GRE31FP1\N3PUBLIC\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\021003_CD.DWG
LAYOUT NAME - SHEET - (5)

PLOT DATE : 7/26/2016 3:17 PM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:50 FT

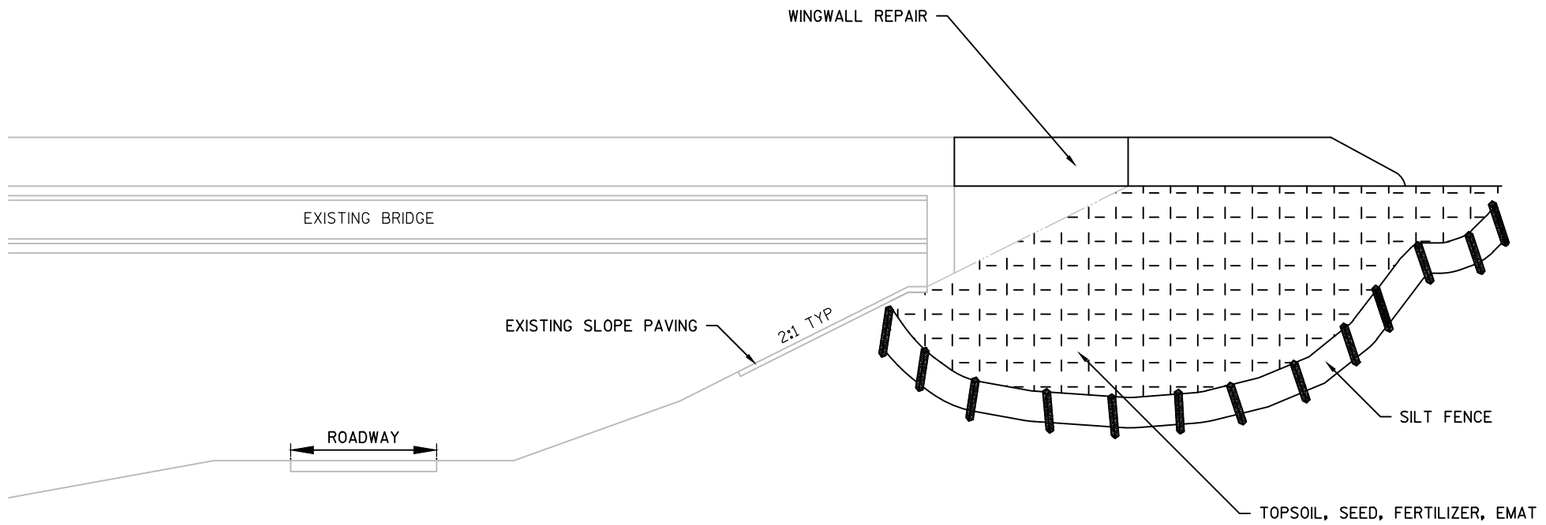
WISDOT/CADDS SHEET 42





PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	TRAILBLAZING ROUTE DETAIL - SB ROADWAY CLOSURE	SHEET 28	E

2



ELEVATION

EROSION CONTROL AT WINGWALL REPAIRS

STA 1445+45'NB' B-36-0053 SE WINGWALL
STA 1445+45'NB' B-36-0053 SW WINGWALL
STA 1447+00'NB' B-36-0053 NW WINGWALL
STA 1445+00'SB' B-36-0052 SW WINGWALL
STA 1446+50'SB' B-36-0052 NW WINGWALL

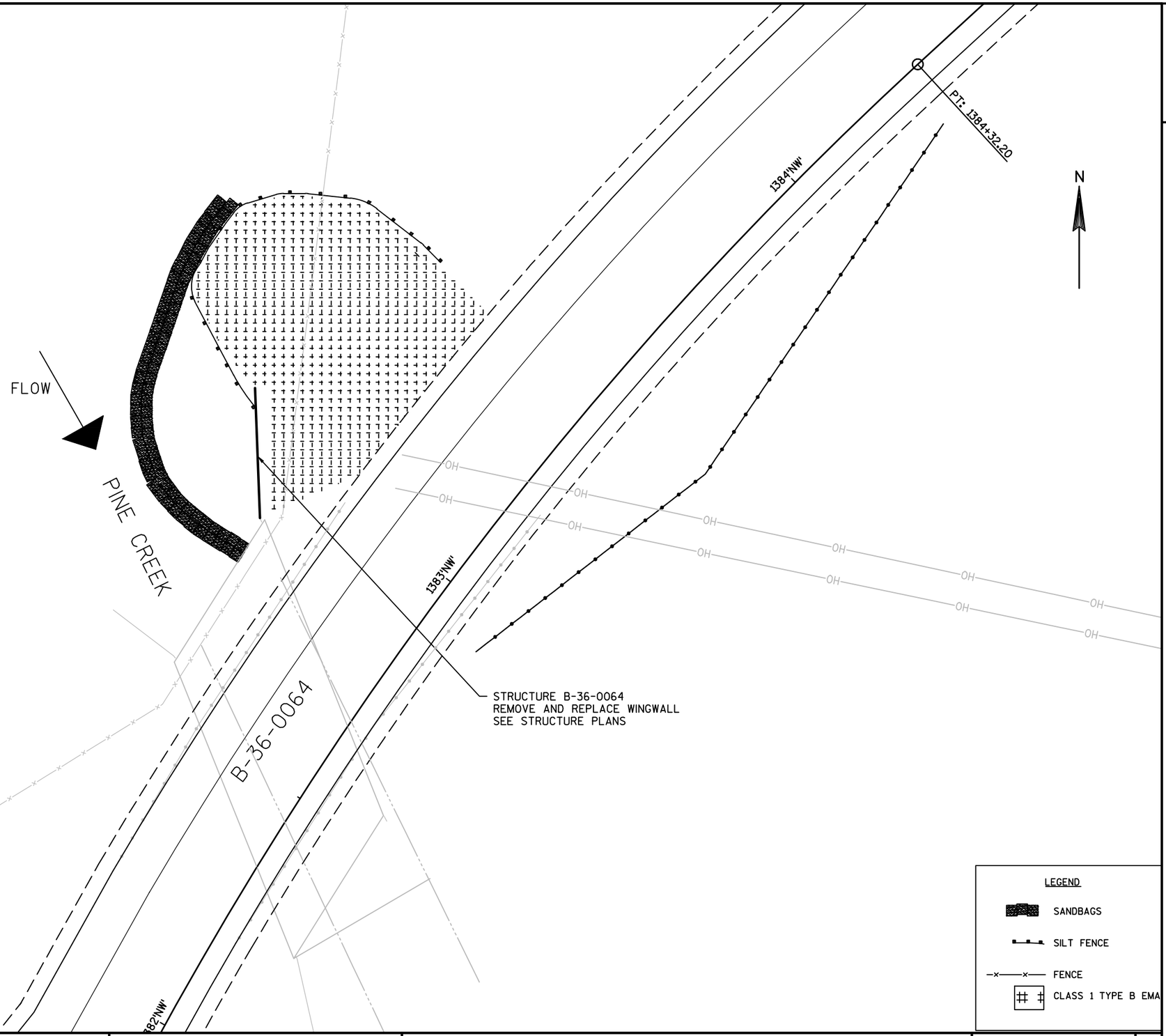
EROSION MAT CLASS 1 TYPE B

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\022001_EC.DWG PLOT DATE : 3/17/2016 1:25 PM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT
WISDOT/CADDS SHEET 42

NOTES

SANDBAGS SHALL BE INCIDENTAL TO THE REMOVING OLD STRUCTURE BID ITEMS.

STACK SANDBAGS TO A HEIGHT AND LENGTH NECESSARY TO PROTECT THE WINGWALL WORKZONE FROM THE FLOW OF WATER.



PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	EROSION CONTROL DETAILS	SHEET 30	E

2

POINT CREEK

1230'SB'

1230'NB'

FLOW

FLOW

POINT CREEK

STA 1229+47.50'NB'
REMOVE STRUCTURE B-36-0014
CONSTRUCT STRUCTURE B-36-0230
SEE STRUCTURE PLANS FOR MORE INFORMATION

*NOTE
2 YEAR FLOOD ELEVATION IS 629.5'

LEGEND

- SILT FENCE
- TURBIDITY BARRIER
- EROSION MAT, SEED, FERTILIZER
- RIP RAP

PROJECT NO:1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	EROSION CONTROL DETAILS	SHEET 31	E

2

2

STA 1325+25.00'SB'
REMOVE STRUCTURE B-36-0049
CONSTRUCT STRUCTURE B-36-0231
SEE STRUCTURE PLANS FOR MORE INFORMATION

NEWTON ROAD

1330'SB'

1330'

N

NEWTON ROAD

LEGEND

SILT FENCE
TURBIDITY BARRIER
EROSION MAT, SEED, FERTILIZER
RIP RAP

PROJECT NO:1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	EROSION CONTROL DETAILS	SHEET 32	E

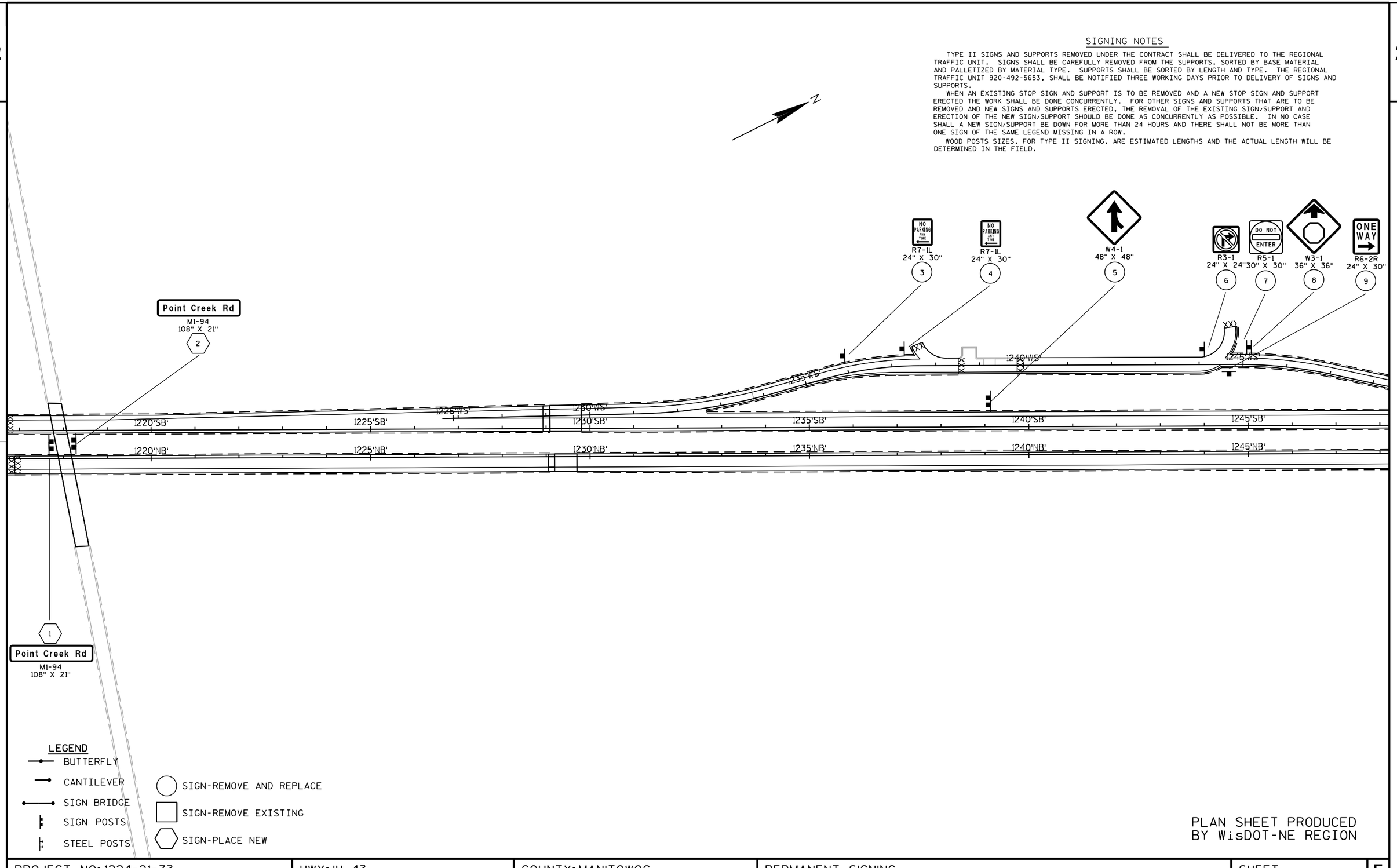
FILE NAME : \\GRE31FP1\N3PUBLIC\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\022002_EC.DWG PLOT DATE : 7/25/2016 11:21 AM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1" = 50'_XREF

SIGNING NOTES

TYPE II SIGNS AND SUPPORTS REMOVED UNDER THE CONTRACT SHALL BE DELIVERED TO THE REGIONAL TRAFFIC UNIT. SIGNS SHALL BE CAREFULLY REMOVED FROM THE SUPPORTS, SORTED BY BASE MATERIAL AND PALLETIZED BY MATERIAL TYPE. SUPPORTS SHALL BE SORTED BY LENGTH AND TYPE. THE REGIONAL TRAFFIC UNIT 920-492-5653, SHALL BE NOTIFIED THREE WORKING DAYS PRIOR TO DELIVERY OF SIGNS AND SUPPORTS.

WHEN AN EXISTING STOP SIGN AND SUPPORT IS TO BE REMOVED AND A NEW STOP SIGN AND SUPPORT ERECTED THE WORK SHALL BE DONE CONCURRENTLY. FOR OTHER SIGNS AND SUPPORTS THAT ARE TO BE REMOVED AND NEW SIGNS AND SUPPORTS ERECTED, THE REMOVAL OF THE EXISTING SIGN/SUPPORT AND ERECTION OF THE NEW SIGN/SUPPORT SHOULD BE DONE AS CONCURRENTLY AS POSSIBLE. IN NO CASE SHALL A NEW SIGN/SUPPORT BE DOWN FOR MORE THAN 24 HOURS AND THERE SHALL NOT BE MORE THAN ONE SIGN OF THE SAME LEGEND MISSING IN A ROW.

WOOD POSTS SIZES, FOR TYPE II SIGNING, ARE ESTIMATED LENGTHS AND THE ACTUAL LENGTH WILL BE DETERMINED IN THE FIELD.



LEGEND

- BUTTERFLY
- CANTILEVER
- SIGN BRIDGE
- SIGN POSTS
- STEEL POSTS
- SIGN-REMOVE AND REPLACE
- SIGN-REMOVE EXISTING
- SIGN-PLACE NEW

PLAN SHEET PRODUCED BY WisDOT-NE REGION

PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	PERMANENT SIGNING	SHEET 33	E

2

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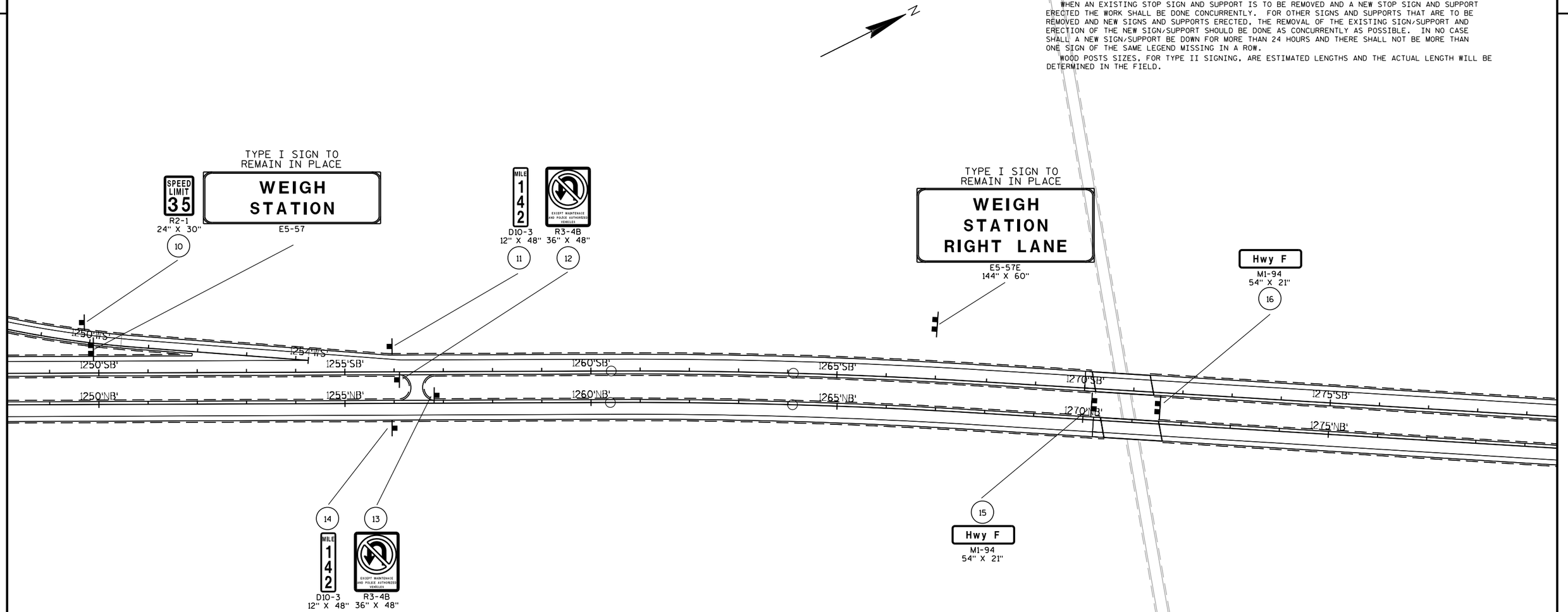

LEGEND

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PLAN SHEET PRODUCED BY WisDOT-NE REGION

PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	PERMANENT SIGNING	SHEET 34	E

2

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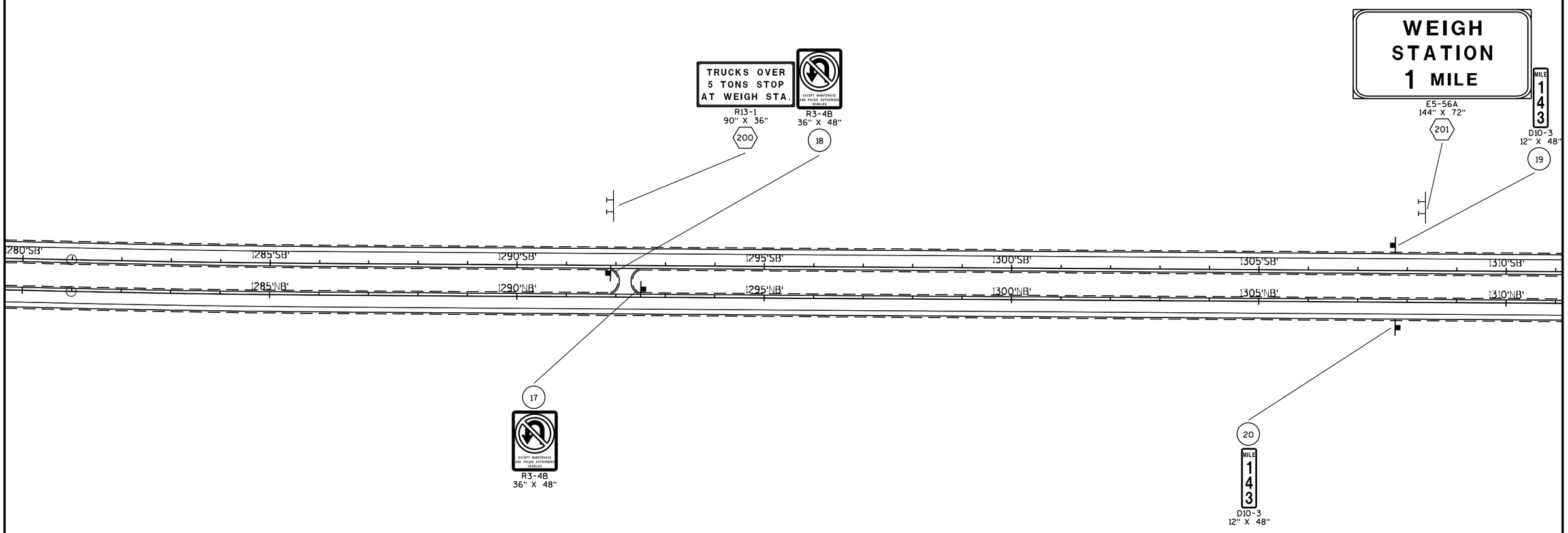

LEGEND

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PLAN SHEET PRODUCED BY WisDOT-NE REGION

PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	PERMANENT SIGNING	SHEET 35	E

2

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N

1315'SB' 1320'SB' 1325'SB' 1330'SB' 1335'SB' 1340'SB'

1315'NB' 1320'NB' 1325'NB' 1330'NB' 1335'NB' 1340'NB'

Newton Rd
M1-94
78" X 21"
22

EMERGENCY STOPPING ONLY
R8-7
48" X 36"
24

21
Newton Rd
M1-94
78" X 21"

23
SPONSOR
155-56

203
E1-5
120" X 30"
202
EXIT 144
C
St Nazianz
Newton
1 MILE
E1-1A
216" X 132"

LEGEND

- BUTTERFLY
- CANTILEVER
- SIGN BRIDGE
- SIGN POSTS
- STEEL POSTS
- SIGN-REMOVE AND REPLACE
- SIGN-REMOVE EXISTING
- SIGN-PLACE NEW

PLAN SHEET PRODUCED BY WisDOT-NE REGION

PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	PERMANENT SIGNING	SHEET 36	E

2

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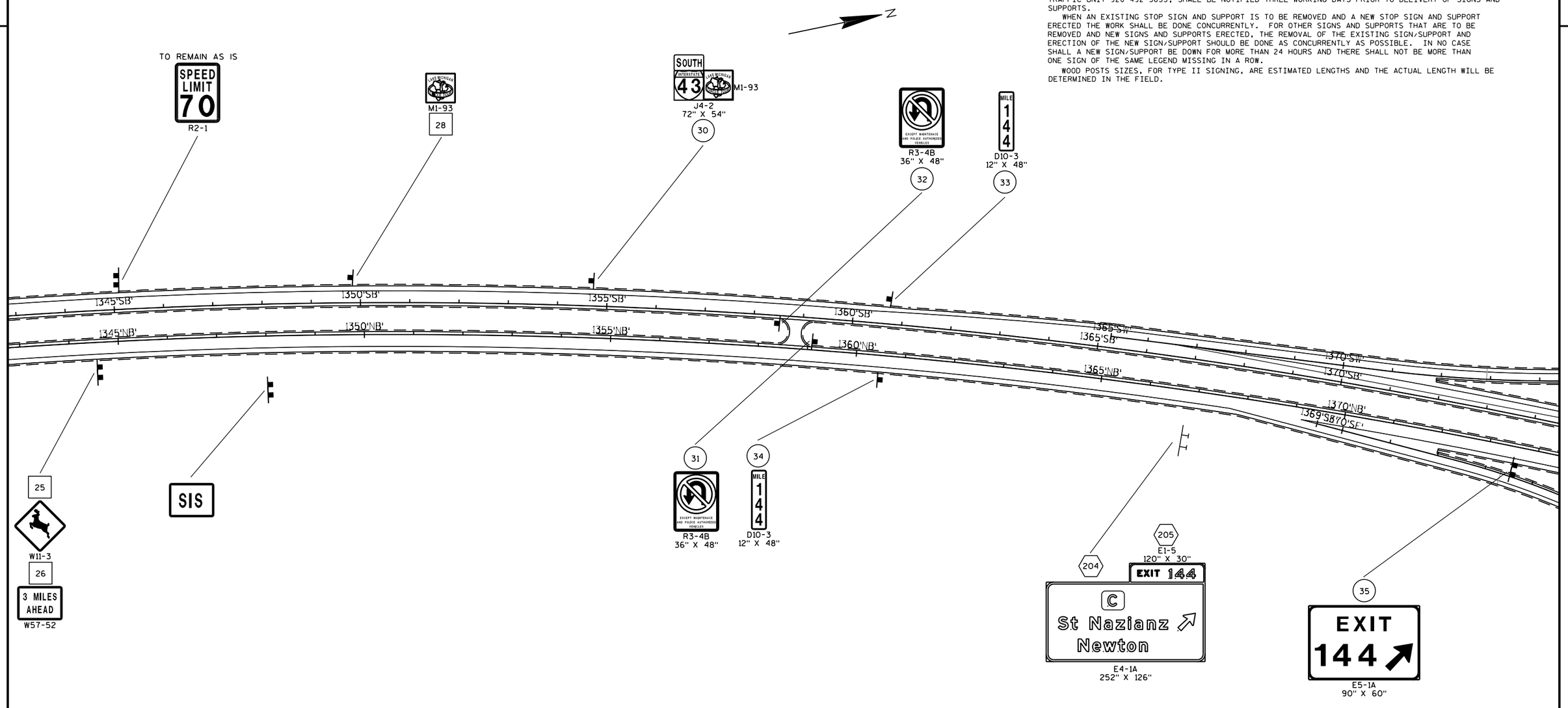
WOOD POSTS SIZES, FOR TYPE II SIGNING, ARE ESTIMATED LENGTHS AND THE ACTUAL LENGTH WILL BE DETERMINED IN THE FIELD.



LEGEND

- BUTTERFLY
- CANTILEVER
- SIGN BRIDGE
- SIGN POSTS
- STEEL POSTS
- SIGN-REMOVE AND REPLACE
- SIGN-REMOVE EXISTING
- SIGN-PLACE NEW

PLAN SHEET PRODUCED BY WisDOT-NE REGION

PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	PERMANENT SIGNING	SHEET 37	E

2

SIGNING NOTES

TYPE II SIGNS AND SUPPORTS REMOVED UNDER THE CONTRACT SHALL BE DELIVERED TO THE REGIONAL TRAFFIC UNIT. SIGNS SHALL BE CAREFULLY REMOVED FROM THE SUPPORTS, SORTED BY BASE MATERIAL AND PALLETIZED BY MATERIAL TYPE. SUPPORTS SHALL BE SORTED BY LENGTH AND TYPE. THE REGIONAL TRAFFIC UNIT 920-492-5653, SHALL BE NOTIFIED THREE WORKING DAYS PRIOR TO DELIVERY OF SIGNS AND SUPPORTS.

WHEN AN EXISTING STOP SIGN AND SUPPORT IS TO BE REMOVED AND A NEW STOP SIGN AND SUPPORT ERECTED THE WORK SHALL BE DONE CONCURRENTLY. FOR OTHER SIGNS AND SUPPORTS THAT ARE TO BE REMOVED AND NEW SIGNS AND SUPPORTS ERECTED, THE REMOVAL OF THE EXISTING SIGN/SUPPORT AND ERECTION OF THE NEW SIGN/SUPPORT SHOULD BE DONE AS CONCURRENTLY AS POSSIBLE. IN NO CASE SHALL A NEW SIGN/SUPPORT BE DOWN FOR MORE THAN 24 HOURS AND THERE SHALL NOT BE MORE THAN ONE SIGN OF THE SAME LEGEND MISSING IN A ROW.

WOOD POSTS SIZES, FOR TYPE II SIGNING, ARE ESTIMATED LENGTHS AND THE ACTUAL LENGTH WILL BE DETERMINED IN THE FIELD.

N

SEE PERMANENT SIGNING SHEET #10 FOR LAYOUT

W4-1
48" X 48"
41

PEDESTRIANS
BICYCLES
NON MOTORIZED TRAFFIC
MOTOR BICYCLES
PROHIBITED
R5-57
36" X 36"
42

WRONG WAY
R5-1A
36" X 24"
45

TO COUNTY CR COUNTY C
J3-2
48" X 57"
46

WRONG WAY
R5-1A
36" X 24"
47

Newton
St Nazianz
D1-2
78" X 30"
48

W3-1
36" X 36"
49

EXIT 144
E5-1A
90" X 60"
50

207
E1-5
120" X 30"
EXIT 144
C
St Nazianz
Newton
E4-1A
252" X 126"
206

1375'SB' 1380'SB' 1385'SB' 1390'SB' 1395'SB' 1400'SB' 1405'SB'
1375'NB' 1380'NB' 1385'NB' 1390'NB' 1395'NB' 1400'NB'
1375'SE' 1380'SE' 1383'NE' 1385'SE' 1385'NE' 1390'NE' 1395'NE' 1400'NE' 1401'NE'
1380'SW' 1385'SW' 1385'NW' 1390'NW' 1395'NW' 1396'NW'

36
W3-1
36" X 36"

37
St Nazianz
Newton
D1-2
78" X 30"

38
WRONG WAY
R5-1A
36" X 24"

39
TO COUNTY C COUNTY CR
J3-2
48" X 57"

40
WRONG WAY
R5-1A
36" X 24"

43
PEDESTRIANS
BICYCLES
NON MOTORIZED TRAFFIC
MOTOR BICYCLES
PROHIBITED
R5-57
36" X 36"

44
W4-1
48" X 48"

LEGEND

- BUTTERFLY
- CANTILEVER
- SIGN BRIDGE
- SIGN POSTS
- STEEL POSTS
- SIGN-REMOVE AND REPLACE
- SIGN-REMOVE EXISTING
- SIGN-PLACE NEW

PLAN SHEET PRODUCED
BY WisDOT-NE REGION

PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	PERMANENT SIGNING	SHEET 38	E

2

SIGNING NOTES

TYPE II SIGNS AND SUPPORTS REMOVED UNDER THE CONTRACT SHALL BE DELIVERED TO THE REGIONAL TRAFFIC UNIT. SIGNS SHALL BE CAREFULLY REMOVED FROM THE SUPPORTS, SORTED BY BASE MATERIAL AND PALLETIZED BY MATERIAL TYPE. SUPPORTS SHALL BE SORTED BY LENGTH AND TYPE. THE REGIONAL TRAFFIC UNIT 920-492-5653, SHALL BE NOTIFIED THREE WORKING DAYS PRIOR TO DELIVERY OF SIGNS AND SUPPORTS.

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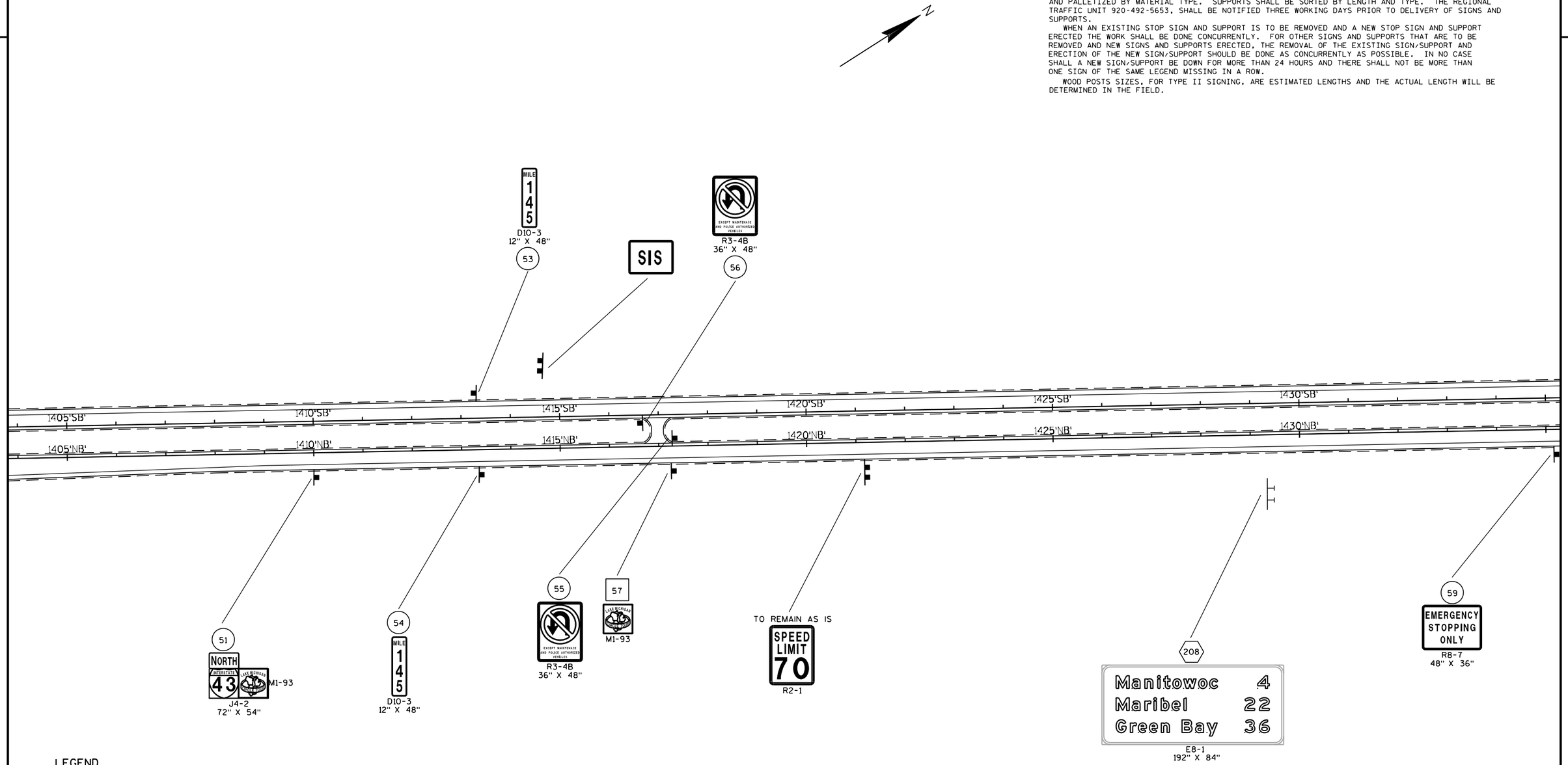
WOOD POSTS SIZES, FOR TYPE II SIGNING, ARE ESTIMATED LENGTHS AND THE ACTUAL LENGTH WILL BE DETERMINED IN THE FIELD.



LEGEND

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- CANTILEVER
- SIGN BRIDGE
- SIGN POSTS
- STEEL POSTS
- SIGN-REMOVE AND REPLACE
- SIGN-REMOVE EXISTING
- SIGN-PLACE NEW

PLAN SHEET PRODUCED BY WisDOT-NE REGION

PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	PERMANENT SIGNING	SHEET 39	E

2

SIGNING NOTES

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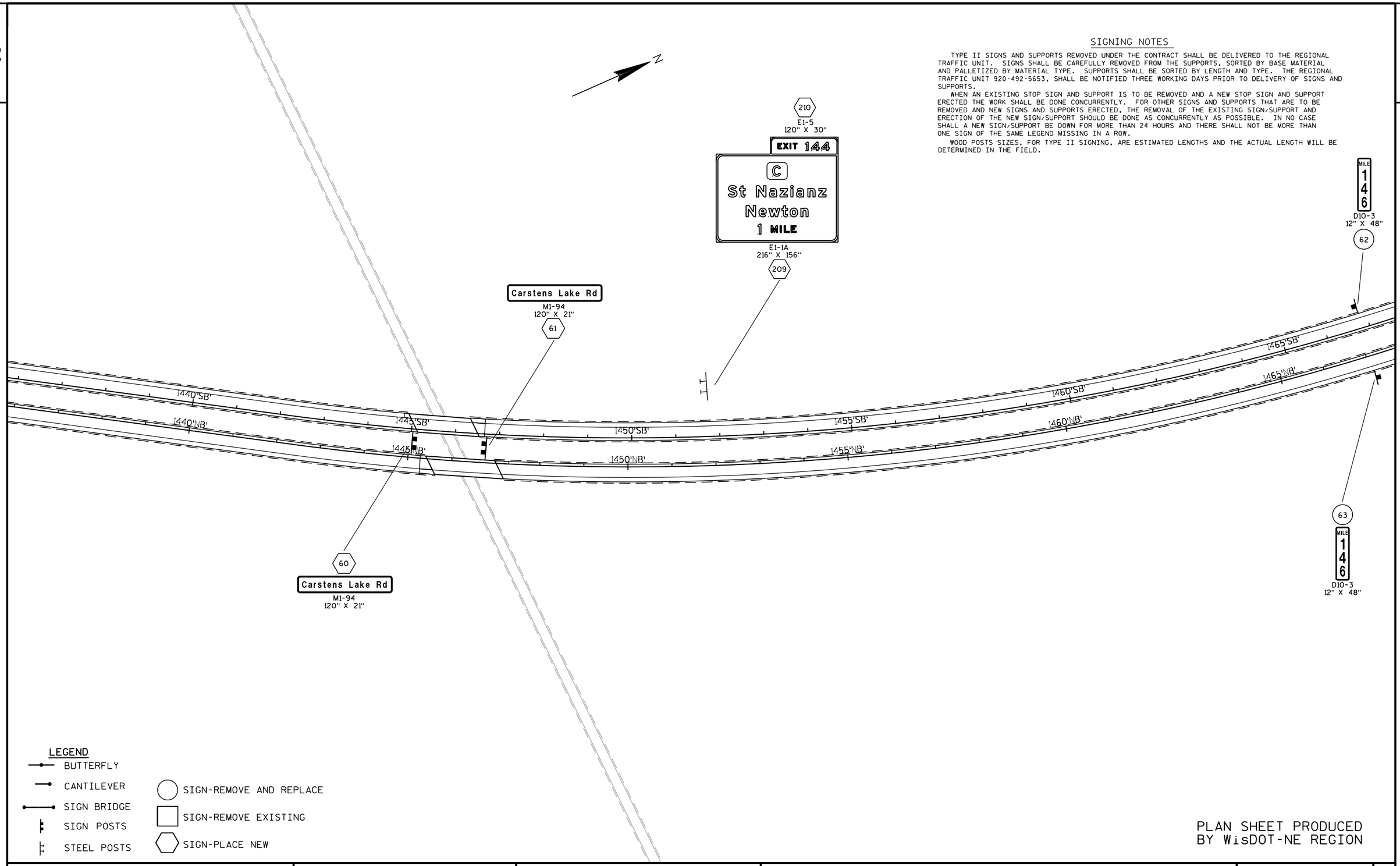

LEGEND

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- CANTILEVER
- SIGN BRIDGE
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- STEEL POSTS
- SIGN-REMOVE AND REPLACE
- SIGN-REMOVE EXISTING
- SIGN-PLACE NEW

PLAN SHEET PRODUCED
BY WisDOT-NE REGION

PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	PERMANENT SIGNING	SHEET 40	E

2

2

SIGNING NOTES

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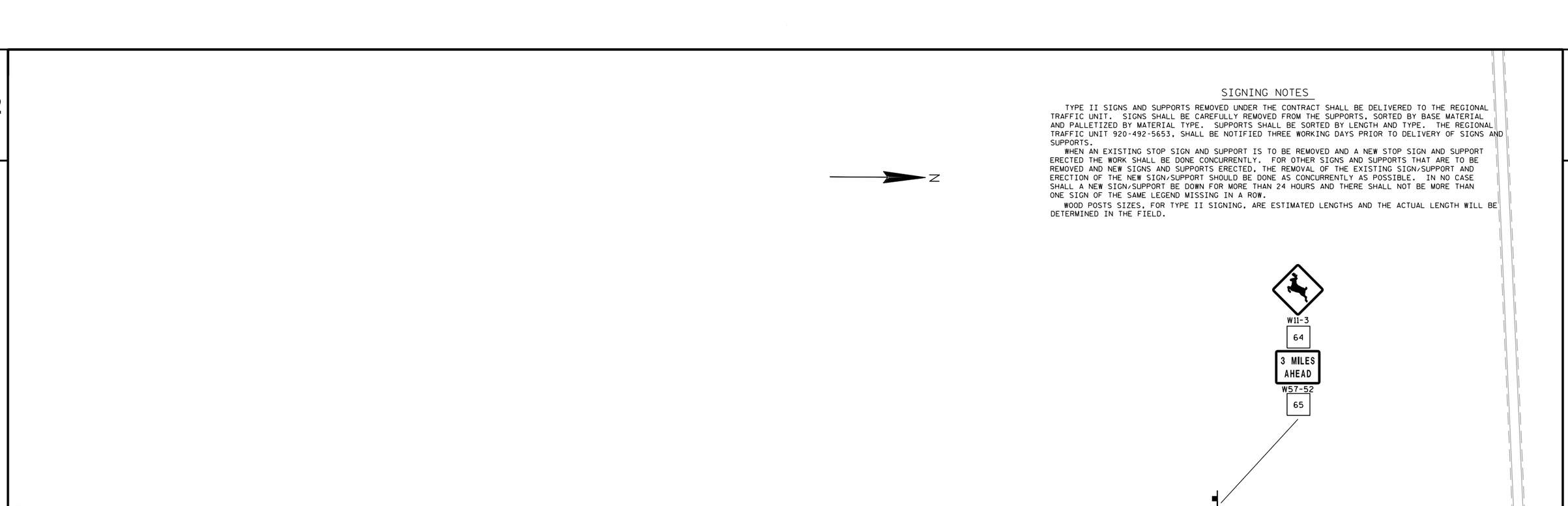
N



LEGEND

- BUTTERFLY
- CANTILEVER
- SIGN BRIDGE
- SIGN POSTS
- STEEL POSTS
- SIGN-REMOVE AND REPLACE
- SIGN-REMOVE EXISTING
- SIGN-PLACE NEW

PLAN SHEET PRODUCED BY WisDOT-NE REGION

PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	PERMANENT SIGNING	SHEET 41	E

FILE NAME : N:\spo\traffic\SIGNING\Projects\1224-21-73 IH 43 Point Creek Rd-Clover Rd\023209_ps.dgn PLOT DATE : 08-JAN-2014 16:13 PLOT BY : dotj1f PLOT NAME : PLOT SCALE : 200:1

2

SIGNING NOTES

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WOOD POSTS SIZES, FOR TYPE II SIGNING, ARE ESTIMATED LENGTHS AND THE ACTUAL LENGTH WILL BE DETERMINED IN THE FIELD.

N

SEE PREVIOUS PERMANENT SIGNING SHEET #6

SEE PREVIOUS PERMANENT SIGNING SHEET #6

1385'NE

1385'NE

1385'SW

1385'SW

1383'NE

1384'SE

1380'SW

COUNTY C
M1-5A
77
St Nazianz 10
D2-1
84" X 15"
76

68 JCT 43 INTERSTATE J1-1 24" X 39"

72 R4-7 30" X 36"

73 DO NOT ENTER R5-1 30" X 30"

74 W6-2 36" X 36"

75 WRONG WAY R5-1A 36" X 24"

87 STOP R1-1 36" X 36"

88 ONE WAY R6-2R 24" X 30"

89 STOP R1-1 36" X 36"

90 W12-1D 24" X 24"

91 STOP R1-1 36" X 36"

92 PARK & RIDE D4-5 36" X 48"

93 DO NOT ENTER R5-1 30" X 30"

94 DO NOT ENTER R5-1 30" X 30"

95 R3-1 24" X 24"

100 WRONG WAY R5-1A 36" X 24"

101 Sheboygan Milwaukee D1-2 78" X 24"

102 BEGIN LEFT TURN LANE R3-20L 24" X 36"

107 SOUTH 43 INTERSTATE COUNTY C J2-2 48" X 57"

112 R4-7 24" X 30"

113 ONE WAY R6-2L 24" X 30"

114 RAMP CLOSED USE ALT ROUTE R11-54F 48" X 30"

115 R4-8 24" X 30"

116 ONE WAY R6-2L

117 SOUTH 43 NORTH 43 INTERSTATE J3-2 48" X 57"

118 RAMP CLOSED USE ALT ROUTE R11-54F 48" X 30"

119 NORTH 43 INTERSTATE J3-1 24" X 57"

120 R3-2 24" X 24"

128 St Nazianz Milwaukee Green Bay D1-3 78" X 36"

132 JCT 43 INTERSTATE J1-1 24" X 39"

69 Manitowoc Milwaukee D1-2 78" X 30"

71 WRONG WAY R5-1A 36" X 24"

70 W3-1

70A NORTH 43 SOUTH 43 INTERSTATE J2-2 48" X 57"

78 PARK & RIDE AHEAD D4-5A 36" X 48"

79 DO NOT ENTER R5-1 30" X 30"

80 DO NOT ENTER R5-1 30" X 30"

81 R3-2 24" X 24"

82 SOUTH 43 INTERSTATE J3-1 24" X 57"

83 SOUTH 43 INTERSTATE J3-1 24" X 57"

84 RAMP CLOSED USE ALT ROUTE R11-54F 48" X 30"

85 ONE WAY R6-2L

86 R4-8 24" X 30"

96 ONE WAY R6-2L 24" X 30"

97 RAMP CLOSED USE ALT ROUTE R11-54F 48" X 30"

98 R4-7 24" X 30"

99 NORTH 43 INTERSTATE COUNTY C J2-2 48" X 57"

103 Manitowoc Denmark Green Bay D1-3 78" X 36"

104 BEGIN LEFT TURN LANE R3-20L 24" X 36"

105 W3-1 36" X 36"

106 WRONG WAY R5-1A 36" X 24"

108 R3-1 24" X 24"

109 DO NOT ENTER R5-1 30" X 30"

110 DO NOT ENTER R5-1 30" X 30"

111 STOP R1-1 36" X 36"

121 W12-1D 24" X 24"

122 STOP R1-1 36" X 36"

123 ONE WAY R6-2L 24" X 30"

124 ONE WAY R6-2R 24" X 30"

125 DO NOT ENTER R5-1 30" X 30"

126 STOP R1-1 36" X 36"

127 PARK & RIDE D4-5 36" X 48"

129 Clover Newton D1-2 60" X 30"

130 ONLY R3-8A

131 DO NOT ENTER R5-1 30" X 30"

LEGEND

- BUTTERFLY
- CANTILEVER
- SIGN BRIDGE
- SIGN POSTS
- STEEL POSTS

- SIGN-REMOVE AND REPLACE
- SIGN-REMOVE EXISTING
- SIGN-PLACE NEW

PLAN SHEET PRODUCED BY WisDOT-NE REGION

PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	PERMANENT SIGNING	SHEET 42	E

2

SIGNING NOTES

WHEN AN EXISTING STOP SIGN AND SUPPORT IS TO BE REMOVED AND A NEW STOP SIGN AND SUPPORT ERRECTED THE WORK SHALL BE DONE CONCURRENTLY. FOR OTHER SIGNS AND SUPPORTS THAT ARE TO BE REMOVED AND NEW SIGNS AND SUPPORTS ERECTED, THE REMOVAL OF THE EXISTING SIGN/SUPPORT AND ERECTION OF THE NEW SIGN/SUPPORT SHOULD BE DONE AS CONCURRENTLY AS POSSIBLE. IN NO CASE SHALL A NEW SIGN/SUPPORT BE DOWN FOR MORE THAN 24 HOURS AND THERE SHALL NOT BE MORE THAN ONE SIGN OF THE SAME LEGEND MISSING IN A ROW.

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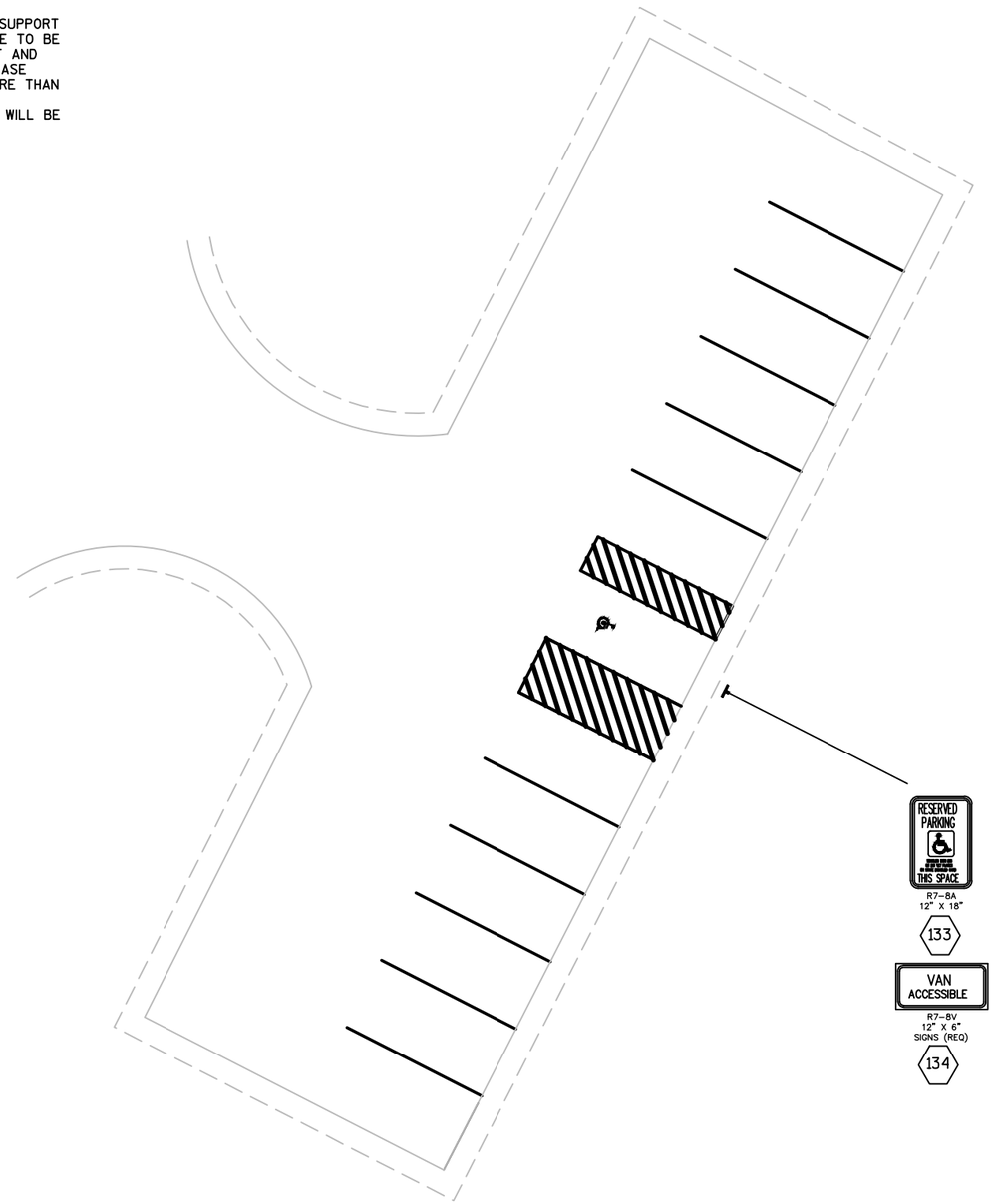


LEGEND

SIGN POSTS

SIGN-PLACE NEW

CTH C PARK & RIDE SIGN LAYOUT

PLAN SHEET PRODUCED
BY WISDOT - NE REGION

PROJECT NO:1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	PERMANENT SIGNING	SHEET 43	E

CONFIGURATION WITH HEAD NUMBERS		
3-VLFY (R, 1-Y, 1-G, F) 1, 2 6, 7	3-V (R, Y, G) 3, 4, 5 8, 9, 10 11, 13, 14 15, 17	3-H (R Y G) 12, 16

MONOTUBE STRUCTURE NUMBERS	
SB4	S-36-0040
SB8	S-36-0041

NOTE: SIGNAL HEADS # 1 & # 6 REQUIRE TUNNEL VISORS

USH 151 (Calumet Ave)

45 MPH Posted Speed Limit

USH 151/STH 42 (Calumet Ave)

45 MPH Posted Speed Limit

Dufek Drive

STH 42

INL

CB1, PB1, PB2, PB3, PB4, PB5, PB6, PB7, PB8, PB9, PB10, PB11, PB12, PB13, PB14, LB1

SB1, SB2, SB3, SB4, SB5, SB6, SB7, SB8

2" COMMUNICATIONS CONDUIT TO S36-2013

COMMUNICATIONS PULL BOX APPROX HALFWAY TO S36-2013

1" TYP

2-3" TYP

3" TYP

2" TYP

REMOVE SIGNAL
REMOVE CONCRETE BASE

REMOVE SIGNAL HEADS
LEAVE SIGNAL STANDARD

350' TO NEAR RIGHT SIGNAL

Overlap "A"

Overlap "C"

LEGEND

- PULL BOX 12" X 24"
- PULL BOX 24" X 36"
- SIGNAL STANDARD, PEDESTAL BASE
- SIGNAL POLE, MONOTUBE ARM 40'
- LUMINAIRE
- CONTROL CABINET BASE
- CONDUIT
- SIGNAL HEAD NUMBER / MOUNTING CONFIGURATION
- LOOP DETECTOR (in 1 " conduit) 30' (51) 3T
- LOOP DETECTOR (1/4" groove, no conduit) 30' (42) 3T

NOTE

WISCONSIN DOT NE REGION ELECTRICAL UNIT SHALL APPROVE FINAL LOCATIONS FOR ALL LOOP DETECTORS AND CONCRETE BASES IN THE FIELD PRIOR TO CONSTRUCTION; MAKE WIRING TERMINATIONS IN THE SIGNAL CABINET. CONTACT THEM 3 DAYS IN ADVANCE AT (920) 492-5710.

GENERAL NOTE

THE LOCATION 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. THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL UTILITIES PRIOR TO CONSTRUCTION.

REVISION				
Rev. No.	NEW TS2 CABINET, ADD MONOTUBES & FYA			
	APPROVAL RECOMMENDED		APPROVED	
	REGION		CENTRAL OFFICE	
	Date	By	Date	By
1	11-25-15	RJS		JLB

TRAFFIC CONTROL SIGNAL

USH 151 & STH 42/Dufek DR
CITY OF MANITOWOC
MANITOWOC COUNTY

SIGNAL NO. 36-0802 CONTROLLER TYPE: EPAC TS2

WISCONSIN DEPARTMENT OF TRANSPORTATION

APPROVAL RECOMMENDED
Date 3-28-2000 Brian S. Brock, REGION TRAFFIC ENGINEER

APPROVED
Date 3-31-2000 William C. Gilding, STATE TRAFFIC ENGINEER

REGION CONTACT: RJS
DESIGNED BY: RJS
REVISED BY: RJS

PAGE 1 OF 1

PROJECT NO: 1224-21-73	HWY: USH 151	COUNTY: MANITOWOC	CONSTRUCTION DETAIL - TRAFFIC SIGNAL REVISION	SHEET 44 E

FILE NAME : F:\d3_traffi\S-802,rev1,const.dgn PLOT DATE : 24-MAR-2016 08:30 PLOT BY : dotc5s PLOT NAME : S-802,rev1,const PLOT SCALE : 40:1

WISDOT/CADDS SHEET 42

GENERAL NOTE

THE LOCATION 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. THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL UTILITIES PRIOR TO CONSTRUCTION.

MONOTUBE STRUCTURE NUMBERS	
SB2	S-36-0042
SB6	S-36-0043

CONFIGURATION WITH HEAD NUMBERS		
4-VLFY: 1, 2	3-V: 3, 4, 5, 6, 7, 8, 11	3-H: 9, 10

NOTE

WISCONSIN DOT NE REGION ELECTRICAL UNIT SHALL APPROVE FINAL LOCATIONS FOR ALL LOOP DETECTORS AND CONCRETE BASES IN THE FIELD PRIOR TO CONSTRUCTION; MAKE WIRING TERMINATIONS IN THE SIGNAL CABINET. CONTACT THEM 3 DAYS IN ADVANCE AT (920) 492-5710.

IH 43 SB Off Ramp

IH 43 SB

IH 43 NB

N

COMMUNICATIONS PULL BOX APPROX HALFWAY TO S36-0802

2" COMMUNICATIONS CONDUIT FROM S59-0802

PB10

PB11

PB8

SB7

REMOVE SIGNAL

REMOVE CONCRETE BASE

2-2" METAL

CB1

PB9

2-3" TYP

PB1

SB1

2-3" CONDUIT RUN UNDER IH 43

USH 151/STH 42 (Calumet Ave)

45 MPH Posted Speed Limit

Grass | Concrete | Concrete

24'NB'+00 | 25'NB'+00 | 27'NB'+00 | 28'NB'+00 | 29'NB'+00

350' TO NEAR RIGHT SIGNAL

MICROWAVE ZONE

Overlap "C"

SB6

PB7

3" TYP

REMOVE SIGNAL HEADS LEAVE SIGNAL STANDARD

PB2

PB6

SB5

PB5

PB4

SB3

SB2

PB3

REMOVE SIGNAL

REMOVE CONCRETE BASE

SB4

GATE

107'A'+00

IH 43 SB On Ramp

NOTE: SIGNAL HEAD # 1 REQUIRES TUNNEL VISOR

LEGEND

- PULL BOX 12" X 24"
- PULL BOX 24" X 36"
- PULL BOX 24" X 42"
- SIGNAL STANDARD, PEDESTAL BASE
- LUMINAIRE
- SIGNAL POLE, MONOTUBE ARM (40')
- CONTROL CABINET BASE
- 3" PVC CONDUIT (2" from PB to T1 Base) (1" from PB to Loop)
- SIGNAL HEAD NUMBER / MOUNTING CONFIGURATION
- MICROWAVE DETECTOR
- LOOP DETECTOR IN 1" PVC CONDUIT

TRAFFIC CONTROL SIGNAL

IH 43 SB & USH 151
CITY OF MANITOWOC
MANITOWOC COUNTY

SIGNAL NO. 36-2013 CONTROLLER TYPE: EPAC TS2

WISCONSIN DEPARTMENT OF TRANSPORTATION

APPROVAL RECOMMENDED
Date 11-25-2015 Robert J. Schuurmans, REGION TRAFFIC ENGINEER

APPROVED
Date _____ Joanna L. Bush, STATE TRAFFIC ENGINEER

REGION CONTACT: RJS
DESIGNED BY: RJS
REVISED BY: RJS

PAGE 1 OF 1

PROJECT NO: 1224-21-73	HWY: USH 151	COUNTY: MANITOWOC	CONSTRUCTION DETAIL - TRAFFIC SIGNAL REVISION	SHEET 45 E

FILE NAME : F:\d3_traffi\S36-2013,const.dgn PLOT DATE : 25-MAR-2016 08:41 PLOT BY : dotc5s PLOT NAME : S36-2013,const PLOT SCALE : 40:1

WISDOT/CADDS SHEET 42

MONOTUBE STRUCTURE NUMBERS	
SB1	S-36-0044
SB4	S-36-0045

N

IH 43 NB On Ramp

202+00

201+00

GATE

NOTE: SIGNAL HEAD # 4 REQUIRES TUNNEL VISOR

GENERAL NOTE

THE LOCATION 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. THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL UTILITIES PRIOR TO CONSTRUCTION.

2-3" CONDUIT
RUN UNDER IH 43

2-2" METAL

REMOVE SIGNAL
REMOVE CONCRETE BASE

REPLACE SIGNAL HEAD

REMOVE SIGNAL HEADS
LEAVE SIGNAL STANDARD

REMOVE SIGNAL HEAD
LEAVE SIGNAL STANDARD

USH 151/STH 42 (Calumet Ave)

45 MPH Posted Speed Limit

Overlap "A"

31'NB'+00

34'NB'+00

35'NB'+00

36'NB'+00

350' TO NEAR
RIGHT SIGNAL

MICROWAVE ZONE

USH 151 (Calumet Ave)

45 MPH Posted Speed Limit

IH 43 NB

IH 43 NB Off Ramp

NOTE

WISCONSIN DOT NE REGION ELECTRICAL UNIT SHALL APPROVE FINAL LOCATIONS FOR ALL LOOP DETECTORS AND CONCRETE BASES IN THE FIELD PRIOR TO CONSTRUCTION; MAKE WIRING TERMINATIONS IN THE SIGNAL CABINET. CONTACT THEM 3 DAYS IN ADVANCE AT (920) 492-5710.

LEGEND

- PULL BOX 12" X 24"
- PULL BOX 24" X 36"
- PULL BOX 24" X 42"
- SIGNAL STANDARD, PEDESTAL BASE
- LUMINAIRE
- SIGNAL POLE, MONOTUBE ARM — 40'
- CONTROL CABINET BASE
- 3" PVC CONDUIT (2" from PB to T1 Base) (1" from PB to Loop)
- SIGNAL HEAD NUMBER MOUNTING CONFIGURATION
- MICROWAVE DETECTOR
- LOOP DETECTOR IN 1" PVC CONDUIT — 2T, 21

CONFIGURATION WITH HEAD NUMBERS			
4-VLFY	3-V	3-VR2	3-H
4, 5	1, 2, 3 6, 7 8, 13	11, 12	9, 10

REVISION				
Rev. No.	NEW TS2 CABINET, ADD MONOTUBES & ADD FYA			
	APPROVAL RECOMMENDED		APPROVED	
	REGION		CENTRAL OFFICE	
	Date	By	Date	By
1	11-25-15	RJS		JLB

TRAFFIC CONTROL SIGNAL

IH 43 NB & USH 151
CITY OF MANITOWOC
MANITOWOC COUNTY

SIGNAL NO. 36-0874 CONTROLLER TYPE: EPAC TS2

WISCONSIN DEPARTMENT OF TRANSPORTATION

APPROVAL RECOMMENDED
Date 2-5-2002 — Robert J. Schuurmans, REGION TRAFFIC ENGINEER

APPROVED
Date 2-8-2002 — William C. Gilding, STATE TRAFFIC ENGINEER

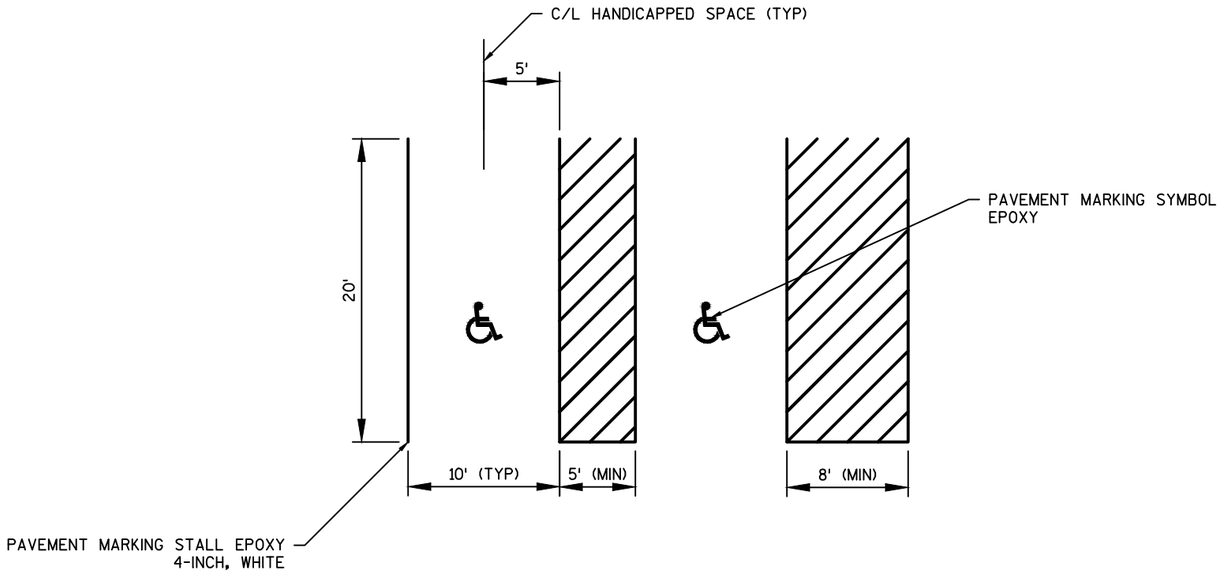
REGION CONTACT: RJS
DESIGNED BY: RJS
REVISED BY: RJS

PAGE 1 OF 1

PROJECT NO: 1224-21-73	HWY: USH 151	COUNTY: MANITOWOC	CONSTRUCTION DETAIL - TRAFFIC SIGNAL REVISION	SHEET 46 E

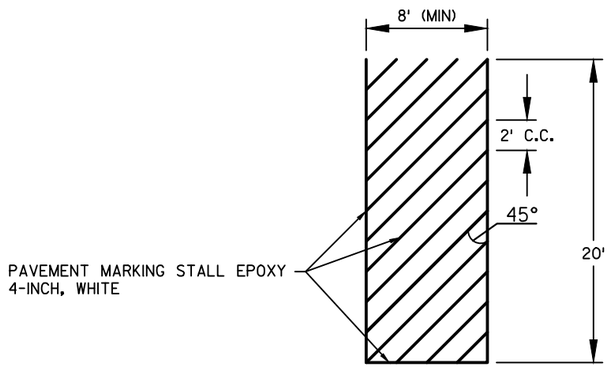
FILE NAME : F:\d3_traffi\S-874,rev1,const.dgn PLOT DATE : 25-MAR-2016 11:44 PLOT BY : dotc5s PLOT NAME : S-874,rev1,const PLOT SCALE : 40:1

WISDOT/CADDS SHEET 42



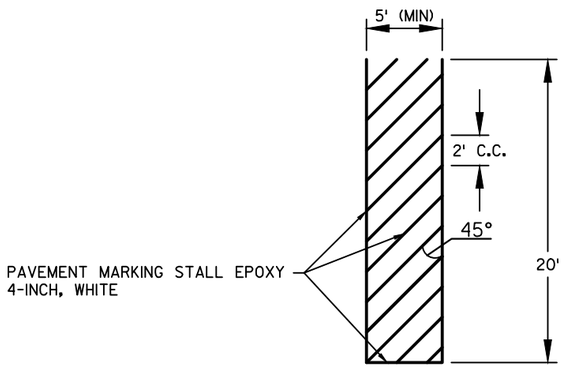
PAVEMENT MARKING DETAIL HANDICAPPED STALLS

CTH C



PAVEMENT MARKING DETAIL BETWEEN
HANDICAPPED SPACES - VAN STALL

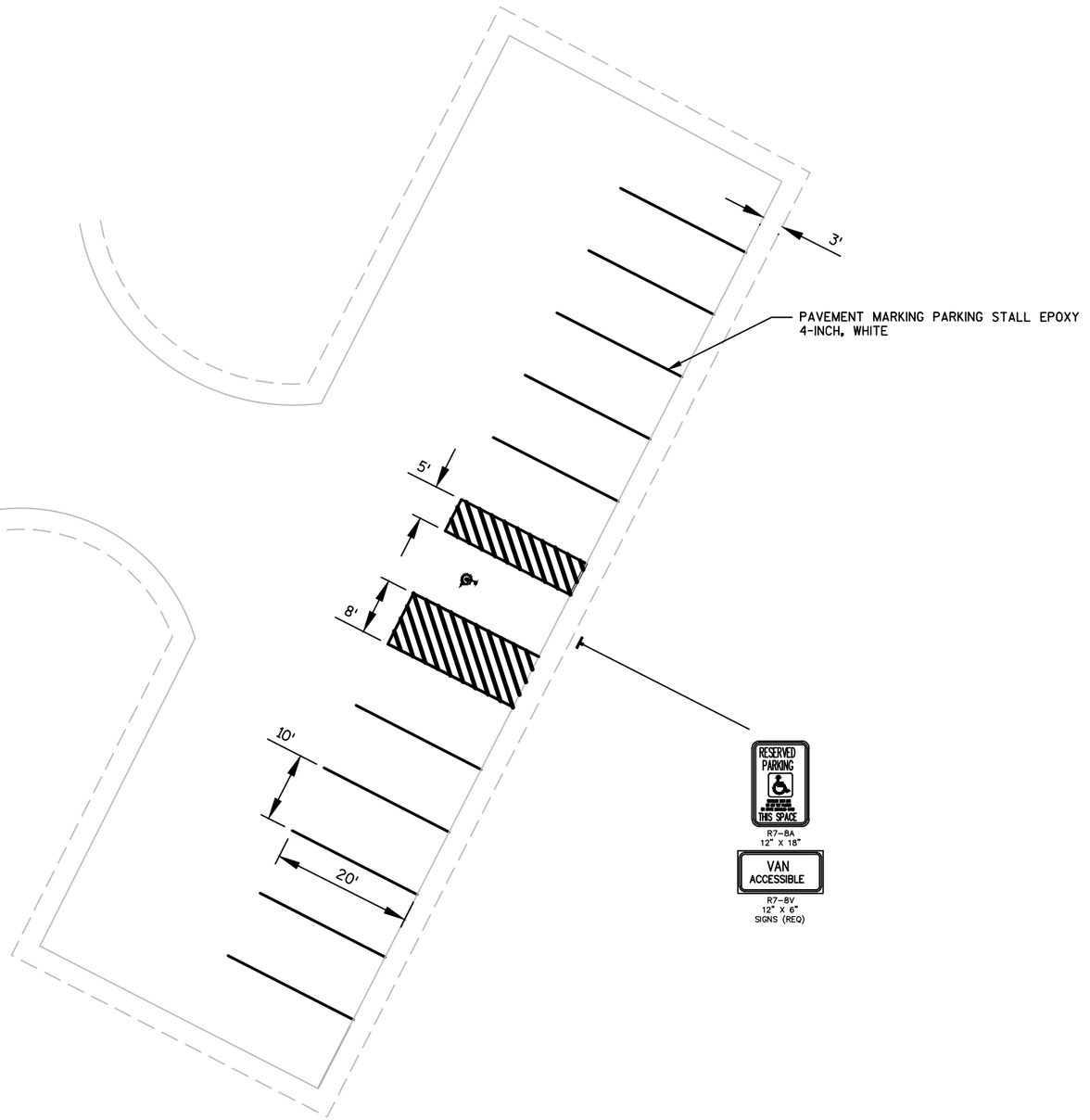
CTH C



PAVEMENT MARKING DETAIL BETWEEN
HANDICAPPED SPACES - VAN STALL

CTH C

2



CTH C PARK & RIDE STALL LAYOUT

12 SPACES. 1 HANDICAPPED SPACE, 1 VAN ACCESSIBLE AISLE, 1 CAR ACCESSIBLE AISLE

PROJECT NO:1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	PAVEMENT MARKING DETAILS	SHEET 48	E

2

N

GASS LAKE RD

BP: 13+89.25'WB'

14'WB' 14'EB 15'WB' 15'EB 16'WB' 16'EB 17'WB' 17'EB 18'WB' 18'EB 19'WB' 19'EB 20'WB' 20'EB

STA 1381+24.00'NW' - STA 1381+56.00'NW'
PAVEMENT MARKING EPOXY 8-INCH
CHANNELIZING

STA 16+02.00'WB' - STA 17+47.00'WB'
PAVEMENT MARKING EPOXY 4-INCH
WHITE

STA 16+02.00'WB' - STA 17+47.00'WB'
PAVEMENT MARKING EPOXY 4-INCH
YELLOW

STA 18+24.00'WB' - STA 24+16.00'WB'
PAVEMENT MARKING EPOXY 4-INCH
WHITE

STA 18+66.00'WB' - STA 23+65.00'WB'
PAVEMENT MARKING EPOXY 4-INCH
YELLOW

STA 19+13.00'WB'
PAVEMENT MARKING ARROWS
EPOXY TYPE 2

STA 16+02.00'EB' - STA 17+87.00'EB'
PAVEMENT MARKING EPOXY 4-INCH
YELLOW

STA 16+02.00'EB' - STA 17+06.00'EB'
PAVEMENT MARKING EPOXY 4-INCH
WHITE

STA 18+64.00'EB' - STA 23+65.00'EB'
PAVEMENT MARKING EPOXY 4-INCH
YELLOW

STA 18+11.00'EB' - STA 23+85.00'EB'
PAVEMENT MARKING EPOXY 4-INCH
WHITE

N

B-36-0050

B-36-0051

IH 43 SB

IH 43 NB

20'WB' 21'WB' 22'WB' 23'WB' 24'WB' 25'WB' 26'WB'

20'EB 21'EB 22'EB 23'EB 24'EB 25'EB 26'EB

STA 18+24.00'WB' - STA 24+16.00'WB'
PAVEMENT MARKING EPOXY 4-INCH
WHITE

STA 18+66.00'WB' - STA 23+65.00'WB'
PAVEMENT MARKING EPOXY 4-INCH
YELLOW

STA 24+31.00'WB' - STA 25+49.00'WB'
PAVEMENT MARKING EPOXY 4-INCH
YELLOW

STA 25+04.00'WB' - STA 25+49.00'WB'
PAVEMENT MARKING EPOXY 4-INCH
WHITE

STA 1383+22.00'SE' - STA 1383+47.00'SE'
PAVEMENT MARKING EPOXY 8-INCH
CHANNELIZING

STA 18+64.00'EB' - STA 23+65.00'EB'
PAVEMENT MARKING EPOXY 4-INCH
YELLOW

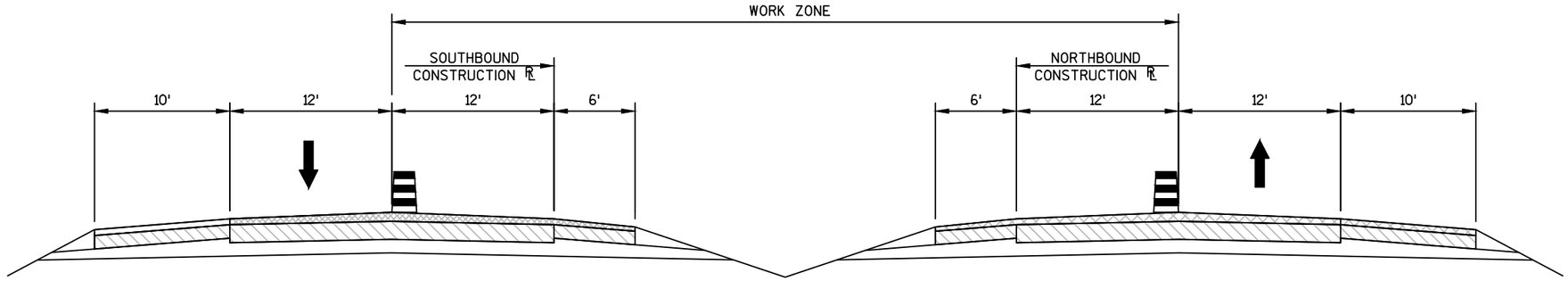
STA 18+11.00'EB' - STA 23+85.00'EB'
PAVEMENT MARKING EPOXY 4-INCH
WHITE

STA 19+13.00'WB'
PAVEMENT MARKING ARROWS
EPOXY TYPE 2

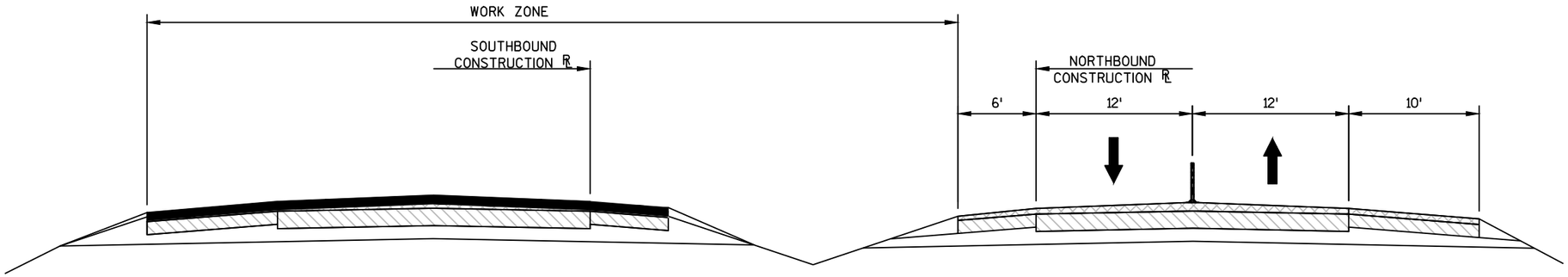
STA 24+99.00'EB' - STA 25+49.00'EB'
PAVEMENT MARKING EPOXY 4-INCH
YELLOW

STA 24+68.00'EB' - STA 25+49.00'EB'
PAVEMENT MARKING EPOXY 4-INCH
WHITE

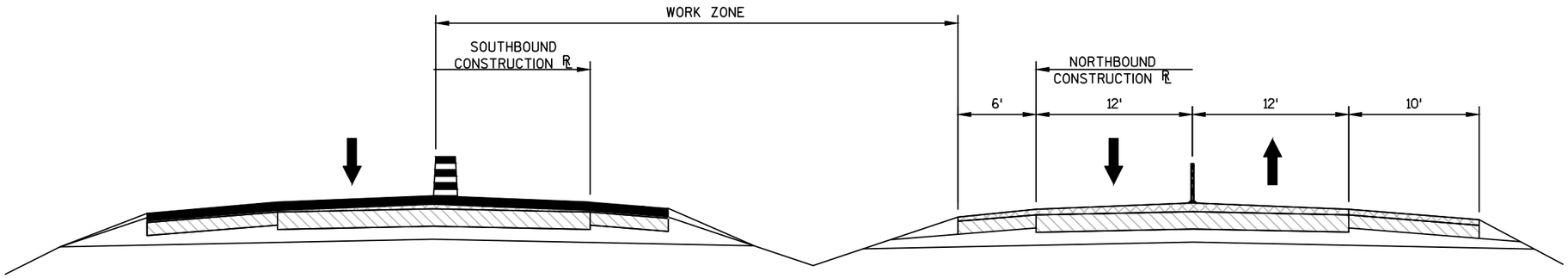
PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	PAVEMENT MARKING DETAILS - CTH C	SHEET 49	E



STAGE 1 IH 43
STA 1124+40.00'NB' - STA 1530+00.00'NB'
STA 1186+00.00'SB' - STA 1271+60.00'SB'
STA 1516+00.00'SB' - STA 1598+60.00'SB'

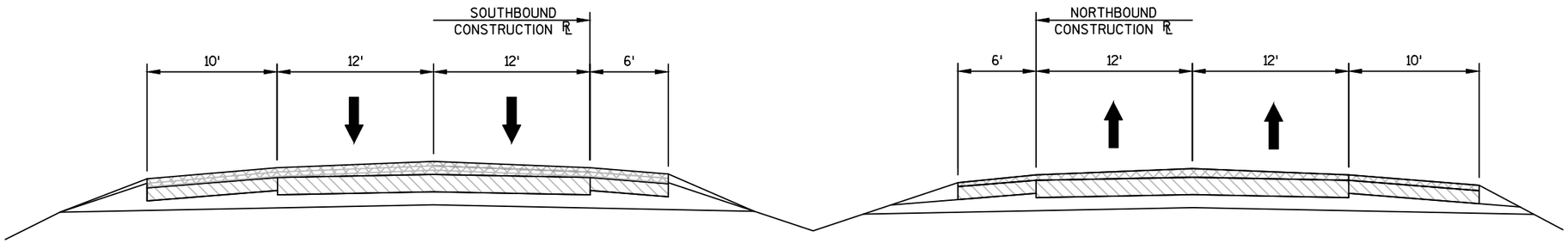


STAGE 2A/B FOR IH 43
STA 1124+40.00'NB' - STA 1530+00.00'NB'
STA 1124+40.00'SB' - STA 1598+60.00'SB'/STA 1393+00.00'SB'

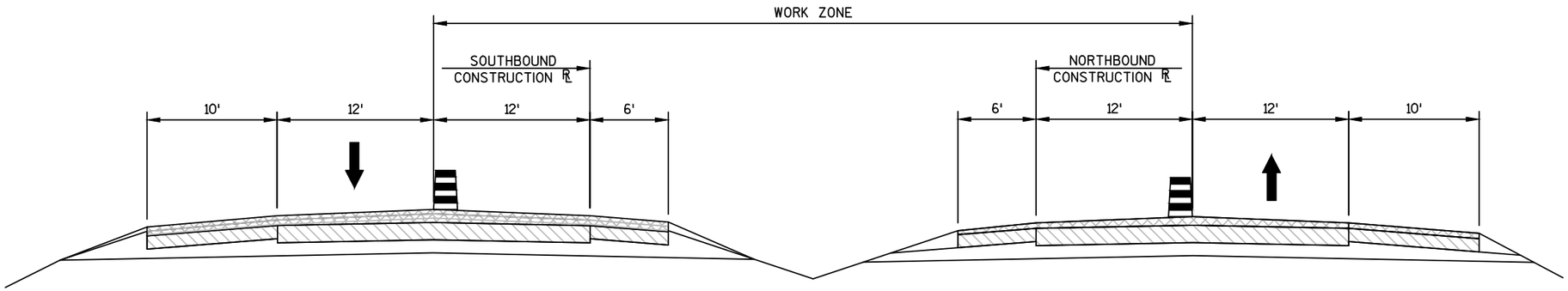


STAGE 2B FOR IH 43
STA 1124+40.00'NB' - STA 1530+00.00'NB'
STA 1393+00.00'SB' - STA 1530+00.00'SB'

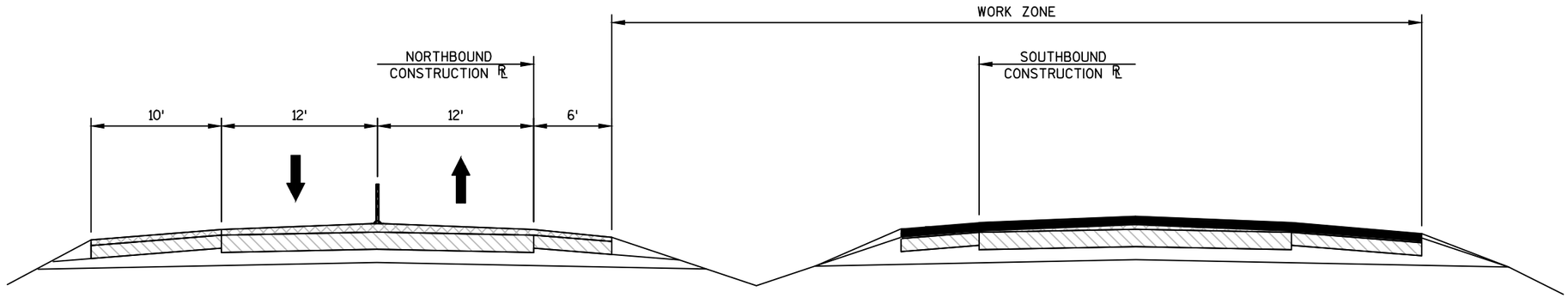
2



IH 43 FOR JULY 4TH HOLLIDAY WEEKEND



STAGE 3 FOR IH 43
STA 1124+40.00'NB' - STA 1531+00.00'NB'
STA 1124+40.00'SB' - STA 1530+00.00'SB'

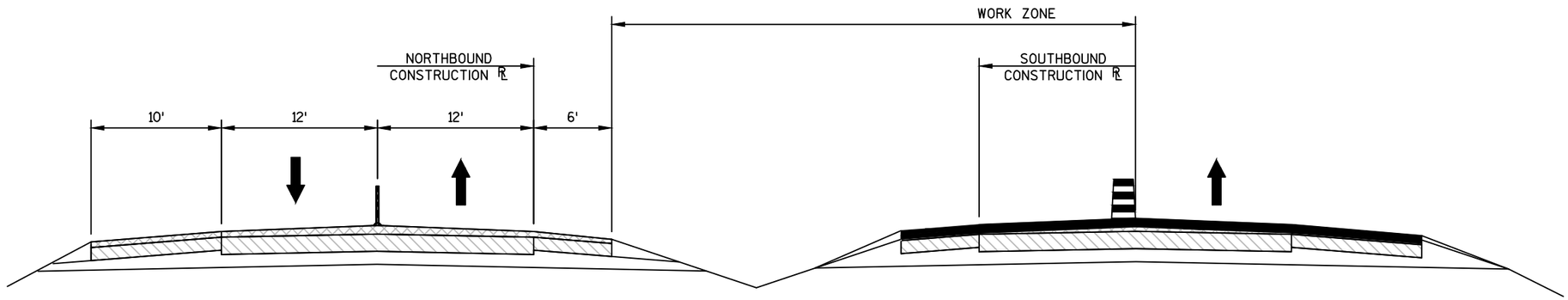


STAGE 4A/B FOR IH 43
STA 1124+40.00'NB' - STA 1531+00.00'NB'/STA 1395+00.00'NB'
STA 1124+40.00'SB' - STA 1530+00.00'SB'

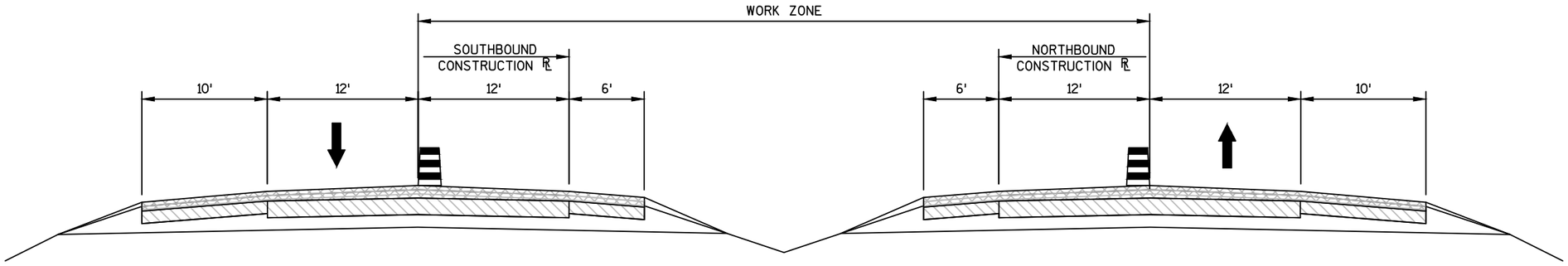
PROJECT NO:1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	STAGE CONSTRUCTION - IH 43	SHEET 51	E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\026001_S1.DWG
LAYOUT NAME - 026002_s1
PLOT DATE : 3/30/2016 5:20 PM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT
WISDOT/CADDS SHEET 42

2



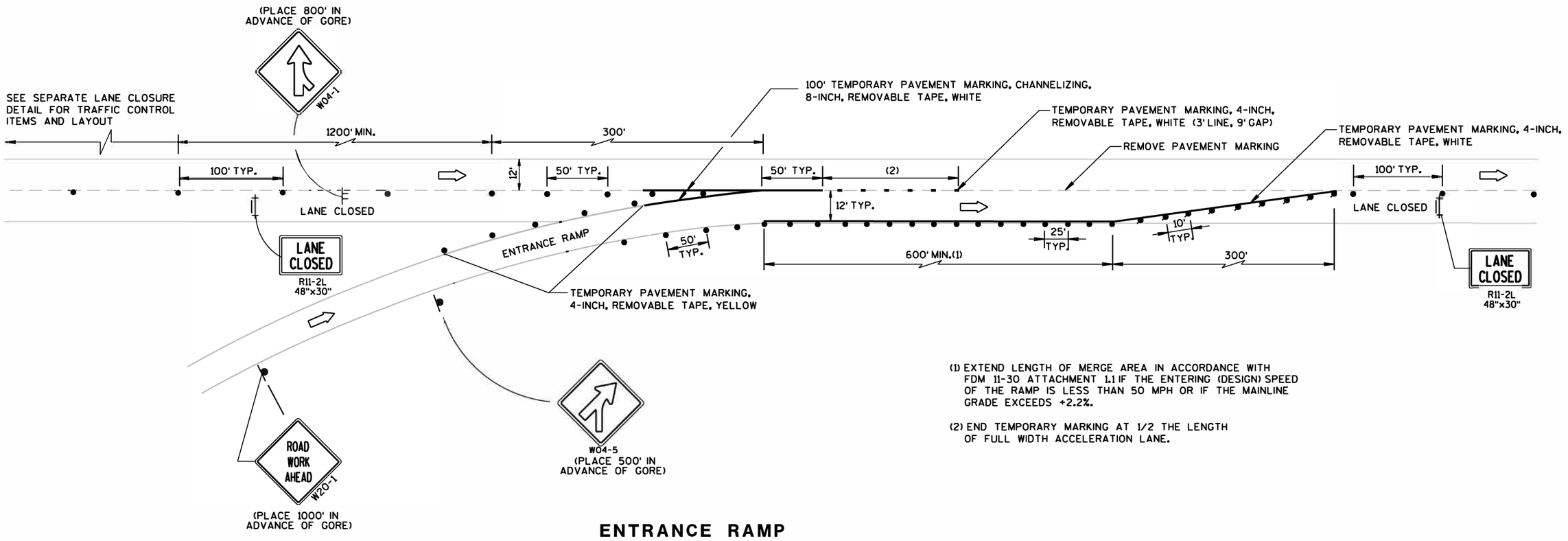
STAGE 4 FOR IH 43
STA 1395+00.00'NB - STA 1527+00.00'NB'
STA 1124+40.00'SB' - STA 1530+00.00'SB'



STAGE 5 FOR IH 43
STA 1124+40.00'NB' - STA 1531+00.00'NB'
STA 1186+00.00'SB' - STA 1598+60.00'SB'

2

TRAFFIC CONTROL, ENTRANCE RAMP WITHIN RIGHT LANE CLOSURE



(1) EXTEND LENGTH OF MERGE AREA IN ACCORDANCE WITH FDM 11-30 ATTACHMENT 1.1 IF THE ENTERING (DESIGN) SPEED OF THE RAMP IS LESS THAN 50 MPH OR IF THE MAINLINE GRADE EXCEEDS +2.2%.

(2) END TEMPORARY MARKING AT 1/2 THE LENGTH OF FULL WIDTH ACCELERATION LANE.

ENTRANCE RAMP

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"x48" 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 CONTINUOUS DAYS AND NIGHTS, OR THAT WILL BE PLACED IN A CLOSED LANE, MAY BE MOUNTED ON PORTABLE SUPPORTS. USE SUPPORTS THAT PROVIDE A MINIMUM OF 5 FEET FROM THE BOTTOM OF THE SIGN TO THE PAVEMENT.

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

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

REMOVE PAVEMENT MARKINGS AND PLACE TEMPORARY PAVEMENT MARKING REMOVABLE TAPE IF LANE CLOSURE IS TO BE IN PLACE FOR 7 OR MORE CONTINUOUS DAYS AND NIGHTS.

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

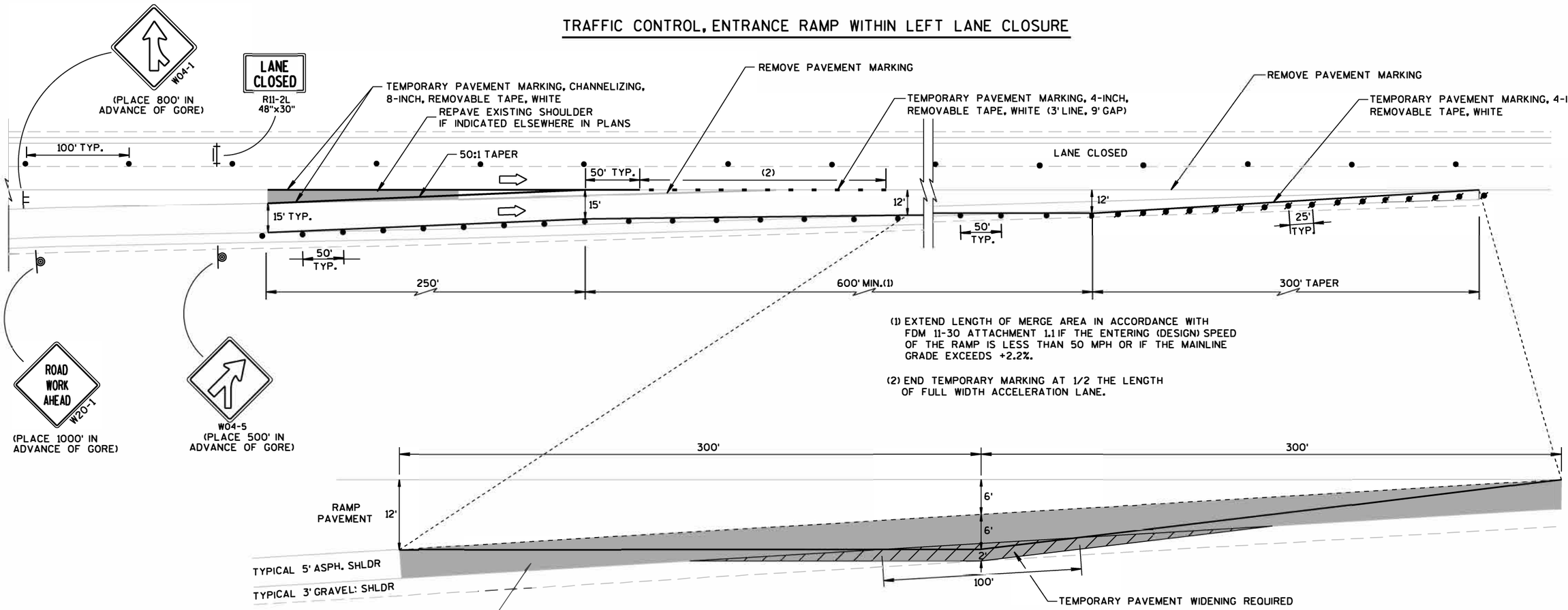
LEGEND

- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TYPE III BARRICADE WITH ATTACHED SIGN
- DIRECTION OF TRAFFIC

PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CONSTRUCTION DETAIL	SHEET	E

2

TRAFFIC CONTROL, ENTRANCE RAMP WITHIN LEFT LANE CLOSURE



(1) EXTEND LENGTH OF MERGE AREA IN ACCORDANCE WITH FDM 11-30 ATTACHMENT 1.1 IF THE ENTERING (DESIGN) SPEED OF THE RAMP IS LESS THAN 50 MPH OR IF THE MAINLINE GRADE EXCEEDS +2.2%.

(2) END TEMPORARY MARKING AT 1/2 THE LENGTH OF FULL WIDTH ACCELERATION LANE.

TYPICAL TAPERED ENTRANCE RAMP TEMPORARY PAVEMENT DETAIL

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

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"x48" 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 CONTINUOUS DAYS AND NIGHTS, OR THAT WILL BE PLACED IN A CLOSED LANE, MAY BE MOUNTED ON PORTABLE SUPPORTS. USE SUPPORTS THAT PROVIDE A MINIMUM OF 5 FEET FROM THE BOTTOM OF THE SIGN TO THE PAVEMENT.

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.

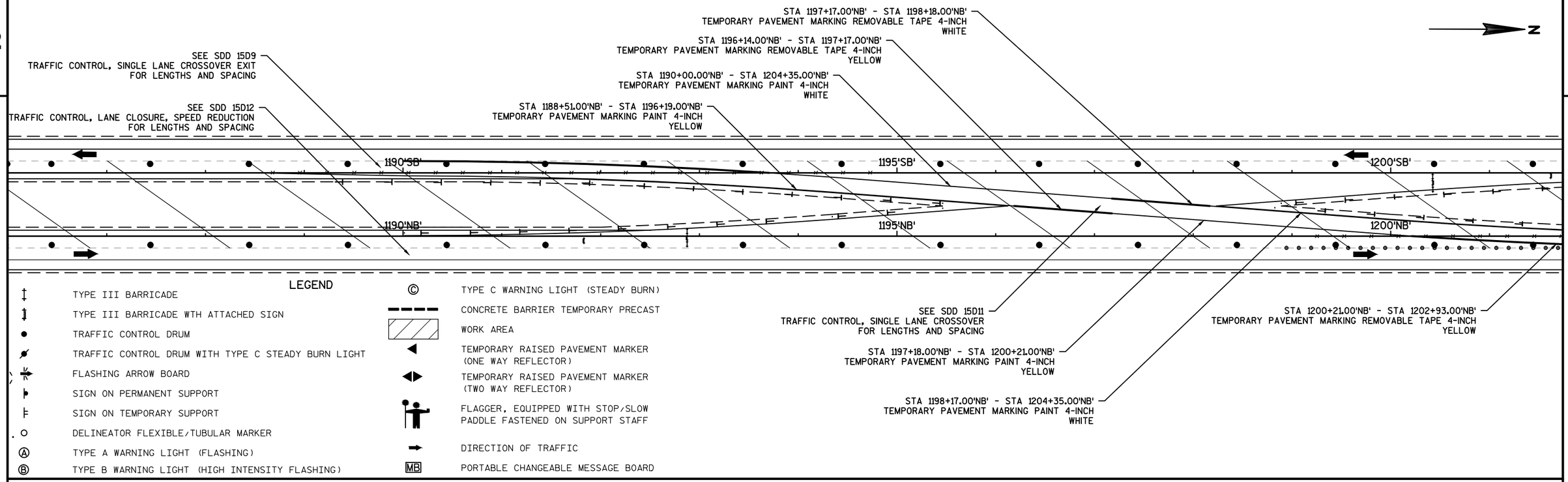
REMOVE PAVEMENT MARKINGS AND PLACE TEMPORARY PAVEMENT MARKING REMOVABLE TAPE IF LANE CLOSURE IS TO BE IN PLACE FOR 7 OR MORE CONTINUOUS DAYS AND NIGHTS.

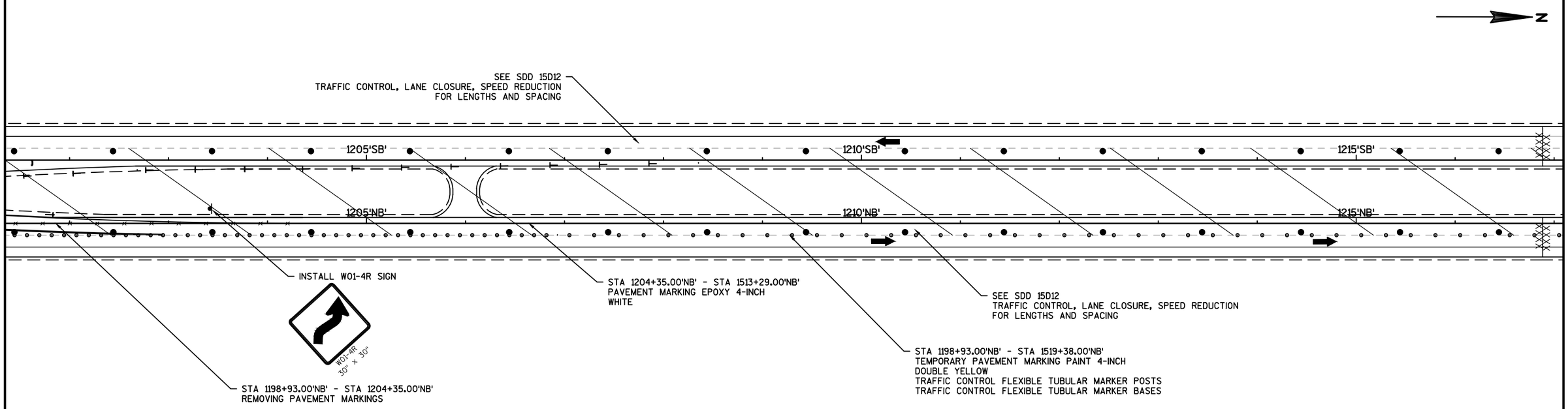
WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

LEGEND

- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TYPE III BARRICADE WITH ATTACHED SIGN
- DIRECTION OF TRAFFIC

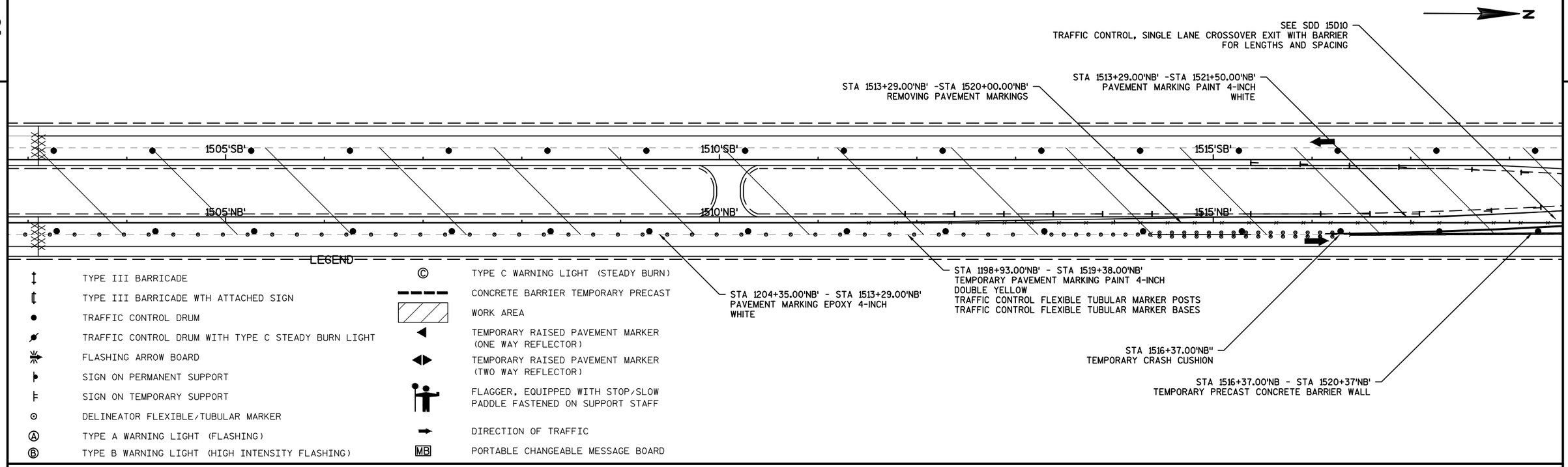
PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CONSTRUCTION DETAIL	SHEET	E

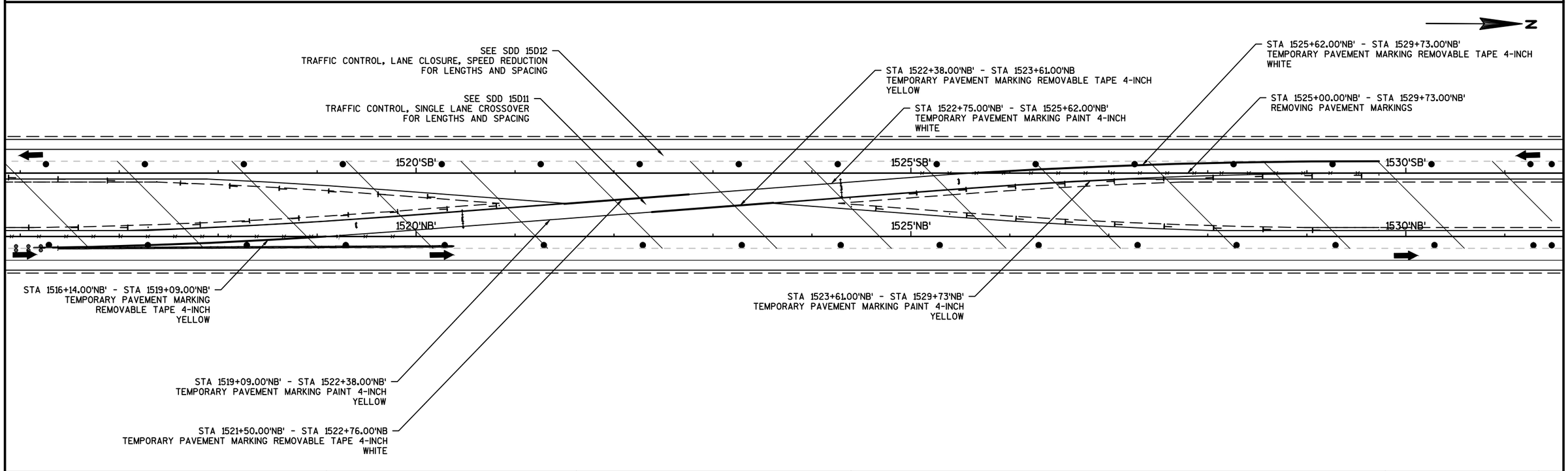




PROJECT NO:1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	TRAFFIC CONTROL - STAGE 1	SHEET 55	E

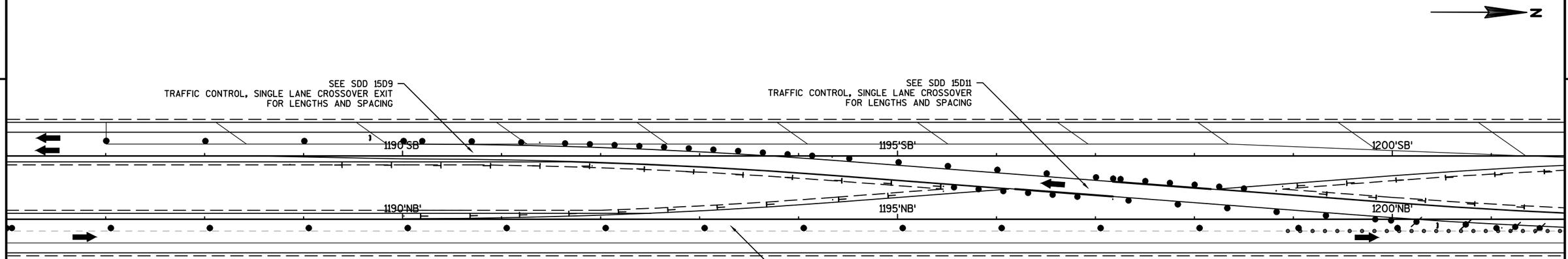
2





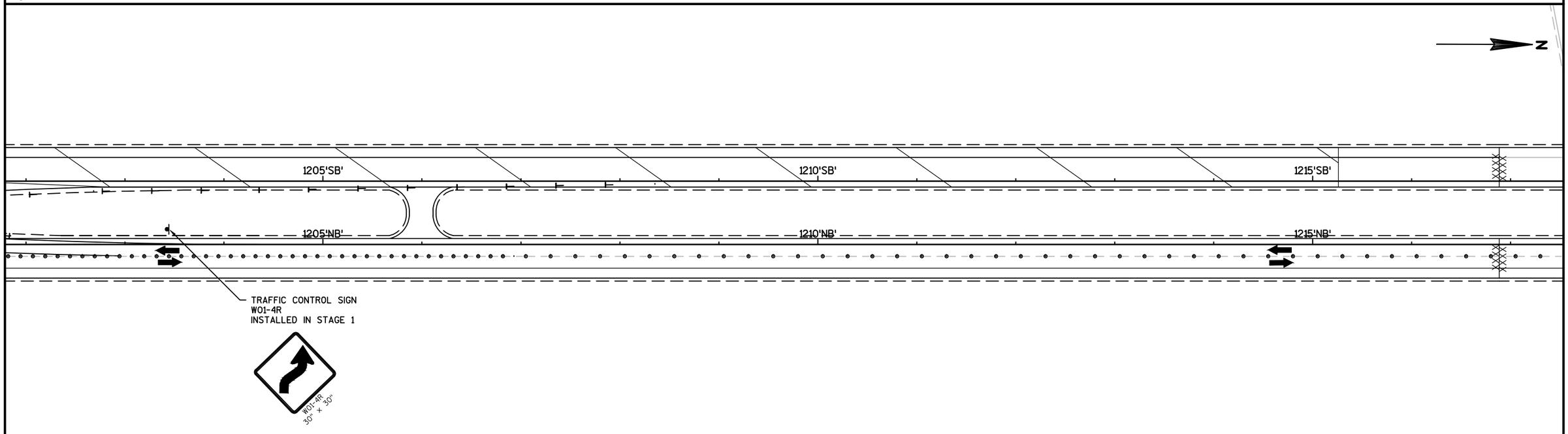
PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	TRAFFIC CONTROL - STAGE 1	SHEET 56	E

2

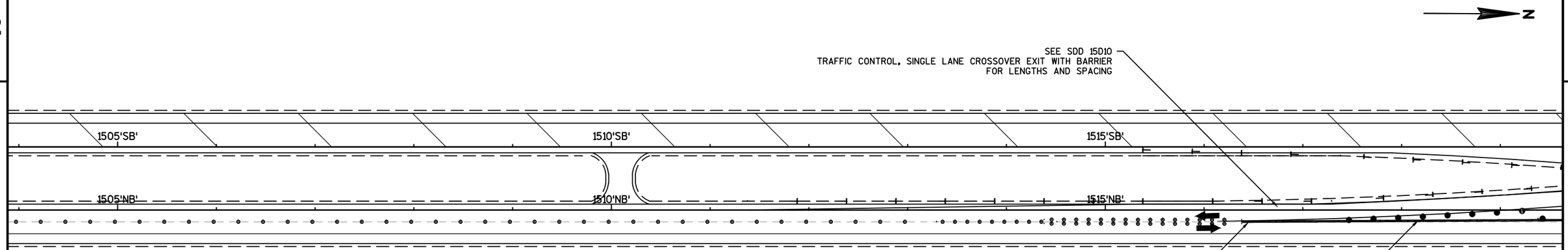


LEGEND

- 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
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- (A) TYPE A WARNING LIGHT (FLASHING)
- (B) TYPE B WARNING LIGHT (HIGH INTENSITY FLASHING)
- (C) TYPE C WARNING LIGHT (STEADY BURN)
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK AREA
- TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)
- TEMPORARY RAISED PAVEMENT MARKER (TWO WAY REFLECTOR)
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF
- DIRECTION OF TRAFFIC
- MB PORTABLE CHANGEABLE MESSAGE BOARD

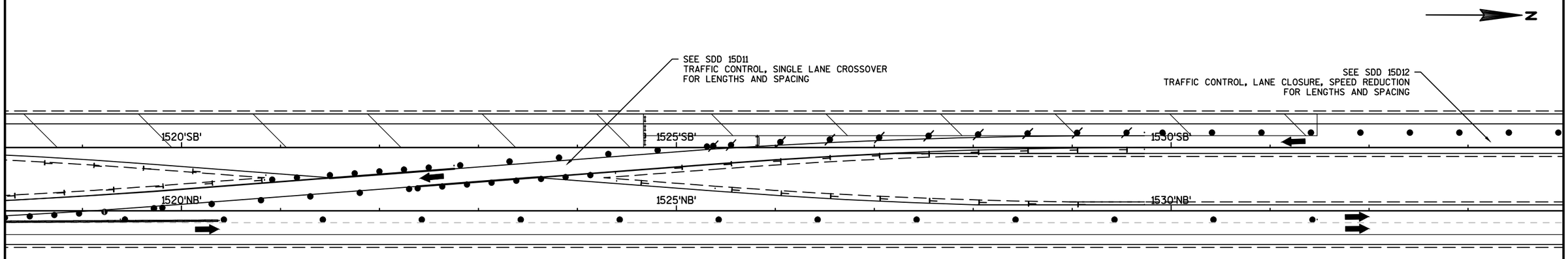


PROJECT NO:1224-21-73	HWY:IH 43	COUNTY:MANITOWOC	TRAFFIC CONTROL - STAGE 2A	SHEET 57	E



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
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- (A) TYPE A WARNING LIGHT (FLASHING)
- (B) TYPE B WARNING LIGHT (HIGH INTENSITY FLASHING)
- (C) TYPE C WARNING LIGHT (STEADY BURN)
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK AREA
- TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)
- TEMPORARY RAISED PAVEMENT MARKER (TWO WAY REFLECTOR)
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF
- DIRECTION OF TRAFFIC
- MB PORTABLE CHANGEABLE MESSAGE BOARD



PROJECT NO:1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	TRAFFIC CONTROL - STAGE 2A	SHEET 58	E

2

N

SEE SDD 15D9
TRAFFIC CONTROL, SINGLE LANE CROSSOVER EXIT
FOR LENGTHS AND SPACING

SEE SDD 15D11
TRAFFIC CONTROL, SINGLE LANE CROSSOVER
FOR LENGTHS AND SPACING

1190'SB'

1195'SB'

1200'SB'

1190'NB'

1195'NB'

1200'NB'

SEE SDD 15D12
TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION
FOR LENGTHS AND SPACING

STA 1198+93.00'NB' - STA 1519+38.00'NB'
TEMPORARY PAVEMENT MARKING 4-INCH, BLACK
TEMPORARY PAVEMENT MARKING 4-INCH, WHITE 4' SKIP 46' GAP
REMOVE TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER POSTS AND BASES
END OF STAGE

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
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- (A) TYPE A WARNING LIGHT (FLASHING)
- (B) TYPE B WARNING LIGHT (HIGH INTENSITY FLASHING)
- (C) TYPE C WARNING LIGHT (STEADY BURN)
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK AREA
- TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)
- TEMPORARY RAISED PAVEMENT MARKER (TWO WAY REFLECTOR)
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF
- DIRECTION OF TRAFFIC
- MB PORTABLE CHANGEABLE MESSAGE BOARD

N

STA 1216+88.00'SB' -STA 1503+11.00'SB'
PAVEMENT MARKING EPOXY 4-INCH
WHITE

STA 1216+88.00'SB' -STA 1503+11.00'SB'
TEMPORARY PAVEMENT MARKING PAINT 4-INCH
4' SKIP 46' GAP
WHITE

1205'SB'

1210'SB'

1215'SB'

1205'NB'

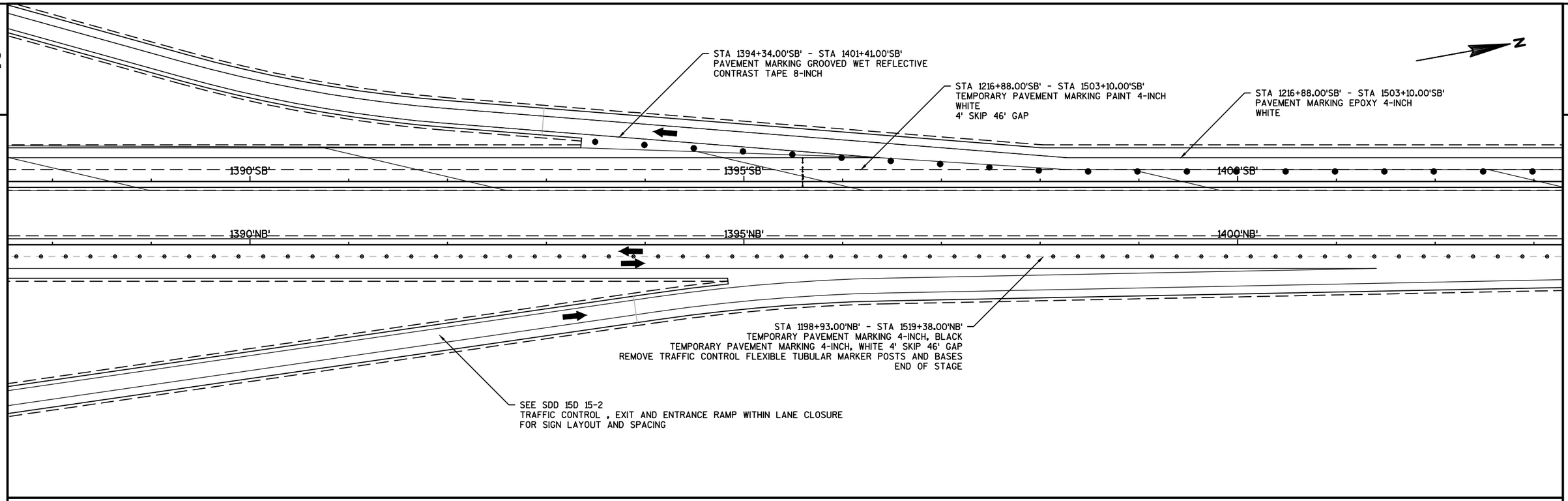
1210'NB'

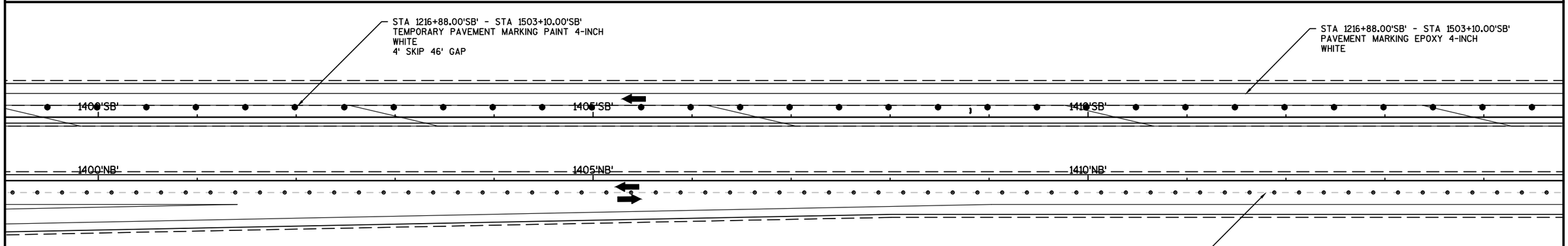
1215'NB'

TRAFFIC CONTROL SIGN
W01-4R
INSTALLED IN STAGE 1

PROJECT NO:1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	TRAFFIC CONTROL - STAGE 2B	SHEET 59	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
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- (A) TYPE A WARNING LIGHT (FLASHING)
- (B) TYPE B WARNING LIGHT (HIGH INTENSITY FLASHING)
- (C) TYPE C WARNING LIGHT (STEADY BURN)
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK AREA
- TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)
- TEMPORARY RAISED PAVEMENT MARKER (TWO WAY REFLECTOR)
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF
- DIRECTION OF TRAFFIC
- MB PORTABLE CHANGEABLE MESSAGE BOARD

PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	TRAFFIC CONTROL - STAGE 2B	SHEET 60	E

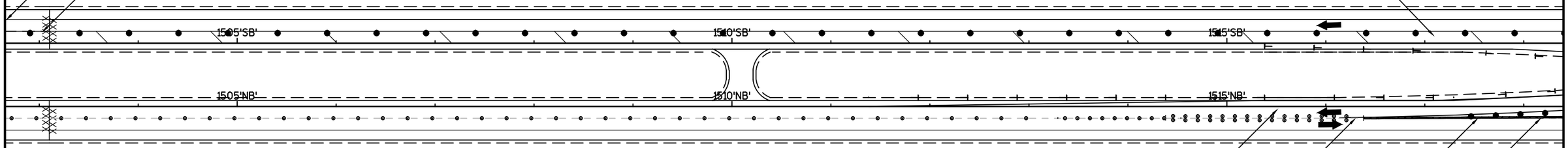
2

STA 1216+88.00'SB' -STA 1503+11.00'SB'
PAVEMENT MARKING EPOXY 4-INCH
WHITE

STA 1216+88.00'SB' -STA 1503+11.00'SB'
TEMPORARY PAVEMENT MARKING PAINT 4-INCH
WHITE
4' SKIP 46' GAP

SEE SDD 15D12
TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION
FOR LENGTHS AND SPACING

N



SEE SDD 15D9
TRAFFIC CONTROL, SINGLE LANE CROSSOVER EXIT
FOR LENGTHS AND SPACING

TEMPORARY CRASH CUSHION
INSTALLED IN STAGE 1

CONCRETE BARRIER TEMPORARY PRECAST
INSTALLED IN STAGE 1

STA 1198+93.00'NB' - STA 1519+38.00'NB'
TEMPORARY PAVEMENT MARKING 4-INCH, BLACK
TEMPORARY PAVEMENT MARKING 4-INCH, WHITE 4' SKIP 46' GAP
REMOVE TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER POSTS AND BASES
END OF STAGE

LEGEND

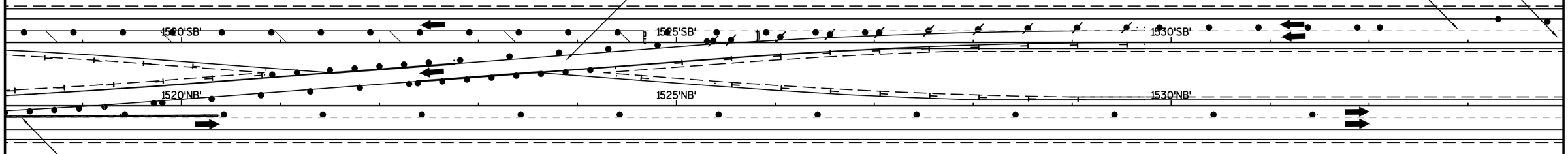
- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- (A) TYPE A WARNING LIGHT (FLASHING)
- (B) TYPE B WARNING LIGHT (HIGH INTENSITY FLASHING)
- (C) TYPE C WARNING LIGHT (STEADY BURN)
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK AREA
- TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)
- TEMPORARY RAISED PAVEMENT MARKER (TWO WAY REFLECTOR)
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF
- DIRECTION OF TRAFFIC
- MB PORTABLE CHANGEABLE MESSAGE BOARD

N

SEE SDD 15D12
TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION
FOR LENGTHS AND SPACING

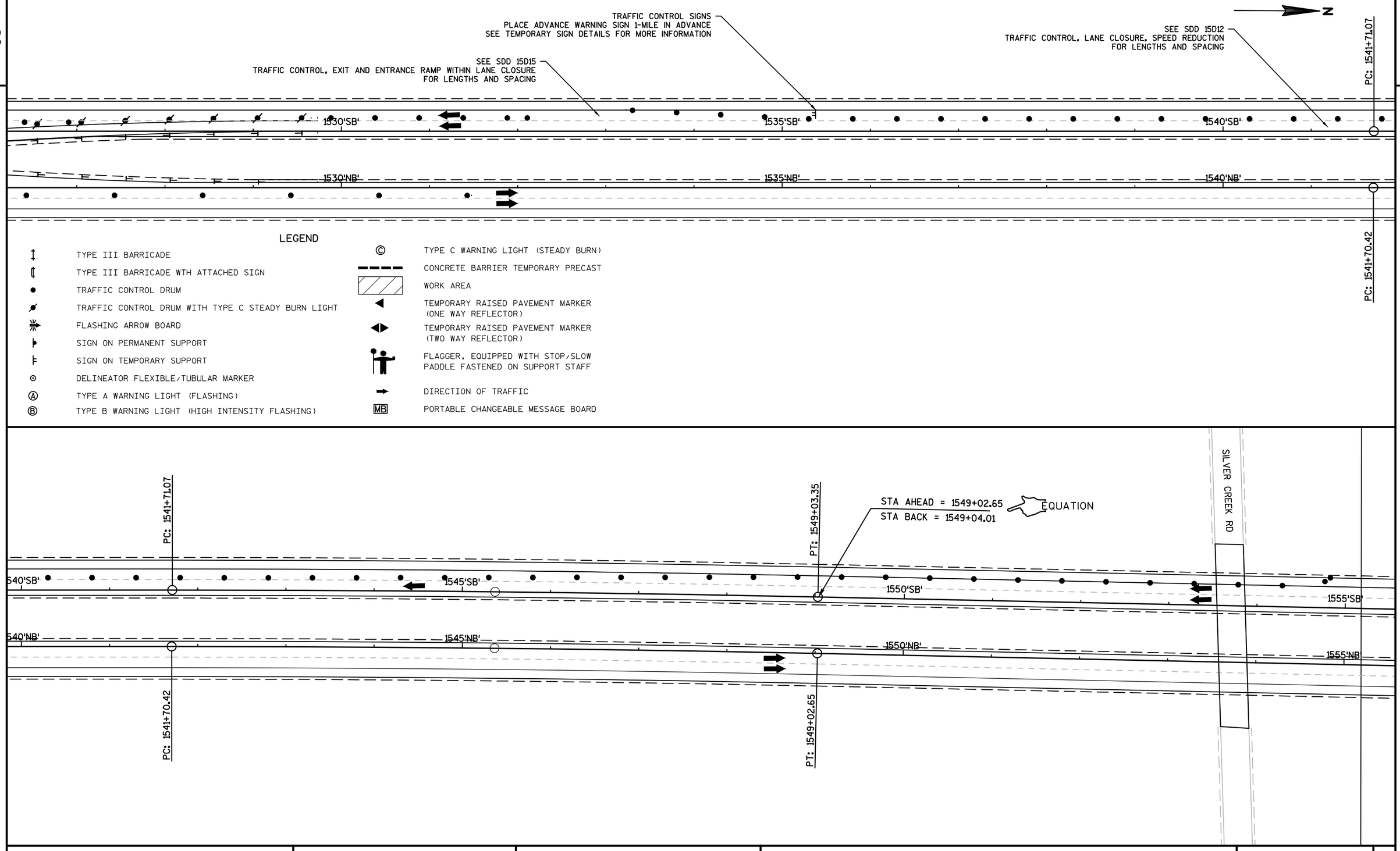
SEE SDD 15D11
TRAFFIC CONTROL, SINGLE LANE CROSSOVER
FOR LENGTHS AND SPACING

SEE SDD 15D15
TRAFFIC CONTROL, EXIT AND ENTRANCE RAMP WITHIN LANE CLOSURE
FOR LENGTHS AND SPACING

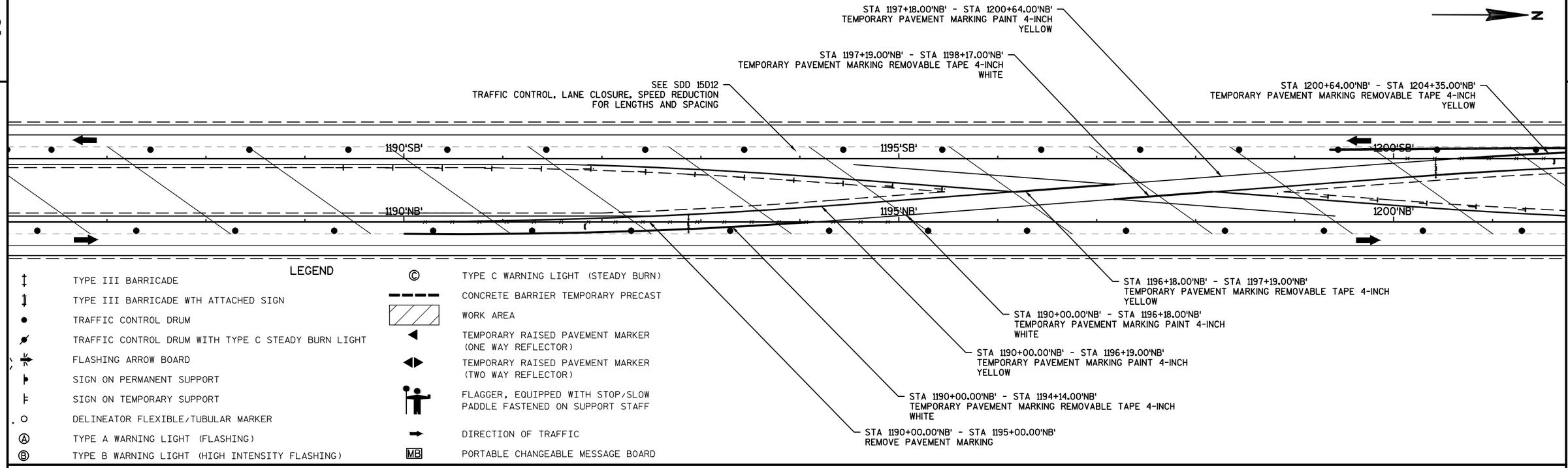


STA 1198+93.00'NB' - STA 1519+38.00'NB'
TEMPORARY PAVEMENT MARKING 4-INCH, BLACK
TEMPORARY PAVEMENT MARKING 4-INCH, WHITE 4' SKIP 46' GAP
REMOVE TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER POSTS AND BASES
END OF STAGE

PROJECT NO:1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	TRAFFIC CONTROL - STAGE 2B	SHEET 61	E

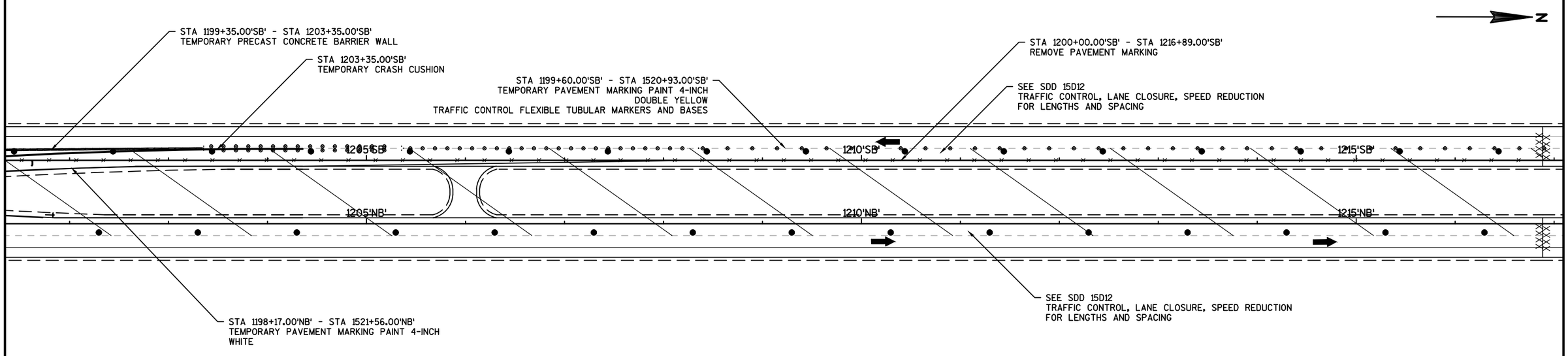


PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	TRAFFIC CONTROL - STAGE 2B	SHEET 62	E

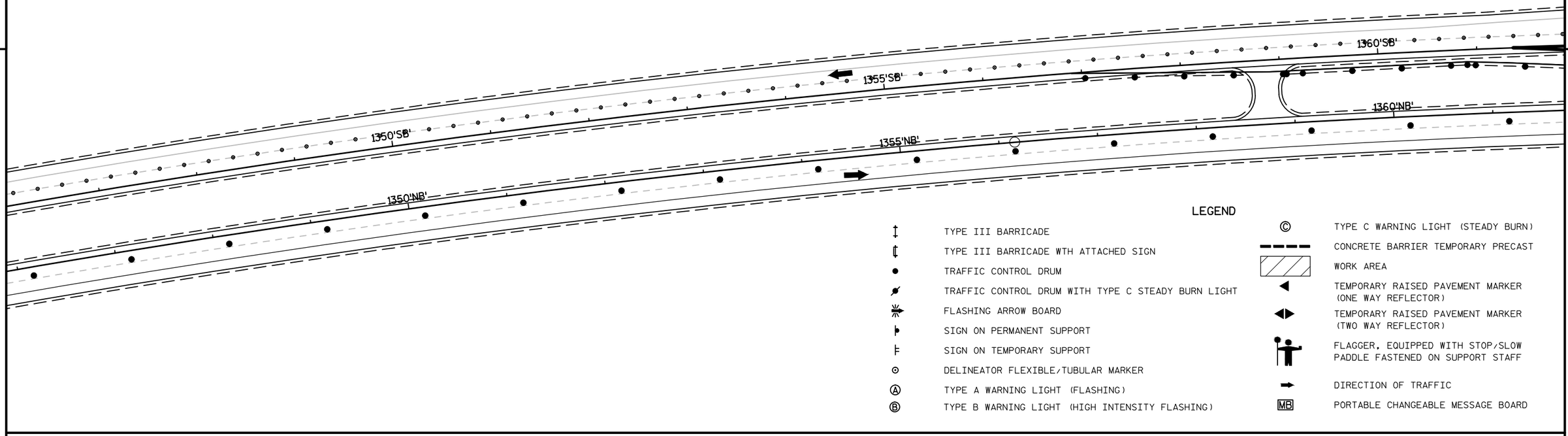


LEGEND

- 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
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- Ⓐ TYPE A WARNING LIGHT (FLASHING)
- Ⓑ TYPE B WARNING LIGHT (HIGH INTENSITY FLASHING)
- Ⓒ TYPE C WARNING LIGHT (STEADY BURN)
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK AREA
- TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)
- TEMPORARY RAISED PAVEMENT MARKER (TWO WAY REFLECTOR)
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF
- DIRECTION OF TRAFFIC
- MB PORTABLE CHANGEABLE MESSAGE BOARD

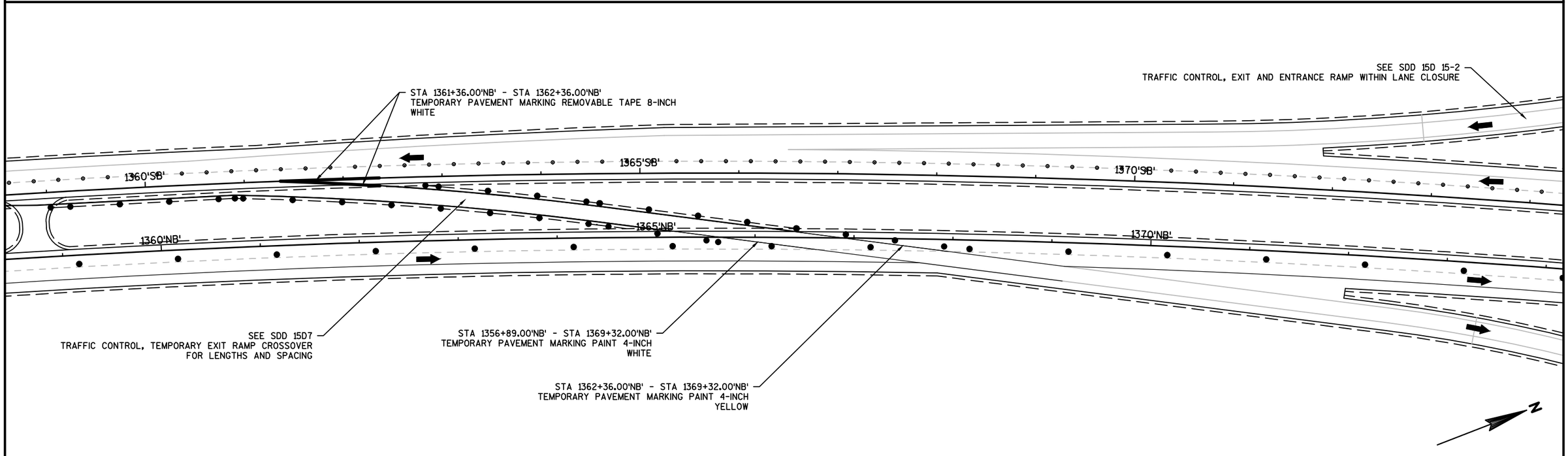


PROJECT NO:1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	TRAFFIC CONTROL - STAGE 3	SHEET 63	E

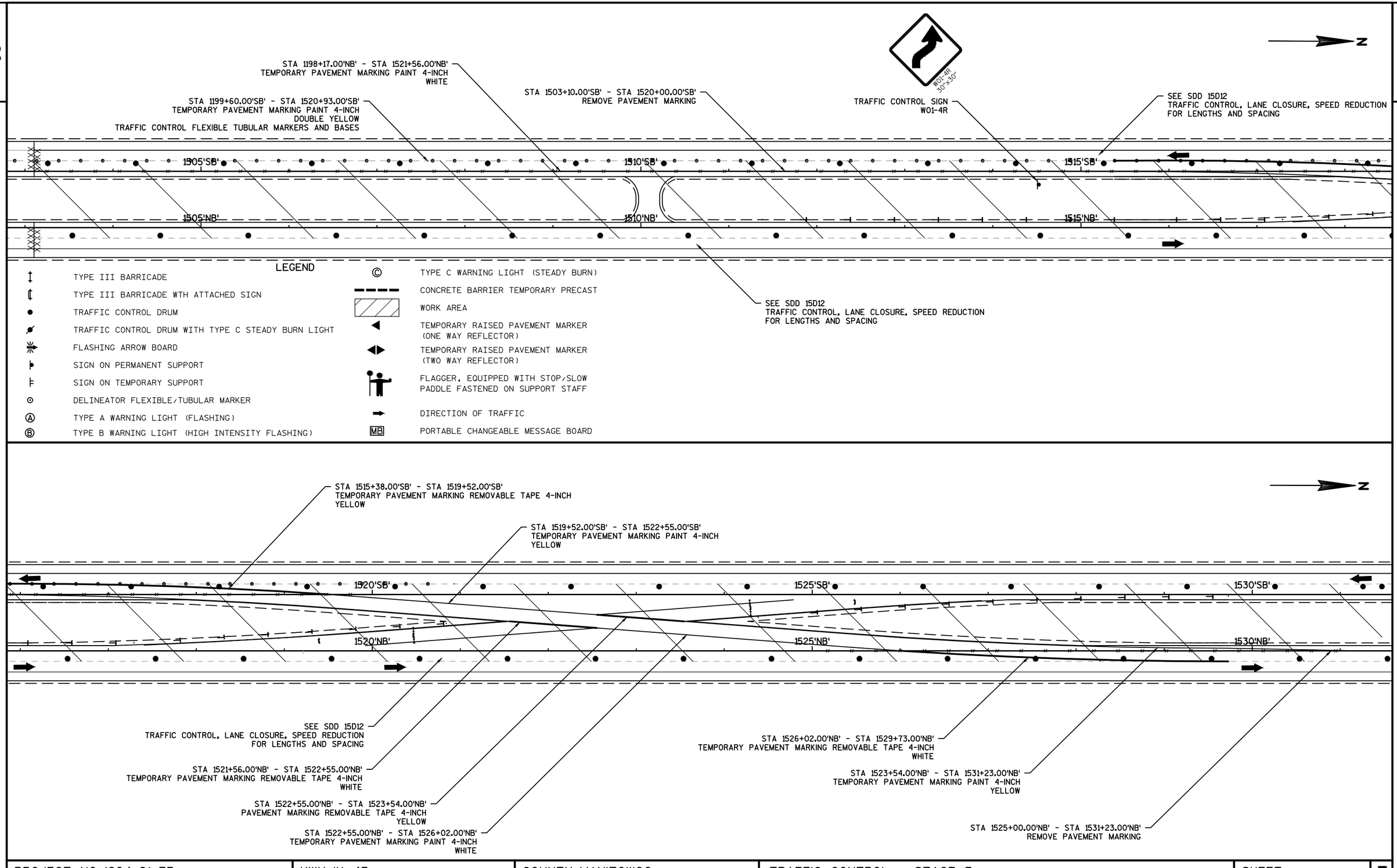


LEGEND

- 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
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- (A) TYPE A WARNING LIGHT (FLASHING)
- (B) TYPE B WARNING LIGHT (HIGH INTENSITY FLASHING)
- (C) TYPE C WARNING LIGHT (STEADY BURN)
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK AREA
- TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)
- TEMPORARY RAISED PAVEMENT MARKER (TWO WAY REFLECTOR)
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF
- DIRECTION OF TRAFFIC
- MB PORTABLE CHANGEABLE MESSAGE BOARD

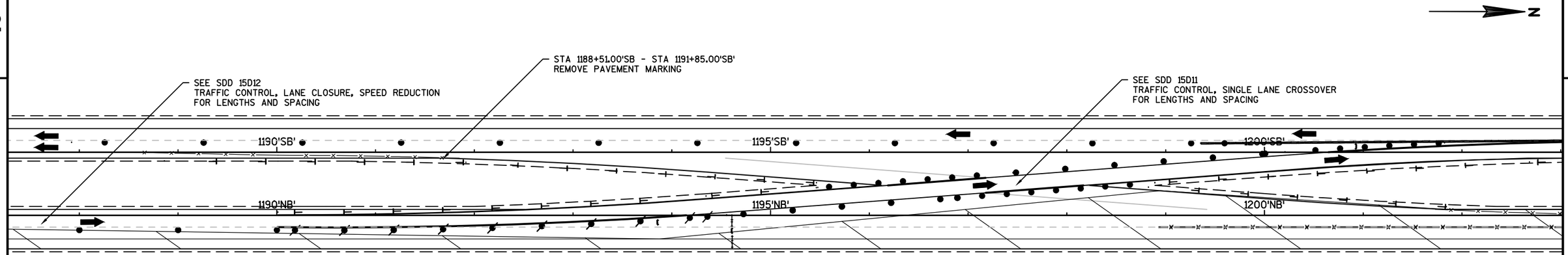


PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	TRAFFIC CONTROL - STAGE 3	SHEET 64	E



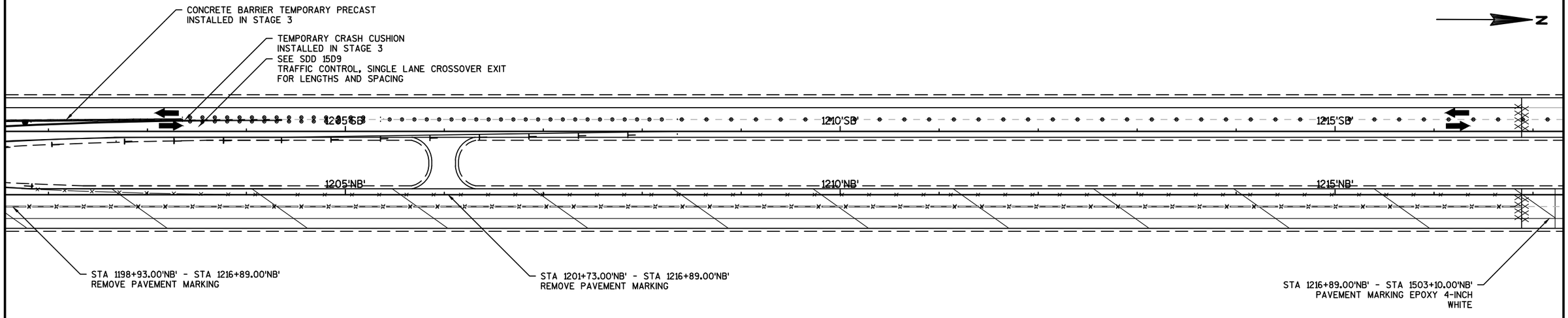
PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	TRAFFIC CONTROL - STAGE 3	SHEET 65	E

2



LEGEND

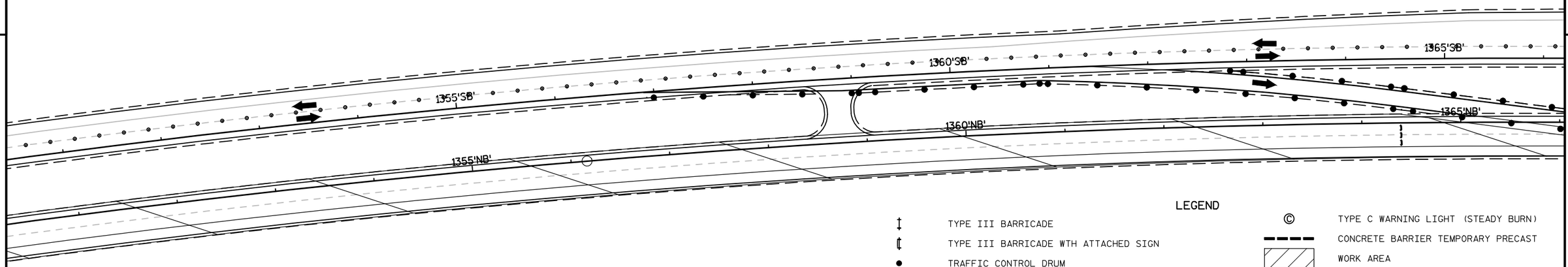
- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- (A) TYPE A WARNING LIGHT (FLASHING)
- (B) TYPE B WARNING LIGHT (HIGH INTENSITY FLASHING)
- (C) TYPE C WARNING LIGHT (STEADY BURN)
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK AREA
- TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)
- TEMPORARY RAISED PAVEMENT MARKER (TWO WAY REFLECTOR)
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF
- DIRECTION OF TRAFFIC
- MB PORTABLE CHANGEABLE MESSAGE BOARD



PROJECT NO:1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	TRAFFIC CONTROL - STAGE 4A	SHEET	E

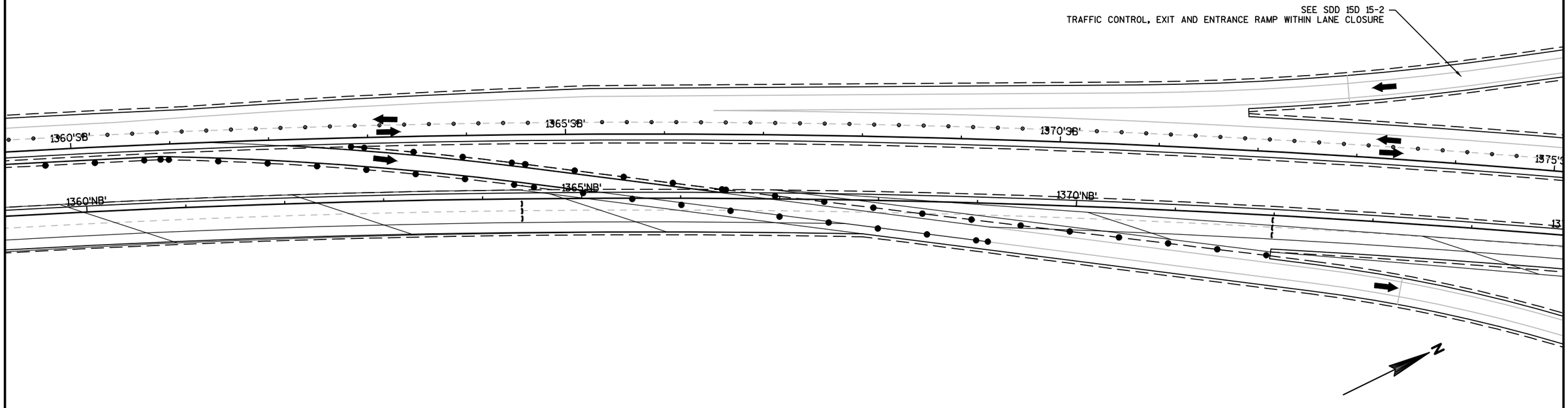
FILE NAME : \\GRE31FP1\N3PUBLIC\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\025004_TC_4A.DWG
LAYOUT NAME - 025003_TCA
PLOT DATE : 7/26/2016 1:25 PM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44

2

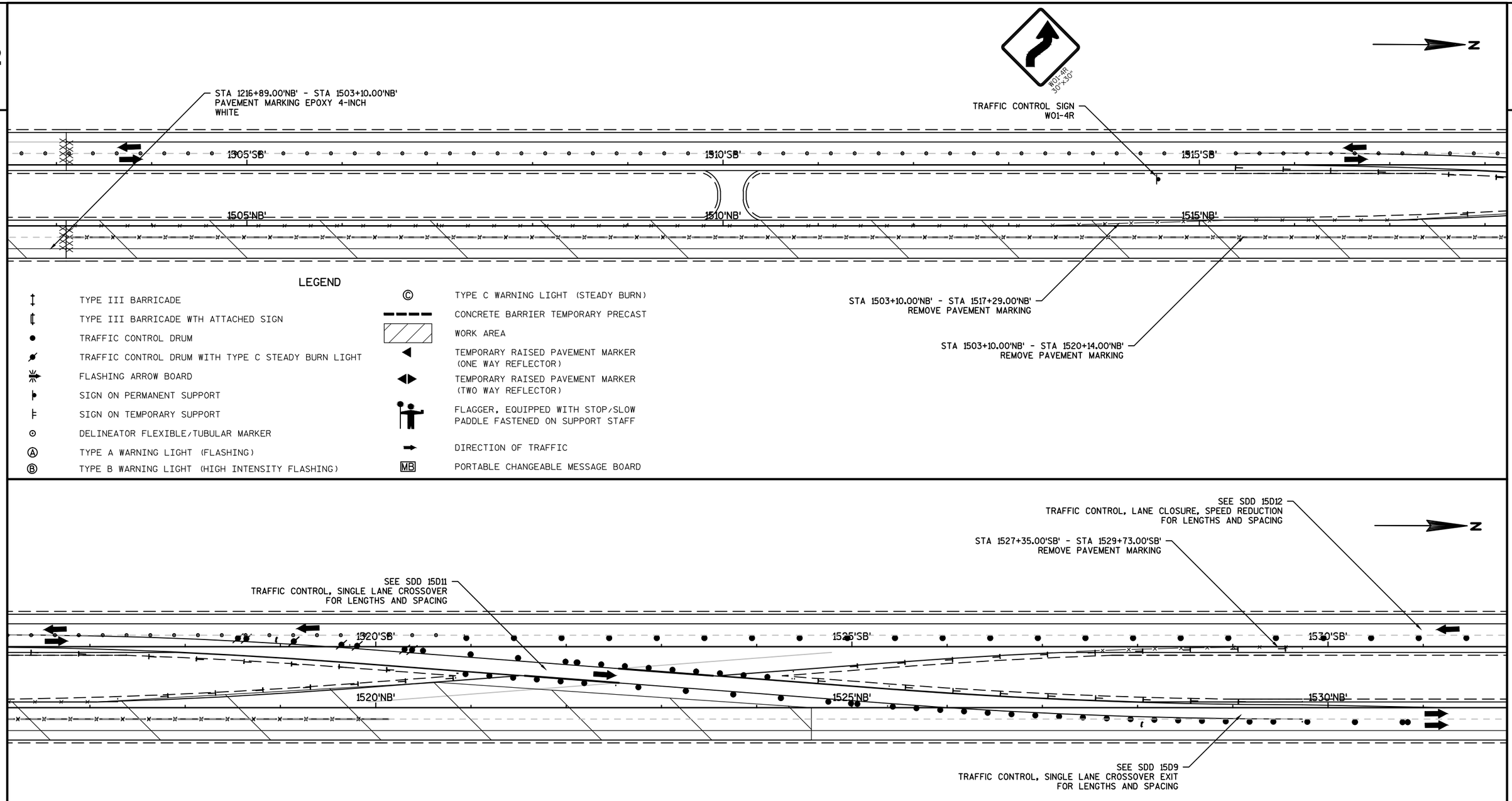


LEGEND

TYPE III BARRICADE	TYPE C WARNING LIGHT (STEADY BURN)
TYPE III BARRICADE WTH ATTACHED SIGN	CONCRETE BARRIER TEMPORARY PRECAST
TRAFFIC CONTROL DRUM	WORK AREA
TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT	TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)
FLASHING ARROW BOARD	TEMPORARY RAISED PAVEMENT MARKER (TWO WAY REFLECTOR)
SIGN ON PERMANENT SUPPORT	FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF
SIGN ON TEMPORARY SUPPORT	
DELINEATOR FLEXIBLE/TUBULAR MARKER	DIRECTION OF TRAFFIC
TYPE A WARNING LIGHT (FLASHING)	PORTABLE CHANGEABLE MESSAGE BOARD
TYPE B WARNING LIGHT (HIGH INTENSITY FLASHING)	

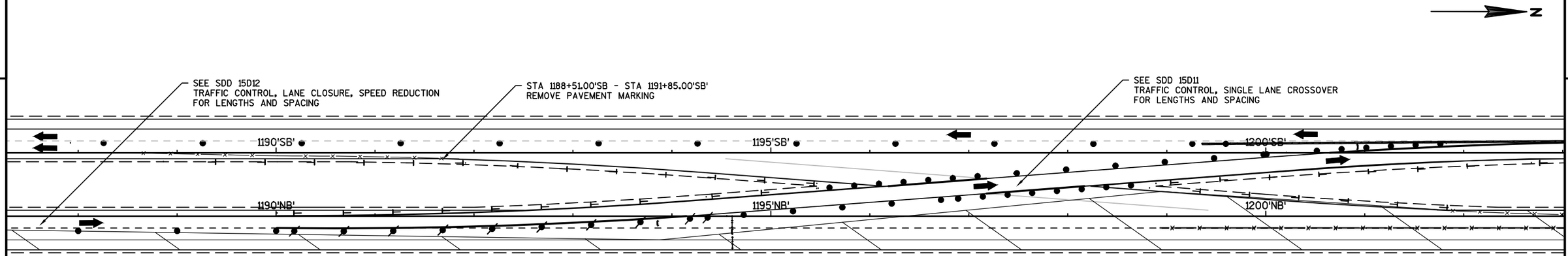


PROJECT NO:1224-21-73	HWY: IH 43	COUNTY:MANITOWOC	TRAFFIC CONTROL - STAGE 4A	SHEET 67 E



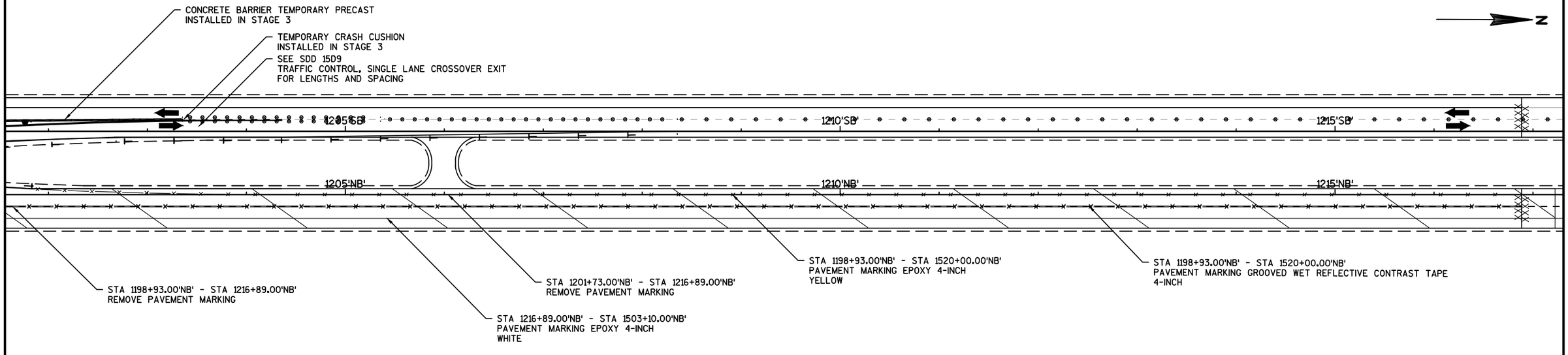
PROJECT NO:1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	TRAFFIC CONTROL - STAGE 4A	SHEET 68	E

2

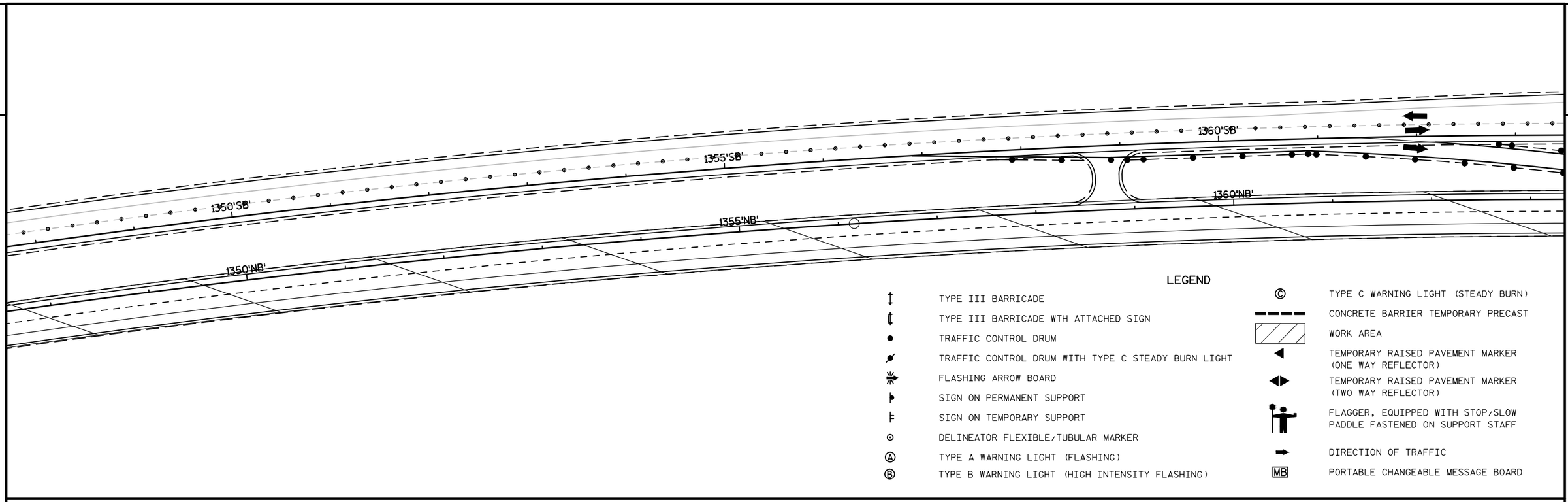


LEGEND

- 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
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- Ⓐ TYPE A WARNING LIGHT (FLASHING)
- Ⓑ TYPE B WARNING LIGHT (HIGH INTENSITY FLASHING)
- © TYPE C WARNING LIGHT (STEADY BURN)
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK AREA
- TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)
- TEMPORARY RAISED PAVEMENT MARKER (TWO WAY REFLECTOR)
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF
- DIRECTION OF TRAFFIC
- MB PORTABLE CHANGEABLE MESSAGE BOARD

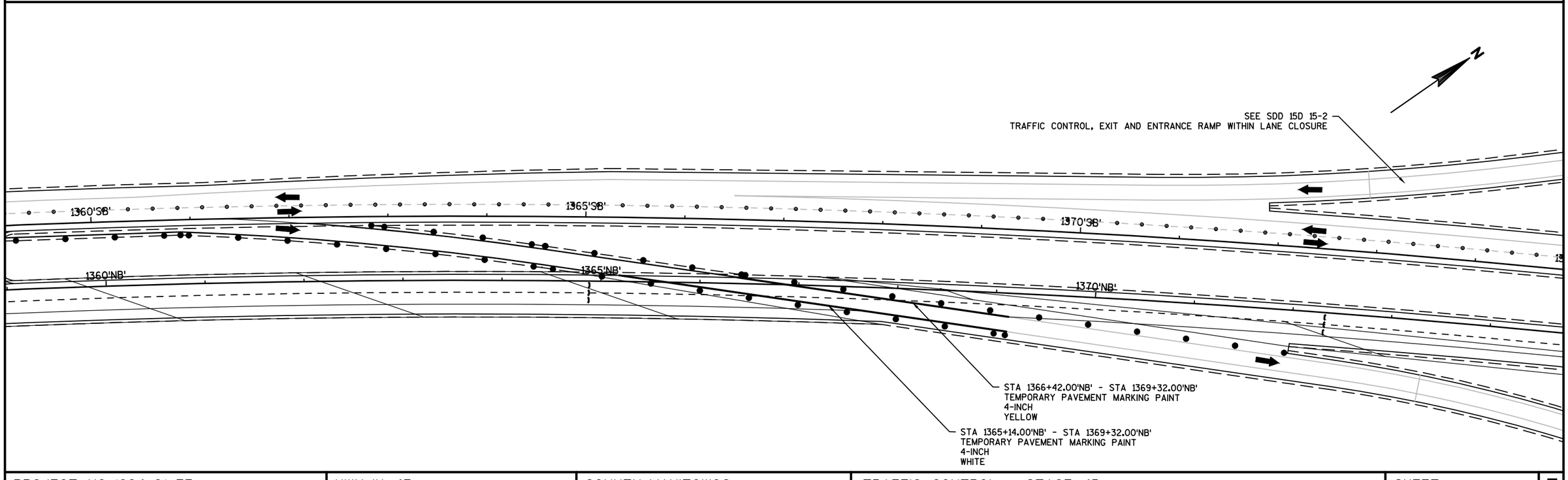


PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	TRAFFIC CONTROL - STAGE 4B	SHEET 69	E

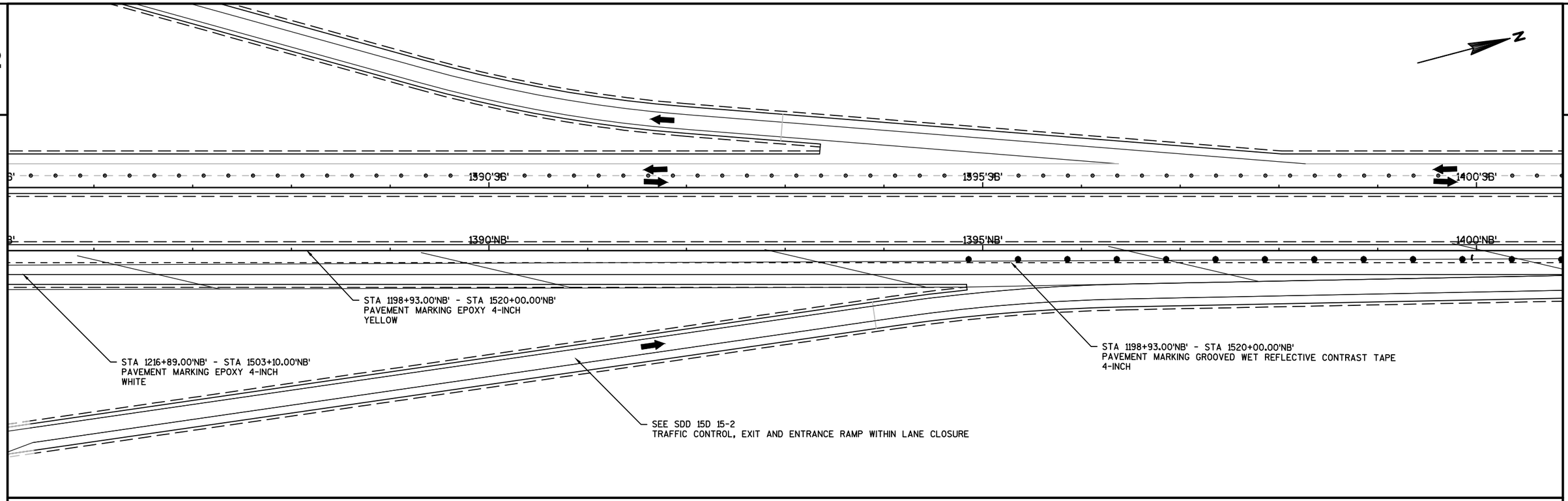


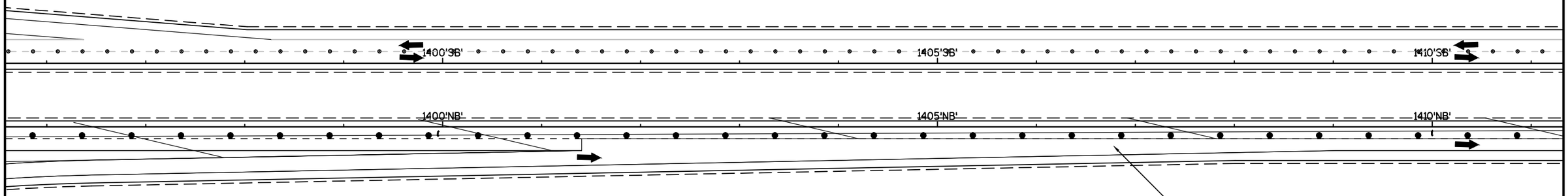
LEGEND

- 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
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- (A) TYPE A WARNING LIGHT (FLASHING)
- (B) TYPE B WARNING LIGHT (HIGH INTENSITY FLASHING)
- (C) TYPE C WARNING LIGHT (STEADY BURN)
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK AREA
- TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)
- TEMPORARY RAISED PAVEMENT MARKER (TWO WAY REFLECTOR)
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF
- DIRECTION OF TRAFFIC
- MB PORTABLE CHANGEABLE MESSAGE BOARD



PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	TRAFFIC CONTROL - STAGE 4B	SHEET 70	E



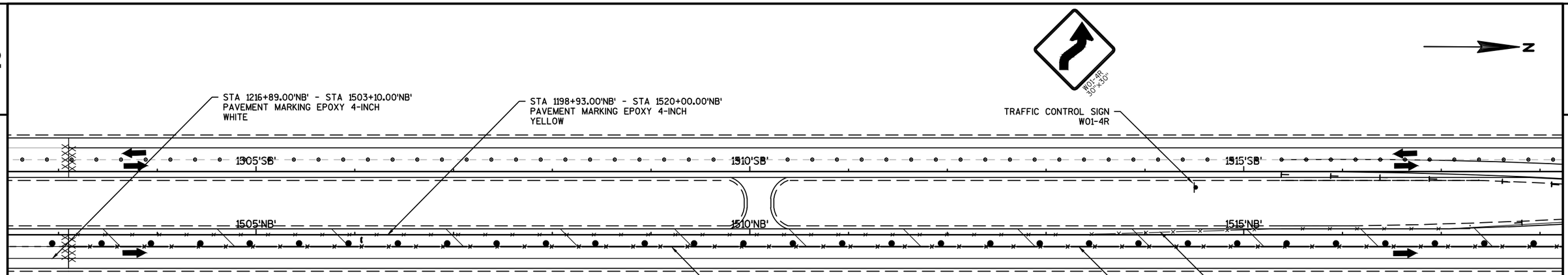


LEGEND

- 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
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- (A) TYPE A WARNING LIGHT (FLASHING)
- (B) TYPE B WARNING LIGHT (HIGH INTENSITY FLASHING)
- (C) TYPE C WARNING LIGHT (STEADY BURN)
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK AREA
- TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)
- TEMPORARY RAISED PAVEMENT MARKER (TWO WAY REFLECTOR)
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF
- DIRECTION OF TRAFFIC
- MB PORTABLE CHANGEABLE MESSAGE BOARD

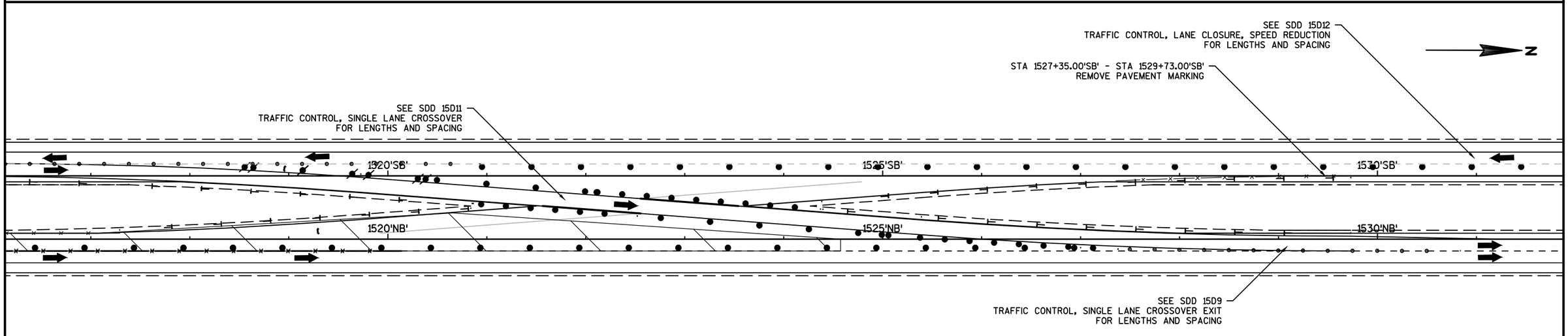
PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	TRAFFIC CONTROL - STAGE 4B	SHEET 71	E

2



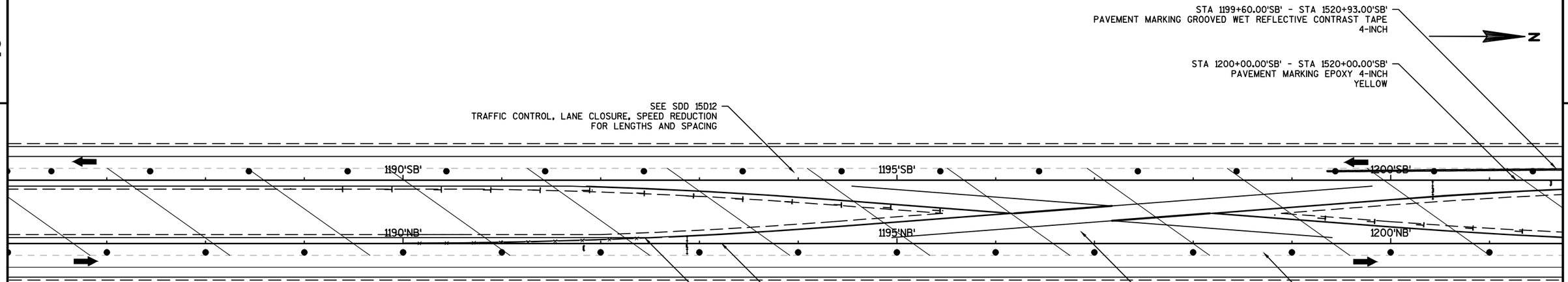
LEGEND

- 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
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- (A) TYPE A WARNING LIGHT (FLASHING)
- (B) TYPE B WARNING LIGHT (HIGH INTENSITY FLASHING)
- (C) TYPE C WARNING LIGHT (STEADY BURN)
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK AREA
- TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)
- TEMPORARY RAISED PAVEMENT MARKER (TWO WAY REFLECTOR)
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF
- DIRECTION OF TRAFFIC
- MB PORTABLE CHANGEABLE MESSAGE BOARD



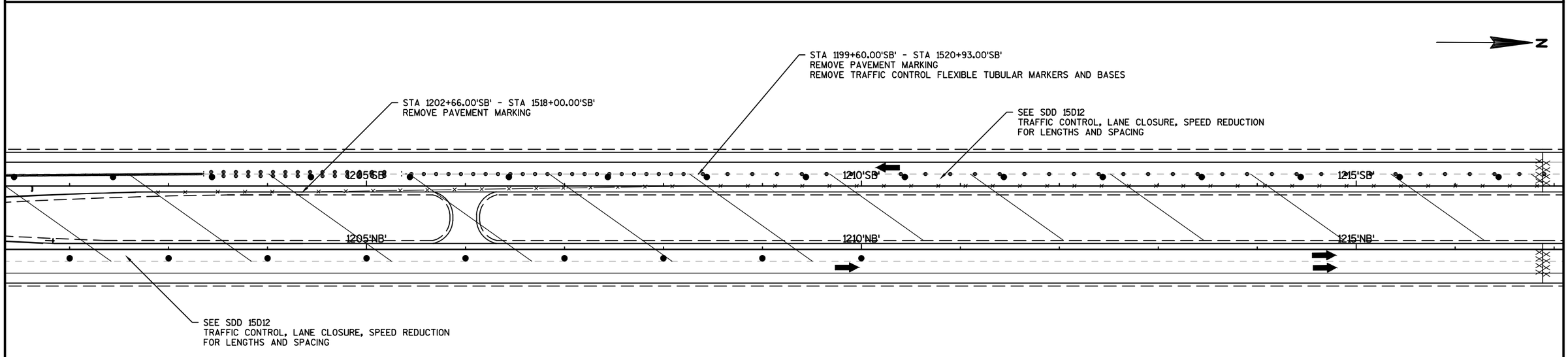
PROJECT NO:1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	TRAFFIC CONTROL - STAGE 4B	SHEET 72	E

2

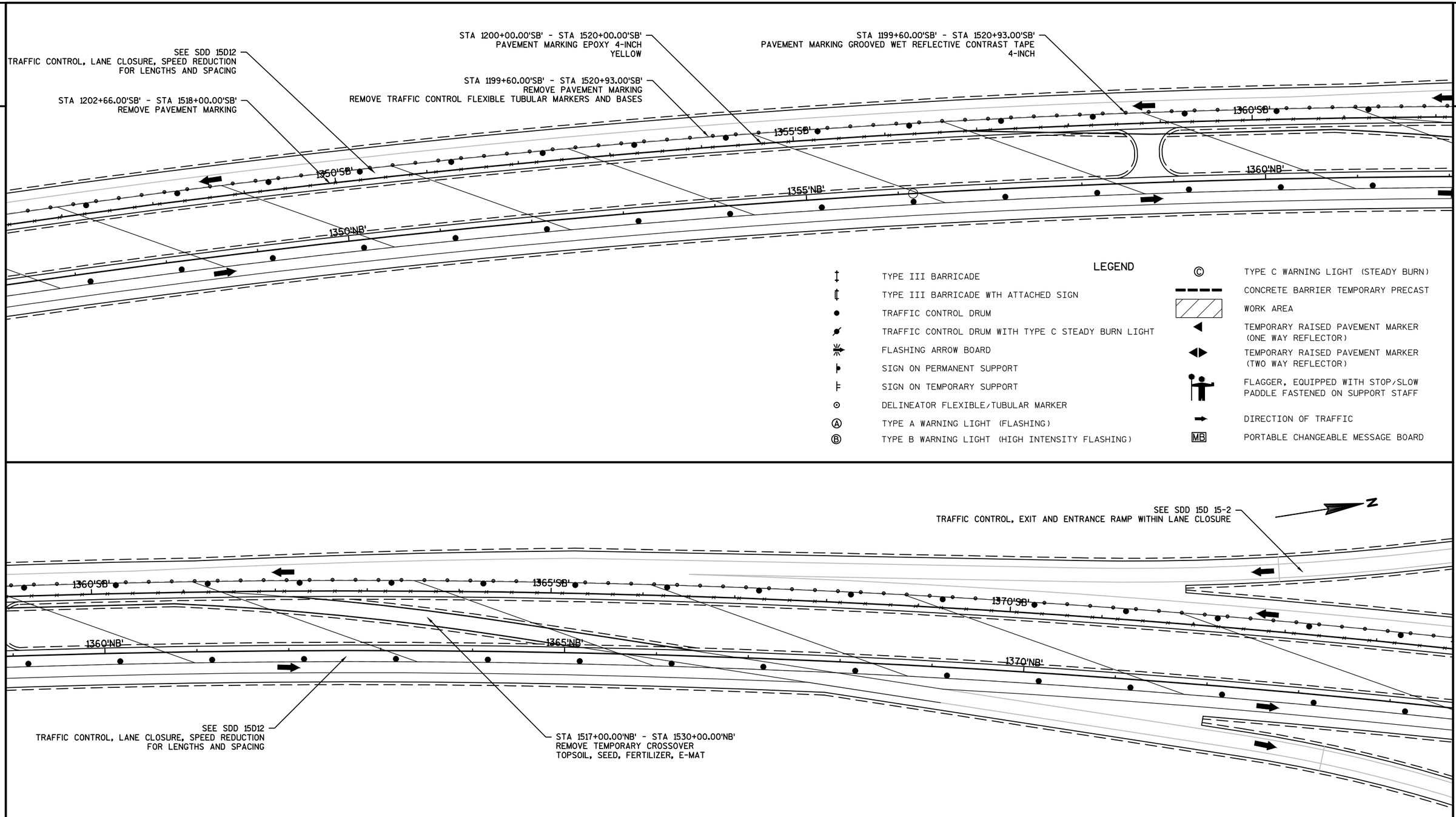


LEGEND

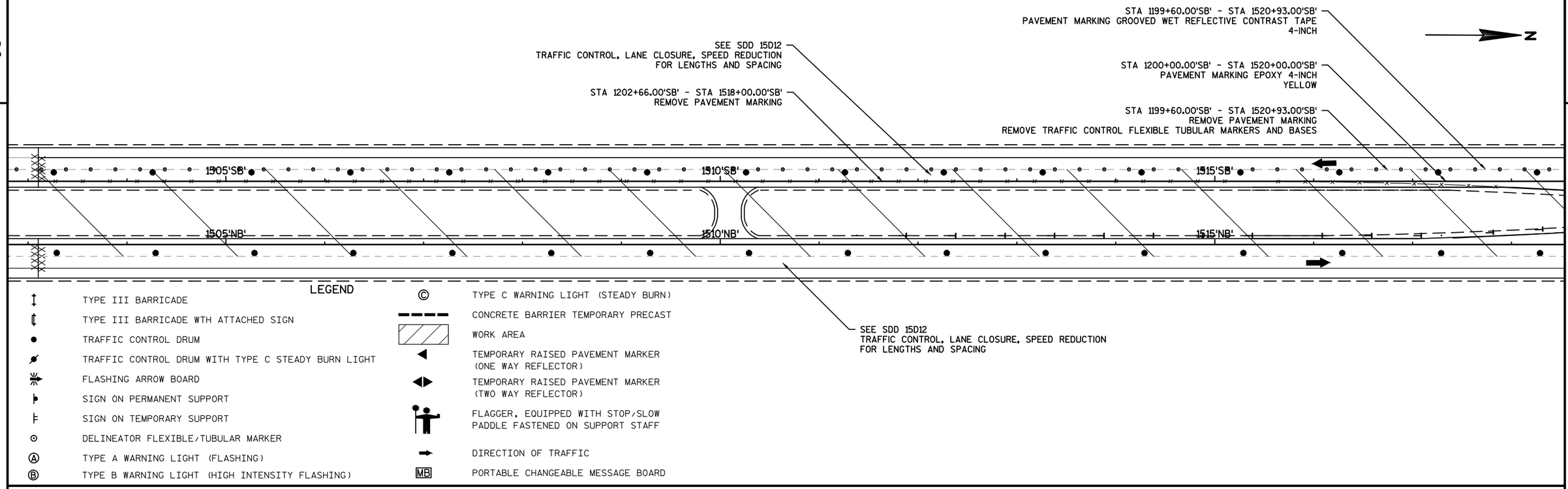
- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- (A) TYPE A WARNING LIGHT (FLASHING)
- (B) TYPE B WARNING LIGHT (HIGH INTENSITY FLASHING)
- (C) TYPE C WARNING LIGHT (STEADY BURN)
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK AREA
- TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)
- TEMPORARY RAISED PAVEMENT MARKER (TWO WAY REFLECTOR)
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF
- DIRECTION OF TRAFFIC
- MB PORTABLE CHANGEABLE MESSAGE BOARD



PROJECT NO:1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	TRAFFIC CONTROL - STAGE 5	SHEET 73	E



PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	TRAFFIC CONTROL - STAGE 5	SHEET 74	E



PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	TRAFFIC CONTROL - STAGE 5	SHEET 75	E

DATE 12OCT16 E S T I M A T E O F Q U A N T I T I E S

LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	1224-21-73 QUANTITY
0010	203.0100	Removing Small Pipe Culverts	EACH	4.000	4.000
0020	203.0200	Removing Old Structure (station) 08. 1445+80	LS	1.000	1.000
0030	203.0200	Removing Old Structure (station) 09. 1446+22	LS	1.000	1.000
0040	203.0200	Removing Old Structure (station) 13. 1382+50	LS	1.000	1.000
0050	203.0200	Removing Old Structure (station) 15. 10+02	LS	1.000	1.000
0060	203.0600.S	Removing Old Structure Over Waterway With Minimal Debris (station) 01. 10+00	LS	1.000	1.000
0070	204.0100	Removing Pavement	SY	1,058.000	1,058.000
0080	204.0105	Removing Pavement Butt Joints	SY	607.000	607.000
0090	204.0110	Removing Asphaltic Surface	SY	310.000	310.000
0100	204.0115	Removing Asphaltic Surface Butt Joints	SY	3,556.000	3,556.000
0110	204.0120	Removing Asphaltic Surface Milling	SY	251,961.000	251,961.000
0120	204.0150	Removing Curb & Gutter	LF	524.000	524.000
0130	204.0155	Removing Concrete Sidewalk	SY	71.000	71.000
0140	204.0165	Removing Guardrail	LF	11,400.000	11,400.000
0150	204.0170	Removing Fence	LF	710.000	710.000
0160	204.0190	Removing Surface Drains	EACH	2.000	2.000
0170	204.0195	Removing Concrete Bases	EACH	6.000	6.000
0180	204.0220	Removing Inlets	EACH	8.000	8.000
0190	204.9060.S	Removing (item description) 01. Culvert Endwalls	EACH	4.000	4.000
0200	205.0100	Excavation Common	CY	6,033.000	6,033.000
0210	206.1000	Excavation for Structures Bridges (structure) 08. B-36-0052	LS	1.000	1.000
0220	206.1000	Excavation for Structures Bridges (structure) 09. B-36-0053	LS	1.000	1.000
0230	206.1000	Excavation for Structures Bridges (structure) 14. B-36-0230	LS	1.000	1.000
0240	206.1000	Excavation for Structures Bridges (structure) 15. B-36-0231	LS	1.000	1.000
0250	206.2000	Excavation for Structures Culverts (structure) 13. B-36-0064	LS	1.000	1.000
0260	208.0100	Borrow	CY	1,963.000	1,963.000
0270	210.1100	Backfill Structure Type A	CY	190.000	190.000
0280	210.1500	Backfill Structure Type A	TON	1,020.000	1,020.000
0290	211.0100	Prepare Foundation for Asphaltic Paving (project) 01. 1224-21-73	LS	1.000	1.000
0300	213.0100	Finishing Roadway (project) 01. 1224-21-73	EACH	1.000	1.000
0310	305.0110	Base Aggregate Dense 3/4-Inch	TON	8,975.000	8,975.000
0320	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	1,641.000	1,641.000
0330	305.0500	Shaping Shoulders	STA	1,278.000	1,278.000
0340	311.0110	Breaker Run	TON	1,251.000	1,251.000
0350	390.0303	Base Patching Concrete	SY	4,650.000	4,650.000
0360	415.0080	Concrete Pavement 8-Inch	SY	430.000	430.000
0370	415.0410	Concrete Pavement Approach Slab	SY	628.000	628.000
0380	416.0610	Drilled Tie Bars	EACH	2,530.000	2,530.000
0390	416.0620	Drilled Dowel Bars	EACH	2,800.000	2,800.000
0400	416.1010	Concrete Surface Drains	CY	4.000	4.000
0410	440.4410	Incentive IRI Ride	DOL	42,176.000	42,176.000
0420	450.4000	HMA Cold Weather Paving	TON	4,910.000	4,910.000
0430	455.0605	Tack Coat	GAL	32,452.000	32,452.000

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1224-21-73

LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	QUANTITY
0440	460.2000	Incentive Density HMA Pavement	DOL	40,820.000	40,820.000
0450	460.2010	Incentive Air Voids HMA Pavement	DOL	63,766.000	63,766.000
0460	460.4110.S	Reheating HMA Pavement Longitudinal Joints	LF	132,282.000	132,282.000
0470	460.5223	HMA Pavement 3 LT 58-28 S	TON	14,380.000	14,380.000
0480	460.5224	HMA Pavement 4 LT 58-28 S	TON	12,050.000	12,050.000
0490	460.7223	HMA Pavement 3 HT 58-28 S	TON	21,010.000	21,010.000
0500	460.7224	HMA Pavement 4 HT 58-28 S	TON	16,235.000	16,235.000
0510	465.0105	Asphaltic Surface	TON	75.000	75.000
0520	465.0125	Asphaltic Surface Temporary	TON	270.000	270.000
0530	465.0400	Asphaltic Shoulder Rumble Strips	LF	112,494.000	112,494.000
0540	502.0100	Concrete Masonry Bridges	CY	1,158.000	1,158.000
0550	502.3100	Expansion Device (structure) 03. B-36-0046	LS	1.000	1.000
0560	502.3100	Expansion Device (structure) 06. B-36-0050	LS	1.000	1.000
0570	502.3100	Expansion Device (structure) 07. B-36-0051	LS	1.000	1.000
0580	502.3200	Protective Surface Treatment	SY	8,638.000	8,638.000
0590	502.3210	Pigmented Surface Sealer	SY	1,811.000	1,811.000
0600	502.4204	Adhesive Anchors No. 4 Bar	EACH	19.000	19.000
0610	502.4205	Adhesive Anchors No. 5 Bar	EACH	236.000	236.000
0620	503.0137	Prestressed Girder Type I 36W-Inch	LF	360.000	360.000
0630	504.0100	Concrete Masonry Culverts	CY	8.000	8.000
0640	505.0400	Bar Steel Reinforcement HS Structures	LB	16,940.000	16,940.000
0650	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	197,170.000	197,170.000
0660	505.0800.S	Bar Steel Reinforcement HS Stainless Structures	LB	1,974.000	1,974.000
0670	506.2605	Bearing Pads Elastomeric Non-Laminated	EACH	10.000	10.000
0680	506.4000	Steel Diaphragms (structure) 01. B-36-0230	EACH	4.000	4.000
0690	509.0301	Preparation Decks Type 1	SY	688.000	688.000
0700	509.0302	Preparation Decks Type 2	SY	242.000	242.000
0710	509.0500	Cleaning Decks	SY	7,273.000	7,273.000
0720	509.1000	Joint Repair	SY	77.000	77.000
0730	509.1500	Concrete Surface Repair	SF	544.000	544.000
0740	509.2000	Full-Depth Deck Repair	SY	13.000	13.000
0750	509.2500	Concrete Masonry Overlay Decks	CY	759.000	759.000
0760	509.9010.S	Removing Asphaltic Concrete Deck Overlay (structure) 01. B-36-0040	SY	524.000	524.000
0770	509.9010.S	Removing Asphaltic Concrete Deck Overlay (structure) 02. B-36-0041	SY	505.000	505.000
0780	509.9010.S	Removing Asphaltic Concrete Deck Overlay (structure) 04. B-36-0047	SY	479.000	479.000
0790	509.9010.S	Removing Asphaltic Concrete Deck Overlay (structure) 05. B-36-0048	SY	524.000	524.000
0800	509.9010.S	Removing Asphaltic Concrete Deck Overlay (structure) 06. B-36-0050	SY	869.000	869.000
0810	509.9010.S	Removing Asphaltic Concrete Deck Overlay (structure) 07. B-36-0051	SY	869.000	869.000
0820	509.9010.S	Removing Asphaltic Concrete Deck Overlay (structure) 08. B-36-0052	SY	622.000	622.000
0830	509.9010.S	Removing Asphaltic Concrete Deck Overlay (structure) 09. B-36-0053	SY	697.000	697.000

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LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	1224-21-73 QUANTITY
0840	509.9010.S	Removing Asphaltic Concrete Deck Overlay (structure) 10. B-36-0056	SY	527.000	527.000
0850	509.9010.S	Removing Asphaltic Concrete Deck Overlay (structure) 11. B-36-0057	SY	527.000	527.000
0860	509.9050.S	Cleaning Parapets	LF	3,859.000	3,859.000
0870	511.1100	Temporary Shoring	SF	400.000	400.000
0880	516.0500	Rubberized Membrane Waterproofing	SY	57.000	57.000
0890	517.3000.S	Structure Overcoating Cleaning and Priming (structure) 01. B-36-0046	LS	1.000	1.000
0900	517.4000.S	Containment and Collection of Waste Materials (structure) 01. B-36-0046	LS	1.000	1.000
0910	520.8700	Cleaning Culvert Pipes	EACH	6.000	6.000
0920	520.9700.S	Culvert Pipe Liners (size) 01. 21-Inch	LF	40.000	40.000
0930	520.9750.S	Cleaning Culvert Pipes for Liner Verification	EACH	1.000	1.000
0940	522.0118	Culvert Pipe Reinforced Concrete Class III 18-Inch	LF	56.000	56.000
0950	522.1018	Apron Endwalls for Culvert Pipe Reinforced Concrete 18-Inch	EACH	4.000	4.000
0960	522.1024	Apron Endwalls for Culvert Pipe Reinforced Concrete 24-Inch	EACH	1.000	1.000
0970	522.1030	Apron Endwalls for Culvert Pipe Reinforced Concrete 30-Inch	EACH	2.000	2.000
0980	550.0600	Pile Redriving	EACH	20.000	20.000
0990	550.2102	Piling CIP Concrete 10 3/4 X 0.219-Inch	LF	5,550.000	5,550.000
1000	550.2104	Piling CIP Concrete 10 3/4 X 0.25-Inch	LF	1,700.000	1,700.000
1010	601.0409	Concrete Curb & Gutter 30-Inch Type A	LF	524.000	524.000
1020	602.0405	Concrete Sidewalk 4-Inch	SF	704.000	704.000
1030	603.8000	Concrete Barrier Temporary Precast Delivered	LF	4,662.500	4,662.500
1040	603.8125	Concrete Barrier Temporary Precast Installed	LF	4,662.500	4,662.500
1050	604.0600	Slope Paving Select Crushed Material	SY	278.000	278.000
1060	604.9010.S	Slope Paving Repair Crushed Aggregate	CY	33.000	33.000
1070	606.0100	Riprap Light	CY	3.000	3.000
1080	606.0200	Riprap Medium	CY	2.000	2.000
1090	606.0300	Riprap Heavy	CY	214.000	214.000
1100	611.0430	Reconstructing Inlets	EACH	7.000	7.000
1110	611.0600	Inlet Covers Type A	EACH	7.000	7.000
1120	611.0642	Inlet Covers Type MS	EACH	1.000	1.000
1130	611.3220	Inlets 2x2-FT	EACH	7.000	7.000
1140	611.3901	Inlets Median 1 Grate	EACH	1.000	1.000
1150	611.8115	Adjusting Inlet Covers	EACH	16.000	16.000
1160	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	440.000	440.000
1170	614.0010	Barrier System Grading Shaping Finishing	EACH	39.000	39.000
1180	614.0150	Anchor Assemblies for Steel Plate Beam Guard	EACH	13.000	13.000
1190	614.0215	Steel Thrie Beam Structure Approach Retrofit Span	EACH	17.000	17.000
1200	614.0220	Steel Thrie Beam Bullnose Terminal	EACH	2.000	2.000
1210	614.0230	Steel Thrie Beam	LF	125.000	125.000
1220	614.0397	Guardrail Mow Strip Emulsified Asphalt	SY	4,761.000	4,761.000
1230	614.0905	Crash Cushions Temporary	EACH	16.000	16.000
1240	614.2300	MGS Guardrail 3	LF	9,062.500	9,062.500
1250	614.2500	MGS Thrie Beam Transition	LF	1,404.000	1,404.000

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LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	1224-21-73 QUANTITY
1260	614.2610	MGS Guardrail Terminal EAT	EACH	41.000	41.000
1270	614.2620	MGS Guardrail Terminal Type 2	EACH	7.000	7.000
1280	616.0100	Fence Woven Wire (height) 01. 4.0-FEET	LF	710.000	710.000
1290	618.0100	Maintenance And Repair of Haul Roads (project) 01. 1224-21-73	EACH	1.000	1.000
1300	619.1000	Mobilization	EACH	1.000	1.000
1310	624.0100	Water	MGAL	103.300	103.300
1320	625.0100	Topsoil	SY	27,740.000	27,740.000
1330	625.0500	Salvaged Topsoil	SY	4,850.000	4,850.000
1340	628.1504	Silt Fence	LF	10,140.000	10,140.000
1350	628.1520	Silt Fence Maintenance	LF	10,140.000	10,140.000
1360	628.1905	Mobilizations Erosion Control	EACH	5.000	5.000
1370	628.1910	Mobilizations Emergency Erosion Control	EACH	5.000	5.000
1380	628.2004	Erosion Mat Class I Type B	SY	32,600.000	32,600.000
1390	628.6005	Turbidity Barriers	SY	85.000	85.000
1400	628.7005	Inlet Protection Type A	EACH	9.000	9.000
1410	628.7015	Inlet Protection Type C	EACH	20.000	20.000
1420	628.7504	Temporary Ditch Checks	LF	135.000	135.000
1430	628.7555	Culvert Pipe Checks	EACH	11.000	11.000
1440	629.0210	Fertilizer Type B	CWT	20.000	20.000
1450	630.0120	Seeding Mixture No. 20	LB	880.000	880.000
1460	630.0200	Seeding Temporary	LB	445.000	445.000
1470	633.0100	Delineator Posts Steel	EACH	30.000	30.000
1480	633.0500	Delineator Reflectors	EACH	30.000	30.000
1490	633.1100	Delineators Temporary	EACH	109.000	109.000
1500	633.5200	Markers Culvert End	EACH	27.000	27.000
1510	634.0612	Posts Wood 4x6-Inch X 12-FT	EACH	44.000	44.000
1520	634.0614	Posts Wood 4x6-Inch X 14-FT	EACH	38.000	38.000
1530	634.0616	Posts Wood 4x6-Inch X 16-FT	EACH	37.000	37.000
1540	635.0200	Sign Supports Structural Steel HS	LB	6,353.000	6,353.000
1550	636.0100	Sign Supports Concrete Masonry	CY	10.400	10.400
1560	636.0500	Sign Supports Steel Reinforcement	LB	626.000	626.000
1570	637.1220	Signs Type I Reflective SH	SF	1,179.500	1,179.500
1580	637.2210	Signs Type II Reflective H	SF	1,017.760	1,017.760
1590	637.2215	Signs Type II Reflective H Folding	SF	40.000	40.000
1600	637.2230	Signs Type II Reflective F	SF	101.000	101.000
1610	638.2601	Removing Signs Type I	EACH	11.000	11.000
1620	638.2602	Removing Signs Type II	EACH	93.000	93.000
1630	638.3000	Removing Small Sign Supports	EACH	112.000	112.000
1640	638.3100	Removing Structural Steel Sign Supports	EACH	14.000	14.000
1650	642.5401	Field Office Type D	EACH	1.000	1.000
1660	643.0100	Traffic Control (project) 01. 1224-21-73	EACH	1.000	1.000
1670	643.0300	Traffic Control Drums	DAY	85,890.000	85,890.000
1680	643.0420	Traffic Control Barricades Type III	DAY	16,420.000	16,420.000
1690	643.0500	Traffic Control Flexible Tubular Marker Posts	EACH	1,370.000	1,370.000
1700	643.0600	Traffic Control Flexible Tubular Marker Bases	EACH	1,370.000	1,370.000
1710	643.0705	Traffic Control Warning Lights Type A	DAY	30,805.000	30,805.000
1720	643.0715	Traffic Control Warning Lights Type C	DAY	8,525.000	8,525.000
1730	643.0800	Traffic Control Arrow Boards	DAY	730.000	730.000
1740	643.0900	Traffic Control Signs	DAY	31,960.000	31,960.000
1750	643.0920	Traffic Control Covering Signs Type II	EACH	25.000	25.000
1760	643.1000	Traffic Control Signs Fixed Message	SF	195.500	195.500

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LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	1224-21-73 QUANTITY
1770	643.1050	Traffic Control Signs PCMS	DAY	90.000	90.000
1780	643.2000	Traffic Control Detour (project) 01. 1224-21-73	EACH	1.000	1.000
1790	643.3000	Traffic Control Detour Signs	DAY	2,296.000	2,296.000
1800	645.0120	Geotextile Type HR	SY	327.000	327.000
1810	646.0106	Pavement Marking Epoxy 4-Inch	LF	206,887.000	206,887.000
1820	646.0126	Pavement Marking Epoxy 8-Inch	LF	284.000	284.000
1830	646.0600	Removing Pavement Markings	LF	115,984.000	115,984.000
1840	646.0790.S	Removing Raised Pavement Markers	EACH	553.000	553.000
1850	646.0841.S	Pavement Marking Grooved Wet Reflective Contrast Tape 4-Inch	LF	14,483.000	14,483.000
1860	646.0883.S	Pavement Marking Grooved Wet Reflective Tape 8-Inch	LF	5,847.000	5,847.000
1870	647.0166	Pavement Marking Arrows Epoxy Type 2	EACH	2.000	2.000
1880	647.0256	Pavement Marking Symbols Epoxy	EACH	1.000	1.000
1890	647.0656	Pavement Marking Parking Stall Epoxy	LF	530.000	530.000
1900	647.0803	Pavement Marking Aerial Enforcement Bars Epoxy 24-Inch	LF	108.000	108.000
1910	649.0400	Temporary Pavement Marking Removable Tape 4-Inch	LF	4,467.000	4,467.000
1920	649.0402	Temporary Pavement Marking Paint 4-Inch	LF	237,162.000	237,162.000
1930	649.0801	Temporary Pavement Marking Removable Tape 8-Inch	LF	200.000	200.000
1940	649.2100	Temporary Raised Pavement Markers Type I	EACH	454.000	454.000
1950	650.6000	Construction Staking Pipe Culverts	EACH	4.000	4.000
1960	650.6500	Construction Staking Structure Layout (structure) 14. B-36-0230	LS	1.000	1.000
1970	650.6500	Construction Staking Structure Layout (structure) 15. B-36-0231	LS	1.000	1.000
1980	650.8000	Construction Staking Resurfacing Reference	LF	79,630.000	79,630.000
1990	650.9910	Construction Staking Supplemental Control (project) 01. 1224-21-73	LS	1.000	1.000
2000	652.0225	Conduit Rigid Nonmetallic Schedule 40 2-Inch	LF	1,220.000	1,220.000
2010	652.0235	Conduit Rigid Nonmetallic Schedule 40 3-Inch	LF	250.000	250.000
2020	654.0110	Concrete Bases Type 10	EACH	2.000	2.000
2030	654.0113	Concrete Bases Type 13	EACH	4.000	4.000
2040	654.0217	Concrete Control Cabinet Bases Type 9 Special	EACH	1.000	1.000
2050	655.0230	Cable Traffic Signal 5-14 AWG	LF	4,260.000	4,260.000
2060	655.0240	Cable Traffic Signal 7-14 AWG	LF	310.000	310.000
2070	655.0260	Cable Traffic Signal 12-14 AWG	LF	2,290.000	2,290.000
2080	655.0305	Cable Type UF 2-12 AWG Grounded	LF	2,890.000	2,890.000
2090	655.0515	Electrical Wire Traffic Signals 10 AWG	LF	5,930.000	5,930.000
2100	655.0610	Electrical Wire Lighting 12 AWG	LF	1,050.000	1,050.000
2110	657.0100	Pedestal Bases	EACH	1.000	1.000
2120	657.0425	Traffic Signal Standards Aluminum 15-FT	EACH	1.000	1.000
2130	657.1350	Install Poles Type 10	EACH	2.000	2.000
2140	657.1360	Install Poles Type 13	EACH	4.000	4.000
2150	657.1530	Install Monotube Arms 30-FT	EACH	2.000	2.000
2160	657.1540	Install Monotube Arms 40-FT	EACH	1.000	1.000
2170	657.1545	Install Monotube Arms 45-FT	EACH	1.000	1.000
2180	657.1550	Install Monotube Arms 50-FT	EACH	1.000	1.000
2190	657.1555	Install Monotube Arms 55-FT	EACH	1.000	1.000

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LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	1224-21-73 QUANTITY
2200	657.1812	Install Luminaire Arms Steel 12-FT	EACH	7.000	7.000
2210	658.0110	Traffic Signal Face 3-12 Inch Vertical	EACH	18.000	18.000
2220	658.0115	Traffic Signal Face 4-12 Inch Vertical	EACH	4.000	4.000
2230	658.0215	Backplates Signal Face 3 Section 12-Inch	EACH	18.000	18.000
2240	658.0220	Backplates Signal Face 4 Section 12-Inch	EACH	4.000	4.000
2250	658.0600	Led Modules 12-Inch Red Ball	EACH	14.000	14.000
2260	658.0605	Led Modules 12-Inch Yellow Ball	EACH	14.000	14.000
2270	658.0610	Led Modules 12-Inch Green Ball	EACH	14.000	14.000
2280	658.0615	Led Modules 12-Inch Red Arrow	EACH	8.000	8.000
2290	658.0620	Led Modules 12-Inch Yellow Arrow	EACH	16.000	16.000
2300	658.0625	Led Modules 12-Inch Green Arrow	EACH	4.000	4.000
2310	658.5069	Signal Mounting Hardware (location) 01. USH 151 & STH 42/Dufek Dr	LS	1.000	1.000
2320	658.5069	Signal Mounting Hardware (location) 02. IH 43 SB & USH 151	LS	1.000	1.000
2330	658.5069	Signal Mounting Hardware (location) 03. IH 43 NB & USH 151	LS	1.000	1.000
2340	659.1120	Luminaires Utility LED B	EACH	14.000	14.000
2350	690.0150	Sawing Asphalt	LF	4,486.000	4,486.000
2360	690.0250	Sawing Concrete	LF	38,685.000	38,685.000
2370	715.0415	Incentive Strength Concrete Pavement	DOL	500.000	500.000
2380	715.0502	Incentive Strength Concrete Structures	DOL	8,798.000	8,798.000
2390	ASP.1T0A	On-the-Job Training Apprentice at $5.00/HR	HRS	2,400.000	2,400.000
2400	ASP.1T0G	On-the-Job Training Graduate at $5.00/HR	HRS	4,400.000	4,400.000
2410	SPV.0060	Special 02. Temporary Thrie Beam Connection	EACH	12.000	12.000
2420	SPV.0060	Special 03. Pull Boxes Non-Conductive 24x42-Inch	EACH	2.000	2.000
2430	SPV.0060	Special 04. Hot Mix Asphalt Percent Within Limits (PWL) Test Strip	EACH	4.000	4.000
2440	SPV.0060	Special 12. Strapping B-36-0058	EACH	1.000	1.000
2450	SPV.0060	Special 13. Strapping B-36-0064	EACH	3.000	3.000
2460	SPV.0090	Special 01. Concrete Joint and Crack Cleaning	LF	355.000	355.000
2470	SPV.0090	Special 02. Removing Rumble Strips	LF	4,147.000	4,147.000
2480	SPV.0090	Special 03. Relapping MGS Guardrail 3	LF	1,590.000	1,590.000
2490	SPV.0105	Special 01. Remove Traffic Signal USH 151 & STH 42/Dufek Dr	LS	1.000	1.000
2500	SPV.0105	Special 02. Remove Traffic Signal IH 43 SB & USH 151	LS	1.000	1.000
2510	SPV.0105	Special 03. Remove Traffic Signal IH 43 NB & USH 151	LS	1.000	1.000
2520	SPV.0180	Special 01. Continuously Reinforced Concrete Repair	SY	3,960.000	3,960.000
2530	SPV.0180	Special 03. Base Patching Concrete HES	SY	980.000	980.000

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3

REMOVING SMALL PIPE CULVERTS

CATEGORY	STATION		LOCATION	SIZE LENGTH FT		SIZE DIA. IN	203.0100 REMOVING SMALL PIPE CULVERTS EACH	204.9060.S REMOVING CULVERT ENDWALLS EACH	MATERIAL	REMARKS
	NORTHBOUND									
0010	1285+45.04	NB	IH 43 NB	150	x	30	--	2	RCCP	
0010	1336+34.00	NB	IH 43 NB	65	x	12	1	--	CMCP	ABANDONED PIPE
0010	1366+00.00	NB	IH 43 NB	80	x	18	--	1	RCCP	
0010	1391+89.04	NB	IH 43 NB	90	x	18	1	--	RCCP	ONLY REMOVE 16 FT
	NORTHBOUND TOTALS						**2**	**3**		
	SOUTHBOUND									
0010	1235+89.04	SB	IH 43 SB	100	x	24	--	1	RCCP	UNDER RAMP
0010	1240+39.04	SB	IH 43 SB	94	x	18	1	--	RCCP	ONLY REMOVE 16 FT
0010	1247+89.04	SB	IH 43 SB	86	x	18	1	--	RCCP	ONLY REMOVE 8 FT
0010	1334+89.04	SB	IH 43 SB	88	x	18	1	--	RCCP	ONLY REMOVE 16 FT
	SOUTHBOUND TOTALS						**2**	**1**		
			PROJECT TOTALS				**4**	**4**		

REMOVING INLETS

CATEGORY	STATION		LOCATION	204.0220 REMOVING INLETS EACH	REMARKS
	NORTHBOUND				
0010	1229+97.81	'NB' RT	IH 43 NB	1	B-36-0230 NW QUAD
0010	1229+97.81	'NB' RT	IH 43 NB	1	B-36-0230 NE QUAD
0010	1324+68.32	'NB' LT	IH 43 NB	1	B-36-0041 SE QUAD
0011	1391+89.04	'NB' LT	IH 43 NB	1	MEDIAN INLET
0012	1445+47.61	'NB' LT	IH 43 NB	1	B-36-0053 SW QUAD
			NORTHBOUND TOTALS	**5**	
	SOUTHBOUND				
0010	1324+60.90	'SB' RT	IH 43 SB	1	B-36-0231 SE QUAD
0010	1324+60.90	'SB' LT	IH 43 SB	1	B-36-0231 SW QUAD
0010	1444+94.48	'SB' LT	IH 43 SB	1	B-36-0052 SW QUAD
			SOUTHBOUND TOTALS	**3**	
			PROJECT TOTALS	**8**	

REMOVING PAVEMENT AND ASPHALTIC SURFACE SUMMARY

CATEGORY	STATION		TO	STATION		LOCATION	LENGTH FT	x	SIZE FT	WIDTH	204.0100 REMOVING PAVEMENT SY	204.0105 REMOVING PAVEMENT BUTT JOINTS SY	204.0110 REMOVING ASPHALTIC SURFACE SY	204.0115 REMOVING ASPHALTIC SURFACE BUTT JOINTS SY	204.0120 REMOVING ASPHALTIC SURFACE MILLING SY	646.0790.S REMOVING RAISED PAVEMENT MARKERS EACH	REMARKS
							NORTHBOUND										
0010	1216+88.99	NB	-	1218+88.99	NB	IH 43 NB	200	x	40		--	--	--	889	--	2	BUTT JT S. PROJECT LIMITS
0010	1218+88.99	NB	-	1229+05.24	NB	IH 43 NB	1016	x	40		--	--	--	--	4,517	10	
0010	1229+05.24	NB	-	1229+19.00	NB	IH 43 NB	14	x	40		61	--	--	--	--	--	B-36-0230 APPROACH SLAB
0010	1229+70.08	NB	-	1229+83.81	NB	IH 43 NB	14	x	40		61	--	--	--	--	--	B-36-0230 APPROACH SLAB
0010	1229+83.81	NB	-	1270+21.49	NB	IH 43 NB	4038	x	40		--	--	--	--	17,945	40	
0010	1270+21.49	NB	-	1270+45.25	NB	IH 43 NB	24	x	40		84	--	--	--	--	--	B-36-0048 APPROACH SLAB
0010	1271+55.26	NB	-	1324+64.32	NB	IH 43 NB	5309	x	40		--	--	--	--	23,596	53	
0010	1324+64.32	NB	-	1324+87.03	NB	IH 43 NB	23	x	40		80	--	--	--	--	--	B-36-0041 APPROACH SLAB
0010	1325+91.84	NB	-	1326+14.02	NB	IH 43 NB	22	x	40		79	--	--	--	--	--	B-36-0041 APPROACH SLAB
0010	1326+14.02	NB	-	1381+76.51	NB	IH 43 NB	5562	x	40		--	--	--	--	24,722	56	
0010	1383+66.81	NB	-	1384+03.04	NB	IH 43 NB	36	x	40		108	--	--	--	--	--	B-36-0051 APPROACH SLAB
0010	1384+03.04	NB	-	1445+27.92	NB	IH 43 NB	6125	x	40		--	--	--	--	27,222	61	
0010	1445+27.92	NB	-	1445+63.61	NB	IH 43 NB	36	x	40		105	--	--	--	--	--	B-36-0053 APPROACH SLAB
0010	1446+97.25	NB	-	1447+29.32	NB	IH 43 NB	32	x	6		20	--	--	--	--	--	B-36-0053 N. LT SHOULDER
0010	1447+00.55	NB	-	1499+10.30	NB	IH 43 NB	5210	x	40		--	--	--	--	23,154	52	
0010	1501+10.30	NB	-	1503+10.30	NB	IH 43 NB	200	x	40		--	--	--	889	--	2	BUTT JT N. PROJECT LIMITS
				NORTHBOUND TOTALS							**599**	**0**	**0**	**1,778**	**121,156**	**277**	
							SOUTHBOUND										
0010	1216+88.99	SB	-	1218+88.99	SB	IH 43 SB	200	x	40		--	--	--	889	--	2	BUTT JT S PROJECT LIMITS
0010	1218+88.99	SB	-	1228+93.15	SB	IH 43 SB	1004	x	40		--	--	--	--	4,463	10	
0010	1228+93.15	SB	-	1229+08.82	SB	IH 43 SB	16	x	58		100	--	--	--	--	--	B-36-0047 APPROACH SLAB
0010	1229+80.53	SB	-	1267+83.81	SB BK	IH 43 SB	3803	x	40		--	--	--	--	16,903	38	
0010	1267+79.67	SB AH	-	1270+00.14	SB	IH 43 SB	220	x	40		--	--	--	--	980	2	
0010	1270+00.14	SB	-	1270+21.67	SB	IH 43 SB	22	x	40		80	--	--	--	--	--	B-36-0040 APPROACH SLAB
0010	1271+39.67	SB	-	1286+39.20	SB BK	IH 43 SB	1500	x	40		--	--	--	--	6,665	15	
0010	1286+40.21	SB AH	-	1324+44.12	SB	IH 43 SB	3804	x	40		--	--	--	--	16,906	38	
0010	1324+44.12	SB	-	1324+64.90	SB	IH 43 SB	21	x	40		79	--	--	--	--	--	B-36-0231 APPROACH SLAB
0010	1325+70.74	SB	-	1325+93.39	SB	IH 43 SB	23	x	40		80	--	--	--	--	--	B-36-0231 APPROACH SLAB
0010	1325+93.39	SB	-	1375+82.73	SB BK	IH 43 SB	4989	x	40		--	--	--	--	22,175	50	
0010	1375+60.80	SB AH	-	1381+37.15	SB	IH 43 SB	576	x	40		--	--	--	--	2,562	6	
0010	1383+30.83	SB	-	1445+10.52	SB	IH 43 SB	6180	x	40		--	--	--	--	27,465	62	
0010	1444+80.71	SB	-	1444+96.45	SB	IH 43 SB	16	x	6		14	--	--	--	--	--	B-36-0052 S. LT SHOULDER
0010	1446+31.70	SB	-	1446+66.02	SB	IH 43 SB	34	x	40		104	--	--	--	--	--	B-36-0052 APPROACH SLAB
0010	1446+66.02	SB	-	1474+18.95	SB BK	IH 43 SB	2753	x	40		--	--	--	--	12,235	28	
0010	1474+55.64	SB AH	-	1499+10.30	SB	IH 43 SB	2455	x	40		--	--	--	--	10,910	25	
0010	1501+10.30	SB	-	1503+10.30	SB	IH 43 SB	200	x	40		--	--	--	889	--	2	BUTT JT N. PROJECT LIMITS
				SOUTHBOUND TOTALS							**459**	**0**	**0**	**1,778**	**121,264**	**277**	
										PAGE TOTALS	**1,058**	**0**	**0**	**3,556**	**242,420**	**553**	

REMOVING PAVEMENT AND ASPHALTIC SURFACE SUMMARY CONTINUED

CATEGORY	STATION	TO	STATION	LOCATION	LENGTH FT x SIZE WIDTH FT	204.0100 REMOVING PAVEMENT SY	204.0105 REMOVING PAVEMENT BUTT JOINTS SY	204.0110 REMOVING ASPHALTIC SURFACE SY	204.0115 REMOVING ASPHALTIC SURFACE BUTT JOINTS SY	204.0120 REMOVING ASPHALTIC SURFACE MILLING SY	646.0790.S REMOVING RAISED PAVEMENT MARKERS EACH	REMARKS
	WEIGH STATION											
0010	1226+88.45 WS	-	1228+93.12 WS	WS RAMP	205 x 27	--	--	--	--	614	--	EXIT RAMP
0010	1229+80.44 WS	-	1233+75.98 WS	WS RAMP	396 x 27	--	--	--	--	1,187	--	EXIT RAMP
0010	1250+63.66 WS	-	1254+25.70 WS	WS RAMP	362 x 27	--	--	--	--	1,086	--	ENTRANCE RAMP
0010	1237+42.65 WS	-	1237+79.08 WS	WS RAMP	20 x 27	--	60	--	--	--	--	SOUTH LOOP
0010	1238+31.45 WS	-	1238+51.45 WS	WS RAMP	20 x 27	--	60	--	--	--	--	SOUTH OF SCALE
0010	1239+85.41 WS	-	1240+05.41 WS	WS RAMP	20 x 27	--	60	--	--	--	--	NORTH OF SCALE
0010	1244+57.02 WS	-	1244+86.11 WS	WS RAMP	20 x 27	--	60	--	--	--	--	NORTH LOOP
	WEIGH STATION TOTALS					**0**	**240**	**0**	**0**	**2,887**	**0**	
	CTH C											
0010	1369+46.66 SE	-	1373+32.95 SE	SE RAMP	386 x 27	--	--	--	--	1,159	--	
0010	1365+24.56 SW	-	1372+92.20 SW	SW RAMP	768 x 27	--	--	--	--	2,303	--	
0010	1393+87.57 NE	-	1401+44.67 NE	NE RAMP	757 x 27	--	--	--	--	2,271	--	
0010	1392+94.92 NW	-	1396+01.99 NW	NW RAMP	307 x 27	--	--	--	--	921	--	
0010	16+00.00 WB	-	16+50.00 WB	CTH C WB	50 x 14	--	78	--	--	--	--	W. PROJECT LIMITS
0010	16+00.00 EB	-	16+50.00 EB	CTH C EB	50 x 14	--	78	--	--	--	--	W. PROJECT LIMITS
0010	24+98.70 WB	-	25+48.70 WB	CTH C WB	50 x 14	--	78	--	--	--	--	W. PROJECT LIMITS
0010	24+98.70 EB	-	25+48.70 EB	CTH C EB	50 x 24	--	133	--	--	--	--	W. PROJECT LIMITS
	CTH C TOTALS					**0**	**367**	**0**	**0**	**6,654**	**0**	
	OVERPASS ROADWAYS											
	POINT CREEK ROAD					--	--	310	--	--	--	
	OVERPASS ROADWAY TOTALS					**0**	**0**	**310**	**0**	**0**	**0**	
	PROJECT TOTALS					**1,058**	**607**	**310**	**3,556**	**251,961**	**553**	

FINISHING ROADWAY PROJECT

CATEGORY	LOCATION	213.0100 FINISHING ROADWAY PROJECT EACH
0010	PROJECT IH 43	1
	PROJECT TOTAL	**1**

PREPARE FOUNDATION FOR ASPHALT PAVING

CATEGORY	LOCATION	211.0100 PREPARE FOUNDATION FOR ASPHALT PAVING LS
0010	PROJECT IH 43	1
	PROJECT TOTAL	**1**

REMOVING CURB & GUTTER

CATEGORY	LOCATION		204.0150 REMOVING CURB & GUTTER LF	204.0155 REMOVING CONCRETE SIDEWALK SY	204.0190 REMOVING SURFACE DRAINS EACH	REMARKS
	NORTHBOUND					
0010	B-36-0230	IH 43 NB	32	--	--	LT & RT
0010	B-36-0048	IH 43 NB	6	--	1	CURB RT, DRAIN LT
0010	B-36-0041	IH 43 NB	6	--	1	CURB RT, DRAIN LT
0010	B-36-0051	IH 43 NB	12	--	--	LT & RT
0010	B-36-0053	IH 43 NB	6	--	--	LT
0010	B-36-0057	IH 43 NB	12	--	--	LT & RT
		NORTHBOUND TOTALS	**74**	**0**	**2**	
	SOUTHBOUND					
0010	B-36-0047	IH 43 SB	12	--	--	LT & RT
0010	B-36-0040	IH 43 SB	12	--	--	LT & RT
0010	B-36-0231	IH 43 SB	12	--	--	LT & RT
0010	B-36-0050	IH 43 SB	12	--	--	LT & RT
0010	B-36-0052	IH 43 SB	6	--	--	LT
0010	B-36-0056	IH 43 SB	12	--	--	LT & RT
		SOUTHBOUND TOTALS	**66**	**0**	**0**	
	OVERPASS/SIDEROADS					
0010	B-36-0046	POINT CREEK ROAD	16	--	--	NW & SW QUAD
0010	17+86.00 EB	CTH C	6	--	--	
0010	17+87.00 WB	CTH C	6	--	--	
0010	18+84.00 WB	CTH C	6	--	--	
0010	18+86.00 EB	CTH C	6	--	--	
0010	19+09.00 EB	CTH C	6	--	--	
0010	19+09.00 WB	CTH C	6	--	--	
0010	19+26.00 EB	CTH C	11	--	--	
0010	19+66.00 WB	CTH C	11	--	--	
0010	20+14.00 EB	CTH C	14	--	--	
0010	20+34.00 EB	CTH C	6	--	--	
0010	21+22.00 EB	CTH C	6	--	--	
0010	21+44.00 EB	CTH C	6	--	--	
0010	21+58.00 EB	CTH C	6	--	--	
0010	22+09.00 WB	CTH C	6	--	--	
0010	22+30.00 WB	CTH C	6	--	--	
0010	22+50.00 WB	CTH C	6	--	--	
0010	22+81.00 EB	CTH C	6	--	--	
0010	23+32.00 EB	CTH C	62	--	--	
0010	23+41.00 WB	CTH C	6	--	--	
0010	24+42.00 EB	CTH C	6	--	--	
0010	24+42.00 WB	CTH C	6	--	--	
0010	NEWTON ROAD		168	71	--	
		OVERPASS TOTALS	**384**	**71**	**0**	
		PROJECT TOTALS	**524**	**71**	**2**	

REMOVING FENCE

CATEGORY	STATION		LOCATION	204.0170 REMOVING FENCE LF	616.0100 FENCE WOVEN WIRE 4-FEET LF	REMARKS
	NORTHBOUND					
0010	1229+02.70	NB'	IH 43 NB	50	50	B-36-0230 SW QUAD
0010	1229+02.70	NB'	IH 43 NB	50	50	B-36-0230 SE QUAD
0010	1229+87.79	NB'	IH 43 NB	120	120	B-36-0230 NE QUAD
0010	1229+87.79	NB'	IH 43 NB	50	50	B-36-0230 NW QUAD
0010	1324+76.52	NB'	IH 43 NB	20	20	B-36-0053 SE QUAD
0010	1324+76.52	NB'	IH 43 NB	50	50	B-36-0053 SW QUAD
0010	1325+93.09	NB'	IH 43 NB	50	50	B-36-0053 NW QUAD
	NORTHBOUND TOTALS			390	390	
	SOUTHBOUND					
0010	1324+54.37	'SB'	IH 43 SB	50	50	B-36-0231 SE QUAD
0010	1324+54.37	'SB'	IH 43 SB	50	50	B-36-0231 SW QUAD
0010	1325+72.33	'SB'	IH 43 SB	50	50	B-36-0231 NE QUAD
0010	1325+72.33	'SB'	IH 43 SB	50	50	B-36-0231 NW QUAD
0010	1444+84.31	'SB'	IH 43 SB	20	20	B-36-0052 SW QUAD
0010	1446+37.51	'SB'	IH 43 SB	20	20	B-36-0052 NW QUAD
	SOUTHBOUND TOTALS			**240**	**240**	
	SIDEROADS AND RAMPS					
0010	1382+81.00	NW'	IH 43 SB	80	80	B-36-0064 NW QUAD
SIDEROAD AND RAMP TOTALS				**80**	**80**	
	PROJECT TOTALS			**710**	**710**	

REMOVING GUARDRAIL SUMMARY

CATEGORY	STATION	TO	STATION	204.0165 REMOVING GUARDRAIL LF	REMARKS
	NORTHBOUND				
0010	1226+48.00 NB	-	1229+19.00 NB	271.0	B-36-0230 SW QUAD
0010	1226+61.00 NB	-	1229+19.00 NB	258.0	B-36-0230 SE QUAD
0010	1228+97.53 NB			50.0	IH 43 MEDIAN
0010	1230+11.26 NB			50.0	IH 43 MEDIAN
0010	1267+55.00 NB	-	1270+26.00 NB	271.0	B-36-0048 SW QUAD
0010	1267+77.00 NB	-	1270+35.00 NB	258.0	B-36-0048 SE QUAD
0010	1321+99.00 NB	-	1324+70.00 NB	271.0	B-36-0041 SW QUAD
0010	1322+21.00 NB	-	1324+79.00 NB	258.0	B-36-0041 SE QUAD
0010	1324+64.83 NB			50.0	IH 43 MEDIAN
0010	1325+99.77 NB			50.0	IH 43 MEDIAN
0010	1378+87.00 NB	-	1381+58.00 NB	271.0	B-36-0051 SW QUAD
0010	1379+28.00 NB	-	1381+86.00 NB	258.0	B-36-0051 SE QUAD
0010	1384+07.00 NB	-	1387+26.00 NB	319.0	B-36-0051 NE QUAD
0010	1442+57.00 NB	-	1445+28.00 NB	271.0	B-36-0053 SW QUAD
0010	1442+92.00 NB	-	1445+50.00 NB	258.0	B-36-0053 SE QUAD
0010	1445+28.67 NB			50.0	IH 43 MEDIAN
0010	1447+01.60 NB			50.0	IH 43 MEDIAN
0010	1466+17.00 NB	-	1447+35.00 NB	1013.0	B-36-0053 NE QUAD
0010	1447+10.00 NB	-	1449+81.00 NB	271.0	B-36-0057 SW QUAD
0010	1497+00.00 NB	-	1499+82.00 NB	221.0	B-36-0057 SE QUAD
			NORTHBOUND TOTALS	**4,769.0**	

CATEGORY	STATION	TO	STATION	204.0165 REMOVING GUARDRAIL LF	REMARKS
	SOUTHBOUND				
0010	1226+40.36 SB	-	1228+94.98 SB	254.5	B-36-0047 SE QUAD
0010	1227+40.19 SB	-	1228+94.81 SB	154.5	B-36-0047 SW QUAD
0010	1229+87.00 SB	-	1229+87.00 SB	271.0	B-36-0047 NE QUAD
0010	1229+87.00 SB	-	1232+45.00 SB	258.0	B-36-0047 NW QUAD
0010	1268+71.00 SB	-	1270+03.00 SB	131.5	B-36-0040 SW QUAD
0010	1267+61.63 SB	-	1270+16.25 SB	254.5	B-36-0040 SE QUAD
0010	1271+42.00 SB	-	1275+30.00 SB	389.0	B-36-0040 NW QUAD
0010	1271+51.00 SB	-	1274+22.00 SB	271.0	B-36-0040 NE QUAD
0010	1322+56.00 SB	-	1324+50.00 SB	194.0	B-36-0231 SW QUAD
0010	1322+04.86 SB	-	1324+59.48 SB	254.5	B-36-0231 SE QUAD
0010	1325+79.00 SB	-	1328+37.00 SB	258.0	B-36-0231 NE QUAD
0010	1323+17.00 SB	-	1325+88.00 SB	271.0	B-36-0049 NW QUAD
0010	1377+33.00 SB	-	1381+02.00 SB	369.0	B-36-0050 SW QUAD
0010	1378+77.11 SB	-	1381+31.73 SB	254.5	B-36-0050 SE QUAD
0010	1383+22.00 SB	-	1385+80.00 SB	258.0	B-36-0050 NW QUAD
0010	1383+50.00 SB	-	1386+21.00 SB	271.0	B-36-0050 NE QUAD
0010	1442+50.48 SB	-	1445+05.10 SB	254.5	B-36-0052 SE QUAD
0010	1443+30.69 SB	-	1444+85.31 SB	154.5	B-36-0052 SW QUAD
0010	1446+44.00 SB	-	1448+65.00 SB	221.0	B-36-0052 NE QUAD
0010	1446+70.00 SB	-	1449+41.00 SB	271.0	B-36-0052 NE QUAD
0010	1497+28.20 'SB'	-	1499+82.82 'SB'	254.5	B-36-0056 SE QUAD
0010	1498+28.20 'SB'	-	1499+82.82 'SB'	154.5	B-36-0056 SW QUAD
0010	1501+16.00 'SB'	-	1503+37.00 'SB'	221	B-36-0056, NW QUAD
0010	1501+18.00 'SB'	-	1503+89.00 'SB'	271	B-36-0056, NE QUAD
			SOUTHBOUND TOTALS	**5,916.0**	
	SIDEROADS AND RAMPS				
0010	1375+11.60 SE	-	1377+46.99 SE	235.0	CTH C SE RAMP
0010	1382+20.16 NW	-	1383+00.00 NW	80.0	CTH C NW RAMP LT
0010	1382+20.16 NW	-	1383+20.47 NW	100.0	CTH C NW RAMP RT
0010	18+11.29 EB	-	19+86.29 EB	175.0	CTH C EB
0010	18+26.97 WB	-	19+51.97 WB	125.0	CTH C WB
			SIDEROAD AND RAMP TOTALS	**715.0**	
			PROJECT TOTALS	**11,400.0**	

3

EARTHWORK SUMMARY

LOCATION	FROM - TO STATION	205.0100 COMMON EXCAVATION (1) CUT (2)	AVAILABLE MATERIAL (5)	UNEXPANDED FILL	EXPANDED FILL FACTOR (13)	MASS ORDINATE +/- (14)	WASTE	208.0100 BORROW	COMMENT:
STAGE 2/STAGE 4					**1.25**				
IH 43 NB	1189+99.72-1232+10	0	0	1,035	1,294	-1,294	0	1,294	B-36-0230
IH 43 SB	1225+11.95-1329+94.87	0	0	436	545	-545	0	545	B-36-0231
MIDDLE CROSSOVER CONSTRUCTION	1357+53 - 1366+38	456	456	464	580	-125	0	125	MIDDLE CROSSOVER
STAGE 2/STAGE 4 SUBTOTALS		**456**	**456**	**1,935**	**2,419**	**-1,963**	**0**	**1,963**	
STAGE 5									
CROSSOVER REMOVAL	1189+99-1529+83.19	4,732	4,732	868	1,085	3,647	3,647	0	NORTH & SOUTH
MIDDLE CROSSOVER REMOVAL	1357+53 - 1366+38	846	846	231	289	557	557	0	WAITING ON SURVEY
STAGE 5 SUBTOTALS		**5,578**	**5,578**	**1,099**	**1,374**	**4,204**	**4,204**	**0**	
PROJECT TOTALS		**6,033**	6,033.39	3,034.20	3,792.75	2,240.64	4,204.07	**1,963**	

1) Common Excavation is the sum of the Cut and EBS Excavation columns. Item number 205.0100
2) Salvaged/Unsuable Pavement Material is included in Cut.
5) Available Material = Cut - Salvaged/Unusuable Pavement Material
13) Expanded Fill. Factor = 1.25
Depending on selections: **Expanded Fill = (Unexpanded Fill - Rock* Rock Factor - Reduced Marsh - Reduced EBS) * Fill Factor**
Or Expanded Fill = (Unexpanded Fill - Rock* Rock Factor - Reduced EBS) * Fill Factor
Or Expanded Fill = (Unexpanded Fill - Rock* Rock Factor - Reduced Marsh) * Fill Factor
Or Expanded Fill = (Unexpanded Fill - Rock* Rock Factor) * Fill Factor
14) The Mass Ordinate + or - Qty calculated for the Division. Plus quantity indicates an excess of material within the Division. Minus indicates a shortage of material within the Division.
15) The 1 1/4-Inch Base Aggregate Material from the crossover removal in stage 5 can not be recyled for WisDOT projects.

3

BASE AGGREGATE SUMMARY

CATEGORY	STATION	TO	STATION	LOCATION	305.0110 BASE AGGREGATE DENSE 3/4-INCH TON	**305.012 BASE AGGREGATE DENSE 1 1/4-INCH TON	305.0500 SHAPING SHOULDERS STA	311.0110 BREAKER RUN TON	624.0100 WATER MGAL	REMARKS
			NORTHBOUND							
0010	1216+88.99 NB	-	1229+18.98 NB	IH 43 NB	182	--	25	--	1.82	S. PROJECT LIMITS - B-36-00230
0010	1228+78.98 NB	-	1228+98.98 NB	IH 43 NB	--	59	--	--	0.59	B-36-0230 S. APPROACH
0010	1229+90.08 NB	-	1230+10.08 NB	IH 43 NB	--	59	--	--	0.59	B-36-0230 N. APPROACH
0010	1229+70.08 NB	-	1270+45.93 NB	IH 43 NB	604	--	82	--	6.04	B-36-0230 - B-36-0048
0010	1271+55.35 NB	-	1324+87.61 NB	IH 43 NB	790	--	107	--	7.90	B-36-0048 - B-36-0041
0010	1325+91.84 NB	-	1381+96.88 NB	IH 43 NB	830	--	112	--	8.30	B-36-0041 - B-36-0051
0010	1336+16.06 NB	-	1336+56.03 NB	IH 43 NB	--	27	--	--	0.27	PIPE REMOVAL BACKFILL
0010	1357+73.00 NB	-	1366+37.00 NB	IH 43 NB	89	1087	--	1251	11.76	MIDDLE CROSSOVER
0010	1383+66.81 NB	-	1445+63.61 NB	IH 43 NB	918	--	124	--	9.18	B-36-0051 - B-36-0053
0010	1446+97.29 NB	-	1499+92.39 NB	IH 43 NB	784	--	106	--	7.84	B-36-0053 - B-36-0057
0010	1501+10.01 NB	-	1503+10.30 NB	IH 43 NB	30	--	4	--	0.30	B-36-0057 - N. PROJECT LIMITS
			NORTHBOUND TOTALS		**4,227**	**1,233**	**559**	**1,251**	**54.6**	
			SOUTHBOUND							
0010	1216+88.99 SB	-	1229+08.70 SB	IH 43 SB	181	--	24	--	1.81	S. PROJECT LIMITS - B-36-0047
0010	1229+80.26 SB	-	1267+83.81 SB BK	IH 43 SB	563	--	76	--	5.63	B-36-0047 - STATION EQUATION
0010	1267+79.67 SB AH	-	1270+23.05 SB	IH 43 SB	36	--	5	--	0.36	STATION EQUATION - B-36-0040
0010	1271+31.51 SB	-	1286+39.20 SB BK	IH 43 SB	223	--	30	--	2.23	B-36-0040 - STATION EQUATION
0010	1286+40.21 SB AH	-	1324+66.37 SB	IH 43 SB	567	--	77	--	5.67	STATION EQUATION - B-36-0231
0010	1324+25.05 SB	-	1324+45.05 SB	IH 43 SB	--	59	--	--	0.59	B-36-0231 S. APPROACH
0010	1325+98.43 SB	-	1326+18.43 SB	IH 43 SB	--	59	--	--	0.59	B-36-0231 N. APPROACH
0010	1325+70.74 SB	-	1375+82.73 SB BK	IH 43 SB	743	--	100	--	7.43	B-36-0231 - STATION EQUATION
0010	1375+60.80 SB AH	-	1381+40.82 SB	IH 43 SB	86	--	12	--	0.86	STATION EQUATION - B-36-0050
0011	1383+10.21 SB	-	1444+90.53 SB	IH 43 SB	916	--	124	--	9.16	B-36-0050 -B-36-0052
0012	1446+31.70 SB	-	1474+18.95 SB BK	IH 43 SB	413	--	56	--	4.13	B-36-0052 - STATION EQUATION
0013	1474+55.64 SB AH	-	1499+87.85 SB	IH 43 SB	375	--	51	--	3.75	STATION EQUATION - B-36-0056
0014	1501+05.79 SB	-	1503+10.30 SB	IH 43 SB	30	--	4	--	0.30	B-36-0056 - N. PROJECT LIMITS
			SOUTHBOUND TOTALS		**4,133**	**119**	**558**	**0**	**42.5**	
			PAGE TOTALS		**8,360**	**1,351**	**1,117**	**1,251**	**97**	

**ADDITIONAL QUANTITES LOCATED ELSWHERE IN THE PLAN

3

BASE AGGREGATE SUMMARY CONTINUED

CATEGORY	STATION		TO	STATION		LOCATION	305.0110 BASE AGGREGATE DENSE 3/4-INCH TON	**305.012 BASE AGGREGATE DENSE 1 1/4-INCH TON	305.0500 SHAPING SHOULDERS STA	311.0110 BREAKER RUN TON	624.0100 WATER MGAL	REMARKS
						WEIGH STATION						
0010	1232+66.07	WS	-	1233+75.98	WS	WEIGH STATON RAMPS	16	--	2	--	0.16	
0010	1233+75.98	WS	-	1237+52.68	WS	WEIGH STATON RAMPS	28	--	8	--	0.28	
0010	1237+52.68	WS	-	1238+51.45	WS	WEIGH STATON RAMPS	4	--	1	--	0.04	
0010	1239+85.41	WS	-	1244+70.07	WS	WEIGH STATON RAMPS	18	--	10	--	0.18	INCLUDES MERGING LANE
0010	1244+70.07	WS	-	1250+63.66	WS	WEIGH STATON RAMPS	44	--	12	--	0.44	
0010	1250+63.66	WS	-	1251+89.63	WS	WEIGH STATON RAMPS	19	--	3	--	0.19	
						WEIGH STATION TOTALS	**128**	**0**	**35**	**0**	**1.3**	
						CTH C INTERCHANGE						
0010	1384+28.00	NE	-	1393+87.57	NE	CTH C NE RAMP	71.1	--	19	--	0.71	
0010	1393+87.57	NE	-	1394+84.12	NE	CTH C NE RAMP	14.3	--	2	--	0.14	
0010	1380+96.00	NW	-	1392+94.92	NW	CTH C NW RAMP	88.8	--	24	--	0.89	
0010	1392+94.92	NW	-	1393+35.18	NW	CTH C NW RAMP	6.0	--	1	--	0.06	
0010	1371+97.54	SE	-	1373+32.95	SE	CTH C SE RAMP	20.1	--	3	--	0.20	
0010	1373+32.95	SE	-	1383+85.00	SE	CTH C SE RAMP	77.9	--	21	--	0.78	
0010	1371+90.28	SW	-	1372+92.20	SW	CTH C SW RAMP	15.1	--	2	--	0.15	
0010	1372+92.20	SW	-	1380+96.00	SW	CTH C SW RAMP	59.5	--	16	--	0.60	
						CTH C INTERCHANGE TOTALS	**353**	**0**	**88**	**0**	**3.5**	
						PARK & RIDE/OVERPASS/SIDEROAD ROADWAYS						
						CTH C PARK & RIDE	26.2	--	7	--	0.26	
						POINT CREEK ROAD OVERPASS	48.0	--	--	--	0.48	
						CTH C EASTBOUND	29.8	--	16	--	0.30	
						CTH C WESTBOUND	29.8	--	16	--	0.30	
						PARK & RIDE TOTALS	**134**	**0**	**39**	**0**	**1.3**	
						PROJECT TOTALS	**8,975**	**1,351**	**1,278**	**1,251**	**103.3**	

**ADDITIONAL QUANTITES LOCATED ELSWHERE IN THE PLAN

BASE PATCHING SUMMARY

CATEGORY	STATION	TO	STATION	LOCATION	390.0303 BASE PATCHING CONCRETE SY	**416.0610 DRILLED TIE BARS EACH	416.0620 DRILLED DOWEL BARS EACH	**690.0150 SAWING CONCRETE LF	SPV.0090.01 CONCRETE JOINT AND CRACK CLEANING LF	SPV.0180.01 CONTINUOUSLY REINFORCED CONCRETE REPAIR SY	SPV.0180.03 BASE PATCHING CONCRETE HES SY	REMARKS
			NORTHBOUND									
0010	1216+88.99 NB	-	1256+34.04 NB	IH 43 NB	83	174	--	2,152	--	425	--	MI. 141 - MI. 142
0010	1256+34.04 NB	-	1307+54.64 NB	IH 43 NB	172	134	--	2,915	--	505	--	MI. 142 - MI. 143
0010	1307+54.64 NB	-	1361+58.00 NB	IH 43 NB	164	105	--	2,463	--	420	--	MI. 143 - MI. 144
0010	1361+58.00 NB	-	1413+96.00 NB	IH 43 NB	75	50	--	1,371	--	187	--	MI. 144 - MI. 145
0010	1413+96.00 NB	-	1467+08.00 NB	IH 43 NB	65	45	--	1,222	--	175	--	MI. 145 - MI. 146
0010	1467+08.00 NB	-	1501+10.30 NB	IH 43 NB	28	16	--	377	--	47	--	MI. 146 - MI. 147
			NORTHBOUND TOTALS		**588**	**524**	**0**	**10,500**	**0**	**1,759**	**0**	
			SOUTHBOUND									
0010	1216+88.99 SB	-	1256+34.04 SB	IH 43 SB	113	98	--	1,779	--	287	--	MI. 141 - MI. 142
0010	1256+34.04 SB	-	1307+54.73 SB	IH 43 SB	153	71	--	1,812	--	268	--	MI. 142 - MI. 143
0010	1307+54.73 SB	-	1361+72.03 SB	IH 43 SB	256	92	--	3,140	--	443	--	MI. 143 - MI. 144
0010	1361+72.03 SB	-	1413+96.00 SB	IH 43 SB	61	126	--	2,109	--	347	--	MI. 144 - MI. 145
0010	1413+96.00 SB	-	1466+79.58 SB	IH 43 SB	143	78	--	2,282	--	312	--	MI. 145 - MI. 146
0010	1466+79.58 SB	-	1501+07.31 SB	IH 43 SB	58	64	--	1,176	--	183	--	MI. 146 - MI. 147
			SOUTHBOUND TOTALS		**784**	**529**	**0**	**12,298**	**0**	**1,839**	**0**	
			WEIGH STATON									
0010	1233+75.98 WS	-	1250+63.66 WS	WEIGH STATION	295	122	181	1,013	322	--	--	
			WEIGH STATION TOTALS		**295**	**122**	**181**	**1,013**	**322**	**0**	**0**	
			CTH C INTERCHANGE									
0010	1373+32.95 SE	-	1382+71.66 SE	CTH C SE RAMP	--	209	320	2,065	--	--	890	
0010	1385+25.88 NE	-	1393+87.57 NE	CTH C NE RAMP	270	98	320	1,022	--	--	--	
0010	1372+92.20 SW	-	1380+24.56 SW	CTH C SW RAMP	275	96	304	965	--	--	--	
0010	1382+20.16 NW	-	1392+94.92 NW	CTH C NW RAMP	727	308	528	2,286	--	--	--	
0010	16+02.00 EB	-	25+49.00 EB	CTH C EB	529	194	406	1,675	--	--	--	
0010	16+02.00 WB	-	25+49.00 WB	CTH C WB	751	213	486	2,228	--	--	--	
			CTH C INTERCHANGE TOTALS		**2,553**	**1,118**	**2,364**	**10,241**	**0**	**0**	**890**	
			UNDISTRIBUTED		**430**	**229**	**255**	**3,407**	**33**	**362**	**90**	
			PROJECT TOTALS		**4,650**	**2,522**	**2,800**	**37,459**	**355**	**3,960**	**980**	

**ADDITIONAL QUANTITES LOCATED ELSWHERE IN THE PLAN

HMA SUMMARY

CATEGORY	STATION	TO	STATION	LOCATION	450.4000 HMA COLD WEATHER PAVING TON	455.0605 TACK COAT GAL	460.4100.S REHEATING HMA PAVEMENT LONGITUDINAL JOINTS STA	465.0105 ASPHALTIC SURFACE TON	465.0125 ASPHALTIC SURFACE TEMPORARY TON	460.5223 HMA PAVEMENT 3 LT 58-28 S TON	460.5224 HMA PAVEMENT 4 LT 58-28 S TON	460.7223 HMA PAVEMENT 3 HT 58-28 S TON	460.7224 HMA PAVEMENT 4 HT 58-28 S TON	REMARKS
			NORTHBOUND											
0010	1216+88.99 NB	-	1229+05.24 NB	IH 43 NB	--	648.7	2433	--	--	289	208	434	312	S. PROJECT LIMITS - B-36-0230
0010	1229+83.81 NB	-	1270+21.49 NB	IH 43 NB	--	2153.4	8076	--	--	960	691	1440	1036	B-36-0230- B-36-0048
0010	1256+11.85 NB	-	1256+80.28 NB	IH 43 NB	--	10.0	--	--	--	--	22	--	--	MAINT. X-OVER
0010	1271+55.35 NB	-	1324+64.32 NB	IH 43 NB	--	2831.5	10618	--	--	1262	908	1894	1363	B-36-0048 - B-36-0041
0010	1291+89.48 NB	-	1292+48.25 NB	IH 43 NB	--	9.6	--	--	--	--	21	--	--	MAINT. X-OVER
0010	1358+39.83 NB	-	1359+07.12 NB	IH 43 NB	--	10.1	--	--	--	--	22	--	--	MAINT. X-OVER
0010	1326+14.02 NB	-	1381+76.07 NB	IH 43 NB	--	2966.4	11125	--	--	1323	952	1984	1428	B-36-0041 - B-36-0051
0010	1358+00.00 NB	-	1366+40.00 NB	IH 43 NB	--	113.2	--	--	270	--	--	--	--	MIDDLE CROSSOVER
0010	1367+84.81 NB	-	1371+98.66 NB	IH 43 NB	--	101.1	828	--	--	113	81	113	81	CTH C SE RAMP/GORE
0010	1384+03.04 NB	-	1445+27.92 NB	IH 43 NB	--	3266.6	12250	--	--	1456	1048	2185	1572	B-36-0051 - B-36-0053
0010	1394+84.57 NB	-	1408+00.87 NB	IH 43 NB	--	232.1	2633	--	--	259	186	259	186	CTH C NE RAMP/GORE
0010	1416+70.02 NB	-	1417+26.21 NB	IH 43 NB	--	9.4	--	--	--	--	21	--	--	MAINT. X-OVER
0010	1447+00.55 NB	-	1499+90.82 NB	IH 43 NB	--	2821.5	10581	--	--	1258	905	1887	1358	B-36-0053 - B-36-0057
0010	1501+10.30 NB	-	1503+10.30 NB	IH 43 NB	--	106.7	400	--	--	48	34	71	51	B-36-0057 - N. PROJECT LIMITS
			NORTHBOUND TOTALS		**0**	**15280**	**58,944**	**0**	**270**	**6,967**	**5,100**	**10,265**	**7,387**	
			SOUTHBOUND											
0010	1216+88.99 SB	-	1228+93.15 SB	IH 43 SB	--	642.2	2409	--	--	286	206	429	309	S. PROJECT LIMITS - B-36-0047
0010	1220+13.59 SB	-	1228+93.15 SB	IH 43 SB	--	103.1	1760	--	--	115	83	115	83	WEIGH STATION SW RAMP/GORE
0010	1229+80.42 SB	-	1232+67.06 SB	IH 43 SB	--	90.3	574	--	--	101	72	101	72	WEIGH STATION SW RAMP/GORE
0010	1229+80.53 SB	-	1267+83.81 SB BK	IH 43 SB	--	2028.4	7607	--	--	904	651	1357	976	B-36-0047 - STATION EQUATION
0010	1251+89.68 SB	-	1255+89.37 SB	IH 43 SB	--	84.5	800	--	--	94	68	94	68	WEIGH STATION NW RAMP/GORE
0010	1267+79.67 SB AH	-	1270+00.14 SB	IH 43 SB	--	117.6	441	--	--	52	38	79	57	STATION EQUATION - B-36-0040
0010	1271+39.80 SB	-	1286+39.20 SB BK	IH 43 SB	--	799.7	2999	--	--	357	257	535	385	B-36-0040 - STATION EQUATION
0010	1286+40.21 SB AH	-	1324+44.12 SB	IH 43 SB	--	2028.8	7608	--	--	904	651	1357	976	STATION EQUATION - B-36-0231
0010	1325+93.39 SB	-	1375+82.73 SB BK	IH 43 SB	1275.1	2661.0	9979	--	--	1186	854	1780	1281	B-36-0231 - STATION EQUATION
0010	1361+12.67 SB	-	1371+89.16 SB	IH 43 SB	225.1	234.9	2153	--	--	262	188	262	188	CTH C SW RAMP/GORE
0010	1375+60.80 SB AH	-	1381+37.15 SB	IH 43 SB	147.3	307.4	1153	--	--	137	99	206	148	STATION EQUATION - B-36-0050
0010	1383+30.83 SB	-	1445+10.58 SB	IH 43 SB	1579.3	3295.9	12360	--	--	1469	1057	2204	1586	B-36-0050 -B-36-0052
0010	1393+34.91 SB	-	1398+02.39 SB	IH 43 SB	110.0	114.8	935	--	--	128	92	128	92	CTH C NW RAMP/GORE
0010	1446+66.02 SB	-	1474+18.95 SB BK	IH 43 SB	703.5	1468.2	5506	--	--	655	471	982	707	B-36-0052 - STATION EQUATION
0010	1474+55.64 SB AH	-	1499+87.85 SB	IH 43 SB	647.1	1350.5	5065	--	--	602	433	903	650	STATION EQUATION - B-36-0056
0010	1501+07.31 SB	-	1503+07.31 SB	IH 43 SB	51.1	106.7	400	--	--	48	34	71	51	B-36-0056 - N. PROJECT LIMITS
			SOUTHBOUND TOTALS		**4,738**	**15434**	**61,749**	**0**	**0**	**7,301**	**5,254**	**10,601**	**7,629**	
			PAGE TOTALS		**4,738**	**30,714**	**120,693**	**0**	**270**	**14,268**	**10,354**	**20,867**	**15,016**	

HMA SUMMARY CONTINUED

CATEGORY	STATION	TO	STATION	LOCATION	450.4000 HMA COLD WEATHER PAVING TON	455.0605 TACK COAT GAL	460.4100.S REHEATING HMA PAVEMENT LONGITUDINAL JOINTS STA	465.0105 ASPHALTIC SURFACE TON	465.0125 ASPHALTIC SURFACE TEMPORARY TON	460.5223 HMA PAVEMENT 3 LT 58-28 S TON	460.5224 HMA PAVEMENT 4 LT 58-28 S TON	460.7223 HMA PAVEMENT 3 HT 58-28 S TON	460.7224 HMA PAVEMENT 4 HT 58-28 S TON	REMARKS
				WEIGH STATON										
0010	1232+65.84 WS	-	1233+75.98 WS	WEIGH STATION	--	39.7	221	--	--	20	14	27	17	
0010	1233+75.98 WS	-	1234+83.48 WS	WEIGH STATION	--	19.4	215	--	--	--	16	--	20	
0010	1234+83.48 WS	-	1238+51.45 WS	WEIGH STATION	--	94.1	736	--	--	--	54	--	119	
0010	1239+85.41 WS	-	1244+49.84 WS	WEIGH STATION	--	128.1	929	--	--	--	28	--	206	
0010	1244+49.84 WS	-	1250+63.66 WS	WEIGH STATION	--	110.5	1228	--	--	--	90	--	113	
0010	1250+63.66 WS	-	1250+94.07 WS BK	WEIGH STATION	--	10.9	61	--	--	5	4	7	5	
0010	1250+74.10 WS AH	-	1251+89.63 WS	WEIGH STATION	--	41.6	232	--	--	21	15	26	19	
				WEIGH STATION TOTALS	**0**	**444**	**3622**	**0**	**0**	**46**	**221**	**60**	**498**	
				CTH C INTERCHANGE										
0010	1371+97.48 SE	-	1373+32.95 SE	CTH C SE RAMP	--	48.8	271	--	--	24	17	30	22	
0010	1373+32.95 SE	-	1382+71.66 SE	CTH C SE RAMP	--	169.0	1878	--	--	--	138	--	172	
0010	1385+25.88 NE	-	1393+87.57 NE	CTH C NE RAMP	--	155.1	1724	--	--	--	126	--	158	
0010	1393+87.57 NE	-	1394+84.12 NE	CTH C NE RAMP	--	34.8	194	--	--	17	12	22	15	
0010	1371+90.28 SW	-	1372+92.20 SW	CTH C SW RAMP	18	36.7	204	--	--	18	13	23	16	
0010	1372+92.20 SW	-	1380+24.56 SW	CTH C SW RAMP	59	131.8	1465	--	--	--	107	--	134	
0010	1382+20.16 NW	-	1392+94.92 NW	CTH C NW RAMP	88	193.5	2150	--	--	--	158	--	197	
0010	1392+94.92 NW	-	1393+35.18 NW	CTH C NW RAMP	7	14.5	81	--	--	7	5	9	6	
				CTH C INTERCHANGE TOTALS	**172**	**784**	**7967**	**0**	**0**	**67**	**577**	**83**	**721**	
				PARK & RIDE/SIDEROAD ROADWAYS										
0010				CTH C PARK & RIDE	--	50.9	--	--	--	--	95	--	--	
0010				POINT CREEK ROAD OVERPASS	--	9.3	--	46	--	--	--	--	--	
0010				NEWTON ROAD	--	11.2	--	29	--	--	--	--	--	B-36-0049 REMOVAL
0010				CTH C WESTBOUND	--	219.2	--	--	--	--	402	--	--	
0010				CTH C EASTBOUND	--	219.2	--	--	--	--	402	--	--	
				PARK & RIDE TOTALS	**0**	**510**	**0**	**75**	**0**	**0**	**899**	**0**	**0**	
				PROJECT TOTALS	**4,910**	**32452**	**132,282**	**75**	**270**	**14,380**	**12,050**	**21,010**	**16,235**	

ASPHALTIC SHOULDER RUMBLE STRIPS

CATEGORY	STATION		TO	STATION		LOCATION	465.0400 ASPHALTIC SHOULDER RUMBLE STRIPS LF	SPV.0090.02 REMOVING RUMBLE STRIPS LF	REMARKS
				NORTHBOUND					
0010	1192+00.00	NB LT	-	1202+00.00	NB LT	IH 43 NB	1000	1000	SOUTH CROSSOVER REMOVAL
0010	1216+88.55	NB LT & RT	-	1229+18.98	NB LT & RT	IH 43 NB	2461	--	SOUTH PROJECT LIMITS - B-36-0230
0010	1229+70.08	NB LT & RT	-	1270+40.02	NB LT & RT	IH 43 NB	8140	--	B-36-0230 - B-36-0048
0010	1271+58.47	NB LT & RT	-	1324+82.56	NB LT & RT	IH 43 NB	10648	--	B-36-0048 - B-36-0041
0010	1325+95.84	NB LT & RT	-	1367+66.85	NB LT & RT	IH 43 NB	8342	--	B-36-0041 - CTH C SE RAMP
0010	1367+66.85	NB LT	-	1371+98.66	NB LT	IH 43 NB	432	--	CTH C SE RAMP - CTH C RAMP GORE
0010	1371+98.66	NB LT & RT	-	1381+83.43	NB LT & RT	IH 43 NB	1970	--	CTH C SE RAMP GORE - B-36-0051
0010	1383+78.00	NB LT & RT	-	1394+83.57	NB LT & RT	IH 43 NB	2211	--	B-36-0051- CTH C NE RAMP GORE
0010	1394+83.57	LT	-	1401+40.54	LT	IH 43 NB	657	--	CTH C NE RAMP GORE -CTH C NE RAMP
0010	1401+40.54	NB LT & RT	-	1445+39.44	NB LT & RT	IH 43 NB	8798	--	CTH C NE RAMP - B-36-0053
0010	1447+06.41	NB LT & RT	-	1499+90.82	NB LT & RT	IH 43 NB	10569	--	B-36-0053 - B-36-0057
0010	1501+10.34	NB LT & RT	-	1503+10.34	NB LT & RT	IH 43 NB	400	--	B-36-0057 - NORTH PROJECT LIMITS
0010	1517+00.00	NB LT	-	1528+00.00	NB LT	IH 43 NB	1100	1100	NOTH CROSSOVER REMOVAL
						NORTHBOUND TOTALS	**56,727**	**2,100**	
				SOUTHBOUND					
0010	1191+65.00	SB RT	-	1202+70.00	SB RT	IH 43 SB	1105	1105	SOUTH CROSSOVER REMOVAL
0010	1216+88.55	SB LT & RT	-	1226+63.97	SB LT & RT	IH 43 SB	1951	--	SOUTH PROJECT LIMITS - SOUTH WS RAMP
0010	1226+63.97	SB RT	-	1229+08.82	SB RT	IH 43 SB	245	--	SOUTH WS RAMP - B-36-0047
0010	1229+80.53	SB RT	-	1232+67.06	SB RT	IH 43 SB	287	--	B-36-0047 - SOUTH WS RAMP GORE
0010	1232+67.06	SB LT & RT	-	1251+89.68	SB LT & RT	IH 43 SB	3845	--	SOUTH WS RAMP GORE - NORTH WS RAMP GORE
0010	1251+89.68	SB RT	-	1256+14.10	SB RT	IH 43 SB	424	--	NORTH WS RAMP GORE - NORTH WS RAMP
0010	1256+14.10	SB LT & RT	-	1267+83.81	SB LT & RT BK	IH 43 SB	2339	--	NORTH WS RAMP - STATION EQUATION
0010	1267+79.67	SB LT & RT AH	-	1270+18.41	SB LT & RT	IH 43 SB	477	--	STATION EQUATION - B-36-0040
0010	1271+36.00	SB LT & RT	-	1286+39.20	SB LT & RT BK	IH 43 SB	3006	--	B-36-0040 - STATION EQUATION
0010	1286+40.21	SB LT & RT AH	-	1324+62.43	SB RT	IH 43 SB	7644	--	STATION EQUATION - B-36-0231
0010	1325+75.25	SB LT & RT	-	1366+49.89	SB LT & RT	IH 43 SB	8149	--	B-36-0231 - CTH C SE RAMP
0010	1366+49.89	SB RT	-	1371+89.16	SB RT	IH 43 SB	539	--	CTH C SW RAMP - CTH C SW RAMP GORE
0010	1371+89.16	SB LT & RT	-	1375+82.73	SB LT & RT BK	IH 43 SB	787	--	CTH C SW RAMP GORE - STATION EQUATION
0010	1375+60.80	SB LT & RT AH	-	1381+30.00	SB LT & RT	IH 43 SB	1138	--	STATION EQUATION - B-36-0050
0010	1383+24.00	SB LT & RT	-	1393+34.91	SB LT & RT	IH 43 SB	2022	--	B-36-0050 - CTH C NW RAMP GORE
0010	1393+34.91	SB RT	-	1398+27.30	SB RT	IH 43 SB	492	--	CTH C NW RAMP GORE CTH C NW RAMP
0010	1398+27.30	SB LT & RT	-	1445+02.00	SB LT & RT	IH 43 SB	9349	--	CTH C NW RAMP - B-36-0052
0010	1446+42.89	SB LT & RT	-	1474+18.95	SB LT & RT BK	IH 43 SB	5552	--	B-36-0052 - STATION EQUATION
0010	1474+55.64	SB LT & RT AH	-	1499+87.85	SB LT & RT	IH 43 SB	5064	--	STATION EQUATION - B-36-0056
0010	1501+07.31	SB LT & RT	-	1503+10.30	SB LT & RT	IH 43 SB	406	--	B-36-0056 - NORTH PROJECT LIMITS
0010	1517+88.00	SB RT	-	1527+30.00	SB RT	IH 43 SB	942	942	NORTH CROSSOVER REMOVAL
						SOUTHBOUND TOTALS	**55,767**	**2,047**	
						PROJECT TOTALS	**112,494**	**4,147**	

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CULVERT PIPE SUMMARY

CATEGORY	STATION	TO	STATION	LOCATION	520.8700 CLEANING CULVERT PIPES EACH	520.9700.S CULVERT PIPE LINERS 21-INCH LF	520.9750.S CLEANING CULVERT PIPE FOR LINER VERIFICATION EACH	522.0118 CULVERT PIPE REINFORCED CONCRETE CL III 18-INCH LF	522.1018 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 18-INCH EACH	522.1024 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 24-INCH EACH	522.1030 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 30-INCH EACH	633.5200 MARKERS CULVERT END EACH	REMARKS
			NORTHBOUND										
0010	1270+00.04		NB	IH 43 NB	1	--	--	--	--	--	--	2	
0010	1285+45.04		NB	IH 43 NB RT	--	--	--	--	--	--	2	4	
0010	1359+00.00		NB	IH 43 NB	1	--	--	--	--	--	--	2	
0010	1366+00.00		NB	IH 43 NB RT	--	--	--	--	1	--	--	2	
0010	1391+89.04		NB	IH 43 NB LT	1	--	--	16	--	--	--	2	MEDIAN
0010	1406+39.04		NB	IH 43 NB	1	--	--	--	--	--	--	2	
0010	1479+89.04		NB	IH 43 NB	1	--	--	--	--	--	--	2	
				NORTHBOUND TOTALS	**5**	**0**	**0**	**16**	**1**	**0**	**2**	**16**	
			SOUTHBOUND										
0010	1235+89.04		SB	IH 43 SB LT	--	--	--	--	--	1	--	2	UNDER WS RAMP
0010	1240+39.04		SB	IH 43 SB LT	--	--	--	16	1	--	--	3	
0010	1247+89.04		SB	IH 43 SB	--	--	--	8	1	--	--	2	
0010	1334+89.04		SB	IH 43 SB LT	1	--	--	16	1	--	--	2	
0010	1444+70.00 SB	-	1446+50.00 SB	UNDER CARSTENS LAKE RD	--	40	1	--	--	--	--	2	EXIST 24-IN CMCP @ 1.18% SLOPE SOUTH TO NORTH
				SOUTHBOUND TOTALS	**1**	**40**	**1**	**40**	**3**	**1**	**0**	**11**	
				PROJECT TOTALS	**6**	**40**	**1**	**56**	**4**	**1**	**2**	**27**	

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CONCRETE PAVEMENT SUMMARY

CATEGORY	STATION	TO	STATION	LOCATION	415.0080 CONCRETE PAVEMENT 8-INCH SY	415.0410 CONCRETE PAVEMENT APPROACH SLAB SY	**416.0610 DRILLED TIE BARS EACH	416.1010 CONCRETE SURFACE DRAINS CY	601.0409 CONCRETE CURB & GUTTER 30-INCH TYPE A LF	602.0405 CONCRETE SIDEWALK 4-INCH SF	REMARKS
			NORTHBOUND								
0010	1229+05.20 NB	-	1229+18.98 NB	IH 43 NB	24	37	--	--	--	--	B-36-0230 S. APPROACH
0010	1229+70.08 NB	-	1229+83.81 NB	IH 43 NB	24	37	--	--	32	--	B-36-0230 N. APPROACH
0010	1270+21.49 NB	-	1270+45.25 NB	IH 43 NB	35	49	--	--	--	--	B-36-0048 S. APPROACH
0010	1271+67.35 NB	-	1271+73.35 NB	IH 43 NB	--	--	4	2	6	--	B-36-0048 N. APPROACH
0010	1324+64.32 NB	-	1324+87.03 NB	IH 43 NB	34	47	4	2	6	--	B-36-0041 S. APPROACH
0010	1325+91.84 NB	-	1326+14.02 NB	IH 43 NB	30	49		--	--	--	B-36-0041 N. APPROACH
0010	1381+58.07 NB	-	1381+64.07 NB	IH 43 NB	--	--	--	--	12	--	B-36-0051 S. APPROACH
0010	1383+66.81 NB	-	1384+03.04 NB	IH 43 NB	39	68	--	--	--	--	B-36-0051 N. APPROACH
0010	1445+27.92 NB	-	1445+63.61 NB	IH 43 NB	45	60	--	--	6	--	B-36-0053 S. APPROACH
0010	1446+97.25 NB	-	1447+29.32 NB	IH 43 NB	20	--	--	--	--	--	B-36-0053 N. LT SHOULDER
0010	1499+72.82 NB	-	1499+78.82 NB	IH 43 NB	--	--	--	--	12	--	B-36-0057 S. APPROACH
			NORTHBOUND TOTALS		**253**	**347**	**8**	**4**	**74**	**0**	
			SOUTHBOUND								
0010	1228+93.15 SB	-	1229+08.82 SB	IH 43 SB	24	76	--	--	--	--	B-36-0047 S. APPROACH
0010	1229+80.53 SB	-	1229+86.53 SB	IH 43 SB	--	--	--	--	12	--	B-36-0047 N. APPROACH
0010	1270+00.14 SB	-	1270+21.67 SB	IH 43 SB	31	49	--	--	--	--	B-36-0040 S. APPROACH
0010	1271+51.80 SB	-	1271+57.80 SB	IH 43 SB	--	--	--	--	12	--	B-36-0040 N. APPROACH
0010	1324+44.12 SB	-	1324+64.90 SB	IH 43 SB	31	49	--	--	12	--	B-36-0231 S. APPROACH
0010	1325+70.74 SB	-	1325+93.39 SB	IH 43 SB	33	47	--	--	--	--	B-36-0231 N. APPROACH
0010	1381+19.15 SB	-	1381+25.15 SB	IH 43 SB	--	--	--	--	12	--	B-36-0050 S. APPROACH
0010	1444+80.71 SB	-	1444+96.45 SB	IH 43 SB	14	--	--	--	6	--	B-36-0052 S. LT SHOULDER
0010	1446+31.70 SB	-	1446+66.02 SB	IH 43 SB	45	60	--	--	--	--	B-36-0052 N. APPROACH
0010	1499+69.85 SB	-	1499+75.85 SB	IH 43 SB	--	--	--	--	12	--	B-36-0056 S. APPROACH
			SOUTHBOUND TOTALS		**177**	**281**	**0**	**0**	**66**	**0**	
			PAGE TOTALS		**430**	**628**	**8**	**4**	**140**	**0**	

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CONCRETE PAVEMENT SUMMARY CONTINUED

CATEGORY	STATION	TO	STATION	LOCATION	415.0080 CONCRETE PAVEMENT 8-INCH SY	415.0410 CONCRETE PAVEMENT APPROACH SLAB SY	**416.0610 DRILLED TIE BARS EACH	416.1010 CONCRETE SURFACE DRAINS CY	601.0409 CONCRETE CURB & GUTTER 30-INCH TYPE A LF	602.0405 CONCRETE SIDEWALK 4-INCH SF	REMARKS
			SIDEROADS								
0010	POINT CREEK ROAD				--	--	--	--	16	--	B-36-0046 WEST APPROACH
0010	NEWTON ROAD				--	--	--	--	168	704	5.5-FEET WIDE
0010	17+86.00 EB	-	17+92.00 EB	CTH C	--	--	--	--	6	--	
0010	17+87.00 WB	-	17+93.00 WB	CTH C	--	--	--	--	6	--	
0010	18+82.00 WB	-	18+88.00 WB	CTH C	--	--	--	--	6	--	
0010	18+83.00 EB	-	18+89.00 EB	CTH C	--	--	--	--	6	--	
0010	19+09.00 EB	-	19+15.00 EB	CTH C	--	--	--	--	6	--	
0010	19+09.00 WB	-	19+15.00 WB	CTH C	--	--	--	--	6	--	
0010	19+21.00 EB	-	19+32.00 EB	CTH C	--	--	--	--	11	--	
0010	19+61.00 WB	-	19+72.00 WB	CTH C	--	--	--	--	11	--	
0010	20+07.00 EB	-	20+21.00 EB	CTH C	--	--	--	--	14	--	
0010	20+34.00 EB	-	20+40.00 EB	CTH C	--	--	--	--	6	--	
0010	21+18.00 EB	-	21+24.00 EB	CTH C	--	--	--	--	6	--	
0010	21+41.00 EB	-	21+47.00 EB	CTH C	--	--	--	--	6	--	
0010	21+56.00 EB	-	21+62.00 EB	CTH C	--	--	--	--	6	--	
0010	22+06.00 WB	-	22+12.00 WB	CTH C	--	--	--	--	6	--	
0010	22+26.00 WB	-	22+32.00 WB	CTH C	--	--	--	--	6	--	
0010	22+46.00 WB	-	22+52.00 WB	CTH C	--	--	--	--	6	--	
0010	22+78.00 EB	-	22+84.00 EB	CTH C	--	--	--	--	6	--	
0010	23+00.00 EB	-	23+62.00 EB	CTH C	--	--	--	--	62	--	
0010	23+38.00 WB	-	23+44.00 WB	CTH C	--	--	--	--	6	--	
0010	24+42.00 EB		24+48.00 EB	CTH C	--	--	--	--	6	--	
0010	24+42.00 WB		24+48.00 WB	CTH C	--	--	--	--	6	--	
			SIDEROAD TOTALS		**0**	**0**	**0**	**0**	**384**	**704**	
			PROJECT TOTALS		**430**	**628**	**8**	**4**	**524**	**704**	

**ADDITIONAL QUANTITES LOCATED ELSWHERE IN THE PLAN

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TEMPORARY CONCRETE BARRIER SUMMARY

CATEGORY	STATION	TO	STATION	LOCATION	603.8000 CONCRETE BARRIER TEMPORARY PRECAST DELIVERED LF	603.8125 CONCRETE BARRIER TEMPORARY PRECAST INSTALLED LF	614.0905 CRASH CUSHIONS TEMPORARY EACH	SPV.0060.02 TEMPORARY THRIE BEAM CONNECTION EACH	BACK WIDTH FT	OBJECT MARKING PATTERN	CRASH TEST LEVEL	TRAFFIC DIRECTION	**TRAFFIC LOCATON	CRASH CUSHION SHIELDS
				NORTHBOUND										
0010	1229+83.94 'NB'	-	1231+21.44 'NB'	IH 43 NB RT	137.5	137.5	1	1	4	OM-3R	TL-3	UNIDIRECTIONAL	LT	B-36-0014 NE PARAPET
0010	1229+83.94 'NB'	-	1232+33.94 'NB'	IH 43 NB LT	250.0	250.0	1	1	4	OM-3L	TL-3	UNIDIRECTIONAL	RT	B-36-0014 NW PARAPET
0010	1271+76.10 'NB'	-	1273+13.60 'NB'	IH 43 NB RT	137.5	137.5	1	1	4	OM-3R	TL-3	UNIDIRECTIONAL	LT	B-36-0048 NE PARAPET
0010	1271+76.10 'NB'	-	1274+26.10 'NB'	IH 43 NB LT	250.0	250.0	1	1	4	OM-3L	TL-3	UNIDIRECTIONAL	RT	B-36-0048 NW PARAPET
0010	1326+14.00 'NB'	-	1327+51.50 'NB'	IH 43 NB RT	137.5	137.5	1	1	4	OM-3R	TL-3	UNIDIRECTIONAL	LT	B-36-0041 NE PARAPET
0010	1326+14.00 'NB'	-	1328+64.00 'NB'	IH 43 NB LT	250.0	250.0	1	1	4	OM-3L	TL-3	UNIDIRECTIONAL	RT	B-36-0041 NW PARAPET
0010	1364+00.00 'NB'	-	1367+00.00 'NB'	IH 43 NB LT	300.0	300.0	2	--	4	OM-3R AND OM-3L	TL-3	UNIDIRECTIONAL	RT	CROSSOVER EXCAVATION
0010	1384+06.51 'NB'	-	1387+06.51 'NB'	IH 43 NB RT	300.0	300.0	1	1	4	OM-3R	TL-3	UNIDIRECTIONAL	LT	B-36-0051 NE PARAPET
0010	1384+06.51 'NB'	-	1386+56.51 'NB'	IH 43 NB LT	250.0	250.0	1	1	4	OM-3L	TL-3	UNIDIRECTIONAL	RT	B-36-0051 NW PARAPET
0010	1447+35.00 'NB'	-	1457+85.00 'NB'	IH 43 NB RT	1,050.0	1,050.0	1	1	4	OM-3R	TL-3	UNIDIRECTIONAL	LT	B-36-0053 NE PARAPET
0010	1447+35.00 'NB'	-	1449+85.00 'NB'	IH 43 NB LT	262.5	262.5	1	1	4	OM-3L	TL-3	UNIDIRECTIONAL	RT	B-36-0053 NW PARAPET
0010	1501+31.06 'NB'	-	1502+68.56 'NB'	IH 43 NB RT	137.5	137.5	1	1	4	OM-3R	TL-3	UNIDIRECTIONAL	LT	B-36-0057 NE PARAPET
0010	1501+31.06 'NB'	-	1503+81.06 'NB'	IH 43 NB LT	400.0	400.0	1	1	4	OM-3L	TL-3	UNIDIRECTIONAL	RT	B-36-0057 NW PARAPET
0010	1516+38.00 'NB'	-	1520+38.00 'NB'	IH 43 NB	400.0	400.0	1	--	4	OM-3R	TL-3	BIDIRECTIONAL	RT/LT	N. CROSSOVER EXIT
				NORTHBOUND TOTALS	**4262.5**	**4262.5**	**15**	**12**						
				SOUTHBOUND										
0010	1516+38.00 'NB'	-	1520+38.00 'NB'	IH 43 NB	400.0	400.0	1	--	2	OM-3R	TL-3	BIDIRECTIONAL	RT/LT	S. CROSSOVER EXIT
				SOUTHBOUND TOTALS	**400.0**	**400.0**	**1**	**--**						
				PROJECT TOTALS	**4662.5**	**4662.5**	**16**	**12**						

**LT AND RT IS BASED ON ALIGNMENT STATIONING

INLET SUMMARY

CATEGORY	STATION	LOCATION	611.0430 RECONSTRUCTING INLETS EACH	611.0600 INLET COVERS TYPE A EACH	611.0642 INLET COVER TYPE MS EACH	611.3220 INLETS 2X2-FT EACH	611.3901 INLETS MEDIAN 1 GRATE EACH	611.8115 ADJUSTING INLET COVERS EACH	REMARKS	RIM ELEVATION	FLOWLINE ELEVATION	DEPTH
	NORTHBOUND											
0010	1229+97.81 'NB' LT	IH 43 NB	--	1	--	1	--	--	B-36-0230 NW QUAD	638.2	634.37	3.83
0010	1229+97.81 'NB' RT	IH 43 NB	--	1	--	1	--	--	B-36-0230 NE QUAD	637.9	634.21	3.69
0010	1271+71.35 'NB' RT	IH 43 NB	1	--	--	--	--	--	B-36-0048 NE QUAD	663.49	659.14	4.35
0010	1324+68.32 'NB' RT	IH 43 NB	--	1	--	1	--	--	B-36-0041 SE QUAD	679.17	675.43	3.74
0010	1381+60.07 'NB' LT	IH 43 NB	1	--	--	--	--	--	B-36-0051 SW QUAD	675.19	671.29	3.90
0010	1381+60.07 'NB' RT	IH 43 NB	1	--	--	--	--	--	B-36-0051 SE QUAD	675.21	672.04	3.17
0010	1391+89.04 'NB' LT	IH 43 NB	--	--	1	--	1	--	IH 43 MEDIAN	666.20	663.5	2.70
0010	1445+47.61 'NB' RT	IH 43 NB	--	1	--	1	--	--	B-36-0053 SW QUAD	683.91	681.09	2.82
0010	1499+78.82 'NB' RT	IH 43 NB	1	--	--	--	--	--	B-36-0057 SE QUAD	690.45	687.05	3.40
0010	1499+78.82 'NB' LT	IH 43 NB	1	--	--	--	--	--	B-36-0057 SW QUAD	690.43	687.73	2.70
	NORTHBOUND TOTALS		**5**	**4**	**1**	**4**	**1**	**0**				
	SOUTHBOUND											
0010	1229+92.53 'SB' RT	IH 43 SB	--	--	--	--	--	1	B-36-0047 NE QUAD	637.97	634.02	3.95
0010	1229+92.53 'SB' LT	IH 43 SB	--	--	--	--	--	1	B-36-0047 NW QUAD	637.22	633.52	3.70
0010	1271+43.80 'SB' RT	IH 43 SB	1	--	--	--	--	--	B-36-0040 NE QUAD	663.89	660.50	3.39
0010	1271+43.80 'SB' LT	IH 43 SB	1	--	--	--	--	--	B-36-0040 NW QUAD	663.81	659.44	4.37
0010	1324+60.90 'SB' RT	IH 43 SB	--	1	--	1	--	--	B-36-0231 SE QUAD	679.39	674.72	4.67
0010	1324+60.90 'SB' LT	IH 43 SB	--	1	--	1	--	--	B-36-0231 SW QUAD	679.13	674.96	4.17
0010	1381+21.15 'SB' LT	IH 43 SB	--	--	--	--	--	1	B-36-0050 SW QUAD	674.29	669.59	4.70
0010	1381+21.15 'SB' RT	IH 43 SB	--	--	--	--	--	1	B-36-0050 SE QUAD	674.88	670.86	4.02
0010	1444+94.48 'SB' LT	IH 43 SB	--	1	--	1	--	--	B-36-0052 SW QUAD	681.21	677.51	3.70
0010	1499+75.85 'SB' LT	IH 43 SB	--	--	--	--	--	1	B-36-0056 SW QUAD	690.39	686.89	3.50
0010	1499+75.85 'SB' RT	IH 43 SB	--	--	--	--	--	1	B-36-0056 SE QUAD	690.53	687.83	2.70
	SOUTHBOUND TOTALS		**2**	**3**	**0**	**3**	**0**	**6**				
	SIDEROADS											
0010	POINT CREEK ROAD		--	--	--	--	--	1	B-36-0046 SW QUAD	662.45	659.37	3.08
0010	POINT CREEK ROAD		--	--	--	--	--	1	B-36-0046 SW QUAD	662.46	659.48	2.98
0010	POINT CREEK ROAD		--	--	--	--	--	1	B-36-0046 NW QUAD	662.57	658.54	4.03
0010	POINT CREEK ROAD		--	--	--	--	--	1	B-36-0046 NW QUAD	662.53	658.65	3.88
0010	17+86.00 EB	CTH C	--	--	--	--	--	1	CTH C EB	653.32	649.87	3.45
0010	17+87.00 WB	CTH C	--	--	--	--	--	1	CTH C WB	653.30	650.30	3.00
0010	19+09.00 EB	CTH C	--	--	--	--	--	1	CTH C EB	652.61	649.06	3.55
0010	19+09.00 WB	CTH C	--	--	--	--	--	1	CTH C WB	652.62	649.47	3.15
0010	24+42.00 EB	CTH C	--	--	--	--	--	1	CTH C EB	653.99	651.19	2.80
0010	24+42.00 WB	CTH C	--	--	--	--	--	1	CTH C WB	654.06	651.46	2.60
	OVERPASS TOTALS		**0**	**0**	**0**	**0**	**0**	**10**				
	PROJECT TOTALS		**7**	**7**	**1**	**7**	**1**	**16**				

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BEAM GUARD SUMMARY

CATEGORY	STATION	TO	STATION	LOCATION	614.0215 STEEL THRIE BEAM STRUCTURE APPROACH RETROFIT SPAN EACH	614.0220 THRIE BEAM BULLNOSE TERMINAL EACH	614.0230 STEEL THRIE BEAM LF	614.2300 MGS GUARDRAIL 3 LF	614.2500 MGS THRIE BEAM TRANSITION LF	614.2610 MGS GUARDRAIL TERMINAL EAT EACH	614.2620 MGS GUARDRAIL TERMINAL TYPE 2 EACH	614.0397 GUARDRAIL MOW STRIP EMULSIFIED ASPHALT SY	SPV.0090.03 RELAPPING MGS GUARDRAIL 3 LF	REMARKS
			NORTHBOUND											
0010	1217+18.00 NB	-	1218+87.00 NB	IH 43 NB	--	2	125.0	--	--	--	--	--	--	
0010	1226+01.98 NB	-	1229+18.98 NB	IH 43 NB	--	--	--	225.0	39	1	--	142	--	B-36-0230 SW QUAD
0010	1226+39.66 NB	-	1229+19.16 NB	IH 43 NB	--	--	--	187.5	39	1	--	125	--	B-36-0230 SE QUAD
0010	1267+15.26 NB	-	1270+32.26 NB	IH 43 NB	--	--	--	225.0	39	1	--	142	--	B-36-0048 SW QUAD
0010	1267+60.75 NB	-	1270+40.25 NB	IH 43 NB	--	--	--	187.5	39	1	--	125	--	B-36-0048 SE QUAD
0010	1321+59.22 NB	-	1324+76.22 NB	IH 43 NB	--	--	--	225.0	39	1	--	142	--	B-36-0041 SW QUAD
0010	1322+04.42 NB	-	1324+83.92 NB	IH 43 NB	1	--	--	187.5	39	1	--	125	--	B-36-0041 SE QUAD
0010	1378+50.01 NB	-	1381+67.01 NB	IH 43 NB	1	--	--	225.0	39	1	--	142	--	B-36-0051 SW QUAD
0010	1379+11.49 NB	-	1381+90.99 NB	IH 43 NB	1	--	--	187.5	39	1	--	125	--	B-36-0051 SE QUAD
0010	1384+01.93 NB	-	1387+01.93 NB	IH 43 NB	--	--	--	300.0	--	--	1	133	--	B-36-0051 NE QUAD
0010	1442+19.59 NB	-	1445+36.59 NB	IH 43 NB	1	--	--	225.0	39	1	--	142	--	B-36-0053 SW QUAD
0010	1442+75.61 NB	-	1445+55.11 NB	IH 43 NB	--	--	--	187.5	39	1	--	125	--	B-36-0053 SE QUAD
0010	1447+30.49 NB	-	1457+80.49 NB	IH 43 NB	--	--	--	1,050.0	--	--	1	467	--	B-36-0053 NE QUAD
0010	1496+69.23 NB	-	1499+86.23 NB	IH 43 NB	1	--	--	225.0	39	1	--	142	--	B-36-0057 SW QUAD
0010	1497+07.89 NB	-	1499+87.39 NB	IH 43 NB	1	--	--	187.5	39	1	--	125	--	B-36-0057 SE QUAD
			NORTHBOUND TOTALS		**6**	**2**	**125.0**	**3,825.0**	**468**	**12**	**2**	**2,201**	**0**	

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BEAM GUARD SUMMARY CONTINUED

CATEGORY	STATION	TO	STATION	LOCATION	614.0215 STEEL THRIE BEAM STRUCTURE APPROACH RETROFIT SPAN EACH	614.0220 THRIE BEAM BULLNOSE TERMINAL EACH	614.0230 STEEL THRIE BEAM LF	614.2300 MGS GUARDRAIL 3 LF	614.2500 MGS THRIE BEAM TRANSITION LF	614.2610 MGS GUARDRAIL TERMINAL EAT EACH	614.2620 MGS GUARDRAIL TERMINAL TYPE 2 EACH	614.0397 GUARDRAIL MOW STRIP EMULSIFIED ASPHALT SY	SPV.0090.03 RELAPPING MGS GUARDRAIL 3 LF	REMARKS
	SOUTHBOUND													
0010	1226+40.36 SB	-	1228+94.98 SB	IH 43 SB	--	--	--	162.5	39	1	--	--	--	B-36-0047 SE QUAD
0010	1227+40.19 SB	-	1228+94.81 SB	IH 43 SB	--	--	--	62.5	39	1	--	--	--	B-36-0047 SW QUAD
0010	1229+88.28 SB	-	1232+67.78 SB	IH 43 SB	1	--	--	187.5	39	1	--	125	--	B-36-0047 NW QUAD
0010	1229+88.53 SB	-	1233+05.53 SB	IH 43 SB	1	--	--	225.0	39	1	--	142	265	B-36-0047 NE QUAD
0010	1267+61.63 SB	-	1270+16.25 SB	IH 43 SB	--	--	--	162.5	39	1	--	--	--	B-36-0040 SE QUAD
0010	1268+28.37 SB	-	1270+07.99 SB	IH 43 SB	--	--	--	87.5	39	1	--	81	--	B-36-0040 SW QUAD
0010	1271+36.51 SB	-	1274+16.01 SB	IH 43 SB	1	--	--	187.5	39	1	--	125	--	B-36-0040 NW QUAD
0010	1271+44.67 SB	-	1274+61.67 SB	IH 43 SB	1	--	--	225.0	39	1	--	142	265	B-36-0040 NE QUAD
0010	1322+04.86 SB	-	1324+59.48 SB	IH 43 SB	1	--	--	162.5	39	1	--	--	--	B-36-0231 SE QUAD
0010	1322+11.60 SB	-	1324+53.72 SB	IH 43 SB	1	--	--	150.0	39	1	--	108	--	B-36-0231 SW QUAD
0010	1325+73.74 SB	-	1328+53.24 SB	IH 43 SB	--	--	--	187.5	39	1	--	125		B-36-0231 NW QUAD
0010	1325+81.57 SB	-	1328+98.57 SB	IH 43 SB	--	--	--	225.0	39	1	--	142	265	B-36-0231 NE QUAD
0010	1378+77.11 SB	-	1381+31.73 SB	IH 43 SB	1	--	--	162.5	39	1	--	--	--	B-36-0050 SE QUAD
0010	1376+89.37 SB	-	1381+06.49 SB	IH 43 SB	1	--	--	325.0	39	1	--	186	--	B-36-0050 SW QUAD
0010	1383+16.71 SB	-	1385+96.21 SB	IH 43 SB	--	--	--	187.5	39	1	--	125	--	B-36-0050 NW QUAD
0010	1383+43.24 SB	-	1386+60.24 SB	IH 43 SB	--	--	--	225.0	39	1	--	142	265	B-36-0050 NE QUAD
0010	1442+50.48 SB	-	1445+05.10 SB	IH 43 SB	--	--	--	162.5	39	1	--	--	--	B-36-0052 SE QUAD
0010	1443+30.69 SB	-	1444+85.31 SB	IH 43 SB	1	--	--	62.5	39	1	--	--	--	B-36-0052 SW QUAD
0010	1446+38.70 SB	-	1450+93.20 SB	IH 43 SB	--	--	--	362.5	39	1	--	203	--	B-36-0052 NW QUAD
0010	1446+61.40 SB	-	1449+78.40 SB	IH 43 SB	--	--	--	225.0	39	1	--	142	265	B-36-0052 NE QUAD
0010	1497+28.20 SB	-	1499+82.82 SB	IH 43 SB	1	--	--	162.5	39	1	--	--	--	B-36-0056 SE QUAD
0010	1498+28.20 SB	-	1499+82.82 SB	IH 43 SB	1	--	--	62.5	39	1	--	--	--	B-36-0056 SW QUAD
0010	1501+10.91 SB	-	1503+90.41 SB	IH 43 SB	--	--	--	187.5	39	1	--	125	--	B-36-0056 NW QUAD
0010	1501+11.91 SB	-	1504+28.91 SB	IH 43 SB	--	--	--	225.0	39	1	--	142	265	B-36-0056 NE QUAD
	SOUTHBOUND TOTALS				**11**	**0**	**0.0**	**4,375.0**	**936**	**24**	**0**	**2,054**	**1,590**	
	SIDEROADS AND RAMPS													
0010	1374+95.00 SE	-	1377+35.50 SE	CTH C	--	--	--	187.5	--	1	1	108	--	CTH C SE RAMP
0010	1382+15.47 NW	-	1385+68.47 NW	CTH C	--	--	--	300.0	--	1	1	158	--	CTH C NW RAMP RT
0010	1382+21.94 NW	-	1383+46.94 NW	CTH C	--	--	--	75.0	--	1	1	58	--	CTH C NW RAMP LT
0010	18+08.35 EB	-	19+86.27 EB	CTH C	--	--	--	125.0	--	1	1	80	--	CTH C EB
0010	18+25.52 WB	-	20+53.52 WB	CTH C	--	--	--	175.0	--	1	1	102	--	CTH C WB
	SIDEROAD AND RAMP TOTALS				**0**	**0**	**0.0**	**862.5**	**0**	**5**	**5**	**506**	**0**	
	PROJECT TOTAL				**17**	**2**	**125.0**	**9,062.5**	**1,404**	**41**	**7**	**4,761**	**1,590**	

BARRIER SYSTEM GRADING, SHAPING & FINISHING SUMMARY

CATEGORY	STATION	TO	STATION	LOCATION	614.0010 BARRIER SYSTEM GRADING, SHAPING & FINISHING EACH	*COMMON EXCAVATION CY	*BORROW CY	*SALVAGED TOPSOIL SY	*FERTILIZER TYPE B CWT	*SEEDING NO. 20 LB	*MULCH	REMARKS
	NORTHBOUND											
0010	1215+08.00 'NB'	-	1220+97.00 'NB'	IH 43 NB	2							POINT CREEK ROAD BULLNOSE
0010	1266+18.86 'NB'	-	1270+45.93 'NB'	IH 43 NB	2	--	**799**	112	0.1	3.0	112	B-36-0048 SOUTH APPROACH LT & RT
0010	1320+62.80 'NB'	-	1324+86.92 'NB'	IH 43 NB	2	--	**693**	234	0.1	6.3	234	B-36-0041 SOUTH APPROACH LT & RT
0010	1377+50.83 'NB'	-	1381+96.88 'NB'	IH 43 NB	2	--	**1363**	188	0.1	5.1	188	B-36-0051 SOUTH APPROACH LT & RT
0010	1441+20.66 'NB'	-	1445+63.61 'NB'	IH 43 NB	2	--	**2320**	321	0.2	8.7	321	B-36-0053 SOUTH APPROACH LT & RT
0010	1495+73.54 'NB'	-	1499+92.39 'NB'	IH 43 NB	2	--	**2209**	239	0.2	6.5	239	B-36-0057 SOUTH APPROACH LT & RT
			NORTHBOUND TOTALS		**12**	**0**	**7384**	**1094**	**0.7**	**30**	**1094**	
	SOUTHBOUND											
0010	1226+40.36 'SB'	-	1228+94.81 'SB'	IH 43 SB	2	--	**122**	180	0.1	5	180	B-36-0047 SOUTH APPROACH LT & RT
0010	1229+80.56 'SB'	-	1233+94.07 'SB'	IH 43 SB	2	--	**582**	96	0.1	3	96	B-36-0047 NORTH APPROACH LT & RT
0010	1267+61.63 'SB'	-	1270+16.25 'SB'	IH 43 SB	2	--	**524**	784	0.5	21	784	B-36-0040 SOUTH APPROACH LT & RT
0010	1271+30.68 'SB'	-	1275+58.38 'SB'	IH 43 SB	2	--	**188**	88	0.1	2	88	B-36-0040 NORTH APPROACH LT & RT
0010	1322+04.86 'SB'	-	1324+59.48 'SB'	IH 43 SB	1	--	**102**	36	0.0	1	36	B-36-0231 SOUTH APPROACH RT
0010	1325+69.94 'SB'	-	1329+94.88 'SB'	IH 43 SB	1	--	**149**	15	0.0	0	15	B-36-0231 NORTH APPROACH RT
0010	1376+89.37 'SB'	-	1381+31.73 'SB'	IH 43 SB	2	--	**1046**	207	0.1	6	207	B-36-0050 SOUTH APPROACH LT & RT
0010	1383+08.03 'SB'	-	1387+57.29 'SB'	IH 43 SB	2	--	**215**	116	0.1	3	116	B-36-0050 NORTH APPROACH LT & RT
0010	1442+50.48 'SB'	-	1445+05.10 'SB'	IH 43 SB	2	--	**402**	254	0.2	7	254	B-36-0052 SOUTH APPROACH LT & RT
0010	1446+33.94 'SB'	-	1450+86.35 'SB'	IH 43 SB	2	--	**273**	344	0.2	9	344	B-36-0052 NORTH APPROACH LT & RT
0010	1497+28.20 'SB'	-	1499+82.82 'SB'	IH 43 SB	2	--	**1778**	249	0.2	7	249	B-36-0056 SOUTH APPROACH LT & RT
0010	1501+05.91 'SB'	-	1505+24.54 'SB'	IH 43 SB	2	--	**240**	169	0.1	5	169	B-36-0056 NORTH APPROACH LT & RT
					22	**0**	**5621**	**2538**	**1.6**	**69**	**2538**	
	SIDEROADS AND RAMPS											
0010	1374+95.00 SE	-	1377+36.76 SE	CTH C	1	**2**	**60**	194	0.1	5	194	CTH C SE RAMP RT
0010	1381+92.49 NW	-	1383+46.94 NW	CTH C	1	**4**	**9**	61	0.0	2	61	CTH C NW RMP RT
0010	1382+20.16 NW	-	1383+52.37 NW	CTH C	1	--	**7**	43	0.0	1	43	CTH C NW RAMP LT
0010	18+08.35 EB	-	19+86.27 EB	CTH C	1	--	**10**	6	0.0	0	6	CTH C EB RT
0010	18+25.53 WB	-	20+53.52 WB	CTH C	1	--	**9**	7	0.0	0	7	CTH C WB LT
			SIDEROAD AND RAMP TOTALS		**5**	**6**	**95**	**311**	**0.19593**	**8.397**	**311**	
			PROJECT TOTAL		**39**	**6**	**13,100**	**3,943**	**2**	**106**	**3,943**	

*FOR INFORMATION ONLY

EROSION CONTROL MOBILIZATIONS

CATEGORY	LOCATION	628.1905 MOBILIZATIONS EROSION CONTROL EACH	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH
0010	PROJECT 1224-21-73	5	5
	PROJECT TOTAL	**5**	**5**

LANDSCAPING SUMMARY

CATEGORY	STATION	TO	STATION	LOCATION	WIDTH	625.0100 TOPSOIL SY	625.0500 SALVAGED TOPSOIL SY	628.2004 EROSION MAT CLASS1, TYPE B SY	629.0210 FERTILIZER TYPE B CWT	630.0120 SEEDING MIXTURE NO. 20 LB	630.0200 SEEDING TEMPORARY LB	REMARKS
			NORTHBOUND									
0010	1190+00.00 NB	-	1203+81.00 NB	IH 43 NB LT	--	9820	--	9820	6.187	265.2	132.58	SOUTH CROSSOVER REMOVAL
0010	1225+11.00 NB	-	1229+20.00 NB	IH 43 NB LT	--	--	323	323	0.20	8.7	4.36	B-36-0230 SW QUAD
0010	1225+39.00 NB	-	1229+20.00 NB	IH 43 NB RT	--	--	656	656	0.41	17.7	8.85	B-36-0230 SE QUAD
0010	1229+70.00 NB	-	1232+10.00 NB	IH 43 NB RT	--	--	303	303	0.19	8.2	4.09	B-36-0230 NE QUAD
0010	1229+70.00 NB	-	1232+10.00 NB	IH 43 NB LT	--	--	172	172	0.11	4.7	2.33	B-36-0230 NW QUAD
0010	1247+89.04 NB			IH 43 NB LT	--	4	--	4	0.002	0.1	0.05	PERIMETER RESTORATION
0010	1285+45.04 NB			IH 43 NB RT	--	--	24	24	0.02	0.6	0.32	ENDWALL REPLACEMENT
0010	1336+16.06 NB			IH 43 NB LT	--	--	24	24	0.02	0.6	0.32	ABANDONED PIPE REMOVAL
0010	1336+56.03 NB			IH 43 NB RT	--	--	24	24	0.02	0.6	0.32	ABANDONED PIPE REMOVAL
0010	1358+00.00 NB	-	1366+40.00 NB	IH 43 NB LT	--	--	1051	1051	0.66	28.4	14.19	MIDDLE CROSSOVER
0010	1358+00.00 NB	-	1366+40.00 NB	IH 43 NB LT	--	4696	--	4696	2.96	126.8	63.40	MIDDLE CROSSOVER REMOVAL
0010	1366+00.00 NB			IH 43 NB RT	--	--	10	10	0.01	0.3	0.14	ENDWALL REPLACEMENT
0010	1391+89.04 NB			IH 43 NB LT	--	--	30	30	0.02	0.8	0.41	PIPE/INLET REPLACEMENT
0010	1444+45.00 NB	-	1445+45.00 NB	IH 43 NB RT	--	--	100	100	0.06	2.7	1.35	B-36-0053 SE WINGWALL
0010	1444+45.00 NB	-	1445+45.00 NB	IH 43 NB LT	--	--	100	100	0.06	2.7	1.35	B-36-0053 SW WINGWALL
0010	1447+00.00 NB	-	1448+00.00 NB	IH 43 NB LT	--	--	100	100	0.06	2.7	1.35	B-36-0053 NW WINGWALL
0010	1479+89.04 NB			IH 43 NB	--	4	--	4	0.00	0.1	0.05	PERIMETER RESTORATION
0010	1515+28.00 NB	-	1529+83.00 NB	IH 43 NB RT	--	10347	--	10347	6.52	279.4	139.68	NORTH CROSSOVER REMOVAL
			NORTHBOUND TOTALS			**24871**	**2917**	**27788**	**18**	**751**	**376**	
			SOUTHBOUND									
0010	1235+89.04 SB			IH 43 SB	--	--	24	24	0.02	0.6	0.3	ENDWALL/PIPE REPLACEMENT
0010	1240+39.04 SB			IH 43 SB	--	--	80	80	0.05	2.2	1.1	ENDWALL/PIPE REPLACEMENT
0010	1247+89.04 SB			IH 43 SB	--	--	40	40	0.03	1.1	0.5	ENDWALL/PIPE REPLACEMENT
0010	1248+00.00 SB	-	1249+00.00 SB	IH 43 SB	30.00	333	--	333	0.21	9.0	4.5	FORESLOPE RESTORATION, RUTS
0010	1320+73.00 SB	-	1324+65.00 SB	IH 43 SB LT	--	--	556	556	0.35	15.0	7.5	B-36-0231 SW QIAD
0010	1325+65.00 SB	-	1329+58.00 SB	IH 43 SB LT	--	--	290	290	0.18	7.8	3.9	B-36-0231 NW QIAD
0010	1334+89.04 NB			IH 43 SB LT	--	11	24	24	0.02	0.6	0.32	ENDWALL/PIPE REPLACEMENT
0010	1444+10.00 SB	-	1445+10.00 SB	IH 43 SB LT	--	--	100	100	0.06	2.7	1.4	B-36-0052 SW WINGWALL
0010	1446+50.00 SB	-	1447+50.00 SB	IH 43 SB LT	--	--	100	100	0.06	2.7	1.4	B-36-0052 NW WINGWALL
			SOUTHBOUND TOTALS			**344**	**1214**	**1547**	**1.0**	**41.8**	**20.9**	
			RAMPS									
0010	1383+00.00 NW	-	1383+43.34 NW	CTH C NW RAMP LT	--	--	278	278	0.18	7.5	3.8	B-36-0064 NW WINGWALL
			RAMP TOTALS			**0**	**278**	**278**	**0**	**8**	**4**	
			UNDISTRIBUTED TOTALS			**2525**	**442**	**2987**	**1**	**80**	**44**	
			PROJECT TOTALS			**27,740**	**4,850**	**32,600**	**20**	**880**	**445**	

EROSION CONTROL SUMMARY

CATEGORY	STATION	TO	STATION	LOCATION	606.0200 RIP RAP MEDIUM CY	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF	628.6005 TURBIDITY BARRIER SY	628.7005 INLET PROTECTION TYPE A EACH	628.7015 INLET PROTECTION TYPE C EACH	628.7504 TEMPORARY DITCH CHECKS LF	628.7555 CULVERT PIPE CHECKS EACH	645.0120 GEOTEXTILE TYPE HR SY	REMARKS
			NORTHBOUND											
0010	1190+00.00 NB	-	1203+81.00	IH 43 NB LT	--	--	--	--	1	--	30	--	--	SOUTH CROSSOVER REMOVAL
0010	1216+80.00 NB			IH 43 NB LT	--	--	--	--	1	--	--	--	--	MEDIAN INLET
0010	1220+00.00 NB			IH 43 NB LT	--	--	--	--	--	--	15	--	--	BULLNOSE GRADING
0010	1225+04.02 NB	-	1229+30.00 NB	IH 43 NB LT	--	505	505	--	--	--	--	--	--	BEAMGUARD LT AND B-36-0014 REPLACEMENT
0010	1225+40.98 NB	-	1229+30.00 NB	IH 43 NB RT	--	390	390	--	--	--	--	--	--	BEAMGUARD RT AND B-36-0014 REPLACEMENT
0010	1229+64.00 NB			IH 43 NB	--	--	--	77	--	--	--	--	--	NORTH BANK
0010	1229+69.00 NB	-	1232+19.00 NB	IH 43 NB RT	--	245	245	--	--	--	--	--	--	B-36-0014 REPLACEMENT
0010	1229+69.00 NB	-	1232+19.00 NB	IH 43 NB LT	--	255	255	--	--	--	--	--	--	B-36-0014 REPLACEMENT
0010	1229+87.00 NB			IH 43 NB LT & RT	--	--	--	--	--	2	--	--	--	INLET REPLACEMENT
0010	1247+89.04 NB			IH 43 NB LT	--	--	--	--	1	--	--	--	--	MEDIAN INLET
0010	1266+08.19 NB	-	1267+65.01 NB	IH 43 NB LT	--	160	160	--	--	--	--	--	--	EAT LEFT
0010	1266+59.00 NB	-	1267+82.12 NB	IH 43 NB RT	--	125	125	--	--	--	--	--	--	EAT RIGHT
0010	1271+70.00 NB			IH 43 NB LT	1	--	--	--	--	--	15	--	3	CONCRETE SURFACE DRAIN
0010	1271+77.00 NB			IH 43 NB RT	--	--	--	--	--	1	--	--	--	INLET ADJUSTMENT
0010	1320+49.56 NB	-	1322+23.19 NB	IH 43 NB LT	--	180	180	--	--	--	--	--	--	EAT LEFT
0010	1321+01.55 NB	-	1322+57.71 NB	IH 43 NB RT	--	160	160	--	--	--	--	--	--	EAT RIGHT
0010	1324+64.00 NB			IH 43 NB LT	1	--	--	--	--	--	--	--	3	CONCRETE SURFACE DRAIN
0010	1324+77.00 NB			IH 43 NB RT	--	--	--	--	--	1	--	--	--	INLET REPLACEMENT
0010	1337+00.00 NB			IH 43 NB RT	--	--	--	--	--	--	15	--	--	ABANDONED PIPE REMOVAL
0010	1359+01.00 NB			IH 43 NB LT	--	--	--	--	1	--	--	--	--	MEDIAN INLET
0010	1366+16.00 NB			IH 43 NB LT	--	--	--	--	1	--	--	--	--	MEDIAN INLET
0010	1377+36.13 NB	-	1379+04.42 NB	IH 43 NB LT	--	170	170	--	--	--	--	--	--	EAT LEFT
0010	1378+06.44 NB	-	1379+71.29 NB	IH 43 NB RT	--	165	165	--	--	--	--	--	--	EAT RIGHT
0010	1381+60.00 NB			IH 43 NB LT	--	--	--	--	--	1	--	--	--	INLET ADJUSTMENT
0010	1381+83.00 NB			IH 43 NB RT	--	--	--	--	--	1	--	--	--	INLET ADJUSTMENT
0010	1391+89.00 NB			IH 43 NB LT	--	--	--	--	1	--	--	--	--	MEDIAN INLET
0010	1441+05.40 NB	-	1442+80.18 NB	IH 43 NB LT	--	180	180	--	--	--	--	--	--	EAT LEFT
0010	1441+68.73 NB	-	1443+29.39 NB	IH 43 NB RT	--	165	165	--	--	--	--	--	--	EAT RIGHT
0010	1444+45.00 NB	-	1445+45.00 NB	IH 43 NB RT	--	100	100	--	--	--	--	--	--	B-36-0053 SE WINGWALL
0010	1444+45.00 NB	-	1445+45.00 NB	IH 43 NB LT	--	100	100	--	--	--	--	--	--	B-36-0053 SW WINGWALL
0010	1445+30.00 NB			IH 43 NB LT	--	--	--	--	--	1	--	--	--	INLET REPLACEMENT
0010	1447+00.00 NB	-	1448+00.00 NB	IH 43 NB LT	--	100	100	--	--	--	--	--	--	B-36-0053 NW WINGWALL
0010	1479+89.04 NB			IH 43 NB LT	--	--	--	--	1	--	--	--	--	MEDIAN INLET
0010	1495+59.18 NB	-	1497+22.06 NB	IH 43 NB LT	--	165	165	--	--	--	--	--	--	EAT LEFT
0010	1496+04.70 NB	-	1497+59.64 NB	IH 43 NB RT	--	155	155	--	--	--	--	--	--	EAT RIGHT
0010	1515+28.00 NB	-	1529+83.00 NB	IH 43 NB RT	--	--	--	--	1	--	30	--	--	NORTH CROSSOVER REMOVAL
			NORTHBOUND TOTALS		**2**	**3320**	**3320**	**77**	**8**	**7**	**105**	**0**	**6**	
			SIDEROADS AND RAMPS											
0010	1503+75.00 'SE'	-	1505+40.00 'SE'	CTH C SE RAMP	--	165	165	--	--	--	--	--	--	EAT RIGHT
0010	1503+75.00 'NW'	-	1505+40.00 'NW'	CTH C NW RAMP LT	--	185	185	--	--	--	--	--	--	EAT LEFT
0010	1503+75.00 'NW'	-	1505+40.00 'NW'	CTH C NW RMAP RT	--	185	185	--	--	--	--	--	--	EAT RIGHT
0010	18+00.00 'EB'	-	18+60.00 'EB'	CTH C EB	--	60	60	--	--	--	--	--	--	EAT RIGHT
0010	19+90.00 'WB'	-	20+72.00 'WB'	CTH C WB	--	85	85	--	--	--	--	--	--	EAT LEFT
			SIDEROAD AND RAMP TOTALS		**0**	**680**	**680**	**0**	**0**	**0**	**0**	**0**	**0**	

EROSION CONTROL SUMMARY CONTINUED

CATEGORY	STATION	TO	STATION	LOCATION	606.0200 RIP RAP MEDIUM CY	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF	628.6005 TURBIDITY BARRIER SY	628.7005 INLET PROTECTION TYPE A EACH	628.7015 INLET PROTECTION TYPE C EACH	628.7504 TEMPORARY DITCH CHECKS LF	628.7555 CULVERT PIPE CHECKS EACH	645.0120 GEOTEXTILE TYPE HR SY	REMARKS
				SOUTHBOUND										
0010	1225+08.00 SB	-	1227+11.00 SB	IH 43 SB LT	--	205	205	--	--	--	--	--	--	EAT RIGHT
0010	1226+78.00 SB	-	1228+06.00 SB	IH 43 SB RT	--	135	135	--	--	--	--	--	--	EAT LEFT
0010	1229+97.00 SB			IH 43 SB RT	--	--	--	--	--	1	--	--	--	INLET ADJUSTMENT
0010	1229+98.00 SB			IH 43 SB LT	--	--	--	--	--	1	--	--	--	INLET ADJUSTMENT
0010	1232+07.99 SB	-	1233+59.96 SB	IH 43 SB LT	--	155	155	--	--	--	--	--	--	EAT LEFT
0010	1232+41.77 SB	-	1234+02.10 SB	IH 43 SB RT	--	165	165	--	--	--	--	--	--	EAT RIGHT
0010	1235+89.04 SB			IH 43 SB LT	--	--	--	--	--	--	--	4	--	ENDWALL REPLACEMENT
0010	1247+75.00 SB			IH 43 SB LT	--	--	--	--	--	--	15	--	--	FORESLOPE RESTORATION
0010	1266+44.00 SB	-	1268+16.00 SB	IH 43 SB RT	--	200	200	--	--	--	--	--	--	EAT RIGHT
0010	1266+80.00 SB	-	1269+08.00 SB	IH 43 SB LT	--	270	270	--	--	--	--	--	--	EAT LEFT
0010	1271+46.00 SB			IH 43 SB LT	--	--	--	--	--	1	--	--	--	INLET ADJUSTMENT
0010	1271+55.00 SB			IH 43 SB RT	--	--	--	--	--	1	--	--	--	INLET ADJUSTMENT
0010	1273+59.11 SB	-	1275+15.38 SB	IH 43 SB LT	--	155	155	--	--	--	--	--	--	EAT LEFT
0010	1274+08.10 SB	-	1275+64.72 SB	IH 43 SB LT	--	160	160	--	--	--	--	--	--	EAT RIGHT
0010	1320+65.00 SB		1324+84.00 SB	IH 43 SB LT	--	500	500	--	--	--	--	--	--	EAT LEFT
0010	1320+66.00 SB		1324+51.00 SB	IH 43 SB RT	--	390	390	--	--	--	--	--	--	EAT RIGHT
0010	1324+49.00 SB			IH 43 SB LT	--	--	--	--	--	1	--	--	--	INLET REPLACEMENT
0010	1324+58.00 SB			IH 43 SB RT	--	--	--	--	--	1	--	--	--	INLET REPLACEMENT
0010	1324+75.00 SB			IH 43 SB LT	--	--	--	--	--	--	--	2	--	UNDER NEWTON ROAD
0010	1325+35.00 SB			IH 43 SB LT	--	--	--	--	--	--	--	4	--	NORTH SIDE NEWTON ROAD
0010	1325+55.00 SB	-	1330+00.00 SB	IH 43 SB RT	--	520	520	--	--	--	--	--	--	EAT RIGHT
0010	1325+88.00 SB	-	1329+58.15 SB	IH 43 SB LT	--	375	375	--	--	--	--	--	--	EAT LEFT
0010	1376+10.00 SB	-	1377+61.00 SB	IH 43 SB LT	--	155	155	--	--	--	--	--	--	EAT LEFT
0010	1377+36.00 SB	-	1379+36.00 SB	IH 43 SB RT	--	200	200	--	--	--	--	--	--	EAT RIGHT
0010	1381+01.00 SB			IH 43 SB LT	--	--	--	--	--	1	--	--	--	INLET ADJUSTMENT
0010	1381+29.00 SB			IH 43 SB RT	--	--	--	--	--	1	--	--	--	INLET ADJUSTMENT
0010	1385+32.15 SB	-	1387+04.68 SB	IH 43 SB LT	--	175	175	--	--	--	--	--	--	EAT LEFT
0010	1386+07.57 SB	-	1387+64.81 SB	IH 43 SB RT	--	160	160	--	--	--	--	--	--	EAT RIGHT
0010	1441+07.00 SB	-	1443+05.00 SB	IH 43 SB RT	--	200	200	--	--	--	--	--	--	EAT RIGHT
0010	1441+78.00 SB	-	1443+93.00 SB	IH 43 SB LT	--	220	220	--	--	--	--	--	--	EAT LEFT
0010	1444+78.00 SB			IH 43 SB LT	--	--	--	--	--	1	--	--	--	INLET REPLACEMENT
0010	1444+10.00 SB	-	1445+10.00 SB	IH 43 SB LT	--	100	100	--	--	--	--	--	--	B-36-0052 SW WINGWALL
0010	1446+50.00 SB	-	1447+50.00 SB	IH 43 SB LT	--	100	100	--	--	--	--	--	--	B-36-0052 NW WINGWALL
0010	1448+61.27 SB	-	1451+30.00 SB	IH 43 SB LT	--	275	275	--	--	--	--	--	--	EAT LEFT
0010	1449+25.78 SB	-	1450+83.68 SB	IH 43 SB RT	--	160	160	--	--	--	--	--	--	EAT RIGHT
0010	1496+79.00 'SB'	-	1498+88.00 'SB'	IH 43 SB LT	--	220	220	--	--	--	--	--	--	EAT LEFT
0010	1496+88.00 'SB'	-	1497+92.00 'SB'	IH 43 SB RT	--	105	105	--	--	--	--	--	--	EAT RIGHT
0010	1499+77.00 'SB'			IH 43 SB LT	--	--	--	--	--	1	--	--	--	INLET ADJUSTMENT
0010	1499+78.00 'SB'			IH 43 SB RT	--	--	--	--	--	1	--	--	--	INLET ADJUSTMENT
0010	1503+33.00 'SB'	-	1505+05.00 'SB'	IH 43 SB LT	--	180	180	--	--	--	--	--	--	EAT LEFT
0010	1503+75.00 'SB'	-	1505+40.00 'SB'	IH 43 SB RT	--	175	175	--	--	--	--	--	--	EAT RIGHT
				SOUTHBOUND TOTALS	**0**	**5655**	**5655**	**0**	**0**	**11**	**15**	**10**	**0**	
				UNDISTRIBUTED	**0**	**485**	**485**	**8**	**1**	**2**	**15**	**1**	**1**	
				PROJECT TOTALS	**2**	**10140**	**10140**	**85**	**9**	**20**	**135**	**11**	**7**	

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DELINEATOR SUMMARY

CATEGORY	LOCATION	633.1100 DELINEATORS TEMPORARY EACH	633.0100 DELINEATOR POSTS STEEL EACH	633.0500 DELINEATOR REFLECTORS EACH	643.0500 TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER POSTS EACH	643.0600 TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER BASES EACH	REMARKS
	NORTHBOUND						
0010	1216+89.00 NB - 1503+10.00 NB	--	15	15	--	--	REPLACE MISSING
0010	1190+00.00 NB - 1195+47.00 NB	11	--	--	--	--	INSTALL STAGE 3
0010	1198+85.00 NB - 1201+85.00 NB	6	--	--	--	--	INSTALL STAGE 1
0010	1198+93.00 NB - 1519+38.00 NB	--	--	--	670	670	INSTALL STAGE 1
0010	1511+38.00 NB - 1520+85.00 NB	19	--	--	--	--	INSTALL STAGE 1
0010	1524+25.00 NB - 1529+75.00 NB	11	--	--	--	--	INSTALL STAGE 3
	NORTHBOUND TOTALS	**47**	**15**	**15**	**670**	**670**	
	SOUTHBOUND						
0010	1216+89.00 SB - 1503+10.00 SB	--	15	15	--	--	REPLACE MISSING
0010	1188+86.00 SB - 1195+47.00 SB	13	--	--	--	--	INSTALL STAGE 1
0010	1198+85.00 SB - 1208+35.00 SB	19	--	--	--	--	INSTALL STAGE 3
0010	1199+60.00 SB - 1520+93.00 SB	--	--	--	700	700	INSTALL STAGE 3
0010	1355+00.00 SB - 1370+00.00 SB	8	--	--	--	--	INSTALL STAGE 3
0010	1515+39.00 SB - 1520+85.00 SB	11	--	--	--	--	INSTALL STAGE 3
0010	1524+25.00 SB - 1529+75.00 SB	11	--	--	--	--	INSTALL STAGE 1
	SOUTHBOUND TOTALS	**62**	**15**	**15**	**700**	**700**	
	PROJECT TOTALS	**109**	**30**	**30**	**1370**	**1370**	

TRAFFIC CONTROL SUMMARY

CATEGORY	STATION	TO	STATION	LOCATION	APPROX. SERVICE PERIOD DAYS	643.0300 DRUMS NO. IN SERV.	643.0300 DRUMS DAY	643.0420 BARRICADES TYPE III NO. IN SERV.	643.0420 BARRICADES TYPE III DAY	643.0705 WARNING LIGHTS TYPE A NO. IN SERV.	643.0705 WARNING LIGHTS TYPE A DAY	643.0715 WARNING LIGHTS TYPE C NO. IN SERV.	643.0715 WARNING LIGHTS TYPE C DAYS	643.0800 ARROW BOARDS NO. IN SERV.	643.0800 ARROW BOARDS DAYS	643.0900 SIGNS NO. IN SERV.	643.0900 SIGNS DAY	**643.0920 COVERING SIGNS TYPE II NO. OF CYCLES	**643.0920 COVERING SIGNS TYPE II EACH	643.1050 PCMS NO. IN SERV.	643.1050 PCMS DAYS	REMARKS
	NORTHBOUND STAGE 1																					
0010	1124+40.00 NB	-	1530+00.00 NB	IH 43 NB	7	374	2618	27	189	54	378	14	98	2	14	50	350	1	1	1	7	PCMS 7 DAYS PRIOR TO PROJECT START
	NORTHBOUND STAGE 1 TOTALS				**7**		**2618**		**189**		**378**		**98**		**14**		**350**		**1**		**7**	
	NORTHBOUND STAGE 2A/2B																					
0010	1124+40.00 NB	-	1530+00.00 NB	IH 43 NB	82	68	5576	3	246	6	492	14	1148	2	164	84	6888	--	--	--	--	BI-DIRECTIONAL TRAFFIC ON NORTHBOUND
	NORTHBOUND STAGE 2A/2B TOATALS				**82**		**5576**		**246**		**492**		**1148**		**164**		**6888**		**0**		**0**	
	NORTHBOUND STAGE 3																					
0010	1124+40.00 NB	-	1205+00.00 NB	IH 43 NB	7	54	378	3	21	6	42	14	98	2	14	24	168	1	1	--	--	PASSING LANE CLOSED
0010	1448+40.00 NB	-	1531+00.00 NB	IH 43 NB	7	54	378	3	21	6	42	14	98	2	14	24	168	--	--	--	--	PASSING LANE CLOSED
	NORTHBOUND STAGE 3 TOTALS				**7**		**756**		**42**		**84**		**196**		**28**		**336**		**1**		**0**	
	NORTHBOUND STAGE 3 TOTALS				**7**		**756**		**42**		**84**		**196**		**28**		**336**		**1**		**0**	
	NORTHBOUND STAGE 4A																					
0010	1124+40.00 NB	-	1515+00.00 NB	IH 43 NB	35	77	2695	58	2030	112	3920	22	770	2	70	43	1505	--	--	1	3	PCMS START OF STAGE
0010	1515+00.00 NB	-	1531+00.00 NB	IH 43 NB	35	47	1645	2	70	4	140	4	140	--	--	7	245	--	--	--	--	NORTH CROSSOVER
	NORTHBOUND STAGE 3 TOATALS				**35**		**4340**		**2100**		**4060**		**910**		**70**		**1750**		**0**		**3**	
	NORTHBOUND STAGE 4B																					
0010	1124+40.00 NB	-	1515+00.00 NB	IH 43 NB	51	77	3927	58	2958	112	5712	22	1122	2	102	43	2193	--	--	--	--	SOUTH CROSSOVER AND NB WORK ZONE
0010	1395+00.00 NB	-	1527+00.00 NB	IH 43 NB	51	264	13464	11	561	22	1122	--	--	--	--	13	663	--	--	--	--	PASSING LANE CLOSED
0010	1515+00.00 NB	-	1531+00.00 NB	IH 43 NB	51	47	2397	2	102	4	204	4	204	--	--	7	357	--	--	--	--	NORTH CROSSOVER
	NORTHBOUND STAGE 4B TOTALS				**51**		**19,788**		**3,621**		**7,038**		**1,326**		**102**		**3,213**		**0**		**0**	
	NORTHBOUND STAGE 5																					
0010	1124+40.00 NB	-	1531+00.00 NB	IH 43 NB	14	374	5236	27	378	54	756	14	196	2	28	50	700	--	--	--	--	PASSING LANE CLOSED
	NORTHBOUND STAGE 4 TOTALS				**14**		**5236**		**378**		**756**		**196**		**28**		**700**		**0**		**0**	
	NORTHBOUND TOTALS				**196**		**38,314**		**6,576**		**12,808**		**3,874**		**406**		**13,237**		**2**		**10**	

**ADDITIONAL QUANTITIES LOCATED ELSEWHERE IN THE PLAN

TRAFFIC CONTROL SUMMARY CONTINUED

CATEGORY	STATION	TO	STATION	LOCATION	APPROX. SERVICE PERIOD DAYS	643.0300 DRUMS NO. IN SERV.	643.0300 DRUMS DAY	643.0420 BARRICADES TYPE III NO. IN SERV.	643.0420 BARRICADES TYPE III DAY	643.0705 WARNING LIGHTS TYPE A NO. IN SERV.	643.0705 WARNING LIGHTS TYPE A DAY	643.0715 WARNING LIGHTS TYPE C NO. IN SERV.	643.0715 WARNING LIGHTS TYPE C DAYS	643.0800 ARROW BOARD NO. IN SERV.	643.0800 ARROW BOARD DAYS	643.0900 SIGNS NO. IN SERV.	643.0900 SIGNS DAY	**643.0920 COVERING SIGNS TYPE II NO. OF CYCLES	**643.0920 COVERING SIGNS TYPE II EACH	643.1050 PCMS NO. IN SERV.	643.1050 PCMS DAYS	REMARKS
	SOUTHBOUND STAGE 1																					
0010	1186+00.00 SB	-	1271+60.00 SB	IH 43 SB	7	54	378	3	21	6	42	14	98	2	14	24	168	1	1	1	7	PCMS 7 DAYS PRIOR TO PROJECT START
0010	1516+00.00 SB	-	1598+60.00 SB	IH 43 SB	7	51	357	3	21	6	42	14	98	2	14	24	168	--	--	--	--	PASSING LANE CLOSED
	SOUTHBOUND STAGE 1 TOTALS				**7**		**735**		**42**		**84**		**196**		**28**		**336**		**1**		**7**	
	SOUTHBOUND STAGE 2A																					
0010	1187+00.00 SB	-	1202+00.00 SB	IH 43 SB	32	47	1504	2	64	4	128	4	128	--	--	7	224	--	--	1	3	PCMS START OF STAGE
0010	1202+00.00 SB	-	1598+60.00 SB	IH 43 SB	32	77	2464	58	1856	112	3584	22	704	2		43	1376	--	--	--	--	NORTH CROSSOVER AND SB WORK ZONE
	SOUTHBOUND STAGE 2A TOTALS				**32**		**3968**		**1920**		**3712**		**832**		**0**		**1600**		**0**		**3**	
	SOUTHBOUND STAGE 2B																					
0010	1187+00.00 SB	-	1202+00.00 SB	IH 43 SB	50	47	2350	2	100	4	200	4	200	--	--	7	350	--	--	--	--	SOUTH CROSSOVER
0010	1395+00.00 SB	-	1527+00.00 SB	IH 43 SB	50	264	13200	11	550	22	1100	--	--	--	--	13	650	--	--	--	--	PASSING LANE CLOSED
0010	1202+00.00 SB	-	1598+60.00 SB	IH 43 SB	50	77	3850	58	2900	112	5600	22	1100	2		43	2150	--	--	--	--	NORTH CROSSOVER AND SB WORK ZONE
	SOUTHBOUND STAGE 2B TOTALS				**50**		**19400**		**3550**		**6900**		**1300**		**0**		**3150**		**0**		**0**	
	SOUTHBOUND STAGE 3																					
0010	1124+40.00 SB	-	1530+00.00 NB	IH 43 SB	7	374	2618	27	189	54	378	14	98	2	14	50	350	1	1	--	--	SINGLE LANE CLOSURES
	SOUTHBOUND STAGE 3 TOTALS				**7**		**2618**		**189**		**378**		**98**		**14**		**350**		**1**		**0**	
	SOUTHBOUND STAGE 4A/4B																					
0010	1124+40.00 'SB'	-	1530+00.00 'SB'	IH 43 SB	86	56	4816	3	258	6	516	14	1204	2	172	87	7482	--	--	--	--	BI-DIRECTIONAL TRAFFIC ON SOUTHBOUND
0010	1356+89.00 'SB'	-	1369+32.00 'SB'	IH 43 SB	86	31	2666	7	602	10	860	8	688	--	--	5	430	--	--	--	--	TEMPORARY CROSSOVER AT CTH C
	SOUTHBOUND STAGE 4A/4B TOTALS				**86**		**4816**		**258**		**516**		**1204**		**172**		**7482**		**0**		**0**	
	SOUTHBOUND STAGE 5																					
0010	1186+00.00 SB	-	1598+60.00 SB	IH 43 SB	14	374	5236	27	378	54	756	14	196	2	28	50	700	--	--	--	--	PASSING LANE CLOSED
	SOUTHBOUND STAGE 5 TOTALS				**14**		**5236**		**378**		**756**		**196**		**28**		**700**		**0**		**0**	
	SOUTHBOUND TOTALS						**36773**		**6337**		**12346**		**3826**		**242**		**13618**		**2**		**10**	
	RAMPS/PARK AND RIDES/SIDEROADS																					
0010	CTH C NB RAMPS				35	17	595	5	175	10	350	--	--	--	--	9	315	1	8	2	6	PCMS 3 DAYS PRIOR TO CLOSING
0010	CTH C SB RAMPS				32	19	608	5	160	10	320	--	--	--	--	9	288	1	8	2	6	PCMS 3 DAYS PRIOR TO CLOSING
0010	PARK AND RIDE				2	--	--	3	6	6	12	--	--	--	--	1	2	--	--	1	3	PCMS 3 DAYS PRIOR TO CLOSING
0010	CTH C EB				7	28	196	3	21	6	42	--	--	1	7	7	49	--	--	1	7	PCMS 7 DAYS PRIOR TO CLOSING
0010	CTH C WB				7	28	196	3	21	6	42	--	--	1	7	9	63	--	--	1	7	PCMS 7 DAYS PRIOR TO CLOSING
0010	POINT CREEK ROAD OVERPASS				24	--	--	18	432	28	672	--	--	--	--	14	336	--	--	2	14	PCMS 7 DAYS PRIOR TO CLOSING
0010	NEWTON ROAD				82	--	--	14	1148	16	1312	--	--	--	--	13	1066	--	--	2	14	PCMS 7 DAYS PRIOR TO CLOSING
0010	USH 151 EB				5	140	700	5	25	10	50	5	25	2	--	8	40	--	--	--	--	TRAFFIC SIGNAL INSTALL/REMOVAL
0010	USH 151 WB				5	140	700	5	25	10	50	5	25	2	--	8	40	--	--	--	--	TRAFFIC SIGNAL INSTALL/REMOVAL
	RAMPS/PARK AND RIDE/OVERPASS TOTALS				**199**		**2995**		**2013**		**2850**		**50**		**14**		**2199**		**16**		**57**	
	UNDISTRIBUTED						**7808**		**1494**		**2801**		**775**		**68**		**2906**		**3**		**13**	
	PROJECT TOTALS						**85,890**		**16,420**		**30,805**		**8,525**		**730**		**31,960**		**23**		**90**	

**ADDITIONAL QUANTITIES LOCATED ELSEWHERE IN THE PLAN

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FIXED MESSAGE SIGN SUMMARY

CATEGORY		SIZE	LOCATION	643.1000 TRAFFIC CONTROL SIGNS FIXED MESSAGE SF	REMARKS
SOUTHBOUND					
0010	1535+00.00 SB	138 x 72	IH 43 SB	69	
0010	1535+00.00 SB	78 x 18	IH 43 SB	9.75	EXIT NUMBER
0010	1535+00.00 SB	108 x 24	IH 43 SB	18	NO RE-ENTRY
0010	1587+80.00 SB	108 x 84	IH 43 SB	63	
0010	1587+80.00 SB	108 x 24	IH 43 SB	18	NO RE-ENTRY
0010	1587+80.00 SB	78 x 18	IH 43 SB	9.75	EXIT NUMBER
			SOUTHBOUND TOTALS	**187.5**	
PARK AND RIDE					
0010	CTH C	48 x 24	IH 43 SB	8	PARK AND RIDE CLOSED
			PARK AND RIDE TOTALS	**8**	
			PROJECT TOTALS	**195.5**	

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TRAFFIC CONTROL DETOUR SIGN SUMMARY

SIGN NO.	LOCATION	SIGN CODE	SIZE W X H	NUMBER IN SERVICE	APPROX. SERVICE PERIOD 82 DAYS	643.3000 DETOUR SIGNS DAYS	NO OF CYCLES	**643.092 COVERING SIGNS TYPE II EACH	REMARKS
1	CTH C, W. OF I-43 SB RAMP INTERSECTION, COVER EXISTING D1-3 AS SHOWN						1	1	COVER "MILWAUKEE"
2	CTH C, AT I-43 SB RAMP INTERSECTION, MODIFY EXISTING J3-2 SIGN AS SHOWN	M 4-5	24"X12"	1	82	82			
	"	MO 6-1	21"X21"	1	82	82			AHEAD
3	CTH C, AT I-43 NB RAMP INTERSECTION, PLACE ON BACK OF R4-7 SIGN	M 4-5	24"X12"	1	82	82			
	"	M 3-3	24"X12"	1	82	82			
	"	M 1-1	24"X24"	1	82	82			43
	"	MO 6-1	21"X21"	1	82	82			LEFT
4	CTH C, W. OF I-43 NB RAMP INTERSECTION, PLACE BETWEEN JCT 43 SIGN AND SIGN #5	M 4-5	24"X12"	1	82	82			
	"	M 3-3	24"X12"	1	82	82			
	"	M 1-1	24"X24"	1	82	82			43
	"	MO 5-1R	21"X21"	1	82	82			
5	CTH C, AT I-43 NB RAMP INTERSECTION, COVER EXISTING D1-3 AS SHOWN						1	1	COVER "SHEBOYGAN-MILWAUKEE"
6	CTH C, AT I-43 NB RAMP INTERSECTION, MODIFY EXISTING J3-2 SIGN AS SHWON	M 4-5	24"X12"	1	82	82			
	"	MO 6-1	21"X21"	1	82	82			RIGHT
7	I-43 NB, PLACE 900' S. OF US 151 OFF-RAMP	M 4-5	36"X18"	1	82	82			
	"	M 3-3	36"X18"	1	82	82			
	"	M 1-1	36"X36"	1	82	82			43
	"	MO 5-2R	30"X30"	1	82	82			
8	I-43 NB, PLACE TO LEFT OF EXISTING TYPE I US 151 EXIT RAMP	M 4-5	36"X18"	1	82	82			
	"	M 3-3	36"X18"	1	82	82			
	"	M 1-1	36"X36"	1	82	82			43
	"	MO 6-2	30"X30"	1	82	82			TILT RIGHT
9	I-43 NB OFF-RAMP TO US 151, PLACE ON LEFT SIDE AT LEFT TURN TAPER POINT	M 4-5	24"X12"	1	82	82			
	"	M 3-3	24"X12"	1	82	82			
	"	M 1-1	24"X24"	1	82	82			43
	"	MO 5-1L	21"X21"	1	82	82			
10	I-43 NB OFF-RAMP TO US 151, PLACE LEFT OF EXISTING J3-1 SIGN AT INTERSECTION	M 4-5	24"X12"	1	82	82			
	"	M 3-3	24"X12"	1	82	82			
	"	M 1-1	24"X24"	1	82	82			43
	"	MO 6-1	21"X21"	1	82	82			LEFT
	PROJECT TOTALS			**28**		**2,296**		**2**	

**ADDITIONAL QUANTITIES LOCATED ELSEWHERE IN THE PLAN

PLAN SHEET PRODUCED

BY WisDOT - NE REGION

3

ERECTION & REMOVAL OF PERMANENT SIGNING, TYPE II

SIGN NO.	LOCATION	SIGN CODE	W X H	637.2210 SIGNS TYPE II REFLECTIVE TYPE H S.F.	637.2215 FOLDING SIGNS TYPE II REFLECTIVE TYPE H S.F.	637.2230 SIGNS TYPE II REFLECTIVE TYPE F S.F.	634.0612 POSTS WOOD 4x6x12 EACH	634.0614 POSTS WOOD 4x6x14 EACH	634.0616 POSTS WOOD 4x6x16 EACH	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH	REMARKS
1	I-43, N. OF POINT CREEK RD OVERPASS	M1-94	108" X 21"	15.75	---	---	2	---	---	---	---	POINT CREEK RD, SEE SIGN DETAIL SHEET
2	"	M1-94	108" X 21"	15.75	---	---	2	---	---	---	---	POINT CREEK RD, SEE SIGN DETAIL SHEET
3	WEIGH STATION ROADWAY	R7-1L	24" X 30"	5.00	---	---	---	1	---	1	1	
4	"	R7-1L	24" X 30"	5.00	---	---	---	1	---	1	1	
5	I-43, N. OF POINT CREEK RD OVERPASS	W4-1	48" X 48"	---	---	16.00	---	---	2	1	2	
6	WEIGH STATION ROADWAY	R3-1	24" X 24"	4.00	---	---	---	1	---	1	1	
7	"	R5-1	30" X 30"	6.25	---	---	---	---	---	1		MOUNT ON BACKSIDE OF SIGN #8
8	"	W3-1	36" X 36"	---	---	9.00	---	1	---	---	1	PART OF REMOVAL FOR SIGN #7
9	"	R6-2R	24" X 30"	5.00	---	---	---	1	---	1	1	
10	"	R2-1	24" X 30"	5.00	---	---	1	---	---	1	1	35 MPH
11	I-43, N. OF WEIGH STATION	D10-3	12" X 48"	4.00	---	---	1	---	---	1	1	MILE 142
12	"	R3-4B	36" X 48"	12.00	---	---	---	---	1	1	1	
13	"	R3-4B	36" X 48"	12.00	---	---	---	---	1	1	1	
14	"	D10-3	12" X 48"	4.00	---	---	1	---	---	1	1	MILE 142
15	"	M1-94	54" X 21"	7.88	---	---	2	---	---	1	1	HWY F, SEE SIGN DETAIL SHEET
16	"	M1-94	54" X 21"	7.88	---	---	2	---	---	1	1	HWY F, SEE SIGN DETAIL SHEET
17	I-43, N. OF HWY F	R3-4B	36" X 48"	12.00	---	---	---	---	1	1	1	
18	"	R3-4B	36" X 48"	12.00	---	---	---	---	1	1	1	
19	"	D10-3	12" X 48"	4.00	---	---	1	---	---	1	1	MILE 143
20	"	D10-3	12" X 48"	4.00	---	---	1	---	---	1	1	MILE 143
21	"	M1-94	78" X 21"	11.38	---	---	2	---	---	1	2	NEWTON RD, SEE SIGN DETAIL SHEET
22	"	M1-94	78" X 21"	11.38	---	---	2	---	---	1	2	NEWTON RD, SEE SIGN DETAIL SHEET
23	I-43, N. OF NEWTON RD OVERPASS	I55-56	---	---	---	---	---	---	---	1	1	
24	"	R8-7	48" X 36"	12.00	---	---	---	1	---	1	1	
25	"	W11-3	---	---	---	---	---	---	---	1	2	
26	"	W57-52	---	---	---	---	---	---	---	---	---	PART OF REMOVAL FOR SIGN #25
27	VACANT	---	---	---	---	---	---	---	---	---	---	
28	I-43, N. OF NEWTON RD OVERPASS	M1-93	---	---	---	---	---	---	---	1	1	
29	VACANT	---	---	---	---	---	---	---	---	---	---	
30	I-43, N. OF NEWTON RD OVERPASS	J4-2	72" X 54"	27.00	---	---	---	---	1	1	1	SOUTH INTERSTATE 43, LAKE MICHIGAN CIRLE TOUR
31	"	R3-4B	36" X 48"	12.00	---	---	---	---	1	1	1	
32	"	R3-4B	36" X 48"	12.00	---	---	---	---	1	1	1	
33	"	D10-3	12" X 48"	4.00	---	---	1	---	---	1	1	MILE 144
34	"	D10-3	12" X 48"	4.00	---	---	1	---	---	1	1	MILE 144
35	I-43 OFF-RAMP TO CTH C	E5-1A	90" X 60"	37.50	---	---	---	---	2	1	2	EXIT 144
36	"	W3-1	36" X 36"	---	---	9.00	---	---	1	1	1	
37	"	D1-2	78" X 30"	16.25	---	---	---	2	---	1	2	SEE SIGN DETAIL SHEET
	PAGE SUBTOTALS			289.00	0.00	34.00	19	8	12	31	37	

PLAN SHEET PRODUCED

BY WisDOT - NE REGION

ERECTION & REMOVAL OF PERMANENT SIGNING, TYPE II

SIGN NO.	LOCATION	SIGN CODE	W X H	637.2210 SIGNS TYPE II REFLECTIVE TYPE H S.F.	637.2215 FOLDING SIGNS TYPE II REFLECTIVE TYPE H S.F.	637.2230 SIGNS TYPE II REFLECTIVE TYPE F S.F.	634.0612 POSTS WOOD 4x6x12 EACH	634.0614 POSTS WOOD 4x6x14 EACH	634.0616 POSTS WOOD 4x6x16 EACH	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH	REMARKS
38	I-43 OFF-RAMP TO CTH C	R5-1A	36" X 24"	6.00	---	---	1	---	---	1	1	
39	"	J3-2	48" X 57"	19.00	---	---	---	---	1	1	1	CTH C, TO CTH CR, SEE PLAN SHEET
40	"	R5-1A	36" X 24"	6.00	---	---	---	---	---	---	---	MOUNT ON BACKSIDE OF SIGN #39, PART OF REMOVAL FOR SIGN #39
41	I-43, N. OF NEWTON RD OVERPASS	W4-1	48" X 48"	---	---	16.00	---	---	2	1	2	
42	CTH C ON-RAMP TO I-43	R5-57	36" X 36"	9.00	---	---	---	1	---	1	1	
43	"	R5-57	36" X 36"	9.00	---	---	---	1	---	1	1	
44	I-43, N. OF CTH C	W4-1	48" X 48"	---	---	16.00	---	---	2	1	2	
45	I-43 OFF-RAMP TO CTH C	R5-1A	36" X 24"	6.00	---	---	---	---		---	---	MOUNT ON BACKSIDE OF SIGN #46, PART OF REMOVAL FOR SIGN #46
46	"	J3-2	48" X 57"	19.00	---	---	---	---	1	1	1	TO CTH CR, CTH C, SEE PLAN SHEET
47	"	R5-1A	36" X 24"	6.00	---	---	1	---	---	1	1	
48	"	D1-2	78" X 30"	16.25	---	---	---	2	---	1	2	SEE SIGN DETAIL SHEET
49	"	W3-1	36" X 36"	---	---	9.00	---	---	1	1	1	
50	"	E5-1A	90" X 60"	37.50	---	---	---	---	2	1	2	EXIT 144
51	I-43, N. OF CTH C	J4-2	72" X 54"	27.00	---	---	---	---	1	1	1	NORTH INTERSTATE 43, LAKE MICHIGAN CIRLE TOUR
52	VACANT		---	---	---	---	---	---	---	---	---	
53	I-43, N. OF CTH C	D10-3	12" X 48"	4.00	---	---	1	---	---	1	1	MILE 145
54	"	D10-3	12" X 48"	4.00	---	---	1	---	---	1	1	MILE 145
55	"	R3-4B	36" X 48"	12.00	---	---	---	---	1	1	1	
56	"	R3-4B	36" X 48"	12.00	---	---	---	---	1	1	1	
57	"	M1-93	---	---	---	---	---	---	---	1	1	
58	VACANT	---	---	---	---	---	---	---	---	---	---	
59	I-43, N. OF CTH C	R8-7	48" X 36"	12.00	---	---	---	1	---	1	1	
60	"	M1-94	120" X 21"	17.50	---	---	2	---	---	---	---	CARSTENS LAKE RD, SEE SIGN DETAIL SHEET
61	"	M1-94	120" X 21"	17.50	---	---	2	---	---	---	---	CARSTENS LAKE RD, SEE SIGN DETAIL SHEET
62	I-43, N. OF CARSTENS LAKE RD OVERPASS	D10-3	12" X 48"	4.00	---	---	1	---	---	1	1	MILE 146
63	"	D10-3	12" X 48"	4.00	---	---	1	---	---	1	1	MILE 146
64	"	W11-3	---	---	---	---	---	---	---	1	2	
65	"	W57-52	---	---	---	---	---	---	---	---	---	PART OF REMOVAL FOR SIGN #64
66	"	M1-94	72" X 21"	10.50	---	---	2	---	---	1	2	CLOVER RD, SEE SIGN DETAIL SHEET
67	"	M1-94	72" X 21"	10.50	---	---	2	---	---	1	2	CLOVER RD, SEE SIGN DETAIL SHEET
68	CTH C, W. OF I-43 RAMP TERMINI	J1-1	24" X 39"	6.50	---	---	---	1	---	1	1	JCT I-43
69	"	D1-2	78" X 30"	16.25	---	---	---	2	---	1	2	MANITOWOC, MILWAUKEE, SEE SIGN DETAIL SHEET
70	"	W3-1	---	---	---	---	---	---	---	1	1	
70A	"	J2-2	48" X 57"	19.00	---	---	---	---	1	---	---	SEE PLAN SHEET
71	"	R5-1A	36" X 24"	6.00	---	---	1	---	---	---	---	PART OF REMOVAL FOR SIGN #70
72	"	R4-7	30" X 36"	7.50	---	---	---	1	---	1	1	
73	"	R5-1	30" X 30"	6.25	---	---	---	---	---	---	---	PART OF REMOVAL FOR SIGN #74, MOUNT ON BACKSIDE OF SIGN #74
74	"	W6-2	36" X 36"	---	---	9.00	---	1	---	1	1	
75	"	R5-1A	36" X 24"	6.00	---	---	---	---	---	---	---	PART OF REMOVAL FOR SIGN #76, MOUNT ON BACKSIDE OF SIGN #76
	PAGE SUBTOTALS			336.25	0.00	50.00	17	8	13	28	36	

PLAN SHEET PRODUCED
BY WisDOT - NE REGION

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ERECTION & REMOVAL OF PERMANENT SIGNING, TYPE II

SIGN NO.	LOCATION	SIGN CODE	W X H	637.2210 SIGNS TYPE II REFLECTIVE TYPE H S.F.	637.2215 FOLDING SIGNS TYPE II REFLECTIVE TYPE H S.F.	637.2230 SIGNS TYPE II REFLECTIVE TYPE F S.F.	634.0612 POSTS WOOD 4x6x12 EACH	634.0614 POSTS WOOD 4x6x14 EACH	634.0616 POSTS WOOD 4x6x16 EACH	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH	REMARKS
76	CTH C, W. OF I-43 RAMP TERMINI	D2-1	84" X 15"	8.75	---	---	2	---	---	1	2	ST NAZIANZ 10, SEE SIGN DETAIL SHEET
77	"	M1-5A	---	---	---	---	---	---	---	---	---	PART OF REMOVAL FOR SIGN #76
78	"	D4-5A	36" X 48"	12.00	---	---	---	---	1	1	1	
79	"	R5-1	30" X 30"	6.25	---	---	---	---	---	---	---	PART OF REMOVAL FOR SIGN #78, MOUNT ON BACKSIDE OF SIGN #78
80	I-43 SB OFF-RAMP AT CTH C INTERSECTION	R5-1	30" X 30"	6.25	---	---	---	---	---	---	---	PART OF REMOVAL FOR SIGN #88, MOUNT ON BACKSIDE OF SIGN #88
81	CTH C, AT I-43 SB RAMP TERMINI	R3-2	24" X 24"	4.00	---	---	---	---	1	---	---	PART OF REMOVAL FOR SIGN #82
82	"	J3-1	24" X 57"	9.50	---	---	---	---	---	1	1	SOUTH I-43, SEE PLAN SHEET, MOUNT ON BACKSIDE OF SIGN #81
83	"	J3-2	48" X 57"	19.00	---	---	---	---	1	1	1	NORTH I-43, SOUTH I-43, SEE PLAN SHEET
84	"	R11-54F	48" X 30"	---	10.00	---	---	---	---	---	---	PART OF REMOVAL FOR SIGN #83, MOUNT BELOW SIGN #84
85	"	R6-2L	---	---	---	---	---	---	---	1	1	
86	"	R4-8	24" X 30"	5.00	---	---	1	---	---	---	---	
87	I-43 SB OFF-RAMP AT CTH C INTERSECTION	R1-1	36" X 36"	7.46	---	---	---	1	---	1	1	
88	"	R6-2R	24" X 30"	5.00	---	---	---	1	---	1	1	
89	"	R1-1	36" X 36"	7.46	---	---	---	1	---	1	1	
90	"	W12-1D	24" X 24"	---	---	4.00	1	---	---	1	1	
91	"	R1-1	36" X 36"	7.46	---	---	---	1	---	1	1	
92	"	D4-5	36" X 48"	12.00	---	---	---	---	1	---	---	PART OF REMOVAL FOR SIGN #91, LOCATION BASED
93	"	R5-1	30" X 30"	6.25	---	---	---	---	---	---	---	PART OF REMOVAL FOR SIGN #91, MOUNT ON BACKSIDE OF SIGN #92
94	CTH C, AT I-43 SB RAMP TERMINI	R5-1	30" X 30"	6.25	---	---	---	1	---	1	1	
95	"	R3-1	24" X 24"	4.00	---	---	---	---	---	---	---	PART OF REMOVAL FOR SIGN #94, MOUNT ON BACKSIDE OF SIGN #94
96	"	R6-2L	24" X 30"	5.00	---	---	---	---	1	1	1	
97	"	R11-54F	48" X 30"	---	10.00	---	---	---	---	---	---	PART OF REMOVAL FOR SIGN #96, MOUNT BELOW SIGN #96
98	"	R4-7	24" X 30"	5.00	---	---	---	1	---	1	1	
99	CTH C, BETWEEN I-43 NB/SB RAMP TERMINI	J2-2	48" X 57"	19.00	---	---	---	---	1	1	1	NORTH I-43, EAST CTH C, SEE PLAN SHEET
100	"	R5-1A	36" X 24"	6.00	---	---	---	---	---	---	---	PART OF REMOVAL FOR SIGN #101, MOUNT ON BACKSIDE OF SIGN #101
101	"	D1-2	78" X 24"	13.00	---	---	2	---	---	1	2	SHEBOYGAN, MILWAUKEE, SEE SIGN DETAIL SHEET
102	"	R3-20L	24" X 36"	6.00	---	---	---	1	---	1	1	
103	"	D1-3	78" X 36"	19.50	---	---	---	2	---	1	2	MANITOWOC, DENMARK, GREEN BAY, SEE SIGN DETAIL SHEET
104	"	R3-20L	24" X 36"	6.00	---	---	---	1	---	1	1	
105	"	W3-1	36" X 36"	---	---	9.00	---	1	---	1	1	
106	"	R5-1A	36" X 24"	6.00	---	---	---	---	---	---	---	PART OF REMOVAL FOR SIGN #105, MOUNT ON BACKSIDE OF SIGN #105
107	"	J2-2	48" X 57"	19.00	---	---	---	---	1	1	1	SOUTH I-43, WEST CTH C, SEE PLAN SHEET
108	"	R3-1	24" X 24"	4.00	---	---	---	1	---	1	1	
109	"	R5-1	30" X 30"	6.25	---	---	---	---	---	---	---	PART OF REMOVAL FOR SIGN #108, MOUNT ON BACKSIDE OF SIGN #108
110	I-43 NB OFF-RAMP AT CTH C INTERSECTION	R5-1	30" X 30"	6.25	---	---	---	1	---	---	---	PART OF REMOVAL FOR SIGN #111, LOCATION BASED
111	"	R1-1	36" X 36"	7.46	---	---	---	1	---	1	1	
112	CTH C, AT I-43 NB RAMP TERMINI	R4-7	24" X 30"	5.00	---	---	---	1	---	1	1	
113	"	R6-2L	24" X 30"	5.00	---	---	---	---	1	1	1	
	PAGE SUBTOTALS			265.09	20.00	13.00	6	15	8	24	27	

PLAN SHEET PRODUCED

BY WisDOT - NE REGION

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ERECTION & REMOVAL OF PERMANENT SIGNING, TYPE II

SIGN NO.	LOCATION	SIGN CODE	W X H	637.2210 SIGNS TYPE II REFLECTIVE TYPE H S.F.	637.2215 FOLDING SIGNS TYPE II REFLECTIVE TYPE H S.F.	637.2230 SIGNS TYPE II REFLECTIVE TYPE F S.F.	634.0612 POSTS WOOD 4x6x12 EACH	634.0614 POSTS WOOD 4x6x14 EACH	634.0616 POSTS WOOD 4x6x16 EACH	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH	REMARKS
114	CTH C, AT I-43 NB RAMP TERMINI	R11-54F	48" X 30"	---	10.00	---	---	---	---	---	---	PART OF REMOVAL FOR SIGN #113, MOUNT BELOW SIGN #113
115	"	R4-8	24" X 30"	5.00	---	---	---	1	---	---	---	
116	"	R6-2L	---	---	---	---	---	---	---	1	1	
117	"	J3-2	48" X 57"	19.00	---	---	---	---	1	1	1	SOUTH I-43, NORTH I-43, SEE PLAN SHEET
118	"	R11-54F	48" X 30"	---	10.00	---	---	---	---	---	---	PART OF REMOVAL FOR SIGN #117, MOUNT BELOW SIGN #117
119	"	J3-1	24" X 57"	9.50	---	---	---	---	1	1	1	NORTH I-43, SEE PLAN SHEET
120	"	R3-2	24" X 24"	4.00	---	---	---	---	---	---	---	PART OF REMOVAL FOR SIGN #119, MOUNT ON BACKSIDE OF SIGN #119
121	I-43 NB OFF-RAMP AT CTH C INTERSECTION	W12-1D	24" X 24"	---	---	4.00	---	---	---	1	1	
122	"	R1-1	36" X 36"	7.46	---	---	---	---	1	1	1	
123	"	R6-2L	24" X 30"	5.00	---	---	---	---	---	---	---	PART OF REMOVAL FOR SIGN #122, MOUNT FACING WEST ON POST, BELOW STOP SIGN
124	"	R6-2R	24" X 30"	5.00	---	---	---	1	---	1	1	
125	"	R5-1	30" X 30"	6.25	---	---	---	---	---	---	---	PART OF REMOVAL FOR SIGN #124, MOUNT ON BACKSIDE OF SIGN #124
126	"	R1-1	36" X 36"	7.46	---	---	---	1	---	1	1	
127	"	D4-5	36" X 48"	12.00	---	---	---	---	1	---	---	PART OF REMOVAL FOR SIGN #126, LOCATION BASED
128	CTH C, E. OF I-43 RAMP TERMINI	D1-3	78" X 36"	19.50	---	---	---	2	---	1	2	ST NAZIANZ, MILWAUKEE, GREEN BAY, SEE SIGN DETAIL SHEET
129	"	D1-2	60" X 30"	12.50	---	---	2	---	---	1	2	CLOVER, NEWTON, SEE SIGN DETAIL SHEET
130	"	R3-8A	---	---	---	---	---	---	---	---	---	PART OF REMOVAL FOR SIGN #129
131	"	R5-1	30" X 30"	6.25	---	---	---	---	---	---	---	PART OF REMOVAL FOR SIGN #129, MOUNT ON BACK OF SIGN #129
132	"	J1-1	24" X 39"	6.50	---	---	---	1	---	1	1	JCT I-43
133	PARK AND RIDE	R7-8A	12" X 18"	1.50	---	---	---	1	---	---	---	
134	"	R7-8V	12" X 6"	0.50	---	---	---	---	---	---	---	MOUNT BELOW SIGN 133
	PAGE SUBTOTALS			127.42	20.00	4.00	2	7	4	10	12	
	PROJECT TOTALS			**1017.76**	**40.00**	**101.00**	**44**	**38**	**37**	**93**	**112**	

PLAN SHEET PRODUCED
BY WisDOT - NE REGION

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ERECTION & REMOVAL OF PERMANENT SIGNING, TYPE I

SIGN NO.	LOCATION	SIGN CODE	W X H	637.1220 SIGNS TYPE I REFLECTIVE TYPE SH S.F.	638.2601 REMOVING SIGNS TYPE I EACH	638.3100 REMOVING STRUCTURAL STEEL SUPPORTS EACH	TYPE/SIZE OF STEEL	636.0100 SIGN SUPPORTS CONCRETE MASONRY CY	636.0500 SIGN SUPPORTS STEEL REINFORCEMENT LB	635.0200 SIGN SUPPORTS STRUCT. STEEL HIGH-STRENGTH LB	NFO ONLY - POST LENGTH TO BE VERIFIED BY CONTRACTO			REMARKS
											POST NO. 1 LENGTH FT	POST NO. 2 LENGTH FT	DISTANCE BETWEEN POSTS (S) FT	
200	IH-43 SB, N. OF CTH F	R13-1	90" X 36"	22.50	1	2	2-TYPE A	1.2	68	535	15.2	16.7	7.0	TRUCKS OVER 4 TONS STOP AT WEIGH STA.
201	"	E5-56A	144" X 72"	72.00	1	2	2-TYPE A	1.2	68	582	17.0	18.8	9.0	WEIGH STATION 1 MILE
202	IH-43 NB, S. OF NEWTON RD	E1-1A	216" X 132"	198.00	1	2	2-TYPE B	1.6	98	1111	24.7	26.7	10.8	SEE SIGN DETAIL SHEET
203	"	E1-5	120" X 30"	25.00	1	---	---	---	---	---	---	---	---	EXIT 144, MOUNT ABOVE SIGN #102 IN UPPER RIGHT CORNER
204	IH-43 NB, S. OF CTH C	E4-1A	252" X 126"	220.50	1	2	2-TYPE B	1.6	98	1039	22.2	24.4	12.6	SEE SIGN DETAIL SHEET
205	"	E1-5	120" X 30"	25.00	1	---	---	---	---	---	---	---	---	EXIT 144, MOUNT ABOVE SIGN #104 IN UPPER RIGHT CORNER
206	IH-43 SB, N. OF CTH C	E4-1A	252" X 126"	220.50	1	2	2-TYPE B	1.6	98	1055	22.2	25.4	12.6	SEE SIGN DETAIL SHEET
207	"	E1-5	120" X 30"	25.00	1	---	---	---	---	---	---	---	---	EXIT 144, MOUNT ABOVE SIGN #106 IN UPPER RIGHT CORNER
208	IH-43 NB, S. OF CARSTENS LAKE RD	E8-1	192" X 84"	112.00	1	2	2-TYPE B	1.6	98	920	18.4	20.8	9.6	MANITOWOC 4, MARIBEL 22, GREEN BAY 36, SEE SIGN DETAIL SHEET
209	IH-43 SB, N. OF CARSTENS LAKE RD	E1-1A	216" X 156"	234.00	1	2	2-TYPE B	1.6	98	1111	22.7	28.4	10.8	SEE SIGN DETAIL SHEET
210	"	E1-5	120" X 30"	25.00	1	---	---	---	---	---	---	---	---	EXIT 144, MOUNT ABOVE SIGN #109 IN UPPER RIGHT CORNER
	PROJECT TOTALS			**1179.50**	**11**	**14**		**10.4**	**626**	**6353**				

PLAN SHEET PRODUCED

BY WisDOT - NE REGION

3

PAVEMENT MARKING SUMMARY

CATEGORY	STATION		TO	STATION	646.0106 PAVEMENT MARKING EPOXY 4-INCH EDGELINE (WHITE) SOLID LF	646.0106 PAVEMENT MARKING EPOXY 4-INCH DASHED (WHITE) 3' LINE, 9' GAP LF	646.0106 PAVEMENT MARKING EPOXY 4-INCH EDGELINE (YELLOW) SOLID LF	646.0126 PAVEMENT MARKING EPOXY 8-INCH CHANNELIZING LF	646.0841.S PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH LF	646.0883.S PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH LF	647.0166 PAVEMENT MARKING ARROWS EPOXY TYPE 2 EACH	647.0256 PAVEMENT MARKING SYMBOLS EPOXY EACH	647.0656 PAVEMENT MARKING PARKING STALL EPOXY LF	647.0803 PAVEMENT MARKING AERIAL ENFORCEMENT BARS EPOXY 24-INCH LF	REMARKS
	NORTHBOUND														
0010	1190+00.00	NB	-	1369+13.11 NB	15,224	37	17,913	--	3,807	--	--	--	--	48	
0010	1204+35.00	NB	-	1513+29.00 NB	30,894	--	--	--	--	--	--	--	--	--	OVER NB LT EDGELINE STAGE 1
0010	1204+35.00	NB	-	1513+29.00 NB	--	--	30,894	--	--	--	--	--	--	--	OVER NB LT EDGELINE STAGE 2B
0010	1369+13.11	NB	-	1372+48.66 NB	336	--	336	--	84	671	--	--	--	--	MAINLINE & RAMP SECTION
0010	1372+48.66	NB	-	1394+33.57 NB	2,185	--	2,185	--	547	--	--	--	--	--	
0010	1394+33.57	NB	-	1401+40.54 NB	707	--	707	--	177	1,414	--	--	--	--	MAINLINE & RAMP SECTION
0010	1401+40.54	NB	-	1531+50.00 NB	10,170	--	13,009	--	2,543	--	--	--	--	--	
	NORTHBOUND TOTALS					**128,403**		**0**	**7,158**	**2,085**	**0**	**0**	**0**	**48**	
	SOUTHBOUND														
0010	1188+51.00	SB	-	1226+63.97 SB	975	--	3,813	--	244	--	--	--	--	--	
0010	1226+63.97	SB	-	1233+17.06 SB	653	--	653	--	164	1,306	--	--	--	--	MAINLINE & RAMP SECTION
0010	1233+17.06	SB	-	1250+94.07 SB BK	1,777	--	1,777	--	445	--	--	--	--	--	
0010	1250+74.10	SB AH	-	1251+39.68 SB	66	--	66	--	17	--	--	--	--	--	
0010	1251+39.68	SB	-	1254+25.70 SB	286	--	286	--	72	572	--	--	--	--	MAINLINE & RAMP SECTION
0010	1254+25.70	SB	-	1267+83.81 SB BK	1,358	47	1,358	--	340	--	--	--	--	--	
0010	1267+79.67	SB AH	-	1286+39.20 SB BK	1,860	--	1,860	--	465	--	--	--	--	--	
0010	1286+40.21	SB AH	-	1366+49.89 SB	8,010	--	8,010	--	2,003	--	--	--	--	--	
0010	1366+49.89	SB	-	1372+39.16 SB	589	--	589	--	148	1,179	--	--	--	--	MAINLINE & RAMP SECTION
0010	1372+39.16	SB	-	1375+82.73 SB BK	344	--	344	--	86	--	--	--	--	--	
0010	1375+60.80	SB AH	-	1392+84.91 SB	1,724	--	1,724	--	432	--	--	--	--	--	
0010	1392+84.91	SB	-	1396+37.46 SB	353	--	353	--	89	705	--	--	--	--	MAINLINE & RAMP SECTION
0010	1396+37.46	SB	-	1474+18.95 SB BK	7,781	48	7,781	--	1,946	--	--	--	--	12	
0010	1474+55.64	SB AH	-	1529+73.00 SB	2,855	--	5,517	--	714	--	--	--	--	48	
	SOUTHBOUND TOTALS					**62,854**		**0**	**7,165**	**3,762**	**0**	**0**	**0**	**60**	
	PAGE TOTALS					**191,257**		**0**	**14,323**	**5,847**	**0**	**0**	**0**	**108**	

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PAVEMENT MARKING SUMMARY CONTINUED

CATEGORY	STATION		TO	STATION	646.0106 PAVEMENT MARKING EPOXY 4-INCH EDGELINE (WHITE) SOLID LF	646.0106 PAVEMENT MARKING EPOXY 4-INCH DASHED (WHITE) 3' LINE, 9' GAP LF	646.0106 PAVEMENT MARKING EPOXY 4-INCH EDGELINE (YELLOW) SOLID LF	646.0126 PAVEMENT MARKING EPOXY 8-INCH CHANNELIZING LF	646.0841.S PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH LF	646.0883.S PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH LF	647.0166 PAVEMENT MARKING ARROWS EPOXY TYPE 2 EACH	647.0256 PAVEMENT MARKING SYMBOLS EPOXY EACH	647.0656 PAVEMENT MARKING PARKING STALL EPOXY LF	647.0803 PAVEMENT MARKING AERIAL ENFORCEMENT BARS EPOXY 24-INCH LF	REMARKS
WEIGH STATON															
0010	1233+17.06	WS	-	1250+94.07	WS	1,675	--	1,777	--	160	--	--	--	--	--	TAPE ON 30 FT LANES
WEIGH STATION TOTALS						**3,452**		**0**	**160**	**0**	**0**	**0**	**0**	**0**	
CTH C INTERCHANGE															
0010	1372+48.66	SE	-	1383+86.00	SE	1,137	--	1,137	50	--	--	--	--	--	--	
0010	1384+27.00	NE	-	1394+33.57	NE	934	--	1,007	--	--	--	--	--	--	--	
0010	1372+39.16	SW	-	1380+96.00	SW	786	--	857	--	--	--	--	--	--	--	
0010	1380+94.00	NW	-	1392+84.91	NW	1,191	--	1,191	64	--	--	--	--	--	--	
0010	16+02.00	WB	-	17+47.00	WB	146	--	146	--	--	--	--	--	--	--	CTH C WB
0010	18+24.00	WB	-	24+16.00	WB	593	--	500	90	--	--	1	--	--	--	CTH C WB
0010	24+31.00	WB	-	25+49.00	WB	46	--	118	--	--	--	--	--	--	--	CTH C WB
0010	16+02.00	EB	-	17+87.00	EB	106	--	186	--	--	--	--	--	--	--	CTH C EB
0010	18+11.00	EB	-	23+85.00	EB	575	--	500	80	--	--	1	--	--	--	CTH C EB
0010	24+68.00	EB	-	25+49.00	EB	82	--	50	--	--	--	--	--	--	--	CTH C EB
CTH C INTERCHANGE TOTALS						**11,287**		**284**	**0**	**0**	**2**	**0**	**0**	**0**	
PARK & RIDE/OVERPASS ROADWAYS															
CTH C PARK & RIDE						--	--	--	--	--	--	--	1	530	--	HANDICAP SYPMBOL
POINT CREEEK ROAD OVERPASS						--	--	890	--	--	--	--	--	--	--	DOUBLE YELLOW CENTERLINE
PARK & RIDE TOTALS						**890**		**0**	**0**	**0**	**0**	**1**	**530**	**0**	
PROJECT TOTALS						**206,887**		**284**	**14,483**	**5,847**	**2**	**1**	**530**	**108**	

TEMPORARY PAVEMENT MARKING SUMMARY

CATEGORY	STATION	TO	STATION	646.0600 REMOVING PAVEMENT MARKINGS LF	TEMPORARY PAVEMENT MARKING 649.0402 PAINT 4-INCH WHITE LF	649.0402 PAINT 4-INCH YELLOW LF	649.0402 PAINT 4-INCH BLACK LF	649.0400 REMOVABLE TAPE 4-INCH WHITE LF	649.0400 REMOVABLE TAPE 4-INCH YELLOW LF	649.0801 REMOVABLE TAPE 8-INCH WHITE LF	649.2100 TEMPORARY RAISED PAVEMENT MARKERS TYPE I EACH	REMARKS
	NORTHBOUND STAGE 1											
0010	1196+14.00 'NB'	-	1197+17.00 'NB'	--	--	--	--	--	100	--	--	S. CROSSOVER RT EDGELINE, YELLOW
0010	1197+17.00 'NB'	-	1198+18.00 'NB'	--	--	--	--	100	--	--	--	S. CROSSOVER LT EDGELINE, WHITE
0010	1197+18.00 'NB'	-	1202+93.00 'NB'	--	--	305	--	--	272	--	23	S. CROSSOVER RT EDGELINE, YELLOW
0010	1198+17.00 'NB'	-	1204+35.00 'NB'	--	620	--	--	--	--	--	25	S. CROSSOVER LT EDGELINE, WHITE
0010	1198+93.00 'NB'	-	1519+38.00 'NB'	--	--	63,690	--	--	--	--	--	IH 43 NB DOUBLE YELLOW CENTERLINE
0010	1198+93.00 'NB'	-	1204+35.00 'NB'	542	--	--	--	--	--	--	--	IH 43 NB LT EDGELINE, YELLOW
0010	1511+38.00 'NB'	-	1520+00.00 'NB'	862	--	--	--	--	--	--	--	IH 43 NB LT EDGELINE, YELLOW
0010	1513+29.00 'NB'	-	1521+50.00 'NB'	--	821	--	--	--	--	--	33	N. CROSSOVER LT EDGELINE, WHITE
0010	1516+14.00 'NB'	-	1522+38.00 'NB'	--	--	330	--	--	295	--	25	N. CROSSOVER RT EDGELINE, YELLOW
0010	1521+50.00 'NB'	-	1522+76.00 'NB'	--	--	--	--	126	--	--	--	N. CROSSOVER LT EDGELINE, WHITE
0010	1522+38.00 'NB'	-	1523+61.00 'NB'	--	--	--	--	--	123	--	--	N. CROSSOVER RT EDGELINE, YELLOW
	NORTHBOUND STAGE 1 TOTALS			**1,404**		**65,766**			**1,016**	**0**	**106**	
	NORTHBOUND STAGE 2B											
0010	1198+93.00 'NB'	-	1519+38.00 'NB'	--	--	--	63,690	--	--	--	--	PAINT OVER DOUBLE YELLOW CENTERLINE BLACK
0010	1198+93.00 'NB'	-	1519+38.00 'NB'	--	2,564	--	--	--	--	--	--	IH 43 SB CENTERLINE SKIPS 4' LINE 46' GAP
	NORTHBOUND STAGE 2B TOTALS			**0**		**66,254**			**0**	**0**	**0**	
	NORTHBOUND STAGE 3											
0010	1190+00.00 'NB'	-	1195+00.00 'NB'	500	--	--	--	--	--	--	--	IH 43 NB LT EDGELINE
0010	1190+00.00 'NB'	-	1196+19.00 'NB'	--	--	619	--	--	--	--	25	S. CROSSOVER LT EDGELINE, YELLOW
0010	1190+00.00 'NB'	-	1197+18.00 'NB'	--	305	--	--	415	--	--	29	S. CROSSOVER RT EDGELINE, WHITE
0010	1196+19.00 'NB'	-	1197+19.00 'NB'	--	--	--	--	--	100	--	--	S. CROSSOVER LT EDGELINE, YELLOW
0010	1197+19.00 'NB'	-	1198+17.00 'NB'	--	--	--	--	100	--	--	--	S. CROSSOVER RT EDGELINE, WHITE
0010	1521+56.00 'NB'	-	1522+55.00 'NB'	--	--	--	--	100	--	--	--	N. CROSSOVER RT EDGELINE, WHITE
0010	1522+55.00 'NB'	-	1523+54.00 'NB'	--	--	--	--	--	100	--	--	N. CROSSOVER LT EDGELINE, YELLOW
0010	1522+55.00 'NB'		1529+73.00 'NB'	--	348	--	--	371	--	--	29	N. CROSSOVER RT EDGELINE, WHITE
0010	1523+54.00 'NB'	-	1531+23.00 'NB'	--	--	770	--	--	--	--	31	N. CROSSOVER LT EDGELINE, YELLOW
0010	1525+00.00 'NB'	-	1531+23.00 'NB'	623	--	--	--	--	--	--	--	IH 43 NB LT EDGELINE, YELLOW
	NORTHBOUND STAGE 3 TOTALS			**1,123**		**2,042**			**1,186**	**0**	**113**	
	NORTHBOUND STAGE 4A											
0010	1198+93.00 'NB'	-	1216+89.00 'NB'	3,736	--	--	--	--	--	--	--	DOUBLE YELLOW CENTERLINE
0010	1201+73.00 'NB'	-	1216+89.00 'NB'	1,516	--	--	--	--	--	--	--	IH 43 NB LT EDGELINE
0010	1365+14.00 'NB'	-	1369+32.00 'NB'	--	--	--	--	422	277	--	--	TEMPORARY CTH C RAMP CROSSOVER
0010	1503+10.00 'NB'	-	1517+29.00 'NB'	1,419	--	--	--	--	--	--	--	IH 43 NB LT EDGELINE
0010	1503+10.00 'NB'	-	1520+14.00 'NB'	3,145	--	--	--	--	--	--	--	DOUBLE YELLOW CENTERLINE
	NORTHBOUND STAGE 4A TOTALS			**9,816**		**0**			**699**	**0**	**0**	
	NORTHBOUND STAGE 5											
0010	1190+00.00 'NB'	-	1192+62.00 'NB'	262	--	--	--	--	--	--	--	S. CROSSOVER LT EDGELINE
0010	1527+88.00 'NB'	-	1531+23.00 'NB'	335	--	--	--	--	--	--	--	N. CROSSOVER LT EDGELINE
	NORTHBOUND STAGE 5 TOTALS			**597**		**0**			**0**	**0**	**0**	
	NORTHBOUND TOTALS			**12,940**		**134,062**			**2,901**	**0**	**219**	

TEMPORARY PAVEMENT MARKING SUMMARY CONTINUED

CATEGORY	STATION	TO	STATION	646.0600 REMOVING PAVEMENT MARKINGS LF	TEMPORARY PAVEMENT MARKING 649.0402 PAINT 4-INCH WHITE LF	649.0402 PAINT 4-INCH YELLOW LF	649.0402 PAINT 4-INCH BLACK LF	649.0400 REMOVABLE TAPE 4-INCH WHITE LF	649.0400 REMOVABLE TAPE 4-INCH YELLOW LF	649.0801 REMOVABLE TAPE 8-INCH WHITE LF	649.2100 TEMPORARY RAISED PAVEMENT MARKERS TYPE I EACH	REMARKS
SOUTHBOUND STAGE 1												
0010	1188+51.00 'SB'	-	1195+00.00 'SB'	649	--	--	--	--	--	--	--	IH 43 SB RT EDGELINE, YELLOW
0010	1188+51.00 'SB'	-	1196+19.00 'SB'	--	--	768	--	--	--	--	31	S. CROSSOVER RT EDGELINE, YELLOW
0010	1190+01.00 'SB'	-	1197+18.00 'SB'	--	348	--	--	370	--	--	29	S. CROSSOVER LT EDGELINE, WHITE
0010	1522+75.00 'SB'	-	1529+73.00 'SB'	--	287	--	--	411	--	--	28	N. CROSSOVER LT EDGELINE, WHITE
0010	1523+61.00 'SB'	-	1529+73.00 'SB'	--	--	613	--	--	--	--	25	N. CROSSOVER RT EDGELINE, YELLOW
0010	1525+00.00 'SB'	-	1529+73.00 'SB'	473	--	--	--	--	--	--	--	IH 43 SB RT EDGELINE, YELLOW
SOUTHBOUND STAGE 1 TOTALS				**1,122**		**2,016**			**781**	**0**	**112**	
SOUTHBOUND STAGE 2B												
0010	1216+88.00 'SB'	-	1503+10.00 'SB'	--	2,290	--	--	--	--	--	--	IH 43 SB CENTERLINE SKIPS 4' LINE 46' GAP
SOUTHBOUND STAGE 2 TOTALS				**0**		**2,290**			**0**	**0**	**0**	
SOUTHBOUND STAGE 3												
0010	1197+18.00 'SB'	-	1204+35.00 'SB'	--	--	348	--	--	371	--	29	S. CROSSOVER LT EDGELINE, YELLOW
0010	1198+17.00 'SB'	-	1521+56.00 'SB'	--	32,339	--	--	--	--	--	66	IH 43 SB RT EDGELINE, WHITE
0010	1199+60.00 'SB'	-	1520+93.00 'SB'	--	--	63,866	--	--	--	--	--	IH 43 SB DOUBLE YELLOW CENTERLINE
0010	1200+00.00 'SB'	-	1216+89.00 'SB'	1,689	--	--	--	--	--	--	--	IH 43 SB RT EDGELINE, YELLOW
0010	1356+89.00 'SB'	-	1369+32.00 'SB'	--	1,241	696	--	--	--	--	--	TEMPORARY CTH C RAMP CROSSOVER
0010	1361+36.00 'SB'	-	1362+36.00 'SB'	--	--	--	--	--	--	200	--	TEMPORARY CTH C RAMP CROSSOVER
0010	1503+10.00 'SB'	-	1520+00.00 'SB'	1,690	--	--	--	--	--	--	--	IH 43 SB RT EDGELINE, YELLOW
0010	1515+38.00 'SB'	-	1522+55.00 'SB'	--	--	304	--	--	414	--	29	N. CROSSOVER LT EDGELINE, YELLOW
SOUTHBOUND STAGE 3 TOTALS				**3,379**		**98,794**			**785**	**200**	**123**	
SOUTHBOUND STAGE 4A												
0010	1188+51.00 'SB'	-	1191+85.00 'SB'	334	--	--	--	--	--	--	--	S. CROSSOVER RT EDGELINE
0010	1527+35.00 'SB'	-	1529+73.00 'SB'	238	--	--	--	--	--	--	--	N. CROSSOVER RT EDGELINE
SOUTHBOOUND STAGE 4A TOTALS				**572**		**0**			**0**	**0**	**0**	
SOUTHBOUND STAGE 5												
0010	1199+60.00 'SB'	-	1520+93.00 'SB'	66,437	--	--	--	--	--	--	--	DOUBLE YELLOW CENTERLINE
0010	1202+66.00 'SB'	-	1518+00.00 'SB'	31,534	--	--	--	--	--	--	--	IH 43 SB RT EDGELINE
SOUTHBOUND STAGE 5 TOTALS				**97,971**		**0**			**0**	**0**	**0**	
SOUTHBOUND TOTALS				**103,044**		**103,100**			**1,566**	**200**	**235**	
PROJECT TOTALS				**115,984**		**237,162**			**4,467**	**200**	**454**	

3

CONSTRUCTION STAKING SUMMARY

CATEGORY	STATION		TO	STATION		LOCATION	650.6000 CONSTRUCTION STAKING PIPE CULVERTS EACH	650.8000 CONSTRUCTION STAKING RESURFACING REFERENCE LF	REMARKS
				NORTHBOUND					
0010	1188+00.00	NB	-	1531+00.00	NB	IH 43 NB	--	34300	
0010	1334+89.04	NB				IH 43 NB RT	1	--	
0010	1391+89.04	NB				IH 43 NB LT	1	--	
						NORTHBOUND TOTALS	**2**	**34300**	
				SOUTHBOUND					
0010	1188+00.00	SB	-	1267+83.81	SB BK	IH 43 SB	--	7984	
0010	1240+39.04	SB				IH 43 SB LT	1	--	
0010	1247+89.04	SB				IH 43 SB LT	1	--	
0010	1267+79.67	SB AH	-	1286+39.20	SB BK	IH 43 SB	--	1860	
0010	1286+40.21	SB AH	-	1375+82.73	SB BK	IH 43 SB	--	8943	
0010	1375+60.80	SB AH	-	1474+18.95	SB BK	IH 43 SB	--	9858	
0010	1474+55.64	SB AH	-	1531+00.00	SB	IH 43 SB	--	5644	
						SOUTHBOUND TOTALS	**2**	**34288**	
				RAMPS/SIDEROADS					
0010	1226+88.45	WS	-	1250+94.07	WS BK	WEIGH STATION RAMP	--	2405.6	
0010	1250+74.10	WS AH	-	1254+25.70	WS	WEIGH STATION RAMP	--	351.6	
0010	1369+46.66	SE	-	1384+11.12	SE	CTH C SE RAMP	--	1464.5	
0010	1383+75.88	NE	-	1401+44.67	NE	CTH C NE RAMP	--	1768.8	
0010	1365+24.56	SW	-	1381+24.58	SW	CTH C SW RAMP	--	1600.0	
0010	1380+45.16	NW	-	1396+01.99	NW	CTH C NW RAMP	--	1556.8	
0010	16+02.00	EB		25+49.00	EB	CTH C EB	--	947.0	
0010	16+02.00	WB		25+49.00	WB	CTH C WB	--	947.0	
						RAMP TOTALS	**0**	**11041**	
						PROJECT TOTALS	**4**	**79,630**	

3

Conduit Rigid Nonmetallic Schedule 40

CATEGORY	FROM	TO	652.0225 2-INCH LF	652.0235 3-INCH LF
	USH 151 & STH 42-Dufek Dr (S36-0802)			
0010	PB5	PB14	600	--
0010	PB8	SB4	--	20
0010	PB12	SB8	--	10
	USH 151 & STH 42-DUFEK DR TOTALS		**600**	**30**
	IH 43 SB & USH 151 (S36-2013)			
0010	CB1	PB1	--	70
0010	CB1	PB1	--	70
0010	PB3	SB2	--	10
0010	PB7	SB6	--	20
0010	PB8	PB10	10	--
0010	PB8	PB10	10	--
0010	PB10	PB11	600	--
0010	PB9	CB1	--	10
0010	PB9	CB1	--	10
	IH 43 SB & USH 151 TOTALS		**620**	**190**
	IH 43 NB & USH 151 (S36-0874)			
0010	PB2	SB1	--	20
0010	PB6	SB4	--	10
	TOTALS		**0**	**30**
	PROJECT TOTALS		**1,220**	**250**

CONCRETE BASES

CATEGORY	LOCATION	204.0195 REMOVING CONCRETE BASES EACH	654.0110 CONCRETE BASE TYPE 10 EACH	654.0113 CONCRETE BASE TYPE 13 EACH	654.0217 CONTROL CABINET TYPE 9 SPECIAL EACH	SPV.0060.03 PULL BOXES NON-CONDUCTIVE 24 x 42-INCH EACH
0010	USH 151 & STH 42-Dufek Dr (S36-0802)	2	--	2	--	1
0010	IH 43 SB & USH 151 (S36-2013)	2	1	1	1	1
0010	IH 43 NB & USH 151 (S36-0874)	2	1	1	--	--
	TOTALS	**6**	**2**	**4**	**1**	**2**

3

TRAFFIC SIGNALS

CATEGORY	LOCATION	657.0100 PEDESTAL BASES EACH	657.0425 TRAFFIC SIGNAL STANDARDS ALUMINUM 15-FT EACH	657.1350 INSTALL POLES TYPE-10 EACH	657.1360 INSTALL POLES TYPE-13 EACH	657.1530 INSTALL MONOTUBE ARMS 30-FT EACH	657.1540 INSTALL MONOTUBE ARMS 40-FT EACH	657.1545 INSTALL MONOTUBE ARMS 45-FT EACH	657.1550 INSTALL MONOTUBE ARMS 50-FT EACH	657.1555 INSTALL MONOTUBE ARMS 55-FT EACH
0010	USH 151 & STH 42-Dufek Dr (S36-0802)	--	--	--	2	--	--	--	1	1
0010	IH 43 SB & USH 151 (S36-2013)	1	1	1	1	1	1	--	--	--
0010	IH 43 NB & USH 151 (S36-0874)	--	--	1	1	1	--	1	--	--
	PROJECT TOTALS	**1**	**1**	**2**	**4**	**2**	**1**	**1**	**1**	**1**

TRAFFIC SIGNALS

CATEGORY	LOCATION	658.0110 TRAFFIC SIGNAL FACE 3-12 INCH VERTICAL EACH	658.0115 TRAFFIC SIGNAL FACE 4-12 INCH VERTICAL EACH	658.0600 LED MODULES 12-INCH RED BALL EACH	658.0605 LED MODULES 12-INCH YELLOW BALL EACH	658.0610 LED MODULES 12-INCH GREEN BALL EACH	658.0615 LED MODULES 12-INCH RED ARROW EACH	658.0620 LED MODULES 12-INCH YELLOW ARROW EACH	658.0625 LED MODULES 12-INCH GREEN ARROW EACH	658.5069 SIGNAL MOUNTING HARDWARE LS	SPV.0105.01 REMOVE TRAFFIC SIGNAL LS
0010	USH 151 & STH 42-Dufek Dr (S36-0802)	8	--	4	4	4	4	8	--	1	1
0010	IH 43 SB & USH 151 (S36-2013)	5	2	5	5	5	2	4	2	1	1
0010	IH 43 NB & USH 151 (S36-0874)	5	2	5	5	5	2	4	2	1	1
	PROJECT TOTALS	**18**	**4**	**14**	**14**	**14**	**8**	**16**	**4**	**3**	**3**

3

USH 151 & STH 42-Dufek Dr (S36-0802) TRAFFIC SIGNAL CABLE

USH 151 & STH 42-Dufek Dr (S36-0802)	655.0230	655.0240	655.0260		655.0230	655.0240	658.0215
					Base to Head	Base to Head	Backplates
	5-14	7-14	12-14	HEAD	5-14	7-14	Signal Face
	AWG	AWG	AWG	NO.	AWG	AWG	3 Section
							12-Inch
From CB1 to	LF	LF	LF		LF	LF	EACH
SB1	50			13			
SB2			100	14			
				15			
SB3			180	5			
				6		15	1
SB3	180			16			
SB4			320	7		80	1
				8	70		1
				9	60		1
SB5			340	11			
				17			
SB6	260			12			
SB7			250	1		15	1
				10			
SB8			140	2		80	1
				3	70		1
				4	60		1
Sub Total	490	0	1,330		260	190	8
TOTALS	750	190	1,330				8

**ALL ITEMS CATEGORY 0010

Signal Indication		Conductor Color
Red	=	Red
Yellow	=	Orange
Green	=	Green
Red Arrow	=	Red w/Black Tracer
Yellow Arrow	=	Black w/White
Yellow Flashing Arrow	=	White w/Black
Green Arrow	=	Blue w/Black

PEDS

Walk	=	Green
Don't Walk	=	Red
Button	=	Black & Orange

NOTE: If there is a back to back 3 section with ball indications, then use solid colored conductors for NB & EB, and tracer conductors for SB & WB.

NOTE: Lead-in Cable shall be pulled in separately from other cables/wires and enter the Control Cabinet in a separate conduit if provided.

3

IH 43 SB & USH 151 (S36-2013) TRAFFIC SIGNAL CABLE

IH 43 SB & USH 151 (S36-2013)	655.0230	655.0240	655.0260		655.0230	655.0240	658.0215	658.0220
					Base to Head	Base to Head	Backplates	Backplates
	5-14	7-14	12-14	HEAD	5-14	7-14	Signal Face	Signal Face
	AWG	AWG	AWG	NO.	AWG	AWG	3 Section	4 Section
							12-Inch	12-Inch
From CB1 to	LF	LF	LF		LF	LF	EACH	EACH
SB1	140			5				
SB2	240			6	70		1	
				7	60		1	
SB3	270			9				
SB4	330			10				
SB5			250	1		20		1
				8	20		1	
SB6			200	2		40		1
				3	50		1	
				4	60		1	
SB7	120			11				
Sub Total	1,100	0	450		260	60	5	2
TOTALS	1,360	60	450				5	2

**ALL ITEMS CATEGORY 0010

Signal Indication		Conductor Color
Red	=	Red
Yellow	=	Orange
Green	=	Green
Red Arrow	=	Red w/Black Tracer
Yellow Arrow	=	Black w/White
Yellow Flashing Arrow	=	White w/Black
Green Arrow	=	Blue w/Black

PEDS

Walk	=	Green
Don't Walk	=	Red
Button	=	Black & Orange

NOTE: If there is a back to back 3 section with ball indications, then use solid colored conductors for NB & EB, and tracer conductors for SB & WB.

NOTE: Lead-in Cable shall be pulled in separately from other cables/wires and enter the Control Cabinet in a separate conduit if provided.

IH 43 NB & USH 151 (S36-0874) TRAFFIC SIGNAL CABLE

IH 43 NB & USH 151 (S36-0874)	655.0230	655.0240	655.0260		655.0230	655.0240	658.0215	658.0220
					Base to Head	Base to Head	Backplates	Backplates
	5-14	7-14	12-14	HEAD	5-14	7-14	Signal Face	Signal Face
	AWG	AWG	AWG	NO.	AWG	AWG	3 Section	4 Section
							12-Inch	12-Inch
From CB1 to	LF	LF	LF		LF	LF	EACH	EACH
SB1	80			1	70		1	
				2	60		1	
SB2	110			9				
SB3	120			10				
SB3			120	3	20		1	
				4		20		1
SB4			390	5		40		1
				6	50		1	
				7	60		1	
SB5	450			11				
SB6	470			12				
SB7	420			13				
SB8	240			8				
Sub Total	1,890	0	510		260	60	5	2
TOTALS	2,150	60	510				5	2

**ALL ITEMS CATEGORY 0010

Signal Indication		Conductor Color
Red	=	Red
Yellow	=	Orange
Green	=	Green
Red Arrow	=	Red w/Black Tracer
Yellow Arrow	=	Black w/White
Yellow Flashing Arrow	=	White w/Black
Green Arrow	=	Blue w/Black

PEDS

Walk	=	Green
Don't Walk	=	Red
Button	=	Black & Orange

NOTE: If there is a back to back 3 section with ball indications, then use solid colored conductors for NB & EB, and tracer conductors for SB & WB.

NOTE: Lead-in Cable shall be pulled in separately from other cables/wires and enter the Control Cabinet in a separate conduit if provided.

ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG

LOCATION: USH 151 & STH 42-DUFEK DR (S36-0802)

FROM	TO	655.0515 (EQUIPMENT GROUNDING CONDUCTOR) (GREEN) LF
CB1	SB1	50
SB1	PB1	40
SB1	SB2	100
SB2	PB2	40
SB2	PB3	80
SB2	SB3	130
SB3	PB6	40
SB3	SB4	190
SB4	PB7	110
SB4	PB8	50
SB4	SB5	150
SB5	PB9	40
SB5	SB6	140
SB6	PB10	50
SB6	SB7	50
SB7	PB11	100
SB7	SB8	170
SB8	PB12	40
SB8	CB1	140
CB1	PB13	50
LB1	PB5	40
LB1	PB4	90
USH 151 & STH 42/DUFEK SUBTOTAL		**1,890**

LOCATION: IH 43 SB & USH 151 (S36-2013)

FROM	TO	655.0515 (EQUIPMENT GROUNDING CONDUCTOR) (GREEN) LF
CB1	SB1	140
SB1	PB1	70
SB1	SB2	210
SB2	PB2	100
SB2	PB3	40
SB2	SB3	80
SB3	PB4	40
SB3	SB4	190
SB4	PB5	70
SB4	SB5	130
SB5	PB6	40
SB5	SB6	120
SB6	PB7	50
SB6	SB7	130
SB7	PB8	40
SB7	CB1	120
CB1	PB9	40
H 43 SB & USH 151 SUBTOTAL		**1,610**

LOCATION: IH 43 NB & USH 151 (S36-0874)

FROM	TO	655.0515 (EQUIPMENT GROUNDING CONDUCTOR) (GREEN) LF
CB1	PB1	40
CB1	PB14	100
CB1	SB2	110
CB1	SB1	80
SB1	PB2	50
SB1	SB3	210
SB3	PB3	40
SB3	PB4	80
SB3	SB4	220
SB4	PB5	110
SB4	PB6	40
SB4	SB5	120
SB5	PB7	40
SB4	SB6	170
SB6	PB8	40
SB6	SB7	110
SB7	PB9	50
SB7	PB10	110
SB7	SB8	230
SB8	PB11	110
SB8	PB12	40
SB8	PB13	90
SB8	CB1	240
H 43 NB & USH 151 SUBTOTAL		**2,430**

PROJECT TOTALS **5,930**

**ALL ITEMS CATEGORY 0010

3

LIGHTING SUMMARY

CATEGORY	LOCATION	657.1812 INSTALL LUMINAIRE ARMS STEEL 12-FT EACH	659.1120 LUMINAIRE UTILITY LED-B EACH
0010	USH 151 & STH 42-Dufek Dr (S36-0802)	2	5
0010	IH 43 SB & USH 151 (S36-2013)	3	5
0010	IH 43 NB & USH 151 (S36-0874)	2	4
	PROJECT TOTALS	**7**	**14**

SIGNAL LIGHTING CABLE

FROM	TO	655.0305 TYPE UF 2-12 AWG GROUNDED LF
USH 151 & STH 42-Dufek Dr (S36-0802)		
CB1	LB1	250
CB1	SB3	180
CB1	SB4	320
CB1	SB6	260
CB1	SB8	140
USH 151 & STH 42-Dufek Dr (S36-0802) TOTAL		**1150**
IH 43 SB & USH 151 (S36-2013)		
CB1	SB1	140
CB1	SB2	240
CB1	SB4	330
CB1	SB6	200
IH 43 SB & USH 151 (S36-2013) TOTAL		**910**
IH 43 NB & USH 151 (S36-0874)		
CB1	SB1	80
CB1	SB3	120
CB1	SB4	390
CB1	SB8	240
IH 43 NB & USH 151 (S36-0874) TOTAL		**830**
PROJECT TOTALS		**2890**

ELECTRICAL WIRE LIGHTING 12 AWG

USH 151 & STH 42-DUFEK DR (S36-0802)

LOCATION

120 VOLT SYSTEM

FROM	TO	655.0610 LF
SB4	LUMINAIRE	150
SB8	LUMINAIRE	150
USH 151 & STH 42-DUFEK DR (S36-0802) TOTAL		**300**

IH 43 SB & USH 151 (S36-2013)

120 VOLT SYSTEM

FROM	TO	655.0610 LF
SB2	LUMINAIRE	150
SB6	LUMINAIRE	300
IH 43 SB & USH 151 (S36-2013) TOTAL		**450**

IH 43 NB & USH 151 (S36-0874)

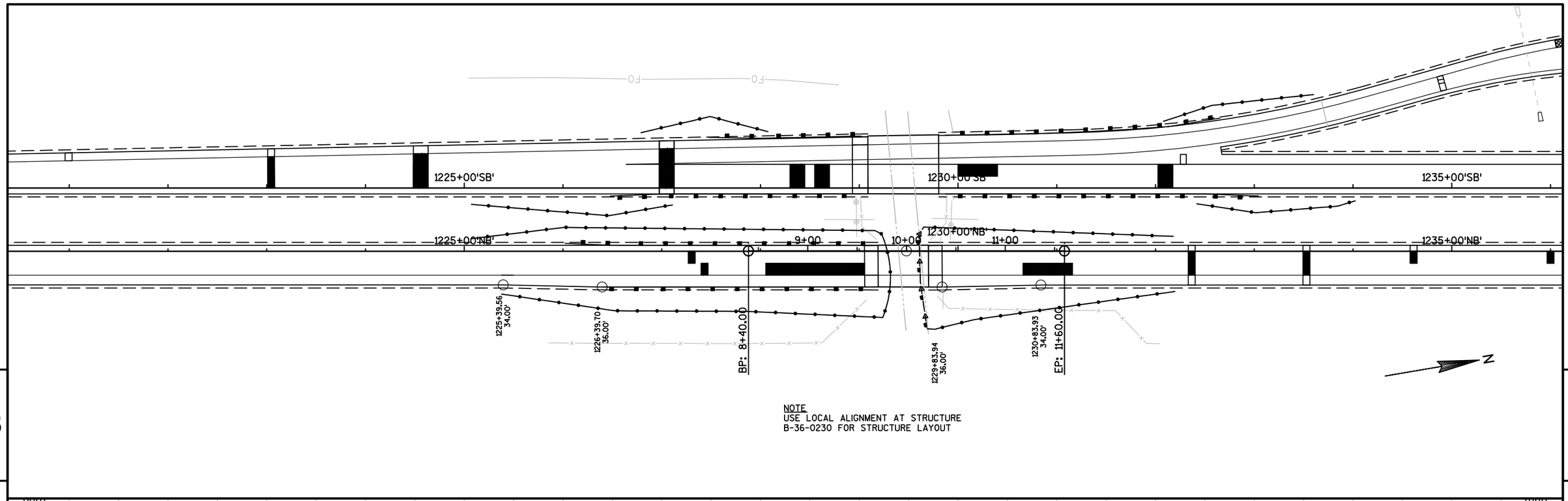
120 VOLT SYSTEM

FROM	TO	655.0610 LF
SB1	LUMINAIRE	150
SB4	LUMINAIRE	150
IH 43 NB & USH 151 (S36-0874) TOTAL		**300**
PROJECT TOTALS		**1050**

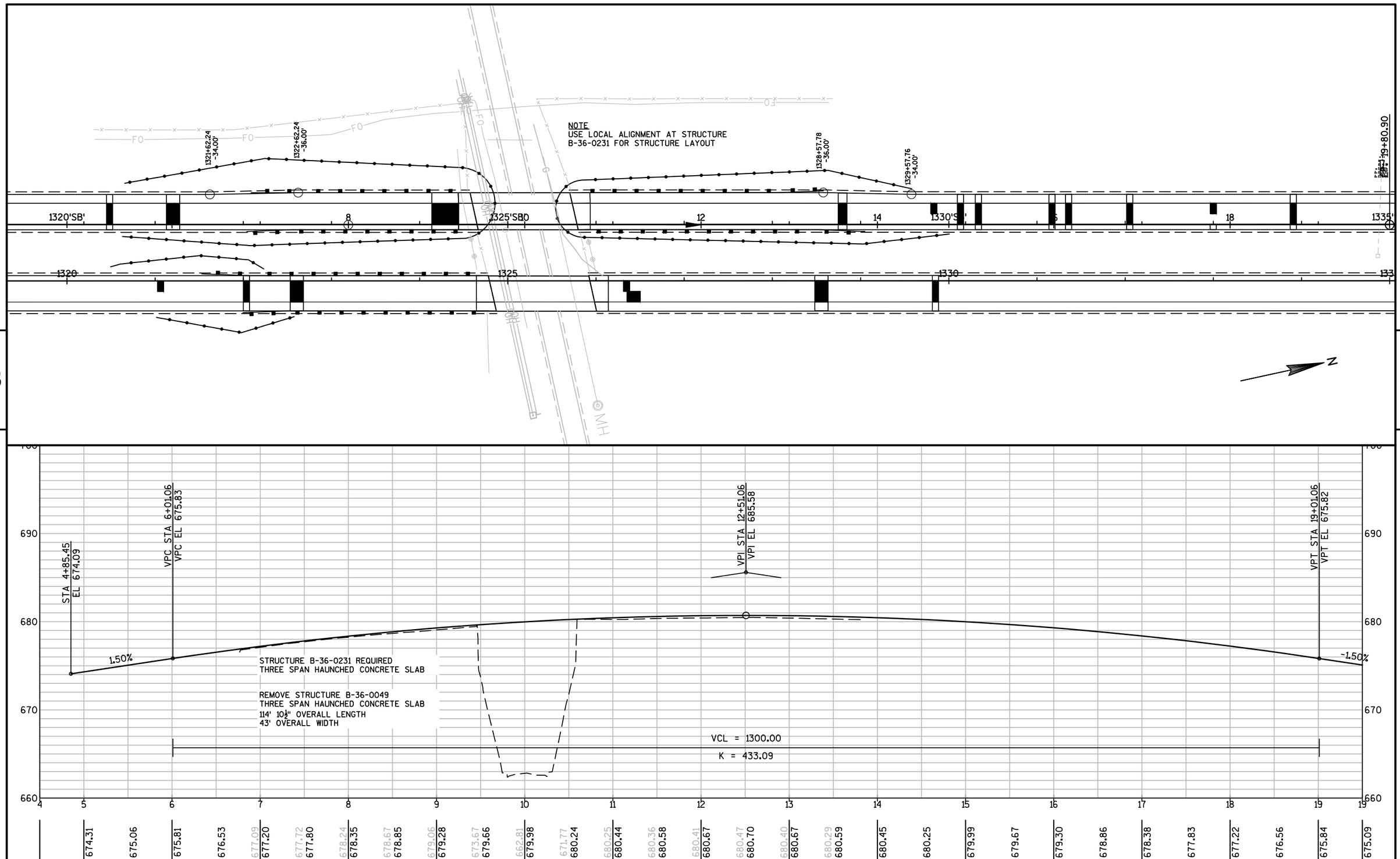
SAWING SUMMARY

CATEGORY	STATION	TO	STATION	LOCATION	690.0150 SAWING ASPHALT LF	**690.025 SAWING CONCRETE LF	REMARKS
			NORTHBOUND				
0010	1192+51.01 NB	-	1201+84.20 NB	IH 43 NB	933	--	S. CROSSOVER REMOVAL
0010			1216+88.98 NB	IH 43 NB	40	--	S. PROJECT LIMITS
0010	1229+05.24 NB	-	1229+19.16 NB	IH 43 NB	--	80	B-36-0230 S. APPROACH SLAB
0010	1229+70.05 NB	-	1229+84.93 NB	IH 43 NB	--	80	B-36-0230 N. APPROACH SLAB
0010	1270+21.49 NB	-	1270+37.16 NB	IH 43 NB	--	80	B-36-0048 S. APPROACH SLAB
0010	1324+64.32 NB	-	1324+87.03 NB	IH 43 NB	--	80	B-36-0041 S. APPROACH SLAB
0010	1325+91.84 NB	-	1326+14.02 NB	IH 43 NB	--	80	B-36-0041 N. APPROACH SLAB
0010	1383+66.81 NB	-	1384+03.04 NB	IH 43 NB	--	80	B-36-0051 N. APPROACH SLAB
0010	1445+27.92 NB	-	1445+63.61 NB	IH 43 NB	--	80	B-36-0053 S. APPROACH SLAB
0010	1446+97.25 NB	-	1447+29.32 NB	IH 43 NB	--	36	B-36-0053 N. APPROACH LT SHOULDER
0010			1503+10.30 NB	IH 43 NB	40	--	N. PROJECT LIMITS
0010	1517+07.10		1527+87.63 NB	IH 43 NB	1081	--	N. CROSSOVER REMOVAL
			NORTHBOUND TOTALS		**2094**	**596**	
			SOUTHBOUND				
0010	1191+69.39		1202+66.40 SB	IH 43 SB	1097	--	S. CROSSOVER REMOVAL
0010			1216+88.55 SB	IH 43 SB	40	--	S. PROJECT LIMITS
0010	1228+93.15 SB	-	1229+08.82 SB	IH 43 SB	--	80	B-36-0047 S. APPROACH SLAB
0010	1270+00.14 SB	-	1270+21.55 SB	IH 43 SB	--	80	B-36-0040 S. APPROACH SLAB
0010	1324+44.12 SB	-	1324+64.90 SB	IH 43 SB	--	80	B-36-0231 S. APPROACH SLAB
0010	1325+70.74 SB	-	1325+93.39 SB	IH 43 SB	--	80	B-36-0231 N. APPROACH SLAB
0010	1444+80.71 SB	-	1444+96.45 SB	IH 43 SB	--	22	B-36-0052 S. APPROACH LT SHOULDER
0010	1446+31.70 SB	-	1446+66.02 SB	IH 43 SB	--	80	B-36-0052 N. APPROACH SLAB
0010			1503+10.30 SB	IH 43 SB	40	--	N. PROJECT LIMITS
0010	1517+88.81 SB	-	1527+21.98 SB	IH 43 SB	933	--	N. CROSSOVER REMOVAL
			SOUTHBOUND TOTALS		**2110**	**422**	
			RAMPS/ PARK AND RIDE/SIDEROADS				
0010			1237+42.65 WS	WS RAMP	--	27	S. LOOP BUTT JOINT
0010			1238+51.45 WS	WS RAMP	--	34	S. OF SCALE BUTT JOINT
0010			1239+85.41 WS	WS RAMP	--	34	N. OF SCALE BUTT JOINT
0010			1244+57.02 WS	WS RAMP	--	27	N. LOOP BUTT JOINT
0010			048+07.80	POINT CREEK ROAD	22	--	POINT CREEK ROAD W. LIMITS
0010			052+53.54	POINT CREEK ROAD	22	--	POINT CREEK ROAD E. LIMITS
0010			NEWTON ROAD		188	20	B-36-0049 REMOVAL
0010			CTH C PARK & RIDE		50	--	CTH C PARK AND RIDE ENTRANCE BUTT JOINT
0010			16+00.00 WB	CTH C WB	--	14	
0010			16+00.00 EB	CTH C EB	--	14	
0010			25+48.70 WB	CTH C WB	--	14	
0010			25+48.70 EB	CTH C EB	--	24	
			RAMP/PARK & RIDE/OVERPASS ROADWAYS TOTALS		**282**	**208**	
			PROJECT TOTALS		**4486**	**1226**	

**ADDITIONAL QUANTITES LOCATED ELSWHERE IN THE PLAN



PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	PLAN AND PROFILE: IH 43 NB AT STRUCTURE B-36-0230	SHEET 128	E

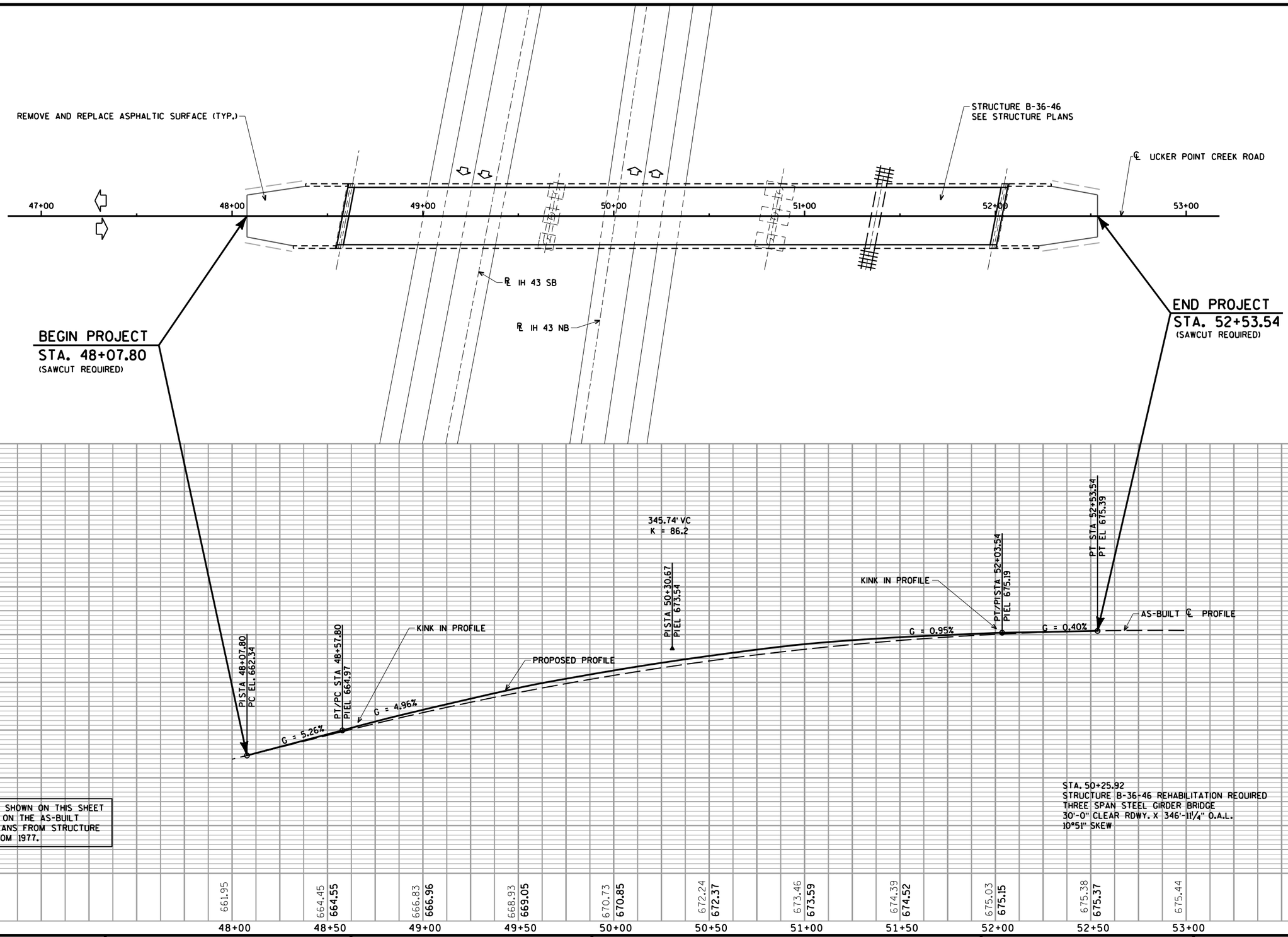


PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	PLAN AND PROFILE: IH 43 SB AT B-36-0231	SHEET 129 E

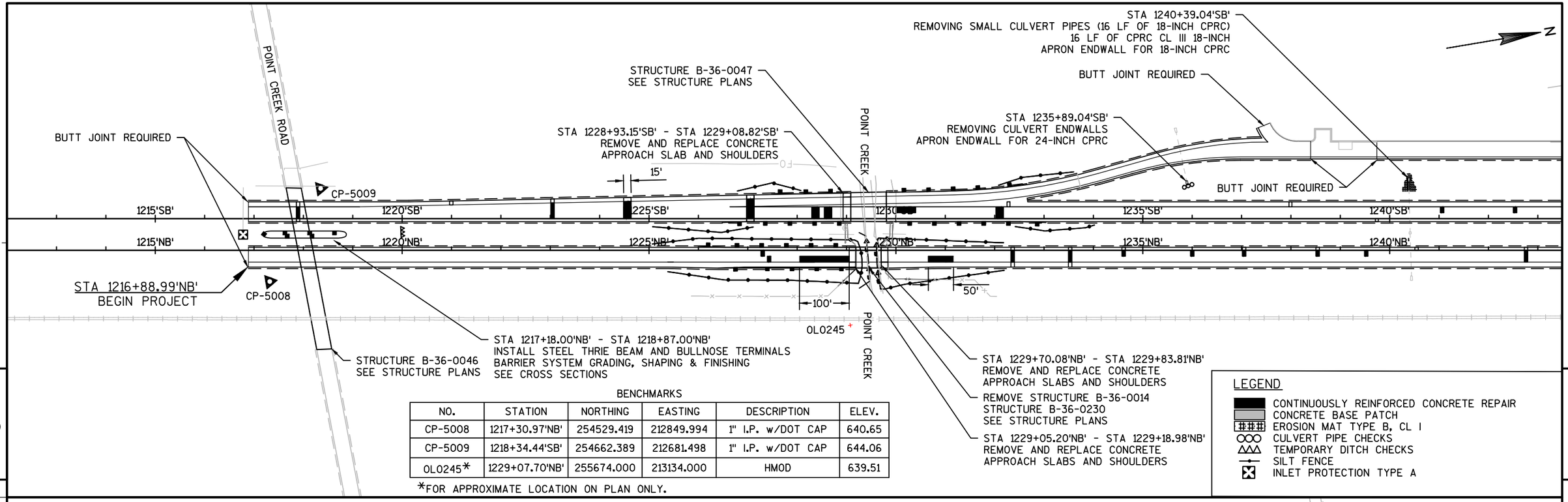
FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\050102_PP.DWG
LAYOUT NAME - 050102_PPA

PLOT DATE : 5/24/2016 2:29 PM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44



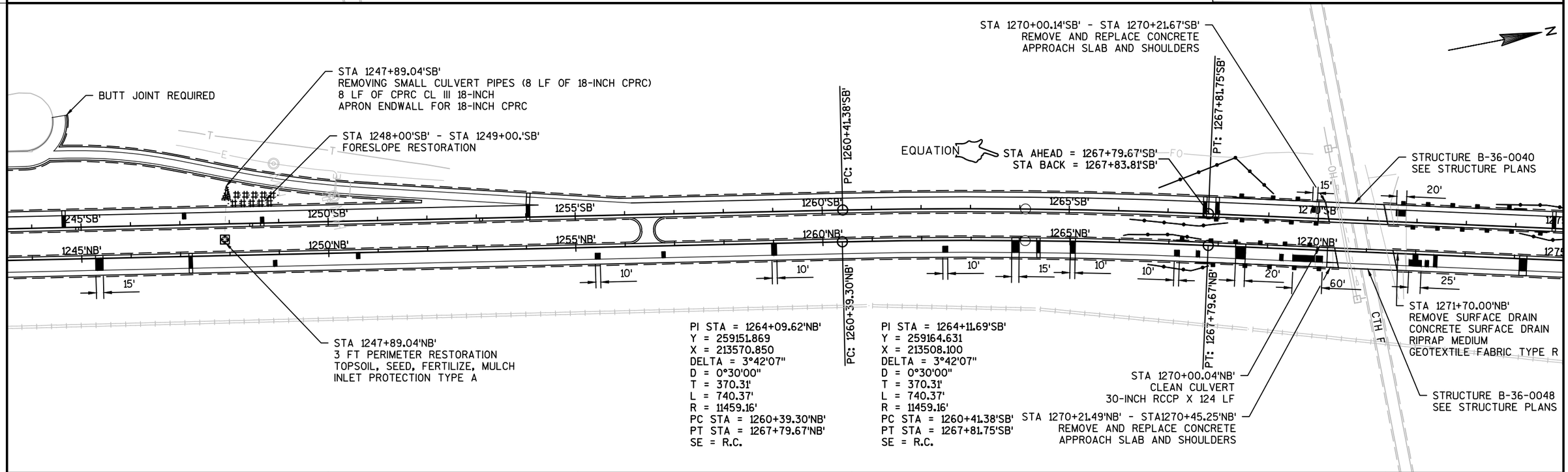
PROJECT NO: 1224-21-71	HWY: UCKER POINT CREEK RD.	COUNTY: MANITOWOC	PLAN AND PROFILE	SCALE, FEET 0 25 50	SHEET 130	E



BENCHMARKS

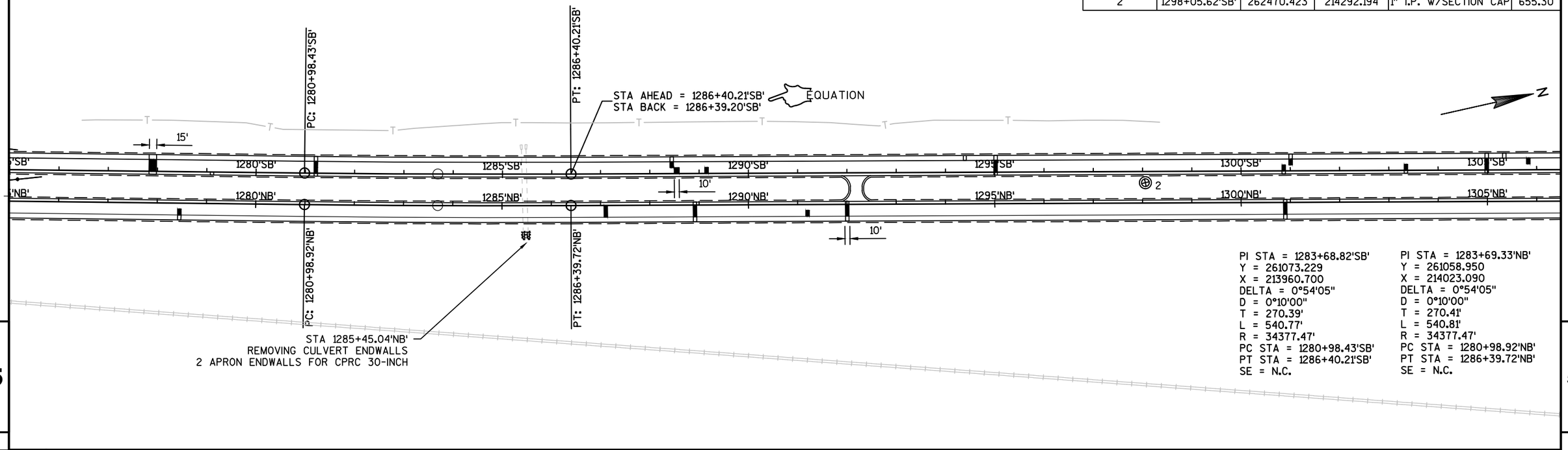
NO.	STATION	NORTHING	EASTING	DESCRIPTION	ELEV.
CP-5008	1217+30.97'NB'	254529.419	212849.994	1" I.P. w/DOT CAP	640.65
CP-5009	1218+34.44'SB'	254662.389	212681.498	1" I.P. w/DOT CAP	644.06
0L0245*	1229+07.70'NB'	255674.000	213134.000	HMOD	639.51

*FOR APPROXIMATE LOCATION ON PLAN ONLY.



PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	PLAN	SHEET 131	E

BENCHMARKS					
NO.	STATION	NORTHING	EASTING	DESCRIPTION	ELEV.
2	1298+05.62'SB'	262470.423	214292.194	1" I.P. w/SECTION CAP	655.30



PI STA = 1283+68.82'SB'
Y = 261073.229
X = 213960.700
DELTA = 0°54'05"
D = 0°10'00"
T = 270.39'
L = 540.77'
R = 34377.47'
PC STA = 1280+98.43'SB'
PT STA = 1286+40.21'SB'
SE = N.C.

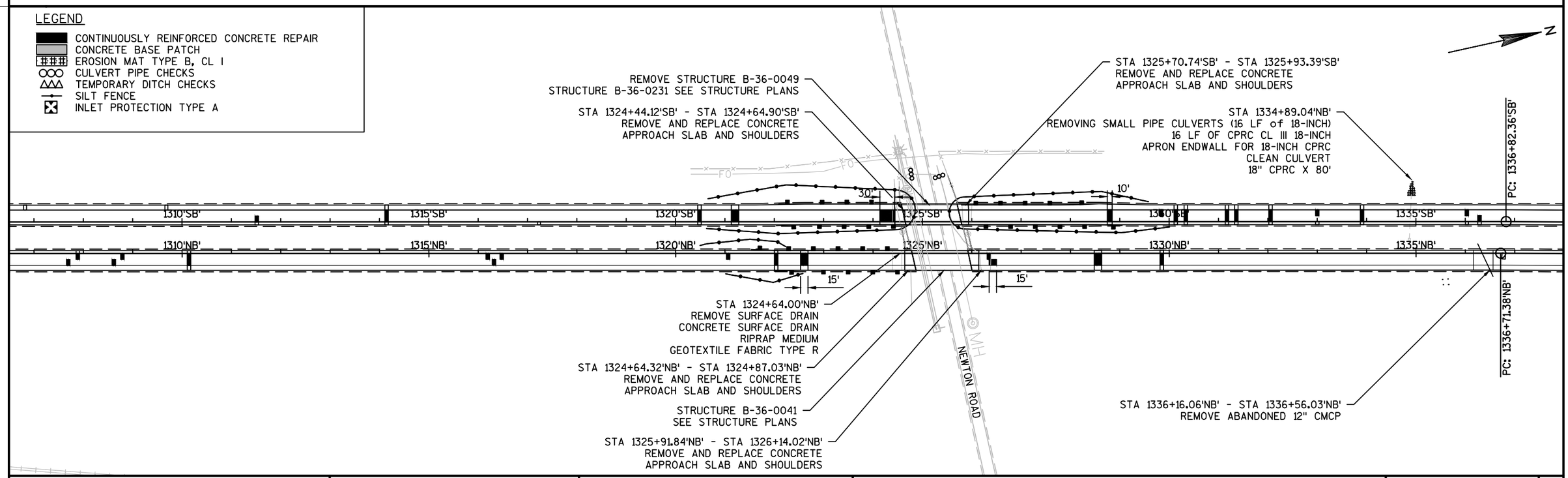
PI STA = 1283+69.33'NB'
Y = 261058.950
X = 214023.090
DELTA = 0°54'05"
D = 0°10'00"
T = 270.41'
L = 540.81'
R = 34377.47'
PC STA = 1280+98.92'NB'
PT STA = 1286+39.72'NB'
SE = N.C.

5

5

LEGEND

- CONTINUOUSLY REINFORCED CONCRETE REPAIR
- CONCRETE BASE PATCH
- EROSION MAT TYPE B, CL I
- CULVERT PIPE CHECKS
- TEMPORARY DITCH CHECKS
- SILT FENCE
- INLET PROTECTION TYPE A



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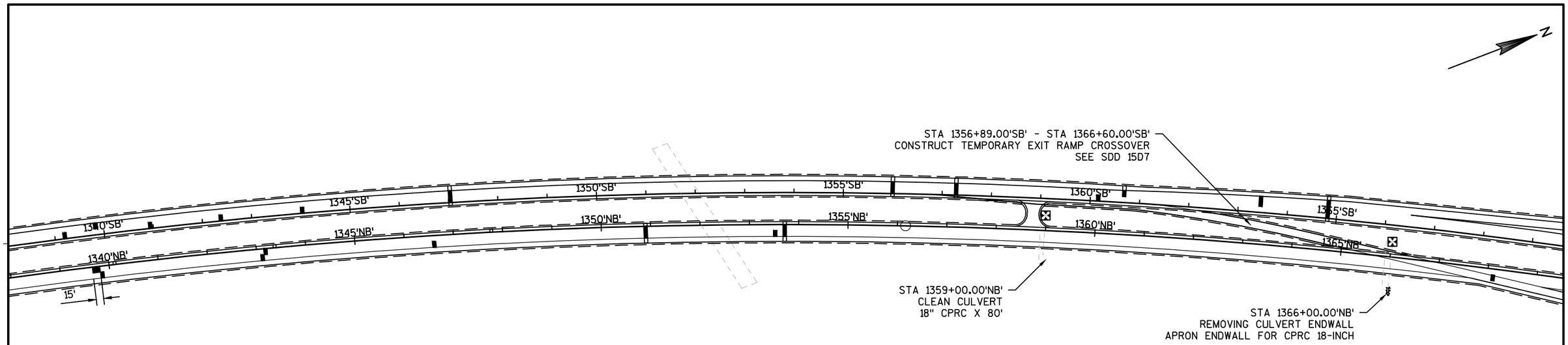
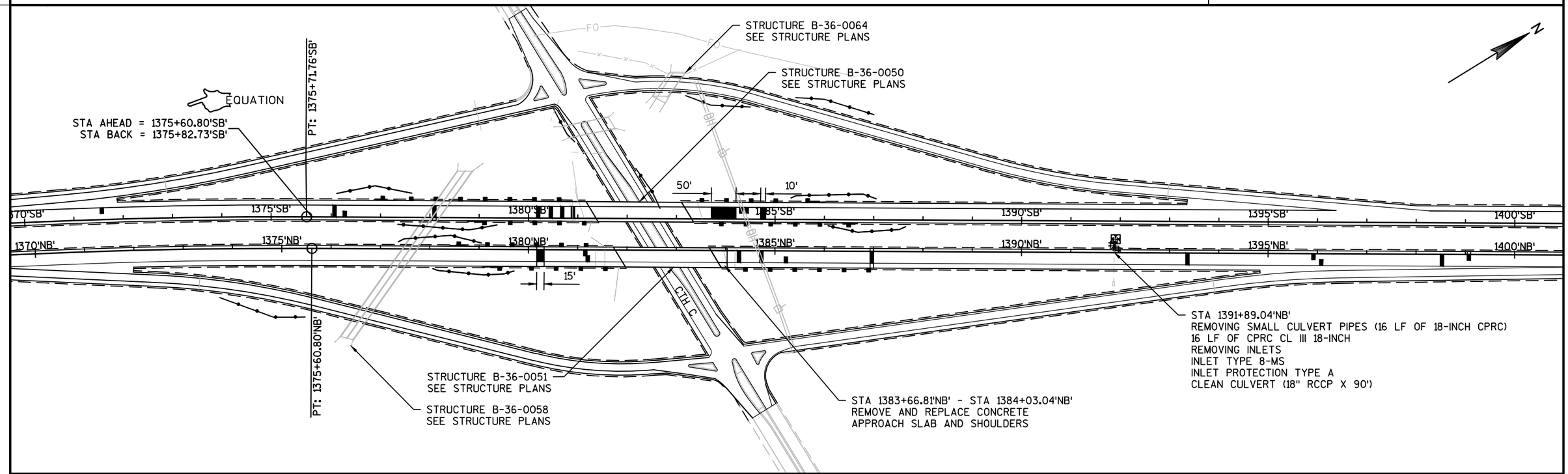


PI STA = 1356+45.95'SB'
Y = 268178.548
X = 215528.010
DELTA = 19°26'49"
D = 0°30'00"
T = 1963.59'
L = 3889.41'
R = 11459.16'
PC STA = 1336+82.36'SB'
PT STA = 1375+71.76'SB'
SE = R.C.

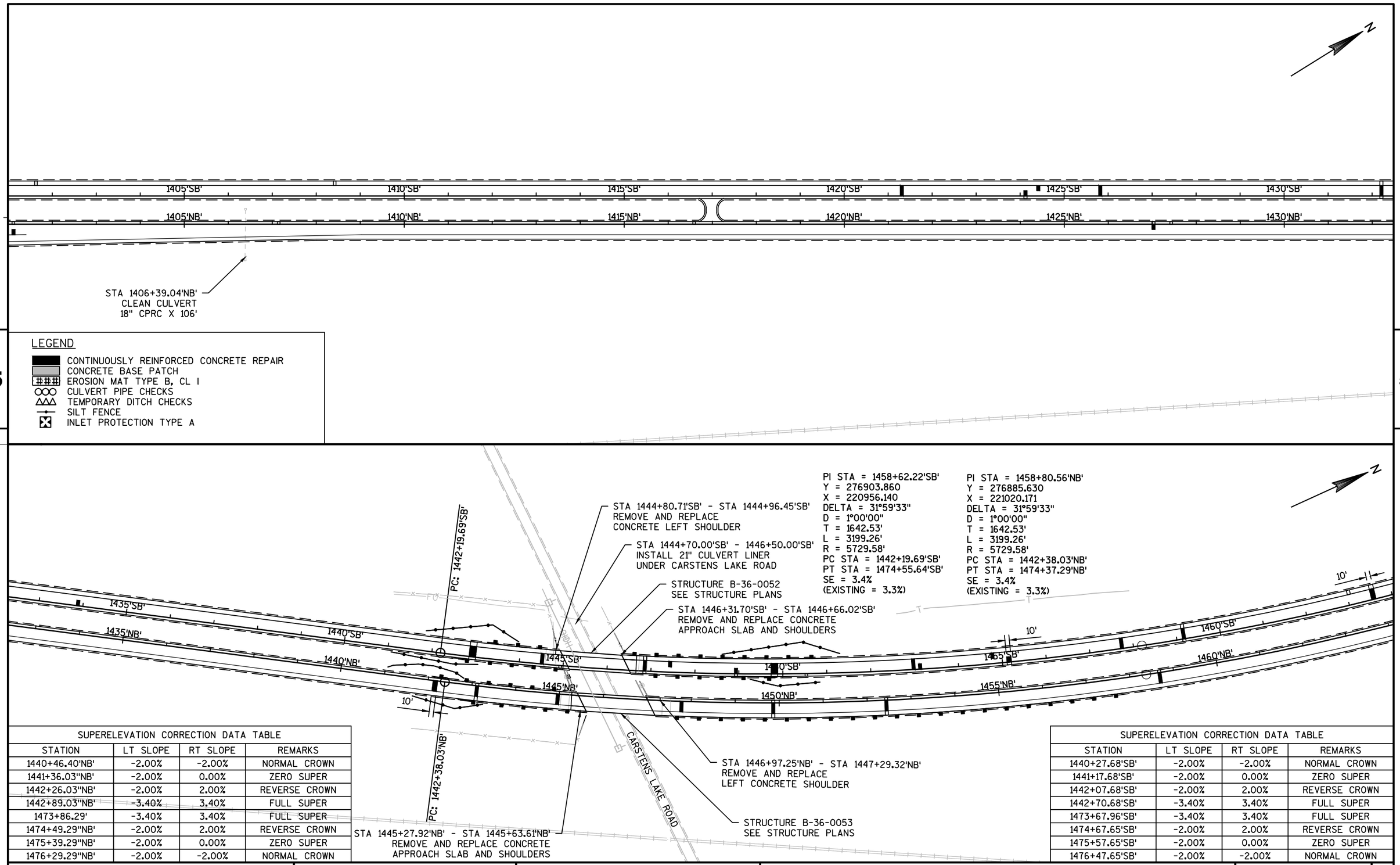
PI STA = 1356+34.98'NB'
Y = 268154.049
X = 215588.140
DELTA = 19°26'49"
D = 0°30'00"
T = 1963.60'
L = 3889.42'
R = 11459.16'
PC STA = 1336+71.38'NB'
PT STA = 1375+60.80'NB'
SE = R.C.

LEGEND

- CONTINUOUSLY REINFORCED CONCRETE REPAIR
- CONCRETE BASE PATCH
- EROSION MAT TYPE B, CL I
- CULVERT PIPE CHECKS
- TEMPORARY DITCH CHECKS
- SILT FENCE
- INLET PROTECTION TYPE A



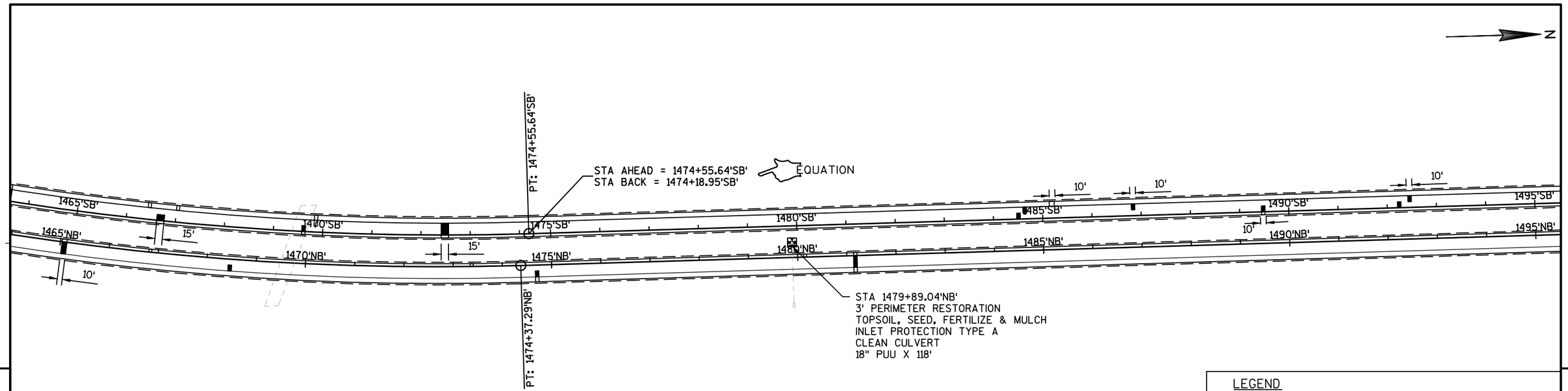
PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	PLAN	SHEET 133	E



SUPERELEVATION CORRECTION DATA TABLE			
STATION	LT SLOPE	RT SLOPE	REMARKS
1440+46.40'NB'	-2.00%	-2.00%	NORMAL CROWN
1441+36.03"NB'	-2.00%	0.00%	ZERO SUPER
1442+26.03"NB'	-2.00%	2.00%	REVERSE CROWN
1442+89.03"NB'	-3.40%	3.40%	FULL SUPER
1473+86.29'	-3.40%	3.40%	FULL SUPER
1474+49.29"NB'	-2.00%	2.00%	REVERSE CROWN
1475+39.29"NB'	-2.00%	0.00%	ZERO SUPER
1476+29.29"NB'	-2.00%	-2.00%	NORMAL CROWN

SUPERELEVATION CORRECTION DATA TABLE			
STATION	LT SLOPE	RT SLOPE	REMARKS
1440+27.68'SB'	-2.00%	-2.00%	NORMAL CROWN
1441+17.68'SB'	-2.00%	0.00%	ZERO SUPER
1442+07.68'SB'	-2.00%	2.00%	REVERSE CROWN
1442+70.68'SB'	-3.40%	3.40%	FULL SUPER
1473+67.96'SB'	-3.40%	3.40%	FULL SUPER
1474+67.65'SB'	-2.00%	2.00%	REVERSE CROWN
1475+57.65'SB'	-2.00%	0.00%	ZERO SUPER
1476+47.65'SB'	-2.00%	-2.00%	NORMAL CROWN

PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	PLAN	SHEET 134 E



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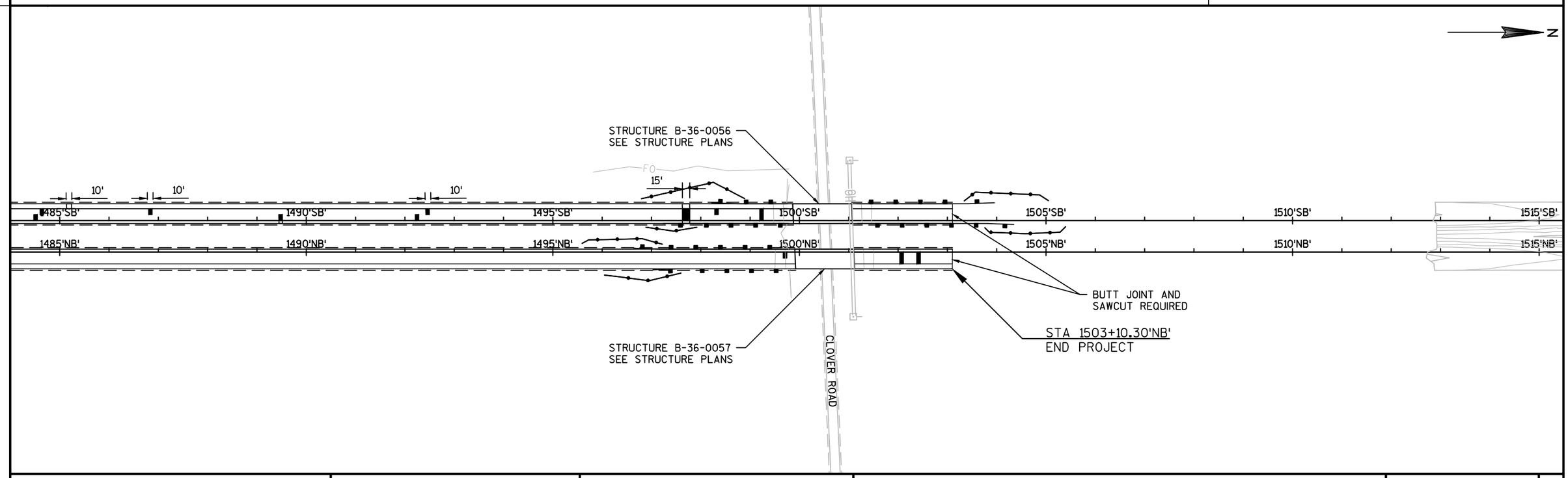


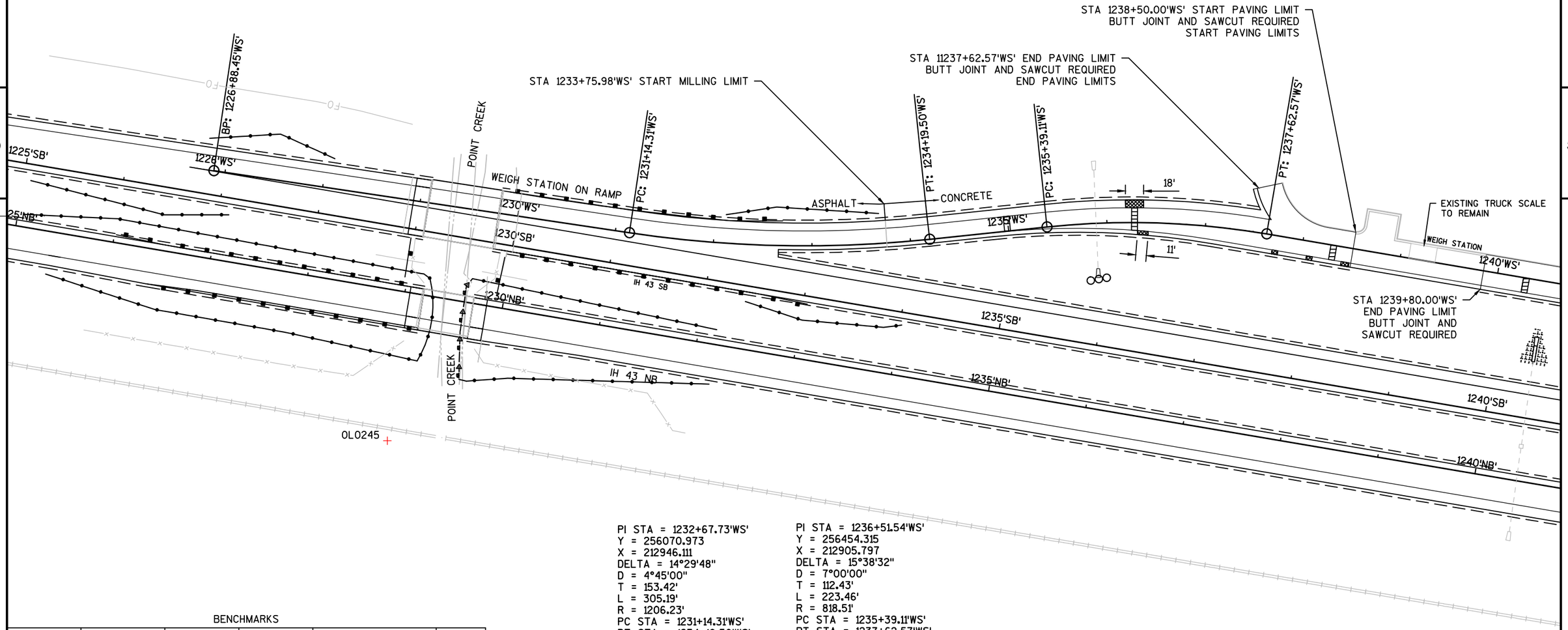
PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	PLAN	SHEET 135	E

LEGEND

- CONCRETE BASE PATCH (LANE)
- CONCRETE BASE PATCH (SHOULDER)
- CONCRETE JOINT AND CRACK CLEANING
- EROSION MAT TYPE B, CL I
- CULVERT PIPE CHECK

SUPERELEVATION CORRECTION DATA TABLE		
STATION	LANE SLOPE	REMARKS
1230+60.87'WS'	-1.50%	NORMAL CROWN
1231+58.98'WS'	-5.60%	FULL SUPER
1233+74.84'WS'	-5.60%	FULL SUPER
1234+72.94'WS'	-1.50%	NORMAL CROWN

N



PI STA = 1232+67.73'WS'
Y = 256070.973
X = 212946.111
DELTA = 14°29'48"
D = 4°45'00"
T = 153.42'
L = 305.19'
R = 1206.23'
PC STA = 1231+14.31'WS'
PT STA = 1234+19.50'WS'
SE = 0.056'/'
(EXISTING = 0.053'/')

PI STA = 1236+51.54'WS'
Y = 256454.315
X = 212905.797
DELTA = 15°38'32"
D = 7°00'00"
T = 112.43'
L = 223.46'
R = 818.51'
PC STA = 1235+39.11'WS'
PT STA = 1237+62.57'WS'
SE = 0.020'/'

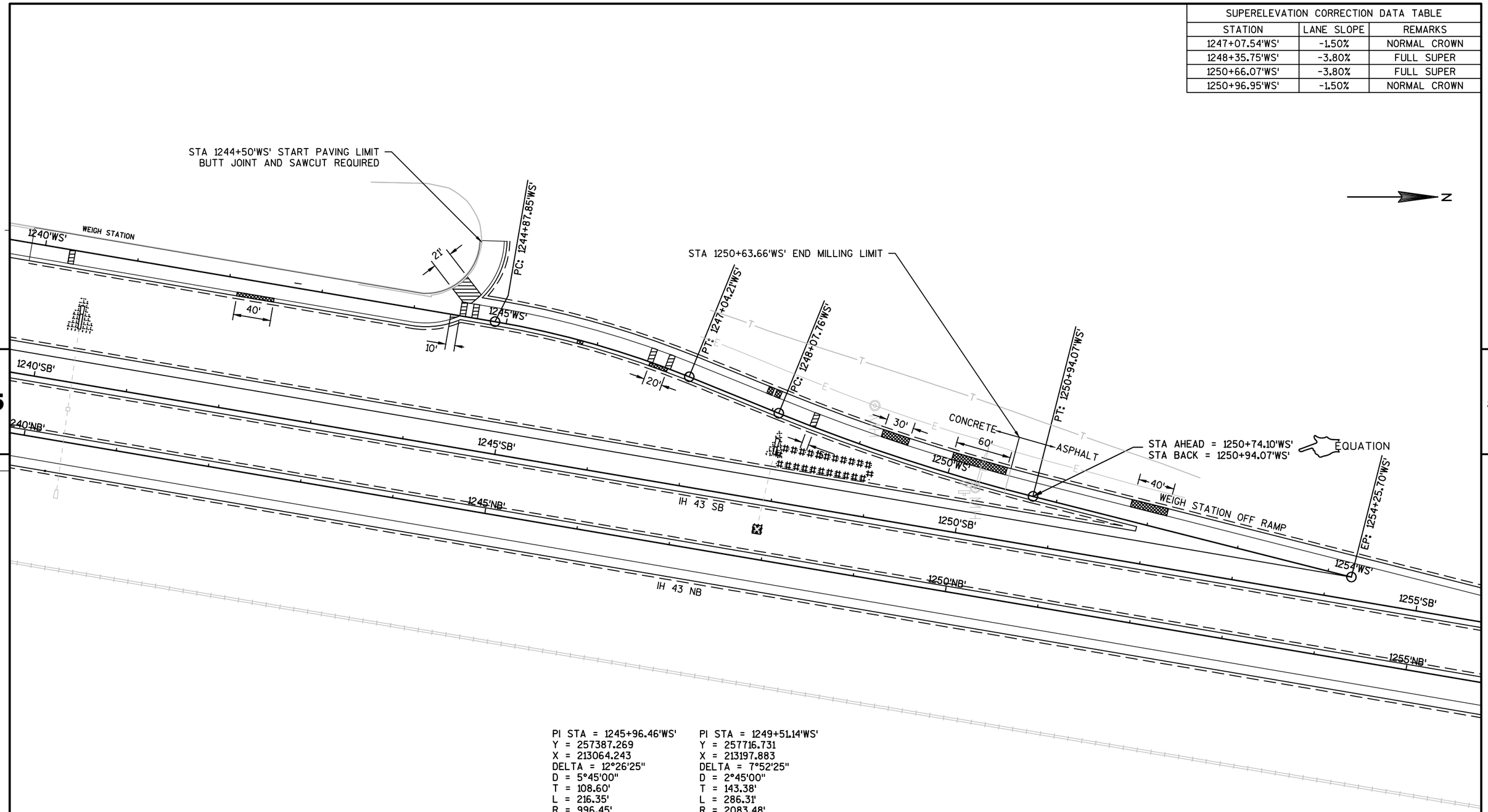
BENCHMARKS

NO.	STATION	NORTHING	EASTING	DESCRIPTION	ELEV.
OL0245*	1229+07.70'NB'	255674.000	213134.000	HMOD	639.51

*FOR APPROXIMATE LOCATION ON PLAN ONLY.

PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	PLAN	SHEET 136	E

SUPERELEVATION CORRECTION DATA TABLE		
STATION	LANE SLOPE	REMARKS
1247+07.54'WS'	-1.50%	NORMAL CROWN
1248+35.75'WS'	-3.80%	FULL SUPER
1250+66.07'WS'	-3.80%	FULL SUPER
1250+96.95'WS'	-1.50%	NORMAL CROWN



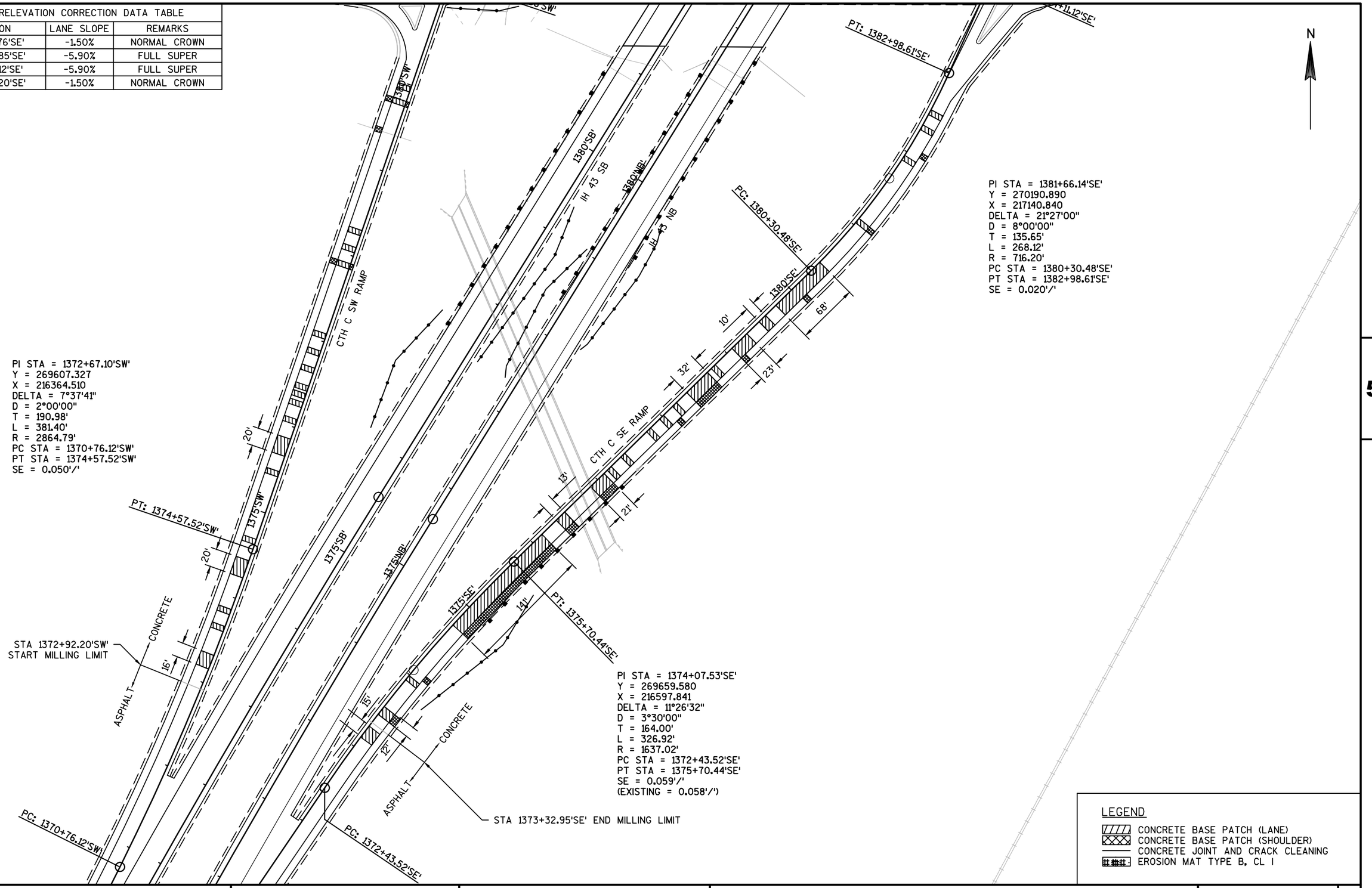
PI STA = 1245+96.46'WS'
Y = 257387.269
X = 213064.243
DELTA = 12°26'25"
D = 5°45'00"
T = 108.60'
L = 216.35'
R = 996.45'
PC STA = 1244+87.85'WS'
PT STA = 1247+04.21'WS'
SE = 0.020'/'

PI STA = 1249+51.14'WS'
Y = 257716.731
X = 213197.883
DELTA = 7°52'25"
D = 2°45'00"
T = 143.38'
L = 286.31'
R = 2083.48'
PC STA = 1248+07.76'WS'
PT STA = 1250+94.07'WS'
SE = 0.038'/'
(EXISTING 0.036'/')

LEGEND
- CONCRETE BASE PATCH (LANE)
- CONCRETE BASE PATCH (SHOULDER)
- CONCRETE JOINT AND CRACK CLEANING
- EROSION MAT TYPE B, CL I
- INLET PROTECTION TYPE A

PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	PLAN	SHEET 137	E

SUPERELEVATION CORRECTION DATA TABLE		
STATION	LANE SLOPE	REMARKS
1371+78.76'SE'	-1.50%	NORMAL CROWN
1372+95.85'SE'	-5.90%	FULL SUPER
1375+18.12'SE'	-5.90%	FULL SUPER
1376+35.20'SE'	-1.50%	NORMAL CROWN



PI STA = 1381+66.14'SE'
Y = 270190.890
X = 217140.840
DELTA = 21°27'00"
D = 8°00'00"
T = 135.65'
L = 268.12'
R = 716.20'
PC STA = 1380+30.48'SE'
PT STA = 1382+98.61'SE'
SE = 0.020'/'

PI STA = 1372+67.10'SW'
Y = 269607.327
X = 216364.510
DELTA = 7°37'41"
D = 2°00'00"
T = 190.98'
L = 381.40'
R = 2864.79'
PC STA = 1370+76.12'SW'
PT STA = 1374+57.52'SW'
SE = 0.050'/'

PI STA = 1374+07.53'SE'
Y = 269659.580
X = 216597.841
DELTA = 11°26'32"
D = 3°30'00"
T = 164.00'
L = 326.92'
R = 1637.02'
PC STA = 1372+43.52'SE'
PT STA = 1375+70.44'SE'
SE = 0.059'/'
(EXISTING = 0.058'/')

LEGEND
- CONCRETE BASE PATCH (LANE)
- CONCRETE BASE PATCH (SHOULDER)
- CONCRETE JOINT AND CRACK CLEANING
- EROSION MAT TYPE B, CL I

PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	PLAN	SHEET 138 E

LEGEND

- CONCRETE BASE PATCH SHES (LANE)
- CONCRETE BASE PATCH SHES (SHOULDER)
- CONCRETE JOINT AND CRACK CLEANING
- EROSION MAT TYPE B, CL I

SUPERELEVATION CORRECTION DATA TABLE		
STATION	LANE SLOPE	REMARKS
1388+55.80'NW'	-1.50%	NORMAL CROWN
1389+75.80'NW'	-6.00%	FULL SUPER
1391+43.27'NW'	-6.00%	FULL SUPER
1392+63.27'NW'	-1.50%	NORMAL CROWN

PI STA = 1382+95.16'NW'
Y = 270645.389
X = 216738.804
DELTA = 22°12'34"
D = 8°00'00"
T = 140.57'
L = 277.62'
R = 716.20'
PC STA = 1381+54.59'NW'
PT STA = 1384+32.20'NW'
SE = 0.020'/'

PI STA = 1390+59.96'NW'
Y = 271165.618
X = 217304.211
DELTA = 10°57'53"
D = 4°00'00"
T = 137.48'
L = 274.12'
R = 1432.39'
PC STA = 1389+22.48'NW'
PT STA = 1391+96.59'NW'
SE = 0.060'/'
(EXISTING = 0.063'/')

PI STA = 1395+26.39'NE'
Y = 271471.092
X = 217694.230
DELTA = 7°05'41"
D = 3°00'00"
T = 118.40'
L = 236.49'
R = 1909.86'
PC STA = 1394+07.99'NE'
PT STA = 1396+44.49'NE'
SE = 0.053'/'

STA 1392+94.92'NW' END MILLING LIMIT

STA 1393+87.57'NE' START MILLING LIMIT

PT: 1391+96.59'NW'

PC: 1389+22.48'NW'

PT: 1384+32.20'NW'

PC: 1381+54.59'NW'

PC: 1394+07.99'NE'

CTH C NW RAMP

CTH C NE RAMP

IH 43 SB

IH 43 NB

1390'SB'

1390'NW'

1390'NE'

1385'SB'

1385'NE'

1385'NE'

ASPHALT

CONCRETE

32'

6'

42'

41'

29'

9'

15'

48'

14'

13'

15'

13'

N

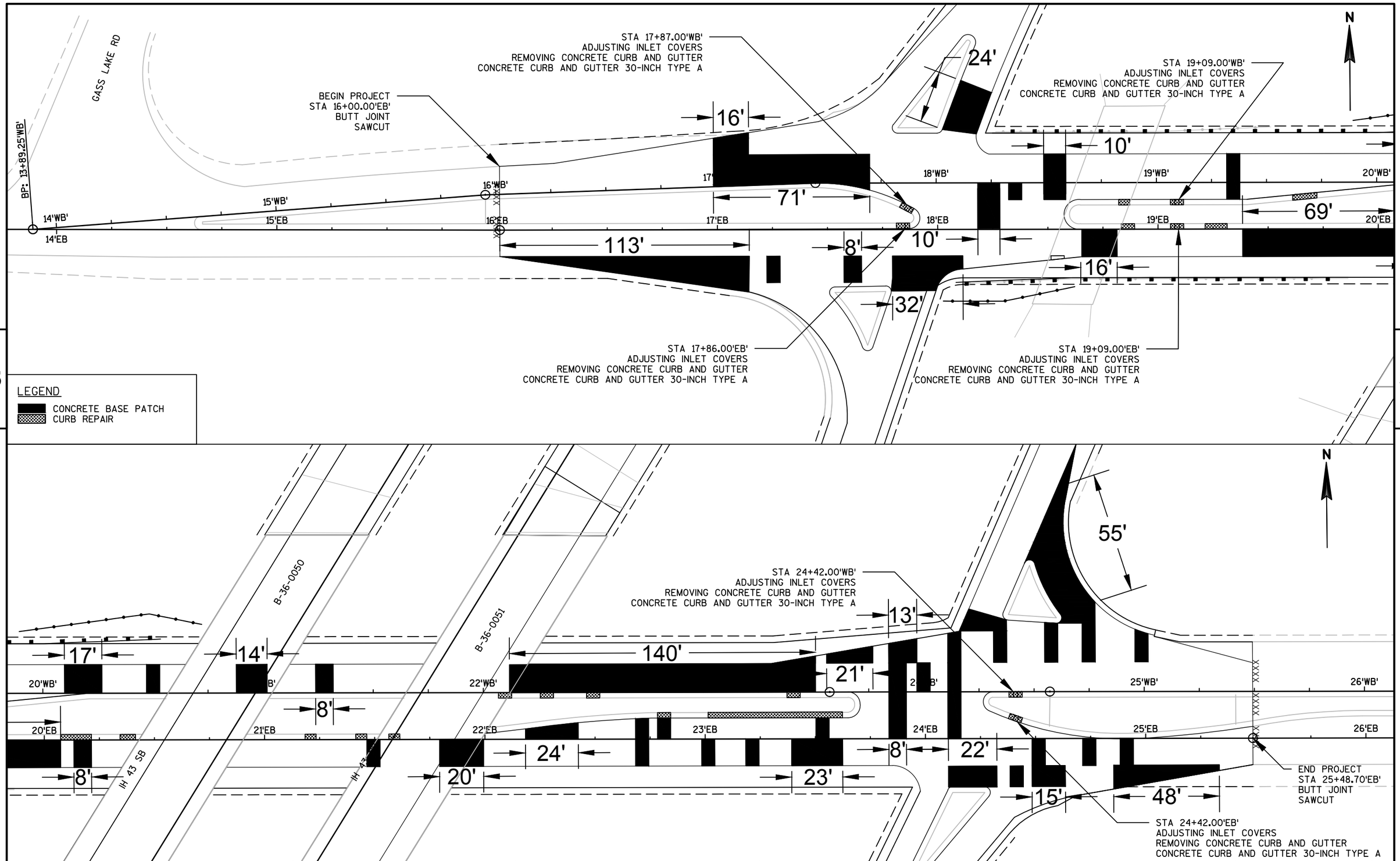
5

5

PROJECT NO:1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	PLAN	SHEET 139	E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\050203_PN.DWG PLOT DATE : 4/18/2016 12:26 PM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1:100_XREF

WISDOT/CADDS SHEET 44



PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	PLAN - CTH C	SHEET 140 E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\050204_PN.DWG
LAYOUT NAME - 050204_PNA

PLOT DATE : 3/22/2016 12:50 PM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:40 FT

Standard Detail Drawing List

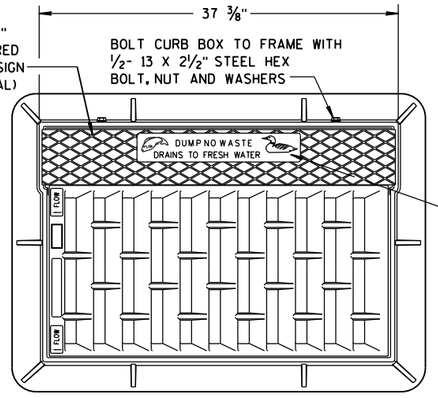
08A05-19A	INLET COVERS TYPE A, H, A-S, H-S & Z
08A05-19B	INLET COVERS TYPE B, B-A, C, MS, MS-A, & WM
08C07-01	INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT
08C08-01	INLETS MEDIAN 1 AND 2 GRATE
08D01-19	CONCRETE CURB, CONCRETE CURB AND GUTTER AND TIES
08D02-06	CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES
08D03-06	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
08E11-02	TURBIDITY BARRIER
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
08F04-07	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
09B02-09	CONDUIT
09B04-11	PULL BOX
09C03-04	TRANSFORMER/PEDESTAL BASES
09C06-07	CONCRETE CONTROL CABINET BASE, TYPE 9, SPECIAL
09C11-09	CONCRETE BASE TYPE 10
09C12-08A	CONCRETE BASE TYPE 13
09C13-02	CONCRETE BASE TYPE 10 & TYPE 13 EXTENSION
09E01-14B	POLE MOUNTINGS FOR TRAFFIC SIGNALS AND LIGHTING UNITS, TYPE 3 (HEAVY DUTY)
09E03-05	NON-FREEWAY LIGHTING UNIT POLE WIRING
09E06-05	TRAFFIC SIGNAL STANDARD POLY BRACKET MOUNTINGS (TYPICAL) 13 FT. OR 15 FT.
09E08-08B	TYPE 10 POLE 15'-30' MONOTUBE ARM
09E08-08D	TYPE 13 POLE 35'-55' MONOTBE ARM
09E08-08E	GENERAL NOTES AND HARDWARE DETAILS FOR TYPE 9, 10, 12 & 13 POLES WITH MONOTUBE ARMS
11A01-05	MAINTENANCE CROSSOVER FOR FREEWAYS
12A03-10	NAME PLATE (STRUCTURES)
13A05-05A	SHOULDER RUMBLE STRIP, MILLING
13A05-05B	SHOULDER RUMBLE STRIP, MILLING
13A07-02	CONTINUOUSLY REINFORCED CONCRETE PAVEMENT REPAIR AND REPLACEMENT
13B02-08A	CONCRETE PAVEMENT APPROACH SLAB
13B02-08B	STRUCTURAL APPROACH SLAB AND CONCRETE PAVEMENT APPROACH SLAB
13C01-18	CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES
13C14-06A	BASE PATCHING CONCRETE
13C14-06B	BASE PATCHING CONCRETE
13C14-06C	BASE PATCHING CONCRETE
14B07-14A	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-14B	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-14C	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-14D	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-14E	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-14F	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-14G	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-14H	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B08-02A	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-02B	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-02C	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-02D	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-02E	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B26-03A	STEEL THRIE BEAM BULLNOSE TERMINAL
14B26-03B	STEEL THRIE BEAM BULLNOSE TERMINAL
14B26-03C	STEEL THRIE BEAM BULLNOSE TERMINAL
14B26-03D	STEEL THRIE BEAM BULLNOSE TERMINAL
14B26-03E	STEEL THRIE BEAM BULLNOSE TERMINAL
14B28-03	GUARDRAIL MOW STRIP
14B42-04A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-04B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-04C	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B44-02A	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-02B	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-02C	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B45-04A	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04B	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04C	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04D	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)

6

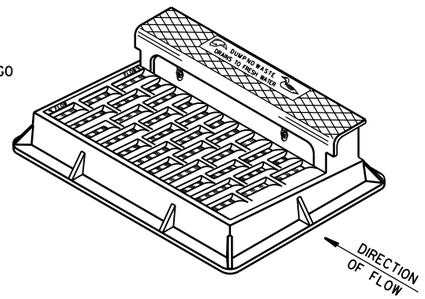
Standard Detail Drawing List

14B45-04E	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04F	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04G	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04H	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04I	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04J	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04K	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04L	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B47-02A	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B47-02B	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B47-02C	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B50-01A	THRIE BEAM APPROACH RETROFIT INSTALLATION OF MISSING POST
14B50-01B	THRIE BEAM APPROACH RETROFIT INSTALLATION OF MISSING POST
14B50-01C	THRIE BEAM APPROACH RETROFIT INSTALLATION OF MISSING POST
15A03-02A	FLEXIBLE MARKER POST FOR CULVERT END
15A03-02B	FLEXIBLE MARKER POST FOR CULVERT END
15A06-02	DELINEATOR LAYOUT
15B01-08A	FENCE WOVEN WIRE
15B01-08B	FENCE WOVEN WIRE
15C03-03	BARRICADES AND SIGNS FOR SIDEROAD CLOSURES
15C07-12A	PAVEMENT MARKING SYMBOLS
15C07-12C	PAVEMENT MARKING ARROWS
15C08-16A	PAVEMENT MARKING (MAINLINE)
15C08-16B	PAVEMENT MARKING (INTERSECTIONS)
15C08-16E	PAVEMENT MARKING (LEFT TURN LANE)
15C08-16F	PAVEMENT MARKING (ISLANDS)
15C11-06	FLEXIBLE TUBULAR MARKER POST
15C12-04	TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS)
15C14-02	AERIAL ENFORCEMENT BARS PAVEMENT MARKING DETAILS
15C19-04A	MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY
15C19-04C	MOVING PAVEMENT MARKING OPERATION MULTI-LANE DIVIDED ROADWAY
15C31-01A	PAVEMENT MARKING (RAMPS AND GORES)
15D07-04	TRAFFIC CONTROL, TEMPORARY EXIT RAMP CROSSOVER
15D09-03	TRAFFIC CONTROL, SINGLE LANE CROSSOVER EXIT
15D10-04	TRAFFIC CONTROL, SINGLE LANE CROSSOVER EXIT WITH BARRIER
15D11-06	TRAFFIC CONTROL, SINGLE LANE CROSSOVER
15D12-06B	TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION
15D15-02	TRAFFIC CONTROL, EXIT AND ENTRANCE RAMP WITHIN LANE CLOSURE
15D16-03	TRAFFIC CONTROL, EXIT RAMP CLOSURE
15D27-03	TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH
16A01-06	LANDMARK REFERENCE MONUMENTS AND COVERS

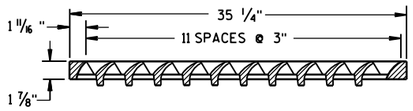
6

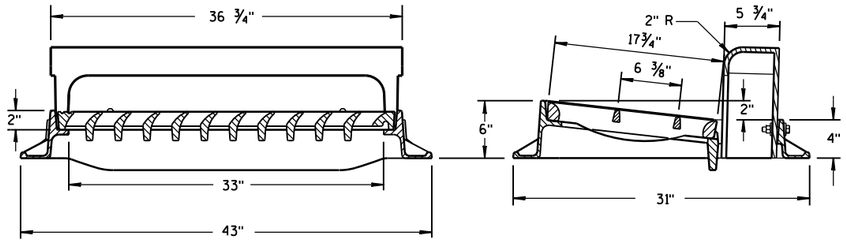


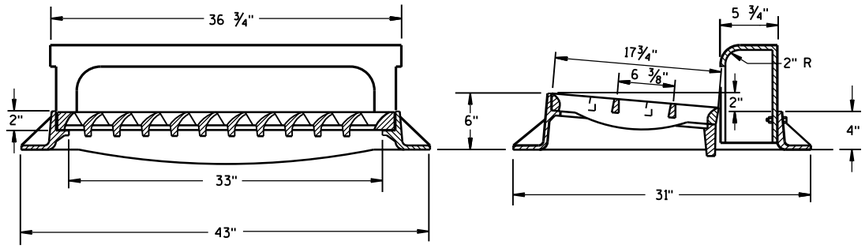
NOTE:
GRATE IS REVERSIBLE.



NOTE: CURB BOX HEIGHT ADJUSTABLE 6" TO 9"

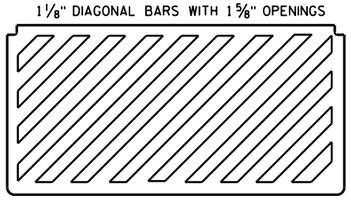






TYPE "H"

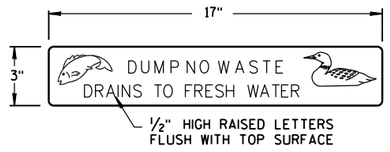
NOTE: EITHER CASTING IS ACCEPTABLE



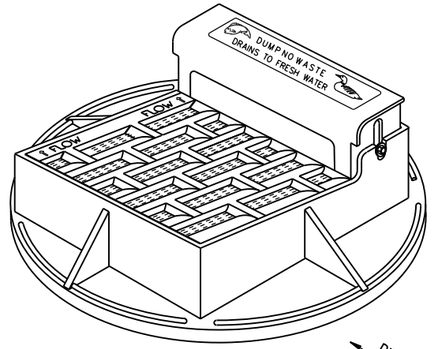
SPECIAL GRATE FOR TYPE "H" COVER

(MEASURES 35 1/4" X 17 3/4" X 2")

(NOTED AS TYPE H-S ON DRAINAGE TABLE)



LOGO DETAIL



NOTE: CURB BOX ADJUSTABLE 4" TO 9"

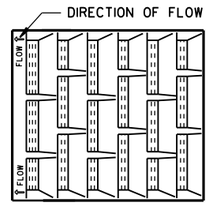
NOTE:
GRATE IS REVERSIBLE.

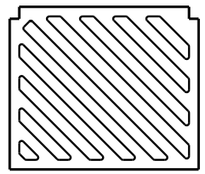
GENERAL NOTES

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.

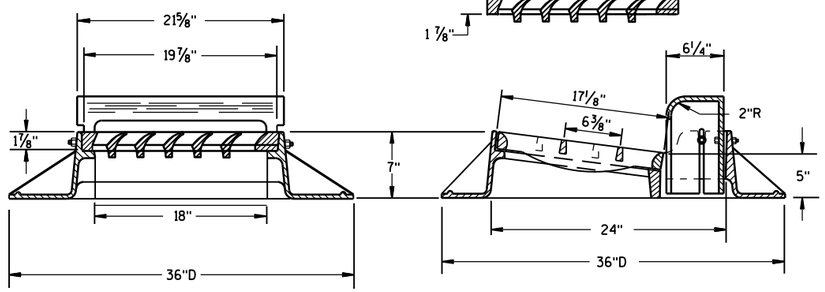




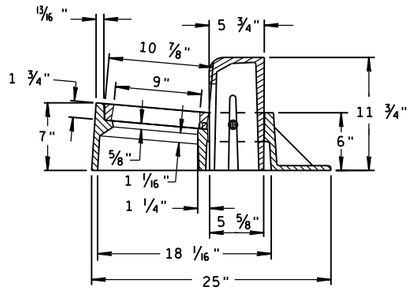
SPECIAL GRATE FOR TYPE "A" COVER

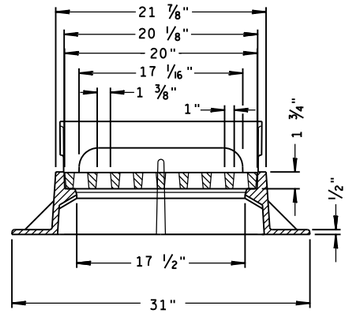
(MEASURES 19 3/4" X 17" X 1 7/8")

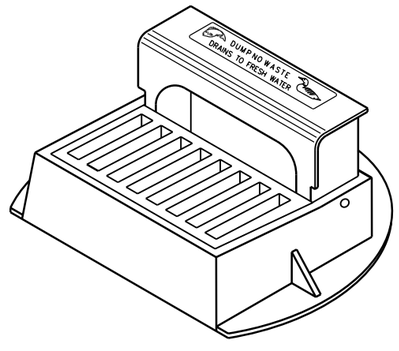
(NOTED AS TYPE A-S ON DRAINAGE TABLE)



TYPE "A"







TYPE "Z"

INLET COVERS
TYPE A, H, A-S, H-S & Z

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11-27-13 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
FHWA

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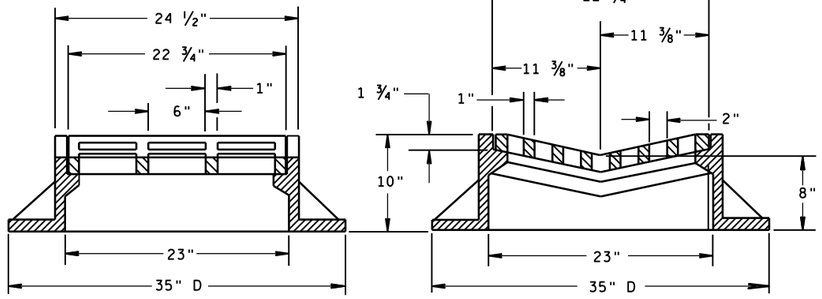
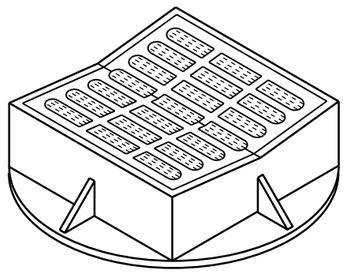
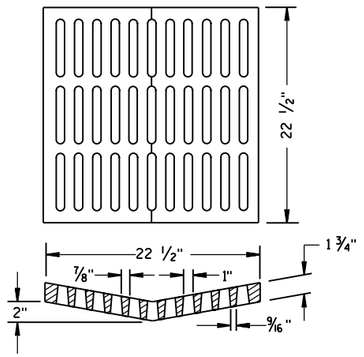
S.D.D. 8 A 5-19a



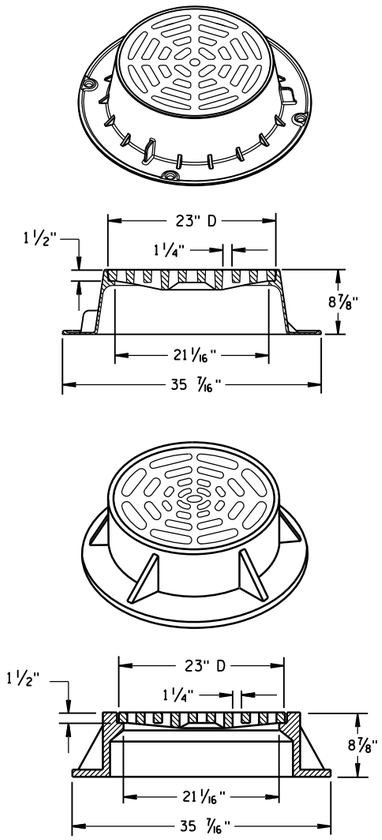


TYPE "B"



ALTERNATIVE GRATE FOR TYPE "B" COVER

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



TYPE "C"

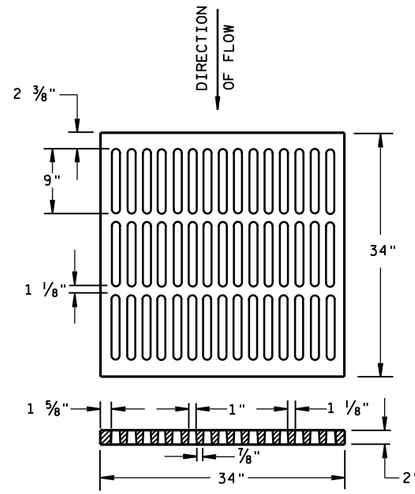
NOTE: EITHER CASTING IS ACCEPTABLE

GENERAL NOTES

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

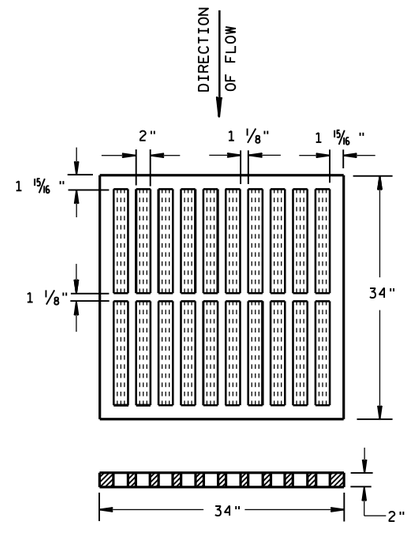
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR CATCH BASIN, MANHOLE AND INLET COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

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



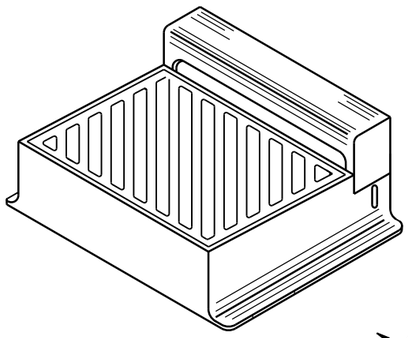
ALTERNATIVE TYPE "MS"

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

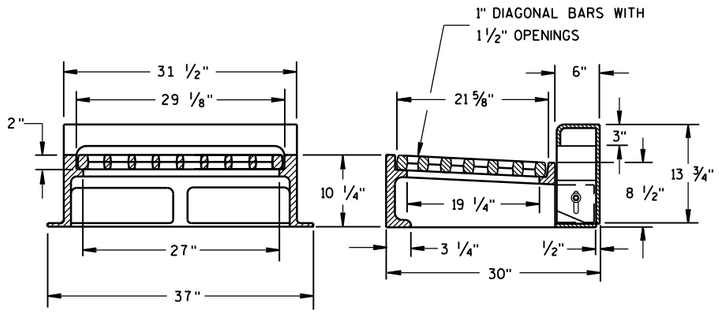


TYPE "MS"

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



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



NOTE: CURB BOX HEIGHT ADJUSTABLE 6" TO 9"

TYPE "WM"

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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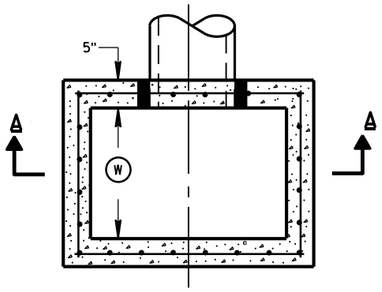
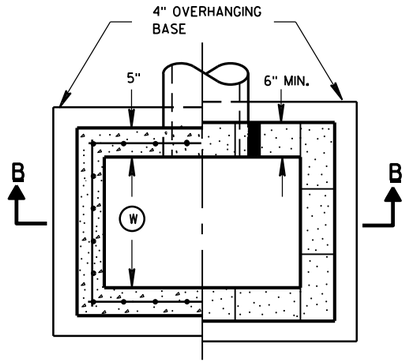
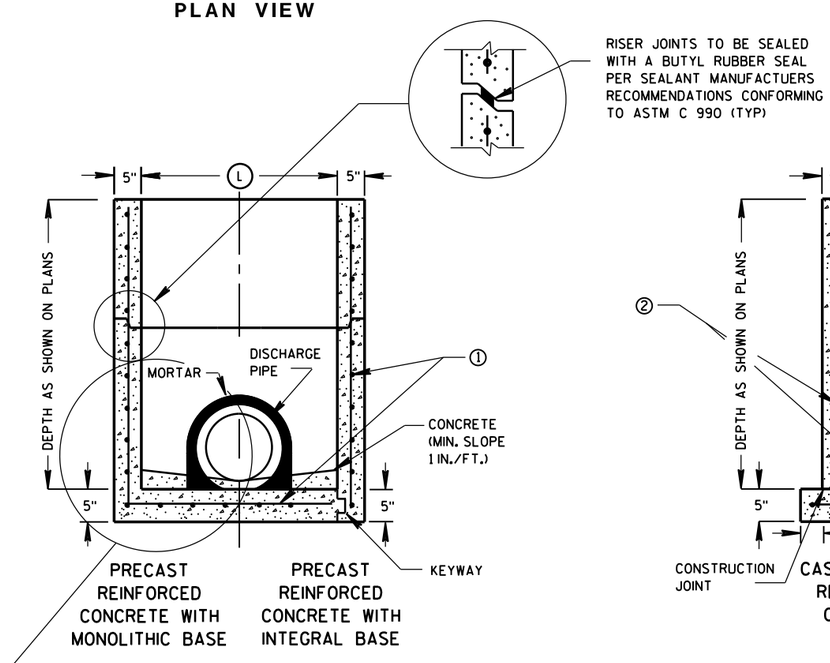
S.D.D. 8 A 5-19b



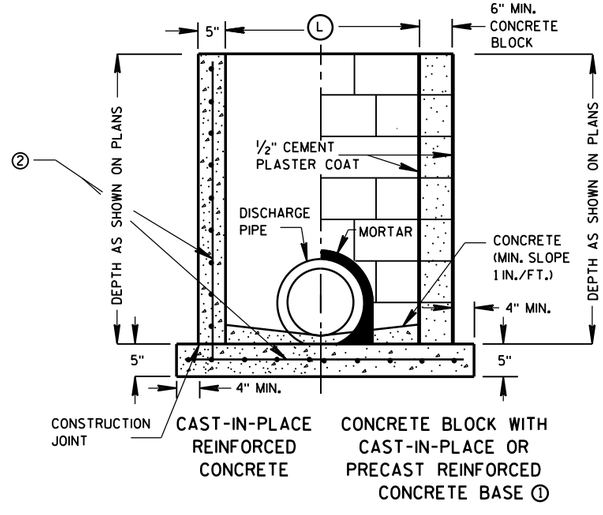
PLAN VIEW



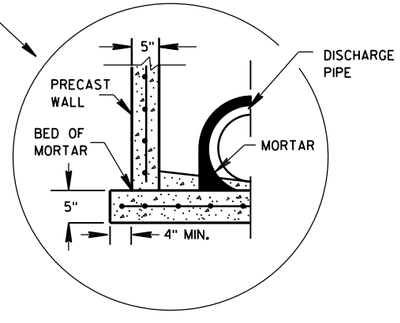
PLAN VIEW



SECTION A-A



SECTION B-B



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

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 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 GRANULAR 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.

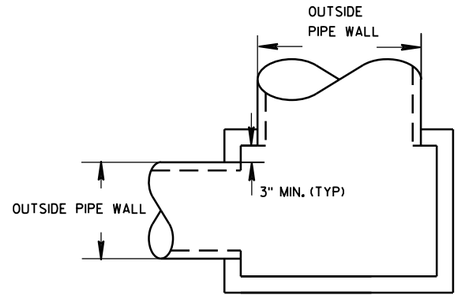
② CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
6/5/2012
DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS DE ENGINEER
FHWA

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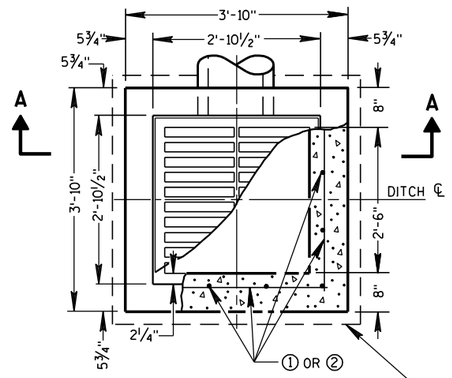
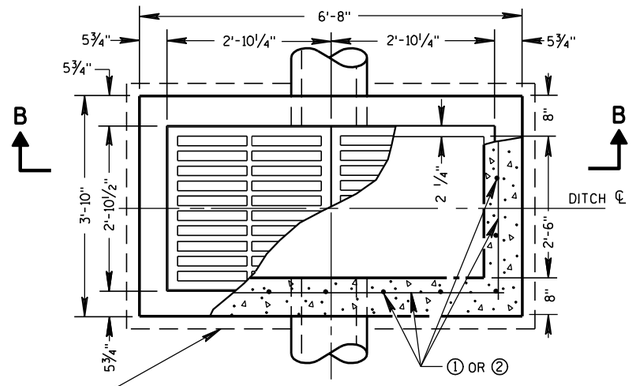
S.D.D. 8 C 7-1

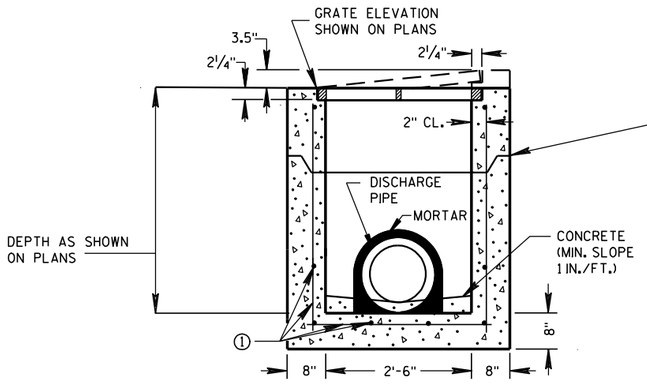


PLAN VIEW

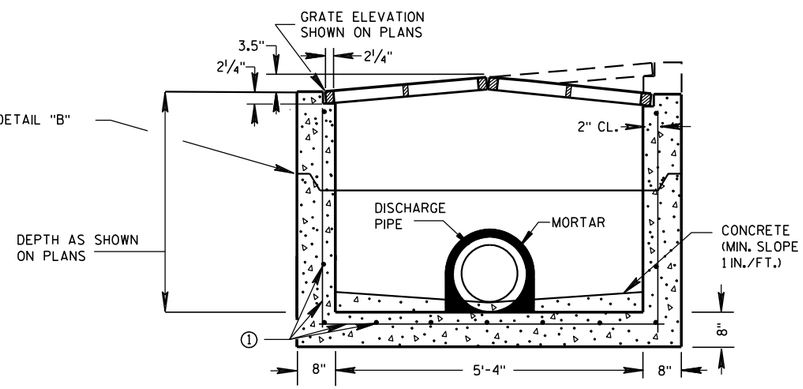


PLAN VIEW

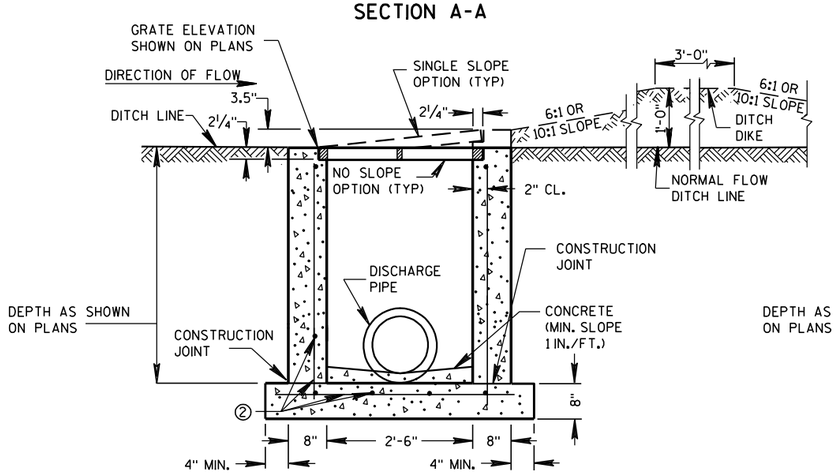
4" OVERHANGING BASE ON REINFORCED CAST-IN-PLACE CONCRETE INLETS



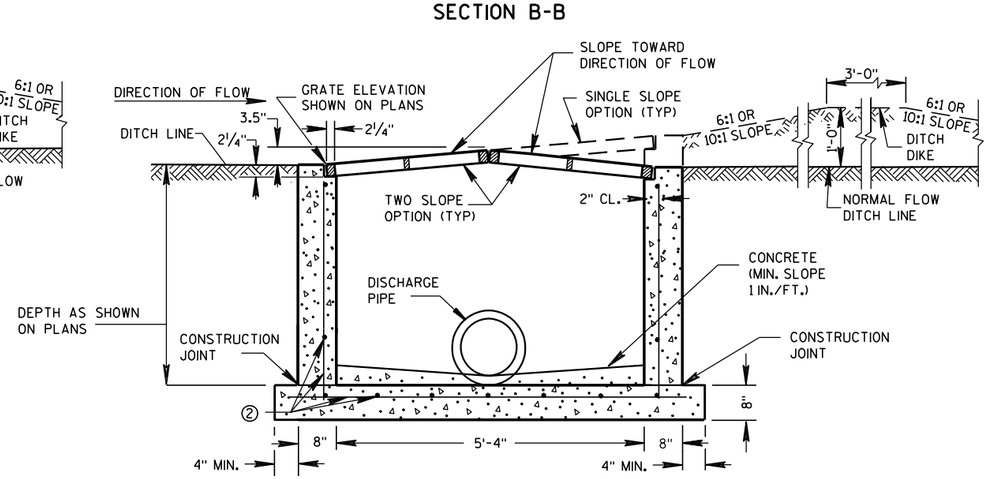
PRECAST REINFORCED CONCRETE SECTION A-A



PRECAST REINFORCED CONCRETE SECTION B-B



REINFORCED CAST-IN-PLACE CONCRETE SECTION A-A



REINFORCED CAST-IN-PLACE CONCRETE SECTION B-B

INLETS MEDIAN 1 GRATE

INLETS MEDIAN 2 GRATE

GENERAL NOTES

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

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

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

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

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

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

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

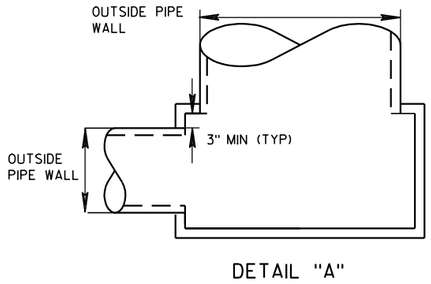
MAXIMUM INSIDE PIPE DIAMETER DETERMINED BY 3" CLEARANCE ON EACH SIDE OF THE OUTSIDE WALL OF THE PIPE. SEE DETAIL "A". ASSUMES PIPE ENTERS PERPENDICULAR TO THE STRUCTURE.

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

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

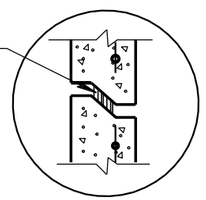
PIPE MATRIX

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



DETAIL "A"

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



DETAIL "B"

INLETS MEDIAN 1 AND 2 GRATE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
6/5/2012 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

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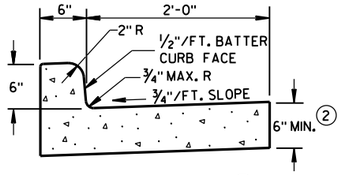
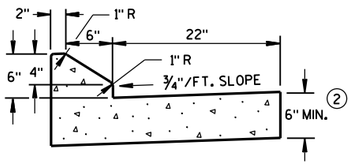
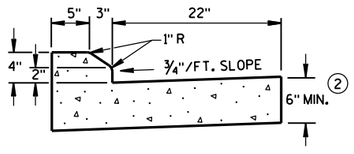
S.D.D. 8 C 8-1



TYPES A & D ①

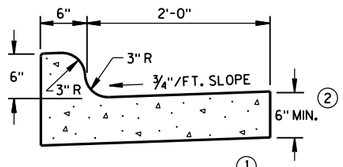


6" SLOPED CURB TYPES G & J ①

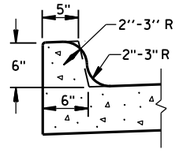


4" SLOPED CURB TYPES G & J ①

CONCRETE CURB & GUTTER 30"

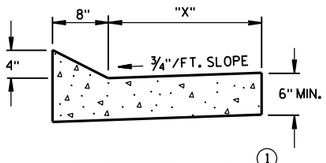


TYPES K & L ①



OPTIONAL CURB SHAPE FOR TYPES K & L ①

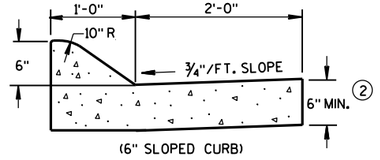
CONCRETE CURB & GUTTER 30"



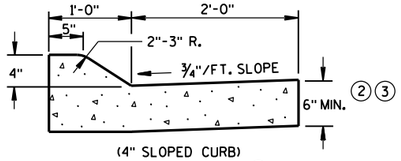
TYPES TBT & TBTT ①

CONCRETE CURB & GUTTER

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

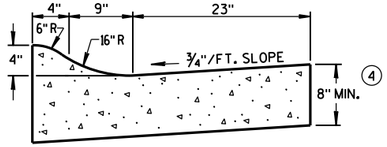


(6" SLOPED CURB)



(4" SLOPED CURB)

TYPES A & D ①



4" SLOPED CURB TYPES R & T ①⑤

CONCRETE CURB & GUTTER 36"

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. A LONGITUDINAL CONSTRUCTION JOINT IS NOT REQUIRED WITH INTEGRAL CURB AND GUTTER.

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.

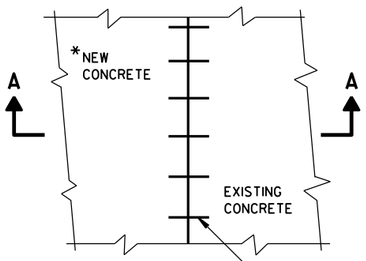
② THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.

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.

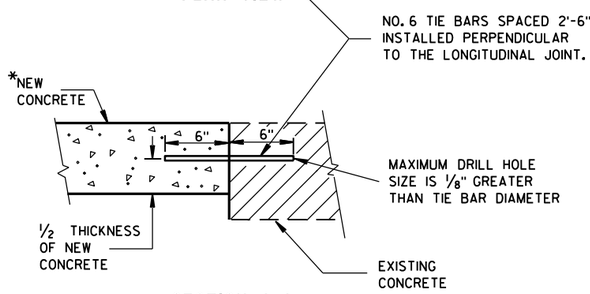
⑤ THE FACE OF CURB IS 6" FROM THE BACK OF CURB.

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



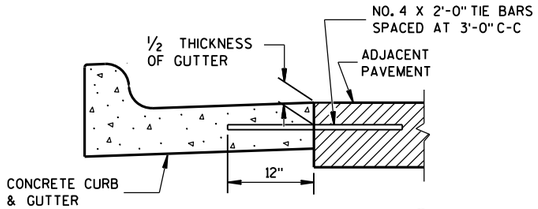
PLAN VIEW

*NEW CURB & GUTTER, SURFACE DRAINS, CONCRETE PAVEMENT OR OTHER NEW CONCRETE.

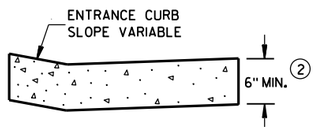


SECTION A-A

TIE BARS DRILLED INTO EXISTING PAVEMENT

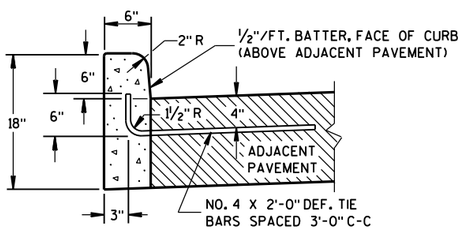


TYPICAL TIE BAR LOCATION ①

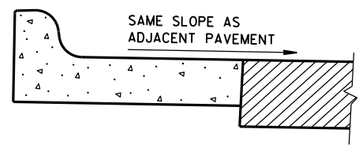


DRIVEWAY ENTRANCE CURB

(WHEN DIRECTED BY THE ENGINEER)

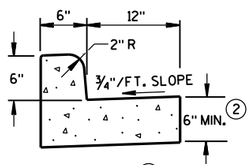


① TYPES A & D



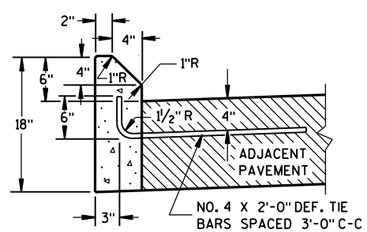
⑥ REVERSE SLOPE GUTTER

(TYPICAL FOR ALL CURB & GUTTER TYPES)



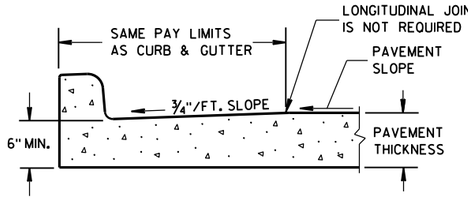
① TYPES A & D

CONCRETE CURB & GUTTER 18"

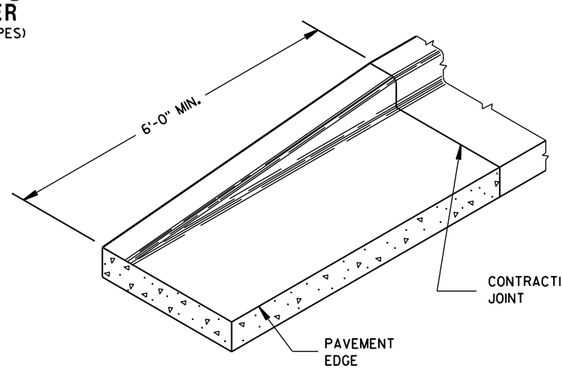


① TYPES G & J

CONCRETE CURB



PARTIAL SECTION OF PAVEMENT WITH INTEGRAL CURB & GUTTER



END SECTION CURB & GUTTER

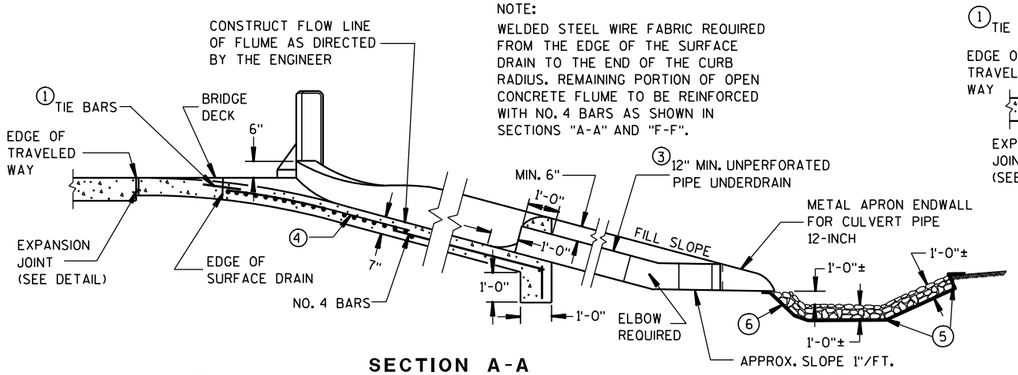
CONCRETE CURB, CONCRETE CURB & GUTTER AND TIES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

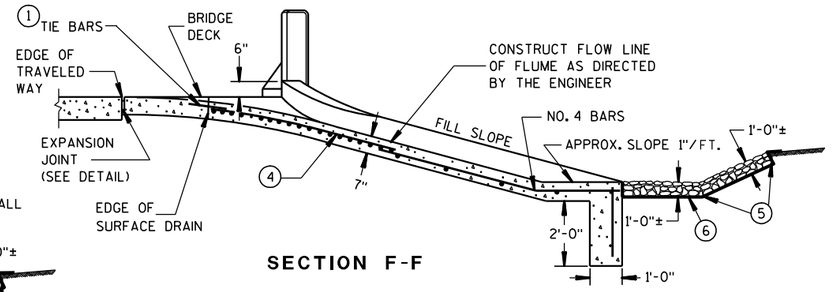
APPROVED
June, 2016 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

6

S.D.D. 8 D 1-19



SECTION A-A



SECTION F-F

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

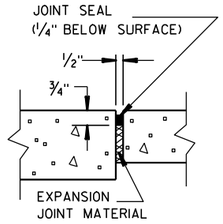
(4) MINIMUM REINFORCEMENT SHALL BE 6" X 6" - W4.0 X W4.0 OR NO. 3 BARS LONGITUDINAL AND TRANSVERSE SPACING 12" C-C.

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

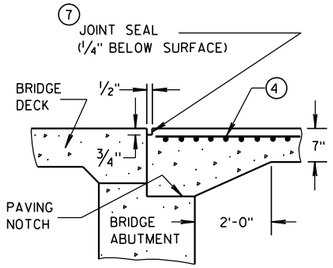
(6) GEOTEXTILE FABRIC, TYPE 'R"

(7) HOT POURED SEALANT UNLESS OTHERWISE SPECIFIED.

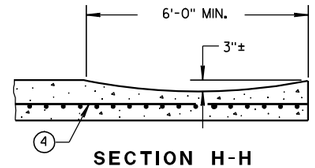
(8) THIS DIMENSION MAY VARY DEPENDING ON THE SPACING OF POSTS FOR THE STEEL PLATE BEAM GUARD. THE TYPICAL LOCATION FOR THE SURFACE DRAIN IS WHERE THE POST SPACING WIDENS TO 3'-1½".



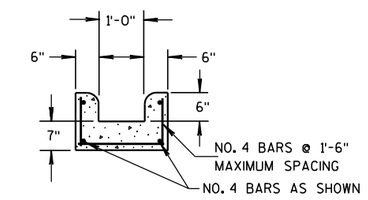
EXPANSION JOINT DETAIL



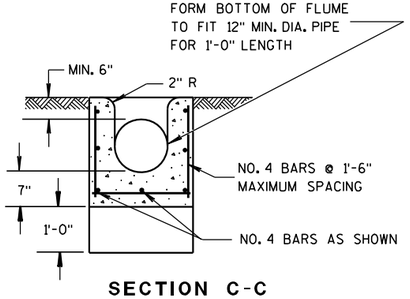
SECTION D-D



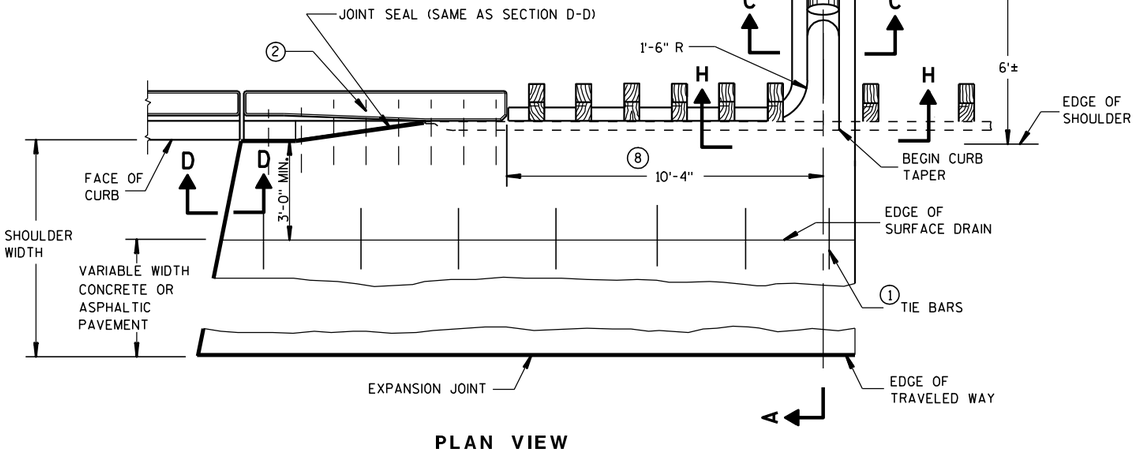
SECTION H-H



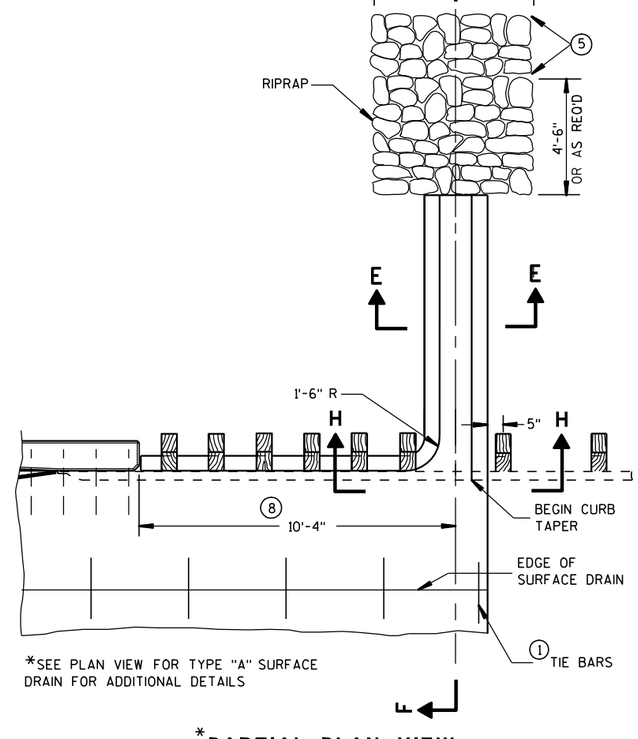
SECTION E-E



SECTION C-C

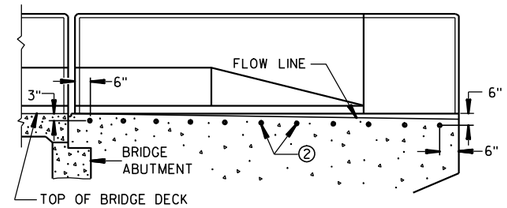


PLAN VIEW
SURFACE DRAIN WITH PIPE
TYPE "A"



*SEE PLAN VIEW FOR TYPE "A" SURFACE DRAIN FOR ADDITIONAL DETAILS

*PARTIAL PLAN VIEW
SURFACE DRAIN WITHOUT PIPE
TYPE "B"



LOCATION OF
TIE BARS IN WINGWALL

CONCRETE SURFACE DRAINS
FLUME TYPE
AT STRUCTURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

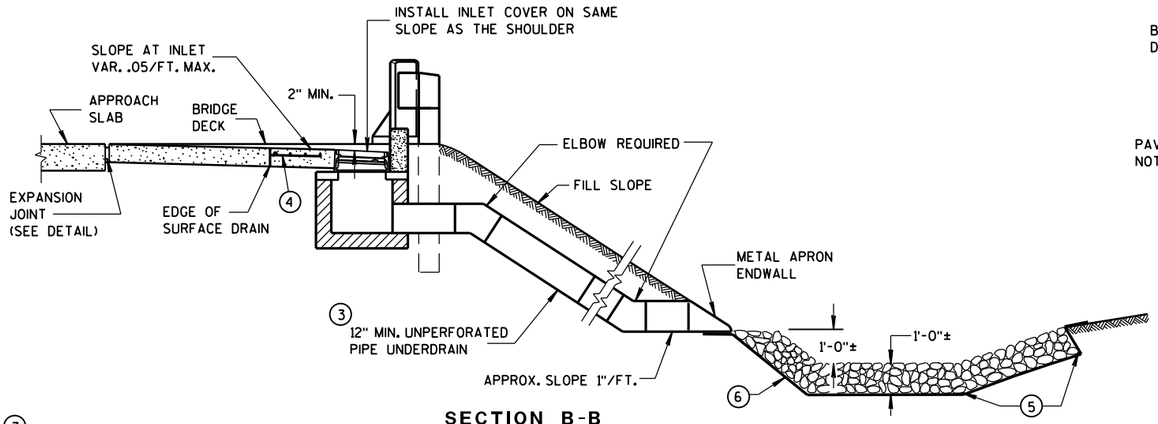
APPROVED
9/4/08
DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER
FHWA

6

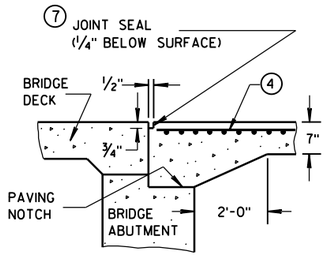
S.D.D. 8 D 2-6

6

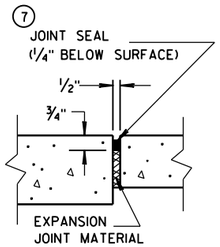
S.D.D. 8 D 2-6



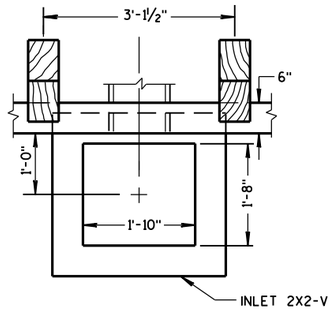
SECTION B-B



SECTION D-D



EXPANSION JOINT DETAIL



PLAN VIEW

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.

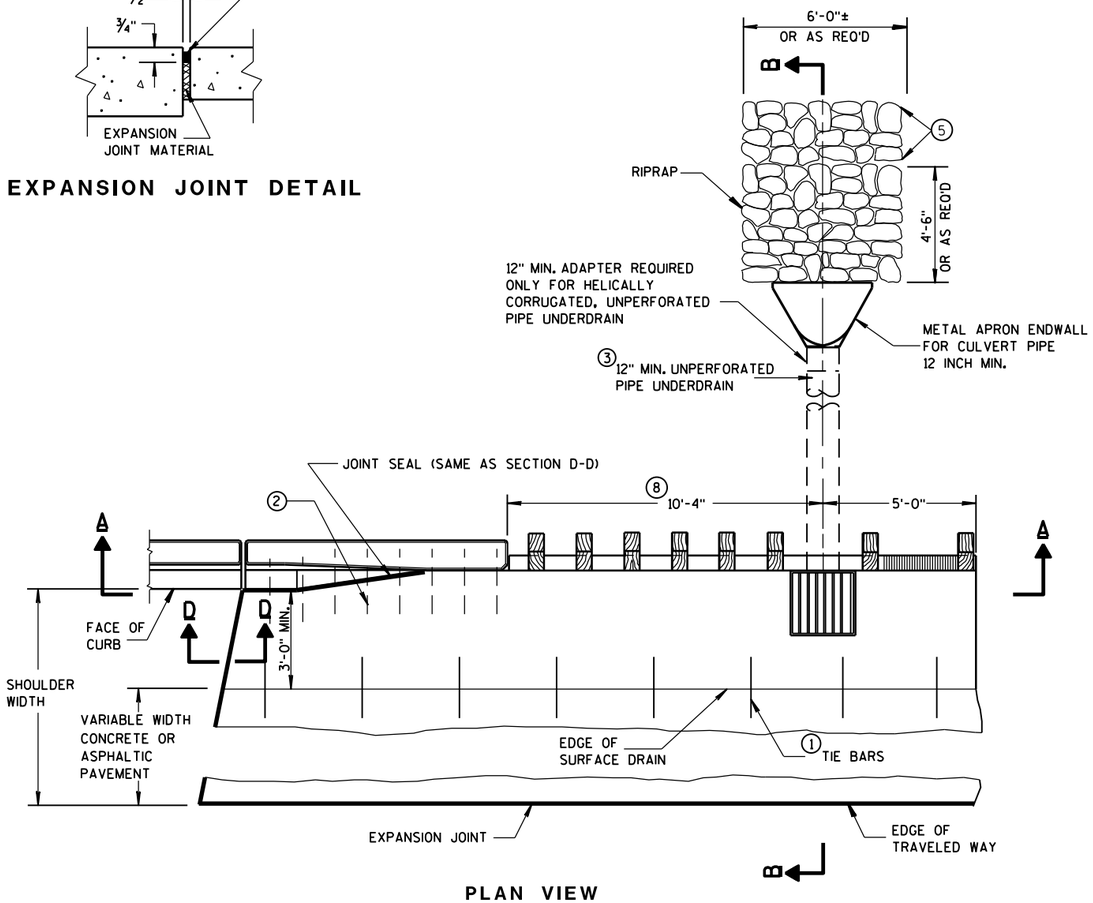
(5) LIMITS OF ADDITIONAL RIPRAP WHEN SPECIAL DITCH IS REQUIRED.

(6) GEOTEXTILE FABRIC, TYPE 'R"

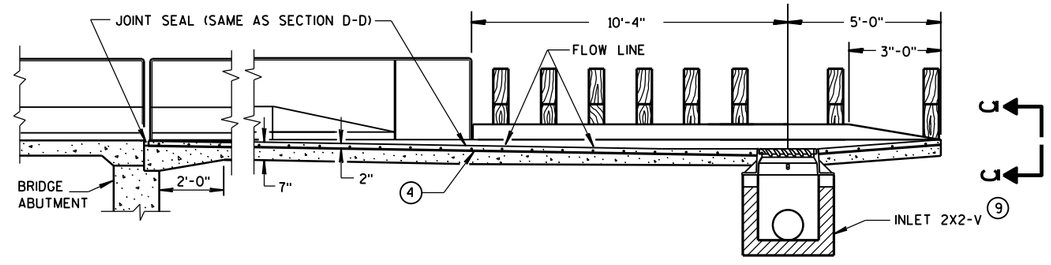
(7) HOT POURED SEALANT UNLESS OTHERWISE SPECIFIED.

(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'-1 1/2".

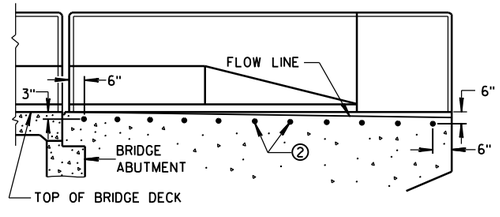
(9) SEE CURRENT STANDARD DETAIL DRAWINGS 8A5 AND 8C7 FOR DETAILS.



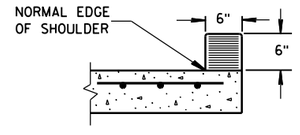
PLAN VIEW



SECTION A-A



LOCATION OF TIE BARS IN WINGWALL



SECTION C-C

CONCRETE SURFACE DRAINS DROP INLET TYPE AT STRUCTURES

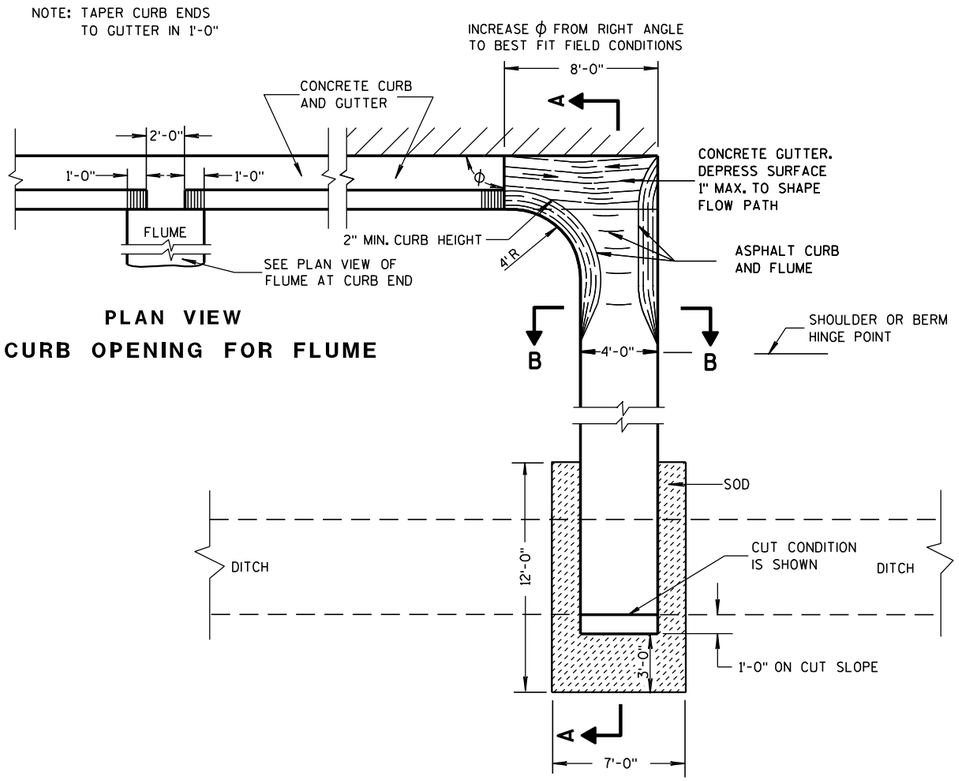
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
9/4/08 DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER
FHWA

6

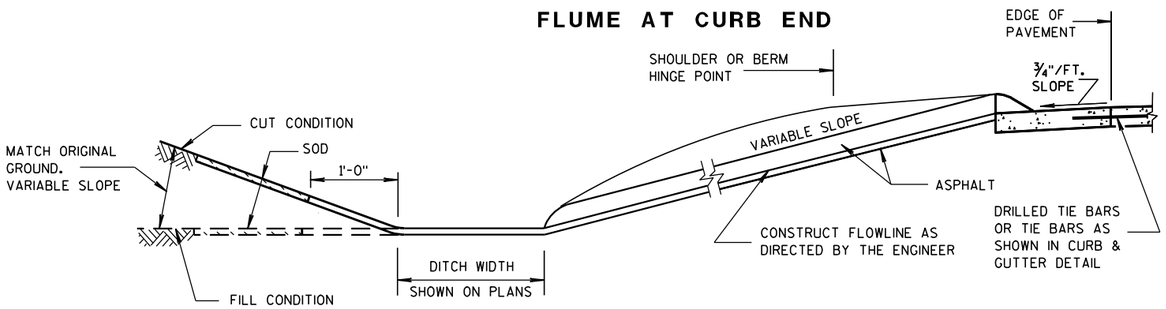
S.D.D. 8 D 3-6

ASPHALTIC FLUME

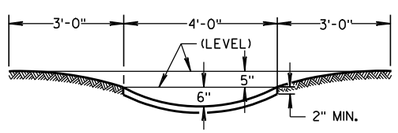


PLAN VIEW
CURB OPENING FOR FLUME

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.

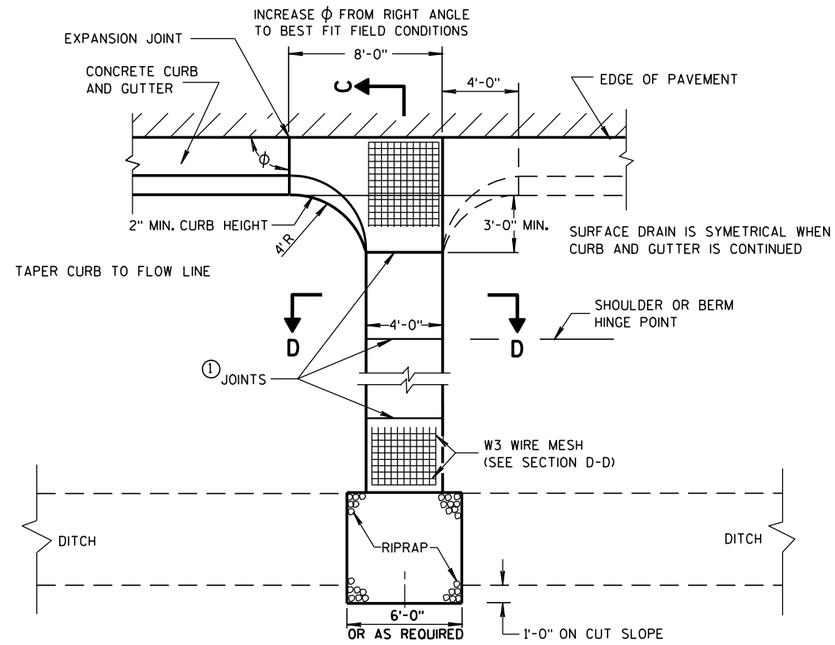
WELDED STEEL WIRE FABRIC SHALL BE IN ACCORDANCE WITH AASHTO SPECIFICATION M55.

① JOINTS SHALL BE ⅛ TO ¼ INCH WIDE BY 1½ INCHES DEEP AND SPACED AT UNIFORM INTERVALS OF APPROXIMATELY 4 FEET.

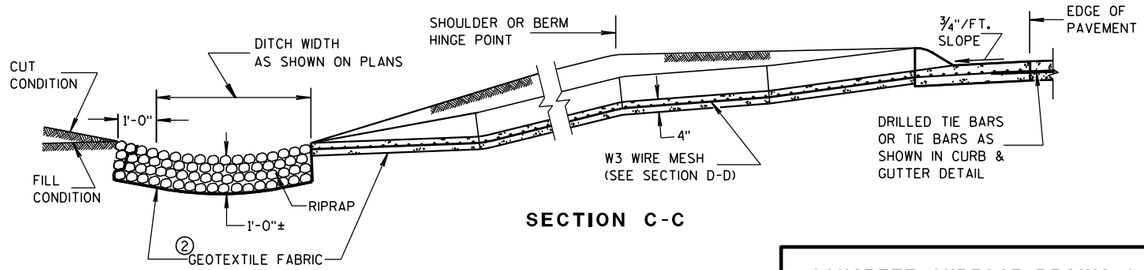
② GEOTEXTILE FABRIC TYPE "R" SHALL UNDERLAY THE FULL LENGTH AND WIDTH OF THE CONCRETE SURFACE DRAIN AND RIPRAP.

③ CONCRETE SURFACE DRAIN WITHOUT CURB AND GUTTER MAY BE USED ON BACKSLOPES WHEN SPECIFIED

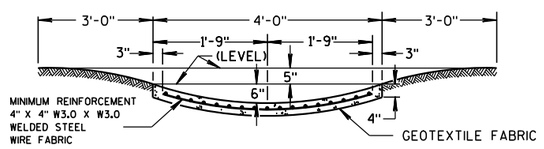
③ CONCRETE SURFACE DRAIN



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 — MENT

FHWA

6

S.D.D. 8 D 4-5

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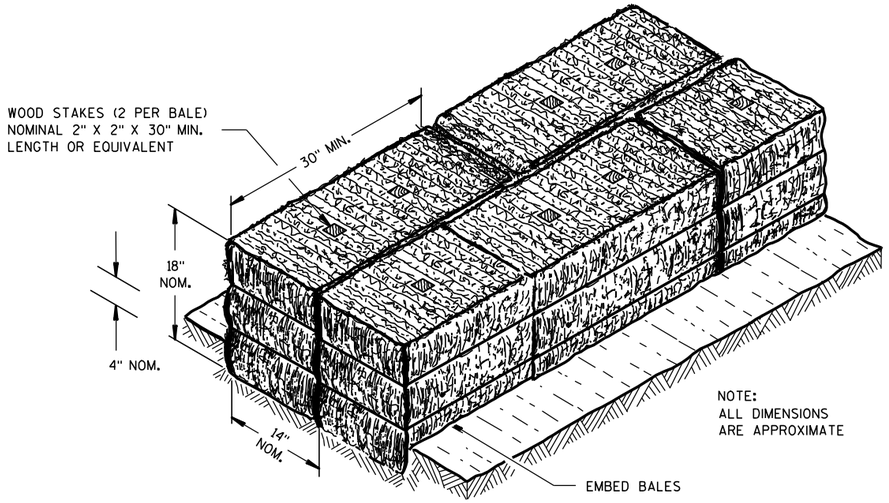
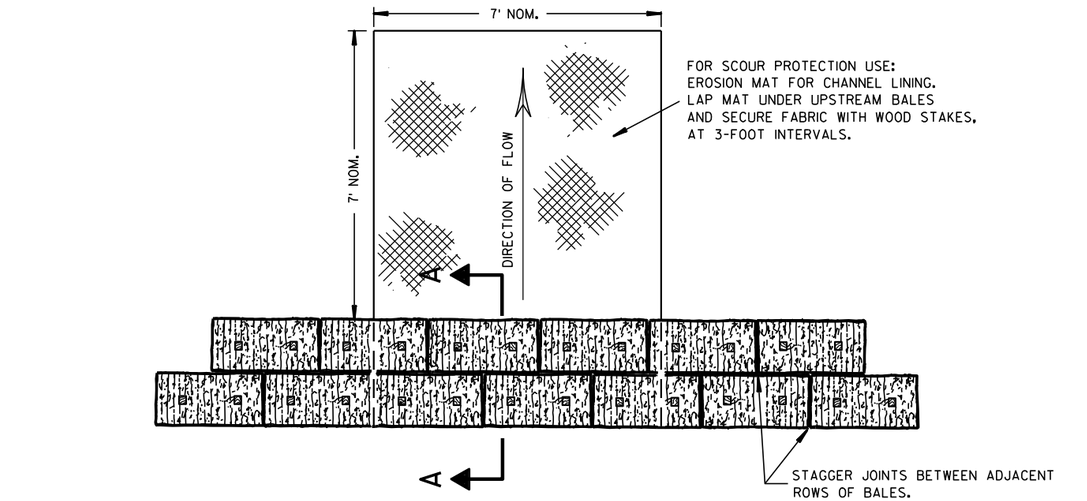
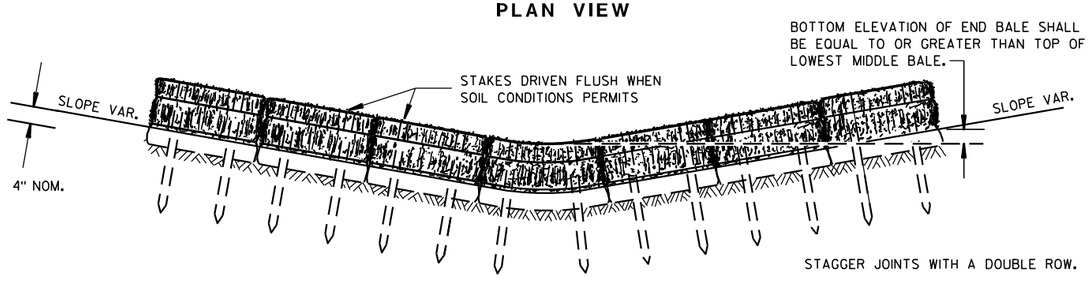
S.D.D. 8 D 4-5



SECTION A-A



PLAN VIEW



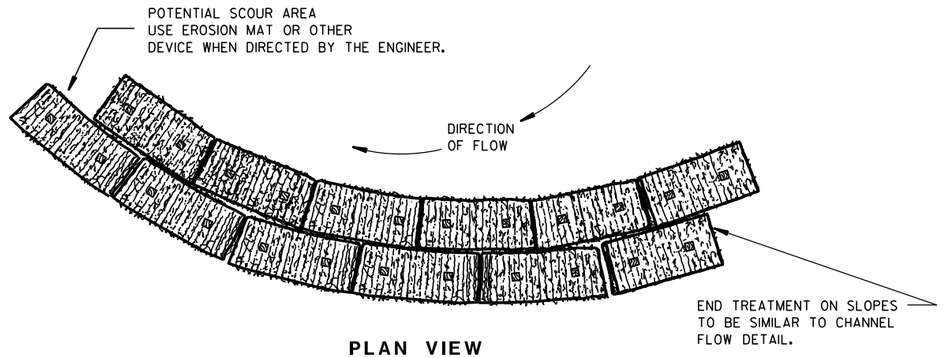
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES (1)

GENERAL NOTES

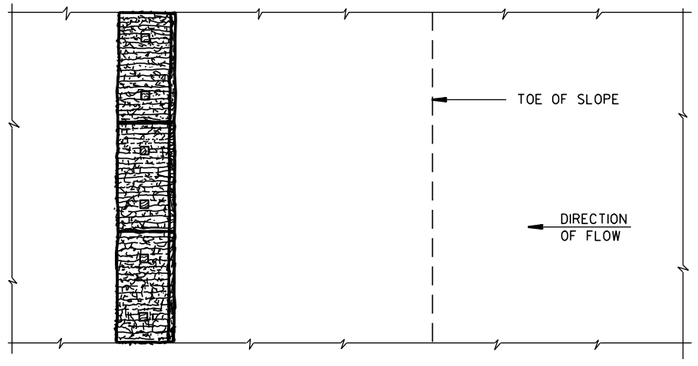
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

(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.

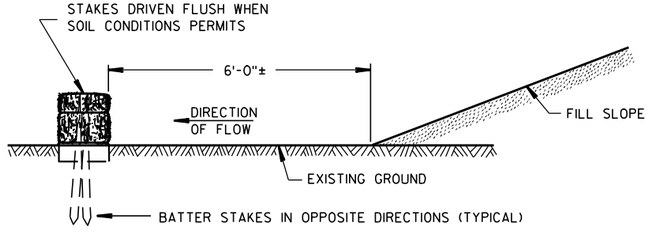


PLAN VIEW

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

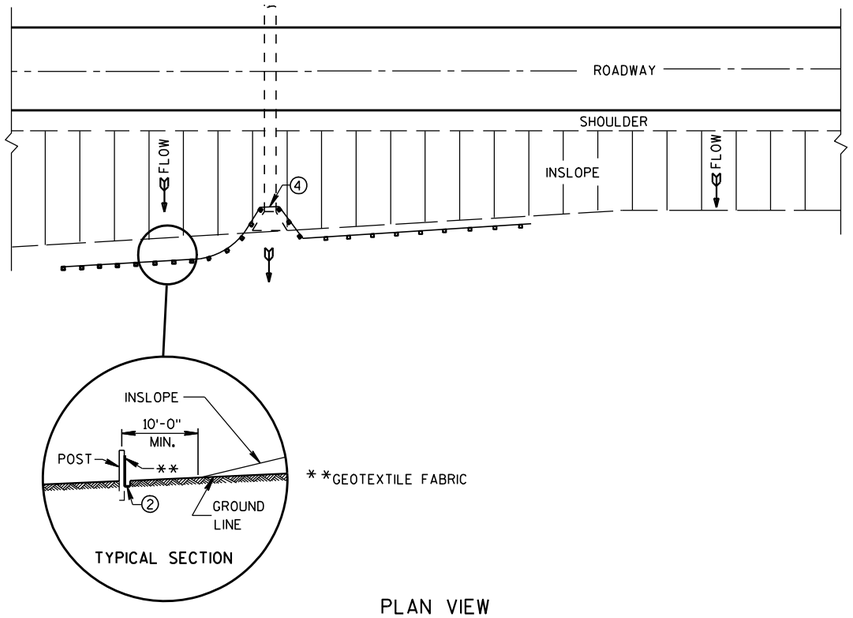
FHWA

6

S.D.D. 8 E 8-3

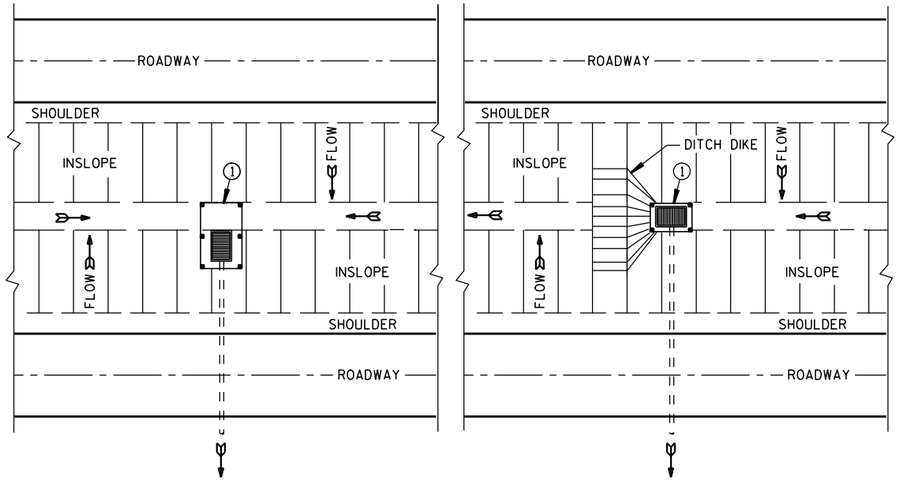
6

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.

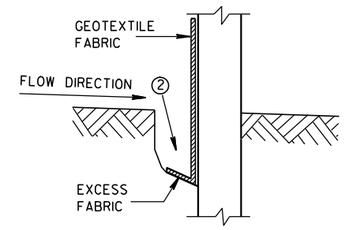
① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.

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.

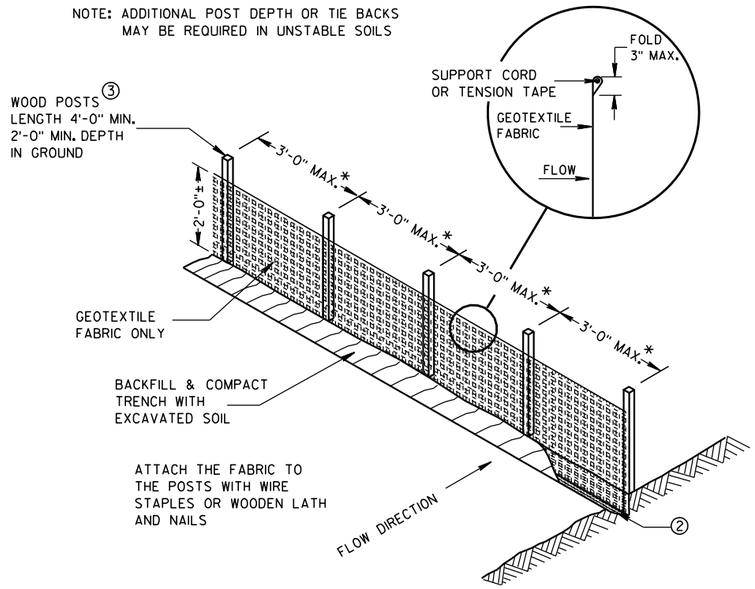
③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1⅛" X 1⅛" OF OAK OR HICKORY.

④ SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.

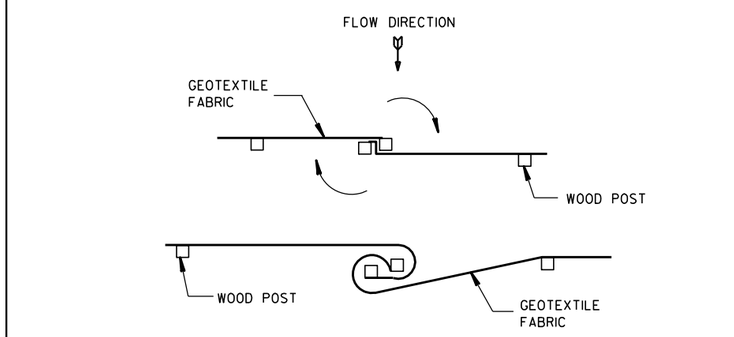
⑤ CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



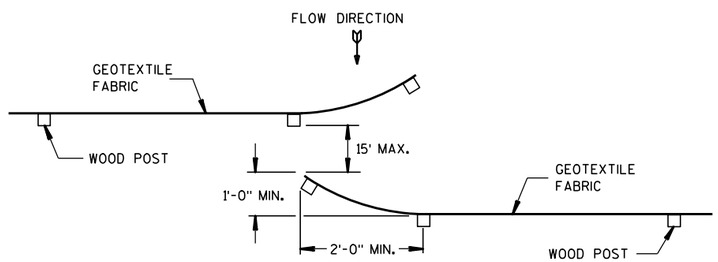
TRENCH DETAIL



SILT FENCE

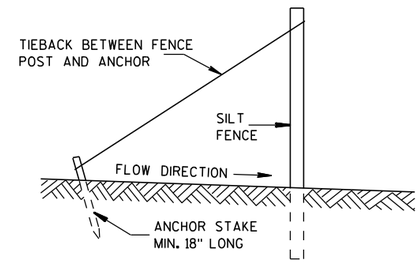


TWIST METHOD



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

6

S.D.D. 8 E 9-6

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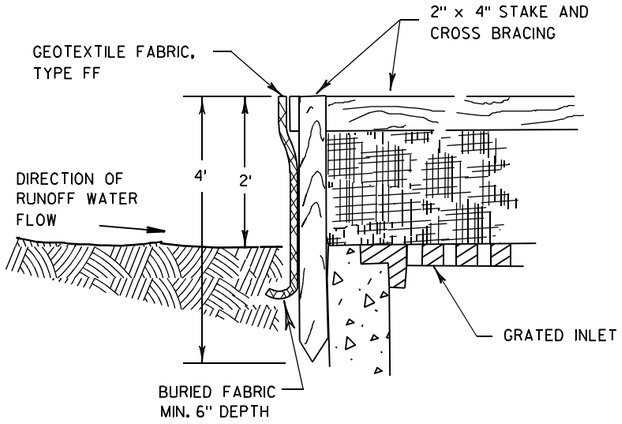
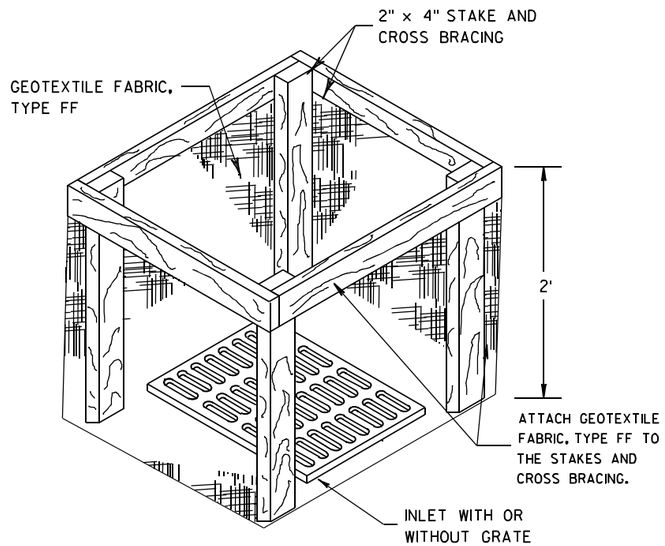
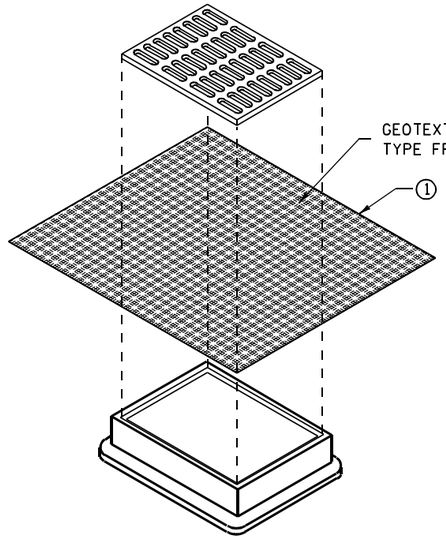
S.D.D. 8 E 9-6



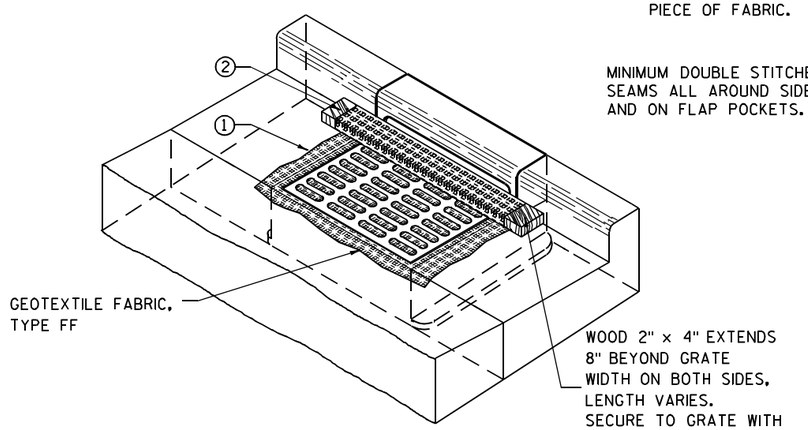


INLET PROTECTION, TYPE A

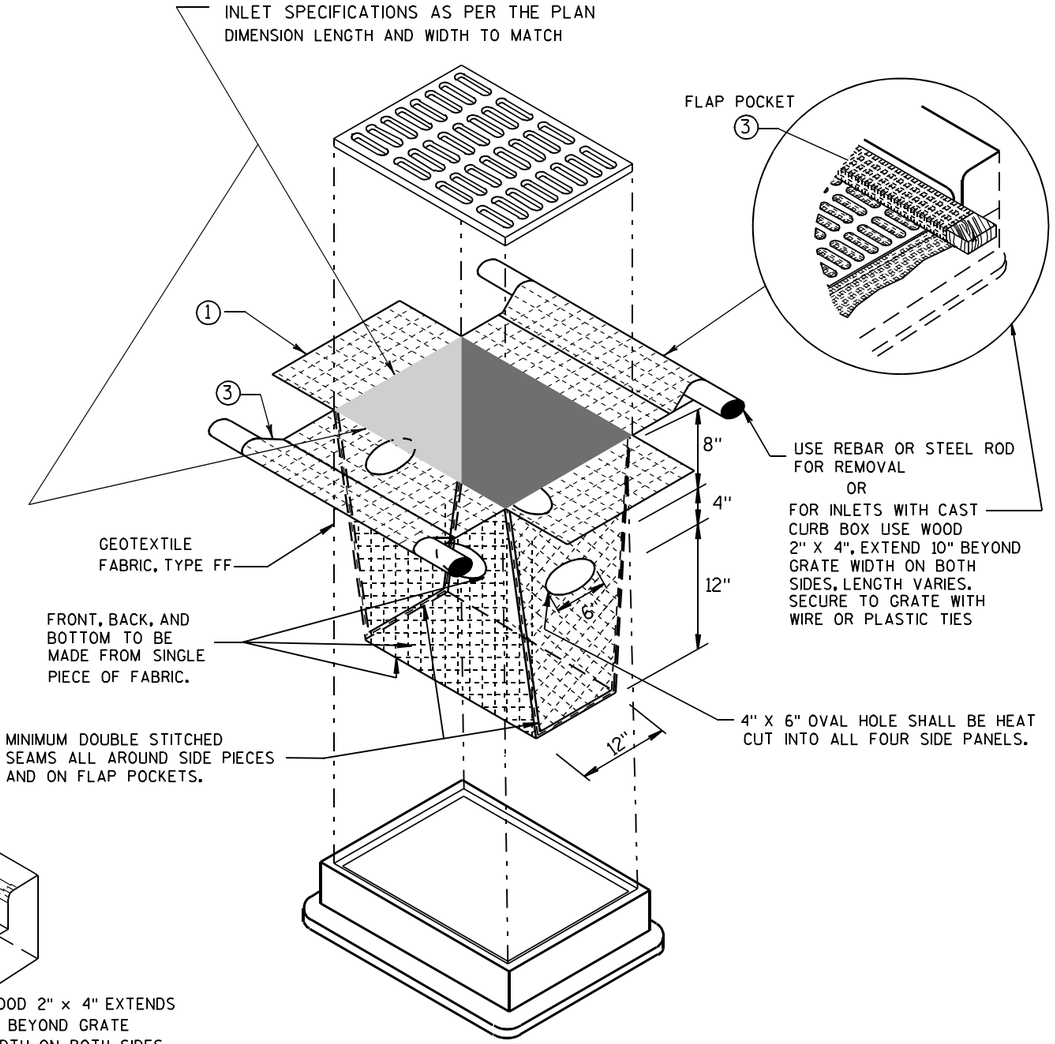


INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)

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



INLET PROTECTION, TYPE C (WITH CURB BOX)



INLET PROTECTION, TYPE D

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

GENERAL NOTES

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

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

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

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

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

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

INSTALLATION NOTES

TYPE B & C

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

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

TYPE D

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

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

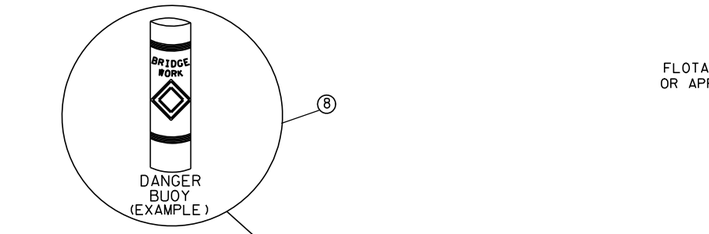
THE INSTALLED BAG SHALL HAVE A MINIMUM SIDE CLEARANCE, BETWEEN THE INLET WALLS AND THE BAG, MEASURED AT THE BOTTOM OF THE OVERFLOW HOLES, OF 3". WHERE NECESSARY THE CONTRACTOR SHALL CINCH THE BAG, USING PLASTIC ZIP TIES, TO ACHIEVE THE 3" CLEARANCE. THE TIES SHALL BE PLACED AT A MAXIMUM OF 4" FROM THE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

INLET PROTECTION
TYPE A, B, C, AND D

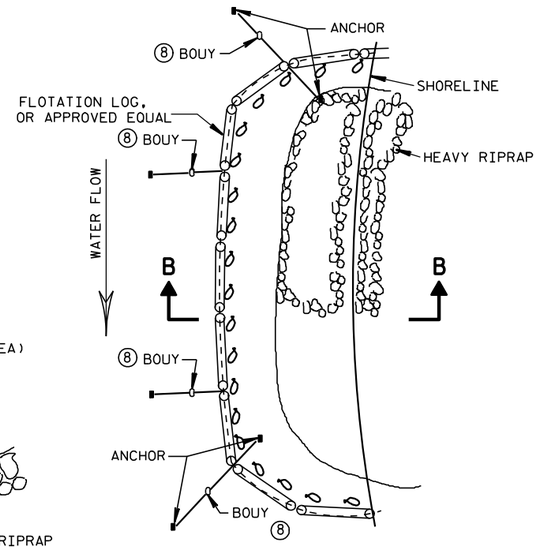
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

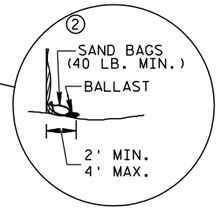
APPROVED
10/16/02
DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

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

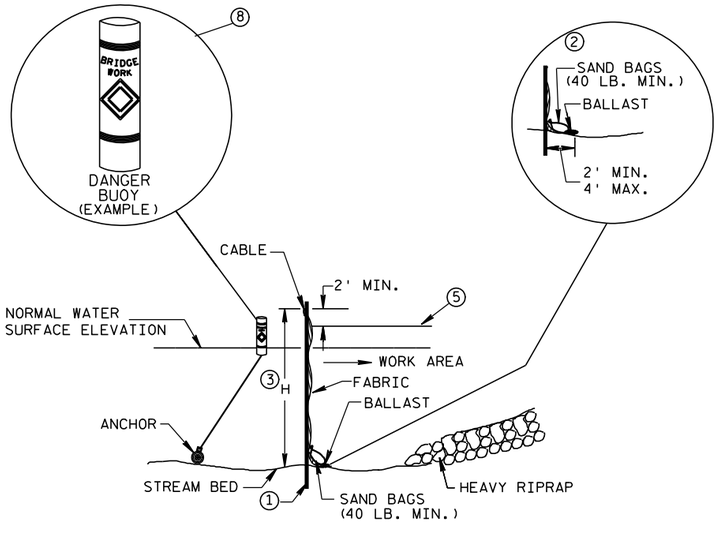


SECTION B-B

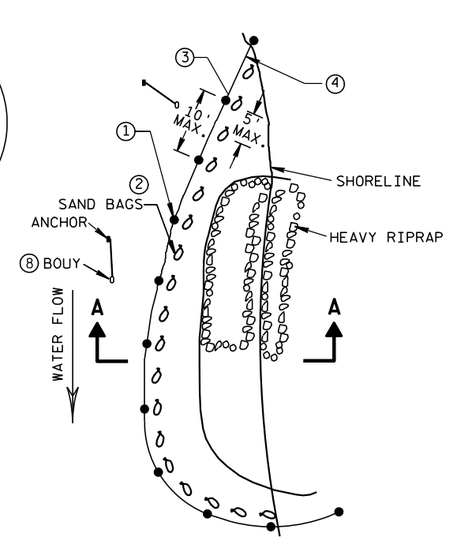




TURBIDITY BARRIER FLOAT ALTERNATIVE
CAUTION - SEE NOTE 6



SECTION A-A



PLAN VIEW

TURBIDITY BARRIER STANDARD POST INSTALLATION

TURBIDITY BARRIER PLACEMENT DETAILS

GENERAL NOTES

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

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

① DRIVEN STEEL POSTS, PIPES, OR CHANNELS. LENGTH SHALL BE SUFFICIENT TO SECURELY SUPPORT BARRIER AT HIGH WATER ELEVATIONS.

② SANDBAGS TO BE USED AS ADDITIONAL BALLAST WHEN ORDERED BY THE ENGINEER TO MEET ADVERSE FIELD CONDITIONS. SPACE AS APPROPRIATE FOR SITE CONDITIONS.

③ WHEN BARRIER HEIGHT, H, EXCEEDS 8 FT., POST SPACING MAY NEED TO BE DECREASED.

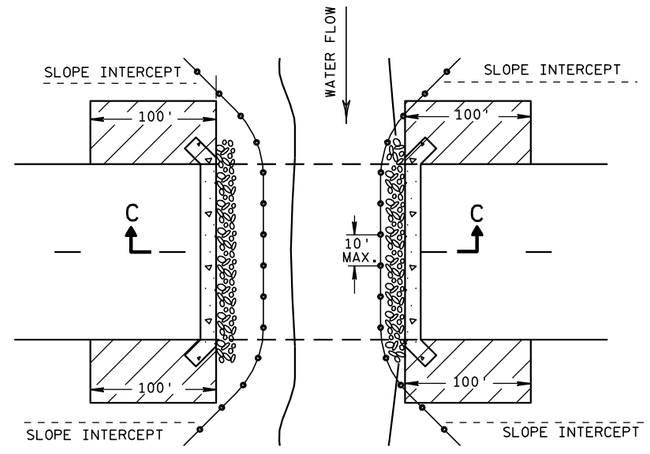
④ IN WATERWAYS SUBJECT TO FLUCTUATING WATER ELEVATIONS, PROVISIONS SHOULD BE MADE TO ALLOW THE WATER TO EQUALIZE ON EACH SIDE OF THE BARRIER. THIS MAY BE ACCOMPLISHED BY LEAVING A PORTION OF THE BARRIER OPEN ON THE UPSTREAM END.

⑤ ESTIMATED HIGH WATER ELEVATION DURING CONSTRUCTION PERIOD. MIMIMUM BARRIER HEIGHT SHALL BE 2'GREATER THAN EITHER THE 02 ELEVATION OR THE ESTIMATED HIGH WATER ELEVATION DURING CONSTRUCTION, WICHEVER IS GREATER.

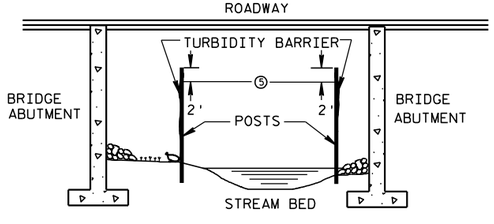
⑥ FLOAT ALTERNATIVE WILL ONLY BE ALLOWED WITH WRITTEN APPROVAL OF THE ENGINEER, AND IS MEANT FOR LOCATIONS WHERE BED ROCK PREVENTS THE INSTALLATION OF POSTS.

⑦ ALLOW SUFFICIENT SLACK VERTICALLY AND HORIZONTALLY SO THAT SEDIMENT BUILD UP WILL NOT SEPARATE OR LOWER THE TURBIDITY BARRIER.

⑧ USE AS DIRECTED BY COAST GUARD OR DNR PERMIT WHEN WORKING IN NAVIGABLE WATERWAYS.



PLAN VIEW



SECTION C-C

TURBIDITY BARRIER DETAIL SHOWING TYPICAL PLACEMENT AT STRUCTURES

TURBIDITY BARRIER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6

S.D.D. 8 E 11-2

6

S.D.D. 8 E 11-2

METAL APRON ENDWALLS

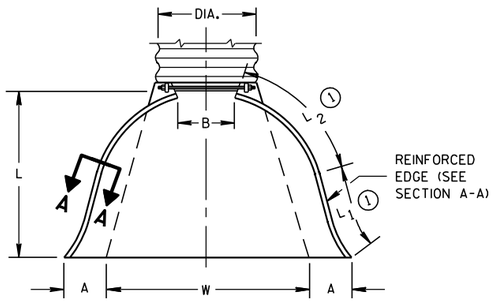
PIPE DIA. (IN.)	MIN. THICK. (Inches) STEEL	MIN. THICK. (Inches) ALUM.	DIMENSIONS (Inches) A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")	APPROX. SLOPE	BODY
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1	1 Pc.
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1	1 Pc.
18	.064	.060	8	10	6	31	15	28 1/4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

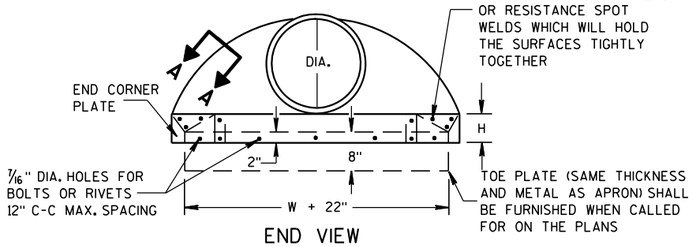
REINFORCED CONCRETE APRON ENDWALLS

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

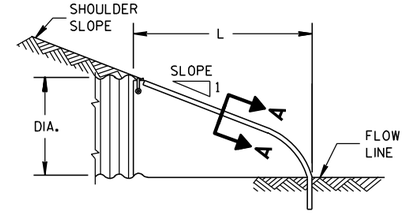
*MINIMUM
**MAXIMUM



PLAN VIEW

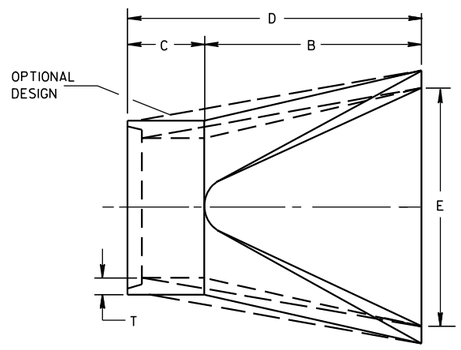


END VIEW

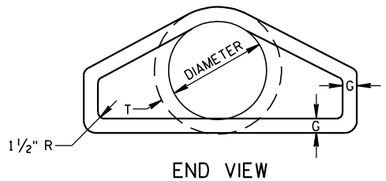


SIDE ELEVATION

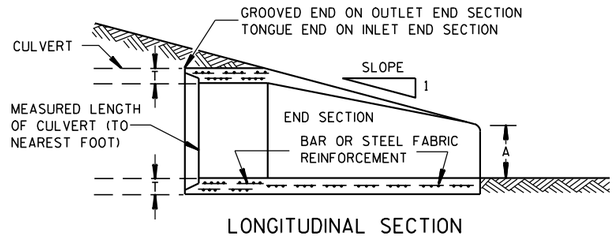
METAL ENDWALLS



PLAN

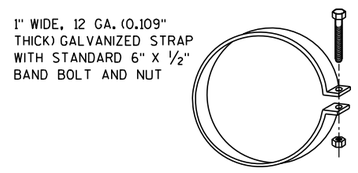


END VIEW



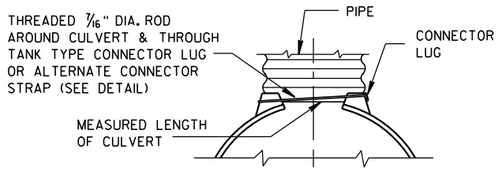
LONGITUDINAL SECTION

CONCRETE ENDWALLS

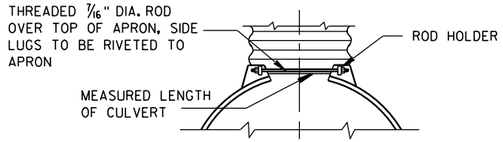


ALTERNATE FOR TYPE 1 CONNECTION

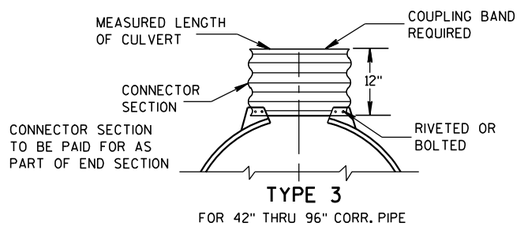
END SECTION CONNECTOR STRAP



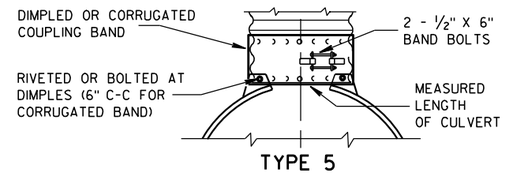
TYPE 1
FOR 12" THRU 24" CORR. PIPE



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

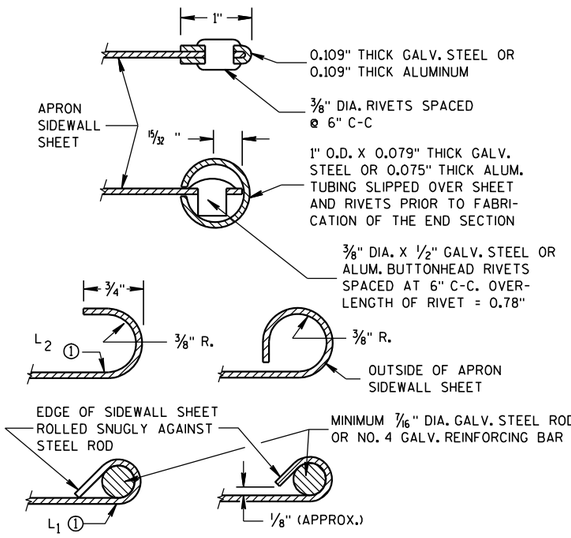
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL. AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

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.

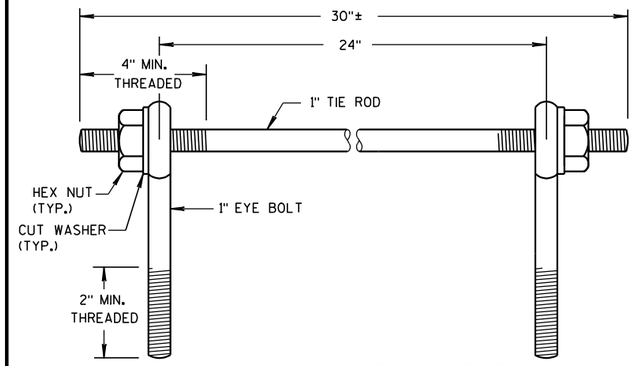
① FOR PIPE SIZES UP TO 60" DIAMETER, A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

APRON ENDWALLS FOR CULVERT PIPE

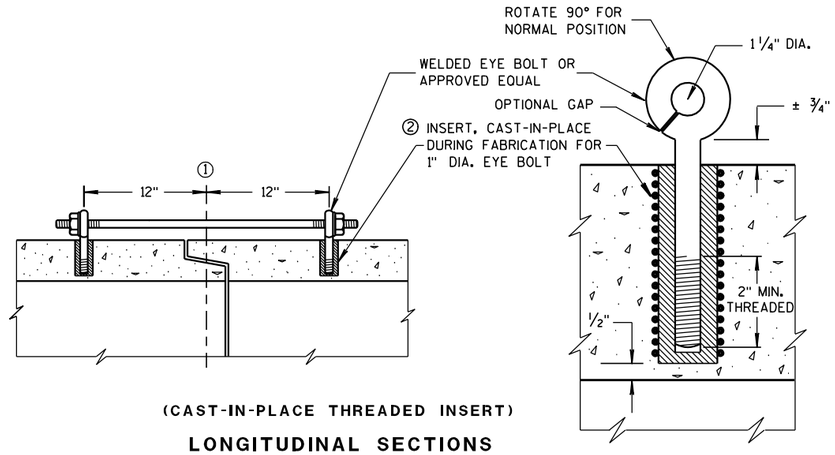
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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.

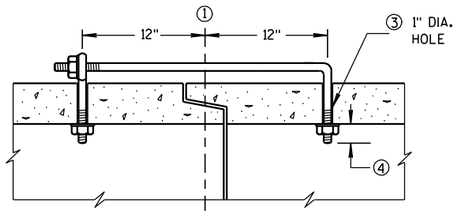
② THE INSIDE OF THE THREADED INSERTS SHALL BE CLEAN TO ALLOW THE INSERTION OF THREADED EYE BOLTS.

③ HOLES SHALL BE CAST-IN-PLACE OR DRILLED 12 INCHES FROM ℄ OF TONGUE AND GROOVE.

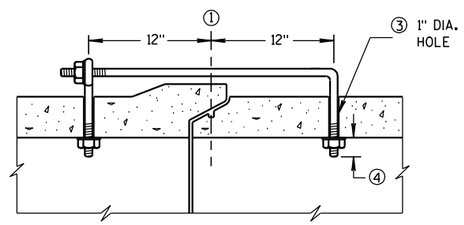
④ BOLT PROJECTION INSIDE OF PIPE SHALL NOT EXCEED 2 INCHES.

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)

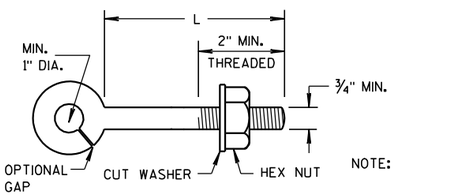


(MODIFIED BELL PIPE)

LONGITUDINAL SECTION

EYE BOLT DIMENSION TABLE

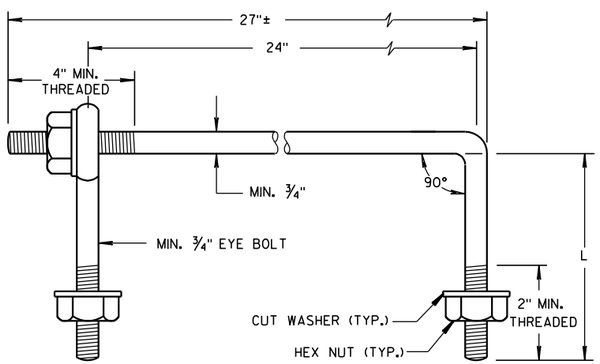
PIPE SIZE	L = LENGTH	
	TONGUE & GROOVE PIPE	MODIFIED BELL PIPE
18" TO 24"	4 1/2"	6 1/4"
30"	5"	7"
36"	5 1/2"	7"
42"	6"	
48"	6 1/2"	
60"	7 1/2"	
66"	8"	



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

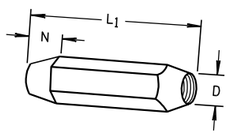
(JOINT TIES FOR 18" TO 66" DIA. CONCRETE PIPE)

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



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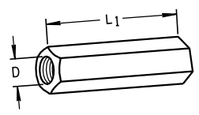
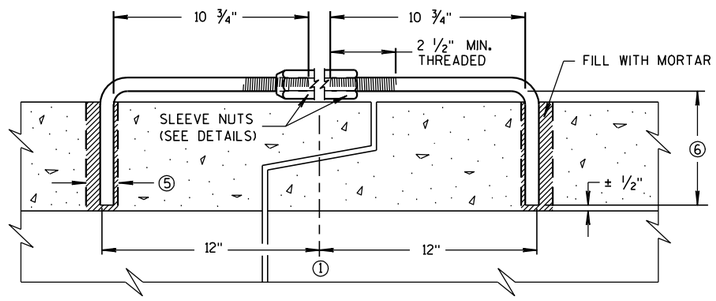


PLAIN

RIGHT AND LEFT THREADS

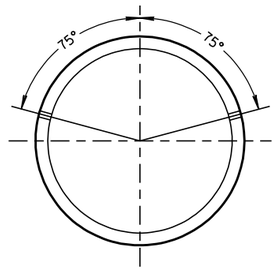
SLEEVE NUTS



LONGITUDINAL SECTION

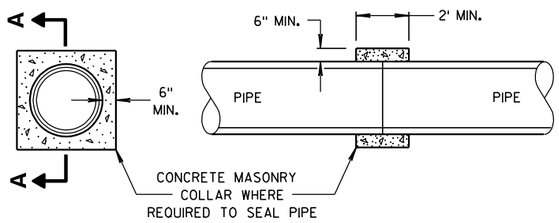
(JOINT TIES FOR 12" TO 108" DIA. CONCRETE PIPE)

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
FHWA

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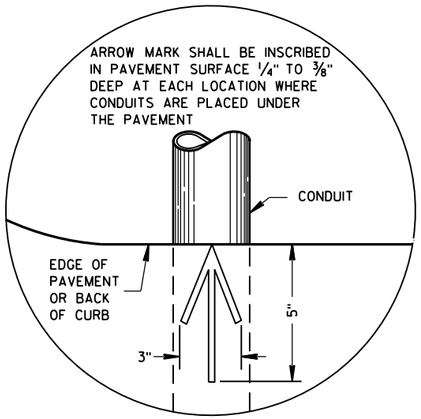
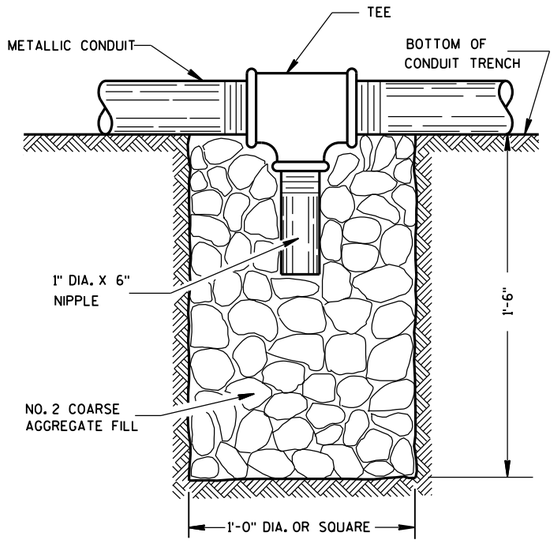


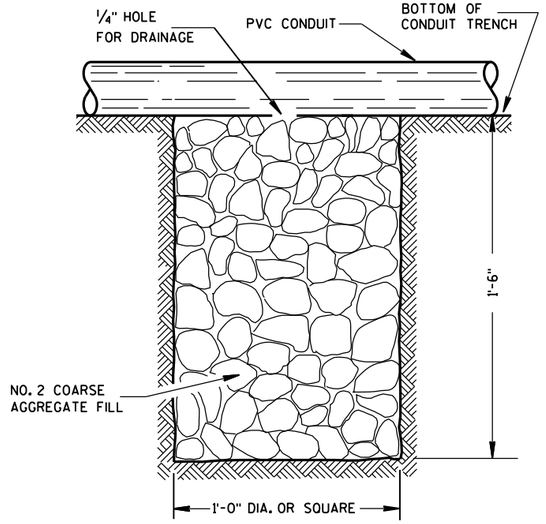
PLAN VIEW

ARROW MARK



NOTE: INSTALL AT LOCATIONS WHERE METALLIC CONDUITS CANNOT BE PITCHED TO DRAIN INTO A PULL BOX.

DRAIN SUMP FOR METALLIC CONDUIT



NOTE: INSTALL AT LOCATIONS WHERE PVC CONDUITS CANNOT BE PITCHED TO DRAIN INTO A PULL BOX.

DRAIN SUMP FOR PVC CONDUIT

GENERAL NOTES

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

METALLIC (STANDARD SPECIFICATION 652.2.2) OR NONMETALLIC (STANDARD SPECIFICATION 652.2.3) CONDUIT SHALL BE FURNISHED AND PLACED AS SHOWN.

DEPTH OF CONDUIT INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES MINIMUM AND 36 INCHES MAXIMUM.

DEPTH OF CONDUIT INSTALLED THAT IS NOT BELOW THE TRAVELED WAY SHALL BE 18 INCHES MINIMUM AND 36 INCHES MAXIMUM.

ANY EXCEPTION TO THE MAXIMUM DEPTH SHALL BE ONLY WITH THE WRITTEN APPROVAL OF THE ENGINEER.

THE TRENCH SHALL NOT BE BACKFILLED PRIOR TO INSPECTION OF THE CONDUIT.

ALL METALLIC CONDUIT RACEWAY ENDS SHALL BE REAMED AND THREADED.

ALL METALLIC CONDUIT IN WHICH WIRE OR CABLE IS TO BE INSTALLED SHALL BE BUSHED WITH APPROVED THREADED BUSHINGS BEFORE INSTALLATION OF THE WIRE OR CABLE.

ALL METALLIC CONDUITS IN WHICH WIRE OR CABLE IS NOT TO BE INSTALLED SHALL BE CAPPED WITH THREADED PROTECTIVE CAPS, AS APPROVED BY THE ENGINEER.

ALL NONMETALLIC CONDUIT SHALL BE CAPPED OR PLUGGED IMMEDIATELY AFTER INSTALLATION AND SHALL REMAIN CAPPED OR PLUGGED UNTIL WIRE/CABLES ARE INSTALLED.

NONMETALLIC CONDUITS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

BENDING OF PVC ELECTRICAL CONDUIT SHALL BE ACCOMPLISHED BY USING A BLANKET OR EMERSION TYPE TANK DESIGNED FOR THE PURPOSE OF BENDING PVC ELECTRICAL CONDUIT.

ALL CUT ENDS SHALL BE TRIMMED INSIDE AND OUTSIDE TO REMOVE ALL ROUGH EDGES ON NONMETALLIC CONDUIT. (SEE NEC 347.5)

WHEN REQUIRED TO CONNECT NONMETALLIC CONDUIT TO METALLIC CONDUIT, ONLY U.L. LISTED ADAPTER FITTINGS SHALL BE USED.

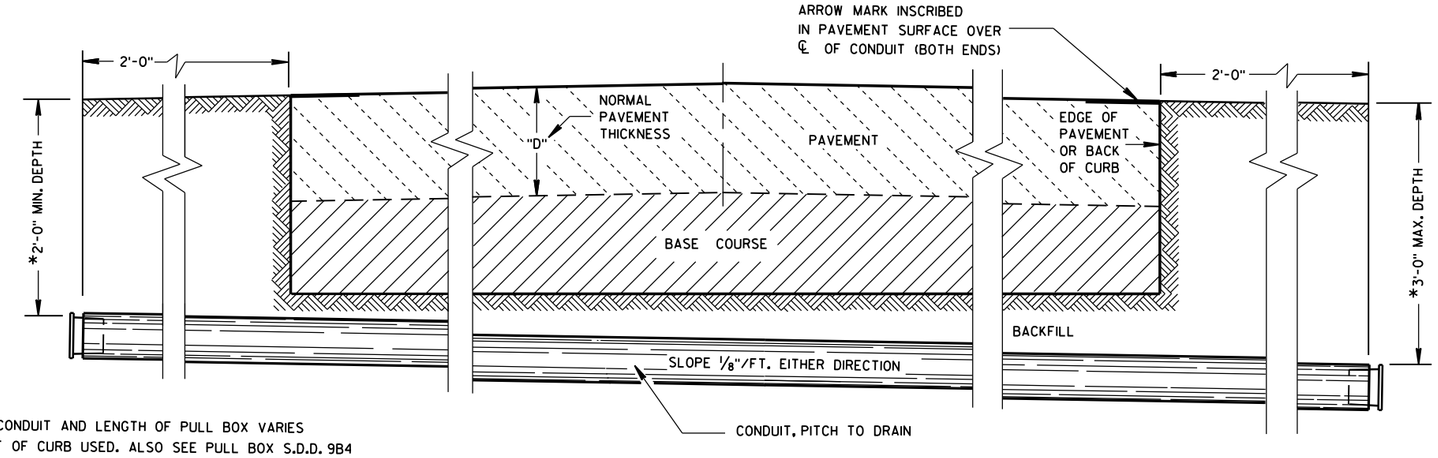
PRIOR TO CONDUIT ACCEPTANCE, CONDUIT CAPS OR PLUGS SHALL BE REMOVED, AND THE CAPS, PLUGS AND CONDUIT ENDS SHALL BE THOROUGHLY CLEANED AND THEN THE CAPS OR PLUGS REINSTALLED TO ENSURE THAT THE CAPS OR PLUGS CAN BE EASILY REMOVED IN THE FUTURE.

ALL CONDUIT BEING FURNISHED AND INSTALLED SHALL HAVE THE U.L. LABEL FIRMLY ATTACHED.

CONDUIT RUNS SHALL BE THE SAME SIZE OF CONDUIT FROM ONE END TO THE OTHER (FROM PULL BOX TO PULL BOX-OR-JUNCTION BOX TO JUNCTION BOX-OR-BASE TO BASE, ETC.).

TRACER WIRE SHALL BE INSTALLED AS STATED IN THE STANDARD SPECIFICATION, ITEM 652.3.1.1.

ALL CONDUIT RUNS SHALL BE STRAIGHT (WITHOUT BENDS) FROM PULL BOX TO PULL BOX, PULL BOX TO BASE AND BASE TO BASE AS SHOWN ON THE PLANS.



*DEPTH OF CONDUIT AND LENGTH OF PULL BOX VARIES WITH HEIGHT OF CURB USED. ALSO SEE PULL BOX S.D.D. 9B4

SIDE ELEVATION

DETAIL FOR CONDUIT UNDER PAVED HIGHWAYS

CONDUIT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2015 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

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S.D.D. 9 B 2-9

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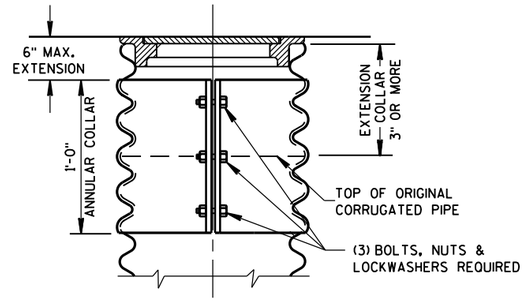
S.D.D. 9 B 2-9

TABLE OF NOMINAL DIMENSIONS AND WEIGHTS

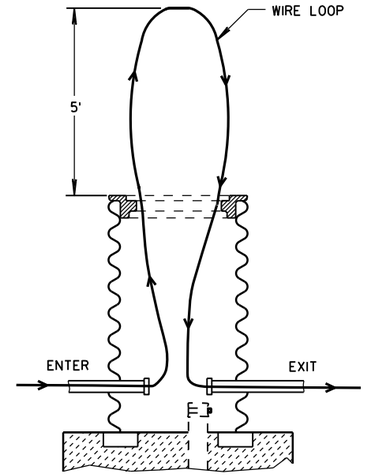
DIMENSION IN INCHES		CORRUGATED STEEL PIPE								
PIPE DIAMETER (INSIDE)	A	12	12	12	18	18	18	24	24	24
PIPE LENGTH **	B	24	30	36	24	30	36	36	42	48
WALL THICKNESS	C	0.064	0.064	0.064	0.064	0.064	0.064	0.064	0.064	0.064
COVER	D	10 1/4	10 1/4	10 1/4	16 1/4	16 1/4	16 1/4	22 1/4	22 1/4	22 1/4
FRAME	E	14 1/2	14 1/2	14 1/2	20 1/2	20 1/2	20 1/2	26 1/2	26 1/2	26 1/2
FRAME	F	8 1/2	8 1/2	8 1/2	14 1/2	14 1/2	14 1/2	20 1/2	20 1/2	20 1/2
FRAME	G	11 1/2	11 1/2	11 1/2	17 1/2	17 1/2	17 1/2	23 1/2	23 1/2	23 1/2
WEIGHT IN POUNDS *										
FRAME AND COVER		60	60	60	110	110	110	155	155	155

* THE ACTUAL WEIGHT OF THE MANHOLE FRAME AND COVER MAY VARY WITHIN 5 PERCENT PLUS OR MINUS OF THE WEIGHTS SHOWN.

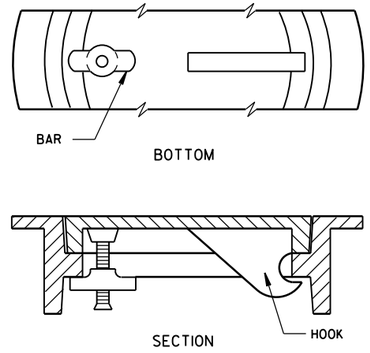
** NORMALLY USED LENGTHS. THE PROJECT ENGINEER SHALL DETERMINE IF PIPE LENGTHS, OTHER THAN THOSE SPECIFIED, SHALL BE USED, TO A MAXIMUM OF 48" (CONTINUOUS LENGTH, NON-SPLICED). THE ADDITIONAL LENGTH SHALL BE INCIDENTAL TO THE PULL BOX BID PRICE.



CORRUGATED PIPE EXTENDER

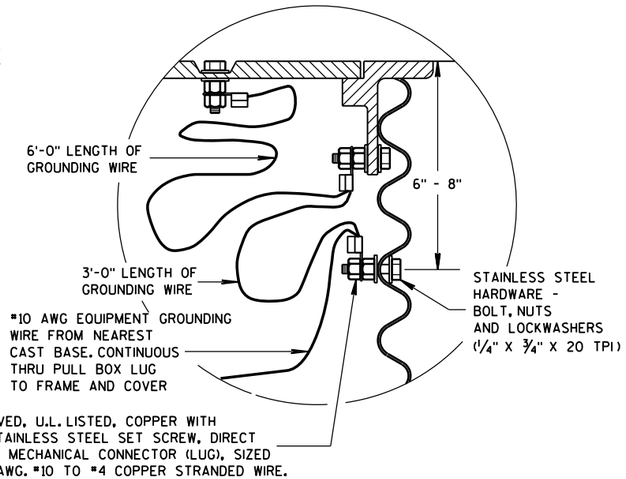


MEASUREMENT DETAIL FOR WIRE/CABLE IN THE PULL BOX



ALTERNATE COVER (LOCKING)

TIGHTENING BAR TYPE



EQUIPMENT GROUNDING LUG AND LOCATION IN STEEL PULL BOXES

GENERAL NOTES

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

ALL FRAMES AND COVERS SHALL BE HEAVY DUTY TYPE, SUITABLE FOR VEHICULAR TRAFFIC LOADS.

PULL BOXES LOCATED IN THE ROADWAYS SHALL HAVE LOCKING COVERS.

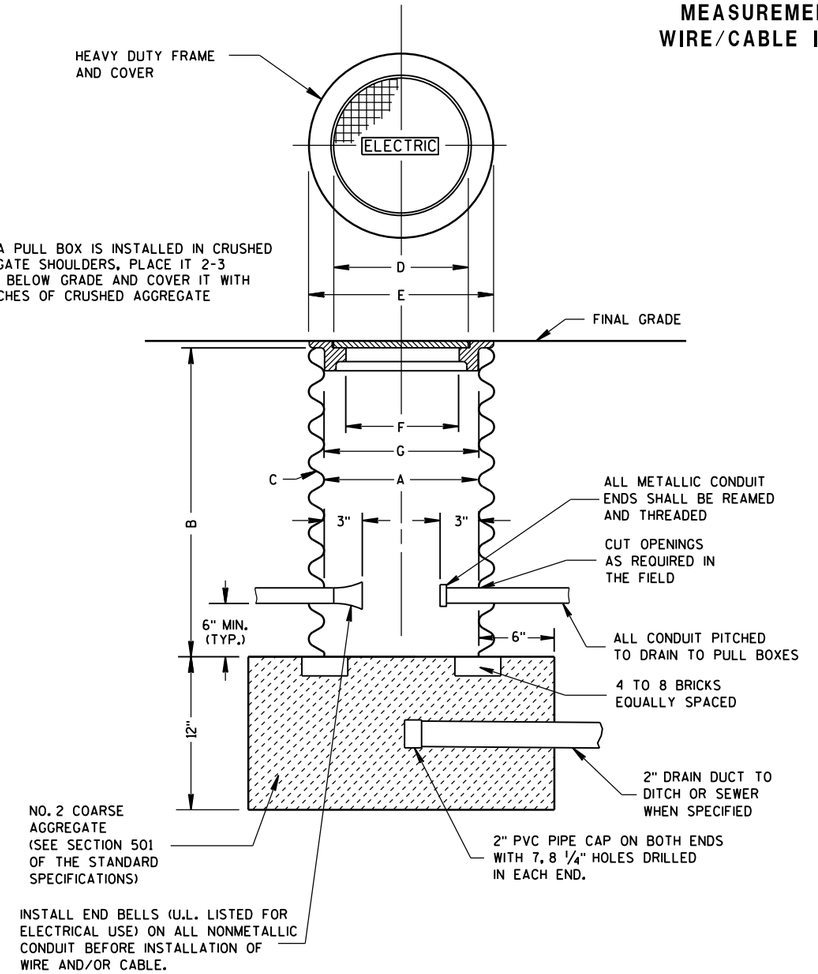
ENTRANCE HOLES INTO PULL BOXES SHALL BE CUT WITH A CIRCULAR HOLE SAW OR HYDRAULIC CONDUIT PUNCH. HOLE SIZE SHALL BE THE OUTSIDE DIAMETER OF THE CONDUIT THAT IS TO FIT IN THE OPENING PLUS NO MORE THAN 1/4".

THE CONTRACTOR SHALL NOT INSTALL WIRE IN ANY PULL BOX UNTIL ITS INSTALLATION HAS BEEN INSPECTED AND ACCEPTED BY THE ENGINEER.

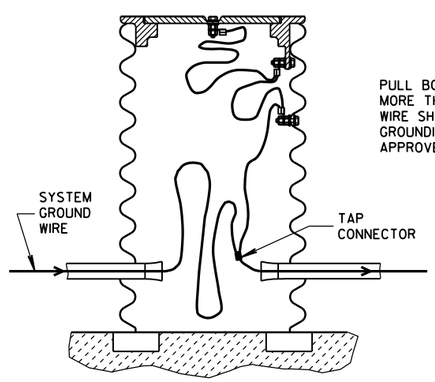
GROUNDING LUGS (MECHANICAL CONNECTORS) SHALL BE U.L. LISTED AND APPROVED FOR USE WITH COPPER WIRE.

ALL METALLIC CONDUIT IN WHICH WIRE AND/OR CABLE IS TO BE INSTALLED, SHALL BE BUSHED BEFORE INSTALLATION OF THE WIRE AND/OR CABLE.

WHEN PULL BOXES ARE INSTALLED FOR FUTURE USE, DO NOT INSTALL THE EQUIPMENT GROUNDING LUG. THE EQUIPMENT GROUNDING LUG, THE EQUIPMENT GROUNDING ELECTRODE AND THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE REQUIRED AND INSTALLED UNDER A FUTURE WIRING CONTRACT.



PULL BOX



PULL BOX TO NEAREST BASE DISTANCE MORE THAN 20 FEET. PULL BOX GROUND WIRE SHALL CONNECT AT SYSTEM GROUNDING WIRE. USE DEPARTMENT APPROVED TAP CONNECTOR.

EQUIPMENT GROUNDING LUG AND LOCATION IN STEEL PULL BOXES

PULL BOX

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2014
DATE
/S/ Ahmet Demirbilek
STATE ELECTRICAL

FHWA

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S.D.D. 9 B 4-11

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S.D.D. 9 B 4-11

GENERAL NOTES

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

FOUR (4) BOLTS SHALL BE FURNISHED WITH EACH TRANSFORMER BASE. BOLTS SHALL BE 1" DIAMETER, 4" IN LENGTH, WITH WASHERS, LOCK WASHERS AND NUTS. BOLTS, NUTS AND WASHERS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 641.2.2 OF THE STANDARD SPECIFICATIONS.

LEVELING SHIMS, IF NEEDED, SHALL BE DESIGNED FOR THE PURPOSE AND USED UNDER CAST BASES WHEN PLUMBING POLES OR STANDARDS DURING INSTALLATION. THE USE OF WASHERS IN LIEU OF PROPER LEVELING SHIMS IS NOT ACCEPTABLE.

SHIM LENGTH SHALL BE LONG ENOUGH TO COMPLETELY COVER THE AREA UNDER THE LENGTH AND WIDTH OF THE BASE MOUNTING FLANGE.

DOUBLE NUTTING IS NOT ACCEPTABLE FOR LEVELING OR MOUNTING PURPOSES.

A NEMA APPROVED, U.L. LISTED, COPPER WITH BRASS OR STAINLESS STEEL SET SCREW, DIRECT BURY RATED, MECHANICAL CONNECTOR (LUG), SIZED TO ACCEPT AWG. #10 TO #4 COPPER STRANDED WIRE SHALL BE FURNISHED AND INSTALLED IN THE PEDESTAL AND TRANSFORMER BASES.

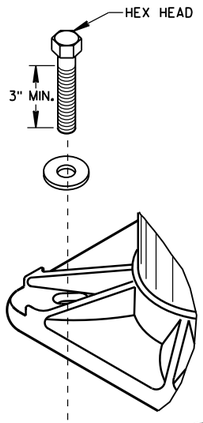
THE MECHANICAL CONNECTOR SHALL BE INSTALLED USING A 1/4" - 20 (TPI) STAINLESS STEEL HEX HEAD BOLT OF SUFFICIENT LENGTH TO FIRMLY ATTACH THE LUG TO THE BASE.

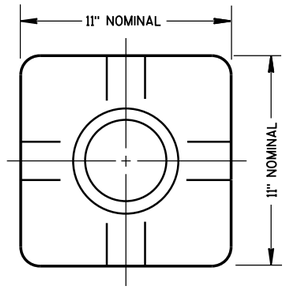
SHOULD THE MANNER OF ATTACHMENT OF THE LUG REQUIRE WASHERS, HEX NUTS, LOCK WASHER - THEY SHALL BE STAINLESS STEEL AS IS THE BOLT. THE MANNER OF ATTACHMENT SHALL NOT BLOCK ACCESSIBILITY TO WIRE PLACEMENT IN THE CONNECTOR.

PEDESTAL BASE COLLAR THREADING SHALL BE TAPERED AND IN ACCORDANCE WITH NATIONAL PIPE THREADING DIMENSIONS.

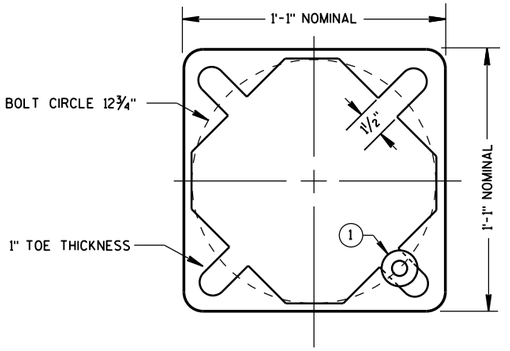
BASE COLLAR THREADING SHALL EXTEND INTO THE BASE COLLAR WITH SUFFICIENT DEPTH TO ACCEPT THE INSTALLATION OF TRAFFIC SIGNAL STANDARDS TO A DEPTH OF 1 1/2", THEN TIGHTENING TO A POINT OF BEING IMMOVABLE.

THE ACCESS DOOR SHALL BE OF THE SAME MATERIAL AS THE BASE.

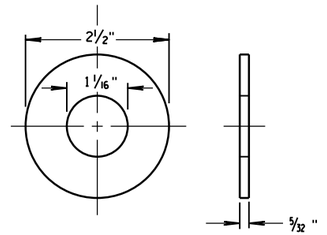




TOP VIEW
(PEDESTAL BASE)

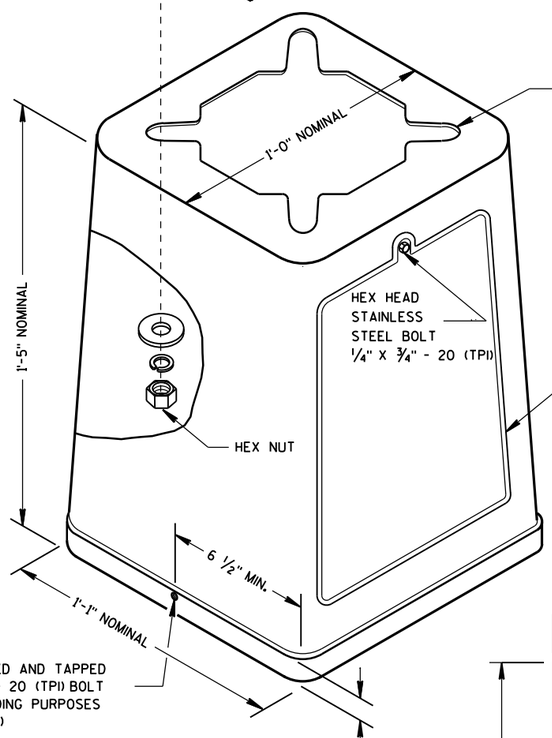


BOTTOM VIEW
(PEDESTAL BASE)

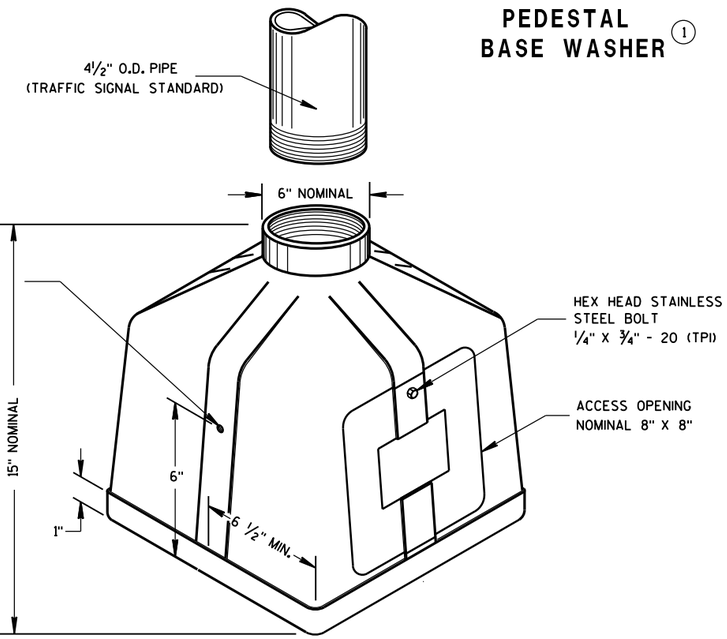


ZINC COATED STEEL WASHER
TO BE PROVIDED BY THE CONTRACTOR

PEDESTAL BASE WASHER (1)

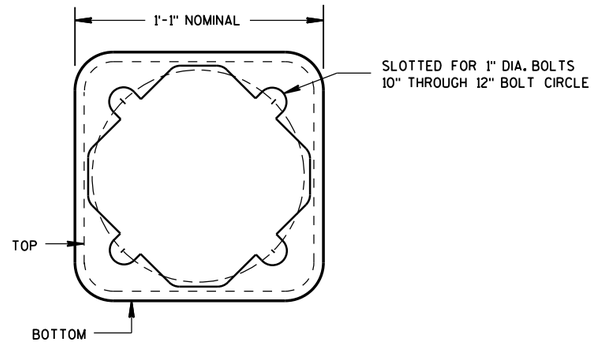


ISOMETRIC VIEW

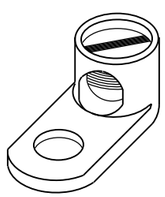


ISOMETRIC VIEW

PEDESTAL BASE



BOTTOM VIEW
(TRANSFORMER BASE)

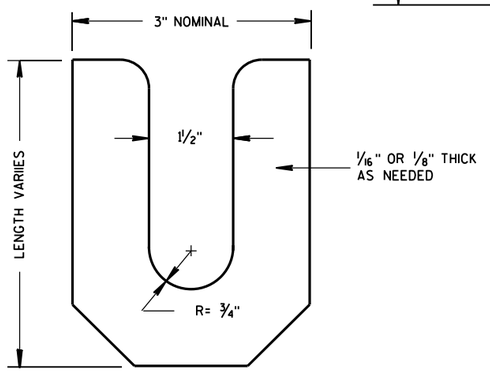


TYPICAL MECHANICAL CONNECTOR LUG

TO BE FURNISHED WITH EACH BASE

TRANSFORMER BASE

INTENDED FOR USE WITH TYPE 2, 3, 4, 5 & 6 POLES



LEVELING SHIM

TRANSFORMER/PEDESTAL BASES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

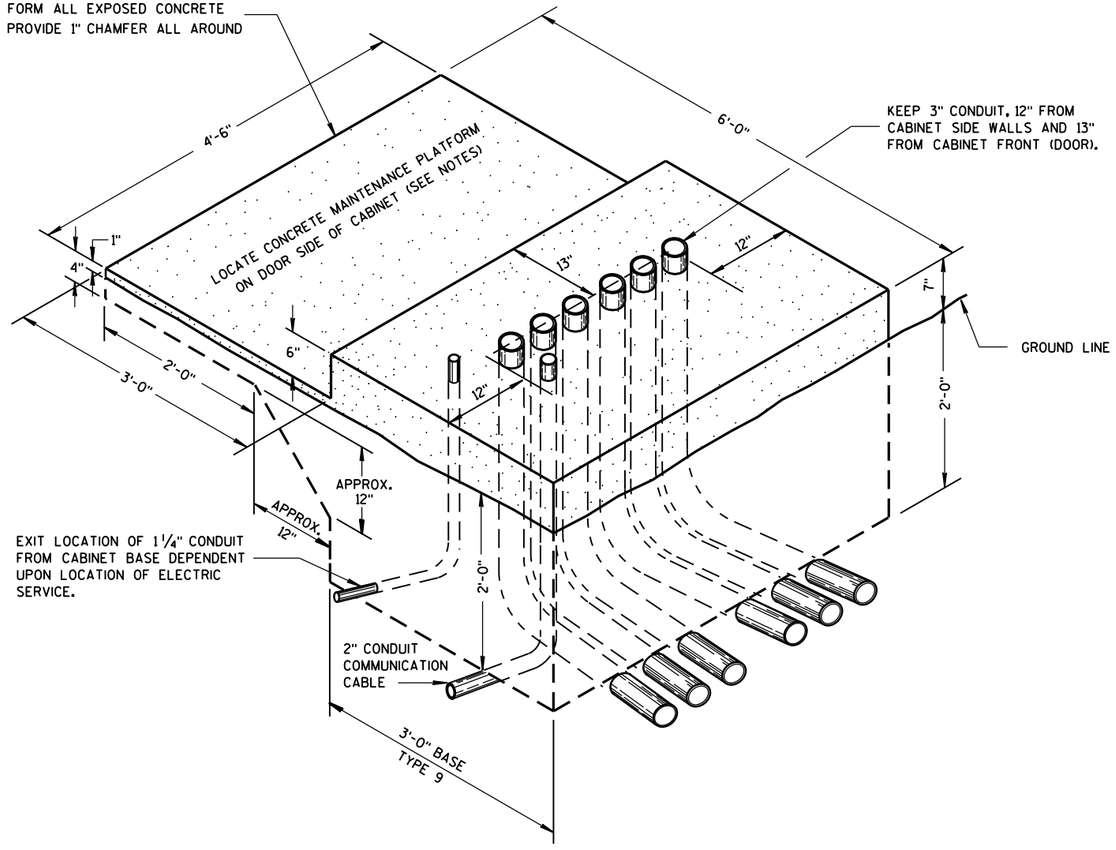
APPROVED
Sept. 2014 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

6

S.D.D. 9 C 3-4

6

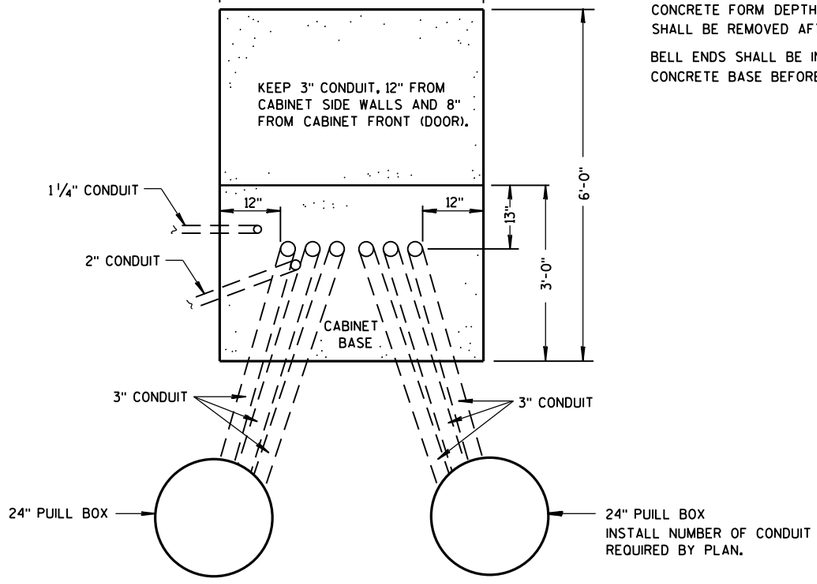
S.D.D. 9 C 3-4



ISOMETRIC VIEW

TYPE 9, SPECIAL

(C.Y. CONCRETE = APPROX. 1.56)



PLAN VIEW

CONCRETE CONTROL CABINET BASE, TYPE 9, SPECIAL

GENERAL NOTES

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

INSTALL FOUR ½ INCH MINIMUM DIAMETER X 4 INCH MINIMUM LENGTH STAINLESS STEEL APPROVED CONCRETE MASONRY ANCHORS WITH A PULLOUT STRENGTH OF 9,000 LBS. TO ANCHOR THE CABINET TO TYPE 6, 7, 8, AND 9 BASES. THE ANCHOR STUDS SHALL BE LOCATED AS DIRECTED BY THE ENGINEER TO PROPERLY ANCHOR THE CONTROL CABINET TO THE BASE.

WHEN REQUIRED TO CONNECT NONMETALLIC CONDUIT TO METALLIC CONDUIT, ONLY ADAPTER FITTINGS, U.L. LISTED FOR ELECTRICAL USE, SHALL BE USED.

CONDUIT HEIGHT ABOVE THE CONCRETE BASE SHALL BE 1 INCH.

DEPTH OF CONDUIT INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES MINIMUM AND 36 INCHES MAXIMUM.

DEPTH OF CONDUIT INSTALLED THAT IS NOT BELOW THE TRAVELED WAY SHALL BE 18 INCHES MINIMUM AND 36 INCHES MAXIMUM.

ANY EXCEPTION TO THE MAXIMUM DEPTH SHALL BE ONLY WITH THE WRITTEN APPROVAL OF THE ENGINEER.

CONTROL CABINET BASE TOP SURFACE SHALL BE TROWEL FINISHED SMOOTH AND LEVEL.

MAINTENANCE PLATFORM SHALL BE FLOAT OR BROOM FINISHED AND BE LEVEL.

MAINTENANCE PLATFORMS ARE NOT REQUIRED WHEN THE SURROUNDING AREA IS PAVED.

MINIMUM BENDING RADIUS OF CONDUIT = 6 X THE DIAMETER.

ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED.

CAP ALL BELOW GRADE METALLIC CONDUIT ENDS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED.

PLUG ALL BELOW GRADE NONMETALLIC CONDUIT ENDS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED.

ALL CONDUIT ENDS AT THE TOP OF CONCRETE BASES SHALL BE CAPPED IF METALLIC OR PLUGGED IF NONMETALLIC IMMEDIATELY AFTER PLACEMENT AND BEFORE CONCRETE IS POURED. CONDUITS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

CONDUIT EXITING THE CONCRETE BASE (SIX THREE INCH) SHALL TERMINATE IN PULL BOXES AS SHOWN ON THE PLANS.

CONCRETE FORM DEPTH BELOW FINISHED GRADE SHALL BE 6" MAXIMUM. CONCRETE FORMS SHALL BE REMOVED AFTER CONCRETE HAS SET.

BELL ENDS SHALL BE INSTALLED ON ALL PVC CONDUIT EXPOSED AT THE TOP OF THE CONCRETE BASE BEFORE INSTALLATION OF CABLE OR WIRE.

CONCRETE CONTROL CABINET BASE, TYPE 9, SPECIAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2014 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

GENERAL NOTES

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

BASES SHALL BE EXCAVATED BY USE OF A CIRCULAR AUGER.

TOP SURFACES OF CONCRETE BASES SHALL BE TROWEL FINISHED AND LEVEL.

CONDUIT SIZES AND LOCATIONS SHALL BE AS SHOWN ON THE PLANS.

THE FINAL OR TERMINATING CONCRETE BASE IN A CONDUIT RUN SHALL HAVE A 6" EXIT STUB INSTALLED FOR FUTURE CABLING USE. THE EXIT STUB SHALL BE SIZED AS USED THROUGHOUT THE CONDUIT RUN AS SHOWN AT THE ENTRANCE OF THE BASE.

MINIMUM BENDING RADIUS OF CONDUIT IS EQUAL TO 6 X THE DIAMETER.

CONDUIT HEIGHT ABOVE CONCRETE BASES SHALL BE 4 INCHES. ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED. NONMETALLIC CONDUIT SHALL HAVE BELL END INSTALLED. ALL CONDUIT SHALL BE SLOPED TO PULL BOX.

ALL CONDUIT ENDS AT THE TOP OF CONCRETE BASES SHALL BE CAPPED IF METALLIC OR PLUGGED IF NONMETALLIC IMMEDIATELY AFTER PLACEMENT AND BEFORE CONCRETE IS POURED. CONDUIT IN WHICH WIRE OR CABLE IS NOT INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

BELL ENDS SHALL BE INSTALLED ON ALL PVC CONDUIT EXPOSED AT THE TOP OF CONCRETE BASES BEFORE INSTALLATION OF CABLE OR WIRE.

ENDS OF CONDUIT INSTALLED BELOW GRADE FOR FUTURE USE SHALL BE CAPPED IF METALLIC OR PLUGGED IF NONMETALLIC.

WHEN REQUIRED TO CONNECT NONMETALLIC CONDUIT TO METALLIC CONDUIT, ONLY ADAPTER FITTINGS, U.L. LISTED FOR ELECTRICAL USE, SHALL BE USED.

IF A BASE REQUIRES A DEEP FORM BECAUSE OF LOOSE DIRT OR FILL, THE FORM SHALL BE REMOVED BEFORE BACKFILLING AROUND THE BASE. BACKFILL SHALL BE TAMPED TIGHT AGAINST THE BARE CONCRETE BASE IN LAYERS OF 1 FOOT OR LESS.

A NO. 4 AWG, STRANDED COPPER EQUIPMENT GROUNDING CONDUCTOR SHALL BE EXOTHERMICALLY WELDED TO THE EQUIPMENT GROUNDING ELECTRODE (GROUND ROD).

THE EQUIPMENT GROUNDING CONDUCTOR SHALL ENTER THE BASE THROUGH A 1 INCH CONDUIT INSTALLED FOR GROUNDING PURPOSES, LEAVING A 4 FOOT COIL OF WIRE ABOVE THE CONCRETE BASE. THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE NEATLY COILED AND THE COILS TIED TOGETHER.

WELDING OF THE ANCHOR RODS TO THE CAGE IS UNACCEPTABLE. TEMPLATES SHALL BE USED.

BAR STEEL REINFORCEMENT SHALL BE COATED WITH POWDERED EPOXY RESIN IN ACCORDANCE WITH SECTION 505 OF THE STANDARD SPECIFICATIONS (LATEST EDITION).

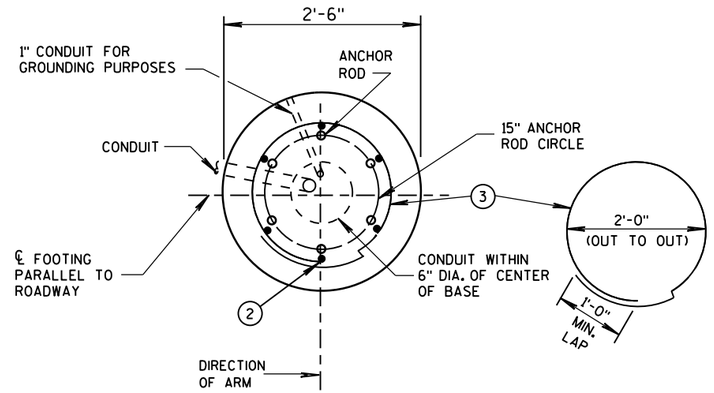
ANCHOR RODS SHALL BE INSTALLED WITH MISALIGNMENTS OF LESS THAN 1:40 FROM VERTICAL.

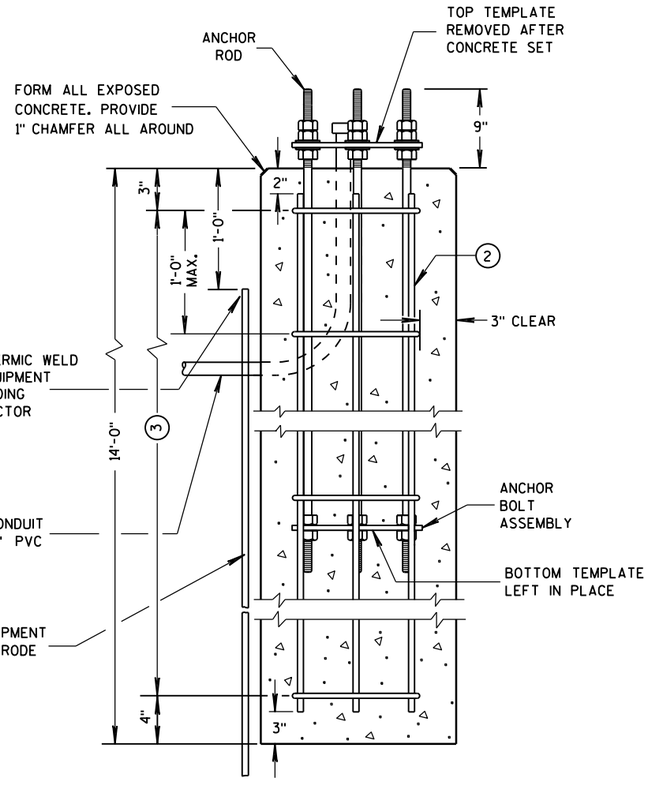
(1) THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE AND INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES. THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE THAT IS NOT INSTALLED BELOW THE TRAVELED WAY SHALL BE 18 INCHES. THE MAXIMUM DEPTH OF ALL CONDUIT SHALL BE 36 INCHES, (GREATER THAN 36 INCHES IF INSTALLED IN BREAKER-RUN), EXCEPT WITH WRITTEN APPROVAL BY THE ENGINEER.

(2) (6) NO. 6 X 13'-7" BAR STEEL REINFORCEMENT.

(3) (15) NO. 4 X 7'-4" BAR STEEL REINFORCEMENT @ 1'-0" MAX. C-C.

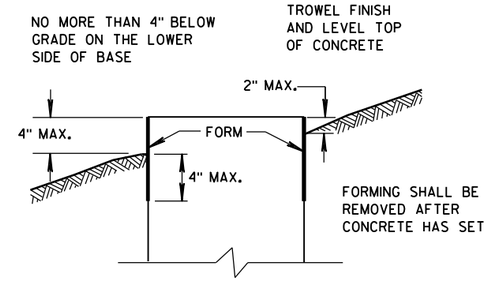
CONCRETE MASONRY	fc=3,500 p.s.i.
HIGH STRENGTH BAR STEEL REINFORCEMENT, GRADE 60	fy=60,000 p.s.i.
ANCHOR RODS, ASTM F1554 GRADE 55 (IN ACCORDANCE WITH SECTION 641.2.2.3 OF THE STANDARD SPECIFICATION)	fy=55,000 p.s.i.
TEMPLATES, ASTM, A709 GRADE 36	fy=36,000 p.s.i.



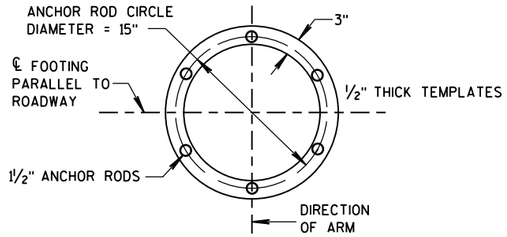


CONCRETE BASE TYPE 10
(FOR TYPE 9 & 10 POLES)

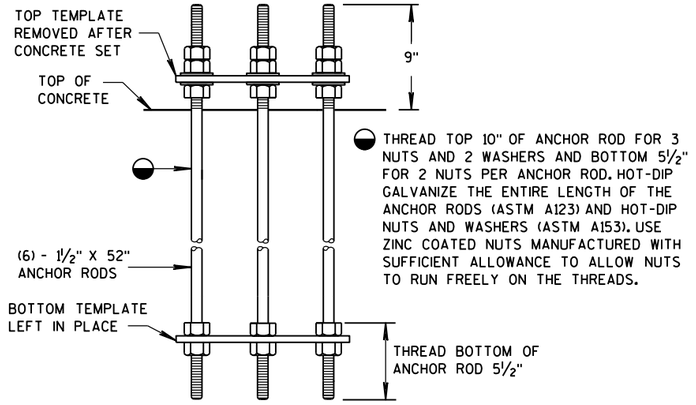
TO BE USED WHEN GROUND ELEVATION AT BASE EQUALS OR IS GREATER THAN HIGH POINT OF ROADWAY ELEVATION. SEE S.D.D. 9C13-2 WHEN GROUND ELEVATION AT BASE IS LOWER THAN HIGH POINT OF ROADWAY ELEVATION.



FORMING DETAIL



TOP AND BOTTOM TEMPLATES



ANCHOR BOLT ASSEMBLY DETAIL

CONCRETE BASE TYPE 10
ANCHOR ASSEMBLY

QUANTITY REQUIREMENTS	
APPROX. CUBIC YARDS OF CONCRETE	2.5
LBS. OF HOOP BAR STEEL	69
LBS. OF VERTICAL BAR STEEL	122

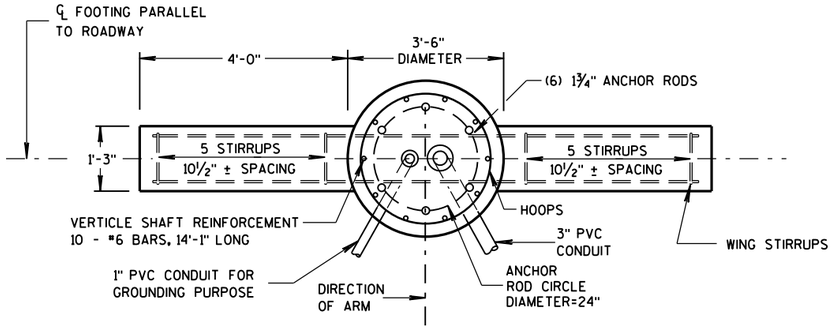
CONCRETE BASE TYPE 10

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

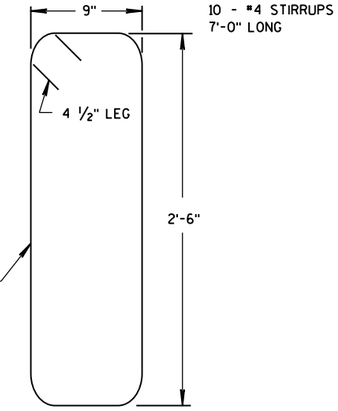
APPROVED
May 2016 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

6

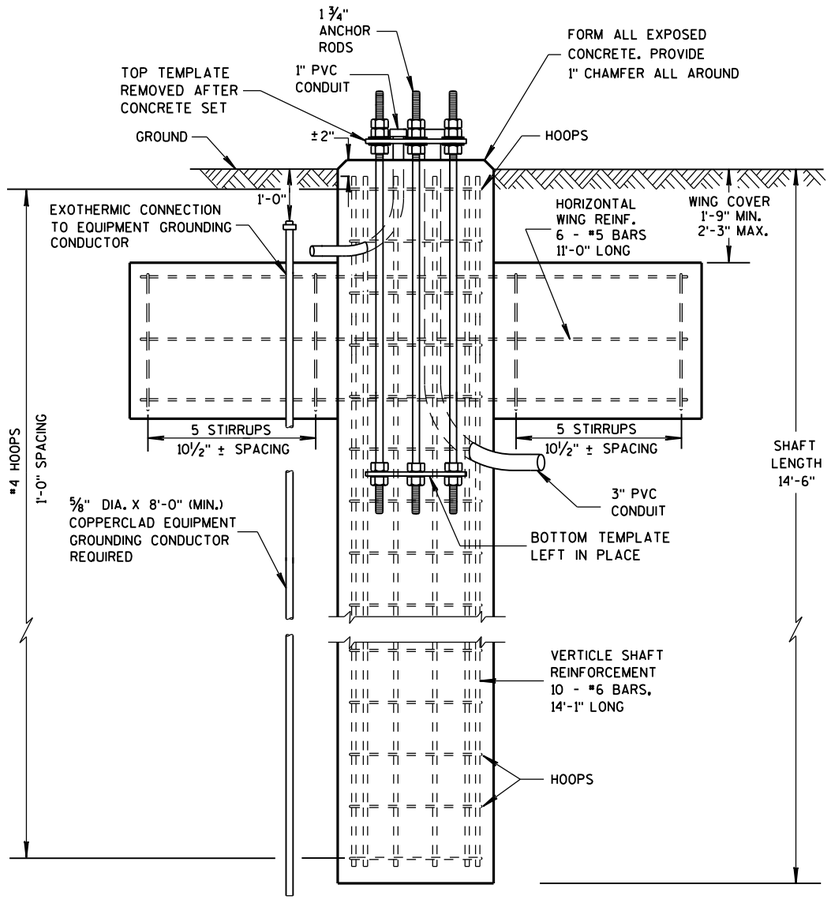
S.D.D. 9 C 11-9



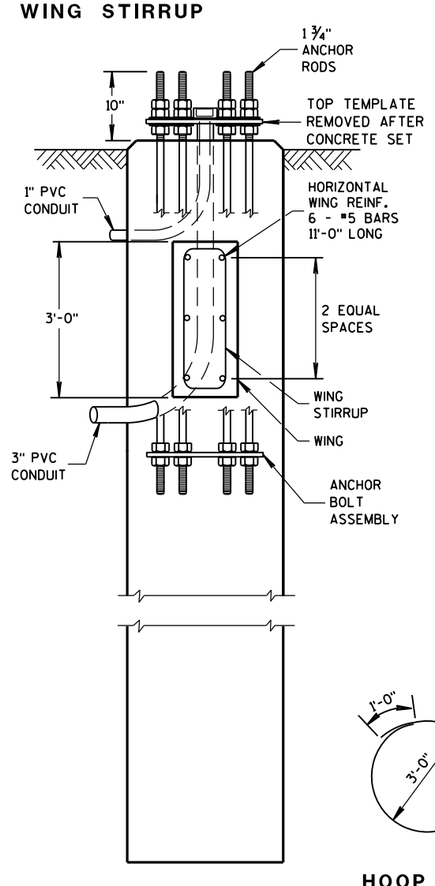
PLAN VIEW



WING STIRRUP

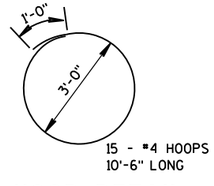


ELEVATION VIEW



SIDE VIEW

DOES NOT SHOW HOOPS OR VERTICAL SHAFT REINFORCEMENT



15 - #4 HOOPS 10'-6" LONG

HOOP DETAIL

GENERAL NOTES

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

ORIENT ANCHOR RODS IN FOOTING AND PROVIDE ANCHOR ROD PROJECTION ABOVE TOP OF CONCRETE FOOTING BASE PER THIS SHEET.

BENDING DIMENSIONS FOR REINFORCING BARS ARE OUT TO OUT.

USE 3" CLEAR FOR ALL REINFORCEMENT UNLESS NOTED OTHERWISE.

THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATION AS TO THE TYPE AND LOCATION OF THE UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO.

WELDING OF ANCHOR RODS TO THE CAGE IS UNACCEPTABLE. TEMPLATES SHALL BE USED.

BASES (SHAFT), BELOW THE WING, SHALL BE EXCAVATED BY THE USE OF A CIRCULAR AUGER. IF A BASE REQUIRES A DEEP FORM BECAUSE OF LOOSE SOIL, THE FORM SHALL BE REMOVED BEFORE BACKFILLING AROUNG THE BASE. BACKFILL SHALL BE TAMPED TIGHT AGAINST THE BARE CONCRETE BASE IN LAYERS OF 1 FOOT OR LESS.

TOP SURFACE OF THE CONCRETE BASE SHALL BE TROWEL FINISHED AND LEVEL.

CONDUIT SIZE AND LOCATIONS SHALL BE AS SHOWN ON THE PLANS.

MINIMUM BENDING RADIUS OF CONDUIT IS EQUAL TO 6 X THE DIAMETER.

CONDUIT HEIGHT ABOVE CONCRETE BASE SHALL BE 4½" INCHES. ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED. NONMETALLIC CONDUIT SHALL HAVE BELL ENDS INSTALLED. ALL CONDUIT SHALL SLOPE TO PULL BOX.

ALL CONDUIT ENDS AT THE TOP OF THE BASES SHALL BE CAPPED IF METALLIC OR PLUGGED IF NONMETALLIC IMMEDIATELY AFTER PLACEMENT AND BEFORE CONCRETE IS POURED. CONDUITS IN WHICH WIRE OR CABLE IS NOT INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

BELL ENDS SHALL BE INSTALLED ON ALL PVC CONDUIT EXPOSED AT THE TOP OF CONCRETE BASES BEFORE INSTALLATION OF CABLE OR WIRE.

WHEN REQUIRED TO CONNECT NONMETALLIC CONDUIT TO METALLIC CONDUIT, ONLY ADAPTOR FITTINGS, UL LISTED FOR ELECTRICAL USE, SHALL BE USED.

A NO. 4 AWG, STRANDED COPPER EQUIPMENT GROUNDING CONDUCTOR SHALL BE EXOTHERMICALLY WELDED TO THE EQUIPMENT GROUNDING ELECTRODE (GROUND ROD).

THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE FURNISHED AND INSTALLED TO ENTER THE BASE THROUGH A 1-INCH CONDUIT INSTALLED FOR GROUNDING PURPOSES, LEAVING A 4-FOOT COIL OF WIRE ABOVE THE CONCRETE BASE, THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE NEATLY COILED AND THE COILS TIED TOGETHER.

BAR STEEL REINFORCEMENT SHALL BE COATED WITH POWDERED EPOXY RESIN IN ACCORDANCE WITH SECTION 505 OF THE STANDARD SPECIFICATIONS.

THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE AND INSTALLED BELOW THE TRAVEL WAY SHALL BE 24-INCHES. THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE THAT IS NOT INSTALLED BELOW THE TRAVELED WAY SHALL BE 18-INCHES. THE MAXIMUM DEPTH OF ALL CONDUIT SHALL BE 36-INCHES, (GREATER THAN 36-INCHES IF INSTALLED IN BREAKER-RUN), EXCEPT WITH THE WRITTEN APPROVAL OF THE ENGINEER.

ANCHOR RODS SHALL BE INSTALLED WITH MISALIGNMENTS OF LESS THAN 1:40 FROM VERTICAL.

CONCRETE MASONRY	fc=3,500 p.s.i.
HIGH STRENGTH BAR STEEL REINFORCEMENT, GRADE 60	fy=60,000 p.s.i.
ANCHOR RODS, ASTM F1554 GRADE 55 (IN ACCORDANCE WITH SECTION 641.2.2.3 OF THE STANDARD SPECIFICATIONS	fy=55,000 p.s.i.
TEMPLATES, ASTM A709 GRADE 36	fy=36,000 p.s.i.

(FOR TYPE 12 & 13 POLES)

CONCRETE = 6.3 C.Y.
H.S. REINFORCEMENT = 433 LBS.

TO BE USED WHEN GROUND ELEVATION AT BASE EQUALS OR IS GREATER THAN HIGH POINT OF ROADWAY ELEVATION.
SEE S.D.D. 9C13-2 WHEN GROUND ELEVATION AT BASE IS LOWER THAN HIGH POINT OF ROADWAY ELEVATION.

CONCRETE BASE TYPE 13

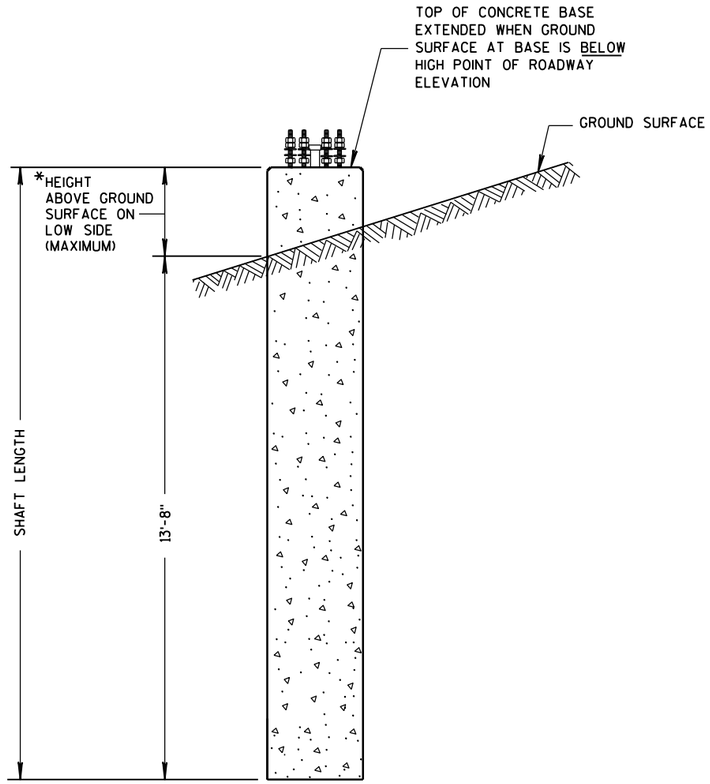
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

S.D.D. 9 C 12-8a

REINFORCEMENT AND CONCRETE QUANTITIES
ADJUSTED FOR EXTENDED TYPE 10 CONCRETE BASE

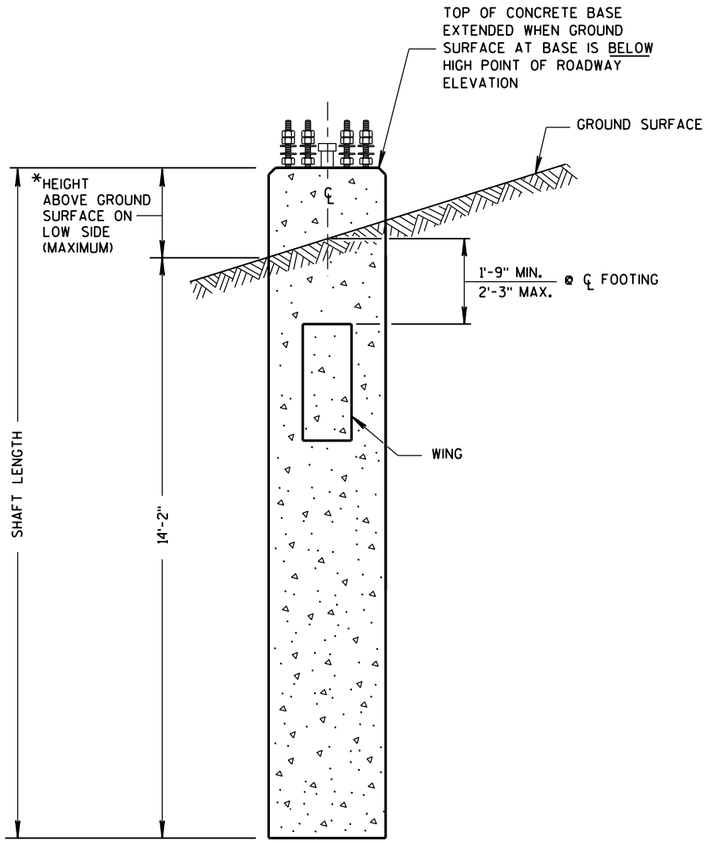
HEIGHT INCREASE REQUIRED	* HEIGHT ABOVE GROUND SURFACE ON LOW SIDE (MAXIMUM)	SHAFT LENGTH	LENGTH OF #6 VERTICAL REINF.	NO. OF #4 HOOPS	C.Y. OF CONCRETE	LBS. OF HOOP BAR STEEL	LBS. OF VERTICAL BAR STEEL
>0" TO 6"	10"	14'-6"	14'-1"	16	2.6	78	127
>6" TO 1'-0"	1'-4"	15'-0"	14'-7"	16	2.7	78	131
>1'-0" TO 1'-6"	1'-10"	15'-6"	15'-1"	17	2.8	83	136
>1'-6" TO 2'-0"	2'-4"	16'-0"	15'-7"	17	2.9	83	141



CONCRETE BASE TYPE 10 (EXTENDED)

REINFORCEMENT AND CONCRETE QUANTITIES
ADJUSTED FOR EXTENDED TYPE 13 CONCRETE BASE

HEIGHT INCREASE REQUIRED	* HEIGHT ABOVE GROUND SURFACE ON LOW SIDE (MAXIMUM)	SHAFT LENGTH	LENGTH OF #6 VERTICAL REINF.	NO. OF #4 HOOPS	C.Y. OF CONCRETE	LBS. OF H.S. BAR STEEL
>0" TO 6"	10"	15'-0"	14'-7"	16	6.5	447
>6" TO 1'-0"	1'-4"	15'-6"	15'-1"	16	6.6	454
>1'-0" TO 1'-6"	1'-10"	16'-0"	15'-7"	17	6.8	469
>1'-6" TO 2'-0"	2'-4"	16'-6"	16'-1"	17	7.0	476



CONCRETE BASE TYPE 13 (EXTENDED)

CONCRETE BASE
TYPE 10 & TYPE 13 EXTENSION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11-26-2013 DATE
/S/ Ahmet Demirbilek STATE ELECTRICAL
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S.D.D. 9 C 13-2

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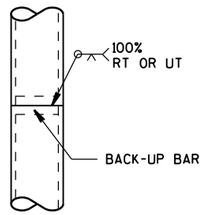
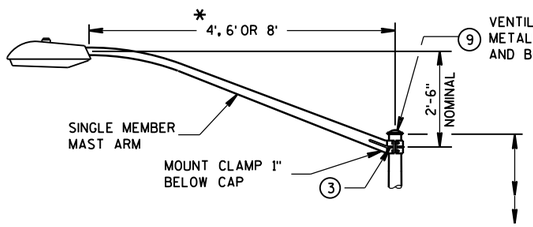
FOR MANUFACTURERS USE ONLY

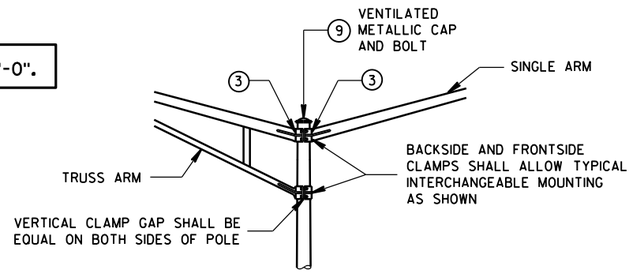
WELD TO BE 100% R.T. OR U.T. TESTED AS PER THE REQUIREMENTS OF AWS D 1.5-88. RECORDS OF COMPLIANCE OF SUCH TESTING SHALL BE FURNISHED TO THE OFFICE OF DESIGN/BRIDGE FOR VERIFICATION AND APPROVAL.

*RISE FOR 4' ARM SHALL BE 2'-0".





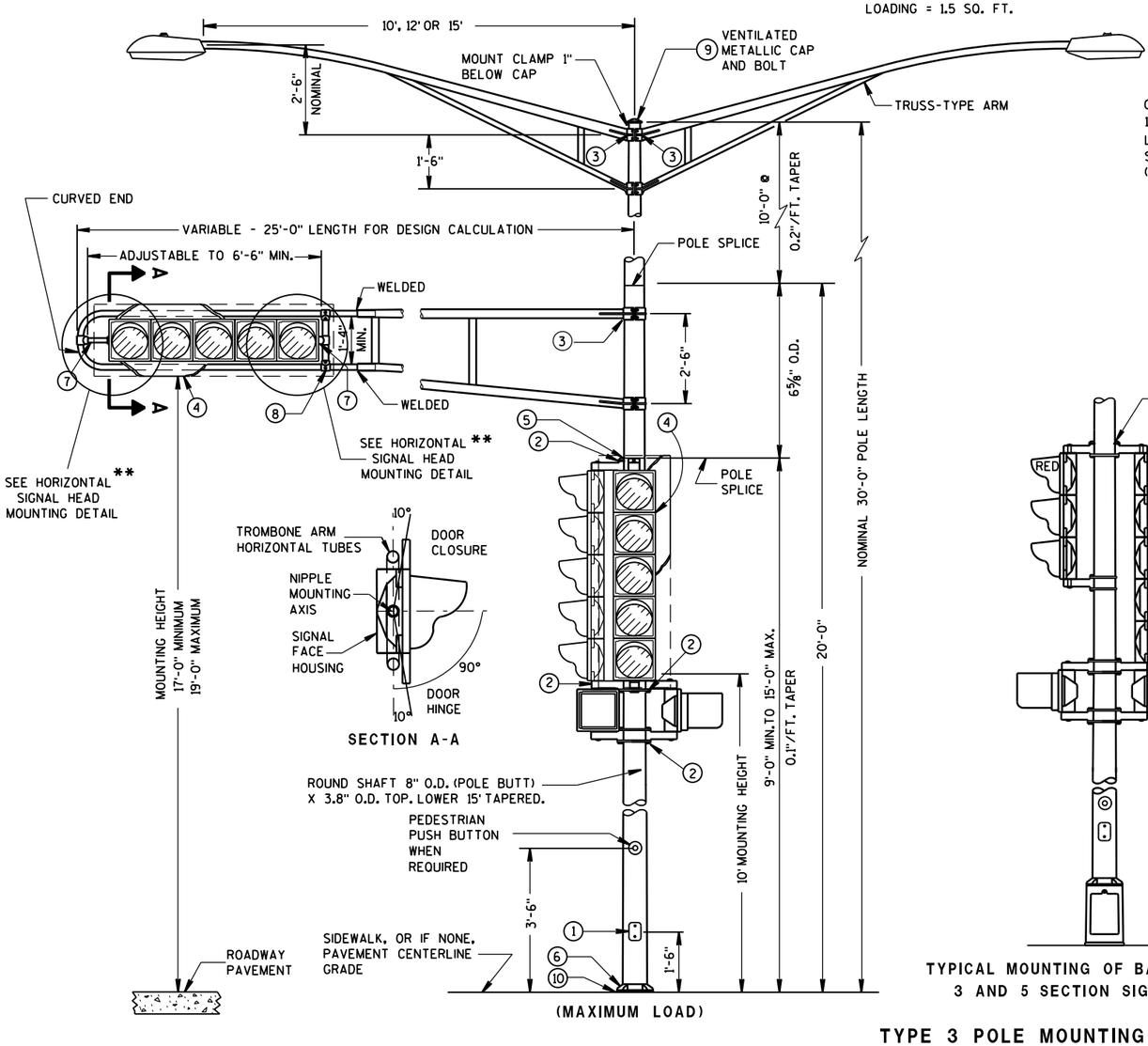
POLE SPLICE DETAIL

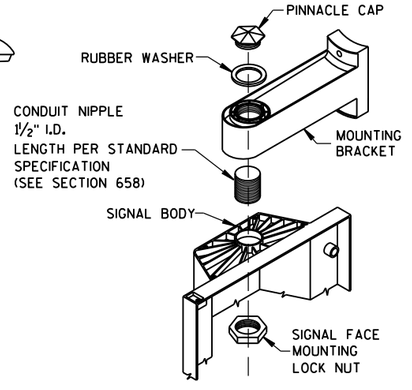


INTERCHANGEABLE MOUNTING DETAIL

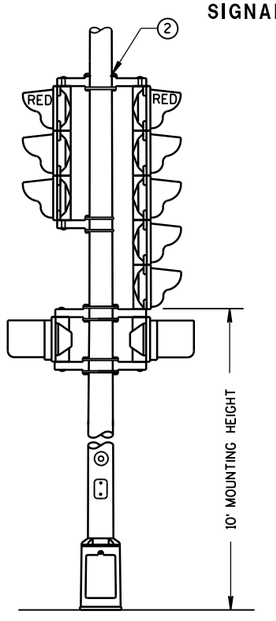
LUMINAIRE

WT. - 50 LBS.
EFFECTIVE PROJECTED
AREA FOR WIND
LOADING = 1.5 SQ. FT.

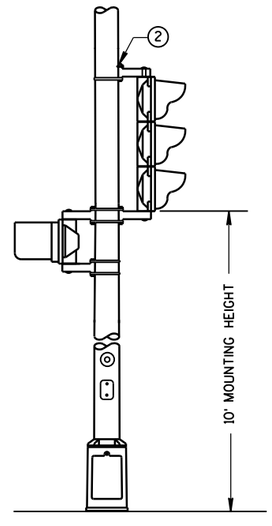




SIGNAL FACE MOUNTING DETAIL
(BANDED)



TYPICAL MOUNTING OF BACK TO BACK
3 AND 5 SECTION SIGNAL FACES



TYPICAL MOUNTING OF 3 SECTION
SIGNAL FACE

GENERAL NOTES

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

ALL TYPE 3 POLE MOUNTINGS SHALL BE DESIGNED TO INCLUDE TWIN 15' ARMS WITH LUMINAIRES.

POLES SHALL BE GALVANIZED STEEL.

SECTION 657, POLES, OF THE STANDARD SPECIFICATIONS SHALL APPLY TO THIS DRAWING.

A PULL WIRE/ROPE IN ACCORDANCE WITH STANDARD SPECIFICATION 652, SHALL BE INSTALLED IN EACH TROMBONE ARM RACEWAY DURING THE MANUFACTURING PROCESS.

THE SLIPFITTER END OF THE LUMINAIRE MAST ARM SHALL BE A NOMINAL 2⅜ INCHES IN OUTSIDE DIAMETER. THE STRAIGHT PORTION OF THE SLIPFITTER END OF THE LUMINAIRE MAST ARM SHALL BE A NOMINAL 12 INCHES IN LENGTH.

WHEN TRANSFORMER BASES ARE USED, WIRE CONNECTIONS SHALL BE MADE IN THE TRANSFORMER BASE.

(1) 4" X 6" REINFORCED HANDHOLE & COVER ASSEMBLY WITH 2 (TWO) ¼" X ¾" - 20 TPI HEX HEAD STAINLESS STEEL BOLTS.

(2) SIGNAL FACE MOUNTING BRACKETS, MOUNT WITH CAP SCREWS AND BANDING. (SEE STANDARD SPECIFICATIONS - SEC. 658)

(3) GROMMETS, 1" CHASE NIPPLES OR 1" CLOSE CONDUIT NIPPLES WITH BUSHINGS SHALL BE PROVIDED FOR 1⅜" HOLE IN POLE SHAFT FOR WIRING.

(4) SECURELY MOUNT DULL BLACK POLYCARBONATE BACKPLATES, PROJECTING 5" BEYOND ALL SIDES OF THE SIGNAL FACE HOUSING, PER MANUFACTURER'S RECOMMENDATIONS.

(5) POLE MOUNTED SIGNAL FACES SHALL REQUIRE 1 OR MORE MOUNTING SPACERS UNDER THE TOP MOUNTING BRACKET(S) AS REQUIRED, TO PLUMB THE SIGNAL FACE.

(6) TYPE 3 POLE CONFIGURATIONS SHALL BE MOUNTED DIRECTLY TO THEIR CONCRETE BASES.

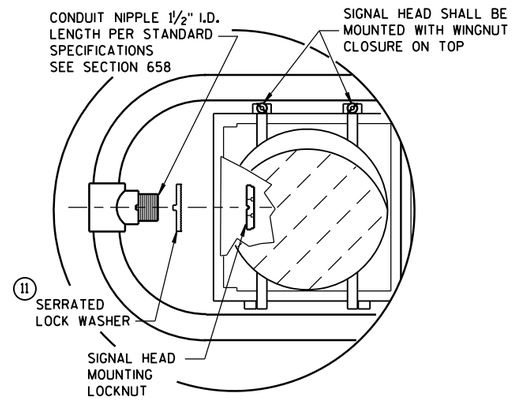
(7) MOUNTING BRACKET NIPPLES FOR THE SIGNAL FACE(S) SHALL BE 2 INCHES IN LENGTH AND 1½ INCHES IN DIAMETER. (SEE STANDARD SPECIFICATION - SECTION 658)

(8) VERTICAL STRUT (ADJUSTABLE). ONE (1) SET SCREW (1/4 " X ¾" -20 TPI, STAINLESS STEEL, HEX HEAD) INTO EACH ARM MEMBER IF STRUT IS THE SLIDING TYPE.

(9) FURNISH AND INSTALL VENTILATED, CAST, METALLIC (ALUMINUM ALLOY) CAPS. FASTEN CAPS WITH ONE (1) ¼" X ¾" - 20 TPI STAINLESS STEEL, HEX HEAD BOLT.

(10) SHIMMING, IF NEEDED, SHALL BE LOCATED BETWEEN THE CONCRETE FOUNDATION AND POLE.

(11) USE SERRATED LOCK WASHERS WITH NOTCHES BETWEEN END TEE AND SIGNAL HEAD.



HORIZONTAL SIGNAL HEAD MOUNTING DETAIL**

** SIGNAL HEAD ATTACHMENT ALSO APPLYS TO MOUNTING AT CROSS BAR

TYPE 3 POLE MOUNTING CONFIGURATION

POLE MOUNTINGS FOR TRAFFIC SIGNALS AND LIGHTING UNITS, TYPE 3 (HEAVY DUTY)

STATE OF WISCONSIN
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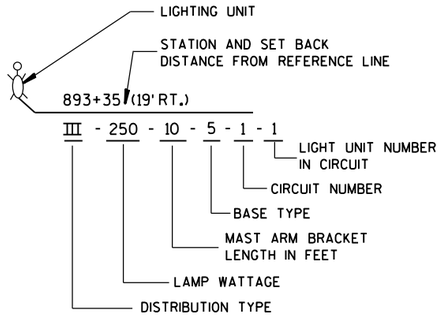
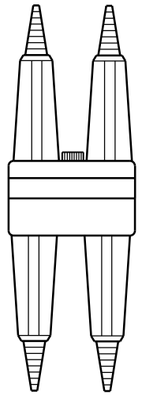
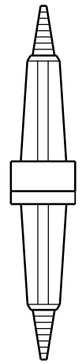


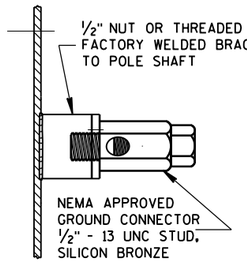
LIGHTING UNIT CODE
(TYPICAL)

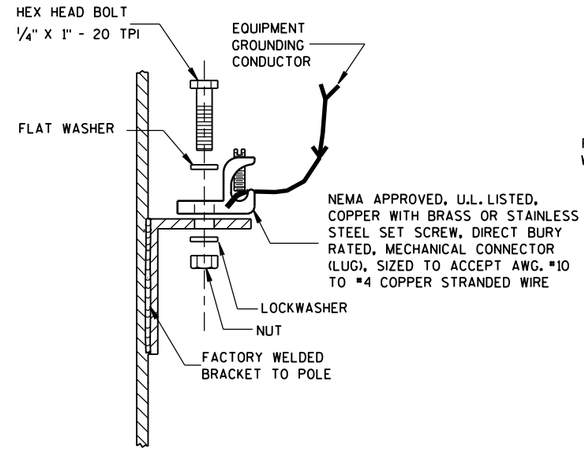


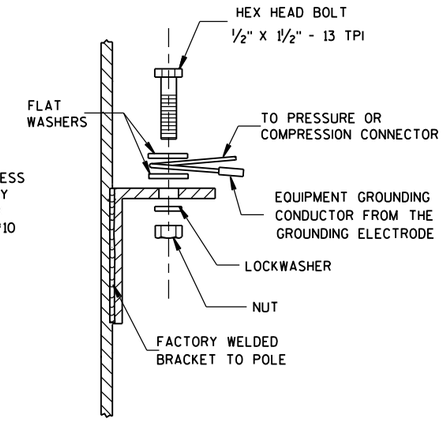
DETAIL "A"
BREAKAWY DOUBLE POLE WITH WATERPROOF INSULATING BOOT



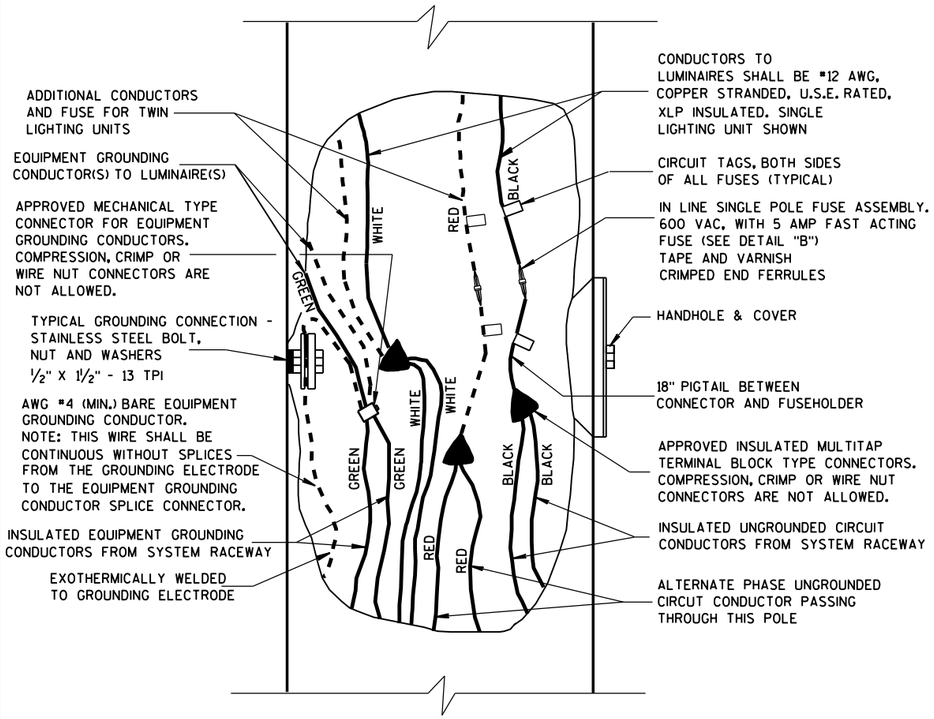
DETAIL "B"
BREAKAWY SINGLE POLE WITH WATERPROOF INSULATING BOOT



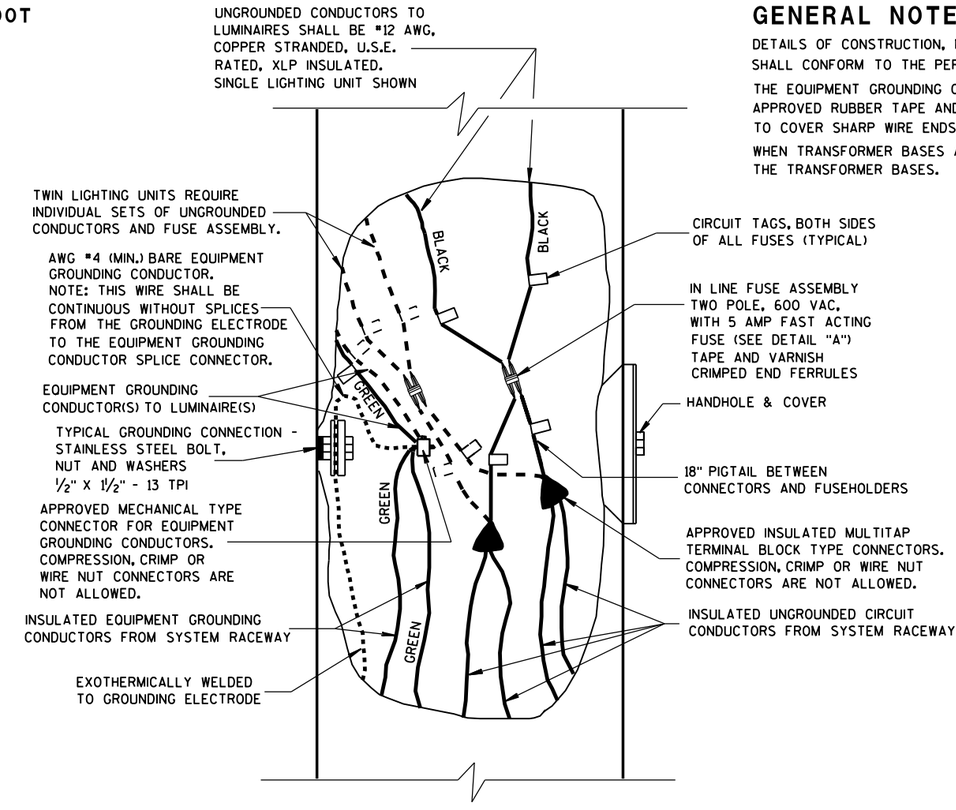




TYPICAL GROUNDING CONNECTIONS
NUT, BOLT, WASHERS AND LOCKWASHERS SHALL BE STAINLESS STEEL



3 WIRE - 120, 240 OR 480 VAC (UNGROUNDED CONDUCTOR) WITH GROUNDED CONDUCTOR AND WITH EQUIPMENT GROUNDING CONDUCTOR



2 WIRE - 240 OR 480 VAC (UNGROUNDED CONDUCTORS) WITH EQUIPMENT GROUNDING CONDUCTOR

GENERAL NOTES

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

THE EQUIPMENT GROUNDING CONNECTOR SHALL BE TAPED WITH 3 WRAPS (MINIMUM) OF APPROVED RUBBER TAPE AND THEN 3 WRAPS (MINIMUM) OF APPROVED VINYL TAPE TO COVER SHARP WIRE ENDS AFTER THE CONNECTION IS COMPLETED.

WHEN TRANSFORMER BASES ARE USED, ALL WIRING CONNECTIONS SHALL OCCUR WITHIN THE TRANSFORMER BASES.

NON-FREEWAY LIGHTING UNIT POLE WIRING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2014 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

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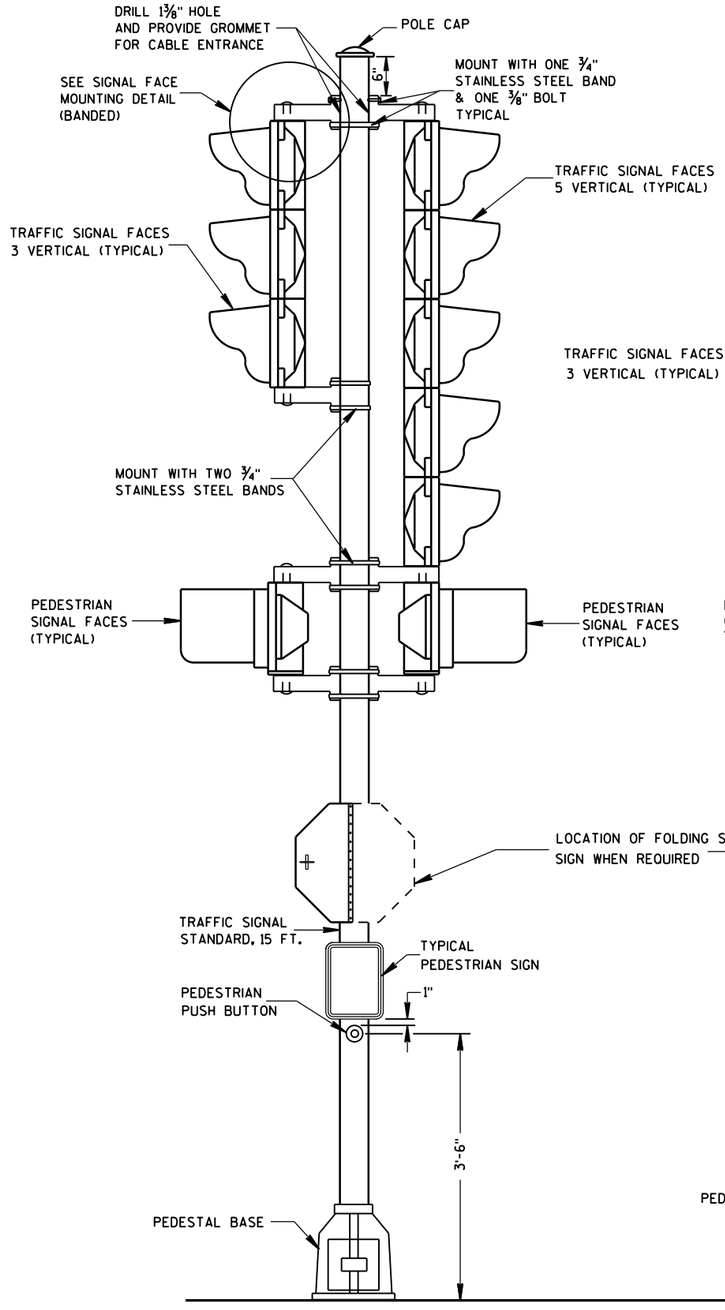
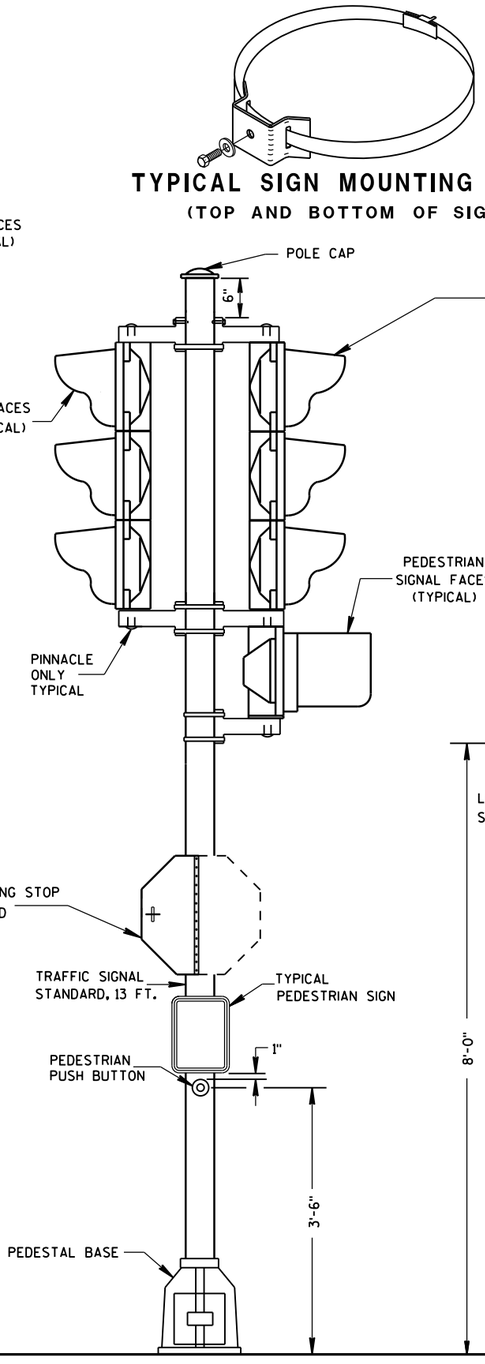
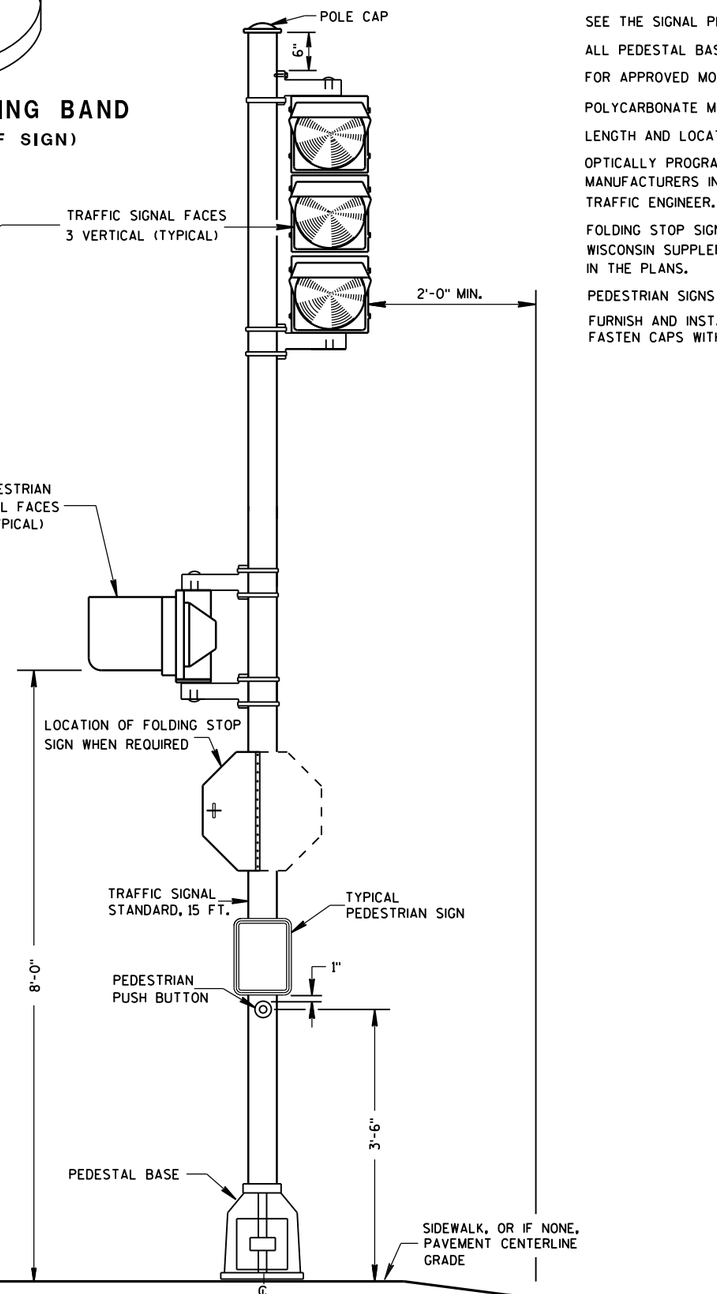


TRAFFIC SIGNAL STANDARD-15 FT.



TRAFFIC SIGNAL STANDARD-13 FT.

TYPICAL SIGN MOUNTING BAND
(TOP AND BOTTOM OF SIGN)



TRAFFIC SIGNAL STANDARD-15 FT.
3M MOUNTING (TYPICAL)

GENERAL NOTES

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

SEE THE SIGNAL PLAN FOR REQUIRED SIGNAL FACE SIZES.

ALL PEDESTAL BASES SHALL BE MOUNTED ON CONCRETE BASE - TYPE 1.

FOR APPROVED MOUNTING HARDWARE, SEE THE CONTRACT SPECIAL PROVISIONS.

POLYCARBONATE MOUNTING BRACKETS SHALL BE USED.

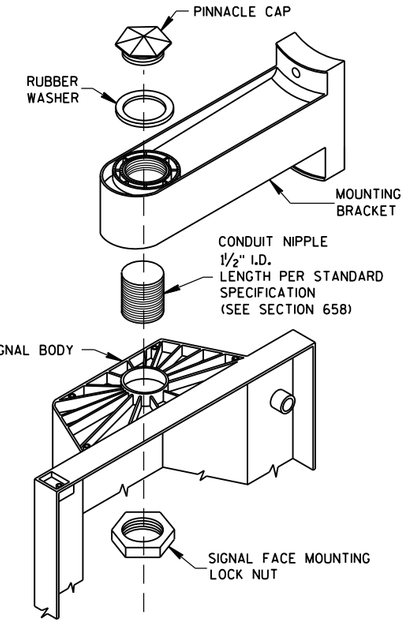
LENGTH AND LOCATION OF TRAFFIC SIGNAL STANDARDS SHALL BE AS SHOWN ON THE PLANS.

OPTICALLY PROGRAMMED SIGNAL FACES SHALL BE MASKED IN ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS, AND UNDER THE DIRECTIONS OF THE REGION TRAFFIC ENGINEER.

FOLDING STOP SIGNS SHALL BE IN ACCORDANCE WITH THE MUTCD AND/OR THE LATEST WISCONSIN SUPPLEMENT. THE SIGNS SHALL BE SIZED AND LOCATED AS CALLED FOR IN IN THE PLANS.

PEDESTRIAN SIGNS SHALL BE AS DESIGNATED IN THE PLANS.

FURNISH AND INSTALL VENTILATED, CAST, METALLIC (ALUMINUM ALLOY) CAPS. FASTEN CAPS WITH ONE (1) ¼" X ¾" - 20 TPI STAINLESS STEEL, HEX HEAD BOLT.



SIGNAL FACE MOUNTING DETAIL
(BANDED)

TRAFFIC SIGNAL STANDARD
POLY BRACKET MOUNTINGS
(TYPICAL) 13 FT. OR 15 FT.

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
2/28/2013
DATE

/S/ Ahmet Demirbilek
STATE ELECTRICAL

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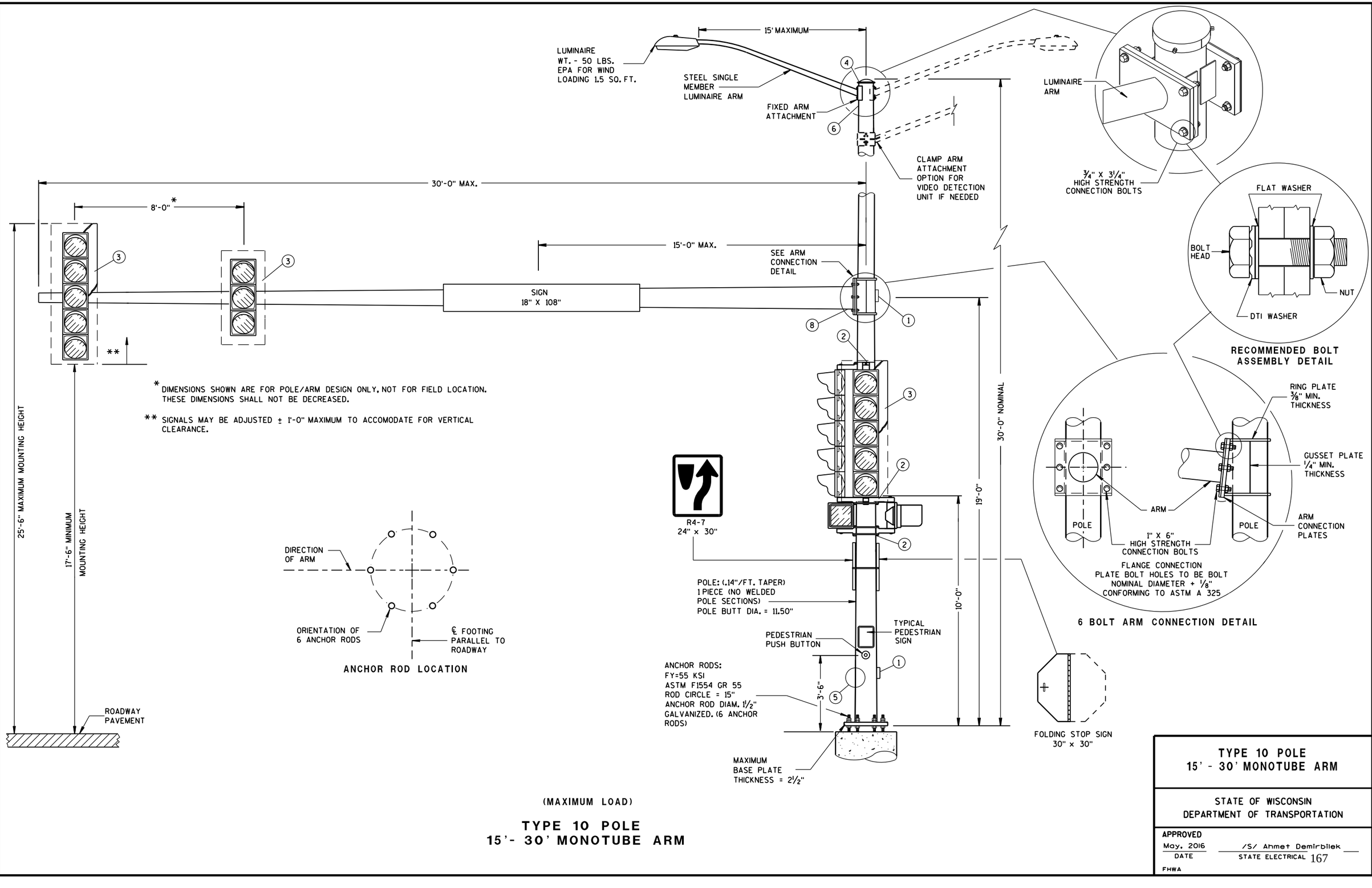

* DIMENSIONS SHOWN ARE FOR POLE/ARM DESIGN ONLY, NOT FOR FIELD LOCATION. THESE DIMENSIONS SHALL NOT BE DECREASED.

** SIGNALS MAY BE ADJUSTED ± 1'-0" MAXIMUM TO ACCOMODATE FOR VERTICAL CLEARANCE.

(MAXIMUM LOAD)

TYPE 10 POLE
15'- 30' MONOTUBE ARM

TYPE 10 POLE
15' - 30' MONOTUBE ARM

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May, 2016 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
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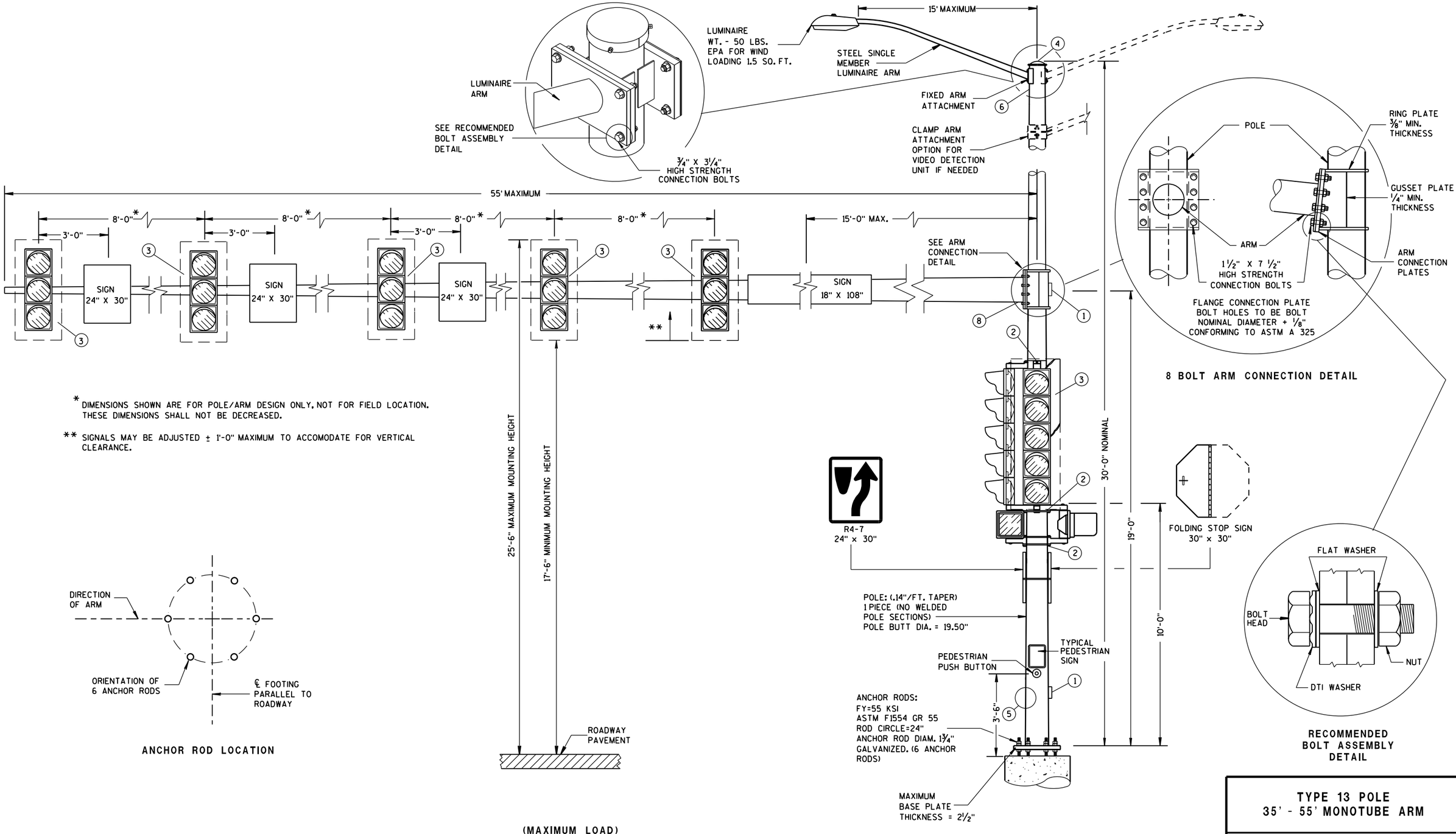

* DIMENSIONS SHOWN ARE FOR POLE/ARM DESIGN ONLY, NOT FOR FIELD LOCATION. THESE DIMENSIONS SHALL NOT BE DECREASED.

** SIGNALS MAY BE ADJUSTED ± 1'-0" MAXIMUM TO ACCOMODATE FOR VERTICAL CLEARANCE.

8 BOLT ARM CONNECTION DETAIL

RECOMMENDED BOLT ASSEMBLY DETAIL

ANCHOR ROD LOCATION

(MAXIMUM LOAD)

TYPE 13 POLE 35'- 55' MONOTUBE ARM

TYPE 13 POLE
35' - 55' MONOTUBE ARM

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2016 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

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GENERAL NOTES

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

POLE TYPES 9 AND 10 ARE FOR ARM LENGTHS 15-FOOT TO 30-FOOT.

POLE TYPES 12 AND 13 ARE FOR ARM LENGTHS 35-FOOT TO 55-FOOT.

MONOTUBE POLE AND ARM SHALL BE GALVANIZED STEEL.

RING-STIFFENED BUILT-UP BOX TYPE OF ATTACHMENT FOR TRAFFIC SIGNAL ARM.

ONE (1) PIECE POLE CONSTRUCTION (NO WELDED POLE SECTIONS).

STANDARD STRAIGHT ARM DESIGN (3 % ± RISE).

SECTION 657, POLES OF THE STANDARD SPECIFICATIONS SHALL APPLY TO THIS DRAWING.

PROVIDE WIREWAY THRU POLE WALL AND ARM CONNECTION PLATES. PROVIDE ROUND, SMOOTH INSIDE SURFACE.

MANUFACTURER'S SUBMITTED POLE DESIGNS AND DRAWINGS SHALL BE SIGNED AND STAMPED BY A REGISTERED PROFESSIONAL ENGINEER AND CERTIFIED AS BEING IN COMPLIANCE WITH THE AASHTO 2013 6TH EDITION AND ALL PERTINENT WISDOT SPECIFICATIONS AND DRAWINGS FOR TRAFFIC AND LIGHTING STRUCTURES AND AS FOLLOWS:

- CATEGORY III FATIGUE LOADS OF GALLOPING, TRUCK GUSTS (AT 45 MPH VEHICLE VELOCITY) AND NATURAL WIND GUSTS FOR DESIGN OF TYPE 9 AND TYPE 10 STRUCTURES.
- CATEGORY II FATIGUE LOADS OF GALLOPING, TRUCK GUSTS (AT 45 MPH VEHICLE VELOCITY) AND NATURAL WIND GUSTS FOR DESIGN OF TYPE 12 AND TYPE 13 STRUCTURES.
- 90 MPH (3-SECOND GUST) WIND SPEED AND A 50 YEAR DESIGN LIFE.

SECURE THE OPENING BELOW THE BASE PLATE WITH STAINLESS STEEL OR GALVANIZED STEEL MESH AND SECURE THE MESH WITH ¾" S.S. BANDING AROUND THE LEVELING NUTS.

INDENT PRINT (NOMINAL ½" HIGH) THE POLE LENGTH AND FIRST TWO LETTERS OF THE MANUFACTURERS NAME ON TWO SIDES OF THE BASE PLATE 180 DEGREES APART, BEFORE GALVANIZING. THE ARM SHALL BE IDENTIFIED WITH THE SAME INFORMATION BY INDENT PRINT.

SIGNAL FACE SHALL BE MOUNTED 6 INCHES (NOMINAL) FROM THE END OF THE MONOTUBE ARM OR AS SHOWN ON THE PLAN CONSTRUCTION DETAIL OR AS DIRECTED BY THE PROJECT ENGINEER/ELECTRICAL OPERATIONS PERSONNEL. MOUNT ALL LIKE HEADS AT SAME ELEVATION.

SIGN MOUNTING BRACKETS SHALL BE FURNISHED IN ACCORDANCE WITH SECTION 637 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION.

(1) DESIGN FOR MAXIMUM ALLOWABLE HANDHOLE WITH COVER ASSEMBLY WITH TWO ¼" X ¾" - 20 TPI STAINLESS STEEL HEX HEAD BOLTS.

(2) SIGNAL MOUNTING BRACKETS FOR POLE MOUNTING, MOUNT WITH CAP SCREW AND BANDING, (SEE SPECIFICATIONS SEC. 658).

(3) SECURELY MOUNT BACKPLATES, PROJECTING 5" BEYOND ALL SIDES OF THE SIGNAL FACE HOUSING, PER MANUFACTURERS RECOMMENDATIONS.

(4) THE TOP OF THE POLE SHAFT AND THE END OF THE MONOTUBE ARM SHALL BE EQUIPPED WITH A REMOVABLE, VENTILATED CAP HELD SECURELY IN PLACE WITH SET SCREWS.

(5) FACTORY-WELDED BRACKET FOR GROUNDING LUG, OPPOSITE HANDHOLE, (LUG AND HARDWARE PAID UNDER SEPARATE ITEM). PROVIDE HOLE IN BRACKET FOR ¼" X ¾" - 20 TPI STAINLESS STEEL HEX HEAD BOLT.

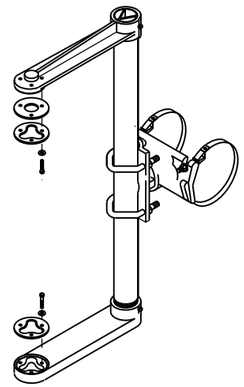
(6) FACTORY-WELDED "J" HOOK FOR STRAIN RELIEF FOR POLE LUMINAIRE WIRE.

(7) INSTALL STRUCTURAL IDENTIFICATION PLAQUES.

STRUCTURAL IDENTIFICATION PLAQUES SHALL BE PLACED ON THE POLES IN THE SAME DIRECTION AS THE ARM.

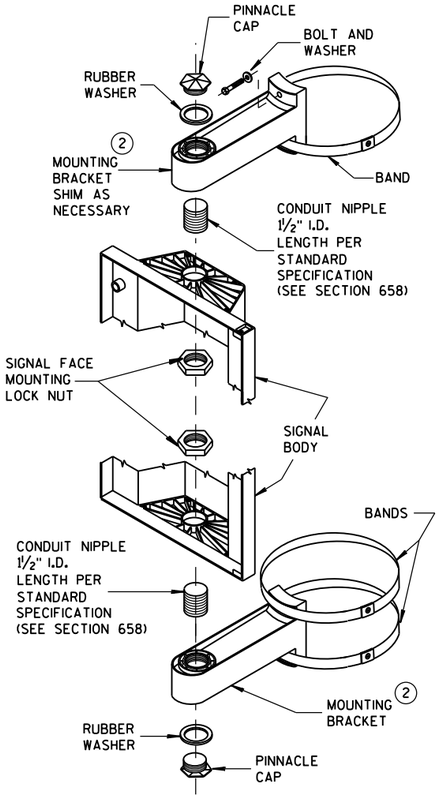
MOUNTING HEIGHT SHALL BE 6'-0" ABOVE THE CURB OR SHOULDER. ADJUST IF IT IS KNOWN THAT REQUIRED TRAFFIC SIGNS WILL BE OBSTRUCTED.

(8) FACTORY DRILLED ½" DRAIN HOLE 2" FROM FLANGE CONNECTION PLATE.

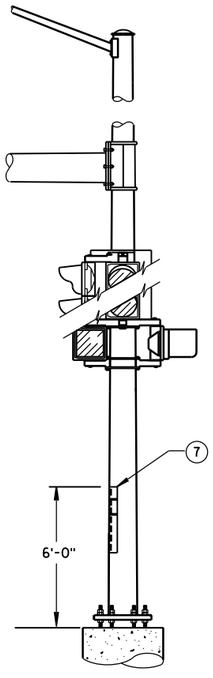


SIGNAL FACE MOUNTING BRACKET DETAIL FOR MONOTUBE ARM

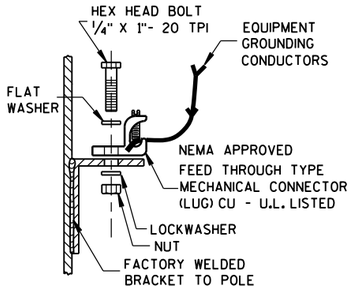
(MOUNT PER MANUFACTURER'S RECOMMENDATION)



SIGNAL FACE VERTICAL MOUNTING DETAIL

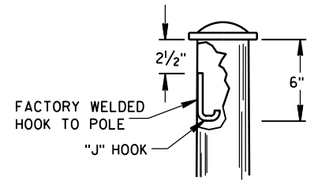


STRUCTURAL IDENTIFICATION PLAQUE PLACEMENT



TYPICAL GROUNDING CONNECTIONS (5)

NUT, BOLT AND WASHERS SHALL BE STAINLESS STEEL



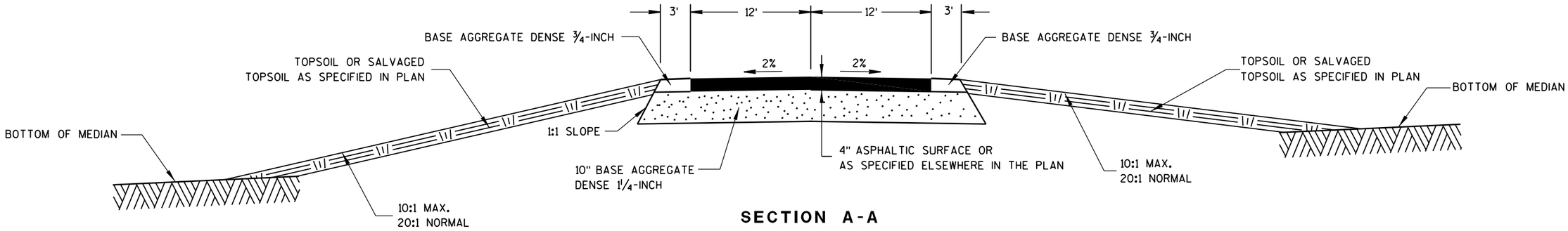
"J" HOOK WIRE SUPPORT (6)

GENERAL NOTES AND HARDWARE DETAILS FOR TYPE 9, 10, 12 & 13 POLES WITH MONOTUBE ARMS

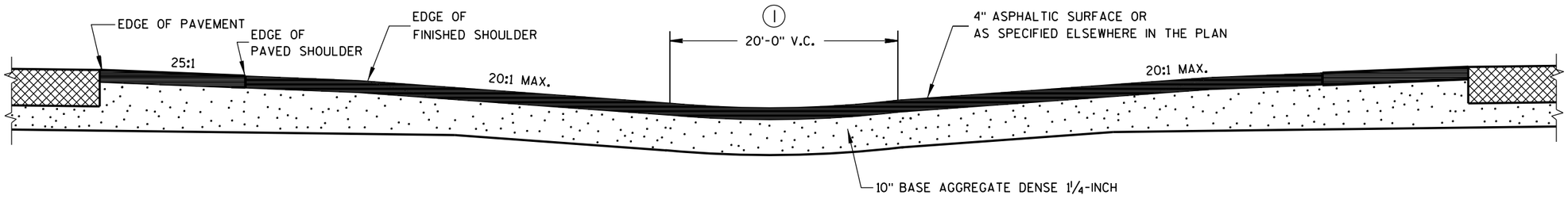
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2016 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

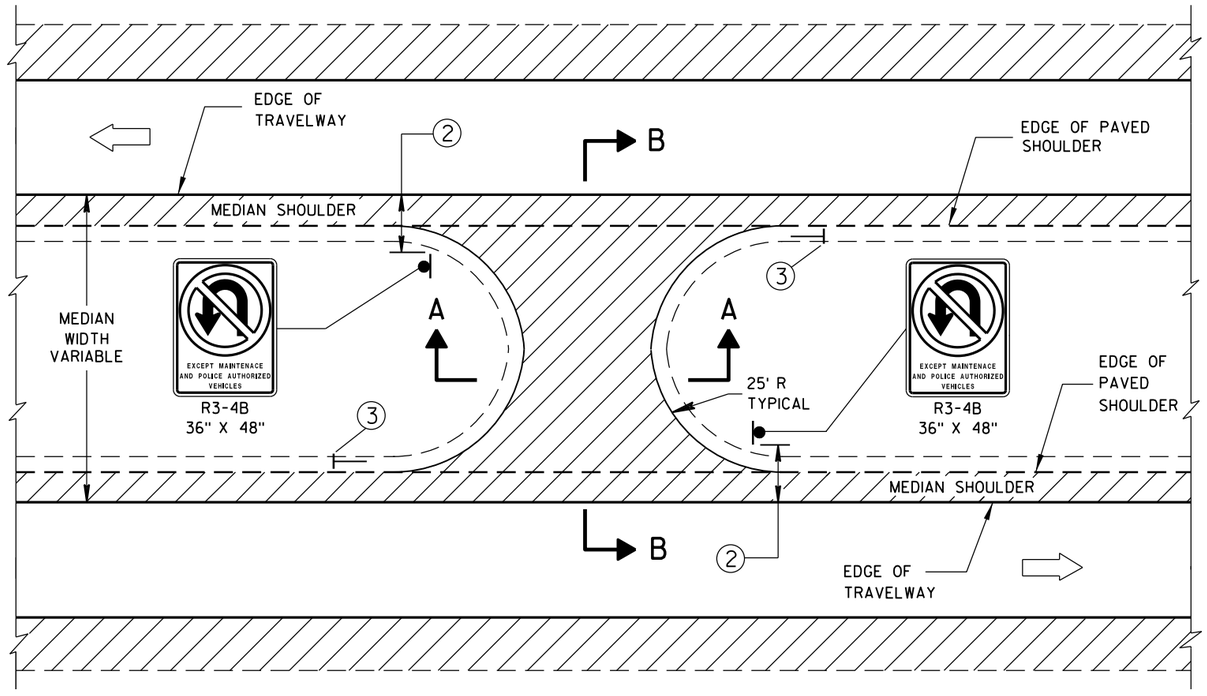
S.D.D. 9 E 8-8e



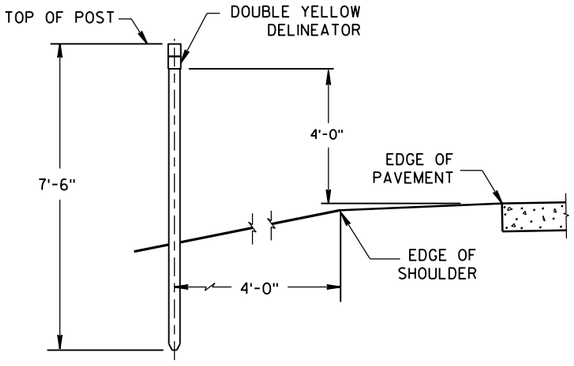
SECTION A-A



SECTION B-B



PLAN VIEW



DOUBLE YELLOW DELINEATOR INSTALLATION

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) ADJUST VERTICAL CURVE LOCATION LATERALLY TO MAINTAIN 20:1 MAX.

(2) SIGNING DETAILS AND SPECIFICATIONS ARE PROVIDED ELSEWHERE IN THE CONTRACT.

(3) INSTALL DOUBLE YELLOW DELINEATOR. SEE STANDARD DETAIL DRAWING 15A2.

MAINTENANCE CROSSOVER FOR FREEWAYS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8/2013 — DATE

/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER

FHWA

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S.D.D. 11 A 1-5

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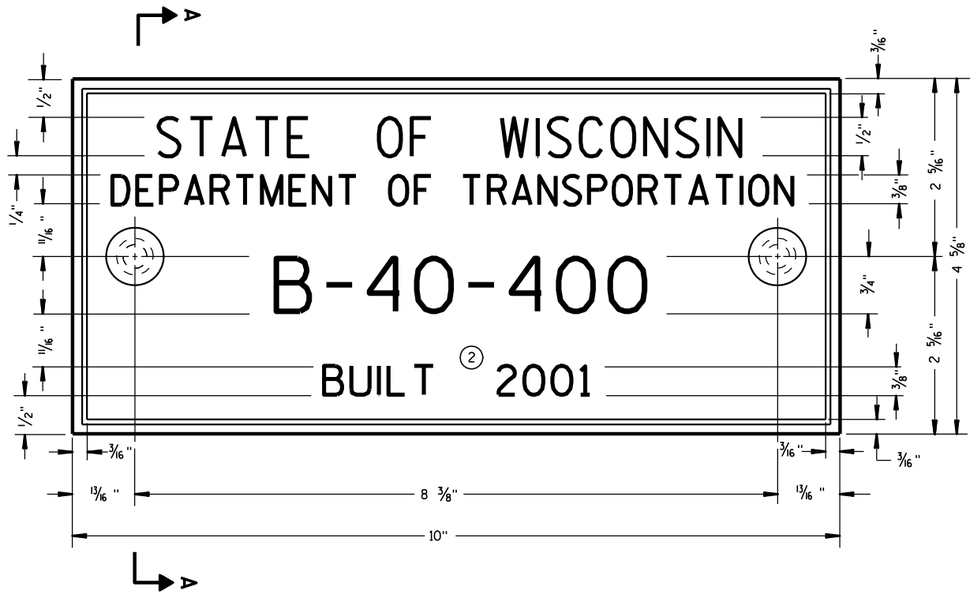
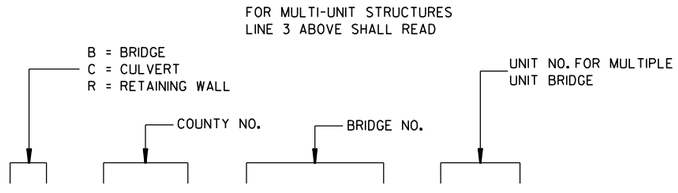
S.D.D. 11 A 1-5



TYPICAL NAME PLATE
(BRIDGES, CULVERTS, AND RETAINING WALLS)



NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES

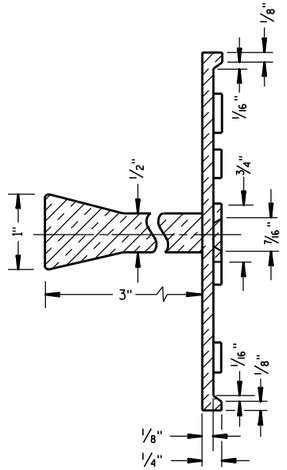
GENERAL NOTES

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.

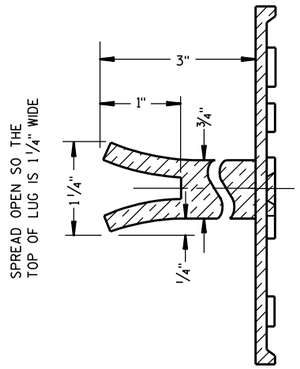
THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

(1) EPOXY RESIN SHALL BE FROM AN APPROVED MANUFACTURER AND USED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

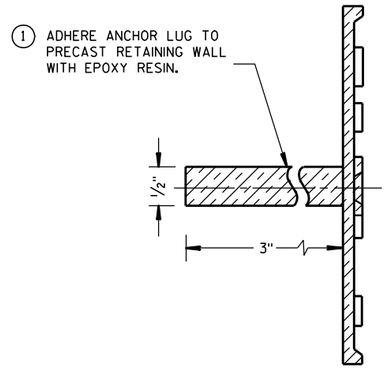
(2) REHABILITATION OF AN EXISTING STRUCTURE SHOULD USE THE DATE OF ORIGINAL STRUCTURE CONSTRUCTION.



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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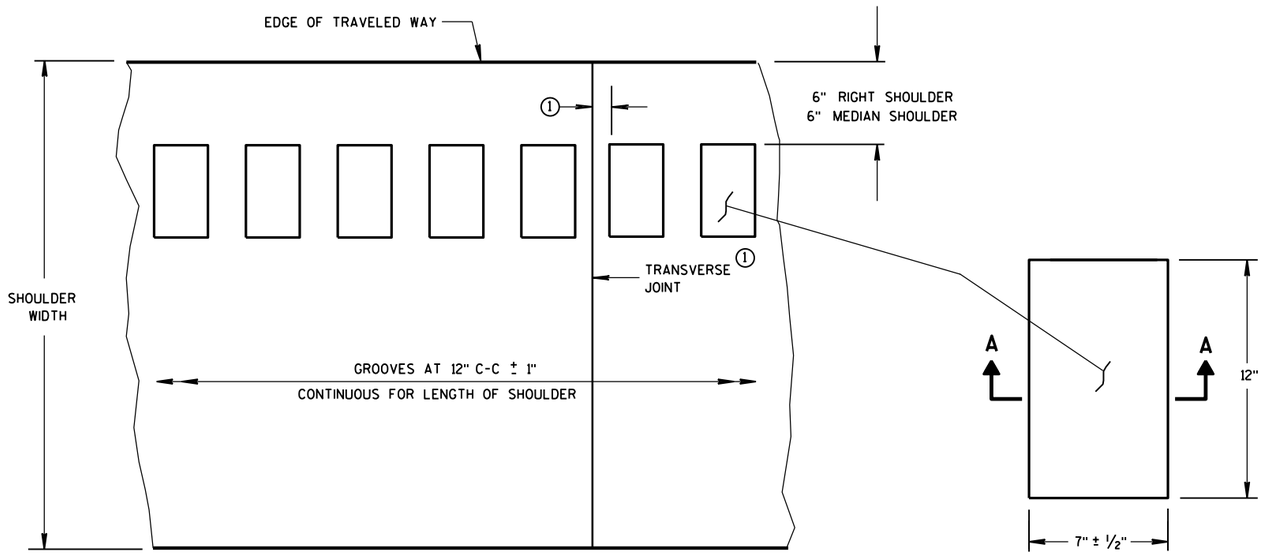
S.D.D. 12 A 3-10



PLAN VIEW
SHOULDER WITH GROOVES

PLAN VIEW
(SINGLE GROOVE)

PLACEMENT DETAIL FOR MILLED RUMBLE STRIP

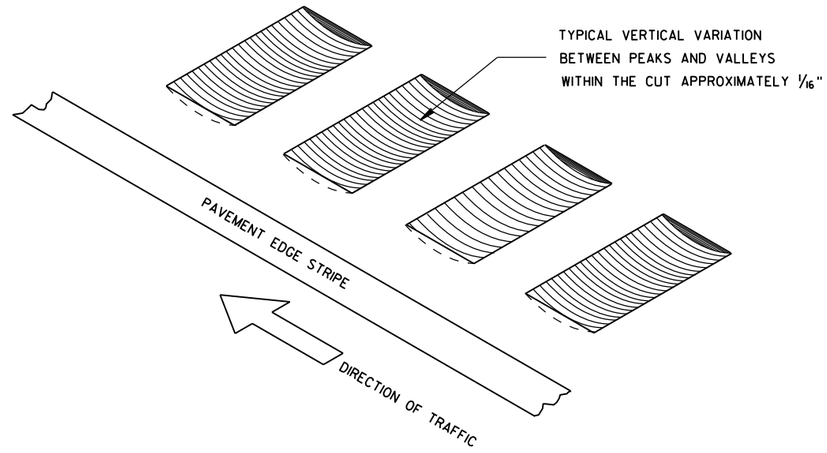
GENERAL NOTES

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

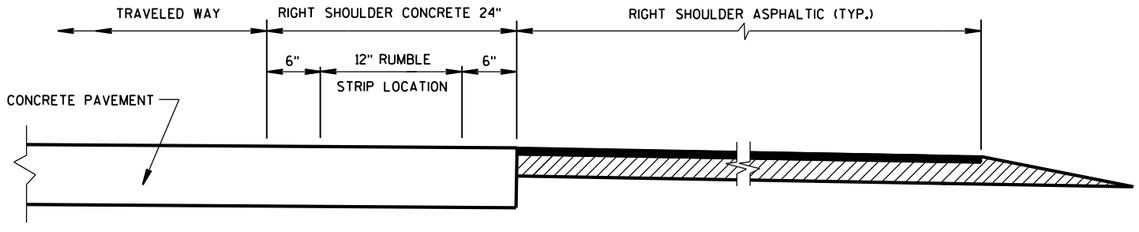
RUMBLE STRIPS ON EXPRESSWAYS

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

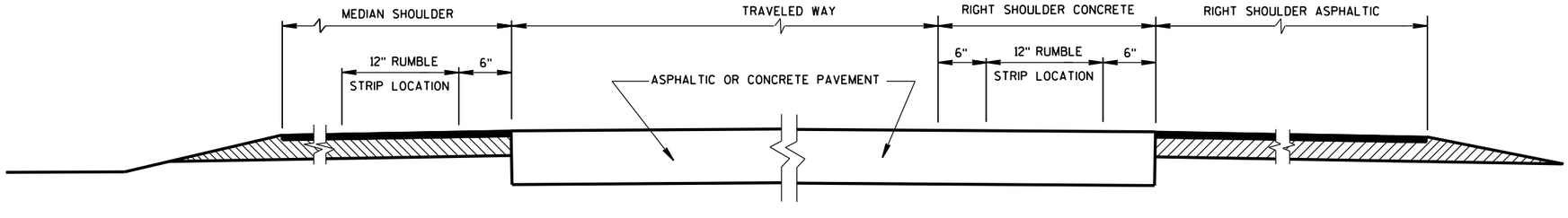
(1) CONCRETE PAVEMENT - RUMBLE STRIPS SHALL BE A MINIMUM OF 6" AWAY FROM TRANSVERSE JOINTS.



ISOMETRIC



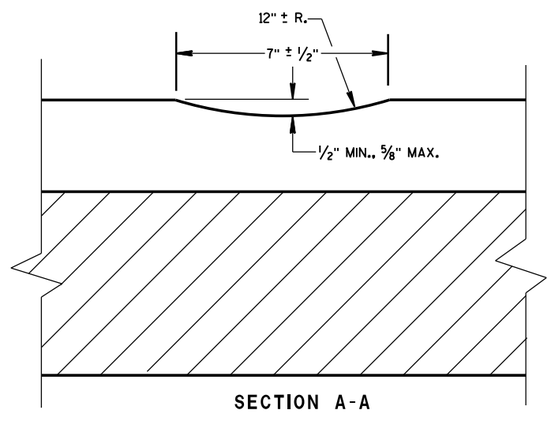
SECTION VIEW
CONCRETE PAVEMENT EXTENDS INTO RIGHT SHOULDER)



SECTION VIEW

TYPICAL LOCATIONS OF SHOULDER RUMBLE STRIPS IN RURAL DIVIDED HIGHWAYS

(ONE ROADWAY IS SHOWN)



SECTION A-A

SHOULDER RUMBLE STRIP, MILLING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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

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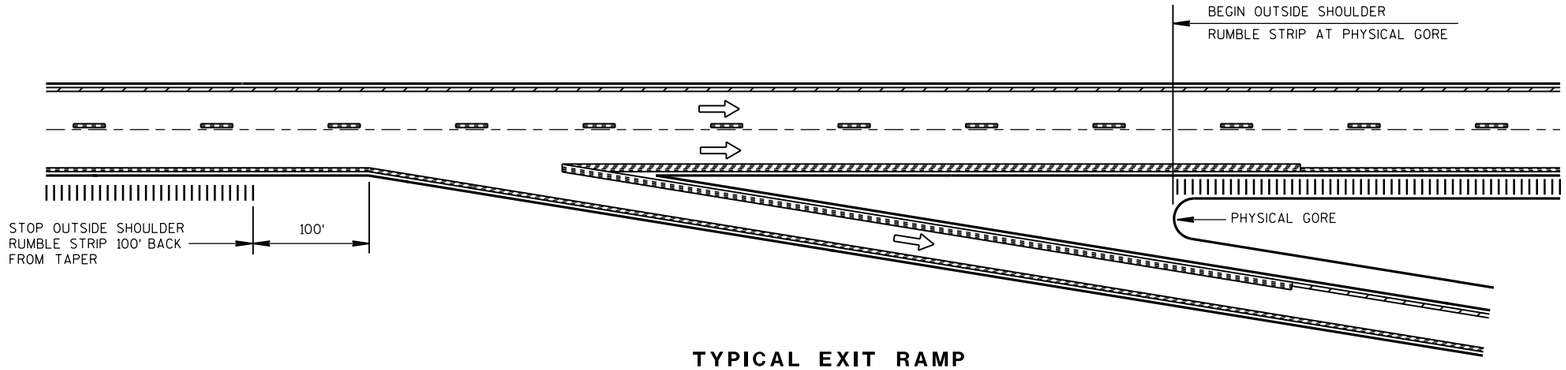
S.D.D. 13 A 5-5a



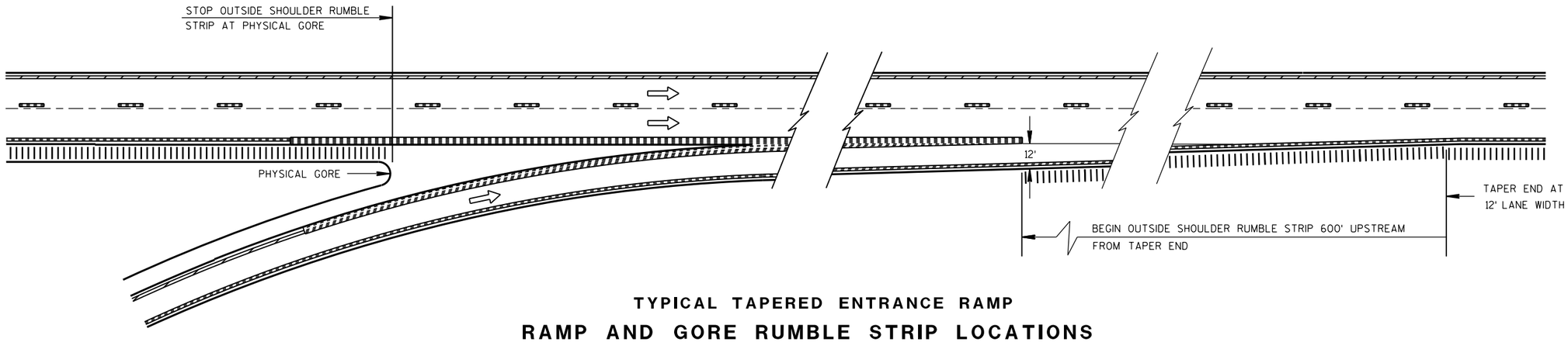
TYPICAL EXIT RAMP

NOTES:

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

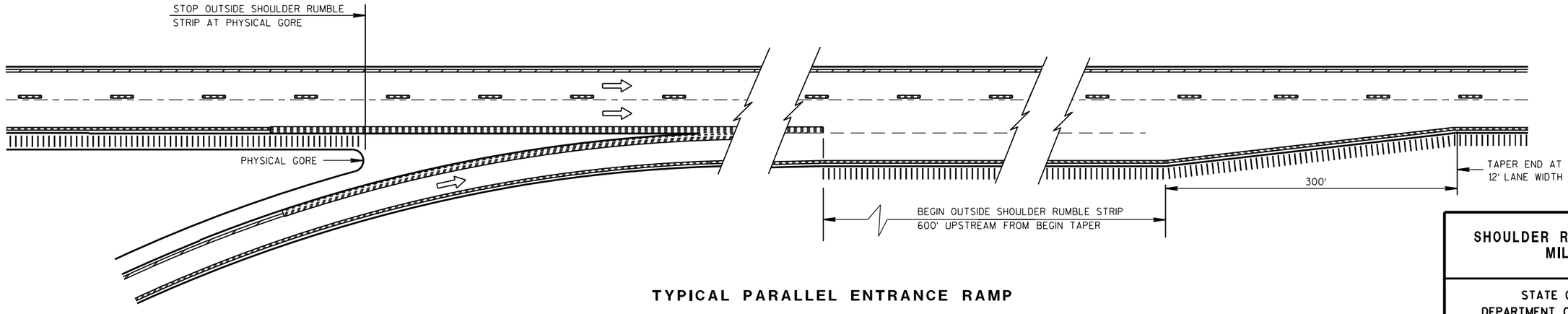
PAVEMENT MARKING DETAILS AND SPECIFICATIONS ARE PROVIDED ELSEWHERE IN THE CONTRACT.

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
FHWA

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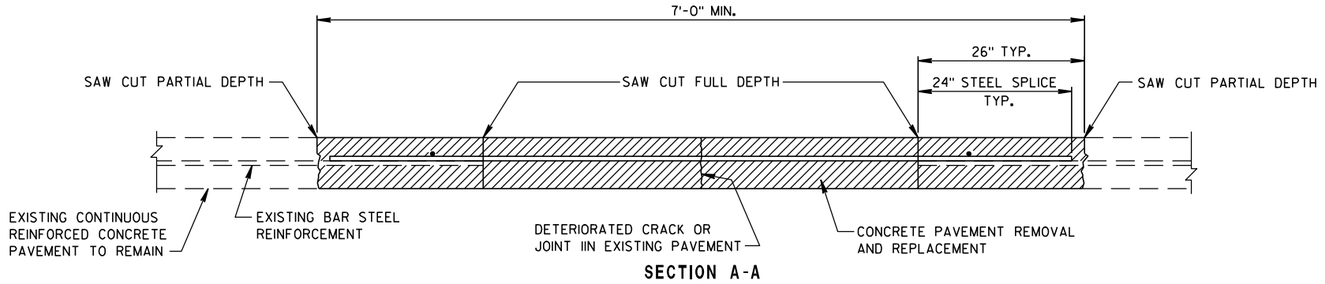
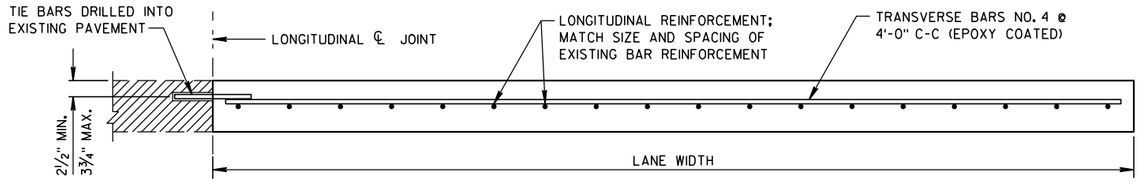
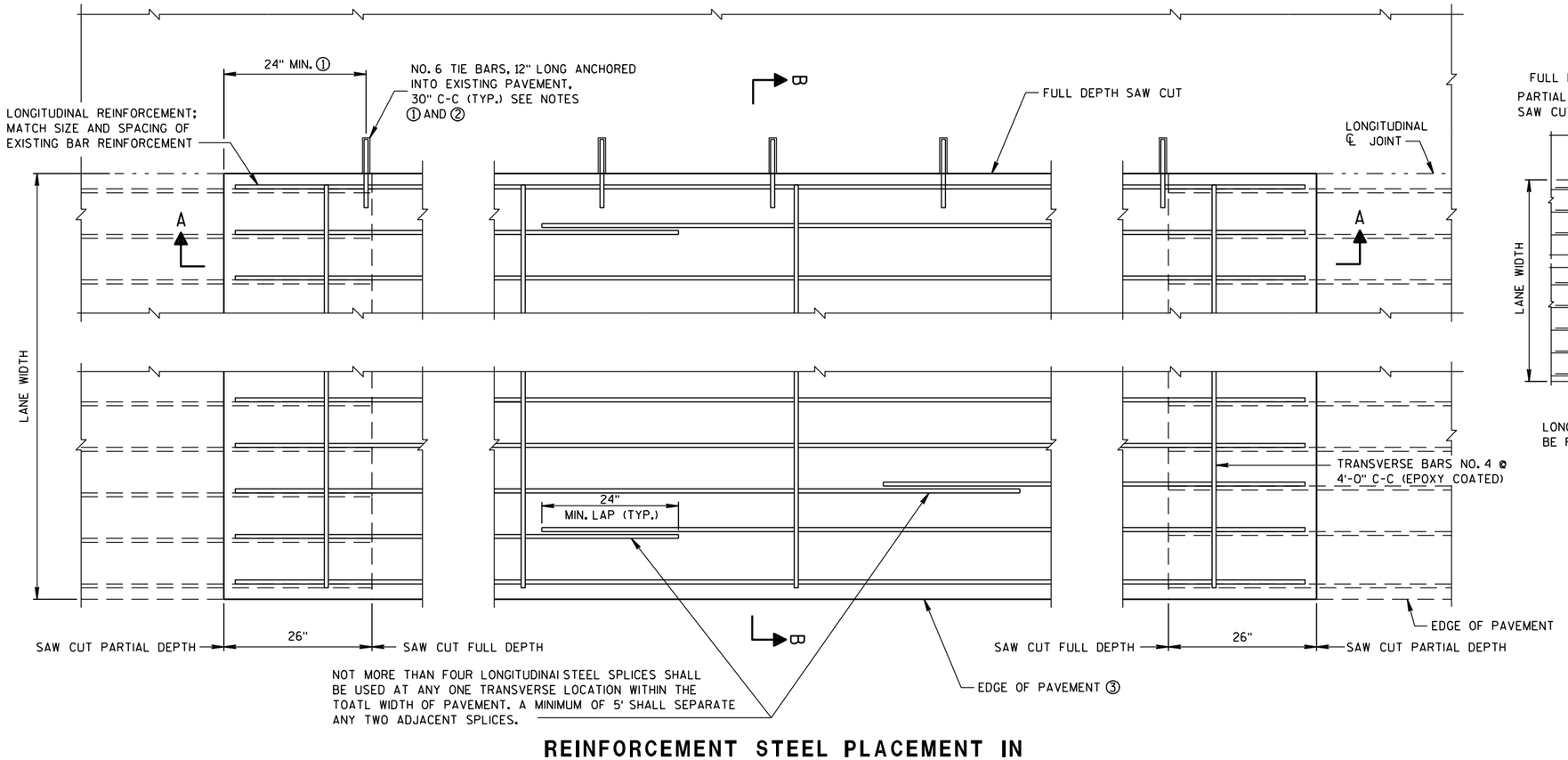
S.D.D. 13 A 5-5b



SECTION A-A



SECTION B-B



REINFORCEMENT STEEL PLACEMENT IN CONTINUOUSLY REINFORCED CONCRETE PAVEMENT REPLACEMENT

GENERAL NOTES

PLACE ALL BAR STEEL REINFORCEMENT AT MID PAVEMENT DEPTH UNLESS OTHERWISE NOTED.

PAY FOR THE TRANSVERSE AND LONGITUDINAL JOINT SAW CUT AS LINEAR FEET OF "SAWING CONCRETE".

WHEN THE PASSING AND TRAVELING LANES ARE TO BE REPLACED, REPLACE THE PASSING LANE FIRST.

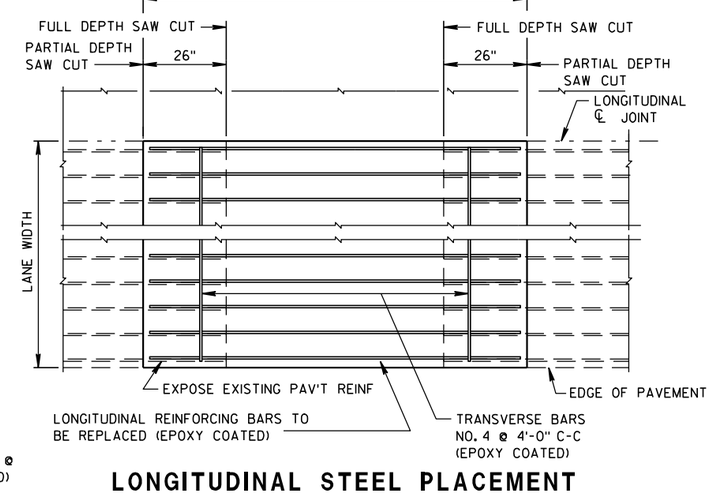
ADD TRANSVERSE STEEL BARS TO REPAIRS GREATER THAN 6'IN LENGTH, USE NO. 4 BARS PLACED TRANSVERSELY AND SPACED 4'C-C. PAYMENT SHALL BE INCIDENTAL TO "CONCRETE PAVEMENT CONTINUOUS REINFORCEMENT".

TIE ALL CONCRETE PAVEMENT REPAIRS WHICH ARE GREATER THAN 15'IN LENGTH, AND ARE ADJACENT TO EXISING CONCRETE PAVEMENT, TO THE EXISTING PAVEMENT USING TIE BARS. DETAILS FOR TIE BAR CONSTRUCTION SHALL CONFORM TO THE STANDARD SPECIFICATIONS AND STANDARD DETAIL DRAWINGS.

① PROVIDE A MINIMUM DISTANCE OF 24 INCHES FROM AN EXISTING TRANSVERSE JOINT OR THE EDGE OF REPLACEMENT TO THE CENTER OF THE TIE BAR NEAREST THAT JOINT OR EDGE.

② ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.

③ SAW CUT THE LONGITUDINAL EDGE JOINT IF THE ADJACENT SHOULDER IS CONCRETE.



LONGITUDINAL STEEL PLACEMENT IN CRCP REPAIRS

PLAN VIEW

CONTINUOUSLY REINFORCED CONCRETE PAVEMENT REPAIR AND REPLACEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

11/1/2011 — DATE

/S/ Deb Bischoff — PAVEMENT POLICY & DE NEER

FHWA

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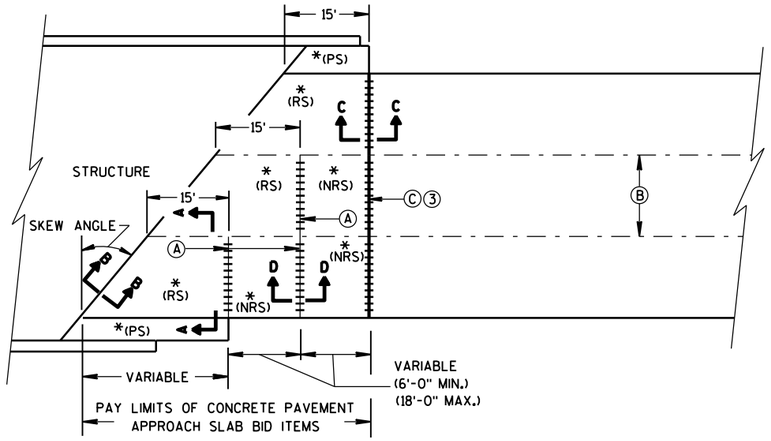
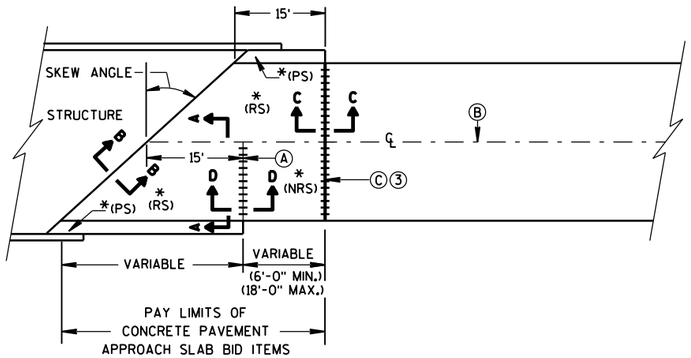
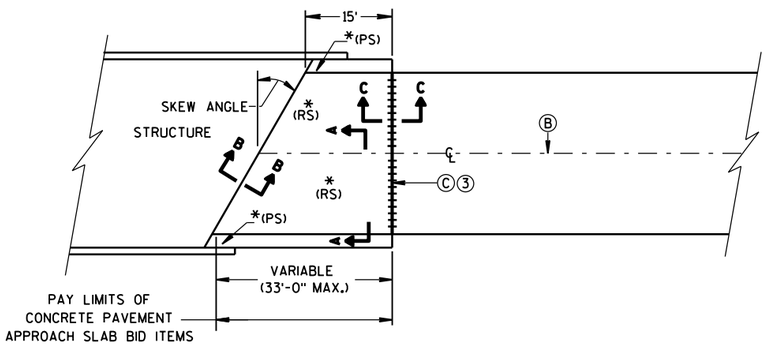
S.D.D. 13 A 7-2



SKEWED APPROACH
(PAVEMENT MORE THAN 2 LANES)



SKEWS >20°
(PAVEMENT WIDTH ≤30')



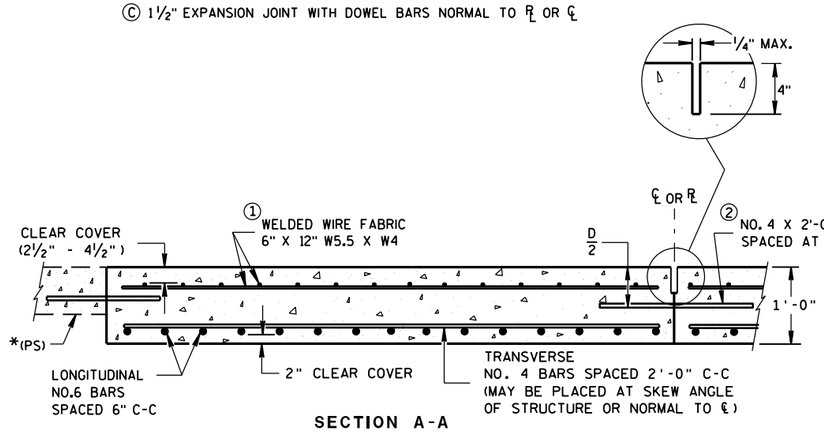
SKEWS ≤20°
(PAVEMENT WIDTH ≤30')

APPROACH SLAB AND ADJACENT PAVEMENT

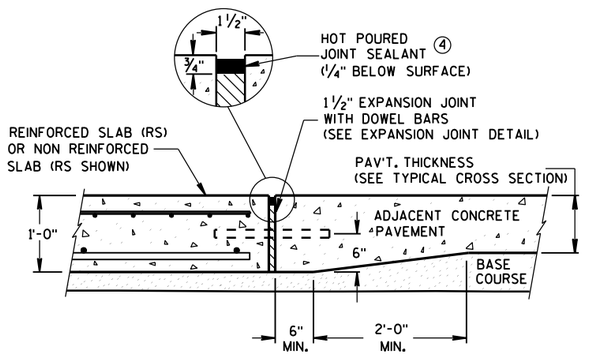
*(RS) = REINFORCED CONCRETE SLAB
*(PS) = PAVED CONCRETE SHOULDER OR CONCRETE DRAINAGE SLAB
(SEE DETAILS ELSEWHERE IN THE PLAN)
*(NRS) = NON-REINFORCED CONCRETE SLAB

***STANDARD DOWEL BAR DIAMETER
(SEE SDD 13C11, & SDD 13C13)

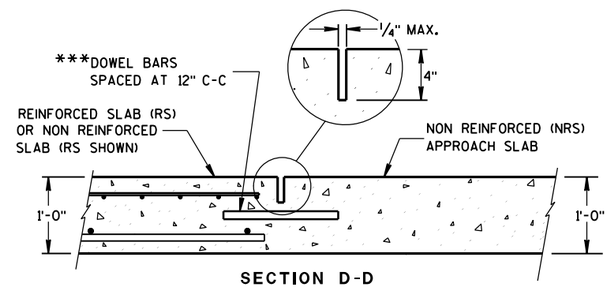
Ⓐ STANDARD CONTRACTION JOINT NORMAL TO ℄ OR ℄
Ⓑ STANDARD LONGITUDINAL JOINT WITH TIE BARS.
Ⓒ 1½" EXPANSION JOINT WITH DOWEL BARS NORMAL TO ℄ OR ℄



SECTION A-A
REINFORCEMENT POSITIONING DETAIL



SECTION C-C
TRANSITION DETAIL
APPROACH SLAB TO ADJACENT PAVEMENT



SECTION D-D
CONTRACTION JOINT

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.

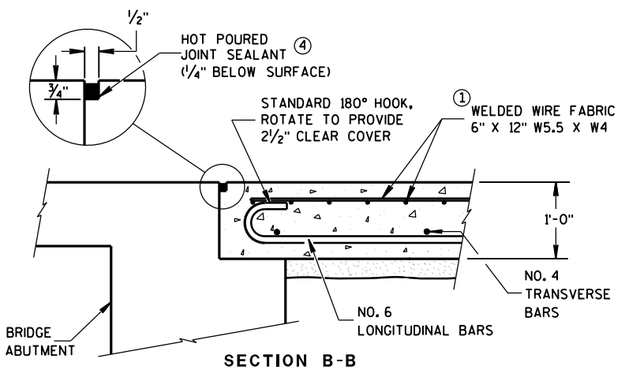
① THE CONTRACTOR MAY USE NO. 4 BARS SPACED AT 2'-0" C-C IN BOTH THE LONGITUDINAL AND TRANSVERSE DIRECTIONS FOR TOP REINFORCEMENT AS AN ALTERNATIVE TO THE WELDED WIRE FABRIC.

② THE CONTRACTOR MAY OMIT TIE BARS BETWEEN REINFORCED SLABS WHERE SLAB REINFORCEMENT BARS EXTEND ACROSS THE CENTERLINE OR REFERENCE LINE.

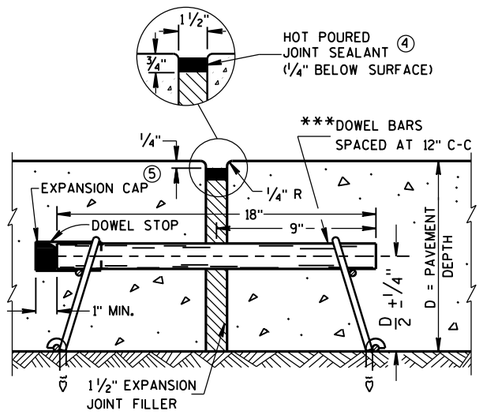
③ DO NOT CONSTRUCT AN EXPANSION JOINT OR INSTALL DOWEL BARS WHEN ABUTTING AN HMA PAVEMENT.

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.



SECTION B-B
BEND DETAIL
BOTTOM REINFORCEMENT



EXPANSION JOINT DETAIL

CONCRETE PAVEMENT APPROACH SLAB

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2015
DATE
/S/ Peter Kemp, P.E.
PAVEMENT SUPER
FHWA

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S.D.D. 13 B 2-8a

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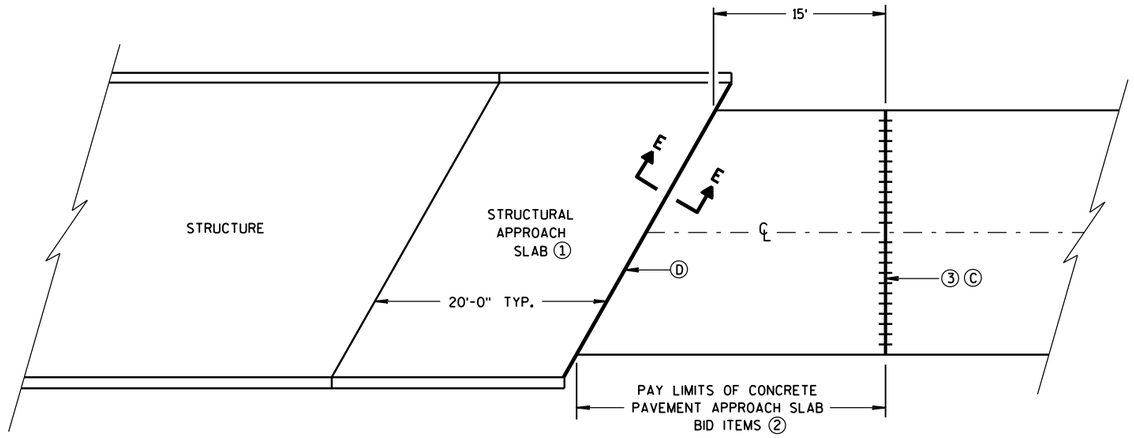
S.D.D. 13 B 2-8a

BRIDGE APPROACHES



GENERAL NOTES

ALL PROJECTS THAT INVOLVE A STRUCTURAL APPROACH SLAB WILL ALSO HAVE A CONCRETE PAVEMENT APPROACH SLAB.

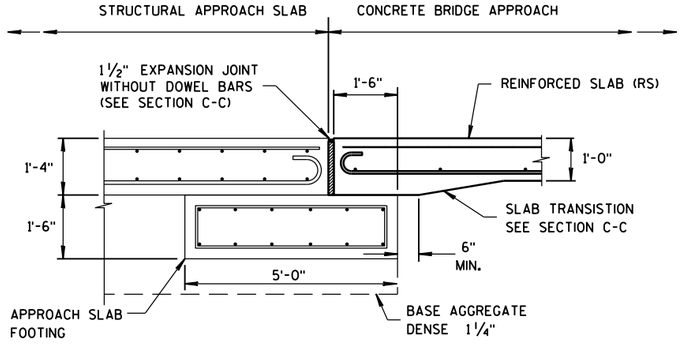
① SEE BRIDGE PLAN.

② CONFORM TO SHEET 13 B 2(A) FOR CONCRETE PAVEMENT APPROACH SLAB DETAILS.

③ DO NOT CONSTRUCT AN EXPANSION JOINT OR INSTALL DOWEL BARS WHEN ABUTTING AN HMA PAVEMENT.

Ⓒ 1½" EXPANSION JOINT WITH DOWEL BARS NORMAL TO ℄ OR ℄

Ⓓ 1½" EXPANSION JOINT (NO DOWELS)



SECTION E-E

FOOTING DETAIL

STRUCTURAL APPROACH SLAB TO CONCRETE BRIDGE APPROACH

STRUCTURAL APPROACH SLAB AND CONCRETE PAVEMENT APPROACH SLAB

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2015 — DATE
/S/ Peter Kemp, P.E. — PAVEMENT SUPEF
FHWA

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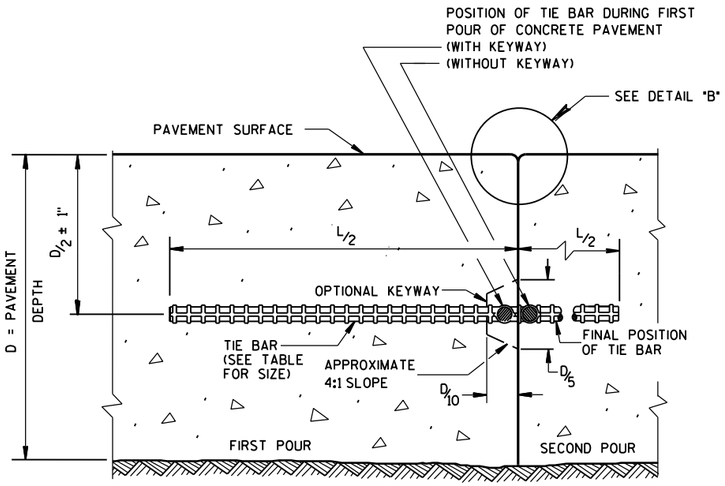
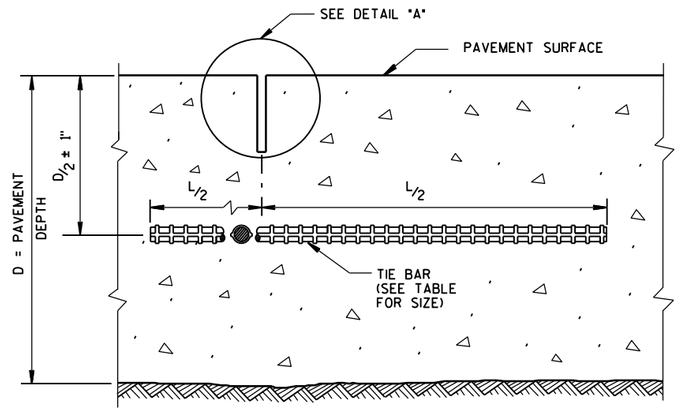
S.D.D. 13 B 2-8b



CONSTRUCTION JOINT



SAWED JOINT

GENERAL NOTES

DO NOT SEAL OR FILL LONGITUDINAL JOINTS.

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

CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.

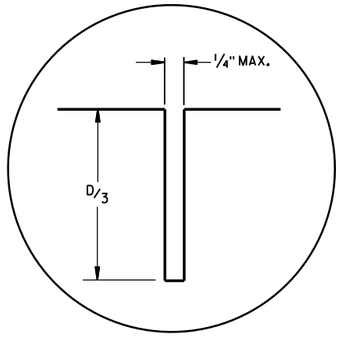
(1) ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.

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

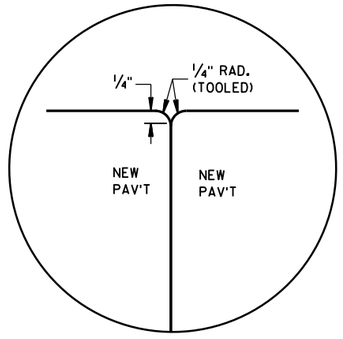
PLAN VIEW

SECTION A-A

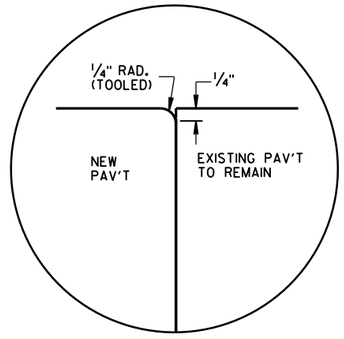
LONGITUDINAL CONSTRUCTION JOINT TIE BARS ANCHORED INTO EXISTING PAVEMENT



DETAIL "A"



DETAIL "B"



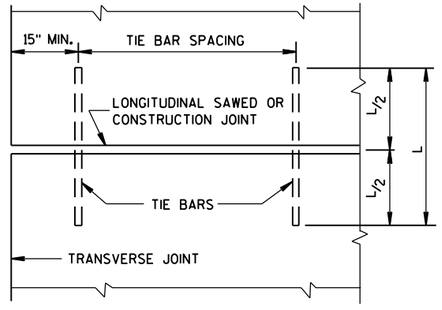
DETAIL "C"

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
June, 2015 — DATE
/S/ Peter Kemp, P.E. — PAVEMENT SUPER
FHWA

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S.D.D. 13 C 1-18

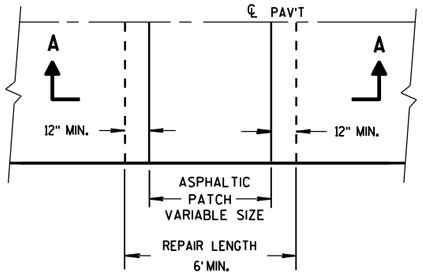
GENERAL NOTES

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

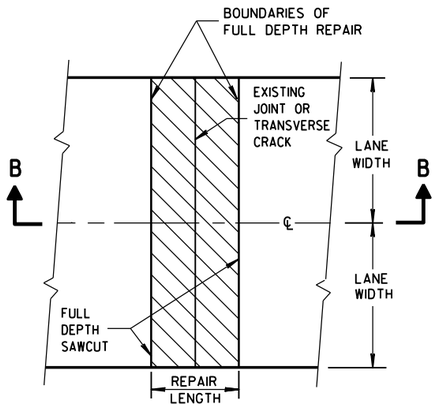
PROVIDE 6-FOOT MINIMUM DISTANCE FROM BOUNDARIES OF CONCRETE REPAIR AREAS TO ADJACENT TRANSVERSE JOINT OR CRACK.

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

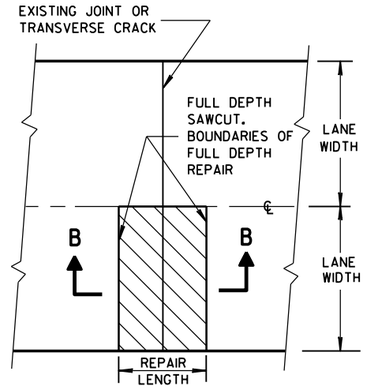
(1) DOWEL BARS MIGHT NOT EXIST.



PLAN VIEW

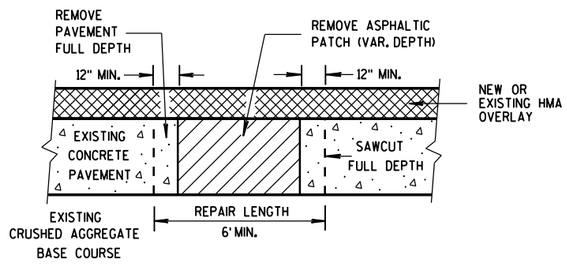


PLAN VIEW
(DOUBLE LANE REPAIR)



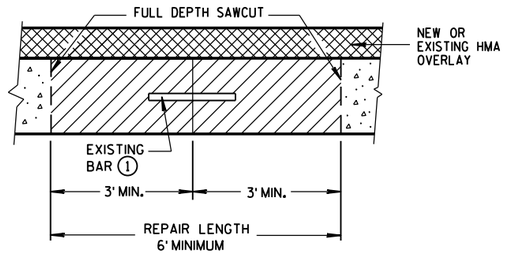
PLAN VIEW
(SINGLE LANE REPAIR)

FULL DEPTH CONCRETE PAVEMENT REMOVAL



SECTION A-A

HMA PATCH REMOVAL



SECTION B-B

CONCRETE REMOVAL

BASE PATCHING CONCRETE

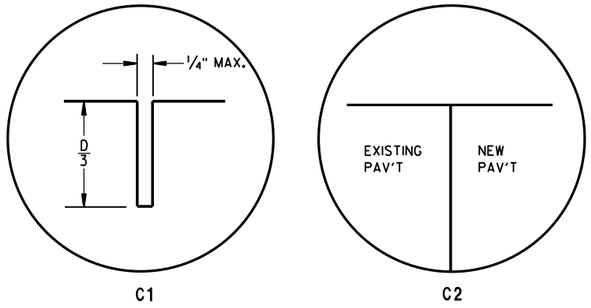
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

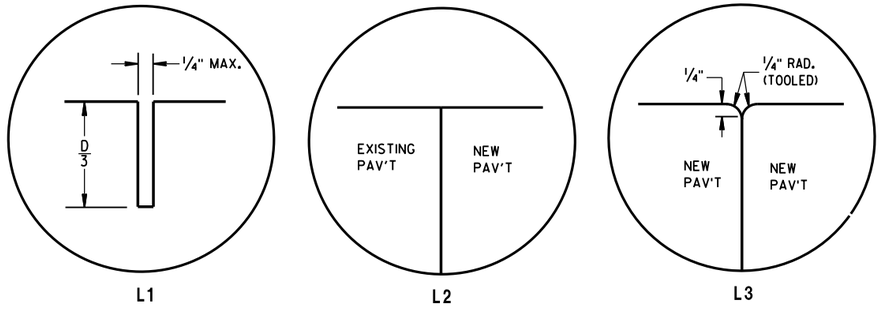
S.D.D. 13 C 14-6a

6

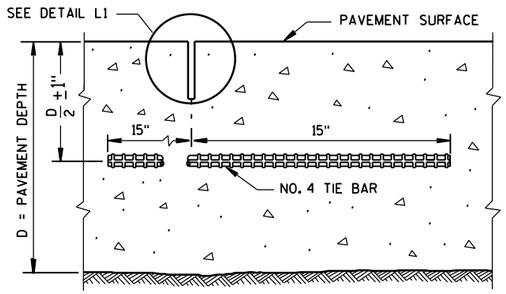
S.D.D. 13 C 14-6a



TRANSVERSE JOINTS

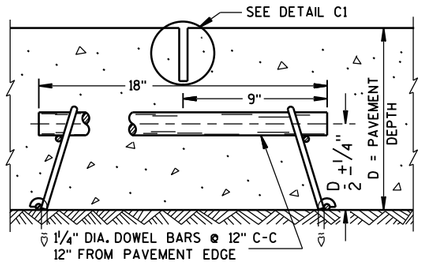


LONGITUDINAL JOINTS



SECTION C-C

SAWED LONGITUDINAL JOINT



SECTION F-F

CONTRACTION JOINT

GENERAL NOTES

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

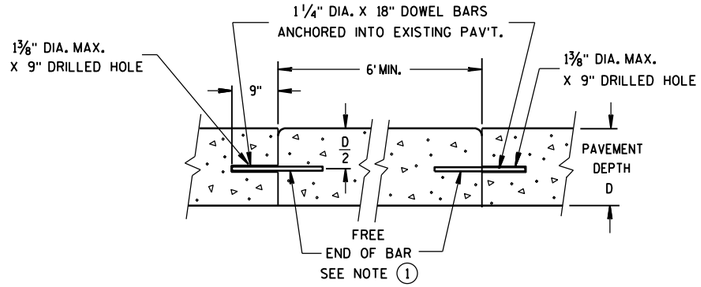
CONCRETE BASE PATCHES OF EXISTING NONDOWELED CONCRETE PAVEMENTS DO NOT NEED TO BE DOWELED.

DO NOT SEAL OR FILL JOINTS.

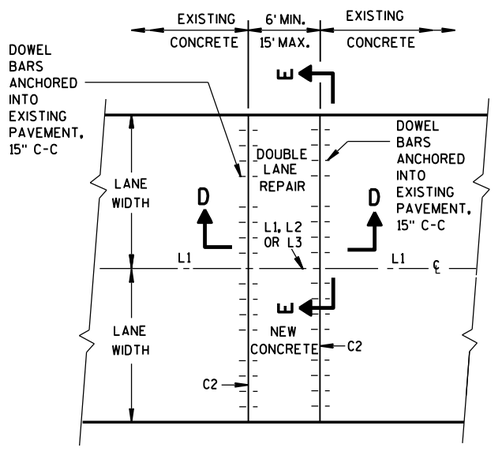
ANCHOR DOWEL BARS AND TIE BARS INTO DRILLED HOLES WITH AN EPOXY.

PROVIDE A MINIMUM DISTANCE OF 15 INCHES FROM AN EXISTING TRANSVERSE JOINT OR THE EDGE OF REPLACEMENT TO THE CENTER OF THE TIE BAR NEAREST THAT JOINT OR EDGE.

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

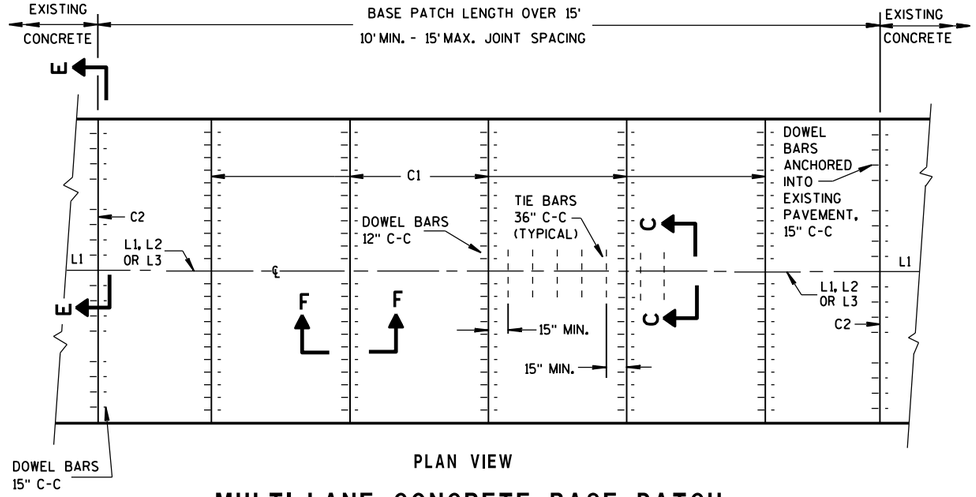


SECTION D-D



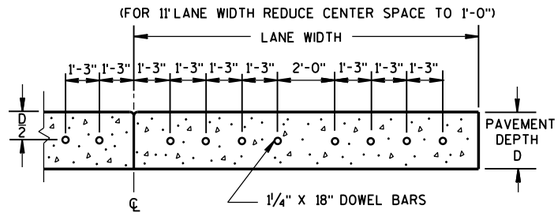
PLAN VIEW

MULTI-LANE CONCRETE BASE PATCH 15' MAXIMUM LENGTH



PLAN VIEW

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



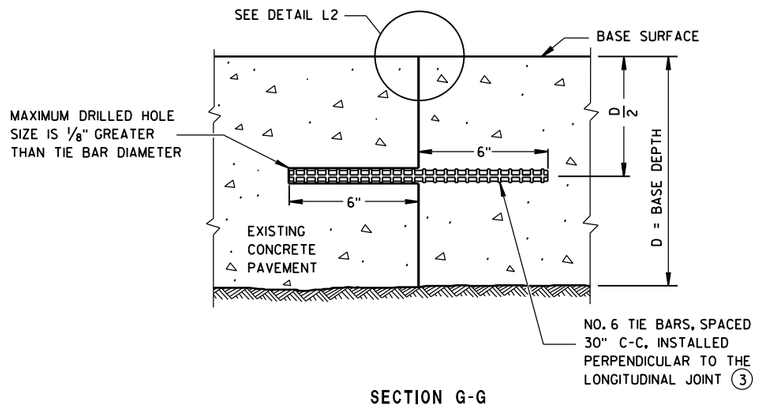
SECTION E-E

SPACING OF DOWEL BARS ANCHORED INTO EXISTING PAVEMENT

BASE PATCHING CONCRETE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6
S.D.D. 13 C 14-6b



SECTION G-G

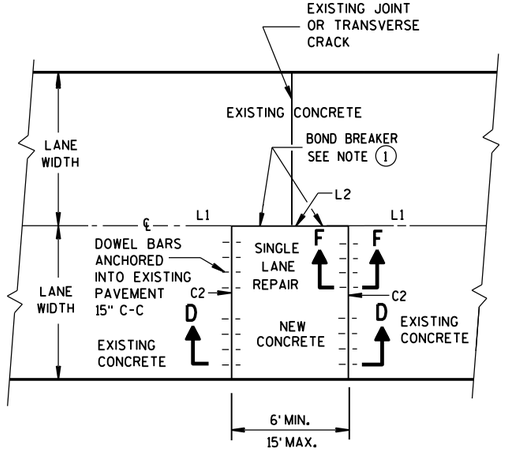
TIE BARS ANCHORED INTO EXISTING PAVEMENT

GENERAL NOTES

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

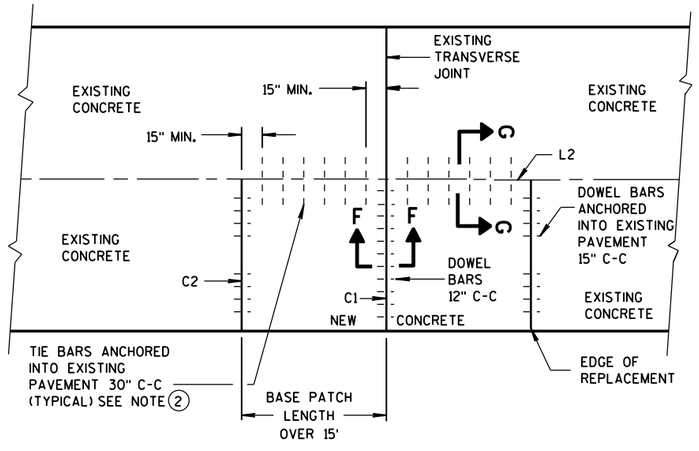
(2) WITH THE APPROVAL OF THE ENGINEER, FOR SINGLE LANE PAVEMENT REPLACEMENTS LESS THAN 30 FEET IN LENGTH, DRILLED TIE BARS MAY BE INSTALLED ON 6:1 SKEW HORIZONTALLY, DIRECTION OF SKEW ALTERNATING WITH EACH SUCCESSIVE BAR. DRIVE SKEWED TIE BARS TO A DEPTH OF 6 INCHES IN A HOLE OF SUCH A DIAMETER AS TO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

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



PLAN VIEW

SINGLE LANE CONCRETE BASE PATCH 15' MAXIMUM LENGTH



PLAN VIEW

SINGLE LANE CONCRETE BASE PATCH GREATER THAN 15' IN LENGTH

BASE PATCHING CONCRETE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept., 2015 — DATE
/S/ Peter Kemp, P.E. — PAVEMENT SUPER
FHWA

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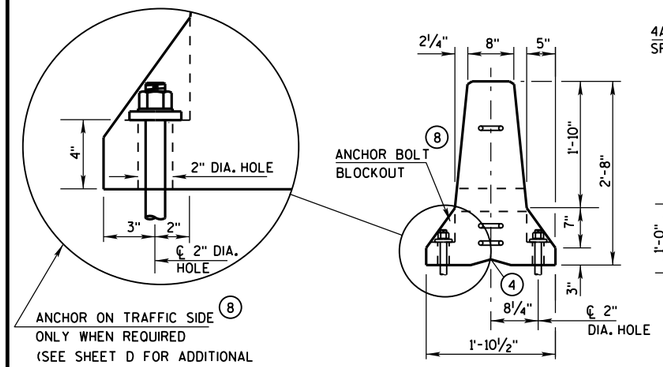
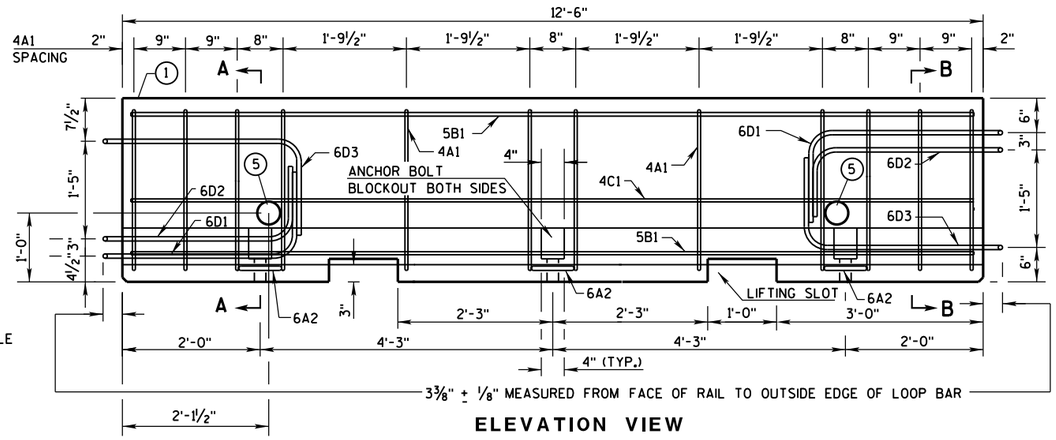
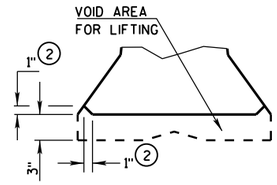
S.D.D. 13 C 14-6c



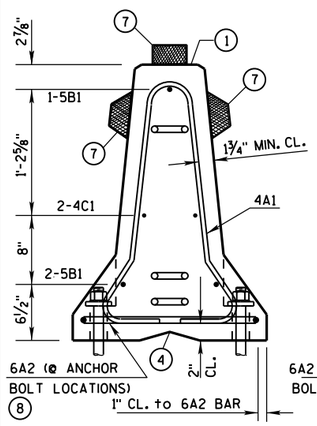
END VIEW



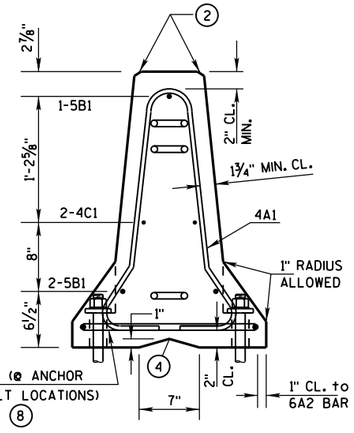
ELEVATION VIEW



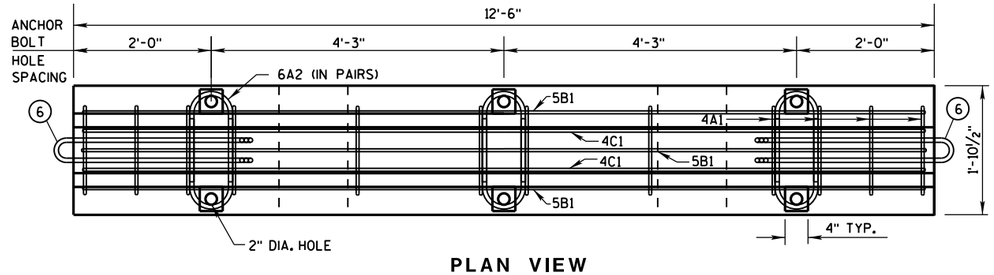
DETAIL "B"
LIFTING SLOT DETAIL



SECTION A-A
(STIRRUP PLACEMENT)

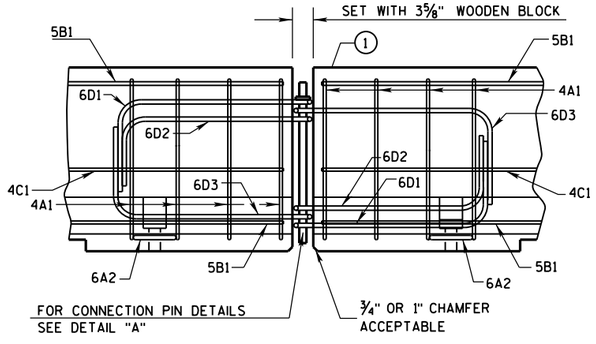


SECTION B-B
(STIRRUP PLACEMENT)

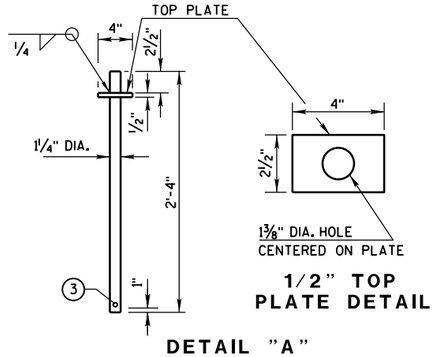


PLAN VIEW

DETAILS OF BARRIER SECTION

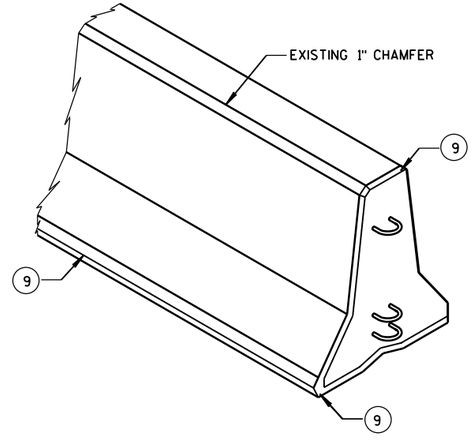


DETAILS OF BARRIER CONNECTION



1/2" TOP
PLATE DETAIL

DETAIL "A"
CONNECTION PIN
(A36 STEEL (10.9 LB EACH))



GENERAL NOTES

THESE GENERAL NOTES APPLY TO SHEETS 14B7-14(a) THRU 14B7-14(h).

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 ANCHORING CRITERIA.

(9) 1" CHAMFER OPTIONAL.

CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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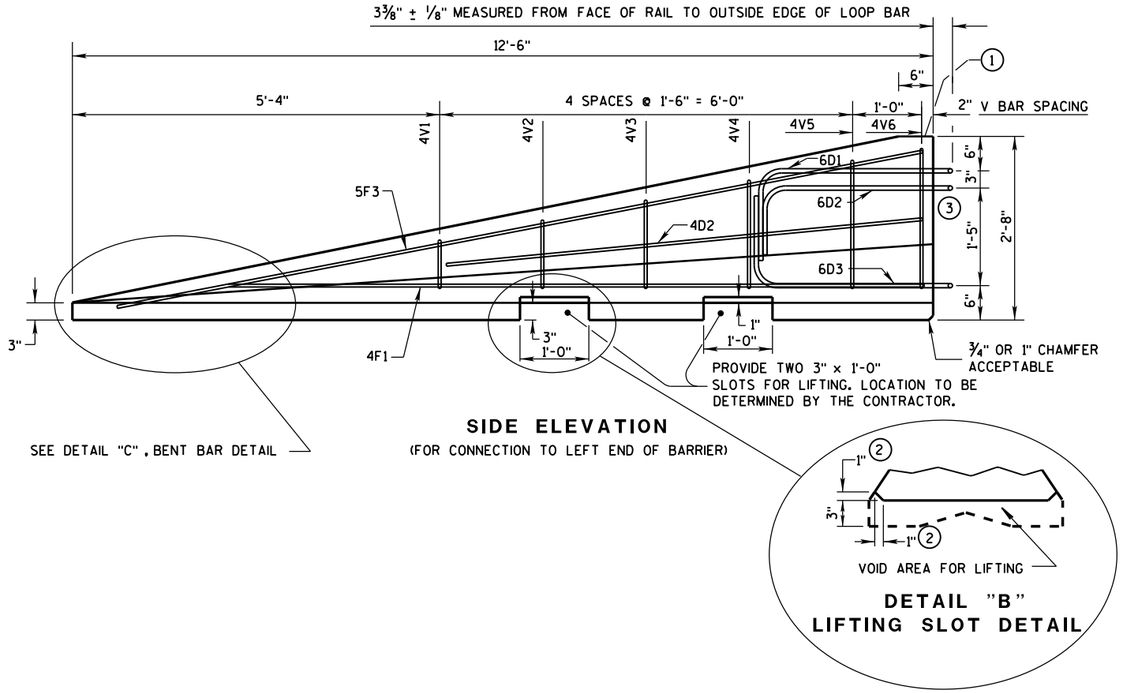
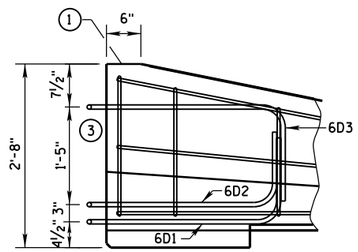
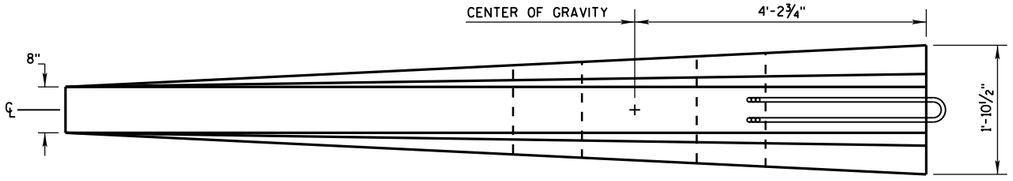
S.D.D. 14 B 7-14a

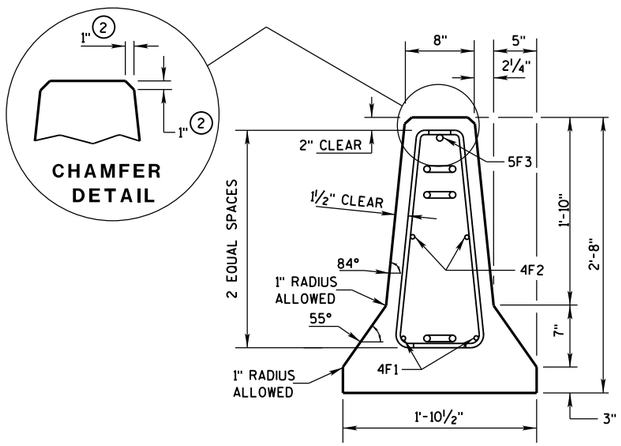


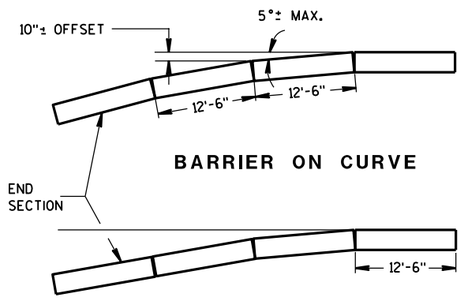


GENERAL NOTES

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.







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

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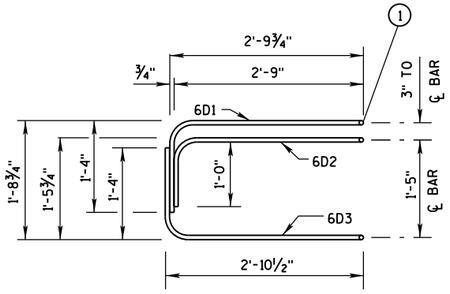
S.D.D. 14 B 7-14b

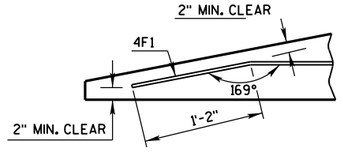
BARRIER TAPER SECTION BILL OF MATERIALS

(PER 12'-6" BARRIER TAPER SECTION)

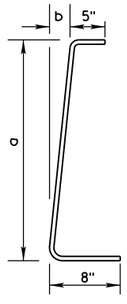
BAR	BAR SIZE	NO. OF BARS	LENGTH FT.
4V1	4	2	1'-11"
4V2	4	2	2'-2"
4V3	4	2	2'-6"
4V4	4	2	2'-9"
4V5	4	2	3'-2"
4V6	4	2	3'-4"
4F1	4	2	12'-0"
4F2	4	2	7'-6"
5F3	5	1	11'-9"
LOOP ASSEMBLY			
6D1	6	1	8'-5"
6D2	6	1	7'-7"
6D3	6	1	8'-6"



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

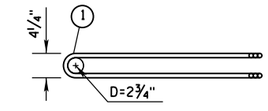
GENERAL NOTES

(1) NEVER USE LOOP BARS (6D1, 6D2 OR 6D3) TO LIFT, MOVE OR REPOSITION THE BARRIER.

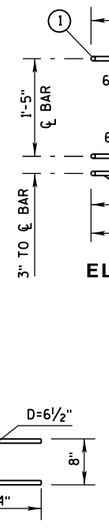
BARRIER SECTION BILL OF MATERIALS

(PER 12'-6" BARRIER SECTION)

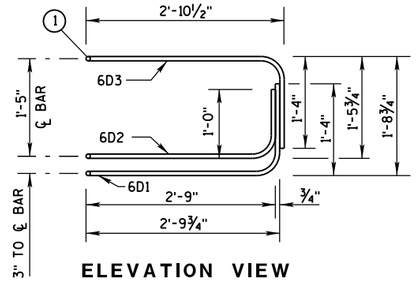
BAR	BAR SIZE	NO. OF BARS	LENGTH FT.
4A1	4	12	6'-0"
6A2	6	6	2'-11"
5B1	5	3	12'-2"
4C1	4	2	12'-2"
LOOP ASSEMBLY			
6D1	6	2	8'-5"
6D2	6	2	7'-7"
6D3	6	2	8'-6"



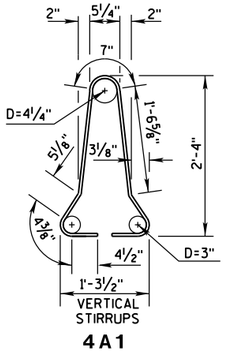
PLAN VIEW
LOOP BAR ASSEMBLY
(MARKED END SHOWN, INVERT FOR OTHER END)



6A2



ELEVATION VIEW



4A1

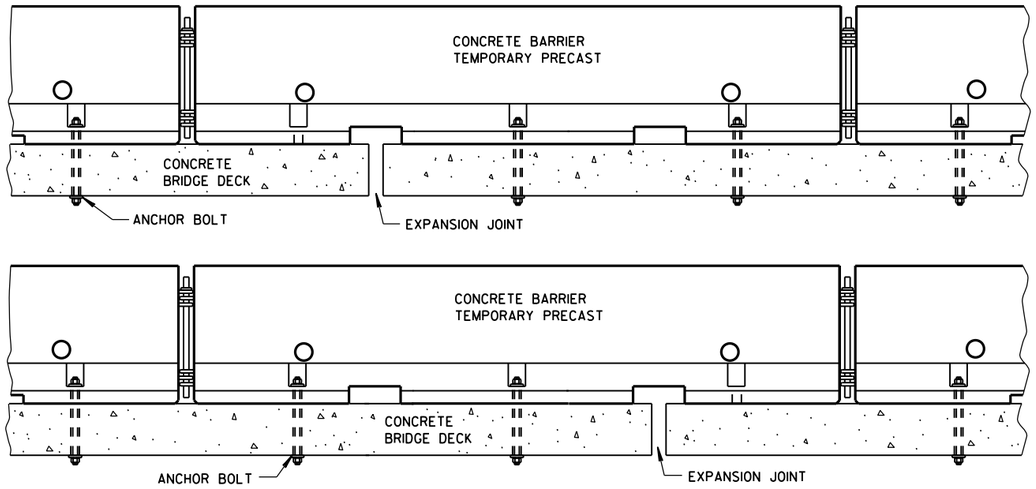
BARRIER SECTION

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

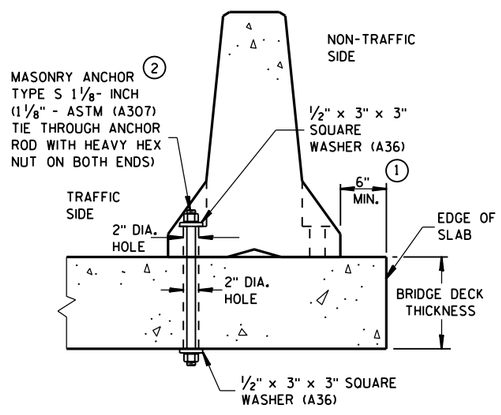
6

S.D.D. 14 B 7-14c



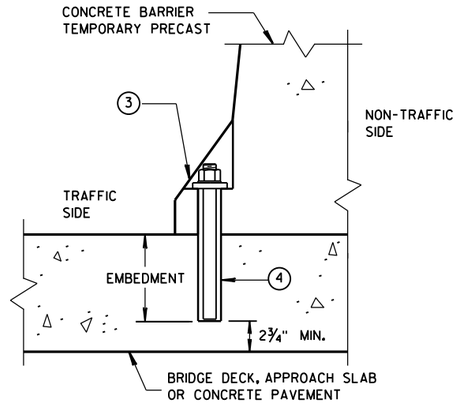
TREATMENT AT BRIDGE DECK EXPANSION JOINTS

(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.)



THROUGH BOLTED ANCHOR INSTALLATION ON BRIDGE DECK

(DO NOTUSE ON CONCRETE BRIDGE DECK WITH ASPHALT OVERLAY)



REMOVABLE ADHESIVE BONDED ANCHOR INSTALLATION ON CONCRETE BRIDGE DECK, CONCRETE APPROACH SLAB, OR CONCRETE PAVEMENT ②

(DO NOT USE ON CONCRETE WITH AN ASPHALTIC OVERLAY)

GENERAL NOTES

① CONCRETE BARRIER TEMPORARY PRECAST, 12'-6" SHALL BE ANCHORED IF:
THE DISTANCE TO A 2 FOOT OR GREATER DROPOFF THAT IS STEEPER THAN 3H : 1V, FOR EXAMPLE THE EDGE OF A BRIDGE DECK OR A DROPOFF AT THE EDGE OF PAVEMENT, IS LESS THAN 4 FEET FROM THE SIDE OF THE BARRIER CLOSEST TO THE DROPOFF AND THE POSTED SPEED IS 45 MPH OR GREATER, OR

THE DISTANCE TO A 2 FOOT OR GREATER DROPOFF THAT IS STEEPER THAN 3H : 1V, FOR EXAMPLE THE EDGE OF A BRIDGE DECK OR A DROPOFF AT THE EDGE OF PAVEMENT, IS LESS THAN 2 FEET FROM THE SIDE OF THE BARRIER CLOSEST TO THE DROPOFF AND THE POSTED SPEED IS 40 MPH OR LESS.

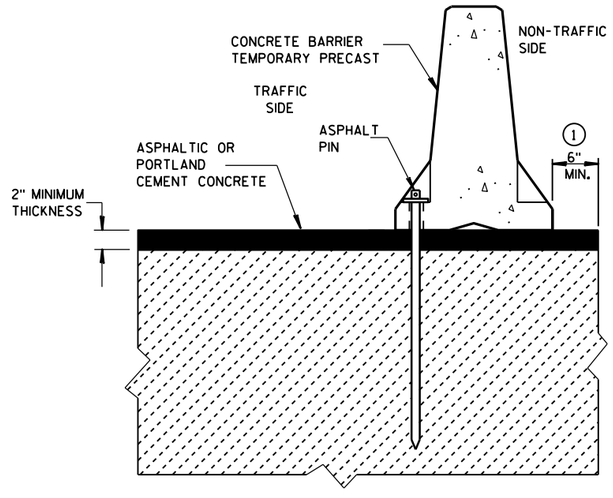
② ANCHORING IS INCIDENTAL TO CONCRETE BARRIER TEMPORARY PRECAST.

WITH THE APPROVAL OF THE ENGINEER, REMOVABLE ADHESIVE BONDED ANCHOR BOLT INSTALLATION MAY BE USED IN LIEU OF THROUGH BOLTED ANCHOR INSTALLATION. THE ADHESIVE BONDED ANCHOR BOLT MUST BE REMOVABLE. USE ASTM (A307) MASONRY ANCHORS TYPE S 1⅛-INCH, EMBEDDED TO A DEPTH SUFFICIENT TO DEVELOP THE ULTIMATE CAPACITY OF THE ANCHOR BOLT AND PROVIDE DOCUMENTATION TO CONFIRM THIS.

UPON REMOVAL OR RELOCATION OF THE BARRIER UNITS, REMOVE ALL ANCHOR BOLTS AND COMPLETELY FILL IN THE REMAINING HOLES IN CONCRETE BRIDGE DECKS, CONCRETE APPROACH SLABS AND CONCRETE PAVEMENTS THAT ARE TO REMAIN, WITH A NON-SHRINK COMMERICAL GROUT OR MATERIAL IDENTIFIED ON THE CURRENT WISDOT APPROVED PRODUCTS LIST.

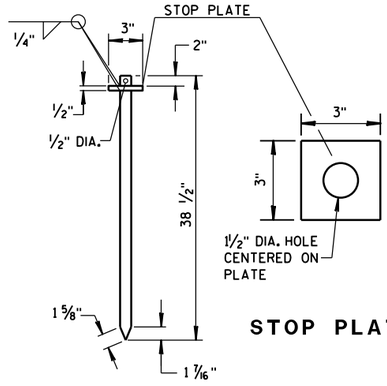
③ 1⅛" DIAMENTER A307 THREADED ROD, ½" X 3" X 3" SQUARE PLATE WASHER WITH ASTM A36 STEEL, ASTM A563A HEAVY HEX NUT.

④ 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.



STAKE DOWN INSTALLATION FOR ASPHALTIC OR PORTLAND CEMENT CONCRETE SURFACE

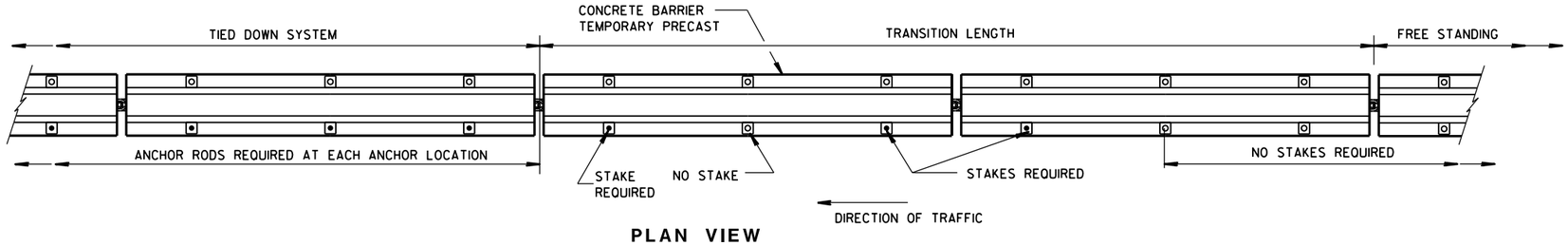
(STAKING IS INCIDENTAL TO CONCRETE BARRIER TEMPORARY PRECAST)



STOP PLATE

ASPHALT PIN

(ASTM A36 STEEL)



PLAN VIEW

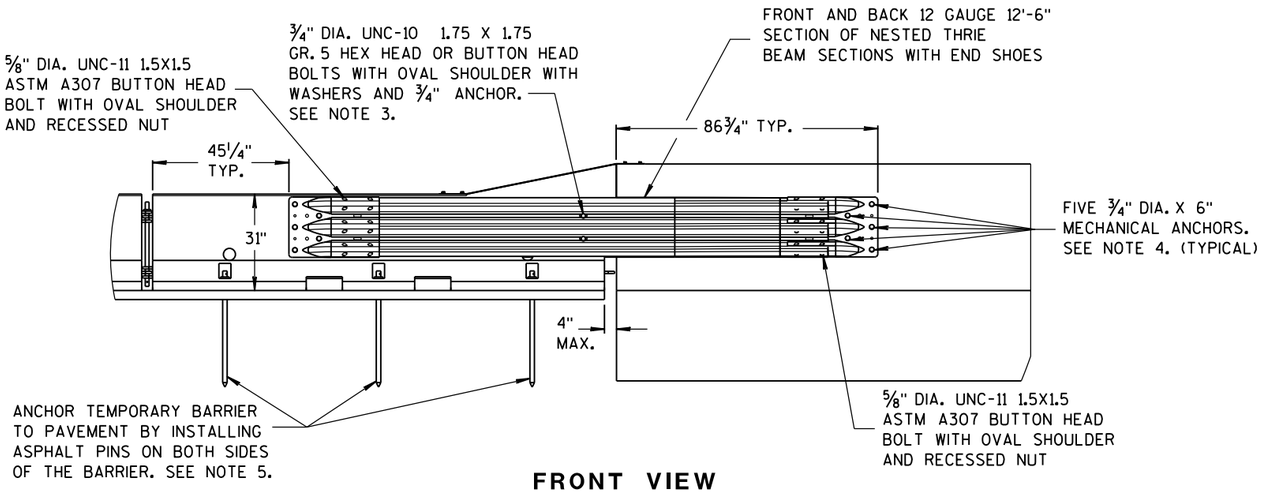
FREE STANDING TRANSITION TO TIED-DOWN SYSTEM

(PLACE TRANSITION IN A TANGENT SECTION OF BARRIER PARALLEL TO THE ROADWAY. IF TRANSITION OCCURS ON STRUCTURAL SLAB, ANCHOR AS SHOWN.)

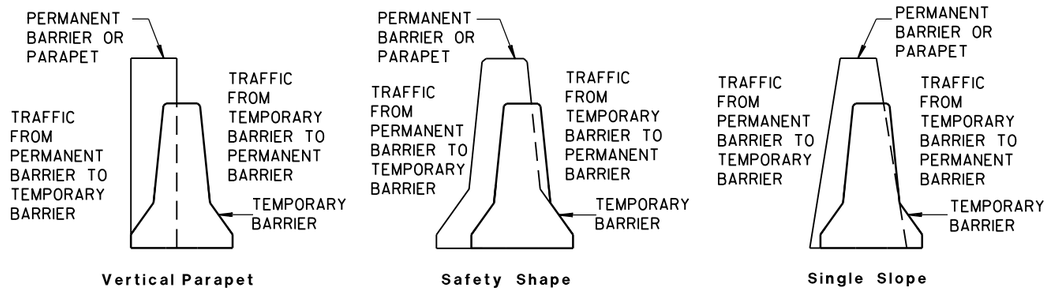
CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6
S.D.D. 14 B 7-14d



FRONT VIEW



TEMPORARY BARRIER PLACEMENT FOR BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM

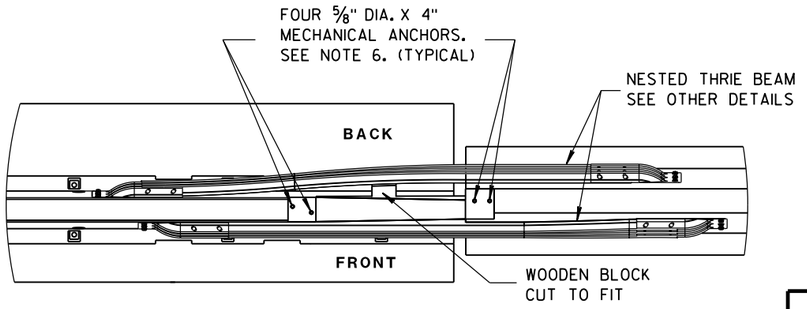
NOTES

NESTED THRIE BEAM IS REQUIRED ON BOTH SIDES OF THE TEMPORARY BARRIER FOR ALL INSTALLATIONS.

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.

BACK VIEW

FRONT VIEW



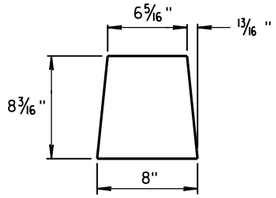
PLAN VIEW

BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM

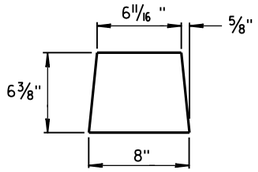
CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

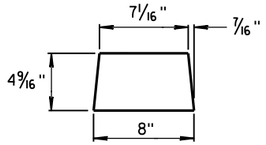
6
S.D.D. 14 B 7-14e



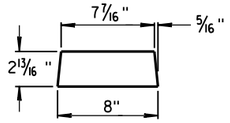
GUSSET 1



GUSSET 2

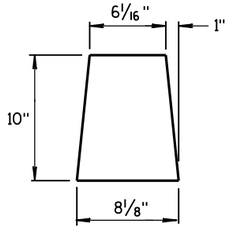


GUSSET 3

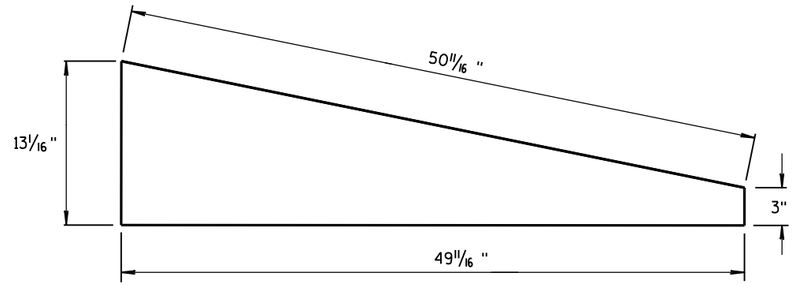


GUSSET 4

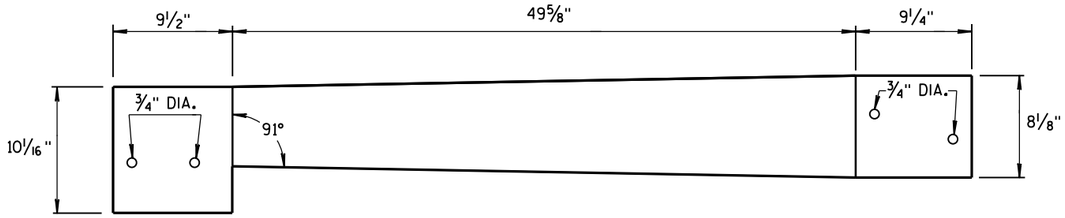
GUSSETS

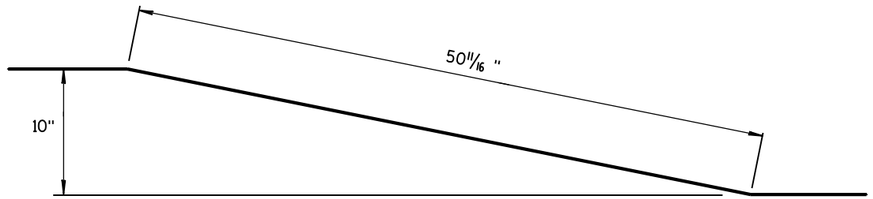


END PLATE



SIDE PLATE

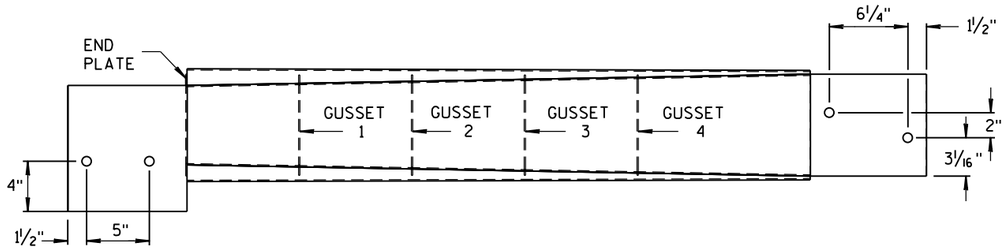


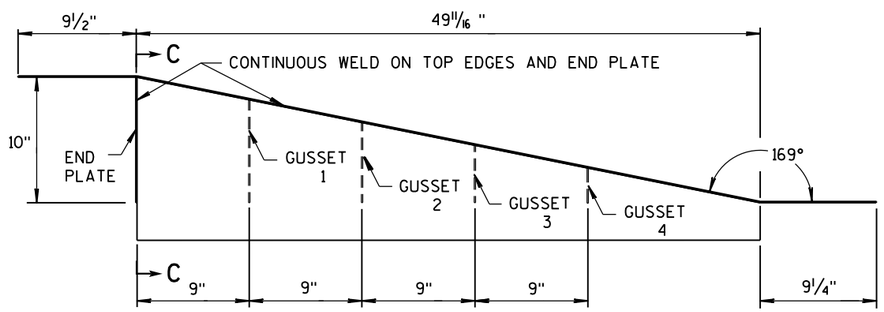


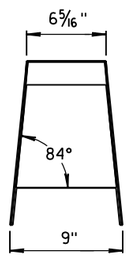
TOP PLATE

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.

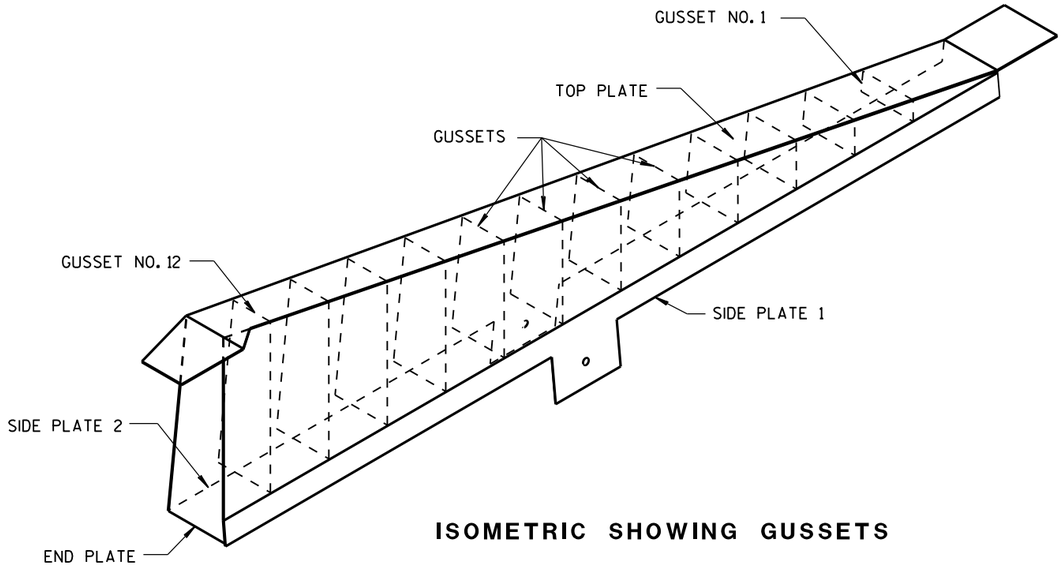
CAP DETAILS FOR TEMPORARY CONCRETE BARRIER TO 42" PERMANENT CONCRETE BARRIER

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

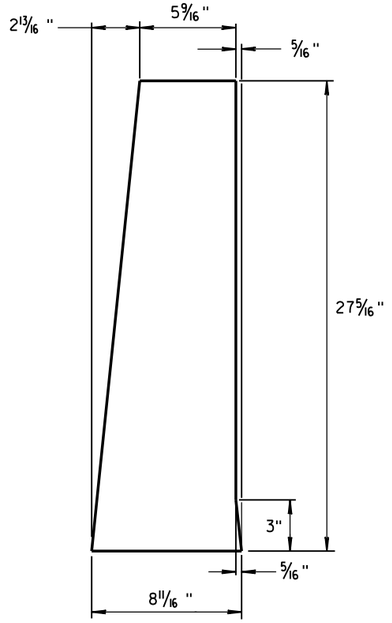
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

S.D.D. 14 B 7-14f

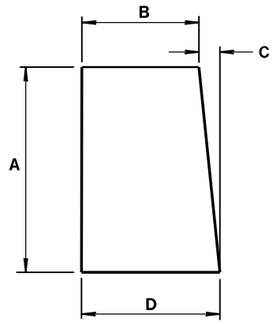


ISOMETRIC SHOWING GUSSETS



END PLATE

1/8" STEEL PLATE



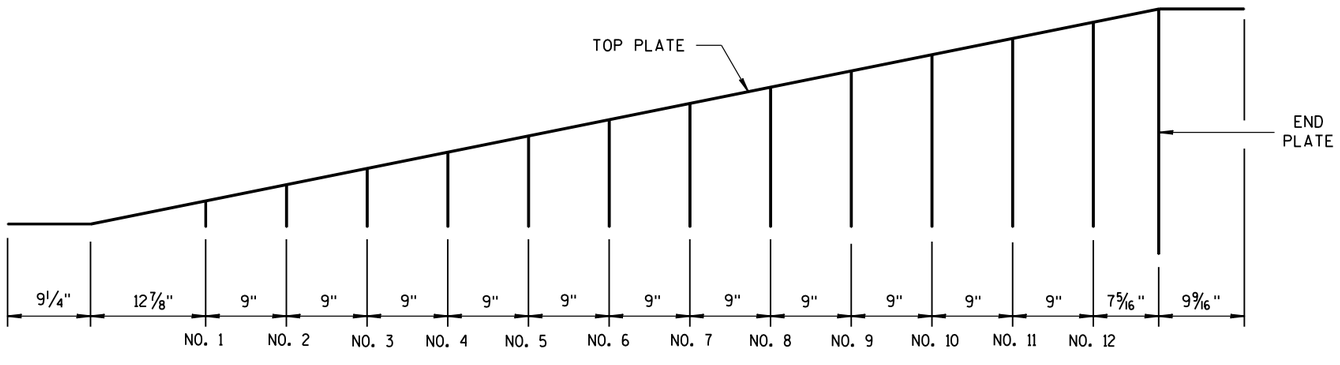
GUSSETS 1 - 12

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

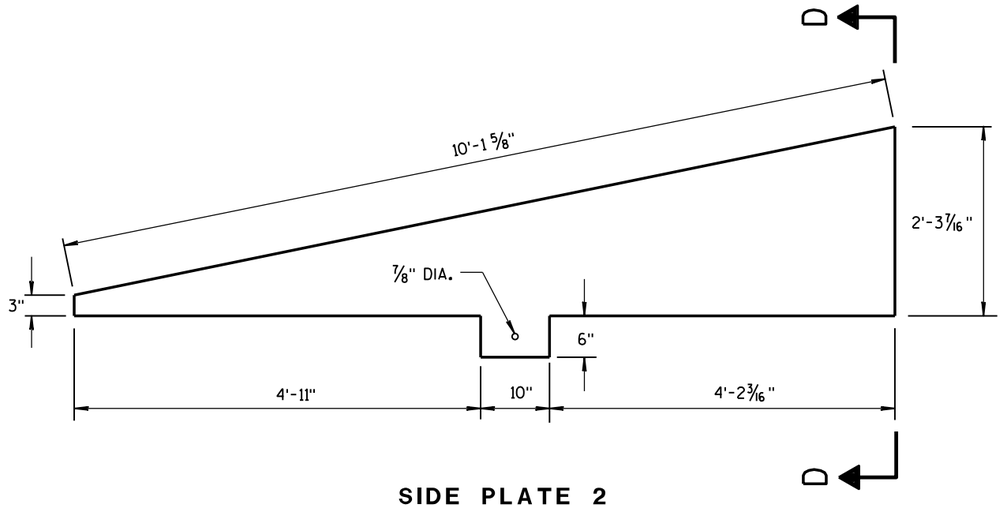
CAP DETAILS FOR TEMPORARY CONCRETE BARRIER TO 56" PERMANENT CONCRETE BARRIER

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

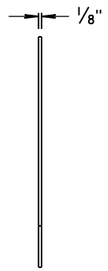
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

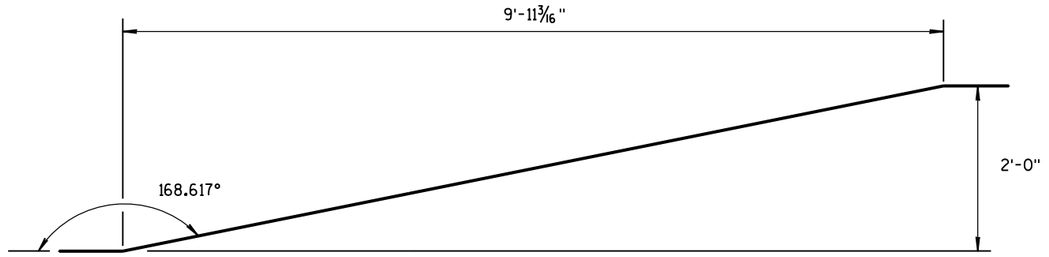
S.D.D. 14 B 7-14g



SIDE PLATE 2

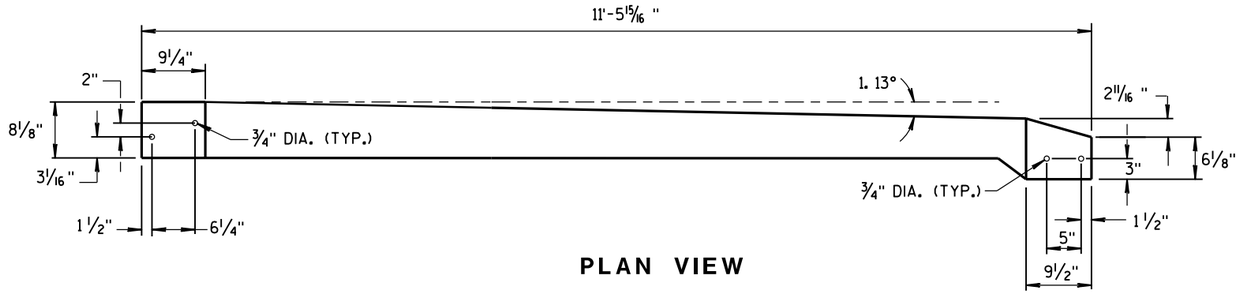


END VIEW



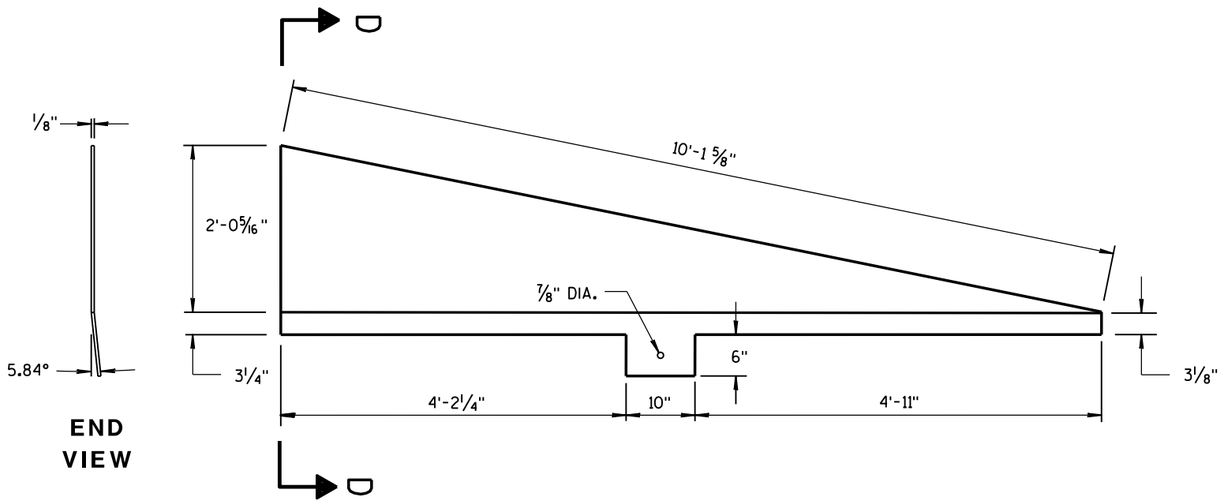
SIDE VIEW

TOP PLATE



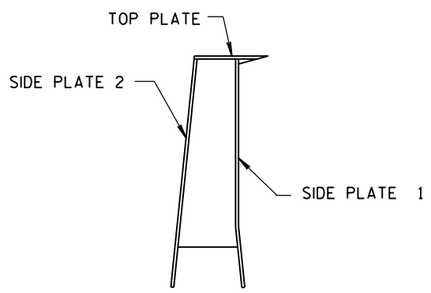
PLAN VIEW

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

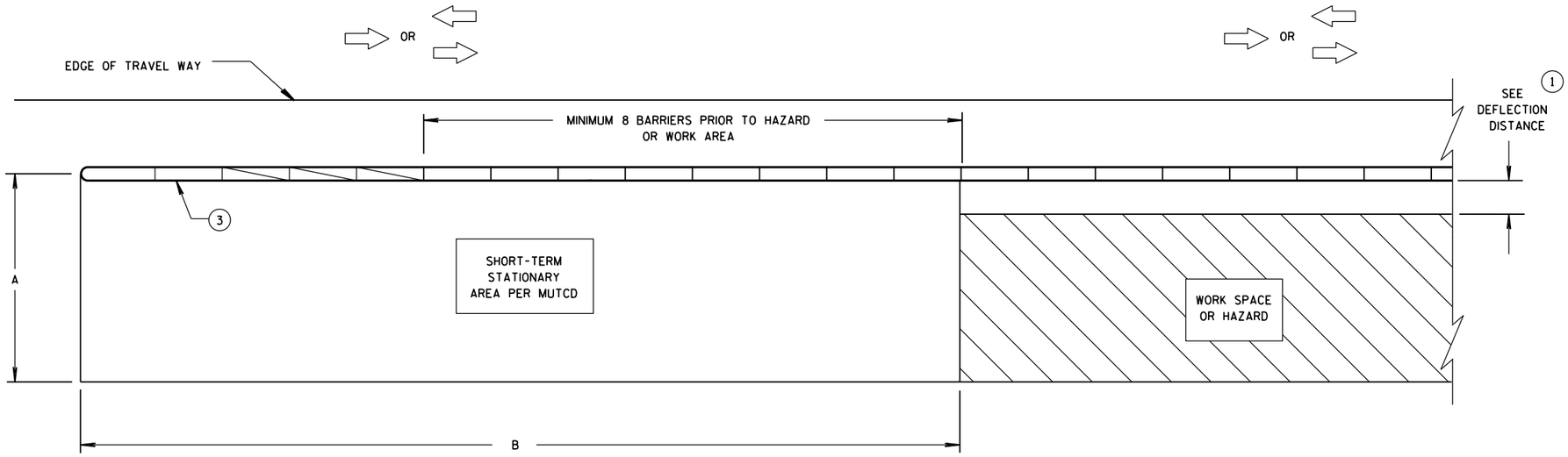
APPROVED
June 2014 — DATE
/S/ Jerry H. Zoaa — ROADWAY STANDARD DEVELOPMENT ENGINEER
FHWA

6

S.D.D. 14 B 7-14h

6

S.D.D. 14 B 7-14h



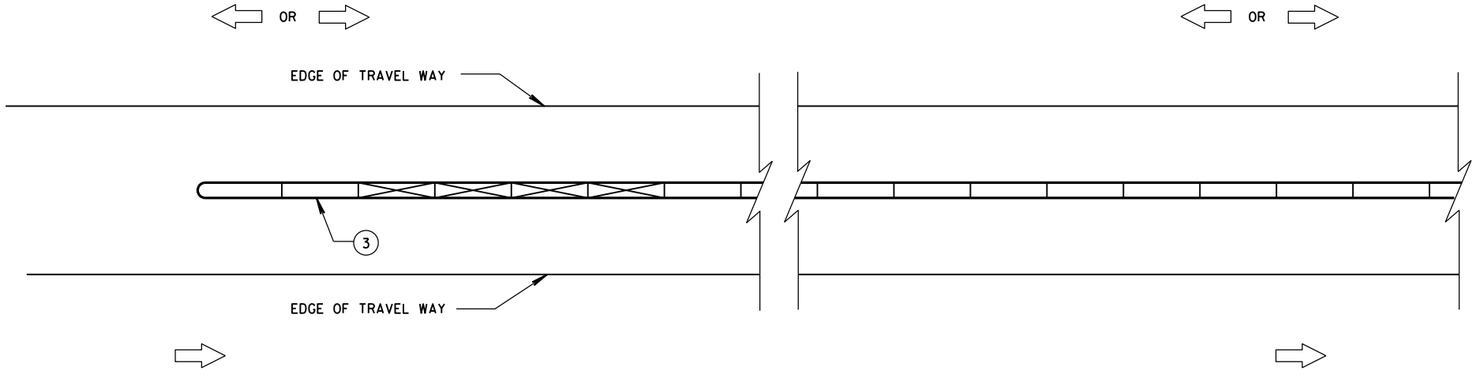
CRASH CUSHION/SAND BARREL ARRAY AND TEMPORARY BARRIER INSTALLATION FOR TRAFFIC ON ONE SIDE OF BARRIER

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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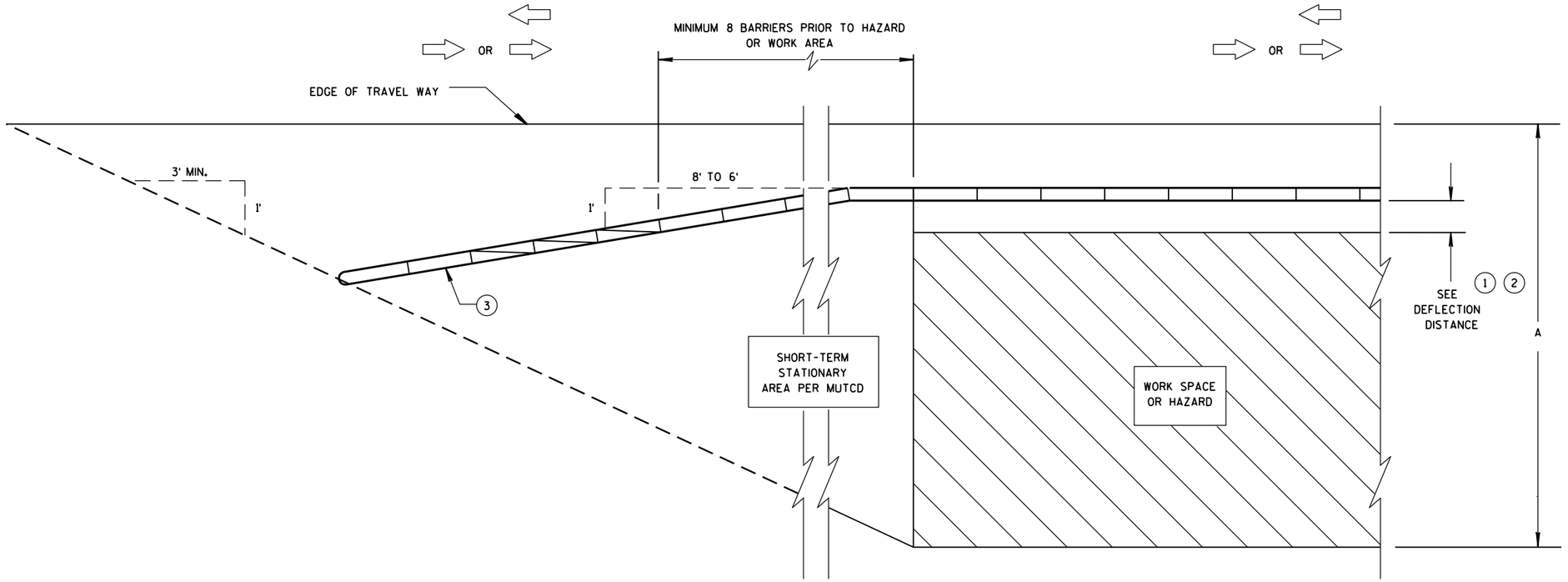
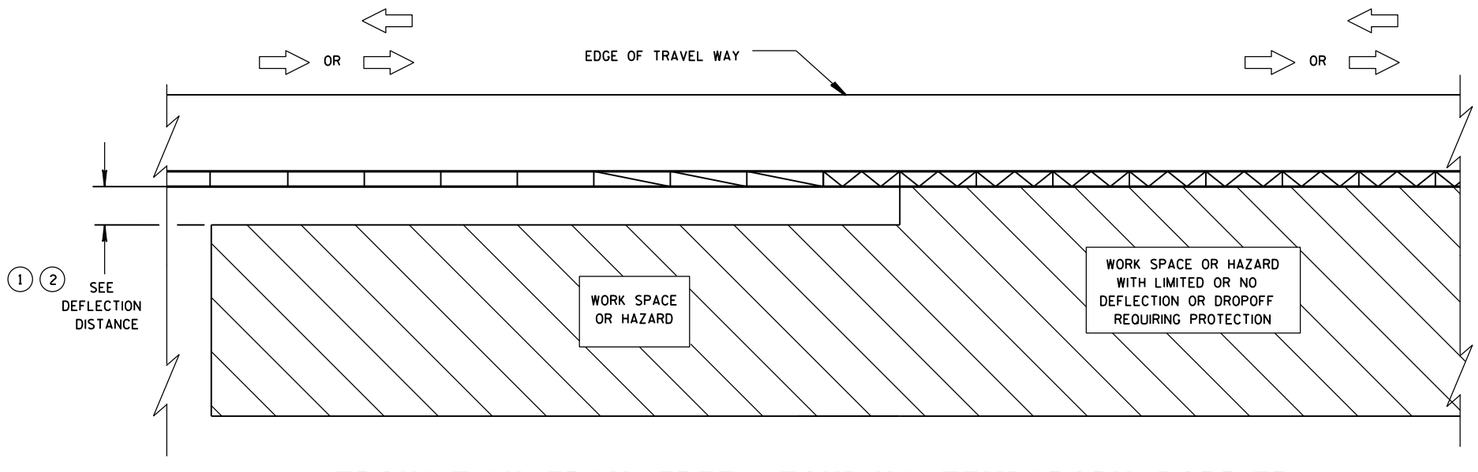
S.D.D. 14 B 8-2a
S.D.D. 14 B 8-2a



CRASH CUSHION/SAND BARREL ARRAY AND TEMPORARY BARRIER INSTALLATION FOR TRAFFIC ON ONE SIDE - FLARED INSTALLATION



TRANSITION FROM FREE STANDING TEMPORARY BARRIER TO ANCHORED BARRIER

LEGEND

- DIRECTION OF TRAVEL
- CRASH CUSHION OR SAND BARREL ARRAY
- SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS
- SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS
- 3 PINS PLACED ON TRAFFIC SIDE OF BARRIER
- PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET
- FREE STANDING TEMPORARY BARRIER

CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS

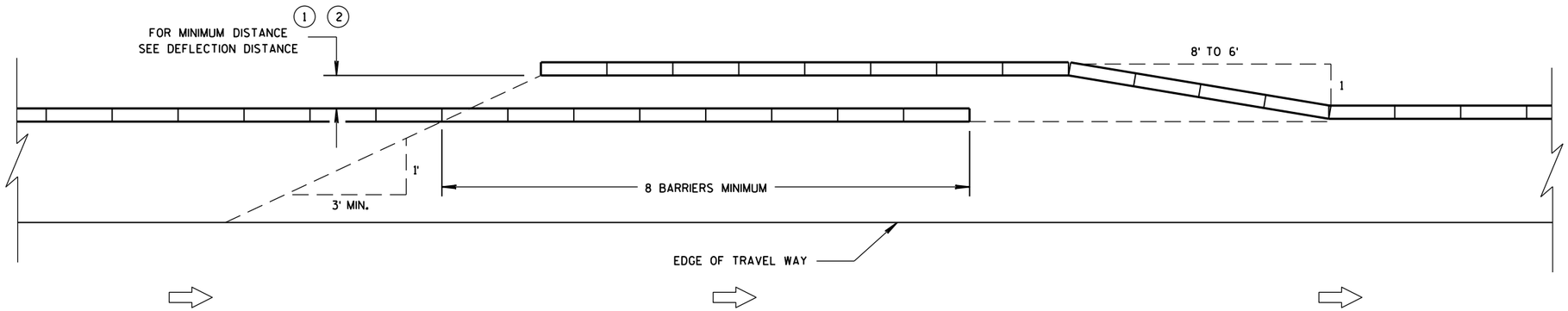
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

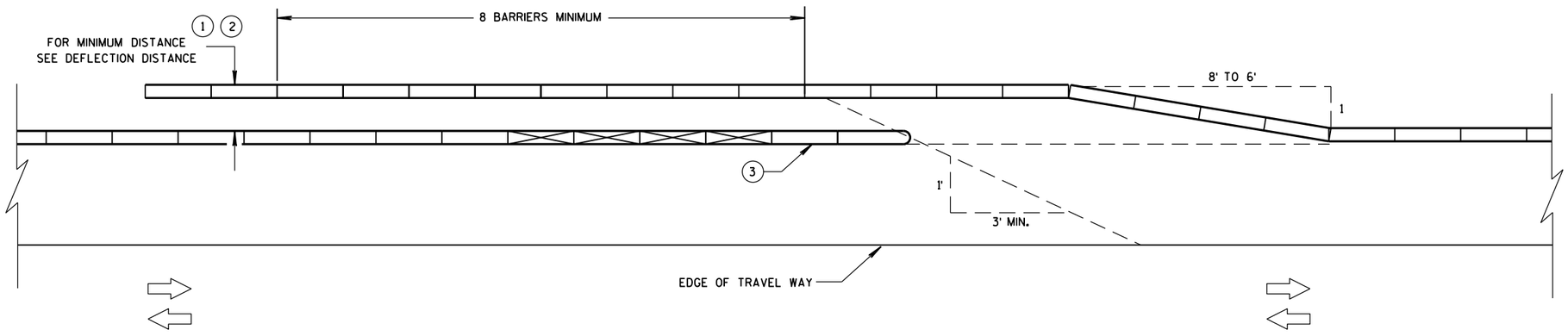
S.D.D. 14 B 8-2b

6

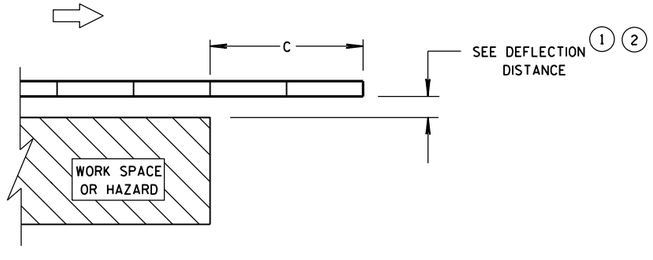
S.D.D. 14 B 8-2b



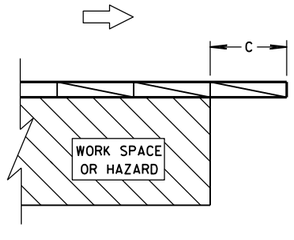
TEMPORARY BARRIER OVERLAP - ONE-WAY TRAFFIC



TEMPORARY BARRIER OVERLAP - TWO-WAY TRAFFIC



ENDING TEMPORARY BARRIER DOWNSTREAM - UNANCHORED



ENDING TEMPORARY BARRIER DOWNSTREAM - ANCHORED

LEGEND

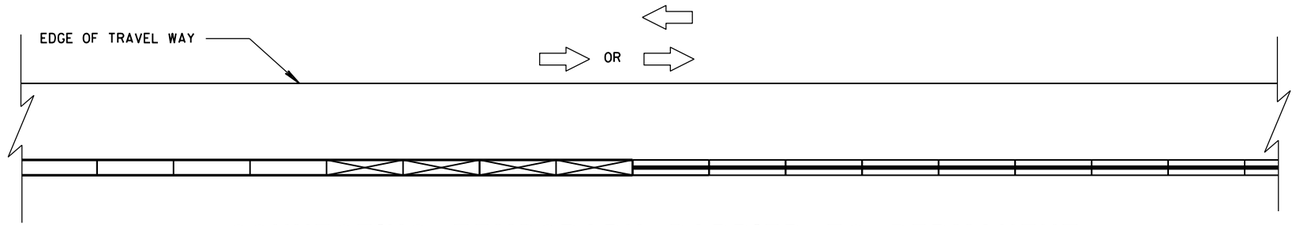
- DIRECTION OF TRAVEL
- CRASH CUSHION OR SAND BARREL ARRAY
- SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS
- SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS
- 3 PINS PLACED ON TRAFFIC SIDE OF BARRIER
- PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET
- FREE STANDING TEMPORARY BARRIER

CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS

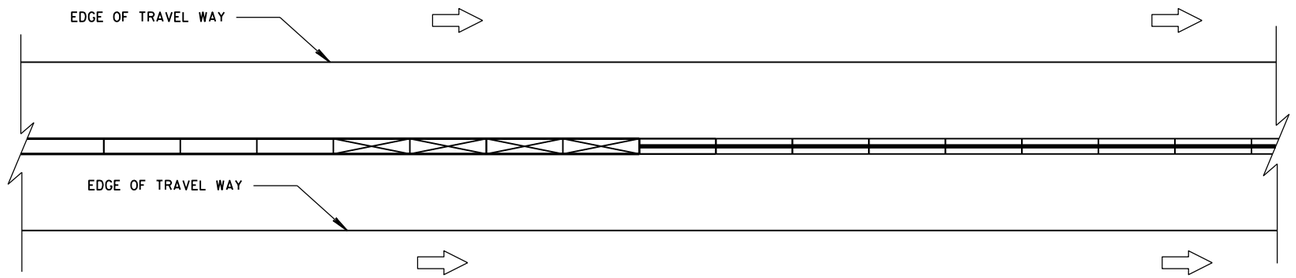
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

S.D.D. 14 B 8-2c



CONNECTING TEMPORARY BARRIER TO PERMANENT
CONCRETE BARRIER-TRAFFIC ON ONE SIDE



CONNECTING TEMPORARY BARRIER TO PERMANENT
CONCRETE BARRIER-TRAFFIC ON BOTH SIDES

LEGEND

DIRECTION OF TRAVEL

CRASH CUSHION OR
SAND BARREL ARRAY

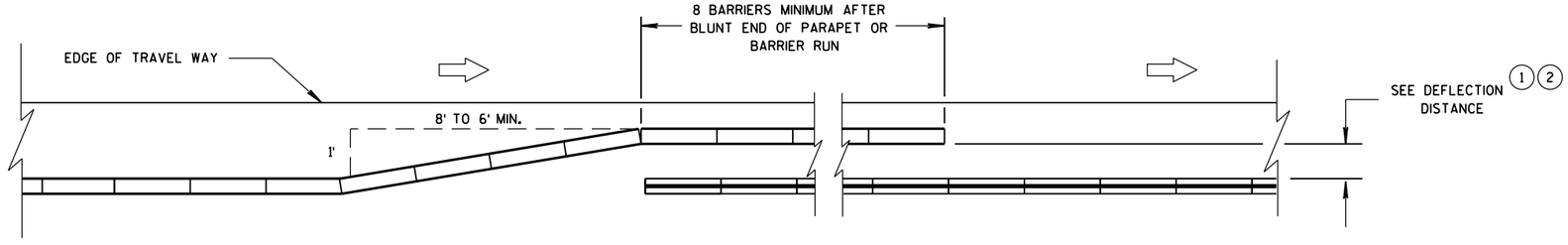
SEE FREE STANDING TRANSITION
TO TIED-DOWN SYSTEM DETAILS

SEE BI-DIRECTIONAL TRANSITION
TO TIED-DOWN SYSTEM DETAILS

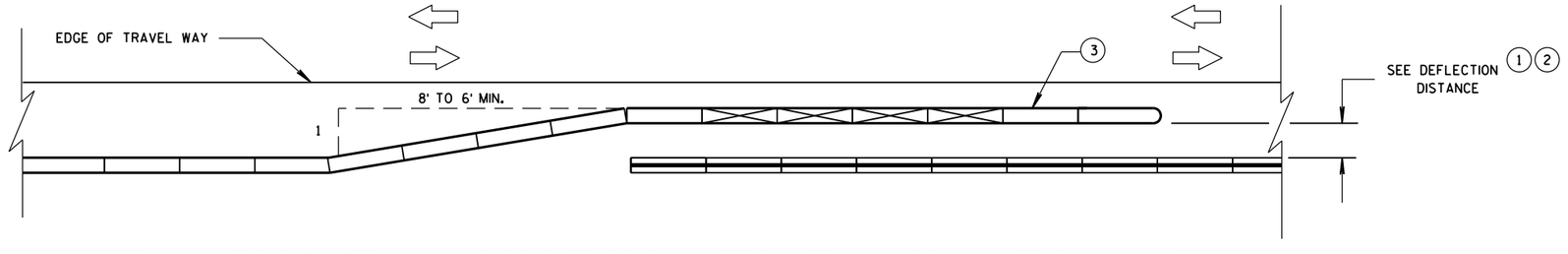
3 PINS PLACED ON
TRAFFIC SIDE OF BARRIER

PERMANENT CONCRETE BARRIER
OR CONCRETE PARAPET

FREE STANDING TEMPORARY
BARRIER



OVERLAPPING TEMPORARY BARRIER AND PERMANENT BARRIER -
ONE WAY TRAFFIC



OVERLAPPING TEMPORARY BARRIER AND PERMANENT BARRIER -
TWO WAY TRAFFIC

CRASH CUSHION/SAND BARREL
ARRAY AND OTHER TEMPORARY
BARRIER LAYOUT DETAILS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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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

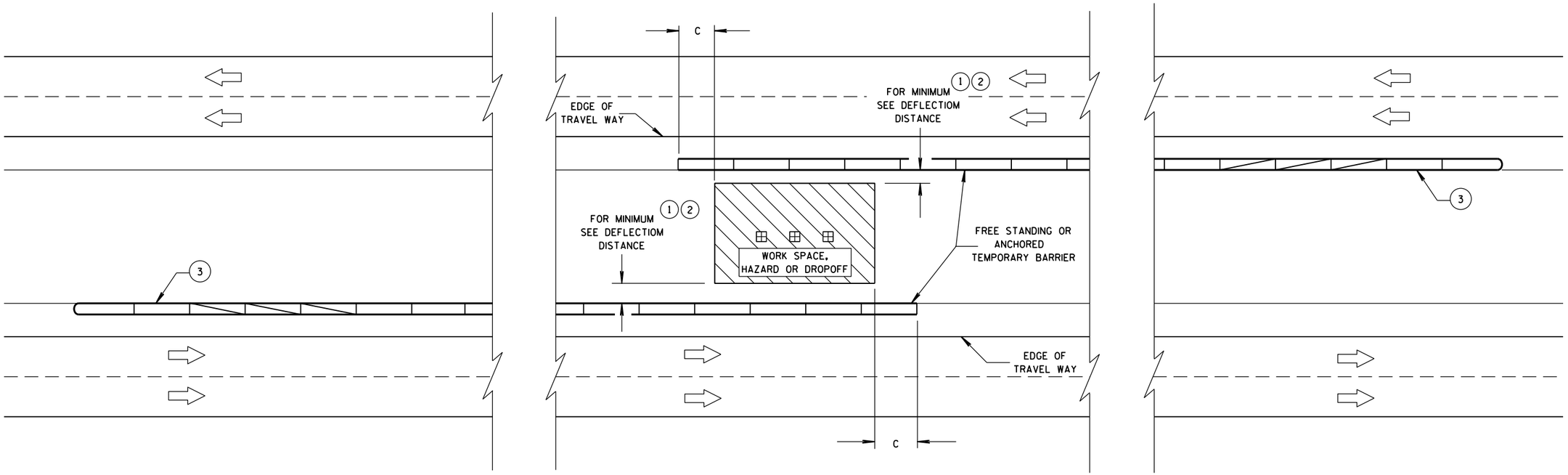
3 PINS PLACED ON TRAFFIC SIDE OF BARRIER

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 ENGINNER
FHWA

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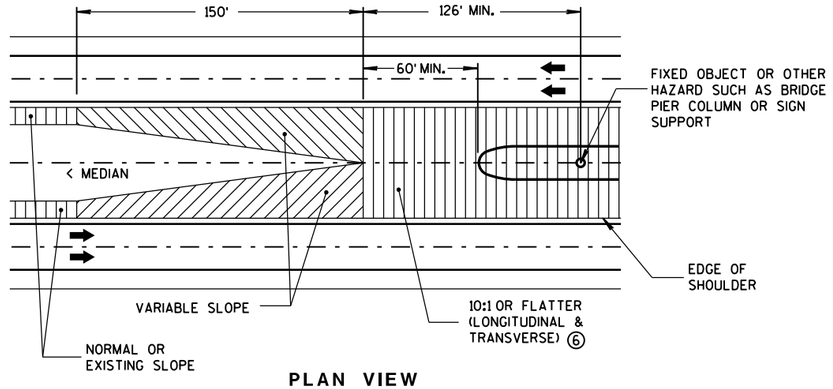
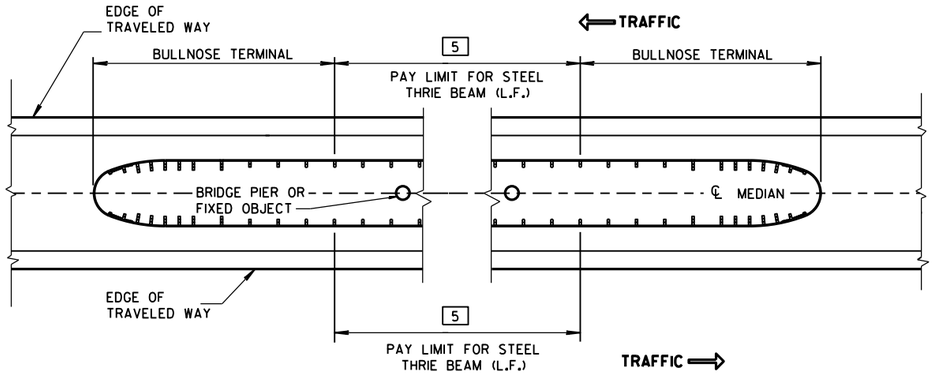
S.D.D. 14 B 8-2e

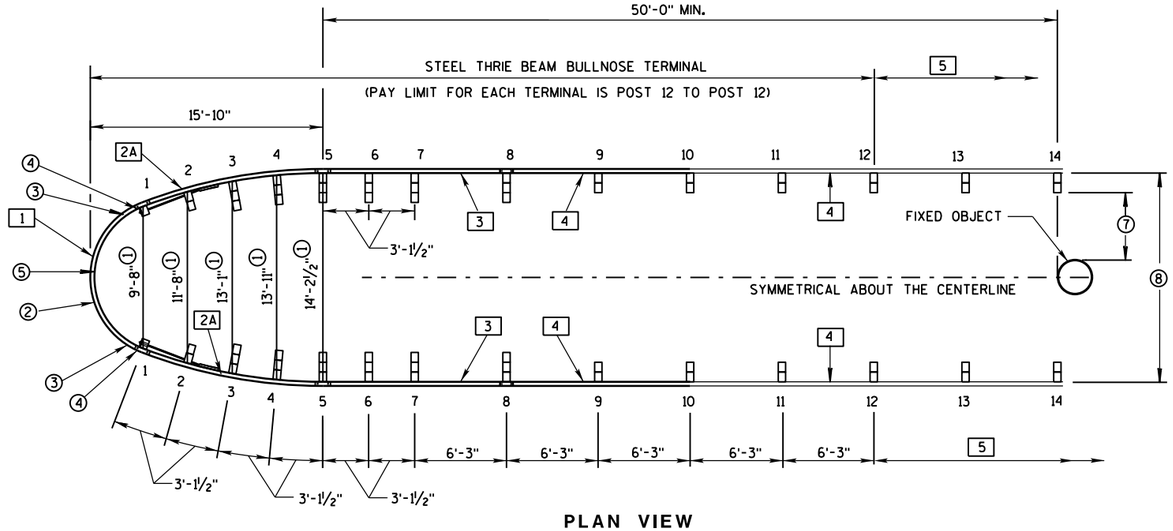


PLAN VIEW

GRADING AT BULLNOSE
(ALL INSTALLATIONS)

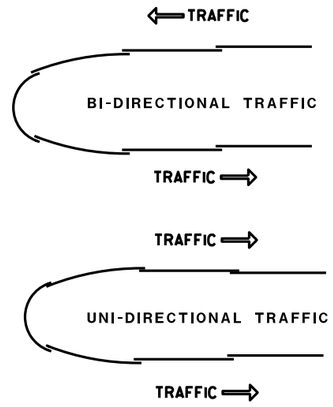


MEDIAN HAZARD PROTECTION PAY LIMITS



PLAN VIEW

TYPICAL BULLNOSE LAYOUT



LAPPING DETAIL
(ALL INSTALLATIONS)

GENERAL NOTES

SEE STANDARD DETAIL DRAWINGS 14 B 26a-e.

PUNCHING, DRILLING, CUTTING OR WELDING IS NOT PERMITTED ON ANY GALVANIZED THRIE BEAM ACCESSORY OR TERMINAL ACCESSORY.

OTHER ANCHOR CABLE ASSEMBLIES HAVING 40,000 LBS. MIN. BREAKING STRENGTH MAY BE USED.

FOR POSTS 2 THROUGH 14, IF POST CANNOT BE INSTALLED AT SPECIFIED LOCATION 1 EXTRA STANDARD WOOD BLOCK MAY BE ADDED.

THE USE OF STEEL POSTS ON THE BULLNOSE IS NOT ALLOWED.

BOLTS AND ALL NECESSARY HARDWARE SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A 153.

ALL THRIE BEAM SHALL BE 12-GAUGE.

IF ROCK IS ENCOUNTERED, REMOVE ROCK TO FULL DEPTH OF POST PLUS 2½" AND 12" DIAMETER AROUND POST. SEE SDD 14B15 OR SDD 14B42 FOR MORE INFORMATION.

[1] SLOTTED THRIE BEAM RAIL NO. 1. (POST 1 TO POST 1)

[2A] SLOTTED THRIE BEAM RAIL NO. 2A. (POST 1 TO POST 5)

[3] SLOTTED THRIE BEAM RAIL NO. 3. (POST 5 TO POST 8)

[4] UNBENT STANDARD THRIE-BEAM RAIL NO.4. (POST 8 TO POST 10 & POST 10 TO POST 12)

[5] BEYOND POST 12: CONSTRUCT STEEL THRIE BEAM - USE UNBENT STANDARD THRIE BEAM RAIL NO. 5.

① DIMENSIONS ARE FROM BACK OF RAIL TO BACK OF RAIL WHERE RAIL IS BOLTED TO POST OR BLOCK.

② U-BOLT CABLE CLIPS (3 PER CABLE) SPACED OUT ON NOSE, TO HOLD CABLE TO BACKSIDE OF THE RAIL.

③ NOSE CABLE W/SWAGGED END BUTTONS.

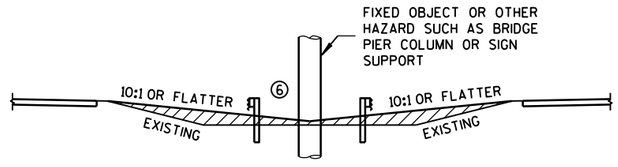
④ NOSE CABLE ANCHOR PLATE (BACKSIDE OF SPLICE).

⑤ THE SLACK IN THE NOSE CABLES SHALL BE EVENLY DISTRIBUTED BETWEEN THE CABLE CLIP FASTENERS AND POST NO. 1 ON EITHER SIDE OF THE NOSE.

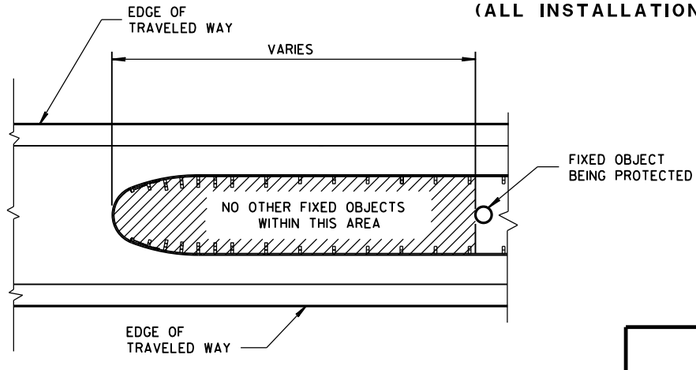
⑥ PROVIDE SUITABLE DRAINAGE WHEN MEDIAN GRADING IMPEDES NORMAL FLOW.

⑦ 2'-6" MINIMUM LATERAL DISTANCE BETWEEN BACK OF POST AND FACE OF FIXED OBJECT.

⑧ MAXIMUM WIDTH OF SYSTEM IS 14'-2½" MEASURED FROM BACK OF RAIL TO BACK OF RAIL WHERE RAIL IS BOLTED TO A POST OR BLOCK.



MEDIAN GRADING SECTION
(ALL INSTALLATIONS)



HAZARD FREE AREA INSIDE BULLNOSE

STEEL THRIE BEAM BULLNOSE TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

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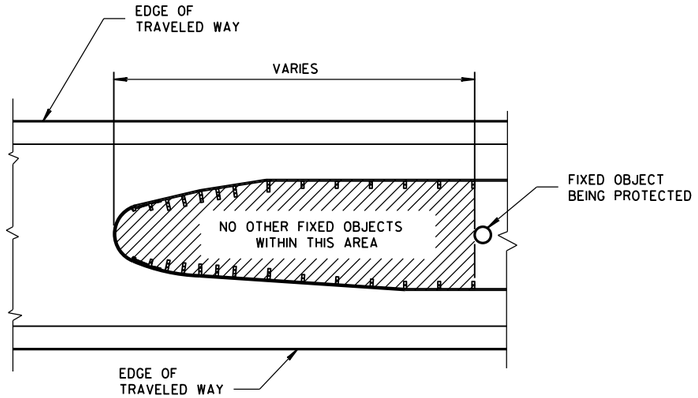
S.D.D. 14 B 26-3a



HAZARD FREE
AREA INSIDE BULLNOSE

GENERAL NOTES

SEE STANDARD DETAIL DRAWINGS 14 B 26a-e.

FOR POSTS 2 THROUGH 14, IF POST CANNOT BE INSTALLED AT SPECIFIED LOCATION 1 EXTRA STANDARD WOOD BLOCK MAY BE ADDED.

[1] SLOTTED THRIE BEAM RAIL NO. 1. (POST 1 TO POST 1)

[2A] SLOTTED THRIE BEAM RAIL NO. 2A, (POST 1 TO POST 5)

[2B] SLOTTED THRIE BEAM RAIL NO. 2B, (POST 1 TO POST 5)

[3] SLOTTED THRIE BEAM RAIL NO. 3. (POST 5 TO POST 8)

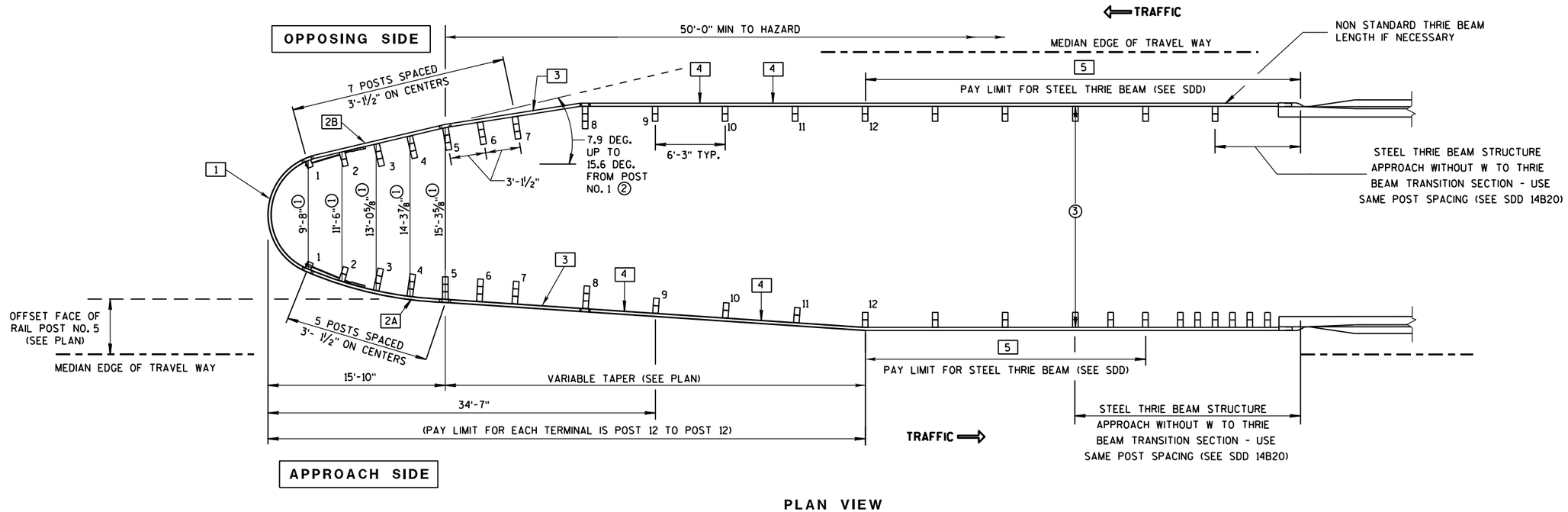
[4] UNBENT STANDARD THRIE-BEAM RAIL NO. 4, (POST 8 TO POST 10 & POST 10 TO POST 12)

[5] BEYOND POST 12: CONSTRUCT STEEL THRIE BEAM - USE UNBENT STANDARD THRIE BEAM RAIL NO. 5.

① DIMENSIONS ARE FROM BACK OF RAIL TO BACK OF RAIL WHERE RAIL IS BOLTED TO POST.

② TAPER BEGINNING AT POST NO. 1 MUST CONTINUE TO POST NO. 5. PAST POST NO. 5 TAPER MAY END OR BE EXTENDED UP TO 15.6 DEGREES TO FIT VARIABLE MEDIAN WIDTHS. (SEE PLAN)

③ FOR MEDIANS WIDER THAN 14'-2½" MEASURED FROM BACK OF RAIL TO BACK OF RAIL WHERE RAIL IS BOLTED TO A POST OR BLOCK.



PLAN VIEW

WIDENED BULLNOSE DESIGN

(INSTALLATION AT TWIN BRIDGES WITH BI-DIRECTIONAL TRAFFIC SHOWN)

STEEL THRIE BEAM
BULLNOSE TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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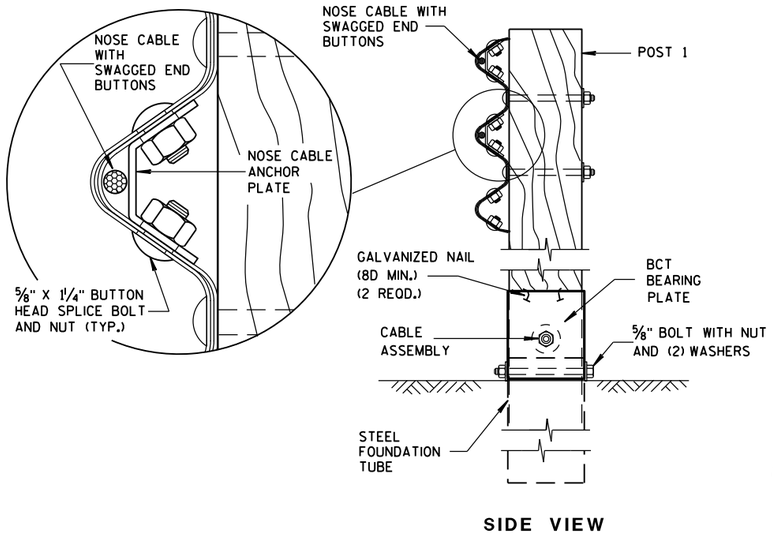
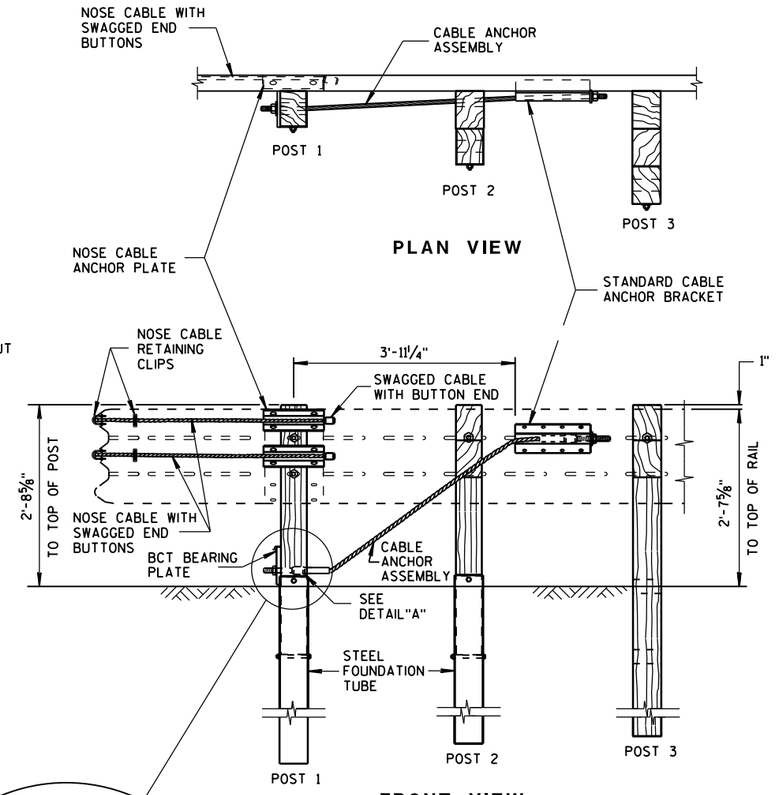
S.D.D. 14 B 26-3b



SIDE VIEW

NOSE CABLE ASSEMBLY AT POST NO. 1



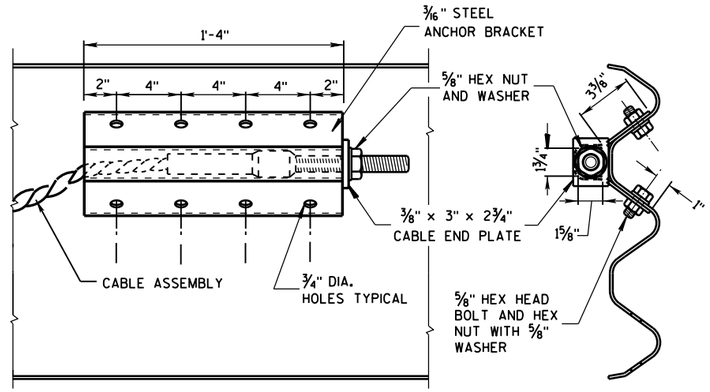
PLAN VIEW

FRONT VIEW

NOSE CABLE ANCHOR AND STANDARD BRACKET ASSEMBLY

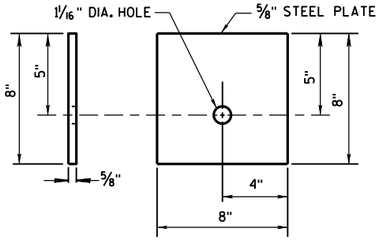
GENERAL NOTES

SEE STANDARD DETAIL DRAWINGS 14 B 26a-e.

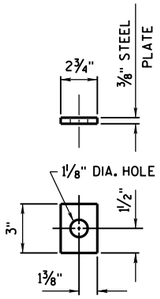


FRONT VIEW END VIEW

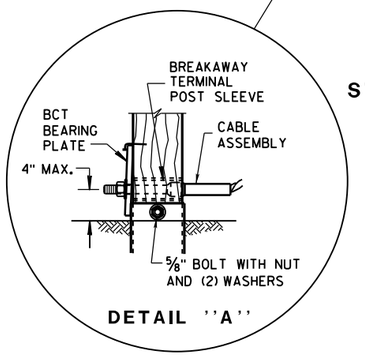
DETAILS OF CABLE ANCHOR BRACKET



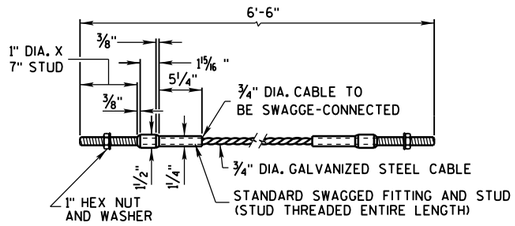
BCT BEARING PLATE



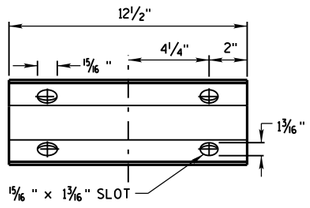
CABLE END PLATE



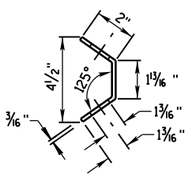
DETAIL ''A''



DETAILS OF CABLE ANCHOR ASSEMBLY



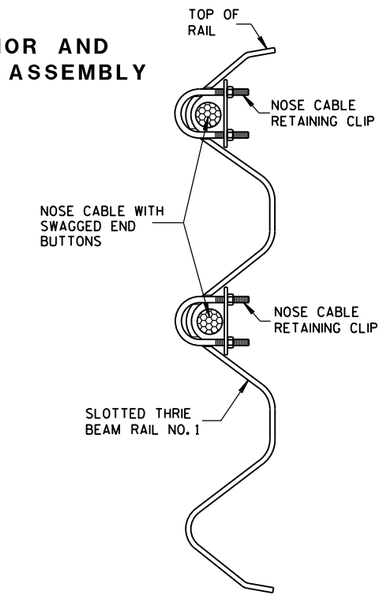
ELEVATION VIEW



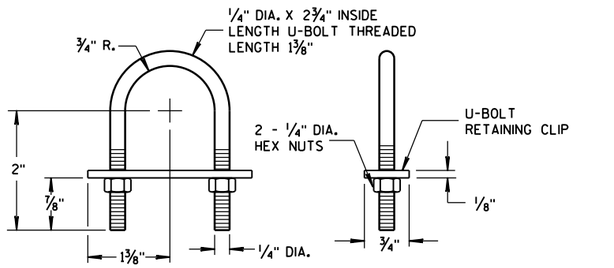
END VIEW

NOSE CABLE ANCHOR PLATE

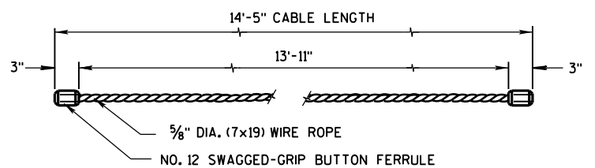
NOTE: 12 1/2" x 5 13/16" x 3/16" STEEL PLATE (A306)



PLACEMENT OF NOSE CABLE RETAINING CLIP



NOSE CABLE RETAINING CLIP



NOSE CABLE WITH SWAGGED END BUTTONS

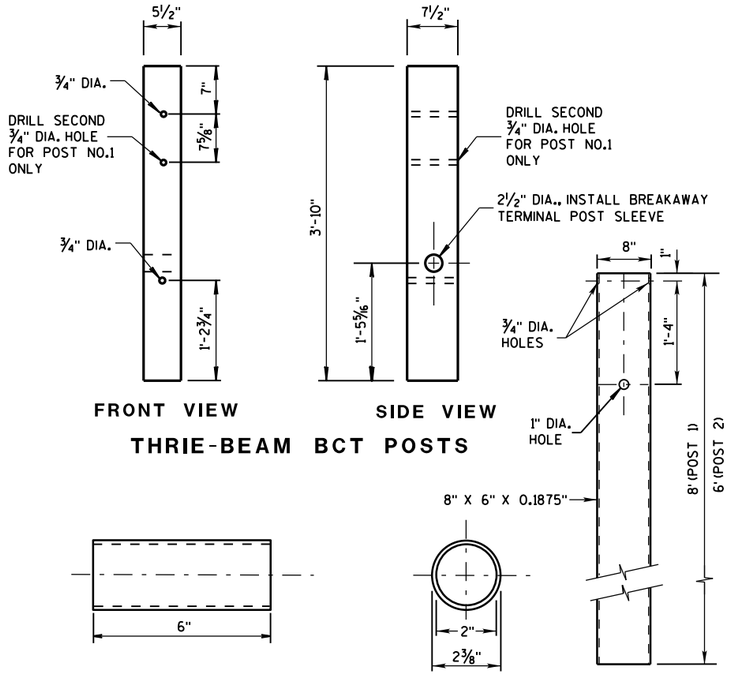
TO PULL OFF SWAGGED GRIP BUTTON FERRULE FROM WIRE ROPE REQUIRES A FORCE EQUAL TO 98% OF THE WIRE ROPE'S BREAKING STRENGHT.

STEEL THRIE BEAM BULLNOSE TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

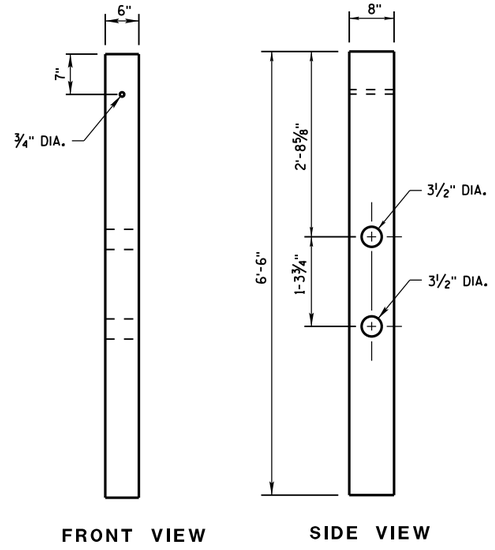
S.D.D. 14 B 26-3c



THRIE-BEAM BCT POSTS

BREAKAWAY TERMINAL POST SLEEVE

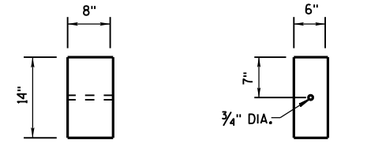
STEEL FOUNDATION TUBE



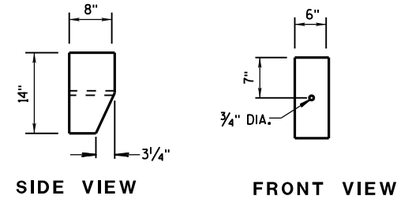
THRIE-BEAM CRT WOOD POSTS

GENERAL NOTES

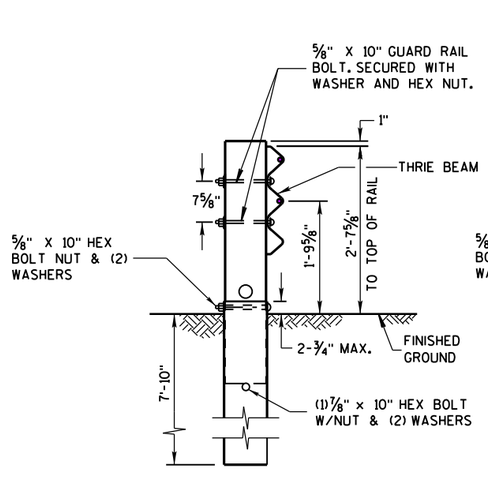
SEE STANDARD DETAIL DRAWINGS 14 B 26a-e.



STANDARD WOOD BLOCK

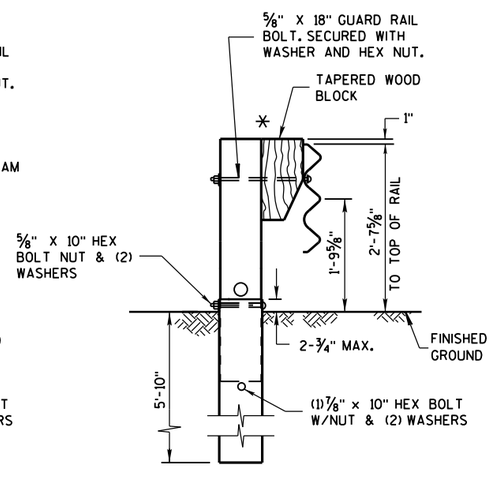


TAPERED WOOD BLOCK



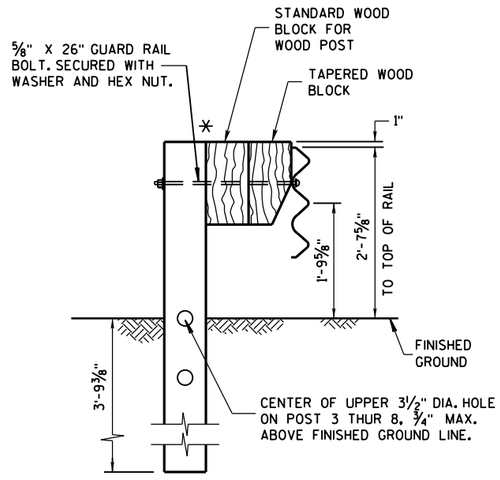
THRIE-BEAM BCT POST
(WITH 8'-0" FOUNDATION TUBE)

POST NO. 1



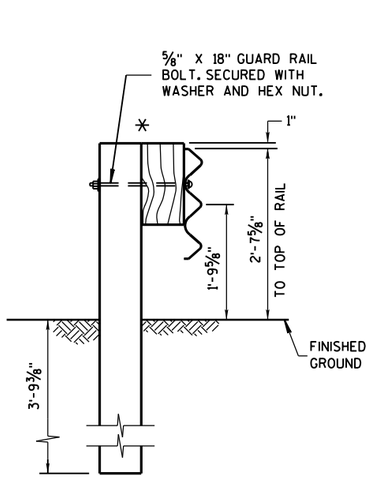
THRIE-BEAM BCT POST
(WITH 6'-0" FOUNDATION TUBE AND 1'-2" TAPERED BLOCK)

POST NO. 2



THRIE-BEAM CRT POST
(6'-6" LONG POST WITH 1'-2" BLOCK AND 1'-2" TAPERED BLOCK)

POST NO. 3,4,5,6,7, & 8



THRIE-BEAM POST
(6'-6" LONG POST WITH 1'-2" BLOCK)

POST NO. 9,10,11,& 12

(ALSO USE FOR STEEL THRIE BEAM BEYOND POST 12)

* IF NEEDED DUE TO AN UNDERGROUND OBSTACLE ADD 1 ADDITIONAL STANDARD BLOCKOUT TO POST.

STEEL THRIE BEAM BULLNOSE TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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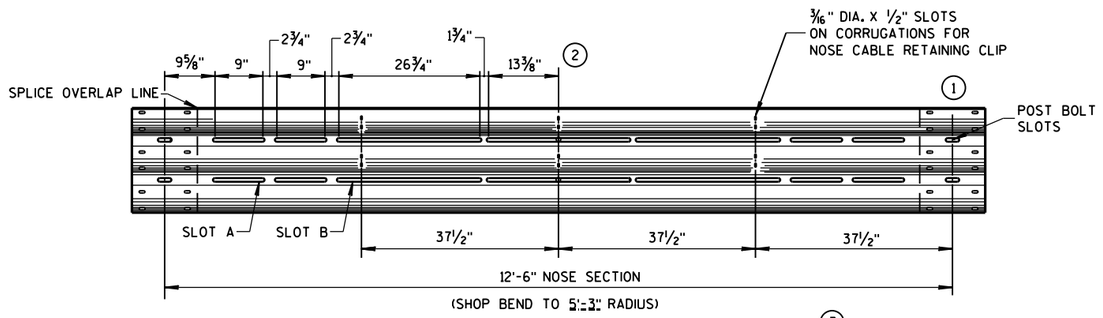
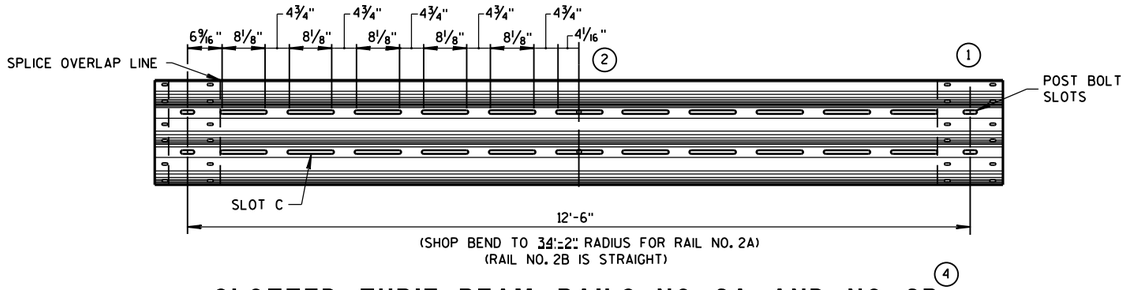
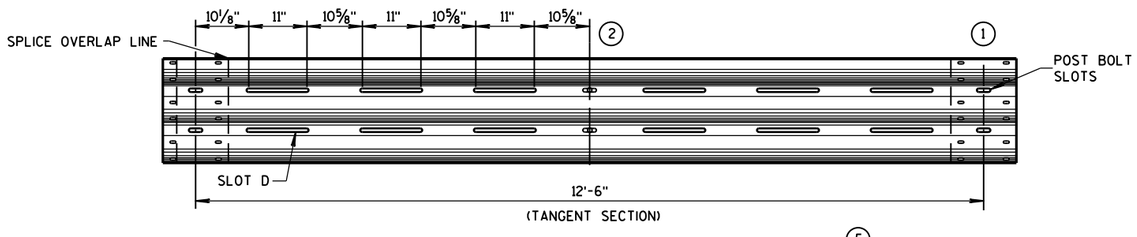


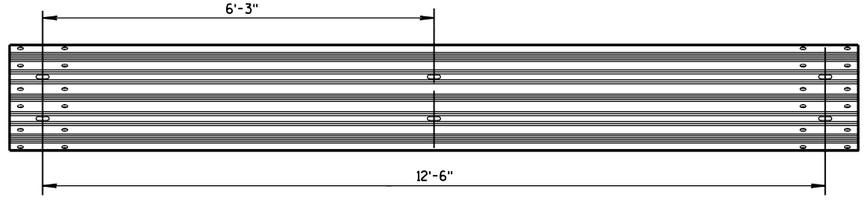
SLOTTED THRIE BEAM RAIL NO. 1 (3)



SLOTTED THRIE BEAM RAILS NO. 2A AND NO. 2B (4)



SLOTTED THRIE BEAM RAIL NO. 3 (5)



UNBENT STANDARD THRIE BEAM RAIL NO. 4 AND NO. 5

GENERAL NOTES

SEE STANADRD DETAIL DRAWINGS 14 B 26a-e.

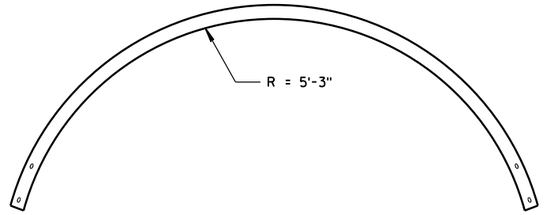
(1) SLOTTED THRIE BEAM RAIL DIMENSIONS SHOWN ARE BEFORE BENDING TO THE RADIUS SHOWN.

(2) SLOT SIZE AND SPACING SYMMETRIC.

(3) SLOTTED THRIE BEAM RAIL NO. 1, 12'-6", SHOP BEND TO R=5'-3".

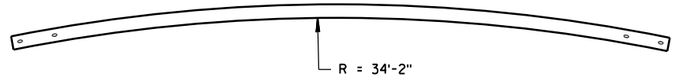
(4) SLOTTED THRIE BEAM RAIL NO. 2A, 12'-6", SHOP BEND TO R=34'-2".
SLOTTED THRIE BEAM RAIL NO. 2B, 12'-6", RAIL IS STRAIGHT.

(5) SLOTTED THRIE BEAM RAIL NO. 3, 12'-6", TANGENT.



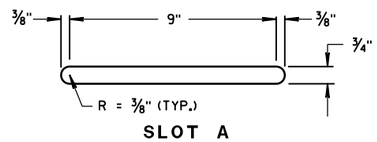
PLAN VIEW

SLOTTED THRIE BEAM RAIL NO. 1

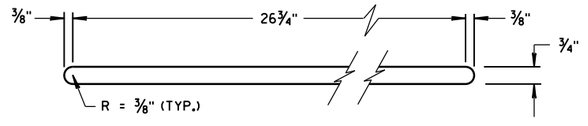


PLAN VIEW

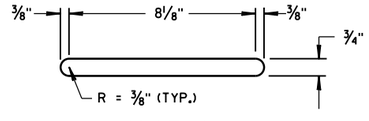
SLOTTED THRIE BEAM RAIL NO. 2A



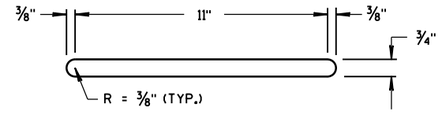
SLOT A



SLOT B



SLOT C



SLOT D

SLOT DETAILS

STEEL THRIE BEAM
BULLNOSE TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2014 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

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S.D.D. 14 B 26-3e

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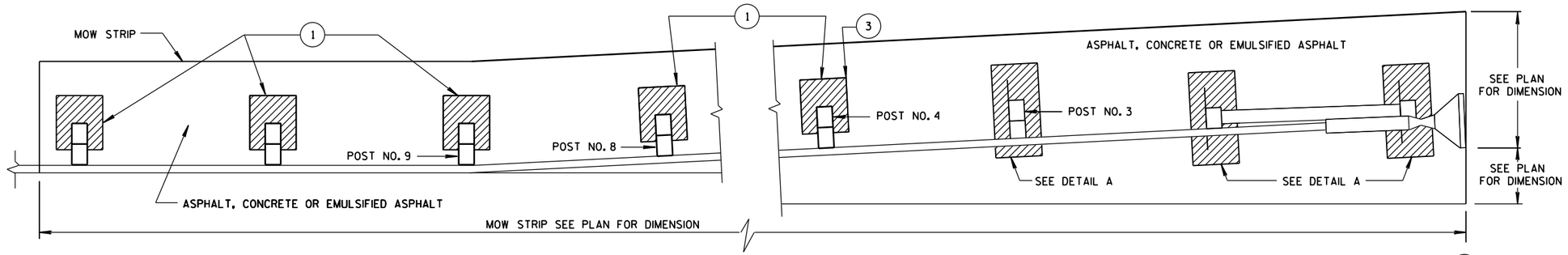
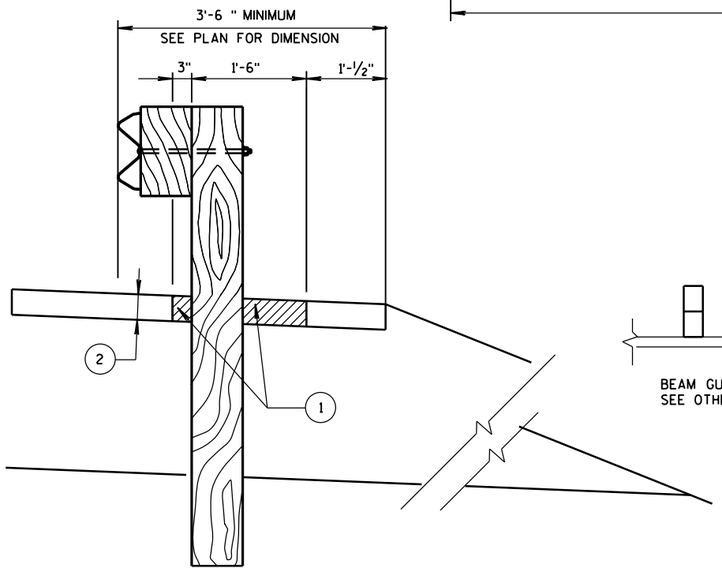
S.D.D. 14 B 26-3e

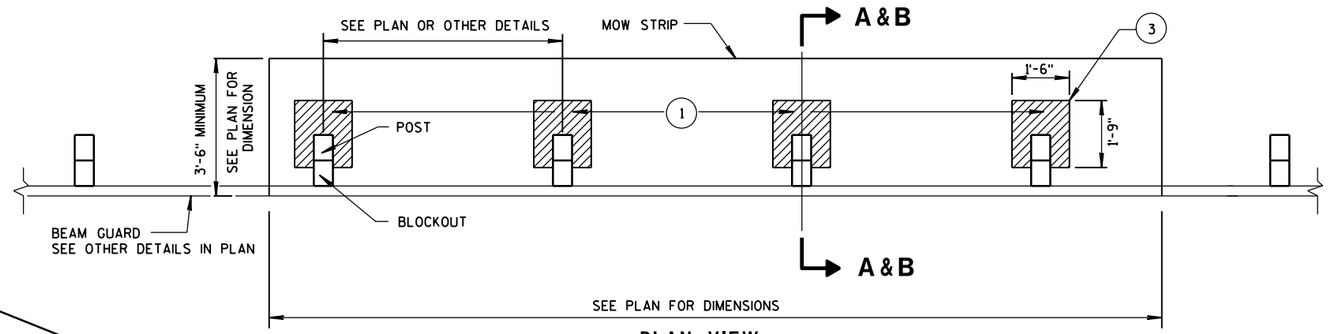


PLAN VIEW

MOW STRIP LAYOUT FOR ENERGY ABORBING TERMINAL

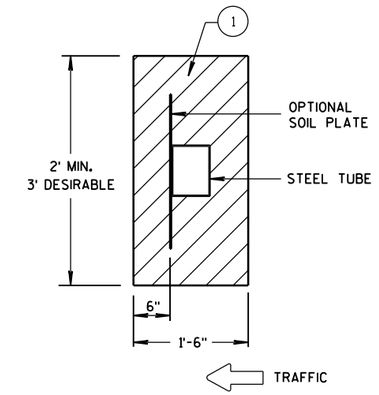


SECTION A-A

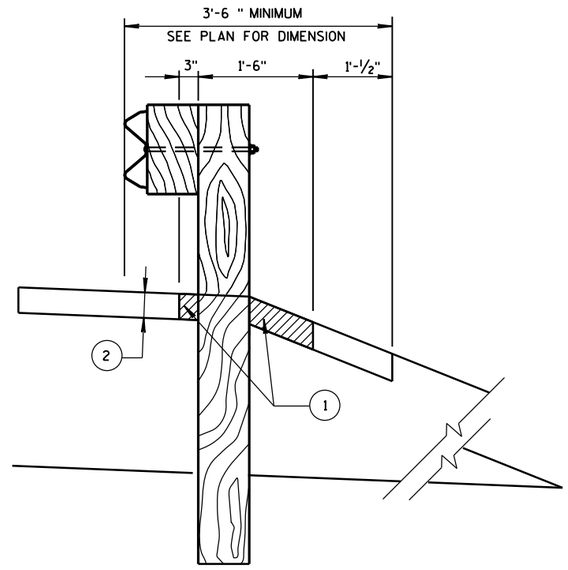


PLAN VIEW

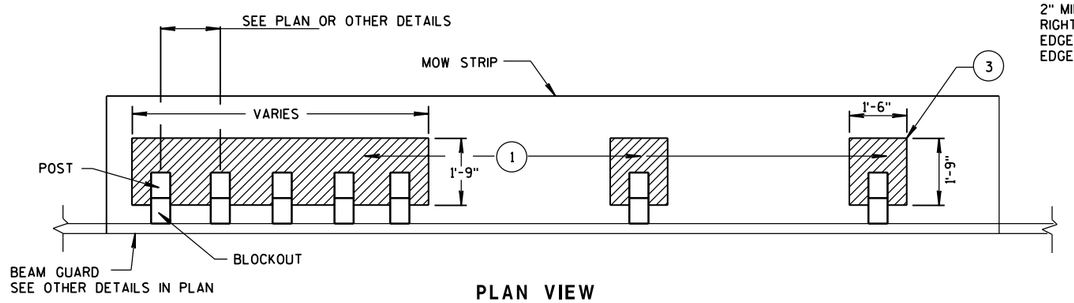
MOW STRIP FOR TYPICAL BLOCKOUT LAYOUT



DETAIL A

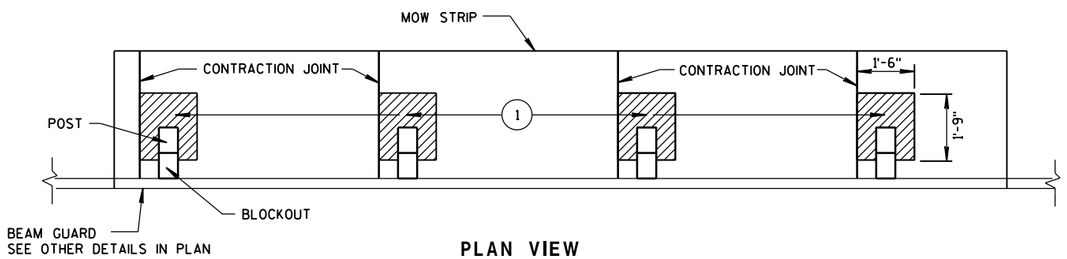


SECTION B-B



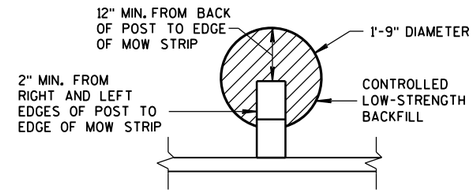
PLAN VIEW

MOW STRIP FOR TIGHT SPACING LAYOUT



PLAN VIEW

JOINT PLACEMENT FOR CONCRETE MOW STRIP



ALTERNATIVE HMA
MOW STRIP DESIGN

(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.)

GUARDRAIL MOW STRIP

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2014
DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA
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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.

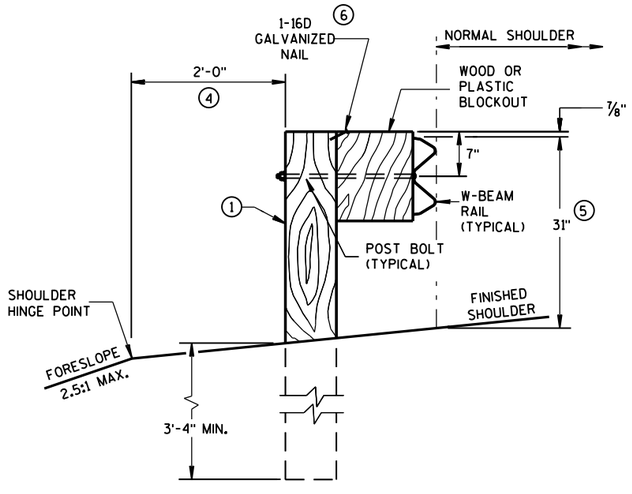
② USE WOOD OR APPROVED PLASTIC BLOCKOUTS. WOOD BLOCKOUTS MAY BE CONSTRUCTED OUT OF TWO OR MORE WOOD BLOCKOUTS. SEE ALTERNATE WOOD BLOCKOUT DETAIL. DIMENSIONS OF APPROVED PLASTIC BLOCKOUTS MAY VARY.

③ IF ROCK IS ENCOUNTERED DURING EXCAVATION, PROVIDE A HOLE 12 INCHES IN DIAMETER EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE APPROXIMATELY 2½ 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).

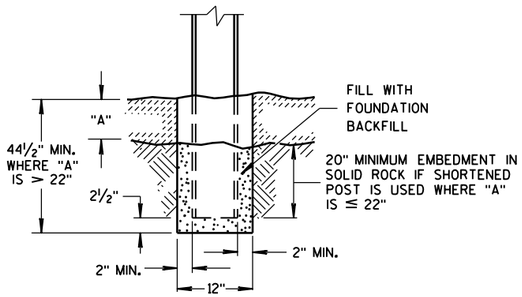
⑤ FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS ± 1". FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27¾" TO 32".

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.



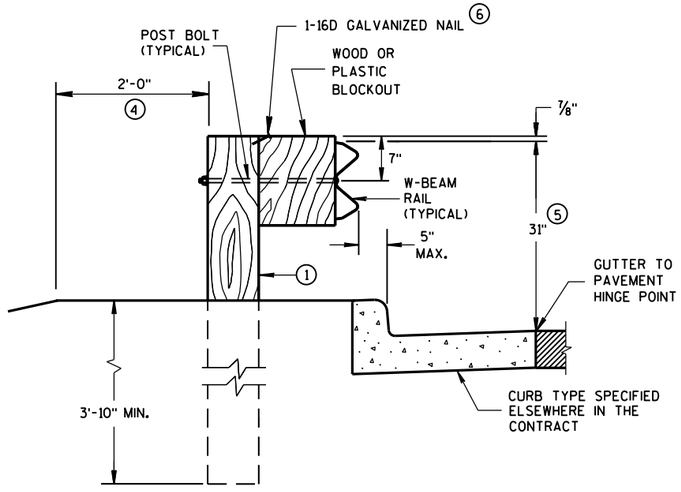
END VIEW

LOCATED ALONG A ROADWAY SHOULDER
STANDARD INSTALLATION



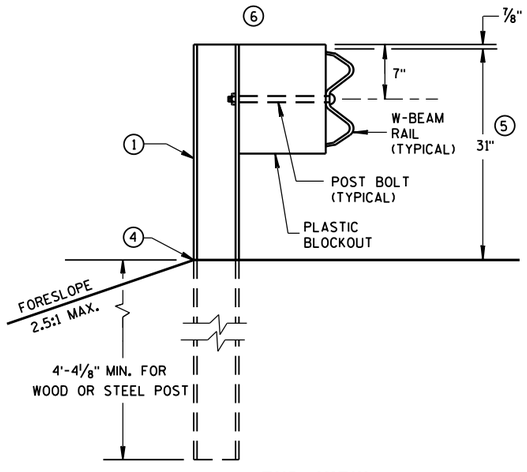
END VIEW

SETTING STEEL OR WOOD POST IN ROCK ③



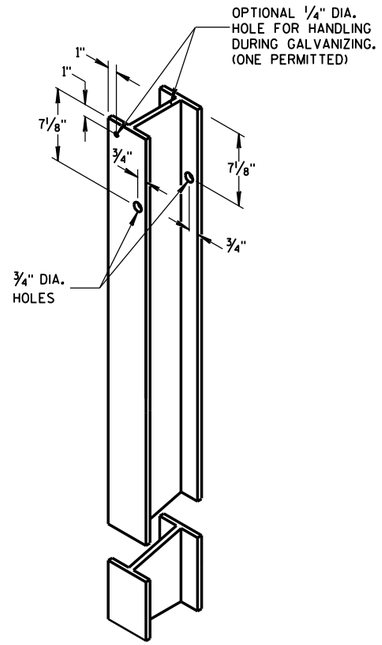
END VIEW

LOCATED ALONG A CURBED ROADWAY

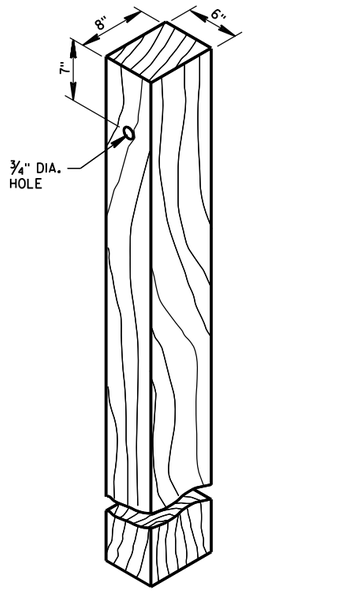


END VIEW

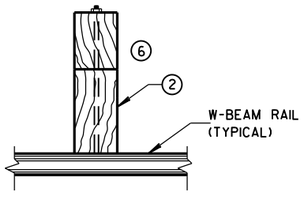
MGS LONGER POST AT HALFPOST SPACING W BEAM (K)



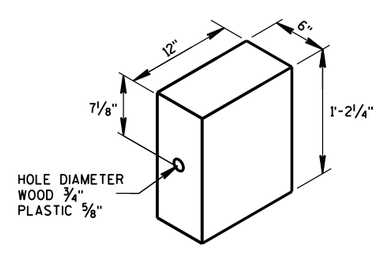
STEEL POST &
HOLE PUNCHING DETAIL
(w6X9) ①



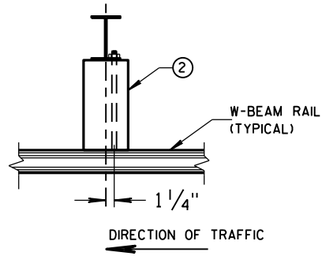
WOOD POST
(6" X 8") NOMINAL ①



PLAN VIEW
WOOD POST,
BLOCKOUT & BEAM



WOOD OR
PLASTIC BLOCKOUT ②



PLAN VIEW
STEEL POST,
PLASTIC BLOCKOUT & BEAM

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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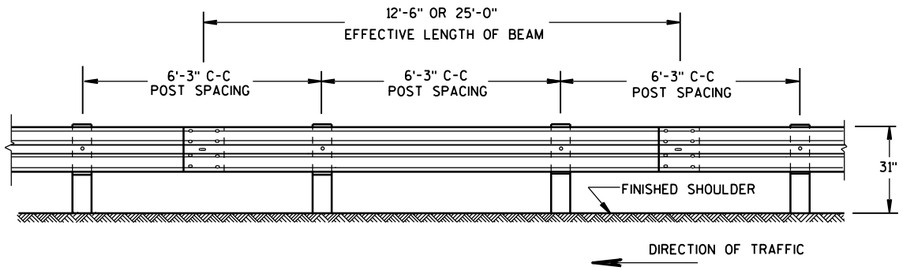
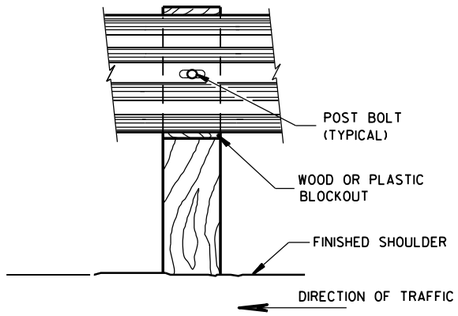
S.D.D. 14 B 42-4a



FRONT VIEW

POST SPACING STANDARD INSTALLATION



FRONT VIEW AT WOOD POST

7. PROVIDE SILVER REFLECTIVE SHEETING ON ALL REFLECTORS EXCEPT THOSE LOCATED ALONG THE LEFT EDGE OF ONE-WAY ROADWAYS, WHICH SHALL BE PROVIDED WITH YELLOW REFLECTIVE SHEETING. SHEETING IS TYPE H. SEE STANDARD SPECIFICATION 637.

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.

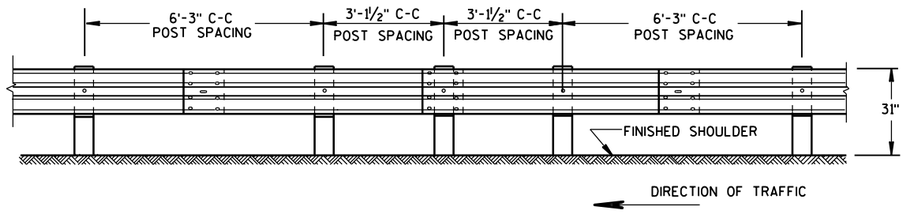
9. REVERSE EVERY OTHER REFLECTOR FOR 2-WAY VISIBILITY. THE CONTRACTOR MAY FURNISH TWO-SIDED REFLECTORS IN LIEU OF ONE-SIDED REFLECTORS.

10. PROVIDE AN ANGLE OF BEND OF 90° ± 1° FOR TWO-SIDED REFLECTORS.

11. 25 FEET OF HALF POST SPACING IS REQUIRED ON APPROACH AND DEPARTURE ENDS OF QUARTER POST SPACING.

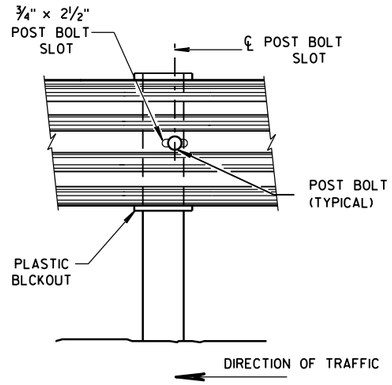
POST BOLTS ARE A 5/8" DIAMETER ASTM A307 GUARDRAIL BOLT. A POST BOLT REQUIRES 5/8" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT AND 5/8" DIAMETER F844 FLAT WASHER. POST BOLTS MAY BE LONGER IF MULTIPLE BLOCKOUTS ARE BEING USED.

GUARD RAIL SPLICE BOLTS ARE A 5/8" DIAMETER ASTM A307 GUARDRAIL HEAD BOLT. A GUARDRAIL SPLICE BOLT REQUIRES 5/8" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT.

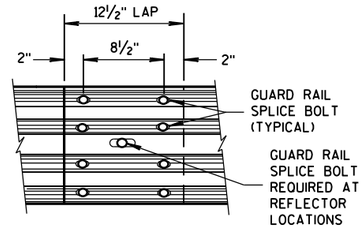


FRONT VIEW

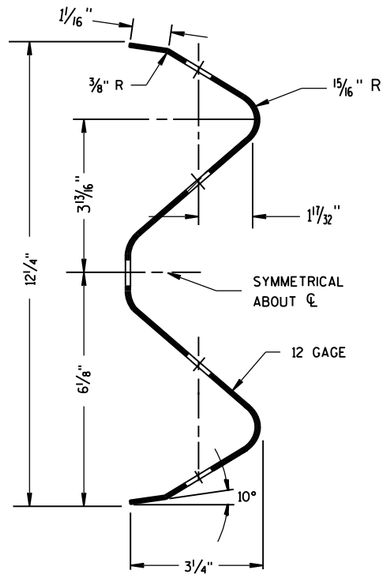
HALF POST SPACING (HS) AND HALF POST SPACING WITH LONGER POSTS (K)



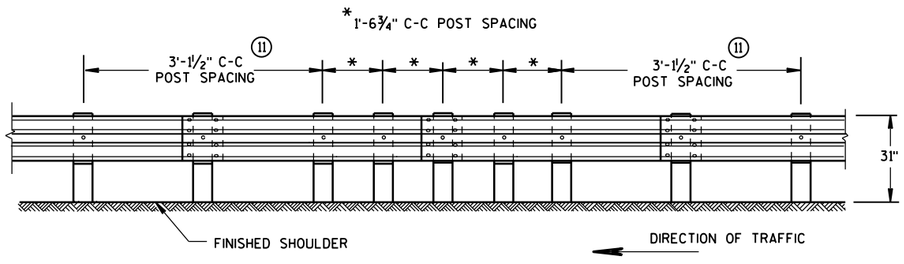
FRONT VIEW AT STEEL POST



FRONT VIEW
MID-SPAN BEAM SPLICE

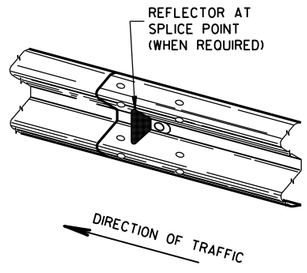


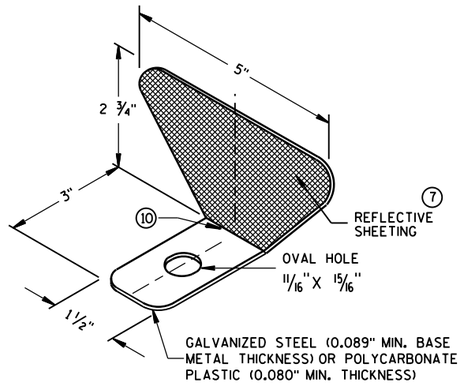
SECTION THRU W-BEAM RAIL



FRONT VIEW

QUARTER POST SPACING (QS)





REFLECTOR SPACING 8

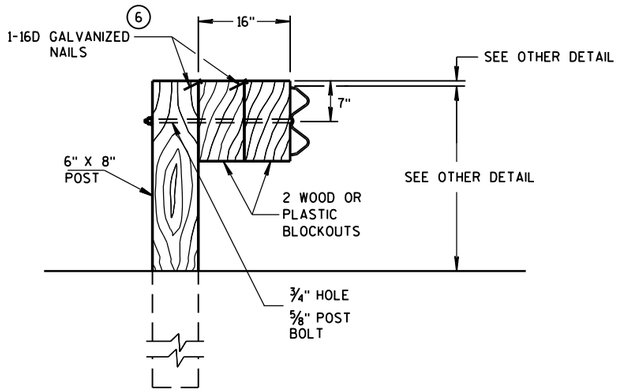
	BEAM GUARD LENGTH	REFLECTOR SPACING	NO. SURFACES REFLECTORIZED	MIN. NO. REFLECTORS
ONE WAY TRAFFIC	< 200'	50' C-C	1	3
	> 200'	100' C-C	1	
TWO WAY TRAFFIC	< 200'	25' C-C	1 9	6
	> 200'	50' C-C	1	
TWO WAY TRAFFIC	< 200'	50' C-C	2	3
	> 200'	100' C-C	2 10	

ONE SIDED REFLECTOR DETAIL AND TYPICAL INSTALLATION 7

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

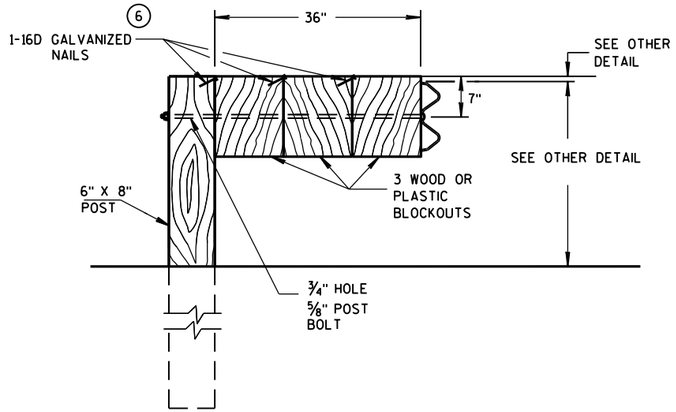
STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

6
S.D.D. 14 B 42-4b



DETAIL FOR 16" BLOCKOUT DEPTH

IT IS ACCEPTABLE TO USE BLOCKOUTS UP TO 16" DEEP TO INCREASE THE POST OFFSET TO AVOID UNDERGROUND OBSTACLES. THERE IS NO LIMIT TO THE NUMBER OF POSTS THAT CAN HAVE ADDITIONAL BLOCKOUTS UP TO 16" DEEP.

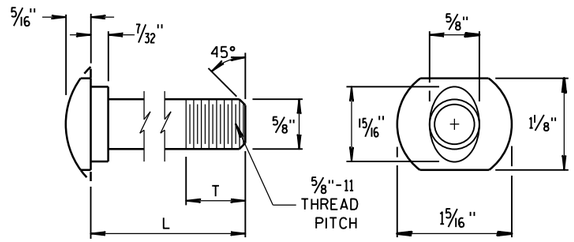


DETAIL FOR 36" BLOCKOUT DEPTH

NOTES: UNDER SPECIAL CIRCUMSTANCES, SUCH AS AVOIDING OBSTACLES THAT ARE NOT RELOCATED, IT IS ACCEPTABLE TO INSTALL ADDITIONAL BLOCKOUTS TO OBTAIN UP TO 36" DEPTH FOR ONE OR TWO POSTS IN A SECTION OF GUARDRAIL.

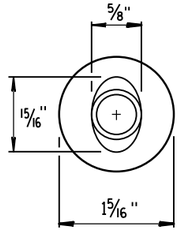
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.

NOTE: 1. ALL FILLETS SHALL HAVE A MINIMUM RADIUS OF 1/16".
2. IF THE BOLT EXTENDS MORE THAN 1/4" FROM THE NUT THE BOLT SHOULD BE TRIMMED BACK.

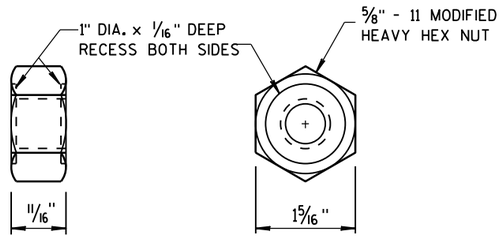


POST BOLT TABLE

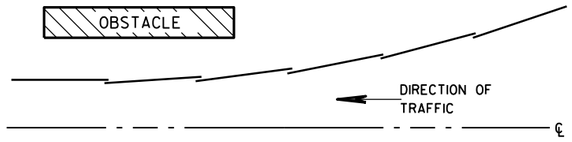
L	T (MIN.)
1¼"	1⅛"
2"	1¾"
10"	4"
14"	4 1/16"
18"	4"
21"	4 1/16"
25"	4"



ALTERNATE BOLT HEAD

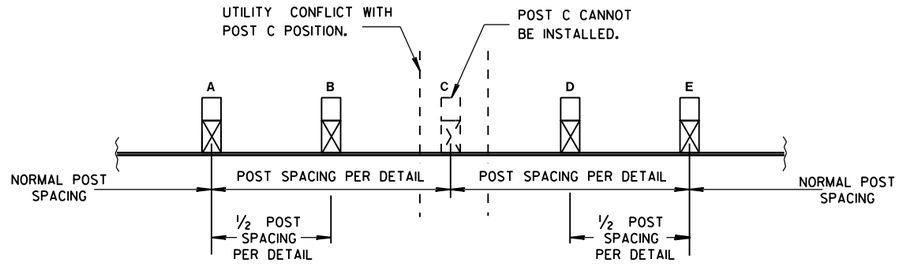


POST BOLT, SPLICE BOLT AND RECESS NUT

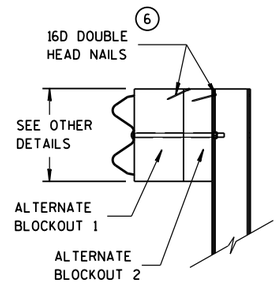


PLAN VIEW

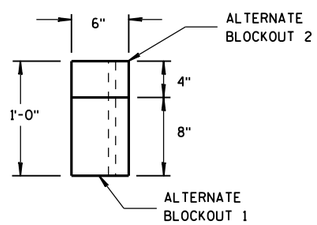
BEAM LAPPING DETAIL



POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION



SIDE VIEW



TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2016 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
FHWA

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 MANUFACTURES REQUIRE DIFFERENT PERFORATED W-BEAM RAIL END PANELS. SEE MANUFACTURES INFORMATION.

(D) THE TOP OF THE STEEL TUBE ON POST 1 AND POST 2 SHALL NOT BE MORE THAN 3" ABOVE THE FINISH GROUND ELEVATION.

(F) ATTACH ALUMINUM SHEET TO E.A.T. HEAD USING 4 STAINLESS STEEL SELF-TAPPING SCREWS. ONE SCREW PER CORNER.

(G) ½" DIAMETER X 3" LONG LAG BOLT AND WASHER.

(H) HARDWARE VARIES BETWEEN DIFFERENT MANUFACTURES. SEE MANUFACTURE'S DRAWING FOR INFORMATION.

(I) DIMENSIONS MAY VARY. SEE MANUFACTURE'S INFORMATION.

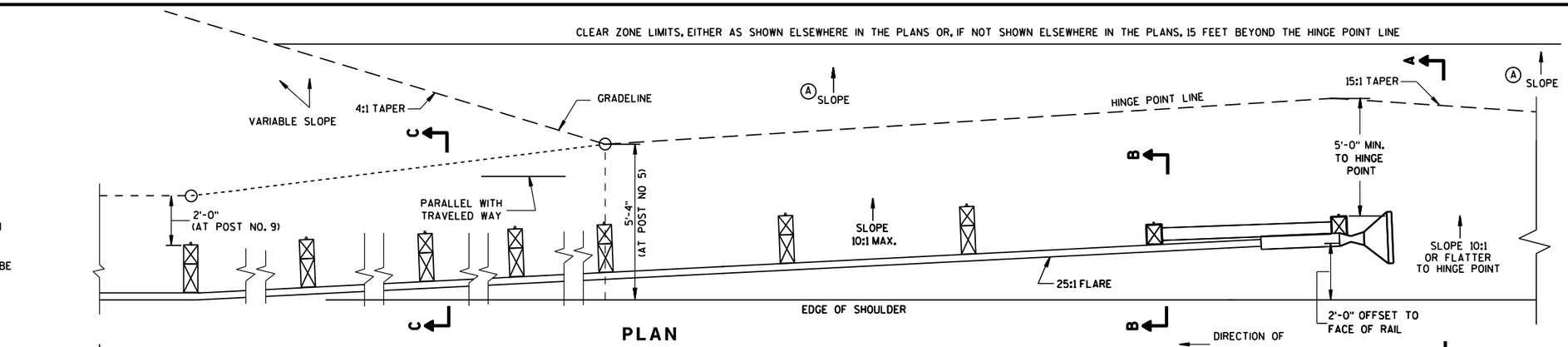
SEE SDD 14B42 FOR MORE INFORMATION.

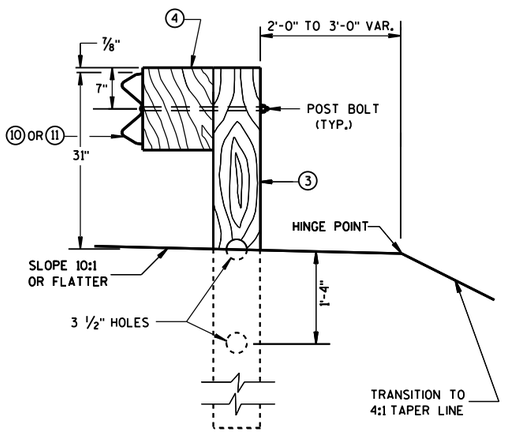
* DO NOT ATTACH BLOCKOUTS TO POSTS 1 AND 2.

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

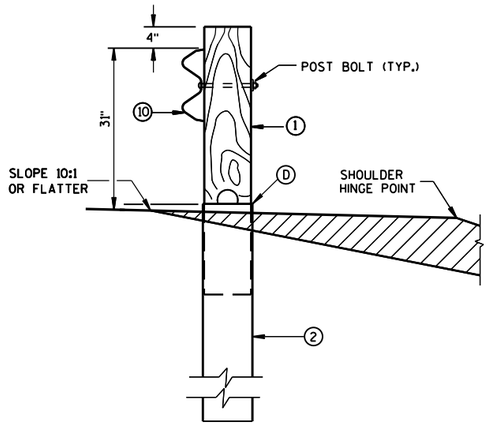
W-BEAM RAIL SPLICES ARE LOCATED AT POST NUMBER 3, AND BETWEEN POST 5 AND 6, BETWEEN POSTS 7 AND 8, AND MIDDLE OF THE SPAN AFTER POST 9.

THE CENTER OF THE UPPER 3½" 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.

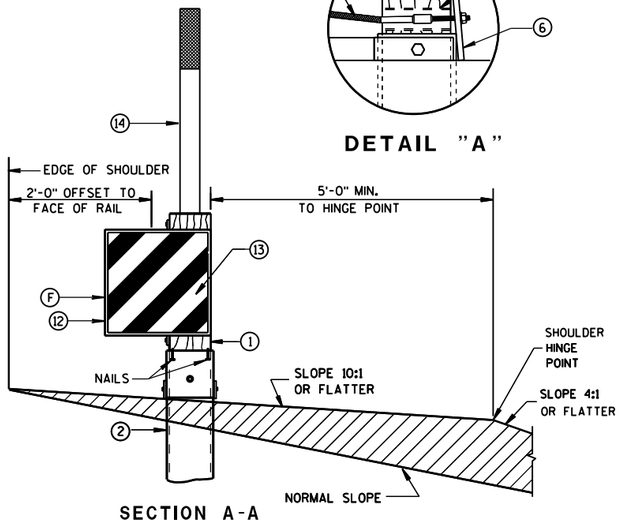




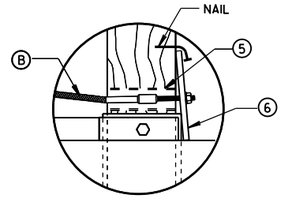
SECTION C-C
TYPICAL AT POST NOS. 3-9



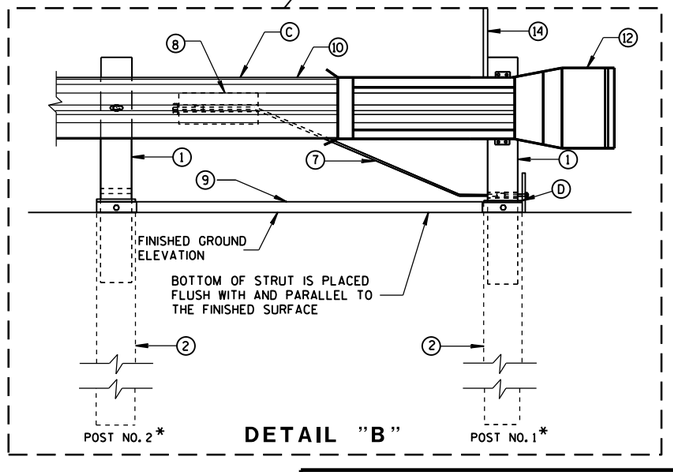
SECTION B-B
TYPICAL AT POST NO. 2*



SECTION A-A
TYPICAL AT POST NO. 1*



DETAIL "A"

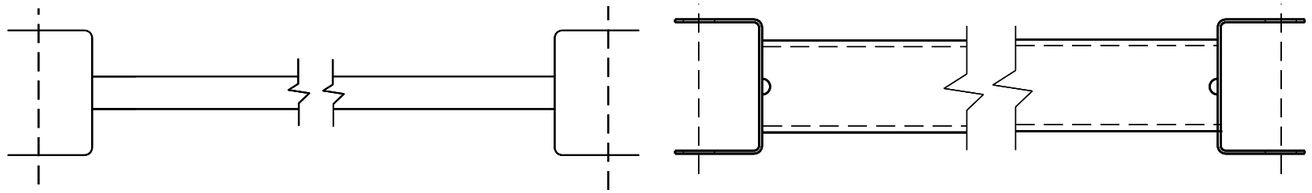


DETAIL "B"

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

S.D.D. 14 B 44-2a

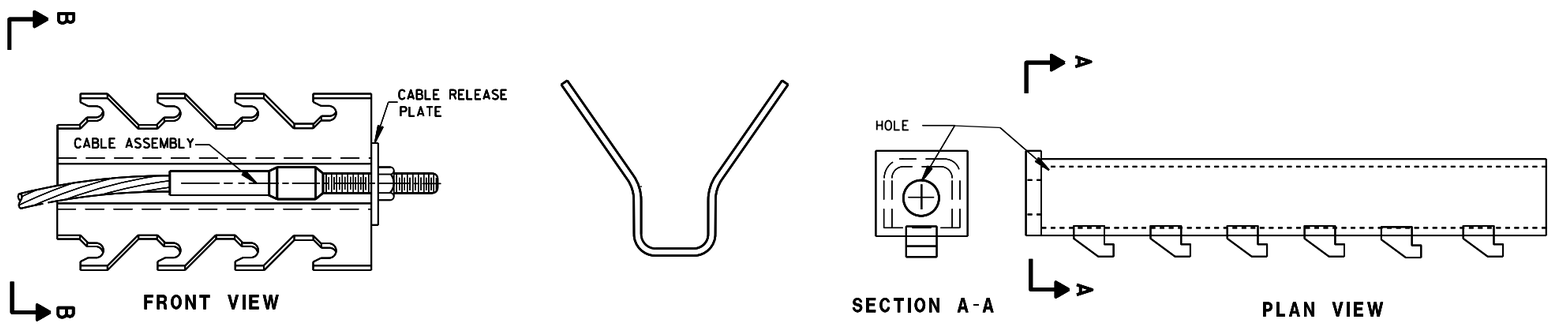


⑨ Ⓗ

GENERIC GROUND STRUT

BILL OF MATERIALS

PART NO.	DESCRIPTION MATERIALS PROVIDED BY MGS EAT MANUFACTURER. SEE MANUFACTURER'S DETAILS FOR MORE INFORMATION.
①	WOOD BREAKAWAY POST
②	6" X 8" X 0.188", 6'-0" LONG FOUNDATION TUBE AT POSTS 1 AND 2
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	END SECTION EAT
⑬	0.040" ALUMINUM SHEET WITH REFLECTIVE SHEETING TYPE F PER SECTION 637 OF THE STANDARD SPECIFICATIONS
⑭	EAT MARKER POST - YELLOW (SEE APPROVED PRODUCTS LIST)



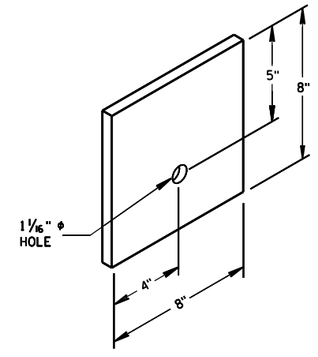
FRONT VIEW

SECTION B-B

SECTION A-A

PLAN VIEW

GENERIC ANCHOR CABLE BOX ⑧ Ⓗ



BEARING PLATE ⑥

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

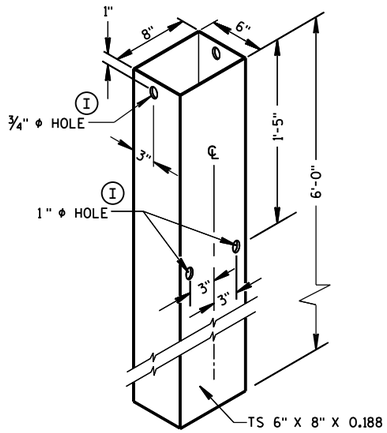
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

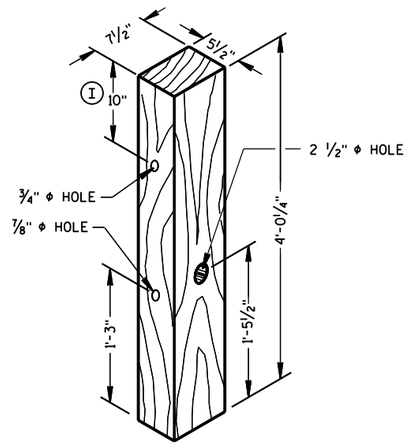
S.D.D. 14 B 44-2b

6

S.D.D. 14 B 44-2b

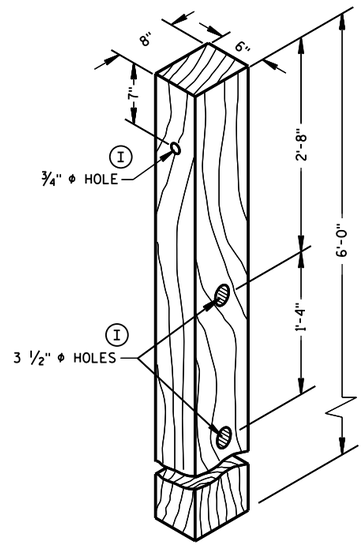


FOUNDATION TUBE (2)



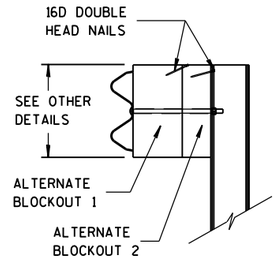
POSTS NUMBER 1 AND 2

WOOD BREAKAWAY POST (1)

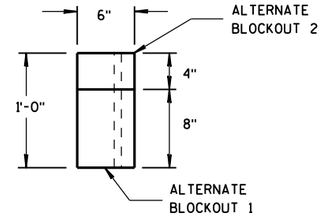


POSTS NUMBER 3-9

WOOD CRT POST (3)

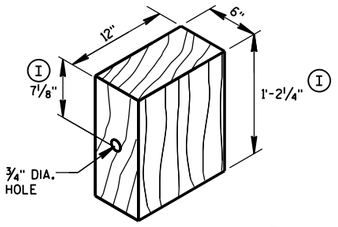


SIDE VIEW



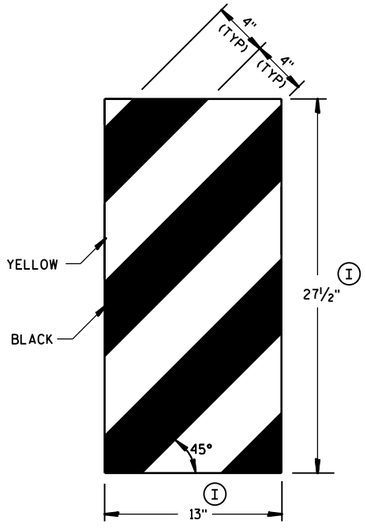
TOP VIEW

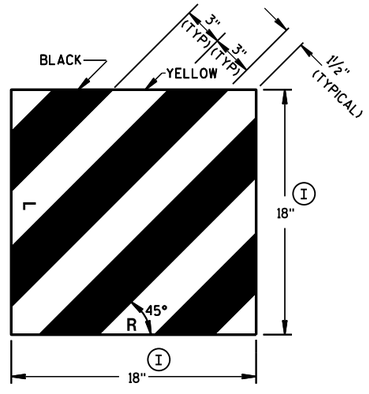
ALTERNATE WOOD BLOCKOUT DETAIL



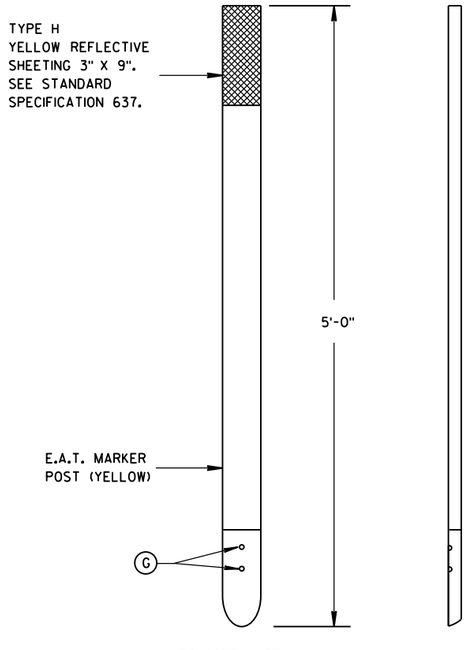
WOOD BLOCKOUT (4)

REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2





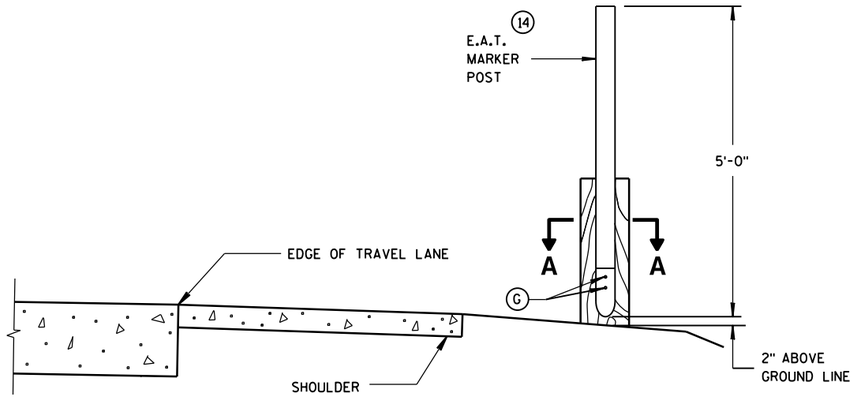
GENERIC REFLECTIVE SHEETING (13) (H)



FRONT VIEW

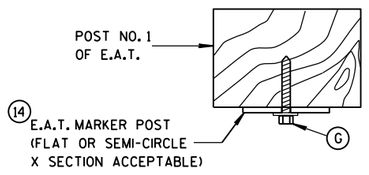
SIDE VIEW

E.A.T. MARKER POST (14)



TYPICAL INSTALLATION OF E.A.T. MARKER POST BACKSIDE OF POST NO. 1

(E.A.T. AND RAIL REMOVED FOR CLARITY)



SECTION A-A

MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)

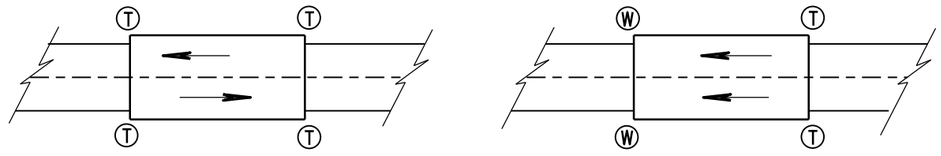
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2014
DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER

FHWA

6

S.D.D. 14 B 44-2c



TWO WAY TRAFFIC

ONE WAY TRAFFIC

Ⓣ THRIE BEAM CONNECTION

Ⓦ W-BEAM CONNECTION WHEN REQUIRED

TYPICAL LOCATIONS OF THRIE BEAM AND W-BEAM CONNECTIONS TO BRIDGE

GENERAL NOTES

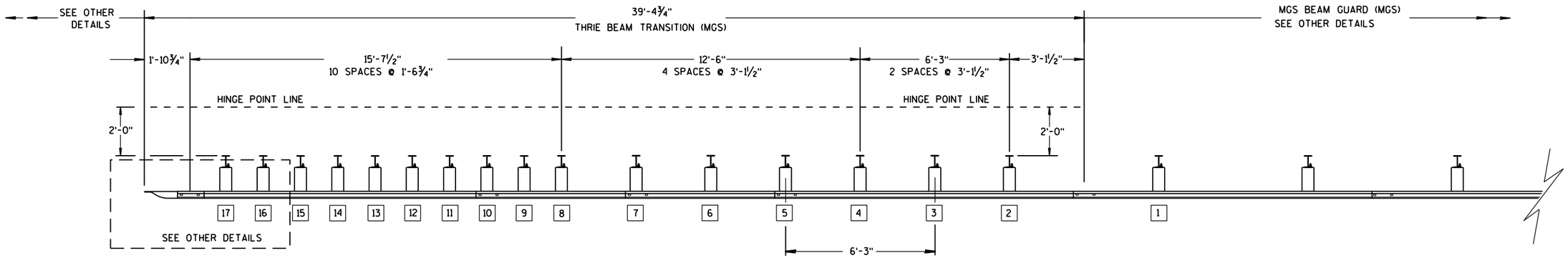
IF ROCK IS ENCOUNTERED, REMOVE ROCK TO FULL DEPTH OF POST PLUS 2½", AND 12" DIAMETER AROUND POST. SEE 14B42 FOR MORE DETAILS.

TRANSITION USES STEEL POSTS ONLY.

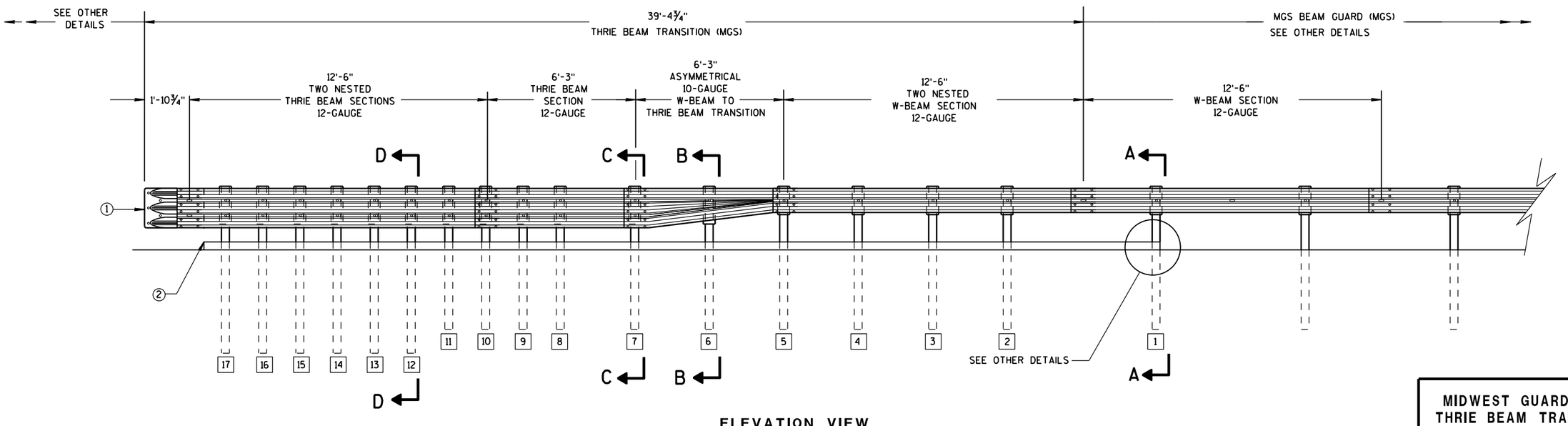
SEE STANDARD DETAIL DRAWING 14 B 42 FOR MORE INFORMATION.

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

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



PLAN VIEW



ELEVATION VIEW

MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

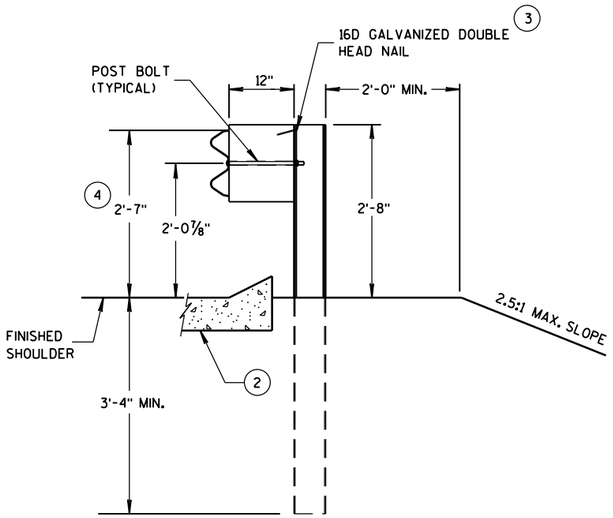
S.D.D. 14 B 45-4a

GENERAL NOTES

(2) OPTIONAL CURB AND GUTTER OR DRAINAGE_FEATURE SEE PLAN FOR INFORMATION.

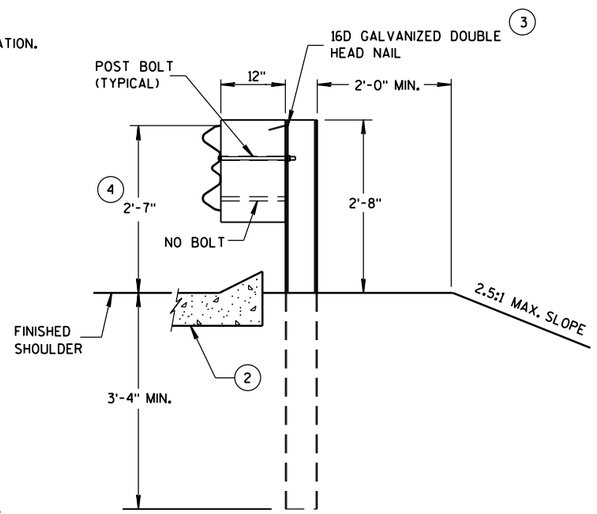
(3) WHEN USING STEEL POSTS AND WOOD BLOCKOUTS INSTALL FOUR 10D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.

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



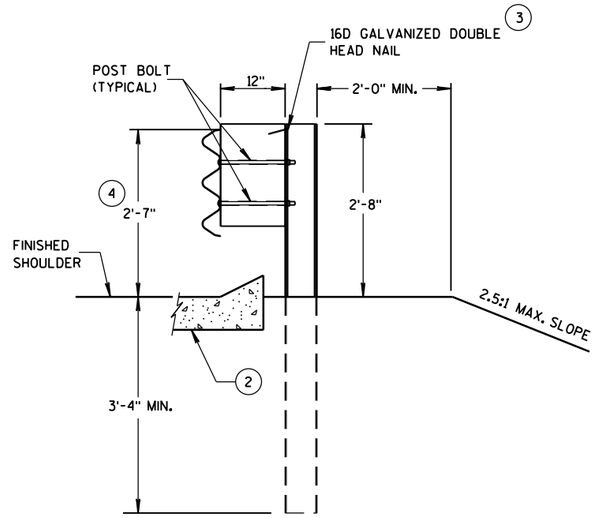
SECTION A-A

POSTS 1-5



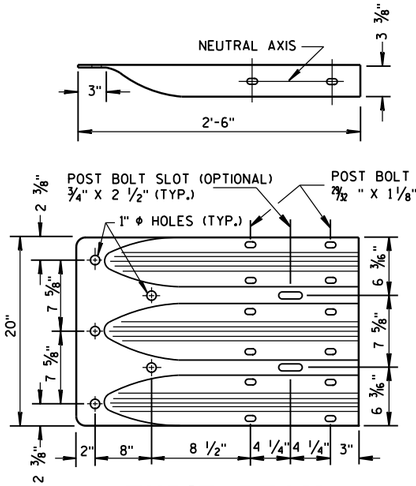
SECTION B-B

POST 6



SECTION C-C

POSTS 7-11



THRIE BEAM TERMINAL CONNECTOR

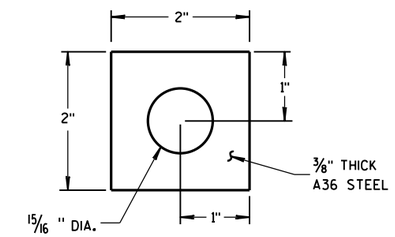
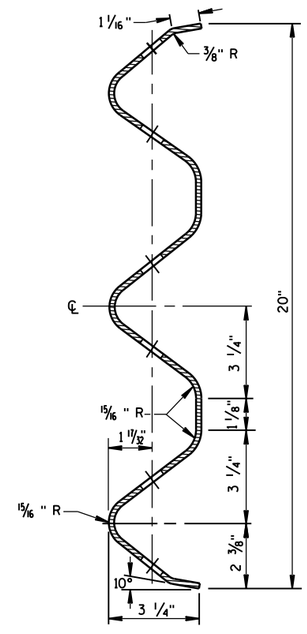
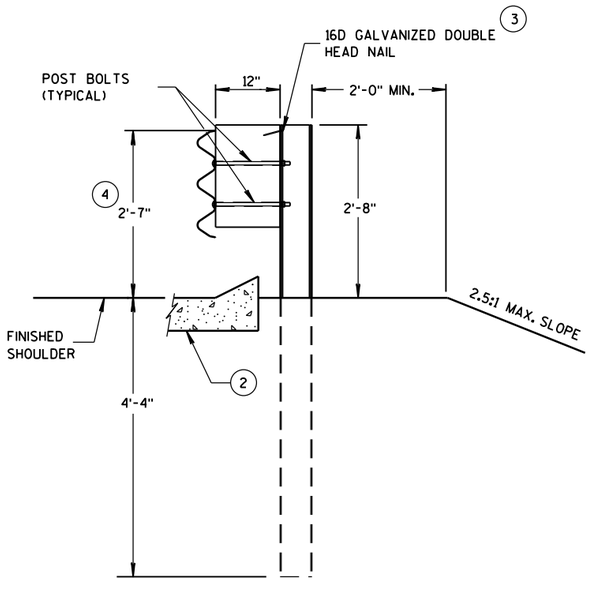


PLATE WASHER DETAIL

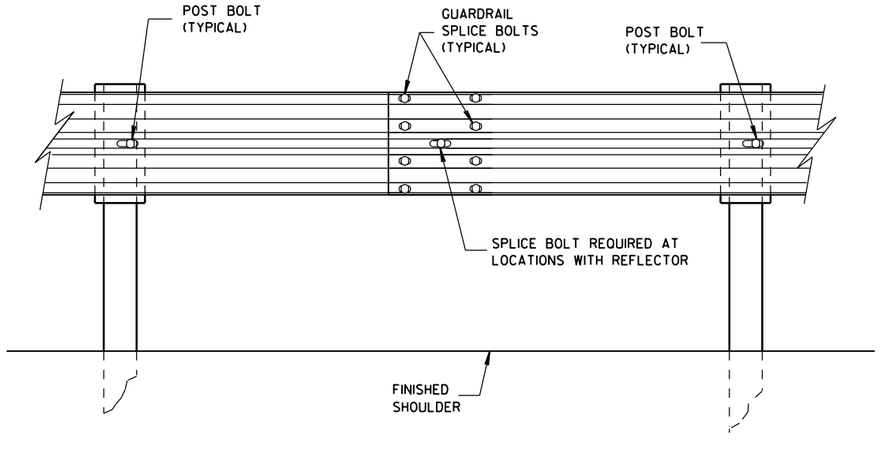


SECTION THRU THRIE BEAM RAIL ELEMENT



SECTION D-D

POSTS 12-17



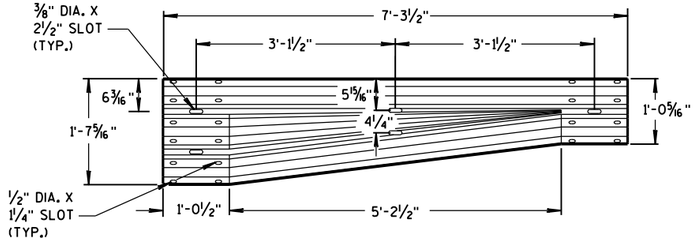
SPLICE DETAIL

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

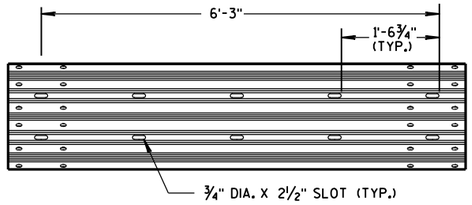
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

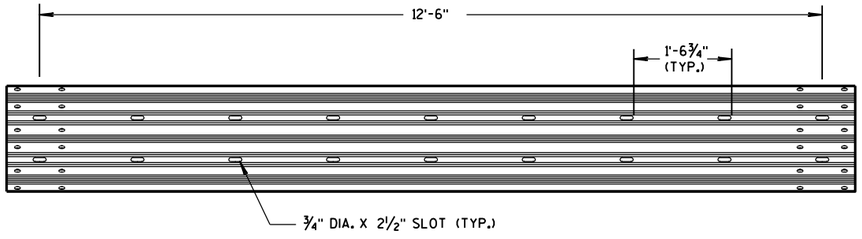
S.D.D. 14 B 45-4b



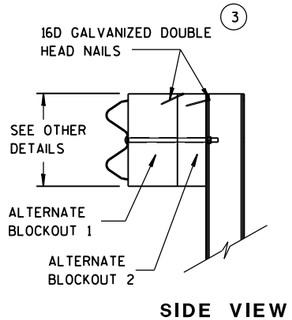
W-BEAM TO THRIE BEAM TRANSITION SECTION



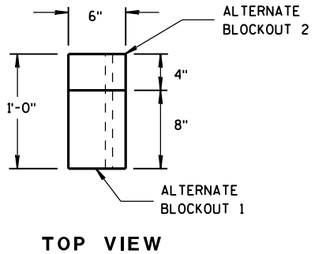
6'-3" THRIE BEAM SECTION



12'-6" THRIE BEAM SECTION

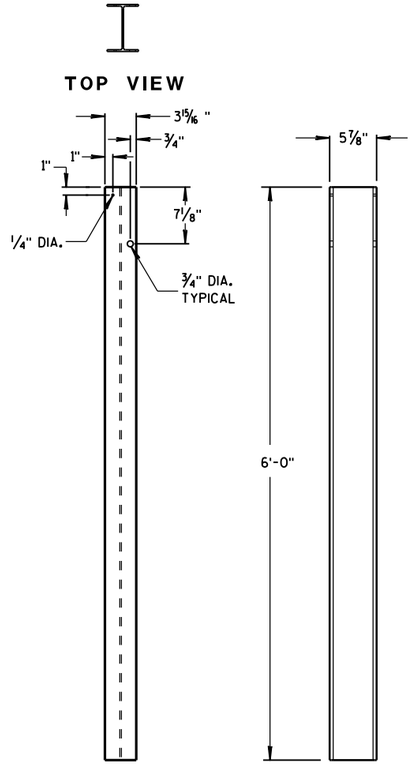


SIDE VIEW

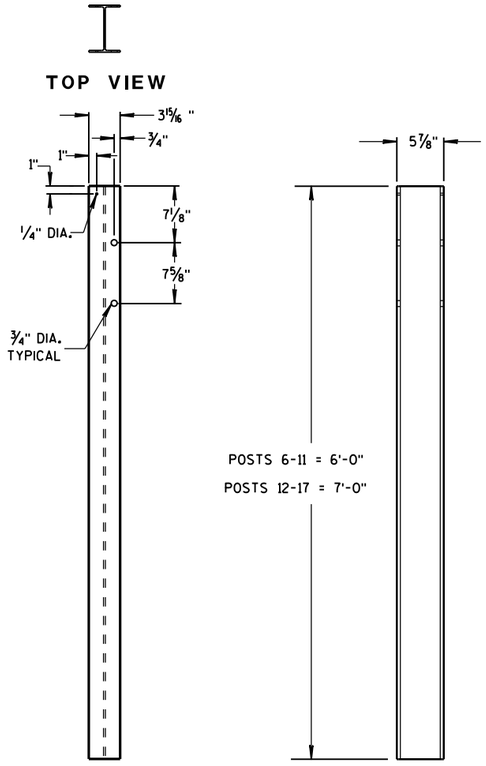


TOP VIEW

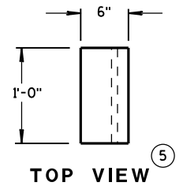
ALTERNATE WOOD BLOCKOUT DETAIL



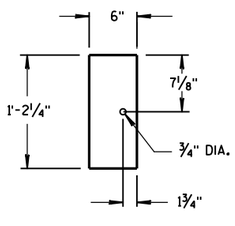
STEEL POSTS 1-5



STEEL POSTS 6-17

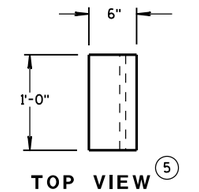


TOP VIEW

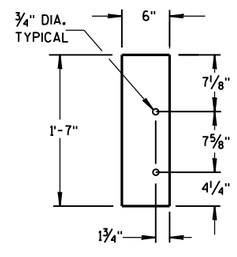


FRONT VIEW

BLOCKOUT POSTS 1-5



TOP VIEW



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.

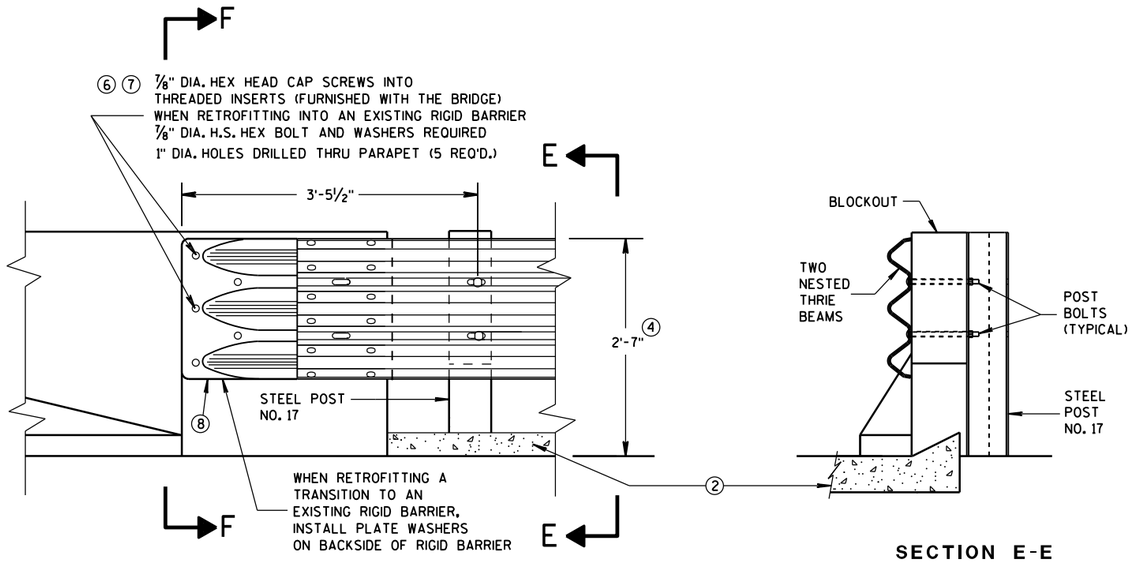
(5) WOOD BLOCKS MAY BE CONSTRUCTED OUT OF 2 WOOD BLOCKS. SEE ALTERNATE WOOD BLOCK DETAIL.

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

S.D.D. 14 B 45-4c



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.

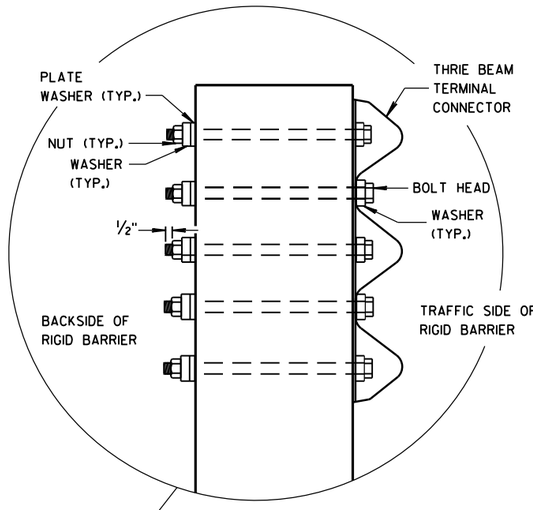
② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.

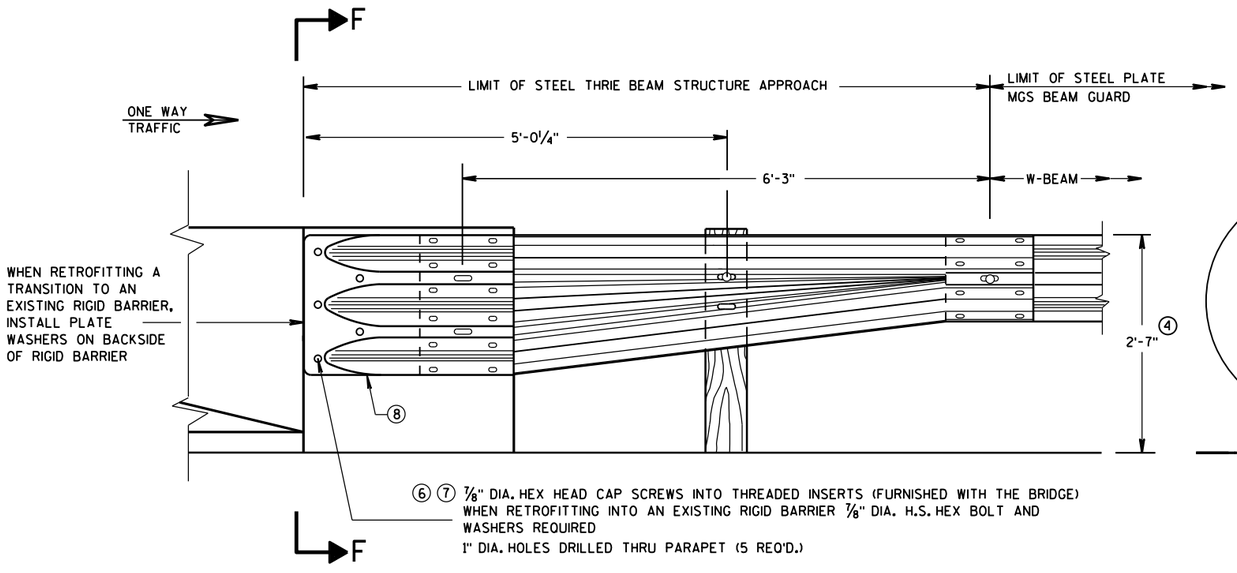
④ TOLERANCE FOR TOP OF BEAM IS ± 1".

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

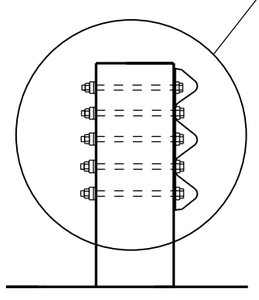
⑦ BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. 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".

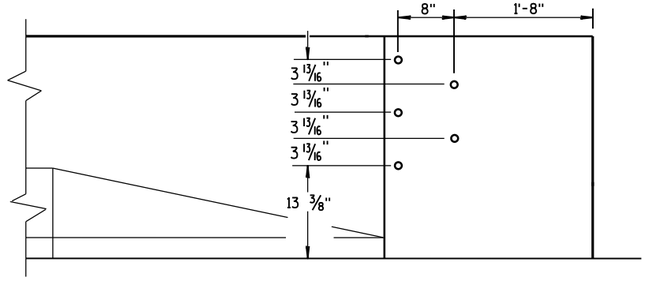




FRONT VIEW



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
June, 2015 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA
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S.D.D. 14 B 45-4d

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.

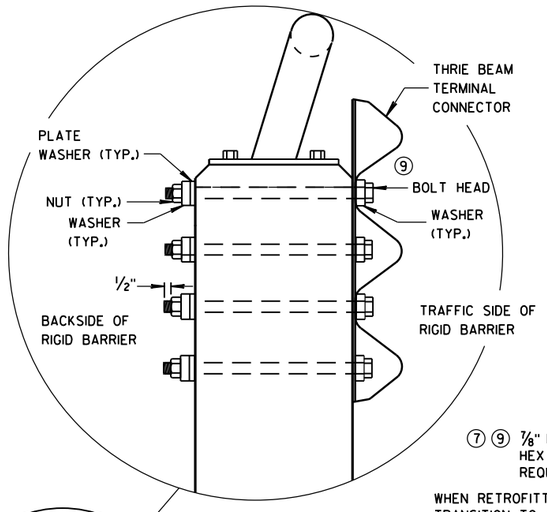
(4) TOLERANCE FOR TOP OF BEAM IS ± 1".

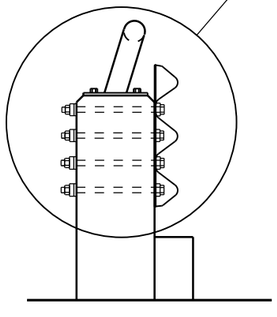
(6) DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

(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.

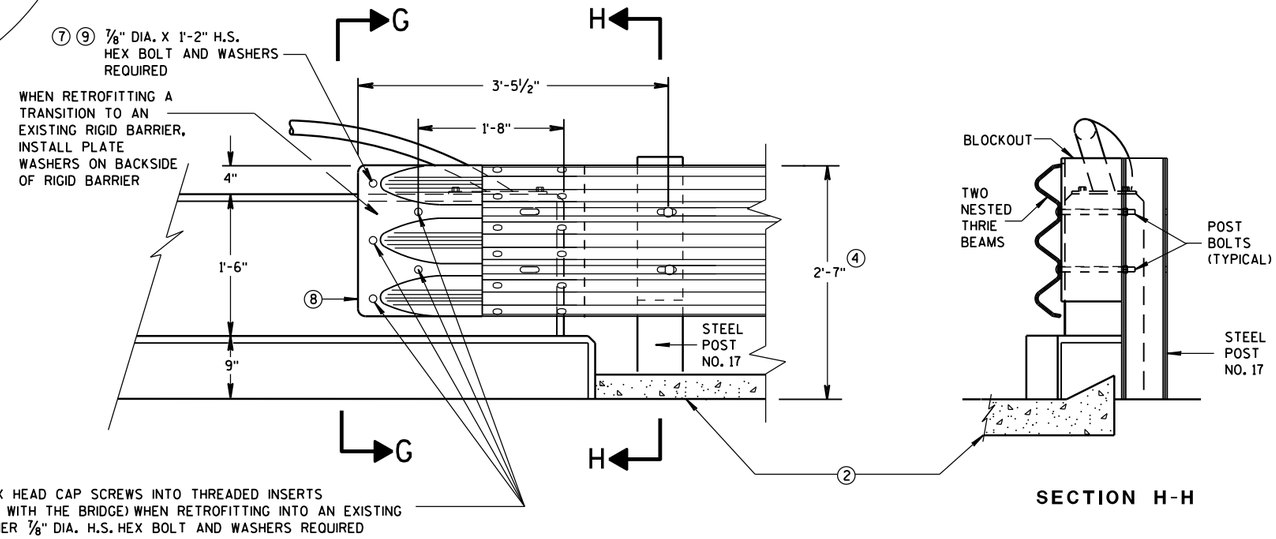
(8) THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3 1/2".

(9) BOLT, NUT AND WASHERS NOT REQUIRED FOR THIS LOCATION WHEN RETROFITTING AN EXISTING PAPAPET AND THE HOLE IS EITHER ABOVE PARAPET OR WITHIN 4 INCHES OF THE EDGE OF PARAPET.





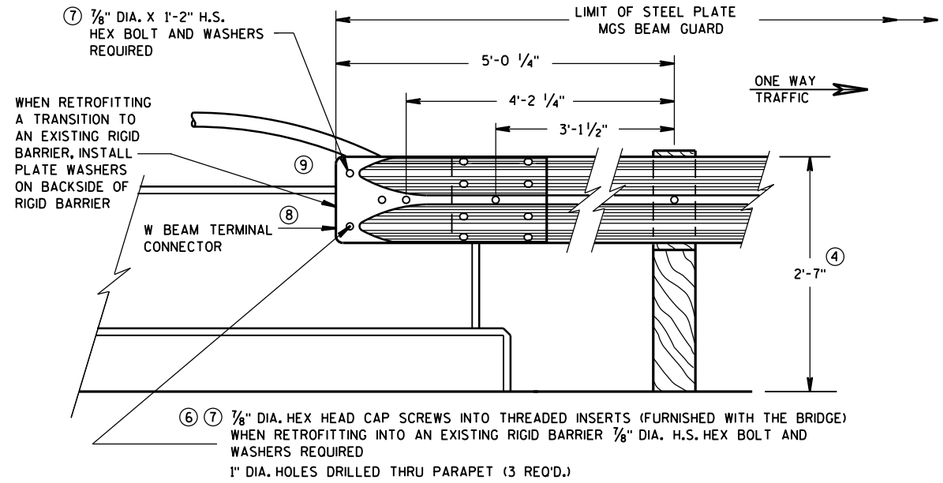
SECTION G-G



FRONT VIEW

SECTION H-H

THRIE BEAM CONNECTION TO VERTICAL FACED PARAPETS



FRONT VIEW

W BEAM CONNECTION TO VERTICAL FACE PARAPET

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

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2015 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

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S.D.D. 14 B 45-4e

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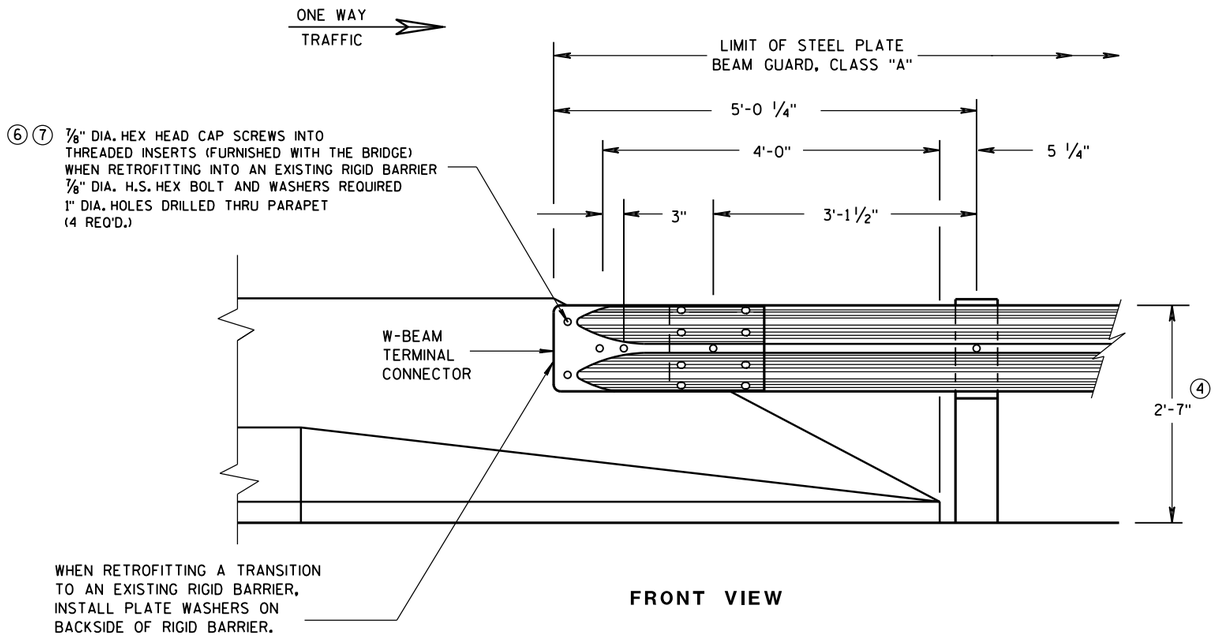
S.D.D. 14 B 45-4e



FRONT VIEW

W BEAM CONNECTION TO PARAPETS WITH SLOPED ENDS

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

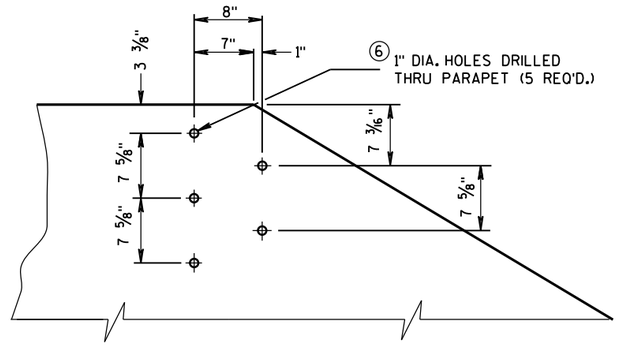
GENERAL NOTES

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

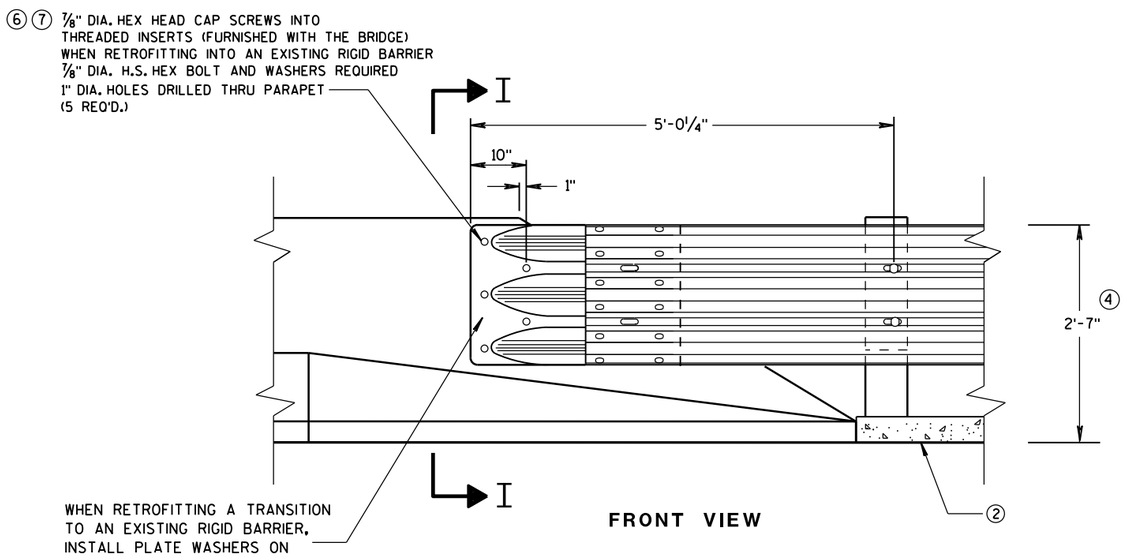
④ TOLERANCE FOR TOP OF BEAM IS ± 1".

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

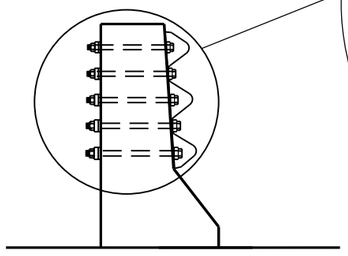
⑦ BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. 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.



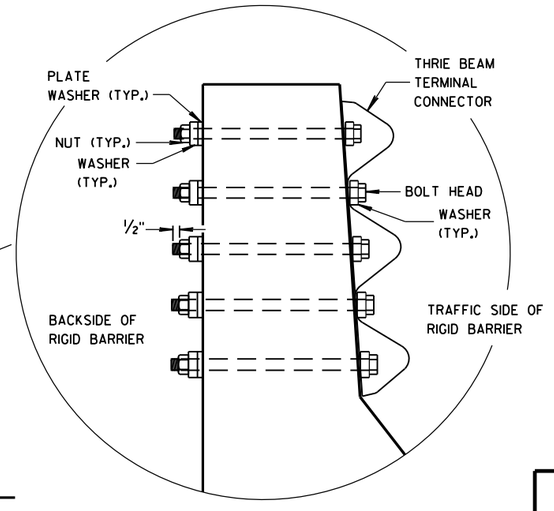
DRILL HOLE LOCATION AND PATTERN
FOR THRIE BEAM CONNECTION



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
June, 2015 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

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S.D.D. 14 B 45-4f

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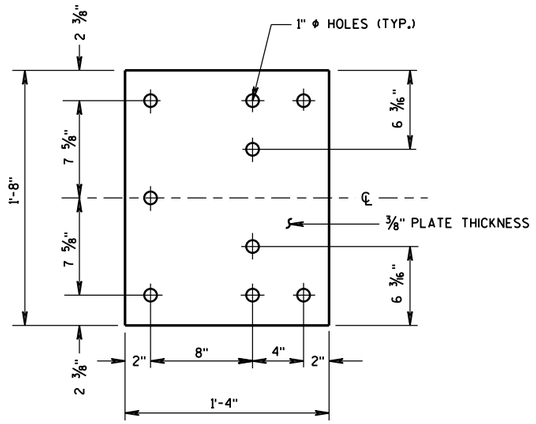
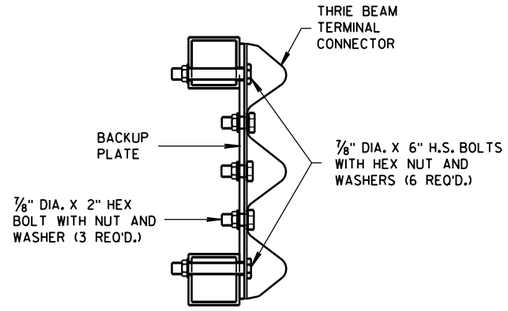
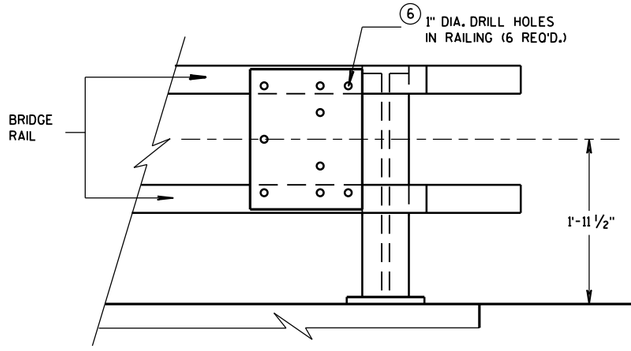
S.D.D. 14 B 45-4f



BACK-UP PLATE DETAIL



SECTION J-J

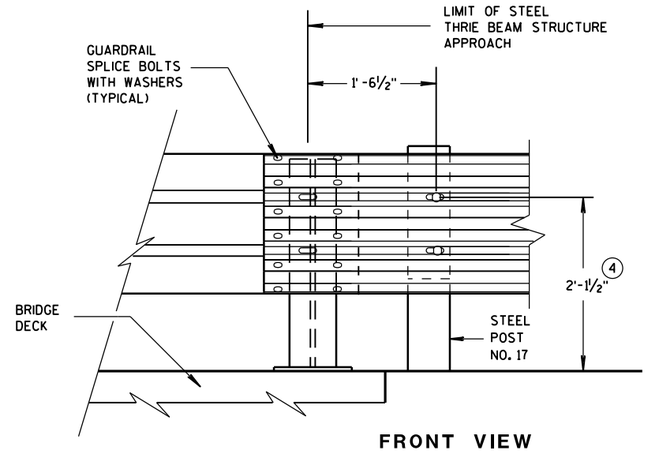


BACK-UP PLATE MOUNTING ONTO BRIDGE RAILING

GENERAL NOTES

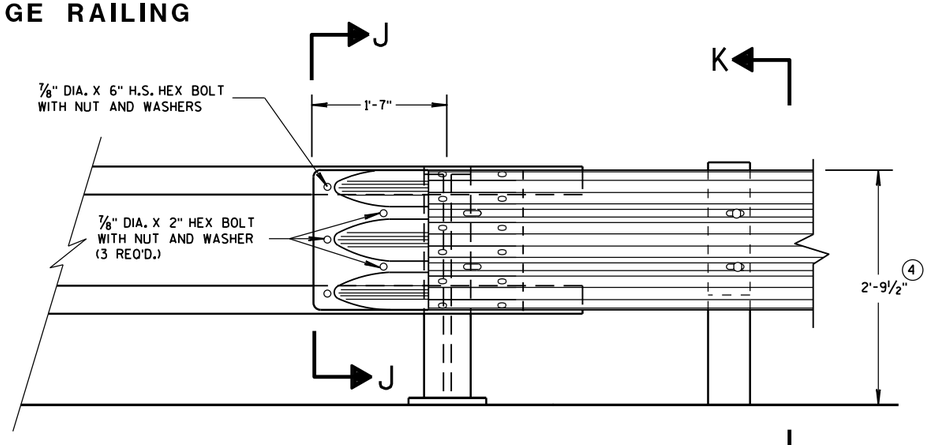
(4) TOLERANCE FOR TOP OF BEAM IS ± 1".

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

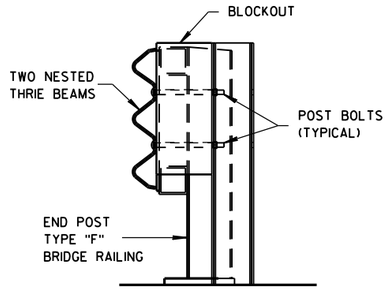


FRONT VIEW

THRIE BEAM CONNECTION TO STEEL RAILING TYPE "W"



FRONT VIEW



SECTION K-K

THRIE BEAM CONNECTION TO TUBULAR RAILING TYPE "F"

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

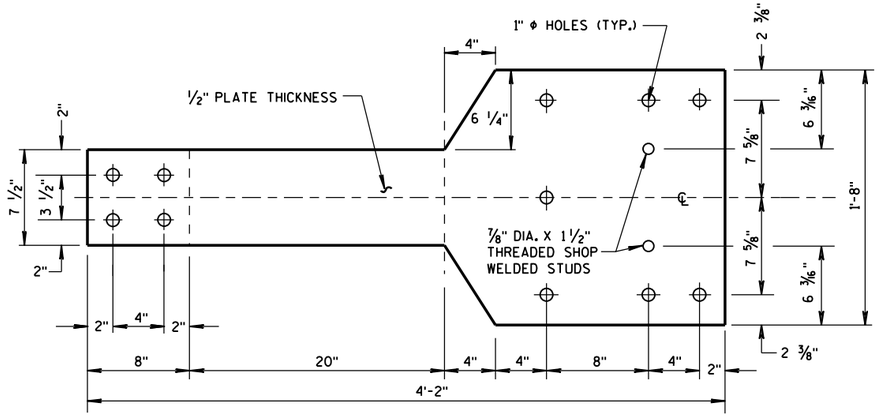
APPROVED
June, 2015 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

S.D.D. 14 B 45-4g

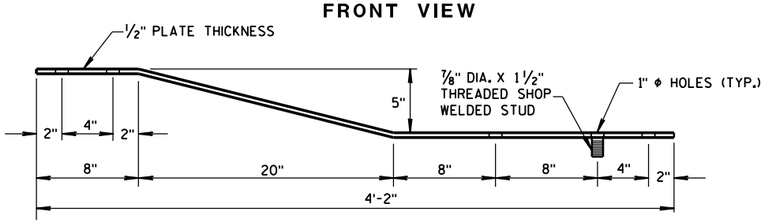
S.D.D. 14 B 45-4g

GENERAL NOTES

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

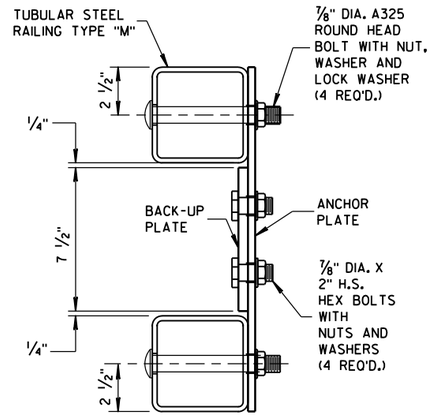


FRONT VIEW

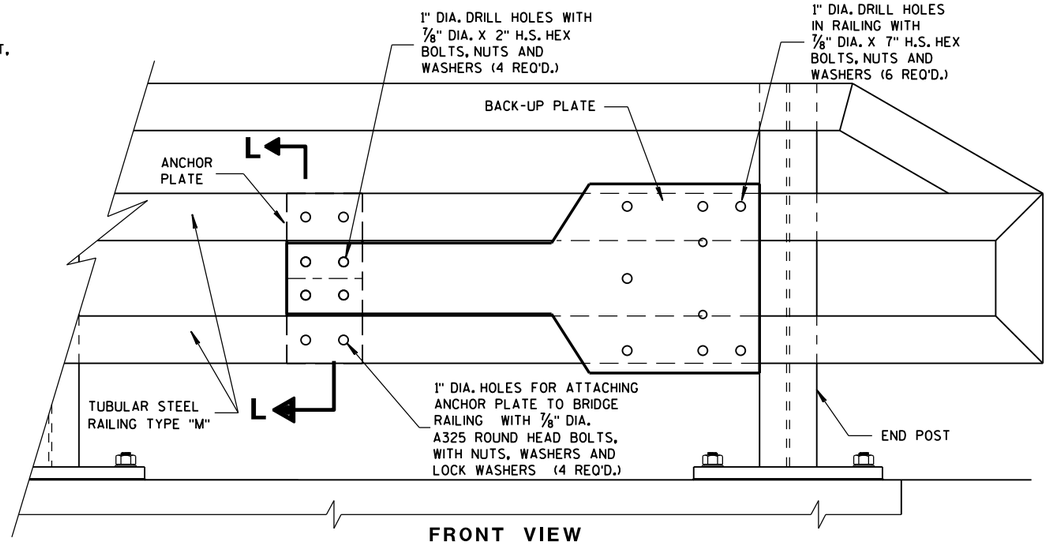


PLAN VIEW

BACK-UP PLATE DETAIL, TYPE "M"

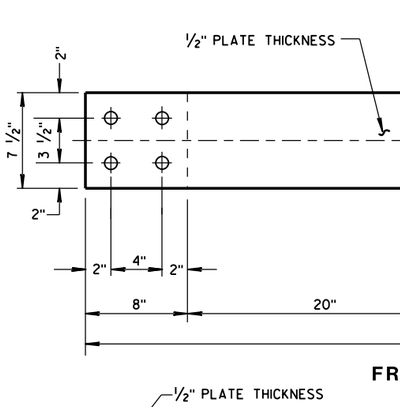


SECTION L-L



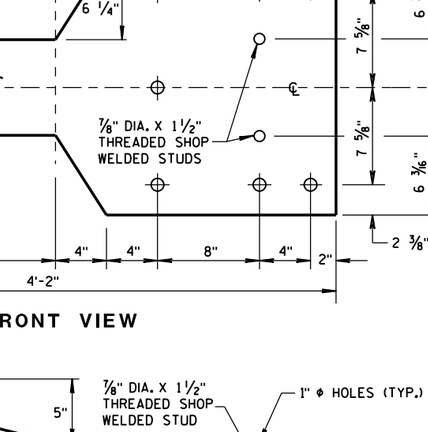
FRONT VIEW

ANCHOR AND BACK-UP PLATE MOUNTING TO BRIDGE RAILING, TYPE "M"

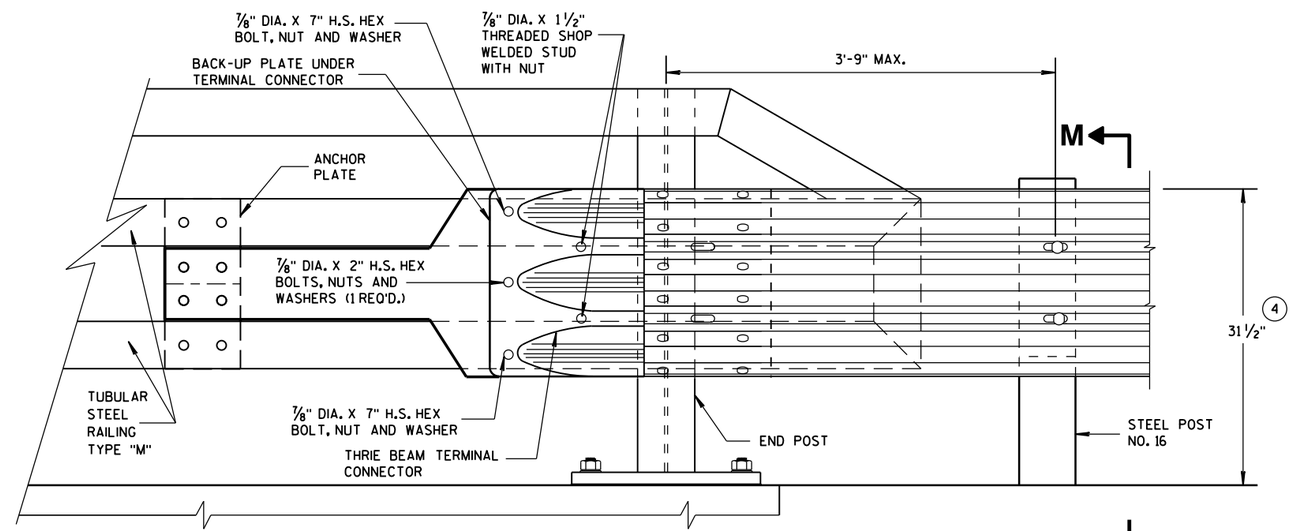


FRONT VIEW

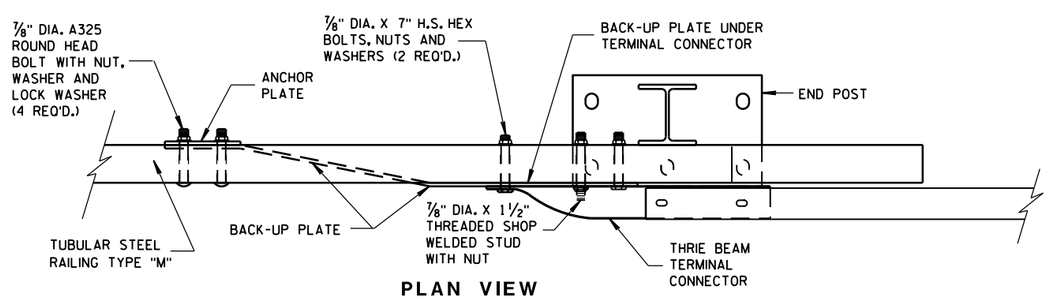
ANCHOR PLATE DETAIL, TYPE "M"



SECTION M-M



FRONT VIEW



PLAN VIEW

THRIE BEAM CONNECTION TO TUBULAR RAILING, TYPE "M"

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2015 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER
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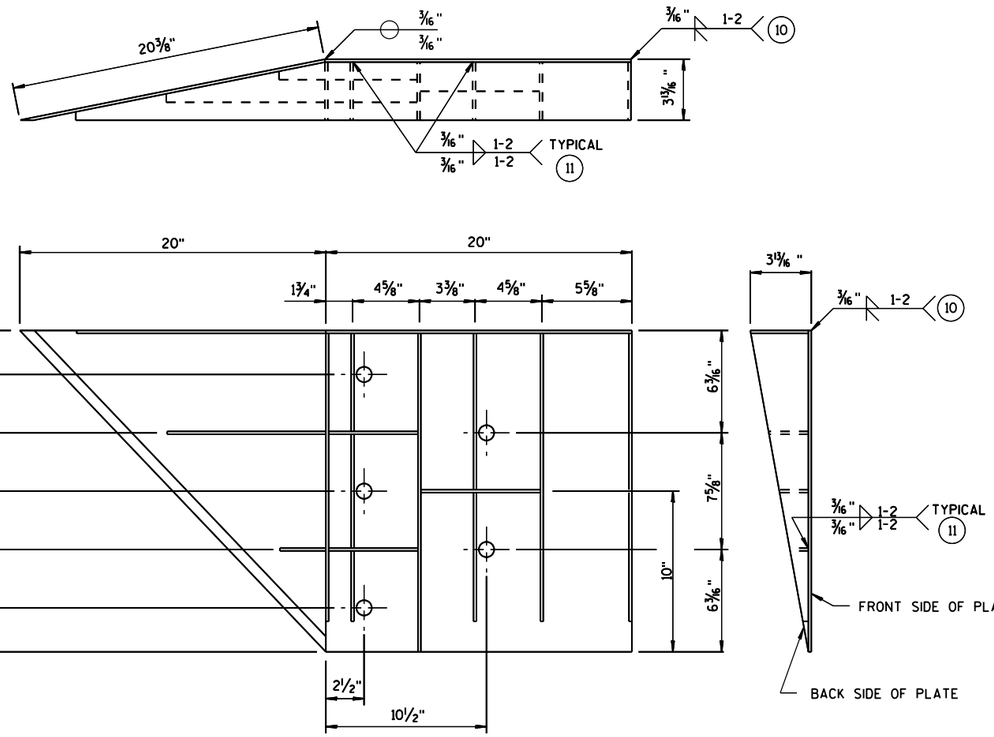

WELDING INSTRUCTION

(VIEWED FROM BACK SIDE OF PLATE)

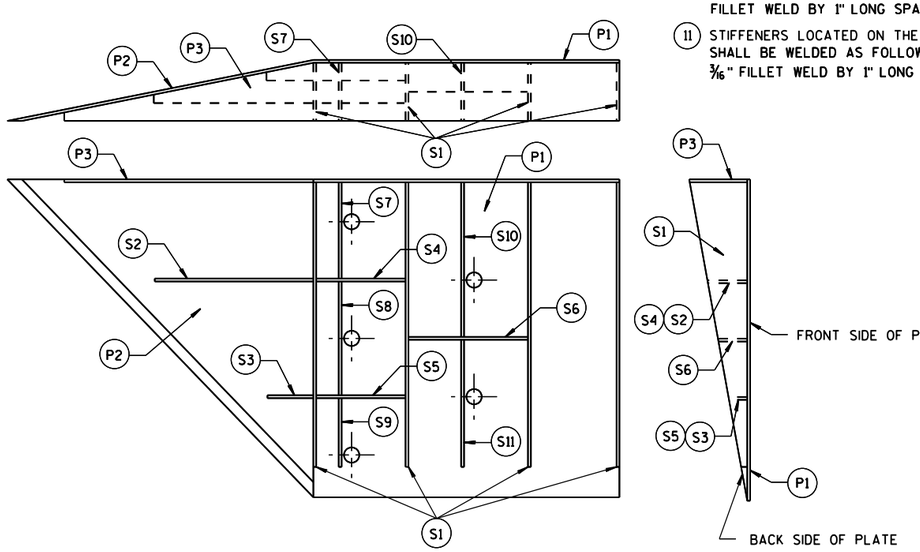

PLATE AND STIFFENER IDENTIFICATION

(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 3/8" 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 1/32"	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
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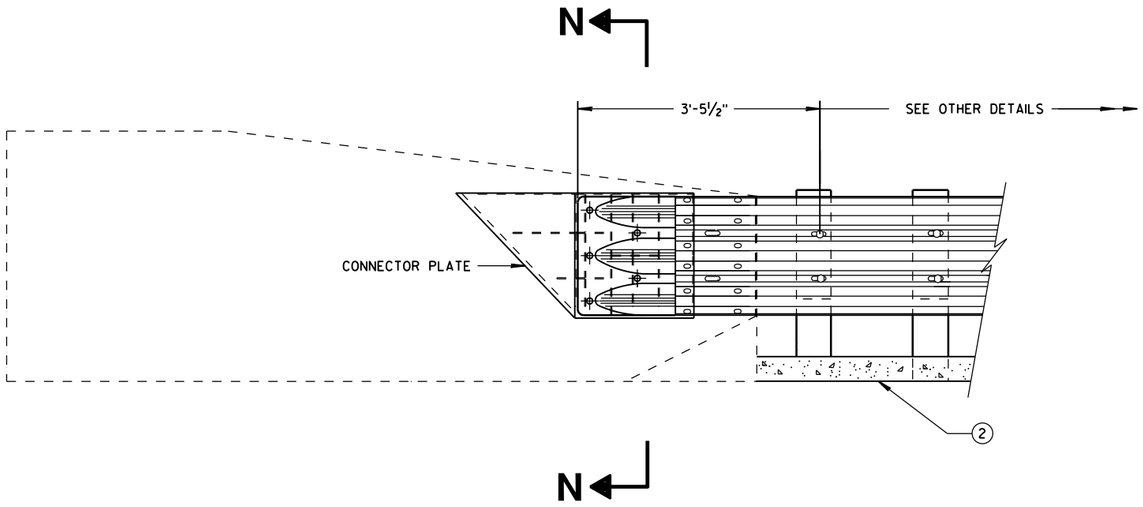
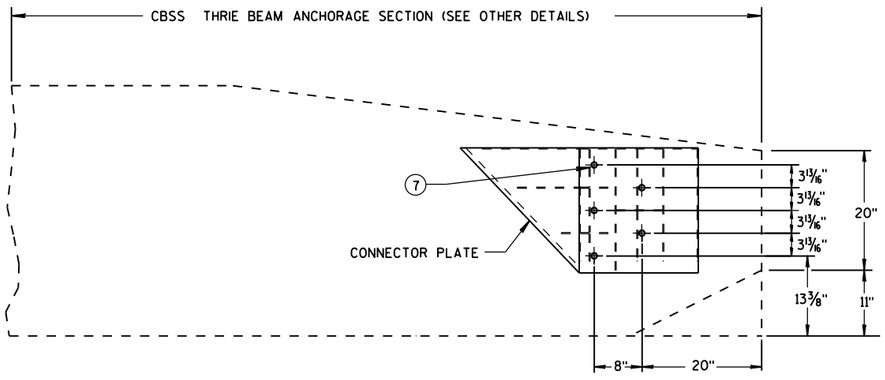


THRIE BEAM CONNECTION TO SINGLE SLOPE BARRIER



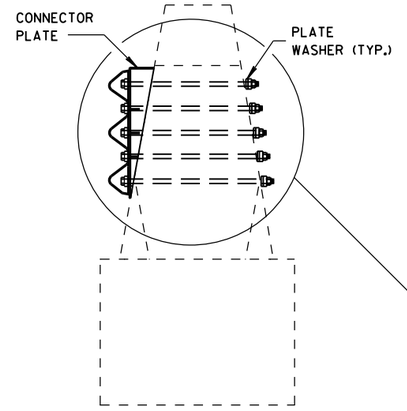
SINGLE SLOPE CONNECTION PLATE PLACEMENT

GENERAL NOTES

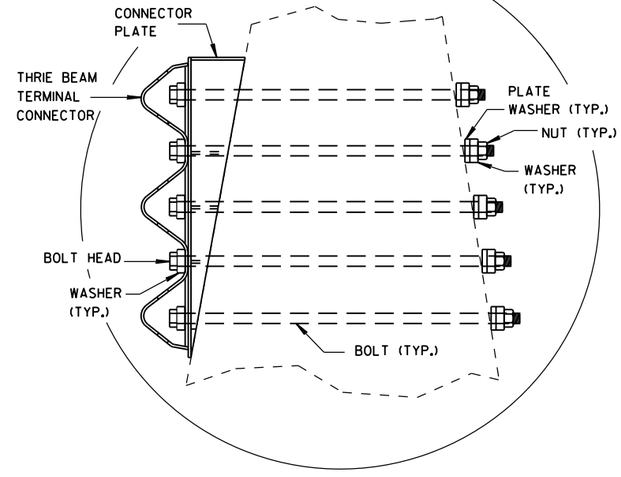
CONNECTOR PLATE, DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

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

(7) BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/8" 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

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June, 2015 — DATE
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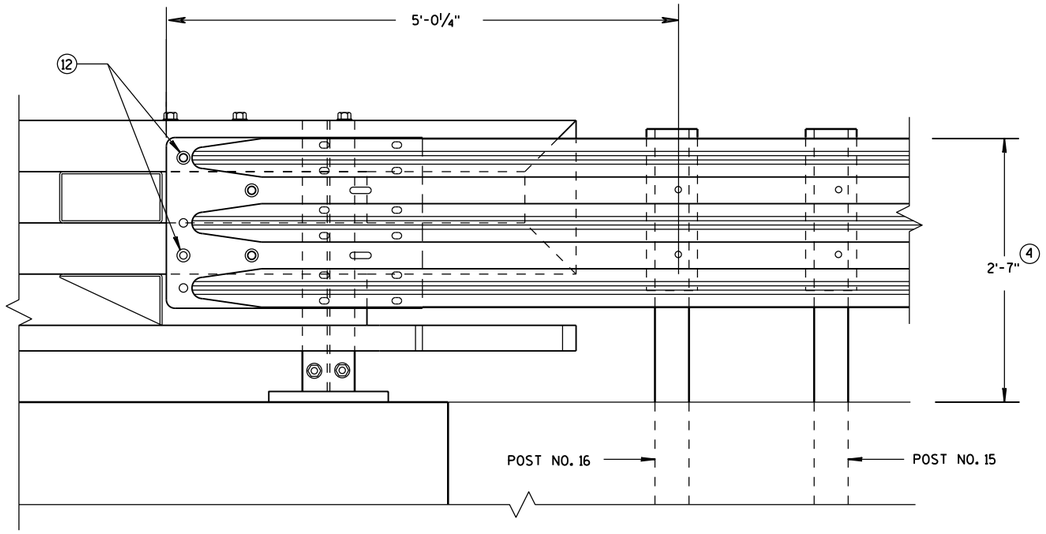
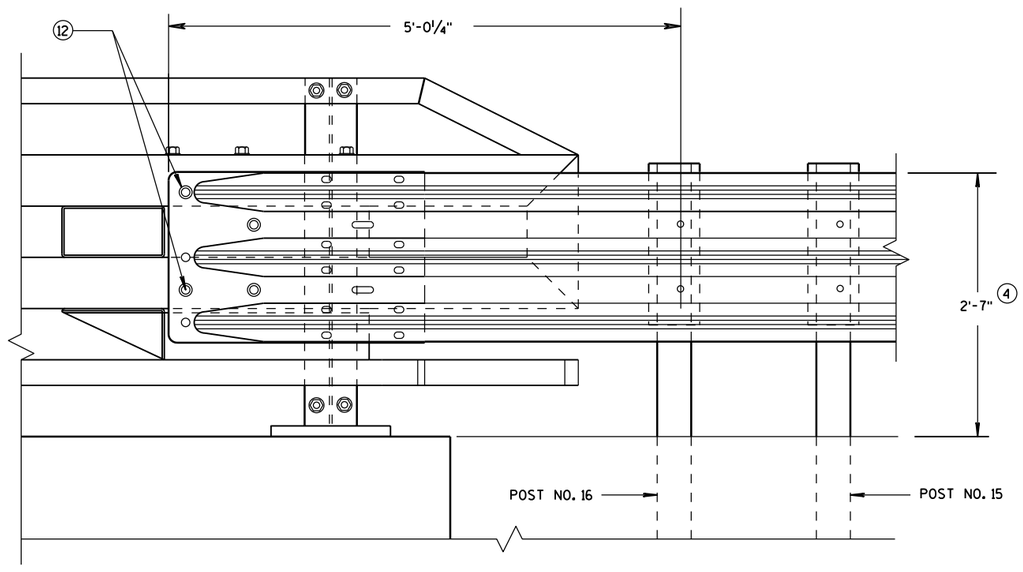


ELEVATION OF DETAIL AT NY3 END POST

THRIE BEAM RAIL ATTACHMENT



ELEVATION OF DETAIL AT NY4 END POST

THRIE BEAM RAIL ATTACHMENT

GENERAL NOTES

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

(12) BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. ON BACKSIDE OF PARAPET ONE ROUND WASHER, AND NUT REQUIRED. BOLT THREAD IS TO EXTEND ½-INCH BEYOND NUT.

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
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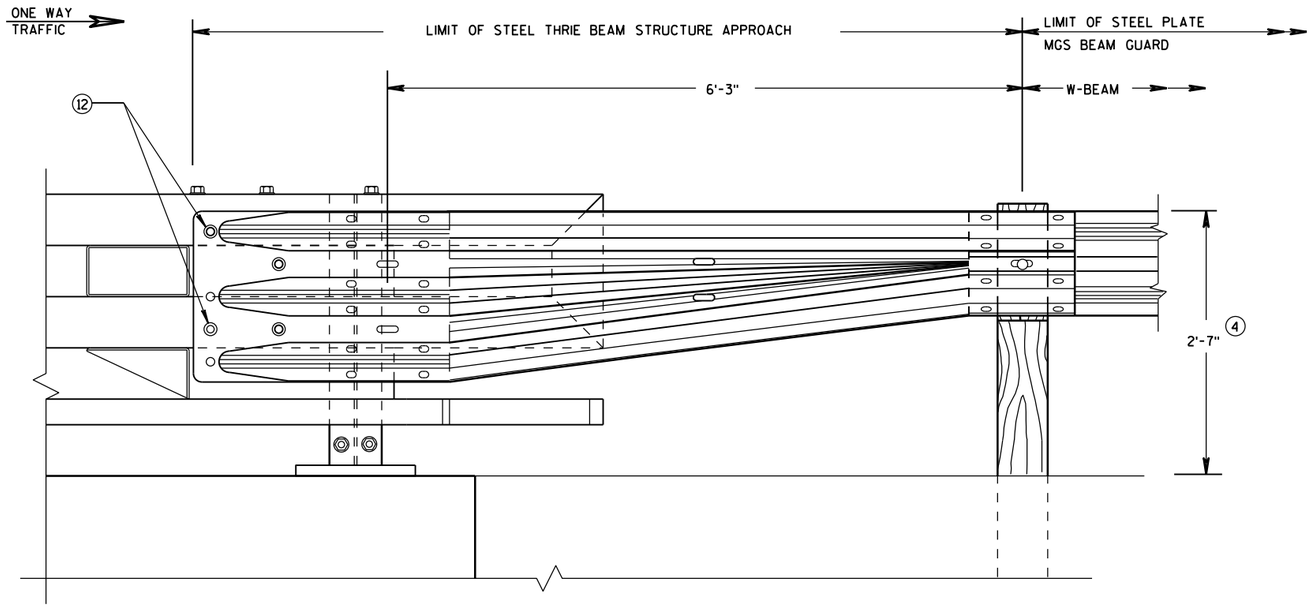


FRONT VIEW

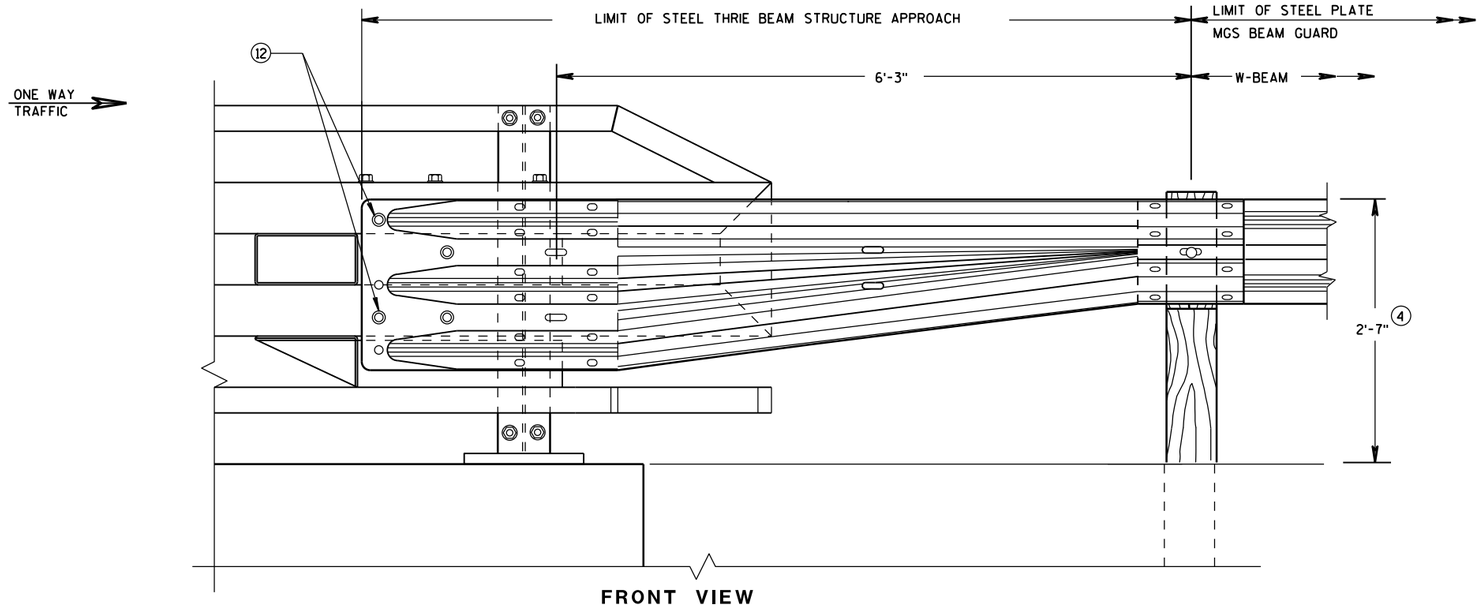
W BEAM TRANSITION AND CONNECTION TO BRIDGE RAILING TYPE "NY3"

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

GENERAL NOTES

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

(12) BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. ON BACKSIDE OF PARAPET ONE ROUND WASHER, AND NUT REQUIRED. BOLT THREAD IS TO EXTEND ½-INCH BEYOND NUT.



FRONT VIEW

W BEAM TRANSITION AND CONNECTION TO BRIDGE RAILING TYPE "NY4"

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

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
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June, 2015 — DATE
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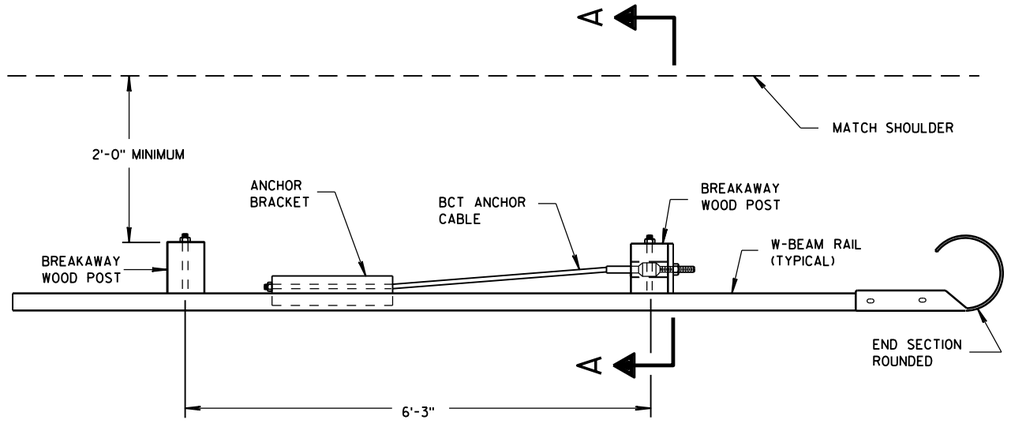
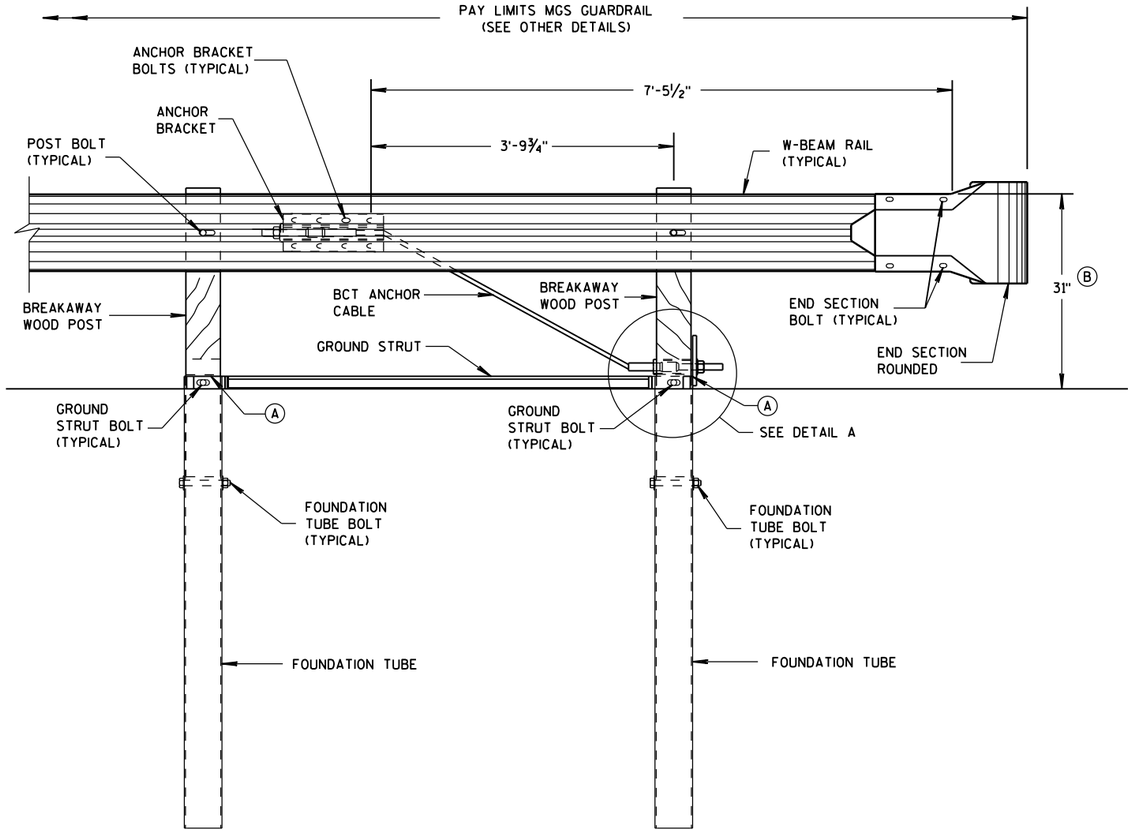
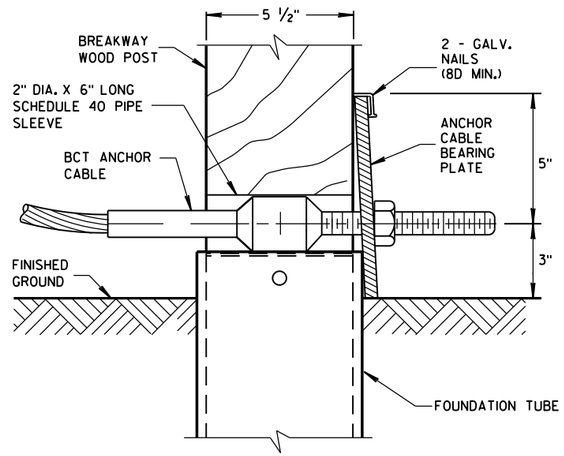


PLAN VIEW



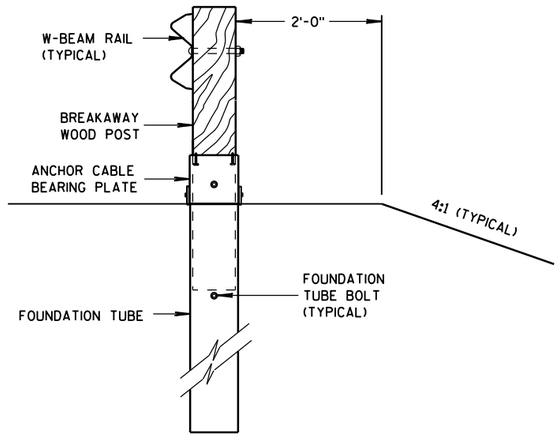
FRONT VIEW

END RAIL DETAIL



DETAIL A

POST NO. 1
GROUNG STRUT NOT SHOWN FOR CLARITY.



SECTION A-A

GENERAL NOTES

SEE SDD 14 B 42 FOR MORE INFORMATION.

END SECTION BOLTS AND NUTS HAVE THE SAME MATERIAL REQUIREMENTS AS SPLICE BOLTS.

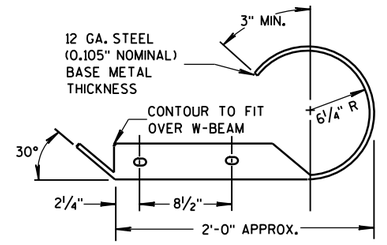
FOUNDATION TUBE BOLTS ARE ⅞" DIAMETER ASTM A307 HEX HEAD BOLT. FOUNDATION TUBE BOLTS REQUIRE ASTM A563 A NUT AND TWO ASTM F844 ⅞" DIAMETER FLAT WASHERS. INSTALL ONE WASHER UNDER BOLT HEAD AND ONE WASHER UNDER NUT.

ANCHOR BRACKET AND GROUND STRUT BOLTS ARE A ⅝" DIAMETER ASTM A307 HEX HEAD BOLT. ANCHOR BRACKET BOLTS REQUIRE ASTM A563 A NUT AND TWO ASTM F844 ⅝" DIAMETER FLAT WASHERS. INSTALL ONE WASHER UNDER BOLT HEAD AND ONE WASHER UNDER NUT.

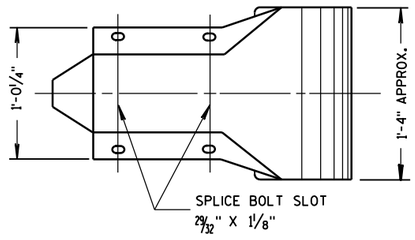
W-BEAM END SECTION ROUNDED HAS THE SAME MATERIAL PROPERTIES AS STANDARD STEEL RAIL.

(A) TOP OF FOUNDATION TUBE SHALL BE NO MORE THAN 3" ABOVE FINISHED GROUND.

(B) FOR NEW CONSTRUCTION TOP OF RAIL IS 31" ± 1".
FOR EXISTING INSTALLATIONS TOP OF RAIL IS BETWEEN 27¾" TO 32" ± 1".



PLAN VIEW



FRONT VIEW

W BEAM END SECTION ROUNDED

MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

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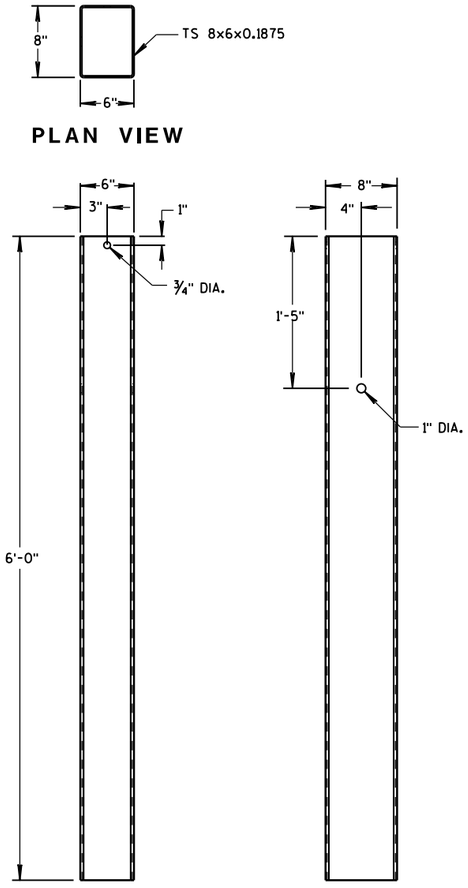
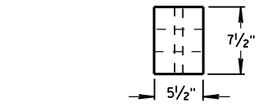
S.D.D. 14 B 47-2a



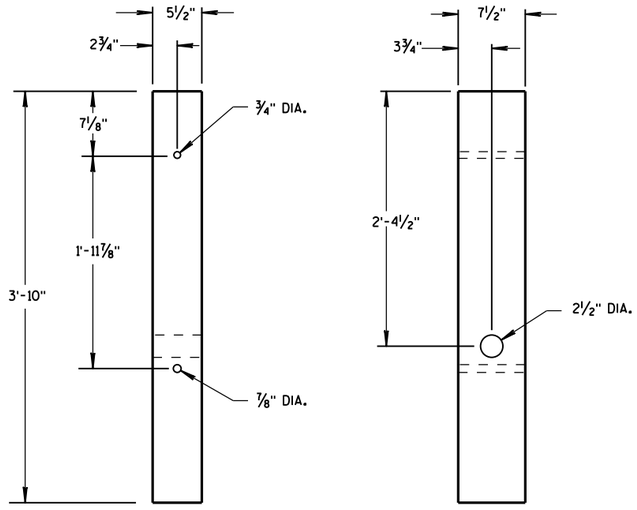
PLAN VIEW

FRONT VIEW SIDE VIEW

FOUNDATION TUBE



PLAN VIEW

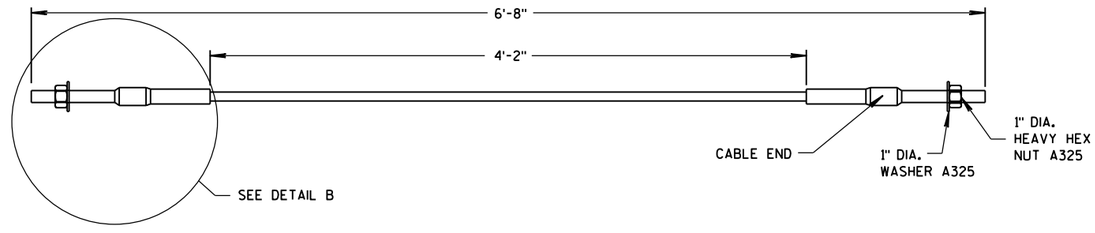


FRONT VIEW SIDE VIEW

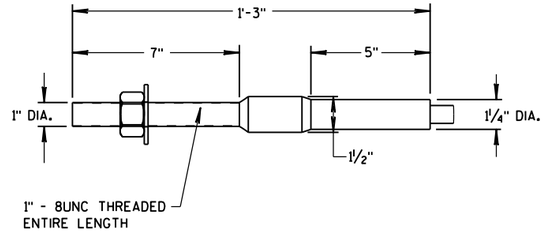
BREAKAWAY WOOD POST

GENERAL NOTES

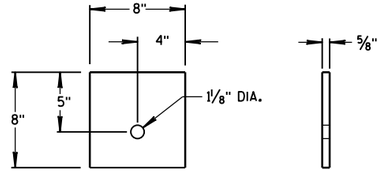
BCT ANCHOR CABLE IS A ¾" DIAMETER 6X19 IWRC IPS GALVANIZED WIRE ROPE. THE SWAGED FITTINGS AND STUD ARE REQUIRED. END FITTING SHALL BE MACHINED FROM HOT-ROLLED CARBON STEEL CONFORMING TO ASTM A576 GRADE 1035 AND GALVANIZED ACCORDING TO ASTM A123. TREADED STUD SHALL CONFORM TO ASTM A325 OR SAE GRADE 5. MINIMUM BREAKING STRENGTH OF WIRE ROPE IS 43,000 LB. WIRE ROPE IS TO BE TAUT.



BCT ANCHOR CABLE



DETAIL B



SIDE VIEW FRONT VIEW

ANCHOR CABLE
BEARING PLATE

MIDWEST GUARDRAIL
SYSTEM (MGS) TYPE 2 TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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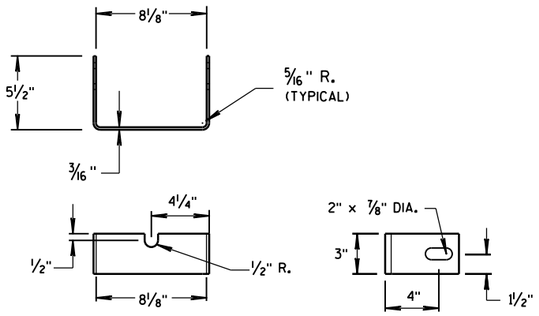
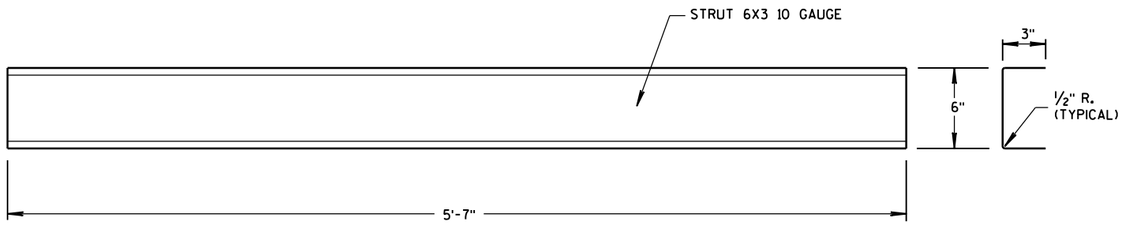
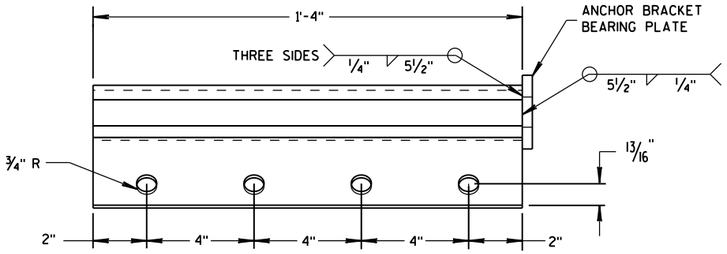
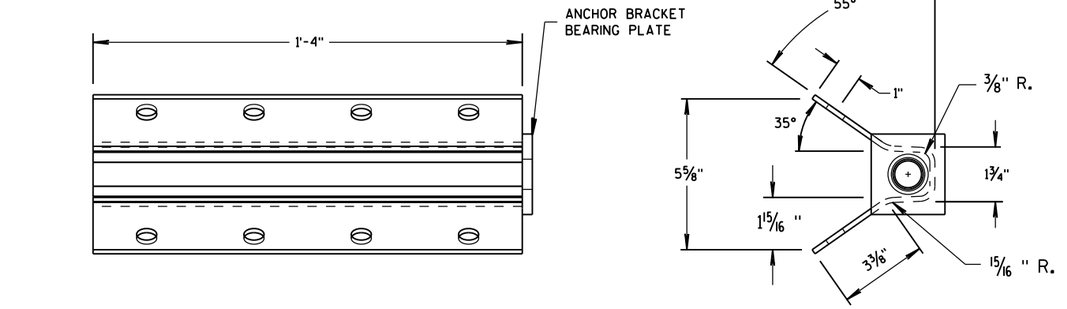


YOKE DETAIL

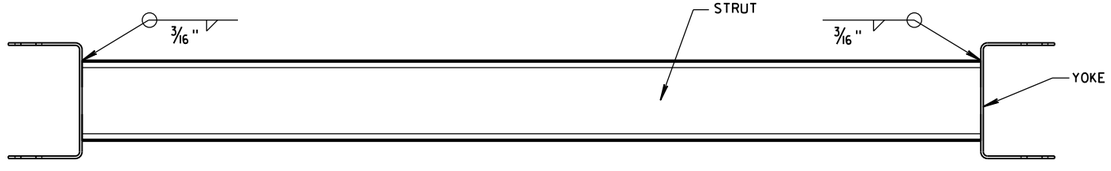


STRUT DETAIL

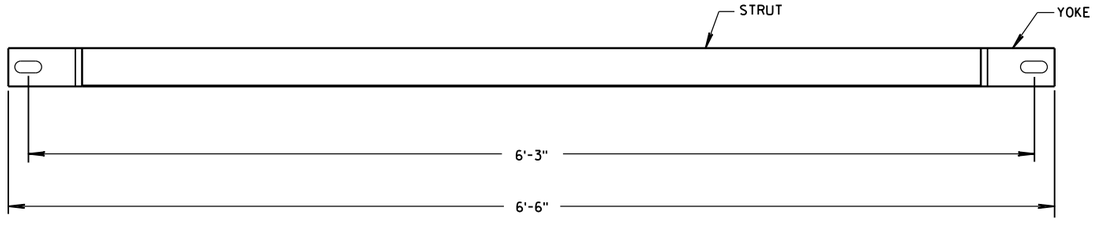




ANCHOR BRACKET

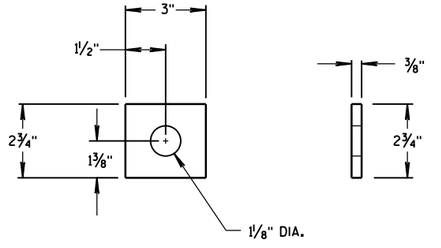


PLAN VIEW



FRONT VIEW

GROUND STRUT DETAIL



ANCHOR BRACKET BEARING PLATE

MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2014
DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER
FHWA

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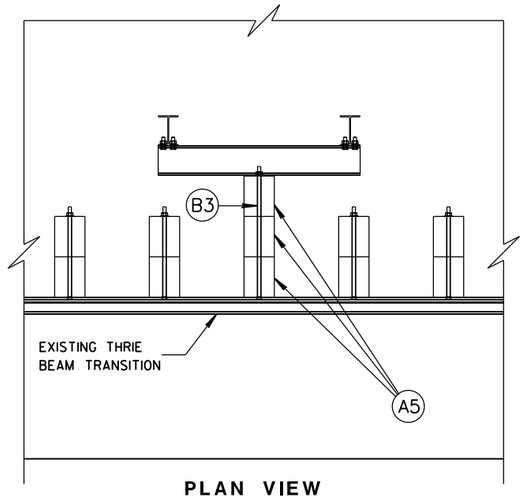
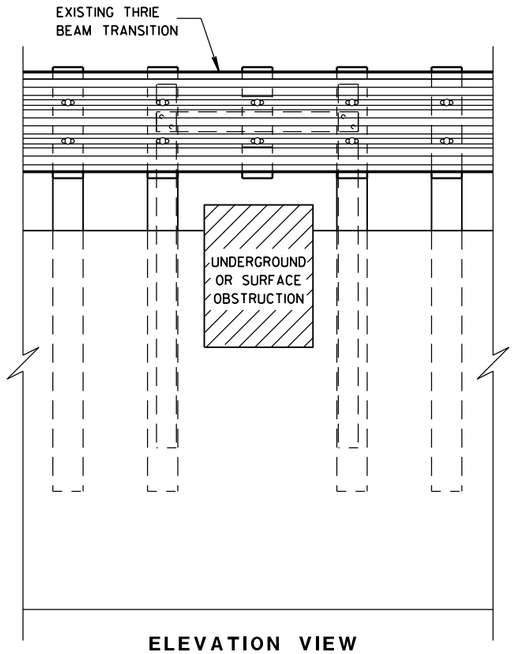
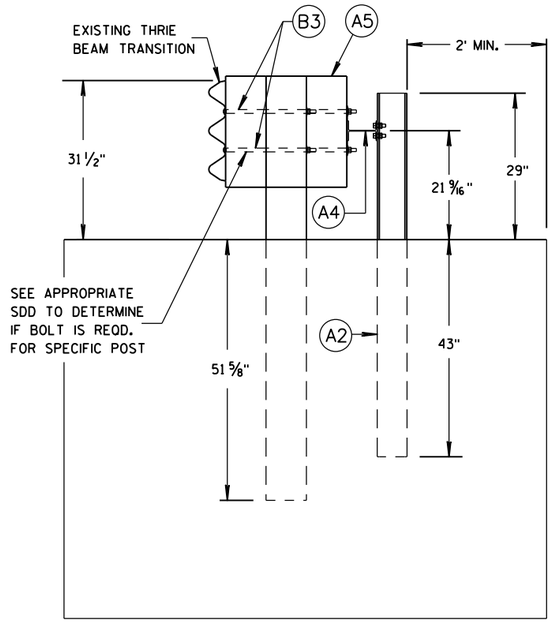


PLAN VIEW



ELEVATION VIEW



SIDE VIEW

72" MISSING POST CROSS-BEAM

GENERAL NOTES

ONLY ONE SUCH POST RETROFIT PER SYSTEM.

SEE SDD 14B20 FOR MORE INFORMATION ON THE THRIE BEAM TRANSITIONS.

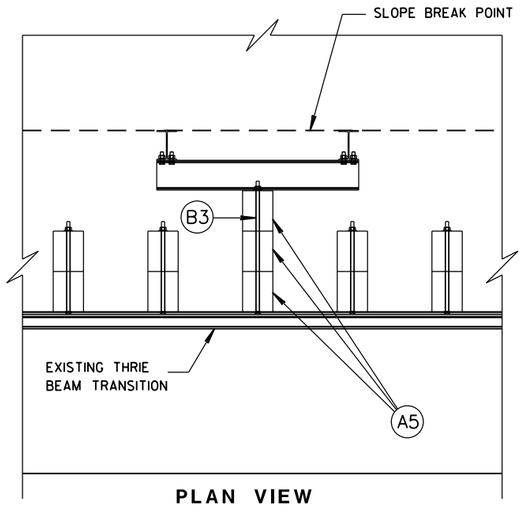
IF ROCK IS ENCOUNTERED, REMOVE ROCK TO FULL DEPTH OF POST PLUS 2½-INCHES AND 12-INCHES IN DIAMETER AROUND POST. SEE SDD 14B20 OR 14B45 FOR MORE DETAILS.

ONLY STEEL POST CAN BE USED.

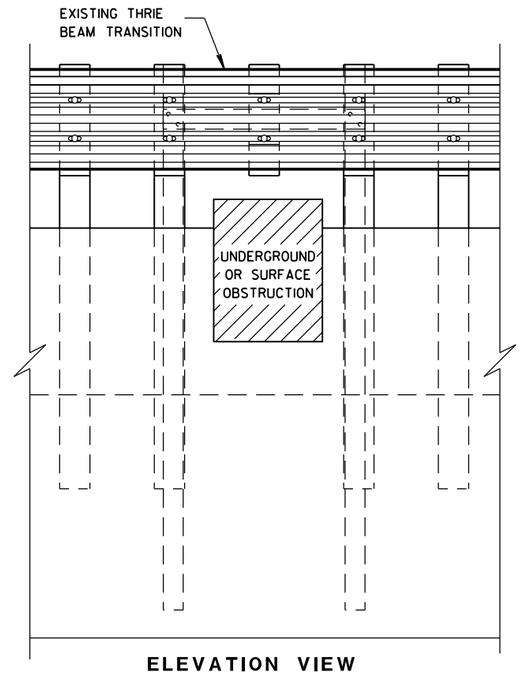
BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN ALL HARDWARE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH.

ONLY ONE WASHER AND ONE NUT CAN BE INSTALLED AT A CONNECTION. CUT THREADING OF BOLTS SO THAT NO MORE THAN ¼-INCH TO ½-INCH OF THREADING IS BEYOND THE NUT.

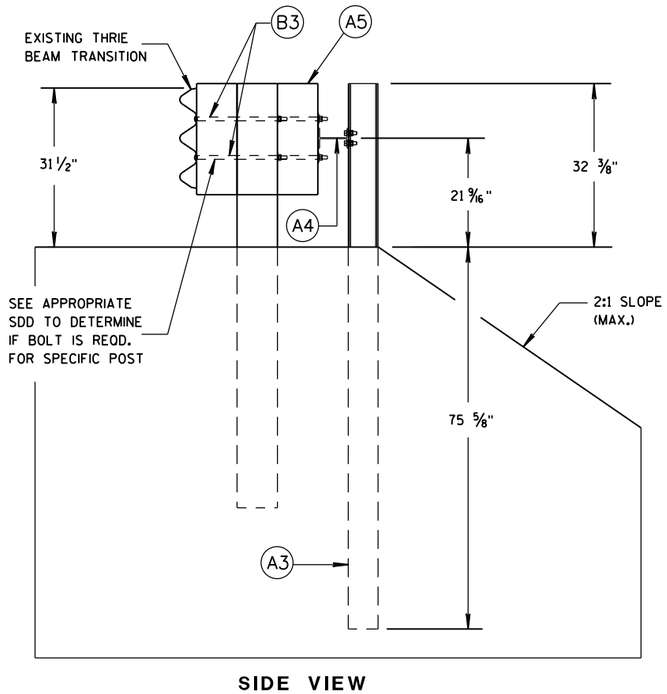
WHEN USING APPROACH RETROFIT POST BID ITEM, REVIEW SDD 14B20 INSTALL POST INFORMATION AND LOCATION, BLOCK AND HARDWARE.



PLAN VIEW



ELEVATION VIEW



SIDE VIEW

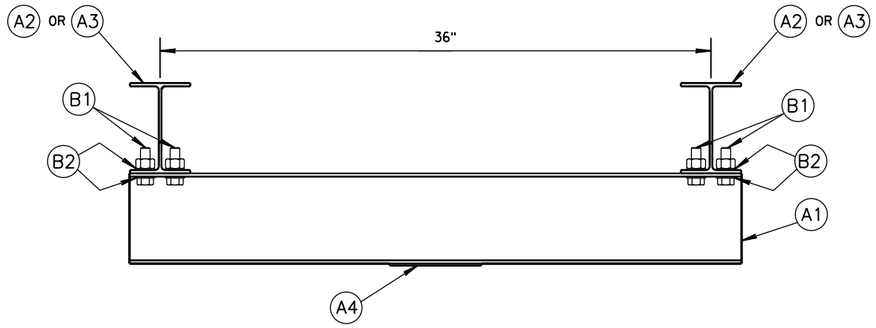
108" MISSING POST CROSS-BEAM

THRIE BEAM APPROACH
RETROFIT INSTALLATION
OF MISSING POST

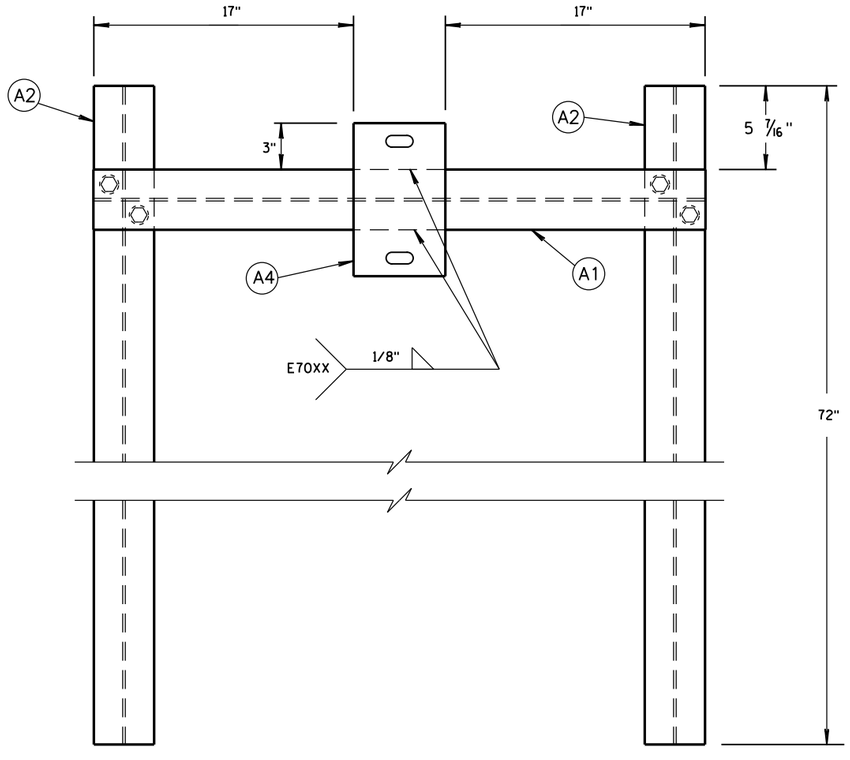
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

S.D.D. 14 B 50-1a

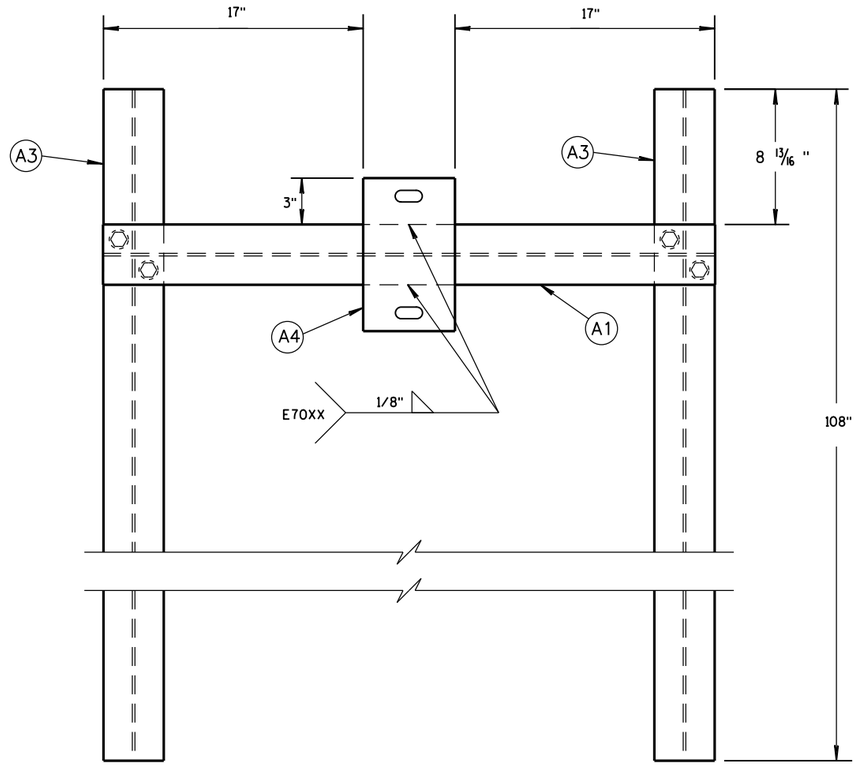


PLAN VIEW



ELEVATION VIEW

72" POST



ELEVATION VIEW

108" POST

MISSING POST CROSS-BEAM DETAIL

THRIE BEAM APPROACH
RETROFIT INSTALLATION
OF MISSING POST

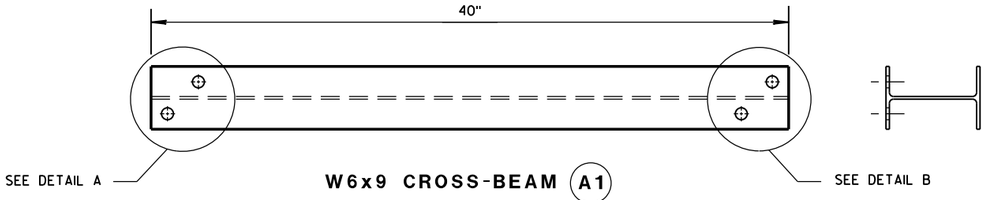
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

S.D.D. 14 B 50-1b

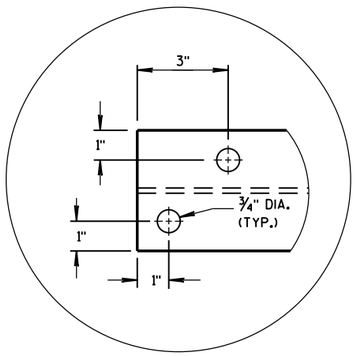
6

S.D.D. 14 B 50-1b

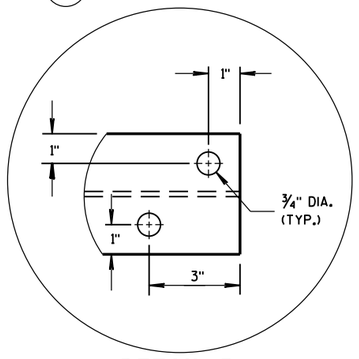


W6x9 CROSS-BEAM (A1)

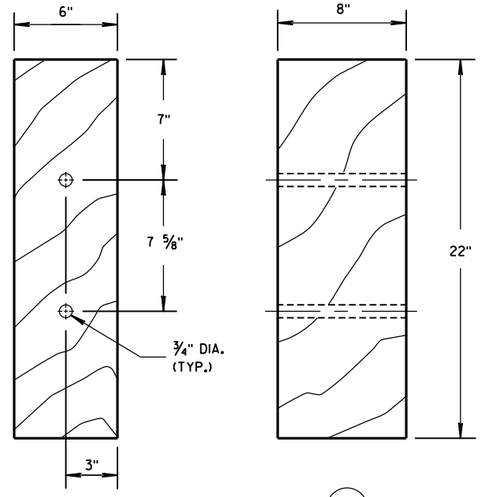
BILL OF MATERIALS			
ITEM NO.	QTY.	DESCRIPTION	MATERIAL SPECIFICATION
(A1)	1	40" LONG W6x9 CROSS-BEAM	ASTM A992 GR. 50 OR ASTM A36
(A2)	2	72" LONG W6x9 POST	ASTM A992 GR. 50 OR ASTM A36
(A3)	2	108" LONG W6x9 POST	ASTM A992 GR. 50 OR ASTM A36
(A4)	1	6" x 10" x 1/8" BACKUP PLATE	ASTM A992 GR. 50 OR ASTM A36
(A5)	3	6" x 8" x 22" BLOCKOUT	
(B1)	4	5/8" DIA. - HEX HEAD BOLT	BOLT: HEAVY HEX HEAD ASTM A307 OR SAE J429 GRADE 2 NUT: HEAVY HEX HEAD ASTM A563 A
(B2)	8	5/8" DIA. NARROW FLAT WASHER	ASTM F436
(B3)	2	LONG, 5/8" DIA. - POST BOLT AND NUT	BOLT: SAE J429 GRADE 2 OR ASTM A307 GRADE C OR ASTM F1554 GRADE 36 NUT: 5/8" DIA. ASTM A563 A DOUBLE RECESSED (DR) HEAVY HEX HEAD
(B4)	2	5/8" DIA. PLAIN ROUND WASHER	ASTM F844



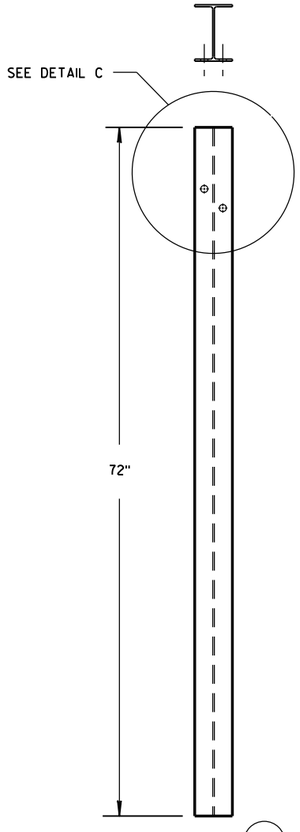
DETAIL A



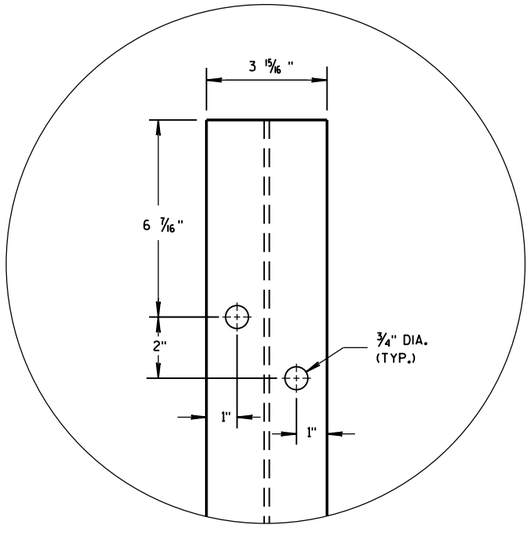
DETAIL B



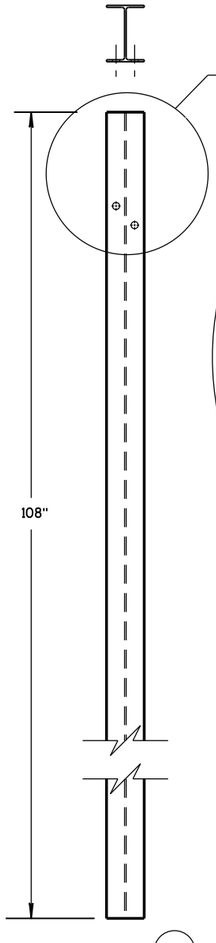
BLOCKOUT (A5)



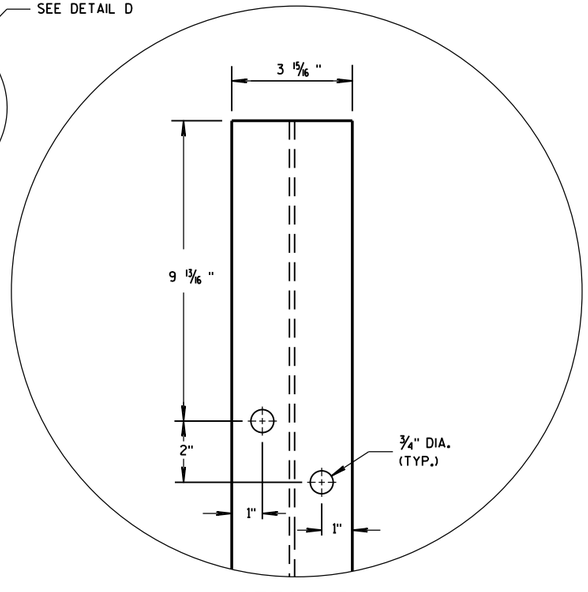
W6x9 POST (A2)



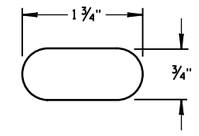
DETAIL C



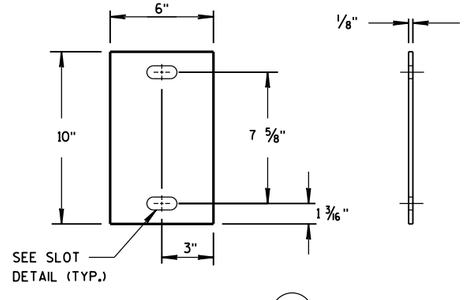
W6x9 POST (A3)



DETAIL D



SLOT DETAIL



BLACKUP PLATE (A4)

THRIE BEAM APPROACH
RETROFIT INSTALLATION
OF MISSING POST

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2014
DATE
/S/ Jerry H. Zoga
ROADWAY STANDARDS ENGINEER

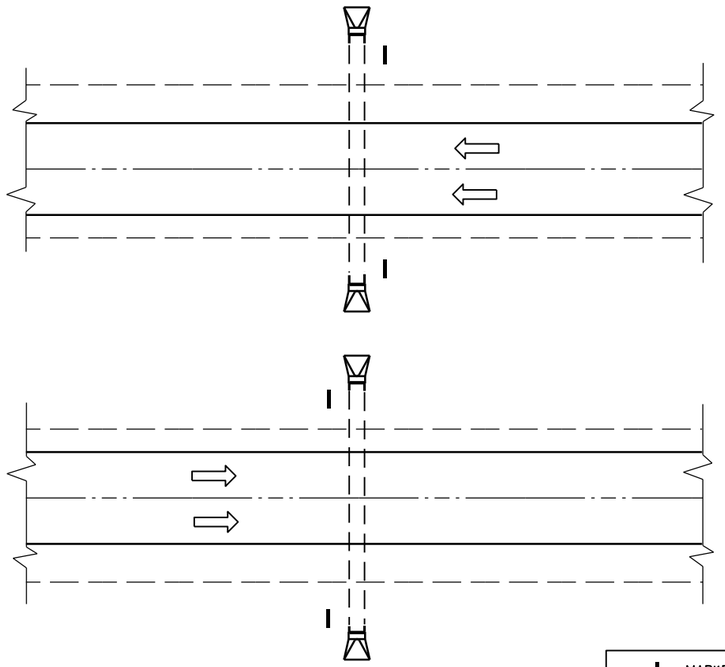
FHWA

6

S.D.D. 14 B 50-1c

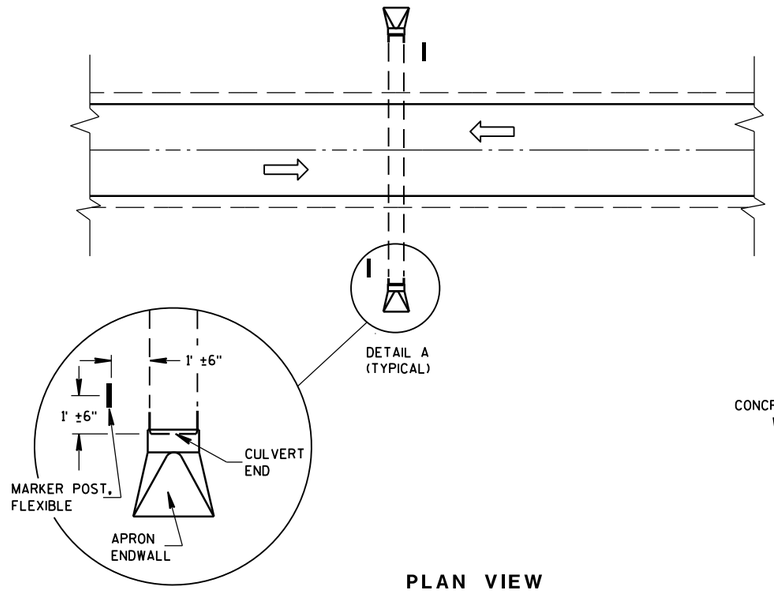
6

S.D.D. 14 B 50-1c



PLAN VIEW

DIVIDED HIGHWAY



DETAIL A
(TYPICAL)

PLAN VIEW

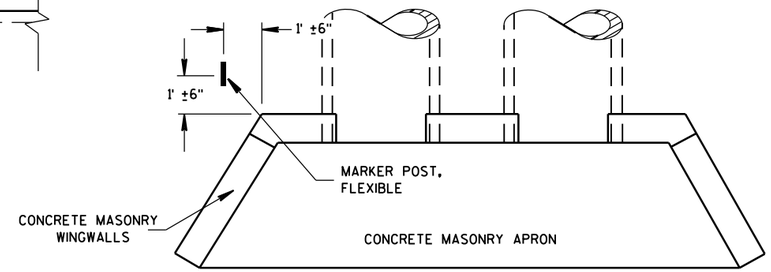
UNDIVIDED HIGHWAY

MARKER POST, FLEXIBLE

DIRECTION OF TRAFFIC FLOW

GENERAL NOTES

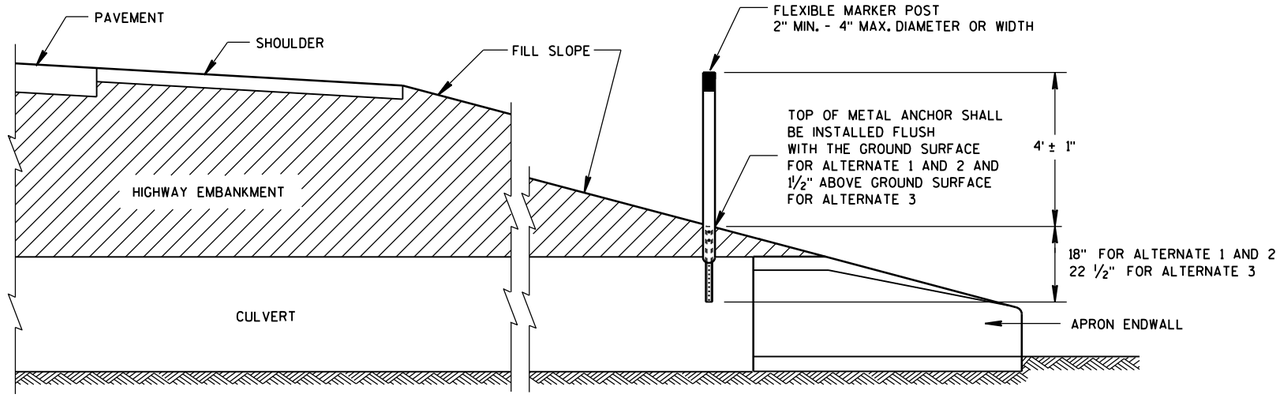
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.



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

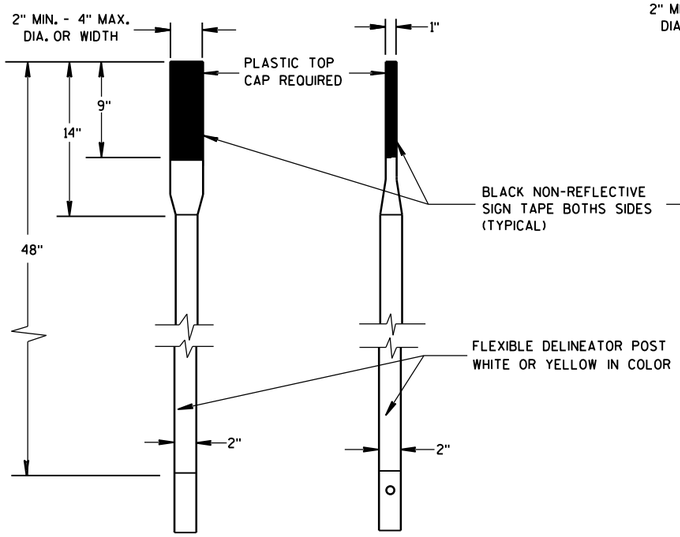
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

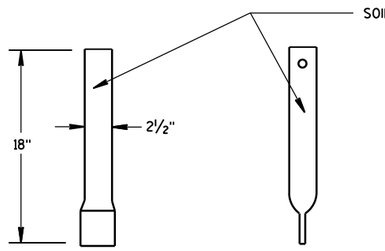
6

S.D.D. 15 A 3-2a

6

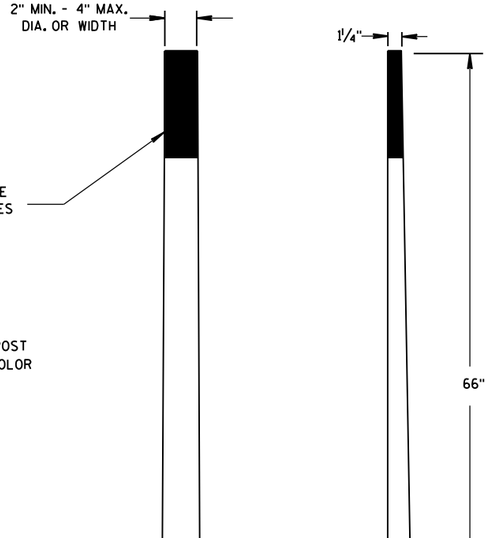
S.D.D. 15 A 3-2a





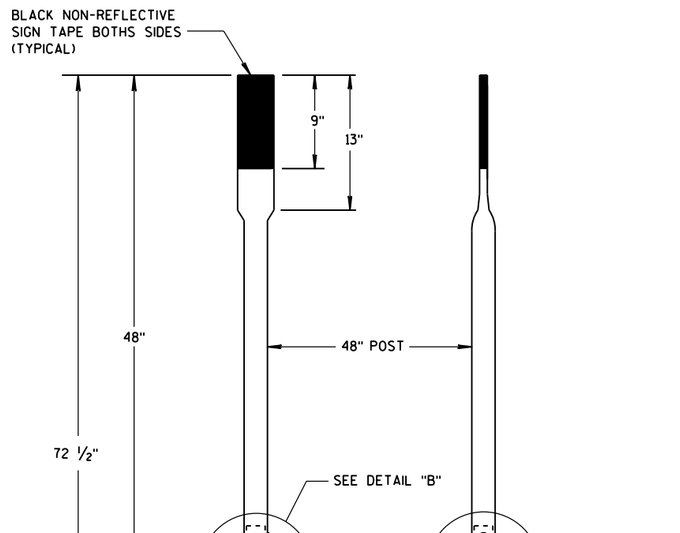
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

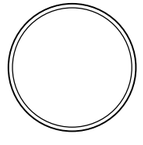
ALTERNATE 2



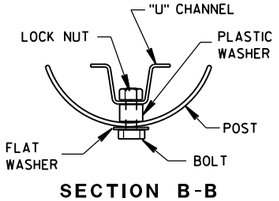
FRONT VIEW SIDE VIEW

ALTERNATE 3

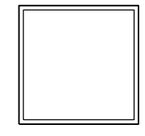
FLEXIBLE MARKER POSTS



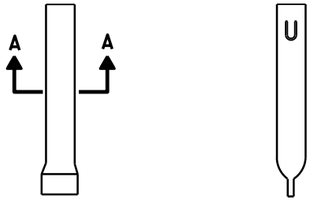
SECTION A-A



SECTION B-B

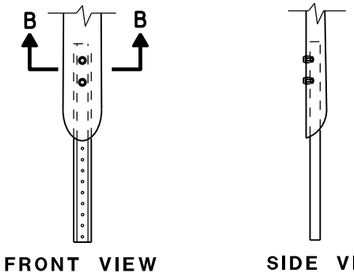


SECTION C-C



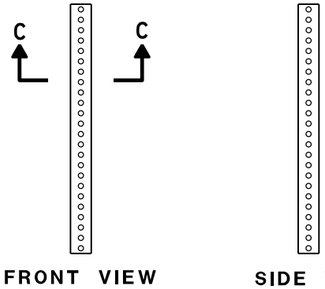
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

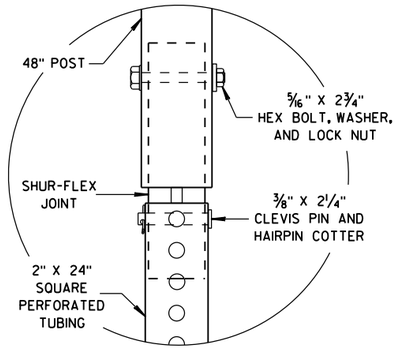
ALTERNATE 2



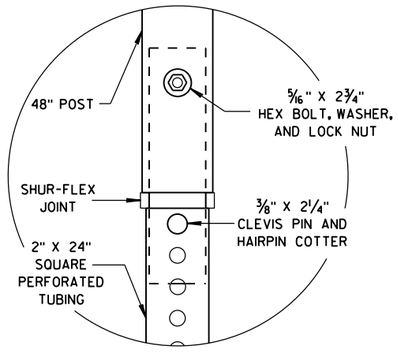
FRONT VIEW SIDE VIEW

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

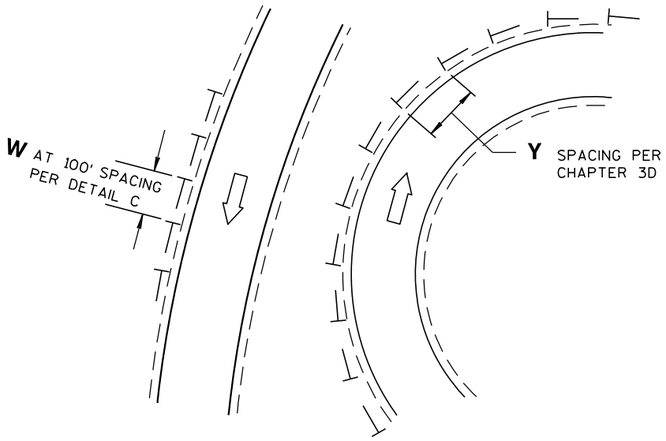
S.D.D. 15 A 3-2b

6

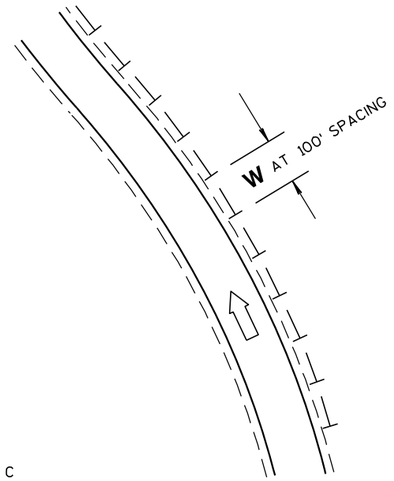
S.D.D. 15 A 3-2b

GENERAL NOTES

* USE DOUBLE DELINEATOR ALONG ACCELERATION-DECELERATION LANES AND TAPERS. USE SINGLE DELINEATOR WHEN RAMP PAVEMENT IS FULL WIDTH.



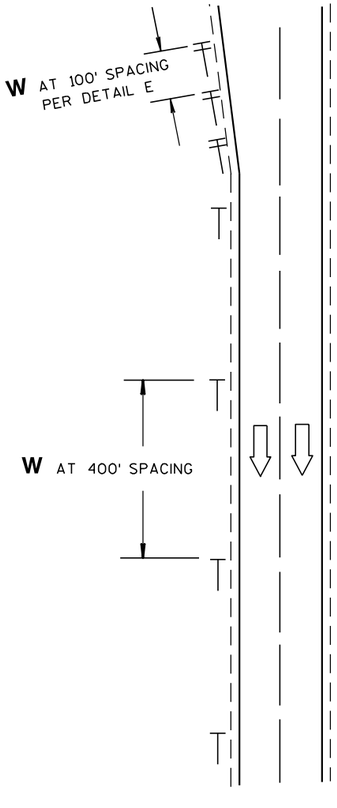
DETAIL A
DELINEATOR LAYOUT AT CURVED RAMP



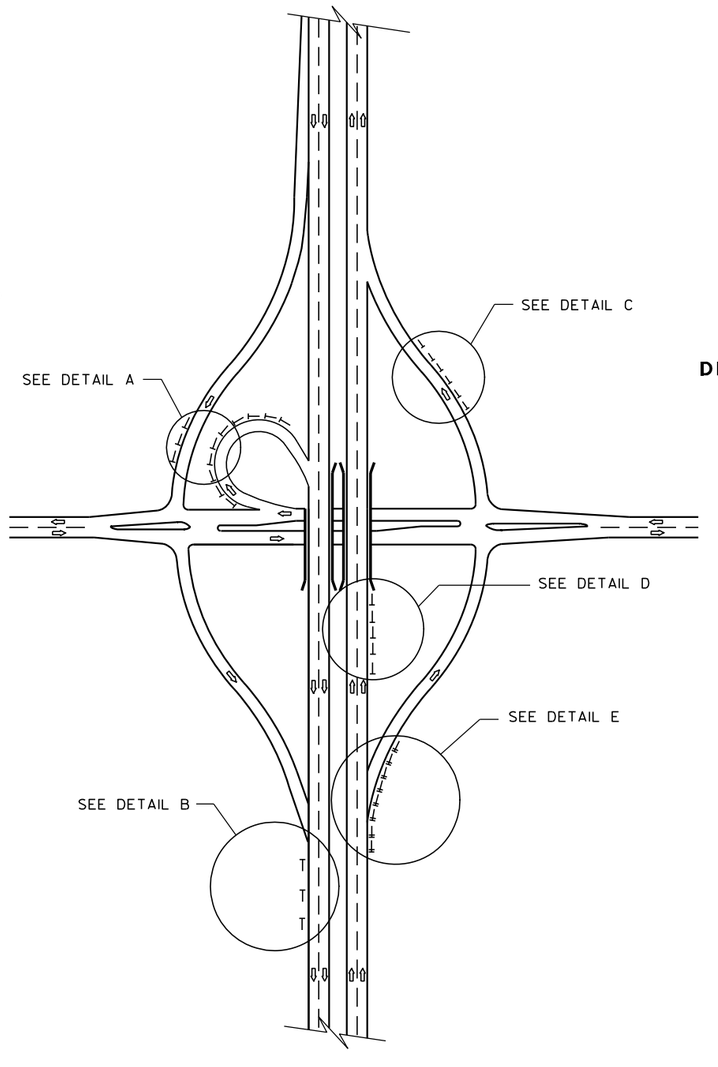
DETAIL C
DELINEATOR LAYOUT ALONG RAMP

LEGEND

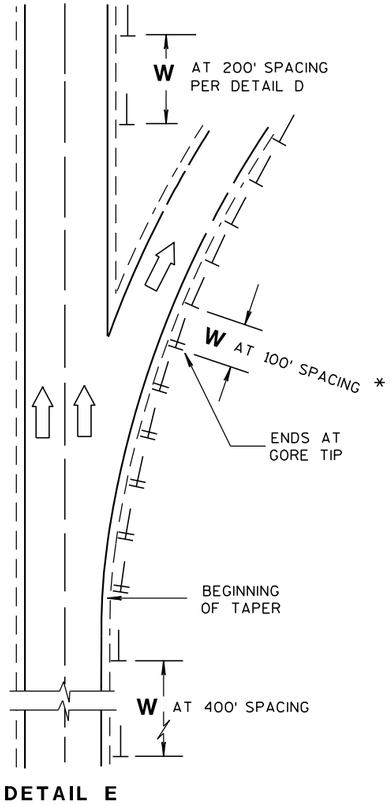
- DIRECTION OF TRAFFIC FLOW
- SINGLE DELINEATOR
- DOUBLE DELINEATOR
- W — WHITE
- Y — YELLOW



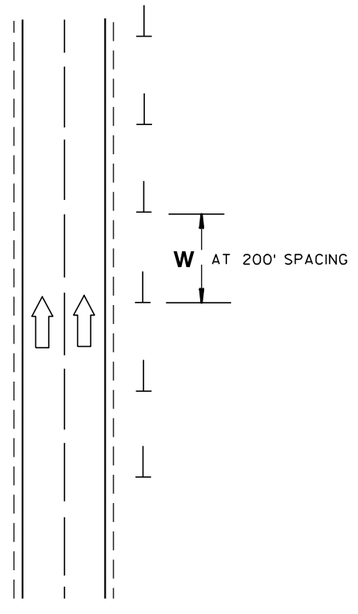
DETAIL B
DELINEATOR LAYOUT ALONG MAINLINE



DELINEATOR LAYOUT



DETAIL E
DELINEATOR LAYOUT FOR ACCELERATION - DECELERATION LANES AND TAPERS AT RAMPS



DETAIL D
DELINEATOR LAYOUT BETWEEN INTERCHANGE RAMPS

DELINEATOR LAYOUT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
2/5/09 DATE
/S/ Thomas N. Nothdurft
STATE TRAFFIC ENGINEER
FHWA

6

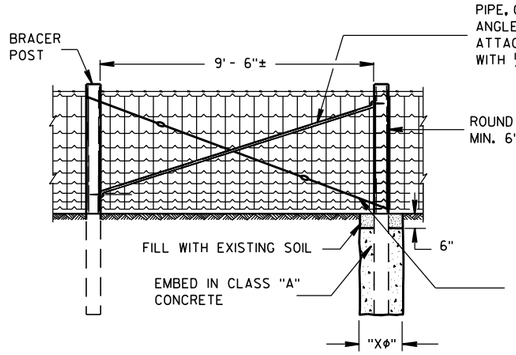
S.D.D. 15 A 6-2

6

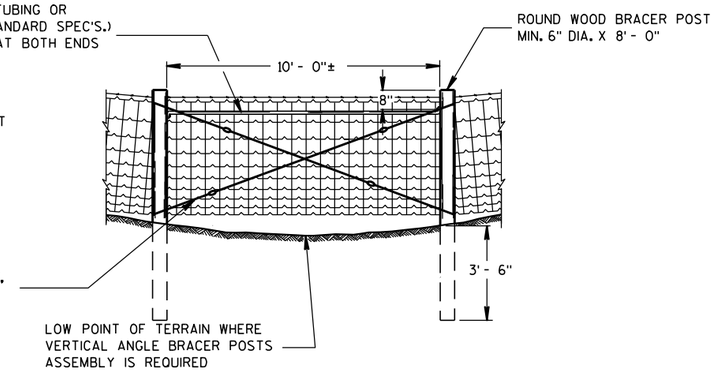
S.D.D. 15 A 6-2

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

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



PULL OR STRETCHER POSTS ASSEMBLY



VERTICAL ANGLE BRACER POSTS ASSEMBLY

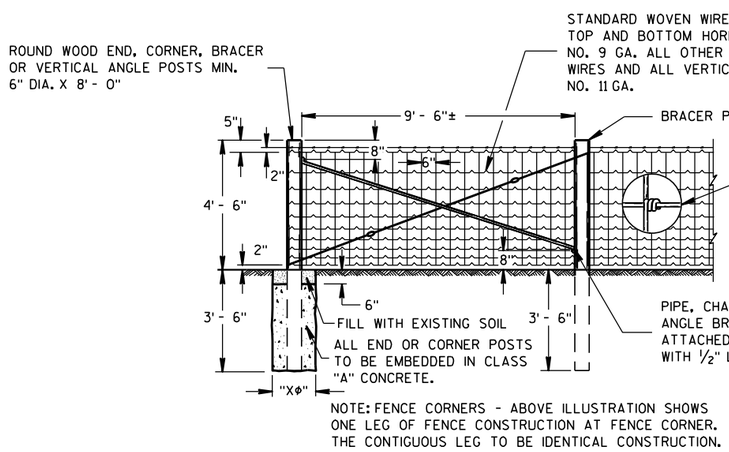
GENERAL NOTES

"XΦ" = DIAMETER OF THE POST PLUS 12".

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

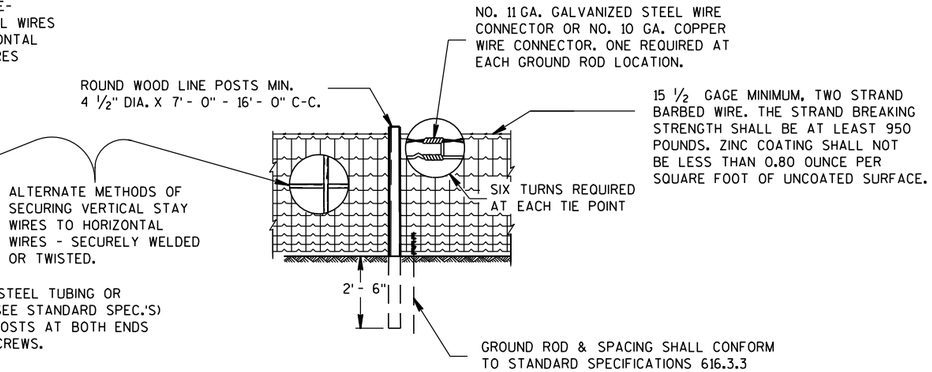
DO NOT STAPLE WIRE TIGHT TO THE LINE POSTS. ALLOW MOVEMENT OF WIRE FOR EXPANSION AND CONTRACTION. STAPLE ARRANGEMENT SHALL BE THE SAME FOR ALL OTHER POSTS EXCEPT THAT THEY SHALL BE DRIVEN TIGHT TO POSTS. ALL STAPLES SHALL BE 2" X 9 GAGE AND SHALL BE MANUFACTURED FROM GALVANIZED WIRE OR HOT DIP GALVANIZED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

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



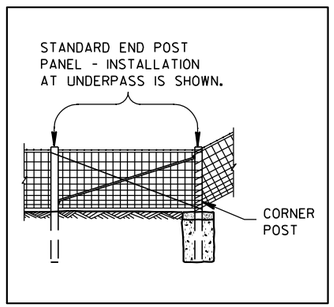
NOTE: FENCE CORNERS - ABOVE ILLUSTRATION SHOWS ONE LEG OF FENCE CONSTRUCTION AT FENCE CORNER. THE CONTIGUOUS LEG TO BE IDENTICAL CONSTRUCTION.

END OR CORNER POSTS ASSEMBLY

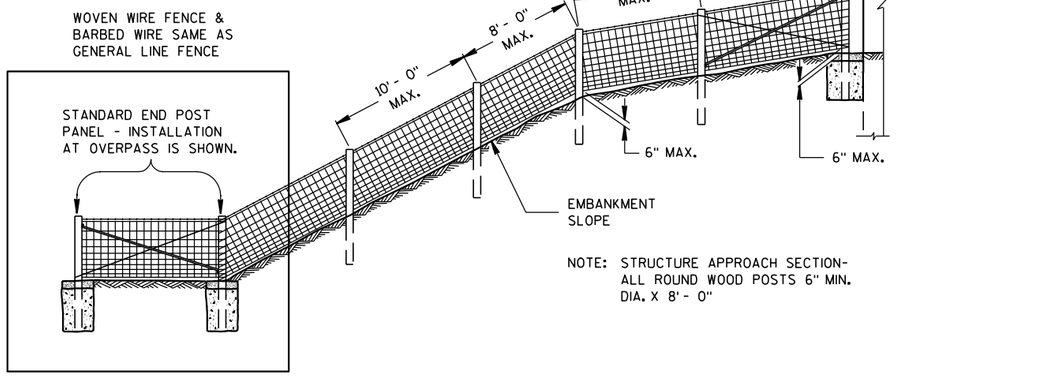


LINE FENCE CONSTRUCTION

GENERAL ROADSIDE VIEW OF WOVEN WIRE FENCE



ALTERNATE FENCE DESIGN AT STRUCTURE



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

FENCE DESIGN AT STRUCTURE APPROACH

FENCE WOVEN WIRE

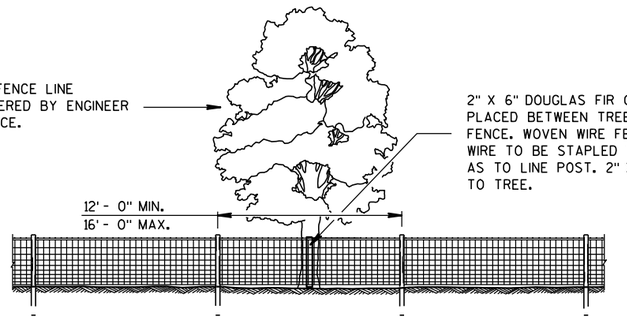
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

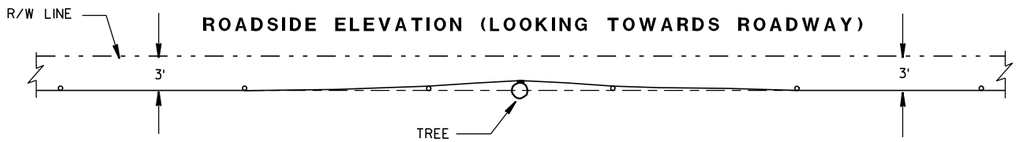
S.D.D. 15 B 1-8a

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

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

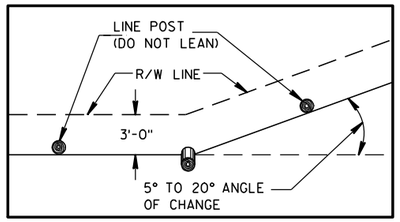


ROADSIDE ELEVATION (LOOKING TOWARDS ROADWAY)

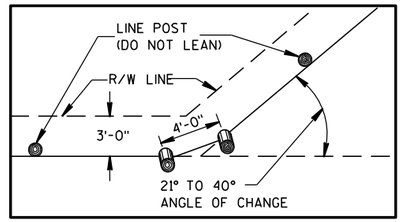


PLAN VIEW

FENCE DESIGN AT TREES REMAINING IN NORMAL FENCE LINE



PLAN VIEW
SINGLE POST CORNER

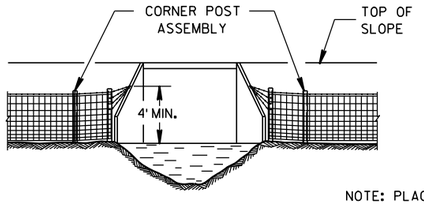


PLAN VIEW
DOUBLE POST CORNER

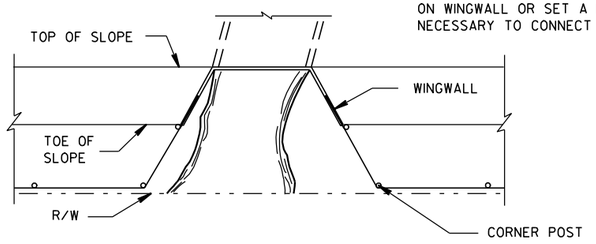
RIGHT OF WAY LINE CHANGE 40° AND LESS

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

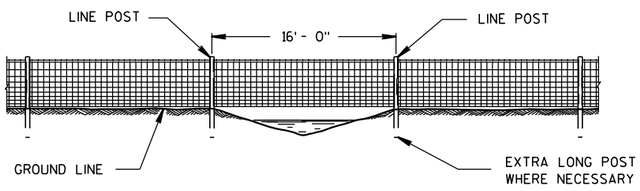
WHEN THE RIGHT OF WAY LINE CHANGE IS MORE THAN 40° USE THE CORNER OR STRETCHER POSTS ASSEMBLY.



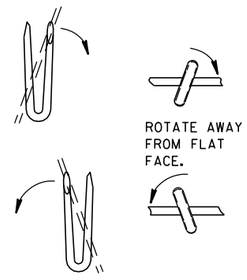
NOTE: PLACE A MINIMUM OF 4 STRANDS OF BARBED WIRE, 6" MAXIMUM CENTERS IN FAN SHAPE CONNECTED TO AN EYE BOLT ON WINGWALL OR SET A LONE POST WHEN NECESSARY TO CONNECT BARBED WIRE.



FENCE INSTALLATION TO WINGWALLS

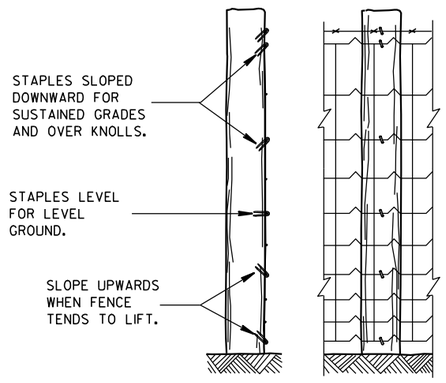


FENCE CONSTRUCTION OVER STREAM COURSES OF 15 FT. OR LESS IN WIDTH



LINE POST

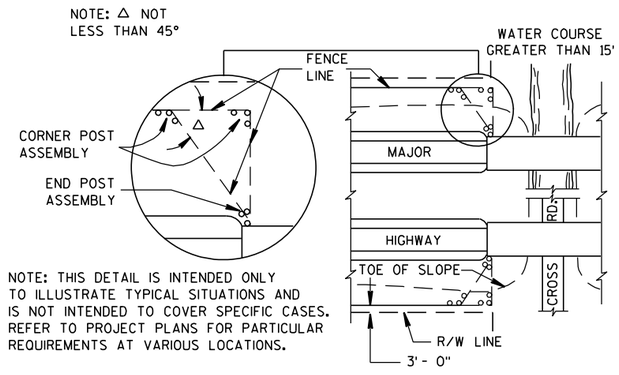
NOTE: WHEN POSTS ARE DRIVEN THE SMALL END SHALL BE DOWN.



END ELEVATION — FARM SIDE ELEVATION

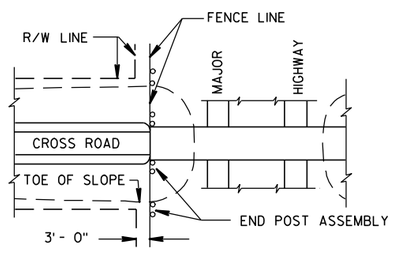
FENCE MOUNTING DETAIL

NOTE: △ NOT LESS THAN 45°



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

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



PLAN VIEW
MAJOR HIGHWAY UNDERPASS

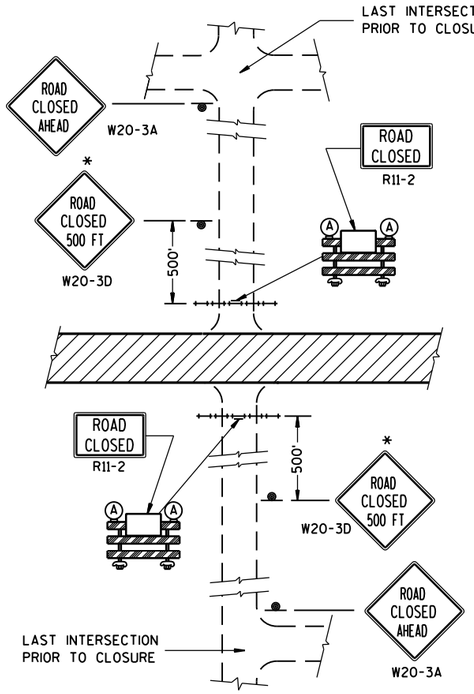
FENCE LOCATION AT STRUCTURES

FENCE WOVEN WIRE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

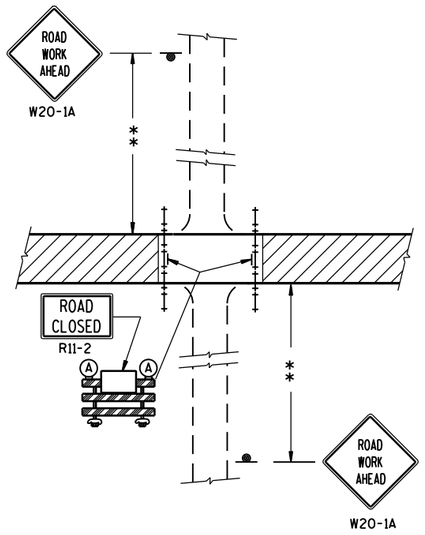
APPROVED
4/4/2008
DATE
/S/ Jerry H. [illegible]
ROADWAY STANDARDS [illegible]
ENGINEER
FHWA

6
S.D.D. 15 B 1-8b



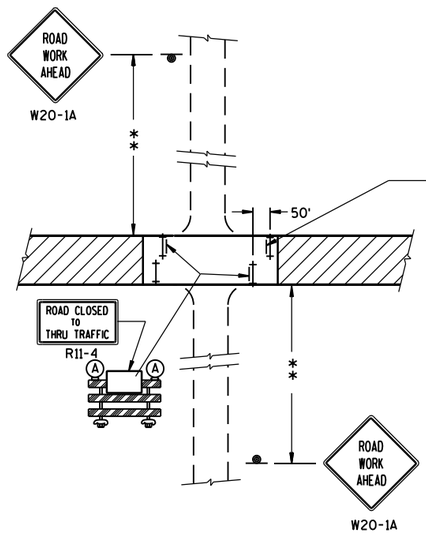
DETAIL 1

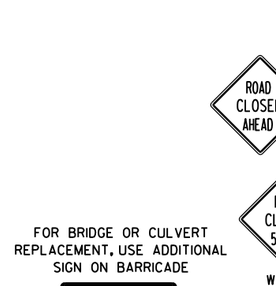
(NO ACCESS TO PROJECT)



DETAIL 2

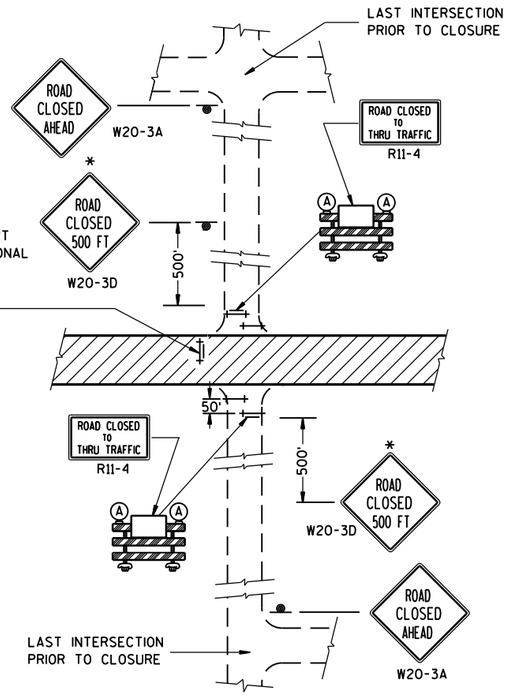
(PUBLIC CROSS-TRAFFIC MAINTAINED.
NO ACCESS TO PROJECT).





DETAIL 3

(PUBLIC CROSS-TRAFFIC MAINTAINED. CONTRACTOR, LOCAL BUSINESS AND RESIDENT ACCESS).



DETAIL 4

(CONTRACTOR, LOCAL BUSINESS AND
RESIDENT ACCESS TO PROJECT)

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.

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.

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 AND R11-4 SIGNS PLACED ON BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE OR BOTTOM RAILS.

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:
R11-2 SHALL BE 48" X 30".
R11-4 AND R11-3 SHALL BE 60" X 30".

*OMIT THE "ROAD CLOSED 500 FT." SIGN IF THE LAST INTERSECTION IS 500 FT. OR LESS FROM THE WORK ZONE.

**500' MAX. OR AT LAST INTERSECTION WHICHEVER IS CLOSER.

LEGEND

- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- (A) TYPE "A" WARNING LIGHT (FLASHING)
- WORK AREA

BARRICADES AND SIGNS FOR SIDEROAD CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2015 — DATE
/S/ Peter Amakobe Atepe
STATEWIDE WORK ZO... SAFETY ENGI... FIC
FHWA

6

S.D.D. 15 C 3-3

6

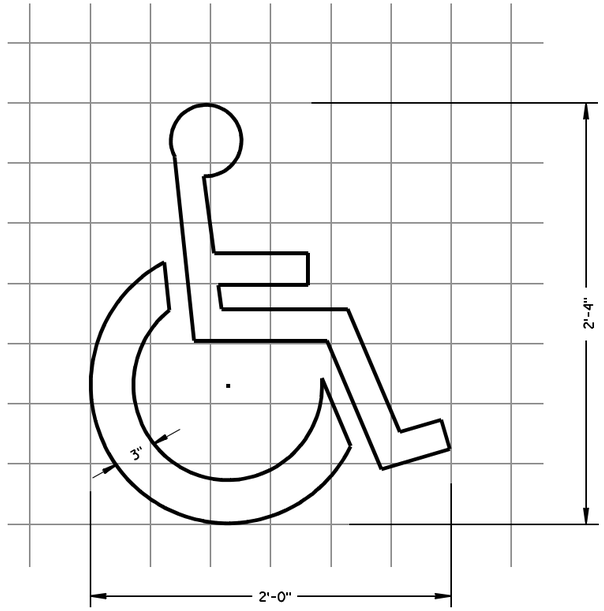
S.D.D. 15 C 3-3

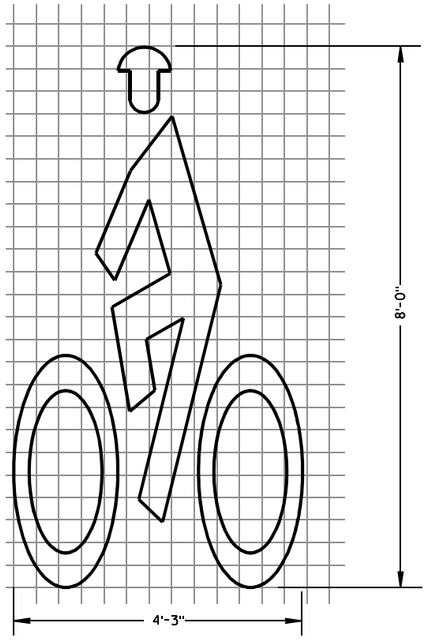
GENERAL NOTES

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

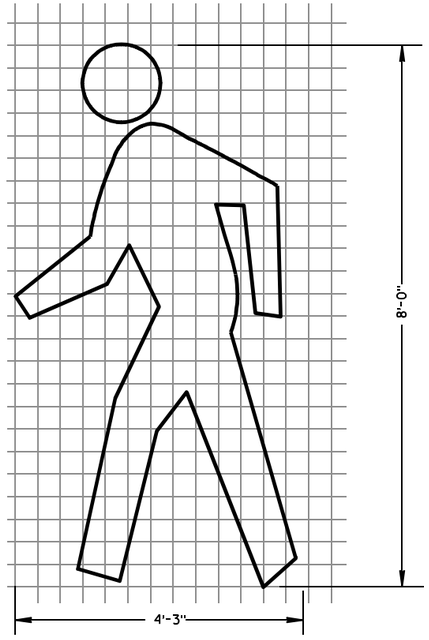
ALL LETTERS, ARROWS AND SYMBOLS SHALL BE IN CONFORMANCE WITH REQUIREMENTS INCLUDED IN "STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKING" BOOK BY THE FEDERAL HIGHWAY ADMINISTRATION. ALL LETTERS, ARROWS AND SYMBOLS SHALL BE WHITE AND REFLECTORIZED. SMALL DIFFERENCES IN DIMENSIONS WITHIN THE TOLERANCES OF THAT BOOK ARE ACCEPTABLE.

A DETAILED DRAWING OF THE HANDICAPPED PARKING SYMBOL IS ILLUSTRATED IN THE "STANDARD HIGHWAY SIGNS MANUAL" BY THE FEDERAL HIGHWAY ADMINISTRATION.

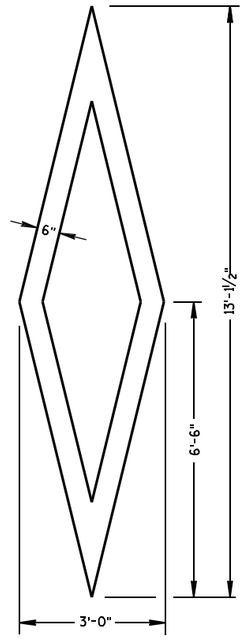




BIKE CROSSING SYMBOL



PEDESTRIAN SYMBOL



PREFERENTIAL LANE SYMBOL

PAVEMENT MARKING SYMBOLS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

7/1/11 DATE

/S/ Thomas N Nathan STATE TRAFFIC ENGINEER

FHWA

6

S.D.D. 15 C 7-12a

6

S.D.D. 15 C 7-12a

GENERAL NOTES

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

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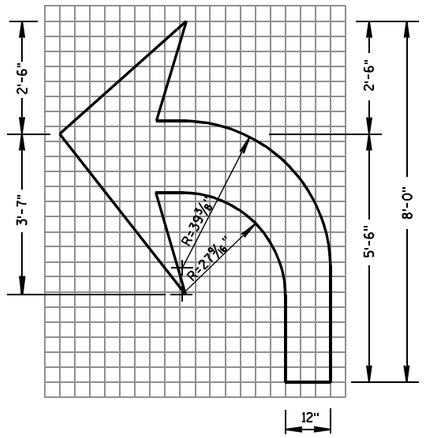
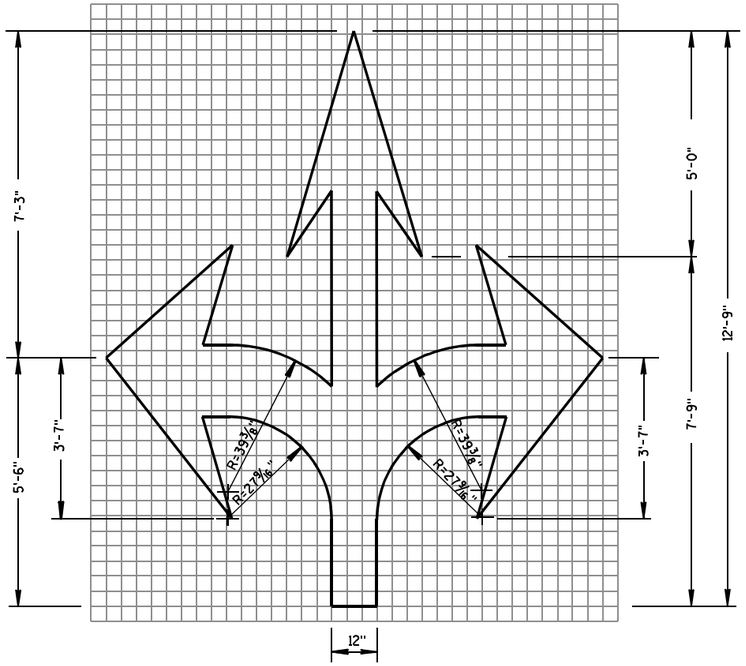
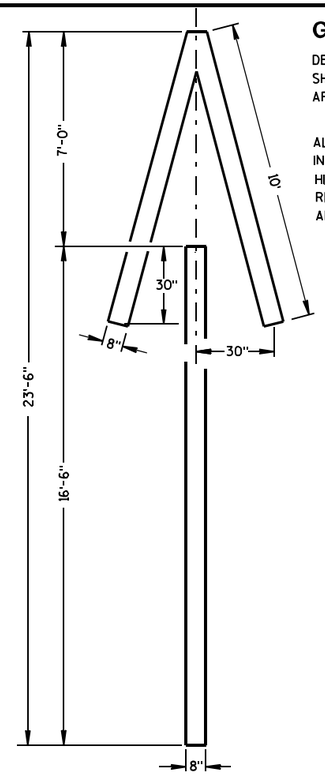


TYPE 2



TYPE 6



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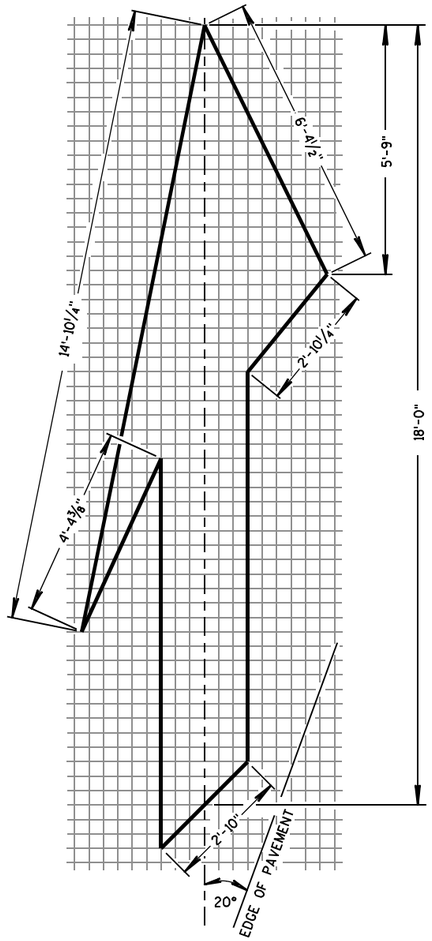
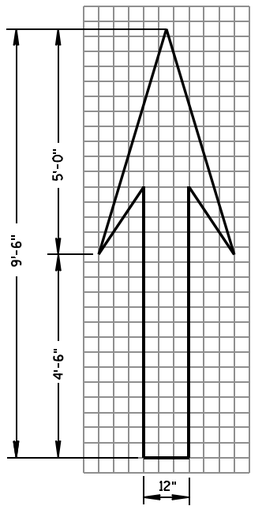
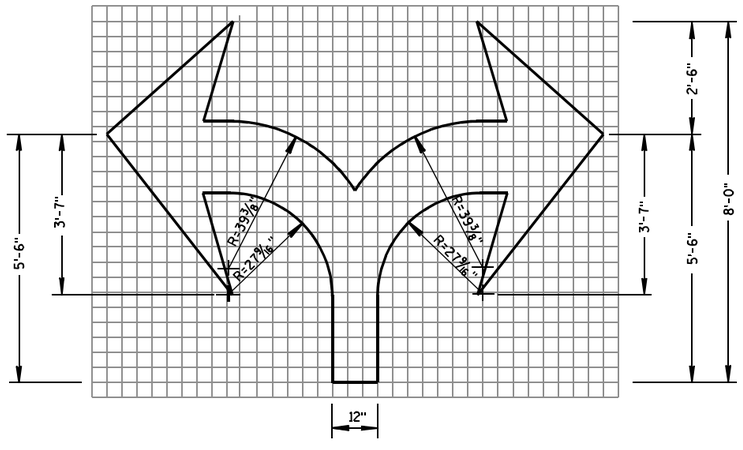


TYPE 5 LANE DROP ARROW



TYPE 1



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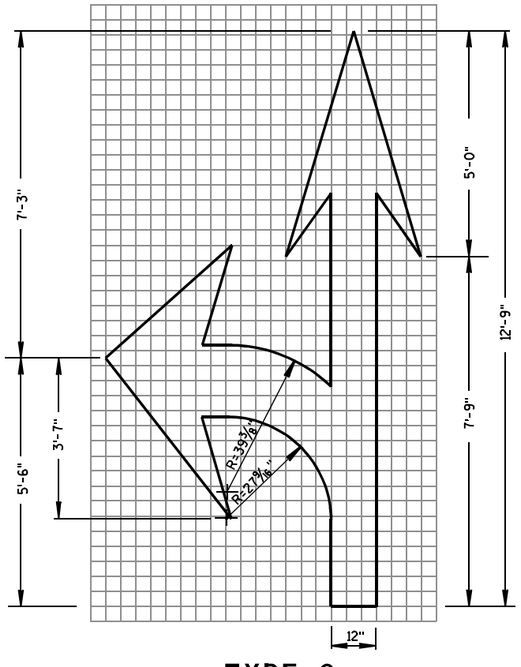

TYPE 3

PAVEMENT MARKING ARROWS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

7/1/11 — DATE

/S/ Thomas N. Nothdurft — STATE TRAFFIC ENGINEER

FHWA

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S.D.D. 15 C 7-12c

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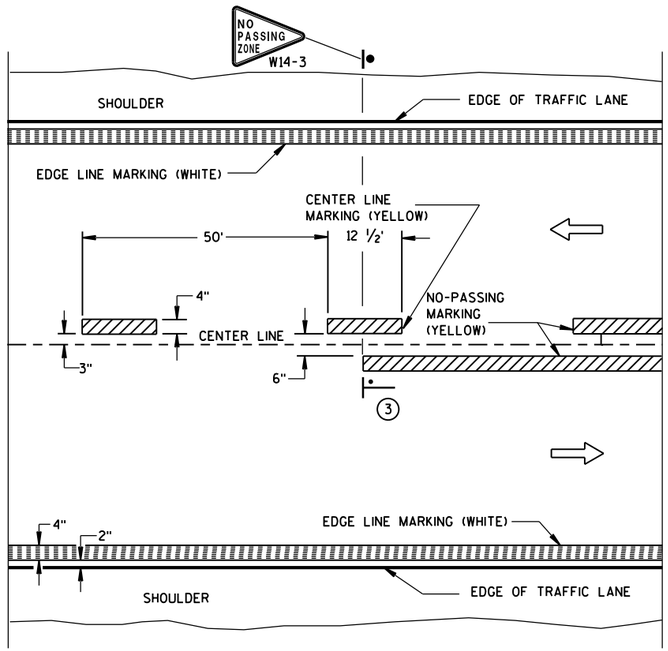
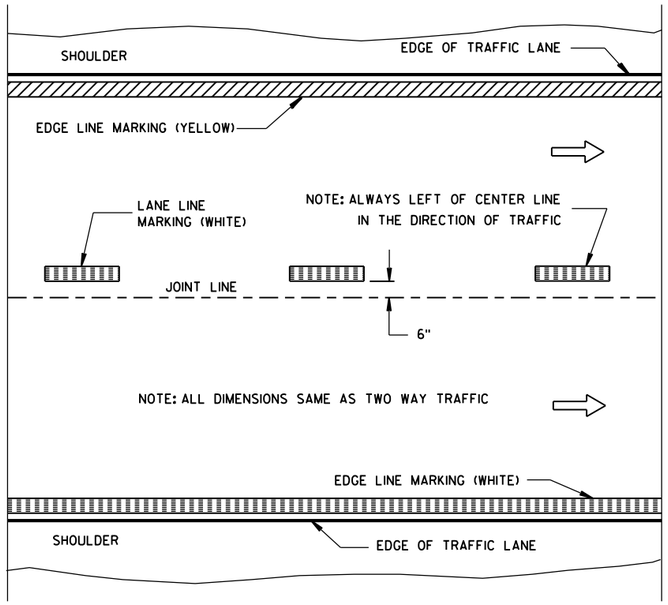
S.D.D. 15 C 7-12c

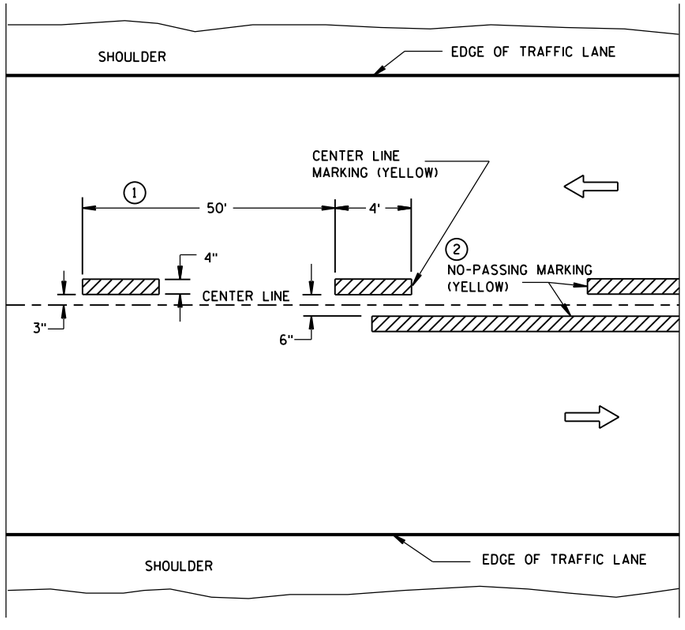


TWO WAY TRAFFIC

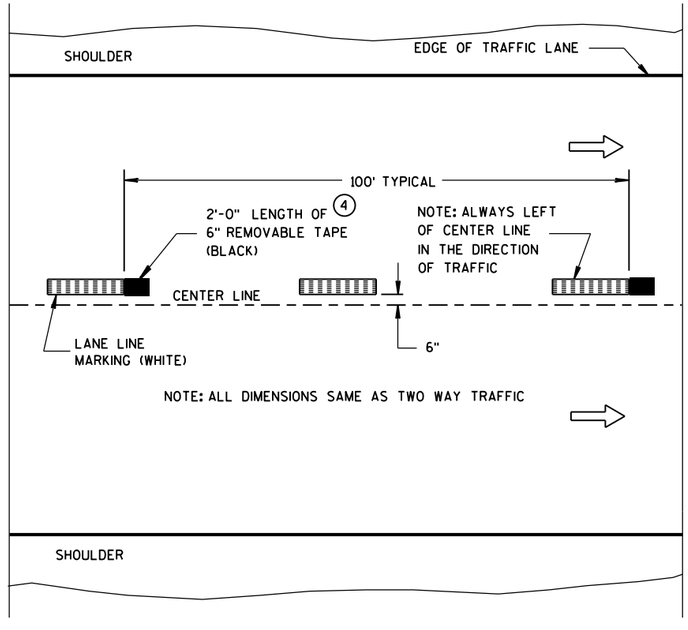


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY (INTERMEDIATE) PAVEMENT MARKING

(SHOWS CYCLE FOR TEMPORARY CENTER LINE OR TEMPORARY LANE LINE MARKING)

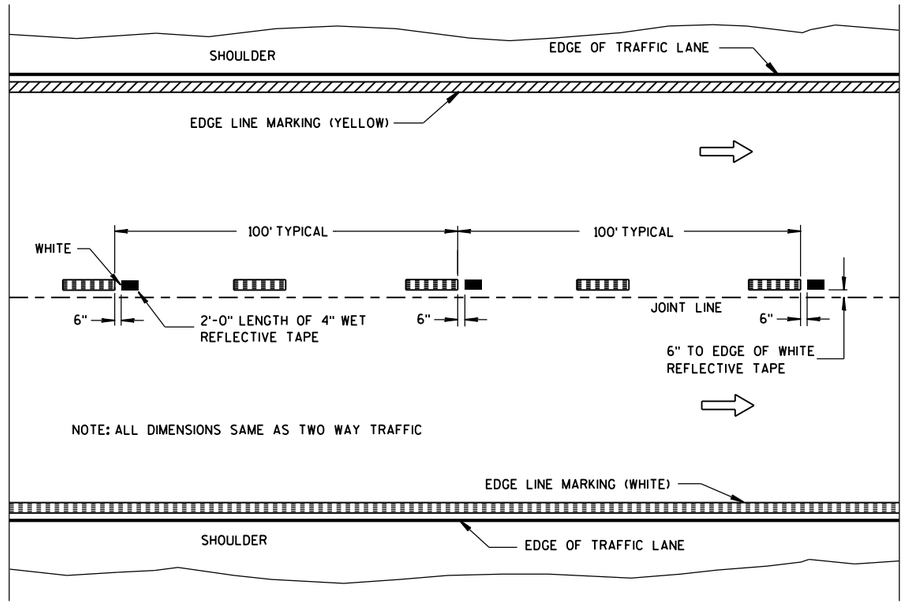
GENERAL NOTES

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

1. HALF CYCLE LENGTHS (25'±) WITH 2' MINIMUM STRIPE LENGTHS SHALL BE PROVIDED ON ROADWAYS (INCLUDING TEMPORARY TRAVELED WAYS) WITH REVERSE CURVATURE, CURVATURE OF OVER 5 DEGREES OR WHEN DIRECTED BY THE ENGINEER TO MARK UNUSUAL ALIGNMENT OF THE TRAVELED WAY.
2. NO PASSING ZONE TEMPORARY PAVEMENT MARKING IS REQUIRED TO BE PLACED, WHERE APPROPRIATE, ALONG WITH CENTERLINE TEMPORARY PAVEMENT MARKING WHEN A SAME DAY PERMANENT PAVEMENT MARKING ITEM IS INCLUDED IN THE CONTRACT.
3. NO PASSING ZONE MARKINGS ARE PLACED ACCORDING TO "T" MARKINGS. IF EXISTING NO PASSING ZONE W14-3 SIGNS ARE BEYOND 50 FEET IN EITHER DIRECTION, THE SIGNS SHALL BE MOVED TO THE "T" MARKINGS.
4. CONCRETE ONLY.

NOTE

ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL



WET REFLECTIVE TAPE SUPPLEMENT TO
SPRAYED OR NON WET REFLECTIVE TAPE LANE LINE

LEGEND

"T" MARKING

POST MOUNTED SIGN

PAVEMENT MARKING (MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

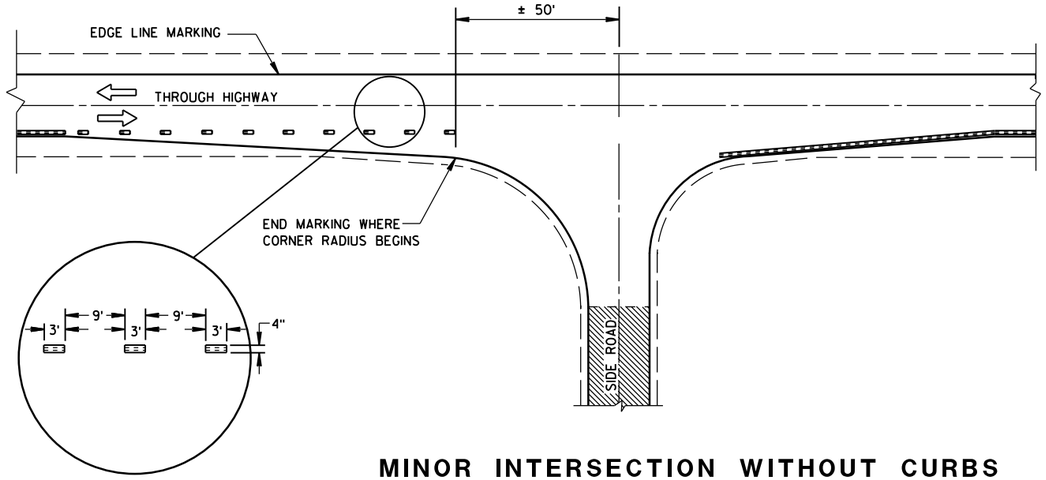
APPROVED
5-13-2013 DATE
/S/ Travis Feltes STATE TRAFFIC E
FHWA

6

S.D.D. 15 C 8-16a

6

S.D.D. 15 C 8-16a



MINOR INTERSECTION WITHOUT CURBS

GENERAL NOTES

EDGE LINES SHALL BE OMITTED THROUGH INTERSECTIONS. EDGE LINES SHALL BE CONTINUED THROUGH DRIVEWAYS.

(1) WHEN DISTANCE "A" IS LESS THAN 250 FEET, OMIT LANE LINE.

(2) WHEN DISTANCE "B" IS LESS THAN 100 FEET, OMIT CHANNELIZING LANE LINE.

(3) ALTERNATIVE MARKING SHALL BE PROVIDED WHEN SPECIFIED IN THE CONTRACT. TYPICAL SITUATIONS WHERE THIS MARKING MAY BE REQUIRED ARE WHERE THE INTERSECTION IS ON A SHARP HORIZONTAL CURVE OR CREST VERTICAL CURVE IN AN UNLIGHTED AREA SUCH THAT THE EDGE LINE MAY BE MISLEADING TO THE MOTORIST OR DISAPPEAR FROM SIGHT.

(4) THE EDGE LINE IN THE TAPER AREAS OF THE BYPASS LANE AND THE BYPASS LANE SHALL BE LOCATED 1-FOOT FROM EDGE OF PAVEMENT TO THE OUTSIDE EDGE OF EDGE LINE.

(5) BARRIER LINE ENDS AT SIDE ROAD PAVEMENT/SURFACE EDGE EXTENSION.

(6) BARRIER LINE STARTS 500 FEET PRIOR TO THE BYPASS TAPER.

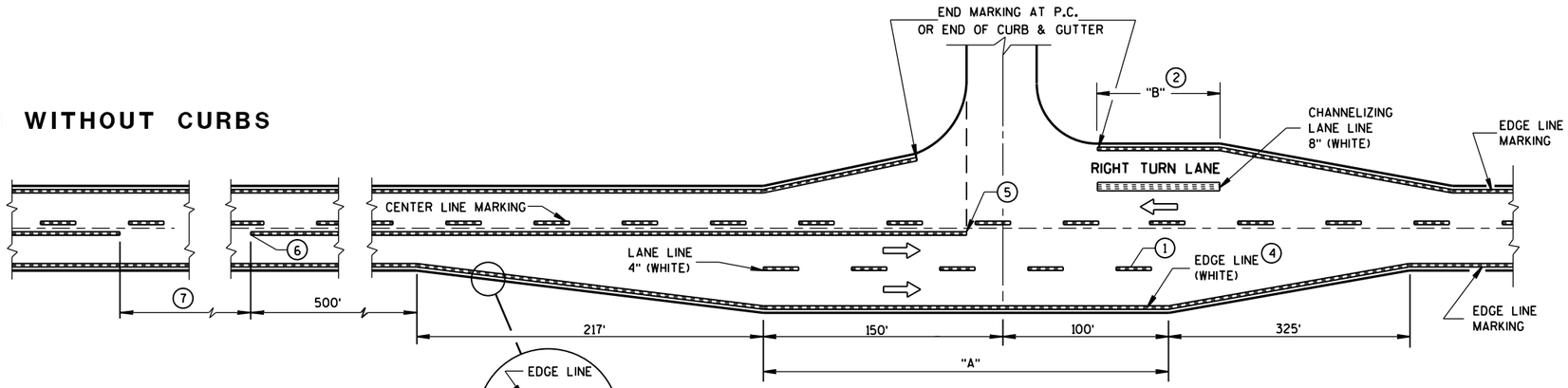
(7) IF THE DISTANCE BETWEEN 2 SUCCESSIVE NO-PASSING ZONES IS LESS THAN THE MINIMUM DISTANCE BETWEEN ZONES, CONNECT THE 2 ZONES.

(8) 3' LINE 9' GAP, EXCEPT RETRACE THE EXISTING LINE - GAP PATTERN WHERE EXISTING MARKINGS ARE IN PLACE.

ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL

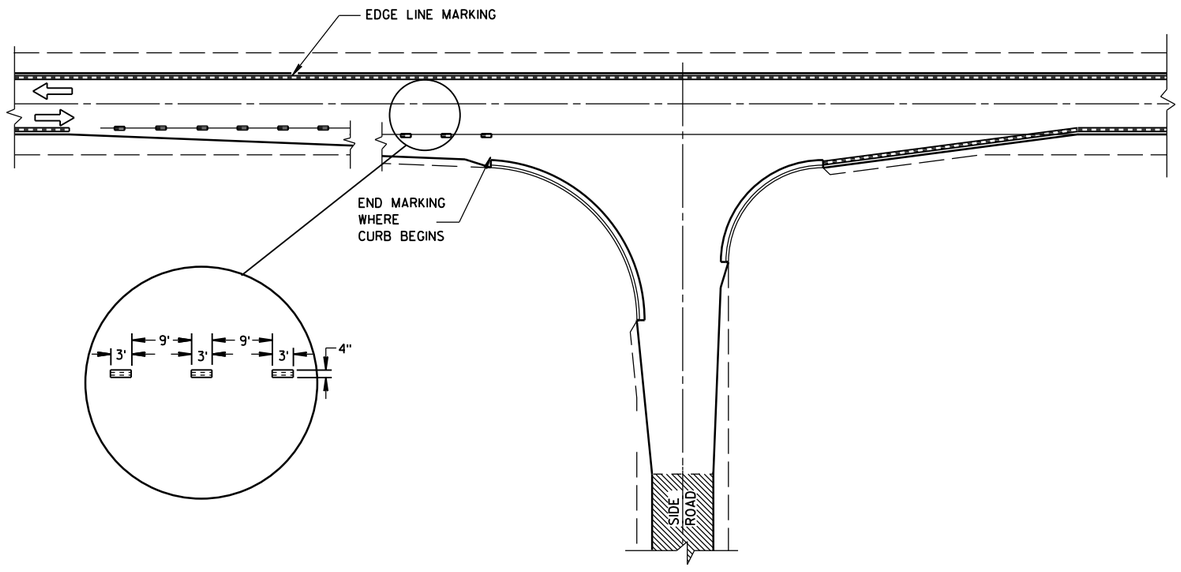
(7)

POSTED SPEED (MPH)	MINIMUM DISTANCE BETWEEN ZONES (FEET)
25 - 30	528
35 - 40	528
45 - 50	686
55	792



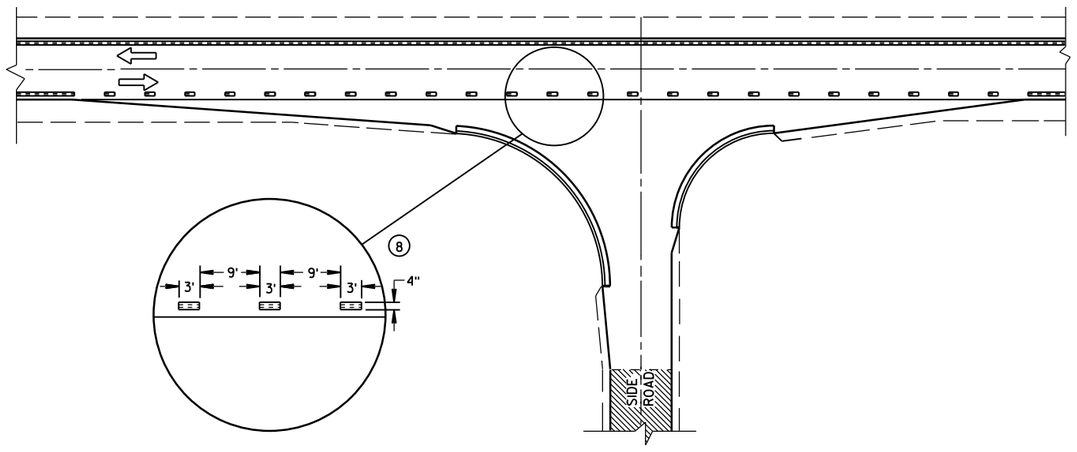
MAJOR INTERSECTIONS

(INTERSECTION WITH FULL RIGHT TURN LANE OR BYPASS LANES)



MINOR INTERSECTION WITH CURBS

(TYPICAL MARKING)



MINOR INTERSECTION WITH CURBS

(3) (FOR SPECIAL CONDITIONS AS SPECIFIED)

PAVEMENT MARKING
(INTERSECTIONS)

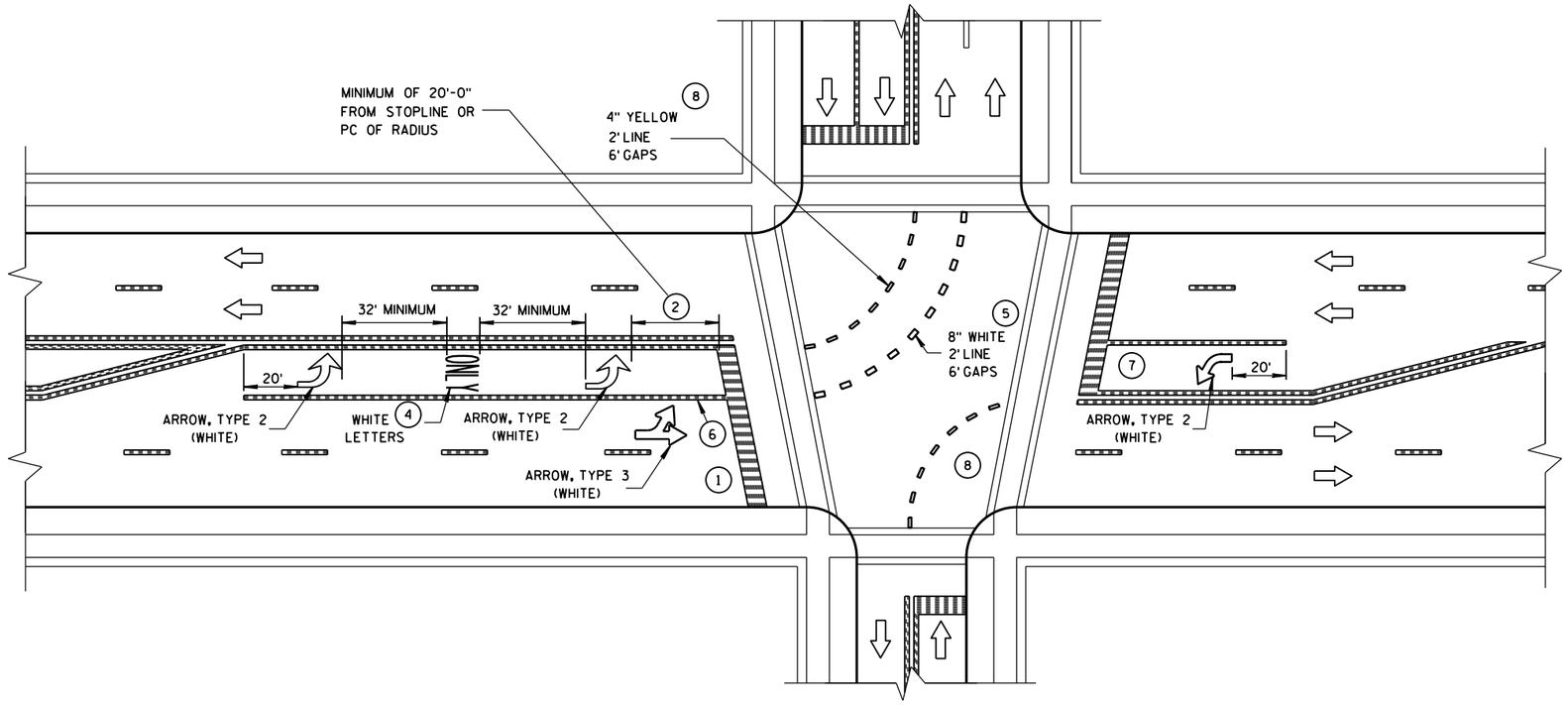
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

S.D.D. 15 C 8-16b

6

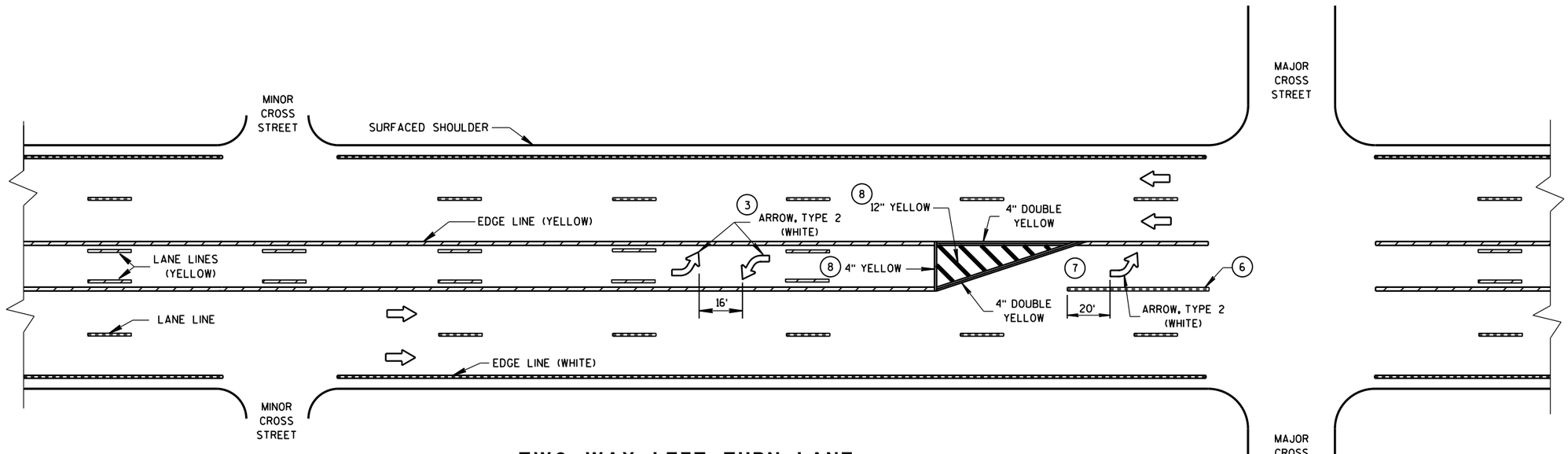
S.D.D. 15 C 8-16b



GENERAL NOTES

1. STOP BAR IS REQUIRED ONLY WHEN SPECIFIED IN THE CONTRACT.
2. DISTANCE MAY BE ADJUSTED TO ACCOMODATE SHORT LEFT TURN LANES. AS APPROVED BY THE ENGINEER.
3. A SET OF ARROWS IS REQUIRED EVERY 400 FEET OR NEAR INTERSECTIONS OR DRIVEWAYS WITH TURNING TRAFFIC.
4. ADD EXTRA SETS OF ONE ARROW AND ONE ONLY PER 160 FEET OR WHEN ON A CURVE.
5. 8" WHITE WITH 2' LINE 6' GAPS FOR DUAL TURN LANE.
6. 8" WHITE
7. ADD SECOND ARROW WHEN TURN BAY IS GREATER THAN OR EQUAL TO 108 FEET.
8. REQUIRED ONLY WHEN SPECIFIED IN THE CONTRACT.

NOTE:
ARROW SYMBOL (⇨)
SHOWS DIRECTION OF TRAVEL



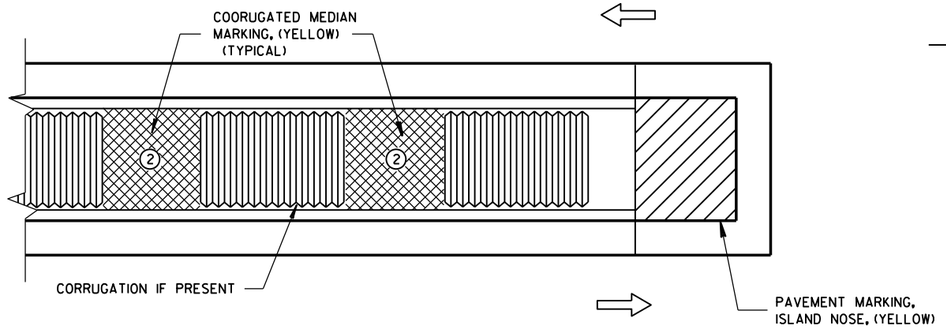
TWO WAY LEFT TURN LANE

PAVEMENT MARKING (LEFT TURN LANE)

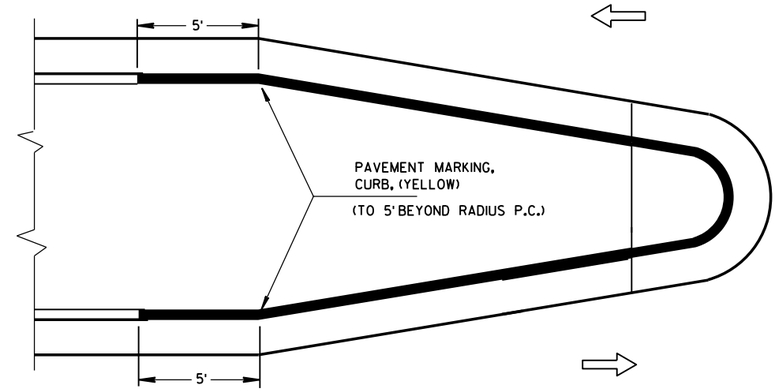
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

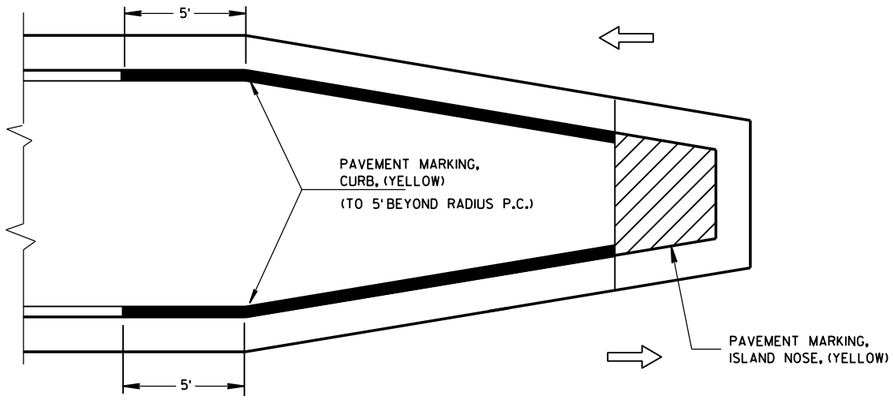
S.D.D. 15 C 8-16e
S.D.D. 15 C 8-16e



MEDIAN ISLAND WITH SQUARE BLUNT NOSE

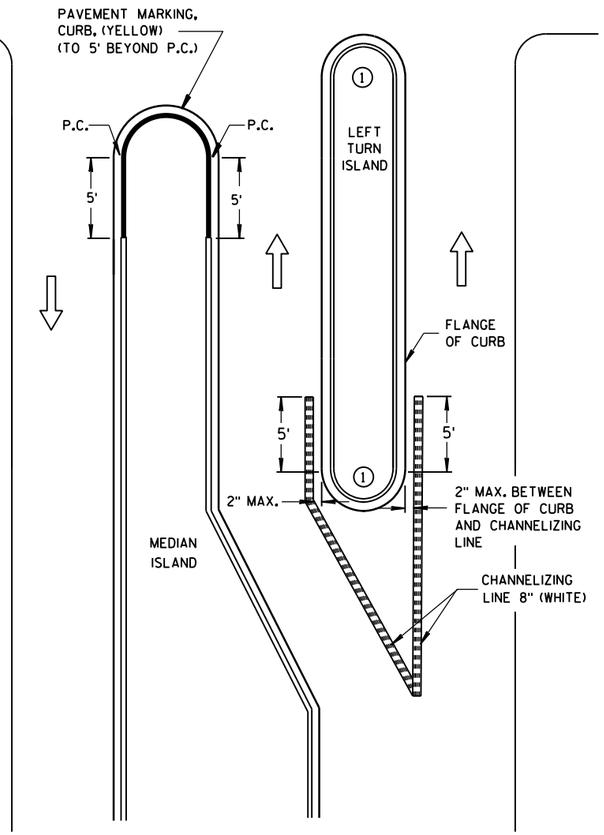


MEDIAN ISLAND WITH ROUND BLUNT NOSE



MEDIAN ISLAND WITH SLOPED NOSE

TYPICAL PLACEMENT OF PAVEMENT MARKING ON MEDIAN ISLANDS

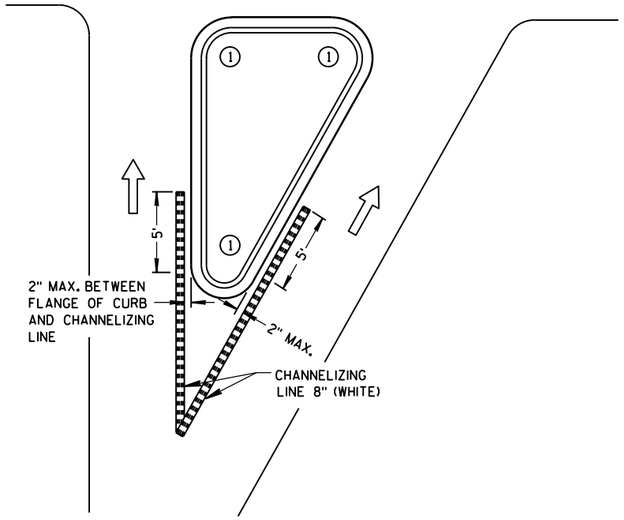


LEFT TURN & MEDIAN ISLAND

GENERAL NOTES

1. DO NOT MARK CURB NOSES THAT SEPARATE LANES OF TRAFFIC TRAVELING IN THE SAME DIRECTION.

2. WHEN CONCRETE CORRUGATED MEDIAN IS CONSTRUCTED TO SEPARATE TRAFFIC OPERATING IN THE OPPOSING DIRECTION YELLOW PAVEMENT MARKING SHALL BE APPLIED TO THE FLAT PORTION OF THE CONCRETE CORRUGATED MEDIAN. THE ITEM OF PAVEMENT MARKING, CONCRETE CORRUGATED MEDIAN, WILL BE MEASURED IN PLACE AND AND ACCEPTED IN ACCORDANCE WITH THE CONTRACT AND PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE FOOT.



RIGHT TURN ISLAND

LEGEND

- ISLAND NOSE MARKING
- CURB MARKING
- CORRUGATED MEDIAN MARKING
- DIRECTION OF TRAVEL

PAVEMENT MARKING
(ISLANDS)

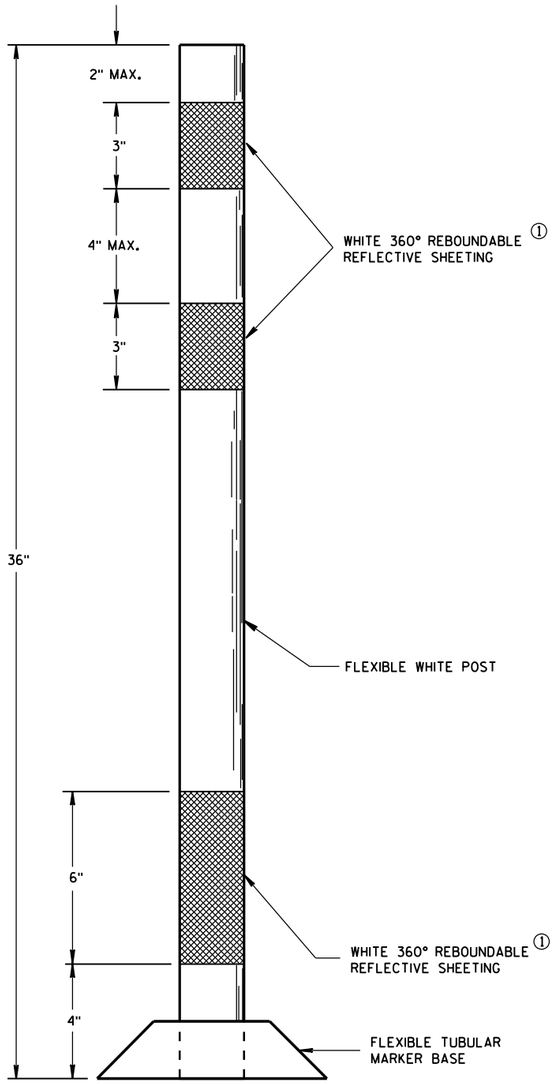
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

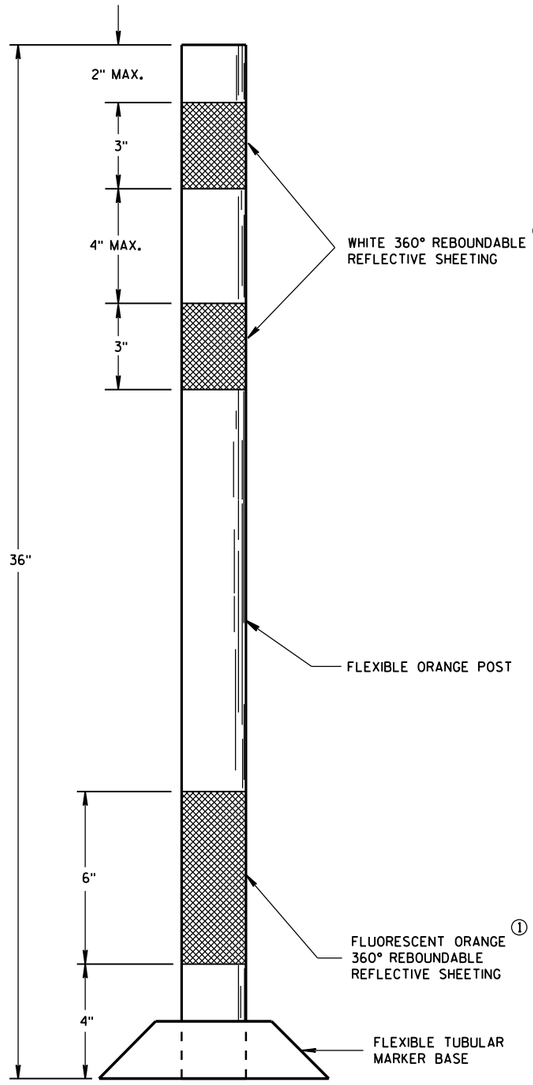
S.D.D. 15 C 8-16f

6

S.D.D. 15 C 8-16f



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 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.

① REFLECTIVE SHEETING SHALL FOLLOW THE REQUIREMENTS IN THE APPROVED PRODUCTS LISTING FOR SIGN SHEETING.

FLEXIBLE TUBULAR MARKER POST

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
10-16-2015
DATE
FHWA

/S/ Peter Amakobe Atepe
STATEWIDE WORK ZON
SAFETY ENGINE

6

S.D.D. 15 C 11-6

LEGEND

SIGN ON PORTABLE OR PERMANENT SUPPORT

DIRECTION OF TRAFFIC

WORK AREA

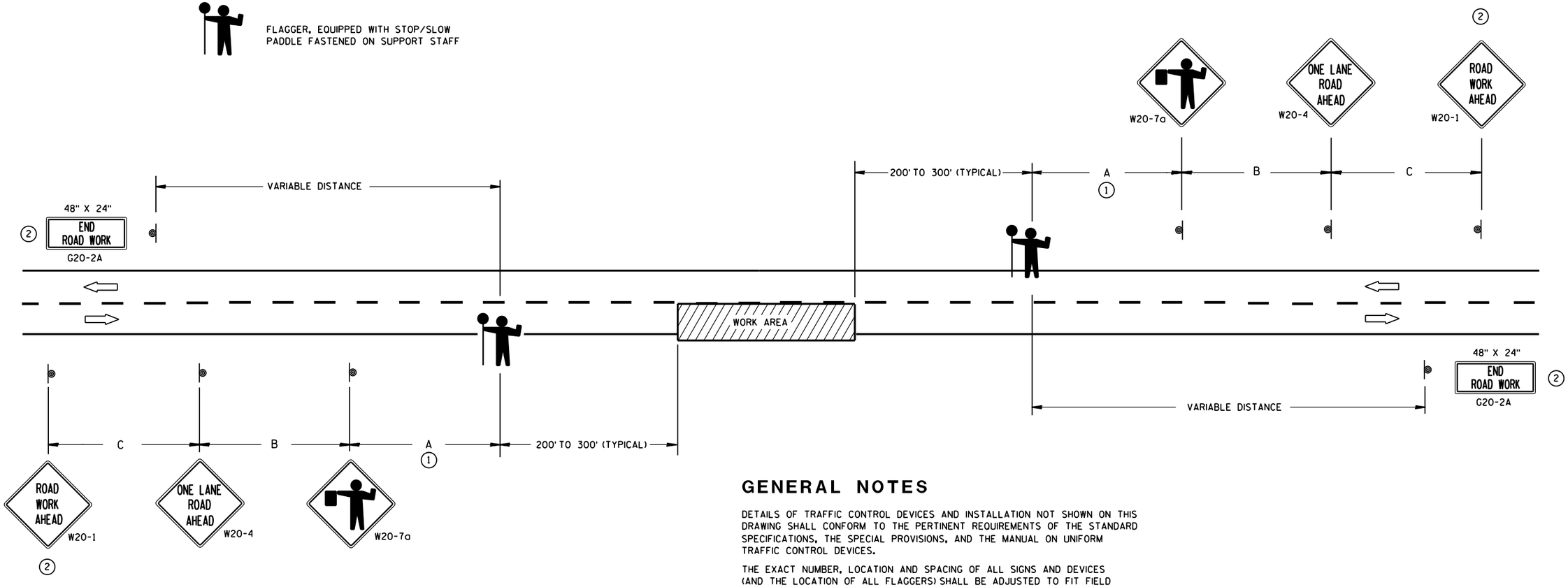
FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF

SIGN SPACING TABLE

SPEED LIMIT	SIGN SPACING A,B,C
25-35 MPH	200'
35-40 MPH	350'
45-55 MPH	500'

W3-4

USE OF THE "BE PREPARED TO STOP" SIGN IS OPTIONAL. WHEN USED, THIS SIGN SHALL BE LOCATED BETWEEN THE W20-7a AND W20-4 SIGNS. A 500' TYPICAL SPACING SHALL BE PROVIDED BETWEEN THE SIGNS.



(1) FOR A MOVING WORK OPERATION,
SIGNING FOR BOTH DIRECTIONS SHALL BE REESTABLISHED (AS SIMULTANEOUSLY AS PRACTICAL) AT APPROXIMATELY 3500 FOOT INTERVALS IN THE MOVING WORK OPERATION OR AS APPROVED BY THE ENGINEER.

(2) SIGN NOT REQUIRED IF FLAGGING OPERATION OCCURS WITHIN A SIGNED ROAD WORK ZONE AREA.

GENERAL NOTES

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

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

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

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

FLAGGERS SHALL BE IN SIGHT OF EACH OTHER OR IN DIRECT COMMUNICATION AT ALL TIMES. THEY SHALL BE EQUIPPED WITH STOP/SLOW PADDLES FASTENED ON SUPPORT STAFFS. WHEN THE FLAGGING OPERATION IS NOT IN EFFECT, COVER OR REMOVE ALL TEMPORARY TRAFFIC CONTROL SIGNS.

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

TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
8/2013
DATE
/S/ Travis Feltes
STATE TRAFFIC ENGINEER
FHWA

6

S.D.D. 15 C 12-4

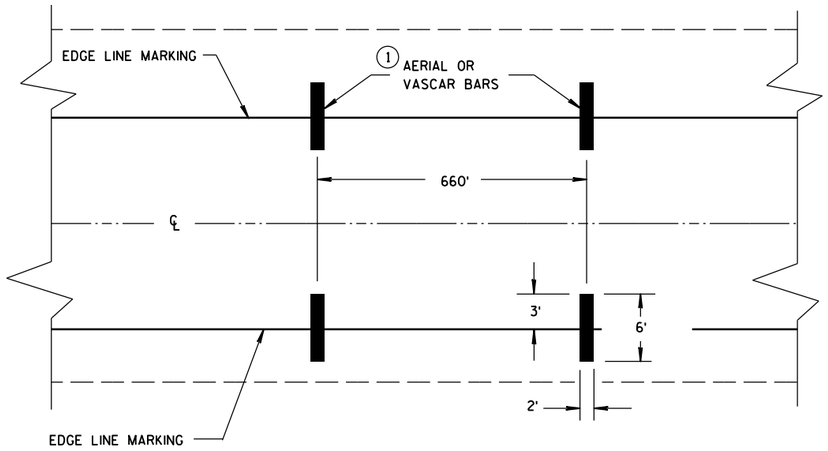
6

S.D.D. 15 C 12-4

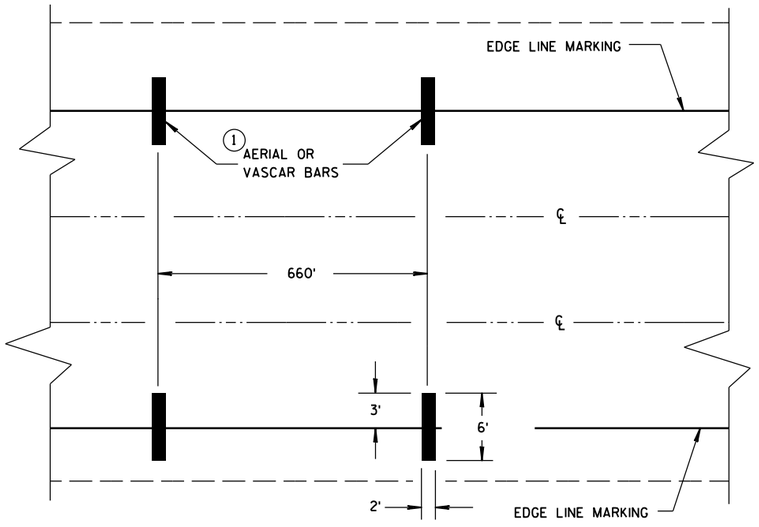
GENERAL NOTES

(1) NUMBER OF VASCAR OR AERIAL BARS SHALL BE A MINIMUM OF 2 OR A MAXIMUM OF 5 AT 660' SPACING.

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



TYPICAL FOR TWO WAY OR ONE WAY TRAFFIC



TYPICAL FOR MULTILANE TRAFFIC

SPEED ENFORCEMENT ZONE WITH AERIAL OR VASCAR BARS

6

S.D.D. 15 C 14-2

AERIAL ENFORCEMENT BARS
PAVEMENT MARKING DETAILS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
4/18/2016 /S/ Matthew R. Rauch
DATE STATE SIGNING AND MAR[illegible]GINEER
FHWA

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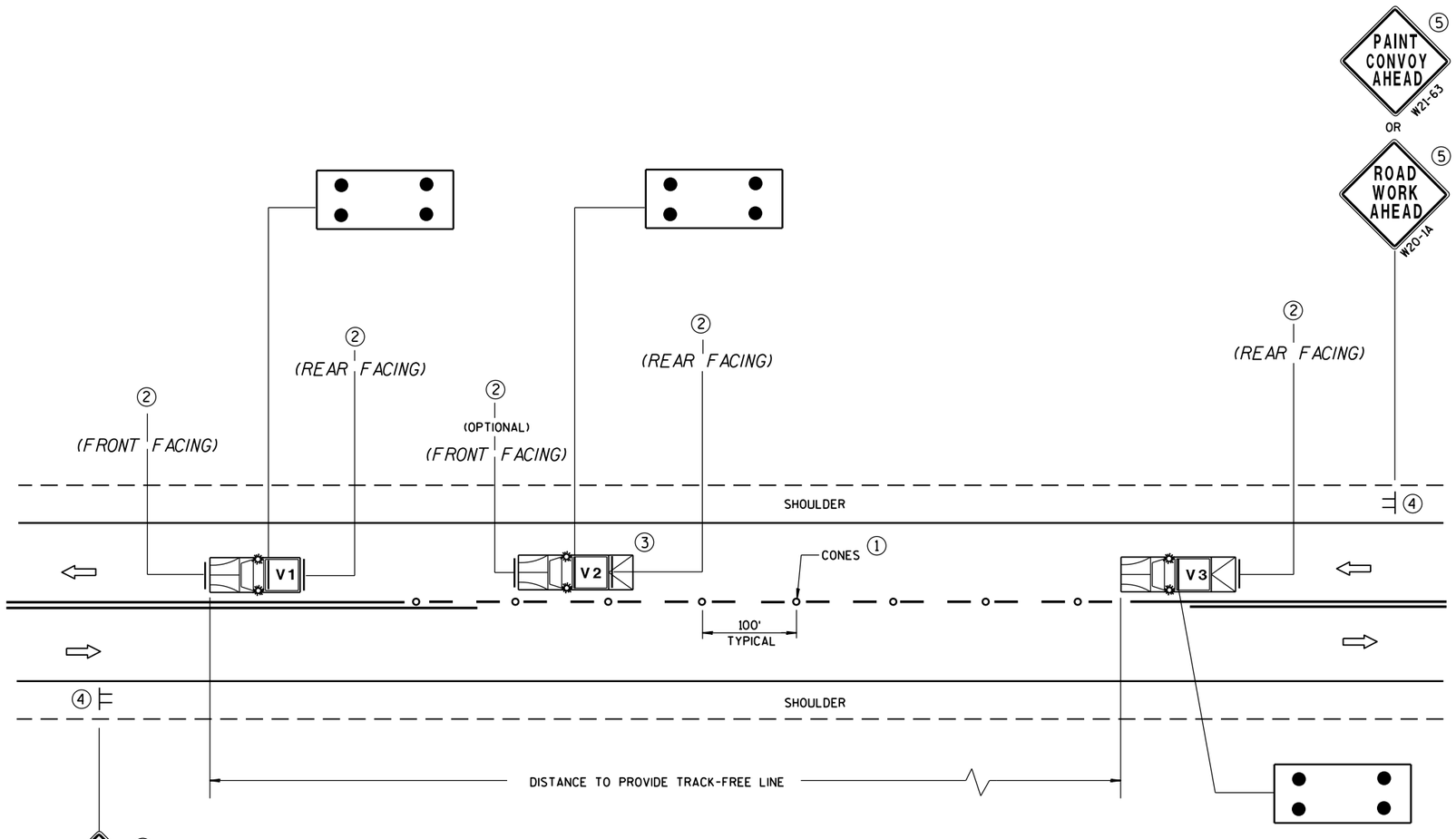
S.D.D. 15 C 14-2



MOVING PAVEMENT MARKING OPERATIONS
TWO-LANE TWO-WAY ROADWAY

GENERAL NOTES

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

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

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

IF SPEED LIMIT IS 40 MPH OR LESS STATIONARY SIGNS MAY BE OMITTED IF CONES ARE USED.

ALTERNATE SIGN MESSAGES, SUCH AS "PAINT CREW AHEAD" OR "ROAD PAINTING AHEAD" MAY BE USED.

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

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

THIS DRAWING SHALL BE USED FOR CENTERLINE OR EDGELINE MARKING.

WHEN NO WORK ACTIVITY IS TAKING PLACE, REMOVE OR TURN THE STATIONARY WARNING SIGNS AWAY FROM TRAFFIC.

(1) CONES MAY BE OMITTED ON PAINTED LINE IF APPROVED BY THE ENGINEER. CONSIDER PAVEMENT MARKING DRY OR CURE TIMES AND TRAFFIC VOLUME.

(2) USE STANDARD SIGN W21-64 WITH APPROPRIATE ARROW.

WET PAINT W21-64 OR WET PAINT W21-64

(3) OPTIONAL TRUCK-MOUNTED ATTENUATOR.

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

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

LEGEND

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

MOVING PAVEMENT MARKING OPERATION
TWO-LANE TWO-WAY ROADWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

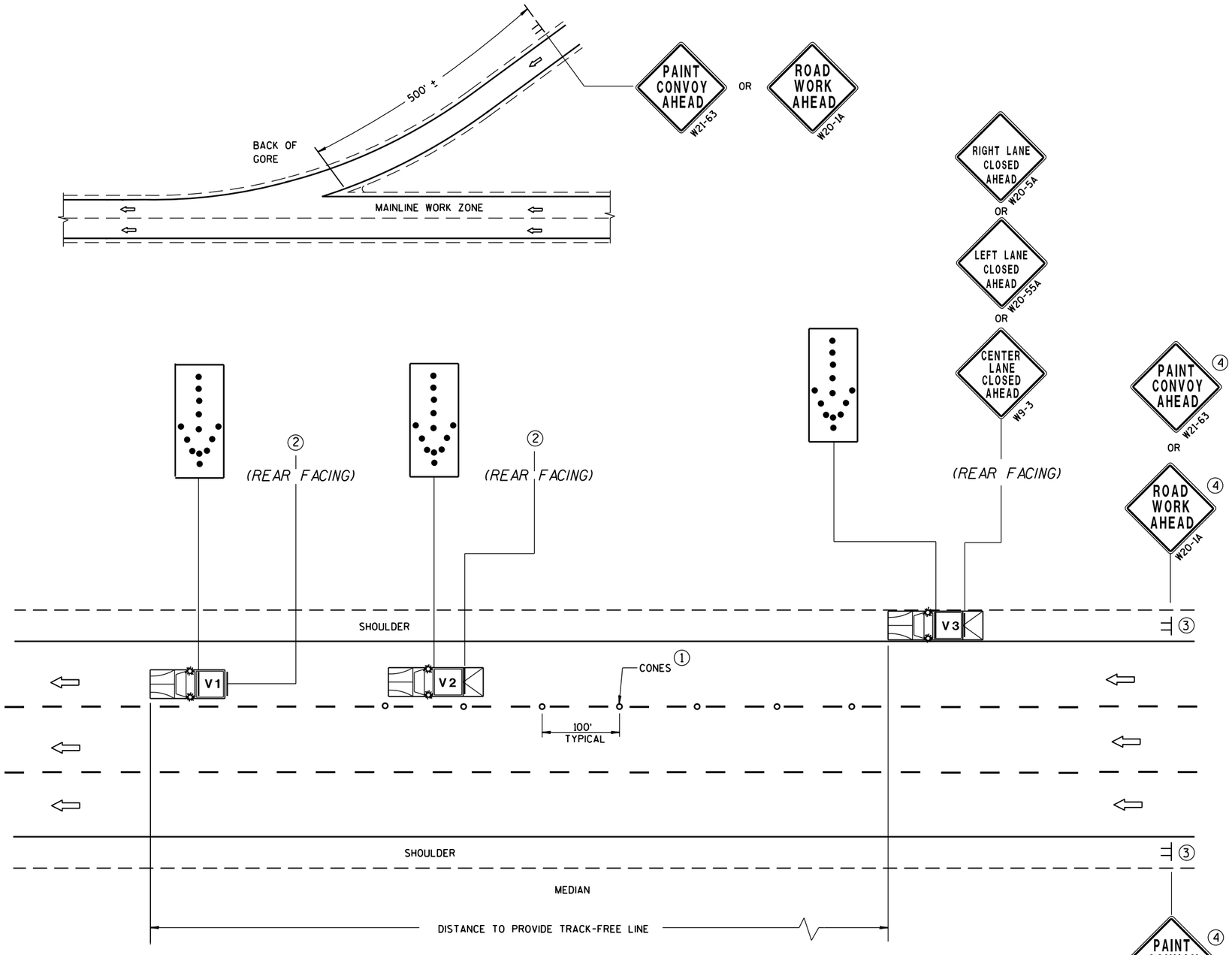
APPROVED
June 2016 — DATE
/S/ Peter Amakobe Atepe — STATEWIDE WORK ZON SAFETY ENGINE
FHWA

6

S.D.D. 15 C 19-4a

6

S.D.D. 15 C 19-4a



MOVING PAVEMENT MARKING OPERATIONS
MULTI-LANE DIVIDED ROADWAY

GENERAL NOTES

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

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

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

IF SPEED LIMIT IS 40 MPH OR LESS STATIONARY SIGNS MAY BE OMITTED IF CONES ARE USED.

ALTERNATE SIGN MESSAGES, SUCH AS "PAINT CREW AHEAD" OR "ROAD PAINTING AHEAD" MAY BE USED.

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

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

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

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

FOR EDGELINE MARKING OR IF CONES ARE NOT USED, POSITION THE REARMOST SHADOW VEHICLE ON THE SHOULDER AS SHOWN IN THE MUTCD IF THE SHOULDER HAS ADEQUATE WIDTH. USE DOUBLE ARROWS WHEN CONVOY IS IN CENTER LANE ONLY.

WHEN NO WORK ACTIVITY IS TAKING PLACE, REMOVE OR TURN THE STATIONARY WARNING SIGNS AWAY FROM TRAFFIC.

THIS DRAWING SHALL BE USED FOR EDGELINE OR LANELINE MARKING FOR MULTILANE DIVIDED ROADWAYS.

(1) CONES MAY BE OMITTED ON PAINTED LINE IF APPROVED BY THE ENGINEER. CONSIDER PAVEMENT MARKING DRY OR CURE TIMES AND TRAFFIC VOLUME.

(2) USE STANDARD SIGN W21-64 WITH APPROPRIATE ARROW.

WET PAINT W21-64 OR WET PAINT W21-64

(3) SIGNS SHALL BE REPEATED AFTER EVERY ON RAMP OR EVERY THREE MILES.

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

LEGEND

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

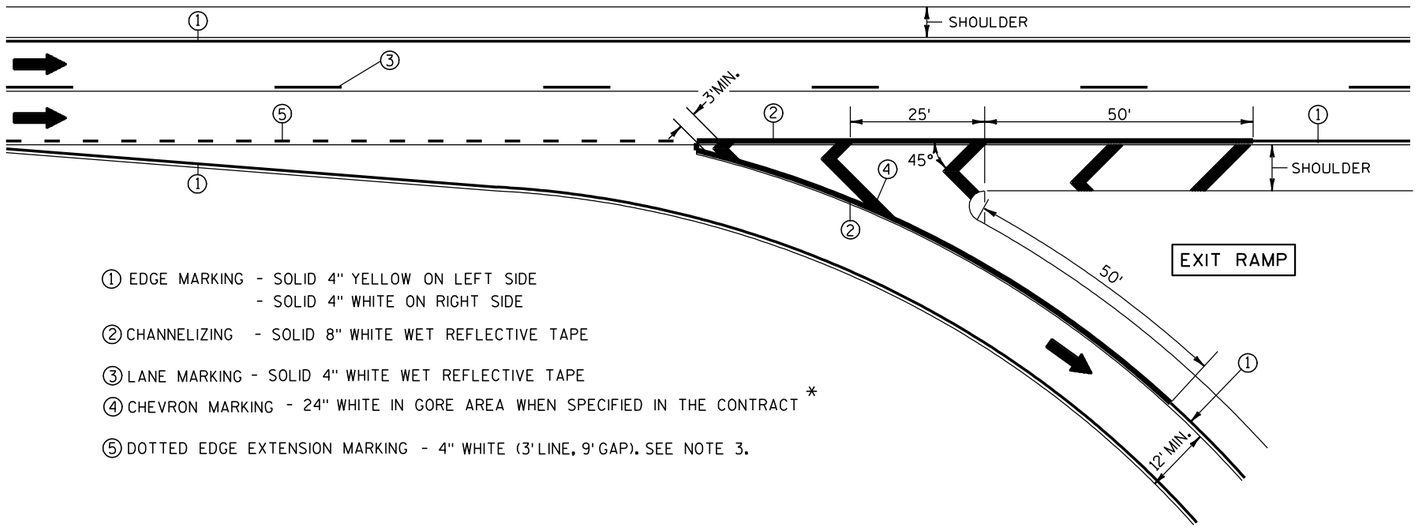
MOVING PAVEMENT MARKING OPERATION MULTI-LANE DIVIDED ROADWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2016 — DATE
/S/ Peter Amakobe Atepe — STATEWIDE WORK ZON SAFETY ENGINI
FHWA

6 S.D.D. 15 C 19-4c

6 S.D.D. 15 C 19-4c



① EDGE MARKING - SOLID 4" YELLOW ON LEFT SIDE
- SOLID 4" WHITE ON RIGHT SIDE

② CHANNELIZING - SOLID 8" WHITE WET REFLECTIVE TAPE

③ LANE MARKING - SOLID 4" WHITE WET REFLECTIVE TAPE

④ CHEVRON MARKING - 24" WHITE IN GORE AREA WHEN SPECIFIED IN THE CONTRACT *

⑤ DOTTED EDGE EXTENSION MARKING - 4" WHITE (3' LINE, 9' GAP). SEE NOTE 3.

NOTES:

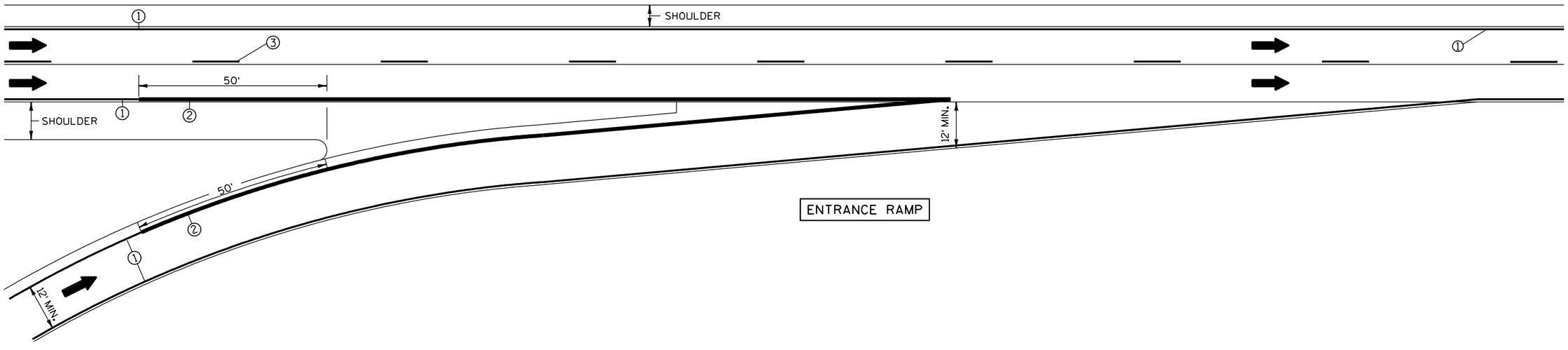
1. ARROWS SHOWN ON THIS MARKING PLAN DESIGNATE TRAFFIC FLOW, AND SHALL NOT BE TAKEN AS PROPOSED PAVEMENT MARKINGS.

2. PLACE WHITE EDGE OF TAPE 6" LEFT FROM JOINT.

3. 3' LINE 9' GAP, EXCEPT RETRACE THE EXISTING LINE-GAP PATTERN WHERE EXISTING MARKINGS ARE IN PLACE.

4. RETRACE EXISTING DIAGONAL MARKINGS.

* REFER TO DESIGN NOTES.



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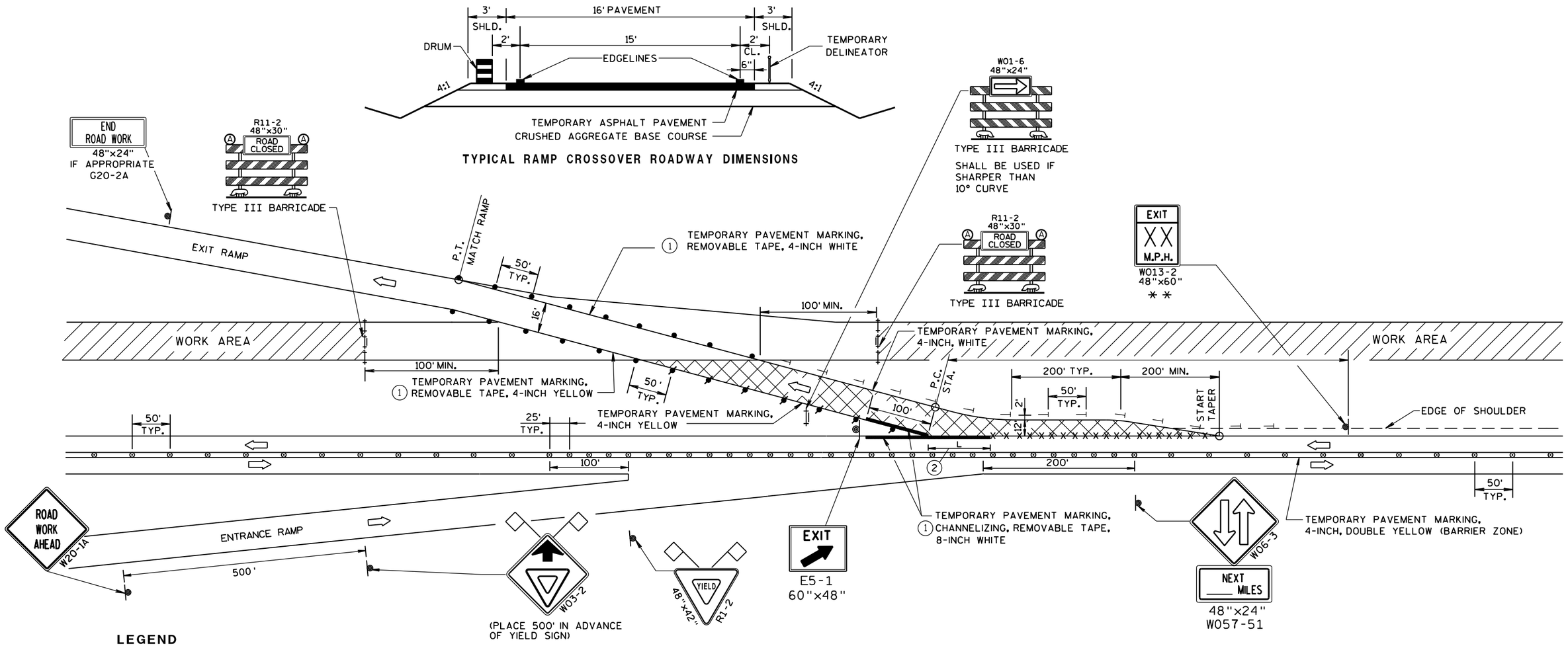
S.D.D. 15 C 31-1a

PAVEMENT MARKING (RAMPS AND GORES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

S.D.D. 15 C 31-1a



LEGEND

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

GENERAL NOTES

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

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

(1) TEMPORARY PAVEMENT MARKING REMOVABLE TAPE SHALL BE USED WHEN CROSSING PERMANENT ROADWAY SURFACES THAT WILL REMAIN AFTER USE OF CROSSOVER. OTHERWISE TEMPORARY PAVEMENT MARKING MAY BE USED.

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

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

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

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

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

** TABLE FOR ADVANCE WARNING SIGN PLACEMENT DISTANCE (FT)

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

TRAFFIC CONTROL, TEMPORARY EXIT RAMP CROSSOVER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

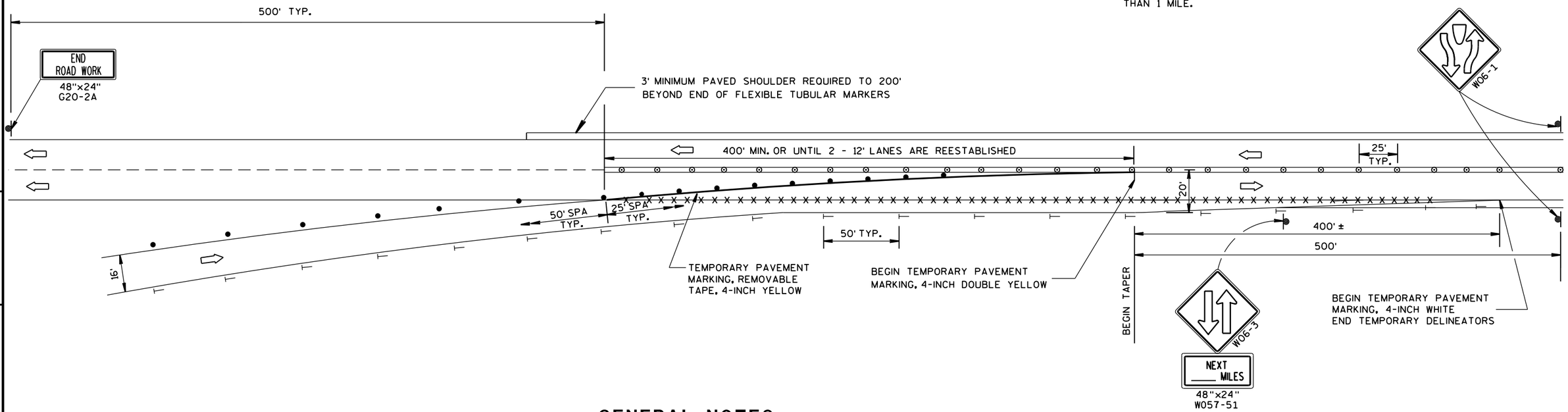
APPROVED
July 14, 2015 — DATE
/S/ Peter Amakobe Atepe
STATEWIDE WORK ZO SAFETY ENGI — 242 — FIC
FHWA

6

S.D.D. 15 D 7-4

LEGEND

- SIGN ON PERMANEMT SUPPORT
- TRAFFIC CONTROL DRUM
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- TEMPORARY DELINEATOR (STEEL POST W/SINGLE DELINEATOR) COLOR OF DELINEATOR SHALL MATCH THE COLOR OF THE RESPECTIVE EDGELINE MARKING
- REMOVE PAVEMENT MARKINGS
- DIRECTION OF TRAFFIC



REPEAT EVERY 1/4 MILE IF PROJECT IS LONGER THAN 1 MILE.

GENERAL NOTES

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

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

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

TEMPORARY PAVEMENT MARKING REMOVABLE TAPE SHALL BE USED WHEN CROSSING PERMANENT ROADWAY SURFACES THAT WILL REMAIN AFTER USE OF CROSSOVER.

TRAFFIC CONTROL, SINGLE LANE CROSSOVER EXIT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8/2013 DATE

/S/ Travis Feltes
STATE TRAFFIC ENGINEER

SIGN

FHWA

6

S.D.D. 15 D 9-3

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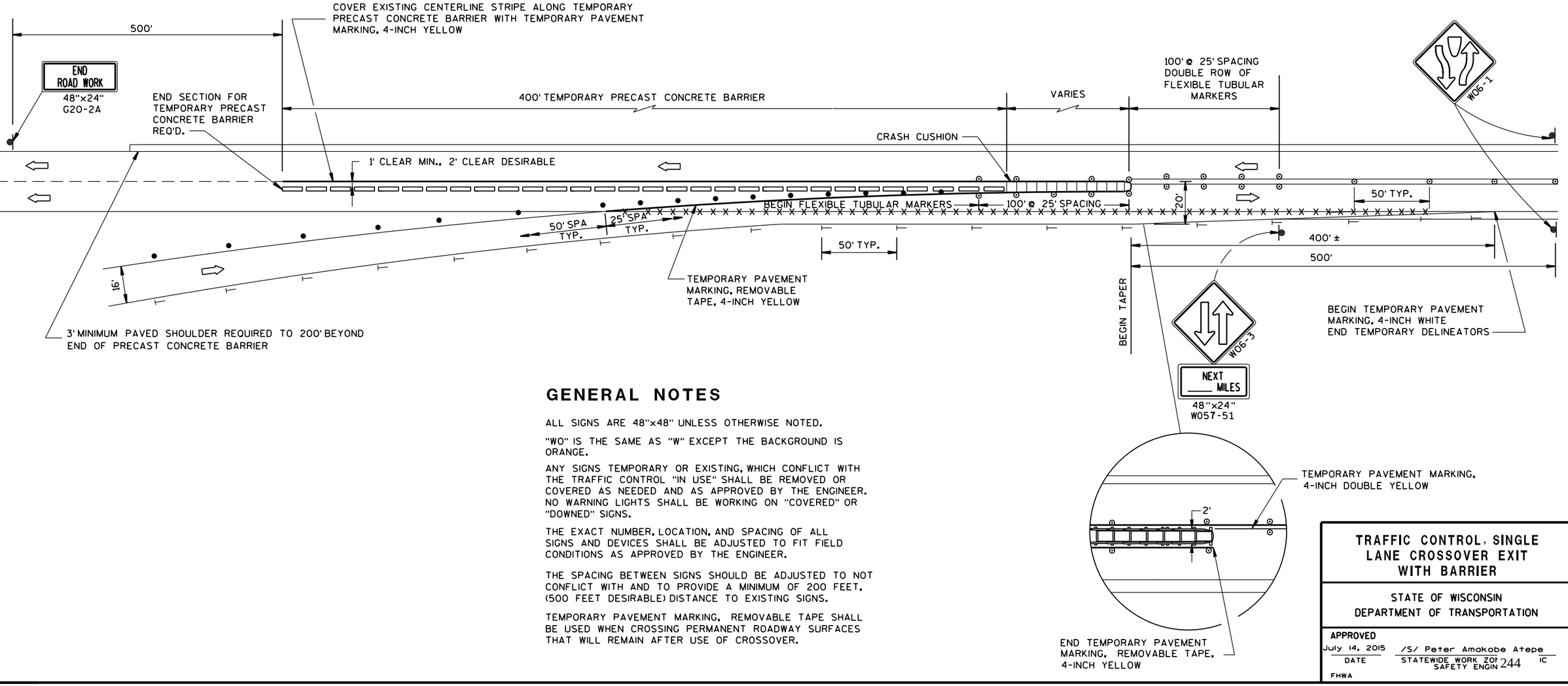
S.D.D. 15 D 9-3

LEGEND

- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- TEMPORARY DELINEATOR (STEEL POST W/SINGLE DELINEATOR) COLOR OF DELINEATOR SHALL MATCH THE COLOR OF THE RESPECTIVE EDGELINE MARKING
- (A) TYPE "A" WARNING LIGHT (FLASHING)
- PORTABLE CRASH CUSHION
- CONCRETE BARRIER TEMPORARY PRECAST
- ~~XXXX~~ REMOVE PAVEMENT MARKINGS
- DIRECTION OF TRAFFIC



GENERAL NOTES

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

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

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

TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE SHALL BE USED WHEN CROSSING PERMANENT ROADWAY SURFACES THAT WILL REMAIN AFTER USE OF CROSSOVER.

TRAFFIC CONTROL, SINGLE LANE CROSSOVER EXIT WITH BARRIER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
July 14, 2015
DATE
/S/ Peter Amakobe Atepe
STATEWIDE WORK ZONE SAFETY ENGINEER
FHWA

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S.D.D. 15 D 10-4

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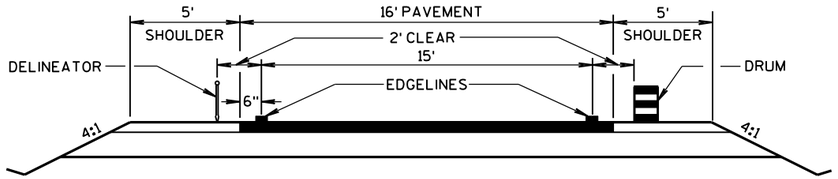
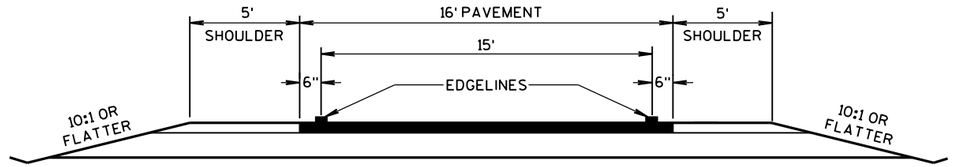
S.D.D. 15 D 10-4



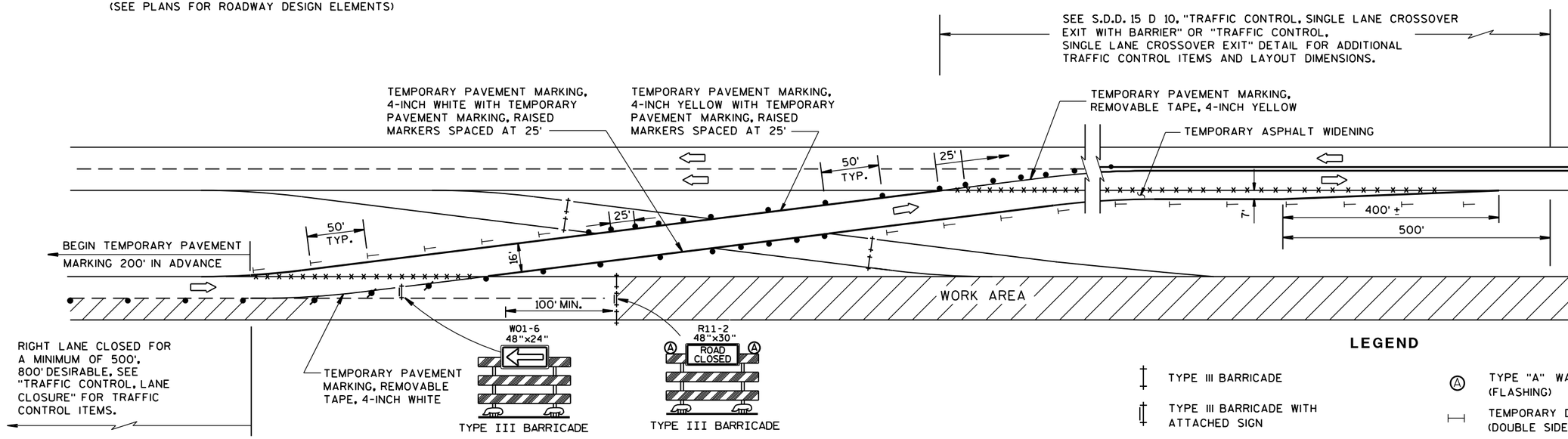
TYPICAL TEMPORARY CROSSOVER ROADWAY DIMENSIONS

(SEE PLANS FOR ROADWAY DESIGN ELEMENTS)



TYPICAL CROSSOVER TO REMAIN IN PLACE ROADWAY DIMENSIONS

(SEE PLANS FOR ROADWAY DESIGN ELEMENTS)



LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL DRUM
- TEMPORARY DELINEATOR (STEEL POST W/SINGLE DELINEATOR) COLOR OF DELINEATOR SHALL MATCH THE COLOR OF THE RESPECTIVE EDGELINE MARKING
- TYPE "A" WARNING LIGHT (FLASHING)
- TEMPORARY DELINEATOR (DOUBLE SIDED)
- REMOVING PAVEMENT MARKINGS
- DELINEATOR FLEXIBLE/ TUBULAR MARKER
- DIRECTION OF TRAFFIC
- WORK AREA

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

TEMPORARY PAVEMENT MARKING REMOVABLE TAPE SHALL BE USED WHEN CROSSING PERMANENT ROADWAY SURFACES THAT WILL REMAIN AFTER USE OF CROSSOVER AND TEMPORARY PAVEMENT MARKING WHERE USED.

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

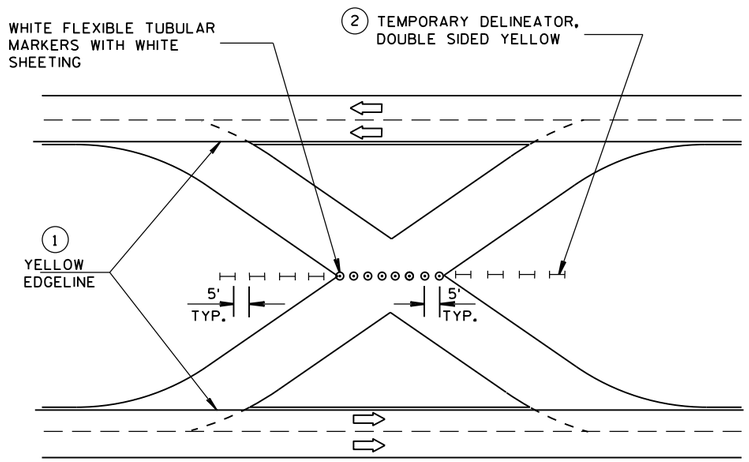
"WO" IS THE SAME AS "W" EXCEPT THE BACKGROUND IS ORANGE.

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

REVERSE DEVICES WHEN OTHER LEG OF CROSSOVER IS IN USE.

(1) FOR PERMANENT CROSSOVER, PAVEMENT MARKING SHOULD CONFORM TO SECTION 646 OF THE STANDARD SPECIFICATIONS.

(2) FOR PERMANENT CROSSOVER, INSTALL PERMANENT DELINEATORS ACCORDING TO SECTION 633 OF THE STANDARD SPECIFICATIONS.



TRAFFIC CONTROL FOR CROSSOVER THAT IS NOT IN USE

TRAFFIC CONTROL, SINGLE LANE CROSSOVER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
10-16-2015 DATE
/S/ Peter Amakobe Atepe
STATEWIDE WORK ZON SAFETY ENGINI IC
FHWA

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S.D.D. 15 D 11-6

LEGEND

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

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 CLOSING RIGHT LANE - REVERSE FOR CLOSING LEFT LANE.

ALL SIGNS ARE 48"×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.

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

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

REMOVE PAVEMENT MARKINGS IF LANE CLOSURE IS TO BE IN PLACE FOR LONGER THAN 4 OR MORE DAYS AND NIGHTS.

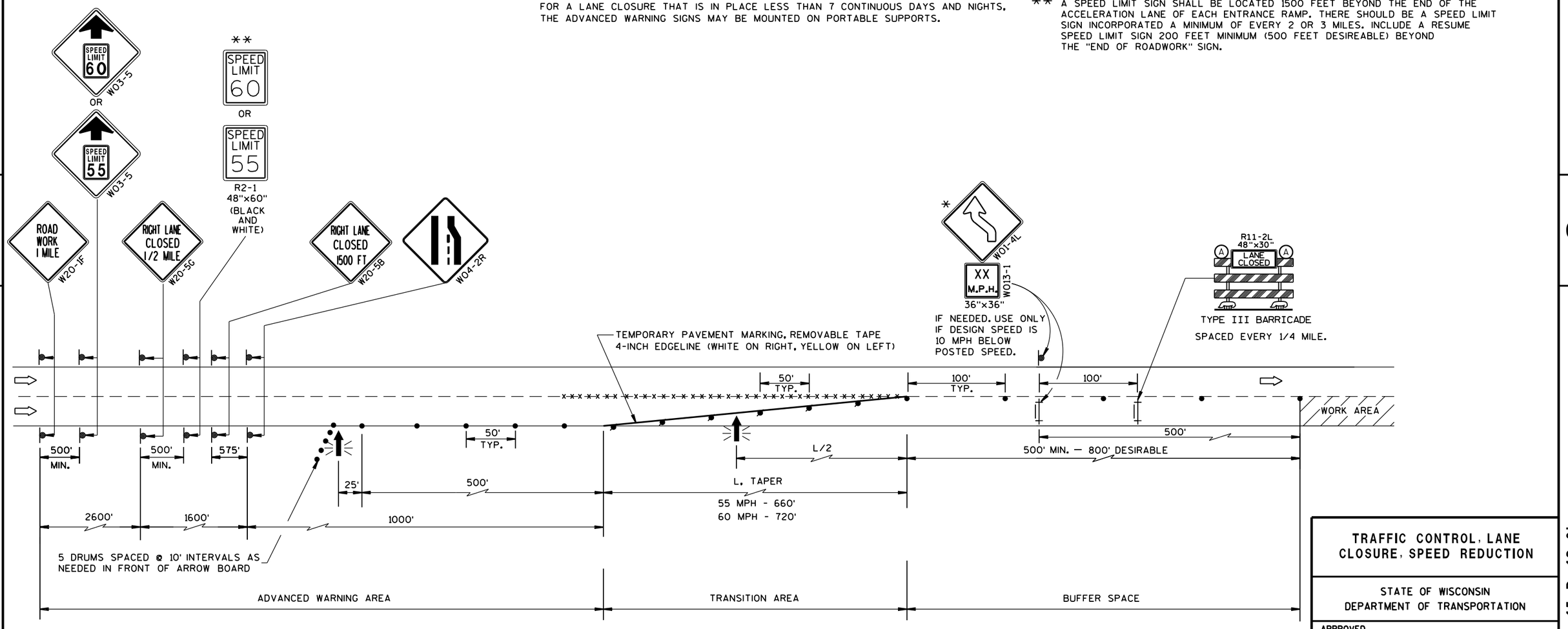
WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

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. THE LANE CLOSURE MUST 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.

* THE LEFT REVERSE CURVE SIGN (W01-4L) IS ONLY REQUIRED WHEN THIS DETAIL IS USED IN COMBINATION WITH "SINGLE LANE CROSSOVER" DETAIL.

** A SPEED LIMIT SIGN SHALL BE LOCATED 1500 FEET BEYOND THE END OF THE ACCELERATION LANE OF EACH ENTRANCE RAMP. THERE SHOULD BE A SPEED LIMIT SIGN INCORPORATED A MINIMUM OF EVERY 2 OR 3 MILES. INCLUDE A RESUME SPEED LIMIT SIGN 200 FEET MINIMUM (500 FEET DESIREABLE) BEYOND THE "END OF ROADWORK" SIGN.



TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2016 — DATE
/S/ Peter Amakobe Atepe
STATEWIDE WORK ZONE SAFETY ENGINEER
FHWA

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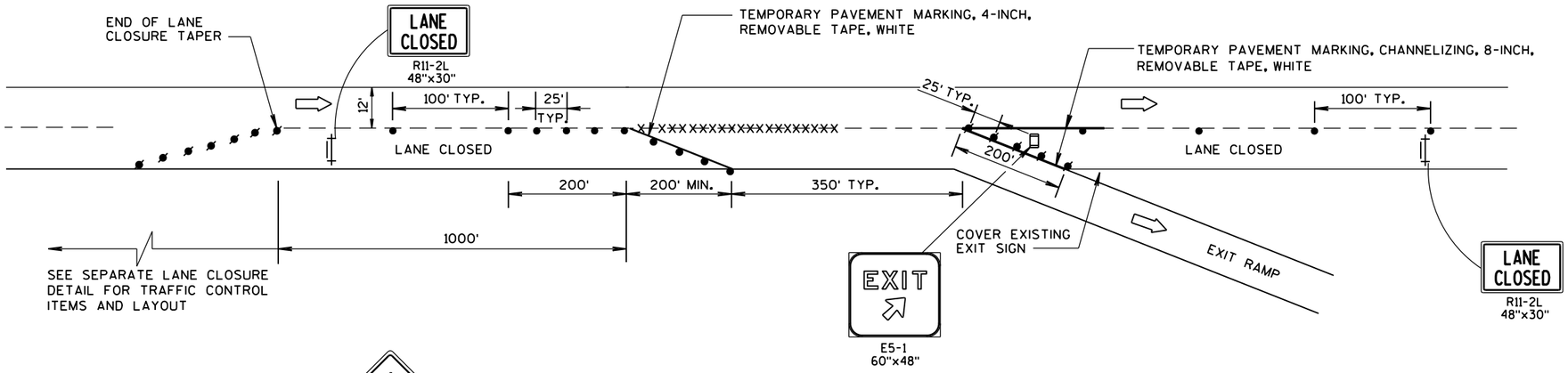
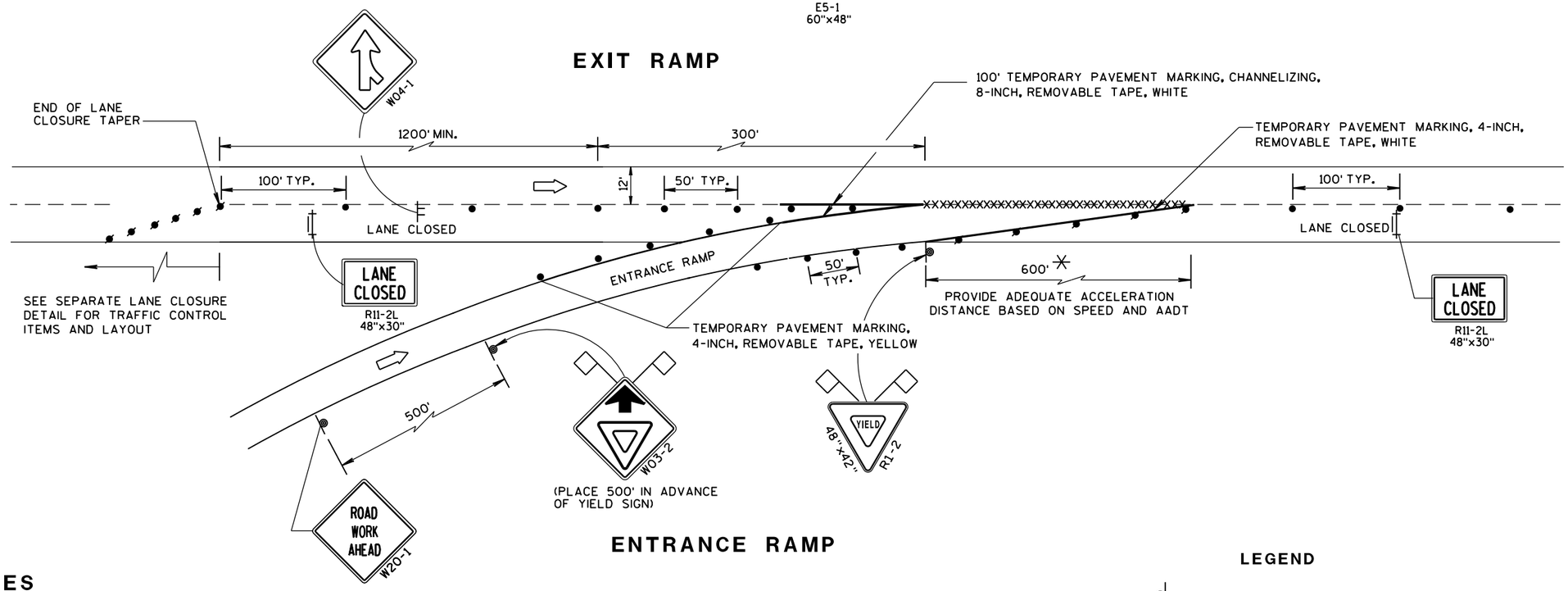


EXIT RAMP



ENTRANCE RAMP

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"x48" UNLESS OTHERWISE NOTED.

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

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

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

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS 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 ENTRANCE RAMP AND MAINLINE TRAFFIC.

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

REMOVE PAVEMENT MARKINGS AND PLACE TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE IF LANE CLOSURE IS TO BE IN PLACE FOR 7 OR MORE CONTINUOUS DAYS AND NIGHTS.

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

* LENGTH OF OPENING MAY BE REDUCED TO 150 FEET DURING STAGING OF WORK IN IMMEDIATE AREA OF RAMP TAPER.

LEGEND

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

TRAFFIC CONTROL, EXIT AND ENTRANCE RAMP WITHIN LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2015 — DATE
/S/ Peter Amakobe Atepe — STATEWIDE WORK ZONE SAFETY ENGINEER
FHWA

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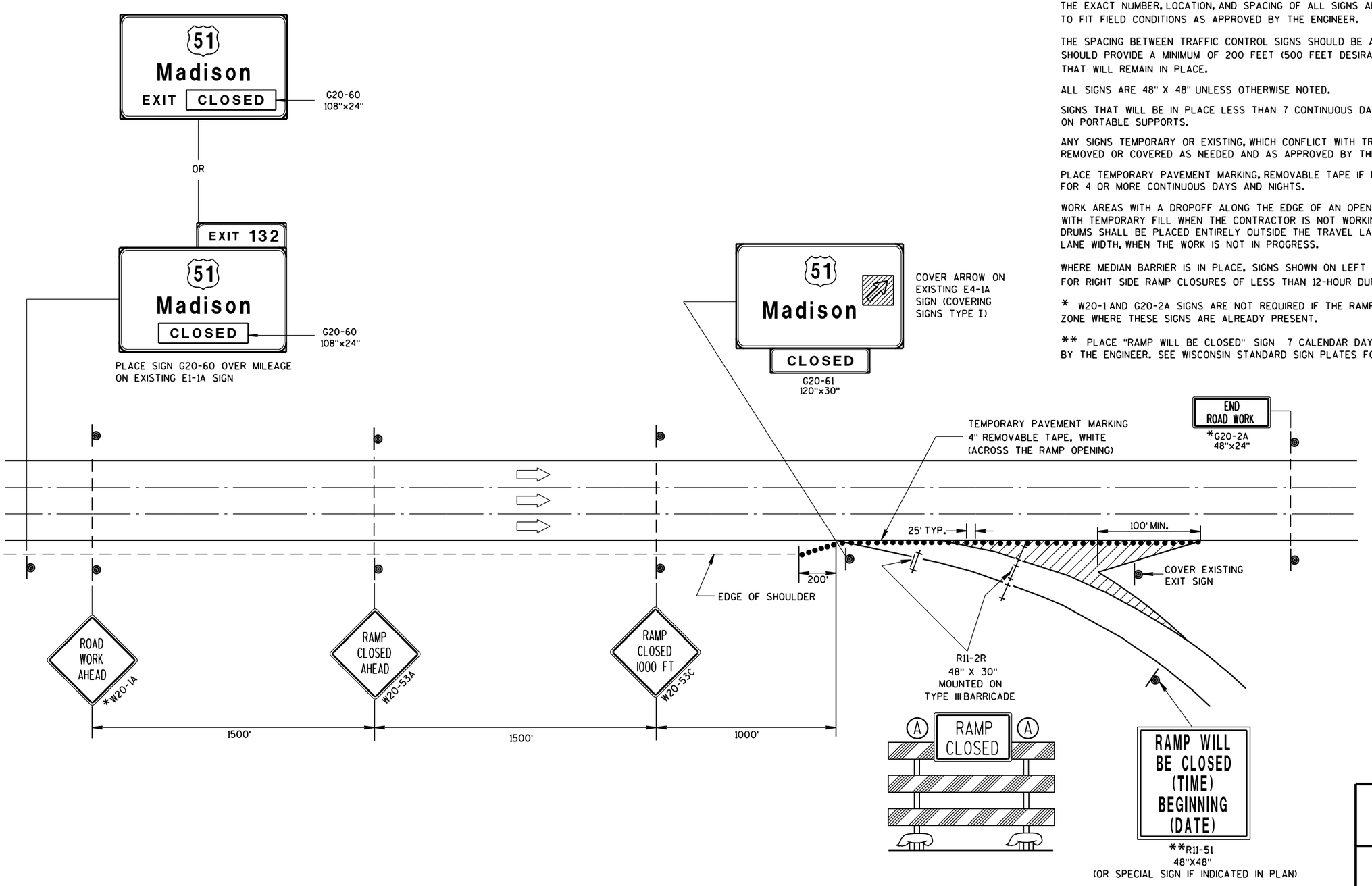
S.D.D. 15 D 15-2



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 FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

WORK AREAS WITH A DROPOFF 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 THE 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.

* W20-1 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 WILL BE CLOSED" SIGN 7 CALENDAR DAYS PRIOR TO CLOSURE OR AS DIRECTED BY THE ENGINEER. SEE WISCONSIN STANDARD SIGN PLATES FOR SIGN LAYOUT.

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- SIGN ON PERMANENT SUPPORT
- (A) TYPE "A" WARNING LIGHT (FLASHING)
- DIRECTION OF TRAFFIC

TRAFFIC CONTROL, EXIT RAMP CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2015 — DATE
/S/ Peter Amakobe Atepe — STATEWIDE WORK ZO SAFETY ENGI FIC
FHWA

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S.D.D. 15 D 16-3

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S.D.D. 15 D 16-3

LEGEND

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

GENERAL NOTES

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

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

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

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

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

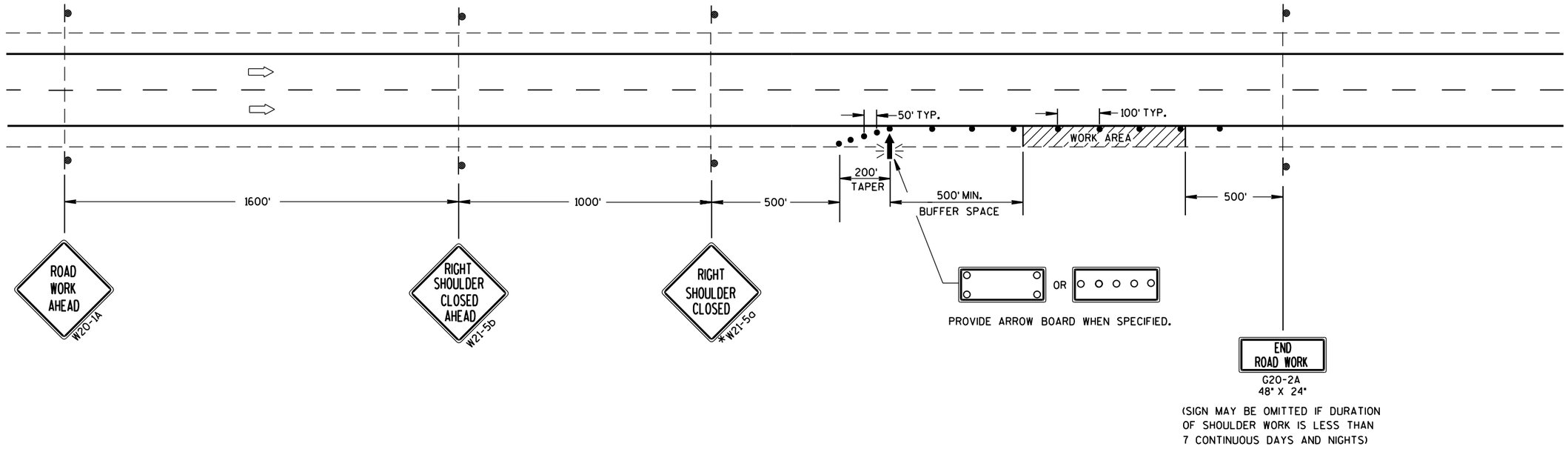
SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

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

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

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

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



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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

June 2016 — DATE

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

FHWA

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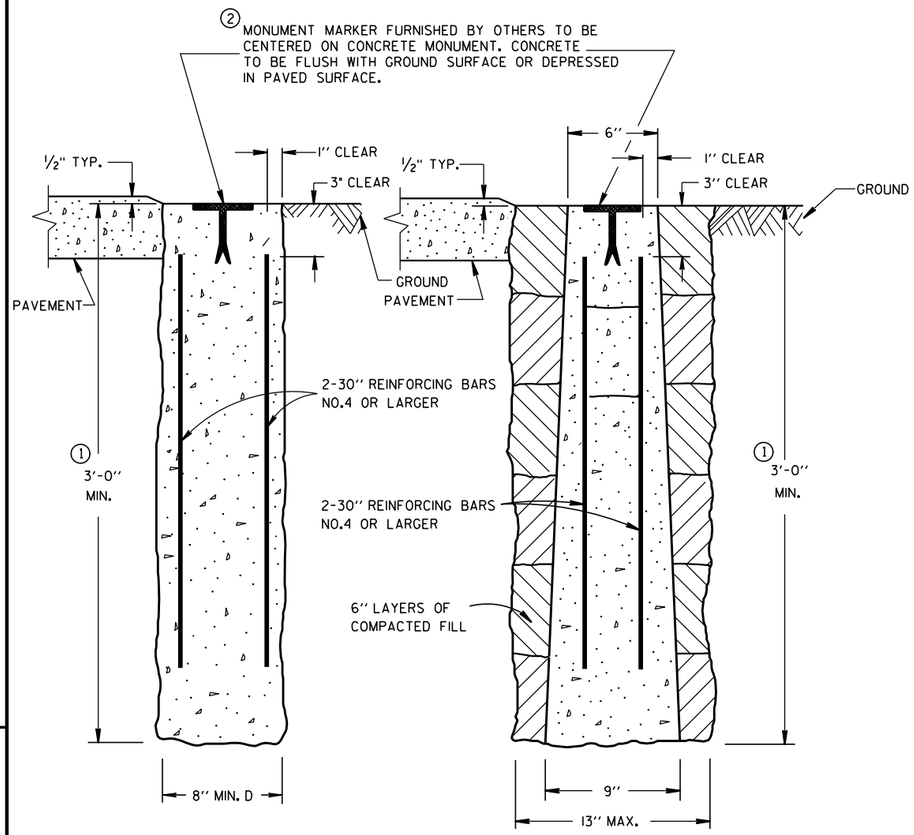
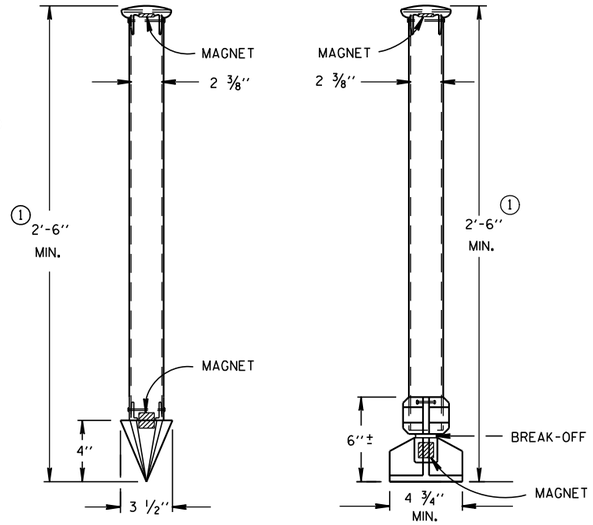


CAST-IN-PLACE PRECAST

CONCRETE MONUMENTS
TYPE A



ALUMINUM MONUMENTS
(INCLUDES MARKER)

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.

DETAILED DRAWINGS OF PROPOSED ALTERNATE DESIGNS FOR METAL MONUMENTS OR MONUMENT COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

INSTALLED METAL MONUMENTS MUST BE EASILY DETECTED WITH A DIP NEEDLE. INSERT PERMANENT MAGNETS SHALL BE ATTACHED NEAR THE TOP AND BOTTOM OF THOSE MONUMENTS CONSTRUCTED OF A METAL ALLOY WHICH IS NOT ATTRACTIVE TO A DIP NEEDLE.

THE CAST IRON MONUMENT COVER SHALL BE A "NON-ROCKING" TYPE. ADJUSTMENT OF THE COVER TO GRADE MAY BE ACCOMPLISHED BY THE USE OF MORTAR AND BRICK, OR BY EITHER PRECAST OR CAST-IN-PLACE REINFORCED CONCRETE GRADE RINGS.

MONUMENTS SHALL BE LOCATED AND PLACED AT THE DIRECTION OF THE ENGINEER.

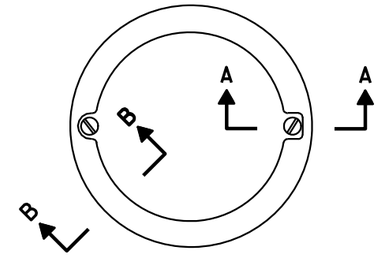
ALUMINUM MONUMENTS AND MONUMENT COVERS SHALL BE MADE FROM AN ALUMINUM AND MAGNESIUM ALLOY AS DETERMINED BY THE MANUFACTURER.

THE MONUMENT COVERS DETAILED ON THIS DRAWING ARE NOT EQUAL ALTERNATES. MONUMENT COVERS SHALL BE CAST IRON UNLESS ALUMINUM IS SPECIFIED ELSEWHERE IN THE CONTRACT.

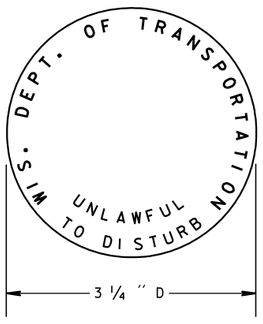
MONUMENT SHALL BE CAST-IN-PLACE CONCRETE UNLESS PRECAST CONCRETE OR ALUMINUM MONUMENTS ARE SPECIFIED IN THE CONTRACT OR PERMITTED BY THE ENGINEER.

① MINIMUM LENGTH SHALL BE 4'-0" FOR MONUMENTS INSTALLED IN PAVED AREAS.

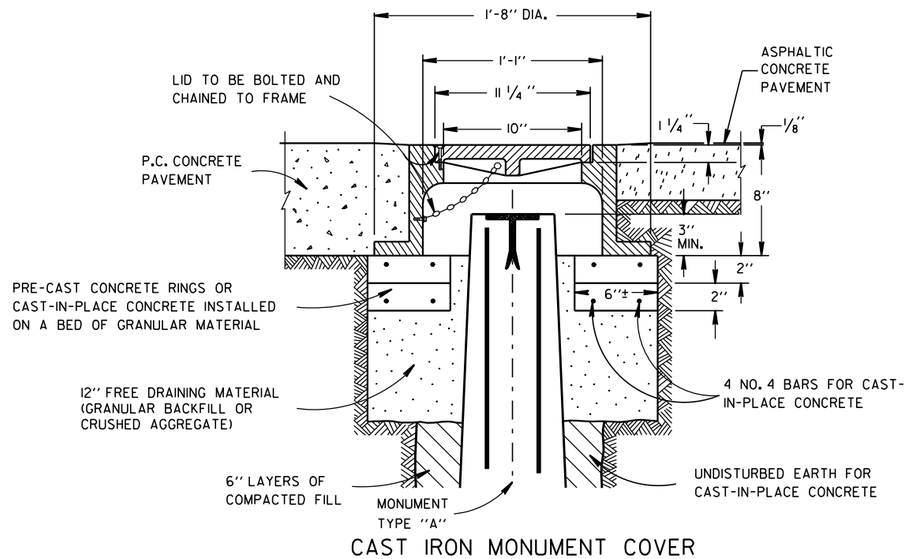
② AN OFFICIAL COUNTY MONUMENT MARKER SUPPLIED BY A COUNTY MAY BE REQUIRED FOR SOME SECTION CORNERS AND WITNESS MONUMENTS INSTEAD OF THIS WIS DOT MARKER.



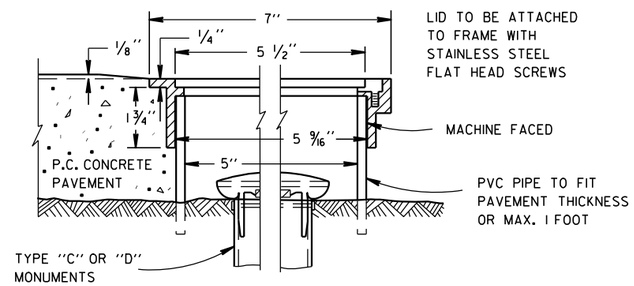
TOP VIEW



② WIS DOT MONUMENT MARKER LOGO
FOR TYPES "A", "C" & "D"



CAST IRON MONUMENT COVER
(APPROXIMATE WEIGHT - 95 LBS.)



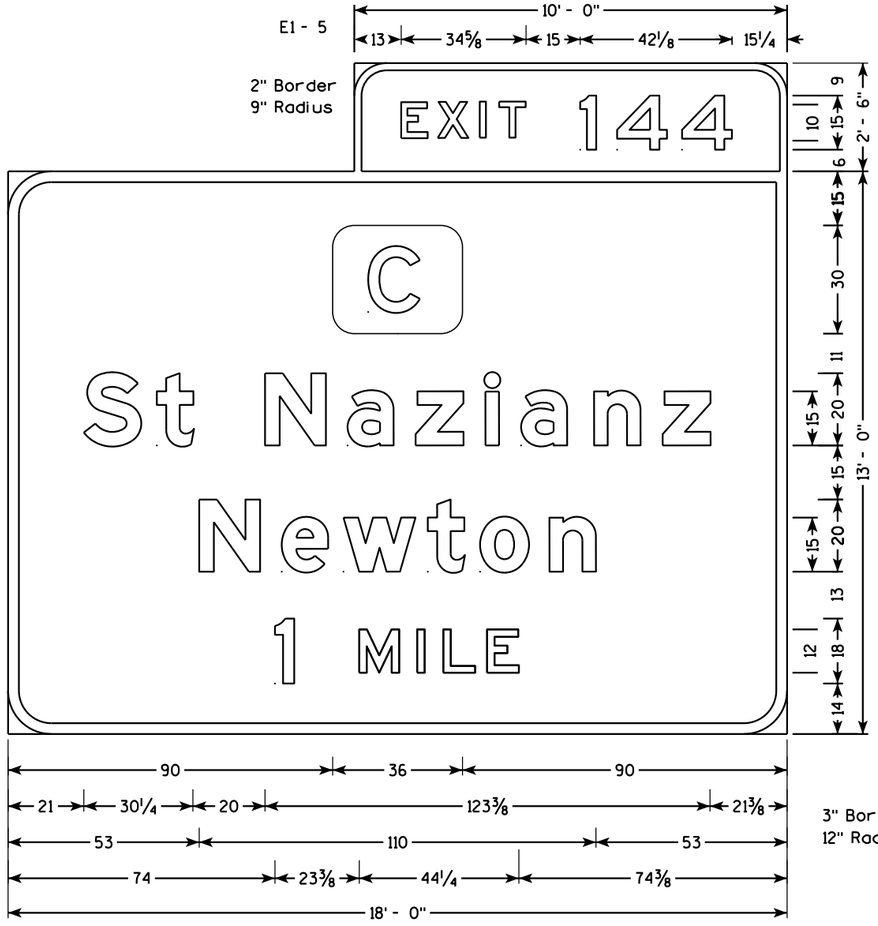
SECTION B-B SECTION A-A
ALUMINUM MONUMENT COVER
(APPROXIMATE WEIGHT 2 LBS)
(FOR CONCRETE PAVEMENT ONLY)

LANDMARK REFERENCE MOUNMENTS AND COVERS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

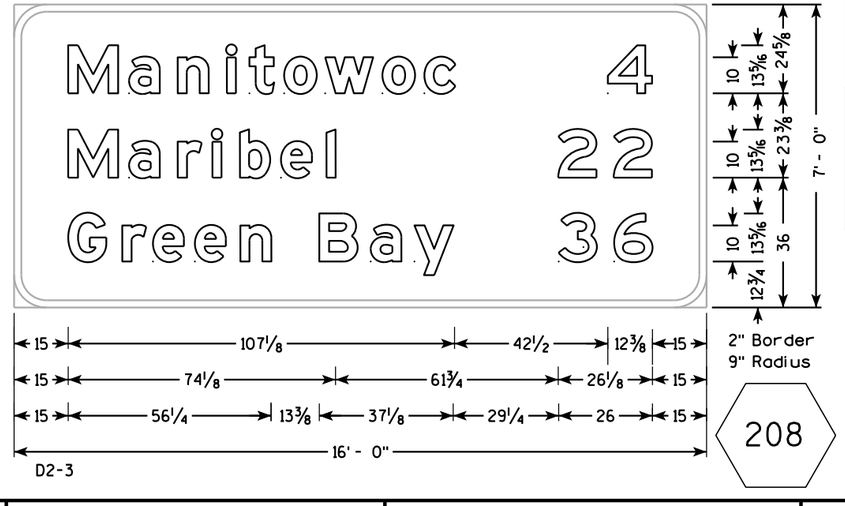
APPROVED
9/22/1999 DATE
/S/ Rory L. Rhinesmith
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6
S.D.D. 16 A 1-6



203 210

202 209

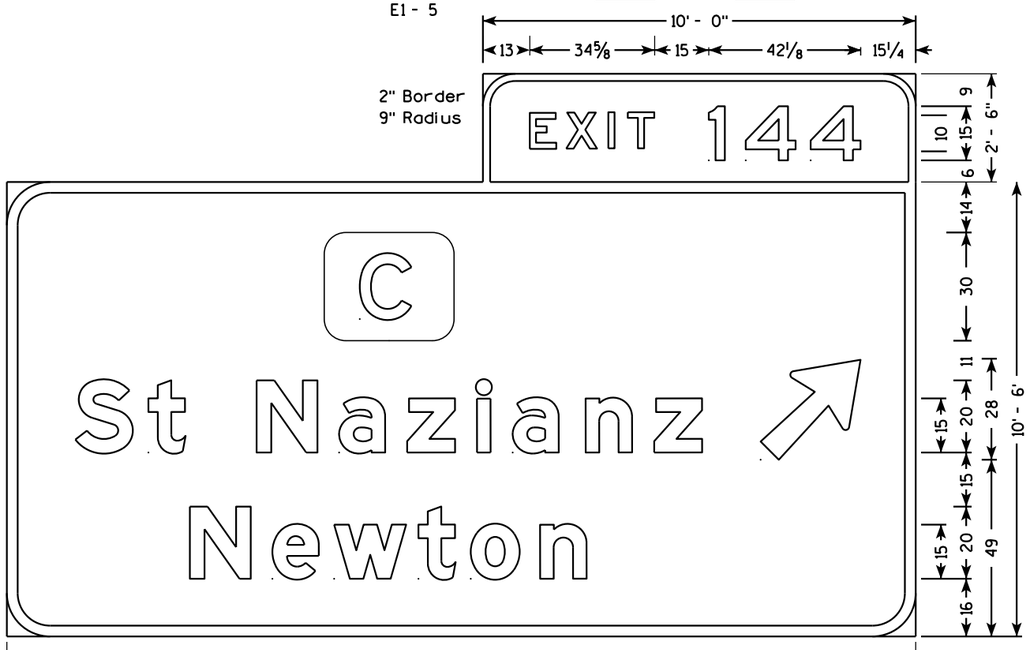


208

NOTES

1. All Signs are Type I - Type SH Reflective
2. Color:
   Background - Green
   Message - White
3. Message Series - E Modified except all cap Words are Series E

205 207

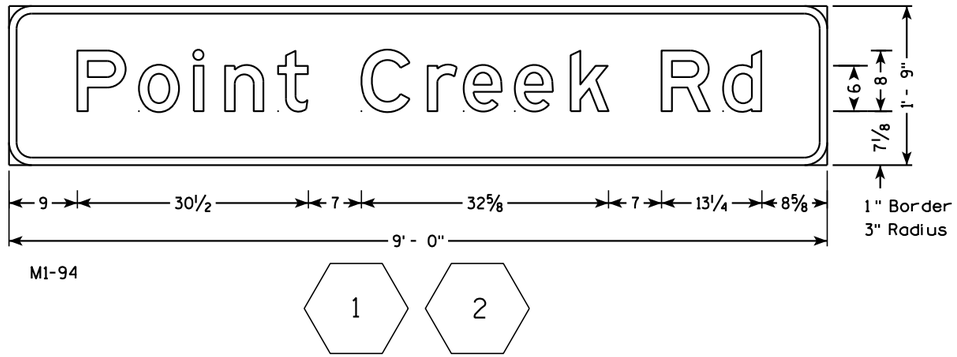


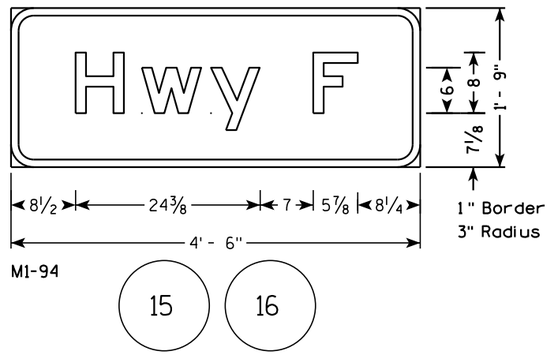
204 206

7

7

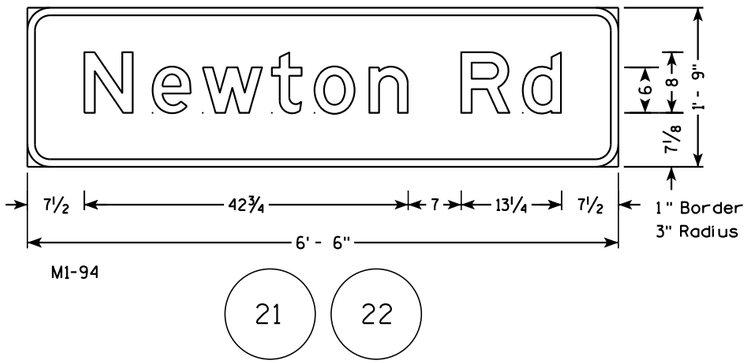
PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	SIGN DETAILS	SHEET NO:	E

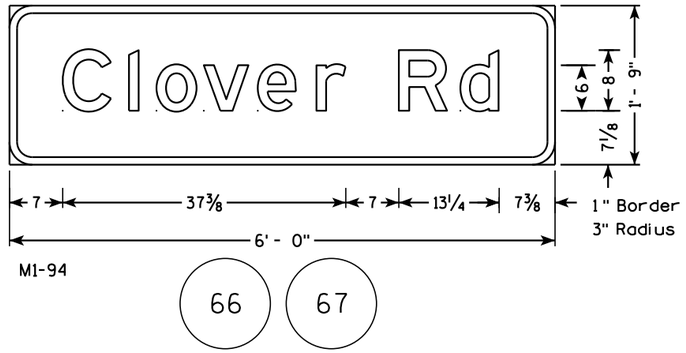


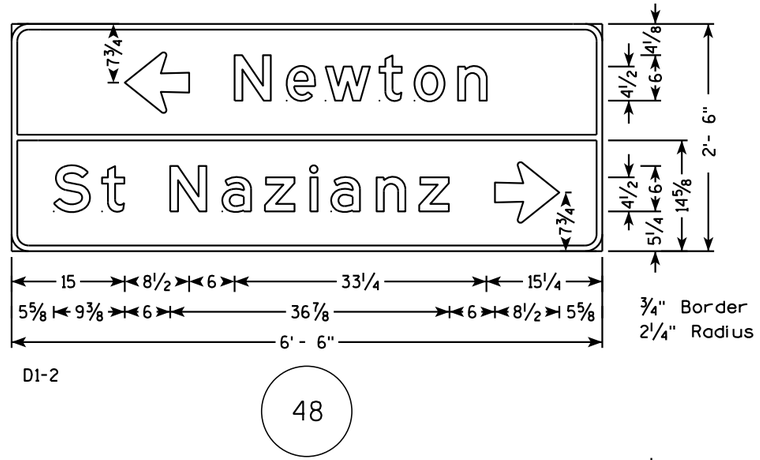


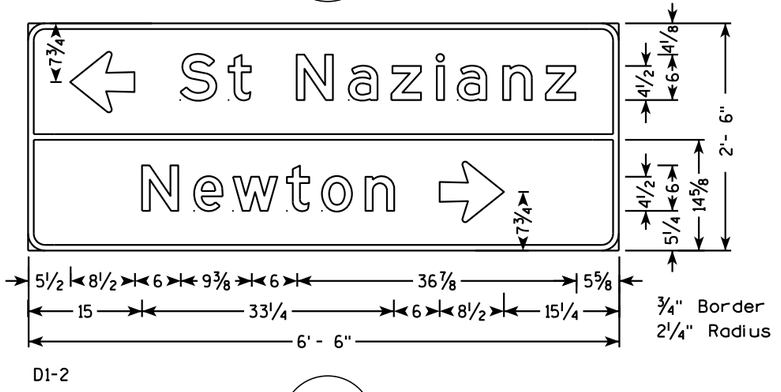
NOTES

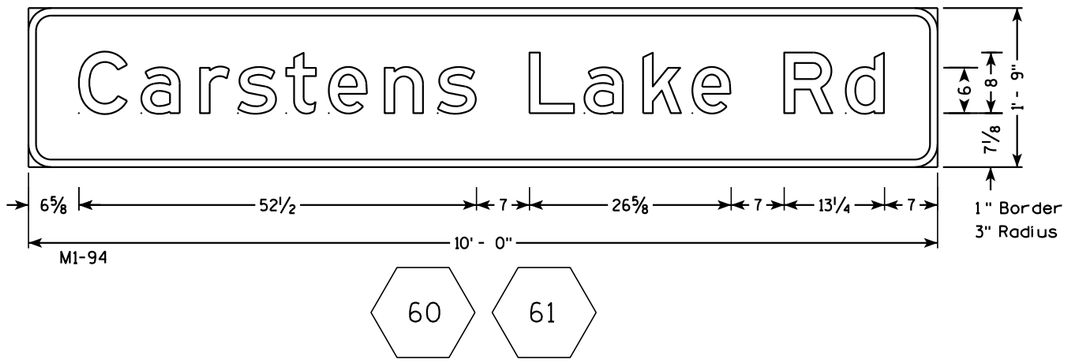
1. All Signs Type II - Type H Reflective
2. Color:
   Background - GREEN
   Message - WHITE
3. Message Series - E











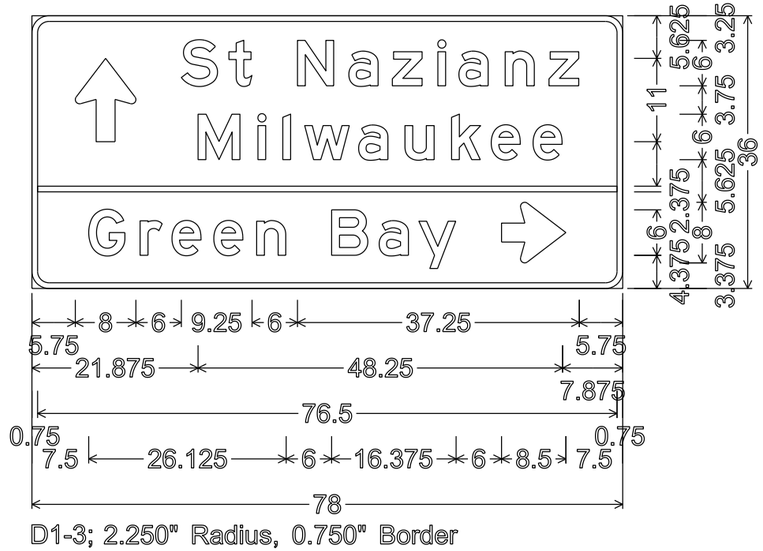
7

7

PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	PERMANENT SIGNING	SHEET NO: 252	E

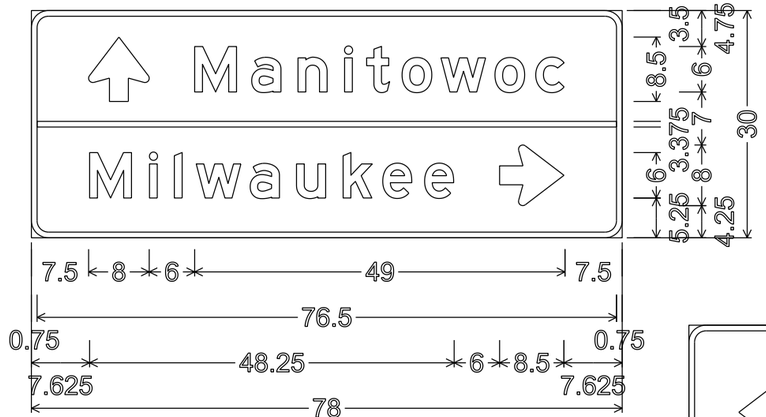
NOTES

1. All Sign Type II - Type H Reflective
2. Color:
   Background - GREEN
   Message - WHITE
3. Message Series - E



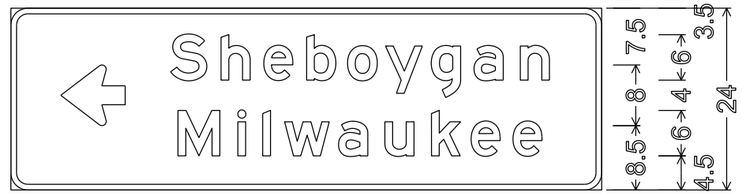
D1-3; 2.250" Radius, 0.750" Border

128



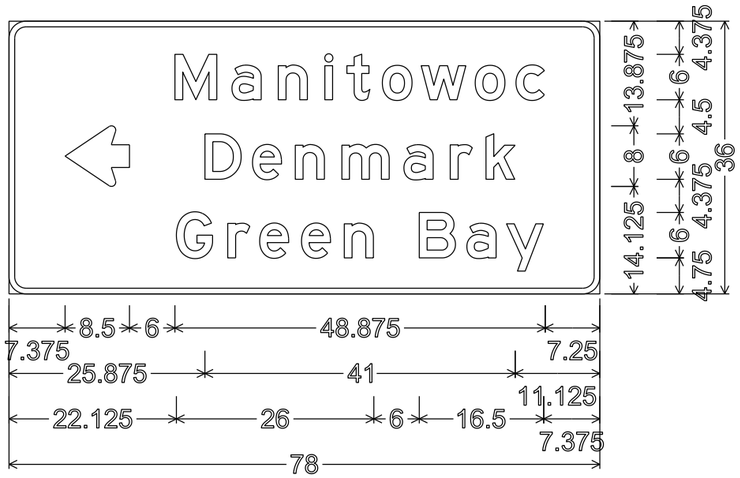
D1-2; 2.250" Radius, 0.750" Border

69



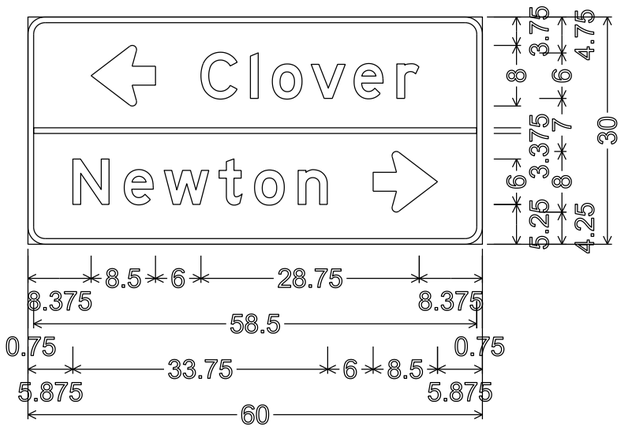
D1-2; 2.250" Radius, 0.750" Border

101



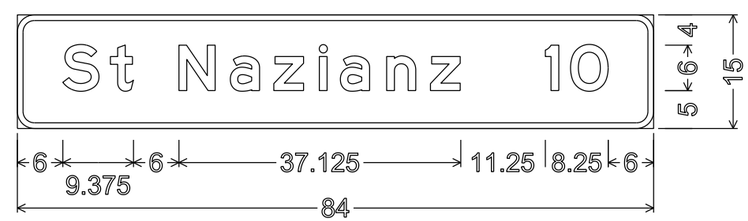
D1-3; 2.250" Radius, 0.750" Border

103



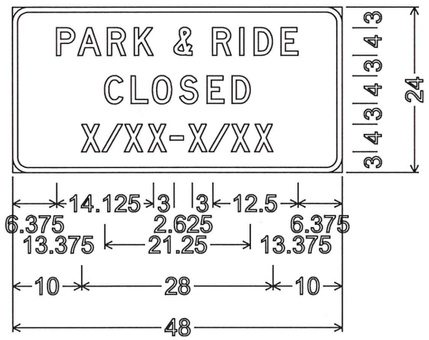
D1-2; 2.250" Radius, 0.750" Border

129

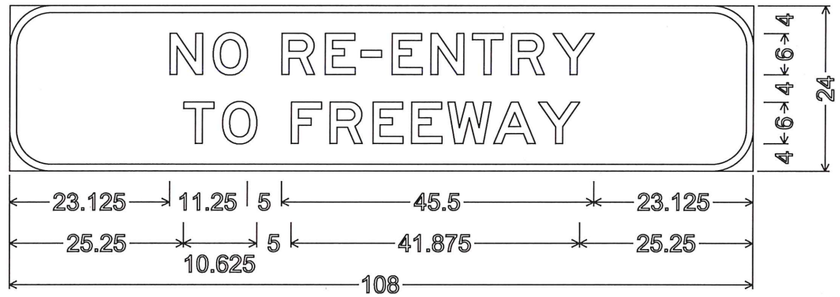


D2-1; 2.250" Radius, 0.750" Border

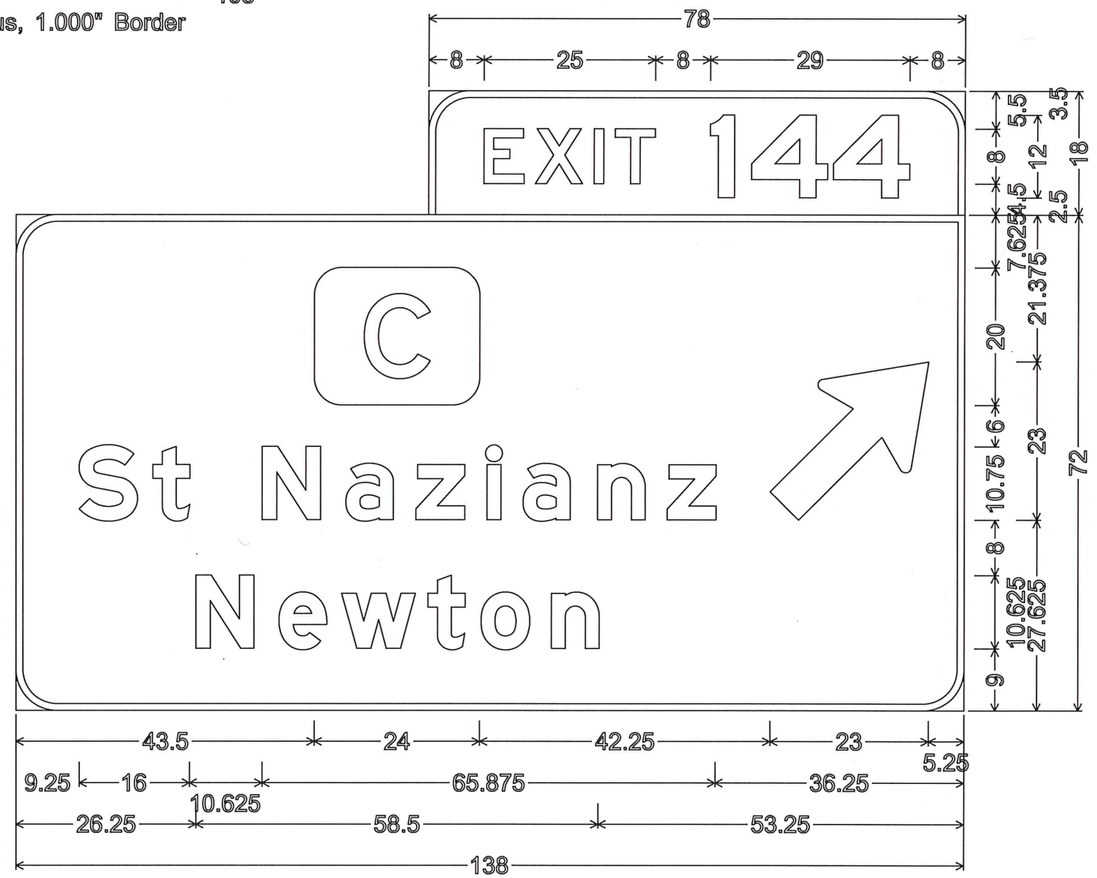
76



2.250" Radius, 0.750" Border
"PARK" D; "&" D; "RIDE" D;
"CLOSED" D; "X/XX-X/XX" D;



6.000" Radius, 1.000" Border



6.000" Radius, 1.000" Border

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - E Mod except Exit Series E

7

7

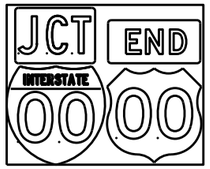
PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	TEMPORARY SIGNING	SHEET NO: 254 E

FILE NAME : N:\spo\traffic\A Work Zone\Detours\Manitowoc County\StNazianz.dgn PLOT DATE : 25-JUL-2016 12:51 PLOT BY : dotj1f PLOT NAME : PLOT SCALE : 22:1

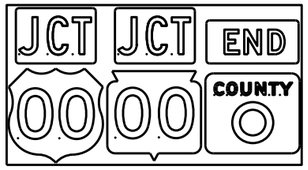
WISDOT/CADDS SHEET 42

TYPICAL ASSEMBLIES

J1-1

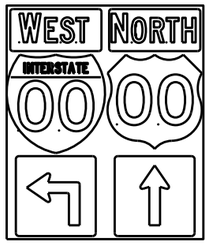


J1-2

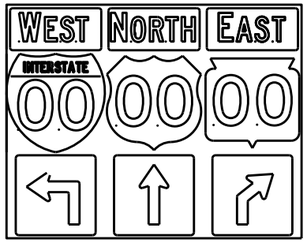


J1-3

J2-1



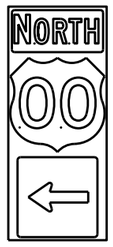
J2-2



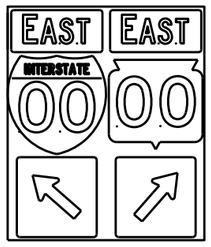
J2-3

JV

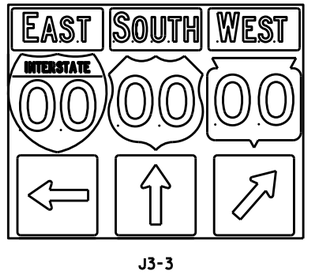
(Typical Vertical J-Assembly
See Note 10 and 11)



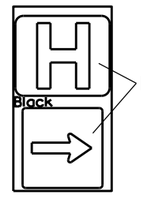
J3-1



J3-2

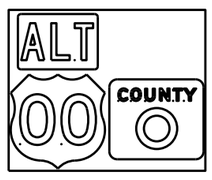


J3-3

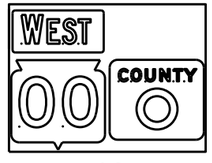


JH-1

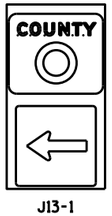
J4-1



J4-2



J4-2



J13-1

J12-1

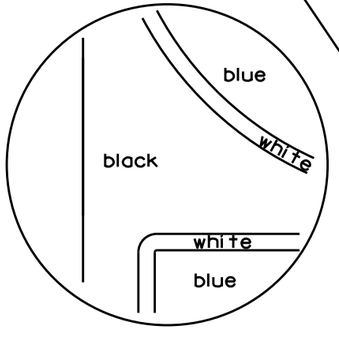
J32-1

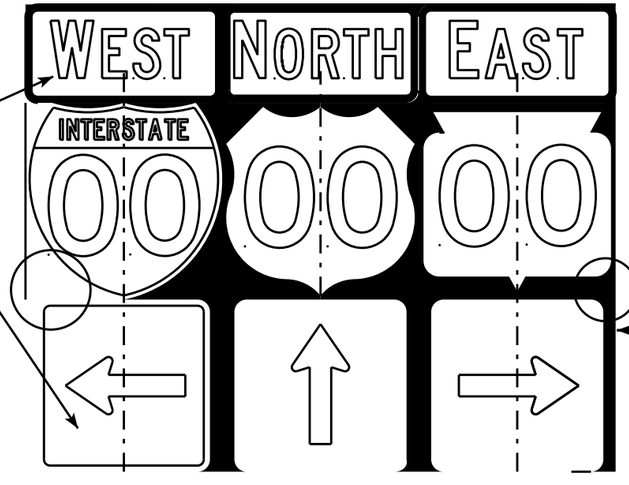
J33-1

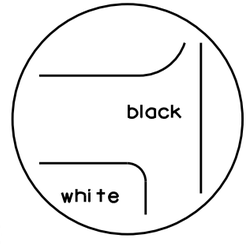
J23-1

J22-1

[blue background with interstate]







[black background]

NOTES

1. Signs are Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Black Non-reflective
   Message - see Note 5
3. Message Series - See Note 5
4. Corners shall be square or rounded if base material is plywood. If base material is metal the corners shall be rounded.
5. The colors and message spacing on each marker shall be according to the applicable route marker panel specifications.
6. Certain marker heads require the component pieces to be the same color. As an example, all the components used with an M1-1 Interstate marker shall be blue.
7. Single panel j-assemblies shall only be used with route marker shields that are same size. If the route marker shields are different size use multiple piece component.
8. Route assemblies that have 24 inch route shields and have dimensions greater than 48 inches (both vertical and horizontal) shall have one horizontal splice between the arrows and route shields. Vertical splices shall not be used on route assemblies with a horizontal dimension of 144 inches or less. The contractor shall not use more than one vertical joint per sign and the joint shall be between route shields.
9. Route assemblies that have 36 inch shields and have dimensions greater than 48 inchs (both vertical and horizontal) shall have two horizontal splices. One horizontal splice shall be between the cardinal direction and route shields and the other horizontal splice shall be between the arrows and route shields. Vertical splices shall not be used on route assemblies with a horizontal dimension of 144 or less. The contractor shall not use more than one vertical joint per sign and the joint shall be between route shields.
10. All Vertical J Assemblies are given a Sign Code of JV
11. For JV Assemblies that have a mixture of Interstate and non Interstate shields, arrows and cardinals shall be white on blue.

ROUTE MARKERS & COMPONENTS
IN TYPICAL ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

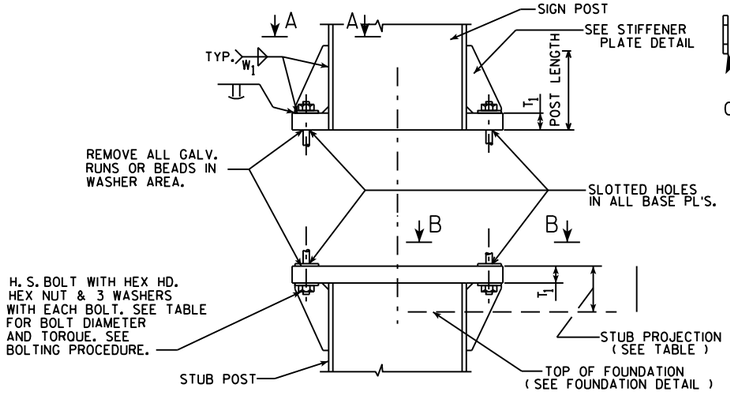
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/06/14 PL... A2-1S.8

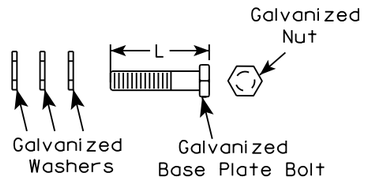
PROJECT NO: | SHEET NO: E

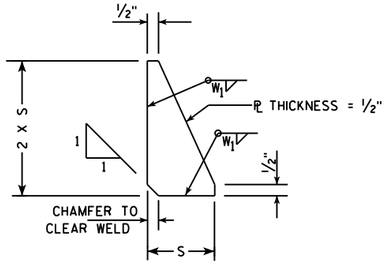
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A21S.DGN PLOT DATE : 06-FEB-2014 14:10 PLOT BY : mscsja PLOT NAME :

WISDOT/CADDS SHEET 42



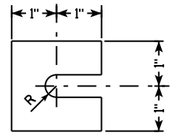
SIGN POST AND STUB POST ELEVATION





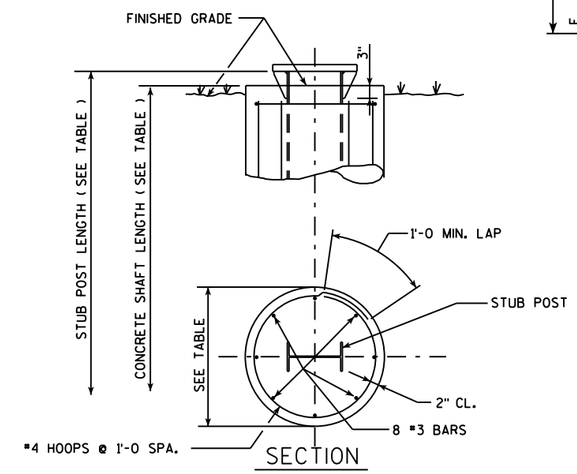
STIFFENER PLATE DETAIL

(SEE TABLE FOR DIMENSIONS)

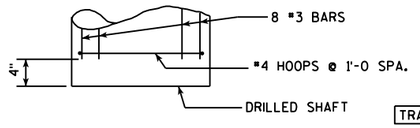


FURNISH 2 @ .012" ± THICK AND 2 @ .032" ± THICK SHIMS PER POST. SHIMS SHALL BE FABRICATED FROM BRASS SHIM STOCK OR STRIP CONFORMING TO A.S.T.M.- B36.

SHIM DETAIL



SECTION



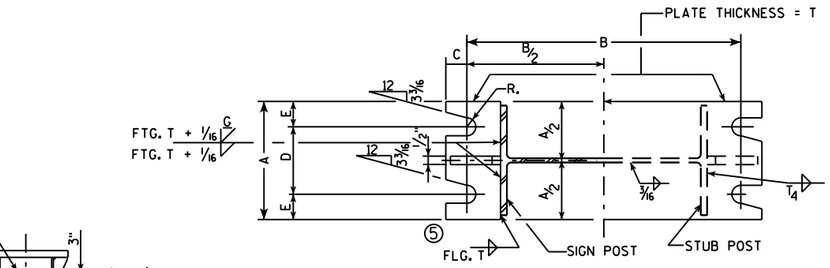
FOUNDATION DETAIL

QUANTITIES FOR 1 FOOTING		
	CONC. MASONRY C.Y.	REINF. STEEL LBS.
A	0.6	34
B	0.8	49
C	0.9	50
D	0.9	56
E	1.0	62

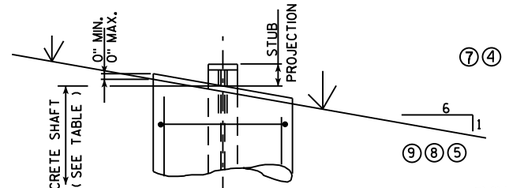
⑦

REINF.	TYPE	#3	#4
	A	8 @ 4'-5	5 @ 6'-3
	B	8 @ 6'-5	7 @ 6'-3
	C	8 @ 6'-11	7 @ 6'-3
	D	8 @ 7'-5	8 @ 6'-3
	E	8 @ 7'-11	9 @ 6'-3

⑦



SECTION A-A SECTION B-B



⑦④

SHAFT PLACEMENT

DESIGN DATA

WIND PRESSURE = 75 M.P.H.
WIND COMPONENTS - NORMAL = 1.0 TRANSVERSE = 0.0
ICE LOAD = 3 P.S.F.

GROUP LOADS	PERCENT OF ALLOWABLE STRESS
1. DEAD	100
2. DEAD & WIND	140
3. DEAD, ICE & ½ WIND[4]	140 [4]25 P.S.F. MIN.

ALLOWABLE SOIL PRESSURE = 1½T / SQ. FT.
WIND LOAD WAS APPLIED TO THE AREA OF THE SIGN AND TO THE SUPPORTING MEMBERS.
ICE LOAD WAS APPLIED TO ONE FACE OF THE SIGN AND AROUND THE SURFACE OF THE SUPPORTING MEMBERS.

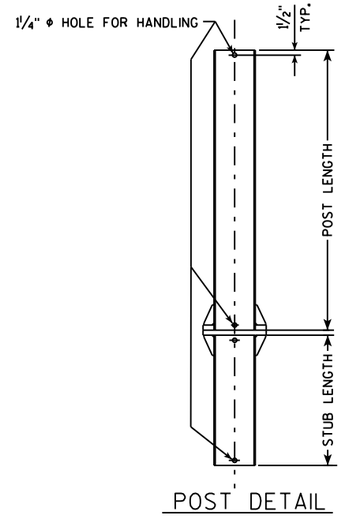
GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.
DESIGN CONFORMS WITH A.A.S.H.T.O. SPECIFICATIONS 1985.
⑨ ALL POSTS, POST STUBS & ATTACHMENTS SHALL BE A.S.T.M. A709 GRADE 50, GALVANIZED IN ACCORDANCE WITH ASTM A123.
THE POST, BASE PLATES, UPPER SIX INCHES OF STUB POST FLANGE SPLICE PLATE AND FUSE PLATE SHALL BE GALVANIZED AFTER FABRICATION.
FURNISH STEEL BOLTS, NUTS, AND WASHERS IN ACCORDANCE WITH SECTION 635 OF THE STANDARD SPECIFICATIONS.

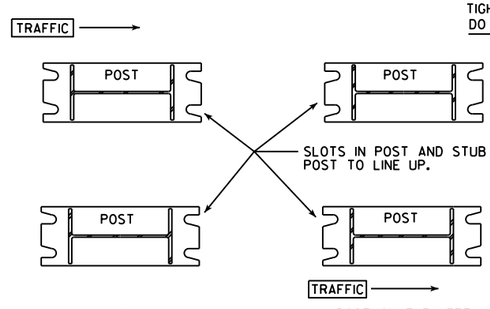
BOLTING PROCEDURE - BASE CONNECTION

1. ASSEMBLE SIGN POST TO STUB POST WITH BOLTS AND ONE OF THE FLAT WASHERS ON EACH BOLT BETW. PLATES.
2. SHIM AS REQ'D. TO PLUMB POST.
3. PRIOR TO BOLT TIGHTENING LUBRICATE BASE CONNECTION BOLTS WITH BEESWAX OR OTHER HIGH-WAX LUBRICANT.
4. TIGHTEN ALL BOLTS THE MAXIMUM POSSIBLE WITH 12" OR 15" WRENCH TO BED WASHERS & SHIMS AND TO CLEAN BOLT THREADS, THEN LOOSEN EACH BOLT IN TURN AND RETIGHTEN IN A SYSTEMATIC ORDER TO THE PRESCRIBED TORQUE. (SEE TABLE)
5. BURR THREADS AT JUNCTION WITH NUT USING A CENTER PUNCH TO PREVENT NUT LOOSENING.

NOTE:
TIGHTEN THE HIGH STRENGTH BOLTS TO THE TORQUE SHOWN. DO NOT OVERTIGHTEN.



POST DETAIL



POST SLOT ORIENTATION ⑦

L	X	TYPE	POST SIZE \ DIMENSION	BOLT SIZE & TORQUE	A	B	C	D	E	T_1	T_4	W_1	R	S	STUB LENGTH	STUB PROJECTION	SHAFT DIAMETER	SHAFT LENGTH	K	
3 ¾	④	A	W10"X12.0 #/FT.	¾" Φ @ 75#-FT.	5¼"	1'-0⅜"	⅞"	3½"	⅞"	1"	3/16"	5/16"	13/32"	2⅛"	3'-6	3"	2'-0 Φ	5'-0	76.0#	④
4 ¾	④	B	W12"X16.0 #/FT.	⅞" Φ @ 85#-FT.	5½"	1'-4¼"	1"	3½"	1"	1¼"	¼"	5/16"	13/32"	3"	5'-6	3"	2'-0 Φ	7'-0	146.5#	④
5		C	W12"X19.0 #/FT.	⅞" Φ @ 85#-FT.	5½"	1'-4¼"	1"	3½"	1"	1½"	5/16"	5/16"	13/32"	3"	6'-0	3"	2'-0 Φ	7'-6	182.1#	
5		D	W12"X22.0 #/FT.	⅞" Φ @ 85#-FT.	5½"	1'-4¼"	1"	3½"	1"	1½"	⅜"	5/16"	13/32"	3"	6'-6	3"	2'-0 Φ	8'-0	210.5#	
5	③	E	W12"X26.0 #/FT.	1" Φ @ 90#-FT.	7"	1'-4¼"	1¼"	4"	1½"	1½"	⅜"	5/16"	17/32"	3"	7'-0	3"	2'-0 Φ	8'-6	293.0#	③

BASE CONNECTION DATA TABLE — FOUNDATION DATA — ②

① ⑥ ①

STRUCTURAL CARBON STEEL PAY WTS. (1 POST) = K+ (POST LENGTH X POST WT.)
" K " INCLUDES STUB, BASE PLATES, STIFFS., BOLTS, AND WASHERS.

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

DATE 11/12/15 PLATE NO. A3-1.16

⑩	1-21-14	LUBRICATION OF BASE BOLTS
⑨	4-26-11	REMOVE NON-GALVANIZED
⑧	10-30-96	NOT GALVANIZED/GALVANIZED
⑦	10-30-92	QUANT., A588 EXCEPT., ADD SLOT VIEW
⑥	8-24-87	BASE CONN. WELD
⑤	10-13-81	BASE CONN. WELD & FUSE PL WASHERS
④	10-19-79	POST A & B, A572 GR. 50, & K
②	11-28-78	"K" ③ 4-23-79 TYPE "E"
①	5-4-78	T_1 , T_2 & W_1
NO.	DATE	REVISION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

TYPE A, B, C, D, & E

CONST. SPEC.	DRAWN BY	PLANS CK'D.
2011	JPH	

FTG. & SIGN SUPPORT DETAILS GROUND MOUNT BREAK-AWAY SIGNS

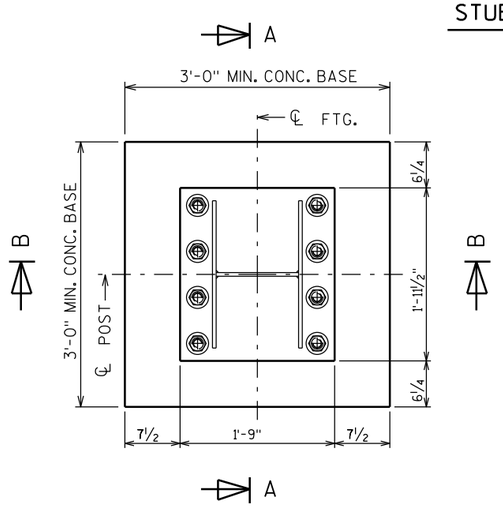
SHEET 256

PROJECT NO: | HWY: | COUNTY: | SHEET NO: E

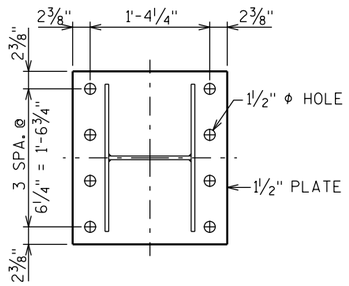
7

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\A31.DGN PLOT DATE : 01-DEC-2015 18:20 PLOT BY : $$ plotuser $$ PLOT NAME : PLOT SCALE : 5.351066:1.000000

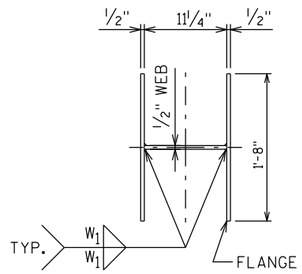
STUB AND MASONRY ANCHOR DETAILS



STUB SECTION



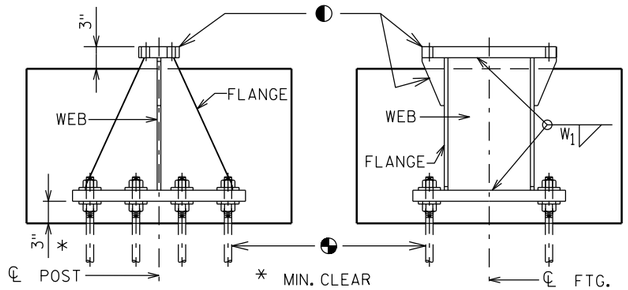
BASE PLATE



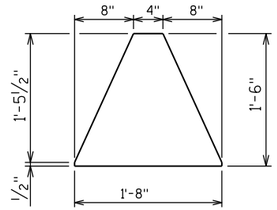
STUB

◐ SEE PLATE NO. A3-1 FOR DETAILS

◒ MASONRY ANCHORS TYPE S 1¼-INCHES (ADHESIVE). ALLOWABLE PULL OUT CAPACITY 14,995 KIPS. EMBED 1'-3" IN ROCK.



SECTION A SECTION B



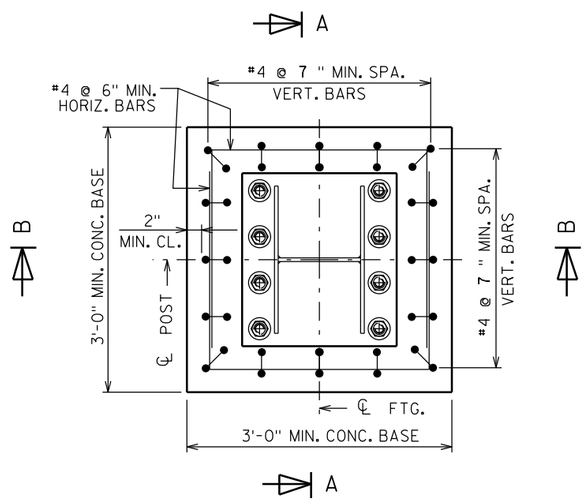
FLANGE

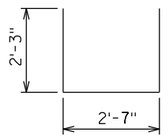
GENERAL NOTES

1. Quantities per Base:
   - REINFORCING BAR STEEL = 62 LBS
   - CONCRETE = 0.6 C.Y.
   - STEEL WEIGHT = 335 LBS
2. All materials, except anchor rod, nuts and washers, are to be A.S.T.M. A709 grade 50. All materials to be galvanized after fabrication.
3. If the contractor encounters rock before reaching the footing depth, per the A3-1 Sign Detail, determine the pull-out capacity of a test adhesive anchor installed in the rock. If the test result equals or exceeds the pull-out capacity of 14,995 KIPS, the contractor may install the breakaway stub for rock, according to this detail.

CONCRETE BASE AND REINFORCING STEEL DETAILS

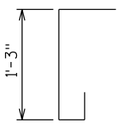
CONCRETE BASE SECTION





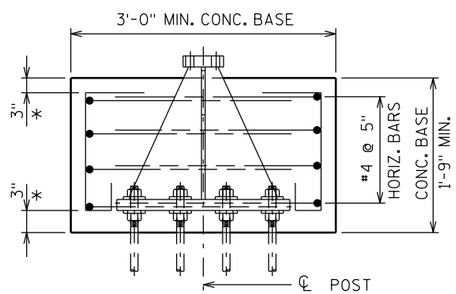
HORIZONTAL BAR

8 BARS @ 6'-11" LENGTH



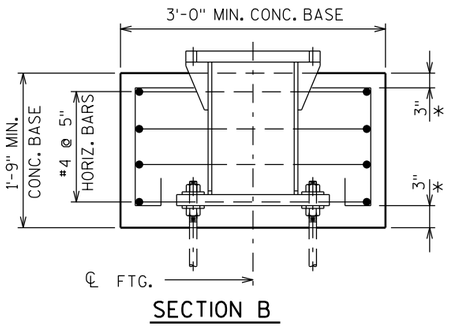
VERTICAL BARS

16 BARS @ 2'-4" LENGTH
MAY BE PLACED IN SKEW
FOR CLEARANCE NEED



SECTION A

* MIN. CLEAR



SECTION B

ALTERNATE BREAK-AWAY BASE ON ROCK
A3-1M

WISCONSIN DEPT OF TRANSPORTATION

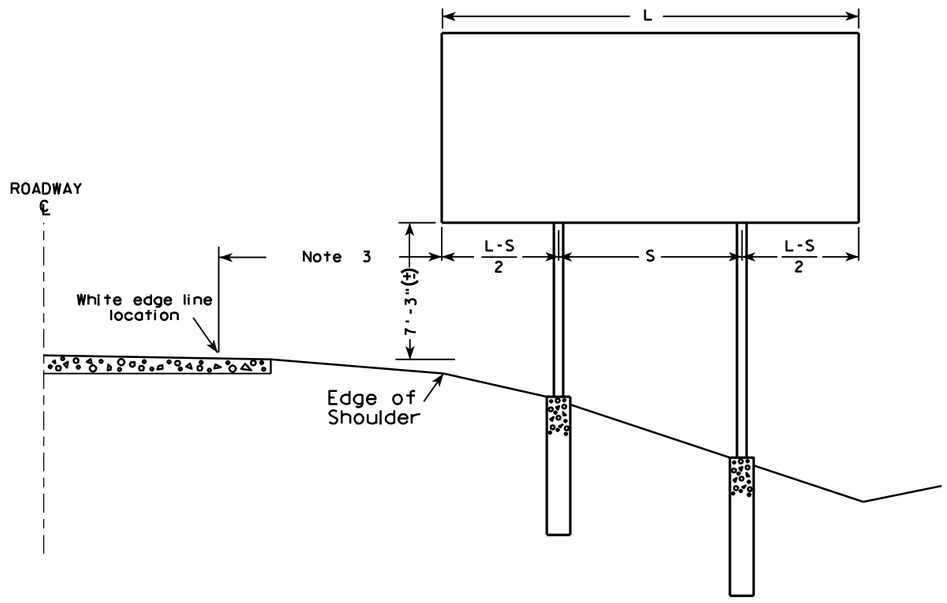
APPROVED Matthew R Rauch for State Traffic Engineer

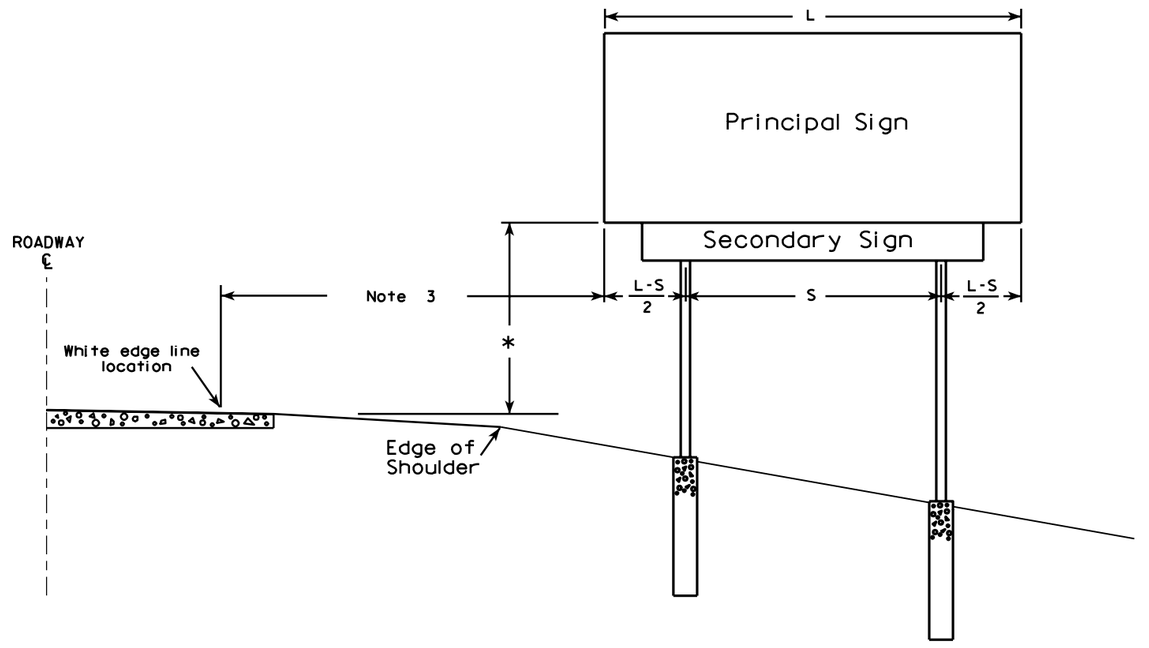
DATE 2/06/2014 PLATE A3-1M.1

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\A31M.DGN PLOT DATE : 10-MAR-2014 15:16 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 1.556674:1.000000

WISDOT/CADDS SHEET 42





GENERAL NOTES

1. For a 2 post installation, S equals 3L/5, but shall not be less than 9 ft.
2. For a 3 post installation, S equals 5L/7, but shall not be less than 18 ft., and the space between any two posts shall not be less than 9 ft.
3. Unless noted in the plan, the sign offset distance shall be a minimum of 17'-6", desirable 30'-0".
4. The (±) tolerance shown on this sheet is 3 in.
5. The vertical sign height clearance detailed is measured from the bottom of the sign to the near edge of pavement.
6. Post lengths shown in the miscellaneous quantities are estimated lengths. The contractor shall verify post lengths at the time of final grading.
7. Refer to the Traffic Guidelines Manual for further guidance on minimum vertical clearance requirements.

* Clearance is 8'-3"(±) when the secondary sign is 3 ft. or less in height. For secondary signs larger than 3 ft., the clearance to the bottom of the secondary sign shall be 5'-3"(±).

7

7

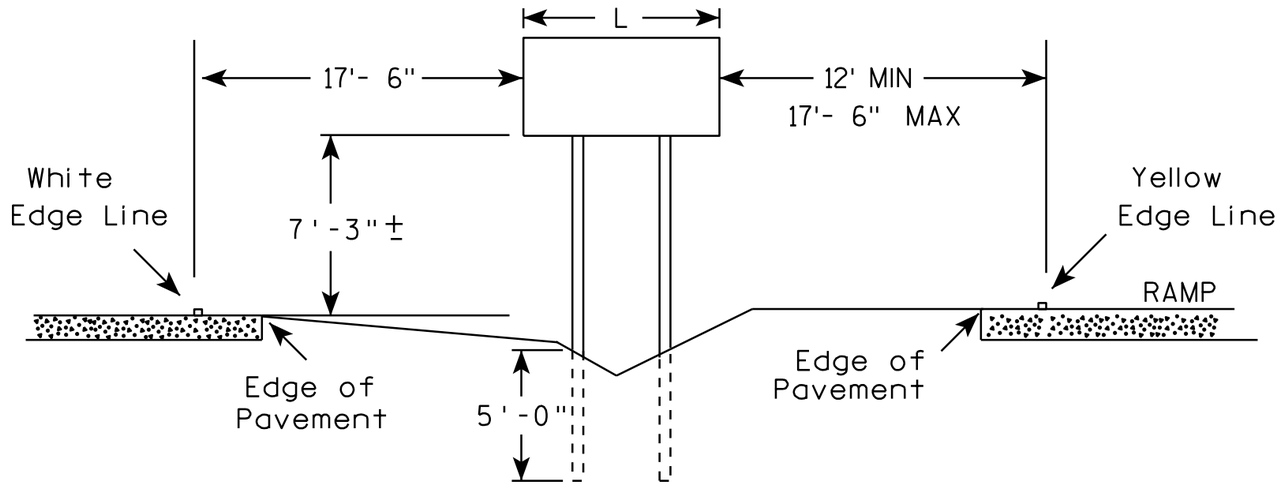
TYPICAL INSTALLATION OF TYPE I SIGNS

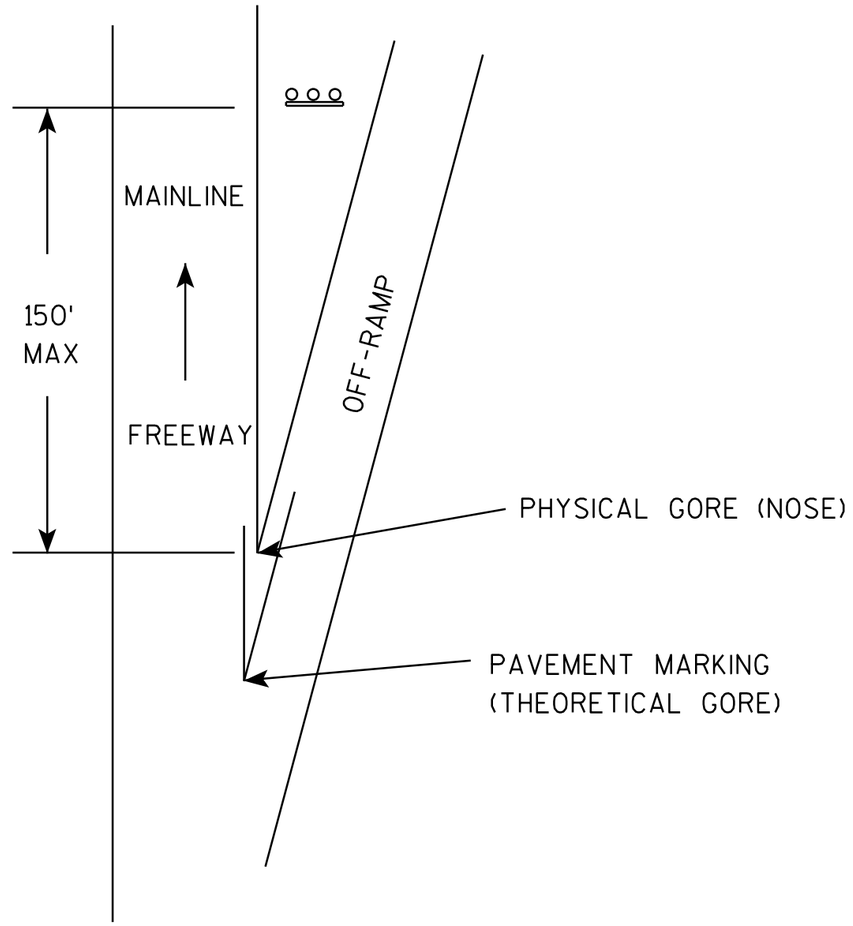
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/02/08 PLATE NO. A4-1.9

PROJECT NO:				SHEET NO: 258	E





GENERAL NOTES

1. The 150 foot distance from the physical gore (where pavement ends) will normally provide the offsets as shown.
2. If roadway geometrics permit, the sign may be closer than the 150 foot distance as long as the offsets are maintained.
3. At no time shall the location be greater than 150 feet. If the normal offsets cannot be maintained, they can be reduced to 6 feet from the edge of the paved shoulder (both freeway and ramp).
4. The offset from edge of sign to the yellow edge line on the ramp is shown as a minimum of 12 feet and a maximum of 17 feet, 6 inches. Preference is adhering to the maximum rather than the minimum dimension.
5. When L is equal to or exceeds 10 feet, use 3 posts as per A4-4.
6. The (∓) tolerance for the mounting height is 3 inches.

7

7

TYPICAL INSTALLATION
OF TYPE II SIGNS ON
WOOD POSTS IN GORE

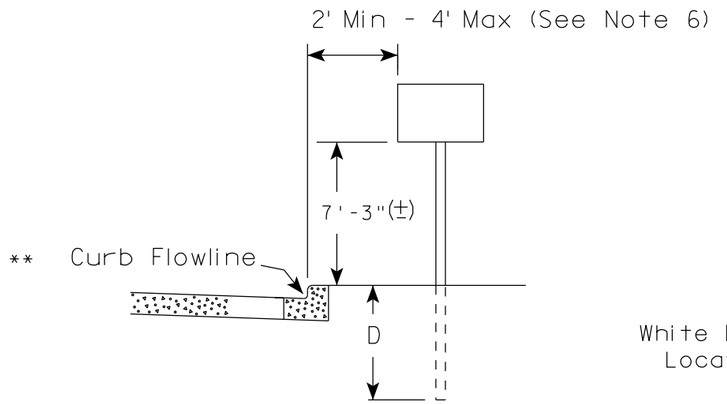
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

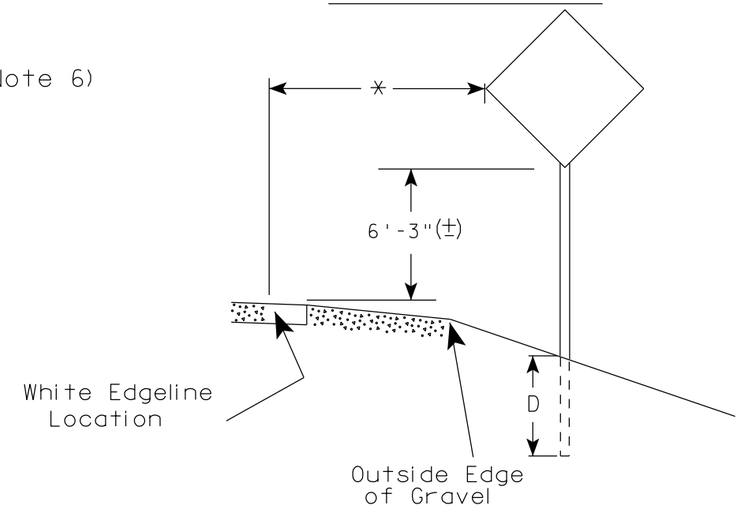
DATE 2/06/14 PLA 259 A4-2.3

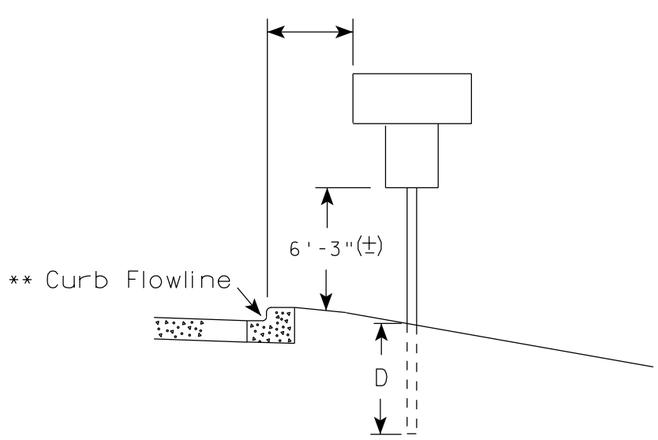
PROJECT NO: | SHEET NO: E

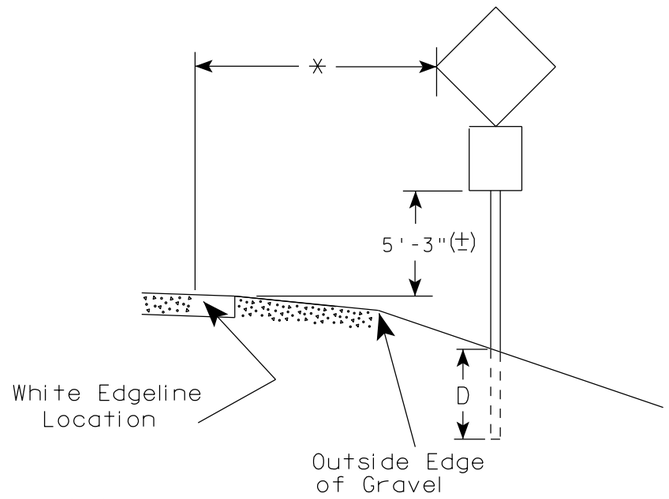
URBAN AREA



RURAL AREA (See Note 2)







GENERAL NOTES

1. Signs wider than 4 feet or 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.
2. If signs are mounted on 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. Minimum mounting height for J assemblies (A2-1S) is 7'-3" (±) or 6'-3" (±) per urban or rural detail respectively.
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'

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

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

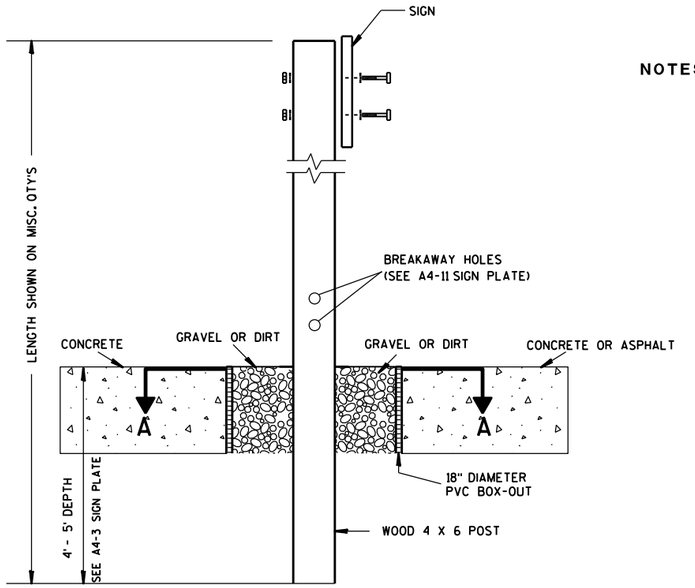
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 7/23/15 PLATE NO. A4-3.20

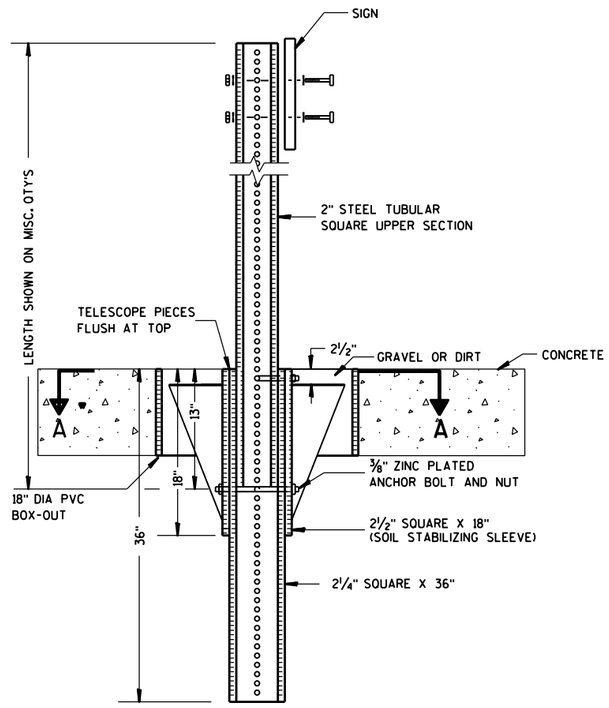
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



ELEVATION VIEW

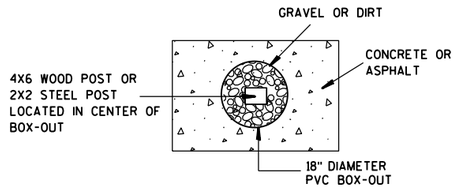
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

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

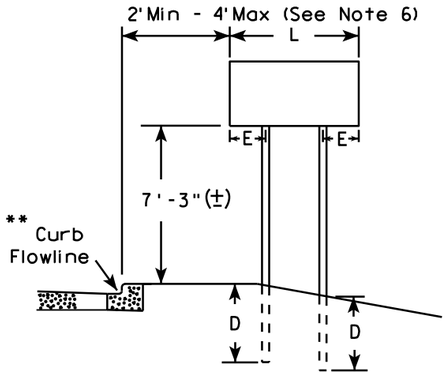
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 1/27/14 PLATE NO. A4-3B.1

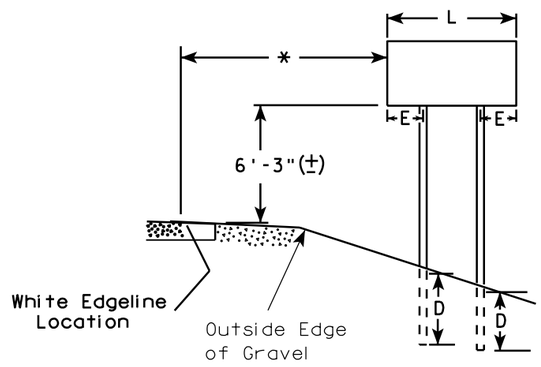
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

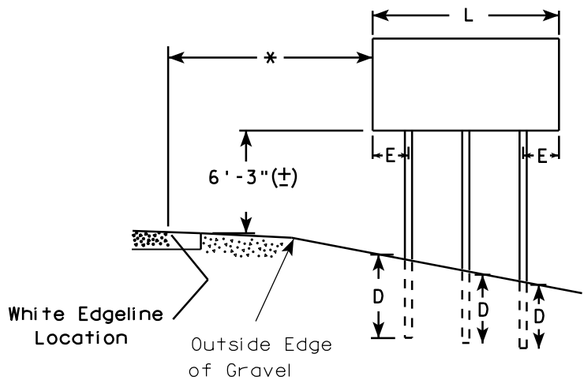
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A43B.DGN PLOT DATE : 27-JAN-2014 09:48 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 13.659812:1.000000 WISDOT/CADDS SHEET 42

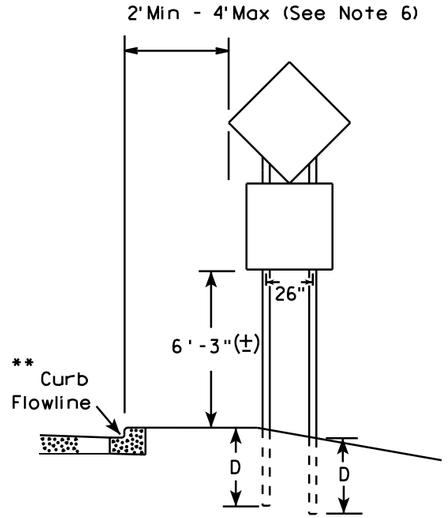
URBAN AREA



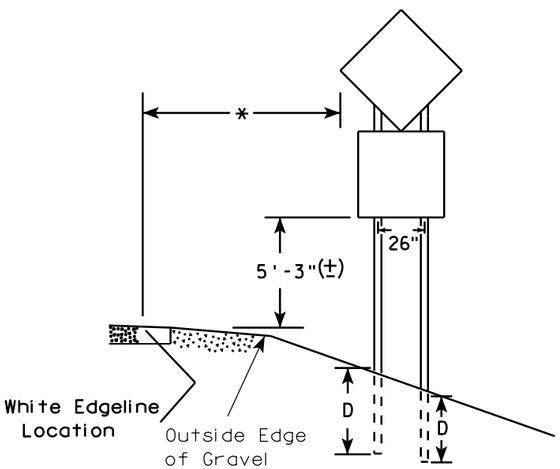
RURAL AREA (See Note 3)







48" DIAMOND WARNING SIGN



48" DIAMOND WARNING SIGN

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. Minimum mounting height for J assemblies (A2-1S) is 7'-3" (±) or 6'-3" (±) per urban or rural detail respectively.
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.

SIGN SHAPE OTHER THAN DIAMOND (TWO POSTS REQUIRED)	
L	E
Greater than 48" Less than 60"	12"
60" to 120"	L/5

***

SIGN SHAPE OTHER THAN DIAMOND (THREE POSTS REQUIRED)	
L	E
Greater than 120" less than 168"	12"

SIGN SHAPE OTHER THAN DIAMOND (FOUR POSTS REQUIRED)	
L	E
168" and greater	12"

POST EMBEDMENT DEPTH

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

TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

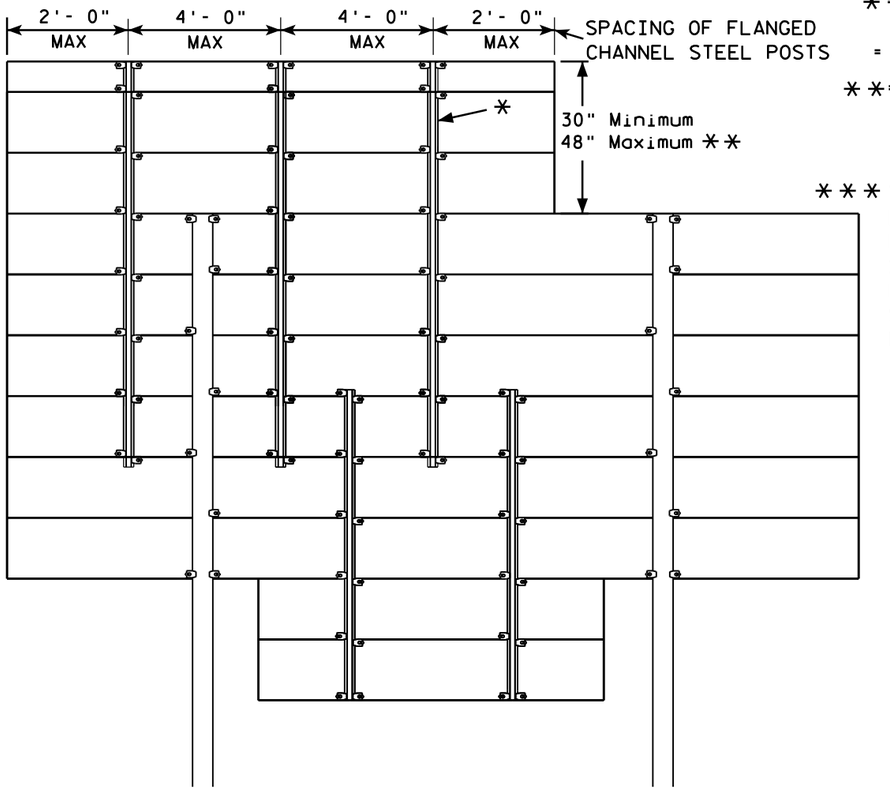
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 7/23/15 PLATE NO. A4-4 262 14

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

GROUND MOUNTED SIGN

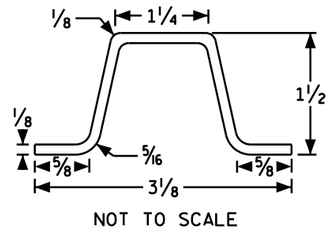


* =2.00 lb/ft FLANGED CHANNEL, MIN. YIELD STRENGTH = 60,000 PSI (GRADE 60) GALVANIZED

** =FOR 48" HEIGHT PANELS ON OVERHEAD STRUCTURES, ENTIRE SIGN SHALL BE CENTERED VERTICALLY ABOUT THE DEPTH OF THE TRUSS.

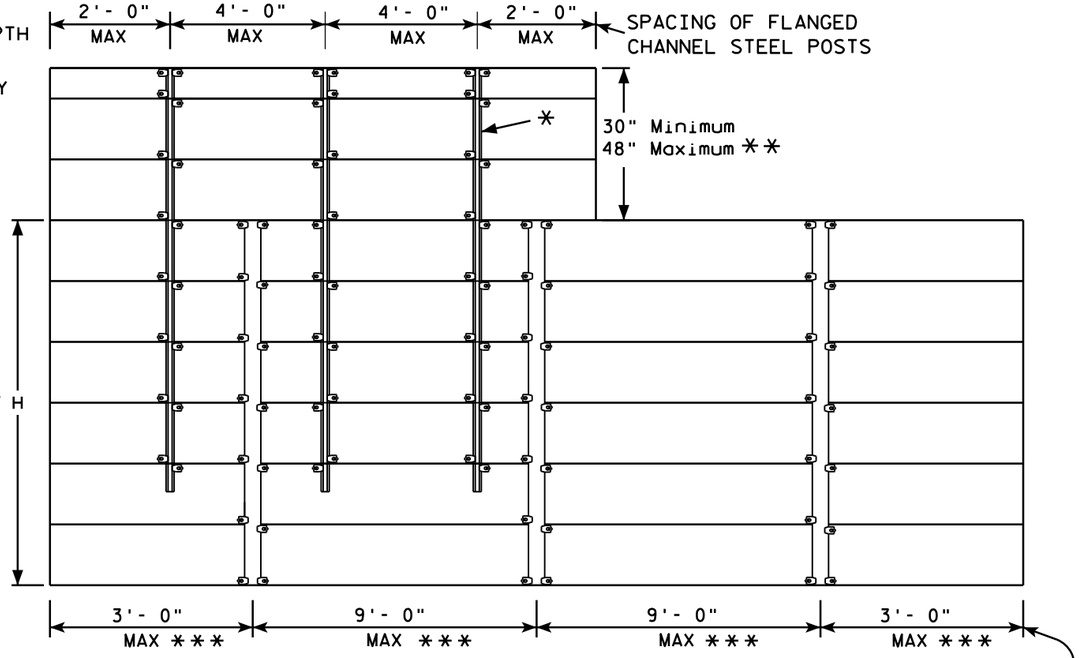
*** THESE SPACING DISTANCES SHALL ONLY BE USED WHEN THE MAIN SIGN HAS A MAXIMUM HEIGHT (DIMENSION H) OF 16 FT OR LESS. FOR SIGNS WITH A HEIGHT OF GREATER THAN 16 FT, STRUCTURAL CALCULATIONS SHALL BE PERFORMED.

FLANGE CHANNEL DETAIL



NOT TO SCALE

SIGN BRIDGE MOUNTED SIGN



SPACING OF ALUMINUM SIGN SUPPORTS
5" X 3.5" X 3.7 LBS./ft.

GENERAL NOTES

1. Flanged channel steel posts shall conform to size and material above, and shall be considered as incidental to other items in the contract.
2. Number of Flanged channel steel supports varies with length of panel and shall be spaced as shown:

   PANEL LENGTH 8'-0" OR LESS = 2 CHANNELS
   PANEL LENGTH 9'- 0" - 12'- 0" = 3 CHANNELS
   PANEL LENGTH 13'- 0" OR MORE = 4 CHANNELS

   If the flanged channel steel posts can not be horizontally spaced as shown, they can be moved so as to securely hold the sign.
3. The EXIT NUMBER PANEL shall normally be positioned above the guide sign aligned with the right edge of the guide sign. If the guide sign indicates a left exit, the EXIT NUMBER PANEL shall be aligned with the left edge of the guide sign.
4. If the bolt holes in the top panel (EXIT NUMBER), or sub panel (NEXT EXIT) line up with holes in main sign panel, stitch bolts shall be used in addition to the channels.
5. Provide post clips for each sign as shown. (Please note the differences between a ground mounted versus Sign bridge mounted sign as far as number of clips required on the main supports or beams)
6. Structural steel sign supports shall extend to the top of the main signs, as shown on the above details.

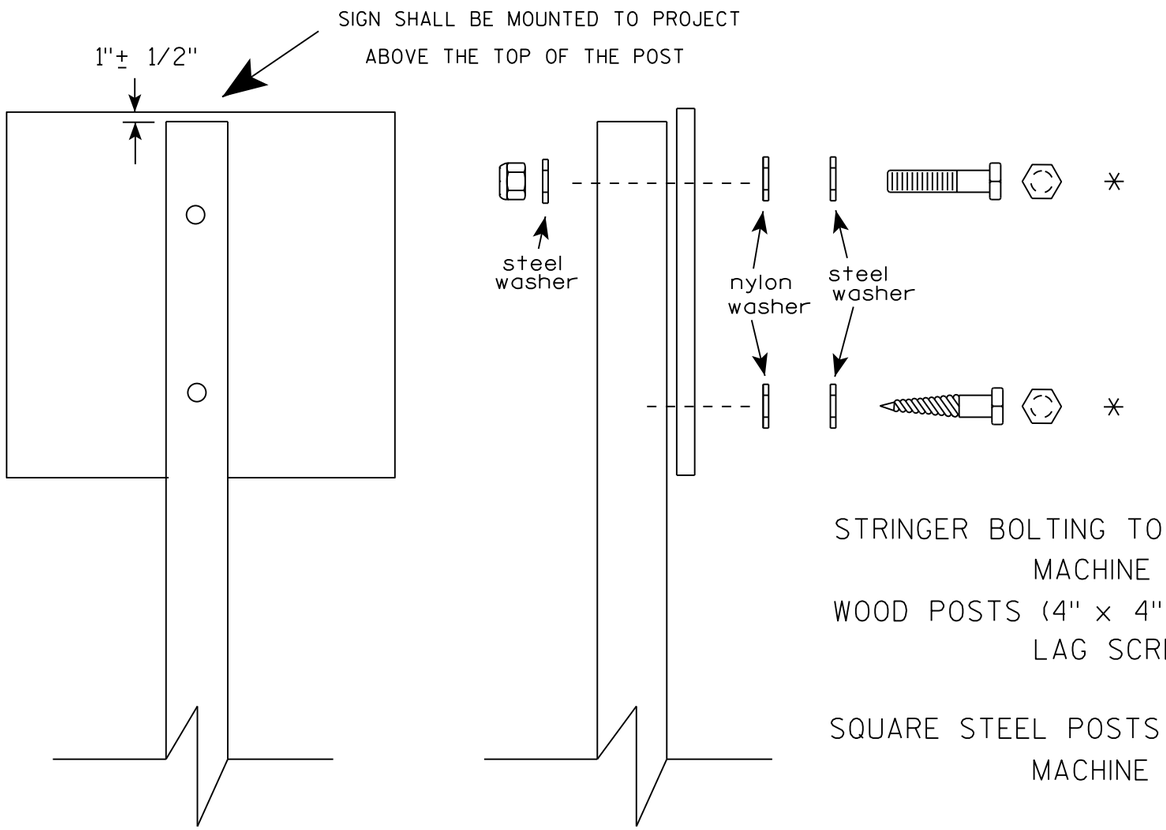
ATTACHMENT OF GUIDE SIGNS TO SUPPORTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/05/13 PLAT 263 A4-6.12

PROJECT NO: | SHEET NO: 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

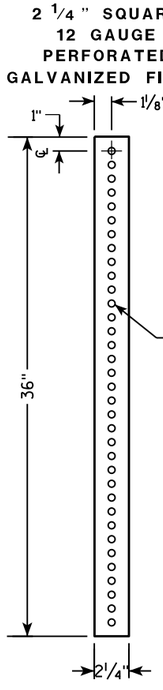
PROJECT NO:

SHEET NO: E

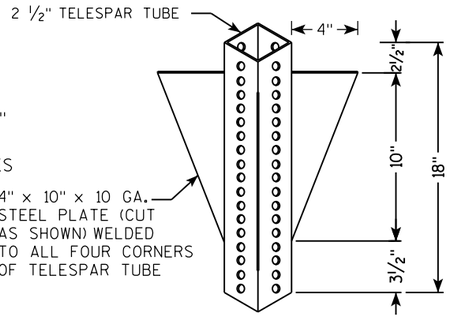
FILE NAME : C:\CADfiles\Projects\tr_stdplate\A48.DGN PLOT DATE : 11-AUG-2016 11:35 PLOT BY : $$ plotuser $$

TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM

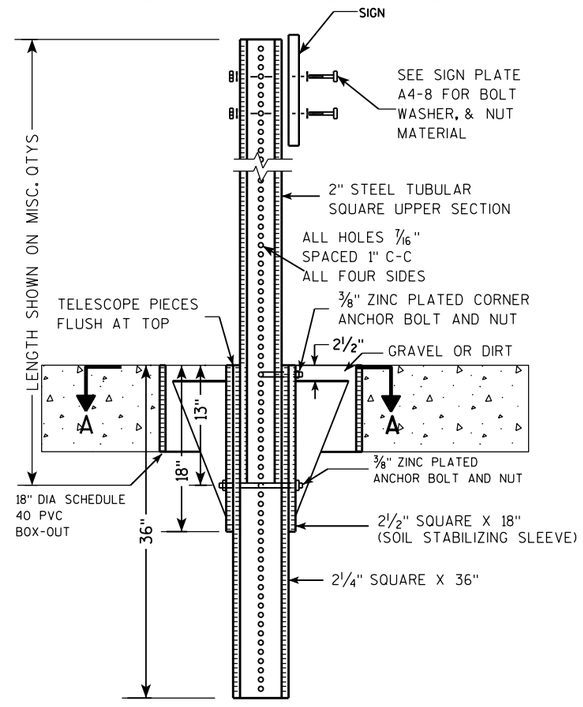
2 1/4 " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



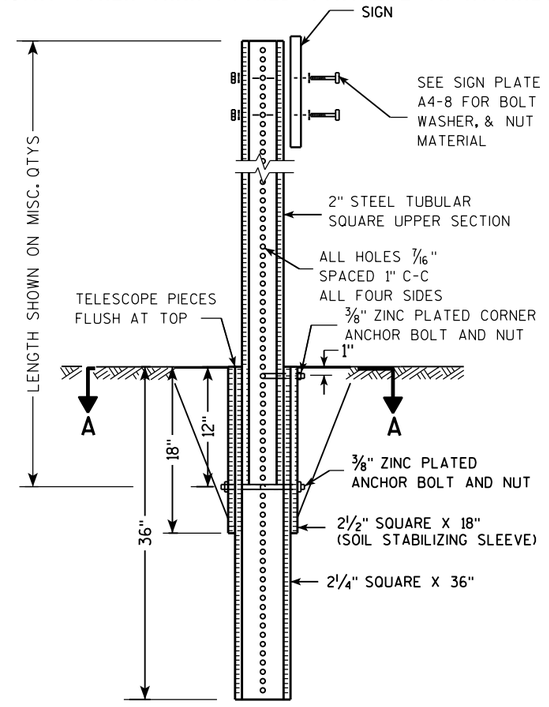
2 1/2 " SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH

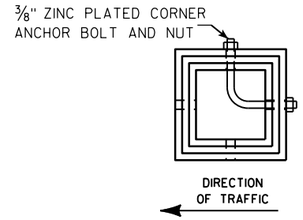


DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



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).

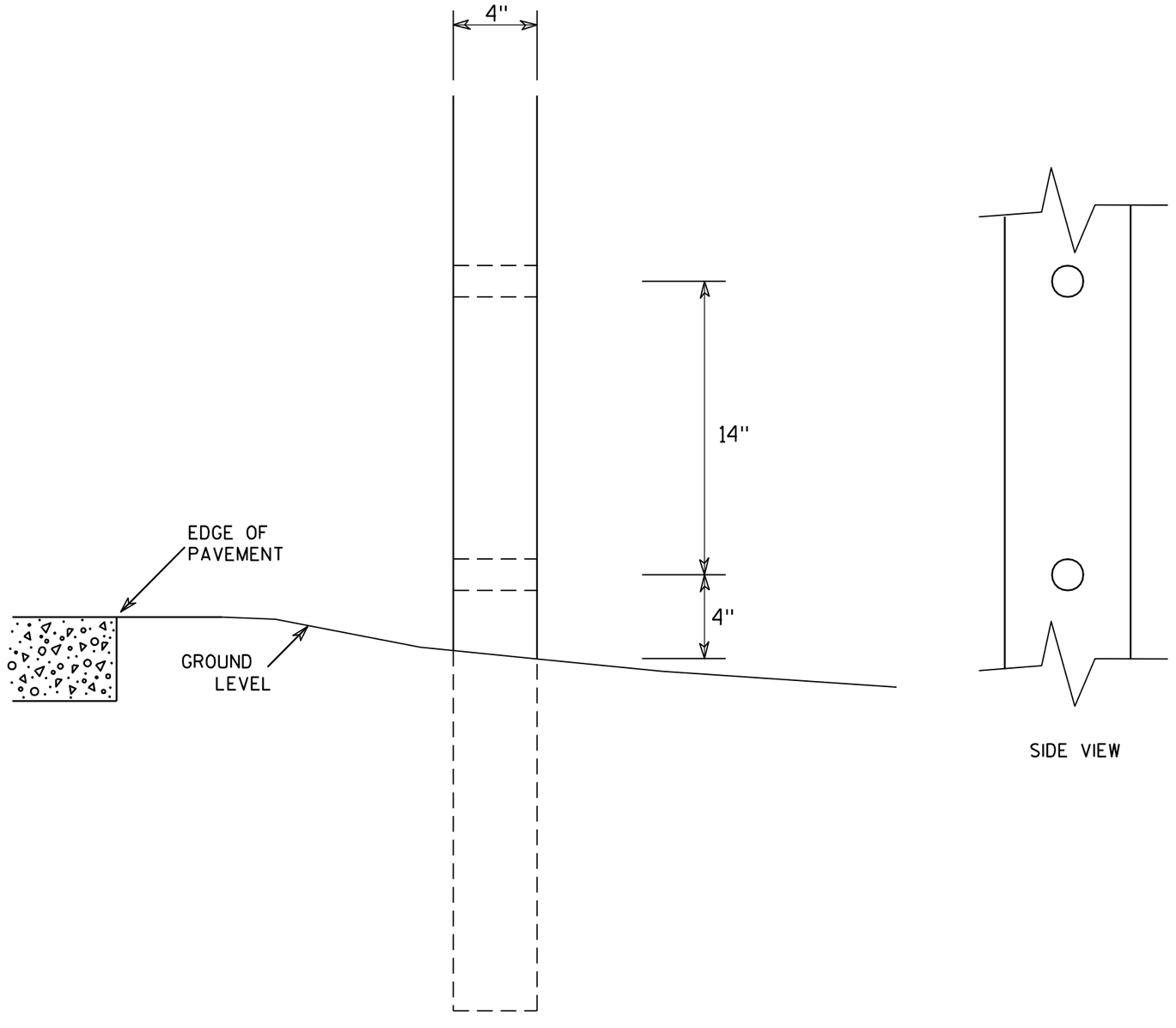
TUBULAR STEEL
SIGN POST
A4-9

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/05/15 PLATE 265 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.

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7

4 X 6 WOOD POST MODIFICATIONS

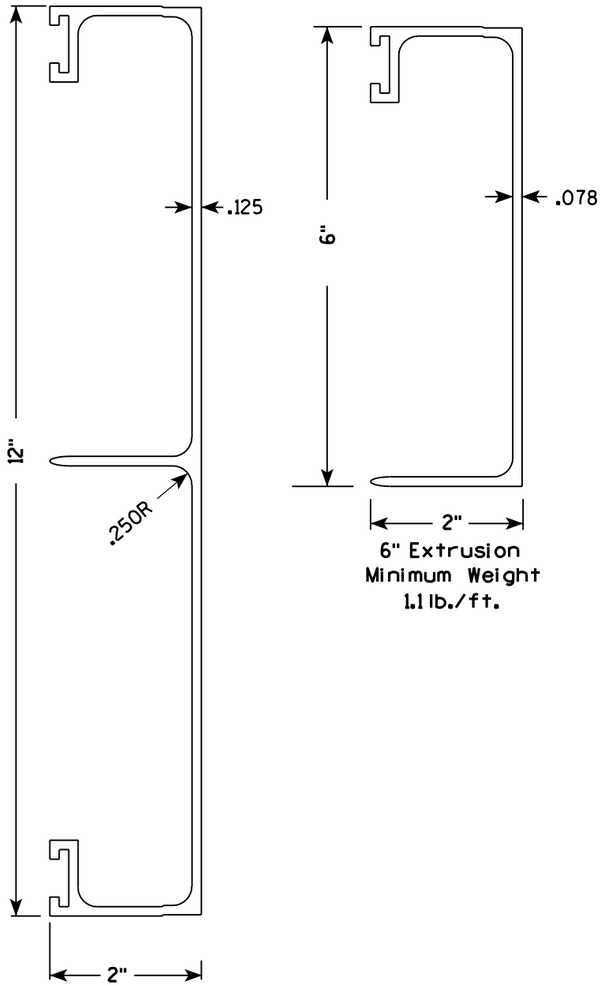
WISCONSIN DEPT OF TRANSPORTATION

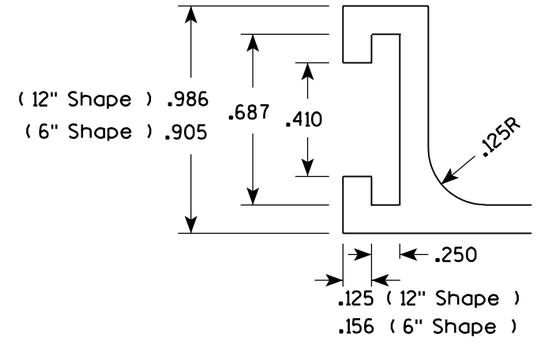
APPROVED Chester J Spang for State Traffic Engineer

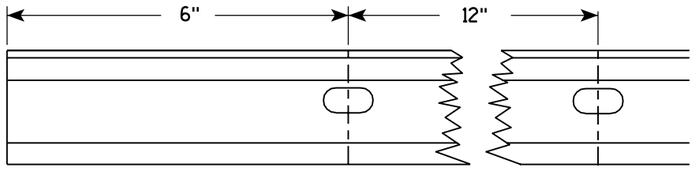
DATE 3/27/97 PLATE NO. A4-11.2

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 266	E

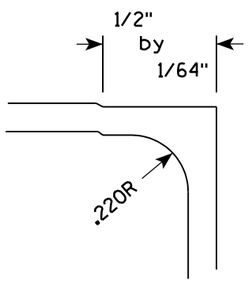
Extruded Shape







Punch 7/16" x 7/8" oval holes beginning 6" in from end of extrusion 12" CC on both edges of 6" and 12" panels.

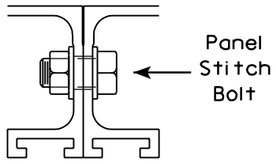


Hardware

STITCH BOLT, WASHER & NUT

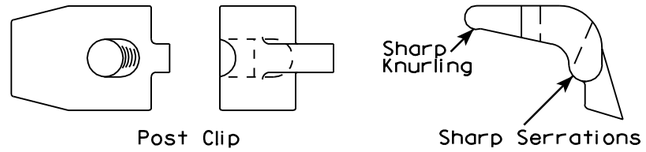
The hardware includes:

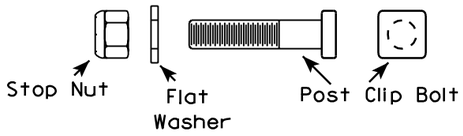
3/8 " - 16 X 3/4 " Economy Bolt 2024-T4 alloy
3/8 " - Stainless steel stop nut
3/8" X .064 Flat Washers, Alclad 2024-T4 alloy



POST CLIP, POST CLIP BOLT, WASHER & NUT

Post Clip shall be Alum. Alloy 356-T6
Post Clip Bolt shall be Stainless Steel.
Flat washer shall be 3/8" X .091, Stainless Steel.
Stop nut shall be stainless steel.





NOTES

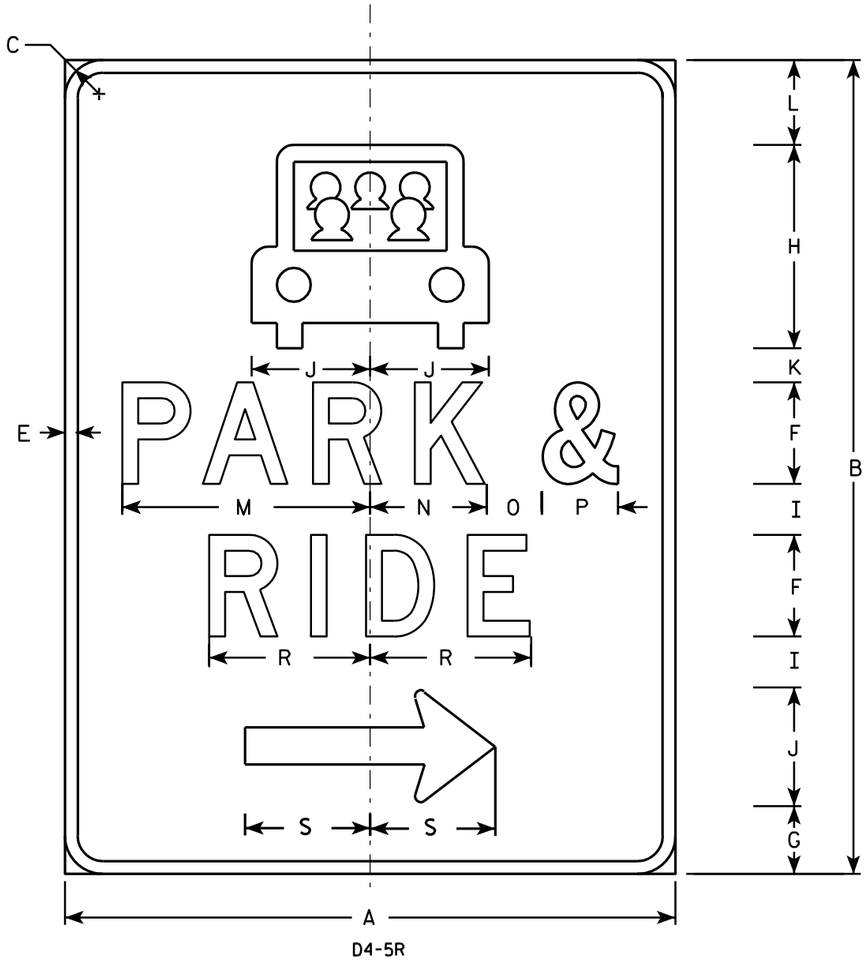
1. The contractor may select any brand of extrusion that conforms to the illustrations or meets with the approval of the engineer, but all extrusions used on this contract shall be of the same brand.
2. Panel Stitch Bolts shall be used to assemble adjacent panels. Maximum stitch bolt spacing shall be 24" C-C, and a minimum of 4 bolts shall be used to connect any two extrusions.
3. Post Clips shall be used to attach the sign panel to the sign support.

ALUMINUM EXTRUSIONS FOR TYPE I SIGNS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spang
for State Traffic Engineer

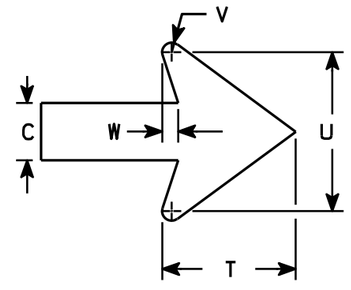
DATE 11/18/99 PLATE NO. A5-2.9



D4-5R

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Green
   Message - White - Type H Reflective
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. The D4-5L is the same as a D4-5R except the arrow is reversed.



Arrow Detail

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	30	36	1 3/8		5/8	5	1 3/8	9	2	5	1 5/8	5	11 3/4	5 1/2	2 3/4	3 3/4		8	6 1/8	4	4 3/8	3/8	1/2				7.50
3	36	48	2 1/4		3/4	6	4	12	3	7	2	5	14 5/8	6 7/8	3 1/4	4 1/2		9 1/2	7 1/2	5 1/4	6 1/4	3/8	5/8				12.0
4																											
5																											

STANDARD SIGN
D4-5 L&R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/15/10 PLATE NO. D4-5.2

PROJECT NO:

SHEET NO: 268 E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\D45.DGN PLOT DATE : 15-NOV-2010 14:08 PLOT BY : dotsja

WISDOT/CADDS SHEET 42

7

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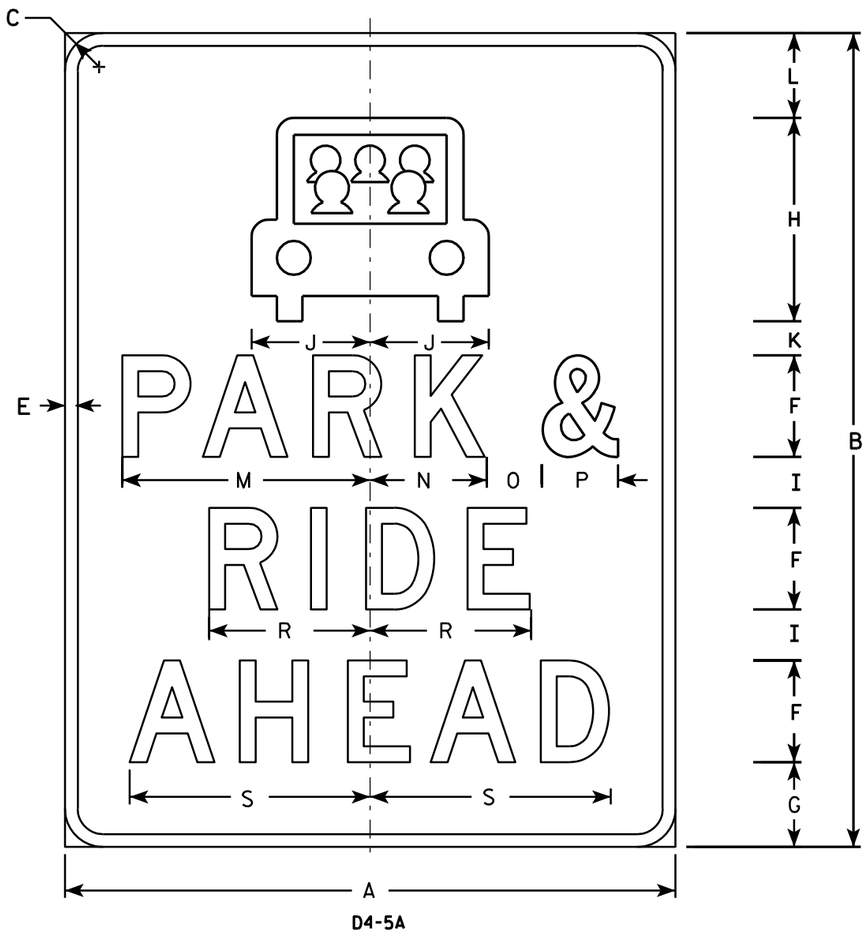


D4-5A

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Green
   Message - White - Type H Reflective
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	30	1 1/8		1/2	4	2 7/8	7 1/2	2	4 3/4	1 3/8	2 1/4	9 3/4	4 5/8	2 3/4	3		6 3/8	9 1/8								5.0
2	30	36	1 3/8		5/8	5	3 3/8	9	2	5 7/8	1 5/8	3	12 1/4	5 1/8	3 3/8	3 3/4		8	11 3/8								7.5
3	36	48	2 1/4		3/4	6	5	12	3	7	2	5	14 5/8	6 7/8	3 1/4	4 1/2		9 1/2	14 1/4								12.0
4																											
5																											

STANDARD SIGN
D4-5A

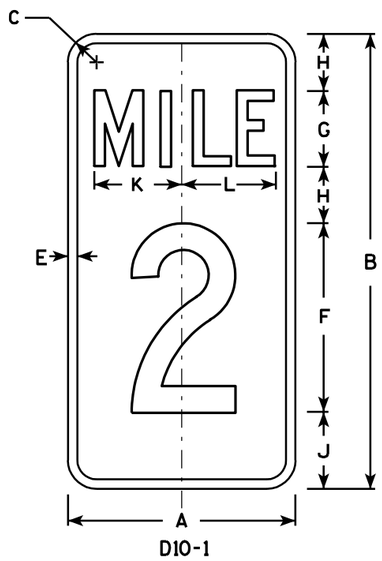
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

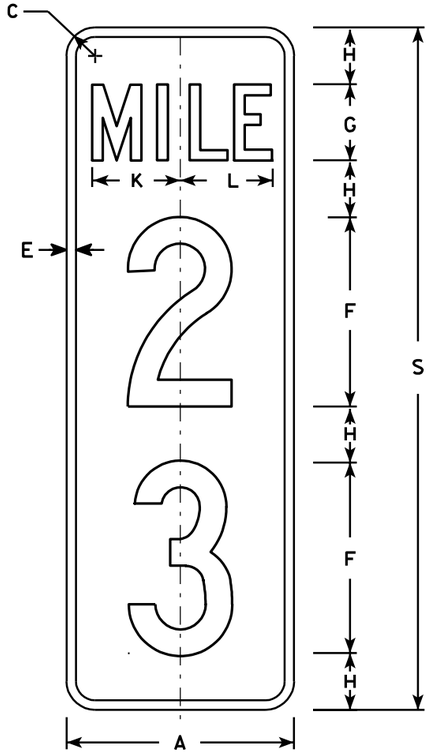
DATE 2/10/2011 PLATE NO. D4-5A.2

PROJECT NO:

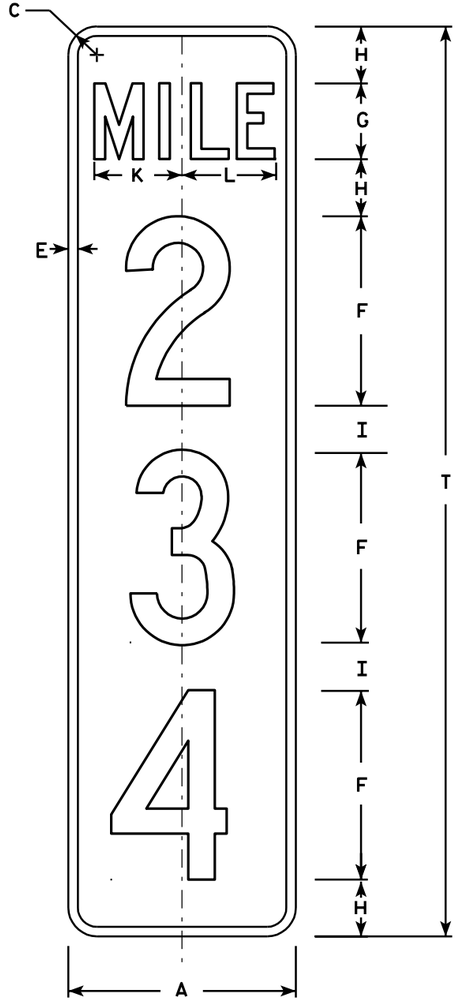
SHEET NO: 269 E



D10-1



D10-2



D10-3

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Green
   Message - White - Type H Reflective
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. Optically adjust numerals about the centerline of the sign to achieve proper balance.

Metric equivalent for this sign is:

PHY. SIZE	
12 X 24	300 mm X 600 mm
12 X 36	300 mm X 900 mm
12 X 48	300 mm X 1200 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
1																										
2																										
3																										
4	12	24	1 ½		½	10	4	3	2 ½	4	4 ⅝	4 ⅞							36	48						
5	12	24	1 ½		½	10	4	3	2 ½	4	4 ⅝	4 ⅞							36	48						

D10-1	D10-2	D10-3
Area sq. ft.	Area sq. ft.	Area sq. ft.
2.0	3.0	4.0
Area m2	Area m2	Area m2
.19	.28	.38

STANDARD SIGN
D10-1 , D10-2 & D10-3

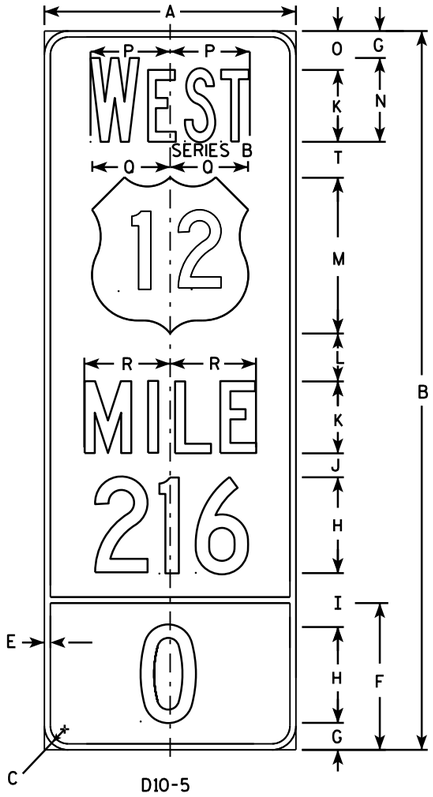
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spang for Director, Office of Traffic

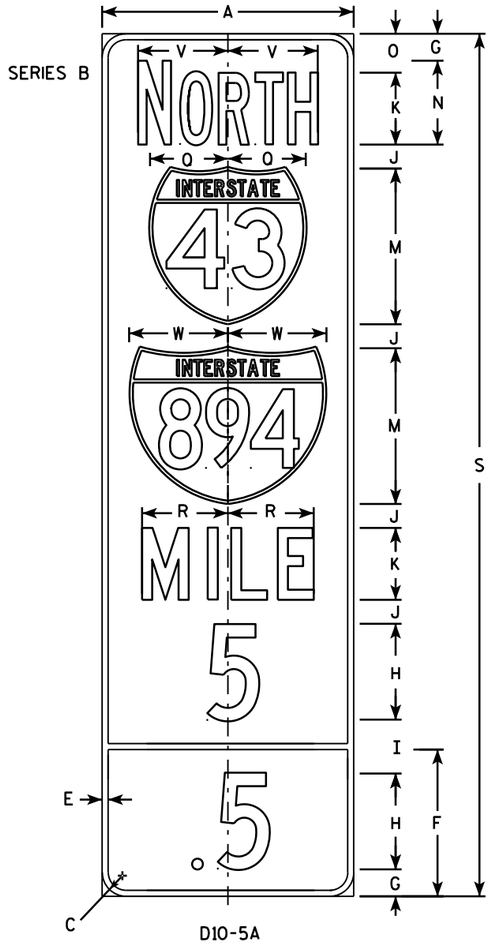
DATE 1/16/02 PLATE NO. D10-3.2

PROJECT NO:

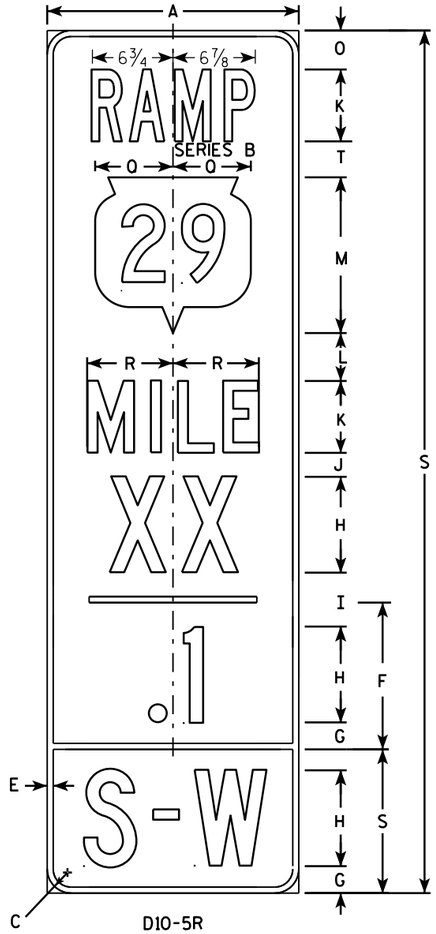
SHEET NO: 270 E



D10-5



D10-5A



D10-5R

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - BLUE
   Message - WHITE
3. Interstate Shield Color
   Background - Top Red
   - Bottom Blue
   Message - White
4. Message Series - C or as noted on the Sign.
5. 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.
6. The decimal point is required for all digits except "0".
7. Optically adjust mileage numbers about the centerline of the sign to achieve proper balance.
8. Optically adjust Ramp direction letters about the centerline of the sign to achieve proper balance.

SERIES B

SERIES B

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	D10-5 Area sq. ft.	D10-5A Area sq. ft.	D10-5R Area sq. ft.
1																													
2																													
3																													
4	21	60	1 ½		½	12 ¼	2 ¼	8	4 ½	2	6	4	13	7	3 ¼	6 ⅝	6 ½	7 ⅛	72	3		7 ½	8 ¼				8.75	10.5	10.5
5	21	60	1 ½		½	12 ¼	2 ¼	8	4 ½	2	6	4	13	7	3 ¼	6 ⅝	6 ½	7 ⅛	72	3		7 ½	8 ¼				8.75	10.5	10.5

STANDARD SIGN
D10-5

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 6/26/14 PL D10-5.2

PROJECT NO:

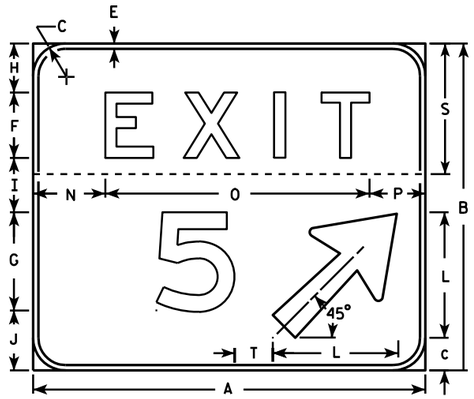
SHEET NO: E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\D105.DGN PLOT DATE : 26-JUN-2014 14:53 PLOT BY : mscsja

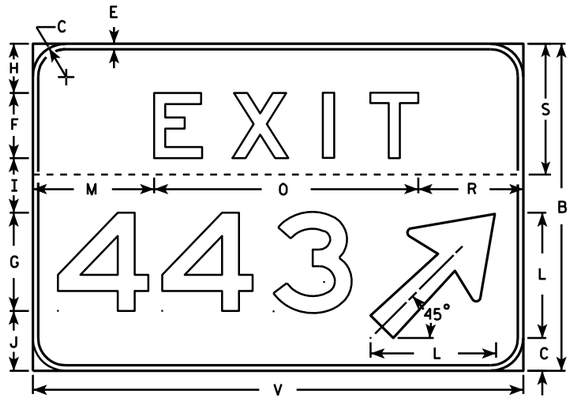
WISDOT/CADDS SHEET 42

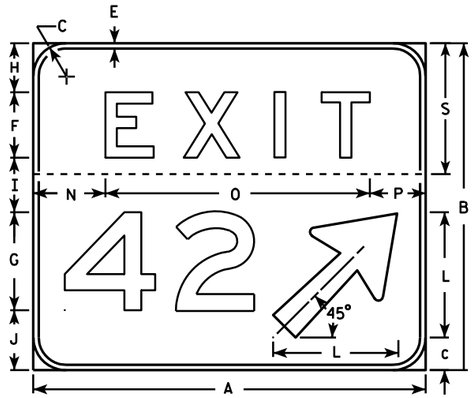
7

7



NOTE: T diminision shall be measured from the back of the number to the front of the arrow

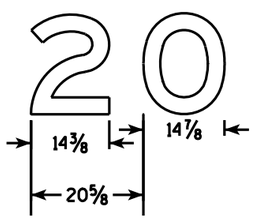




NOTES

1. Sign is Type II - Type H reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Green
   Message - White (Type H reflective)
3. Message Series - E
4. Corners may be square or rounded but the border shall be rounded as shown.
5. Base material for this sign shall be plywood and shall be split into two seperate pieces as shown on each detail by the dashed line (----------).
6. Arrow is Type "A" from sign plate A1-1.
7. Substitute appropriate message, space per the table and adjust placement on sign to achieve proper balance.
8. As per the Standard Spec's, these signs shall not have a vertical joint.

EXAMPLE FOR USING SPACING CHART



SPACING CHART FOR 18" NUMERALS

NUMBERS	WIDTH	0	1	2	3	4	5	6	7	8	9	A	B	C
0	14 7/8	21 5/8	21 5/8	21 1/4	20 3/8	21 1/4	21 1/4	21 5/8	19 7/8	22 1/8	21 5/8			
1	5 7/8	14	14	14	13 1/8	12 1/8	14	14	12 1/4	14	14			
2	14 3/8	20 5/8	21 1/8	20 5/8	19 3/4	20 1/4	20 5/8	20 5/8	18 7/8	21 1/8	20 5/8			
3	14 3/8	20 3/4	21 1/8	20 3/4	20 1/4	19 3/4	20 3/4	20 3/4	19 3/8	21 1/8	20 3/4			
4	16 5/8	22 7/8	22	22 1/2	21 5/8	21 5/8	22 7/8	22 7/8	20 5/8	23 3/8	22 7/8			
5	14 1/4	20 5/8	20 5/8	20 1/8	18 3/4	18 3/4	20 5/8	20 5/8	18 3/8	20 5/8	20 5/8			
6	14 1/2	21 1/4	20 3/4	20 3/4	19 7/8	19 1/2	20 3/8	20 3/4	19	20 3/4	20 3/8			
7	14 3/8	19 3/4	19 3/4	20 1/4	19 3/4	17	19 3/4	20 5/8	18 7/8	20 5/8	19 3/4			
8	14 1/4	21 1/2	21 1/2	20 5/8	19 1/4	19 3/4	20 5/8	21 1/2	19 5/8	21 1/2	20 5/8			
9	14 1/2	21 1/4	21 1/4	20 7/8	20	20 7/8	20 7/8	21 1/4	19 1/2	21 3/4	21 1/4			
A	18	19 3/4	19 3/4	20 1/4	19 3/4	17	19 3/4	20 5/8	18 7/8	20 5/8	19 3/4	21 5/8	23 7/8	23
B	14 1/4	21 1/2	21 1/2	20 5/8	19 1/4	19 3/4	20 5/8	21 1/2	19 5/8	21 1/2	20 5/8	19 1/2	22 3/8	21 1/2
C	14 1/4	21 1/4	21 1/4	20 7/8	20	20 7/8	20 7/8	21 1/4	19 1/2	21 3/4	21 1/4	18 3/8	21	19 3/4

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
2																										
3																										
4																										
5	72	60	6		1	12	18	9	10	11	8 7/8	23	22 1/4	13 1/4	48 1/2	10 1/4		19 1/4	24	7		90		96	7 1/2	

1-2 Digit Bid Area	3 Digit Bid Area
Sq. Ft.	
30	37.5

STANDARD SIGN
E5-1A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/11/10 PLATE NO. E5-1A.12

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 272 | E

E5-56L

NOTES

1. Sign is Type I- Type SH Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Green except as noted
   Message - White except as noted
3. Message Series - E
4. LEFT LANE PLAQUE COLOR:
   Background - Yellow - Type F Reflective
   Message - Black

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2																											
3																											
4	144	96	9		2	12	10	9 ½	9	15	32	41	19 ½	8 ¾	28 ¼	38 ¼	7 ½	2 ½	43 ¼	14	96						96.0
5	144	96	9		2	12	10	9 ½	9	15	32	41	19 ½	8 ¾	28 ¼	38 ¼	7 ½	2 ½	43 ¼	14	96						96.0

STANDARD SIGN
E5-56L

WISCONSIN DEPT OF TRANSPORTATION

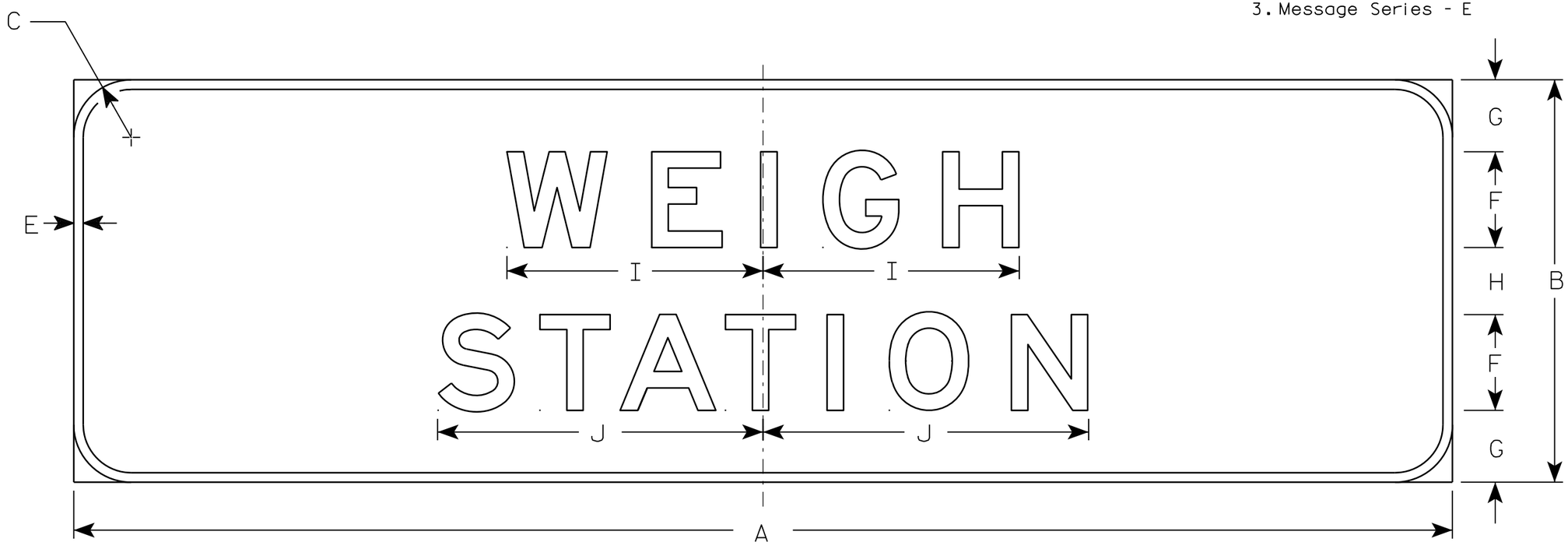
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/5/12 PLATE NO. E5-56L.8

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 273 | E

NOTES

1. Sign is Type I - Type SH Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Green
   Message - White
3. Message Series - E



E5-57

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	42	6		1	10	7 1/2	7	26 3/4	34																	42.0
5	144	42	6		1	10	7 1/2	7	26 3/4	34																	42.0

STANDARD SIGN
E5-57

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

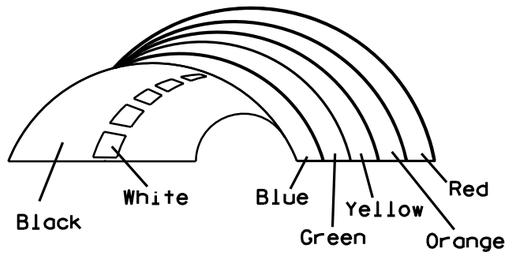
DATE 11/8/10 PLATE NO. E5-57.3

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 274	E

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - (See Note 5)
3. Message Series - (See Note 6)
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. Border - Blue
   Line 1 - Red
   Line 2 - Black
   Line 3-5 - Blue
6. Line 1 - Dutch 8011L
   Line 2 - Series E
   Line 3-5 - Series C
7. Contractor shall provide and install a new post bracket in accordance with the I55-56B sign detail.

Background Colors of Symbol*



*1/4" Black Border between each color of rainbow and border of rainbow

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	30	36	1 1/2	1/2	5/8	3	2	3 1/2	2 7/8	1	8	2 1/8	11 1/4	11 1/8	9 3/8	1 1/4		3/4	12 5/8	7 1/2							7.5
3																											
4																											
5																											

STANDARD SIGN
I55-56

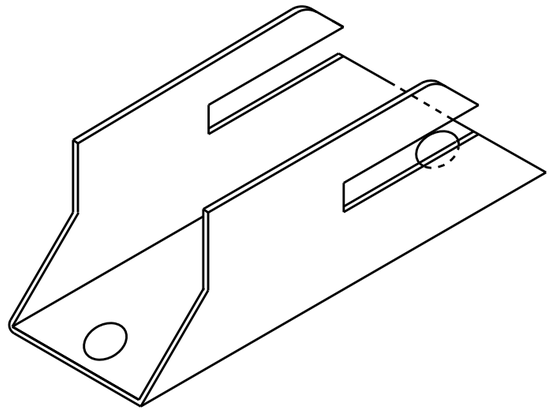
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

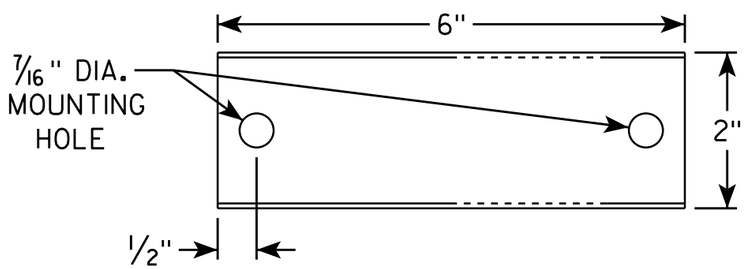
DATE 4/27/11 PLATE NO. 155-56.3

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 275

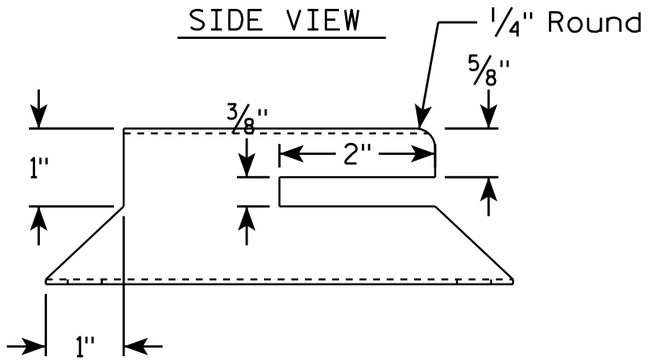
ISOMETRIC VIEW



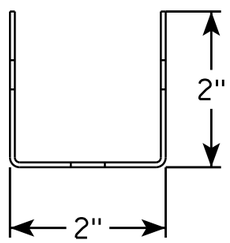
TOP VIEW



SIDE VIEW



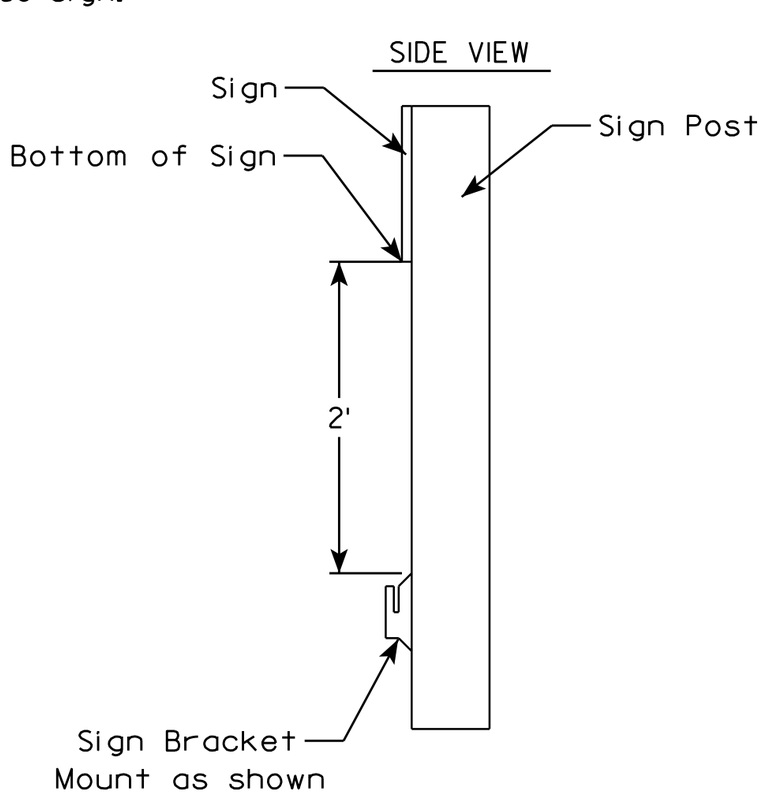
END VIEW



NOTES

1. Must be capable of permanent attachment to a wood or steel channel sign post utilizing the fastening hardware specified on the A4-8 sign plate.
2. Shall be entirely primed and painted with two coats of a black powder coated enamel paint.
3. Shall be made with 12 gauge steel, and incorporate no welds, no hinged components, no threaded lock-type components, and no parts which are loose or can be separated from the main body.
4. Shall have rounded edges with at least 1/8" radii.
5. Shall not have unrounded and uncoated metal edges which can contact the back surface of the roll-up sign.
6. Top of bracket shall be mounted 2' below the bottom of the I55-56 sign.
7. Cost of bracket and fastening hardware shall be incidental to the I55-56 sign.

SIDE VIEW



7

7

ROLLUP SIGN BRACKET
I55-56B

WISCONSIN DEPT OF TRANSPORTATION

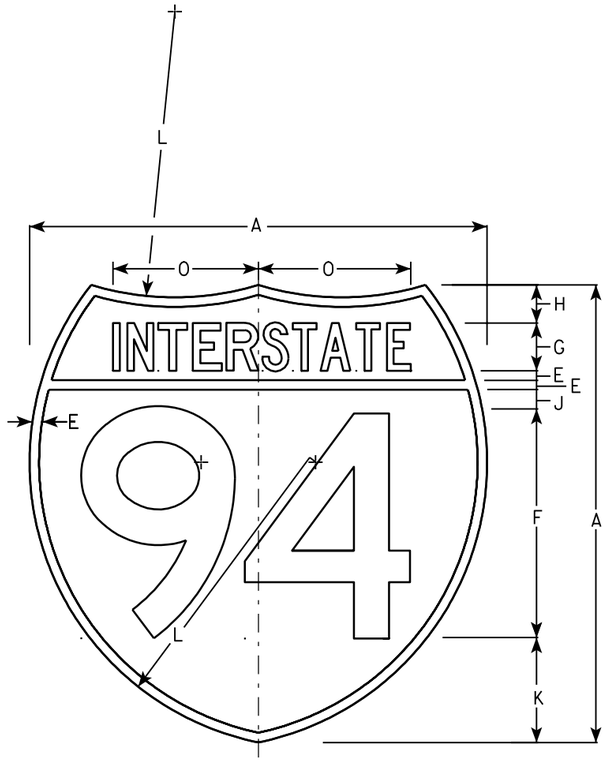
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/26/16 PLATE I55-56B.2

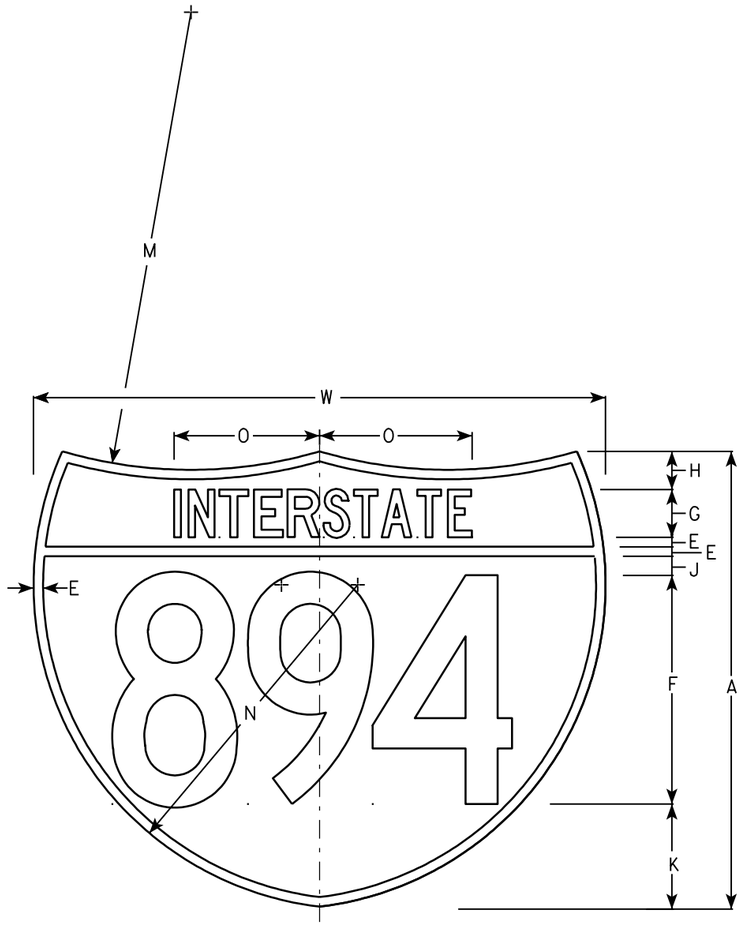
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\I5556B.DGN PLOT DATE : 26-APR-2016 17:29 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 1.945842:1.000000

WISDOT/CADDS SHEET 42



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

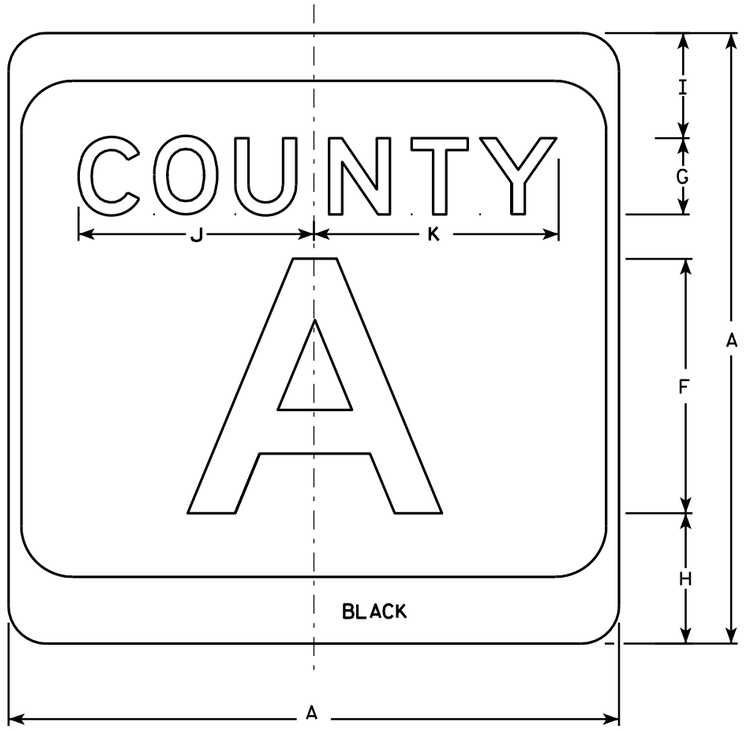
INTERSTATE ROUTE MARKER
M1-1 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

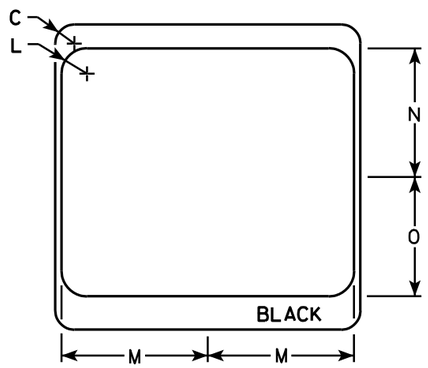
APPROVED Matthew R Rauch
for State Traffic Engineer

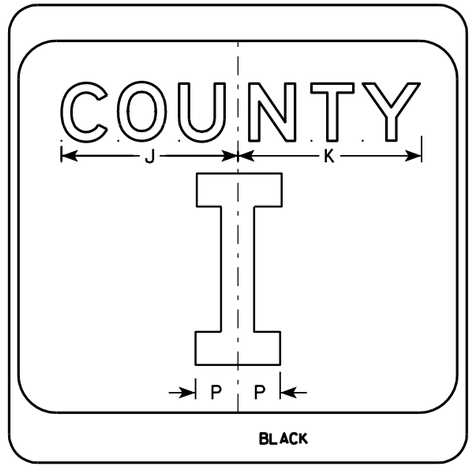
DATE 08/23/05 PLATE NO. M1-1.8

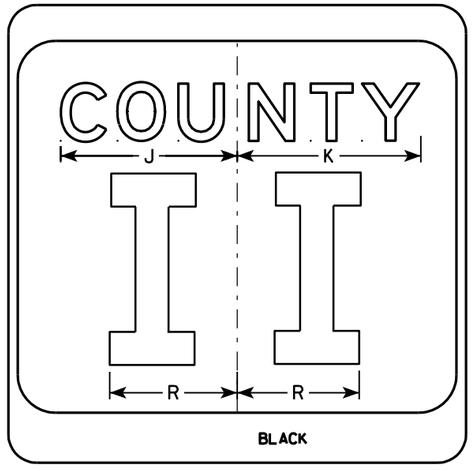
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 277	E



M1-5A







NOTES

1. Sign is Type II - see Note 7 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White & Black - See Note 7
   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. Message Series E for 1 letter.
   Message Series D for 2 letters unless message is too big then Series C.
   Message Series C for 3 letters unless message is too big then Series B.
6. Substitute appropriate letters & optically center to achieve proper balance.
7. Permanent Signs
   Background - Type H Reflective
   Detour or temporary Signs
   Background - Reflective

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24		1 1/2			10	3	5 1/8	4 1/8	9 1/4	9 5/8	2	11 1/2	10 1/8	9 3/8	2 1/4		6 5/8									4.0
3	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0
4	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0
5	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0

CTH MARKER
M1-5A FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 9/27/11 PLATE NO. M1-5A.8

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 278 | E

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Green
   Message - White - Graphics - White
   Circle Tour Message is Green
3. Message Series - Special
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.	Area m2
1																												
2	24			1 1/8	1/2																						4.0	.36
3																												
4	36			1 5/8	3/4																						9.0	.81
5																												

STANDARD SIGN
M1-93

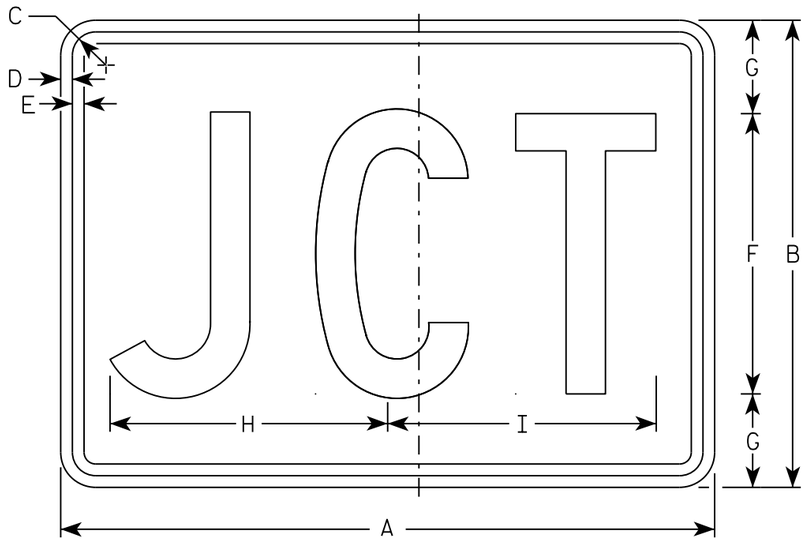
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

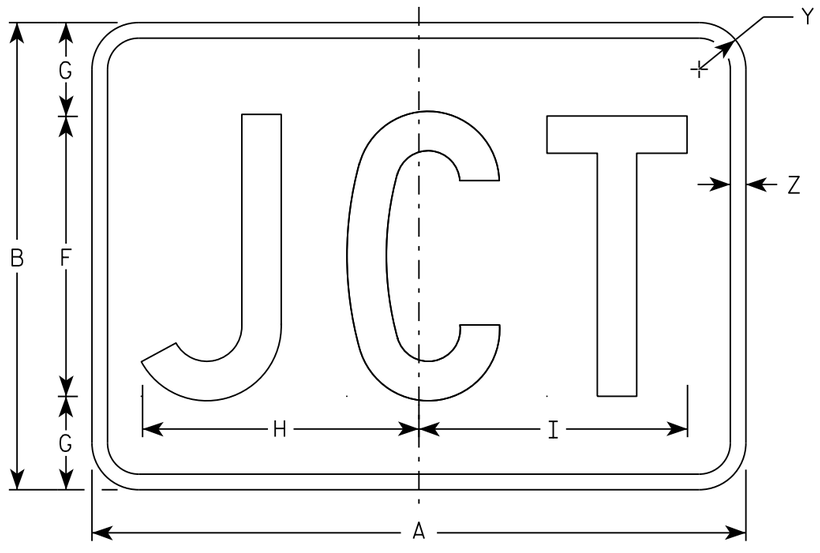
DATE 11/5/15 PLATE NO. M1-93.2

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\M193.DGN PLOT DATE : 01-DEC-2015 18:00 PLOT BY : $$ plotuser $$ PLOT NAME : PLOT SCALE : 5.837526:1.000000



M2-1
MM2-1
MP2-1



MB2-1
MK2-1
MN2-1
MR2-1

NOTES

1. Sign is 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. M2-1 Background - White
   Message - Black
   MB2-1 Background - Blue
   Message - White
   MK2-1 Background - Green
   Message - White
   MM2-1 Background - White
   Message - Green
   MN2-1 Background - Brown
   Message - White
   MP2-1 Background - White
   Message - Blue
   MR2-1 Background - Brown
   Message - Yellow

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	21	15	1 1/8	3/8	3/8	9	3	8 7/8	8 5/8																1 1/2	1/2	2.20
3	30	21	1 1/8	3/8	3/8	13	4	12 7/8	12 3/8																1 1/2	1/2	4.40
4	30	21	1 1/8	3/8	3/8	13	4	12 7/8	12 3/8																1 1/2	1/2	4.40
5	30	21	1 1/8	3/8	3/8	13	4	12 7/8	12 3/8																1 1/2	1/2	4.40

STANDARD SIGN
M2-1

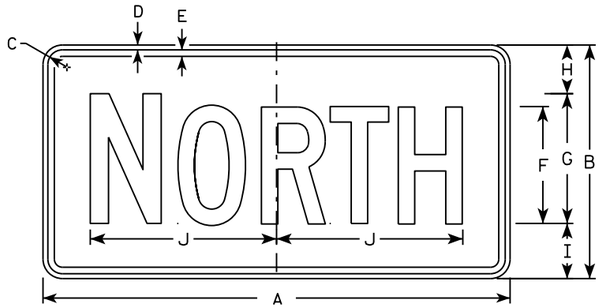
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

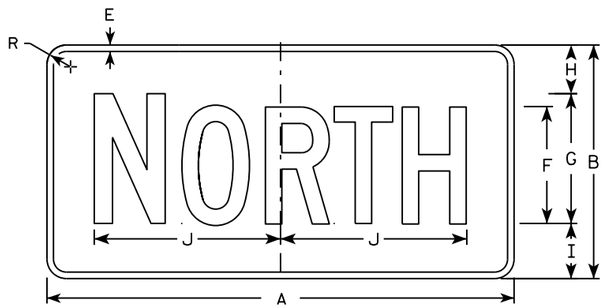
DATE 10/15/15 PLATE 280 12-1.12

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\M21.DGN PLOT DATE : 01-DEC-2015 17:54 PLOT BY : $$ plotuser $$ PLOT NAME : PLOT SCALE : 4.864603:1.000000



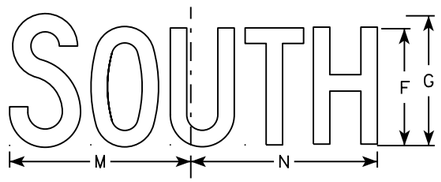
M3-1
MM3-1
MP3-1



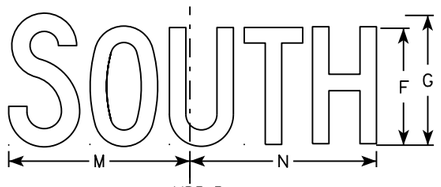
MB3-1
MK3-1
MN3-1

M3-2
MM3-2
MP3-2

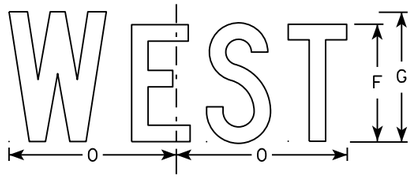
MB3-2
MK3-2
MN3-2



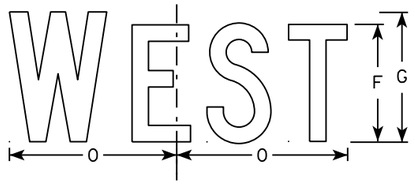
M3-3
MM3-3
MP3-3



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

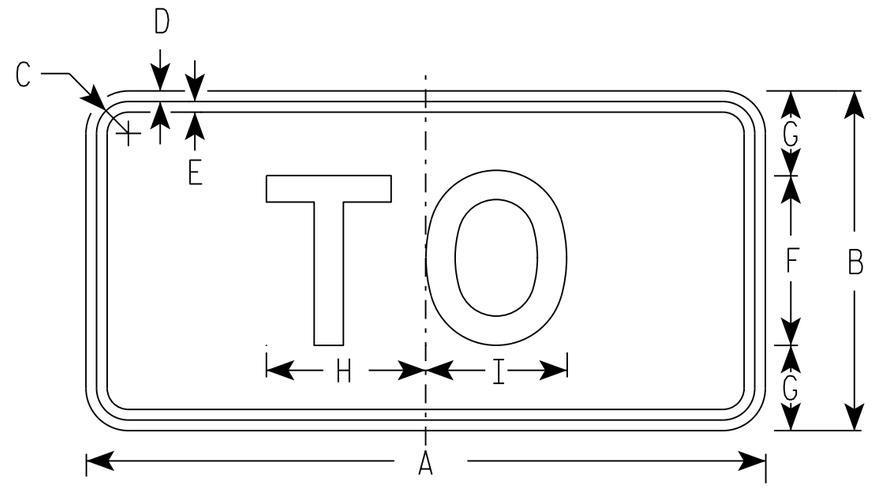
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew P Rauch for State Traffic Engineer

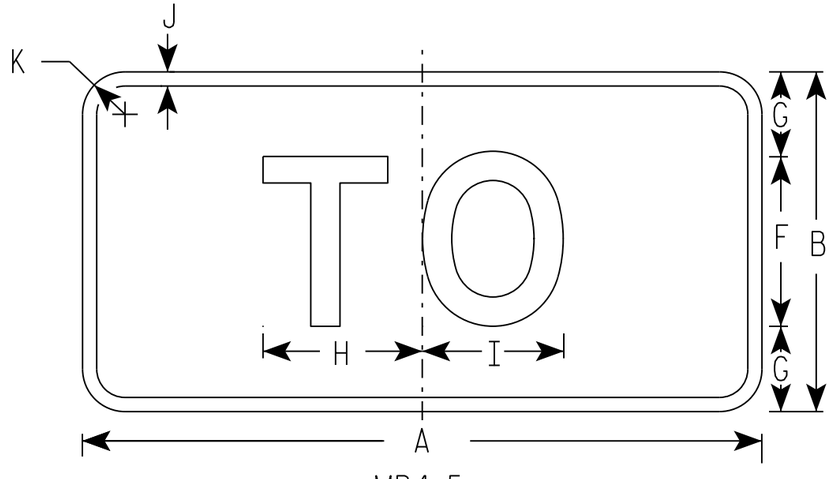
DATE 10/15/15 PLATE NO M3-1.14

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



M4-5
MM4-5
MP4-5



MB4-5
MK4-5
MN4-5

NOTES

1. Sign is Type II - Type H
2. Color:
   Background - See note 5
   Message - See note 5
3. Message Series - E
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. M4-5 Background - White
   Message - Black

   MB4-5 Background - Blue
   Message - White

   MK4-5 Background - Green
   Message - White

   MM4-5 Background - White
   Message - Green

   MN4-5 Background - Brown
   Message - White

   MP4-5 Background - White
   Message - Blue

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	5 3/8	5 1/4	1/2	1 1/2																2.00
3	36	18	1 3/8	3/8	1/2	9	4 1/2	8 1/4	8 3/8	1/2	1 1/2																4.5
4	36	18	1 3/8	3/8	1/2	9	4 1/2	8 1/4	8 3/8	1/2	1 1/2																4.5
5	36	18	1 3/8	3/8	1/2	9	4 1/2	8 1/4	8 3/8	1/2	1 1/2																4.5

STANDARD SIGN
M4-5

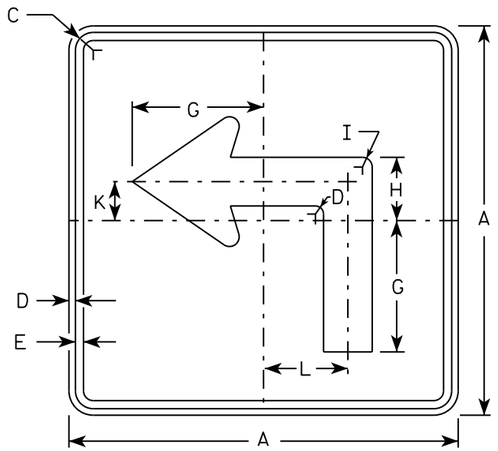
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

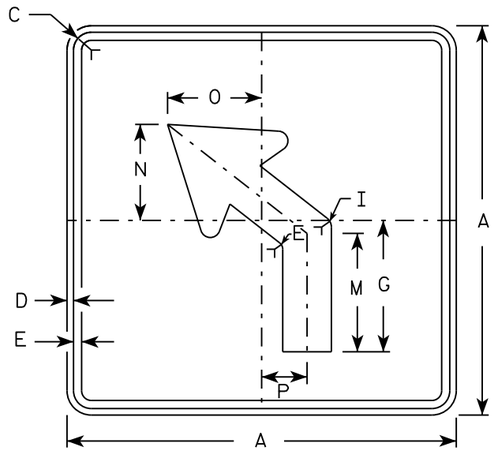
DATE 10/15/15 PLATE 282 M4-5.8

PROJECT NO: | HWY: | COUNTY: | SHEET NO: E

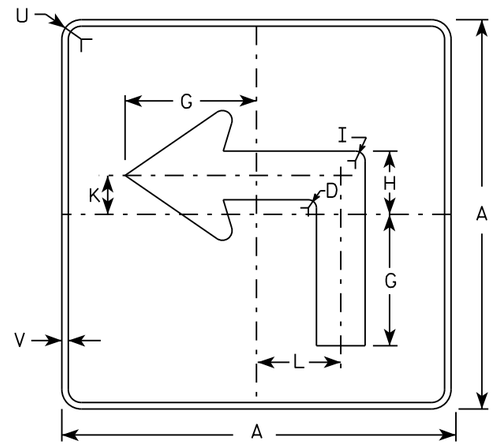
FILE NAME : C:\CAEfiles\Projects\tr_stdplate\M45.DGN PLOT DATE : 01-DEC-2015 17:55 PLOT BY : $$ plotuser $$ PLOT NAME : PLOT SCALE : 5.351066:1.000000



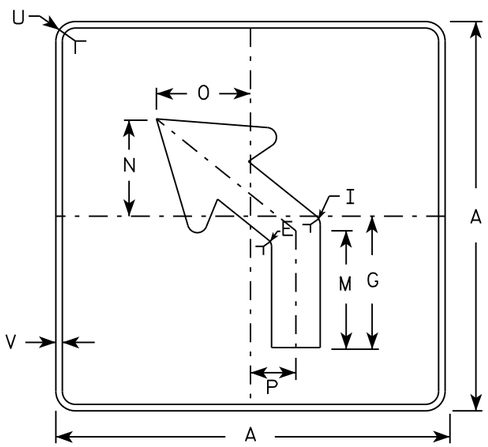
M5-1L
MM5-1L
MO5-1L
MP5-1L



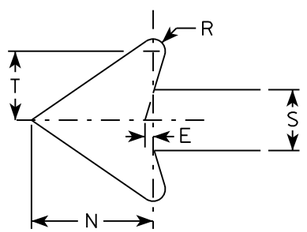
M5-2L
MM5-2L
MO5-2L
MP5-2L



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

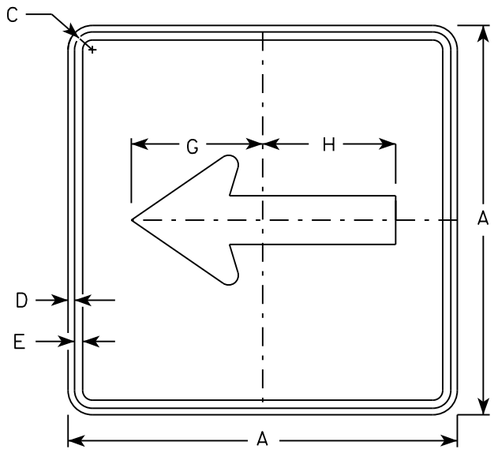
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

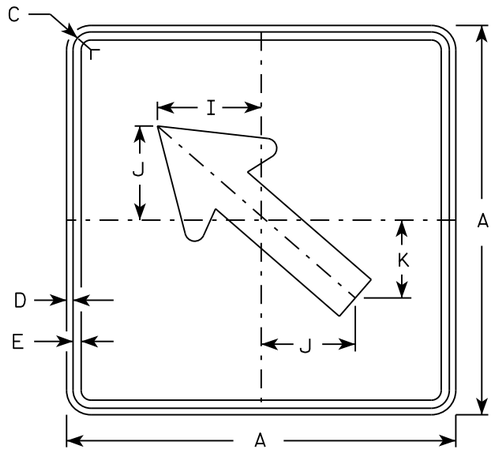
DATE 10/15/15 PLATE NO. M5-1.13

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



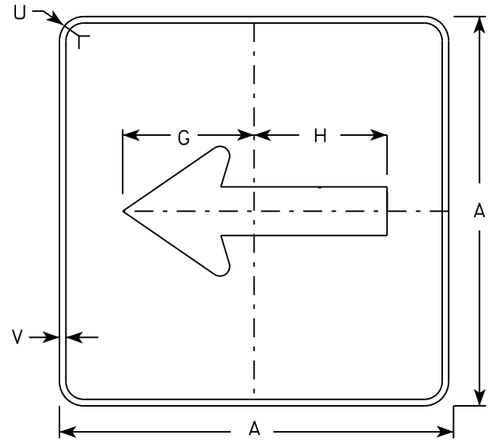
M6-1
MM6-1
MO6-1
MP6-1



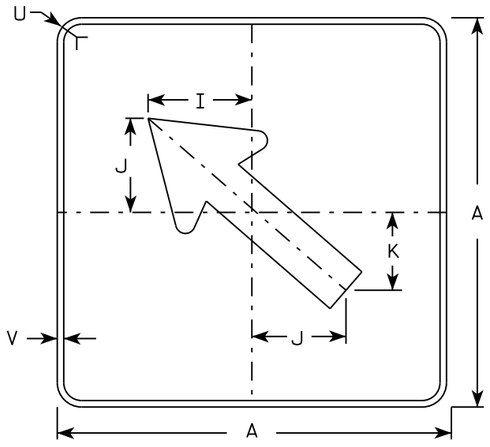
M6-2
MM6-2
MO6-2
MP6-2

NOTES

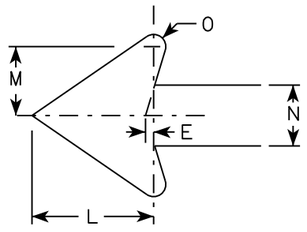
1. Signs are Type II - Type H except as Shown
2. Color:
   Background - See note 4
   Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. M6-1 and M6-2 Background - 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

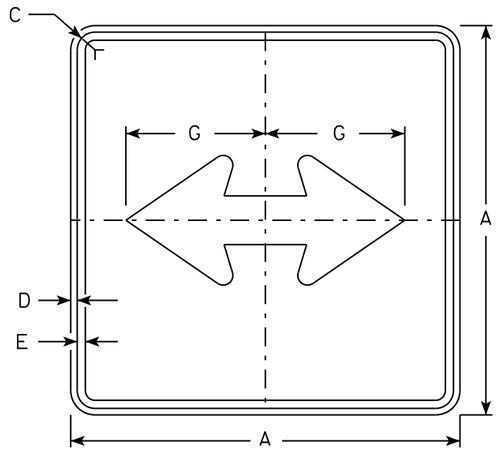
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

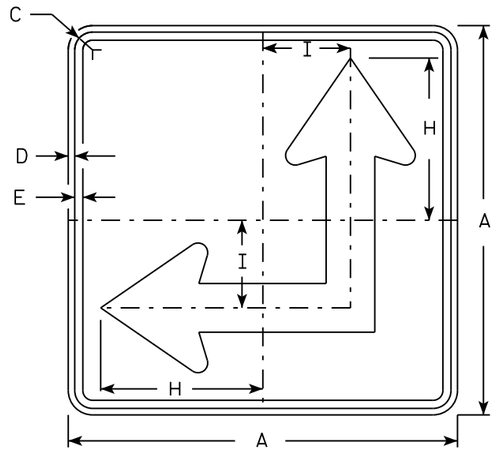
DATE 10/15/15 PLATE 284 M6-1.15

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



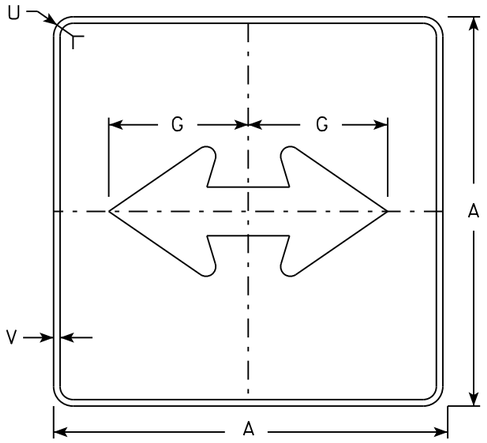
M6-4
MM6-4
MO6-4
MP6-4



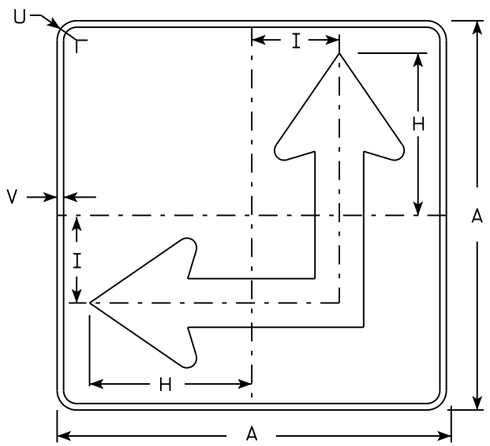
M6-6
MM6-6
MO6-6
MP6-6

NOTES

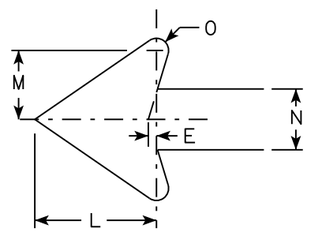
1. Signs are Type II - Type H except as Shown
2. Color:
   Background - See Note 4
   Message - See Note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. M6-4 and M6-6 Background - White
   Message - Black
   MB6-4 and MB6-6 Background - Blue
   Message - White
   MK6-4 and MK6-6 Background - Green
   Message - White
   MM6-4 and MM6-6 Background - White
   Message - Green
   MN6-4 and MN6-6 Background - Brown
   Message - White
   MO6-4 and MO6-6 Background - Orange - Type F Reflective
   Message - Black
   MP6-4 and MP6-6 Background - White
   Message - Blue
   MR6-4 and MR6-6 Background - Brown
   Message - Yellow
5. M6-6R same as M6-6L except arrow points ahead and right.



MB6-4
MK6-4
MN6-4
MR6-4



MB6-6
MK6-6
MN6-6
MR6-6



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	8 3/4	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	12 1/2	6 3/4			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	12 1/2	6 3/4			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	12 1/2	6 3/4			7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25

STANDARD SIGN
M6-4 & M6-6
SERIES

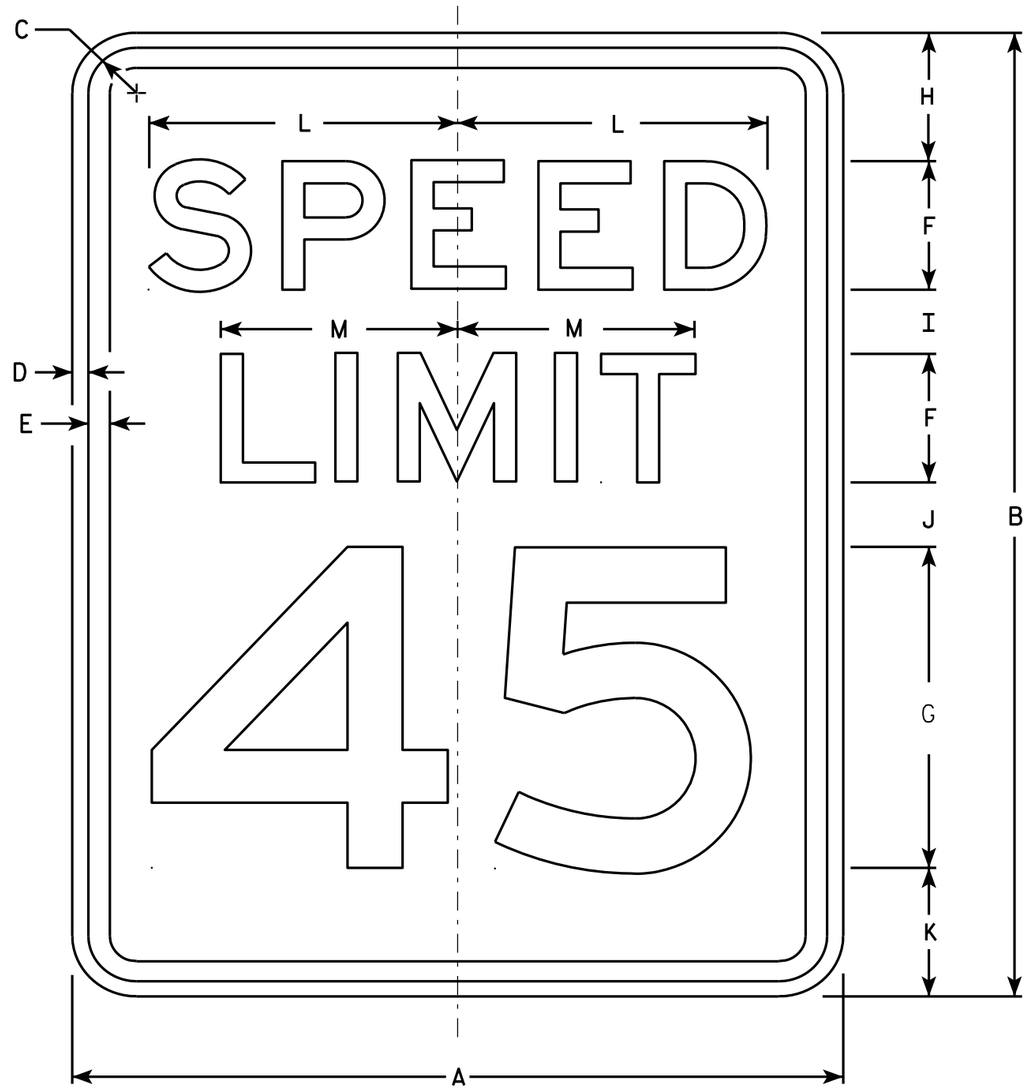
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/15/15 PLATI 285 M6-4.10

PROJECT NO: | HWY: | COUNTY: | SHEET NO: E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\M64.DGN PLOT DATE : 01-DEC-2015 17:58 PLOT BY : $$ platuser $$ 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

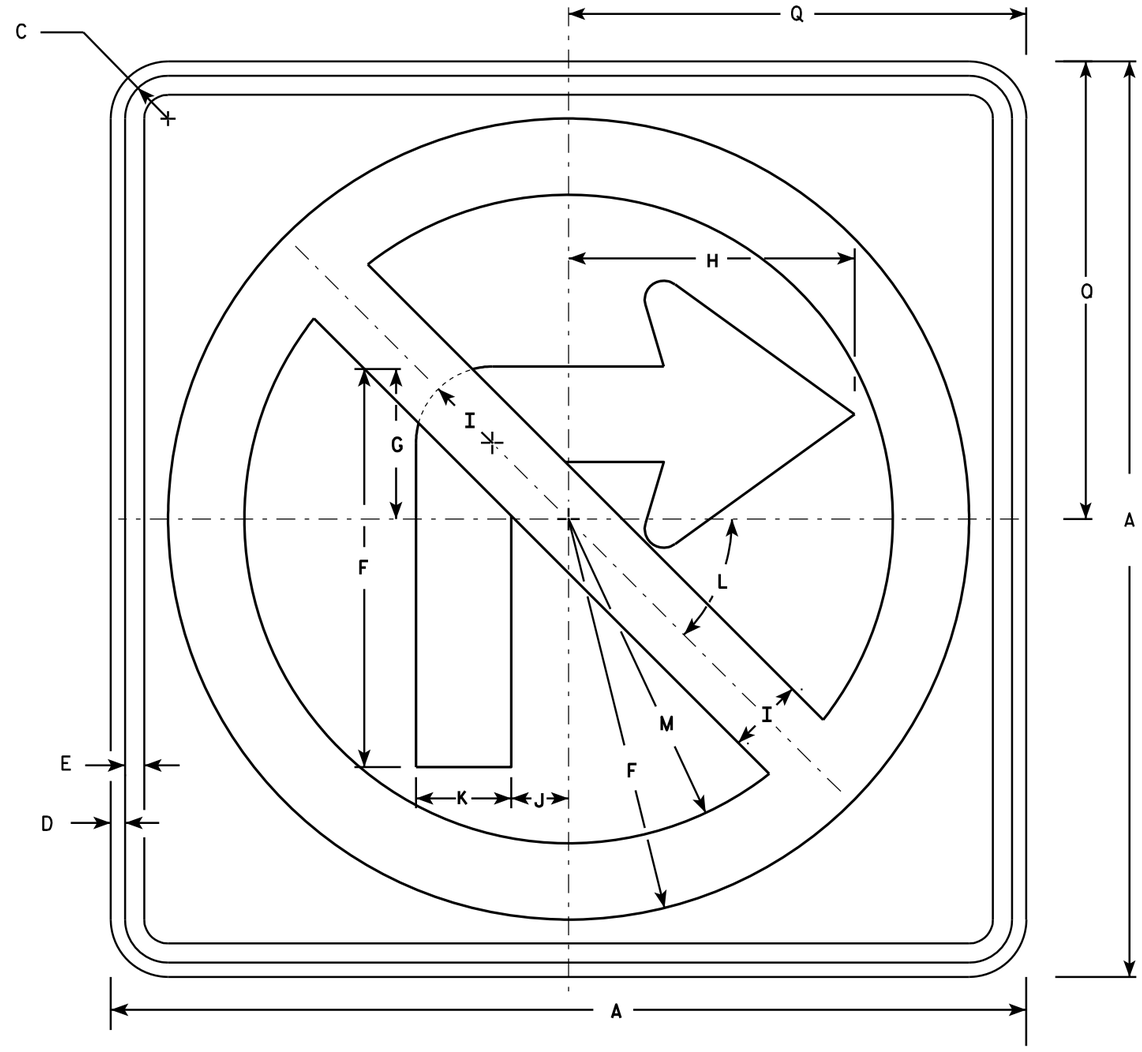
STANDARD SIGN
R2-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/26/10 PLATE NO. R2-1.13

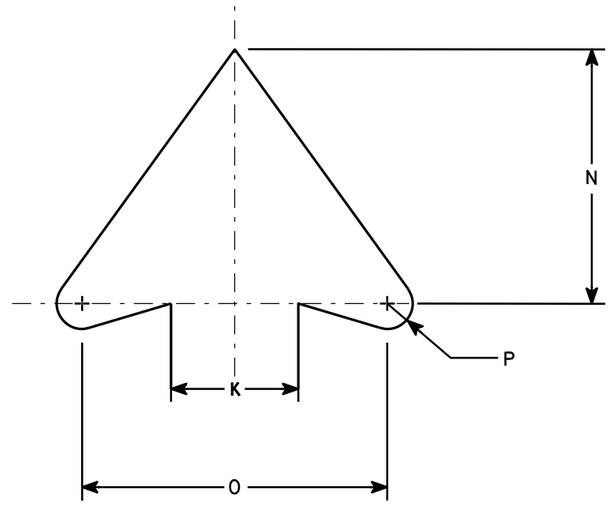
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 286	E



R3-1

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 - 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. Border & Arrow are non reflective black, the circle with diagonal bar is reflective red.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/8	3/8	1/2	10 1/2	4	7 1/2	2	1 1/2	2 1/2	45	8 1/2	5	6	1/2	12										4.0
2S	24		1 1/8	3/8	1/2	10 1/2	4	7 1/2	2	1 1/2	2 1/2	45°	8 1/2	5	6	1/2	12										4.0
2M	36		1 5/8	5/8	3/4	15 3/4	6	11 1/4	3	2 1/4	3 3/4	45	12 3/4	7 1/2	9	3/4	18										9.0
3	36		1 5/8	5/8	3/4	15 3/4	6	11 1/4	3	2 1/4	3 3/4	45	12 3/4	7 1/2	9	3/4	18										9.0
4	36		1 5/8	5/8	3/4	15 3/4	6	11 1/4	3	2 1/4	3 3/4	45°	12 3/4	7 1/2	9	3/4	18										9.0
5	48		2 1/4	3/4	1	21	8	15	4	3	5	45°	17	10	12	1	24										16.0

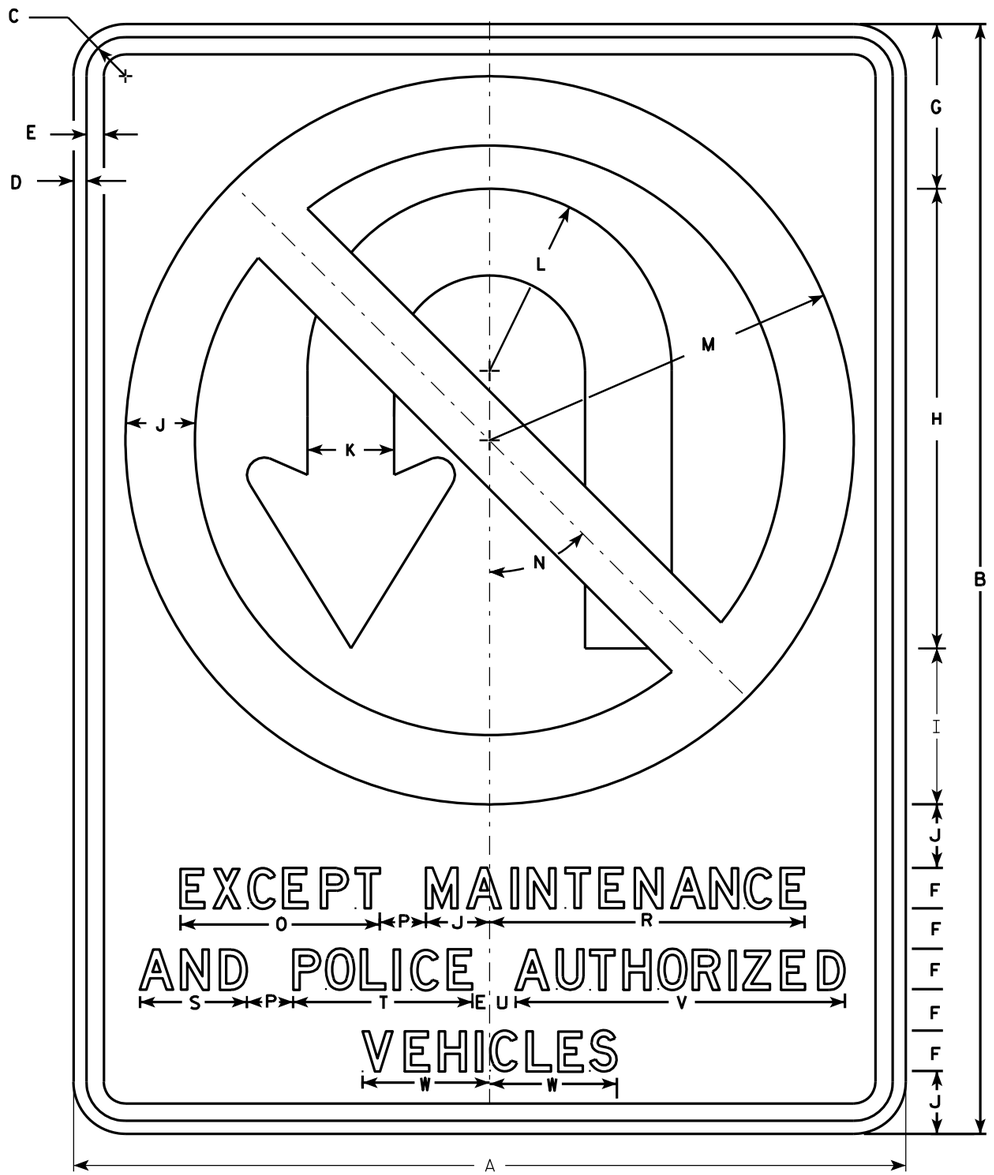
STANDARD SIGN
R3-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/08/10 PLATE NO. R3-1.5

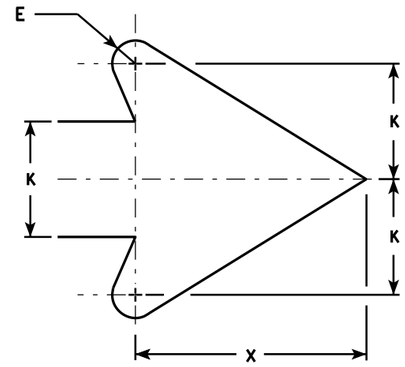
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 287	E



R3-4B

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - See note 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. Border & Arrow are non reflective black, the circle with diagonal bar is reflective red.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S																											
2M																											
3																											
4	36	48	1 5/8	5/8	3/4	1 3/4	7 1/8	19 7/8	6 3/4	2 3/4	3 3/4	7 7/8	15 3/4	45°	8 5/8	2		13 5/8	4 5/8	7 3/4	1 1/8	14 1/4	5 1/2	7 5/8			12.0
5	36	48	1 5/8	5/8	3/4	1 3/4	7 1/8	19 7/8	6 3/4	2 3/4	3 3/4	7 7/8	15 3/4	45°	8 5/8	2		13 5/8	4 5/8	7 3/4	1 1/8	14 1/4	5 1/2	7 5/8			12.0

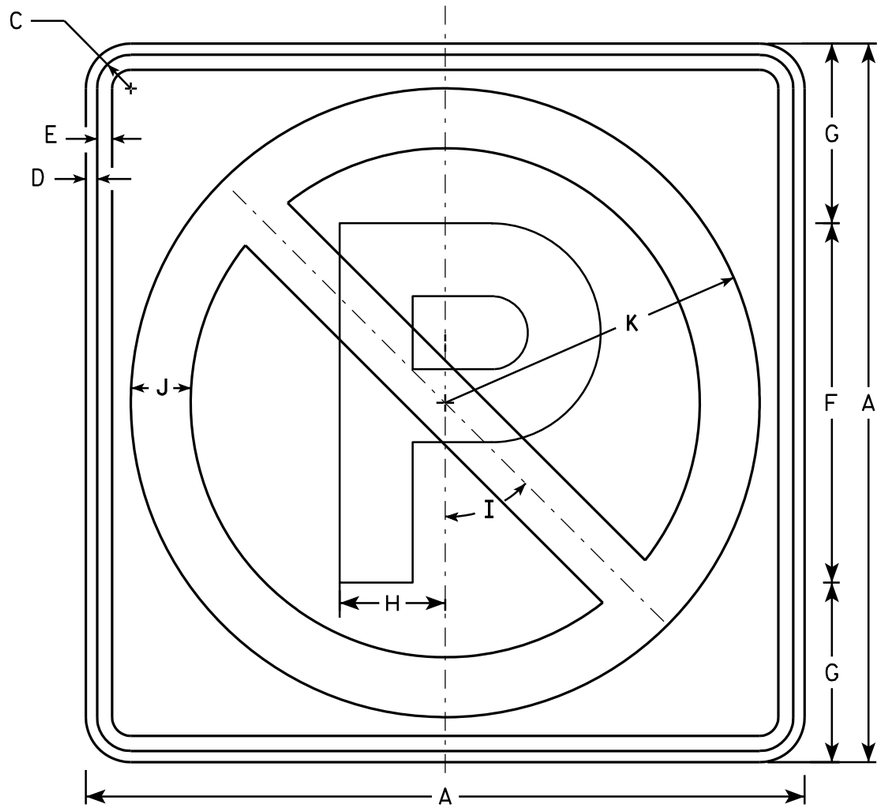
STANDARD SIGN
R3-4B

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/17/2011 PLATE NO. R3-4B.2

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 288	E



R3-8A

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - See note 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. Border & Letter P are non reflective black, the circle with diagonal bar is reflective red.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24		1 1/8	3/8	1/2	12	6	3 1/2	45°	2	10 1/2																4.0
2M	24		1 1/8	3/8	1/2	12	6	3 1/2	45°	2	10 1/2																4.0
3																											
4																											
5																											

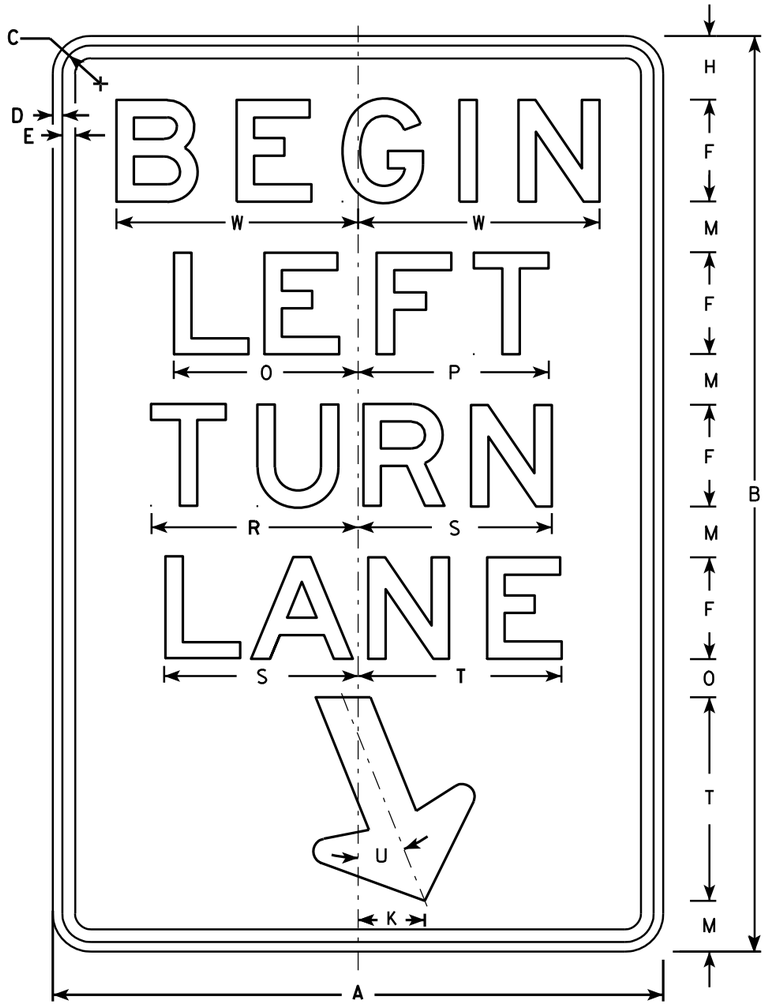
STANDARD SIGN
R3-8A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 8/01/12 PLATE NO. R3-8A.1

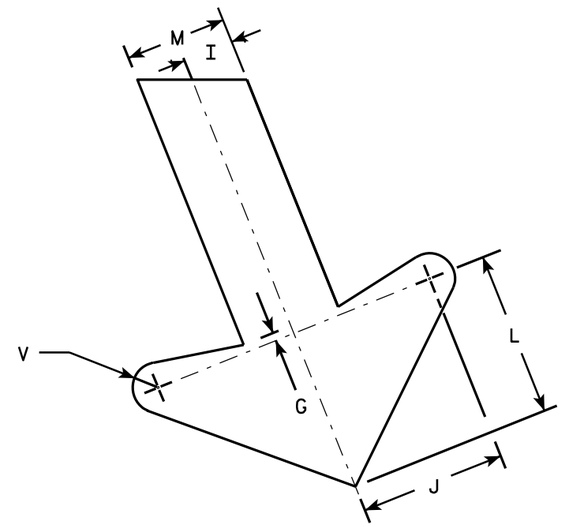
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 289 | E



R3-20L

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.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	36	1 1/8	3/8	1/2	4	1/4	2 1/2	1	2 7/8	2 5/8	3 1/4	2	1 1/2	7 1/4	7 1/2		8 1/8	7 5/8	8	22°	1/2	9 1/2				6.0
2M	24	36	1 1/8	3/8	1/2	4	1/4	2 1/2	1	2 7/8	2 5/8	3 1/4	2	1 1/2	7 1/4	7 1/2		8 1/8	7 5/8	8	22°	1/2	9 1/2				6.0
3	36	54	1 3/4	1/2	5/8	6	3/8	3 3/4	1 1/2	4 1/4	4	4 7/8	3	2 1/4	10 7/8	11 1/4		12 1/4	11 1/2	12	22°	3/4	13 1/4				13.5
4																											
5																											

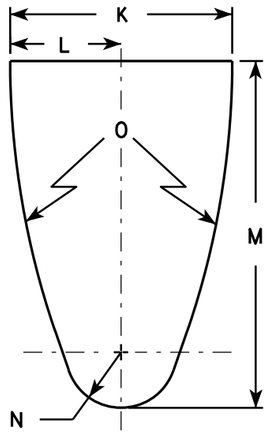
STANDARD SIGN
R3-20L

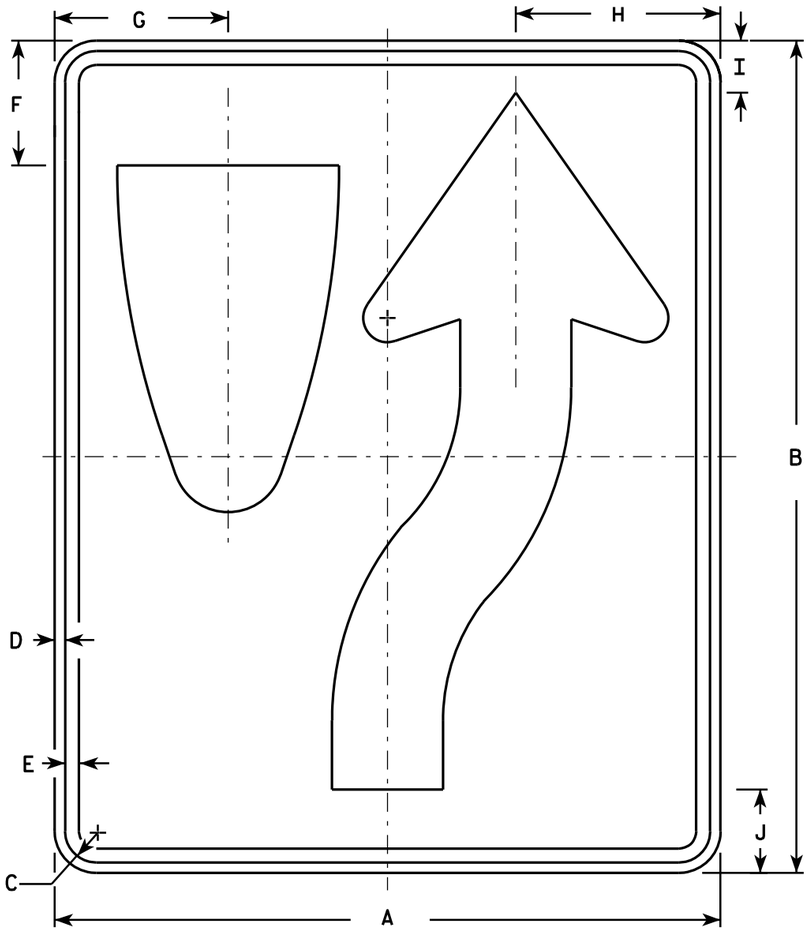
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/18/10 PLATE NO. R3-20L.7

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 290 | E

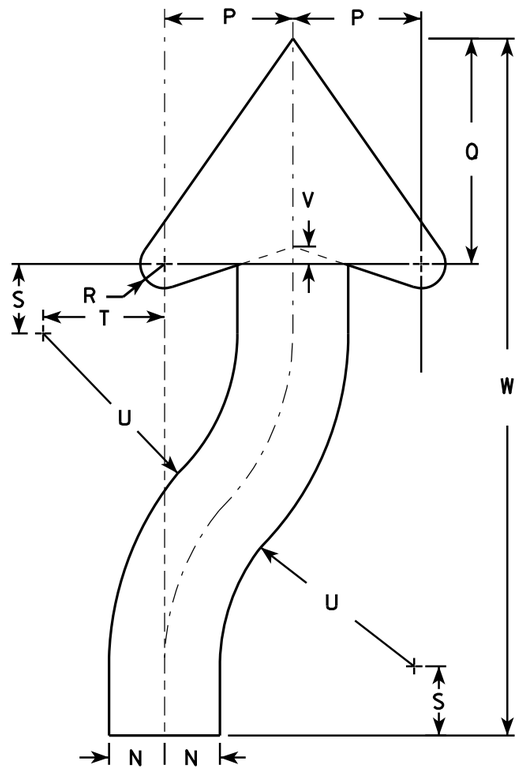




R4-7

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition. material is plywood but borders shall be rounded
2. Color:
   Background - White
   Message - Black
3. Corners may be square or rounded when base as shown. When base material is metal, the corners and borders shall be rounded.
4. R4-8 is the same as R4-7 except Legend is reversed.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	18	24	1 1/8	3/8	1/2	3 3/8	4 3/4	5 1/2	1 3/8	2 1/4	6	3	9 3/8	1 1/2	22 1/2	3 1/2	6 1/8	5/8	1 7/8	3 1/4	6 3/4	1/2	20 3/8				3.0
2S	24	30	1 1/8	3/8	1/2	4 1/2	6 1/4	7 3/8	1 7/8	3	8	4	12 1/2	2	30	4 5/8	8 1/8	7/8	2 1/2	4 3/8	9	5/8	25 1/8				5.0
2M	24	30	1 1/8	3/8	1/2	4 1/2	6 1/4	7 3/8	1 7/8	3	8	4	12 1/2	2	30	4 5/8	8 1/8	7/8	2 1/2	4 3/8	9	5/8	25 1/8				5.0
3	36	48	1 3/4	1/2	5/8	6 3/4	9 3/8	11 1/8	2 7/8	4 1/2	12	6	18 3/4	3	45	6 7/8	12 1/4	1 1/4	3 3/4	6 5/8	13 1/2	1	40 3/4				12.0
4	36	48	1 3/4	1/2	5/8	6 3/4	9 3/8	11 1/8	2 7/8	4 1/2	12	6	18 3/4	3	45	6 7/8	12 1/4	1 1/4	3 3/4	6 5/8	13 1/2	1	40 3/4				12.0
5	48	60	2 1/4	3/4	1	9	12 1/2	14 3/4	3 3/4	6	16	8	25	4	60	9 1/4	16 1/4	1 5/8	5	8 3/4	18	1 1/4	50 1/4				20.0

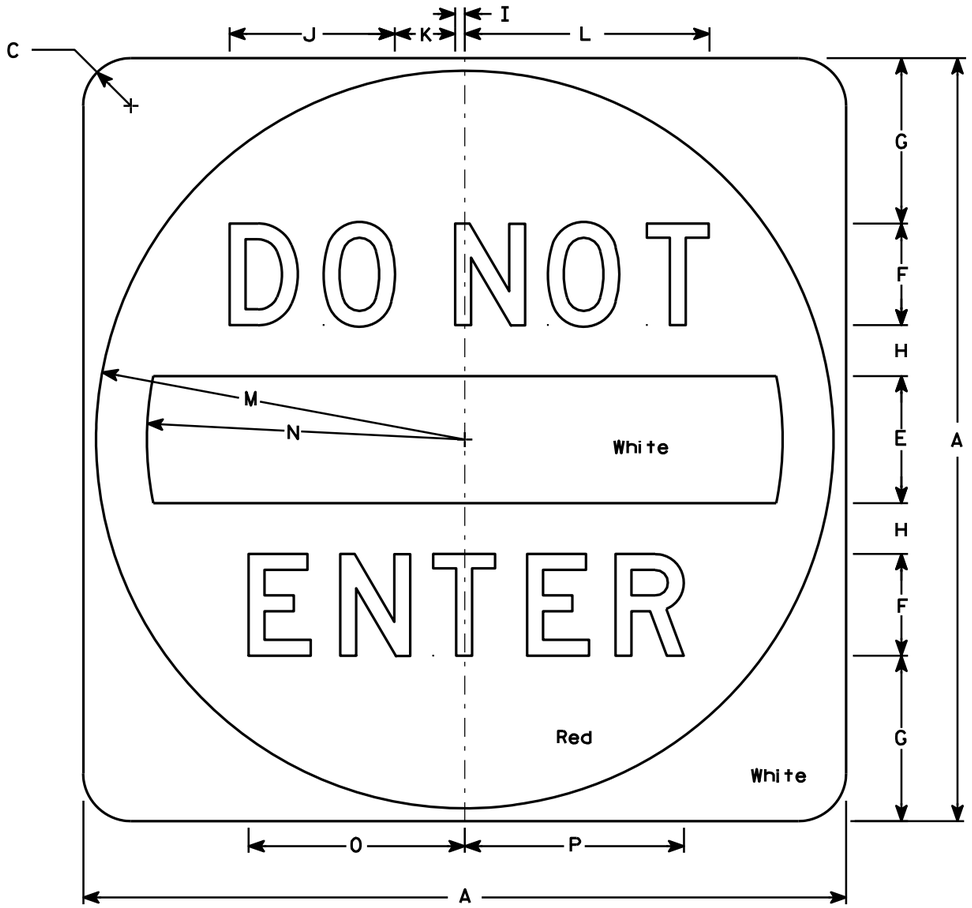
STANDARD SIGN
R4-7 & R4-8

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

DATE 3/25/2011 PLATE NO. R4-7.8

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 291	E



R5-1

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - See detail
   Message - White - Type H Reflective
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but when base material is metal, the cornors shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30		1 7/8		5	4	6 1/2	2	3/8	6 1/2	2 3/8	9 5/8	14 1/2	12 1/2	8 1/2	8 5/8											6.26
2M	36		2 1/4		6	5	7 1/2	2 1/2	1/2	8 1/8	3	12 1/8	17 1/2	15	10 5/8	10 3/4											9.0
3	36		2 1/4		6	5	7 1/2	2 1/2	1/2	8 1/8	3	12 1/8	17 1/2	15	10 5/8	10 3/4											9.0
4	36		2 1/4		6	5	7 1/2	2 1/2	1/2	8 1/8	3	12 1/8	17 1/2	15	10 5/8	10 3/4											9.0
5	48		3		8	6	11	3	5/8	9 3/4	3 5/8	14 1/2	23 1/2	20	12 3/4	12 7/8											16.0

STANDARD SIGN
R5-1

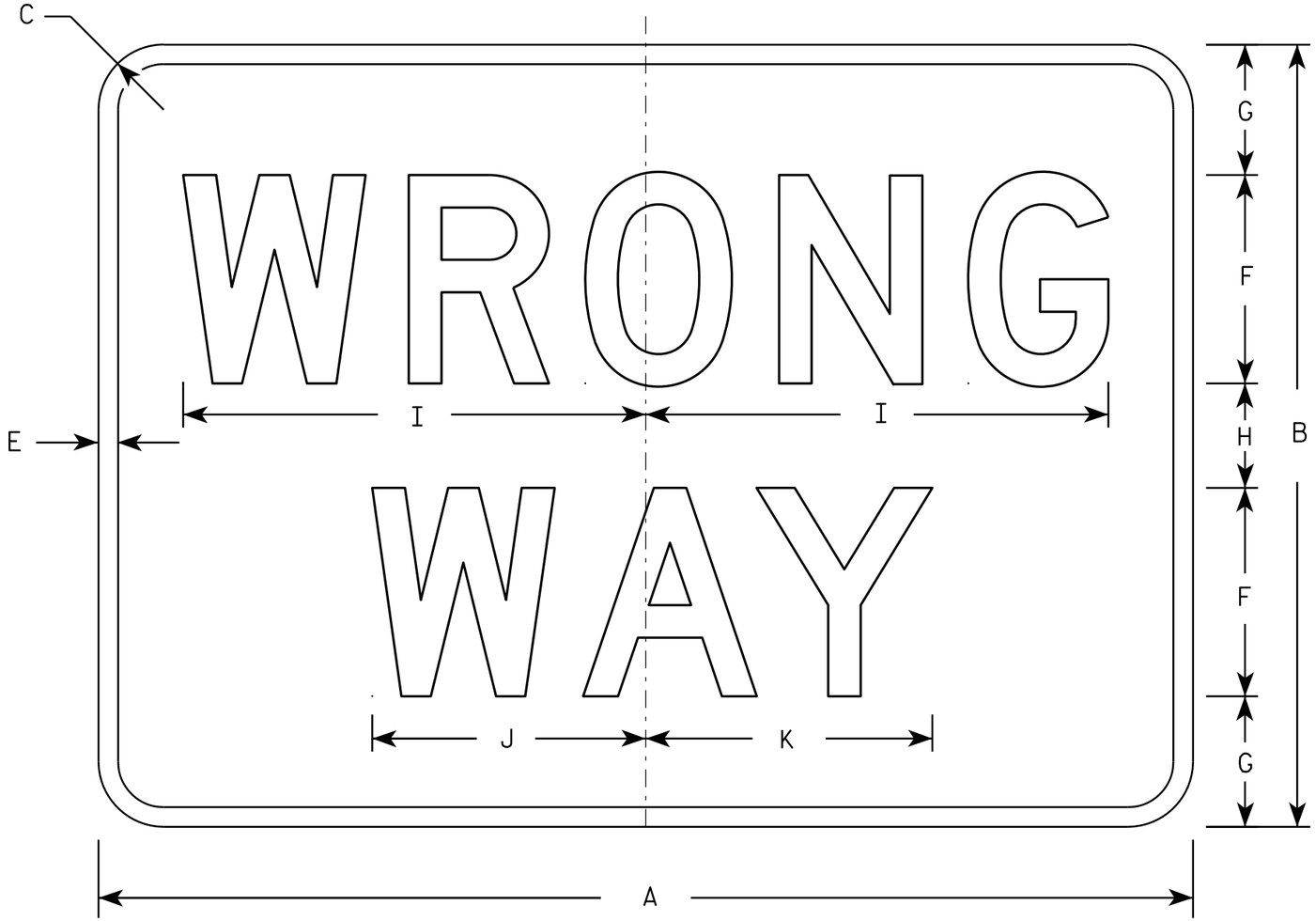
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/17/10 PLATE NO. R5-1.15

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 292 | E

7



R5-1A

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Red
   Message - White
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	30	18	1 1/2		1/2	5	3	2	11	6 1/2	6 7/8																3.75
2S	36	24	2		5/8	6	4 1/2	3	13 1/4	7 7/8	8 1/4																6.00
2M	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75
3	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75
4	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75
5	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75

STANDARD SIGN
R5-1A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/17/10 PLATE NO. R5-1A.2

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 293 | E

R5-57

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 - Lines 1, 2, and 5 are Series C.
   Lines 3 and 4 are 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																											
2S																											
2M																											
3																											
4	36		1 5/8	5/8	3/4	4	3	2	3 1/2	14 1/4	14 7/8	11	11 1/2	4 3/4	1 3/4	9		1 3/8	10	11	2 1/2	1 3/4	15 1/2	13	13 5/8		9.0
5	36		1 5/8	5/8	3/4	4	3	2	3 1/2	14 1/4	14 7/8	11	11 1/2	4 3/4	1 3/4	9		1 3/8	10	11	2 1/2	1 3/4	15 1/2	13	13 5/8		9.0

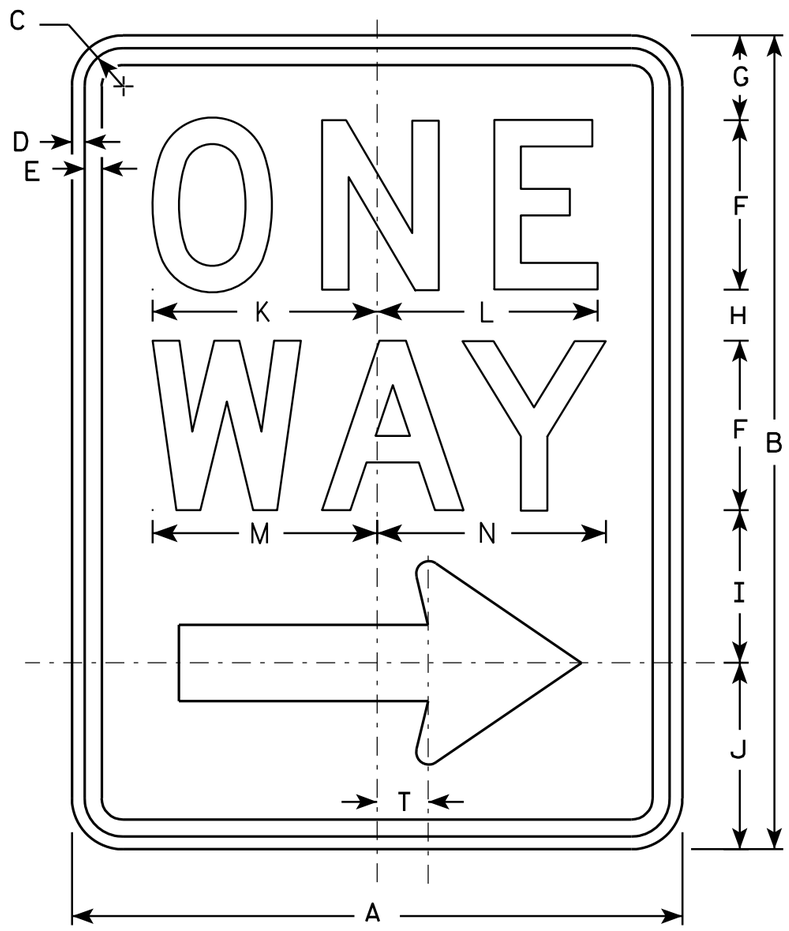
STANDARD SIGN
R5-57

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/29/2011 PLATE NO. R5-57.10

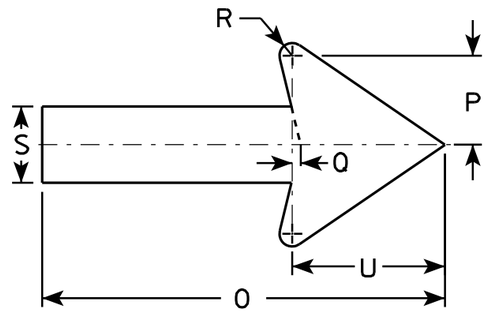
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 294 | E



R6-2R

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. R6-2L same as R6-2R except arrow points to the left.



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
1	18	24	1 1/8	3/8	1/2	5	2 1/2	1 1/2	4 1/2	5 1/2	6 5/8	6 1/2	6 5/8	6 3/4	11 7/8	2 5/8	1/4	3/8	2 1/4	1 1/2	4 1/2					
2S	24	30	1 1/8	3/8	1/2	6	3	2 1/2	5 1/2	7	8 1/8	8 1/8	8 1/2	8 5/8	16	3 1/2	3/8	1/2	3	2	6					
2M	30	36	1 3/8	1/2	5/8	8	2 1/2	2 5/8	6 7/8	8	10 1/2	10 1/2	11 1/4	11 1/4	20	4 3/8	1/2	5/8	3 3/4	2 1/2	7 1/2					
3	36	48	1 7/8	1/2	5/8	10	5 1/4	3 1/4	9	10 1/2	12 3/4	12 3/4	13 1/4	13 1/2	24	5 5/8	1/2	3/4	4 3/4	3	9					
4	36	48	1 7/8	1/2	5/8	10	5 1/4	3 1/4	9	10 1/2	12 3/4	12 3/4	13 1/4	13 1/2	24	5 5/8	1/2	3/4	4 3/4	3	9					
5																										

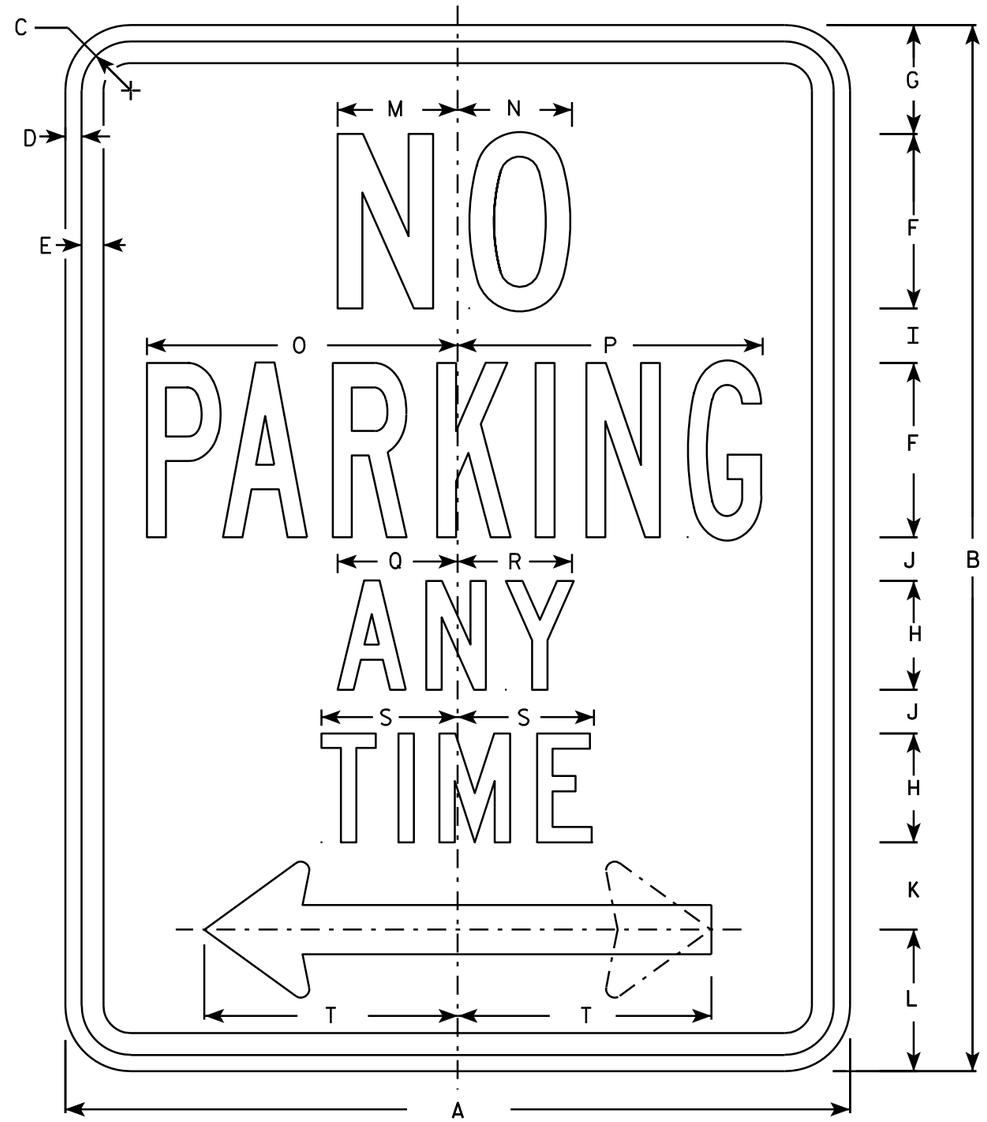
STANDARD SIGN
R6-2 R&L

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/2/10 PLATE NO. R6-2.8

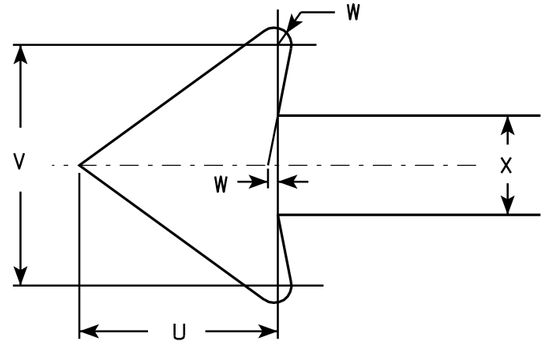
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 295	E



R7-1

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 - Red
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, 3 and 4 are series C, line 2 is series B.
6. R7-1D (double arrow)
   R7-1L (left arrow)
   R7-1R (right arrow)



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	12	18	1 1/8	3/8	3/8	3	1 7/8	2	7/8	5/8	1 1/2	2 1/2	2	2	4 7/8	4 7/8	2 1/4	2 1/8	2 1/2	3 7/8	1 1/2	1 3/4	1/8	3/4			1.5
2S	18	24	1 1/8	3/8	1/2	4	2 1/2	2 1/2	1 1/4	1	2	3 1/4	2 3/4	2 5/8	7 1/8	7	2 3/4	2 5/8	3 1/8	5 7/8	2 1/4	2 5/8	1/4	1 1/8			3.0
2M	24	30	1 1/8	3/8	1/2	5	3	3	2	1 1/4	2 1/2	4	3 1/4	3 3/8	9 1/4	9 1/4	3 1/4	3 1/4	3 3/4	7 3/4	3	3 1/2	1/4	1 1/2			5.0
3	24	30	1 1/8	3/8	1/2	5	3	3	2	1 1/4	2 1/2	4	3 1/4	3 3/8	9 1/4	9 1/4	3 1/4	3 1/4	3 3/4	7 3/4	3	3 1/2	1/4	1 1/2			5.0
4																											
5																											

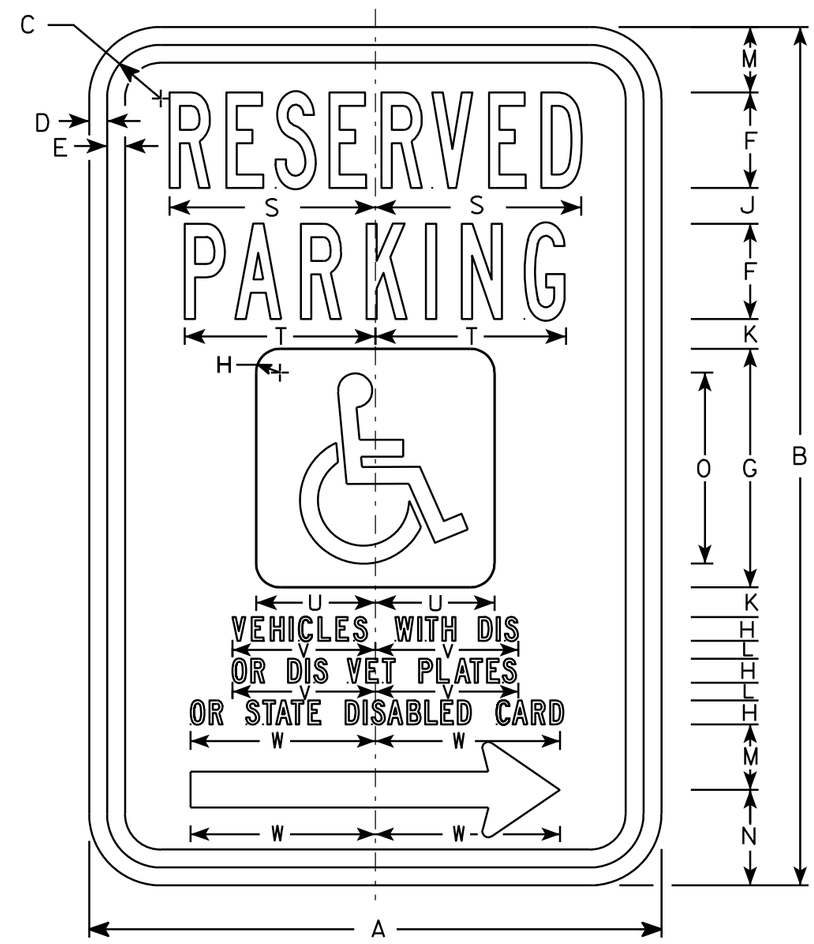
STANDARD SIGN
R7-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/31/2011 PLATE NO. R7-1.9

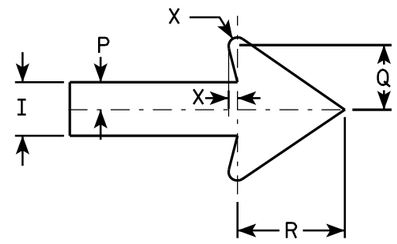
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 296	E



R7-8R

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Sign is white Type H Reflective; paraplegic background is blue.
   Message - Legend and border are green; paraplegic symbol is white
3. Message Series - Lines 1 & 2 are Series B
   Lines 3, 4, 5 & 6 are 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. R7-8R (RIGHT ARROW)
   R7-8L (LEFT ARROW)



Arrow Detail

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	12	18	1 1/8	3/8	3/8	2	5	1/2	3/4	3/4	5/8	3/8	1 3/8	2	4	3/8	7/8	1 1/2	4 3/8	4	2 1/2	3	3 7/8	3/16			1.5
2M	18	24	1 1/8	3/8	1/2	3	6	3/4	1 1/8	7/8	5/8	1/2	1 7/8	2 7/8	5	5/8	1 3/8	2 1/4	6 1/2	5 3/8	3	4 1/2	5 7/8	1/8			3.0
3	18	24	1 1/8	3/8	1/2	3	6	3/4	1 1/8	7/8	5/8	1/2	1 7/8	2 7/8	5	5/8	1 3/8	2 1/4	6 1/2	5 3/8	3	4 1/2	5 7/8	1/8			3.0
4																											
5																											

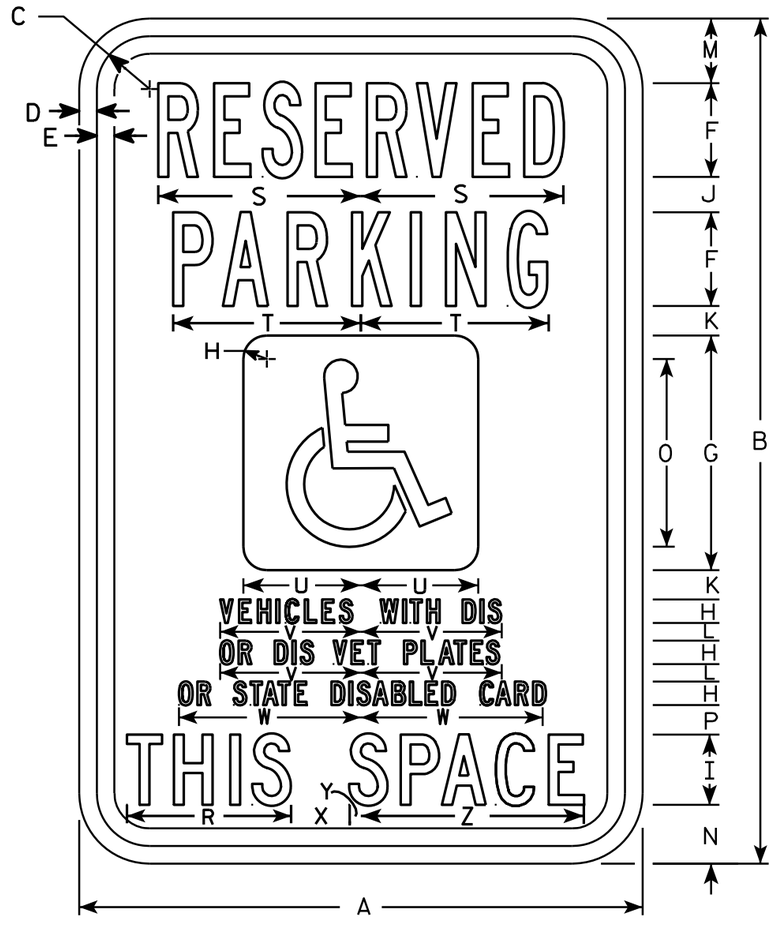
STANDARD SIGN
R7-8

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/31/2011 PLATE NO. R7-8.6

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 297	E



R7-8A

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Sign is white Type H Reflective; paraplegic background is blue.
   Message - Legend and border are green; paraplegic symbol is white
3. Message Series - Lines 1 & 2 are Series B
   Lines 3, 4, 5 & 6 are Series C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	12	18	1 1/8	3/8	3/8	2	5	1/2	1 1/2	3/4	5/8	3/8	1 3/8	1 1/4	4	5/8		3 1/2	4 3/8	4	2 1/2	3	3 7/8	1 1/4	1/4	4 3/4	1.5
2M	18	24	1 1/8	3/8	1/2	3	6	3/4	2	7/8	5/8	1/2	1 7/8	2	5	3/4		4 5/8	6 1/2	5 3/8	3	4 1/2	5 7/8	1 1/2	1/4	6 3/8	3.0
3	18	24	1 1/8	3/8	1/2	3	6	3/4	2	7/8	5/8	1/2	1 7/8	2	5	3/4		4 5/8	6 1/2	5 3/8	3	4 1/2	5 7/8	1 1/2	1/4	6 3/8	3.0
4																											
5																											

STANDARD SIGN
R7-8A

WISCONSIN DEPT OF TRANSPORTATION

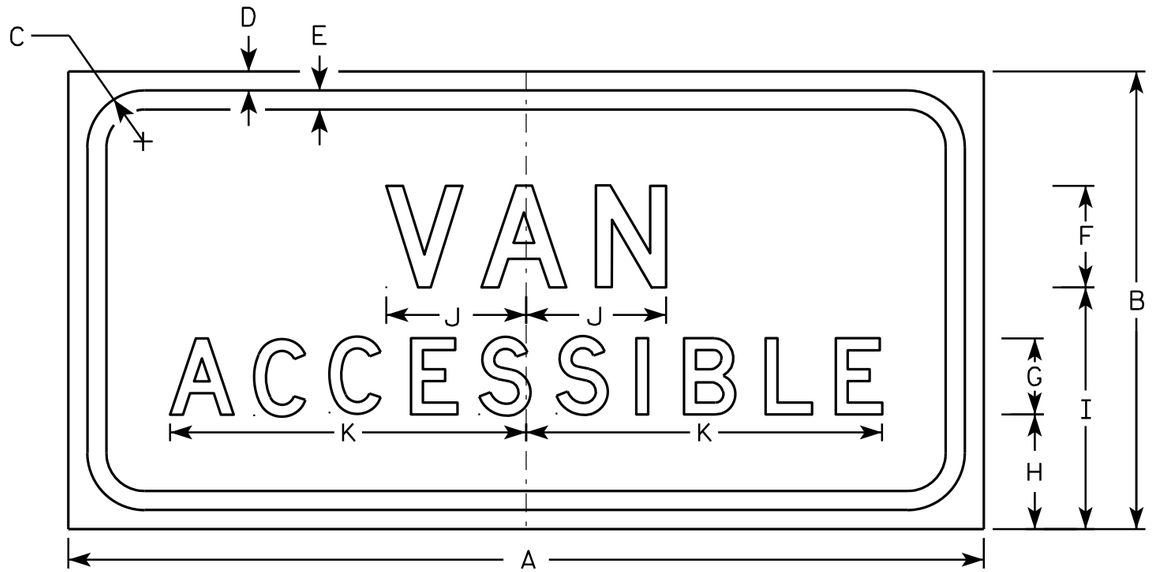
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/25/2011 PLATE NO. R7-8A.6

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 298 | E

NOTES

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



R7-8V

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	6	1 1/8	3/8	3/8	1 1/2	1	1 5/8	3 1/2	2	4 1/4																0.50
2M	18	9	1 1/8	3/8	3/8	2	1 1/2	2 1/4	4 3/4	2 3/4	7																0.75
3	18	9	1 1/8	3/8	3/8	2	1 1/2	2 1/4	4 3/4	2 3/4	7																0.75
4																											
5																											

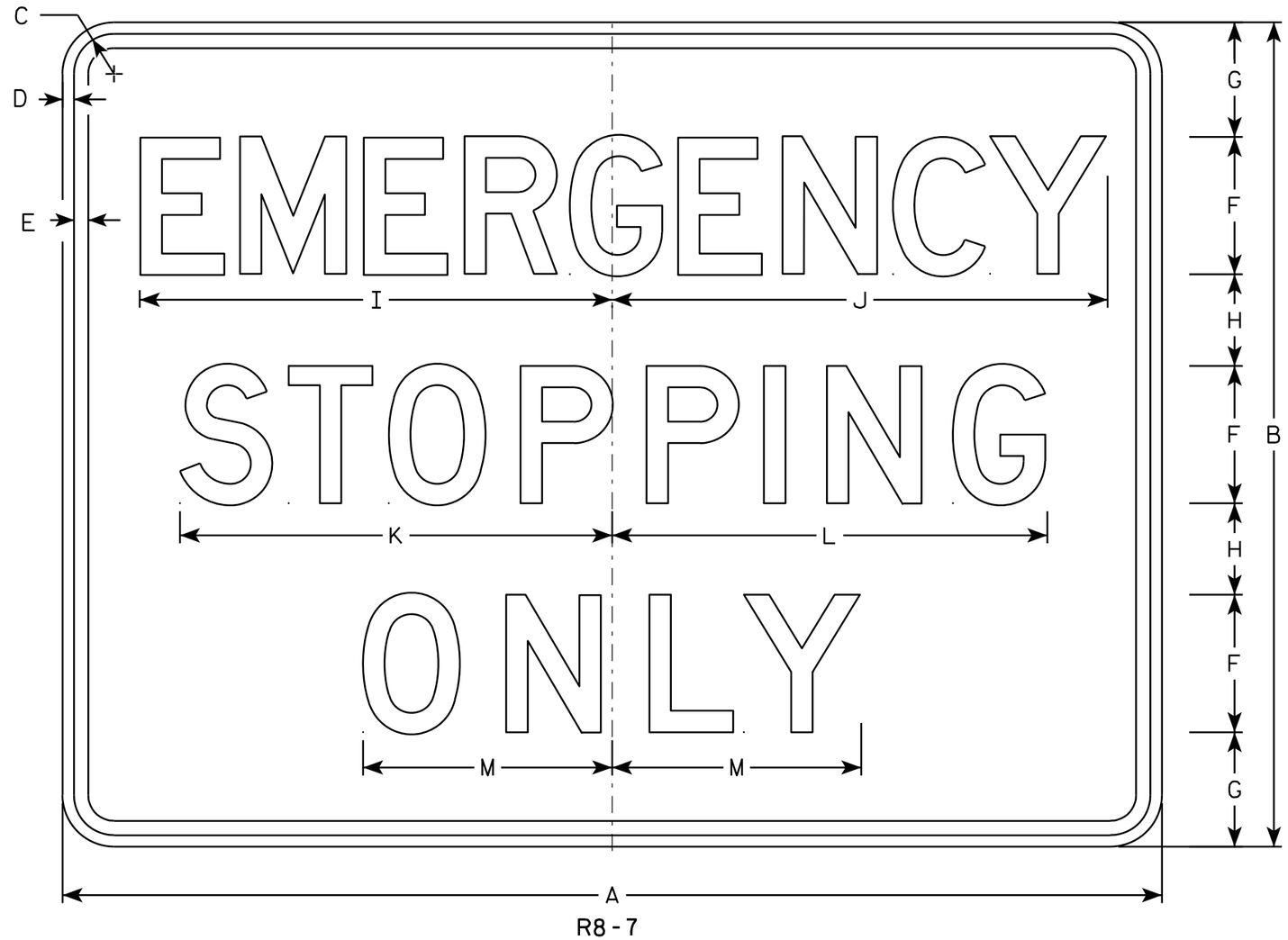
STANDARD SIGN
R7-8V

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/31/2011 PLATE NO. R7-8V.5

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 299 | E



R8-7

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																											
2S																											
2M																											
3																											
4	48	36	1 3/4	1/2	5/8	6	5	4	20 5/8	21 5/8	18 7/8	19	10 7/8														12.0
5	48	36	1 3/4	1/2	5/8	6	5	4	20 5/8	21 5/8	18 7/8	19	10 7/8														12.0

STANDARD SIGN
R8-7

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/31/2011 PLATE NO. R8-7.6

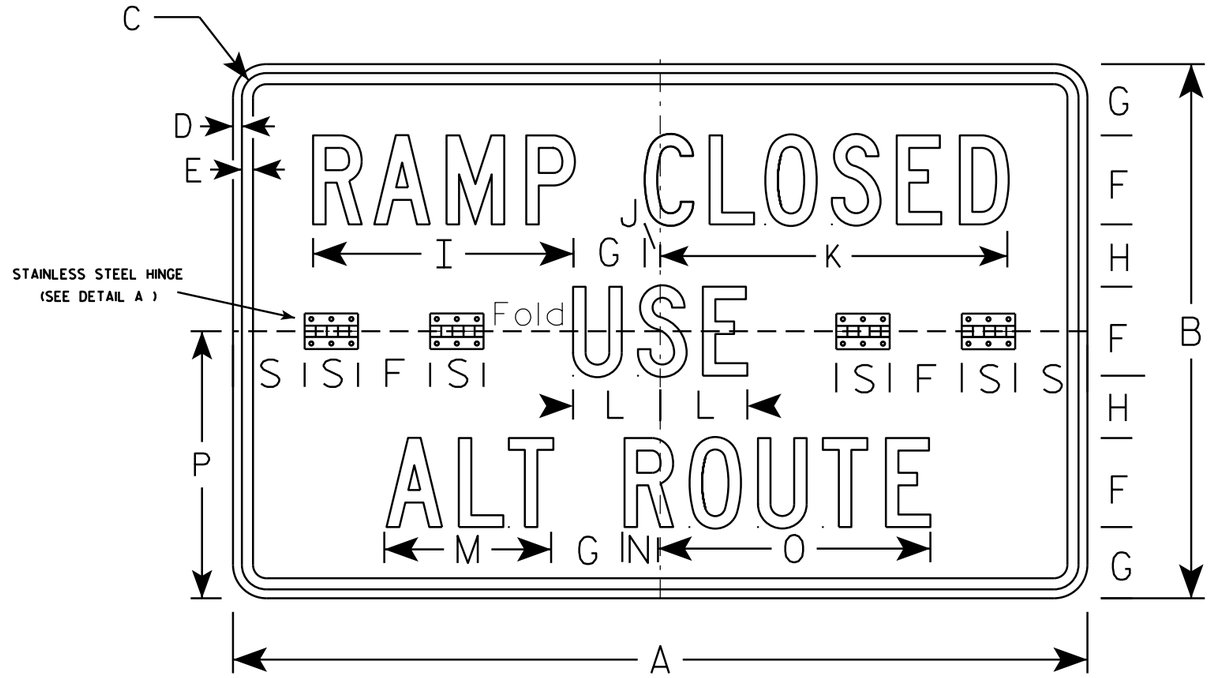
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 300 | E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\R87.DGN PLOT DATE : 31-MAR-2011 14:28 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 5.959043:1.000000

WISDOT/CADDS SHEET 42

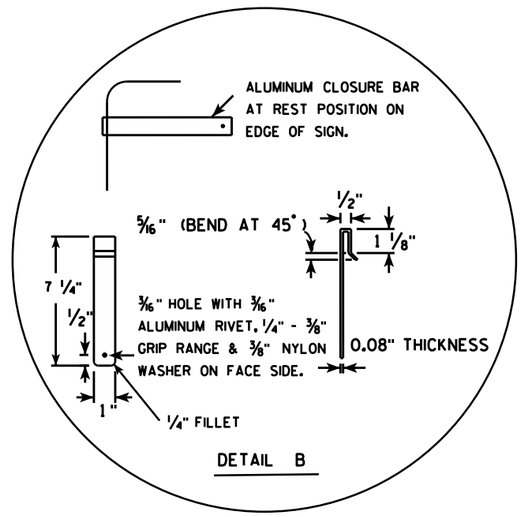
7

7



R11-54F

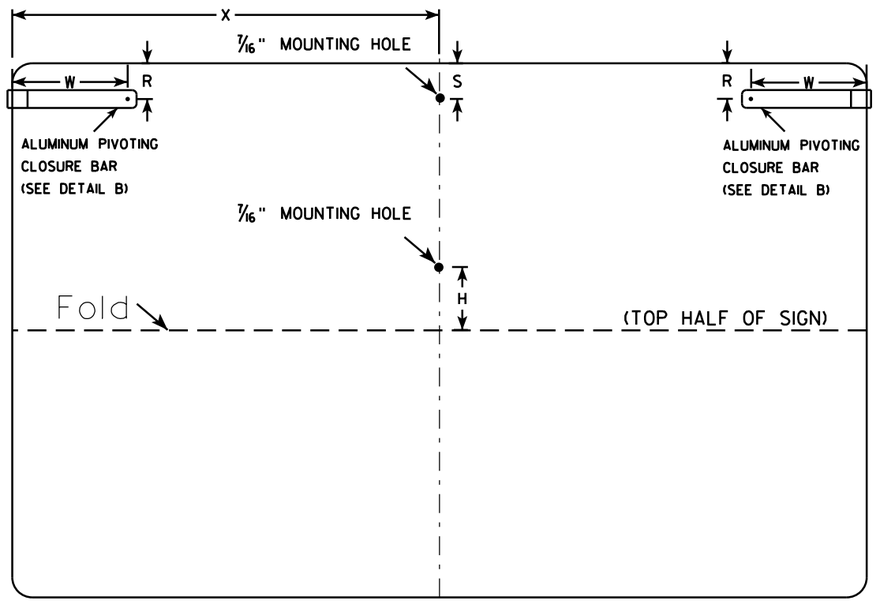
DETAIL A



DETAIL B

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - WHITE
   Message - BLACK
3. Message Series - C
4. Sign Base Material shall be aluminum, corners and borders shall be rounded.
5. All hardware used on the folding sign installation shall conform to 637.2.4 of the WIS DOT Standard Specification.
6. Refer to plate A5-3A for sign blank layout.



(BACK VIEW)

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	5	4	3 1/2	14 5/8	7/8	19 1/2	4 7/8	9 3/8	2	15 1/4	15		2	3	2 5/8	1 1/4	11/16	6 1/2	24			10.0
2M	48	30	1 3/8	1/2	5/8	5	4	3 1/2	14 5/8	7/8	19 1/2	4 7/8	9 3/8	2	15 1/4	15		2	3	2 5/8	1 1/4	11/16	6 1/2	24			10.0
3																											
4																											
5																											

STANDARD SIGN
R11-54F

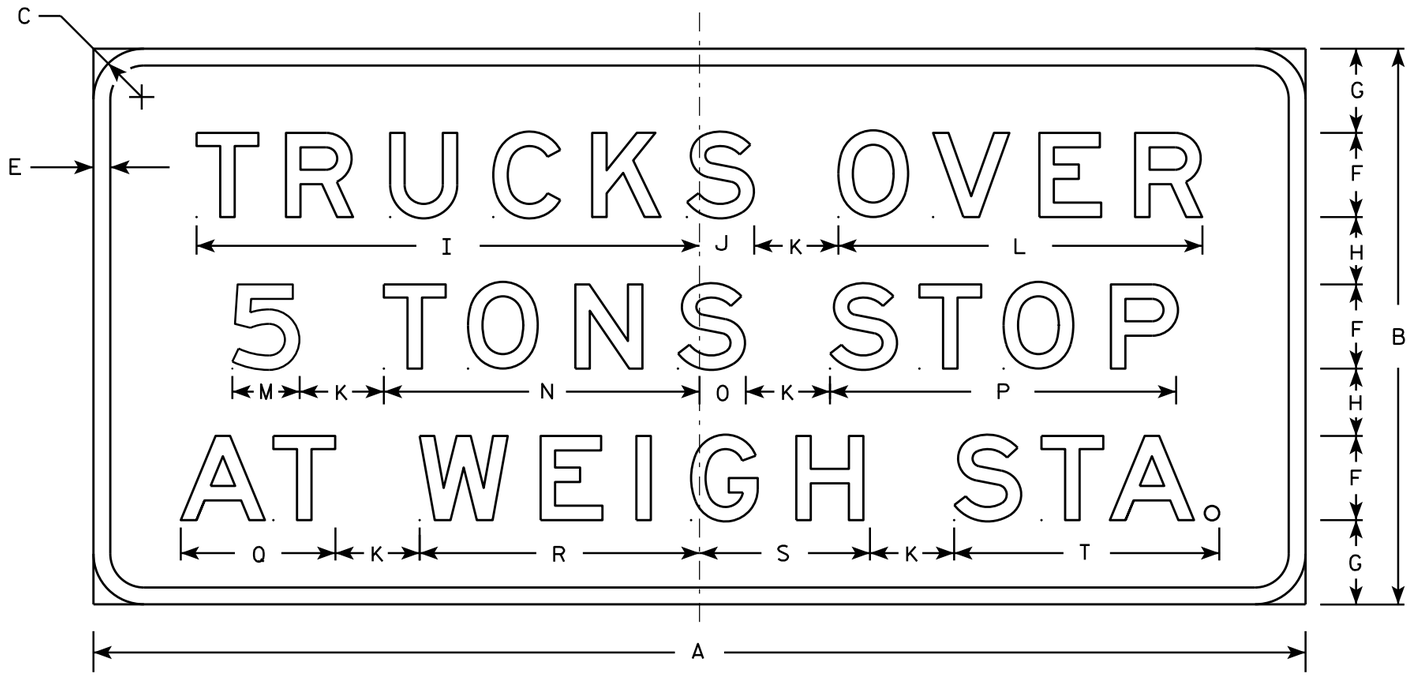
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/28/14 PLATE NO. R11-54F.3

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\R1154F.DGN PLOT DATE : 28-MAY-2014 14:15 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 8.511110:1.000000
WISDOT/CADDS SHEET 42



R13-1

NOTES

1. Sign is Type I or Type II - Non-Reflective
2. Color:
   Background - Black (Non-reflective)
   Message - White Type H Reflective
3. Message Series - E
4. Corners may be square or rounded but borders shall be rounded as shown.
5. Code sizes 2 & 4 are Type II, Code size 5 is Type I. All code sizes have a non-reflective background.
6. Base material for Type II signs shall be plywood.

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	90	36	3		1	6	5	4	36	3 7/8	6	26 1/8	4 3/4	22 3/4	3 1/4	25	11 1/8	19 7/8	12 1/4	19 1/2							22.5
2M	90	36	3		1	6	5	4	36	3 7/8	6	26 1/8	4 3/4	22 3/4	3 1/4	25	11 1/8	19 7/8	12 1/4	19 1/2							22.5
3																											
4	120	48	6		1	8	7	5	47 7/8	5 1/8	8	34 3/4	6 3/8	30 1/8	4 3/8	33 1/8	14 7/8	26 3/8	17 1/8	26 1/8							40.0
5	144	66	6		2	10	10	8	59 3/4	6 1/2	10	43 1/4	8	37 1/2	5 1/2	36 7/8	17 3/4	33 1/4	20 1/4	31 1/2							66.0

STANDARD SIGN
R13-1

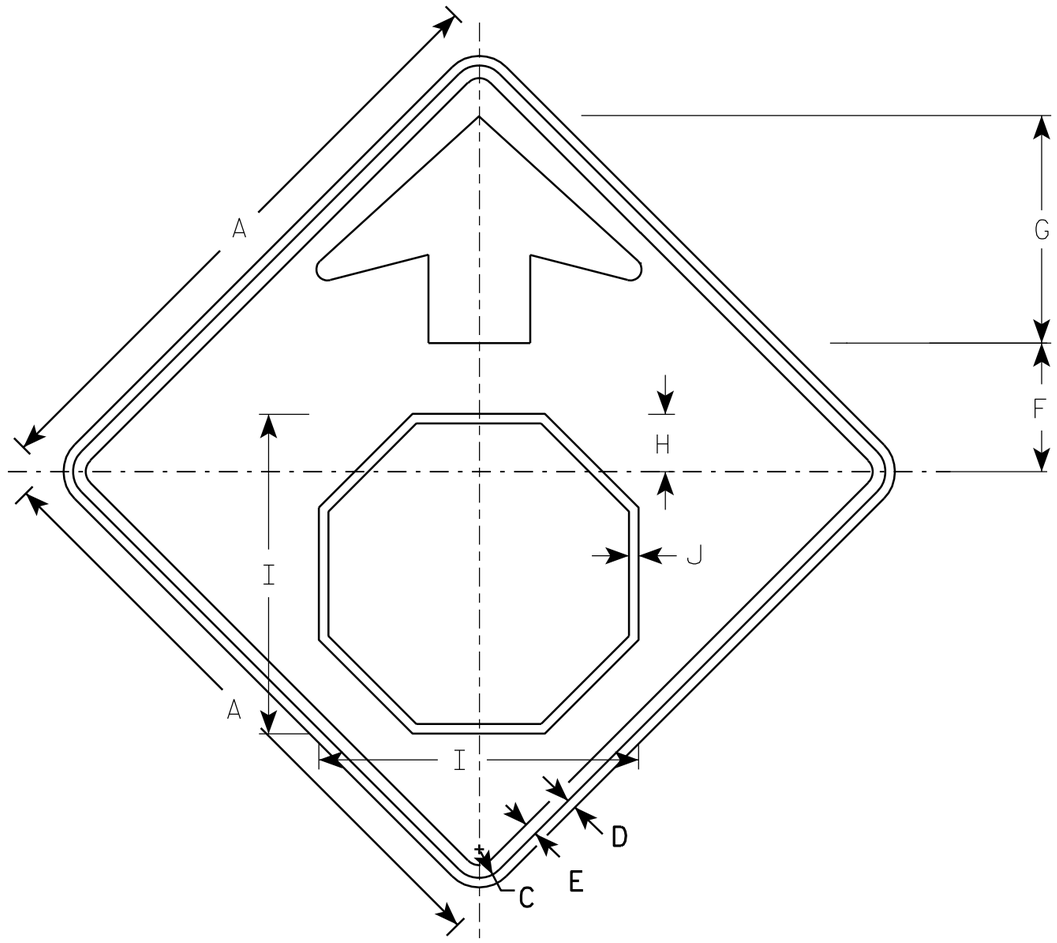
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 6/23/14 PLATE NO R13-1.7

PROJECT NO: | HWY: | COUNTY: | SHEET NO: E

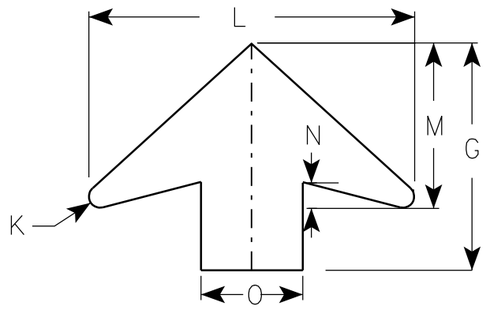
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\R131.DGN PLOT DATE : 23-JUN-2014 17:08 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 17.999037:1.000000
WISDOT/CADDS SHEET 42



W3-1

NOTES

1. All Signs Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - YELLOW
   Arrow & Border - BLACK
   Stop Symbol - WHITE BORDER ON RED BACKGROUND



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30		1 3/8	1/2	5/8	6 1/4	11 1/4	2 7/8	15 3/4	1/2	1/2	16	8	1 1/4	5												6.25
2S	36		1 5/8	5/8	3/4	7 1/2	13 1/2	3 1/2	19	5/8	5/8	19 1/4	9 3/4	1 5/8	6												9.0
2M	36		1 5/8	5/8	3/4	7 1/2	13 1/2	3 1/2	19	5/8	5/8	19 1/4	9 3/4	1 5/8	6												9.0
3	36		1 5/8	5/8	3/4	7 1/2	13 1/2	3 1/2	19	5/8	5/8	19 1/4	9 3/4	1 5/8	6												9.0
4	48		2 1/4	3/4	1	10	17 7/8	4 1/2	25 1/8	3/4	7/8	25 5/8	13	2	8												16.0
5	48		2 1/4	3/4	1	10	17 7/8	4 1/2	25 1/8	3/4	7/8	25 5/8	13	2	8												16.0

STANDARD SIGN
W3-1

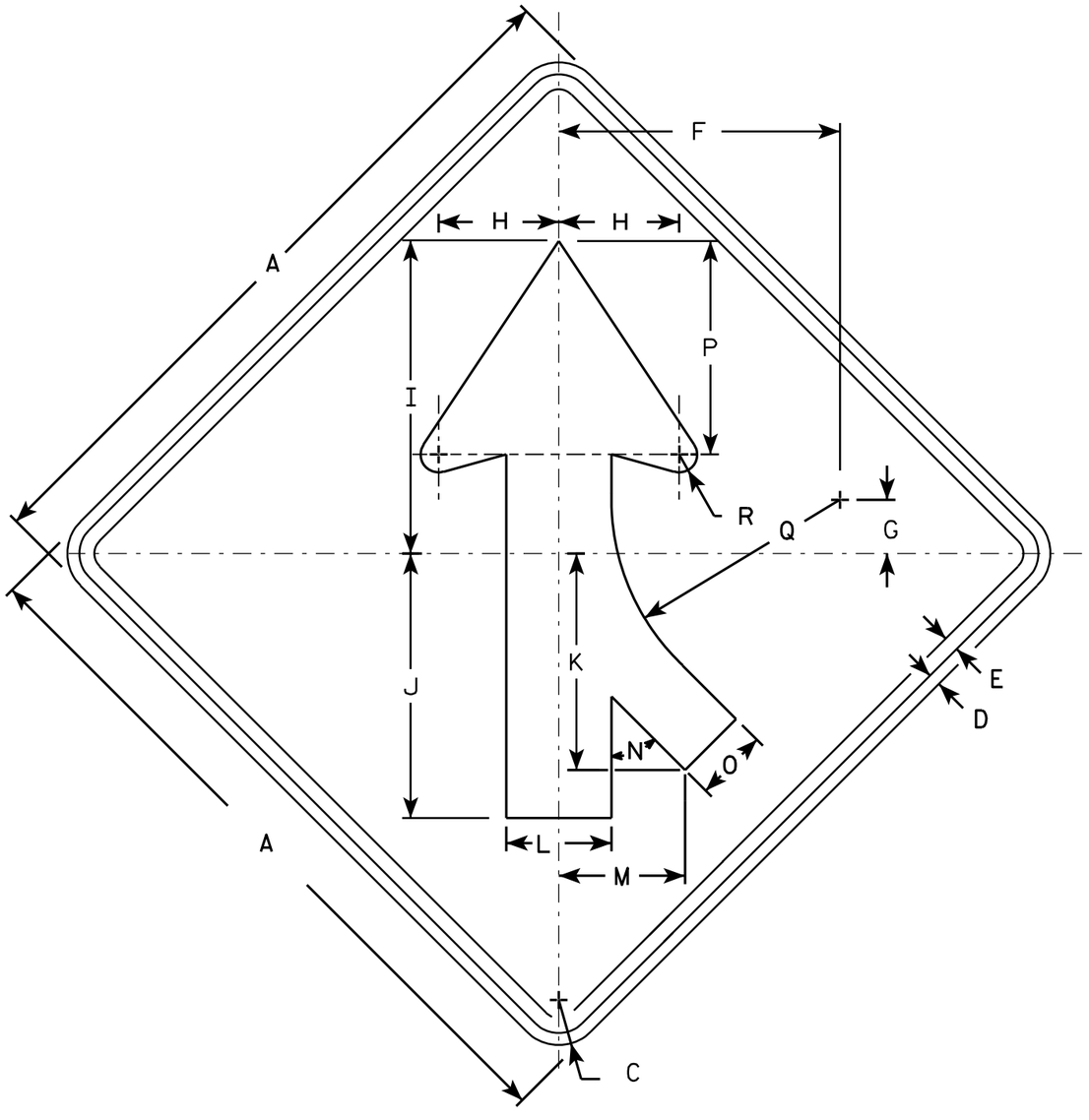
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 6/7/10 PLATE NO. W3-1.12

PROJECT NO:

SHEET NO: 303 E



W4-1 R

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   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. W4-1L is the same as W4-1R except the arrow is reversed along the vertical centerline.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30		1 3/8	1/2	5/8	11 5/8	2 1/2	5	13	11	9	4 3/8	5 1/4	45°	3	8 7/8	9 1/2	3/4									6.25
2S	36		1 5/8	5/8	3/4	14	2 3/4	6	15 3/4	13 1/4	10 1/4	5 1/4	6 3/8	45°	3 5/8	10 5/8	11 3/8	7/8									9.0
2M	36		1 5/8	5/8	3/4	14	2 3/4	6	15 3/4	13 1/4	10 1/4	5 1/4	6 3/8	45°	3 5/8	10 5/8	11 3/8	7/8									9.0
3	36		1 5/8	5/8	3/4	14	2 3/4	6	15 3/4	13 1/4	10 1/4	5 1/4	6 3/8	45°	3 5/8	10 5/8	11 3/8	7/8									9.0
4	48		2 1/4	3/4	1	18 3/4	3 5/8	8	20 1/2	17 1/2	14 3/8	7	8 3/8	45°	4 3/4	14 1/4	15 1/4	1 1/4									16.0
5	48		2 1/4	3/4	1	18 3/4	3 5/8	8	20 1/2	17 1/2	14 3/8	7	8 3/8	45°	4 3/4	14 1/4	15 1/4	1 1/4									16.0

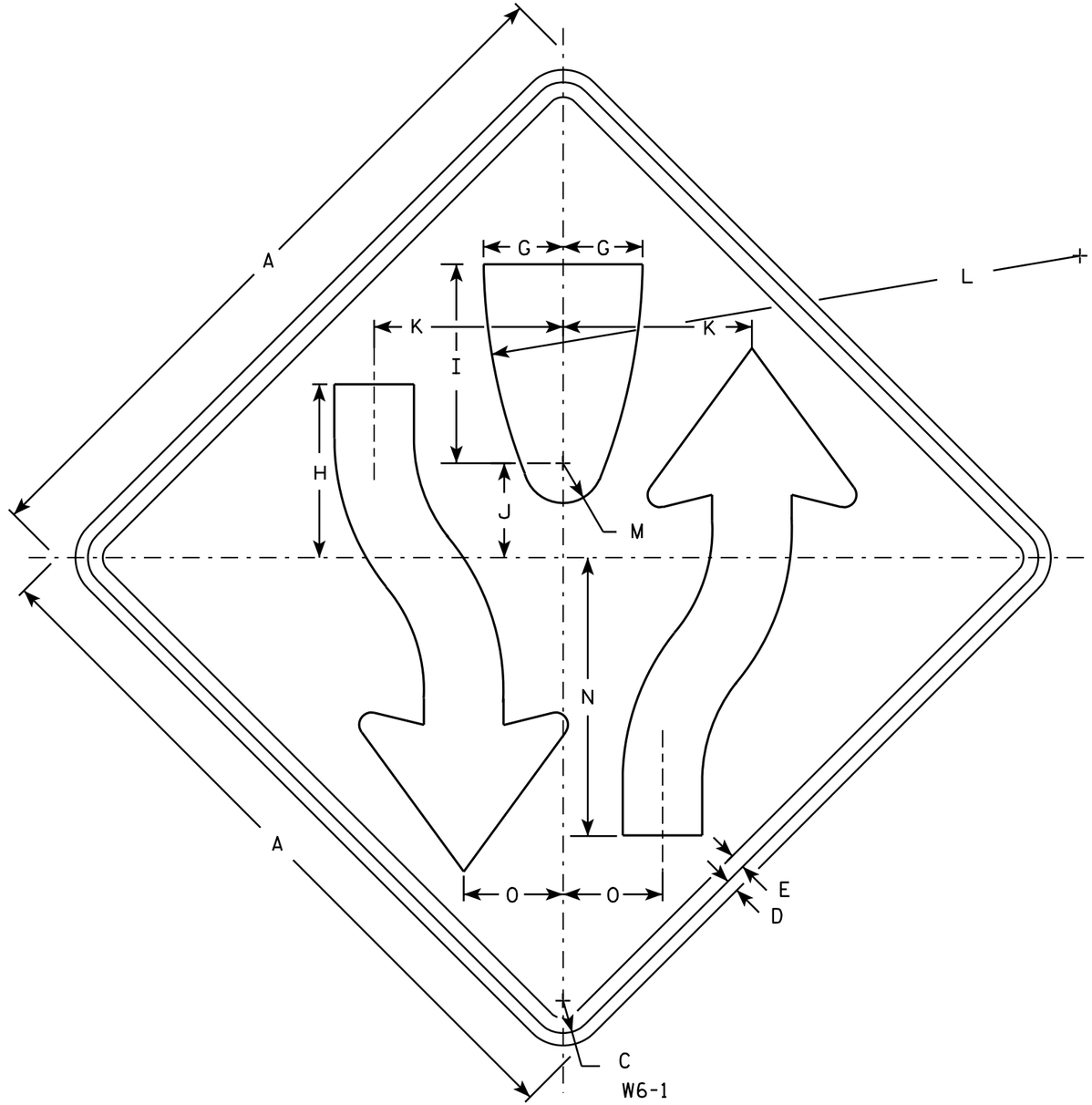
STANDARD SIGN
W4-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

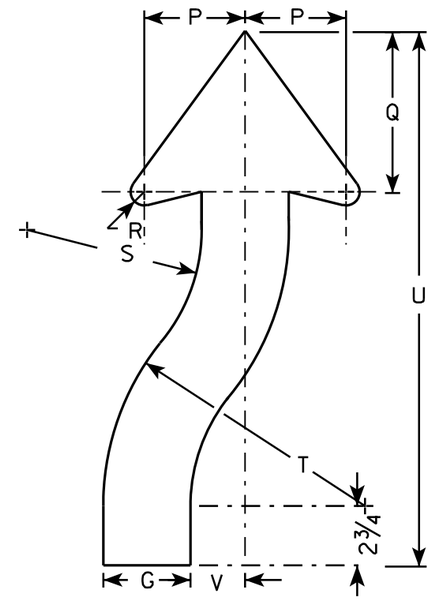
DATE 03/12/13 PLATE NO. W4-1.14

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 304	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 - Yellow
   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. W6-2 same as W6-1 but is rotated 180° when mounted.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30		1 3/8	1/2	5/8		3 1/4	8	8 1/4	4 1/8	7 7/8	25	1 3/4	11 5/8	4 1/8	3 7/8	6 3/4	5/8	6 5/8	9 7/8	21 5/8	2					6.25
2S	36		1 5/8	5/8	3/4		4	8 3/4	10	4 3/4	9 1/2	30	2	14	5	4 5/8	7 3/8	7/8	8	12	24 1/2	2 1/2					9.0
2M	36		1 5/8	5/8	3/4		4	8 3/4	10	4 3/4	9 1/2	30	2	14	5	4 5/8	7 3/8	7/8	8	12	24 1/2	2 1/2					9.0
3																											
4	48		2 1/4	3/4	1		5 3/8	11 5/8	13 3/8	6 3/8	12 5/8	40	2 5/8	18 5/8	6 5/8	6 1/4	9 7/8	1 1/4	10 5/8	16	32 5/8	3 3/8					16.0
5	48		2 1/4	3/4	1		5 3/8	11 5/8	13 3/8	6 3/8	12 5/8	40	2 5/8	18 5/8	6 5/8	6 1/4	9 7/8	1 1/4	10 5/8	16	32 5/8	3 3/8					16.0

STANDARD SIGN
W6-1 & W6-2

WISCONSIN DEPT OF TRANSPORTATION

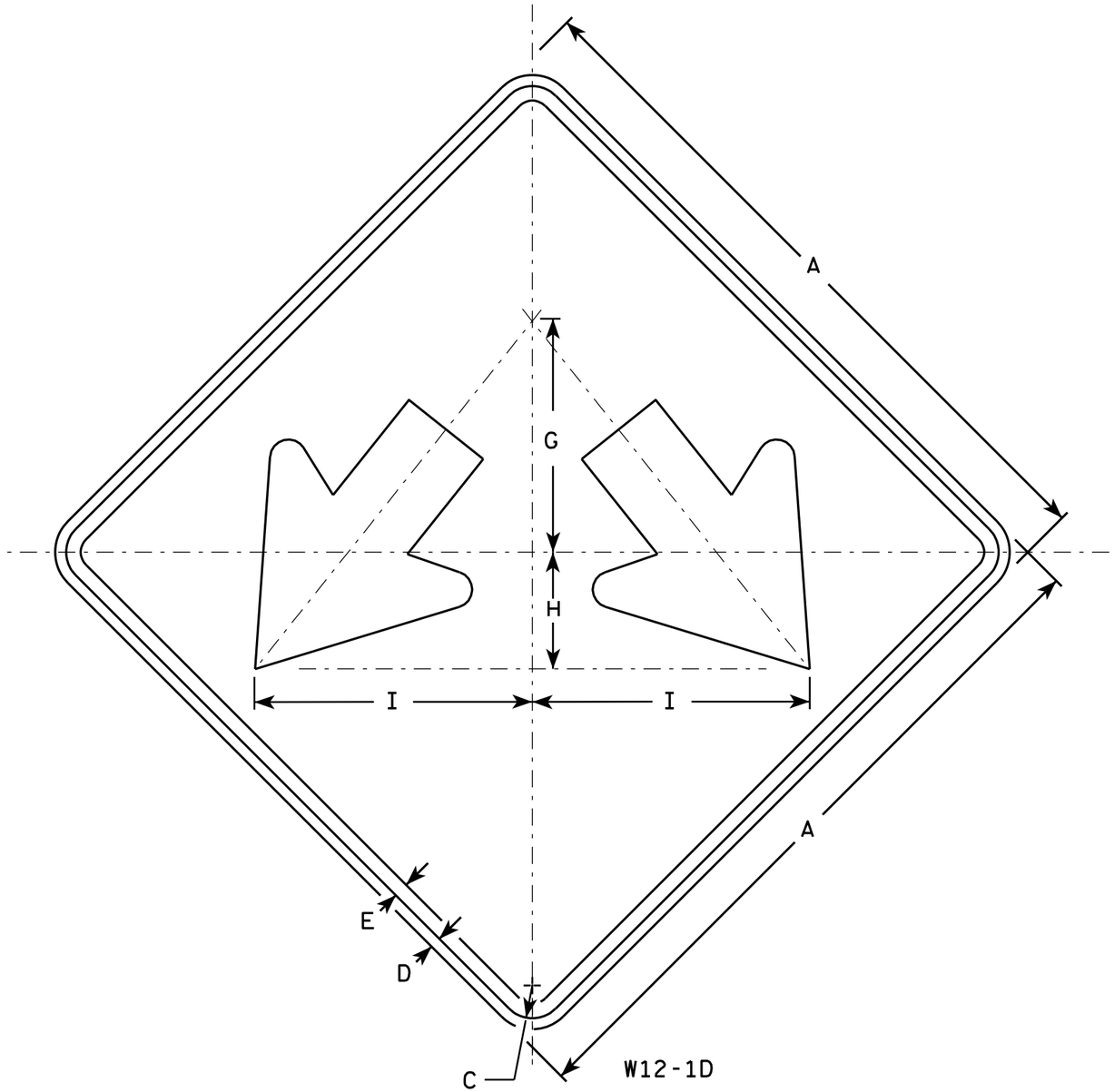
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 03/12/13 PLATE NO. W6-1.14

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 305	E

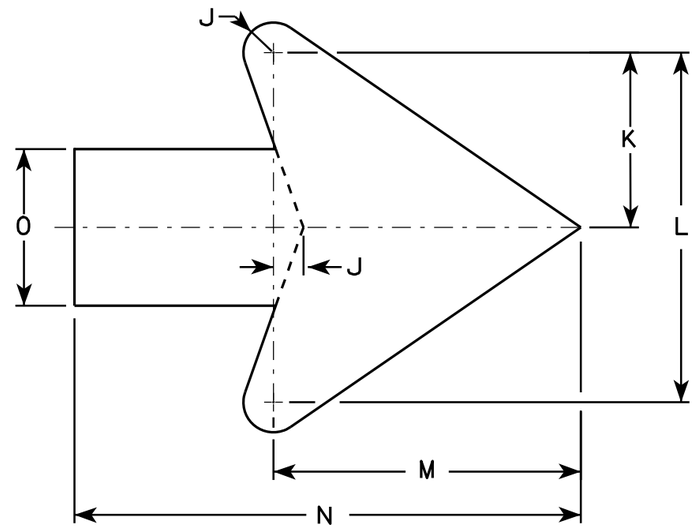
7

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\W61.DGN PLOT DATE : 12-MAR-2013 14:02 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 6.946657:1.000000
WISDOT/CADDS SHEET 42



NOTES

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



Arrow Detail

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24		1 1/8	1/2	3/8		8	4	9 1/2	3/8	3 3/8	7 1/4	6 3/8	10 3/8	3 1/4												4.0
2M	24		1 1/8	1/2	3/8		8	4	9 1/2	3/8	3 3/8	7 1/4	6 3/8	10 3/8	3 1/4												4.0
3	30		1 3/8	1/2	5/8		10	5	11 7/8	3/4	4 1/2	9	7 7/8	13	4												6.25
4	36		1 3/8	1/2	5/8		12	6	14 1/4	1	5 1/2	10 7/8	9 5/8	15 3/4	4 3/4												9.0
5	48		2 1/4	3/4	1		16	8	19	1 1/4	7 1/4	14 1/2	12 3/4	21	6 1/4												16.0

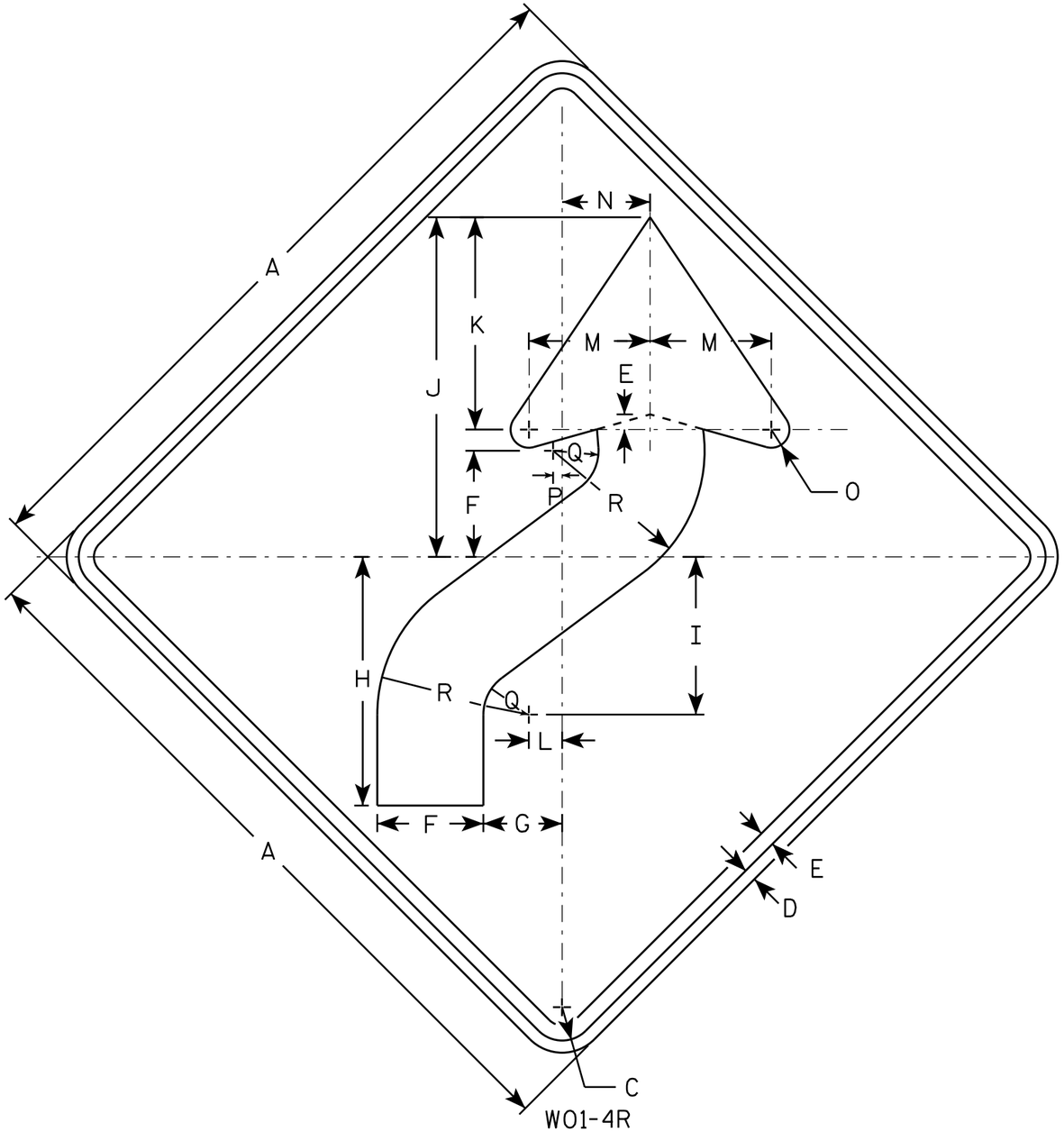
STANDARD SIGN
W12-1D

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/13/13 PLATE NO. W12-1D.15

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 306	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

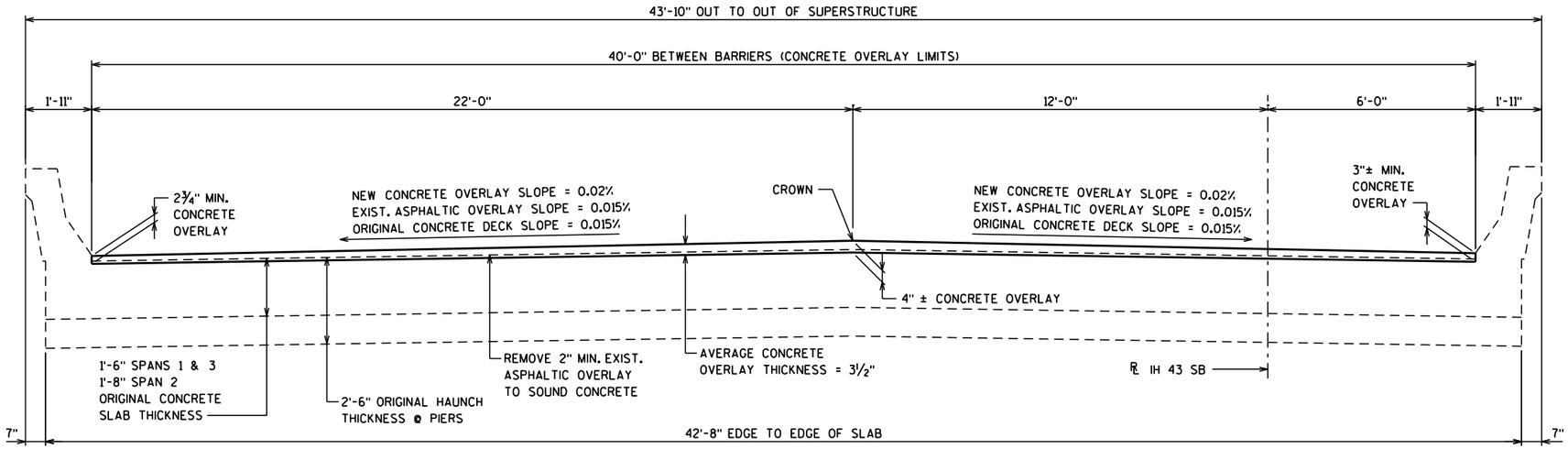
DATE 11/18/13 PLATE NO W01-4.1

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

7

STATE PROJECT NUMBER
1224-21-73



CROSS SECTION THRU ROADWAY

(LOOKING NORTH)

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

DIMENSIONS SHOWN ARE BASED ON THE EXISTING ORIGINAL STRUCTURE PLANS.

ANY EXCAVATION NECESSARY TO COMPLETE THE OVERLAY AT THE ABUTMENTS IS TO BE CONSIDERED INCIDENTAL TO THE BID ITEM "CONCRETE MASONRY OVERLAY DECKS".

PROFILE GRADE LINE SHALL BE DETERMINED IN THE FIELD BASED ON A MINIMUM OVERLAY THICKNESS OF 4" AT THE CROWN POINT AND 2¾" AT THE TOE OF THE OUTSIDE PARAPET PLACED ABOVE THE DECK SURFACE AFTER "CLEANING DECKS". EXPECTED AVERAGE OVERLAY THICKNESS IS 3½" (OR AS GIVEN ON THE PLANS). IF EXPECTED AVERAGE OVERLAY THICKNESS IS EXCEEDED BY MORE THAN ½", CONTACT THE STRUCTURES DESIGN SECTION.

THE EXISTING BITUMINOUS ASPHALTIC OVERLAY SHALL BE REMOVED FROM THE BRIDGE DECK UNDER BID ITEM "REMOVING ASPHALTIC CONCRETE DECK OVERLAY".

PREPARATION DECKS TYPE 1, PREPARATION DECKS TYPE 2, CONCRETE SURFACE REPAIR AND FULL-DEPTH DECK REPAIR AREAS SHALL BE DETERMINED BY THE FIELD ENGINEER. "CONCRETE SURFACE REPAIR" TO INCLUDE BUT NOT LIMITED TO THE SOUTH ABUTMENT & WEST PARAPET.

REMOVAL LINES NOT COVERED WITH A CONCRETE OVERLAY SHALL BE DEFINED BY A 1" DEEP SAW CUT AT THE CONCRETE SURFACES.

PROTECTIVE SURFACE TREATMENT SHALL BE APPLIED TO THE ENTIRE TOP SURFACE OF THE NEW CONCRETE OVERLAY. PIGMENTED PROTECTIVE SURFACE TREATMENT SHALL BE APPLIED TO THE ENTIRE FRONT FACES AND TOPS OF BOTH WING & DECK PARAPETS.

A MINIMUM OF 1-INCH OF CONCRETE SHALL BE REMOVED FROM THE ENTIRE BRIDGE DECK UNDER THE BID ITEM "CLEANING DECKS".

TRAFFIC DATA

ADT = 11,800 (2036)
RDS = 70 M.P.H.

LIST OF DRAWINGS

1. GENERAL PLAN
2. DECK REPAIR

DESIGN DATA

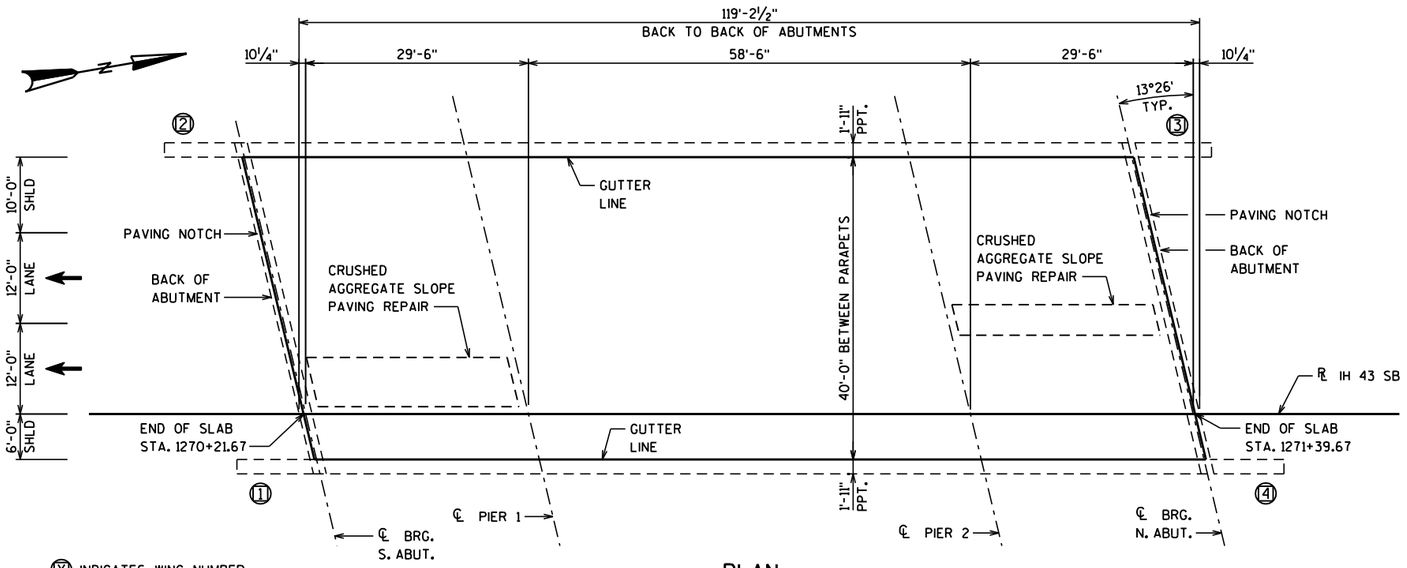
LIVE LOAD:
INVENTORY RATING: HS-21
OPERATING RATING: HS-36
WISCONSIN STANDARD PERMIT VEHICLE (Wis-SPV): 250 KIPS

MATERIAL PROPERTIES:
CONCRETE MASONRY
OVERLAY DECKS: f'c = 4,000 p.s.i.

TOTAL ESTIMATED QUANTITIES

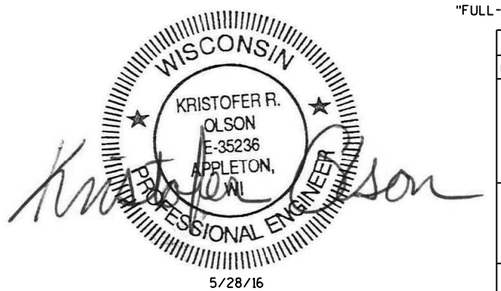
ITEM NUMBER	BID ITEMS	UNIT	TOTAL
502.3200	PROTECTIVE SURFACE TREATMENT	SY	524
502.3210	PIGMENTED SURFACE SEALER	SY	113
509.0301	PREPARATION DECKS TYPE 1	SY	93
509.0302	PREPARATION DECKS TYPE 2	SY	26
509.0500	CLEANING DECKS	SY	524
509.1500	CONCRETE SURFACE REPAIR	SF	39
509.2000	FULL-DEPTH DECK REPAIR	SY	1
☆ 509.2500	CONCRETE MASONRY OVERLAY DECKS	CY	57
509.9010.S	REMOVING ASPHALTIC CONCRETE DECK OVERLAY (B-36-40)	SY	524
509.9050.S	CLEANING PARAPETS	LF	278
604.9010.S	SLOPE PAVING REPAIR CRUSHED AGGREGATE	CY	9

☆ BID ITEM ALSO INCLUDES CONCRETE FOR:
"PREPARATION DECKS TYPE 1"
"PREPARATION DECKS TYPE 2"
"FULL-DEPTH DECK REPAIR"



Ⓧ INDICATES WING NUMBER

PLAN



5/28/16

BRIDGE OFFICE CONTACT

WILLIAM DREHER
(608) 266-8489

CONSULTANT CONTACT

KRISTOFER OLSON
OMNNI ASSOCIATES
(920) 735-6900

NO.	DATE	REVISION	BY

ORIGINAL PLANS PREPARED BY
OMNNI ASSOCIATES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher SDR 08/09/16
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE B-36-40

IH 43 SB OVER CTH F

COUNTY	TOWN
MANITOWOC	NEWTON

DESIGN SPEC. REHABILITATION N/A

DESIGNED BY	BRE	DESIGN CK'D.	KRO	DRAWN BY	BRE	PLANS CK'D.	KRO

GENERAL PLAN

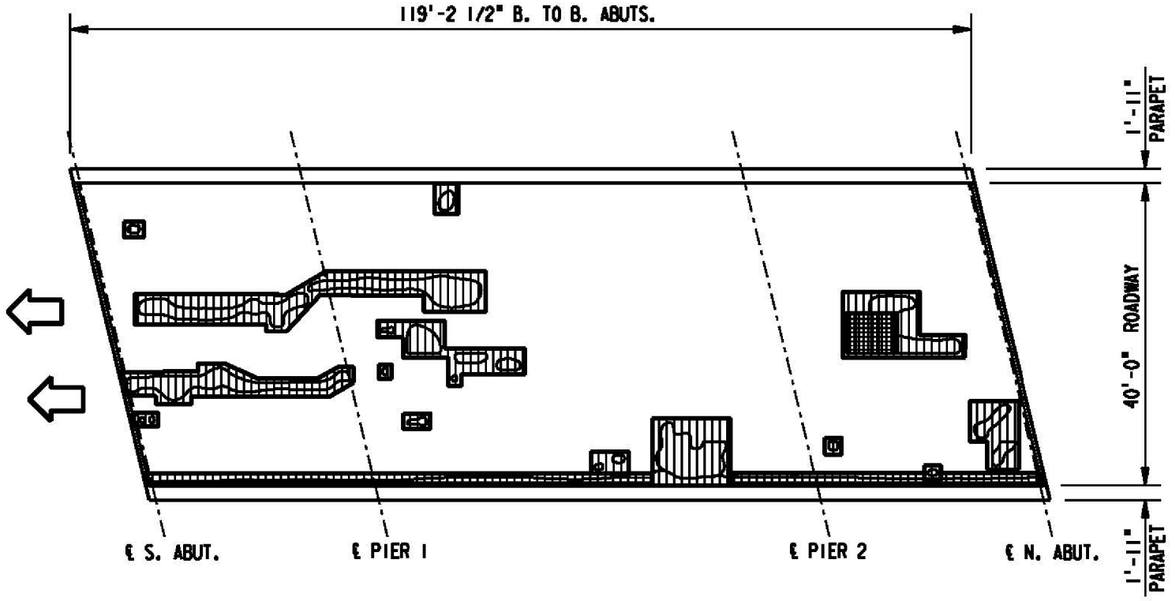
SHEET 1 OF 2

308

8

8

STATE PROJECT NUMBER
1224-21-73



PLAN

PROPOSED REHAB AREAS

N

SCALE 0' 5' 10' 20'

FIELD OBSERVATIONS SUMMARY		STRUCTURE NO. B-36-40	
ITEM	UNIT	QUANT.	%
TOTAL AREA	yd^2	524.4	
SHADE/DEBRIS	yd^2	0	
PREPARATION, DECKS, TYPE 1	yd^2	73.4	14.0
PREPARATION, DECKS, TYPE 2	yd^2	25.7	4.9
FULL DEPTH DECK REPAIR	yd^2	1.0	0.2
PREPARATION, DECKS, TYPE 1 DEBOND/SCALING ONLY	yd^2	19.3	3.7

LEGEND

DECK PREPARATION AREA

SHADE/DEBRIS

DELAMINATION

SPALL

DEBOND/SCALING

ASPHALT PATCH

CONCRETE PATCH

SURFACE TYPE: BITUMINOUS OVERLAY
INFRARED INSPECTION DATE: 4/11/2015

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-36-40

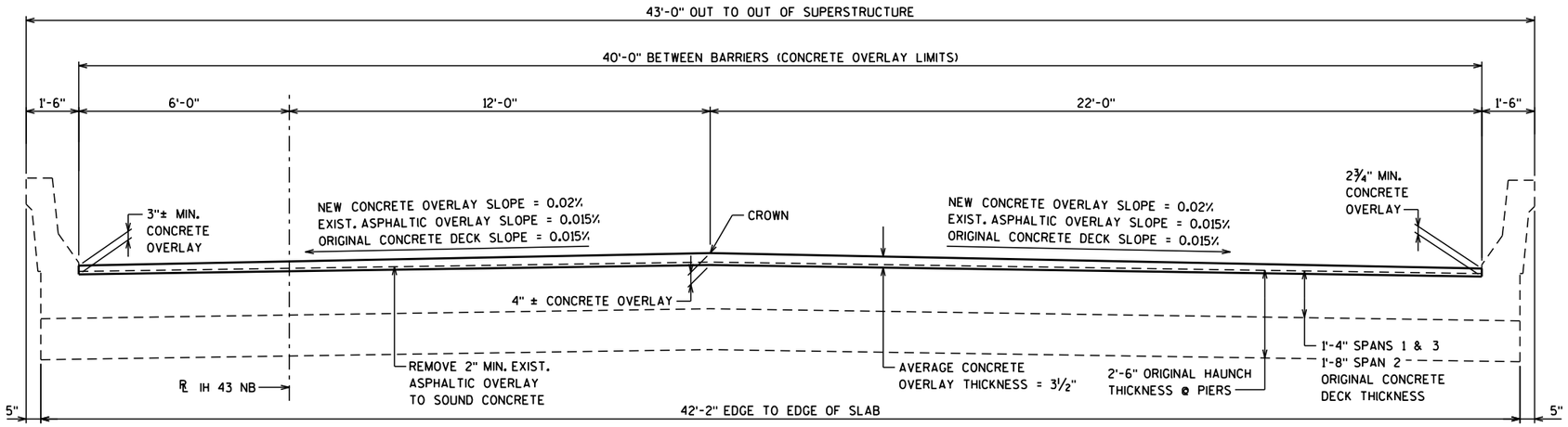
DRAWN BY BRE | PLANS CK'D. KRO

DECK REPAIR

SHEET 2 OF 2

309

FILE NAME : F:±TR±JOBS±E2041A12±Sheets±Bridges±B-36-40±B-36-40 02 deck repair.dgn PLOT BY : epleyb PLOT DATE: 2/26/2016 10:22:59 AM



CROSS SECTION THRU ROADWAY

(LOOKING NORTH)

TRAFFIC DATA

ADT = 11,800 (2036)
RDS = 70 M.P.H.

LIST OF DRAWINGS

1. GENERAL PLAN
2. DECK REPAIR

DESIGN DATA

LIVE LOAD:

INVENTORY RATING:	HS-20
OPERATING RATING:	HS-33
WISCONSIN STANDARD PERMIT VEHICLE (Wis-SPV):	250 KIPS

MATERIAL PROPERTIES:

CONCRETE MASONRY OVERLAY DECKS: f'c = 4,000 p.s.i.

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

DIMENSIONS SHOWN ARE BASED ON THE EXISTING ORIGINAL STRUCTURE PLANS.

ANY EXCAVATION NECESSARY TO COMPLETE THE OVERLAY AT THE ABUTMENTS IS TO BE CONSIDERED INCIDENTAL TO THE BID ITEM "CONCRETE MASONRY OVERLAY DECKS".

PROFILE GRADE LINE SHALL BE DETERMINED IN THE FIELD BASED ON A MINIMUM OVERLAY THICKNESS OF 4" AT THE CROWN POINT AND 2¾" AT THE TOE OF THE OUTSIDE PARAPET PLACED ABOVE THE DECK SURFACE AFTER "CLEANING DECKS". EXPECTED AVERAGE OVERLAY THICKNESS IS 3½" (OR AS GIVEN ON THE PLANS). IF EXPECTED AVERAGE OVERLAY THICKNESS IS EXCEEDED BY MORE THAN ½", CONTACT THE STRUCTURES DESIGN SECTION.

THE EXISTING BITUMINOUS ASPHALTIC OVERLAY SHALL BE REMOVED FROM THE BRIDGE DECK UNDER BID ITEM "REMOVING ASPHALTIC CONCRETE DECK OVERLAY".

PREPARATION DECKS TYPE 1, PREPARATION DECKS TYPE 2, CONCRETE SURFACE REPAIR AND FULL-DEPTH DECK REPAIR AREAS SHALL BE DETERMINED BY THE FIELD ENGINEER. "CONCRETE SURFACE REPAIR" TO INCLUDE BUT NOT LIMITED TO THE SOUTH ABUTMENT & WEST PARAPET.

REMOVAL LINES NOT COVERED WITH A CONCRETE OVERLAY SHALL BE DEFINED BY A 1" DEEP SAW CUT AT THE CONCRETE SURFACES.

PROTECTIVE SURFACE TREATMENT SHALL BE APPLIED TO THE ENTIRE TOP SURFACE OF THE NEW CONCRETE OVERLAY. PIGMENTED PROTECTIVE SURFACE TREATMENT SHALL BE APPLIED TO THE ENTIRE FRONT FACES AND TOPS OF BOTH WING & DECK PARAPETS.

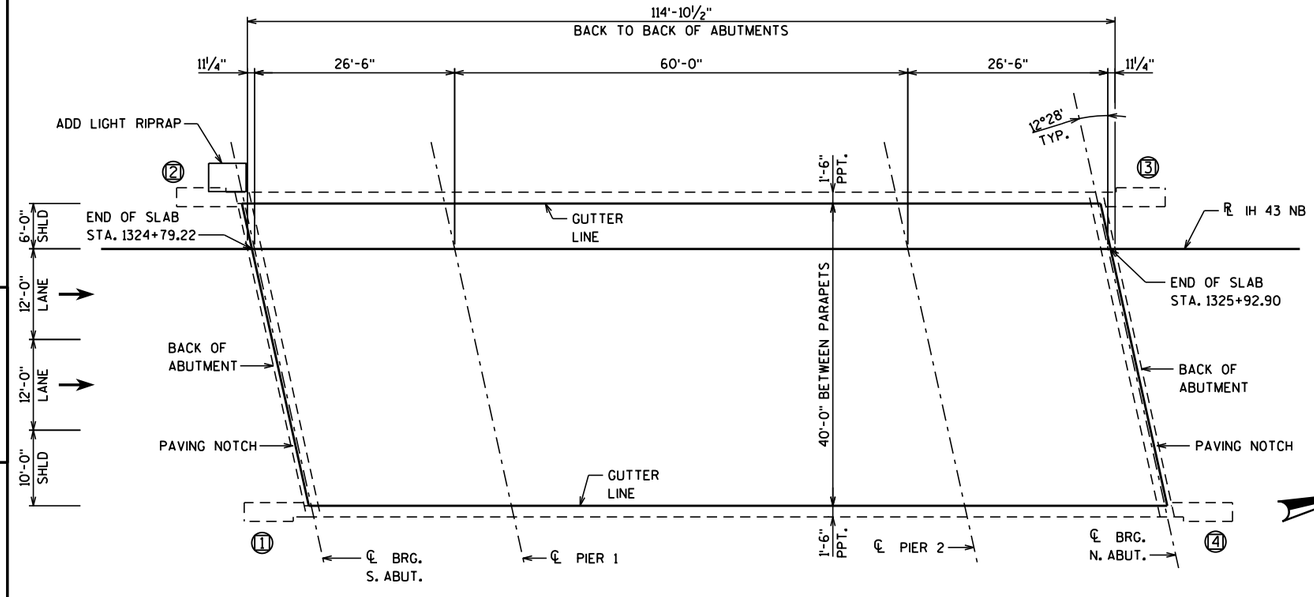
A MINIMUM OF 1-INCH OF CONCRETE SHALL BE REMOVED FROM THE ENTIRE BRIDGE DECK UNDER THE BID ITEM "CLEANING DECKS".

TOTAL ESTIMATED QUANTITIES

ITEM NUMBER	BID ITEMS	UNIT	TOTALS
502.3200	PROTECTIVE SURFACE TREATMENT	SY	505
502.3210	PIGMENTED SURFACE SEALER	SY	106
509.0301	PREPARATION DECKS TYPE 1	SY	120
509.0302	PREPARATION DECKS TYPE 2	SY	60
509.0500	CLEANING DECKS	SY	505
509.1500	CONCRETE SURFACE REPAIR	SF	61
509.2000	FULL-DEPTH DECK REPAIR	SY	1
☆ 509.2500	CONCRETE MASONRY OVERLAY DECKS	CY	59
509.9010.S	REMOVING ASPHALTIC CONCRETE DECK OVERLAY (B-36-41)	SY	505
509.9050.S	CLEANING PARAPETS	LF	262
606.0100	RIPRAP LIGHT	CY	1

☆ BID ITEM ALSO INCLUDES CONCRETE FOR:
"PREPARATION DECKS TYPE 1"
"PREPARATION DECKS TYPE 2"
"FULL-DEPTH DECK REPAIR"

Ⓧ INDICATES WING NUMBER



PLAN

BRIDGE OFFICE CONTACT

WILLIAM DREHER
(608) 266-8489

CONSULTANT CONTACT

KRISTOFER OLSON
OMNNI ASSOCIATES
(920) 735-6900

WISCONSIN
KRISTOFER R. OLSON
E-35236
APPLETON, WI
PROFESSIONAL ENGINEER
6/1/16

NO.	DATE	REVISION	BY

ORIGINAL PLANS PREPARED BY
OMNNI ASSOCIATES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher SDR 08/09/16
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STATE PROJECT NUMBER
1224-21-73

STRUCTURE B-36-41

IH 43 NB OVER NEWTON ROAD

COUNTY	TOWN
MANITOWOC	NEWTON

DESIGN SPEC. REHABILITATION N/A

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
BRE	KRO	BRE	KRO

GENERAL PLAN

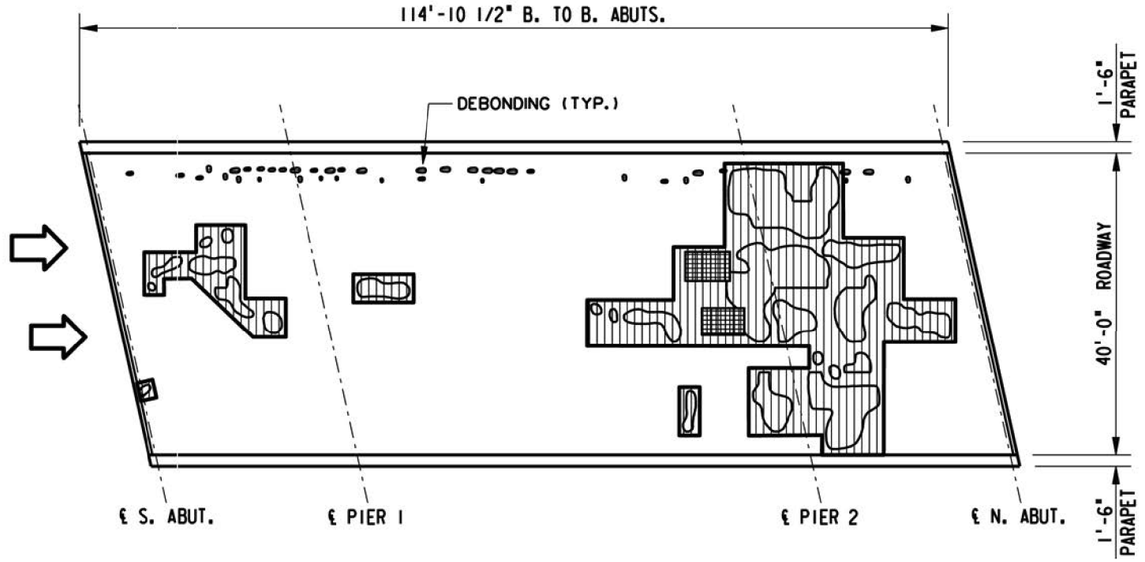
SHEET 1 OF 2

310

8

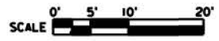
8

STATE PROJECT NUMBER
1224-21-73



PLAN

PROPOSED REHAB AREAS



FIELD OBSERVATIONS SUMMARY		STRUCTURE NO. B-36-41	
ITEM	UNIT	QUANT.	%
TOTAL AREA	yd^2	505.3	
SHADE/DEBRIS	yd^2	0	
PREPARATION, DECKS, TYPE 1	yd^2	119.9	23.7
PREPARATION, DECKS, TYPE 2	yd^2	60.0	11.9
FULL DEPTH DECK REPAIR	yd^2	1	0.2

LEGEND

DECK PREPARATION AREA

SHADE/DEBRIS

DELAMINATION

SPALL

DEBOND

ASPHALT PATCH

CONCRETE PATCH

SURFACE TYPE: BITUMINOUS OVERLAY
INFRARED INSPECTION DATE: 4/11/15

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-36-41

DRAWN BY BRE | PLANS CK'D. KRO

DECK REPAIR

SHEET 2 OF 2

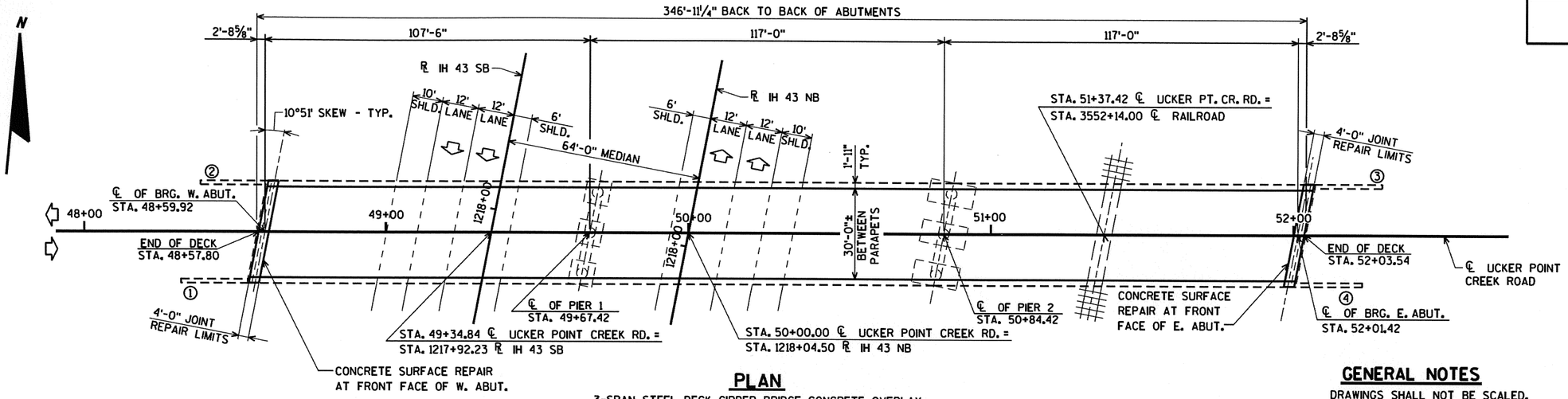
311

FILE NAME : F:±TR±JOBS±E2041A12±Sheets±Bridges±B-36-41±B-36-41 02 deck repair.dgn PLOT BY : epleyb PLOT DATE: 2/24/2016 3:47:49 PM

$PRFNAME$
U:\42-0888.00 - Manitowoc County, IH43 Rehabs\B-36-46\BRIDGE\B-36-46 gp FINAL.dgn
DATE:
DATE:
DATE:
CHECKED BY:
BACK CHECKED BY:
CORRECTED BY:

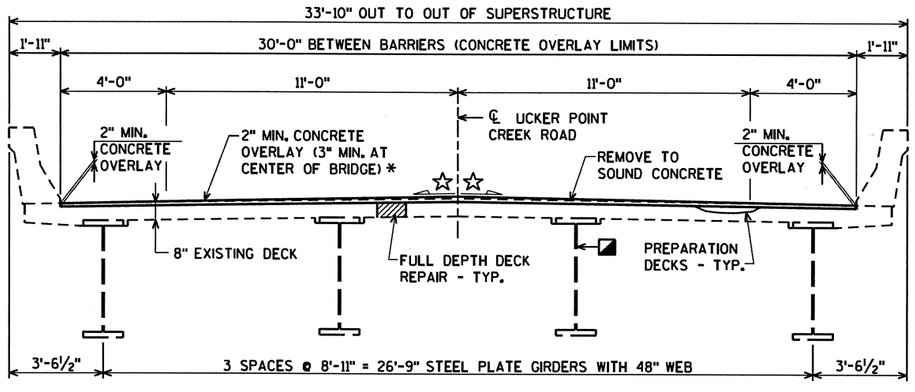
STATE PROJECT NUMBER

1224-21-73



PLAN

3-SPAN STEEL DECK GIRDER BRIDGE CONCRETE OVERLAY



CROSS SECTION THRU BRIDGE

(LOOKING EAST)

TOTAL ESTIMATED QUANTITIES

	BID ITEM NUMBER	BID ITEMS	UNIT	TOTAL
	502.0100	CONCRETE MASONRY BRIDGES	CY	2
	502.3100	EXPANSION DEVICE B-36-46	LS	1
	502.3200	PROTECTIVE SURFACE TREATMENT	SY	1160
	502.3210	PIGMENTED SURFACE SEALER	SY	330
	502.4205	ADHESIVE ANCHORS NO. 5 BAR	EACH	58
	505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	2,330
	509.0301	PREPARATION DECKS TYPE 1	SY	5
	509.0302	PREPARATION DECKS TYPE 2	SY	2
	509.0500	CLEANING DECKS	SY	1,130
	509.1000	JOINT REPAIR	SY	31
	509.1500	CONCRETE SURFACE REPAIR	SF	60
	509.2000	FULL-DEPTH DECK REPAIR	SY	2
△	509.2500	CONCRETE MASONRY OVERLAY DECKS	CY	108
	509.9050.S	CLEANING PARAPETS	LF	778
◪	517.3000.S	STRUCTURE OVERCOATING CLEANING AND PRIMING B-36-46	LS	1
◪	517.4000.S	CONTAINMENT AND COLLECTION OF WASTE MATERIALS B-36-46	LS	1

LEGEND

* THE PROPOSED OVERLAY THICKNESS VARIES FROM A MINIMUM OF 2" AT THE PARAPETS TO 3" AT THE CROWN. THE MINIMUM AVERAGE OVERLAY THICKNESS IS 2½". THE EXPECTED AVERAGE OVERLAY THICKNESS IS 3".

△ BID ITEM ALSO INCLUDES CONCRETE FOR:
"PREPARATION DECKS TYPE 1"
"PREPARATION DECKS TYPE 2"
"FULL-DEPTH DECK REPAIR"
"JOINT REPAIR"

☆ NEW CONCRETE OVERLAY SLOPE = 0.02 %
CURRENT DECK SLOPE = 0.015 %

◯ DENOTES WING NUMBER.

◪ CLEAN AND PAINT 6' END SECTIONS OF ALL GIRDERS AND END DIAPHRAGMS ADJACENT TO JOINTS ONLY. DO NOT PAINT EXTERIOR FACE OF EXTERIOR GIRDERS.

LIST OF DRAWINGS

1. GENERAL PLAN
2. EXPANSION JOINT DETAILS AT ABUTMENTS
3. EXPANSION JOINT DETAILS AT ABUTMENTS
4. EXPANSION JOINT DETAILS AT ABUTMENTS
5. PARAPET DETAILS
6. DECK REPAIR

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HS-20
INVENTORY RATING: HS-20
OPERATING RATING: HS-34
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV) = 210 KIPS

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.

TRAFFIC DATA:

IH 43	UCKER PT. CREEK RD.
A.D.T. = 25,000 (2016)	A.D.T. = 100 (2016)
A.D.T. = 29,500 (2036)	A.D.T. = 135 (2036)
R.D.S. = 70 M.P.H.	R.D.S. = 40 M.P.H.

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

DIMENSIONS SHOWN ARE BASED ON ORIGINAL STRUCTURE PLANS.

A MINIMUM OF 1-INCH OF CONCRETE SHALL BE REMOVED FROM THE ENTIRE BRIDGE DECK UNDER THE BID ITEM "CLEANING DECKS".

ANY EXCAVATION NECESSARY TO COMPLETE THE OVERLAY OR JOINT REPAIR AT THE ABUTMENTS IS CONSIDERED INCIDENTAL TO THE BID ITEM "CONCRETE MASONRY OVERLAY DECKS".

REMOVAL LINES NOT COVERED WITH A CONCRETE OVERLAY SHALL BE DEFINED BY A 1" DEEP SAW CUT AT THE CONCRETE SURFACES.

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

THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

PREPARATION DECKS TYPE 1, PREPARATION DECKS TYPE 2, CONCRETE SURFACE REPAIR AND FULL DEPTH DECK REPAIR AREAS SHALL BE DETERMINED BY THE FIELD ENGINEER.

APPLY BRIDGE SEAT PROTECTION, AS PER SECTION 502.3.12 OF THE STANDARD SPECIFICATIONS, TO THE TOP SURFACES OF BOTH ABUTMENTS BELOW EXPANSION DEVICES, POWER WASH AND ADEQUATELY DRY SURFACES BEFORE APPLICATION. WORK TO BE INCIDENTAL TO "JOINT REPAIR".

PROFILE GRADE LINE SHALL BE DETERMINED IN THE FIELD BASED ON A MINIMUM OVERLAY THICKNESS OF 2". PLACED ABOVE THE DECK SURFACE AFTER "CLEANING DECKS". EXPECTED AVERAGE OVERLAY THICKNESS IS 3". IF EXPECTED AVERAGE OVERLAY THICKNESS IS EXCEEDED BY MORE THAN ½", CONTACT THE STRUCTURES DESIGN SECTION.

PARAPET JOINTS TO BE RE-SEALED WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE). WORK CONSIDERED INCIDENTAL TO "JOINT REPAIR".

PAINT COLOR TO BE BROWN (FEDERAL STANDARD COLOR NO. 20059).

CLEAN FULL LENGTH OF PARAPETS ACCORDING TO STSP ITEM 509.9050.S "CLEANING PARAPETS".

PROTECTIVE SURFACE TREATMENT IS TO BE APPLIED TO THE TOP OF THE OVERLAY AND PIGMENTED SURFACE SEALER IS TO BE APPLIED TO THE TOP AND INSIDE FACE OF PARAPETS.

WISCONSIN
DANIEL N. SYDOW
E-38363
WI
PROFESSIONAL ENGINEER
6/1/2016

BRIDGE OFFICE CONTACT:
WILLIAM DREHER
(608)-266-8489

CONSULTANT CONTACT:
DAN SYDOW
(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 08/09/16
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-36-46

UCKER POINT CREEK RD OVER IH 43 & RAILROAD

COUNTY	TOWN ~~CITY/VILLAGE~~
MANITOWOC	CENTERVILLE

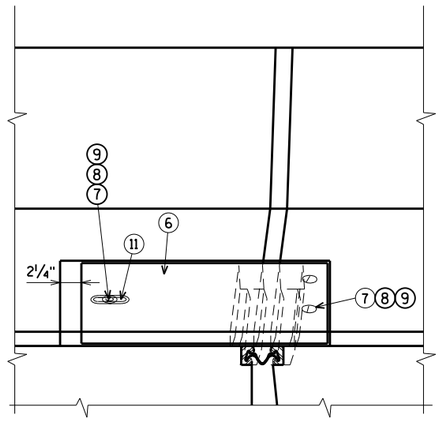
DESIGN SPEC. REHABILITATION N/A

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
JWZ	AEB	CJM/CLS	DWS

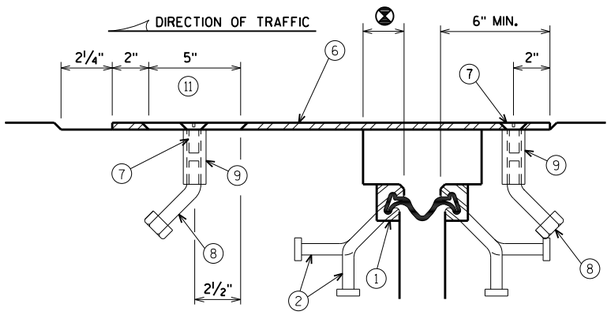
GENERAL PLAN

SHEET 312 OF 6

8



VIEW OF PARAPET PLATES FROM ROADWAY



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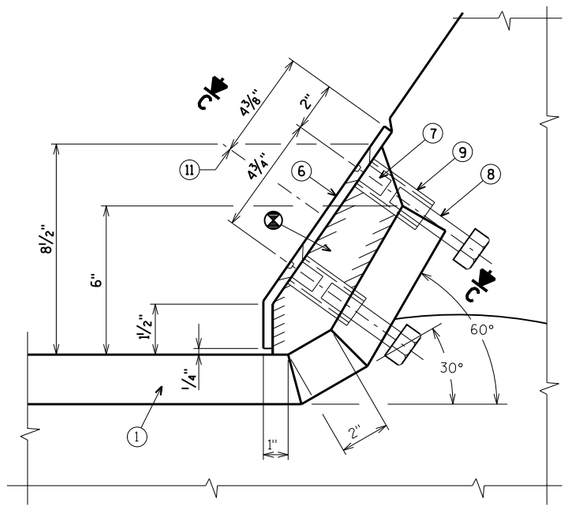

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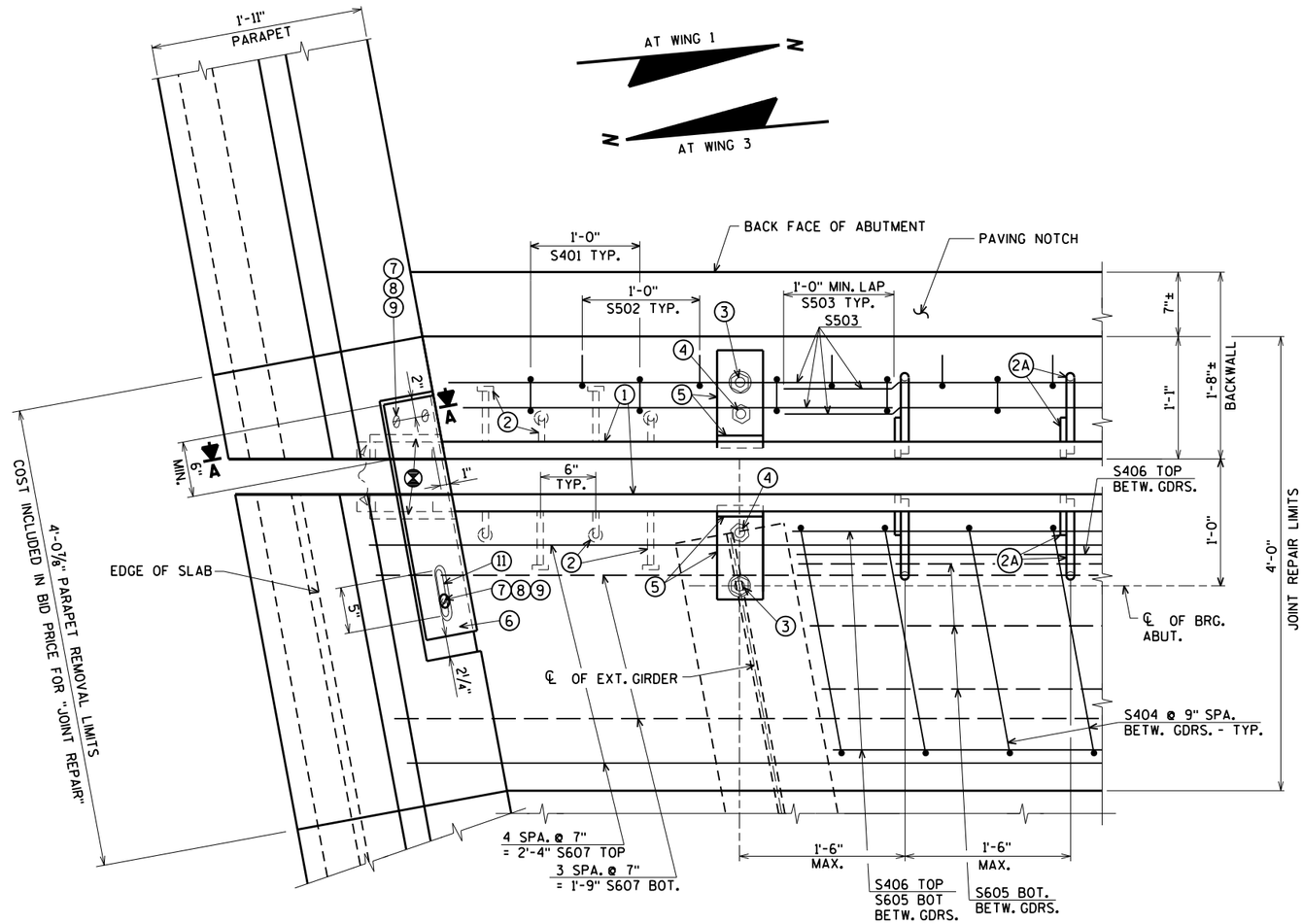

PART PLAN
AT WINGS 1 & 3

BLOCK OUT CONCRETE 2" EACH SIDE OF JOINT OPENING.

WORK THIS SHEET WITH SHEETS 3, 4 & 5

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-36-46

DRAWN BY CLS | PLANS CK'D. JCK

EXPANSION JOINT DETAILS AT ABUTMENTS

SHEET 2 OF 6
313

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

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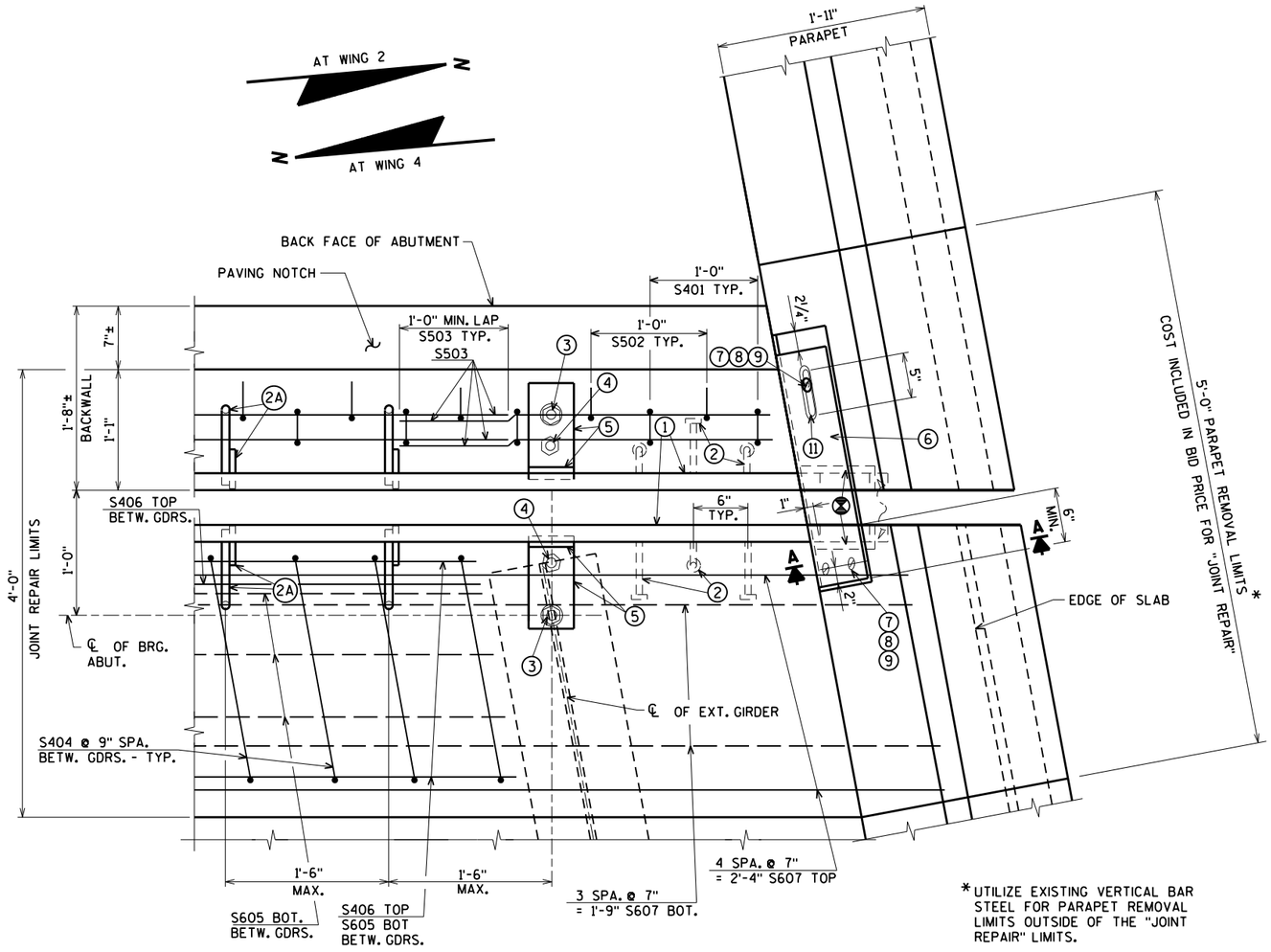
U:\42-0888.00 - Manitowoc County, IH43 Rehabs\B-36-46\BRIDGE\B-36-46 exp.DGN
5/19/2016
PENTABLE:BReau_shd_util.tbl

STATE PROJECT NUMBER

1224-21-73

BILL OF BARS

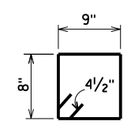
BAR. NO.	COATED BAR	NO. REQ'D.	LENGTH	BENT BAR	BUNDLED BAR	SERIES	2,330# COATED LOCATION
S401	X	60	3-4	X			PAVING BLOCK VERT.
S502	X	58	2-11	X			PAVING BLOCK VERT. ANCHOR
S503	X	12	15-8				PAVING BLOCK HORIZ.
S404	X	60	3-9	X			DIAPH. VERT.
S605	X	30	7-8				DIAPH. HORIZ.
S406	X	24	7-8				DIAPH. HORIZ.
S607	X	36	17-0				DECK TRANSVERSE
S508	X	16	4-9	X			PARAPET VERT.
S509	X	26	5-0	X			PARAPET VERT.
S510	X	10	0-5				PARAPET HORIZ. WINGS 1 & 3 APPROACH
S511	X	10	2-5				PARAPET HORIZ. WINGS 1 & 3 STRUCTURE
S512	X	10	1-8				PARAPET HORIZ. WINGS 2 & 4 APPROACH
S513	X	10	2-1				PARAPET HORIZ. WINGS 2 & 4 STRUCTURE



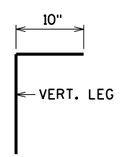
PART PLAN
AT WINGS 2 & 4

*UTILIZE EXISTING VERTICAL BAR STEEL FOR PARAPET REMOVAL LIMITS OUTSIDE OF THE "JOINT REPAIR" LIMITS.

FOR SECTION A, SEE SHEET 2.



S401



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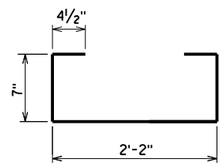

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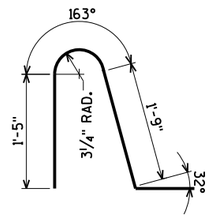

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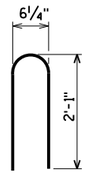

S509

⊗ BLOCK OUT CONCRETE 2" EACH SIDE OF JOINT OPENING.

WORK THIS SHEET WITH SHEETS 2, 4 & 5

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-36-46

DRAWN BY CLS | PLANS CK'D. JCK

EXPANSION JOINT DETAILS AT ABUTMENTS

SHEET 3 OF 6
314

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

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STATE PROJECT NUMBER

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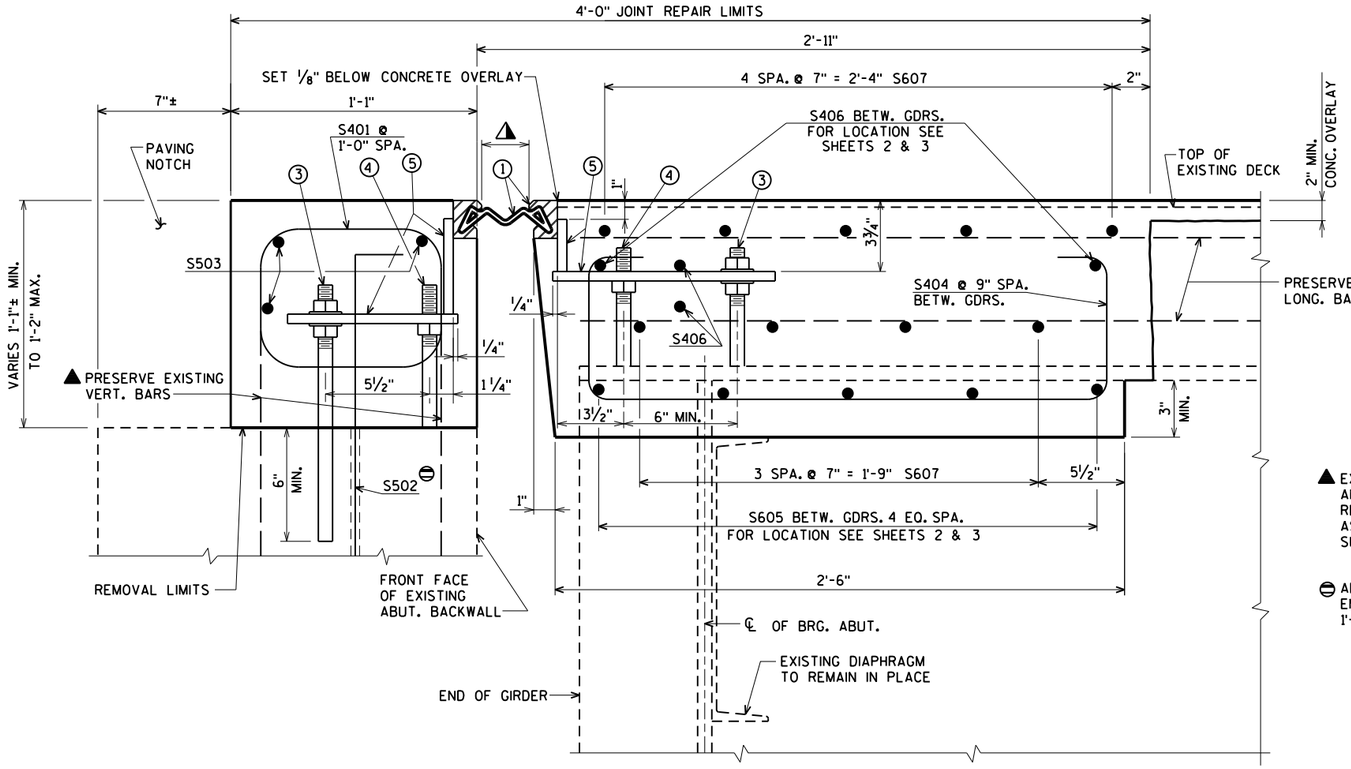


TYPICAL SECTION THRU JOINT
NORMAL TO ℄ SUBSTRUCTURE

▲ EXISTING BARS LIKELY TO BE CORRODED AND/OR DAMAGED DURING CONCRETE REMOVAL. PRESERVE AND INCORPORATE AS MUCH REBAR AS PRACTICAL. SUPPLEMENT WITH THE BARS INDICATED BY ⊖.

⊖ ADHESIVE ANCHORS NO. 5 BARS. EMBED 1'-6" INTO CONCRETE. SPACE AT 1'-0". TURN 10" LEG AS NECESSARY TO FIT.

LEGEND

▲1. NEOPRENE STRIP SEAL (5 - INCH) & STEEL EXTRUSIONS. SET JOINT OPENING AT 1¾".

2. STUDS ⅝" ϕ X 6⅜" LONG AT 6" ALTERNATE CENTERS. WELD TO EXTRUSIONS & BEND AS SHOWN AFTER WELDING.

2A. ½" THICK ANCHOR PLATE WITH ⅝"ϕ ROD (OR ALTERNATE STRIP SEAL ANCHOR). WELD ROD TO ANCHOR PLATE, WELD ANCHOR PLATE TO #1 AT 1'-6" CTRS. BETWEEN GIRDERS.

3. ¾" ϕ THREADED ROD WITH 2 NUTS AND PLATE WASHERS. WELD THREADED ROD TO TOP FLANGE OR ATTACH BY BOLTING THRU FLANGE. ON ABUTMENT SIDE, GROUT THREADED ROD INTO FIELD DRILLED HOLES IN ABUTMENT BACKWALL AS SHOWN.

4. ¾"ϕ THREADED ROD WITH NUT. TACK WELD NUT TO NO. 5.

5. FABRICATE SUPPORT FROM 3" X ½" BAR AS SHOWN OR EQUIVALENT, ONE PER GIRDER PER SIDE. FIELD OR SHOP WELD TO NO. 1. IF FIELD WELDED, COVER WELDED AREAS WITH EPOXY-COATING MATERIAL. PROVIDE 1½" ϕ HOLE FOR NO. 3 & 1" ϕ HOLE FOR NO. 4.

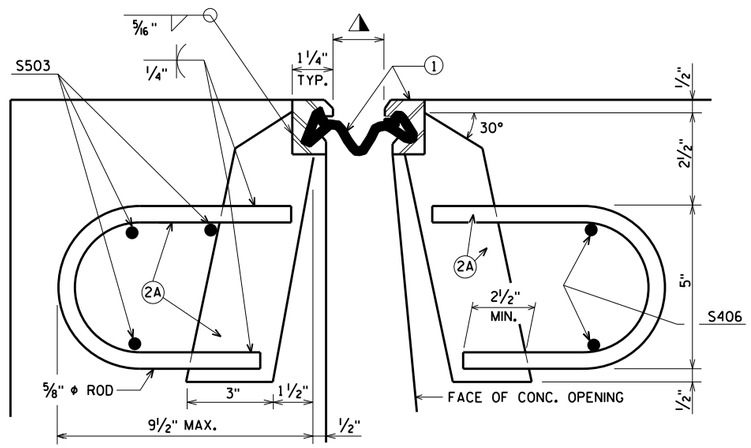
6. GALVANIZED PLATE ⅜" x 10½" x 2'-2" LONG WITH HOLES FOR #7. BEND AS SHOWN.

7. ¾" ϕ x 1½" STAINLESS STEEL SOCKET FLAT HEAD SCREWS WITH ANTI-SEIZE LUBRICANT. PLACE IN COUNTERSUNK HOLES. RECESS 1/16" BELOW PLATE SURFACE.

8. ¾" ϕ x 4" GALV. HEX HEAD BOLT. BEND 45°.

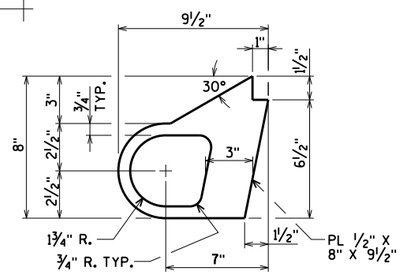
9. ¾" ϕ x 2¼" GALV. THREADED COUPLING.

11. 1" x 5" SLOTTED CSK. HOLE FOR #7. PLACE SLOT PARALLEL TO DIRECTION OF MOVEMENT.

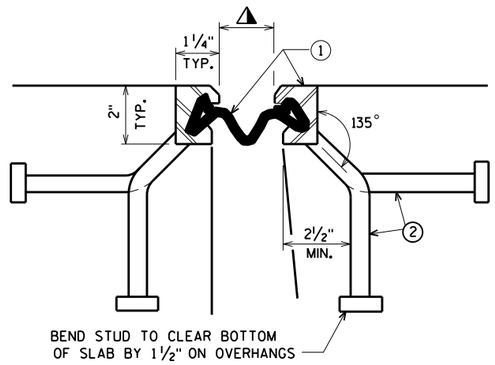


SECTION THRU JOINT
ROADWAY TRAFFIC AREA BETWEEN EXTERIOR GIRDERS.

SYM. ABOUT ℄ JOINT UNLESS OTHERWISE SHOWN OR NOTED.



ALTERNATE STRIP SEAL ANCHOR



SECTION THRU JOINT
EXTERIOR GIRDER TO EDGE OF SLAB & AT PARAPETS.

NOTES

ONE FIELD SPLICE PERMITTED IN STEEL EXTRUSIONS. IF USED, DETAILS SHALL BE SUBMITTED FOR APPROVAL. NO SPLICING PERMITTED IN NEOPRENE STRIP SEAL.

AFTER FABRICATION, BUT BEFORE SHIPMENT, STRAIGHTEN STEEL EXTRUSIONS SUCH THAT THEY SHALL BE FREE FROM WARP, TWIST & SWEEP.

FABRICATOR SHALL PROVIDE MEANS OF KEEPING GALVANIZED EXTRUSIONS CLEAN & SMOOTH DURING SHIPMENT AND PRIOR TO APPLYING LUBRICANT ADHESIVE FOR NEOPRENE GLAND INSTALLATION.

SANDBLAST PLATES, SUPPORTS, & EXTRUSIONS AFTER FABRICATION IN ACCORDANCE WITH SSPC SP. #6 "COMMERCIAL BLAST CLEANING". AFTER BLAST CLEANING THE PLATES, SUPPORTS, & EXTRUSIONS SHALL BE HOT DIPPED GALVANIZED.

ANCHOR SYSTEM #8 & #9 SHALL CONFORM TO ASTM A307 & SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153 CLASS C & D.

STRIP SEAL EXPANSION JOINT ASSEMBLY, INCLUDING ANCHOR STUDS & HARDWARE WILL BE PAID FOR AT THE LUMP SUM PRICE BID FOR "EXPANSION DEVICE B-36-46".

WORK THIS SHEET WITH SHEETS 2 & 3

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-36-46

DRAWN BY CLS | PLANS CK'D. JCK

EXPANSION JOINT DETAILS AT ABUTMENTS

SHEET 4 OF 6
315

ORIGINAL PLANS PREPARED BY
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STATE PROJECT NUMBER

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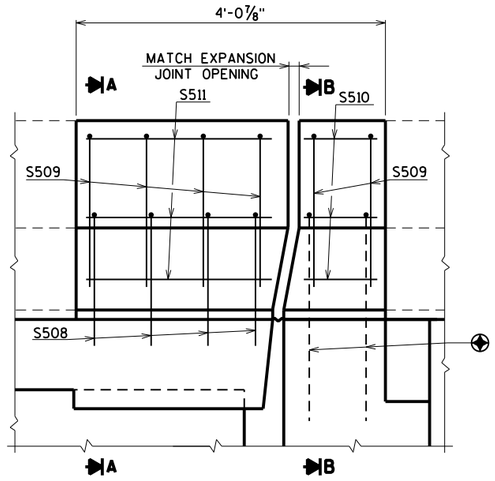
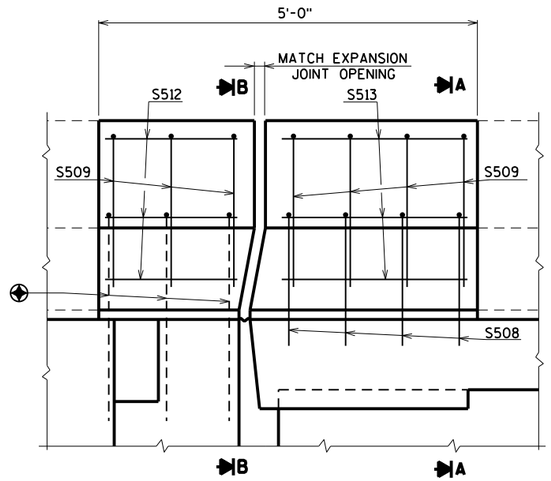
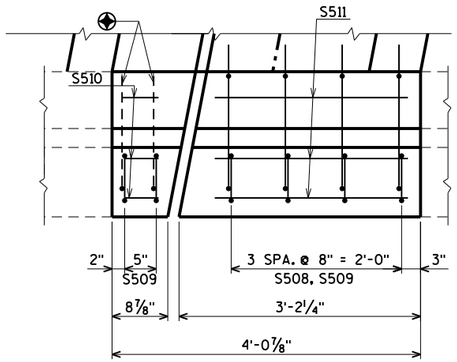


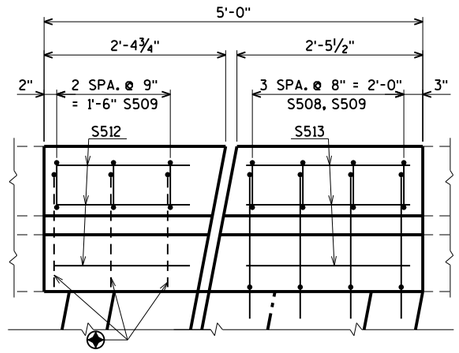
INSIDE ELEVATION
AT WINGS 1 & 3



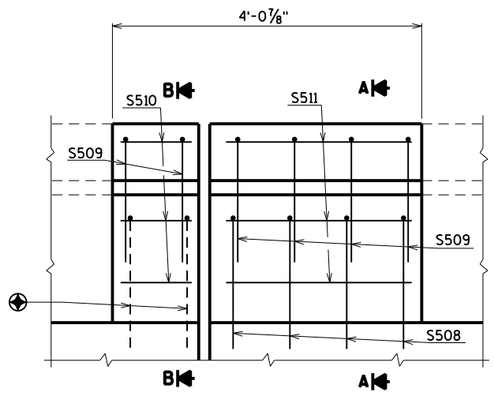
INSIDE ELEVATION
AT WINGS 2 & 4



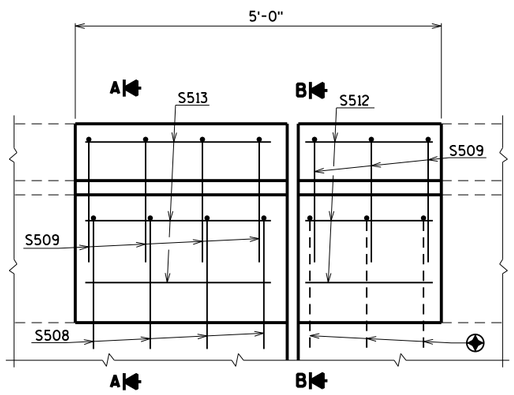
PLAN
AT WINGS 1 & 3



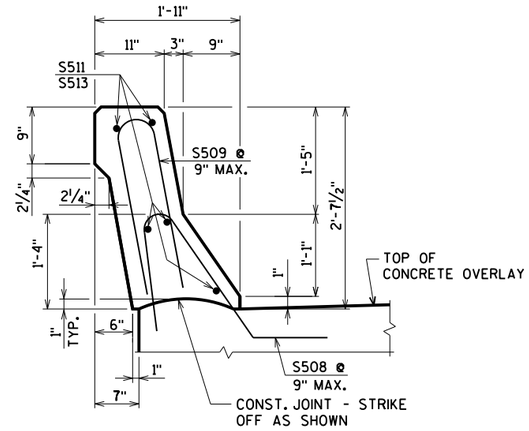
PLAN
AT WINGS 2 & 4



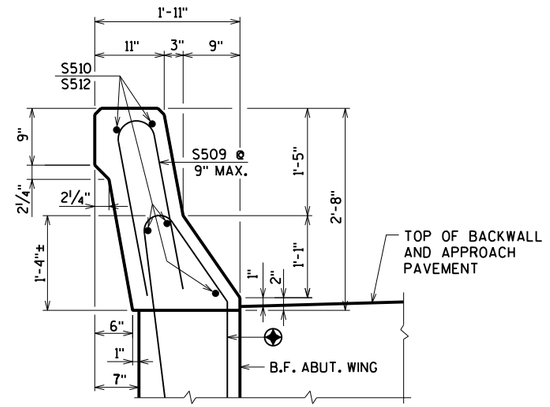
OUTSIDE ELEVATION
AT WINGS 1 & 3



OUTSIDE ELEVATION
AT WINGS 2 & 4



SECTION A



SECTION B

UTILIZE EXISTING VERTICAL BAR STEEL

WORK THIS SHEET WITH SHEETS 2 & 3

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-36-46

DRAWN BY CLS | PLANS CK'D. JCK

PARAPET DETAILS

SHEET 5 OF 6
316

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

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5/19/2016

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$PRFNAME$
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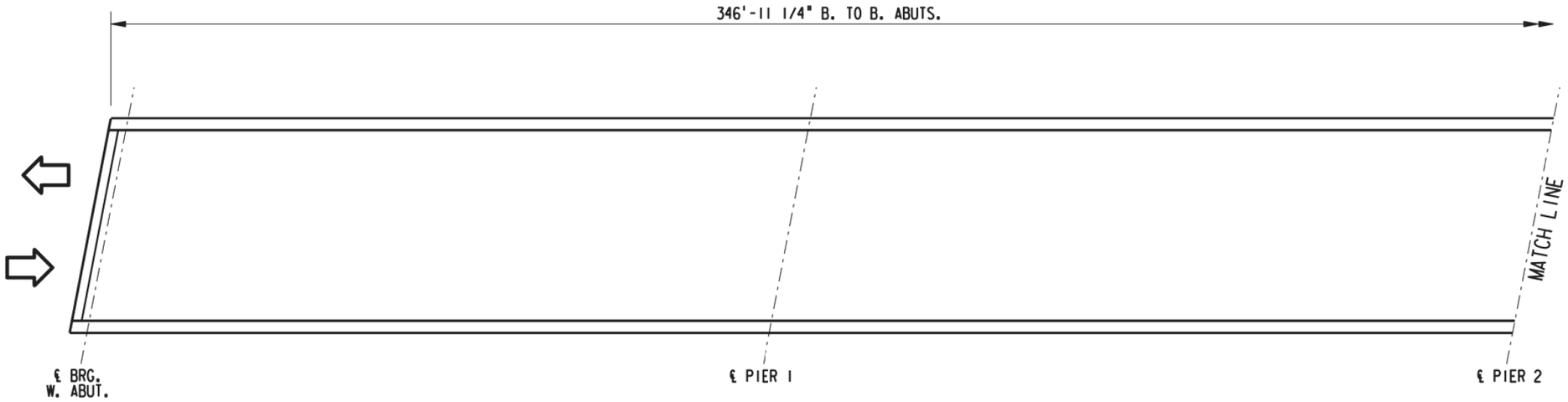
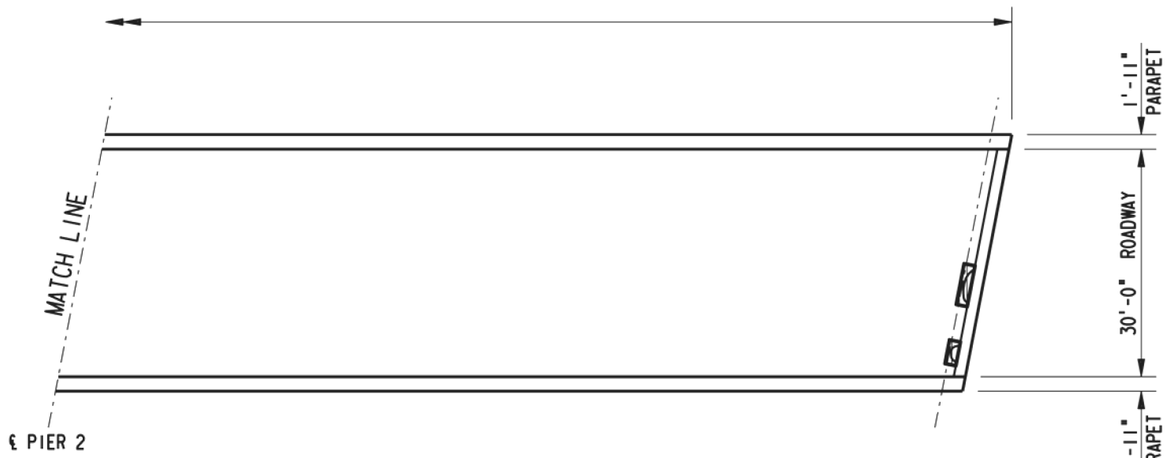
STATE PROJECT NUMBER
1224-21-73





PLAN

PROPOSED REHAB AREAS

SCALE 0' 5' 10' 20'

FIELD OBSERVATIONS SUMMARY		STRUCTURE NO. B-36-46	
ITEM	UNIT	QUANT.	%
TOTAL AREA	yd^2	1152.3	
SHADE/DEBRIS	yd^2	0	
PREPARATION, DECKS, TYPE 1	yd^2	1.4	0.1
PREPARATION, DECKS, TYPE 2	yd^2	0.1	<0.1
FULL DEPTH DECK REPAIR	yd^2	1.0	<0.1

LEGEND

DECK PREPARATION AREA

SHADE/DEBRIS

DELAMINATION
SPALL
DEBOND
ASPHALT PATCH
CONCRETE PATCH

SURFACE TYPE: CONCRETE - NO OVERLAY
INFRARED INSPECTION DATE: 4/11/15

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-36-46

DRAWN BY JWZ | PLANS CK'D. JCK

DECK REPAIR

SHEET 6 OF 6
317

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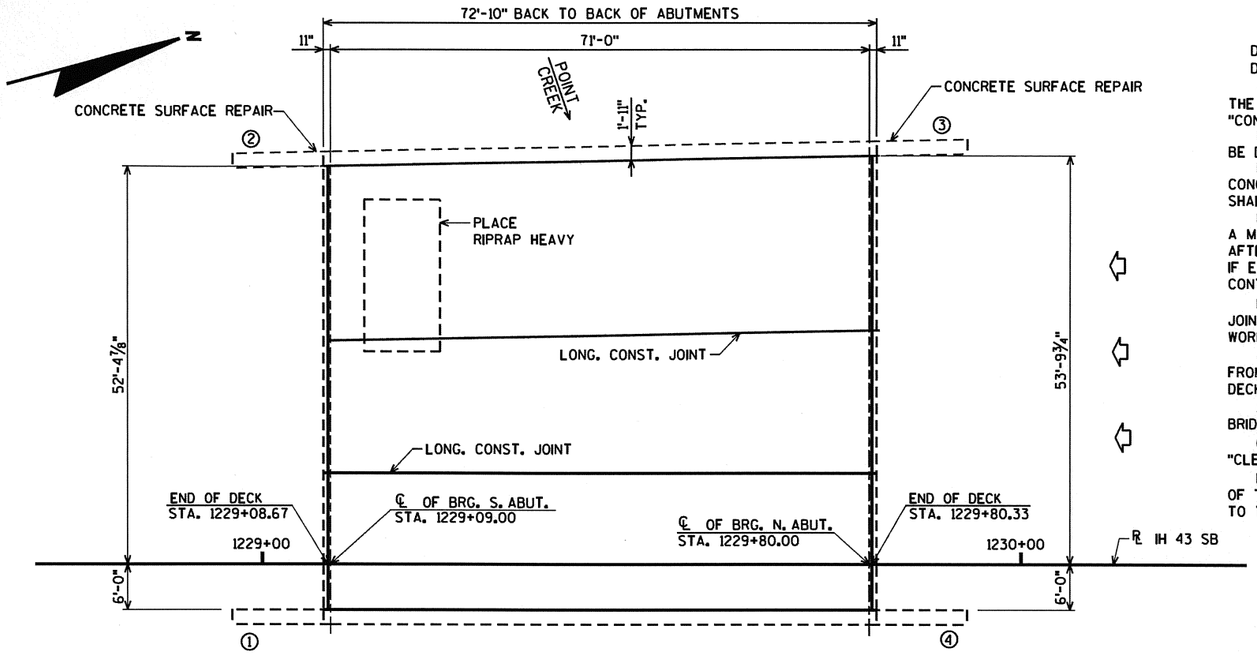
DATE:
DATE:
DATE:
CHECKED BY:
BACK CHECKED BY:
CORRECTED BY:

STATE PROJECT NUMBER

1224-21-73



PLAN

SINGLE-SPAN 45" PRESTRESSED GIRDER BRIDGE CONCRETE OVERLAY

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

DIMENSIONS SHOWN ARE BASED ON ORIGINAL STRUCTURE PLANS.

ANY EXCAVATION NECESSARY TO COMPLETE THE OVERLAY AT THE ABUTMENTS IS CONSIDERED INCIDENTAL TO THE BID ITEM "CONCRETE MASONRY OVERLAY DECKS".

REMOVAL LINES NOT COVERED WITH A CONCRETE OVERLAY SHALL BE DEFINED BY A 1" DEEP SAW CUT AT THE CONCRETE SURFACES.

PREPARATION DECKS TYPE 1, PREPARATION DECKS TYPE 2, CONCRETE SURFACE REPAIR AND FULL DEPTH DECK REPAIR AREAS SHALL BE DETERMINED BY THE FIELD ENGINEER.

PROFILE GRADE LINE SHALL BE DETERMINED IN THE FIELD BASED ON A MINIMUM OVERLAY THICKNESS OF 1½" PLACED ABOVE THE DECK SURFACE AFTER "CLEANING DECKS". EXPECTED AVERAGE OVERLAY THICKNESS IS 3½". IF EXPECTED AVERAGE OVERLAY THICKNESS IS EXCEEDED BY MORE THAN ½", CONTACT THE STRUCTURES DESIGN SECTION.

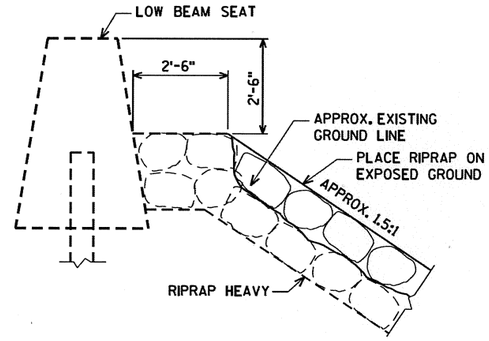
PARAPET JOINTS TO BE RE-SEALED WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE). WORK CONSIDERED INCIDENTAL TO "CONCRETE MASONRY OVERLAY DECKS".

THE EXISTING BITUMINOUS ASPHALTIC OVERLAY SHALL BE REMOVED FROM THE BRIDGE DECK UNDER BID ITEM "REMOVING ASPHALTIC CONCRETE DECK OVERLAY".

A MINIMUM OF 1" OF CONCRETE SHALL BE REMOVED FROM THE ENTIRE BRIDGE DECK UNDER THE BID ITEM "CLEANING DECKS".

CLEAN FULL LENGTH OF PARAPETS ACCORDING TO STSP ITEM 509.9050.S "CLEANING PARAPETS".

PROTECTIVE SURFACE TREATMENT IS TO BE APPLIED TO THE TOP OF THE OVERLAY AND PIGMENTED SURFACE SEALER IS TO BE APPLIED TO THE TOP AND INSIDE FACE OF PARAPET.



RIPRAP AT WEST ABUTMENT

CROSS SECTION THRU BRIDGE

(LOOKING NORTH)

LEGEND

* THE PROPOSED OVERLAY THICKNESS VARIES FROM A MINIMUM OF 1½" AT THE WEST PARAPET TO 4" AT THE CROWN. THE MINIMUM AVERAGE OVERLAY THICKMESS IS 3". THE EXPECTED AVERAGE OVERLAY THICKNESS IS 3½".

△ BID ITEM ALSO INCLUDES CONCRETE FOR:
"PREPARATION DECKS TYPE 1"
"PREPARATION DECKS TYPE 2"
"FULL-DEPTH DECK REPAIR"

☆ NEW CONCRETE OVERLAY SLOPE = 0.02 %
EXISTING ASPHALTIC OVERLAY SLOPE = 0.015 %
ORIGINAL CONCRETE DECK SLOPE = 0.015 %

◯ DENOTES WING NUMBER.

⊕ LONG. CONST. JOINT
SEAL WITH CRACK SEALER PER SECTION 502.3.13 OF STD. SPEC. WORK CONSIDERED INCIDENTAL TO "CONCRETE MASONRY OVERLAY DECKS".

TOTAL ESTIMATED QUANTITIES

	BID ITEM NUMBER	BID ITEMS	UNIT	TOTAL
	502.3200	PROTECTIVE SURFACE TREATMENT	SY	479
	502.3210	PIGMENTED SURFACE SEALER	SY	83
	509.0301	PREPARATION DECKS TYPE 1	SY	15
	509.0302	PREPARATION DECKS TYPE 2	SY	5
	509.0500	CLEANING DECKS	SY	479
	509.1500	CONCRETE SURFACE REPAIR	SF	27
	509.2000	FULL-DEPTH DECK REPAIR	SY	2
△	509.2500	CONCRETE MASONRY OVERLAY DECKS	CY	47
	509.9010.S	REMOVING ASPHALTIC CONCRETE DECK OVERLAY B-36-47	SY	479
	509.9050.S	CLEANING PARAPETS	LF	190
	606.0300	RIPRAP HEAVY	CY	4

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HS-20
INVENTORY RATING: HS-21
OPERATING RATING: HS-32
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV) = 250 KIPS

ULTIMATE DESIGN STRESSES:

CONCRETE MASONRY OVERLAY DECKS_____ f'_c = 4,000 p.s.i.

TRAFFIC DATA:

IH 43

A.D.T. = 25,000 (2016)
A.D.T. = 29,500 (2036)
R.D.S. = 70 M.P.H.

LIST OF DRAWINGS

1. GENERAL PLAN
2. DECK REPAIR

WISCONSIN
DANIEL N. SYDOW
E-38363
WI
PROFESSIONAL ENGINEER
5/24/2016

BRIDGE OFFICE CONTACT:
WILLIAM DREHER
(608)-266-8489

CONSULTANT CONTACT:
DAN SYDOW
(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 08/09/16
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE B-36-47

IH 43 SB OVER POINT CREEK

COUNTY	TOWN/~~CITY/VILLAGE~~
MANITOWOC	CENTERVILLE

DESIGN SPEC. REHABILITATION N/A

DESIGNED BY	DESIGN CK'D.	DRAWN BY	CJM/CLS	PLANS CK'D.
JWZ	JCK			BNS

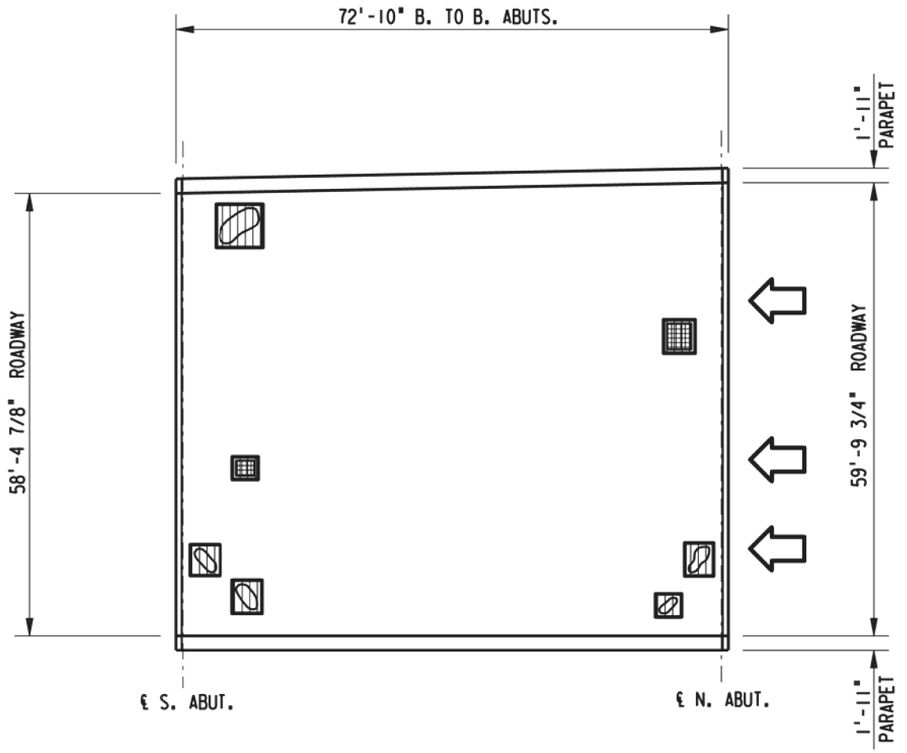
GENERAL PLAN

SHEET 1 OF 2
318

8

5/24/2016
PENTABLE:BBegu.shd utILtbl
LD
DATE:

STATE PROJECT NUMBER
1224-21-73



PLAN

PROPOSED REHAB AREAS

N

SCALE 0' 5' 10' 20'

FIELD OBSERVATIONS SUMMARY		STRUCTURE NO. B-36-47	
ITEM	UNIT	QUANT.	%
TOTAL AREA	yd^2	470.8	
SHADE/DEBRIS	yd^2	0	
PREPARATION, DECKS, TYPE 1	yd^2	13.8	2.9
PREPARATION, DECKS, TYPE 2	yd^2	3.5	0.7
FULL DEPTH DECK REPAIR	yd^2	1.0	0.2

LEGEND

DECK PREPARATION AREA

SHADE/DEBRIS

DELAMINATION
SPALL
DEBOND
ASPHALT PATCH
CONCRETE PATCH

SURFACE TYPE: BITUMINOUS OVERLAY
INFRARED INSPECTION DATE: 4/11/15

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-36-47

DRAWN BY JWZ | PLANS CK'D. JCK

DECK REPAIR

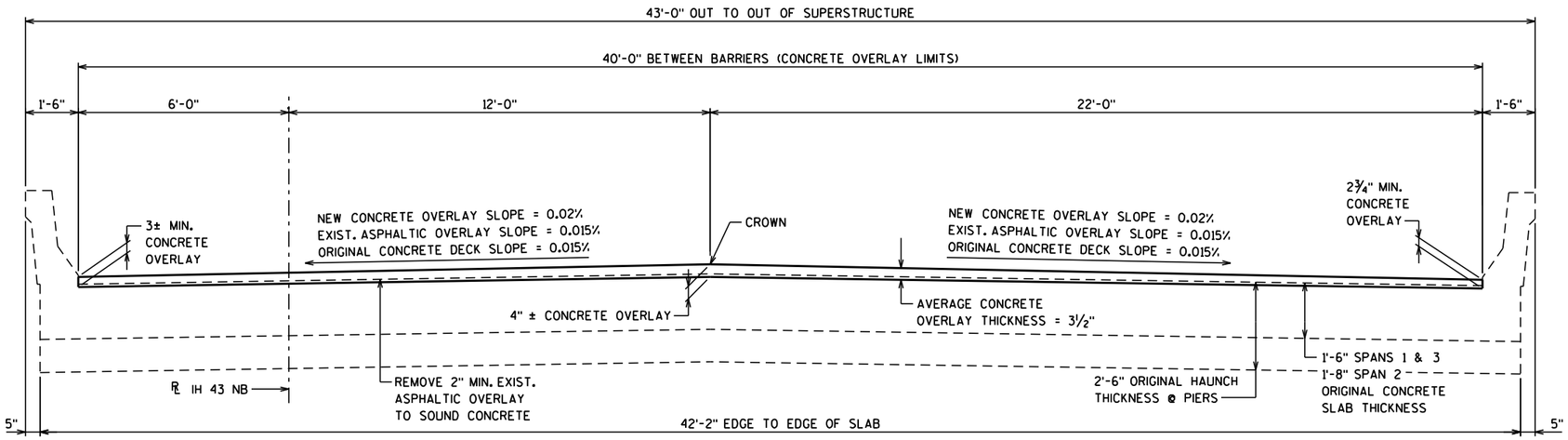
SHEET 2 OF 2
319

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

$PRFNAME$
U:\42-0888.00 - Manitowoc County, IH43 Rehabs\B-36-47\BRIDGE\B-36-47 deck repair.dgn

8

STATE PROJECT NUMBER
1224-21-73



CROSS SECTION THRU ROADWAY

(LOOKING NORTH)

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

DIMENSIONS SHOWN ARE BASED ON THE EXISTING ORIGINAL STRUCTURE PLANS.

ANY EXCAVATION NECESSARY TO COMPLETE THE OVERLAY AT THE ABUTMENTS IS TO BE CONSIDERED INCIDENTAL TO THE BID ITEM "CONCRETE MASONRY OVERLAY DECKS".

PROFILE GRADE LINE SHALL BE DETERMINED IN THE FIELD BASED ON A MINIMUM OVERLAY THICKNESS OF 4" AT THE CROWN POINT AND 2¾" AT THE TOE OF THE OUTSIDE PARAPET PLACED ABOVE THE DECK SURFACE AFTER "CLEANING DECKS". EXPECTED AVERAGE OVERLAY THICKNESS IS 3½" (OR AS GIVEN ON THE PLANS). IF EXPECTED AVERAGE OVERLAY THICKNESS IS EXCEEDED BY MORE THAN ½", CONTACT THE STRUCTURES DESIGN SECTION.

THE EXISTING BITUMINOUS ASPHALTIC OVERLAY SHALL BE REMOVED FROM THE BRIDGE DECK UNDER BID ITEM "REMOVING ASPHALTIC CONCRETE DECK OVERLAY".

PREPARATION DECKS TYPE 1, PREPARATION DECKS TYPE 2, CONCRETE SURFACE REPAIR AND FULL-DEPTH DECK REPAIR AREAS SHALL BE DETERMINED BY THE FIELD ENGINEER. "CONCRETE SURFACE REPAIR" TO INCLUDE BUT NOT LIMITED TO THE NORTH & SOUTH ABUTMENTS, AND EAST PARAPET.

REMOVAL LINES NOT COVERED WITH A CONCRETE OVERLAY SHALL BE DEFINED BY A 1" DEEP SAW CUT AT THE CONCRETE SURFACES.

PROTECTIVE SURFACE TREATMENT SHALL BE APPLIED TO THE ENTIRE TOP SURFACE OF THE NEW CONCRETE OVERLAY. PIGMENTED PROTECTIVE SURFACE TREATMENT SHALL BE APPLIED TO THE ENTIRE FRONT FACES AND TOPS OF BOTH WING & DECK PARAPETS.

A MINIMUM OF 1-INCH OF CONCRETE SHALL BE REMOVED FROM THE ENTIRE BRIDGE DECK UNDER THE BID ITEM "CLEANING DECKS".

TRAFFIC DATA

ADT = 11,800 (2036)
RDS = 70 M.P.H.

DESIGN DATA

LIVE LOAD:
INVENTORY RATING: HS-21
OPERATING RATING: HS-36
WISCONSIN STANDARD PERMIT VEHICLE (Wis-SPV): 250 KIPS

MATERIAL PROPERTIES:
CONCRETE MASONRY OVERLAY DECKS: f'c = 4,000 p.s.i.

TOTAL ESTIMATED QUANTITIES

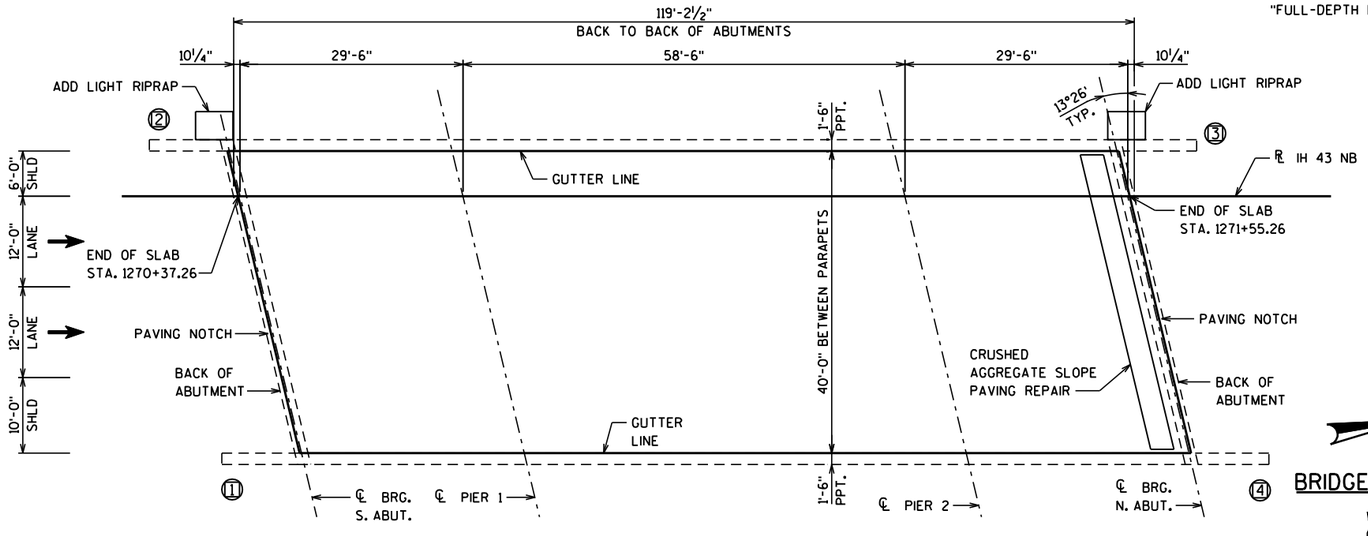
	ITEM NUMBER	BID ITEMS	UNIT	TOTALS
	502.3200	PROTECTIVE SURFACE TREATMENT	SY	524
	502.3210	PIGMENTED SURFACE SEALER	SY	113
	509.0301	PREPARATION DECKS TYPE 1	SY	81
	509.0302	PREPARATION DECKS TYPE 2	SY	17
	509.0500	CLEANING DECKS	SY	524
	509.1500	CONCRETE SURFACE REPAIR	SF	46
	509.2000	FULL-DEPTH DECK REPAIR	SY	1
☆	509.2500	CONCRETE MASONRY OVERLAY DECKS	CY	56
	509.9010.S	REMOVING ASPHALTIC CONCRETE DECK OVERLAY (B-36-48)	SY	524
	509.9050.S	CLEANING PARAPETS	LF	278
	604.9010.S	SLOPE PAVING REPAIR CRUSHED AGGREGATE	CY	3
	606.0100	RIPRAP LIGHT	CY	2

☆ BID ITEM ALSO INCLUDES CONCRETE FOR:
"PREPARATION DECKS TYPE 1"
"PREPARATION DECKS TYPE 2"
"FULL-DEPTH DECK REPAIR"

LIST OF DRAWINGS

1. GENERAL PLAN
2. DECK REPAIR

ⓧ INDICATES WING NUMBER



PLAN

WISCONSIN
KRISTOFER R. OLSON
E-35236
APPLETON, WI
PROFESSIONAL ENGINEER
5/28/16

BRIDGE OFFICE CONTACT

WILLIAM DREHER
(608) 266-8489

CONSULTANT CONTACT

KRISTOFER OLSON
OMNNI ASSOCIATES
(920) 735-6900

NO.	DATE	REVISION	BY

ORIGINAL PLANS PREPARED BY
OMNNI ASSOCIATES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher SDR 08/09/16
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-36-48

IH 43 NB OVER CTH F

COUNTY	TOWN
MANITOWOC	NEWTON

DESIGN SPEC. REHABILITATION N/A

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
BRE	KRO	BRE	KRO

GENERAL PLAN

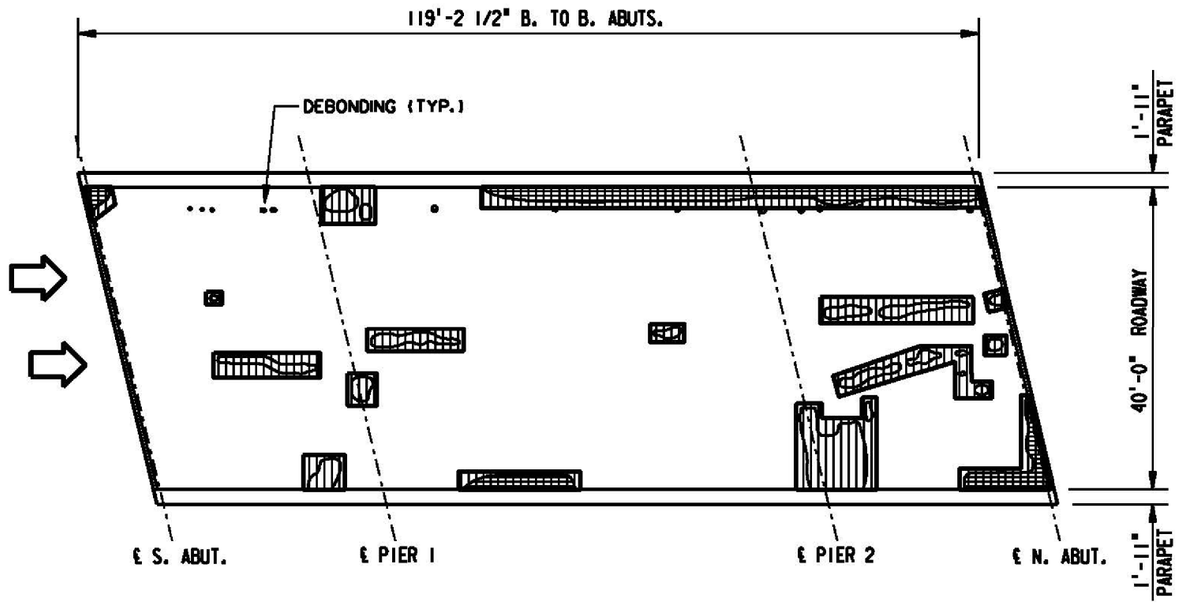
SHEET 1 OF 2

320

8

8

STATE PROJECT NUMBER
1224-21-73



PLAN

PROPOSED REHAB AREAS

N

SCALE 0' 5' 10' 20'

FIELD OBSERVATIONS SUMMARY		STRUCTURE NO. B-36-48	
ITEM	UNIT	QUANT.	%
TOTAL AREA	yd^2	524.4	
SHADE/DEBRIS	yd^2	0	
PREPARATION, DECKS, TYPE 1	yd^2	49.1	9.4
PREPARATION, DECKS, TYPE 2	yd^2	17.2	3.3
FULL DEPTH DECK REPAIR	yd^2	1.0	0.2
PREPARATION, DECKS, TYPE 1 DEBOND/SCALING ONLY	yd^2	31.4	6.0

LEGEND	
DECK PREPARATION AREA	DELAMINATION
SHADE/DEBRIS	SPALL
	DEBOND/SCALING
	ASPHALT PATCH
	CONCRETE PATCH

SURFACE TYPE: BITUMINOUS OVERLAY
INFRARED INSPECTION DATE: 4/11/15

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-36-48

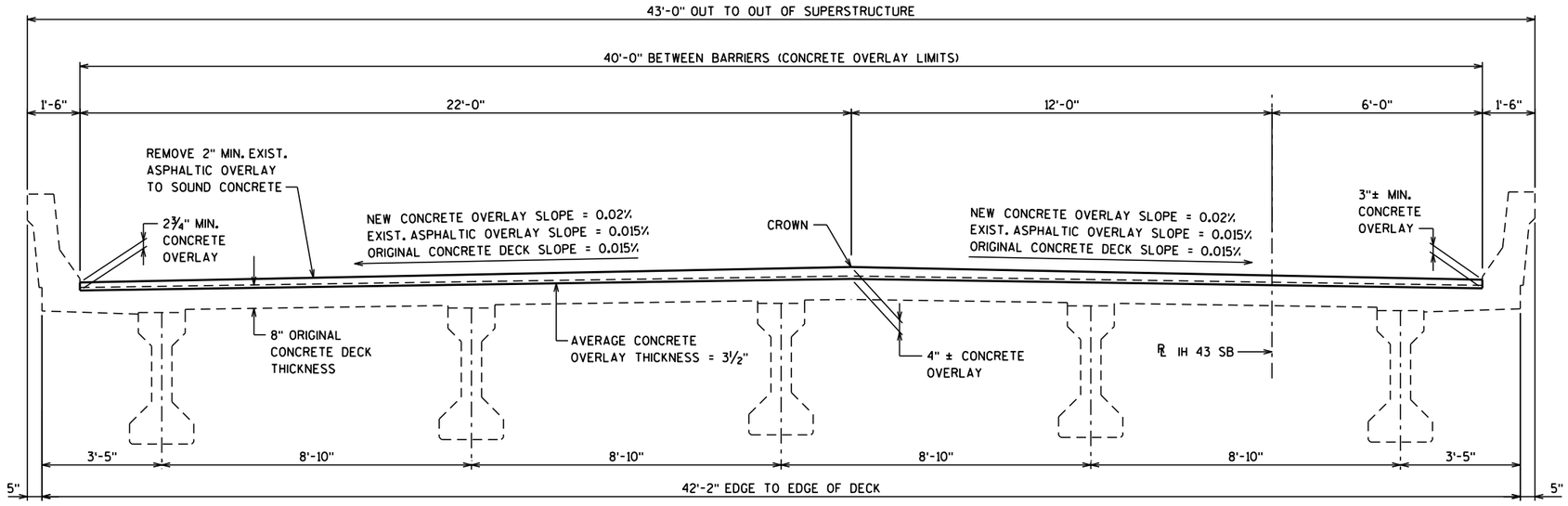
DRAWN BY BRE | PLANS CK'D. KRO

DECK REPAIR

SHEET 2 OF 2

321

STATE PROJECT NUMBER
1224-21-73



CROSS SECTION THRU EXISTING ROADWAY

(LOOKING NORTH)

TRAFFIC DATA

ADT = 11,800 (2036)
RDS = 70 M.P.H.

DESIGN DATA

LIVE LOAD:

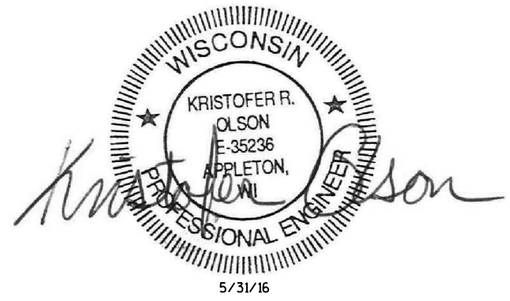
INVENTORY RATING: HS-13
OPERATING RATING: HS-28
WISCONSIN STANDARD PERMIT
VEHICLE (Wis-SPV): 155 KIPS

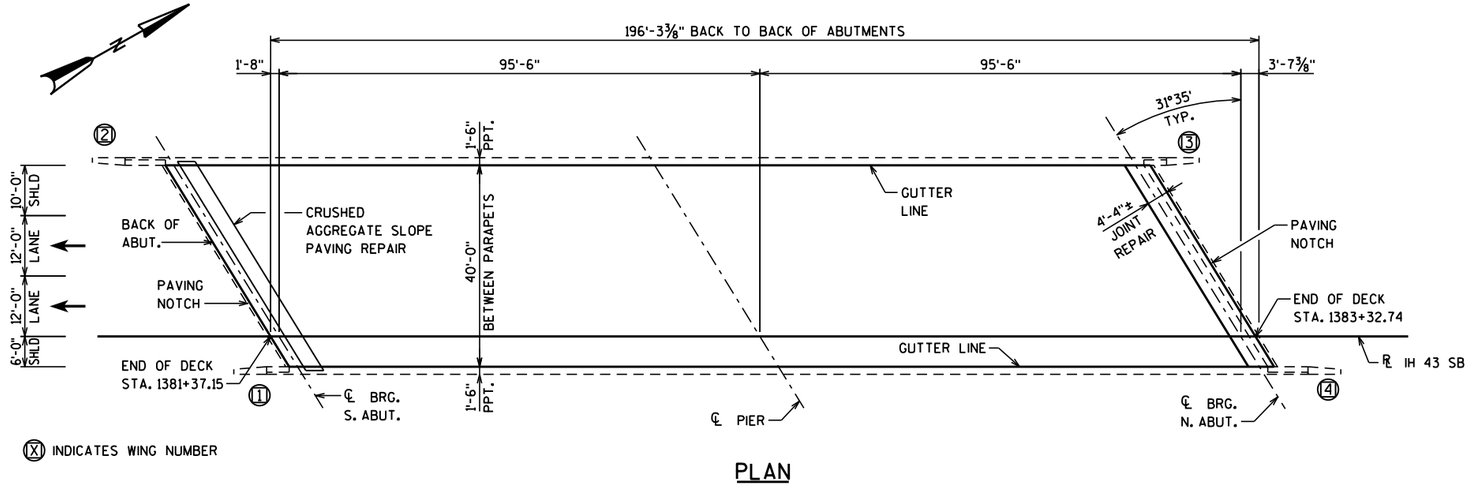
MATERIAL PROPERTIES:

CONCRETE MASONRY OVERLAY
DECKS & PARAPETS: ———— f'c = 4,000 p.s.i.
BAR STEEL REINFORCEMENT
GRADE 60: ———— fy = 60,000 p.s.i.

LIST OF DRAWINGS

1. GENERAL PLAN
2. GENERAL NOTES & QUANTITIES
3. JOINT REPAIR
4. EXPANSION DEVICE
5. COVER PLATE DETAILS
6. DECK REPAIR





PLAN

BRIDGE OFFICE CONTACT

WILLIAM DREHER
(608) 266-8489

CONSULTANT CONTACT

KRISTOFER OLSON
OMNNI ASSOCIATES
(920) 735-6900

NO.	DATE	REVISION	BY

ORIGINAL PLANS PREPARED BY
OMNNI ASSOCIATES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher SDR 08/09/16
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-36-50

IH 43 SB OVER CTH C

COUNTY	TOWN
MANITOWOC	NEWTON

DESIGN SPEC. REHABILITATION N/A

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
BRE	KRO	BRE	KRO

GENERAL PLAN

SHEET 1 OF 6

322

8

8

STATE PROJECT NUMBER
1224-21-73

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

USE EXSTING BAR STEEL REINFORCEMENT WHERE SHOWN AND EXTEND 24 BAR DIAMETERS INTO NEW WORK.

DIMENSIONS SHOWN ARE BASED ON THE EXISTING ORIGINAL STRUCTURE PLANS.

ANY EXCAVATION NECESSARY TO COMPLETE THE OVERLAY OR JOINT REPAIR AT THE ABUTMENTS IS TO BE CONSIDERED INCIDENTAL TO THE BID ITEM "CONCRETE MASONRY OVERLAY DECKS".

PROFILE GRADE LINE SHALL BE DETERMINED IN THE FIELD BASED ON A MINIMUM OVERLAY THICKNESS OF 4" AT THE CROWN POINT AND 2¾" AT THE TOE OF THE OUTSIDE PARAPET PLACED ABOVE THE DECK SURFACE AFTER "CLEANING DECKS". EXPECTED AVERAGE OVERLAY THICKNESS IS 3½" (OR AS GIVEN ON THE PLANS). IF EXPECTED AVERAGE OVERLAY THICKNESS IS EXCEEDED BY MORE THAN ½", CONTACT THE STRUCTURES DESIGN SECTION.

THE EXISTING BITUMINOUS ASPHALTIC OVERLAY SHALL BE REMOVED FROM THE BRIDGE DECK UNDER BID ITEM "REMOVING ASPHALTIC CONCRETE DECK OVERLAY".

PREPARATION DECKS TYPE 1, PREPARATION DECKS TYPE 2, CONCRETE SURFACE REPAIR AND FULL-DEPTH DECK REPAIR AREAS SHALL BE DETERMINED BY THE FIELD ENGINEER. "CONCRETE SURFACE REPAIR" TO INCLUDE BUT NOT LIMITED TO THE SOUTH AND NORTH ABUTMENTS AND WEST PARAPET.

REMOVAL LINES NOT COVERED WITH A CONCRETE OVERLAY SHALL BE DEFINED BY A 1" DEEP SAW CUT AT THE CONCRETE SURFACES.

PROTECTIVE SURFACE TREATMENT SHALL BE APPLIED TO THE ENTIRE TOP SURFACE OF THE NEW CONCRETE OVERLAY. PIGMENTED PROTECTIVE SURFACE TREATMENT SHALL BE APPLIED TO THE ENTIRE FRONT FACES AND TOPS OF BOTH WING & DECK PARAPETS.

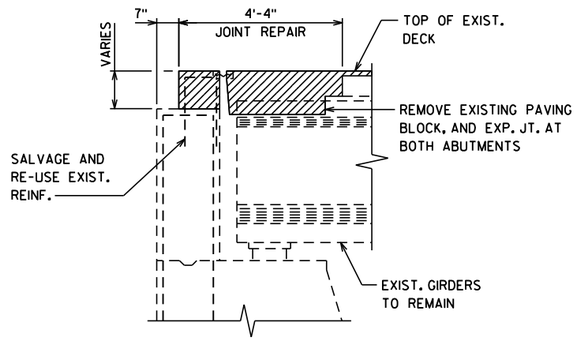
APPLY BRIDGE SEAT PROTECTION, AS PER SECTION 502.3.12 OF THE STANDARD SPECIFICATIONS, TO THE TOP SURFACE OF THE NORTH ABUTMENT BELOW EXPANSION DEVICE. POWER WASH AND ADEQUATELY DRY SURFACES BEFORE APPLICATION. WORK TO BE INCIDENTAL TO "JOINT REPAIR".

A MINIMUM OF 1-INCH OF CONCRETE SHALL BE REMOVED FROM THE ENTIRE BRIDGE DECK UNDER THE BID ITEM "CLEANING DECKS"..

TOTAL ESTIMATED QUANTITIES

	ITEM NUMBER	BID ITEMS	UNIT	TOTALS
	502.3100	EXPANSION DEVICE (B-36-50)	LS	1
	502.3200	PROTECTIVE SURFACE TREATMENT	SY	869
	502.3210	PIGMENTED SURFACE SEALER	SY	171
	502.4205	ADHESIVE ANCHORS NO.5 BARS	EACH	47
	505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	1,730
	509.0301	PREPARATION DECKS TYPE 1	SY	37
	509.0302	PREPARATION DECKS TYPE 2	SY	6
	509.0500	CLEANING DECKS	SY	869
	509.1000	JOINT REPAIR	SY	23
	509.1500	CONCRETE SURFACE REPAIR	SF	66
	509.2000	FULL-DEPTH DECK REPAIR	SY	1
☆	509.2500	CONCRETE MASONRY OVERLAY DECKS	CY	94
	509.9010.S	REMOVING ASPHALTIC CONCRETE DECK OVERLAY (B-36-50)	SY	869
	509.9050.S	CLEANING PARAPETS	LF	440
	604.9010.S	SLOPE PAVING REPAIR CRUSHED AGGREGATE	CY	3

☆ BID ITEM ALSO INCLUDES CONCRETE FOR:
"PREPARATION DECKS TYPE 1"
"PREPARATION DECKS TYPE 2"
"FULL-DEPTH DECK REPAIR"



TYPICAL SECTION THRU NORTH ABUTMENT

8

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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-36-50

DRAWN BY BRE | PLANS CK'D. KRO

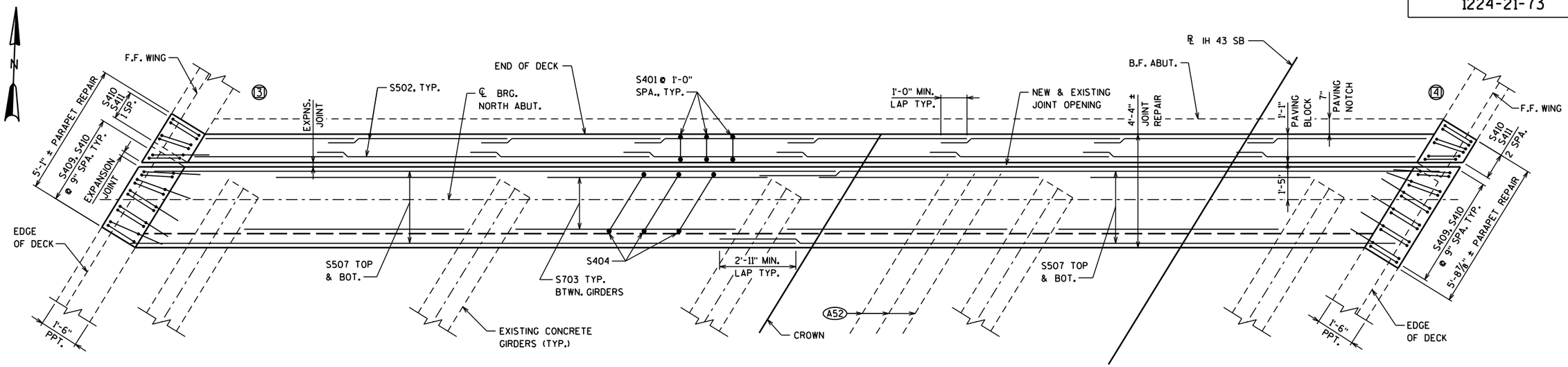
GENERAL NOTES & QUANTITIES

SHEET 2 OF 6

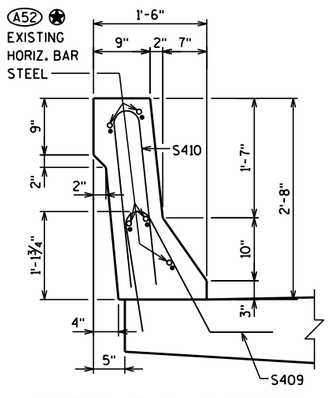
323

FILE NAME : F:±TR±JOBS±E2041A12±Sheets±Bridges±B-36-50±B-36-50 02 notes qty.dgn PLOT BY : EpleyB PLOT DATE: 5/31/2016 3:19:39 PM

STATE PROJECT NUMBER
1224-21-73

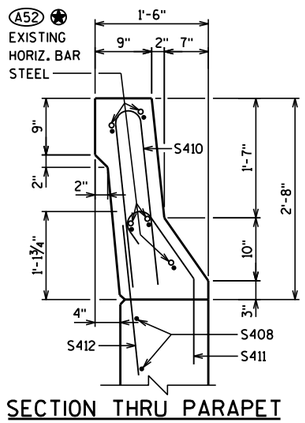


NORTH ABUTMENT "JOINT REPAIR" PLAN



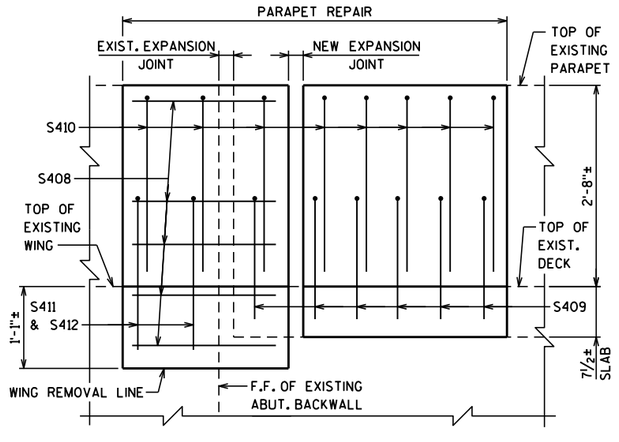
SECTION THRU PARAPET REPLACEMENT ON BRIDGE

DIMENSIONS ARE FOR REFERENCE ONLY
MATCH EXISTING PARAPET EDGES.

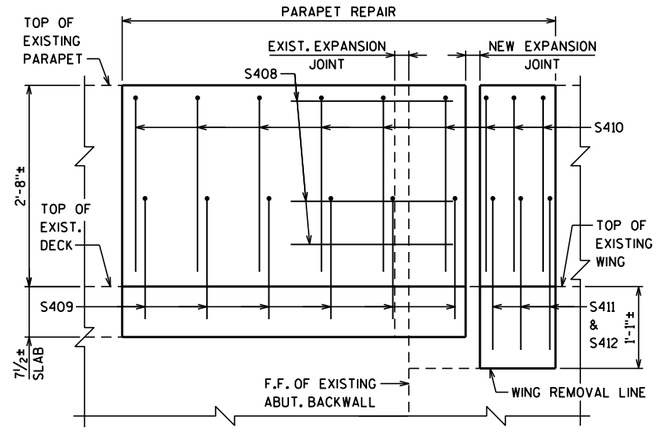


SECTION THRU PARAPET REPLACEMENT ON WING

DIMENSIONS ARE FOR REFERENCE ONLY
MATCH EXISTING PARAPET EDGES.



WING 3 PARAPET ELEVATION



WING 4 PARAPET ELEVATION

SEE SHEET 4 FOR SECTION THROUGH JOINT AT ABUTMENT.

(A52) SALVAGE EXIST. LONGITUDINAL REINFORCEMENT AND EXTEND FULL LENGTH INTO NEW WORK.

TIE S408 BARS TO EXISTING HORIZ. BARS IN NEW PARAPETS THAT EXTEND BEYOND EXISTING EXPANSION JOINTS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-36-50

DRAWN BY BRE | PLANS CK'D. KRO

JOINT REPAIR

SHEET 3 OF 6

324

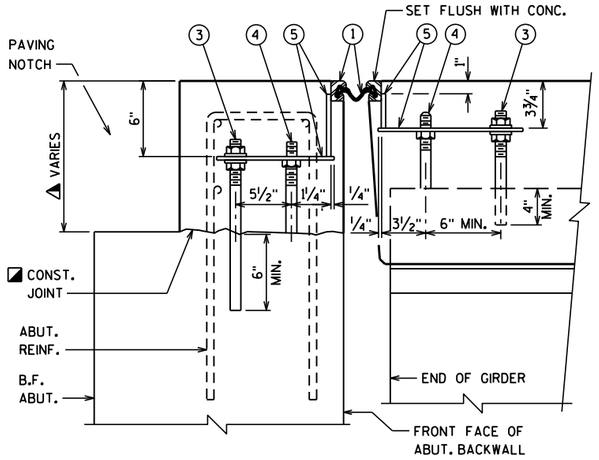
8

8

FILE NAME : F:±TR±JOBS±E2041A12±Sheets±Bridges±B-36-50±B-36-50 03 joint.dgn PLOT BY : EpleyB PLOT DATE: 5/31/2016 3:20:48 PM

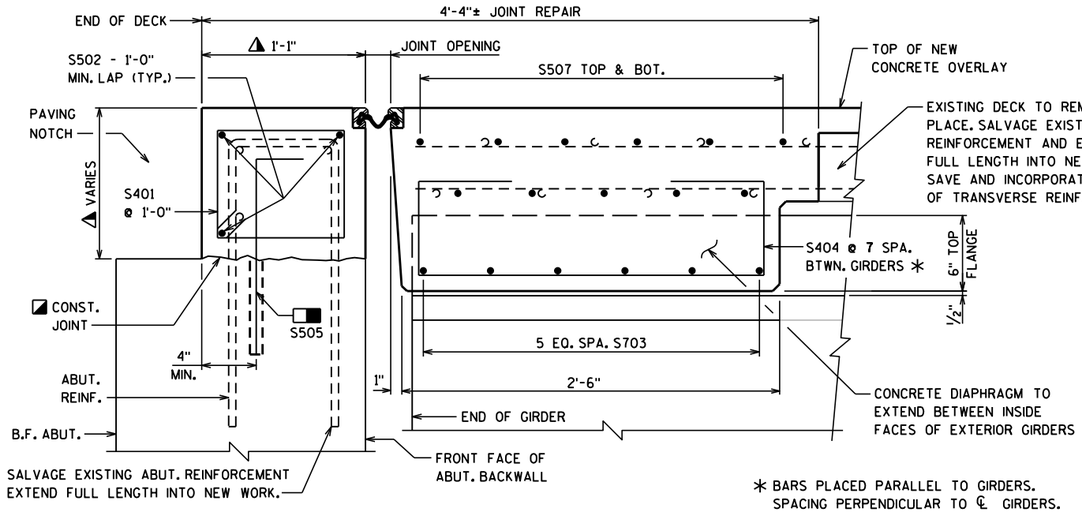
STATE PROJECT NUMBER

1224-21-73



SECTION THRU JOINT AT ABUTMENT

NORMAL TO ℄ SUBSTRUCTURE



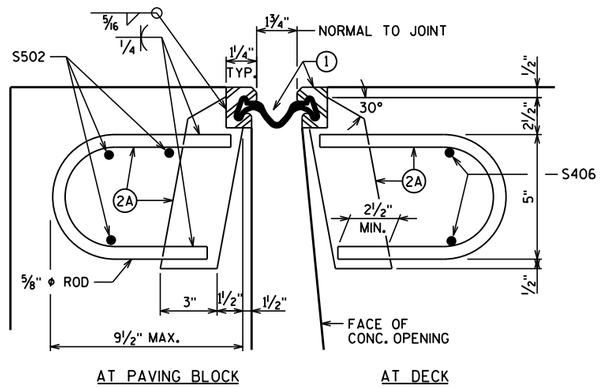
* BARS PLACED PARALLEL TO GIRDERS. SPACING PERPENDICULAR TO ℄ GIRDERS.

SECTION THRU JOINT AT ABUTMENT

NORMAL TO ℄ SUBSTRUCTURE

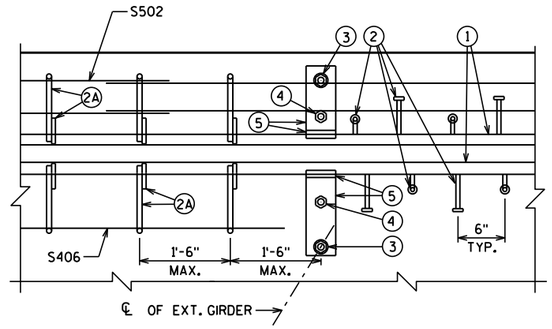
LEGEND

1. NEOPRENE STRIP SEAL (4-INCH) AND STEEL EXTRUSIONS.
2. STUDS ⅝"Φ X 6⅜" LONG AT 6" ALTERNATE CENTERS. WELD TO EXTRUSIONS AND BEND AS SHOWN AFTER WELDING.
2A. ½" THICK ANCHOR PLATE WITH ⅝"Φ ROD (OR ALTERNATE STRIP SEAL ANCHOR). WELD ROD TO ANCHOR PLATE, WELD ANCHOR PLATE TO NO. 1 AT 1'-6" CENTERS BETWEEN GIRDERS.
3. ¾" Φ THREADED ROD WITH 2 NUTS AND PLATE WASHERS. GROUT THREADED ROD INTO FIELD DRILLED HOLES ON ℄ OF GIRDER. ON ABUTMENT SIDE GROUT THREADED ROD INTO FIELD DRILLED HOLES IN ABUTMENT BACKWALL AS SHOWN.
4. ¾"Φ THREADED ROD WITH NUT. TACK WELD NUT TO NO. 5.
5. FABRICATE SUPPORT FROM 3" X ½" BAR AS SHOWN OR EQUIVALENT, ONE PER GIRDER PER SIDE. SHOP OR FIELD WELD TO NO. 1. IF FIELD WELDED, COVER WELDED AREAS WITH EPOXY-COATING MATERIAL. PROVIDE 1½" Φ HOLE FOR NO. 3 AND 1" Φ HOLE FOR NO. 4.
6. GALVANIZED PLATE ⅜" X 1'-2" X 2'-0" LONG WITH HOLES FOR NO. 7. BEND AS SHOWN.
7. ¾"Φ X 1½" STAINLESS STEEL SOCKET FLAT HEAD SCREWS WITH ANTI-SEIZE LUBRICANT. PLACE IN COUNTERSUNK HOLE. RECESS 1/16" BELOW PLATE SURFACE.
8. ¾"Φ X 4" GALVANIZED HEX HEAD BOLT. BEND 45°.
9. ¾"Φ X 2¼" GALVANIZED THREADED COUPLING.
10. 1" x 5" SLOTTED COUNTERSUNK HOLE FOR NO. 7. PLACE SLOT PARALLEL TO DIRECTION OF MOVEMENT.

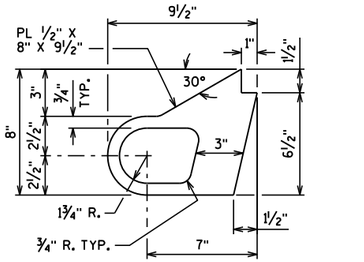


SECTION THRU JOINT

ROADWAY TRAFFIC AREA BETWEEN EXTERIOR GIRDERS



PART PLAN



ALTERNATE STRIP SEAL ANCHOR

NOTES:

ONE FIELD SPLICE PERMITTED IN STEEL EXTRUSIONS. IF USED, DETAILS SHALL BE SUBMITTED FOR APPROVAL. NO SPLICING PERMITTED IN NEOPRENE STRIP SEAL.

AFTER FABRICATION, BUT BEFORE SHIPMENT, STRAIGHTEN STEEL EXTRUSIONS SUCH THAT THEY SHALL BE FREE FROM WARP, TWIST & SWEEP.

FABRICATOR SHALL PROVIDE MEANS OF KEEPING GALVANIZED EXTRUSIONS CLEAN & SMOOTH DURING SHIPMENT AND PRIOR TO APPLYING LUBRICANT ADHESIVE FOR NEOPRENE GLAND INSTALLATION.

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REMOVE EXISTING PARAPET AS REQUIRED TO REMOVE EXISTING AND INSTALL NEW EXPANSION DEVICE. (INCORPORATE ALL SLAB REINFORCEMENT INTO NEW WORK). (REUSE ALL PARAPET REINFORCEMENT)

◪ POUR CONCRETE ABOVE THIS JOINT AFTER SUPERSTRUCTURE IS IN PLACE. STRIKE OFF AND LEAVE ROUGH.

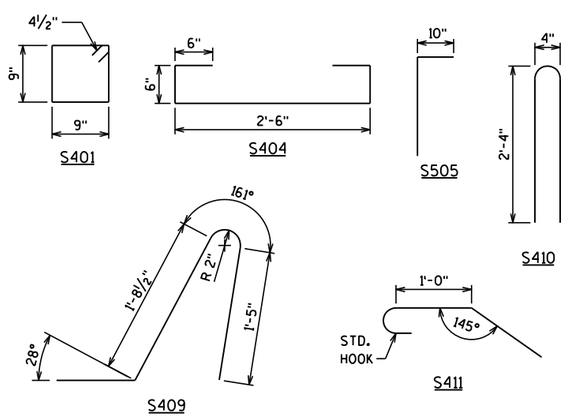
⚠ MATCH TOP OF PAVING BLOCK TO ROADWAY CROWN AND GRADE.

◨ ADHESIVE ANCHORS NO. 5 BARS. EMBED MIN. 1'-6" INTO EXISTING CONCRETE. SPACE AT 1'-0". TURN 10" LEG AS NECESSARY TO FIT.

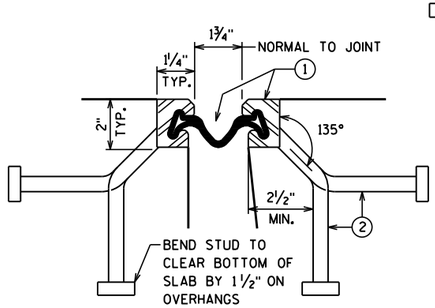
☆ CUT TO FIT AS REQUIRED

BILL OF BARS

	BAR MARK	COAT	NORTH ABUT.	LENGTH	BENT	LOCATION
	S401	X	48	3'-6"	X	PAVING BLOCK
	S502	X	21	8'-0"		PAVING BLOCK
	S703	X	24	8'-5"		DECK - DIAPHRAGM
	S404	X	40	4'-2"	X	DECK - DIAPHRAGM
◨	S505	X	47	3'-0"	X	PAVING BLOCK ANCHOR
	S406	X	8	9'-9"		END OF DECK
	S507	X	22	26'-1"		SLAB TRANSVERSE
☆	S408	X	12	2'-0"		PARAPET HORIZONTAL
	S409	X	12	4'-3"	X	PARAPET VERTICAL
	S410	X	17	4'-10"	X	PARAPET VERTICAL
	S411	X	5	2'-8"	X	PARAPET VERTICAL
	S412	X	5	2'-0"		PARAPET VERTICAL



BAR BENDING DIAGRAMS



SECTION THRU JOINT

EXTERIOR GIRDER TO EDGE OF DECK AND AT PARAPETS, MEDIANS AND SIDEWALKS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-36-50

DRAWN BY BRE | PLANS CK'D. KRO

EXPANSION DEVICE

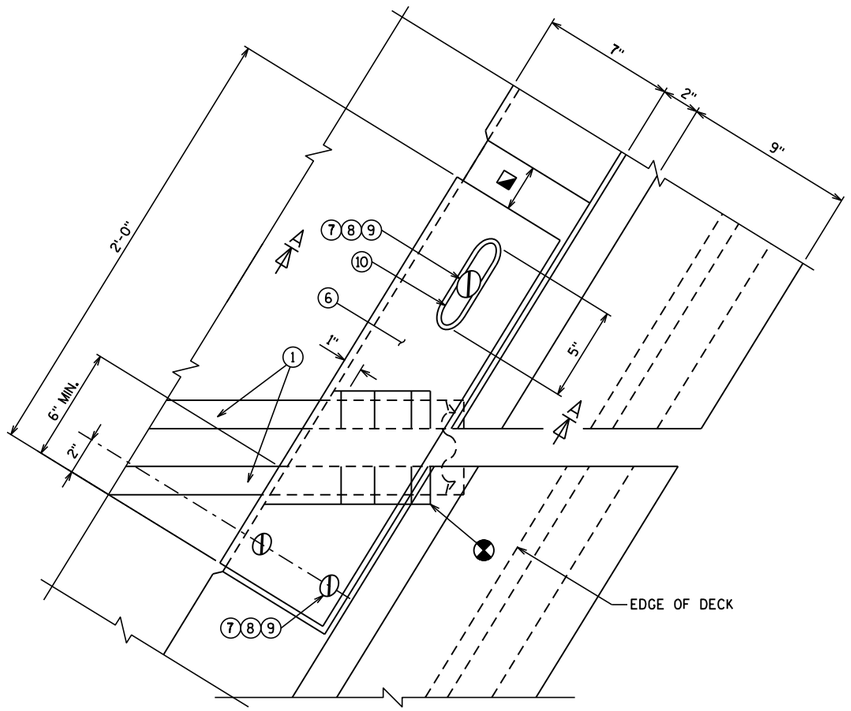
SHEET 4 OF 6

325

8

8

STATE PROJECT NUMBER
1224-21-73

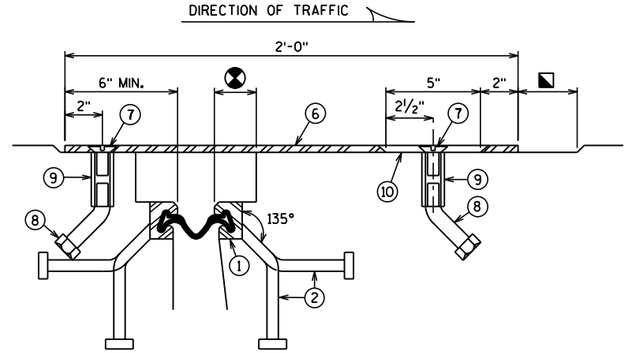


PLAN

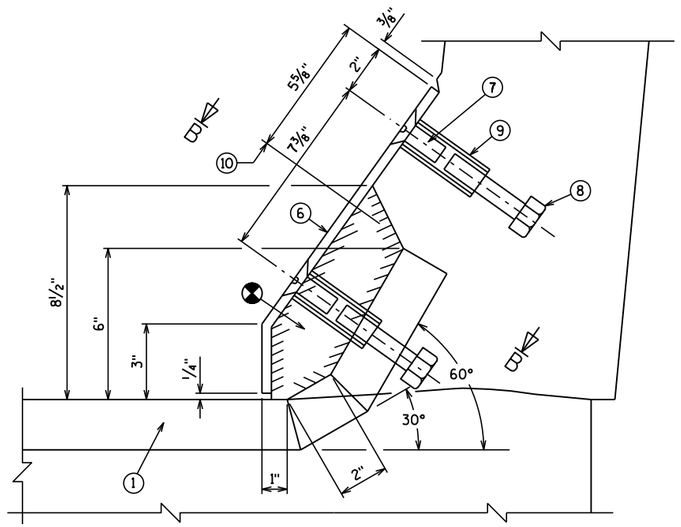
SEE SHEET 4 FOR LEGEND AND NOTES.

⊗ BLOCK OUT CONCRETE 2" EACH SIDE OF JOINT OPENING.

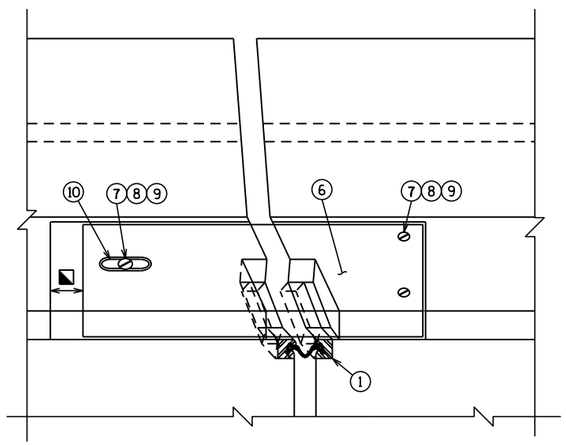
◪ JOINT OPENING DIMENSION ALONG SKEW PLUS ½".



SECTION B-B



SECTION A-A



VIEW OF PARAPET PLATE FROM ROADWAY

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-36-50

DRAWN BY BRE | PLANS CK'D. KRO

COVER PLATE DETAILS

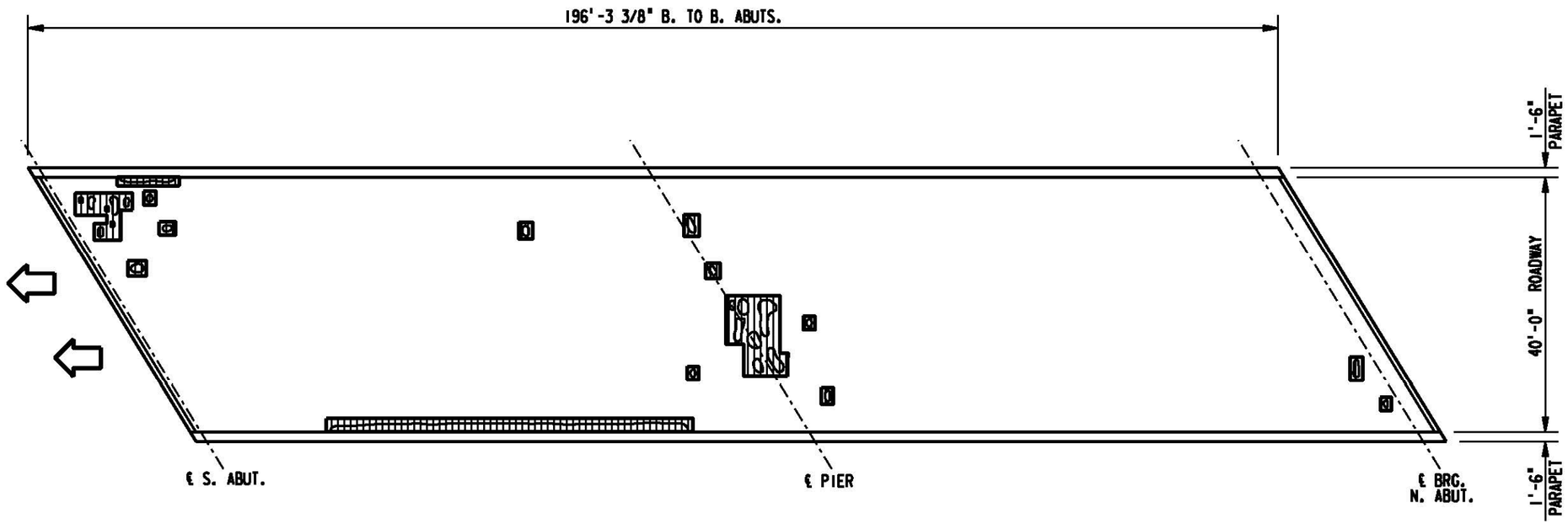
SHEET 5 OF 6

326

8

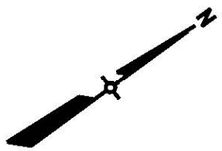
8

STATE PROJECT NUMBER
1224-21-73



PLAN

PROPOSED REHAB AREAS



SCALE 0' 5' 10' 20'

FIELD OBSERVATIONS SUMMARY		STRUCTURE NO. B-36-50	
ITEM	UNIT	QUANT.	%
TOTAL AREA	yd^2	869.3	
SHADE/DEBRIS	yd^2	0	
PREPARATION, DECKS, TYPE 1	yd^2	22.3	2.6
PREPARATION, DECKS, TYPE 2	yd^2	5.6	0.6
FULL DEPTH DECK REPAIR	yd^2	1.0	0.1
PREPARATION, DECKS, TYPE 1 DEBOND/SCALING ONLY	yd^2	15.1	1.7

LEGEND

DECK PREPARATION AREA

SHADE/DEBRIS

DELAMINATION
SPALL
DEBOND/SCALING
ASPHALT PATCH
CONCRETE PATCH

SURFACE TYPE: BITUMINOUS OVERLAY
INFRARED INSPECTION DATE: 7/27/15

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-36-50

DRAWN BY BRE | PLANS CK'D. KRO

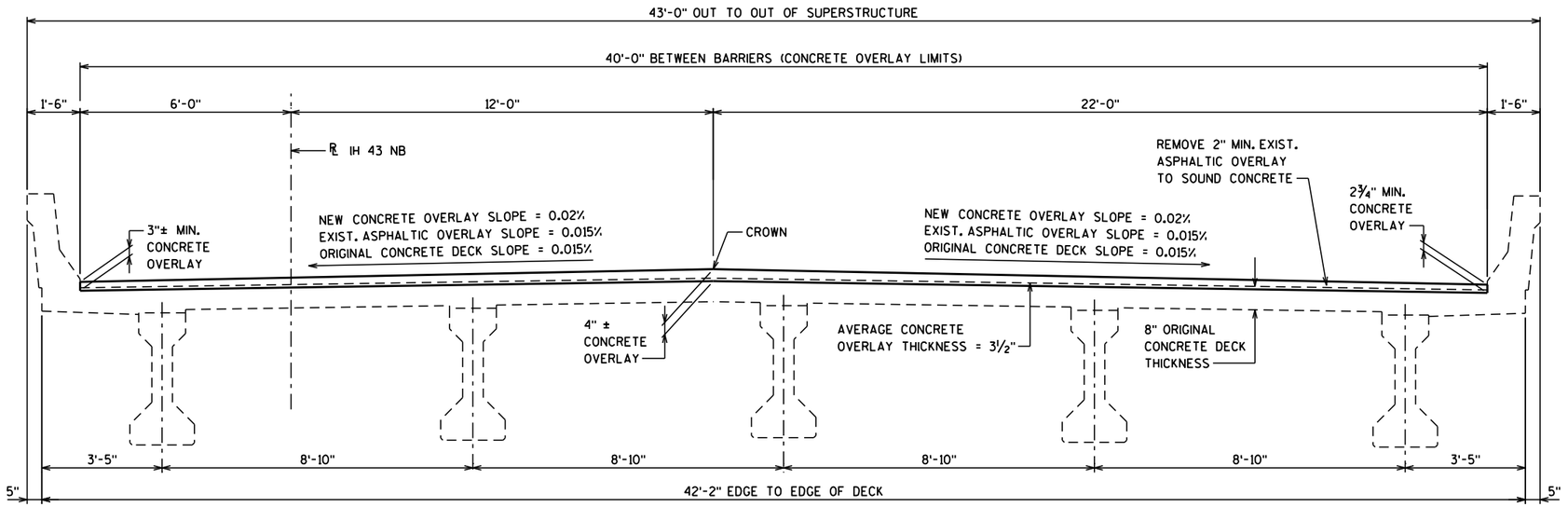
DECK REPAIR

SHEET 6 OF 6

327

FILE NAME : F:±TR±JOBS±E2041A12±Sheets±Bridges±B-36-50±B-36-50 06 deck repair.dgn PLOT BY : olsonk PLOT DATE: 5/28/2016 4:40:46 PM

STATE PROJECT NUMBER
1224-21-73



CROSS SECTION THRU EXISTING ROADWAY

(LOOKING NORTH)

TRAFFIC DATA

ADT = 11,800 (2036)
RDS = 70 M.P.H.

DESIGN DATA

LIVE LOAD:

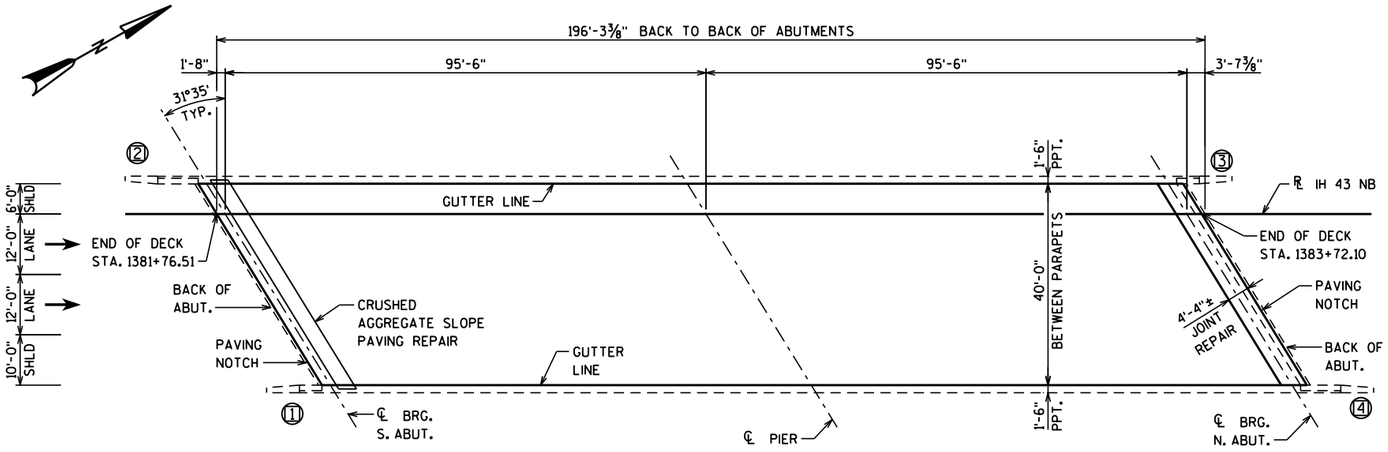
INVENTORY RATING:	HS-13
OPERATING RATING:	HS-28
WISCONSIN STANDARD PERMIT VEHICLE (Wis-SPV):	155 KIPS

MATERIAL PROPERTIES:

CONCRETE MASONRY OVERLAY DECKS & PARAPETS: ———— f'c = 4,000 p.s.i.
BAR STEEL REINFORCEMENT GRADE 60: ———— fy = 60,000 p.s.i.

LIST OF DRAWINGS

1. GENERAL PLAN
2. GENERAL NOTES, QUANTITIES, & DETAILS
3. JOINT REPAIR
4. EXPANSION DEVICE
5. COVER PLATE DETAILS
6. DECK REPAIR



Ⓧ INDICATES WING NUMBER

PLAN

WISCONSIN
KRISTOFER R. OLSON
E-35236
APPLETON, WI
PROFESSIONAL ENGINEER
6/1/16

BRIDGE OFFICE CONTACT

WILLIAM DREHER
(608) 266-8489

CONSULTANT CONTACT

KRISTOFER OLSON
OMNNI ASSOCIATES
(920) 735-6900

NO.	DATE	REVISION	BY

ORIGINAL PLANS PREPARED BY
OMNNI ASSOCIATES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
ACCEPTED William C. Dreher SDR 08/09/16
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-36-51

IH 43 NB OVER CTH C

COUNTY	TOWN
MANITOWOC	NEWTON

DESIGN SPEC. REHABILITATION N/A

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
BRE	KRO	BRE	KRO

GENERAL PLAN

SHEET 1 OF 6

328

8

8

FILE NAME : F:±TR±JOBS±E2041A12±Sheets±Bridges±B-36-51±B-36-51 01 gp.dgn PLOT BY : EpleyB PLOT DATE: 6/1/2016 11:30:08 AM

STATE PROJECT NUMBER
1224-21-73

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

USE EXSTING BAR STEEL REINFORCEMENT WHERE SHOWN AND EXTEND 24 BAR DIAMETERS INTO NEW WORK.

DIMENSIONS SHOWN ARE BASED ON THE EXISTING ORIGINAL STRUCTURE PLANS.

ANY EXCAVATION NECESSARY TO COMPLETE THE OVERLAY OR JOINT REPAIR AT THE ABUTMENTS IS TO BE CONSIDERED INCIDENTAL TO THE BID ITEM "CONCRETE MASONRY OVERLAY DECKS".

PROFILE GRADE LINE SHALL BE DETERMINED IN THE FIELD BASED ON A MINIMUM OVERLAY THICKNESS OF 4" AT THE CROWN POINT AND 2¾" AT THE TOE OF THE OUTSIDE PARAPET PLACED ABOVE THE DECK SURFACE AFTER "CLEANING DECKS". EXPECTED AVERAGE OVERLAY THICKNESS IS 3½" (OR AS GIVEN ON THE PLANS). IF EXPECTED AVERAGE OVERLAY THICKNESS IS EXCEEDED BY MORE THAN ½", CONTACT THE STRUCTURES DESIGN SECTION.

THE EXISTING BITUMINOUS ASPHALTIC OVERLAY SHALL BE REMOVED FROM THE BRIDGE DECK UNDER BID ITEM "REMOVING ASPHALTIC CONCRETE DECK OVERLAY".

PREPARATION DECKS TYPE 1, PREPARATION DECKS TYPE 2, CONCRETE SURFACE REPAIR AND FULL-DEPTH DECK REPAIR AREAS SHALL BE DETERMINED BY THE FIELD ENGINEER. "CONCRETE SURFACE REPAIR" TO INCLUDE BUT NOT LIMITED TO THE SOUTH ABUTMENT, EAST PARAPET, AND GIRDER END AT NORTH ABUTMENT.

REMOVAL LINES NOT COVERED WITH A CONCRETE OVERLAY SHALL BE DEFINED BY A 1" DEEP SAW CUT AT THE CONCRETE SURFACES.

PROTECTIVE SURFACE TREATMENT SHALL BE APPLIED TO THE ENTIRE TOP SURFACE OF THE NEW CONCRETE OVERLAY. PIGMENTED PROTECTIVE SURFACE TREATMENT SHALL BE APPLIED TO THE ENTIRE FRONT FACES AND TOPS OF BOTH WING & DECK PARAPETS.

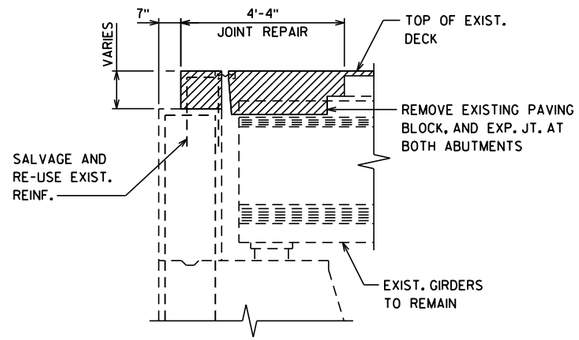
APPLY BRIDGE SEAT PROTECTION, AS PER SECTION 502.3.12 OF THE STANDARD SPECIFICATIONS, TO THE TOP SURFACE OF THE NORTH ABUTMENT BELOW EXPANSION DEVICE. POWER WASH AND ADEQUATELY DRY SURFACES BEFORE APPLICATION. WORK TO BE INCIDENTAL TO "JOINT REPAIR".

A MINIMUM OF 1-INCH OF CONCRETE SHALL BE REMOVED FROM THE ENTIRE BRIDGE DECK UNDER THE BID ITEM "CLEANING DECKS".

TOTAL ESTIMATED QUANTITIES

	ITEM NUMBER	BID ITEMS	UNIT	TOTALS
	502.3100	EXPANSION DEVICE (B-36-51)	LS	1
	502.3200	PROTECTIVE SURFACE TREATMENT	SY	869
	502.3210	PIGMENTED SURFACE SEALER	SY	171
	502.4205	ADHESIVE ANCHORS NO.5 BARS	EACH	47
	505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	1,730
	509.0301	PREPARATION DECKS TYPE 1	SY	67
	509.0302	PREPARATION DECKS TYPE 2	SY	10
	509.0500	CLEANING DECKS	SY	869
	509.1000	JOINT REPAIR	SY	23
	509.1500	CONCRETE SURFACE REPAIR	SF	24
	509.2000	FULL-DEPTH DECK REPAIR	SY	1
☆	509.2500	CONCRETE MASONRY OVERLAY DECKS	CY	96
	509.9010.S	REMOVING ASPHALTIC CONCRETE DECK OVERLAY (B-36-51)	SY	869
	509.9050.S	CLEANING PARAPETS	LF	440
	604.9010.S	SLOPE PAVING REPAIR CRUSHED AGGREGATE	CY	3

☆ BID ITEM ALSO INCLUDES CONCRETE FOR:
"PREPARATION DECKS TYPE 1"
"PREPARATION DECKS TYPE 2"
"FULL-DEPTH DECK REPAIR"



TYPICAL SECTION THRU NORTH ABUTMENT

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-36-51

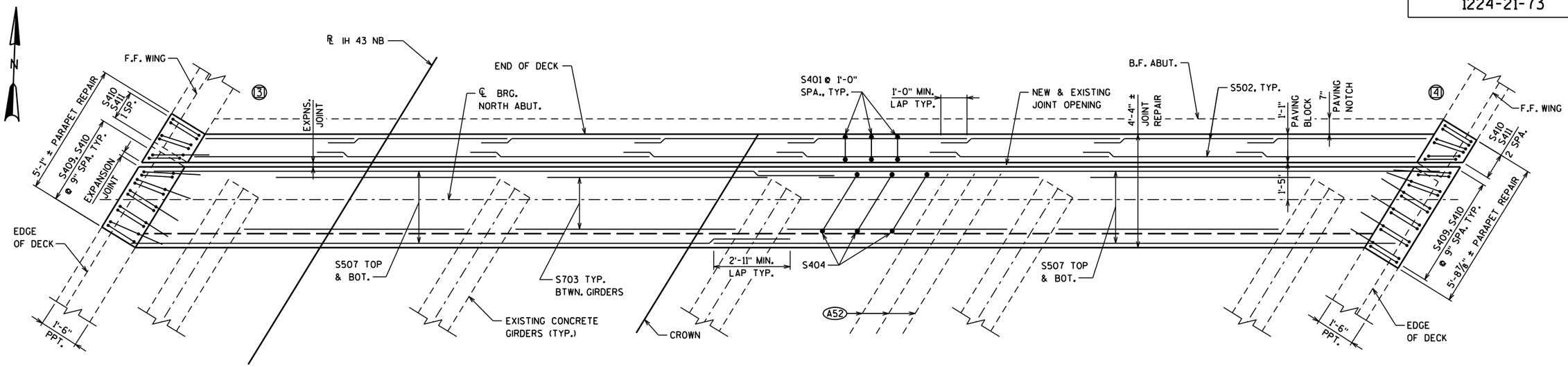
DRAWN BY BRE | PLANS CK'D. KRO

GENERAL NOTES & QUANTITIES

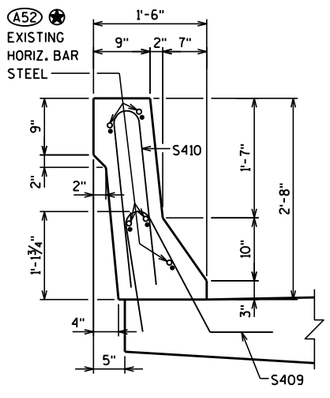
SHEET 2 OF 6

329

STATE PROJECT NUMBER
1224-21-73

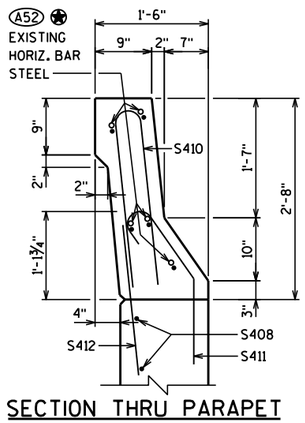


NORTH ABUTMENT "JOINT REPAIR" PLAN



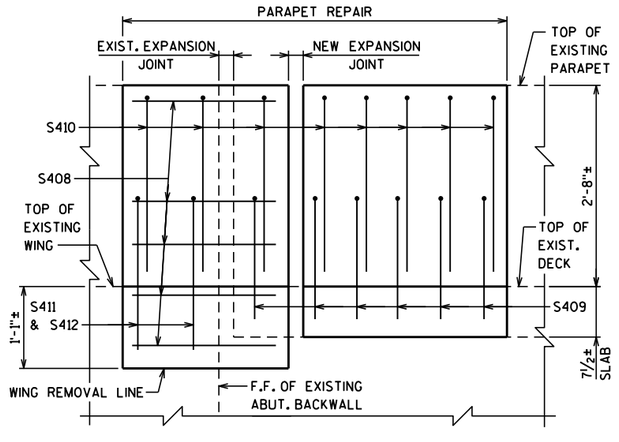
SECTION THRU PARAPET REPLACEMENT ON BRIDGE

DIMENSIONS ARE FOR REFERENCE ONLY
MATCH EXISTING PARAPET EDGES.

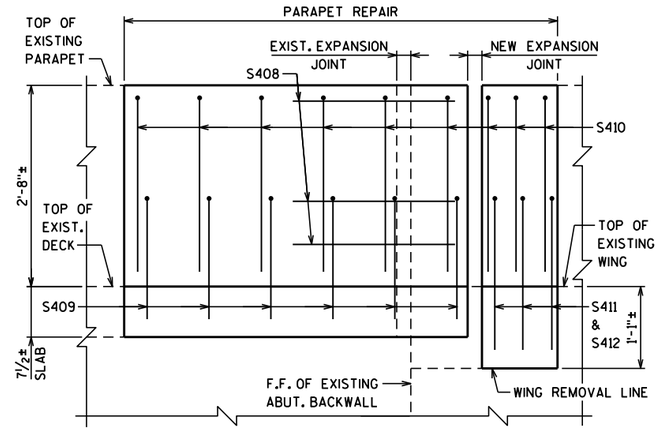


SECTION THRU PARAPET REPLACEMENT ON WING

DIMENSIONS ARE FOR REFERENCE ONLY
MATCH EXISTING PARAPET EDGES.



WING 3 PARAPET ELEVATION



WING 4 PARAPET ELEVATION

SEE SHEET 4 FOR SECTION THROUGH JOINT AT ABUTMENT.

(A52) SALVAGE EXIST. LONGITUDINAL REINFORCEMENT AND EXTEND FULL LENGTH INTO NEW WORK.

TIE S408 BARS TO EXISTING HORIZ. BARS IN NEW PARAPETS THAT EXTEND BEYOND EXISTING EXPANSION JOINTS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-36-51

DRAWN BY BRE | PLANS CK'D. KRO

JOINT REPAIR

SHEET 3 OF 6

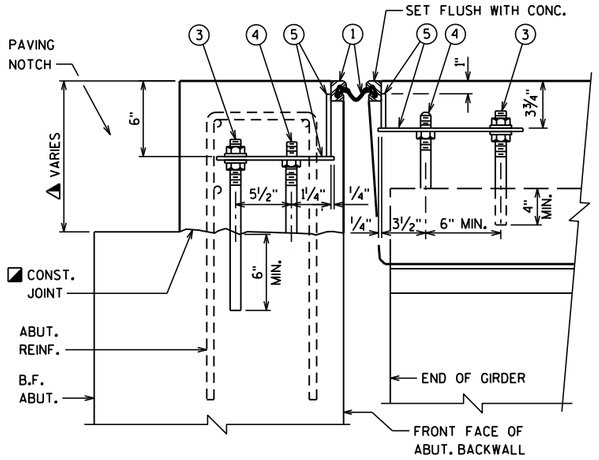
330

8

8

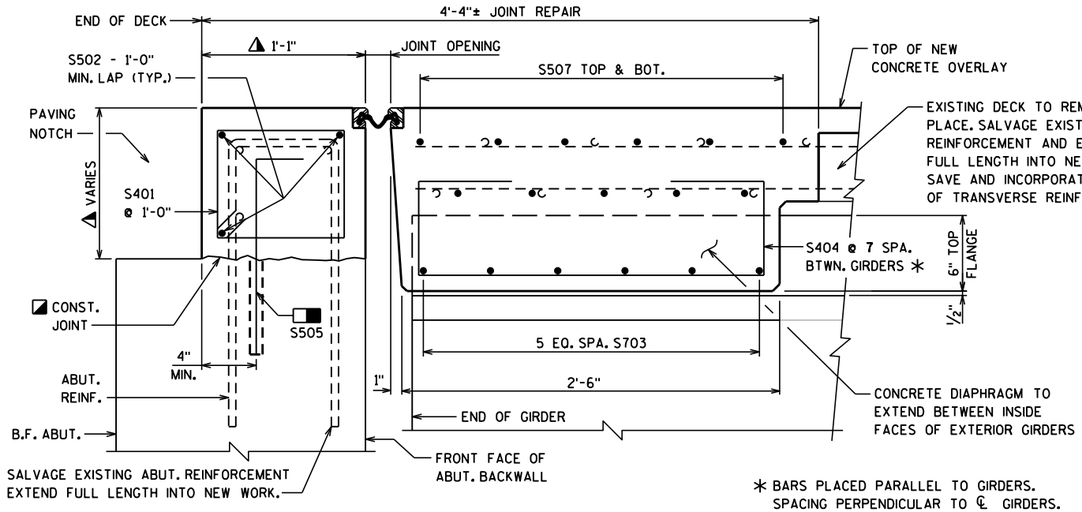
STATE PROJECT NUMBER

1224-21-73



SECTION THRU JOINT AT ABUTMENT

NORMAL TO ℄ SUBSTRUCTURE



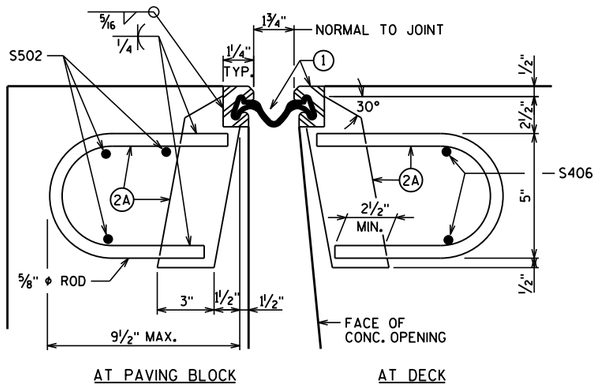
* BARS PLACED PARALLEL TO GIRDERS. SPACING PERPENDICULAR TO ℄ GIRDERS.

SECTION THRU JOINT AT ABUTMENT

NORMAL TO ℄ SUBSTRUCTURE

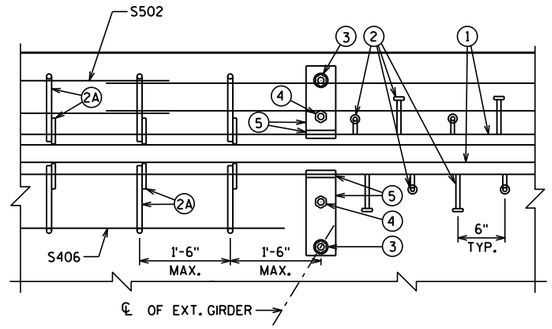
LEGEND

1. NEOPRENE STRIP SEAL (4-INCH) AND STEEL EXTRUSIONS.
2. STUDS ⅝"Φ X 6⅜" LONG AT 6" ALTERNATE CENTERS. WELD TO EXTRUSIONS AND BEND AS SHOWN AFTER WELDING.
2A. ½" THICK ANCHOR PLATE WITH ⅝"Φ ROD (OR ALTERNATE STRIP SEAL ANCHOR). WELD ROD TO ANCHOR PLATE, WELD ANCHOR PLATE TO NO. 1 AT 1'-6" CENTERS BETWEEN GIRDERS.
3. ¾" Φ THREADED ROD WITH 2 NUTS AND PLATE WASHERS. GROUT THREADED ROD INTO FIELD DRILLED HOLES ON ℄ OF GIRDER. ON ABUTMENT SIDE GROUT THREADED ROD INTO FIELD DRILLED HOLES IN ABUTMENT BACKWALL AS SHOWN.
4. ¾"Φ THREADED ROD WITH NUT. TACK WELD NUT TO NO. 5.
5. FABRICATE SUPPORT FROM 3" X ½" BAR AS SHOWN OR EQUIVALENT, ONE PER GIRDER PER SIDE. SHOP OR FIELD WELD TO NO. 1. IF FIELD WELDED, COVER WELDED AREAS WITH EPOXY-COATING MATERIAL. PROVIDE 1½" Φ HOLE FOR NO. 3 AND 1" Φ HOLE FOR NO. 4.
6. GALVANIZED PLATE ⅜" X 1'-2" X 2'-0" LONG WITH HOLES FOR NO. 7. BEND AS SHOWN.
7. ¾"Φ X 1½" STAINLESS STEEL SOCKET FLAT HEAD SCREWS WITH ANTI-SEIZE LUBRICANT. PLACE IN COUNTERSUNK HOLE. RECESS 1/16" BELOW PLATE SURFACE.
8. ¾"Φ X 4" GALVANIZED HEX HEAD BOLT. BEND 45°.
9. ¾"Φ X 2¼" GALVANIZED THREADED COUPLING.
10. 1" x 5" SLOTTED COUNTERSUNK HOLE FOR NO. 7. PLACE SLOT PARALLEL TO DIRECTION OF MOVEMENT.

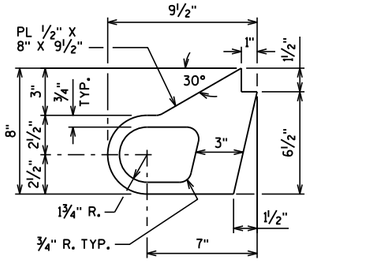


SECTION THRU JOINT

ROADWAY TRAFFIC AREA BETWEEN EXTERIOR GIRDERS



PART PLAN



ALTERNATE STRIP SEAL ANCHOR

NOTES:

ONE FIELD SPLICE PERMITTED IN STEEL EXTRUSIONS. IF USED, DETAILS SHALL BE SUBMITTED FOR APPROVAL. NO SPLICING PERMITTED IN NEOPRENE STRIP SEAL.

AFTER FABRICATION, BUT BEFORE SHIPMENT, STRAIGHTEN STEEL EXTRUSIONS SUCH THAT THEY SHALL BE FREE FROM WARP, TWIST & SWEEP.

FABRICATOR SHALL PROVIDE MEANS OF KEEPING GALVANIZED EXTRUSIONS CLEAN & SMOOTH DURING SHIPMENT AND PRIOR TO APPLYING LUBRICANT ADHESIVE FOR NEOPRENE GLAND INSTALLATION.

SANDBLAST PLATES & EXTRUSIONS AFTER FABRICATION IN ACCORDANCE WITH SSPC SP. #6 "COMMERCIAL BLAST CLEANING". AFTER BLAST CLEANING THE PLATES & EXTRUSIONS SHALL BE HOT DIPPED GALVANIZED. SLIP-RESISTANT SURFACE IS APPLIED TO SIDEWALK COVER PLATES BY THE MANUFACTURER AND THEN HOT DIPPED GALVANIZED TO THEIR RECOMMENDATIONS TO MAINTAIN THE INTEGRITY OF THIS SURFACE.

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REMOVE EXISTING PARAPET AS REQUIRED TO REMOVE EXISTING AND INSTALL NEW EXPANSION DEVICE. (INCORPORATE ALL SLAB REINFORCEMENT INTO NEW WORK). (REUSE ALL PARAPET REINFORCEMENT)

◪ POUR CONCRETE ABOVE THIS JOINT AFTER SUPERSTRUCTURE IS IN PLACE. STRIKE OFF AND LEAVE ROUGH.

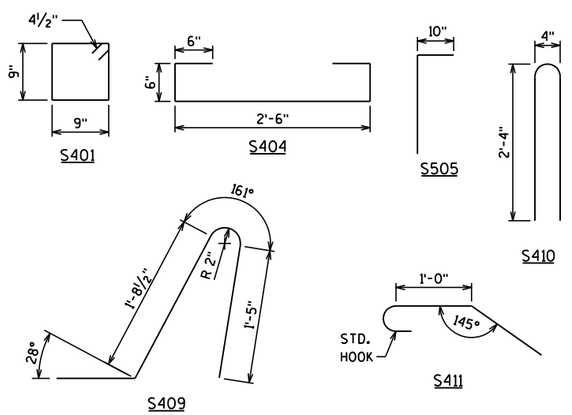
⚠ MATCH TOP OF PAVING BLOCK TO ROADWAY CROWN AND GRADE.

◧ ADHESIVE ANCHORS NO. 5 BARS. EMBED MIN. 1'-6" INTO EXISTING CONCRETE. SPACE AT 1'-0". TURN 10" LEG AS NECESSARY TO FIT.

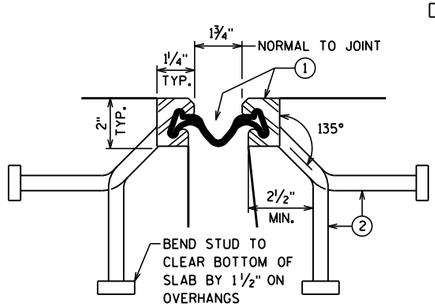
☆ CUT TO FIT AS REQUIRED.

BILL OF BARS

	BAR MARK	COAT	NORTH ABUT.	LENGTH	BENT	LOCATION
	S401	X	48	3'-6"	X	PAVING BLOCK
	S502	X	21	8'-0"		PAVING BLOCK
	S703	X	24	8'-5"		DECK - DIAPHRAGM
	S404	X	40	4'-2"	X	DECK - DIAPHRAGM
◧	S505	X	47	3'-0"	X	PAVING BLOCK ANCHOR
	S406	X	8	9'-9"		END OF DECK
	S507	X	22	26'-1"		SLAB TRANSVERSE
	S408	X	12	2'-0"		PARAPET HORIZONTAL
	S409	X	12	4'-3"	X	PARAPET VERTICAL
	S410	X	17	4'-10"	X	PARAPET VERTICAL
	S411	X	5	2'-8"	X	PARAPET VERTICAL
	S412	X	5	2'-0"		PARAPET VERTICAL



BAR BENDING DIAGRAMS



SECTION THRU JOINT

EXTERIOR GIRDER TO EDGE OF DECK AND AT PARAPETS, MEDIANS AND SIDEWALKS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-36-51

DRAWN BY BRE | PLANS CK'D. KRO

EXPANSION DEVICE

SHEET 4 OF 6

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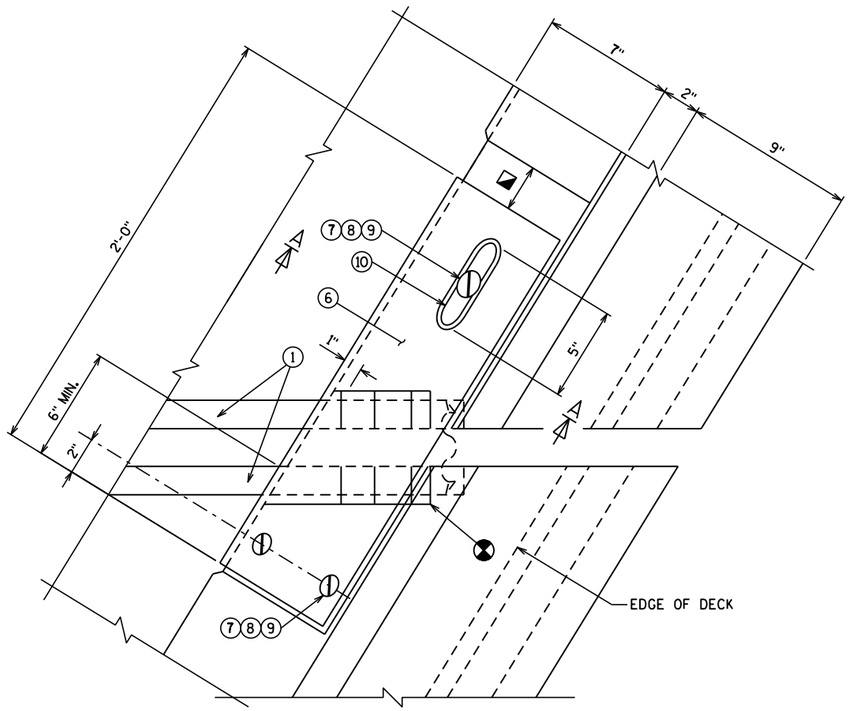
8

8

STATE PROJECT NUMBER
1224-21-73

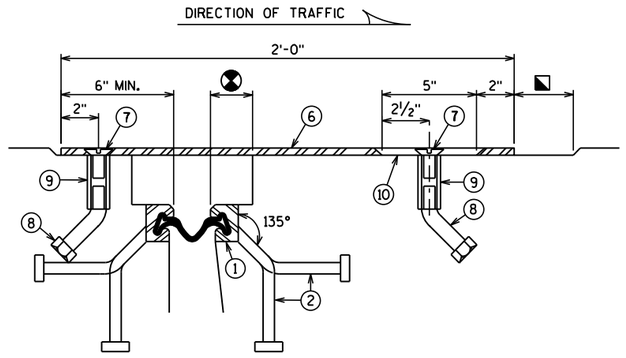


PLAN

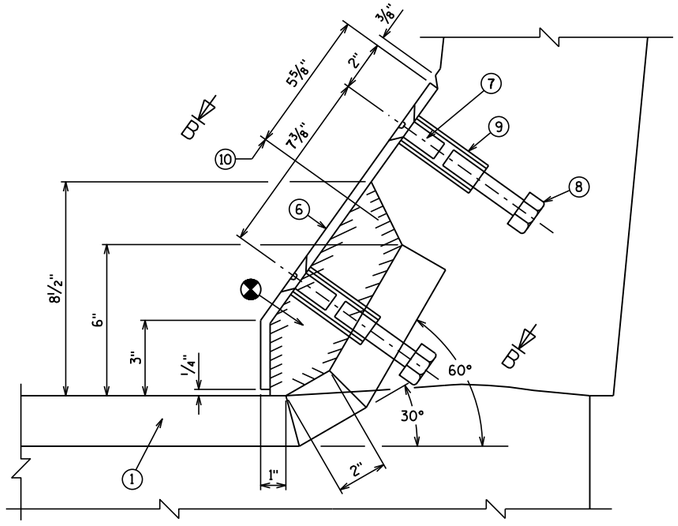
SEE SHEET 4 FOR LEGEND AND NOTES.

⊗ BLOCK OUT CONCRETE 2" EACH SIDE OF JOINT OPENING.

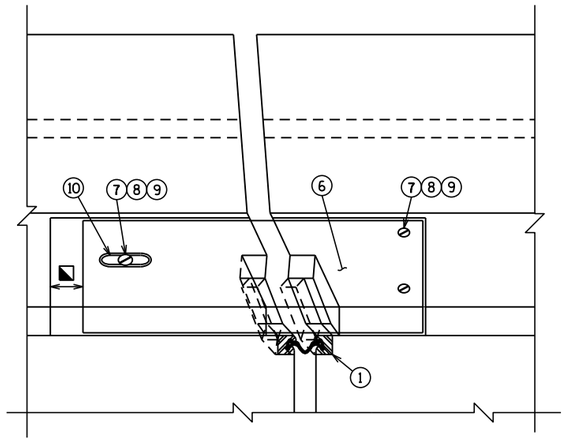
◪ JOINT OPENING DIMENSION ALONG SKEW PLUS ½".



SECTION B-B



SECTION A-A



VIEW OF PARAPET PLATE FROM ROADWAY

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-36-51

DRAWN BY BRE | PLANS CK'D. KRO

COVER PLATE DETAILS

SHEET 5 OF 6

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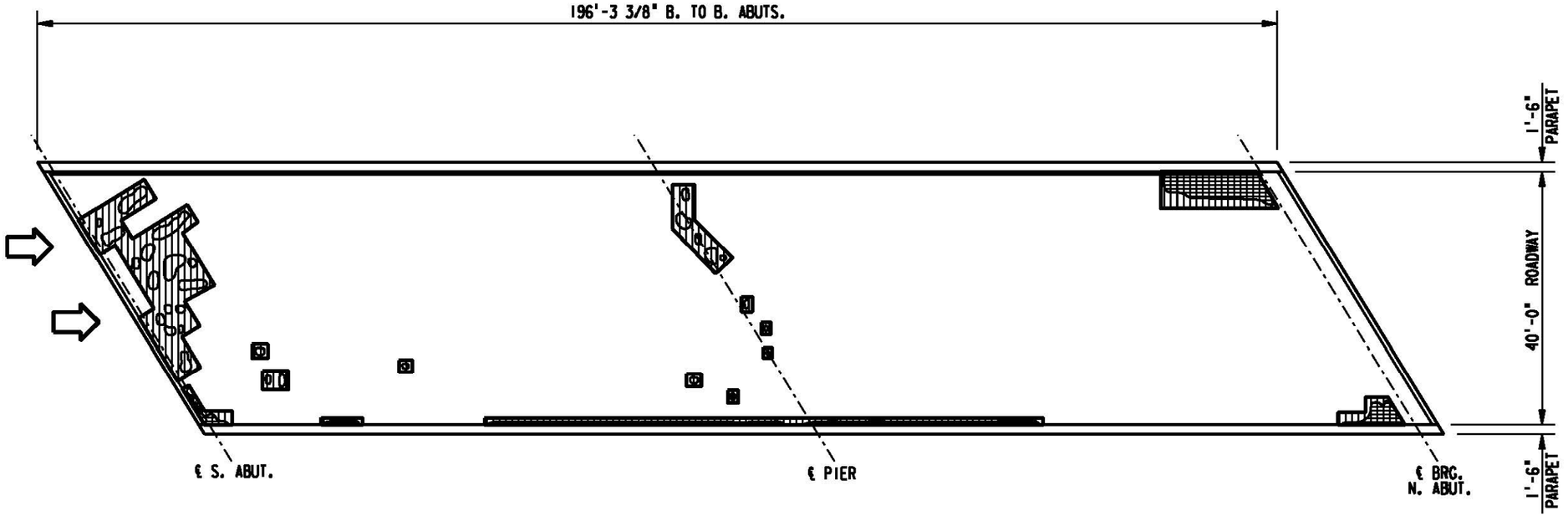
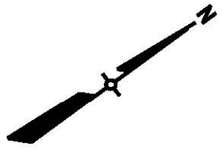
STATE PROJECT NUMBER
1224-21-73



PLAN

PROPOSED REHAB AREAS



FIELD OBSERVATIONS SUMMARY		STRUCTURE NO. B-36-51	
ITEM	UNIT	QUANT.	%
TOTAL AREA	yd^2	869.3	
SHADE/DEBRIS	yd^2	10.7	
PREPARATION, DECKS, TYPE 1	yd^2	39.8	4.6
PREPARATION, DECKS, TYPE 2	yd^2	10.0	1.2
FULL DEPTH DECK REPAIR	yd^2	1.0	0.1
PREPARATION, DECKS, TYPE 1 DEBOND/SCALING ONLY	yd^2	27.4	3.2

LEGEND	
DECK PREPARATION AREA	DELAMINATION
SHADE/DEBRIS	SPALL
	DEBOND/SCALING
	ASPHALT PATCH
	CONCRETE PATCH

SURFACE TYPE: BITUMINOUS OVERLAY
INFRARED INSPECTION DATE: 7/27/15

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-36-51

DRAWN BY BRE | PLANS CK'D. KRO

DECK REPAIR

SHEET 6 OF 6

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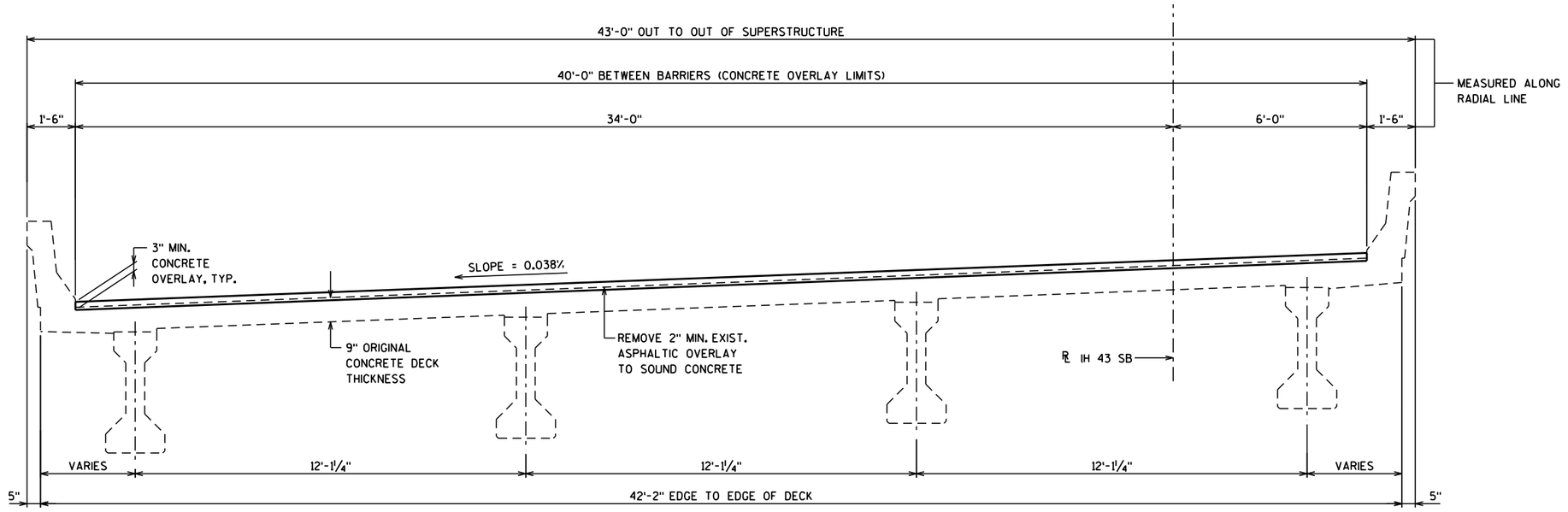
FILE NAME : F:±TR±JOBS±E2041A12±Sheets±Bridges±B-36-51±B-36-51 06 deck repair.dgn PLOT BY : olsonk PLOT DATE: 5/28/2016 4:43:08 PM

STATE PROJECT NUMBER
1224-21-73



CROSS SECTION THRU EXISTING ROADWAY

(LOOKING NORTH)

TRAFFIC DATA

ADT = 11,800 (2036)
RDS = 70 M.P.H.

DESIGN DATA

LIVE LOAD:

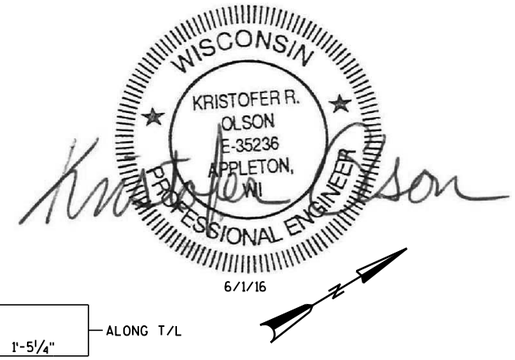
INVENTORY RATING: HS-14
OPERATING RATING: HS-29
WISCONSIN STANDARD PERMIT VEHICLE (Wis-SPV): 180 KIPS

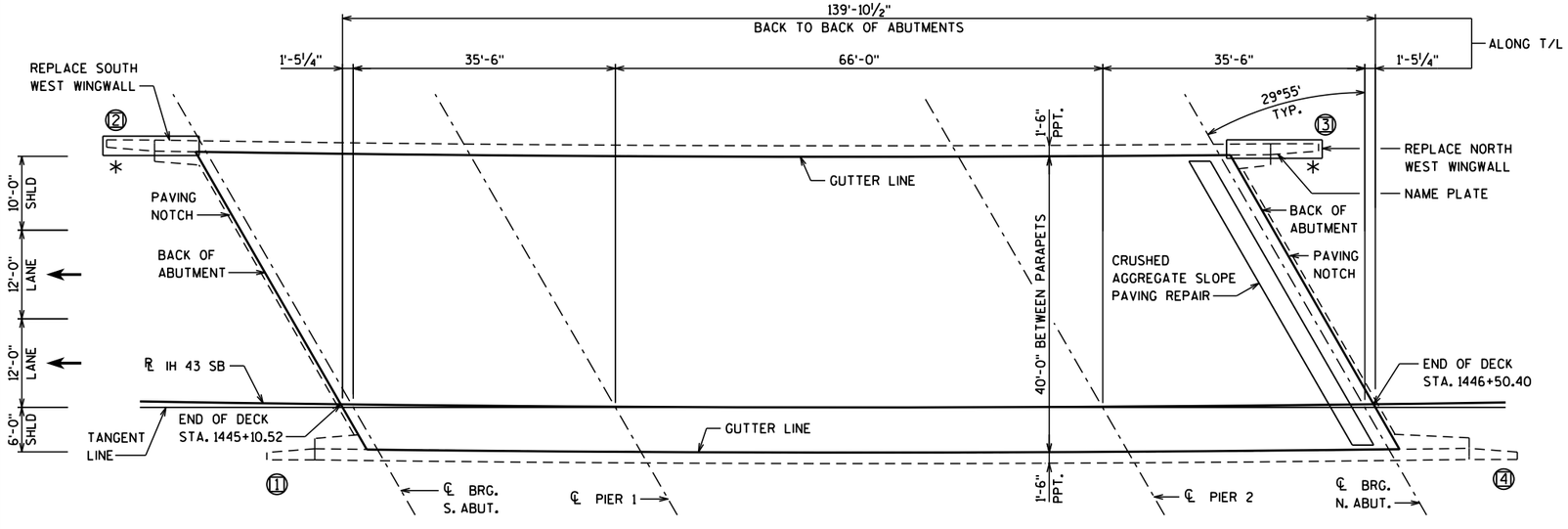
MATERIAL PROPERTIES:

CONCRETE MASONRY OVERLAY
DECKS & PARAPETS: —— f'c = 4,000 p.s.i.
OTHER: —————— f'c = 3,500 p.s.i.
BAR STEEL REINFORCEMENT
GRADE 60: ———— fy = 60,000 p.s.i.

LIST OF DRAWINGS

1. GENERAL PLAN
2. GENERAL NOTES & QUANTITIES
3. SOUTH WEST WING REPLACEMENT
4. SW SLOPED FACE PARAPET 'B'
5. NORTH WEST WING REPLACEMENT
6. NW SLOPED FACE PARAPET 'B'
7. DECK REPAIR





Ⓧ INDICATES WING NUMBER

✳ THRIE BEAM ATTACHMENT REQUIRED

PLAN

CURVE DATA

IH 43 SB

P.I. = STA 1458+64.80
△ = 31°59'36"
T = 1642.57'
L = 3199.34'
R = 5729.58'
S.E. = 0.038%
P.C. = STA 1442+22.23
P.T. = STA 1474+21.57

BRIDGE OFFICE CONTACT

WILLIAM DREHER
(608) 266-8489

CONSULTANT CONTACT

KRISTOFER OLSON
OMNNI ASSOCIATES
(920) 735-6900

NO.	DATE	REVISION	BY

ORIGINAL PLANS PREPARED BY
OMNNI ASSOCIATES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher SDR 08/09/16
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE B-36-52

IH 43 SB OVER CARSTENS LAKE ROAD

COUNTY	TOWN
MANITOWOC	NEWTON

DESIGN SPEC. REHABILITATION N/A

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
BRE	KRO	BRE	KRO

GENERAL PLAN

SHEET 1 OF 7

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STATE PROJECT NUMBER
1224-21-73

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

USE EXSTING BAR STEEL REINFORCEMENT WHERE SHOWN AND EXTEND 24 BAR DIAMETERS INTO NEW WORK.

DIMENSIONS SHOWN ARE BASED ON THE EXISTING ORIGINAL STRUCTURE PLANS.

AT ABUTMENTS, ALL SPACES EXCAVATED AND NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH "BACKFILL STRUCTURE TYPE A".

PROFILE GRADE LINE SHALL BE DETERMINED IN THE FIELD BASED ON A MINIMUM OVERLAY THICKNESS OF 3" PLACED ABOVE THE DECK SURFACE AFTER "CLEANING DECKS". EXPECTED AVERAGE OVERLAY THICKNESS IS 3" (OR AS GIVEN ON THE PLANS). IF EXPECTED AVERAGE OVERLAY THICKNESS IS EXCEEDED BY MORE THAN ½", CONTACT THE STRUCTURES DESIGN SECTION.

THE EXISTING BITUMINOUS ASPHALTIC OVERLAY SHALL BE REMOVED FROM THE BRIDGE DECK UNDER BID ITEM "REMOVING ASPHALTIC CONCRETE DECK OVERLAY".

PREPARATION DECKS TYPE 1, PREPARATION DECKS TYPE 2, CONCRETE SURFACE REPAIR AND FULL-DEPTH DECK REPAIR AREAS SHALL BE DETERMINED BY THE FIELD ENGINEER. "CONCRETE SURFACE REPAIR" TO INCLUDE BUT NOT LIMITED TO THE NORTH & SOUTH ABUTMENTS AND WEST PARAPET.

REMOVAL LINES NOT COVERED WITH A CONCRETE OVERLAY SHALL BE DEFINED BY A 1" DEEP SAW CUT AT THE CONCRETE SURFACES.

PROTECTIVE SURFACE TREATMENT SHALL BE APPLIED TO THE ENTIRE TOP SURFACE OF THE NEW CONCRETE OVERLAY. PIGMENTED PROTECTIVE SURFACE TREATMENT SHALL BE APPLIED TO THE ENTIRE FRONT FACES AND TOPS OF BOTH WING & DECK PARAPETS.

THE CONTRACTOR SHALL SUPPLY A NEW NAME PLATE IN ACCORDANCE WITH SECTION 502.3.11 OF THE STANDARD SPECIFICATIONS AND THE STANDARD DETAIL DRAWINGS. NAME PLATE TO SHOW ORIGINAL CONSTRUCTION YEAR OF 1979.

A MINIMUM OF 1-INCH OF CONCRETE SHALL BE REMOVED FROM THE ENTIRE BRIDGE DECK UNDER THE BID ITEM "CLEANING DECKS".

THE UPPER LIMITS OF EXCAVATION SHALL BE THE EXISTING GROUND LINE.

TOTAL ESTIMATED QUANTITIES

	ITEM NUMBER	BID ITEMS	UNIT	TOTALS
	203.0200	REMOVING OLD STRUCTURE (STA 1445+80)	LS	1
	206.1000	EXCAVATION FOR STRUCTURES BRIDGES (B-36-52)	LS	1
	210.1100	BACKFILL STRUCTURE TYPE A	CY	50
	502.0100	CONCRETE MASONRY BRIDGES	CY	9
	502.3200	PROTECTIVE SURFACE TREATMENT	SY	622
	502.3210	PIGMENTED SURFACE SEALER	SY	126
	502.4204	ADHESIVE ANCHORS NO.4 BAR	EACH	7
	502.4205	ADHESIVE ANCHORS NO.5 BAR	EACH	32
	505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	1,430
	509.0301	PREPARATION DECKS TYPE 1	SY	50
	509.0302	PREPARATION DECKS TYPE 2	SY	25
	509.0500	CLEANING DECKS	SY	622
	509.1500	CONCRETE SURFACE REPAIR	SF	61
	509.2000	FULL-DEPTH DECK REPAIR	SY	1
☆	509.2500	CONCRETE MASONRY OVERLAY DECKS	CY	56
	509.9010.S	REMOVING ASPHALTIC CONCRETE DECK OVERLAY (B-36-52)	SY	622
	509.9050.S	CLEANING PARAPETS	LF	304
	516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	4
	604.9010.S	SLOPE PAVING REPAIR CRUSHED AGGREGATE	CY	2
	614.0150	ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	2

☆ BID ITEM ALSO INCLUDES CONCRETE FOR:
"PREPARATION DECKS TYPE 1"
"PREPARATION DECKS TYPE 2"
"FULL-DEPTH DECK REPAIR"

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-36-52

DRAWN BY BRE | PLANS CK'D. KRO

GENERAL NOTES & QUANTITIES

SHEET 2 OF 7

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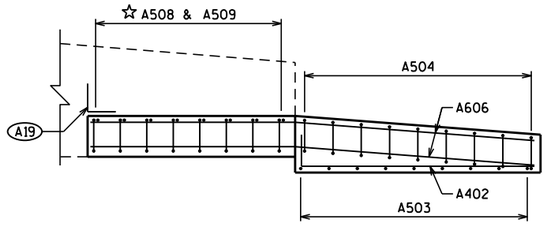
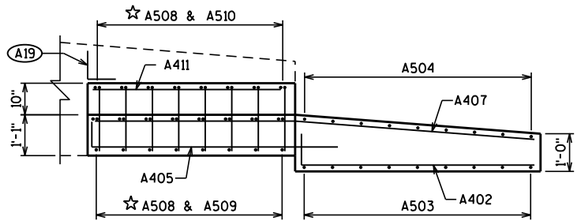
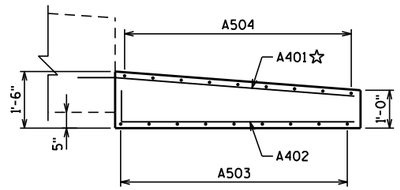
STATE PROJECT NUMBER
1224-21-73



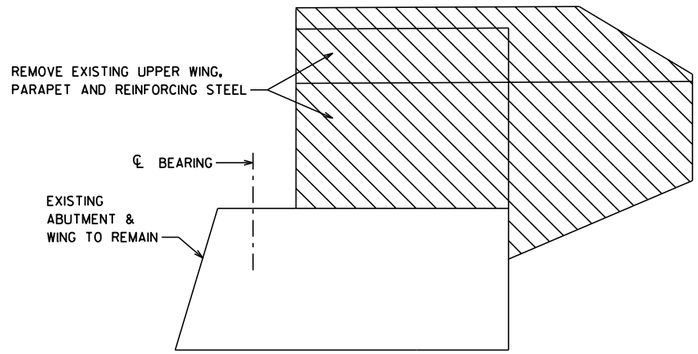
SECTION C-C



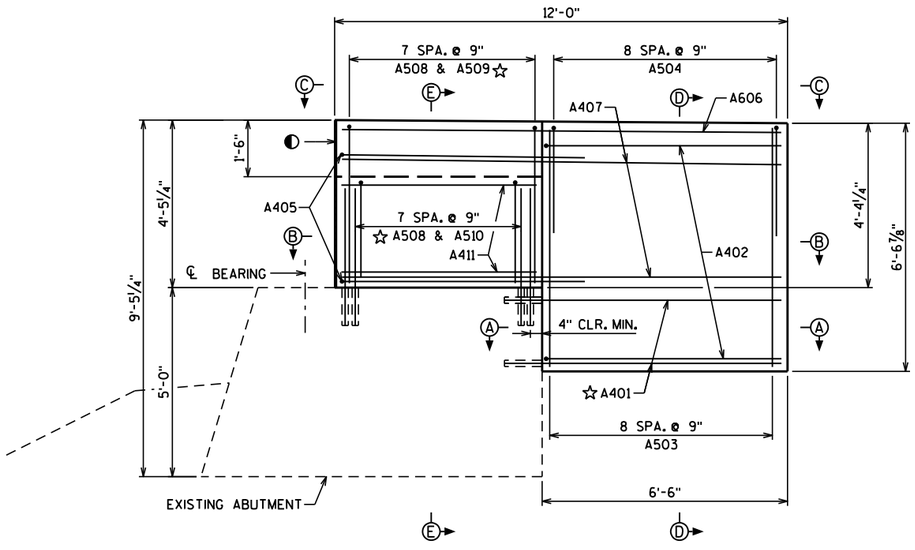
SECTION B-B



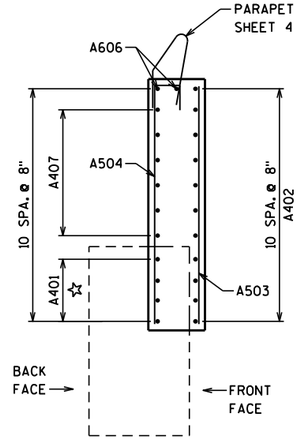
SECTION A-A



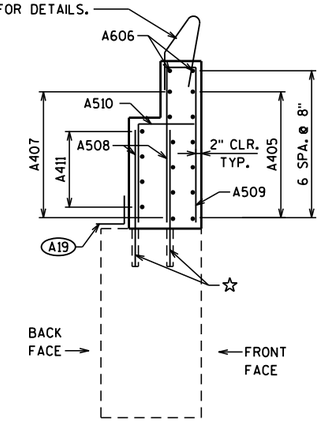
EXISTING WING REMOVAL



WING ELEVATION



SECTION D-D



SECTION E-E

NOTES

☆ ADHESIVE ANCHORS NO. 4 OR NO. 5 BARS. EMBED 12" INTO CONCRETE.

◑ ½" FILLER (INCLUDED IN WING LENGTH): 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.) EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

(A19) 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-36-52

DRAWN BY BRE | PLANS CK'D. KRO

SOUTH WEST WING REPLACEMENT

SHEET 3 OF 7

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STATE PROJECT NUMBER

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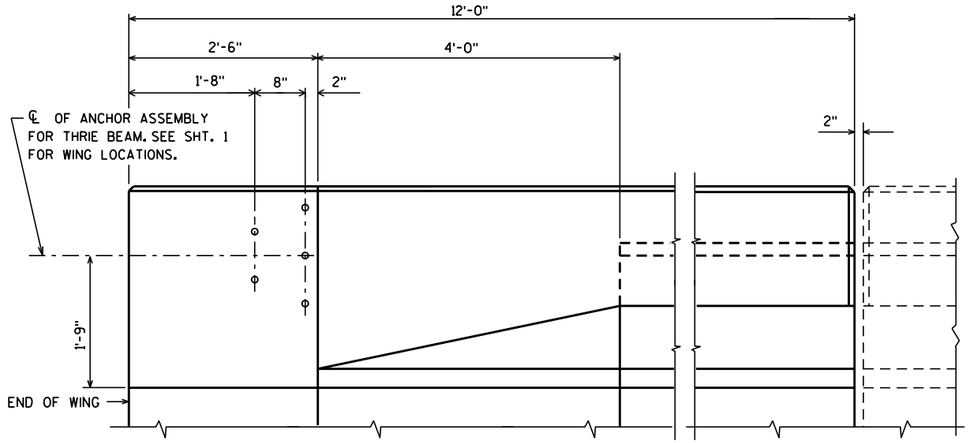
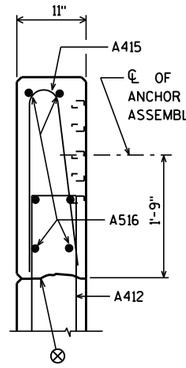
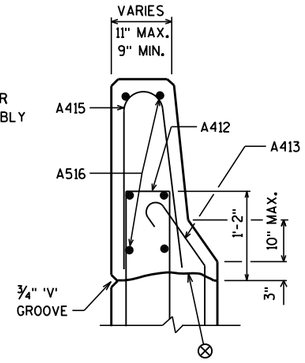


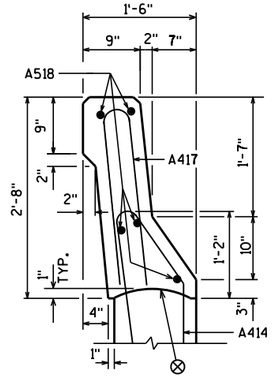
INSIDE ELEVATION



SECTION A



SECTION B



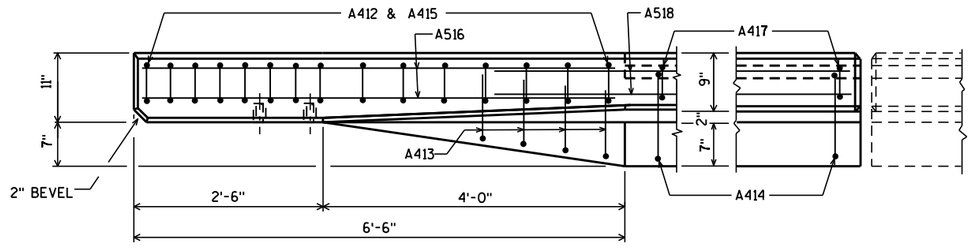
SECTION C

⊗ CONST. JOINT - STRIKE OFF AS SHOWN.

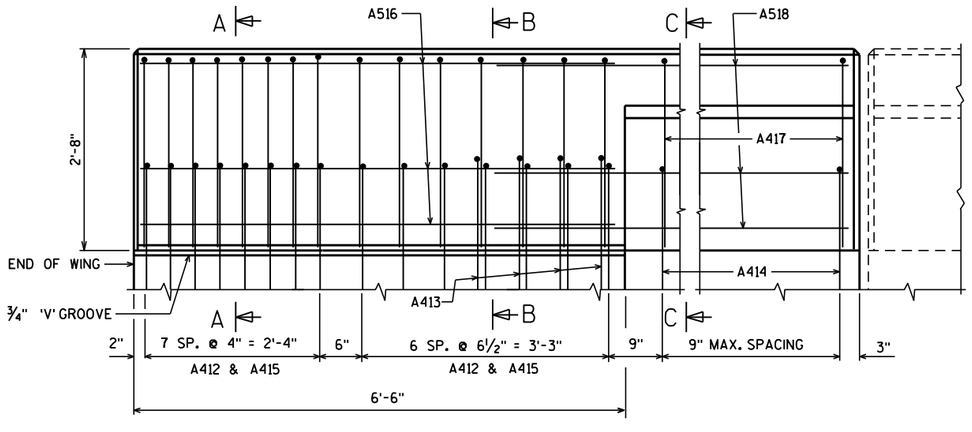
BILL OF BARS

	BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	LOCATION
☆	A401	X	4	7'-4"	X	WING - HORIZONTAL, B.F.
	A402	X	11	6'-11"	X	WING - HORIZONTAL, F.F.
	A503	X	9	6'-2"		WING - VERTICAL, F.F.
	A504	X	9	7'-5"	X	WING - VERTICAL, B.F.
	A405	X	6	6'-11"	X	WING - HORIZONTAL, F.F.
	A606	X	2	11'-7"	X	WING - HORIZONTAL, TOP
	A407	X	6	11'-7"	X	WING - HORIZONTAL, B.F.
☆	A508	X	16	3'-8"		WING - VERTICAL, B.F.
	A509	X	8	8'-6"	X	WING - VERTICAL, F.F.
	A510	X	8	4'-1"	X	WING - VERTICAL, B.F.
	A411	X	4	5'-1"		WING - HORIZONTAL, B.F.
	A412	X	15	4'-9"	X	PARAPET STIRRUPS
	A413	X	4	3'-1"	X	PARAPET - VERTICAL
	A414	X	8	4'-9"	X	PARAPET STIRRUPS
	A415	X	15	4'-9"	X	PARAPET - VERTICAL
	A516	X	6	6'-2"		PARAPET - HORIZONTAL
	A417	X	8	4'-10"	X	PARAPET - VERTICAL
	A518	X	5	7'-0"		PARAPET - HORIZONTAL

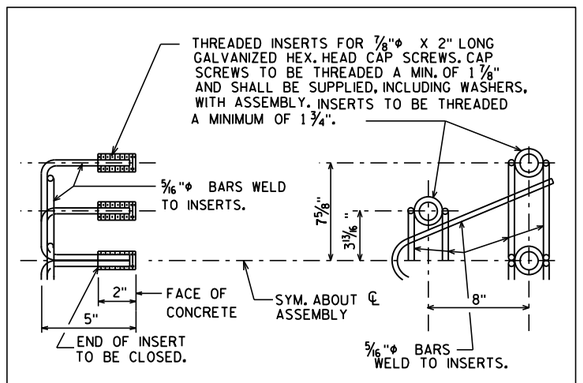
☆ ADHESIVE ANCHORS NO. 4 OR NO. 5 BARS. EMBED 12" INTO CONCRETE.



PLAN

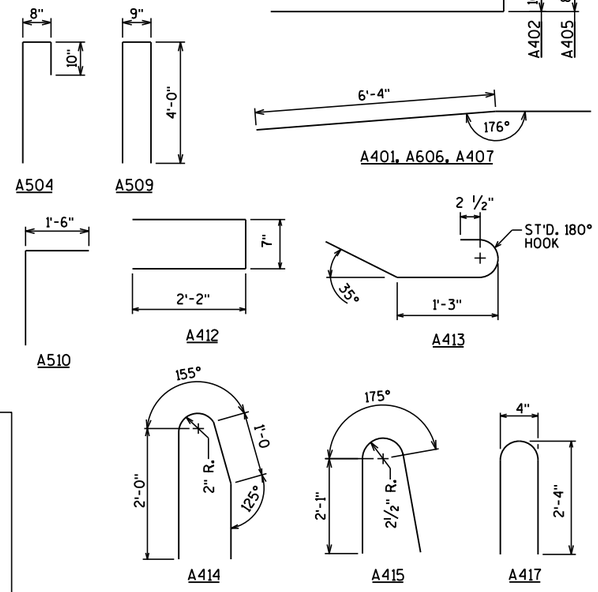


OUTSIDE ELEVATION



DETAIL OF ANCHOR ASSEMBLY

NOTE: HEX. HEAD CAP SCREWS & WASHERS TO BE GALVANIZED IN ACCORDANCE WITH AASHTO M232 CLASS C.



BAR BEND DIAGRAMS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-36-52

DRAWN BY BRE | PLANS CK'D. KRO

SW SLOPED FACE PARAPET "B"

SHEET 4 OF 7

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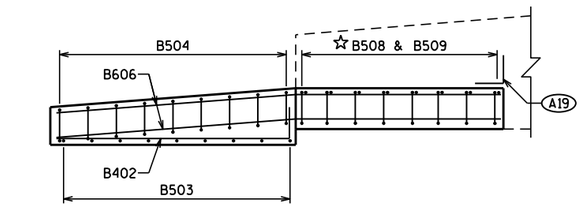
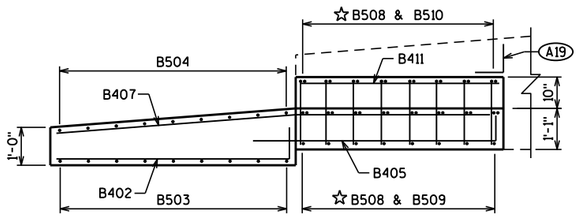
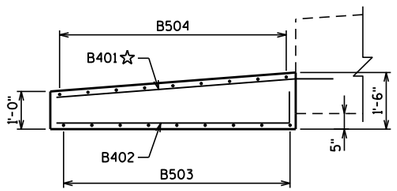
STATE PROJECT NUMBER
1224-21-73



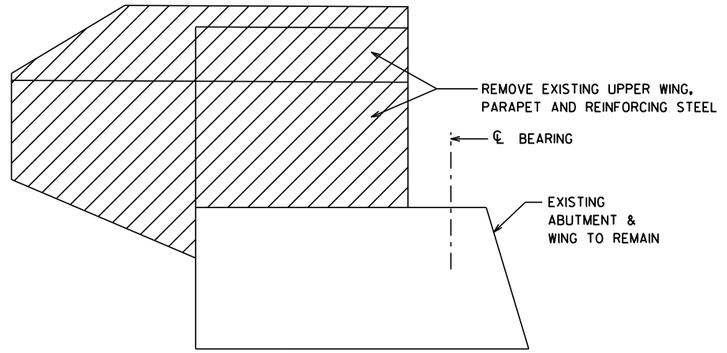
SECTION C-C



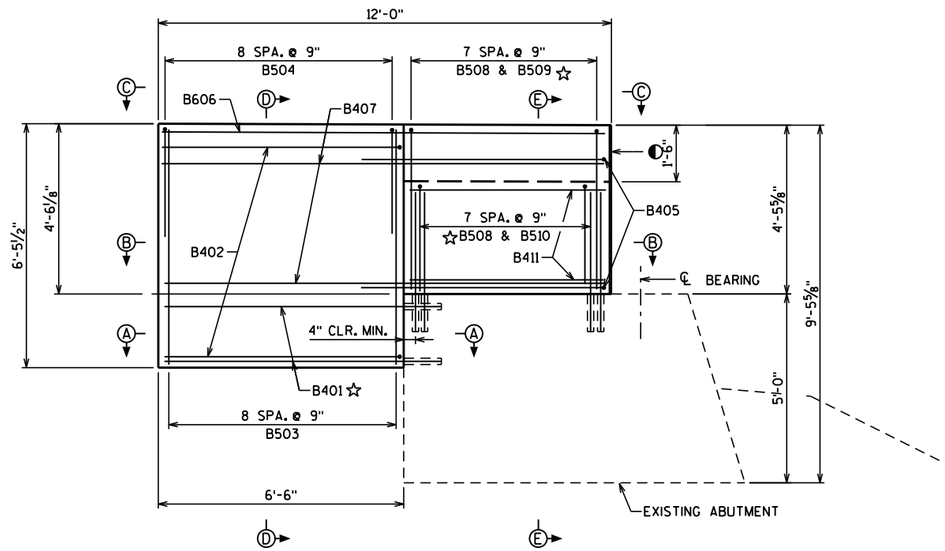
SECTION B-B



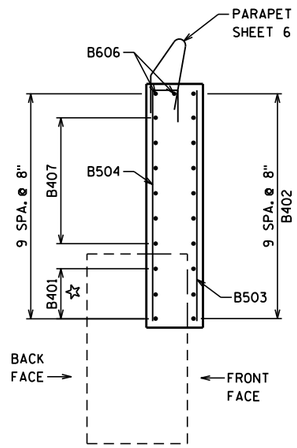
SECTION A-A



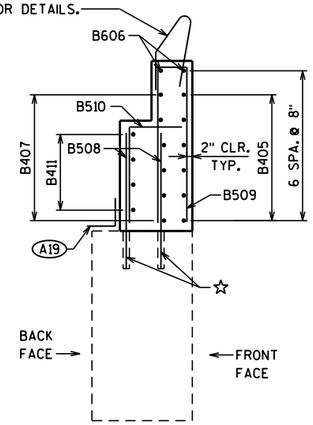
EXISTING WING REMOVAL



WING ELEVATION



SECTION D-D



SECTION E-E

NOTES

☆ ADHESIVE ANCHORS NO. 4 OR NO. 5 BARS. EMBED 12" INTO CONCRETE.

◑ ½" FILLER (INCLUDED IN WING LENGTH): 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.) EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

(A19) 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-36-52

DRAWN BY	BRE	PLANS CK'D.	KRO

NORTH WEST WING REPLACEMENT

SHEET 5 OF 7

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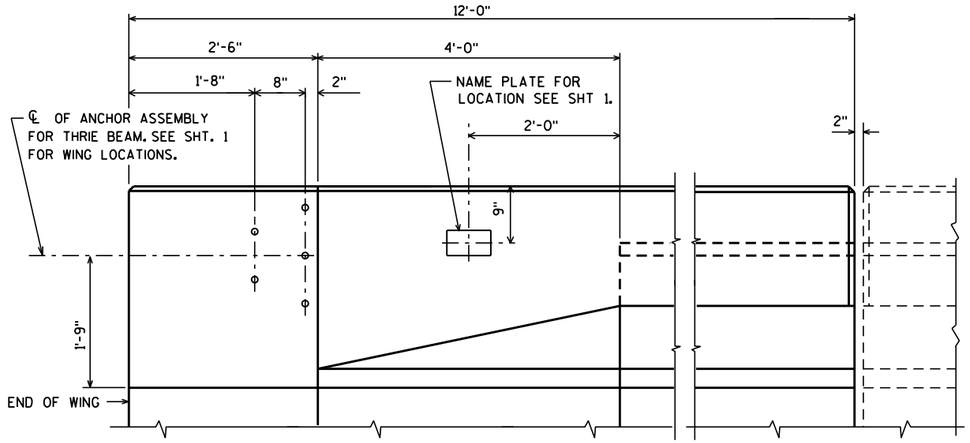
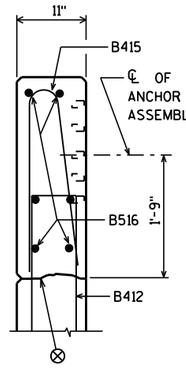
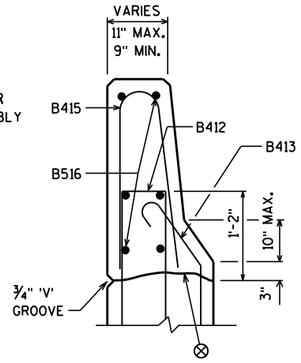
STATE PROJECT NUMBER
1224-21-73



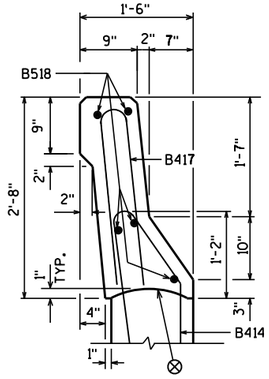
INSIDE ELEVATION



SECTION A



SECTION B



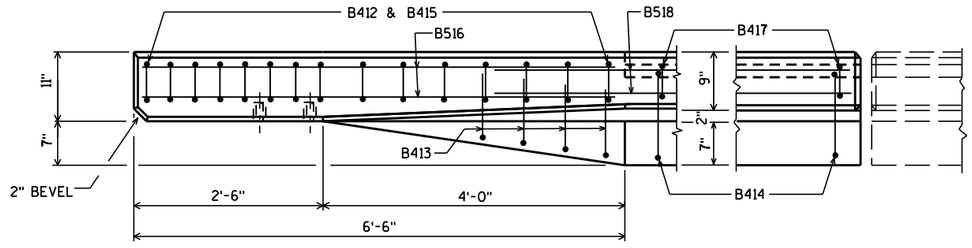
SECTION C

⊗ CONST. JOINT - STRIKE OFF AS SHOWN.

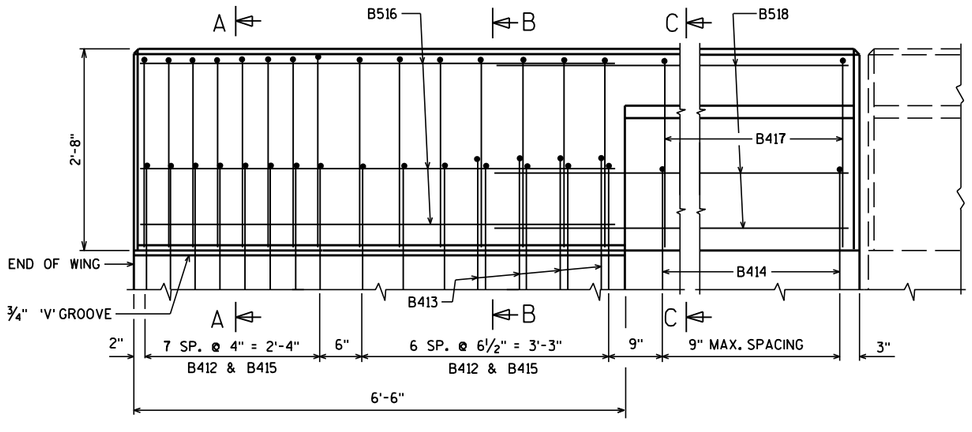
BILL OF BARS

	BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	LOCATION
☆	B401	X	3	7'-4"	X	WING - HORIZONTAL, B.F.
	B402	X	10	6'-11"	X	WING - HORIZONTAL, F.F.
	B503	X	9	6'-1"		WING - VERTICAL, F.F.
	B504	X	9	7'-4"	X	WING - VERTICAL, B.F.
	B405	X	6	6'-11"	X	WING - HORIZONTAL, F.F.
	B606	X	2	11'-7"	X	WING - HORIZONTAL, TOP
	B407	X	6	11'-7"	X	WING - HORIZONTAL, B.F.
☆	B508	X	16	3'-8"		WING - VERTICAL, B.F.
	B509	X	8	8'-8"	X	WING - VERTICAL, F.F.
	B510	X	8	4'-1"	X	WING - VERTICAL, B.F.
	B411	X	4	5'-1"		WING - HORIZONTAL, B.F.
	B412	X	15	4'-9"	X	PARAPET STIRRUPS
	B413	X	4	3'-1"	X	PARAPET - VERTICAL
	B414	X	8	4'-9"	X	PARAPET STIRRUPS
	B415	X	15	4'-9"	X	PARAPET - VERTICAL
	B516	X	6	6'-2"		PARAPET - HORIZONTAL
	B417	X	8	4'-10"	X	PARAPET - VERTICAL
	B518	X	5	7'-0"		PARAPET - HORIZONTAL

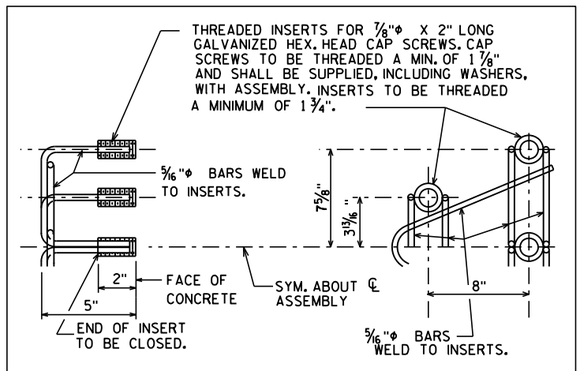
☆ ADHESIVE ANCHORS NO. 4 OR NO. 5 BARS. EMBED 12" INTO CONCRETE.



PLAN

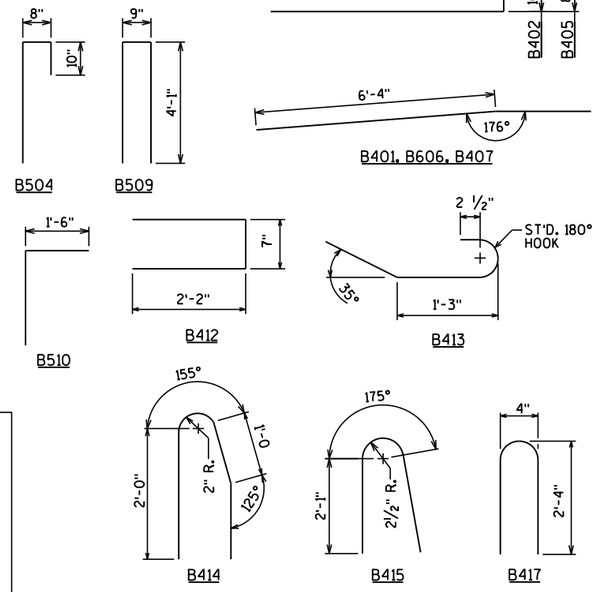


OUTSIDE ELEVATION



DETAIL OF ANCHOR ASSEMBLY

NOTE: HEX. HEAD CAP SCREWS & WASHERS TO BE GALVANIZED IN ACCORDANCE WITH AASHTO M232 CLASS C.



BAR BEND DIAGRAMS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-36-52

DRAWN BY BRE | PLANS CK'D. KRO

NW SLOPED FACE PARAPET "B"

SHEET 6 OF 7

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STATE PROJECT NUMBER
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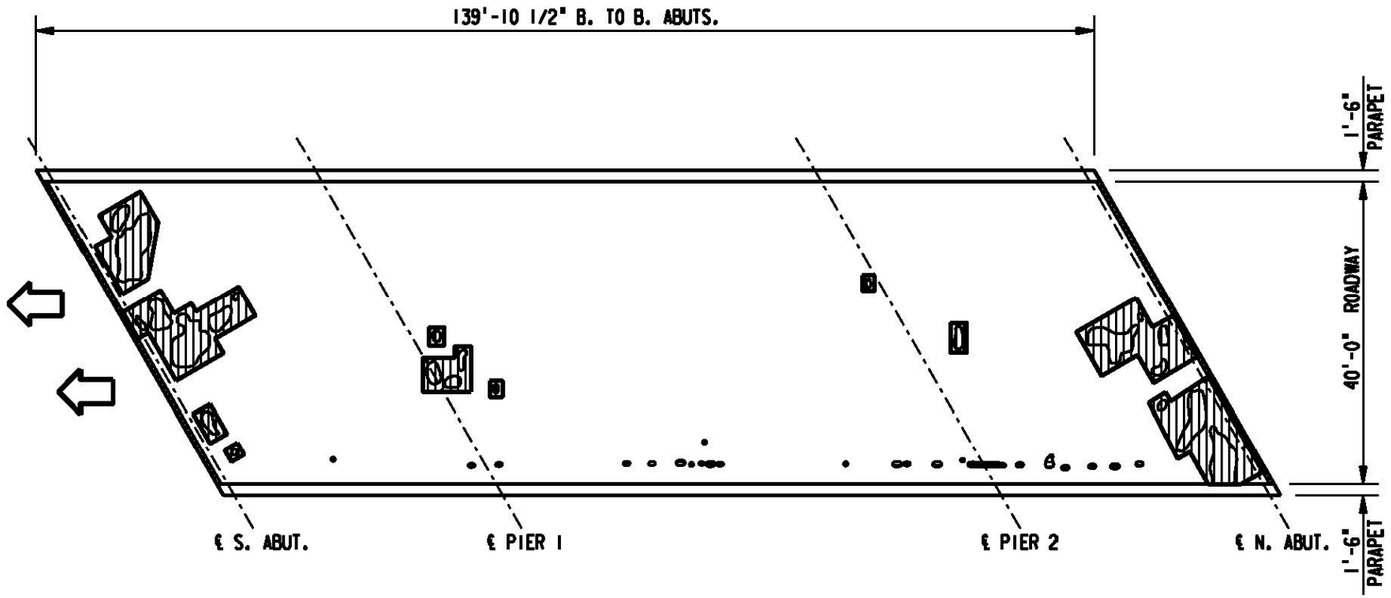
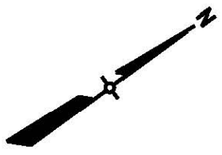


PLAN

PROPOSED REHAB AREAS



FIELD OBSERVATIONS SUMMARY		STRUCTURE NO. B-36-52	
ITEM	UNIT	QUANT.	%
TOTAL AREA	yd^2	621.3	
SHADE/DEBRIS	yd^2	0	
PREPARATION, DECKS, TYPE 1	yd^2	50.0	8.0
PREPARATION, DECKS, TYPE 2	yd^2	25.0	4.0
FULL DEPTH DECK REPAIR	yd^2	1.0	0.2

LEGEND

DECK PREPARATION AREA

SHADE/DEBRIS

DELAMINATION

SPALL

DEBOND

ASPHALT PATCH

CONCRETE PATCH

SURFACE TYPE: BITUMINOUS OVERLAY
INFRARED INSPECTION DATE: 7/21/15

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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-36-52

DRAWN BY BRE | PLANS CK'D. KRO

DECK REPAIR

SHEET 7 OF 7

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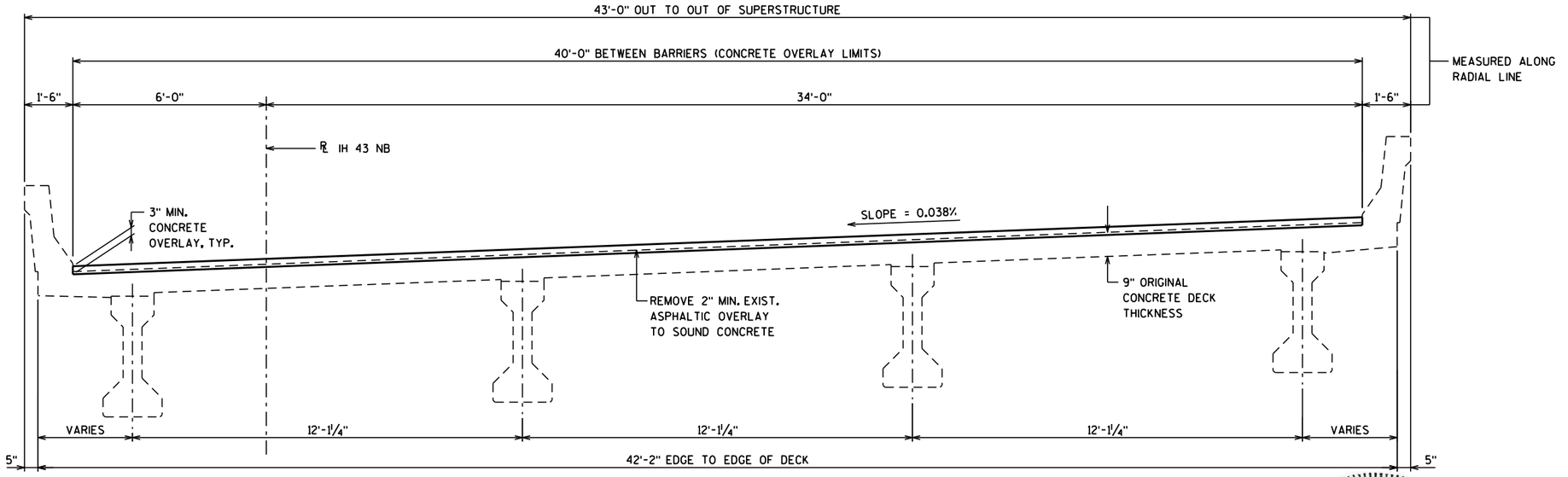
FILE NAME : F:±TR±JOBS±E2041A12±Sheets±Bridges±B-36-52±B-36-52 07 deck repair.dgn PLOT BY : olsonk PLOT DATE: 5/28/2016 4:45:48 PM

STATE PROJECT NUMBER
1224-21-73



CROSS SECTION THRU EXISTING ROADWAY

(LOOKING NORTH)

TRAFFIC DATA

ADT = 11,800 (2036)
RDS = 70 M.P.H.

DESIGN DATA

LIVE LOAD:

INVENTORY RATING: HS-13
OPERATING RATING: HS-27
WISCONSIN STANDARD PERMIT VEHICLE (Wis-SPV): 165 KIPS

MATERIAL PROPERTIES:

CONCRETE MASONRY OVERLAY DECKS & PARAPETS: —— f'c = 4,000 p.s.i.
OTHER: —— f'c = 3,500 p.s.i.
BAR STEEL REINFORCEMENT GRADE 60: —— fy = 60,000 p.s.i.

LIST OF DRAWINGS

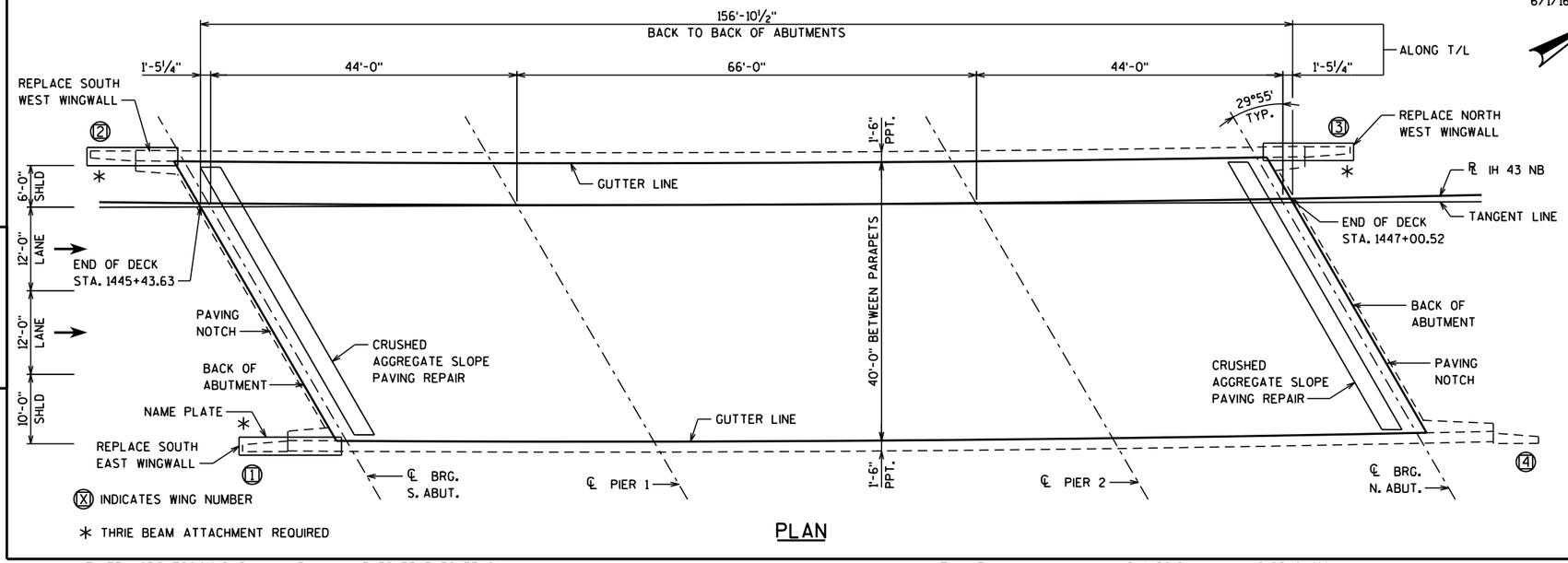
1. GENERAL PLAN
2. GENERAL NOTES & QUANTITIES
3. SOUTH EAST WING REPLACEMENT
4. SE SLOPED FACE PARAPET "B"
5. SOUTH WEST WING REPLACEMENT
6. SW SLOPED FACE PARAPET "B"
7. NORTH WEST WING REPLACEMENT
8. NW SLOPED FACE PARAPET "B"
9. DECK REPAIR

BRIDGE OFFICE CONTACT

WILLIAM DREHER
(608) 266-8489

CONSULTANT CONTACT

KRISTOFER OLSON
OMNNI ASSOCIATES
(920) 735-6900



PLAN

CURVE DATA

IH 43 NB

P.I. = STA 594'N'+91.75
△ = 31°59'36"
T = 1642.57'
L = 3199.34'
R = 5729.58'
S.E. = 0.038%
P.C. = STA 578'N'+49.18
P.T. = STA 610'N'+48.52

NO.	DATE	REVISION	BY

ORIGINAL PLANS PREPARED BY
OMNNI ASSOCIATES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher SDR 08/09/16
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE B-36-53

IH 43 NB OVER CARSTENS LAKE ROAD

COUNTY	TOWN
MANITOWOC	NEWTON

DESIGN SPEC. REHABILITATION N/A

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
BRE	KRO	BRE	KRO

GENERAL PLAN

SHEET 1 OF 9

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STATE PROJECT NUMBER
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GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

USE EXSTING BAR STEEL REINFORCEMENT WHERE SHOWN AND EXTEND 24 BAR DIAMETERS INTO NEW WORK.

DIMENSIONS SHOWN ARE BASED ON THE EXISTING ORIGINAL STRUCTURE PLANS.

AT ABUTMENTS, ALL SPACES EXCAVATED AND NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH "BACKFILL STRUCTURE TYPE A".

PROFILE GRADE LINE SHALL BE DETERMINED IN THE FIELD BASED ON A MINIMUM OVERLAY THICKNESS OF 3" PLACED ABOVE THE DECK SURFACE AFTER "CLEANING DECKS". EXPECTED AVERAGE OVERLAY THICKNESS IS 3" (OR AS GIVEN ON THE PLANS). IF EXPECTED AVERAGE OVERLAY THICKNESS IS EXCEEDED BY MORE THAN ½", CONTACT THE STRUCTURES DESIGN SECTION.

THE EXISTING BITUMINOUS ASPHALTIC OVERLAY SHALL BE REMOVED FROM THE BRIDGE DECK UNDER BID ITEM "REMOVING ASPHALTIC CONCRETE DECK OVERLAY".

PREPARATION DECKS TYPE 1, PREPARATION DECKS TYPE 2, CONCRETE SURFACE REPAIR AND FULL-DEPTH DECK REPAIR AREAS SHALL BE DETERMINED BY THE FIELD ENGINEER. "CONCRETE SURFACE REPAIR" TO INCLUDE BUT NOT LIMITED TO THE NORTH & SOUTH ABUTMENTS AND EAST & WEST PARAPETS.

REMOVAL LINES NOT COVERED WITH A CONCRETE OVERLAY SHALL BE DEFINED BY A 1" DEEP SAW CUT AT THE CONCRETE SURFACES.

PROTECTIVE SURFACE TREATMENT SHALL BE APPLIED TO THE ENTIRE TOP SURFACE OF THE NEW CONCRETE OVERLAY. PIGMENTED PROTECTIVE SURFACE TREATMENT SHALL BE APPLIED TO THE ENTIRE FRONT FACES AND TOPS OF BOTH WING & DECK PARAPETS.

THE CONTRACTOR SHALL SUPPLY A NEW NAME PLATE IN ACCORDANCE WITH SECTION 502.3.11 OF THE STANDARD SPECIFICATIONS AND THE STANDARD DETAIL DRAWINGS. NAME PLATE TO SHOW ORIGINAL CONSTRUCTION YEAR OF 1979.

A MINIMUM OF 1-INCH OF CONCRETE SHALL BE REMOVED FROM THE ENTIRE BRIDGE DECK UNDER THE BID ITEM "CLEANING DECKS".

THE UPPER LIMITS OF EXCAVATION SHALL BE THE EXISTING GROUND LINE.

TOTAL ESTIMATED QUANTITIES

	ITEM NUMBER	BID ITEMS	UNIT	TOTALS
	203.0200	REMOVING OLD STRUCTURE (STA 1446+22)	LS	1
	206.1000	EXCAVATION FOR STRUCTURES BRIDGES (B-36-53)	LS	1
	210.1100	BACKFILL STRUCTURE TYPE A	CY	90
	502.0100	CONCRETE MASONRY BRIDGES	CY	14
	502.3200	PROTECTIVE SURFACE TREATMENT	SY	697
	502.3210	PIGMENTED SURFACE SEALER	SY	141
	502.4204	ADHESIVE ANCHORS NO.4 BARS	EACH	12
	502.4205	ADHESIVE ANCHORS NO.5 BARS	EACH	52
	505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	2,260
	509.0301	PREPARATION DECKS TYPE 1	SY	27
	509.0302	PREPARATION DECKS TYPE 2	SY	7
	509.0500	CLEANING DECKS	SY	697
	509.1500	CONCRETE SURFACE REPAIR	SF	56
	509.2000	FULL-DEPTH DECK REPAIR	SY	1
☆	509.2500	CONCRETE MASONRY OVERLAY DECKS	CY	60
	509.9010.S	REMOVING ASPHALTIC CONCRETE DECK OVERLAY (B-36-53)	SY	697
	509.9050.S	CLEANING PARAPETS	LF	329
	516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	6
	604.9010.S	SLOPE PAVING REPAIR CRUSHED AGGREGATE	CY	11
	614.0150	ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	3

☆ BID ITEM ALSO INCLUDES CONCRETE FOR:
"PREPARATION DECKS TYPE 1"
"PREPARATION DECKS TYPE 2"
"FULL-DEPTH DECK REPAIR"

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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-36-53

DRAWN BY BRE | PLANS CK'D. KRO

GENERAL NOTES & QUANTITIES

SHEET 2 OF 9

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STATE PROJECT NUMBER
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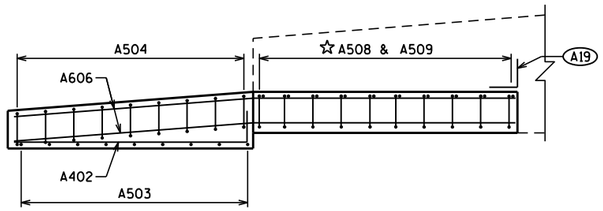
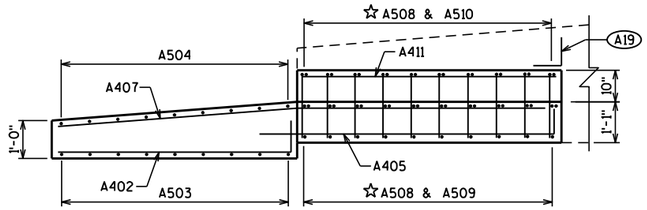
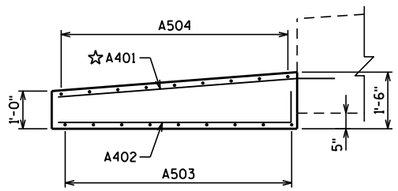


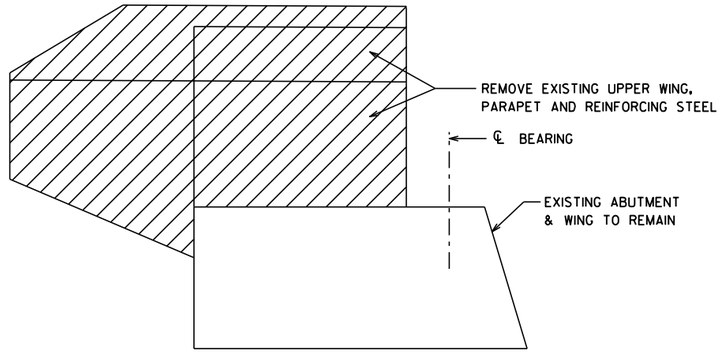
SECTION C-C



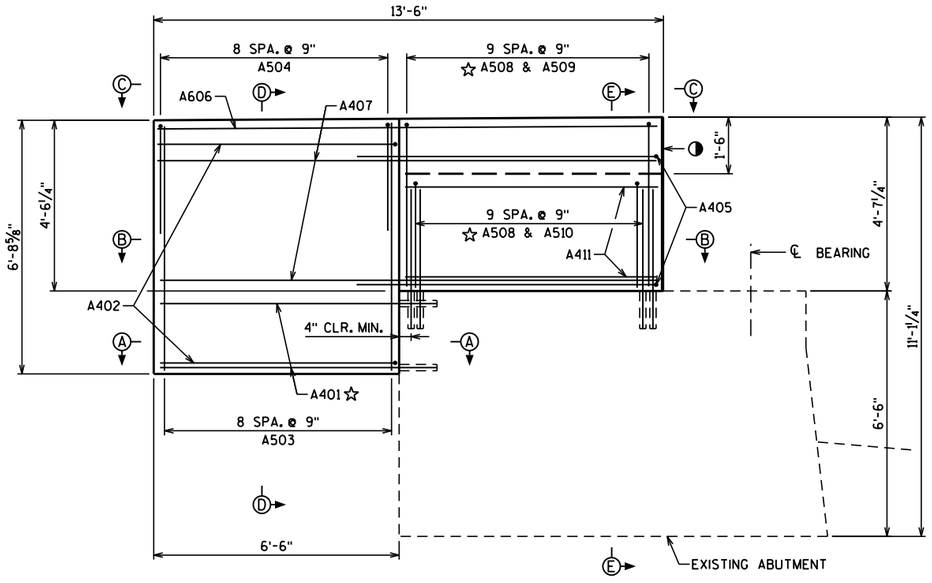
SECTION B-B



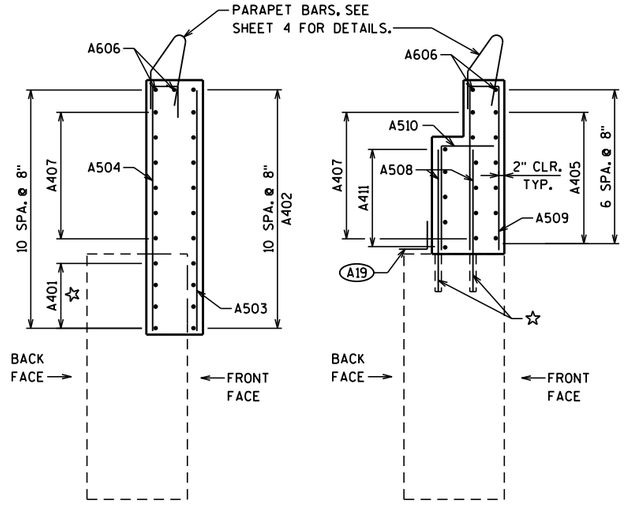
SECTION A-A



EXISTING WING REMOVAL



WING ELEVATION



SECTION D-D

SECTION E-E

NOTES

☆ ADHESIVE ANCHORS NO. 4 OR NO. 5 BARS. EMBED 12" INTO CONCRETE.

◑ ½" FILLER (INCLUDED IN WING LENGTH): 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.) EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

(A19) 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-36-53

DRAWN BY BRE | PLANS CK'D. KRO

SOUTH EAST
WING REPLACEMENT

SHEET 3 OF 9

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STATE PROJECT NUMBER

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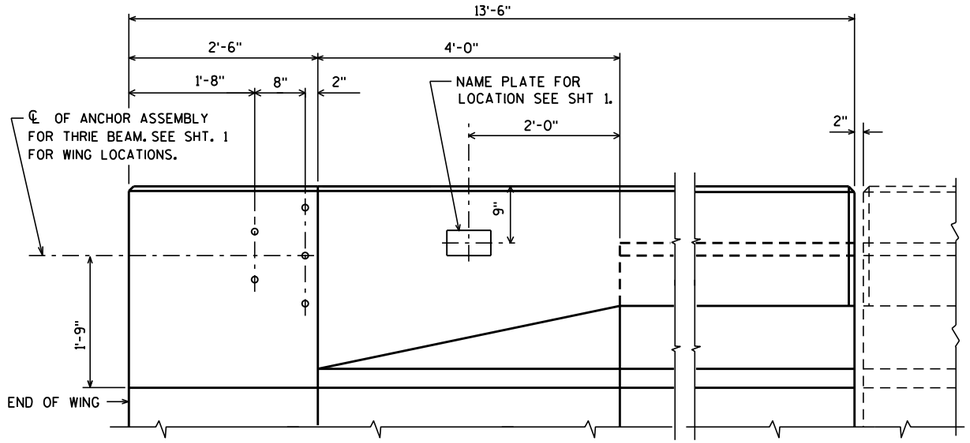
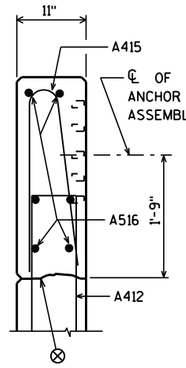
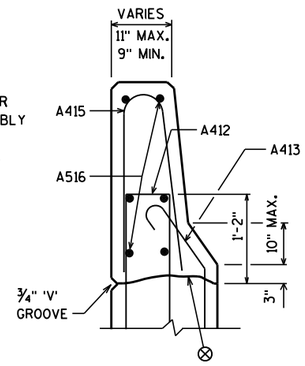


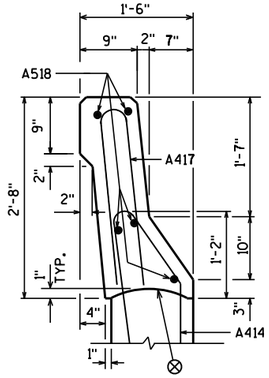
INSIDE ELEVATION



SECTION A



SECTION B



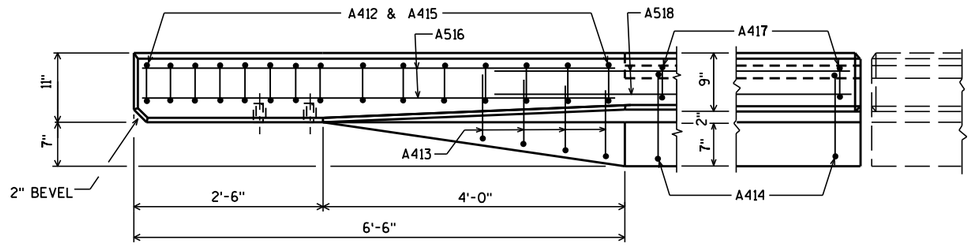
SECTION C

⊗ CONST. JOINT - STRIKE OFF AS SHOWN.

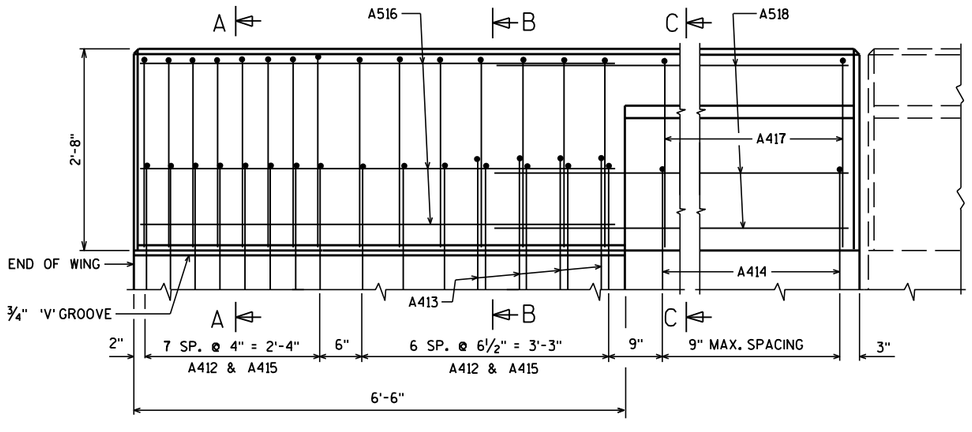
BILL OF BARS

	BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	LOCATION
☆	A401	X	4	7'-4"	X	WING - HORIZONTAL, B.F.
	A402	X	11	6'-11"	X	WING - HORIZONTAL, F.F.
	A503	X	9	6'-3"		WING - VERTICAL, F.F.
	A504	X	9	7'-6"	X	WING - VERTICAL, B.F.
	A405	X	6	8'-5"	X	WING - HORIZONTAL, F.F.
	A606	X	2	13'-1"	X	WING - HORIZONTAL, TOP
☆	A407	X	6	13'-1"	X	WING - HORIZONTAL, B.F.
	A508	X	20	3'-11"		WING - VERTICAL, B.F.
	A509	X	10	9'-0"	X	WING - VERTICAL, F.F.
	A510	X	10	4'-2"	X	WING - VERTICAL, B.F.
	A411	X	5	6'-7"		WING - HORIZONTAL, B.F.
	A412	X	15	4'-9"	X	PARAPET STIRRUPS
	A413	X	4	3'-1"	X	PARAPET - VERTICAL
	A414	X	10	4'-9"	X	PARAPET STIRRUPS
	A415	X	15	4'-9"	X	PARAPET - VERTICAL
	A516	X	6	6'-2"		PARAPET - HORIZONTAL
	A417	X	10	4'-10"	X	PARAPET - VERTICAL
	A518	X	5	8'-6"		PARAPET - HORIZONTAL

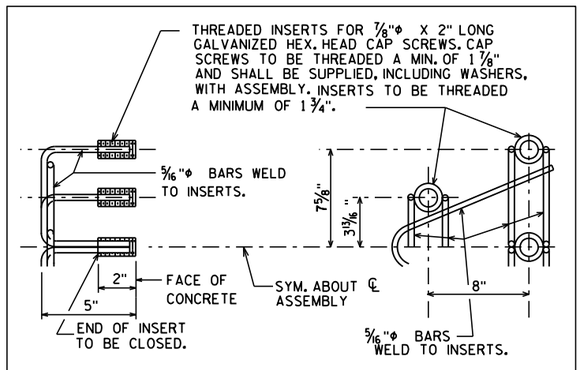
☆ ADHESIVE ANCHORS NO. 4 OR NO. 5 BARS. EMBED 12" INTO CONCRETE.



PLAN

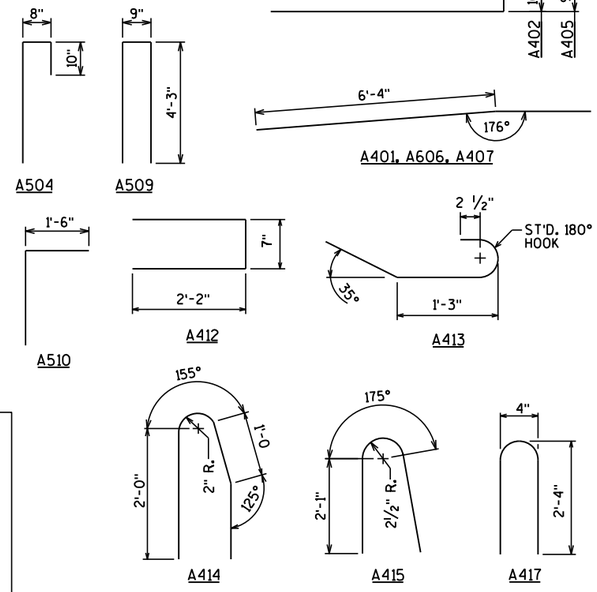


OUTSIDE ELEVATION



DETAIL OF ANCHOR ASSEMBLY

NOTE: HEX. HEAD CAP SCREWS & WASHERS TO BE GALVANIZED IN ACCORDANCE WITH AASHTO M232 CLASS C.



BAR BEND DIAGRAMS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-36-53

DRAWN BY BRE | PLANS CK'D. KRO

SE SLOPED FACE PARAPET "B"

SHEET 4 OF 9

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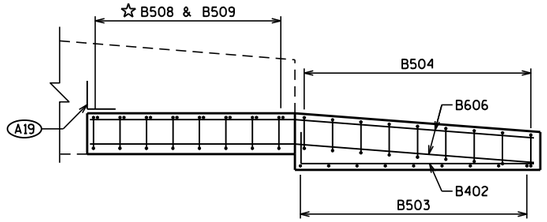
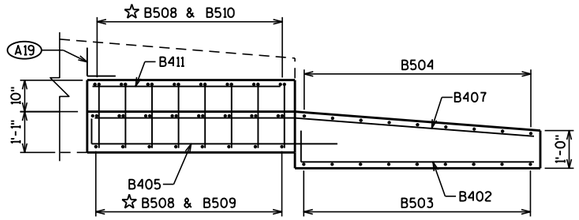
8

8

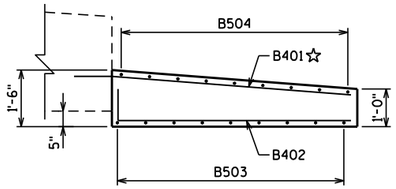
STATE PROJECT NUMBER
1224-21-73



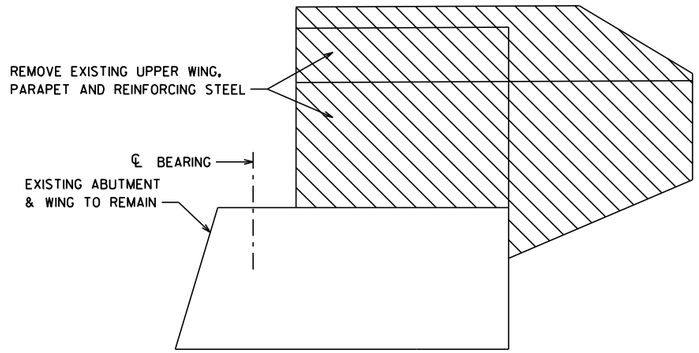
SECTION C-C



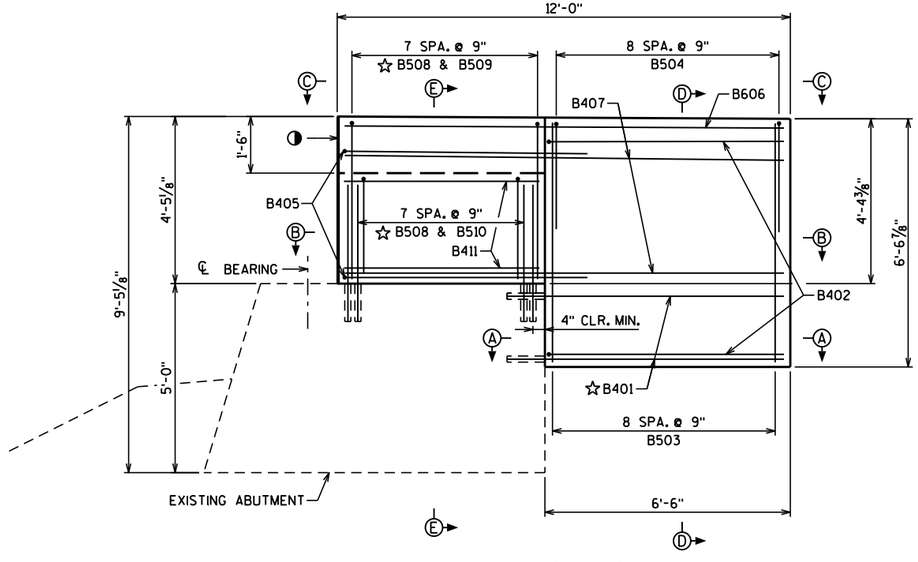
SECTION B-B



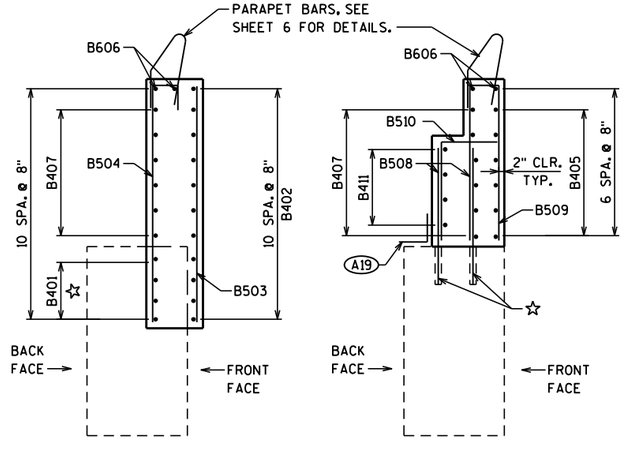
SECTION A-A



EXISTING WING REMOVAL



WING ELEVATION



SECTION D-D

SECTION E-E

NOTES

☆ ADHESIVE ANCHORS NO. 4 OR NO. 5 BARS. EMBED 12" INTO CONCRETE.

◑ 1/2" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE.) EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

(A19) 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-36-53

DRAWN BY	BRE	PLANS CK'D.	KRO

SOUTH WEST WING REPLACEMENT

SHEET 5 OF 9

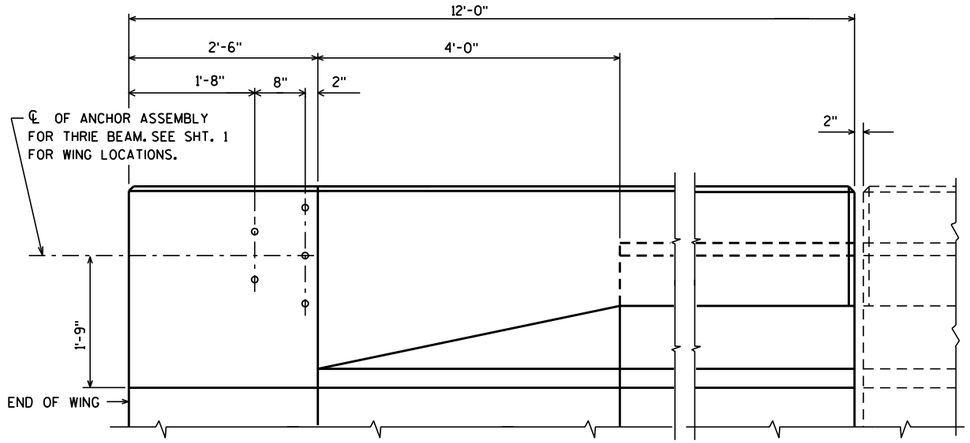
345

8

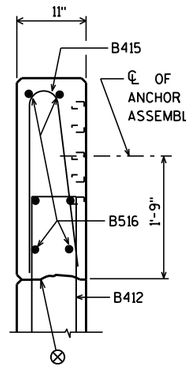
8

STATE PROJECT NUMBER

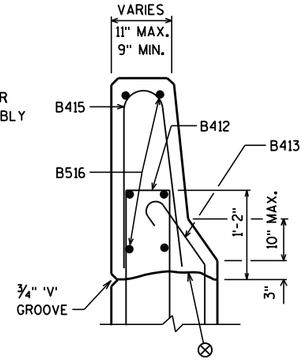
1224-21-73



INSIDE ELEVATION



SECTION A



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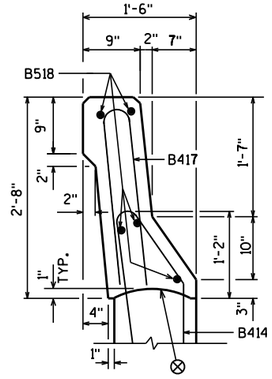


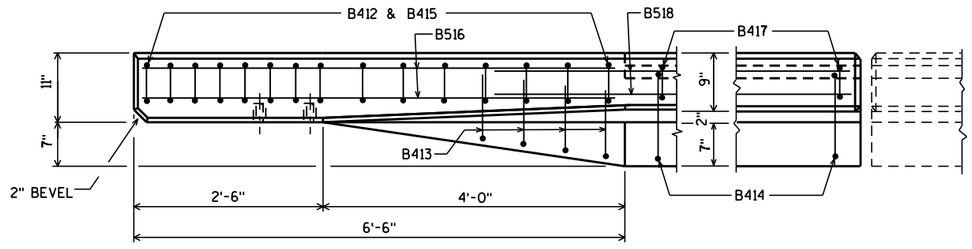
SECTION C

⊗ CONST. JOINT - STRIKE OFF AS SHOWN.

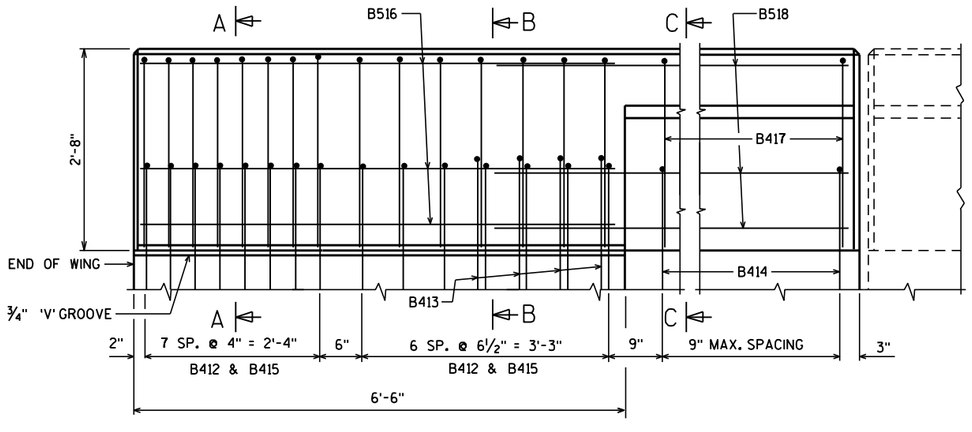
BILL OF BARS

	BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	LOCATION
☆	B401	X	4	7'-4"	X	WING - HORIZONTAL, B.F.
	B402	X	11	6'-11"	X	WING - HORIZONTAL, F.F.
	B503	X	9	6'-2"		WING - VERTICAL, F.F.
	B504	X	9	7'-5"	X	WING - VERTICAL, B.F.
	B405	X	6	6'-11"	X	WING - HORIZONTAL, F.F.
	B606	X	2	11'-7"	X	WING - HORIZONTAL, TOP
	B407	X	6	11'-7"	X	WING - HORIZONTAL, B.F.
☆	B508	X	16	3'-9"		WING - VERTICAL, B.F.
	B509	X	8	8'-8"	X	WING - VERTICAL, F.F.
	B510	X	8	4'-0"	X	WING - VERTICAL, B.F.
	B411	X	4	5'-1"		WING - HORIZONTAL, B.F.
	B412	X	15	4'-9"	X	PARAPET STIRRUPS
	B413	X	4	3'-1"	X	PARAPET - VERTICAL
	B414	X	8	4'-9"	X	PARAPET STIRRUPS
	B415	X	15	4'-9"	X	PARAPET - VERTICAL
	B516	X	6	6'-2"		PARAPET - HORIZONTAL
	B417	X	8	4'-10"	X	PARAPET - VERTICAL
	B518	X	5	7'-0"		PARAPET - HORIZONTAL

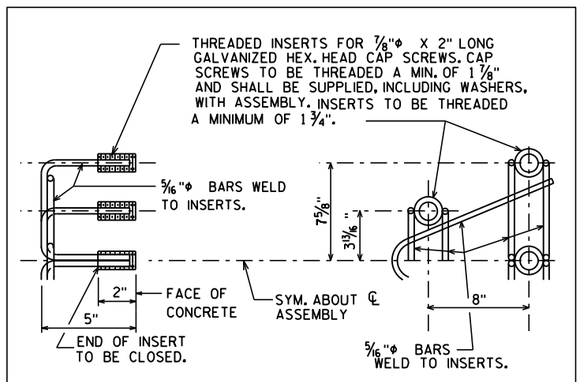
☆ ADHESIVE ANCHORS NO. 4 OR NO. 5 BARS. EMBED 12" INTO CONCRETE.



PLAN

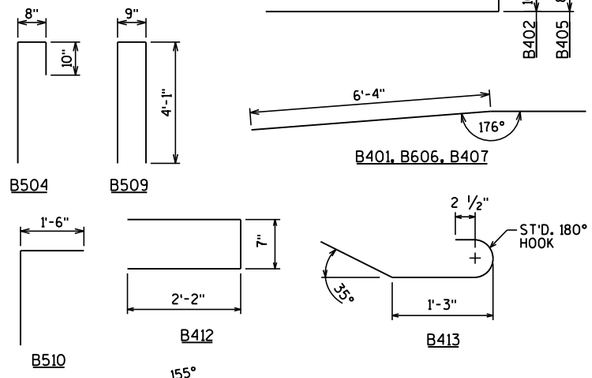


OUTSIDE ELEVATION



DETAIL OF ANCHOR ASSEMBLY

NOTE: HEX. HEAD CAP SCREWS & WASHERS TO BE GALVANIZED IN ACCORDANCE WITH AASHTO M232 CLASS C.



BAR BEND DIAGRAMS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-36-53

DRAWN BY BRE | PLANS CK'D. KRO

SW SLOPED FACE PARAPET "B"

SHEET 6 OF 9

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8

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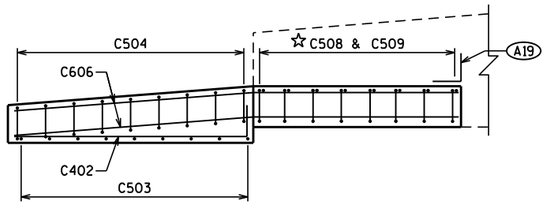
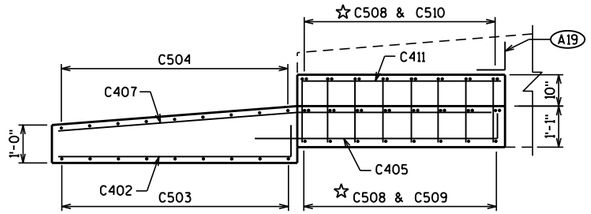
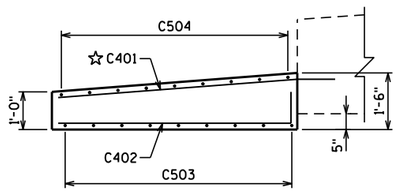
STATE PROJECT NUMBER
1224-21-73



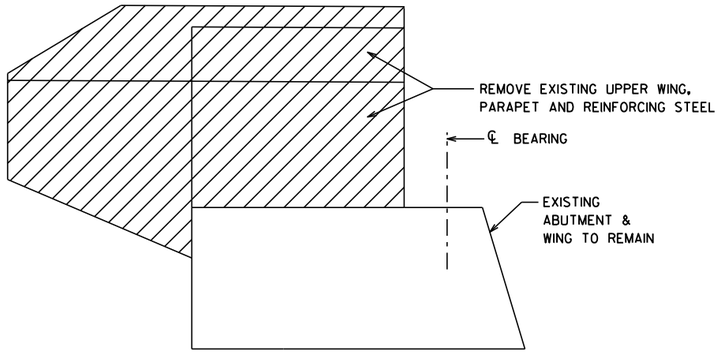
SECTION C-C



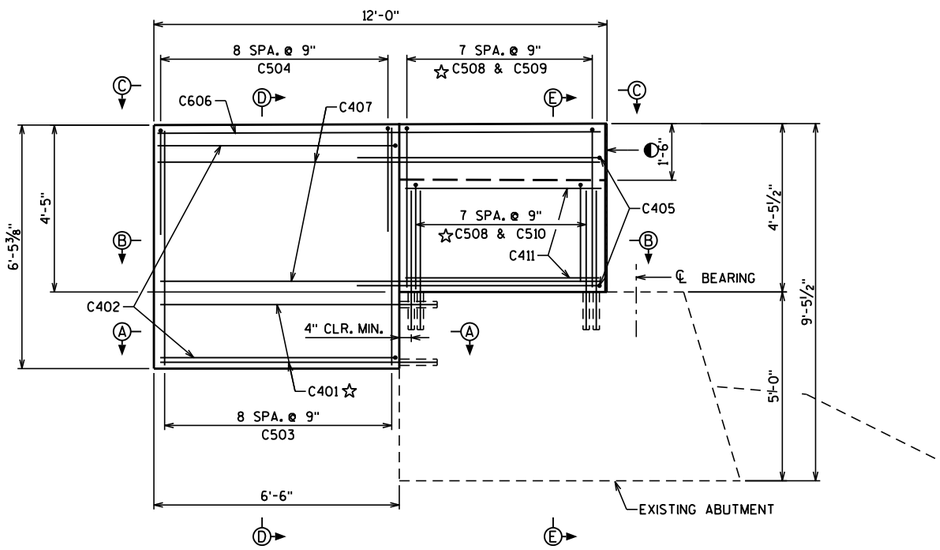
SECTION B-B



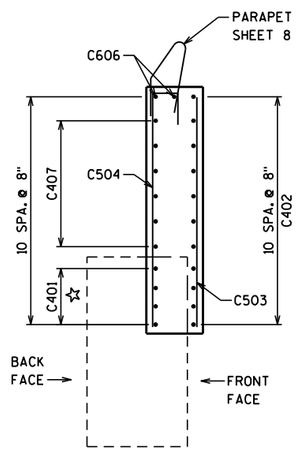
SECTION A-A



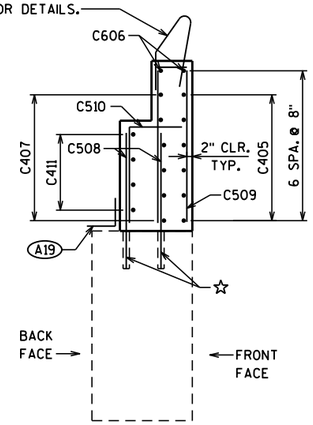
EXISTING WING REMOVAL



WING ELEVATION



SECTION D-D



SECTION E-E

NOTES

☆ ADHESIVE ANCHORS NO. 4 OR NO. 5 BARS. EMBED 12" INTO CONCRETE.

◑ ½" FILLER (INCLUDED IN WING LENGTH): 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.) EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

(A19) 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-36-53

DRAWN BY BRE | PLANS CK'D. KRO

NORTH WEST
WING REPLACEMENT

SHEET 7 OF 9

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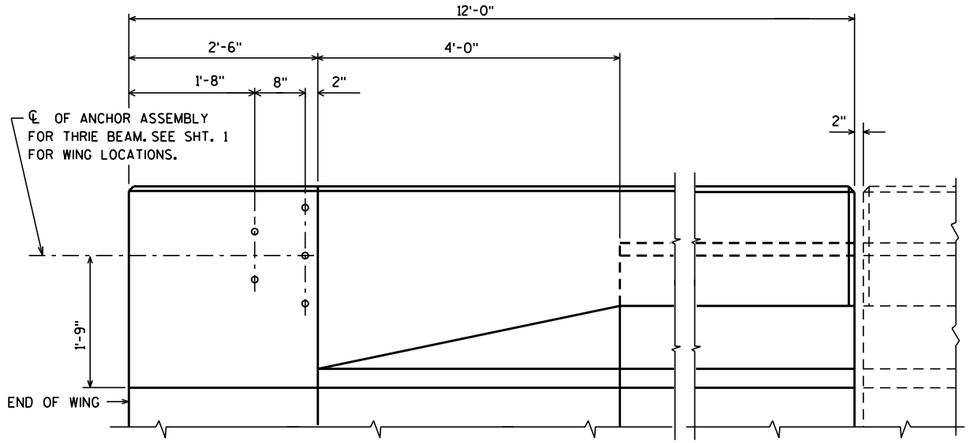
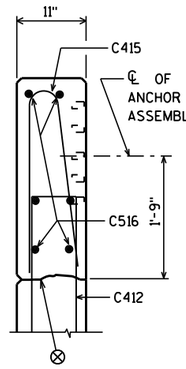
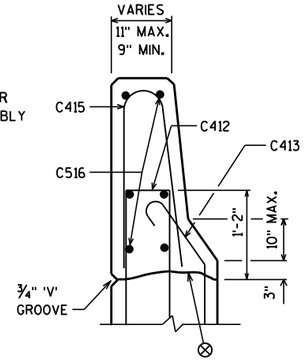
STATE PROJECT NUMBER
1224-21-73



INSIDE ELEVATION



SECTION A



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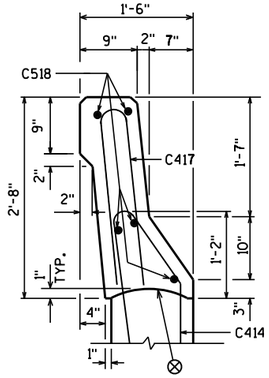

SECTION C

⊗ CONST. JOINT - STRIKE OFF AS SHOWN.

BILL OF BARS

	BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	LOCATION
☆	C401	X	4	7'-4"	X	WING - HORIZONTAL, B.F.
	C402	X	11	6'-11"	X	WING - HORIZONTAL, F.F.
	C503	X	9	6'-1"		WING - VERTICAL, F.F.
	C504	X	9	7'-4"	X	WING - VERTICAL, B.F.
	C405	X	6	6'-11"	X	WING - HORIZONTAL, F.F.
	C606	X	2	11'-7"	X	WING - HORIZONTAL, TOP
	C407	X	6	11'-7"	X	WING - HORIZONTAL, B.F.
☆	C508	X	16	3'-9"		WING - VERTICAL, B.F.
	C509	X	8	8'-8"	X	WING - VERTICAL, F.F.
	C510	X	8	4'-0"	X	WING - VERTICAL, B.F.
	C411	X	4	5'-1"		WING - HORIZONTAL, B.F.
	C412	X	15	4'-9"	X	PARAPET STIRRUPS
	C413	X	4	3'-1"	X	PARAPET - VERTICAL
	C414	X	8	4'-9"	X	PARAPET STIRRUPS
	C415	X	15	4'-9"	X	PARAPET - VERTICAL
	C516	X	6	6'-2"		PARAPET - HORIZONTAL
	C417	X	8	4'-10"	X	PARAPET - VERTICAL
	C518	X	5	7'-0"		PARAPET - HORIZONTAL

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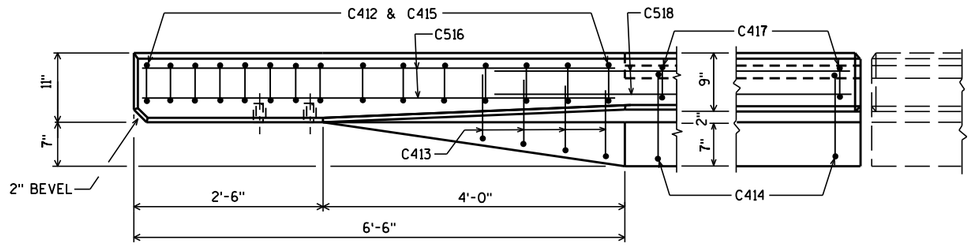
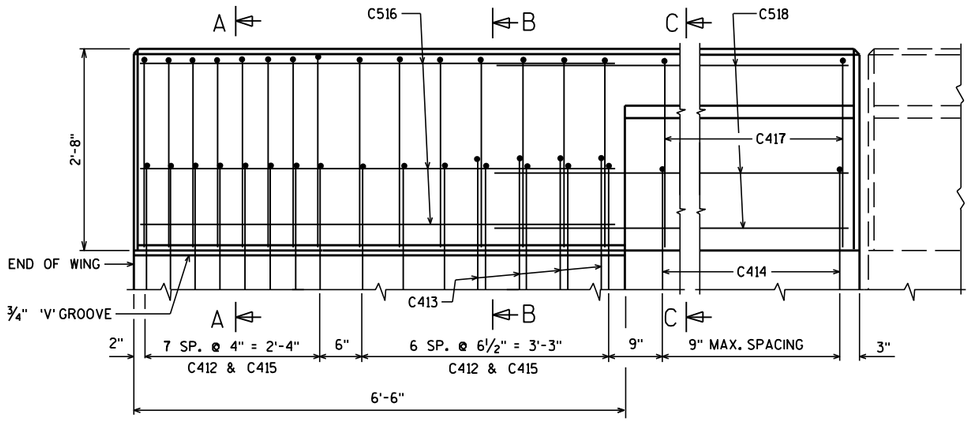
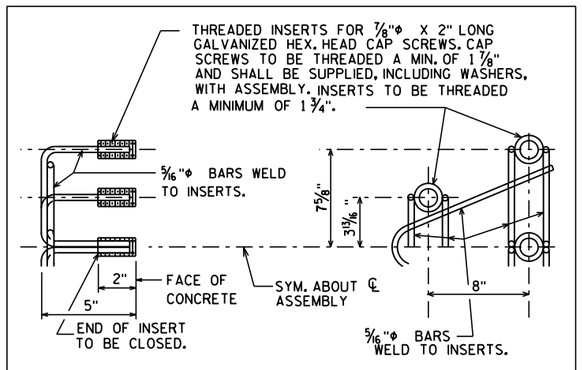


PLAN

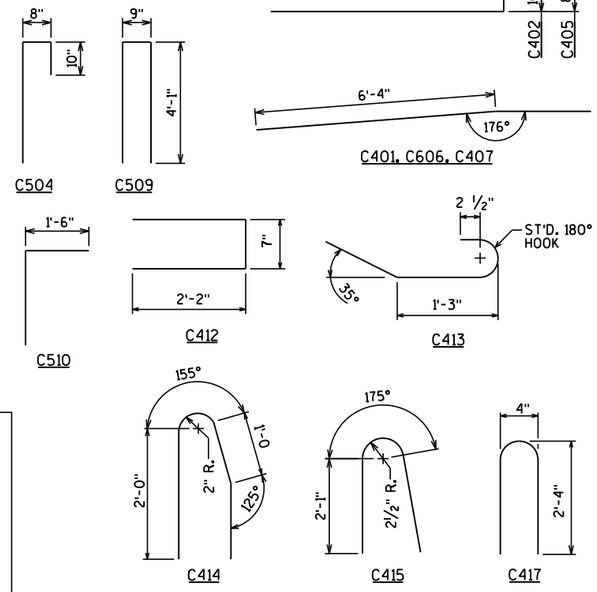


OUTSIDE ELEVATION



DETAIL OF ANCHOR ASSEMBLY

NOTE: HEX. HEAD CAP SCREWS & WASHERS TO BE GALVANIZED IN ACCORDANCE WITH AASHTO M232 CLASS C.



BAR BEND DIAGRAMS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-36-53

DRAWN BY BRE | PLANS CK'D. KRO

NW SLOPED FACE PARAPET "B"

SHEET 8 OF 9

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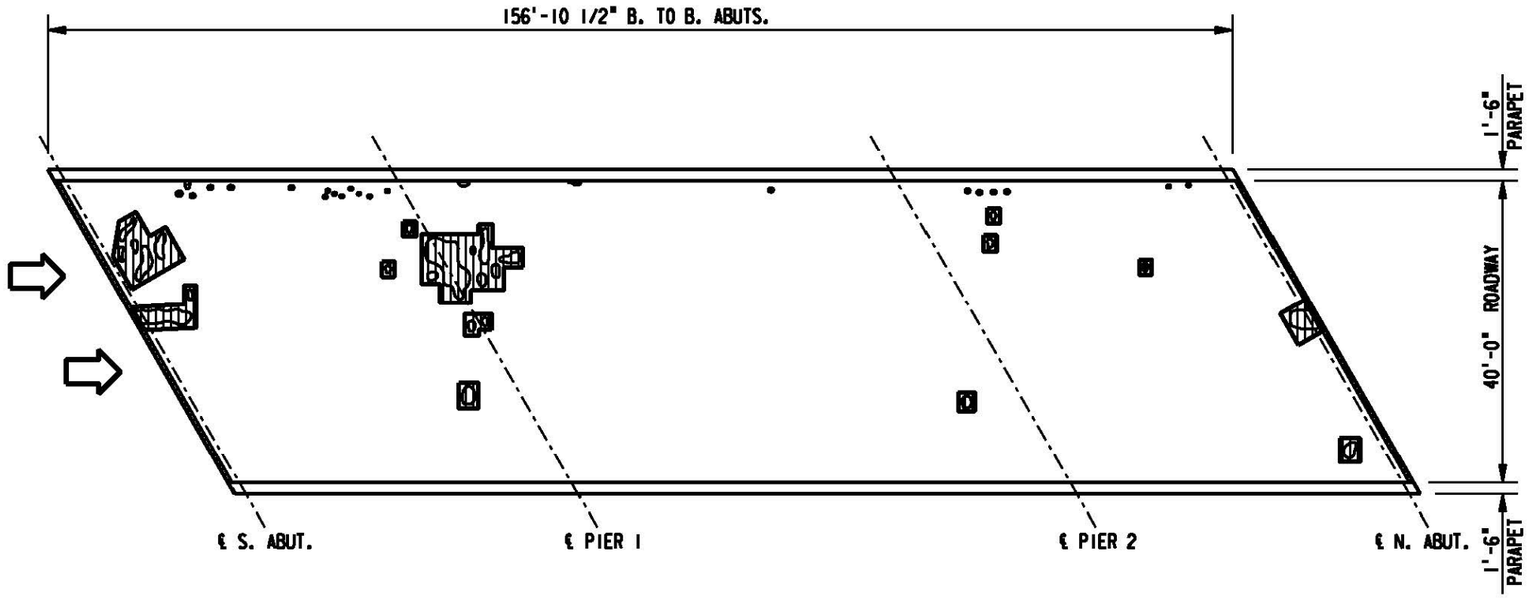
STATE PROJECT NUMBER
1224-21-73



PLAN

PROPOSED REHAB AREAS

SCALE 0' 5' 10' 20'

FIELD OBSERVATIONS SUMMARY		STRUCTURE NO. B-36-53	
ITEM	UNIT	QUANT.	%
TOTAL AREA	yd^2	696.9	
SHADE/DEBRIS	yd^2	0	
PREPARATION, DECKS, TYPE 1	yd^2	26.9	3.9
PREPARATION, DECKS, TYPE 2	yd^2	6.7	1.0
FULL DEPTH DECK REPAIR	yd^2	1.0	0.1

LEGEND	
DECK PREPARATION AREA	DELAMINATION
SHADE/DEBRIS	SPALL
	DEBOND
	ASPHALT PATCH
	CONCRETE PATCH

SURFACE TYPE: BITUMINOUS OVERLAY
INFRARED INSPECTION DATE: 7/21/15

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-36-53

DRAWN BY BRE | PLANS CK'D. KRO

DECK REPAIR

SHEET 9 OF 9

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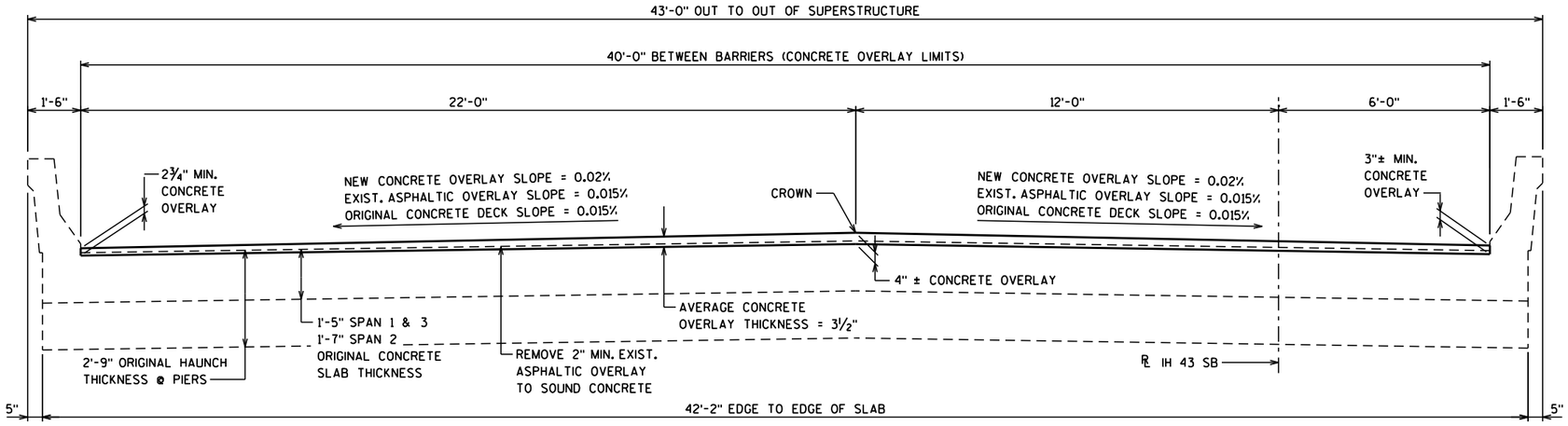
FILE NAME : F:±TR±JOBS±E2041A12±Sheets±Bridges±B-36-53±B-36-53 09 deck repair.dgn PLOT BY : olsonk PLOT DATE: 5/28/2016 4:50:05 PM

STATE PROJECT NUMBER
1224-21-73



CROSS SECTION THRU EXISTING ROADWAY

(LOOKING NORTH)

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

DIMENSIONS SHOWN ARE BASED ON THE EXISTING ORIGINAL STRUCTURE PLANS.

ANY EXCAVATION NECESSARY TO COMPLETE THE OVERLAY AT THE ABUTMENTS IS TO BE CONSIDERED INCIDENTAL TO THE BID ITEM "CONCRETE MASONRY OVERLAY DECKS".

PROFILE GRADE LINE SHALL BE DETERMINED IN THE FIELD BASED ON A MINIMUM OVERLAY THICKNESS OF 4" AT THE CROWN POINT AND 2¾" AT THE TOE OF THE OUTSIDE PARAPET PLACED ABOVE THE DECK SURFACE AFTER "CLEANING DECKS". EXPECTED AVERAGE OVERLAY THICKNESS IS 3½" (OR AS GIVEN ON THE PLANS). IF EXPECTED AVERAGE OVERLAY THICKNESS IS EXCEEDED BY MORE THAN ½", CONTACT THE STRUCTURES DESIGN SECTION.

THE EXISTING BITUMINOUS ASPHALTIC OVERLAY SHALL BE REMOVED FROM THE BRIDGE DECK UNDER BID ITEM "REMOVING ASPHALTIC CONCRETE DECK OVERLAY".

PREPARATION DECKS TYPE 1, PREPARATION DECKS TYPE 2, CONCRETE SURFACE REPAIR AND FULL-DEPTH DECK REPAIR AREAS SHALL BE DETERMINED BY THE FIELD ENGINEER. "CONCRETE SURFACE REPAIR" TO INCLUDE BUT NOT LIMITED TO THE NORTH ABUTMENT & WEST PARAPET.

REMOVAL LINES NOT COVERED WITH A CONCRETE OVERLAY SHALL BE DEFINED BY A 1" DEEP SAW CUT AT THE CONCRETE SURFACES.

PROTECTIVE SURFACE TREATMENT SHALL BE APPLIED TO THE ENTIRE TOP SURFACE OF THE NEW CONCRETE OVERLAY. PIGMENTED PROTECTIVE SURFACE TREATMENT SHALL BE APPLIED TO THE ENTIRE FRONT FACES AND TOPS OF BOTH WING & DECK PARAPETS.

A MINIMUM OF 1-INCH OF CONCRETE SHALL BE REMOVED FROM THE ENTIRE BRIDGE DECK UNDER THE BID ITEM "CLEANING DECKS".

TRAFFIC DATA

ADT = 11,800 (2036)
RDS = 70 M.P.H.

LIST OF DRAWINGS

1. GENERAL PLAN
2. DECK REPAIR

DESIGN DATA

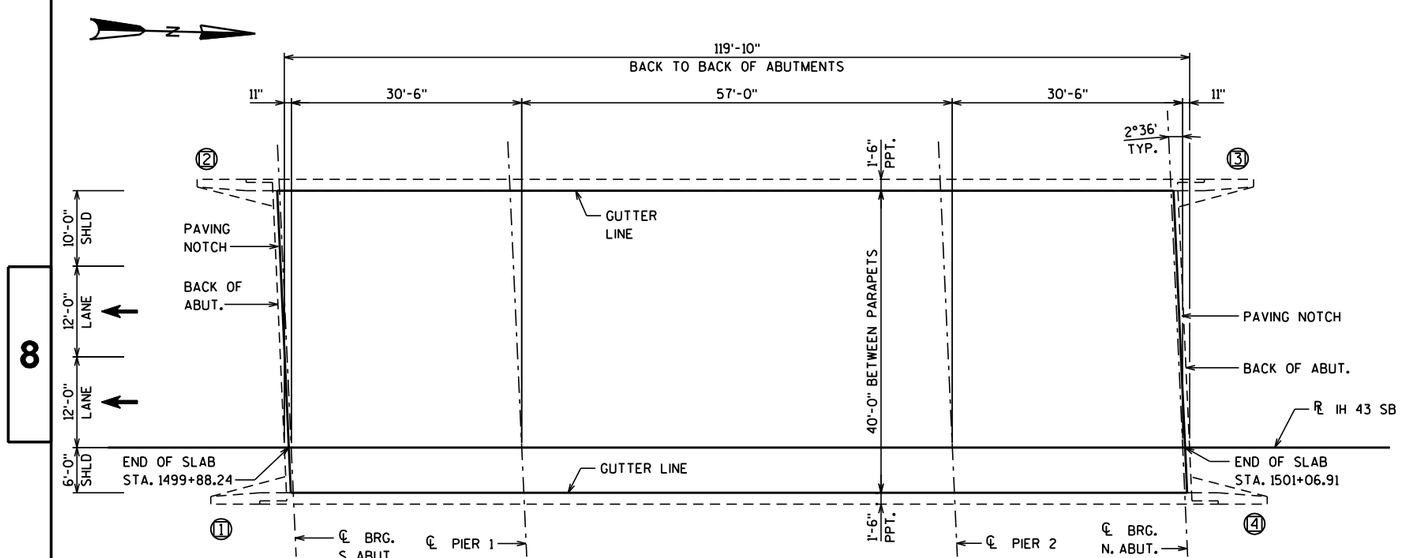
LIVE LOAD:
- INVENTORY RATING: HS-19
- OPERATING RATING: HS-31
- WISCONSIN STANDARD PERMIT VEHICLE (Wis-SPV): 250 KIPS

MATERIAL PROPERTIES:
- CONCRETE MASONRY OVERLAY DECKS: f'c = 4,000 p.s.i.

TOTAL ESTIMATED QUANTITIES

	ITEM NUMBER	BID ITEMS	UNIT	TOTALS
	502.3200	PROTECTIVE SURFACE TREATMENT	SY	527
	502.3210	PIGMENTED SURFACE SEALER	SY	114
	509.0301	PREPARATION DECKS TYPE 1	SY	79
	509.0302	PREPARATION DECKS TYPE 2	SY	48
	509.0500	CLEANING DECKS	SY	527
	509.1500	CONCRETE SURFACE REPAIR	SF	19
	509.2000	FULL-DEPTH DECK REPAIR	SY	1
☆	509.2500	CONCRETE MASONRY OVERLAY DECKS	CY	58
	509.9010.S	REMOVING ASPHALTIC CONCRETE DECK OVERLAY (B-36-56)	SY	527
	509.9050.S	CLEANING PARAPETS	LF	280

☆ BID ITEM ALSO INCLUDES CONCRETE FOR:
"PREPARATION DECKS TYPE 1"
"PREPARATION DECKS TYPE 2"
"FULL-DEPTH DECK REPAIR"



PLAN

5/28/16

BRIDGE OFFICE CONTACT

WILLIAM DREHER
(608) 266-8489

CONSULTANT CONTACT

KRISTOFER OLSON
OMNNI ASSOCIATES
(920) 735-6900

NO.	DATE	REVISION	BY

ORIGINAL PLANS PREPARED BY
OMNNI ASSOCIATES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
ACCEPTED William C. Dreher SDR 08/09/16
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE B-36-56

IH 43 SB OVER CLOVER ROAD

COUNTY	TOWN
MANITOWOC	NEWTON

DESIGN SPEC. REHABILITATION N/A

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
BRE	KRO	BRE	KRO

GENERAL PLAN

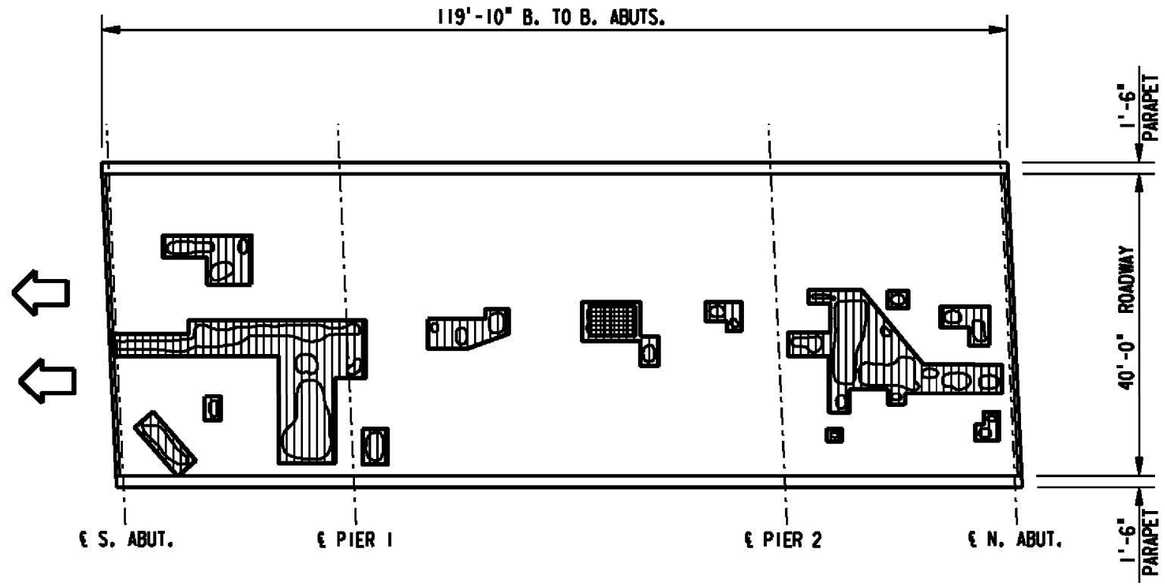
SHEET 1 OF 2

350

8

8

STATE PROJECT NUMBER
1224-21-73



PLAN

PROPOSED REHAB AREAS

N

SCALE 0' 5' 10' 20'

FIELD OBSERVATIONS SUMMARY		STRUCTURE NO. B-36-56	
ITEM	UNIT	QUANT.	%
TOTAL AREA	yd^2	527.1	
SHADE/DEBRIS	yd^2	0	
PREPARATION, DECKS, TYPE 1	yd^2	79.0	15.0
PREPARATION, DECKS, TYPE 2	yd^2	47.4	9.0
FULL DEPTH DECK REPAIR	yd^2	1.0	0.2

LEGEND

DECK PREPARATION AREA

SHADE/DEBRIS

DELAMINATION
SPALL
DEBOND
ASPHALT PATCH
CONCRETE PATCH

SURFACE TYPE: BITUMINOUS OVERLAY
INFRARED INSPECTION DATE: 7/21/15

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-36-56

DRAWN BY BRE | PLANS CK'D. KRO

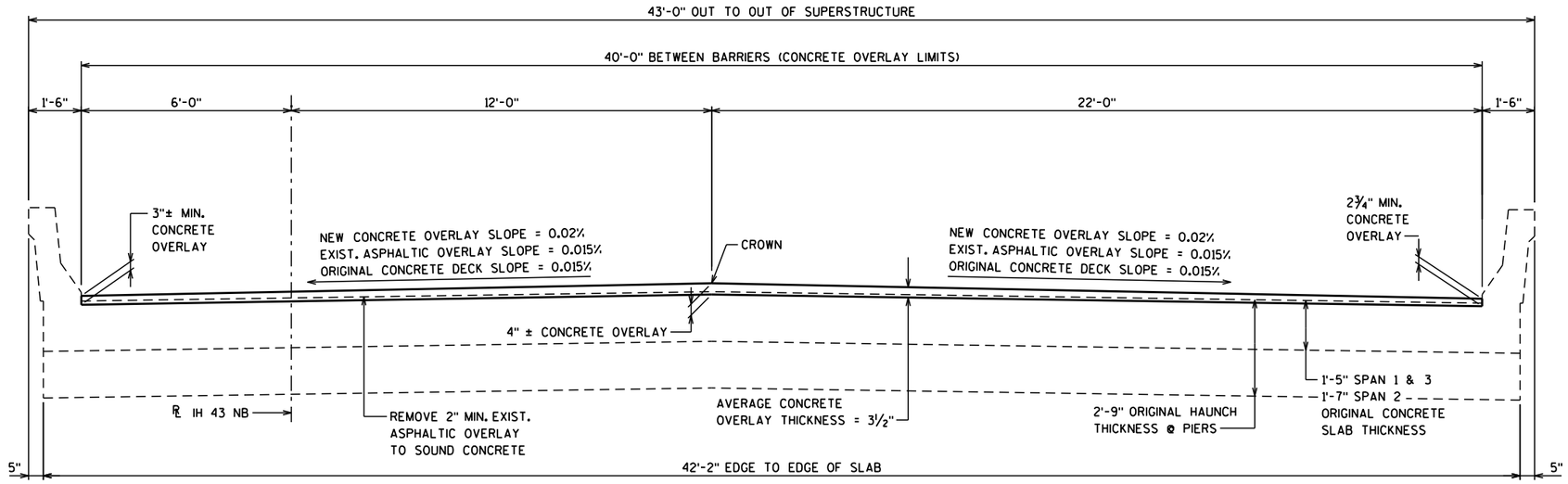
DECK REPAIR

SHEET 2 OF 2

351

FILE NAME : F:±TR±JOBS±E2041A12±Sheets±Bridges±B-36-56±B-36-56 02 deck repair.dgn PLOT BY : epleyb PLOT DATE: 2/18/2016 2:28:38 PM

STATE PROJECT NUMBER
1224-21-73



CROSS SECTION THRU EXISTING ROADWAY

(LOOKING NORTH)

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

DIMENSIONS SHOWN ARE BASED ON THE EXISTING ORIGINAL STRUCTURE PLANS.

ANY EXCAVATION NECESSARY TO COMPLETE THE OVERLAY AT THE ABUTMENTS IS TO BE CONSIDERED INCIDENTAL TO THE BID ITEM "CONCRETE MASONRY OVERLAY DECKS".

PROFILE GRADE LINE SHALL BE DETERMINED IN THE FIELD BASED ON A MINIMUM OVERLAY THICKNESS OF 4" AT THE CROWN POINT AND 2¾" AT THE TOE OF THE OUTSIDE PARAPET PLACED ABOVE THE DECK SURFACE AFTER "CLEANING DECKS". EXPECTED AVERAGE OVERLAY THICKNESS IS 3½" (OR AS GIVEN ON THE PLANS). IF EXPECTED AVERAGE OVERLAY THICKNESS IS EXCEEDED BY MORE THAN ½", CONTACT THE STRUCTURES DESIGN SECTION.

THE EXISTING BITUMINOUS ASPHALTIC OVERLAY SHALL BE REMOVED FROM THE BRIDGE DECK UNDER BID ITEM "REMOVING ASPHALTIC CONCRETE DECK OVERLAY".

PREPARATION DECKS TYPE 1, PREPARATION DECKS TYPE 2, CONCRETE SURFACE REPAIR AND FULL-DEPTH DECK REPAIR AREAS SHALL BE DETERMINED BY THE FIELD ENGINEER. "CONCRETE SURFACE REPAIR" TO INCLUDE BUT NOT LIMITED TO THE NORTH ABUTMENT, & EAST PARAPET.

REMOVAL LINES NOT COVERED WITH A CONCRETE OVERLAY SHALL BE DEFINED BY A 1" DEEP SAW CUT AT THE CONCRETE SURFACES.

PROTECTIVE SURFACE TREATMENT SHALL BE APPLIED TO THE ENTIRE TOP SURFACE OF THE NEW CONCRETE OVERLAY. PIGMENTED PROTECTIVE SURFACE TREATMENT SHALL BE APPLIED TO THE ENTIRE FRONT FACES AND TOPS OF BOTH WING & DECK PARAPETS.

A MINIMUM OF 1-INCH OF CONCRETE SHALL BE REMOVED FROM THE ENTIRE BRIDGE DECK UNDER THE BID ITEM "CLEANING DECKS".

TRAFFIC DATA

ADT = 11,800 (2036)
RDS = 70 M.P.H.

LIST OF DRAWINGS

1. GENERAL PLAN
2. DECK REPAIR

DESIGN DATA

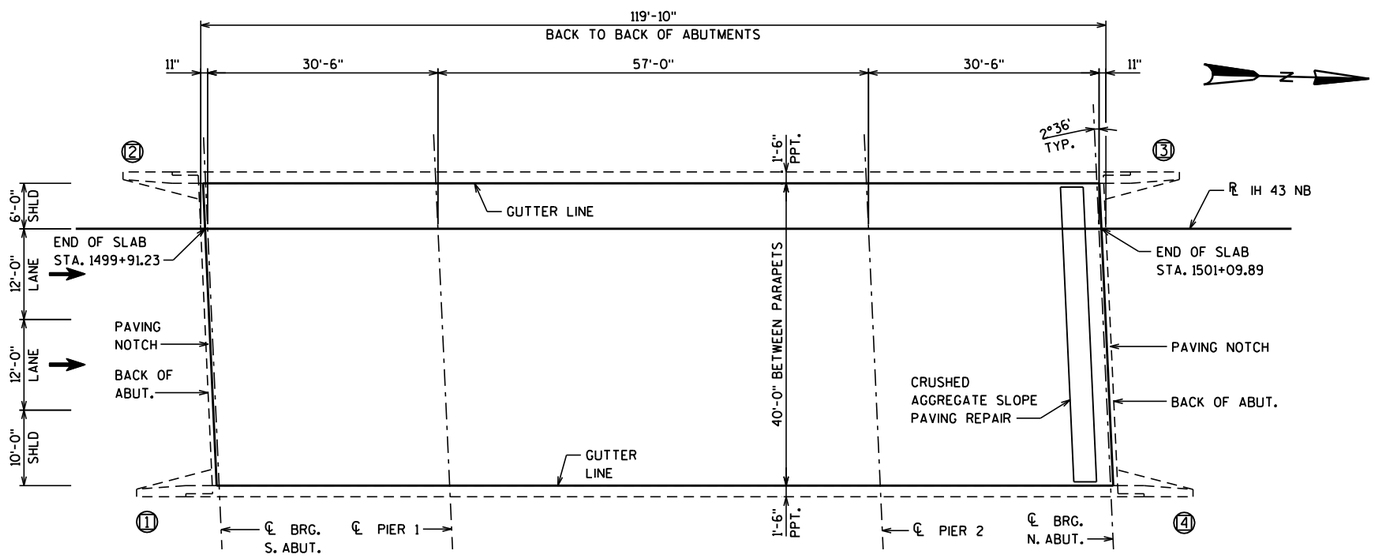
LIVE LOAD:
INVENTORY RATING: HS-19
OPERATING RATING: HS-31
WISCONSIN STANDARD PERMIT VEHICLE (Wis-SPV): 250 KIPS

MATERIAL PROPERTIES:
CONCRETE MASONRY
OVERLAY DECKS: f'c = 4,000 p.s.i.

TOTAL ESTIMATED QUANTITIES

ITEM NUMBER	BID ITEMS	UNIT	TOTALS
502.3200	PROTECTIVE SURFACE TREATMENT	SY	527
502.3210	PIGMENTED SURFACE SEALER	SY	114
509.0301	PREPARATION DECKS TYPE 1	SY	114
509.0302	PREPARATION DECKS TYPE 2	SY	36
509.0500	CLEANING DECKS	SY	527
509.1500	CONCRETE SURFACE REPAIR	SF	21
509.2000	FULL-DEPTH DECK REPAIR	SY	1
☆ 509.2500	CONCRETE MASONRY OVERLAY DECKS	CY	59
509.9010.S	REMOVING ASPHALTIC CONCRETE DECK OVERLAY (B-36-57)	SY	527
509.9050.S	CLEANING PARAPETS	LF	280
604.9010.S	SLOPE PAVING REPAIR CRUSHED AGGREGATE	CY	2

☆ BID ITEM ALSO INCLUDES CONCRETE FOR:
"PREPARATION DECKS TYPE 1"
"PREPARATION DECKS TYPE 2"
"FULL-DEPTH DECK REPAIR"



ⓧ INDICATES WING NUMBER

PLAN

WISCONSIN
KRISTOFER R. OLSON
E-35236
APPLETON, WI
PROFESSIONAL ENGINEER

5/28/16

BRIDGE OFFICE CONTACT

WILLIAM DREHER
(608) 266-8489

CONSULTANT CONTACT

KRISTOFER OLSON
OMNNI ASSOCIATES
(920) 735-6900

NO.	DATE	REVISION	BY

ORIGINAL PLANS PREPARED BY
OMNNI ASSOCIATES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
ACCEPTED William C. Dreher SDR 08/09/16
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE B-36-57

IH 43 NB OVER CLOVER ROAD

COUNTY	TOWN
MANITOWOC	NEWTON

DESIGN SPEC. REHABILITATION N/A

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
BRE	KRO	BRE	KRO

GENERAL PLAN

SHEET 1 OF 2

352

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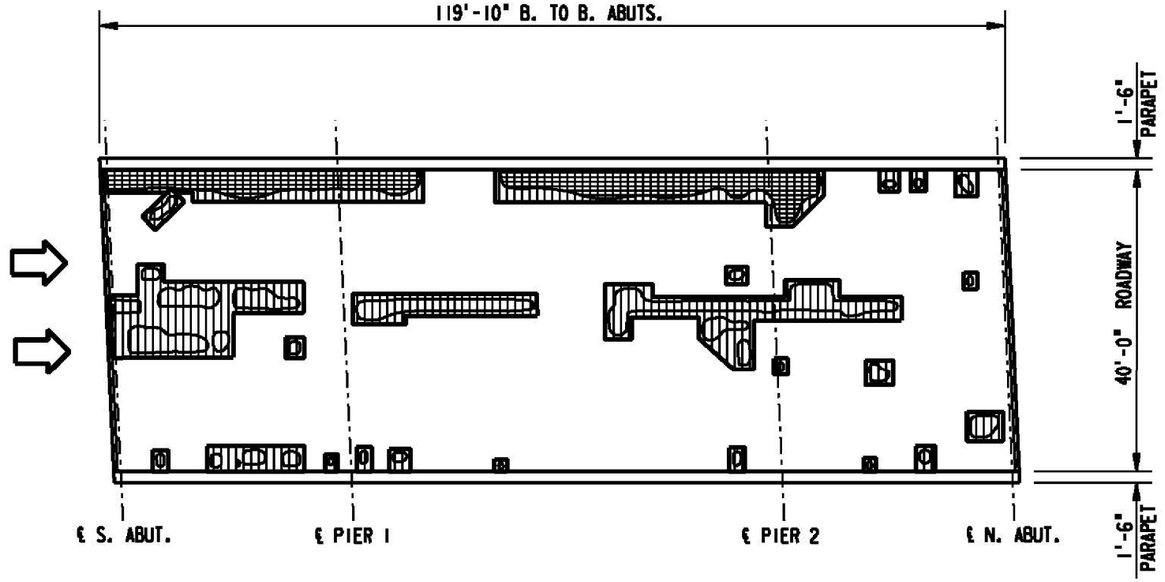
8

STATE PROJECT NUMBER
1224-21-73



PLAN

PROPOSED REHAB AREAS

N

SCALE 0' 5' 10' 20'

FIELD OBSERVATIONS SUMMARY		STRUCTURE NO. B-36-57	
ITEM	UNIT	QUANT.	%
TOTAL AREA	yd^2	527.1	
SHADE/DEBRIS	yd^2	0	
PREPARATION, DECKS, TYPE 1	yd^2	72.0	13.7
PREPARATION, DECKS, TYPE 2	yd^2	36.0	6.8
FULL DEPTH DECK REPAIR	yd^2	1.0	0.2
PREPARATION, DECKS, TYPE 1 DEBOND/SCALING ONLY	yd^2	41.2	7.8

LEGEND

DECK PREPARATION AREA

SHADE/DEBRIS

DELAMINATION
SPALL
DEBOND
ASPHALT PATCH
CONCRETE PATCH

SURFACE TYPE: BITUMINOUS OVERLAY
INFRARED INSPECTION DATE: 7/21/15

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-36-57

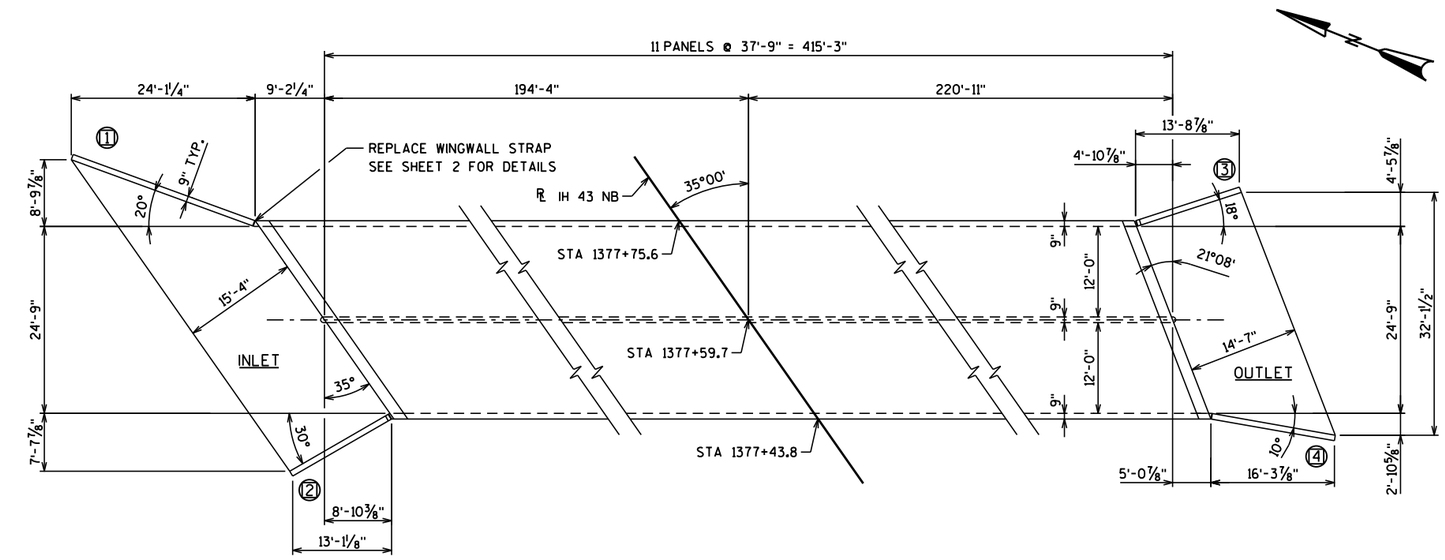
DRAWN BY BRE | PLANS CK'D. KRO

DECK REPAIR

SHEET 2 OF 2

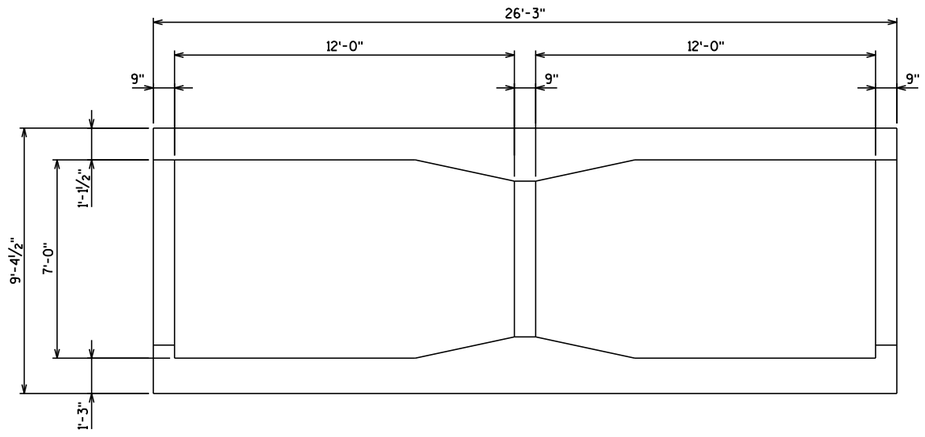
353

STATE PROJECT NUMBER
1224-21-73



11 INDICATES WING NUMBER

PLAN



TYPICAL SECTION THRU BOX

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

DIMENSIONS SHOWN ARE BASED ON THE EXISTING ORIGINAL STRUCTURE PLANS.

CONCRETE SURFACE REPAIR AREA SHALL BE DETERMINED BY THE FIELD ENGINEER. "CONCRETE SURFACE REPAIR" TO INCLUDE BUT NOT LIMITED TO WING 1.

TRAFFIC DATA

ADT = 11,800 (2036)
RDS = 70 M.P.H.

LIST OF DRAWINGS

1. GENERAL PLAN
2. WING STRAP DETAILS

TOTAL ESTIMATED QUANTITIES

ITEM NUMBER	BID ITEMS	UNIT	TOTALS
509.1500	CONCRETE SURFACE REPAIR	SF	9
SPV.0060.12	STRAPPING B-36-58	EA	1

WISCONSIN
KRISTOFER R. OLSON
E-35236
APPLETON, WI
PROFESSIONAL ENGINEER
6/1/16

DESIGN DATA

EARTH LOAD:
ORIGINAL BOX DESIGNED FOR 22.5 FEET OF FILL AT INLET.

MATERIAL PROPERTIES:
CONCRETE MASONRY: f'c = 3,500 p.s.i.
STRUCTURAL STEEL, ASTM A36, GRADE 36: fy = 36,000 p.s.i.

BRIDGE OFFICE CONTACT

WILLIAM DREHER
(608) 266-8489

CONSULTANT CONTACT

KRISTOFER OLSON
OMNNI ASSOCIATES
(920) 735-6900

NO.	DATE	REVISION	BY

ORIGINAL PLANS PREPARED BY
OMNNI ASSOCIATES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
ACCEPTED William C. Dreher SDR 08/09/16
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE B-36-58

IH 43 OVER PINE CREEK

COUNTY	TOWN
MANITOWOC	NEWTON

DESIGN SPEC. REHABILITATION N/A

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
BRE	KRO	BRE	KRO

GENERAL PLAN

8

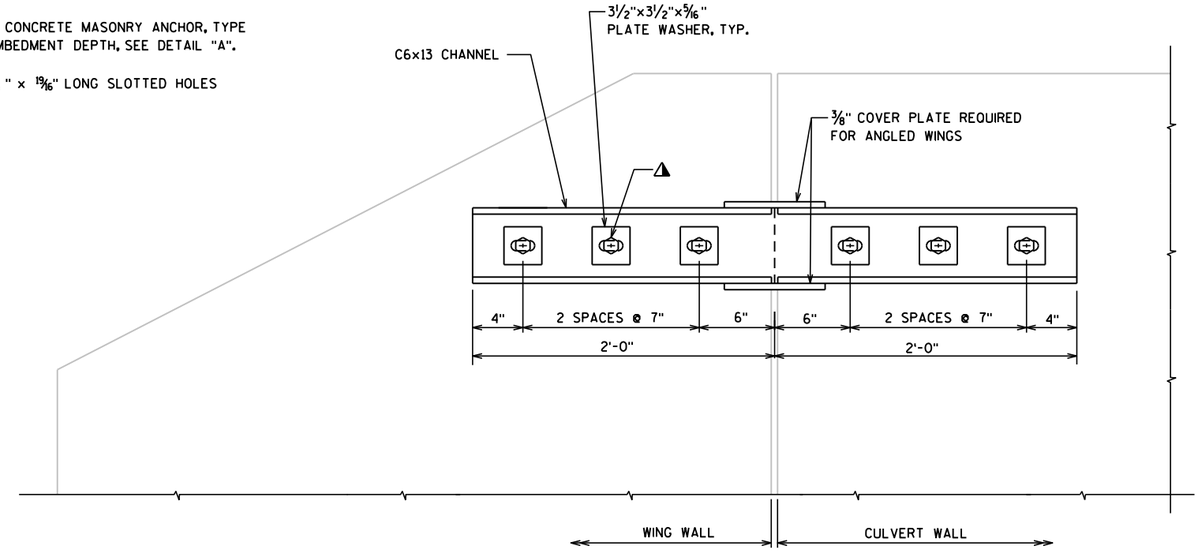
8

FILE NAME : F:±TR±JOBS±E2041A12±Sheets±Bridges±B-36-58±B-36-58 01 gp.dgn PLOT BY : EpleyB PLOT DATE: 6/1/2016 10:09:10 AM

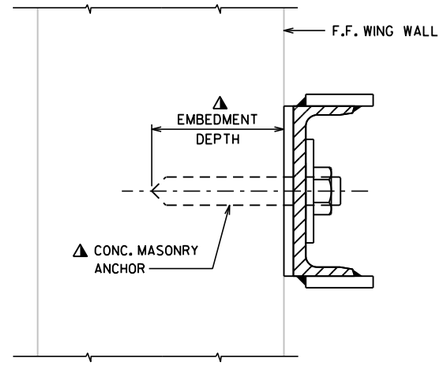
STATE PROJECT NUMBER
1224-21-73

⚠ 5/8" DIA. CONCRETE MASONRY ANCHOR, TYPE S, 5" EMBEDMENT DEPTH, SEE DETAIL "A".

USE 11/16 " x 13/16" LONG SLOTTED HOLES

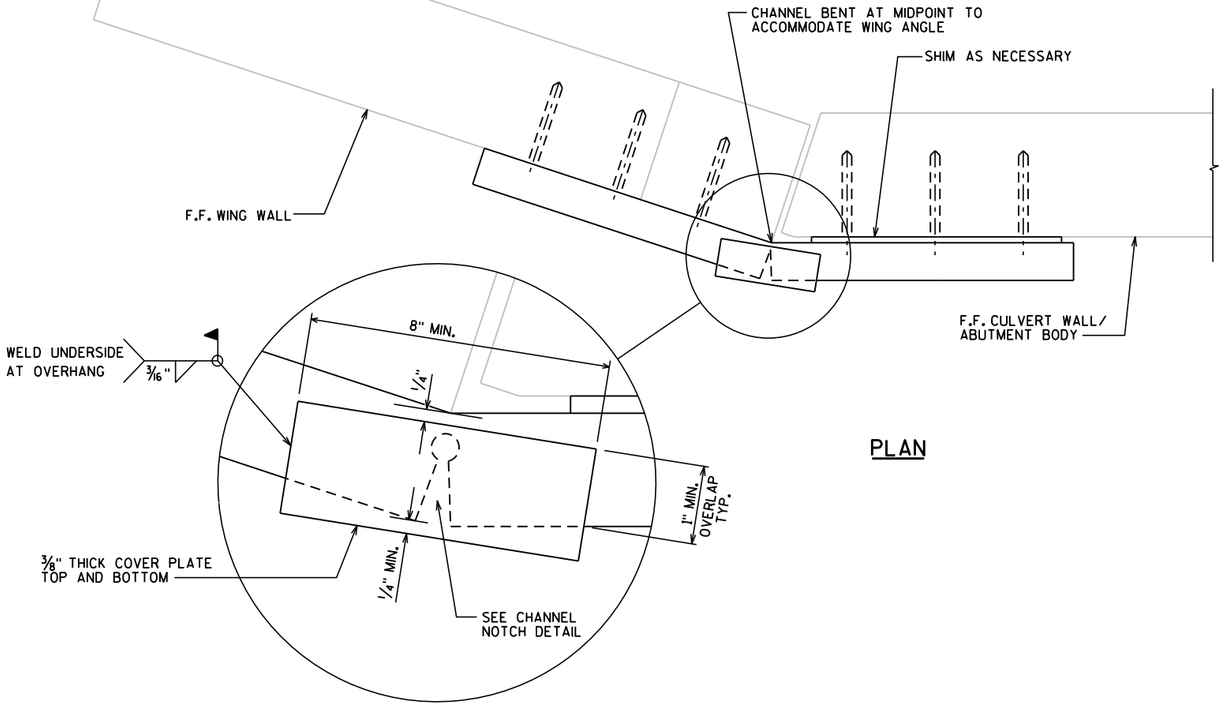


WING ELEVATION

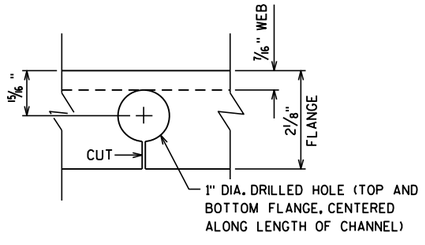


DETAIL "A"

SECTION THRU CHANNEL



PLAN



CHANNEL NOTCH DETAIL

FOR USE WITH ANGLED WINGS ONLY

GENERAL NOTES

WING STRAPPING DETAIL FOR THE PURPOSE OF MITIGATING INWARD WING TIPPING, AS AN ALTERNATIVE TO THE PREFERRED METHOD OF WING REPLACEMENT.

PLACE NEW STRAP AT MAXIMUM HEIGHT ALLOWED OUTSIDE OF THE CONCRETE SURFACE REPAIR AREA.

BID ITEM SHALL BE "STRAPPING B-36-58" WHICH INCLUDES REMOVAL OF EXISTING STRAP AND ALL ITEMS SHOWN.

WISDOT REGIONAL BRIDGE MAINTENANCE ENGINEER TO APPROVE USE OF DETAIL PRIOR TO INSTALLATION.

ALL PROVIDED STEEL MATERIAL SHALL CONFORM TO ASTM A36.

ALL STRUCTURAL STEEL SHOWN SHALL BE GALVANIZED. THREADED RODS, MASONRY ANCHORS, NUTS AND WASHERS SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153 CLASS C.

CUTTING AND DRILLING OF CHANNEL SHALL BE DONE IN FABRICATION SHOP, PRIOR TO GALVANIZING.

IF WELDING COVER PLATE IN FIELD, PRIOR TO WELDING, REMOVE GALVANIZING FROM AREA TO BE WELDED. TOUCH UP WITH PAINT ALL AREAS LACKING GALVANIZING WHEN COMPLETE.

CAULK AROUND PERIMETER OF CHANNEL AND FILL PORTION OF HOLE AROUND ANCHOR BOLT AND SHIM WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-36-58

DRAWN BY: BRE | PLANS CK'D.: JAW

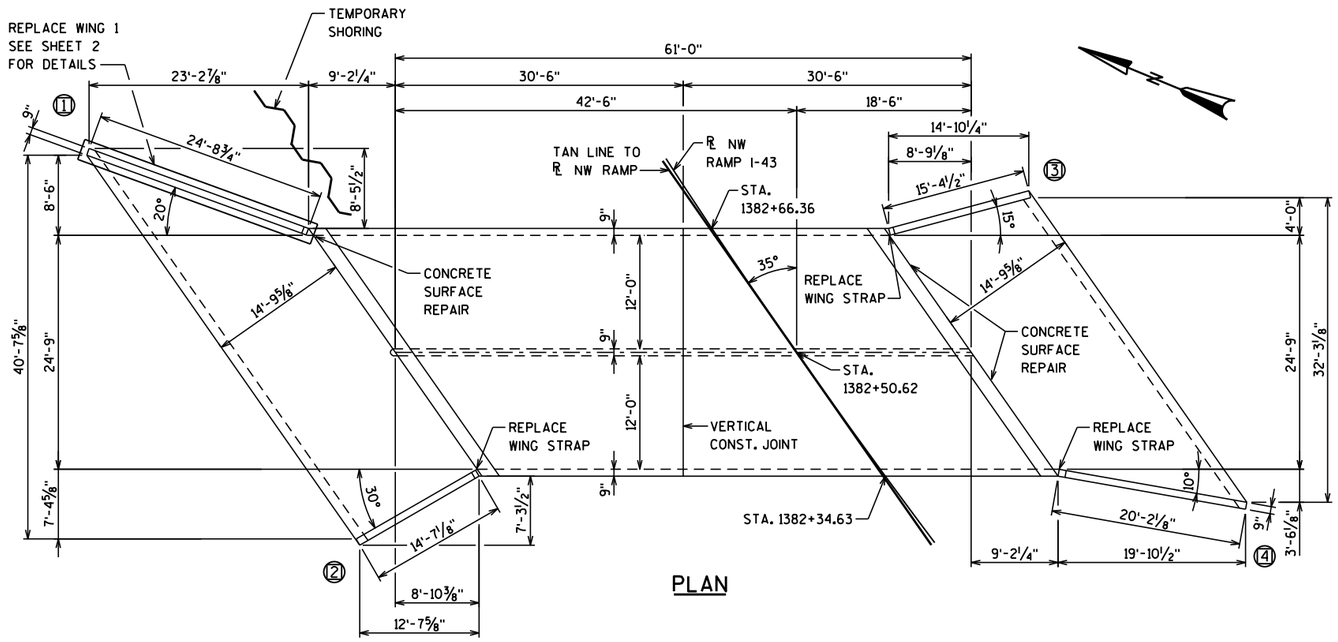
WING STRAP DETAILS

SHEET 2 OF 2

355

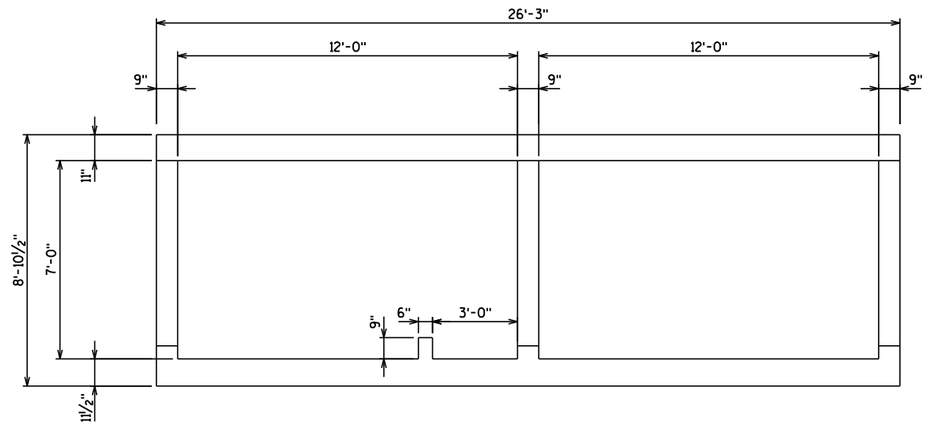
8

8



PLAN

Ⓧ INDICATES WING NUMBER



TYPICAL CROSS SECTION

STATE PROJECT NUMBER
1224-21-73

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

USE EXSTING BAR STEEL REINFORCEMENT WHERE SHOWN AND EXTEND 24 BAR DIAMETERS INTO NEW WORK.

DIMENSIONS SHOWN ARE BASED ON THE EXISTING ORIGINAL STRUCTURE PLANS.

AT WINGS, ALL SPACES EXCAVATED AND NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH "BACKFILL STRUCTURE TYPE A".

CONCRETE SURFACE REPAIR AREA SHALL BE DETERMINED BY THE FIELD ENGINEER. "CONCRETE SURFACE REPAIR" TO INCLUDE BUT NOT LIMITED TO EAST HEADWALL AND WING 1.

THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES CULVERTS B-36-64" SHALL BE THE EXISTING GROUND LINE.

ALL CONCRETE REMOVAL SHALL BE DEFINED BY A 1" DEEP SAW CUT.

LIST OF DRAWINGS

1. GENERAL PLAN
2. WING REPLACEMENT
3. WING STRAP DETAILS

TRAFFIC DATA

ADT = 460 (2037)
RDS = 35 M.P.H.

TOTAL ESTIMATED QUANTITIES

ITEM NUMBER	BID ITEMS	UNIT	TOTALS
203.0200	REMOVING OLD STRUCTURE (STA. 1382+50)	LS	1
206.2000	EXCAVATION FOR STRUCTURES CULVERTS B-36-64	LS	1
210.1100	BACKFILL STRUCTURE TYPE A	CY	50
504.0100	CONCRETE MASONRY CULVERTS	CY	8
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	530
509.1500	CONCRETE SURFACE REPAIR	SF	55
511.1100	TEMPORARY SHORING	SF	400
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	5
SPV.0060.13	STRAPPING B-36-64	EA	3

DESIGN DATA

EARTH LOAD:
WING DESIGNED FOR SURCHARGE HEIGHT OF ONE FOOT.

MATERIAL PROPERTIES:
CONCRETE MASONRY: f'c = 3,500 p.s.i.
BAR STEEL REINFORCEMENT
GRADE 60: fy = 60,000 p.s.i.
STRUCTURAL STEEL, ASTM
A36, GRADE 36: fy = 36,000 p.s.i.

WISCONSIN
KRISTOFER R. OLSON
E-35236
APPLETON, WI
PROFESSIONAL ENGINEER

6/1/16

BRIDGE OFFICE CONTACT

WILLIAM DREHER
(608) 266-8489

CONSULTANT CONTACT

KRISTOFER OLSON
OMNNI ASSOCIATES
(920) 735-6900

NO.	DATE	REVISION	BY

ORIGINAL PLANS PREPARED BY
OMNNI ASSOCIATES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
ACCEPTED William C. Dreher SDR 08/09/16
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE B-36-64

RAMP I-43 SB - CTH C OVER PINE CREEK

COUNTY	TOWN
MANITOWOC	NEWTON

DESIGN SPEC. REHABILITATION N/A

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
BRE	KRO	BRE	KRO

GENERAL PLAN

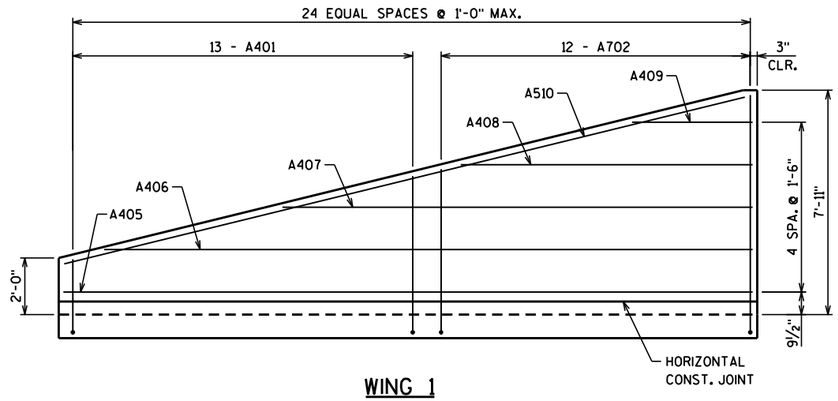
SHEET 1 OF 3

356

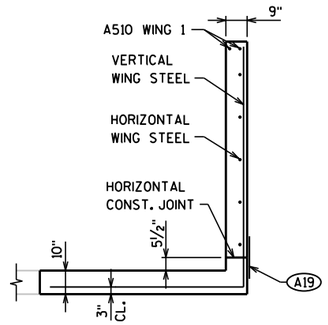
8

8

STATE PROJECT NUMBER
1224-21-73



WING 1



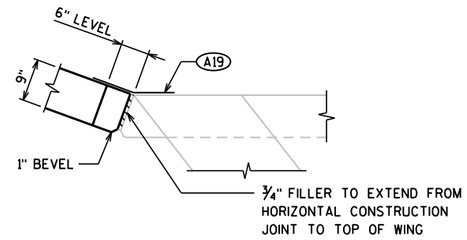
TYPICAL SECTION THRU WING

BILL OF BARS

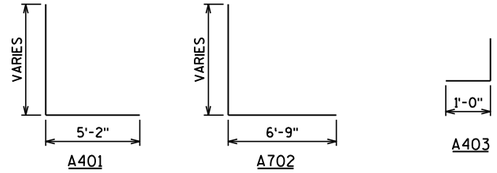
BAR MARK	COAT	NO. REQ'D.	LENGTH	SERIES	BENT	LOCATION
A401		13	9'-2"	△	X	WING 1 - VERTICAL
A702		12	13'-7"	△	X	WING 1 - VERTICAL
A403		8	2'-0"		X	WING 1 - VERT., CURB WALL
A404		1	11'-2"			WING 1 - HORIZ., CURB WALL
A405		1	24'-4"			WING 1 - HORIZONTAL
A406		1	22'-10"			WING 1 - HORIZONTAL
A407		1	16'-7"			WING 1 - HORIZONTAL
A408		1	10'-3"			WING 1 - HORIZONTAL
A409		1	4'-0"			WING 1 - HORIZONTAL
A510		2	24'-9"			WING 1 - TOP

BAR SERIES

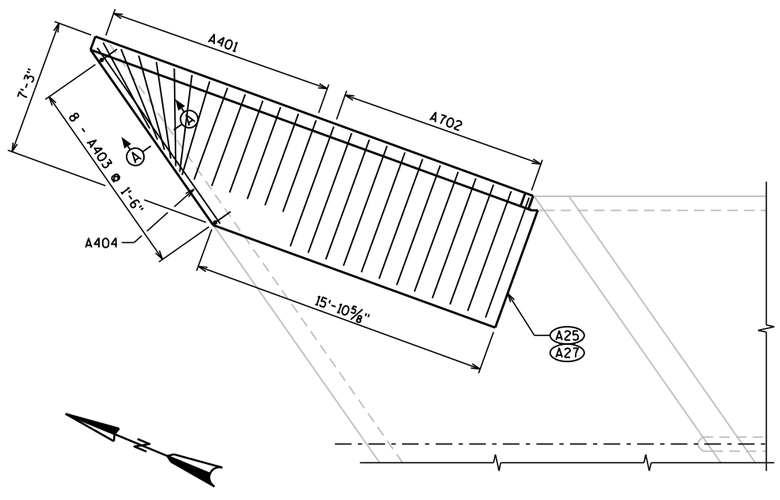
BAR NO.	NO. REQ'D.	LENGTH
A401	1 SERIES OF 13	7'-8" TO 10'-8"
A702	1 SERIES OF 12	12'-3" TO 14-11"



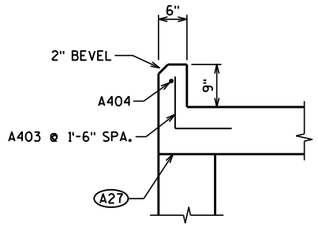
WING 1 CORNER DETAIL



BAR BENDING DIAGRAMS



NORTH WEST APRON PLAN



SECTION A-A

NOTES

(A19) 18" RUBBERIZED MEMBRANE WATERPROOFING (RMW). SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

(A25) SALVAGE EXIST. REINF. & EXTEND FULL LENGTH INTO NEW WORK. APRON REMOVAL AREA TO BE DETERMINED IN FIELD. SALVAGE STEEL IN APRON FLOOR.

(A27) LINE OF APRON REMOVAL. EXISTING CUTOFF WALL TO REMAIN.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-36-64

DRAWN BY BRE | PLANS CK'D. JAW

WING REPLACEMENT

SHEET 2 OF 3

357

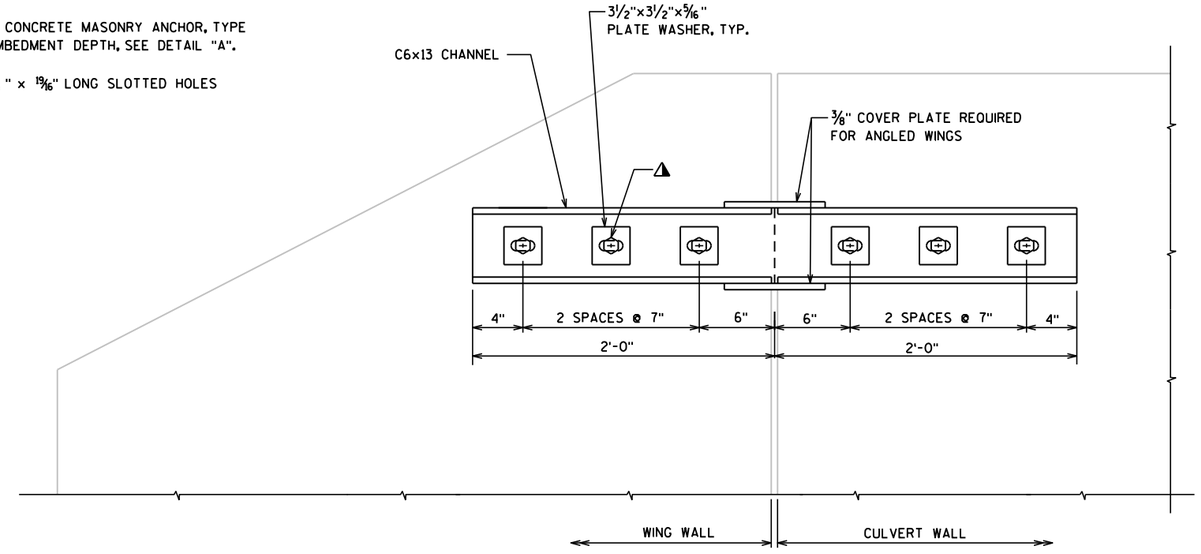
8

8

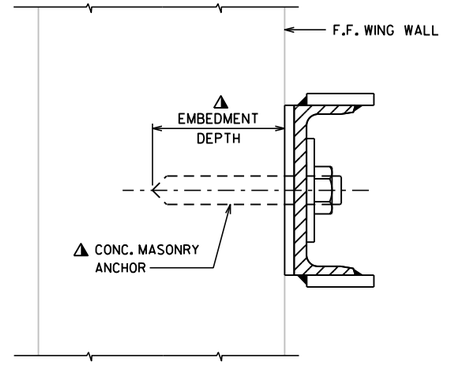
STATE PROJECT NUMBER
1224-21-73

⚠ 5/8" DIA. CONCRETE MASONRY ANCHOR, TYPE S, 5" EMBEDMENT DEPTH, SEE DETAIL "A".

USE 11/16 " x 13/16" LONG SLOTTED HOLES

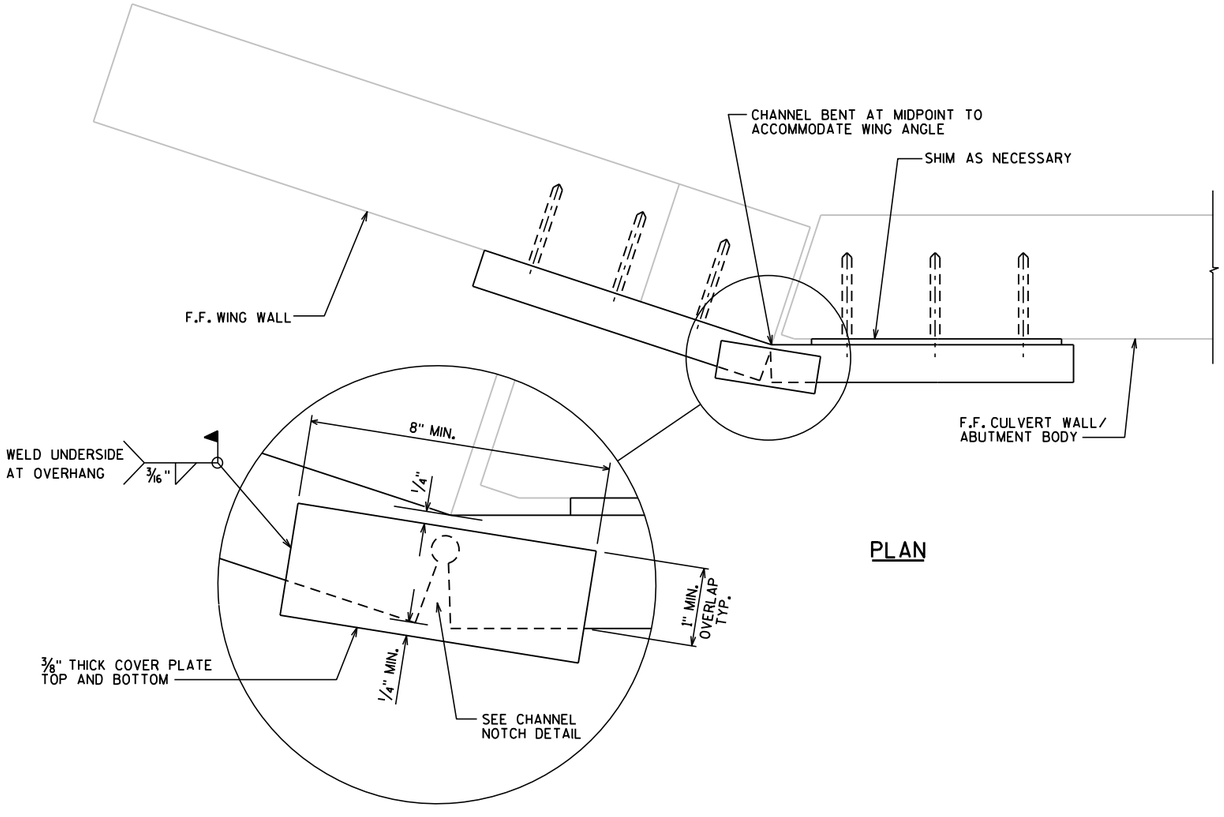


WING ELEVATION

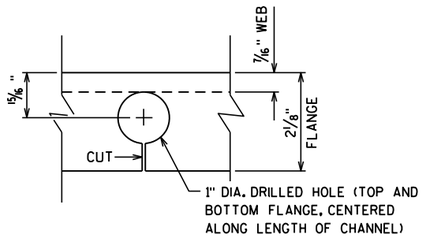


DETAIL "A"

SECTION THRU CHANNEL



PLAN



CHANNEL NOTCH DETAIL

FOR USE WITH ANGLED WINGS ONLY

GENERAL NOTES

WING STRAPPING DETAIL FOR THE PURPOSE OF MITIGATING INWARD WING TIPPING, AS AN ALTERNATIVE TO THE PREFERRED METHOD OF WING REPLACEMENT.

BID ITEM SHALL BE "STRAPPING B-36-64" WHICH INCLUDES REMOVAL OF EXISTING STRAP AND ALL ITEMS SHOWN.

WISDOT REGIONAL BRIDGE MAINTENANCE ENGINEER TO APPROVE USE OF DETAIL PRIOR TO INSTALLATION.

ALL PROVIDED STEEL MATERIAL SHALL CONFORM TO ASTM A36.

ALL STRUCTURAL STEEL SHOWN SHALL BE GALVANIZED. THREADED RODS, MASONRY ANCHORS, NUTS AND WASHERS SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153 CLASS C.

CUTTING AND DRILLING OF CHANNEL SHALL BE DONE IN FABRICATION SHOP, PRIOR TO GALVANIZING.

IF WELDING COVER PLATE IN FIELD, PRIOR TO WELDING, REMOVE GALVANIZING FROM AREA TO BE WELDED. TOUCH UP WITH PAINT ALL AREAS LACKING GALVANIZING WHEN COMPLETE.

CAULK AROUND PERIMETER OF CHANNEL AND FILL PORTION OF HOLE AROUND ANCHOR BOLT AND SHIM WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-36-64

DRAWN BY BRE | PLANS CK'D. JAW

WING STRAP DETAILS

SHEET 3 OF 3

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STATE PROJECT NUMBER

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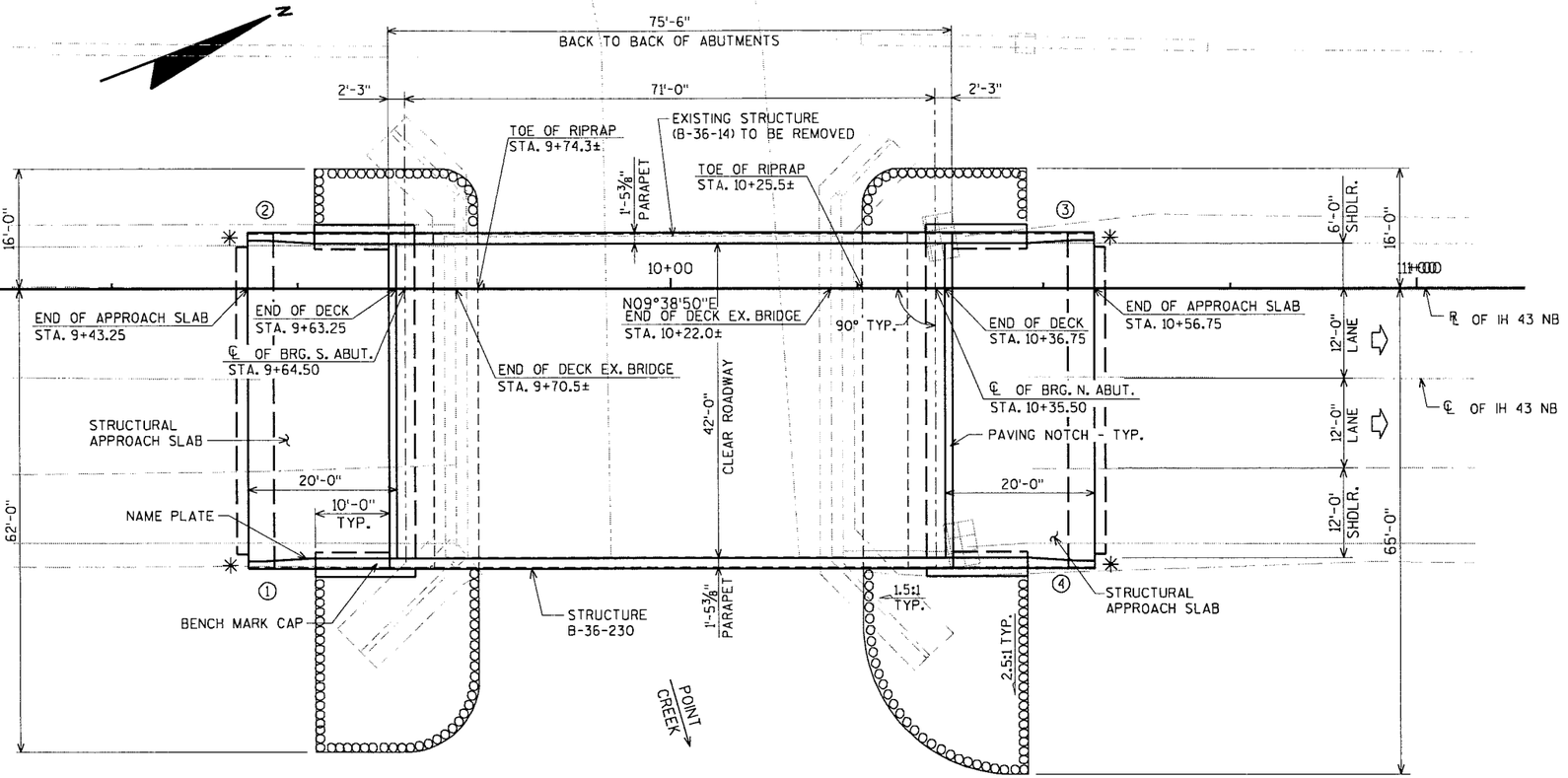
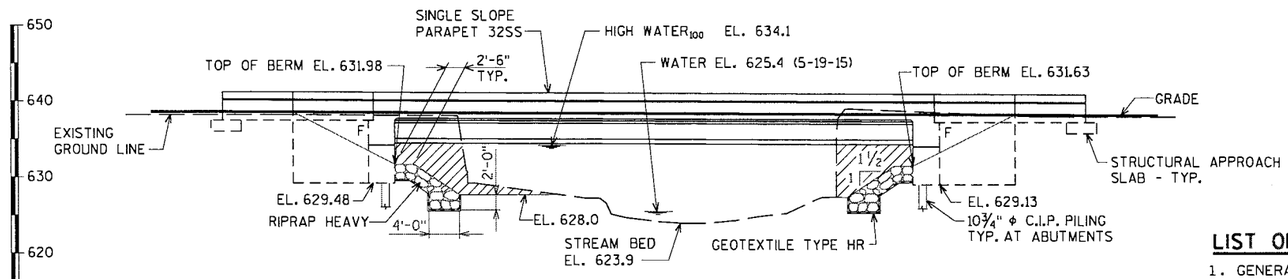


✳ ANCHOR ASSEMBLY FOR THRIE BEAM TYPE GUARDRAIL.

◯ DENOTES WING NUMBER.

PLAN

SINGLE SPAN 36W" PRESTRESSED CONCRETE GIRDER



ELEVATION

COST OF EXCAVATION IN THE HATCHED AREAS SHALL BE INCLUDED IN THE CONTRACT LUMP SUM PRICE FOR "EXCAVATION FOR STRUCTURES BRIDGES B-36-230".

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HL-93
INVENTORY RATING FACTOR: 1.06
OPERATING RATING FACTOR: 1.67
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV) = 250 KIPS

STRUCTURE IS DESIGNED FOR A FUTURE WEARING SURFACE OF 20 #/S.F.

MATERIAL PROPERTIES:

CONCRETE MASONRY { SUPERSTRUCTURE ____ f'_c = 4,000 p.s.i.
CONCRETE MASONRY { ALL OTHER ____ f'_c = 3,500 p.s.i.
HIGH STRENGTH BAR STEEL REINFORCEMENT (GRADE 60) ____ f_y = 60,000 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.

HYDRAULIC DATA:

100 YEAR FLOOD
DRAINAGE AREA = 17.6 sq. mi.
WATERWAY AREA = 337 sq. ft.
V = 7.4 f.p.s.
Q_{100} = 2,500 c.f.s.
HIGH WATER$_{100}$ EL. 634.1
HIGH WATER$_2$ EL. 629.9
RDWY. OVERFLOW = N/A
SCOUR CRITICAL CODE = 8
NGVD 88 DATUM

REGULATORY HIGH WATER$_{100}$ EL. 636.5
REGULATORY Q_{100} = 3,250 c.f.s.

FOUNDATION DATA:

ABUTMENTS TO BE SUPPORTED ON 10¾" ϕ C.I.P. PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 130 TONS ‡ PER PILE AT REDRIVING AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA.
ESTIMATED LENGTH 85'-0" FOR BOTH ABUTMENTS.

‡ 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:

IH 43 NB

A.D.T. = 25,000 (2016)
A.D.T. = 29,500 (2036)
R.D.S. = 70 M.P.H.

FOR TYPICAL SECTION, PROFILE GRADE LINE, AND GENERAL NOTES, SEE SHEET 2

LIST OF DRAWINGS

1. GENERAL PLAN
2. TYPICAL SECTION, QUANTITIES, AND NOTES
3. SUBSURFACE EXPLORATION
4. SOUTH ABUTMENT
5. SOUTH ABUTMENT WING DETAILS
6. SOUTH ABUTMENT BILL OF BARS
7. NORTH ABUTMENT
8. NORTH ABUTMENT WING DETAILS
9. NORTH ABUTMENT BILL OF BARS
10. 36W" PRESTRESSED GIRDER DETAILS
11. 36W" PRESTRESSED GIRDER DETAILS
12. STEEL INTER. DIAPHRAGM DETAILS
13. SUPERSTRUCTURE
14. SUPERSTRUCTURE PLAN
15. SOUTH STRUCTURAL APPROACH SLAB
16. NORTH STRUCTURAL APPROACH SLAB
17. STRUCTURAL APPROACH SLAB DETAILS
18. SINGLE SLOPE PARAPET 32SS

WISCONSIN
DANIEL N. SYDOW
E-38363
WI
PROFESSIONAL ENGINEER
7/22/2016

BRIDGE OFFICE CONTACT:
WILLIAM DREHER
(608)-266-8489

CONSULTANT CONTACT:
DAN SYDOW
(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 08/09/16
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE B-36-230

IH 43 NB OVER POINT CREEK

COUNTY	TOWN/~~CITY/VILLAGE~~
MANITOWOC	CENTERVILLE

DESIGN SPEC.
AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
AEB	CJM	CJM/CLS	DNS

GENERAL PLAN

SHEET 1 OF 18
359

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CHECKED BY: DATE:
BACK CHECKED BY: DATE:
CORRECTED BY: DATE:

$PRFNAME$
U:\42-0888.00 - Manitowoc County, IH43 Rehabs\B-36-230\BRIDGE\B-36-230 gp.dgn

7/22/2016 PENTABLE:BRegu_shd_util.tbl I.D.

STATE PROJECT NUMBER

1224-21-73

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	S. STR. APPR. SLAB	S. ABUT.	N. ABUT.	N. STR. APPR. SLAB	SUPER.	TOTAL
203.0600.S	REMOVING OLD STRUCTURE OVER WATERWAY WITH MINIMAL DEBRIS STATION 10+00	LS	-----	-----	-----	-----	-----	1
206.1000	EXCAVATION FOR STRUCTURES BRIDGES B-36-230	LS	-----	-----	-----	-----	-----	1
210.1500	BACKFILL STRUCTURE TYPE A	TON	-----	300	300	-----	-----	600
502.0100	CONCRETE MASONRY BRIDGES	CY	57	48	48	57	176	386
502.3200	PROTECTIVE SURFACE TREATMENT	SY	95	-----	-----	95	365	555
502.3210	PIGMENTED SURFACE SEALER	SY	17	-----	-----	17	65	99
503.0137	PRESTRESSED GIRDER TYPE 136W-INCH	LF	-----	-----	-----	-----	360	360
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	-----	2,990	2,990	-----	-----	5,980
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	15,610	1,400	1,400	15,610	23,370	57,390
505.0800.S	BAR STEEL REINFORCEMENT HS STAINLESS BRIDGES	LB	780	-----	-----	780	-----	1,560
506.2605	BEARING PADS ELASTOMERIC NON-LAMINATED	EACH	-----	5	5	-----	-----	10
506.4000	STEEL DIAPHRAGMS B-36-230	EACH	-----	-----	-----	-----	4	4
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	-----	11	11	-----	-----	22
550.0600	PILE REDRIVING	EACH	-----	10	10	-----	-----	20
550.2104	PILING CIP CONCRETE 10¾X 0.25-INCH	LF	-----	850	850	-----	-----	1,700
606.0300	RIPRAP HEAVY	CY	-----	100	110	-----	-----	210
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	-----	100	100	-----	-----	200
614.0150	ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	2	-----	-----	2	-----	4
645.0120	GEOTEXTILE TYPE HR	SY	-----	160	160	-----	-----	320
	NON-BID ITEMS							
	FILLER	SIZE		-----	-----		-----	½" & ¾"

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. AND 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 SLOPE OF THE FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH RIPRAP HEAVY AND GEOTEXTILE TYPE HR TO THE EXTENT SHOWN ON THE GENERAL PLAN SHEET AND IN THE ABUTMENT DETAILS.

ELASTOMERIC BEARING PADS NEED NOT BE INDIVIDUALLY MOLDED PROVIDED THE CUT EDGES ARE SMOOTH AND TRUE.

THE EXISTING GROUNDLINE SHALL BE THE UPPER LIMIT FOR EXCAVATION FOR STRUCTURES.

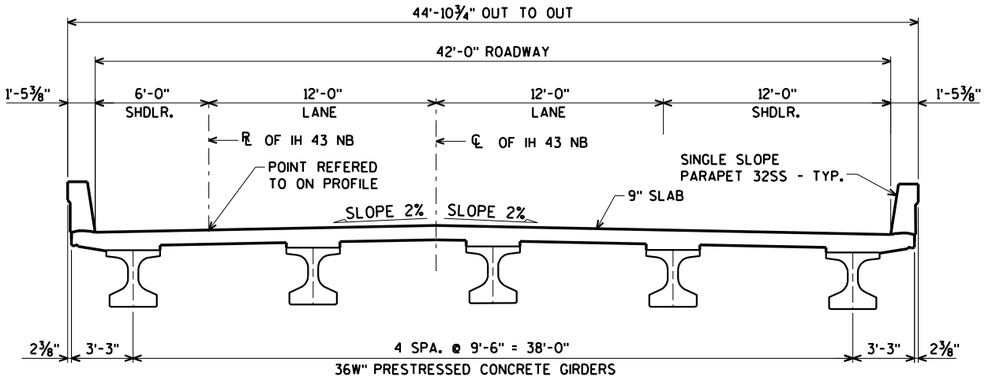
THE EXISTING STRUCTURE, B-36-14, TO BE REMOVED, IS A SINGLE SPAN STEEL DECK GIRDER BRIDGE ON CONCRETE, FULL-RETAINING ABUTMENTS, 53 FT. LONG WITH A 40 FT. CLEAR ROADWAY WIDTH.

AT BACKFACE OF ABUTMENTS ALL EXCAVATED VOLUME NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH BACKFILL STRUCTURE TYPE A.

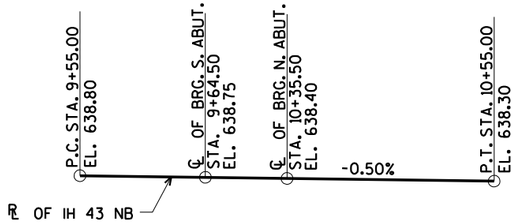
PROTECTIVE SURFACE TREATMENT AND PIGMENTED SURFACE SEALER TO BE APPLIED AS SHOWN ON THE DETAIL ON THIS SHEET.

THE HAUNCH QUANTITY IS BASED ON AN AVERAGE HAUNCH DEPTH SHOWN ON THE PRESTRESSED GIRDER DETAILS SHEETS, WHICH IS THE MAXIMUM HAUNCH QUANTITY FOR WHICH THE CONTRACTOR WILL BE PAID.

THE QUANTITY OF BACKFILL STRUCTURE TYPE A, BID ITEM 210.1500 IS CALCULATED BASED ON APPLICABLE FIGURES 12.6-1 AND 12.6-2 IN THE WISCONSIN DEPARTMENT OF TRANSPORTATION BRIDGE MANUAL.

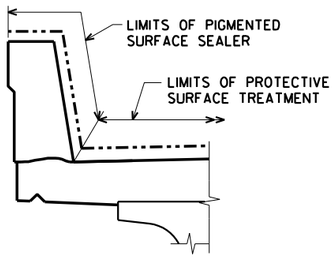


TYPICAL SECTION THRU BRIDGE
(LOOKING NORTH)



PROFILE GRADE LINE
(IH 43 NB)

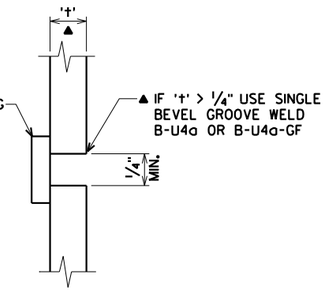
BENCH MARK:
B.M. CAP LOCATED IN SE PARAPET WALL OF STRUCTURE B-36-14
STA. 9+76, 35'RT.
EL. 640.34



PROTECTIVE SURFACE TREATMENT AND PIGMENTED SURFACE SEALER DETAIL

PILE SPLICE DETAIL

CAST-IN-PLACE PILE SHELL MATERIAL SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.



CIP PILE WELD DETAIL

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-36-230

DRAWN BY CJM/CLS | PLANS CK'D. AEB

TYPICAL SECTION, QUANTITIES, AND NOTES

SHEET 2 OF 18
360

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

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7/22/2016

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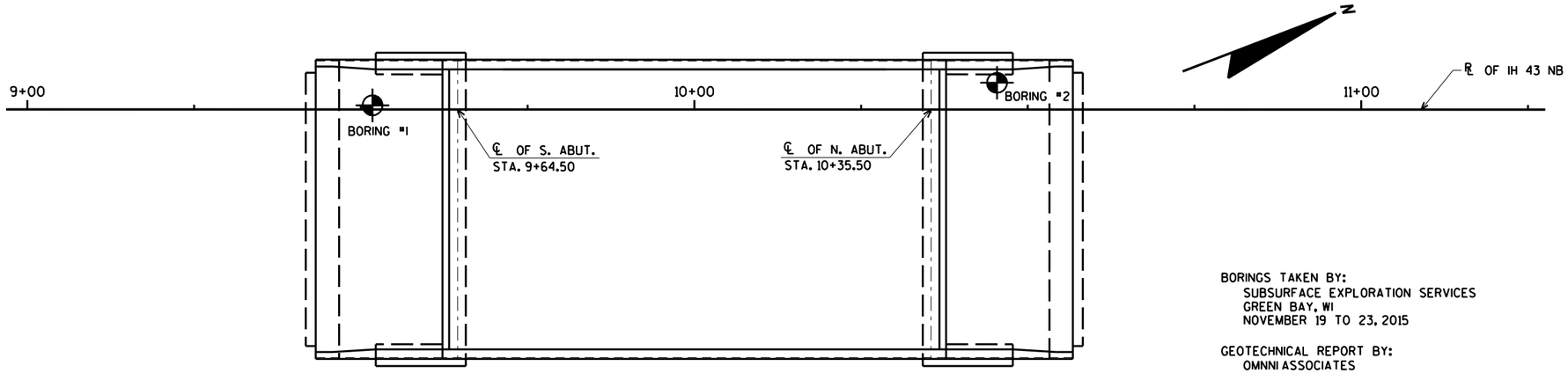
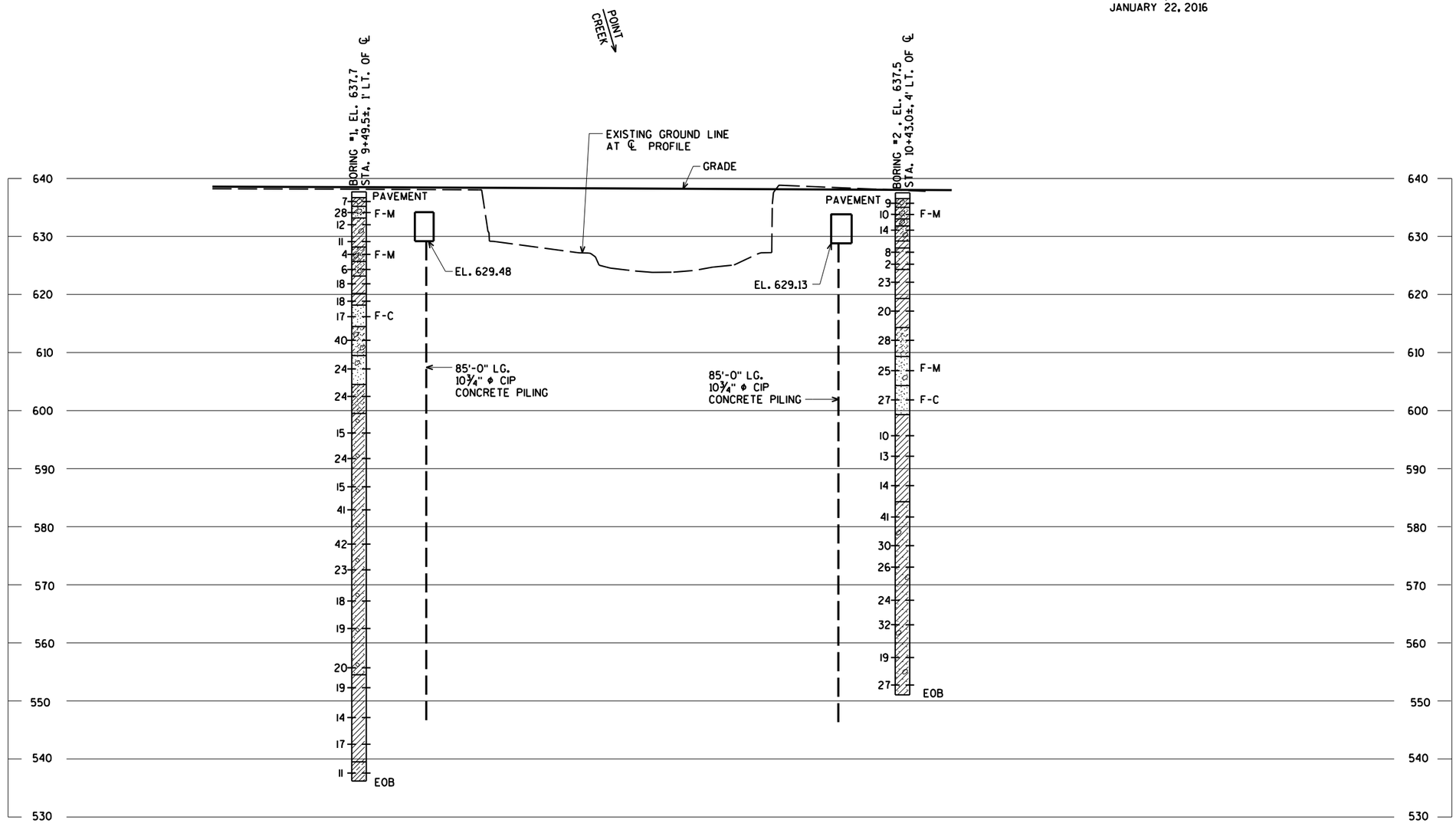


BORINGS TAKEN BY:
SUBSURFACE EXPLORATION SERVICES
GREEN BAY, WI
NOVEMBER 19 TO 23, 2015

GEOTECHNICAL REPORT BY:
OMNNI ASSOCIATES
APPLETON, WI
JANUARY 22, 2016



STATE PROJECT NUMBER

1224-21-73

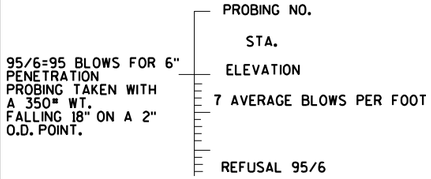
ABBREVIATIONS

F — FINE M — MEDIUM C — COARSE
WS — WEATHERED SO — SOUND

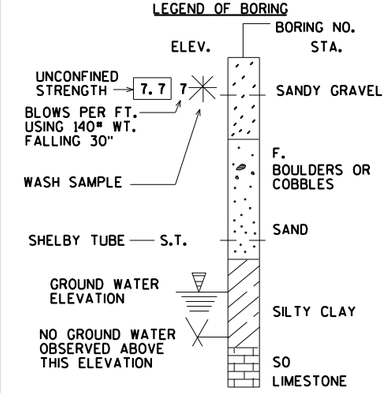
MATERIAL SYMBOLS

TOPSOIL, SILT, SANDSTONE
SAND, PEAT, LIMESTONE
GRAVEL, CLAY, IGNEOUS ROCK

LEGEND OF PROBING



LEGEND OF BORING



UNLESS OTHERWISE SPECIFIED, THE BLOWS PER FOOT AT THE LOCATIONS INDICATED ARE BASED ON DRIVING A 2" O.D. X 1.4" I.D. SPLIT SPOON SAMPLER WITH A 140# HAMMER HAVING A FREE FALL OF 30". THE BLOW COUNT IS TAKEN IN UNDISTURBED SOIL IMMEDIATELY BELOW A CASED OR OPEN HOLE ELIMINATING SIDE FRICTION ON THE DRIVE PIPE.

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

TO OBTAIN RELATIVE DATA CONCERNING THE CHARACTER OF MATERIAL IN AND UPON WHICH THE FOUNDATION MIGHT BE BUILT, BORINGS AND/OR SOUNDINGS WERE MADE AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING. THE DATA PRESENTED HEREIN REPRESENTS THE FINDINGS OF THE SUBSURFACE EXPLORATIONS MADE. HOWEVER, BECAUSE THE DEPTHS INVESTIGATED ARE LIMITED AND THE AREA OF THE BORINGS AND/OR SOUNDINGS IS VERY SMALL IN RELATION TO THE ENTIRE AREA, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT CONDITIONS BELOW THE DEPTHS INVESTIGATED OR THAT THE CLASSIFICATION OF MATERIAL ENCOUNTERED IN THESE INVESTIGATIONS IS NECESSARILY TYPICAL OF THE ENTIRE SITE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-36-230

DRAWN BY CJM | PLANS CK'D. AEB

SUBSURFACE EXPLORATION

SHEET 3 OF 18
361

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5/24/2016

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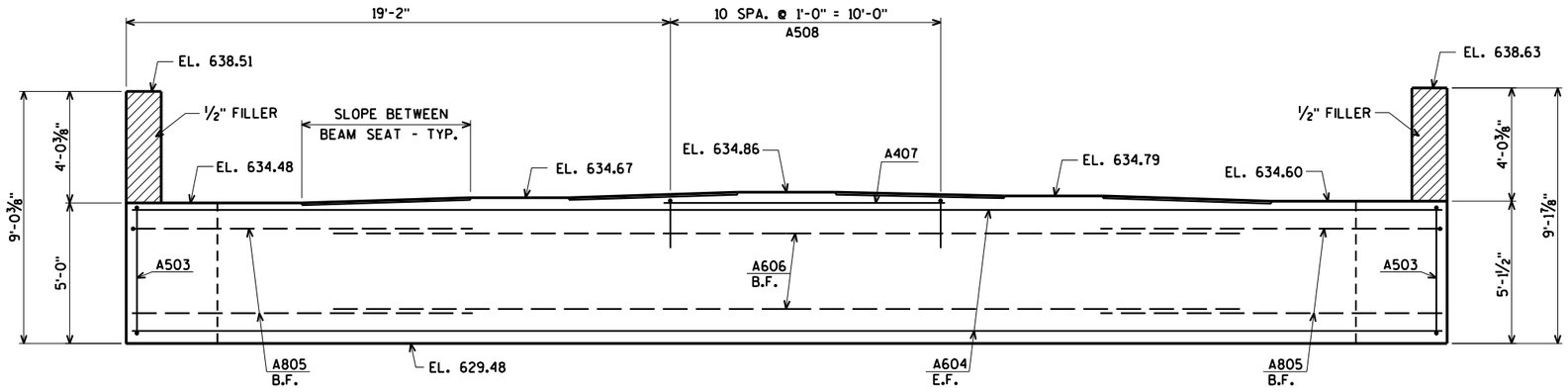
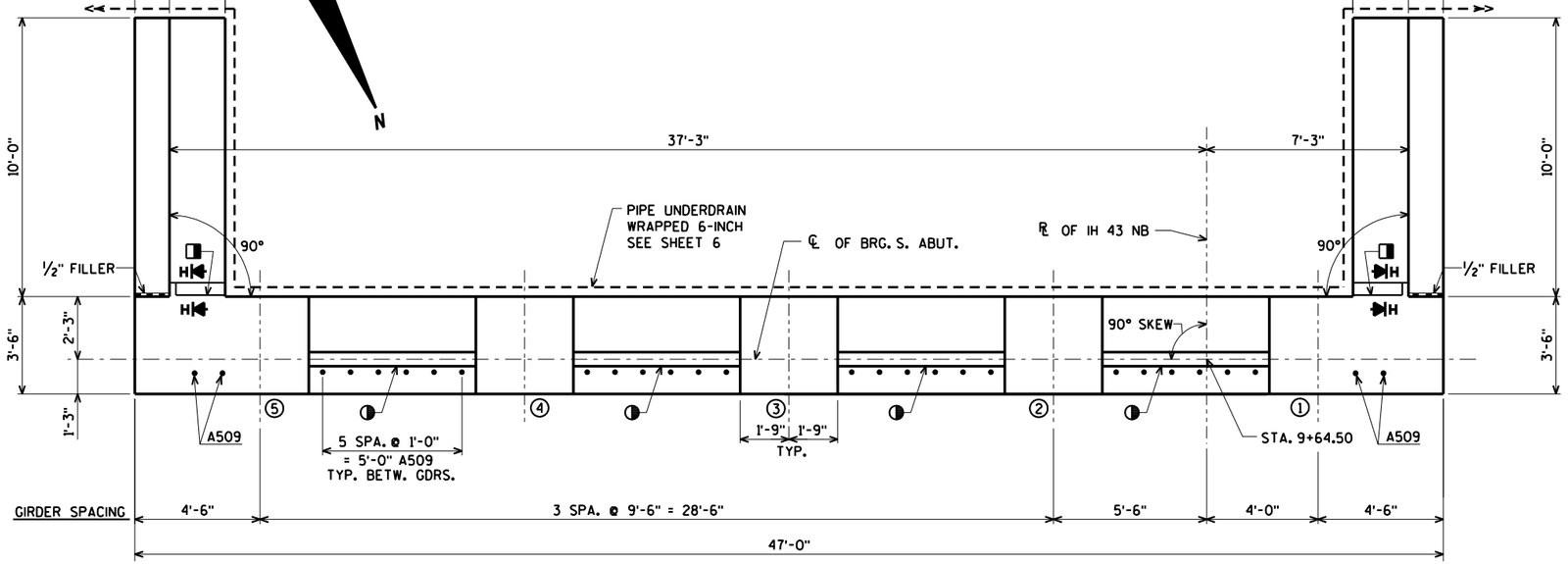
NOTE: SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE.)

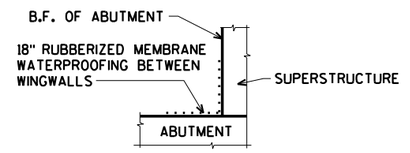


ELEVATION
(LOOKING SOUTH)

FOR SECTION THRU BODY
SEE SHEET 6



PLAN



SECTION H

◑ KEYED CONST. JOINT - FORMED BY A BEVELED 2" × 6"

◨ VERTICAL 18" RUBBERIZED MEMBRANE WATERPROOFING TO EXTEND FROM BRIDGE SEAT TO TOP OF WING WAL

B.F. DENOTES BACK FACE

E.F. DENOTES EACH FACE

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-36-230

DRAWN BY	CLS	PLANS CK'D.	AEB

SOUTH ABUTMENT

SHEET 4 OF 18
362

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

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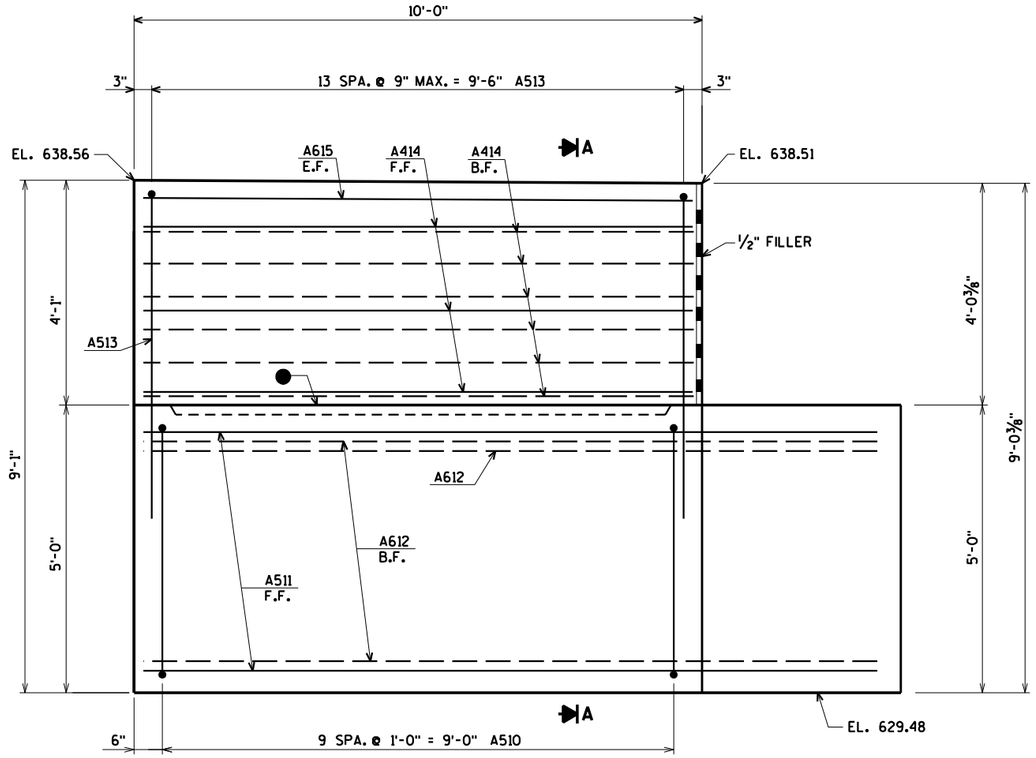
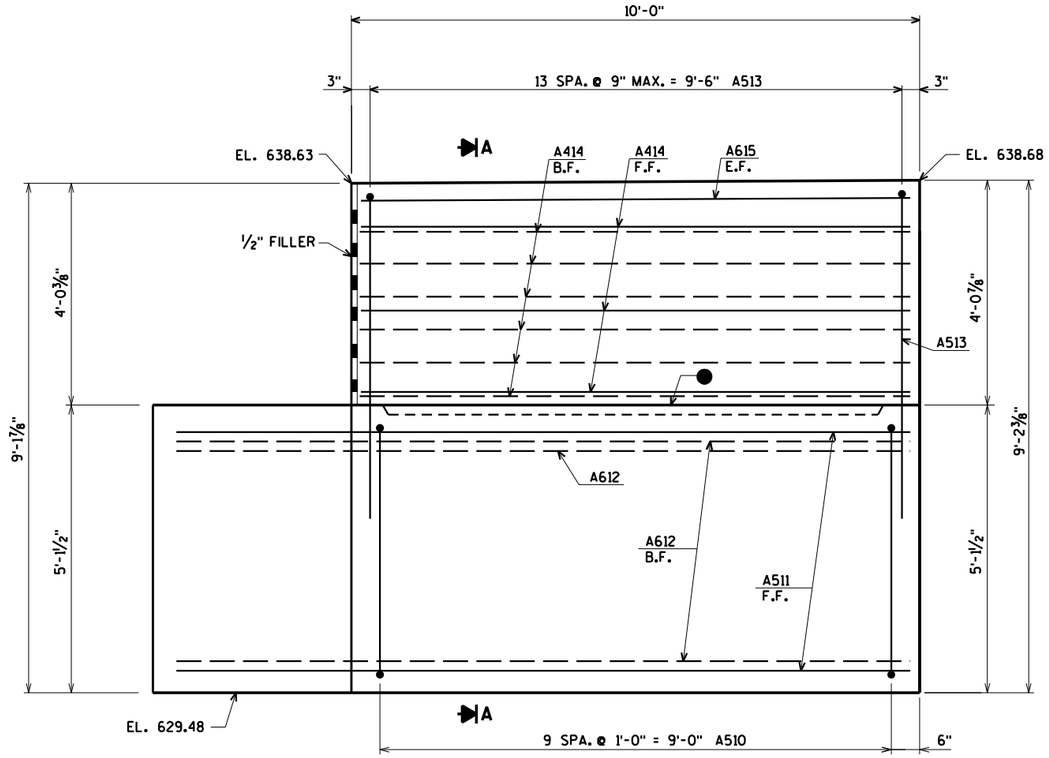
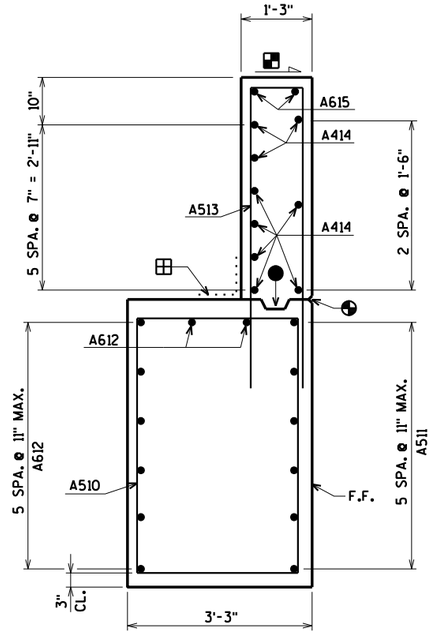


ELEVATION - WING 1



ELEVATION - WING 2



SECTION A

- ¾" "V" GROOVE ON FRONT FACE OF WINGWALL.
- OPT. KEYED CONST. JOINT - FORMED BY A SURFACED BEVELED 2" x 6".
- 18" RUBBERIZED MEMBRANE WATERPROOFING ON BACK FACE. NOT REQUIRED IF CONST. JT. IS NOT USED.
- SLOPE TO DRAIN.

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-36-230

DRAWN BY CLS | PLANS CK'D. AEB

SOUTH ABUTMENT WING DETAILS

SHEET 5 OF 18
363

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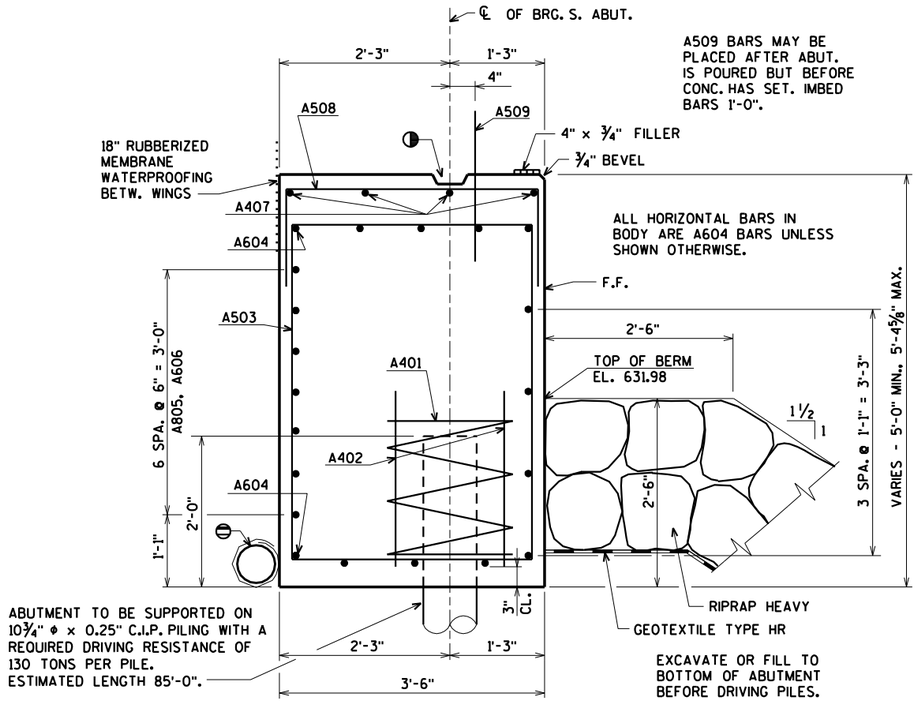
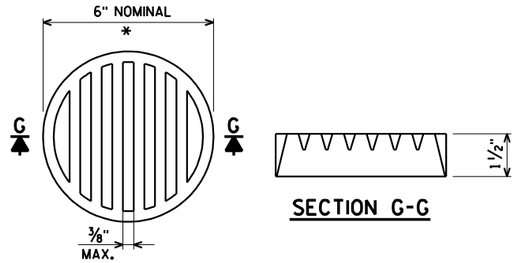
STATE PROJECT NUMBER

1224-21-73



SECTION THRU BODY



SECTION G-G

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THE RODENT SHIELD, PIPE COUPLING AND SCREWS SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".

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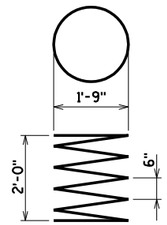
RODENT SHIELD DETAIL

BILL OF BARS

BAR. NO.	COATED BAR	NO. REQ'D.	LENGTH	BENT BAR	BUNDLED BAR SERIES	2,990# UNCOATED 1,400# COATED LOCATION
A401		10	28-0	X		BODY ℄ PILES
A402		20	2-3			BODY ℄ PILES
A503		58	15-8	X		BODY VERT.
A604		13	46-8			BODY HORIZ.
A805		14	13-2	X		BODY HORIZ. ℄ WINGS B.F.
A606		7	30-6			BODY HORIZ. BETW. WINGS B.F.
A407		4	10-4			BODY HORIZ.
A508		11	6-3	X		BODY VERT. TOP
A509	X	28	2-0			BODY DOWELS
A510	X	20	15-2	X		WINGS VERT.
A511	X	12	13-2			WINGS HORIZ. F.F.
A612	X	16	13-2			WINGS HORIZ.
A513	X	28	12-8	X		WINGS VERT.
A414	X	18	9-8			WINGS HORIZ. E.F.
A615	X	4	9-8			WINGS HORIZ. E.F.

BENDING DIMENSIONS ARE OUT TO OUT OF BARS.



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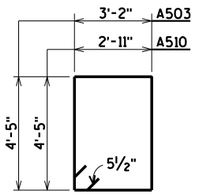

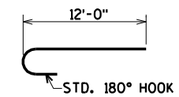

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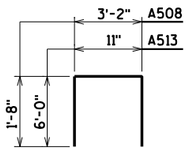

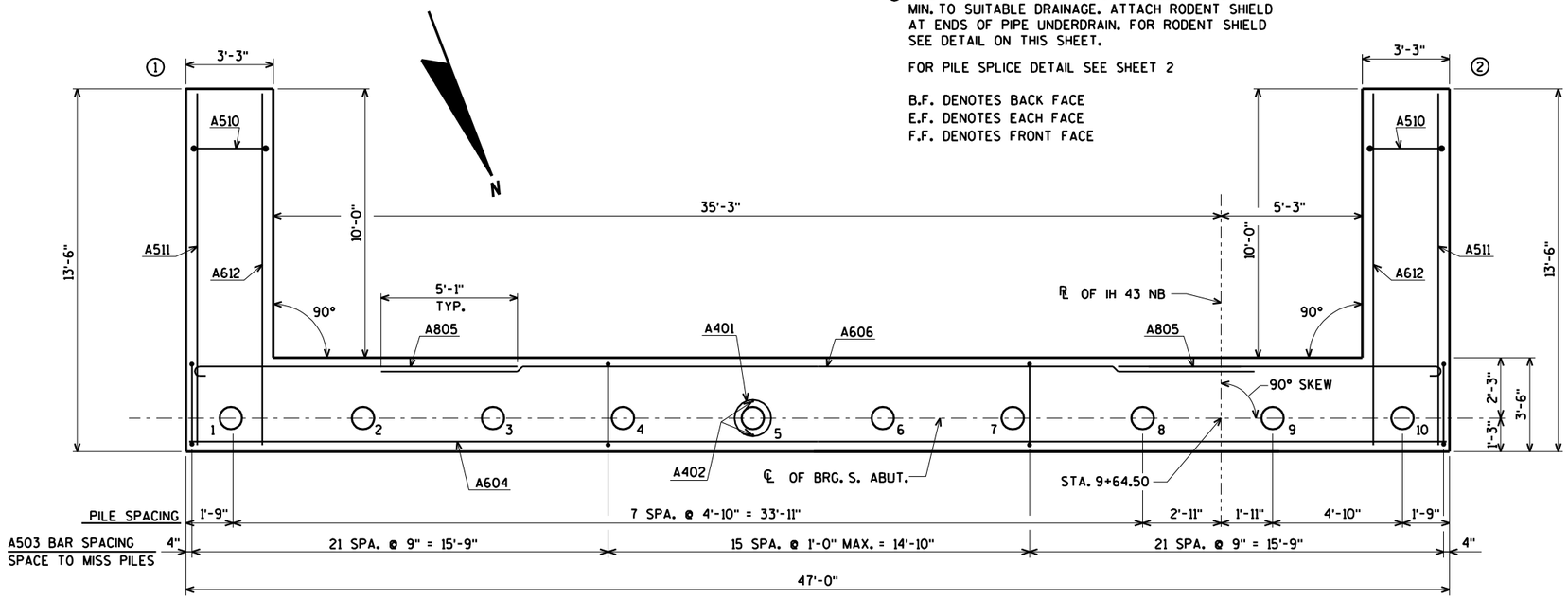

PILE LAYOUT

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-36-230

DRAWN BY CLS | PLANS CK'D. AEB

SOUTH ABUTMENT BILL OF BARS

SHEET 6 OF 18
364

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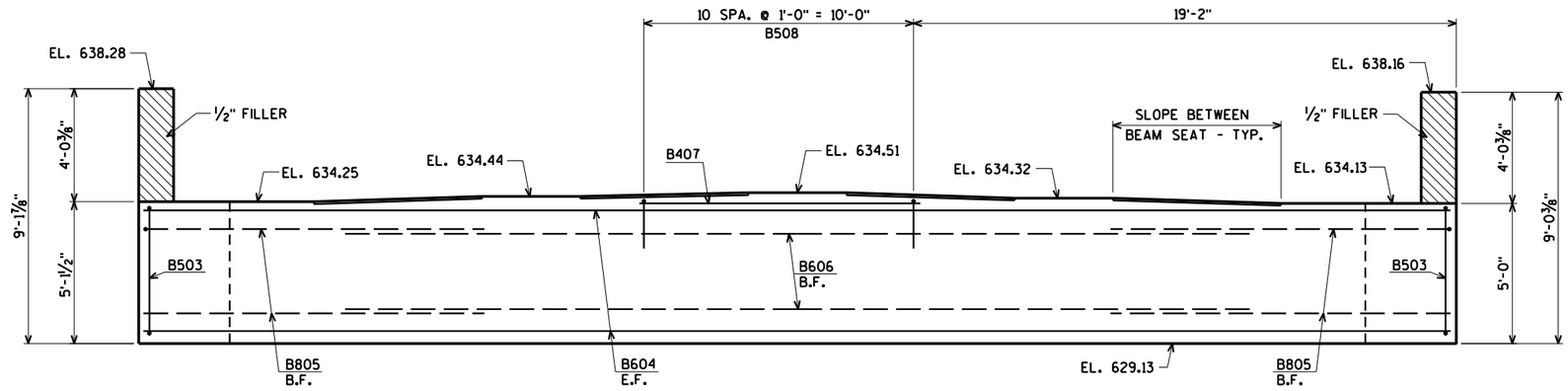
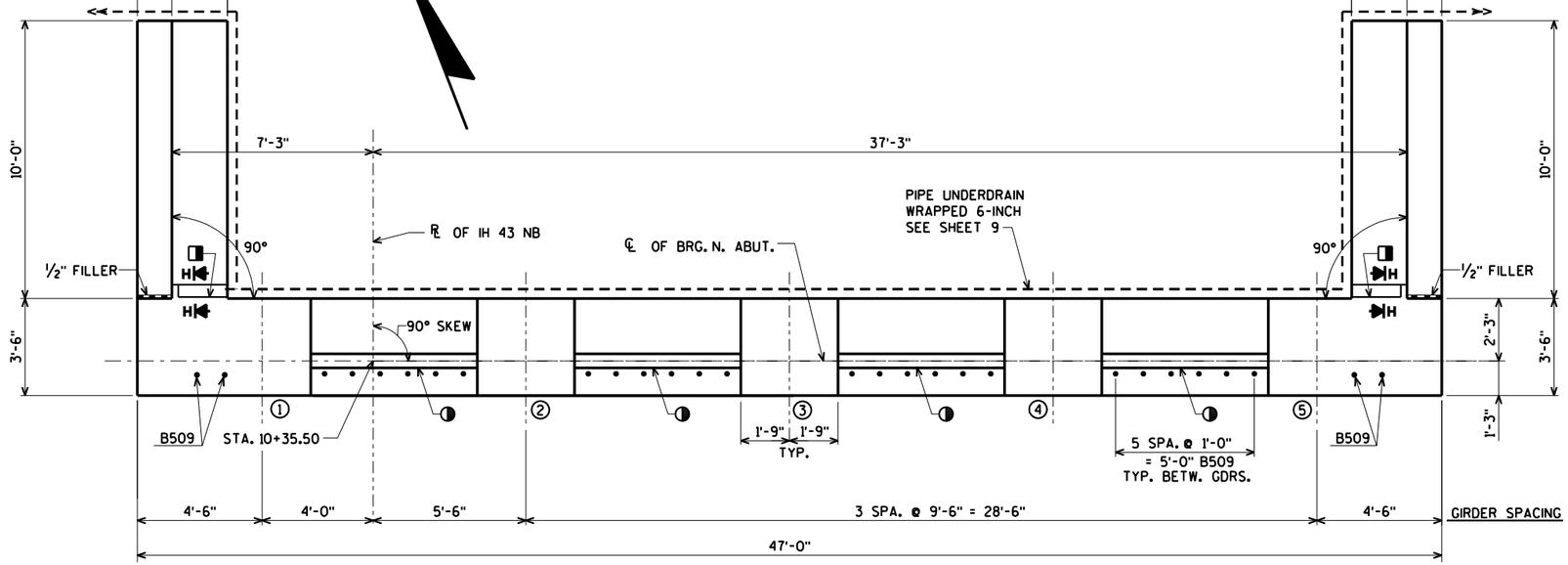
NOTE: SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE.)

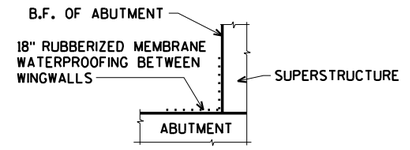


ELEVATION
(LOOKING NORTH)

FOR SECTION THRU BODY
SEE SHEET 9



PLAN



SECTION H

◑ KEYED CONST. JOINT - FORMED BY A BEVELED 2" × 6"

◨ VERTICAL 18" RUBBERIZED MEMBRANE WATERPROOFING TO EXTEND FROM BRIDGE SEAT TO TOP OF WING WAL

B.F. DENOTES BACK FACE

E.F. DENOTES EACH FACE

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-36-230

DRAWN BY CLS | PLANS CK'D. AEB

NORTH ABUTMENT

SHEET 7 OF 18
365

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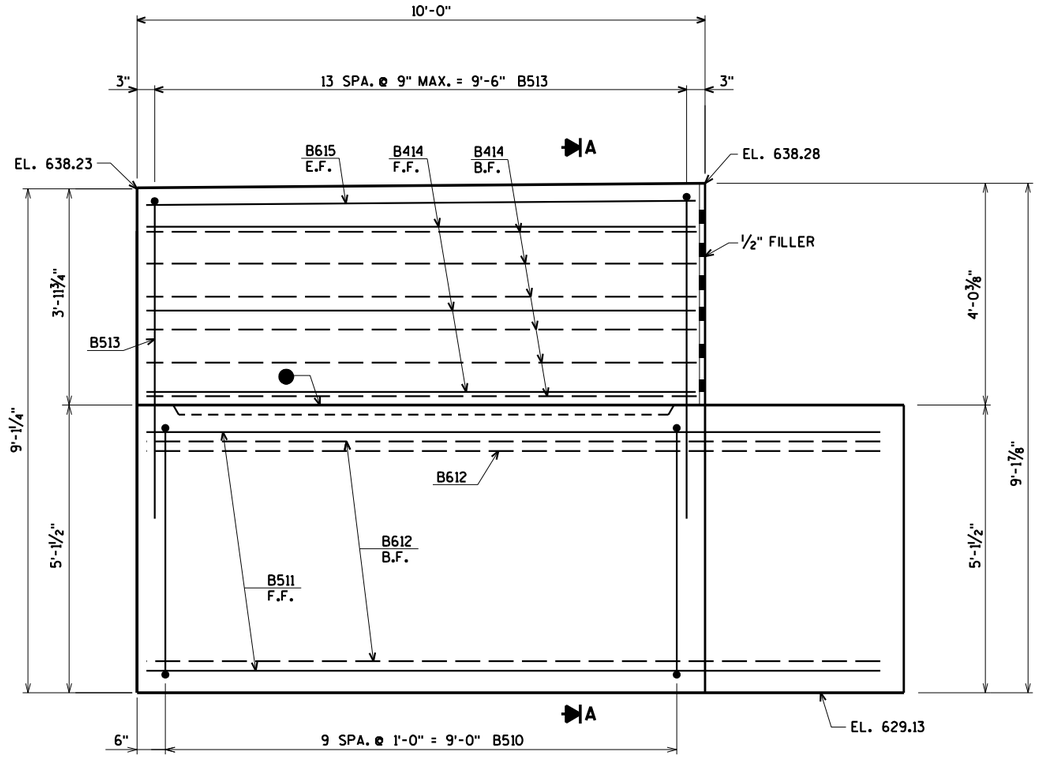
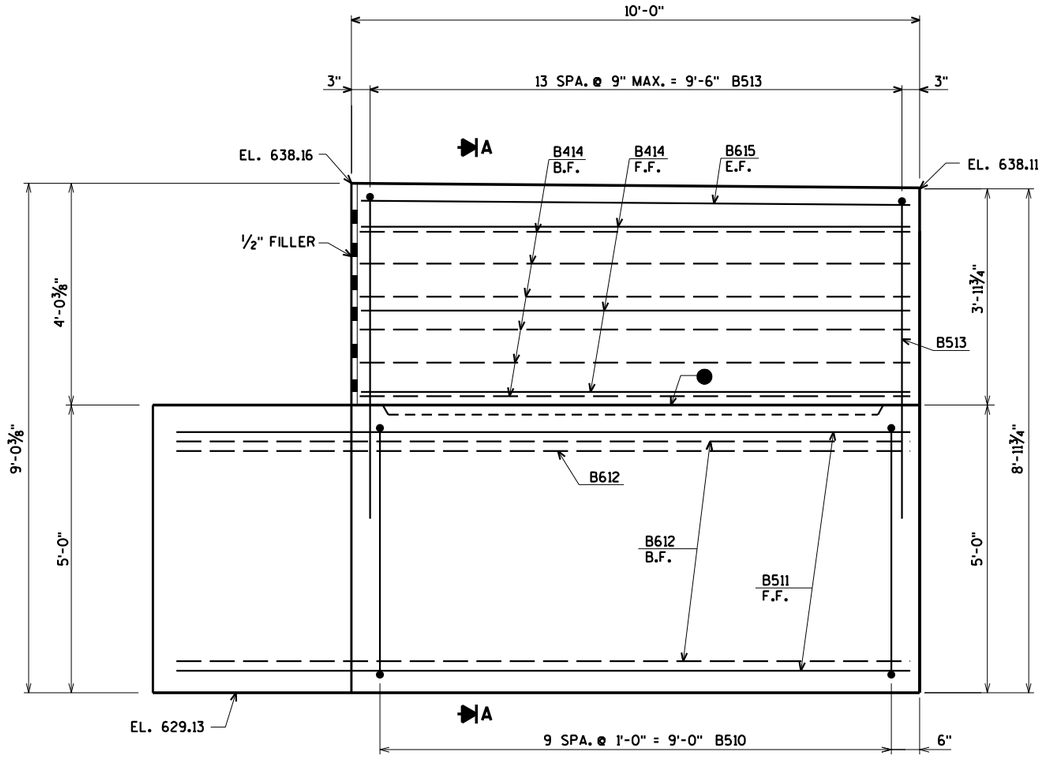


ELEVATION - WING 3



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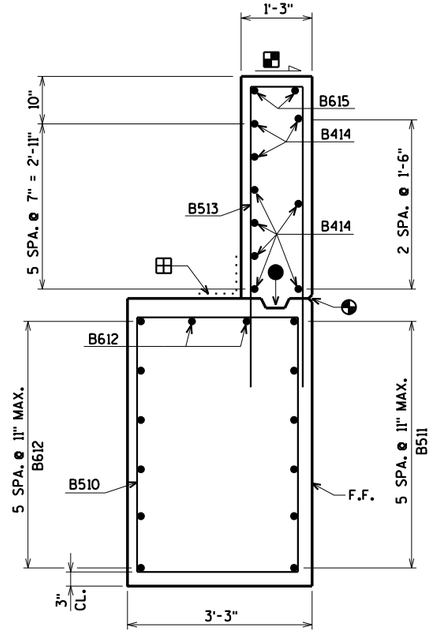

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NORTH ABUTMENT WING DETAILS

SHEET 8 OF 18
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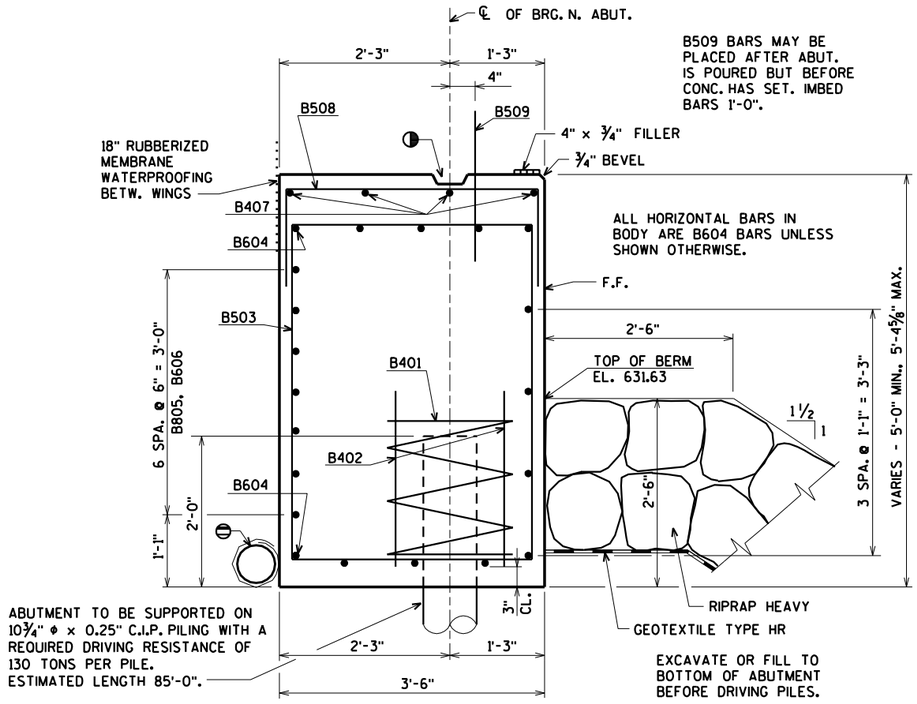
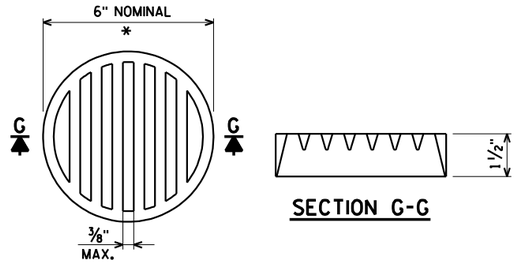


SECTION THRU BODY



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B604		13	46-8			BODY HORIZ.
B805		14	13-2	X		BODY HORIZ. @ WINGS B.F.
B606		7	30-6			BODY HORIZ. BETW. WINGS B.F.
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B509	X	28	2-0			BODY DOWELS
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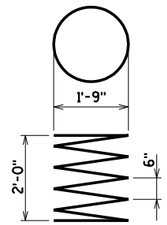

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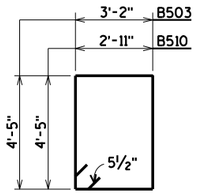

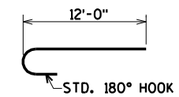

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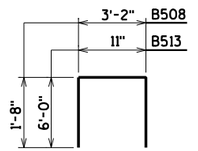

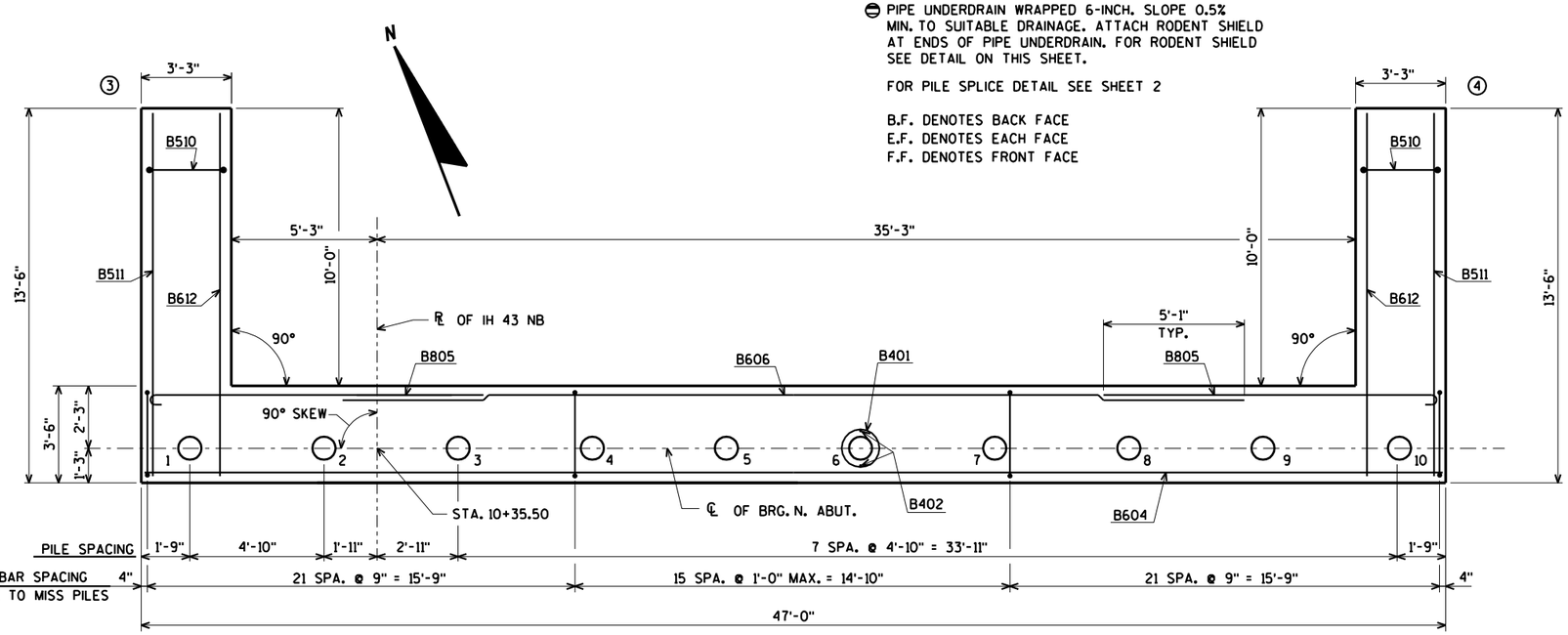

- KEYED CONST. JOINT - FORMED BY A BEVELED 2" x 6"
- PIPE UNDERDRAIN WRAPPED 6-INCH. SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN. FOR RODENT SHIELD SEE DETAIL ON THIS SHEET.

FOR PILE SPLICE DETAIL SEE SHEET 2

B.F. DENOTES BACK FACE
E.F. DENOTES EACH FACE
F.F. DENOTES FRONT FACE

PILE LAYOUT

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-36-230

DRAWN BY CLS | PLANS CK'D. AEB

NORTH ABUTMENT BILL OF BARS

SHEET 9 OF 18
367

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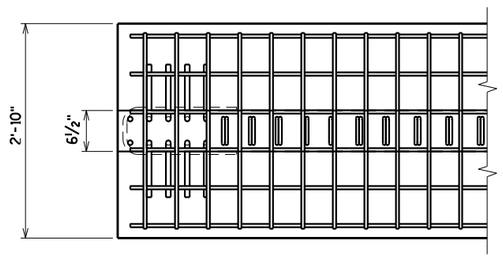
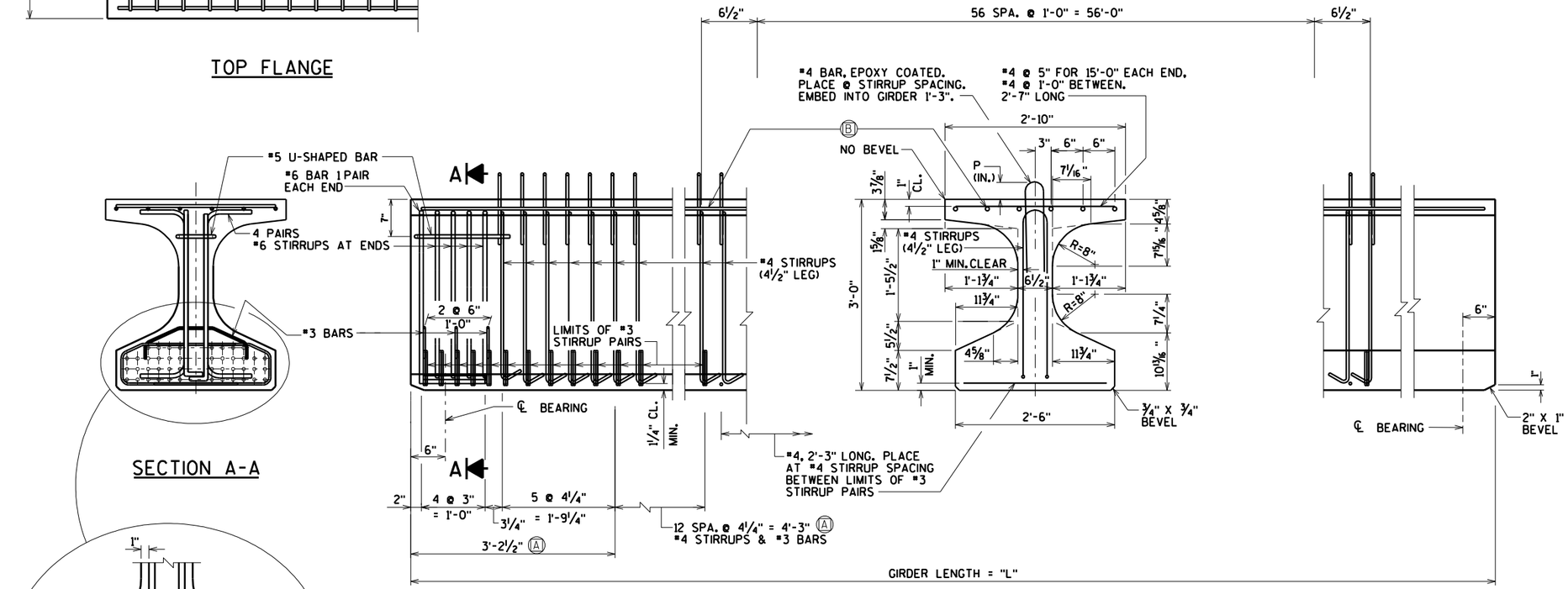
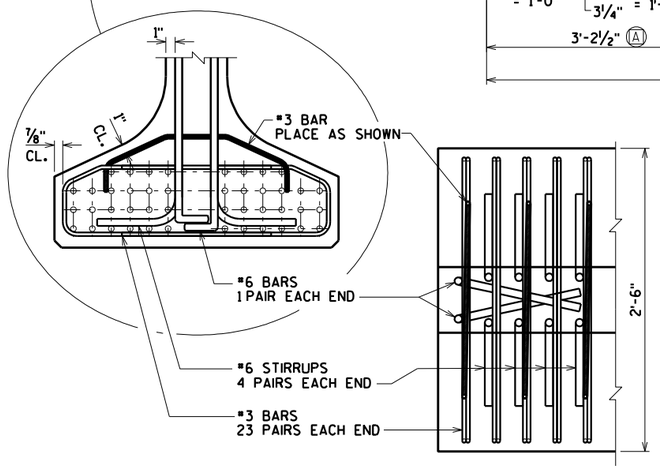


TOP FLANGE



SECTION A-A



BOTTOM FLANGE

DETAIL A

SIDE VIEW & TYPICAL SECTION IN SPAN

Ⓐ DETAIL TYP. AT EACH END

Ⓑ 6 #4 BARS, FULL LENGTH, MIN. LAP = 2'-4"

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 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. 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.

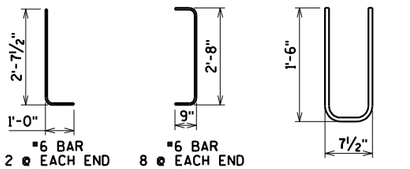
ALL GIRDERS SHALL BE CAST FULL LENGTH AS SHOWN.

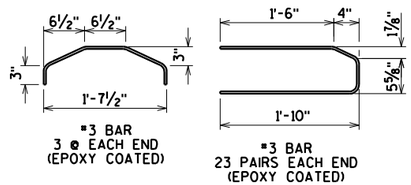
SPACING SHOWN FOR #4 STIRRUPS IS FOR GRADE 60 REINFORCEMENT.

AN ALTERNATE EQUIVALENT OF WELDED WIRE FABRIC (WWF) ASTM A497 MAY BE SUBSTITUTED FOR THE STIRRUP REINFORCEMENT SHOWN, UPON APPROVAL OF THE STRUCTURES DEVELOPMENT SECTION.

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	ALL	72'-0"	0.3	0.6	0.8	0.9	1.0	0.9	0.8	0.6	0.3	8,000	8"	7"	8"	0.6	24	6,400	32	11	14	4		

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-36-230

DRAWN BY CLS | PLANS CK'D. AEB

36W" PRESTRESSED GIRDER DETAILS

SHEET 10 OF 18
368

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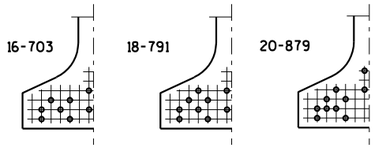
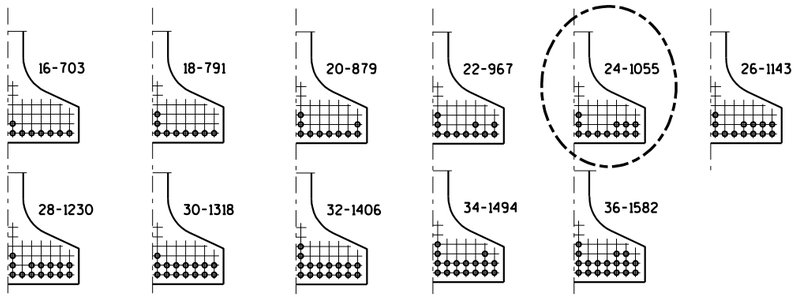


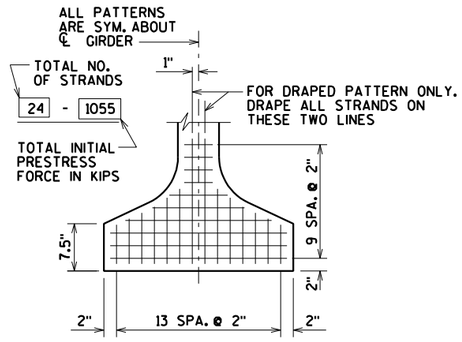
STANDARD ARRANGEMENTS TO RAISE CENTER OF GRAVITY TO AVOID DRAPING OF STRANDS

0.6"ϕ STRANDS



ARRANGEMENT AT ℄ SPAN - FOR GIRDERS WITH DRAPED STRANDS

0.6"ϕ STRANDS



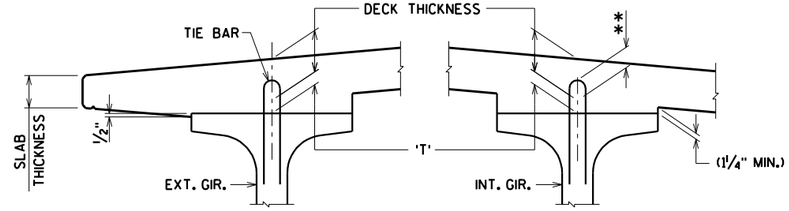
TYP. STRAND PATTERN

* THE THEORETICAL INITIAL CAMBER VALUE AT THE TIME OF STRAND RELEASE AT MIDSPAN MULTIPLIED BY A FACTOR OF 1.4 TO ACCOUNT FOR CAMBER GROWTH FROM THE TIME OF STRAND RELEASE TO JOBSITE PLACEMENT.

SPAN	CAMBER (IN.) *
1	2.0

THESE VALUES ARE NOT TO BE USED IN DETERMINING 'T', USE ACTUAL GIRDER SHOTS.

THESE VALUES ARE FOR INFORMATIONAL PURPOSES ONLY.



DECK HAUNCH DETAIL

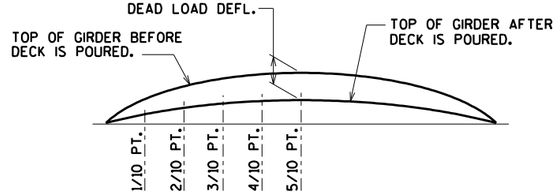
IF 1¼" MINIMUM HAUNCH HEIGHT AT EDGE OF GIRDER CANNOT BE MAINTAINED, THE GRADE LINE MAY BE REVISED BY THE ENGINEER AT THE OPTION OF THE CONTRACTOR, THE PLAN DECK THICKNESS SHALL BE HELD. NOTIFY THE STRUCTURES SECTION IF THE GRADE LINE IS RAISED FROM THE PLAN PROFILE BY MORE THAN ½" OR,

** 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 3" WAS USED IN THE QUANTITY "CONCRETE MASONRY BRIDGES".



DEAD LOAD DEFLECTION DIAGRAM

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-36-230

DRAWN BY CLS | PLANS CK'D. AEB

36W" PRESTRESSED GIRDER DETAILS

SHEET 11 OF 18
369

ORIGINAL PLANS PREPARED BY
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STATE PROJECT NUMBER

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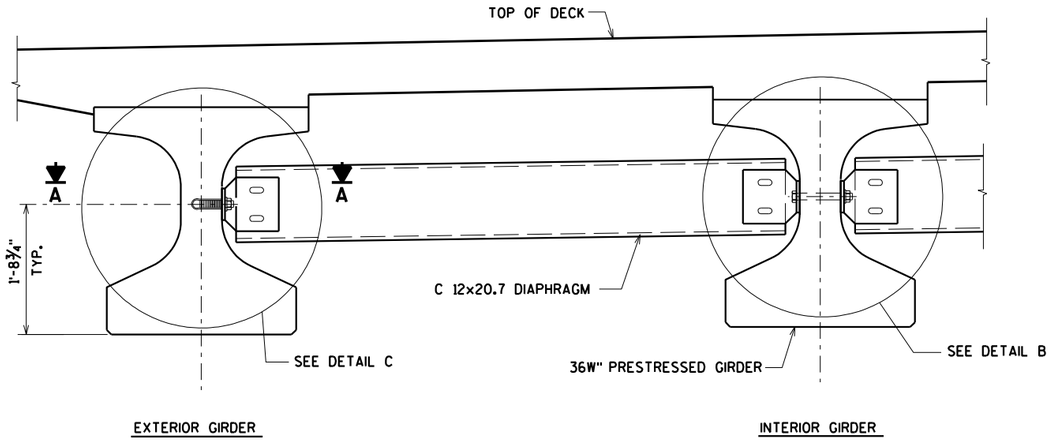
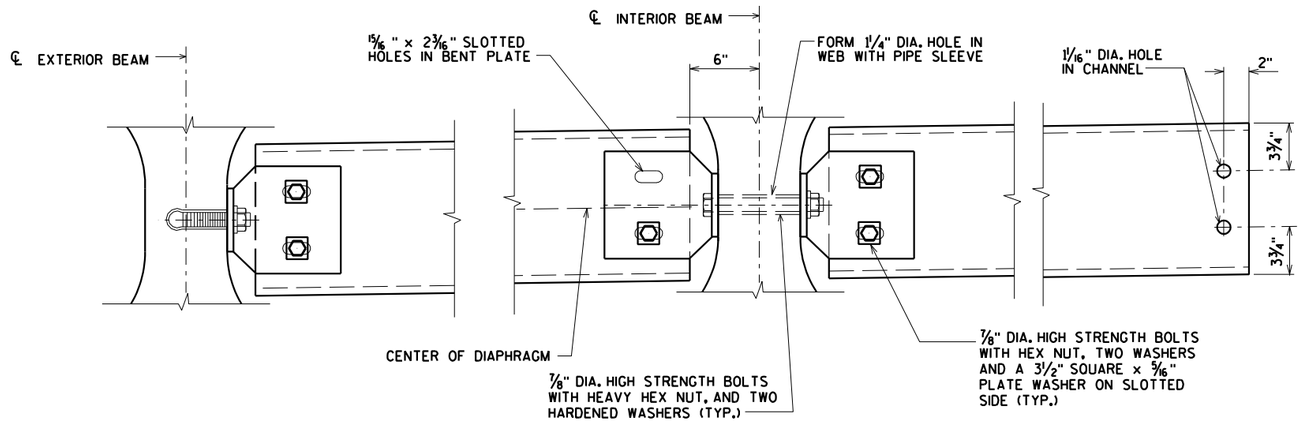
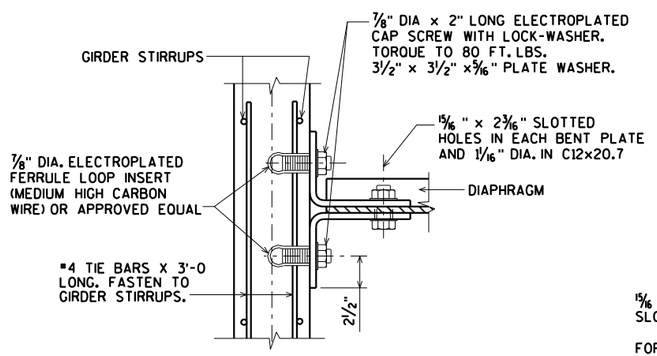


PART TRANSVERSE SECTION AT DIAPHRAGM



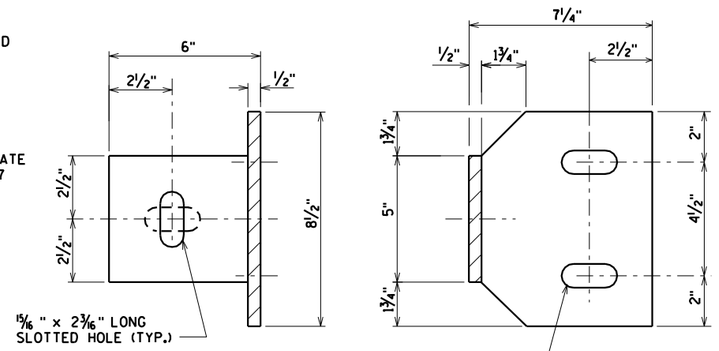
DETAIL C



SECTION A-A

(FOR EXTERIOR ATTACHMENT)

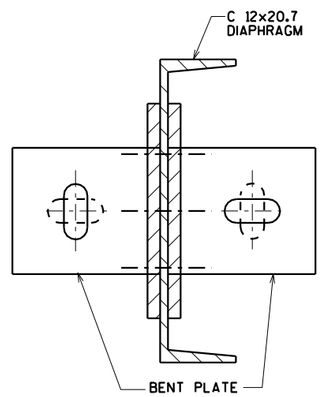
DETAIL B



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

NOTES

ALL DIAPHRAGM MATERIAL NOT EMBEDDED IN THE CONCRETE GIRDER SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "STEEL DIAPHRAGMS B-36-230", EACH.

EACH DIAPHRAGM BETWEEN GIRDERS SHALL CONSTITUTE ONE UNIT.

ALL DIAPHRAGM STRUCTURAL STEEL SHALL BE ASTM A709 GRADE 36. ALL BOLTS, NUTS AND WASHERS SHALL BE ASTM A325 TYPE 1.

ALL DIAPHRAGM STRUCTURAL STEEL SHOWN SHALL BE HOT-DIPPED GALVANIZED. ALL BOLTS, NUTS AND WASHERS SHALL BE HOT-DIPPED GALVANIZED IN ACCORDANCE WITH ASTM A153 CLASS C. GALVANIZED NUTS SHALL BE TAPPED OVERSIZE IN ACCORDANCE WITH THE REQUIREMENTS OF ASTM A563 AND SHALL MEET THE REQUIREMENTS OF SUPPLEMENTARY REQUIREMENT S1 OF ASTM A563, LUBRICANT AND TEST FOR COATED NUTS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-36-230

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STEEL INTER. DIAPHRAGM DETAILS

SHEET 12 OF 18
370

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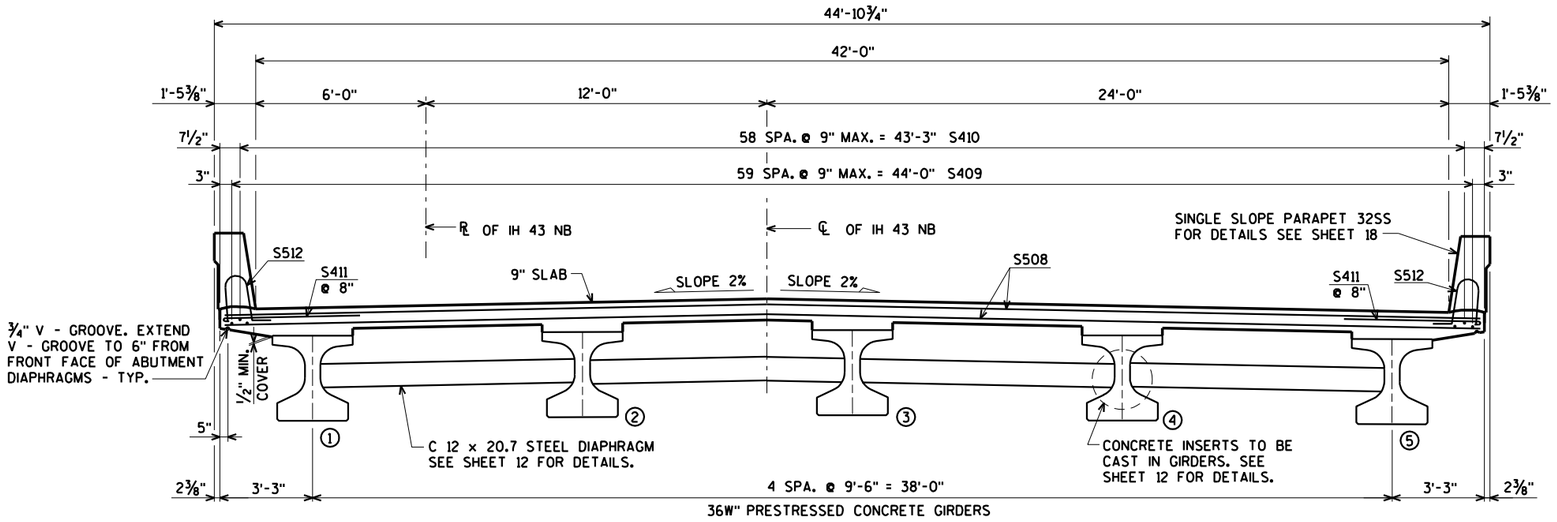


CROSS SECTION THRU ROADWAY
(LOOKING NORTH)

BILL OF BARS

BAR. NO.	COATED BAR	NO. REQ'D.	LENGTH	BENT BAR	BUNDLED BAR SERIES	23,370# COATED LOCATION
S501	X	100	11-4	X		DIAPH. @ ABUT. VERT.
S502	X	20	9-10	X		DIAPH. @ ABUT. VERT.
S503	X	100	5-7	X		DIAPH. @ ABUT. VERT.
S604	X	10	46-8			DIAPH. @ ABUT. HORIZ.
S605	X	48	5-7			DIAPH. @ ABUT. HORIZ. BETW. GDRS.
S606	X	8	3-9			DIAPH. @ ABUT. HORIZ. @ EXT. GDRS.
S607	X	4	2-11			DIAPH. @ ABUT. HORIZ. @ EXT. GDRS.
S508	X	221	44-2			SLAB TRANS. TOP & BOT.
S409	X	120	38-5			SLAB LONG. BOT.
S410	X	118	37-9			SLAB LONG. TOP
S411	X	222	5-3	X		SLAB TRANS. TOP @ EDGES
S512	X	228	4-5	X		SLAB @ PARAPET VERT.
S513	X	228	5-0	X		PARAPET VERT.
S514	X	24	39-2			PARAPET HORIZ.

BENDING DIMENSIONS ARE OUT TO OUT OF BARS.

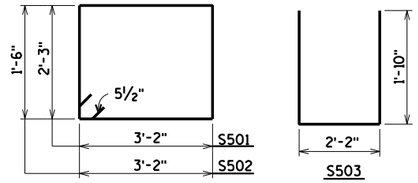
⊖ END OF GIRDER

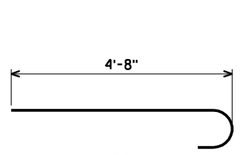
◭ 18" RUBBERIZED MEMBRANE WATERPROOFING

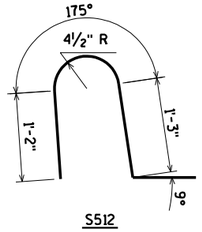
◪ OPTIONAL CONSTRUCTION JOINT 1'-2" BELOW TOP OF GIRDER. IF USED, DECK POUR MUST BE WITHIN 2 WEEKS FROM THE TIME OF THE DIAPHRAGM POUR.

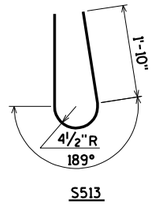
▨ 18" RUBBERIZED MEMBRANE WATERPROOFING IF CONST. JT. IS USED. COST INCIDENTAL TO BID ITEM "CONCRETE MASONRY BRIDGES"

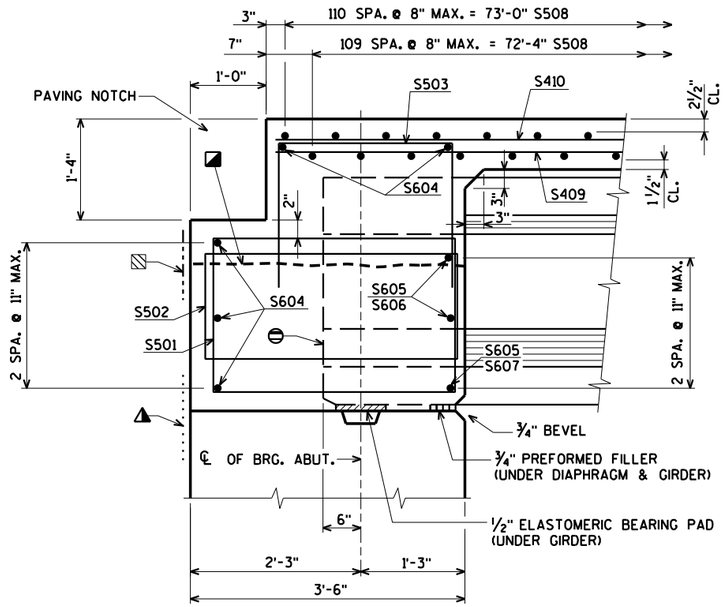
◪ SLOPE TO DRAIN.



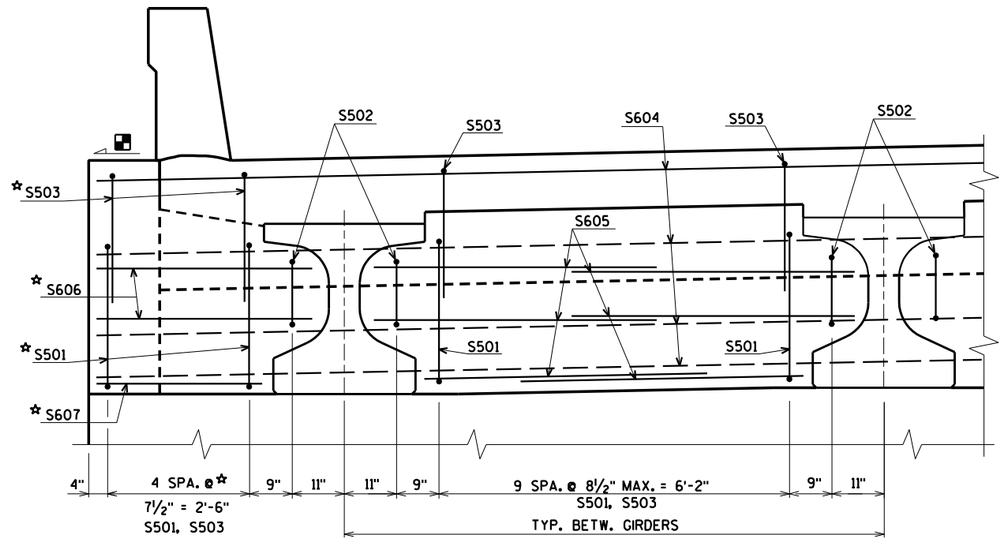








PART LONGITUDINAL SECTION



PART ELEVATION AT ABUTMENT

☆SEE SUPERSTRUCTURE CORNER DETAIL ON SHEET 14

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-36-230

DRAWN BY CLS | PLANS CK'D. AEB

SUPERSTRUCTURE

SHEET 13 OF 18
371

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
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STATE PROJECT NUMBER

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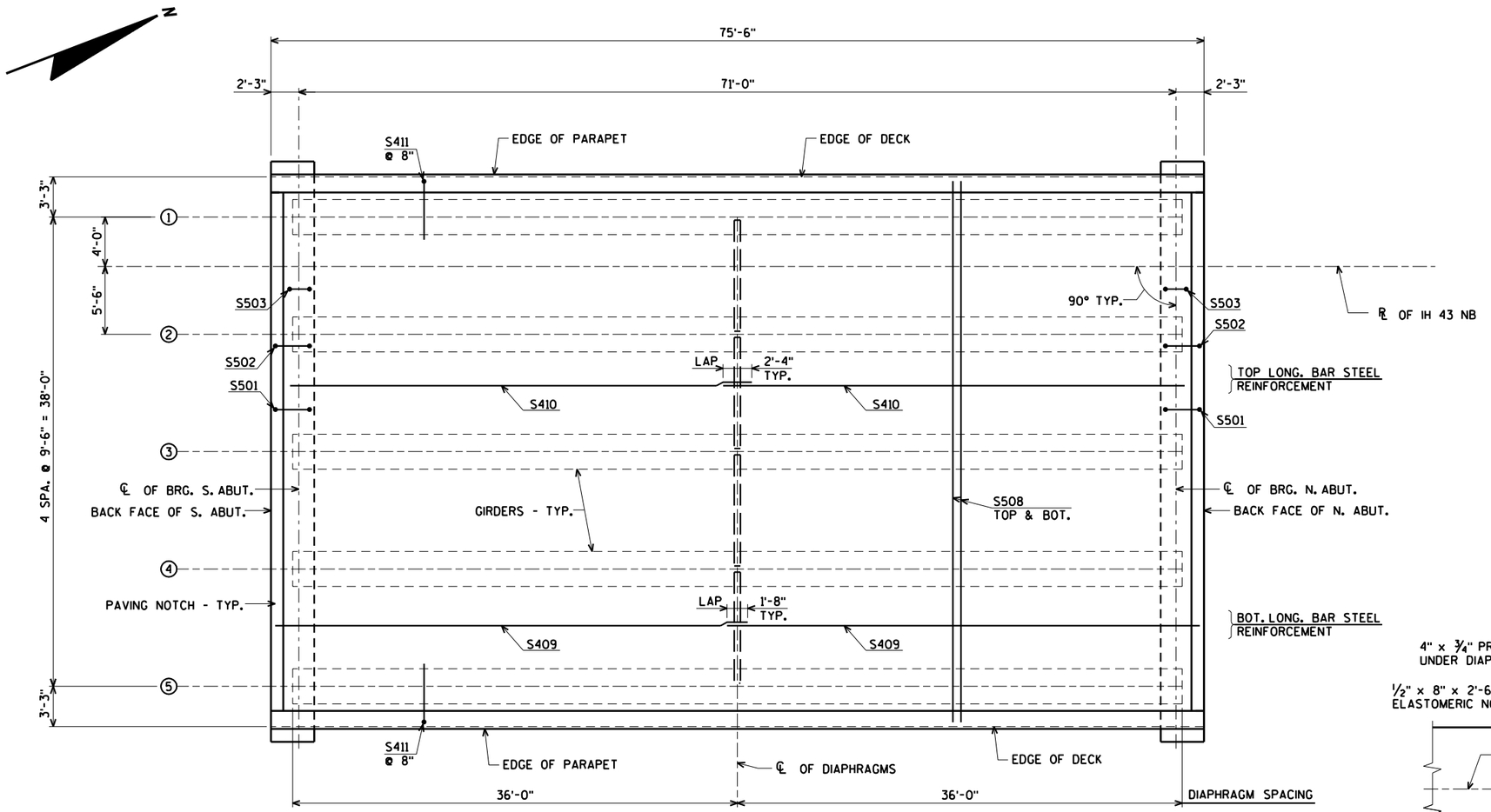
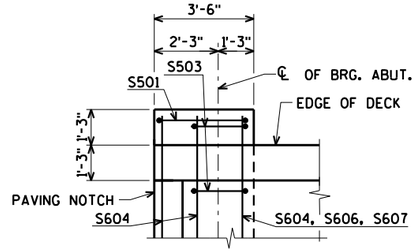
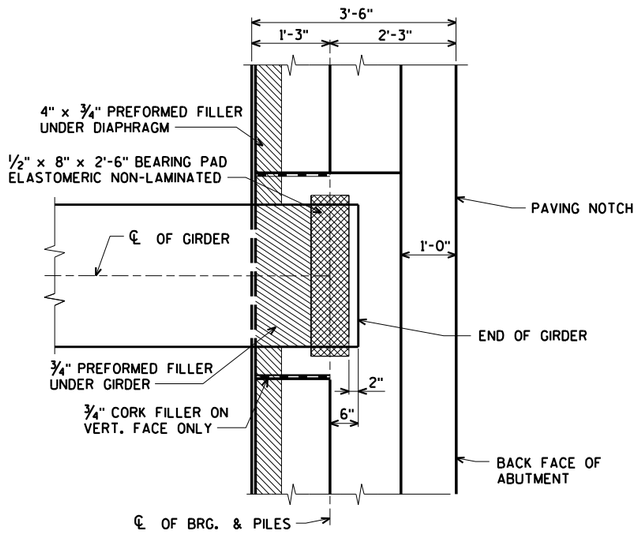


PLAN



CORNER DETAIL



BEARING PAD DETAIL

TOP OF DECK ELEVATIONS

	℄ OF BRG. S. ABUT.	0.1 PT.	0.2 PT.	0.3 PT.	0.4 PT.	0.5 PT.	0.6 PT.	0.7 PT.	0.8 PT.	0.9 PT.	℄ OF BRG. N. ABUT.
W. EDGE OF DECK	638.63	638.60	638.56	638.53	638.49	638.46	638.42	638.38	638.35	638.31	638.28
GIRDER 1	638.67	638.64	638.60	638.57	638.53	638.50	638.46	638.42	638.39	638.35	638.32
℄ OF ROAD	638.75	638.72	638.68	638.65	638.61	638.58	638.54	638.50	638.47	638.43	638.40
GIRDER 2	638.86	638.83	638.79	638.76	638.72	638.69	638.65	638.61	638.58	638.54	638.51
℄ OF ROAD	638.99	638.96	638.92	638.89	638.85	638.82	638.78	638.74	638.71	638.67	638.64
GIRDER 3	638.93	638.90	638.86	638.83	638.79	638.76	638.72	638.68	638.65	638.61	638.58
GIRDER 4	638.74	638.71	638.67	638.64	638.60	638.57	638.53	638.49	638.46	638.42	638.39
GIRDER 5	638.55	638.52	638.48	638.45	638.41	638.38	638.34	638.30	638.27	638.23	638.20
E. EDGE OF DECK	638.51	638.48	638.44	638.41	638.37	638.34	638.30	638.26	638.23	638.19	638.16

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-36-230

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SUPERSTRUCTURE PLAN

SHEET 14 OF 18
372

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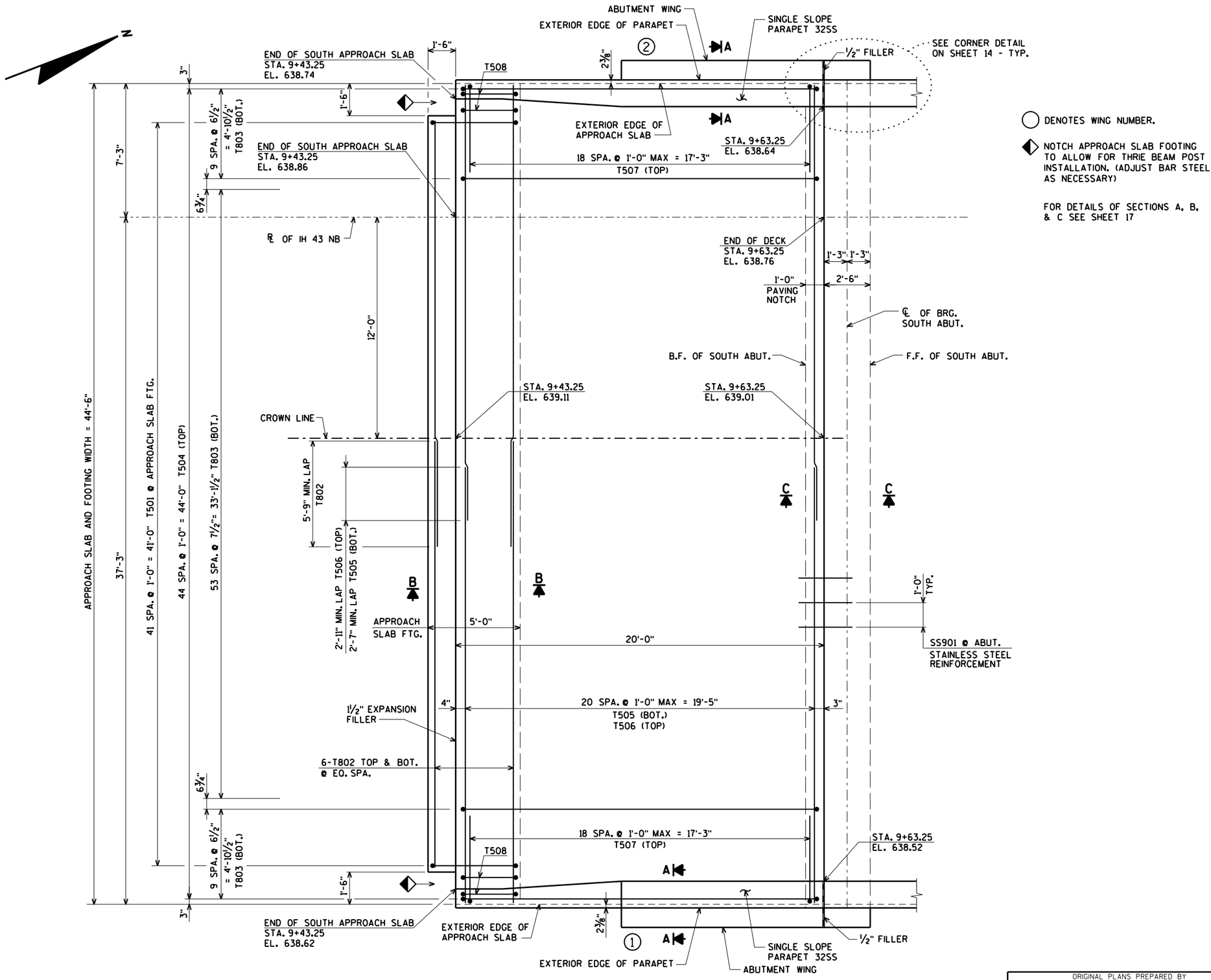

○ DENOTES WING NUMBER.

◆ NOTCH APPROACH SLAB FOOTING TO ALLOW FOR THRIE BEAM POST INSTALLATION. (ADJUST BAR STEEL AS NECESSARY)

FOR DETAILS OF SECTIONS A, B, & C SEE SHEET 17

APPROACH SLAB PLAN

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-36-230

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SOUTH STRUCTURAL APPROACH SLAB

SHEET 15 OF 18
373

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5/24/2016

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STATE PROJECT NUMBER

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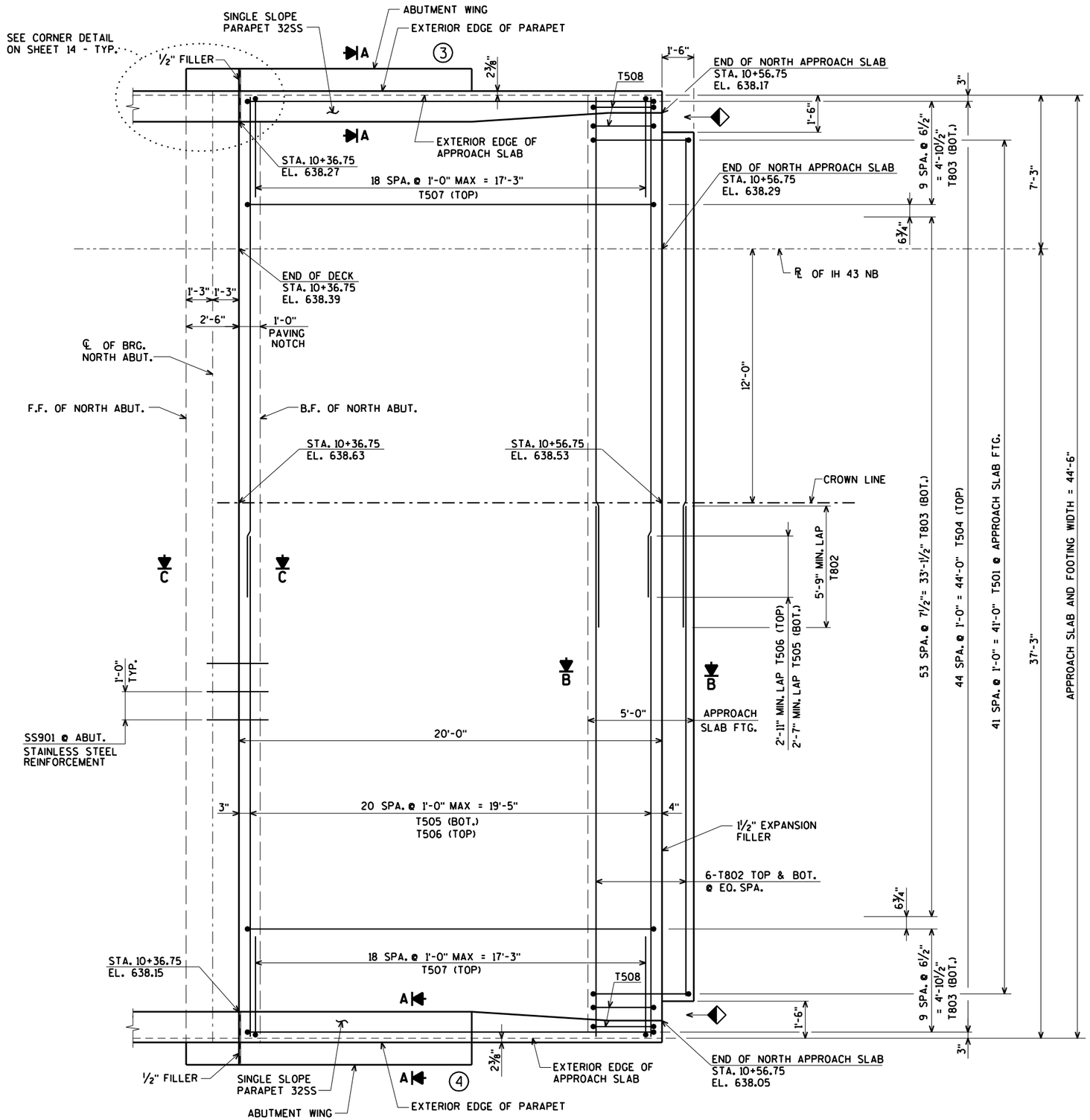

APPROACH SLAB PLAN

N

○ DENOTES WING NUMBER.

◆ NOTCH APPROACH SLAB FOOTING TO ALLOW FOR THRIE BEAM POST INSTALLATION. (ADJUST BAR STEEL AS NECESSARY)

FOR LOCATIONS OF SECTIONS A, B, & C SEE SHEET 17

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-36-230

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NORTH STRUCTURAL APPROACH SLAB

SHEET 16 OF 18
374

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5/24/2016

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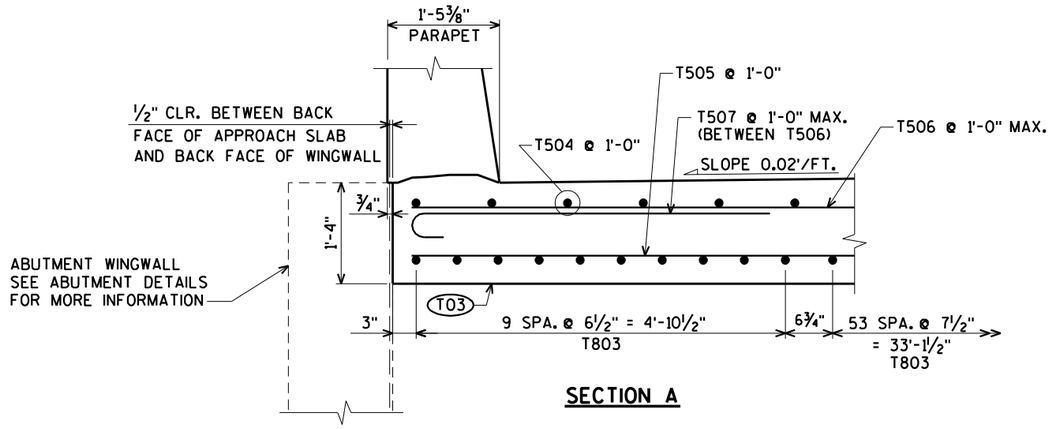
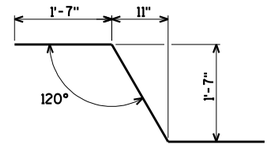


SECTION A



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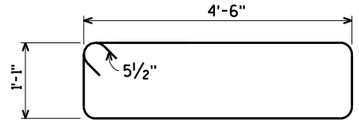

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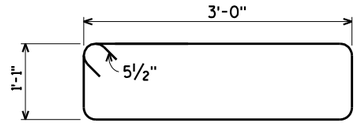

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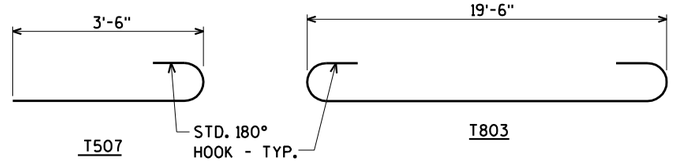


T507 T803

BILL OF BARS

BAR. NO.	COATED BAR	NO. REQ'D.	LENGTH	BENT BAR	BUNDLED BAR SERIES	780# STAINLESS STEEL (PER APPROACH SLAB) LOCATION
SS901		46	5-0	X		CONC. ABUT. DIAPH. TO APPROACH SLAB

BAR. NO.	COATED BAR	NO. REQ'D.	LENGTH	BENT BAR	BUNDLED BAR SERIES	14,640# COATED (PER APPROACH SLAB) LOCATION
T501	X	84	11-10	X		APPROACH SLAB FTG.- STIRRUP
T802	X	48	25-0			APPROACH SLAB FTG.- TRANS.
T803	X	74	21-4	X		APPROACH SLAB - LONG. - BOT.
T504	X	90	19-6			APPROACH SLAB - LONG - TOP
T505	X	84	23-5			APPROACH SLAB - TRANS. - BOT.
T506	X	84	23-7			APPROACH SLAB - TRANS. - TOP
T507	X	38	4-1	X		APPROACH SLAB - TRANS. - TOP
T508	X	8	8-10	X		APPROACH SLAB FTG.- STIRRUP AT ENDS

BENDING DIMENSIONS ARE OUT TO OUT OF BARS.

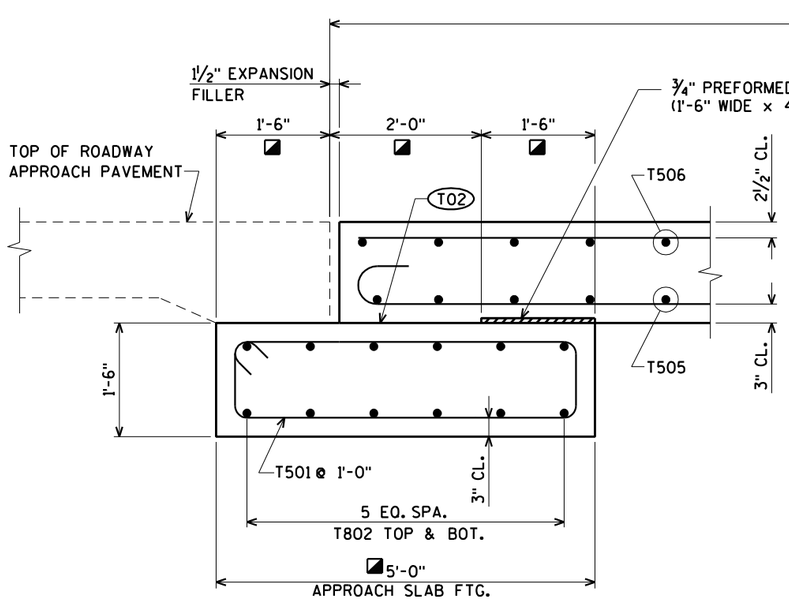
T02 STEEL TROWEL TOP SURFACE OF FOOTING AND PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHYLENE SHEETS OVER THE ENTIRE TOP OF FOOTING.

T03 PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHYLENE SHEETS OVER THE ENTIRE TOP OF SUBGRADE.

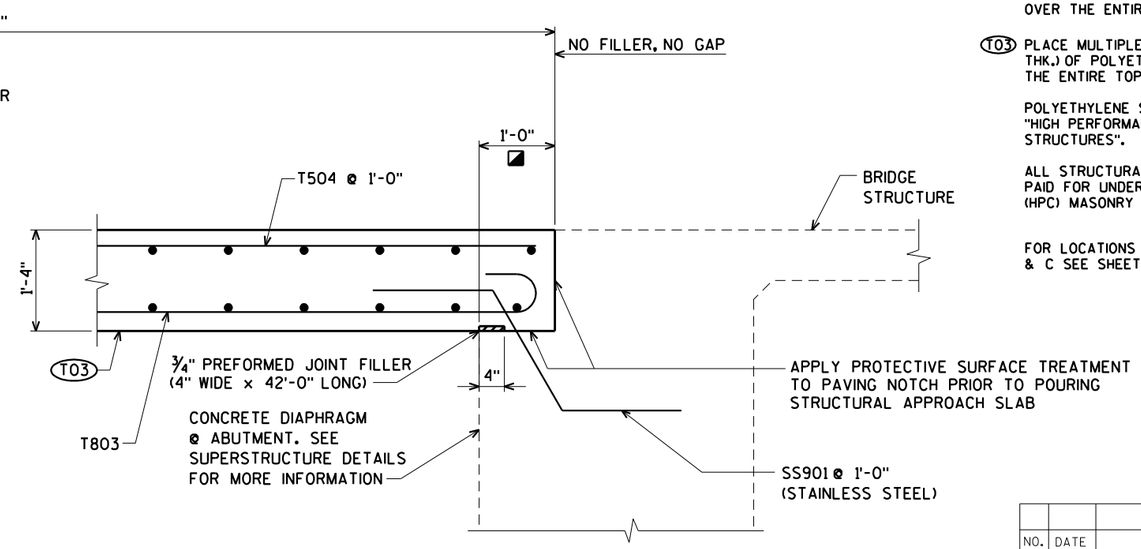
POLYETHYLENE SHEETS ARE INCIDENTAL TO "HIGH PERFORMANCE CONCRETE (HPC) MASONRY STRUCTURES".

ALL STRUCTURAL APPROACH SLAB CONCRETE PAID FOR UNDER "HIGH PERFORMANCE CONCRETE (HPC) MASONRY STRUCTURES".

FOR LOCATIONS OF SECTIONS A, B, & C SEE SHEETS 15 & 16



SECTION B



SECTION C

SECTION THRU APPROACH SLAB

◪ MEASURED NORMAL TO ABUTMENT

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-36-230

DRAWN BY CLS | PLANS CK'D. AEB

STRUCTURAL APPROACH SLAB DETAILS

SHEET 17 OF 18
375

ORIGINAL PLANS PREPARED BY
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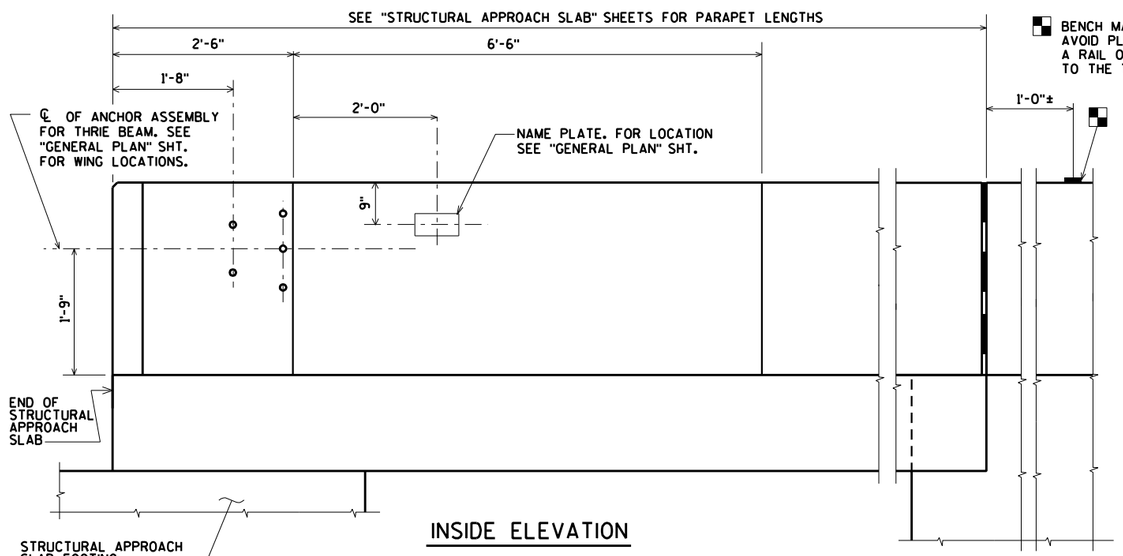
STATE PROJECT NUMBER

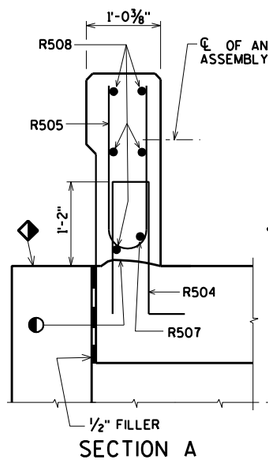
1224-21-73



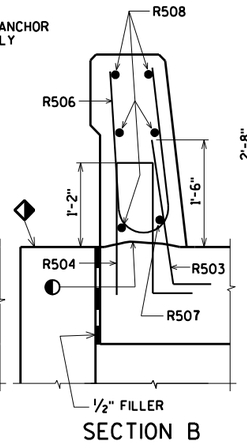
INSIDE ELEVATION

BENCH MARK CAP (WHEN SUPPLIED). AVOID PLACING A BENCH MARK CAP BELOW A RAIL OR FENCE SYSTEM THAT IS ATTACHED TO THE TOP OF THE PARAPET.

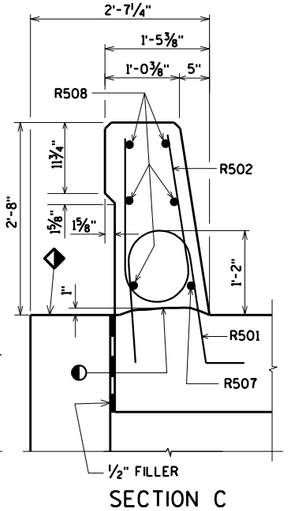
1'-0"±



SECTION A



SECTION B

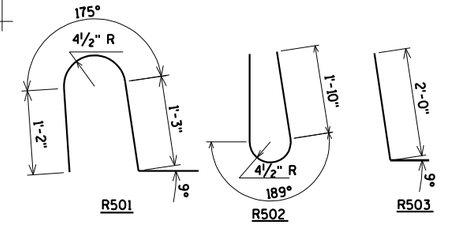


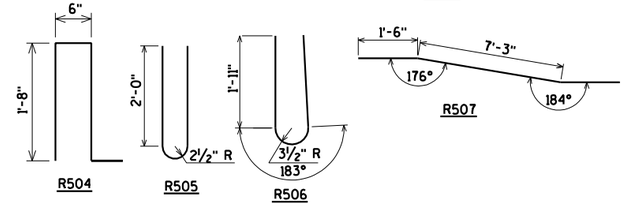
SECTION C

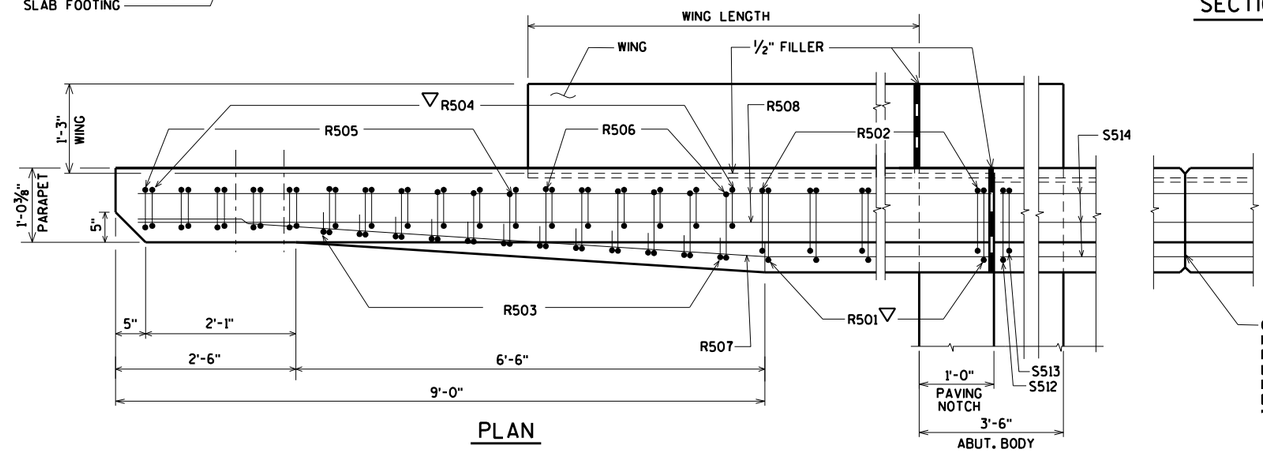
BILL OF BARS

970ᵉ COATED PER APPROACH FOR STRUCTURAL APPROACH SLAB PARAPETS

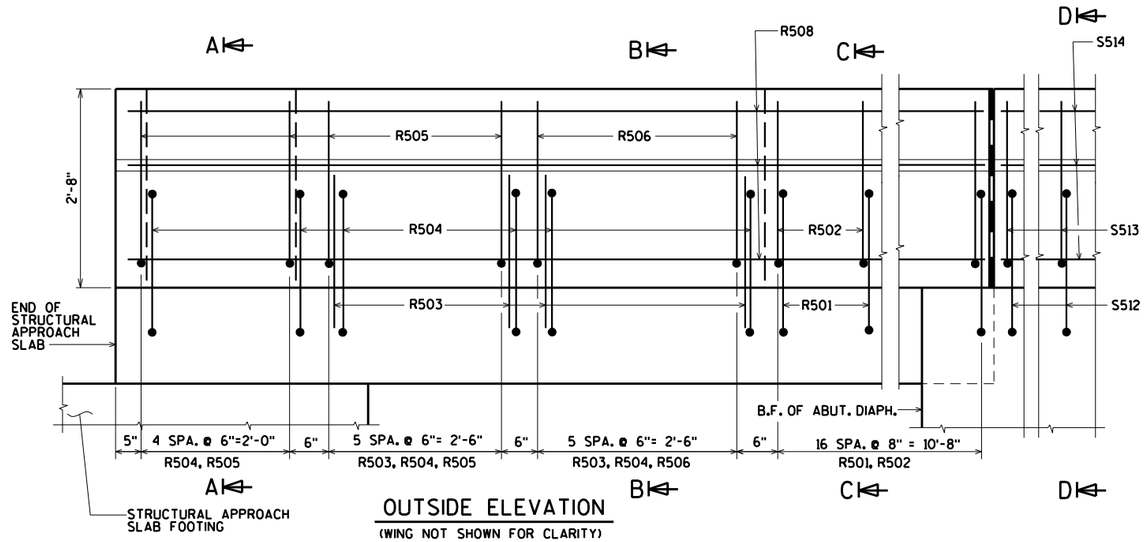
BAR MARK	COAT	S. ABUT.	N. ABUT.	LENGTH	BENT	BAR SERIES	LOCATION
R501	X	34	34	4-5	X		PARAPET VERT.
R502	X	34	34	5-0	X		PARAPET VERT.
R503	X	24	24	2-9	X		PARAPET VERT.
R504	X	34	34	4-4	X		PARAPET VERT.
R505	X	22	22	4-9	X		PARAPET VERT.
R506	X	12	12	4-10	X		PARAPET VERT.
R507	X	2	2	19-8	X		PARAPET HORIZ.
R508	X	10	10	19-8			PARAPET HORIZ.





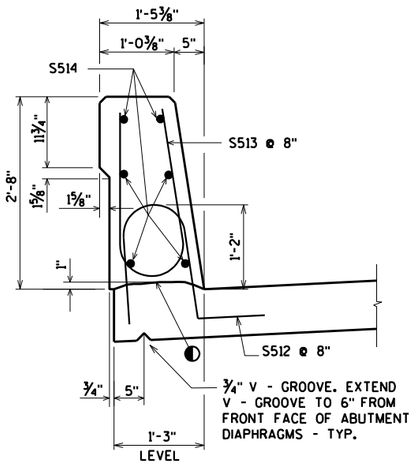


PLAN

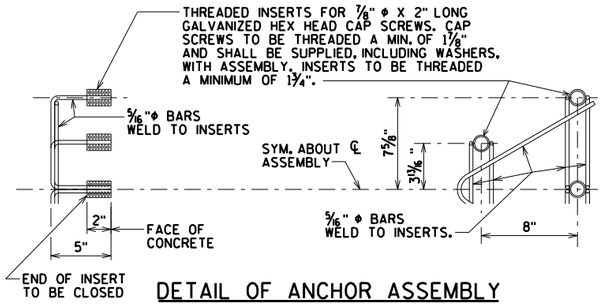


OUTSIDE ELEVATION

(WING NOT SHOWN FOR CLARITY)



SECTION D



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.

◆ SLOPE FOR DRAINAGE

◐ CONST. JOINT - STRIKE OFF AS SHOWN.

▽ R501 AND R504 BARS TO BE TIED TO STRUCTURAL APPROACH SLAB STEEL BEFORE STRUCTURAL APPROACH SLAB IS POURED.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-36-230

DRAWN BY CLS | PLANS CK'D. AEB

SINGLE SLOPE PARAPET 32SS WITH STRUCTURAL APPROACH SLAB

SHEET 18 OF 18

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ORIGINAL PLANS PREPARED BY

AYRES ASSOCIATES

3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

$PRFNAME$
U:\42-0888.00 - Manitowoc County, IH43 Rehabs\B-36-230\BRIDGE\B-36-230 32ss.dgn

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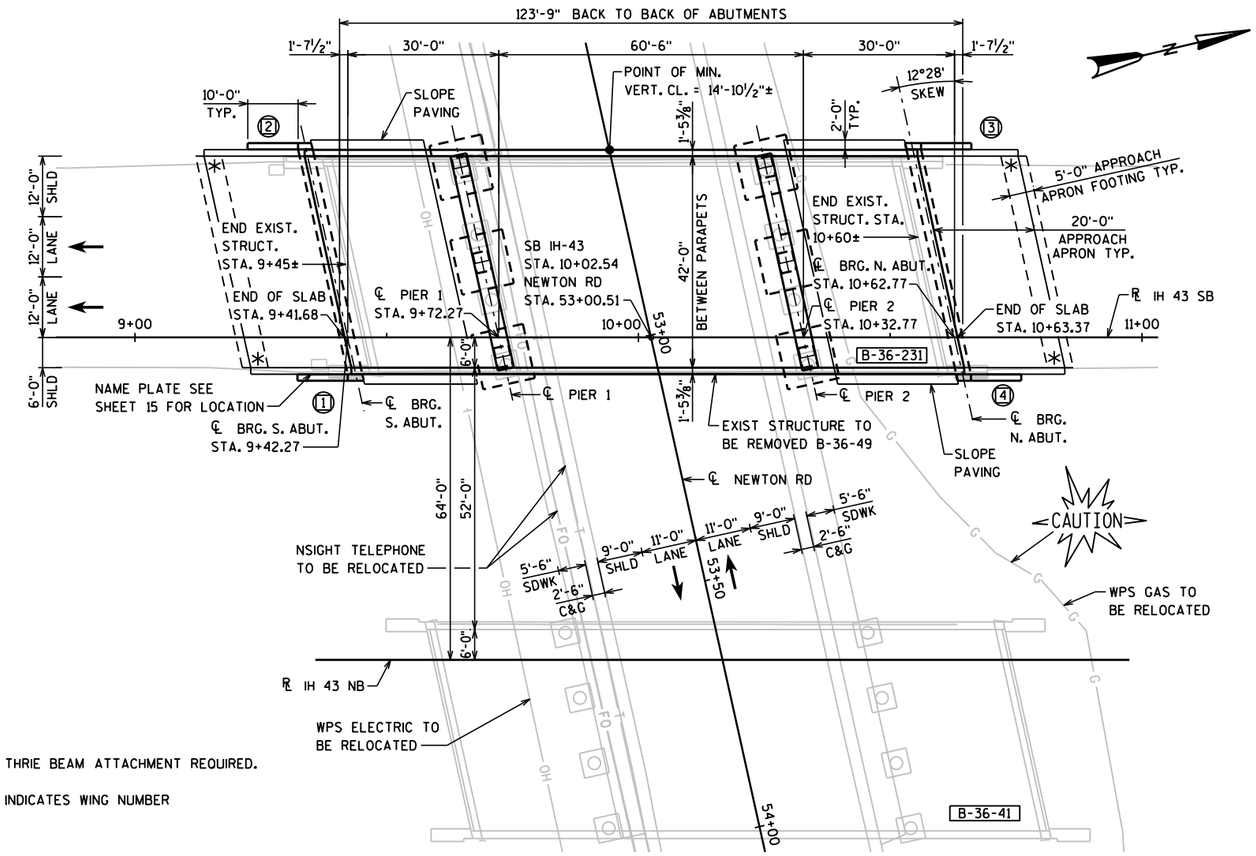
5/24/2016

PENTABLE:BReau_shd_util.tbl

STATE PROJECT NUMBER
1224-21-73

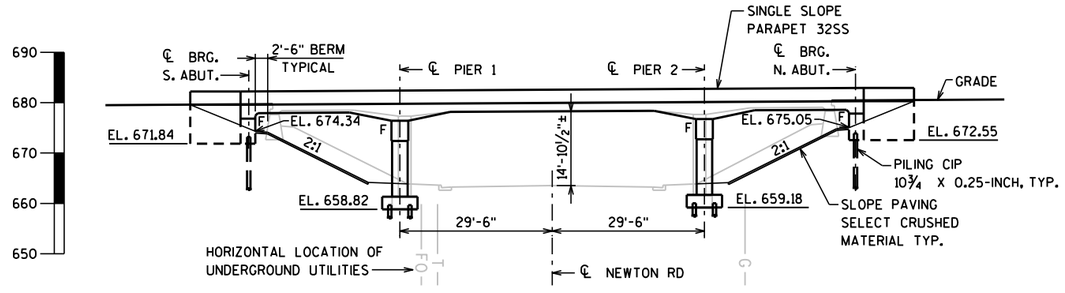


✱ THRIE BEAM ATTACHMENT REQUIRED.

(X) INDICATES WING NUMBER

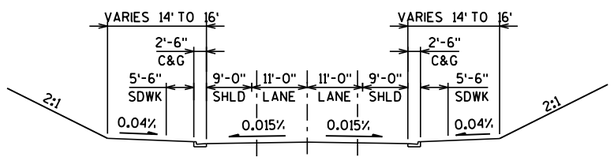
PLAN

3-SPAN HAUNCHED SLAB BRIDGE



ELEVATION

NORMAL TO NEWTON ROAD



TYPICAL FINISHED SECTION NEWTON ROAD

TRAFFIC DATA

IH 43	NEWTON RD
ADT = 11800 (2036)	ADT = 380 (2036)
RDS = 70 M.P.H.	RDS = 50 M.P.H.

DESIGN DATA

STRUCTURE IS DESIGNED FOR FUTURE WEARING SURFACE OF 20#/SQ. FT.

LIVE LOAD:

DESIGN LOADING	HL-93
INVENTORY RATING FACTOR	RF = 1.37
OPERATING RATING FACTOR	RF = 1.77
WISCONSIN STANDARD PERMIT VEHICLE (Wis-SPV)	250 KIPS

MATERIAL PROPERTIES:

CONCRETE MASONRY	
SUPERSTRUCTURE	f'c = 4,000 PSI
ALL OTHER	f'c = 3,500 PSI
HIGH STRENGTH BAR STEEL REINFORCEMENT, GRADE 60	fy = 60,000 PSI

LIST OF DRAWINGS

1. GENERAL PLAN
2. CROSS SECTION & QUANTITIES
3. SUBSURFACE EXPLORATION
4. SOUTH ABUTMENT
5. SOUTH ABUTMENT DETAILS
6. NORTH ABUTMENT
7. NORTH ABUTMENT DETAILS
8. PIER 1
9. PIER 2
10. PIER DETAILS
11. SUPERSTRUCTURE
12. SUPERSTRUCTURE DETAILS
13. STRUCTURAL APPROACH SLAB
14. STRUCTURAL APPROACH SLAB DETAILS
15. SINGLE SLOPE 32SS PARAPET
16. SLOPE PAVING

FOUNDATION DATA

ABUTMENTS AND PIERS TO BE SUPPORTED ON 10¾ X 0.25-INCH CIP CONCRETE PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 130 TONS** PER PILE. ESTIMATED LENGTH = 75' AT EACH ABUTMENT. ESTIMATED LENGTH = 75' AT EACH PIER.

** 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.

9/8/16

BRIDGE OFFICE CONTACT

WILLIAM DREHER
(608) 266-8489

CONSULTANT CONTACT

KRISTOFER OLSON
OMNNI ASSOCIATES
(920) 735-6900

NO.	DATE	REVISION	BY

ORIGINAL PLANS PREPARED BY
OMNNI ASSOCIATES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher SDR 09/08/16
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE B-36-231

IH 43 SB OVER NEWTON ROAD

COUNTY	TOWN
MANITOWOC	NEWTON

DESIGN SPEC. AASHTO LRFD BRIDGE DESIGN SPECIFICATION — LOAD HL-93

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
BRE	KRO	BRE	KRO

GENERAL PLAN

SHEET 1 OF 16

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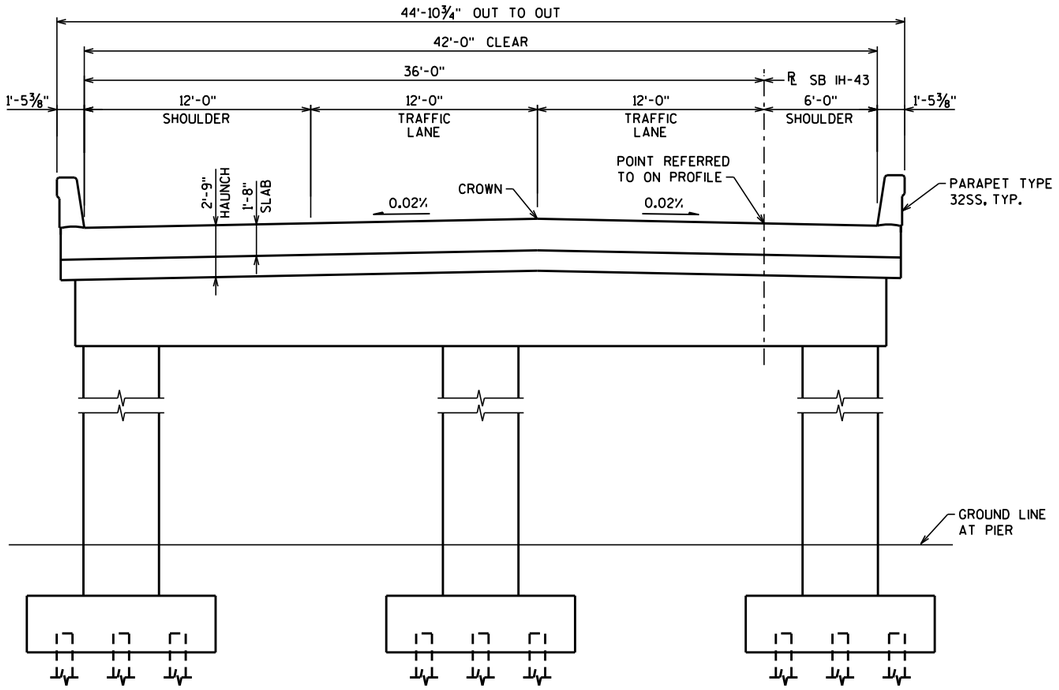


CROSS SECTION
(LOOKING NORTH)

BENCH MARKS

NO.	STATION	DESCRIPTION	ELEV.
1	9+65 100'RT.	BENCH MARK CAP TOP OF S.E. WING STRU. B-36-41	681.91
2	10+55 35'LT.	BENCH MARK CAP TOP OF N.W. WING STRU. B-36-49	682.59

TOTAL ESTIMATED QUANTITIES

ITEM NO.	BID ITEMS	UNIT	SUPER.	SOUTH ABUT.	NORTH ABUT.	PIER 1	PIER 2	S. APRCH. APRON	N. APRCH. APRON	TOTALS
203.0200	REMOVING OLD STRUCTURE STA. 10+02	LS	---	---	---	---	---	---	---	1
206.1000	EXCAVATION FOR STRUCTURES BRIDGES B-36-231	LS	---	---	---	---	---	---	---	1
210.1500	BACKFILL STRUCTURE TYPE A	TON	---	210	210	---	---	---	---	420
305.0120	BASE AGGREGATE DENSE 1 1/4-INCH	TON	---	---	---	---	---	145	145	290
502.0100	CONCRETE MASONRY BRIDGES	CY	411	42	42	63	63	63	63	747
502.3200	PROTECTIVE SURFACE TREATMENT	SY	590	---	---	---	---	95	95	780
502.3210	PIGMENTED SURFACE SEALER	SY	100	---	---	---	---	15	15	130
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	---	2930	2920	2290	2290	---	---	10,430
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	89800	1260	1260	8680	8680	10310	10310	130,300
505.0800.S	BAR STEEL REINFORCEMENT HS STAINLESS STRUCTURES	LB	---	---	---	---	---	207	207	414
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	---	10	10	---	---	---	---	20
550.2104	PILING CIP CONCRETE 10 3/4 X 0.25-INCH	LF	---	525	525	2250	2250	---	---	5,550
604.0600	SLOPE PAVING SELECT CRUSHED MATERIAL	SY	---	139	139	---	---	---	---	278
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	---	70	70	---	---	50	50	240
614.0150	ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	4	---	---	---	---	---	---	4
	NON-BID ITEMS									
	FILLER	SIZE	-----	-----	-----	-----	-----	-----	-----	½"&¾"

GENERAL NOTES:

DRAWING SHALL NOT BE SCALED.

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

BEVEL EXPOSED EDGES OF CONCRETE ¾" UNLESS OTHERWISE NOTED.

SLAB FALSEWORK SHALL BE SUPPORTED ON PILES OR THE SUBSTRUCTURE UNLESS AN ALTERNATE METHOD IS APPROVED BY THE ENGINEER.

THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

AT ABUTMENTS ALL SPACES EXCAVATED AND NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH "BACKFILL STRUCTURE TYPE A".

THE EXISTING GROUND LINE SHALL BE THE UPPER LIMITS OF EXCAVATION FOR STRUCTURES.

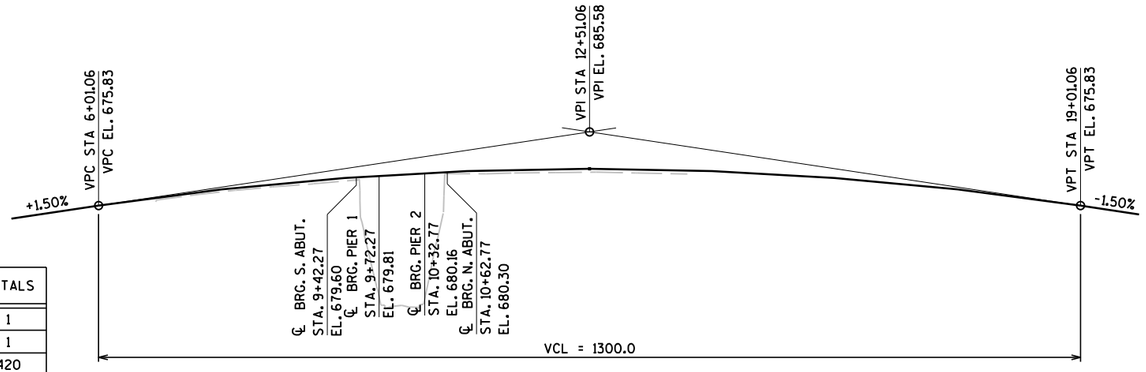
EXISTING BRIDGE B-36-49 IS A THREE SPAN HAUNCHED CONCRETE SLAB WITH AN OVERALL WIDTH OF 43'-0" AND AN OVERALL LENGTH OF 114'-10½".

THE SLOPE OF THE FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH SELECT CRUSHED MATERIAL TO THE EXTENT SHOWN ON SHEET 1 AND IN THE ABUTMENT DETAILS.

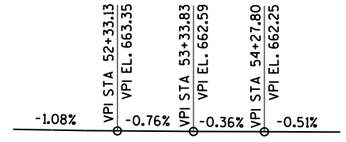
PROTECTIVE SURFACE TREATMENT SHALL BE APPLIED TO THE FOLLOWING COMPLETED SURFACES: TOP OF SLAB, PAVING NOTCH, TOPS OF APPROACH APRONS. PIGMENTED PROTECTIVE SURFACE TREATMENT SHALL BE APPLIED TO THE ENTIRE FRONT FACES AND TOPS OF BOTH DECK & APPROACH PARAPETS.

ALL STATIONS AND ELEVATIONS ARE IN FEET. ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).

THE QUANTITY FOR BACKFILL STRUCTURE TYPE A, BID ITEM 210.1500, IS CALCULATED BASED ON THE APPLICABLE FIGURES 12.6-1 AND 12.6-2 IN THE WISCONSIN DEPARTMENT OF TRANSPORTATION BRIDGE MANUAL.



PROFILE GRADE LINE - SOUTHBOUND IH 43



EXIST. PROFILE GRADE LINE - NEWTON RD.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-36-231

DRAWN BY BRE | PLANS CK'D. KRO

CROSS SECTION & QUANTITIES

SHEET 2 OF 16

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STATE PROJECT NUMBER
1224-21-73

8

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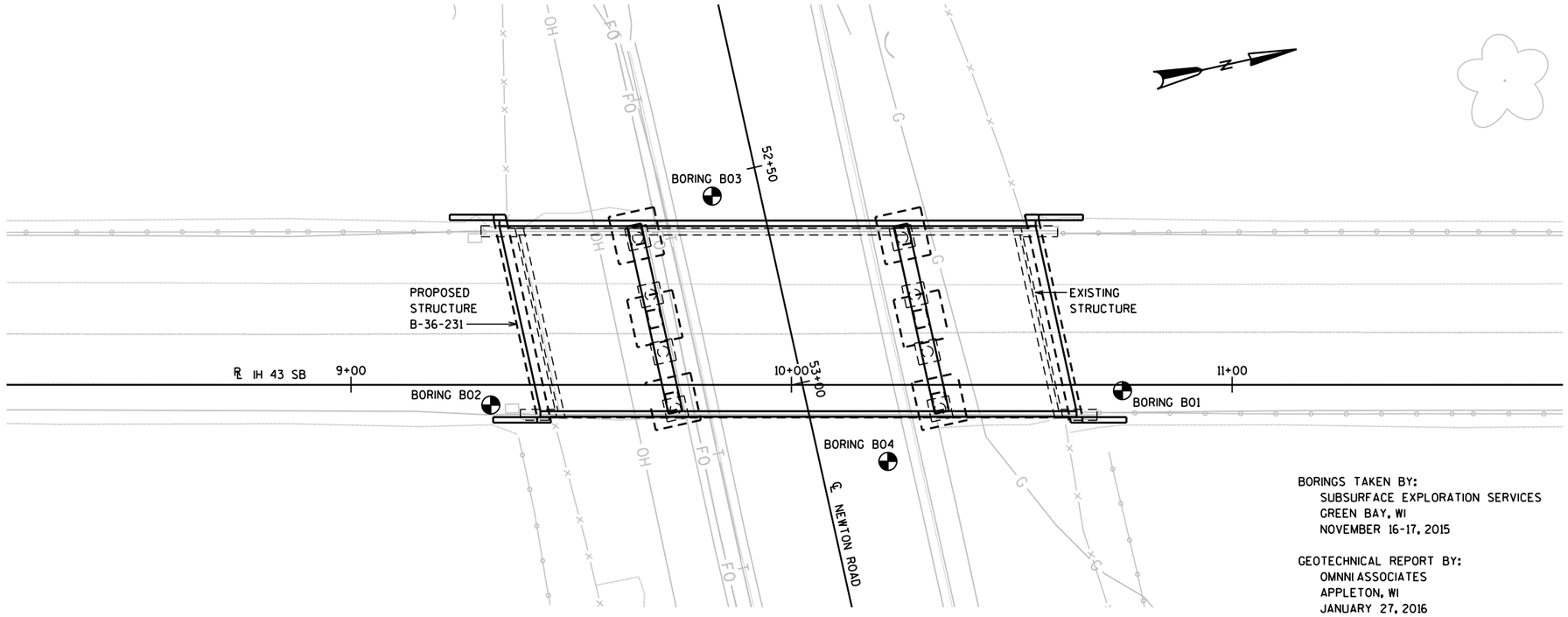
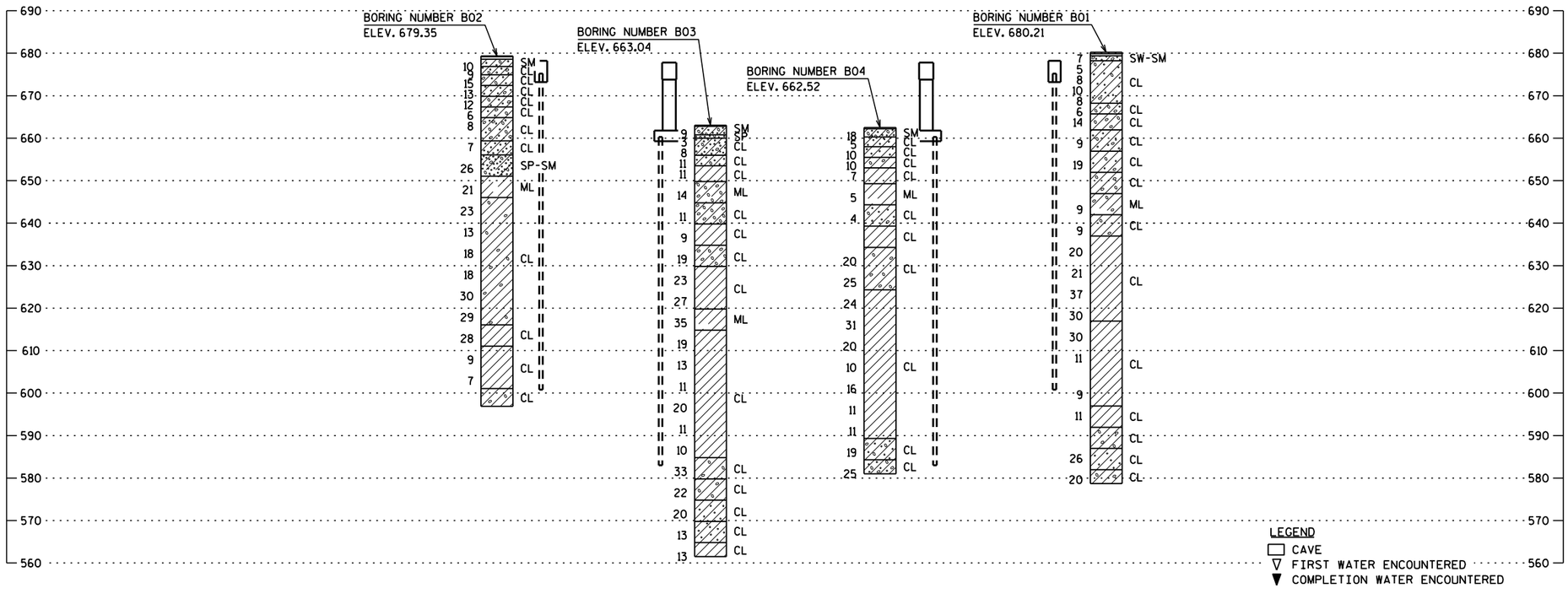
FILE NAME : F:±TR±JOBS±E2041A12±Sheets±Bridges±B-36-231±B-36-231 02 xc & quant.dgn PLOT BY : epleyb PLOT DATE: 9/8/2016 9:47:30 AM

STATE PROJECT NUMBER
1224-21-73



BORINGS TAKEN BY:
SUBSURFACE EXPLORATION SERVICES
GREEN BAY, WI
NOVEMBER 16-17, 2015

GEOTECHNICAL REPORT BY:
OMNNI ASSOCIATES
APPLETON, WI
JANUARY 27, 2016



LEGEND
CAVE
FIRST WATER ENCOUNTERED
COMPLETION WATER ENCOUNTERED

ABBREVIATIONS
F — Fine M — Medium C — Coarse
Ws — Weathered So — Sound

MATERIAL SYMBOLS
Topsoil, Silt, Sandstone
Sand, Peat, Limestone
Gravel, Clay, Igneous Rock

LEGEND OF PROBING
Probing No.
Sta.
Elevation
95/6=95 Blows for 6" Penetration
Probing taken with a 350#wt.
Falling 18" on a 2" O.D. Point.
7 Average Blows Per Foot
Refusal 95/6

LEGEND OF BORING
Boring No.
Elev.
Sta.
Unconfined Strength → 7.7 7
Blows Per Ft. Using 140# Wt. Falling 30"
Wash Sample
Sandy Gravel
F.
Boulders or Cobbles
Sand
Shelby Tube — S.T.
Ground Water Elevation
No Ground Water Observed Above This Elevation
Silty Clay
So
Limestone

Unless otherwise specified, the blows per foot at the locations indicated are based on driving a O.D.x1. 4" I.D. split spoon sampler with a 140# hammer having a free fall of 30". The blow count is taken in undisturbed soil immediately below a cased or open hole eliminating side friction on the drive pipe.

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

To obtain relative data concerning the character of material in and upon which the foundation might be built, borings and/or soundings were made at points approximately as indicated on this drawing. The data presented herein represents the findings of the subsurface explorations made. However, because the depths investigated are limited and the area of the borings and/or soundings is very small in relation to the entire area, the Division of Highways does not warrant conditions below the depths investigated or that the classification of material encountered in these investigations is necessarily typical of the entire site.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-36-231

DRAWN BY BRE | PLANS CK'D. KRO

SUBSURFACE EXPLORATION

SHEET 3 OF 16

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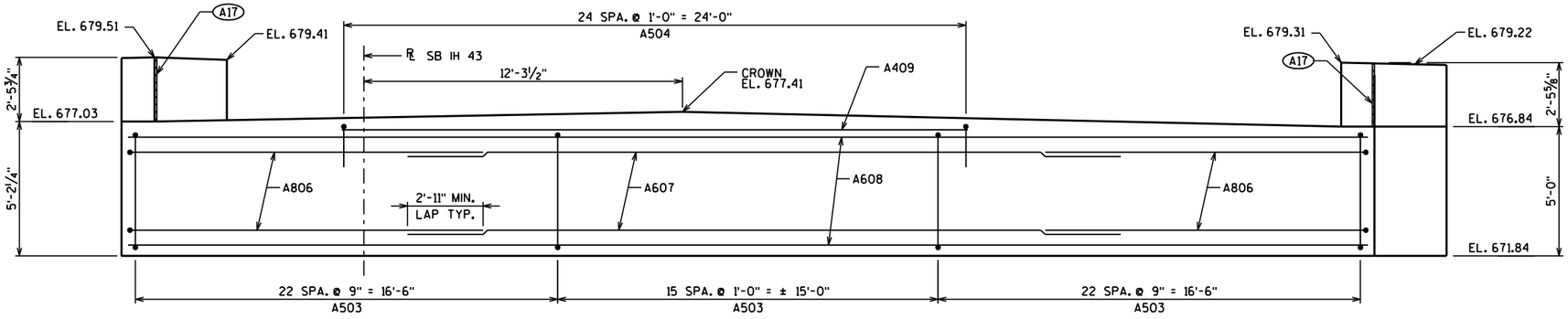
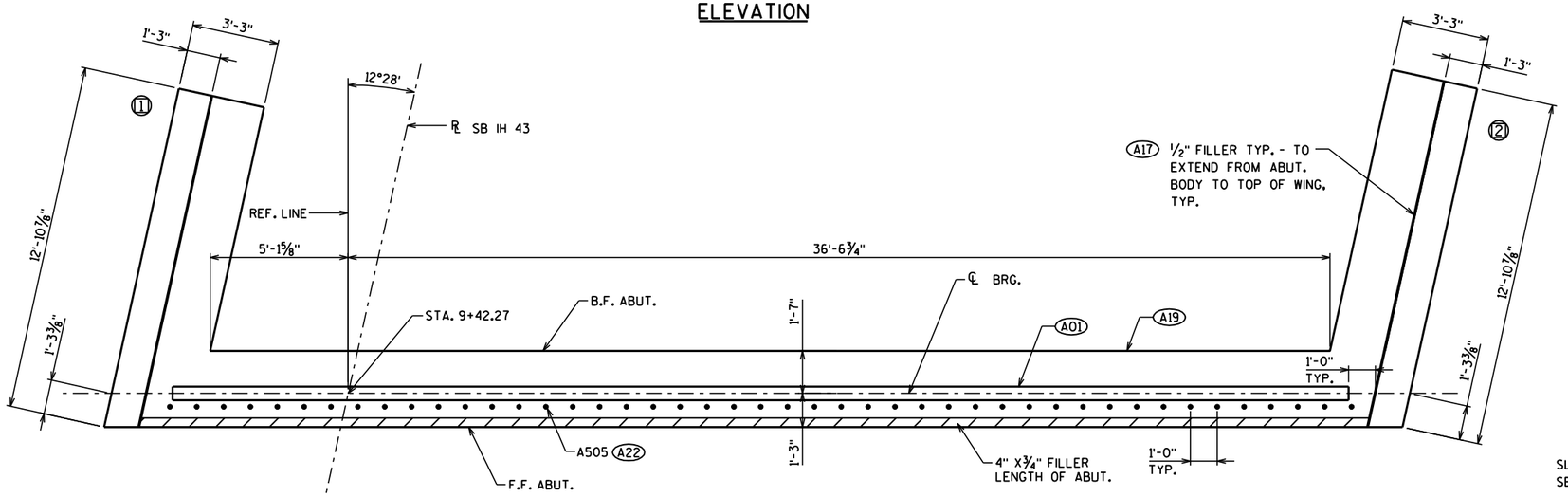
8

8

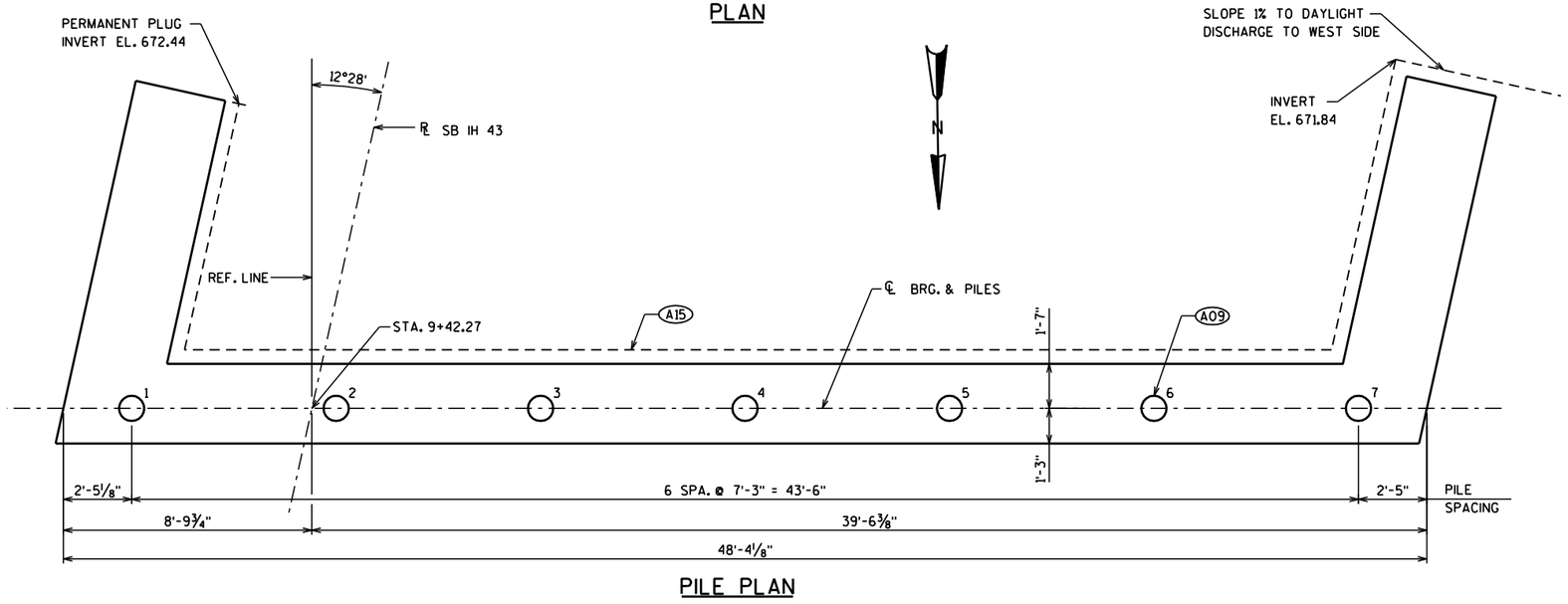
STATE PROJECT NUMBER
1224-21-73



ELEVATION



PLAN



PILE PLAN

LEGEND

(A01) CONSTRUCTION JOINT: KEYWAY FORMED BY A BEVELED 2 x 6.

(A09) SUPPORT ABUTMENT ON 10 3/4" DIA. 0.250-INCH WALL THK. CAST-IN-PLACE CONCRETE PILING, ESTIMATED 75'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 130 TONS PER PILE.

(A15) PIPE UNDERDRAIN WRAPPED 6-INCH. SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN, SEE SHEET 5 FOR DETAILS.

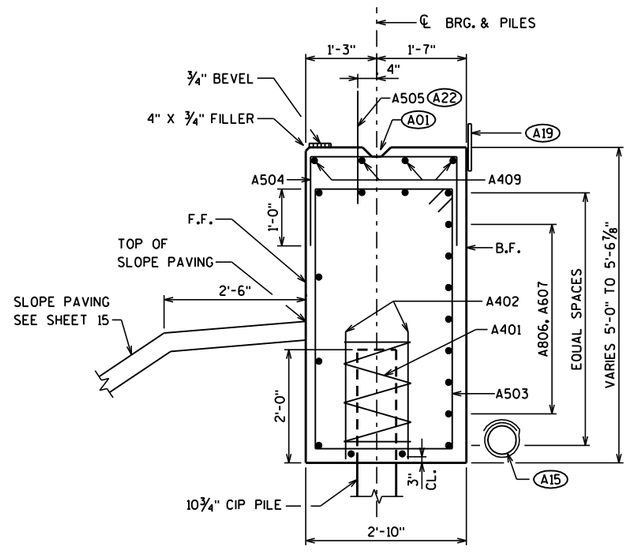
(A17) SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE.)

(A19) 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE.

(A22) A505 BARS SPACED @ 1'-0" CTRS. MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. (EMBED 1'-0" INTO CONC.)

SEE SHEET 5 FOR BILL OF BARS, BAR BENDING DIAGRAMS AND PILE SPLICE DETAILS.

(X) INDICATES WING NUMBER



SECTION THRU ABUTMENT BODY

HORIZ. BARS NOT OTHERWISE IDENTIFIED ARE A608 BARS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-36-231

DRAWN BY KRW | PLANS CK'D. JAW

SOUTH ABUTMENT

SHEET 4 OF 16

380

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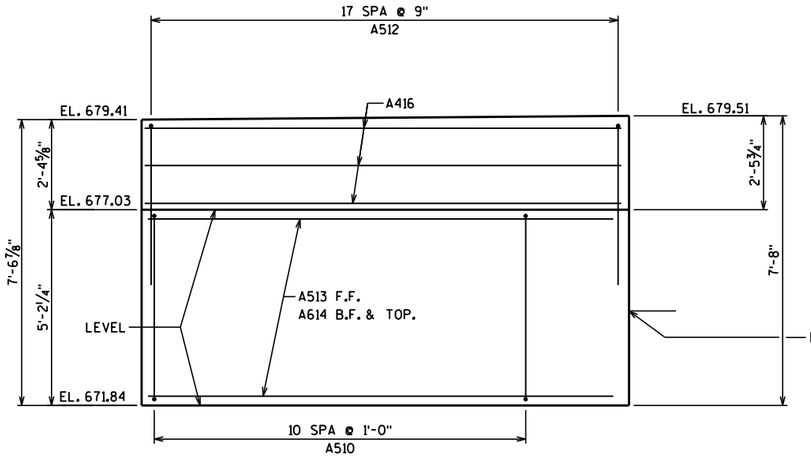
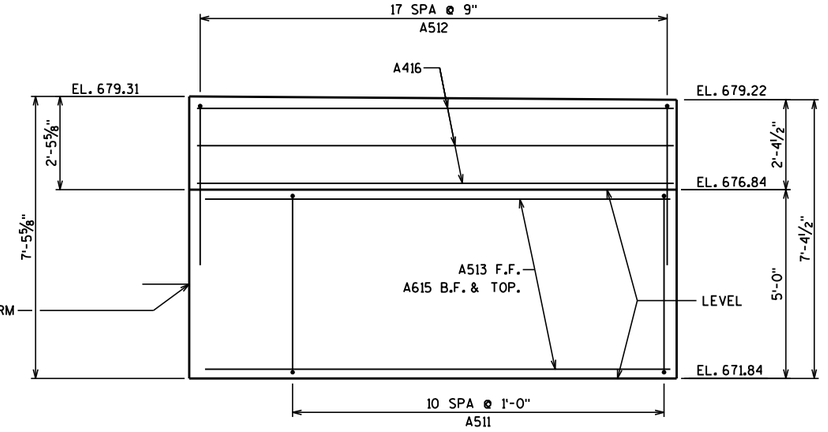
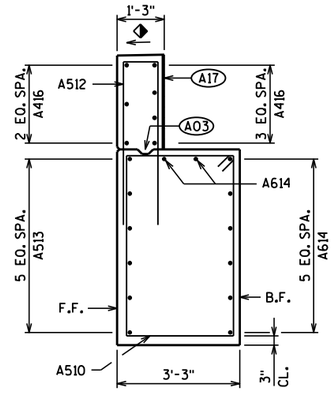


WING 1 ELEVATION

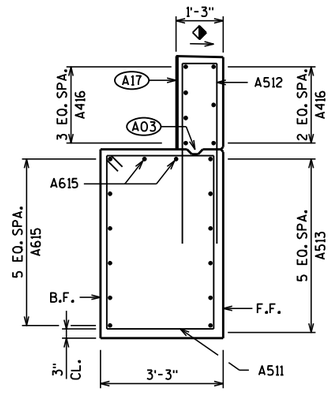


WING 2 ELEVATION

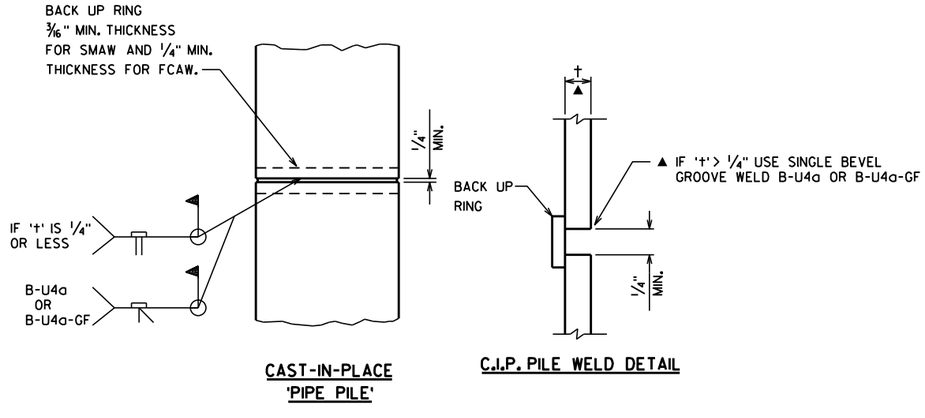
BERM



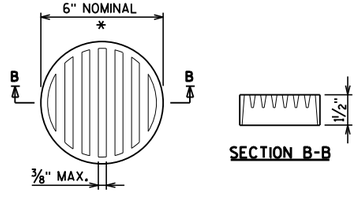
WING 1 SECTION



WING 2 SECTION



PILE SPLICE DETAILS



RODENT SHIELD DETAIL

* DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING. ORIENT SO SLOTS ARE VERTICAL.

THE RODENT SHIELD, PIPE COUPLING AND SCREWS SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".

THE RODENT SHIELD SHALL BE A PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALLY AVAILABLE AS A FLOOR STRAINER. A PIPE COUPLING IS REQUIRED FOR THE ATTACHMENT OF THIS SHIELD TO THE EXPOSED END OF THE PIPE UNDERDRAIN. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X 1-INCH STAINLESS STEEL SHEET METAL SCREWS.

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LEGEND

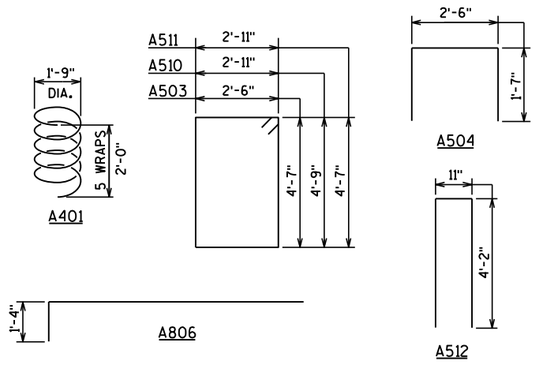
(A03) OPTIONAL CONST. JOINT: KEYWAY FORMED BY BEVELED 2" x 6". (18" R.M.W. @ B.F. & ¾" "V" GROOVE @ F.F. IF JOINT IS USED).

(A17) ½" FILLER: 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.)

◆ SLOPE TO DRAIN. SLOPE SAME AS SUPERSTRUCTURE.

BILL OF BARS

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	LOCATION
A401		7	28'-0"	X	BODY - ONE PER PILE
A402		14	2'-3"		BODY - TWO PER PILE
A503		60	14'-10"	X	BODY - STIRRUPS
A504		25	5'-5"	X	BODY - VERTICAL, TOP
A505		45	2'-0"		BODY - VERTICAL, DOWEL
A806		14	14'-5"	X	BODY - HORIZONTAL B.F.
A607		7	27'-6"		BODY - HORIZONTAL B.F.
A608		10	48'-0"		BODY - HORIZONTAL F.F., TOP, BOTT.
A409		4	24'-0"		BODY - HORIZONTAL TOP
A510	X	11	16'-0"	X	WINGS - STIRRUPS, W1
A511	X	11	15'-8"	X	WINGS - STIRRUPS, W2
A512	X	36	9'-0"	X	WINGS - VERTICAL
A513	X	12	12'-4"		WINGS - HORIZONTAL, F.F.
A614	X	8	11'-5"		WING 1 - HORIZONTAL, B.F. & TOP
A615	X	8	12'-9"		WING 2 - HORIZONTAL, B.F. & TOP
A416	X	14	12'-4"		WINGS - HORIZONTAL



BAR BENDING DIAGRAMS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-36-231

DRAWN BY KRW | PLANS CK'D. JAW

SOUTH ABUTMENT DETAILS

SHEET 5 OF 16

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STATE PROJECT NUMBER
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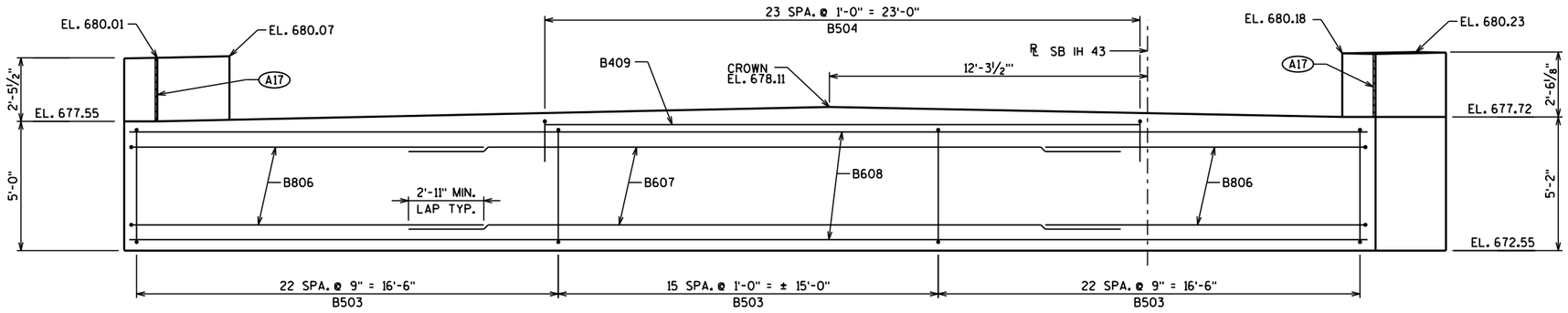
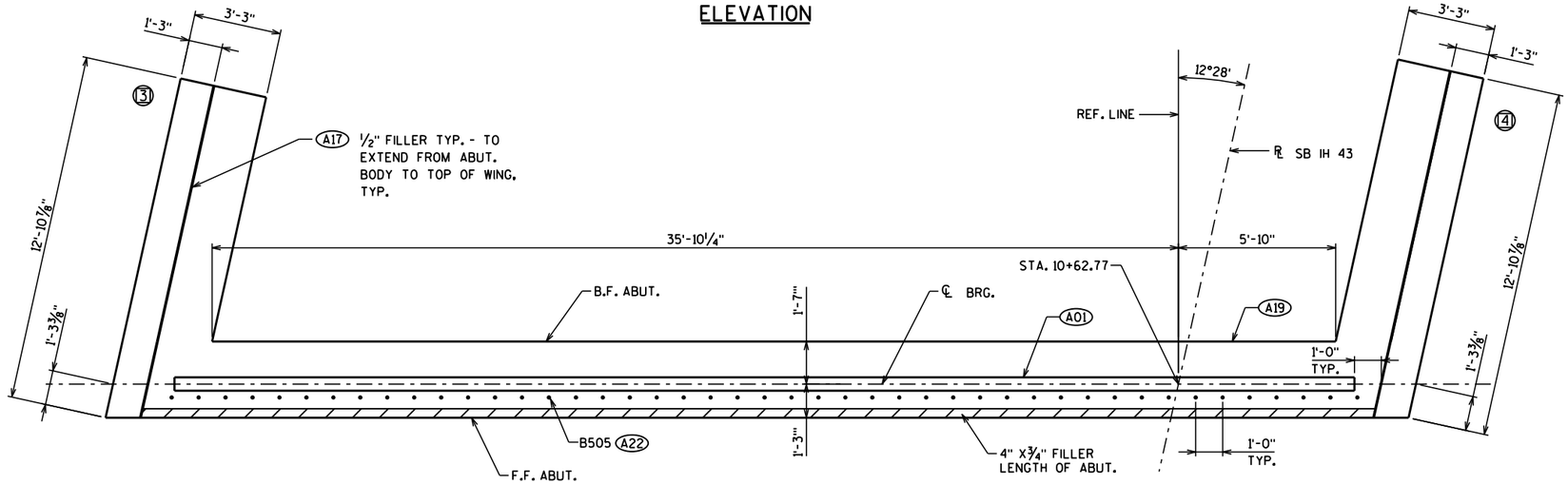
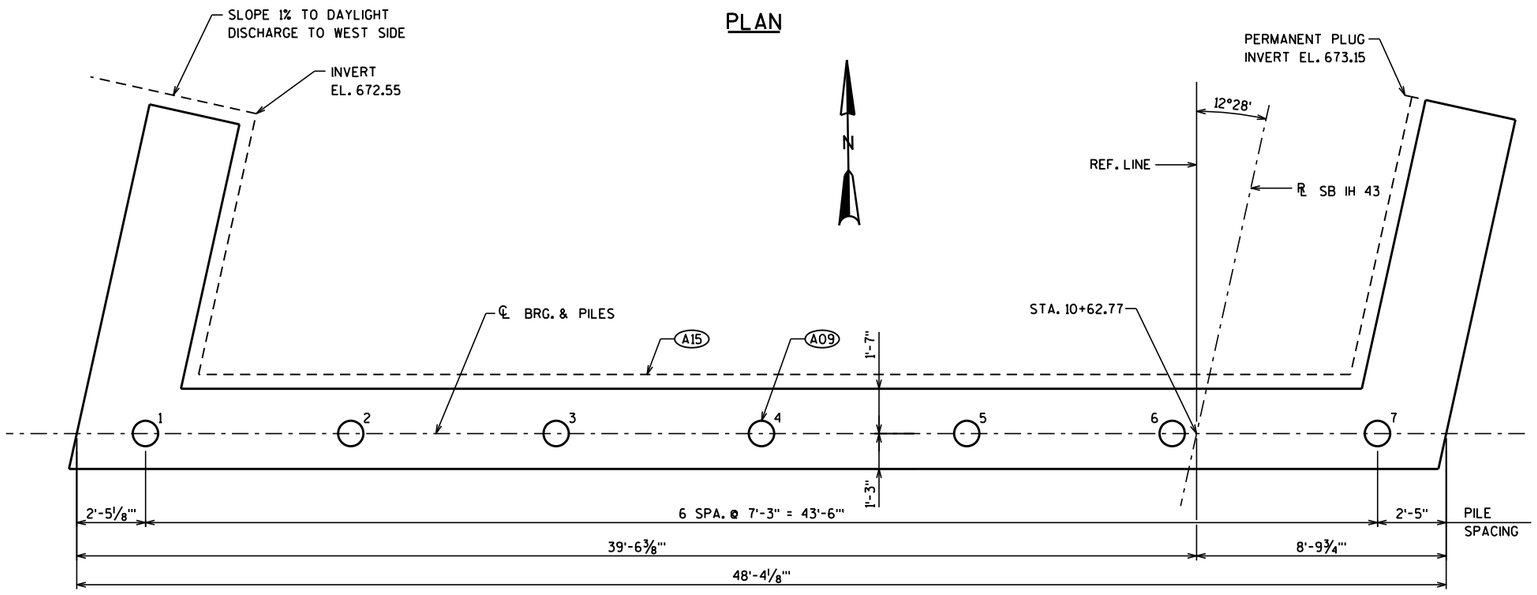


ELEVATION



PLAN



PILE PLAN

LEGEND

(A01) CONSTRUCTION JOINT: KEYWAY FORMED BY A BEVELED 2 x 6.

(A09) SUPPORT ABUTMENT ON 10 3/4" DIA. 0.250-INCH WALL THK. CAST-IN-PLACE CONCRETE PILING, ESTIMATED 75'LONG WITH A REQUIRED DRIVING RESISTANCE OF 130 TONS PER PILE.

(A15) PIPE UNDERDRAIN WRAPPED 6-INCH. SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN, SEE SHEET 5 FOR DETAILS.

(A17) 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.)

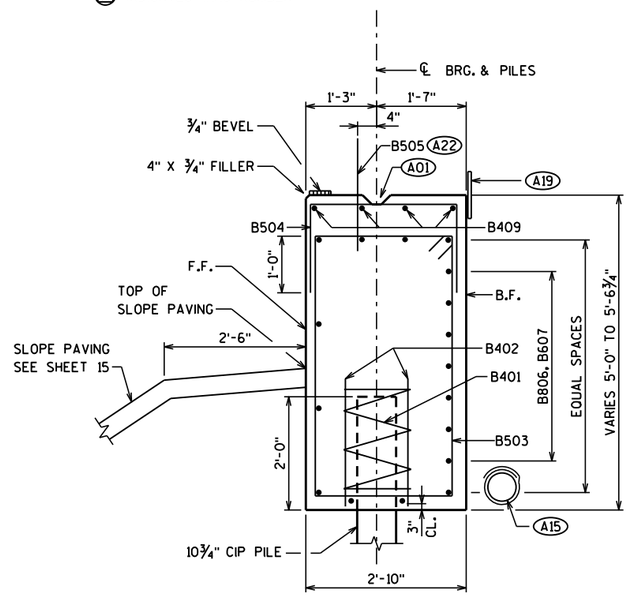
(A19) 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE.

(A22) B505 BARS SPACED @ 1'-0" CTRS. MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. (EMBED 1'-0" INTO CONC.)

SEE SHEET 7 FOR BILL OF BARS AND BAR BENDING DIAGRAMS.

SEE SHEET 5 FOR PILE SPLICE DETAILS.

(X) INDICATES WING NUMBER



SECTION THRU ABUTMENT BODY

HORIZ. BARS NOT OTHERWISE IDENTIFIED ARE B608 BARS

NO.	DATE	REVISION	BY

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NORTH ABUTMENT

SHEET 6 OF 16

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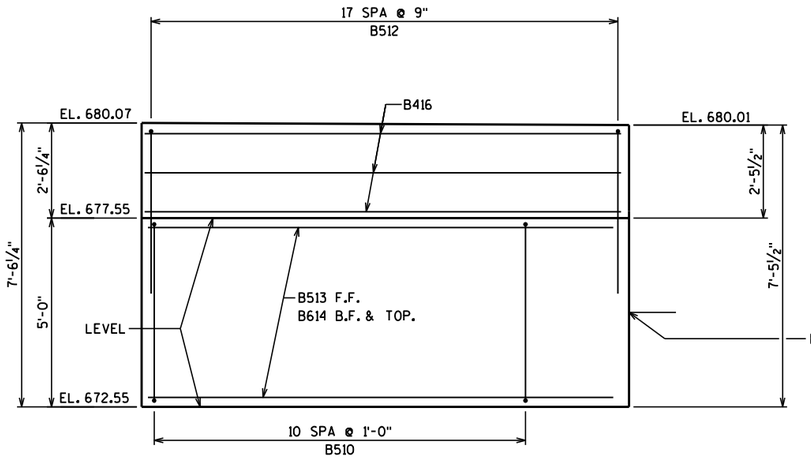
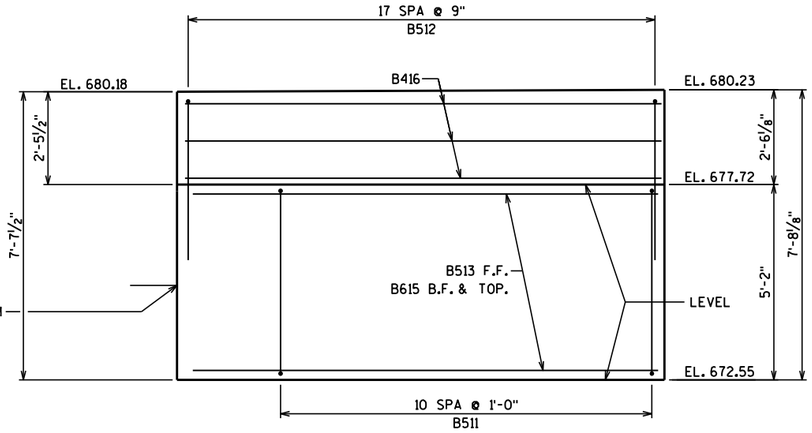
STATE PROJECT NUMBER
1224-21-73



WING 3 ELEVATION



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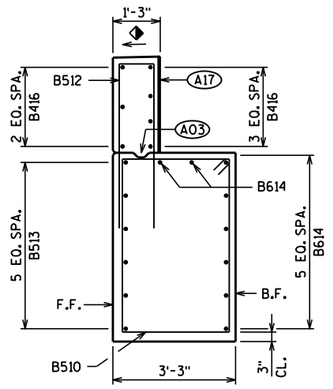
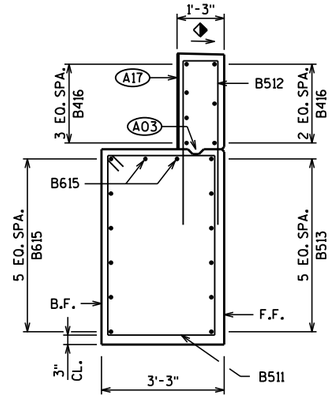


WING 3 SECTION



WING 4 SECTION

LEGEND

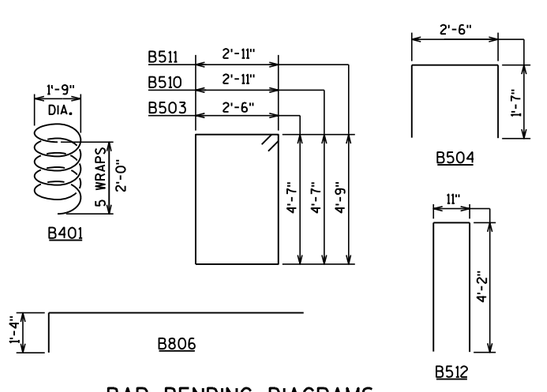
(A03) OPTIONAL CONST. JOINT: KEYWAY FORMED BY BEVELED 2" x 6". (18" R.M.W. @ B.F. & ¾" "V" GROOVE @ F.F. IF JOINT IS USED).

(A17) ½" FILLER: 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.)

◆ SLOPE TO DRAIN. SLOPE SAME AS SUPERSTRUCTURE.

BILL OF BARS

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	LOCATION
B401		7	28'-0"	X	BODY - ONE PER PILE
B402		14	2'-3"		BODY - TWO PER PILE
B503		60	14'-10"	X	BODY - STIRRUPS
B504		24	5'-4"	X	BODY - VERTICAL, TOP
B505		45	2'-0"		BODY - VERTICAL, DOWEL
B806		14	14'-5"	X	BODY - HORIZONTAL B.F.
B607		7	27'-6"		BODY - HORIZONTAL B.F.
B608		10	48'-0"		BODY - HORIZONTAL F.F., TOP, BOTT.
B409		4	23'-0"		BODY - HORIZONTAL TOP
B510	X	11	15'-8"	X	WINGS - STIRRUPS, W3
B511	X	11	16'-0"	X	WINGS - STIRRUPS, W4
B512	X	36	9'-0"	X	WINGS - VERTICAL, W3
B513	X	12	12'-4"		WINGS - HORIZONTAL, F.F.
B614	X	8	11'-5"		WING 3 - HORIZONTAL, B.F. & TOP
B615	X	8	12'-9"		WING 4 - HORIZONTAL, B.F. & TOP
B416	X	14	12'-4"		WINGS - HORIZONTAL



BAR BENDING DIAGRAMS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-36-231

DRAWN BY KRW | PLANS CK'D. JAW

NORTH ABUTMENT DETAILS

SHEET 7 OF 16

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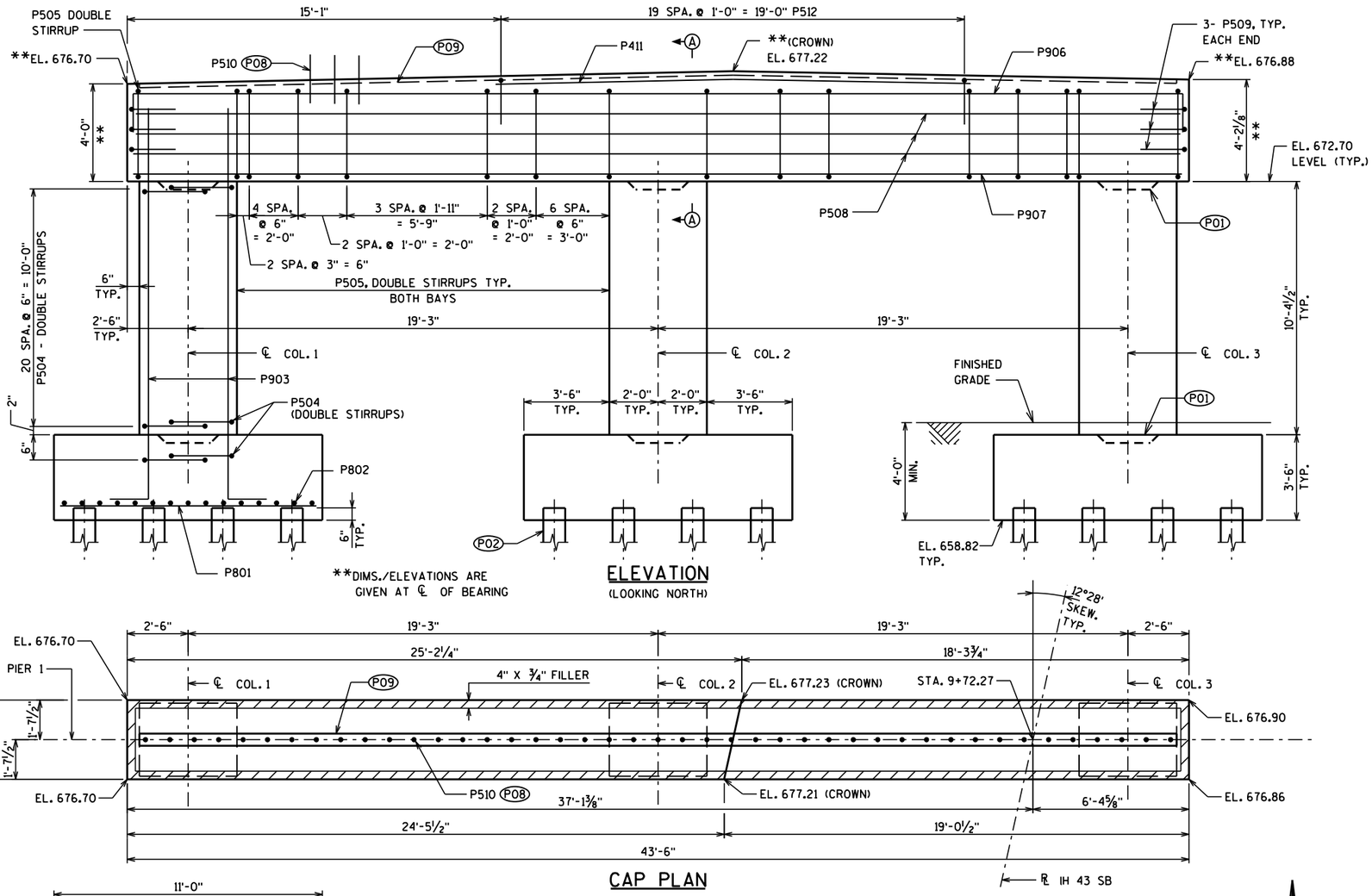
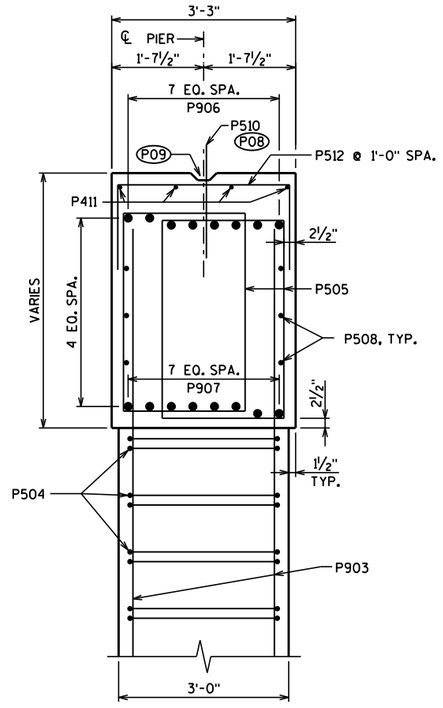
STATE PROJECT NUMBER
1224-21-73



ELEVATION
(LOOKING NORTH)

CAP PLAN



SECTION A-A THRU CAP

NOTES

(P01) 1'-3" X 2'-6" X 4" CONSTRUCTION JOINT FORMED BY BEVELED KEYWAY.

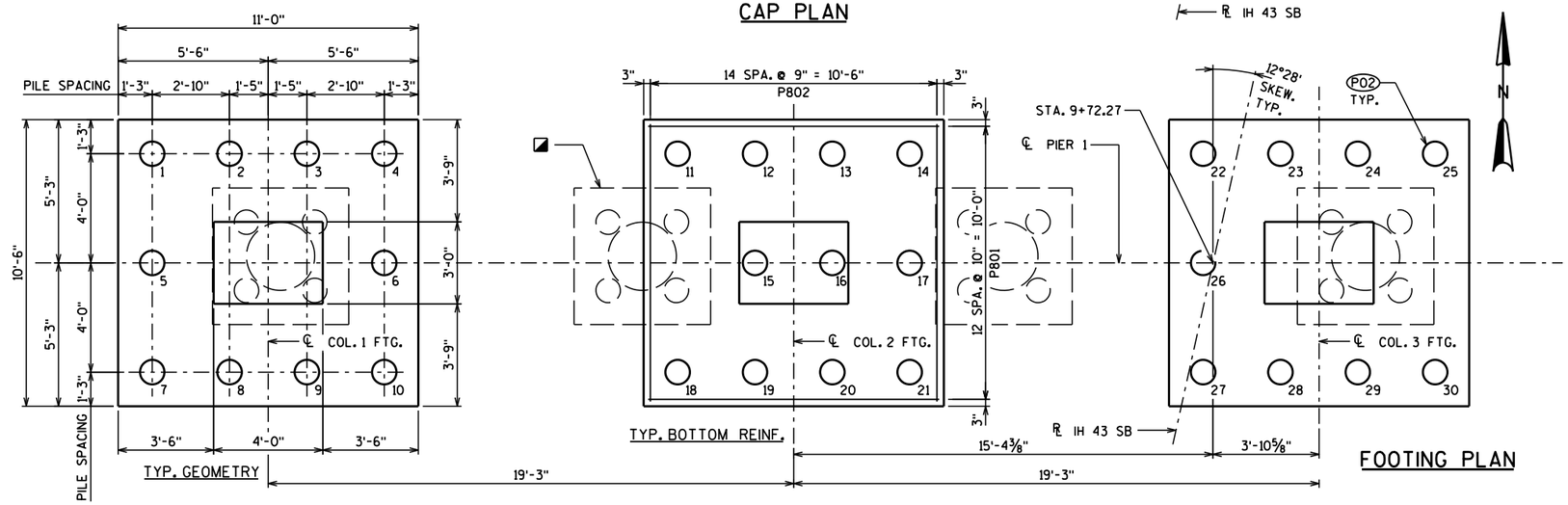
(P02) PIER TO BE SUPPORTED ON 10 3/4 X 0.25-INCH CIP CONCRETE PILING, ESTIMATED 75 FEET LONG WITH A REQUIRED DRIVING RESISTANCE OF 130 TONS PER PILE. PILING FROM EXISTING BRIDGE THAT FALL WITHIN THE PILE CAP SHALL BE INCORPORATED INTO THE NEW PIER.

(P08) P510 BARS @ 1'-0" CTRS. MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. (EMBED 1'-0" INTO CONC.)

(P09) KEYED CONSTRUCTION JOINT-FORMED BY BEVELED 2 X 6. (TERMINATE 6" FROM EDGE OF PIER CAP.)

◪ REMOVE EXISTING PILE CAP WITHOUT DAMAGING EXISTING PILES.

SEE SHEET 10 FOR SECTION THRU COLUMN, BILL OF BARS, BAR BENDING DIAGRAMS AND PILE SPLICE DETAILS.



FOOTING PLAN

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-36-231

DRAWN BY KRO | PLANS CK'D. BRE

PIER 1

SHEET 8 OF 16

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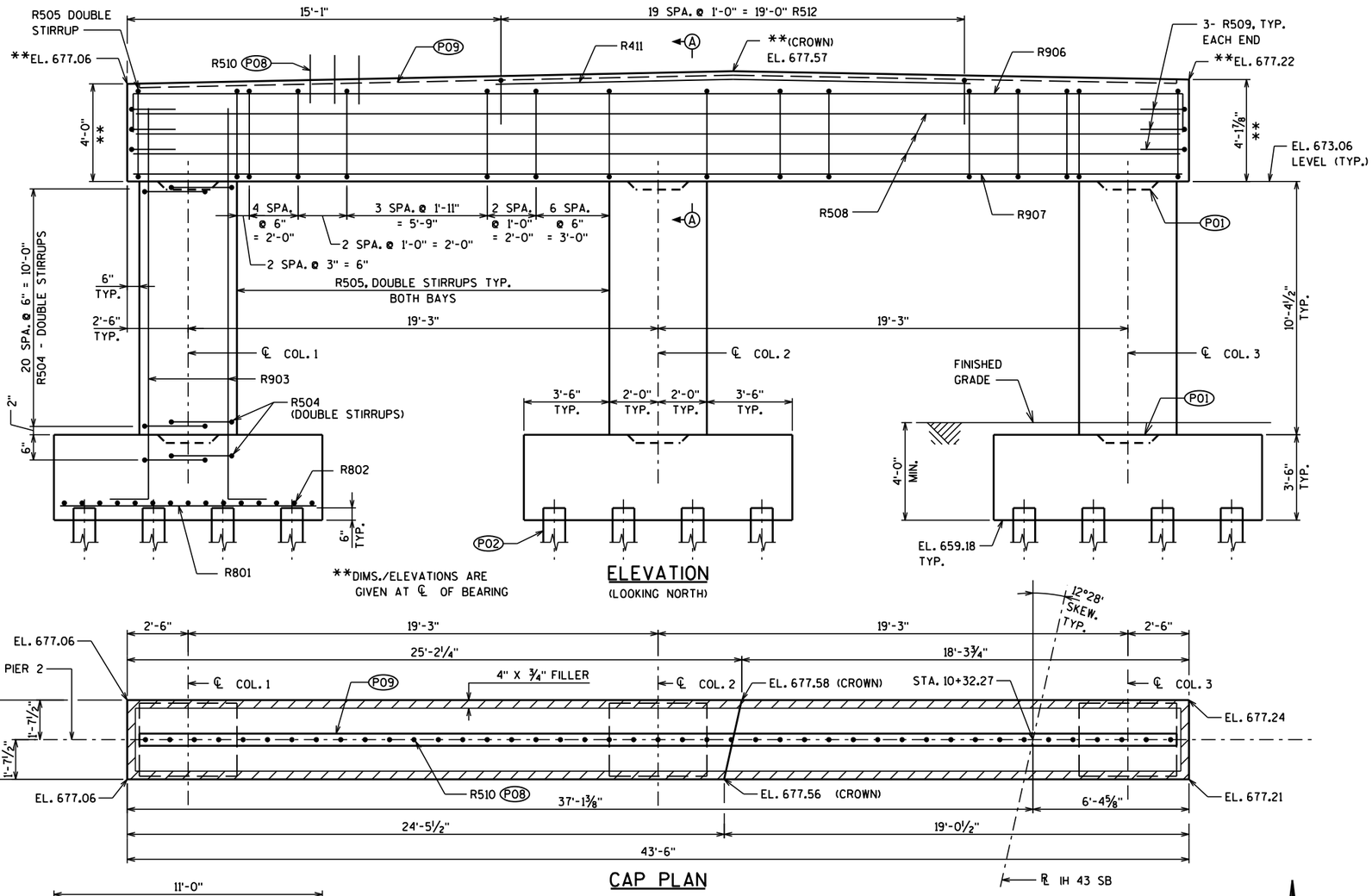
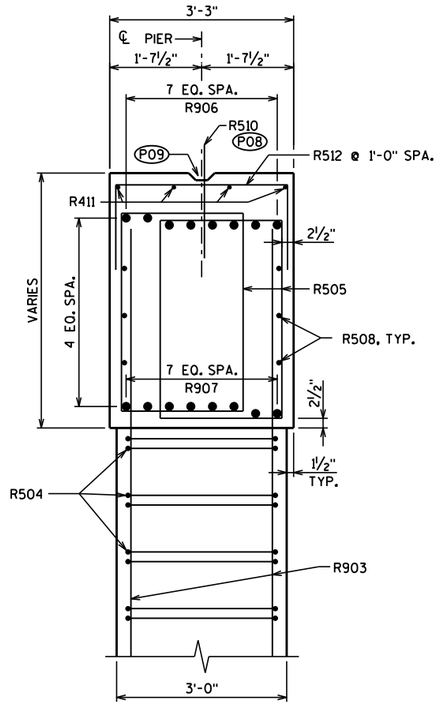
STATE PROJECT NUMBER
1224-21-73





SECTION A-A THRU CAP

NOTES

(P01) 1'-3" X 2'-6" X 4" CONSTRUCTION JOINT FORMED BY BEVELED KEYWAY.

(P02) PIER TO BE SUPPORTED ON 10¾ X 0.25-INCH CIP CONCRETE PILING, ESTIMATED 75 FEET LONG WITH A REQUIRED DRIVING RESISTANCE OF 130 TONS PER PILE. PILING FROM EXISTING BRIDGE THAT FALL WITHIN THE PILE CAP SHALL BE INCORPORATED INTO THE NEW PIER.

(P08) R510 BARS @ 1'-0" CTRS. MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. (EMBED 1'-0" INTO CONC.)

(P09) KEYED CONSTRUCTION JOINT-FORMED BY BEVELED 2 X 6. (TERMINATE 6" FROM EDGE OF PIER CAP.)

◪ REMOVE EXISTING PILE CAP WITHOUT DAMAGING EXISTING PILES.

SEE SHEET 10 FOR SECTION THRU COLUMN, BILL OF BARS, BAR BENDING DIAGRAMS AND PILE SPLICE DETAILS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-36-231

DRAWN BY KRO | PLANS CK'D. BRE

PIER 2

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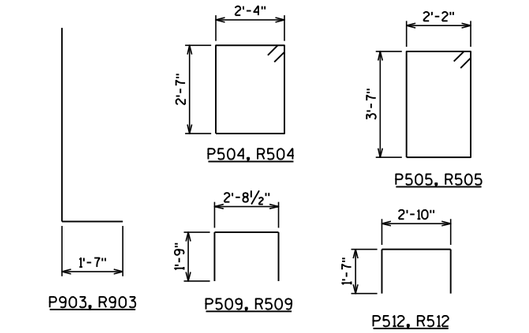
STATE PROJECT NUMBER
1224-21-73

BILL OF BARS PIER 1

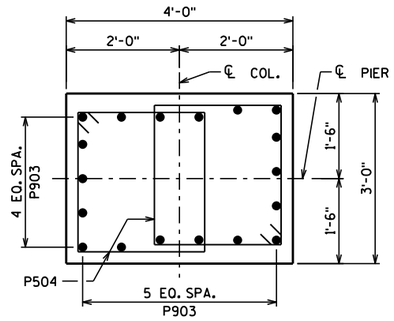
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	LOCATION
P801		39	10'-6"		FOOTING - HORIZONTAL
P802		45	10'-0"		FOOTING - HORIZONTAL
P903	X	54	17'-5"	X	COLUMN - VERTICAL
P504	X	132	10'-6"	X	COLUMN - DOUBLE STIRRUPS
P505	X	84	12'-2"	X	CAP - DOUBLE STIRRUPS
P906	X	8	45'-7"	X	CAP - HORIZONTAL - TOP
P907	X	8	43'-0"		CAP - HORIZONTAL - BOTTOM
P508	X	6	43'-0"		CAP - HORIZONTAL - SIDES
P509	X	6	6'-0"	X	CAP - ENDS
P510	X	42	2'-0"		CAP - DOWELS
P411	X	4	19'-0"		CAP - HORIZONTAL - TOP
P512	X	20	5'-7"	X	CAP - VERTICAL - TOP

BILL OF BARS PIER 2

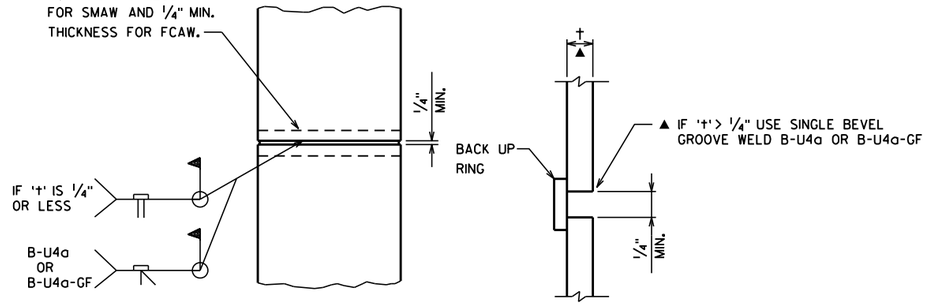
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	LOCATION
R801		39	10'-6"		FOOTING - HORIZONTAL
R802		45	10'-0"		FOOTING - HORIZONTAL
R903	X	54	17'-5"	X	COLUMN - VERTICAL
R504	X	132	10'-6"	X	COLUMN - DOUBLE STIRRUPS
R505	X	84	12'-2"	X	CAP - DOUBLE STIRRUPS
R906	X	8	45'-7"	X	CAP - HORIZONTAL - TOP
R907	X	8	43'-0"		CAP - HORIZONTAL - BOTTOM
R508	X	6	43'-0"		CAP - HORIZONTAL - SIDES
R509	X	6	6'-0"	X	CAP - ENDS
R510	X	42	2'-0"		CAP - DOWELS
R411	X	4	19'-0"		CAP - HORIZONTAL - TOP
R512	X	20	5'-7"	X	CAP - VERTICAL - TOP



BAR BENDING DIAGRAMS



TYPICAL SECTION THRU COLUMN



CAST-IN-PLACE 'PIPE PILE'

C.I.P. PILE WELD DETAIL

PILE SPLICE DETAILS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-36-231

DRAWN BY BRE | PLANS CK'D. KRO

PIER DETAILS

SHEET 10 OF 16

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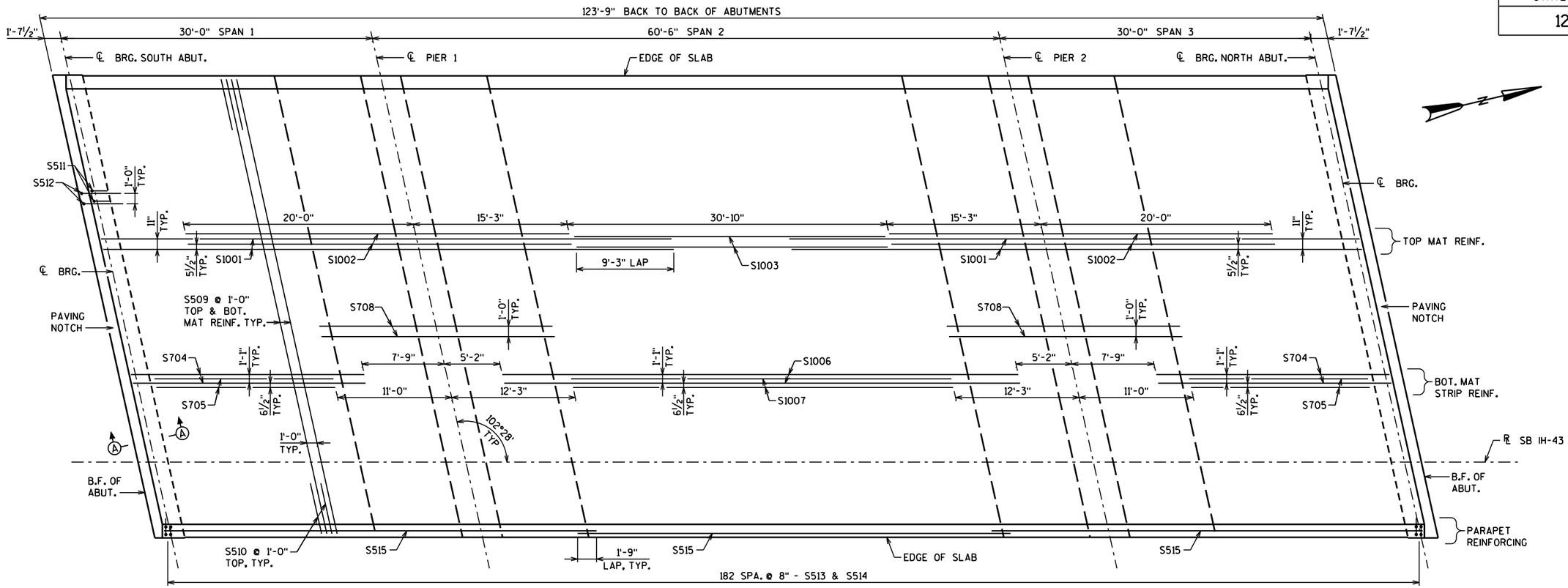
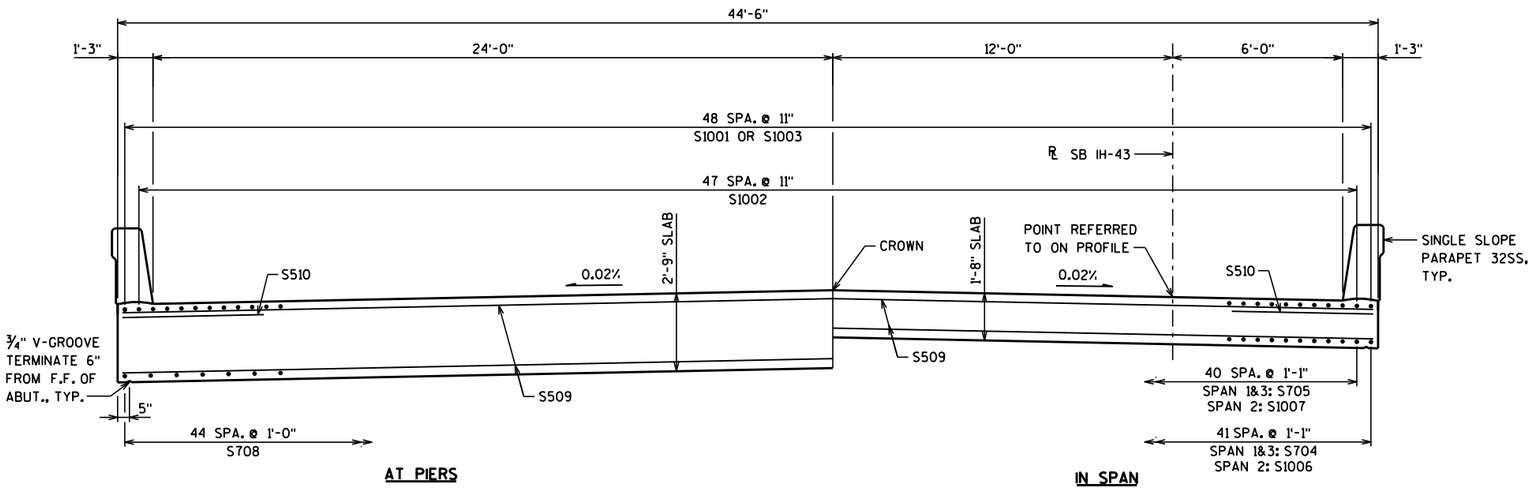
STATE PROJECT NUMBER
1224-21-73

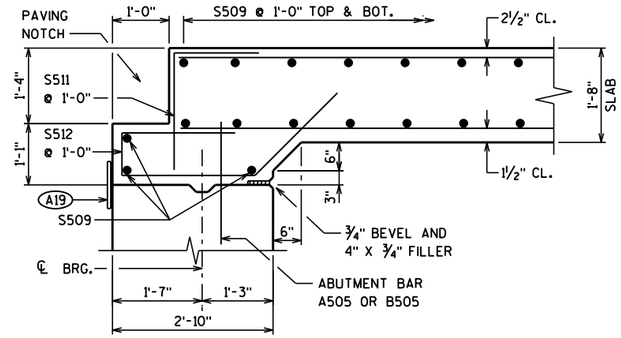


PLAN



AT PIERS IN SPAN

CROSS SECTION THRU ROADWAY



SECTION A-A

NOTES

(A19) 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-36-231

DRAWN BY BRE | PLANS CK'D. JAW

SUPERSTRUCTURE

SHEET 11 OF 16

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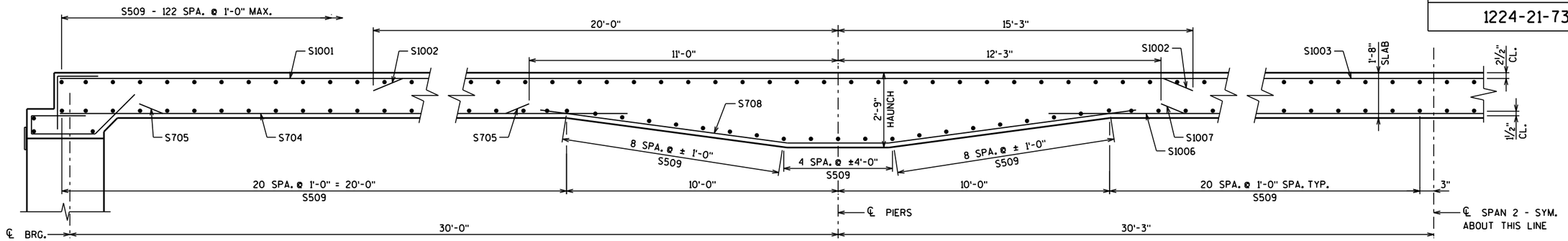
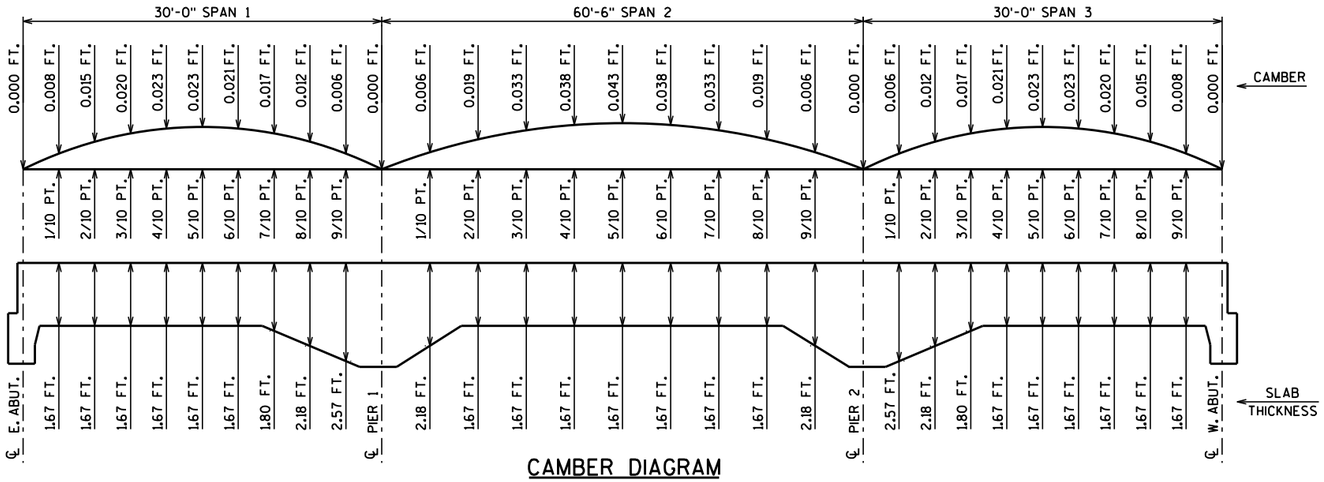
STATE PROJECT NUMBER
1224-21-73



LONGITUDINAL SECTION THRU ROADWAY

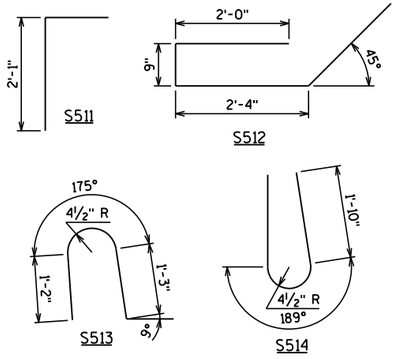


CAMBER DIAGRAM

CAMBER IS BASED ON 3 TIMES DEAD LOAD DEFLECTIONS. CAMBER SPANS AS SHOWN TO PROVIDE FOR DEADLOAD DEFLECTION AND FUTURE CREEP. CAMBER DOES NOT INCLUDE ALLOWANCE FOR FORM SETTLEMENT. PARAPETS SHOWN ABOVE THE HORIZ. CONST. JT. SHALL BE POURED AFTER FALSEWORK HAS BEEN RELEASED.

BILL OF BARS

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	LOCATION
S1001	X	98	55'-0"		LONGITUDINAL TOP
S1002	X	96	35'-3"		LONGITUDINAL TOP
S1003	X	49	30'-0"		LONGITUDINAL TOP
S704	X	84	22'-9"		LONGITUDINAL BOTTOM
S705	X	82	18'-0"		LONGITUDINAL BOTTOM
S1006	X	42	50'-2"		LONGITUDINAL BOTTOM
S1007	X	41	36'-0"		LONGITUDINAL BOTTOM
S708	X	90	22'-2"	X	LONGITUDINAL BOTTOM AT PIER
S509	X	253	45'-1"		TRANSVERSE TOP & BOTTOM
S510	X	244	5'-0"		TRANSVERSE TOP
S511	X	90	3'-6"	X	END OF SLAB
S512	X	90	6'-11"	X	END OF SLAB
S513	X	366	4'-5"	X	PARAPET VERTICAL
S514	X	366	5'-0"	X	PARAPET VERTICAL
S515	X	36	41'-8"		PARAPET HORIZONTAL



BAR BEND DIAGRAMS

TOP OF DECK ELEVATIONS

LOCATION	S.ABUT.	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	PIER 1
W. EDGE	679.28	679.30	679.32	679.35	679.37	679.39	679.41	679.43	679.45	679.47	679.49
CROWN	679.83	679.85	679.87	679.89	679.91	679.93	679.95	679.97	679.99	680.01	680.03
PROFILE	679.60	679.63	679.65	679.67	679.69	679.71	679.73	679.75	679.77	679.79	679.81
E. EDGE	679.47	679.49	679.51	679.53	679.55	679.57	679.60	679.62	679.63	679.65	679.67

LOCATION	PIER 1	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	PIER 2
W. EDGE	679.49	679.53	679.57	679.61	679.64	679.68	679.71	679.75	679.78	679.82	679.85
CROWN	680.03	680.07	680.11	680.15	680.18	680.22	680.25	680.29	680.32	680.35	680.38
PROFILE	679.81	679.85	679.88	679.92	679.96	679.99	680.03	680.06	680.09	680.12	680.16
E. EDGE	679.67	679.71	679.75	679.79	679.82	679.86	679.89	679.92	679.96	679.99	680.02

LOCATION	PIER 2	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	N.ABUT.
W. EDGE	679.85	679.86	679.88	679.89	679.91	679.92	679.94	679.95	679.97	679.98	679.99
CROWN	680.38	680.40	680.41	680.43	680.44	680.46	680.47	680.48	680.50	680.51	680.52
PROFILE	680.16	680.17	680.18	680.20	680.21	680.23	680.24	680.26	680.27	680.28	680.30
E. EDGE	680.02	680.03	680.05	680.06	680.08	680.09	680.10	680.12	680.13	680.14	680.16

NOTES

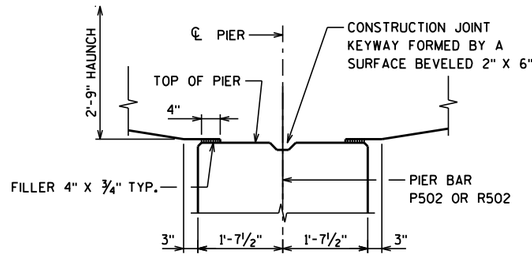
SLAB THICKNESS DIMENSION IS MINIMUM. ANY TOLERANCES TO CORRECT CONSTRUCTION DISCREPANCIES ARE TO BE PLUS (+).

TOP TRANSVERSE BARS IN THE SLAB SHALL BE SUPPORTED BY INDIVIDUAL BAR CHAIRS AT APPROXIMATELY 3'-0" CENTERS EACH WAY. BOTTOM LONGITUDINAL BARS SHALL BE SUPPORTED BY CONTINUOUS BAR CHAIRS AT APPROXIMATELY 4'-0" CENTERS.

TRANSVERSE BARS SHALL BE PLACED PARALLEL TO THE ℄ OF SUBSTRUCTURE UNITS.

PARAPETS PLACED ON TOP OF THE SLAB SHALL BE POURED AFTER FALSEWORK HAS BEEN RELEASED.

PRIOR TO RELEASING SLAB FALSEWORK, TAKE TOP OF SLAB ELEVATIONS AT THE ℄ OF ABUTMENTS, THE ℄ OF PIERS AND AT 5/10 PTS. TO VERIFY CAMBER. TAKE ELEVATIONS ALONG GUTTER LINES AND CROWN OR ℄.



PIER DETAIL

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-36-231

DRAWN BY BRE | PLANS CK'D. JAW

SUPERSTRUCTURE DETAILS

SHEET 12 OF 16

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STATE PROJECT NUMBER
1224-21-73

NOTES:

(T01) PIPE UNDERDRAIN WRAPPED 6-INCH AT APPROACH SLAB, LOCATED ONLY ON UPHILL SIDE OF APRON FOOTING. SLOPE 0.5% MIN. TO SUITABLE DRAINAGE.

(T02) STEEL TROWEL TOP SURFACE OF FOOTING AND PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHLENE SHEETS OVER THE ENTIRE TOP OF FOOTING.

(T03) PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHLENE SHEETS OVER THE ENTIRE TOP OF SUBGRADE BENEATH SLAB.

(A17) 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.)

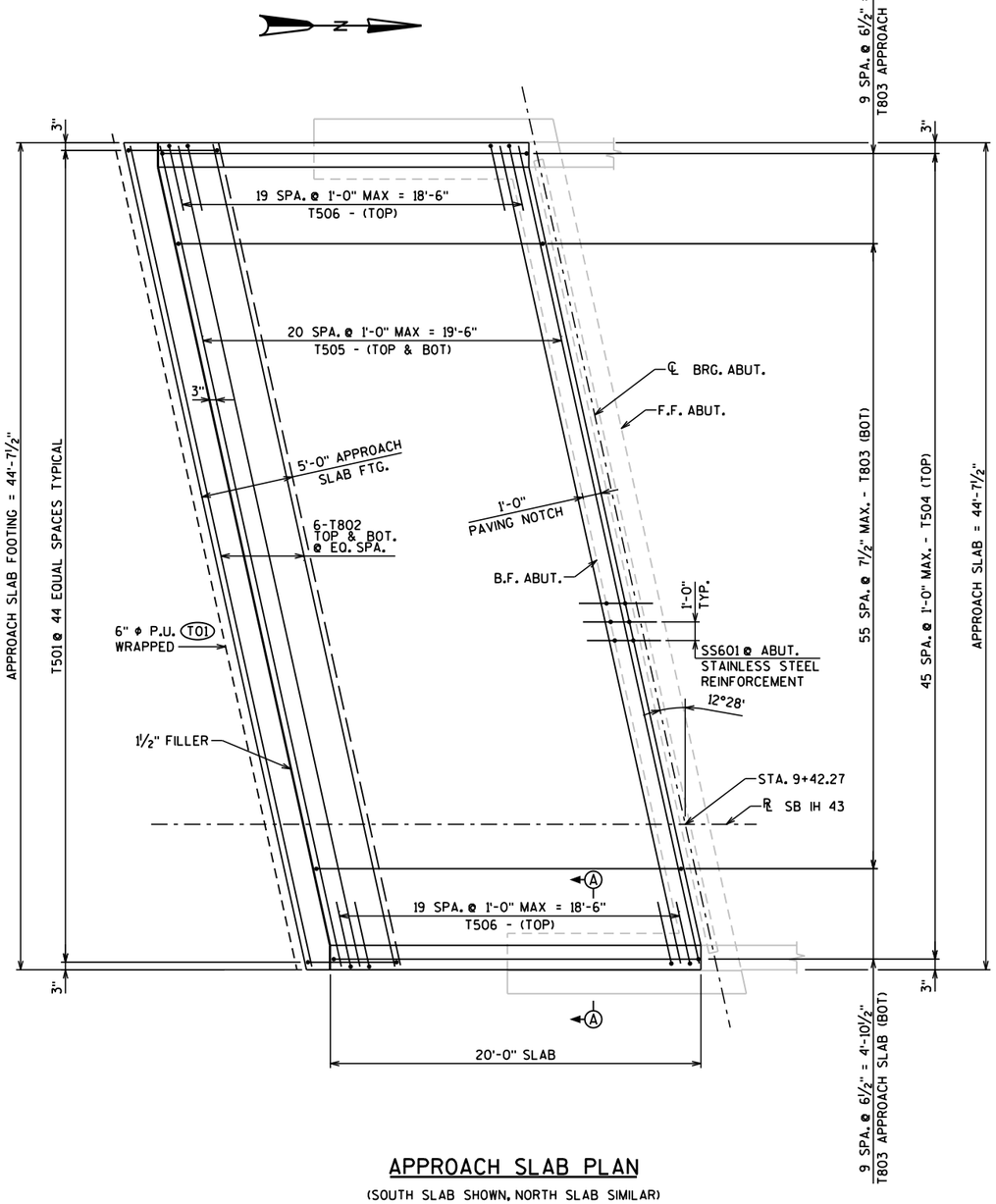
* APPLY PROTECTIVE SURFACE TREATMENT TO PAVING NOTCH PRIOR TO POURING STRUCTURAL APPROACH SLAB.

◪ ¾" PREFORMED JOINT FILLER ACCORDING TO STD. SPEC. 502.2.7. (4" WIDE X PAVING NOTCH LENGTH)

◑ ¾" PREFORMED JOINT FILLER ACCORDING TO STD. SPEC. 502.2.7. (1'-6" WIDE X FOOTING LENGTH)

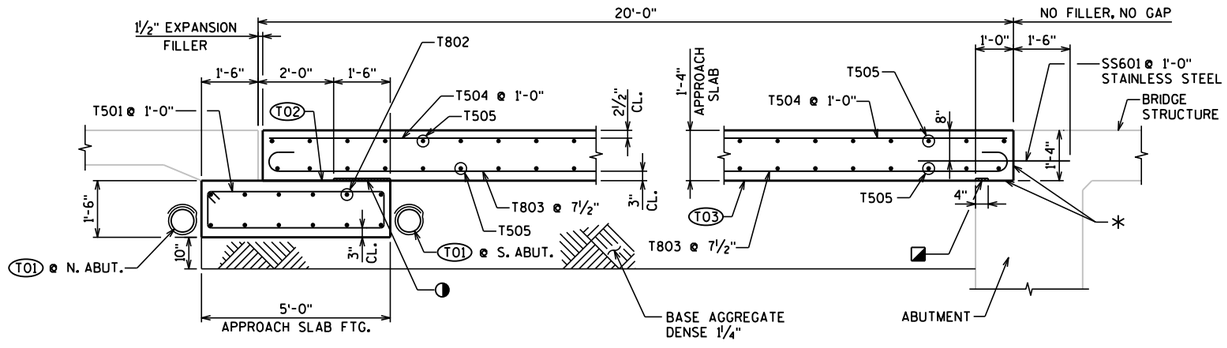
DESIGN DATA:

ALLOWABLE SOIL BEARING PRESSURE:	2,000 P.S.F.
CONCRETE STRENGTH f'c:	4,000 P.S.I.
BAR STEEL REINFORCEMENT, GRADE 60, fy:	60,000 P.S.I.



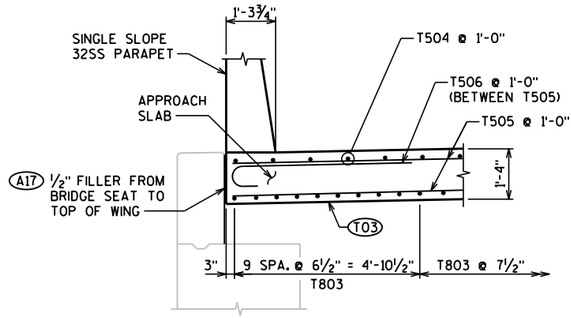
APPROACH SLAB PLAN

(SOUTH SLAB SHOWN, NORTH SLAB SIMILAR)



TRANSVERSE SECTION THRU APPROACH SLAB

(SOUTH APRON SHOWN, NORTH APRON SIMILAR)



SECTION A-A

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-36-231

DRAWN BY BRE | PLANS CK'D. JAW

STRUCTURAL APPROACH SLAB

SHEET 13 OF 16

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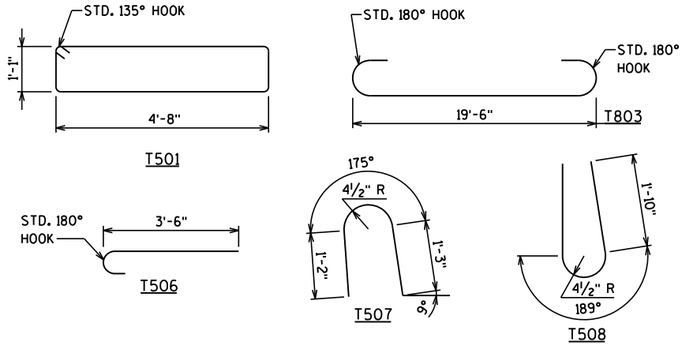
STATE PROJECT NUMBER

1224-21-73

BILL OF BARS

BAR MARK	COAT	SOUTH QTY.	NORTH QTY.	LENGTH	BENT	LOCATION
T501	X	45	45	12'-1"	X	FOOTING - STIRRUPS
T802	X	12	12	45'-2"		FOOTING - HORIZONTAL
T803	X	74	74	21'-4"	X	SLAB - LONG. - BOTTOM
T504	X	46	46	19'-6"		SLAB - LONG. - TOP
T505	X	42	42	45'-2"		SLAB - TRANS. - TOP & BOT.
T506	X	40	40	4'-1"	X	SLAB - TRANS. - TOP
T507	X	36	36	4'-5"	X	PARAPET - VERTICAL
T508	X	36	36	5'-0"	X	PARAPET - VERTICAL
T509	X	24	24	2'-9"	X	PARAPET - VERTICAL
T510	X	34	34	4'-4"	X	PARAPET - VERTICAL
T511	X	22	22	4'-9"	X	PARAPET - VERTICAL
T512	X	12	12	4'-10"	X	PARAPET - VERTICAL
T513	X	2	2	19'-6"	X	PARAPET - HORIZONTAL
T514	X	10	10	19'-6"		PARAPET - HORIZONTAL



BAR BENDING DIAGRAMS

8

BILL OF BARS (STAINLESS STEEL, FOR ONE APPROACH SLAB)

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	LOCATION
SS601		46	3'-0"		CONC. DIAPH. @ ABUTS. TO APPROACH APRON

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-36-231

DRAWN BY BRE | PLANS CK'D. JAW

STRUCTURAL APPROACH SLAB DETAILS

SHEET 14 OF 16

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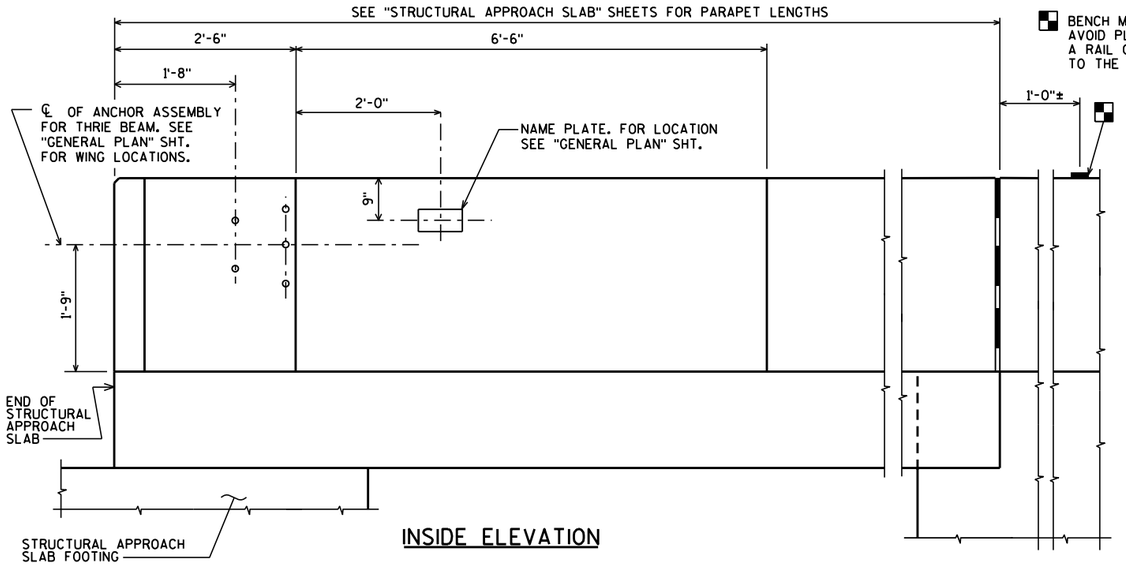
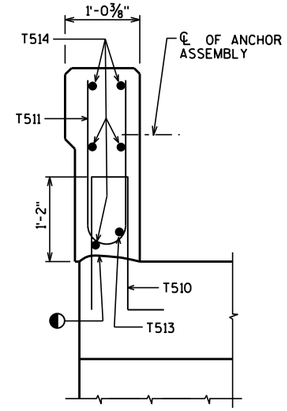
1224-21-73

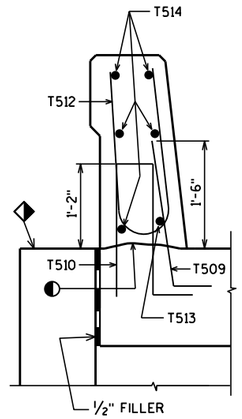


INSIDE ELEVATION

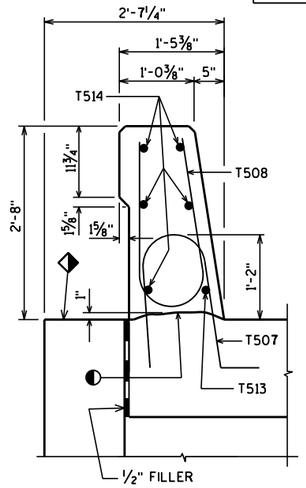
BENCH MARK CAP (WHEN SUPPLIED). AVOID PLACING A BENCH MARK CAP BELOW A RAIL OR FENCE SYSTEM THAT IS ATTACHED TO THE TOP OF THE PARAPET.



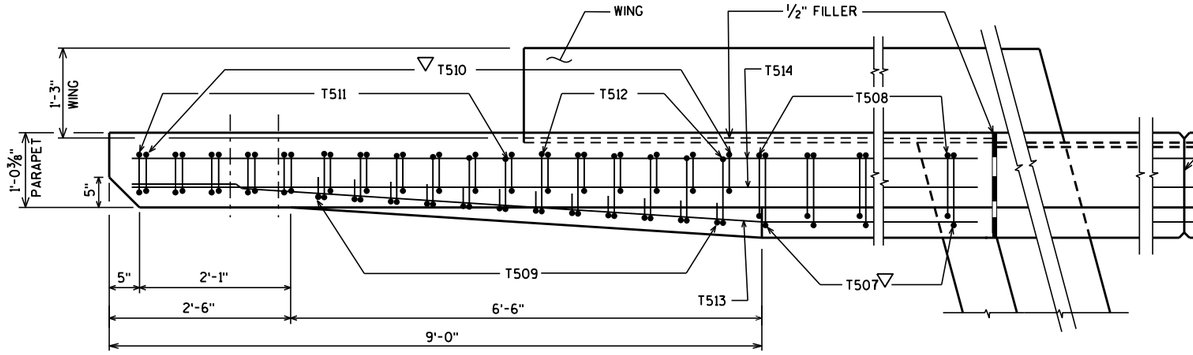
SECTION A



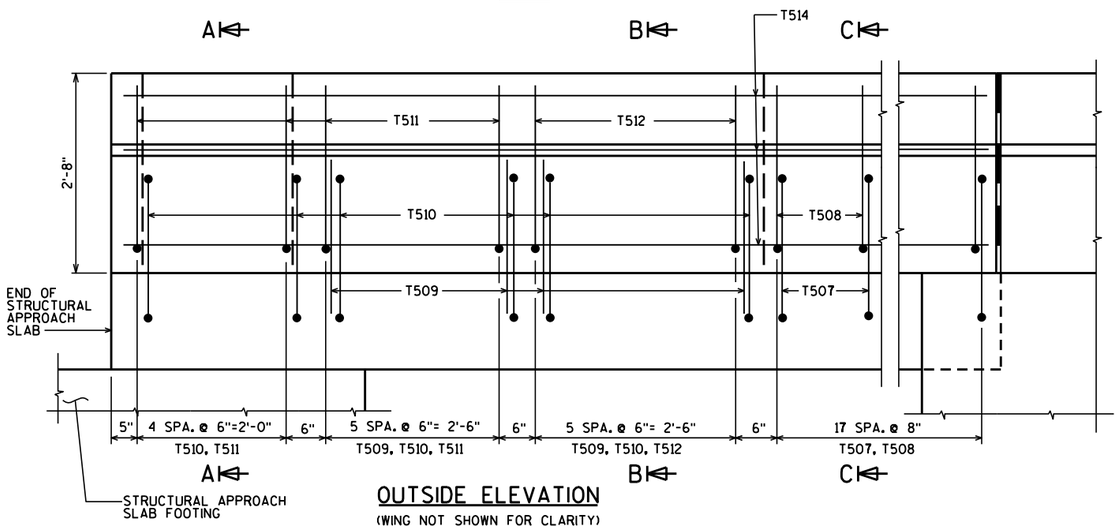
SECTION B



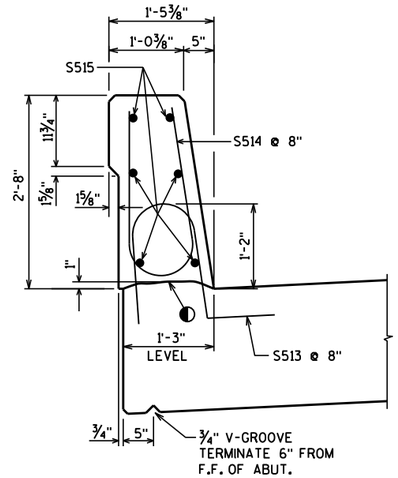
SECTION C



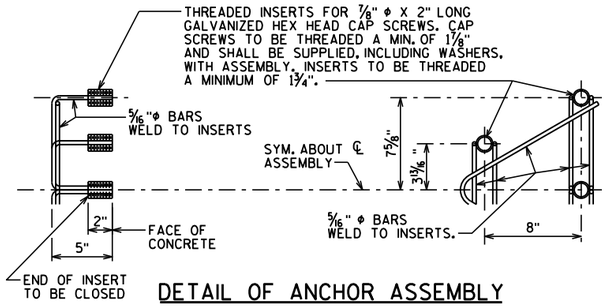
PLAN



OUTSIDE ELEVATION
(WING NOT SHOWN FOR CLARITY)



SECTION THRU PARAPET ON BRIDGE



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.

LEGEND

- ◆ SLOPE FOR DRAINAGE
- ◐ CONST. JOINT - STRIKE OFF AS SHOWN.
- ▽ T507 AND T510 BARS TO BE TIED TO STRUCTURAL APPROACH SLAB STEEL BEFORE STRUCTURAL APPROACH SLAB IS POURED.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-36-231

DRAWN BY BRE | PLANS CK'D. KRO

SINGLE SLOPE
32SS PARAPET

SHEET 15 OF 16

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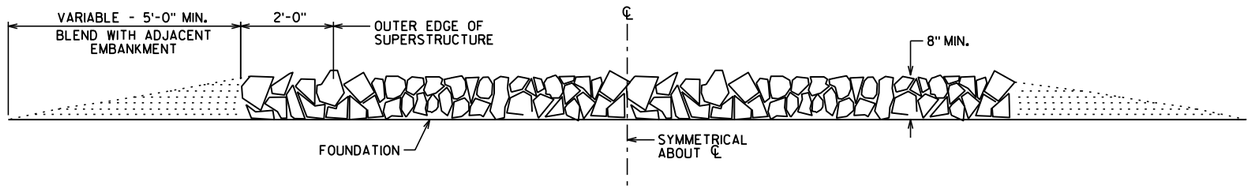
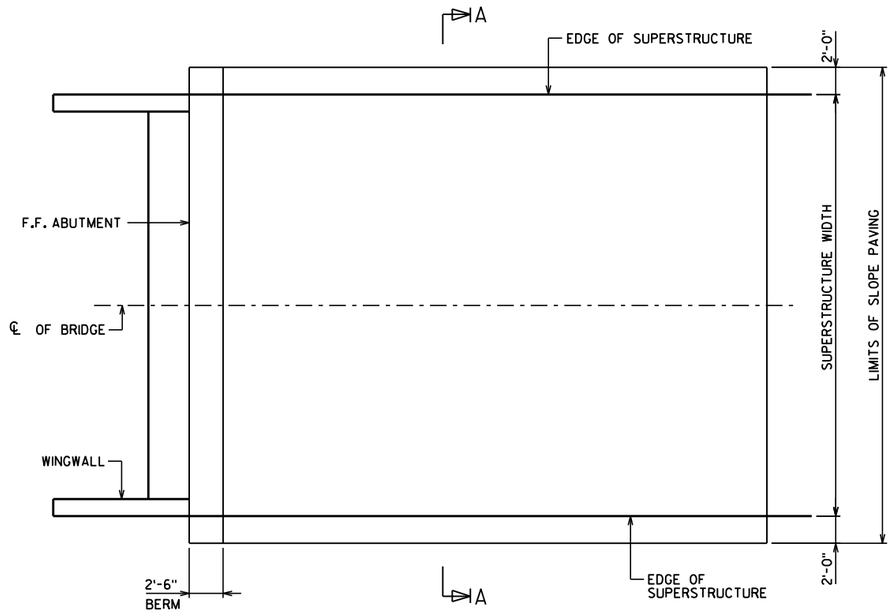
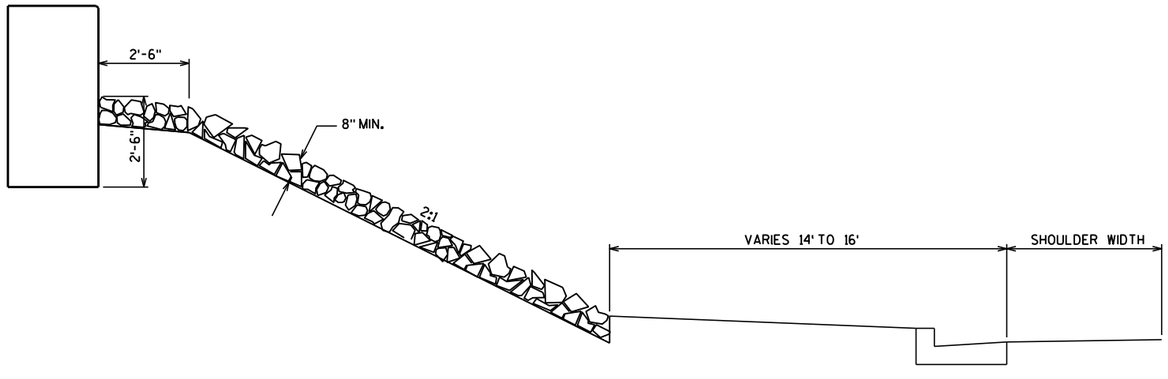
STATE PROJECT NUMBER
1224-21-73



SECTION A-A



PLAN



STANDARD CROSS SECTION

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.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-36-231

DRAWN BY BRE | PLANS CK'D. KRO

SLOPE PAVING (SELECT CRUSHED MATERIAL)

SHEET 16 OF 16

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STATION	Real Station	Distance	AREA (SF)						Incremental Vol (CY) (Unadjusted)	Cumulative Vol (CY)			
			Cut	Salvaged/Unusable Pavement Material	Fill	Marsh Exc	Rock Exc	EBS	Cut Note 1	Fill Note 3	Cut 1.00 Note 1	Expanded Fill 1.25	Mass Ordinate Note 8
1225+11.95	122511.95	0.00	0.00	0.00	3.27	0.00	0.00	0.00	0	0	0	0	0.00
1225+39.56	122539.56	27.62	0.00	0.00	21.05	0.00	0.00	0.00	0	12	0	16	-15.55
1226+00	122600.00	60.44	0.00	0.00	44.01	0.00	0.00	0.00	0	73	0	107	-106.57
1226+01.95	122601.95	1.95	0.00	0.00	44.41	0.00	0.00	0.00	0	3	0	111	-110.55
1226+26.95	122626.95	25.00	0.00	0.00	41.22	0.00	0.00	0.00	0	40	0	160	-160.10
1226+39.7	122639.70	12.76	0.00	0.00	42.89	0.00	0.00	0.00	0	20	0	185	-184.94
1226+54.8	122654.80	15.09	0.00	0.00	44.86	0.00	0.00	0.00	0	25	0	216	-215.60
1226+64.66	122664.66	9.86	0.00	0.00	45.88	0.00	0.00	0.00	0	17	0	236	-236.31
1226+91.57	122691.57	26.91	0.00	0.00	46.56	0.00	0.00	0.00	0	46	0	294	-293.90
1227+00	122700.00	8.43	0.00	0.00	45.87	0.00	0.00	0.00	0	14	0	312	-311.93
1227+50	122750.00	50.00	0.00	0.00	43.13	0.00	0.00	0.00	0	82	0	415	-414.94
1228+00	122800.00	50.00	0.00	0.00	48.72	0.00	0.00	0.00	0	85	0	521	-521.25
1228+50	122850.00	50.00	0.00	0.00	51.09	0.00	0.00	0.00	0	92	0	637	-636.78
1228+98.75	122898.75	48.75	0.00	0.00	55.59	0.00	0.00	0.00	0	96	0	757	-757.17
1229+91.25	122991.25	92.50	0.00	0.00	82.08	0.00	0.00	0.00	0	236	0	1,052	-1,051.97
1230+00	123000.00	8.75	0.00	0.00	69.45	0.00	0.00	0.00	0	25	0	1,083	-1,082.66
1230+04.16	123004.16	4.16	0.00	0.00	64.93	0.00	0.00	0.00	0	10	0	1,096	-1,095.61
1230+50	123050.00	45.84	0.00	0.00	24.65	0.00	0.00	0.00	0	76	0	1,191	-1,190.65
1230+83.93	123083.93	33.93	0.00	0.00	17.77	0.00	0.00	0.00	0	27	0	1,224	-1,223.96
1231+00	123100.00	16.07	0.00	0.00	15.38	0.00	0.00	0.00	0	10	0	1,236	-1,236.30
1231+50	123150.00	50.00	0.00	0.00	10.86	0.00	0.00	0.00	0	24	0	1,267	-1,266.67
1232+00	123200.00	50.00	0.00	0.00	8.99	0.00	0.00	0.00	0	18	0	1,290	-1,289.66
1232+10	123210.00	10.00	0.00	0.00	7.87	0.00	0.00	0.00	0	3	0	1,294	-1,293.56
								IH 43 NB TOTALS	**0**	**1,035**			

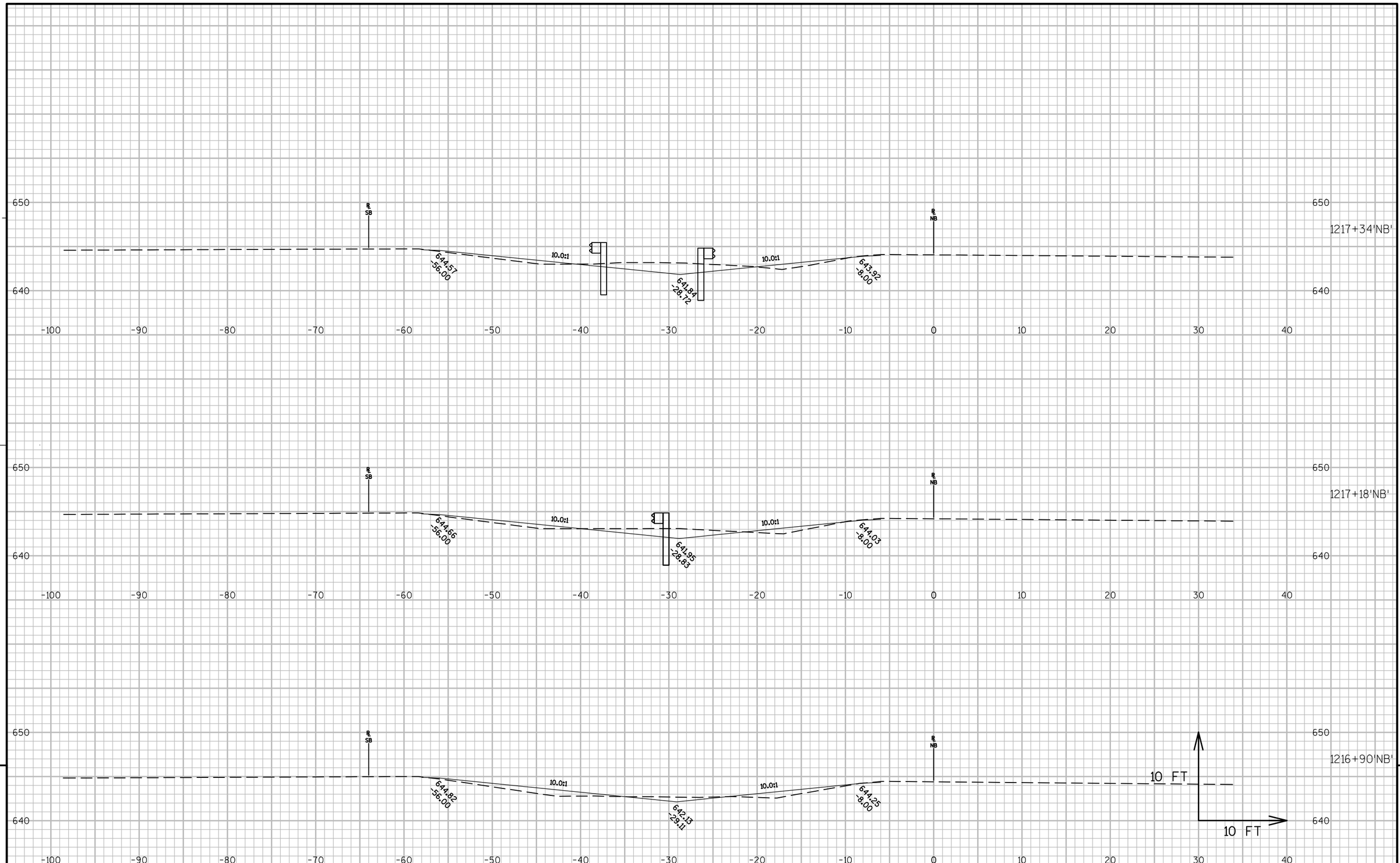
STATION	Real Station	Distance	AREA (SF)						Incremental Vol (CY) (Unadjusted)	Cumulative Vol (CY)			
			Cut	Salvaged/Unusable Pavement Material	Fill	Marsh Exc	Rock Exc	EBS	Cut Note 1	Fill Note 3	Cut 1.00 Note 1	Expanded Fill 1.25	Mass Ordinate Note 8
1320+68.87(6)	132082.70	0.00	0.00	0.00	1.38	0.00	0.00	0.00	0	0	0	0	0.00
1320+73.75(6)	132087.58	4.88	0.00	0.00	7.16	0.00	0.00	0.00	0	1	0	1	-0.96
1321+00.08(6)	132113.91	26.33	0.00	0.00	7.74	0.00	0.00	0.00	0	7	0	10	-10.05
1321+50(6)	132163.83	49.92	0.00	0.00	11.46	0.00	0.00	0.00	0	18	0	32	-32.24
1322+00(6)	132213.83	50.00	0.00	0.00	20.14	0.00	0.00	0.00	0	29	0	69	-68.80
1322+03.87(6)	132217.70	3.87	0.00	0.00	20.95	0.00	0.00	0.00	0	3	0	72	-72.48
1322+08.75(6)	132222.58	4.88	0.00	0.00	21.49	0.00	0.00	0.00	0	4	0	77	-77.27
1322+28.87(6)	132242.70	20.12	0.00	0.00	13.45	0.00	0.00	0.00	0	13	0	94	-93.54
1322+33.75(6)	132247.58	4.88	0.00	0.00	11.76	0.00	0.00	0.00	0	2	0	96	-96.39
1322+50(6)	132263.83	16.25	0.00	0.00	10.25	0.00	0.00	0.00	0	7	0	105	-104.68
1322+56.87(6)	132270.70	6.87	0.00	0.00	10.91	0.00	0.00	0.00	0	3	0	108	-108.04
1322+61.81(6)	132275.64	4.94	0.00	0.00	11.51	0.00	0.00	0.00	0	2	0	111	-110.61
1323+00(6)	132313.83	38.19	0.00	0.00	20.28	0.00	0.00	0.00	0	22	0	139	-138.72
1323+50(6)	132363.83	50.00	0.00	0.00	15.97	0.00	0.00	0.00	0	34	0	181	-180.67
1324+00(6)	132413.83	50.00	0.00	0.00	14.62	0.00	0.00	0.00	0	28	0	216	-216.07
1324+44.12(6)	132457.96	44.12	0.00	0.00	13.73	0.00	0.00	0.00	0	23	0	245	-245.02
1325+92.87(6)	132606.70	148.75	0.00	0.00	13.07	0.00	0.00	0.00	0	74	0	337	-337.31
1326+00(6)	132613.83	7.13	0.00	0.00	11.53	0.00	0.00	0.00	0	3	0	341	-341.37
1326+50(6)	132663.83	50.00	0.00	0.00	7.85	0.00	0.00	0.00	0	18	0	364	-363.79
1327+00(6)	132713.83	50.00	0.00	0.00	7.46	0.00	0.00	0.00	0	14	0	382	-381.51
1327+50(6)	132763.83	50.00	0.00	0.00	12.97	0.00	0.00	0.00	0	19	0	405	-405.15
1328+00(6)	132813.83	50.00	0.00	0.00	14.15	0.00	0.00	0.00	0	25	0	437	-436.54
1328+04.8(6)	132818.63	4.80	0.00	0.00	13.91	0.00	0.00	0.00	0	2	0	440	-439.65
1328+33.14(6)	132846.97	28.34	0.00	0.00	15.32	0.00	0.00	0.00	0	15	0	459	-458.82
1328+51.91(6)	132865.74	18.77	0.00	0.00	20.19	0.00	0.00	0.00	0	12	0	474	-474.25
1328+57.8(6)	132871.63	5.89	0.00	0.00	22.13	0.00	0.00	0.00	0	5	0	480	-480.02
1328+79.91(6)	132893.74	22.11	0.00	0.00	16.22	0.00	0.00	0.00	0	16	0	500	-499.65
1329+04.88(6)	132918.72	24.98	0.00	0.00	10.89	0.00	0.00	0.00	0	13	0	515	-515.32
1329+58.24(6)	132972.07	53.35	0.00	0.00	7.46	0.00	0.00	0.00	0	18	0	538	-537.98
1329+94.87(6)	133008.71	36.64	0.00	0.00	0.99	0.00	0.00	0.00	0	6	0	545	-545.15
								IH 43 SB TOTALS	**0**	**436**			

STATION	Real Station	Distance	AREA (SF)						Incremental Vol (CY) (Unadjusted)		Cumulative Vol (CY)		
			Cut	Salvaged/Unusable Pavement Material	Fill	Marsh Exc	Rock Exc	EBS	Cut Note 1	Fill Note 3	Cut 1.00 Note 1	Expanded Fill 1.25	Mass Ordinate Note 8
1357+50	135750.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0.00
1357+62.52	135762.52	12.52	0.02	0.00	0.15	0.00	0.00	0.00	0	0	0	0	-0.04
1358+00	135800.00	37.48	11.12	0.00	1.87	0.00	0.00	0.00	8	1	8	2	5.94
1358+50	135850.00	50.00	17.96	0.00	0.11	0.00	0.00	0.00	27	2	35	4	30.57
1358+77.45	135877.45	27.45	19.00	0.00	0.03	0.00	0.00	0.00	19	0	53	4	49.27
1359+00	135900.00	22.55	18.53	0.00	0.99	0.00	0.00	0.00	16	0	69	5	64.40
1359+50	135950.00	50.00	18.00	0.00	6.63	0.00	0.00	0.00	34	7	103	14	89.42
1360+00	136000.00	50.00	17.91	0.00	8.92	0.00	0.00	0.00	33	14	136	32	104.68
1360+50	136050.00	50.00	17.14	0.00	9.62	0.00	0.00	0.00	32	17	169	53	115.67
1360+76.58	136076.58	26.58	17.37	0.00	9.80	0.00	0.00	0.00	17	10	186	65	120.71
1361+00	136100.00	23.42	18.72	0.00	11.00	0.00	0.00	0.00	16	9	201	76	125.09
1361+22.75	136122.75	22.75	19.81	0.00	12.31	0.00	0.00	0.00	16	10	218	88	129.05
1361+50	136150.00	27.25	19.09	0.00	13.78	0.00	0.00	0.00	20	13	237	105	132.22
1362+00	136200.00	50.00	20.63	0.00	17.25	0.00	0.00	0.00	37	29	274	141	133.07
1362+50	136250.00	50.00	22.49	0.00	18.46	0.00	0.00	0.00	40	33	314	182	131.66
1363+00	136300.00	50.00	8.98	0.00	18.39	0.00	0.00	0.00	29	34	343	225	118.15
1363+50	136350.00	50.00	1.13	0.00	22.82	0.00	0.00	0.00	9	38	352	273	79.82
1364+00	136400.00	50.00	0.57	0.00	31.02	0.00	0.00	0.00	2	50	354	335	19.09
1364+50	136450.00	50.00	8.06	0.00	31.42	0.00	0.00	0.00	8	58	362	407	-45.19
1365+00	136500.00	50.00	19.17	0.00	27.61	0.00	0.00	0.00	25	55	387	475	-88.29
1365+50	136550.00	50.00	14.28	0.00	16.39	0.00	0.00	0.00	31	41	418	526	-108.24
1366+00	136600.00	50.00	11.23	0.00	13.86	0.00	0.00	0.00	24	28	442	561	-119.65
1366+35.36	136635.36	35.36	7.02	0.00	6.54	0.00	0.00	0.00	12	13	454	578	-124.41
1366+50	136650.00	14.64	0.00	0.00	0.00	0.00	0.00	0.00	2	2	456	580	-124.72
					MIDDLE CROSSOVER CONSTRUCTION TOTALS				**456**	**464**			

STATION	Real Station	Distance	AREA (SF) Cut	Salvaged/Unusable Pavement Material	Fill	Marsh Exc	Rock Exc	EBS	Incremental Vol (CY) (Unadjusted) Cut Note 1	Fill Note 3	Cumulative Vol (CY) Cut 1.00 Note 1	Expanded Fill 1.25	Mass Ordinate Note 8
SOUTH CROSSOVER													
1189+99.72	118999.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0.00
1190+01.19	119001.19	1.47	0.00	0.00	21.41	0.00	0.00	0.00	0	1	0	1	-0.73
1190+50	119050.00	48.81	0.00	0.00	19.90	0.00	0.00	0.00	0	37	0	47	-47.40
1191+00	119100.00	50.00	0.45	0.00	16.60	0.00	0.00	0.00	0	34	0	90	-89.23
1191+50	119150.00	50.00	1.27	0.00	13.53	0.00	0.00	0.00	2	28	2	125	-122.51
1192+00	119200.00	50.00	2.06	0.00	10.79	0.00	0.00	0.00	3	23	5	153	-147.56
1192+50	119250.00	50.00	5.98	0.00	4.33	0.00	0.00	0.00	7	14	13	170	-157.62
1193+00	119300.00	50.00	14.85	0.00	0.94	0.00	0.00	0.00	19	5	32	176	-144.43
1193+50	119350.00	50.00	27.50	0.00	0.04	0.00	0.00	0.00	39	1	71	177	-106.35
1194+00	119400.00	50.00	73.29	0.00	0.00	0.00	0.00	0.00	93	0	164	177	-13.07
1194+50	119450.00	50.00	88.31	0.00	0.00	0.00	0.00	0.00	150	0	314	177	136.56
1195+00	119500.00	50.00	88.45	0.00	0.00	0.00	0.00	0.00	164	0	478	177	300.22
1195+50	119550.00	50.00	88.02	0.00	0.00	0.00	0.00	0.00	163	0	641	177	463.62
1196+00	119600.00	50.00	87.41	0.00	0.00	0.00	0.00	0.00	162	0	803	177	626.05
1196+50	119650.00	50.00	87.05	0.00	0.00	0.00	0.00	0.00	162	0	965	177	787.58
1197+00	119700.00	50.00	87.15	0.00	0.00	0.00	0.00	0.00	161	0	1,126	177	948.88
1197+50	119750.00	50.00	87.22	0.00	0.00	0.00	0.00	0.00	161	0	1,288	177	1,110.34
1198+00	119800.00	50.00	87.21	0.00	0.00	0.00	0.00	0.00	162	0	1,449	177	1,271.85
1198+50	119850.00	50.00	87.24	0.00	0.00	0.00	0.00	0.00	162	0	1,611	177	1,433.38
1199+00	119900.00	50.00	87.24	0.00	0.00	0.00	0.00	0.00	162	0	1,772	177	1,594.94
1199+50	119950.00	50.00	87.17	0.00	0.00	0.00	0.00	0.00	161	0	1,934	177	1,756.43
1200+00	120000.00	50.00	88.41	0.00	0.00	0.00	0.00	0.00	163	0	2,096	177	1,919.01
1200+50	120050.00	50.00	90.59	0.00	0.00	0.00	0.00	0.00	166	0	2,262	177	2,084.75
1201+00	120100.00	50.00	23.78	0.00	0.00	0.00	0.00	0.00	106	0	2,368	177	2,190.66
1201+50	120150.00	50.00	11.85	0.00	1.35	0.00	0.00	0.00	33	1	2,401	179	2,222.09
1202+00	120200.00	50.00	4.73	0.00	5.59	0.00	0.00	0.00	15	6	2,416	187	2,229.40
1202+50	120250.00	50.00	2.25	0.00	11.11	0.00	0.00	0.00	6	15	2,423	206	2,216.53
1203+00	120300.00	50.00	1.23	0.00	13.97	0.00	0.00	0.00	3	23	2,426	235	2,190.73
1203+50	120350.00	50.00	0.85	0.00	16.60	0.00	0.00	0.00	2	28	2,428	271	2,157.28
1203+75.96	120375.96	25.96	0.76	0.00	17.19	0.00	0.00	0.00	1	16	2,429	291	2,137.75
1203+81.32	120381.32	5.35	0.00	0.00	0.00	0.00	0.00	0.00	0	2	2,429	293	2,135.70
					SOUTH CROSSOVER TOTALS				**2,429**	**235**			

STATION	Real Station	Distance	AREA (SF)						Incremental Vol (CY) (Unadjusted)		Cumulative Vol (CY)		
			Cut	Salvaged/Unusable Pavement Material	Fill	Marsh Exc	Rock Exc	EBS	Cut Note 1	Fill Note 3	Cut 1.00 Note 1	Expanded Fill 1.25	Mass Ordinate Note 8
1357+50	135750.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0.00
1357+63.1	135763.10	13.10	0.02	0.00	7.76	0.00	0.00	0.00	0	2	0	2	-2.35
1358+00	135800.00	36.90	0.59	0.00	6.78	0.00	0.00	0.00	0	10	0	15	-14.35
1358+50	135850.00	50.00	0.15	0.00	11.18	0.00	0.00	0.00	1	17	1	36	-34.45
1359+00	135900.00	50.00	3.88	0.00	1.19	0.00	0.00	0.00	4	11	5	50	-45.04
1359+50	135950.00	50.00	5.41	0.00	1.56	0.00	0.00	0.00	9	3	13	53	-39.63
1360+00	136000.00	50.00	6.54	0.00	1.42	0.00	0.00	0.00	11	3	24	57	-32.02
1360+50	136050.00	50.00	6.59	0.00	1.58	0.00	0.00	0.00	12	3	37	60	-23.33
1361+00	136100.00	50.00	8.45	0.00	1.49	0.00	0.00	0.00	14	3	51	64	-12.95
1361+50	136150.00	50.00	16.82	0.00	9.09	0.00	0.00	0.00	23	10	74	76	-1.78
1362+00	136200.00	50.00	29.25	0.00	8.72	0.00	0.00	0.00	43	16	117	96	20.26
1362+50	136250.00	50.00	43.64	0.00	7.98	0.00	0.00	0.00	67	15	184	116	68.41
1363+00	136300.00	50.00	54.59	0.00	8.01	0.00	0.00	0.00	91	15	275	134	140.85
1363+50	136350.00	50.00	63.09	0.00	9.22	0.00	0.00	0.00	109	16	384	154	229.88
1364+00	136400.00	50.00	68.45	0.00	9.04	0.00	0.00	0.00	122	17	506	175	330.55
1364+50	136450.00	50.00	65.48	0.00	10.97	0.00	0.00	0.00	124	19	630	198	431.39
1365+00	136500.00	50.00	50.08	0.00	12.80	0.00	0.00	0.00	107	22	737	226	510.88
1365+50	136550.00	50.00	22.53	0.00	14.60	0.00	0.00	0.00	67	25	804	258	546.40
1365+65.83	136565.83	15.83	14.19	0.00	18.48	0.00	0.00	0.00	11	10	815	270	545.05
1366+00	136600.00	34.17	14.63	0.00	0.51	0.00	0.00	0.00	18	12	833	285	548.26
1366+37.05	136637.05	37.05	2.78	0.00	3.10	0.00	0.00	0.00	12	2	845	288	557.10
1366+50	136650.00	12.95	0.00	0.00	0.00	0.00	0.00	0.00	1	1	846	289	556.84
								MIDDLE CROSSOVER REMOVAL	**846**	**231**			

STATION	Real Station	Distance	AREA (SF) Cut	Salvaged/Unusable Pavement Material	Fill	Marsh Exc	Rock Exc	EBS	Incremental Vol (CY) (Unadjusted) Cut Note 1	Fill Note 3	Cumulative Vol (CY) Cut 1.00 Note 1	Expanded Fill 1.25	Mass Ordinate Note 8
NORTH CROSSOVER													
1515+28	151528.00	31146.68	0.00	0.00	0.00	0.00	0.00	0.00	0	0	2,429	293	2,135.70
1515+38.11	151538.11	10.11	0.00	0.00	19.44	0.00	0.00	0.00	0	4	2,429	298	2,131.15
1515+50	151550.00	11.89	0.02	0.00	18.62	0.00	0.00	0.00	0	8	2,429	308	2,120.68
1516+00	151600.00	50.00	0.55	0.00	16.42	0.00	0.00	0.00	1	32	2,429	349	2,080.65
1516+50	151650.00	50.00	0.67	0.00	14.95	0.00	0.00	0.00	1	29	2,431	385	2,045.47
1517+00	151700.00	50.00	1.79	0.00	13.50	0.00	0.00	0.00	2	26	2,433	418	2,014.82
1517+50	151750.00	50.00	3.33	0.00	8.91	0.00	0.00	0.00	5	21	2,438	444	1,993.64
1518+00	151800.00	50.00	9.62	0.00	2.60	0.00	0.00	0.00	12	11	2,450	457	1,992.32
1518+50	151850.00	50.00	20.24	0.00	0.24	0.00	0.00	0.00	28	3	2,477	461	2,016.69
1519+00	151900.00	50.00	34.02	0.00	0.00	0.00	0.00	0.00	50	0	2,527	461	2,066.65
1519+50	151950.00	50.00	67.58	0.00	0.00	0.00	0.00	0.00	94	0	2,622	461	2,160.72
1520+00	152000.00	50.00	85.78	0.00	0.00	0.00	0.00	0.00	142	0	2,764	461	2,302.71
1520+50	152050.00	50.00	86.30	0.00	0.00	0.00	0.00	0.00	159	0	2,923	461	2,462.04
1521+00	152100.00	50.00	86.35	0.00	0.00	0.00	0.00	0.00	160	0	3,083	461	2,621.90
1521+50	152150.00	50.00	85.11	0.00	0.00	0.00	0.00	0.00	159	0	3,241	461	2,780.66
1522+00	152200.00	50.00	86.42	0.00	0.00	0.00	0.00	0.00	159	0	3,400	461	2,939.47
1522+50	152250.00	50.00	86.47	0.00	0.00	0.00	0.00	0.00	160	0	3,560	461	3,099.55
1523+00	152300.00	50.00	86.48	0.00	0.00	0.00	0.00	0.00	160	0	3,721	461	3,259.69
1523+50	152350.00	50.00	86.48	0.00	0.00	0.00	0.00	0.00	160	0	3,881	461	3,419.83
1524+00	152400.00	50.00	86.68	0.00	0.00	0.00	0.00	0.00	160	0	4,041	461	3,580.16
1524+50	152450.00	50.00	87.44	0.00	0.00	0.00	0.00	0.00	161	0	4,202	461	3,741.37
1525+00	152500.00	50.00	88.71	0.00	0.00	0.00	0.00	0.00	163	0	4,365	461	3,904.47
1525+50	152550.00	50.00	90.54	0.00	0.00	0.00	0.00	0.00	166	0	4,531	461	4,070.44
1526+00	152600.00	50.00	33.06	0.00	0.14	0.00	0.00	0.00	114	0	4,646	461	4,184.73
1526+50	152650.00	50.00	18.45	0.00	1.18	0.00	0.00	0.00	48	1	4,693	463	4,230.89
1527+00	152700.00	50.00	7.86	0.00	5.30	0.00	0.00	0.00	24	6	4,718	470	4,247.76
1527+50	152750.00	50.00	2.83	0.00	12.79	0.00	0.00	0.00	10	17	4,728	491	4,236.73
1528+00	152800.00	50.00	0.83	0.00	17.06	0.00	0.00	0.00	3	28	4,731	526	4,205.57
1528+50	152850.00	50.00	0.13	0.00	19.26	0.00	0.00	0.00	1	34	4,732	568	4,164.43
1529+00	152900.00	50.00	0.00	0.00	21.04	0.00	0.00	0.00	0	37	4,732	614	4,117.91
1529+50	152950.00	50.00	0.02	0.00	20.80	0.00	0.00	0.00	0	39	4,732	663	4,069.50
1529+71.81	152971.81	21.81	0.00	0.00	20.74	0.00	0.00	0.00	0	17	4,732	684	4,048.53
1529+83.19	152983.19	11.37	0.00	0.00	0.00	0.00	0.00	0.00	0	4	4,732	689	4,043.07
								NORTH CROSSOVER TOTALS	2,303	317			



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PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: IH 43 MEDIAN BULLNOSE BEAMGUARD	SHEET 399	E

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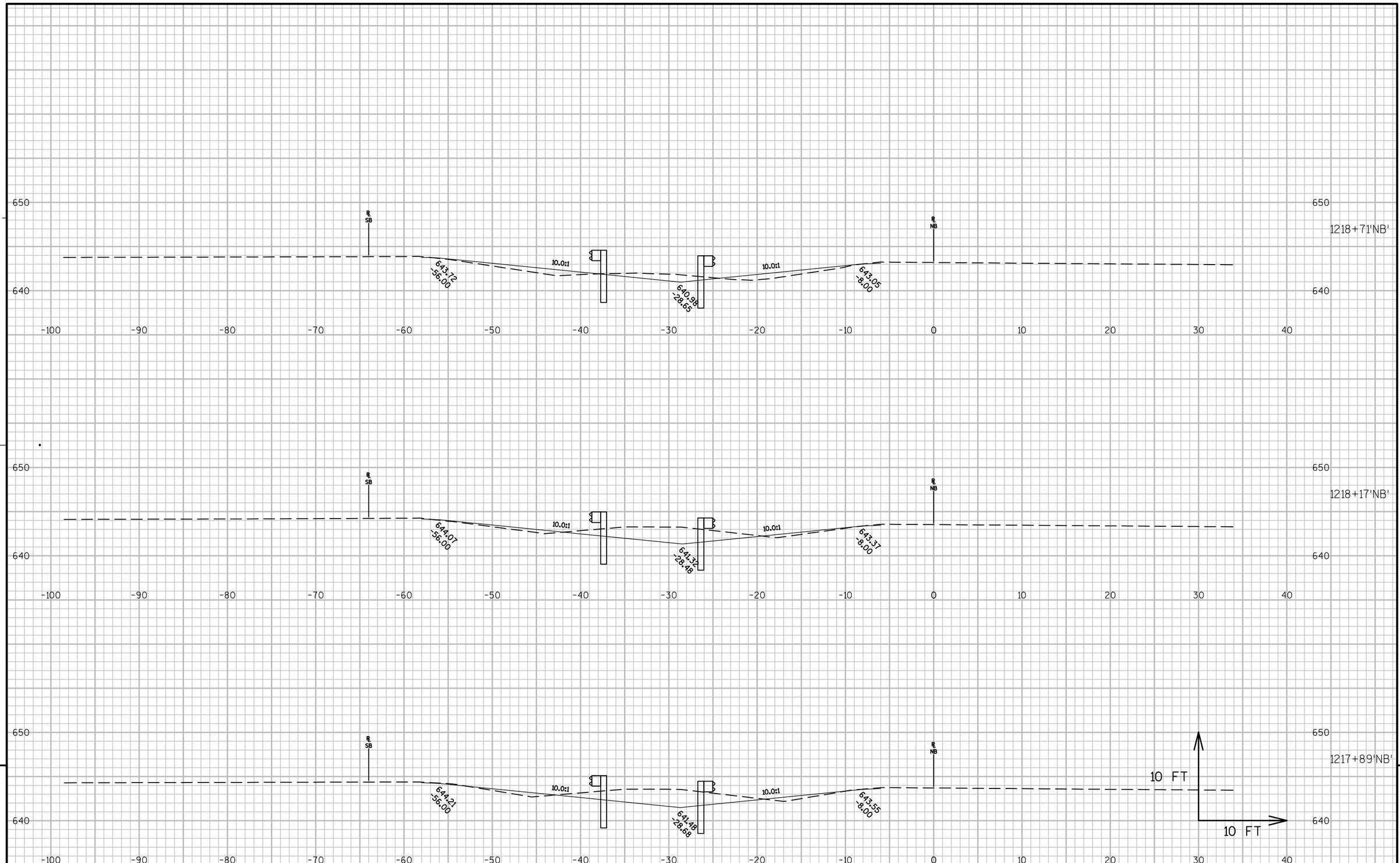
PLOT DATE : 8/11/2015 4:13 PM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



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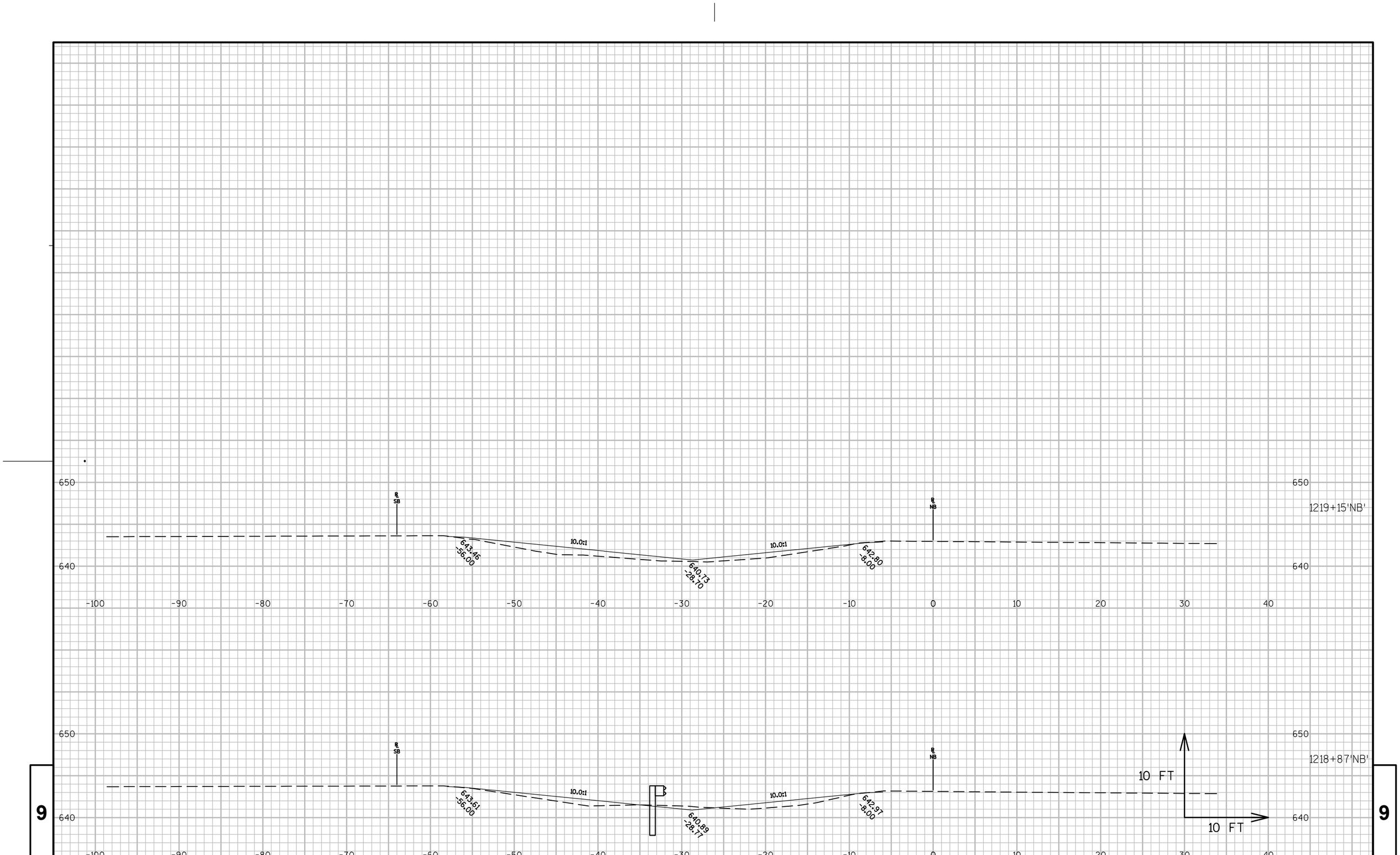

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PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: IH 43 MEDIAN BULLNOSE BEAMGUARD	SHEET 401	E

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LAYOUT NAME - 090201_XSC

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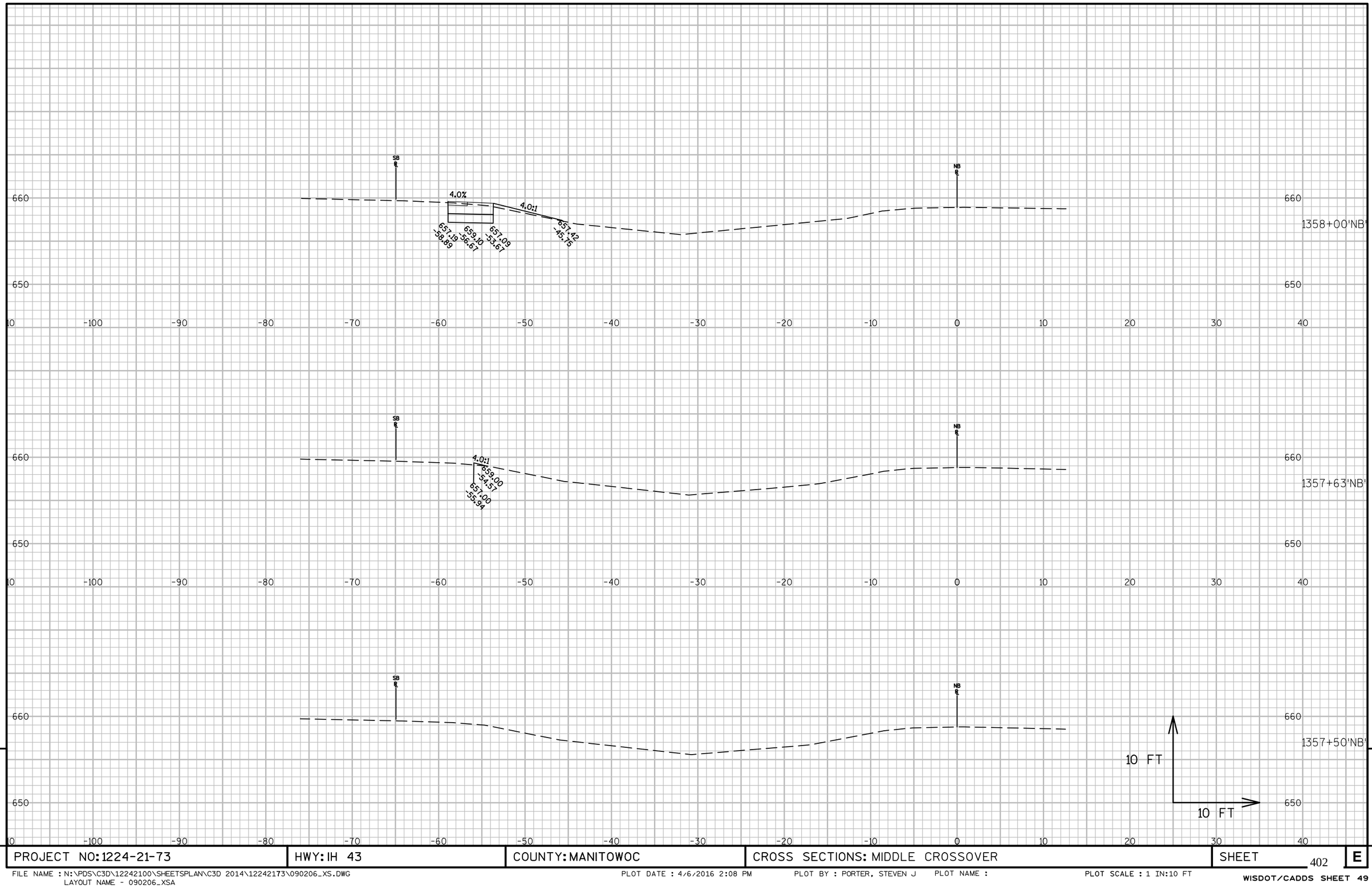
WISDOT/CADDS SHEET 49



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PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: MIDDLE CROSSOVER	SHEET 402	E

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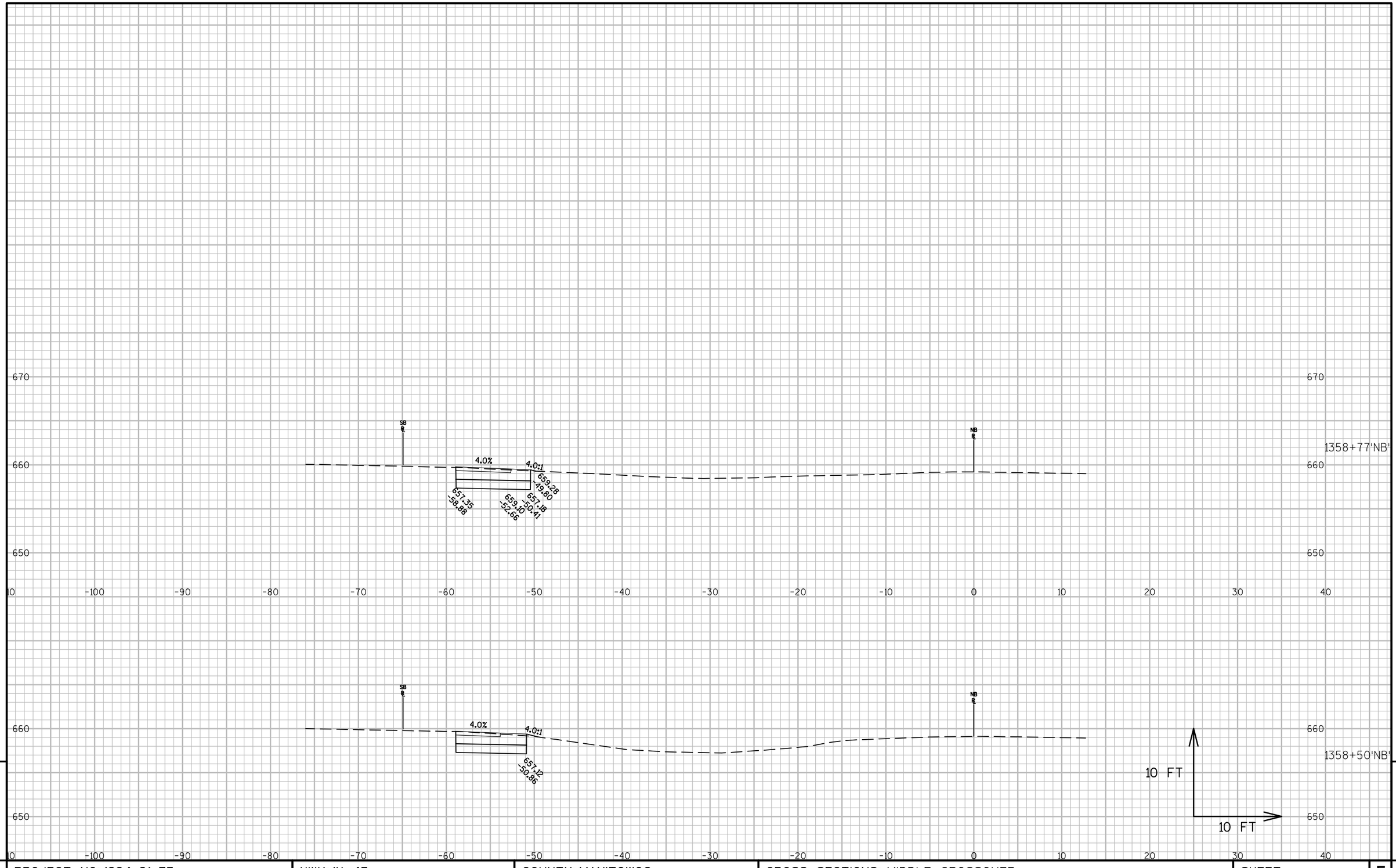
LAYOUT NAME - 090206_XSA

PLOT DATE : 4/6/2016 2:08 PM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



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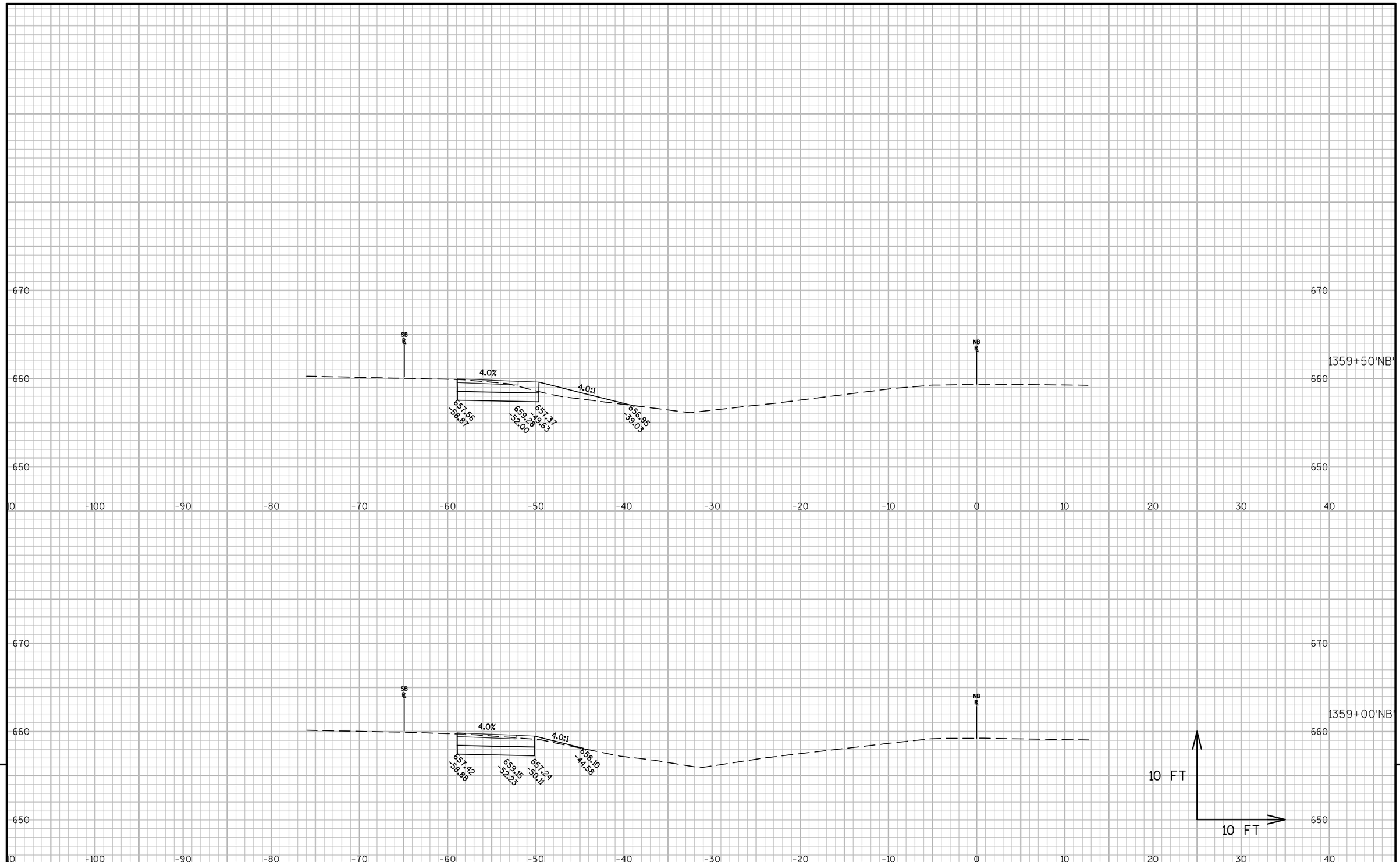
PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: MIDDLE CROSSOVER	SHEET 403	E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090206_XS.DWG
LAYOUT NAME - 090206_XSB

PLOT DATE : 4/6/2016 2:08 PM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT



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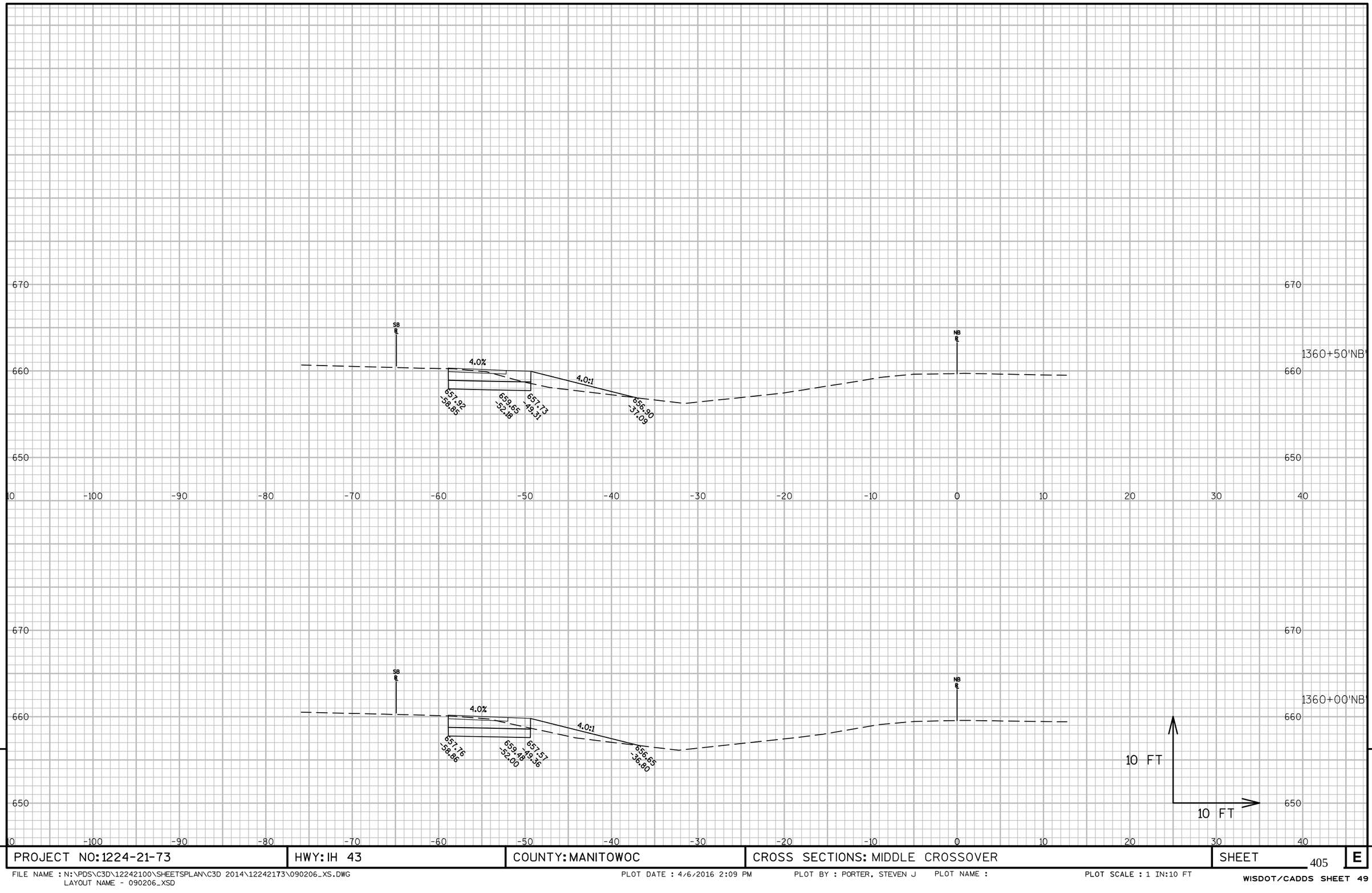
PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: MIDDLE CROSSOVER	SHEET 404	E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090206_XS.DWG
LAYOUT NAME - 090206_XSC

PLOT DATE : 4/6/2016 2:09 PM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



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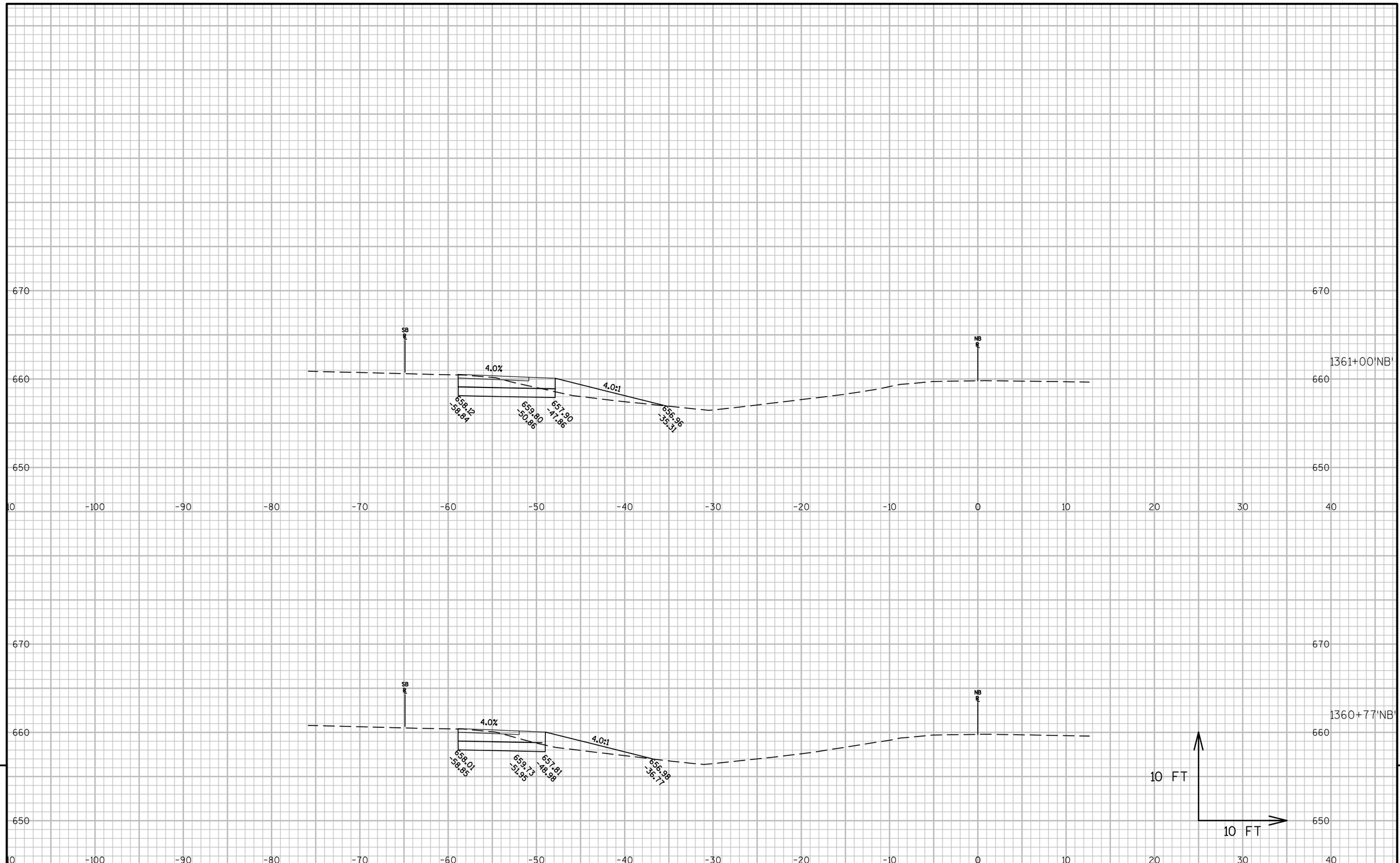
PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: MIDDLE CROSSOVER	SHEET 405	E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090206_XS.DWG
LAYOUT NAME - 090206_XSD

PLOT DATE : 4/6/2016 2:09 PM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



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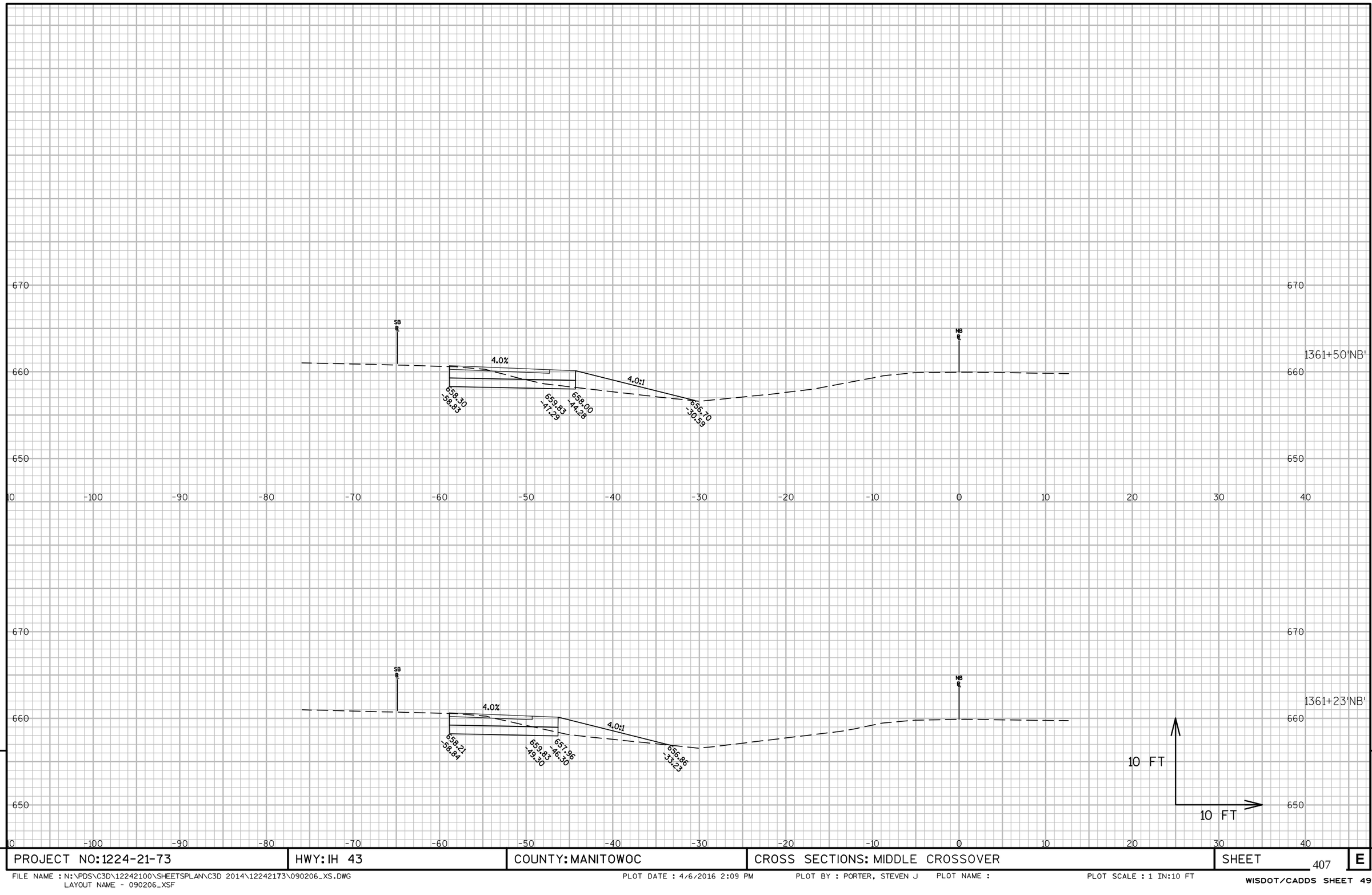
PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: MIDDLE CROSSOVER	SHEET 406	E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090206_XS.DWG
LAYOUT NAME - 090206_XSE

PLOT DATE : 4/6/2016 2:09 PM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



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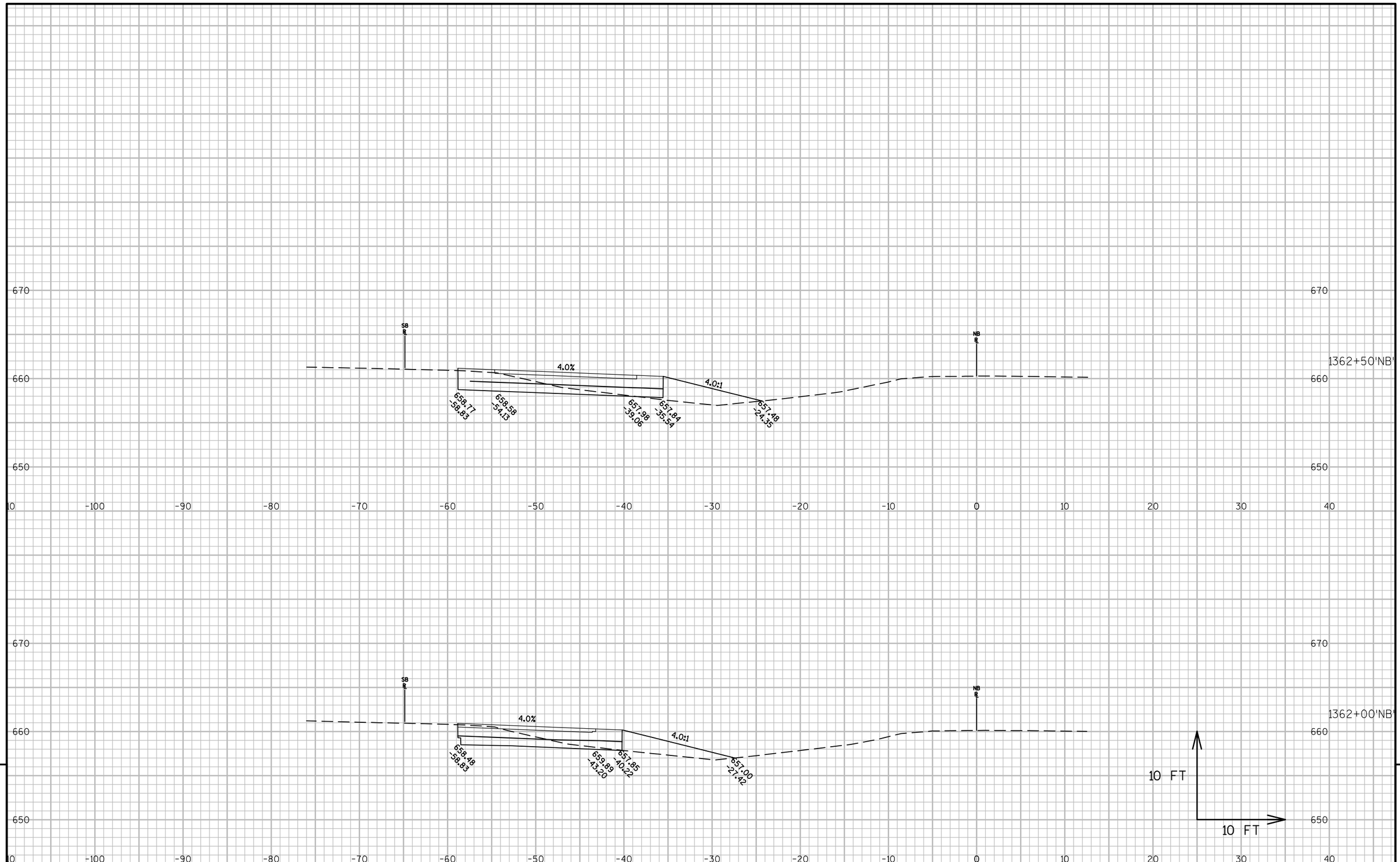
PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: MIDDLE CROSSOVER	SHEET 407	E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090206_XS.DWG
LAYOUT NAME - 090206_XSF

PLOT DATE : 4/6/2016 2:09 PM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



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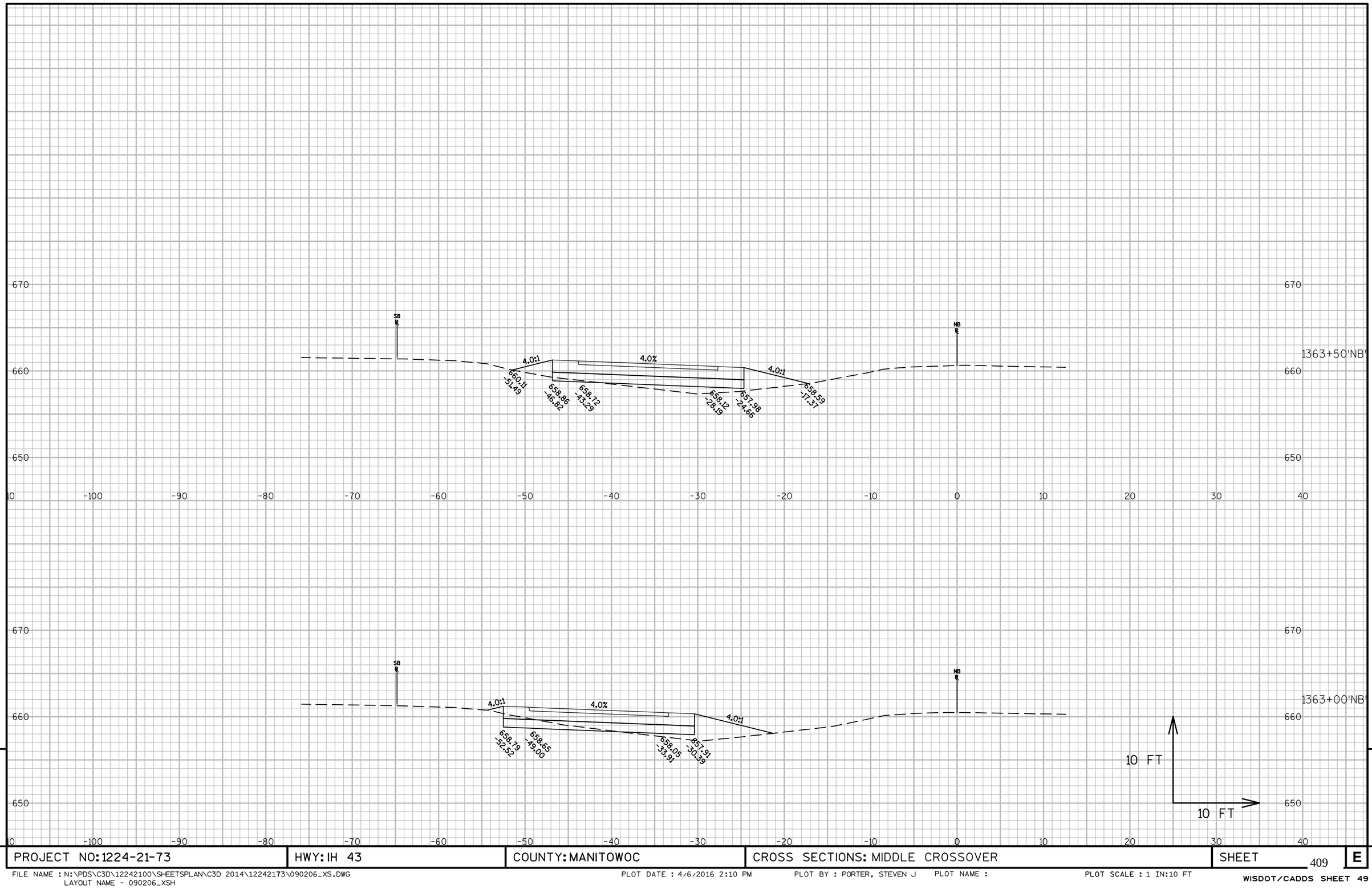
PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: MIDDLE CROSSOVER	SHEET 408	E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090206_XS.DWG
LAYOUT NAME - 090206_XSG

PLOT DATE : 4/6/2016 2:10 PM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49

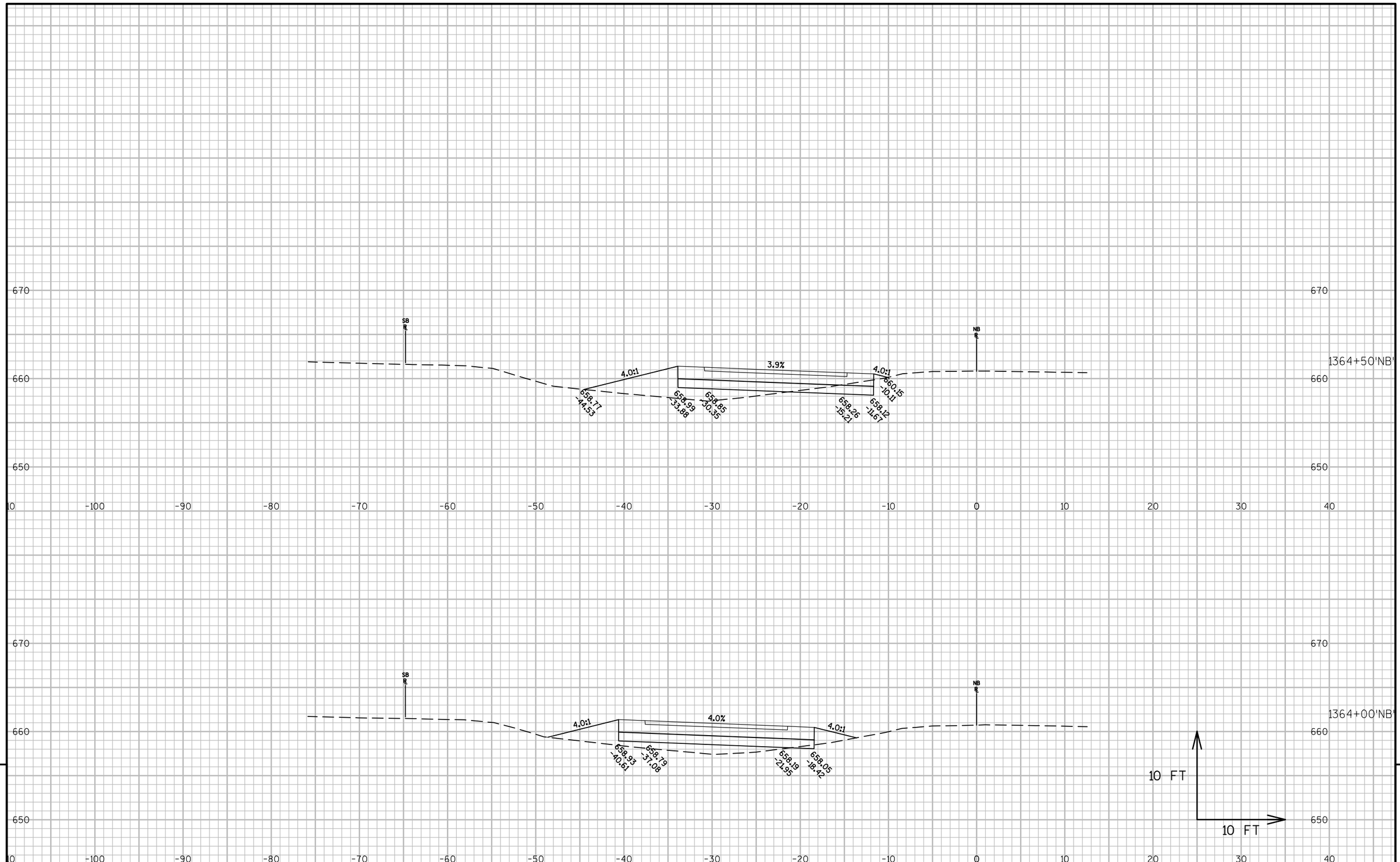


PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: MIDDLE CROSSOVER	SHEET 409 E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090206_XS.DWG
LAYOUT NAME - 090206_XSH

PLOT DATE : 4/6/2016 2:10 PM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



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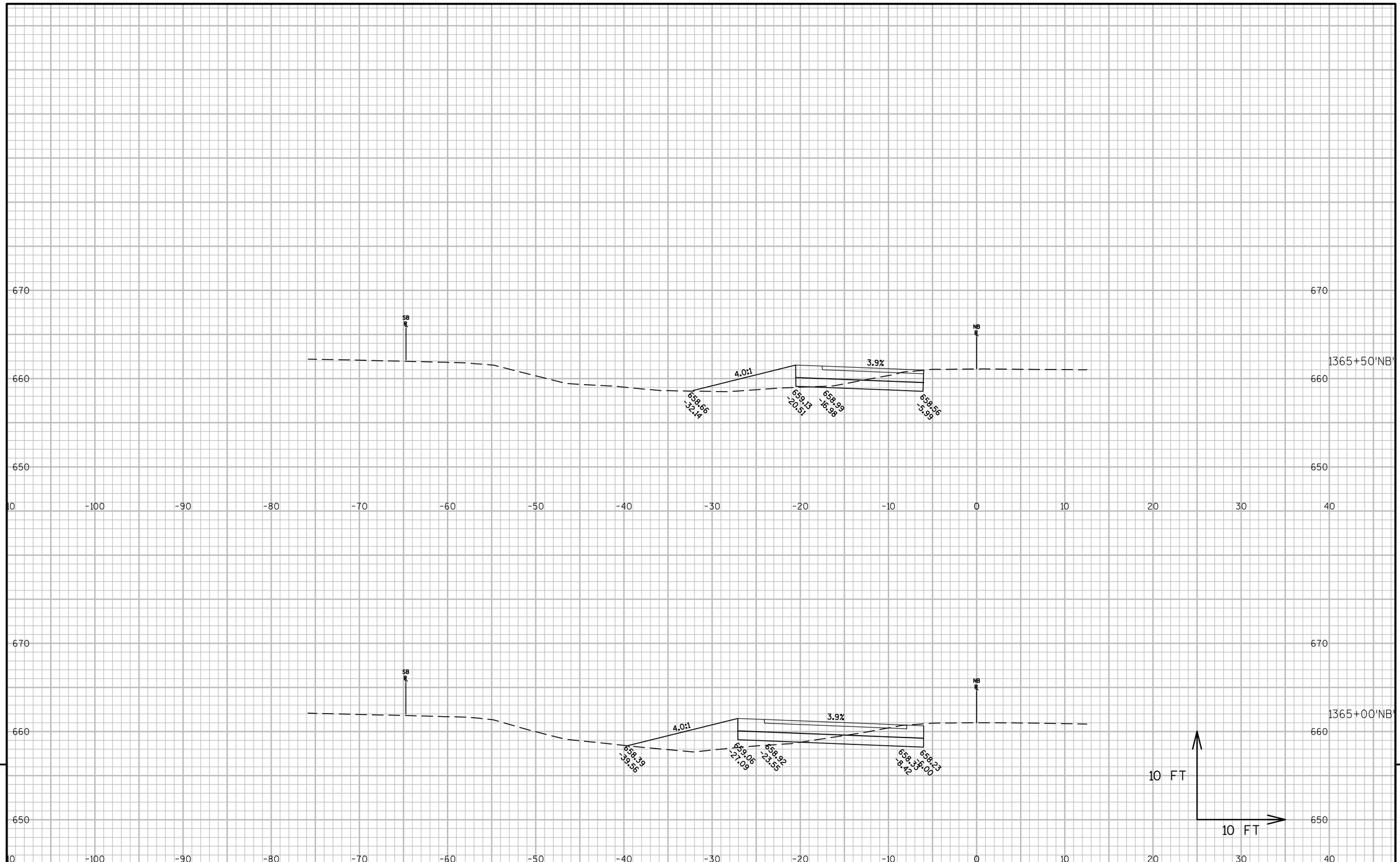
PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: MIDDLE CROSSOVER	SHEET 410	E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090206_XS.DWG
LAYOUT NAME - 090206_XSI

PLOT DATE : 4/6/2016 2:10 PM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



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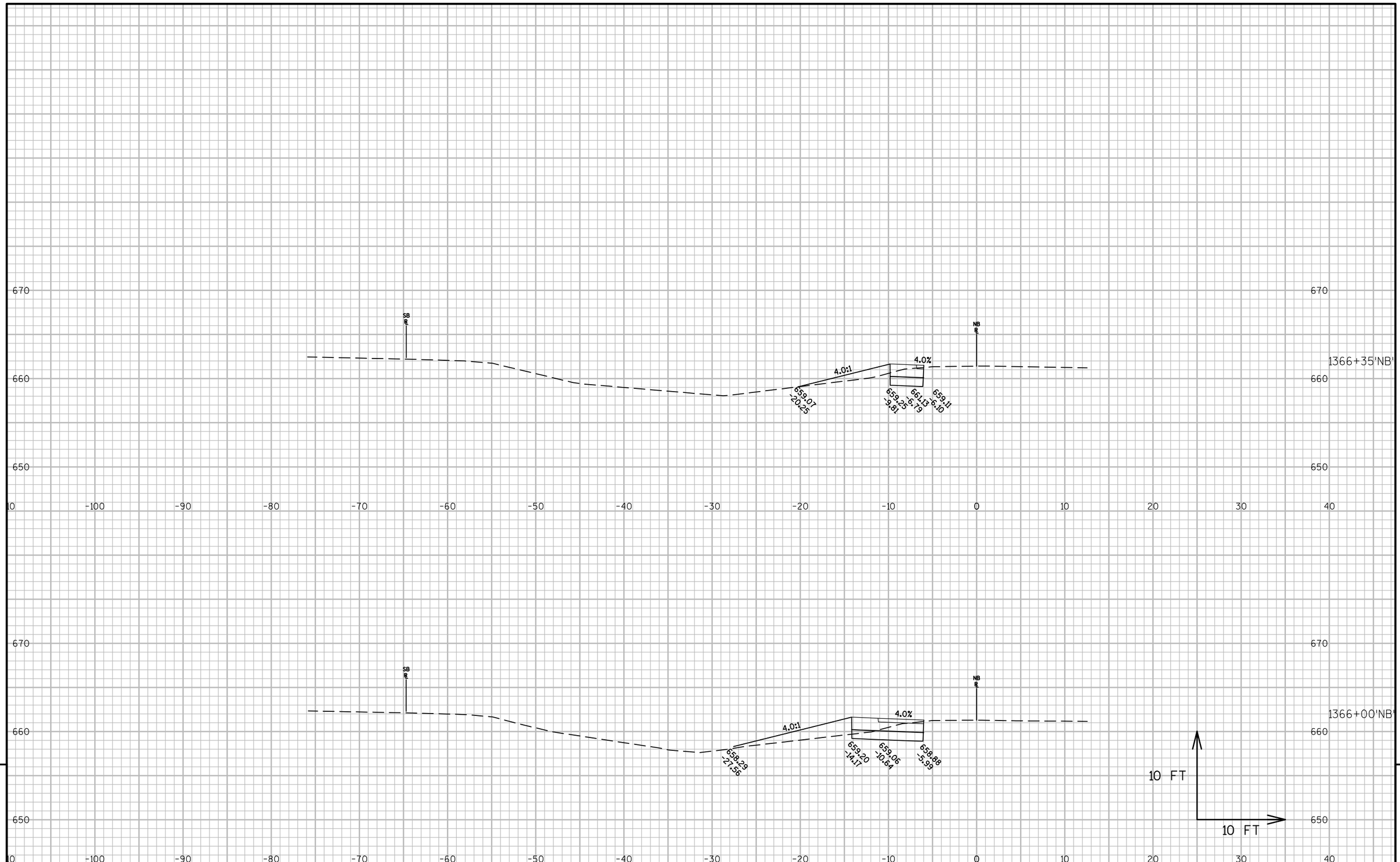
PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: MIDDLE CROSSOVER	SHEET 411	E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090206_XS.DWG
LAYOUT NAME - 090206_XSJ

PLOT DATE : 4/6/2016 2:10 PM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



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PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: MIDDLE CROSSOVER	SHEET 412 E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090206_XS.DWG
LAYOUT NAME - 090206_XSK

PLOT DATE : 4/6/2016 2:11 PM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49

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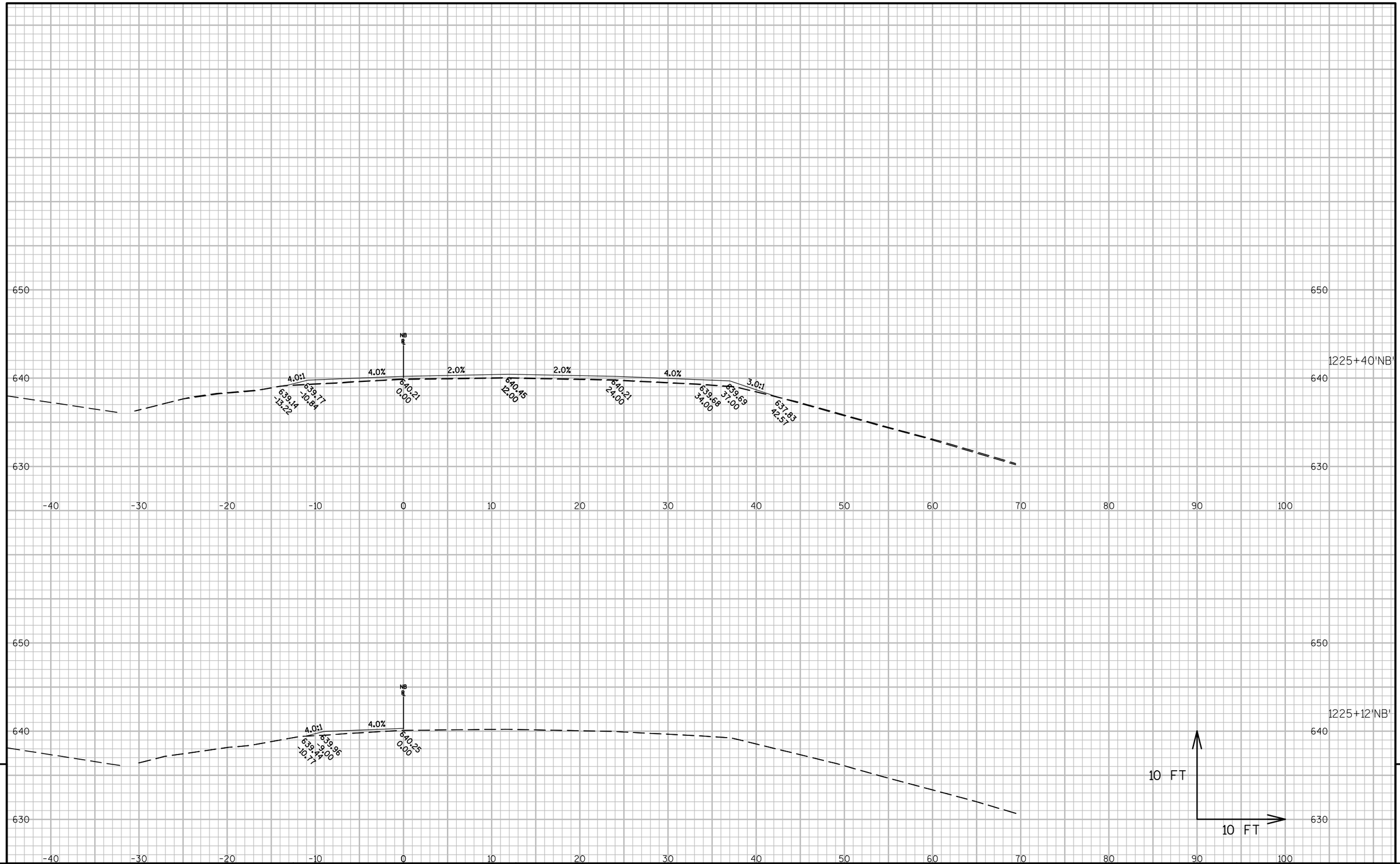
PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: MIDDLE CROSSOVER	SHEET 413	E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090206_XS.DWG
LAYOUT NAME - 090206_XSL

PLOT DATE : 4/6/2016 2:11 PM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT

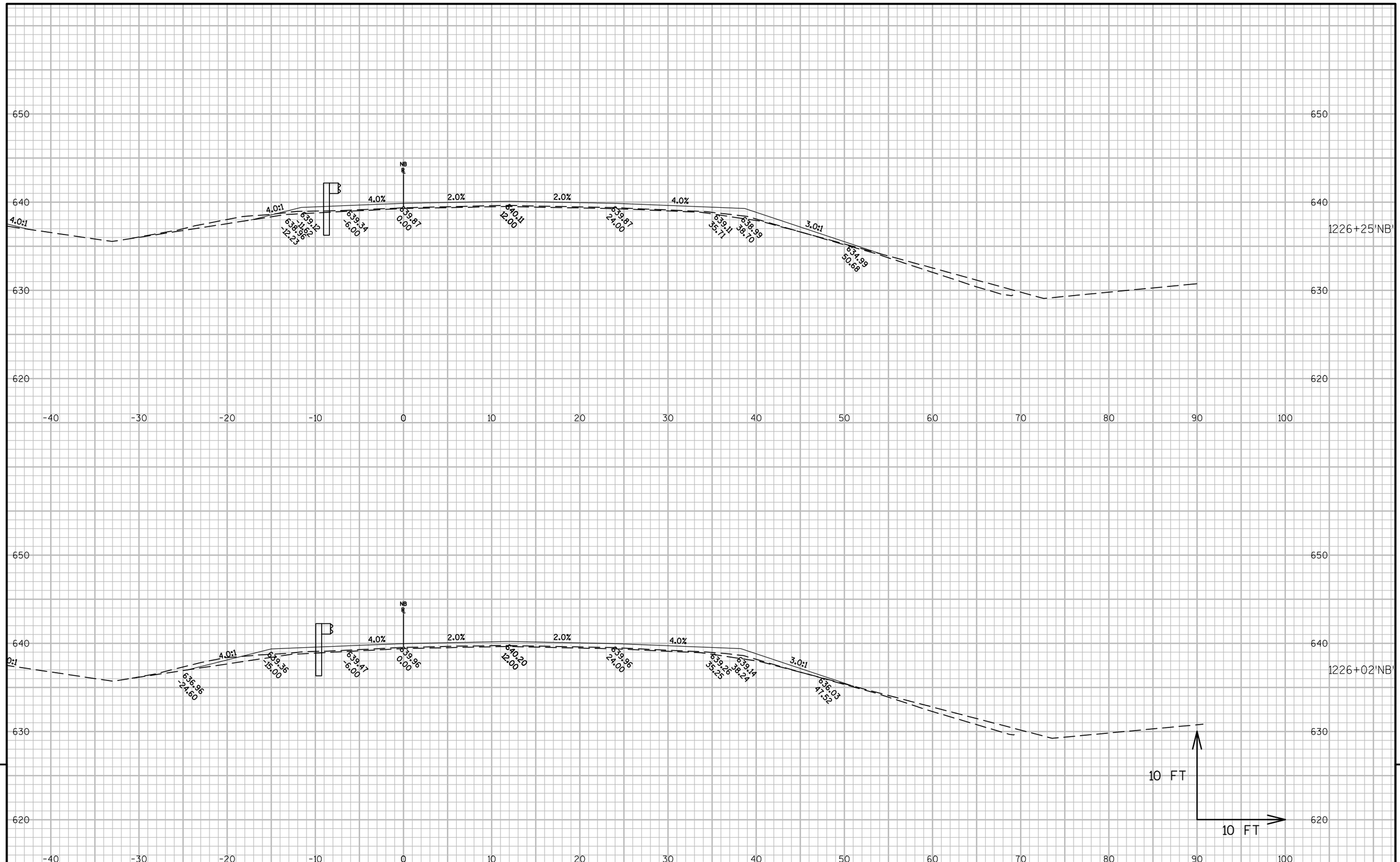


PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: IH 43 NB	SHEET 414	E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090202_XS.DWG
LAYOUT NAME - 090202_XSA

PLOT DATE : 1/19/2016 4:39 PM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



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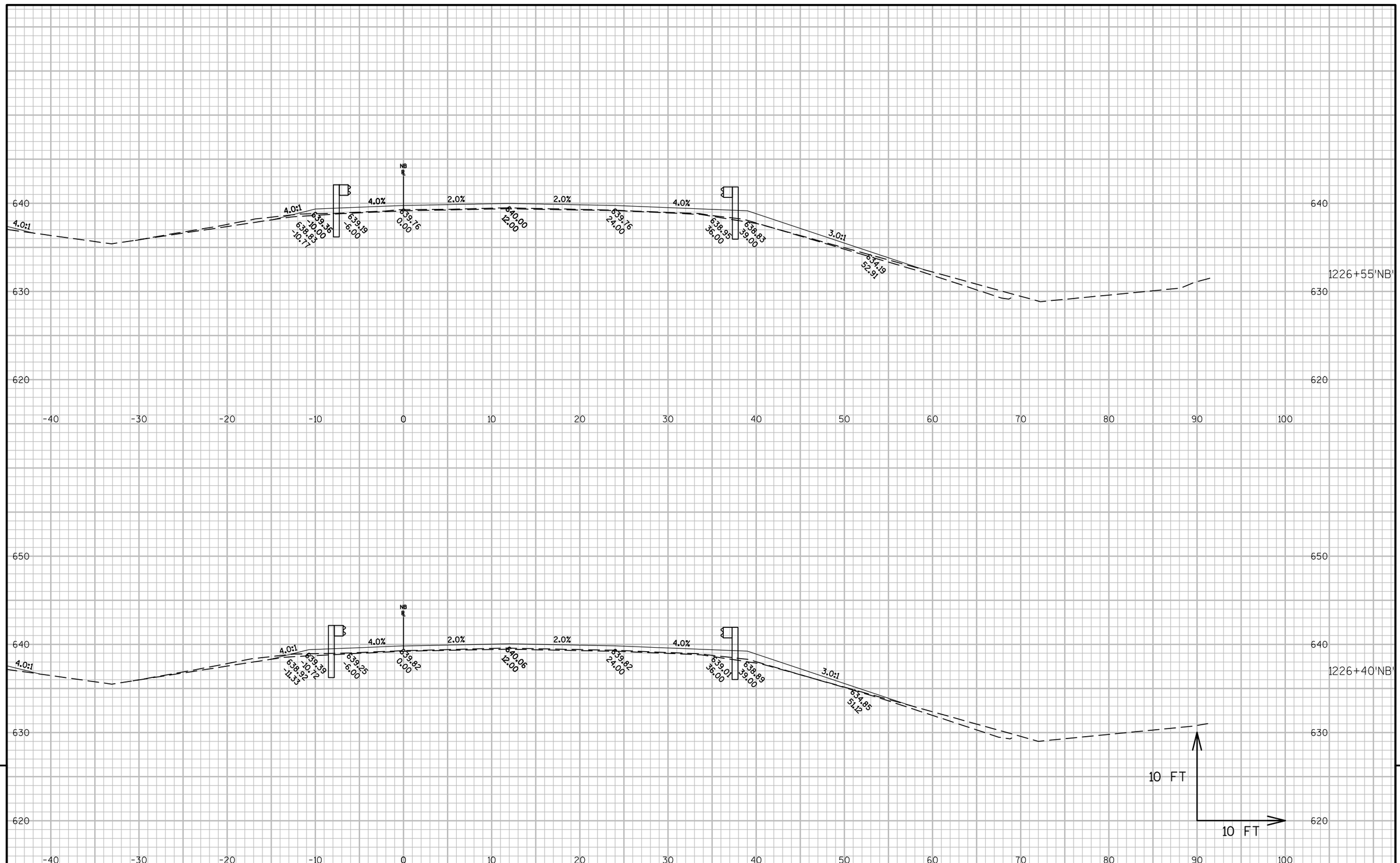
PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: IH 43 NB	SHEET 415	E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090202_XS.DWG
LAYOUT NAME - 090202_XSB

PLOT DATE : 1/19/2016 4:39 PM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



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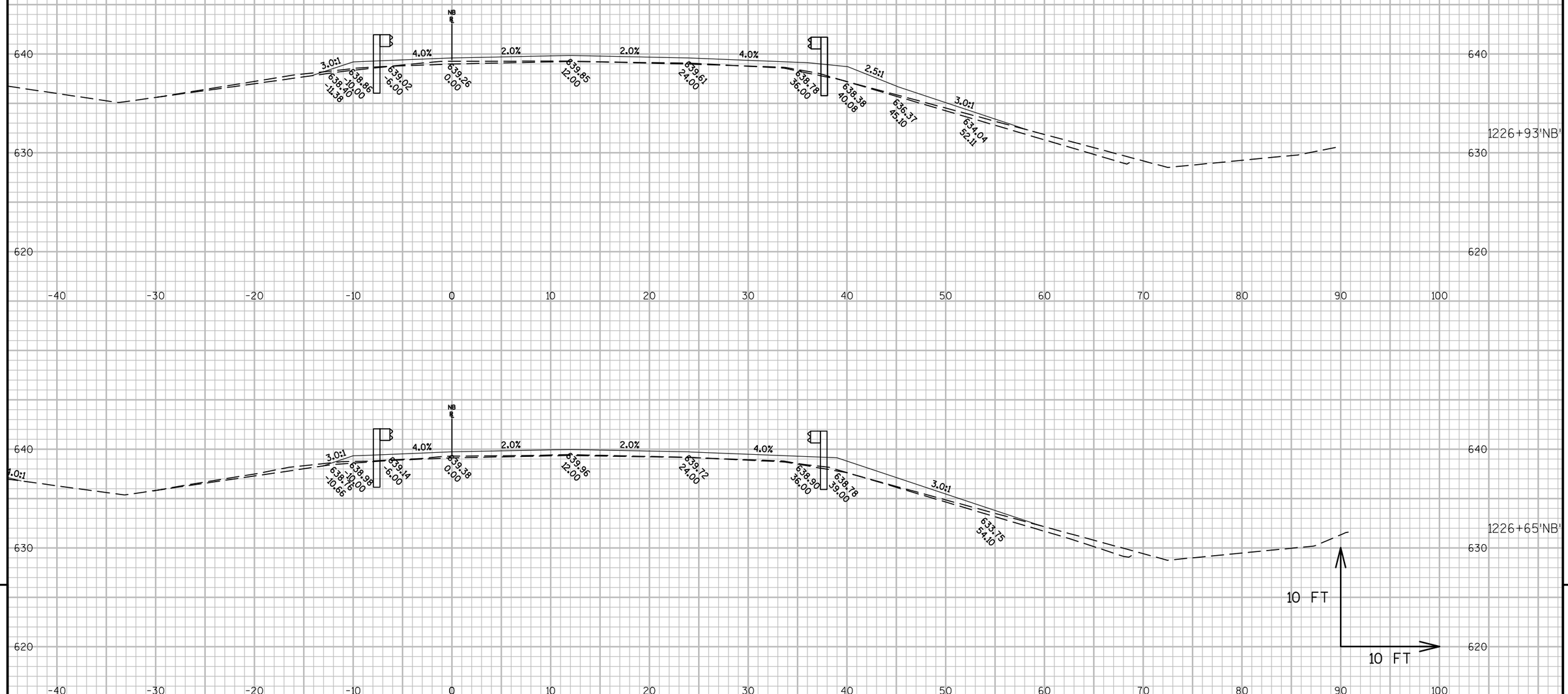
PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: IH 43 NB	SHEET 416	E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090202_XS.DWG
LAYOUT NAME - 090202_XSC

PLOT DATE : 1/19/2016 4:39 PM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49

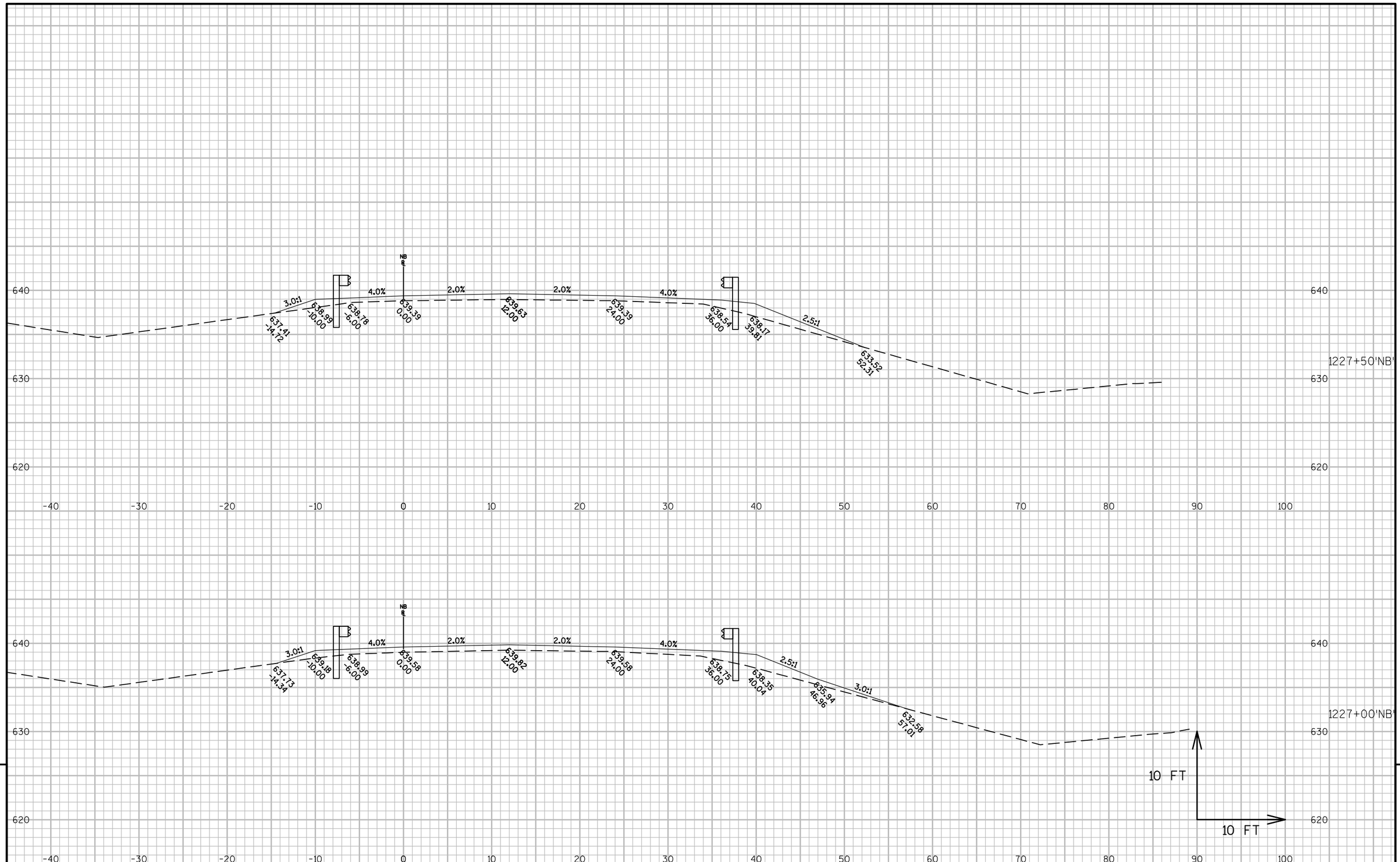


PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: IH 43 NB	SHEET 417	E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090202_XS.DWG
LAYOUT NAME - 090202_XSD

PLOT DATE : 1/19/2016 4:39 PM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49

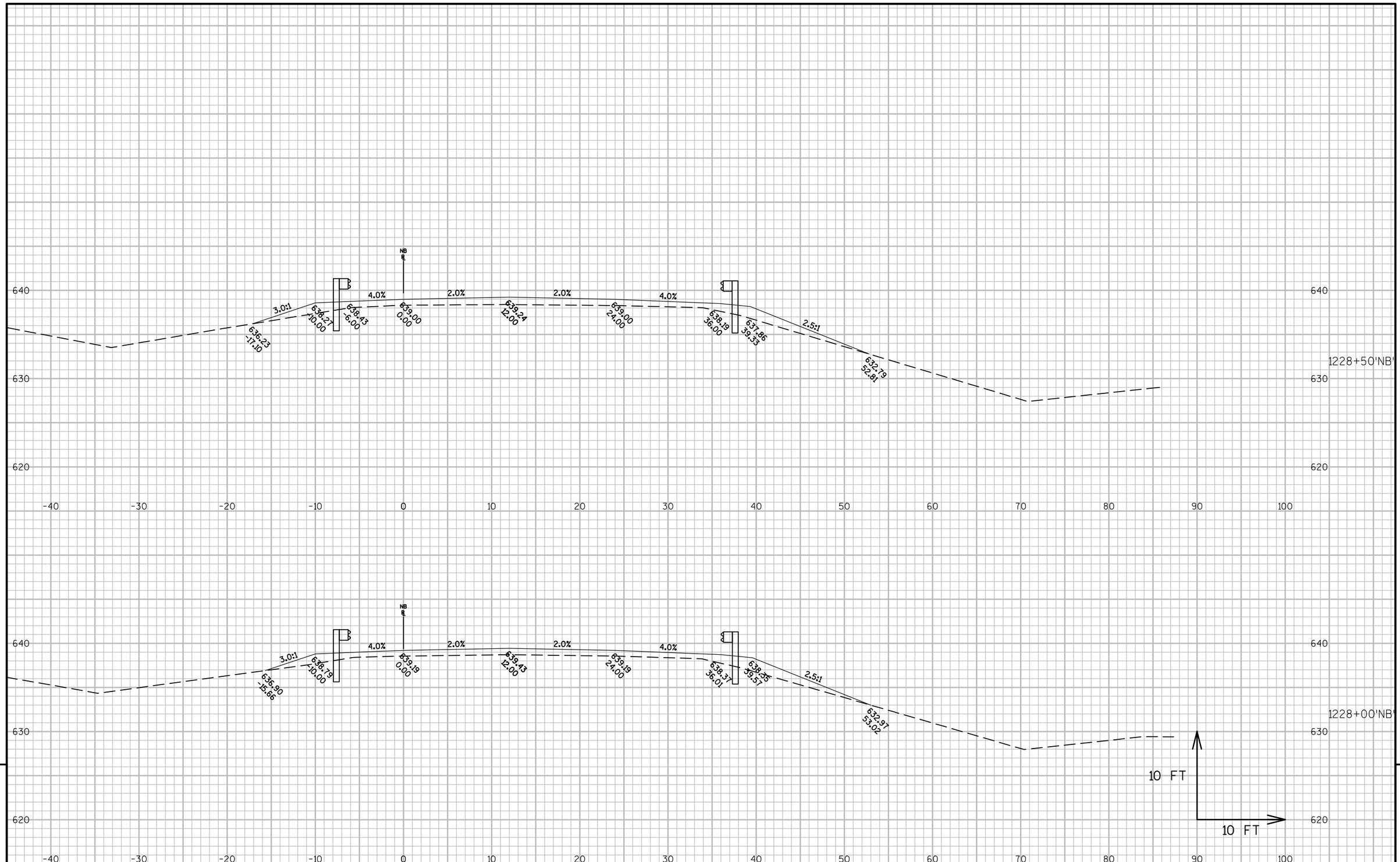


PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: IH 43 NB	SHEET 418	E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090202_XS.DWG
LAYOUT NAME - 090202_XSE

PLOT DATE : 1/19/2016 4:40 PM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49

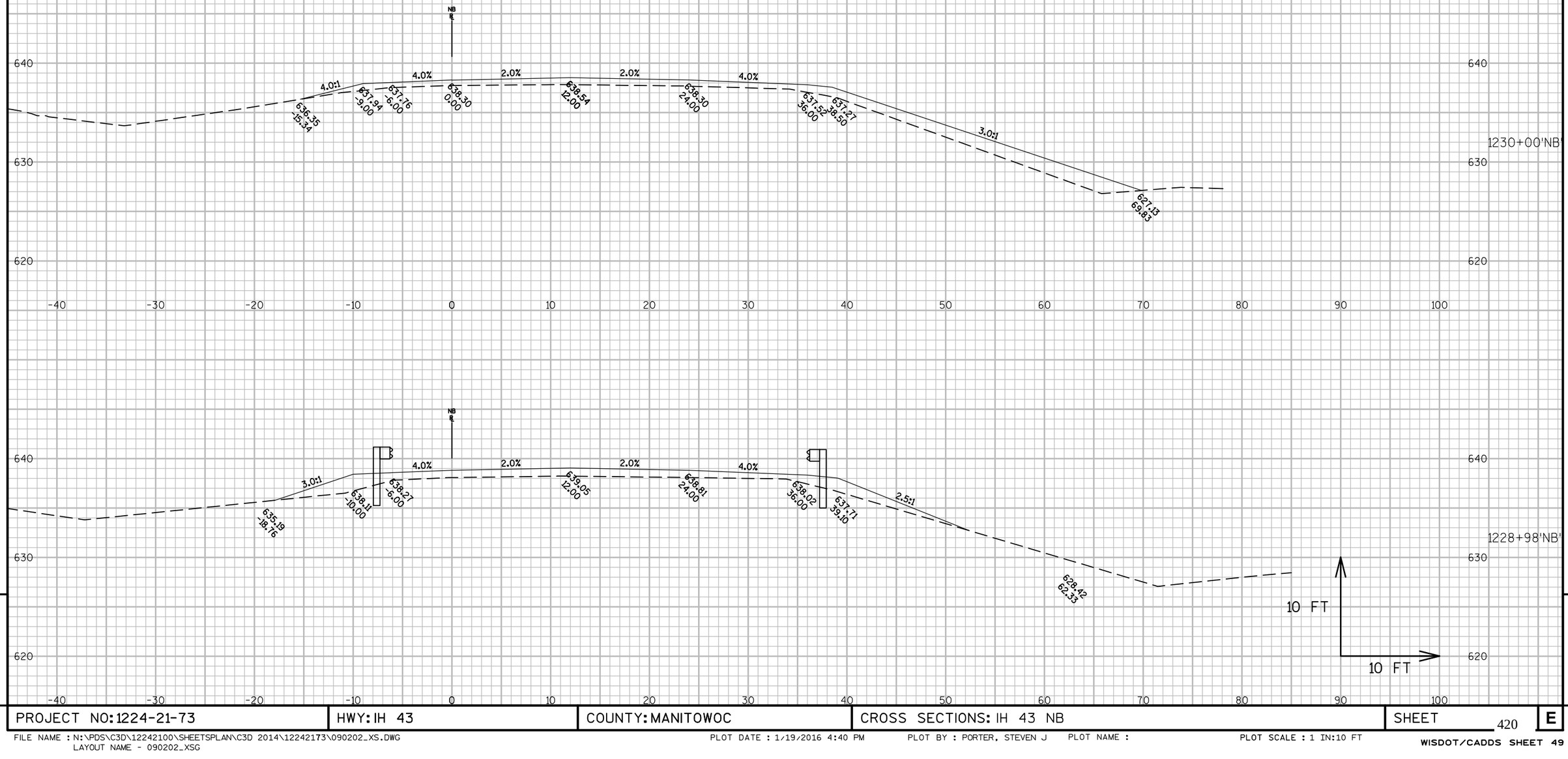


PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: IH 43 NB	SHEET 419	E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090202_XS.DWG
LAYOUT NAME - 090202_XSF

PLOT DATE : 1/19/2016 4:40 PM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



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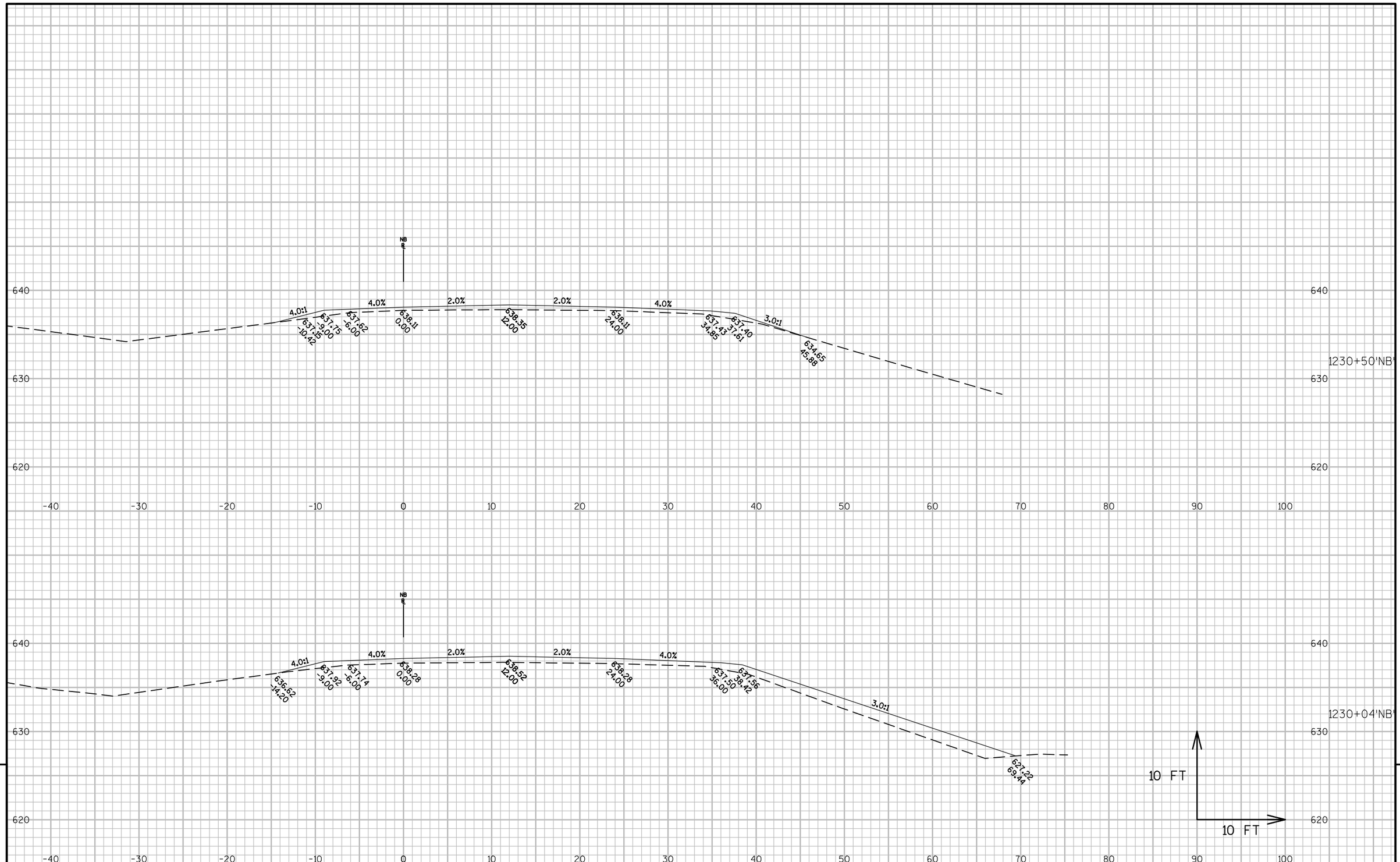
PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: IH 43 NB	SHEET 420	E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090202_XS.DWG
LAYOUT NAME - 090202_XSG

PLOT DATE : 1/19/2016 4:40 PM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



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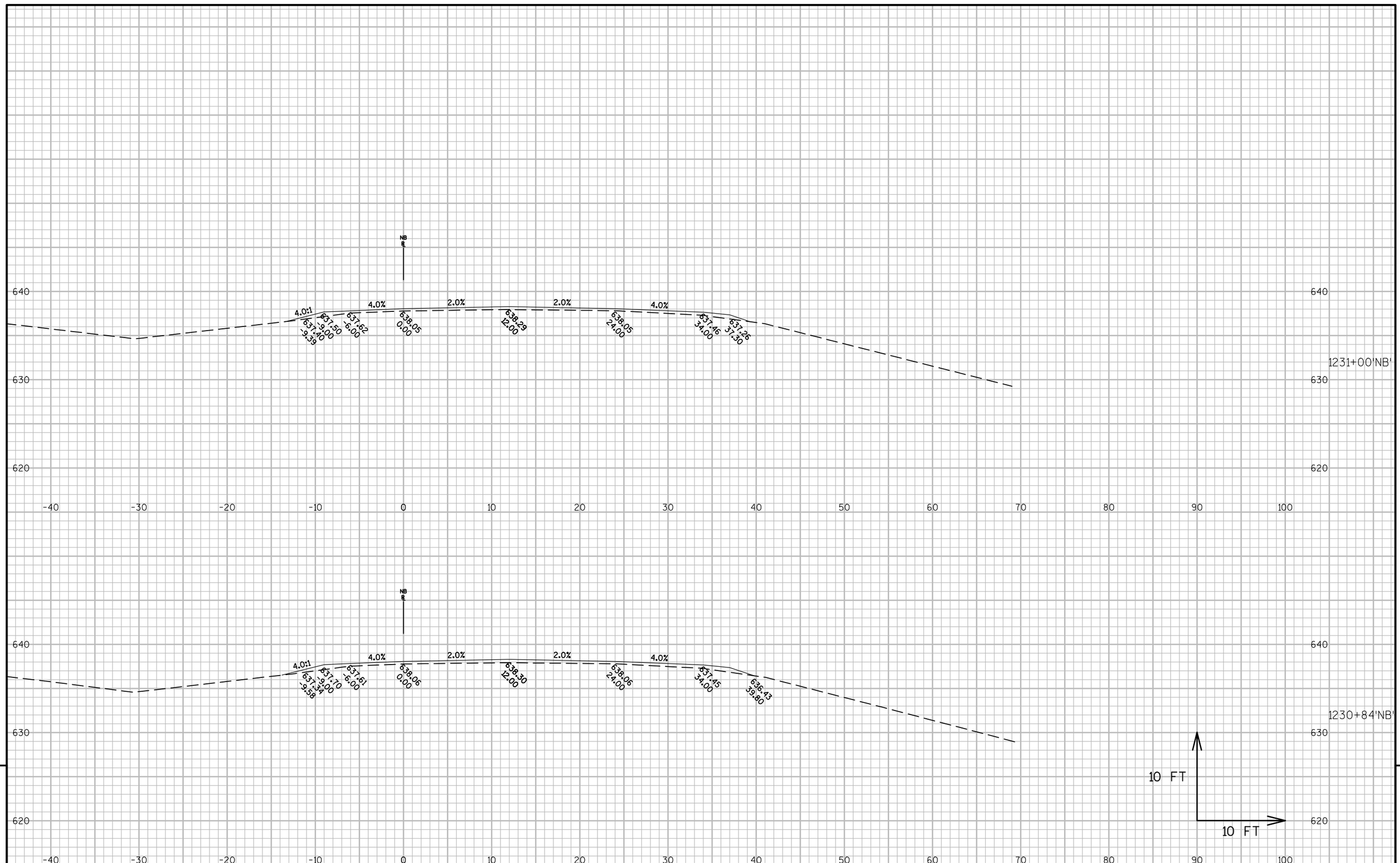
PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: IH 43 NB	SHEET 421	E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090202_XS.DWG
LAYOUT NAME - 090202_XSH

PLOT DATE : 1/19/2016 4:40 PM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



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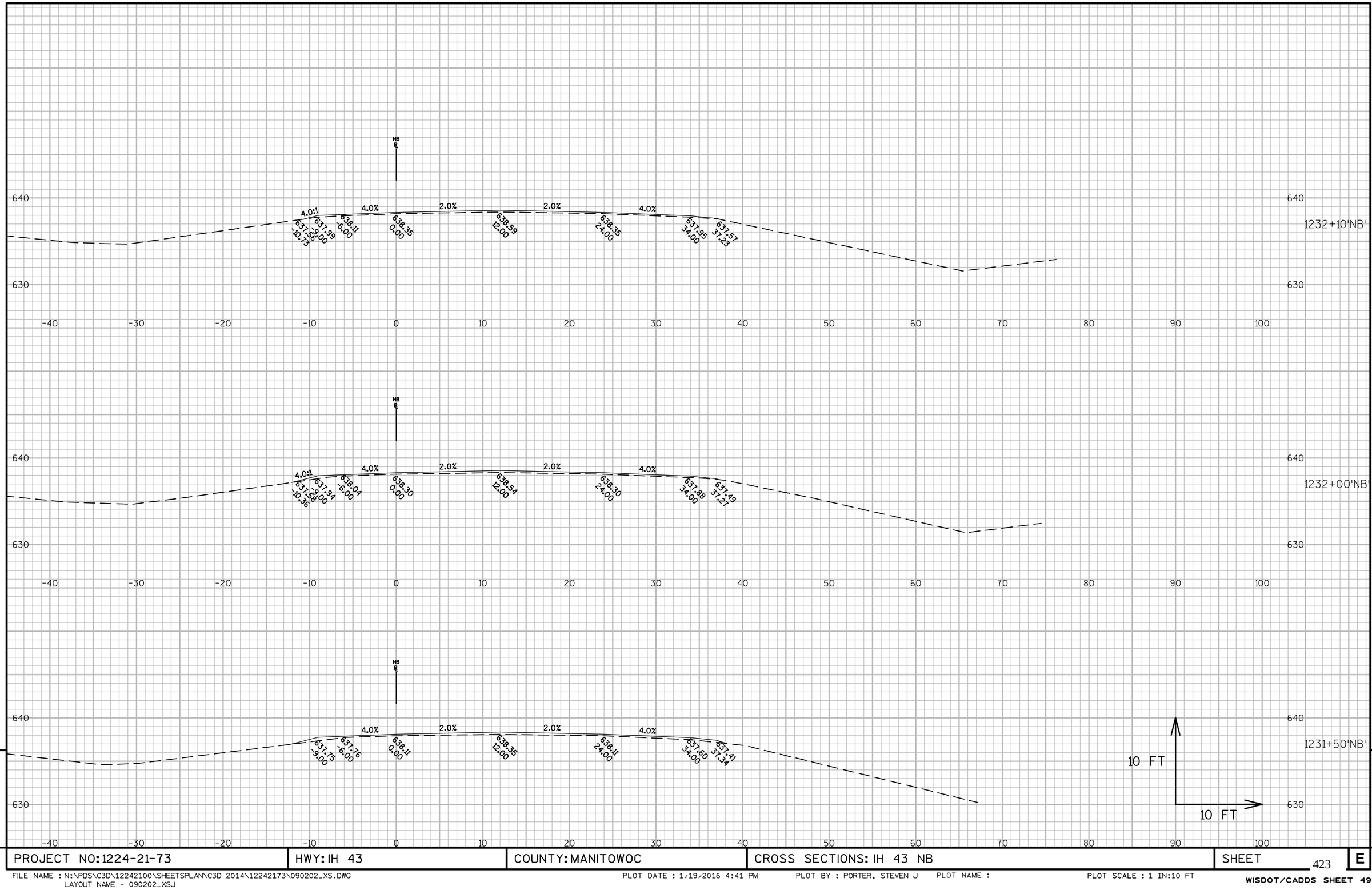
PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: IH 43 NB	SHEET 422	E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090202_XS.DWG
LAYOUT NAME - 090202_XSI

PLOT DATE : 1/19/2016 4:41 PM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49

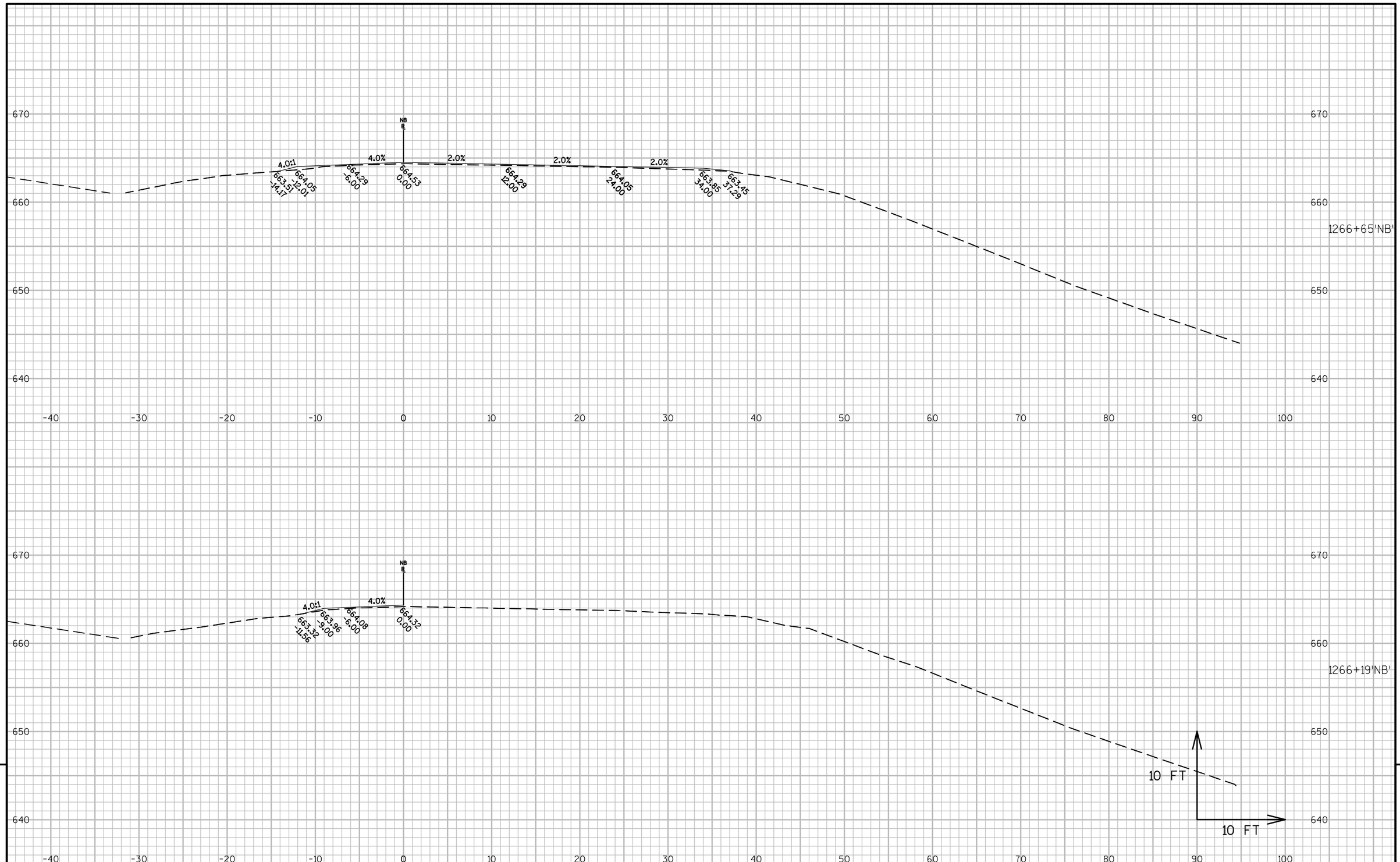


PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: IH 43 NB	SHEET 423	E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090202_XS.DWG
LAYOUT NAME - 090202_XSJ

PLOT DATE : 1/19/2016 4:41 PM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



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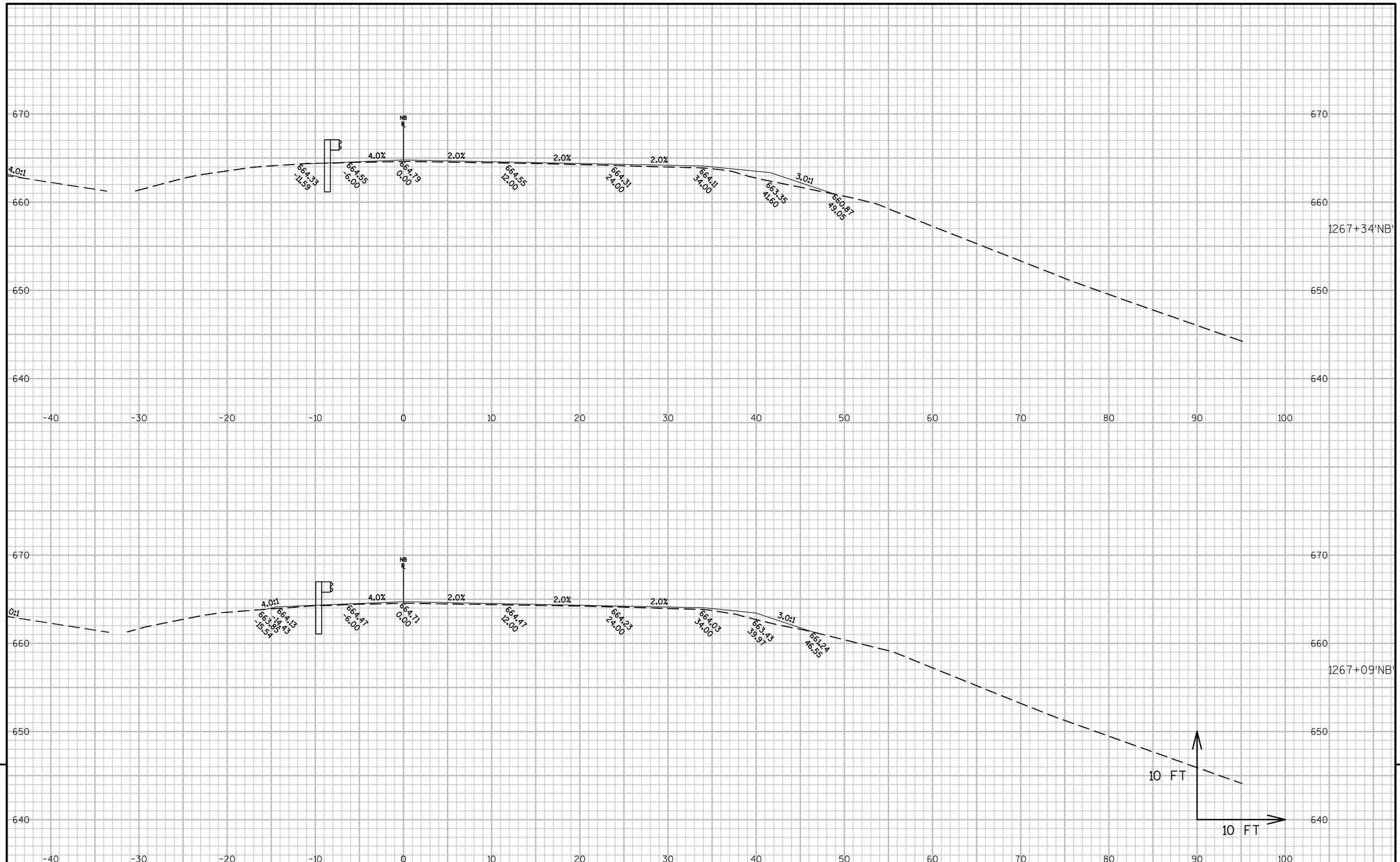
PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: IH 43 NB	SHEET 424	E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090202_XS.DWG
LAYOUT NAME - 090202_XSK

PLOT DATE : 1/19/2016 4:41 PM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49

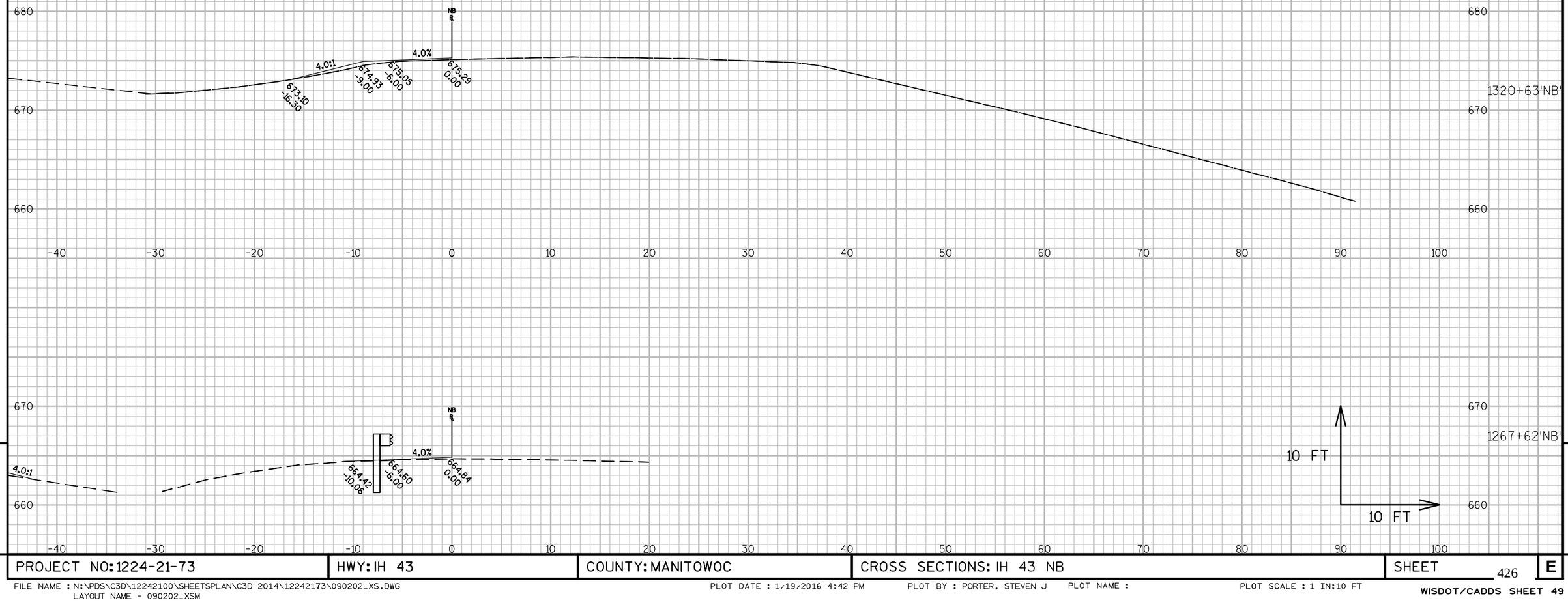


PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: IH 43 NB	SHEET 425	E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090202_XS.DWG
LAYOUT NAME - 090202_XSL

PLOT DATE : 1/19/2016 4:41 PM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



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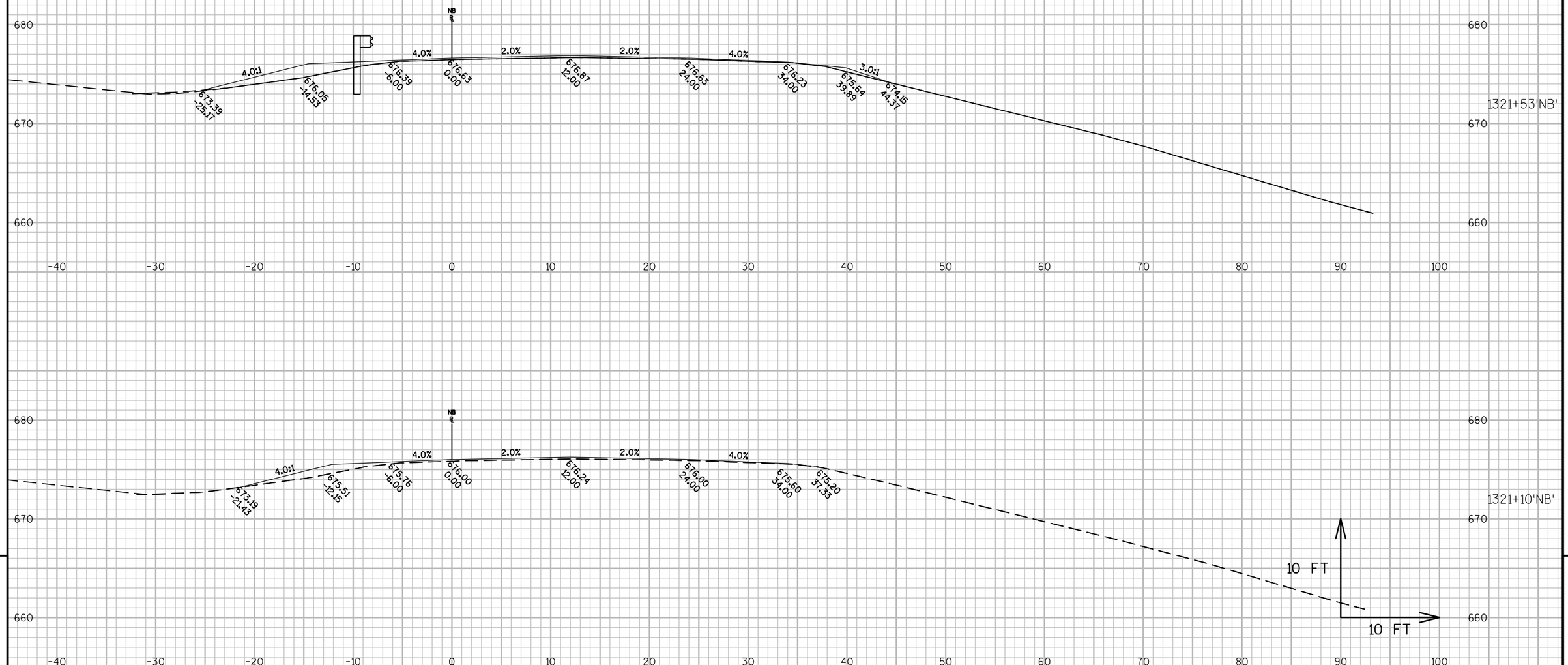
PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: IH 43 NB	SHEET 426	E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090202_XS.DWG
LAYOUT NAME - 090202_XSM

PLOT DATE : 1/19/2016 4:42 PM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT



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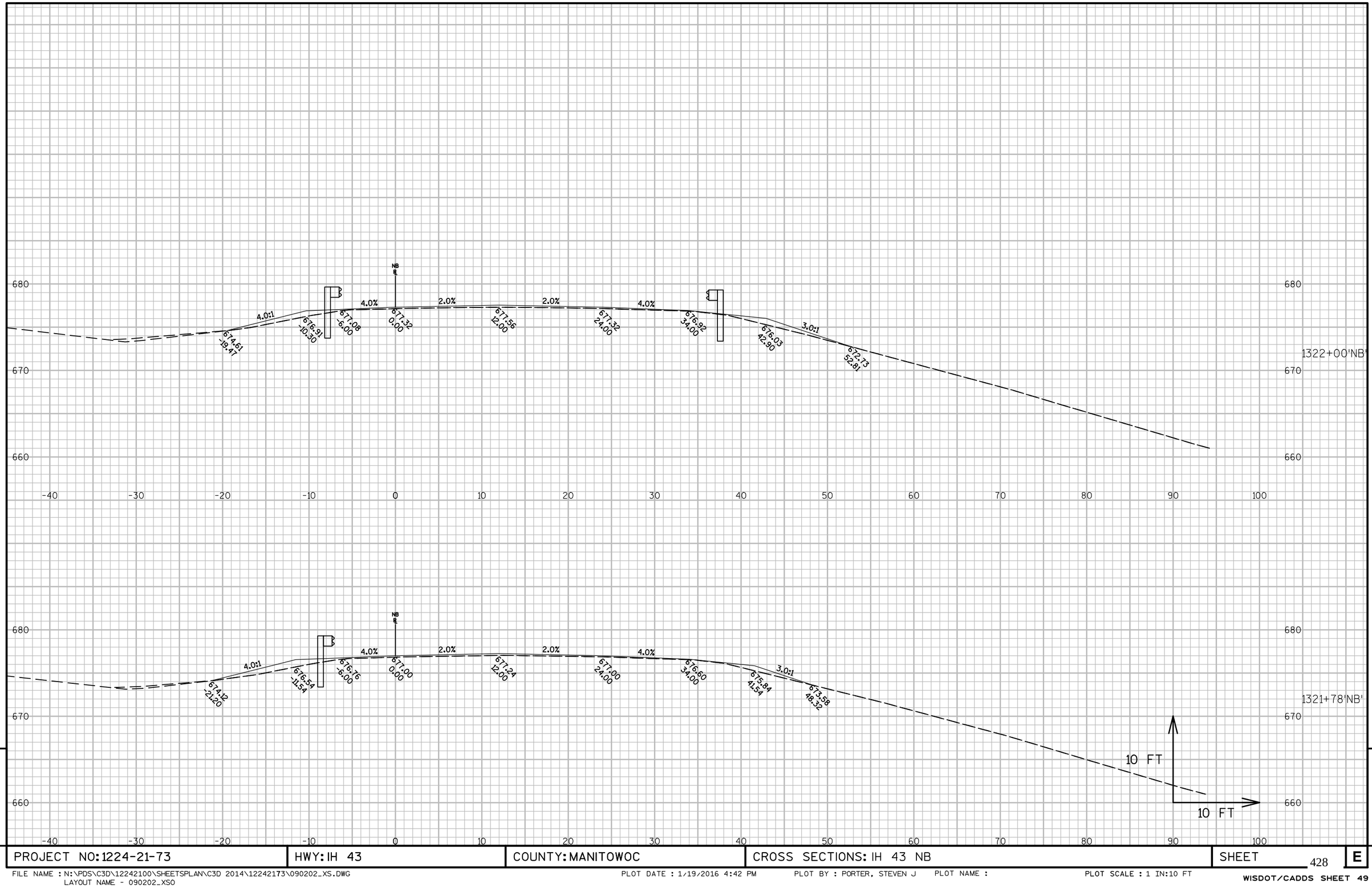
PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: IH 43 NB	SHEET 427	E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090202_XS.DWG
LAYOUT NAME - 090202_XSN

PLOT DATE : 1/19/2016 4:42 PM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49

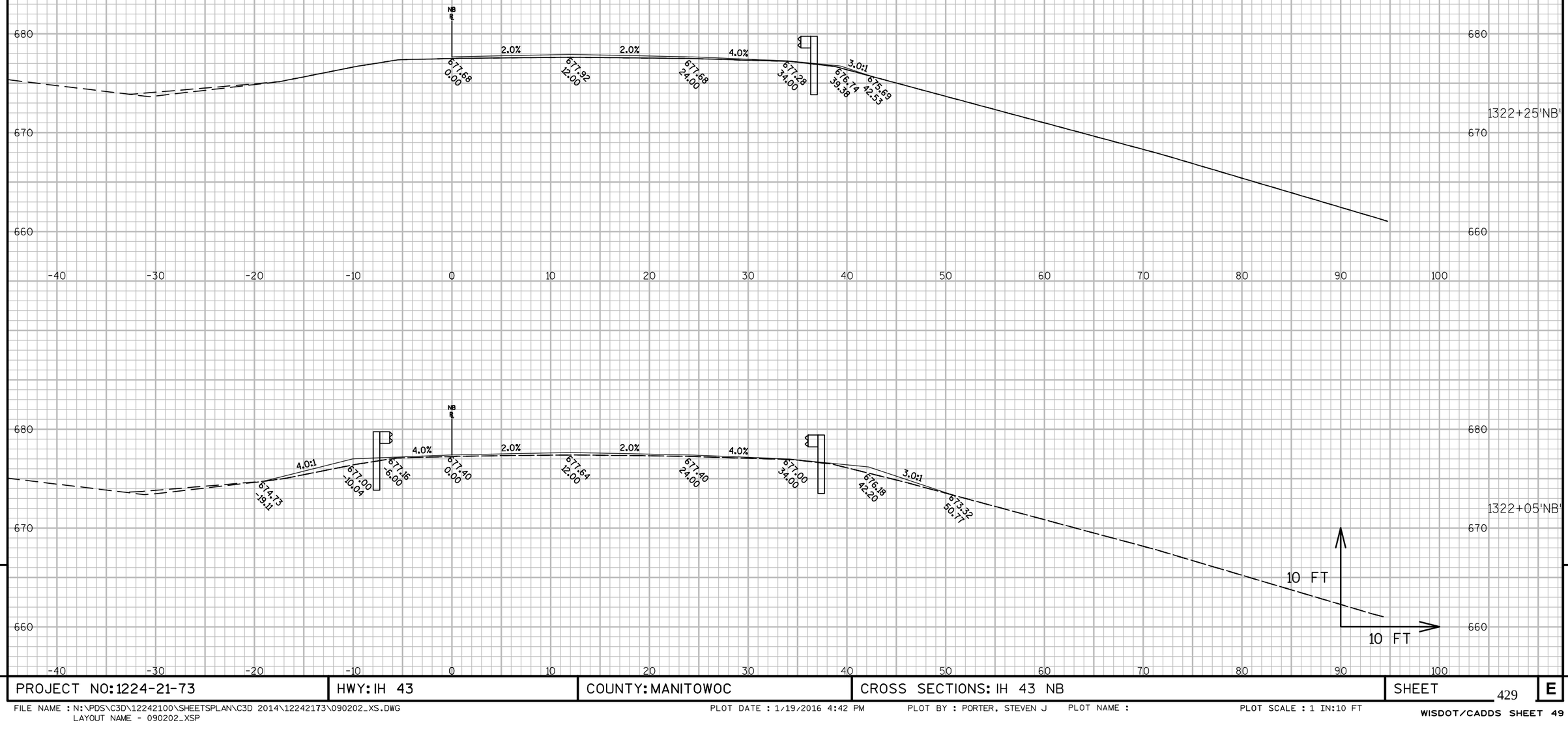


9	PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: IH 43 NB	SHEET 428 E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090202_XS.DWG
LAYOUT NAME - 090202_XSO

PLOT DATE : 1/19/2016 4:42 PM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



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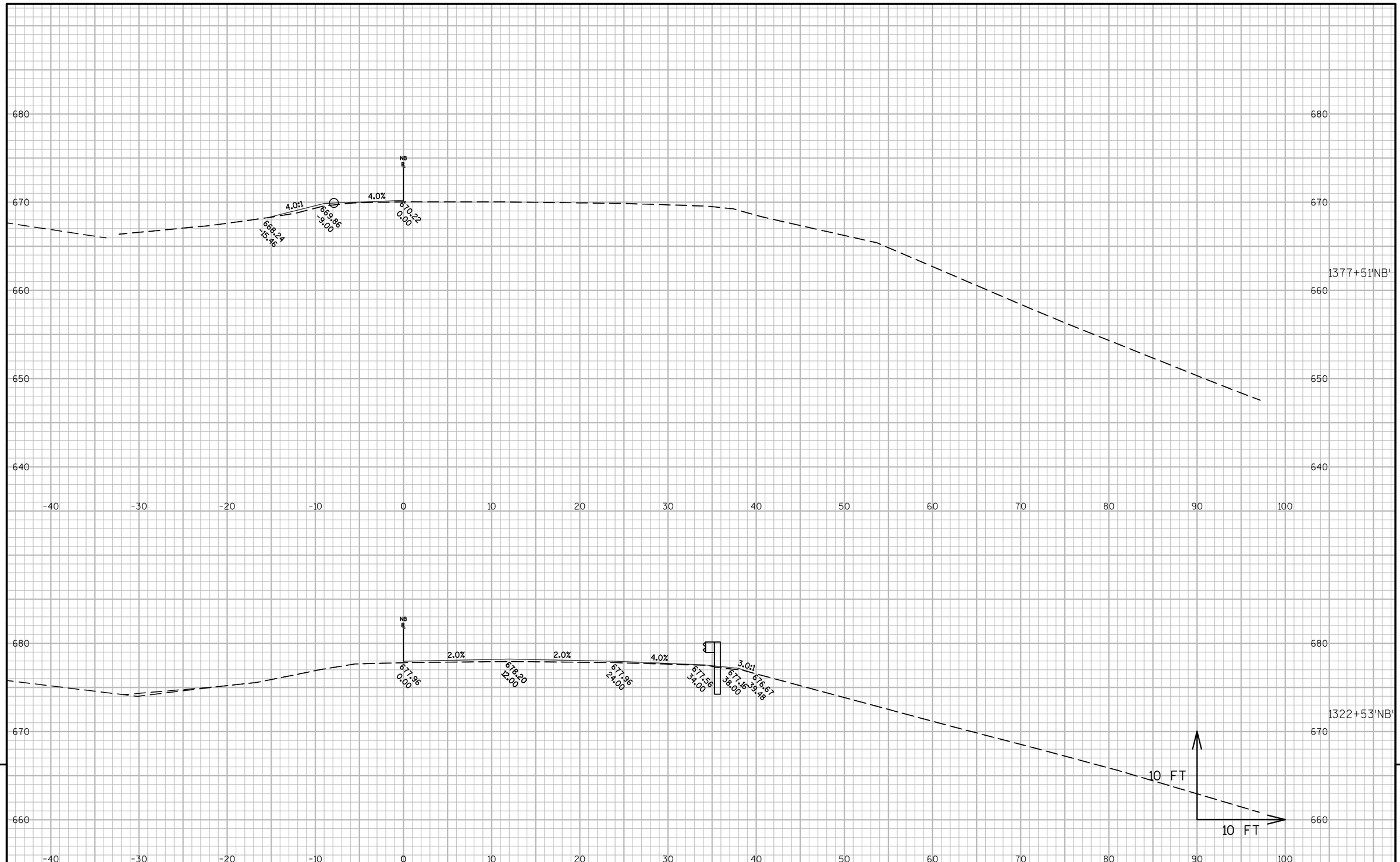
PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: IH 43 NB	SHEET 429	E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090202_XS.DWG
LAYOUT NAME - 090202_XSP

PLOT DATE : 1/19/2016 4:42 PM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



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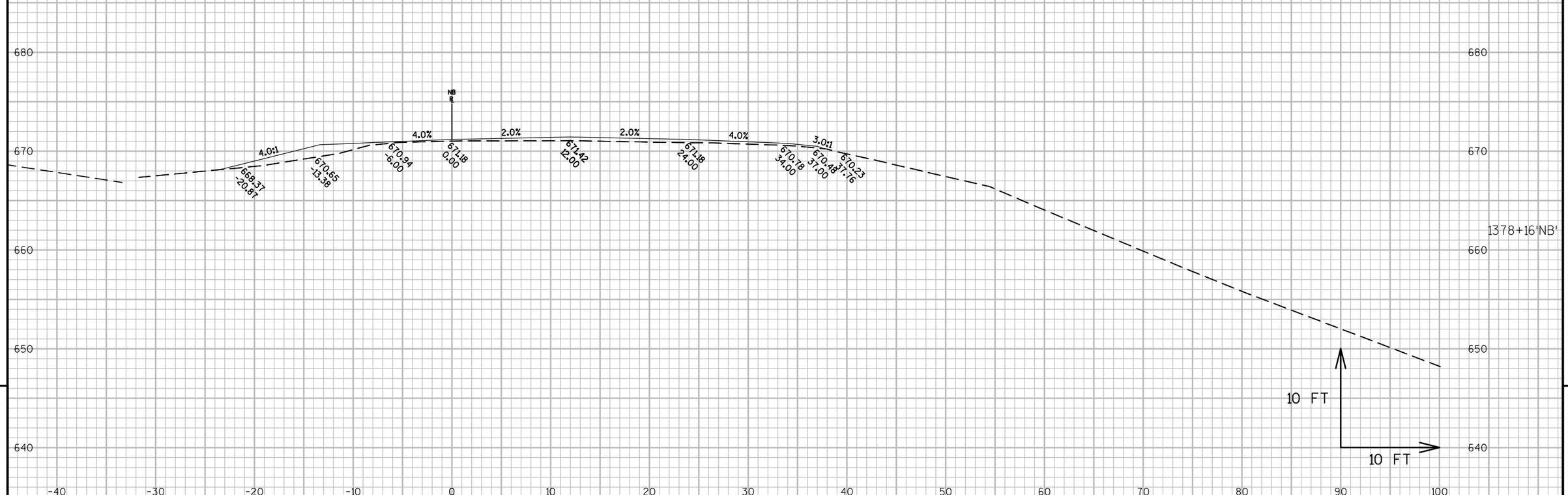
PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: IH 43 NB	SHEET 430	E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090202_XS.DWG
LAYOUT NAME - 090202_XSQ

PLOT DATE : 1/19/2016 4:42 PM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



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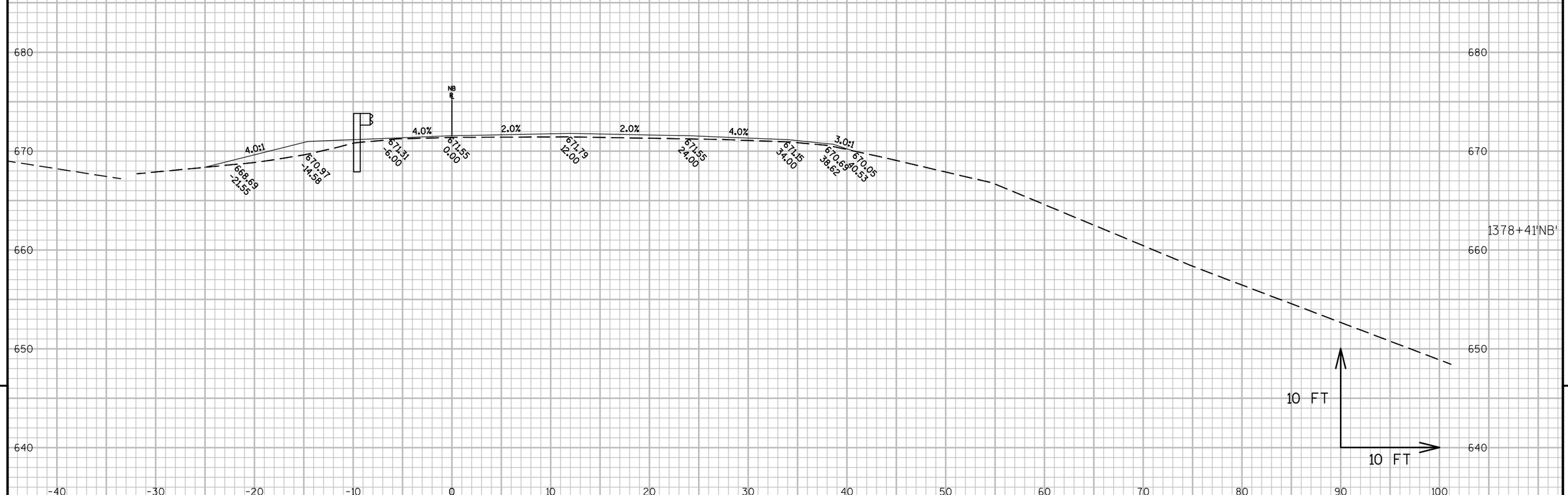
PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: IH 43 NB	SHEET 431	E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090202_XS.DWG
LAYOUT NAME - 090202_XSR

PLOT DATE : 1/19/2016 4:43 PM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT



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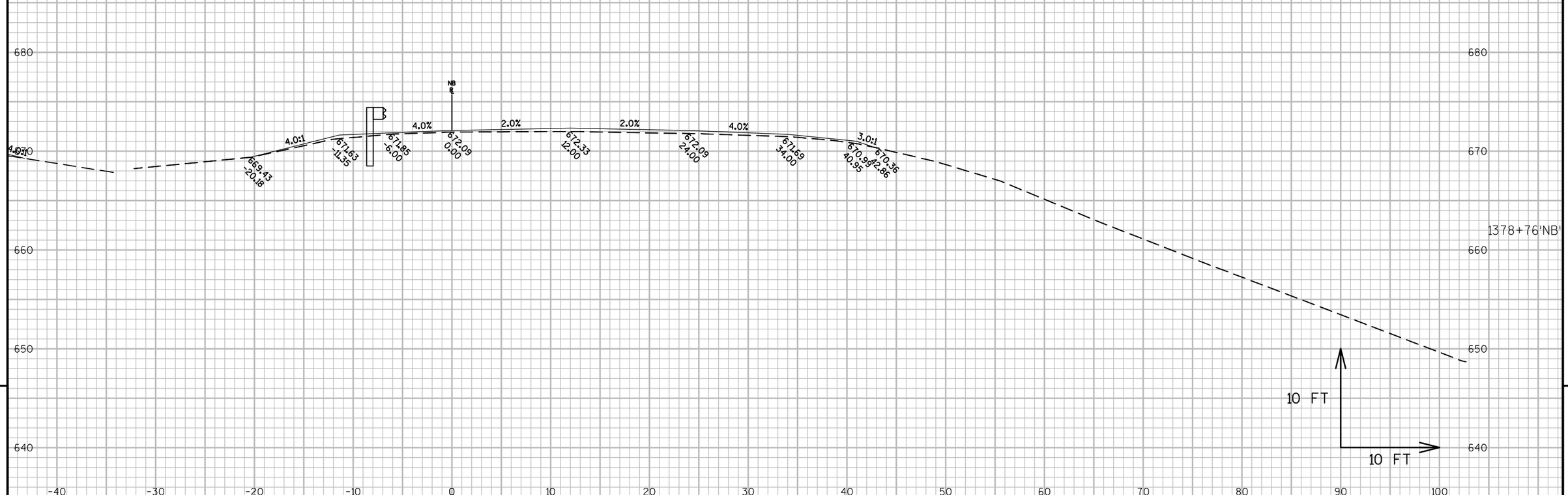
PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: IH 43 NB	SHEET 432	E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090202_XS.DWG
LAYOUT NAME - 090202_XSS

PLOT DATE : 1/19/2016 4:43 PM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



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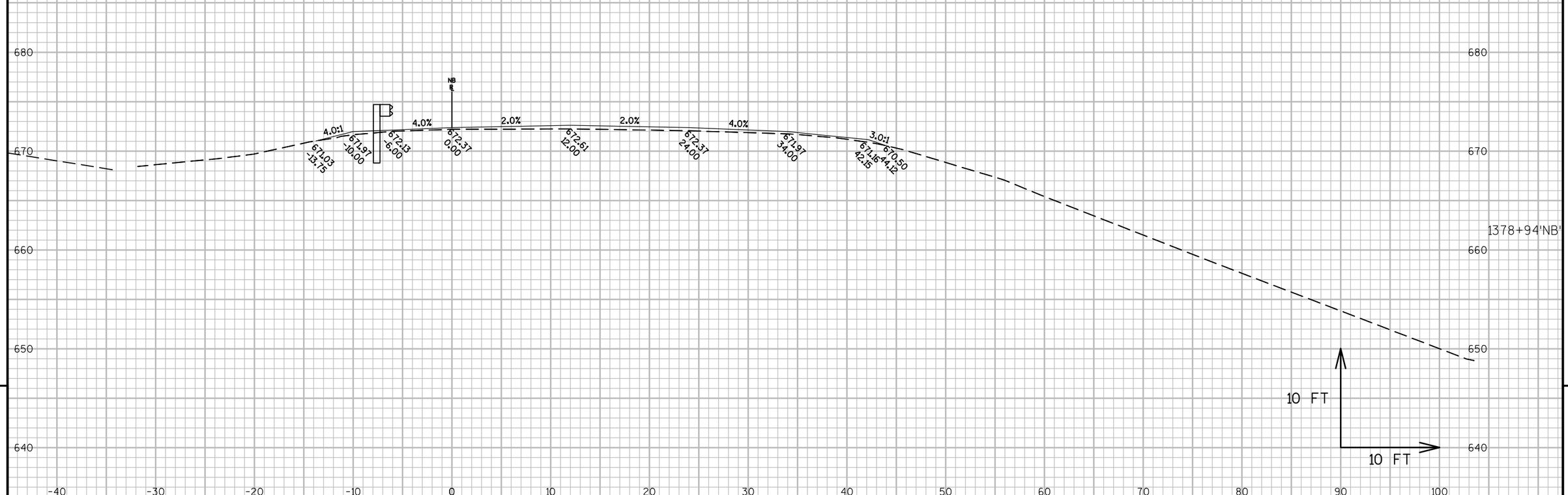
PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: IH 43 NB	SHEET 433	E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090202_XS.DWG
LAYOUT NAME - 090202_XST

PLOT DATE : 1/19/2016 4:43 PM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



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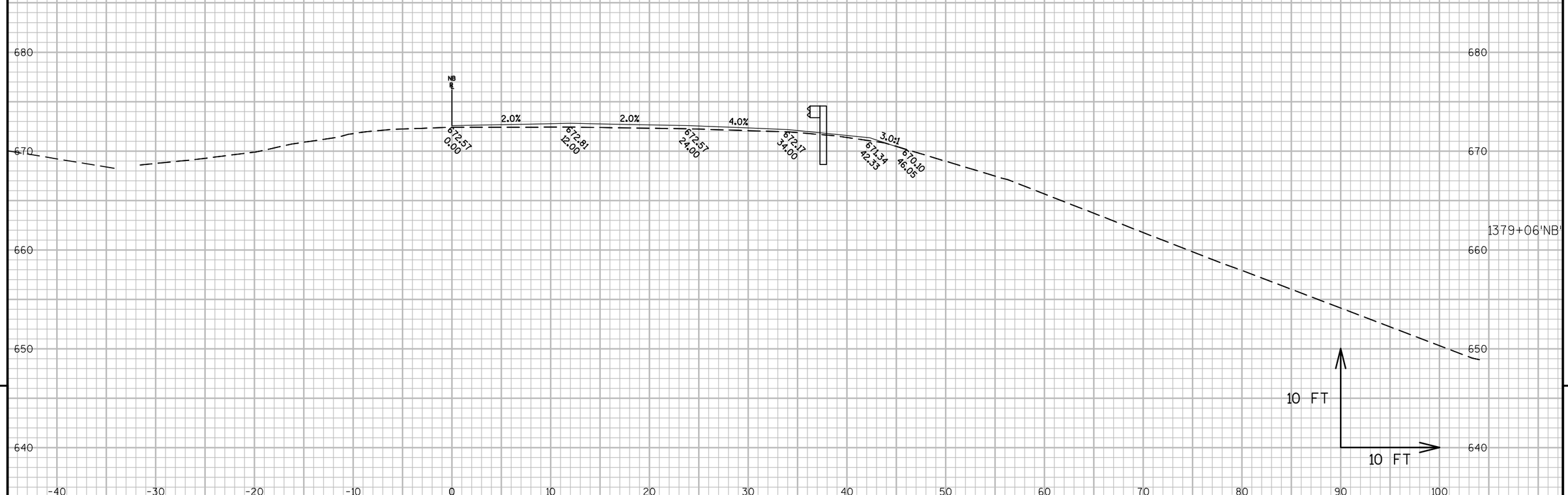
PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: IH 43 NB	SHEET 434	E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090202_XS.DWG
LAYOUT NAME - 090202_XSU

PLOT DATE : 1/19/2016 4:43 PM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



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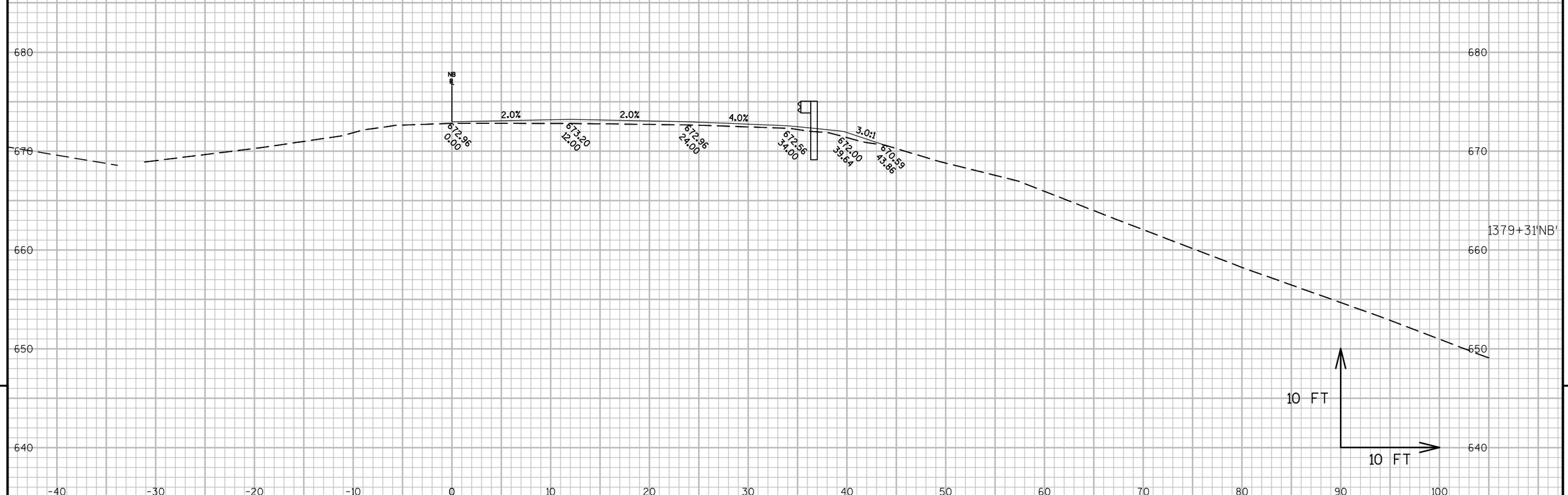
PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: IH 43 NB	SHEET 435	E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090202_XS.DWG
LAYOUT NAME - 090202_XSV

PLOT DATE : 1/19/2016 4:44 PM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



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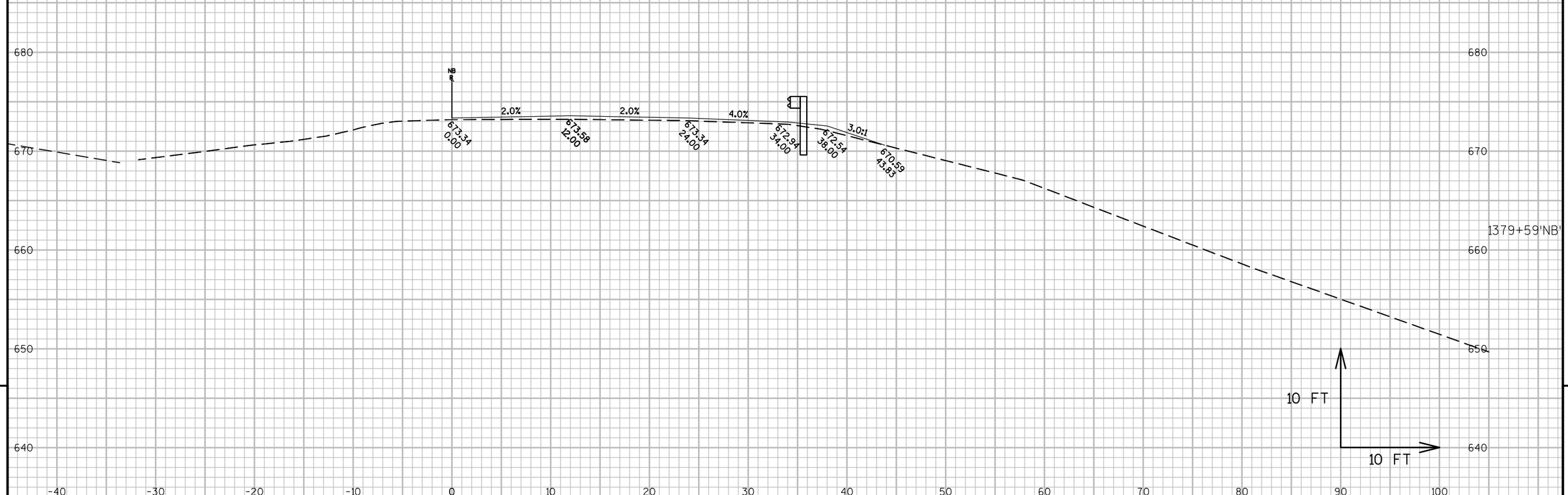
PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: IH 43 NB	SHEET 436	E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090202_XS.DWG
LAYOUT NAME - 090202_XSW

PLOT DATE : 1/19/2016 4:44 PM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT



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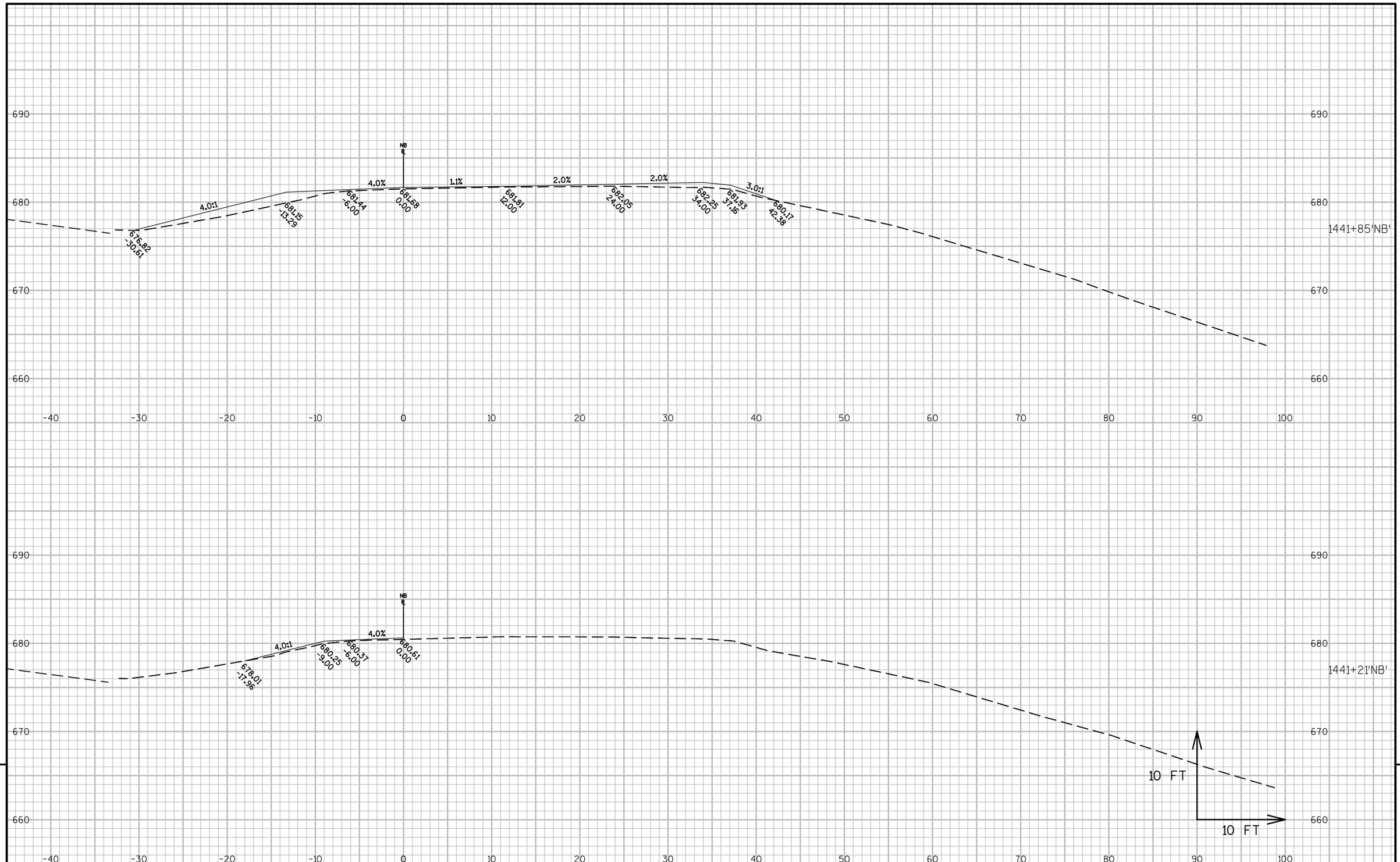
PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: IH 43 NB	SHEET 437	E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090202_XS.DWG
LAYOUT NAME - 090202_XSX

PLOT DATE : 1/19/2016 4:44 PM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49

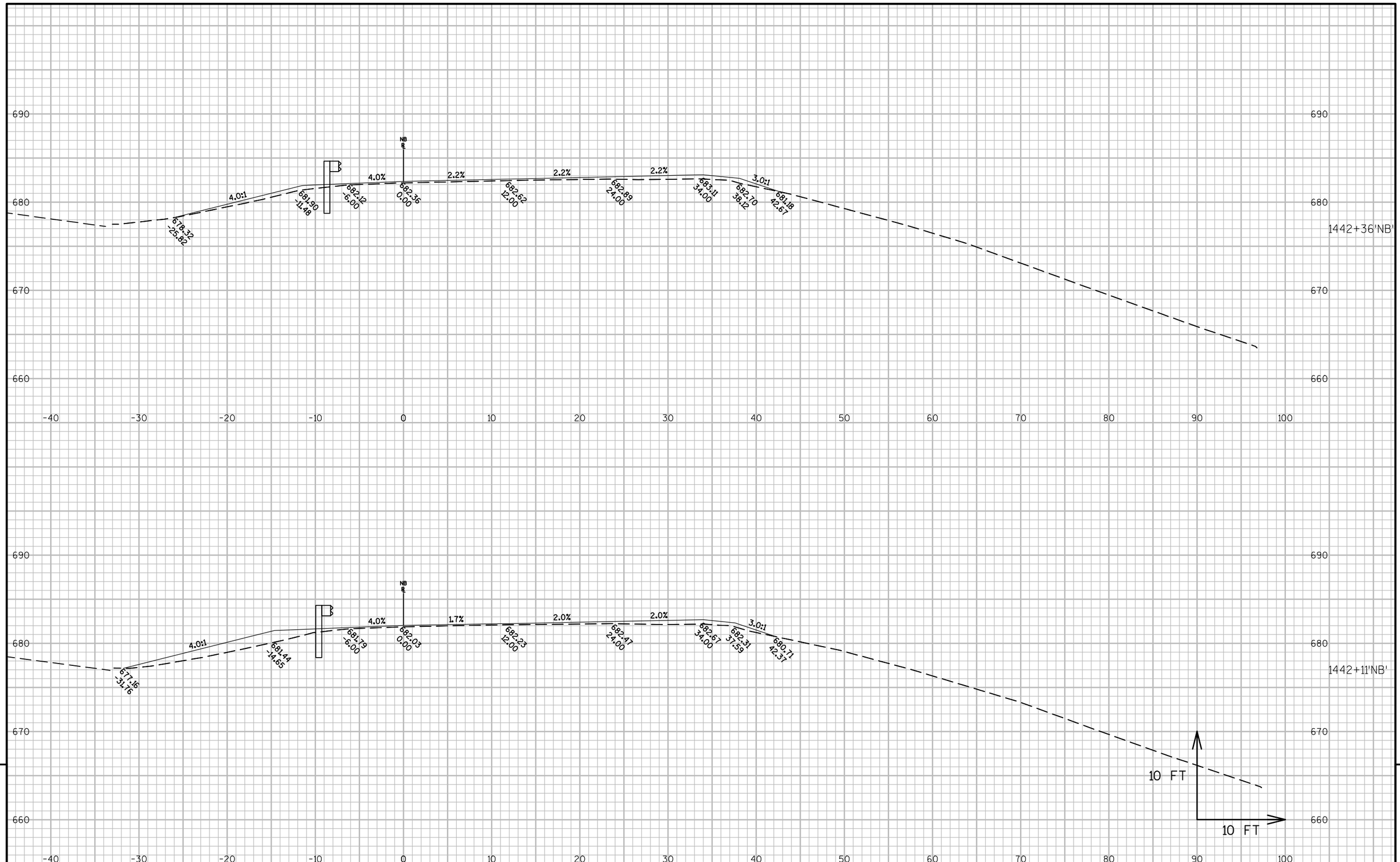


PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: IH 43 NB	SHEET 438	E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090202_XS.DWG
LAYOUT NAME - 090202_XSY

PLOT DATE : 1/19/2016 4:44 PM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49

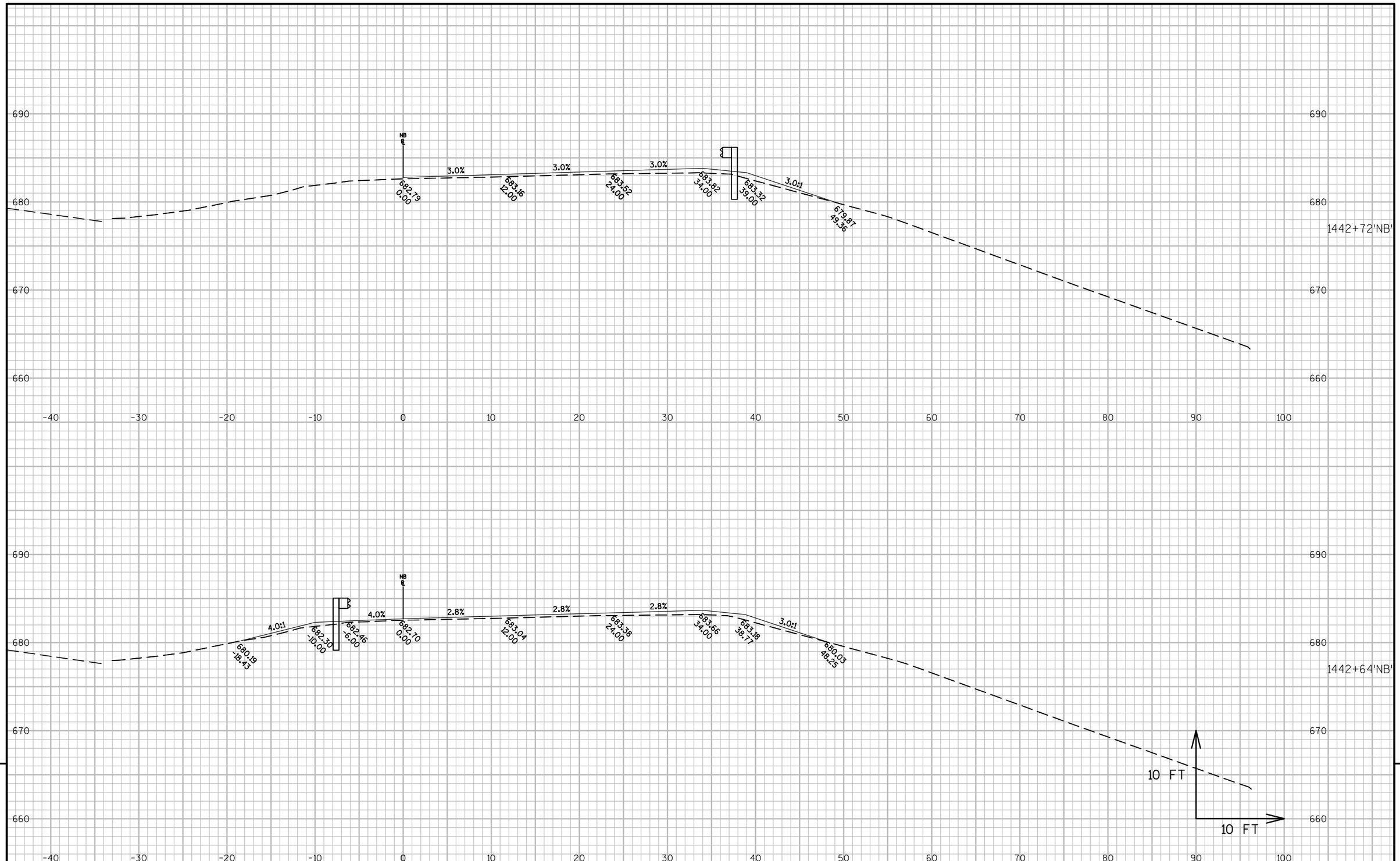


PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: IH 43 NB	SHEET 439	E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090202_XS.DWG
LAYOUT NAME - 090202_XSZ

PLOT DATE : 1/19/2016 4:45 PM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



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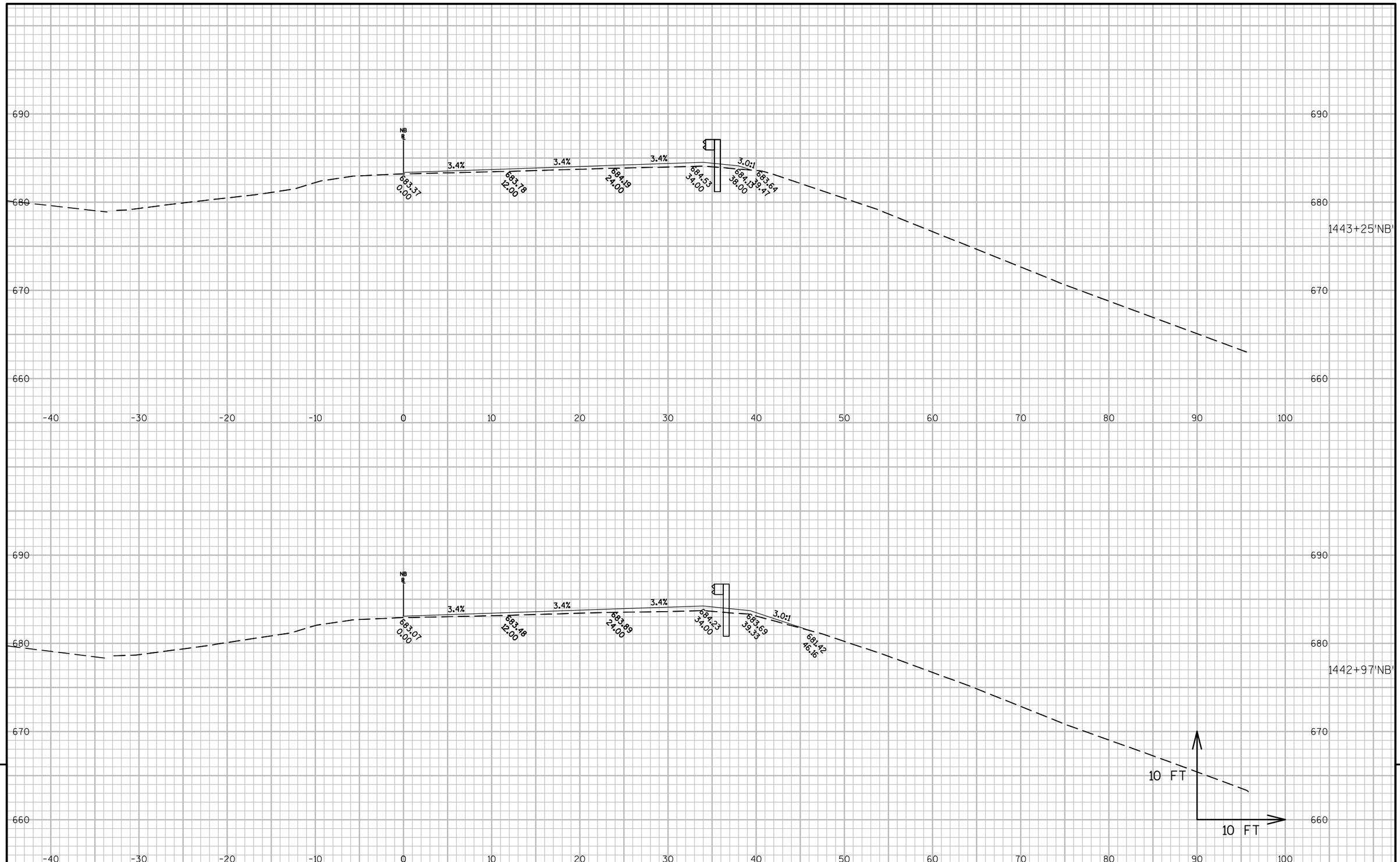
PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: IH 43 NB	SHEET 440	E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090202_XS.DWG
LAYOUT NAME - 090202_XSAA

PLOT DATE : 1/19/2016 4:45 PM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT



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PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: IH 43 NB	SHEET 441	E

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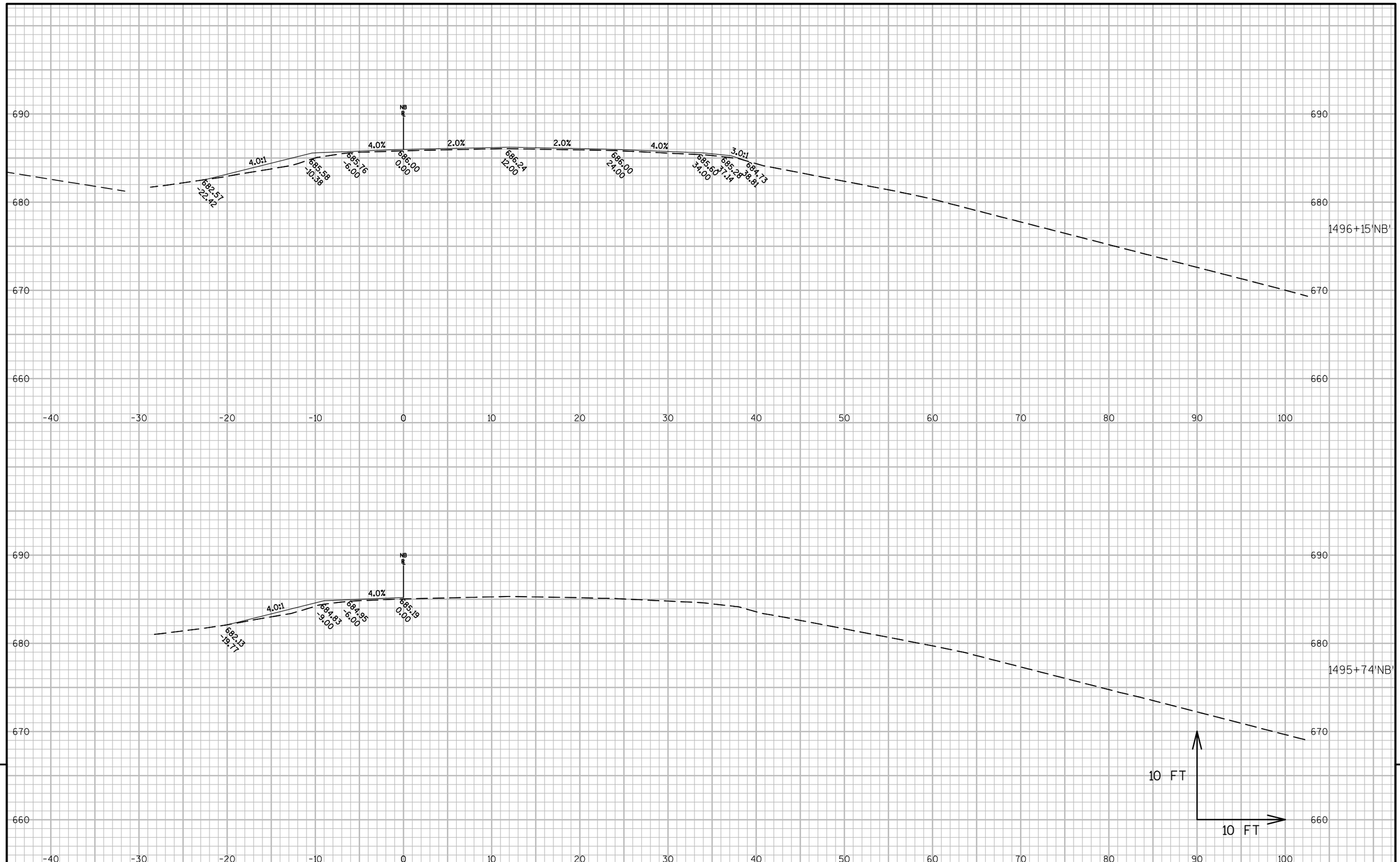
FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090202_XS.DWG
LAYOUT NAME - 090202_XSAB

PLOT DATE : 1/19/2016 4:45 PM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT



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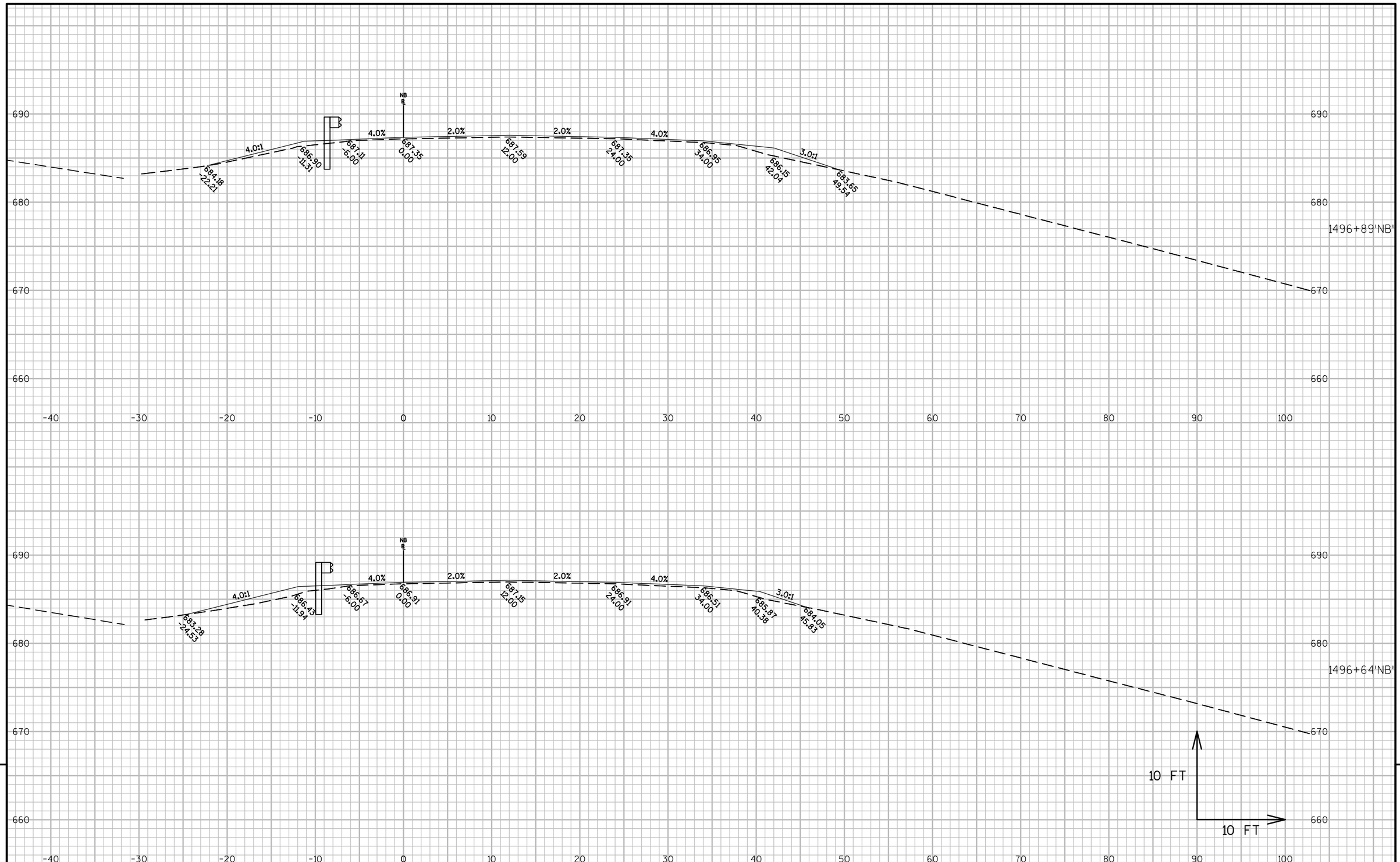
PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: IH 43 NB	SHEET 442	E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090202_XS.DWG
LAYOUT NAME - 090202_XSAC

PLOT DATE : 1/19/2016 4:45 PM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



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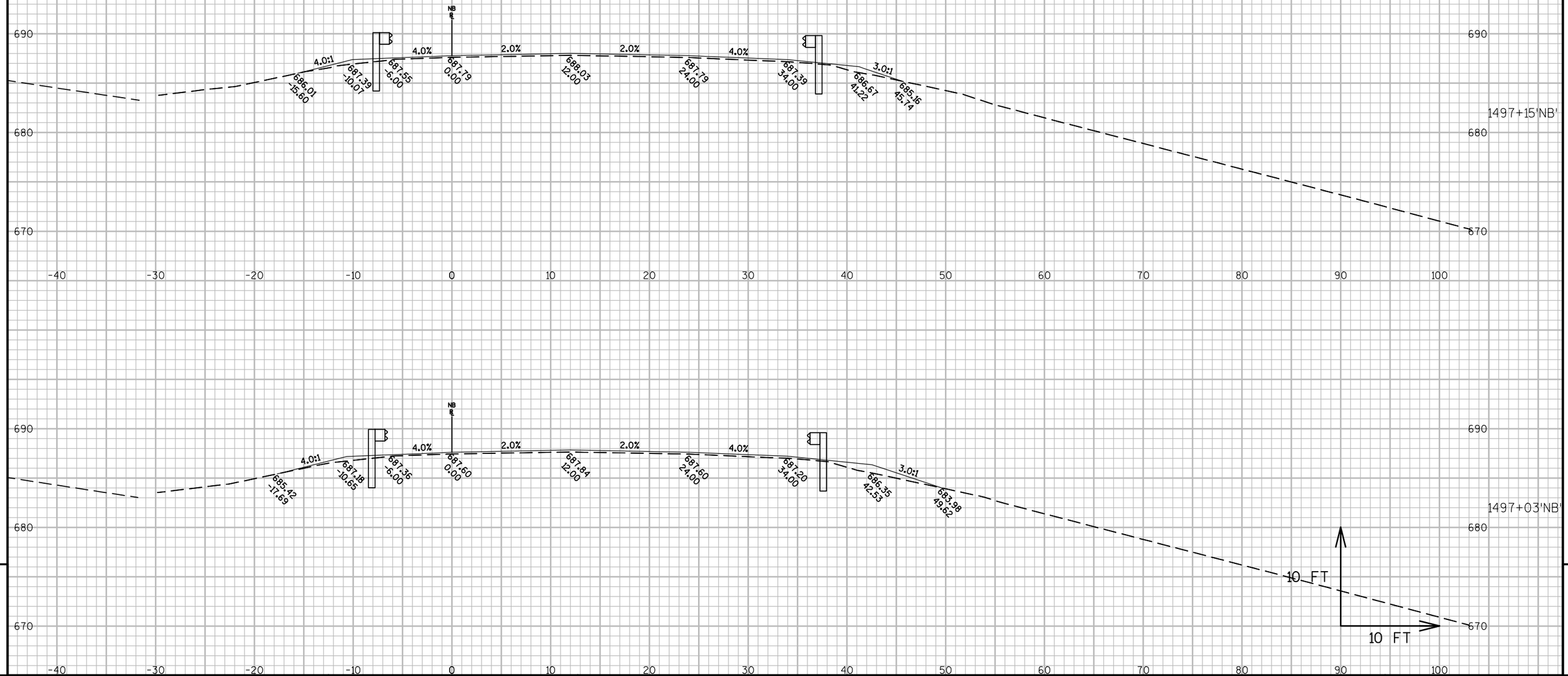
PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: IH 43 NB	SHEET 443	E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090202_XS.DWG
LAYOUT NAME - 090202_XSAD

PLOT DATE : 1/19/2016 4:45 PM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT

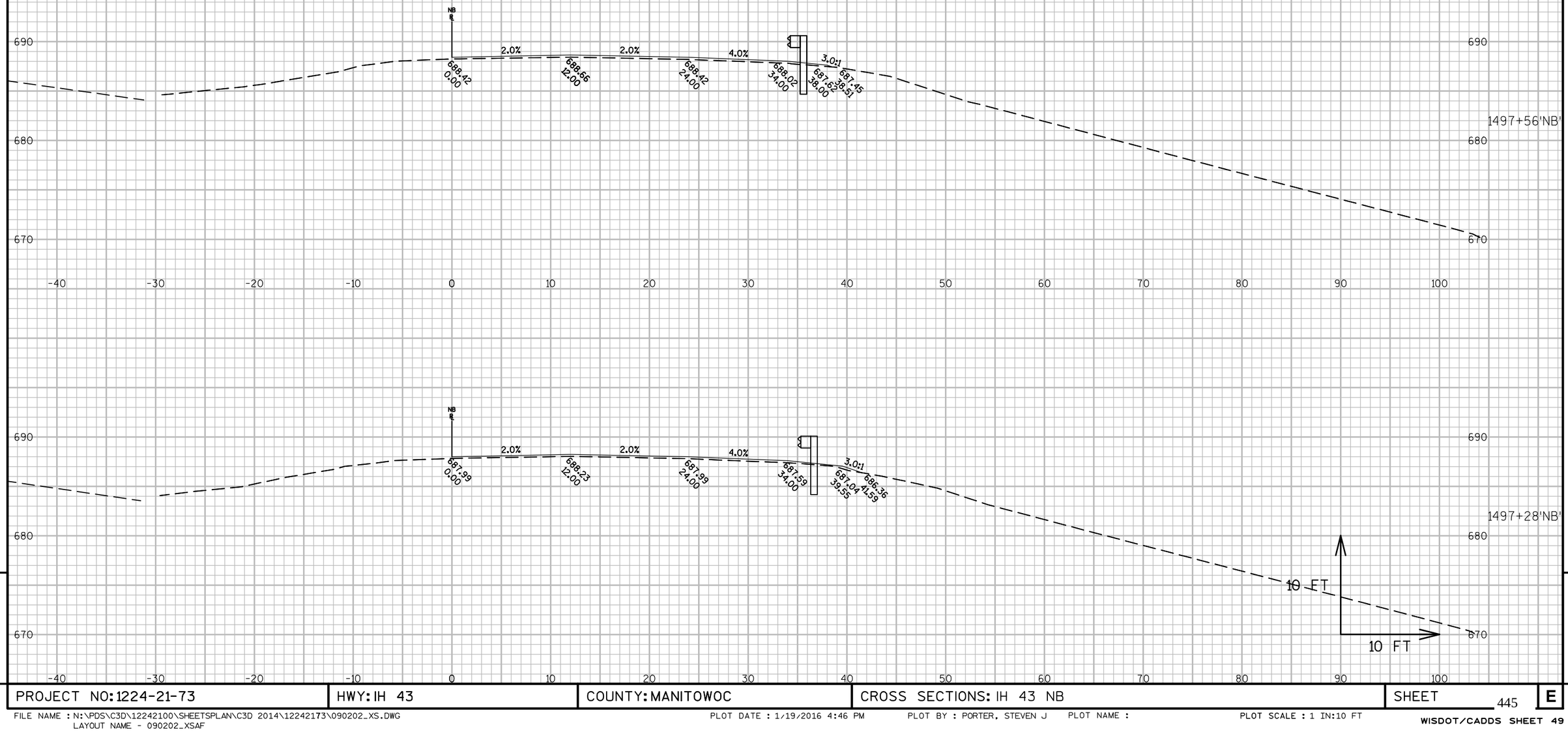


PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: IH 43 NB	SHEET 444	E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090202_XS.DWG
LAYOUT NAME - 090202_XSAE

PLOT DATE : 1/19/2016 4:46 PM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



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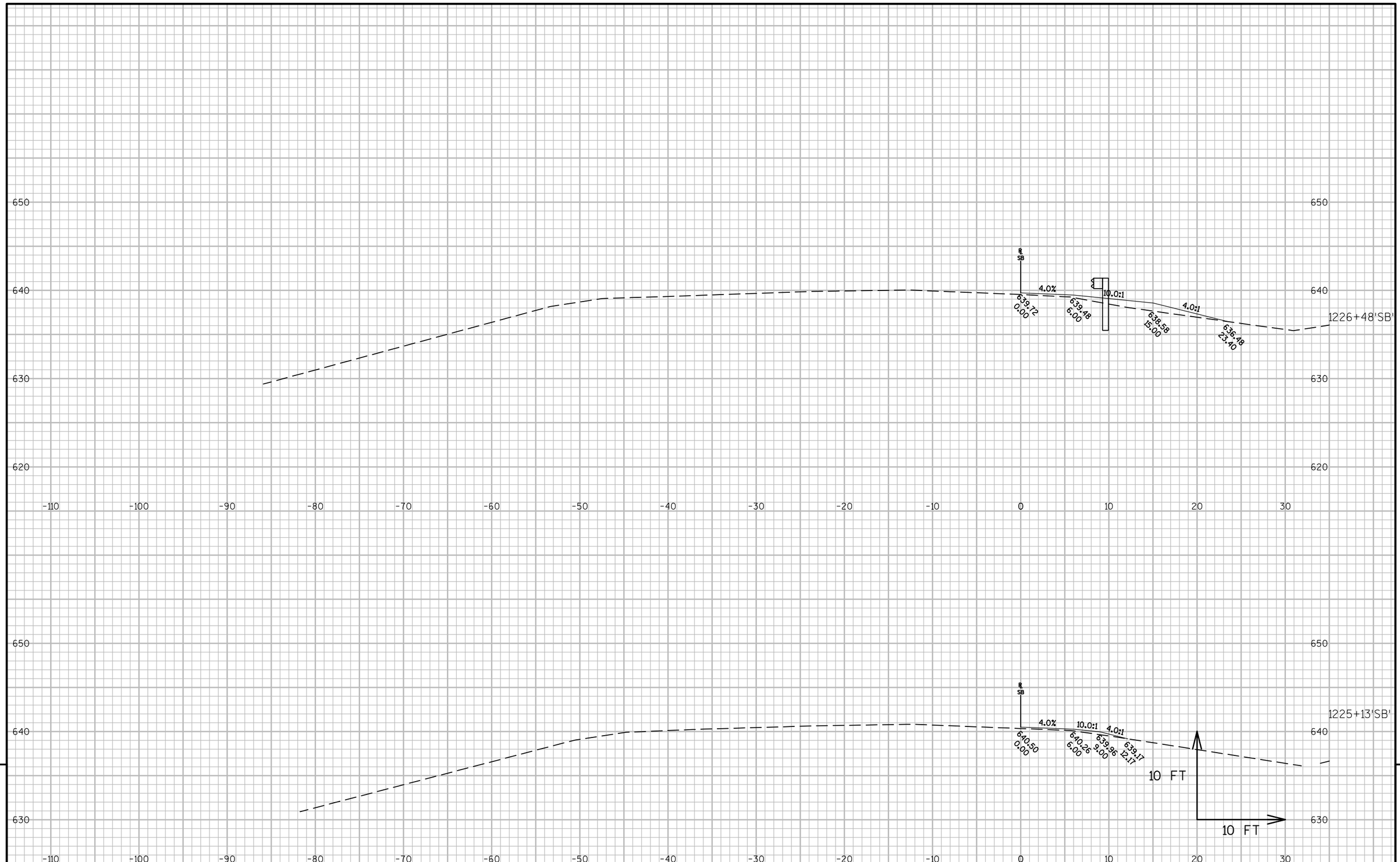
PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: IH 43 NB	SHEET 445	E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090202_XS.DWG
LAYOUT NAME - 090202_XSAF

PLOT DATE : 1/19/2016 4:46 PM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT



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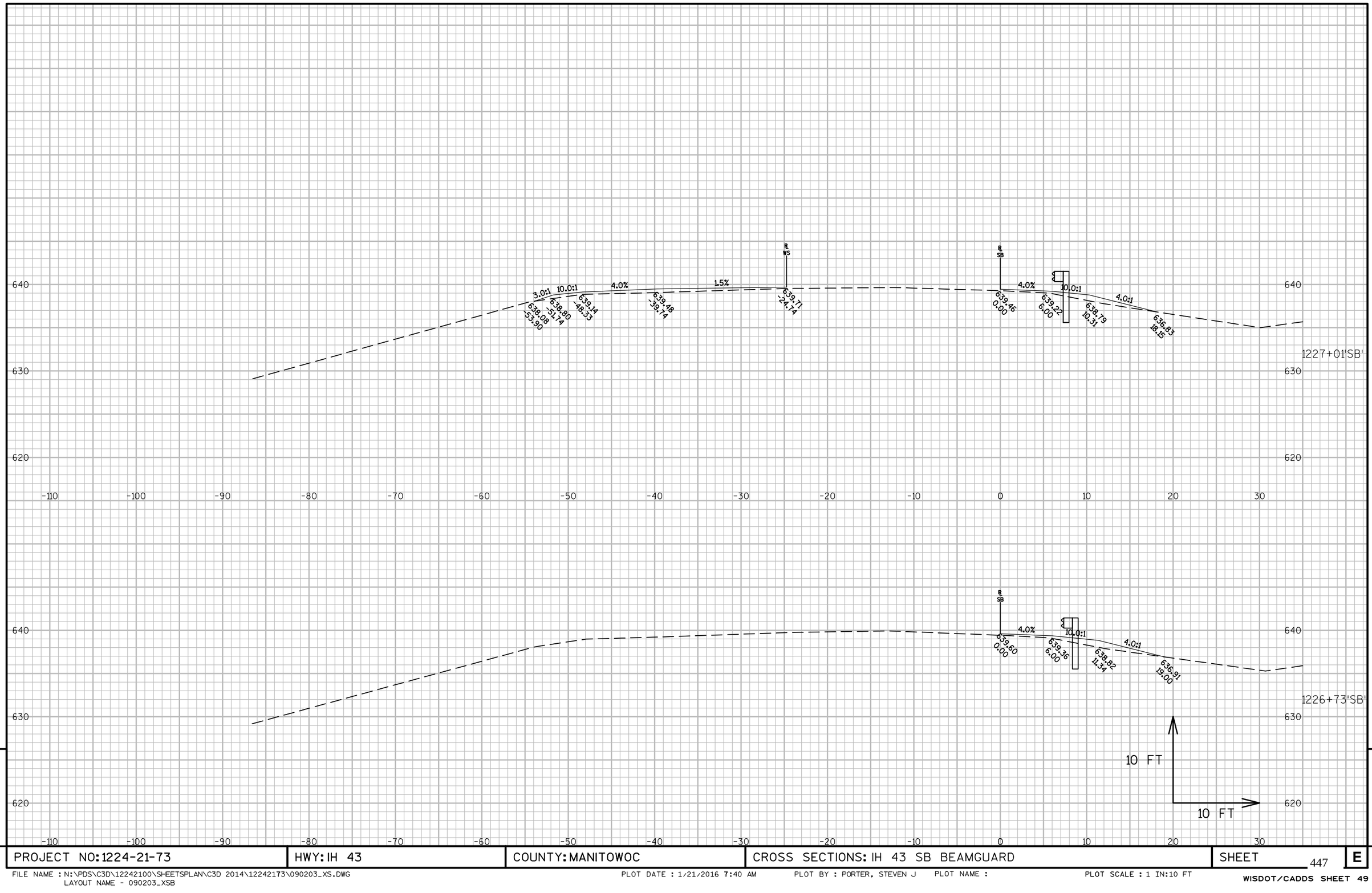
PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: IH 43 SB BEAMGUARD	SHEET 446	E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090203_XS.DWG
LAYOUT NAME - 090203_XSA

PLOT DATE : 1/21/2016 7:40 AM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49

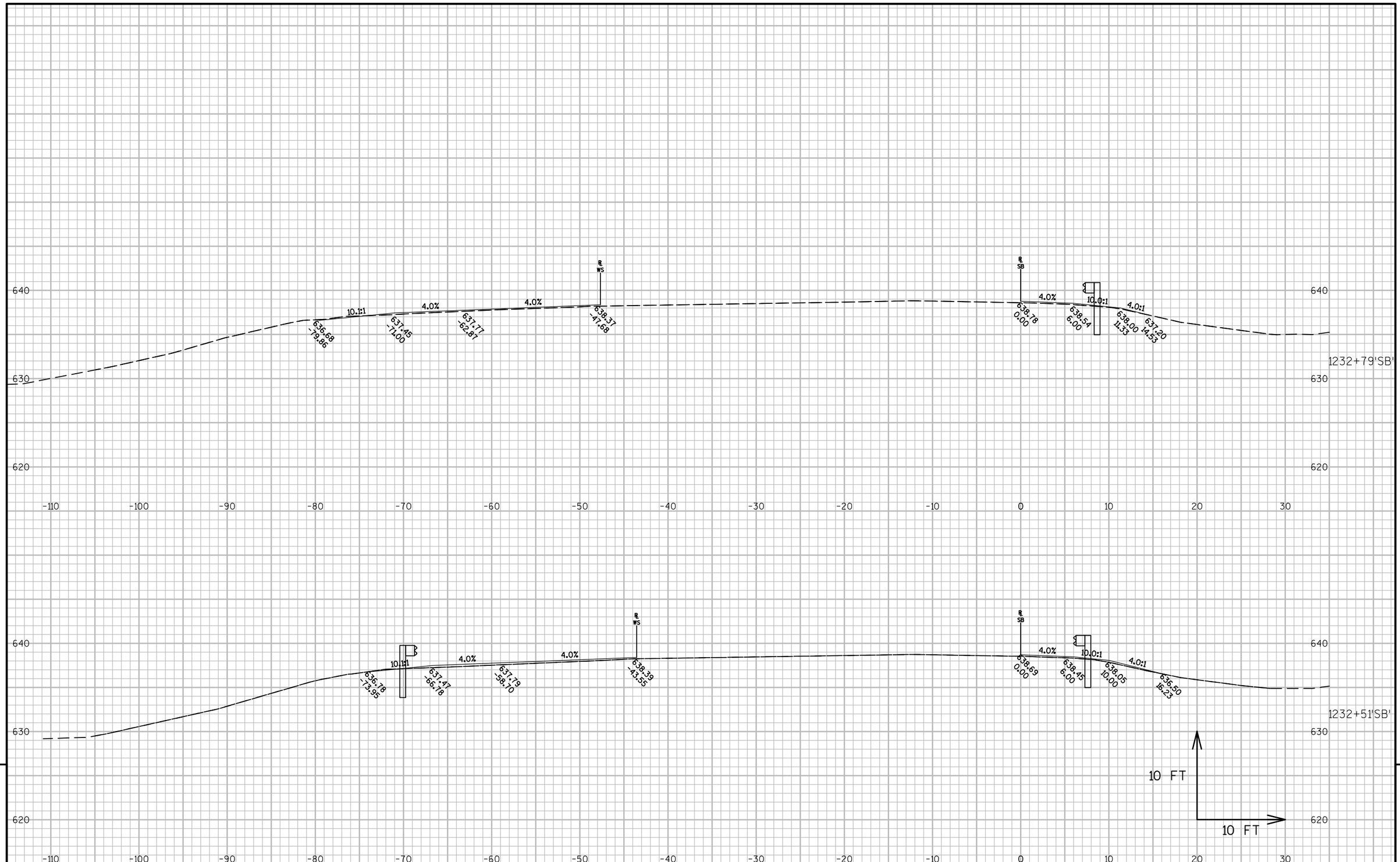


PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: IH 43 SB BEAMGUARD	SHEET 447	E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090203_XS.DWG
LAYOUT NAME - 090203_XSB

PLOT DATE : 1/21/2016 7:40 AM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



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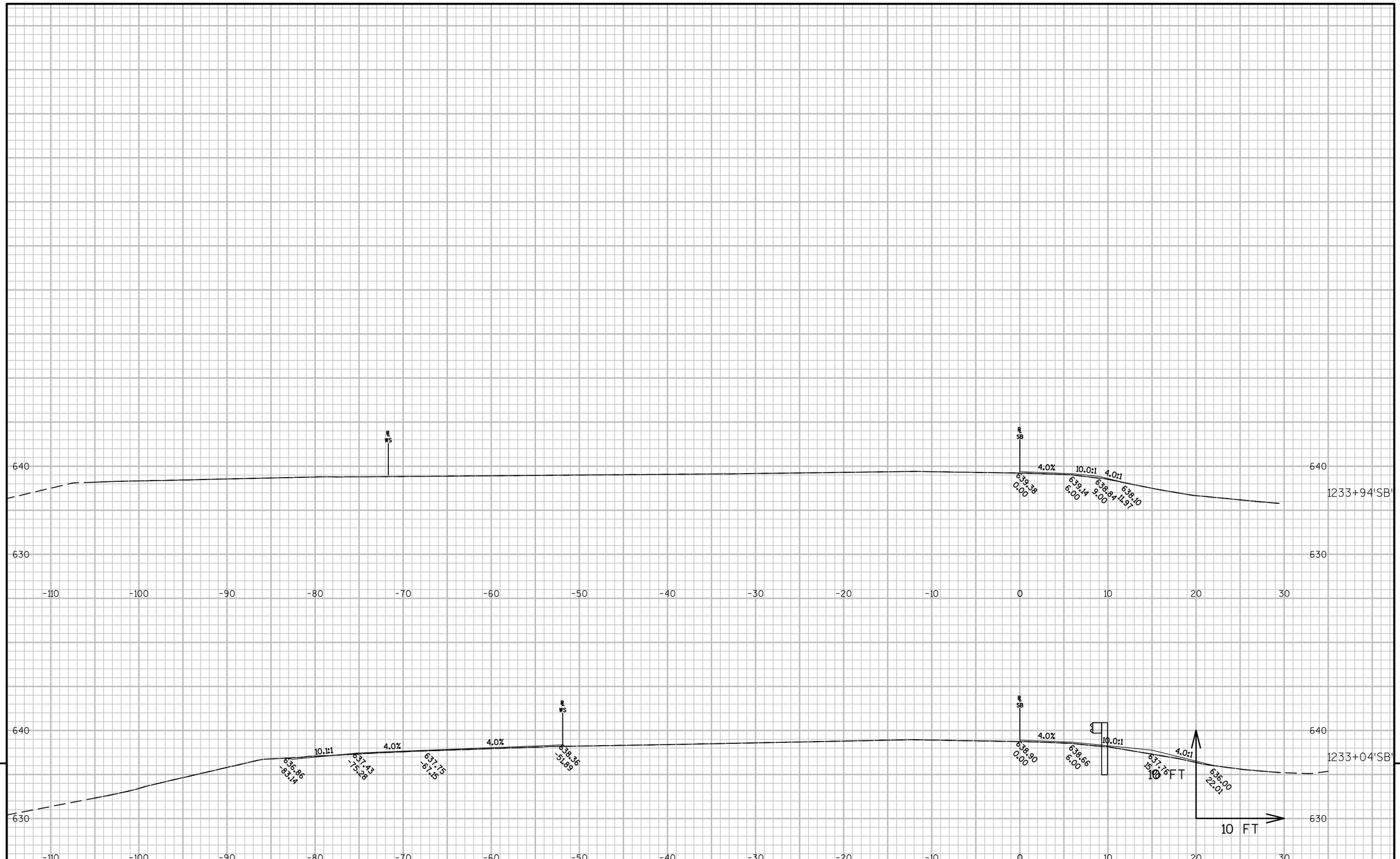
PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: IH 43 SB BEAMGUARD	SHEET 448	E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090203_XS.DWG
LAYOUT NAME - 090203_XSC

PLOT DATE : 1/21/2016 7:40 AM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



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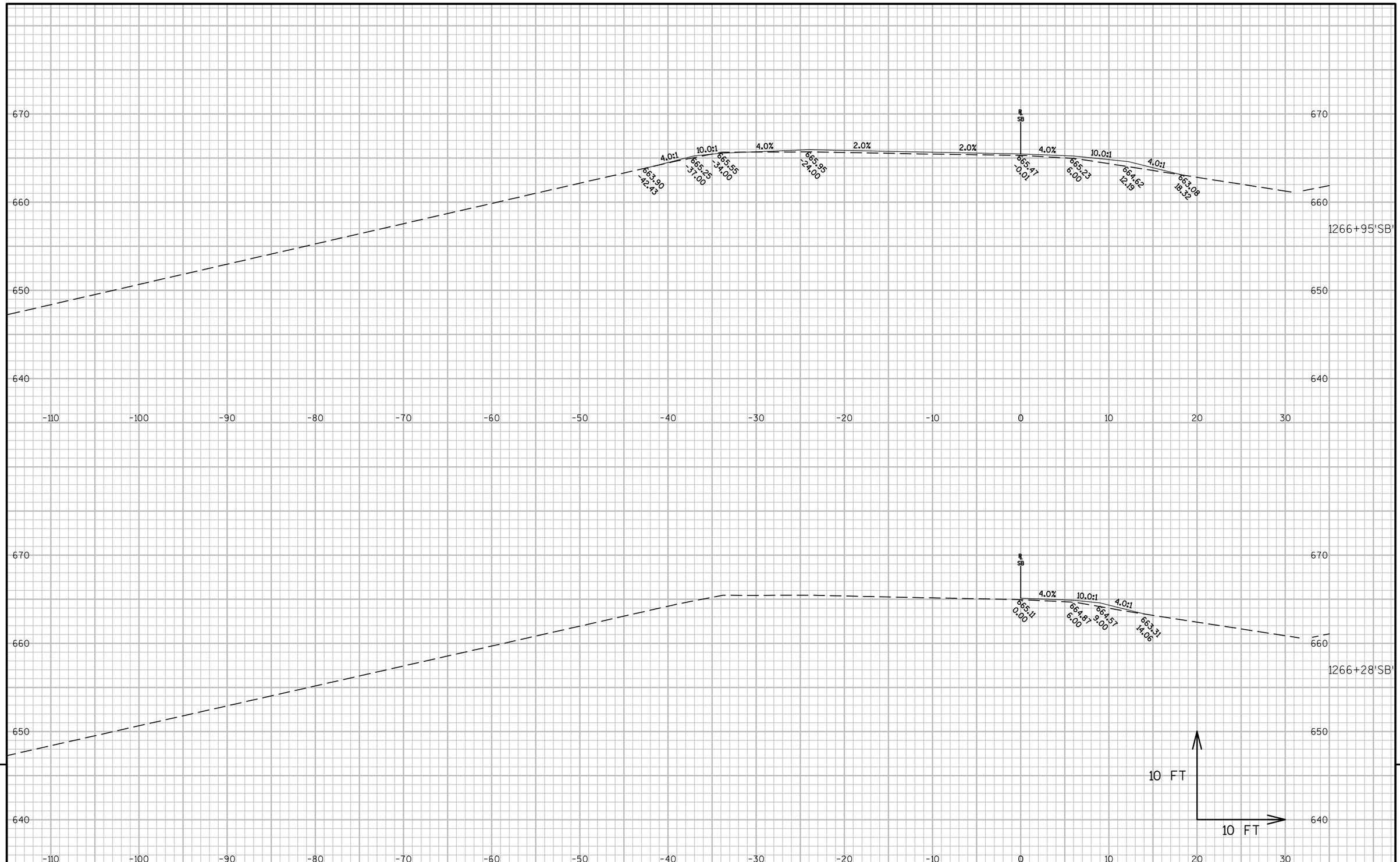
PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: IH 43 SB BEAMGUARD	SHEET 449	E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090203_XS.DWG
LAYOUT NAME - 090203_XSD

PLOT DATE : 1/21/2016 7:41 AM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT



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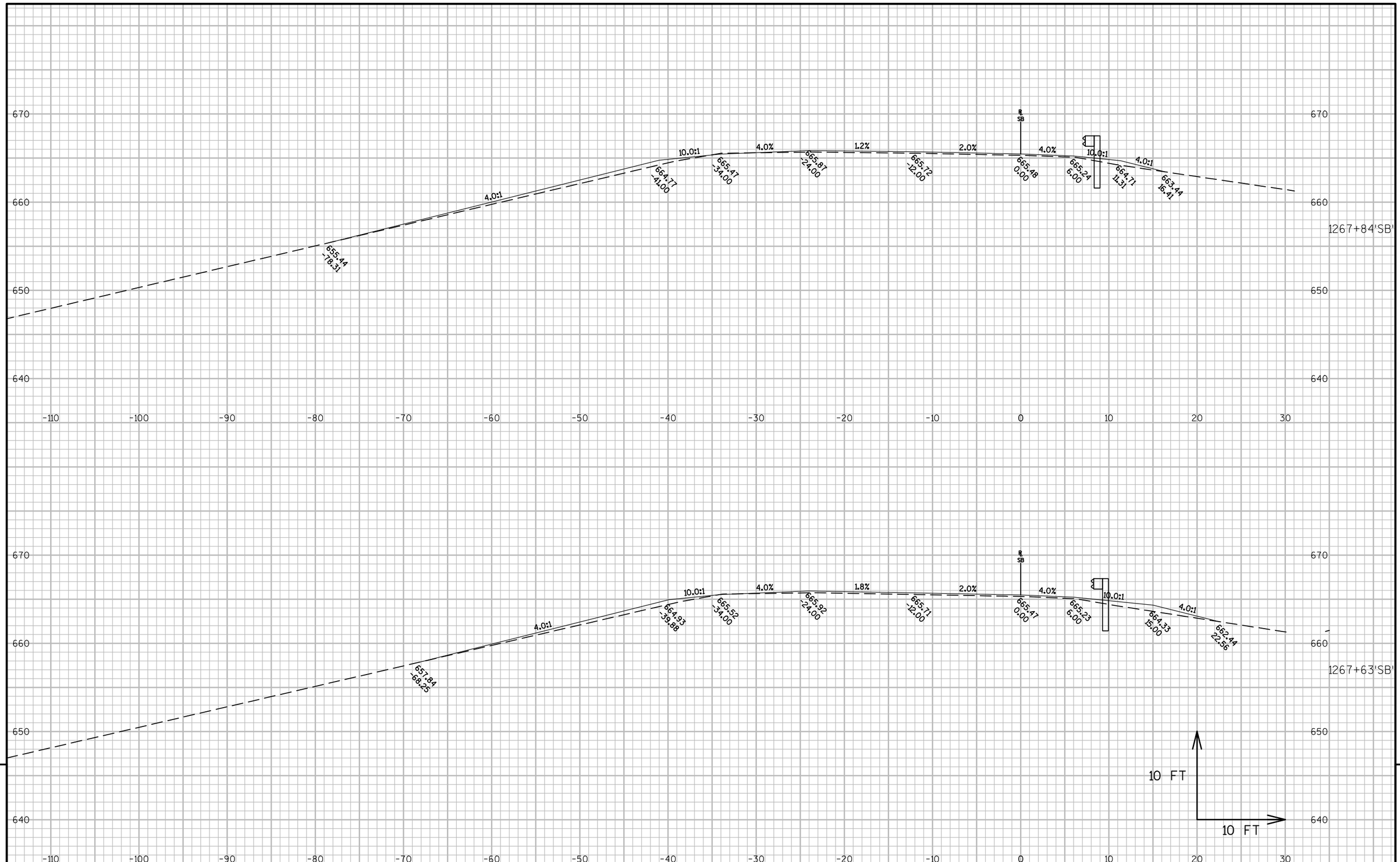
PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: IH 43 SB BEAMGUARD	SHEET 450	E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090203_XS.DWG
LAYOUT NAME - 090203_XSE

PLOT DATE : 1/21/2016 7:41 AM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



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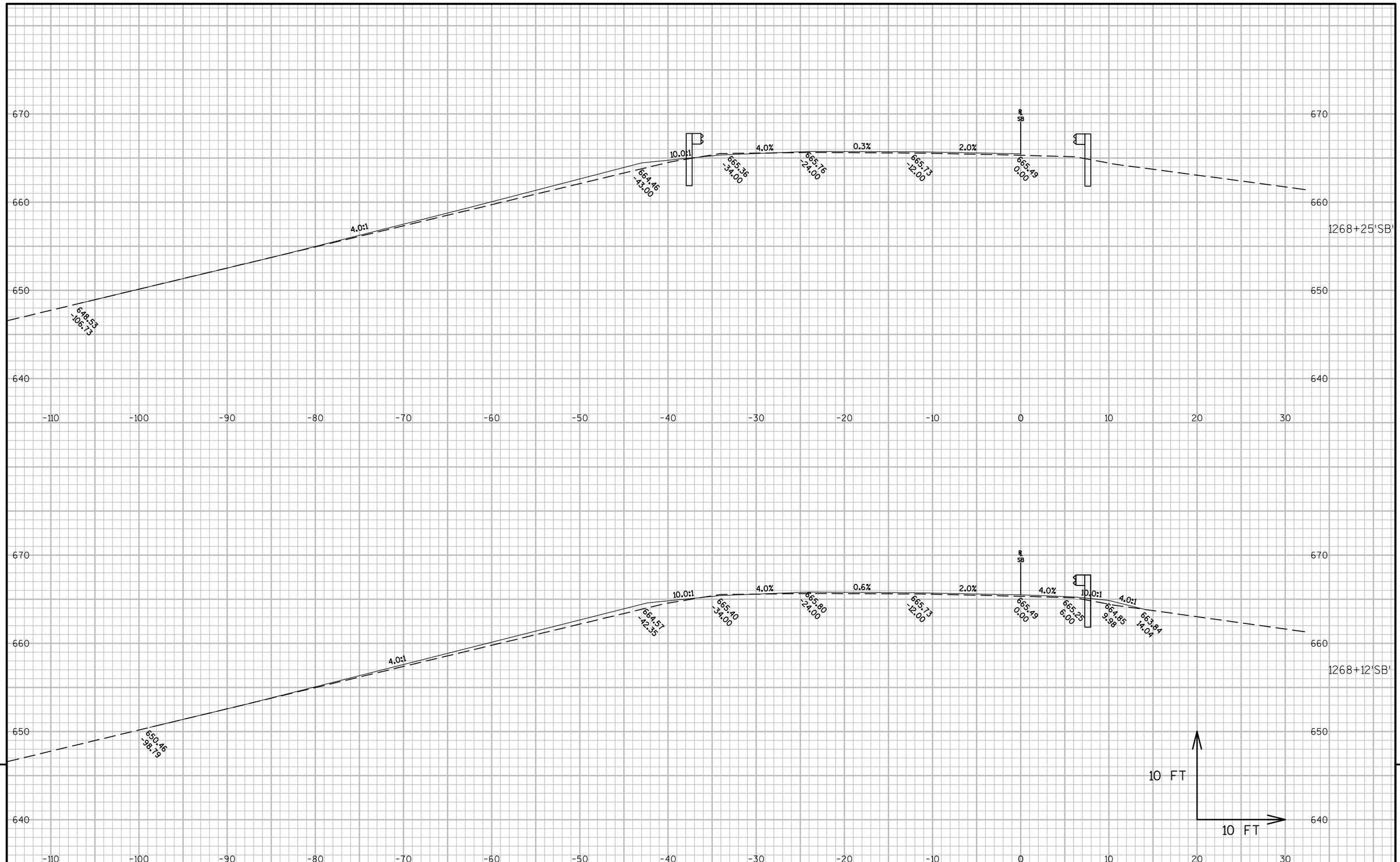
PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: IH 43 SB BEAMGUARD	SHEET 451	E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090203_XS.DWG
LAYOUT NAME - 090203_XSF

PLOT DATE : 1/21/2016 7:41 AM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



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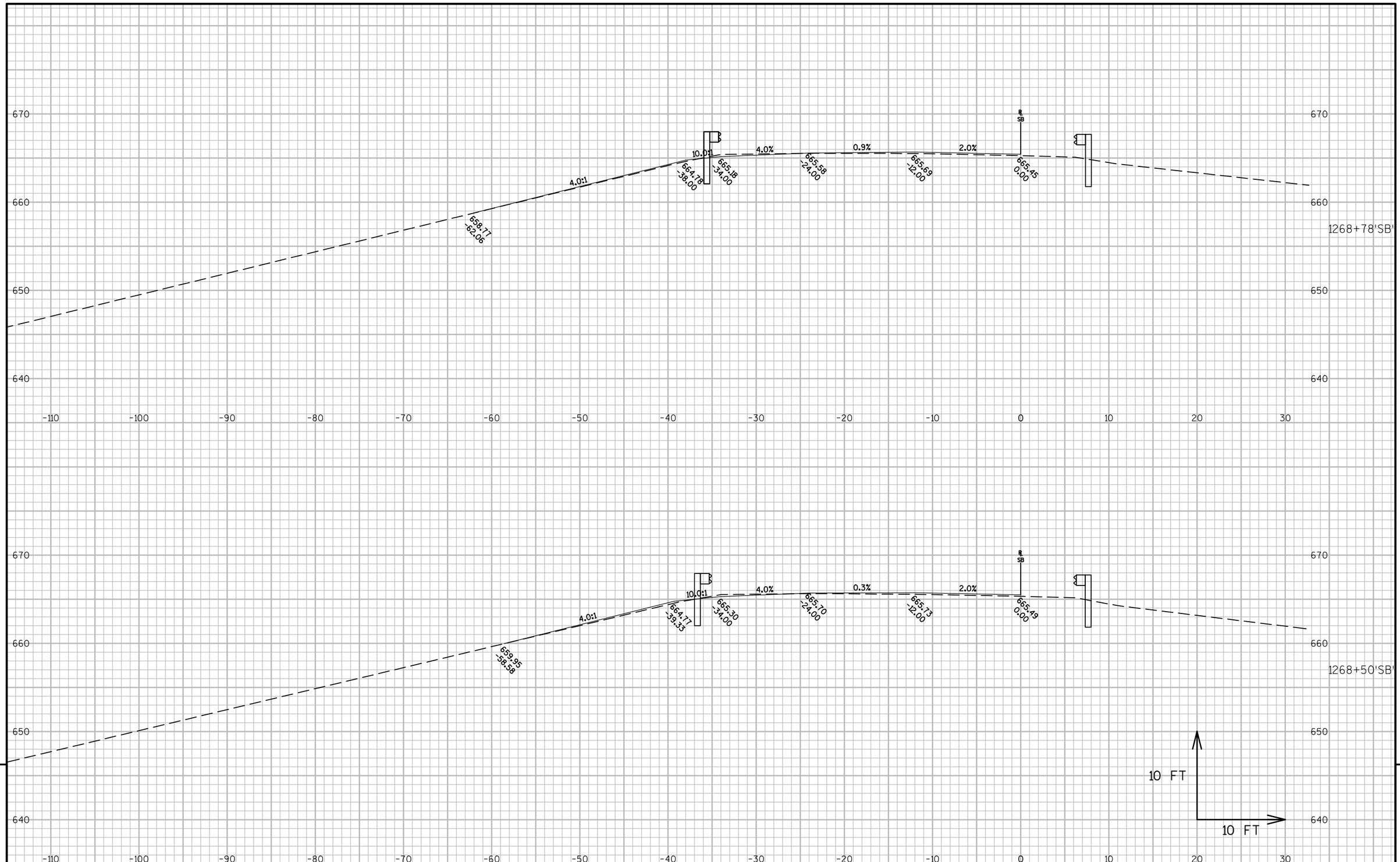
PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: IH 43 SB BEAMGUARD	SHEET 452	E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090203_XS.DWG
LAYOUT NAME - 090203_XSG

PLOT DATE : 1/21/2016 7:41 AM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



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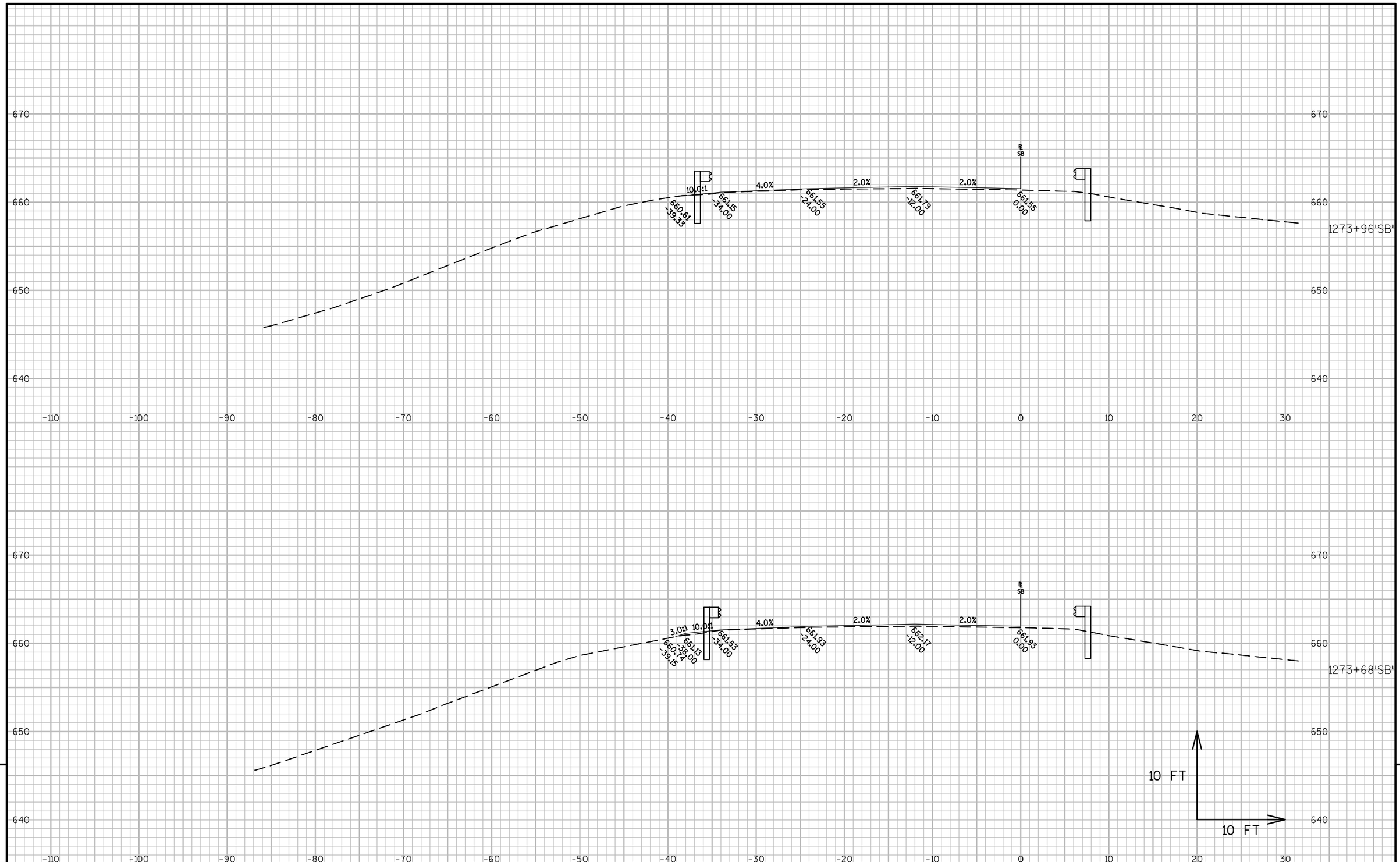
PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: IH 43 SB BEAMGUARD	SHEET 453	E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090203_XS.DWG
LAYOUT NAME - 090203_XSH

PLOT DATE : 1/21/2016 7:42 AM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT

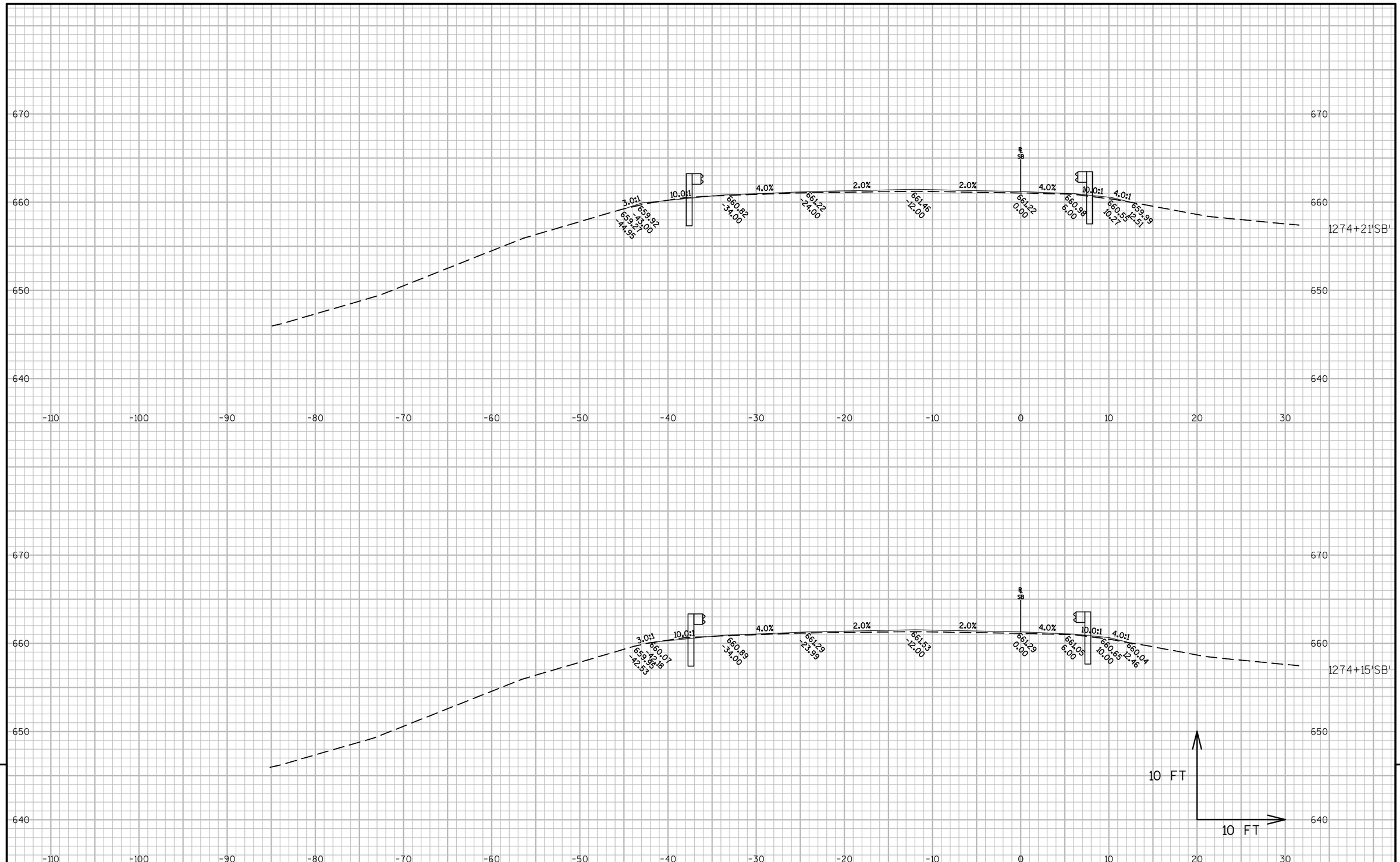


PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: IH 43 SB BEAMGUARD	SHEET 454	E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090203_XS.DWG
LAYOUT NAME - 090203_XSI

PLOT DATE : 1/21/2016 7:42 AM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



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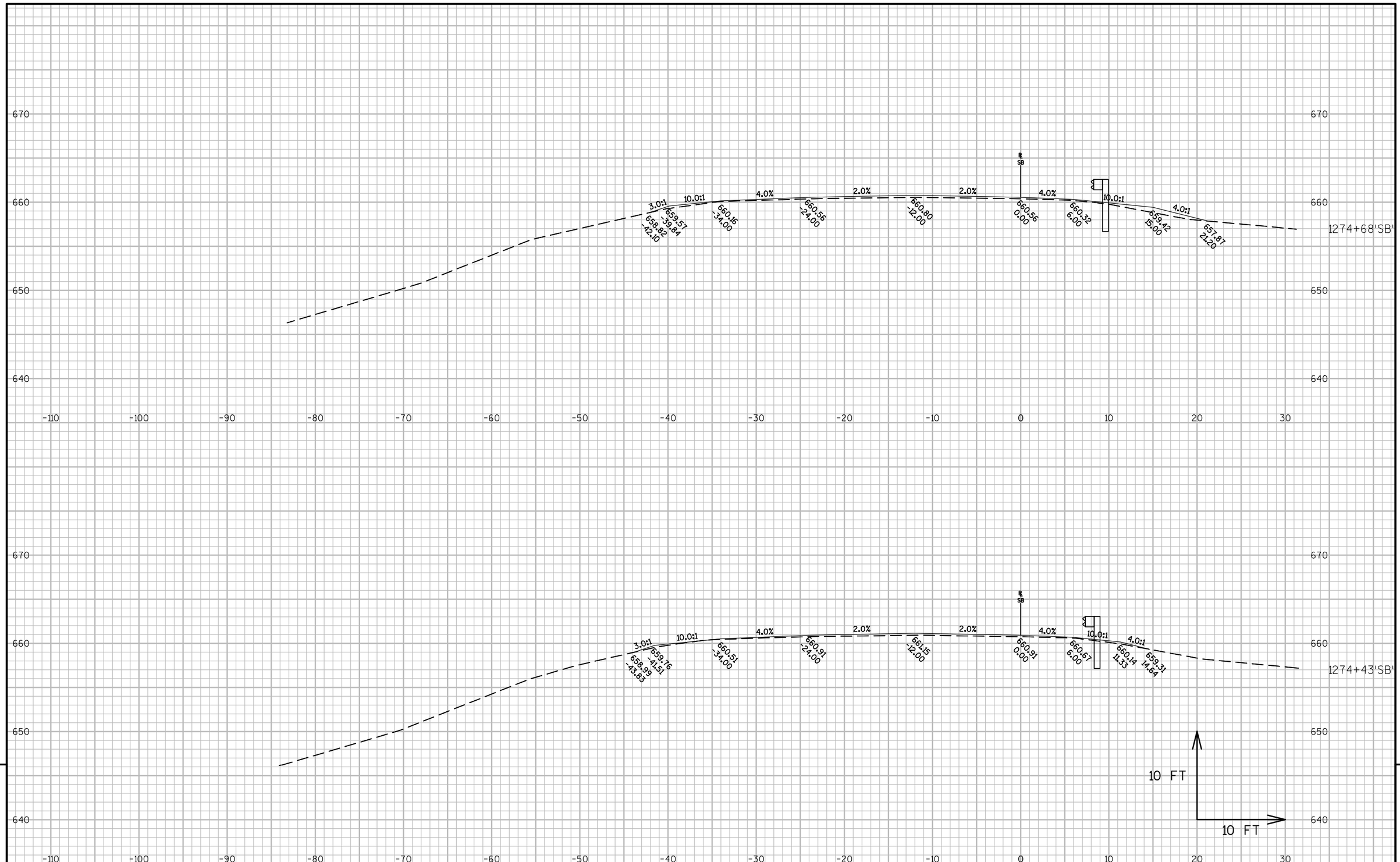
PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: IH 43 SB BEAMGUARD	SHEET 455	E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090203_XS.DWG
LAYOUT NAME - 090203_XSJ

PLOT DATE : 1/21/2016 7:42 AM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT

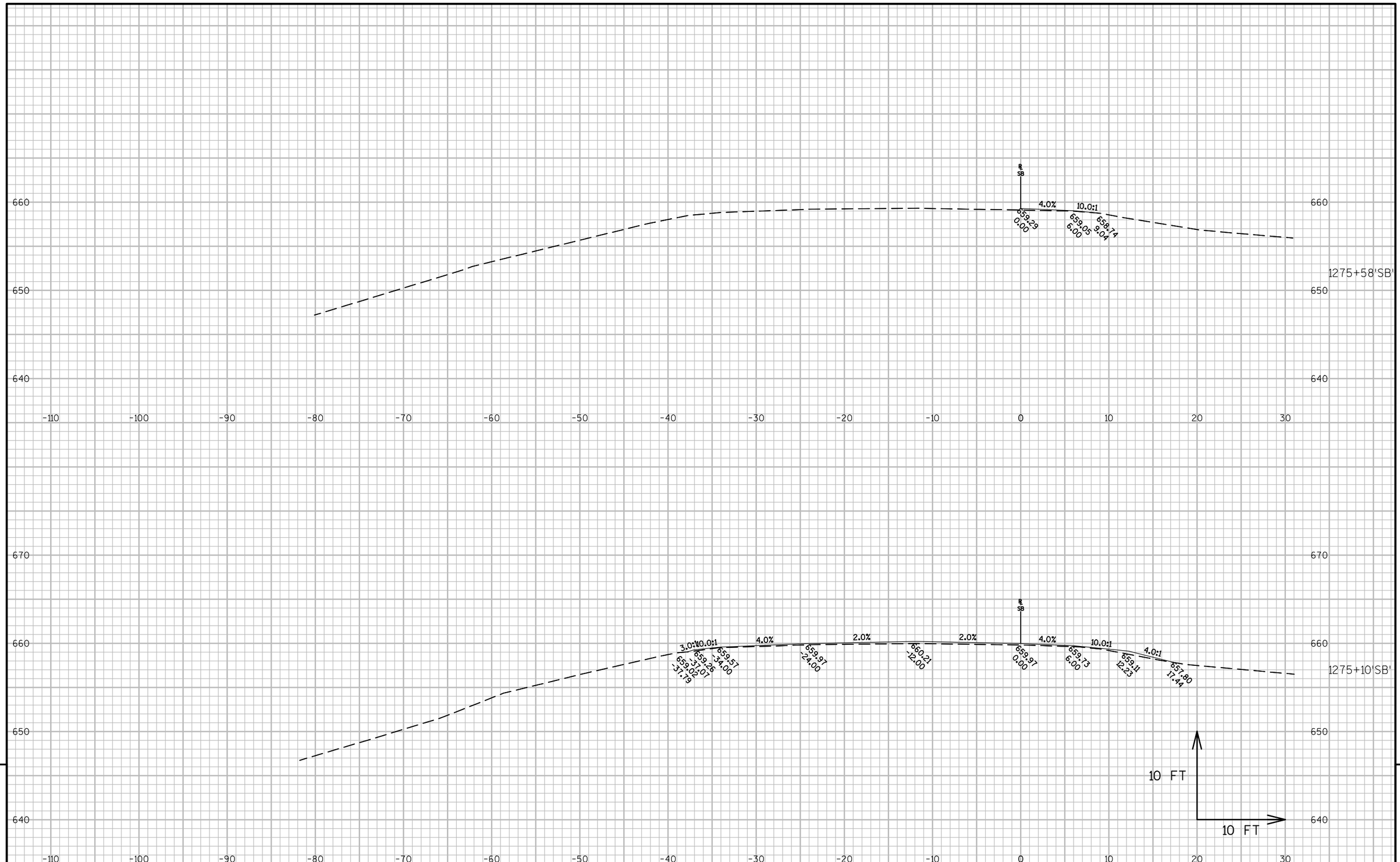


PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: IH 43 SB BEAMGUARD	SHEET 456	E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090203_XS.DWG
LAYOUT NAME - 090203_XSK

PLOT DATE : 1/21/2016 7:42 AM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



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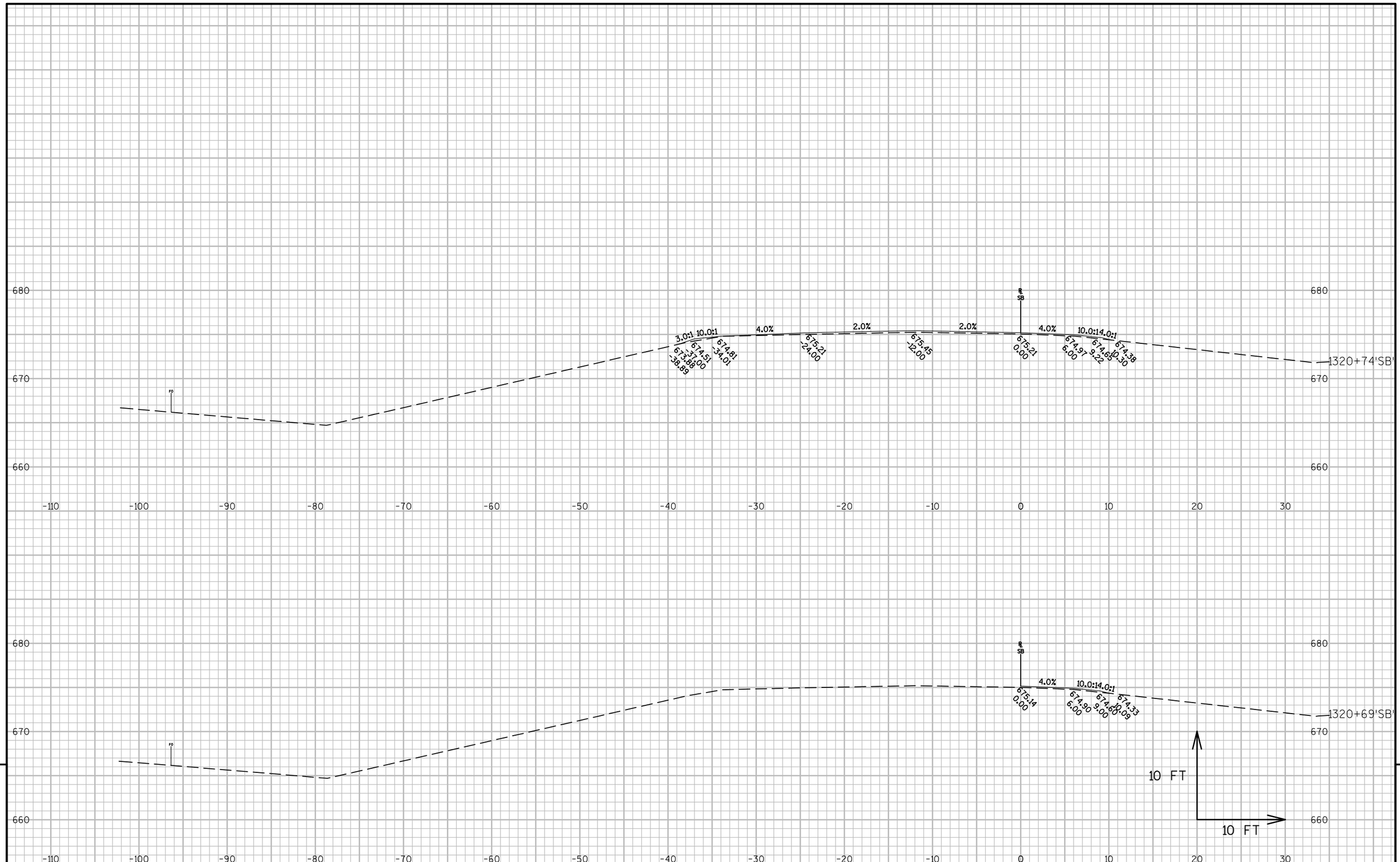
PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: IH 43 SB BEAMGUARD	SHEET 457	E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090203_XS.DWG
LAYOUT NAME - 090203_XSL

PLOT DATE : 1/21/2016 7:43 AM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49

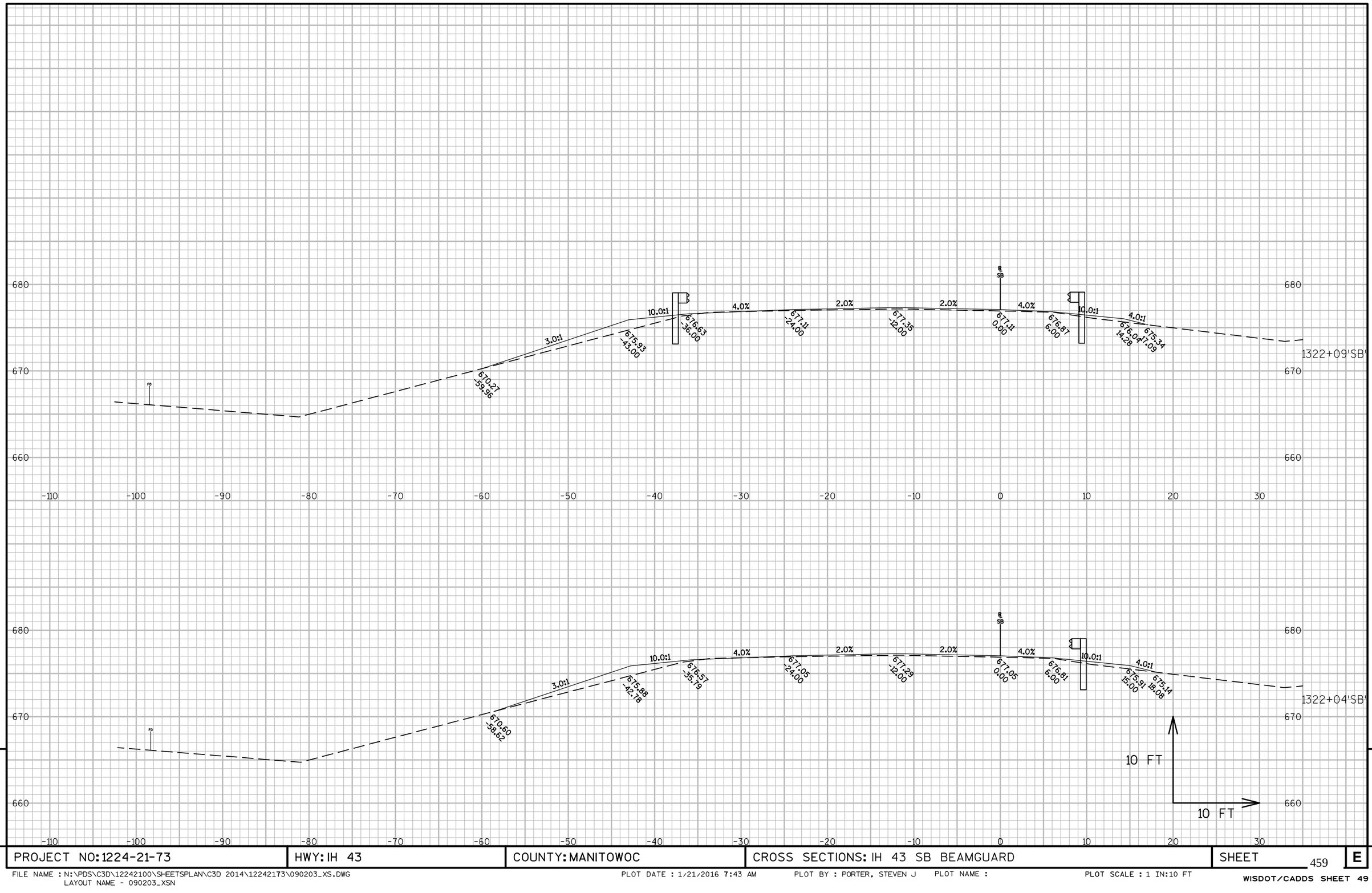


PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: IH 43 SB BEAMGUARD	SHEET 458	E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090203_XS.DWG
LAYOUT NAME - 090203_XSM

PLOT DATE : 1/21/2016 7:43 AM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49

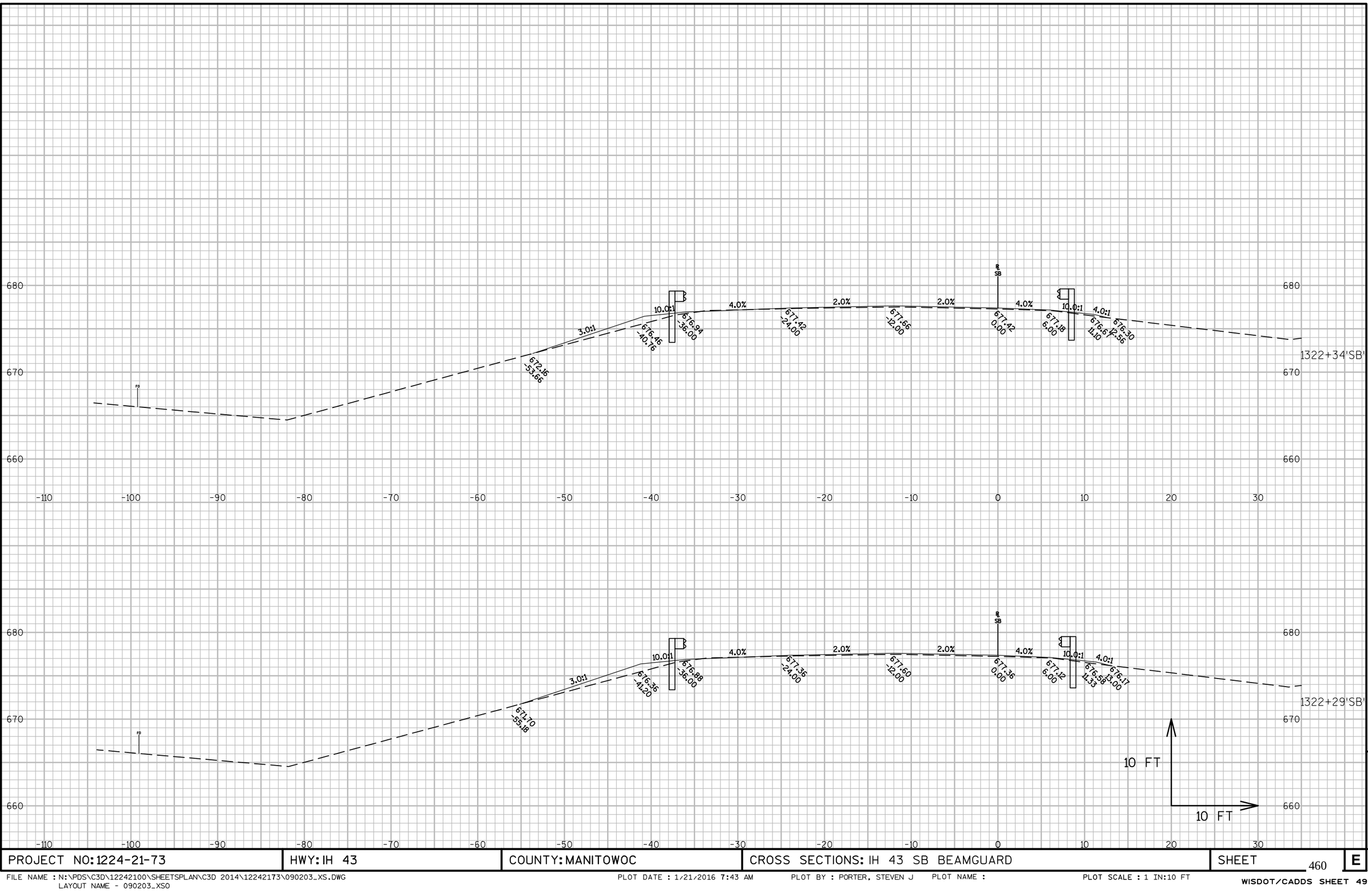


PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: IH 43 SB BEAMGUARD	SHEET 459	E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090203_XS.DWG
LAYOUT NAME - 090203_XSN

PLOT DATE : 1/21/2016 7:43 AM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



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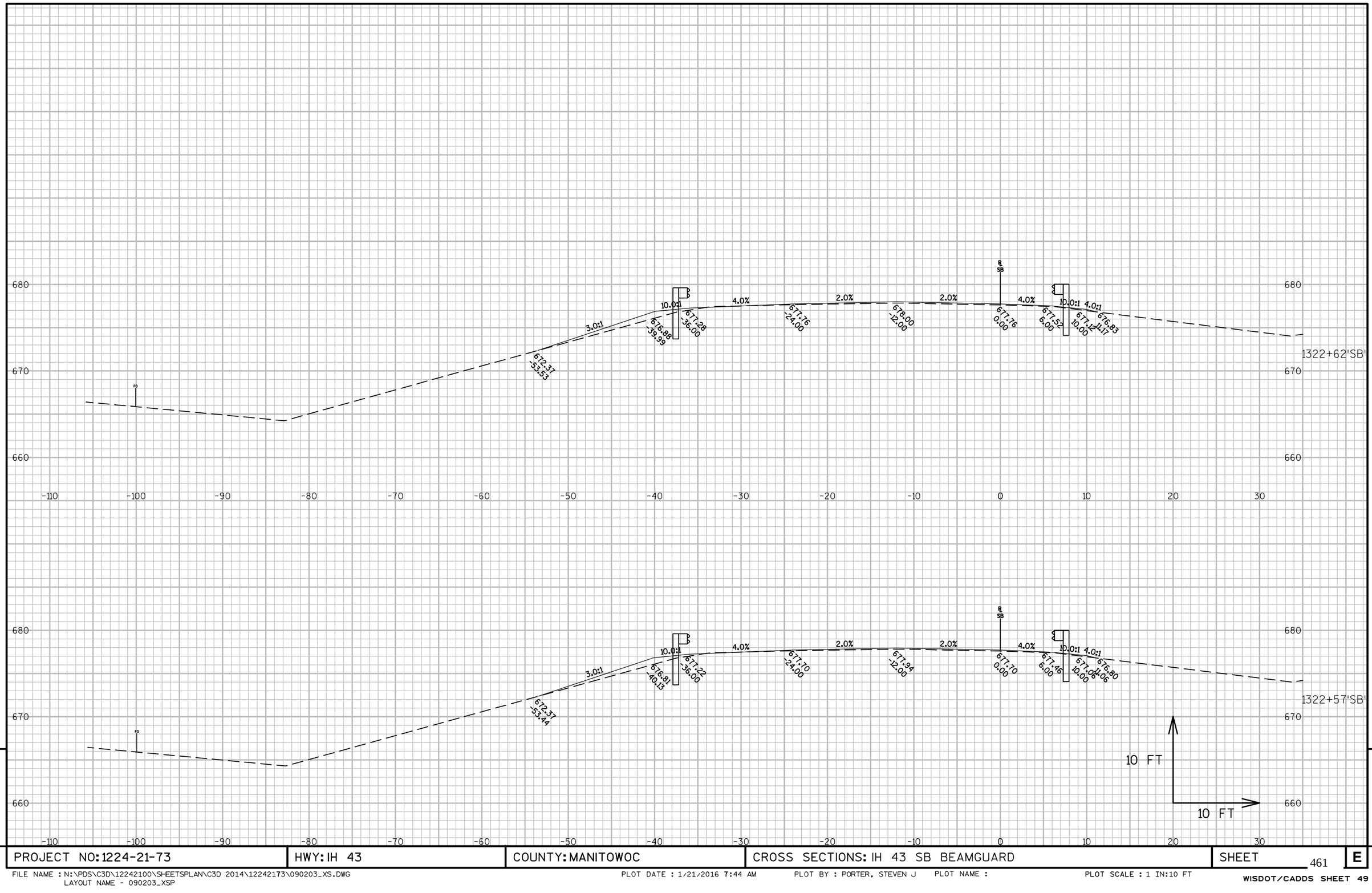
PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: IH 43 SB BEAMGUARD	SHEET 460	E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090203_XS.DWG
LAYOUT NAME - 090203_XSO

PLOT DATE : 1/21/2016 7:43 AM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49

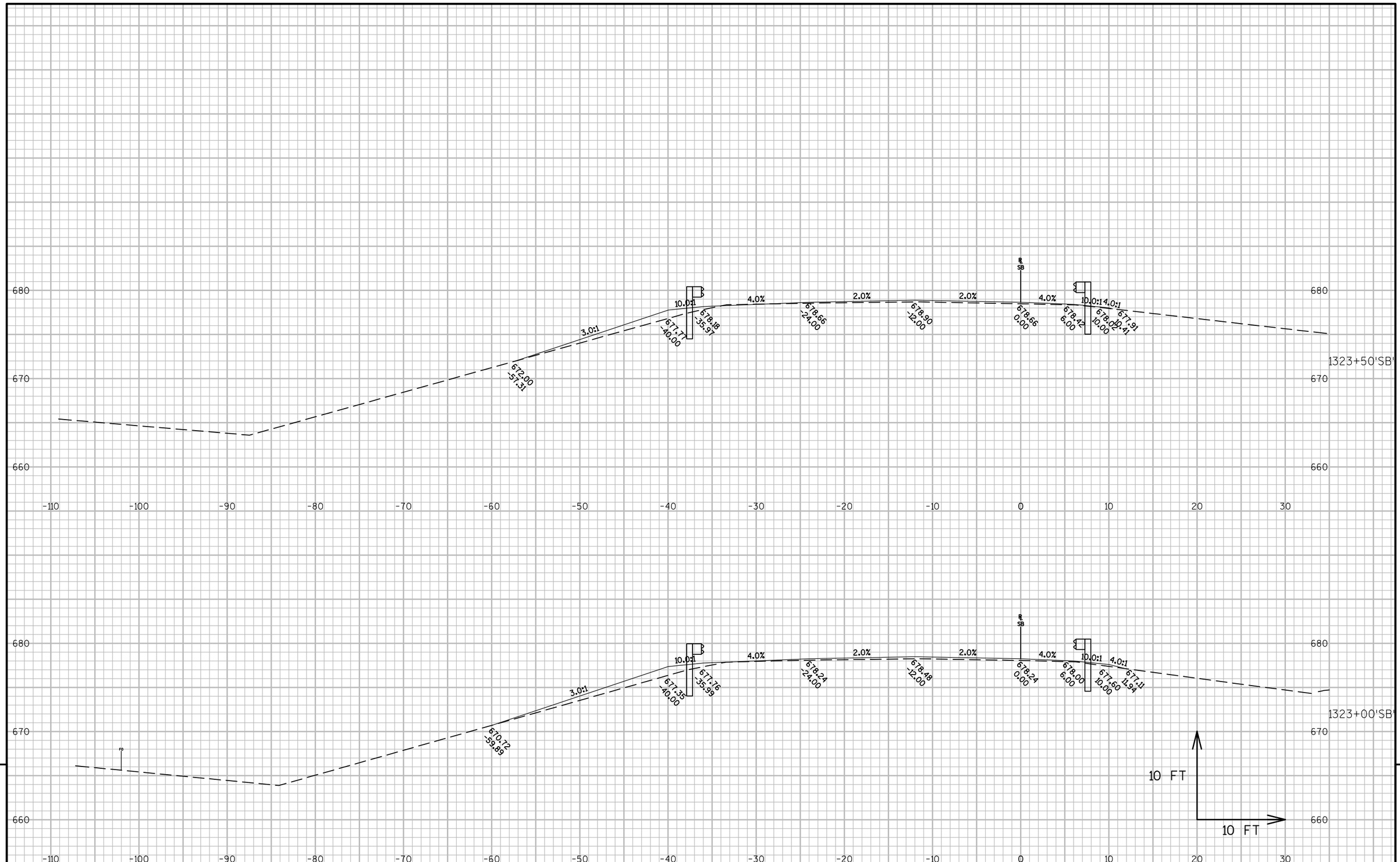


PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: IH 43 SB BEAMGUARD	SHEET 461	E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090203_XS.DWG
LAYOUT NAME - 090203_XSP

PLOT DATE : 1/21/2016 7:44 AM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



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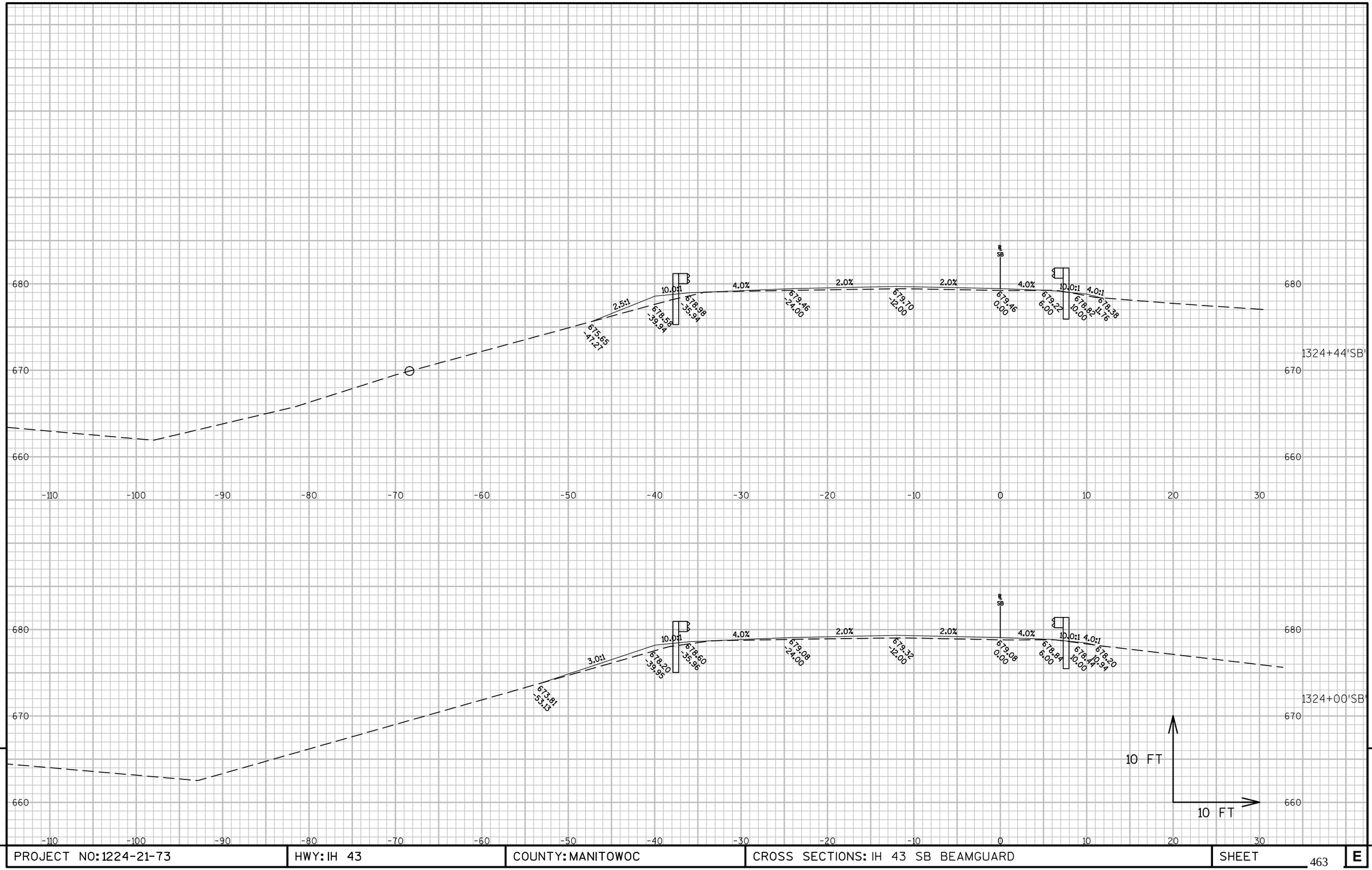
PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: IH 43 SB BEAMGUARD	SHEET 462	E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090203_XS.DWG
LAYOUT NAME - 090203_XSQ

PLOT DATE : 1/21/2016 7:44 AM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



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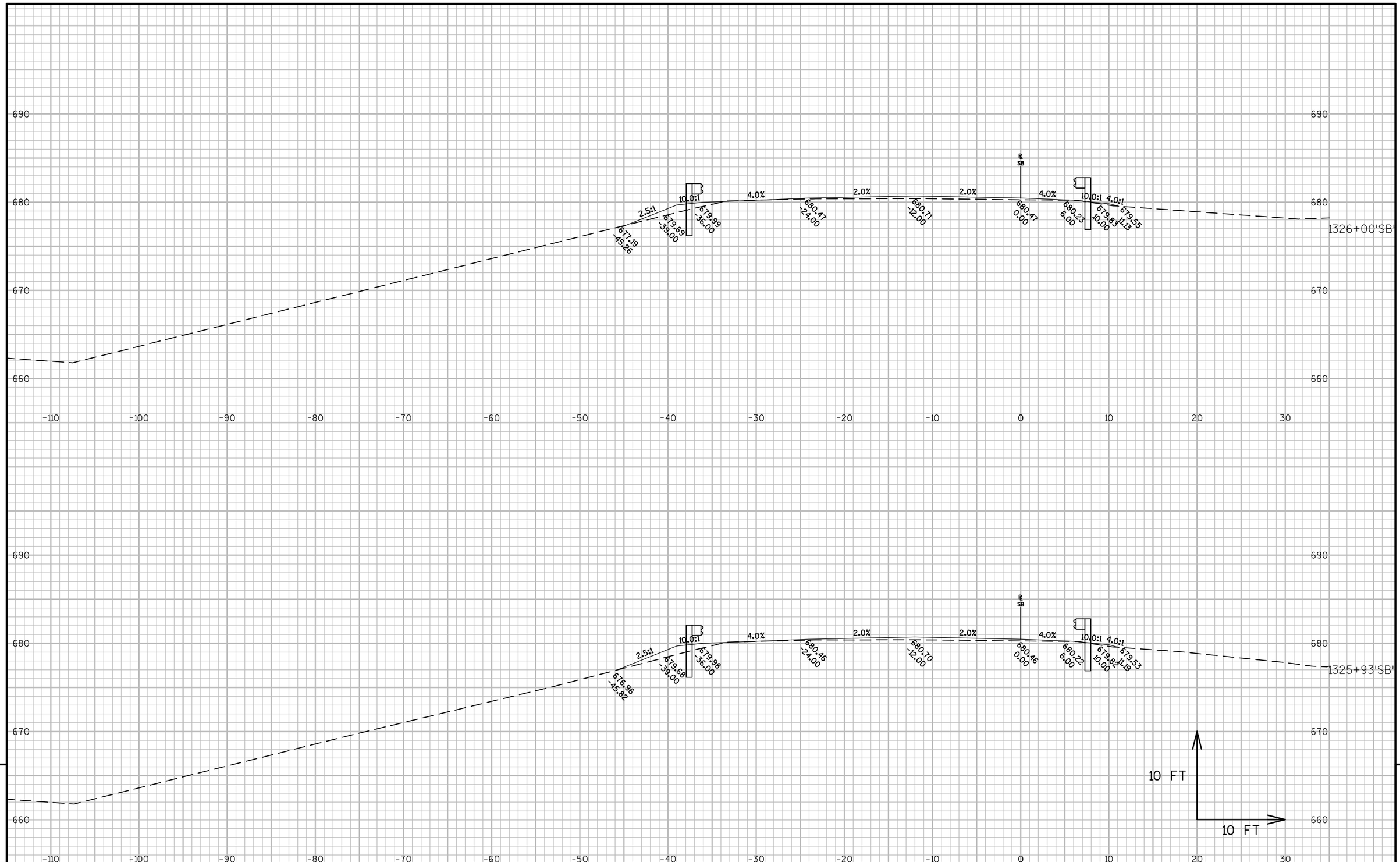
PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: IH 43 SB BEAMGUARD	SHEET 463	E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090203_XS.DWG
LAYOUT NAME - 090203_XSR

PLOT DATE : 1/21/2016 7:44 AM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



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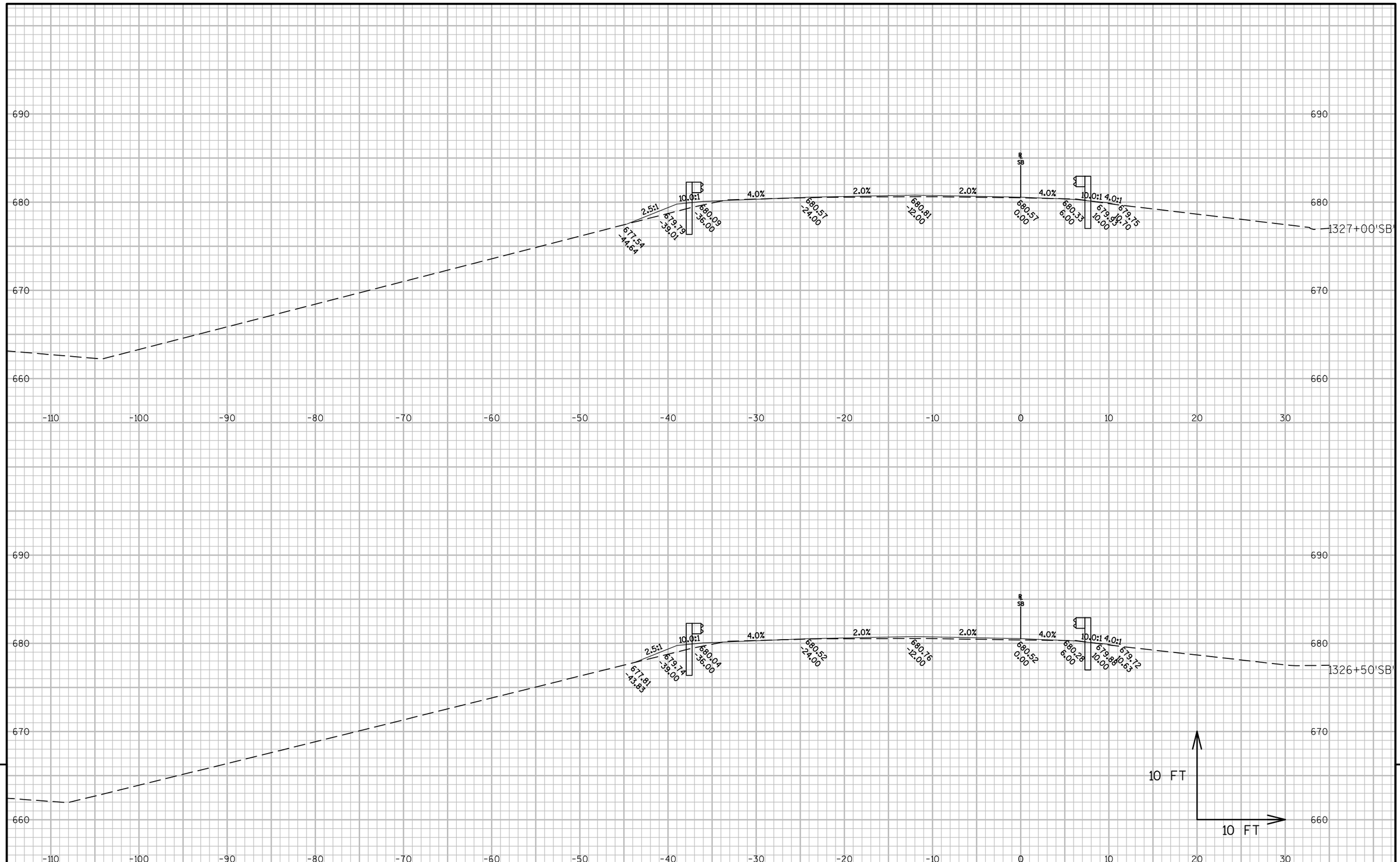
PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: IH 43 SB BEAMGUARD	SHEET 464	E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090203_XS.DWG
LAYOUT NAME - 090203_XSS

PLOT DATE : 1/21/2016 7:44 AM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



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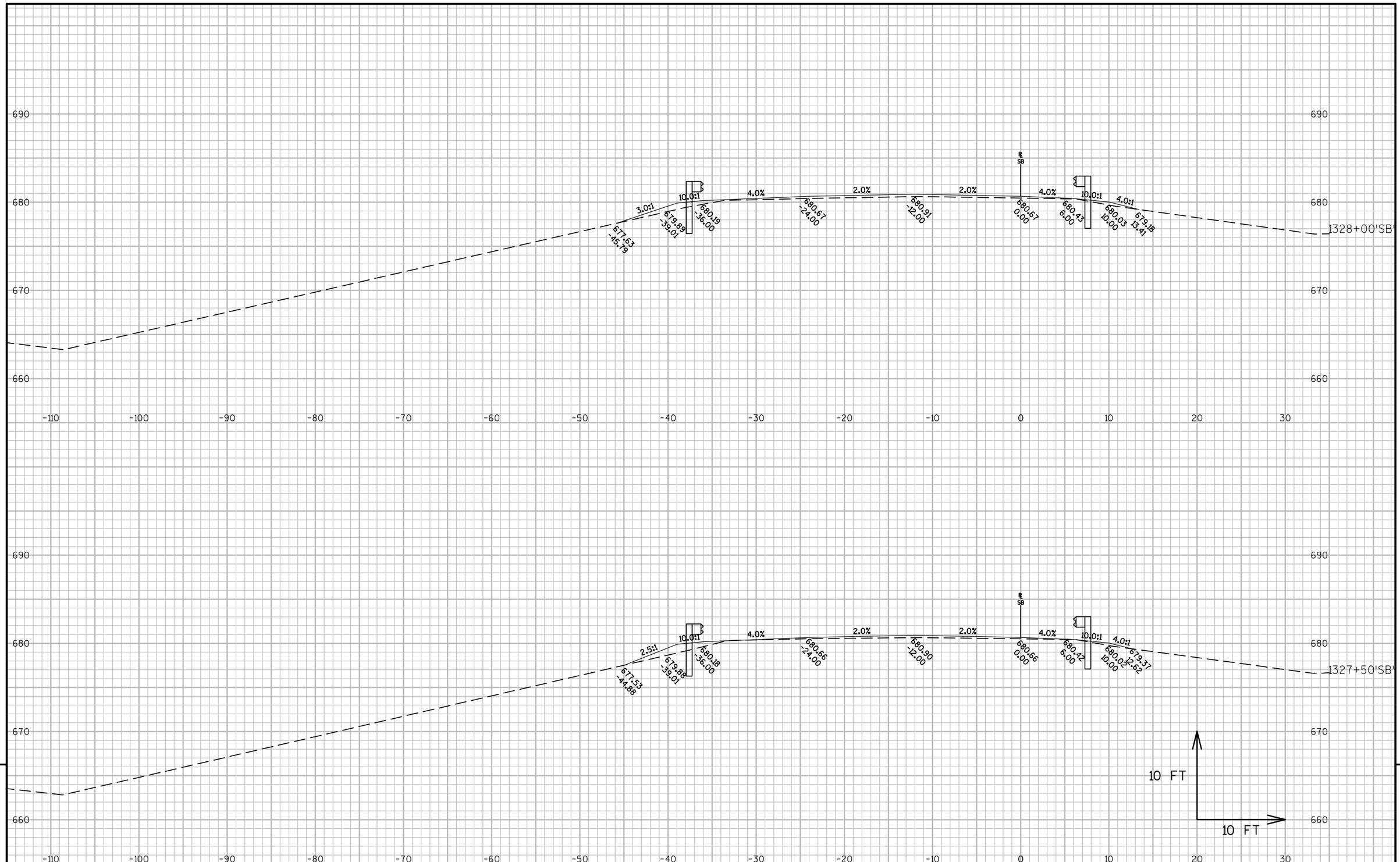
PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: IH 43 SB BEAMGUARD	SHEET 465	E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090203_XS.DWG
LAYOUT NAME - 090203_XST

PLOT DATE : 1/21/2016 7:45 AM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT

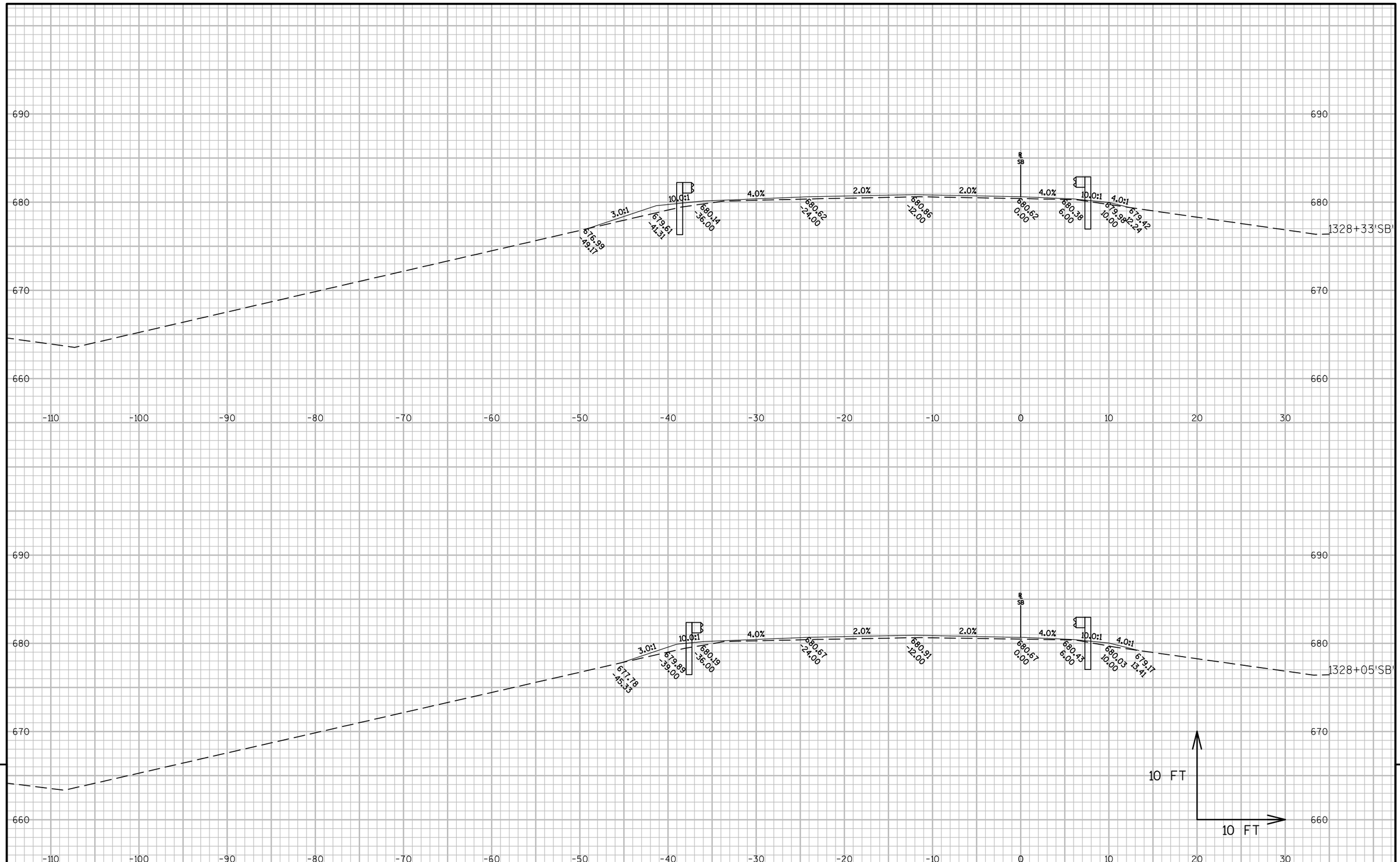


PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: IH 43 SB BEAMGUARD	SHEET 466 E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090203_XS.DWG
LAYOUT NAME - 090203_XSU

PLOT DATE : 1/21/2016 7:45 AM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



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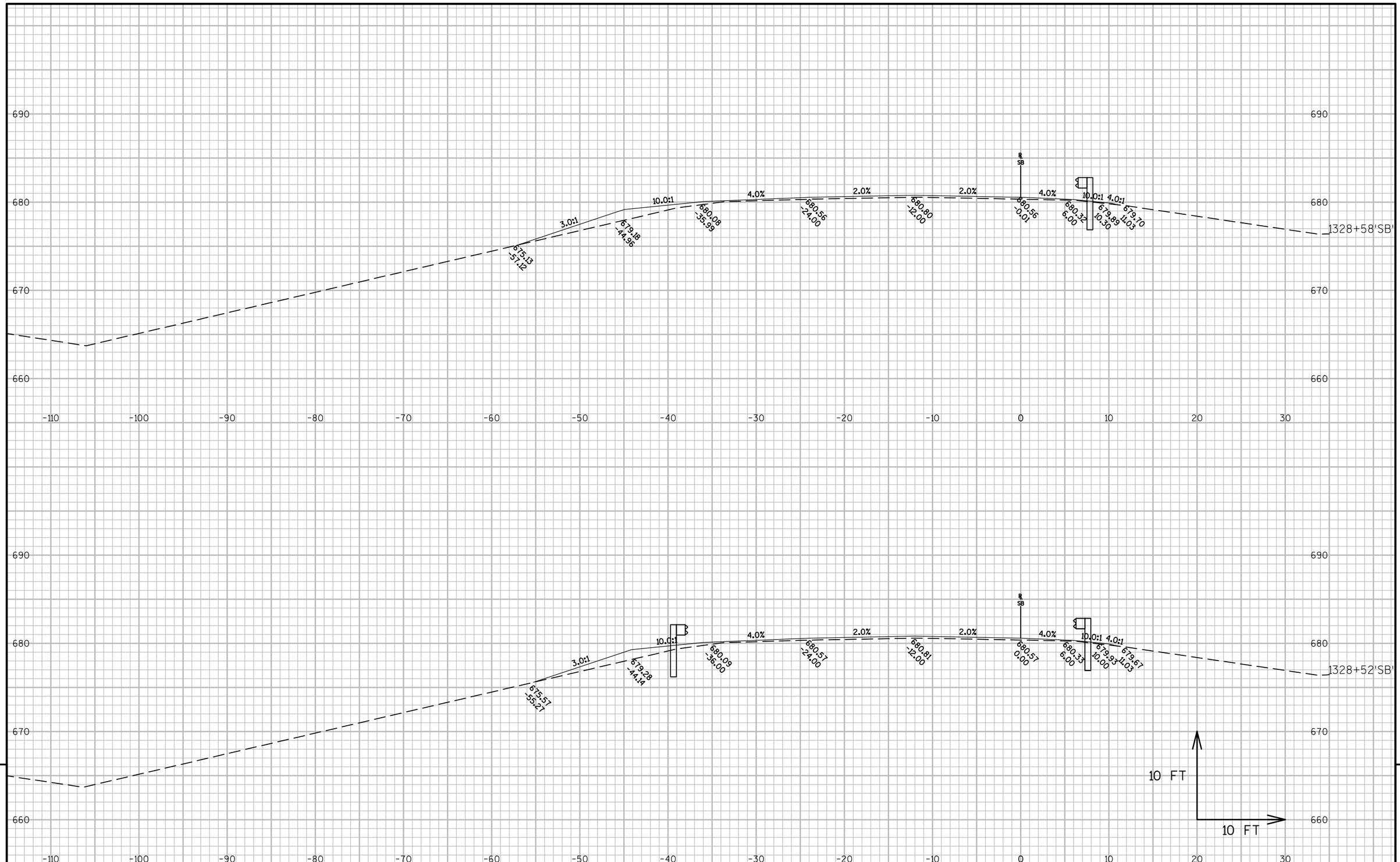
PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: IH 43 SB BEAMGUARD	SHEET 467	E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090203_XS.DWG
LAYOUT NAME - 090203_XSV

PLOT DATE : 1/21/2016 7:45 AM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



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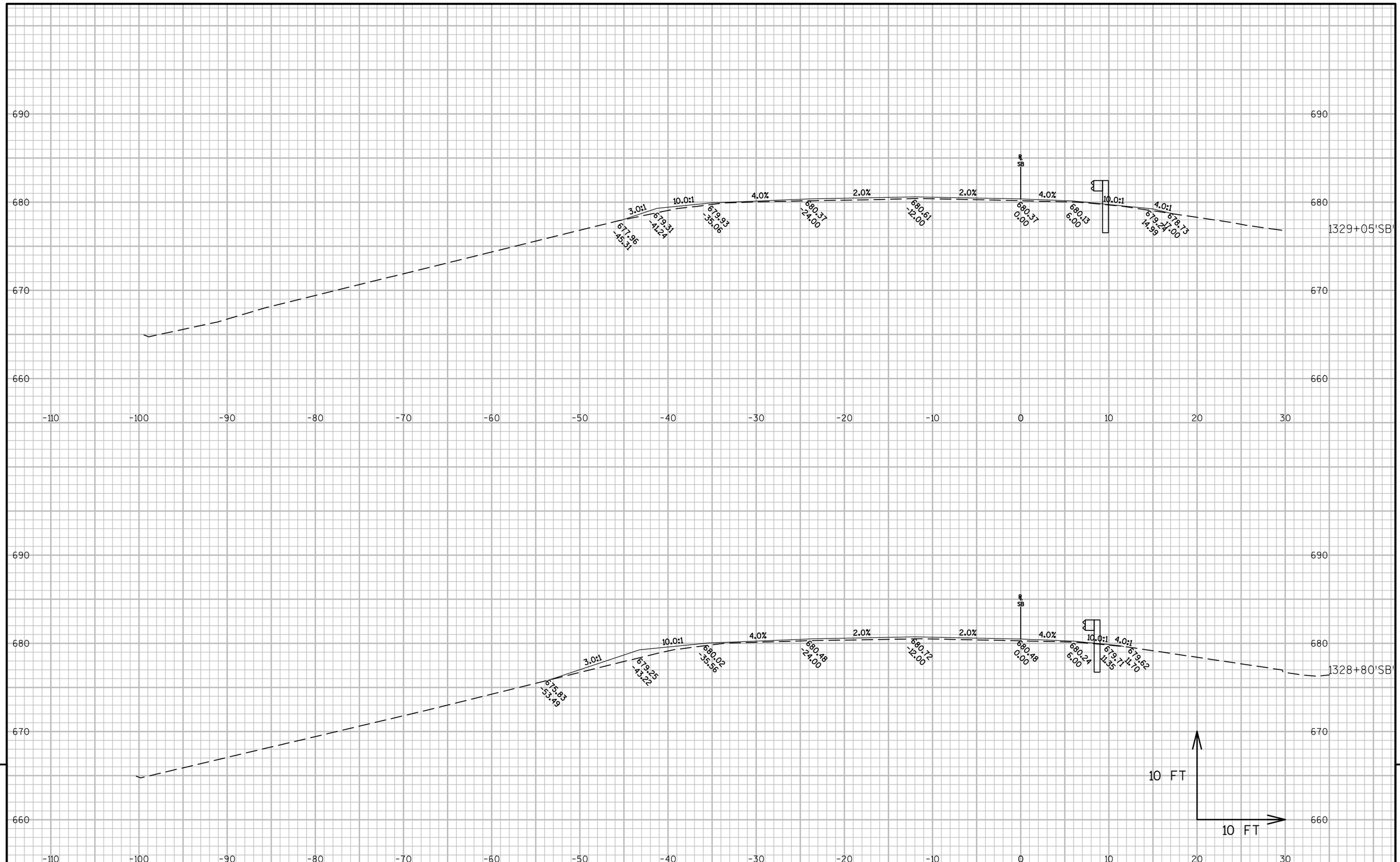
PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: IH 43 SB BEAMGUARD	SHEET 468	E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090203_XS.DWG
LAYOUT NAME - 090203_XSW

PLOT DATE : 1/21/2016 7:45 AM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT

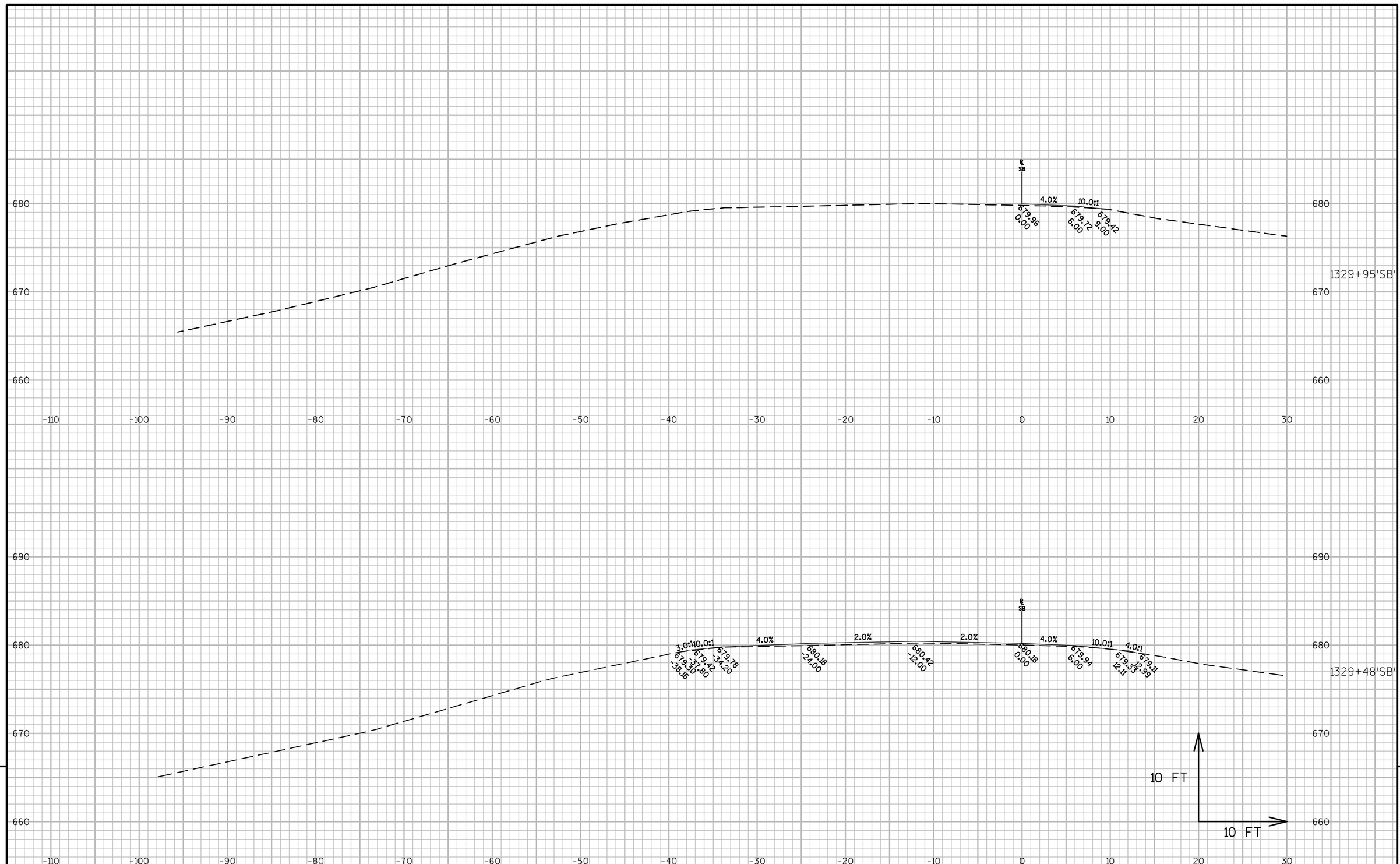


PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: IH 43 SB BEAMGUARD	SHEET 469	E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090203_XS.DWG
LAYOUT NAME - 090203_XSX

PLOT DATE : 1/21/2016 7:46 AM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



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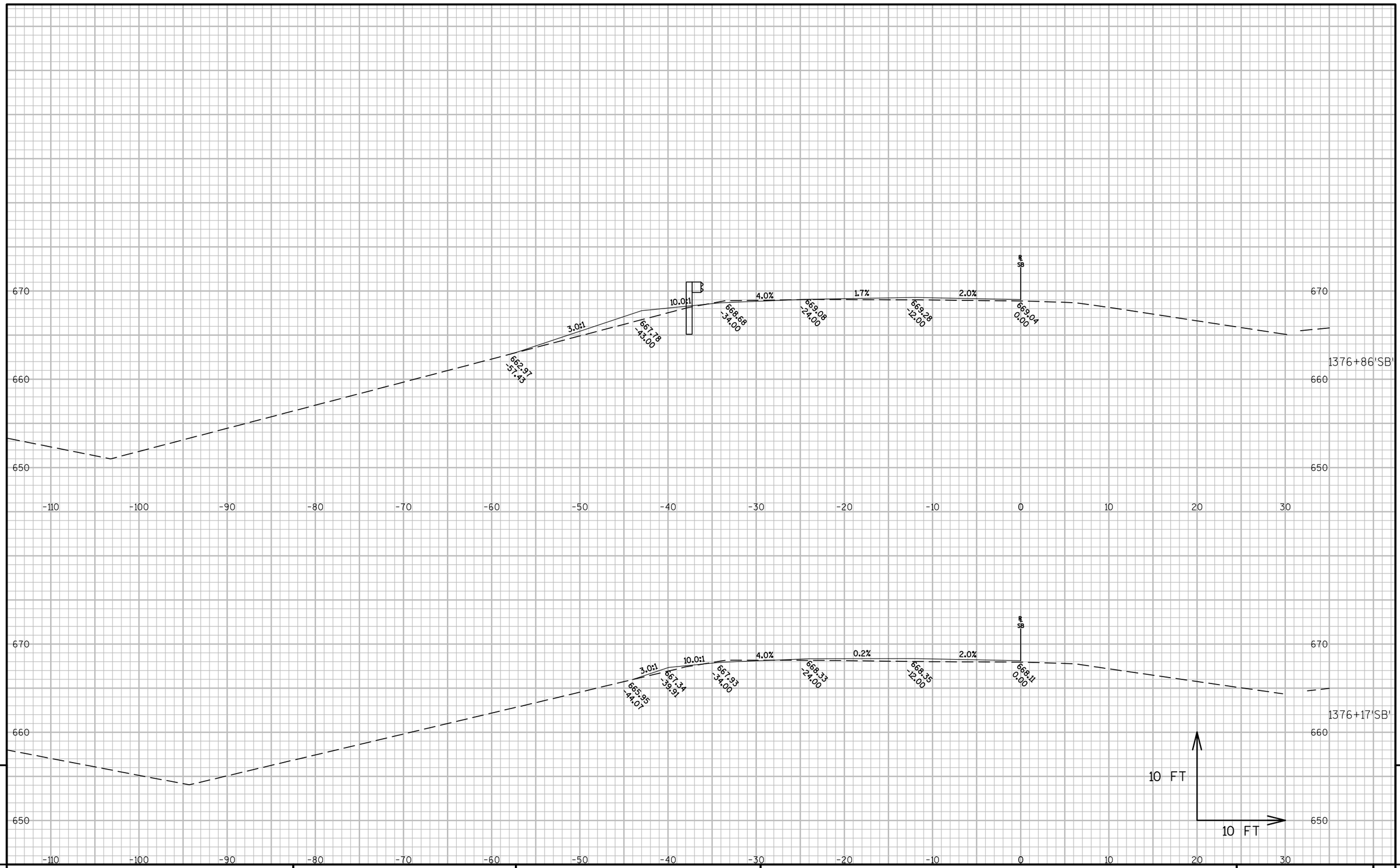
PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: IH 43 SB BEAMGUARD	SHEET 470	E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090203_XS.DWG
LAYOUT NAME - 090203_XSY

PLOT DATE : 1/21/2016 7:46 AM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



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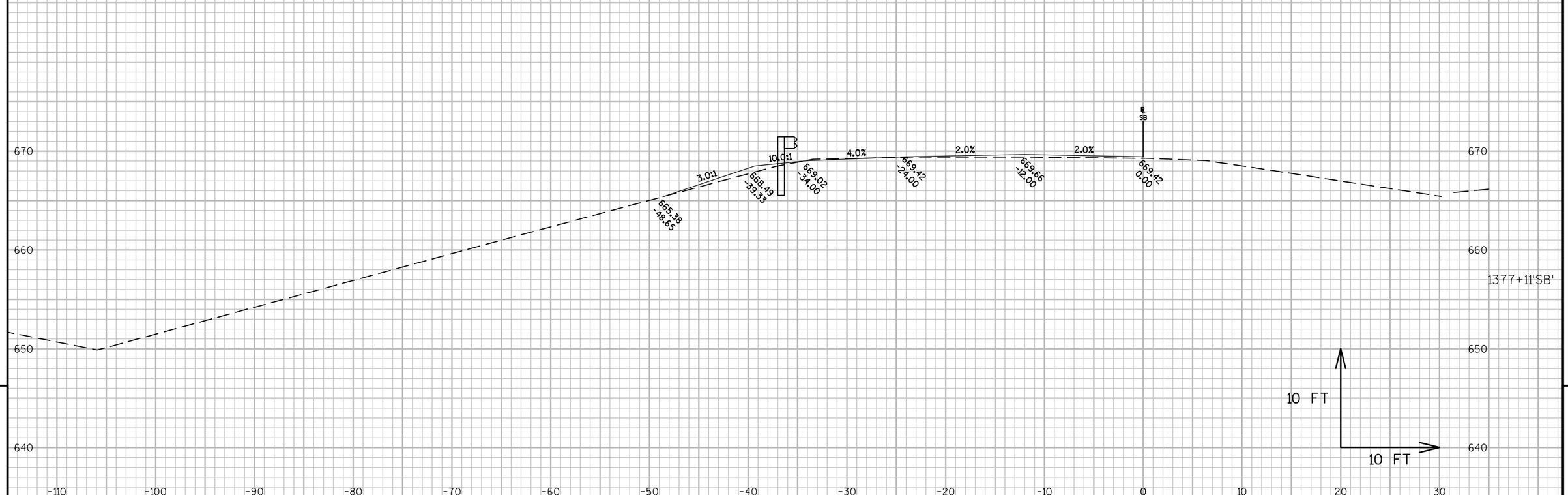
PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: IH 43 SB BEAMGUARD	SHEET 471	E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090203_XS.DWG
LAYOUT NAME - 090203_XSZ

PLOT DATE : 1/21/2016 7:46 AM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT

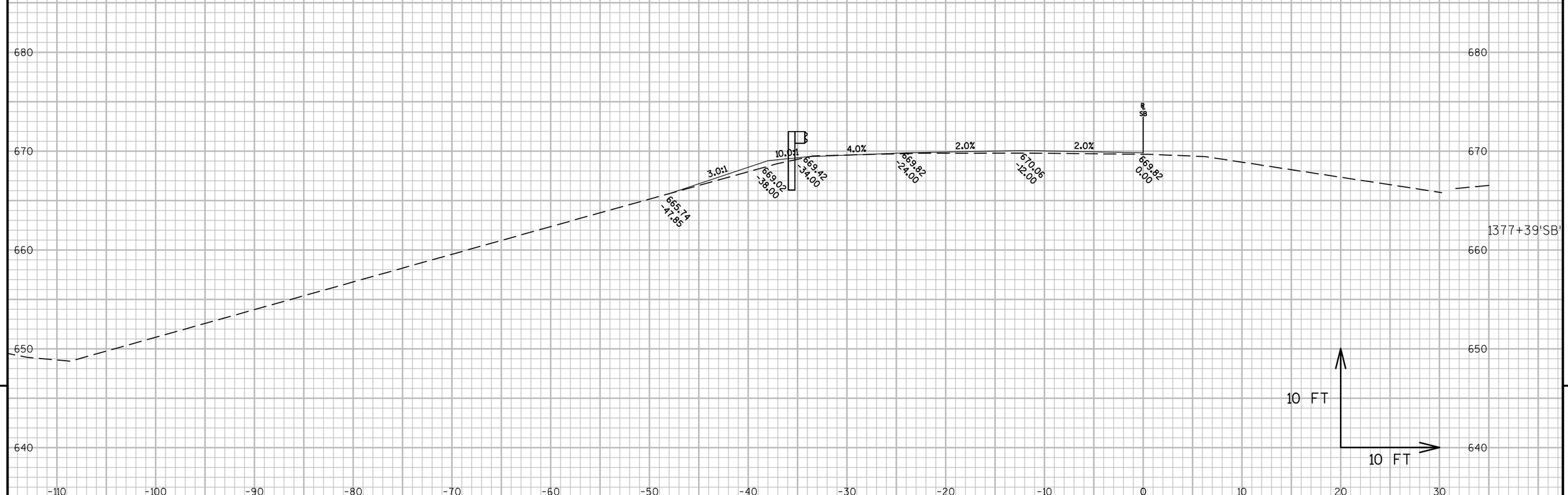


PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: IH 43 SB BEAMGUARD	SHEET 472	E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090203_XS.DWG
LAYOUT NAME - 090203_XSAA

PLOT DATE : 1/21/2016 7:46 AM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49

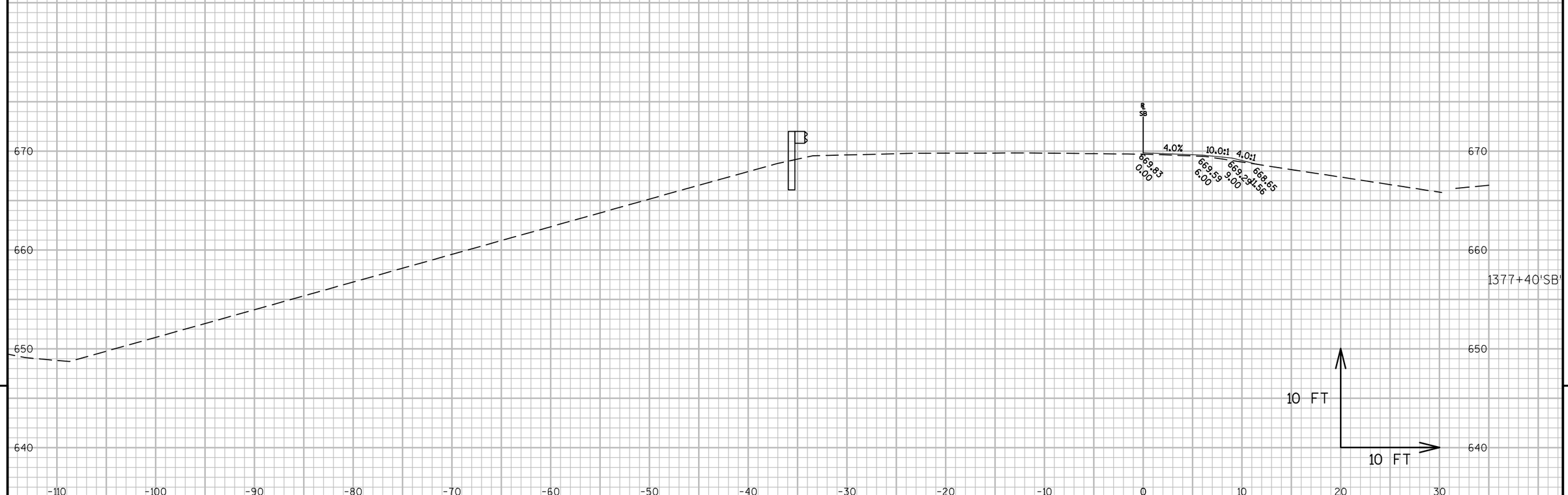


PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: IH 43 SB BEAMGUARD	SHEET 473	E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090203_XS.DWG
LAYOUT NAME - 090203_XSAB

PLOT DATE : 1/21/2016 7:47 AM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



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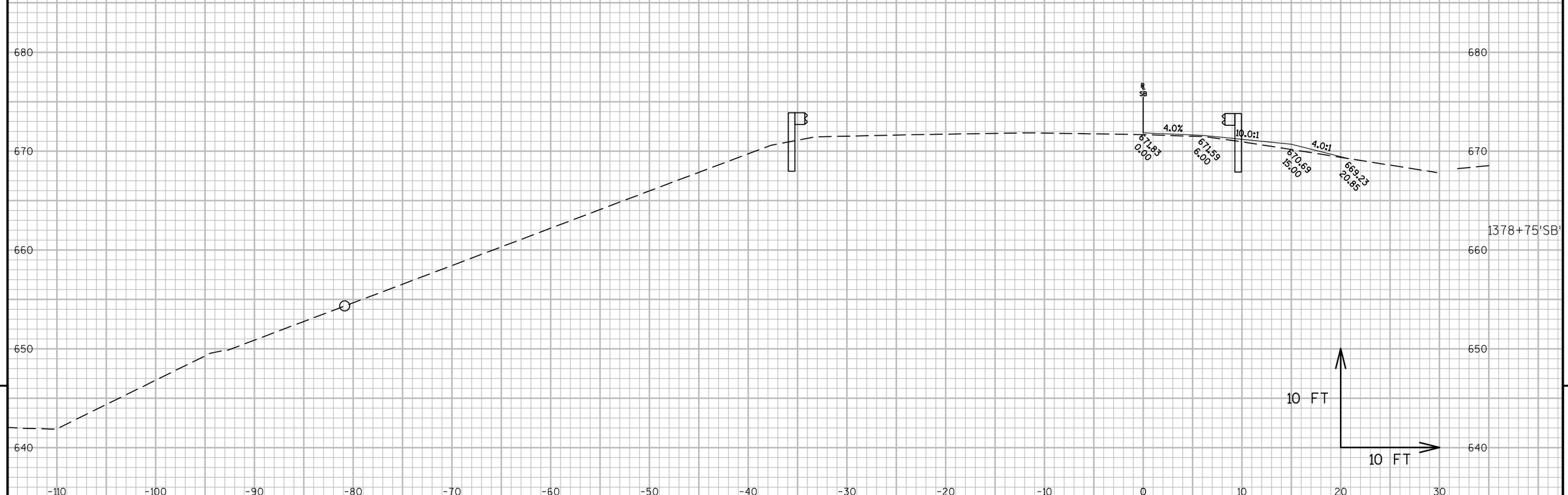
PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: IH 43 SB BEAMGUARD	SHEET 474	E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090203_XS.DWG
LAYOUT NAME - 090203_XSAC

PLOT DATE : 1/21/2016 7:47 AM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT



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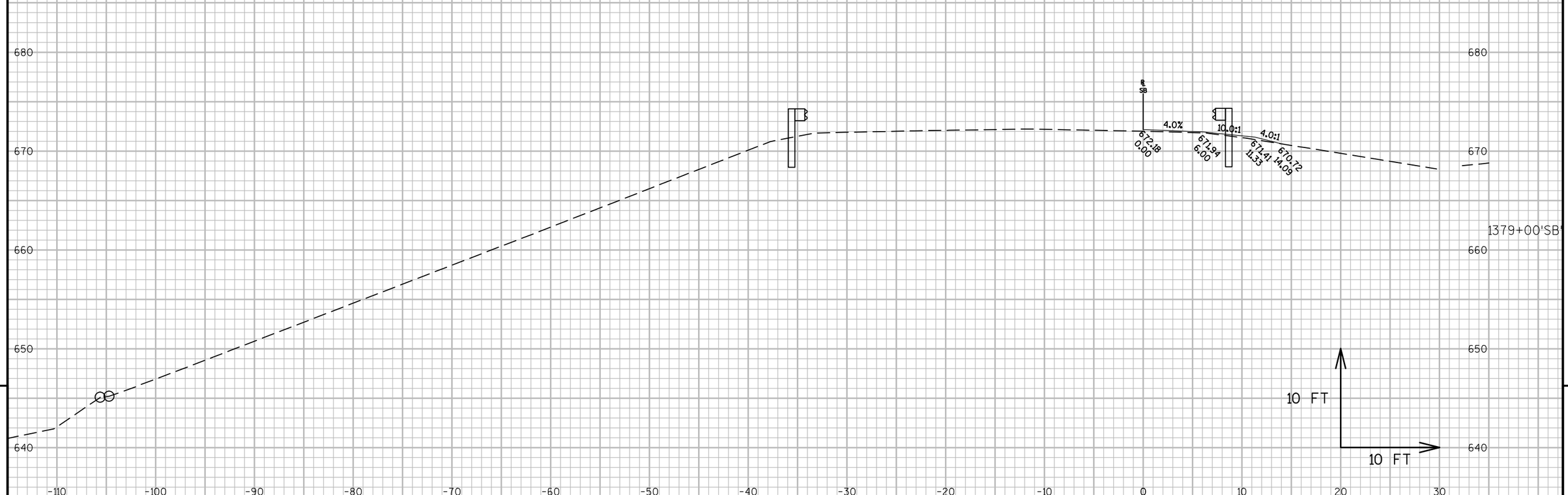
PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: IH 43 SB BEAMGUARD	SHEET 475	E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090203_XS.DWG
LAYOUT NAME - 090203_XSAD

PLOT DATE : 1/21/2016 7:47 AM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



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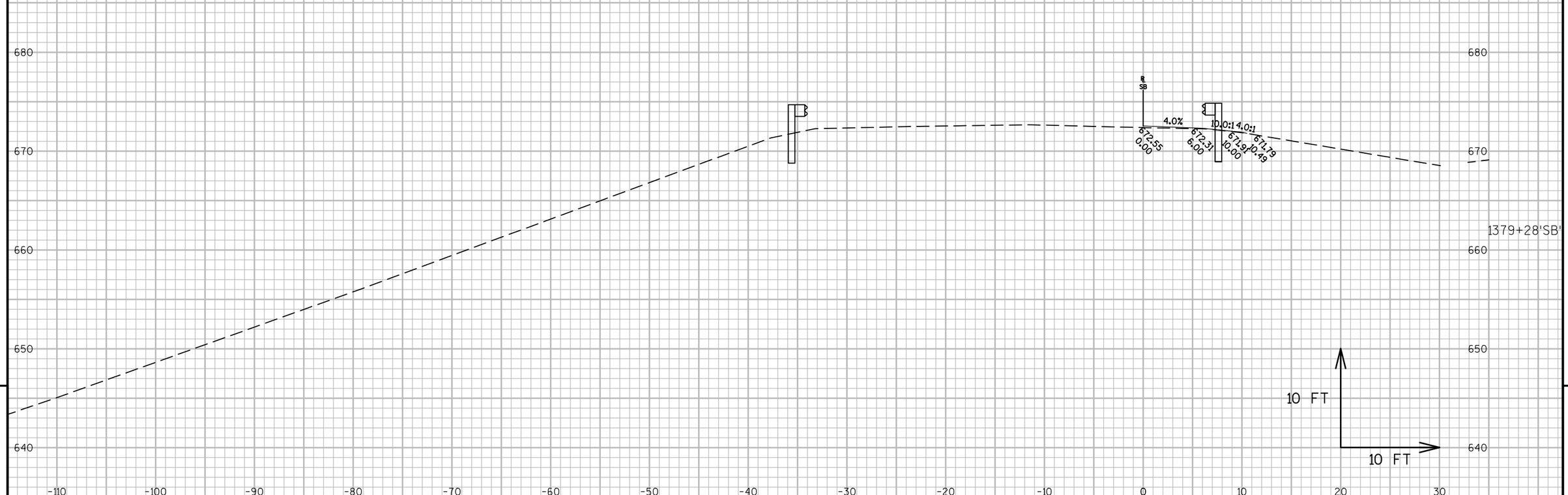
PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: IH 43 SB BEAMGUARD	SHEET 476	E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090203_XS.DWG
LAYOUT NAME - 090203_XSAE

PLOT DATE : 1/21/2016 7:47 AM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT



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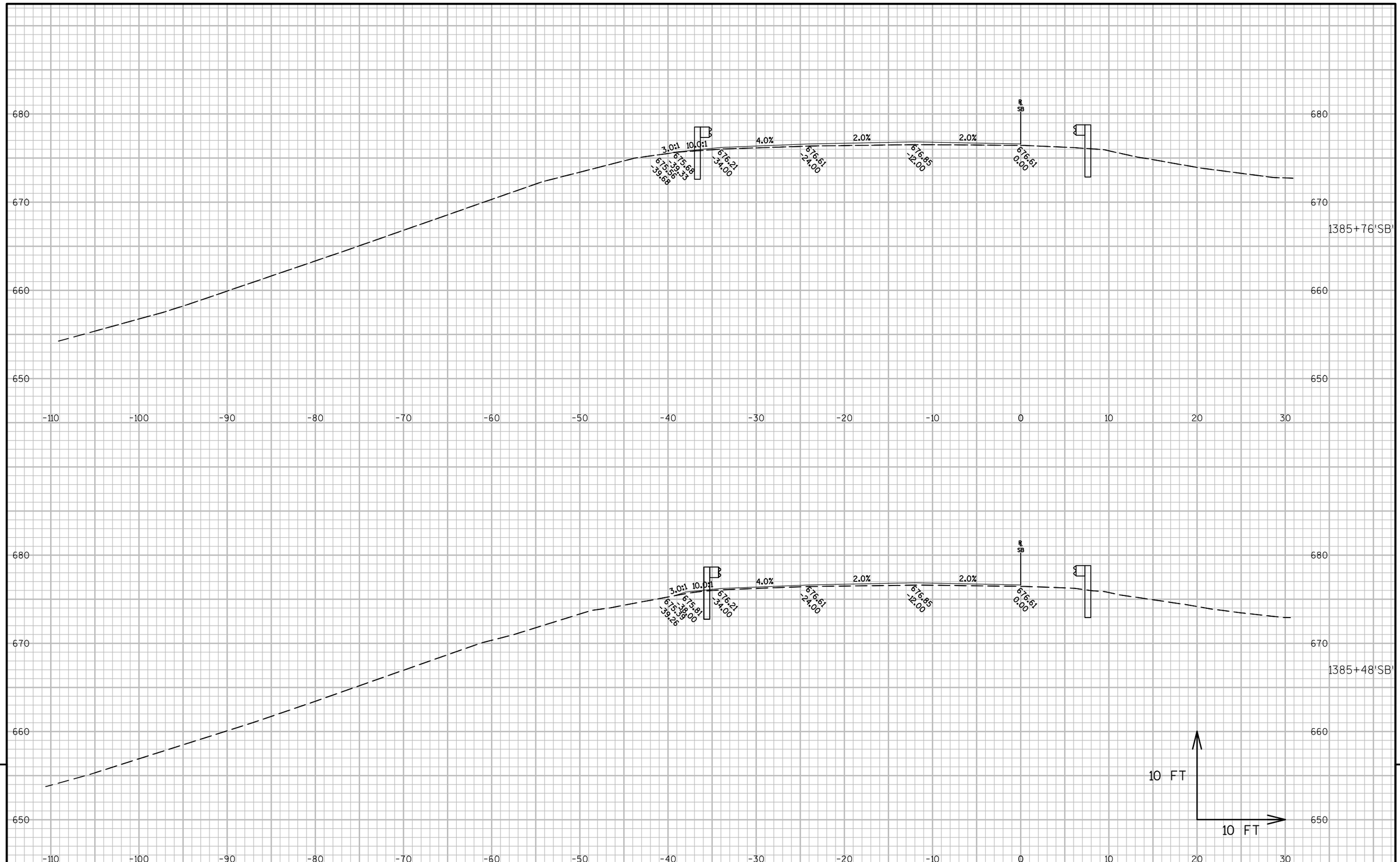
PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: IH 43 SB BEAMGUARD	SHEET 477	E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090203_XS.DWG
LAYOUT NAME - 090203_XSAF

PLOT DATE : 1/21/2016 7:48 AM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT



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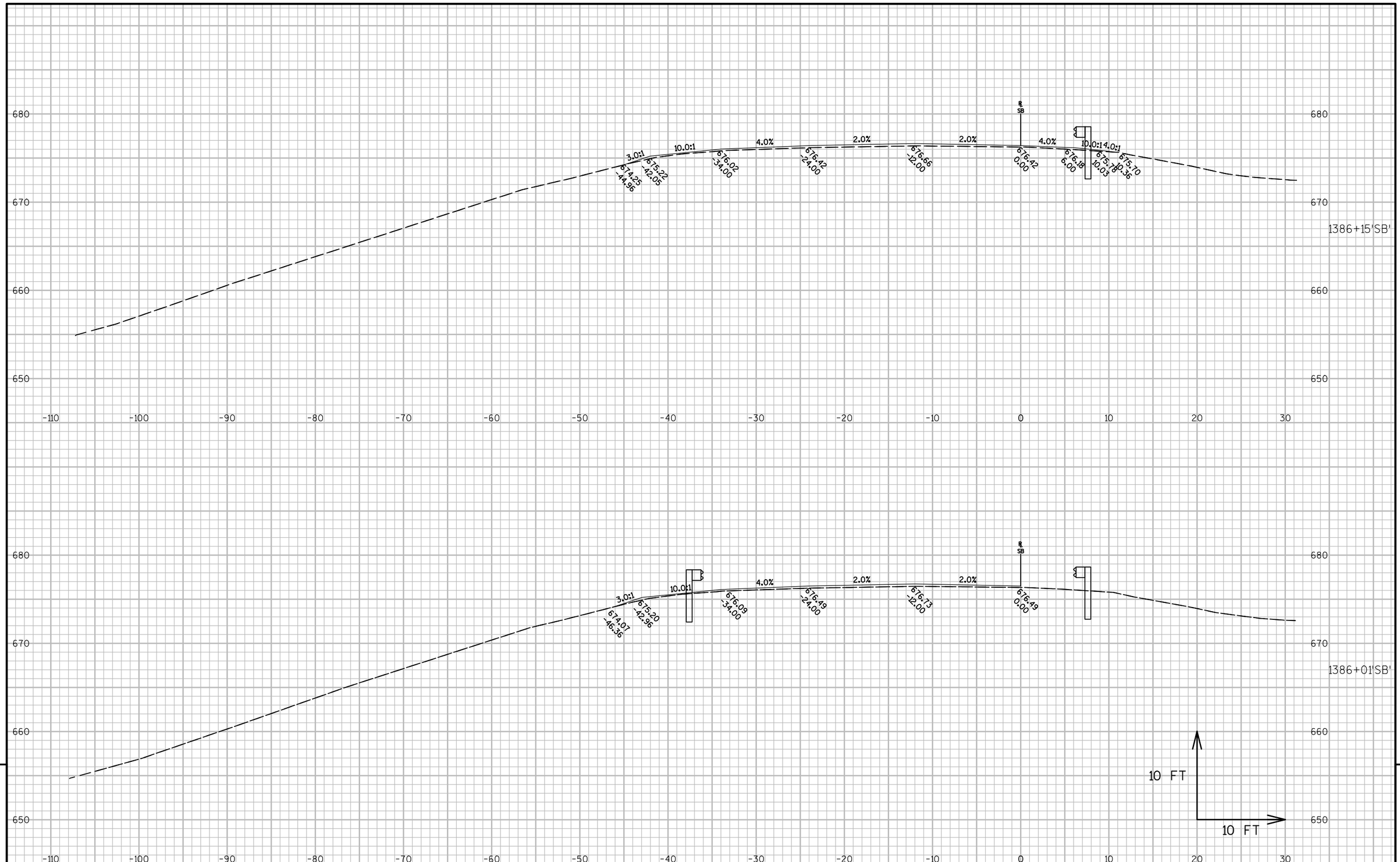
PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: IH 43 SB BEAMGUARD	SHEET 478	E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090203_XS.DWG
LAYOUT NAME - 090203_XSAG

PLOT DATE : 1/21/2016 7:48 AM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



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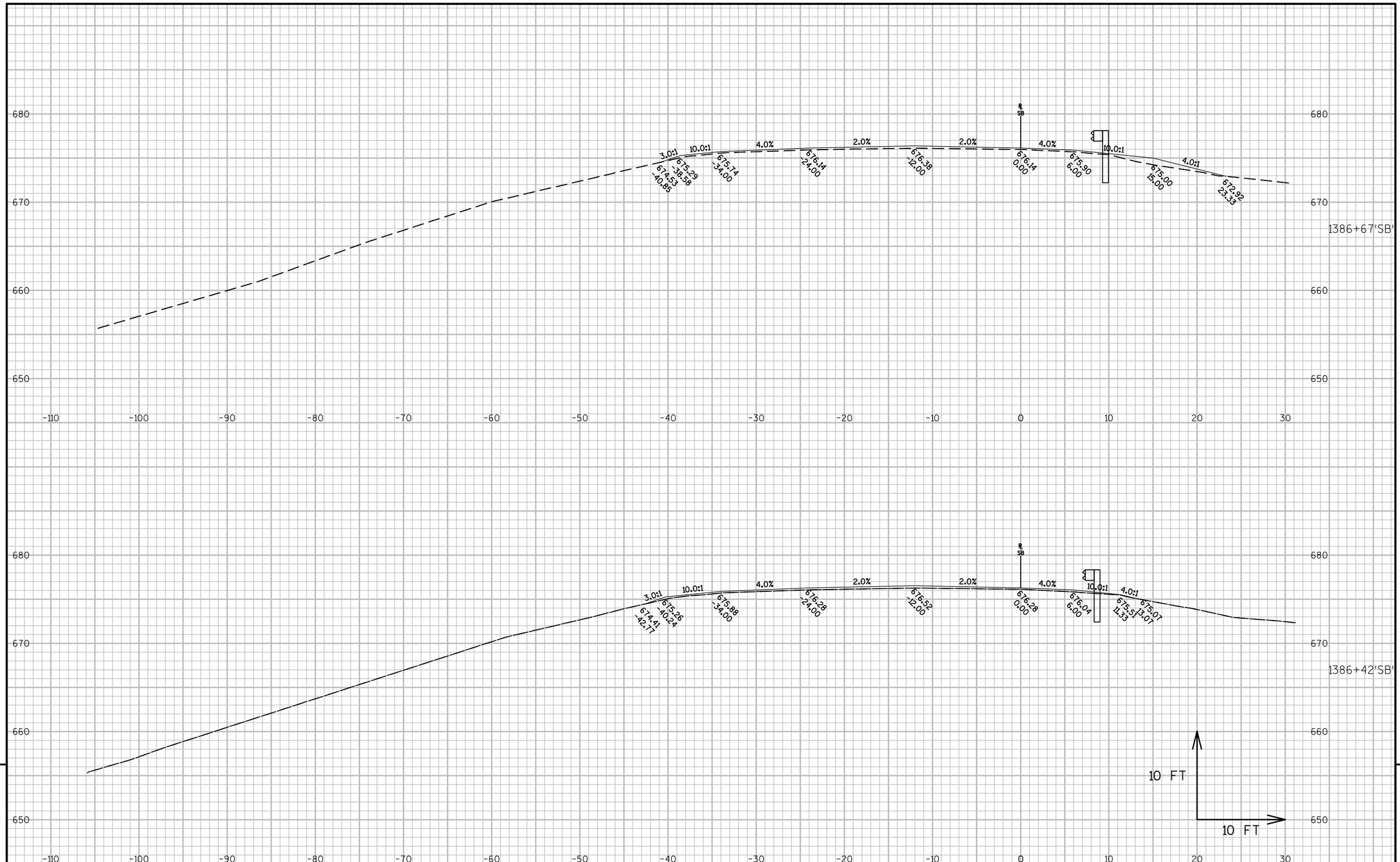
PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: IH 43 SB BEAMGUARD	SHEET 479	E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090203_XS.DWG
LAYOUT NAME - 090203_XSAH

PLOT DATE : 1/21/2016 7:48 AM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



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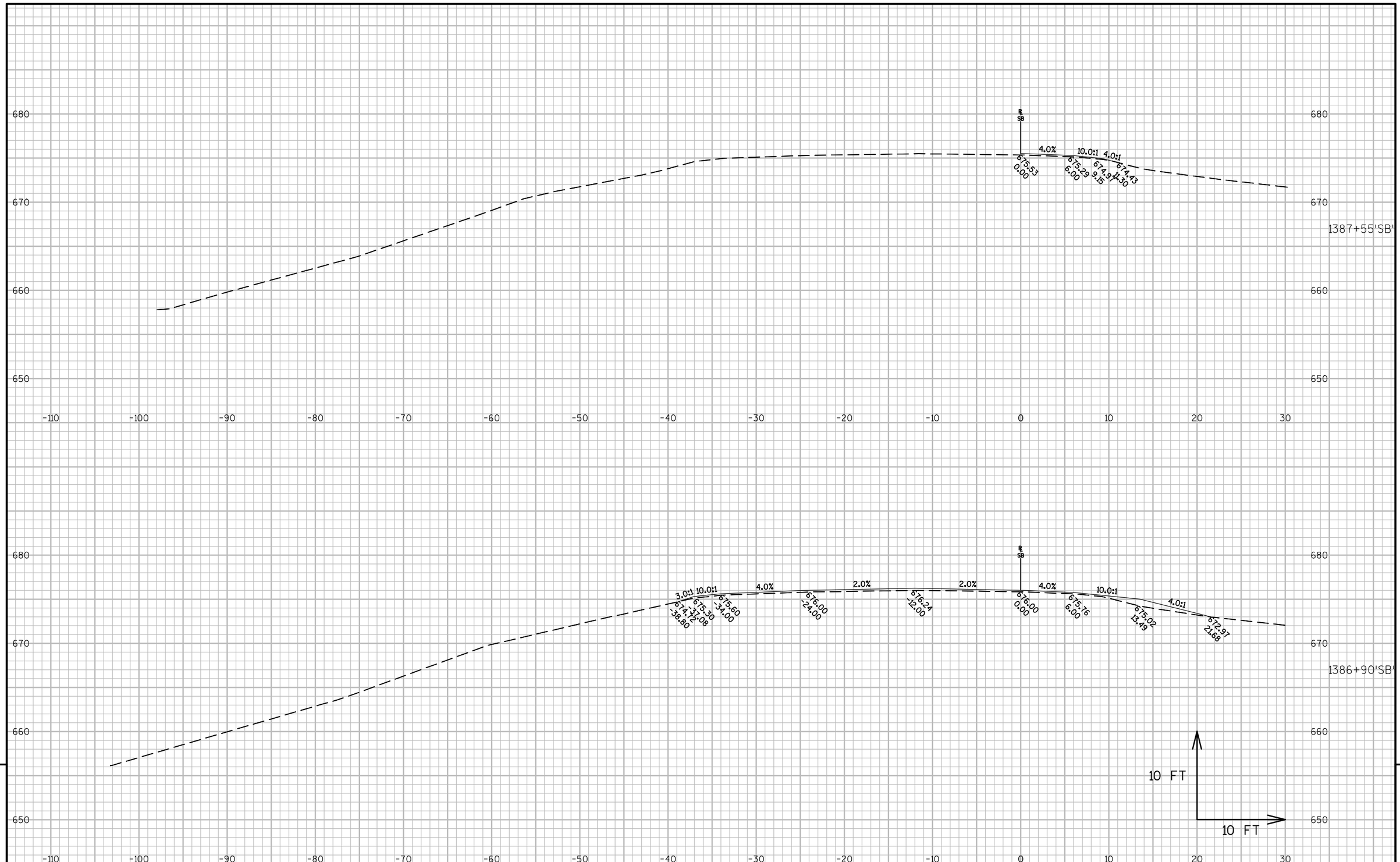
PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: IH 43 SB BEAMGUARD	SHEET 480	E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090203_XS.DWG
LAYOUT NAME - 090203_XSAI

PLOT DATE : 1/21/2016 7:48 AM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



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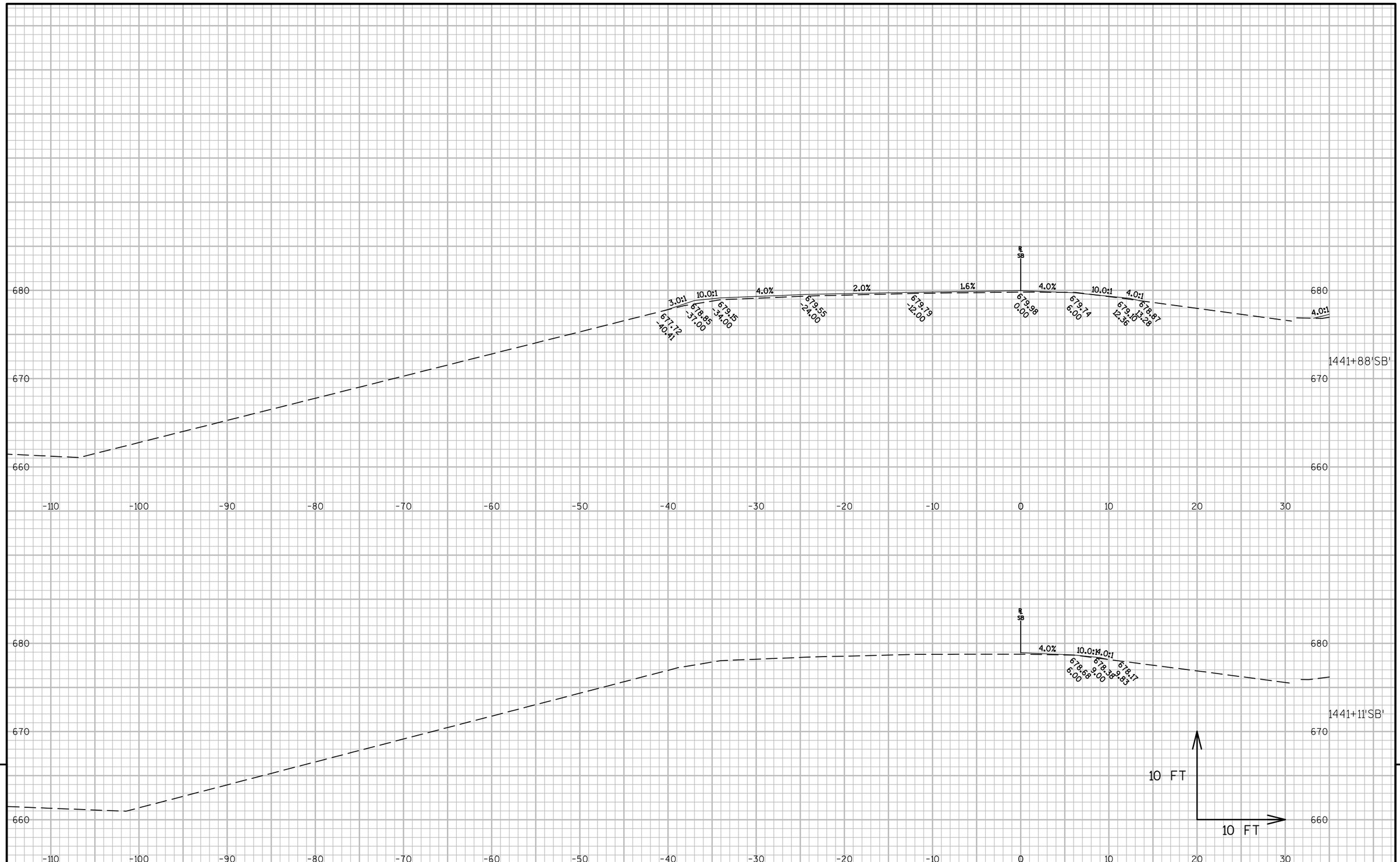
PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: IH 43 SB BEAMGUARD	SHEET 481	E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090203_XS.DWG
LAYOUT NAME - 090203_XSAJ

PLOT DATE : 1/21/2016 7:49 AM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49

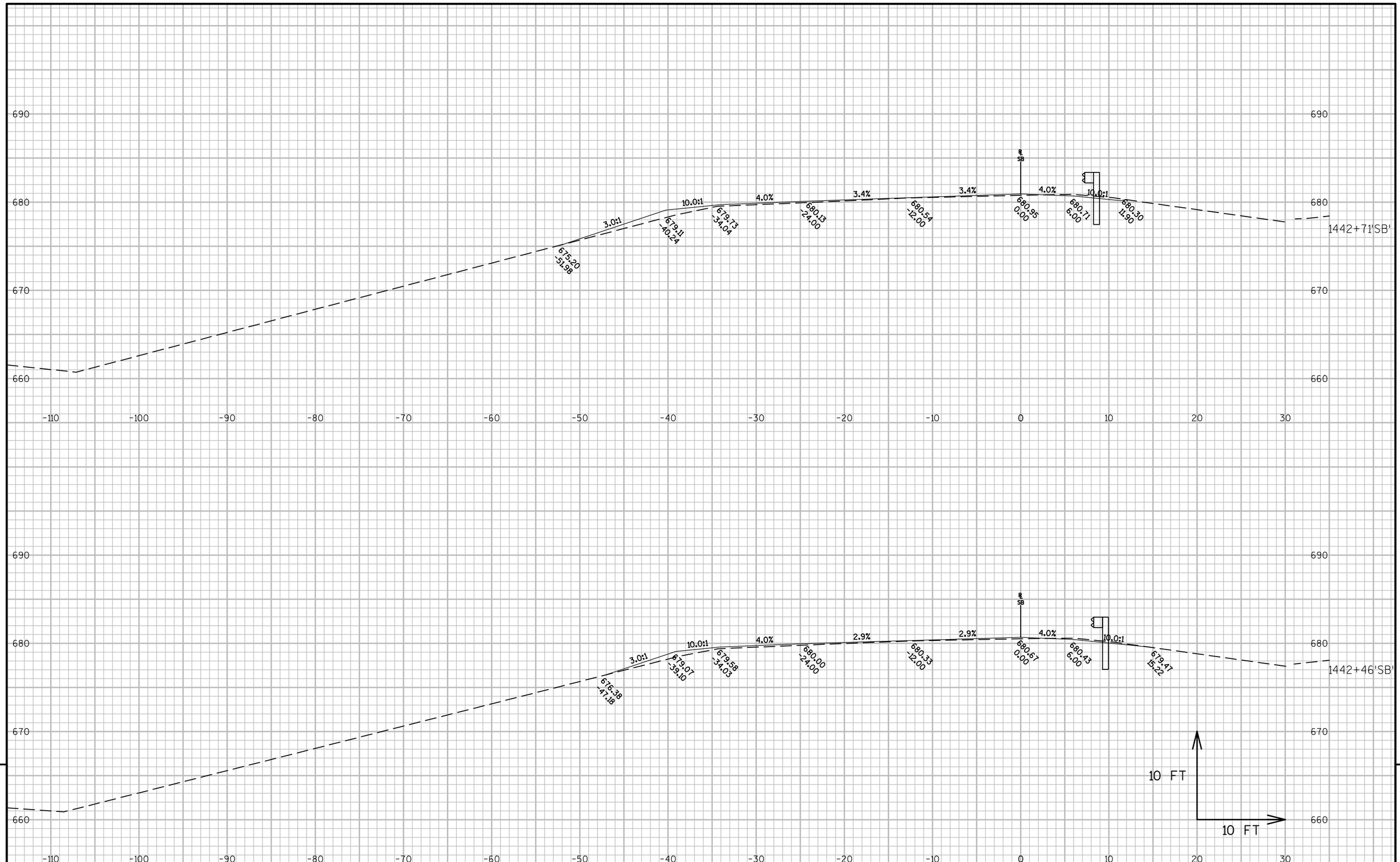


PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: IH 43 SB BEAMGUARD	SHEET 482 E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090203_XS.DWG
LAYOUT NAME - 090203_XSAK

PLOT DATE : 1/21/2016 7:49 AM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



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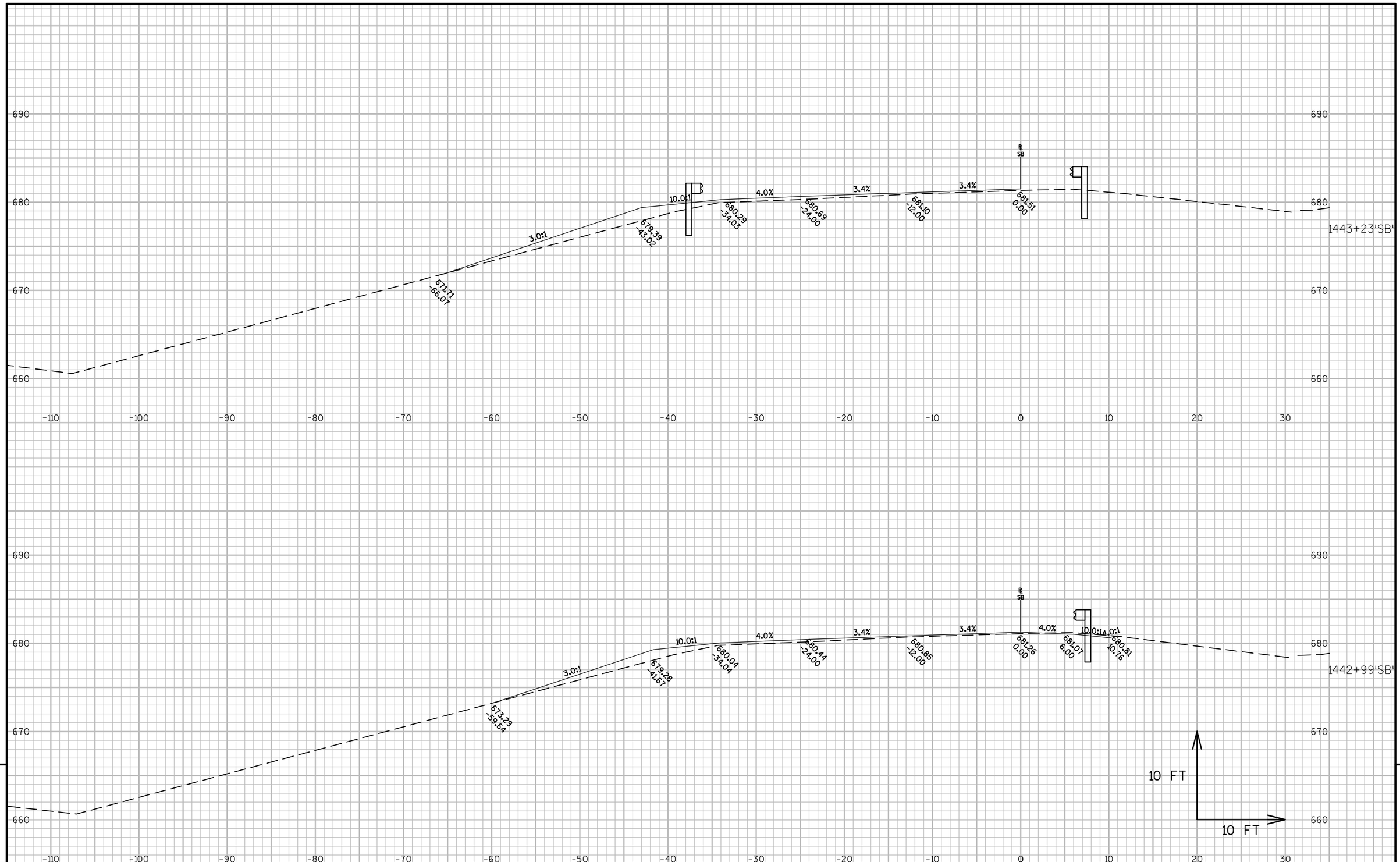
PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: IH 43 SB BEAMGUARD	SHEET 483	E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090203_XS.DWG
LAYOUT NAME - 090203_XSAL

PLOT DATE : 1/21/2016 7:49 AM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



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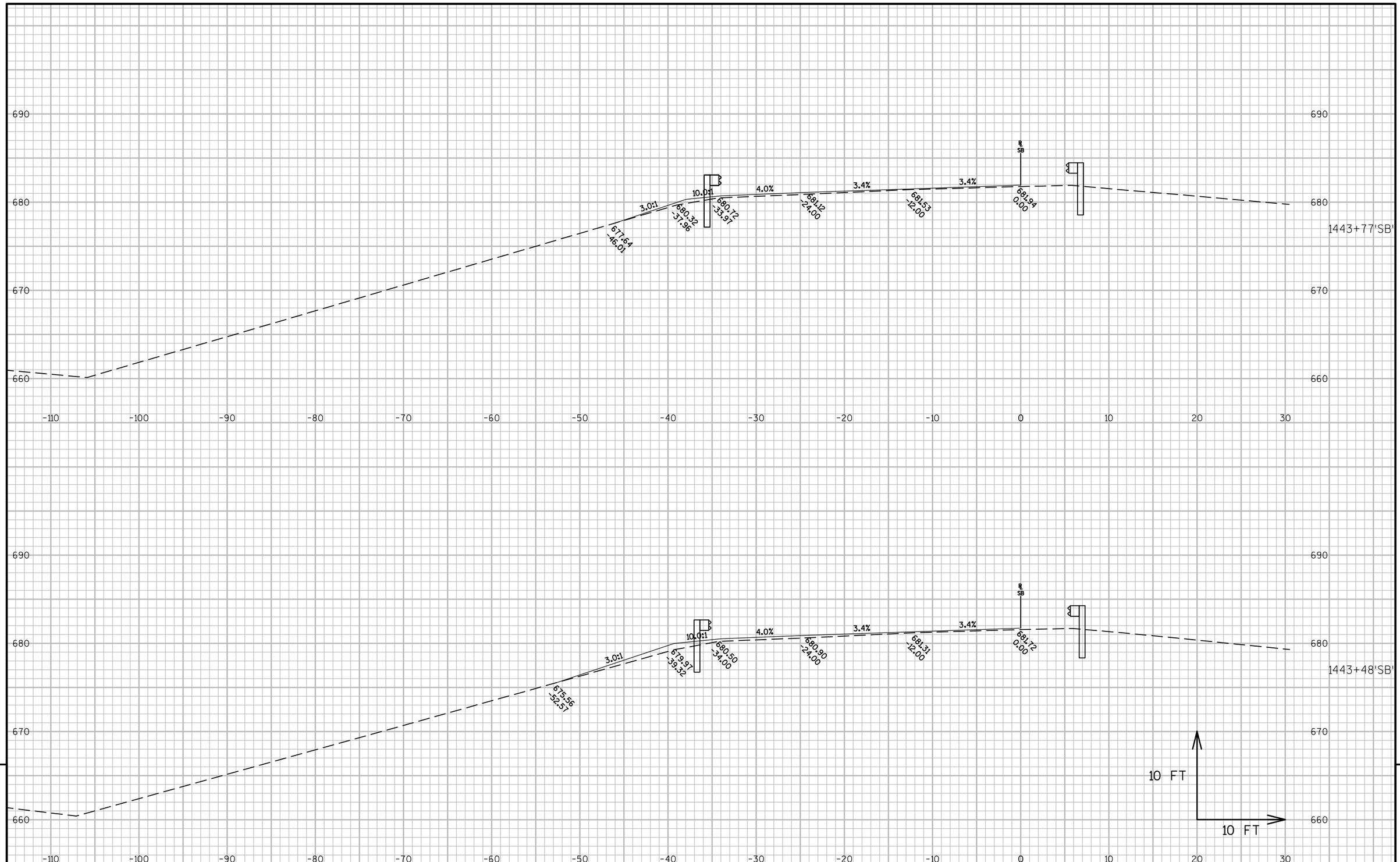
PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: IH 43 SB BEAMGUARD	SHEET 484	E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090203_XS.DWG
LAYOUT NAME - 090203_XSAM

PLOT DATE : 1/21/2016 7:49 AM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49

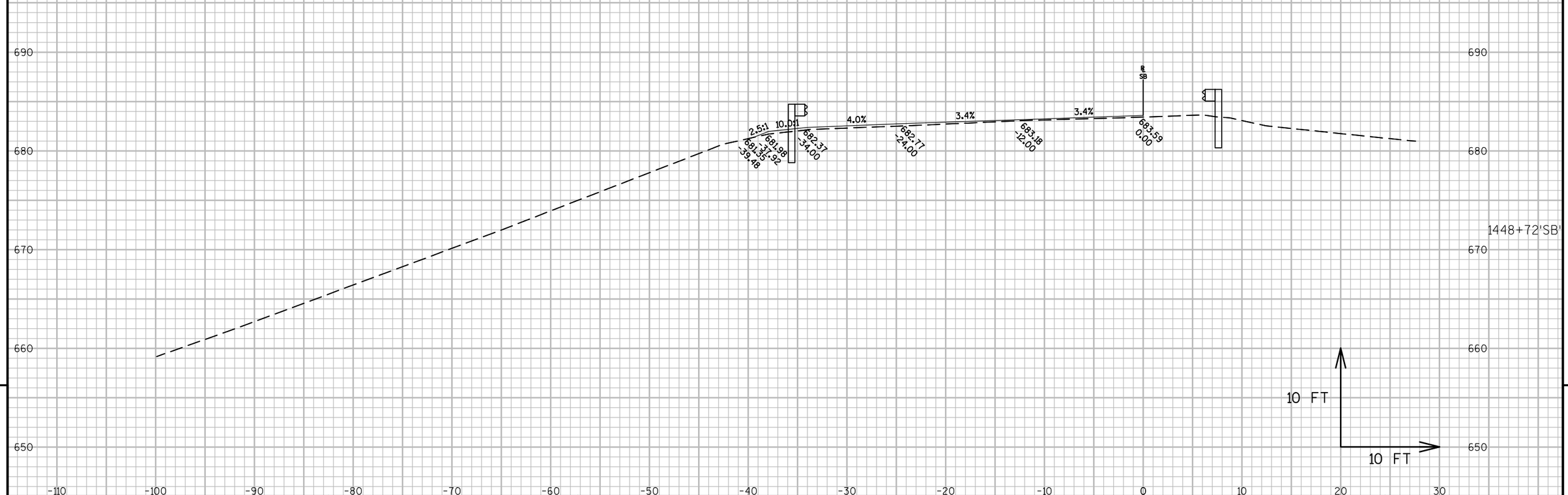


PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: IH 43 SB BEAMGUARD	SHEET 485	E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090203_XS.DWG
LAYOUT NAME - 090203_XSAN

PLOT DATE : 1/21/2016 7:50 AM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



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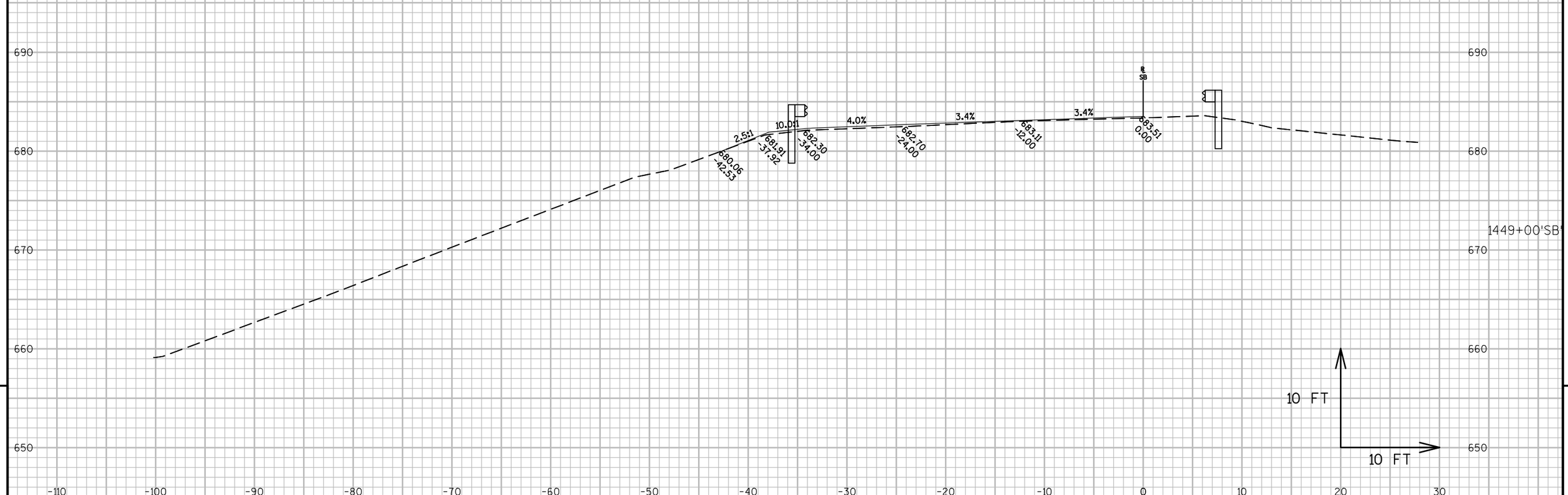
PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: IH 43 SB BEAMGUARD	SHEET 486	E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090203_XS.DWG
LAYOUT NAME - 090203_XSA0

PLOT DATE : 1/21/2016 7:50 AM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



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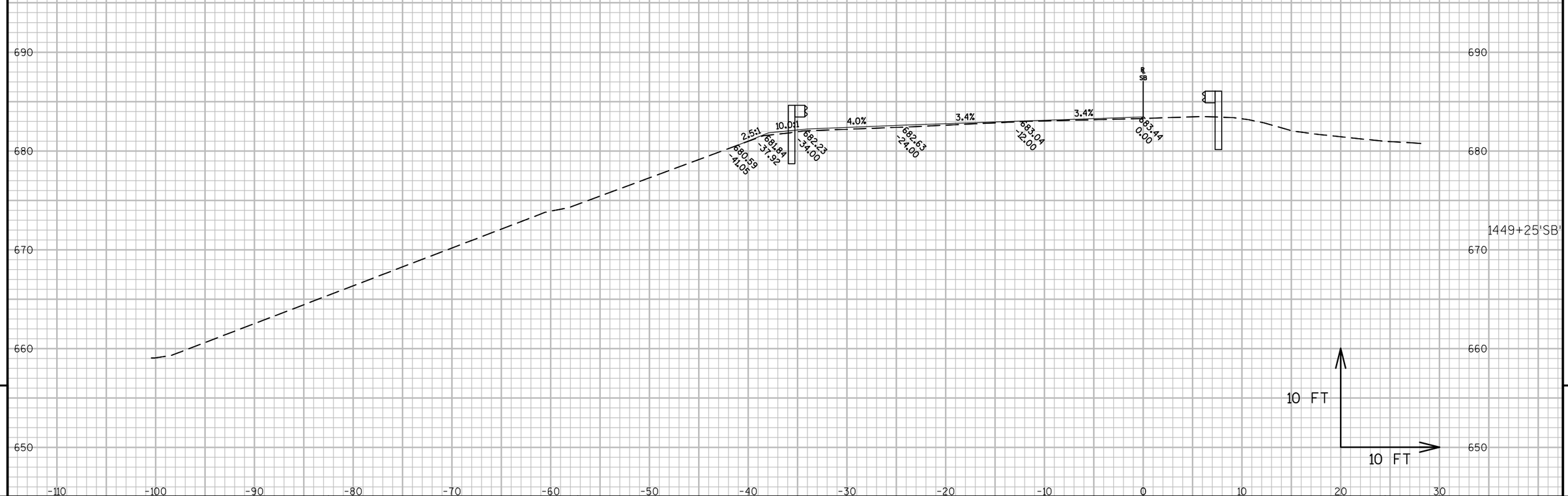
PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: IH 43 SB BEAMGUARD	SHEET 487	E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090203_XS.DWG
LAYOUT NAME - 090203_XSAP

PLOT DATE : 1/21/2016 7:50 AM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49

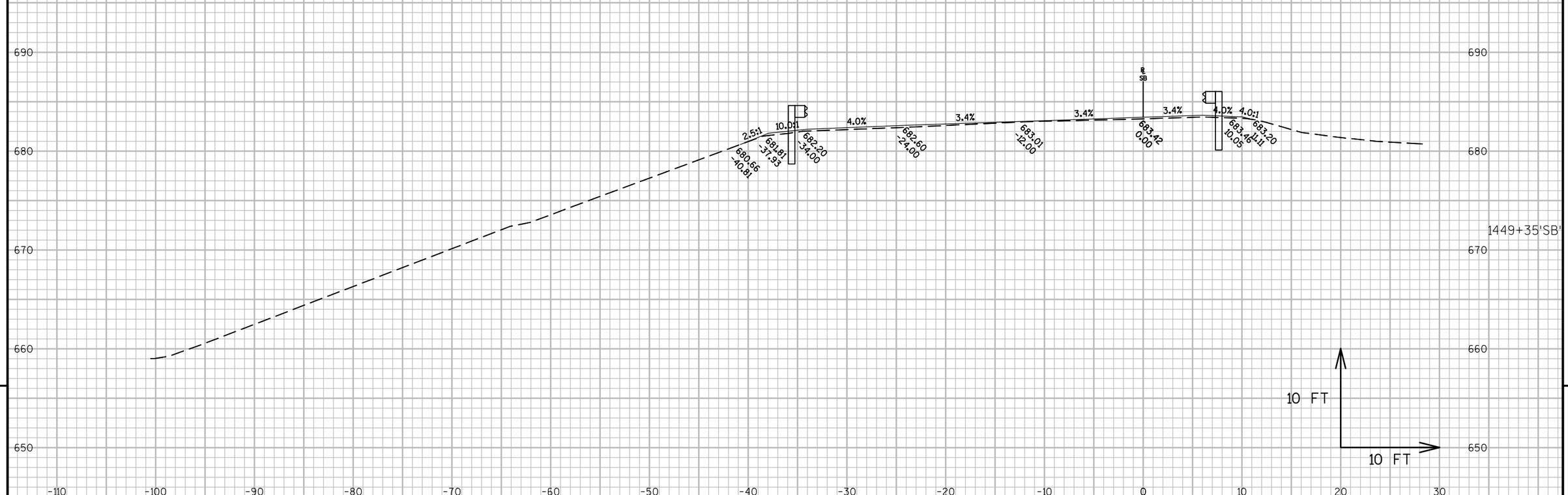


PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: IH 43 SB BEAMGUARD	SHEET 488 E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090203_XS.DWG
LAYOUT NAME - 090203_XSAQ

PLOT DATE : 1/21/2016 7:50 AM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49

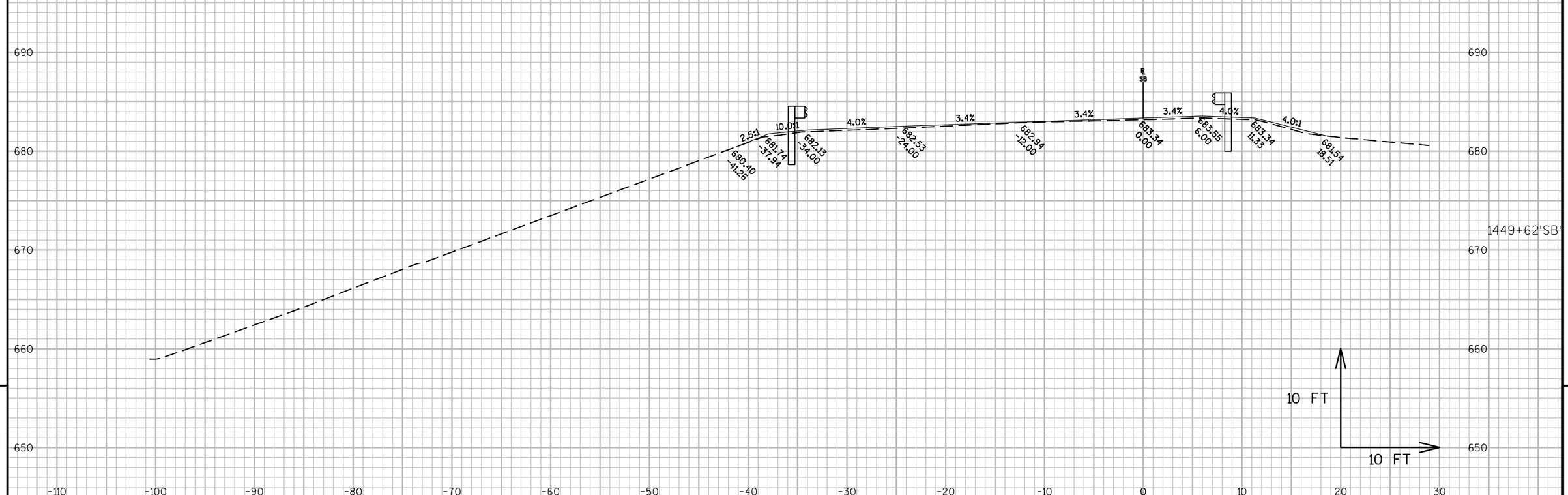


PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: IH 43 SB BEAMGUARD	SHEET 489	E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090203_XS.DWG
LAYOUT NAME - 090203_XSAR

PLOT DATE : 1/21/2016 7:50 AM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49

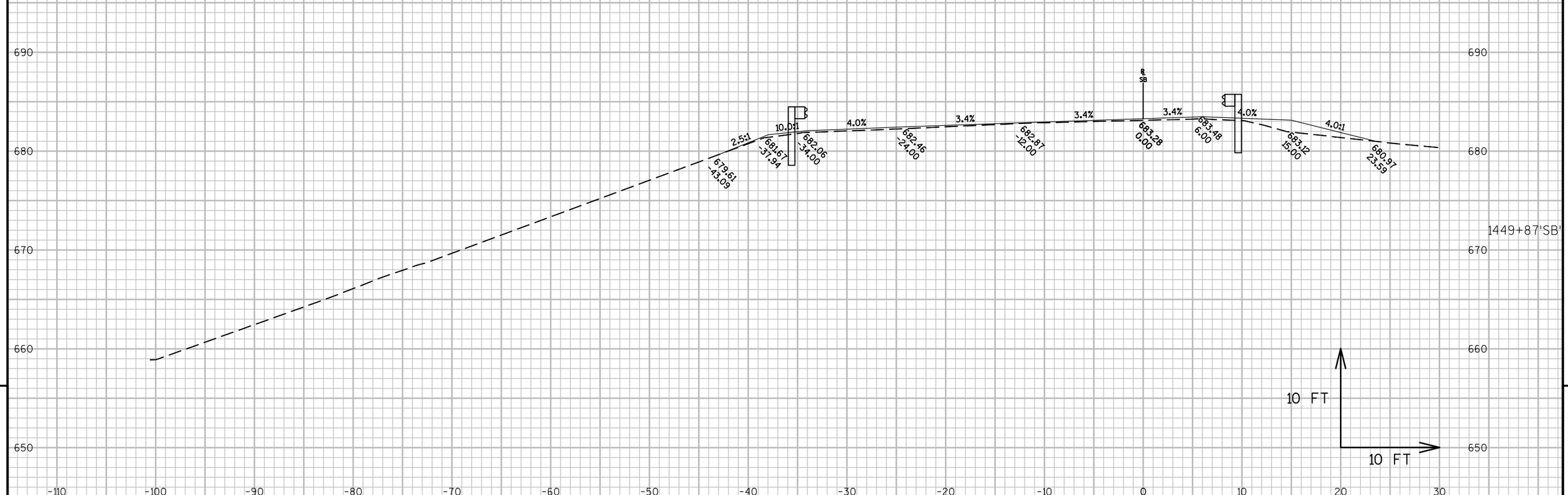


PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: IH 43 SB BEAMGUARD	SHEET 490	E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090203_XS.DWG
LAYOUT NAME - 090203_XSAS

PLOT DATE : 1/21/2016 7:51 AM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49

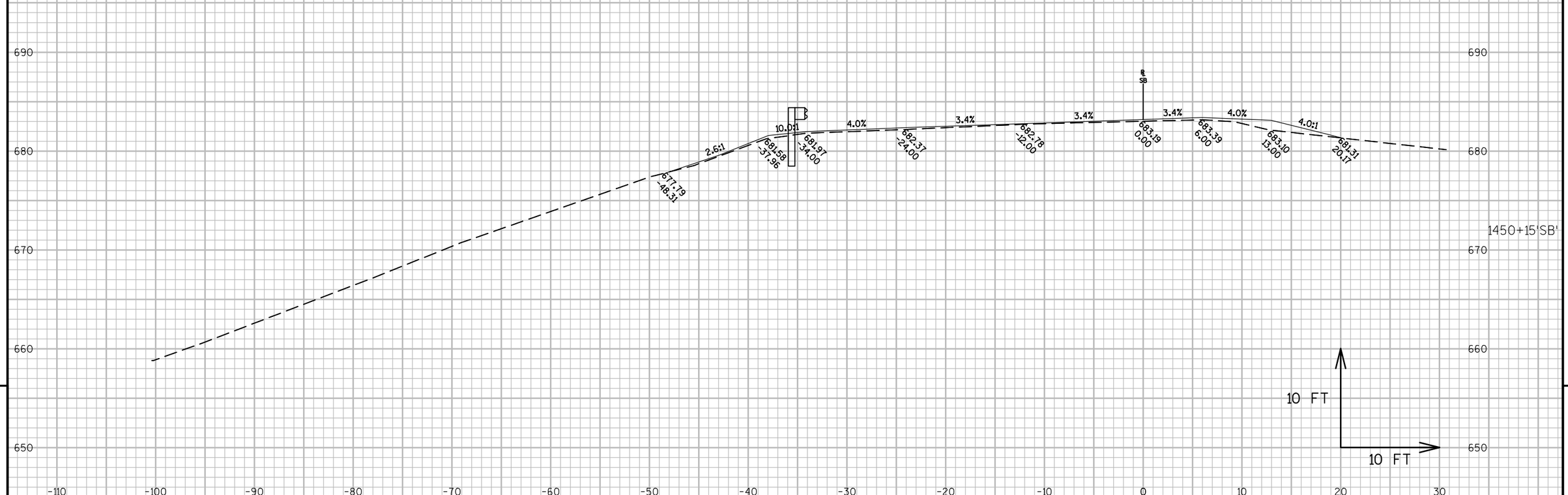


PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: IH 43 SB BEAMGUARD	SHEET 491	E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090203_XS.DWG
LAYOUT NAME - 090203_XSAT

PLOT DATE : 1/21/2016 7:51 AM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49

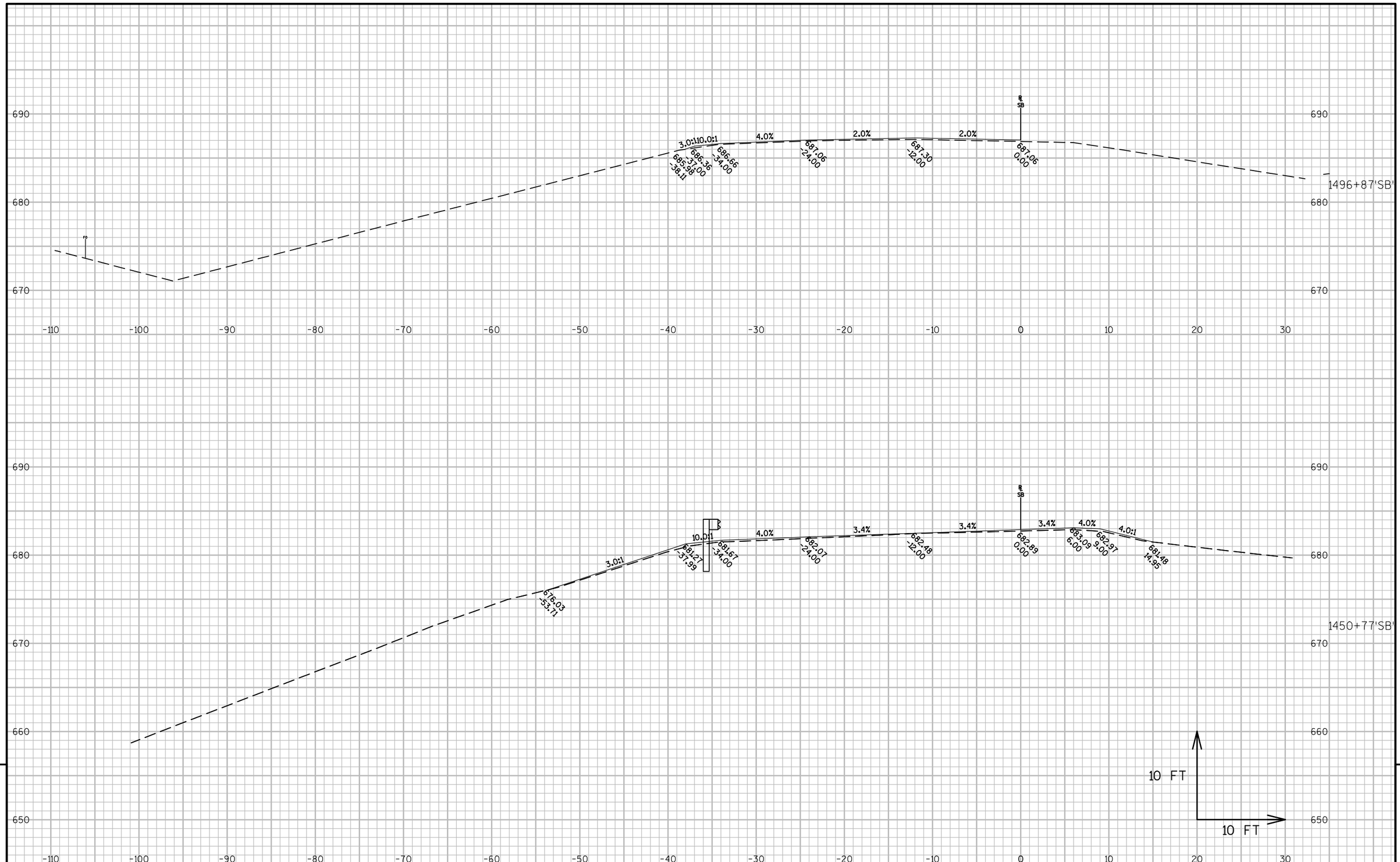


PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: IH 43 SB BEAMGUARD	SHEET 492	E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090203_XS.DWG
LAYOUT NAME - 090203_XSAU

PLOT DATE : 1/21/2016 7:51 AM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49

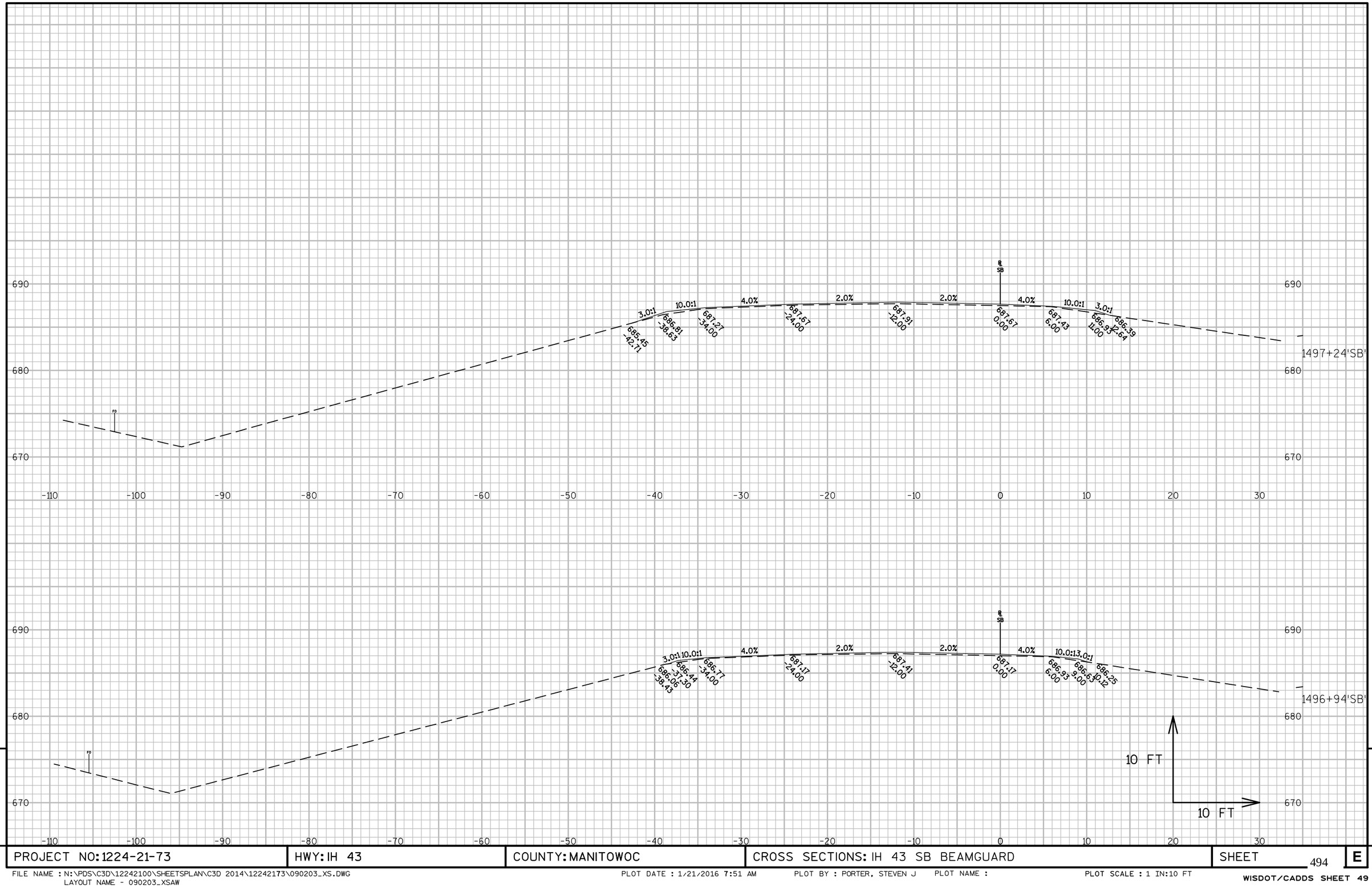


PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: IH 43 SB BEAMGUARD	SHEET 493	E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090203_XS.DWG
LAYOUT NAME - 090203_XSAV

PLOT DATE : 1/21/2016 7:51 AM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49

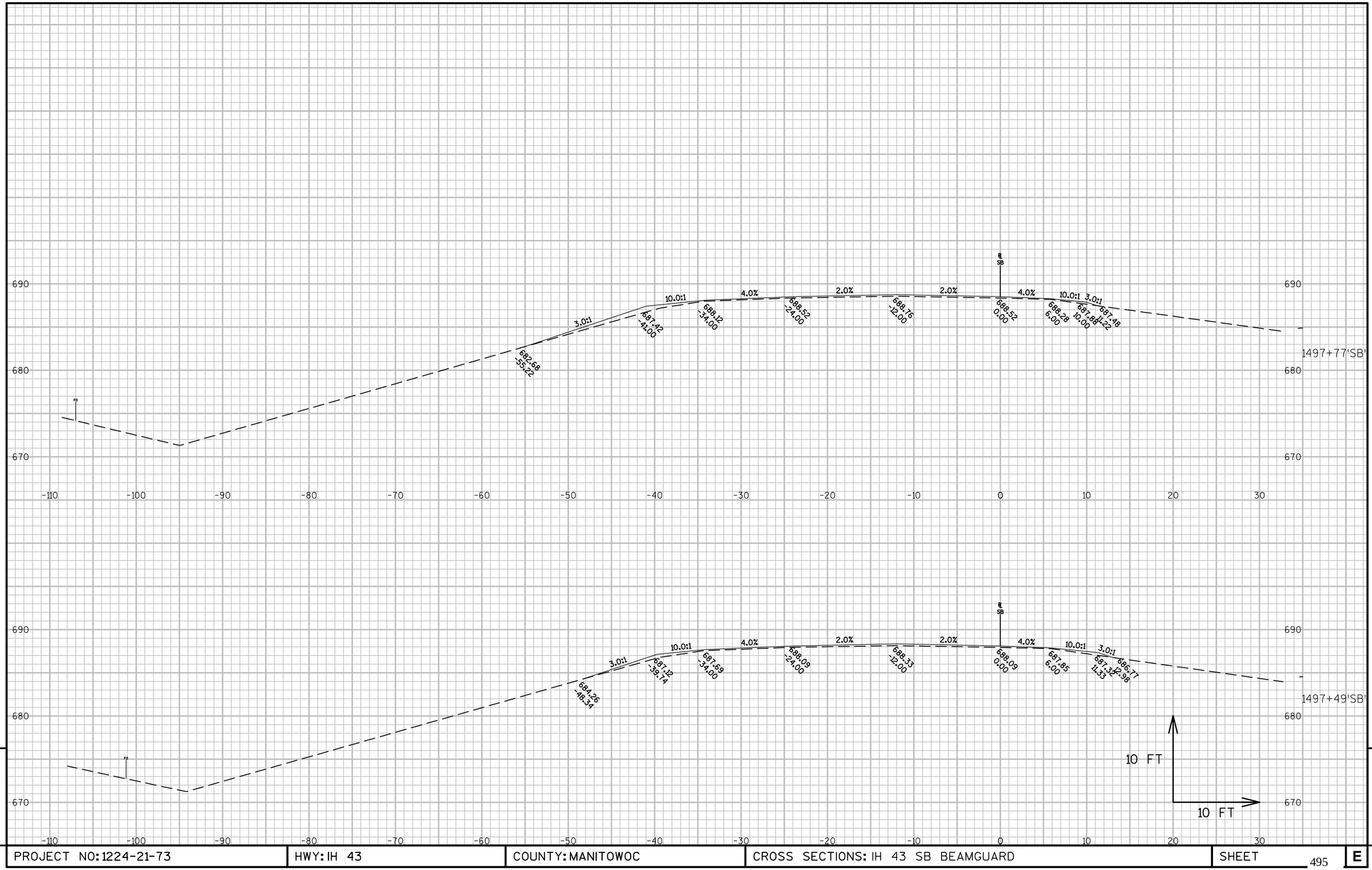


PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: IH 43 SB BEAMGUARD	SHEET 494	E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090203_XS.DWG
LAYOUT NAME - 090203_XSAW

PLOT DATE : 1/21/2016 7:51 AM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



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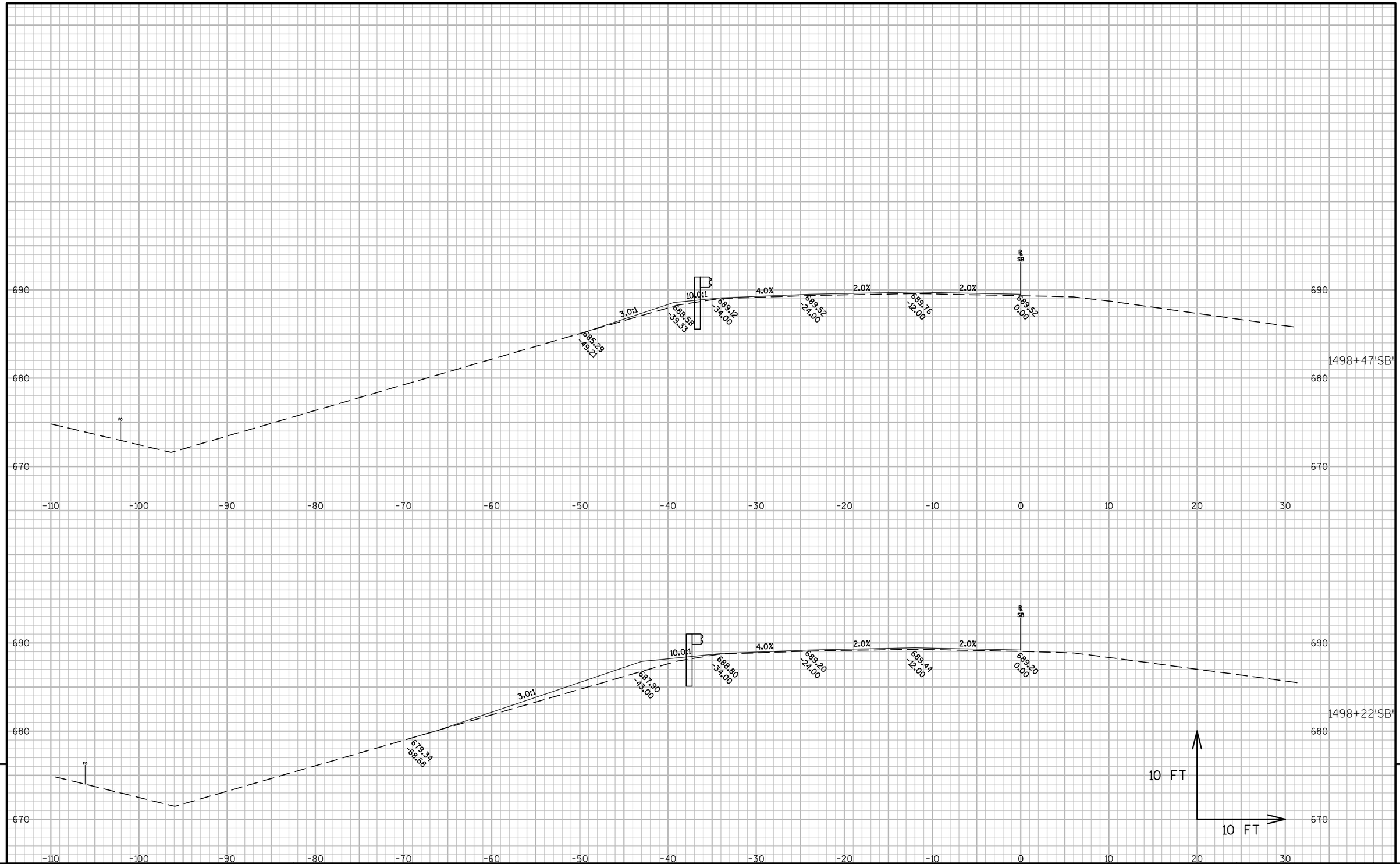
PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: IH 43 SB BEAMGUARD	SHEET 495	E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090203_XS.DWG
LAYOUT NAME - 090203_XSAX

PLOT DATE : 1/21/2016 7:52 AM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT

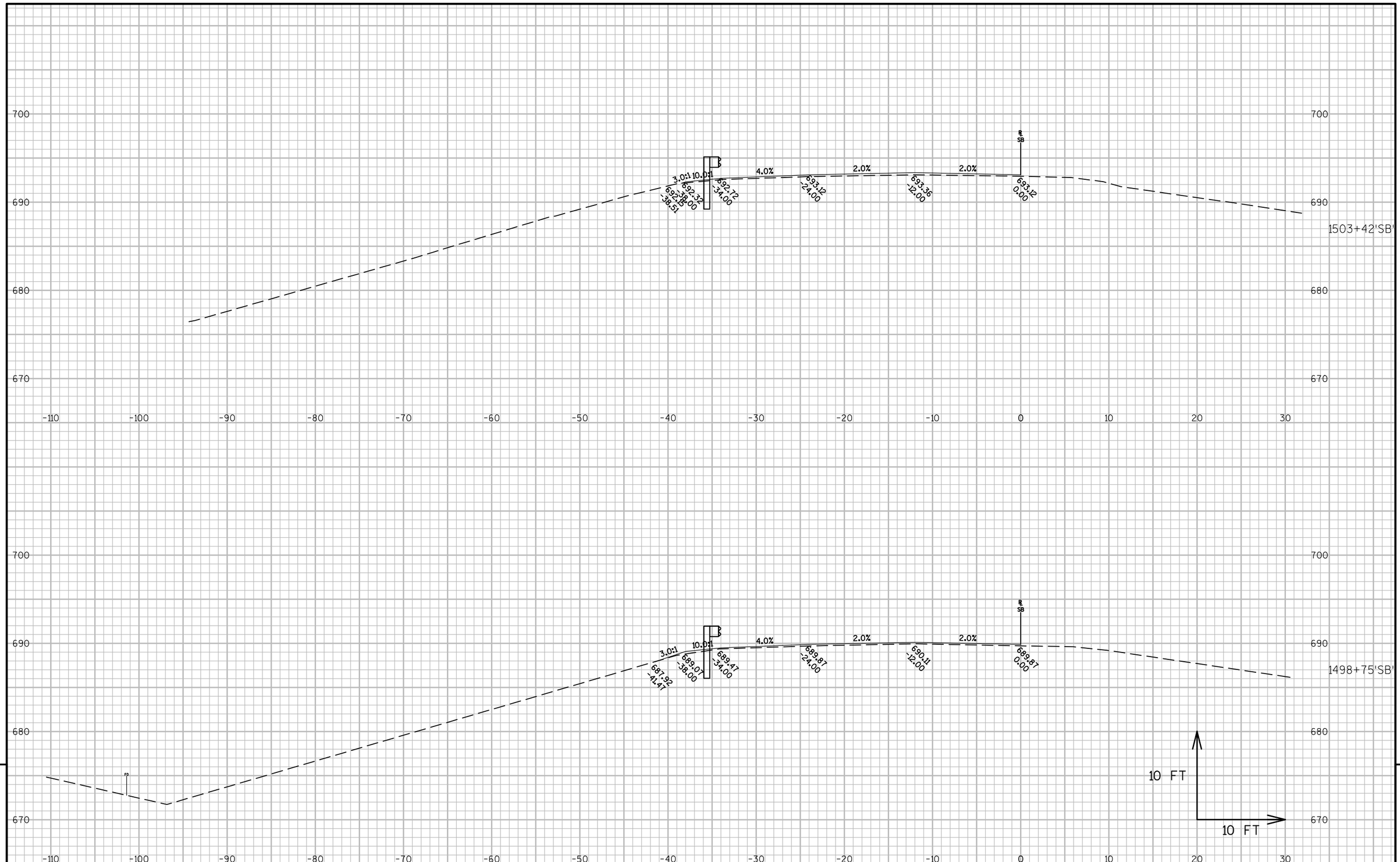


PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: IH 43 SB BEAMGUARD	SHEET 496	E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090203_XS.DWG
LAYOUT NAME - 090203_XSAY

PLOT DATE : 1/21/2016 7:52 AM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49

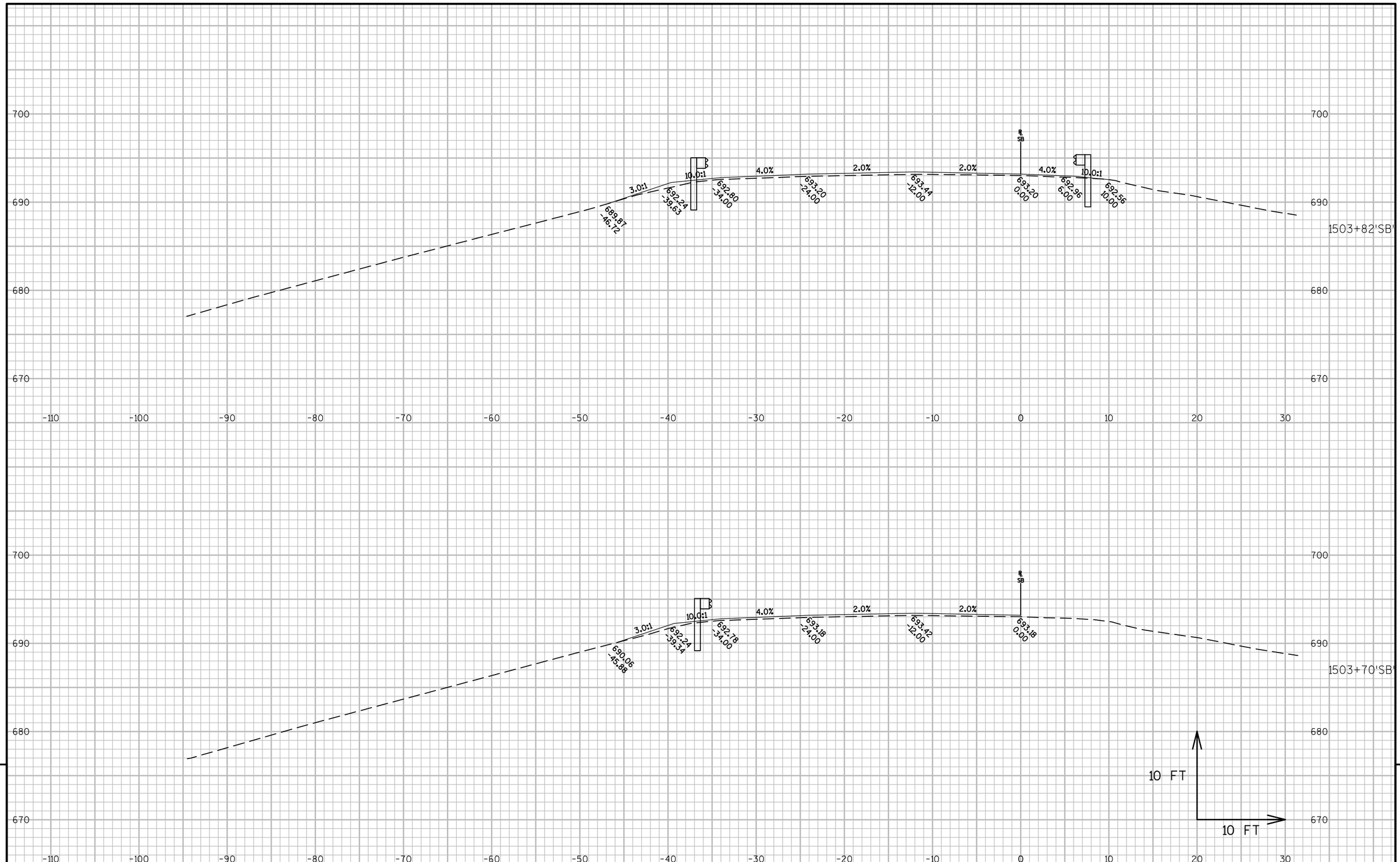


PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: IH 43 SB BEAMGUARD	SHEET 497	E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090203_XS.DWG
LAYOUT NAME - 090203_XSAZ

PLOT DATE : 1/21/2016 7:52 AM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49

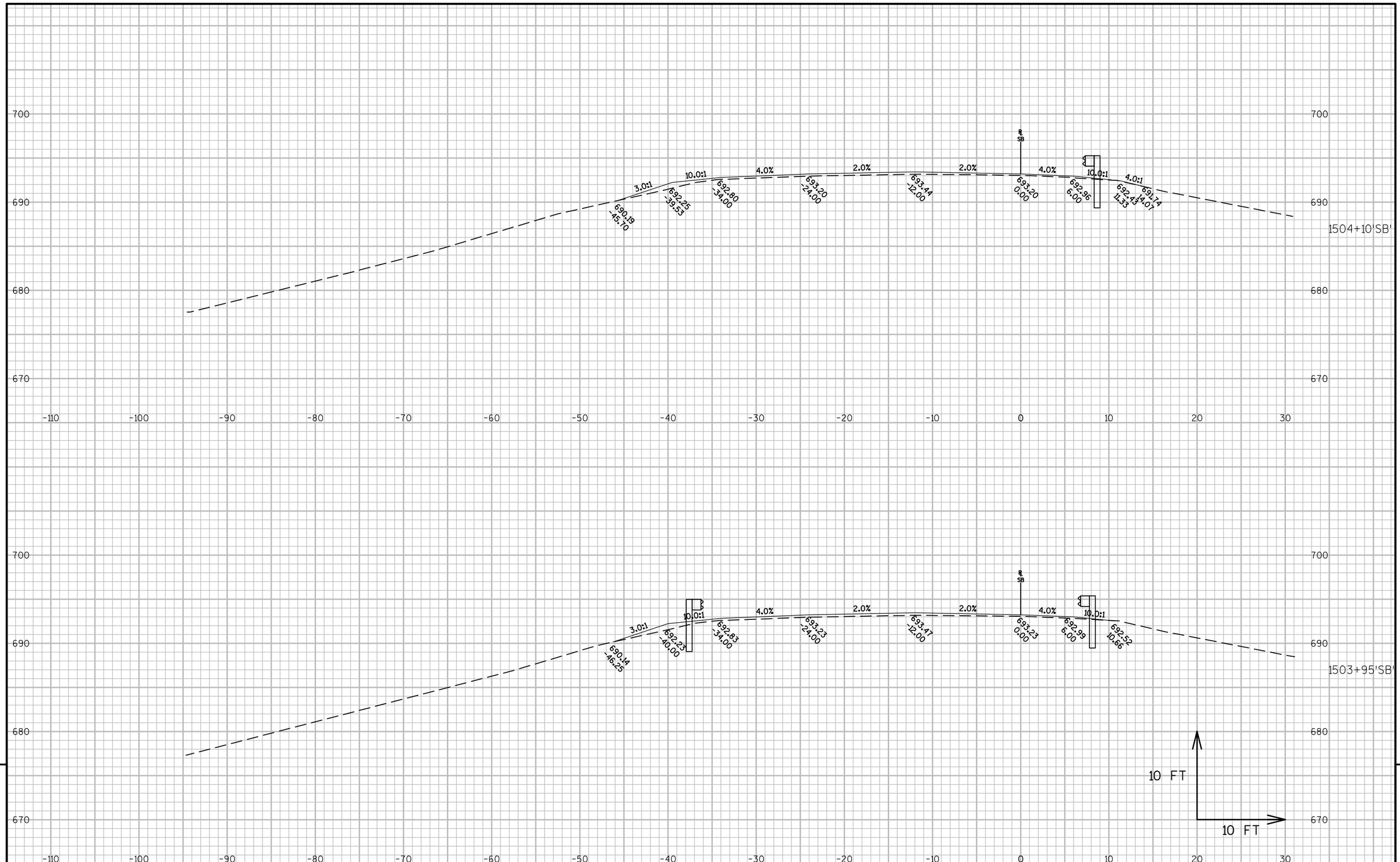


PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: IH 43 SB BEAMGUARD	SHEET 498	E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090203_XS.DWG
LAYOUT NAME - 090203_XSAAA

PLOT DATE : 1/21/2016 7:52 AM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT

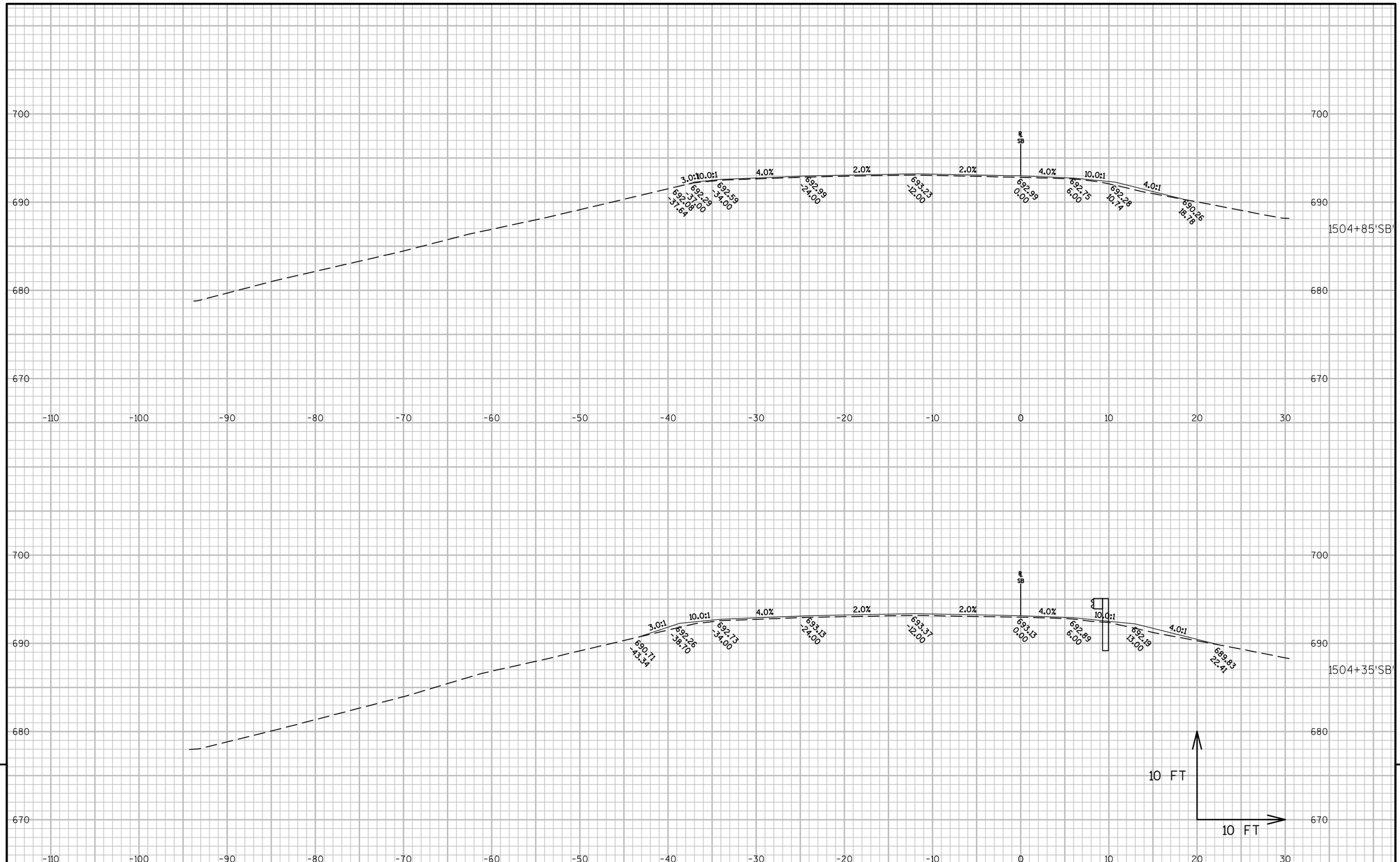
WISDOT/CADDS SHEET 49



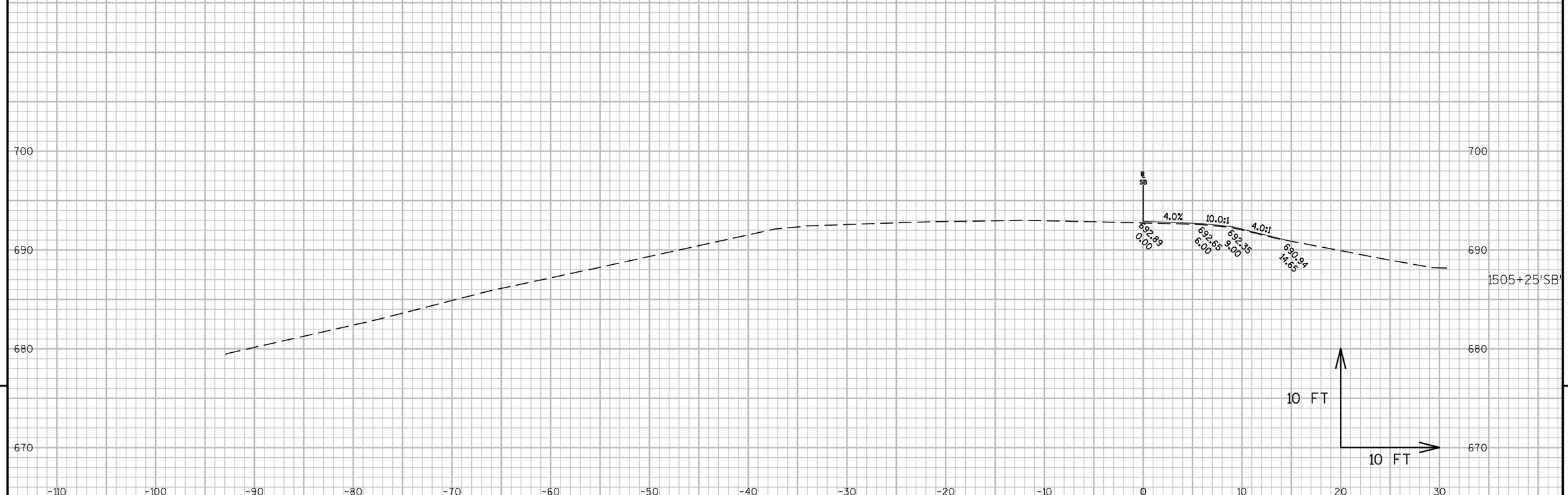
PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: IH 43 SB BEAMGUARD	SHEET 499	E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090203_XS.DWG
LAYOUT NAME - 090203_XSAAB

PLOT DATE : 1/21/2016 7:52 AM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT



PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: IH 43 SB BEAMGUARD	SHEET 500	E



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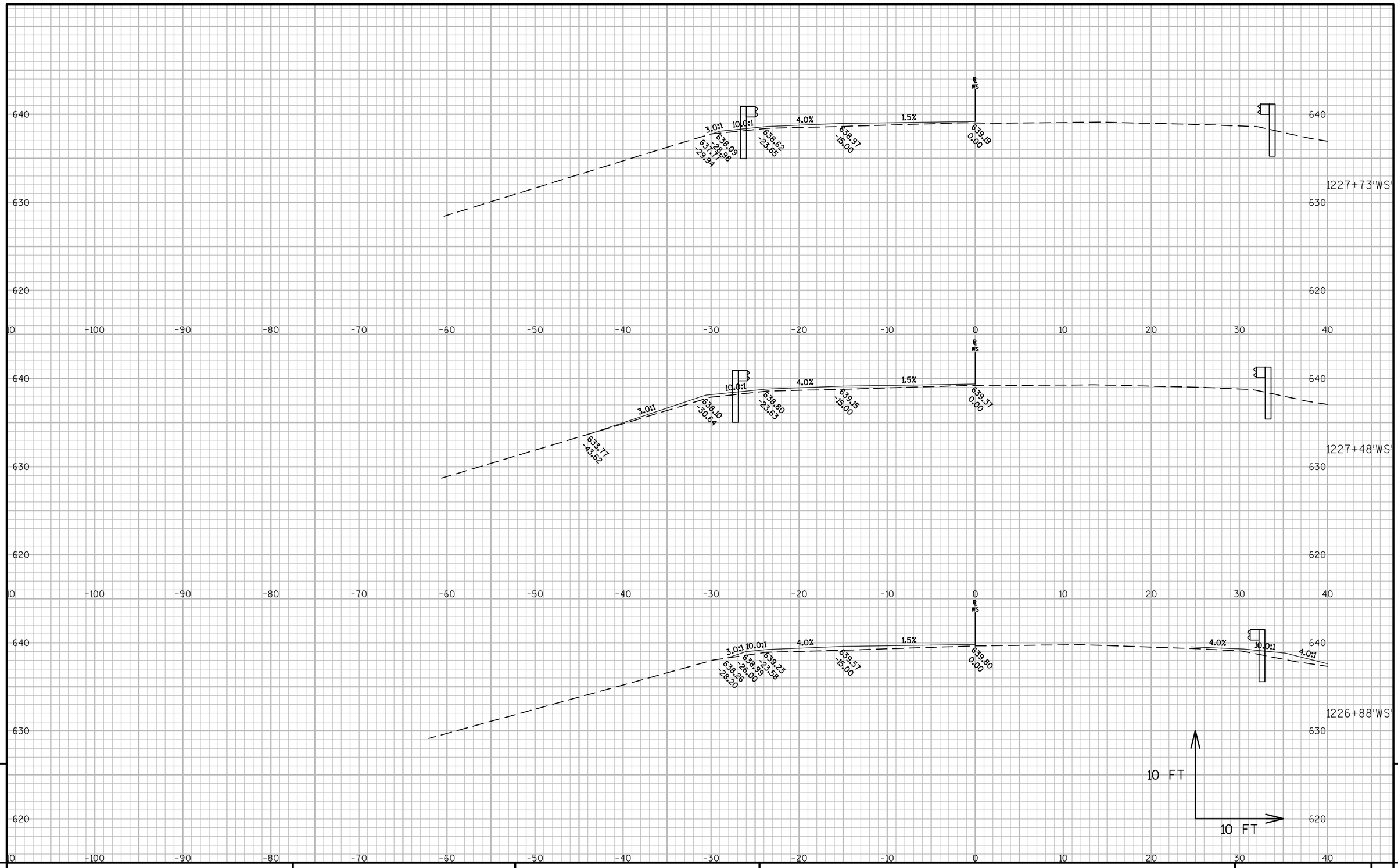
PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: IH 43 SB BEAMGUARD	SHEET 501	E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090203_XS.DWG
LAYOUT NAME - 090203_XSAAD

PLOT DATE : 1/21/2016 7:53 AM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



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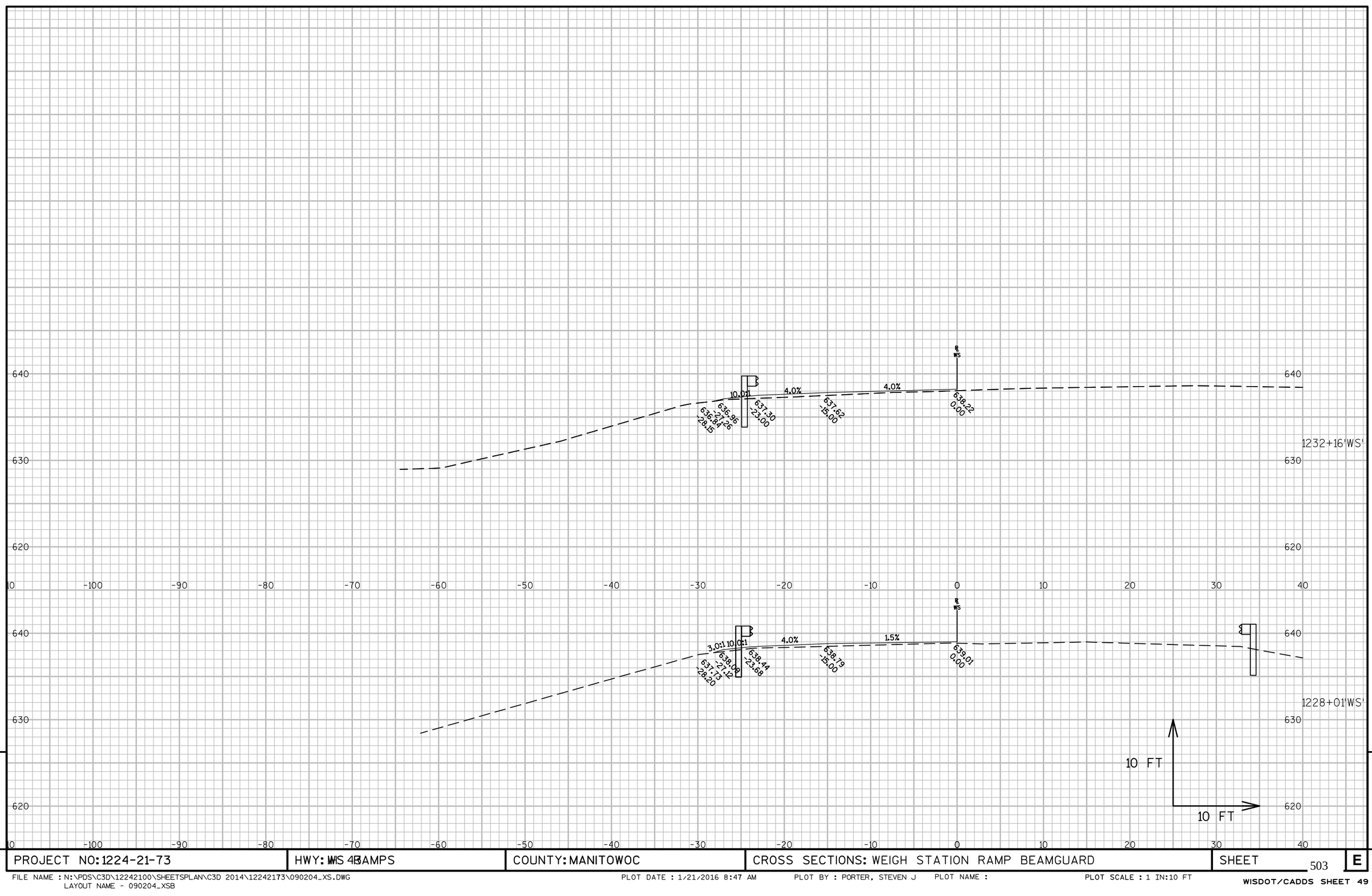
PROJECT NO: 1224-21-73	HWY: WIS 43 RAMPS	COUNTY: MANITOWOC	CROSS SECTIONS: WEIGH STATION RAMP BEAMGUARD	SHEET 502	E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090204_XS.DWG
LAYOUT NAME - 090204_XSA

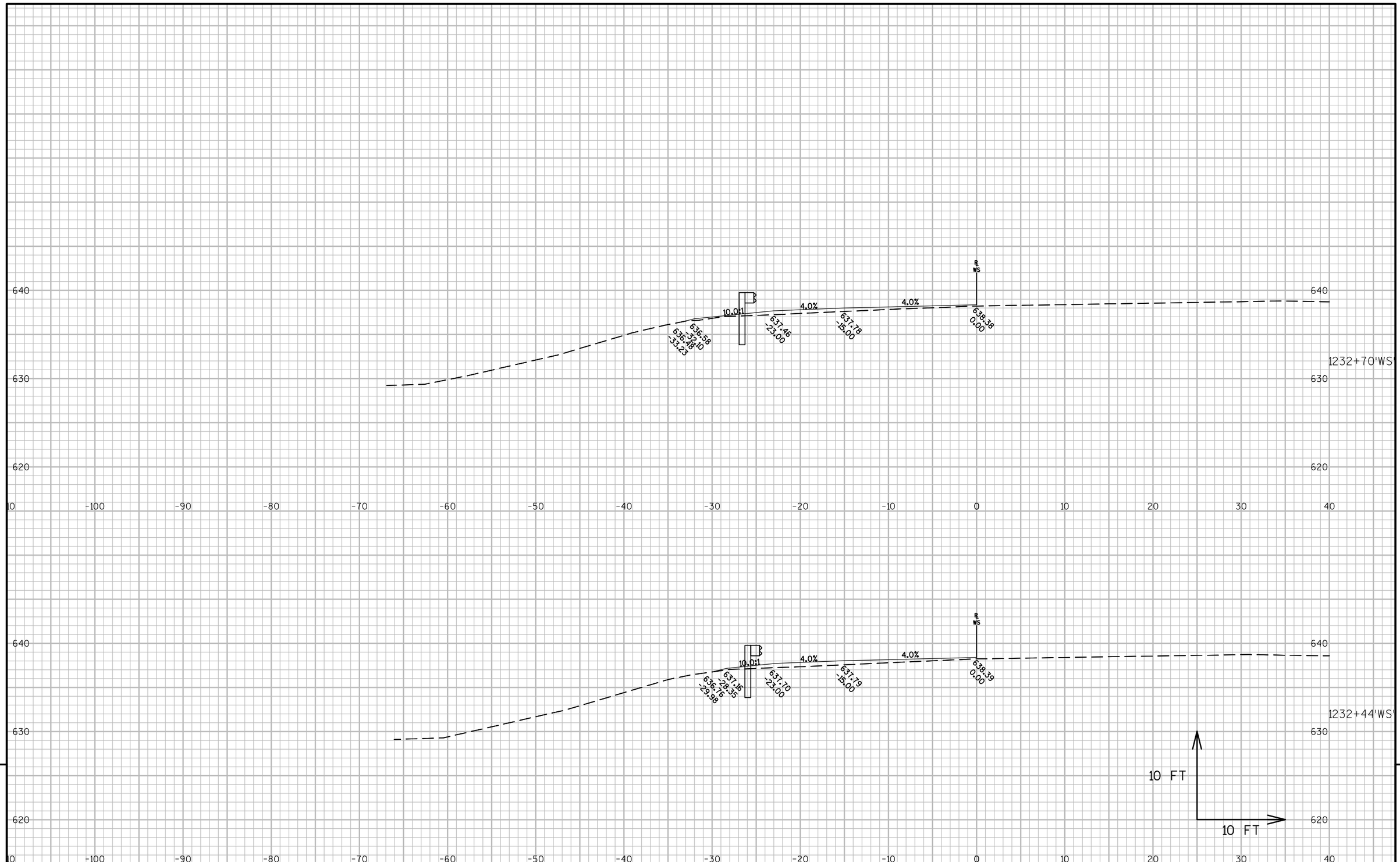
PLOT DATE : 1/21/2016 8:47 AM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT



PROJECT NO: 1224-21-73	HWY: WIS 43 RAMPS	COUNTY: MANITOWOC	CROSS SECTIONS: WEIGH STATION RAMP BEAMGUARD	SHEET 503 E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090204_XS.DWG
LAYOUT NAME - 090204_XSB

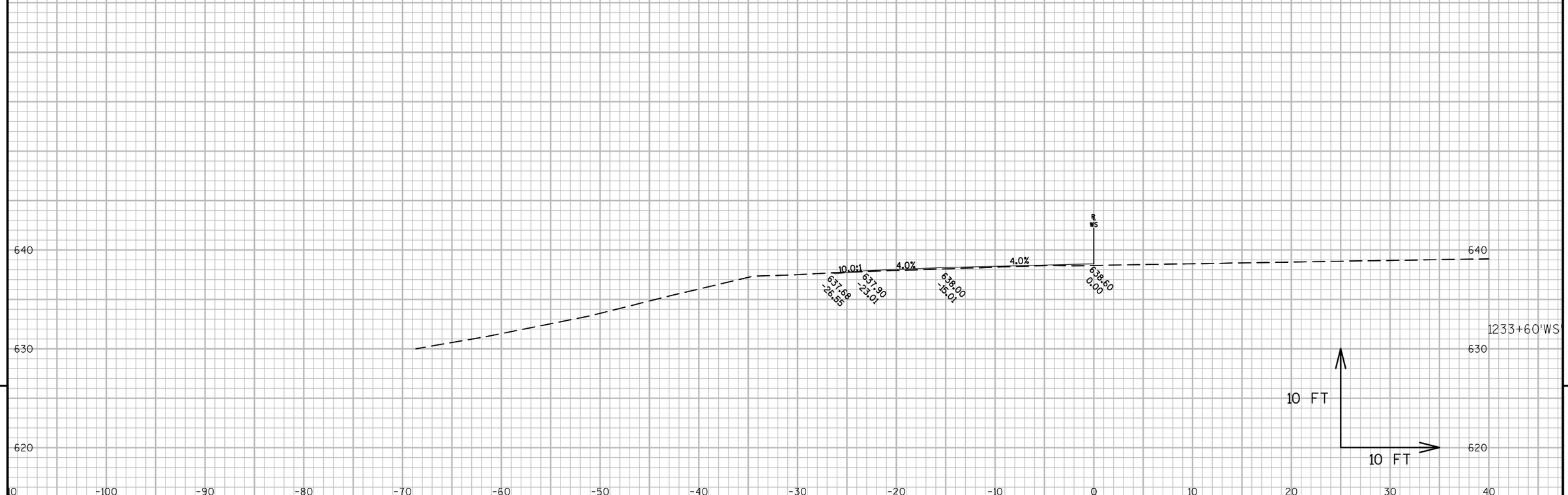
PLOT DATE : 1/21/2016 8:47 AM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT



PROJECT NO: 1224-21-73	HWY: WIS 43 RAMPS	COUNTY: MANITOWOC	CROSS SECTIONS: WEIGH STATION RAMP BEAMGUARD	SHEET 504 E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090204_XS.DWG
LAYOUT NAME - 090204_XSC

PLOT DATE : 1/21/2016 8:47 AM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT



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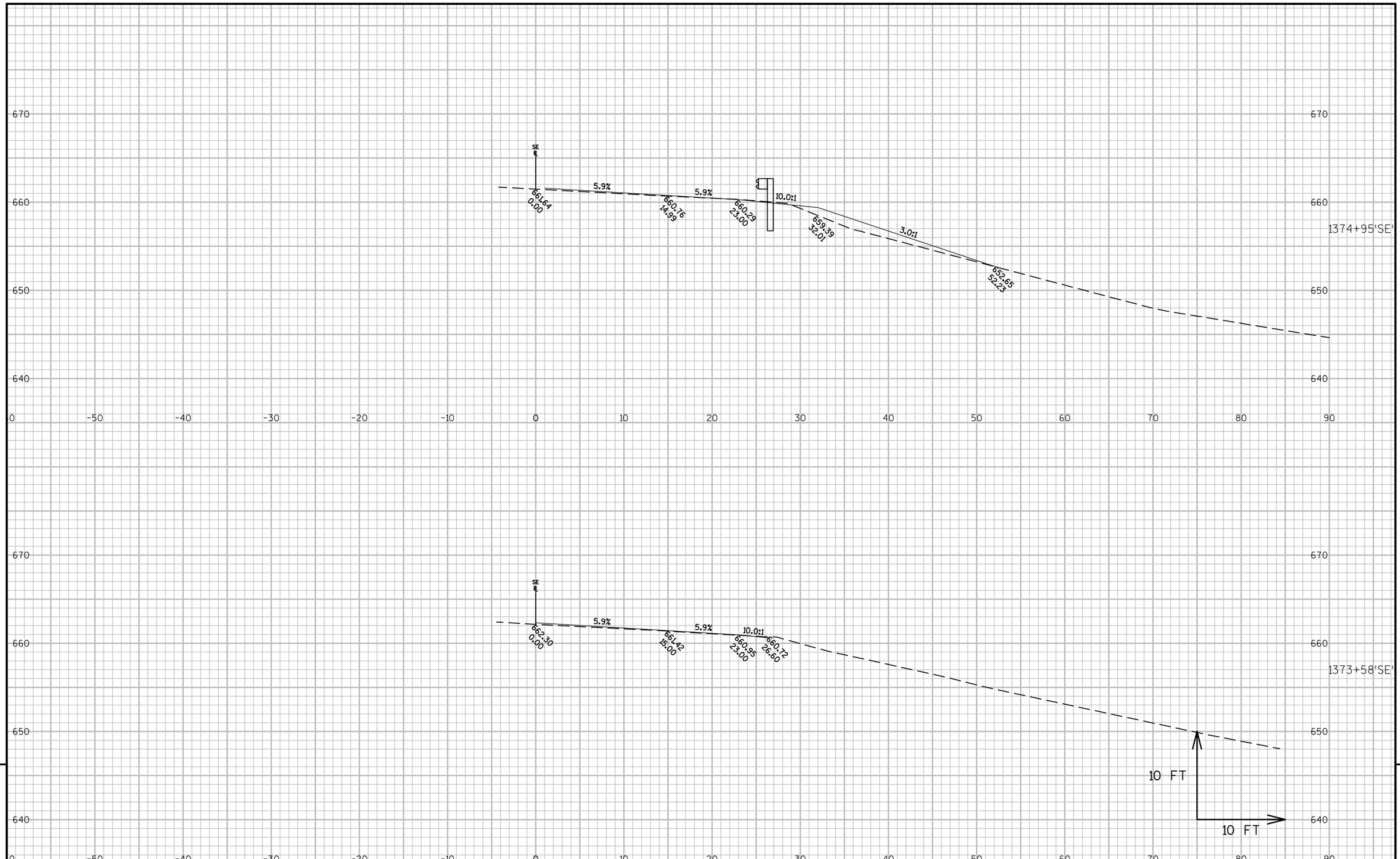
PROJECT NO: 1224-21-73	HWY: WIS 42 RAMPS	COUNTY: MANITOWOC	CROSS SECTIONS: WEIGH STATION RAMP BEAMGUARD	SHEET 505	E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090204_XS.DWG
LAYOUT NAME - 090204_XSD

PLOT DATE : 1/21/2016 8:48 AM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT



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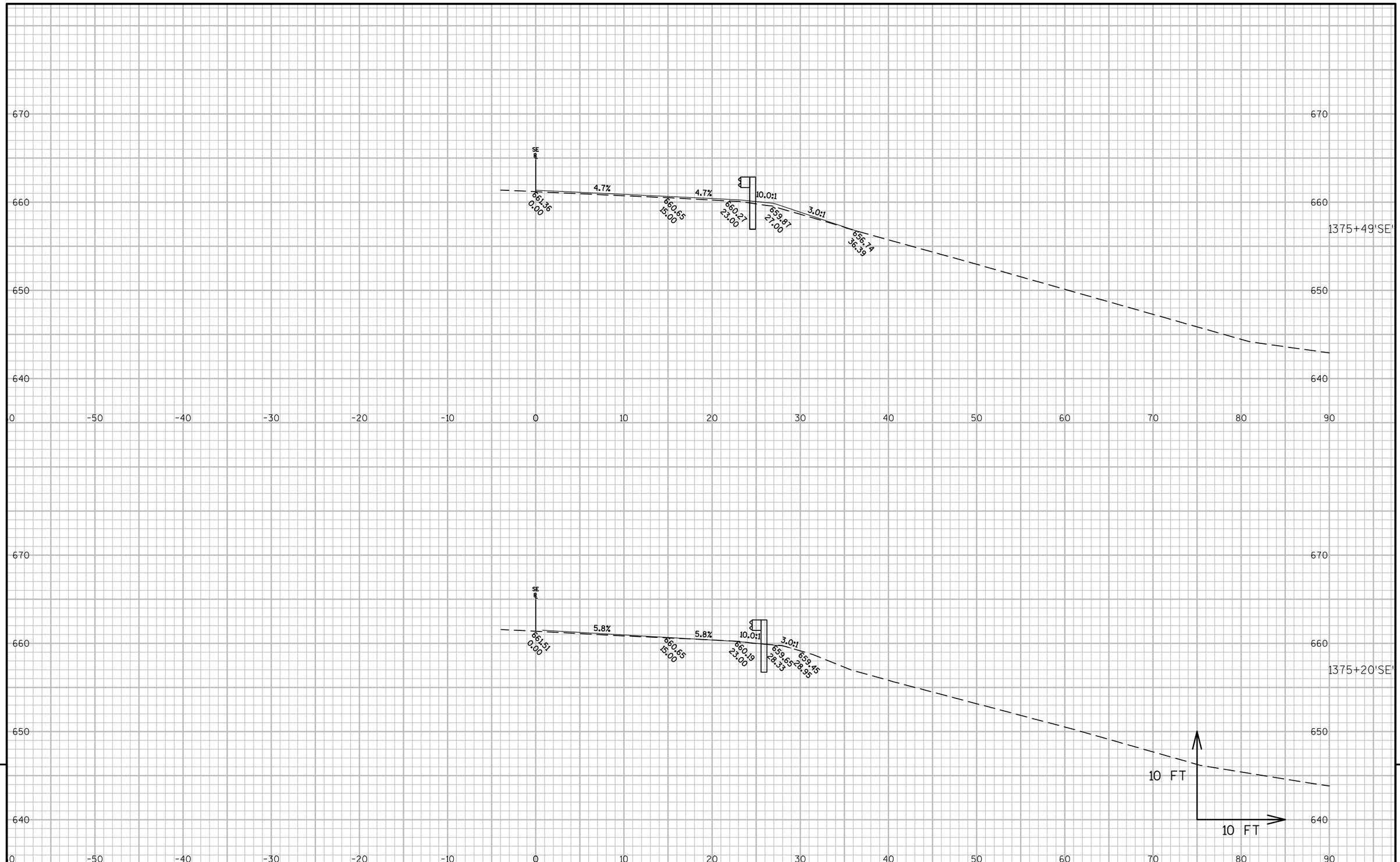
PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: CTH C SE RAMP BEAMGUARD	SHEET 506 E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090208_XS.DWG
LAYOUT NAME - 090208_XSA

PLOT DATE : 4/12/2016 9:39 AM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



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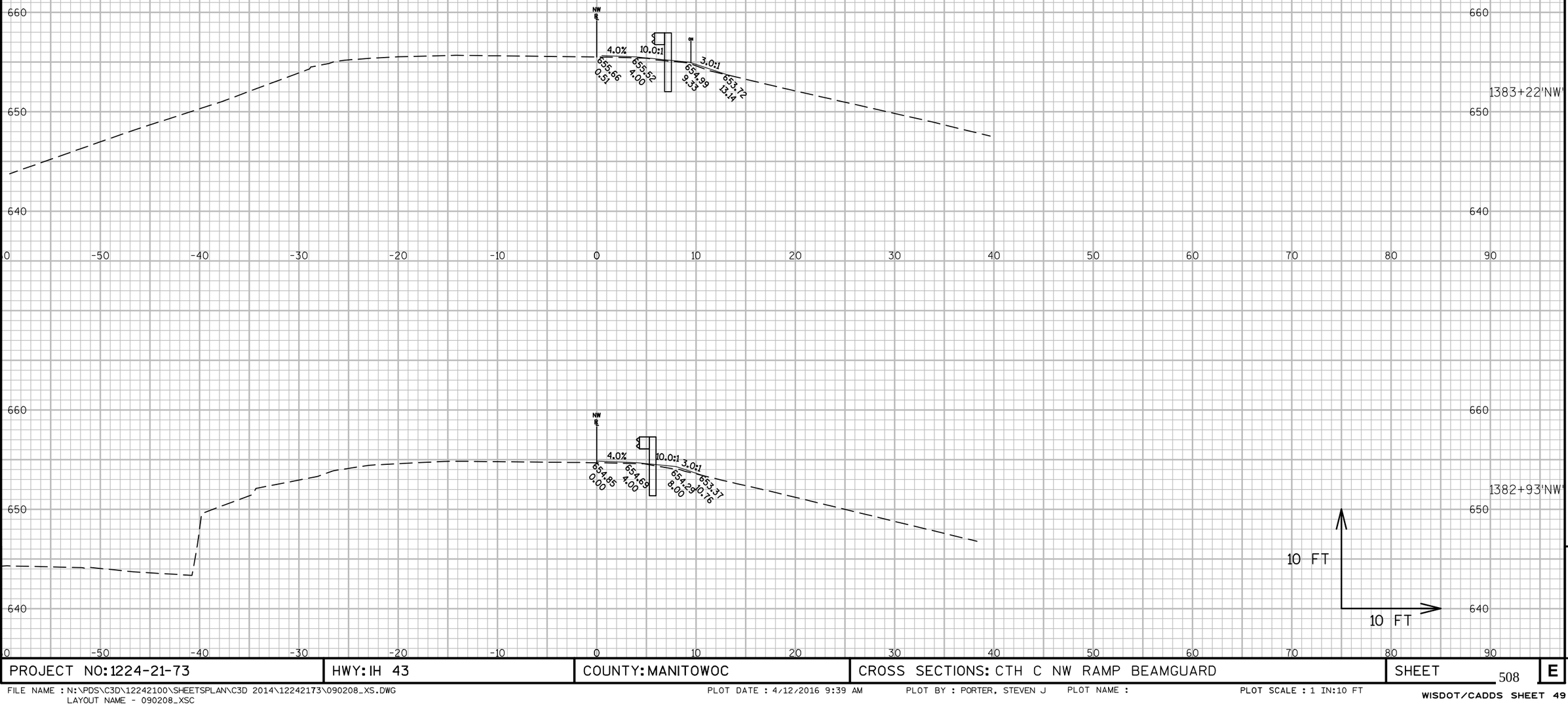
PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: CTH C SE RAMP BEAMGUARD	SHEET 507	E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090208_XS.DWG
LAYOUT NAME - 090208_XSB

PLOT DATE : 4/12/2016 9:39 AM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



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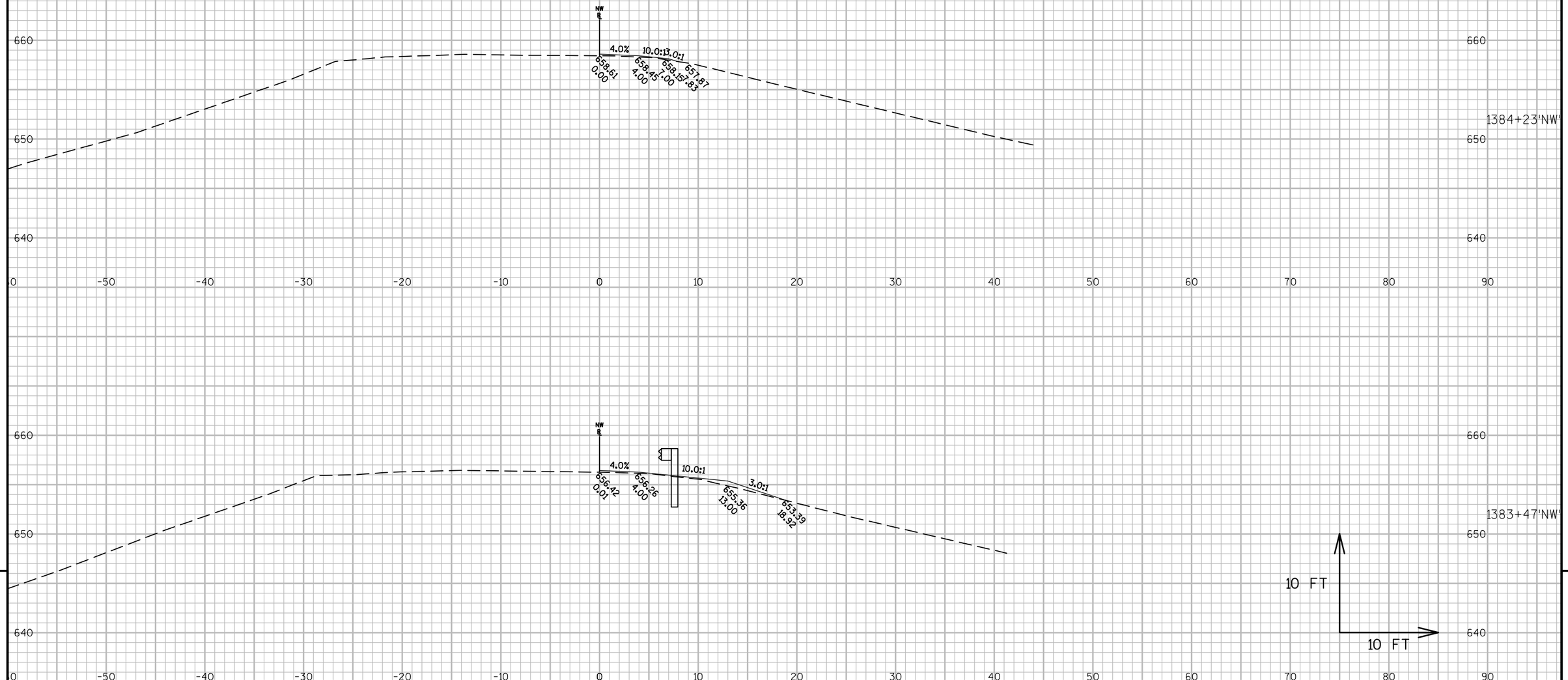
PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: CTH C NW RAMP BEAMGUARD	SHEET 508	E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090208_XS.DWG
LAYOUT NAME - 090208_XSC

PLOT DATE : 4/12/2016 9:39 AM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



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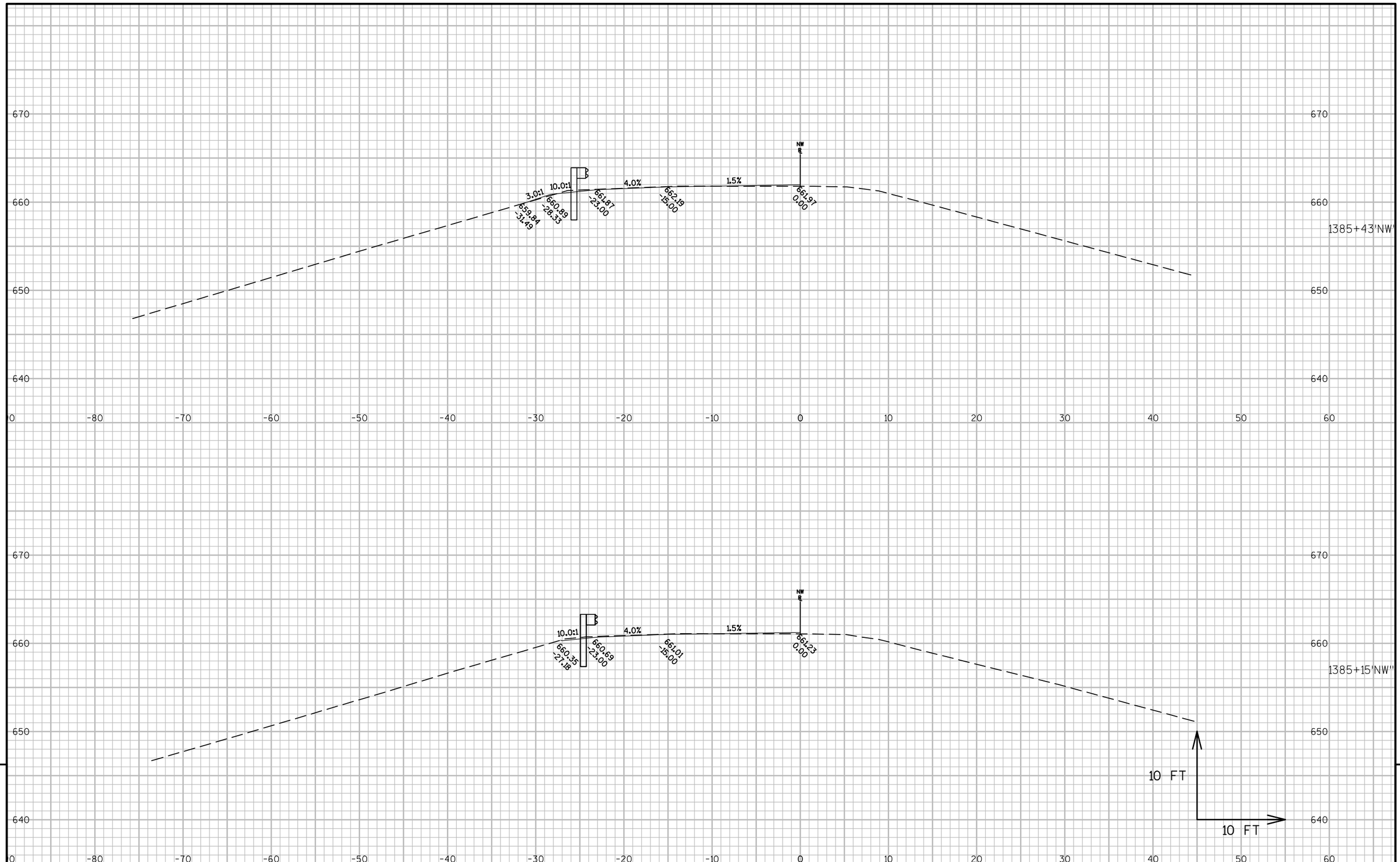
PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: CTH C NW RAMP BEAMGUARD	SHEET 509 E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090208_XS.DWG
LAYOUT NAME - 090208_XSD

PLOT DATE : 4/12/2016 9:39 AM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT



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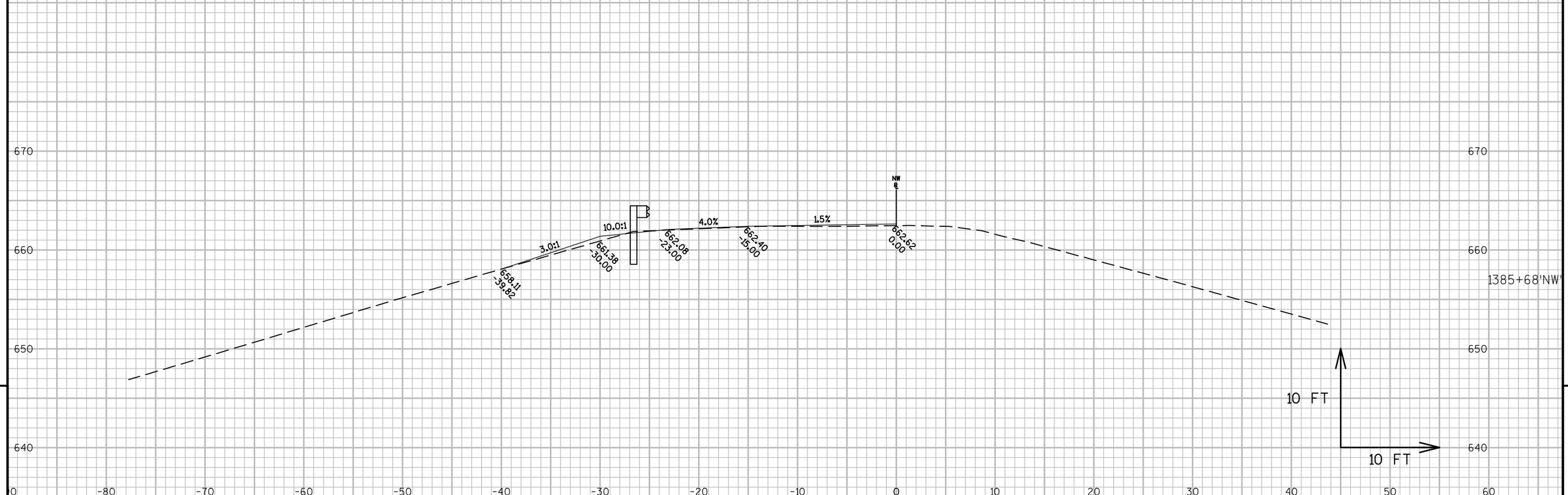
PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: CTH C NW RAMP BEAMGUARD	SHEET 510 E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090208_XS.DWG
LAYOUT NAME - 090208_XSE

PLOT DATE : 4/12/2016 9:39 AM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT



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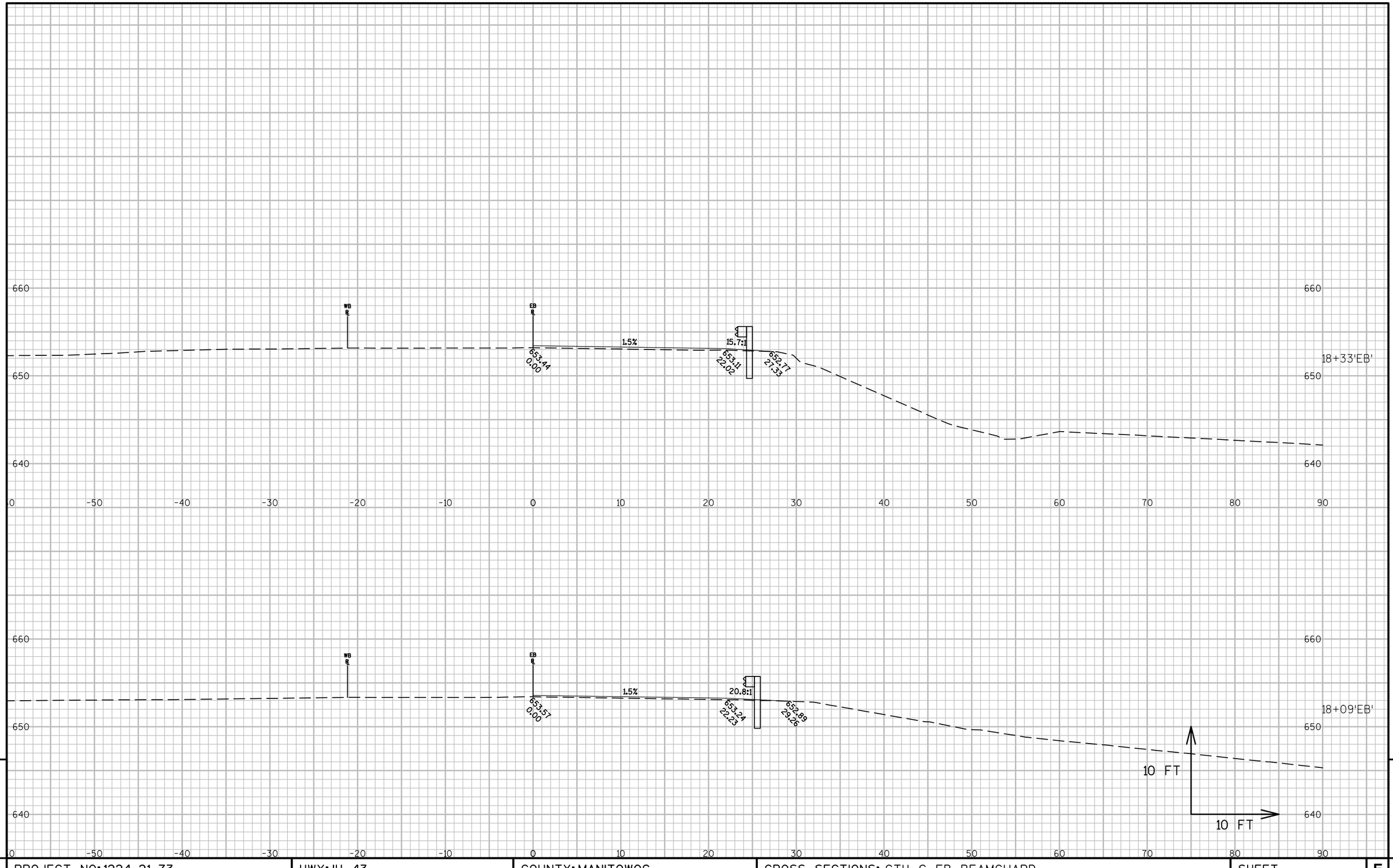
PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: CTH C NW RAMP BEAMGUARD	SHEET 511	E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090208_XS.DWG
LAYOUT NAME - 090208_XSF

PLOT DATE : 4/12/2016 9:39 AM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT



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PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: CTH C EB BEAMGUARD	SHEET 512	E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090208_XS.DWG
LAYOUT NAME - 090208_XSG

PLOT DATE : 4/12/2016 9:40 AM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49

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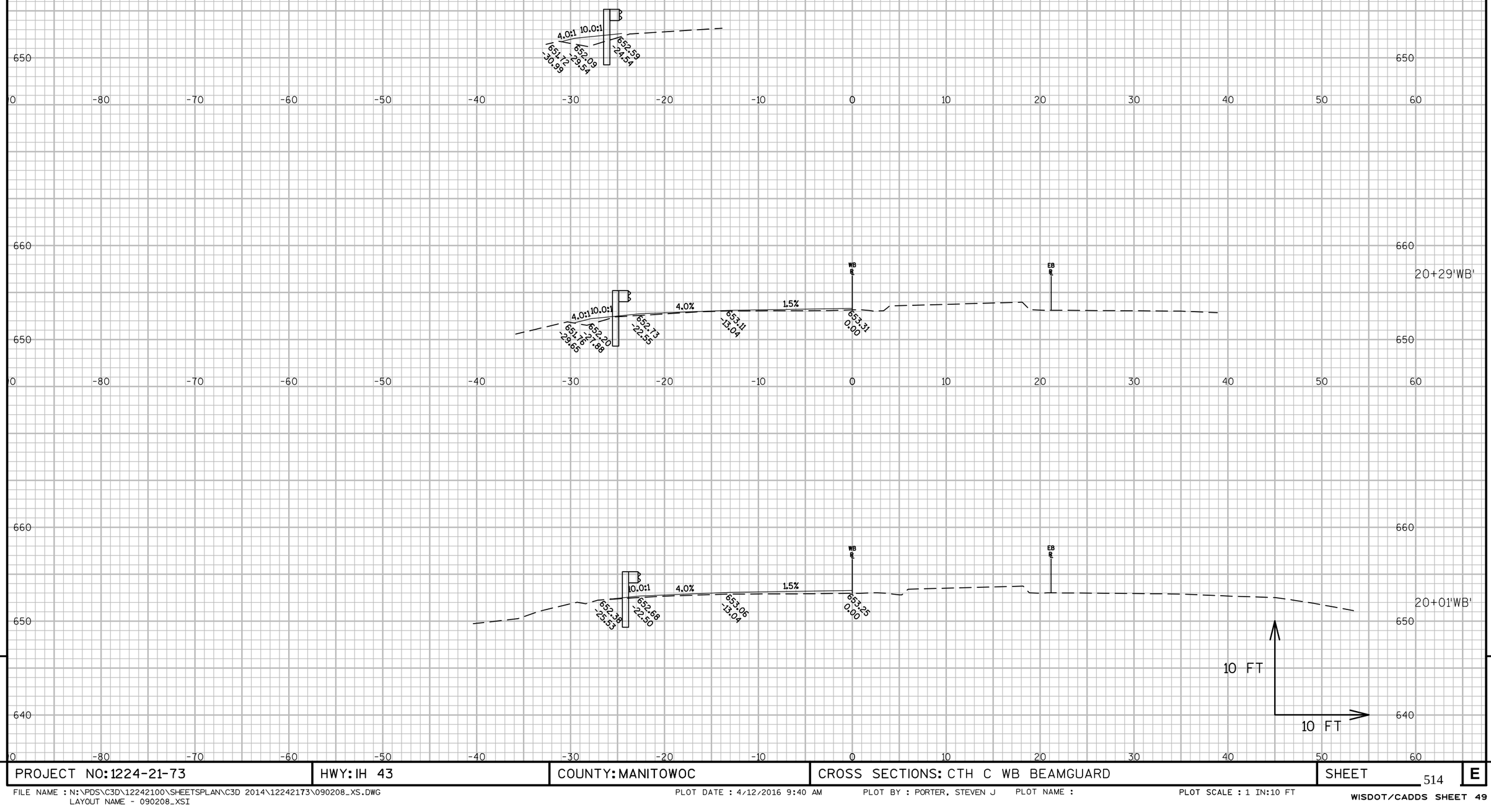
PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: CTH C EB BEAMGUARD	SHEET 513	E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090208_XS.DWG
LAYOUT NAME - 090208_XSH

PLOT DATE : 4/12/2016 9:40 AM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



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PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: CTH C WB BEAMGUARD	SHEET 514	E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090208_XS.DWG
LAYOUT NAME - 090208_XSI

PLOT DATE : 4/12/2016 9:40 AM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT

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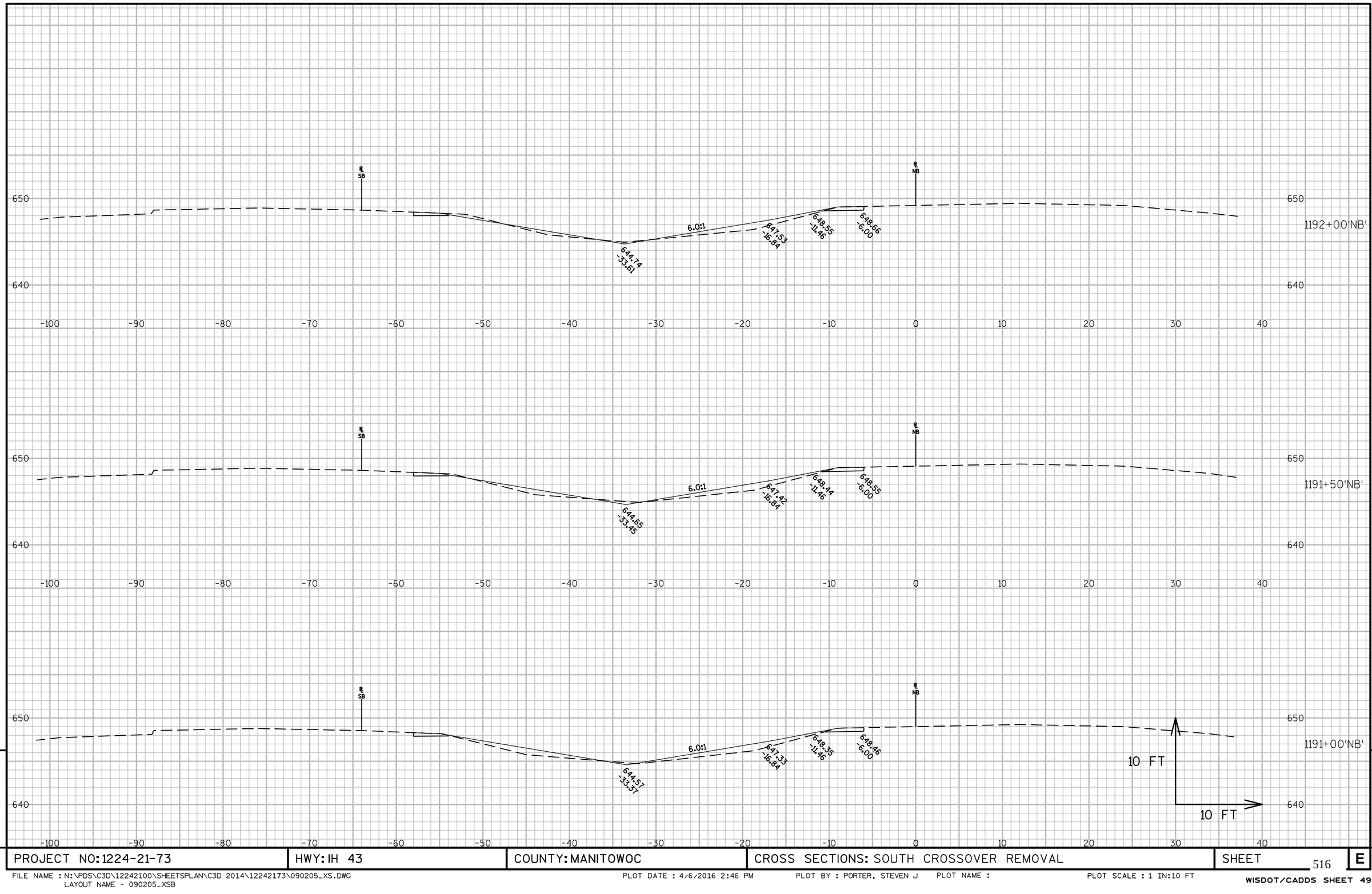
PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: SOUTH CROSSOVER REMOVAL	SHEET 515	E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090205_XS.DWG
LAYOUT NAME - 090205_XSA

PLOT DATE : 4/6/2016 2:45 PM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT



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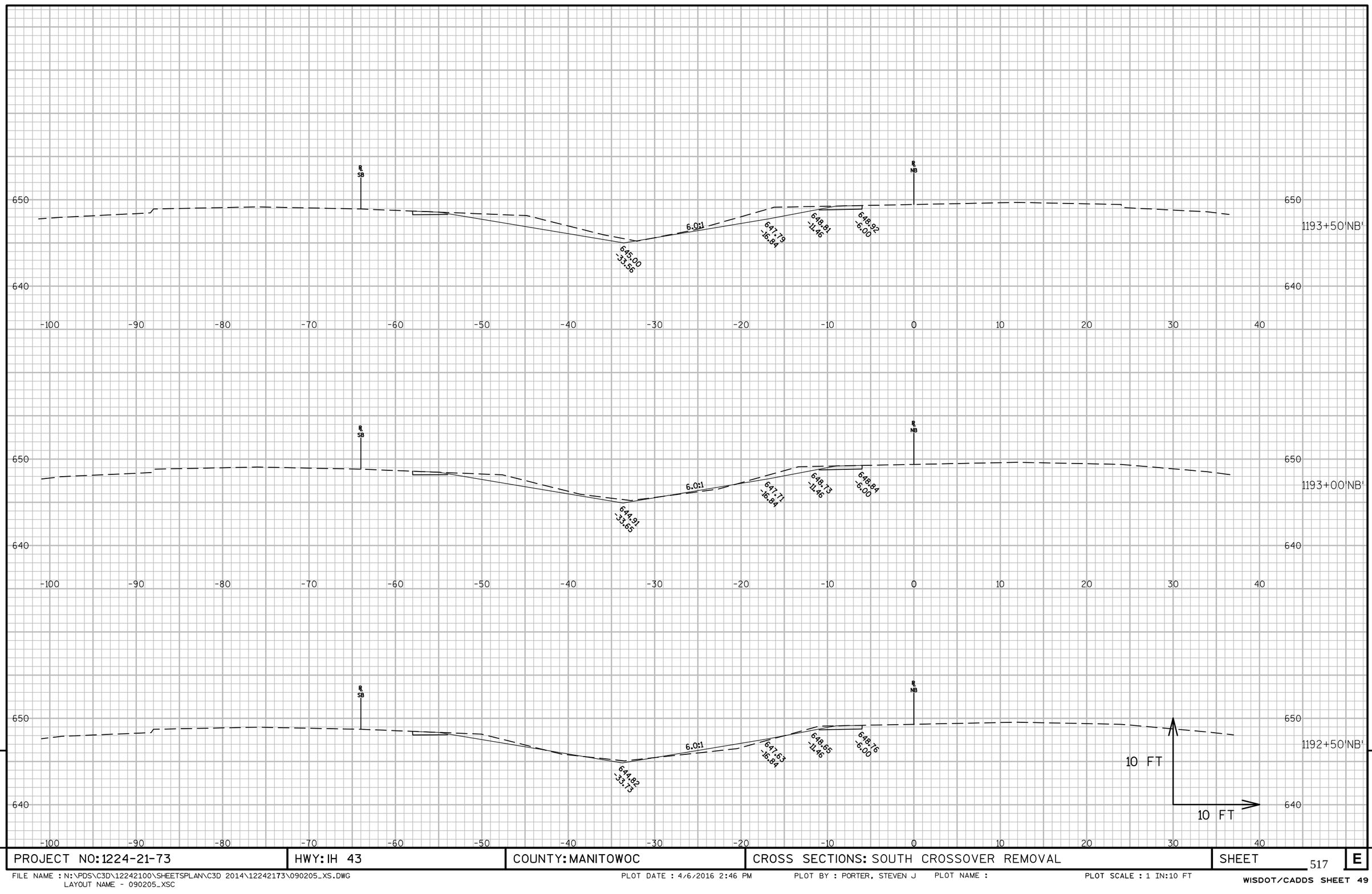
PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: SOUTH CROSSOVER REMOVAL	SHEET 516	E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090205_XS.DWG
LAYOUT NAME - 090205_XSB

PLOT DATE : 4/6/2016 2:46 PM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT



PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: SOUTH CROSSOVER REMOVAL	SHEET 517	E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090205_XS.DWG
LAYOUT NAME - 090205_XSC

PLOT DATE : 4/6/2016 2:46 PM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT

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PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: SOUTH CROSSOVER REMOVAL	SHEET 518	E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090205_XS.DWG
LAYOUT NAME - 090205_XSD

PLOT DATE : 4/6/2016 2:46 PM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT

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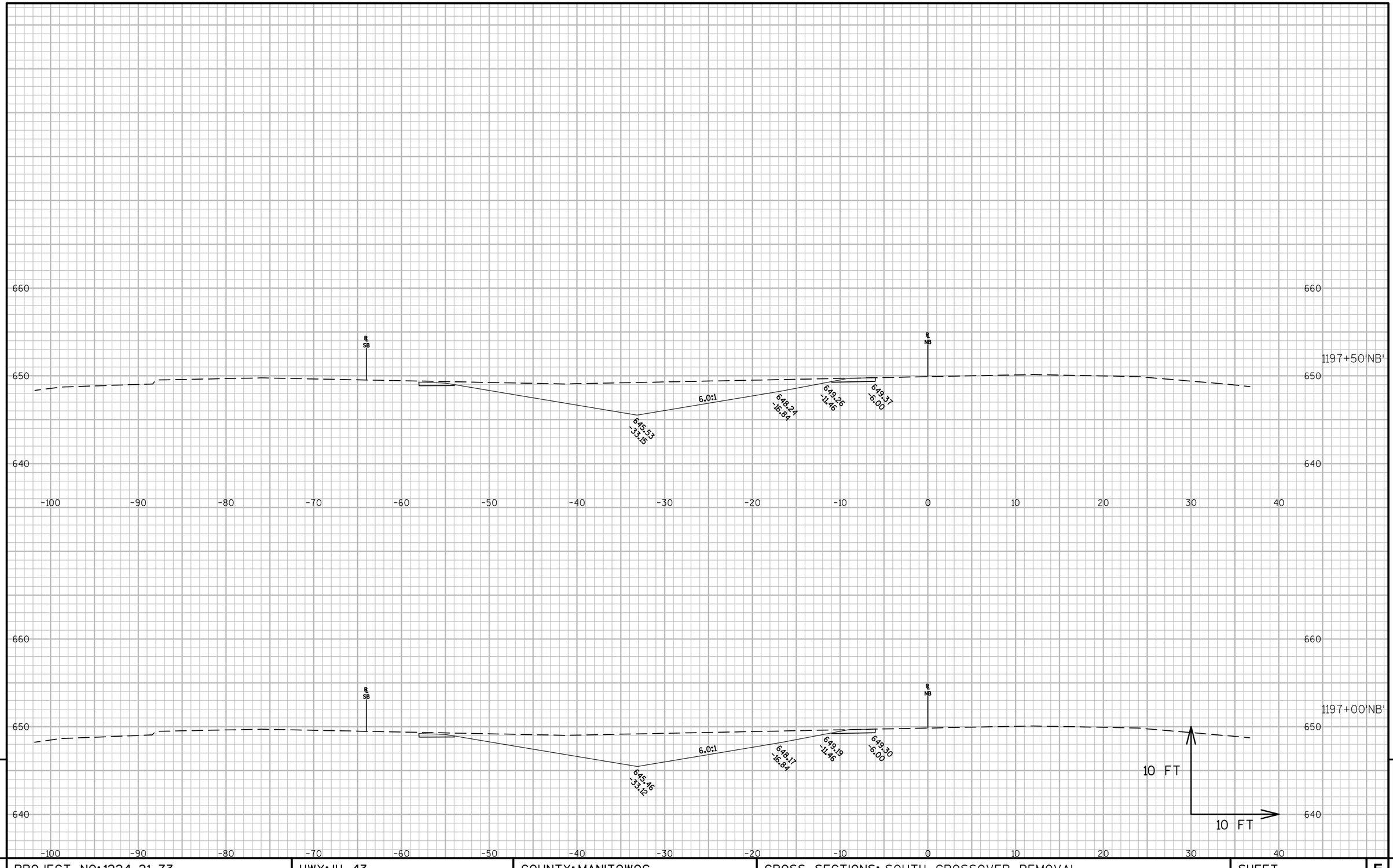
PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: SOUTH CROSSOVER REMOVAL	SHEET 519	E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090205_XS.DWG
LAYOUT NAME - 090205_XSE

PLOT DATE : 4/6/2016 2:47 PM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT



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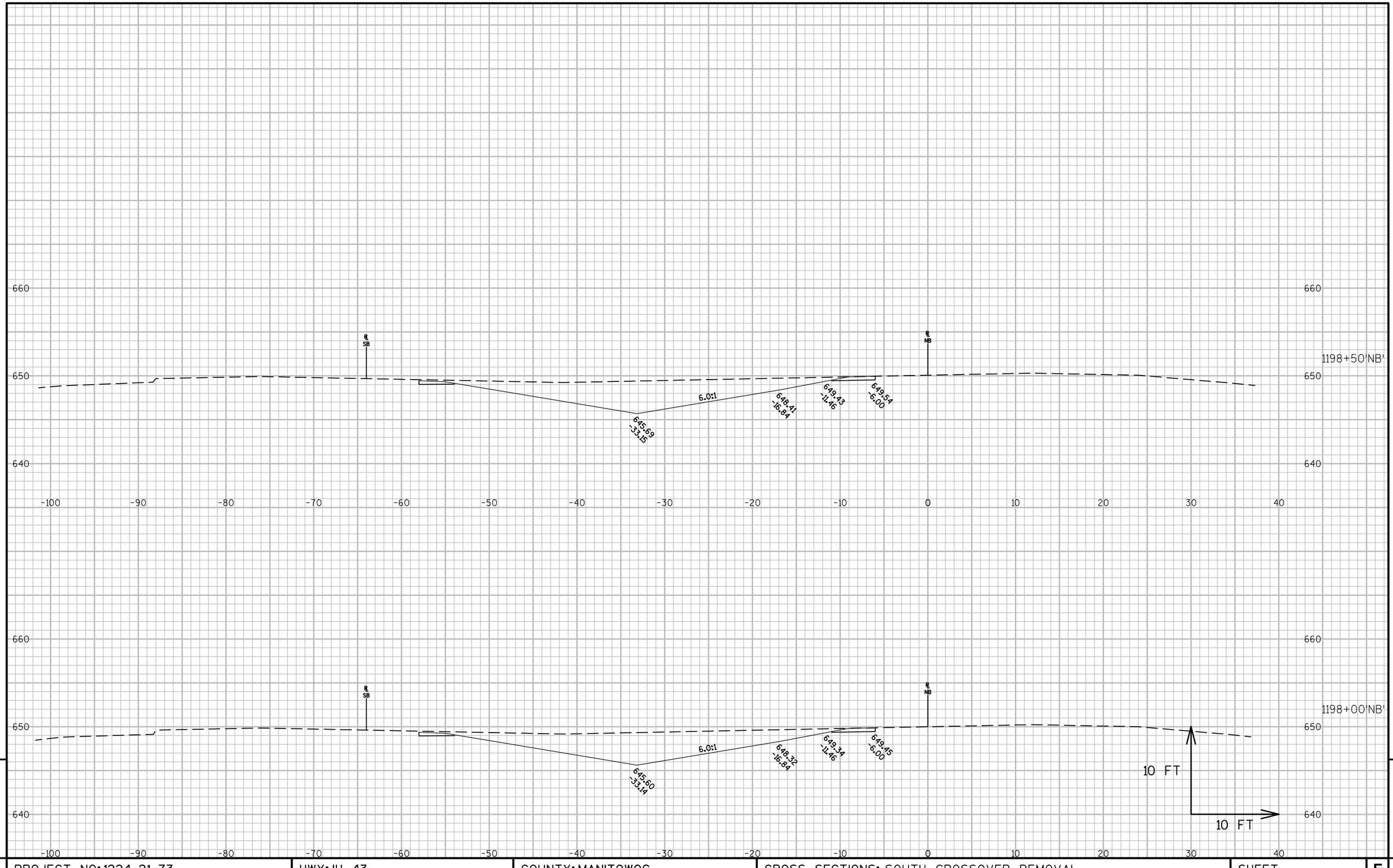
PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: SOUTH CROSSOVER REMOVAL	SHEET 520	E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090205_XS.DWG
LAYOUT NAME - 090205_XSF

PLOT DATE : 4/6/2016 2:47 PM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT



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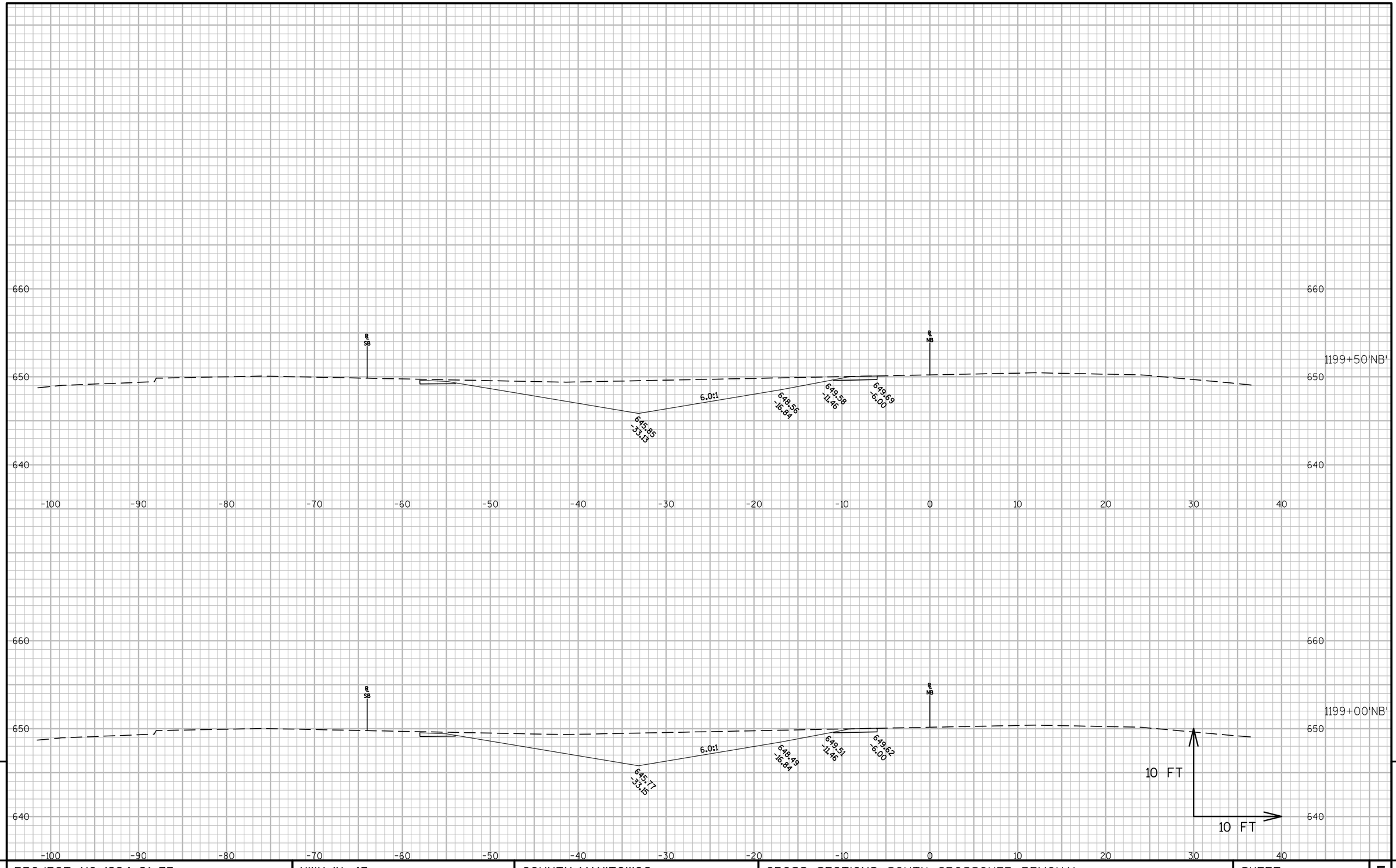
PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: SOUTH CROSSOVER REMOVAL	SHEET 521	E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090205_XS.DWG
LAYOUT NAME - 090205_XSG

PLOT DATE : 4/6/2016 2:47 PM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT



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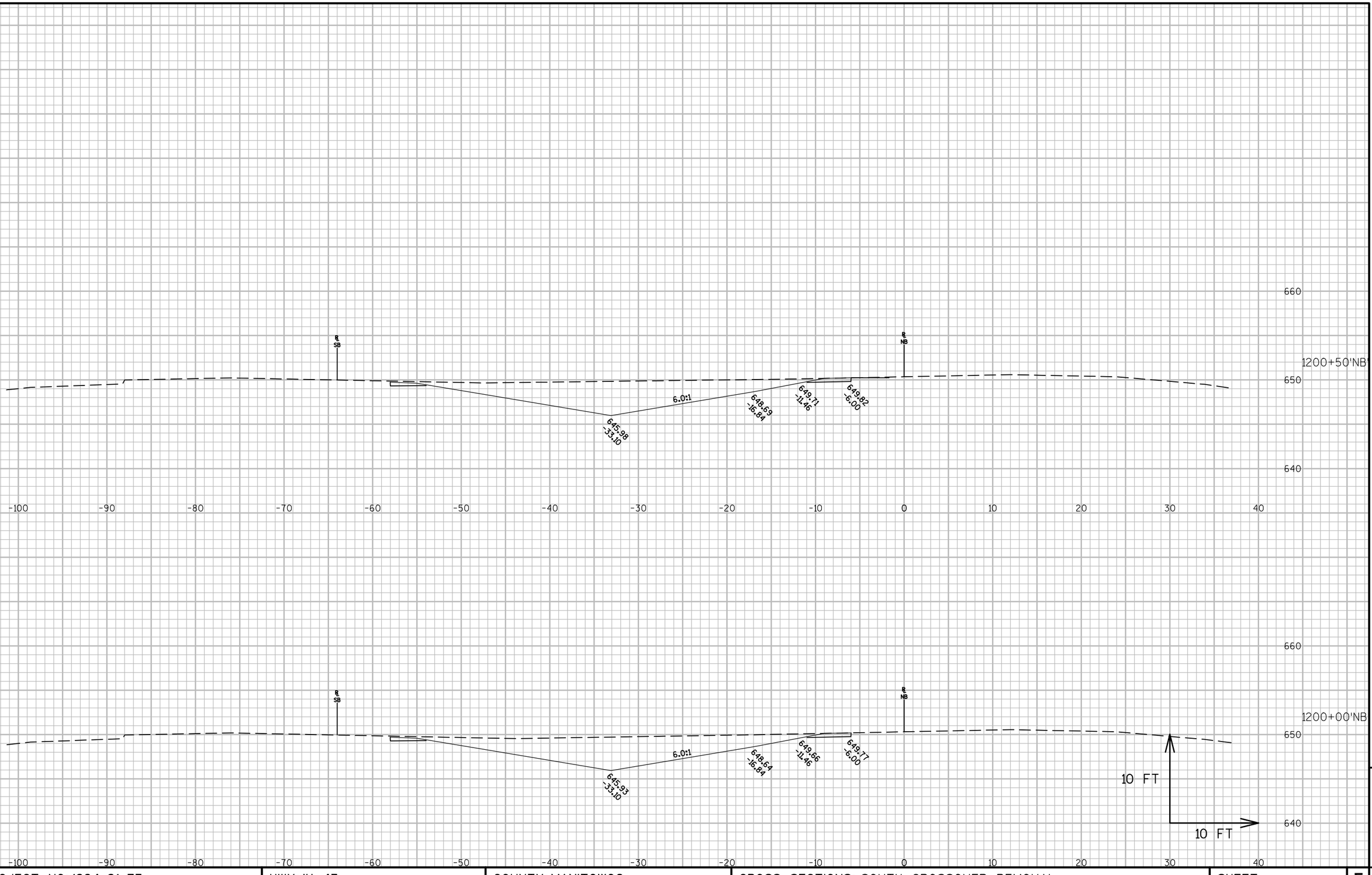
PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: SOUTH CROSSOVER REMOVAL	SHEET 522	E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090205_XS.DWG
LAYOUT NAME - 090205_XSH

PLOT DATE : 4/6/2016 2:47 PM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT

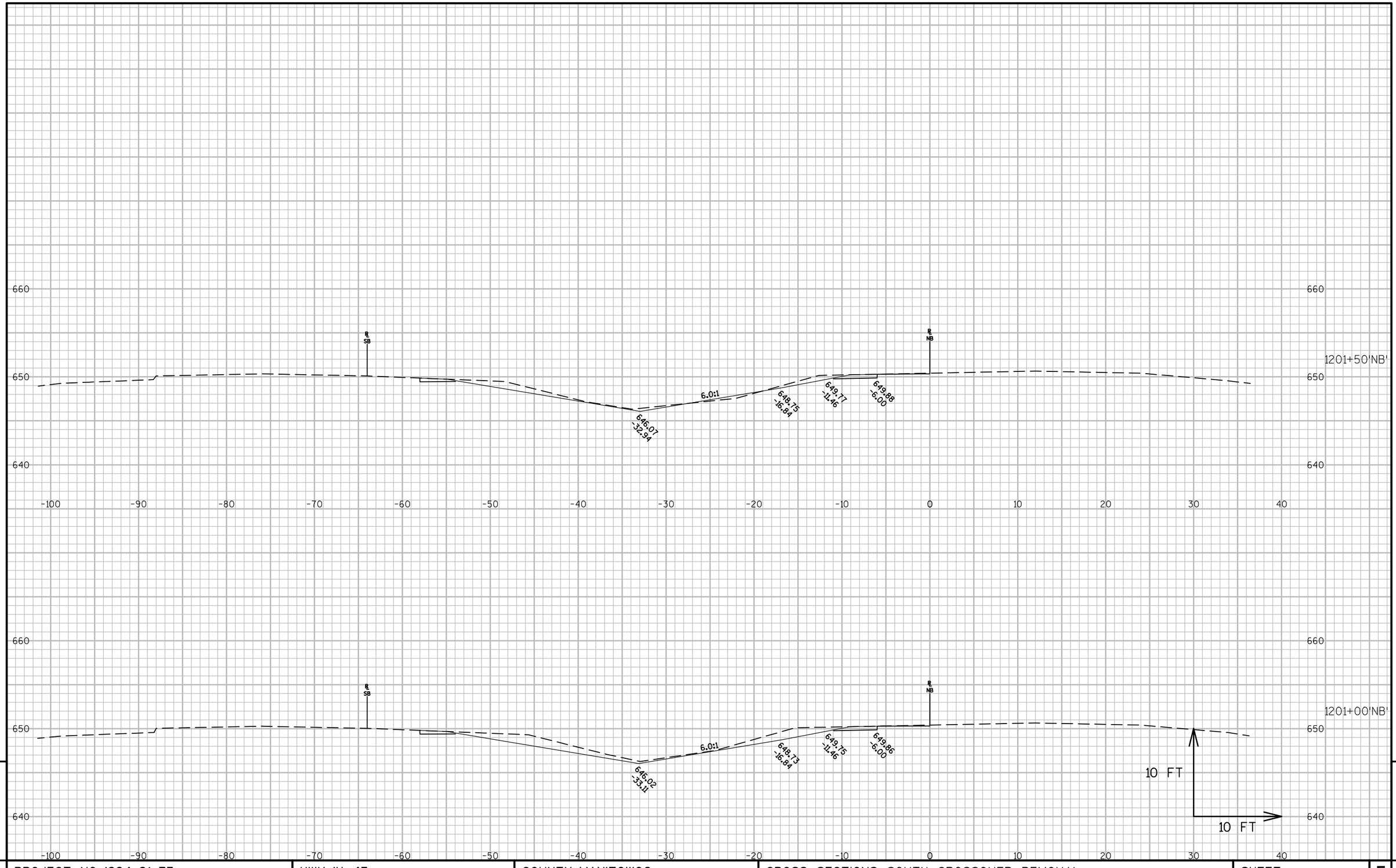


PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: SOUTH CROSSOVER REMOVAL	SHEET 523 E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090205_XS.DWG
LAYOUT NAME - 090205_XSI

PLOT DATE : 4/6/2016 2:48 PM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT

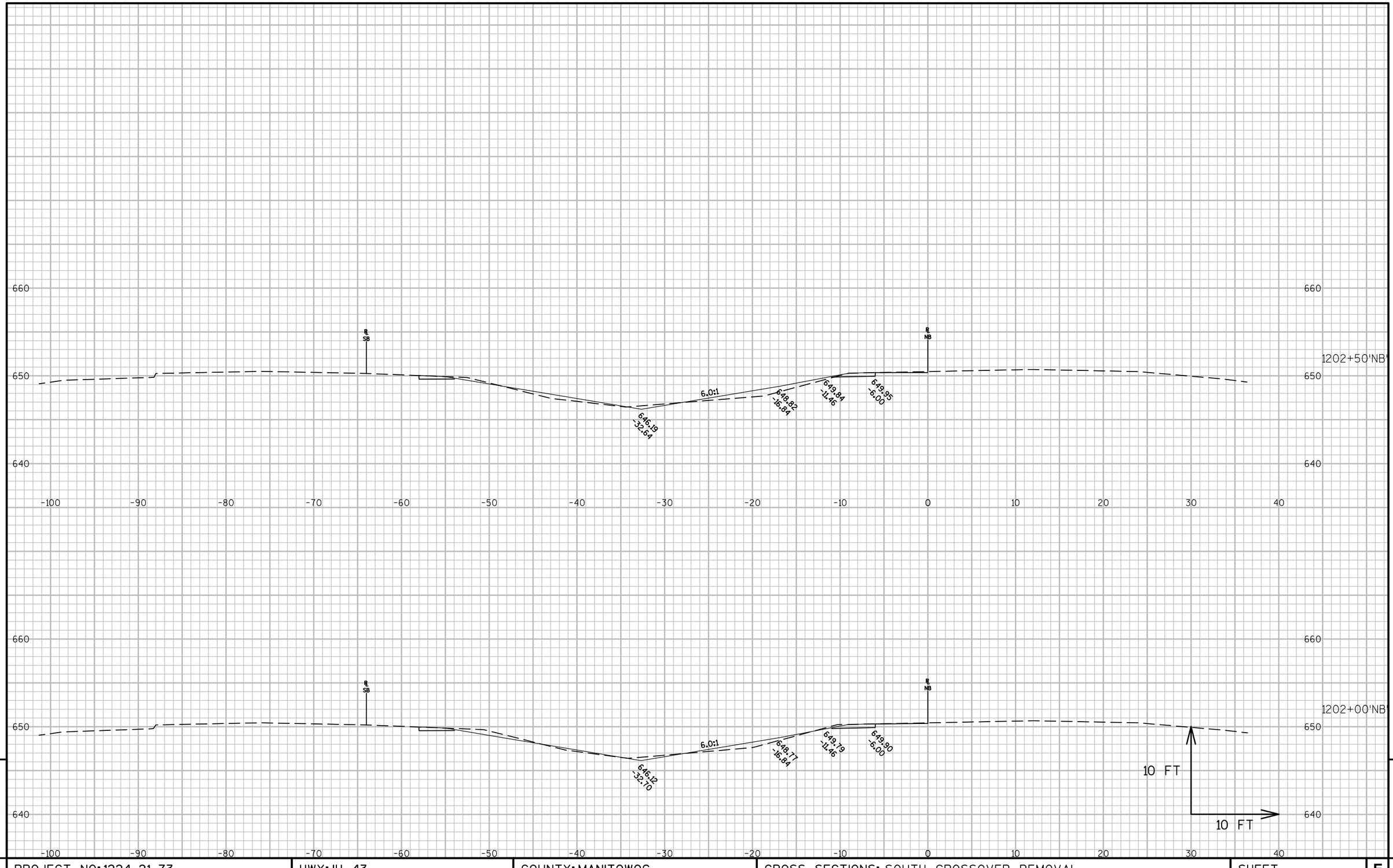
WISDOT/CADDS SHEET 49



PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: SOUTH CROSSOVER REMOVAL	SHEET 524	E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090205_XS.DWG
LAYOUT NAME - 090205_XSJ

PLOT DATE : 4/6/2016 2:48 PM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT



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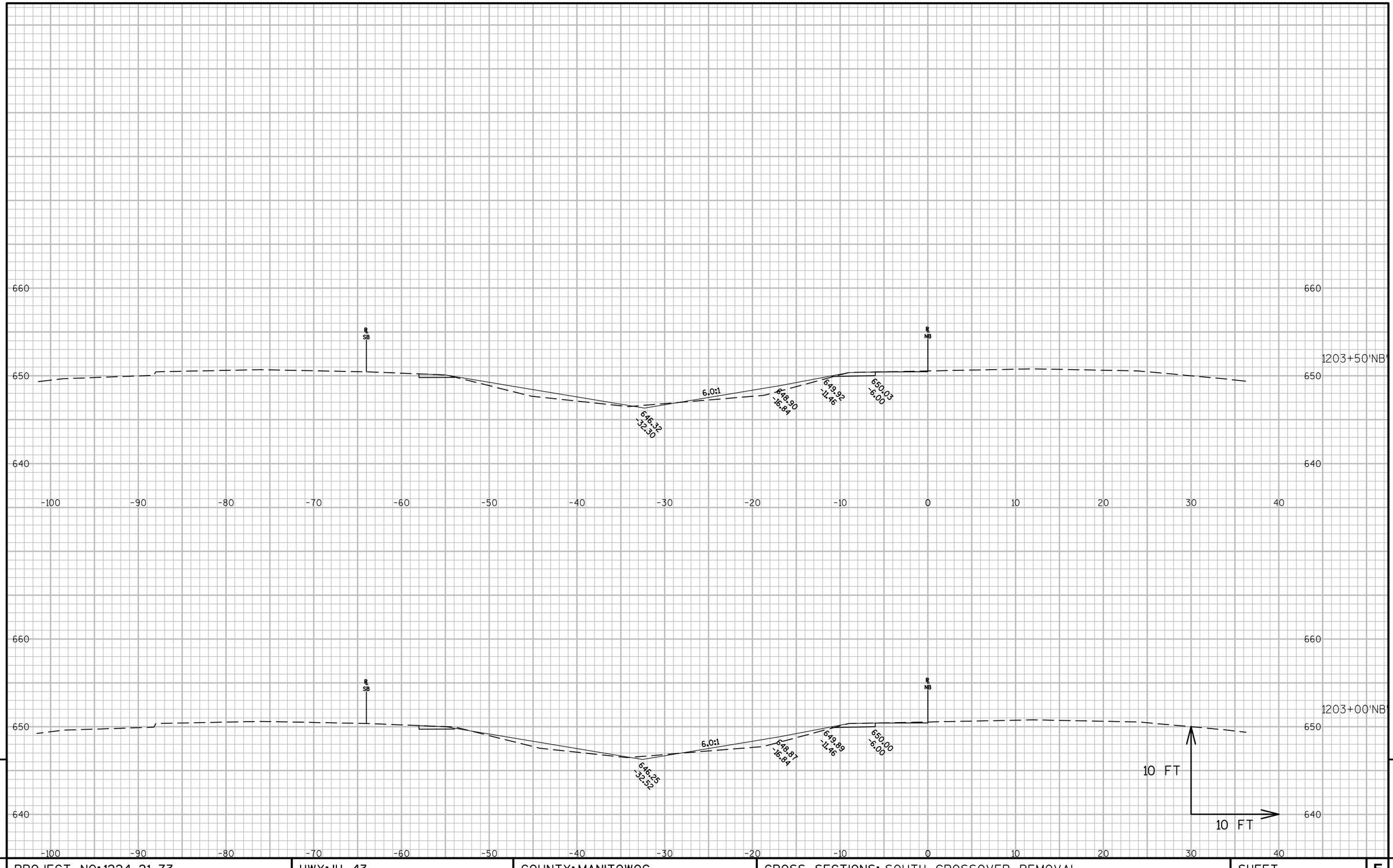
PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: SOUTH CROSSOVER REMOVAL	SHEET 525	E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090205_XS.DWG
LAYOUT NAME - 090205_XSK

PLOT DATE : 4/6/2016 2:48 PM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT



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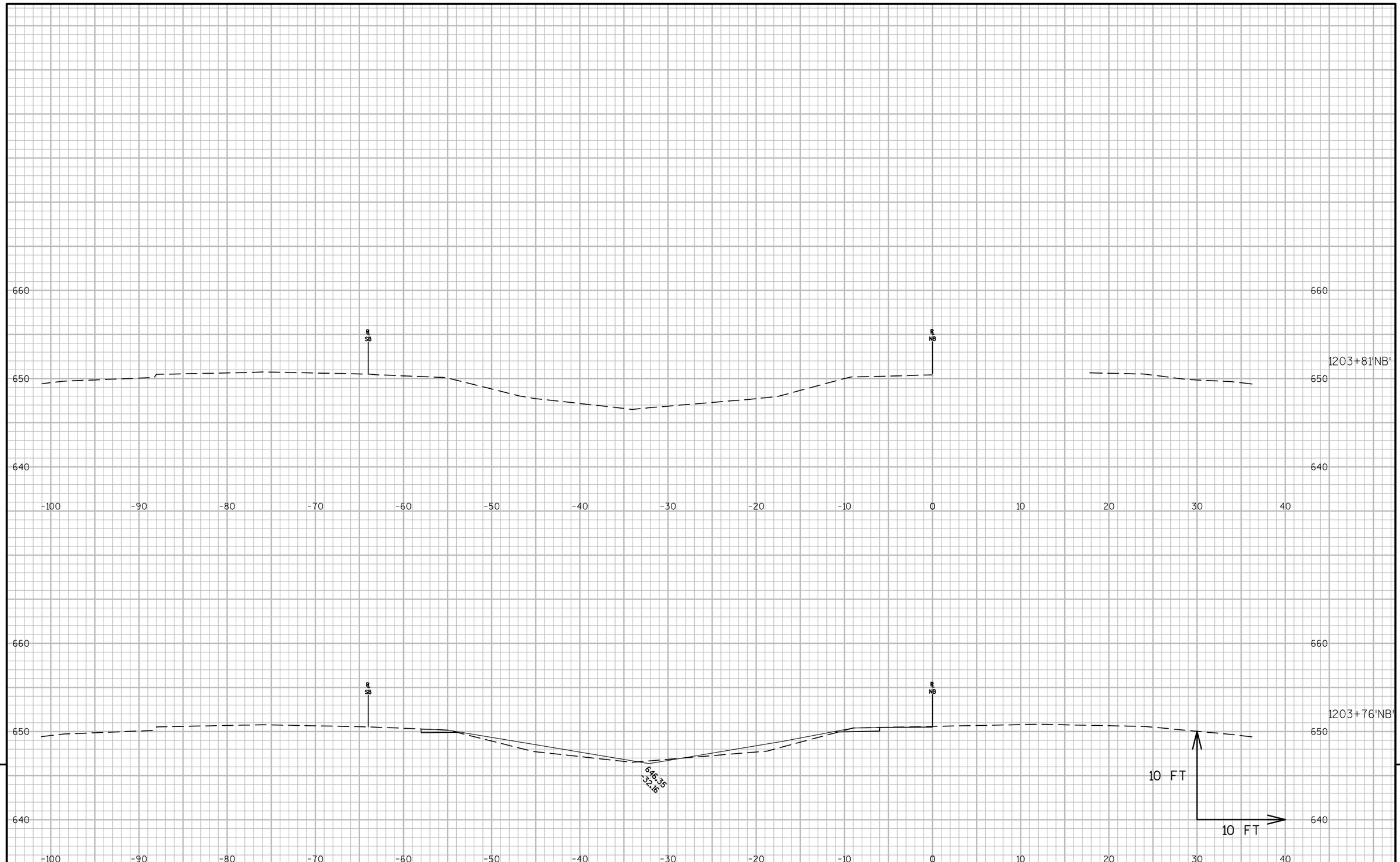
PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: SOUTH CROSSOVER REMOVAL	SHEET 526	E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090205_XS.DWG
LAYOUT NAME - 090205_XSL

PLOT DATE : 4/6/2016 2:49 PM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



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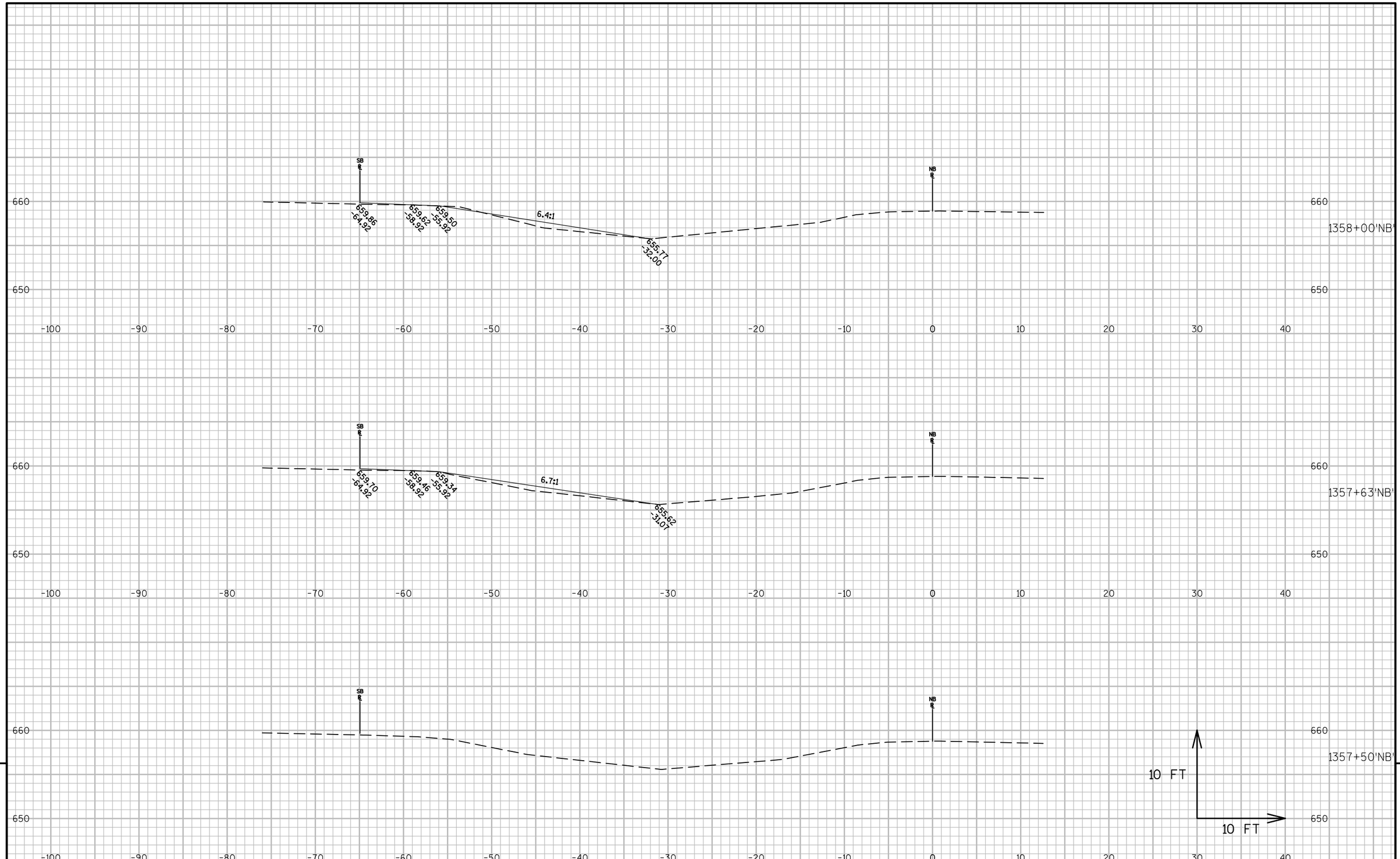
PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: SOUTH CROSSOVER REMOVAL	SHEET 527	E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090205_XS.DWG
LAYOUT NAME - 090205_XSM

PLOT DATE : 4/6/2016 2:49 PM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



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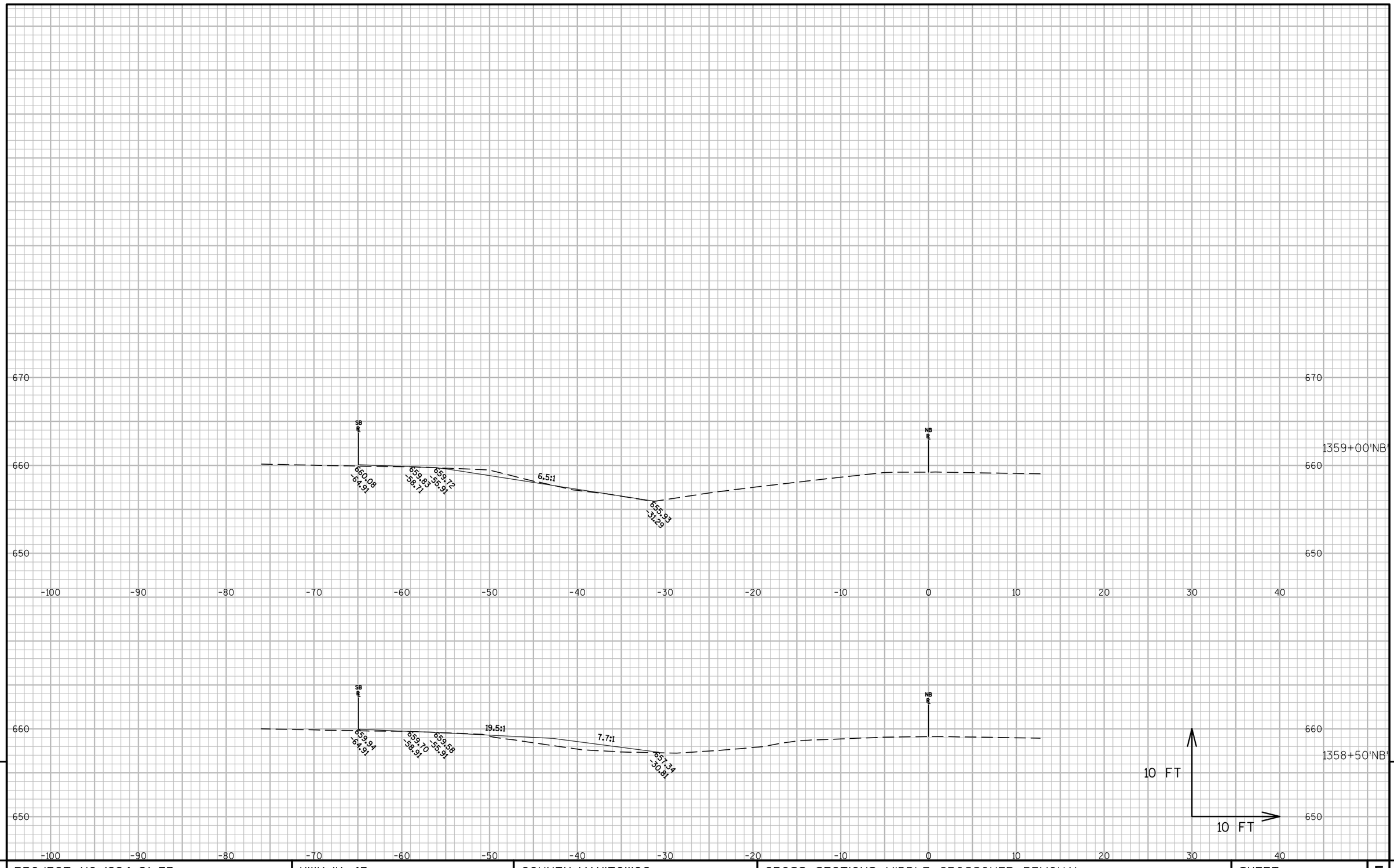
PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: MIDDLE CROSSOVER REMOVAL	SHEET 528	E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090207_XS.DWG
LAYOUT NAME - 090207_XSA

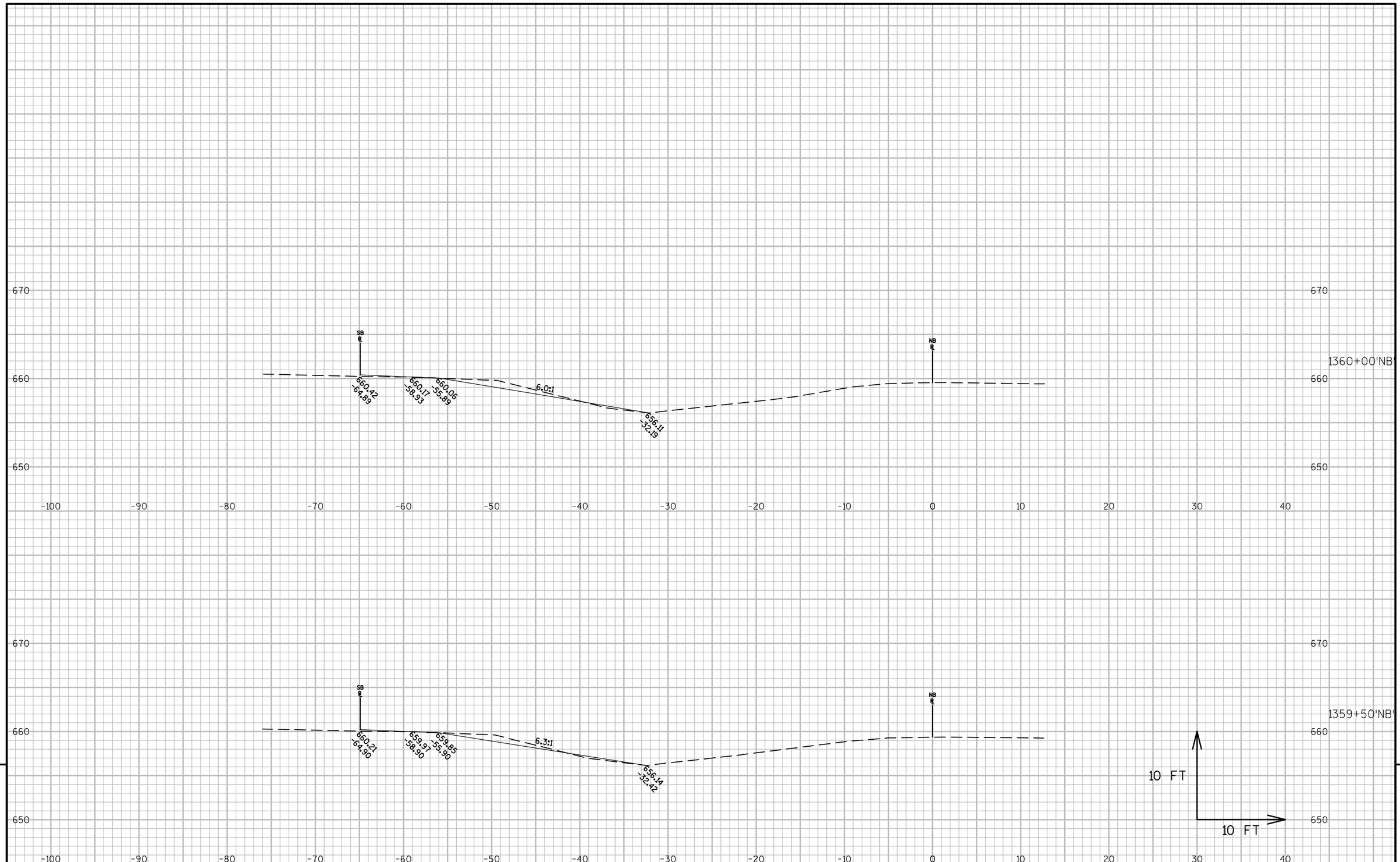
PLOT DATE : 4/11/2016 8:02 AM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT



PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: MIDDLE CROSSOVER REMOVAL	SHEET 529	E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090207_XS.DWG
LAYOUT NAME - 090207_XSB

PLOT DATE : 4/11/2016 8:02 AM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT



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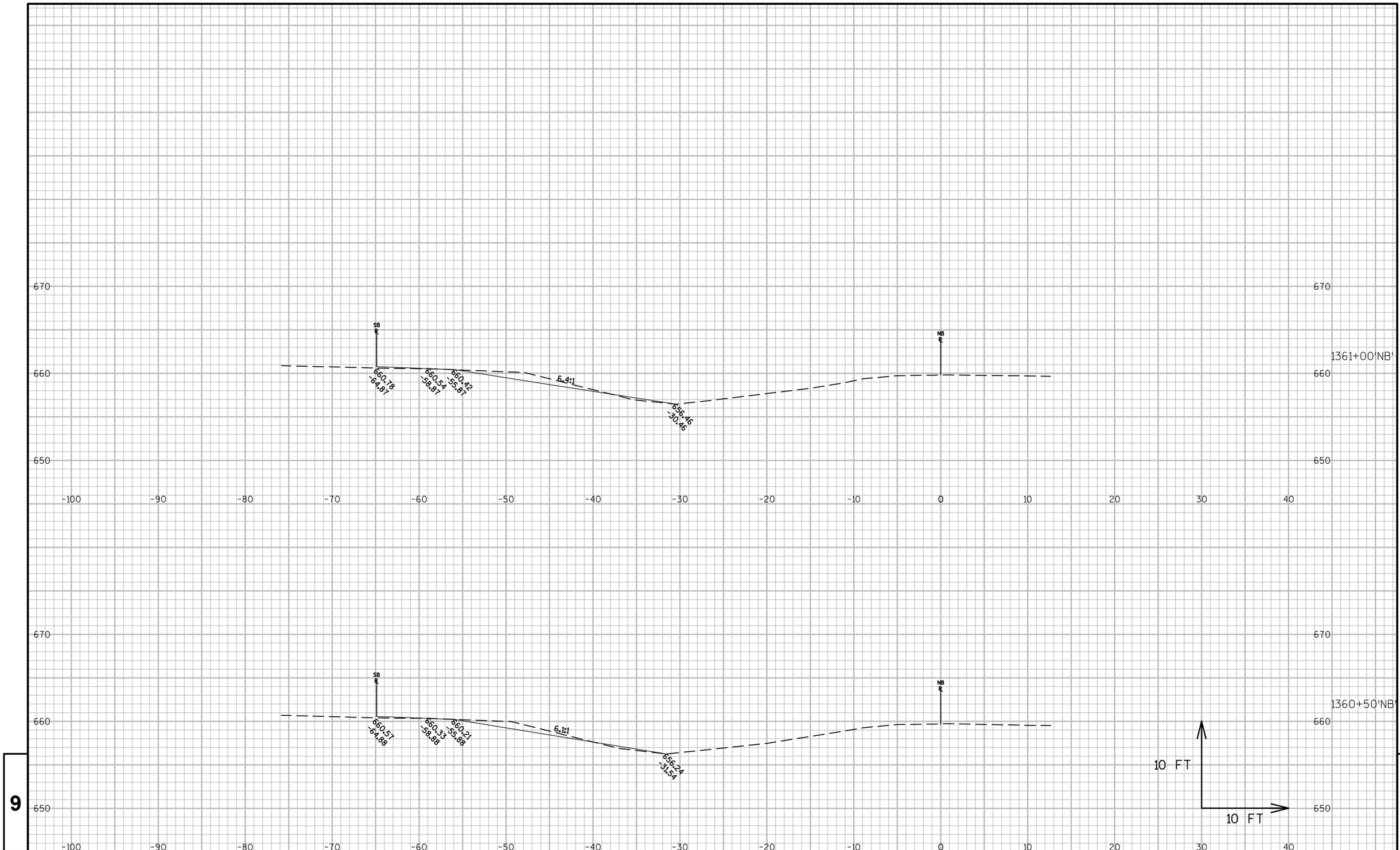
PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: MIDDLE CROSSOVER REMOVAL	SHEET 530	E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090207_XS.DWG
LAYOUT NAME - 090207_XSC

PLOT DATE : 4/11/2016 8:02 AM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT



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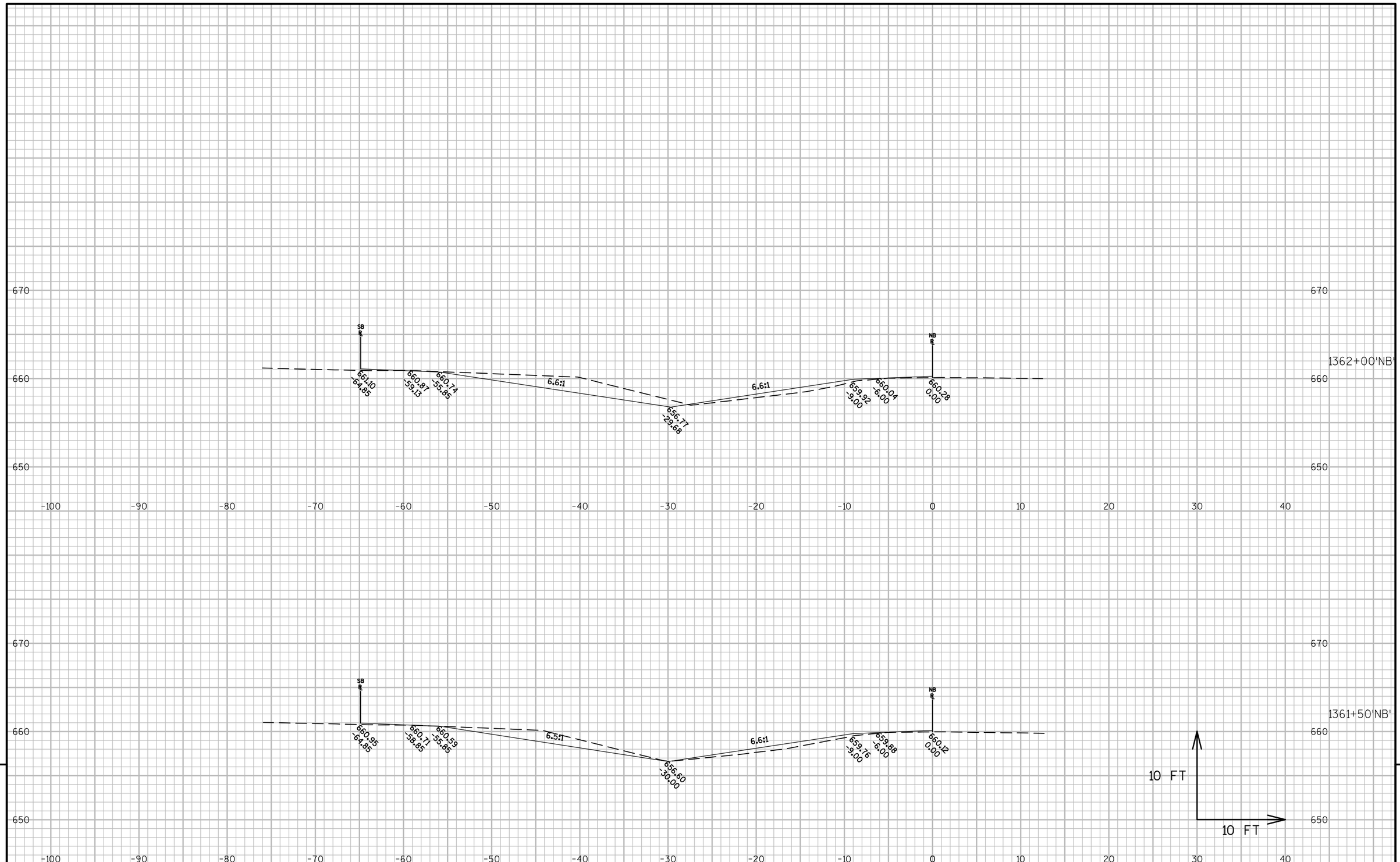
PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: MIDDLE CROSSOVER REMOVAL	SHEET 531	E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090207_XS.DWG
LAYOUT NAME - 090207_XSD

PLOT DATE : 4/11/2016 8:02 AM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT



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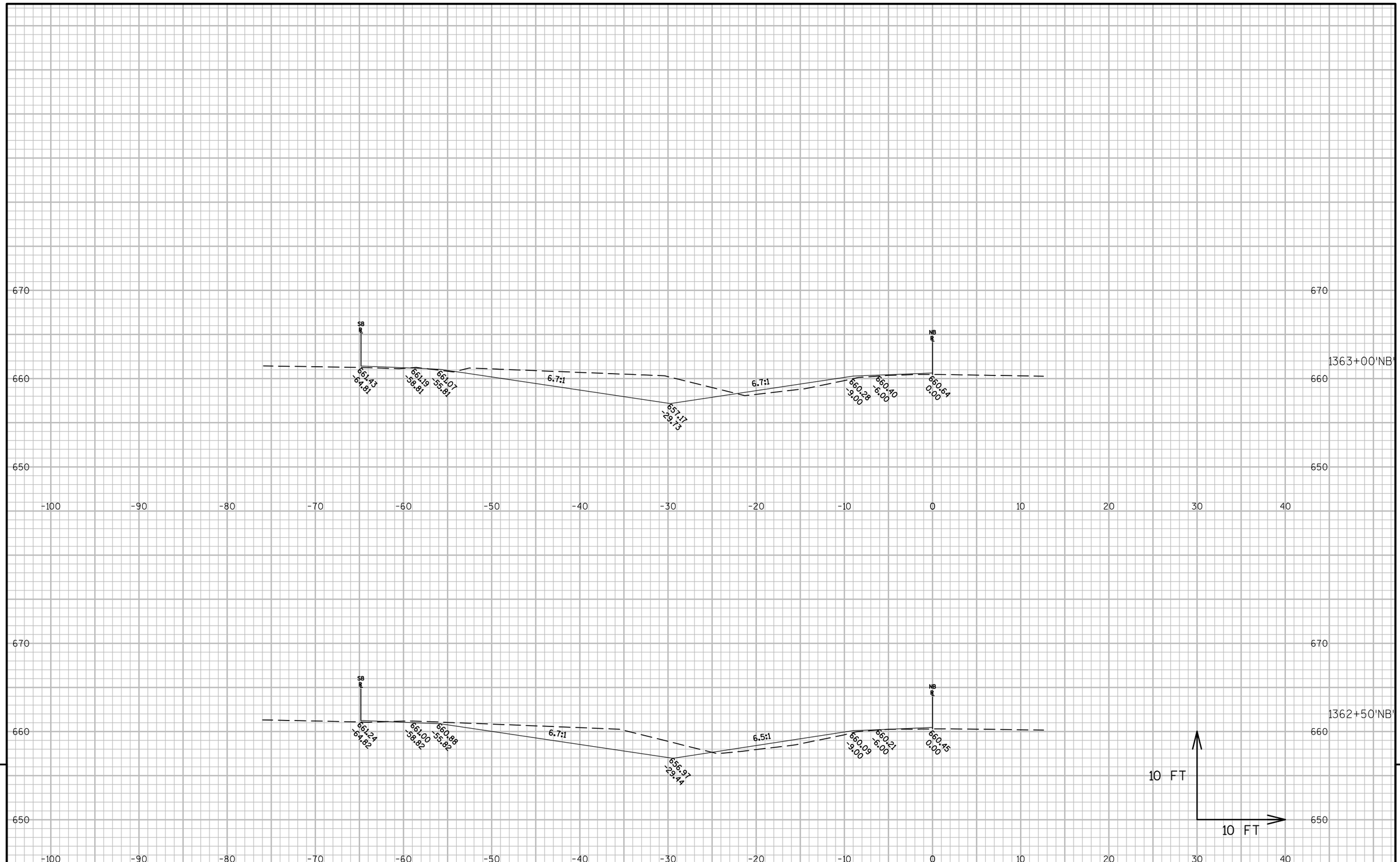
PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: MIDDLE CROSSOVER REMOVAL	SHEET 532	E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090207_XS.DWG
LAYOUT NAME - 090207_XSE

PLOT DATE : 4/11/2016 8:03 AM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT



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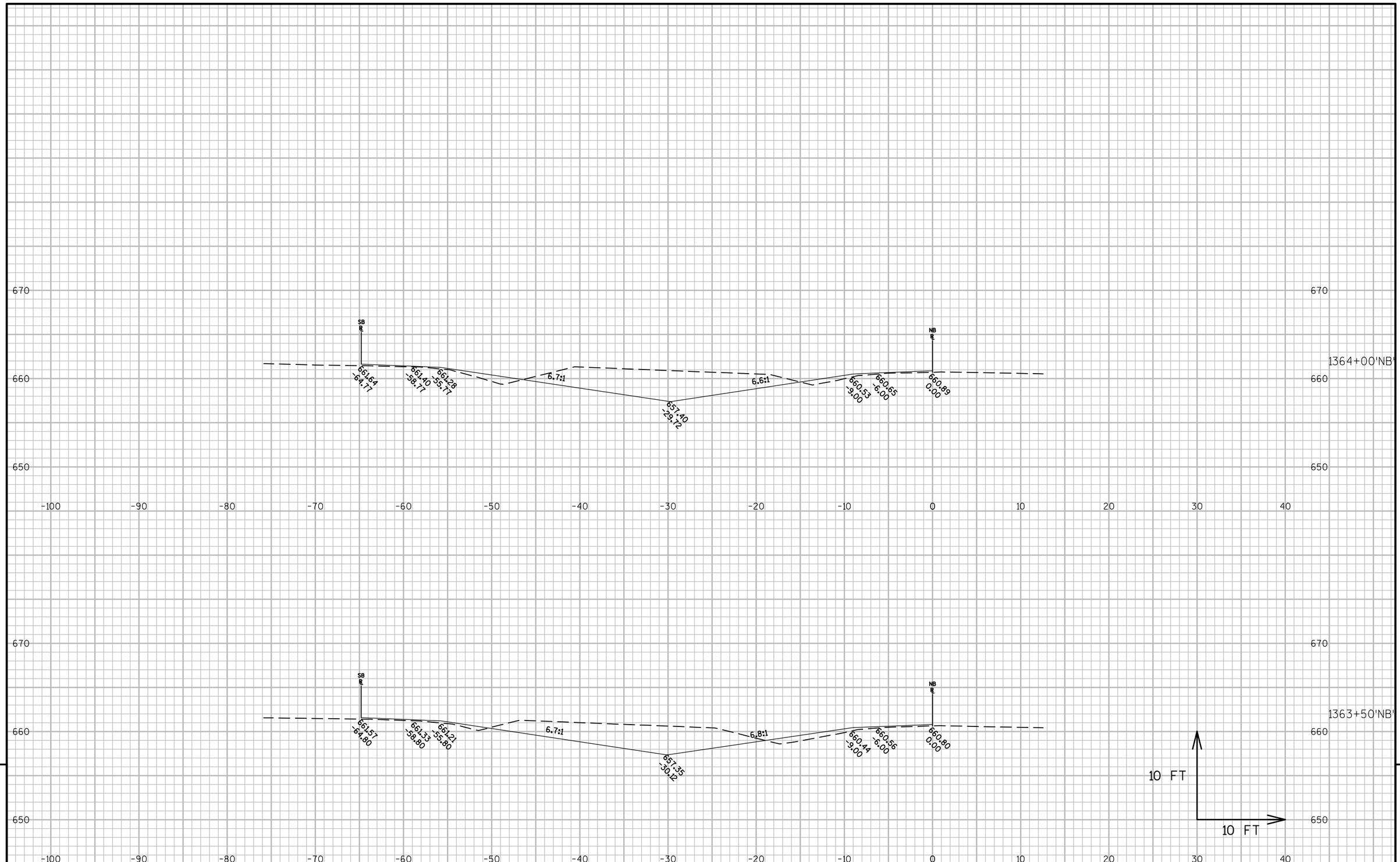
PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: MIDDLE CROSSOVER REMOVAL	SHEET 533	E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090207_XS.DWG
LAYOUT NAME - 090207_XSF

PLOT DATE : 4/11/2016 8:03 AM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT



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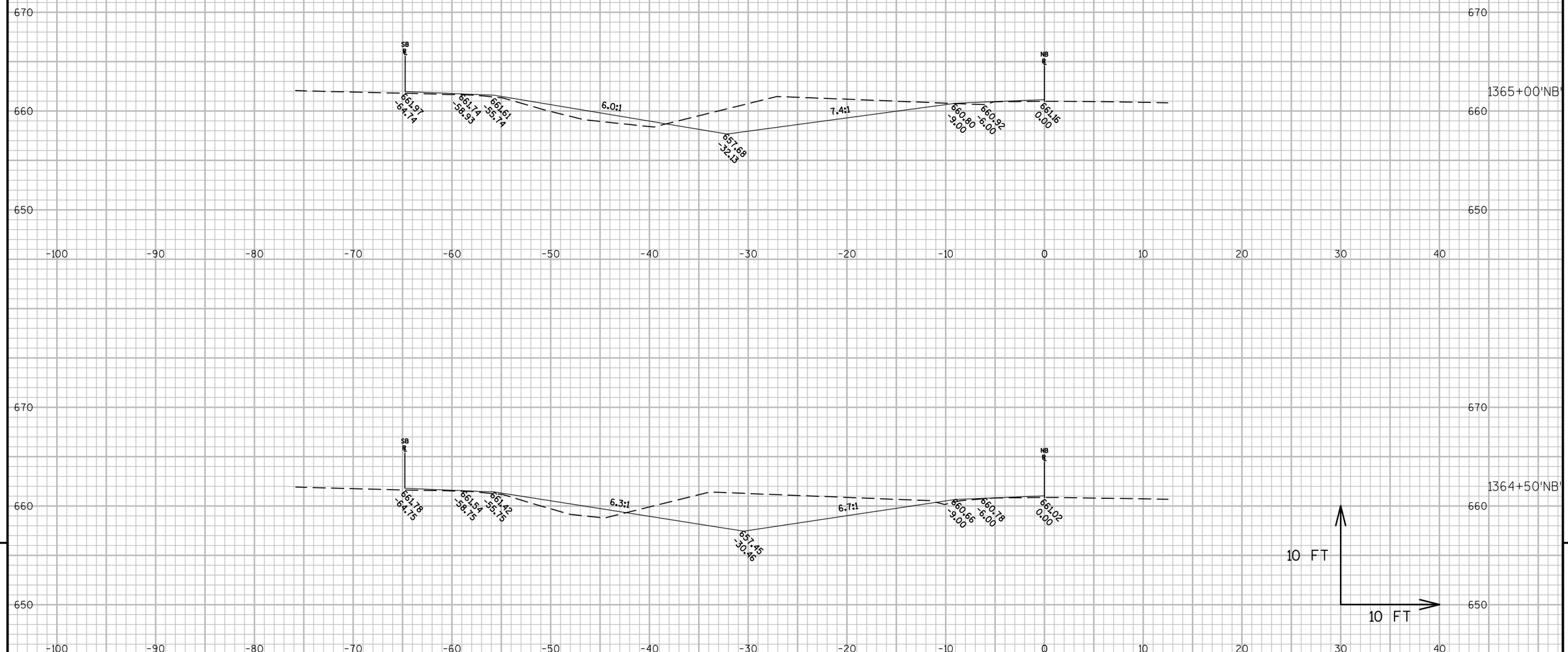
PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: MIDDLE CROSSOVER REMOVAL	SHEET 534	E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090207_XS.DWG
LAYOUT NAME - 090207_XSG

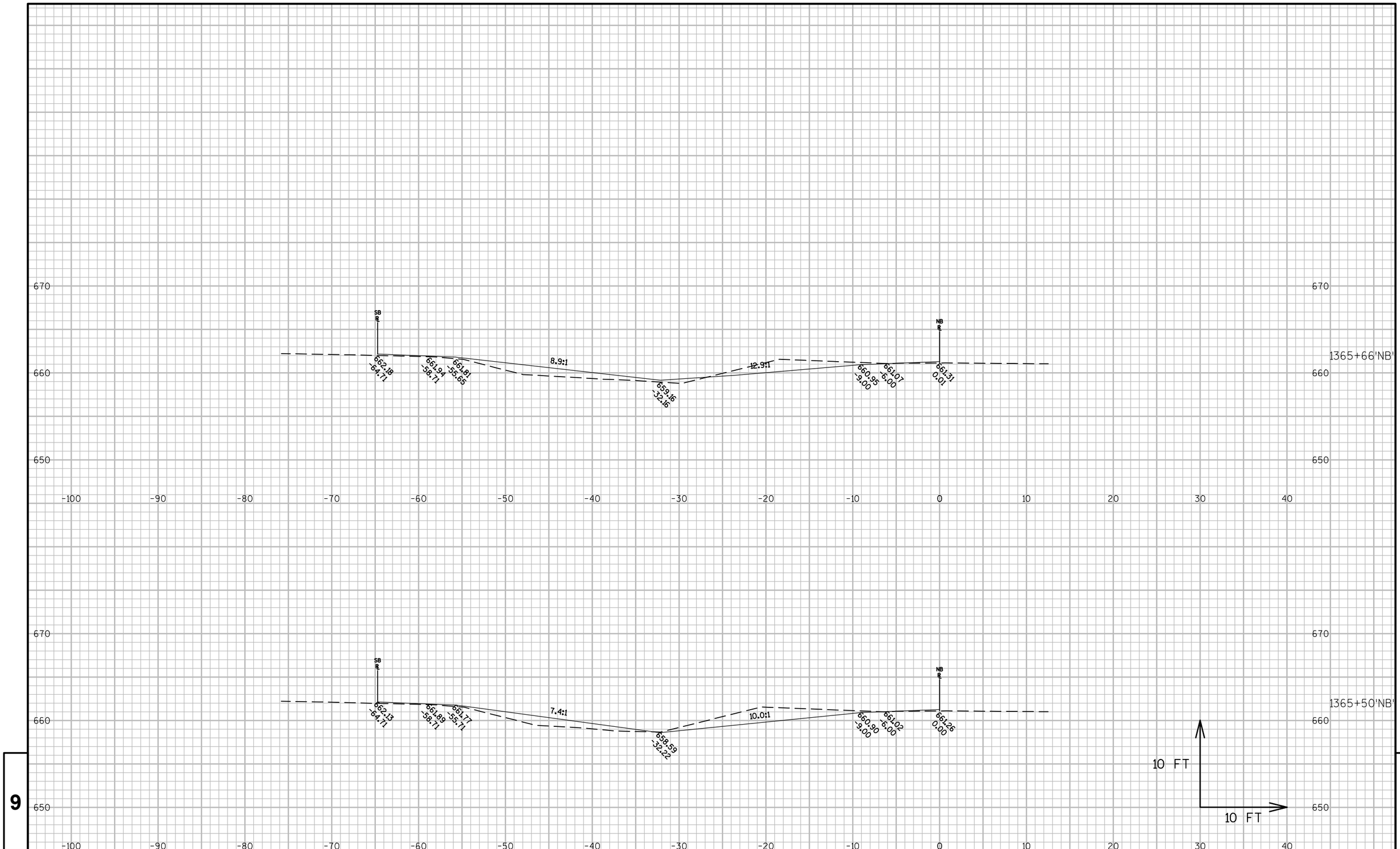
PLOT DATE : 4/11/2016 8:03 AM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT



PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: MIDDLE CROSSOVER REMOVAL	SHEET 535 E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090207_XS.DWG
LAYOUT NAME - 090207_XSH

PLOT DATE : 4/11/2016 8:03 AM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT



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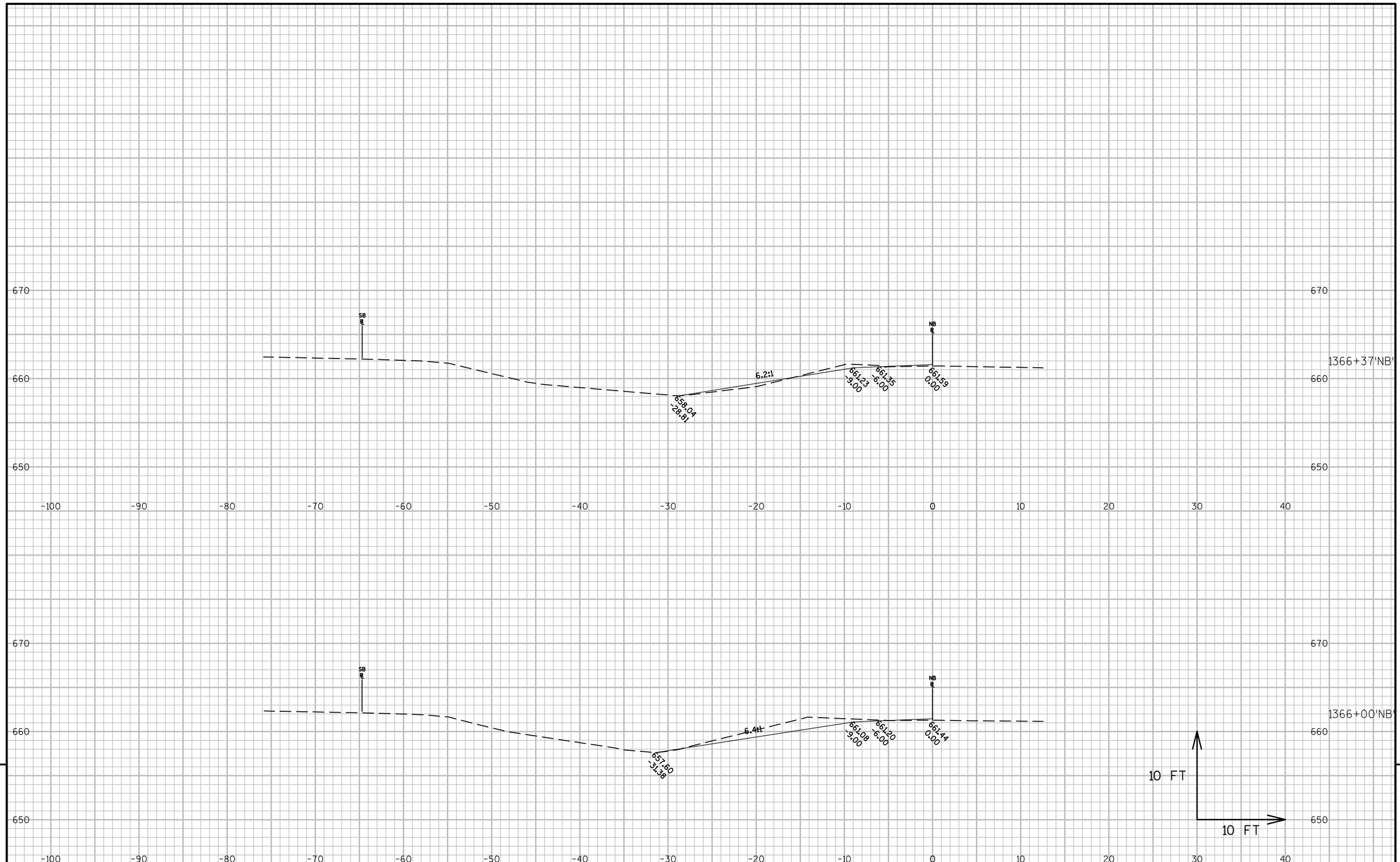
PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: MIDDLE CROSSOVER REMOVAL	SHEET 536	E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090207_XS.DWG
LAYOUT NAME - 090207_XSI

PLOT DATE : 4/11/2016 8:03 AM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT



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PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: MIDDLE CROSSOVER REMOVAL	SHEET 537	E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090207_XS.DWG
LAYOUT NAME - 090207_XSJ

PLOT DATE : 4/11/2016 8:03 AM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT

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PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: MIDDLE CROSSOVER REMOVAL	SHEET 538	E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090207_XS.DWG
LAYOUT NAME - 090207_XSK

PLOT DATE : 4/11/2016 8:03 AM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT

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PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: NORTH CROSSOVER REMOVAL	SHEET 539	E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090205_XS.DWG
LAYOUT NAME - 090205_XSN

PLOT DATE : 4/6/2016 2:49 PM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49

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PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: NORTH CROSSOVER REMOVAL	SHEET 540	E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090205_XS.DWG
LAYOUT NAME - 090205_XSO

PLOT DATE : 4/6/2016 2:49 PM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49

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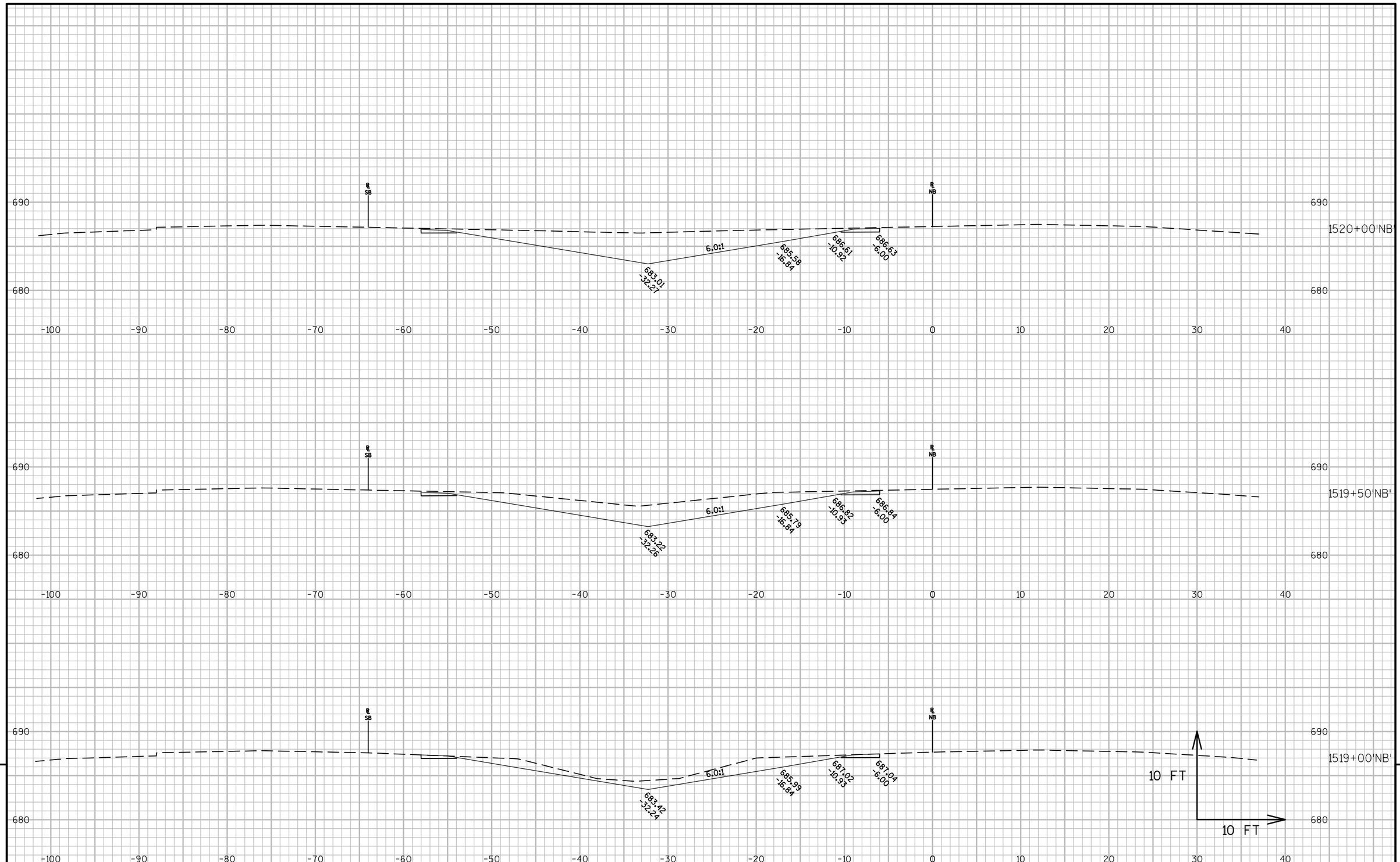
9

PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: NORTH CROSSOVER REMOVAL	SHEET 541	E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090205_XS.DWG
LAYOUT NAME - 090205_XSP

PLOT DATE : 4/6/2016 2:50 PM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT



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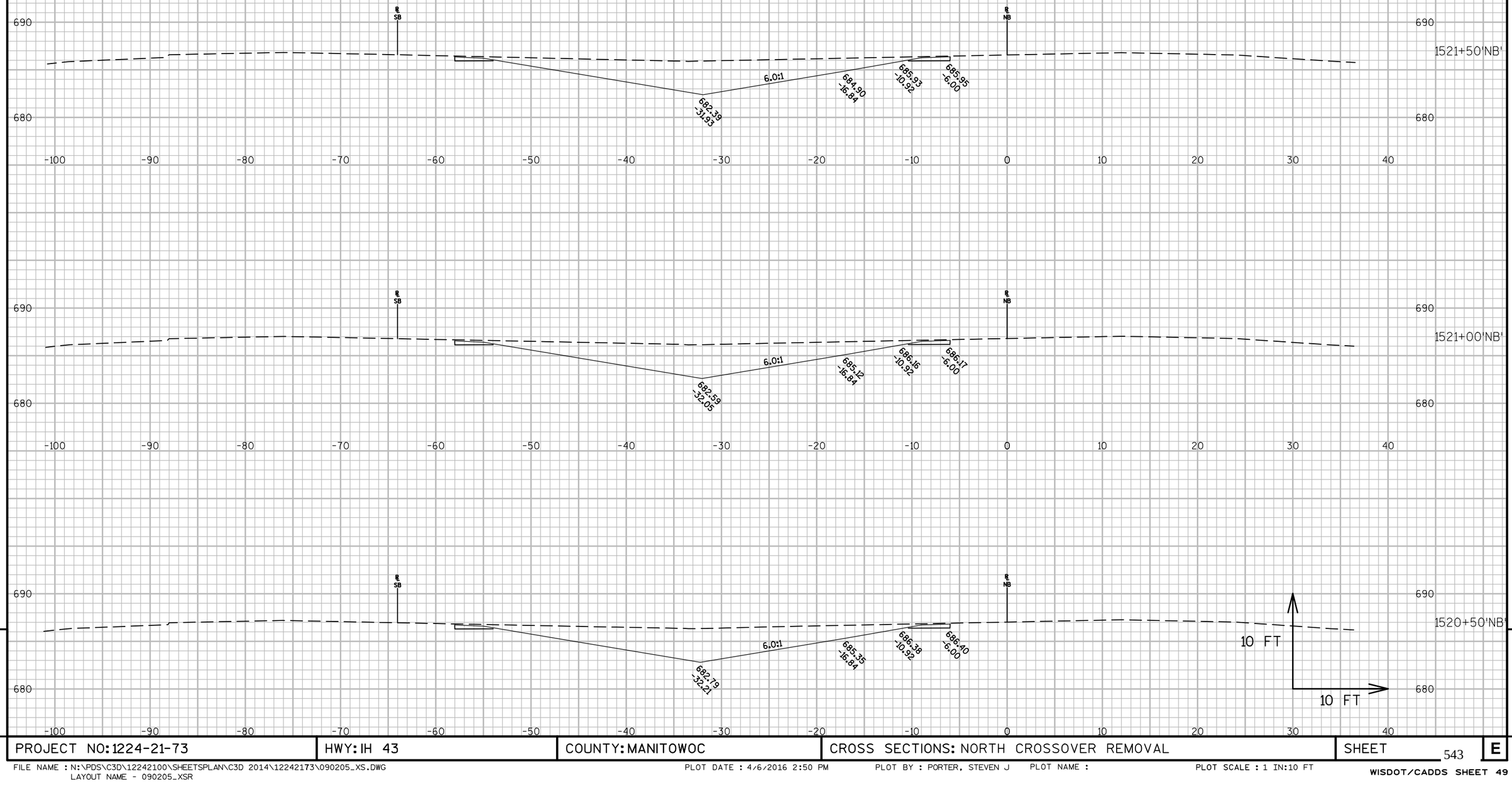
PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: NORTH CROSSOVER REMOVAL	SHEET 542	E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090205_XS.DWG
LAYOUT NAME - 090205_XSQ

PLOT DATE : 4/6/2016 2:50 PM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



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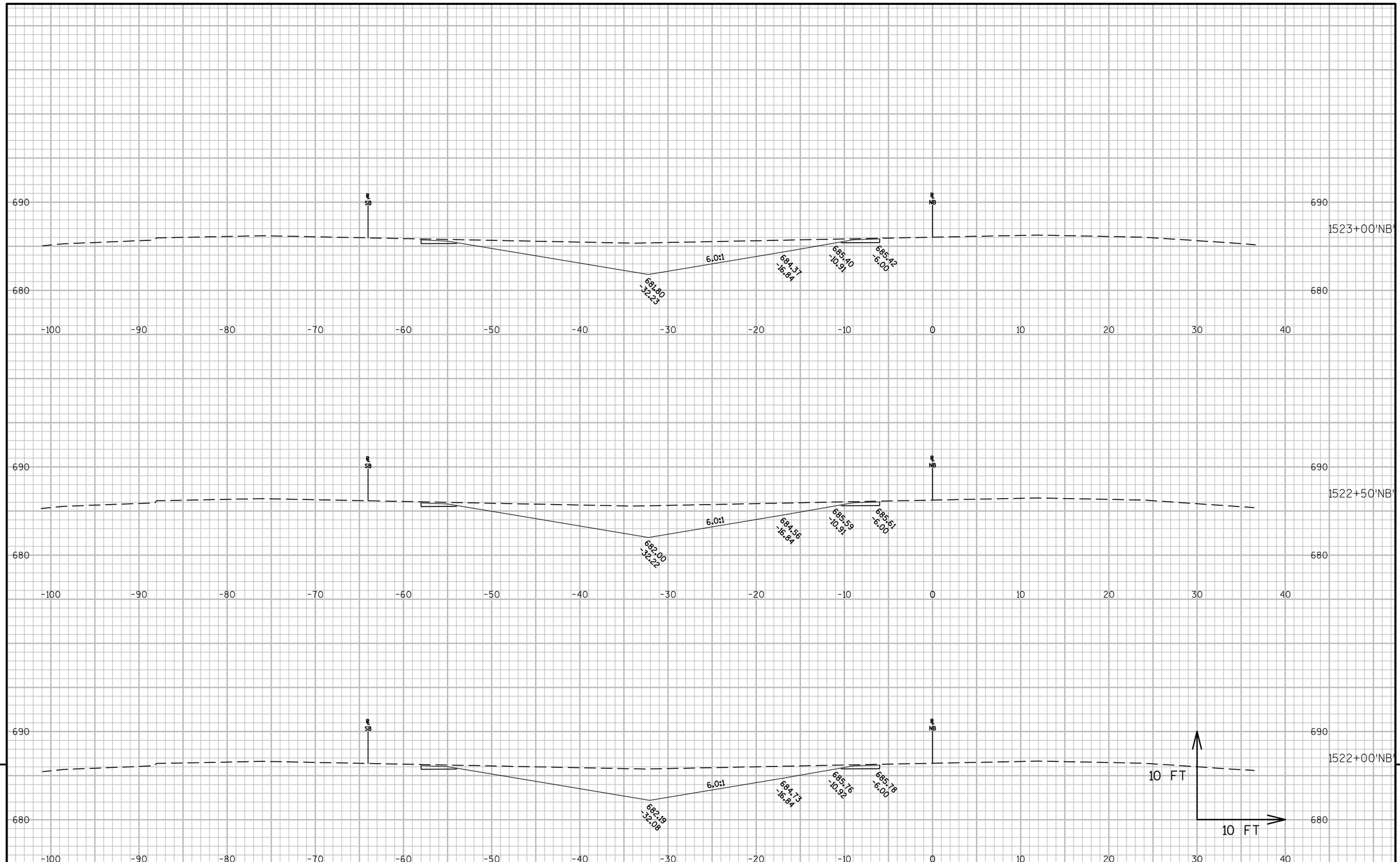
PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: NORTH CROSSOVER REMOVAL	SHEET 543	E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090205_XS.DWG
LAYOUT NAME - 090205_XSR

PLOT DATE : 4/6/2016 2:50 PM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



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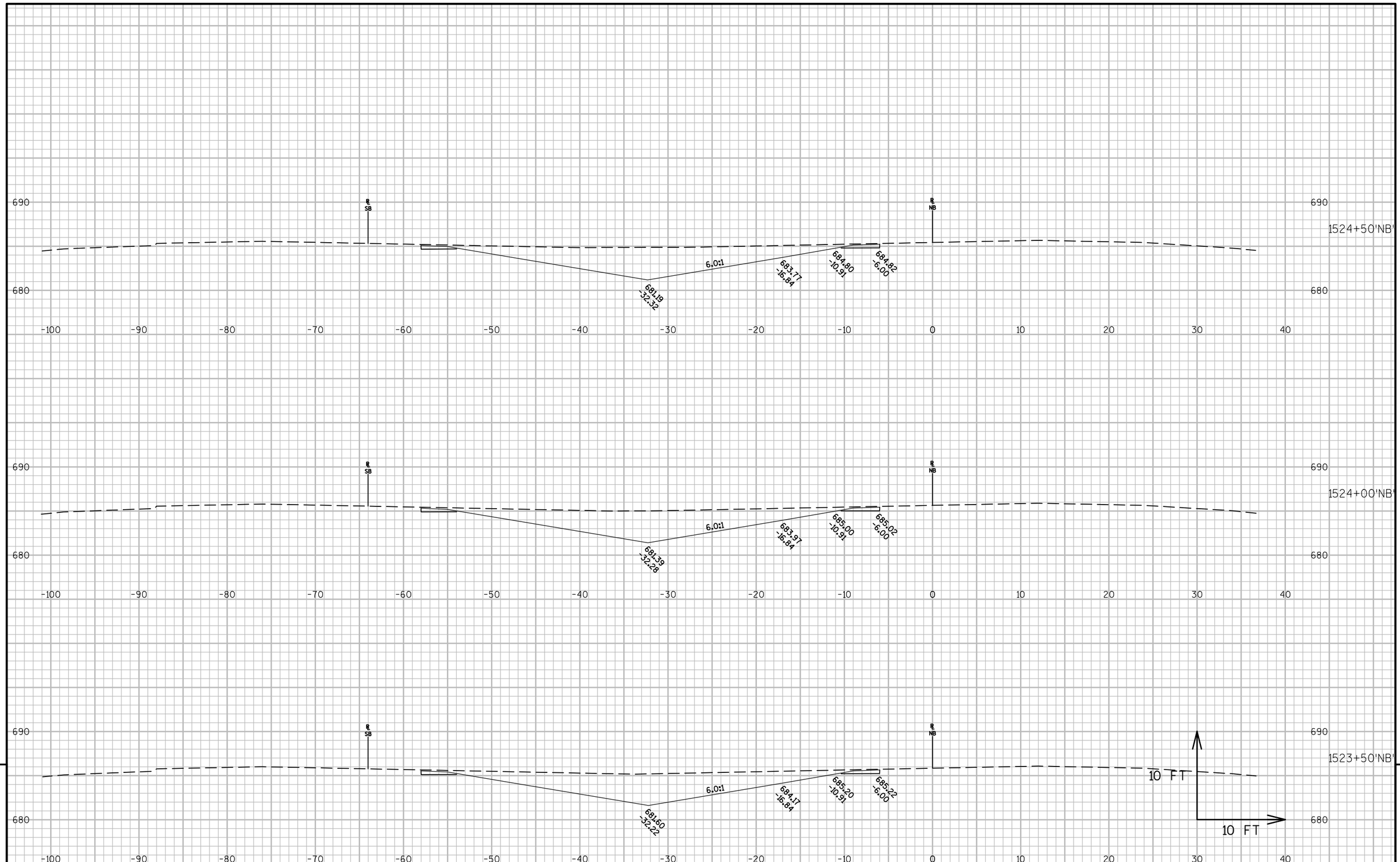
PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: NORTH CROSSOVER REMOVAL	SHEET 544 E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090205_XS.DWG
LAYOUT NAME - 090205_XSS

PLOT DATE : 4/6/2016 2:51 PM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT



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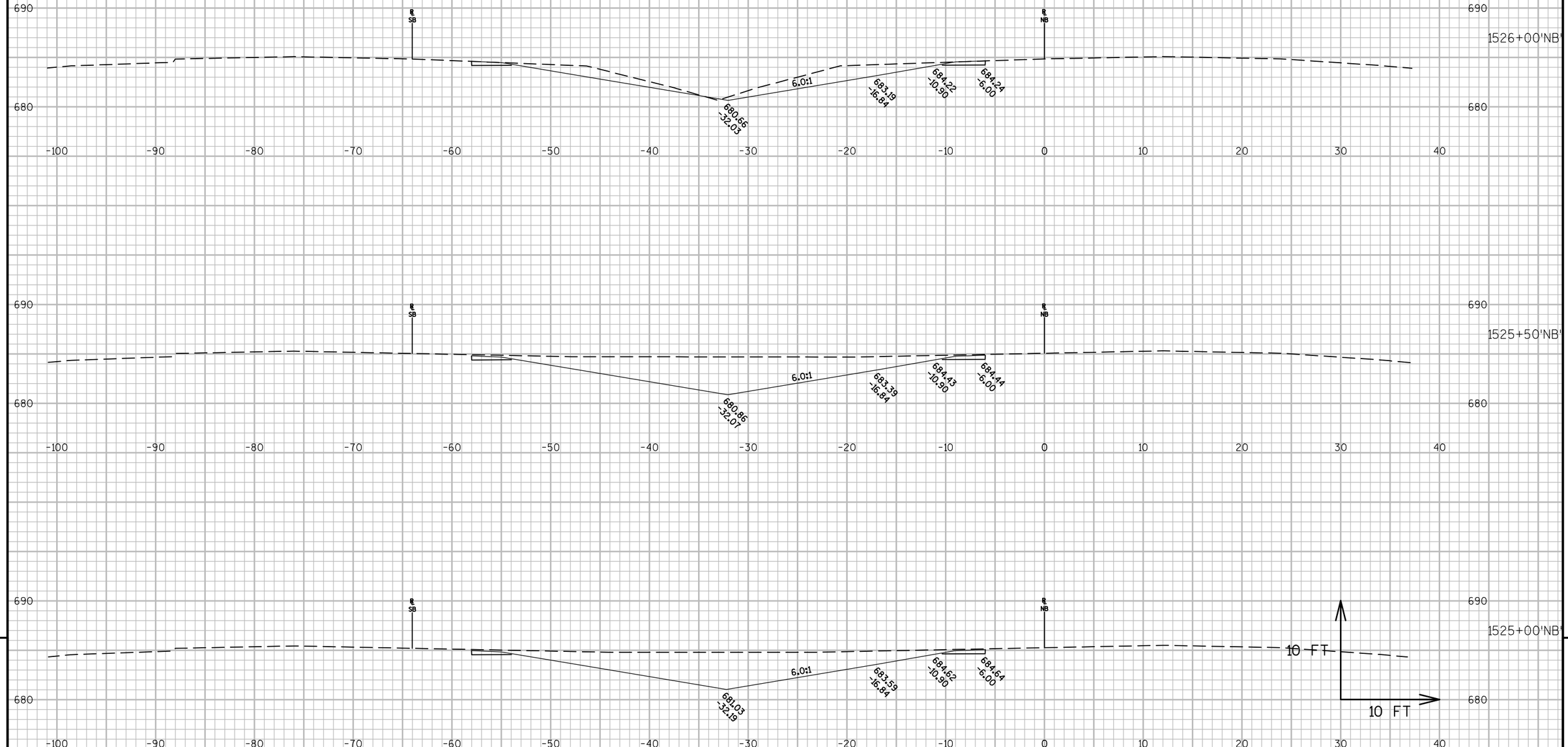
PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: NORTH CROSSOVER REMOVAL	SHEET 545	E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090205_XS.DWG
LAYOUT NAME - 090205_XST

PLOT DATE : 4/6/2016 2:51 PM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



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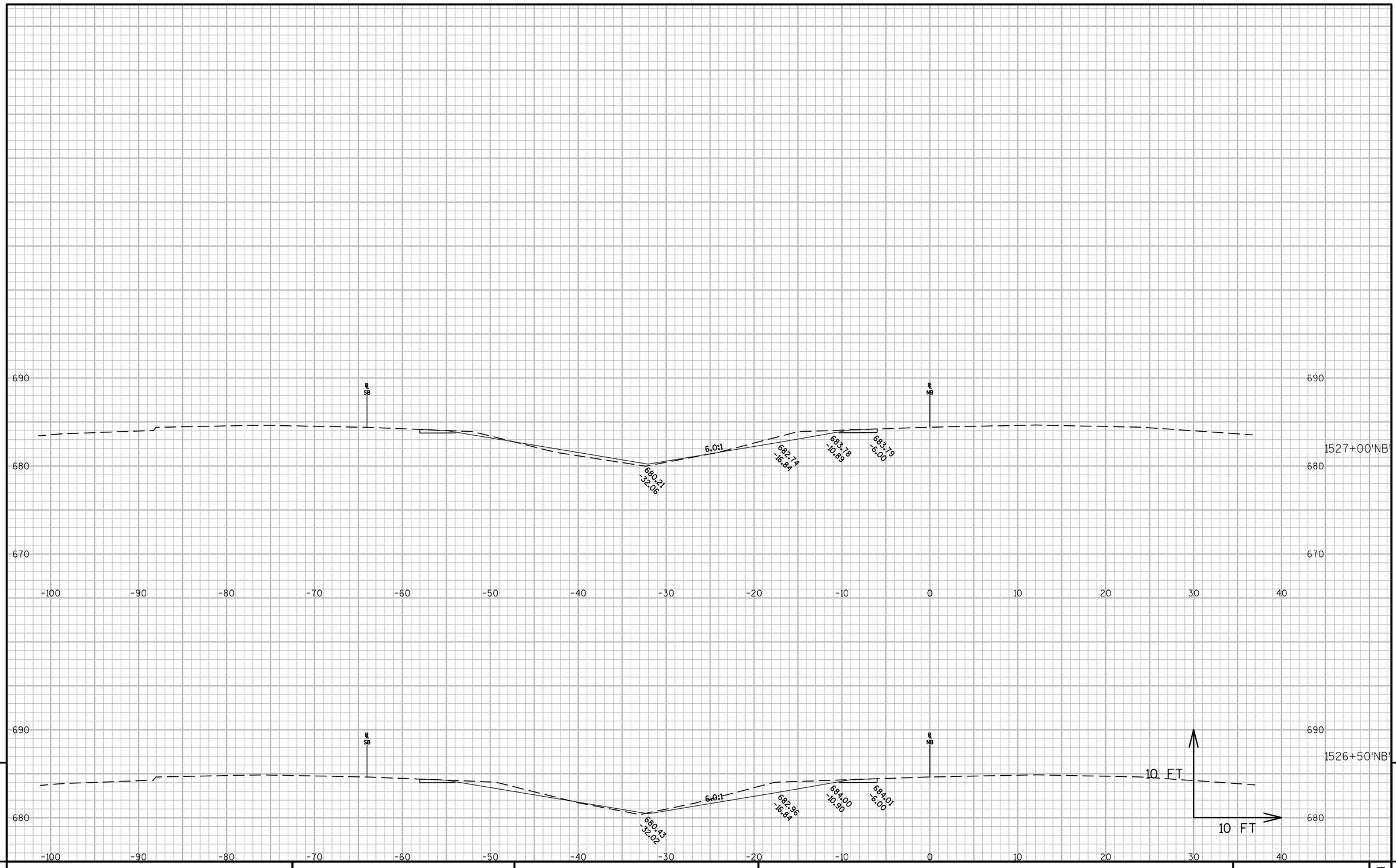
PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: NORTH CROSSOVER REMOVAL	SHEET 546	E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090205_XS.DWG
LAYOUT NAME - 090205_XSU

PLOT DATE : 4/6/2016 2:51 PM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT



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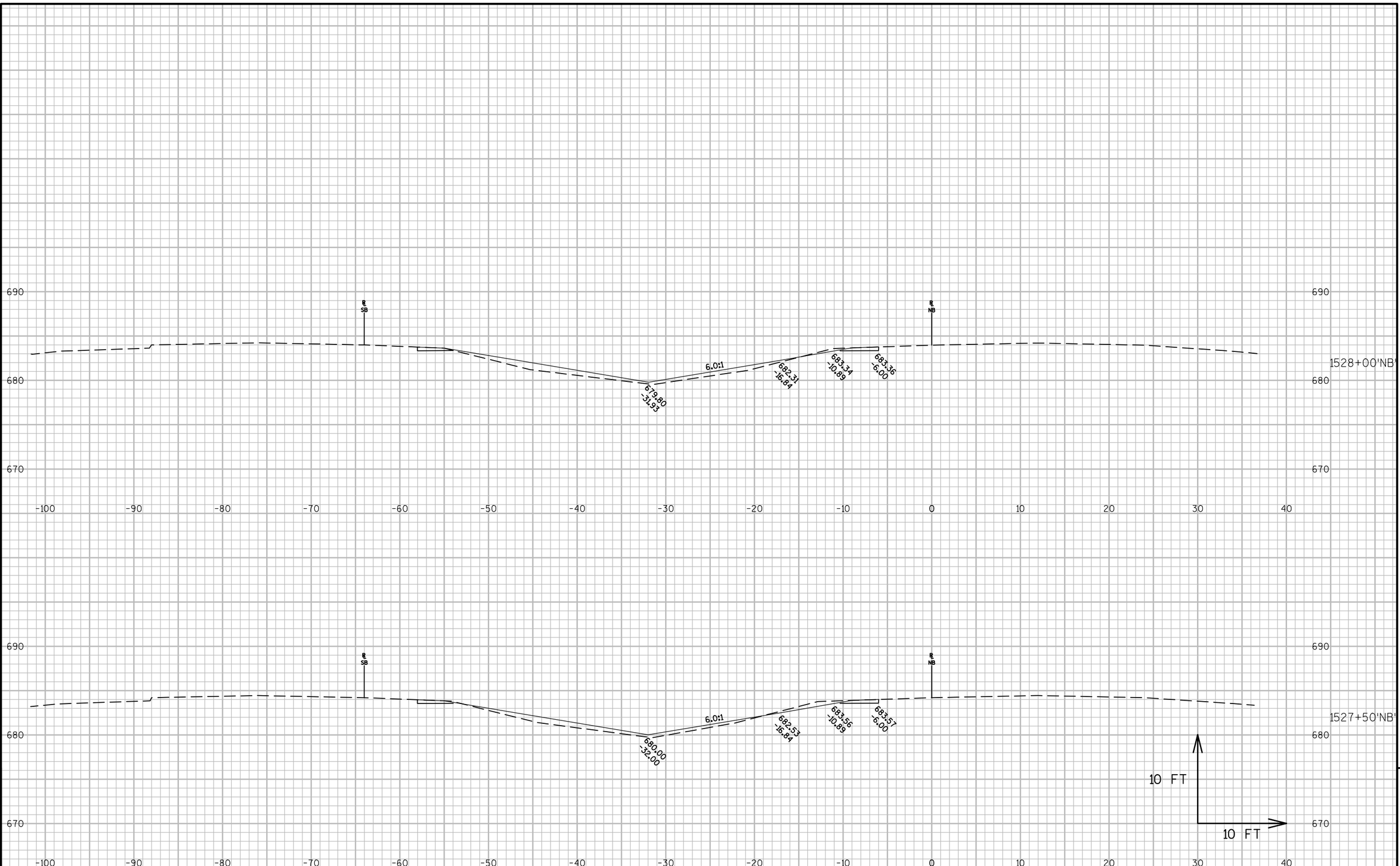
PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: NORTH CROSSOVER REMOVAL	SHEET 547	E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090205_XS.DWG
LAYOUT NAME - 090205_XSV

PLOT DATE : 4/6/2016 2:51 PM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT



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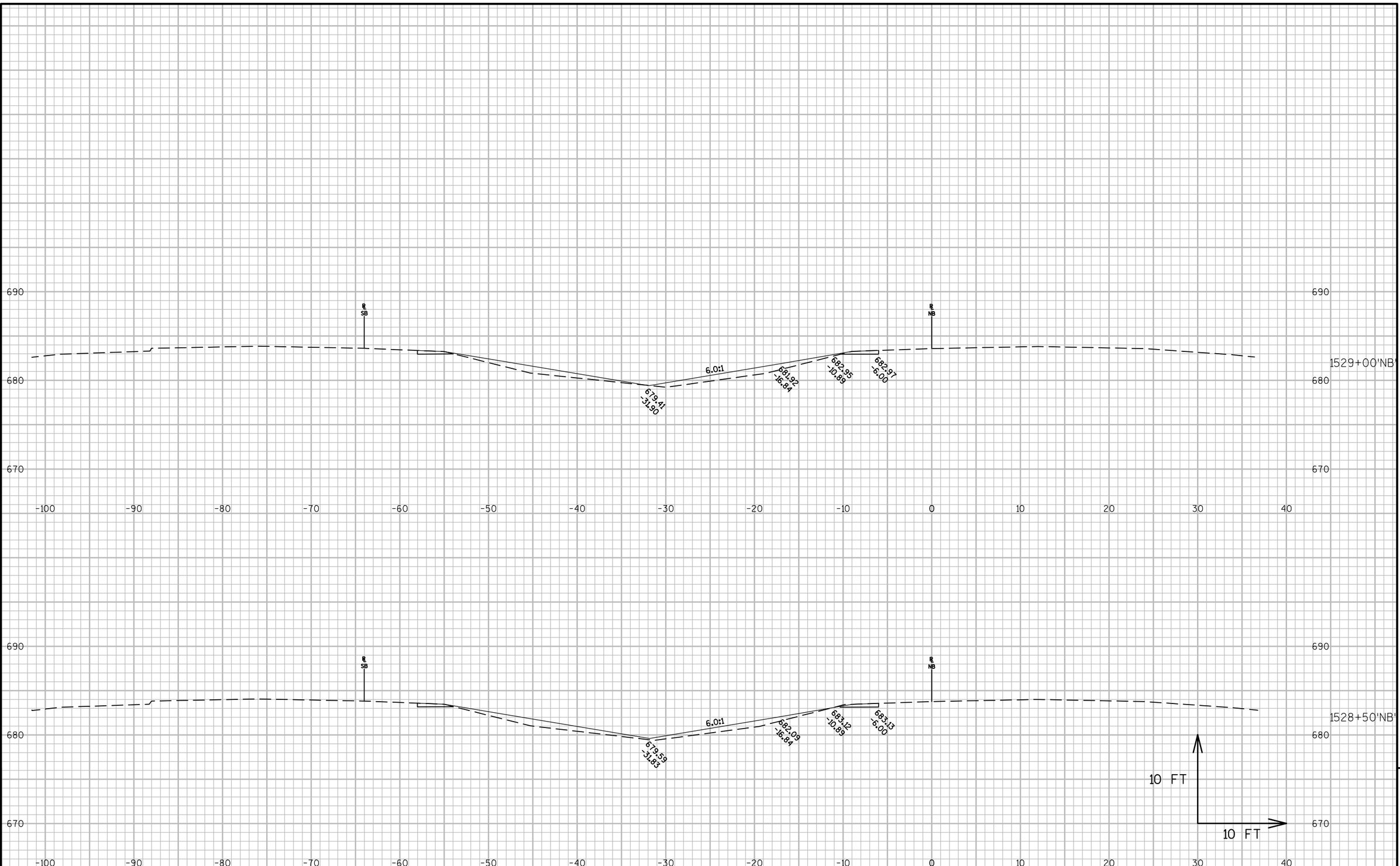
PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: NORTH CROSSOVER REMOVAL	SHEET 548	E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090205_XS.DWG
LAYOUT NAME - 090205_XSW

PLOT DATE : 4/6/2016 2:52 PM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



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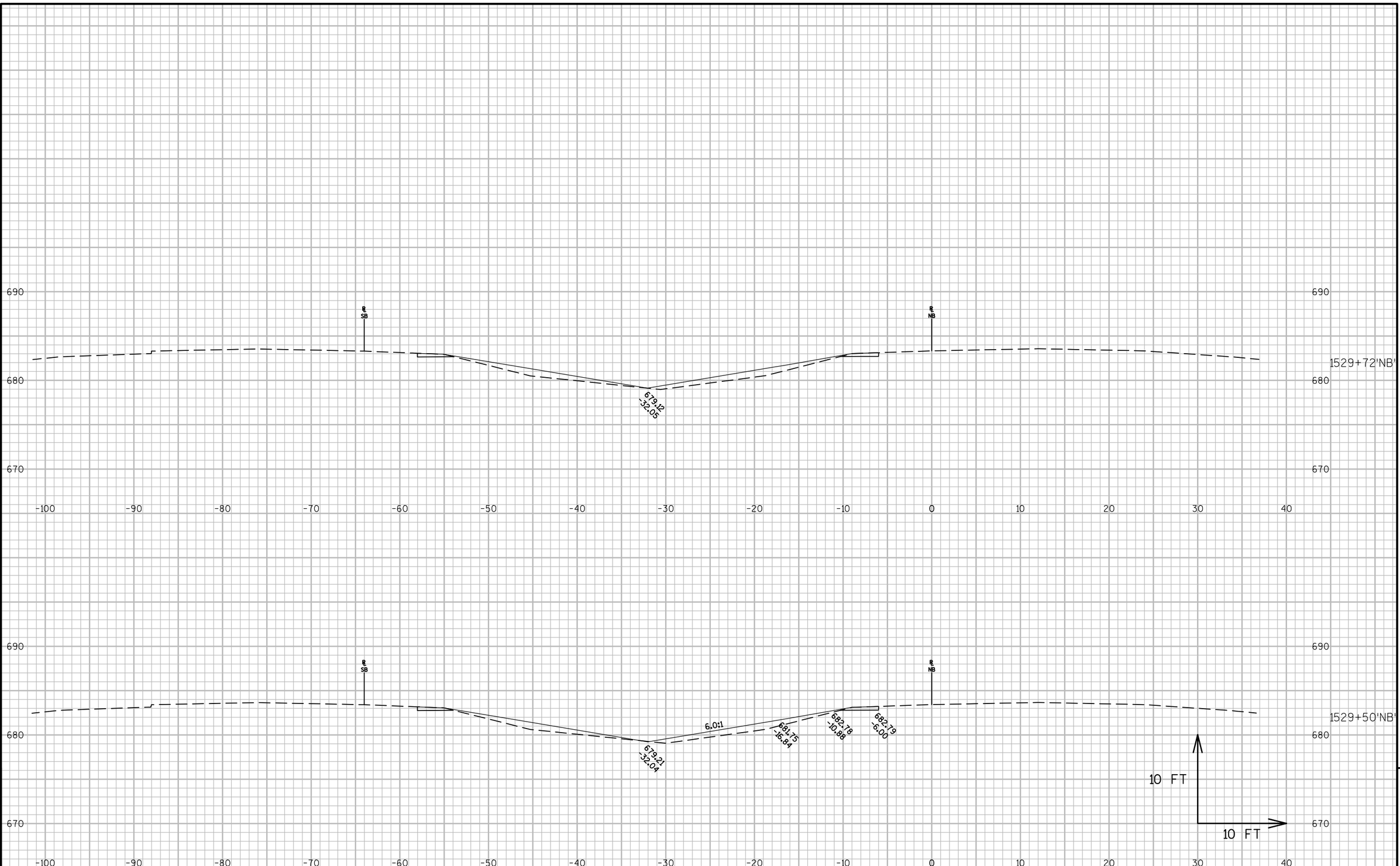
PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: NORTH CROSSOVER REMOVAL	SHEET 549	E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090205_XS.DWG
LAYOUT NAME - 090205_XSX

PLOT DATE : 4/6/2016 2:52 PM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT



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PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: NORTH CROSSOVER REMOVAL	SHEET 550 E

FILE NAME : N:\PDS\C3D\12242100\SHEETSPLAN\C3D 2014\12242173\090205_XS.DWG
LAYOUT NAME - 090205_XSY

PLOT DATE : 4/6/2016 2:52 PM PLOT BY : PORTER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:10 FT

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PROJECT NO: 1224-21-73	HWY: IH 43	COUNTY: MANITOWOC	CROSS SECTIONS: NORTH CROSSOVER REMOVAL	SHEET 551	E

Wisconsin Department of Transportation

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