MAD FEBRUARY 2016

PROJECT ID: 1003-10-88
WITH: 1005-10-84

COUNTY: ROCK

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.	5	Plan and Profile
Section No.	6	Standard Detail Drawings
Section No.	8	Structure Plans
Section No.	9	Computer Earthwork Data
Section No.	9	Cross Sections

TOTAL SHEETS = 86

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
1003-10-88	———	—

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

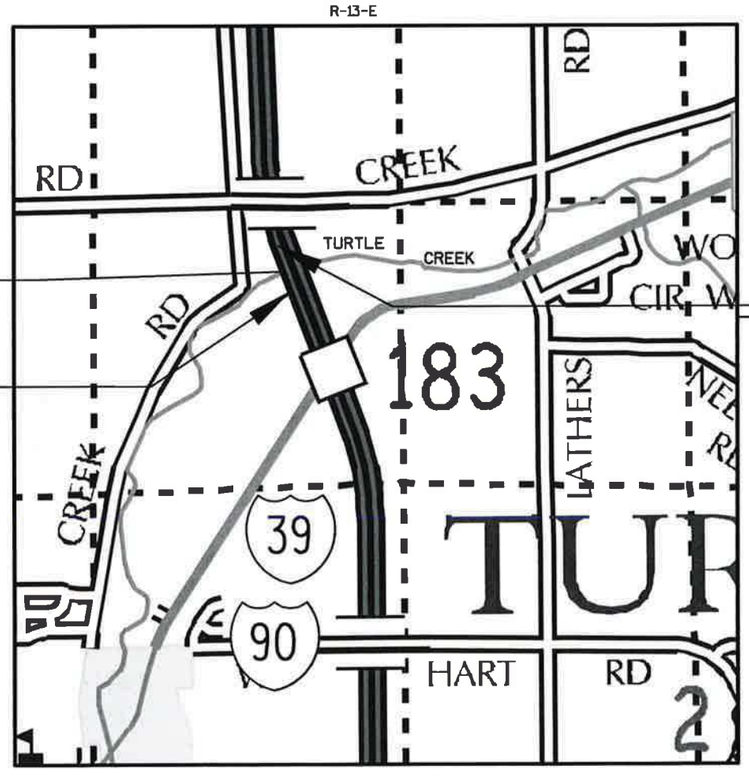
ILLINOIS STATE LINE - MADISON

SB TURTLE CREEK BRIDGE B-53-0042
IH 39
ROCK COUNTY

STATE PROJECT NUMBER
1003-10-88







DESIGN DESIGNATION 1003-10-88

A.A.D.T. (2017)	=	56,400
A.A.D.T. (2019)	=	58,200
D.H.V. (2019)	=	5,588
D.D.	=	58/42
T. (% A.A.D.T.)	=	35.1%
DESIGN SPEED	=	70 MPH
ESALS	=	5,255,300

STRUCTURES
SB IH 39 B-53-42

BEGIN PROJECT 1003-10-88
STA. 357+00
X = 505,352.65
Y = 225,137.97

END PROJECT 1003-10-88
STA. 379+38

T-1-N

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

LAYOUT
SCALE 0 1/2 MI

TOTAL NET LENGTH OF CENTERLINE = 0.424 MI

COORDINATES SHOWN ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS) ROCK COUNTY, NAD 83 (1991)
ELEVATIONS SHOWN ON THIS PLAN ARE REFERENCED TO NAVD88 (2007)

ORIGINAL PLANS PREPARED BY
AECOM

WISCONSIN
SCOTT R. STEVENSON
E-43799
MENOMONEE FALLS, WI
PROFESSIONAL ENGINEER

7-28-15 (Date) (Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	COMBS & ASSOCIATES
Designer	AECOM
Project Manager	STEVE MARSHALL
Regional Examiner	JAMES BUSCHKOPF
Regional Supervisor	KIMBERLY SCHAUDER
C.O. Examiner	

APPROVED FOR THE DEPARTMENT
DATE: 7/29/2015 (Signature)

E

2

GENERAL NOTES

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

BE AWARE THAT ALL EXISTING UNDERGROUND AND ABOVE GROUND STRUCTURES AND FACILITIES WITHIN THE SCOPE OF THIS PROJECT MAY NOT BE LOCATED IN THE PLANS. THE CONTRACTOR IS FULLY RESPONSIBLE FOR LOCATING AND AVOIDING ALL UNDERGROUND AND ABOVE GROUND STRUCTURES AND FACILITIES.

RADII, ELEVATIONS, AND DIMENSIONS ARE GIVEN AT THE PAVEMENT EDGES, UNLESS OTHERWISE NOTED IN THE PLANS.

THE CONTRACTOR'S PAVING OPERATIONS SHALL BE CONSISTENT WITH PLAN TYPICAL SECTIONS AND SHALL PREVENT HMA LONGITUDAL JOINTS FROM BEING LOCATED WITHIN A DRIVING LANE.

ADJUST TRAFFIC CONTROL DEVICE LOCATIONS TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.

EROSION CONTROL ITEMS SHOWN IN THE MISCELLANEOUS QUANTITIES ARE AT SUGGESTED LOCATIONS.
THE ENGINEER MAY MODIFY LOCATIONS TO FIT FIELD CONDITIONS.

SALVAGED TOPSOIL, SEEDING, MULCHING, AND FERTILIZER HAVE BEEN COMPUTED BY A DIRECT MEASUREMENT ON THE CROSS SECTIONS PLUS FIVE (5) FEET BEYOND THE TOE OF SLOPE.

THE HMA PAVEMENT WEIGHT CALCULATIONS ARE BASED ON A UNIT WEIGHT OF 112 LBS/SY/IN OF DEPTH.

THE BASE AGGREGATE DENSE (BAD) 3/4-INCH WEIGHT CALCULATIONS ARE BASED ON A UNIT WEIGHT OF 2.1 TONS/CY.

THE BASE AGGREGATE DENSE (BAD) 1 1/4-INCH WEIGHT CALCULATIONS ARE BASED ON A UNIT WEIGHT OF 2.0 TONS/CY.

6.5-INCH HMA PAVMENT TYPE E-30

LAYER	THICKNESS	GRADATION	ASPHALTIC MATERIAL
UPPER	2.5-INCHES	19.0mm OR 12.5mm	PG64-28
LOWER	4.0-INCHES	19.0 mm	PG58-28

CONTACTS

WISDNR

WISCONSIN DEPARTMENT OF NATURAL RESOURCES
(SOUTH CENTRAL REGION)
ROCK COUNTY
LAURA BUB
3911 FISH HATCHERY RD
FITCHBURG, WI 53711-5397
PHONE: (608) 275-3485
laura.bub@wisconsin.gov

WISDOT

WisDOT DESIGN PROJECT MANAGER
STEVE MARSHALL
111 INTERSTATE BLVD.
EDGERTON, WI 53534
PHONE: (608) 884-7134
steve.marshall@dot.wi.gov

WisDOT CONSTRUCTION MANAGER
EMMANUEL YARTEY
111 INTERSTATE BLVD.
EDGERTON, WI 53534
PHONE: (608) 884-7134
emmanuel.yartey@dot.wi.gov

DESIGN CONTACT

MIKE PREBOSKE
AECOM
1555 N. RIVERCENTER DRIVE
SUITE 214
MILWAUKEE, WI 53212
PHONE: (414) 944-6139
michael.preboske@aecom.com

ABBREVIATIONS

A.A.D.T.	ANNUAL AVERAGE DAILY TRAFFIC
C/L	CENTERLINE
D	DEGREE OF CURVE
D.D.	DIRECTION DISTRIBUTION
D.H.V.	DESIGN HOUR VOLUME
DOC.	DOCUMENT
EL OR ELEV	ELEVATION
E.S.A.L.	EQUIVALENT SINGLE AXLE LOAD
HMA	HOT MIX ASPHALT
IP OR I.P.	IRON PIN
L	LENGTH OF CURVE
LT. OR LT	LEFT
MAX.	MAXIMUM
MIN.	MINIMUM
N.	NORTH
NB	NORTHBOUND
P.	PAGE
R/L	REFERENCE LINE
RT OR RT.	RIGHT
R/W	RIGHT-OF-WAY
S.E.	SUPEREVELVATION
SB	SOUTHBOUND
SF	SQUARE FEET
STA.	STATION
T. %	TRUCK (PERCENT OF)
V.	VOLUME

UTILITIES

WISCONSIN POWER AND LIGHT - GAS/ELECTRICITY
JASON HOGAN
4902 N BILTMORE LANE STE 1000
MADISON, WI 53718
(608)458-4871
Jasonhogan@alliantenergy.com

CHARTER COMMUNICATIONS - COMMUNICATION LINE
BRANDON STORM
2701 DANIELS ST
MADISON, WI 53718
(608)274-3822
brandon.storm@charter.com.com

AT&T WISCONSIN - COMMUNICATION LINE
CAROL ANASON
316 W WASHINGTON AVE
MADISON, WI 53703
(608)252-2385
ca2624@att.com

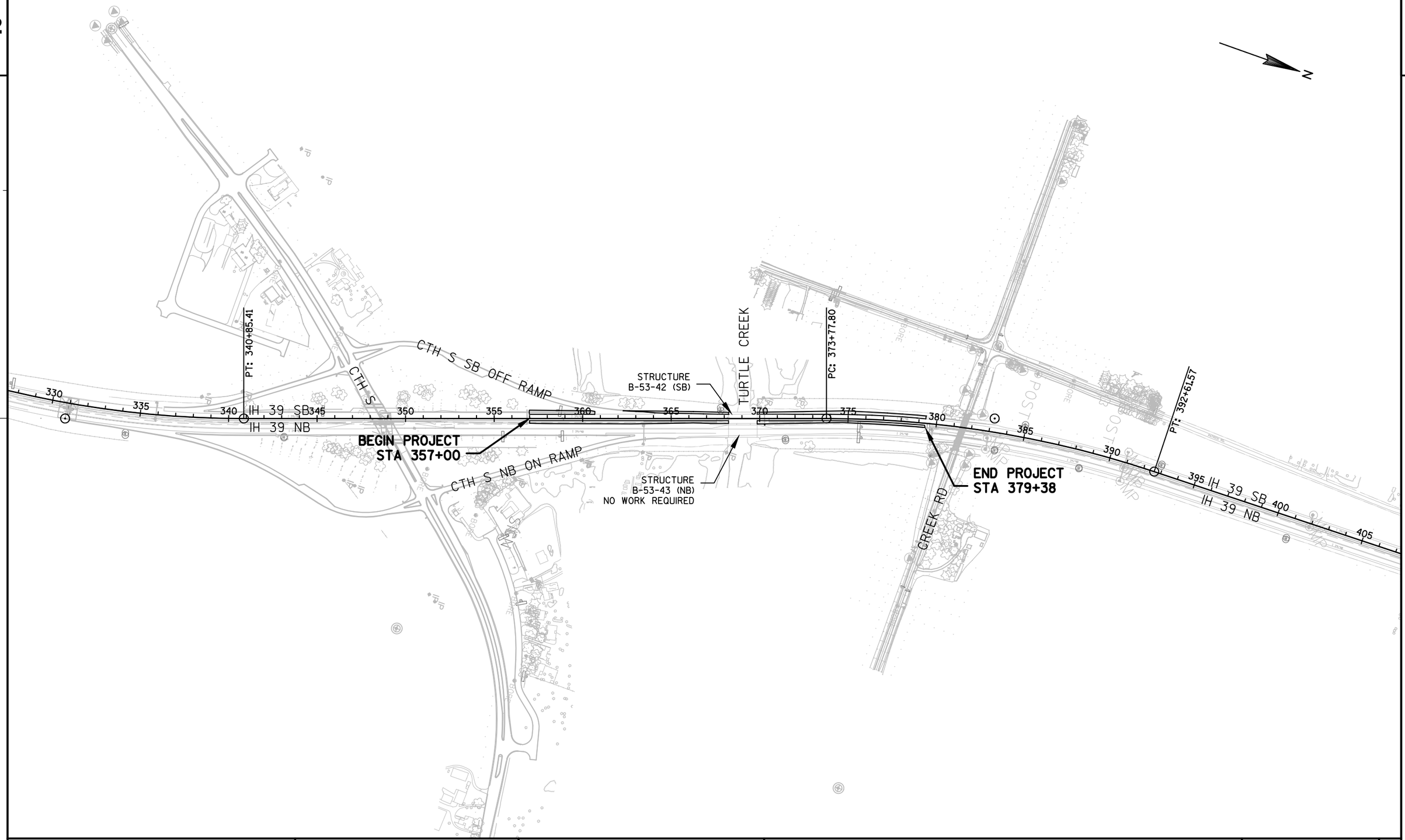
WINDSTREAM/MCLEOD USA - COMMUNICATION LINE
JIM KOSTUCH
13935 BISHOPS DR
BROOKFIELD, WI 53005
(262)792-7938
James.kostch@windstream.com

DETAIL SHEET INDEX

GENERAL NOTES
PROJECT OVERVIEW
TYPICAL SECTIONS
CONSTRUCTION DETAILS
EROSION CONTROL
PERMANENT SIGNING
TRAFFIC CONTROL
ALIGNMENT DIAGRAM

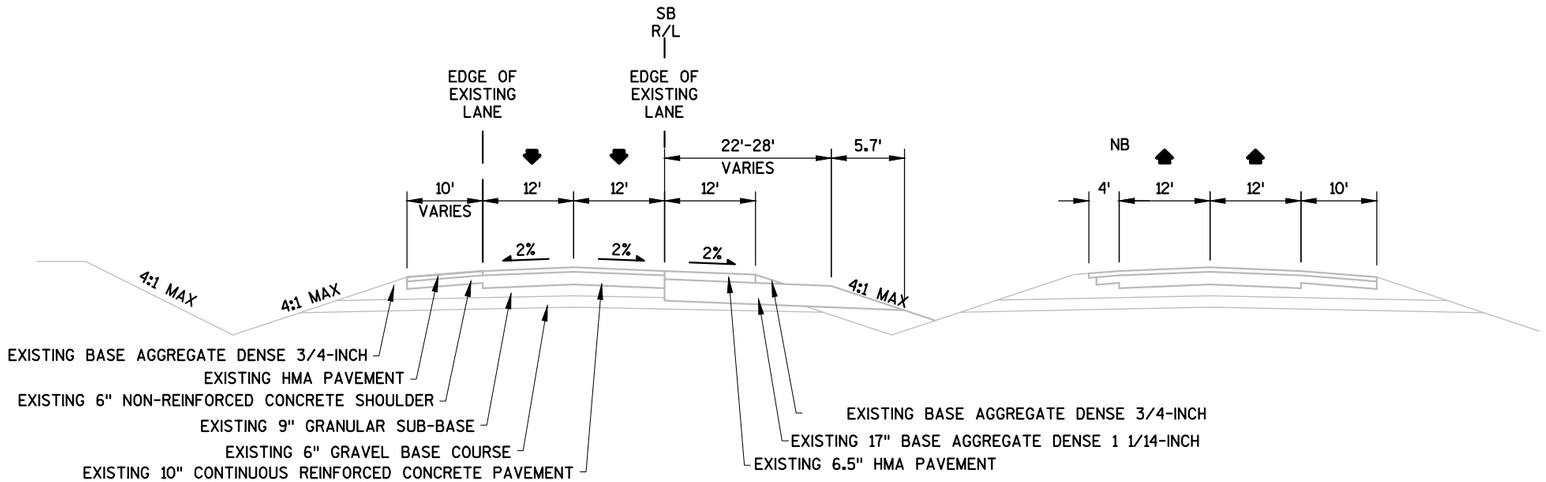
DIGGERS HOTLINE
Dial 811 or (800) 242-8511
www.DiggersHotline.com

2



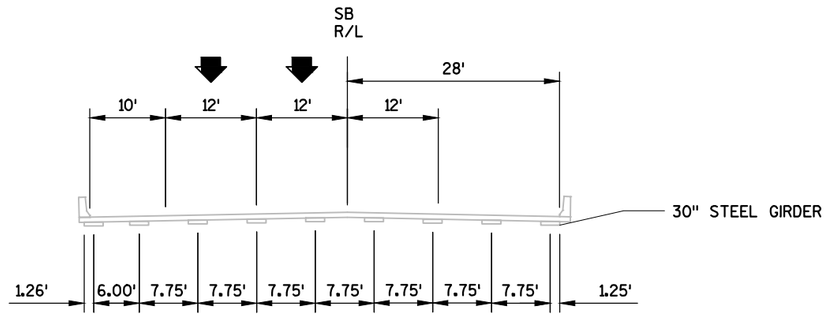
PROJECT NO: 1003-10-88	HWY: IH 39	COUNTY: ROCK	PROJECT OVERVIEW	SHEET 3	E

2



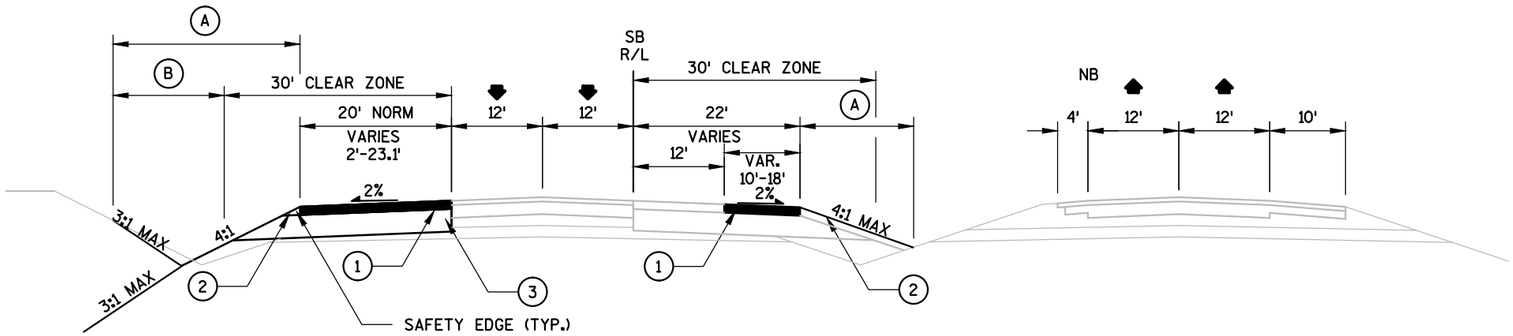
IH 39 TYPICAL EXISTING SECTION

STA. 357+00 - STA. 368+25
(B-53-42 LOCATED STA. 368+25 - STA. 369+86)
STA. 369+86 - STA. 379+38



IH 39 TYPICAL EXISTING SECTION

(B-53-42)
(LOOKING NORTH)



IH 39 TYPICAL FINISHED SECTION

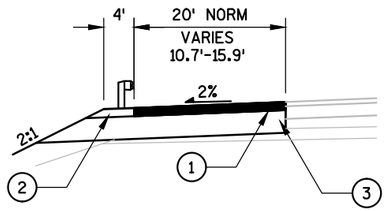
STA. 357+00 - STA. 368+25
(B-53-42 LOCATED STA. 368+25 - STA. 369+86)
STA. 369+86 - STA. 379+38*

*SEE GUARDRAIL PARTIAL TYPICAL SECTION

LEGEND

1. 6.5" HMA PAVEMENT TYPE E-30
2. BASE AGGREGATE DENSE 3/4-INCH
3. 17" BASE AGGREGATE DENSE 1 1/4-INCH
A. SEED & FERTILIZER
B. SALVAGED TOPSOIL AND MULCHING

EXCAVATION BELOW SUBGRADE IS ANTICIPATED ON THIS PROJECT. EXCAVATION BELOW SUBGRADE SHOWN IN MISCELLANEOUS QUANTITY TABLES AND COPUTER EARTHWORK DATA.

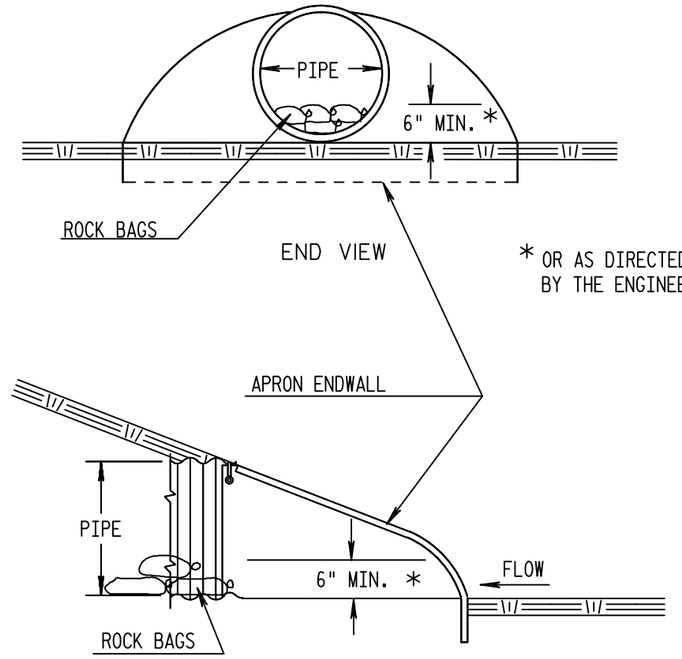


IH 39 TYPICAL PARTIAL FINISHED SECTION WITH GUARDRAIL

STA. 369+86 - STA. 374+53

PROJECT NO: 1003-10-88	HWY: IH 39	COUNTY: ROCK	TYPICAL SECTIONS	SHEET 5	E

2



SIDE VIEW

CULVERT PIPE CHECK

PROJECT NO:1003-10-88	HWY:IH 39	COUNTY:ROCK	CONSTRUCTION DETAILS	SHEET 6	E

2

2

CTH S SB OFF RAMP

R/W

R/W

1B

1B

IH 39 SB

IH 39 NB

1B

CULVERT PIPE CHECK

NOTE: FOR CULVERT PIPE CHECKS AT CULVERT PIPE ENDS,
SEE CONSTRUCTION DETAIL

CTH S NB ON RAMP

SIGN

R/W

LEGEND

EROSION MAT CLASS I TYPE B (APPLIES TO OUTLINED AREA) 1B

X CULVERT PIPE CHECKS

HMA PAVEMENT WIDENING (SEE TEMPORARY WIDENING PLAN)

SILT FENCE

N

R/W

CREEK RD

15"CK

R/W

R/W

TURTLE CREEK

1B

IH 39 SB

IH 39 NB

X

CULVERT PIPE CHECK

1B

CULVERT PIPE CHECK

SIGN

R/W

R/W

PROJECT NO: 1003-10-88	HWY: IH 39	COUNTY: ROCK	EROSION CONTROL	SHEET 7	E

FILE NAME : L:\WORK\IH-39-SOUTH-SEGMENT\TURTLE CREEK\CADD\WORKING FILES\NEW\022001_EC.DWG PLOT DATE : 11/24/2015 1:50 PM PLOT BY : STEVENSON, SCOTT PLOT NAME : PLOT SCALE : 1" = 100'_XREF

WISDOT/CADDS SHEET 42

2

CTH S SB OFF RAMP

EXIT 183

M1-01

E5-1A SIZE

EXIT 183

S

Shopiere Rd

TO REMAIN

N

TURTLE CR.

IH 39 SB

355

IH 39 SB

360

365

IH 39 NB

IH 39 NB

MATCHLINE STA. 369+50

WEST 39 90 MILE 182 .8

TO REMAIN

CTH S NB ON RAMP

TURTLE CREEK

SIGN

WEST 39 90 MILE 182 .6

MOVE 2 SIGNS

M1-02

N

PC: 373+77.80

370

375

IH 39 SB

380

IH 39 NB

MATCHLINE STA. 369+50

SIGN

CREEK RD

EXCEPT MAINTENANCE AND POLICE AUTHORIZED VEHICLES

MOVE 2 SIGNS

M1-03

LEGEND

EXISTING SIGN MOUNTED ON POST(S)

EXISTING SIGN MOUNTED ON SIGNAL OR LIGHT POLE

PROPOSED SIGN MOUNTED ON POST(S)

PROPOSED SIGN MOUNTED ON SIGNAL OR LIGHT POLE

(XXX) DENOTES SIGN NUMBER

PROJECT NO: 1003-10-88	HWY: IH 39	COUNTY: ROCK	PERMANENT SIGNING	SHEET	E

FILE NAME : L:\WORK\IH-39-SOUTH-SEGMENT\TURTLE CREEK\CADD\WORKING FILES\NEW\023201-PS.DWG PLOT DATE : 7/30/2015 2:15 PM PLOT BY : SCHNEIDER, MICHAEL PLOT NAME : PLOT SCALE : **********

2

CTH S SB OFF RAMP

PAVEMENT MARKING LIMITS STA 353+24

PM02

PM06

PM03

PM02

IH 39 SB

355

360

365

PM01

IH 39 NB

CTH S NB ON RAMP

MATCHLINE STA. 368+50

TURTLE CREEK

SIGN

TURTLE CREEK

MATCHLINE STA. 368+50

PC: 373+77.80

PAVEMENT MARKING LIMITS STA 381+76

PM02

PM03

IH 39 SB

370

375

380

PM01

IH 39 NB

SIGN

CREEK RD

LEGEND

PM01 PAVEMENT MARKING EPOXY 4-INCH (YELLOW)

PM02 PAVEMENT MARKING EPOXY 4-INCH (WHITE)

PM03 PAVEMENT MARKING EPOXY 4-INCH (DASHED WHITE) (12.52 FT LINE 37.5 FT SKIP)

PM06 PAVEMENT MARKING EPOXY 8-INCH (WHITE)

PROJECT NO: 1003-10-88	HWY: IH 39	COUNTY: ROCK	PAVEMENT MARKINGS	SHEET 9	E

FILE NAME : L:\WORK\IH-39-SOUTH-SEGMENT\TURTLE CREEK\CADD\WORKING FILES\NEW\024501-PM.DWG PLOT DATE : 10/1/2015 2:07 PM PLOT BY : SCHNEIDER, MICHAEL PLOT NAME : PLOT SCALE : ********** WISDOT/CADDS SHEET 44

2

GENERAL TRAFFIC CONTROL NOTES

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

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

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

ALL SIGNS IN CONFLICT WITH THE STATUS OF THE CONTROL ZONE INCLUDING PRE-EXISTING SIGNING IN THE VICINITY SHALL BE COVERED OR REMOVED AS SPECIFIED IN THE PLANS AND/OR THE SPECIAL PROVISIONS OR AS DIRECTED BY THE ENGINEER.

TWO (2) TYPE A WARNING LIGHTS SHALL BE INSTALLED ON ALL TYPE III BARRICADES.

ADVANCE WARNING SIGNS TO BE IN PLACE DURING ALL TRAFFIC CONTROL STAGES.

NO ACCESS BY CONSTRUCTION VEHICLES FROM LIVE LANES OF IH 39/90 TRAFFIC WILL BE ALLOWED DURING DAY-TIME HOURS.

TRAFFIC CONTROL INDEX OF SHEETS

TRAFFIC CONTROL GENERAL NOTES & STAGING SUMMARY
TRAFFIC CONTROL DETAILS - ROAD CLOSURE
TRAFFIC CONTROL STAGING SEQUENCE
TRAFFIC CONTROL IH 39 DETAILS

LEGEND

- TRAFFIC DIRECTION ARROW
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM W/ TYPE C STEADY BURN LIGHT
- TRAFFIC CONTROL SIGN
- TYPE III BARRICADE
- TYPE III BARRICADE W/ SIGN
- FLASHING ARROW BOARD
- WORK ZONE
- TEMPORARY PAVEMENT MARKING 4-INCH YELLOW
- TEMPORARY PAVEMENT MARKING 4-INCH WHITE
- TEMPORARY PAVEMENT MARKING 8-INCH WHITE
- PCMS — PORTABLE CHANGEABLE MESSAGE SIGN

TRAFFIC CONTROL - STAGING SUMMARY

STAGE 1
TRAFFIC CONTROL:
DAY-TIME - SEE STAGE 1 - DAY & 'FREEWAY SHOULDER CLOSURE (DAY-TIME OPERATION)'
NIGHT-TIME - SEE STAGE 1 - NIGHT & 'FREEWAY LANE CLOSURE (NIGHT-TIME OPERATION)'

CONSTRUCTION (NIGHT-TIME):
- COMMON EXCAVATION
- PLACE BASE AGGREGATE DENSE
- PLACE HMA PAVEMENT
- REMOVE PERMANENT PAVEMENT MARKING
- PLACE TEMPORARY PAVEMENT MARKING

STAGE 2
TRAFFIC CONTROL:
DAY-TIME - SEE STAGE 2 - DAY & 'FREEWAY LANE SHIFT FOR OUTSIDE SHOULDER WORK (DAY-TIME OPERATION)'
NIGHT-TIME - SEE STAGE 2 - NIGHT & 'FREEWAY LANE CLOSURE FOR OUTSIDE SHOULDER WORK (NIGHT-TIME OPERATION)'

CONSTRUCTION (NIGHT-TIME UNLESS SPECIFIED):
- JOINT REPAIR (DAY-TIME)
- INSTALL CONCRETE BARRIER TEMPORARY
- REMOVE GUARDRAIL
- COMMON EXCAVATION
- PLACE BASE AGGREGATE DENSE
- PLACE HMA PAVEMENT
- REMOVE PERMANENT PAVEMENT MARKING
- PLACE TEMPORARY PAVEMENT MARKING

STAGE 3
TRAFFIC CONTROL:
DAY-TIME - SEE STAGE 3 - DAY & 'FREEWAY LANE SHIFT FOR MEDIAN WORK (DAY-TIME OPERATION)'

CONSTRUCTION (DAY-TIME):
- INSTALL CONCRETE BARRIER TEMPORARY
- JOINT REPAIR
- INSTALL GUARDRAIL

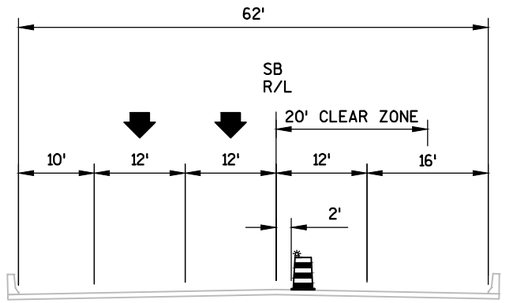
STAGE 4
TRAFFIC CONTROL:
NIGHT-TIME - SEE STAGE 4A - NIGHT & 'FREEWAY LANE CLOSURE FOR MEDIAN WORK (NIGHT-TIME OPERATION)'
STAGE 4B - NIGHT & 'FREEWAY LANE CLOSURE FOR OUTSIDE SHOULDER WORK (NIGHT-TIME OPERATION)'

CONSTRUCTION (NIGHT-TIME):
- REMOVE CONCRETE BARRIER TEMPORARY
- REMOVE TEMPORARY PAVEMENT MARKING
- INSTALL PERMANENT PAVEMENT MARKING
- INSTALL GUARDRAIL

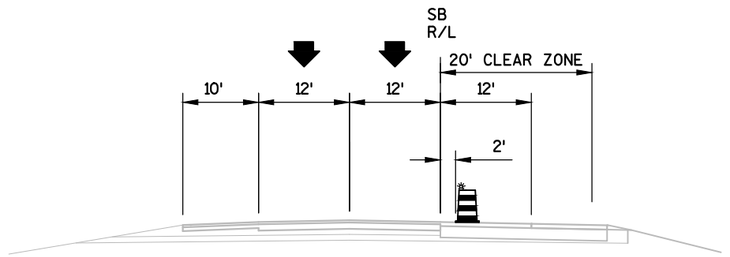
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PROJECT NO: 1003-10-88	HWY: IH 39	COUNTY: ROCK	TRAFFIC CONTROL GENERAL NOTES & STAGING SUMMARY	SHEET 10	E

FILE NAME : L:\WORK\IH-39-SOUTH-SEGMENT\TURTLE CREEK\CADD\WORKING FILES\NEW\025001_TC.DWG PLOT DATE : 5/15/2015 9:53 AM PLOT BY : SCHNEIDER, MICHAEL (MILWAUKEE) PLOT SCALE :
WISDOT/CADDS SHEET 42



STAGE 1 - DAY
(B-53-42)
(LOOKING NORTH)



STAGE 1 - DAY
(ROADWAY)
(LOOKING NORTH)

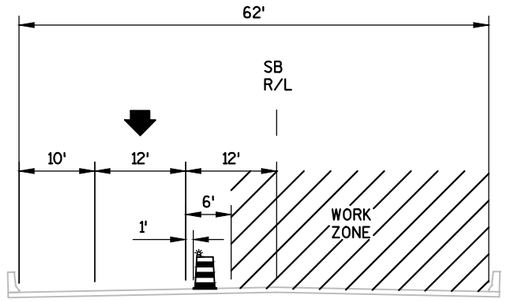
TRAFFIC CONTROL

MAINTAIN 2 LANES
SEE STANDARD DETAIL DRAWING TRAFFIC CONTROL SHOULDER CLOSURE ON DIVIDED ROADDWAY, SPEEDS GREATER THAN 40 MPH

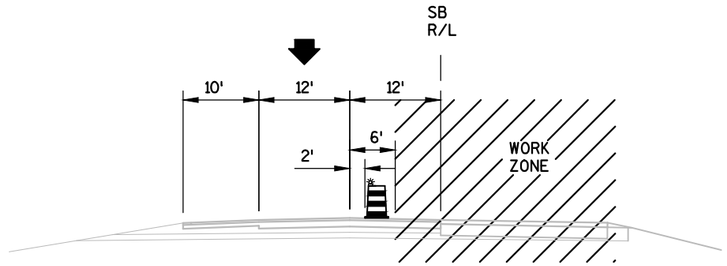
CONSTRUCTION

NONE

PROJECT NO: 1003-10-88	HWY: IH 39	COUNTY: ROCK	TRAFFIC CONTROL TYPICAL SECTIONS - STAGE 1 - DAY	SHEET 11	E



STAGE 1 - NIGHT
(B-53-42)
(LOOKING NORTH)



STAGE 1 - NIGHT
(ROADWAY)
(LOOKING NORTH)

TRAFFIC CONTROL

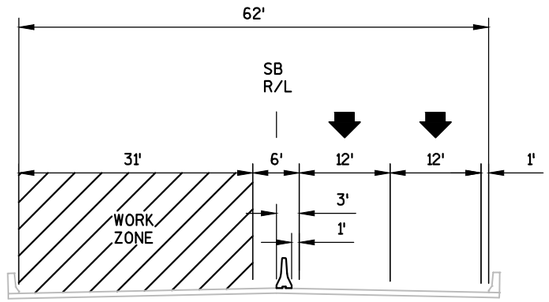
INSIDE LANE TO BE CLOSED FOR
NIGHT-TIME WORK
SEE DETAIL LANE CLOSURE FOR MEDIAN
WORK (NIGHT-TIME)

CONSTRUCTION

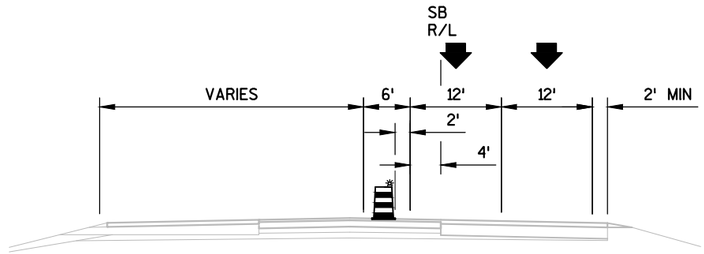
INSIDE SHOULDER:
  COMMON EXCAVATION
  PLACE BASE AGGREGATE DENSE
  PLACE HMA PAVEMENT
REMOVE PERMANENT PAVEMENT MARKING
TEMPORARY PAVEMENT MARKING

PROJECT NO: 1003-10-88	HWY: IH 39	COUNTY: ROCK	TRAFFIC CONTROL TYPICAL SECTIONS - STAGE 1 - NIGHT	SHEET	E

FILE NAME : L:\WORK\IH-39-SOUTH-SEGMENT\TURTLE CREEK\CADD\WORKING FILES\NEW\025003-TC.DWG PLOT DATE : 7/30/2015 3:38 PM PLOT BY : SCHNEIDER, MICHAEL PLOT NAME : PLOT SCALE : 1 IN:20 FT
WISDOT/CADDS SHEET 42



STAGE 2 - DAY
(B-53-42)
(LOOKING NORTH)



STAGE 2 - DAY
(ROADWAY)
(LOOKING NORTH)

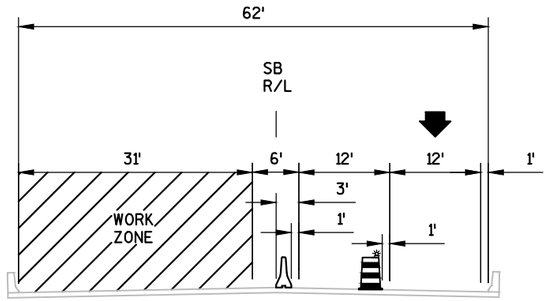
TRAFFIC CONTROL

SOUTHBOUND LANES TO BE SHIFTED TO
THE INSIDE SHOULDER
SEE DETAIL LANE SHIFT-OUTSIDE SHOULDER
WORK (DAY-TIME)

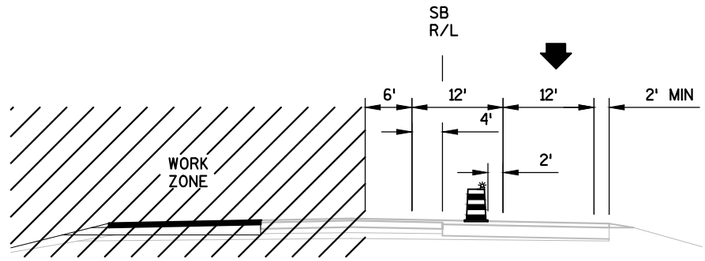
CONSTRUCTION

STRUCTURE B-53-42 REPAIRS
ONLY STRUCTURE WORK BEHIND BARRIER WALL
PERMITTED DURING THE DAY

PROJECT NO: 1003-10-88	HWY: IH 39	COUNTY: ROCK	TRAFFIC CONTROL TYPICAL SECTIONS - STAGE 2-DAY	SHEET 13	E



STAGE 2 - NIGHT
(B-53-42)
(LOOKING NORTH)



STAGE 2 - NIGHT
(ROADWAY)
(LOOKING NORTH)

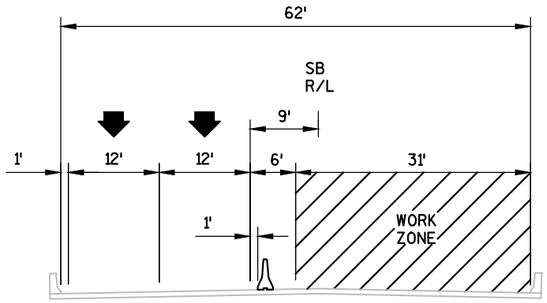
TRAFFIC CONTROL

OUTSIDE LANE TO BE CLOSED FOR
NIGHT-TIME CLOSURE
SEE DETAIL LANE CLOSURE FOR OUTSIDE
SHOULDER WORK (NIGHT-TIME)

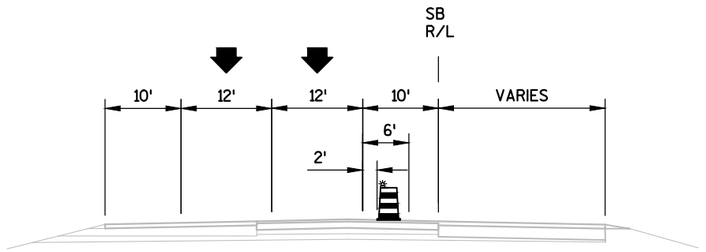
CONSTRUCTION

INSTALL CONCRETE BARRIER TEMPORARY
OUTSIDE SHOULDER:
- REMOVE GUARDRAIL
- COMMON EXCAVATION
- PLACE BASE AGGREGATE DENSE
- PLACE HMA PAVEMENT

REMOVE PERMANENT PAVEMENT MARKING
TEMPORARY PAVEMENT MARKING



STAGE 3
(B-53-42)
(LOOKING NORTH)



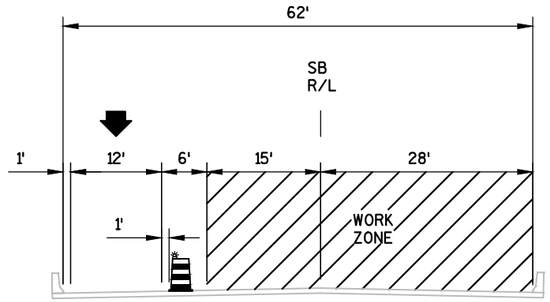
STAGE 3
(ROADWAY - PRIOR TO TAPER)
(LOOKING NORTH)

TRAFFIC CONTROL

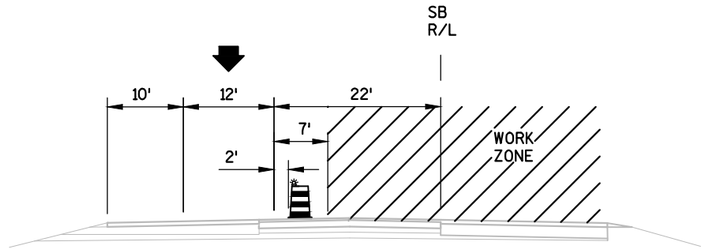
SOUTHBOUND LANES TO BE SHIFTED TO
THE OUTSIDE SHOULDER
SEE DETAIL LANE SHIFT FOR MEDIAN WORK

CONSTRUCTION

INSTALL CONCRETE BARRIER TEMPORARY
STRUCTURE B-53-42 REPAIRS



STAGE 4A - NIGHT
(B-53-42)
(LOOKING NORTH)



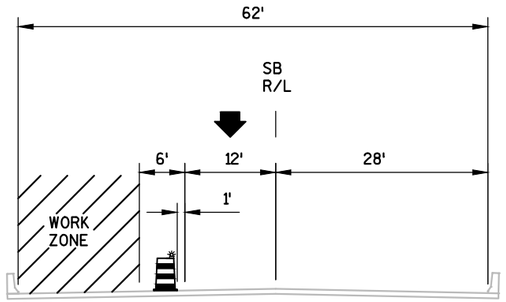
STAGE 4A - NIGHT
(ROADWAY)
(LOOKING NORTH)

TRAFFIC CONTROL

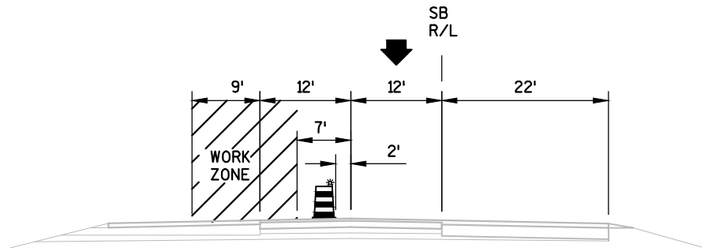
INSIDE LANE TO BE CLOSED FOR
NIGHT-TIME CLOSURE
SEE DETAIL LANE CLOSURE FOR MEDIAN
WORK (NIGHT-TIME)

CONSTRUCTION

REMOVE CONCRETE BARRIER TEMPORARY
REMOVE TEMPORARY PAVEMENT MARKING
PERMANENT PAVEMENT MARKING



STAGE 4B - NIGHT
(B-53-42)
(LOOKING NORTH)



STAGE 4B - NIGHT
(ROADWAY)
(LOOKING NORTH)

TRAFFIC CONTROL

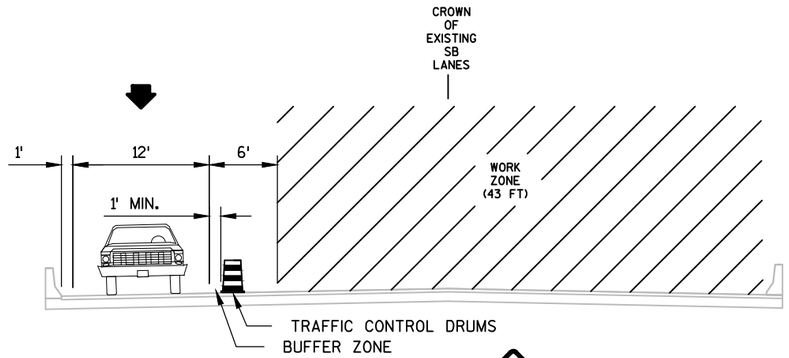
OUTSIDE LANE TO BE CLOSED FOR
NIGHT-TIME CLOSURE
SEE DETAIL LANE CLOSURE FOR OUTSIDE
SHOULDER WORK (NIGHT-TIME)

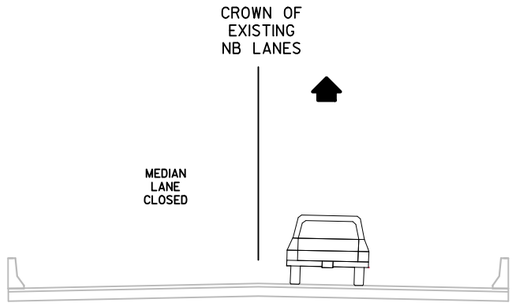
CONSTRUCTION

REMOVE TEMPORARY PAVEMENT MARKING
PERMANENT PAVEMENT MARKING

PROJECT NO: 1003-10-88	HWY: IH 39	COUNTY: ROCK	TRAFFIC CONTROL TYPICAL SECTIONS - STAGE 4B - NIGHT	SHEET	E

FILE NAME : L:\WORK\IH-39-SOUTH-SEGMENT\TURTLE CREEK\CADD\WORKING FILES\NEW\025003-TC.DWG PLOT DATE : 7/30/2015 3:38 PM PLOT BY : SCHNEIDER, MICHAEL PLOT NAME : PLOT SCALE : 1 IN:20 FT
WISDOT/CADDS SHEET 42





TRAFFIC CONTROL NOTES

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

FOR NIGHTTIME OPERATION ALL DRUMS IN TAPERS SHALL HAVE A WARNING LIGHT, TYPE C (STEADY BURN).

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

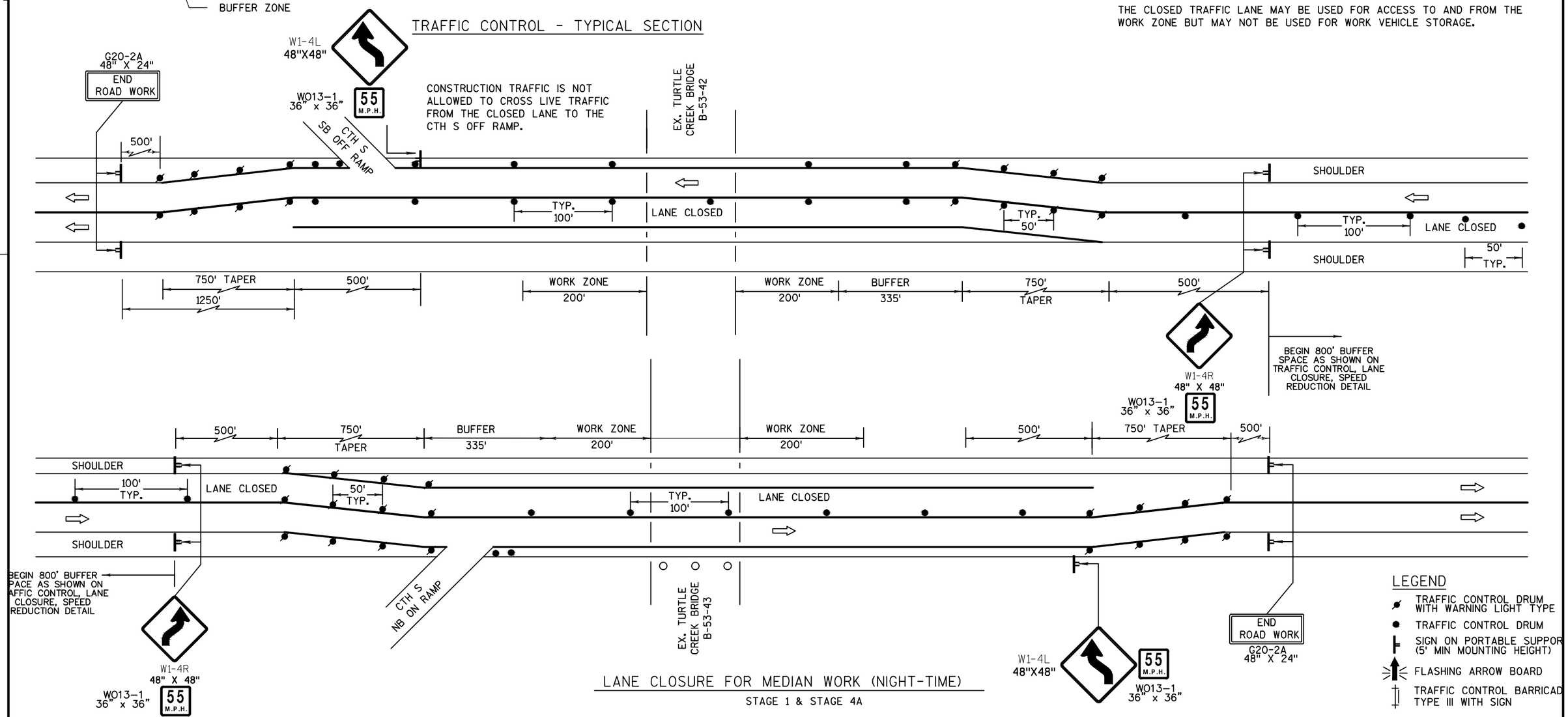
"WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

ALL SHORT TERM LANE CLOSURE SIGNS SHALL BE REMOVED OR COVERED AND ALL ARROWBOARDS AND DEVICES REMOVED BEYOND THE SHOULDER WHEN THE WORK IS NOT IN PROGRESS AND THE LANE IS RESTORED TO A SAFE OPERATING CONDITION.

CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROWBOARDS SO THE DRIVER HAS A CLEAR VIEW OF THE ARROWBOARD AND LANE CLOSURE DRUMS FOR A MINIMUM 1500' IN FRONT OF DRUMS.

THE CLOSED TRAFFIC LANE MAY BE USED FOR ACCESS TO AND FROM THE WORK ZONE BUT MAY NOT BE USED FOR WORK VEHICLE STORAGE.

TRAFFIC CONTROL - TYPICAL SECTION



LANE CLOSURE FOR MEDIAN WORK (NIGHT-TIME)

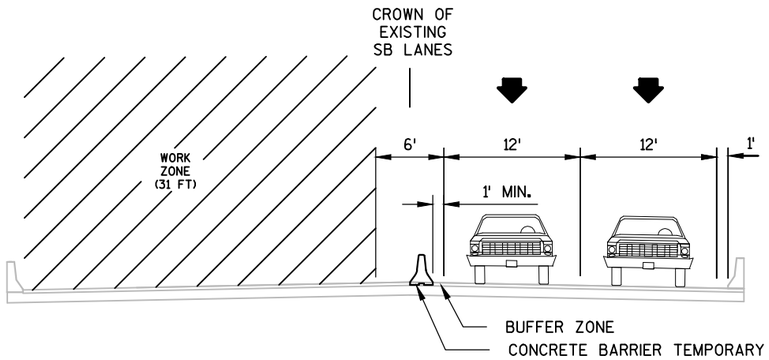
STAGE 1 & STAGE 4A

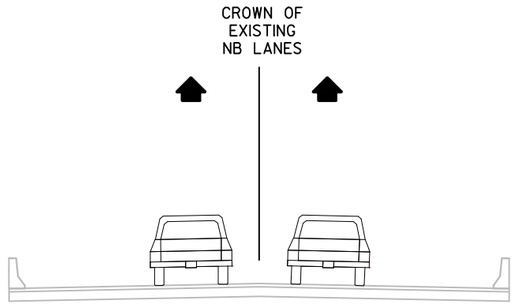
LEGEND

- TRAFFIC CONTROL DRUM WITH WARNING LIGHT TYPE
- TRAFFIC CONTROL DRUM
- SIGN ON PORTABLE SUPPOR (5' MIN MOUNTING HEIGHT)
- FLASHING ARROW BOARD
- TRAFFIC CONTROL BARRICAD TYPE III WITH SIGN

PROJECT NO: 1003-10-88	HWY: IH 39	COUNTY: ROCK	DETAIL: LANE CLOSURE FOR MEDIAN WORK (NIGHT-TIME)	SHEET	E

FILE NAME : L:\WORK\IH-39-SOUTH-SEGMENT\TURTLE CREEK\CADD\WORKING FILES\NEW\TURTLE CREEK TRAFFIC CONTROL EXHIBITS-1P.DWG PLOT DATE : 10/1/2015 1:58 PM PLOT BY : SCHNEIDER, MICHAEL PLOT NAME : PLOT SCALE : 1 IN:200 FT
WISDOT/CADDS SHEET 42

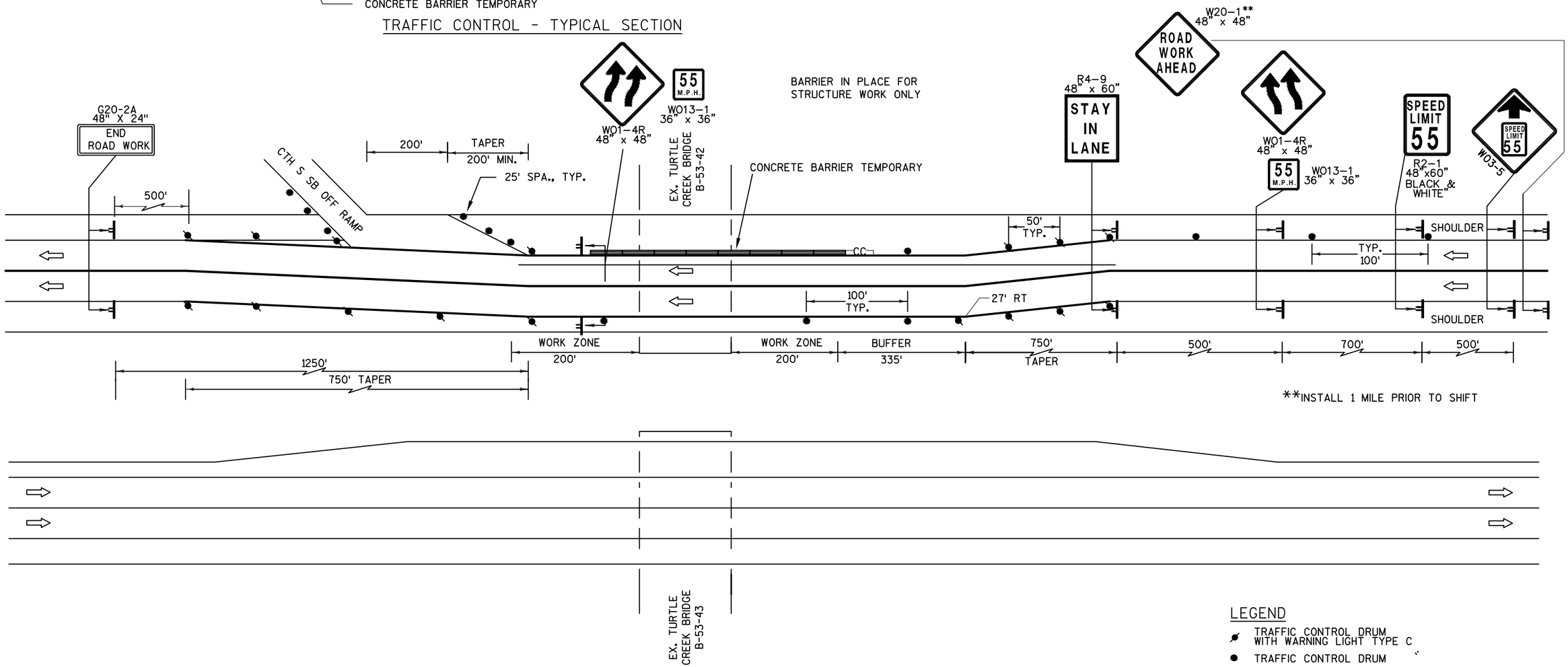




TRAFFIC CONTROL NOTES

NO ACCESS TO WORK ZONE FOR DELIVERY OR
REMOVAL OF MATERIAL AND EQUIPMENT

TRAFFIC CONTROL - TYPICAL SECTION



LANE SHIFT FOR OUTSIDE SHOULDER WORK (DAY-TIME)

THIS DETAIL COMPLEMENTS THE LANE CLOSURE FOR OUTSIDE SHOULDER WORK (NIGHT-TIME) DETAIL

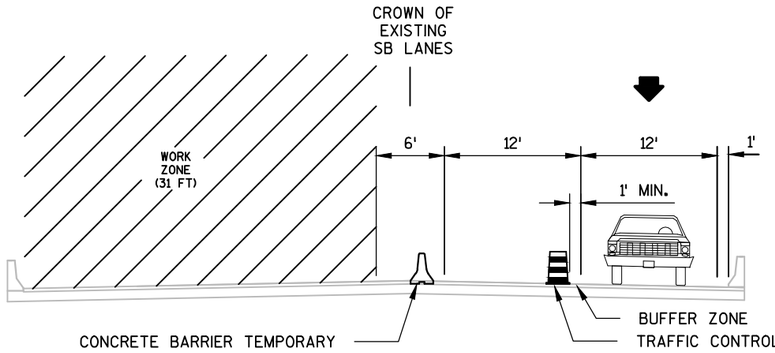
STAGE 2

LEGEND

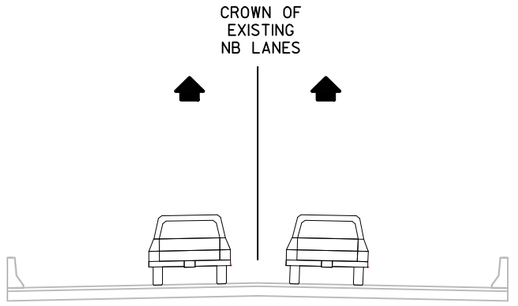
- TRAFFIC CONTROL DRUM WITH WARNING LIGHT TYPE C
- TRAFFIC CONTROL DRUM
- SIGN ON PORTABLE SUPPORT (5' MIN MOUNTING HEIGHT)
- FLASHING ARROW BOARD
- TRAFFIC CONTROL BARRICADE TYPE III WITH SIGN

PROJECT NO: 1003-10-88	HWY: IH 39	COUNTY: ROCK	DETAIL: LANE SHIFT-OUTSIDE SHOULDER WORK (DAY-TIME)	SHEET	E

FILE NAME : L:\WORK\IH-39-SOUTH-SEGMENT\TURTLE CREEK\CADD\WORKING FILES\NEW\TURTLE CREEK TRAFFIC CONTROL EXHIBITS-1P.DWG PLOT DATE : 10/1/2015 1:58 PM PLOT BY : SCHNEIDER, MICHAEL PLOT NAME : PLOT SCALE : 1 IN:200 FT



TRAFFIC CONTROL - TYPICAL SECTION



TRAFFIC CONTROL NOTES

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

FOR NIGHTTIME OPERATION ALL DRUMS IN TAPERS SHALL HAVE A WARNING LIGHT, TYPE C (STEADY BURN).

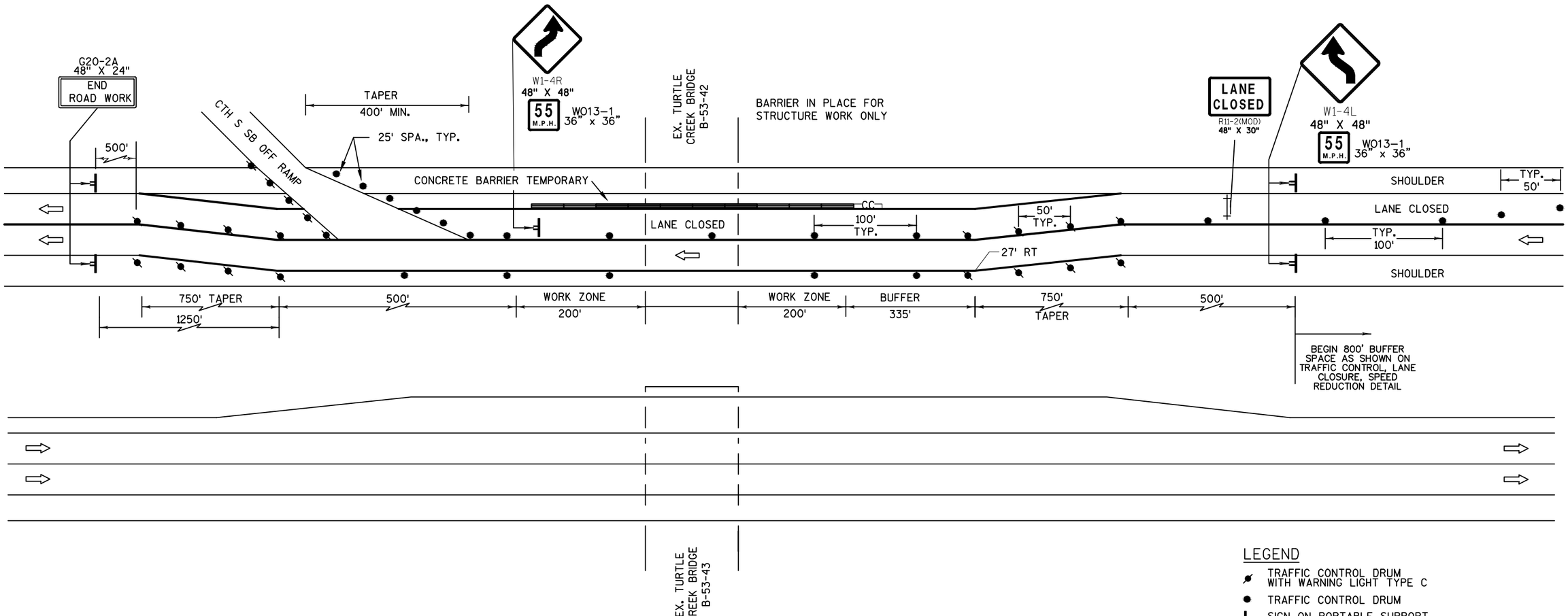
ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

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

ALL SHORT TERM LANE CLOSURE SIGNS SHALL BE REMOVED OR COVERED AND ALL ARROWBOARDS AND DEVICES REMOVED BEYOND THE SHOULDER WHEN THE WORK IS NOT IN PROGRESS AND THE LANE IS RESTORED TO A SAFE OPERATING CONDITION.

CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROWBOARDS SO THE DRIVER HAS A CLEAR VIEW OF THE ARROWBOARD AND LANE CLOSURE DRUMS FOR A MINIMUM 1500' IN FRONT OF DRUMS.

THE CLOSED TRAFFIC LANE MAY BE USED FOR ACCESS TO AND FROM THE WORK ZONE BUT MAY NOT BE USED FOR WORK VEHICLE STORAGE.



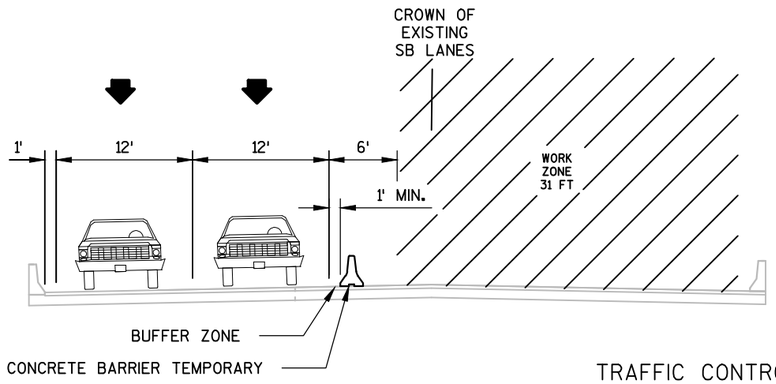
LANE CLOSURE FOR OUTSIDE SHOULDER WORK (NIGHT-TIME)

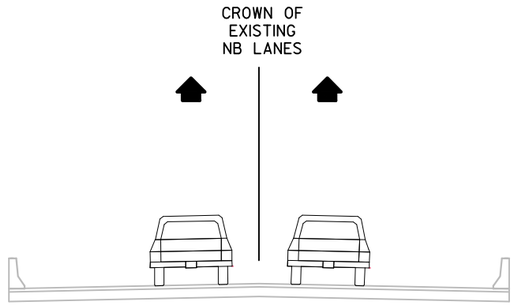
THIS DETAIL COMPLEMENTS THE LANE SHIFT FOR OUTSIDE SHOULDER WORK (DAY-TIME) DETAIL STAGE 2 & STAGE 4B

LEGEND

- TRAFFIC CONTROL DRUM WITH WARNING LIGHT TYPE C
- TRAFFIC CONTROL DRUM
- SIGN ON PORTABLE SUPPORT (5' MIN MOUNTING HEIGHT)
- FLASHING ARROW BOARD
- TRAFFIC CONTROL BARRICADE TYPE III WITH SIGN

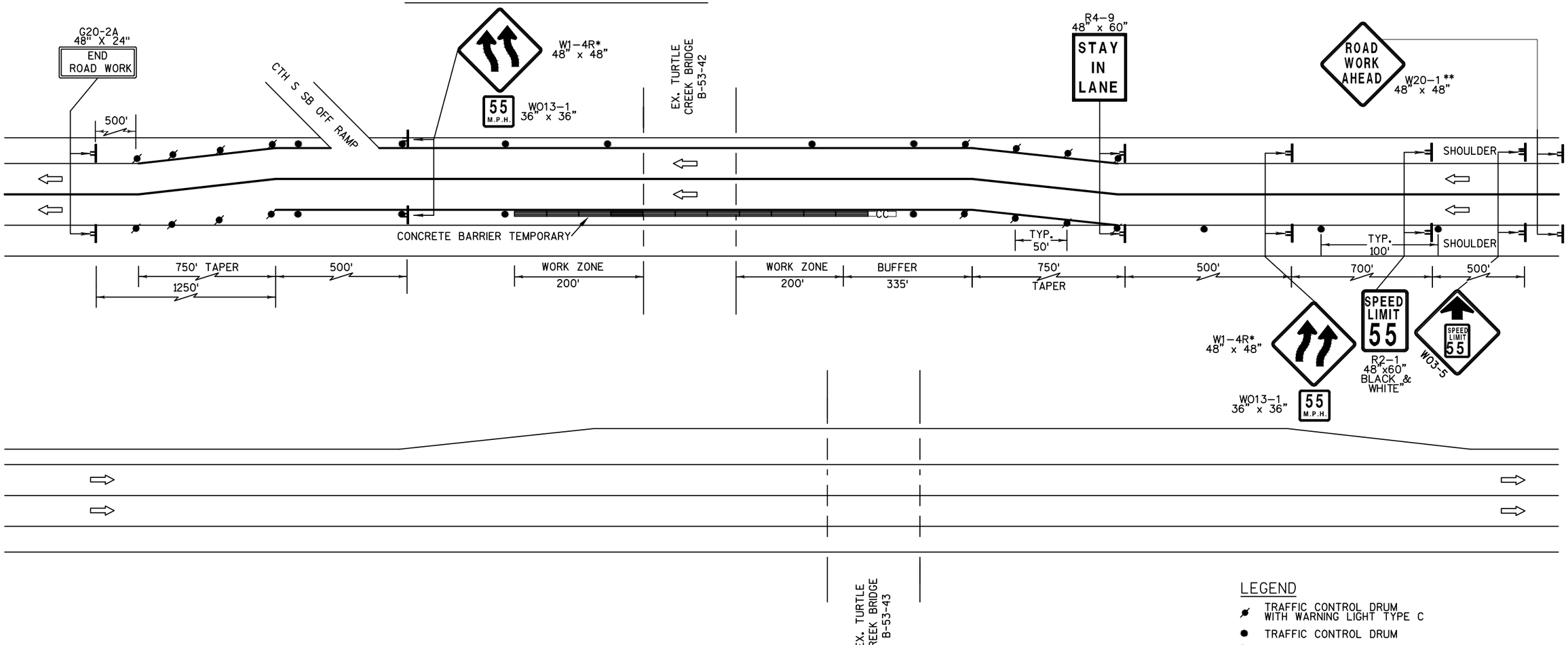
PROJECT NO: 1003-10-88	HWY: IH 39	COUNTY: ROCK	DETAIL: LANE CLOSURE FOR OUTSIDE SHOULDER WORK (NIGHT-TIME)	SHEET 20	E





TRAFFIC CONTROL - TYPICAL SECTION

**INSTALL 1 MILE PRIOR TO SHIFT



LANE SHIFT FOR MEDIAN WORK

STAGE 3

LEGEND

- TRAFFIC CONTROL DRUM WITH WARNING LIGHT TYPE C
- TRAFFIC CONTROL DRUM
- SIGN ON PORTABLE SUPPORT (5' MIN MOUNTING HEIGHT)
- FLASHING ARROW BOARD
- TRAFFIC CONTROL BARRICADE TYPE III WITH SIGN

PROJECT NO: 1003-10-88	HWY: IH 39	COUNTY: ROCK	DETAIL: LANE SHIFT FOR MEDIAN WORK	SHEET	E

FILE NAME : L:\WORK\IH-39-SOUTH-SEGMENT\TURTLE CREEK\CADD\WORKING FILES\NEW\TURTLE CREEK TRAFFIC CONTROL EXHIBITS-1P.DWG PLOT DATE : 10/1/2015 1:58 PM PLOT BY : SCHNEIDER, MICHAEL PLOT NAME : PLOT SCALE : 1 IN:200 FT
WISDOT/CADDS SHEET 42

2

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
- PCMS TRAFFIC CONTROL SIGN PORTABLE CHANGEABLE MESSAGE

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"x48" UNLESS OTHERWISE NOTED.

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

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

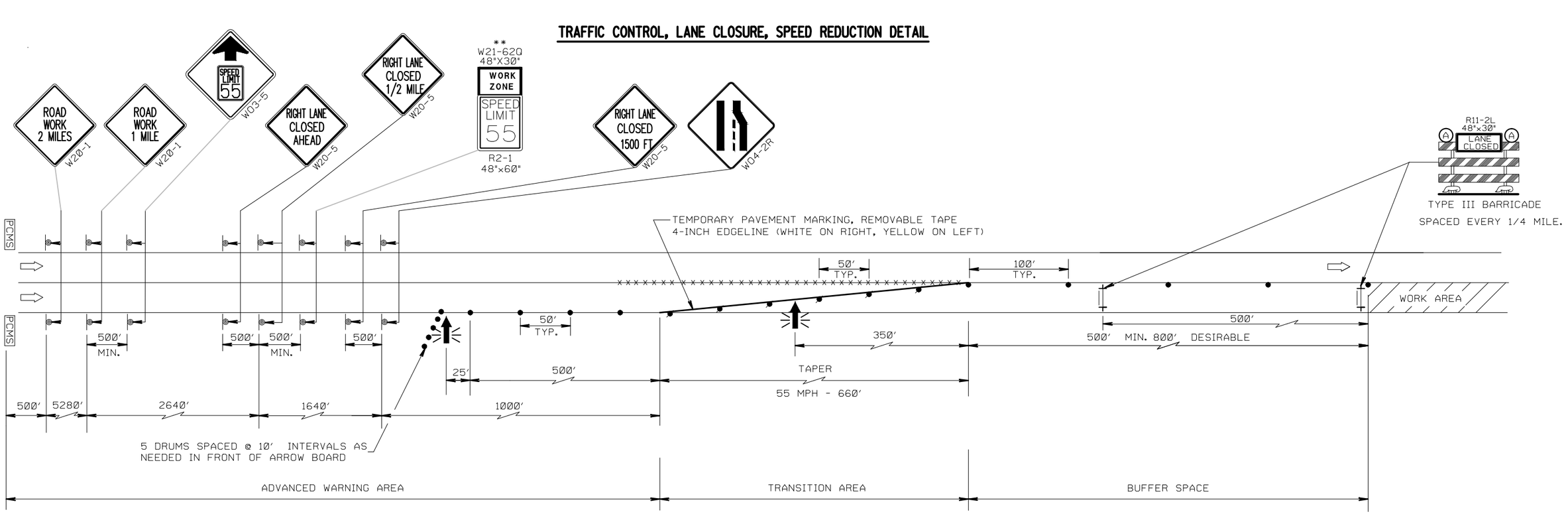
IF THE HORIZONTAL ALIGNMENT IS SUCH THAT A CURVE MAY REQUIRE ADDITIONAL DELINEATION, THE DEVICE SPACING MAY BE DECREASED TO 50 FEET.

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.

** 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 65 MPH RESUME SPEED LIMIT SIGN 200 FEET MINIMUM (500 FEET DESIREABLE) BEYOND THE "END OF ROADWORK" SIGN.

2

TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION DETAIL



PROJECT NO: 1003-10-88	HWY: IH 39	COUNTY: ROCK	TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION	SHEET 22	E

LEGEND

- TYPE III BARRICADE
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- REMOVING PAVEMENT MARKING
- DIRECTION OF TRAFFIC
- WORK AREA
- PCMS — PORTABLE CHANGEABLE MESSAGE SIGN

TRAFFIC CONTROL NOTES

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

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

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

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

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

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

REDUCED SPEED AHEAD AND SPEED LIMIT 55 SIGNS MUST BE POST MOUNTED.

SPEED LIMIT SIGNS SHALL ALSO BE LOCATED 1500 FEET BEYOND THE END OF THE ACCELERATION LANE OF EACH ENTRANCE RAMP AND AT 0.5 MILE INTERVALS, OR AS DIRECTED BY THE ENGINEER.

THE LOCATION OF THE FIRST SIGN INDICATING THE 55 MPH REGULATORY SPEED LIMIT IS REFERENCED FROM BEGINNING OF LANE CLOSURE TAPER. THE 55 MPH REGULATORY SPEED LIMIT SIGN LOCATION MUST BE ADJUSTED WHEN CONSTRUCTION ACTIVITIES REQUIRE THE LANE CLOSURE START LOCATION TO CHANGE.

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

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

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

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

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

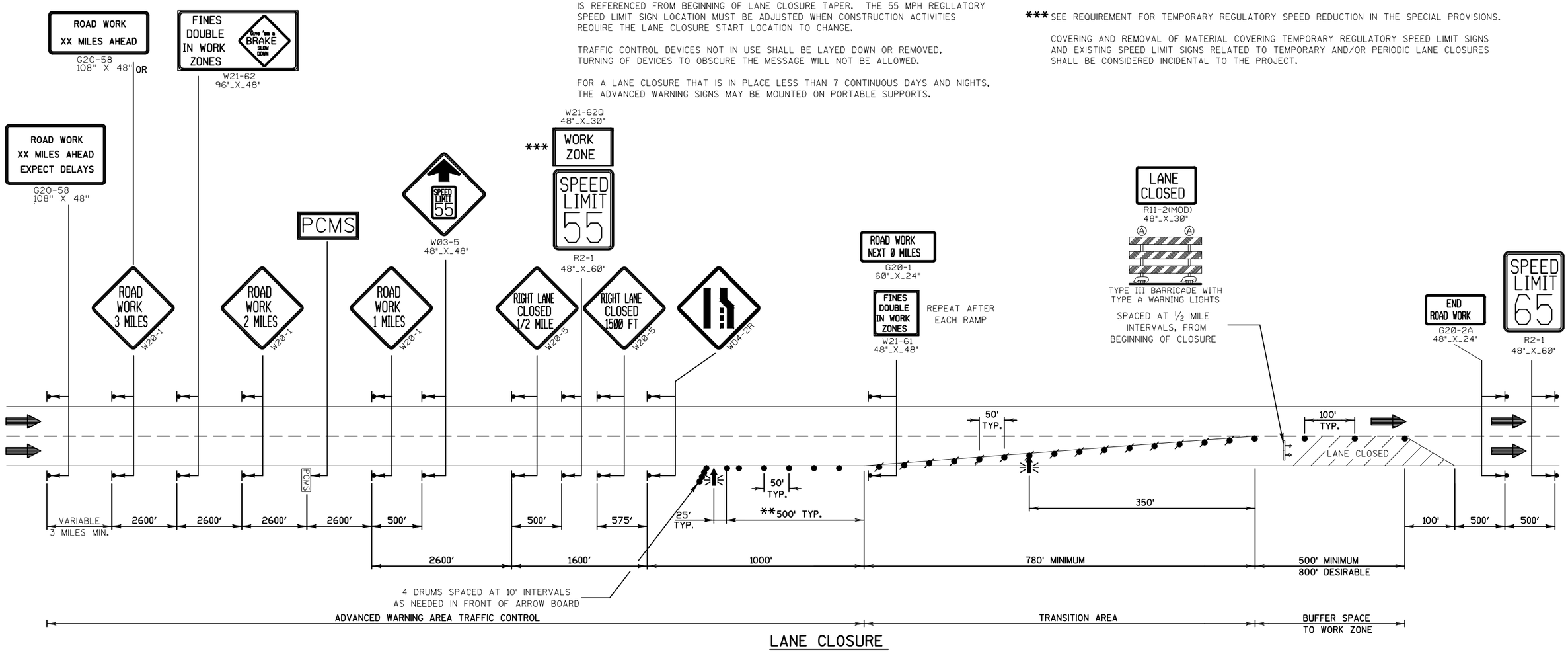
IF LANE CLOSURE IS MORE THAN 1 MILE, PLACE A TYPE III BARRICADE APPROXIMATELY EVERY ½ MILE ACROSS THE CLOSED LANE TO HELP ENFORCE THE DRUM LINE.

ADJUSTMENTS IN BUFFER SPACE NEED TO BE INCORPORATED WHEN THE LANE CLOSURE OCCURS NEAR AN INTERCHANGE EXIT OR ENTRANCE RAMP. THE LANE CLOSURE MUST TAKE PLACE FAR ENOUGH IN ADVANCE OF AN EXIT OR ENTRANCE RAMP TO STILL ALLOW FOR ADEQUATE BUFFER SPACE. THE MINIMUM LENGTH OF THE BUFFER SPACE BEFORE AN EXIT RAMP SHOULD BE ½ THE LENGTH OF THE TRANSITION AREA. THE ENTRANCE RAMP SHOULD BE FOLLOWED BY THE ORIGINAL BUFFER SPACE LENGTH OF 800 FEET DESIRABLE PRIOR TO ANOTHER TRAFFIC CONTROL CHANGE SUCH AS A CROSSOVER MANEUVER.

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

*** SEE REQUIREMENT FOR TEMPORARY REGULATORY SPEED REDUCTION IN THE SPECIAL PROVISIONS.

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



LANE CLOSURE

PROJECT NO: 1003-10-88	HWY: IH 39	COUNTY: ROCK	TRAFFIC CONTROL, LANE CLOSURE, ADVANCED WARNING	SHEET	E

2

N

PI STA = 330+96.25
Y = 222663.74
X = 506228.13
DELTA = 20°07'24"
D = 1°00'24"
T = 1009.97
L = 1999.13
R = 5692.00
PC STA = 320+86.28
PT STA = 340+85.41

PI

330 335 340

PT: 340+85.41

IH 39 SB

IH 39 NB

345 350 355 360 365 370 375 380 385 390 395 400 405

CTH S

CTH S SB OFF RAMP

BEGIN PROJECT
STA 357+00

CTH S NB ON RAMP

N19° 29' 09.28"W
3292.39

STRUCTURE
B-53-42 (SB)

STRUCTURE
B-53-43 (NB)

TURTLE CREEK

PC: 373+77.80

PI STA = 383+27.87
Y = 227615.32
X = 504476.06
DELTA = 18°24'10"
D = 0°58'37"
T = 950.07
L = 1883.77
R = 5865.00
PC STA = 373+77.80
PT STA = 392+61.57

PI

PT: 392+61.57

CREEK RD

END PROJECT
STA 379+38

IH 39 SB

IH 39 NB

N1° 04' 59.51"W
11646.03

PROJECT NO: 1003-10-88	HWY: IH 39	COUNTY: ROCK	ALIGNMENT DIAGRAM	SHEET 24	E

DATE 30NOV15 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	1003-10-88 QUANTITY
0060	204.0100	Removing Pavement	SY	1,950.000	1,950.000
0080	204.0165	Removing Guardrail	LF	393.000	393.000
0130	205.0100	Excavation Common	CY	7,467.000	7,467.000
0150	208.1100	Select Borrow	CY	600.000	600.000
0170	213.0100	Finishing Roadway (project) 001. 1003-10-88	EACH	1.000	1.000
0190	305.0110	Base Aggregate Dense 3/4-Inch	TON	145.000	145.000
0200	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	10,595.000	10,595.000
0260	455.0105	Asphaltic Material PG58-28	TON	85.000	85.000
0270	455.0120	Asphaltic Material PG64-28	TON	53.000	53.000
0280	455.0605	Tack Coat	GAL	170.000	170.000
0300	460.1130	HMA Pavement Type E-30	TON	2,484.000	2,484.000
0310	460.2000	Incentive Density HMA Pavement	DOL	1,500.000	1,500.000
0330	502.0100	Concrete Masonry Bridges **P**	CY	25.000	25.000
0340	502.3200	Protective Surface Treatment	SY	28.000	28.000
0350	502.3210	Pigmented Surface Sealer	SY	4.000	4.000
0390	505.0600	Bar Steel Reinforcement HS Coated Structures **P**	LB	3,665.000	3,665.000
0400	505.0905	Bar Couplers No. 5 **P**	EACH	14.000	14.000
0430	509.1000	Joint Repair	SY	29.000	29.000
0540	603.8000	Concrete Barrier Temporary Precast Delivered	LF	524.000	524.000
0550	603.8125	Concrete Barrier Temporary Precast Installed	LF	524.000	524.000
0640	614.0150	Anchor Assemblies for Steel Plate Beam Guard	EACH	1.000	1.000
0650	614.0905	Crash Cushions Temporary	EACH	2.000	2.000
0660	614.2300	MGS Guardrail 3	LF	212.500	212.500
0670	614.2500	MGS Thrie Beam Transition	LF	78.800	78.800
0680	614.2610	MGS Guardrail Terminal EAT	EACH	2.000	2.000
0710	618.0100	Maintenance And Repair of Haul Roads (project) 001. 1003-10-88	EACH	1.000	1.000
0730	619.1000	Mobilization	EACH	0.250	0.250
0740	624.0100	Water	MGAL	110.000	110.000
0750	625.0500	Salvaged Topsoil **P**	SY	7,791.000	7,791.000
0760	627.0200	Mulching	SY	7,791.000	7,791.000
0770	628.1504	Silt Fence	LF	2,900.000	2,900.000
0780	628.1520	Silt Fence Maintenance	LF	2,900.000	2,900.000
0790	628.1905	Mobilizations Erosion Control	EACH	2.000	2.000
0800	628.1910	Mobilizations Emergency Erosion Control	EACH	2.000	2.000
0810	628.2004	Erosion Mat Class I Type B	SY	4,640.000	4,640.000
0860	628.7555	Culvert Pipe Checks	EACH	15.000	15.000
0880	629.0205	Fertilizer Type A	CWT	5.000	5.000
0900	630.0130	Seeding Mixture No. 30	LB	121.000	121.000
0920	630.0300	Seeding Borrow Pit	LB	15.000	15.000
0960	638.2102	Moving Signs Type II	EACH	5.000	5.000
0970	638.4000	Moving Small Sign Supports	EACH	3.000	3.000
0980	642.5201	Field Office Type C	EACH	0.250	0.250
0990	643.0200	Traffic Control Surveillance and Maintenance (project) 001. 1003-10-88	DAY	80.000	80.000
1010	643.0300	Traffic Control Drums	DAY	6,767.000	6,767.000
1020	643.0420	Traffic Control Barricades Type III	DAY	71.000	71.000
1040	643.0715	Traffic Control Warning Lights Type C	DAY	4,277.000	4,277.000
1050	643.0800	Traffic Control Arrow Boards	DAY	76.000	76.000
1060	643.0900	Traffic Control Signs	DAY	2,004.000	2,004.000

3

DATE 30NOV15 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	1003-10-88 QUANTITY
1090	643.1050	Traffic Control Signs PCMS	DAY	63.000	63.000
1120	646.0106	Pavement Marking Epoxy 4-Inch	LF	7,230.000	7,230.000
1130	646.0126	Pavement Marking Epoxy 8-Inch	LF	400.000	400.000
1140	646.0600	Removing Pavement Markings	LF	25,330.000	25,330.000
1160	649.0402	Temporary Pavement Marking Paint 4-Inch	LF	16,900.000	16,900.000
1170	649.0802	Temporary Pavement Marking Paint 8-Inch	LF	800.000	800.000
1190	690.0250	Sawing Concrete	LF	2,065.000	2,065.000
1210	715.0502	Incentive Strength Concrete Structures	DOL	500.000	500.000
1220	SPV.0035	Special 001. Roadway Embankment	CY	2,814.000	2,814.000
1230	SPV.0060	Special 001. Baseline CPM Progress Schedule	EACH	1.000	1.000
1240	SPV.0060	Special 002. CPM Progress Schedule Updates And Accepted Revisions	EACH	6.000	6.000
1310	SPV.0090	Special 201. Traffic Control Gawk Screen Furnished	LF	524.000	524.000
1320	SPV.0090	Special 202. Traffic Control Gawk Screen Installed	LF	524.000	524.000
1330	SPV.0105	Special 001. Survey Project 1003-10-88	LS	1.000	1.000

3

3

REMOVING PAVEMENT

STATION	-	STATION	COMMENTS	204.0100 REMOVING PAVEMENT (SY)
357+00	-	360+68	LT	800
362+29	-	368+25	LT	450
369+86	-	379+37	LT	700
			CATEGORY 1000 TOTALS	1950
			PROJECT TOTALS	1950

REMOVING GUARDRAIL

STATION	-	STATION	LT/RT	204.0165 REMOVING GUARDRAIL (LF)
369+86	-	372+79	LT	293
369+86		370+86	RT	100
			CATEGORY 1000 TOTALS	393

3

Division	From/To Station	Location	Excavation Common (CY) (1) 205.0100		Fill (CY)	Roadway Embankment (CY) (2) SPV.0035.001	208.1100 Select Borrow (CY)	Comment:
			Cut (CY)	EBS (CY)				
1	357+00 - 379+38	IH 39 SB LT	5,206	500	2,195	2,195	500	
2	357+00 - 379+38	IH 39 SB RT	1,661	100	619	619	100	
			6,867	600	2,814	2,814	600	
Project 1003-10-88 Totals			**7,467**			**2,814**	**600**	

1) Excavation Common = Cut + EBS Excavation. Item number 205.0100.
2) Cut volume includes concrete and asphaltic surface material.
3) EBS Excavation to be backfilled with Select Borrow unless otherwise noted in plans.
4) Roadway Embankment = (Fill + EBS Excavation - Select Borrow)

3

FINISHING ROADWAY

LOCATION	213.0100 FINISHING ROADWAY 1003-10-88 EACH
PROJECT	1
CATEGORY 1000 TOTALS	1

BASE AGGREGATE DENSE

STATION	-	STATION	LOCATION	305.0110 BASE AGGREGATE DENSE 3/4-INCH (TON)	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH (TON)
357+00	-	360+69	LT	15	1,034
357+00	-	368+25	RT	35	2,456
362+28	-	368+25	LT	20	1,816
369+86	-	379+38	LT	30	2,804
369+86	-	379+38	RT	45	2,485
			CATEGORY 1000 TOTALS	145	10,595

3

HMA PAVEMENT ITEMS

STATION	-	STATION	LOCATION	PAVEMENT DEPTH (INCHES)	460.1130 HMA PAVEMENT E-30 (TON)	455.0105 ASPHALTIC MATERIAL PG 58-28 (TON)	455.0120 ASPHALTIC MATERIAL PG 64-28 (TON)	455.0605 TACK COAT (GAL)
357+00	-	360+69	IH 39 SB SHOULDER	6.5	319	11	7	20
357+00	-	368+25	IH 39 SB MEDIAN	6.5	736	25	16	50
362+28	-	368+25	IH 39 SB SHOULDER	6.5	229	8	5	15
369+86	-	379+38	IH 39 SB SHOULDER	6.5	623	21	13	45
369+86	-	379+38	IH 39 SB MEDIAN	6.5	577	20	12	40
			CATEGORY 1000 TOTALS		2,484	85	53	170

TRAFFIC CONTROL - CONCRETE BARRIER

ROADWAY			LOC.	603.8000 CONCRETE BARRIER TEMPORARY PRECAST DELIVERED (LF)	603.8125 CONCRETE BARRIER TEMPORARY PRECAST INSTALLED (LF)	614.0905 CRASH CUSHION TEMPORARY (EACH)	SPV.0090.201 TRAFFIC CONTROL GAWK SCREEN FURNISHED (LF)	SPV.0090.202 TRAFFIC CONTROL GAWK SCREEN INSTALLED (LF)
IH 39 - STAGE 2 DAY								
367+74	-	370+36	LT	262	262	1	262	262
IH 39 - STAGE 3A								
367+74	-	370+36	RT	262	262	1	262	262
CATEGORY 1000 TOTALS				524	524	2	524	524

MGS GUARDRAIL

STATION	-	STATION	LOCATION	614.2300 MGS GUARDRAIL 3 (LF)	614.2500 MGS THRIE BEAM TRANSITION (LF)	614.2610 MGS GUARDRAIL TERMINAL EAT (EACH)
369+86	-	372+79	LT	150	39.4	1
369+90	-	370+90		62.5	39.4	1
CATEGORY 1000 TOTALS				212.5	78.8	2

MAINTENANCE, MOBILIZATION AND SCHEDULE

LOCATION	618.0100 MAINTENANCE AND REPAIR OF HAUL ROADS 1003-10-88 EACH	619.1000 MOBILIZATION EACH	SPV.0060.001 BASELINE CPM PROGRESS SCHEDULE EACH	SPV.0060.002 CPM PROGRESS SCHEDULE UPDATES AND ACCEPTED REVISIONS EACH
PROJECT	1	0.25	1.00	6.00
CATEGORY 1000 TOTALS	1	0.25	1.00	6.00
PROJECT TOTALS	1	0.25	1.00	6.00

3

SALVAGED TOPSOIL, MULCHING, FERTILIZER, SEEDING, & SEEDING BORROW PIT

STATION	-	STATION	LOCATION	625.0500 SALVAGED TOPSOIL (SY)	627.0200 MULCHING (SY)	629.0205 FERTILIZER TYPE A (CWT)	630.0130 SEEDING MIXTURE NO. 30 (LB)	630.0300 SEEDING BORROW PIT (LB)
357+00	-	360+69	LT	430	430	0.3	8	
357+00	-	368+25	RT	1,420	1,420	0.9	26	
362+28	-	368+25	LT	1,985	1,985	1.3	36	
369+86	-	379+38	LT	1,745	1,745	1.1	31	
369+86	-	379+38	RT	1,100	1,100	0.7	20	
BORROW SITE				1,111	1,111	0.7		15
			CATEGORY 1000 TOTALS	7,791	7,791	5.0	121	15
			PROJECT TOTALS	7,791	7,791	5.0	121	15

WATER

LOCATION	624.0100 WATER (MGAL)
1003-10-88	110
CATEGORY 1000 TOTALS	110

3

EROSION CONTROL

STATION	-	STATION	LOCATION	628.1504 MAT SILT FENCE (LF)	628.1520 SILT FENCE MAINTENANCE (LF)	628.1905 MOBILIZATIONS EROSION CONTROL (EACH)	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL (EACH)	628.2004 EROSION MAT CLASS I TYPE B (SY)	628.7555 CULVERT PIPE CHECKS (EACH)
357+00	-	360+69	LT	300	300	--	--	220	5
357+00		368+25	RT	500	500	--	--	765	--
362+28	-	368+25	LT	600	600	--	--	984	--
369+86	-	379+38	LT	500	500	--	--	946	5
369+86	-	379+38	RT	500	500	--	--	880	--
UNDISTRIBUTED				500	500	2	2	845	5
			CATEGORY 1000 TOTALS	2,900	2,900	2	2	4,640	15
			PROJECT TOTALS	2,900	2,900	2	2	4,640	15

FIELD OFFICE TYPE C

CATEGORY STATION	LOCATION	642.5201 FIELD OFFICE TYPE C EACH
1000	1003-10-88	0.25
	TOTALS	0.25

TRAFFIC CONTROL - DRUMS, BARRICADES, WARNING LIGHTS, ARROW BOARDS, AND SIGNS

ROADWAY	DAYS IN SERVICE	643.0300 DRUMS NO.	(DAYS)	643.0420 BARRICADES TYPE III NO.	(DAYS)	643.0715 WARNING LIGHTS TYPE C NO.	(DAYS)	643.0800 TRAFFIC CONTROL ARROW BOARDS NO.	(DAYS)	643.0900 SIGNS NO.	(DAYS)	643.1050 TRAFFIC CONTROL SIGNS PCMS NO.	(DAYS)
IH 39 - STAGE 1													
DAYTIME/NIGHTTIME	4	85	340	2	8	13	52	2	8	23	92	1	4
IH 39 - STAGE 2													
DAYTIME/NIGHTTIME	30	106	3,180	2	55	71	2,129	2	60	30	900	1	27
IH 39 - STAGE 3													
DAYTIME	30	94	2,807	--	--	60	1,800	--	--	30	900	1	28
IH 39 - STAGE 4													
NIGHTTIME	4	110	440	2	8	74	296	2	8	28	112	1	4
CATEGORY 1000 TOTALS			6,767		71		4,277		76		2,004		63
PROJECT TOTALS			6,767		71		4,277		76		2,004		63

TRAFFIC CONTROL

CATEGORY	STATION	LOCATION	643.0200 TRAFFIC CONTROL SURVEILLANCE AND MAINTENANCE DAYS
1000		PROJECT	80
		TOTALS	80

3

MOVING SIGNS TYPE II, MOVING SMALL SIGN SUPPORTS, & REMOVING SIGNS

STATION	LOCATION	638.2102 MOVING SIGNS TYPE II (EACH)	638.4000 MOVING SMALL SIGN SUPPORTS (EACH)	DESCRIPTION
PROJECT ID 1003-10-74				
M1-01	358+60 LT	1	1	EXIT 183
M1-02	379+18 RT	2	1	MILE MARKER 182.6
M1-03	379+71 RT	2	1	NO U TURN
	CATEGORY 1000 TOTALS	5	3	
	PROJECT TOTALS	5	3	

PAVEMENT MARKING

LOCATION	646.0106 EPOXY 4-INCH YELLOW (LF)	646.0106 EPOXY 4-INCH WHITE (LF)	646.0126 EPOXY 8-INCH WHITE (LF)	646.0600 REMOVING PAVEMENT MARKINGS (LF)
IH 39 - STAGE 1	--	--	--	3,090
IH 39 - STAGE 2	--	1,492	--	8,330
IH 39 - STAGE 3	2,852	894	--	9,490
IH 39 - STAGE 4	--	1,992	400	4,420
	2,852	4,378	400	25,330
TOTAL FOR 646.0106	7,230			
PROJECT TOTALS		7,230	400	25,330

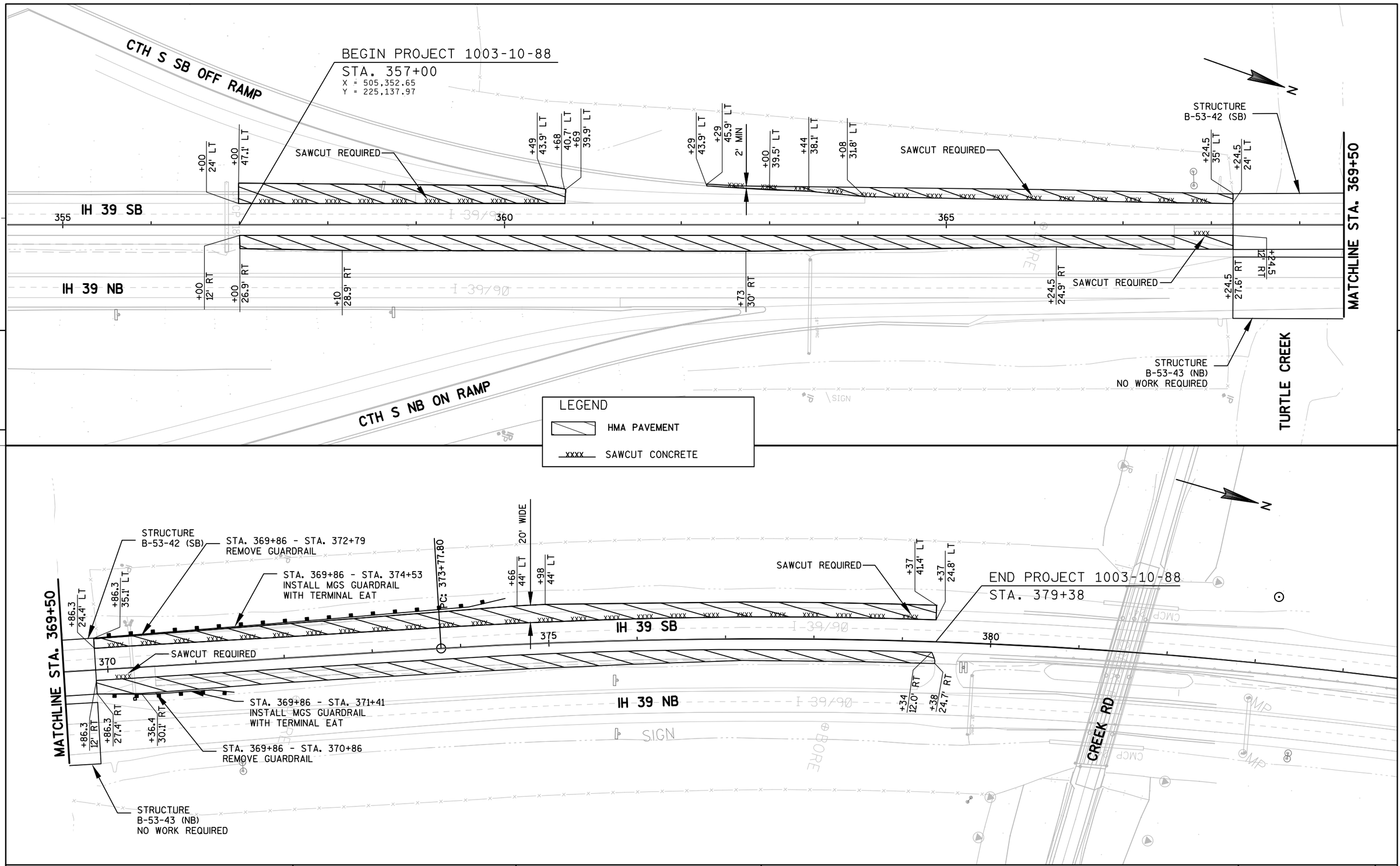
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TEMPORARY PAVEMENT MARKING

LOCATION	649.0402 TEMPORARY PAVEMENT MARKING PAINT 4-INCH YELLOW (LF)	649.0402 TEMPORARY PAVEMENT MARKING PAINT 4-INCH WHITE (LF)	649.0802 TEMPORARY PAVEMENT MARKING PAINT 8-INCH WHITE (LF)	COMMENTS
IH 39 - STAGE 1	3,490	3,490	--	
IH 39 - STAGE 2	--	7,710	800	
IH 39 - STAGE 3	2,210	--	--	
CATEGORY 1000 TOTALS	5,700	11,200	800	
TOTAL	16,900			
PROJECT TOTALS	16,900		800	

SAWING CONCRETE

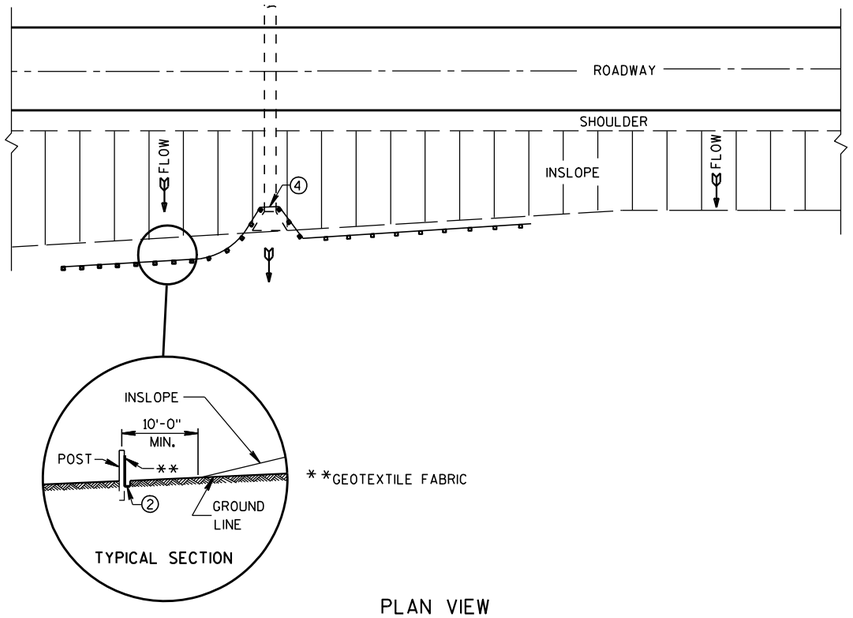
STATION		STATION	LOCATION	690.0250 SAWING CONCRETE (LF)
356+99	-	360+68	LT	370
362+29	-	368+25	LT/RT	670
369+86	-	379+38	LT	1025
			CATEGORY 1000 TOTALS	2,065
			PROJECT TOTALS	2,065



PROJECT NO: 1003-10-88	HWY: IH 39	COUNTY: ROCK	TEMPORARY WIDENING	SHEET 33 E

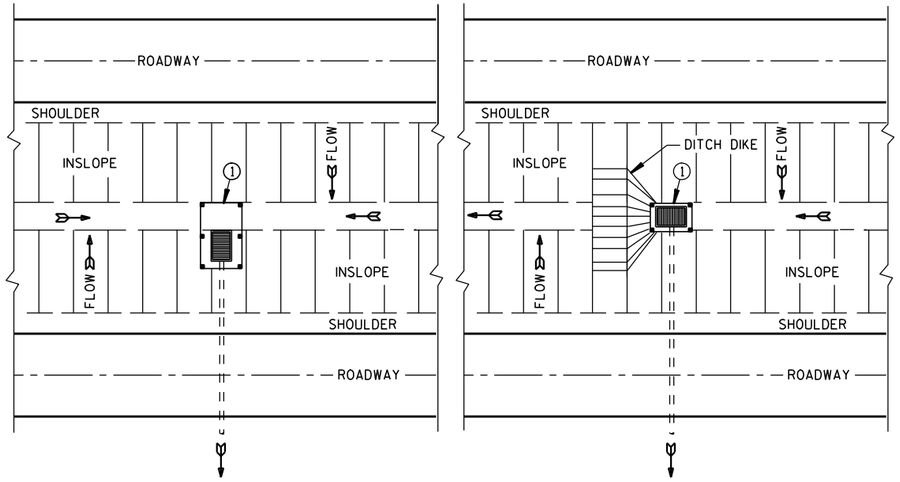
Standard Detail Drawing List

08E09-06	SILT FENCE
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"
14B42-03A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-03B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-03C	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)
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)
15C08-16A	PAVEMENT MARKING (MAINLINE)
15C31-01A	PAVEMENT MARKING (RAMPS AND GORES)
15D15-01	TRAFFIC CONTROL, EXIT AND ENTRANCE RAMP WITHIN LANE CLOSURE
15D27-02	TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH



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.

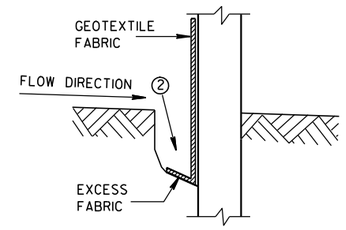
① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.

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.

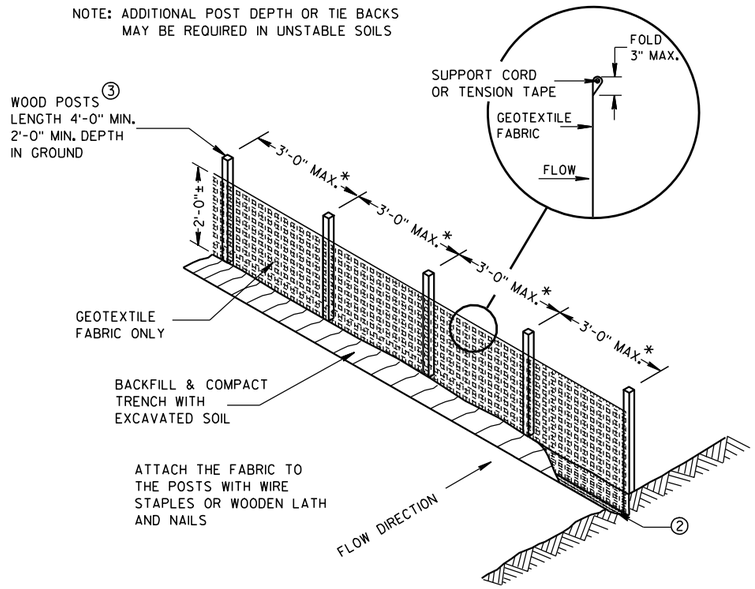
③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1⅛" X 1⅛" OF OAK OR HICKORY.

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

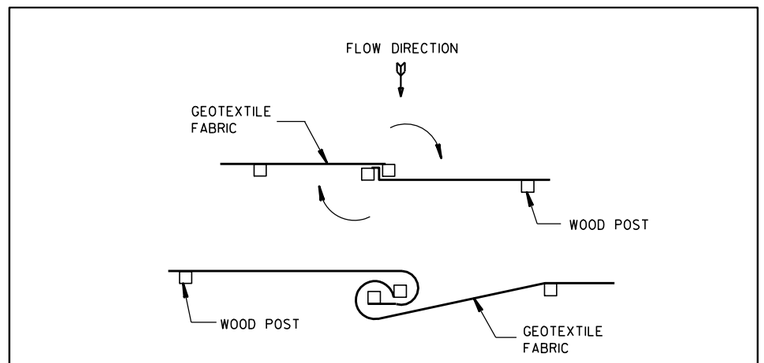
⑤ CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



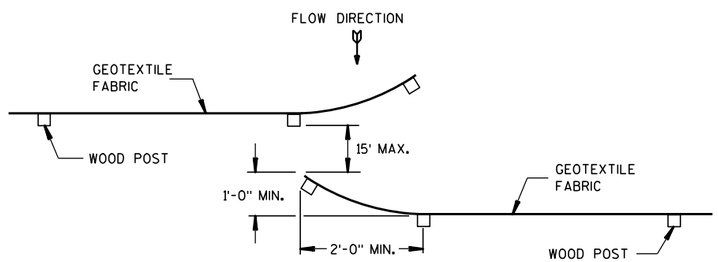
TRENCH DETAIL



SILT FENCE

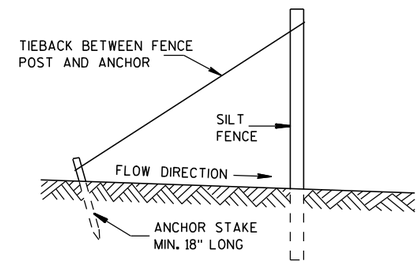


TWIST METHOD



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

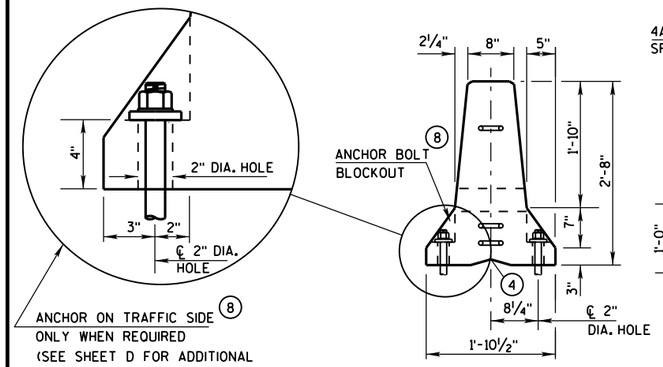
APPROVED
4-29-05 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6

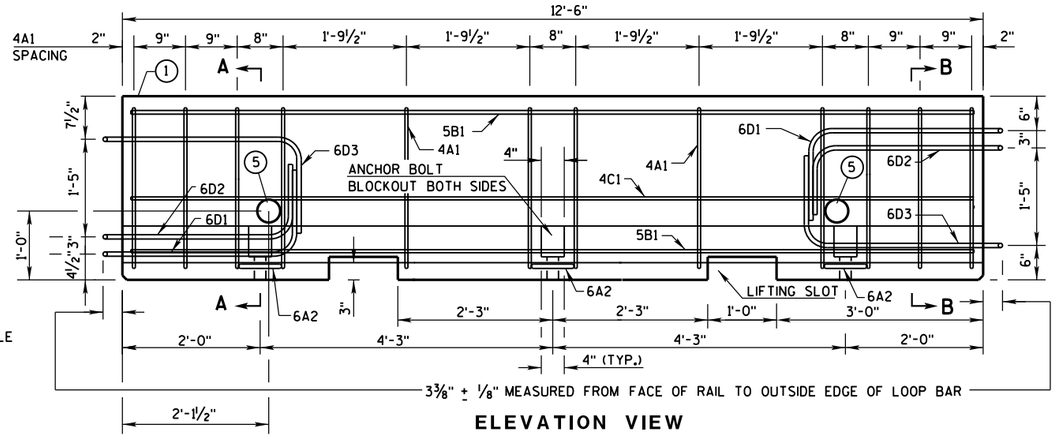
S.D.D. 8 E 9-6

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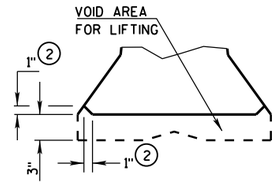
S.D.D. 8 E 9-6



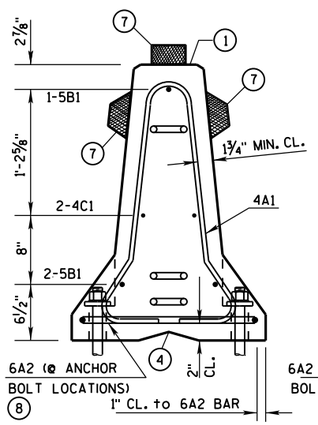
END VIEW



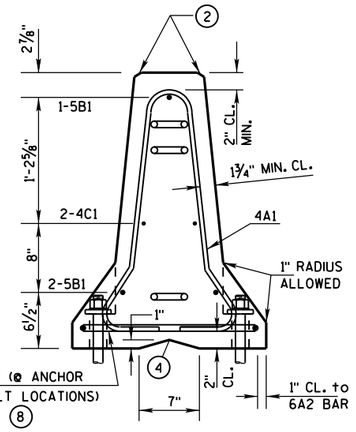
ELEVATION VIEW



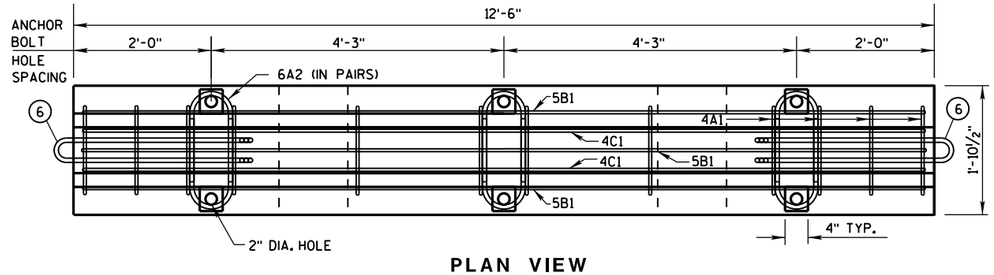
DETAIL "B"
LIFTING SLOT DETAIL



SECTION A-A
(STIRRUP PLACEMENT)

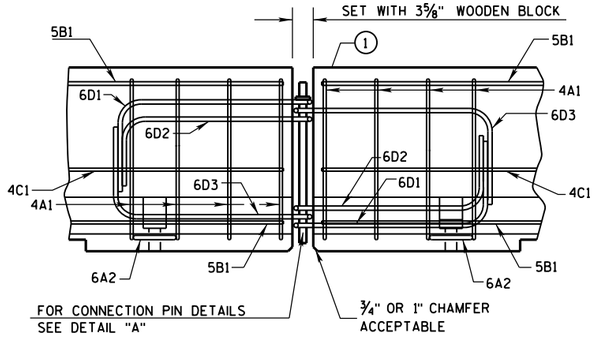


SECTION B-B
(STIRRUP PLACEMENT)

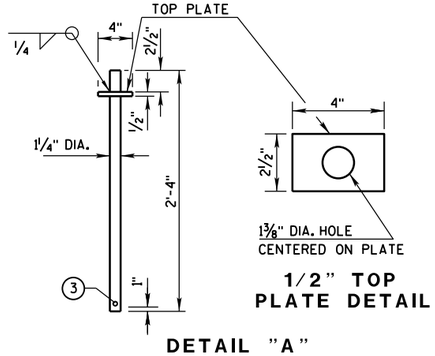


PLAN VIEW

DETAILS OF BARRIER SECTION

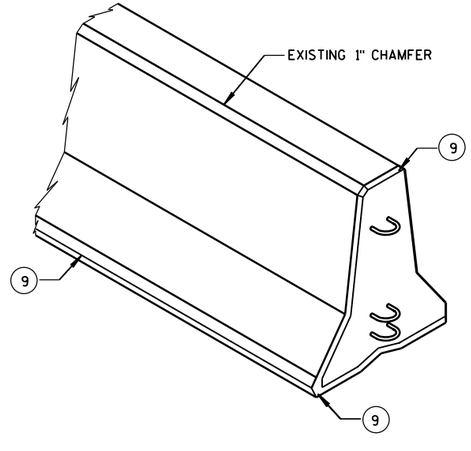


DETAILS OF BARRIER CONNECTION



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.

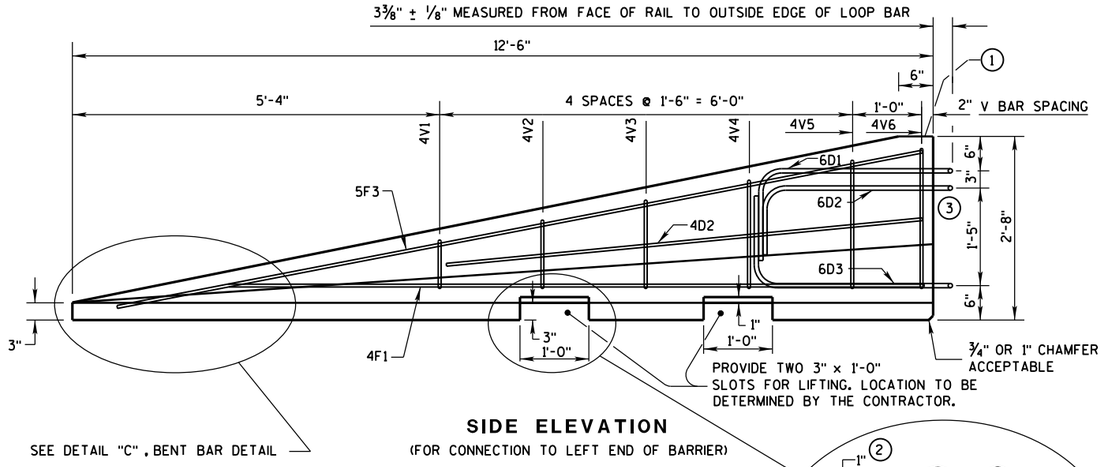
(8) SEE SHEET D FOR ANCHORING CRITERIA.

(9) 1" CHAMFER OPTIONAL.

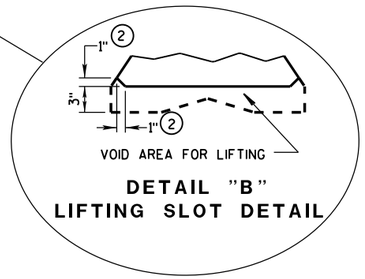
CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

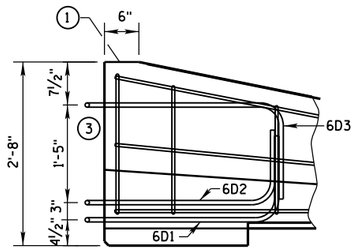
6
S.D.D. 14 B 7-14a



SIDE ELEVATION
(FOR CONNECTION TO LEFT END OF BARRIER)



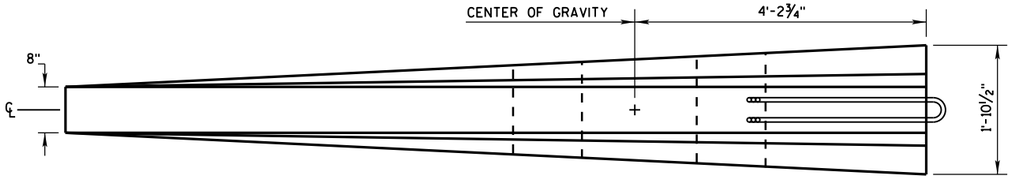
DETAIL "B"
LIFTING SLOT DETAIL



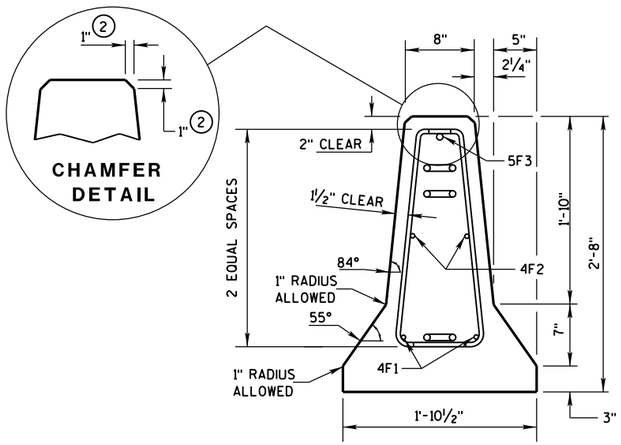
SIDE ELEVATION
LOOP BAR ASSEMBLY INVERTED
FOR OPPOSITE END.
(FOR CONNECTION TO RIGHT END OF BARRIER)

GENERAL NOTES

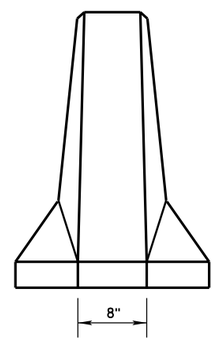
1. MARK ONE END OF EACH BARRIER PERMANENTLY BY FORMING INTO THE BARRIER THE FOLLOWING INFORMATION:
   a. TYPE WICBTP
   b. MANUFACTURER
   c. DATE MANUFACTURED (MONTH AND YEAR)
2. 1" CHAMFER TO PREVENT SPALLING.
3. NEVER USE LOOP BARS (6D1, 6D2 OR 6D3) TO LIFT, MOVE OR REPOSITION THE BARRIER.



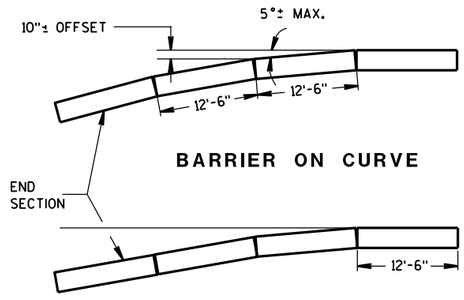
PLAN VIEW



END SECTION



FRONT ELEVATION



BARRIER ON CURVE

FLARE AT BARRIER END

POSTED SPEED, (MPH)	FLARE RATE
40 OR LESS	6:1
45 OR GREATER	8:1

DETAILS OF BARRIER TAPER SECTION

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

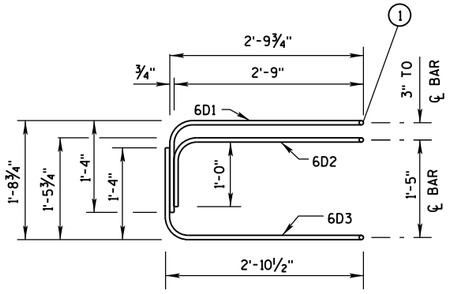
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6
S.D.D. 14 B 7-14b

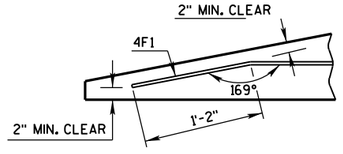
BARRIER TAPER SECTION BILL OF MATERIALS

(PER 12'-6" BARRIER TAPER SECTION)

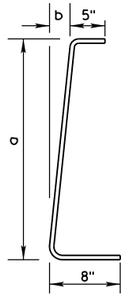
BAR	BAR SIZE	NO. OF BARS	LENGTH FT.
4V1	4	2	1'-11"
4V2	4	2	2'-2"
4V3	4	2	2'-6"
4V4	4	2	2'-9"
4V5	4	2	3'-2"
4V6	4	2	3'-4"
4F1	4	2	12'-0"
4F2	4	2	7'-6"
5F3	5	1	11'-9"
LOOP ASSEMBLY			
6D1	6	1	8'-5"
6D2	6	1	7'-7"
6D3	6	1	8'-6"



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

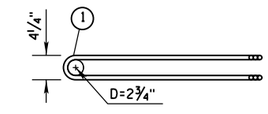
GENERAL NOTES

(1) NEVER USE LOOP BARS (6D1, 6D2 OR 6D3) TO LIFT, MOVE OR REPOSITION THE BARRIER.

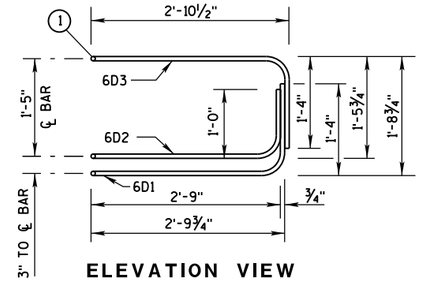
BARRIER SECTION BILL OF MATERIALS

(PER 12'-6" BARRIER SECTION)

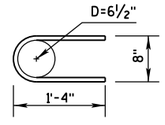
BAR	BAR SIZE	NO. OF BARS	LENGTH FT.
4A1	4	12	6'-0"
6A2	6	6	2'-11"
5B1	5	3	12'-2"
4C1	4	2	12'-2"
LOOP ASSEMBLY			
6D1	6	2	8'-5"
6D2	6	2	7'-7"
6D3	6	2	8'-6"



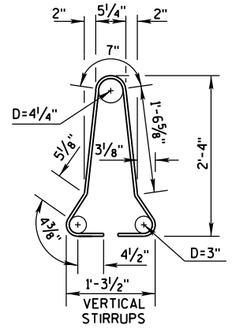
PLAN VIEW
LOOP BAR ASSEMBLY
(MARKED END SHOWN, INVERT FOR OTHER END)



ELEVATION VIEW



6A2



4A1

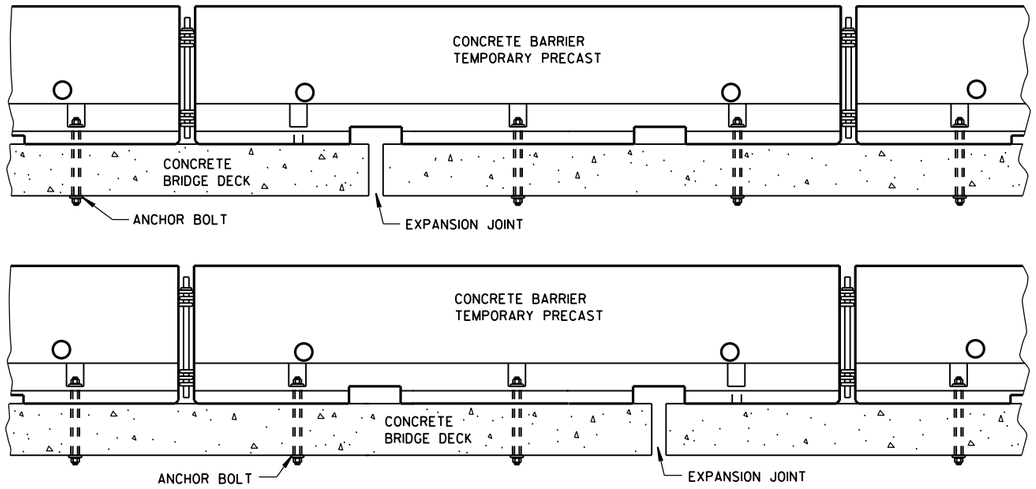
BARRIER SECTION

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

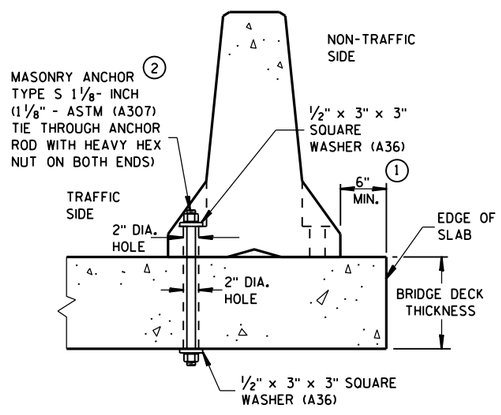
6

S.D.D. 14 B 7-14c



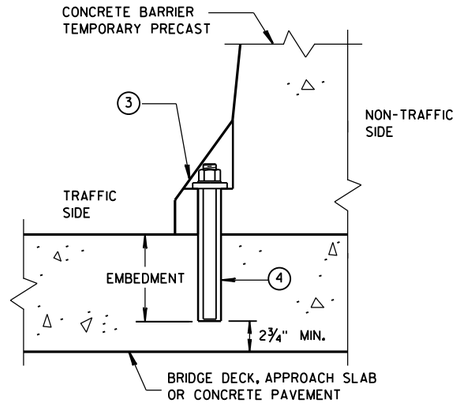
TREATMENT AT BRIDGE DECK EXPANSION JOINTS

(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.)



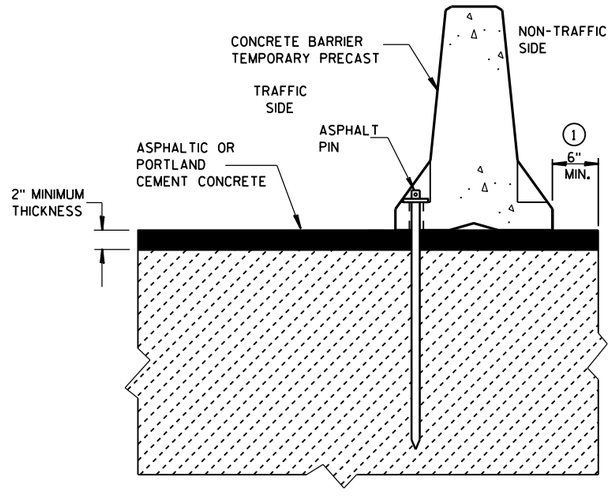
THROUGH BOLTED ANCHOR INSTALLATION ON BRIDGE DECK

(DO NOTUSE ON CONCRETE BRIDGE DECK WITH ASPHALT OVERLAY)



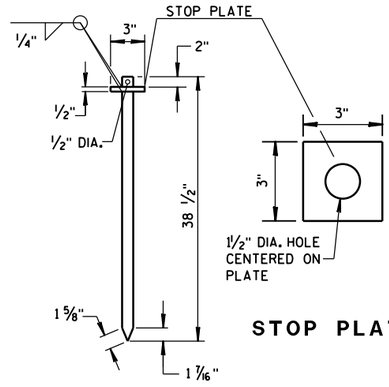
REMOVABLE ADHESIVE BONDED ANCHOR ② INSTALLATION ON CONCRETE BRIDGE DECK, CONCRETE APPROACH SLAB, OR CONCRETE PAVEMENT

(DO NOT USE ON CONCRETE WITH AN ASPHALTIC OVERLAY)



STAKE DOWN INSTALLATION FOR ASPHALTIC OR PORTLAND CEMENT CONCRETE SURFACE

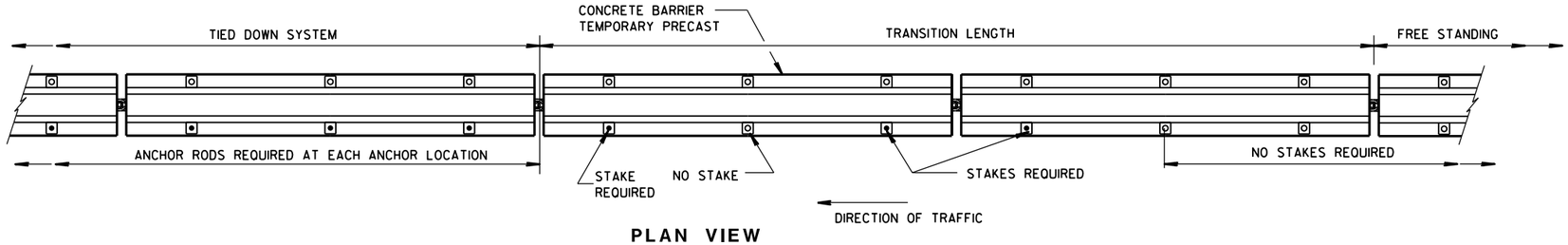
(STAKING IS INCIDENTAL TO CONCRETE BARRIER TEMPORARY PRECAST)



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.)

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.

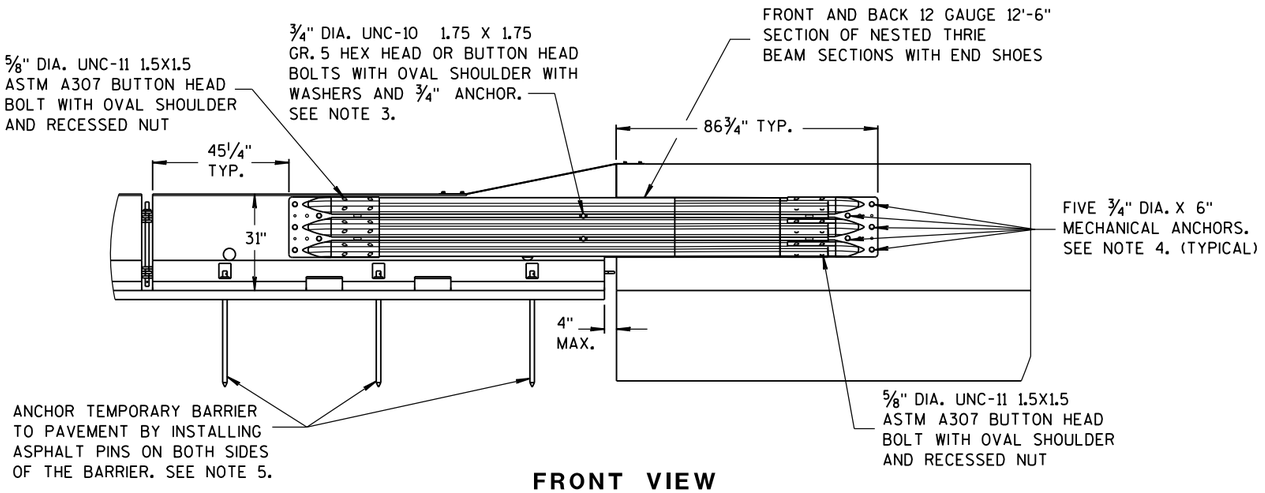
④ ADHESIVE ANCHORS WITH A MINIMUM BOND STRENGTH OF 1,800 PSI AND 5¼" EMBEDMENT. SEE 603.2 AND 603.3.1.2 OF THE WISCONSIN STANDARD SPECIFICATIONS FOR MORE INFORMATION ON ADHESIVE ANCHORS.

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

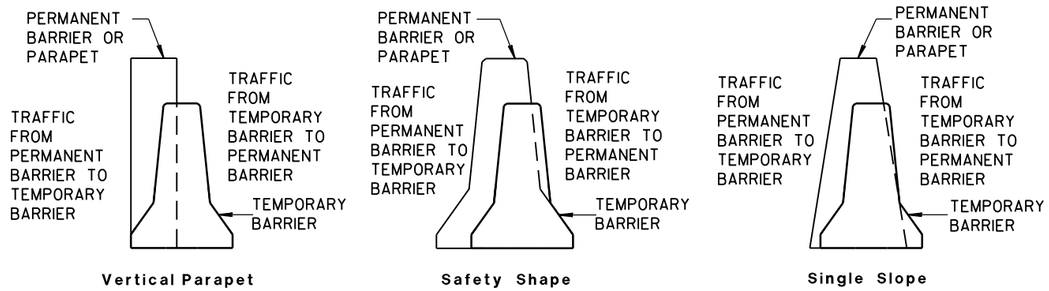
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

S.D.D. 14 B 7-14d



FRONT VIEW

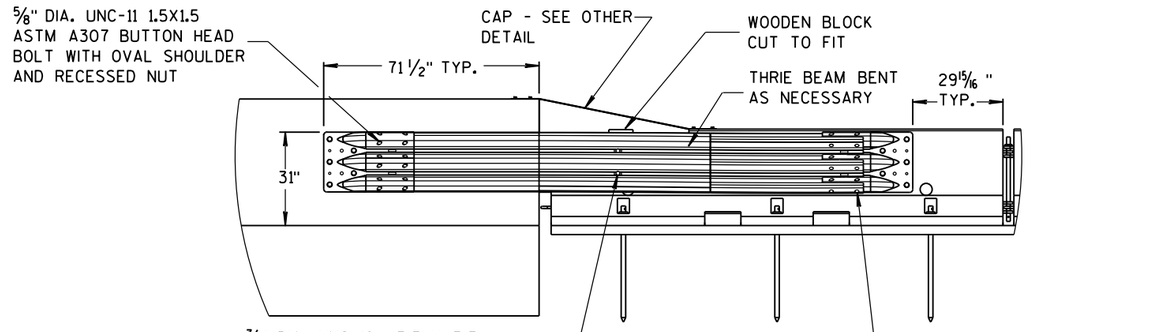


TEMPORARY BARRIER PLACEMENT FOR BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM

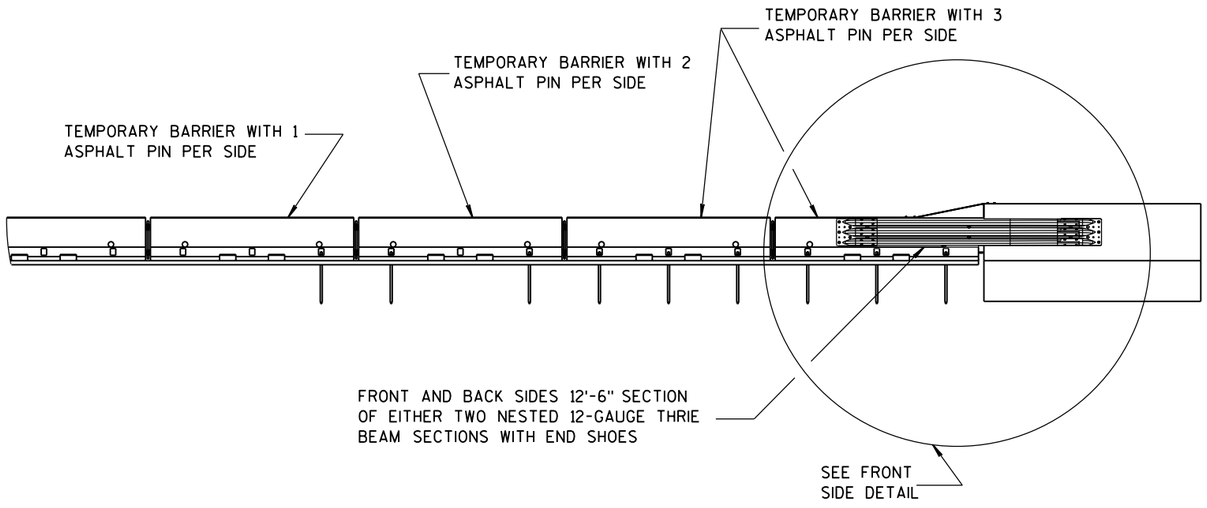
NOTES

NESTED THRIE BEAM IS REQUIRED ON BOTH SIDES OF THE TEMPORARY BARRIER FOR ALL INSTALLATIONS.

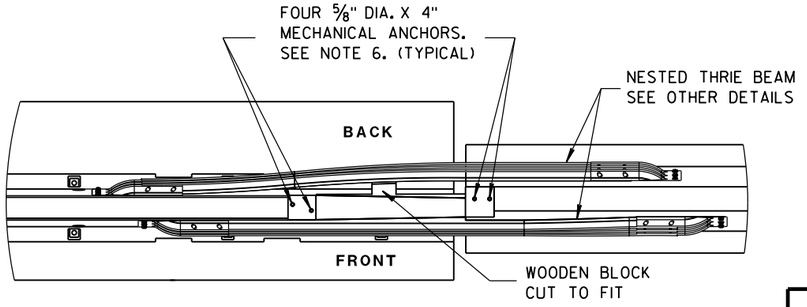
1. CAP END PLATE PLACED FLUSH WITH UPSTREAM END OF PERMANENT BARRIER OR PARAPET.
2. THRIE BEAM PIECES ARE OFFSET 15 1/4" TO PREVENT INTERFERENCE FROM THE ANCHORS ON OPPOSING SIDES.
3. MINIMUM MECHANICAL OR ADHESIVE ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 9.48 KIPS AND ULTIMATE SHEAR LOAD 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



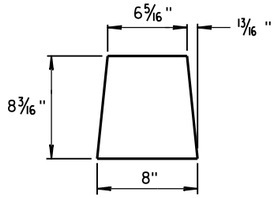
PLAN VIEW

BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM

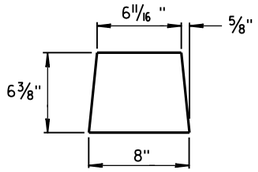
CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

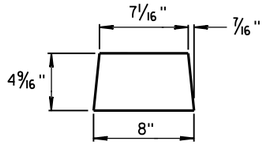
6
S.D.D. 14 B 7-14e



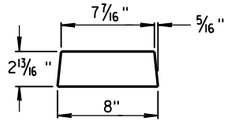
GUSSET 1



GUSSET 2

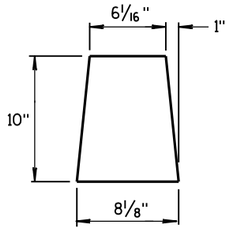


GUSSET 3

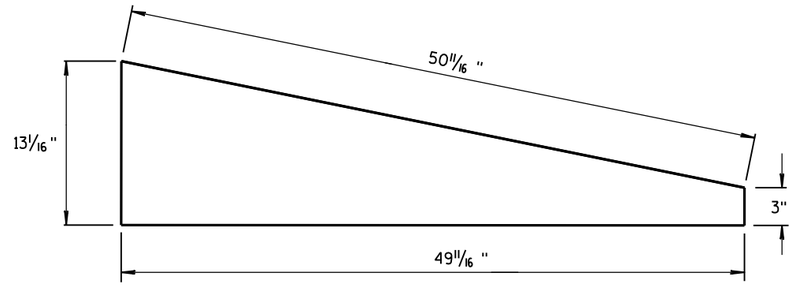


GUSSET 4

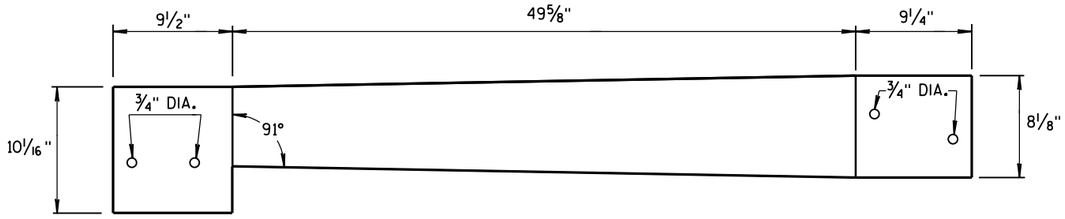
GUSSETS

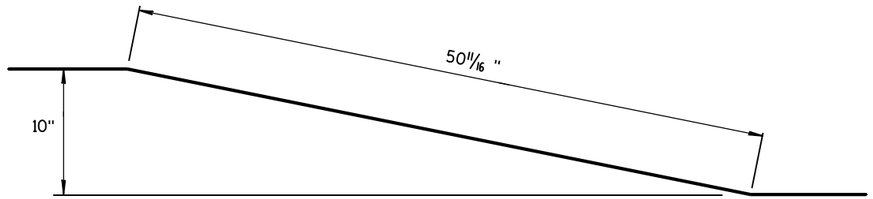


END PLATE



SIDE PLATE

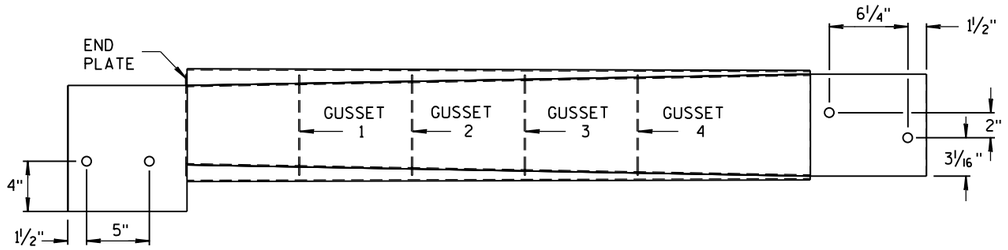


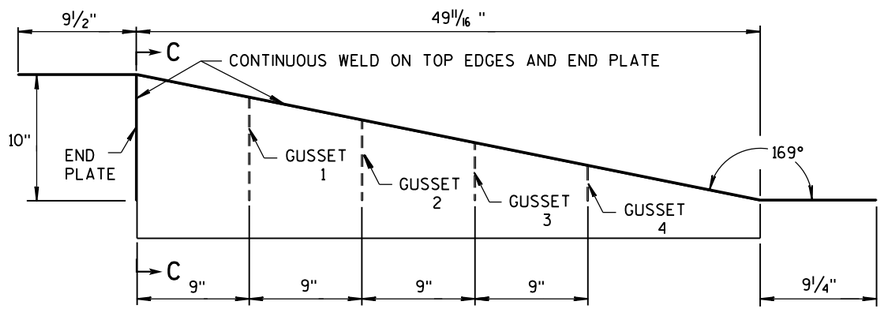


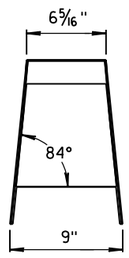
TOP PLATE

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

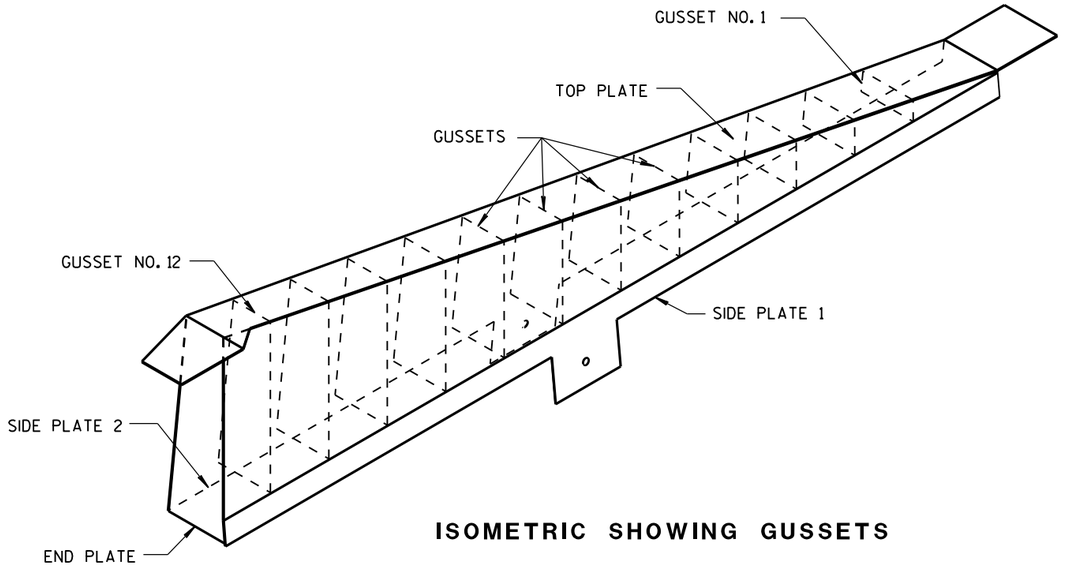
1. FOUR GUSSETS AND END PLATE ARE STITCH WELDED ON THREE SIDES.
2. TWO TRIANGULAR SIDE PLATES ARE STITCH WELDED TO TOP PLATE, END PLATE, AND GUSSETS.

CAP DETAILS FOR TEMPORARY CONCRETE BARRIER TO 42" PERMANENT CONCRETE BARRIER

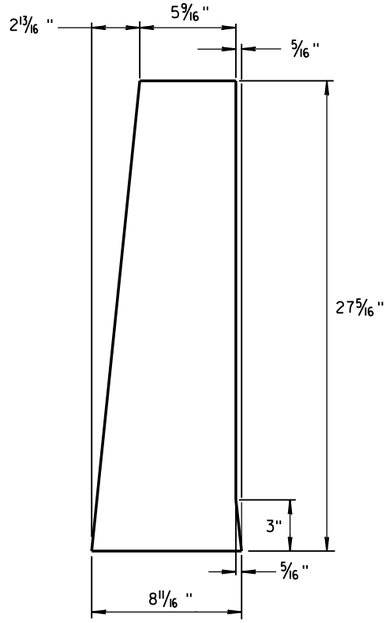
CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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S.D.D. 14 B 7-14f

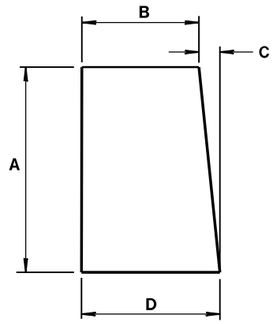


ISOMETRIC SHOWING GUSSETS



END PLATE

1/8" STEEL PLATE



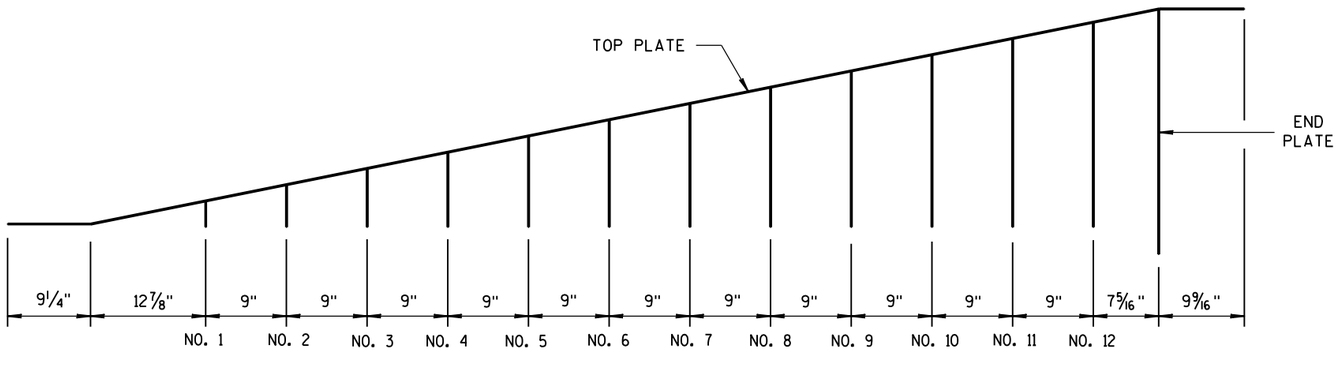
GUSSETS 1 - 12

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

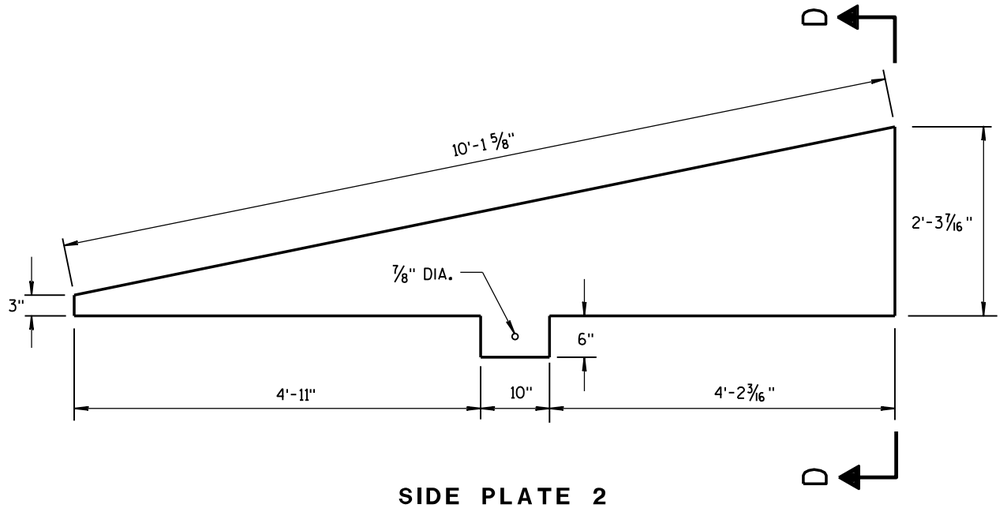
CAP DETAILS FOR TEMPORARY CONCRETE BARRIER TO 56" PERMANENT CONCRETE BARRIER

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

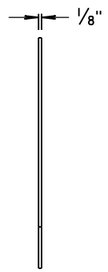
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

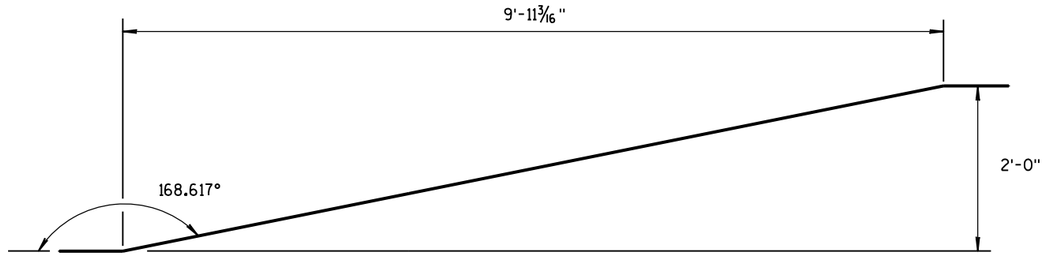
S.D.D. 14 B 7-14g



SIDE PLATE 2

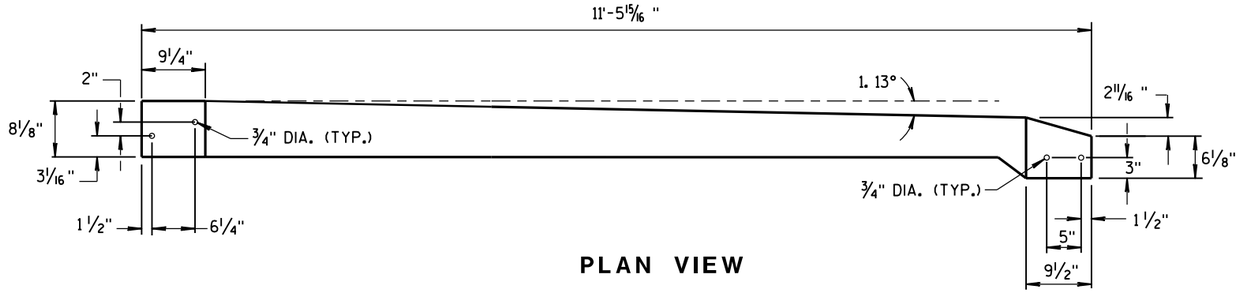


END VIEW



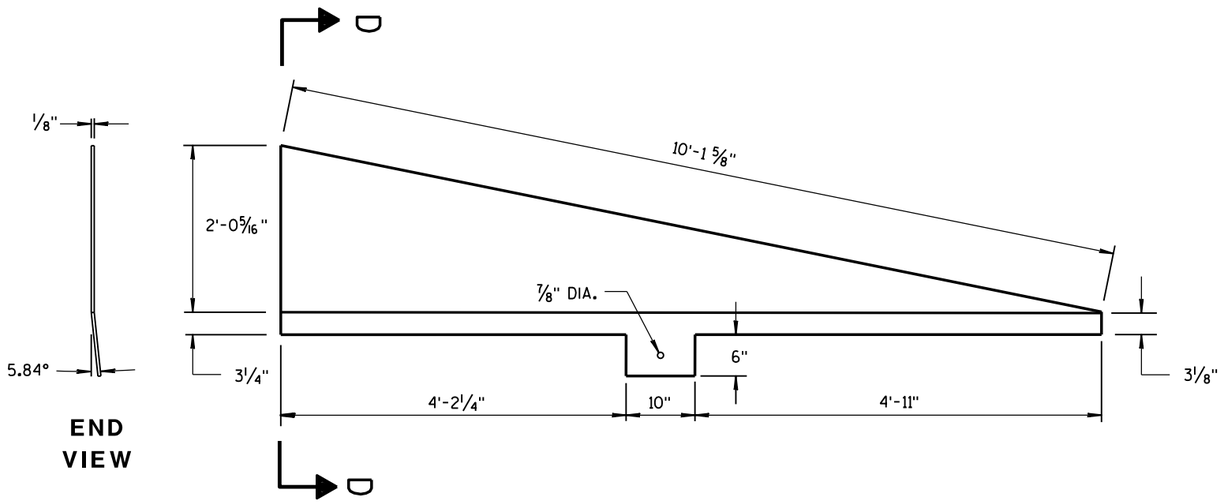
SIDE VIEW

TOP PLATE



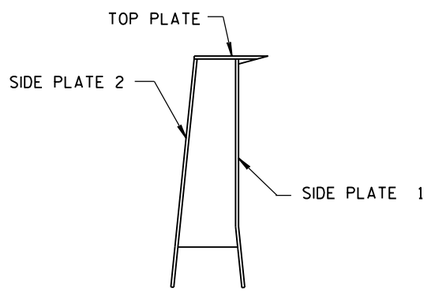
PLAN VIEW

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. Zoda — ROADWAY STANDARD DEVELOPMENT ENGINEER
FHWA

6

S.D.D. 14 B 7-14h

6

S.D.D. 14 B 7-14h

GENERAL NOTES

(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.

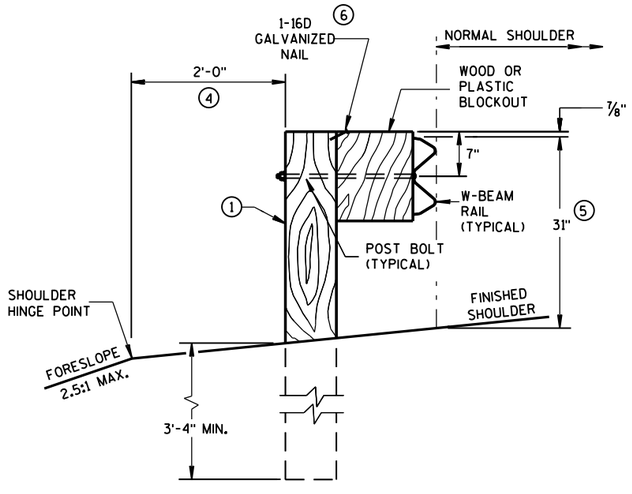
(2) USE WOOD OR APPROVED PLASTIC BLOCKOUTS. WOOD BLOCKOUTS MAY BE CONSTRUCTED OUT OF TWO OR MORE WOOD BLOCKOUTS. SEE ALTERNATE WOOD BLOCKOUT DETAIL. DIMENSIONS OF APPROVED PLASTIC BLOCKOUTS MAY VARY.

(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).

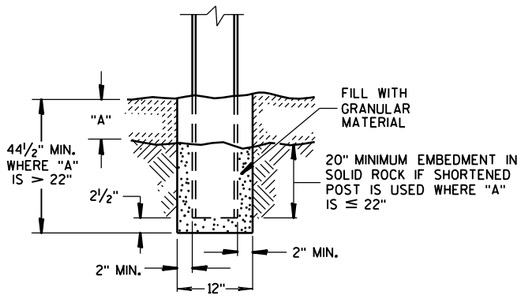
(5) FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS ± 1". FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27¾" TO 32".

(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.



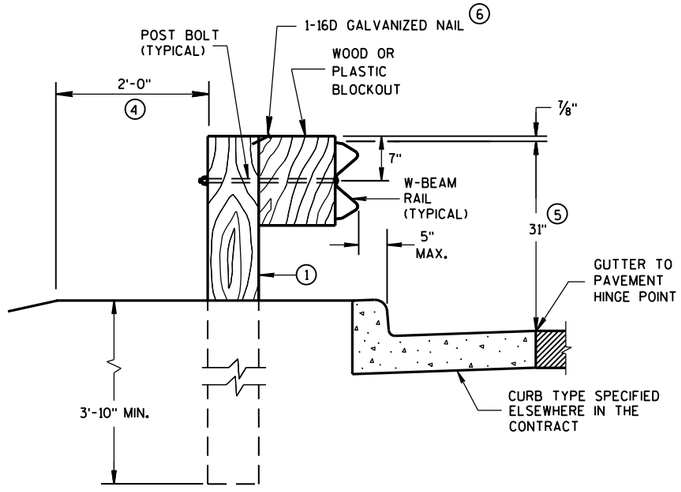
END VIEW

LOCATED ALONG A ROADWAY SHOULDER
STANDARD INSTALLATION



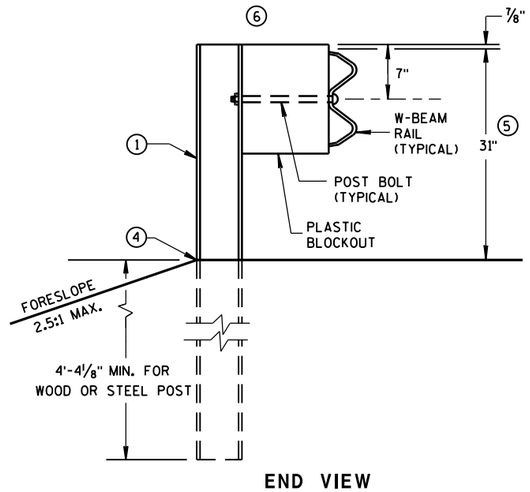
END VIEW

SETTING STEEL OR WOOD POST IN ROCK (3)



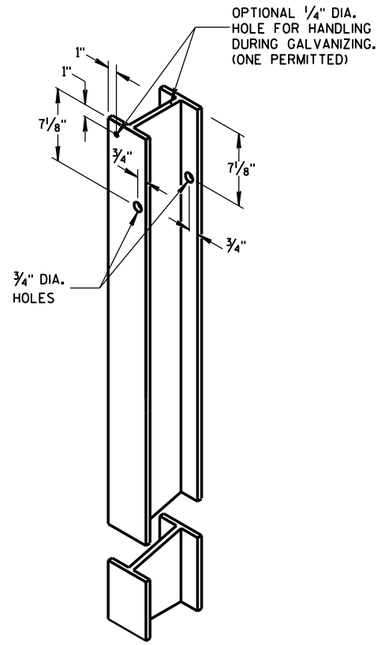
END VIEW

LOCATED ALONG A CURBED ROADWAY

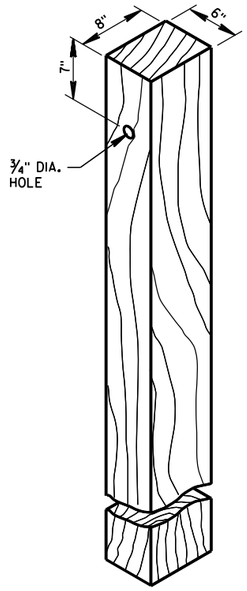


END VIEW

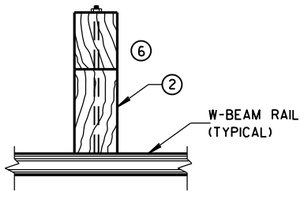
MGS LONGER POST AT HALFPOST SPACING W BEAM (K)



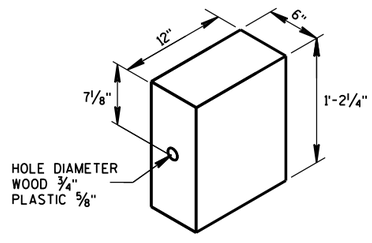
STEEL POST &
HOLE PUNCHING DETAIL
(w6X9) (1)



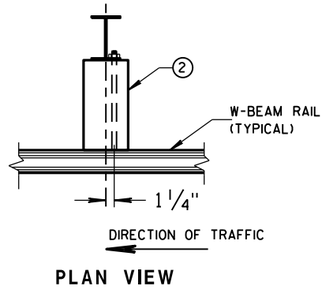
WOOD POST
(6" X 8") NOMINAL (1)



PLAN VIEW
WOOD POST,
BLOCKOUT & BEAM



WOOD OR
PLASTIC BLOCKOUT (2)

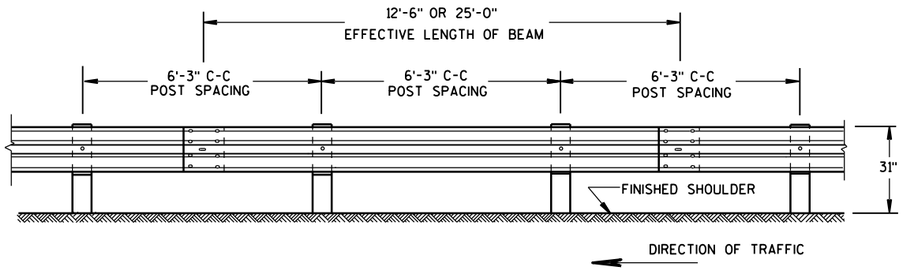


PLAN VIEW
STEEL POST,
PLASTIC BLOCKOUT & BEAM

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

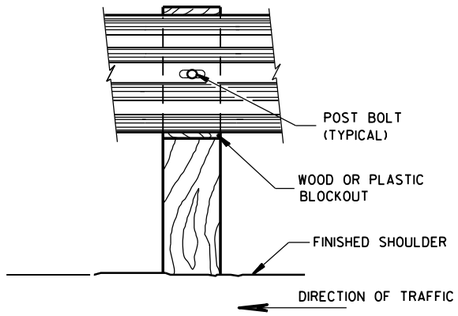
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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S.D.D. 14 B 42-3a



FRONT VIEW

POST SPACING STANDARD INSTALLATION



FRONT VIEW AT WOOD POST

GENERAL NOTES

(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.

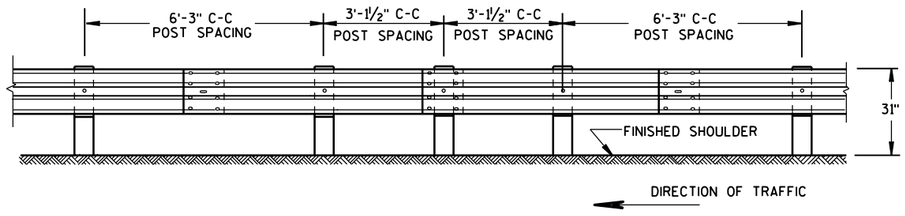
(9) REVERSE EVERY OTHER REFLECTOR FOR 2-WAY VISIBILITY. THE CONTRACTOR MAY FURNISH TWO-SIDED REFLECTORS IN LIEU OF ONE-SIDED REFLECTORS.

(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.

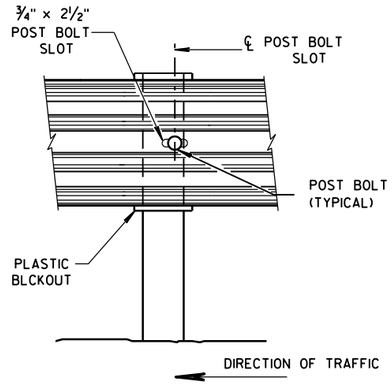
POST BOLTS ARE A 5/8" DIAMETER ASTM A307 GUARDRAIL BOLT. A POST BOLT REQUIRES 5/8" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT AND 5/8" DIAMETER F844 FLAT WASHER. POST BOLTS MAY BE LONGER IF MULTIPLE BLOCKOUTS ARE BEING USED.

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.

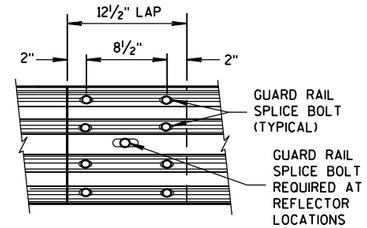


FRONT VIEW

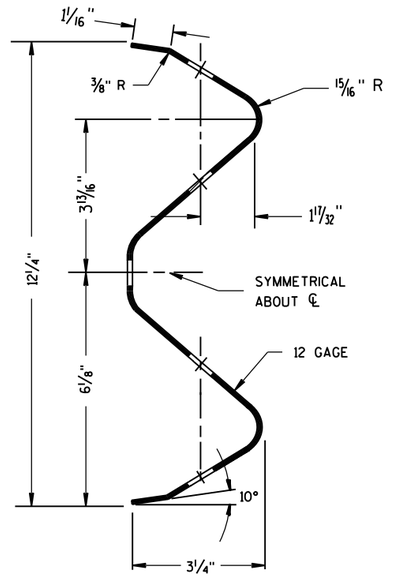
HALF POST SPACING (HS) AND HALF POST SPACING WITH LONGER POSTS (K)



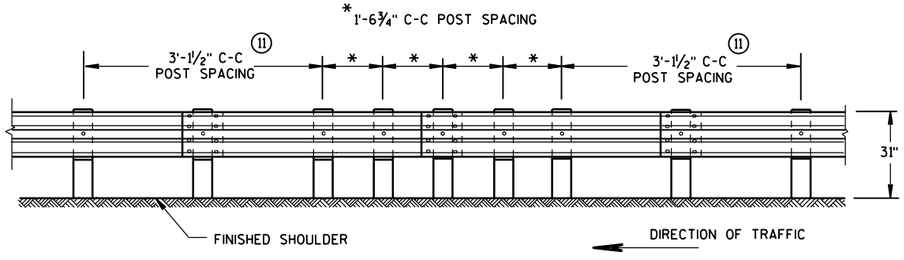
FRONT VIEW AT STEEL POST



FRONT VIEW
MID-SPAN BEAM SPLICE

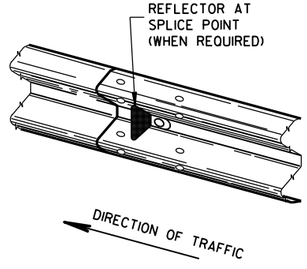


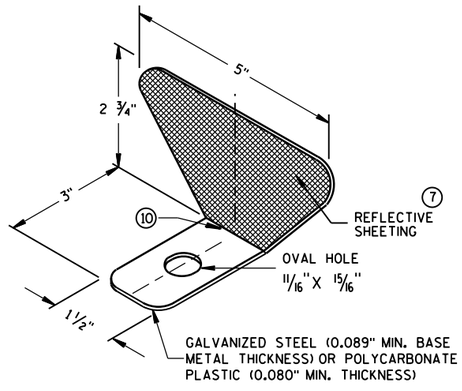
SECTION THRU W-BEAM RAIL



FRONT VIEW

QUARTER POST SPACING (QS)





REFLECTOR SPACING (8)

	BEAM GUARD LENGTH	REFLECTOR SPACING	NO. SURFACES REFLECTORIZED	MIN. NO. REFLECTORS
ONE WAY TRAFFIC	< 200' > 200'	50' C-C 100' C-C	1 1	3
TWO WAY TRAFFIC	< 200' > 200'	25' C-C 50' C-C	1 (9) 1	6
TWO WAY TRAFFIC	< 200' > 200'	50' C-C 100' C-C	2 2 (10)	3

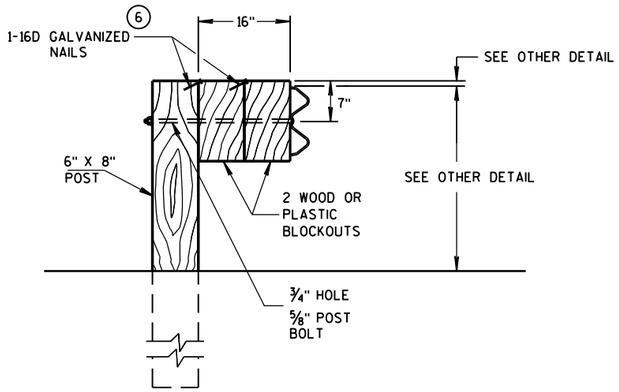
ONE SIDED REFLECTOR DETAIL AND TYPICAL INSTALLATION (7)

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

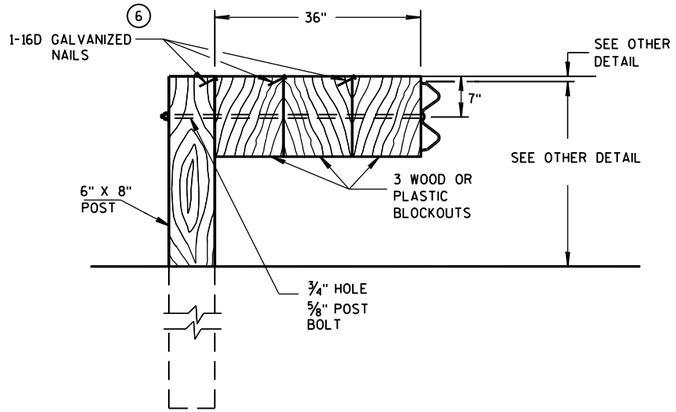
6

S.D.D. 14 B 42-3b



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.

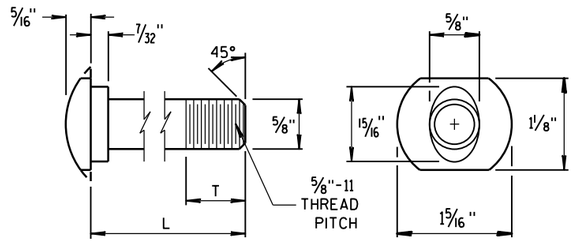


DETAIL FOR 36" BLOCKOUT DEPTH

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.

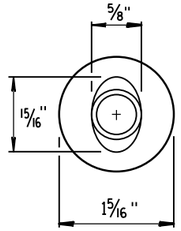
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.

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.

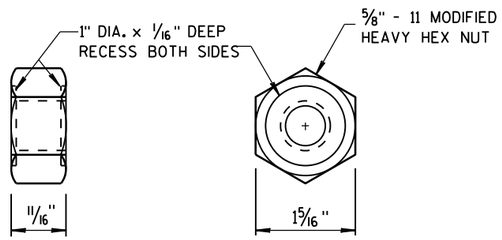


POST BOLT TABLE

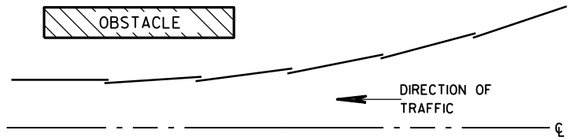
L	T (MIN.)
1¼"	1⅛"
2"	1¾"
10"	4"
14"	4 1/16"
18"	4"
21"	4 1/16"
25"	4"



ALTERNATE BOLT HEAD

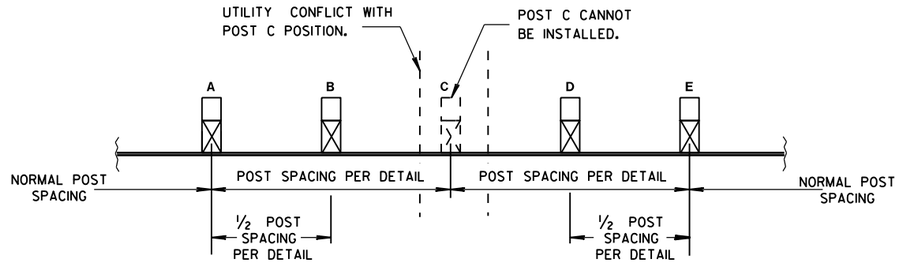


POST BOLT AND RECESS NUT

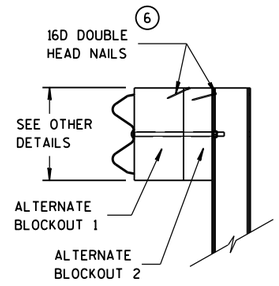


PLAN VIEW

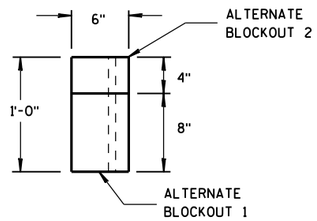
BEAM LAPPING DETAIL



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 2014
DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER
FHWA

6
S.D.D. 14 B 42-3c

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.

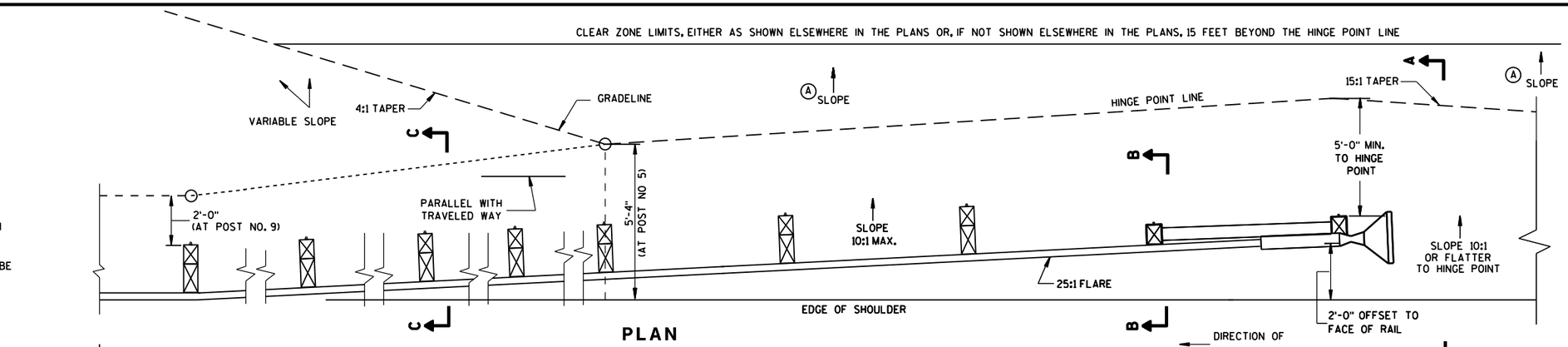
SEE SDD 14B42 FOR MORE INFORMATION.

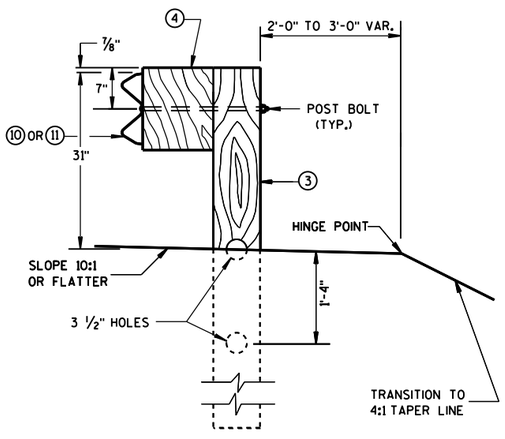
* DO NOT ATTACH BLOCKOUTS TO POSTS 1 AND 2.

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

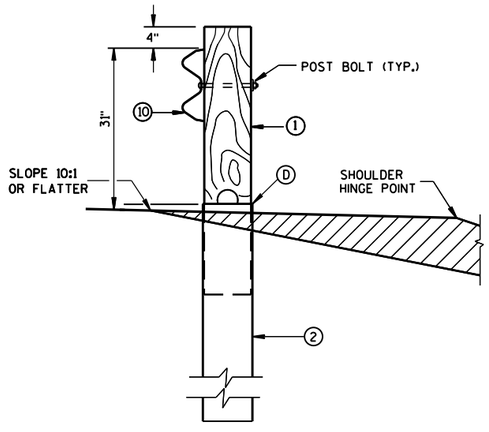
W-BEAM RAIL SPLICES ARE LOCATED AT POST NUMBER 3, AND BETWEEN POST 5 AND 6, BETWEEN POSTS 7 AND 8, AND MIDDLE OF THE SPAN AFTER POST 9.

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.

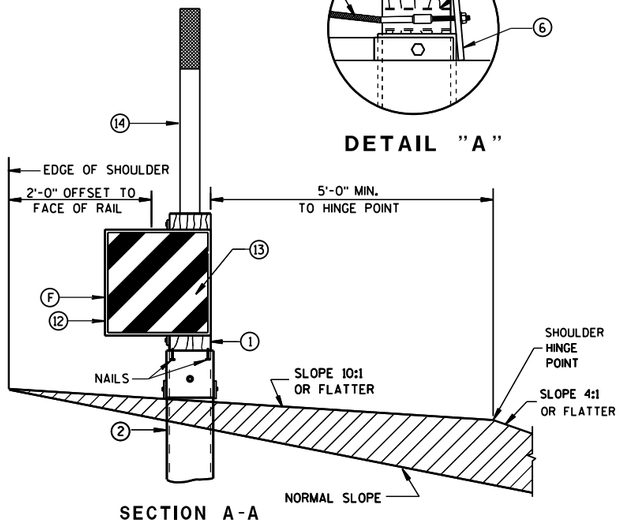




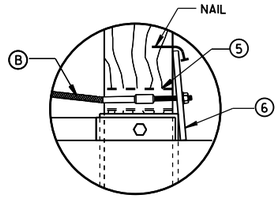
SECTION C-C
TYPICAL AT POST NOS. 3-9



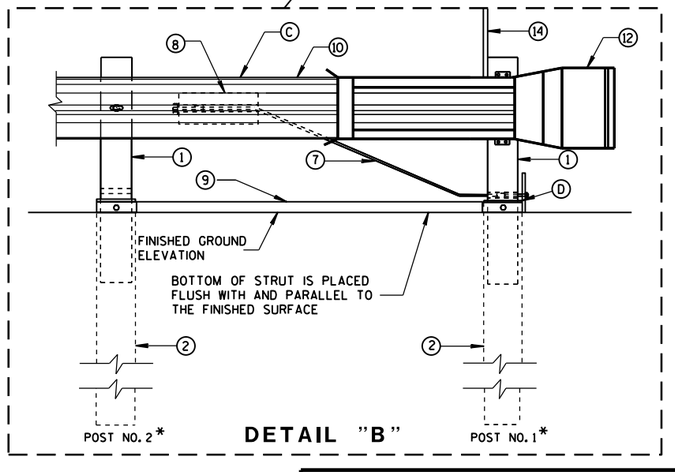
SECTION B-B
TYPICAL AT POST NO. 2*



SECTION A-A
TYPICAL AT POST NO. 1*



DETAIL "A"



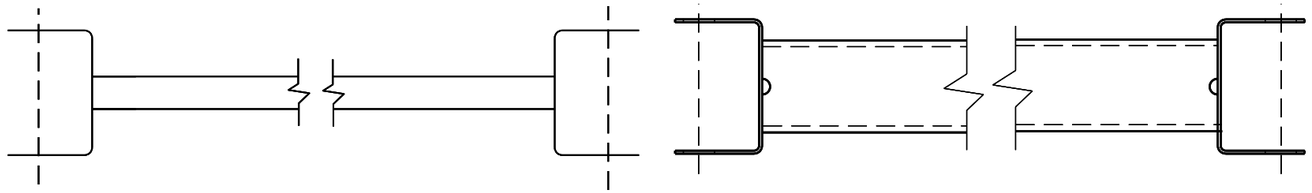
DETAIL "B"

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

S.D.D. 14 B 44-2a

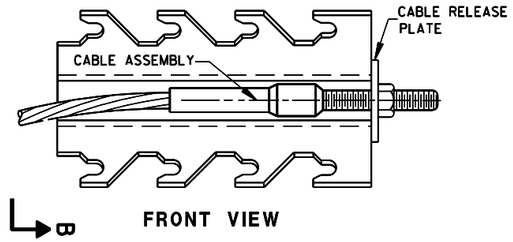
S.D.D. 14 B 44-2a



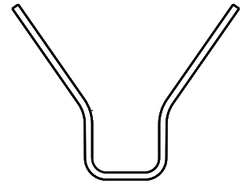
GENERIC GROUND STRUT (9) (H)

BILL OF MATERIALS

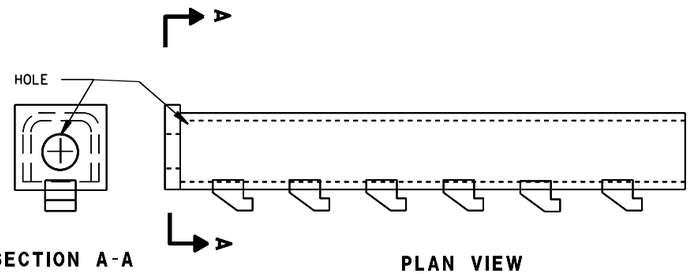
PART NO.	DESCRIPTION MATERIALS PROVIDED BY MGS EAT MANUFACTURER. SEE MANUFACTURER'S DETAILS FOR MORE INFORMATION.
(1)	WOOD BREAKAWAY POST
(2)	6" X 8" X 0.188", 6'-0" LONG FOUNDATION TUBE AT POSTS 1 AND 2
(3)	WOOD CRT
(4)	WOOD BLOCKOUT
(5)	PIPE SLEEVE
(6)	BEARING PLATE
(7)	BCT CABLE ASSEMBLY
(8)	ANCHOR 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



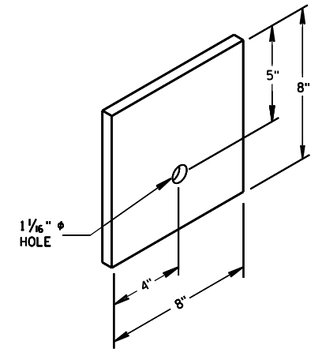
SECTION B-B



SECTION A-A

PLAN VIEW

GENERIC ANCHOR CABLE BOX (8) (H)



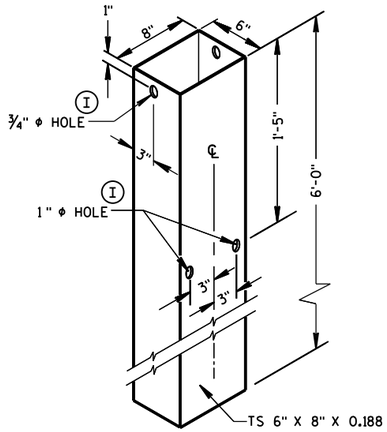
BEARING PLATE (6)

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

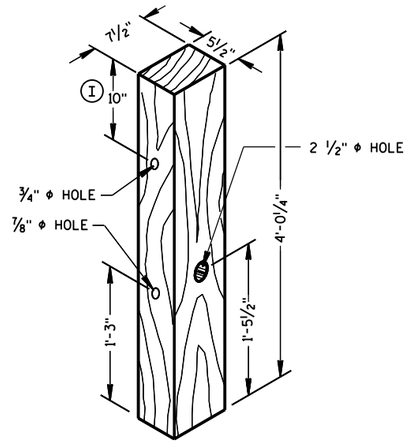
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

S.D.D. 14 B 44-2b

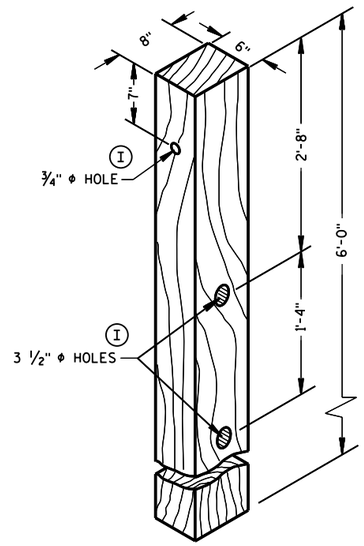


FOUNDATION TUBE (2)



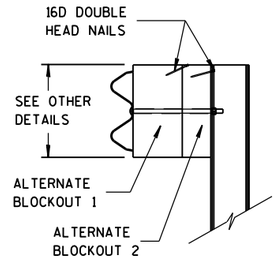
POSTS NUMBER 1 AND 2

WOOD BREAKAWAY POST (1)

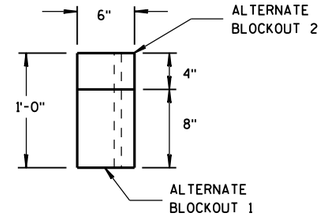


POSTS NUMBER 3-9

WOOD CRT POST (3)

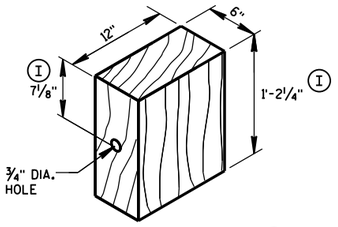


SIDE VIEW



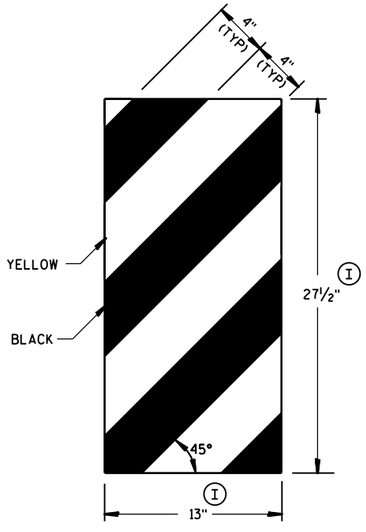
TOP VIEW

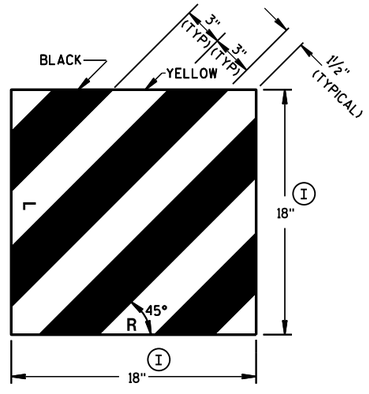
ALTERNATE WOOD BLOCKOUT DETAIL



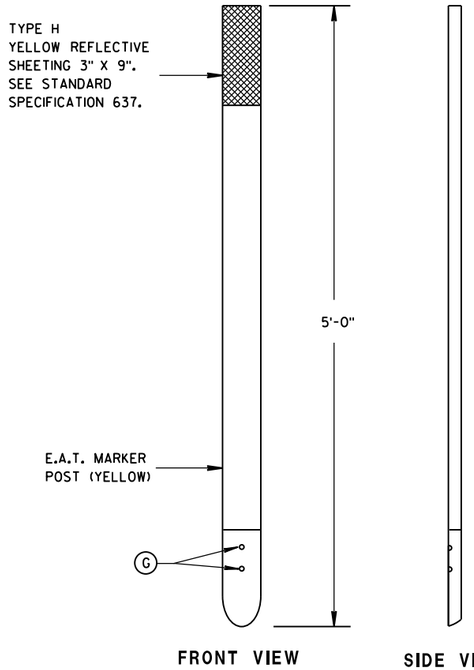
WOOD BLOCKOUT (4)

REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2





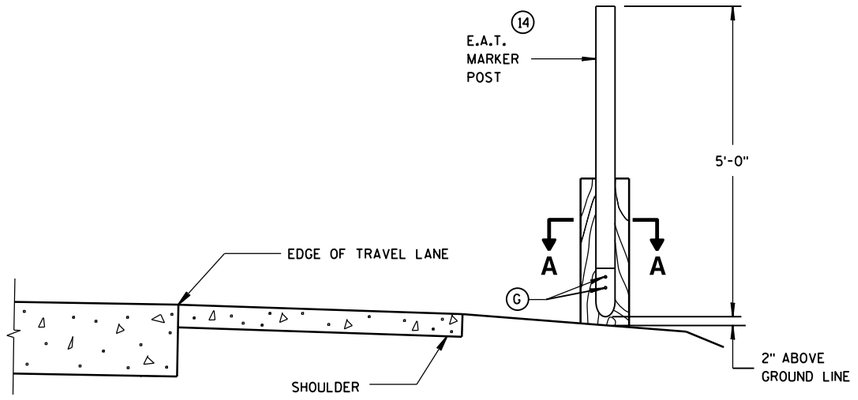
GENERIC REFLECTIVE SHEETING (13) (H)



FRONT VIEW

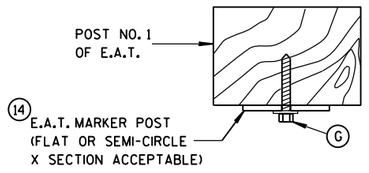
SIDE VIEW

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

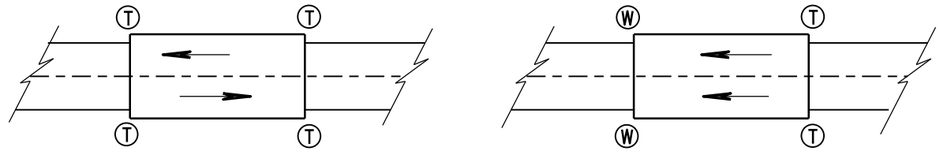
MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)

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

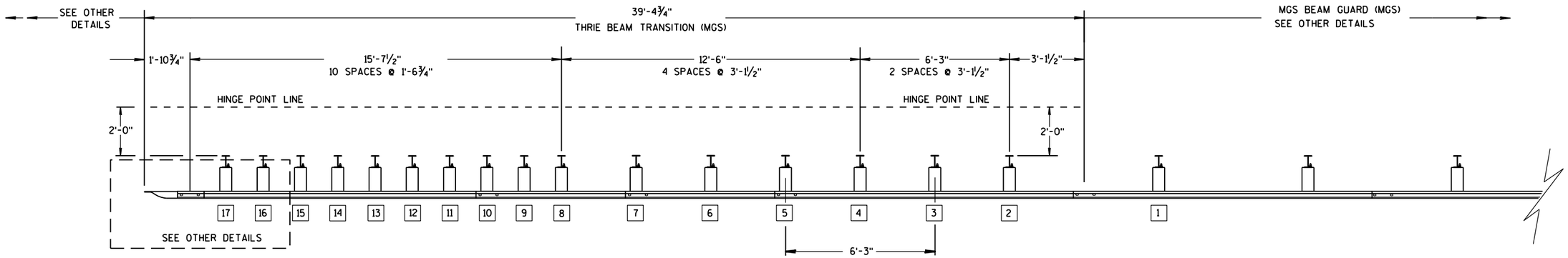
IF ROCK IS ENCOUNTERED, REMOVE ROCK TO FULL DEPTH OF POST PLUS 2½", AND 12" DIAMETER AROUND POST. SEE 14B42 FOR MORE DETAILS.

TRANSITION USES STEEL POSTS ONLY.

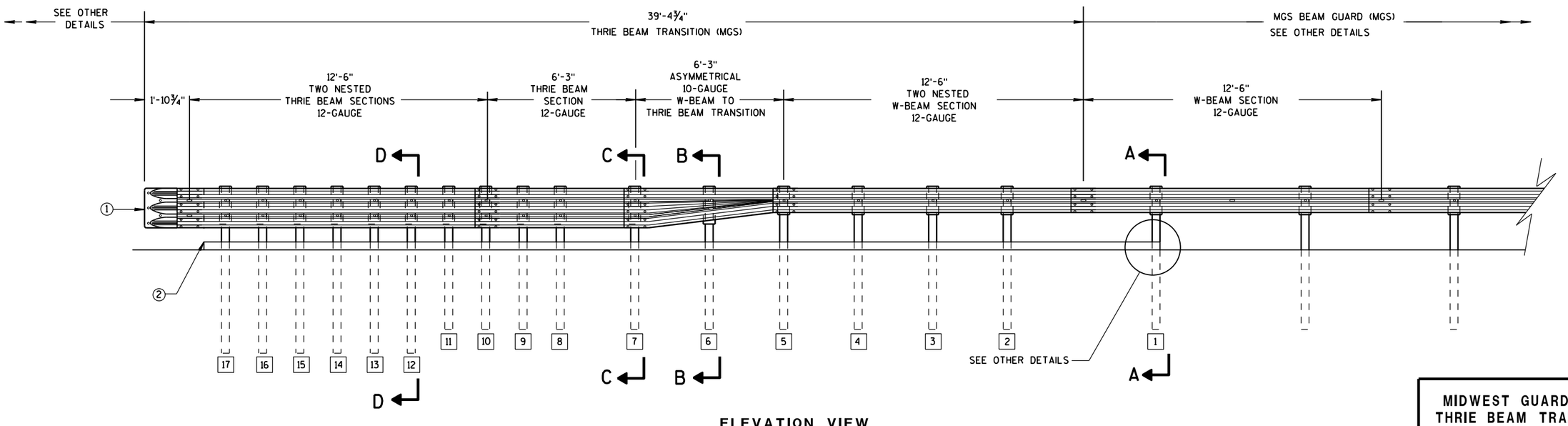
SEE STANDARD DETAIL DRAWING 14 B 42 FOR MORE INFORMATION.

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 TRANSPOR

6

S.D.D. 14 B 45-4a

6

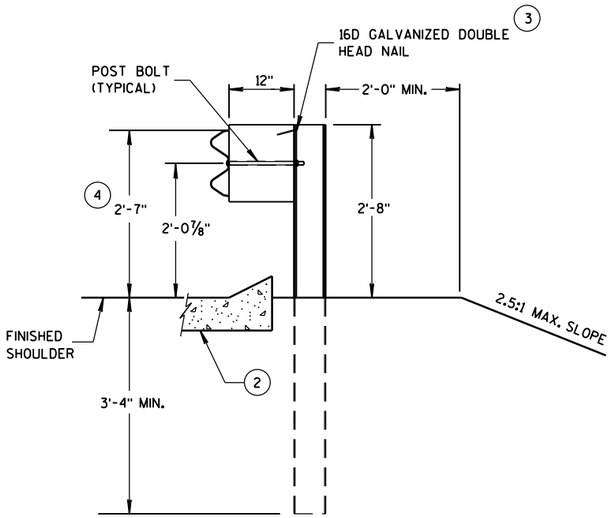
S.D.D. 14 B 45-4a

GENERAL NOTES

(2) OPTIONAL CURB AND GUTTER OR DRAINAGE_FEATURE SEE PLAN FOR INFORMATION.

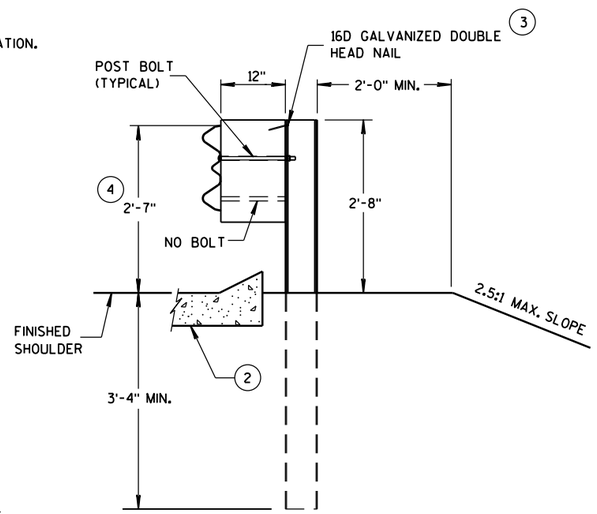
(3) WHEN USING STEEL POSTS AND WOOD BLOCKOUTS INSTALL FOUR 10D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.

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



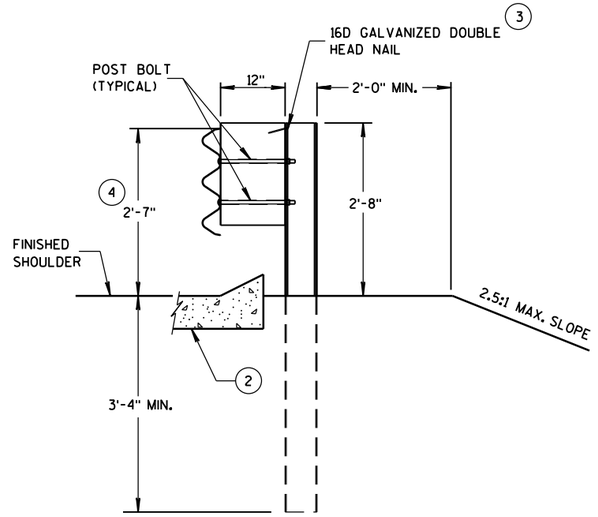
SECTION A-A

POSTS 1-5



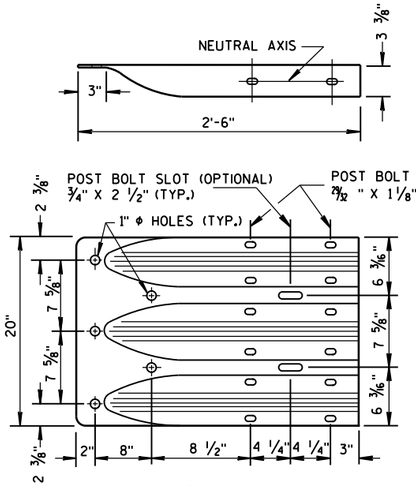
SECTION B-B

POST 6



SECTION C-C

POSTS 7-11



THRIE BEAM TERMINAL CONNECTOR

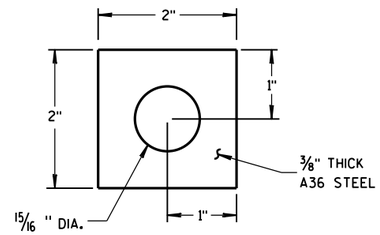
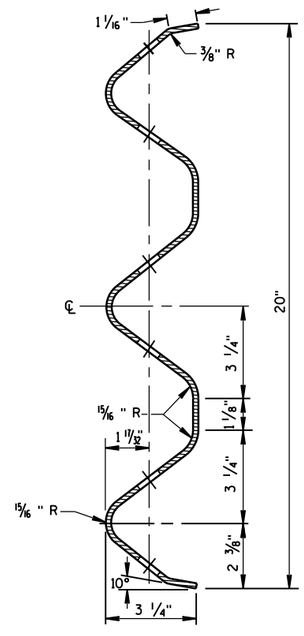
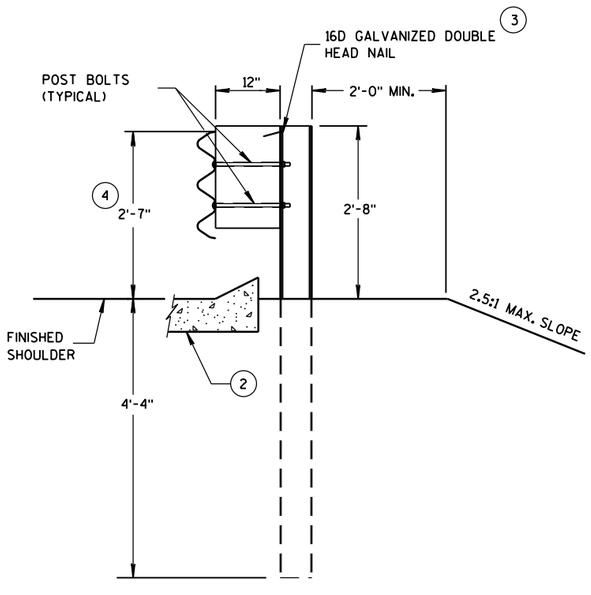


PLATE WASHER DETAIL

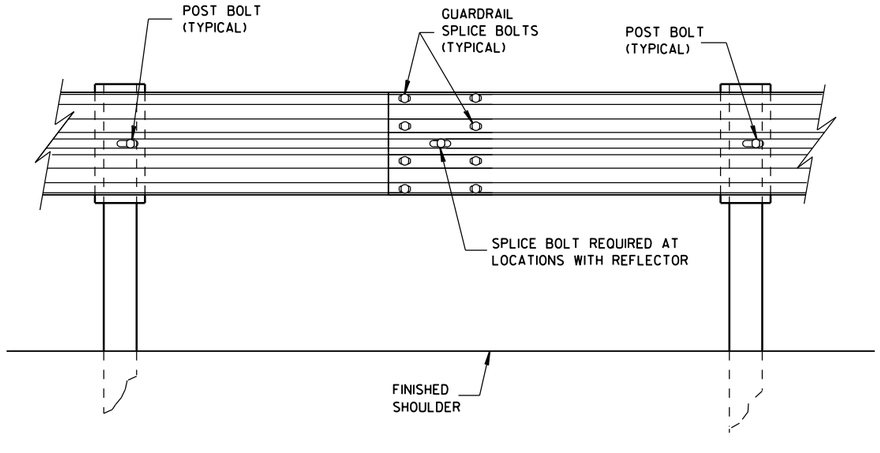


SECTION THRU THRIE BEAM RAIL ELEMENT



SECTION D-D

POSTS 12-17



SPLICE DETAIL

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

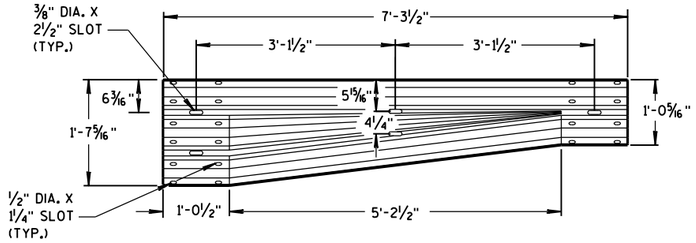
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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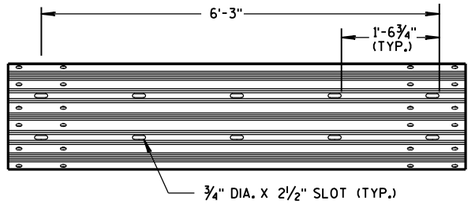
S.D.D. 14 B 45-4b

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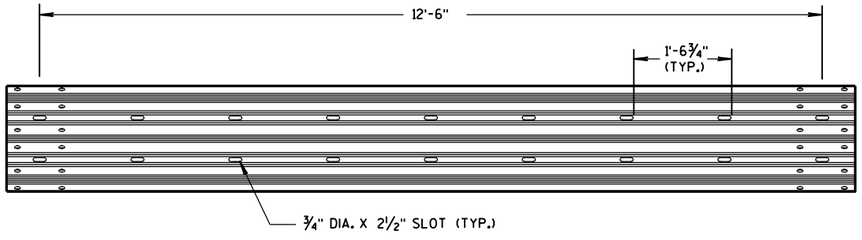
S.D.D. 14 B 45-4b



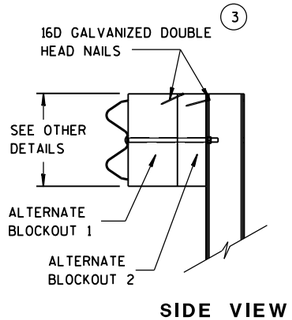
W-BEAM TO THRIE BEAM TRANSITION SECTION



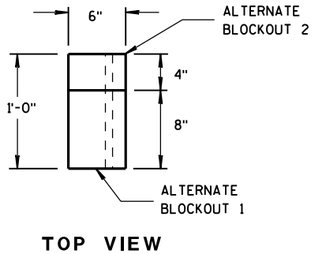
6'-3" THRIE BEAM SECTION



12'-6" THRIE BEAM SECTION

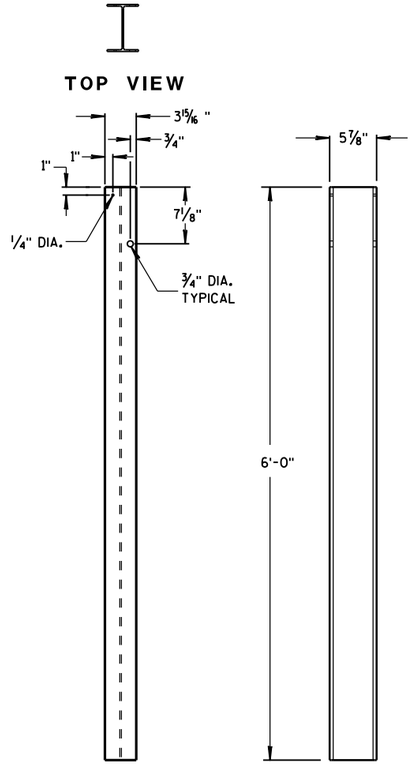


SIDE VIEW

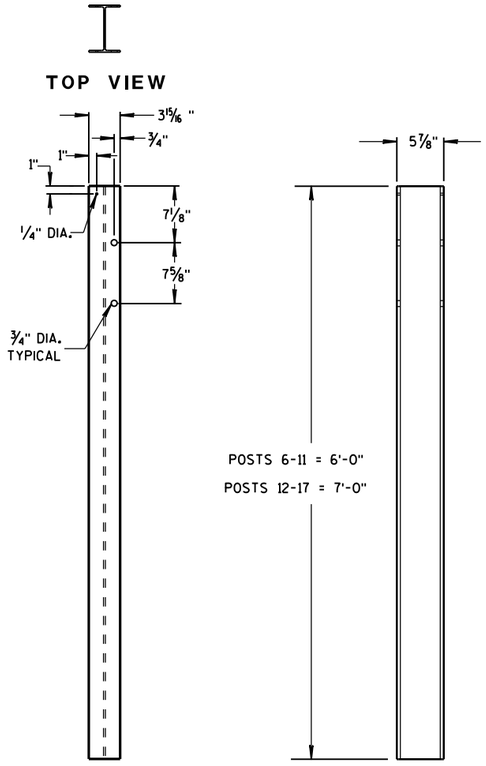


TOP VIEW

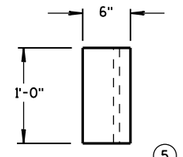
ALTERNATE WOOD BLOCKOUT DETAIL



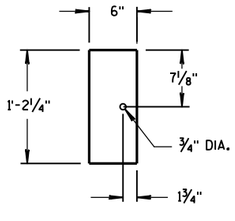
STEEL POSTS 1-5



STEEL POSTS 6-17

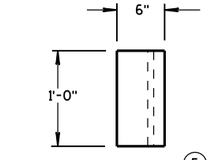


TOP VIEW

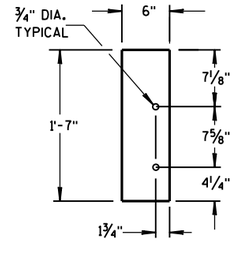


FRONT VIEW

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.

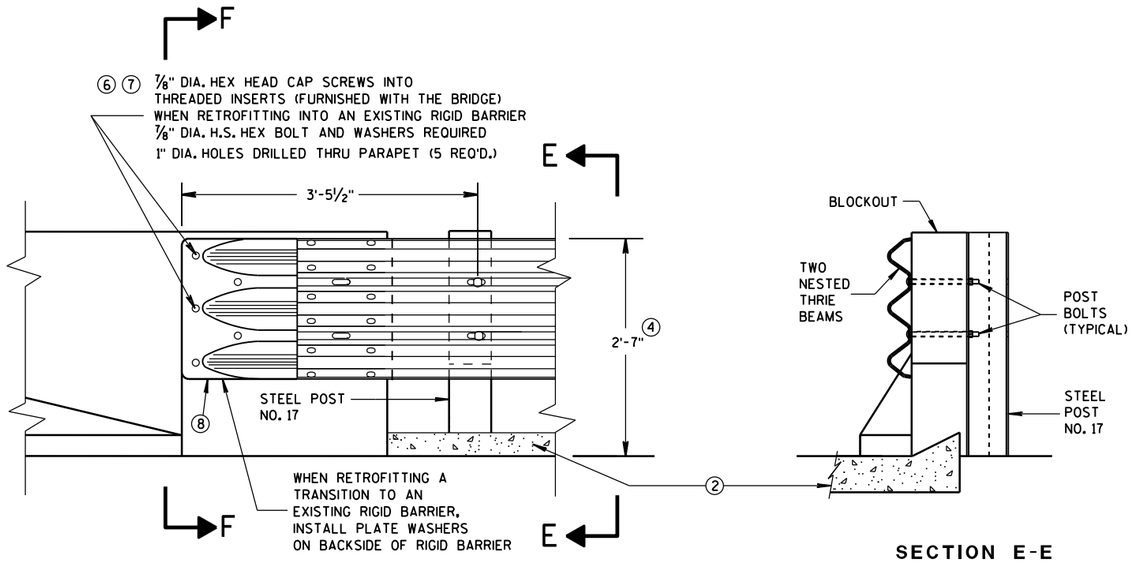
(5) WOOD BLOCKS MAY BE CONSTRUCTED OUT OF 2 WOOD BLOCKS. SEE ALTERNATE WOOD BLOCK DETAIL.

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

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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.

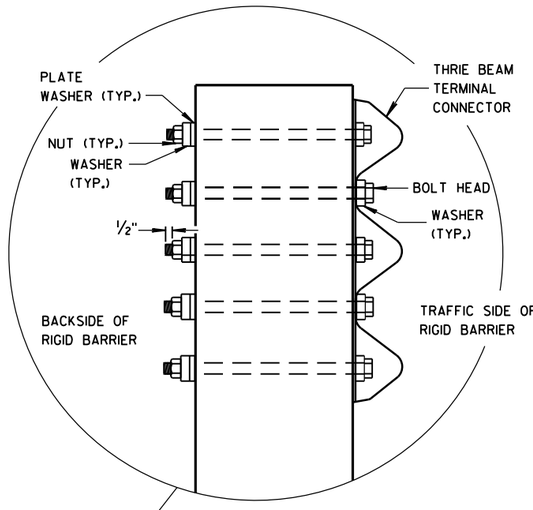
② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.

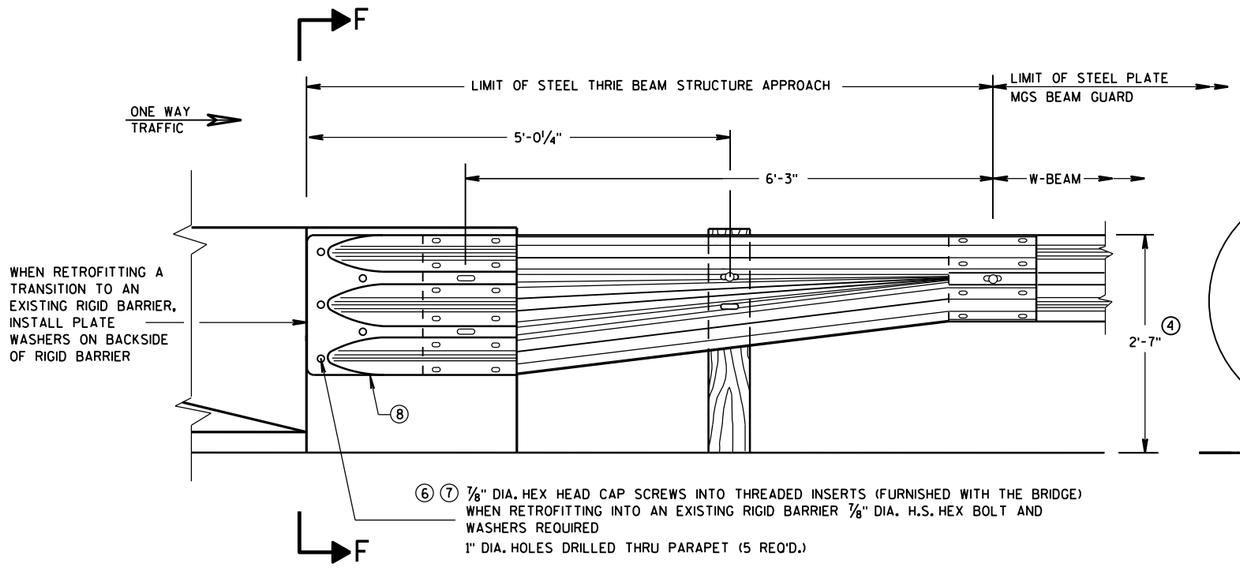
④ TOLERANCE FOR TOP OF BEAM IS ± 1".

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

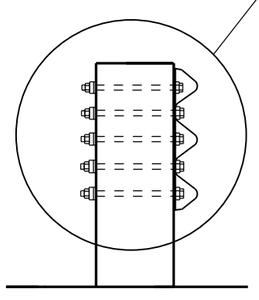
⑦ BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. 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".

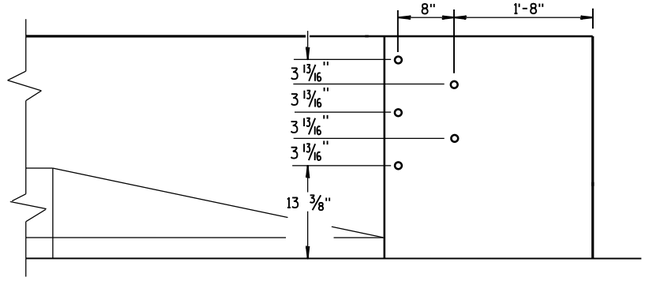




FRONT VIEW



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 DESIGN 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.

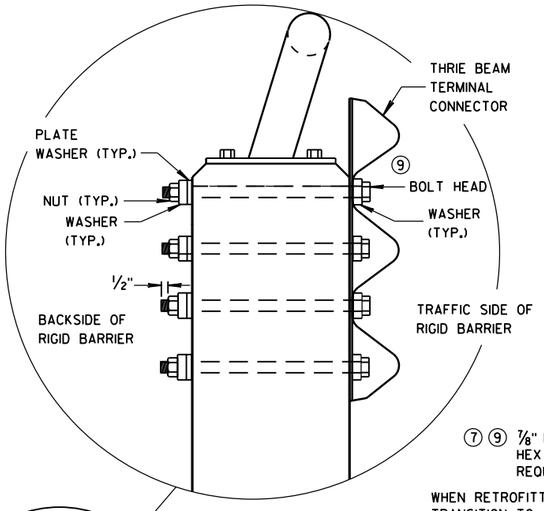
(4) TOLERANCE FOR TOP OF BEAM IS ± 1".

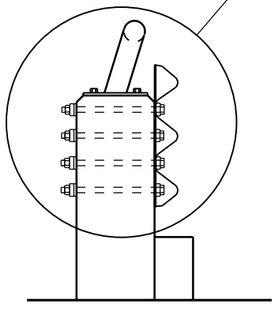
(6) DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

(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.

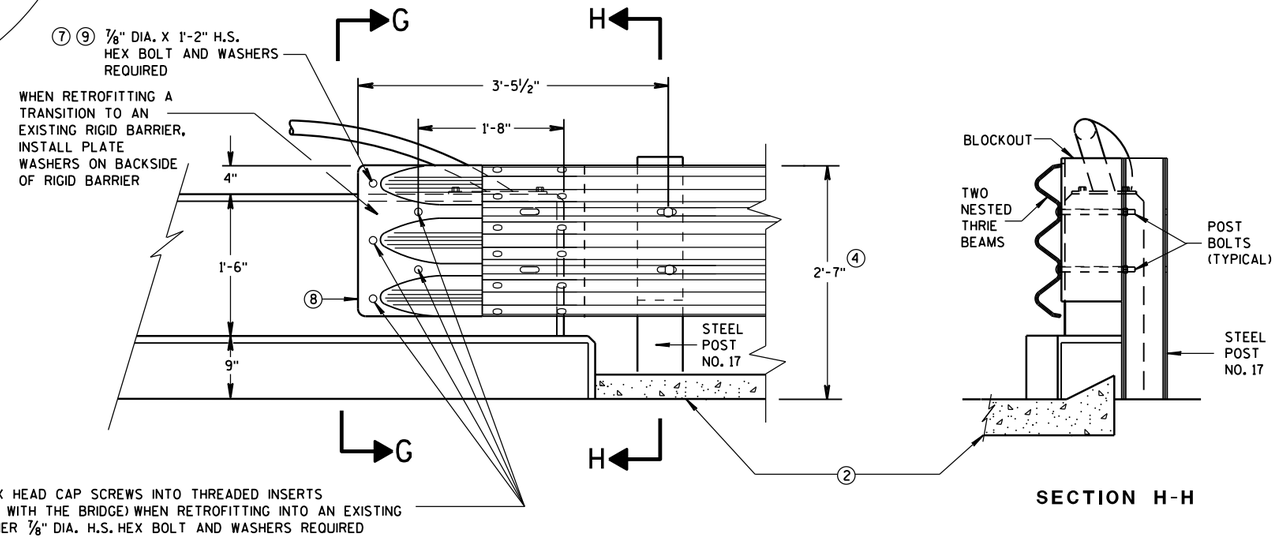
(8) THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3 1/2".

(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.





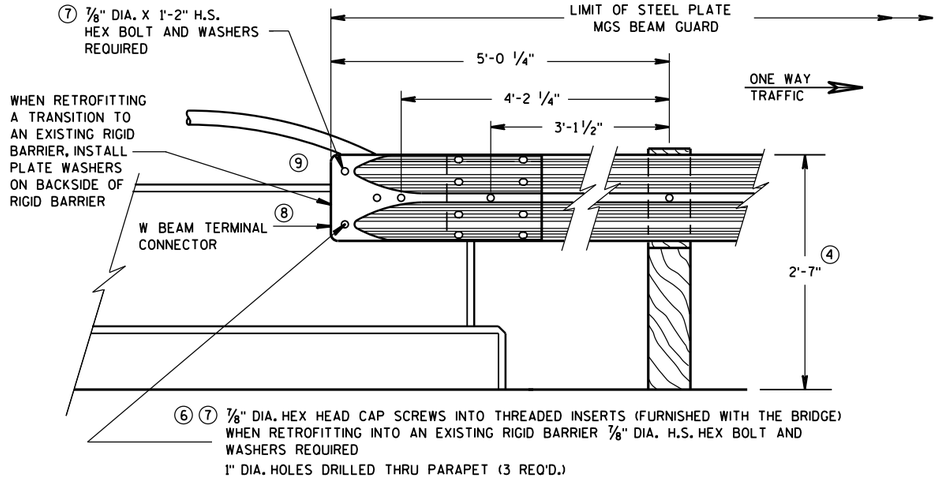
SECTION G-G



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)

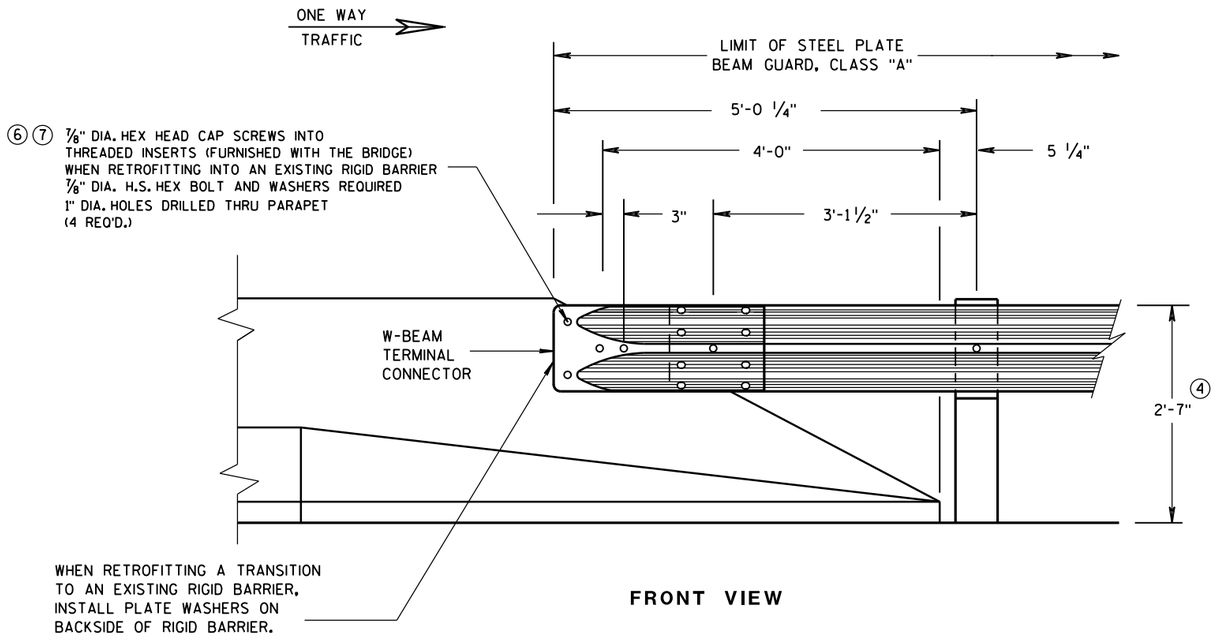
MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2015 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER
NT
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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)

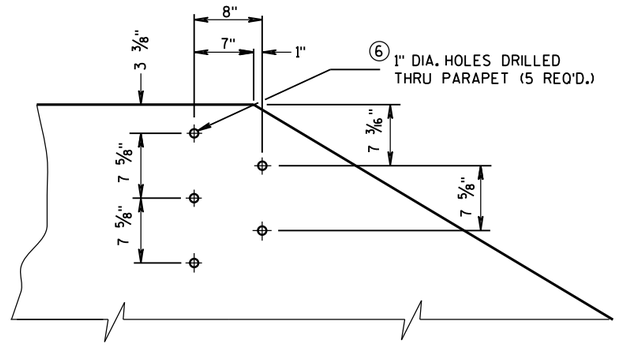
GENERAL NOTES

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

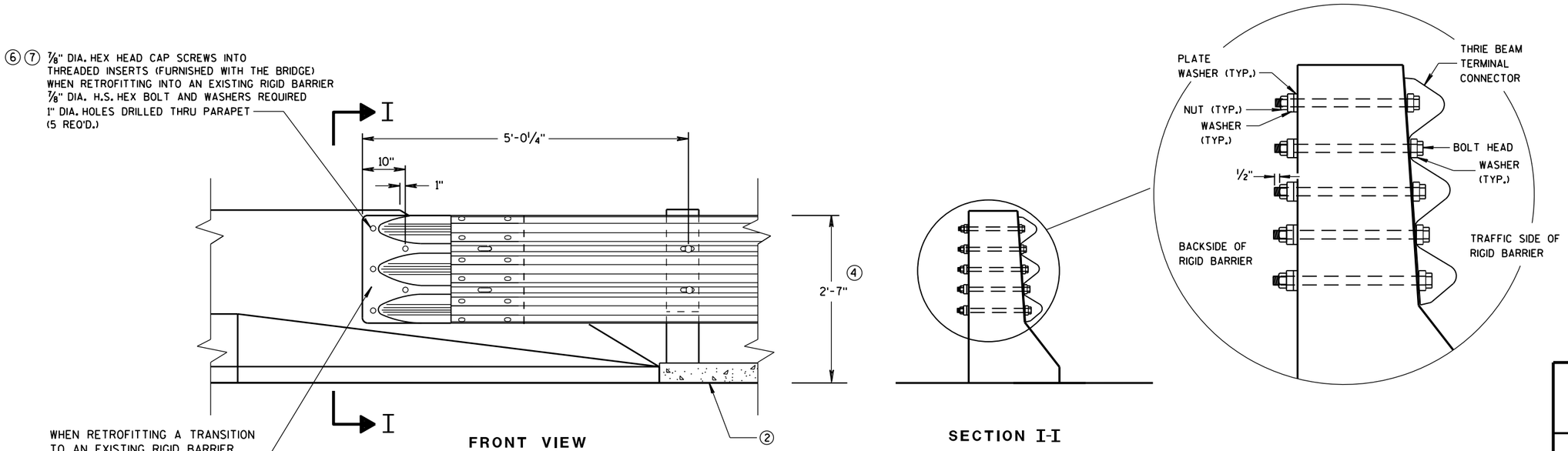
④ TOLERANCE FOR TOP OF BEAM IS ± 1".

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

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DRILL HOLE LOCATION AND PATTERN
FOR THRIE BEAM CONNECTION



FRONT VIEW

SECTION I-I

THRIE BEAM CONNECTION TO BRIDGE PARAPETS WITH SLOPED ENDS

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

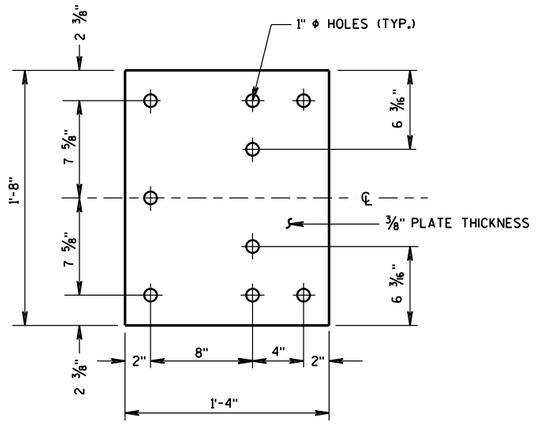
APPROVED
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/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER
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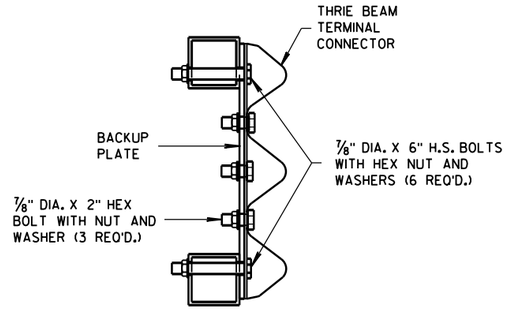
S.D.D. 14 B 45-4f

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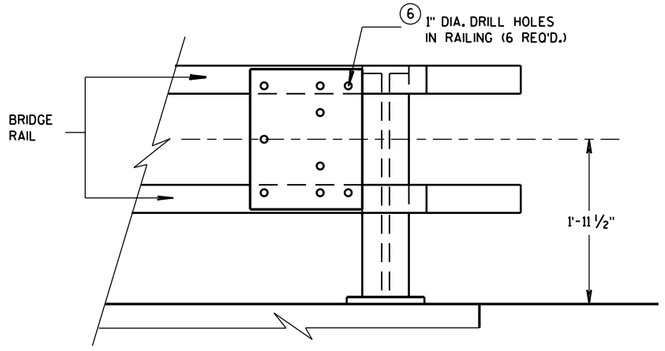
S.D.D. 14 B 45-4f



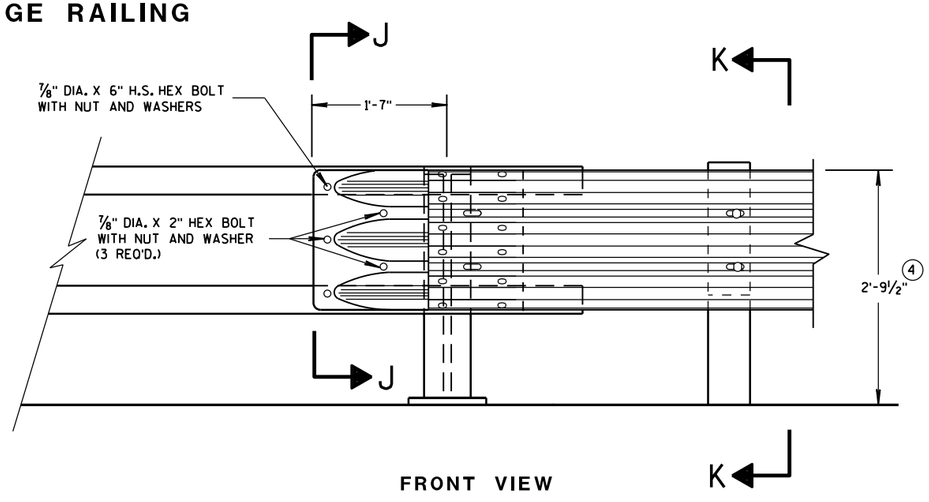
BACK-UP PLATE DETAIL



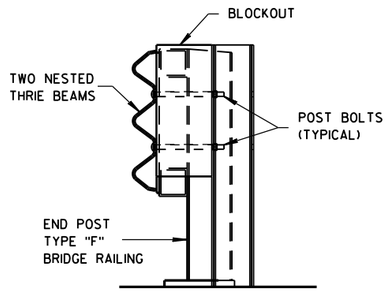
SECTION J-J



BACK-UP PLATE MOUNTING ONTO BRIDGE RAILING



FRONT VIEW



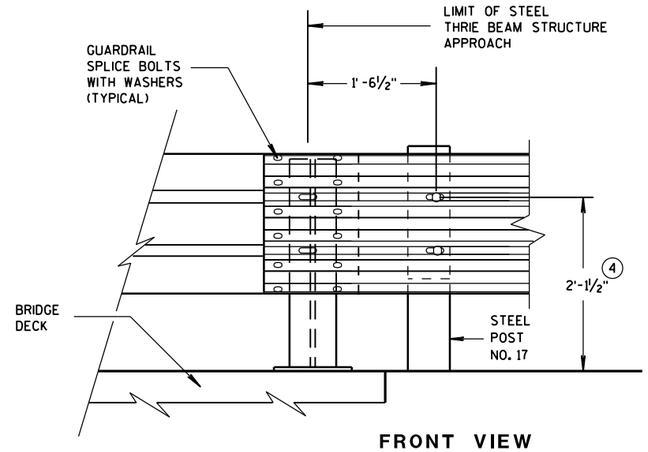
SECTION K-K

THRIE BEAM CONNECTION TO TUBULAR RAILING TYPE "F"

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"

6

S.D.D. 14 B 45-4g

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

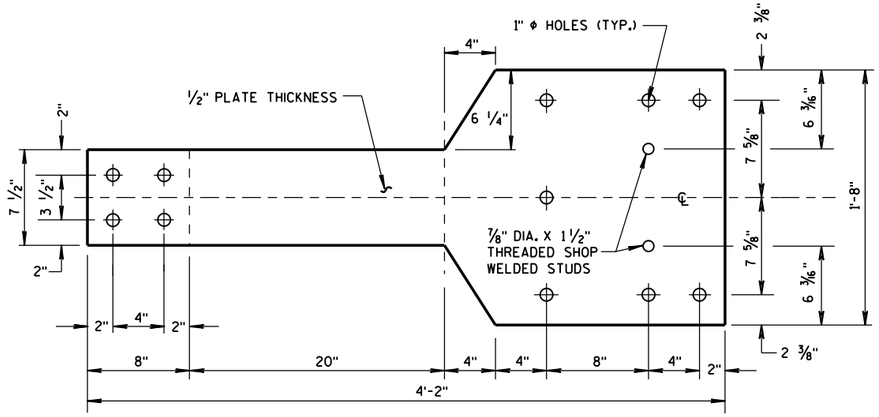
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June, 2015 — DATE
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FHWA — NT

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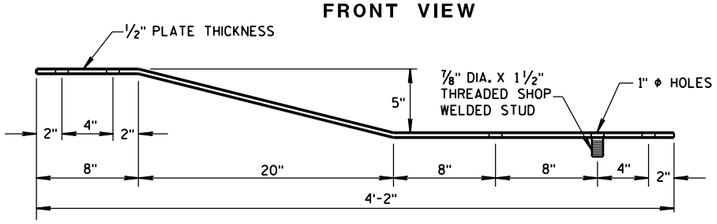
S.D.D. 14 B 45-4g

GENERAL NOTES

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

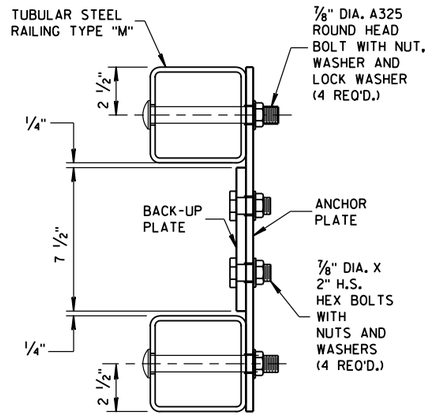


FRONT VIEW

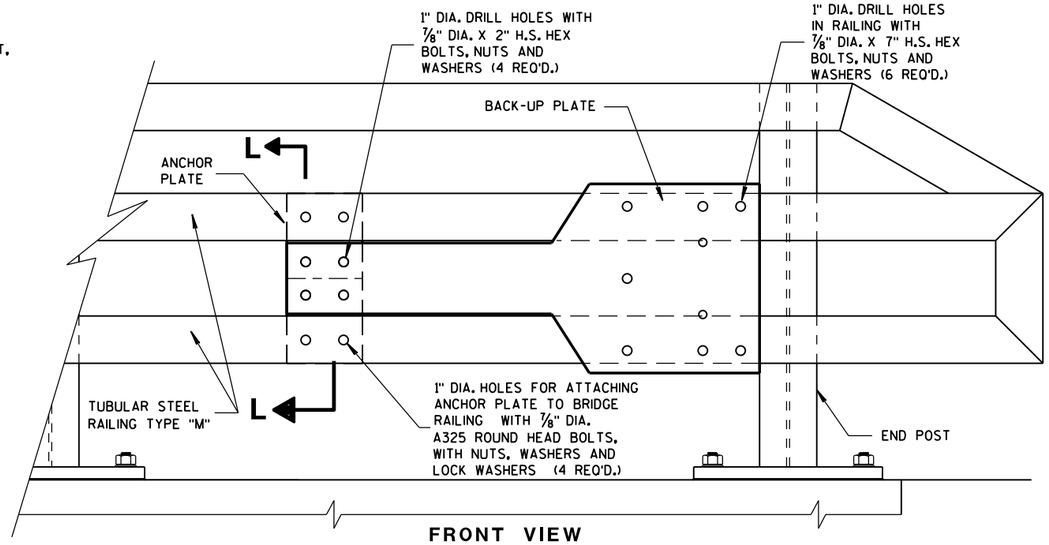


PLAN VIEW

BACK-UP PLATE DETAIL, TYPE "M"

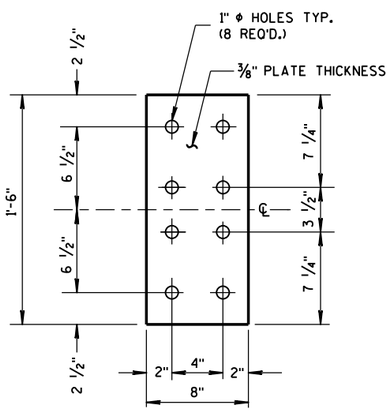


SECTION L-L



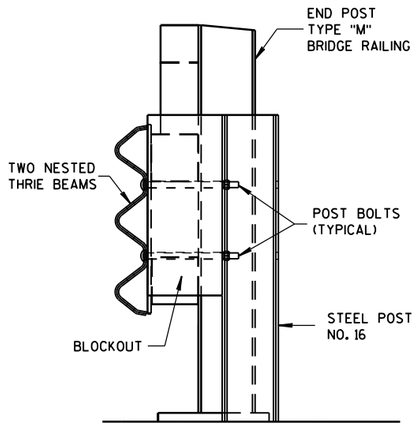
FRONT VIEW

ANCHOR AND BACK-UP PLATE MOUNTING TO BRIDGE RAILING, TYPE "M"

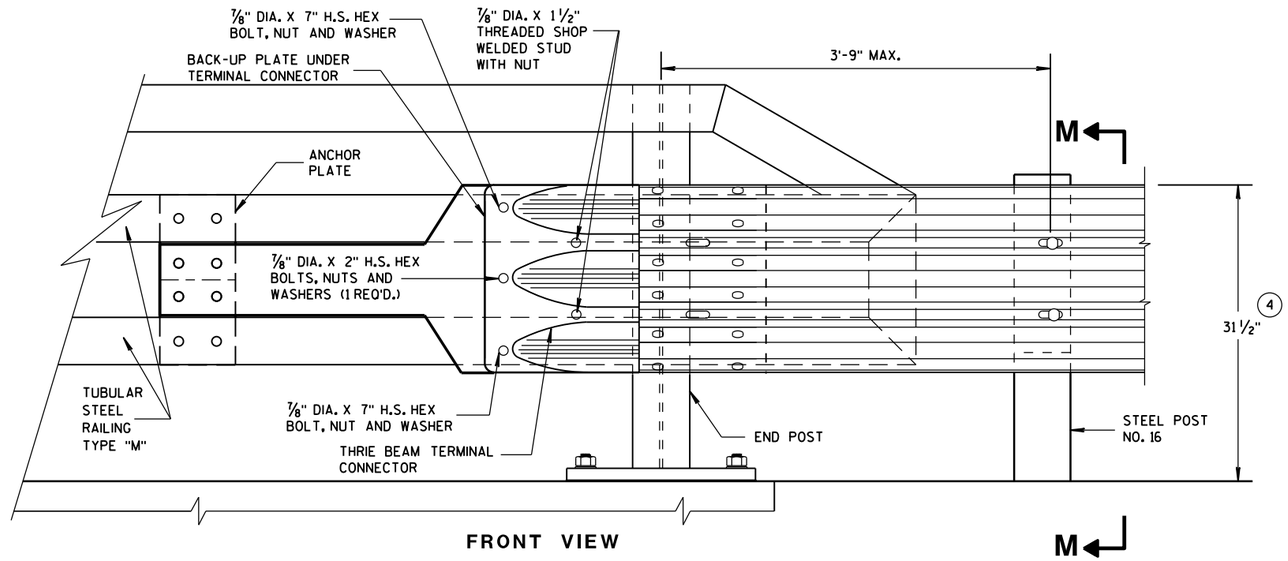


FRONT VIEW

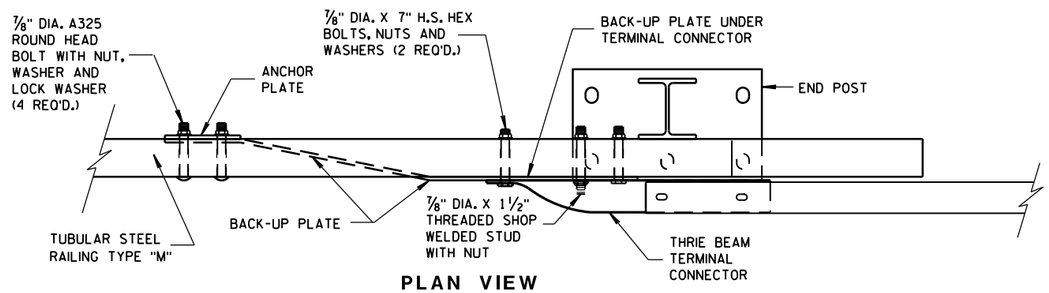
ANCHOR PLATE DETAIL, TYPE "M"



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

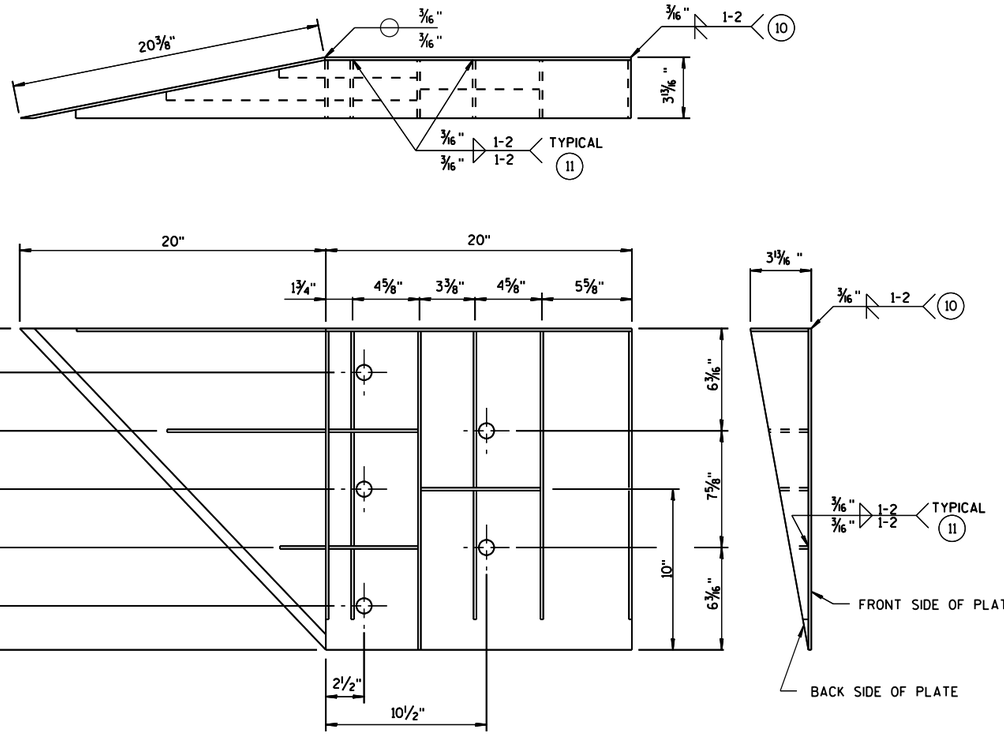
APPROVED
June, 2015 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
FHWA

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S.D.D. 14 B 45-4h

6

S.D.D. 14 B 45-4h



WELDING INSTRUCTION

(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".

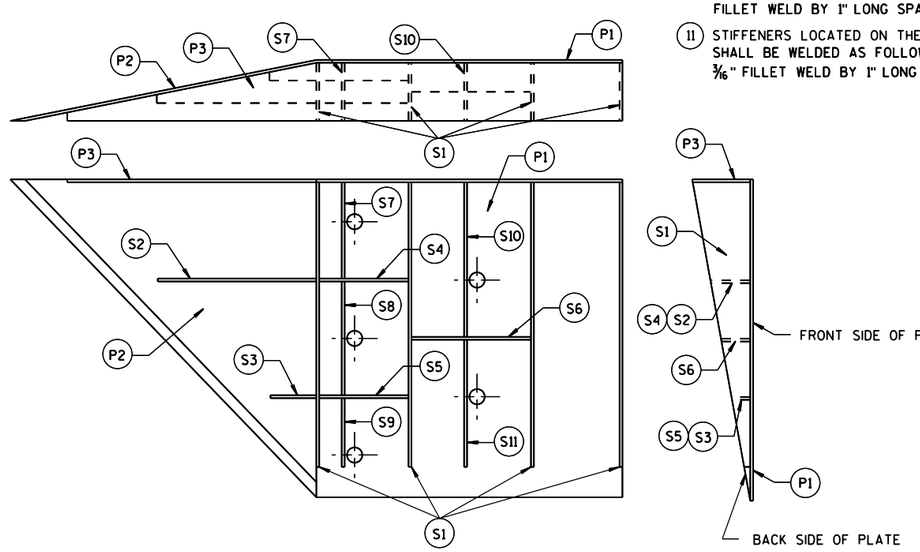


PLATE AND STIFFENER IDENTIFICATION

(VIEWED FROM BACK SIDE OF PLATE)

CONNECTOR PLATE DIMENSION (PER ASSEMBLY)

PLATE	QUANTITY	SHAPE	SIZE (A x B x C x D)	THICKNESS
P1	1		20" x 20"	3/16"
P2	1		20" x 20" x 28 9/16"	3/16"
P3	1		39" x 3 5/8" x 20" x 19 5/16"	3/16"
S1	4		18 7/16" x 3 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
DEPARTMENT OF TRANSPORTATION

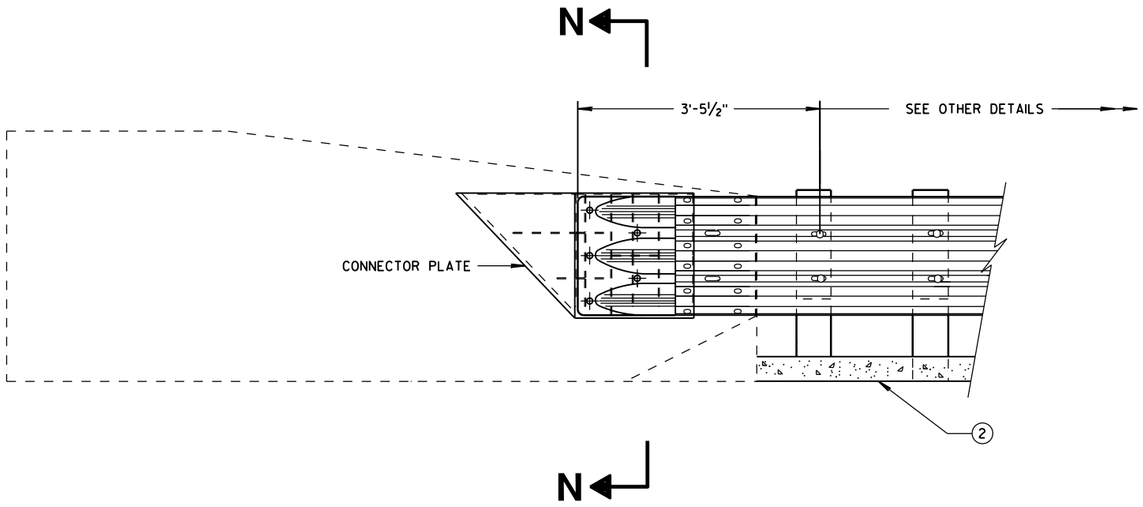
APPROVED
June, 2015 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
FHWA

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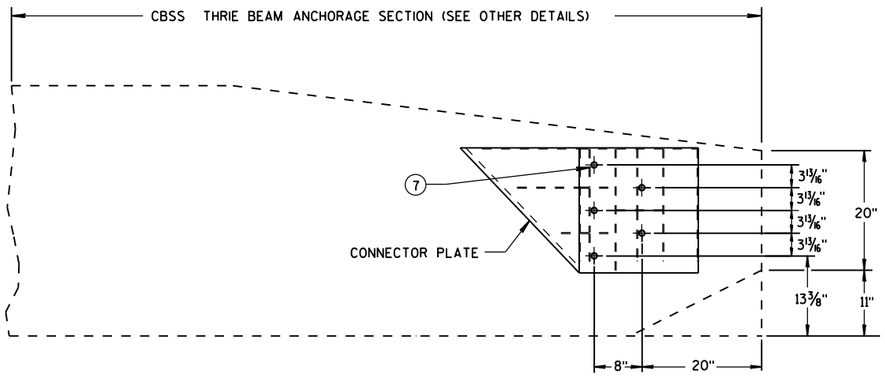
S.D.D. 14 B 45-4i

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S.D.D. 14 B 45-4i



THRIE BEAM CONNECTION TO SINGLE SLOPE BARRIER



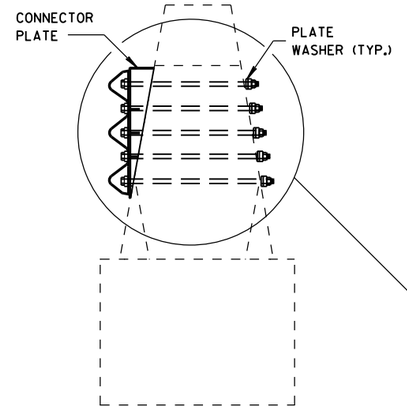
SINGLE SLOPE CONNECTION PLATE PLACEMENT

GENERAL NOTES

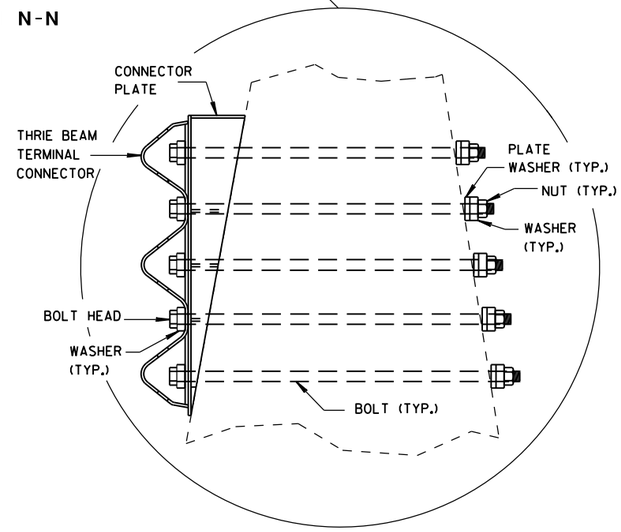
CONNECTOR PLATE, DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

(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

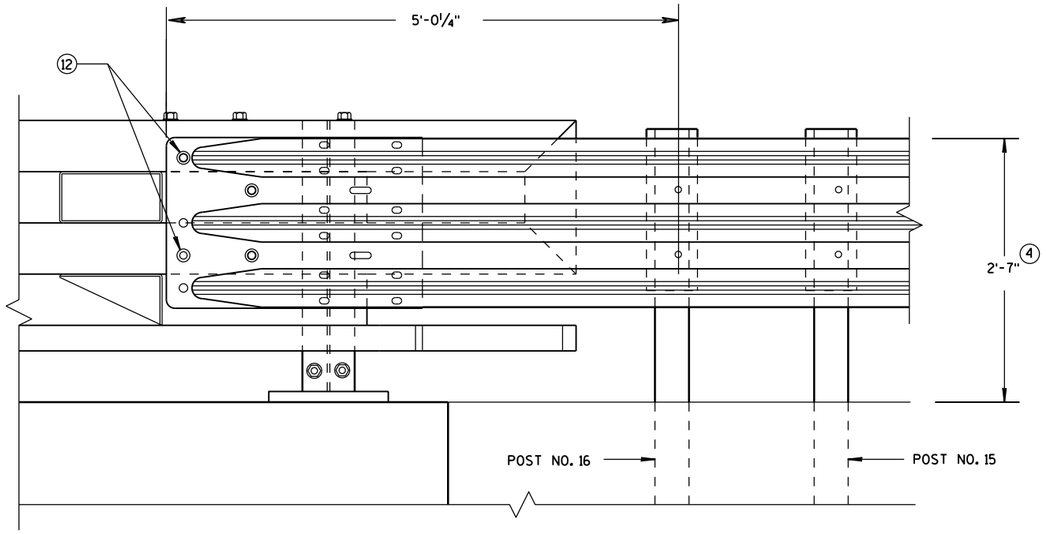
APPROVED
June, 2015 — DATE
/S/ Jerry H. Zoga — ROADWAY STANDARDS DEVELOPMENT ENGINEER
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S.D.D. 14 B 45-4j

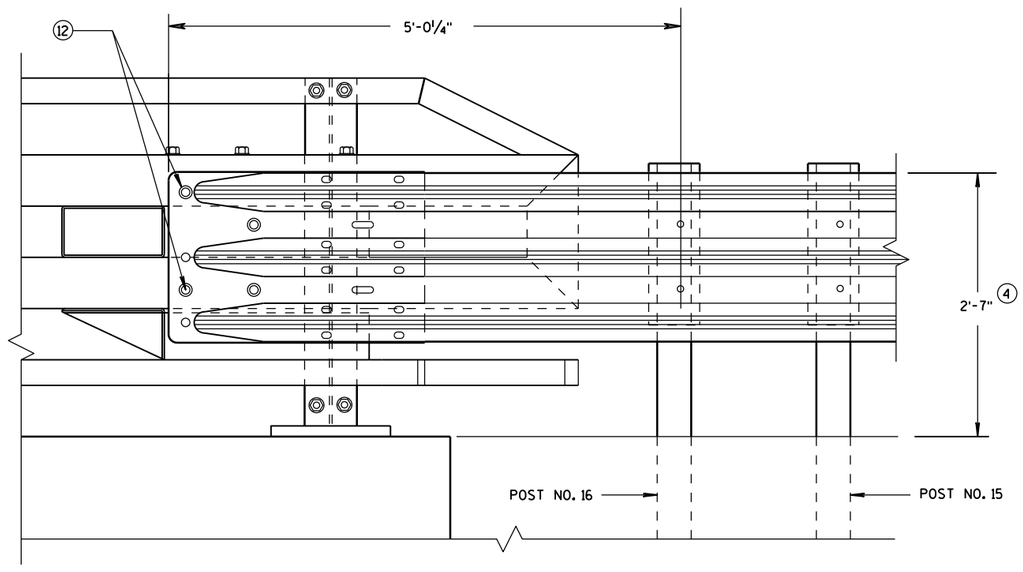
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S.D.D. 14 B 45-4j



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
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2015
DATE

/S/ Jerry H. Zogg
ROADWAY STANDARDS D 60 NT
ENGINEER

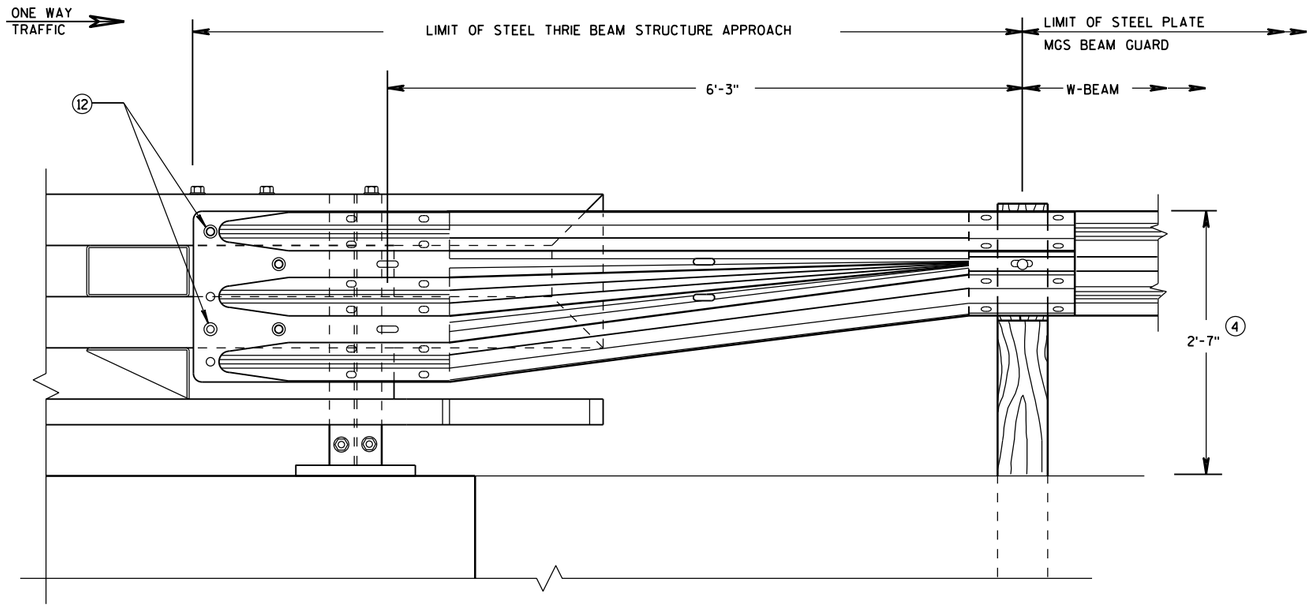
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S.D.D. 14 B 45-4k

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S.D.D. 14 B 45-4k



FRONT VIEW

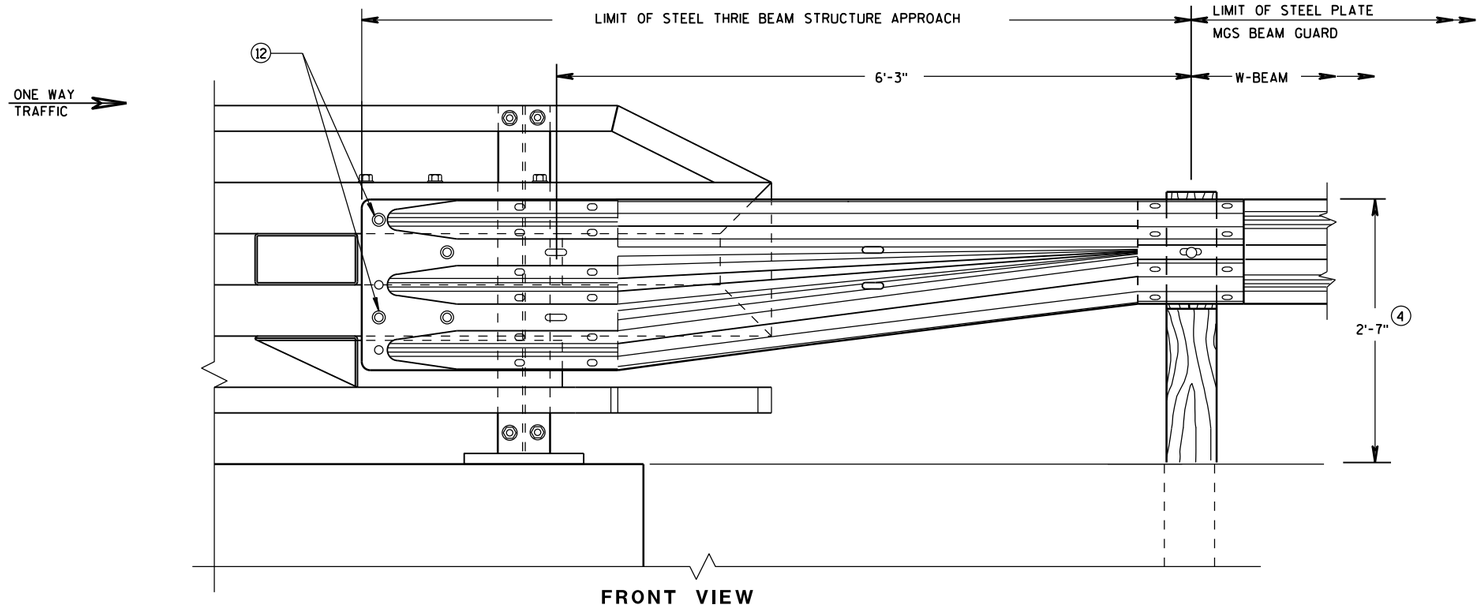
W BEAM TRANSITION AND CONNECTION TO BRIDGE RAILING TYPE "NY3"

(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
DEPARTMENT OF TRANSPORTATION

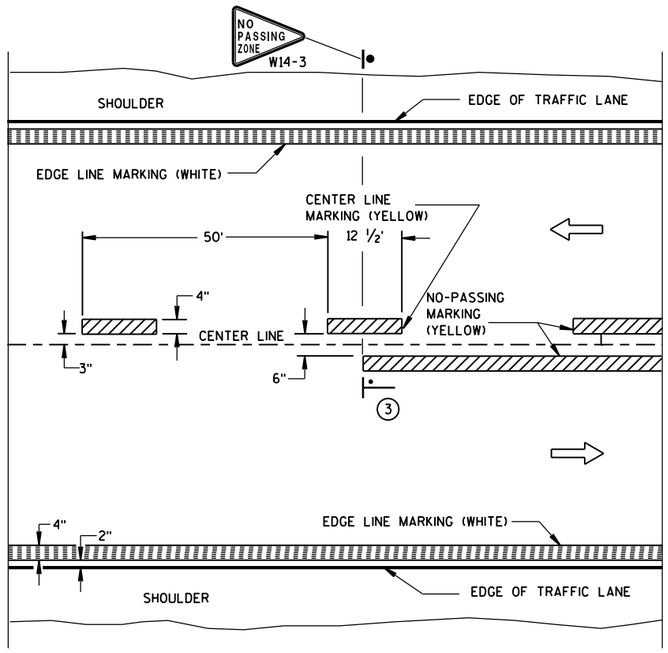
APPROVED
June, 2015 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

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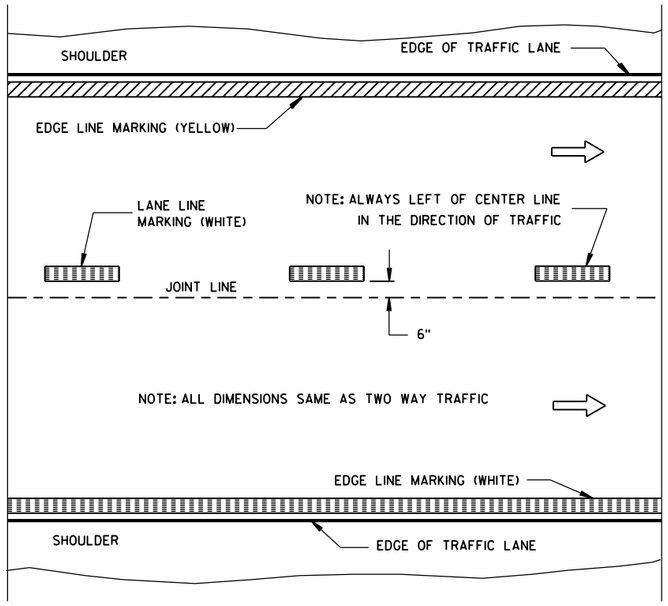
S.D.D. 14 B 45-4L

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S.D.D. 14 B 45-4L

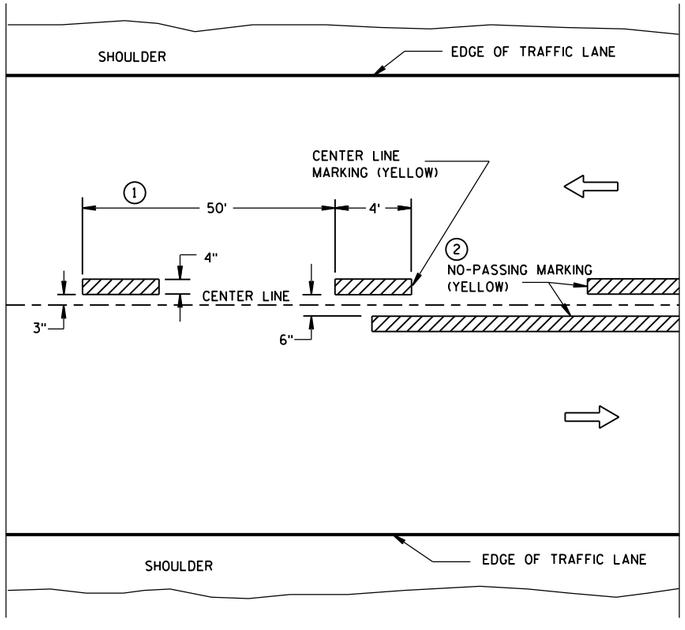


TWO WAY TRAFFIC

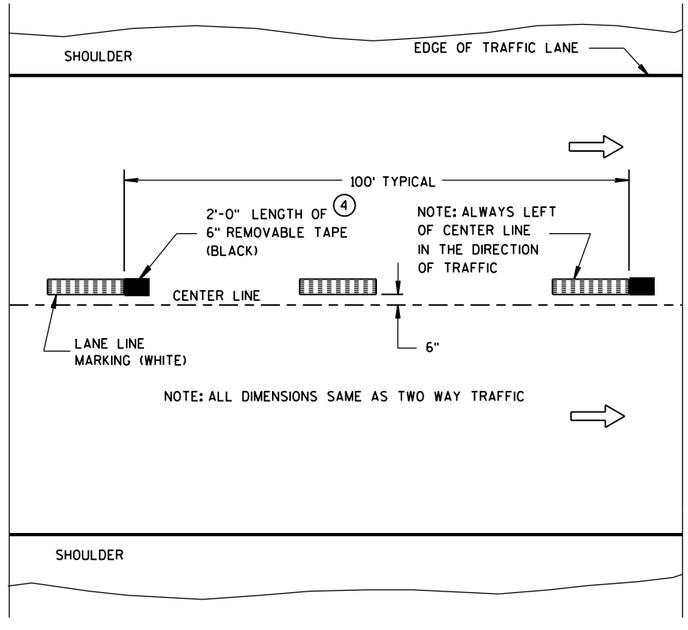


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY (INTERMEDIATE) PAVEMENT MARKING

(SHOWS CYCLE FOR TEMPORARY CENTER LINE OR TEMPORARY LANE LINE MARKING)

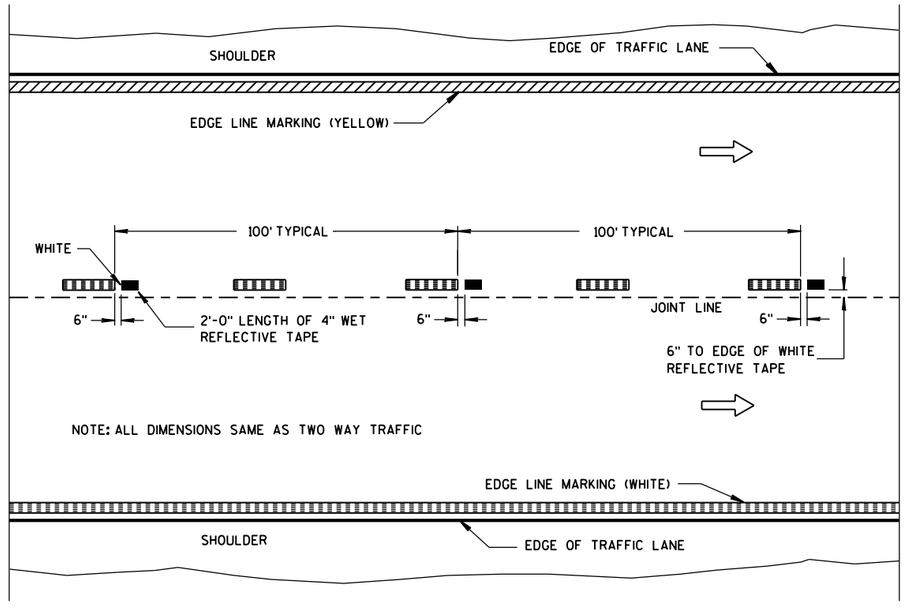
GENERAL NOTES

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

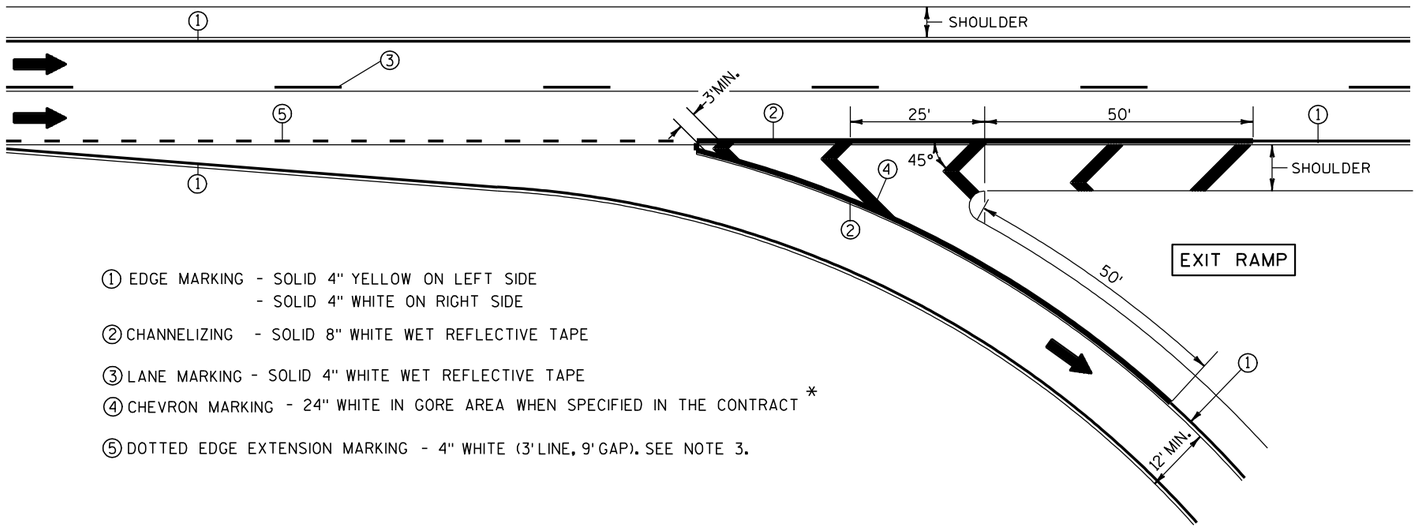
PAVEMENT MARKING (MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
5-13-2013 DATE
/S/ Travis Feltes STATE TRAFFIC E
FHWA

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S.D.D. 15 C 8-16a



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:

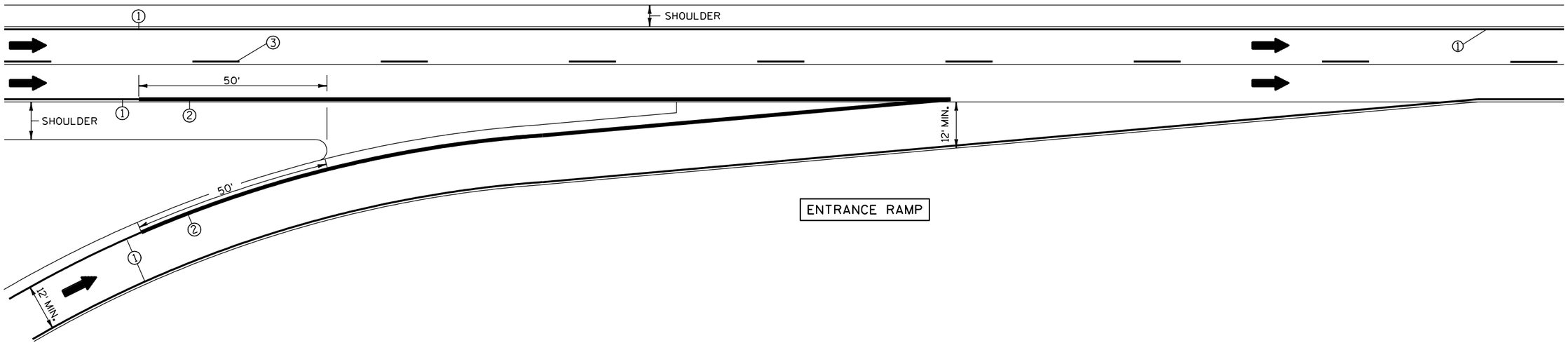
1. ARROWS SHOWN ON THIS MARKING PLAN DESIGNATE TRAFFIC FLOW, AND SHALL NOT BE TAKEN AS PROPOSED PAVEMENT MARKINGS.

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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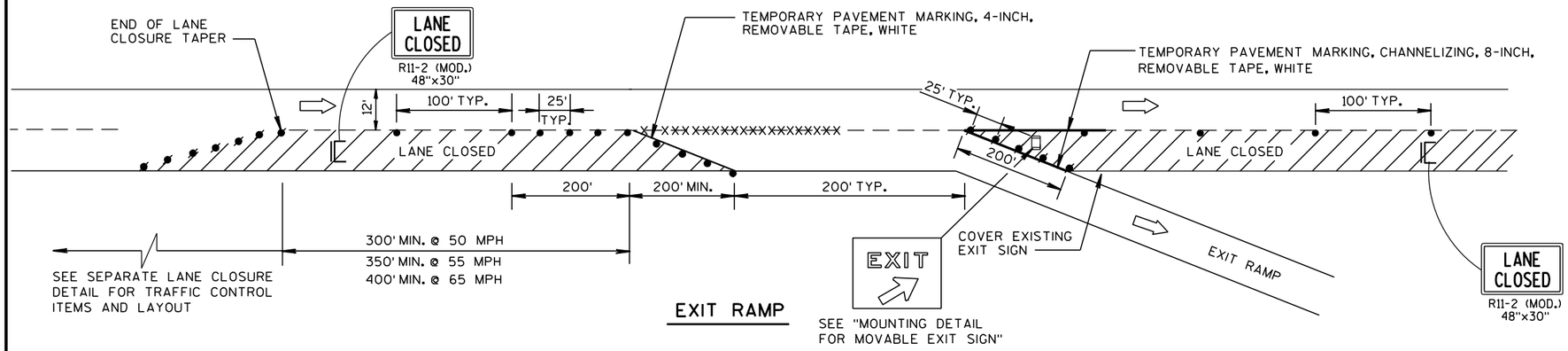
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S.D.D. 15 C 31-1a

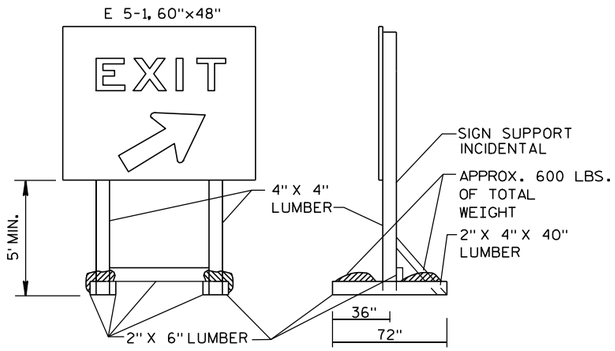
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PAVEMENT MARKING
(RAMPS AND GORES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

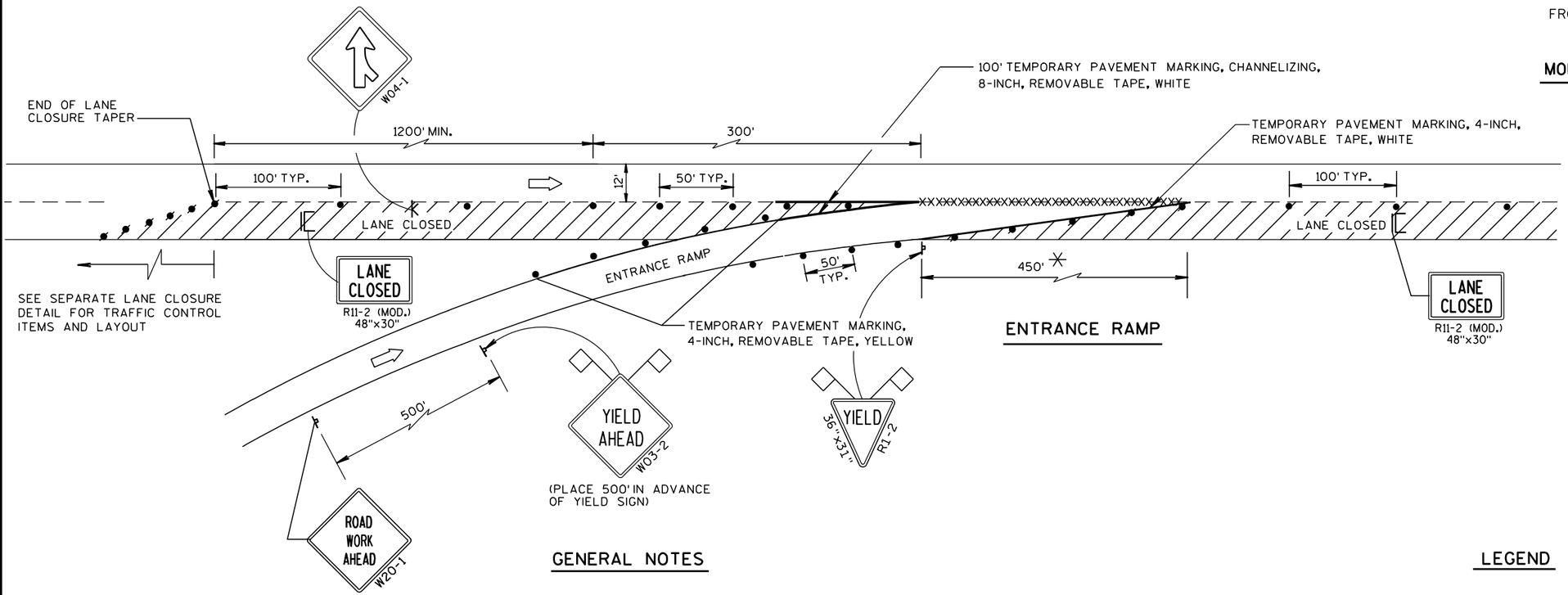


EXIT RAMP



NOTE: ALL LUMBER DIMENSIONS ARE NOMINAL

MOUNTING DETAIL FOR MOVABLE EXIT SIGN



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 R11-2 (MOD.) "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

- POST MOUNTED SIGN
- SIGN ON PORTABLE SUPPORT
- TRAFFIC CONTROL, DRUM
- TRAFFIC CONTROL, DRUM WITH WARNING LIGHT, TYPE C (STEADY-BURN)
- REMOVING PAVEMENT MARKING (SEE GENERAL NOTES)
- TYPE III BARRICADE (8' EQUIVALENT) WITH SIGN
- FLAGS, 16"x16" MIN., ORANGE
- DIRECTION OF TRAFFIC FLOW

TRAFFIC CONTROL, EXIT AND ENTRANCE RAMP WITHIN LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
5/24/2000 DATE
/S/ Chester J. [illegible]
CHIEF SIGNS AND MARKINGS ENGINEER
FHWA

S.D.D. 15 D 15-1

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.

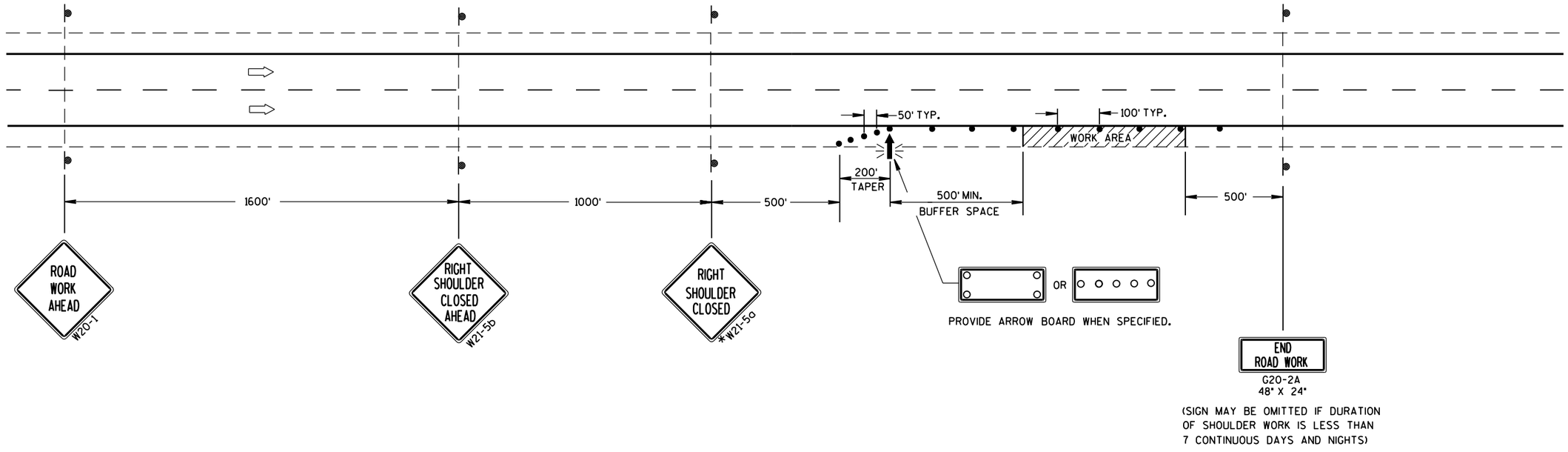
SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

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

8/2013
DATE

/S/ Travis Feltes
STATE TRAFFIC ENGINEER

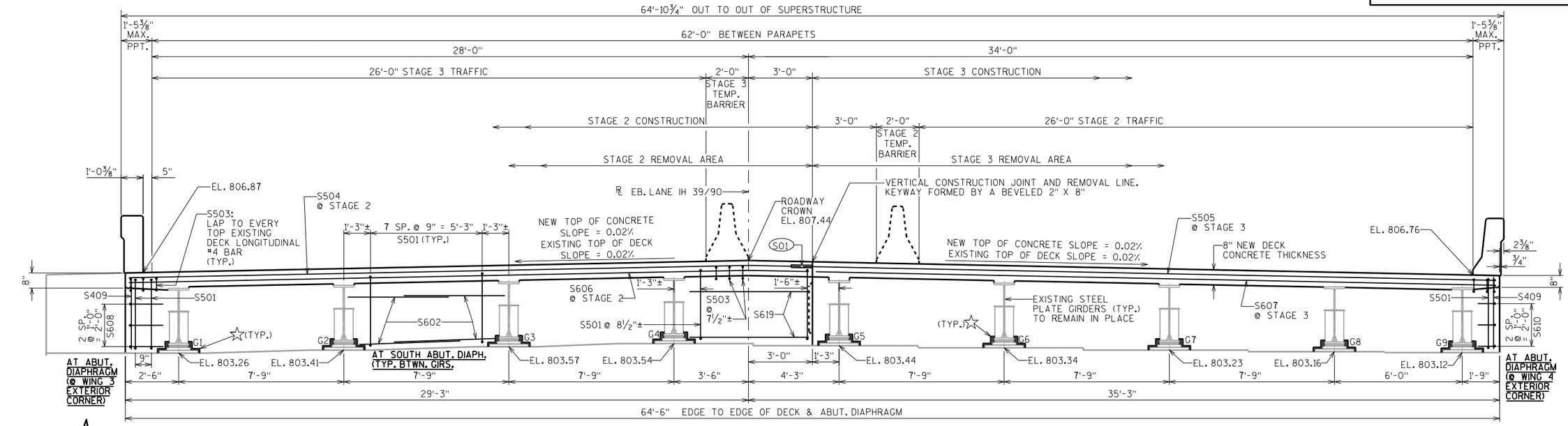
FHWA

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S.D.D. 15 D 27-2

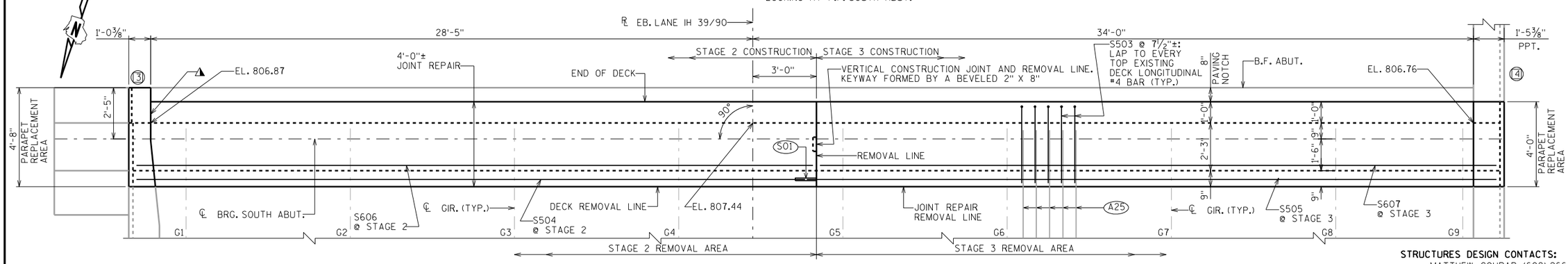
STATE PROJECT NUMBER

1003-10-88



CROSS SECTION THRU BRIDGE LOOKING SOUTH

LOOKING AT F.F. SOUTH ABUT.



SOUTH ABUTMENT JOINT REPAIR PLAN

ELEVATIONS GIVEN ARE AT TOP OF PAVING BLOCK

DESIGN DATA

MATERIAL PROPERTIES:

CONCRETE MASONRY BRIDGES: f'c = 4,000 P.S.I.

BAR STEEL REINFORCEMENT, GRADE 60: fy = 60,000 P.S.I.

EXISTING BENCH MARK INFO

NO.	DESCRIPTION	OFFSET	ELEV.
BM 1	DISK AT NW CORNER OF BRIDGE OVER NORTH ABUTMENT	28 FT. RT.	810.31

☆ BLOCK OUT BEARING AND UNDER GIRDER: ISOLATE THE EXISTING BEARINGS FROM THE NEW FULL DEPTH CONCRETE DIAPHRAGM. PLACE RIGID FOAM INSULATION AROUND THE EXISTING BEARINGS AND UNDER THE BOTTOM FLANGES OF THE EXISTING GIRDERS. PROVIDE A MINIMUM THICKNESS OF 1-INCH OF RIGID FOAM INSULATION AROUND ALL BEARING ELEMENTS. SEAL AND SECURE THE RIGID FOAM INSULATION TO PREVENT MOVEMENT AND MORTAR INTRUSION PRIOR TO PLACEMENT OF CONCRETE. THE COST OF MATERIALS AND LABOR FOR ISOLATING THE BEARINGS SHALL BE INCLUDED WITH THE COST OF THE BID ITEM: "CONCRETE MASONRY BRIDGES"

△ PROVIDE FOR THRIE BEAM GUARD RAIL ATTACHMENT AT UNUSED ANCHOR ASSEMBLIES CAULK HOLES SHUT WITH "100% SILICONE CAULK".

(3) INDICATES WING NUMBER

(A25) SALVAGE ALL EXISTING LONGIT. REINF. AND EXTEND FULL LENGTH INTO NEW WORK.

(S01) BAR COUPLERS USED. BAR LENGTH COMPUTED TO ℄ OF LONGIT. JOINT & SHALL BE MODIFIED TO THE BAR COUPLER MANUFACTURERS RECOMMENDATIONS.

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.

DIMENSIONS AND ELEVATIONS SHOWN ARE BASED ON THE EXISTING STRUCTURE PLANS.

ANY EXCAVATION NECESSARY TO COMPLETE THE JOINT REPAIR AT THE SOUTH ABUTMENT IS TO BE INCLUDED UNDER THE BID ITEM "CONCRETE MASONRY BRIDGES".

BEVEL EXPOSED EDGES OF CONCRETE ¾" UNLESS OTHERWISE SHOWN OR NOTED.

REMOVAL LINES SHALL BE DEFINED BY A 1" DEEP SAW CUT AT THE CONCRETE SURFACES.

LIST OF DRAWINGS

1. SOUTH ABUTMENT JOINT REPAIR
2. REPAIR DETAILS
3. WEST PARAPET REPLACEMENT
4. EAST PARAPET REPLACEMENT
5. BAR DETAILS

STRUCTURES DESIGN CONTACTS:
MATTHEW COUPAR (608) 266-5083
AARON BONK (608) 261-0261

NO.	DATE	REVISION	BY

Plans Prepared By **WISDOT**
BUREAU OF STRUCTURES

ACCEPTED William C. Duchac 7/28/15
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-53-42

SOUTHBOUND IH 39/90 OVER TURTLE CREEK

COUNTY	TOWN
ROCK	TURTLE

DESIGN SPEC. REHABILITATION N/A

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
MSC	——	JPH	MSC

SOUTH ABUTMENT JOINT REPAIR

SHEET 1 OF 5

66

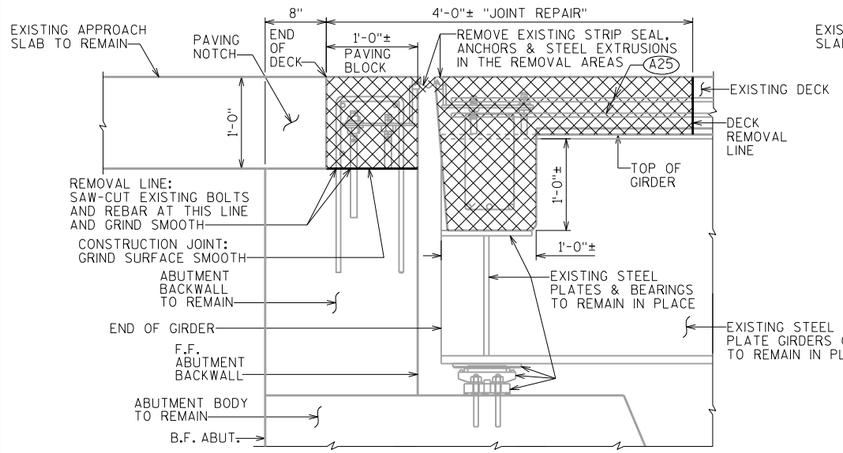
I.D. 1003-10-011

DATE: **JUNE 2015**

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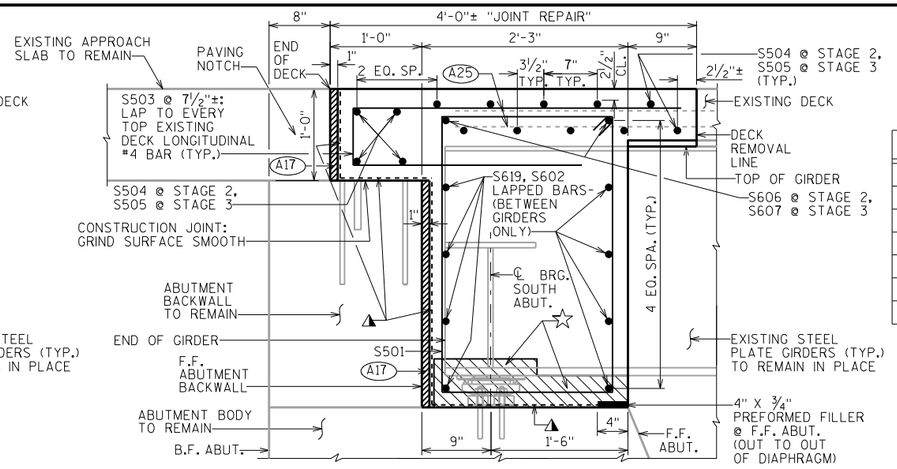
STATE PROJECT NUMBER

1003-10-88



SECTION THRU EXISTING JOINT AT SOUTH ABUTMENT

(SECTION NORMAL TO ℄ BRG. ABUT. - SHOWING REMOVAL AREAS)



SECTION THRU NEW DIAPHRAGM AT SOUTH ABUTMENT

NORMAL TO ℄ BRG. ABUT.

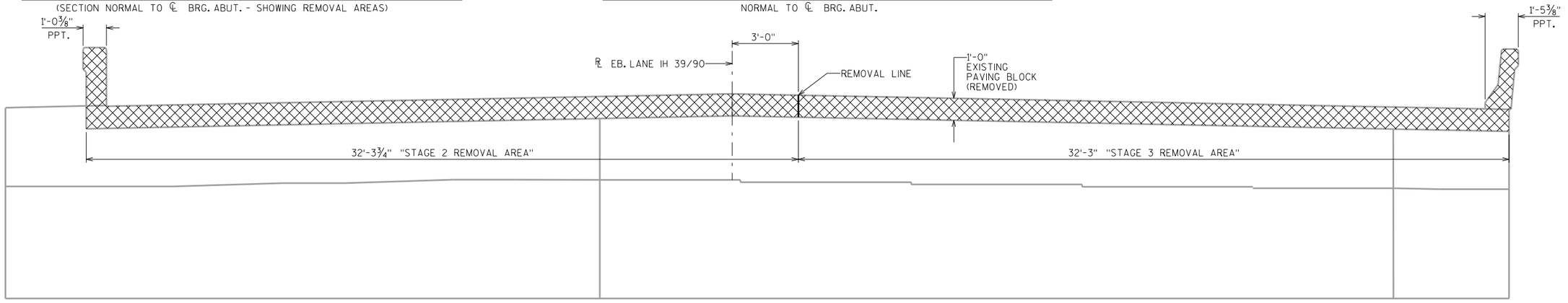
TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBERS	BID ITEMS	UNIT	TOTALS
502.0100	CONCRETE MASONRY BRIDGES	CY	25
502.3200	PROTECTIVE SURFACE TREATMENT	SY	28
502.3210	PIGMENTED SURFACE SEALER	SY	4
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	3665
505.0905	BAR COUPLERS NO. 5	EACH	14
509.1000	JOINT REPAIR	SY	29
614.0150	ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	1

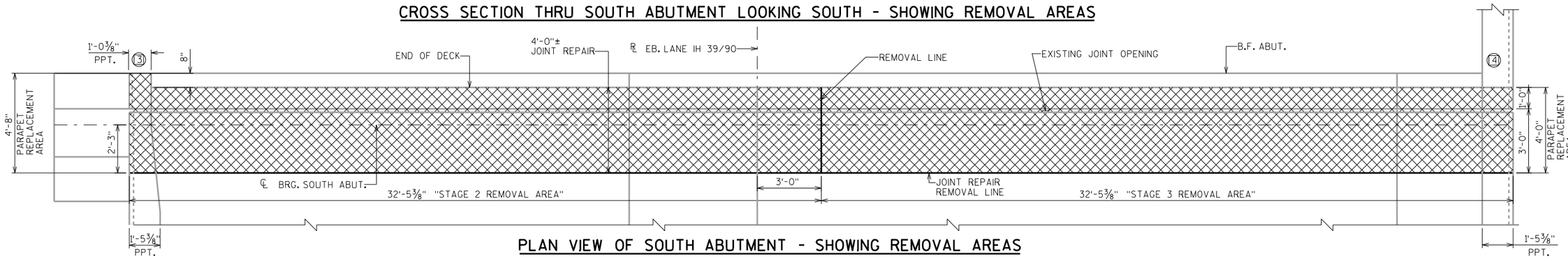
NOTES:

NEW CONCRETE FOR "JOINT REPAIR" SHALL BE INCLUDED UNDER BID ITEM "CONCRETE MASONRY BRIDGES".

NEW REINFORCEMENT REQUIRED FOR "JOINT REPAIR" SHALL BE INCLUDED UNDER BID ITEM "BAR STEEL REINFORCEMENT HS COATED STRUCTURES".



CROSS SECTION THRU SOUTH ABUTMENT LOOKING SOUTH - SHOWING REMOVAL AREAS



PLAN VIEW OF SOUTH ABUTMENT - SHOWING REMOVAL AREAS

(A17) PLACE A 1-INCH THICK COMPRESSIBLE MAT ON THE ENTIRE FRONT FACE OF THE EXISTING ABUTMENT BACKWALL AND AT THE FRONT FACE OF THE EXISTING APPROACH SLAB. THE COMPRESSIBLE MAT SHALL HAVE A COMPRESSIVE STRENGTH BETWEEN 600 PSF AND 1500 PSF AND HAVE A MINIMUM OF ½-INCH OF COMPRESSIBILITY. PLACE POLYETHYLENE SHEETS AFTER INSTALLING COMPRESSIBLE MAT. THE COMPRESSIBLE MAT SHALL BE INCLUDED WITH THE COST OF THE BID ITEM "CONCRETE MASONRY BRIDGES".

(A25) SALVAGE ALL EXISTING LONGIT. REINF. AND EXTEND FULL LENGTH INTO NEW WORK.

▲ PLACE MULTIPLE LAYERS OF POLYETHYLENE SHEETS OVER AND ALONG ENTIRE ABUTMENT SURFACES SHOWN BEFORE POURING CONCRETE DIAPHRAGM. TOTAL THICKNESS OF SHEETS SHALL BE 0.03" MIN. CLEAN ALL DEBRIS FROM ABUTMENT SURFACES PRIOR TO PLACEMENT OF POLYETHYLENE SHEETS.

☆ BLOCK OUT BEARING AND UNDER GIRDER: ISOLATE THE EXISTING BEARINGS FROM THE NEW FULL DEPTH CONCRETE DIAPHRAGM. PLACE RIGID FOAM INSULATION AROUND THE EXISTING BEARINGS AND UNDER THE BOTTOM FLANGES OF THE EXISTING GIRDERS. PROVIDE A MINIMUM THICKNESS OF 1-INCH OF RIGID FOAM INSULATION AROUND ALL BEARING ELEMENTS. SEAL AND SECURE THE RIGID FOAM INSULATION TO PREVENT MOVEMENT AND MORTAR INTRUSION PRIOR TO PLACEMENT OF CONCRETE. THE COST OF MATERIALS AND LABOR FOR ISOLATING THE BEARINGS SHALL BE INCLUDED WITH THE COST OF THE BID ITEM: "CONCRETE MASONRY BRIDGES"

(3) INDICATES WING NUMBER

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-53-42

DRAWN BY JPH | PLANS CK'D. MSC

REPAIR DETAILS

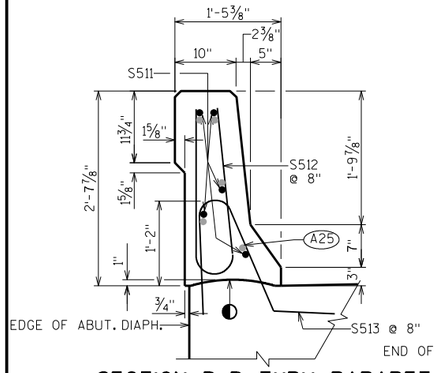
SHEET 2

67

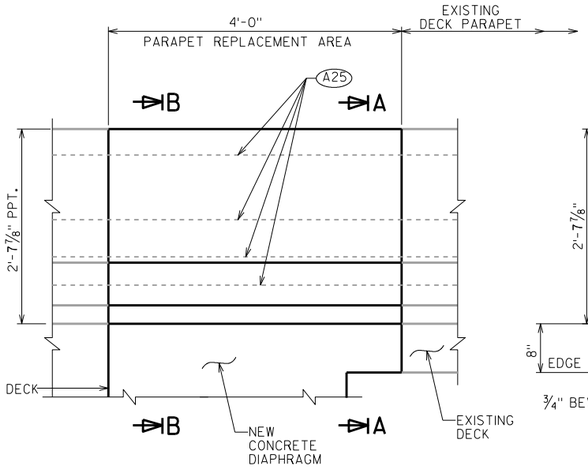
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STATE PROJECT NUMBER

1003-10-88

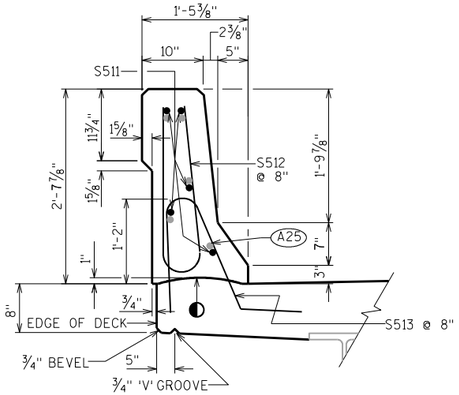


SECTION B-B THRU PARAPET ON CONCRETE DIAPHRAGM



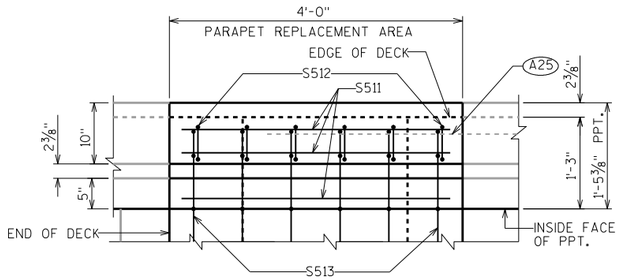
INSIDE ELEVATION OF PARAPET

MATCH IN WITH EXISTING PARAPET

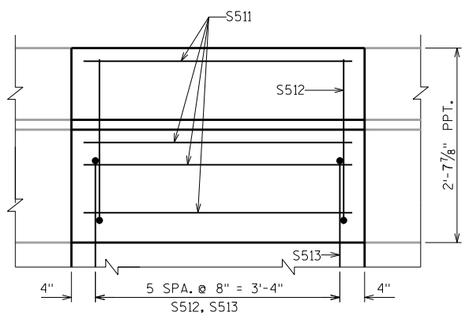


SECTION A-A THRU PARAPET ON DECK

SEE SHEET 5 FOR THE BILL OF BARS AND BAR DETAILS.



PLAN



OUTSIDE ELEVATION OF PARAPET

(A25) SALVAGE ALL EXISTING LONGIT. REINF. AND EXTEND FULL LENGTH INTO NEW WORK.

◐ HORIZ. CONST. JOINT - STRIKE OFF AS SHOWN AND LEAVE ROUGH.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-53-42

DRAWN BY JPH | PLANS CK'D. MSC

WEST PARAPET REPLACEMENT

SHEET 3

68

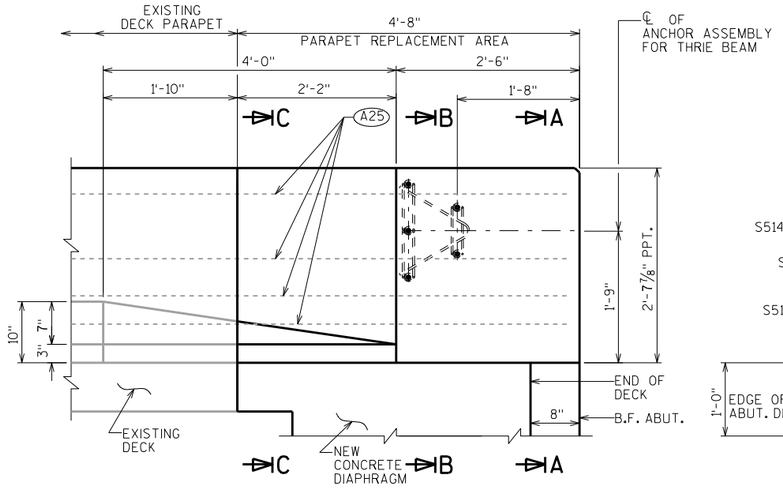
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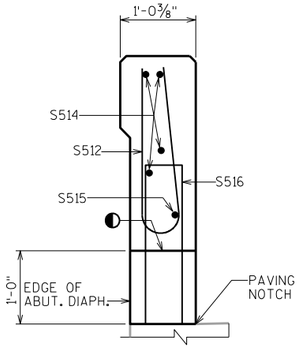
STATE PROJECT NUMBER

1003-10-88

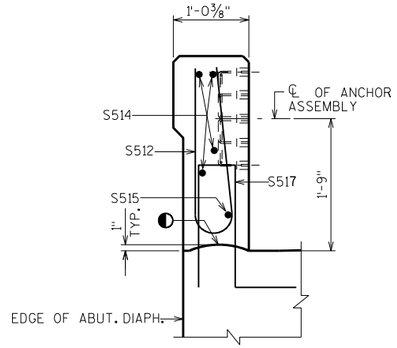


INSIDE ELEVATION OF PARAPET

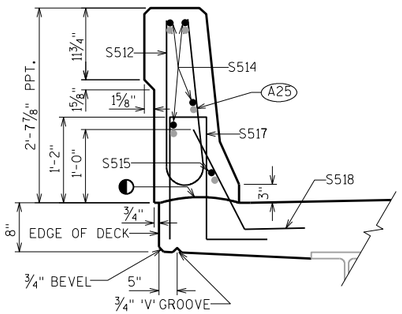
MATCH IN WITH EXISTING PARAPET



SECTION A-A

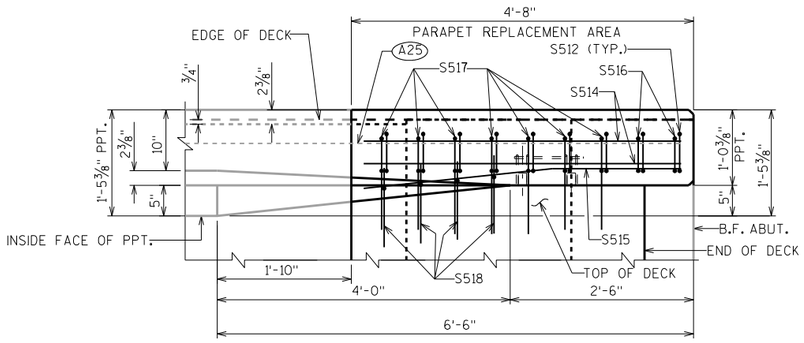


SECTION B-B

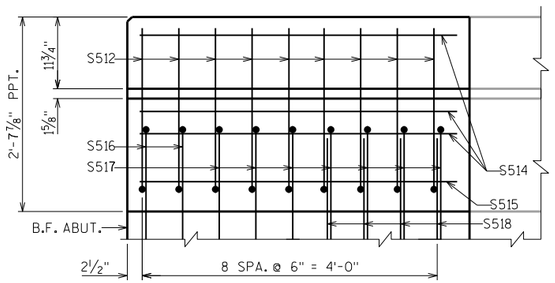


SECTION C-C THRU PARAPET ON DECK

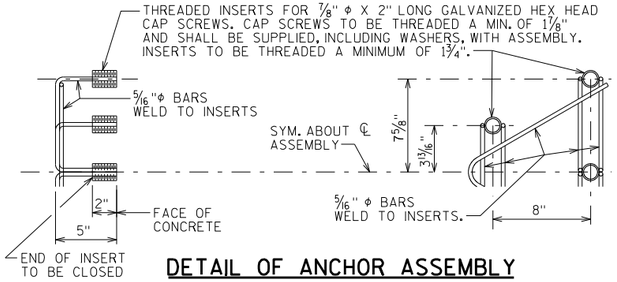
SEE SHEET 5 FOR THE BILL OF BARS AND BAR DETAILS.



PLAN



OUTSIDE ELEVATION OF PARAPET



DETAIL OF ANCHOR ASSEMBLY

HEX HEAD CAP SCREWS & WASHERS TO BE GALVANIZED IN ACCORDANCE WITH AASHTO M232 CLASS C.

ASSEMBLY BID ITEM SHALL BE "ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD", EACH.

(A25) SALVAGE ALL EXISTING LONGIT. REINF. AND EXTEND FULL LENGTH INTO NEW WORK.

◐ HORIZ. CONST. JOINT - STRIKE OFF AS SHOWN AND LEAVE ROUGH.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-53-42

DRAWN BY JPH | PLANS CK'D. MSC

EAST PARAPET REPLACEMENT

SHEET 4

69

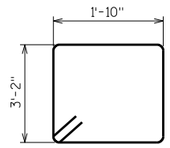
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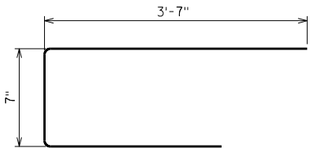
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STATE PROJECT NUMBER

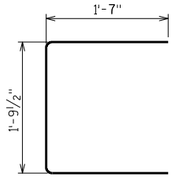
1003-10-88



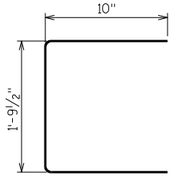
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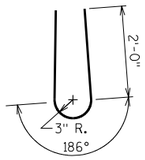
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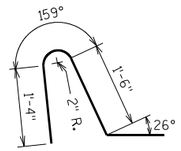
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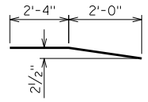
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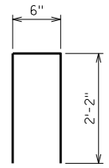
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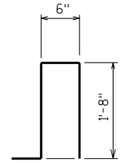
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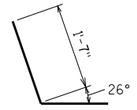
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S516



S517

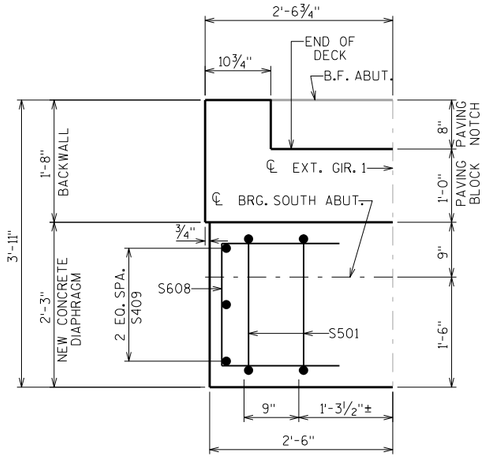


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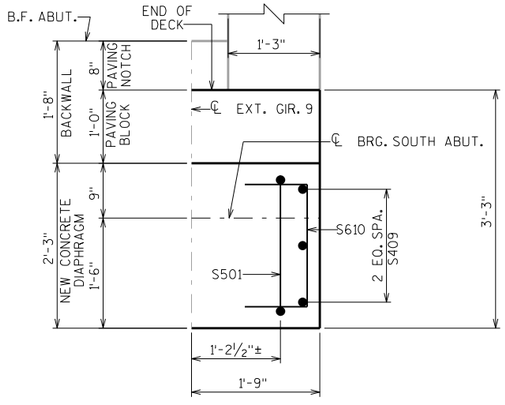
BILL OF BARS

NOTE:
THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
S501	X	67	10'-8"	X		SOUTH ABUT. DIAPH./DECK-VERT.-STIRRUP
S602	X	112	4'-9"			SOUTH ABUT. DIAPH.-BOTH FACES-HORIZ.-BTWN. GIRS.
S503	X	104	6'-3"	X		DECK-VERT.-LONGIT.
(S01) S504	X	14	32'-1"			DECK-HORIZ.-TRANS.-TOP & BOT.-STAGE 1
(S01) S505	X	14	32'-1"			DECK-HORIZ.-TRANS.-TOP & BOT.-STAGE 2
S606	X	2	31'-11"			DECK-HORIZ.-TRANS.-ABOVE GIRDERS-STAGE 1
S607	X	2	31'-11"			DECK-HORIZ.-TRANS.-ABOVE GIRDERS-STAGE 2
S608	X	3	4'-7"	X		SOUTH ABUT. DIAPH.-HORIZ.-AT GIR. 1 EXT. CORNER
S409	X	6	3'-3"			SOUTH ABUT. DIAPH./DECK-VERT.-AT BOTH GIR. EXT. CORNERS
S610	X	3	3'-2"	X		SOUTH ABUT. DIAPH.-HORIZ.-AT GIR. 9 EXT. CORNER
S511	X	5	3'-8"			WEST PARAPET-HORIZ.-LONGIT,
S512	X	15	4'-10"	X		WEST & EAST PARAPET-VERT.-TRANS,
S513	X	6	4'-2"	X		WEST PARAPET/DECK-VERT.-TRANS,
S514	X	4	4'-4"			EAST PARAPET-HORIZ.-LONGIT,
S515	X	1	4'-4"	X		EAST PARAPET-BOT.-HORIZ.-LONGIT.-INSIDE FACE
S516	X	2	4'-7"	X		EAST PARAPET/DECK-VERT.-TRANS.-END ONLY
S517	X	7	4'-5"	X		EAST PARAPET/DECK-VERT.-TRANS.
S518	X	4	2'-4"	X		EAST PARAPET/DECK-VERT.-TRANS.-INSIDE FACE
S619	X	8	5'-8"			SOUTH ABUT. DIAPH.-BOTH FACES-HORIZ.-BTWN. GIRS. 4& 5 ONLY



DIAPHRAGM CORNER DETAIL AT WING 3



DIAPHRAGM CORNER DETAIL AT WING 4

(S01) BAR COUPLERS USED. BAR LENGTH COMPUTED TO ℄ OF LONGIT. JOINT & SHALL BE MODIFIED TO THE BAR COUPLER MANUFACTURERS RECOMMENDATIONS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-53-42

DRAWN BY JPH | PLANS CK'D. MSC

BAR DETAILS

SHEET 5

70

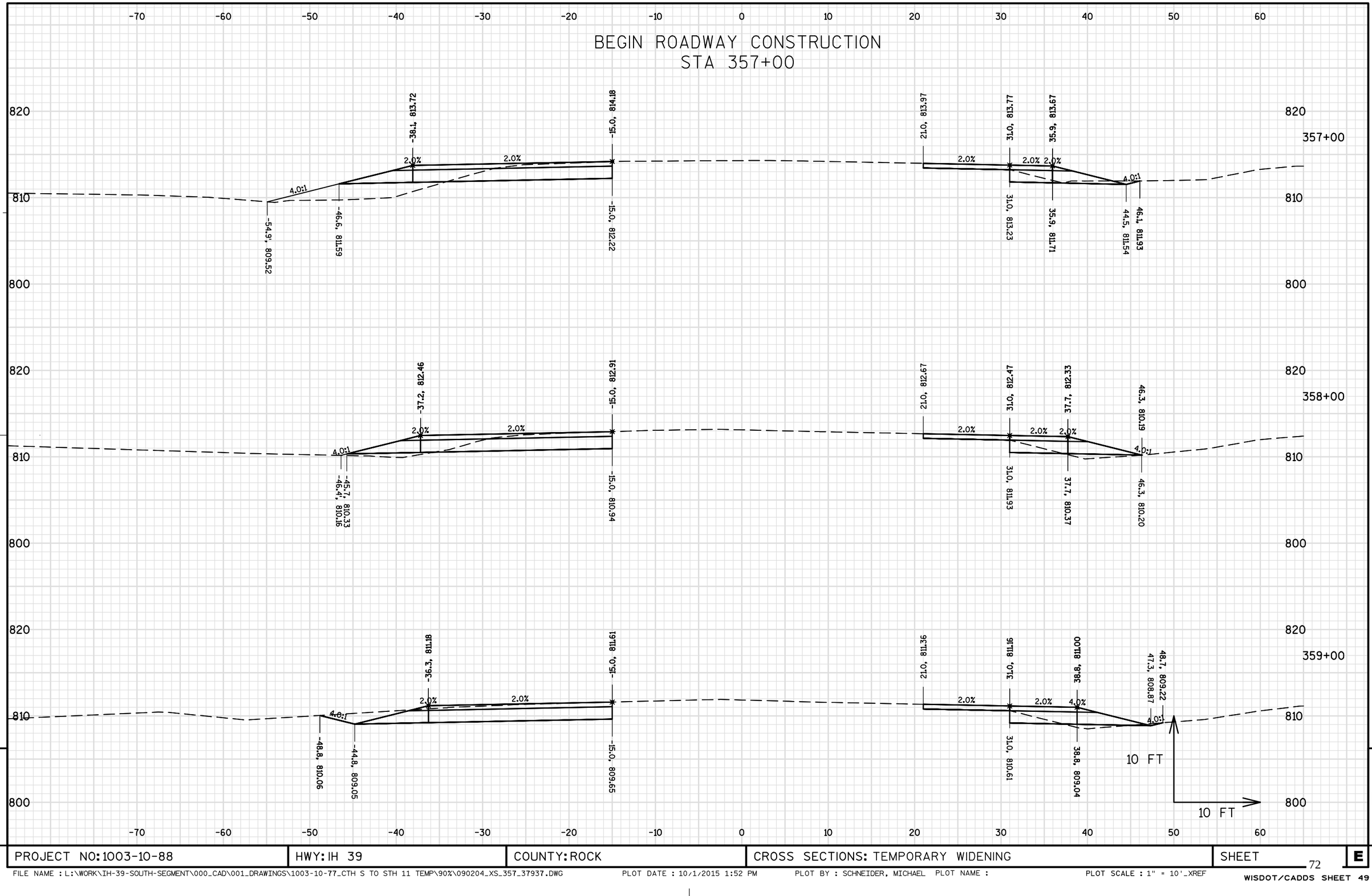
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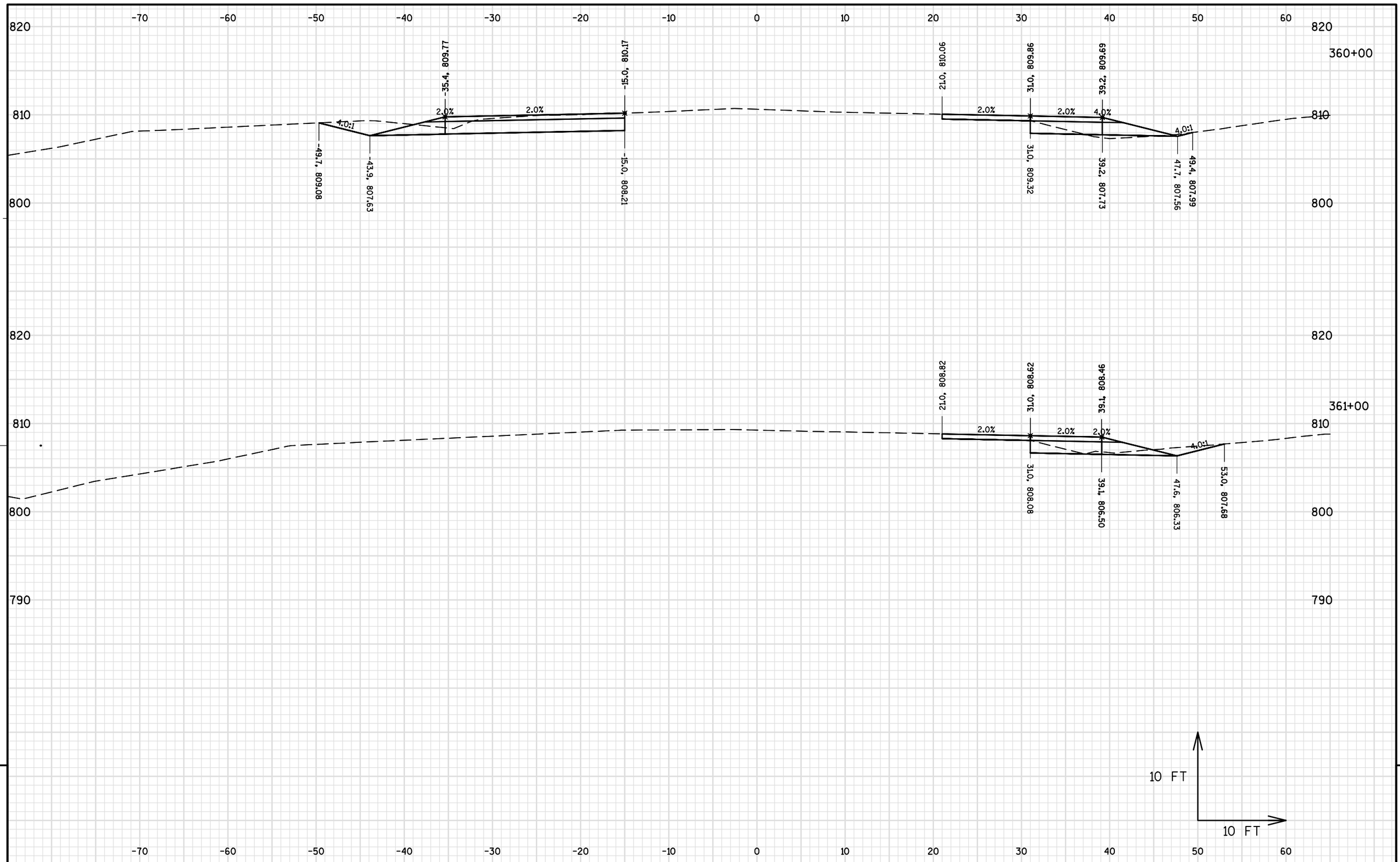
PROJECT ID 1003-10-88

STATION	Real Station	Distance	AREA (SF)		Incremental Vol (CY) (Unadjusted)		Cumulative Vol (CY)		Mass Ordinate
			Cut	Fill	Cut	Fill	Cut	Fill	
357+00	35700.00	0.00	82.93	26.36	0.00	0.00	0.00	0.00	0.00
358+00	35800.00	100.00	86.31	21.11	313.41	78.19	313.41	78.19	235.22
359+00	35900.00	100.00	104.09	11.17	352.59	59.78	666.00	137.96	528.04
360+00	36000.00	100.00	103.43	10.79	384.30	40.67	1050.30	178.63	871.67
361+00	36100.00	100.00	60.23	5.32	303.07	29.83	1353.37	208.46	1144.91
362+00	36200.00	100.00	134.9	7.97	361.35	24.61	1714.72	233.07	1481.65
363+00	36300.00	100.00	99.53	12.94	434.13	38.72	1787.50	271.80	1515.70
364+00	36400.00	100.00	101.03	8.23	371.41	39.20	2086.13	311.00	1775.13
365+00	36500.00	100.00	84.63	22.56	343.81	57.02	2429.94	368.02	2061.93
366+00	36600.00	100.00	85.24	48.5	314.57	131.59	2744.52	499.61	2244.91
367+00	36700.00	200.00	107.82	19.3	685.65	223.11	3115.60	591.13	2524.47
368+00	36800.00	100.00	138.91	11.16	456.91	56.41	3572.51	647.54	2924.97
369+00	36900.00	100.00	0	0	257.24	20.67	3829.75	668.20	3161.54
370+00	37000.00	100.00	48.67	7.12	90.13	13.19	3919.88	681.39	3238.49
371+00	37100.00	100.00	98.23	4.49	272.04	21.50	4191.91	702.89	3489.02
372+00	37200.00	100.00	84.61	17.18	338.59	40.13	4530.51	743.02	3787.49
373+00	37300.00	100.00	74.23	23.08	294.15	74.56	4824.65	817.57	4007.08
374+00	37400.00	100.00	77.31	19.23	280.63	78.35	5105.28	895.93	4209.36
375+00	37500.00	100.00	79.12	17.23	289.69	67.52	5394.97	963.44	4431.52
376+00	37600.00	100.00	78.07	16.58	291.09	62.61	5686.06	1026.06	4660.01
377+00	37700.00	100.00	84.86	25.58	301.72	78.07	5987.78	1104.13	4883.65
378+00	37800.00	100.00	74.56	24.2	295.22	92.19	6283.01	1196.31	5086.69
379+00	37900.00	100.00	86.12	13.25	297.56	69.35	6580.56	1265.67	5314.90
379+38	37938.00	38.00	109.59	16.01	137.72	20.59	6718.28	1286.26	5432.03
					7466.99	1417.85			



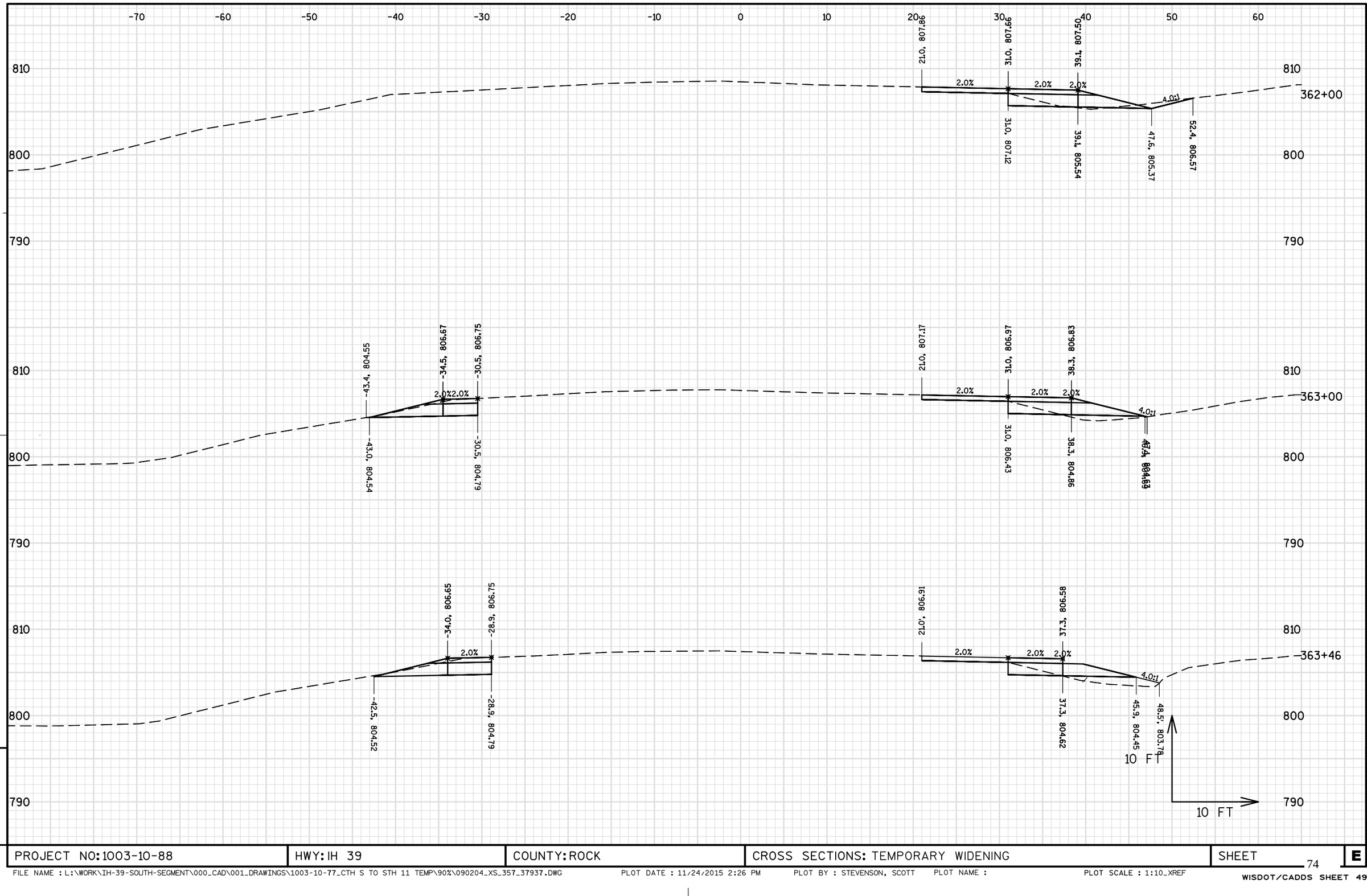
PROJECT NO: 1003-10-88	HWY: IH 39	COUNTY: ROCK	CROSS SECTIONS: TEMPORARY WIDENING	SHEET E

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WISDOT/CADDS SHEET 49



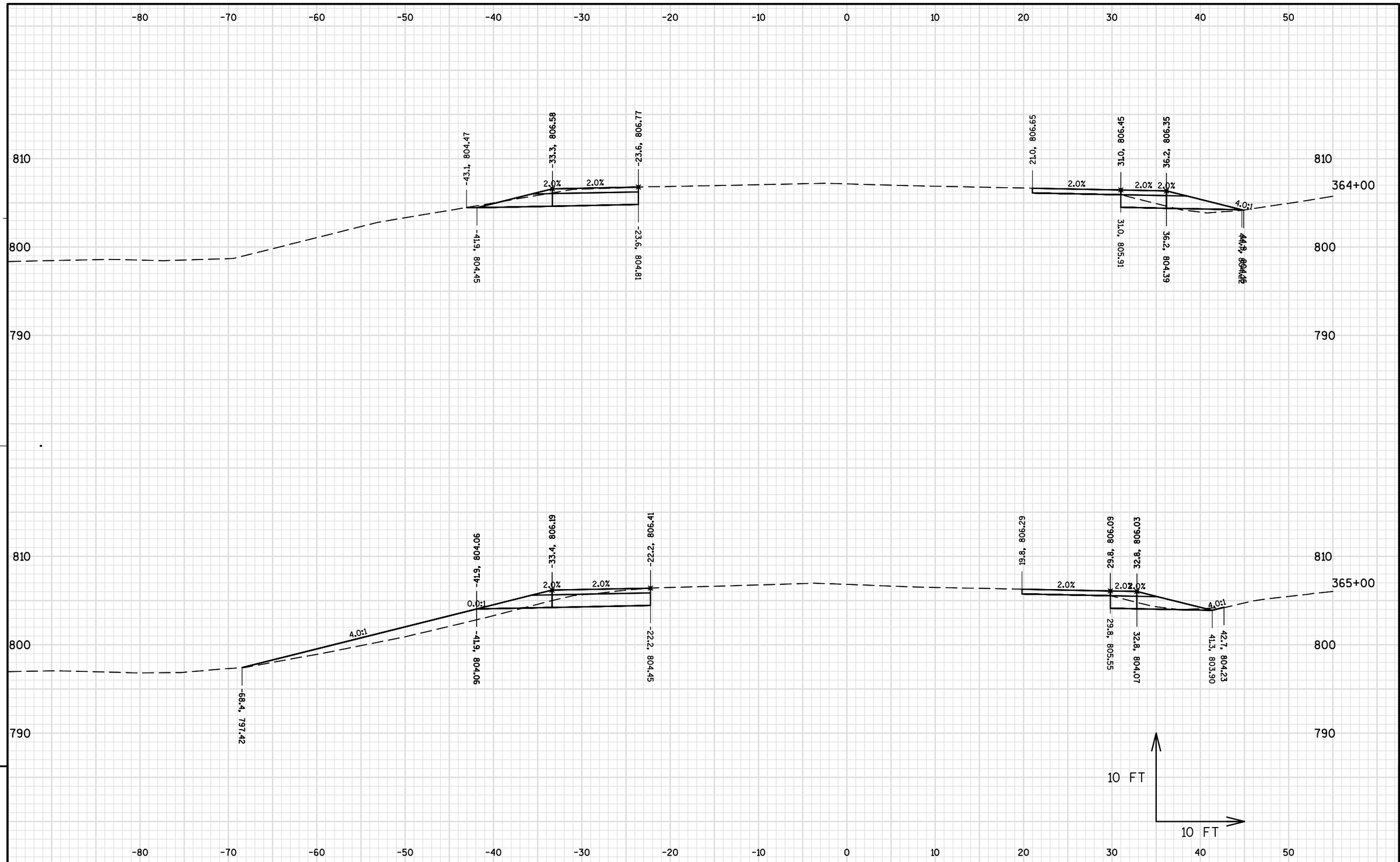
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WISDOT/CADDS SHEET 49



PROJECT NO: 1003-10-88	HWY: IH 39	COUNTY: ROCK	CROSS SECTIONS: TEMPORARY WIDENING	SHEET	E

FILE NAME : L:\WORK\IH-39-SOUTH-SEGMENT\000_CAD\001_DRAWINGS\1003-10-77_CTH S TO STH 11 TEMP\90%\090204_XS_357_37937.DWG PLOT DATE : 11/24/2015 2:26 PM PLOT BY : STEVENSON, SCOTT PLOT NAME : PLOT SCALE : 1:10_XREF
WISDOT/CADDS SHEET 49



PROJECT NO: 1003-10-88	HWY: IH 39	COUNTY: ROCK	CROSS SECTIONS: TEMPORARY WIDENING	SHEET 75	E

366+00

-77.9, 795.46
-43.1, 804.15
-43.1, 804.15
-34.6, 806.28
-22.8, 806.52
-22.8, 804.56
17.4, 806.21
27.4, 805.47
27.2, 806.99
28.2, 804.03
36.8, 803.86
48.0, 806.66
4.0:1
2.0%
0.0:1

367+00

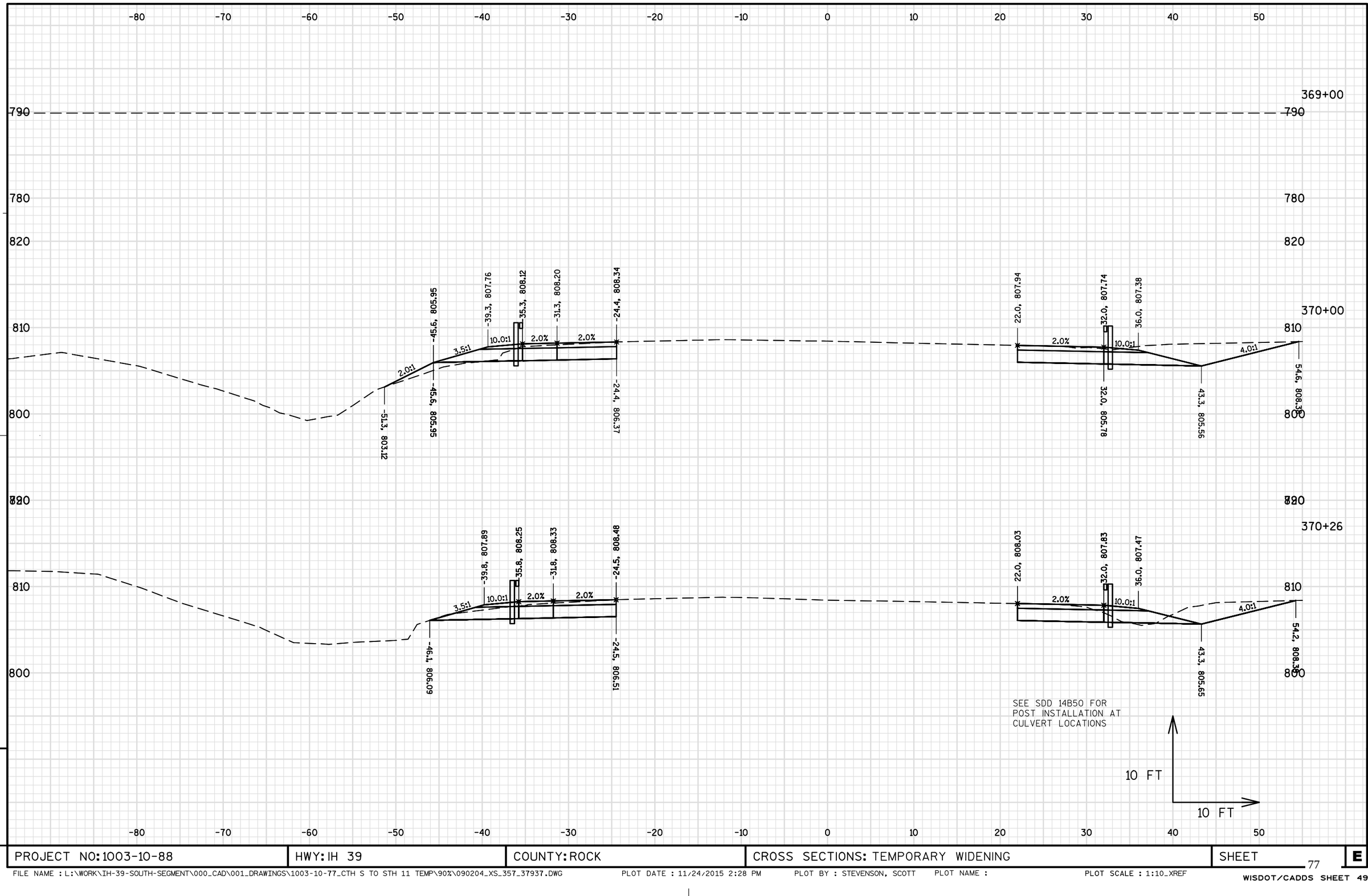
EXIST R/W
-64.8, 799.00
-43.4, 804.34
-43.4, 804.34
-34.9, 806.47
-23.4, 806.70
-23.4, 804.74
15.0, 806.54
25.0, 805.80
25.2, 806.34
27.1, 804.34
27.2, 806.90
35.6, 804.17
47.8, 807.20
4.0:1
2.0%
0.0:1

368+00

EXIST R/W
-65.1, 799.33
-61.9, 800.11
-61.9, 800.11
-43.4, 804.73
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-30.9, 806.95
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-23.9, 805.12
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10 FT
10 FT

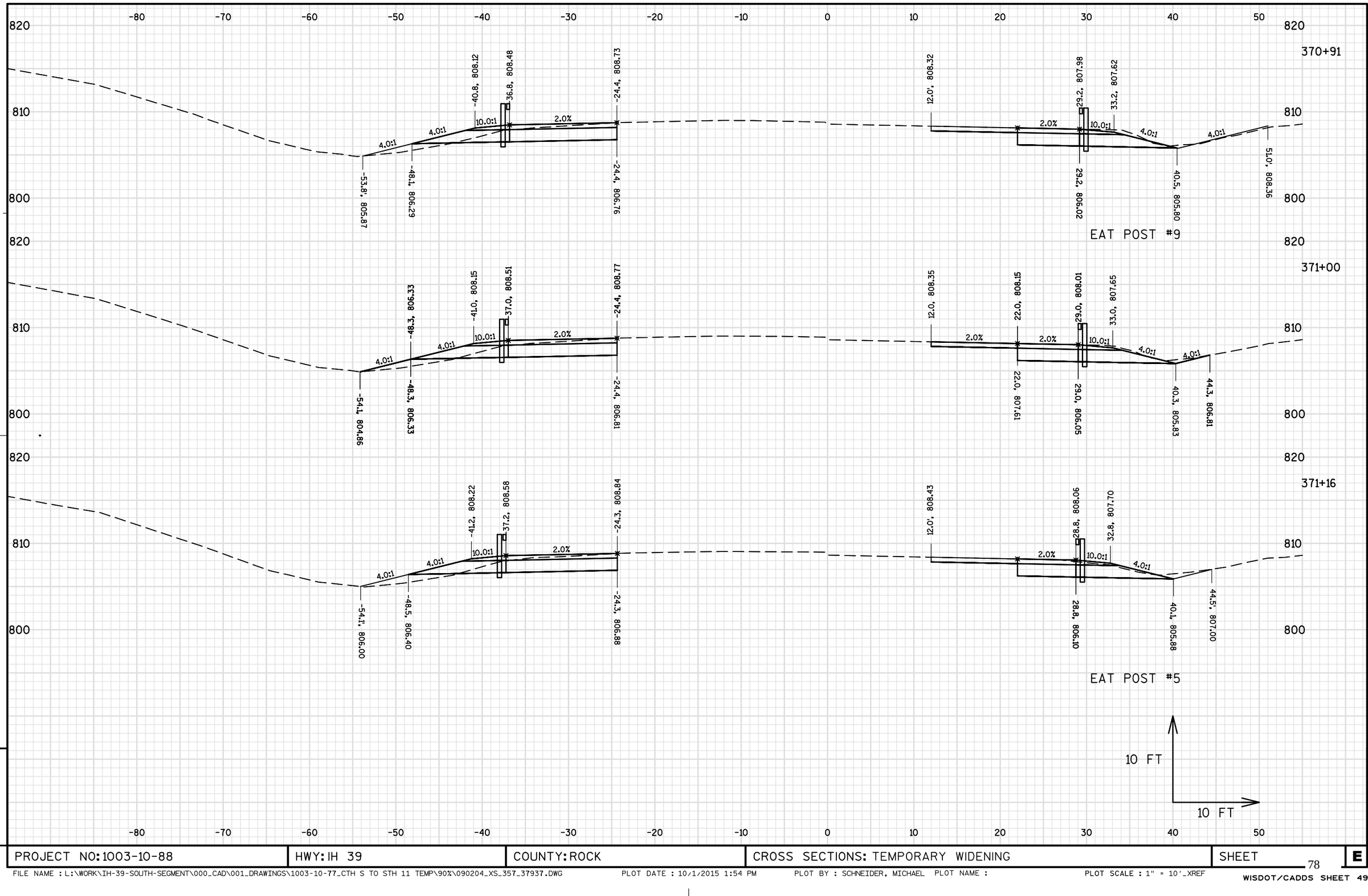
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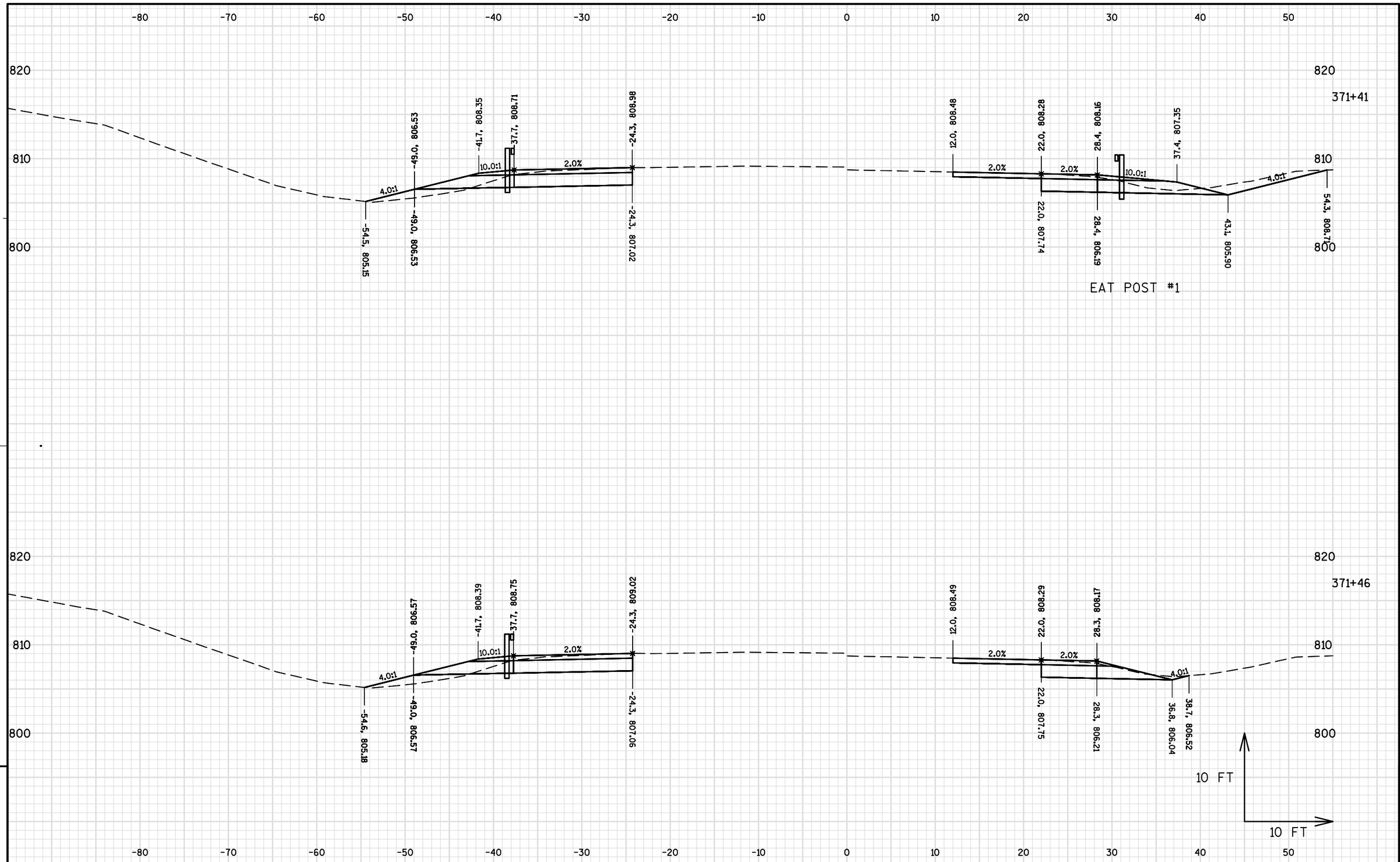
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FILE NAME : L:\WORK\IH-39-SOUTH-SEGMENT\000_CAD\001_DRAWINGS\1003-10-77_CTH S TO STH 11 TEMP\90%\090204_XS_357_37937.DWG PLOT DATE : 11/24/2015 2:28 PM PLOT BY : STEVENSON, SCOTT PLOT NAME : PLOT SCALE : 1:10_XREF
WISDOT/CADDS SHEET 49



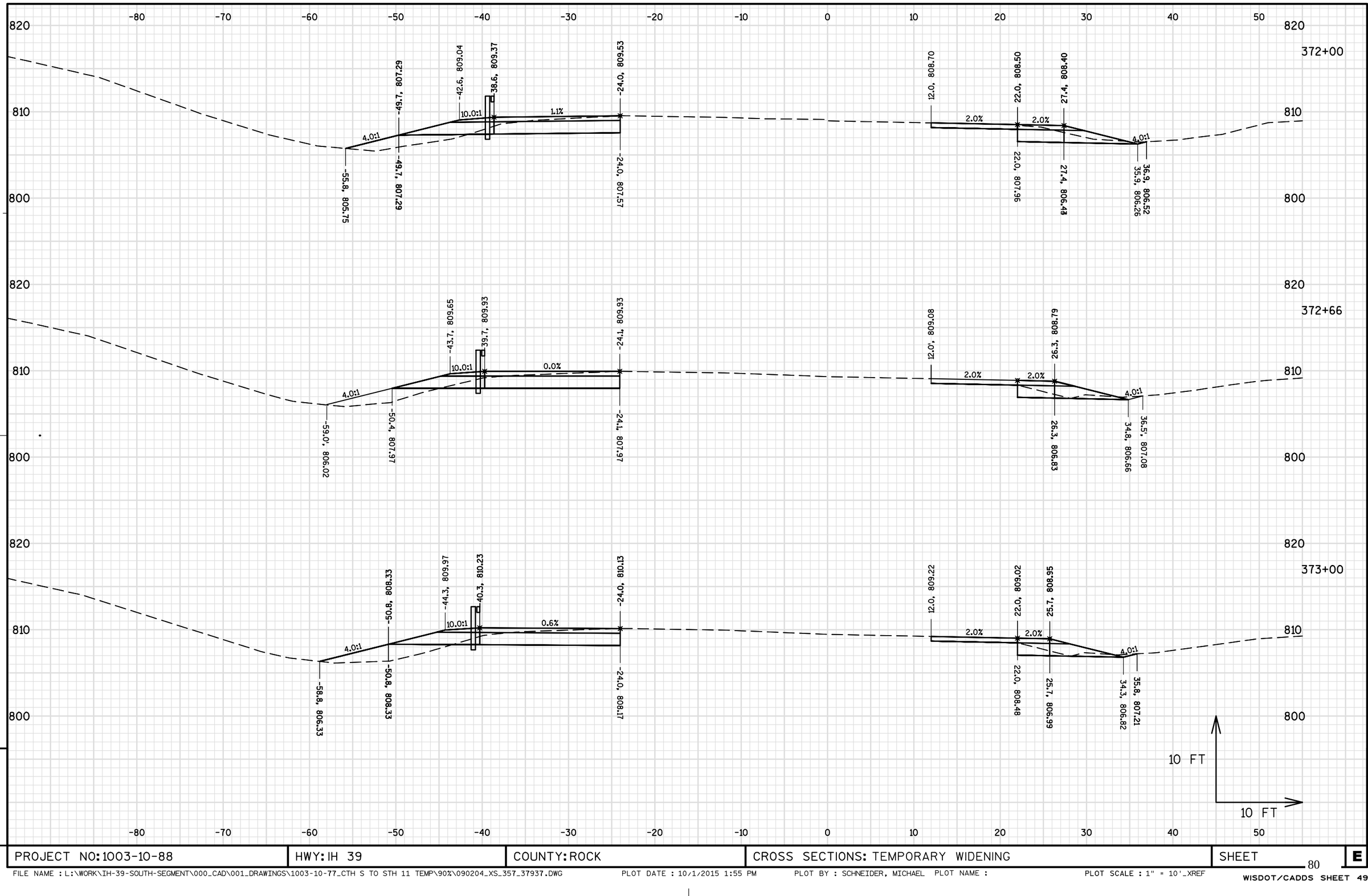
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FILE NAME : L:\WORK\IH-39-SOUTH-SEGMENT\000_CAD\001_DRAWINGS\1003-10-77_CTH S TO STH 11 TEMP\90%\090204_XS_357_37937.DWG PLOT DATE : 10/1/2015 1:54 PM PLOT BY : SCHNEIDER, MICHAEL PLOT NAME : PLOT SCALE : 1" = 10'_XREF

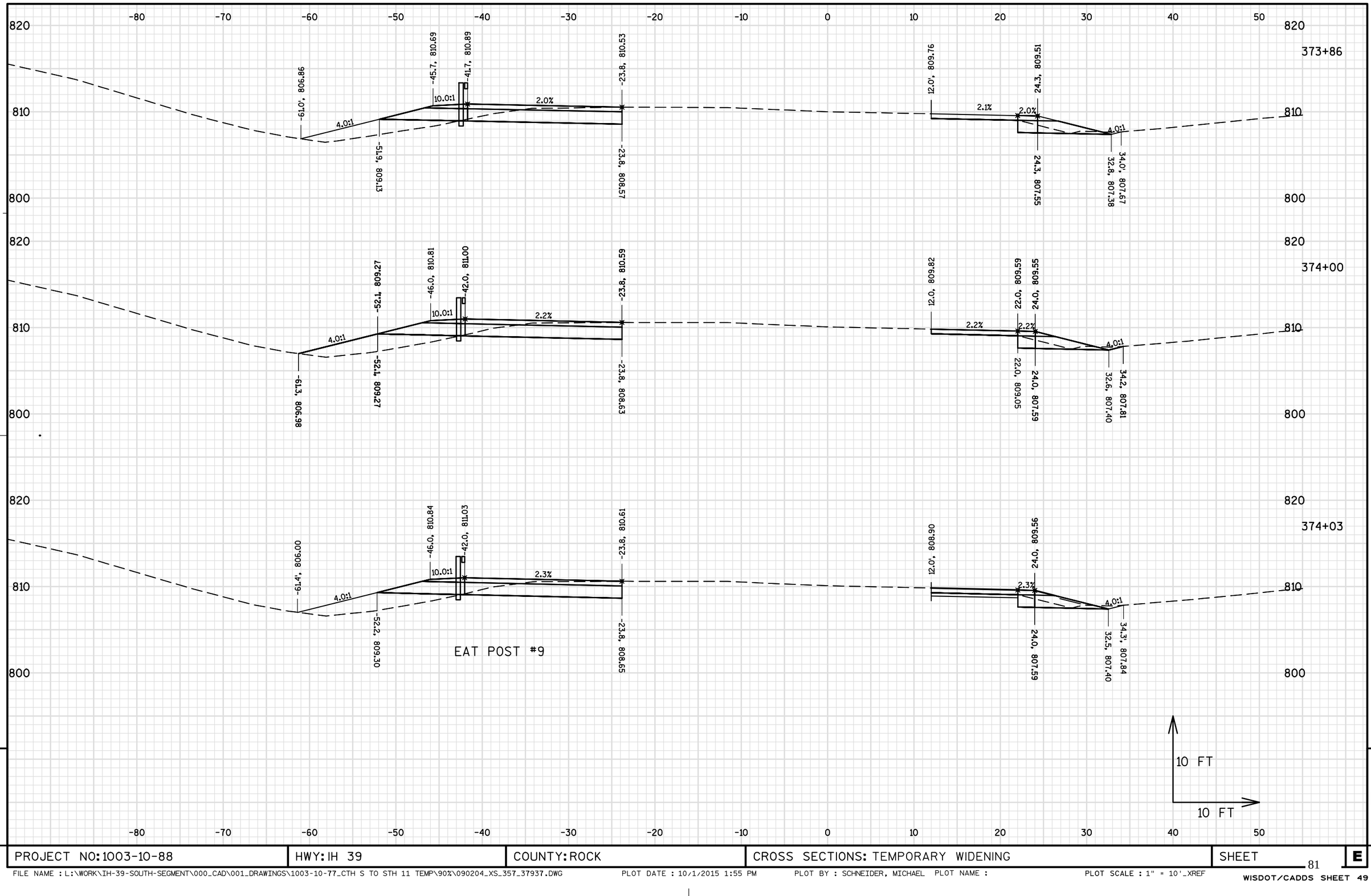


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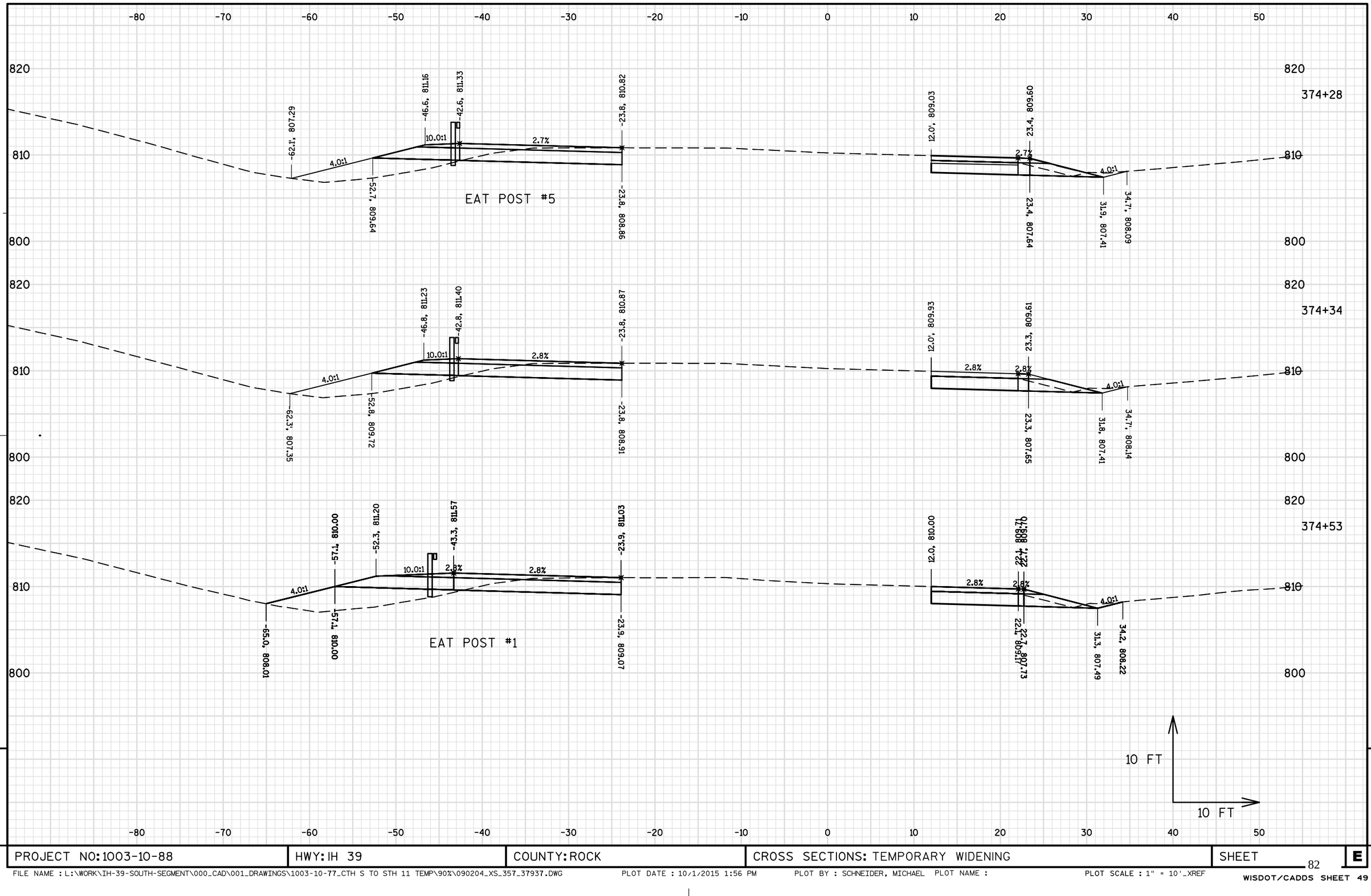


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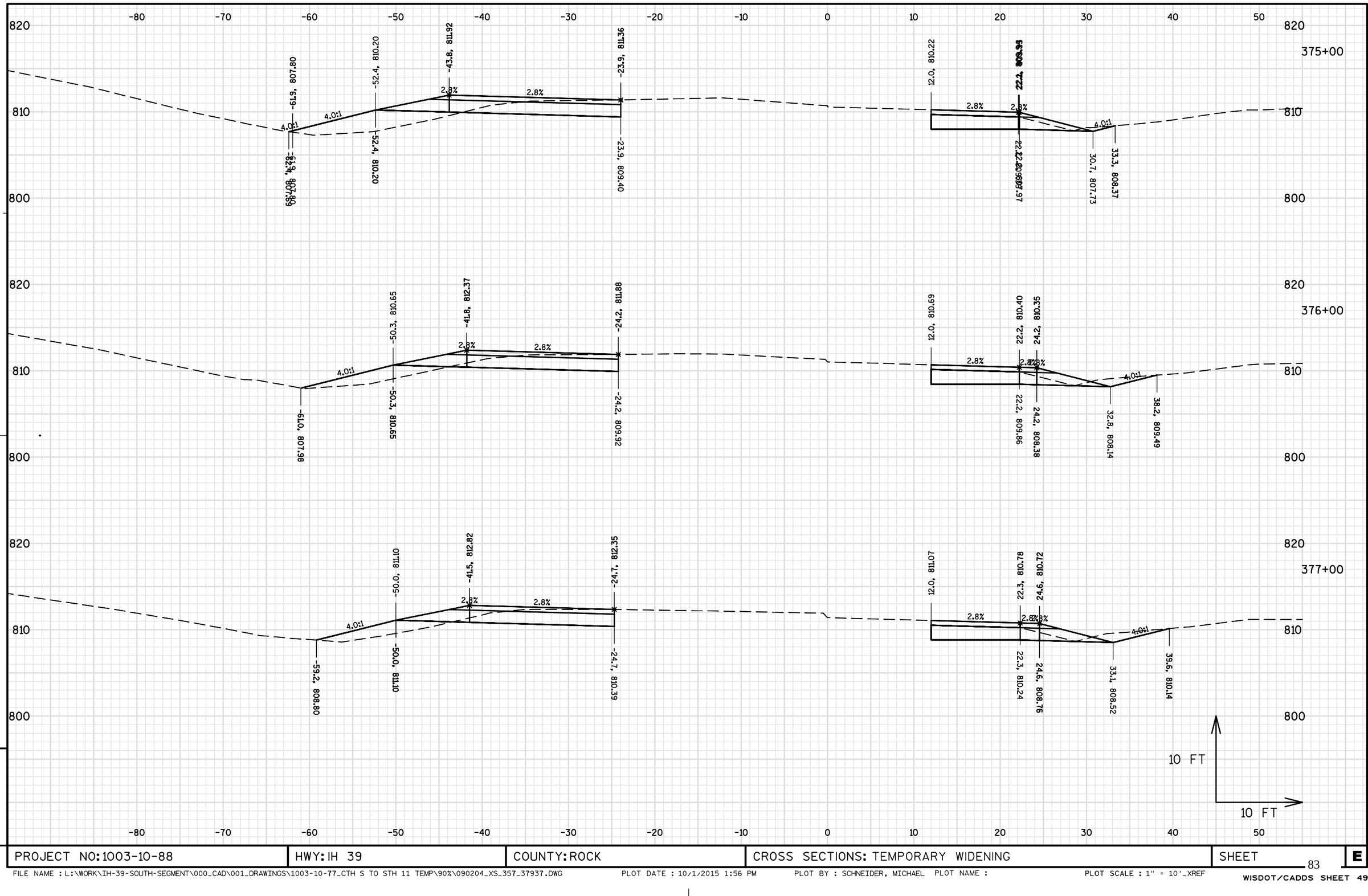
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WISDOT/CADDS SHEET 49



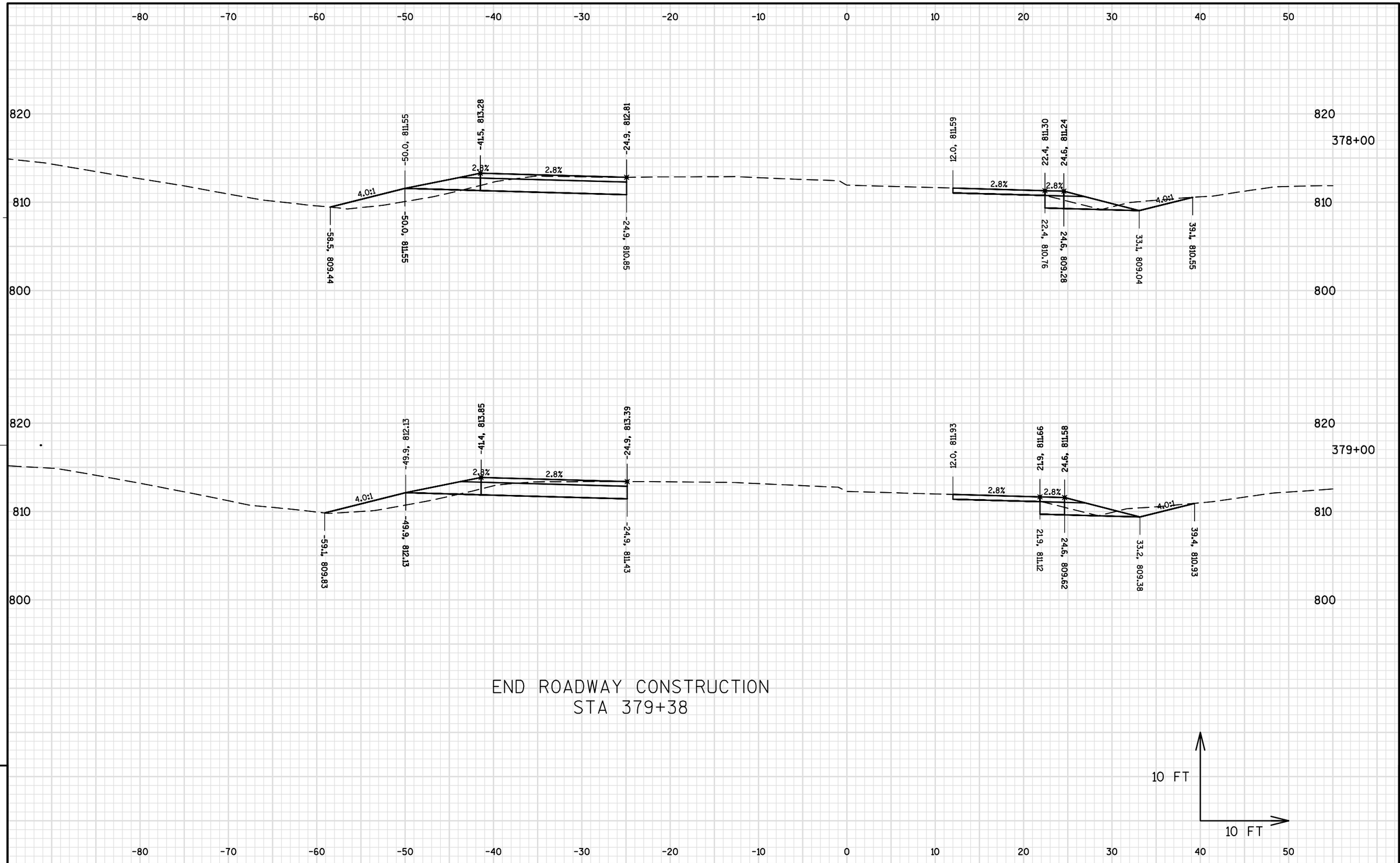
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PROJECT NO: 1003-10-88	HWY: IH 39	COUNTY: ROCK	CROSS SECTIONS: TEMPORARY WIDENING	SHEET	E

FILE NAME : L:\WORK\IH-39-SOUTH-SEGMENT\000_CAD\001_DRAWINGS\1003-10-77_CTH S TO STH 11 TEMP\90%\090204_XS_357_37937.DWG PLOT DATE : 10/1/2015 1:56 PM PLOT BY : SCHNEIDER, MICHAEL PLOT NAME : PLOT SCALE : 1" = 10'_XREF
WISDOT/CADDS SHEET 49



PROJECT NO: 1003-10-88	HWY: IH 39	COUNTY: ROCK	CROSS SECTIONS: TEMPORARY WIDENING	SHEET	E

FILE NAME : L:\WORK\IH-39-SOUTH-SEGMENT\000_CAD\001_DRAWINGS\1003-10-77_CTH S TO STH 11 TEMP\90%\090204_XS_357_37937.DWG PLOT DATE : 10/1/2015 1:57 PM PLOT BY : SCHNEIDER, MICHAEL PLOT NAME : PLOT SCALE : 1" = 10'_XREF
WISDOT/CADDS SHEET 49

Notes

Wisconsin Department of Transportation

Dedicated people creating transportation solutions
through innovation and exceptional service.

http://www.dot.wisconsin.gov

MAD FEBRUARY 2016

PROJECT ID: 1005-10-84
WITH: 1003-10-88

COUNTY: ROCK

02

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
1005-10-84	———	—

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

ILLINOIS STATE LINE - MADISON

NB NEWVILLE ROAD BRIDGE B-53-0073

IH 39

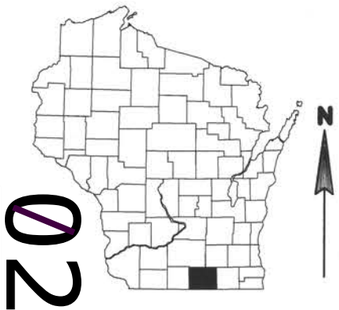
ROCK COUNTY

STATE PROJECT NUMBER
1005-10-84

ORDER OF SHEETS

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

TOTAL SHEETS = 184



N

END PROJECT 1005-10-84
STA. 1300+00.00 'TWNB'

DESIGN DESIGNATION

A.A.D.T. (2018)	=	54,000
A.A.D.T. (2020)	=	55,540
D.H.V. (2018)	=	5,890
D.D.	=	58/42
T.	=	29.1%
DESIGN SPEED	=	70 MPH
ESALS	=	4,200,000

CONVENTIONAL SYMBOLS

PLAN

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

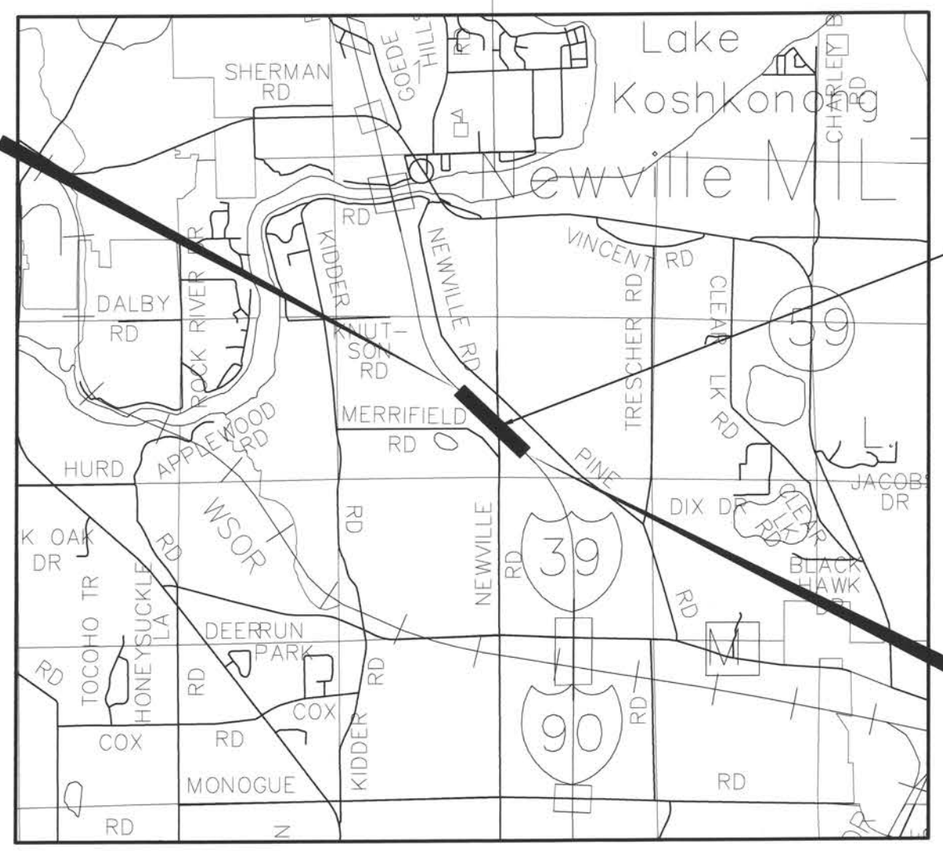
PROFILE

- 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

R-12-E R-13-E



STRUCTURE
B-53-0073
STA. 1284+26.67'TWNB'

T-4-N

BEGIN PROJECT 1005-10-84
STA. 1265+85.00 'TWNB'
Y = 313525.53
X = 497129.77

LAYOUT
SCALE 0 0.5 MI.

1005-10-84 TOTAL NET LENGTH OF CENTERLINE = 0.647 MI.

Coordinates on this plan are referenced to the Wisconsin County Coordinate System (WCCS), Rock County, NAD 1983(2007)
Vertical Datum based on USGS (NAVD 88)

ORIGINAL PLANS PREPARED BY

KL Engineering
[A] Better Experience

WISCONSIN
DANIEL J. RYAN
E-40769
MADISON
WI
PROFESSIONAL ENGINEER

7/12/15 (Date) Dan Ryan (Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	KL ENGINEERING, INC.
Designer	KL ENGINEERING, INC.
Project Manager	DEREK POTTER
Regional Examiner	JIM BUSCHKOPF
Regional Supervisor	WAYNE CHASE
C.O. Examiner	

APPROVED FOR THE DEPARTMENT
DATE: 7/13/15 Wayne Chase (Signature)

E

FILE NAME : G:\WDOTSW\WSW10-11032\CIVIL3D\TEMP WIDENING_CTHO-KENNEDY\SHEETS PLAN\PLAN DETAILS\010101_TI-NEWVILLLE.DWG PLOT DATE : 4/24/2012 12:27 PM PLOT BY : KL ENGINEERING PLOT NAME : PLOT SCALE :

WISDOT/CADDS SHEET 10

ABBREVIATIONS

BAD	BASE AGGREGATE DENSE
BM	BENCH MARK
BLDG.	BUILDING
CTR	CENTER
C/L	CENTERLINE
C.E.	COMMERCIAL ENTRANCE
CONC.	CONCRETE
CSW	CONCRETE SIDEWALK
CMCP	CORRUGATED METAL CULVERT PIPE
CP	CULVERT PIPE
CPCS	CULVERT PIPE CORRUGATED STEEL
CPRC	CULVERT PIPE REINFORCED CONCRETE
CPRCHE	CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL
CPT	CONSTRUCTION PERMIT
EAT	ENERGY ABSORBING TERMINAL
EB	EASTBOUND
ELEC	ELECTRIC
IE	INVERT ELEVATION
EX. OR EXIST	EXISTING
FO	FIBER OPTIC
F.E.	FIELD ENTRANCE
GAS	GAS
HMA	HOT MIX ASPHALT
HSE.	HOUSE
LHF	LEFT HAND FORWARD
MH	MANHOLE
MAX.	MAXIMUM
MIN.	MINIMUM
NOR.	NORMAL
NTS	NOT TO SCALE
PLE	PERMANENT LIMITED EASEMENT
P.E.	PRIVATE ENTRANCE
P.L.	PROPERTY LINE
PRW	PROPOSED RIGHT-OF-WAY
RAD OR R	RADIUS
R/L	REFERENCE LINE
REQ'D.	REQUIRED
RHF	RIGHT HAND FORWARD
RW	RIGHT-OF-WAY LINE
SAN	SANITARY SEWER
SHLD	SHOULDER
SW	SIDEWALK
SF	SQUARE FEET
SY	SQUARE YARD
S.D.D.	STANDARD DETAIL DRAWING
STA	STATION
SS	STORM SEWER
TEL	TELEPHONE
TLE	TEMPORARY LIMITED EASEMENT
TYP	TYPICAL
WAT	WATER
WB	WESTBOUND

ORDER OF DETAIL SHEETS

PROJECT OVERVIEW
TYPICAL SECTIONS
CONSTRUCTION DETAILS
APPROACH SLAB DETAIL AND FENCING PLAN
REMOVAL PLAN
PLAN DETAILS
EROSION CONTROL PLAN
PERMANENT SIGNING AND MARKING PLAN
TRAFFIC CONTROL AND CONSTRUCTION STAGING PLAN
ALIGNMENT DIAGRAM
BENCHMARKS, CONTROL POINTS, AND BORING LOCATIONS

UTILITY CONTACTS

SEWER

LON LIEFKE
CITY OF MILTON-WASTEWATER
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MILTON, WI 53563
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(608) 247-6918 (mobile)
lliefke@milton-wi.gov

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ROCK ENERGY COOPERATIVE
P.O. BOX 1758
2815 KENNEDY ROAD
JANESVILLE, WI 53545
(608) 752-4550
lynnm@rock.coop

COMMUNICATIONS

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224 INDUSTRIAL DRIVE
NORTH PRAIRIE, WI 53153
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mark.murn@centurylink.com

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

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EVAN SAYRE
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sayre.e@centurytel.net

TOWN OF MILTON

BRYAN MEYER
CHAIRMAN, TOWN OF MILTON
6025 N. KENNEDY ROAD
MILTON, WI 53563
(608) 774-9229
bcmeyer@ticon.net

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BENJAMIN COOPMAN, P.E.
3715 NEWVILLE ROAD
JANESVILLE, WI 53545
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WISCONSIN DEPARTMENT OF TRANSPORTATION
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emmanuel.yartey@dot.wi.gov

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SUITE 200
MADISON, WI 53711
(608) 663-1218
bhalvensleben@klengineering.com

DESIGN CONTACT

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WISCONSIN DEPARTMENT OF TRANSPORTATION
111 INTERSTATE BLVD
EDGERTON, WI 53534
(608) 884-7135
Derek.Potter@dot.wi.gov

DNR LIAISON

LAURA BUB
DEPARTMENT OF NATURAL RESOURCES
DNR SOUTH CENTRAL REGION HEADQUARTERS
3911 FISH HATCHERY ROAD
FITCHBURG, WI 53711
(608) 275-3485
laura.bub@wisconsin.gov

GENERAL NOTES

THE LOCATION OF EXISTING AND PROPOSED UTILITY INSTALLATIONS AS SHOWN IN THE PLAN ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN. CONTACT DIGGERS HOTLINE AND AFFECTED UTILITIES PRIOR TO START OF WORK.

UTILITY REFERENCE LINES ON THE CROSS SECTIONS ARE FOR APPROXIMATE HORIZONTAL REFERENCE ONLY.

REMOVAL ITEMS REQUIRING RESTORATION OF CONCRETE OR ASPHALT SHALL BE REMOVED TO AN EXISTING JOINT OR SAWED AS DETERMINED BY THE ENGINEER.

EROSION CONTROL FEATURES AS SHOWN IN THE PLANS ARE AT SUGGESTED LOCATIONS. THE ENGINEER MAY MODIFY LOCATIONS AS NEEDED. ALL EROSION CONTROL MEASURES SHALL BE MAINTAINED UNTIL SUCH TIME AS THE ENGINEER DETERMINES THE MEASURE IS NO LONGER NECESSARY.

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

PIPE ELEVATIONS, LENGTHS, AND LOCATIONS AS SHOWN ON THE PLANS, MAY BE ADJUSTED TO FIT EXISTING FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

JOINT TIES FOR CONCRETE PIPE SHALL BE PROVIDED AT ALL REINFORCED CONCRETE APRON ENDWALL LOCATIONS. APRON ENDWALLS SHALL BE TIED FOR THE LAST THREE JOINTS AT PIPE ENDS. THE COST OF THESE TIES SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE FOR THE REINFORCED CONCRETE PIPE.

STATIONING AND OFFSETS TO APRON ENDWALLS FOR STORM SEWER AND CULVERT PIPES ARE SHOWN TO THE END OF THE PIPE.

LOCATIONS OF INLETS AND MANHOLES AS SHOWN ON THE STORM SEWER SHEETS ARE BY STATION AND OFFSET TO THE CENTER OF THE STRUCTURE (SEE DETAIL).

CONTRACTOR IS RESPONSIBLE FOR RESHAPING AND FINISHING ANY PREVIOUSLY GRASSED AREAS WHICH ARE DISTURBED BY THEIR OPERATION OUTSIDE THE NORMAL CONSTRUCTION LIMITS.
THE CONTRACTOR'S HMA PAVING OPERATION SHALL BE CONSISTENT WITH THE TYPICAL SECTIONS AND CONSTRUCTED TO PREVENT LONGITUDINAL JOINTS FROM BEING LOCATED WITHIN A DRIVING, TURNING, PASSING OR PARKING LANE.

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

HMA PAVEMENT, WHEN INDICATED ON THE PLANS, SHALL CONSIST OF COURSES AS FOLLOWS:

TOTAL DEPTH	LAYERS	TYPE	NOMINAL MAX SIZE GRADATION	PERFORMANCE GRADE
6 1/4-INCH	2 1/4" UPPER 4" LOWER	E-30 E-30	12.5 mm 19.0 mm	PG64-28 PG58-28
2 -INCH	1 LAYER	E-10	12.5 mm	PG58-28
2 -INCH	1 LAYER	E-30	12.5 mm	PG64-28

2

2

CTH M

1200'TWNB'

1220'TWNB'

1240'TWNB'

BURIAL SITE
WHITFORD MAP MOUND

B-53-0072

E MERRIFIELD RD

1260'TWNB'

1280'TWNB'

1300'TWNB'

END PROJECT 1005-10-84
STA. 1300+00.00 'TWNB'

B-53-0073

NEWVILLE RD.

1320'TWNB'

IH 39/90

1340'TWNB'

1360'TWNB'

ROCK RIVER

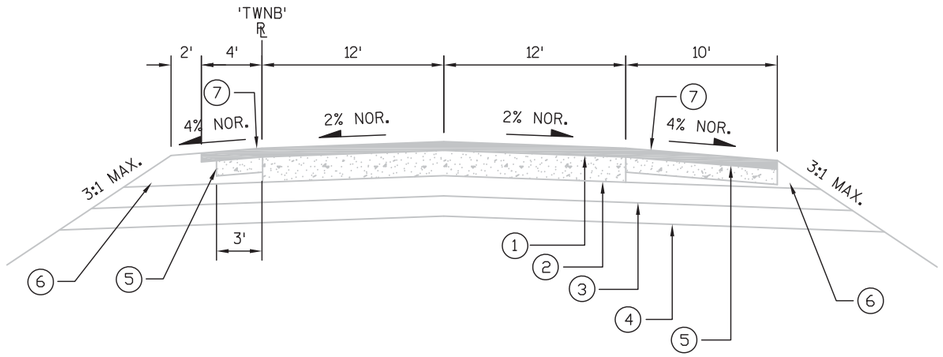
BEGIN PROJECT 1005-10-84
STA. 1265+85.00 'TWNB'

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PROJECT NO: 1005-10-84	HWY: IH 39/90	COUNTY: ROCK	PLAN: PROJECT OVERVIEW	SHEET 3	E

FILE NAME : G:\WDOTSW\WSW10-11032\CIVIL3D\TEMP WIDENING_CTHO-KENNEDY\SHEETS PLAN\PLAN DETAILS\020201_PO_NEWVILLE.DWG PLOT DATE : 9/3/2008 9:36 AM PLOT BY : KL ENGINEERING PLOT NAME : _____ PLOT SCALE : ========== WISDOT/CADDS SHEET 42

2

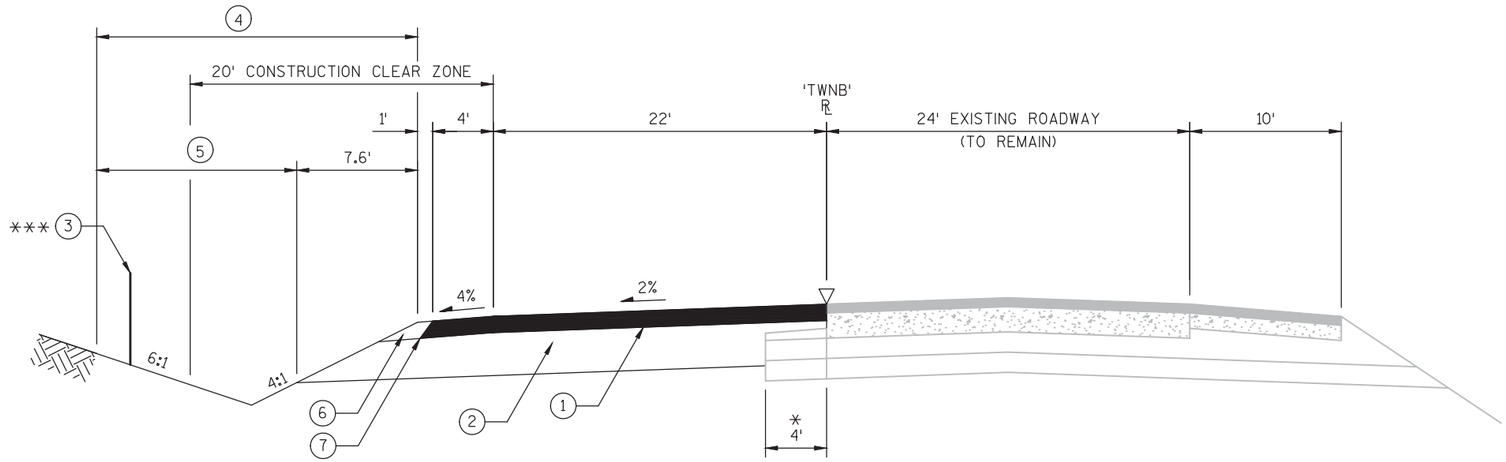


TYPICAL EXISTING SECTION - NB IH 39/90

STA. 1265+85 'TWNB' - 1300+00 'TWNB'

LEGEND

1	3 1/2" ASPHALTIC PAVEMENT
2	10" CONTINUOUS REINFORCED CONCRETE PAVEMENT
3	8" CRUSHED AGGREGATE BASE COURSE
4	GRANULAR SUBBASE COURSE
5	6" NON-REINFORCED CONCRETE
6	CRUSHED AGGREGATE BASE COURSE
7	RUMBLE STRIPS



TYPICAL FINISHED SECTION - IH 39/90

STA. 1265+85'TWNB' - 1269+15'TWNB'

STA. 1296+40'TWNB' - 1300+00'TWNB

* EXISTING BASE COURSE AND SUBBASE TO REMAIN IN LOCATIONS WHERE PAVED SHOULDER TO BE REMOVED.

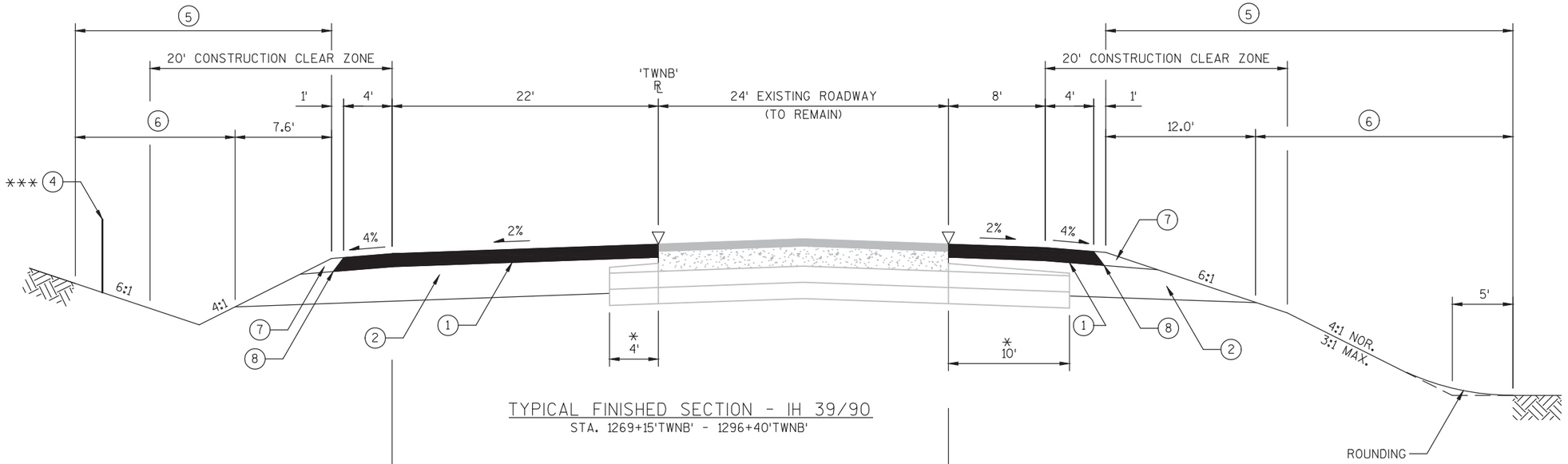
*** INSTALL HIGH TENSION CABLE GUARD 8' MIN. FROM MEDIAN DITCH BOTTOM. AT LOCATIONS SHOWN ON PLANS.

▽ SAWING CONCRETE

EXCAVATION BELOW SUBGRADE IS ANTICIPATED ON THIS PROJECT. EXCAVATION BELOW SUBGRADE IS SHOWN IN THE MISCELLANEOUS QUANTITY TABLES AND EARTHWORK DATA TABLES.

LEGEND

(1)	6 1/4" HMA PAVEMENT, TYPE E-30
(2)	BASE AGGREGATE DENSE 1 1/4", 16-INCH
(3)	HIGH-TENSION CABLE GUARD TL-3, SOCKETED, GIBRALTAR
(4)	TEMPORARY SEED, SEED, AND FERTILIZER
(5)	SALVAGED TOPSOIL AND MULCH
(6)	BASE AGGREGATE DENSE 3/4"
(7)	SAFETY EDGE (TYP.)



TYPICAL FINISHED SECTION - IH 39/90

STA. 1269+15'TWNB' - 1296+40'TWNB'

LEGEND

1	6 1/4" HMA PAVEMENT, TYPE E-30
2	BASE AGGREGATE DENSE 1 1/4", 16-INCH
3	MGS GUARDRAIL 3
4	HIGH-TENSION CABLE GUARD TL-3, SOCKETED, GIBRALTAR
5	TEMPORARY SEED, SEED, AND FERTILIZER
6	SALVAGED TOPSOIL AND MULCH
7	BASE AGGREGATE DENSE 3/4"
8	SAFETY EDGE (TYP.)

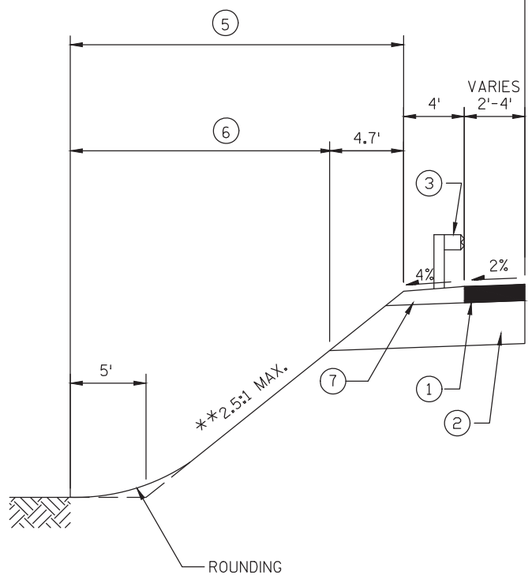
* EXISTING BASE COURSE AND SUBBASE TO REMAIN IN LOCATIONS WHERE PAVED SHOULDER TO BE REMOVED.

** FOR GRADING AT END AREA TREATMENT SEE CROSS SECTIONS

*** INSTALL HIGH TENSION CABLE GUARD 8' MIN. FROM MEDIAN DITCH BOTTOM. AT LOCATIONS SHOWN ON PLANS.

▽ SAWING CONCRETE

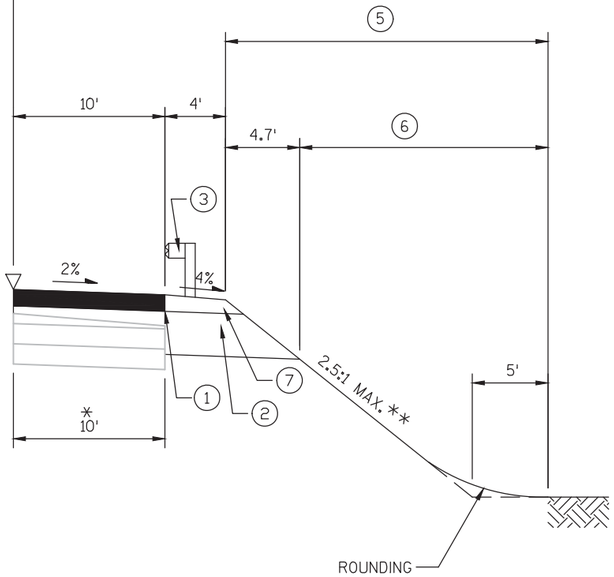
EXCAVATION BELOW SUBGRADE IS ANTICIPATED ON THIS PROJECT. EXCAVATION BELOW SUBGRADE IS SHOWN IN THE MISCELLANEOUS QUANTITY TABLES AND EARTHWORK DATA TABLES.



TYPICAL FINISHED PARTIAL SECTION - IH 39/90

STA. 1281+63'TWNB' - 1283+13'TWNB'

STA. 1284+89'TWNB' - 1287+51'TWNB'



TYPICAL FINISHED PARTIAL SECTION - IH 39/90

STA. 1276+31'TWNB' - 1283+83'TWNB'

STA. 1285+34'TWNB' - 1286+84'TWNB'

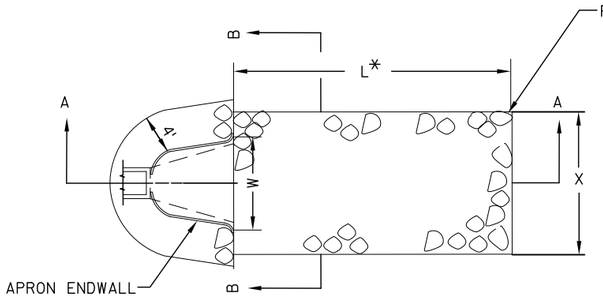
PROJECT NO: 1005-10-84	HWY: IH 39/90	COUNTY: ROCK	PLAN: TYPICAL SECTIONS - NORTHBOUND IH 39/90	SHEET 6 E

FILE NAME : \\KL1NAS\DATA1\WDOTSW\WSW10-11032\CIVIL3D\TEMP WIDENING_CTH0-KENNEDY\SHEETS PLAN\PLAN DETAILS\020301_TS_NEWVILLE.DWG PLOT DATE : 11/20/2015 PLOT BY : KL ENGINEERING PLOT NAME : _____ PLOT SCALE : 1 IN:10 FT

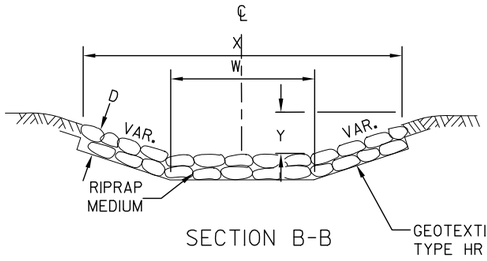
WISDOT/CADDS SHEET 42

	HYDROLOGIC SOIL GROUP											
	A			B			C			D		
	SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)		
LAND USE:	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER
ROW CROPS	.08 .22	.16 .30	.22 .38	.12 .26	.20 .34	.27 .44	.15 .30	.24 .37	.33 .50	.19 .34	.28 .41	.38 .56
MEDIAN STRIP-TURF	.19 .24	.20 .26	.24 .30	.19 .25	.22 .28	.26 .33	.20 .26	.23 .30	.30 .37	.20 .27	.25 .32	.30 .40
SIDE SLOPE-TURF			.25 .32			.27 .34			.28 .36			.30 .38
PAVEMENT:												
ASPHALT	.70 - .95											
CONCRETE	.80 - .95											
BRICK	.70 - .80											
DRIVES, WALKS	.75 - .85											
ROOFS	.75 - .95											
GRAVEL ROADS, SHOULDERS	.40 - .60											

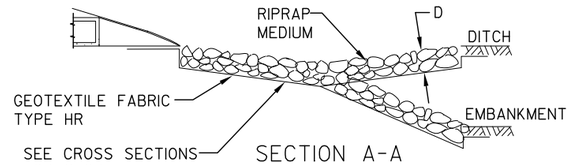
TOTAL PROJECT AREA = 21.0 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 5.7 ACRES



PLAN VIEW



SECTION B-B



SECTION A-A

L* = 3 x W (NOR.) OR 10' MIN. OR AS INDICATED IN THE PLANS OR AS DIRECTED BY THE ENGINEER.

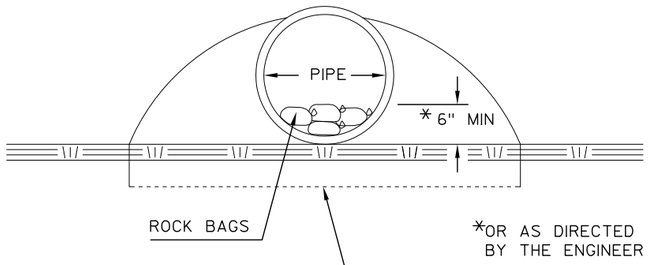
D = 18" FOR RIPRAP MEDIUM

X = W+2' FOR TYPICAL CULVERT DISCHARGE INTO DITCH
W+5' FOR CULVERT DISCHARGE DOWN EMBANKMENT SLOPE

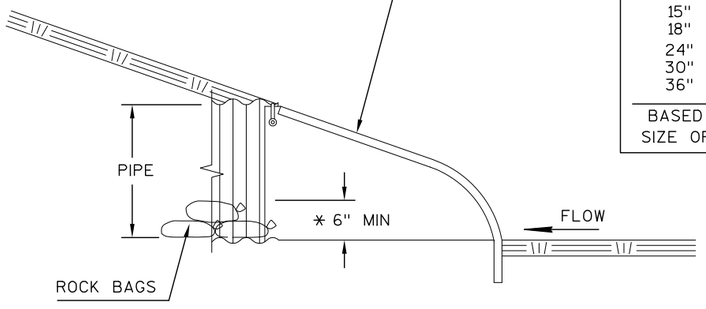
Y = 0' FOR TYPICAL CULVERT DISCHARGE INTO DITCH
12" FOR CULVERT DISCHARGE DOWN EMBANKMENT SLOPE

RIPRAP AND GEOTEXTILE FABRIC DETAIL AT APRON ENDWALLS

SEE EROSION CONTROL PLAN FOR LOCATIONS.



END VIEW



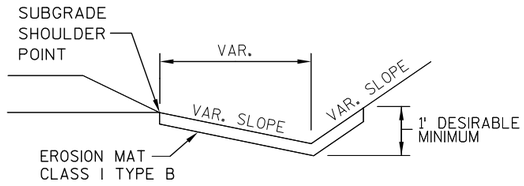
SIDE VIEW

APPROXIMATE NUMBER OF ROCK BAGS REQUIRED BY PIPE SIZE

PIPE SIZE (IN)	ROCK BAGS (EACH)
15"	1
18"	1
24"	2
30"	2
36"	3
BASED ON A BAG SIZE OF 18"x12"x6"	

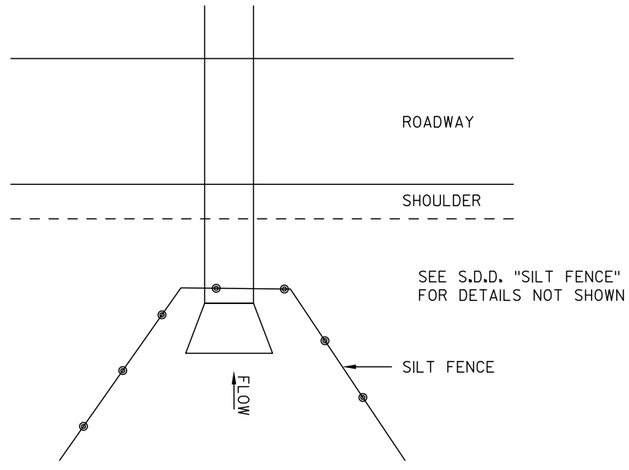
CULVERT PIPE CHECKS

SEE EROSION CONTROL PLAN FOR LOCATIONS.



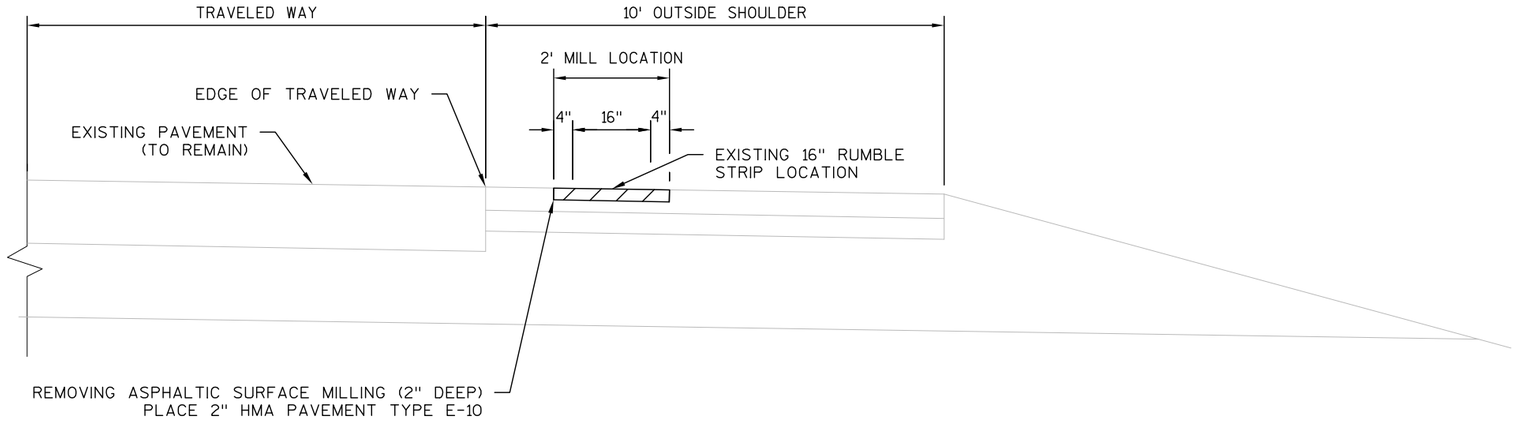
EROSION MAT DETAIL FOR DITCHES

SEE EROSION CONTROL PLAN FOR LOCATIONS.



TYPICAL SILT FENCE DETAIL AT PIPE INLET

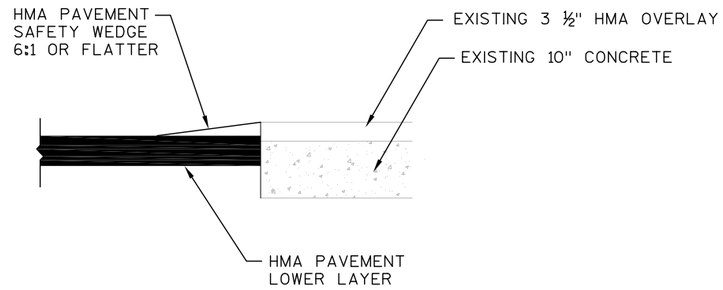
SEE EROSION CONTROL PLAN FOR LOCATIONS.



SECTION VIEW

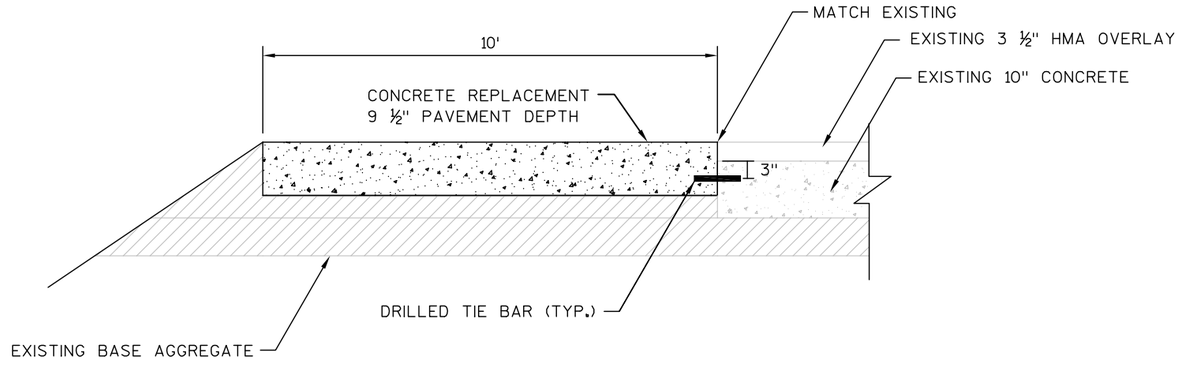
REMOVING ASPHALTIC SURFACE MILLING - 2' WIDTH

STA. 1262+25'TWNB' - STA. 1303+60'TWNB, RT.



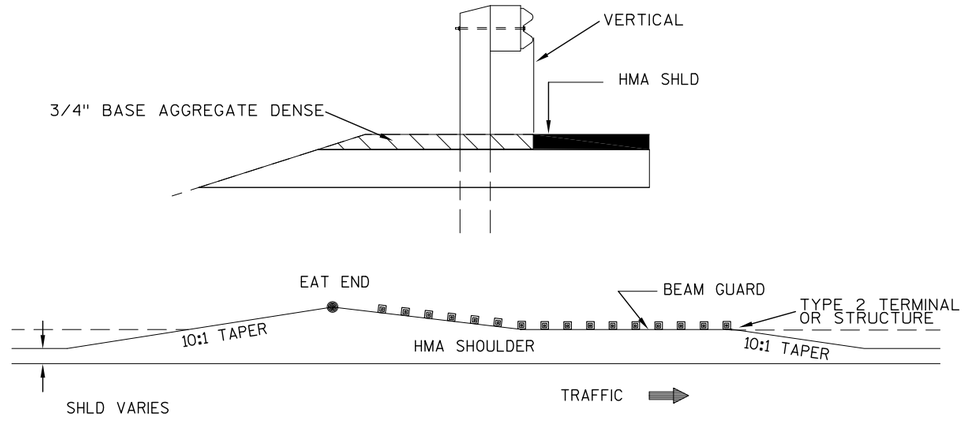
HMA PAVEMENT SAFETY WEDGE

NOTE:
HMA PAVEMENT SAFETY WEDGE TO BE PLACED WHEN UNABLE TO PAVE BOTH THE LOWER AND UPPER LAYERS OF HMA PAVEMENT IN ONE NIGHT.



OUTSIDE SHOULDER CONCRETE REPAIR AND REPLACEMENT

NOTE:
1) SEE SDD "CONCRETE PAVEMENT REPAIR AND REPLACEMENT" FOR DETAILS NOT SHOWN.
2) DO NOT PLACE DOWEL BARS AT CONTRACTION JOINTS OR DRILL DOWEL BARS INTO EXISTING CONCRETE PAVEMENT. MAXIMUM CONTRACTION JOINT SPACING IS 15'.
3) PLACE DRILLED TIE BARS IN THE CENTER OF THE EXISTING 10" CONCRETE PAVEMENT.
4) SEE PLANS FOR LOCATIONS.



NOTE: DETAIL IS SHOWN FOR INSIDE SHOULDER. MIRROR DETAIL FOR OUTSIDE SHOULDER.

DETAIL FOR ASPHALTIC SHOULDER AT BEAM GUARD

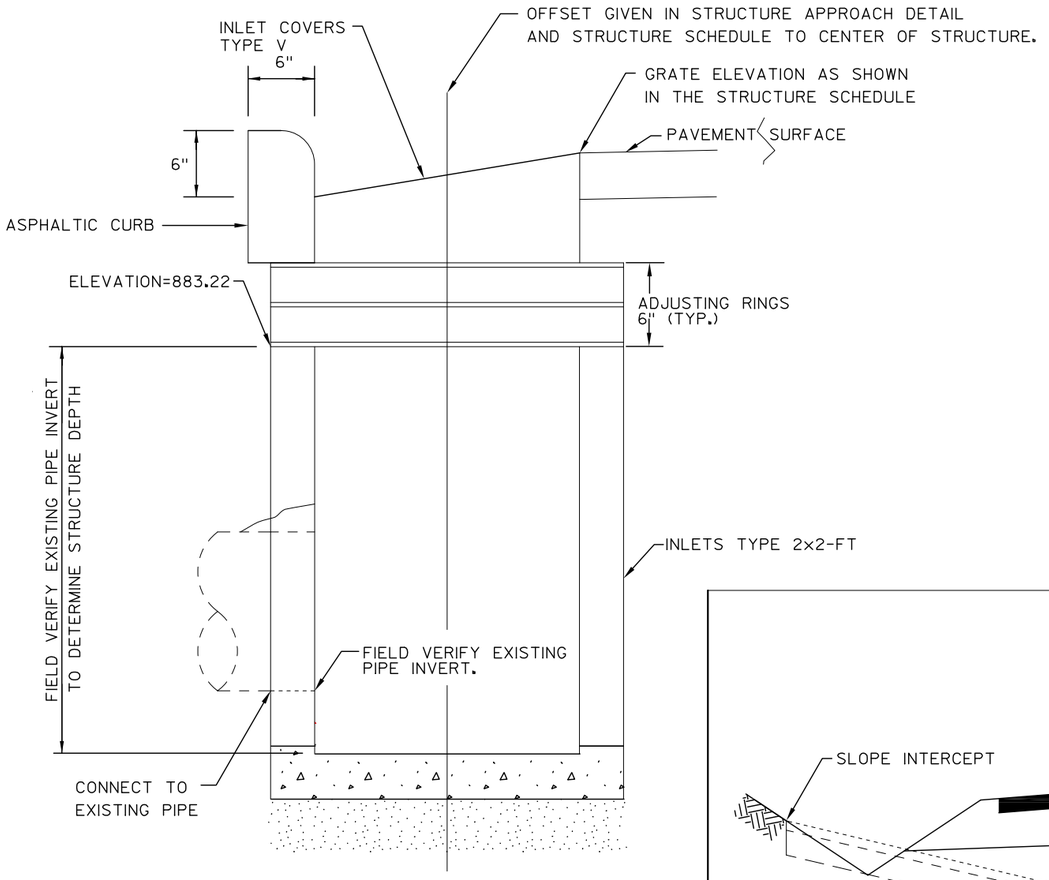
SEE S.D.D. "MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL",
"MIDWEST GUARDRAIL SYSTEM (MGS) ENERGY ABSORBING TERMINAL",
"MIDWEST GUARDRAIL SYSTEM (MGS) THRIE BEAM TRANSITION",
FOR DETAILS NOT SHOWN.

2

GENERAL NOTES:

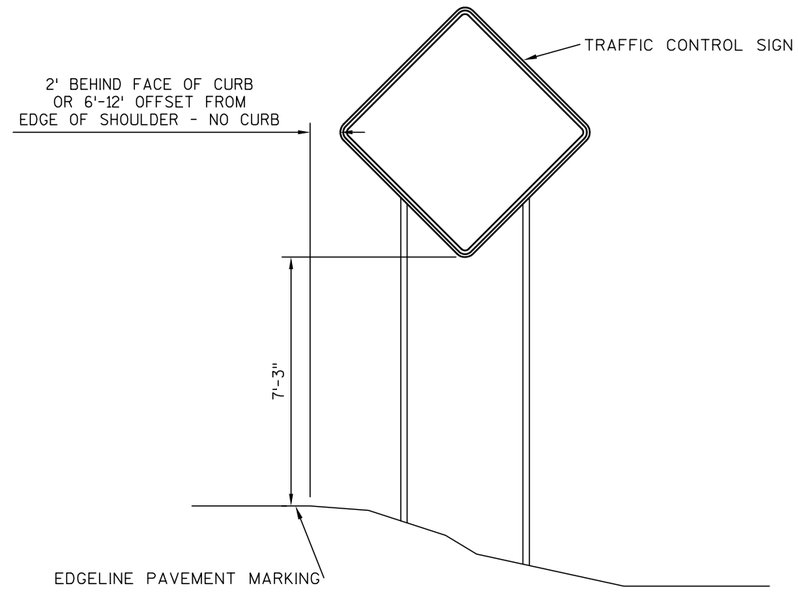
GRANULAR BACKFILL REQUIRED AROUND INLET
(INCIDENTAL TO CONSTRUCTION OF INLET)

DETAILS OF CONSTRUCTION, MATERIALS, AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND S.D.D. FOR INLETS 2X2-FT.



DROP INLET STRUCTURE & ASPHALTIC CURB

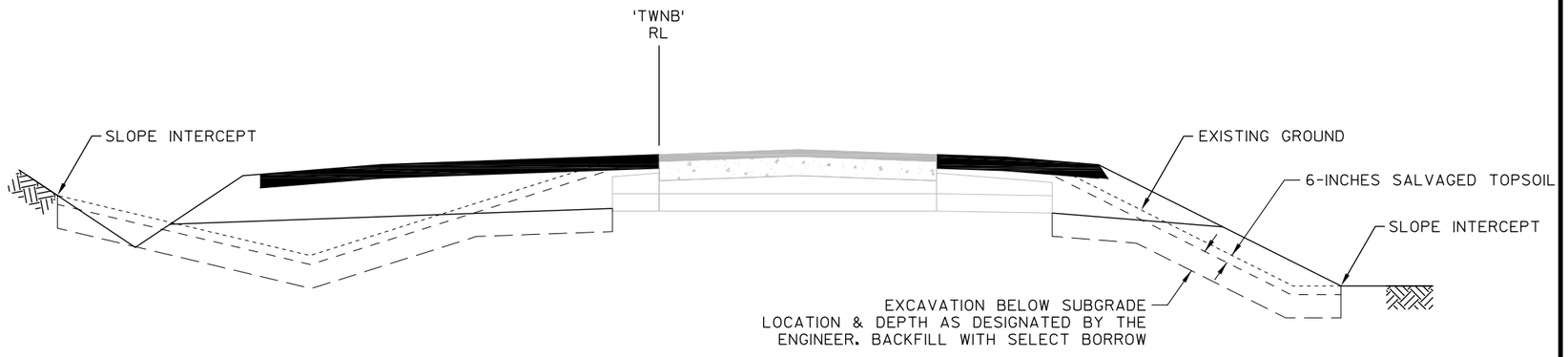
1285+40'TWNB'



TYPICAL TEMPORARY TRAFFIC CONTROL DETAIL

MOUNTING ON FIXED SUPPORT

LONG TERM
7 DAYS OR MORE



DETAIL FOR EXCAVATION BELOW SUBGRADE

EXCAVATION BELOW SUBGRADE SHOWN IN
MISCELLANEOUS QUANTITY TABLES
AND COMPUTER EARTHWORK DATA TABLES

| | | |

2

WI Dept. of Transportation
3502 Kinsman Blvd.
Madison, WI 53704

WISDOT PROJECT ID: 1005-10-84
WISDOT STRUCTURE ID:

BORING ID: CG-13

PAGE NO: 1 of 1

WISDOT PROJECT NAME: I-39 Central Segment	CONSULTANT: CGC, Inc.	CONSULTANT PROJECT NO: C12011-4	LATITUDE:	LONGITUDE:	
ROADWAY NAME: I-39 Central	DRILLING CONTRACTOR: SES	DRILLING CONTRACTOR PROJECT NO: 12939.2	NORTHING: 315924.1	EASTING: 494663.9	
DATE STARTED: 3/27/15	CREW CHIEF: SWK	DRILL RIG: CME-850	COORDINATE SYSTEM:		
DATE COMPLETED: 3/27/15	LOGGED BY: SES	HOLE SIZE: 2.25 in	HORIZONTAL DATUM: WGS 1984	VERTICAL DATUM: MSL	
COUNTY: Rock	LOG QC BY: AJB	HAMMER TYPE: Automatic	STREAMBED ELEVATION: NA		
STATION:	OFFSET:	TOWNSHIP: RANGE: SECTION: 1/4 SECTION: 1/4 1/4 SECTION:	SURFACE ELEVATION: 868.1 ft		

SAMPLE TYPE NUMBER	RECOVERY (in) (RQD)	Moisture	BLOW COUNTS (N VALUE)	Depth (ft)	Graphic	Soil / Rock Description and Geological Origin for Each Major Unit / Comments	USCS / AASHTO	Strength Qp (tsf)	Liquid Limit (%)	Plasticity Index (%)	Boulders	Drilling Method	Notes
				0.3		4 in. Dark Brown Silty TOPSOIL (OL) 867.8							
						Loose to Medium Dense, Brown Fine to Medium SAND, Trace to Little Silt and Gravel (SP/SP-SM)							
SS 1	10	M	11										
SS 2	13	M	9										
SS 3	15	M	13										
SS 4	15	M	14										
				10.0		858.1							

Borehole backfilled with soil cuttings
Boring Offset 5 ft SW of Staked Location
End of Boring at 10.0 ft.

WATER LEVEL & CAVE-IN OBSERVATION DATA

WATER ENCOUNTERED DURING DRILLING: NE	CAVE - IN DEPTH AT COMPLETION: NMR	WET ☐ DRY ☐		
WATER LEVEL AT COMPLETION: NE	CAVE - IN DEPTH AFTER 0 HOURS: NMR	WET ☐ DRY ☐		

NOTES: 1) Stratification lines between soil types represent the approximate boundary; gradual transition between in-situ soil layers should be expected.
2) NE = Not Encountered; NMR = No Measurement Recorded

WI Dept. of Transportation
3502 Kinsman Blvd.
Madison, WI 53704

WISDOT PROJECT ID: 1005-10-84
WISDOT STRUCTURE ID:

BORING ID: CG-14

PAGE NO: 1 of 1

WISDOT PROJECT NAME: I-39 Central Segment	CONSULTANT: CGC, Inc.	CONSULTANT PROJECT NO: C12011-4	LATITUDE:	LONGITUDE:	
ROADWAY NAME: I-39 Central	DRILLING CONTRACTOR: SES	DRILLING CONTRACTOR PROJECT NO: 12939.2	NORTHING: 316044.7	EASTING: 494489.7	
DATE STARTED: 3/27/15	CREW CHIEF: SWK	DRILL RIG: CME-850	COORDINATE SYSTEM:		
DATE COMPLETED: 3/27/15	LOGGED BY: SES	HOLE SIZE: 2.25 in	HORIZONTAL DATUM: WGS 1984	VERTICAL DATUM: MSL	
COUNTY: Rock	LOG QC BY: AJB	HAMMER TYPE: Automatic	STREAMBED ELEVATION: NA		
STATION:	OFFSET:	TOWNSHIP: RANGE: SECTION: 1/4 SECTION: 1/4 1/4 SECTION:	SURFACE ELEVATION: 870.2 ft		

SAMPLE TYPE NUMBER	RECOVERY (in) (RQD)	Moisture	BLOW COUNTS (N VALUE)	Depth (ft)	Graphic	Soil / Rock Description and Geological Origin for Each Major Unit / Comments	USCS / AASHTO	Strength Qp (tsf)	Liquid Limit (%)	Plasticity Index (%)	Boulders	Drilling Method	Notes
				0.2		2 in. Dark Brown Silty TOPSOIL (OL) 870.0							
SS 1	15	M	18			Stiff, Brown Lean CLAY, Little Sand, Trace Gravel (CL-Possible Fill)		1.5					
				3.0		867.2							
SS 2	15	M	12			Medium Dense, Brown Fine to Medium SAND, Trace to Little Silt and Gravel (SP/SP-SM)							
SS 3	15	M	26										
SS 4	18	M	15										
				10.0		860.2							

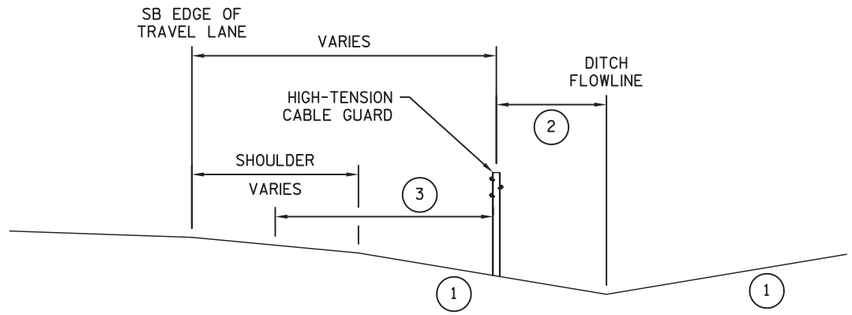
Borehole backfilled with soil cuttings
End of Boring at 10.0 ft.

WATER LEVEL & CAVE-IN OBSERVATION DATA

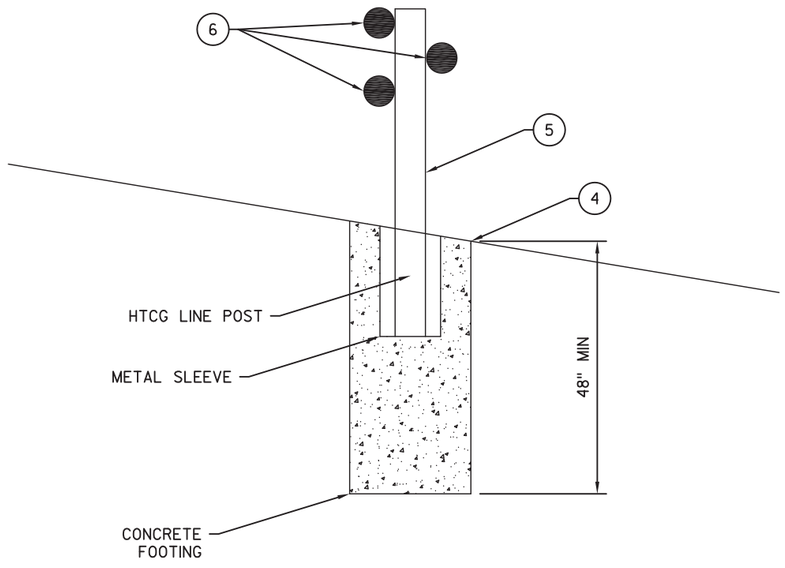
WATER ENCOUNTERED DURING DRILLING: NE	CAVE - IN DEPTH AT COMPLETION: NMR	WET ☐ DRY ☐		
WATER LEVEL AT COMPLETION: NE	CAVE - IN DEPTH AFTER 0 HOURS: NMR	WET ☐ DRY ☐		

NOTES: 1) Stratification lines between soil types represent the approximate boundary; gradual transition between in-situ soil layers should be expected.
2) NE = Not Encountered; NMR = No Measurement Recorded

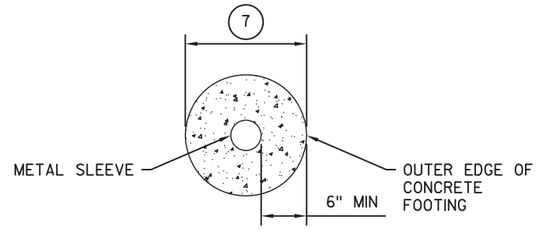
2



HIGH-TENSION CABLE GUARD (HTCG) LINE POST PLACEMENT



CROSS SECTION VIEW LINE POST DETAIL (7)



PLAN VIEW LINE POST DETAIL (7)
(CABLES OMITTED FOR CLARITY)

(1) DO NOT INSTALL HTCG ON SLOPES STEEPER THAN 6:1

(2) OFFSET OF HTCG: SEE TYPICAL SECTIONS

(3) DEFLECTION IS MEASURED FROM MIDPOINT OF SHOULDER TO LINE POST. FOR DEFLECTION CRITERIA SEE SPECIAL PROVISIONS

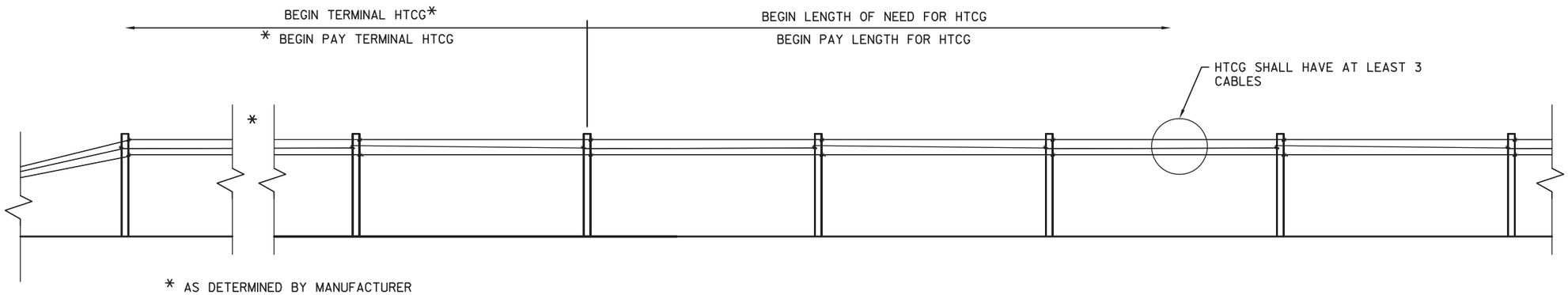
(4) CONCRETE FOOTING FOR HTCG LINE POST SHALL BE FLUSH WITH FINISH SURFACE +/- 3/4" TOLERANCE

(5) LINE POST FOR HTCG SHALL BE PLUMB, EASILY REMOVED FROM STEEL SLEEVE AND MAINTAIN CABLES AT THE CORRECT ELEVATION

(6) HTCG SHALL HAVE A MINIMUM OF 3 CABLES. CABLES SHALL HOLD DESIRED TENSION PER MANUFACTURER'S SPECIFICATIONS. SEE MANUFACTURER'S SPECIFICATIONS FOR CORRECT HEIGHT OF CABLES AND CABLE CONFIGURATION

(7) SEE MANUFACTURER'S DETAILS AND SPECIFICATIONS FOR LINE POST FOOTING DESIGN

2



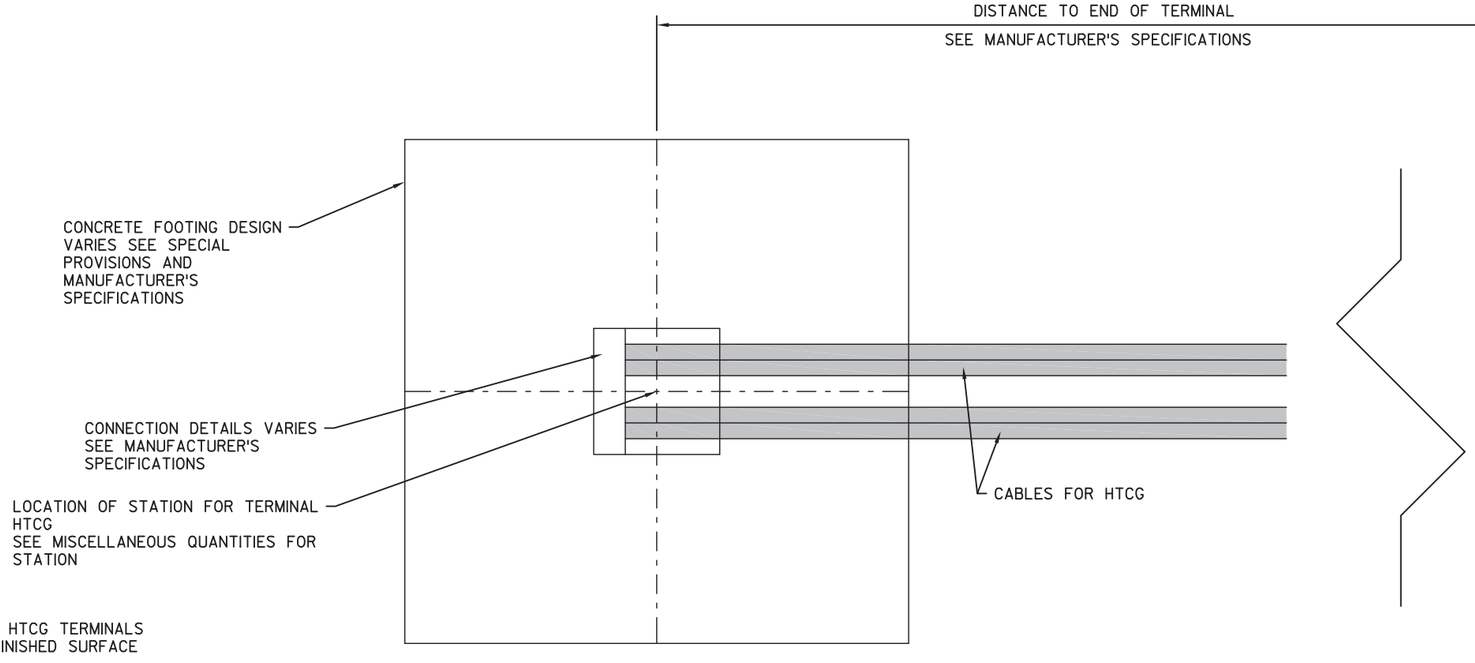
HIGH-TENSION CABLE GUARD (HTCG) PAY LIMIT DETAIL AND
TERMINAL, HIGH TENSION CABLE GUARD PAY LIMIT DETAIL

LEGEND

CMC = CROSS MEDIAN CRASHES

HTCG= HIGH TENSION CABLE GUARD

LON = LENGTH OF NEED



CONCRETE ANCHORS FOR HTCG TERMINALS SHALL BE FLUSH WITH FINISHED SURFACE ±3/4" TOLERANCE

PLAN VIEW OF CONCRETE ANCHOR

2

2

LEGEND

P.C.S. DENOTES PAVED CONCRETE SHOULDER PAID FOR AS "CONCRETE PAVEMENT, 9-INCH"

C.P.A.S. DENOTES CONCRETE PAVEMENT APPROACH SLAB

NOTE:
DO NOT TIE EXISTING AND PROPOSED CONCRETE PAVEMENT APPROACH SLABS.

FOR DETAILS NOT SHOWN SEE S.D.D. "CONCRETE PAVEMENT APPROACH SLAB"

N

IH 39/90 SB

P.C.S.

P.C.S.

HMA PAVEMENT

+10.33

C.P.A.S.

STRUCTURE B-53-73

C.P.A.S.

+15.74

HMA PAVEMENT

1282+00'TWNB'

1283+00'TWNB'

1284+00'TWNB'

1285+00'TWNB'

1286+00'TWNB'

1287+00'TWNB'

15" CMP

18" CMP

EXISTING CONCRETE PAVEMENT WITH HMA OVERLAY

EXISTING C.P.A.S. WITH HMA OVERLAY

EXISTING CONCRETE PAVEMENT WITH HMA OVERLAY

IH 39/90 NB

EXISTING C.P.A.S. WITH HMA OVERLAY

CONSTRUCT ASPHALTIC CURB FROM EXISTING PARAPET TO 5' PAST INLET

FENCE WOVEN WIRE (4 FT.)

+45.5 'TWNB'
45.1' RT

STA. 1285+40'TWNB', 33.2' RT.
1-INLETS TYPE 2X2-V REQUIRED
CONNECT TO EXISTING DROP INLET PIPE
FIELD VERIFY LOCATION PRIOR TO CONSTRUCTION
SEE DETAIL

NEWVILLE RD

MATCH EXISTING FENCE

2" POLYMER MODIFIED ASPHALT OVERLAY AS SHOWN IN STRUCTURE PLANS

2" HMA PAVEMENT OVERLAY, TYPE E-30

6 1/4" HMA PAVEMENT, TYPE E-30 AS SHOWN IN THE TYPICAL SECTIONS.

C.P.A.S. AND P.C.S

BRIDGE ABUTMENT

HMA OVERLAY OF APPROACH SLAB

STRUCTURE B-53-73

PROJECT NO: 1005-10-84	HWY: IH 39/90	COUNTY: ROCK	APPROACH SLAB DETAIL AND FENCING PLAN	SHEET 14	E

2

IH 39/90 SB

N

MATCH LINE 1272+00 'TWNB'

1266'TWNB'

1268'TWNB'

1270'TWNB'

1272'

IH 39/90 NB

REMOVAL LEGEND

REMOVING PAVEMENT

SLOPE INTERCEPT

XXXX SAWING CONCRETE

REMOVING ASPHALT PAVEMENT
(PAID FOR AS 'COMMON EXCAVATION')

IH 39/90 SB

N

MATCH LINE 1272+00 'TWNB'

24" CMP

TWNB'

1274'TWNB'

1276'TWNB'

1278'

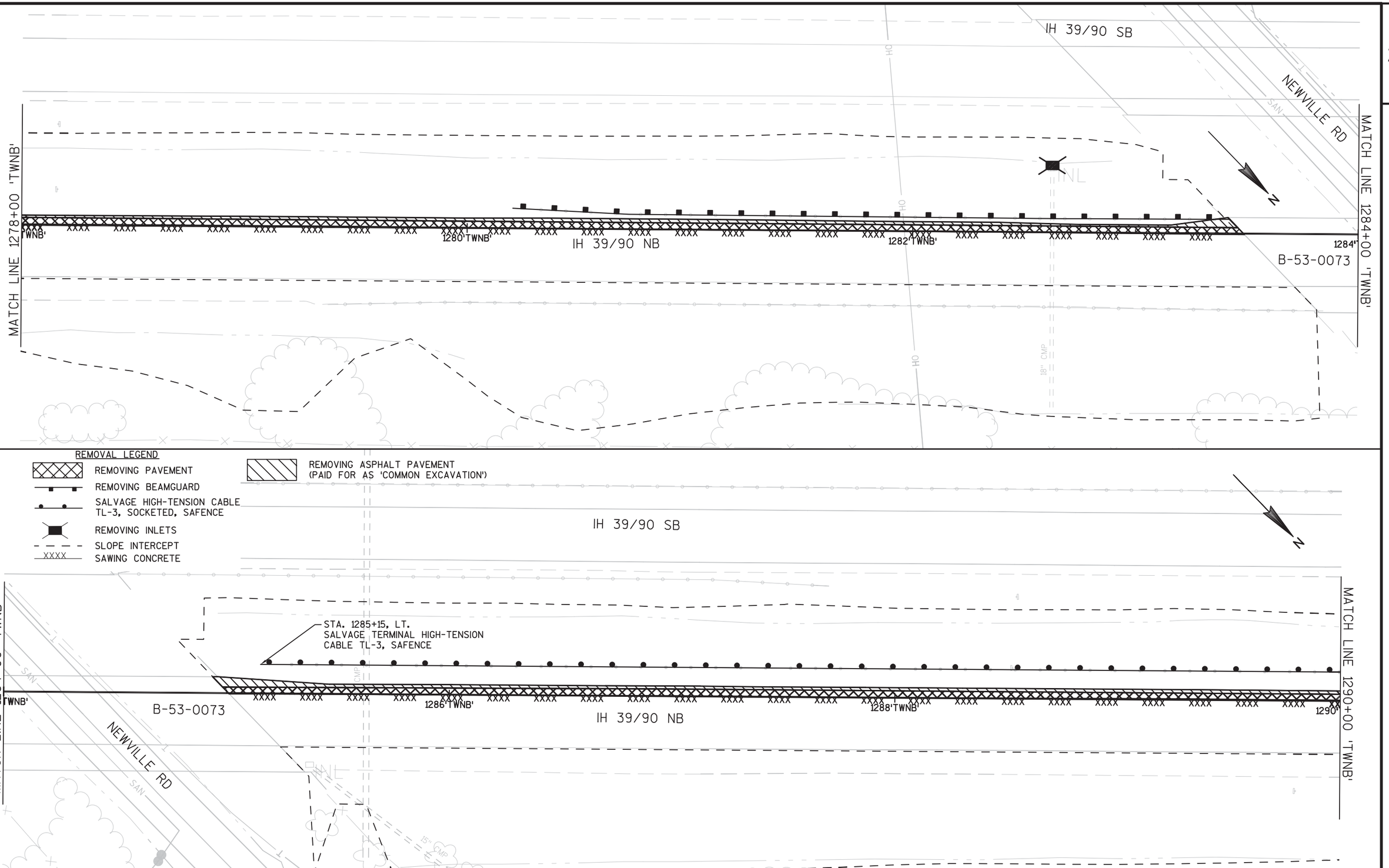
IH 39/90 NB

MATCH LINE 1278+00 'TWNB'

PROJECT NO:1005-10-84	HWY: IH 39/90	COUNTY:ROCK	REMOVAL PLAN: IH 39/90 NORTHBOUND - STAGE 2	SHEET 15	E

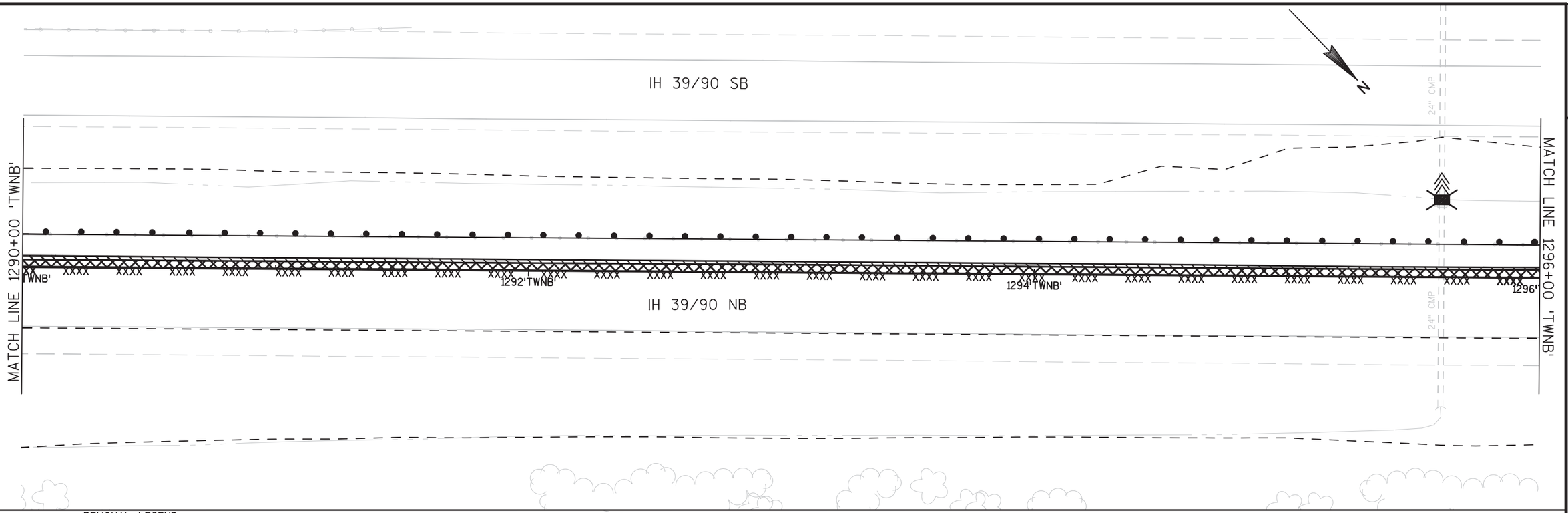
FILE NAME : G:\WDOTSW\WSW10-11032\CIVIL3D\TEMP WIDENING_CTHO-KENNEDY\SHEETS PLAN\PLAN DETAILS\021004_RM_STAGE2_NEWVILLE.DWG PLOT DATE : 7/9/2015 PLOT BY : KL ENGINEERING PLOT NAME : ---------- PLOT SCALE : 1 IN:40 FT

2



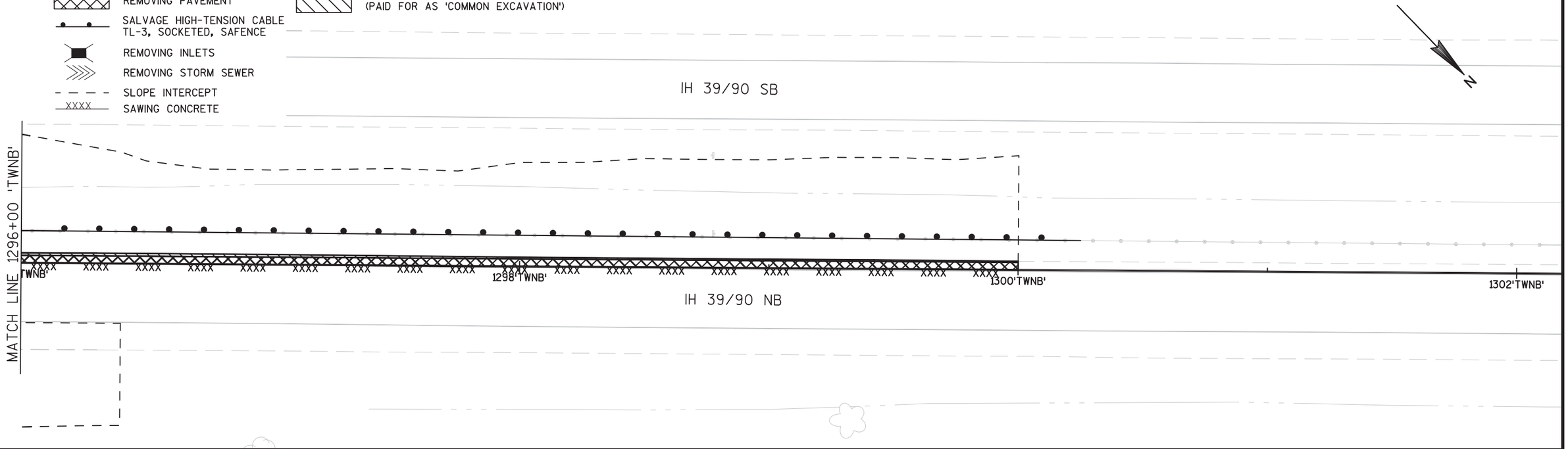
PROJECT NO: 1005-10-84	HWY: IH 39/90	COUNTY: ROCK	REMOVAL PLAN: IH 39/90 NORTHBOUND - STAGE 2	SHEET 16	E

2



REMOVAL LEGEND

- REMOVING PAVEMENT
- SALVAGE HIGH-TENSION CABLE TL-3, SOCKETED, SAFENCE
- REMOVING INLETS
- REMOVING STORM SEWER
- SLOPE INTERCEPT
- XXXX SAWING CONCRETE
- REMOVING ASPHALT PAVEMENT (PAID FOR AS 'COMMON EXCAVATION')



PROJECT NO: 1005-10-84	HWY: IH 39/90	COUNTY: ROCK	REMOVAL PLAN: IH 39/90 NORTHBOUND - STAGE 2	SHEET 17	E

FILE NAME : G:\WDOTSW\WSW10-11032\CIVIL3D\TEMP WIDENING_CTHO-KENNEDY\SHEETS PLAN\PLAN DETAILS\021004_RM_STAGE2_NEWVILLE.DWG PLOT DATE : 7/9/2015 PLOT BY : KL ENGINEERING PLOT NAME : ---------- PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 44

2

IH 39/90 SB

N

MATCH LINE 1272+00 'TWNB'

1266'TWNB' 1268'TWNB' 1270'TWNB' 1272'

IH 39/90 NB

REMOVAL LEGEND

REMOVING PAVEMENT

SLOPE INTERCEPT

XXXX SAWING CONCRETE

IH 39/90 SB

N

MATCH LINE 1272+00 'TWNB'

24" CMP

1274'TWNB' 1276'TWNB' 1278'

IH 39/90 NB

MATCH LINE 1278+00 'TWNB'

REMOVE ENDWALL
PAID FOR AS "REMOVING SMALL PIPE CULVERTS"

PROJECT NO: 1005-10-84	HWY: IH 39/90	COUNTY: ROCK	REMOVAL PLAN: IH 39/90 NORTHBOUND - STAGE 3	SHEET 18	E

FILE NAME : G:\WDOTSW\WSW10-11032\CIVIL3D\TEMP WIDENING_CTHO-KENNEDY\SHEETS PLAN\PLAN DETAILS\021004_RM_STAGE3_NEWVILLE.DWG PLOT DATE : 7/9/2015 PLOT BY : KL ENGINEERING PLOT NAME : _____ PLOT SCALE : 1 IN:40 FT

2

2

IH 39/90 SB

NEWVILLE RD

MATCH LINE 1278+00 'TWNB'

MATCH LINE 1284+00 'TWNB'

TWNB'

1280'TWNB'

1282'TWNB'

1284'

IH 39/90 NB

B-53-0073

REMOVE ENDWALL
PAID FOR AS "REMOVING SMALL PIPE CULVERTS"

18" CMP

INL

REMOVAL LEGEND

- REMOVING PAVEMENT
- CLEARING AND GRUBBING
- REMOVING INLETS
- REMOVING BEAMGUARD
- REMOVING FENCE
- SLOPE INTERCEPT
- XXXX SAWING CONCRETE

IH 39/90 SB

MATCH LINE 1284+00 'TWNB'

MATCH LINE 1290+00 'TWNB'

TWNB'

1286'TWNB'

1288'TWNB'

1290'

B-53-0073

IH 39/90 NB

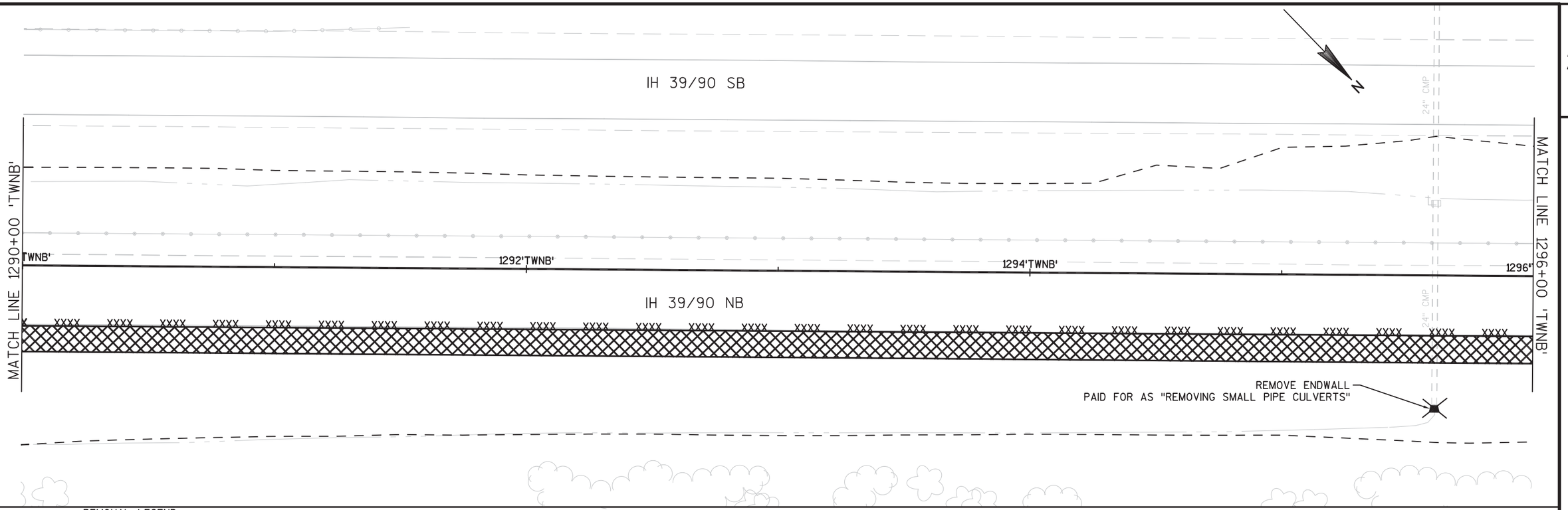
NEWVILLE RD

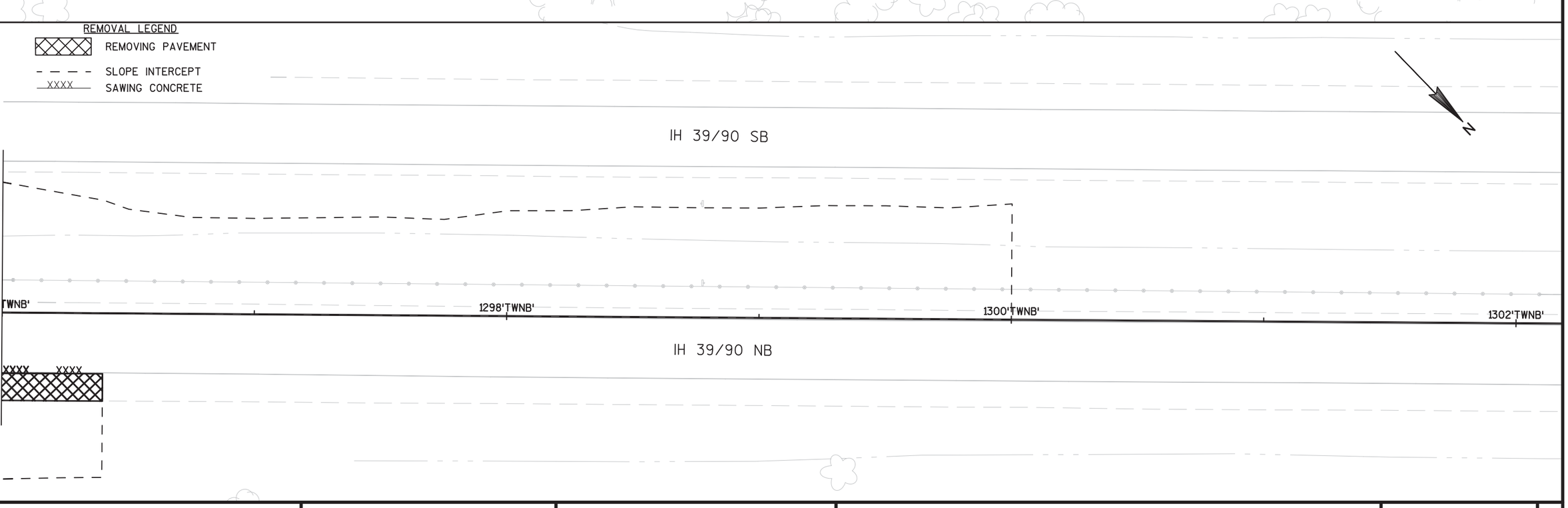
30" CMP

PROJECT NO: 1005-10-84	HWY: IH 39/90	COUNTY: ROCK	REMOVAL PLAN: IH 39/90 NORTHBOUND - STAGE 3	SHEET 19	E

FILE NAME : G:\WDOTSW\WSW10-11032\CIVIL3D\TEMP WIDENING_CTHO-KENNEDY\SHEETS PLAN\PLAN DETAILS\021004_RM_STAGE3_NEWVILLE.DWG PLOT DATE : 7/9/2015 PLOT BY : KL ENGINEERING PLOT NAME : ---------- PLOT SCALE : 1 IN:40 FT

2

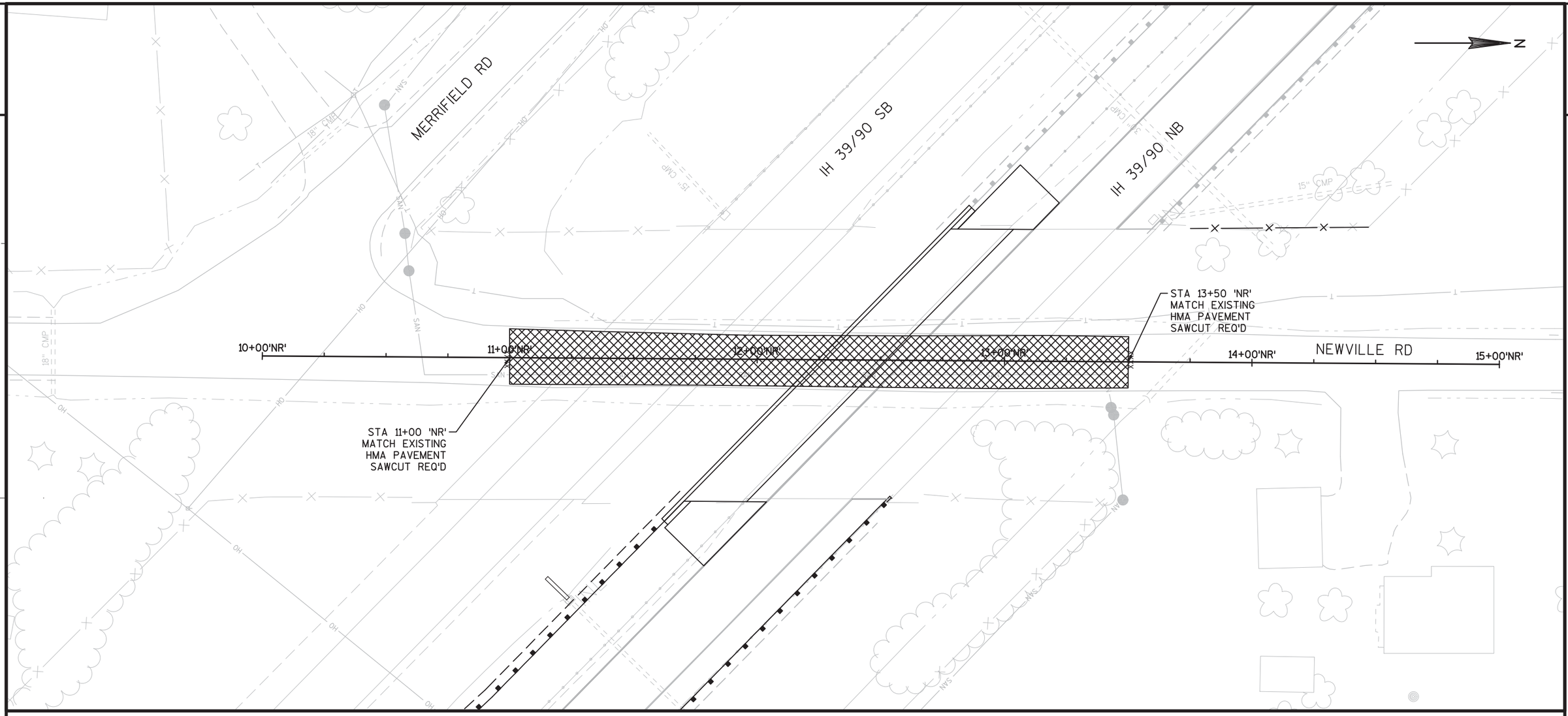




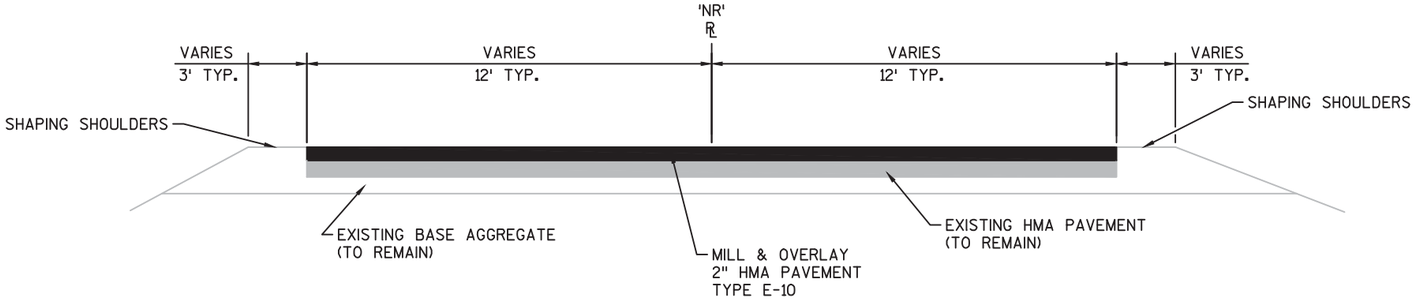
PROJECT NO: 1005-10-84	HWY: IH 39/90	COUNTY: ROCK	REMOVAL PLAN: IH 39/90 NORTHBOUND - STAGE 3	SHEET 20	E

FILE NAME : G:\WDOTSW\WSW10-11032\CIVIL3D\TEMP WIDENING_CTHO-KENNEDY\SHEETS PLAN\PLAN DETAILS\021004_RM_STAGE3_NEWVILLE.DWG PLOT DATE : 7/9/2015 PLOT BY : KL ENGINEERING PLOT NAME : ---------- PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 44

2



2" MILL AND OVERLAY
HMA PAVEMENT, TYPE E-10



NEWVILLE RD SECTION
(LOOKING NORTH)

PROJECT NO: 1005-10-84	HWY: IH 39/90	COUNTY: ROCK	PLAN DETAILS: NEWVILLE ROAD	SHEET 21	E

2

IH 39/90 SB

EROSION MAT CLASS I
TYPE B FOR DITCHES

MATCH LINE 1272+00 'TWNB'

1266'TWNB' 1268'TWNB' 1270'TWNB' 1272'

IH 39/90 NB

LEGEND

- EROSION MAT CLASS I, TYPE B
- SILT FENCE
- RIP RAP MEDIUM
- SLOPE INTERCEPT
- INLET PROTECTION ⒶⒷ
- TEMPORARY DITCH CHECKS
- CULVERT PIPE CHECKS
- SURFACE WATER FLOW

TEMPORARY DITCH CHECKS (TYP.)

EROSION MAT CLASS I
TYPE B FOR DITCHES

2

IH 39/90 SB

EROSION MAT CLASS I
TYPE B FOR DITCHES

MATCH LINE 1272+00 'TWNB'

MATCH LINE 1278+00 'TWNB'

TWNB' 1274'TWNB' 1276'TWNB' 1278'

24" CMP

IH 39/90 NB

EROSION MAT CLASS I
TYPE B FOR DITCHES

SILT FENCE (TYP.)

RIP RAP MEDIUM
TREATMENT AT
ENDWALLS (TYP.)

EROSION MAT CLASS I
TYPE B FOR DITCHES

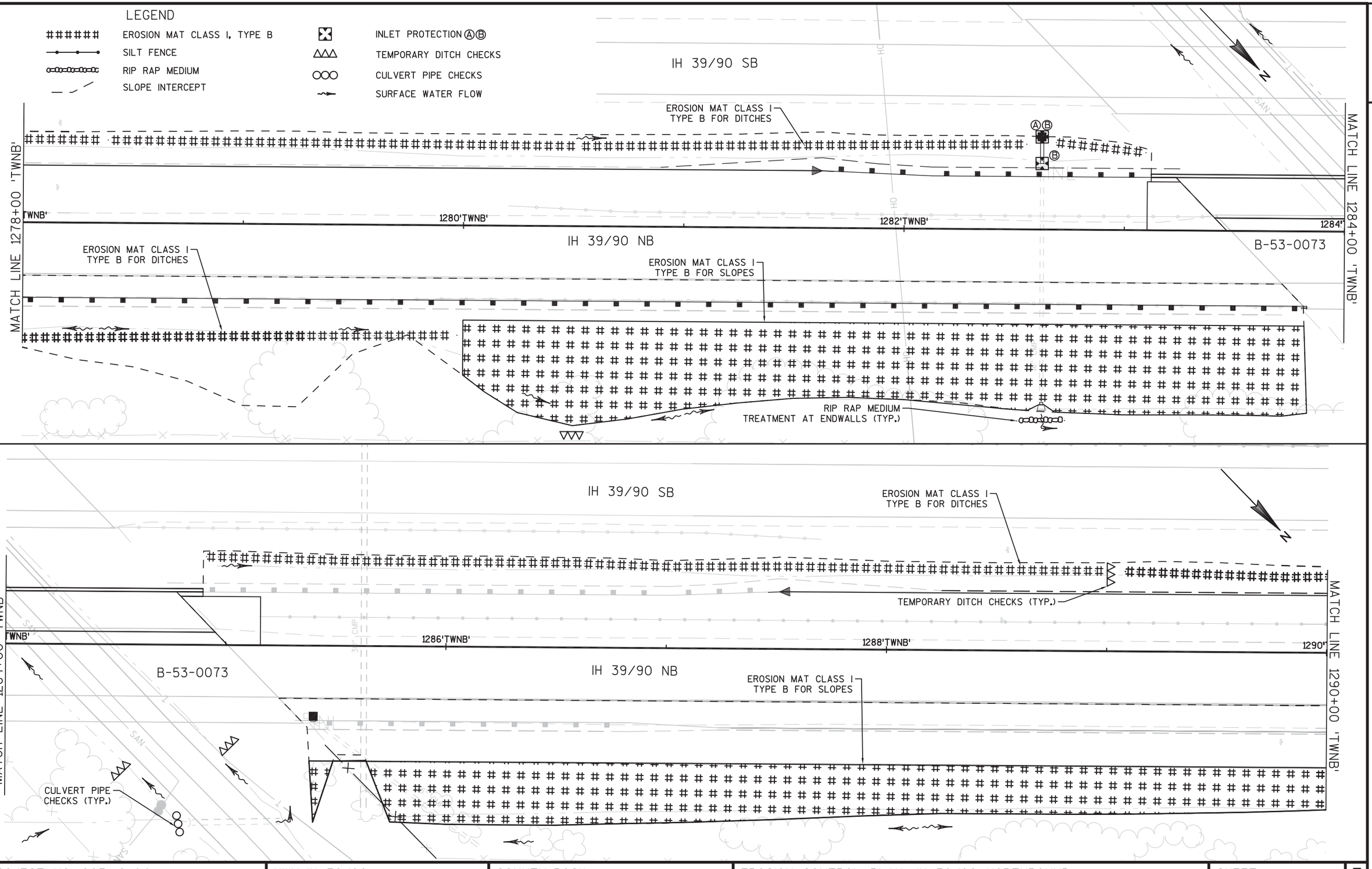
PROJECT NO: 1005-10-84	HWY: IH 39/90	COUNTY: ROCK	EROSION CONTROL PLAN: IH 39/90 NORTHBOUND	SHEET 22	E

FILE NAME : G:\WDOTSW\WSW10-11032\CIVIL3D\TEMP WIDENING_CTHO-KENNEDY\SHEETS PLAN\PLAN DETAILS\022002_EC_NEWVILLE.DWG PLOT DATE : 7/9/2015 PLOT BY : KL ENGINEERING PLOT NAME : _____ PLOT SCALE : 1:40_XREF

2

LEGEND

- EROSION MAT CLASS I, TYPE B
- SILT FENCE
- RIP RAP MEDIUM
- SLOPE INTERCEPT
- INLET PROTECTION ⒶⒷ
- TEMPORARY DITCH CHECKS
- CULVERT PIPE CHECKS
- SURFACE WATER FLOW



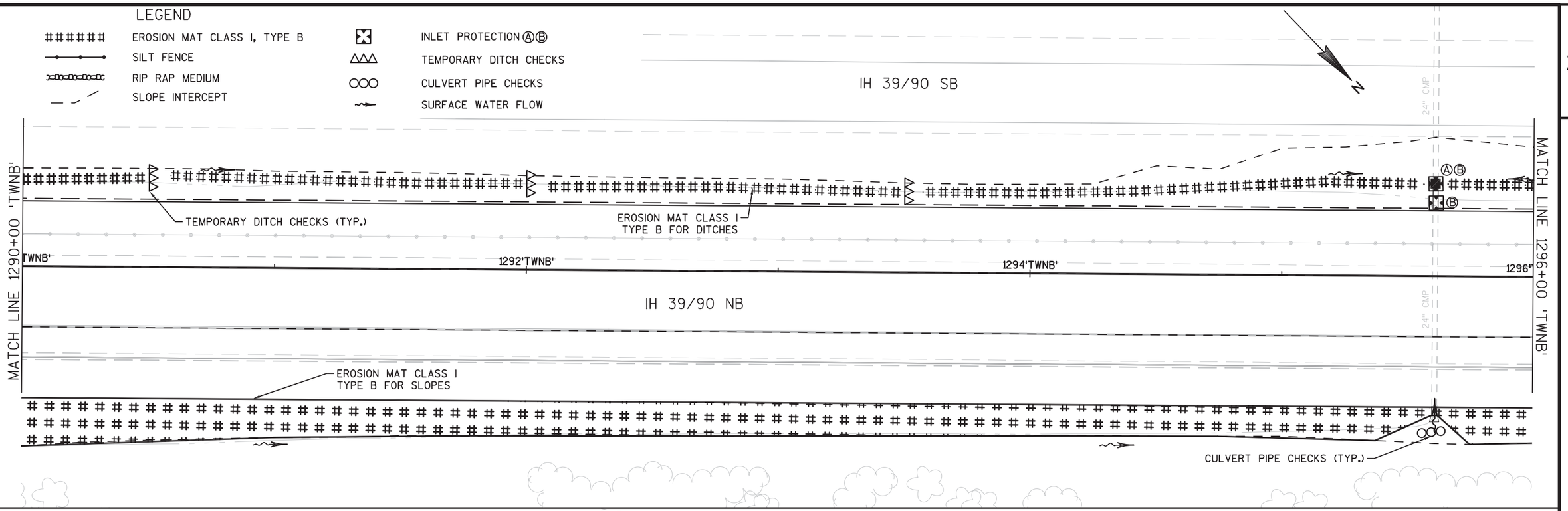
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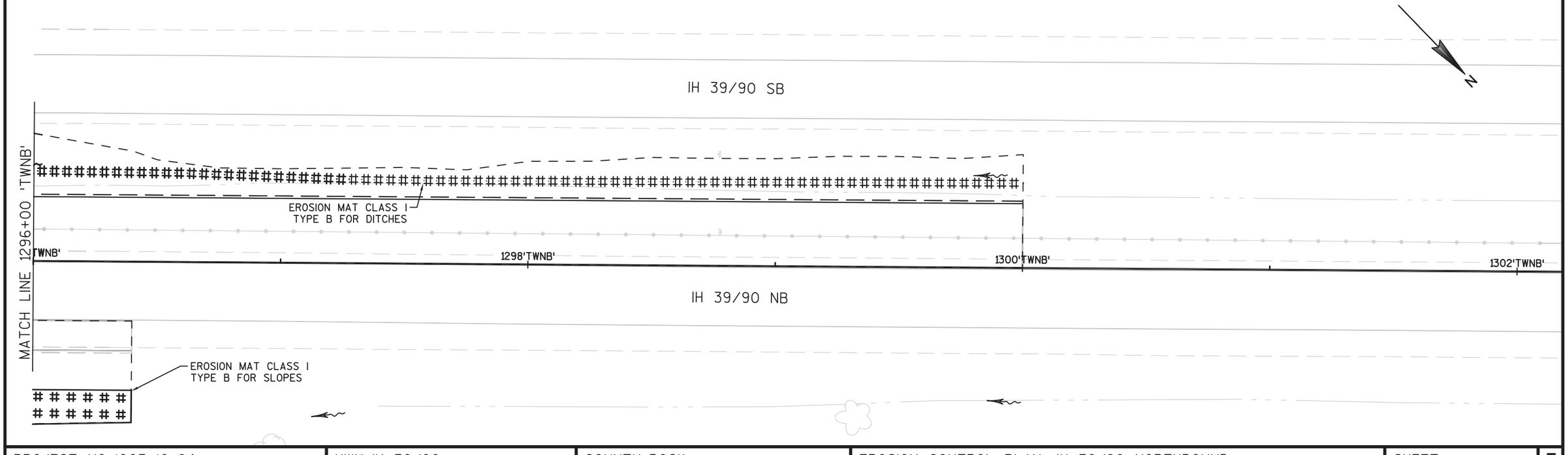
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WISDOT/CADDS SHEET 44

LEGEND

- EROSION MAT CLASS I, TYPE B
- SILT FENCE
- RIP RAP MEDIUM
- SLOPE INTERCEPT
- INLET PROTECTION ⒶⒷ
- TEMPORARY DITCH CHECKS
- CULVERT PIPE CHECKS
- SURFACE WATER FLOW



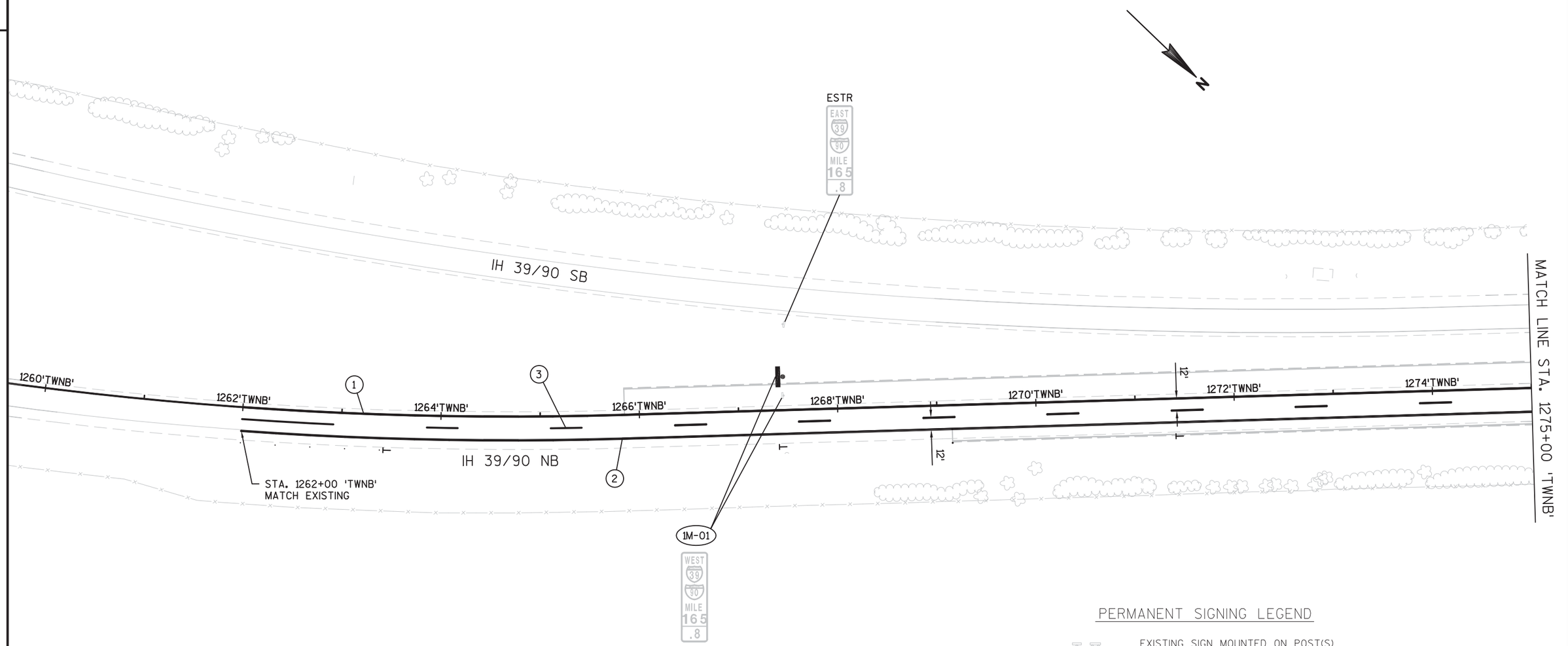


PROJECT NO: 1005-10-84	HWY: IH 39/90	COUNTY: ROCK	EROSION CONTROL PLAN: IH 39/90 NORTHBOUND	SHEET 24	E

FILE NAME : G:\WDOTSW\WSW10-11032\CIVIL3D\TEMP WIDENING_CTHO-KENNEDY\SHEETS PLAN\PLAN DETAILS\022002_EC_NEWVILLE.DWG PLOT DATE : 7/9/2015 PLOT BY : KL ENGINEERING PLOT NAME : ---------- PLOT SCALE : 1:40_XREF

WISDOT/CADDS SHEET 44

2



PAVEMENT MARKING LEGEND

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

⊢ SINGLE DELINEATOR

NOTE:
DELINEATORS SHALL BE PLACED EVERY 400' ON LONGITUDINAL TANGENT SECTIONS. SEE S.D.D. DELINEATOR LAYOUT FOR DETAILS NOT SHOWN.

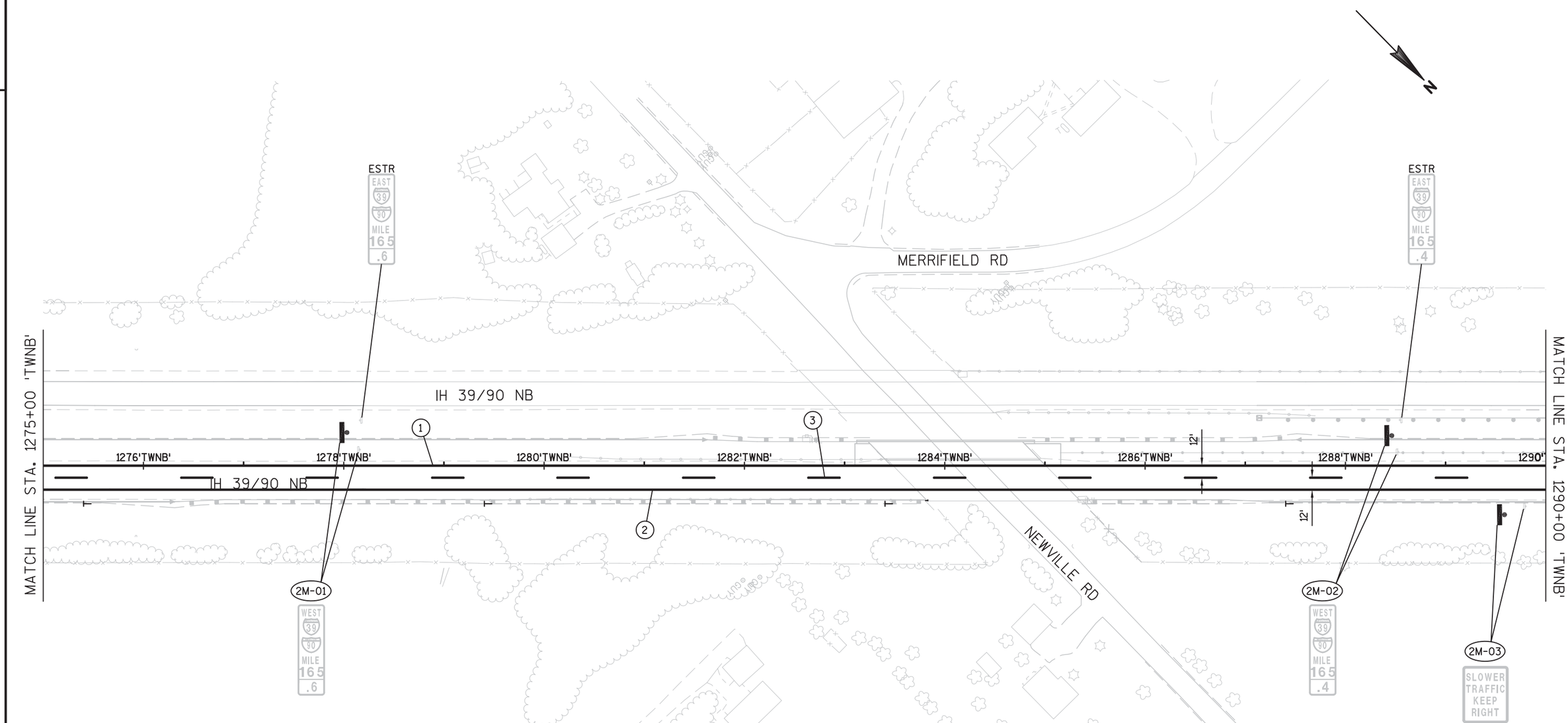
PERMANENT SIGNING LEGEND

	EXISTING SIGN MOUNTED ON POST(S)
XM-XX	DENOTES SIGN TO BE MOVED
	PROPOSED SIGN MOUNTED ON POST(S)
ESTR	EXISTING SIGN TO REMAIN

PROJECT NO: 1005-10-84	HWY: IH 39/90	COUNTY: ROCK	PERMANENT SIGNING AND PAVEMENT MARKING PLAN	SHEET 25	E

FILE NAME : G:\WDOTSW\WSW10-11032\CIVIL3D\TEMP WIDENING_CTHO-KENNEDY\SHEETS PLAN\PLAN DETAILS\023202_PS-PM_NEWVILLE.DWG
LAYOUT NAME - SHEET - (1)
PLOT DATE : 7/9/2015 4:07 PM
PLOT BY : JOSH MERCIER
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 42

2



PAVEMENT MARKING LEGEND

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

⊢ SINGLE DELINEATOR

NOTE:
DELINEATORS SHALL BE PLACED EVERY 400' ON LONGITUDINAL TANGENT SECTIONS. SEE S.D.D. DELINEATOR LAYOUT FOR DETAILS NOT SHOWN.

PERMANENT SIGNING LEGEND

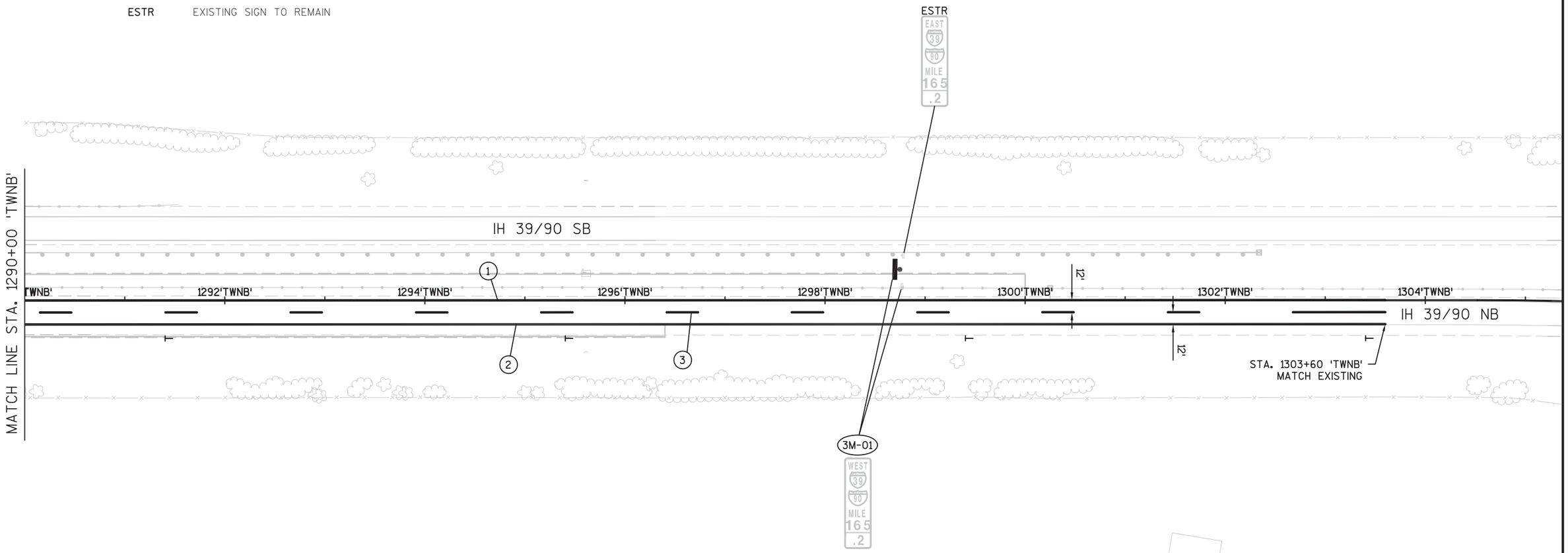
	EXISTING SIGN MOUNTED ON POST(S)
XM-XX	DENOTES SIGN TO BE MOVED
	PROPOSED SIGN MOUNTED ON POST(S)
ESTR	EXISTING SIGN TO REMAIN

PROJECT NO: 1005-10-84	HWY: IH 39/90	COUNTY: ROCK	PERMANENT SIGNING AND PAVEMENT MARKING PLAN	SHEET 26	E

2

PERMANENT SIGNING LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- XM-XX — DENOTES SIGN TO BE MOVED
- PROPOSED SIGN MOUNTED ON POST(S)
- ESTR — EXISTING SIGN TO REMAIN



PAVEMENT MARKING LEGEND

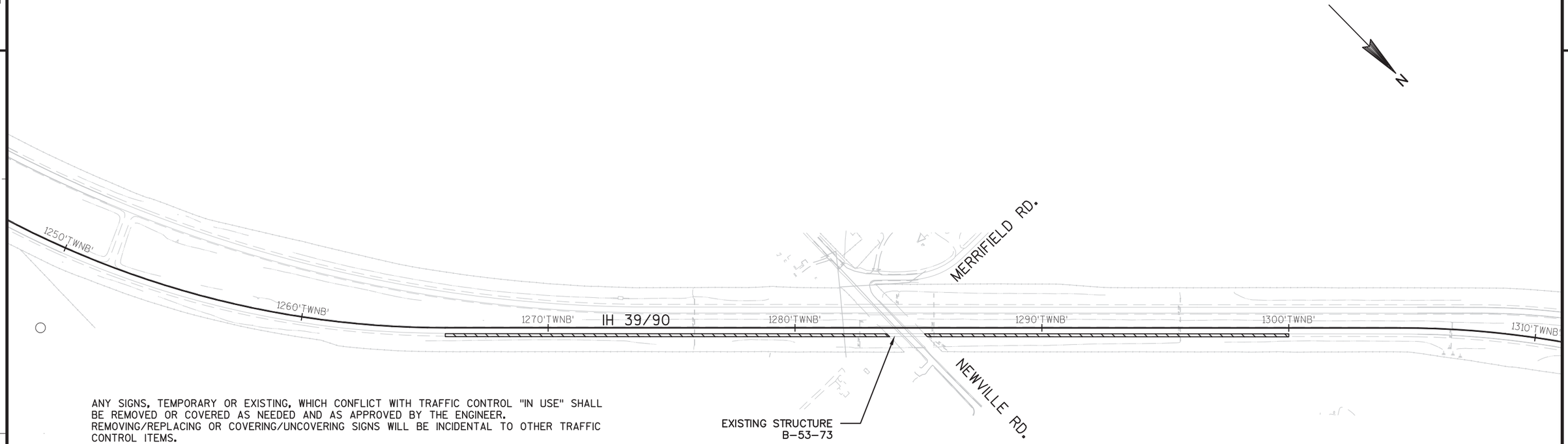
1. PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
2. PAVEMENT MARKING EPOXY 4-INCH (WHITE)
3. PAVEMENT MARKING EPOXY 4-INCH (DASHED WHITE) (12.5 FT LINE 37.5 FT SKIP)

⊢ SINGLE DELINEATOR

NOTE:
DELINEATORS SHALL BE PLACED EVERY 400' ON LONGITUDINAL TANGENT SECTIONS. SEE S.D.D. DELINEATOR LAYOUT FOR DETAILS NOT SHOWN.

PROJECT NO: 1005-10-84	HWY: IH 39/90	COUNTY: ROCK	PERMANENT SIGNING AND PAVEMENT MARKING PLAN	SHEET 27	E

2



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. REMOVING/REPLACING OR COVERING/UNCOVERING SIGNS WILL BE INCIDENTAL TO OTHER TRAFFIC CONTROL ITEMS.

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

IF SIGNS ARE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS THE ADVANCED WARNING SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS. MOUNT ALL PORTABLE TRAFFIC CONTROL SIGNS AT A MINIMUM HEIGHT OF 5 FEET, MEASURED FROM THE BOTTOM OF THE SIGN, ABOVE THE EDGE OF PAVEMENT.

ALL TRAFFIC CONTROL SIGNING SHALL CONFORM TO: PART VI OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, THE WISCONSIN SUPPLEMENT TO THE MUTCD, AND OTHER CONTRACT DOCUMENTS.

THE TURNING OF TRAFFIC CONTROL DEVICES WHEN NOT IN USE TO OBSCURE THE MESSAGE WILL NOT BE ALLOWED.

REMOVE PAVEMENT MARKINGS NOT APPROPRIATE FOR THE TRAVEL PATH IN USE.

THE LANE CLOSURE SERIES SHALL BE INSTALLED AS A COMPLETE UNIT WHICH INCLUDES ALL ADVANCE WARNING SIGNING, DRUMS, AND ARROW BOARDS.

CONTRACTORS EQUIPMENT AND MATERIAL STOCKPILES MAY NOT BE STORED WITHIN THE CLEAR ZONE OF IH 39/90 WHILE THE CONTRACTOR IS NOT WORKING, UNLESS THEY ARE PROTECTED BY CONCRETE BARRIER TEMPORARY PRECAST. CONSTRUCTION CLEAR ZONE = 20 FEET MEASURED FROM THE EDGE OF LANE LINE.

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

ALL TRAFFIC CONTROL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED IN THE PLANS.

ADVANCED PROJECT WARNING AND END ROADWORK SIGNS SHALL BE COORDINATED WITH OTHERS FROM WISDOT PROJECTS 1005-10-71,-72.

WORK ZONE

STAGE 1

MAINTENANCE OF TRAFFIC:

- IH 39/90 WILL BE OPEN TO ALL EXISTING LANES AT ALL TIMES EXCEPT FOR NIGHTTIME OUTSIDE SIDE LANE CLOSURES IN THE NORTHBOUND DIRECTION AS SPECIFIED IN THE CONTRACT SPECIAL PROVISIONS.
- SOUTHBOUND IH 39/90 WILL BE OPEN TO ALL EXISTING LANES AT ALL TIMES.
- NEWVILLE ROAD WILL REMAIN OPEN AT ALL TIMES.

CONSTRUCTION TO BE COMPLETED:

- OUTSIDE SHOULDER REPAIR

NOTES - STAGE 1:

REFER TO THE FOLLOWING TRAFFIC CONTROL DETAIL FOR TRAFFIC CONTROL DEVICES, AS WELL AS STANDARD DETAIL DRAWINGS AS NECESSARY, UNLESS OTHERWISE DIRECTED BY THE ENGINEER

- TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION DETAIL

2

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"x48" UNLESS OTHERWISE NOTED.

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

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

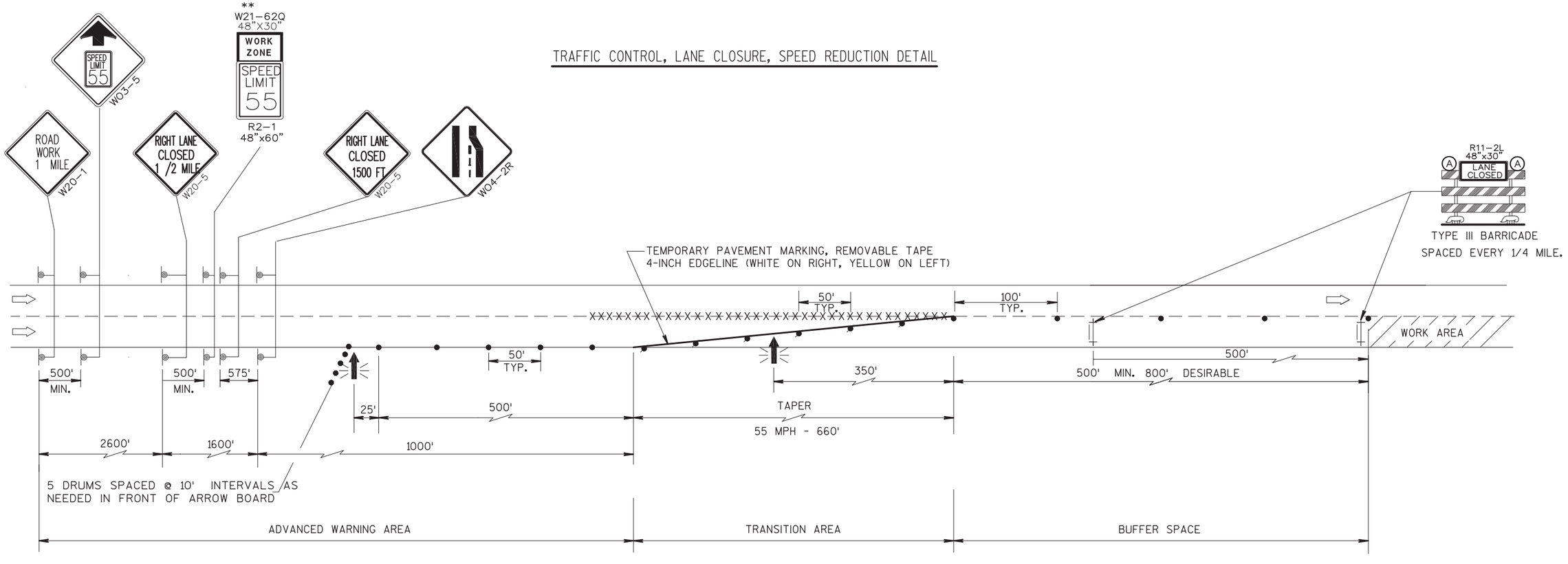
WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

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.

** 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 70 MPH RESUME SPEED LIMIT SIGN 200 FEET MINIMUM (500 FEET DESIREABLE) BEYOND THE "END OF ROADWORK" SIGN.

TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION DETAIL



PROJECT NO:1005-10-84	HWY: IH 39/90	COUNTY:ROCK	TRAFFIC CONTROL DETAIL: TRAFFIC CONTROL, LANE CLSOURE, SPEED REDUCTION	SHEET 29 - E

2

PCMS

PCMS

WO1-6
48"_X_24"

TYPE III BARRICADE

FOR CONSTRUCTION TRAFFIC EXITING LIVE TRAFFIC LANES

100'

END OF
WORK ZONE

500'

750'

TRUCKS
ENTERING
FROM
RIGHT
W08-6
(MOD)

FOR CONSTRUCTION TRAFFIC RE-ENTERING LIVE TRAFFIC LANES

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

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

PORTABLE MESSAGE SIGN MESSAGES SHOULD READ:

FRAME 1	FRAME 2
TRUCKS EXITING RIGHT	TRAFFIC STAY LEFT

LEGEND

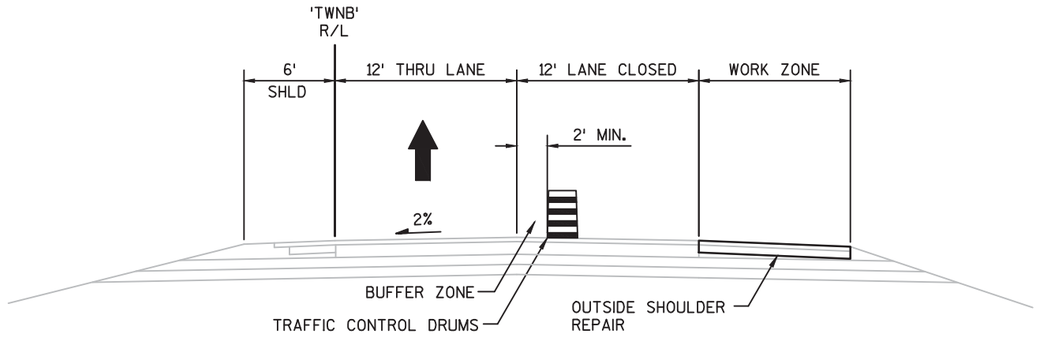
- TYPE III BARRICADE WITH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL SIGN
- IH 39 TRAFFIC
- CONSTRUCTION TRAFFIC
- WORK ZONE
- PCMS — PORTABLE CHANGEABLE MESSAGE BOARD

TRAFFIC CONTROL DETAIL FOR CONSTRUCTION ACCESS AT LANE CLOSURES

NIGHT USE ONLY

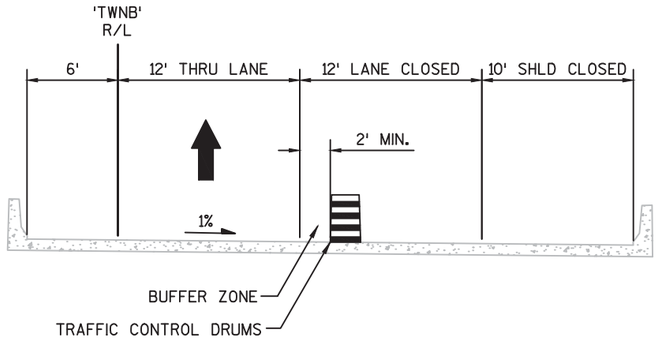
PROJECT NO: 1005-10-84	HWY: IH 39/90	COUNTY: ROCK	TRAFFIC CONTROL DETAIL: CONSTRUCTION ACCESS	SHEET 30	E

2



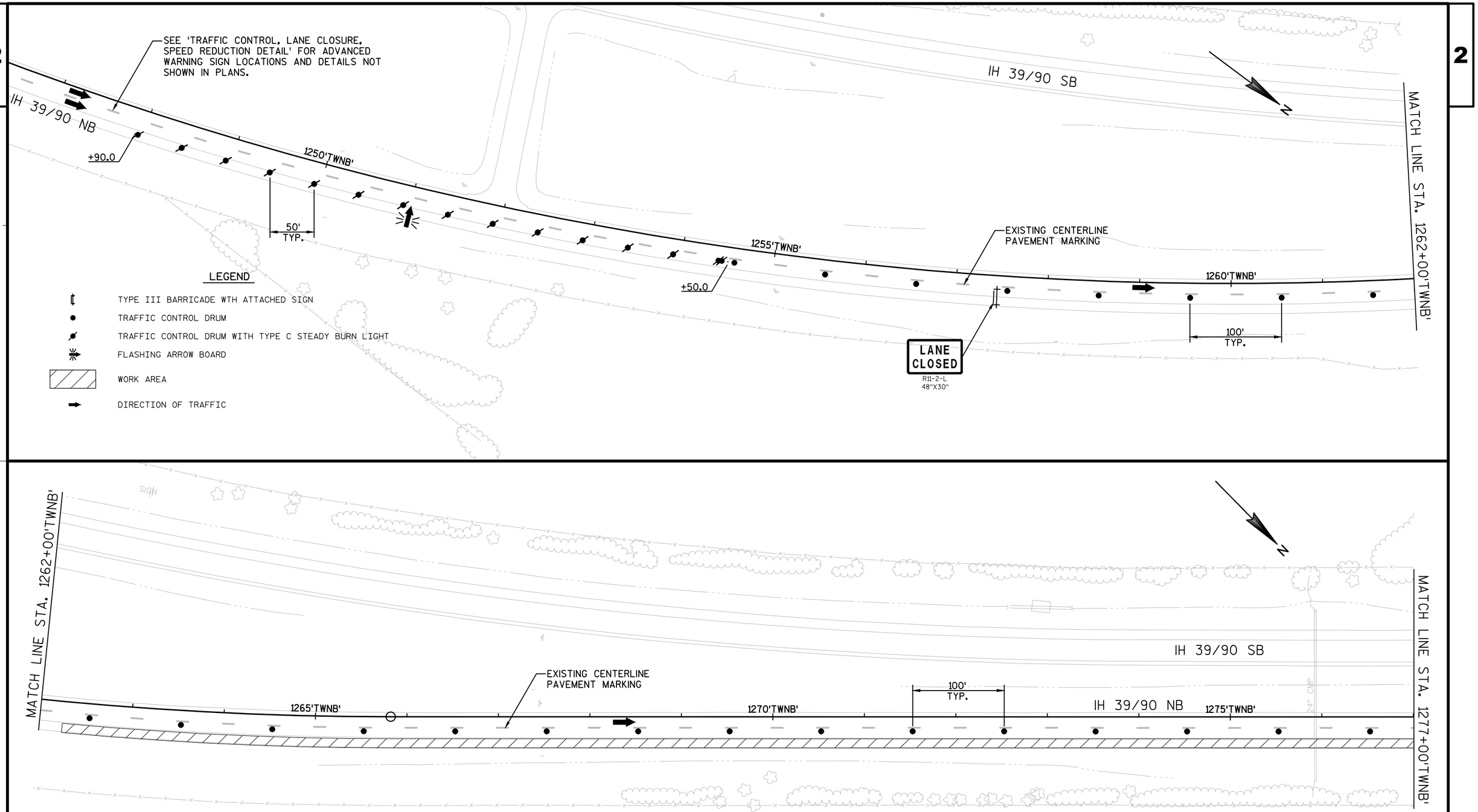
IH 39/90 WIDENING - NORTHBOUND STAGE 1 NIGHTTIME HOURS

STA. 1262+50'TWNB' - STA. 1287+47'TWNB'



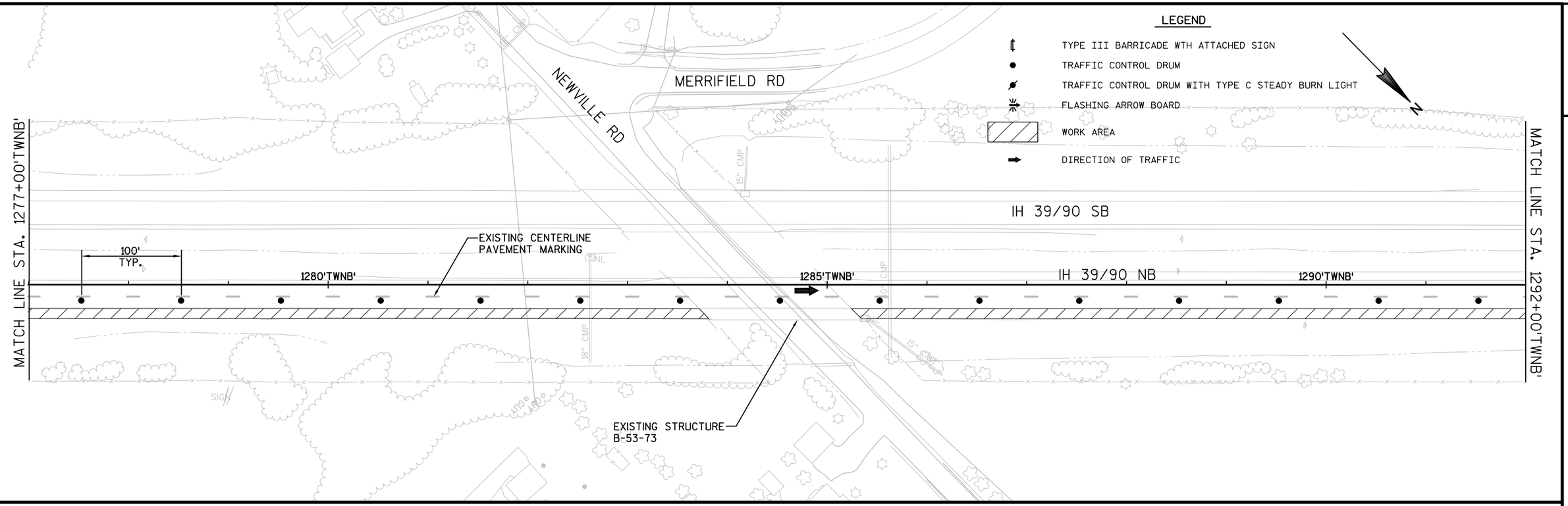
IH 39/90 WIDENING - NORTHBOUND STAGE 1 NIGHTTIME HOURS

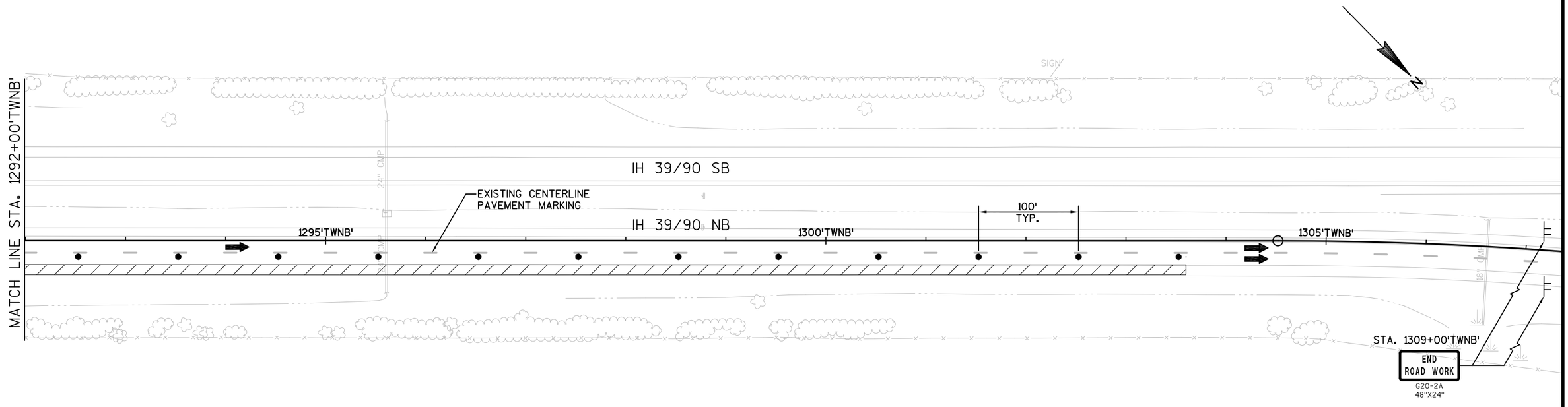
STRUCTURE B-53-73
NO WORK ON STRUCTURE IN STAGE 1



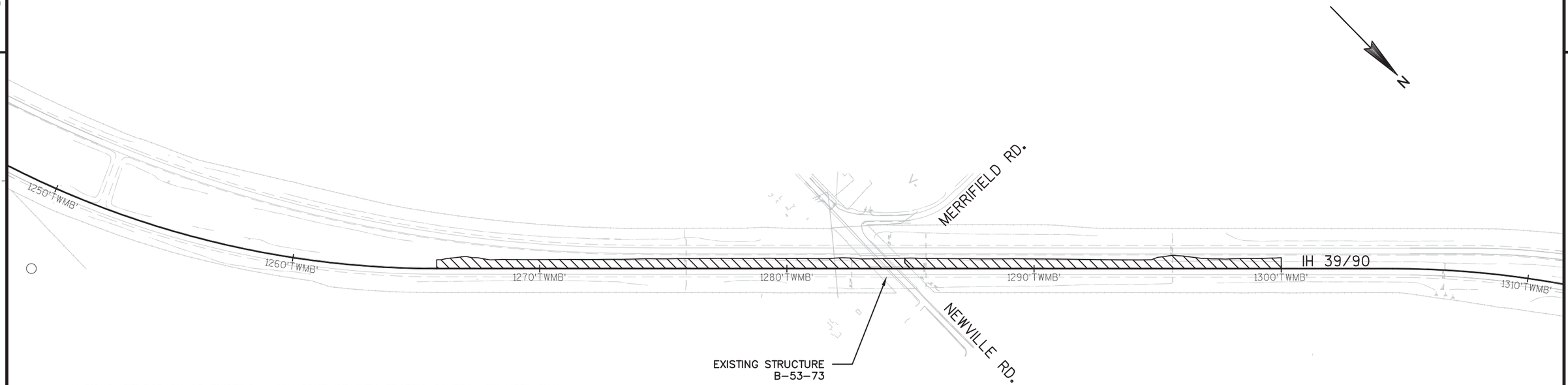
PROJECT NO: 1005-10-84	HWY: IH 39/90	COUNTY: ROCK	TRAFFIC CONTROL: STAGE 1 (NIGHTTIME HOURS)	SHEET 32 E

2





PROJECT NO: 1005-10-84	HWY: IH 39/90	COUNTY: ROCK	TRAFFIC CONTROL: STAGE 1 (NIGHTTIME HOURS)	SHEET 33	E



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. REMOVING/REPLACING OR COVERING/UNCOVERING SIGNS WILL BE INCIDENTAL TO OTHER TRAFFIC CONTROL ITEMS.

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

IF SIGNS ARE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS THE ADVANCED WARNING SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS. MOUNT ALL PORTABLE TRAFFIC CONTROL SIGNS AT A MINIMUM HEIGHT OF 5 FEET, MEASURED FROM THE BOTTOM OF THE SIGN, ABOVE THE EDGE OF PAVEMENT.

ALL TRAFFIC CONTROL SIGNING SHALL CONFORM TO: PART VI OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, THE WISCONSIN SUPPLEMENT TO THE MUTCD, AND OTHER CONTRACT DOCUMENTS.

THE TURNING OF TRAFFIC CONTROL DEVICES WHEN NOT IN USE TO OBSCURE THE MESSAGE WILL NOT BE ALLOWED.

REMOVE PAVEMENT MARKINGS NOT APPROPRIATE FOR THE TRAVEL PATH IN USE.

THE LANE CLOSURE SERIES SHALL BE INSTALLED AS A COMPLETE UNIT WHICH INCLUDES ALL ADVANCE WARNING SIGNING, DRUMS, AND ARROW BOARDS.

CONTRACTORS EQUIPMENT AND MATERIAL STOCKPILES MAY NOT BE STORED WITHIN THE CLEAR ZONE OF IH 39/90 WHILE THE CONTRACTOR IS NOT WORKING, UNLESS THEY ARE PROTECTED BY CONCRETE BARRIER TEMPORARY PRECAST. CONSTRUCTION CLEAR ZONE = 20 FEET MEASURED FROM THE EDGE OF LANE LINE.

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

ALL TRAFFIC CONTROL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED IN THE PLANS.

AT THE END OF EACH NIGHTTIME WORKING OPERATION A 6:1 OR FLATTER SAFETY EDGE BEHIND THE TRAFFIC CONTROL DRUMS SHALL BE PROVIDED AT THE EXISTING EDGE OF PAVEMENT AFTER EXCAVATION AND PRIOR TO PAVING.

ADVANCED PROJECT WARNING AND END ROADWORK SIGNS SHALL BE COORDINATED WITH OTHERS FROM WISDOT PROJECTS 1005-10-71,-72.

WORK ZONE

STAGE 2

MAINTENANCE OF TRAFFIC:

- NORTHBOUND TRAFFIC LANES WILL SHIFT AND UTILIZE THE NORTHBOUND OUTSIDE SHOULDER REPAIR IN STAGE 1.
- TWO (2) THROUGH LANES WILL BE OPEN AT ALL TIMES ALONG NORTHBOUND AND SOUTHBOUND IH 39/90 EXCEPT FOR NIGHTTIME INSIDE LANE CLOSURES IN THE NORTHBOUND AND SOUTHBOUND DIRECTION AS SPECIFIED IN THE CONTRACT SPECIAL PROVISIONS.
- NEWVILLE ROAD WILL BE OPEN TO A MINIMUM OF ONE (1) 11' THROUGH LANE AT ALL TIMES EXCEPT WHEN CLOSURES ARE REQUIRED AND APPROVED BY THE ENGINEER TO WIDEN STRUCTURE B-53-73. NO POSTED DETOUR FOR NEWVILLE ROAD.

CONSTRUCTION TO BE COMPLETED:

- MEDIAN SHOULDER REPLACEMENT/WIDENING
- GUARD RAIL REMOVAL AND INSTALLATION
- CABLE GUARD REMOVAL AND INSTALLATION
- WIDENING OF EXISTING STRUCTURE B-53-73

NOTES - STAGE 2:

DELIVERY OF MATERIALS TO THE WORKZONE IS LIMITED TO NIGHTTIME HOURS ONLY AS SPECIFIED IN THE CONTRACT SPECIAL PROVISIONS.

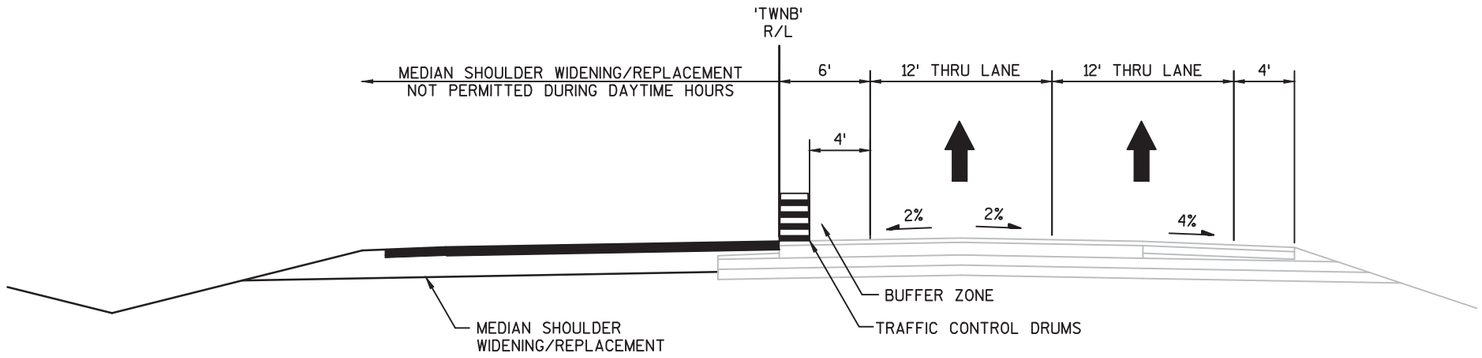
REFER TO THE FOLLOWING STANDARD DETAIL DRAWINGS FOR TRAFFIC CONTROL DEVICES, AS WELL AS OTHER STANDARD DETAIL DRAWINGS AS NECESSARY, UNLESS OTHERWISE DIRECTED BY THE ENGINEER

- TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS)
- BARRICADES AND SIGNS FOR MAINLINE CLOSURES

PROJECT NO: 1005-10-84	HWY: IH 39/90	COUNTY: ROCK	TRAFFIC CONTROL: STAGE 2 OVERVIEW	SHEET 34	E

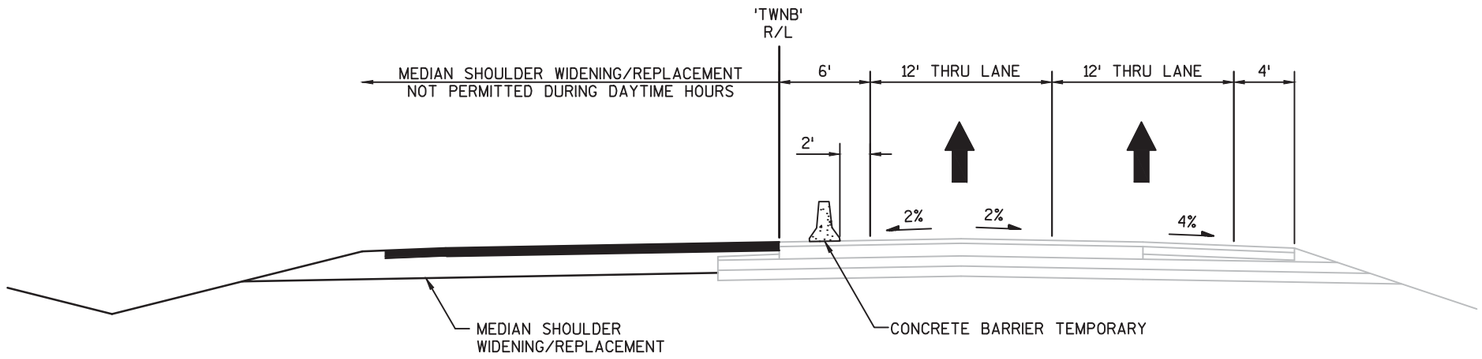
FILE NAME : G:\WDOTSW\WSW10-11032\CIVIL3D\TEMP WIDENING_CTHO-KENNEDY\SHEETS PLAN\TRAFFIC CONTROL\025001_TC - OVERVIEW_NEWVILLERD.DWG PLOT DATE : 7/10/2015 7:42 AM PLOT BY : KL ENGINEERING PLOT NAME : ---------- PLOT SCALE : **********
WISDOT/CADDS SHEET 42

2



IH 39/90 WIDENING - NORTHBOUND STAGE 2 DAYTIME HOURS

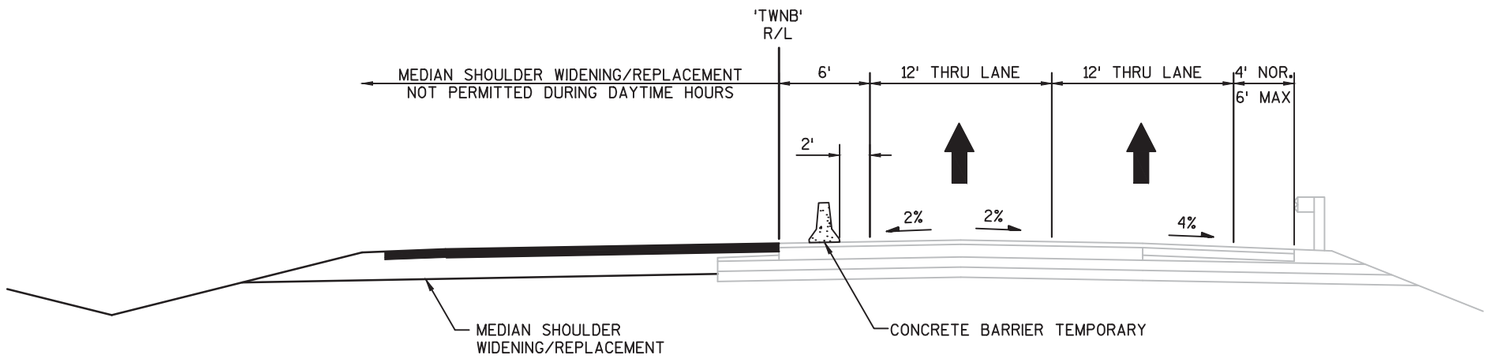
STA. 1265+85'TWNB' - STA. 1278+70'TWNB'
STA. 1287+00'TWNB' - STA. 1300+00'TWNB'



IH 39/90 WIDENING - NORTHBOUND STAGE 2 DAYTIME HOURS

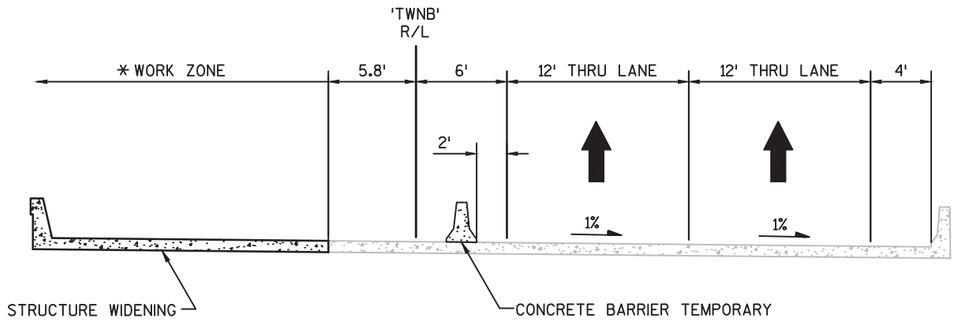
STA. 1278+70'TWNB' - STA. 1279+38'TWNB'
STA. 1285+00'TWNB' - STA. 1287+00'TWNB'

2



IH 39/90 WIDENING - NORTHBOUND STAGE 2 DAYTIME HOURS

STA. 1279+38'TWNB - STA. 1283+80'TWNB'

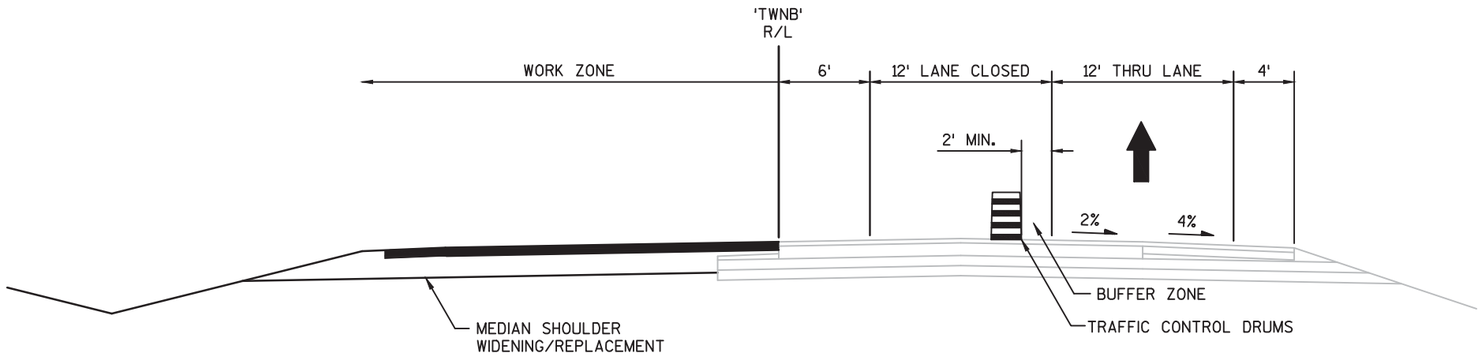


IH 39/90 WIDENING - NORTHBOUND STAGE 2 DAYTIME HOURS

STRUCTURE B-53-73

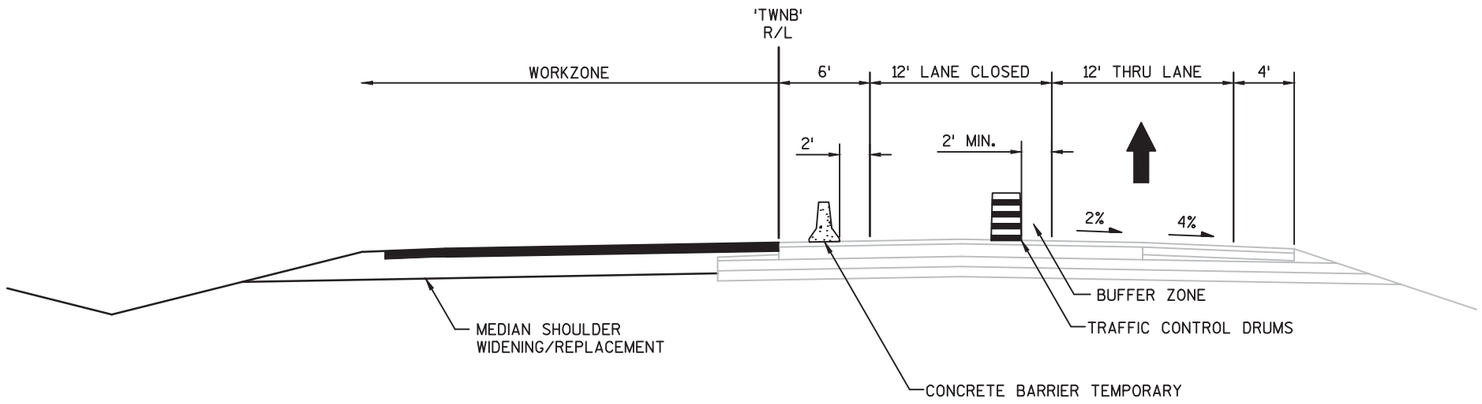
* DELIVERY OF MATERIALS TO THE WORK ZONE NOT PERMITTED

2



IH 39/90 WIDENING - NORTHBOUND STAGE 2 NIGHTTIME HOURS

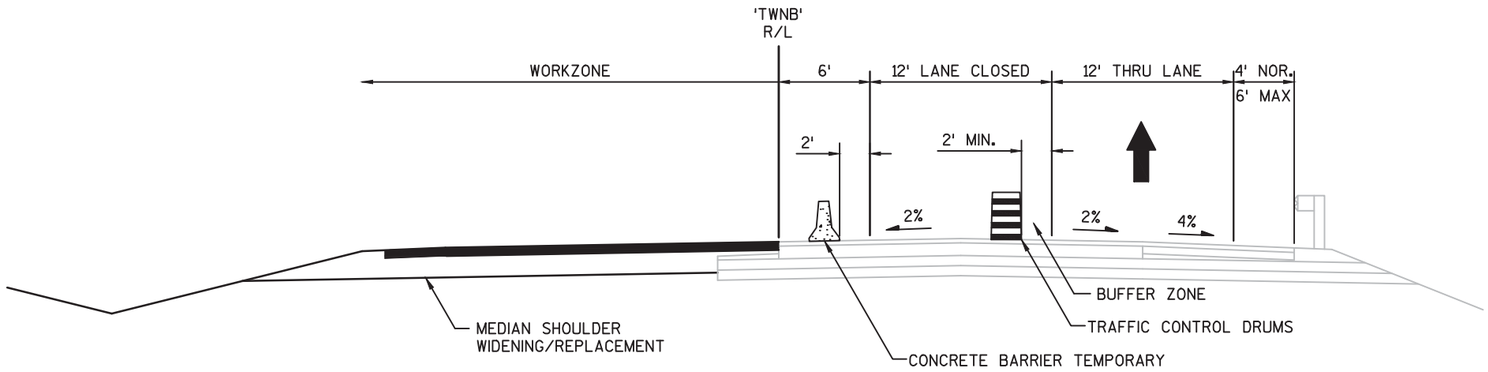
STA. 1265+85'TWNB' - STA. 1278+70'TWNB'
STA. 1287+00'TWNB' - STA. 1300+00'TWNB'



IH 39/90 WIDENING - NORTHBOUND STAGE 2 NIGHTTIME HOURS

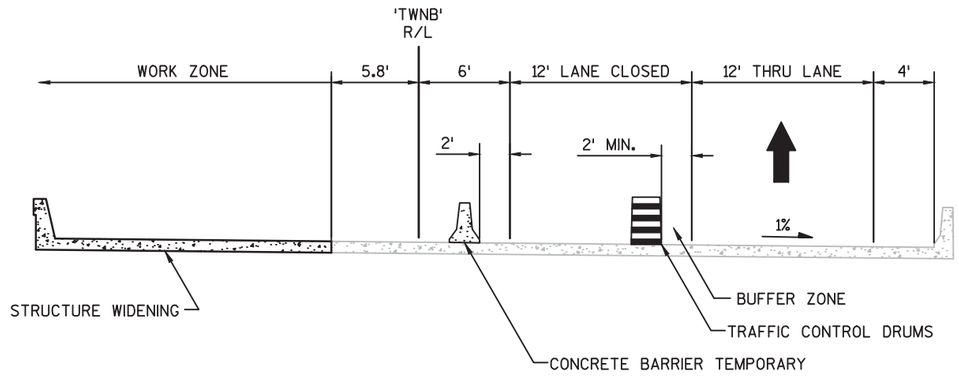
STA. 1278+70'TWNB' - STA. 1279+38'TWNB'
STA. 1285+00'TWNB' - STA. 1287+00'TWNB'

2



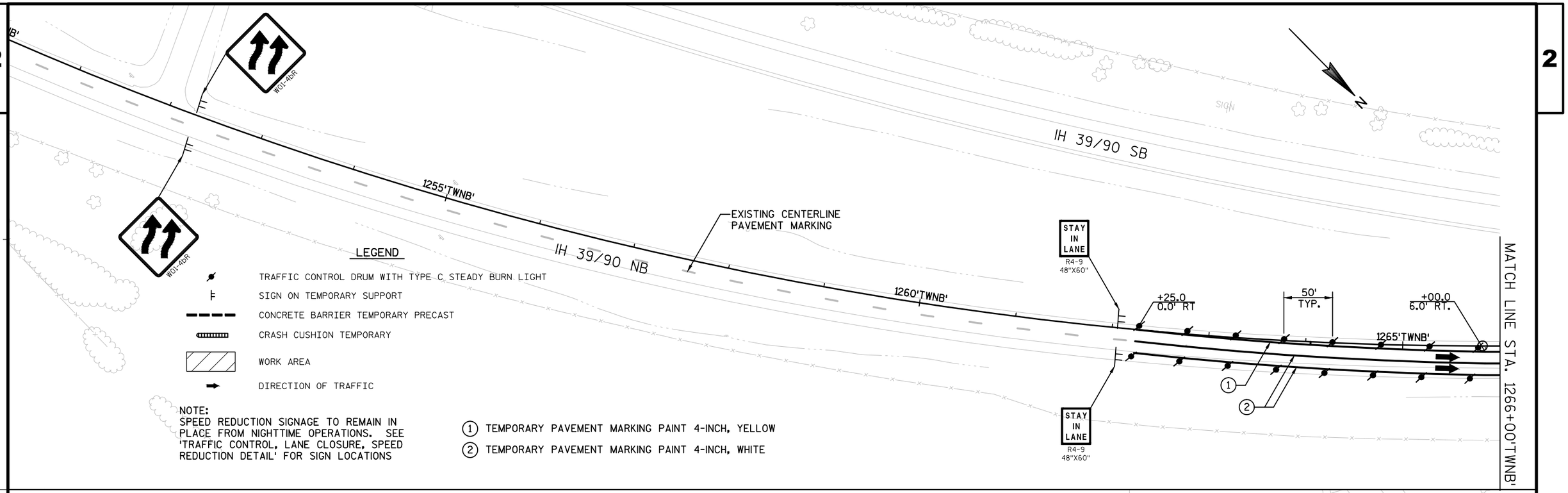
IH 39/90 WIDENING - NORTHBOUND STAGE 2 NIGHTTIME HOURS

STA. 1279+38'TWNB - STA. 1283+80'TWNB'



IH 39/90 WIDENING - NORTHBOUND STAGE 2 NIGHTTIME HOURS

STRUCTURE B-53-73



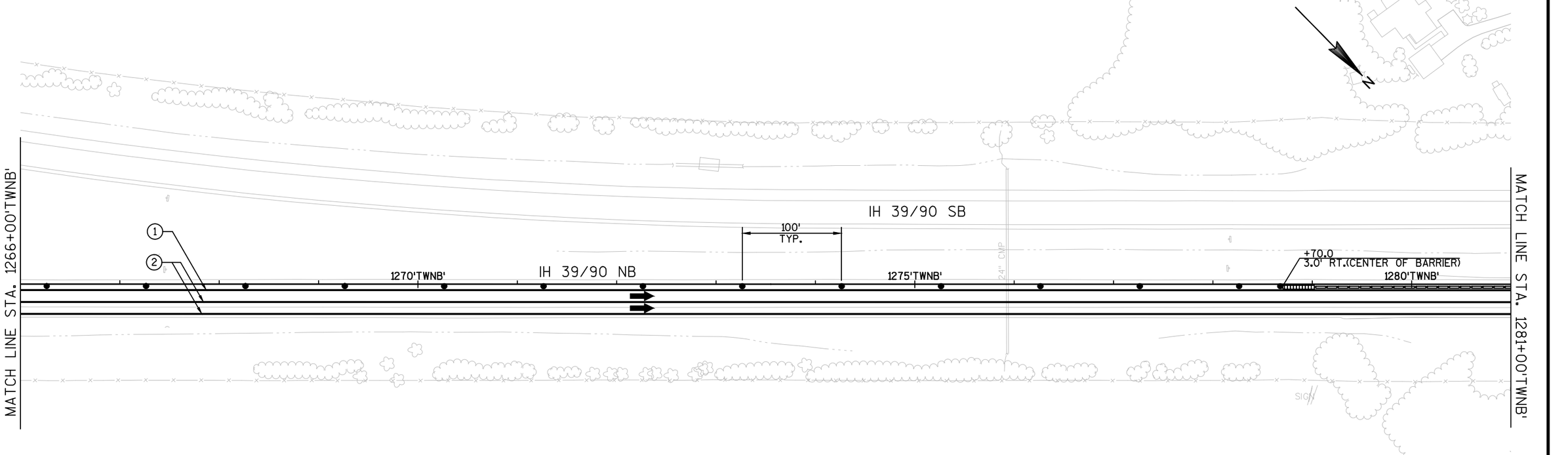
LEGEND

- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- SIGN ON TEMPORARY SUPPORT
- CONCRETE BARRIER TEMPORARY PRECAST
- CRASH CUSHION TEMPORARY
- WORK AREA
- DIRECTION OF TRAFFIC

NOTE:
SPEED REDUCTION SIGNAGE TO REMAIN IN PLACE FROM NIGHTTIME OPERATIONS. SEE 'TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION DETAIL' FOR SIGN LOCATIONS

(1) TEMPORARY PAVEMENT MARKING PAINT 4-INCH, YELLOW

(2) TEMPORARY PAVEMENT MARKING PAINT 4-INCH, WHITE

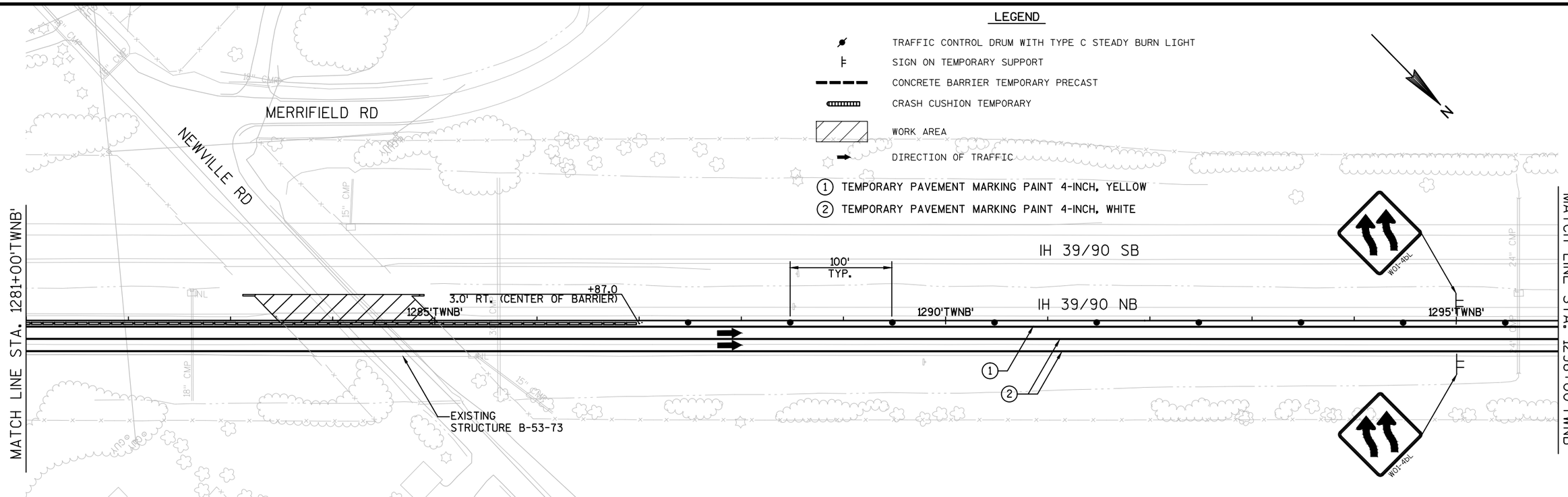


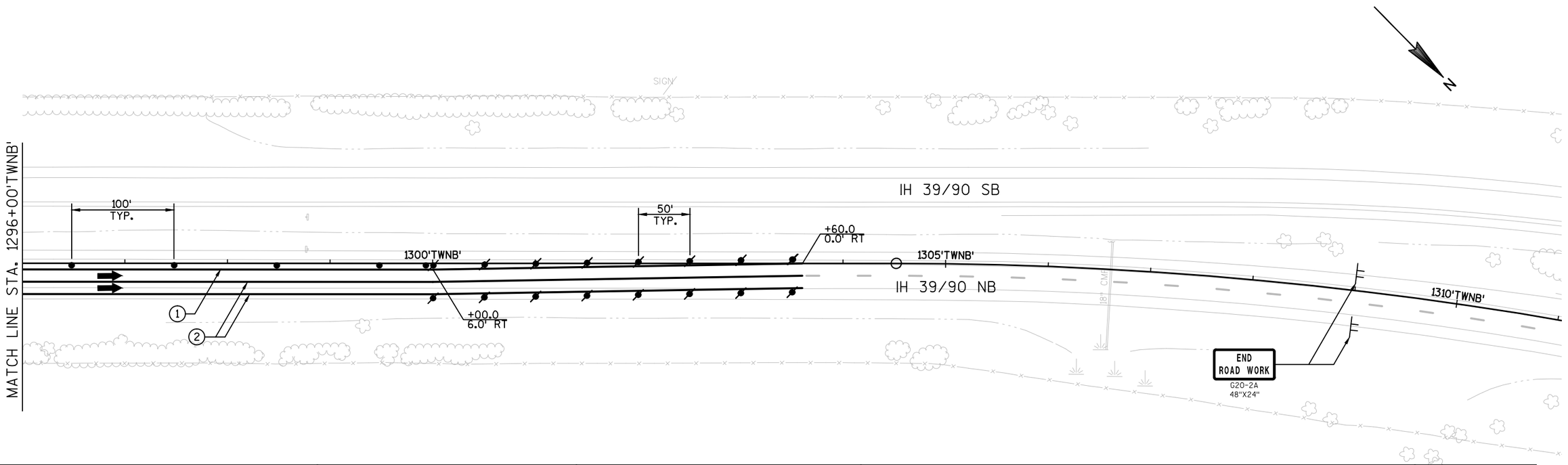
PROJECT NO: 1005-10-84	HWY: IH 39/90	COUNTY: ROCK	TRAFFIC CONTROL: STAGE 2 (DAYTIME HOURS)	SHEET 39 E

2

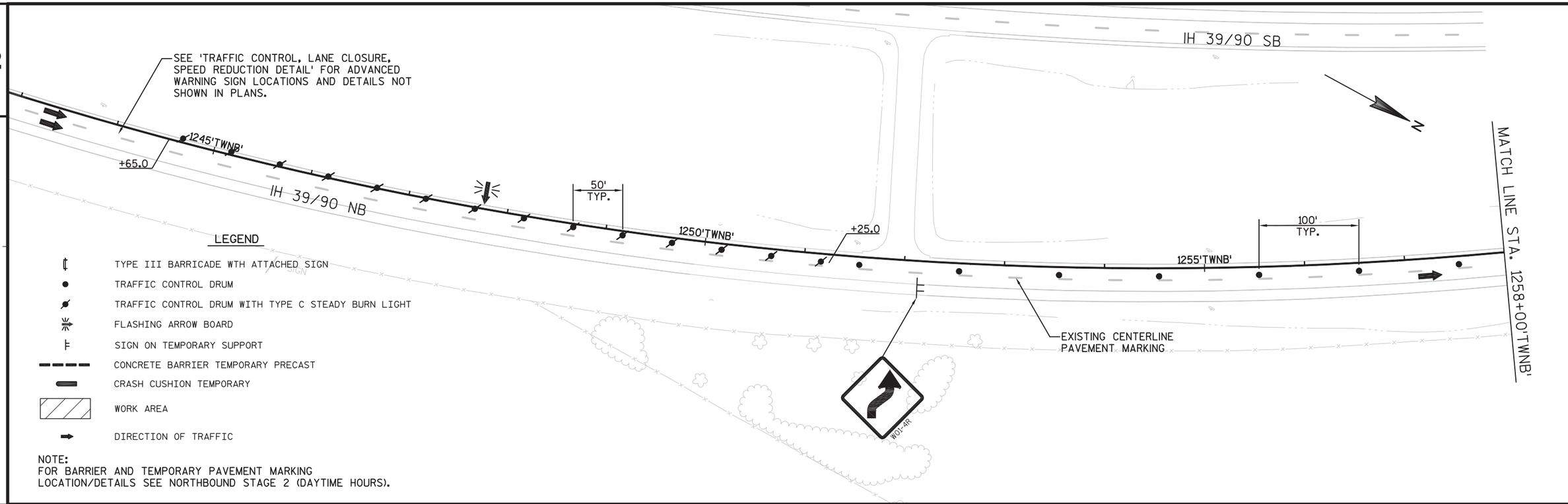
LEGEND

- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- SIGN ON TEMPORARY SUPPORT
- CONCRETE BARRIER TEMPORARY PRECAST
- CRASH CUSHION TEMPORARY
- WORK AREA
- DIRECTION OF TRAFFIC
- (1) TEMPORARY PAVEMENT MARKING PAINT 4-INCH, YELLOW
- (2) TEMPORARY PAVEMENT MARKING PAINT 4-INCH, WHITE

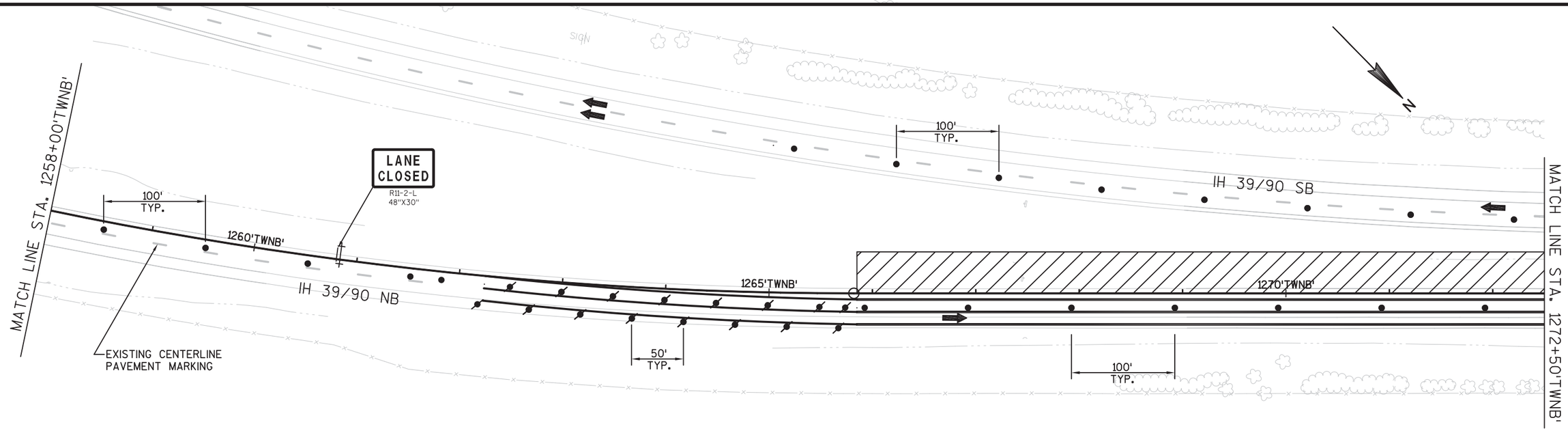




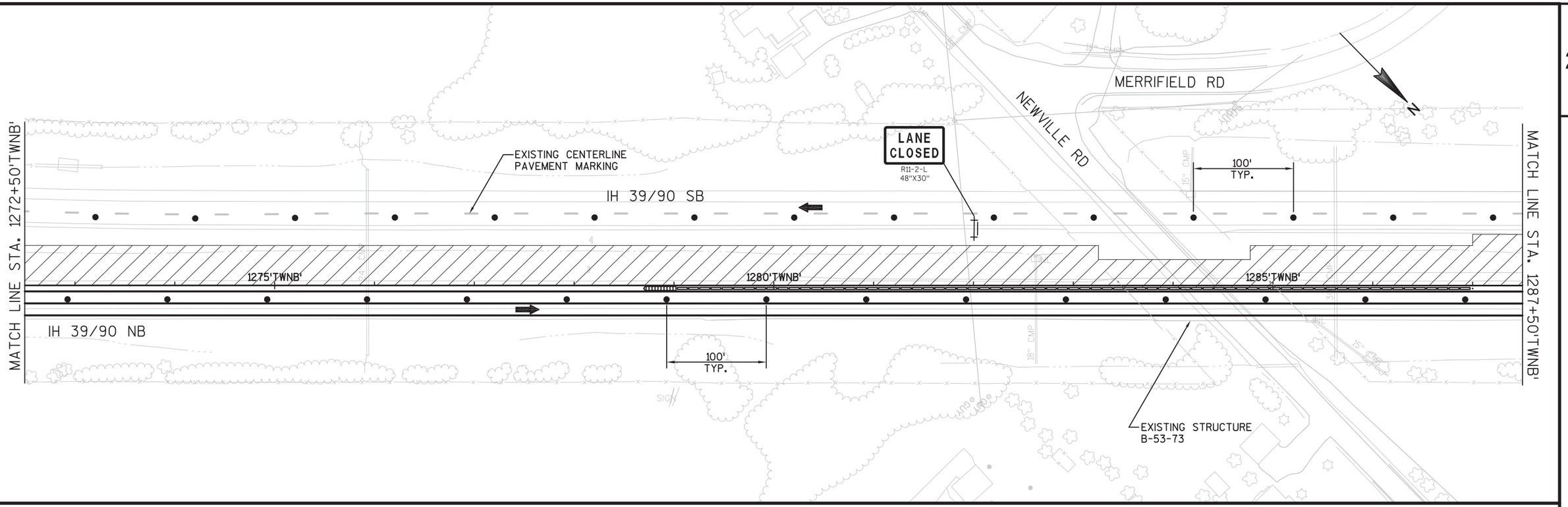
PROJECT NO: 1005-10-84	HWY: IH 39/90	COUNTY: ROCK	TRAFFIC CONTROL: STAGE 2 (DAYTIME HOURS)	SHEET 40 E



NOTE:
FOR BARRIER AND TEMPORARY PAVEMENT MARKING LOCATION/DETAILS SEE NORTHBOUND STAGE 2 (DAYTIME HOURS).



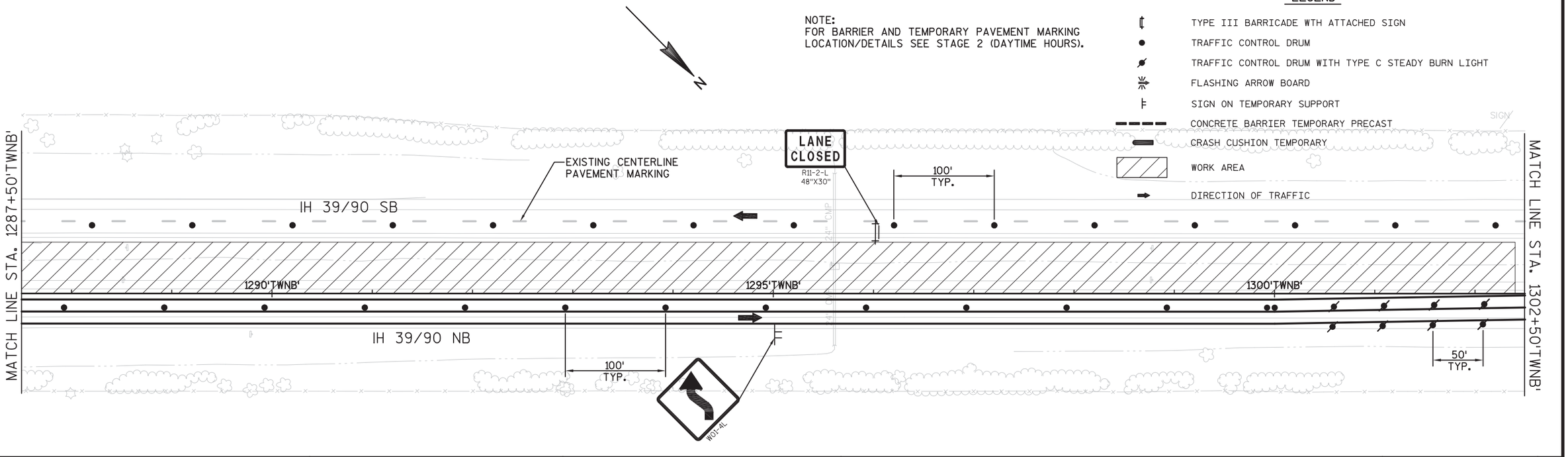
PROJECT NO: 1005-10-84	HWY: IH 39/90	COUNTY: ROCK	TRAFFIC CONTROL: STAGE 2 (NIGHTTIME HOURS)	SHEET 41 - E



NOTE:
FOR BARRIER AND TEMPORARY PAVEMENT MARKING LOCATION/DETAILS SEE STAGE 2 (DAYTIME HOURS).

LEGEND

- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- CONCRETE BARRIER TEMPORARY PRECAST
- CRASH CUSHION TEMPORARY
- WORK AREA
- DIRECTION OF TRAFFIC

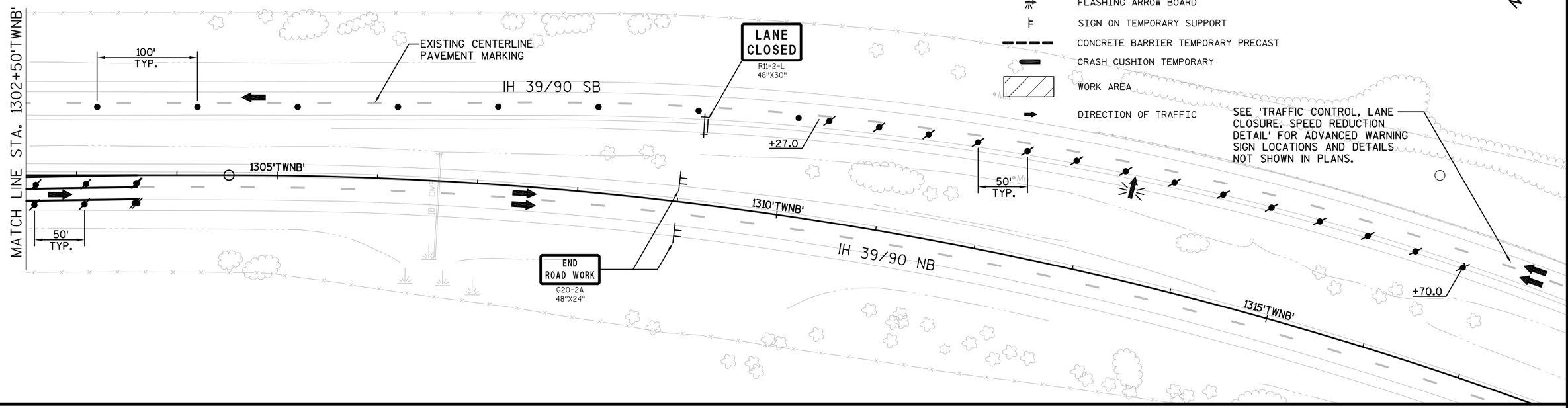


PROJECT NO: 1005-10-84	HWY: IH 39/90	COUNTY: ROCK	TRAFFIC CONTROL: STAGE 2 (NIGHTTIME HOURS)	SHEET 42 - E

NOTE:
FOR BARRIER AND TEMPORARY PAVEMENT MARKING LOCATION/DETAILS SEE STAGE 2 (DAYTIME HOURS).

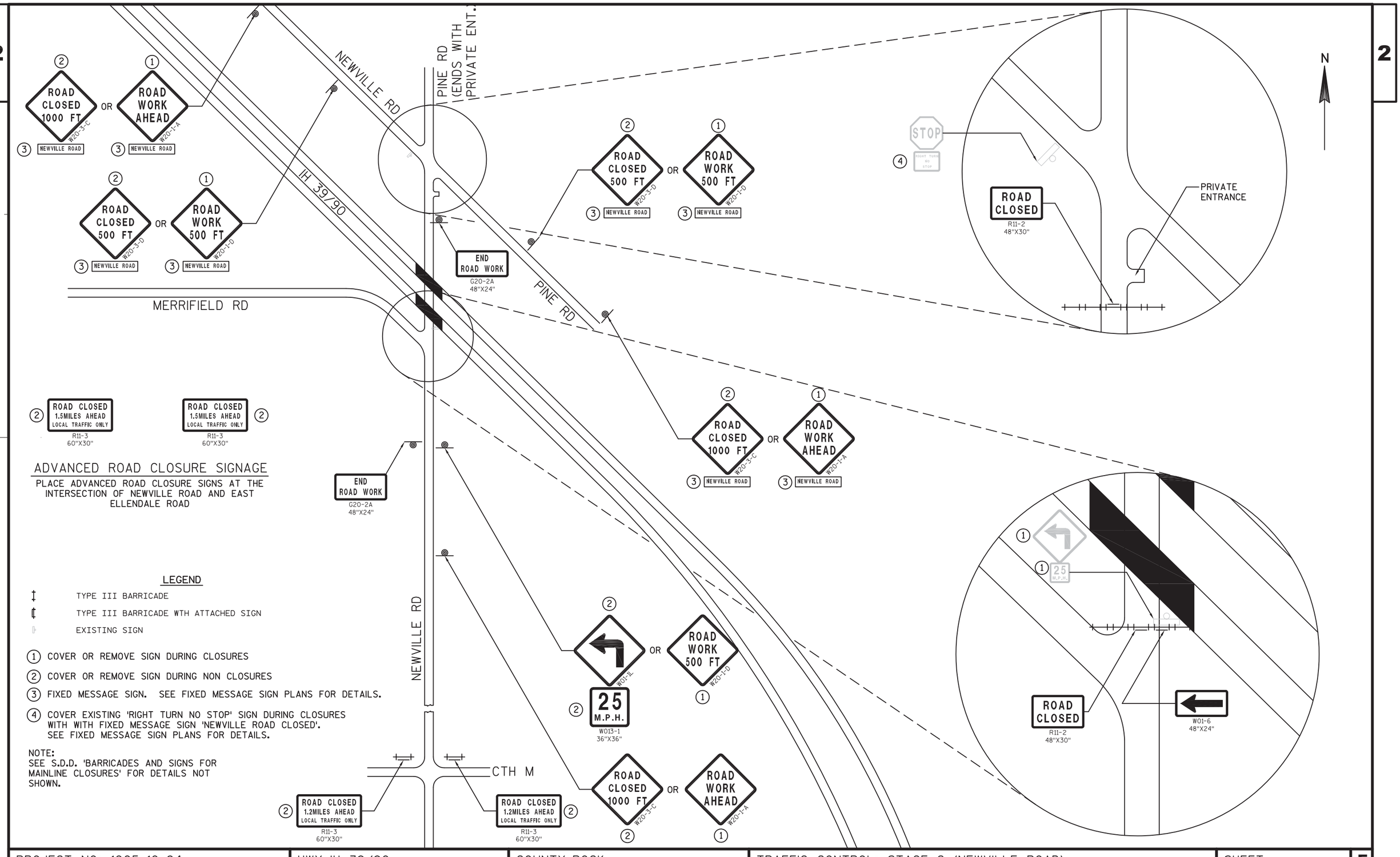
LEGEND

- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- CONCRETE BARRIER TEMPORARY PRECAST
- CRASH CUSHION TEMPORARY
- WORK AREA
- DIRECTION OF TRAFFIC



PROJECT NO: 1005-10-84	HWY: IH 39/90	COUNTY: ROCK	TRAFFIC CONTROL: STAGE 2 (NIGHTTIME HOURS)	SHEET 43	E

FILE NAME : G:\WDOTSW\WSW10-11032\CIVIL3D\TEMP WIDENING_CTHO-KENNEDY\SHEETS PLAN\TRAFFIC CONTROL\025201_TC_STAGE2_NB_NIGHT.DWG PLOT DATE : 9/14/2015 PLOT BY : KL ENGINEERING PLOT NAME : ----------



ADVANCED ROAD CLOSURE SIGNAGE

PLACE ADVANCED ROAD CLOSURE SIGNS AT THE INTERSECTION OF NEWVILLE ROAD AND EAST ELLENDALE ROAD

LEGEND

‡ TYPE III BARRICADE

‡ TYPE III BARRICADE WTH ATTACHED SIGN

EXISTING SIGN

(1) COVER OR REMOVE SIGN DURING CLOSURES

(2) COVER OR REMOVE SIGN DURING NON CLOSURES

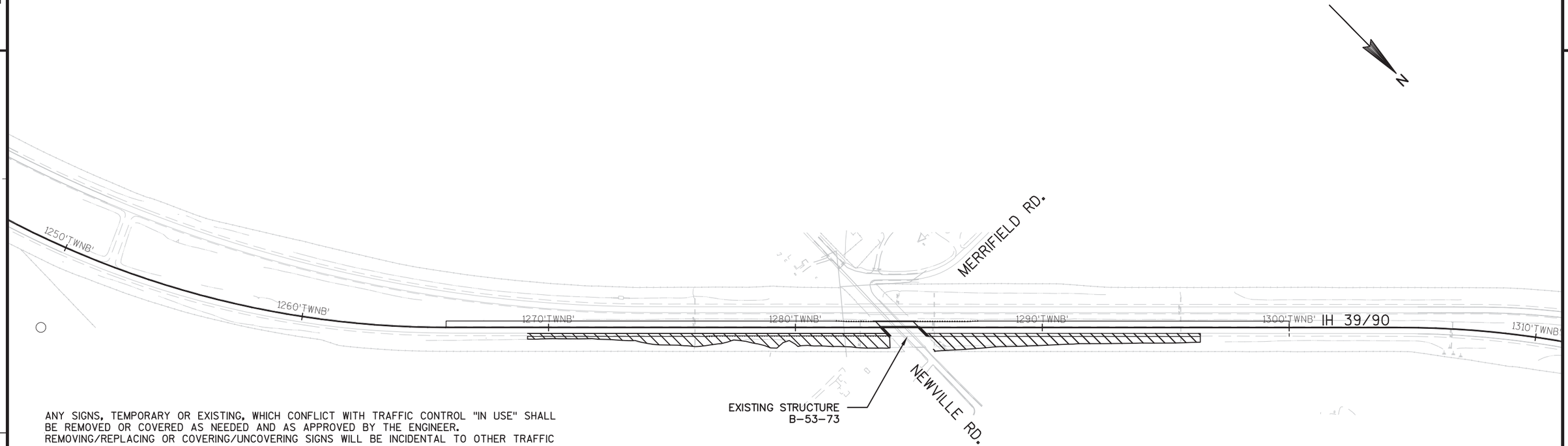
(3) FIXED MESSAGE SIGN. SEE FIXED MESSAGE SIGN PLANS FOR DETAILS.

(4) COVER EXISTING 'RIGHT TURN NO STOP' SIGN DURING CLOSURES WITH WITH FIXED MESSAGE SIGN 'NEWVILLE ROAD CLOSED'. SEE FIXED MESSAGE SIGN PLANS FOR DETAILS.

NOTE:
SEE S.D.D. 'BARRICADES AND SIGNS FOR MAINLINE CLOSURES' FOR DETAILS NOT SHOWN.

PROJECT NO: 1005-10-84	HWY: IH 39/90	COUNTY: ROCK	TRAFFIC CONTROL: STAGE 2 (NEWVILLE ROAD)	SHEET ----- E

2



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. REMOVING/REPLACING OR COVERING/UNCOVERING SIGNS WILL BE INCIDENTAL TO OTHER TRAFFIC CONTROL ITEMS.

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

IF SIGNS ARE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS THE ADVANCED WARNING SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS. MOUNT ALL PORTABLE TRAFFIC CONTROL SIGNS AT A MINIMUM HEIGHT OF 5 FEET, MEASURED FROM THE BOTTOM OF THE SIGN, ABOVE THE EDGE OF PAVEMENT.

ALL TRAFFIC CONTROL SIGNING SHALL CONFORM TO: PART VI OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, THE WISCONSIN SUPPLEMENT TO THE MUTCD, AND OTHER CONTRACT DOCUMENTS.

THE TURNING OF TRAFFIC CONTROL DEVICES WHEN NOT IN USE TO OBSCURE THE MESSAGE WILL NOT BE ALLOWED.

REMOVE PAVEMENT MARKINGS NOT APPROPRIATE FOR THE TRAVEL PATH IN USE.

THE LANE CLOSURE SERIES SHALL BE INSTALLED AS A COMPLETE UNIT WHICH INCLUDES ALL ADVANCE WARNING SIGNING, DRUMS, AND ARROW BOARDS.

CONTRACTORS EQUIPMENT AND MATERIAL STOCKPILES MAY NOT BE STORED WITHIN THE CLEAR ZONE OF IH 39/90 OR WHILE THE CONTRACTOR IS NOT WORKING, UNLESS THEY ARE PROTECTED BY CONCRETE BARRIER TEMPORARY PRECAST. CONSTRUCTION CLEAR ZONE = 20 FEET MEASURED FROM THE EDGE OF LANE LINE.

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

ALL TRAFFIC CONTROL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED IN THE PLANS.

AT THE END OF EACH NIGHTTIME WORKING OPERATION A 6:1 OR FLATTER SAFETY EDGE BEHIND THE TRAFFIC CONTROL DRUMS SHALL BE PROVIDED AT THE EXISTING EDGE OF PAVEMENT AFTER EXCAVATION AND PRIOR TO PAVING.

ADVANCED PROJECT WARNING AND END ROADWORK SIGNS SHALL BE COORDINATED WITH OTHERS FROM WISDOT PROJECTS 1005-10-71,-72.

WORK ZONE

STAGE 3

MAINTENANCE OF TRAFFIC:

- NORTHBOUND TRAFFIC LANES WILL SHIFT AND UTILIZE THE NORTHBOUND MEDIAN SHOULDER REPLACED/WIDENED IN STAGE 2
- TWO (2) THROUGH LANES WILL BE OPEN AT ALL TIMES ALONG NORTHBOUND IH 39/90 EXCEPT FOR NIGHTTIME INSIDE LANE CLOSURES IN THE NORTHBOUND DIRECTION AS SPECIFIED IN THE CONTRACT SPECIAL PROVISIONS.
- SOUTHBOUND IH 39/90 WILL BE OPEN TO ALL EXISTING LANES AT ALL TIMES.
- NEWVILLE ROAD WILL BE OPEN TO A MINIMUM OF ONE (1) 11" THROUGH LANE AT ALL TIMES.

CONSTRUCTION TO BE COMPLETED:

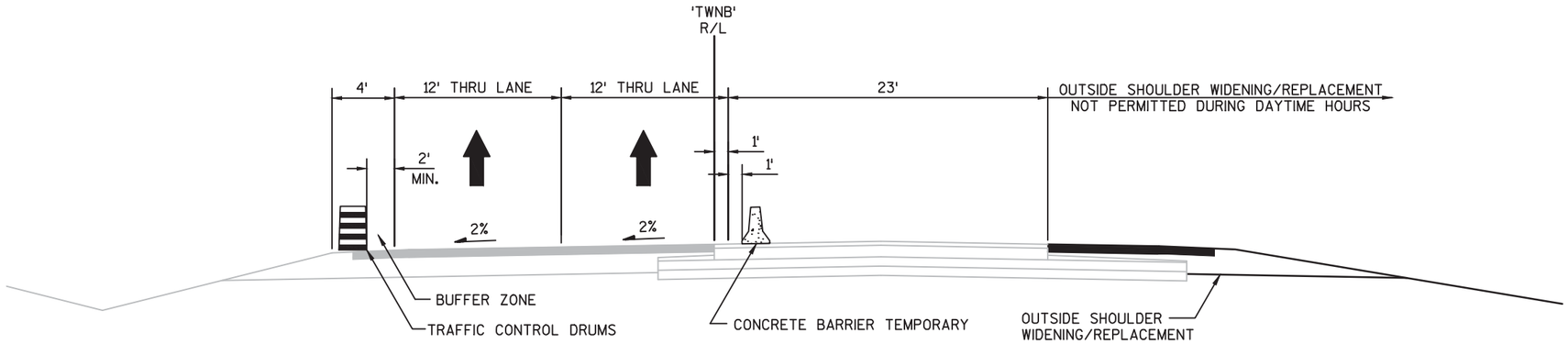
- EXISTING ABUTMENT REPAIR OF STRUCTURE B-53-73
- OUTSIDE SHOULDER REPLACEMENT/WIDENING
- GUARD RAIL REMOVAL AND INSTALLATION

NOTES - STAGE 3:

DELIVERY OF MATERIALS TO THE WORKZONE IS LIMITED TO NIGHTTIME HOURS ONLY AS SPECIFIED IN THE CONTRACT SPECIAL PROVISIONS.

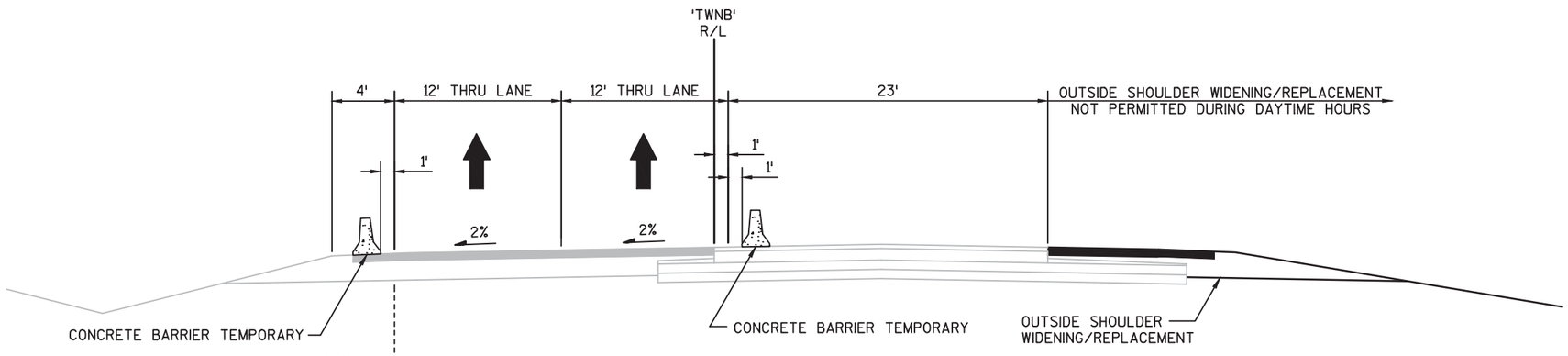
REFER TO THE FOLLOWING STANDARD DETAIL DRAWINGS FOR TRAFFIC CONTROL DEVICES, AS WELL AS OTHER STANDARD DETAIL DRAWINGS AS NECESSARY, UNLESS OTHERWISE DIRECTED BY THE ENGINEER

- TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS)



IH 39/90 WIDENING - NORTHBOUND STAGE 3 DAYTIME HOURS

STA. 1278+70'TWNB' - STA. 1280+25'TWNB'



IH 39/90 WIDENING - NORTHBOUND STAGE 3 DAYTIME HOURS

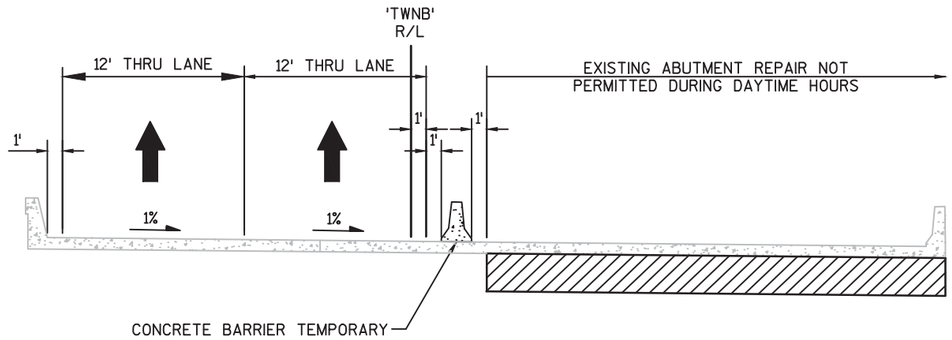
STA. 1280+25'TWNB' - STA. 1283+12'TWNB'
STA. 1284+90'TWNB' - STA. 1287+00'TWNB'

PARTIAL SECTION

STA. 1281+63'TWNB' - STA. 1283+12'TWNB'
STA. 1284+90'TWNB' - STA. 1287+00'TWNB'

PROJECT NO: 1005-10-84	HWY: IH 39/90	COUNTY: ROCK	TRAFFIC CONTROL: STAGE 3 TYPICAL SECTIONS	SHEET 46 E

2

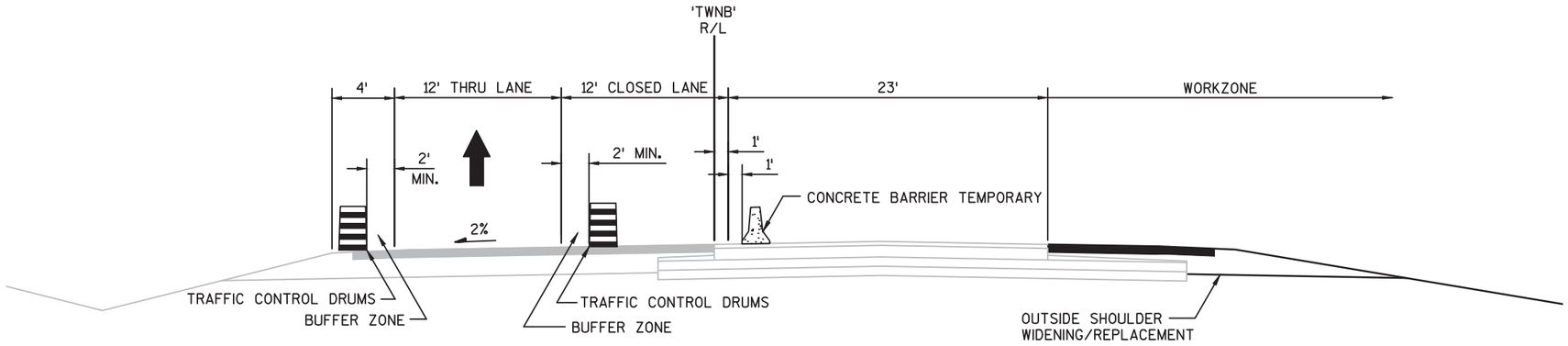


IH 39/90 WIDENING - NORTHBOUND STAGE 3 DAYTIME HOURS

STRUCTURE B-53-73

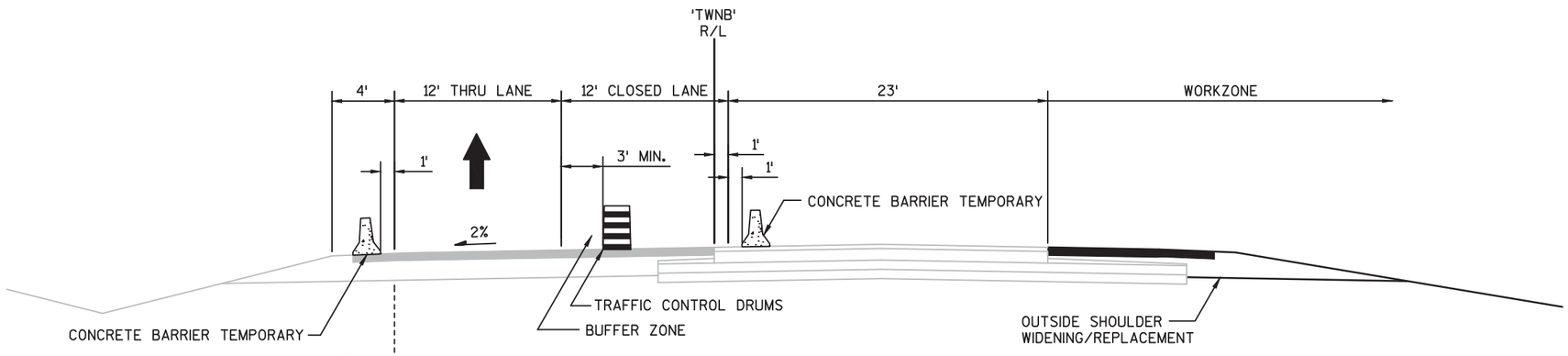
PROJECT NO:1005-10-84	HWY:IH 39/90	COUNTY:ROCK	TRAFFIC CONTROL: STAGE 3 TYPICAL SECTIONS	SHEET 47	E

2



IH 39/90 WIDENING - NORTHBOUND STAGE 3 NIGHTTIME HOURS

STA. 1278+70'TWNB' - STA. 1280+25'TWNB'



IH 39/90 WIDENING - NORTHBOUND STAGE 3 NIGHTTIME HOURS

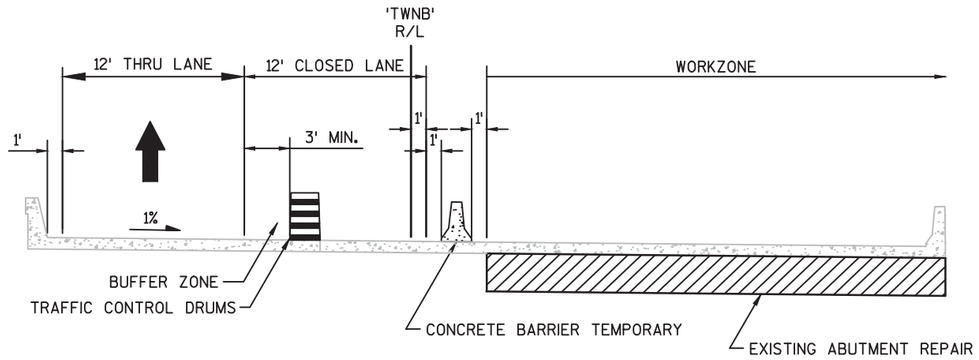
STA. 1280+25'TWNB' - STA. 1283+12'TWNB'
STA. 1284+90'TWNB' - STA. 1287+00'TWNB'

PARTIAL SECTION

STA. 1281+63'TWNB' - STA. 1283+12'TWNB'
STA. 1284+90'TWNB' - STA. 1287+00'TWNB'

PROJECT NO: 1005-10-84	HWY: IH 39/90	COUNTY: ROCK	TRAFFIC CONTROL: STAGE 3 TYPICAL SECTIONS	SHEET 48	E

2



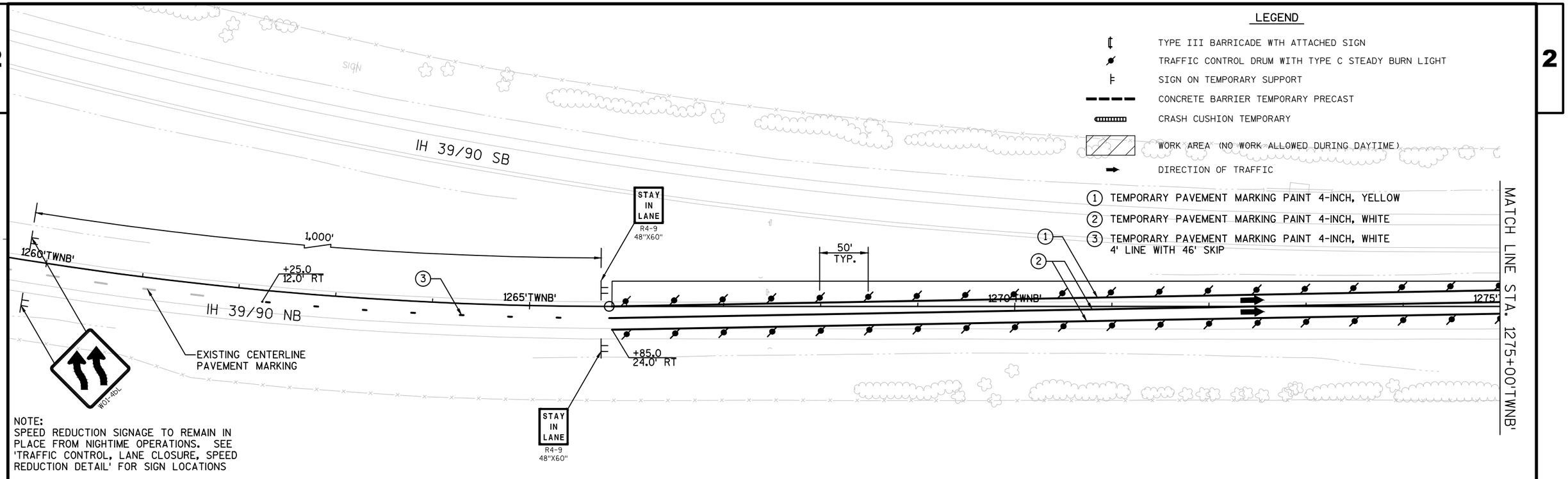
IH 39/90 WIDENING - NORTHBOUND STAGE 3 NIGHTTIME HOURS

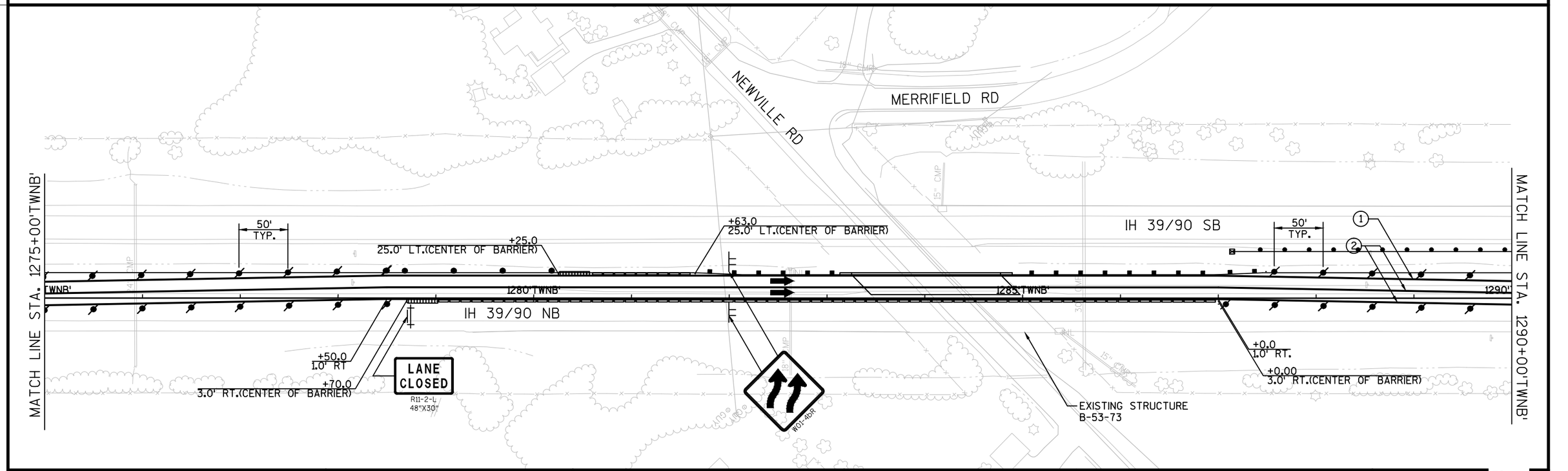
STRUCTURE B-53-73

PROJECT NO: 1005-10-84	HWY: IH 39/90	COUNTY: ROCK	TRAFFIC CONTROL: STAGE 3 TYPICAL SECTIONS	SHEET 49	E

FILE NAME : G:\WDOTSW\WSW10-11032\CIVIL3D\TEMP WIDENING_CTHO-KENNEDY\SHEETS PLAN\TRAFFIC CONTROL\025002_TC_TS_NEWVILLE.DWG PLOT DATE : 7/28/2015 PLOT BY : KL ENGINEERING PLOT NAME : ----------

WISDOT/CADDS SHEET 42





PROJECT NO: 1005-10-84	HWY: IH 39/90	COUNTY: ROCK	TRAFFIC CONTROL: STAGE 3 (DAYTIME HOURS)	SHEET 50 E

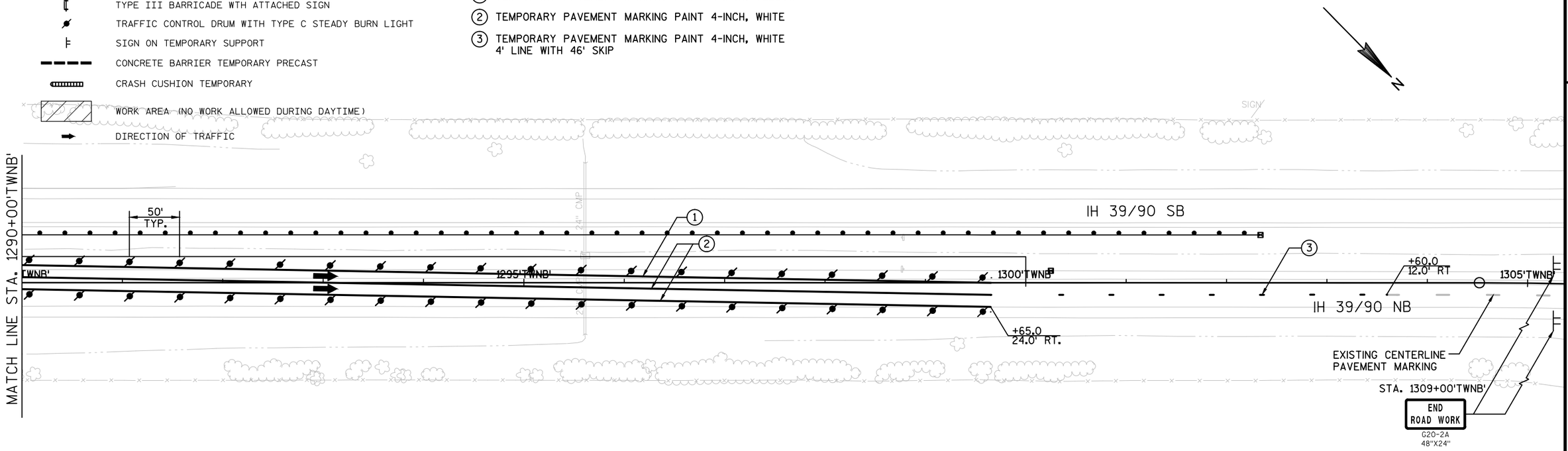
LEGEND

- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- SIGN ON TEMPORARY SUPPORT
- CONCRETE BARRIER TEMPORARY PRECAST
- CRASH CUSHION TEMPORARY
- WORK AREA (NO WORK ALLOWED DURING DAYTIME)
- DIRECTION OF TRAFFIC

(1) TEMPORARY PAVEMENT MARKING PAINT 4-INCH, YELLOW

(2) TEMPORARY PAVEMENT MARKING PAINT 4-INCH, WHITE

(3) TEMPORARY PAVEMENT MARKING PAINT 4-INCH, WHITE
4' LINE WITH 46' SKIP



PROJECT NO: 1005-10-84	HWY: IH 39/90	COUNTY: ROCK	TRAFFIC CONTROL: STAGE 3 (DAYTIME HOURS)	SHEET 51 E

FILE NAME : G:\WDOTSW\WSW10-11032\CIVIL3D\TEMP WIDENING_CTH0-KENNEDY\SHEETS PLAN\TRAFFIC CONTROL\025201_TC_STAGE3_NB.DWG PLOT DATE : 9/17/2015 PLOT BY : KL ENGINEERING PLOT NAME : ----------

SEE 'TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION DETAIL' FOR ADVANCED WARNING SIGN LOCATIONS AND DETAILS NOT SHOWN IN PLANS.

IH 39/90 NB

1250'TWNB'

+25.0

50' TYP.

EXISTING CENTERLINE PAVEMENT MARKING

IH 39/90 SB

1255'TWNB'

+85.0

W01-4L

LANE CLOSED
R11-2-L
48"X30"

1260'TWNB'

100' TYP.

MATCH LINE STA. 1263+00'TWNB'

N

LEGEND

- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- CONCRETE BARRIER TEMPORARY PRECAST
- CRASH CUSHION TEMPORARY
- WORK AREA
- DIRECTION OF TRAFFIC

NOTE:
FOR BARRIER AND TEMPORARY PAVEMENT MARKING LOCATION/DETAILS SEE STAGE 3 (DAYTIME HOURS).

MATCH LINE STA. 1263+00'TWNB'

IH 39/90 NB

1265'TWNB'

100' TYP.

LANE CLOSED
R11-2-L
48"X30"

1270'TWNB'

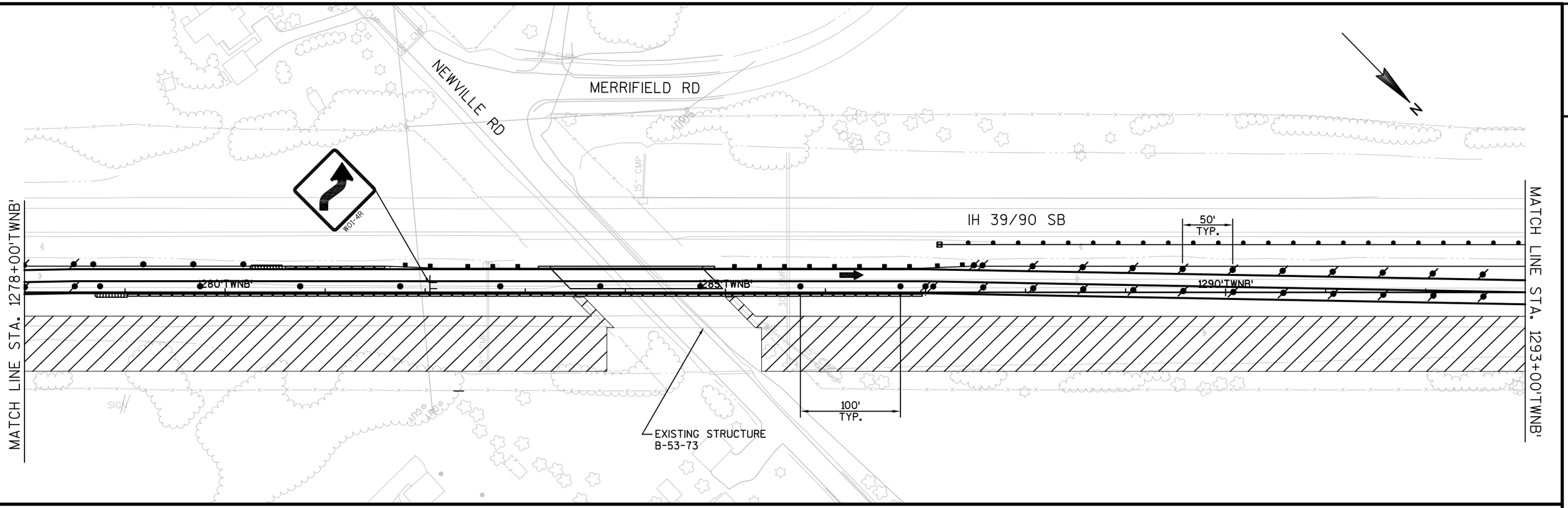
1275'TWNB'

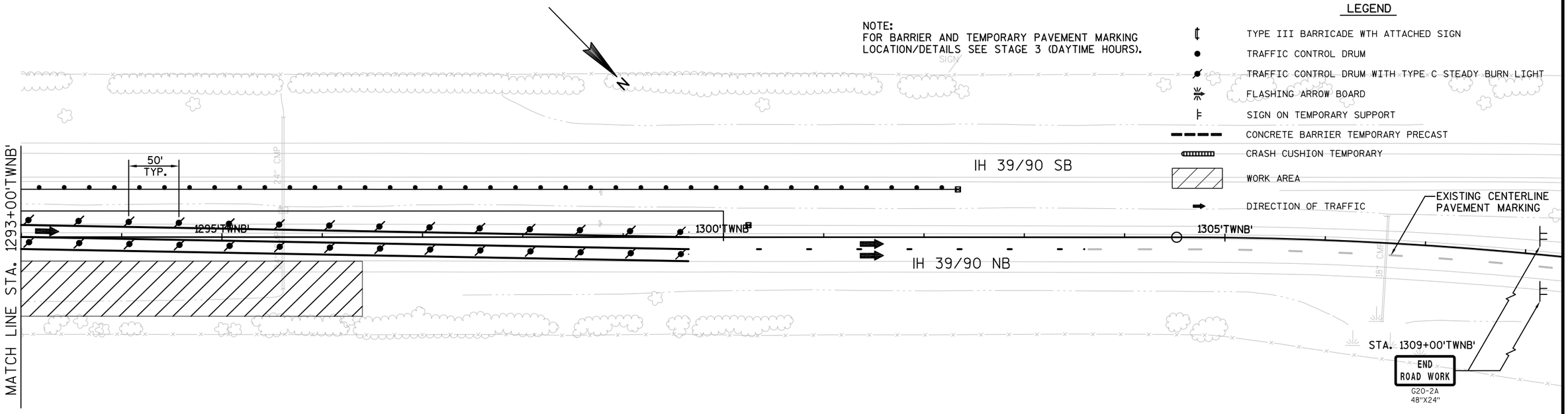
50' TYP.

IH 39/90 SB

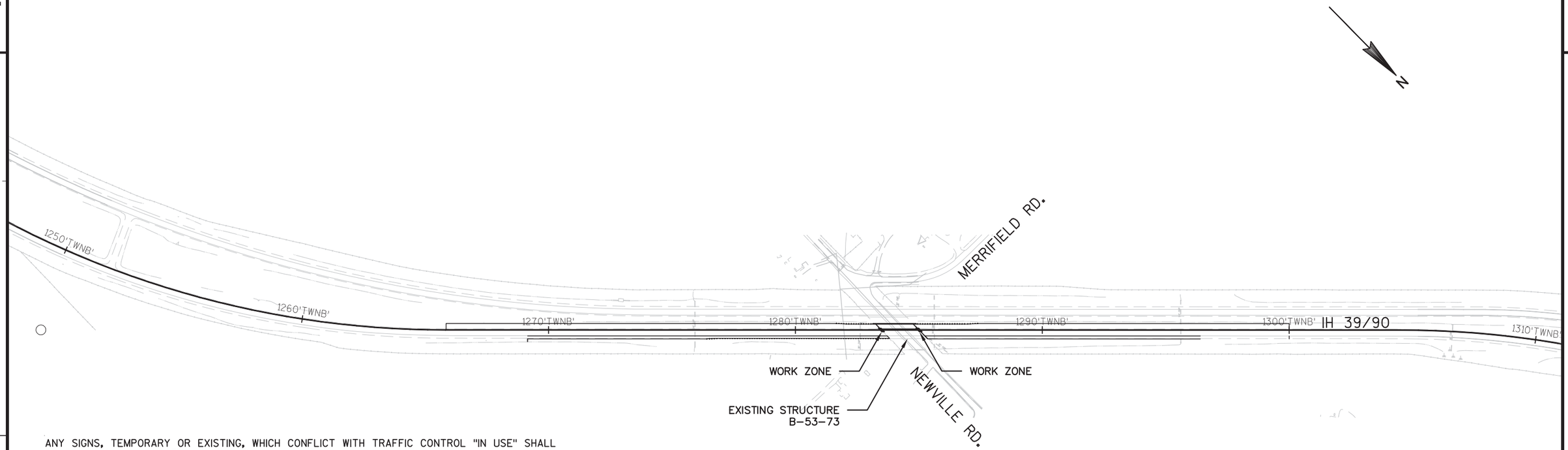
MATCH LINE STA. 1278+00'TWNB'

PROJECT NO: 1005-10-84	HWY: IH 39/90	COUNTY: ROCK	TRAFFIC CONTROL: STAGE 3 (NIGHTTIME HOURS)	SHEET 52 - E





PROJECT NO: 1005-10-84	HWY: IH 39/90	COUNTY: ROCK	TRAFFIC CONTROL: STAGE 3 (NIGHTTIME HOURS)	SHEET 53	E



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. REMOVING/REPLACING OR COVERING/UNCOVERING SIGNS WILL BE INCIDENTAL TO OTHER TRAFFIC CONTROL ITEMS.

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

IF SIGNS ARE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS THE ADVANCED WARNING SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS. MOUNT ALL PORTABLE TRAFFIC CONTROL SIGNS AT A MINIMUM HEIGHT OF 5 FEET, MEASURED FROM THE BOTTOM OF THE SIGN, ABOVE THE EDGE OF PAVEMENT.

ALL TRAFFIC CONTROL SIGNING SHALL CONFORM TO: PART VI OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, THE WISCONSIN SUPPLEMENT TO THE MUTCD, AND OTHER CONTRACT DOCUMENTS.

THE TURNING OF TRAFFIC CONTROL DEVICES WHEN NOT IN USE TO OBSCURE THE MESSAGE WILL NOT BE ALLOWED.

REMOVE PAVEMENT MARKINGS NOT APPROPRIATE FOR THE TRAVEL PATH IN USE.

THE LANE CLOSURE SERIES SHALL BE INSTALLED AS A COMPLETE UNIT WHICH INCLUDES ALL ADVANCE WARNING SIGNING, DRUMS, AND ARROW BOARDS.

CONTRACTORS EQUIPMENT AND MATERIAL STOCKPILES MAY NOT BE STORED WITHIN THE CLEAR ZONE OF IH 39/90 WHILE THE CONTRACTOR IS NOT WORKING, UNLESS THEY ARE PROTECTED BY CONCRETE BARRIER TEMPORARY PRECAST. CONSTRUCTION CLEAR ZONE = 20 FEET MEASURED FROM THE EDGE OF LANE LINE.

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

ALL TRAFFIC CONTROL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED IN THE PLANS.

ADVANCED PROJECT WARNING AND END ROADWORK SIGNS SHALL BE COORDINATED WITH OTHERS FROM WISDOT PROJECTS 1005-10-71,-72.

STAGE 4

MAINTENANCE OF TRAFFIC:

- NORTHBOUND TRAFFIC LANES WILL SHIFT AND UTILIZE THE NORTHHBOUND OUTSIDE SHOULDER REPLACED/WIDENED IN STAGE 3
- TWO (2) THROUGH LANES WILL BE OPEN AT ALL TIMES ALONG NORTHBOUND IH 39/90 EXCEPT FOR NIGHTTIME INSIDE LANE CLOSURES IN THE NORTHBOUND DIRECTION AS SPECIFIED IN THE CONTRACT SPECIAL PROVISIONS.
- SOUTHBOUND IH 39/90 WILL BE OPEN TO ALL EXISTING LANES AT ALL TIMES.
- NEWVILLE ROAD WILL BE OPEN TO A MINIMUM OF ONE (1) 11' THROUGH LANE AT ALL TIMES.

CONSTRUCTION TO BE COMPLETED:

- EXISTING ABUTMENT REPAIR OF STRUCTURE B-53-73

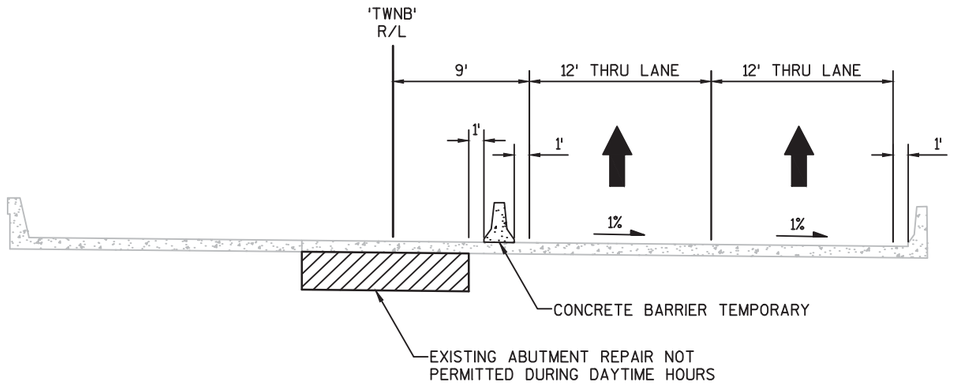
NOTES - STAGE 4:

DELIVERY OF MATERIALS TO THE WORKZONE IS LIMITED TO NIGHTTIME HOURS ONLY AS SPECIFIED IN THE CONTRACT SPECIAL PROVISIONS.

REFER TO THE FOLLOWING STANDARD DETAIL DRAWINGS FOR TRAFFIC CONTROL DEVICES, AS WELL AS OTHER STANDARD DETAIL DRAWINGS AS NECESSARY, UNLESS OTHERWISE DIRECTED BY THE ENGINEER

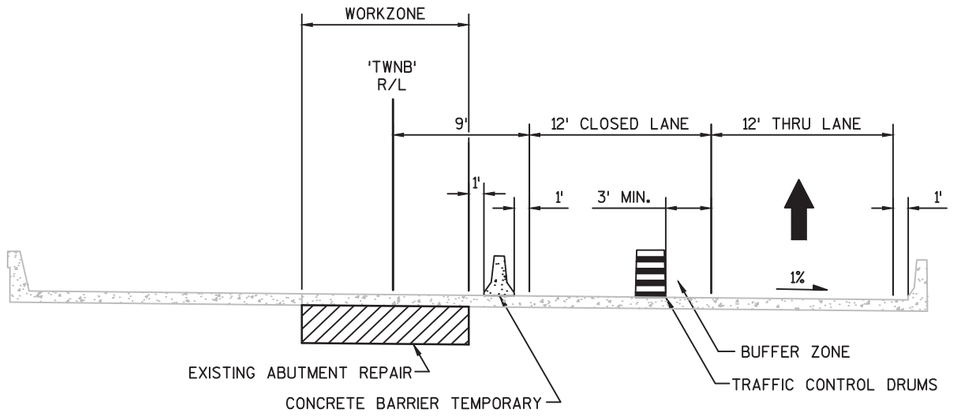
- TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS)

2



IH 39/90 WIDENING - NORTHBOUND STAGE 4 DAYTIME HOURS

STRUCTURE B-53-73



IH 39/90 WIDENING - NORTHBOUND STAGE 4 NIGHTTIME HOURS

STRUCTURE B-53-73

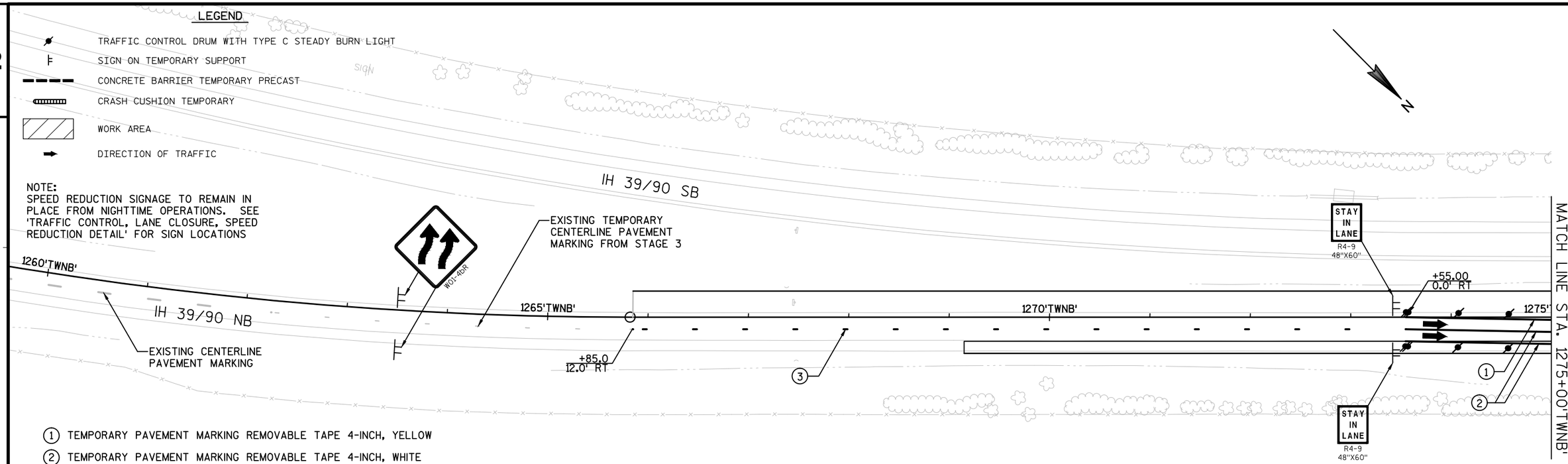
PROJECT NO: 1005-10-84	HWY: IH 39/90	COUNTY: ROCK	TRAFFIC CONTROL: STAGE 4 TYPICAL SECTIONS	SHEET 55	E

2

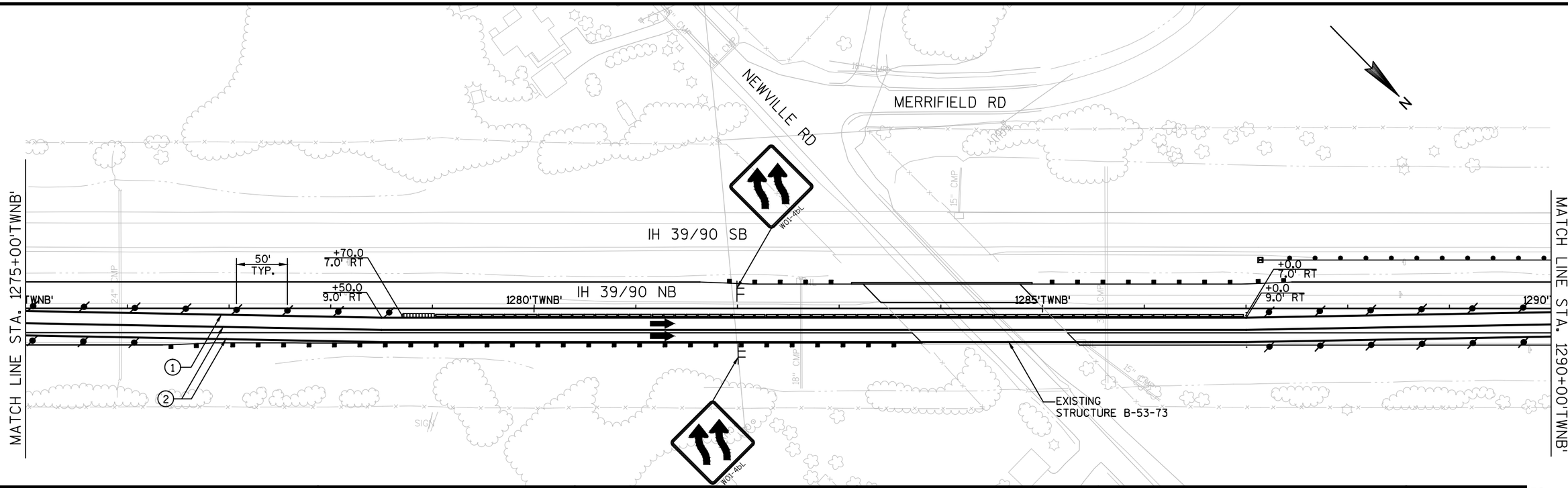
LEGEND

- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- SIGN ON TEMPORARY SUPPORT
- CONCRETE BARRIER TEMPORARY PRECAST
- CRASH CUSHION TEMPORARY
- WORK AREA
- DIRECTION OF TRAFFIC

NOTE:
SPEED REDUCTION SIGNAGE TO REMAIN IN PLACE FROM NIGHTTIME OPERATIONS. SEE 'TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION DETAIL' FOR SIGN LOCATIONS



1. TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH, YELLOW
2. TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH, WHITE
3. TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH, WHITE 4' LINE WITH 46' SKIP



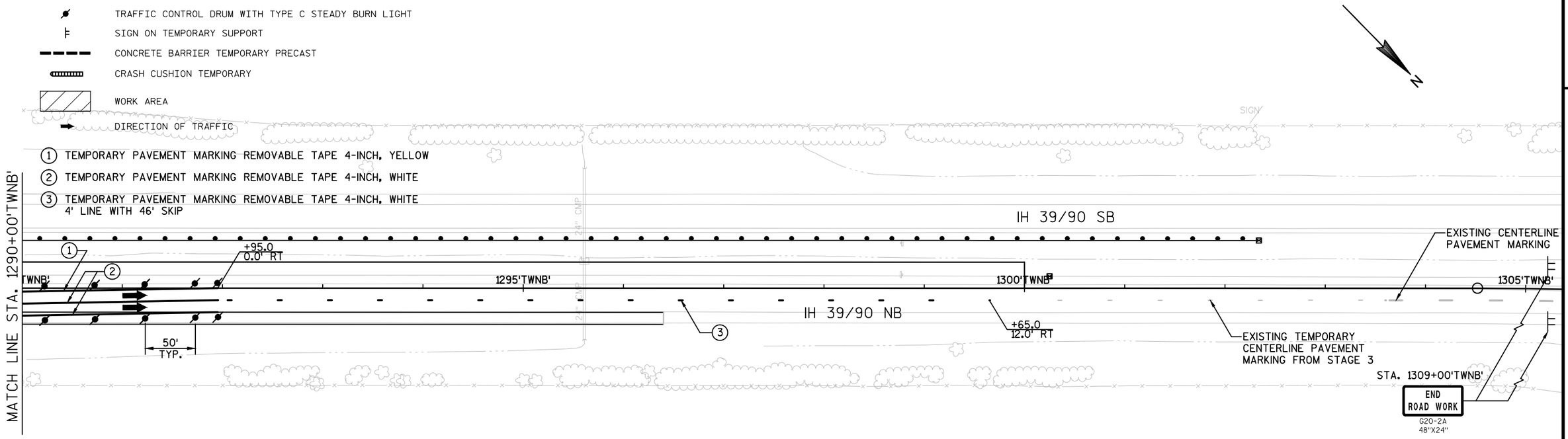
PROJECT NO: 1005-10-84	HWY: IH 39/90	COUNTY: ROCK	TRAFFIC CONTROL: STAGE 4 (DAYTIME HOURS)	SHEET 56 E

2

LEGEND

- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- SIGN ON TEMPORARY SUPPORT
- CONCRETE BARRIER TEMPORARY PRECAST
- CRASH CUSHION TEMPORARY
- WORK AREA
- DIRECTION OF TRAFFIC

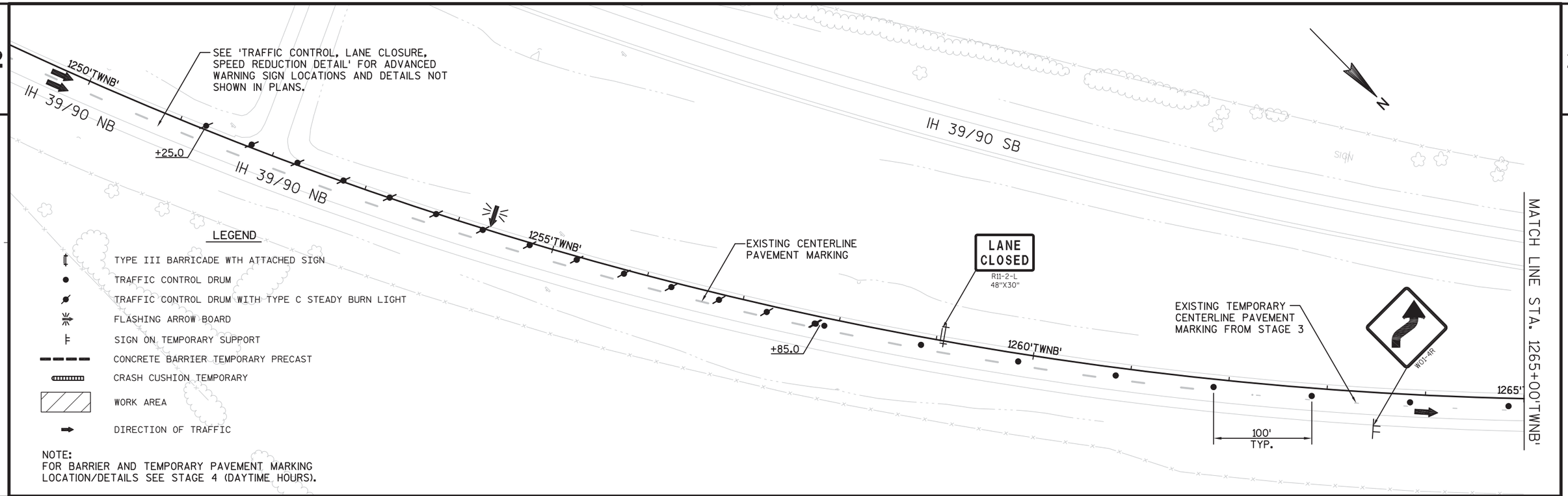
(1) TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH, YELLOW
(2) TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH, WHITE
(3) TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH, WHITE 4' LINE WITH 46' SKIP



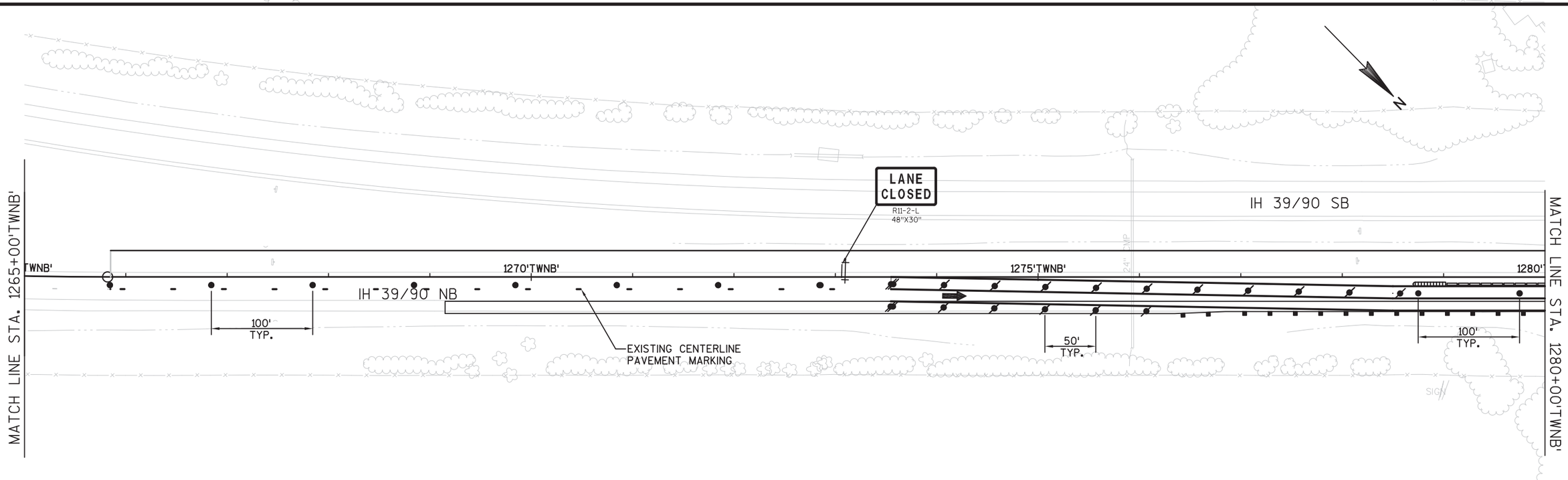
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PROJECT NO: 1005-10-84	HWY: IH 39/90	COUNTY: ROCK	TRAFFIC CONTROL: STAGE 4 (DAYTIME HOURS)	SHEET 57 E

FILE NAME : G:\WDOTSW\WSW10-11032\CIVIL3D\TEMP WIDENING_CTH0-KENNEDY\SHEETS PLAN\TRAFFIC CONTROL\025201_TC_STAGE4_NB.DWG PLOT DATE : 9/17/2015 PLOT BY : KL ENGINEERING PLOT NAME : ----------



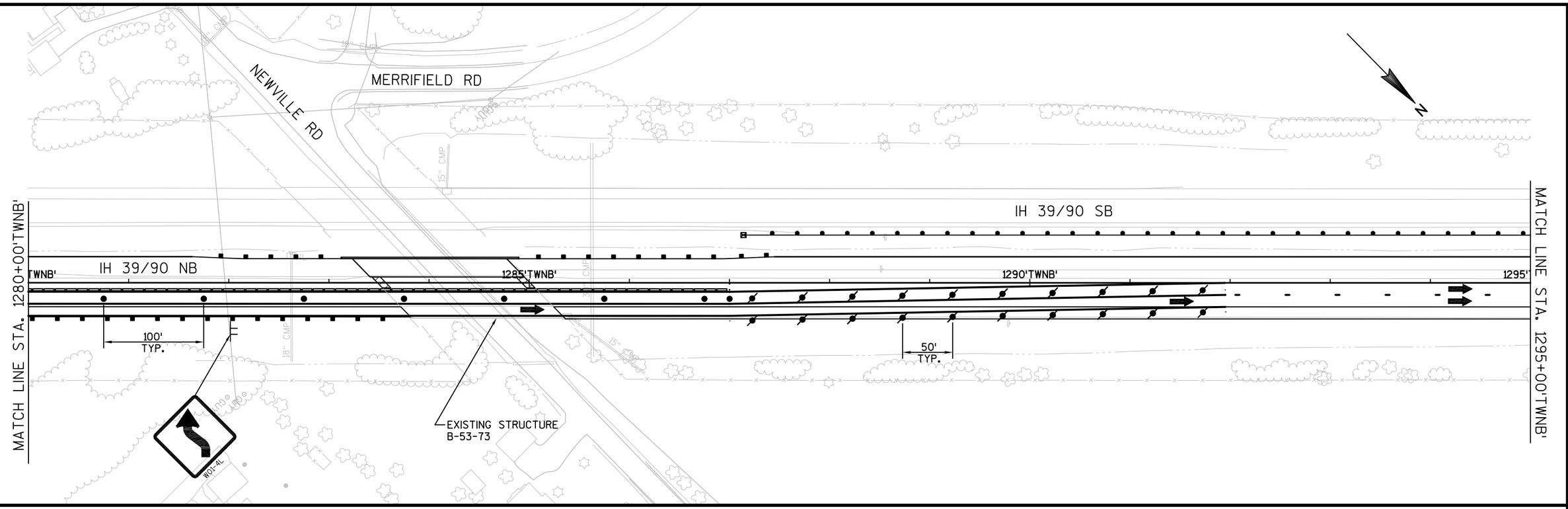
NOTE:
FOR BARRIER AND TEMPORARY PAVEMENT MARKING LOCATION/DETAILS SEE STAGE 4 (DAYTIME HOURS).



PROJECT NO: 1005-10-84	HWY: IH 39/90	COUNTY: ROCK	TRAFFIC CONTROL: STAGE 4 (NIGHTTIME HOURS)	SHEET 58	E

FILE NAME : G:\WDOTSW\WSW10-11032\CIVIL3D\TEMP WIDENING_CTHO-KENNEDY\SHEETS PLAN\TRAFFIC CONTROL\025201_TC_STAGE4_NB_NIGHT.DWG PLOT DATE : 7/20/2015 PLOT BY : KL ENGINEERING PLOT NAME : ----------
WISDOT/CADDS SHEET 42

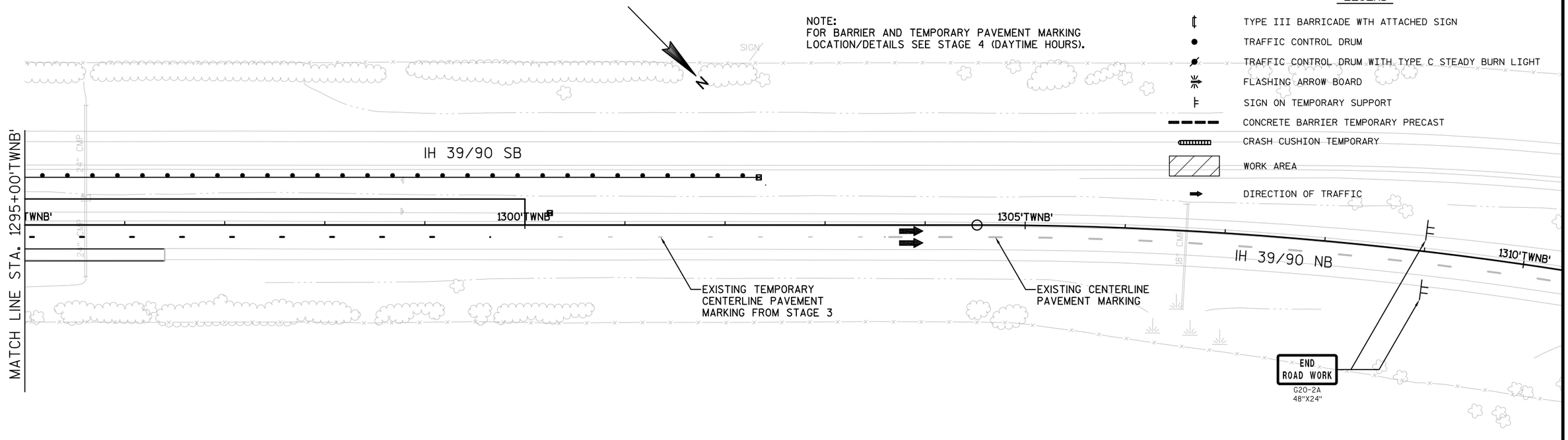
2



NOTE:
FOR BARRIER AND TEMPORARY PAVEMENT MARKING LOCATION/DETAILS SEE STAGE 4 (DAYTIME HOURS).

LEGEND

- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- CONCRETE BARRIER TEMPORARY PRECAST
- CRASH CUSHION TEMPORARY
- WORK AREA
- DIRECTION OF TRAFFIC



PROJECT NO: 1005-10-84	HWY: IH 39/90	COUNTY: ROCK	TRAFFIC CONTROL: STAGE 4 (NIGHTTIME HOURS)	SHEET 59	E

2

2

N

'TWNB' R/L
STA 1234+86.94
X: 498278.34
Y: 310739.12

PC: 1234+86.94'TWNB'

1235'TWNB'

1240'TWNB'

1245'TWNB'

PI STA = 1251+25.14'TWNB'
Y = 312377.157
X = 498302.179
DELTA = 46°25'38"
D = 1°30'00"
T = 1638.21'
L = 3095.15'
R = 3819.72'
PC STA = 1234+86.94'TWNB'
PT STA = 1265+82.08'TWNB'

1250'TWNB'

1255'TWNB'

IH 39/90 NB

1260'TWNB'

1265'TWNB'

PT: 1265+82.08'TWNB'

N45° 35' 36"W
3869.79'

'TWNB' R/L
STA 1265+82.08
X: 497131.86
Y: 313523.49

MATCH LINE STA. 1268+00'TWNB'

PROJECT NO: 1005-10-84	HWY: IH 39/90	COUNTY: ROCK	ALIGNMENT DIAGRAM - IH 39/90	SHEET 60	E

2

2

T4E R12E T4E R13E

N

MATCH LINE STA. 1268+00'TWNB'

1270'TWNB'

1275'TWNB'

N45° 35' 36"W
3869.79'

1280'TWNB'

IH 39/90 NB

'NR' R/L
STA 10+00.00
X: 495812.35
Y: 314554.41

BP: 10+00.00'NR'

N0° 23' 08"E
500.00'

1285'TWNB'

NEWVILLE RD

EP: 15+00.00'NR'

'NR' R/L
STA 15+00.00
X: 495815.72
Y: 315054.40

1290'TWNB'

1295'TWNB'

MATCH LINE STA. 1298+00'TWNB'

T4E R12E T4E R13E

PROJECT NO: 1005-10-84	HWY: IH 39/90	COUNTY: ROCK	ALIGNMENT DIAGRAM - IH 39/90	SHEET 61	E

2

2

N

MATCH LINE STA. 1298+00'TWNB'

1300'TWNB'

N45° 35' 36"W

3869.79'

1305'TWNB'

PC: 1304+51.87'TWNB'

1310'TWNB'

1315'TWNB'

IH 39/90 NB

1320'TWNB'

1325'TWNB'

PT: 1327+91.59'TWNB'

1330'TWNB'

'TWNB' R/L
STA 1304+51.87
X: 494367.31
Y: 316231.35

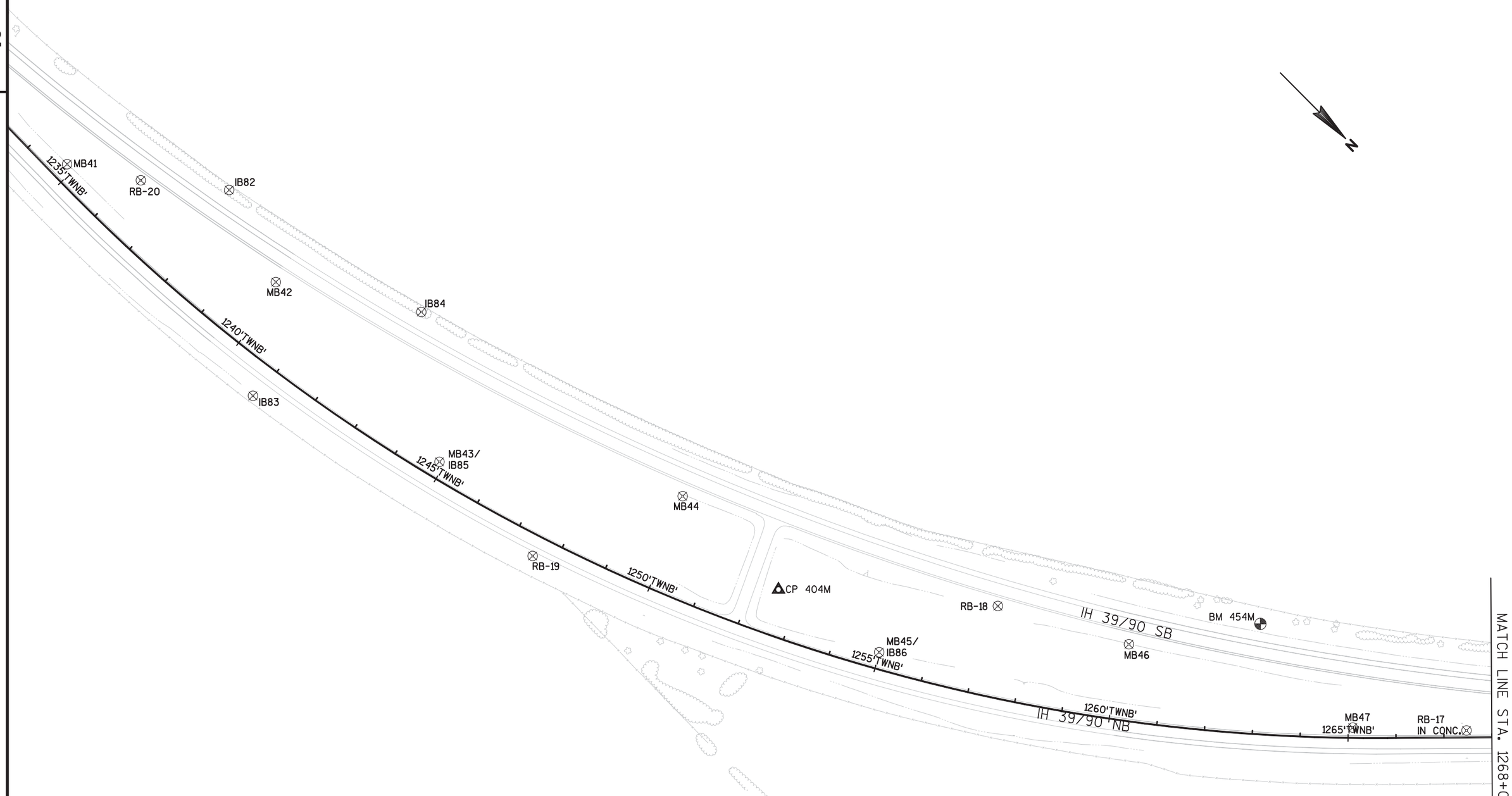
PI STA = 1316+59.74'TWNB'
Y = 317076.548
X = 493504.420
DELTA = 35°05'45"
D = 1°30'00"
T = 1207.86'
L = 2339.72'
R = 3819.72'
PC STA = 1304+51.87'TWNB'
PT STA = 1327+91.59'TWNB'

'TWNB' R/L
STA 1327+91.59
X: 493284.35
Y: 318264.19

PROJECT NO: 1005-10-84	HWY: IH 39/90	COUNTY: ROCK	ALIGNMENT DIAGRAM - IH 39/90	SHEET 62	E

FILE NAME : G:\WDOTSW\WSW10-11032\CIVIL3D\TEMP WIDENING_CTHO-KENNEDY\SHEETS PLAN\ALIGNMENT DIAGRAM\027201_AD_NEWVILLE.DWG PLOT DATE : 7/9/2015 4:09 PM PLOT BY : JOSH MERCIER PLOT NAME : PLOT SCALE : 1 IN:200 FT

2



CONTROL POINT LOCATIONS IN RELATION TO IH 39/90

POINT NAME	TYPE	X	Y	ELEV	DESCRIPTION
404M	CP	497815.060	312409.175	880.54	3/4IN RB CAP
454M	BM	497152	313168	885.08	CUT X NE SIGN BOLT IN EB I39 SIGN BASE

NOTE:
THE COORDINATES ARE REFERENCED TO WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), ROCK COUNTY, NAD 1983 (2007).

VERTICAL DATUM BASED ON NAVD 88 (2007).

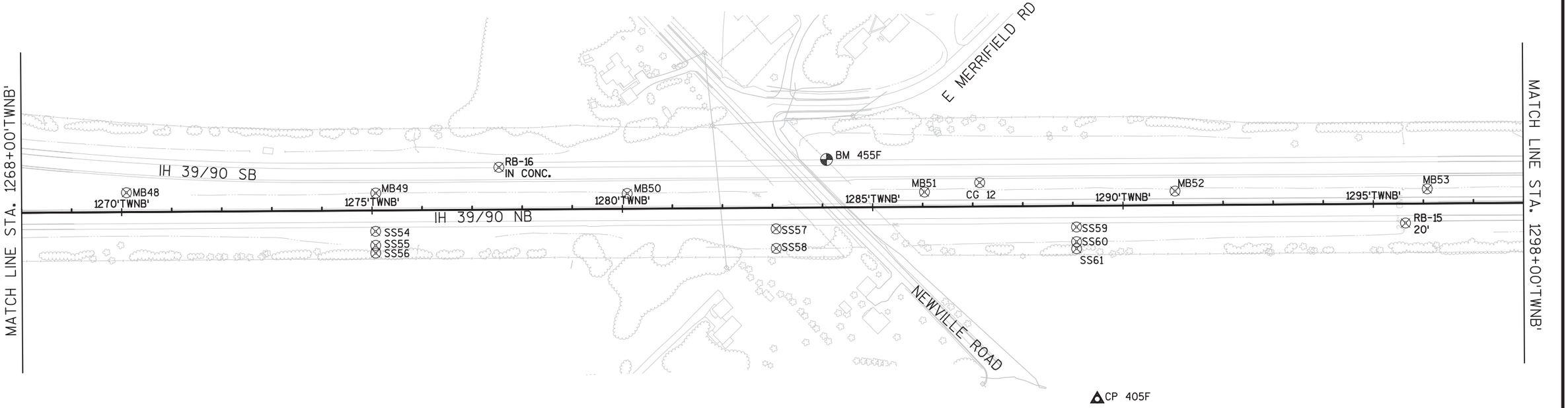
FOR INFORMATION ONLY. OFFICIAL SURVEY CONTROL SHALL BE OBTAINED FROM WISDOT PRIOR TO CONSTRUCTION.

LEGEND

- SOIL BORING
- BENCHMARK
- CONTROL POINT

PROJECT NO: 1005-10-84	HWY: IH 39/90	COUNTY: ROCK	BENCHMARKS, CONTROL POINTS, AND BORING LOCATIONS	SHEET 63	E

2



CONTROL POINT LOCATIONS IN RELATION TO IH 39/90

POINT NAME	TYPE	X	Y	ELEV	DESCRIPTION
405F	CP	495712.965	315453.292	*869.22	3/4IN RB CAP
455F	BM	495760	314733	883.70	DISK B-53-72

NOTE:
THE COORDINATES ARE REFERENCED TO WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), ROCK COUNTY, NAD 1983 (2007).

VERTICAL DATUM BASED ON NAVD 88 (2007).

FOR INFORMATION ONLY. OFFICIAL SURVEY CONTROL SHALL BE OBTAINED FROM WISDOT PRIOR TO CONSTRUCTION.

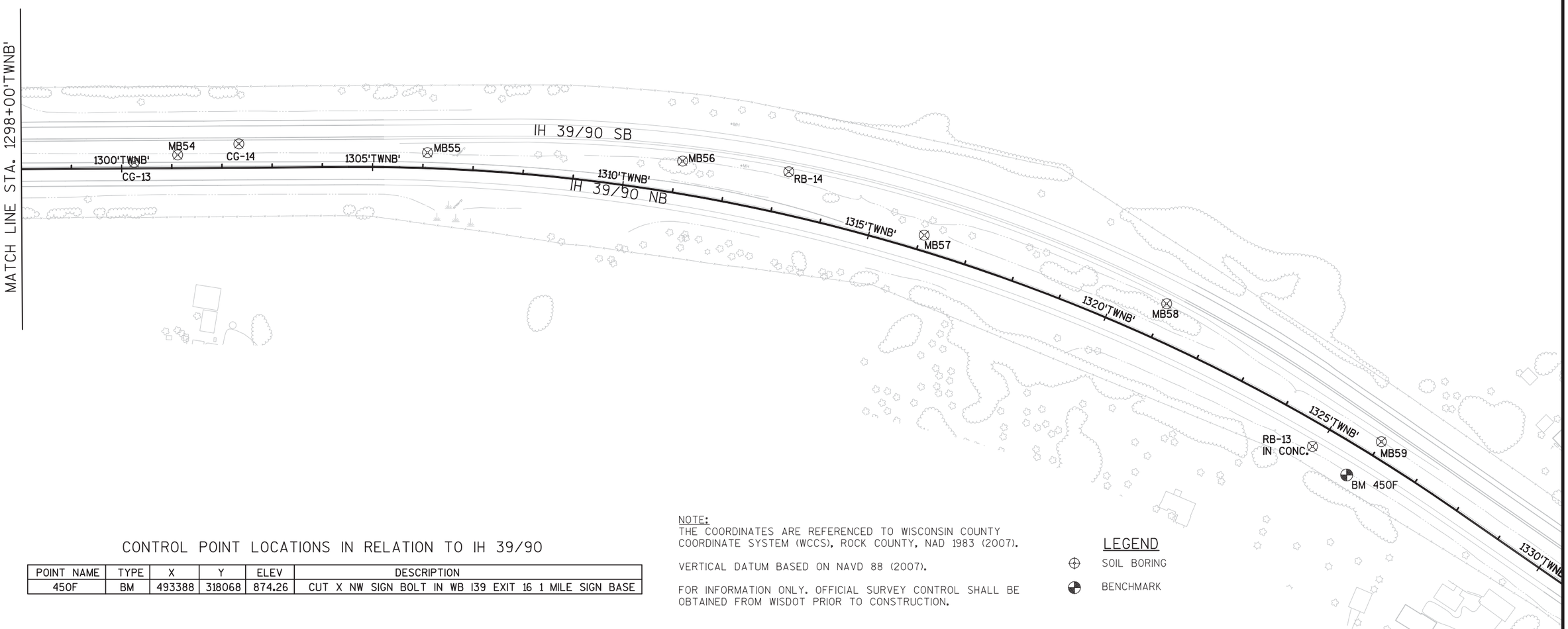
*GPS OBSERVED ELEVATION

LEGEND

- SOIL BORING
- BENCHMARK
- CONTROL POINT

PROJECT NO: 1005-10-84	HWY: IH 39/90	COUNTY: ROCK	BENCHMARKS, CONTROL POINTS, AND BORING LOCATIONS	SHEET 64	E

2



CONTROL POINT LOCATIONS IN RELATION TO IH 39/90

POINT NAME	TYPE	X	Y	ELEV	DESCRIPTION
450F	BM	493388	318068	874.26	CUT X NW SIGN BOLT IN WB I39 EXIT 16 1 MILE SIGN BASE

NOTE:
THE COORDINATES ARE REFERENCED TO WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), ROCK COUNTY, NAD 1983 (2007).

VERTICAL DATUM BASED ON NAVD 88 (2007).

FOR INFORMATION ONLY. OFFICIAL SURVEY CONTROL SHALL BE OBTAINED FROM WISDOT PRIOR TO CONSTRUCTION.

LEGEND

- SOIL BORING
- BENCHMARK

DATE 30NOV15 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	1005-10-84 QUANTITY
0010	201.0105	Clearing	STA	6.000	6.000
0020	201.0205	Grubbing	STA	6.000	6.000
0030	203.0100	Removing Small Pipe Culverts	EACH	3.000	3.000
0040	203.0200	Removing Old Structure (station) 001. 1284+00 'TWNB'	LS	1.000	1.000
0050	203.0225.S	Debris Containment (structure) 001. B-53-73	LS	1.000	1.000
0060	204.0100	Removing Pavement	SY	4,125.000	4,125.000
0070	204.0120	Removing Asphaltic Surface Milling	SY	1,650.000	1,650.000
0080	204.0165	Removing Guardrail	LF	770.000	770.000
0090	204.0170	Removing Fence	LF	65.000	65.000
0100	204.0180	Removing Delineators and Markers	EACH	8.000	8.000
0110	204.0220	Removing Inlets	EACH	3.000	3.000
0120	204.0245	Removing Storm Sewer (size) 001. 24-Inch	LF	10.000	10.000
0130	205.0100	Excavation Common	CY	7,777.000	7,777.000
0140	206.1000	Excavation for Structures Bridges (structure) 001. B-53-73	LS	1.000	1.000
0150	208.1100	Select Borrow	CY	6,152.000	6,152.000
0160	210.0100	Backfill Structure **P**	CY	134.000	134.000
0180	213.0100	Finishing Roadway (project) 002. 1005-10-84	EACH	1.000	1.000
0190	305.0110	Base Aggregate Dense 3/4-Inch	TON	910.000	910.000
0200	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	14,000.000	14,000.000
0210	305.0500	Shaping Shoulders	STA	5.000	5.000
0220	415.0090	Concrete Pavement 9-Inch **P**	SY	5.000	5.000
0230	415.0410	Concrete Pavement Approach Slab	SY	125.000	125.000
0240	416.0610	Drilled Tie Bars	EACH	30.000	30.000
0250	416.1725	Concrete Pavement Replacement SHES	SY	100.000	100.000
0260	455.0105	Asphaltic Material PG58-28	TON	180.000	180.000
0270	455.0120	Asphaltic Material PG64-28	TON	95.000	95.000
0280	455.0605	Tack Coat	GAL	1,050.000	1,050.000
0290	460.1110	HMA Pavement Type E-10	TON	190.000	190.000
0300	460.1130	HMA Pavement Type E-30	TON	4,700.000	4,700.000
0310	460.2000	Incentive Density HMA Pavement	DOL	3,070.000	3,070.000
0320	465.0310	Asphaltic Curb	LF	10.000	10.000
0330	502.0100	Concrete Masonry Bridges **P**	CY	290.000	290.000
0360	502.6102	Masonry Anchors Type S 1/2-Inch **P**	EACH	10.000	10.000
0370	503.0128	Prestressed Girder Type I 28-Inch **P**	LF	458.000	458.000
0380	505.0400	Bar Steel Reinforcement HS Structures **P**	LB	6,670.000	6,670.000
0390	505.0600	Bar Steel Reinforcement HS Coated Structures **P**	LB	43,800.000	43,800.000
0410	506.2605	Bearing Pads Elastomeric Non-Laminated **P**	EACH	18.000	18.000
0420	506.4000	Steel Diaphragms (structure) 001. B-53-73 **P**	EACH	6.000	6.000
0440	509.3500.S	HMA Overlay Polymer-Modified	TON	43.000	43.000
0450	511.1200	Temporary Shoring (structure) 001. B-53-73 **P**	SF	933.000	933.000
0460	516.0500	Rubberized Membrane Waterproofing **P**	SY	18.000	18.000
0470	520.8000	Concrete Collars for Pipe	EACH	5.000	5.000
0480	521.0118	Culvert Pipe Corrugated Steel 18-Inch	LF	14.000	14.000
0490	521.0124	Culvert Pipe Corrugated Steel 24-Inch	LF	26.000	26.000
0500	521.1018	Apron Endwalls for Culvert Pipe Steel 18-Inch	EACH	1.000	1.000

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DATE 30NOV15 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	1005-10-84 QUANTITY
0510	521.1024	Apron Endwalls for Culvert Pipe Steel 24-Inch	EACH	1.000	1.000
0520	550.0010	Pre-Boring Unconsolidated Materials	LF	115.000	115.000
0530	550.2126	Piling CIP Concrete 12 3/4 X 0.375-Inch	LF	2,875.000	2,875.000
0540	603.8000	Concrete Barrier Temporary Precast Delivered	LF	850.000	850.000
0550	603.8125	Concrete Barrier Temporary Precast Installed	LF	1,650.000	1,650.000
0560	604.0500	Slope Paving Crushed Aggregate **P**	SY	271.000	271.000
0570	606.0200	Riprap Medium	CY	20.000	20.000
0580	611.0642	Inlet Covers Type MS	EACH	3.000	3.000
0590	611.0654	Inlet Covers Type V	EACH	1.000	1.000
0600	611.3220	Inlets 2x2-FT	EACH	1.000	1.000
0610	611.3901	Inlets Median 1 Grate	EACH	1.000	1.000
0620	611.3902	Inlets Median 2 Grate	EACH	1.000	1.000
0630	612.0406	Pipe Underdrain Wrapped 6-Inch **P**	LF	115.000	115.000
0640	614.0150	Anchor Assemblies for Steel Plate Beam Guard	EACH	4.000	4.000
0650	614.0905	Crash Cushions Temporary	EACH	3.000	3.000
0660	614.2300	MGS Guardrail 3	LF	1,062.500	1,062.500
0670	614.2500	MGS Thrie Beam Transition	LF	118.200	118.200
0680	614.2610	MGS Guardrail Terminal EAT	EACH	3.000	3.000
0690	614.2620	MGS Guardrail Terminal Type 2	EACH	1.000	1.000
0700	616.0100	Fence Woven Wire (height) 001. 4-FT **P**	LF	75.000	75.000
0720	618.0100	Maintenance And Repair of Haul Roads (project) 002. 1005-10-84	EACH	1.000	1.000
0730	619.1000	Mobilization	EACH	0.750	0.750
0740	624.0100	Water	MGAL	560.000	560.000
0750	625.0500	Salvaged Topsoil **P**	SY	8,600.000	8,600.000
0760	627.0200	Mulching	SY	5,000.000	5,000.000
0770	628.1504	Silt Fence	LF	1,050.000	1,050.000
0780	628.1520	Silt Fence Maintenance	LF	460.000	460.000
0790	628.1905	Mobilizations Erosion Control	EACH	8.000	8.000
0800	628.1910	Mobilizations Emergency Erosion Control	EACH	5.000	5.000
0810	628.2004	Erosion Mat Class I Type B	SY	10,300.000	10,300.000
0820	628.6510	Soil Stabilizer Type B	ACRE	2.000	2.000
0830	628.7005	Inlet Protection Type A	EACH	2.000	2.000
0840	628.7010	Inlet Protection Type B	EACH	5.000	5.000
0850	628.7504	Temporary Ditch Checks	LF	125.000	125.000
0860	628.7555	Culvert Pipe Checks	EACH	5.000	5.000
0870	628.7560	Tracking Pads	EACH	4.000	4.000
0880	629.0205	Fertilizer Type A	CWT	12.000	12.000
0890	630.0120	Seeding Mixture No. 20	LB	170.000	170.000
0900	630.0130	Seeding Mixture No. 30	LB	200.000	200.000
0910	630.0200	Seeding Temporary	LB	390.000	390.000
0920	630.0300	Seeding Borrow Pit	LB	35.000	35.000
0930	633.0100	Delineator Posts Steel	EACH	11.000	11.000
0940	633.0500	Delineator Reflectors	EACH	11.000	11.000
0950	633.5200	Markers Culvert End	EACH	3.000	3.000
0960	638.2102	Moving Signs Type II	EACH	5.000	5.000
0970	638.4000	Moving Small Sign Supports	EACH	5.000	5.000
0980	642.5201	Field Office Type C	EACH	0.750	0.750
1000	643.0200	Traffic Control Surveillance and Maintenance (project) 002. 1005-10-84	DAY	109.000	109.000

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DATE 30NOV15 E S T I M A T E O F Q U A N T I T I E S

LINE 1005-10-84

NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	QUANTITY
1010	643.0300	Traffic Control Drums	DAY	19,000.000	19,000.000
1020	643.0420	Traffic Control Barricades Type III	DAY	515.000	515.000
1030	643.0705	Traffic Control Warning Lights Type A	DAY	950.000	950.000
1040	643.0715	Traffic Control Warning Lights Type C	DAY	7,400.000	7,400.000
1050	643.0800	Traffic Control Arrow Boards	DAY	400.000	400.000
1060	643.0900	Traffic Control Signs	DAY	5,130.000	5,130.000
1070	643.0920	Traffic Control Covering Signs Type II	EACH	17.000	17.000
1080	643.1000	Traffic Control Signs Fixed Message	SF	3.750	3.750
1090	643.1050	Traffic Control Signs PCMS	DAY	510.000	510.000
1100	643.1055.S	Truck or Trailer Mounted Attenuator	DAY	23.000	23.000
1110	645.0120	Geotextile Fabric Type HR	SY	35.000	35.000
1120	646.0106	Pavement Marking Epoxy 4-Inch	LF	9,900.000	9,900.000
1140	646.0600	Removing Pavement Markings	LF	39,500.000	39,500.000
1150	649.0400	Temporary Pavement Marking Removable Tape 4-Inch	LF	6,000.000	6,000.000
1160	649.0402	Temporary Pavement Marking Paint 4-Inch	LF	24,000.000	24,000.000
1180	690.0150	Sawing Asphalt	LF	50.000	50.000
1190	690.0250	Sawing Concrete	LF	6,130.000	6,130.000
1200	715.0415	Incentive Strength Concrete Pavement	DOL	500.000	500.000
1210	715.0502	Incentive Strength Concrete Structures	DOL	1,740.000	1,740.000
1220	SPV.0035	Special 001. Roadway Embankment	CY	4,886.000	4,886.000
1230	SPV.0060	Special 001. Baseline CPM Progress Schedule	EACH	1.000	1.000
1240	SPV.0060	Special 002. CPM Progress Schedule Updates And Accepted Revisions	EACH	8.000	8.000
1250	SPV.0060	Special 003. Salvage Terminal High-Tension Cable TL-3, Safence	EACH	1.000	1.000
1260	SPV.0060	Special 004. Terminal High-Tension Cable TL-3, Gibralter	EACH	2.000	2.000
1270	SPV.0060	Special 005. Terminal High-Tension Cable TL-3, Safence	EACH	1.000	1.000
1280	SPV.0090	Special 001. High-Tension Cable TL-3, Socketed, Gibralter	LF	1,520.000	1,520.000
1290	SPV.0090	Special 002. Removing HMA Pavement Safety Wedge Longitudinal Joint Milling	LF	6,100.000	6,100.000
1300	SPV.0090	Special 003. Salvage High-Tension Cable TL-3, Socketed, Safence	LF	1,510.000	1,510.000
1340	SPV.0105	Special 002. Survey Project 1005-10-84	LS	1.000	1.000

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CLEARING AND GRUBBING

	STATION - STATION	ALI	LOCATION	201.0105 CLEARING (STA)	201.0205 GRUBBING (STA)
CATEGORY 1000					
IH 39/90					
STAGE 3	1279+00 - 1283+00	TWNB	IH 39/90 NB, RT	4	4
	1285+00 - 1287+00	TWNB	IH 39/90 NB, RT	2	2
	PROJECT TOTAL			**6**	**6**

REMOVING FENCE

	STATION - STATION	ALIGNMENT	LOCATION	204.0170 (LF)
CATEGORY 1000				
IH 39/90				
STAGE 3	1285+45 - 1285+95	TWNB	IH 39/90 NB, RT	65
	PROJECT TOTAL			**65**

REMOVING PAVEMENT

	STATION - STATION	ALIGNMENT	LOCATION	204.0100 REMOVING PAVEMENT (SY)	204.0120 REMOVING ASPHALTIC SURFACE MILLING (SY)	SPV.0090.002 REMOVING HMA PAVEMENT SAFETY WEDGE LONGITUDINAL JOINT MILLING (LF)
CATEGORY 1000						
IH 39/90						
STAGE 1	1262+25 - 1303+60	TWNB	RT	--	920	--
STAGE 2	1265+85 - 1300+00	TWNB	LT	1,068	--	3,210
STAGE 3	1265+85 - 1300+00	TWNB	RT	2,853	--	2573
IH 39/90 SUBTOTAL				3,921	920	5,783
NEWVILLE ROAD						
STAGE 4	11+00 - 13+50	NR	LT & RT	-	666	-
NEWVILLE ROAD TOTAL				0	666	0
		UNDISTRIBUTED		204	64	317
	PROJECT TOTAL			**4,125**	**1,650**	**6,100**

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REMOVING SMALL PIPE CULVERTS

	STATION	LOCATION	203.0100 REMOVING SMALL PIPE CULVERTS (EACH)	*204.0180 REMOVING DELINEATORS AND MARKERS (EACH)	REMARKS
CATEGORY 1000					
IH 39/90					
STAGE 3	1275+93 'TWNB'	IH 39/90 NB, RT	1	1	24" CPCS, REMOVE ENDWALL ONLY
	1282+63 'TWNB'	IH 39/90 NB, RT	1	1	18" CPCS, REMOVE ENDWALL ONLY
	1295+61 'TWNB'	IH 39/90 NB, RT	1	1	24" CPCS, REMOVE ENDWALL ONLY
	PROJECT TOTAL		**3**	**3**	

*ADDITIONAL QUANTITY FOUND IN TABLE "REMOVING DELINEATORS AND MARKERS"

REMOVING DELINEATORS AND MARKERS

	STATION - STATION	ALI	LOCATION	*204.0180 (EACH)
CATEGORY 1000				
IH 39/90				
STAGE 3	1265+85 - 1300+00	TWNB	RT	5
	PROJECT TOTAL			**5**

*ADDITIONAL QUANTITY FOUND IN TABLE "REMOVING SMALL PIPE CULVERTS"

EXCAVATION SUMMARY

Category		From/To Station	Location	Cut (2)	205.0100 Excavation Common (1) (CY) EBS Excavation (3)	Salvaged/ Unusable Pavement Material	Available Material (4)	Unexpanded Fill	SPV.0035.001 Roadway Embankment (CY) (5)	208.1100 Select Borrow (CY) (7)	Mass Ordinate +/- (6)	Comment:
1000	DIV. 2	1265+85 - 1300+00	(DIV 2-1) NB IH 39/90 TEMPORARY WIDENING 'TWNB' - STAGE 2 CONSTRUCTION	2,198	1,727	35	2,163	1,821	1,821	2,246	342	
	DIV. 3	1269+15 - 1296+40	(DIV 3-1) NB IH 39/90 TEMPORARY WIDENING 'TWNB' - STAGE 3 CONSTRUCTION	847	3,005	0	847	3,064	3,064	3,906	-2,218	
			CATEGORY 1000 SUBTOTAL	3,044	4,732	35	3,010	4,886	4,886	6,152	-1,876	
			SUBTOTALS	3,044	4,732	35	3,010	4,886	4,886		-1,876	
			TOTALS		**7,777**				**4,886**	**6,152**		

Note 1) Common Excavation is the sum of the Cut and EBS Excavation columns. Item number 205.0100
Note 2) Salvaged/Unusable Pavement Material is included in Cut.
Note 3) EBS Excavation to be backfilled with Select Borrow. All EBS material is to be wasted offsite.
Note 4) Available Material = Cut - Salvaged/Unusable Pavement Material
Note 5) Roadway Embankment = Unexpanded Fill
Note 6) 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.
Mass Ordinate = Available Material - Unexpanded Fill. The Mass Ordinate is for information purposes only as Common Excavation and Roadway Embankment are not balanced for quantity and does not guarantee the quality of Common Excavation, and if it can be reused onsite.
Note 7) Used to backfill EBS. (Fill Factor used = 1.3)

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REMOVING GUARDRAIL

	STATION - STATION	ALIGNMENT	LOCATION	204.0165 (LF)
CATEGORY 1000				
IH 39/90				
STAGE 2	1280+20 - 1283+50	TWNB	IH 39/90 MEDIAN	320
STAGE 3	1279+35 - 1283+75	TWNB	IH 39/90 NB, RT	450
IH 39/90 SUBTOTAL				770
PROJECT TOTAL				**770**

REMOVING STORM SEWER

	STATION	LOCATION	O/S	204.0245.001 24-INCH (LF)
CATEGORY 1000				
IH 39/90				
STAGE 2	1295+61 'TWNB'	IH 39/90 MEDIAN	30' LT	10
IH 39/90 SUBTOTAL				10
PROJECT TOTAL				**10**

BASE AGGREGATE

	STATION - STATION	ALI	O/S	305.0110 BASE AGGREGATE DENSE 3/4-INCH (TON)	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH (TON)
CATEGORY 1000					
IH 39/90					
STAGE 2	1265+85 - 1283+48	TWNB	LT	193	4,861
	1284+77 - 1300+00	TWNB	LT	181	4,219
STAGE 3	1269+15 - 1283+82	TWNB	RT	277	1,770
	1285+24 - 1296+40	TWNB	RT	137	1,297
IH 39/90 SUBTOTAL				788	12,147
		UNDISTRIBUTED		122	1,853
		PROJECT TOTAL		**910**	**14,000**

REMOVING INLETS

	STATION	LOCATION	OFFSET	204.0220 REMOVING INLETS (EACH)
CATEGORY 1000				
IH 39/90				
STAGE 2	1282+63 'TWNB'	IH 39/90 MEDIAN	30' LT	1
	1295+61 'TWNB'	IH 39/90 MEDIAN	30' LT	1
STAGE 3	1285+37 'TWNB'	IH 39/90 SHOULDER	33' RT	1
IH 39/90 SUBTOTAL				3
PROJECT TOTAL				3

CONCRETE PAVEMENT ITEMS

	STA	STA	ALI	O/S	415.0090 CONCRETE PAVEMENT 9-INCH (SY)	415.0410 CONCRETE PAVEMENT APPROACH SLAB (SY)	416.0610 DRILLED TIE BARS (EACH)	416.1725 CONCRETE PAVEMENT REPLACEMENT SHES (SY)
CATEGORY 1000								
IH 39/90								
STAGE 1	1285+95	1286+67	TWNB	RT	-	-	20	88
STAGE 2	1283+10	1283+47	TWNB	LT	3	63	-	-
	1284+77	1285+16	TWNB	LT	2	63	-	-
IH 39/90 SUBTOTAL					5	125	20	88
				UNDISTRIBUTED	-	-	10	12
				PROJECT TOTAL	**5**	**125**	**30**	**100**

SHAPING SHOULDERS

	STATION - STATION	ALIGNMENT	LOCATION	305.0500 SHAPING SHOULDER (STA)
CATEGORY 1000				
IH 39/90				
STAGE 4	11+00 - 13+50	NR	LT & RT	5
		PROJECT TOTAL		**5**

HMA PAVEMENT ITEMS

LOCATION	STATION - STATION	ALI	455.0105 ASPHALTIC MATERIAL PG58-28 (TON)	455.0120 ASPHALTIC MATERIAL PG64-28 (TON)	455.0605 TACK COAT (GAL)	460.1110 HMA PAVEMENT TYPE E-10 (TON)	460.1130 HMA PAVEMENT TYPE E-30 (TON)	465.0310 ASPHALTIC CURB (LF)
CATEGORY 1000								
IH 39/90								
STAGE 1	1265+85 - 1300+00	TWNB	6	-	67	107	-	-
STAGE 2	1265+85 - 1300+00	TWNB	117	65	654	-	3,300	-
STAGE 3	1269+15 - 1296+40	TWNB	42	23	229	-	1,167	-
STAGE 3	1285+37 - 1285+47	TWNB	-	-	-	-	-	10
IH 39/90 SUBTOTAL			165	88	950	107	4,467	10
NEWVILLE ROAD								
STAGE 4	11+00 - 13+50	NR	5	-	46	75	-	-
NEWVILLE ROAD TOTAL			5	0	46	75	0	0
		UNDISTRIBUTED	10	7	54	8	233	0
		PROJECT TOTAL	**180**	**95**	**1,050**	**190**	**4,700**	**10**

INLETS AND INLET COVERS

	STA	ALI	O/S	GRATE ELEV	DEPTH (FT)	611.3220 INLETS 2X2-FT (EACH)	611.3901 INLETS MEDIAN 1 GRATE (EACH)	611.3902 INLETS MEDIAN 2 GRATE (EACH)	611.0642 INLET COVERS TYPE MS (EACH)	611.0654 INLET COVERS TYPE V (EACH)	COMMENTS
CATEGORY 1000											
IH 39/90											
STAGE 2	1282+62.8	TWNB	42.6' LT	882.97	7.48	-	1	-	1	-	-
	1295+61.0	TWNB	36.7' LT	865.84	5.20	-	-	1	2	-	-
STAGE 3	1285+40.0	TWNB	33.2' RT	884.55	SEE COMMENT	1	-	-	-	1	FIELD VERIFY EXISTING PIPE ELEVATON
IH 39/90 SUBTOTAL						1	1	1	3	1	
PROJECT TOTAL						**1**	**1**	**1**	**3**	**1**	

CULVERT PIPE

	ALI	STA	O/S	STA	O/S	INLET ELEV	OUTLET ELEV	SLOPE %	MINIMUM PIPE THICKNESS STEEL (IN)	520.8000 CONCRETE COLLARS FOR PIPE (EACH)	521.0118 CULVERT PIPE CORRUGATED STEEL 18-INCH (LF)	521.0124 CULVERT PIPE CORRUGATED STEEL 24-INCH (LF)	521.1018 APRON ENDWALLS FOR CULVERT PIPE STEEL 18-INCH (EACH)	521.1024 APRON ENDWALLS FOR CULVERT PIPE STEEL 24-INCH (EACH)	633.5200 MARKERS CULVERT END (EACH)
CATEGORY 1000															
IH 39/90															
STAGE 2	TWNB	1282+62.8	42.6' LT	1282+62.5	29.9' LT	875.70	874.96	5.86	0.064	1	13	-	-	-	-
	TWNB	1295+61.0	36.7' LT	1295+61.0	29.8' LT	860.96	860.89	0.88	0.064	1	-	8	-	-	-
STAGE 3	TWNB	1275+93.0	70.0' RT	1275+93.0	77.2' RT	879.82	879.78	0.50	0.064	1	-	8	-	1	1
	TWNB	1282+62.8	78.6' RT	1282+62.8	79.7' RT	868.57	868.50	5.88	0.064	1	1	-	1	-	1
	TWNB	1295+61.0	61.5' RT	1295+61.0	51.8' RT	861.45	861.40	0.50	0.064	1	-	10	-	-	1
IH 39/90 SUBTOTAL										5	14	26	1	1	3
PROJECT TOTAL										**5**	**14**	**26**	**1**	**1**	**3**

BEAM GUARD

	STATION - STATION	ALI	O/S	614.2500 MGS THRIE BEAM TRANSITION (LF)	614.2300 MGS GUARDRAIL 3 (LF)	614.2610 MGS GUARDRAIL TERMINAL EAT (EACH)	614.2620 MGS GUARDRAIL TERMINAL TYPE 2 (EACH)
CATEGORY 1000							
IH 39/90							
STAGE 2	1281+63 - 1283+13	TWNB	LT	39.4	75.0	1	-
	1284+77 - 1287+51	TWNB	LT	39.4	175.0	1	-
STAGE 3	1276+31 - 1283+83	TWNB	RT	39.4	662.5	1	-
	1285+34 - 1286+84	TWNB	RT	-	150.0	-	1
IH 39/90 SUBTOTAL				118.2	1,062.5	3	1
			PROJECT TOTAL	**118.2**	**1,062.5**	**3**	**1**

WATER

	USE	624.0100 (MGAL)
CATEGORY 1000		
STAGE 2	BASE COMPACTION	180
	DUST CONTROL	180
STAGE 3	BASE COMPACTION	100
	DUST CONTROL	100
	PROJECT TOTAL	**560**

EROSION CONTROL ITEMS

	STATION - STATION	ALIGNMENT	628.1504 SILT FENCE (LF)	628.1520 SILT FENCE MAINTENANCE (LF)	628.2004 EROSION MAT CLASS I TYPE B (SY)	628.6510 SOIL STABILIZER TYPE B (ACRE)	628.7504 TEMPORARY DITCH CHECKS (LF)	628.7560 TRACKING PADS (EACH)
CATEGORY 1000								
IH 39/90								
STAGE 2	1265+85 - 1283+50	TWNB	-	-	1,522	-	10	1
	1285+00 - 1300+00	TWNB	-	-	1,303	-	40	1
STAGE 3	1265+85 - 1283+50	TWNB	440	220	2,237	-	40	1
	1285+00 - 1300+00	TWNB	-	-	2,143	-	10	1
STAGE4	BORROW PIT		550	225	1,050			
IH 39/90 SUBTOTAL			990	445	8,255	-	100	4
	UNDISTRIBUTED		60	15	2,045	2	25	-
		PROJECT TOTAL	**1,050**	**460**	**10,300**	**2**	**125**	**4**

NOTE: BORROW PIT QUANTITIES ARE ESTIMATED AND ARE NOT BASED ON A PRE-DETERMINED SITE.

FENCE

	STATION - STATION	ALI	O/S	616.0100 FENCE WOVEN WIRE (4-FT) (LF)
CATEGORY 1000				
IH 39/90				
STAGE 3	1285+45 - 1285+96	TWNB	RT	75
IH 39/90 SUBTOTAL				75
			PROJECT TOTAL	**75**

MOBILIZATIONS EROSION CONTROL

	628.1905 (EACH)	628.1910 EMERGENCY (EACH)
CATEGORY 1000		
STAGE 1	2	1
STAGE 2	3	2
STAGE 3	3	2
PROJECT TOTAL	**8**	**5**

EROSION CONTROL AT PIPE ENDWALLS

	STATION	ALIGNMENT	LOCATION	606.0200 RIPRAP MEDIUM (CY)	628.7555 CULVERT PIPE CHECKS (EACH)	645.0120 GEOTEXTILE FABRIC TYPE HR (SY)
CATEGORY 1000						
IH 39/90						
STAGE 3	1275+93	TWNB	RT	10	-	20
	1282+63	TWNB	RT	5	-	9
	1284+79	TWNB	RT	-	2	-
	1295+61	TWNB	RT	-	2	-
IH 39/90 SUBTOTAL				15	4	29
		UNDISTRIBUTED		5	1	6
		PROJECT TOTAL		**20**	**5**	**35**

CABLE GUARD

	STATION - STATION	ALI	O/S	LOCATION	SPV.0090.001 HIGH-TENSION CABLE, TL-3 SOCKETED GIBRALTAR (LF)	SPV.0060.003 SALVAGE TERMINAL HIGH-TENSION CABLE TL-3 SAFENCE (EACH)	SPV.0090.003 SALVAGE HIGH-TENSION CABLE TL-3 SOCKETED, SAFENCE (LF)	SPV.0060.004 TERMINAL HIGH-TENSION CABLE TL-3 GIBRALTAR (EACH)	SPV.0060.005 TERMINAL HIGH-TENSION CABLE TL-3 SAFENCE (EACH)
CATEGORY 1000									
IH 39/90									
STAGE 2	1285+15	TWNB	LT	MEDIAN	-	1	-	-	-
	1287+14 - 1302+34	TWNB	LT	MEDIAN	1,520	-	-	2	-
	1285+15 - 1300+25	TWNB	LT	MEDIAN	-	-	1,510		
	1300+25	TWNB	LT	MEDIAN	-	-	-	-	1
IH 39/90 SUBTOTAL					1,520	1	1,510	2	1
				PROJECT TOTAL	**1,520**	**1**	**1,510**	**2**	**1**

CONCRETE BARRIER ITEMS

	STATION - STATION	ALI	LOCATION	603.8000 CONCRETE TEMPORARY DELIVERED (LF)	603.8125 BARRIER PRECAST INSTALLED (LF)	614.0905 CRASH CUSHIONS TEMPORARY (EACH)
CATEGORY 1000						
IH 39/90						
STAGE 2	1278+70 - 1287+00	TWNB	B-53-73 STAGING, RT	798	798	1
STAGE 4	1278+70 - 1287+00	TWNB	B-53-73 STAGING, LT	-	798	1
IH 39/90 SUBTOTAL				798	1596	2
			UNDISTRIBUTED	52	54	1
			PROJECT TOTAL	**850**	**1,650**	**3**

INLET PROTECTION

	STATION	ALIGNMENT	OFFSET	628.7005 INLET PROTECTION TYPE A (EACH)	628.7010 INLET PROTECTION TYPE B (EACH)	COMMENT
CATEGORY 1000						
IH 39/90						
STAGE 2	1282+63	TWNB	30' LT	-	1	EXISTING
	1282+63	TWNB	43' LT	1	1	PROPOSED
	1295+62	TWNB	30' LT	-	1	EXISTING
	1295+62	TWNB	43' LT	1	1	PROPOSED
STAGE 3	1285+40	TWNB	33' RT	-	1	PROPOSED
IH 39/90 SUBTOTAL				2	5	
PROJECT TOTAL				**2**	**5**	

PAVEMENT MARKING

	STATION - STATION	ALI	646.0106 PAVEMENT MARKING EPOXY 4-INCH WHITE (LF)	646.0106 PAVEMENT MARKING EPOXY 4-INCH YELLOW (LF)
CATEGORY 1000				
IH 39/90				
STAGE 1	1262+00 - 1303+60	TWSB	5,200	4,160
	UNDISTRIBUTED		300	240
IH 39/90 SUBTOTAL			5,500	4,400
PROJECT TOTAL			**9,900**	

TEMPORARY PAVEMENT MARKING ITEMS

STAGE	LOCATION	646.0600 REMOVING PAVEMENT MARKINGS (LF)	649.0402 TEMPORARY PAVEMENT MARKING PAINT 4-INCH YELLOW (LF)	649.0402 TEMPORARY PAVEMENT MARKING PAINT 4-INCH WHITE (LF)	649.0400 TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH YELLOW (LF)	649.0400 TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH WHITE (LF)
CATEGORY 1000						
STAGE 2	IH 39/90	9,305	4,135	8,270	-	-
STAGE 3	IH 39/90	12,405	3,380	6,820	-	-
STAGE 4	IH 39/90	15,850	-	-	1,840	3,805
	UNDISTRIBUTED	1,940	465	930	120	235
			7,980	16,020	1,960	4,040
	PROJECT TOTAL	**39,500**	**24,000**		**6,000**	

3

MOVING SIGNS

	SIGN #	SIGN CODE	638.2102 MOVING SIGNS TYPE II EACH	638.4000 MOVING SMALL SIGN SUPPORTS EACH	REMARKS
CATEGORY 1000					
	1M-01	D10-5A	1	1	ENHANCED REFERENCE MARKER
	2M-01	D10-5A	1	1	ENHANCED REFERENCE MARKER
	2M-02	D10-5A	1	1	ENHANCED REFERENCE MARKER
	2M-03	R4-3	1	1	SLOWER TRAFFIC KEEP RIGHT
	3M-01	D10-5A	1	1	ENHANCED REFERENCE MARKER
PROJECT TOTALS			**5**	**5**	

SAWING ASHPALT AND CONCRETE

	STA	STA	ALI	O/S	690.0150 SAWING ASPHALT (LF)	690.0250 SAWING CONCRETE (LF)
CATEGORY 1000						
IH 39/90						
STAGE 2	1265+85	1283+48	TWNB	LT	-	1,765
	1285+01	1300+00	TWNB	LT	-	1,499
STAGE 3	1265+85	1283+72	TWNB	RT	-	1,457
	1285+25	1296+40	TWNB	RT	-	1,116
IH 39/90 SUBTOTAL					0	5,837
NEWVILLE ROAD						
STAGE 4	11+00	-	NR	-	23	-
	13+50	-	NR	-	21	-
NEWVILLE ROAD SUBTOTAL					44	0
UNDISTRIBUTED					6	293
PROJECT TOTAL					**50**	**6,130**

DELINEATOR ITEMS

	STATION - STATION	ALI	O/S	633.0100 DELINEATOR POSTS STEEL (EACH)	633.0500 DELINEATOR REFLECTORS (EACH)
CATEGORY 1000					
IH 39/90					
STAGE 3	1262+00 - 1283+50	TWNB	RT	6	6
	1285+00 - 1304+00	TWNB	RT	5	5
PROJECT TOTAL				**11**	**11**

TRAFFIC CONTROL DEVICES

	# OF DAYS	643.0300 DRUMS (DAYS)	643.0420 BARRICADES TYPE III (DAYS)	643.0705 WARNING LIGHTS TYPE A (DAYS)	643.0715 WARNING LIGHTS TYPE C (DAYS)	643.0800 ARROW BOARDS (DAYS)	643.0900 SIGNS (DAYS)	643.0920 COVERING SIGNS TYPE II (EA)	643.1000 SIGNS FIXED MESSAGE (SF)	643.1050 SIGNS PCMS (DAYS)	643.1055.S TRUCK OR TRAILER-MOUNTED ATTENUATOR (DAYS)
CATEGORY 1000											
IH 39/90 WIDENING											
STAGE 1	5	395	10	100	75	10	90	-	-	15	3
STAGE 2	80	14,480	320	640	4,640	320	3,200	-	-	400	12
STAGE 3	15	2,340	30	60	1,755	30	390	-	-	45	6
STAGE 4	9	828	18	36	459	18	234	-	-	27	-
IH 39/90 WIDENING SUBTOTAL		18,043	378	836	6,929	378	3,914	0	0	487	21
NEWVILLE ROAD											
STAGE 1-4	109	-	-	-	-	-	872	-	-	-	-
ROAD CLOSURE	8	-	112	64	-	-	112	16	3.75	-	-
NEWVILLE ROAD SUBTOTAL		0	112	64	0	0	984	16	3.75	0	0
UNDISTRIBUTED		957	25	50	471	22	232	1	0	23	2
PROJECT TOTAL		**19,000**	**515**	**950**	**7,400**	**400**	**5,130**	**17**	**3.75**	**510**	**23**

LANDSCAPING ITEMS

	STATION - STATION	ALI	O/S	625.0500 SALVAGED TOPSOIL (SY)	627.0200 MULCHING (SY)	629.0205 FERTILIZER TYPE A (CWT)	630.0120 SEEDING MIXTURE NO. 20 (LB)	630.0130 SEEDING MIXTURE NO. 30 (LB)	630.0200 SEEDING TEMPORARY (LB)	630.0300 SEEDING BORROW PIT (LB)
CATEGORY 1000										
IH 39/90										
STAGE 2	1265+85 - 1283+47	TWNB	LT	894	-	2	-	42	64	-
	1285+00 - 1300+00	TWNB	LT	1,031	341	2	-	42	63	-
STAGE 3	1269+15 - 1283+80	TWNB	RT	3,461	1,221	3	71	43	135	-
	1285+37 - 1296+40	TWNB	RT	2,740	364	3	64	33	50	-
STAGE 4	BORROW PIT			-	2,100	1	-	-	-	28
IH 39/90 SUBTOTAL				8,126	4,026	10	135	160	312	28
UNDISTRIBUTED				474	974	2	35	40	78	7
PROJECT TOTAL				**8,600**	**5,000**	**12**	**170**	**200**	**390**	**35**

NOTE: BORROW PIT QUANTITIES ARE ESTIMATED AND ARE NOT BASED ON A PRE-DETERMINED SITE.

LEGEND

SHES CONCRETE PAVEMENT REPLACEMENT

MULDER DAIRY FARMS INC

SCHULTZ

P.L.

R/W

IH 39/90 SB

IH 39/90 NB

1266'TWNB' 1268'TWNB' 1270'TWNB' 1272'TWNB' 1274'TWNB' 1276'TWNB' 1278'TWNB' 1280'TWNB'

1' 26' +15.0 +31.2 +81.2 12' 10' 4.0'

MATCH LINE STA. 1281+00'TWNB'

BEGIN PROJECT 1005-10-84
STA. 1265+85'TWNB'
Y = 313525.53
X = 497129.77

SLOPE INTERCEPTS (TYP.)

STA. 1275+93 'TWNB', RT.
1-24" CSCP EXTENSION REQUIRED
1-APRON ENDWALL REQUIRED

STA. 1276+31'TWNB' - STA. 1283+83'TWNB', RT.
MGS GUARDRAIL 3, MGS GUARDRAIL THRIE BEAM TRANSITION, & MGS GUARDRAIL TERMINAL EAT REQUIRED.

MULDER DAIRY FARMS INC

STA. 1284+50'TWNB' - STA. 1287+70'TWNB', LT.
EXISTING SB GUARDRAIL TO REMAIN

STA. 1281+63'TWNB' - STA. 1283+13'TWNB', LT.
MGS GUARDRAIL 3, MGS GUARDRAIL THRIE BEAM TRANSITION, & MGS GUARDRAIL TERMINAL EAT REQUIRED. SEE CROSS SECTIONS FOR POST LOCATIONS.

STA. 1284+89'TWNB' - STA. 1287+51'TWNB', LT.
MGS GUARDRAIL 3, MGS GUARDRAIL THRIE BEAM TRANSITION, & MGS GUARDRAIL TERMINAL EAT REQUIRED. SEE CROSS SECTIONS FOR POST LOCATIONS.

THALACKER

R/W

MERRIFIELD RD

NEWVILLE RD

SCHULTZ

10"NR'

12"NR'

14"NR'

15"NR'

CENTURY LINK
(TELEPHONE)

CITY OF MILTON
(SANITARY)

STA. 1287+14, 47' LT.
TERMINAL HIGH TENSION CABLE GUARD
TL-3 SOCKETED GIBRALTER

HIGH TENSION CABLE GUARD
TL-3 SOCKETED GIBRALTER

IH 39/90 SB

IH 39/90 NB

1282'TWNB' 1284'TWNB' 1286'TWNB' 1288'TWNB' 1290'TWNB' 1292'TWNB' 1294'TWNB' 1296'

4' 26' 24' +63.1 +13.1 +01.5 +51.5 +84.0 10' +24.0 12' 1'

MATCH LINE STA. 1281+00'TWNB'

MATCH LINE STA. 1296+00'TWNB'

ROCK COUNTY
ELECTRIC COOP
(ELECTRIC)

SLOPE INTERCEPTS (TYP.)

STRUCTURE
B-53-73

MILLER

STA. 1282+63'TWNB'
1-INLETS MEDIAN 1 GRATE, TYPE MS REQUIRED, LT.
2-18" CSCP EXTENSION REQUIRED, LT. & RT.
1-APRON ENDWALL REQUIRED

STA. 1284+26.67'TWNB'
EXISTING STRUCTURE B-53-73 TO BE WIDENED
3-SPAN - 28" PRE-STRESSED CONCRETE GIRDERS
58'-2¾" CLEAR ROADWAY WIDTH
SEE STRUCTURE PLAN

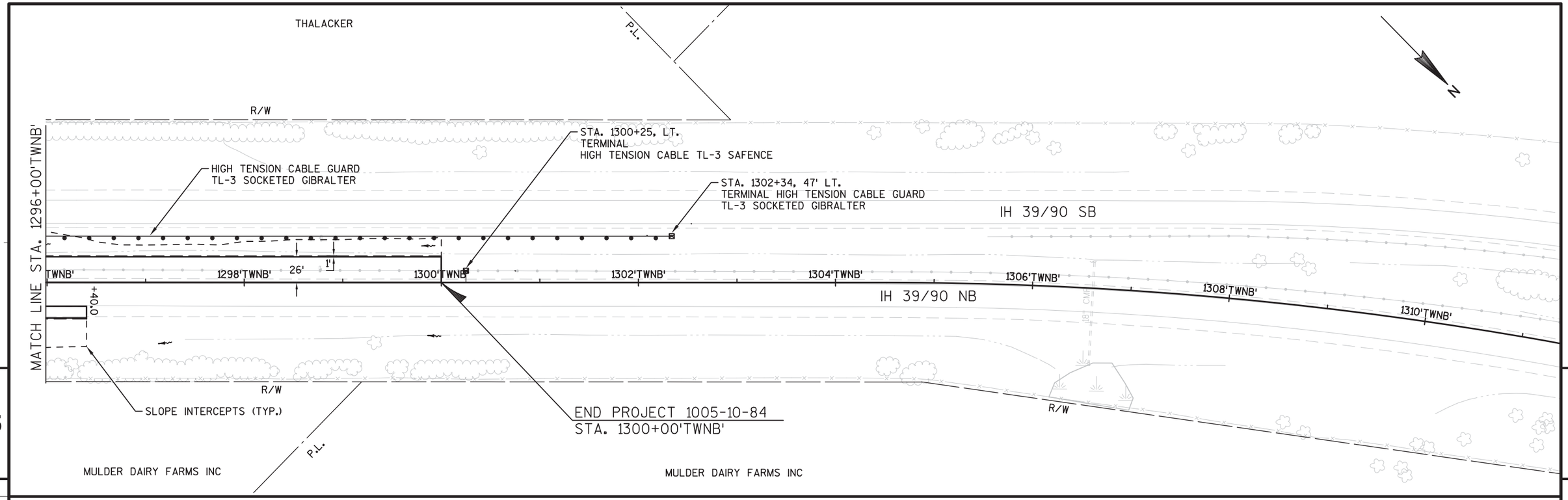
STA. 1285+34'TWNB' - STA. 1286+84'TWNB', RT.
MGS GUARDRAIL 3, MGS GUARDRAIL THRIE BEAM TRANSITION, & MGS GUARDRAIL TERMINAL TYPE 2 REQUIRED.

STA. 1295+61'TWNB'
1-INLETS MEDIAN 2 GRATE, TYPE MS REQUIRED, LT.
2-24" CSCP EXTENSION REQUIRED, LT. & RT.
1-APRON ENDWALL REQUIRED

MULDER DAIRY FARMS INC

PROJECT NO: 1005-10-84	HWY: IH 39/90	COUNTY: ROCK	PLAN: IH 39/90 NORTHBOUND	SHEET 73	E

FILE NAME : G:\WDOTSW\WSW10-11032\CIVIL3D\TEMP WIDENING_CTHO-KENNEDY\SHEETS PLAN\PLAN AND PROFILE\050112_PP_TW-NB.DWG PLOT DATE : 7/16/2015 PLOT BY : KL ENGINEERING PLOT NAME : ---------- PLOT SCALE : 1:100_XREF

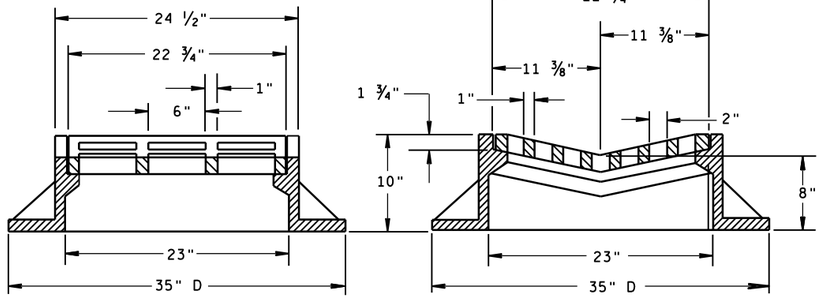


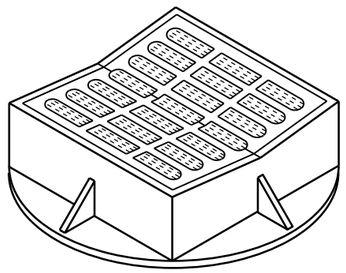
PROJECT NO: 1005-10-84	HWY: IH 39/90	COUNTY: ROCK	PLAN: IH 39/90 NORTHBOUND	SHEET 74	E

Standard Detail Drawing List

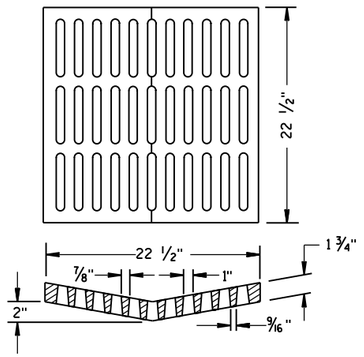
08A05-19B	INLET COVERS TYPE B, B-A, C, MS, MS-A, & WM
08A05-19C	INLET COVERS TYPE F, HM, HM-S, S, T, V, HM-GJ, & HM-GJ-S
08C07-01	INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT
08C08-01	INLETS MEDIAN 1 AND 2 GRATE
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
08E14-01	TRACKING PAD
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
08F04-07	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
13B02-08A	CONCRETE PAVEMENT APPROACH SLAB
13C01-18	CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES
13C09-12A	CONCRETE PAVEMENT REPAIR AND REPLACEMENT
13C09-12B	CONCRETE PAVEMENT REPAIR AND REPLACEMENT
13C09-12C	CONCRETE PAVEMENT REPAIR AND REPLACEMENT
13C18-03A	CONCRETE PAVEMENT JOINTING
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
14B29-01	SAFETY EDGE
14B42-03A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-03B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-03C	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)
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
15A02-08	DELINEATOR POST, DELINEATOR, AND DELINEATOR BRACKET WITH REFLECTIVE SHEETING
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
15C02-05A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-05B	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C08-16A	PAVEMENT MARKING (MAINLINE)
15C12-04	TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS)
15C19-02C	MOVING PAVEMENT MARKING OPERATION MULTI-LANE DIVIDED ROADWAY
15D27-02	TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH

6



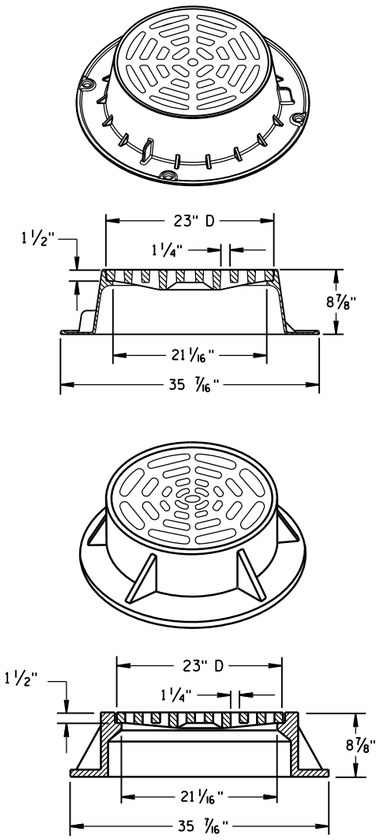


TYPE "B"



ALTERNATIVE GRATE FOR TYPE "B" COVER

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



TYPE "C"

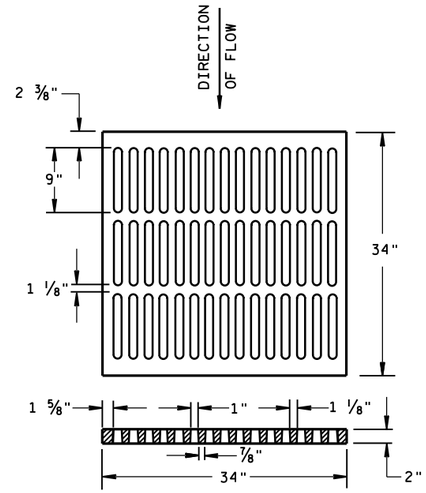
NOTE: EITHER CASTING IS ACCEPTABLE

GENERAL NOTES

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

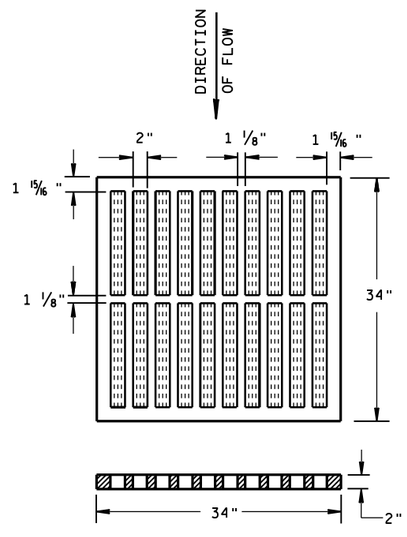
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR CATCH BASIN, MANHOLE AND INLET COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

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



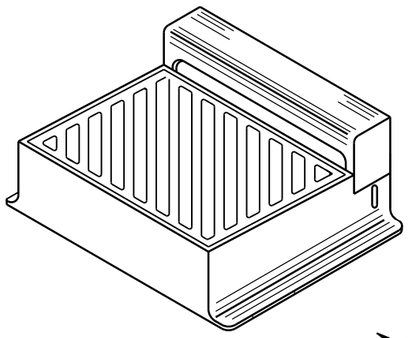
ALTERNATIVE TYPE "MS"

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

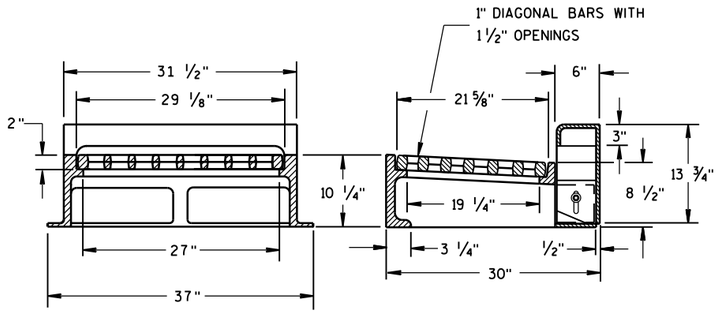


TYPE "MS"

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



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



NOTE: CURB BOX HEIGHT ADJUSTABLE 6" TO 9"

TYPE "WM"

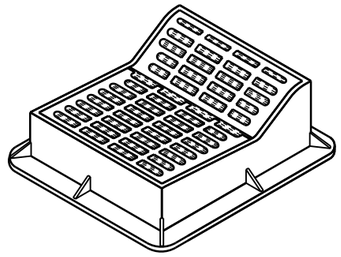
INLET COVERS
TYPE B, B-A, C,
MS, MS-A, & WM

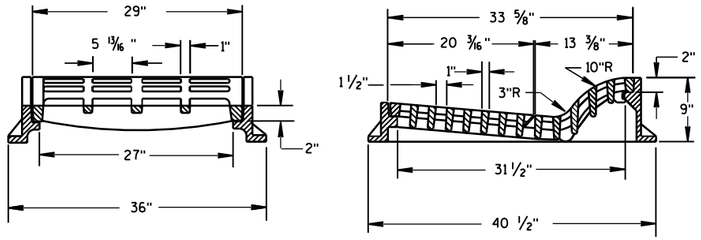
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6

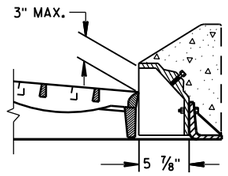
S.D.D. 8 A 5-19b





TYPE "F"

USE WITH TYPES A & D CONCRETE CURB & GUTTER, 36 INCH.



ALTERNATIVE CURB BOX FOR TYPE "HM" COVER

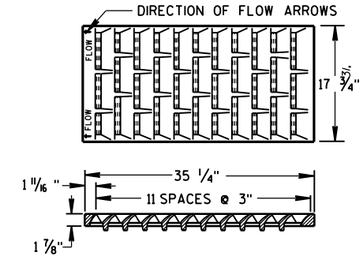
USE WITH TYPES G & J CONCRETE CURB & GUTTER, 30 INCH
NOTED AS TYPE HM-GJ ON DRAINAGE TABLE

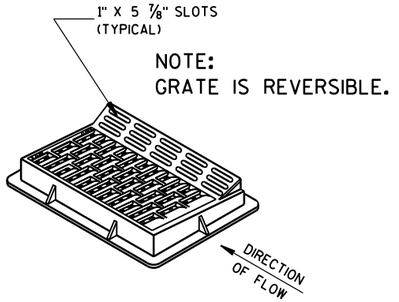
NOTE:
SPECIAL GRATE FOR THE
TYPE "H" COVER MAY ALSO BE
USED FOR THE TYPE "HM-GJ" COVER
NOTED AS TYPE HM-GJ-S ON DRAINAGE TABLE

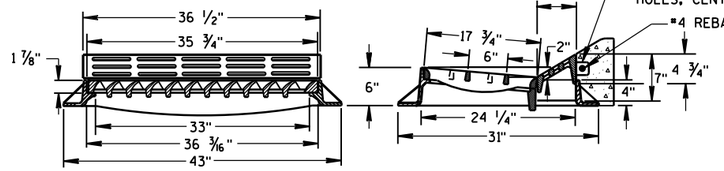
GENERAL NOTES

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

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



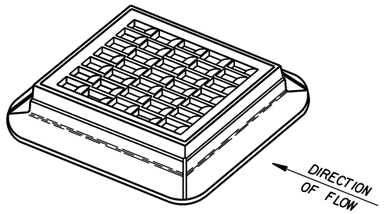


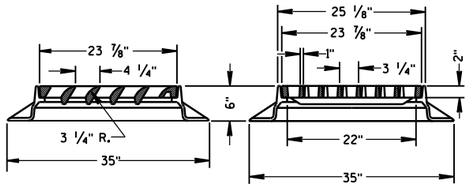


TYPE "HM"

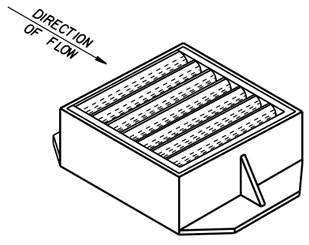
USE WITH TYPES A & D CONCRETE CURB & GUTTER, 36 INCH.

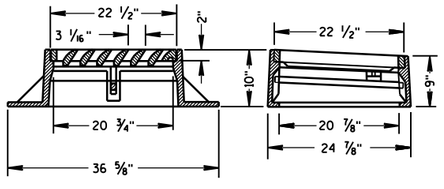
NOTE:
SPECIAL GRATE FOR THE
TYPE "H" COVER MAY ALSO BE
USED FOR THE TYPE "HM" COVER
NOTED AS TYPE HM-S ON DRAINAGE TABLE



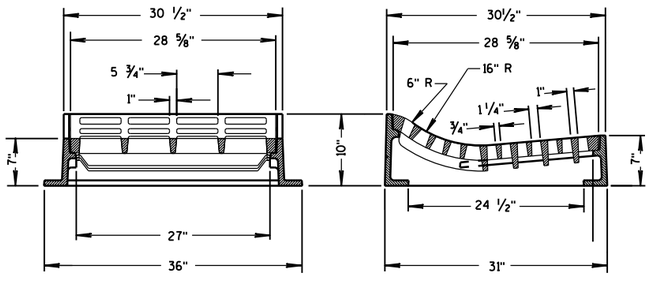


TYPE "S"



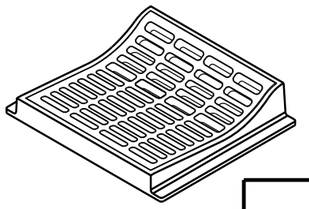


TYPE "V"



TYPE "T"

USE WITH TYPES R & T CONCRETE CURB & GUTTER, 36 INCH.



INLET COVERS
TYPE F, HM, HM-S, S, T, V, HM-GJ, & HM-GJ-S

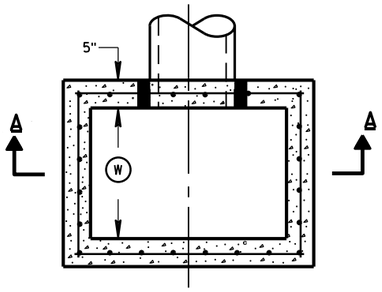
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11/27/2013
DATE

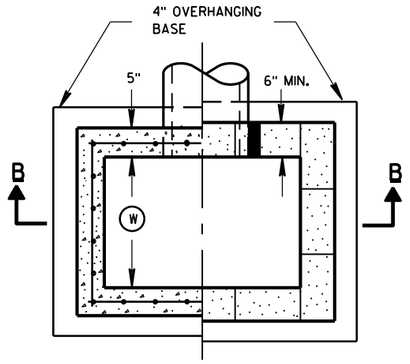
/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER

FHWA

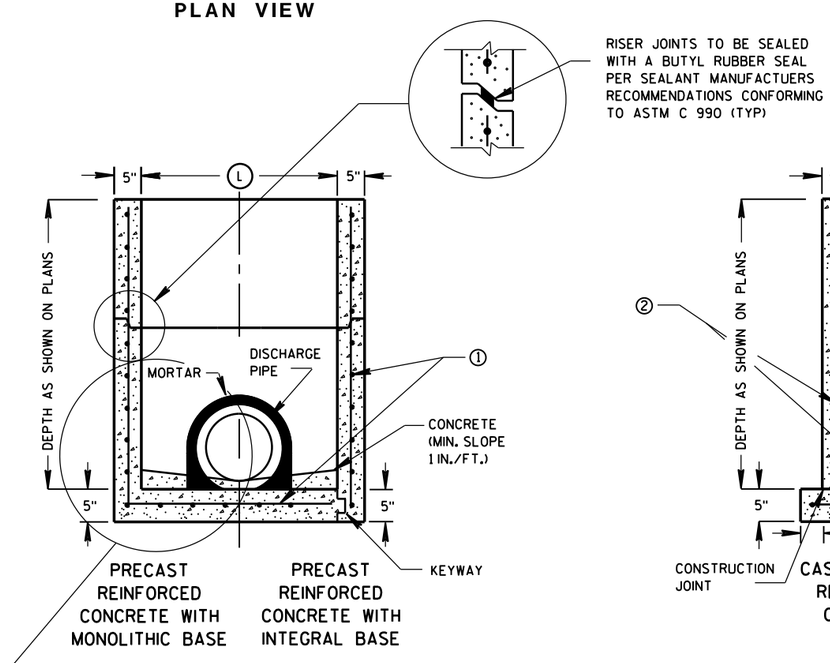
6
S.D.D. 8 A 5-19c



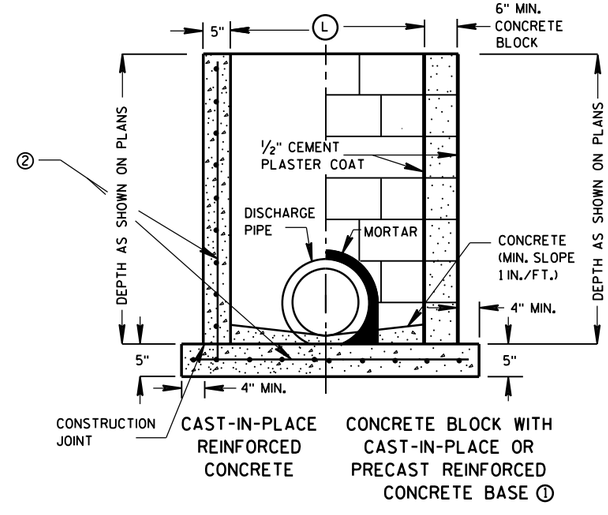
PLAN VIEW



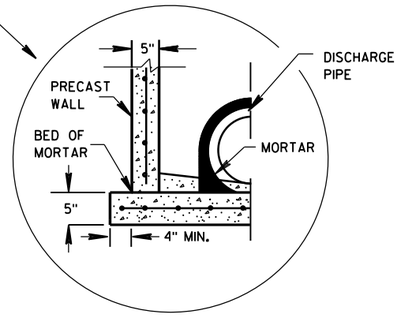
PLAN VIEW



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.

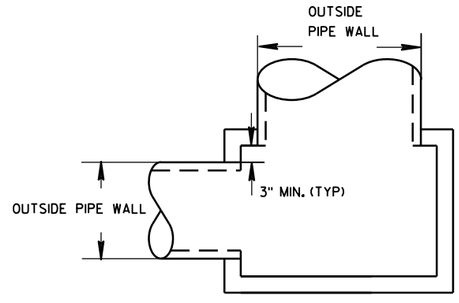
② CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.

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

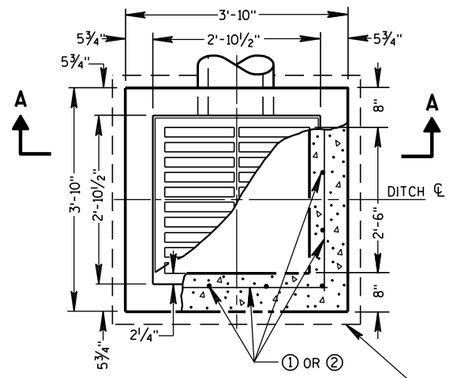
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
6/5/2012
DATE
FHWA

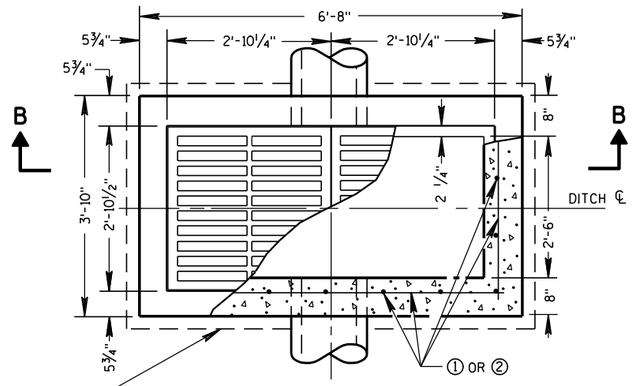
/S/ Jerry H. Zogg
ROADWAY STANDARDS DE
ENGINEER

6
S.D.D. 8 C 7-1

INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT

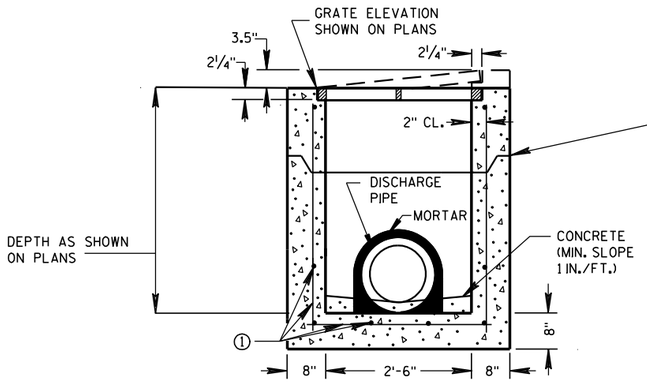


PLAN VIEW

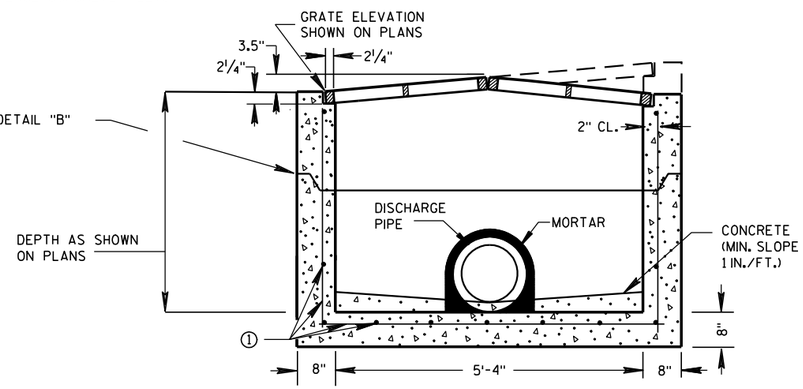


PLAN VIEW

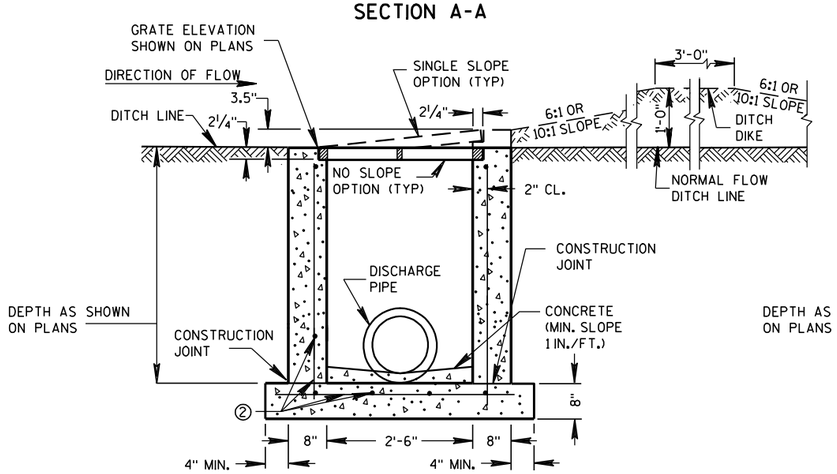
4" OVERHANGING BASE ON REINFORCED CAST-IN-PLACE CONCRETE INLETS



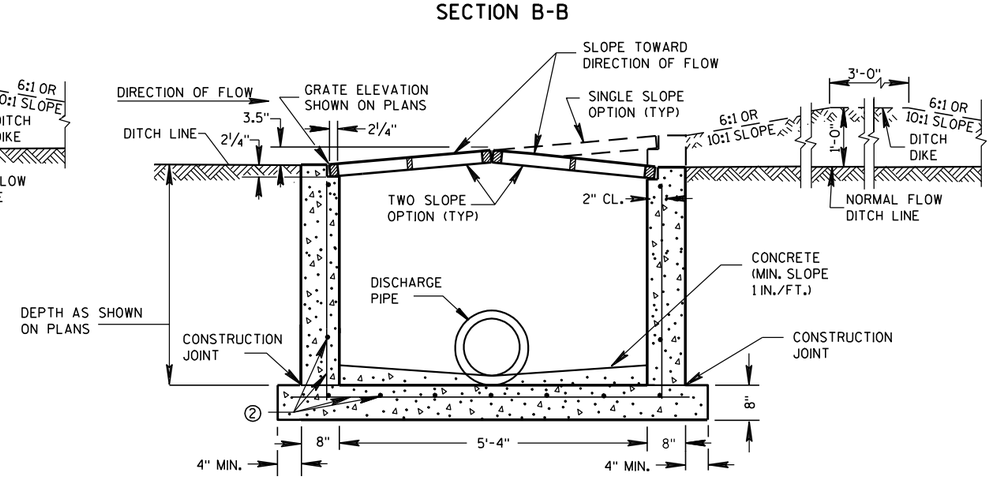
PRECAST REINFORCED CONCRETE SECTION A-A



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.

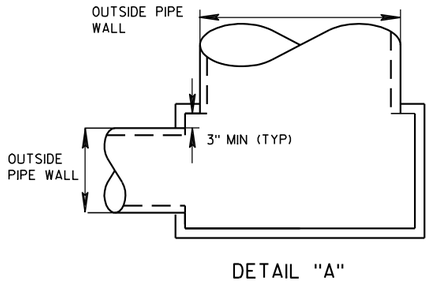
MAXIMUM INSIDE PIPE DIAMETER DETERMINED BY 3" CLEARANCE ON EACH SIDE OF THE OUTSIDE WALL OF THE PIPE. SEE DETAIL "A". ASSUMES PIPE ENTERS PERPENDICULAR TO THE STRUCTURE.

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.

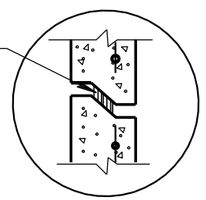
PIPE MATRIX

	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

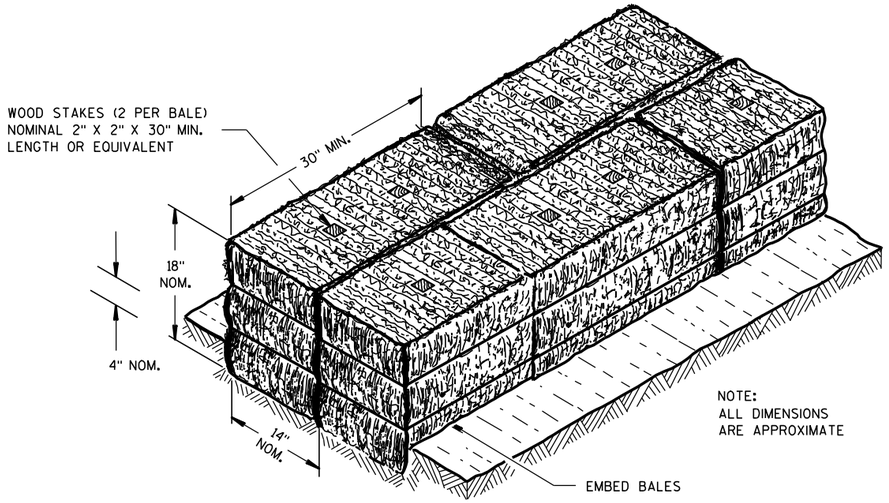
APPROVED
6/5/2012 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

6

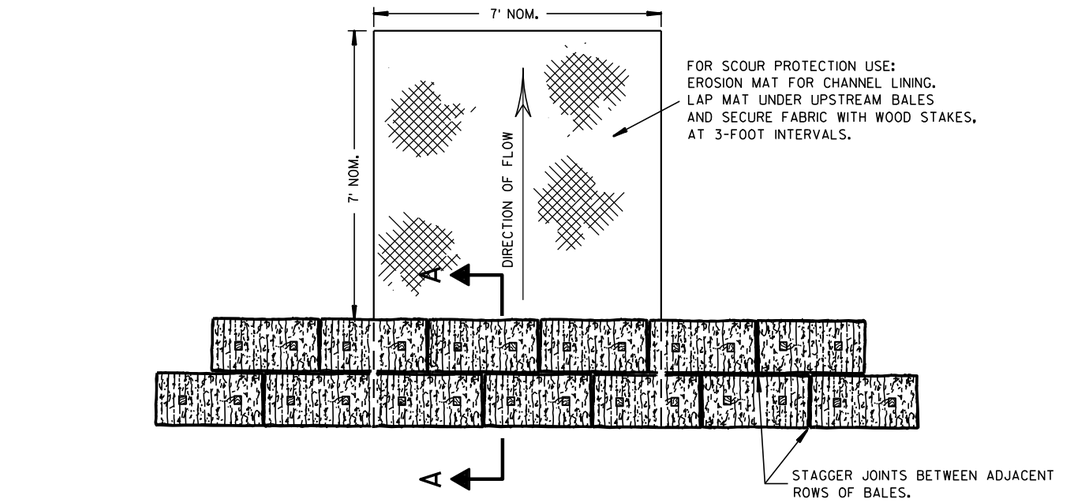
S.D.D. 8 C 8-1

6

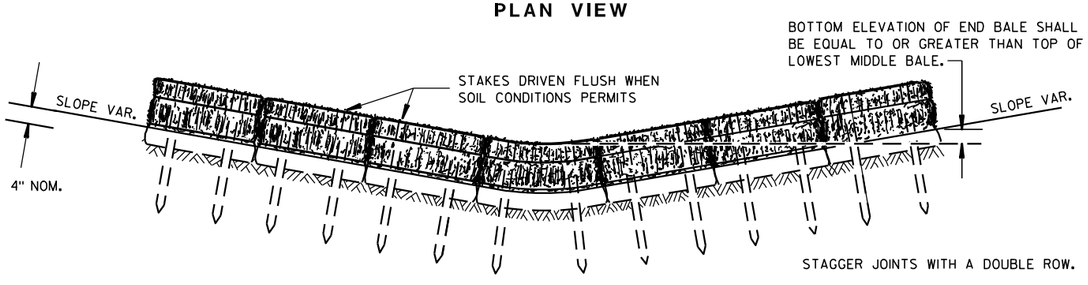
S.D.D. 8 C 8-1



SECTION A-A



PLAN VIEW



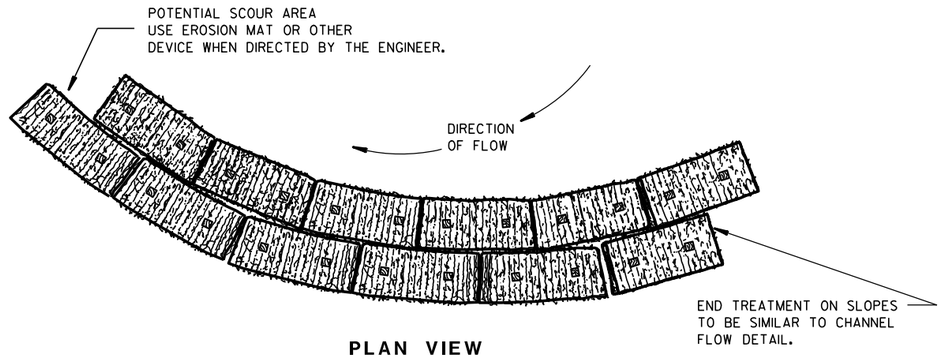
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES (1)

GENERAL NOTES

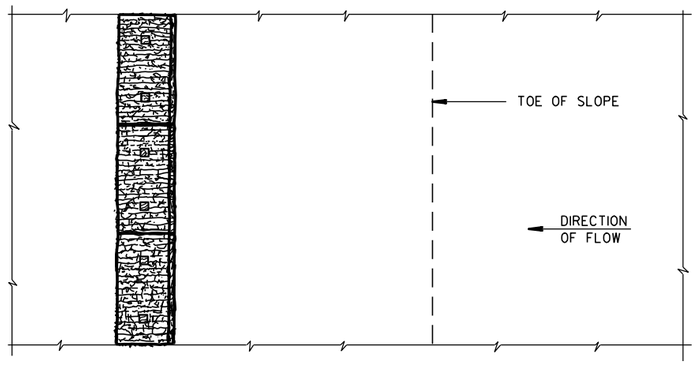
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

(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.

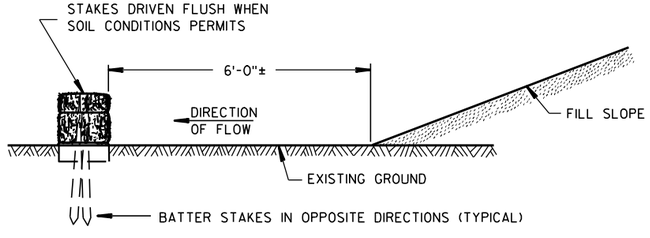


PLAN VIEW

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

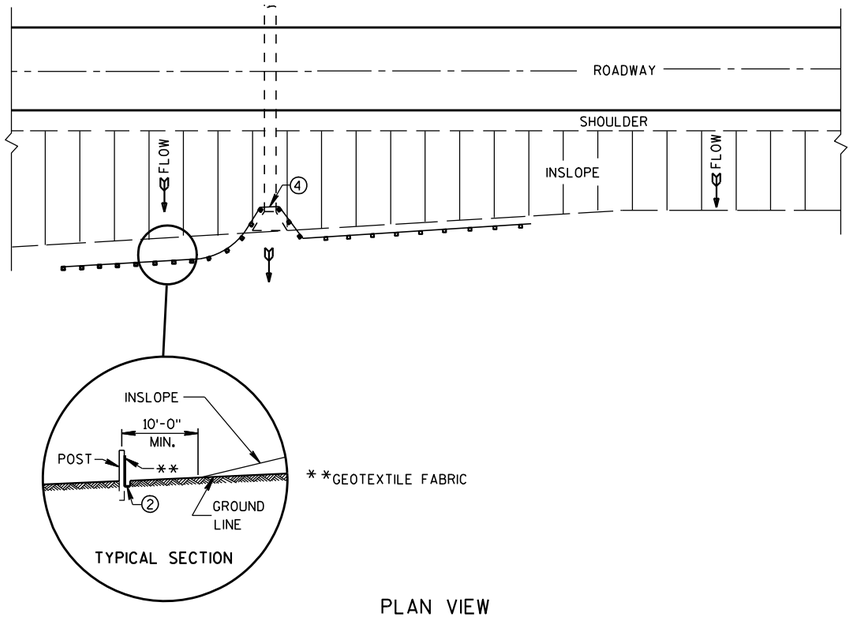
6/04/02 — DATE

/S/ Beth Cannestra — CHIEF ROADWAY DEVELOPMENT ENGINEER

FHWA

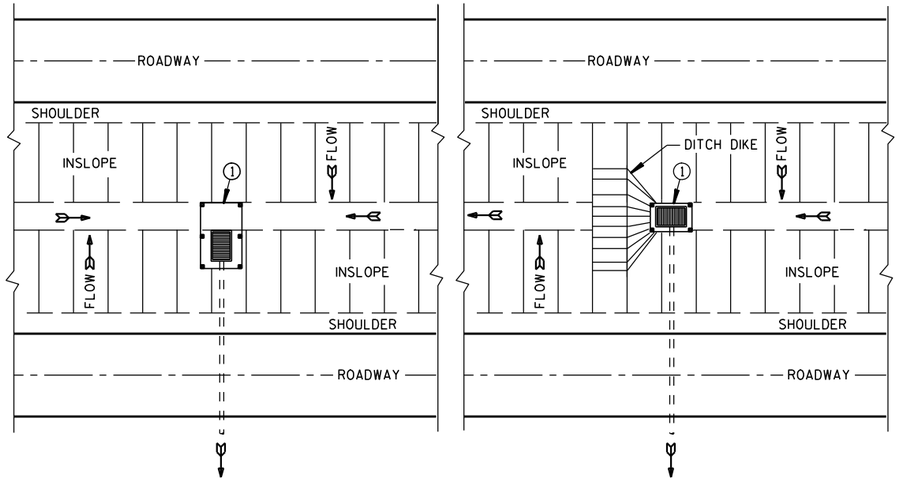
6

S.D.D. 8 E 8-3



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



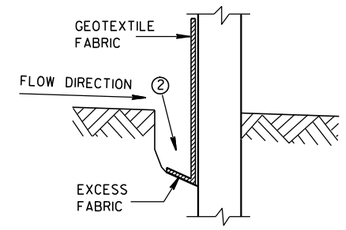
PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

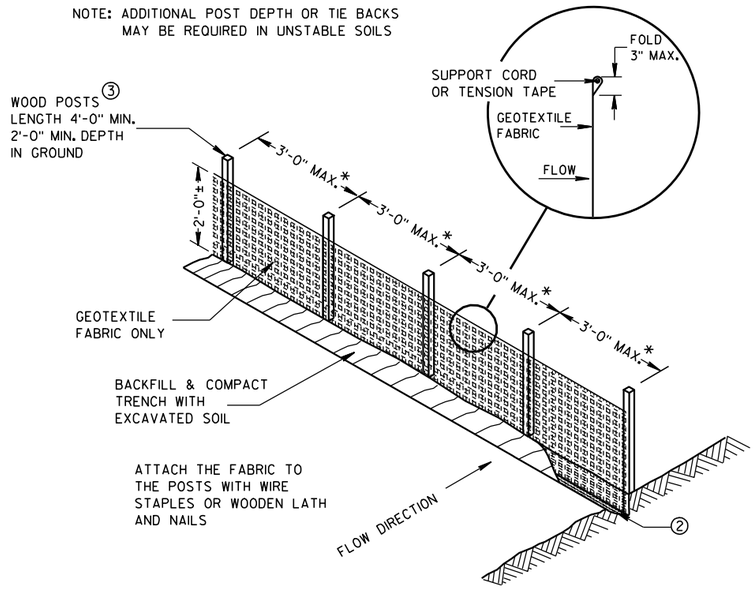
GENERAL NOTES

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

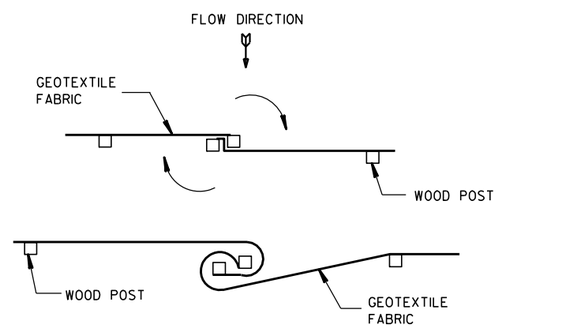
1. HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
2. FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
3. WOOD POSTS SHALL BE A MINIMUM SIZE OF 1⅛" X 1⅛" OF OAK OR HICKORY.
4. SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.
5. CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



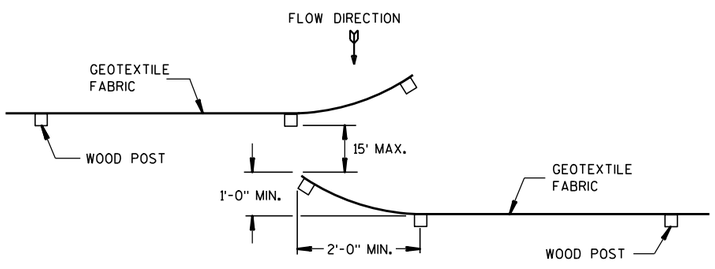
TRENCH DETAIL



SILT FENCE

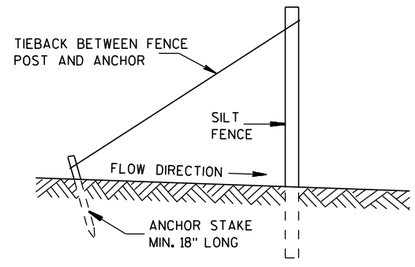


TWIST METHOD



HOOK METHOD

JOINING TWO LENGTHS OF SILT FENCE 5



SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

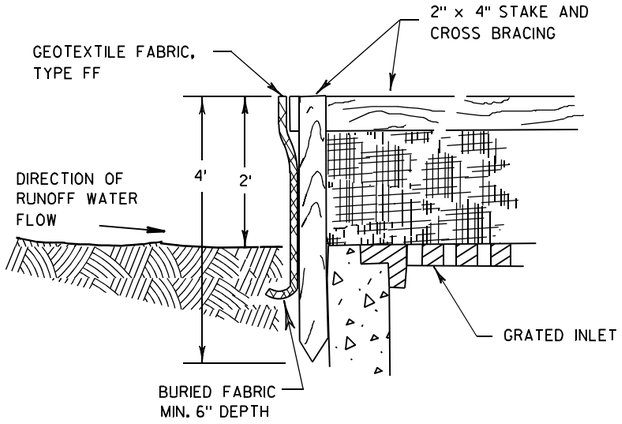
APPROVED
4-29-05 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

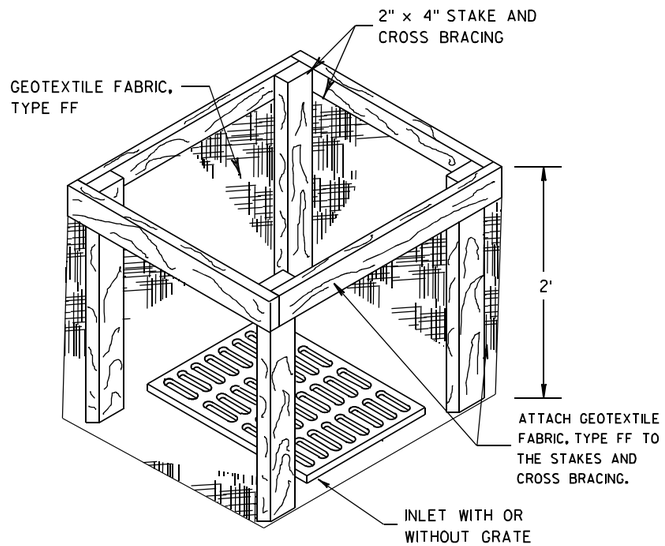
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S.D.D. 8 E 9-6

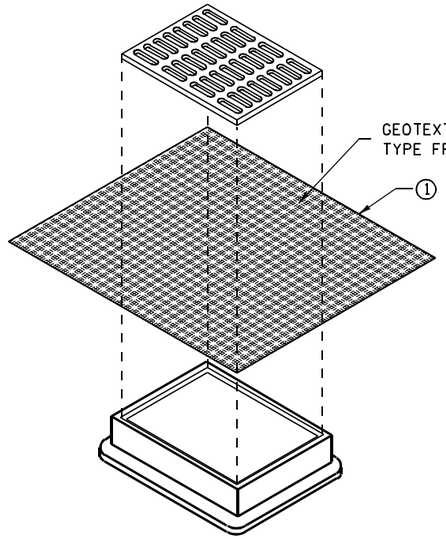
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S.D.D. 8 E 9-6



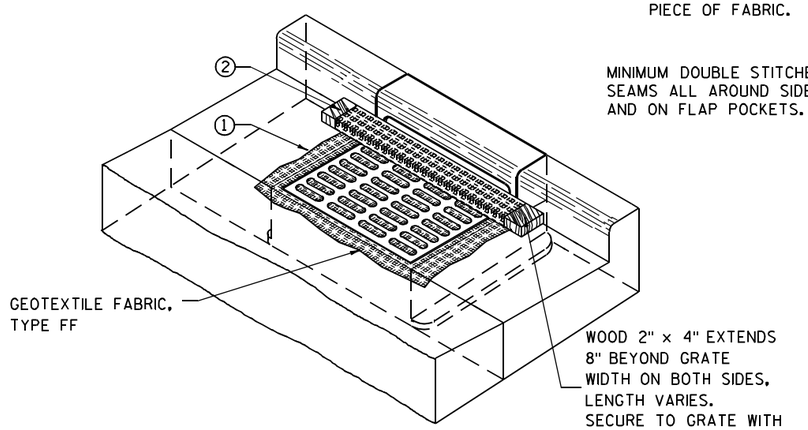


INLET PROTECTION, TYPE A

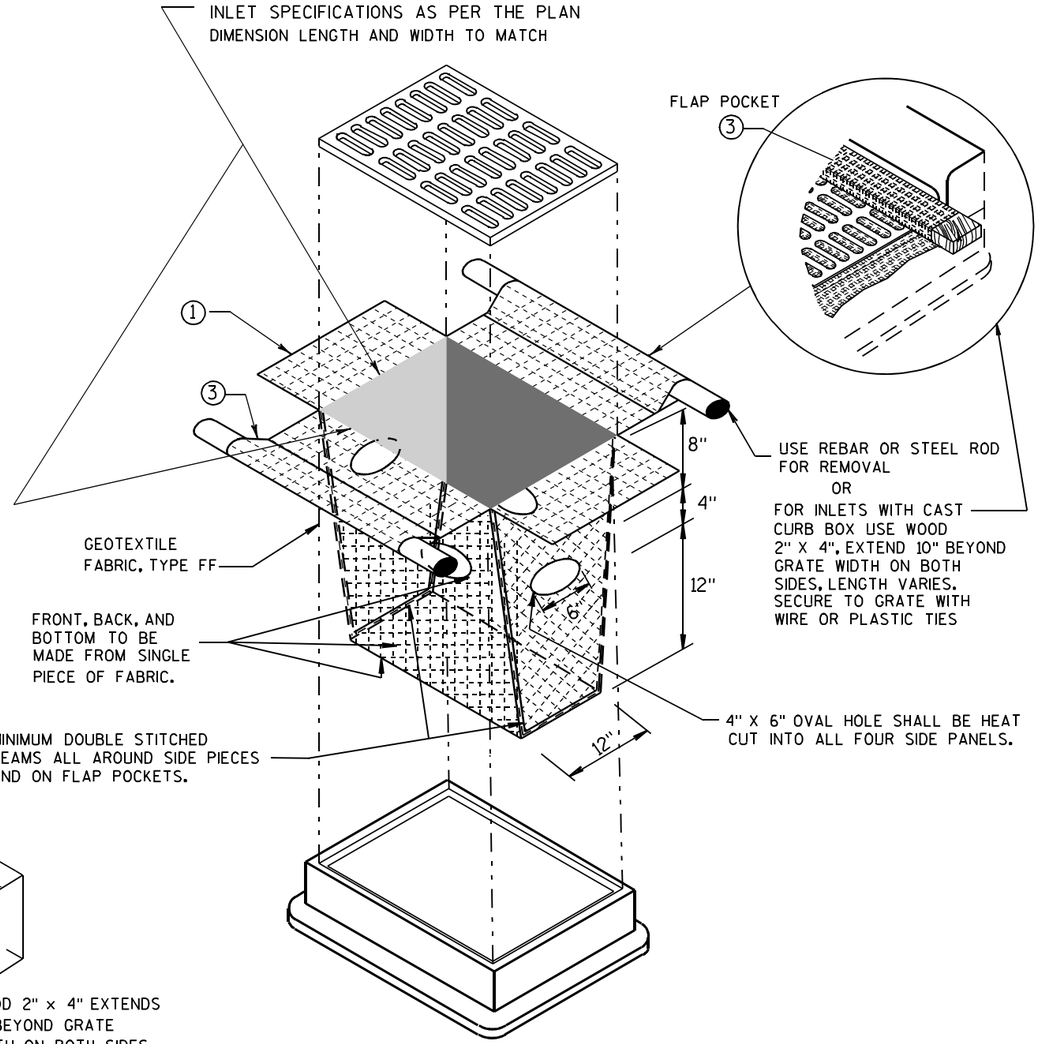


INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)

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



INLET PROTECTION, TYPE C (WITH CURB BOX)



INLET PROTECTION, TYPE D

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

GENERAL NOTES

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

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

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

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

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

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

INSTALLATION NOTES

TYPE B & C

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

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

TYPE D

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

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

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

INLET PROTECTION
TYPE A, B, C, AND D

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

10/16/02
DATE

/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER

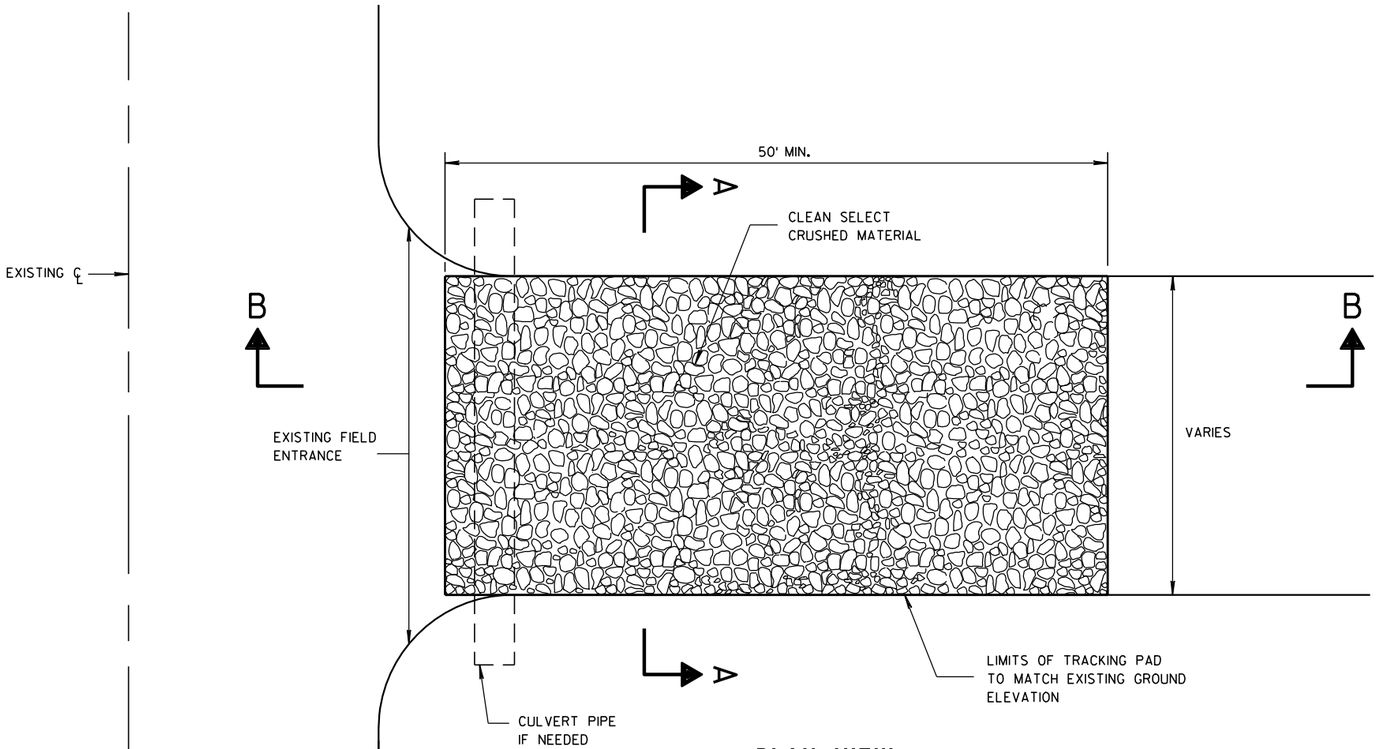
FHWA

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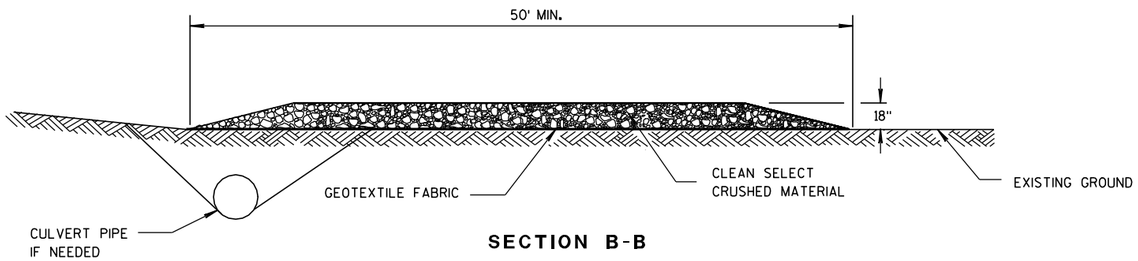
S.D.D. 8 E 10-2

6

S.D.D. 8 E 10-2



PLAN VIEW



SECTION B-B

GENERAL NOTES

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

TRACKING PAD SHALL BE INSPECTED DAILY. DEFICIENT AREAS SHALL BE REPAIRED OR REPLACED IMMEDIATELY.

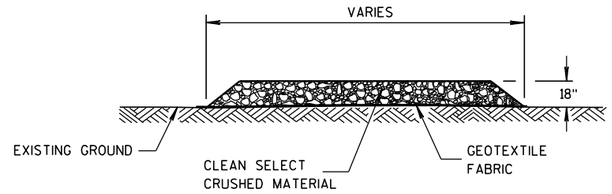
TRACKING PAD TO BE REMOVED AFTER CONSTRUCTION IS COMPLETED.

TRACKING PAD SHALL BE THE FULL WIDTH OF THE EGRESS POINT.

SURFACE WATER MUST BE PREVENTED FROM PASSING THROUGH THE TRACKING PAD. FLOWS SHALL BE DIVERTED AWAY, AROUND OR CONVEYED UNDER THE TRACKING PAD.

CULVERT PIPE OR OTHER BMP USED TO DIVERT WATER AWAY, AROUND OR UNDER THE TRACKING PAD SHALL BE DESIGNED TO CONVEY THE 2 YEAR - 24 HOUR EVENT.

THE COST OF ADDITIONAL BMP TO DIVERT WATER ARE INCIDENTAL TO THE TRACKING PAD BID ITEM.



SECTION A-A

TRACKING PAD

TRACKING PAD	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 3/24/2011 DATE FHWA	/S/ Jerry H. Zoda ROADWAY STANDARDS ENGINEER 83 ENT

6

S.D.D. 8 E 14-1

6

S.D.D. 8 E 14-1

METAL APRON ENDWALLS

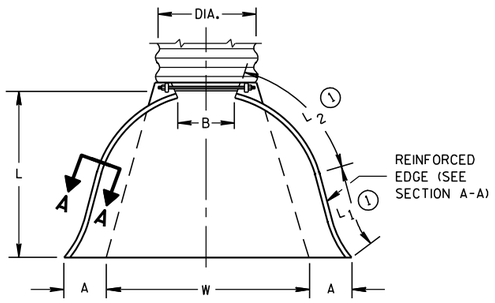
PIPE DIA. (IN.)	MIN. THICK. (Inches) STEEL	MIN. THICK. (Inches) ALUM.	DIMENSIONS (Inches) A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")	APPROX. SLOPE	BODY
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1	1 Pc.
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1	1 Pc.
18	.064	.060	8	10	6	31	15	28 1/4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

× EXCEPT CENTER PANEL SEE GENERAL NOTES

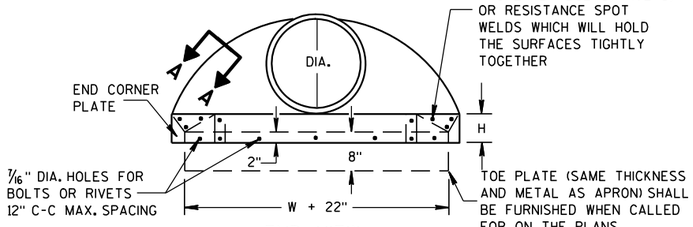
REINFORCED CONCRETE APRON ENDWALLS

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

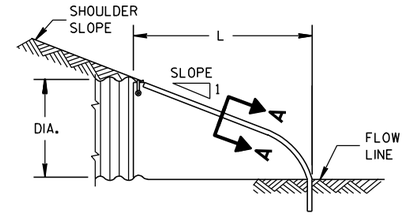
*MINIMUM
**MAXIMUM



PLAN VIEW

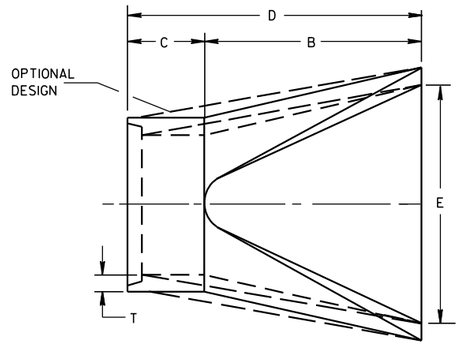


END VIEW

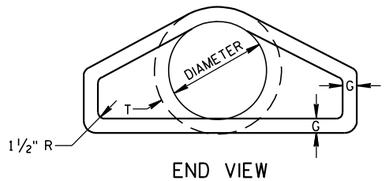


SIDE ELEVATION

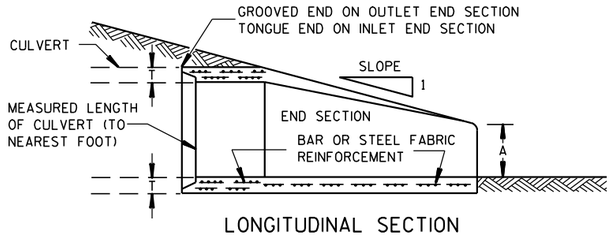
METAL ENDWALLS



PLAN

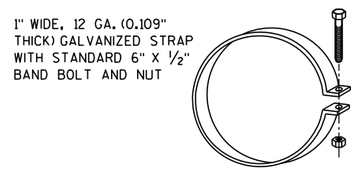


END VIEW



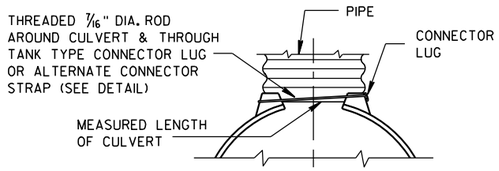
LONGITUDINAL SECTION

CONCRETE ENDWALLS

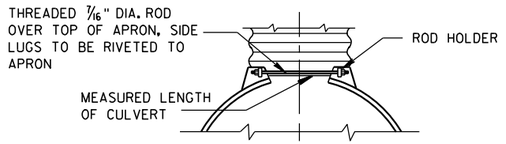


ALTERNATE FOR TYPE 1 CONNECTION

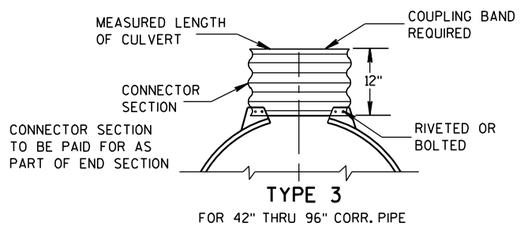
END SECTION CONNECTOR STRAP



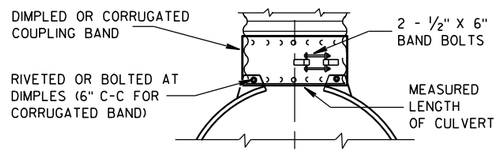
TYPE 1
FOR 12" THRU 24" CORR. PIPE



TYPE 2
FOR 30" THRU 96" CORR. PIPE



TYPE 3
FOR 42" THRU 96" CORR. PIPE



TYPE 5
ALTERNATE FOR:
ALL SIZES CORRUGATED CIRCULAR PIPE

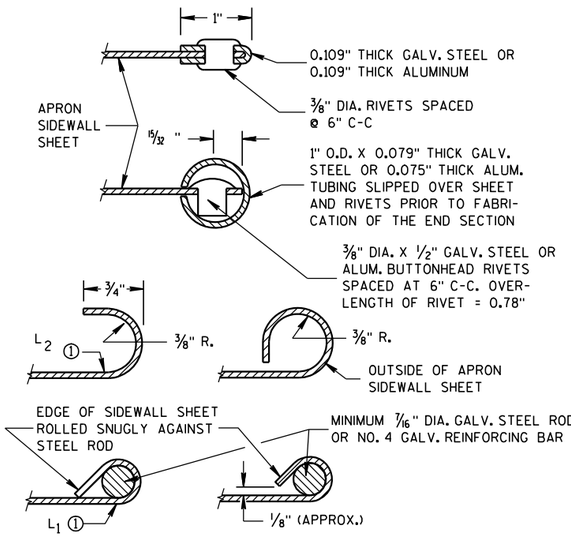
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL. AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

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

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

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

CONNECTION DETAILS



SECTION A-A

GENERAL NOTES

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

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

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

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

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

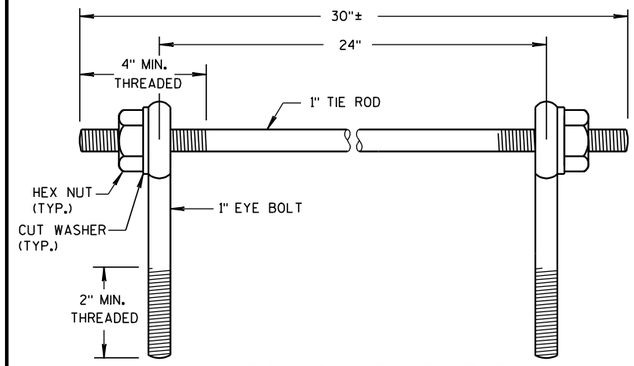
① FOR PIPE SIZES UP TO 60" DIAMETER, A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

APRON ENDWALLS FOR CULVERT PIPE

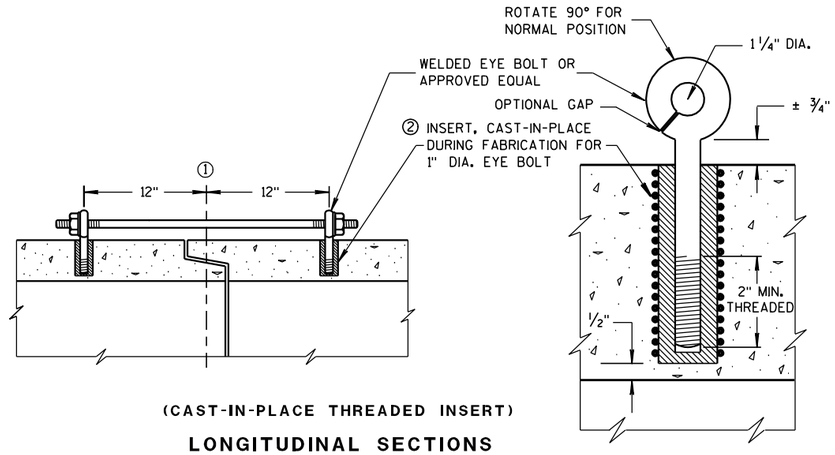
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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



EYE BOLTS AND TIE ROD



(CAST-IN-PLACE THREADED INSERT)

LONGITUDINAL SECTIONS

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

GENERAL NOTES

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

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

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

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

① ℄ OF TONGUE AND GROOVE OR BELL AND SPIGOT JOINTS.

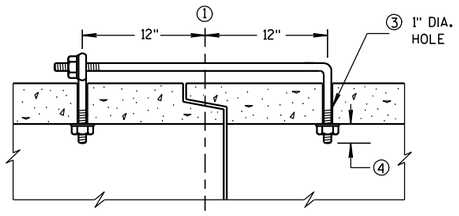
② THE INSIDE OF THE THREADED INSERTS SHALL BE CLEAN TO ALLOW THE INSERTION OF THREADED EYE BOLTS.

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

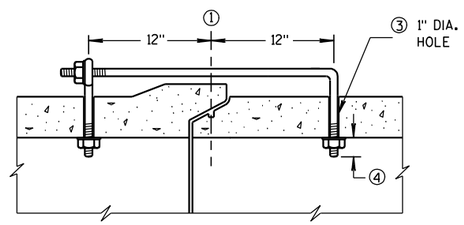
④ BOLT PROJECTION INSIDE OF PIPE SHALL NOT EXCEED 2 INCHES.

⑤ OPENING TO BE ROD DIAMETER PLUS 1 INCH.

⑥ LENGTH ADEQUATE TO EXTEND TO WITHIN 1/2 INCH OF THE INNER SURFACE OF THE PIPE.



(TONGUE & GROOVE PIPE)

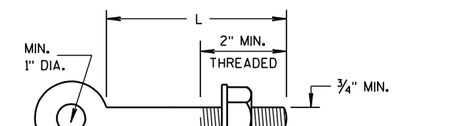


(MODIFIED BELL PIPE)

LONGITUDINAL SECTION

EYE BOLT DIMENSION TABLE

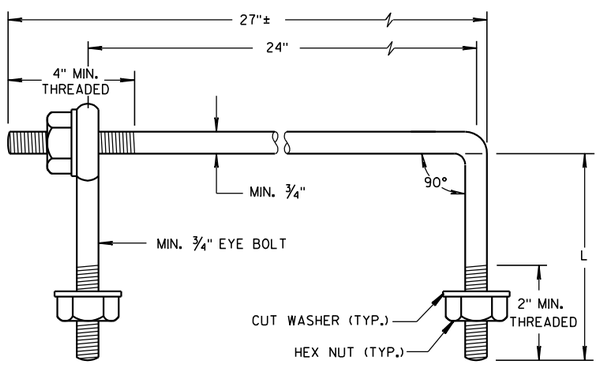
PIPE SIZE	L = LENGTH	
	TONGUE & GROOVE PIPE	MODIFIED BELL PIPE
18" TO 24"	4 1/2"	6 1/4"
30"	5"	7"
36"	5 1/2"	7"
42"	6"	
48"	6 1/2"	
60"	7 1/2"	
66"	8"	



NOTE:

EYE BOLT

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



EYE BOLT AND TIE ROD

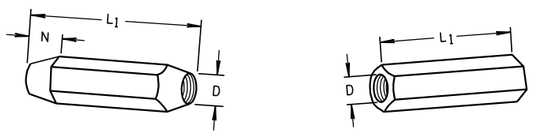
(JOINT TIES FOR 18" TO 66" DIA. CONCRETE PIPE)

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

ADJUSTABLE TIE ROD TABLE

PIPE DIAMETER	TIE ROD DIAMETER	D	L_1	N
12-60	5/8	5/8	5	1/2
66-84	3/4	3/4	5	1/2
90-108	1	1	7	1 1/16

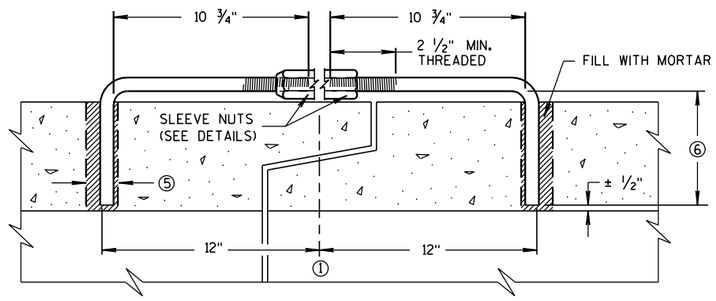
DIMENSIONS SHOWN ARE IN INCHES



TAPERED PLAIN

RIGHT AND LEFT THREADS

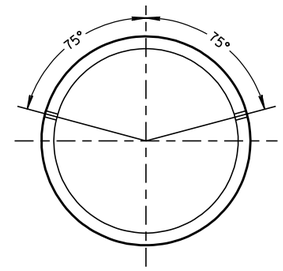
SLEEVE NUTS



LONGITUDINAL SECTION

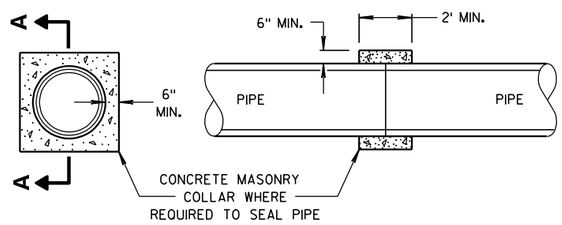
(JOINT TIES FOR 12" TO 108" DIA. CONCRETE PIPE)

ADJUSTABLE TIE ROD (ALTERNATE NO. 3)



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

TRANSVERSE SECTION



SECTION A-A

CONCRETE COLLAR DETAIL

JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

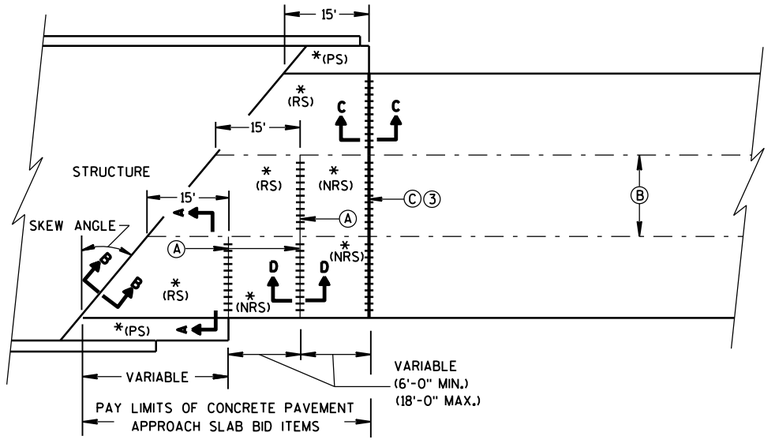
APPROVED
6/5/2012 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
FHWA

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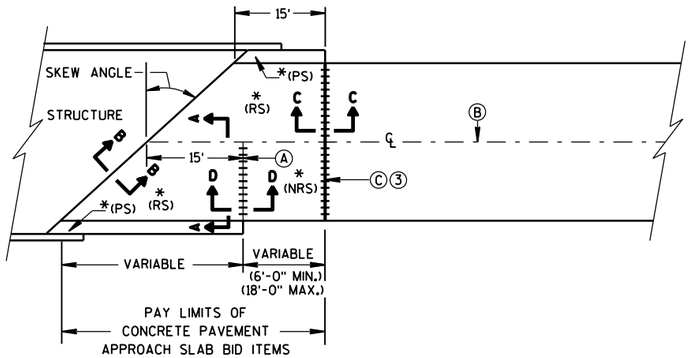
S.D.D. 8 F 4-7

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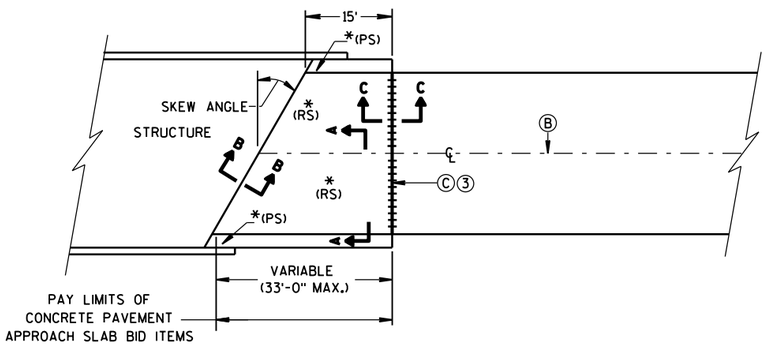
S.D.D. 8 F 4-7



SKEWED APPROACH
(PAVEMENT MORE THAN 2 LANES)



SKEWS >20°
(PAVEMENT WIDTH ≤30')



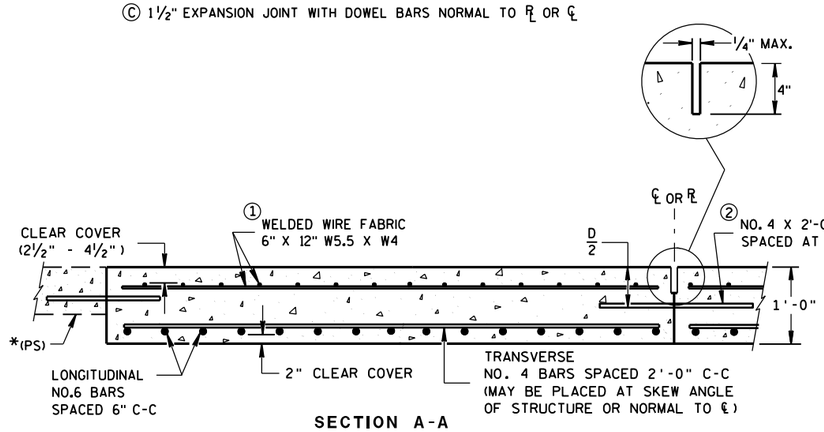
SKEWS ≤20°
(PAVEMENT WIDTH ≤30')

APPROACH SLAB AND ADJACENT PAVEMENT

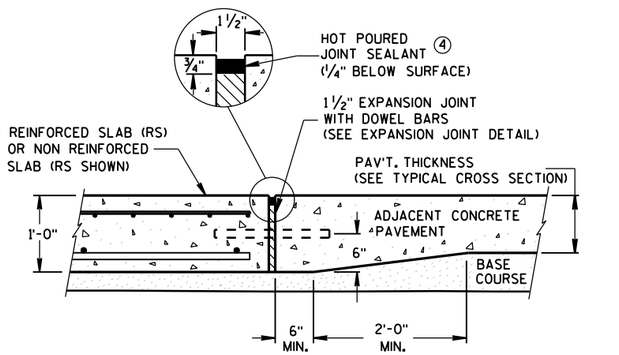
*(RS) = REINFORCED CONCRETE SLAB
*(PS) = PAVED CONCRETE SHOULDER OR CONCRETE DRAINAGE SLAB
(SEE DETAILS ELSEWHERE IN THE PLAN)
*(NRS) = NON-REINFORCED CONCRETE SLAB

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

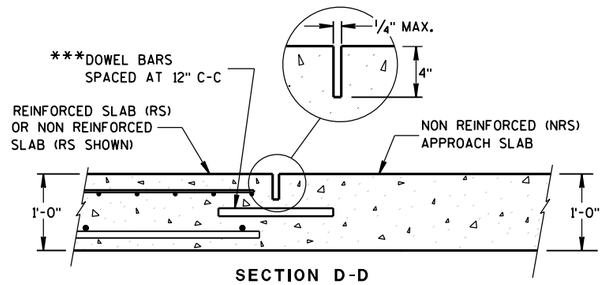
Ⓐ STANDARD CONTRACTION JOINT NORMAL TO ℄ OR ℄
Ⓑ STANDARD LONGITUDINAL JOINT WITH TIE BARS.
Ⓒ 1½" EXPANSION JOINT WITH DOWEL BARS NORMAL TO ℄ OR ℄



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.

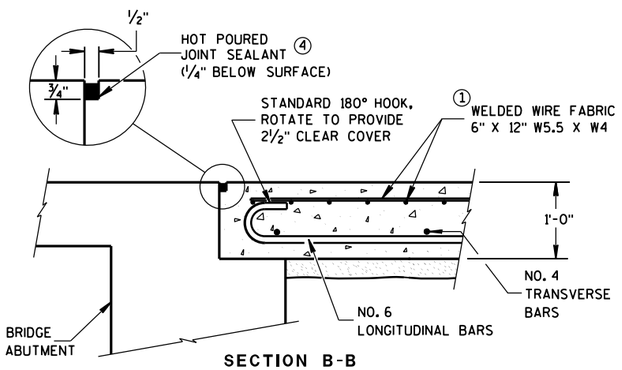
① THE CONTRACTOR MAY USE NO. 4 BARS SPACED AT 2'-0" C-C IN BOTH THE LONGITUDINAL AND TRANSVERSE DIRECTIONS FOR TOP REINFORCEMENT AS AN ALTERNATIVE TO THE WELDED WIRE FABRIC.

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

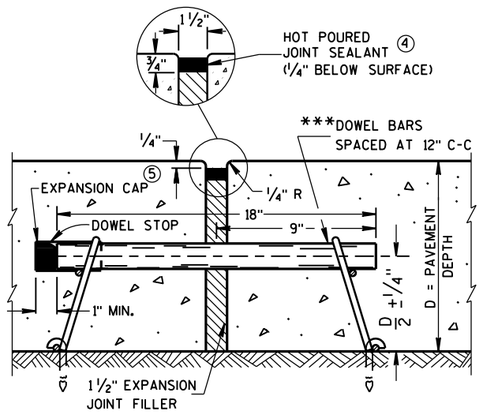
③ DO NOT CONSTRUCT AN EXPANSION JOINT OR INSTALL DOWEL BARS WHEN ABUTTING AN HMA PAVEMENT.

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

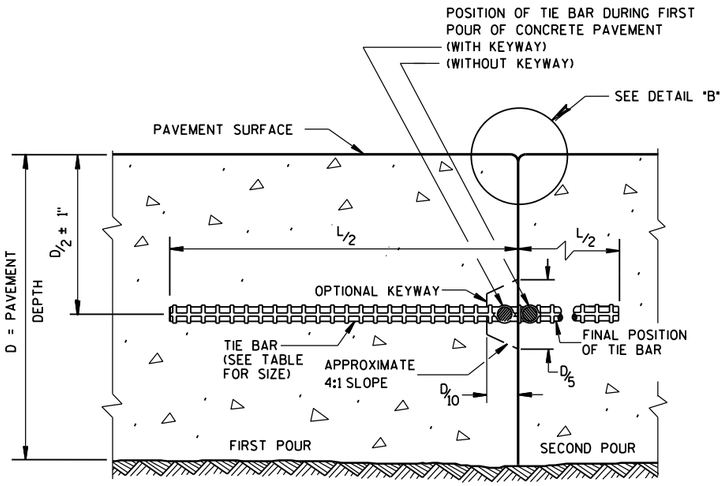
APPROVED
June, 2015
DATE
/S/ Peter Kemp, P.E.
PAVEMENT SUPE
FHWA

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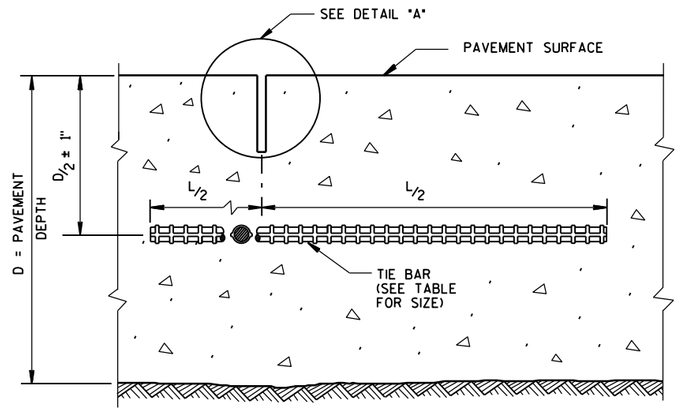
S.D.D. 13 B 2-8a

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S.D.D. 13 B 2-8a



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"

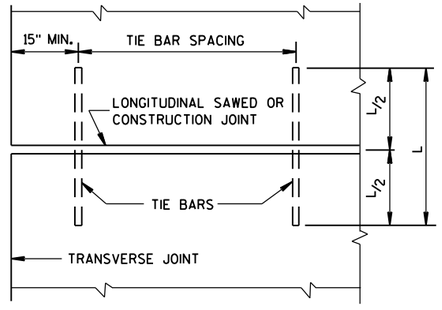
DETAIL "C"

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

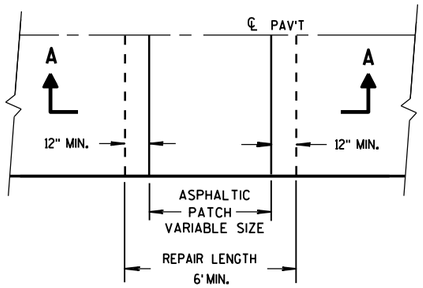
GENERAL NOTES

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. ADDITIONAL SAW CUTS ARE NOT PAID FOR BY THE DEPARTMENT.

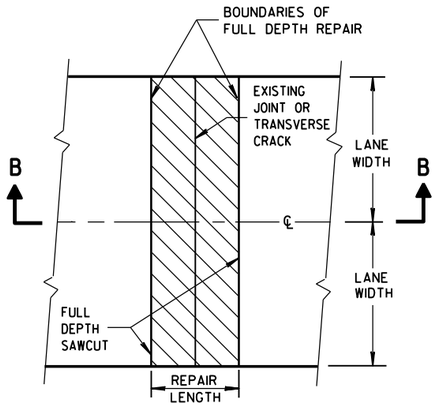
PROVIDE A 6-FOOT MINIMUM DISTANCE FROM BOUNDARIES OF CONCRETE REPAIR AREAS TO ADJACENT TRANSVERSE JOINT OR CRACK IN THE SAME LANE.

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

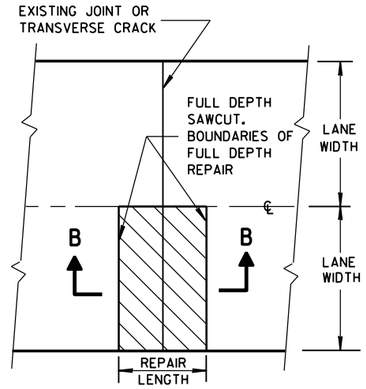
(1) DOWEL BARS MIGHT NOT EXIST.



PLAN VIEW

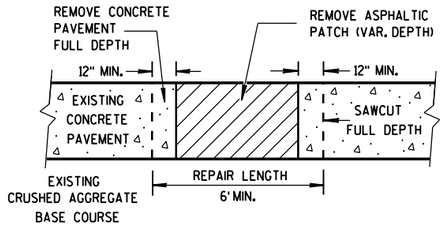


PLAN VIEW
(DOUBLE LANE REPAIR)



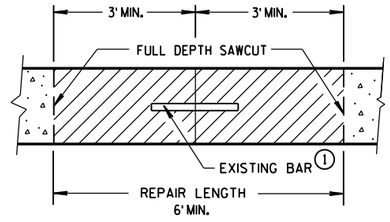
PLAN VIEW
(SINGLE LANE REPAIR)

FULL DEPTH CONCRETE PAVEMENT REMOVAL



SECTION A-A

HMA PATCH REMOVAL

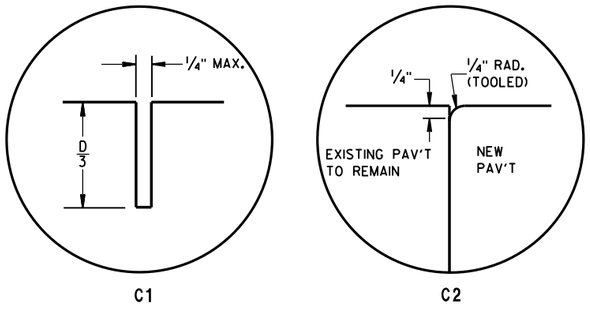


SECTION B-B

CONCRETE REMOVAL

CONCRETE PAVEMENT REPAIR AND REPLACEMENT

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S.D.D. 13 C 9-12a



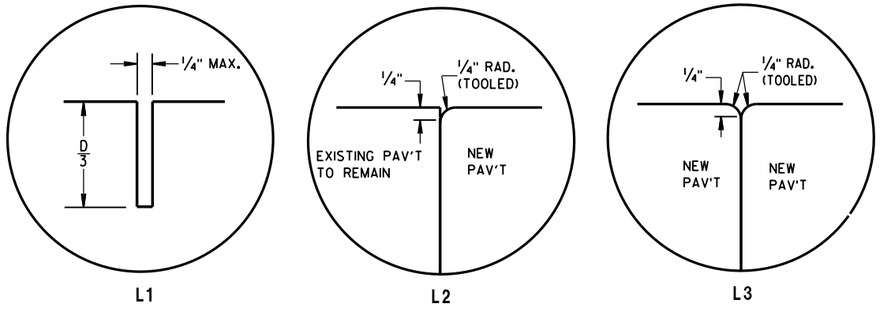
TRANSVERSE JOINTS

TIE BAR TABLE

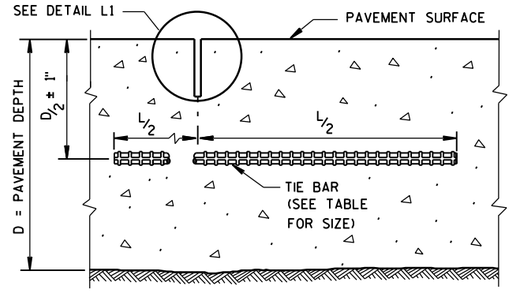
PAVEMENT DEPTH (D)	TIE BAR SIZE	TIE BAR LENGTH (L)	MAX. TIE BAR SPACING
< 10 ½"	NO. 4	30"	36"
≥ 10 ½"	NO. 5	36"	36"
	NO. 4 *	30"	24"**

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

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



LONGITUDINAL JOINTS



SECTION C-C

SAWED LONGITUDINAL JOINT

GENERAL NOTES

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

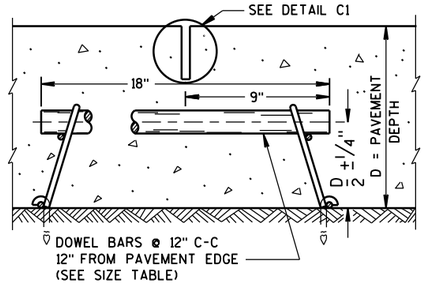
CONCRETE PAVEMENT REPAIRS OF EXISTING NONDOWELED CONCRETE PAVEMENTS DO NOT NEED TO BE DOWELED.

DO NOT SEAL OR FILL JOINTS.

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

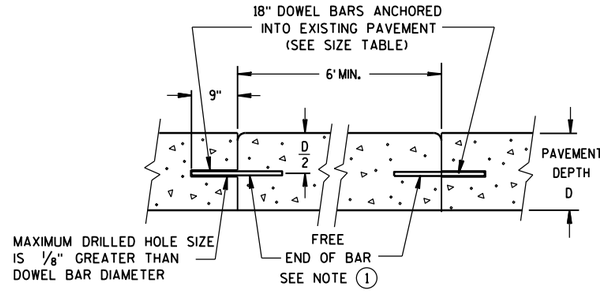
FOR MULTI-LANE CONCRETE PAVEMENT REPLACEMENTS, PROVIDE A MINIMUM DISTANCE OF 15 INCHES FROM ALL TRANSVERSE JOINTS OR EDGES OF REPLACEMENT TO THE CENTER OF THE TIE BAR NEAREST THAT JOINT OR EDGE.

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

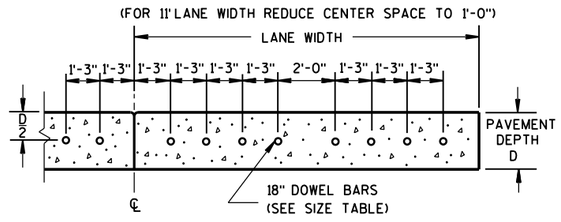


SECTION F-F

CONTRACTION JOINT



SECTION D-D

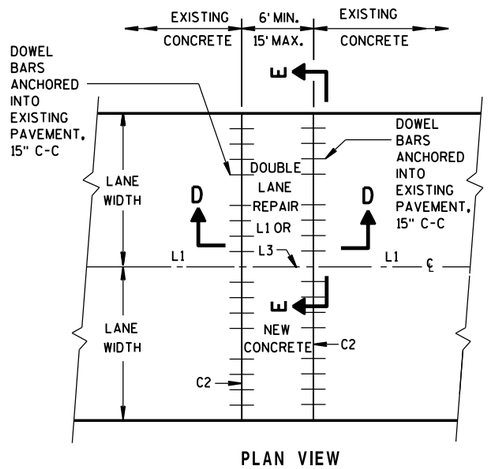


SECTION E-E

DRILLED DOWEL BAR CONSTRUCTION JOINT

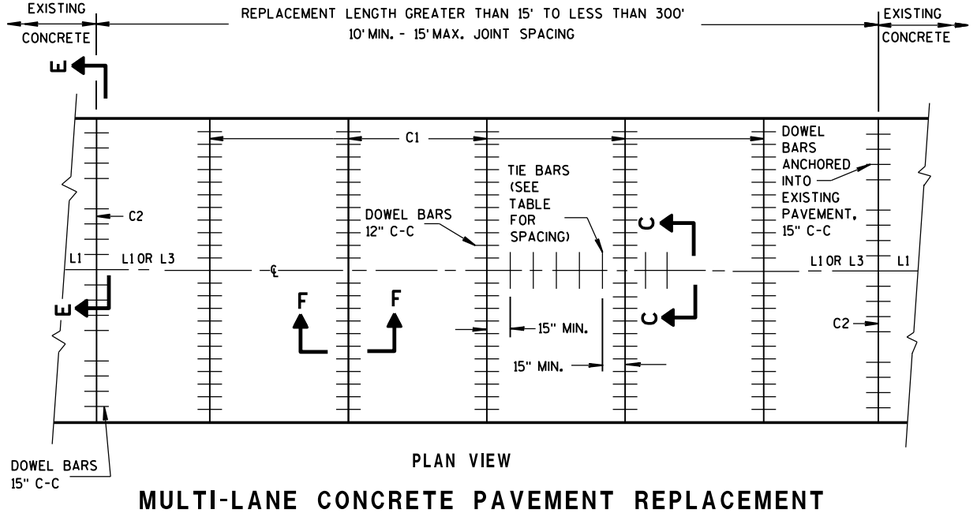
PAVEMENT DEPTH, DOWEL BAR SIZE AND JOINT SPACING TABLE

PAVEMENT DEPTH (D)	DOWEL BAR DIAMETER	CONTRACTION JOINT SPACING
5 ½", 6",6 ½"	NONE	12'
7",7 ½"	1"	14'
8",8 ½"	1 ¼"	15'
9",9 ½"	1 ¼"	15'
10" & ABOVE	1 ½"	15'



PLAN VIEW

MULTI-LANE CONCRETE PAVEMENT REPAIR



PLAN VIEW

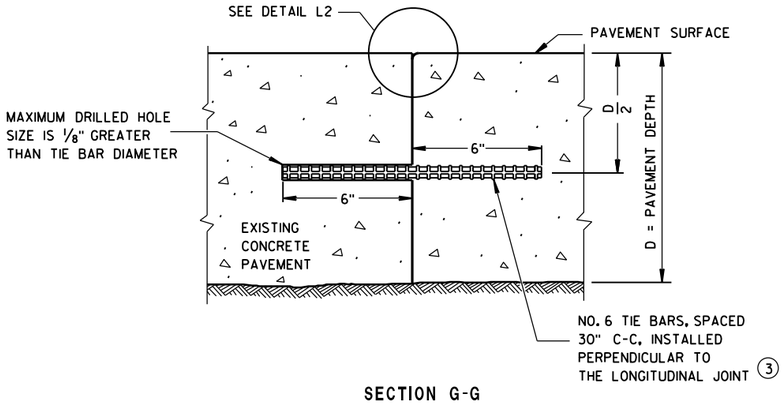
MULTI-LANE CONCRETE PAVEMENT REPLACEMENT

CONCRETE PAVEMENT REPAIR AND REPLACEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

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S.D.D. 13 C 9-12b



SECTION G-G

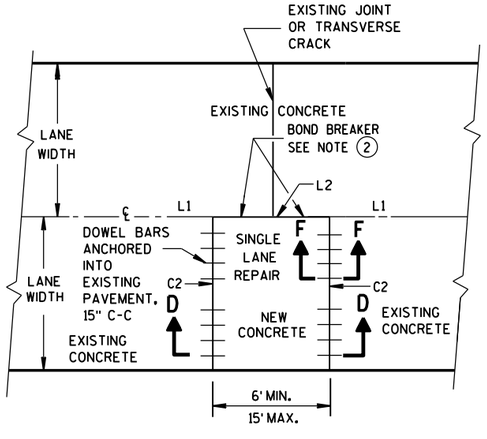
TIE BARS ANCHORED INTO EXISTING PAVEMENT

GENERAL NOTES

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

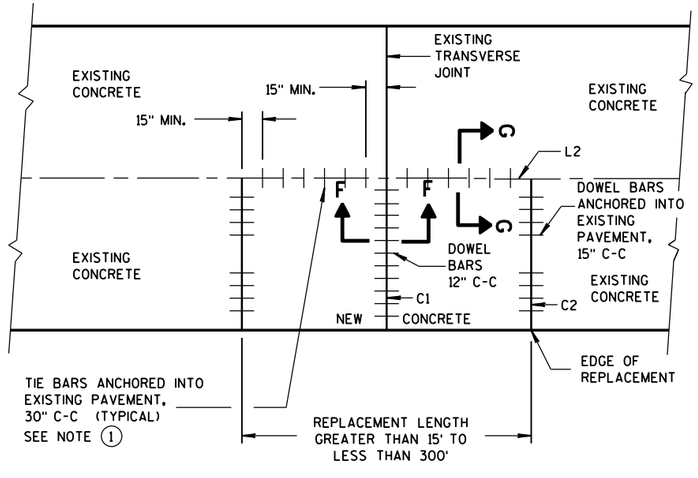
(2) USE AN ENGINEER-APPROVED BOND BREAKER (E.G. RELEASE AGENT, CURING COMPOUND) FOR SINGLE LANE REPAIRS UP TO 15 FEET IN LENGTH.

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



PLAN VIEW

SINGLE LANE CONCRETE PAVEMENT REPAIR



PLAN VIEW

SINGLE LANE CONCRETE PAVEMENT REPLACEMENT

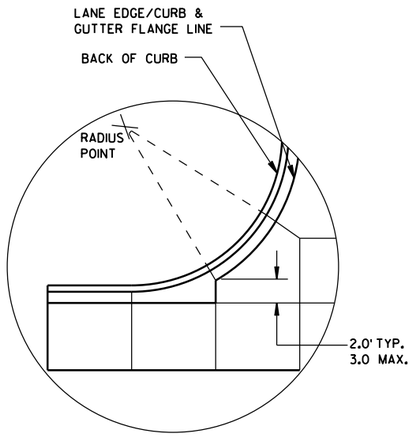
CONCRETE PAVEMENT REPAIR AND REPLACEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

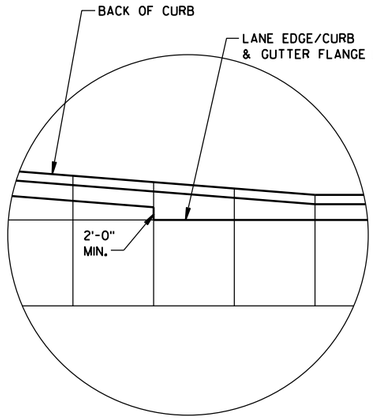
APPROVED
June, 2015 — DATE
/S/ Peter Kemp, P.E. — PAVEMENT SUPER
FHWA

6

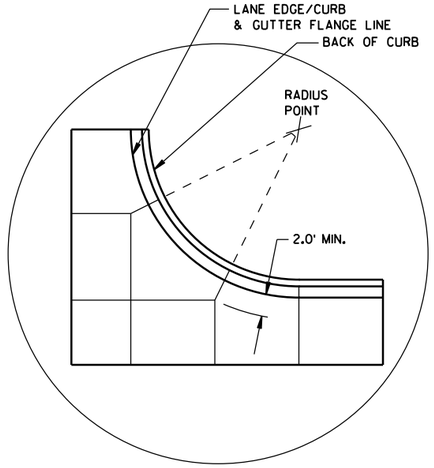
S.D.D. 13 C 9-12c



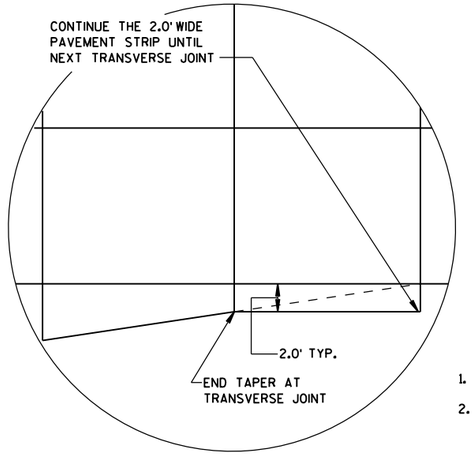
DETAIL "A"



DETAIL "B"



DETAIL "C"



DETAIL "D"

GENERAL NOTES

THE PRIMARY ROADWAY CONTROLS THE TRANSVERSE JOINT PATTERN.

ALIGN NEW JOINTS WITH EXISTING JOINTS OR CRACKS.

CONSTRUCT TRANSVERSE JOINTS PERPENDICULAR TO THE ROADWAY.

ADJUST TRANSVERSE JOINTS TO ALIGN WITH UTILITY FIXTURES (E.G. MANHOLES AND INLETS) IN THE PAVEMENT STRUCTURE WHEN POSSIBLE. WATER VALVES DO NOT REQUIRE JOINT ADJUSTMENT.

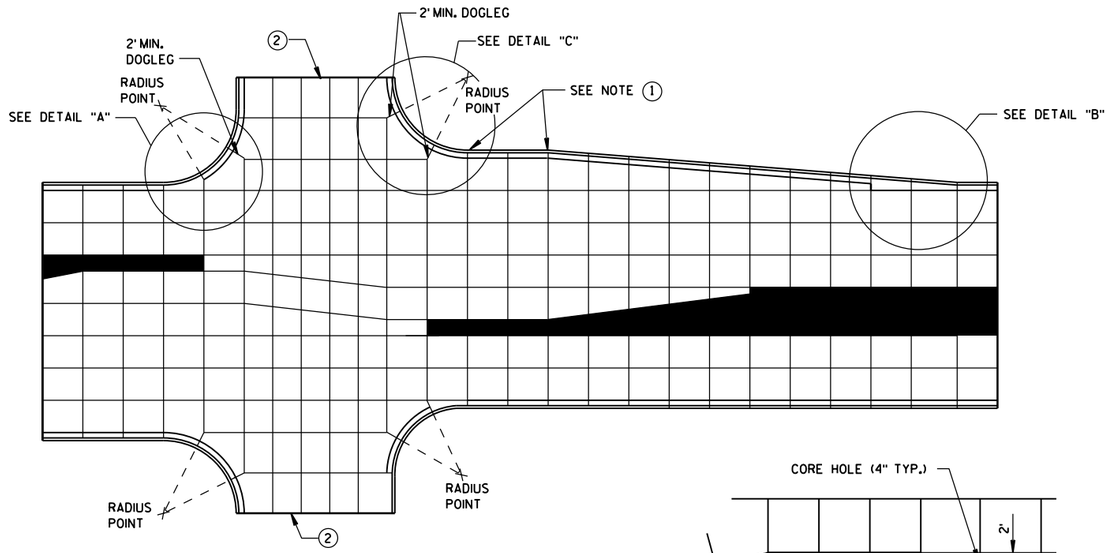
AVOID SLABS LESS THAN 2 FEET WIDE OR GREATER THAN 15 FEET WIDE.

SEE TABLE FOR TRANSVERSE JOINT SPACING. JOINT SPACING SPECIFIED IS MAXIMUM AND ACTUAL SPACING CAN BE ADJUSTED TO ACCOMMODATE INTERSECTIONS.

AVOID ANGLES LESS THAN 60° BY DOGLEGGING JOINTS THROUGH CURVE RADIUS POINTS. USE 90° ANGLES WHEN POSSIBLE.

CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.

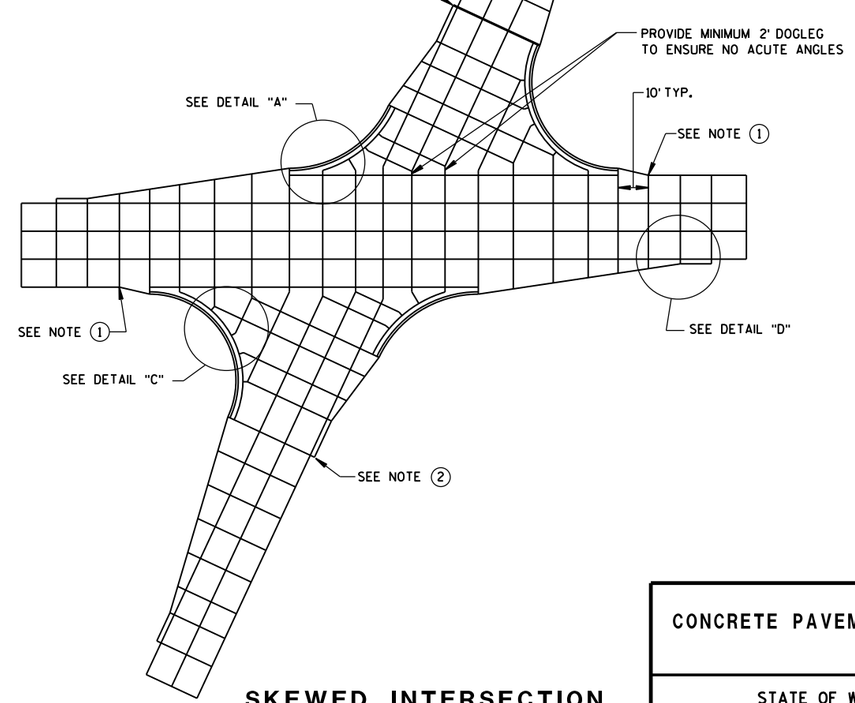
1. PROVIDE TRANSVERSE JOINTS AT ALL PAVEMENT WIDTH CHANGES.
2. CONSTRUCT DOWELED EXPANSION JOINT ON THE SIDE ROAD OF AN INTERSECTION IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH. ALIGN EXPANSION JOINT WITH EDGE OF RADIUS.
3. THE ENGINEER MAY APPROVE SLIGHT VARIATIONS FROM THESE JOINTING DETAILS.



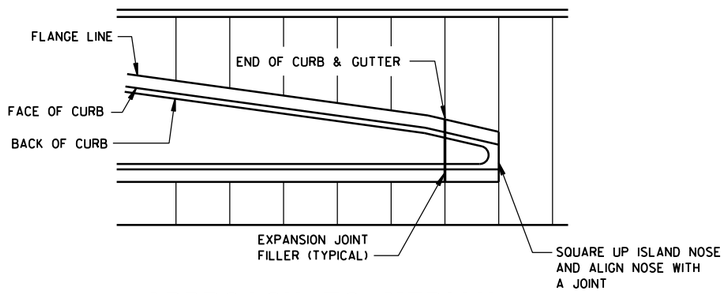
STANDARD INTERSECTION

PAVEMENT DEPTH AND JOINT SPACING TABLE

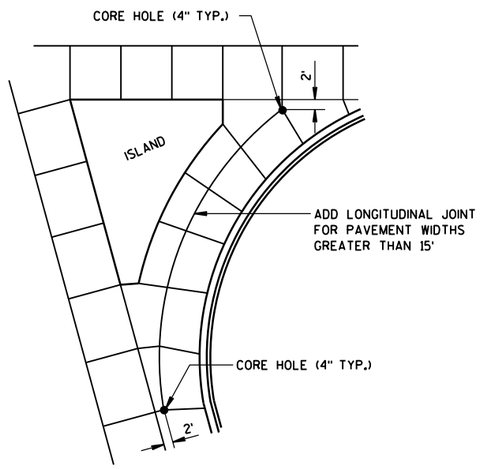
PAVEMENT DEPTH (D)	CONTRACTION JOINT SPACING
6", 6½"	12'
7", 7½"	14'
8" & ABOVE	15'



SKEWED INTERSECTION



APPROACH TO MEDIAN

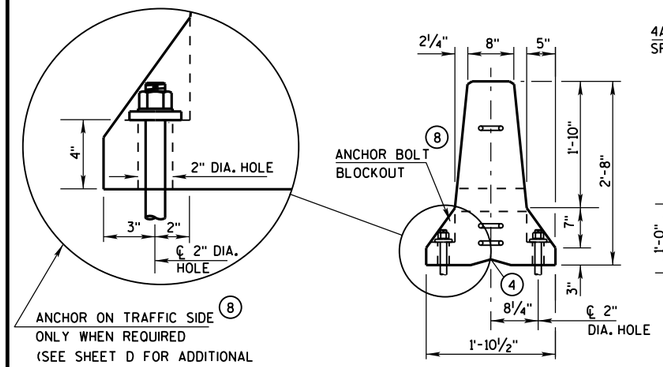


LARGE RIGHT TURN

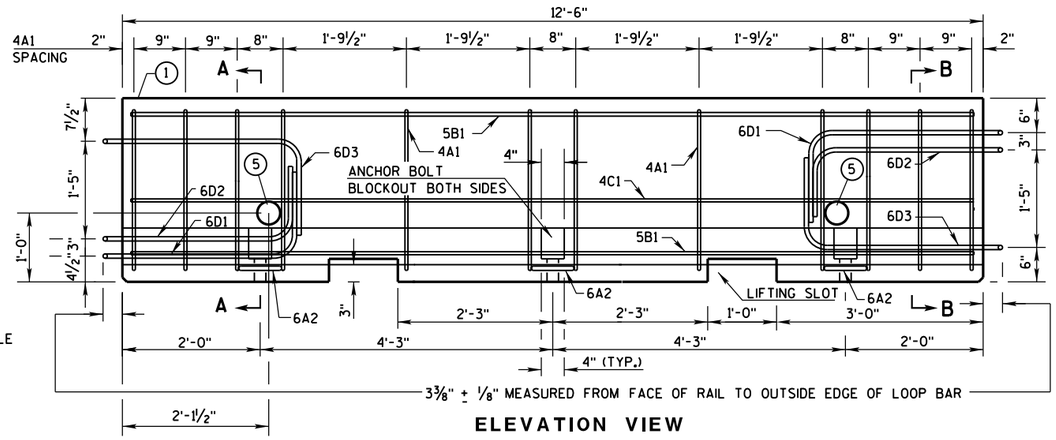
CONCRETE PAVEMENT JOINTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

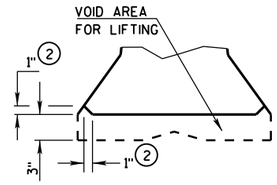
6
S.D.D. 13 C 18-3a



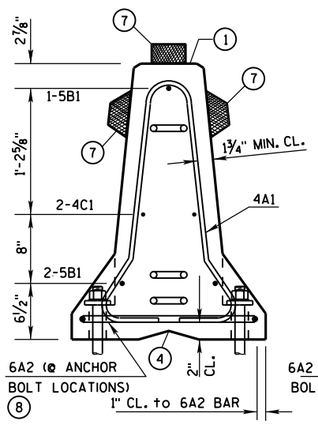
END VIEW



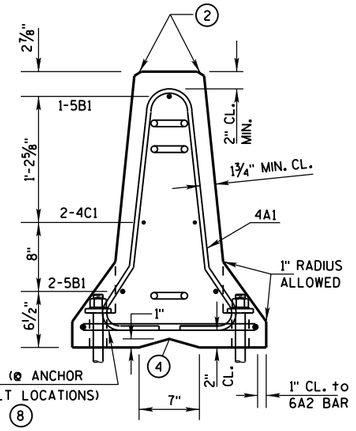
ELEVATION VIEW



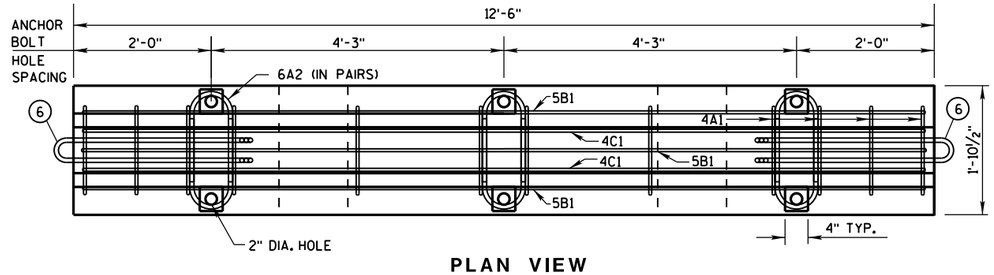
DETAIL "B"
LIFTING SLOT DETAIL



SECTION A-A
(STIRRUP PLACEMENT)

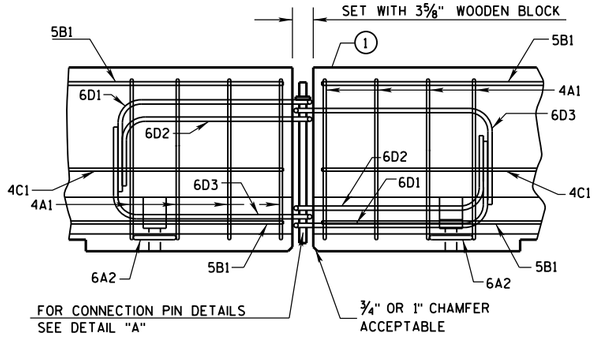


SECTION B-B
(STIRRUP PLACEMENT)

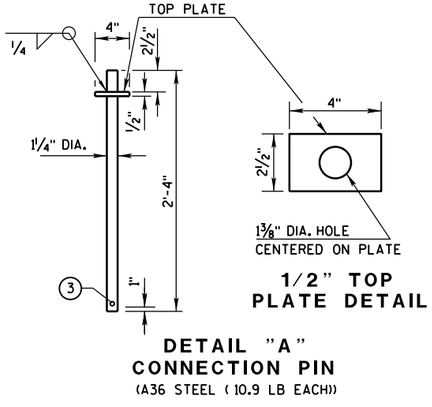


PLAN VIEW

DETAILS OF BARRIER SECTION

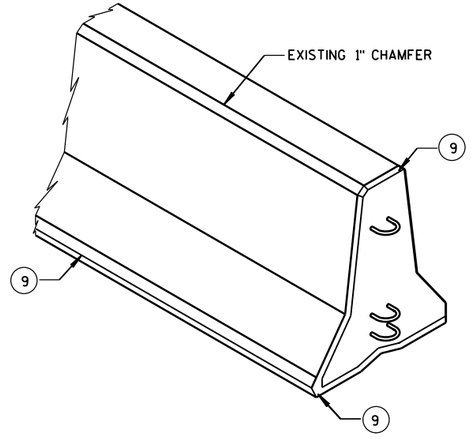


DETAILS OF BARRIER CONNECTION



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.

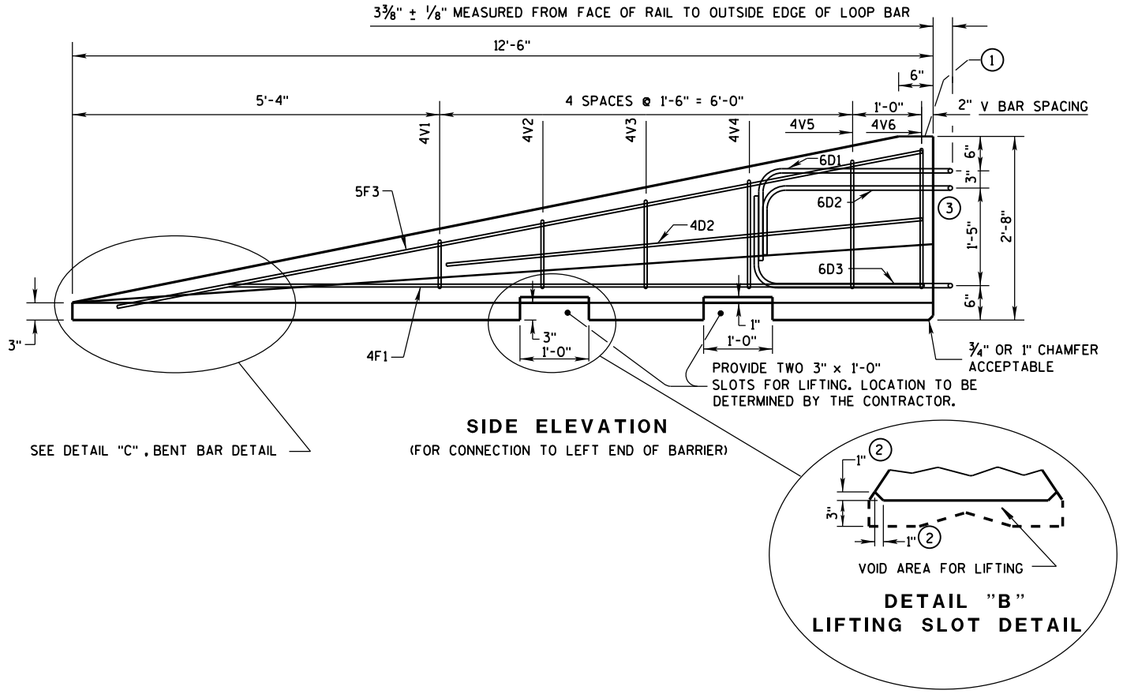
(7) USE DELINEATORS CONFORMING TO SECTION 633 OF THE STANDARD SPECIFICATIONS. CONTRACTOR MAY USE ALTERNATE SHAPES AND HOUSING. INSTALL DELINEATORS ACCORDING TO MANUFACTURES INSTRUCTION. INSTALL YELLOW REFLECTORS WHEN BARRIER IS LOCATED TO THE LEFT OF TRAFFIC AND WHITE REFLECTORS WHEN BARRIER IS LOCATED 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.

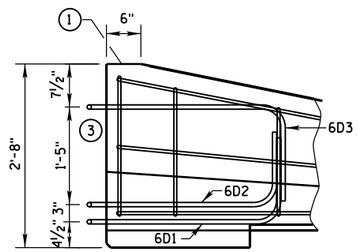
(8) SEE SHEET D FOR ANCHORING CRITERIA.

(9) 1" CHAMFER OPTIONAL.

CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"

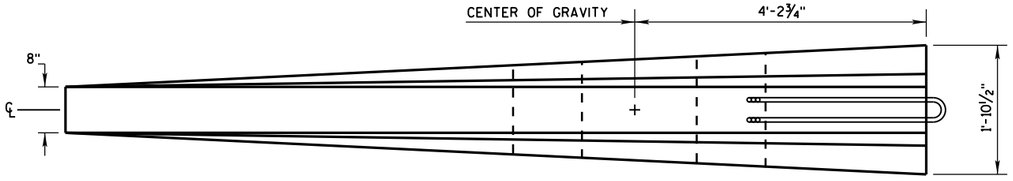
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

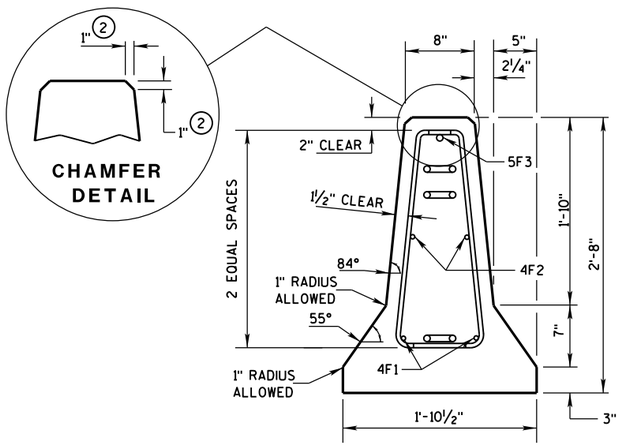


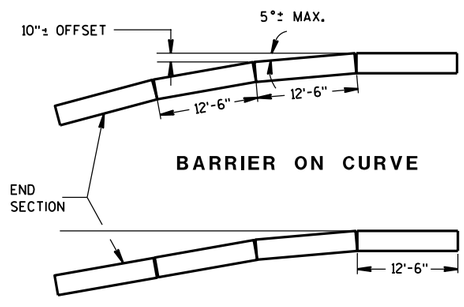


GENERAL NOTES

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 TRANSPOR

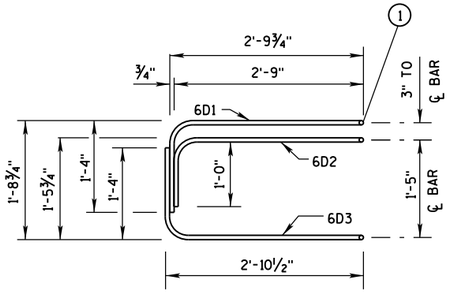
6

S.D.D. 14 B 7-14b

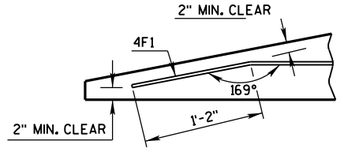
BARRIER TAPER SECTION BILL OF MATERIALS

(PER 12'-6" BARRIER TAPER SECTION)

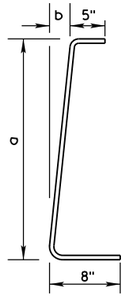
BAR	BAR SIZE	NO. OF BARS	LENGTH FT.
4V1	4	2	1'-11"
4V2	4	2	2'-2"
4V3	4	2	2'-6"
4V4	4	2	2'-9"
4V5	4	2	3'-2"
4V6	4	2	3'-4"
4F1	4	2	12'-0"
4F2	4	2	7'-6"
5F3	5	1	11'-9"
LOOP ASSEMBLY			
6D1	6	1	8'-5"
6D2	6	1	7'-7"
6D3	6	1	8'-6"



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

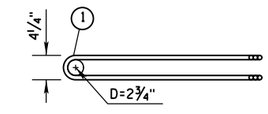
GENERAL NOTES

(1) NEVER USE LOOP BARS (6D1, 6D2 OR 6D3) TO LIFT, MOVE OR REPOSITION THE BARRIER.

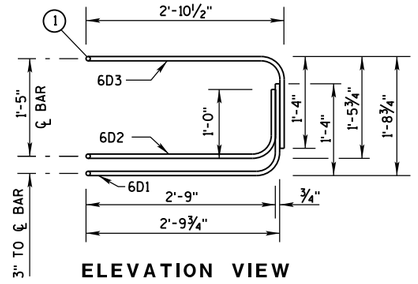
BARRIER SECTION BILL OF MATERIALS

(PER 12'-6" BARRIER SECTION)

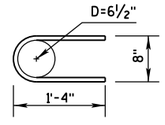
BAR	BAR SIZE	NO. OF BARS	LENGTH FT.
4A1	4	12	6'-0"
6A2	6	6	2'-11"
5B1	5	3	12'-2"
4C1	4	2	12'-2"
LOOP ASSEMBLY			
6D1	6	2	8'-5"
6D2	6	2	7'-7"
6D3	6	2	8'-6"



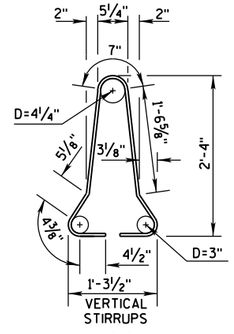
PLAN VIEW
LOOP BAR ASSEMBLY
(MARKED END SHOWN, INVERT FOR OTHER END)



ELEVATION VIEW



6A2



4A1

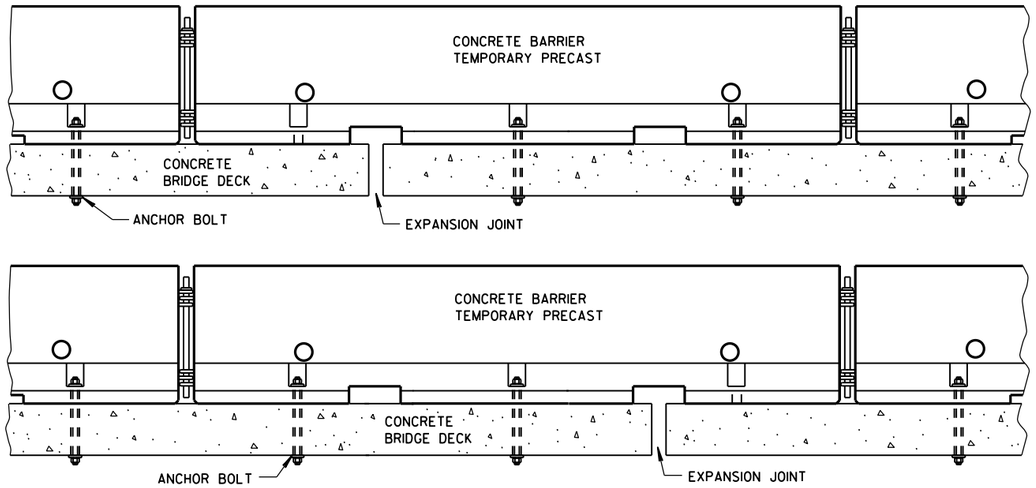
BARRIER SECTION

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

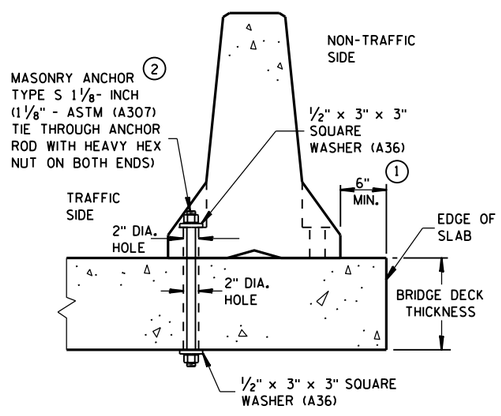
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S.D.D. 14 B 7-14c



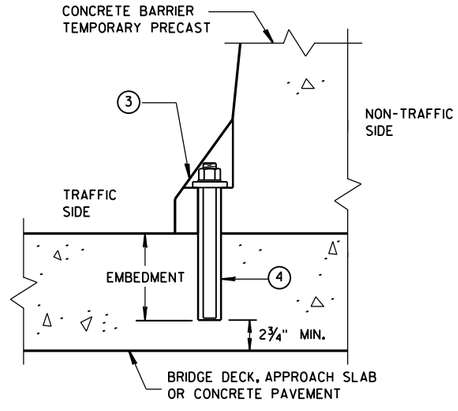
TREATMENT AT BRIDGE DECK EXPANSION JOINTS

(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 ② INSTALLATION ON CONCRETE BRIDGE DECK, CONCRETE APPROACH SLAB, OR CONCRETE PAVEMENT

(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.

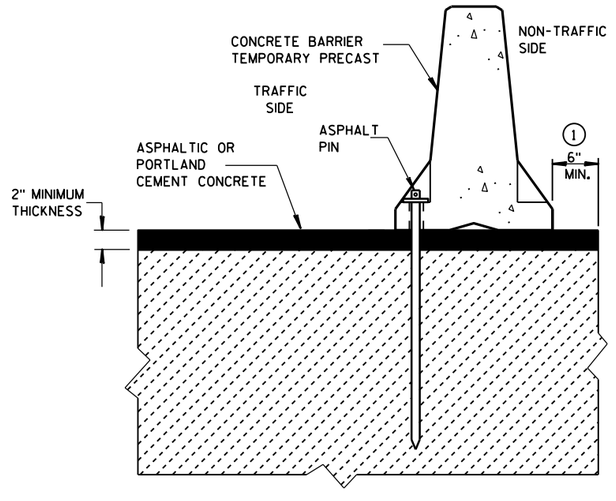
② ANCHORING IS INCIDENTAL TO CONCRETE BARRIER TEMPORARY PRECAST.

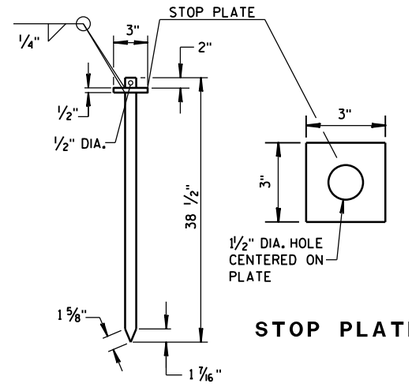
WITH THE APPROVAL OF THE ENGINEER, REMOVABLE ADHESIVE BONDED ANCHOR BOLT INSTALLATION MAY BE USED IN LIEU OF THROUGH BOLTED ANCHOR INSTALLATION. THE ADHESIVE BONDED ANCHOR BOLT MUST BE REMOVABLE. USE ASTM (A307) MASONRY ANCHORS TYPE S 1⅛-INCH, EMBEDDED TO A DEPTH SUFFICIENT TO DEVELOP THE ULTIMATE CAPACITY 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.



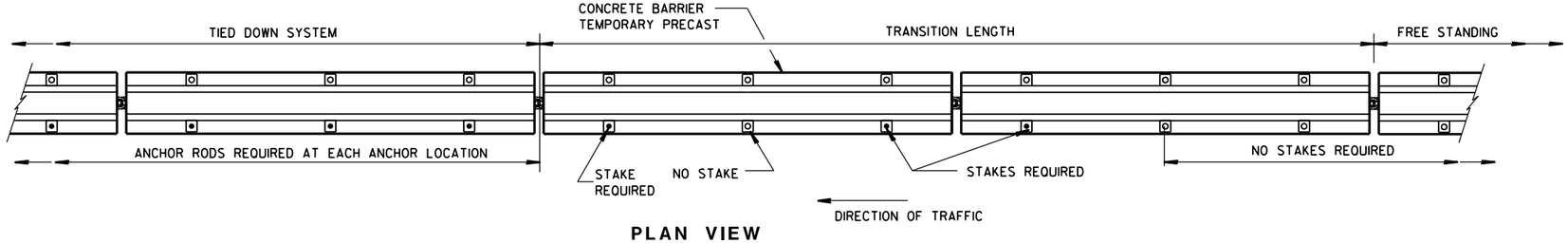


STOP PLATE



STAKE DOWN INSTALLATION FOR ASPHALTIC OR PORTLAND CEMENT CONCRETE SURFACE

(STAKING IS INCIDENTAL TO CONCRETE BARRIER TEMPORARY PRECAST)



PLAN VIEW

FREE STANDING TRANSITION TO TIED-DOWN SYSTEM

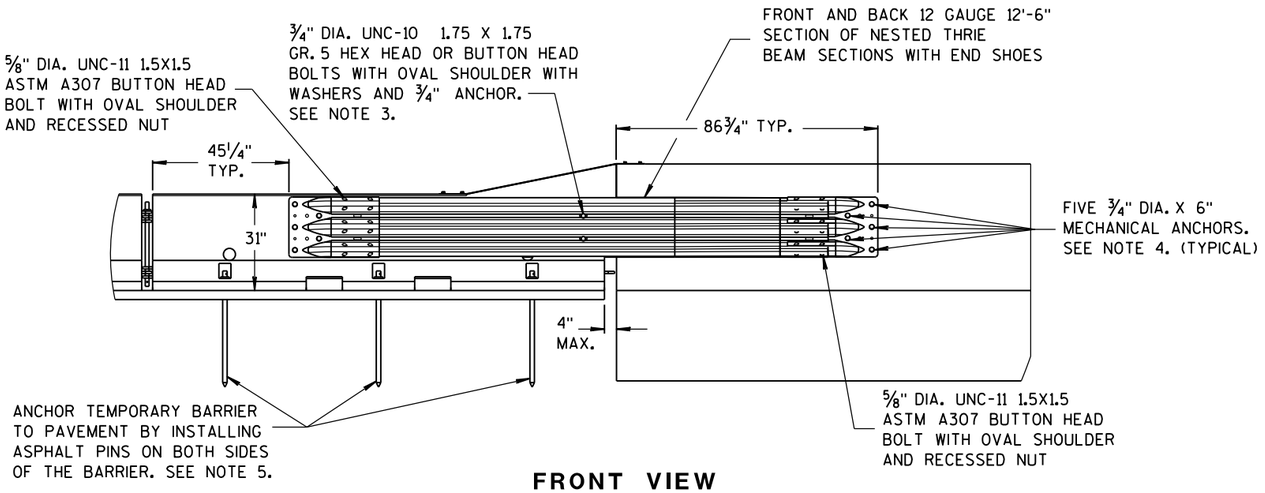
(PLACE TRANSITION IN A TANGENT SECTION OF BARRIER PARALLEL TO THE ROADWAY. IF TRANSITION OCCURS ON STRUCTURAL SLAB, ANCHOR AS SHOWN.)

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

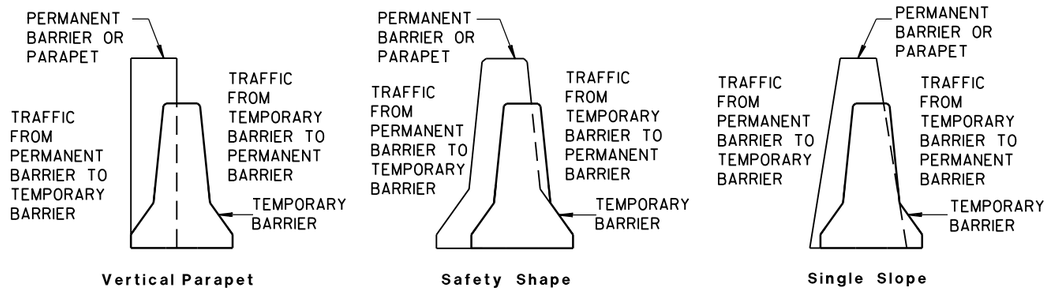
STATE OF WISCONSIN
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S.D.D. 14 B 7-14d



FRONT VIEW



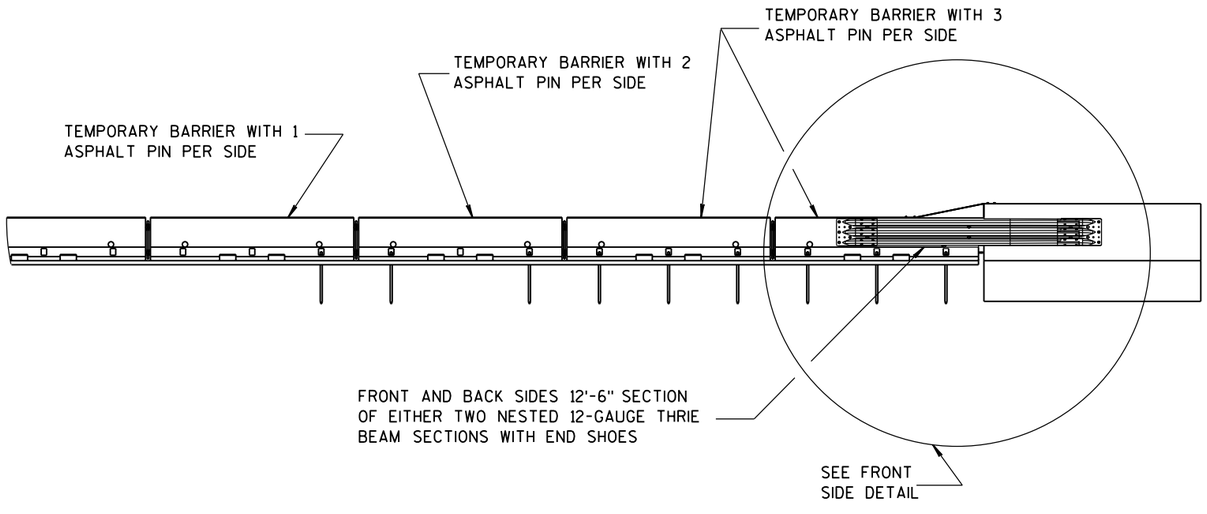
TEMPORARY BARRIER PLACEMENT FOR BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM

NOTES

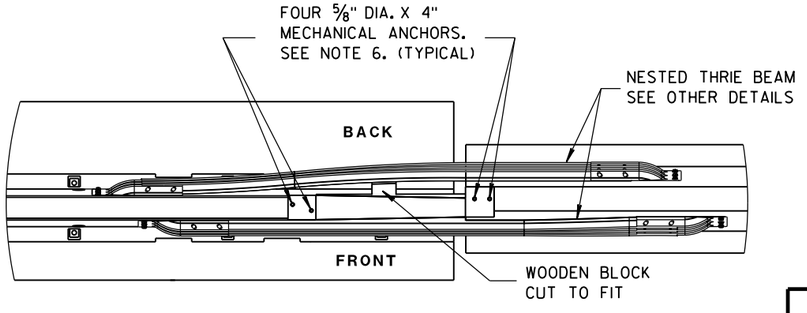
NESTED THRIE BEAM IS REQUIRED ON BOTH SIDES OF THE TEMPORARY BARRIER FOR ALL INSTALLATIONS.

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



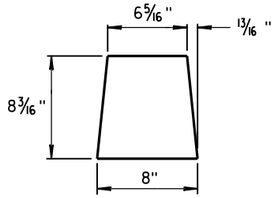
PLAN VIEW

BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM

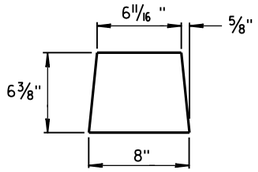
CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

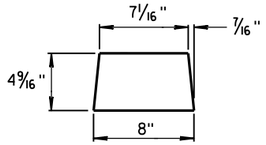
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S.D.D. 14 B 7-14e



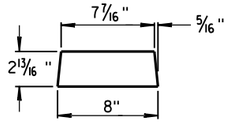
GUSSET 1



GUSSET 2

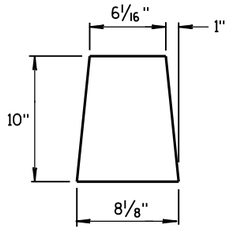


GUSSET 3

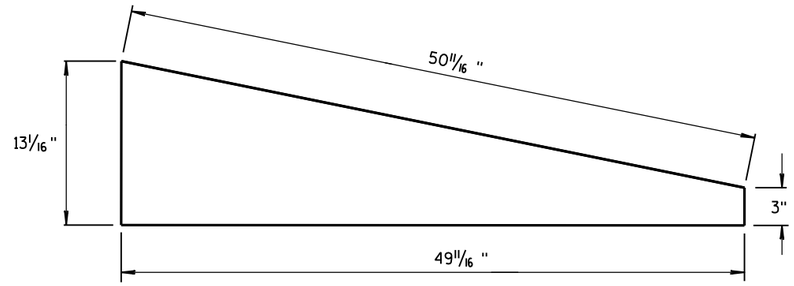


GUSSET 4

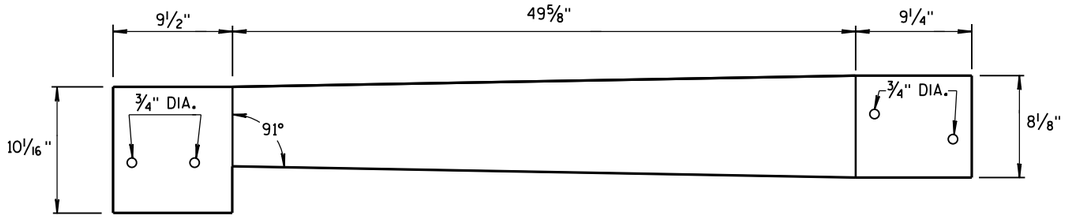
GUSSETS

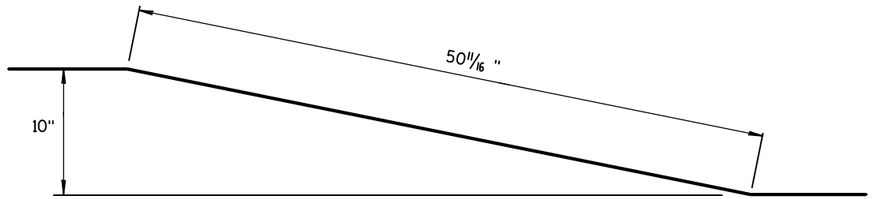


END PLATE



SIDE PLATE

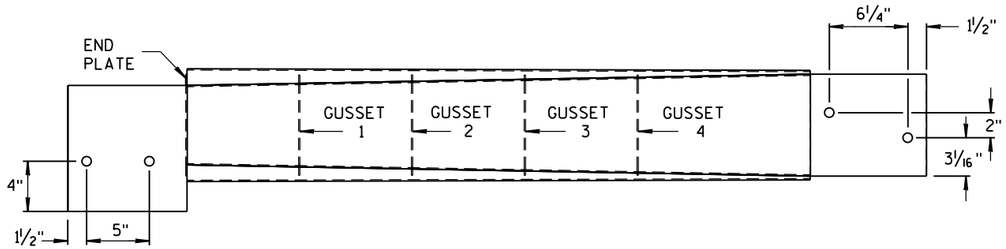


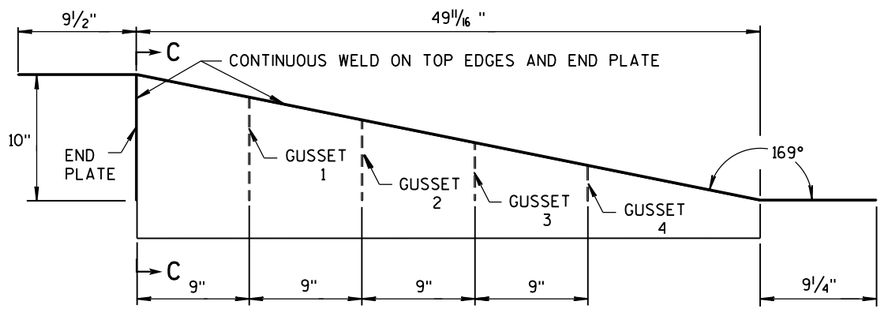


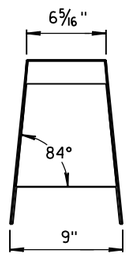
TOP PLATE

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.

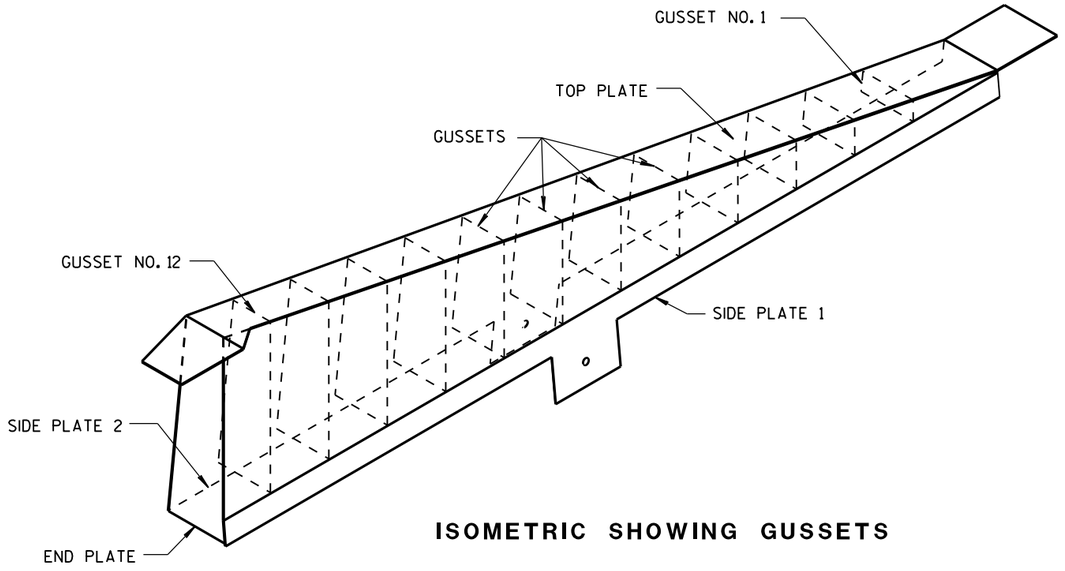
CAP DETAILS FOR TEMPORARY CONCRETE BARRIER TO 42" PERMANENT CONCRETE BARRIER

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

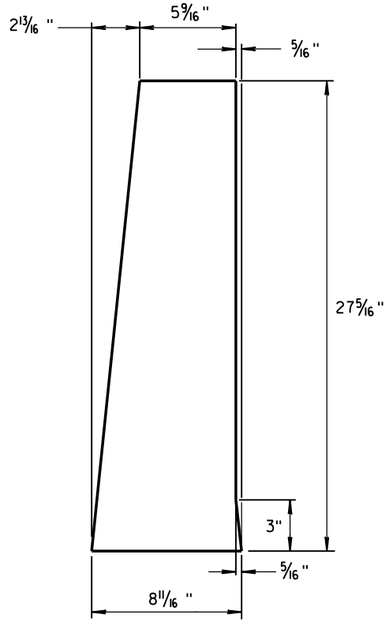
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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S.D.D. 14 B 7-14f

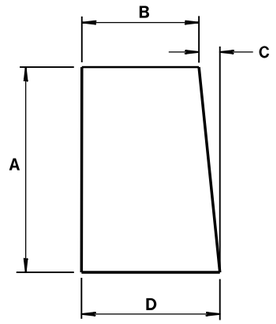


ISOMETRIC SHOWING GUSSETS



END PLATE

1/8" STEEL PLATE



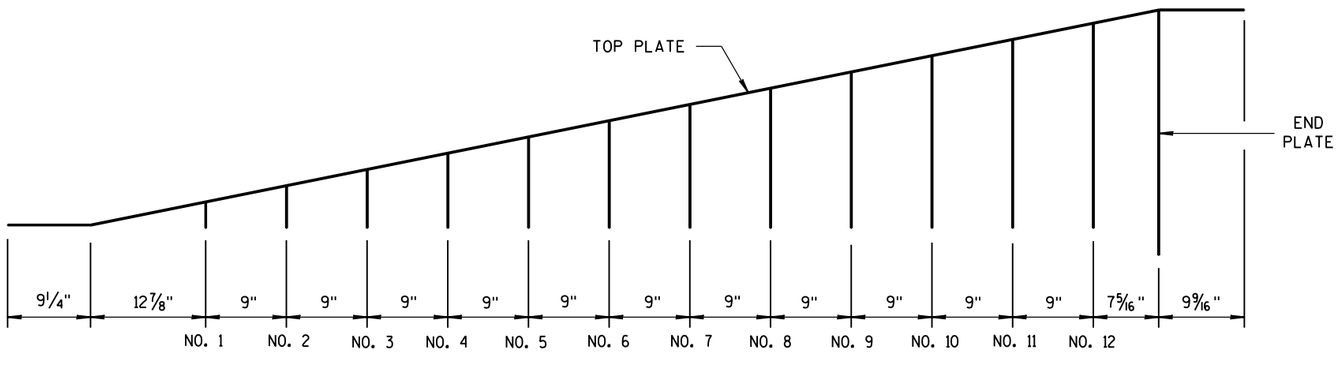
GUSSETS 1 - 12

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

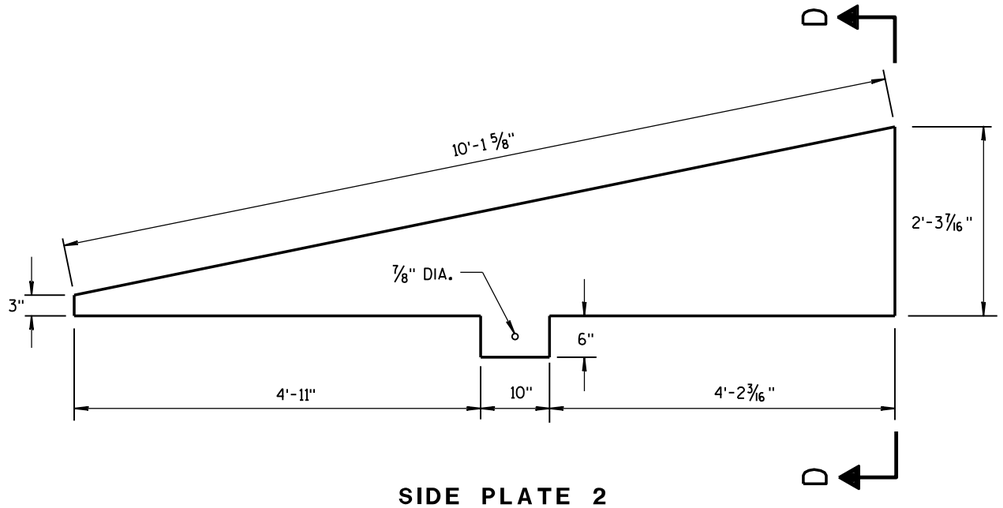
CAP DETAILS FOR TEMPORARY CONCRETE BARRIER TO 56" PERMANENT CONCRETE BARRIER

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

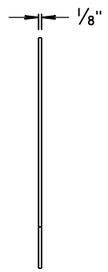
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

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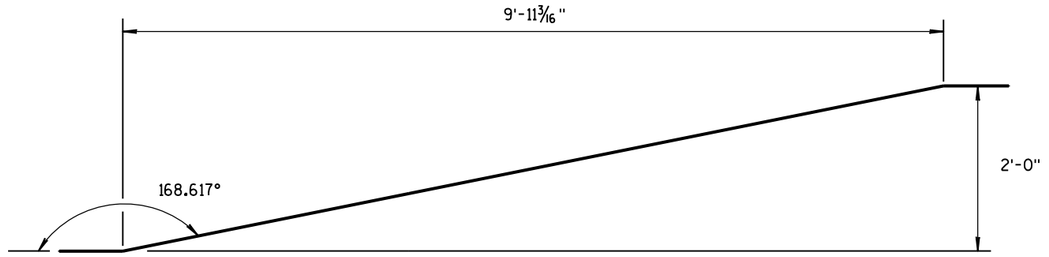
S.D.D. 14 B 7-14g



SIDE PLATE 2

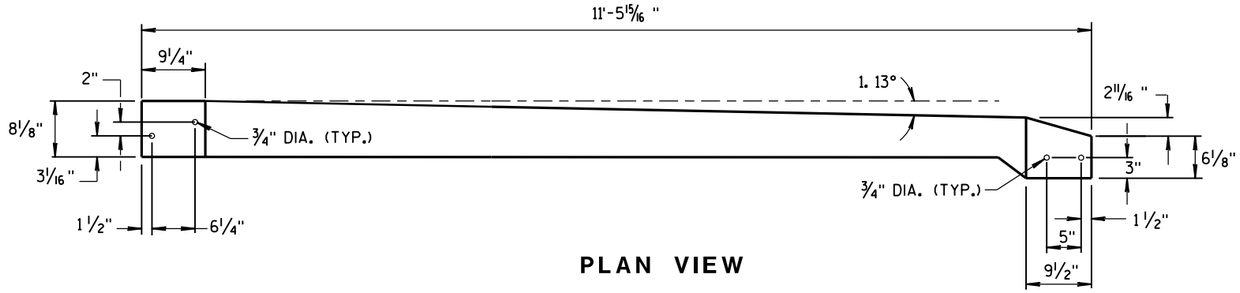


END VIEW



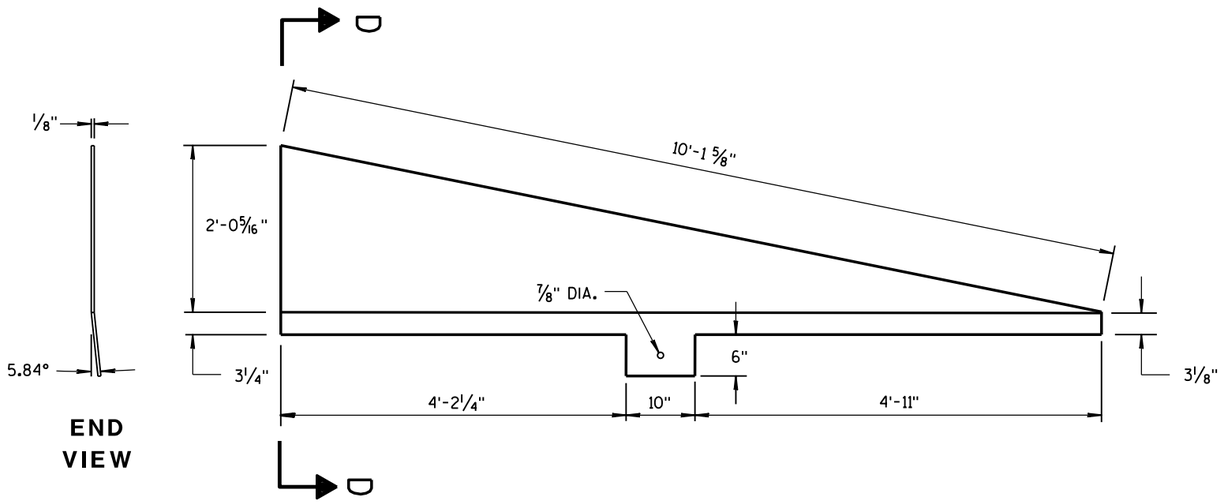
SIDE VIEW

TOP PLATE



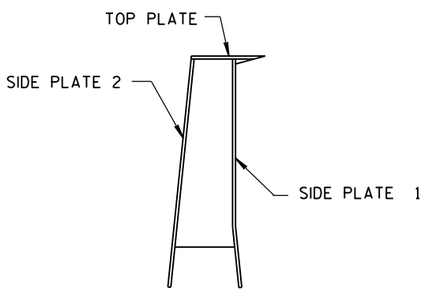
PLAN VIEW

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

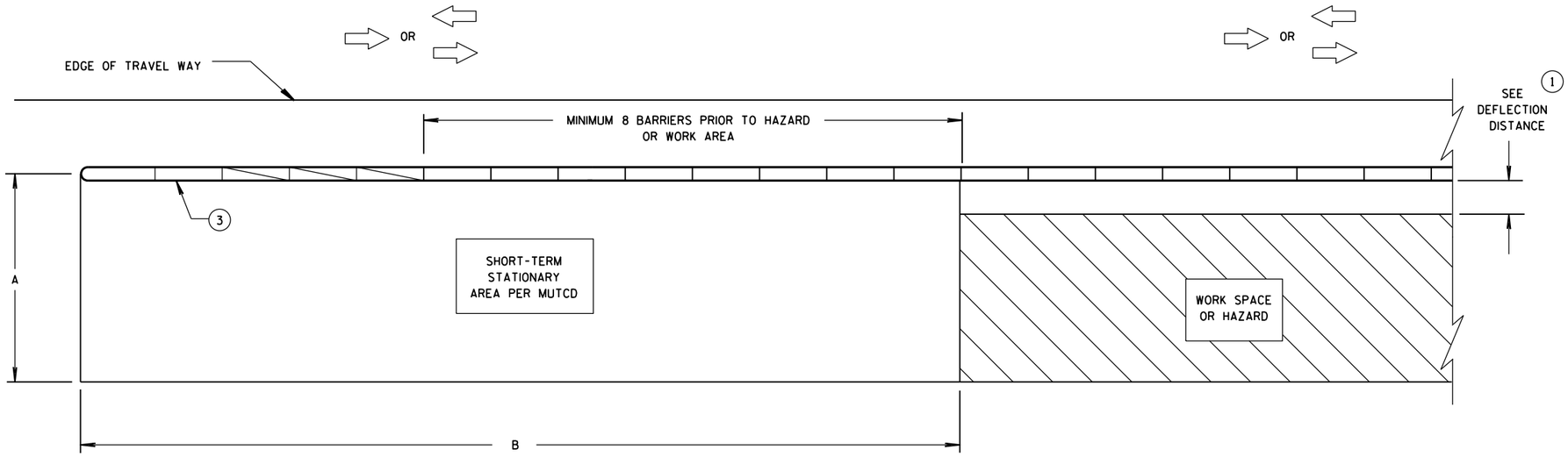
APPROVED
June 2014 — DATE
/S/ Jerry H. Zoda — ROADWAY STANDARDS ENGINEER
FHWA

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S.D.D. 14 B 7-14h

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S.D.D. 14 B 7-14h



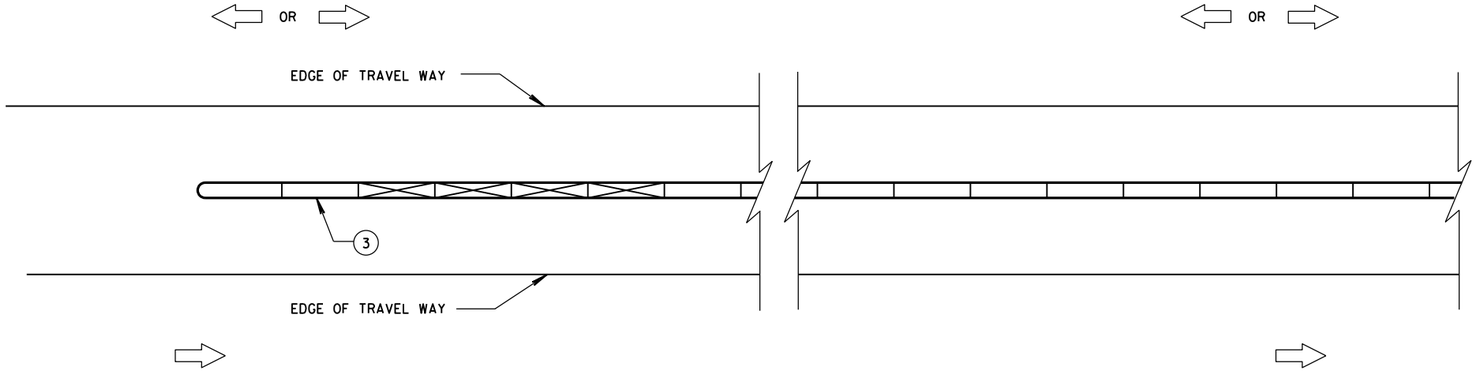
CRASH CUSHION/SAND BARREL ARRAY AND TEMPORARY BARRIER INSTALLATION FOR TRAFFIC ON ONE SIDE OF BARRIER

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

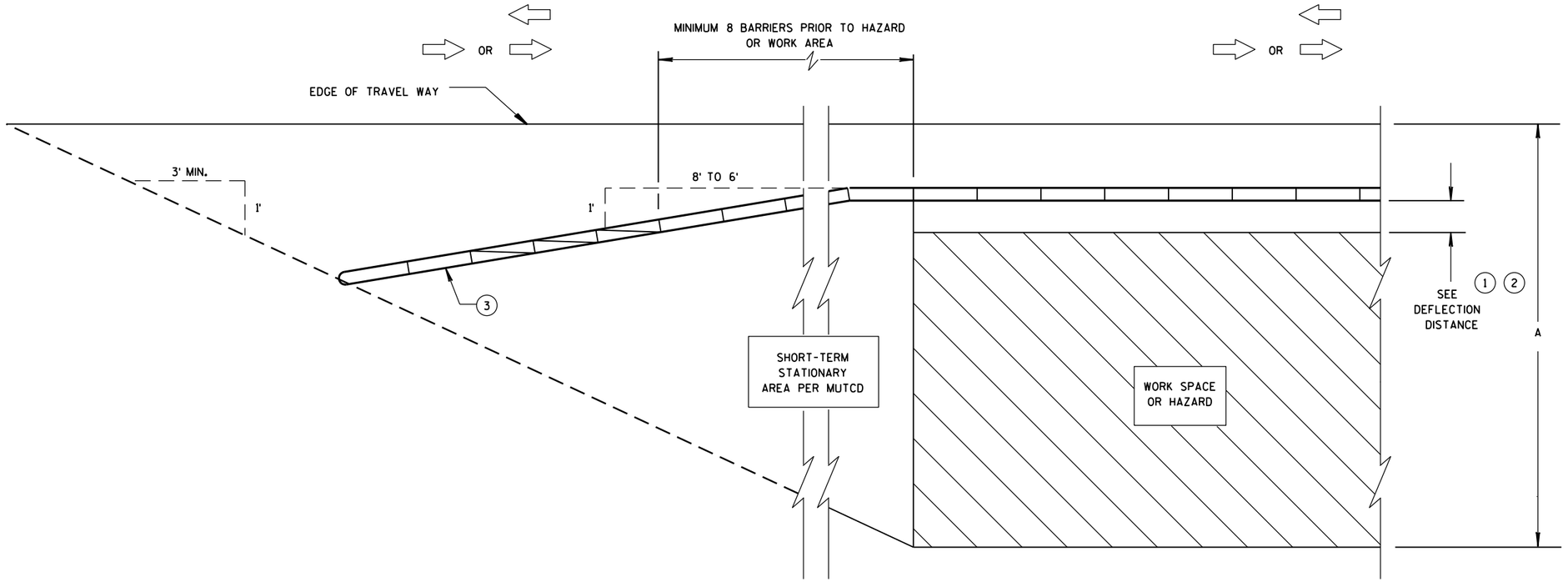
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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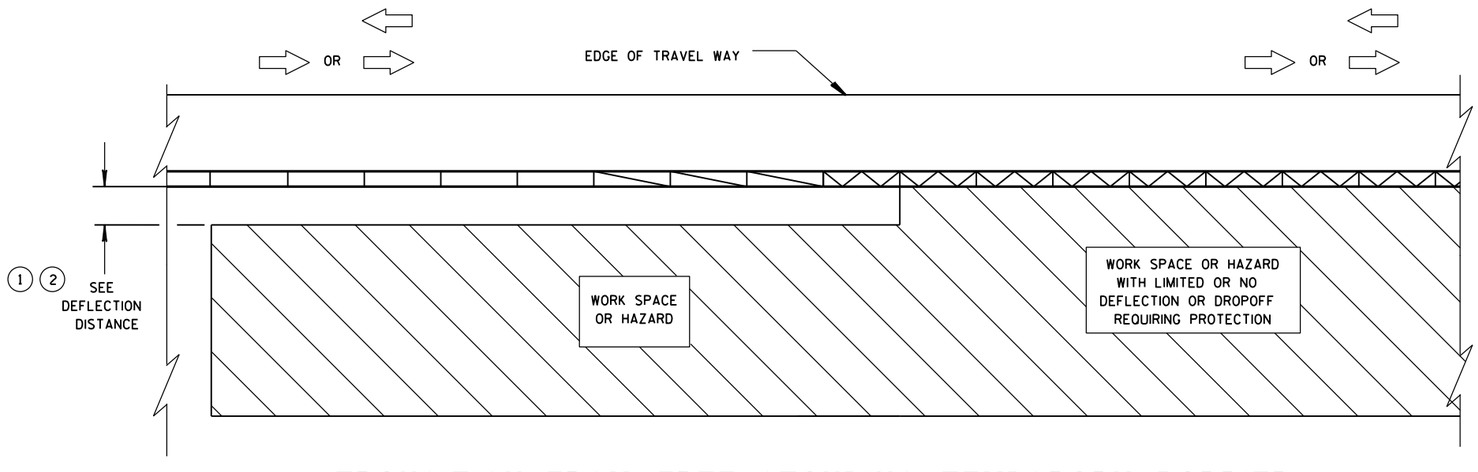
S.D.D. 14 B 8-2a

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S.D.D. 14 B 8-2a



CRASH CUSHION/SAND BARREL ARRAY AND TEMPORARY BARRIER INSTALLATION FOR TRAFFIC ON ONE SIDE - FLARED INSTALLATION



TRANSITION FROM FREE STANDING TEMPORARY BARRIER TO ANCHORED BARRIER

LEGEND

- DIRECTION OF TRAVEL
- CRASH CUSHION OR SAND BARREL ARRAY
- SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS
- SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS
- 3 PINS PLACED ON TRAFFIC SIDE OF BARRIER
- PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET
- FREE STANDING TEMPORARY BARRIER

CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS

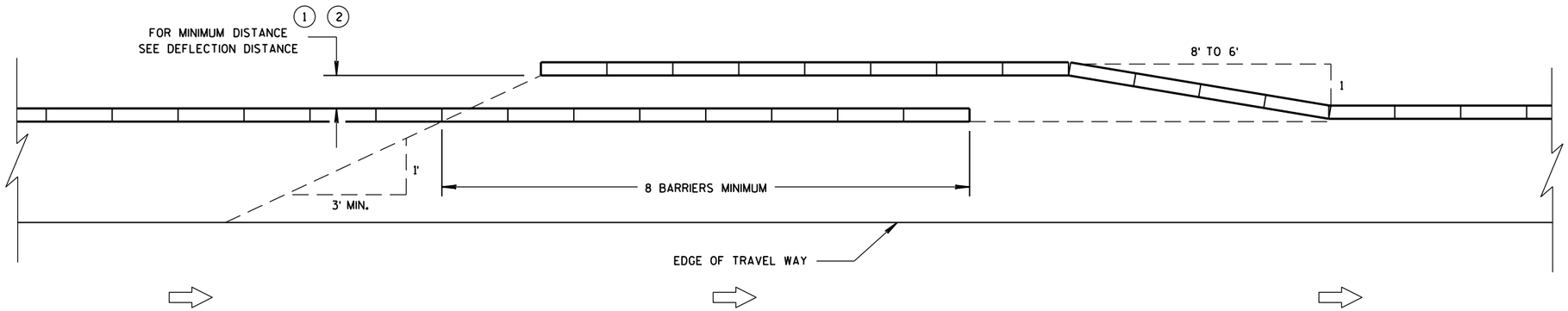
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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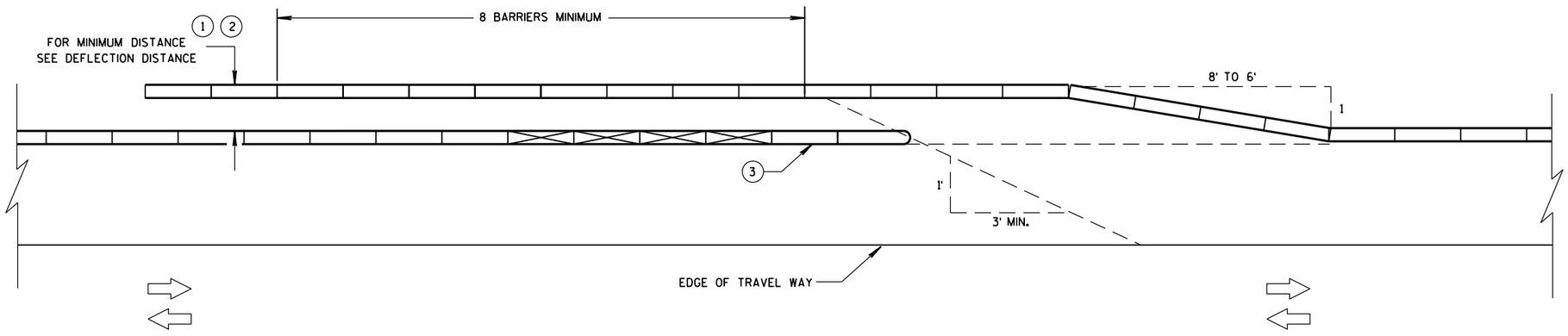
S.D.D. 14 B 8-2b

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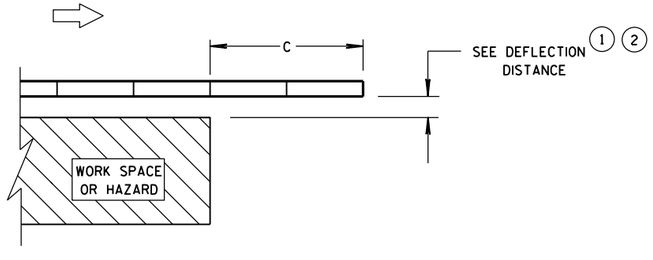
S.D.D. 14 B 8-2b



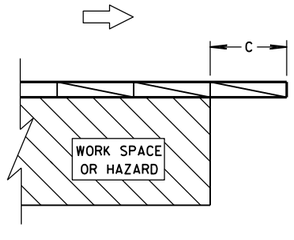
TEMPORARY BARRIER OVERLAP - ONE-WAY TRAFFIC



TEMPORARY BARRIER OVERLAP - TWO-WAY TRAFFIC



ENDING TEMPORARY BARRIER DOWNSTREAM - UNANCHORED



ENDING TEMPORARY BARRIER DOWNSTREAM - ANCHORED

LEGEND

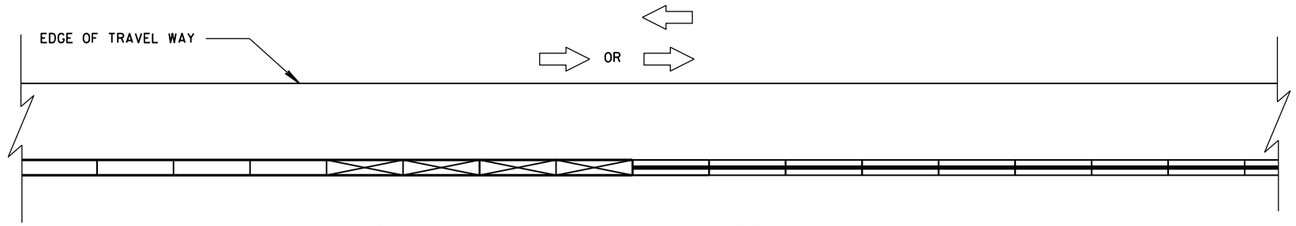
- DIRECTION OF TRAVEL
- CRASH CUSHION OR SAND BARREL ARRAY
- SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS
- SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS
- 3 PINS PLACED ON TRAFFIC SIDE OF BARRIER
- PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET
- FREE STANDING TEMPORARY BARRIER

CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS

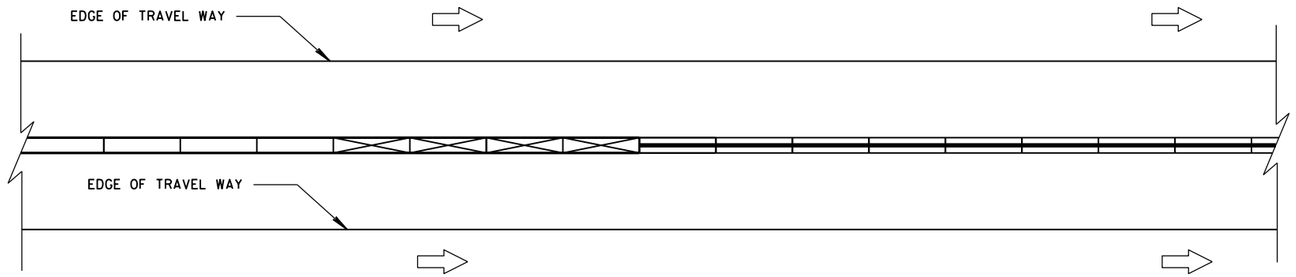
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

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S.D.D. 14 B 8-2c



CONNECTING TEMPORARY BARRIER TO PERMANENT
CONCRETE BARRIER-TRAFFIC ON ONE SIDE



CONNECTING TEMPORARY BARRIER TO PERMANENT
CONCRETE BARRIER-TRAFFIC ON BOTH SIDES

LEGEND

DIRECTION OF TRAVEL

CRASH CUSHION OR
SAND BARREL ARRAY

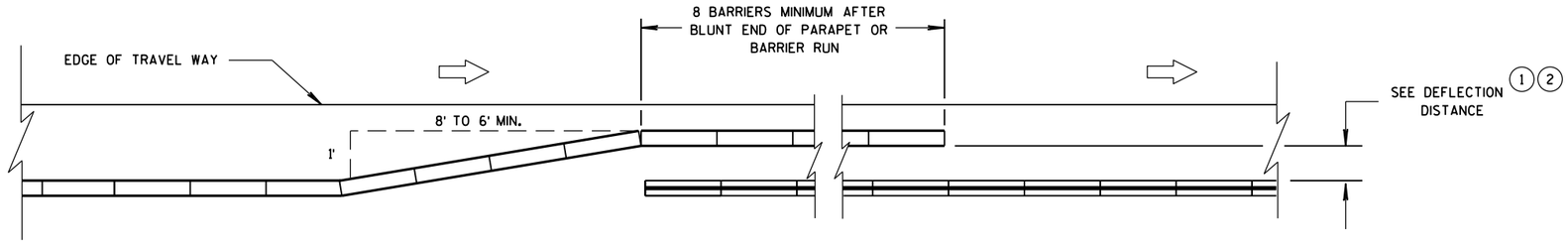
SEE FREE STANDING TRANSITION
TO TIED-DOWN SYSTEM DETAILS

SEE BI-DIRECTIONAL TRANSITION
TO TIED-DOWN SYSTEM DETAILS

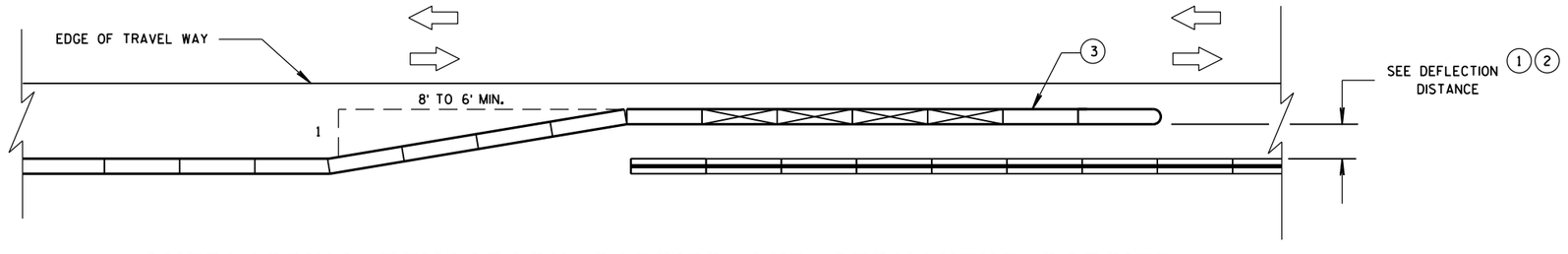
3 PINS PLACED ON
TRAFFIC SIDE OF BARRIER

PERMANENT CONCRETE BARRIER
OR CONCRETE PARAPET

FREE STANDING TEMPORARY
BARRIER



OVERLAPPING TEMPORARY BARRIER AND PERMANENT BARRIER -
ONE WAY TRAFFIC



OVERLAPPING TEMPORARY BARRIER AND PERMANENT BARRIER -
TWO WAY TRAFFIC

CRASH CUSHION/SAND BARREL
ARRAY AND OTHER TEMPORARY
BARRIER LAYOUT DETAILS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

S.D.D. 14 B 8-2d

LEGEND

DIRECTION OF TRAVEL

CRASH CUSHION OR SAND BARREL ARRAY

SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS

SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS

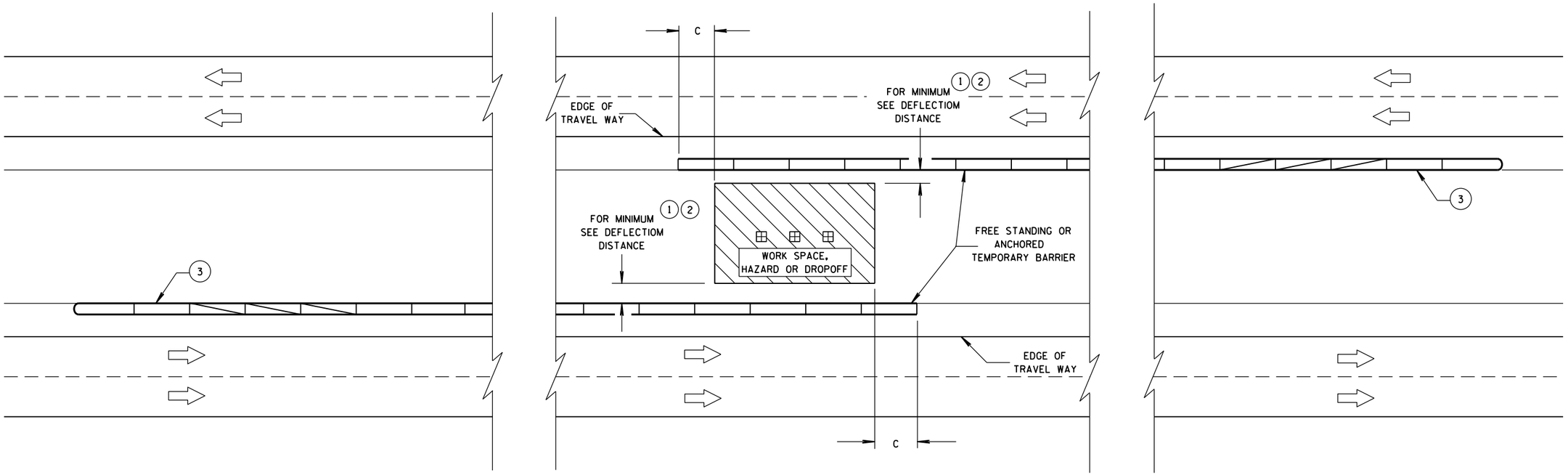
3 PINS PLACED ON TRAFFIC SIDE OF BARRIER

PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET

FREE STANDING TEMPORARY BARRIER

DIMENSION C TABLE (2)

AVAILABLE DEFLECTION DISTANCE	MINIMUM LENGTH OF BARRIER BEYOND HAZARD FT
GREATER THAN 8'	12.5
LESS THAN OR EQUAL TO 8' BUT GREATER THAN 4'	50
LESS THAN OR EQUAL TO 4'	100



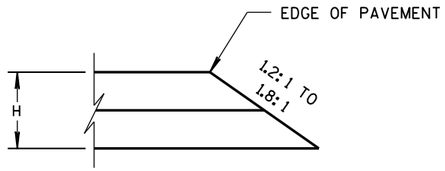
CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2015
DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINNER
FHWA

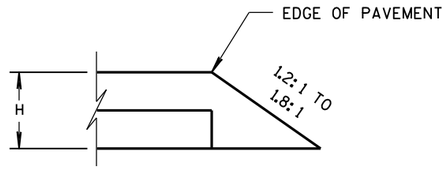
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S.D.D. 14 B 8-2e



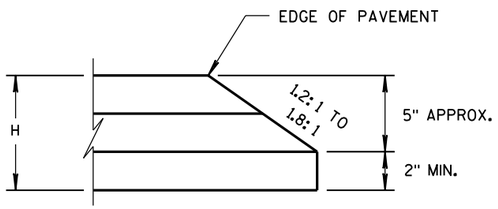
CONSTRUCTED WITH FINAL TWO LAYERS

FOR H 5" OR LESS



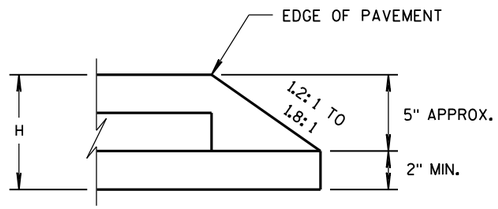
CONSTRUCTED WITH FINAL LAYER

FOR H 5" OR LESS



CONSTRUCTED WITH FINAL TWO LAYERS

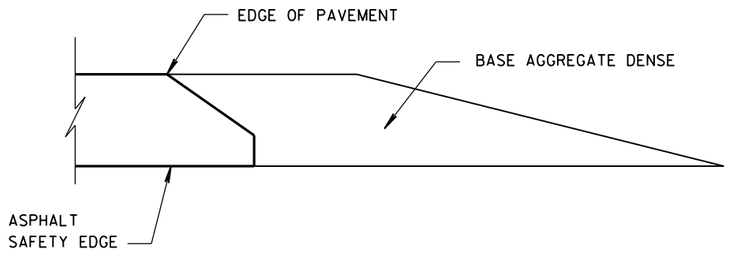
FOR H GREATER THAN 5"



CONSTRUCTED WITH FINAL LAYER

FOR H GREATER THAN 5"

HMA PAVEMENT AND HMA OVERLAYS



FINISHED SHOULDER AGGREGATE PLACEMENT

6

6

S.D.D. 14 B 29-1

S.D.D. 14 B 29-1

SAFETY EDGE SM

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

11/30/2012
DATE

/S/ Jerry H. Zoda
ROADWAY STANDARDS DEVELOPMENT ENGINEER

FHWA

GENERAL NOTES

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.

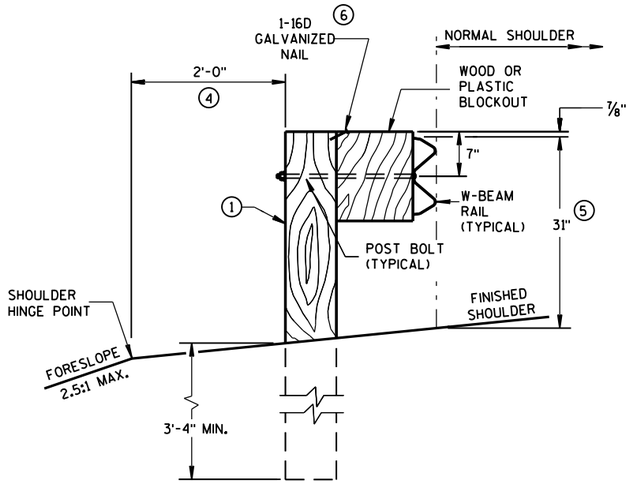
2. USE WOOD OR APPROVED PLASTIC BLOCKOUTS. WOOD BLOCKOUTS MAY BE CONSTRUCTED OUT OF TWO OR MORE WOOD BLOCKOUTS. SEE ALTERNATE WOOD BLOCKOUT DETAIL. DIMENSIONS OF APPROVED PLASTIC BLOCKOUTS MAY VARY.

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).

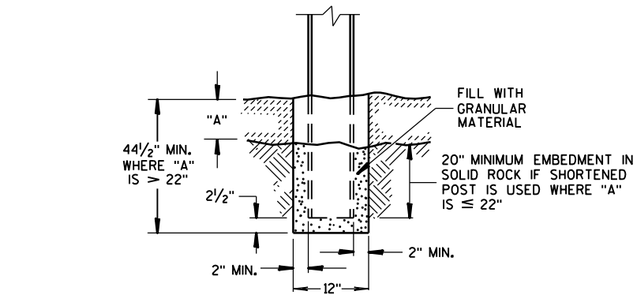
5. FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS ± 1". FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27¾" TO 32".

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.



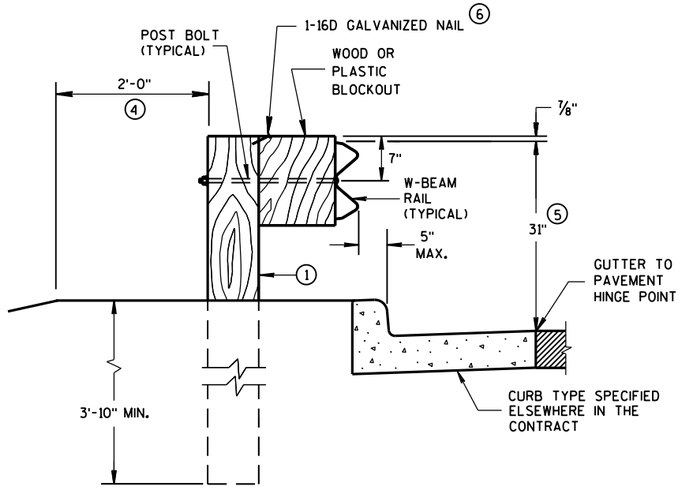
END VIEW

LOCATED ALONG A ROADWAY SHOULDER
STANDARD INSTALLATION



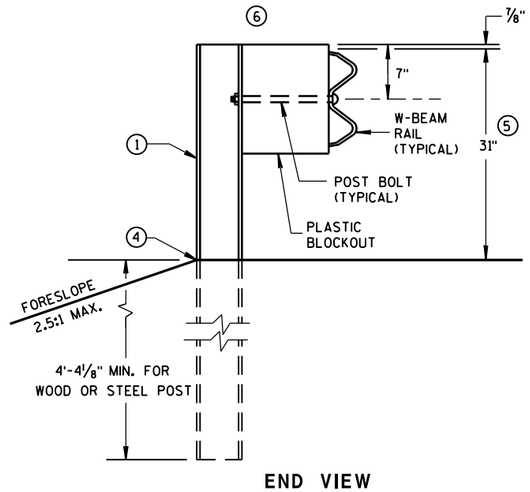
END VIEW

SETTING STEEL OR WOOD POST IN ROCK 3



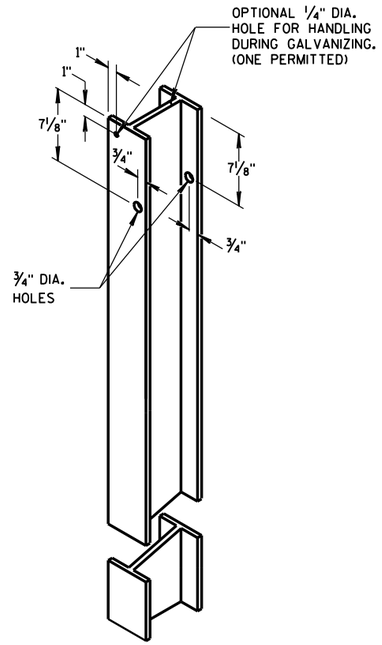
END VIEW

LOCATED ALONG A CURBED ROADWAY

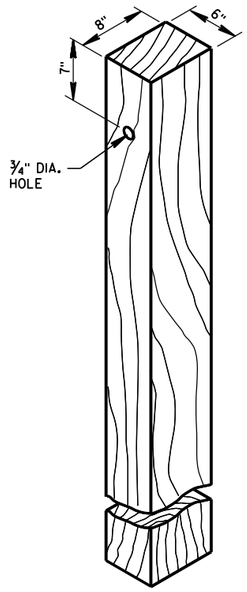


END VIEW

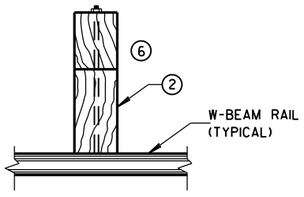
MGS LONGER POST AT HALFPOST SPACING W BEAM (K)



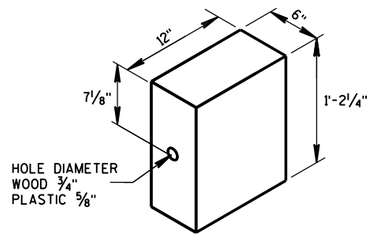
STEEL POST &
HOLE PUNCHING DETAIL
(w6X9) 1



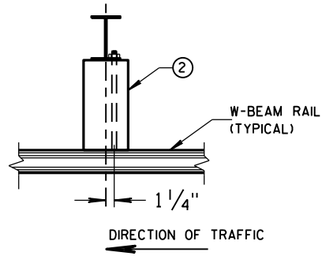
WOOD POST
(6" X 8") NOMINAL 1



PLAN VIEW
WOOD POST,
BLOCKOUT & BEAM



WOOD OR
PLASTIC BLOCKOUT 2

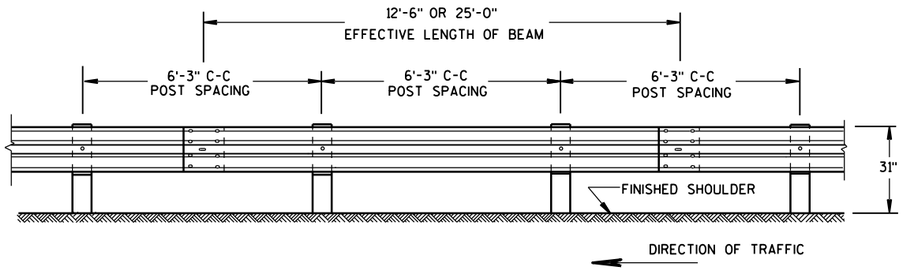


PLAN VIEW
STEEL POST,
PLASTIC BLOCKOUT & BEAM

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

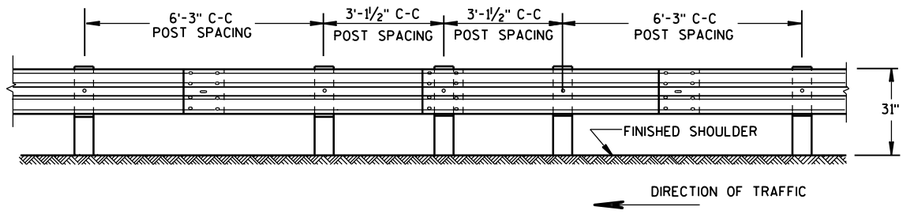
STATE OF WISCONSIN
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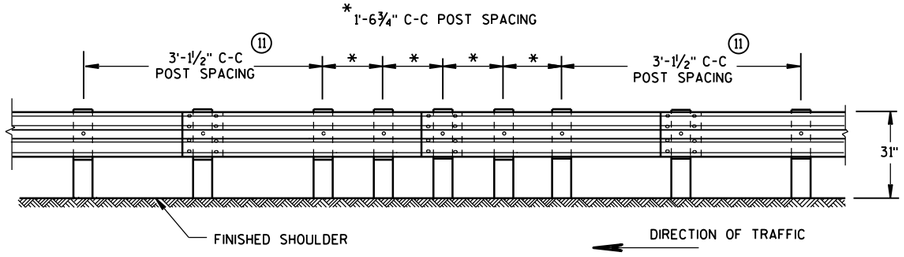
FRONT VIEW

POST SPACING STANDARD INSTALLATION



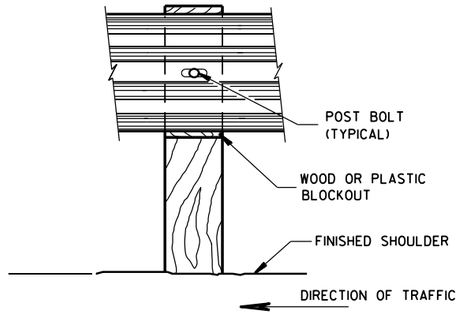
FRONT VIEW

HALF POST SPACING (HS) AND HALF POST SPACING WITH LONGER POSTS (K)

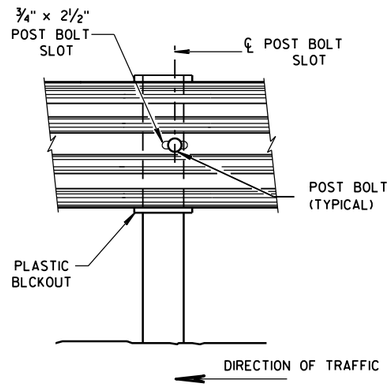


FRONT VIEW

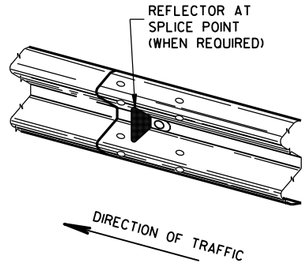
QUARTER POST SPACING (QS)

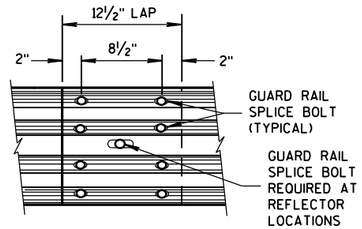


FRONT VIEW AT WOOD POST



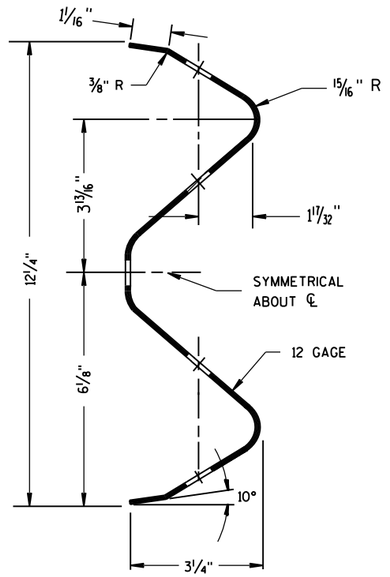
FRONT VIEW AT STEEL POST



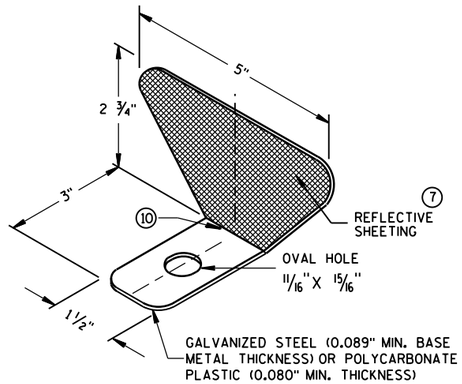


FRONT VIEW

MID-SPAN BEAM SPLICE



SECTION THRU W-BEAM RAIL



ONE SIDED REFLECTOR DETAIL AND TYPICAL INSTALLATION ⑦

GENERAL NOTES

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 ⅝" DIAMETER ASTM A307 GUARDRAIL BOLT. A POST BOLT REQUIRES ⅝" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT AND ⅝" DIAMETER F844 FLAT WASHER. POST BOLTS MAY BE LONGER IF MULTIPLE BLOCKOUTS ARE BEING USED.

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

REFLECTOR SPACING ⑧

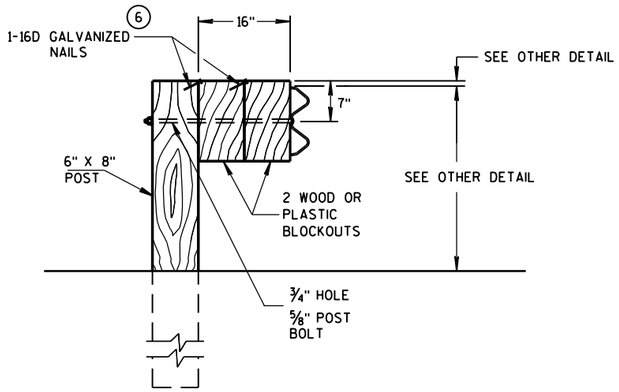
	BEAM GUARD LENGTH	REFLECTOR SPACING	NO. SURFACES REFLECTORIZED	MIN. NO. REFLECTORS
ONE WAY TRAFFIC	< 200'	50' C-C	1	3
	> 200'	100' C-C	1	
TWO WAY TRAFFIC	< 200'	25' C-C	1 ⑨	6
	> 200'	50' C-C	1	
TWO WAY TRAFFIC	< 200'	50' C-C	2	3
	> 200'	100' C-C	2 ⑩	

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

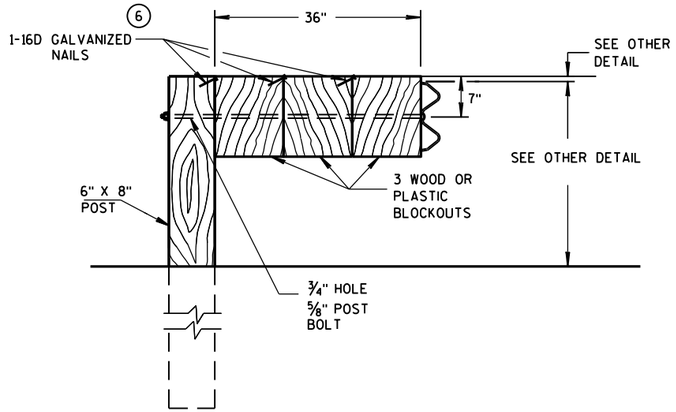
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DETAIL FOR 16" BLOCKOUT DEPTH

IT IS ACCEPTABLE TO USE BLOCKOUTS UP TO 16" DEEP TO INCREASE THE POST OFFSET TO AVOID UNDERGROUND OBSTACLES. THERE IS NO LIMIT TO THE NUMBER OF POSTS THAT CAN HAVE ADDITIONAL BLOCKOUTS UP TO 16" DEEP.

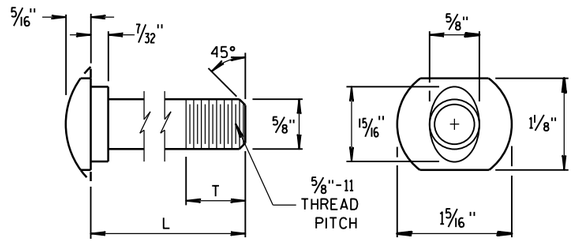


DETAIL FOR 36" BLOCKOUT DEPTH

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.

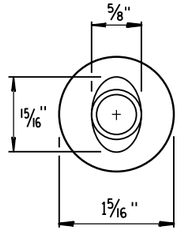
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.

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.

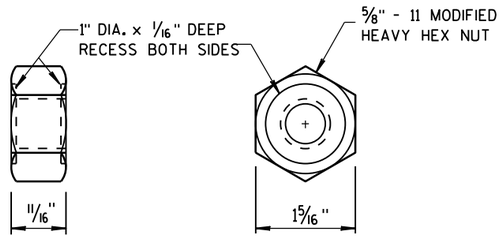


POST BOLT TABLE

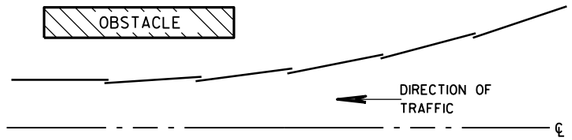
L	T (MIN.)
1¼"	1⅛"
2"	1¾"
10"	4"
14"	4 1/16"
18"	4"
21"	4 1/16"
25"	4"



ALTERNATE BOLT HEAD

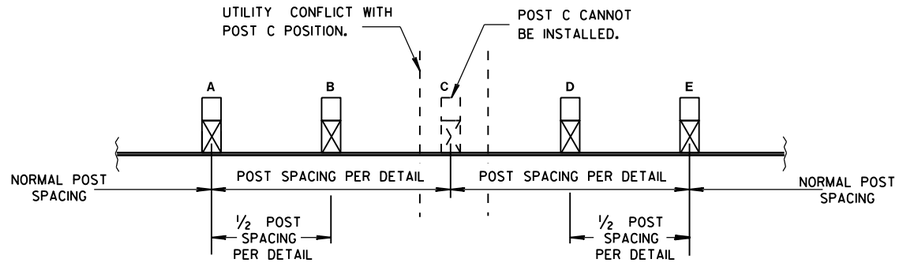


POST BOLT AND RECESS NUT

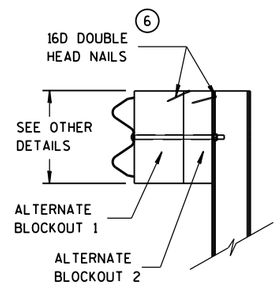


PLAN VIEW

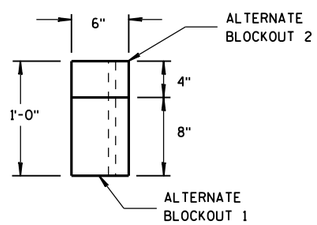
BEAM LAPPING DETAIL



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 2014
DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER
FHWA

6
S.D.D. 14 B 42-3c

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.

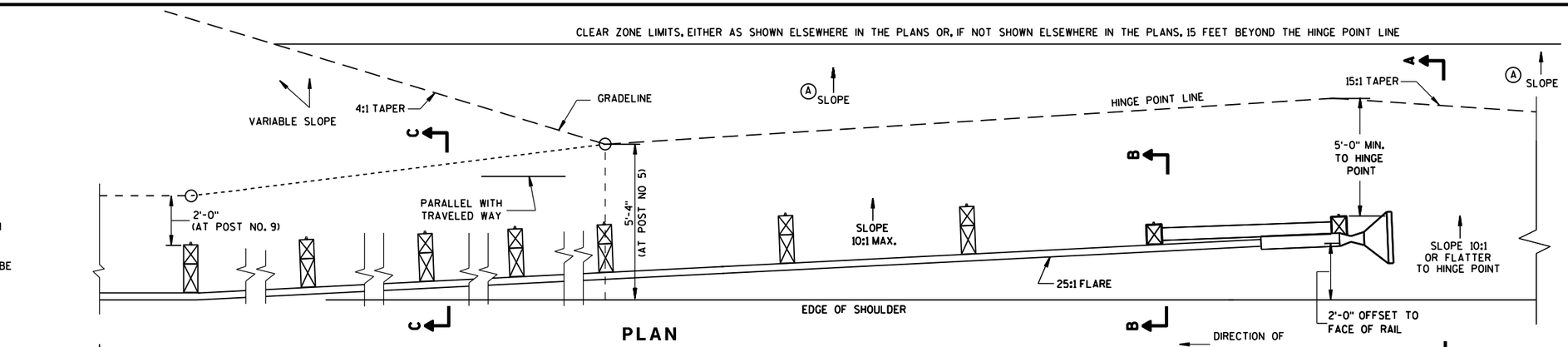
SEE SDD 14B42 FOR MORE INFORMATION.

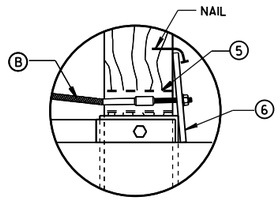
* DO NOT ATTACH BLOCKOUTS TO POSTS 1 AND 2.

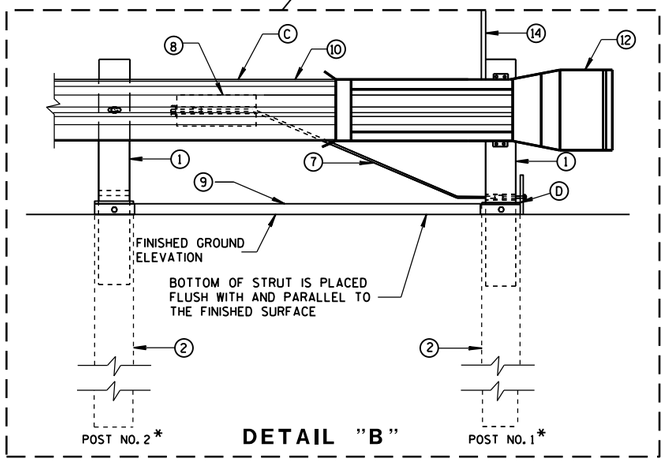
DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

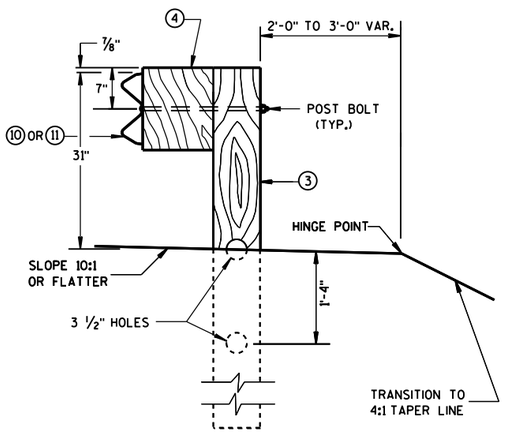
W-BEAM RAIL SPLICES ARE LOCATED AT POST NUMBER 3, AND BETWEEN POST 5 AND 6, BETWEEN POSTS 7 AND 8, AND MIDDLE OF THE SPAN AFTER POST 9.

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.

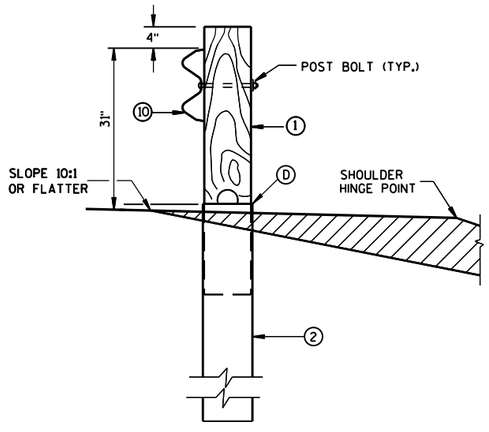




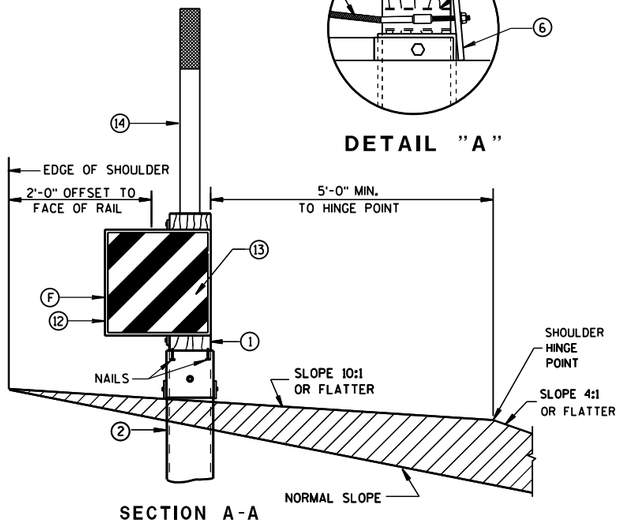




SECTION C-C
TYPICAL AT POST NOS. 3-9



SECTION B-B
TYPICAL AT POST NO. 2*



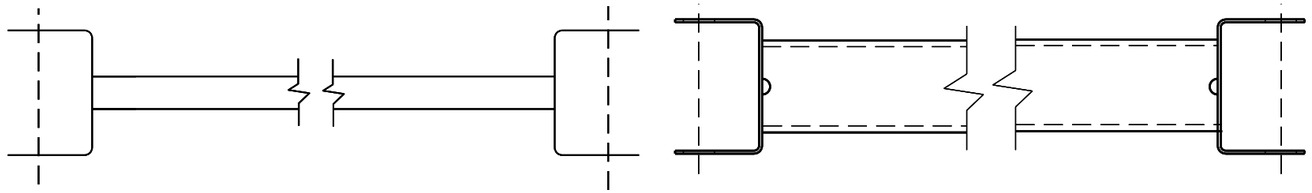
SECTION A-A
TYPICAL AT POST NO. 1*

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

S.D.D. 14 B 44-2a

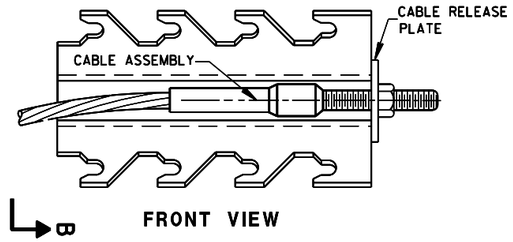
S.D.D. 14 B 44-2a



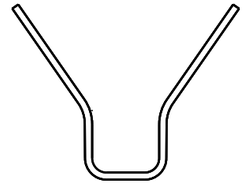
GENERIC GROUND STRUT (9) (H)

BILL OF MATERIALS

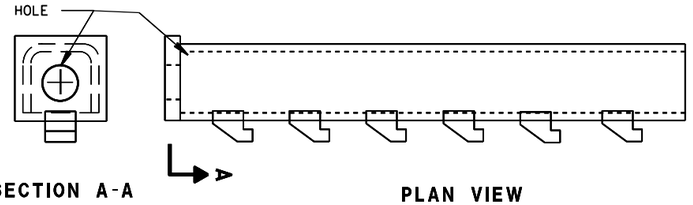
PART NO.	DESCRIPTION MATERIALS PROVIDED BY MGS EAT MANUFACTURER. SEE MANUFACTURER'S DETAILS FOR MORE INFORMATION.
(1)	WOOD BREAKAWAY POST
(2)	6" X 8" X 0.188", 6'-0" LONG FOUNDATION TUBE AT POSTS 1 AND 2
(3)	WOOD CRT
(4)	WOOD BLOCKOUT
(5)	PIPE SLEEVE
(6)	BEARING PLATE
(7)	BCT CABLE ASSEMBLY
(8)	ANCHOR 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



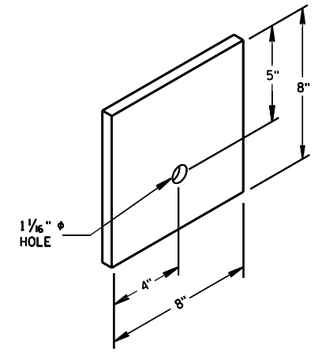
SECTION B-B



SECTION A-A

PLAN VIEW

GENERIC ANCHOR CABLE BOX (8) (H)



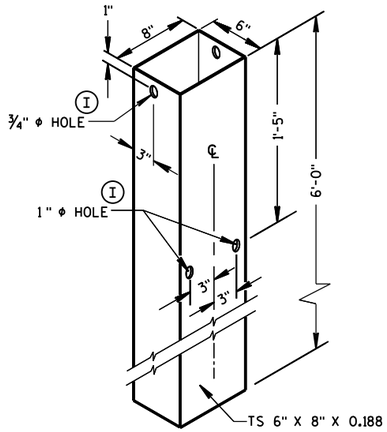
BEARING PLATE (6)

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

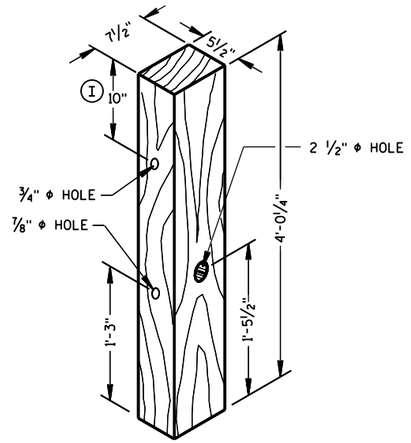
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

S.D.D. 14 B 44-2b

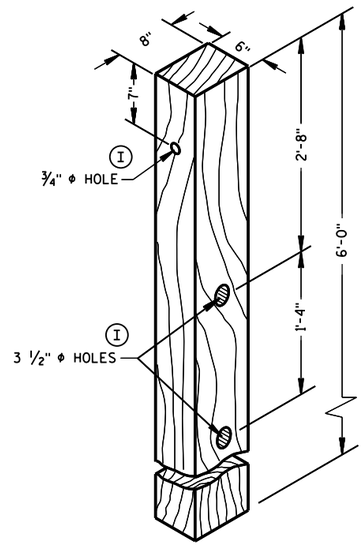


FOUNDATION TUBE (2)



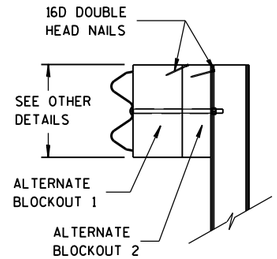
POSTS NUMBER 1 AND 2

WOOD BREAKAWAY POST (1)

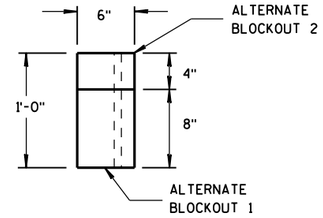


POSTS NUMBER 3-9

WOOD CRT POST (3)

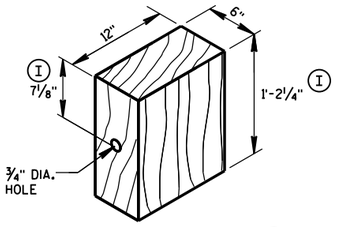


SIDE VIEW



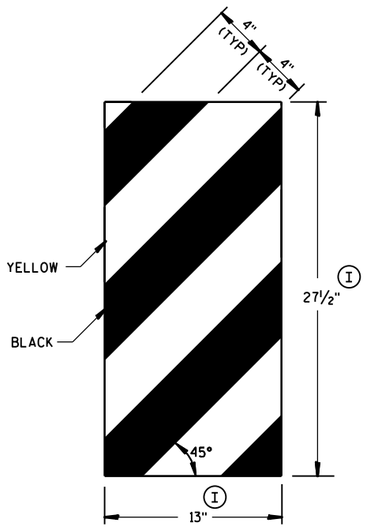
TOP VIEW

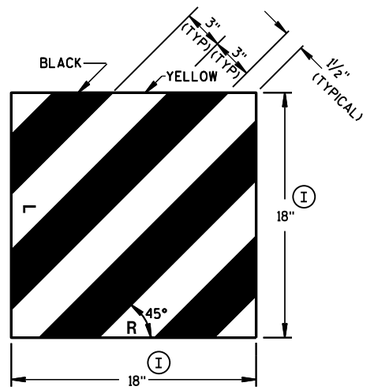
ALTERNATE WOOD BLOCKOUT DETAIL



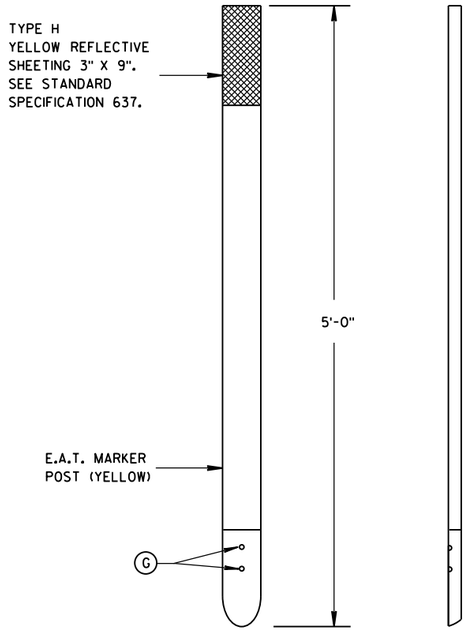
WOOD BLOCKOUT (4)

REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2





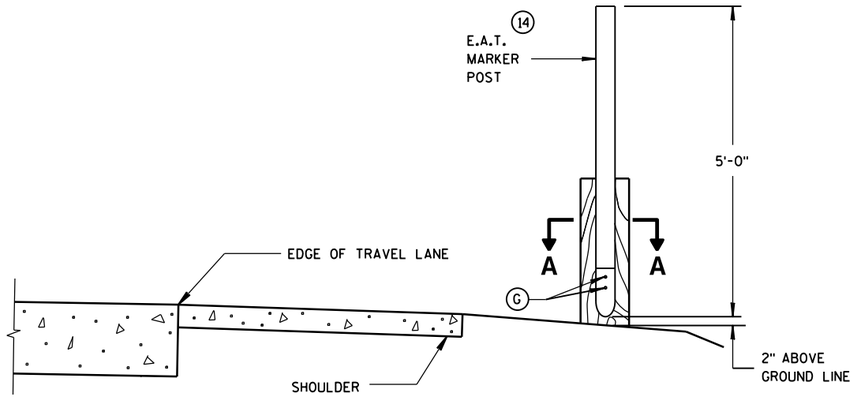
GENERIC REFLECTIVE SHEETING (13) (H)



FRONT VIEW

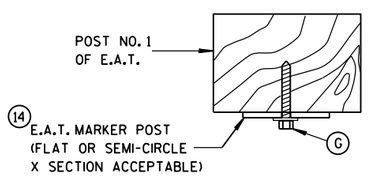
SIDE VIEW

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

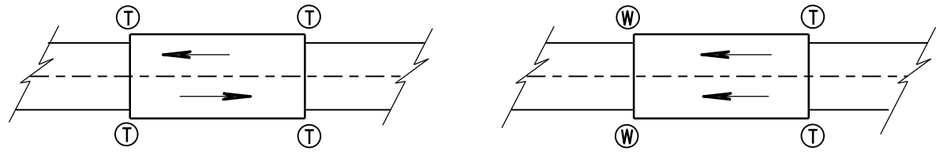
MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2014 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
FHWA

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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

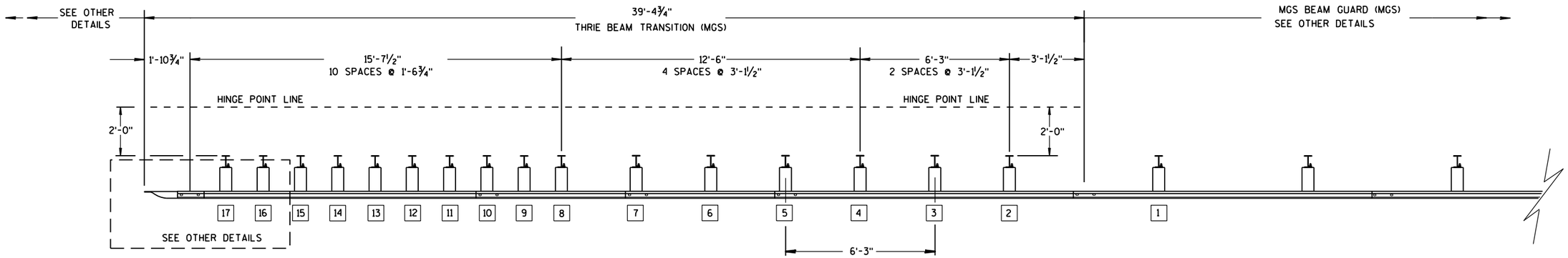
IF ROCK IS ENCOUNTERED, REMOVE ROCK TO FULL DEPTH OF POST PLUS 2½", AND 12" DIAMETER AROUND POST. SEE 14B42 FOR MORE DETAILS.

TRANSITION USES STEEL POSTS ONLY.

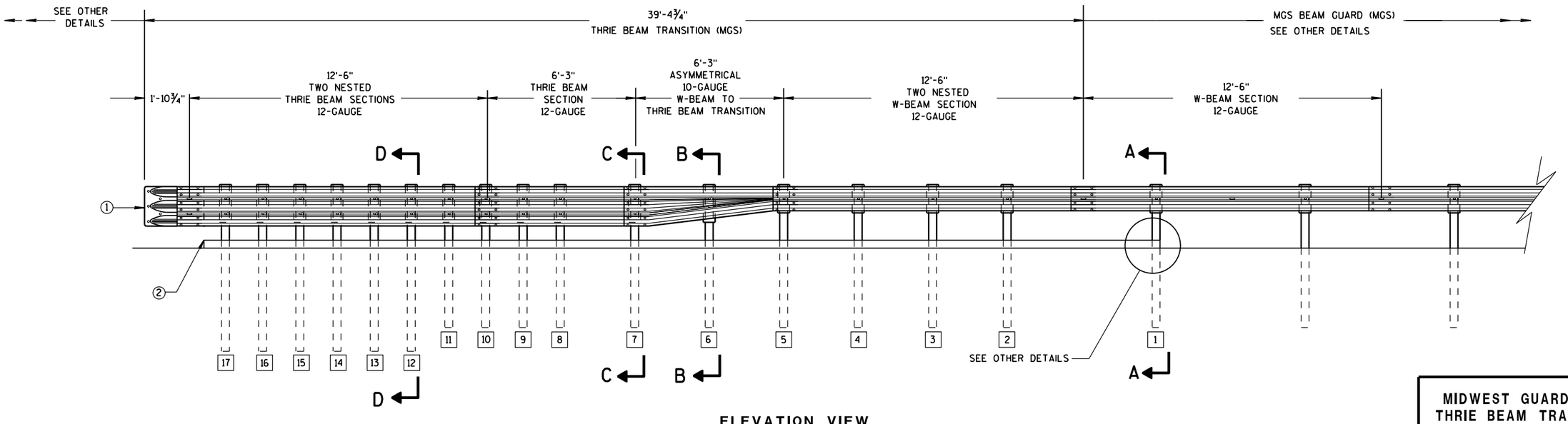
SEE STANDARD DETAIL DRAWING 14 B 42 FOR MORE INFORMATION.

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

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S.D.D. 14 B 45-4a

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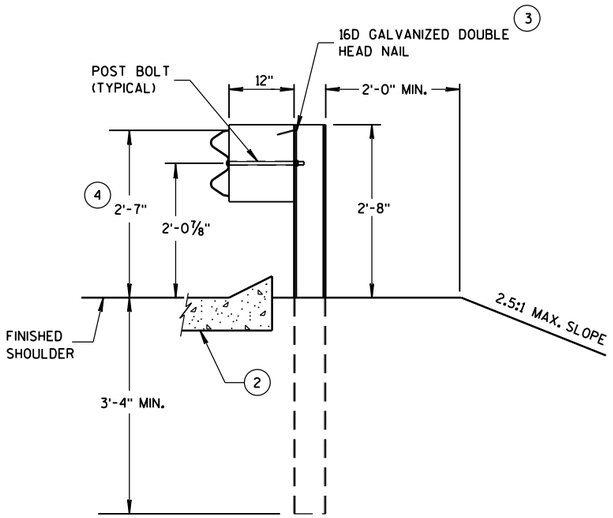
S.D.D. 14 B 45-4a

GENERAL NOTES

(2) OPTIONAL CURB AND GUTTER OR DRAINAGE_FEATURE SEE PLAN FOR INFORMATION.

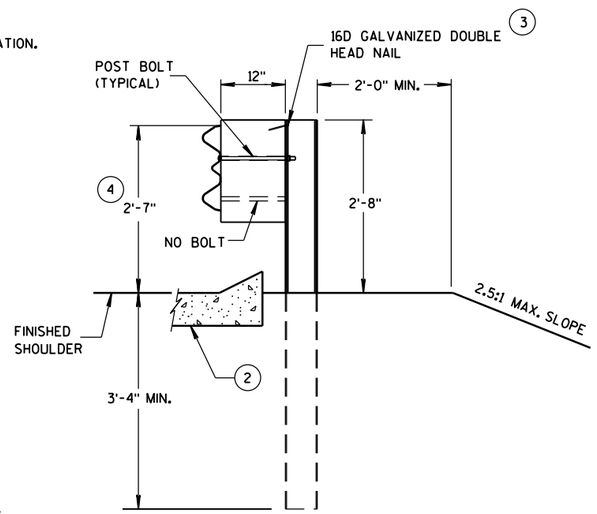
(3) WHEN USING STEEL POSTS AND WOOD BLOCKOUTS INSTALL FOUR 10D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.

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



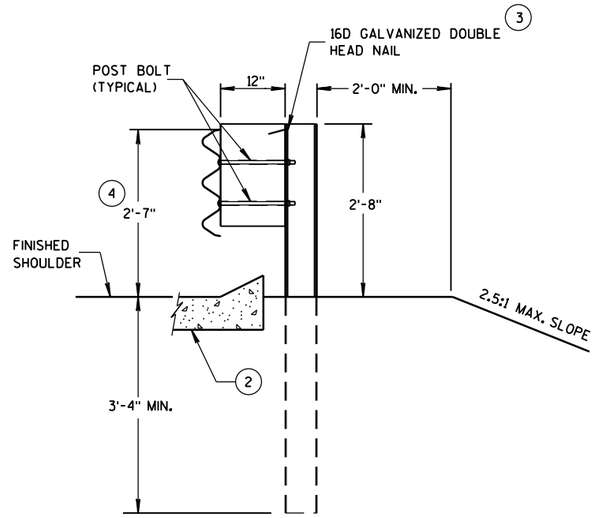
SECTION A-A

POSTS 1-5



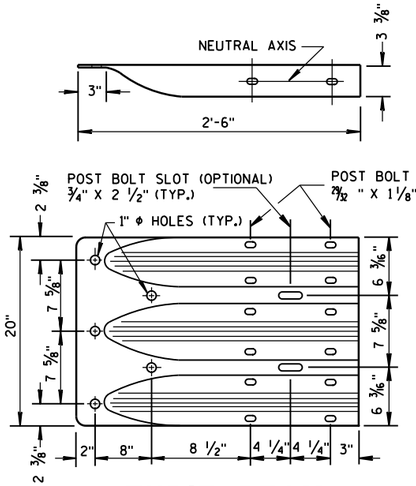
SECTION B-B

POST 6



SECTION C-C

POSTS 7-11



THRIE BEAM TERMINAL CONNECTOR

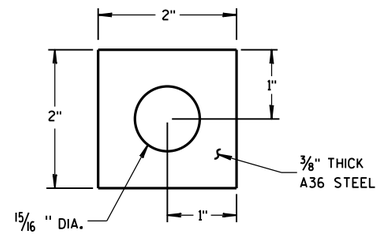
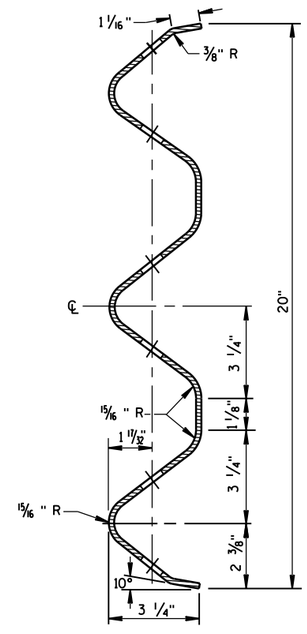
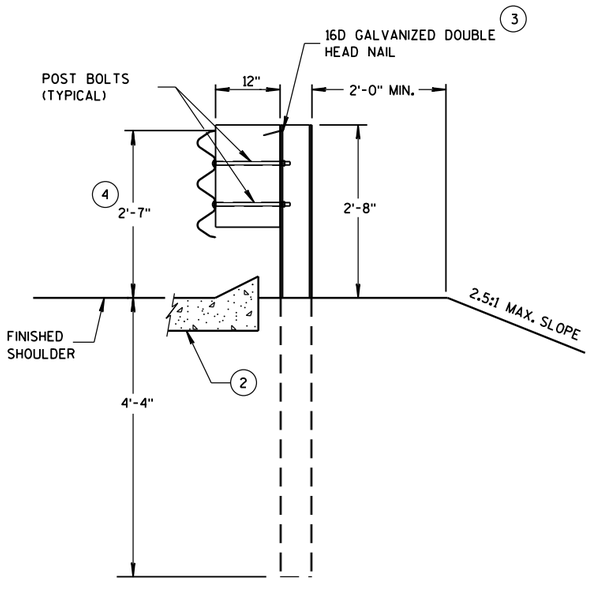


PLATE WASHER DETAIL

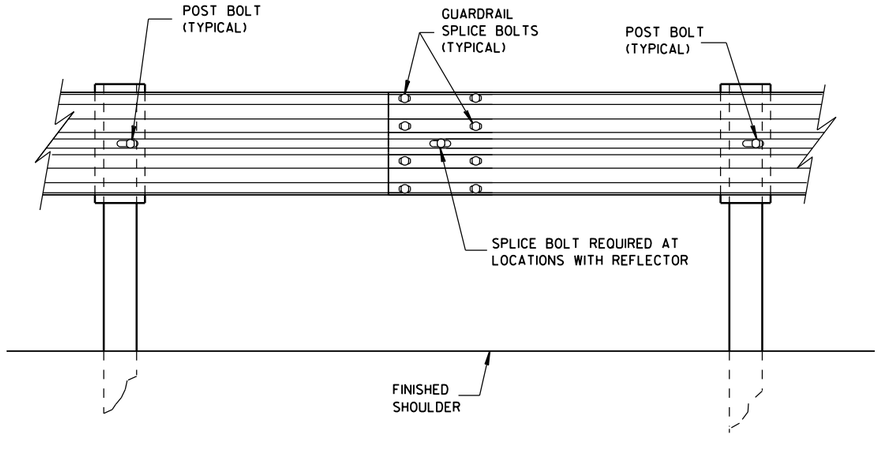


SECTION THRU THRIE BEAM RAIL ELEMENT



SECTION D-D

POSTS 12-17



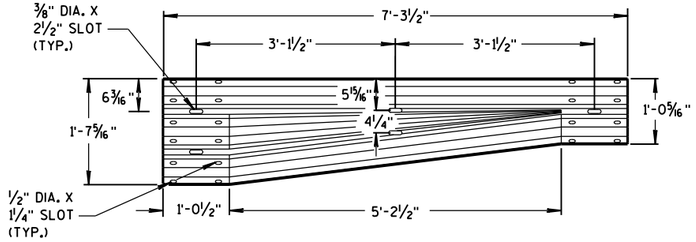
SPLICE DETAIL

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

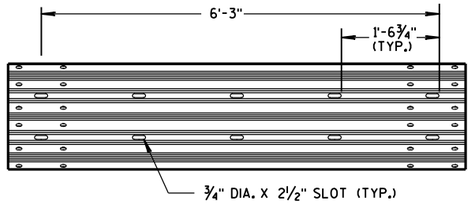
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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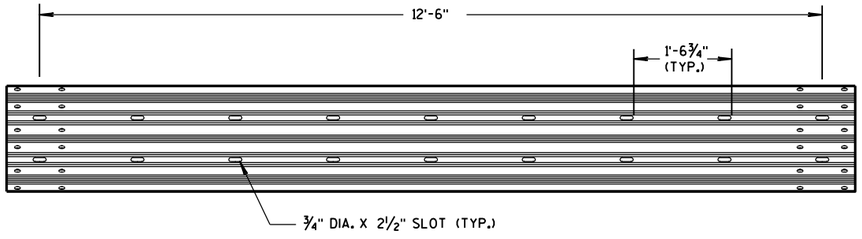
S.D.D. 14 B 45-4b



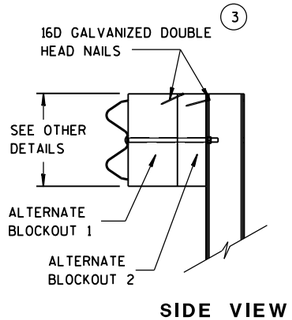
W-BEAM TO THRIE BEAM TRANSITION SECTION



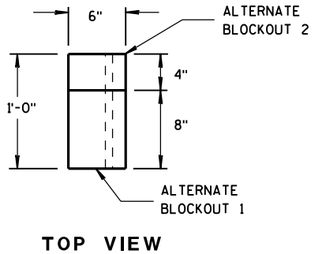
6'-3" THRIE BEAM SECTION



12'-6" THRIE BEAM SECTION

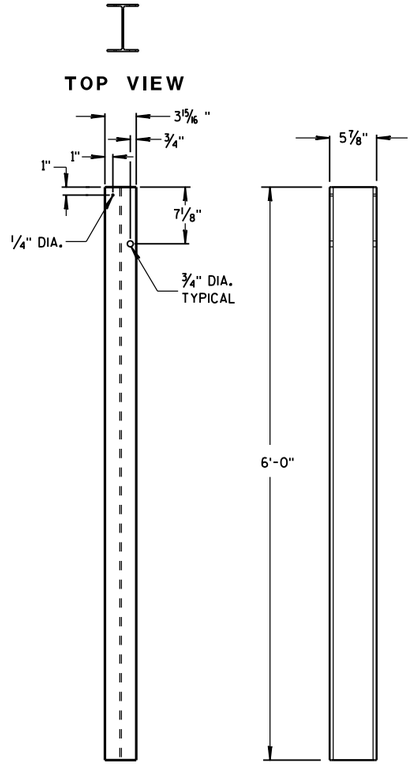


SIDE VIEW

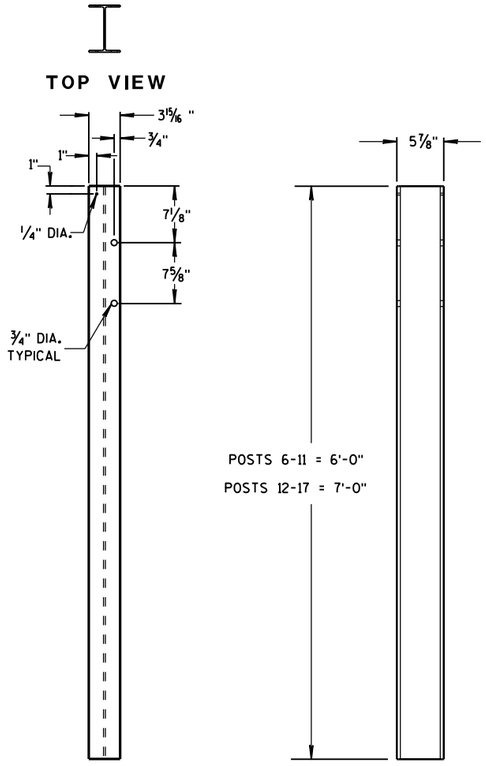


TOP VIEW

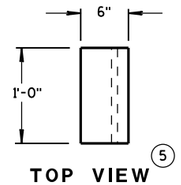
ALTERNATE WOOD BLOCKOUT DETAIL



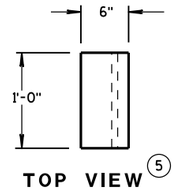
STEEL POSTS 1-5



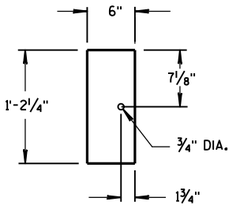
STEEL POSTS 6-17



TOP VIEW

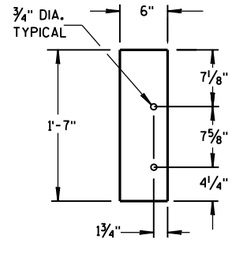


TOP VIEW



FRONT VIEW

BLOCKOUT POSTS 1-5



FRONT VIEW

BLOCKOUT POSTS 6-17

GENERAL NOTES

STEEL POSTS ARE W6X9 OR W6X8.5.

BOLT HOLES FOR POST ARE ON FRONT AND OF SIDE OF POST.

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

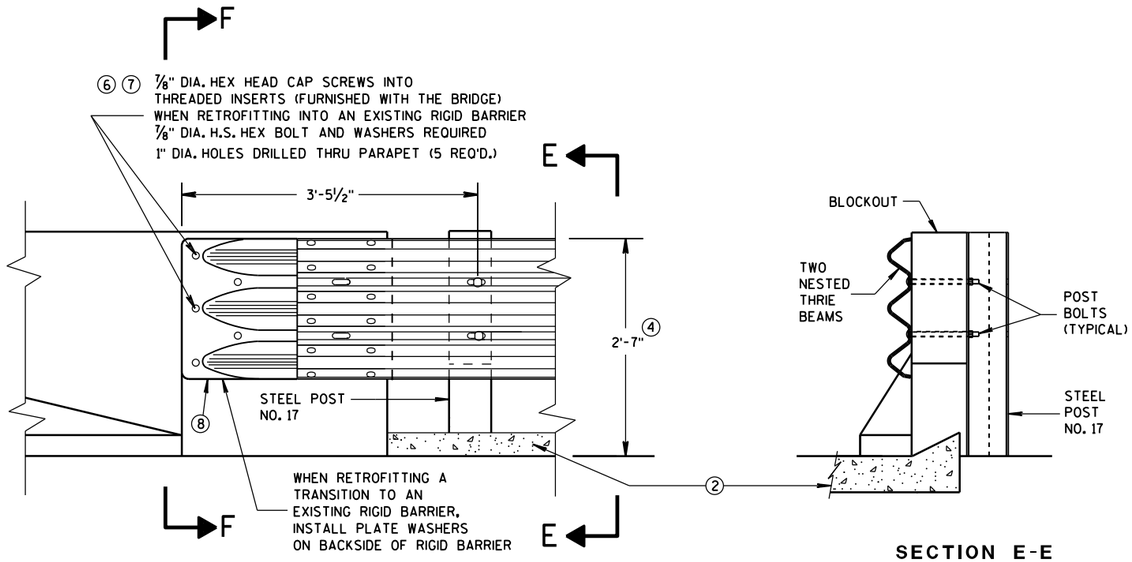
(5) WOOD BLOCKS MAY BE CONSTRUCTED OUT OF 2 WOOD BLOCKS. SEE ALTERNATE WOOD BLOCK DETAIL.

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

S.D.D. 14 B 45-4c
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.

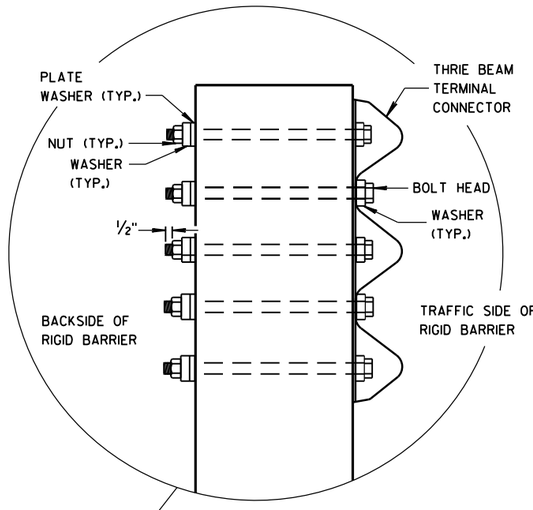
② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.

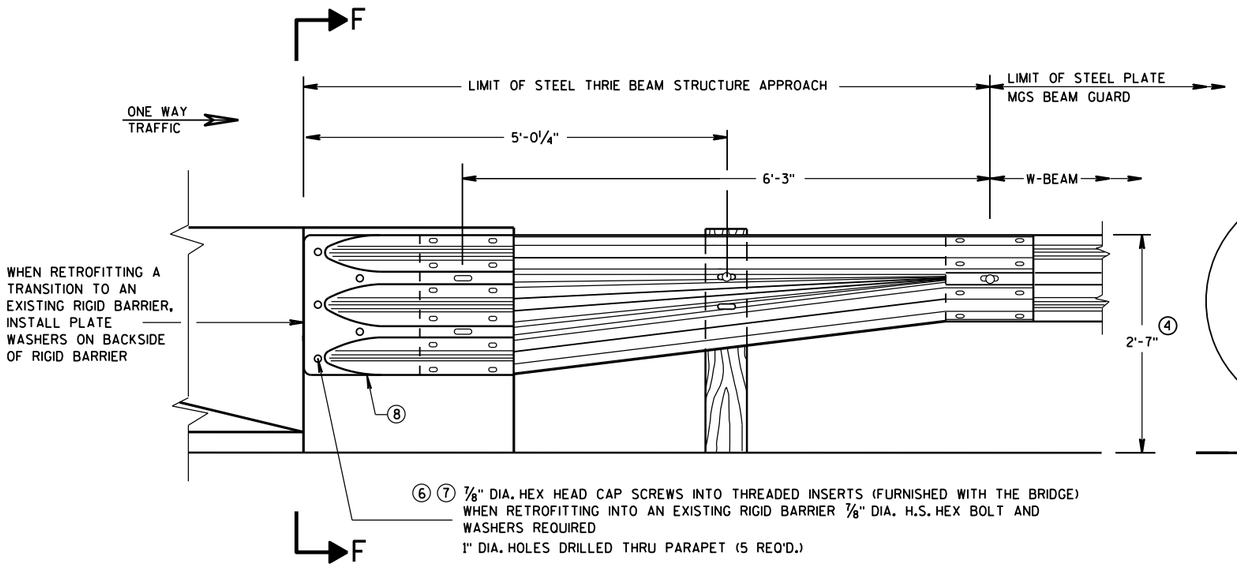
④ TOLERANCE FOR TOP OF BEAM IS ± 1".

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

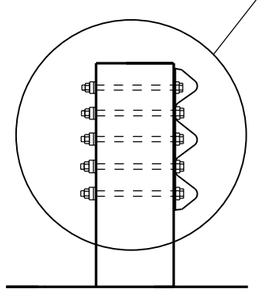
⑦ BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. 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".

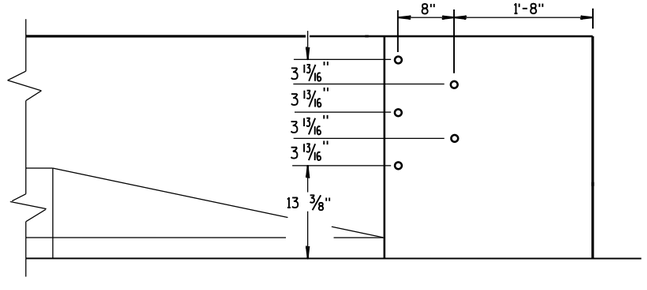




FRONT VIEW



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.

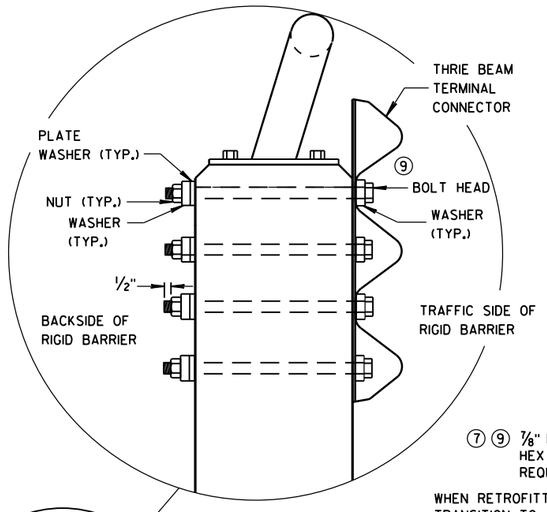
(4) TOLERANCE FOR TOP OF BEAM IS ± 1".

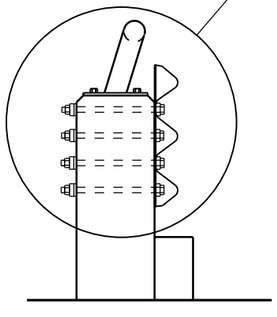
(6) DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

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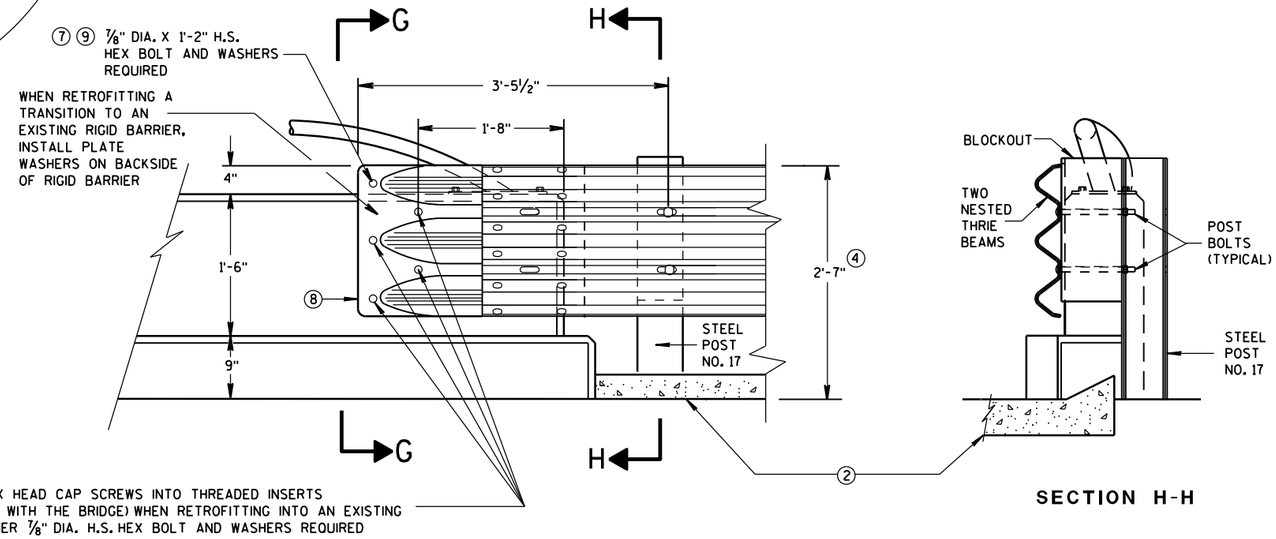
(8) THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3 1/2".

(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.





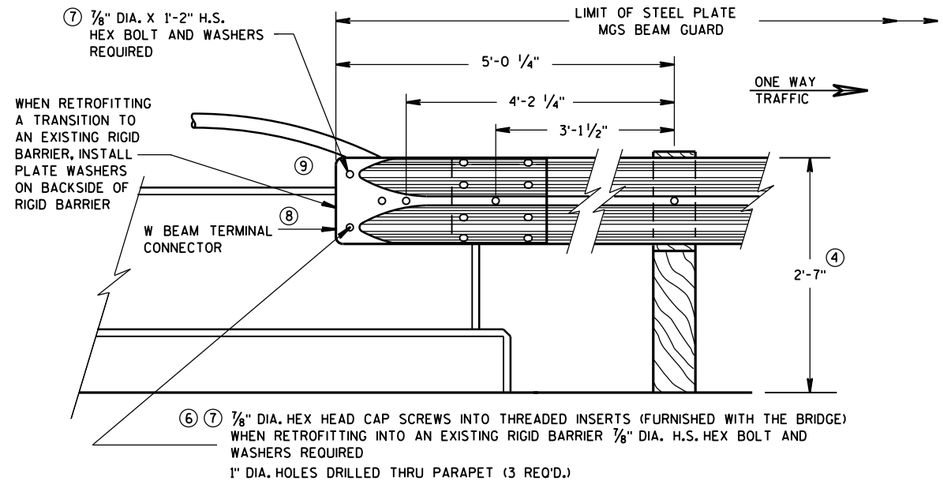
SECTION G-G



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

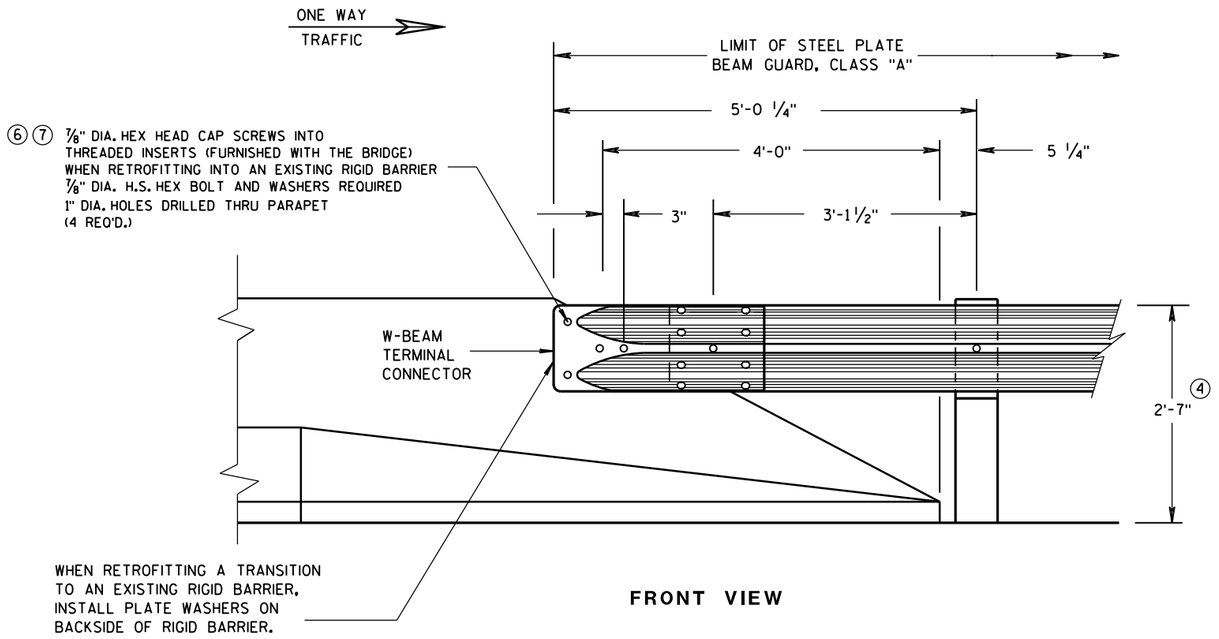
APPROVED
June, 2015 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

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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)

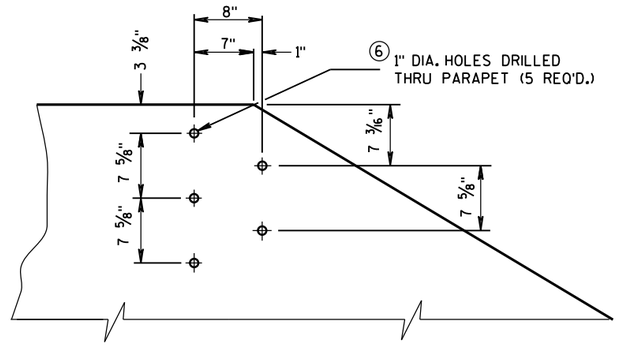
GENERAL NOTES

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

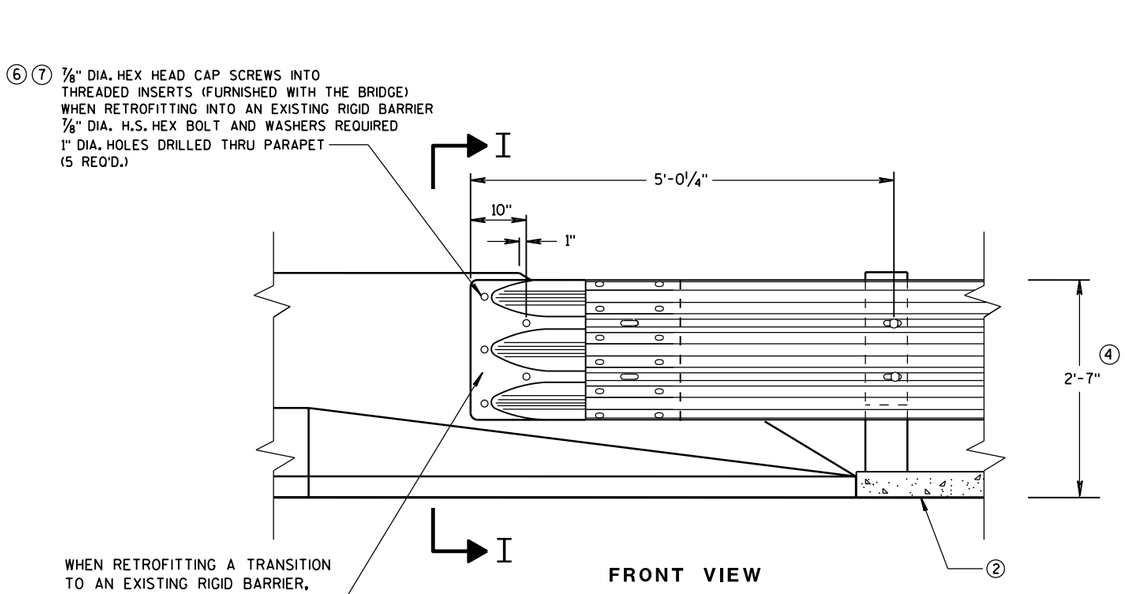
④ TOLERANCE FOR TOP OF BEAM IS ± 1".

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

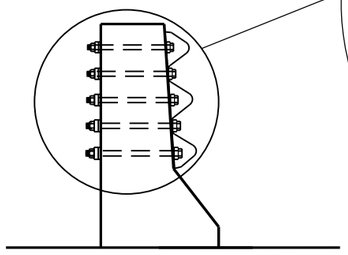
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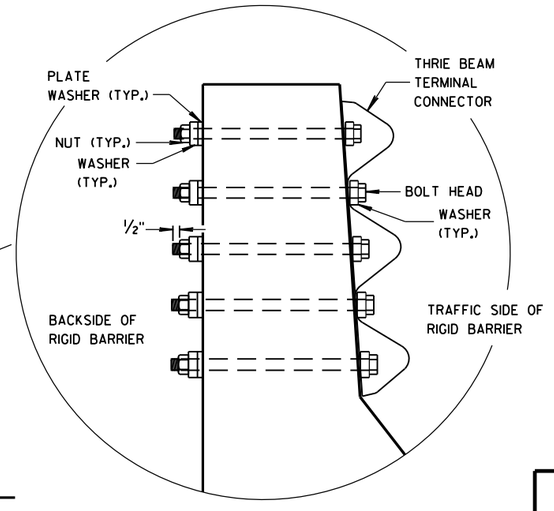
DRILL HOLE LOCATION AND PATTERN
FOR THRIE BEAM CONNECTION



FRONT VIEW



SECTION I-I



THRIE BEAM CONNECTION TO BRIDGE PARAPETS WITH SLOPED ENDS

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

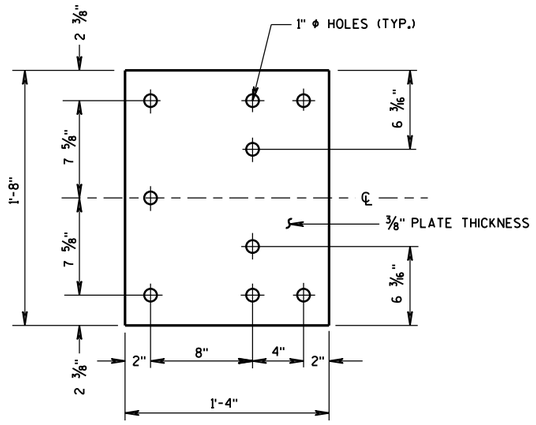
APPROVED
June, 2015 — DATE
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FHWA

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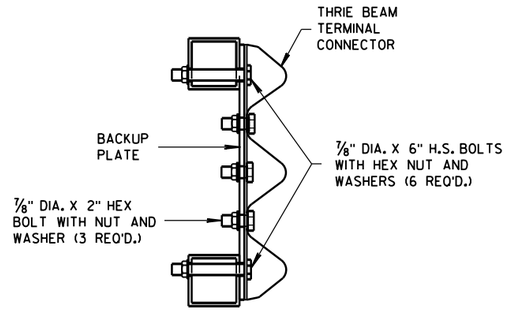
S.D.D. 14 B 45-4f

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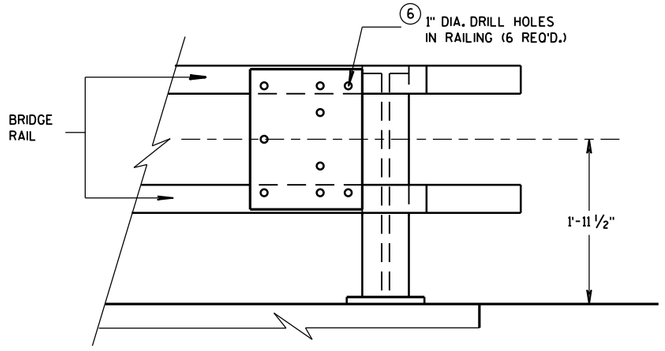
S.D.D. 14 B 45-4f



BACK-UP PLATE DETAIL



SECTION J-J

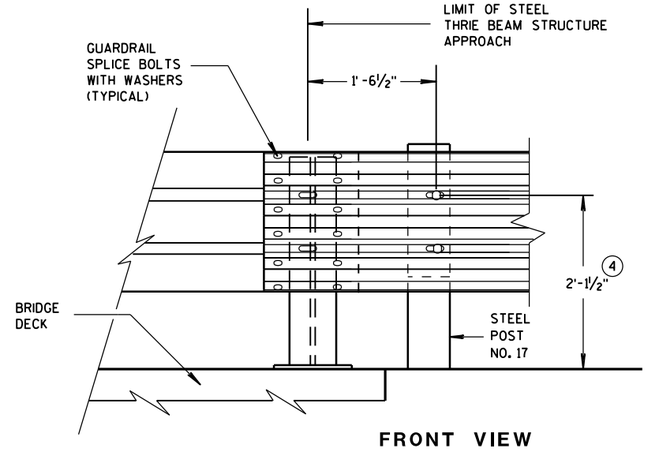


BACK-UP PLATE MOUNTING ONTO BRIDGE RAILING

GENERAL NOTES

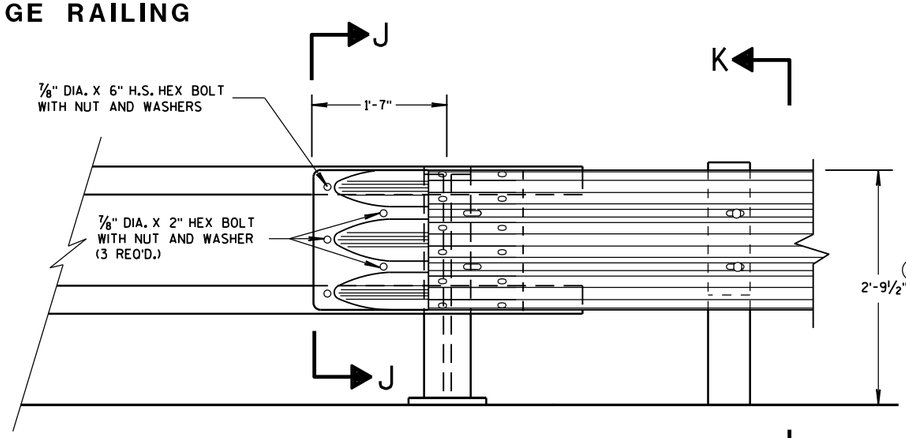
4 TOLERANCE FOR TOP OF BEAM IS ± 1".

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

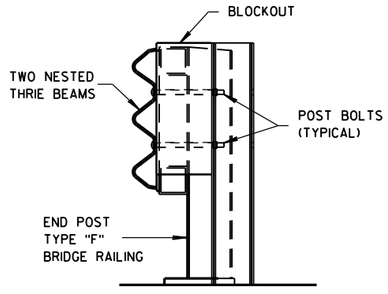


FRONT VIEW

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 — NT

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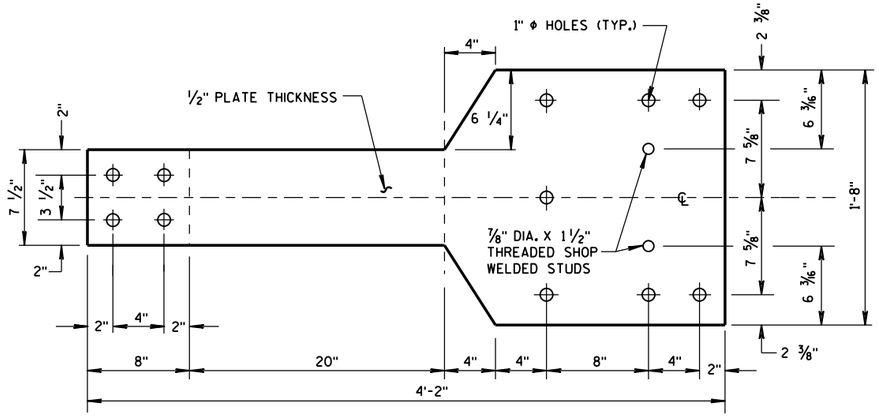
S.D.D. 14 B 45-4g

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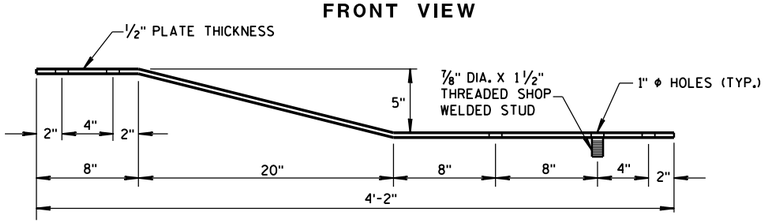
S.D.D. 14 B 45-4g

GENERAL NOTES

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

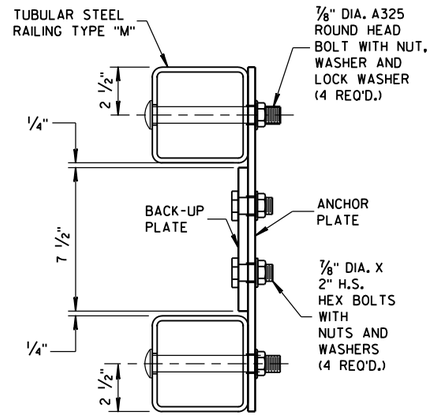


FRONT VIEW

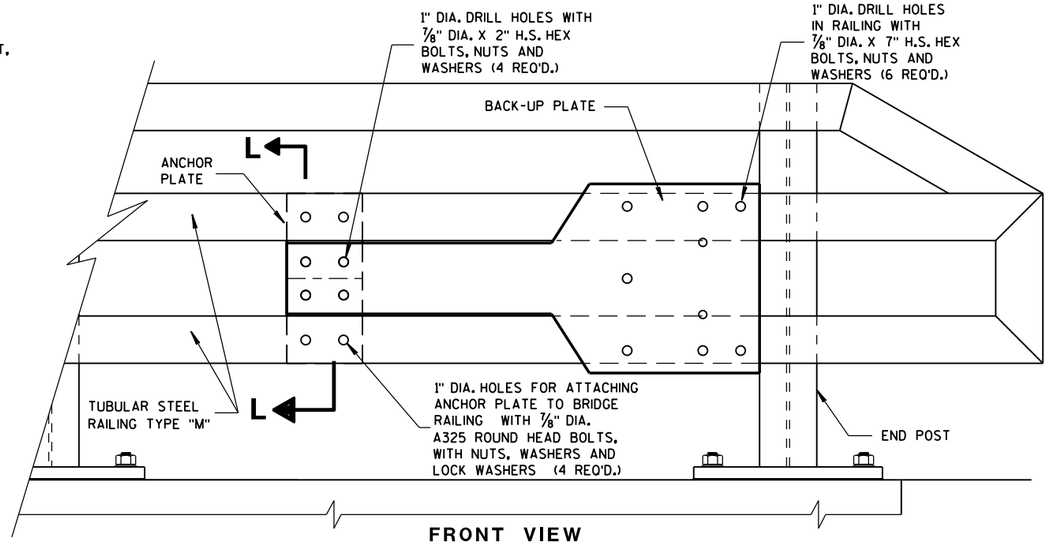


PLAN VIEW

BACK-UP PLATE DETAIL, TYPE "M"

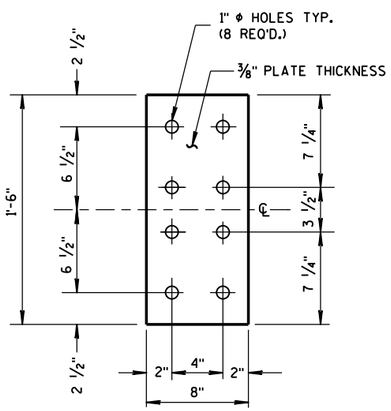


SECTION L-L



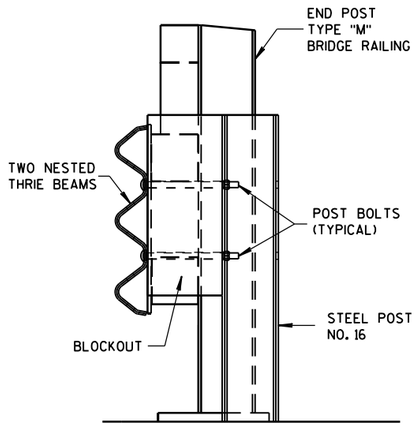
FRONT VIEW

ANCHOR AND BACK-UP PLATE MOUNTING TO BRIDGE RAILING, TYPE "M"

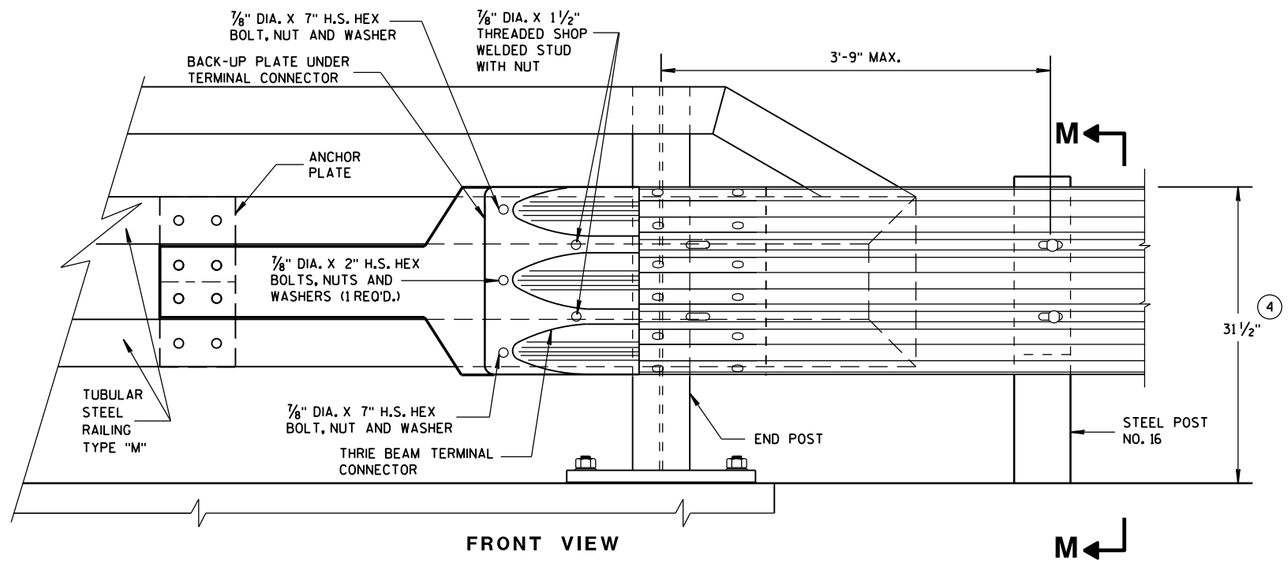


FRONT VIEW

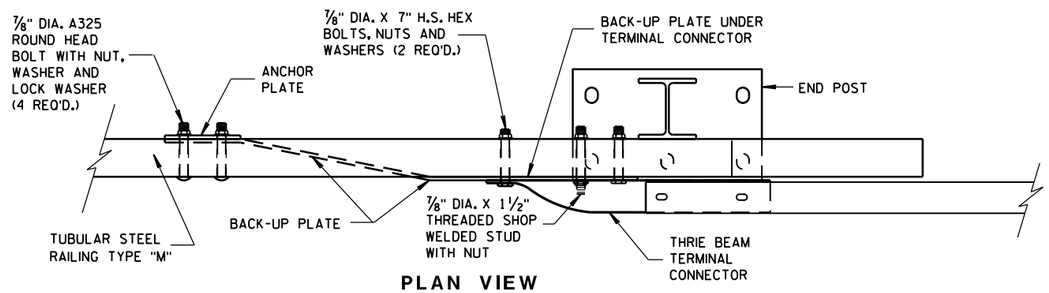
ANCHOR PLATE DETAIL, TYPE "M"



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
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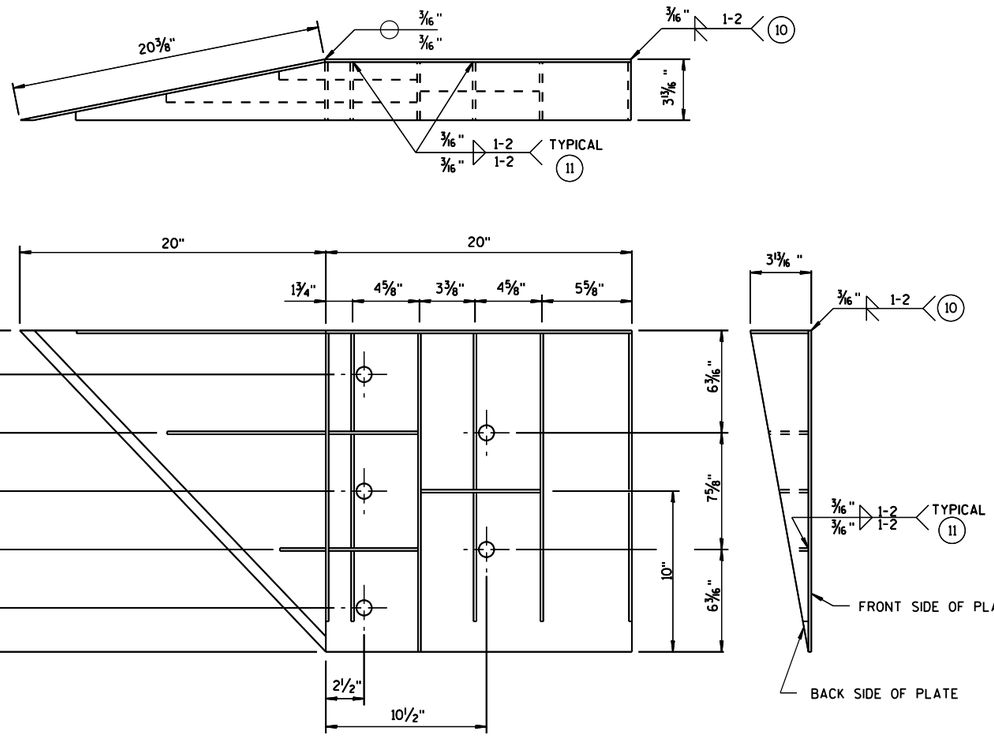
FHWA

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S.D.D. 14 B 45-4h

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S.D.D. 14 B 45-4h



WELDING INSTRUCTION

(VIEWED FROM BACK SIDE OF PLATE)

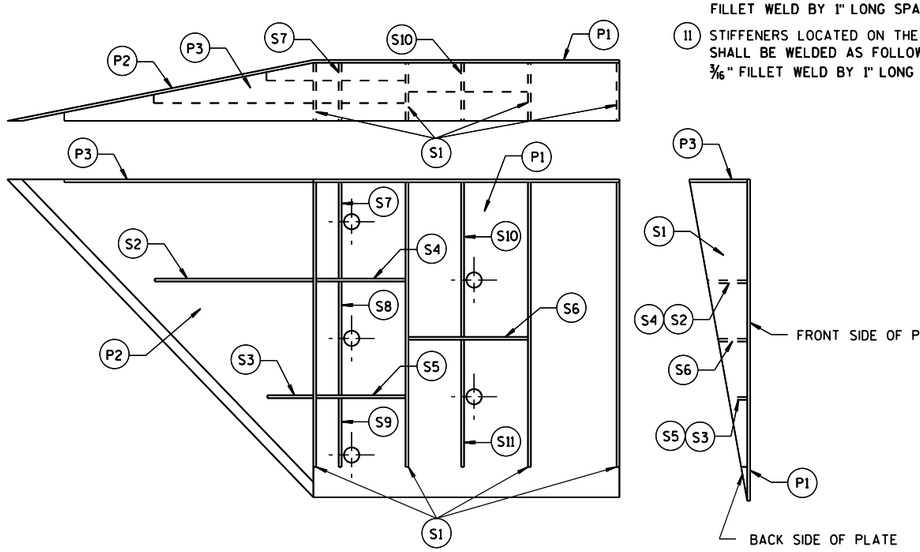


PLATE AND STIFFENER IDENTIFICATION

(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
DEPARTMENT OF TRANSPORTATION

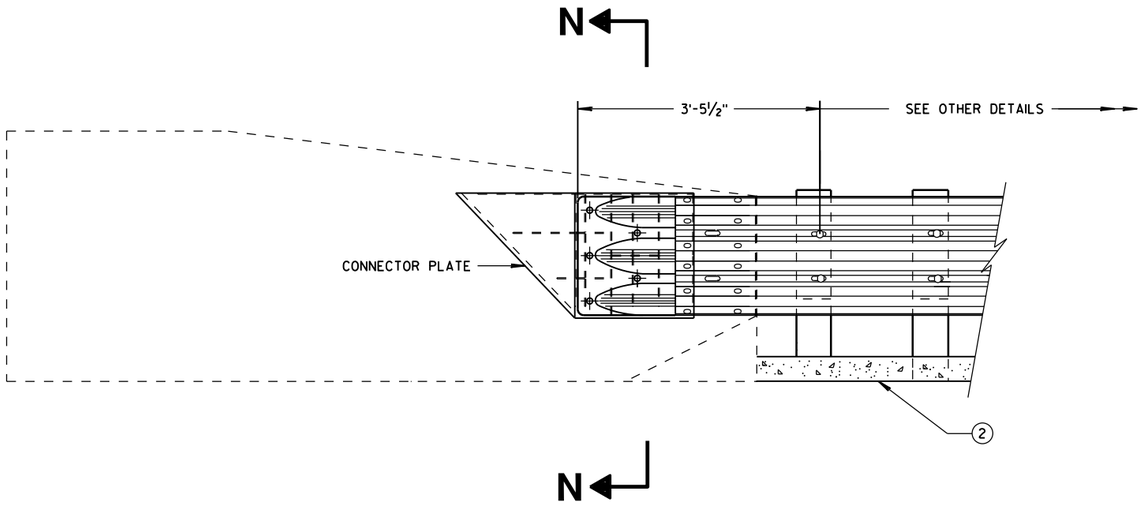
APPROVED
June, 2015 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
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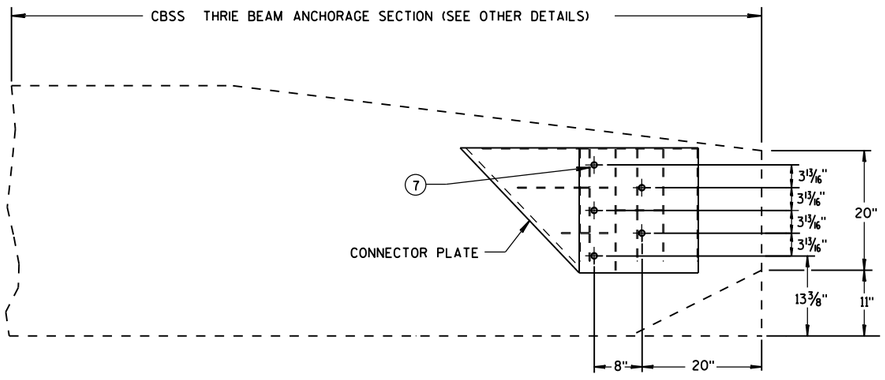
S.D.D. 14 B 45-4i

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S.D.D. 14 B 45-4i



THRIE BEAM CONNECTION TO SINGLE SLOPE BARRIER



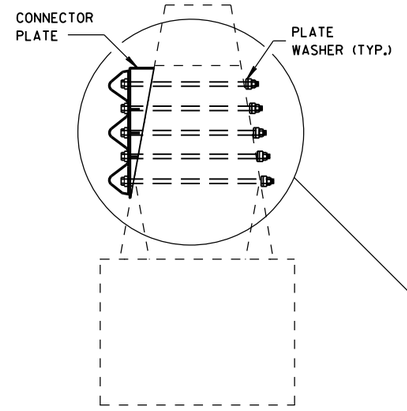
SINGLE SLOPE CONNECTION PLATE PLACEMENT

GENERAL NOTES

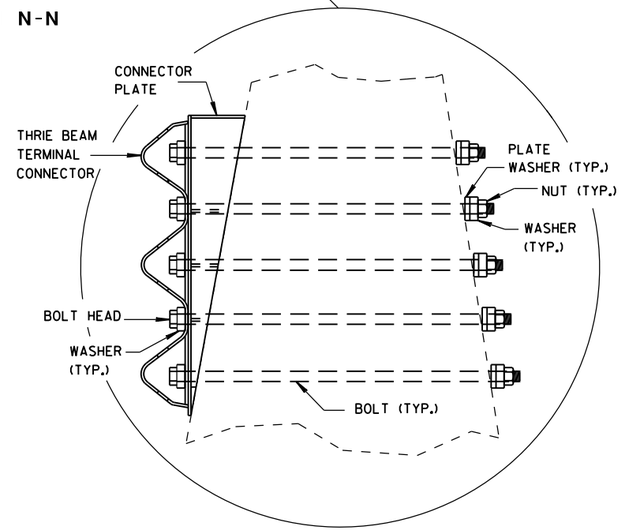
CONNECTOR PLATE, DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

(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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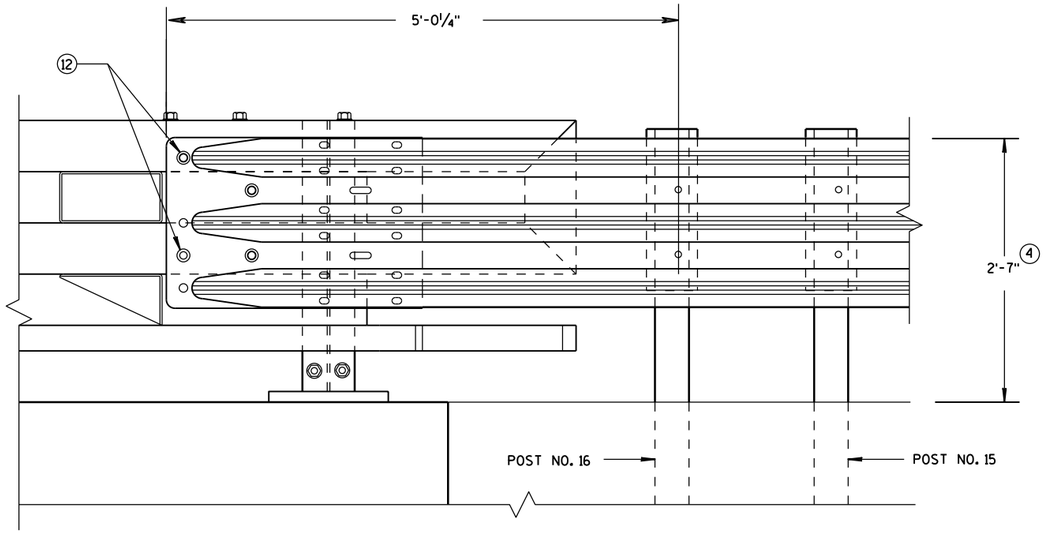
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S.D.D. 14 B 45-4j

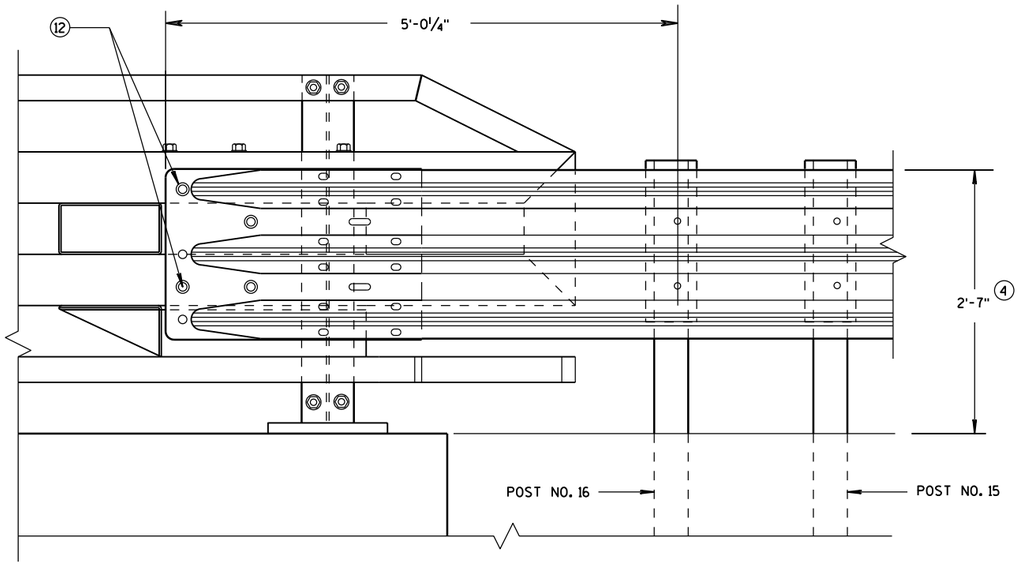
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S.D.D. 14 B 45-4j



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
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2015
DATE

/S/ Jerry H. Zogg
ROADWAY STANDARDS D ENGINEER

FHWA

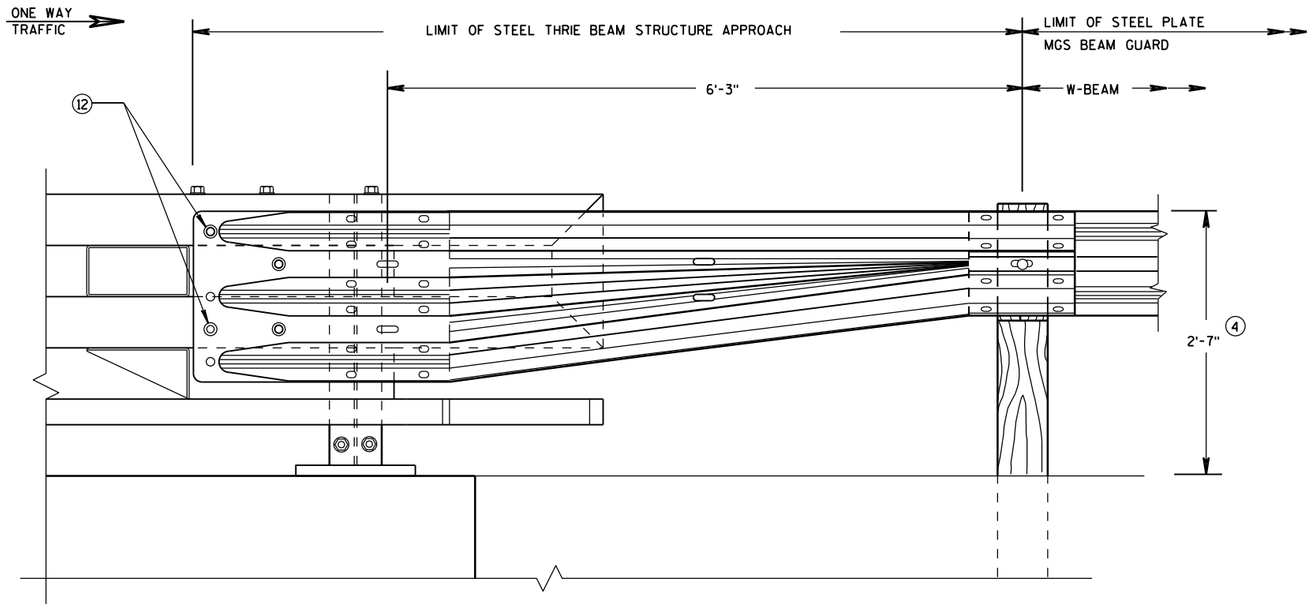
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S.D.D. 14 B 45-4k

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S.D.D. 14 B 45-4k



FRONT VIEW

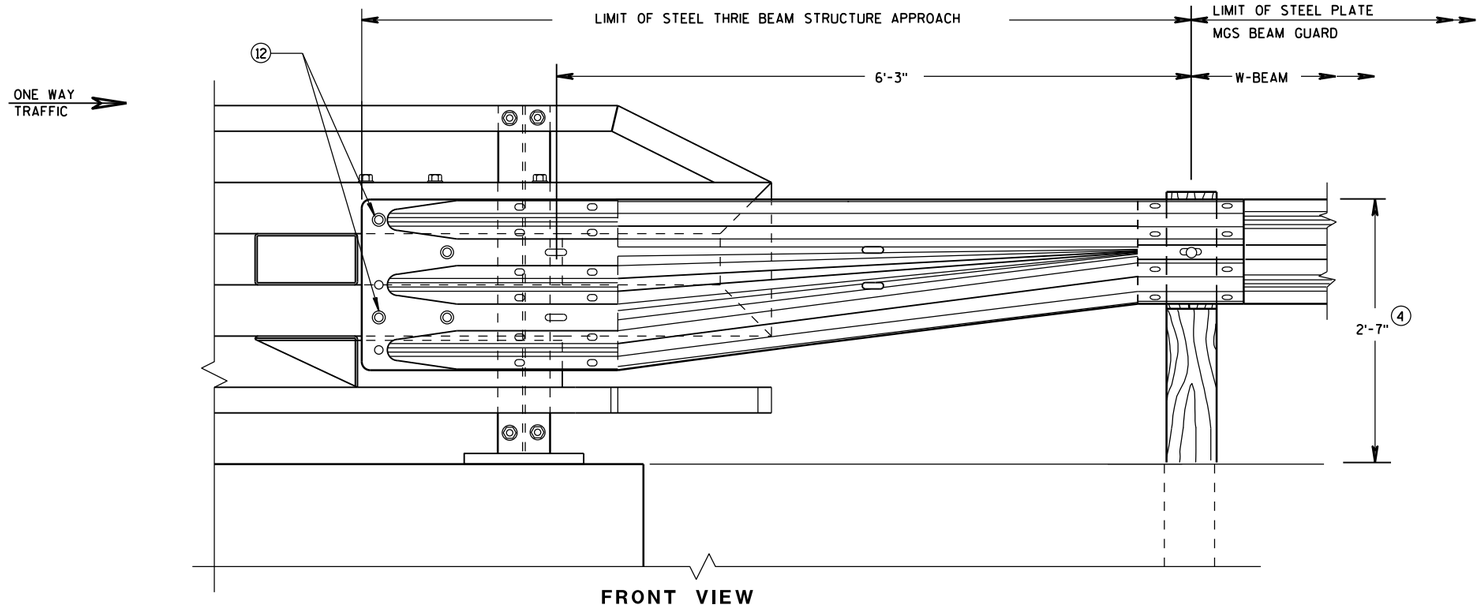
W BEAM TRANSITION AND CONNECTION TO BRIDGE RAILING TYPE "NY3"

(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
DEPARTMENT OF TRANSPORTATION

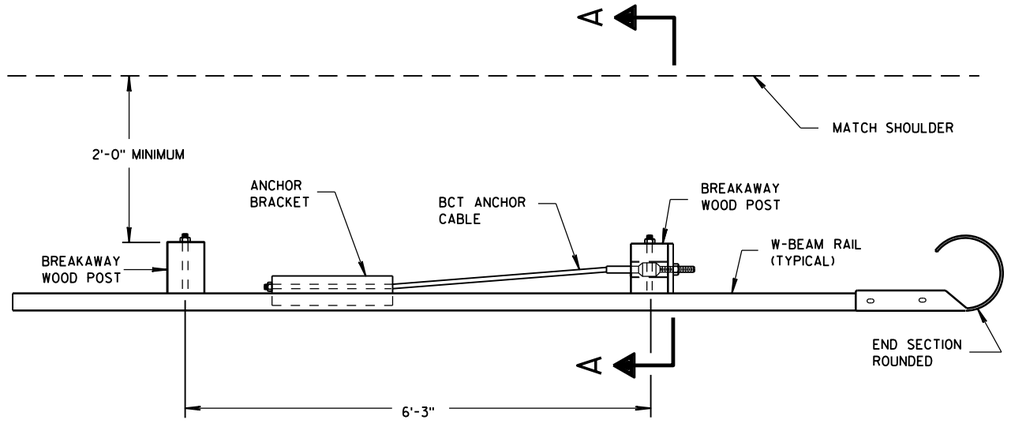
APPROVED
June, 2015
DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

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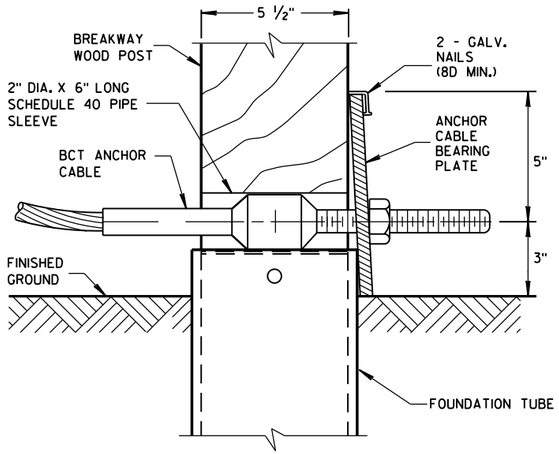
S.D.D. 14 B 45-4L

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S.D.D. 14 B 45-4L



PLAN VIEW



DETAIL A

POST NO. 1
GROUNG STRUT NOT SHOWN FOR CLARITY.

GENERAL NOTES

SEE SDD 14 B 42 FOR MORE INFORMATION.

END SECTION BOLTS AND NUTS HAVE THE SAME MATERIAL REQUIREMENTS AS SPLICE BOLTS.

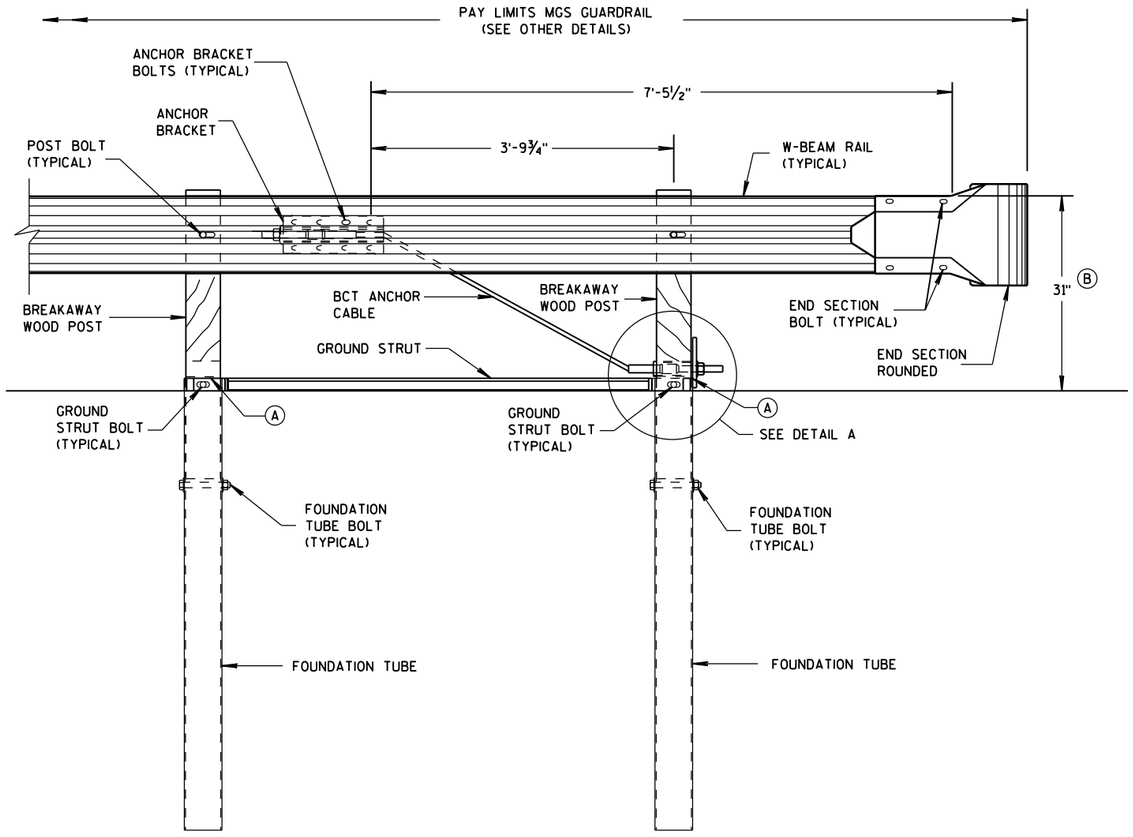
FOUNDATION TUBE BOLTS ARE ⅞" DIAMETER ASTM A307 HEX HEAD BOLT. FOUNDATION TUBE BOLTS REQUIRE ASTM A563 A NUT AND TWO ASTM F844 ⅞" DIAMETER FLAT WASHERS. INSTALL ONE WASHER UNDER BOLT HEAD AND ONE WASHER UNDER NUT.

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.

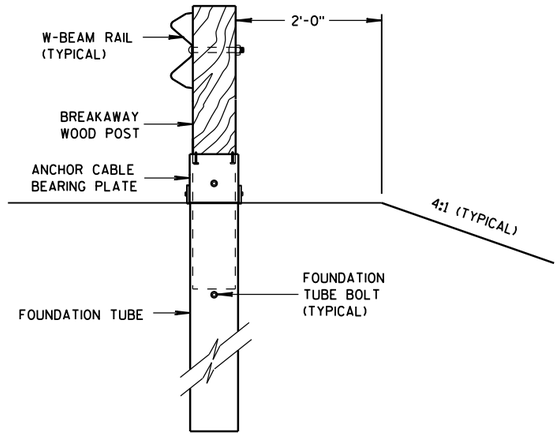
(A) TOP OF FOUNDATION TUBE SHALL BE NO MORE THAN 3" ABOVE FINISHED GROUND.

(B) FOR NEW CONSTRUCTION TOP OF RAIL IS 31" ± 1".
FOR EXISTING INSTALLATIONS TOP OF RAIL IS BETWEEN 27¾" TO 32" ± 1".

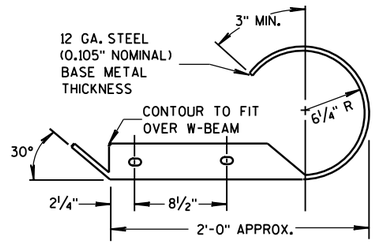


FRONT VIEW

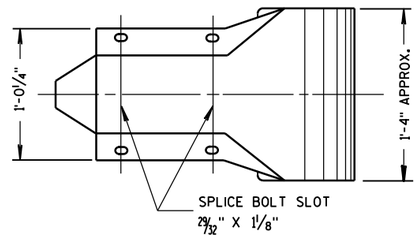
END RAIL DETAIL



SECTION A-A



PLAN VIEW



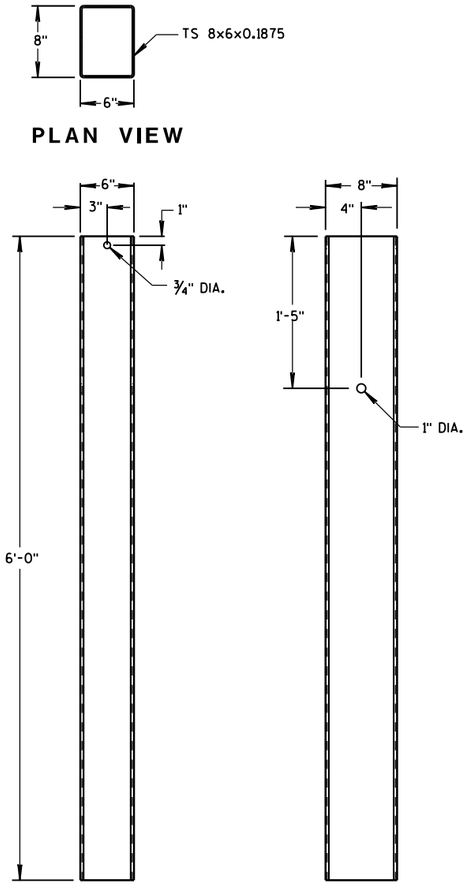
FRONT VIEW

W BEAM END SECTION ROUNDED

MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

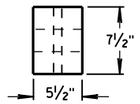
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S.D.D. 14 B 47-2a



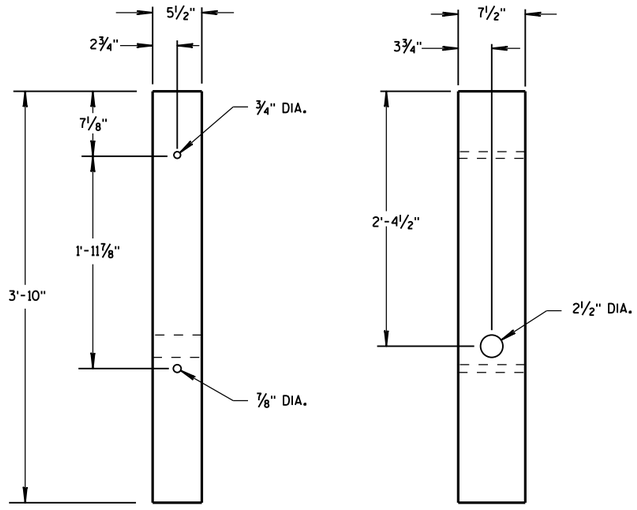
PLAN VIEW

FRONT VIEW SIDE VIEW

FOUNDATION TUBE



PLAN VIEW



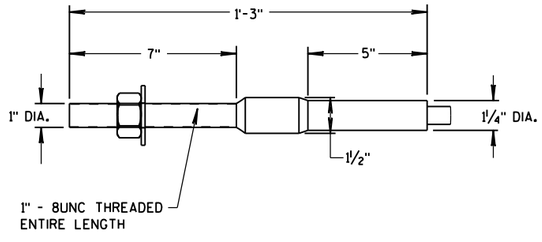
FRONT VIEW SIDE VIEW

BREAKAWAY WOOD POST

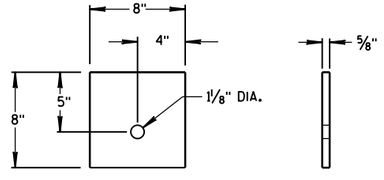
GENERAL NOTES

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

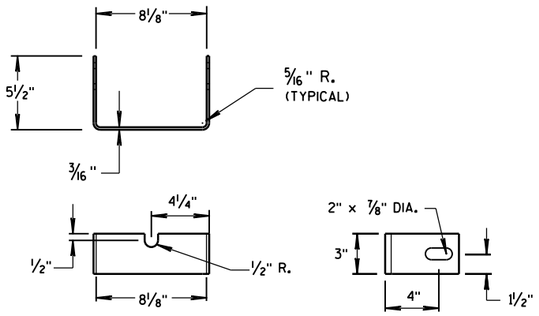
ANCHOR CABLE
BEARING PLATE

MIDWEST GUARDRAIL
SYSTEM (MGS) TYPE 2 TERMINAL

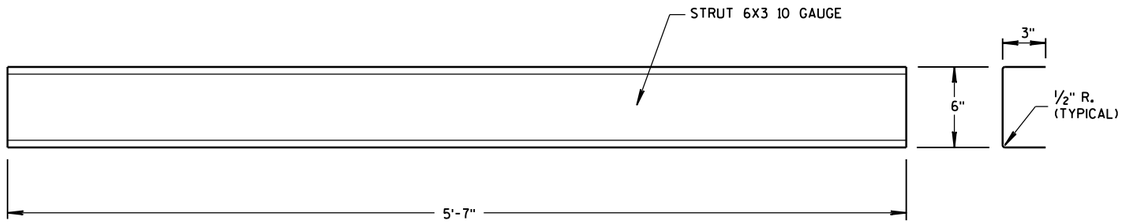
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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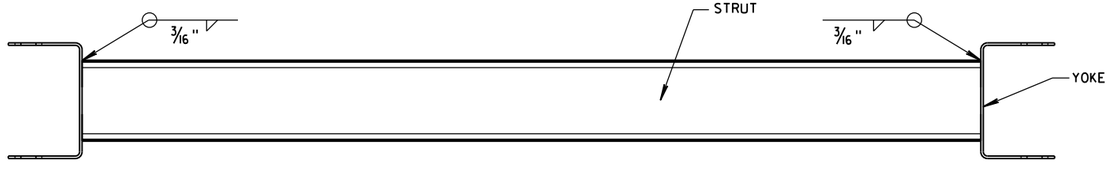
S.D.D. 14 B 47-2b



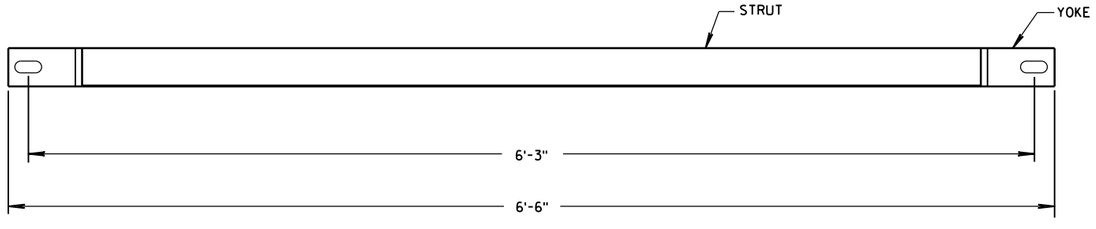
YOKE DETAIL



STRUT DETAIL

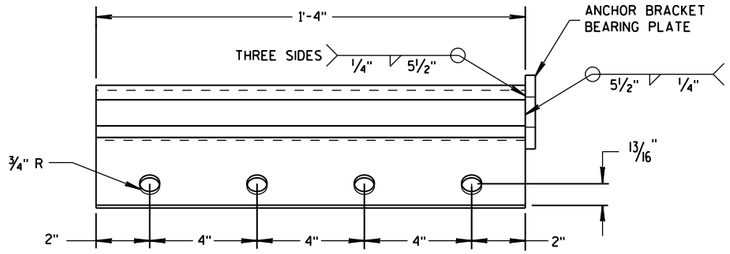


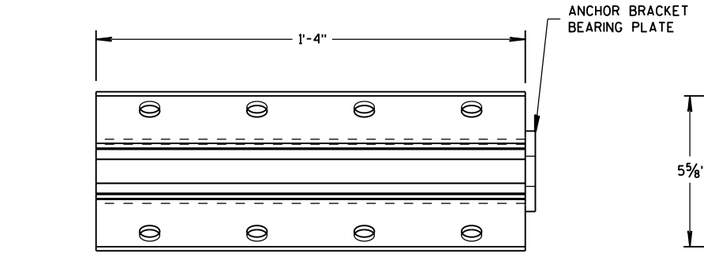
PLAN VIEW

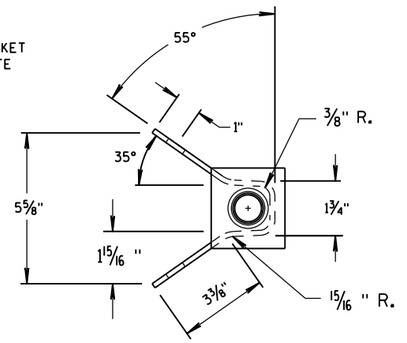


FRONT VIEW

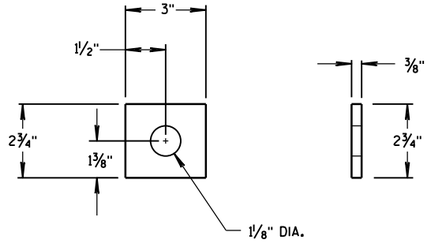
GROUND STRUT DETAIL







ANCHOR BRACKET



ANCHOR BRACKET BEARING PLATE

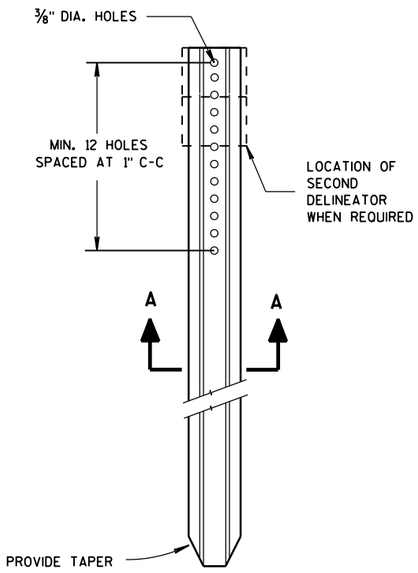
MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

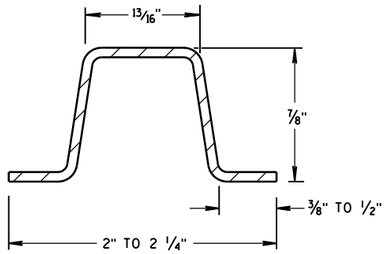
APPROVED
June 2014 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
FHWA

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S.D.D. 14 B 47-2c

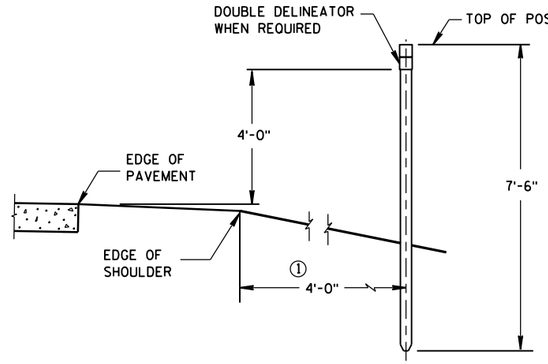


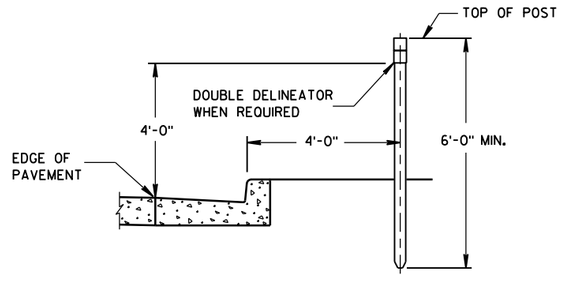
DELINEATOR POST



SECTION A-A

WEIGHT 1.12 LBS PER FT. ± 0.1 LB.



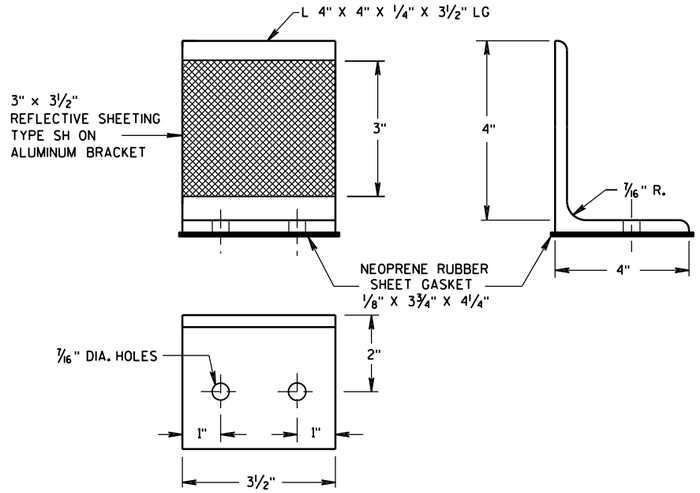


TYPICAL INSTALLATIONS OF DELINEATOR POSTS

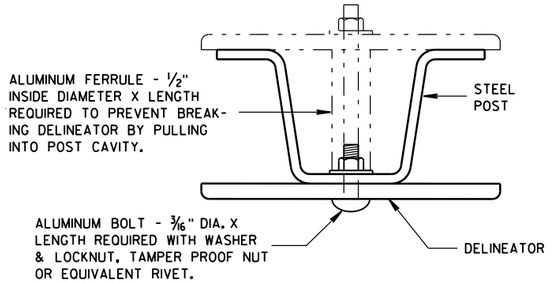
GENERAL NOTES

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

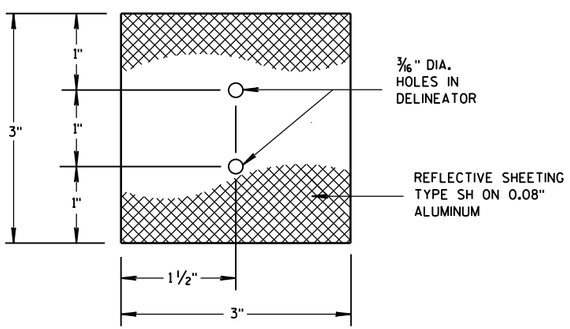
① DELINEATORS SHALL BE PLACED AT A CONSTANT DISTANCE FROM THE EDGE OF THE SHOULDER FOR THE LENGTH OF THE INSTALLATION.



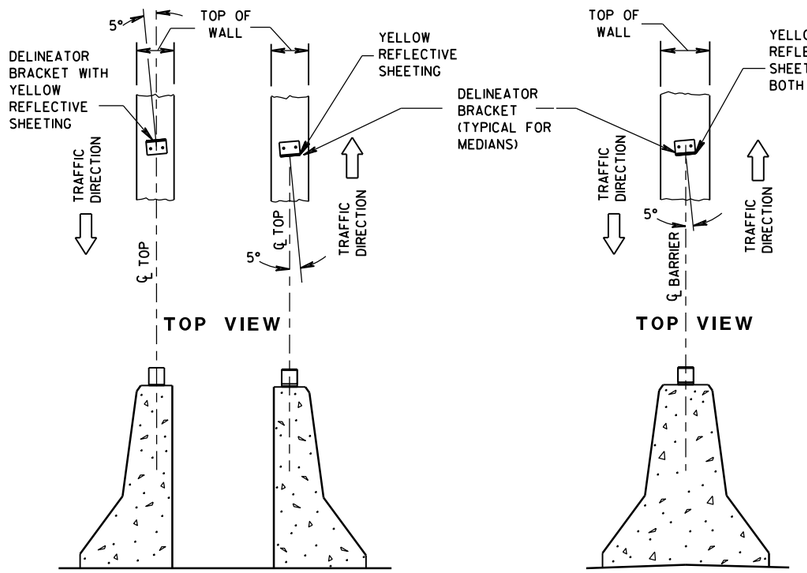
DELINEATOR BRACKET



MOUNTING DETAIL FOR DELINEATOR

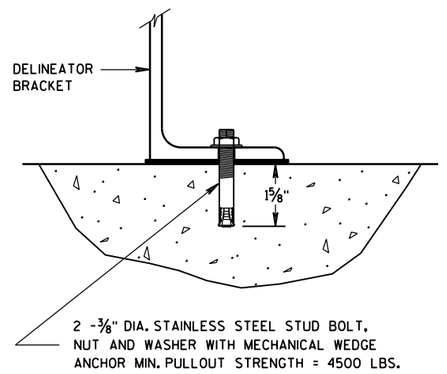


3"x 3" DELINEATOR



DOUBLE BARRIERS IN MEDIAN | MEDIAN BARRIER | BARRIER LOCATED TO RT. OF TRAFFIC FLOW

LOCATION AND AIMING DETAILS FOR DELINEATOR BRACKETS MOUNTED ON CONCRETE BARRIERS



DELINEATOR BRACKET MOUNTING DETAIL

DELINEATOR POST, DELINEATOR, AND DELINEATOR BRACKET WITH REFLECTIVE SHEETING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

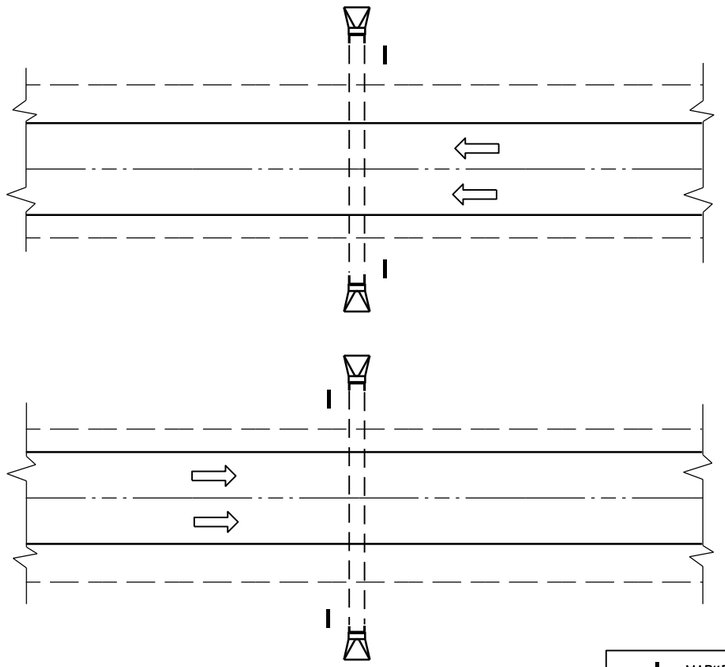
APPROVED
7/2013 — DATE
/S/ Travis Feltes — STATE TRAFFIC E
FHWA

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S.D.D. 15 A 2-8

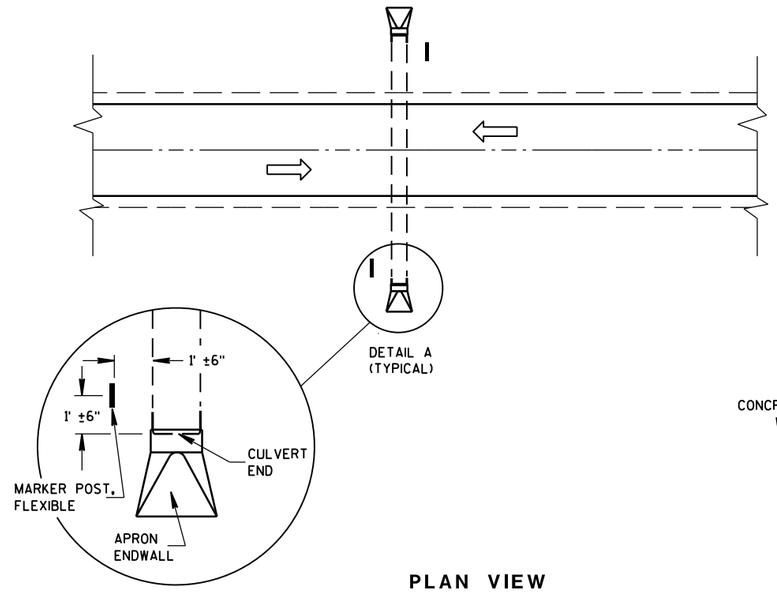
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S.D.D. 15 A 2-8



PLAN VIEW

DIVIDED HIGHWAY



DETAIL A
(TYPICAL)

PLAN VIEW

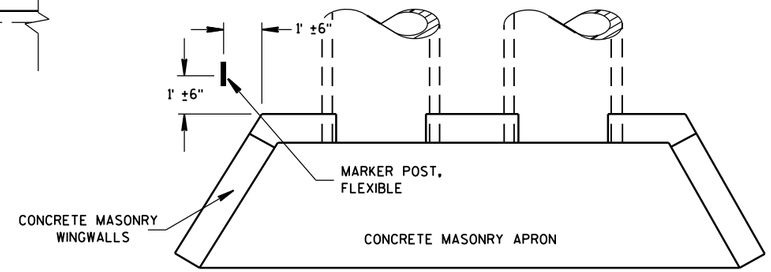
UNDIVIDED HIGHWAY

MARKER POST, FLEXIBLE

DIRECTION OF TRAFFIC FLOW

GENERAL NOTES

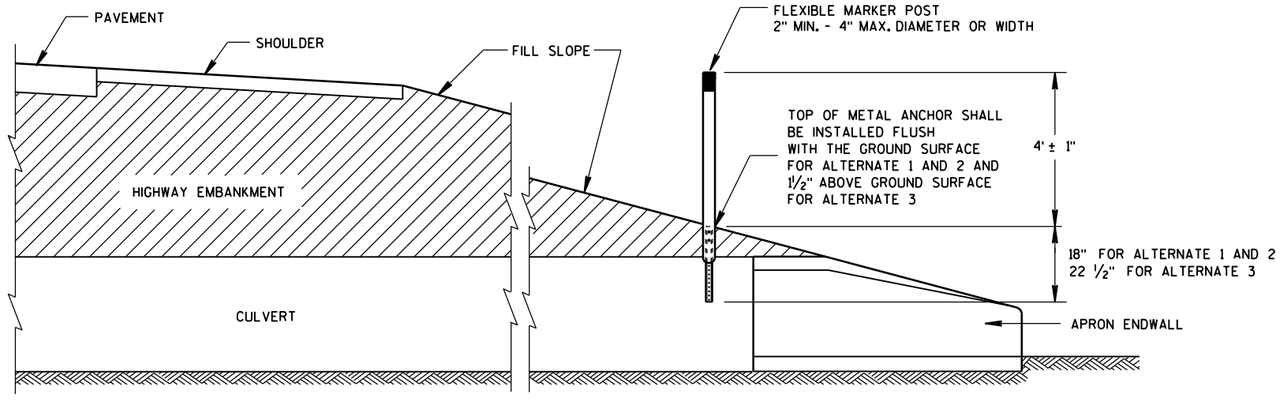
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.



PLAN VIEW

CONCRETE MASONRY ENDWALLS FOR CULVERT PIPE AND PIPE ARCH

FLEXIBLE MARKER POST LOCATION



CROSS SECTION

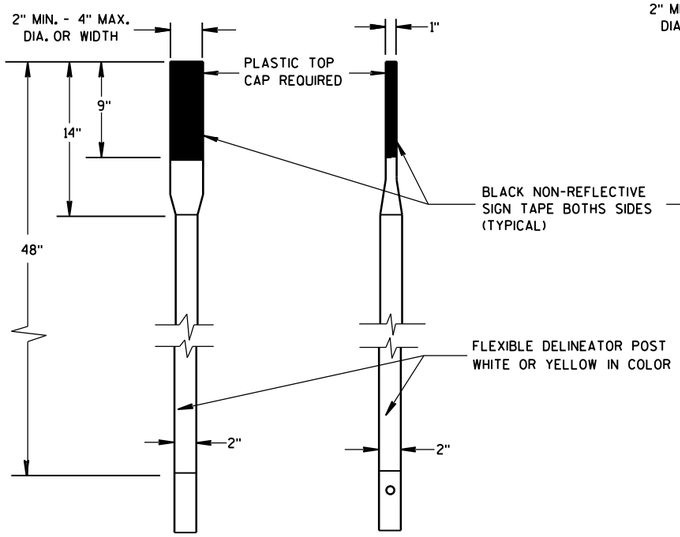
FLEXIBLE MARKER POST

FLEXIBLE MARKER POST FOR CULVERT END

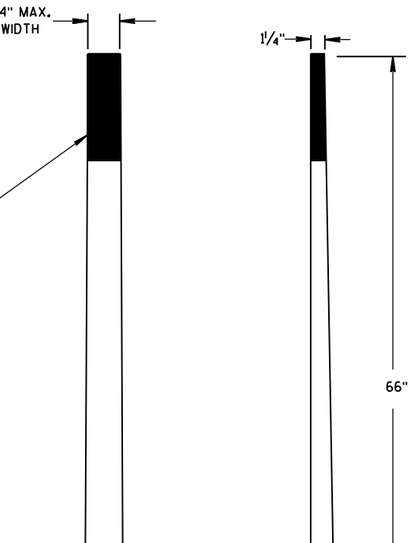
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

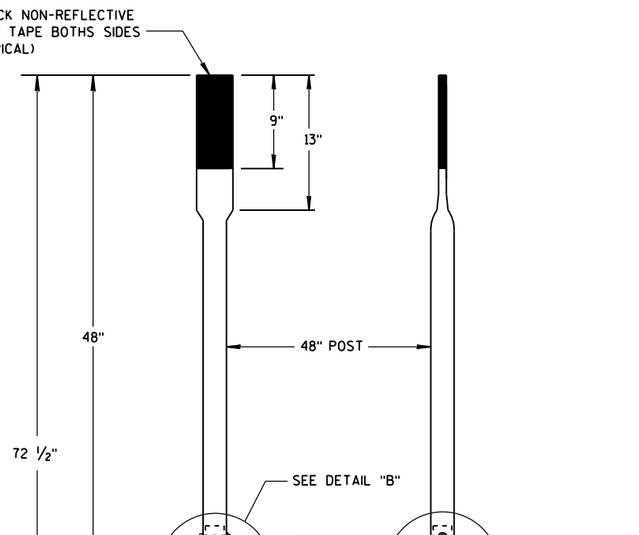
S.D.D. 15 A 3-2a



ALTERNATE 1

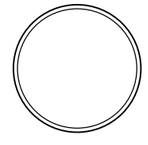


ALTERNATE 2

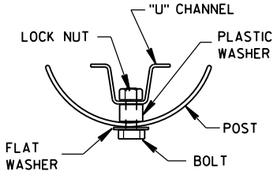


ALTERNATE 3

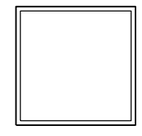
FLEXIBLE MARKER POSTS



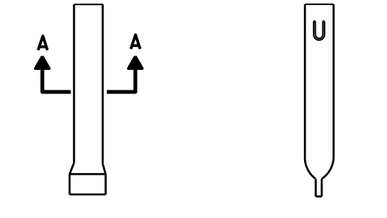
SECTION A-A



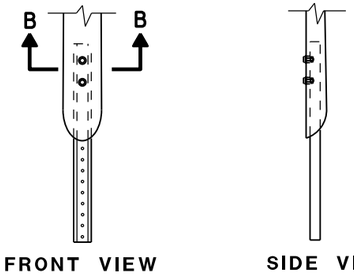
SECTION B-B



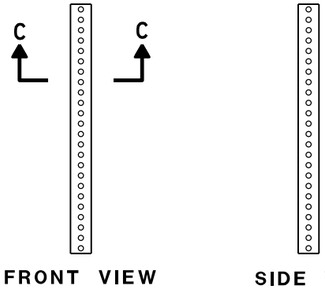
SECTION C-C



ALTERNATE 1

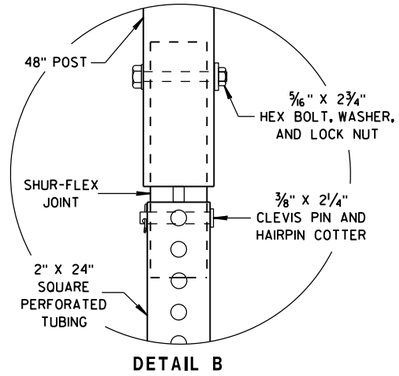


ALTERNATE 2

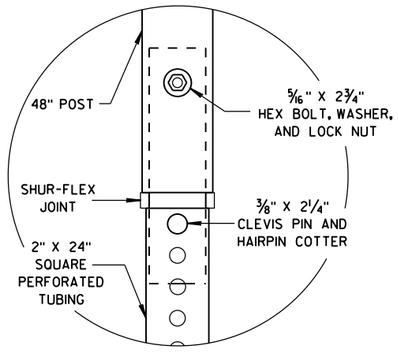


ALTERNATE 3

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

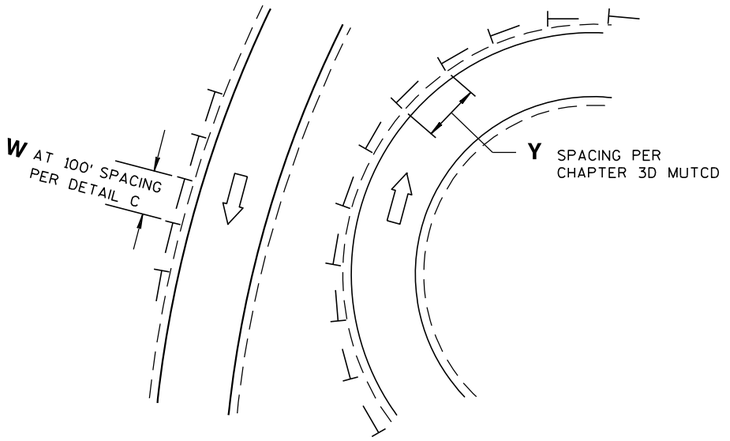
S.D.D. 15 A 3-2b

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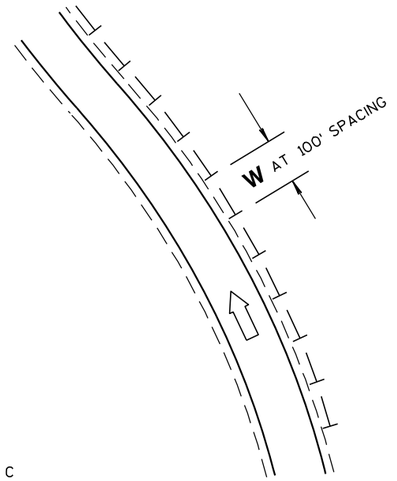
S.D.D. 15 A 3-2b

GENERAL NOTES

* USE DOUBLE DELINEATOR ALONG ACCELERATION-DECELERATION LANES AND TAPERS. USE SINGLE DELINEATOR WHEN RAMP PAVEMENT IS FULL WIDTH.



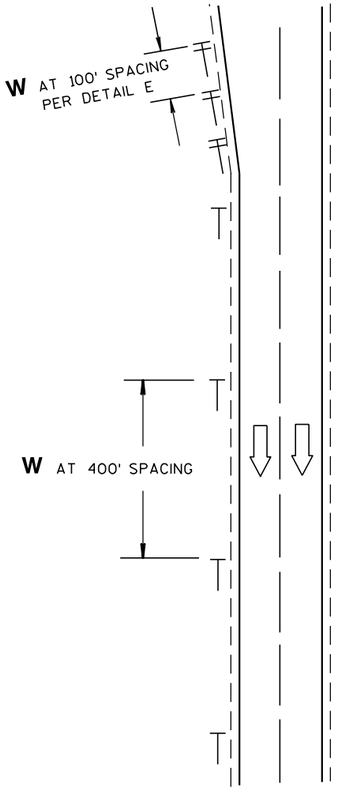
DETAIL A
DELINEATOR LAYOUT AT CURVED RAMP



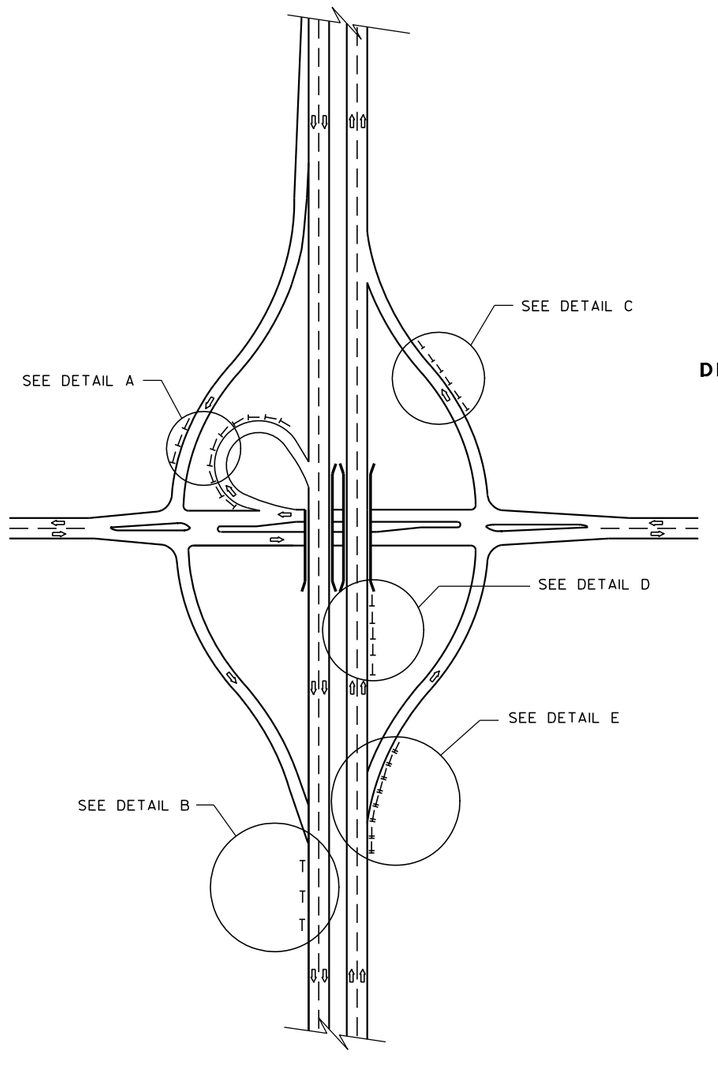
DETAIL C
DELINEATOR LAYOUT ALONG RAMP

LEGEND

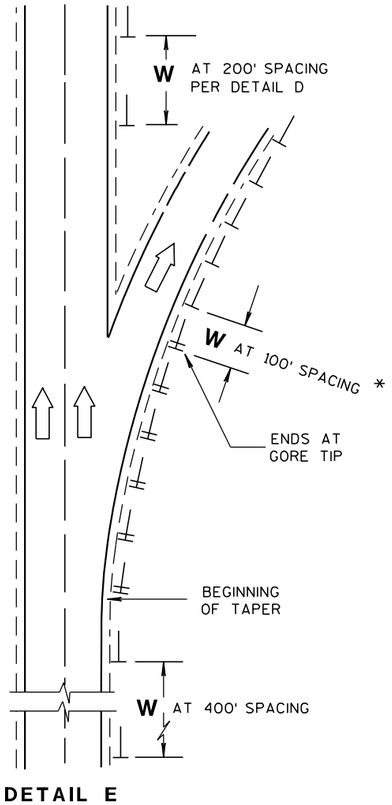
- DIRECTION OF TRAFFIC FLOW
- SINGLE DELINEATOR
- DOUBLE DELINEATOR
- W — WHITE
- Y — YELLOW



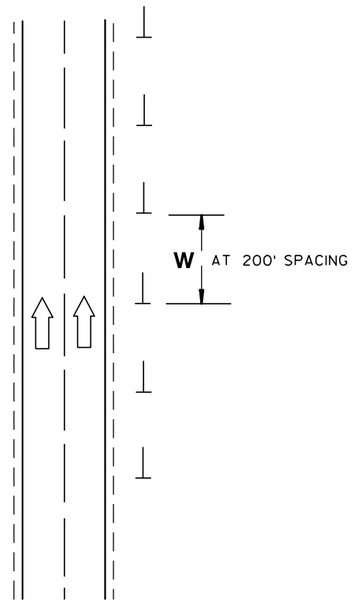
DETAIL B
DELINEATOR LAYOUT ALONG MAINLINE



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

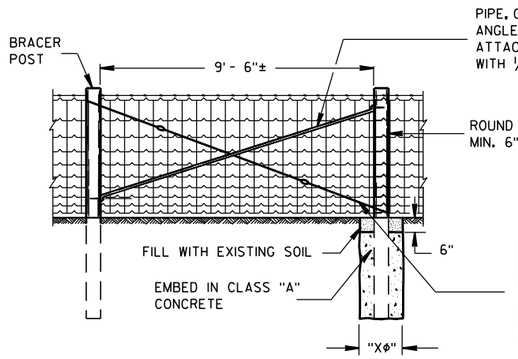
S.D.D. 15 A 6-2

6

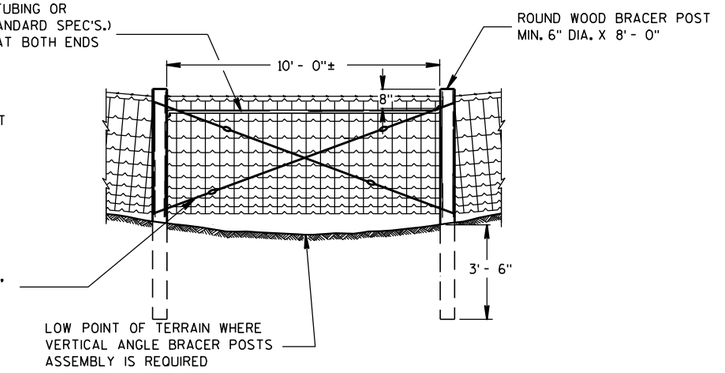
S.D.D. 15 A 6-2

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

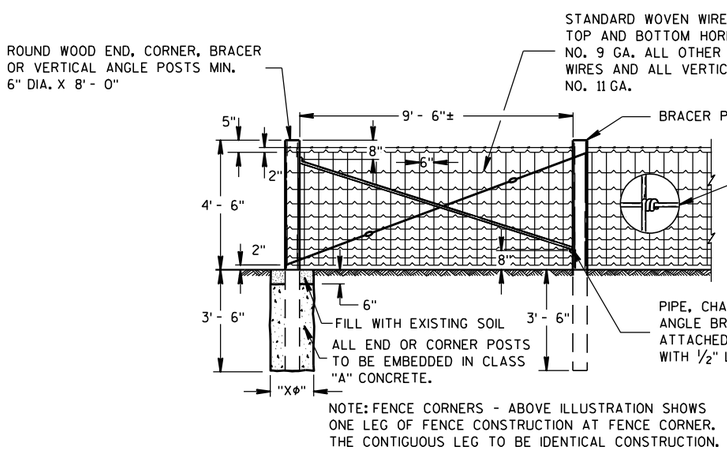
GENERAL NOTES

"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.

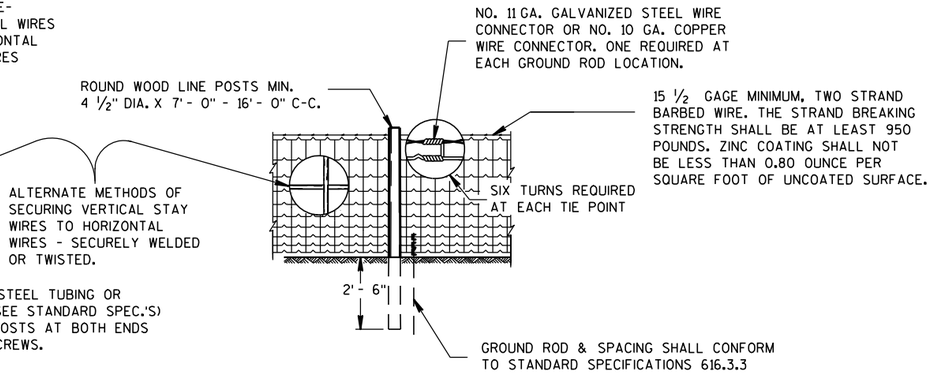
DO NOT STAPLE WIRE TIGHT TO THE LINE POSTS. ALLOW MOVEMENT OF WIRE FOR EXPANSION AND CONTRACTION. STAPLE ARRANGEMENT SHALL BE THE SAME FOR ALL OTHER POSTS EXCEPT THAT THEY SHALL BE DRIVEN TIGHT TO POSTS. ALL STAPLES SHALL BE 2" X 9 GAGE AND SHALL BE MANUFACTURED FROM GALVANIZED WIRE OR HOT DIP GALVANIZED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



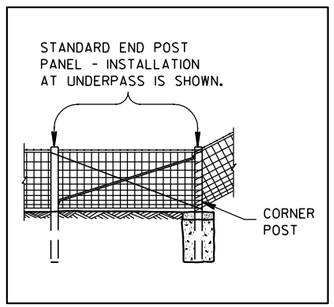
NOTE: FENCE CORNERS - ABOVE ILLUSTRATION SHOWS ONE LEG OF FENCE CONSTRUCTION AT FENCE CORNER. THE CONTIGUOUS LEG TO BE IDENTICAL CONSTRUCTION.

END OR CORNER POSTS ASSEMBLY

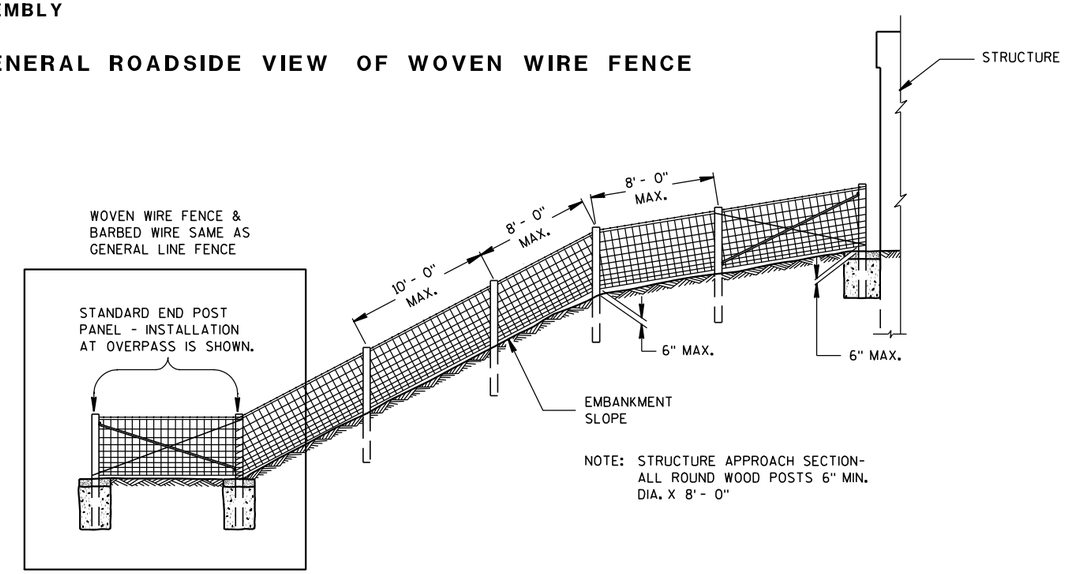


LINE FENCE CONSTRUCTION

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

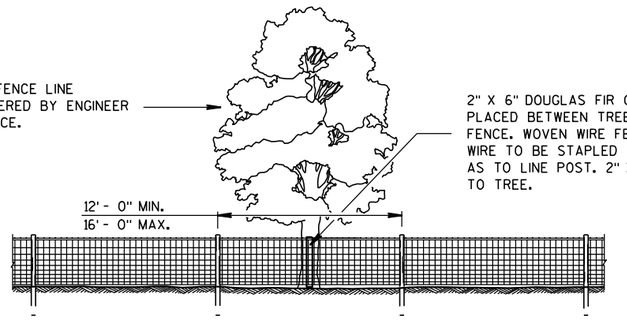
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

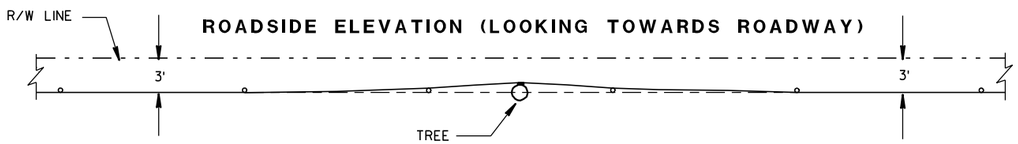
S.D.D. 15 B 1-8a

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.

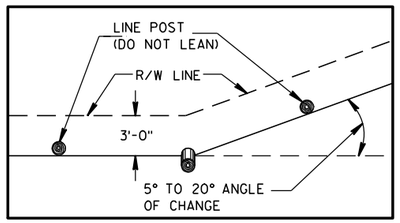


ROADSIDE ELEVATION (LOOKING TOWARDS ROADWAY)

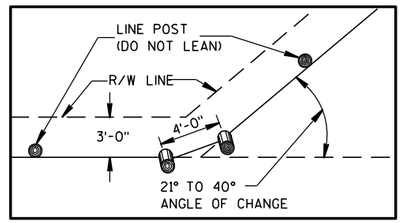


PLAN VIEW

FENCE DESIGN AT TREES REMAINING IN NORMAL FENCE LINE



PLAN VIEW
SINGLE POST CORNER

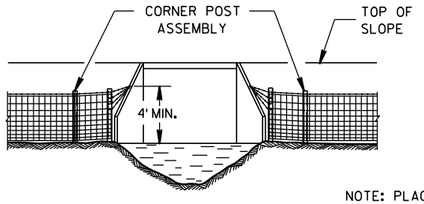


PLAN VIEW
DOUBLE POST CORNER

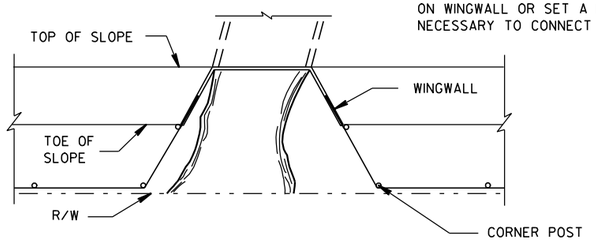
RIGHT OF WAY LINE CHANGE 40° AND LESS

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.

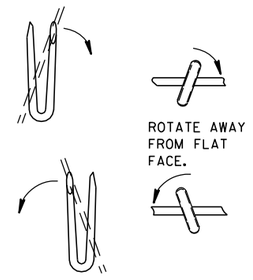
WHEN THE RIGHT OF WAY LINE CHANGE IS MORE THAN 40° USE THE CORNER OR STRETCHER POSTS ASSEMBLY.



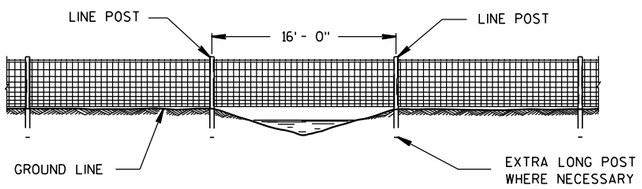
NOTE: PLACE A MINIMUM OF 4 STRANDS OF BARBED WIRE, 6" MAXIMUM CENTERS IN FAN SHAPE CONNECTED TO AN EYE BOLT ON WINGWALL OR SET A LONE POST WHEN NECESSARY TO CONNECT BARBED WIRE.



FENCE INSTALLATION TO WINGWALLS

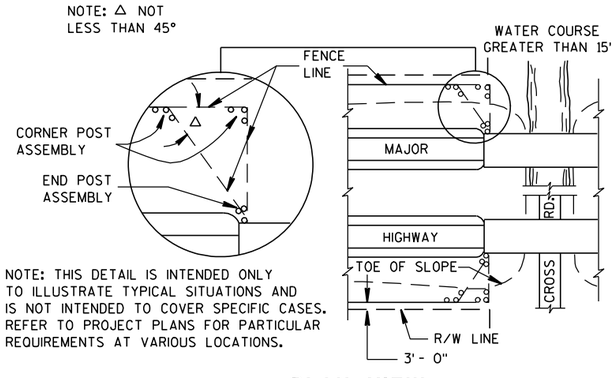


LINE POST



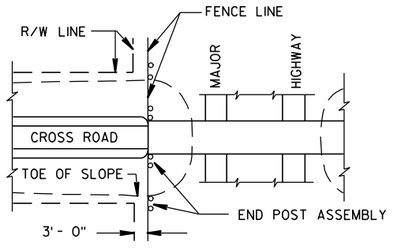
FENCE CONSTRUCTION OVER STREAM COURSES OF 15 FT. OR LESS IN WIDTH

NOTE: △ NOT LESS THAN 45°



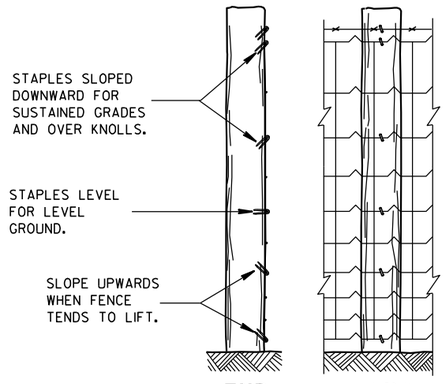
NOTE: THIS DETAIL IS INTENDED ONLY TO ILLUSTRATE TYPICAL SITUATIONS AND IS NOT INTENDED TO COVER SPECIFIC CASES. REFER TO PROJECT PLANS FOR PARTICULAR REQUIREMENTS AT VARIOUS LOCATIONS.

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



PLAN VIEW
MAJOR HIGHWAY UNDERPASS

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



END ELEVATION

FARM SIDE ELEVATION

FENCE MOUNTING DETAIL

FENCE LOCATION AT STRUCTURES

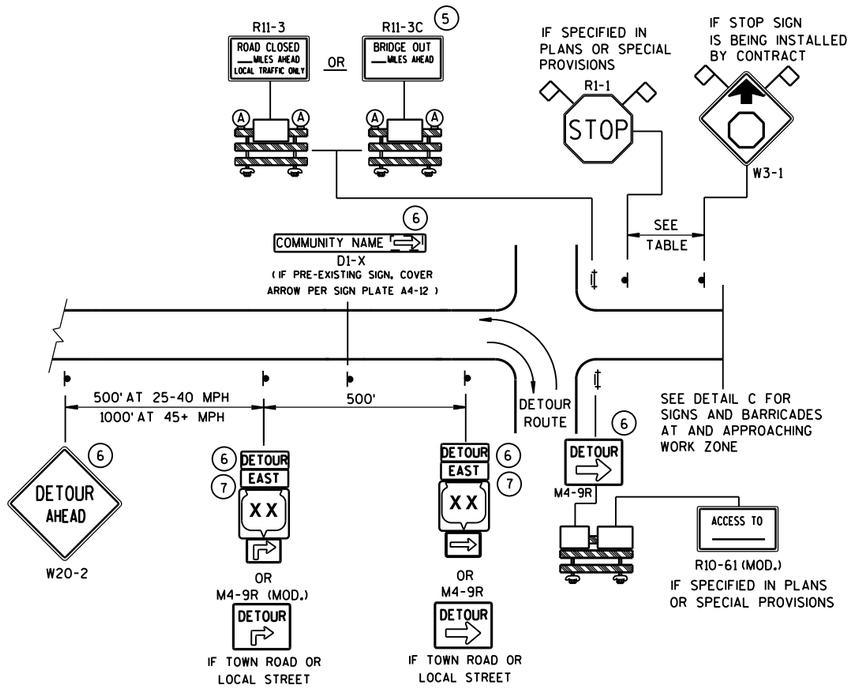
FENCE WOVEN WIRE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
4/4/2008
DATE
/S/ Jerry H. [illegible]
ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

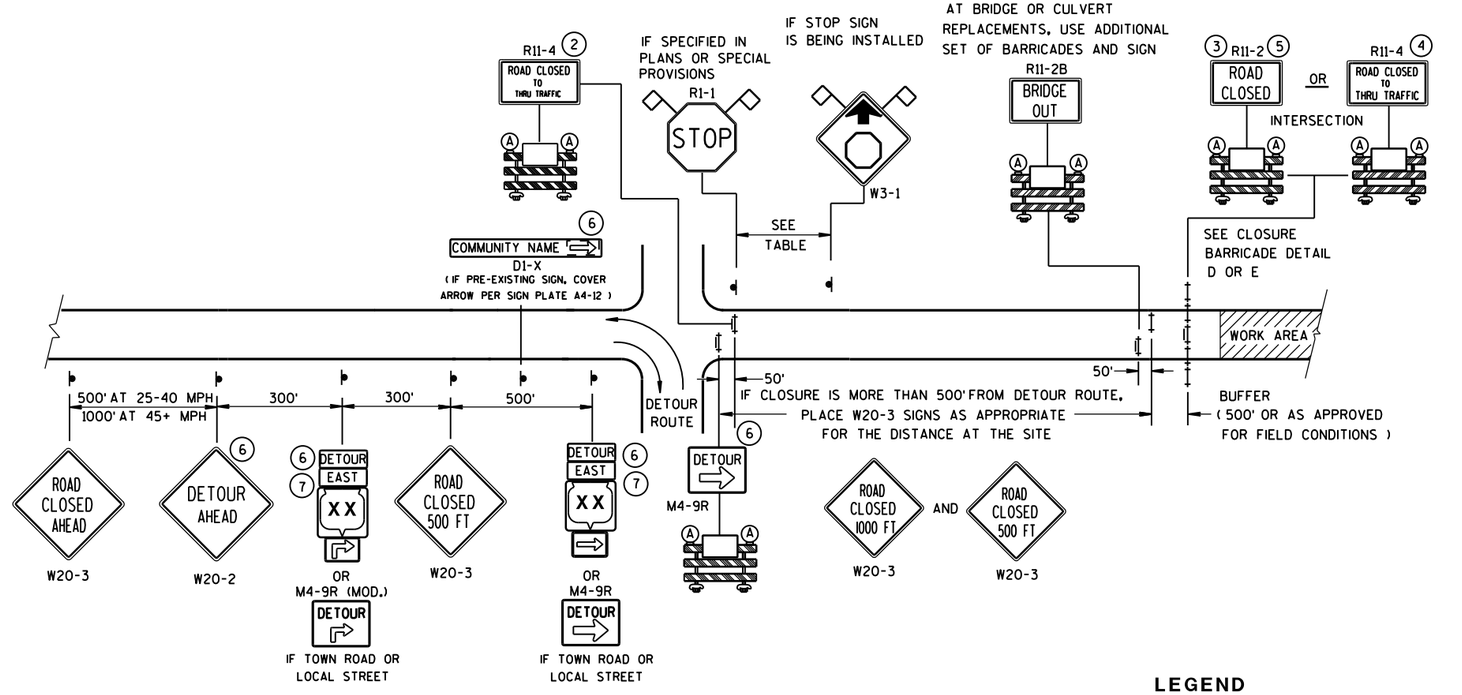
6

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



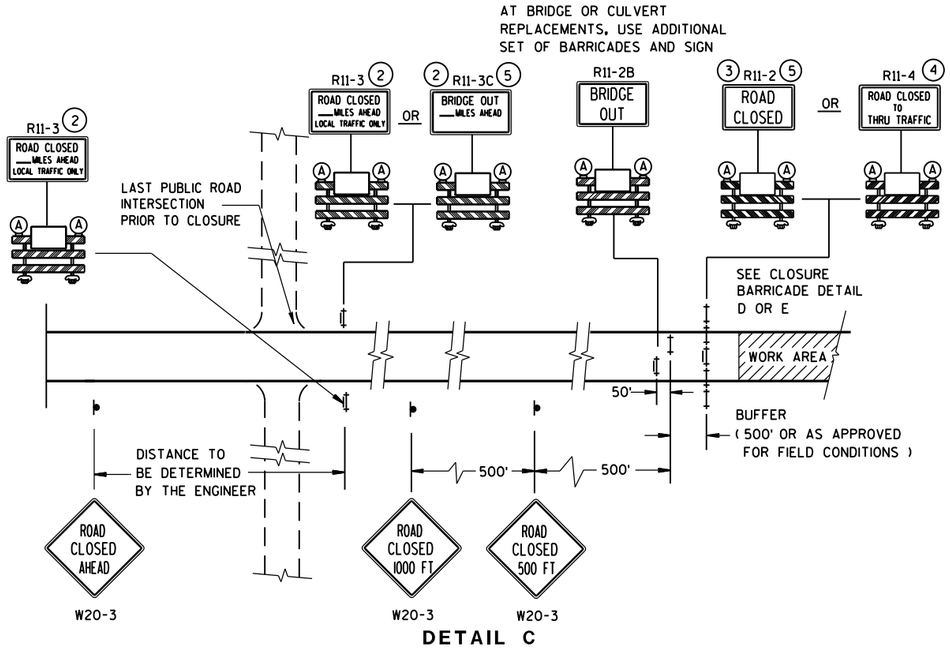
DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR

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



DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR

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



DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR

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

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

LEGEND

- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- (A) TYPE "A" WARNING LIGHT (FLASHING)
- WORK AREA
- DETOUR / EAST — M4-8 / M3-X
- XX — M1-4; COUNTY XX — M1-5A; XX — M1-6
- M05-1 OR M06-1
- FLAGS, 16" X 16" MIN., (ORANGE)

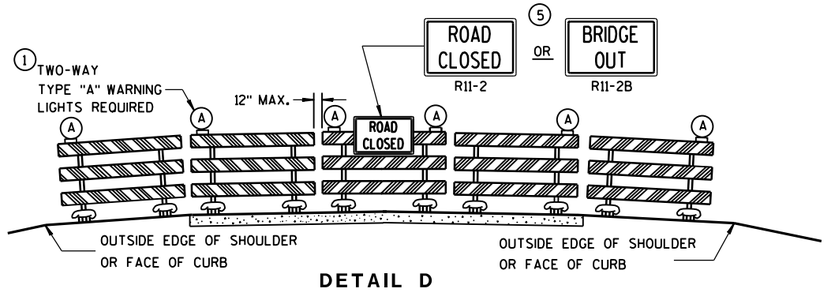
BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

8/2013 DATE — /S/ Travis Feltes STATE TRAFFIC ENGINEER — DESIGN

FHWA

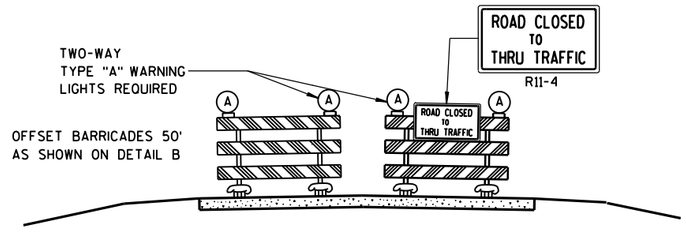
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S.D.D. 15 C 2-5a



DETAIL D

ROAD CLOSURE BARRICADE DETAIL

APPROACH VIEW



DETAIL E

LANE CLOSURE BARRICADE DETAIL

APPROACH VIEW

SEE SDD 15C2-SHEET "**a**" FOR LEGEND

GENERAL NOTES

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

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

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

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

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

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

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

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

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

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:
- R11-2 SHALL BE 48" X 30".
- R11-3, R11-4 AND R10-61 SHALL BE 60" X 30".
- M4-9 SHALL BE 30" X 24".
- M3-X SHALL BE 24" X 12". (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS.)
- M4-8 SHALL BE 24" X 12". (30" X 15" IF NEEDED TO MATCH EXISTING SIGNS.)
- M1-4, M1-5A, AND M1-6 SHALL BE 24" X 24". (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS.)
- M05-1 AND M06-1 SHALL BE 21" X 21". (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS.)
- D1-X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.
- R1-1 SHALL BE 36" X 36".

(1) TWO WARNING LIGHTS SHALL BE PROVIDED ON THE CENTER BARRICADE AND A MINIMUM OF ONE WARNING LIGHT SHALL BE PROVIDED ON EACH OF THE OTHER BARRICADES WITHIN THE ROADWAY LIMITS. SPACING OF THE WARNING LIGHTS SHALL BE UNIFORM TO THE EDGE OF ROADWAY AS SHOWN (APPROX. 8-FOOT LIGHT SPACING).

(2) THESE SIGNS AND BARRICADES ARE NOT REQUIRED IF ROAD CLOSURE BEGINS AT INTERSECTION.

(3) FOR ROAD CLOSURE WITHOUT LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL D.

(4) FOR ROAD CLOSURE WITH LOCAL ACCESS TO PROJECT, SEE LANE CLOSURE BARRICADE DETAIL E.

(5) FOR BRIDGE OR CULVERT REPLACEMENTS, SUBSTITUTE "BRIDGE OUT" INSTEAD OF "ROAD CLOSED" ON R11-2 AND R11-3 SIGNS.

(6) INSTALL DETOUR AND COMMUNITY GUIDE SIGNS AND ARROWS ONLY IF SPECIFIED IN THE CONTRACT. IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. MODIFY EXISTING SIGNS WHERE POSSIBLE. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. IF DETOUR SIGNS ARE BEING INSTALLED BY OTHERS, PLACE THE CONTRACTED TRAFFIC CONTROL SIGNS TO ALLOW FOR PLACEMENT OF ALL WARNING, DETOUR AND GUIDE SIGNS AS SHOWN.

(7) "EAST" CARDINAL DIRECTION MARKERS AND RIGHT TURN ARROWS ARE SHOWN. USE OTHER CARDINAL DIRECTIONS AND ARROWS AS APPROPRIATE.

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

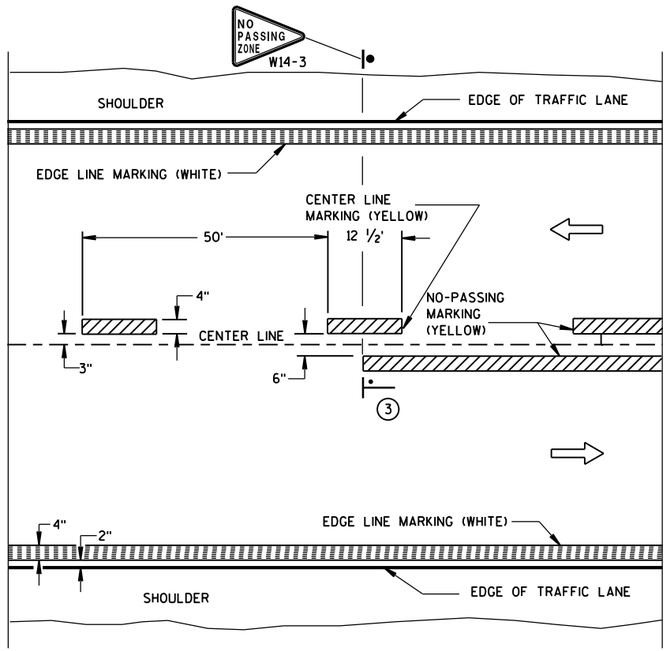
8/2013 DATE

/S/ Travis Feltes
STATE TRAFFIC ENGINEER

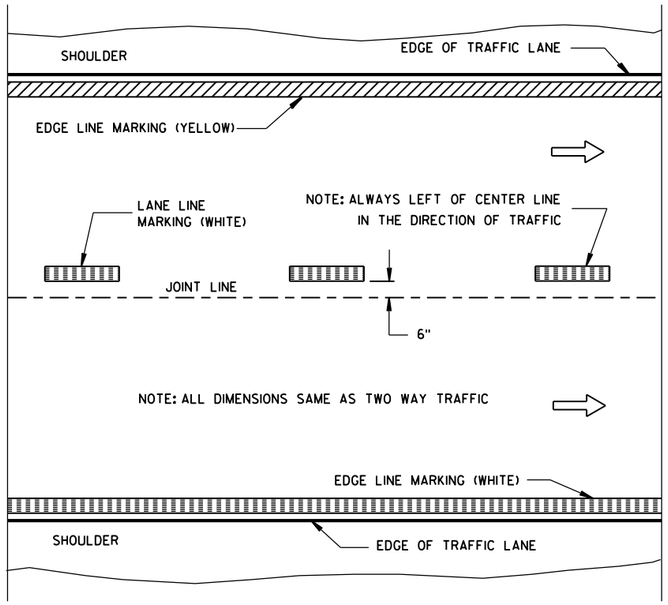
FHWA

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S.D.D. 15 C 2-5b

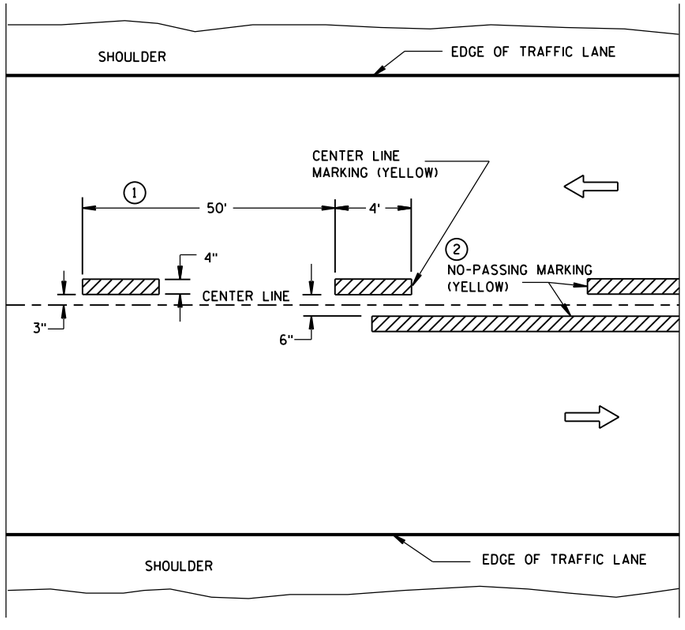


TWO WAY TRAFFIC

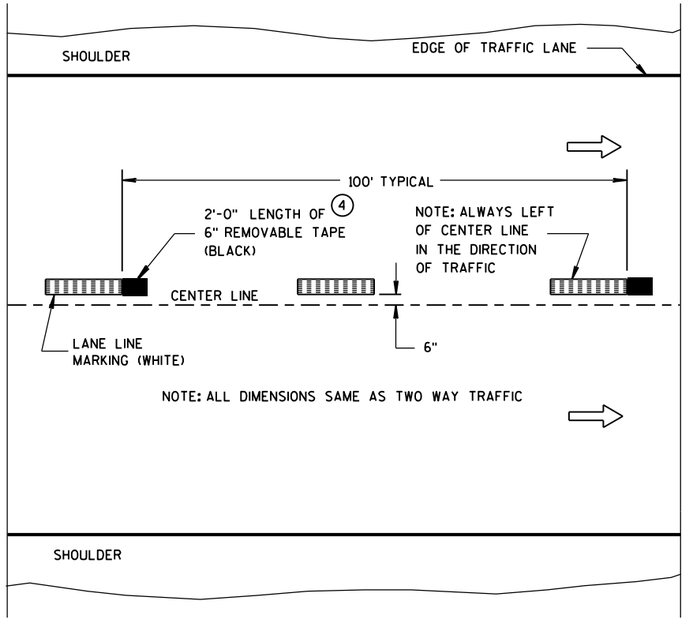


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY (INTERMEDIATE) PAVEMENT MARKING

(SHOWS CYCLE FOR TEMPORARY CENTER LINE OR TEMPORARY LANE LINE MARKING)

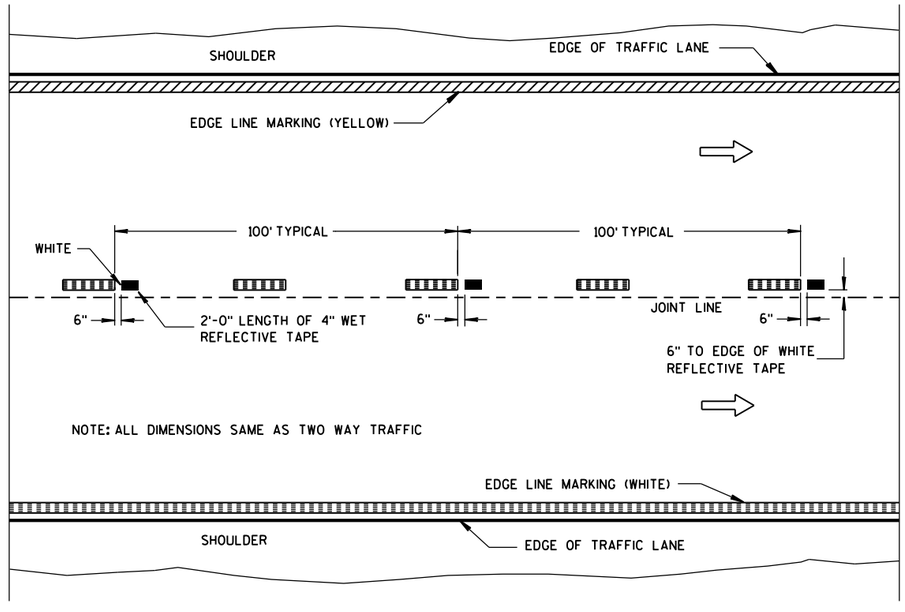
GENERAL NOTES

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

LEGEND

SIGN ON PORTABLE OR PERMANENT SUPPORT

DIRECTION OF TRAFFIC

WORK AREA

FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF

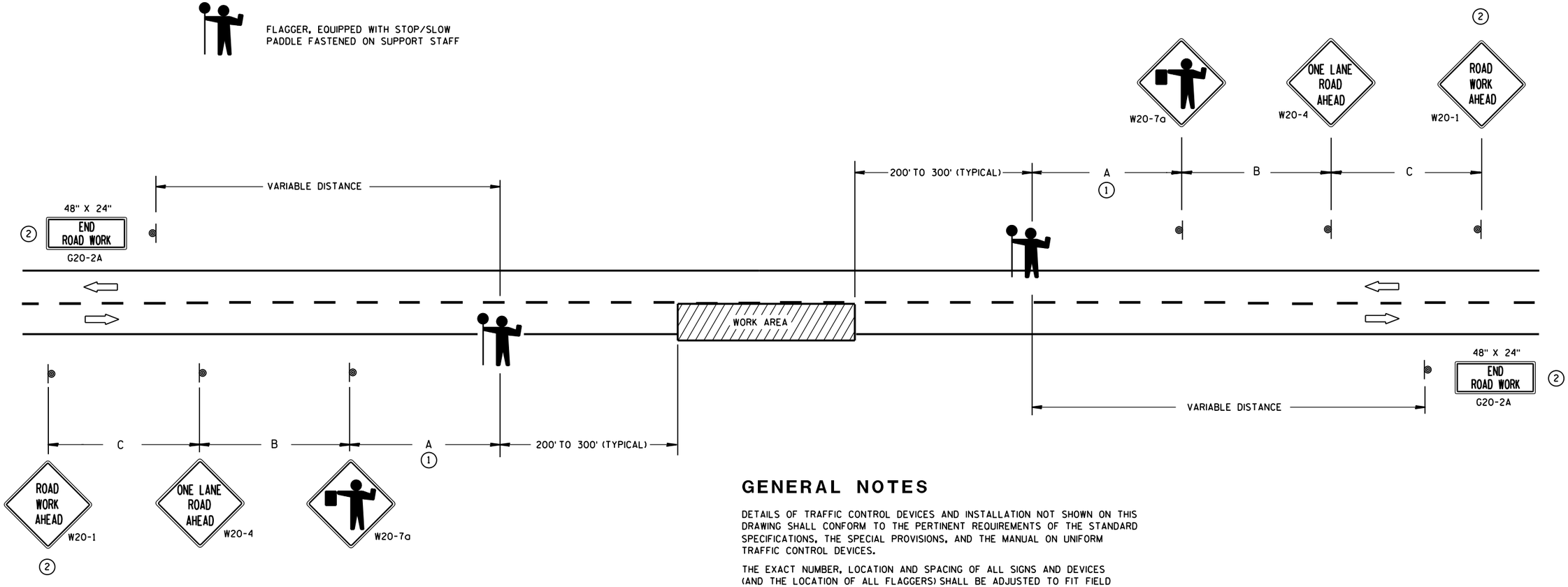
SIGN SPACING TABLE

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

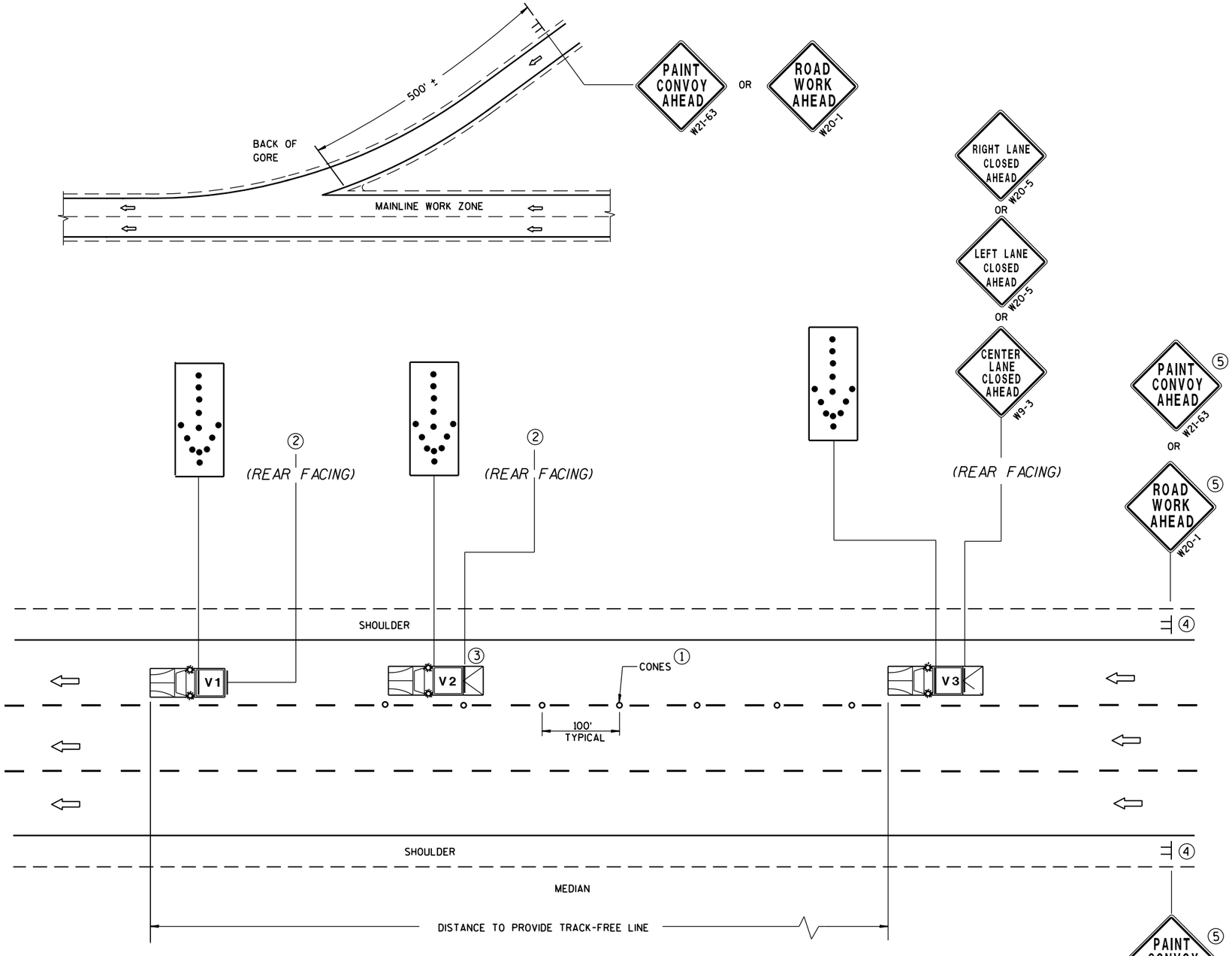
APPROVED
8/2013 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
FHWA

6

S.D.D. 15 C 12-4

6

S.D.D. 15 C 12-4



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 OPTIONAL TRUCK-MOUNTED ATTENUATOR.

④ SIGNS SHALL BE REPEATED AFTER EVERY ON RAMP OR 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 (MERGE)

MOVING PAVEMENT MARKING OPERATION MULTI-LANE DIVIDED ROADWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

5/3/2013 DATE

/S/ Travis Feltes STATE TRAFFIC EN

FHWA

6

S.D.D. 15 C 19-2c

6

S.D.D. 15 C 19-2c

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.

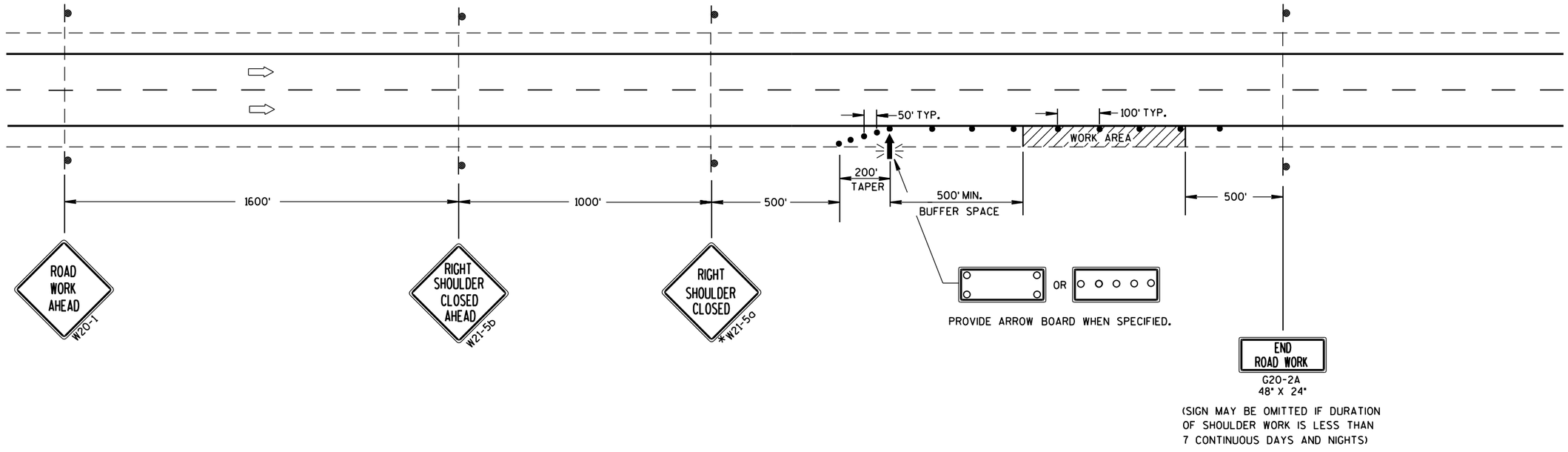
SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

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

8/2013 DATE

/S/ Travis Feltes
STATE TRAFFIC ENGINEER

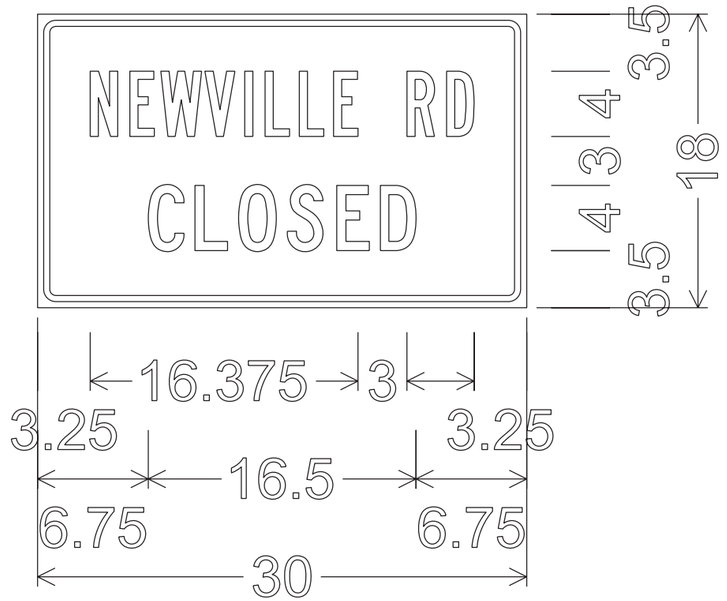
FHWA

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S.D.D. 15 D 27-2

NOTES

1. All Signs Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - As noted



1.125" Radius, 0.375" Border, 0.375" Indent

"NEWVILLE" B;

"RD" B;

"CLOSED" C;

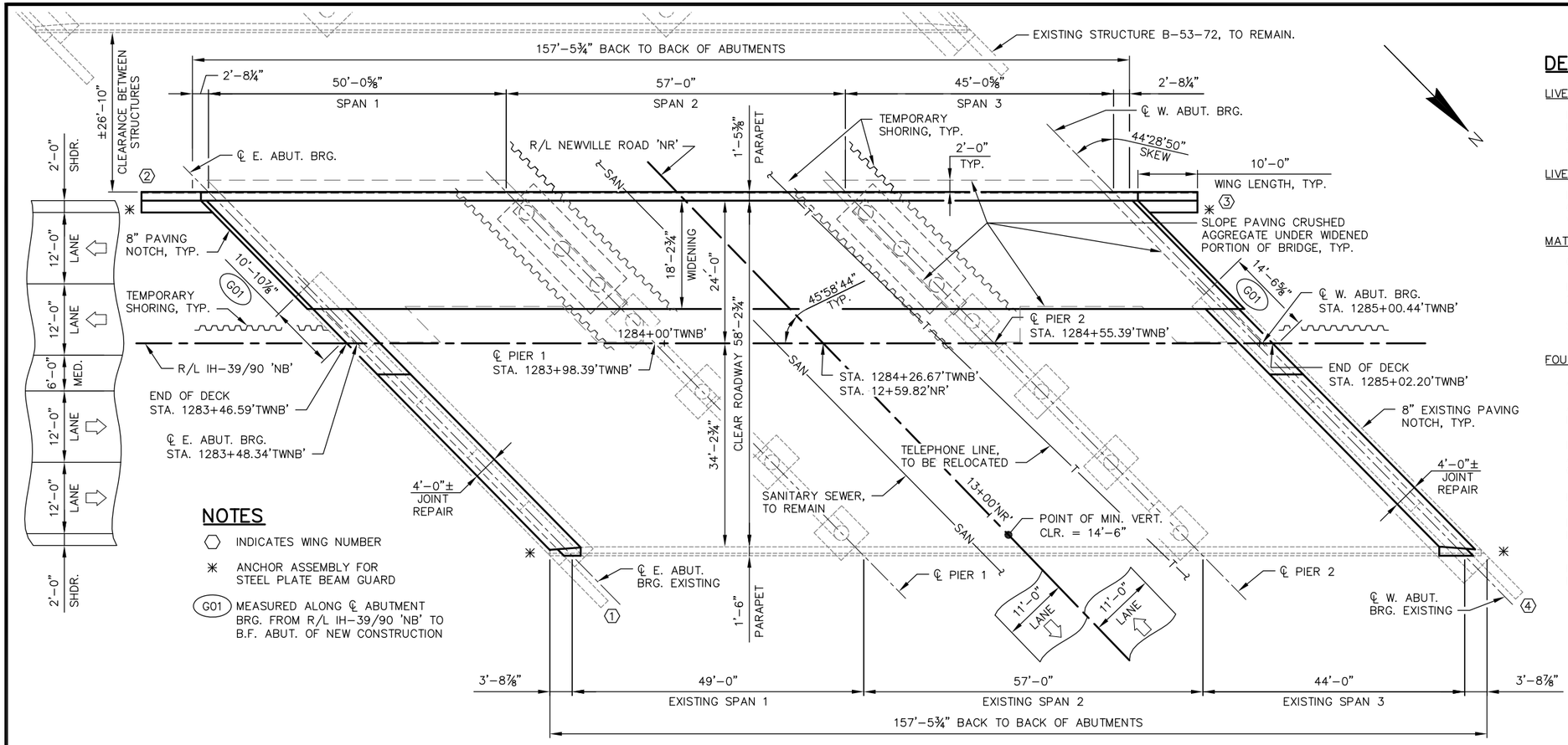
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PROJECT NO: 1005-10-84	HWY: IH 39	COUNTY: ROCK	TEMPORARY	SHEET NO:	E

FILE NAME : C:\CAEfiles\Projects\tr_d1\1533a715.DGN PLOT DATE : 16-JUL-2015 08:20 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 9.291122:1.000000

WISDOT/CADDS SHEET 42

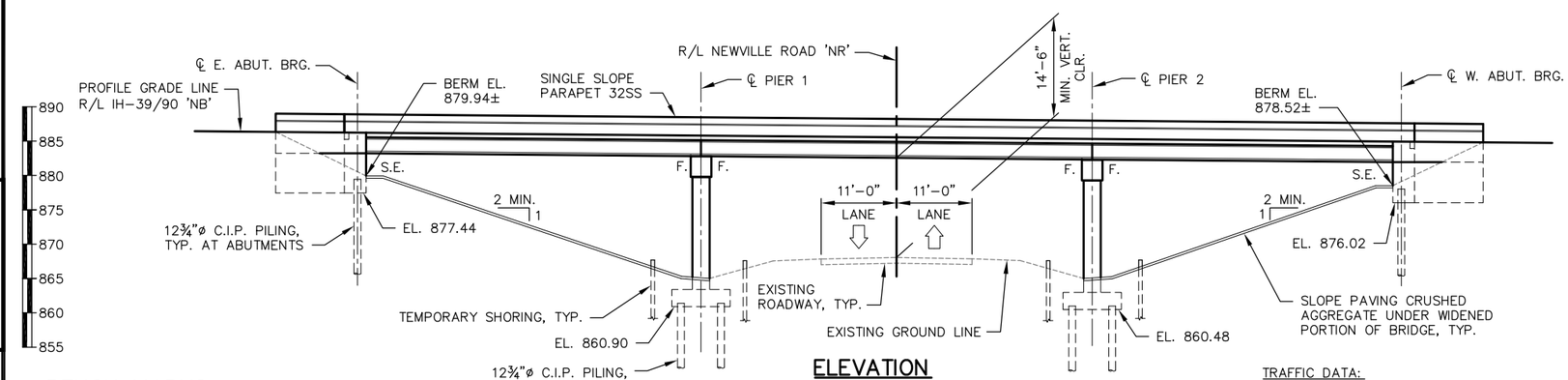


NOTES

- ⬡ INDICATES WING NUMBER
- ✳ ANCHOR ASSEMBLY FOR STEEL PLATE BEAM GUARD
- (G01) MEASURED ALONG ℄ ABUTMENT BRG. FROM R/L IH-39/90 'NB' TO B.F. ABUT. OF NEW CONSTRUCTION

PLAN B-53-73

(WIDENED THREE SPAN 28-INCH PRESTRESSED GIRDERS)



ELEVATION

(NORMAL TO NEWVILLE ROAD, LOOKING SOUTH)

BENCH MARKS

NO.	STATION	DESCRIPTION	ELEVATION
1	1325+76'TWNB'	CUT 'X' ON NW SIGN BOLT; WB IH-39/90 EXIT 163, 1 MILE SIGN BASE	874.26
2	1284+08'TWNB'	DISK ON BRIDGE B-53-72	883.70
3	1263+02'TWNB'	CUT 'X' ON NE SIGN BOLT IN EB IH-39/90 SIGN BASE	885.08

HORIZONTAL DATUM AND ADJUSTMENT: NAD 83 (2007)
VERTICAL DATUM AND ADJUSTMENT: NAVD 88 (2007)
COORDINATE REFERENCE SYSTEM: WCCS ROCK CO

BRIDGE OFFICE CONTACT
WILLIAM DREHER, P.E.
(608) 266-8489

CONSULTANT CONTACT
JEFFREY J. KOCH, P.E.
(608) 588-7866

TRAFFIC DATA:

NEWVILLE ROAD
A.A.D.T. (2014) — 875
A.A.D.T. (2019) — 1,100
DESIGN SPEED — 50 M.P.H

IH-39/90
A.A.D.T. (2016) — 52,400
A.A.D.T. (2020) — 55,540
DESIGN SPEED — 70 M.P.H.

DESIGN DATA

LIVE LOAD: (WIDENING STRUCTURE)

DESIGN LOADING — HL-93
INVENTORY RATING FACTOR — RF=1.09
OPERATING RATING FACTOR — RF=1.41
WISCONSIN STANDARD PERMIT VEHICLE RATING — 250 KIPS

LIVE LOAD: (EXISTING STRUCTURE, TAKEN FROM HSI, 2/5/2015)

INVENTORY RATING — HS-19
OPERATING RATING — HS-37
WISCONSIN STANDARD PERMIT VEHICLE RATING — 190 KIPS

MATERIAL PROPERTIES:

CONCRETE MASONRY, SUPERSTRUCTURE — $f'c$ = 4,000 P.S.I.
ALL OTHER — $f'c$ = 3,500 P.S.I.
HIGH-STRENGTH BAR STEEL REINFORCEMENT — fy = 60,000 P.S.I.
28-INCH PRESTRESSED GIRDERS
CONCRETE MASONRY — $f'c$ = 8,000 P.S.I.
STRANDS – 0.6" DIAMETER WITH AN ULTIMATE TENSILE STRENGTH OF — fu = 270,000 P.S.I.

FOUNDATION DATA:

ABUTMENTS TO BE SUPPORTED ON 12¾" x 0.375" C.I.P. PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 150 TONS PER PILE AT EAST ABUTMENT AND 150 TONS PER PILE AT WEST ABUTMENT AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATE 100 FT. PILE LENGTHS AT THE EAST ABUTMENT AND 95 FT. PILE LENGTHS AT THE WEST ABUTMENT. PREBORING IS REQUIRED AT BOTH ABUTMENTS TO THE BOTTOM OF EXISTING FILL ELEVATION. THE BOTTOM OF EXISTING FILL ELEVATION IS ±866.0.

PIERS TO BE SUPPORTED ON 12¾" x 0.375" C.I.P. PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 200 TONS PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATE 95 FT. PILE LENGTHS AT PIER 1 AND 95 FT. PILE LENGTHS AT PIER 2.

THE FACTORED AXIAL RESISTANCE OF PILES IN COMPRESSION USED FOR DESIGN IS THE REQUIRED DRIVING RESISTANCE MULTIPLIED BY A RESISTANCE FACTOR OF 0.5 USING MODIFIED GATES DYNAMIC FORMULA TO DETERMINE DRIVEN PILE CAPACITY.

LIST OF DRAWINGS

1. GENERAL PLAN
2. CROSS SECTION, QUANTITIES, NOTES
3. CONSTRUCTION STAGING #1
4. CONSTRUCTION STAGING #2
5. SUBSURFACE EXPLORATION
6. ABUTMENT REMOVAL
7. EAST ABUTMENT
8. EAST ABUTMENT DETAILS
9. EAST ABUTMENT REINFORCEMENT
10. WEST ABUTMENT
11. WEST ABUTMENT DETAILS
12. WEST ABUTMENT REINFORCEMENT
13. PIER 1
14. PIER 1 DETAILS
15. PIER 2
16. PIER 2 DETAILS
17. BEAM SEAT DETAILS
18. 28-INCH PRESTRESSED GIRDER
19. 28-INCH PRESTRESSED GIRDER DETAILS
20. INTERMEDIATE STEEL DIAPHRAGM
21. SUPERSTRUCTURE PLAN
22. SUPERSTRUCTURE TYPICAL SECTION
23. DIAPHRAGM REINFORCEMENT AT PIERS
24. DIAPHRAGM REINFORCEMENT AT ABUTMENTS
25. SUPERSTRUCTURE REINFORCEMENT
26. EAST ABUTMENT DIAPHRAGM REPAIR SECTION
27. WEST ABUTMENT DIAPHRAGM REPAIR SECTION
28. SLOPED FACE PARAPET TYPE B REPAIR
29. SUPERSTRUCTURE REPAIR REINFORCEMENT
30. SINGLE SLOPE PARAPET 32SS
31. HMA OVERLAY POLYMER-MODIFIED
32. SLOPE PAVING CRUSHED AGGREGATE

WISCONSIN
JEFFREY J. KOCH
E-28802
PLAIN, WISCONSIN
PROFESSIONAL ENGINEER

9/30/2015

STATE PROJECT NUMBER
1005-10-84

NO.	DATE	REVISION	BY

WESTBROOK Associated Engineers, Inc.
619 EAST HOXIE STREET
P.O. BOX 429
SPRING GREEN, WI 53588
PHONE (608) 588-7866
FAX (608) 588-7954

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher SDR 09/30/15
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-53-73

IH-39/90 'NB' OVER NEWVILLE RD.

COUNTY	TOWN/~~CITY/VILLAGE~~
ROCK	MILTON

DESIGN SPEC. REHABILITATION N/A

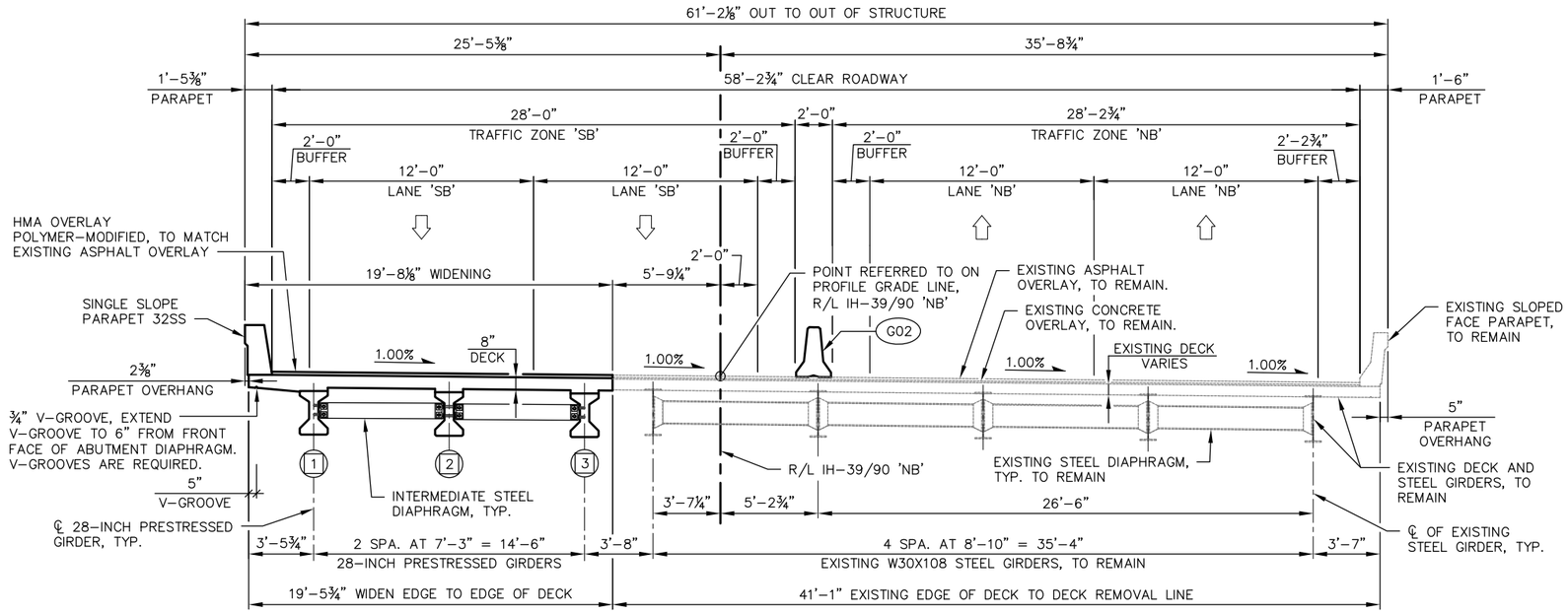
DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
MJW	CDS	MJW	JJK

GENERAL PLAN

SHEET 1 OF 32

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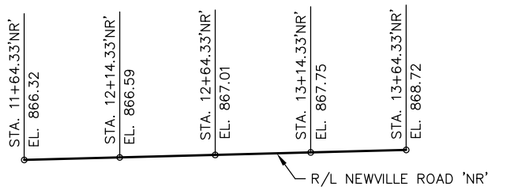
STATE PROJECT NUMBER
1005–10–84



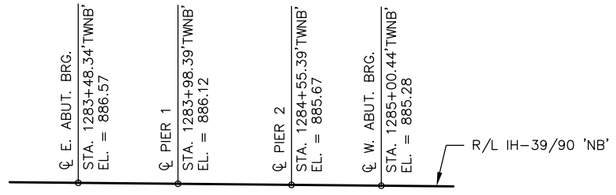
CROSS SECTION THRU ROADWAY IN SPAN
(LOOKING WEST)

(1) GIRDER 1 LINE DESIGNATION
(2) GIRDER 2 LINE DESIGNATION
(3) GIRDER 3 LINE DESIGNATION

(G02) TEMPORARY PRECAST CONCRETE BARRIER, UN–ANCHORED. SEE ROADWAY PLANS FOR QUANTITIES.



PROFILE GRADE LINE, R/L NEWVILLE ROAD 'NR'
(ELEVATIONS BASED ON FIELD SURVEY)



PROFILE GRADE LINE, R/L IH–39/90 'NB'
(ELEVATIONS BASED ON FIELD SURVEY)

TOTAL ESTIMATED QUANTITIES

ITEM NO.	BID ITEMS	UNIT	E. ABUT.	PIER 1	PIER 2	W. ABUT.	SUPER.	TOTALS
203.0200.001	REMOVING OLD STRUCTURE STA. 1284+00'TWNB'	LS	---	---	---	---	---	1
203.0225.S.001	DEBRIS CONTAINMENT B–53–73	LS	---	---	---	---	---	1
206.1000.001	EXCAVATION FOR STRUCTURES BRIDGES B–53–73	LS	---	---	---	---	---	1
210.0100	BACKFILL STRUCTURE	CY	66	---	---	68	---	134
502.0100	CONCRETE MASONRY BRIDGES	CY	26	35	35	27	167	290
502.6102	MASONRY ANCHORS TYPE S 1/2–INCH	EACH	5	---	---	5	---	10
503.0128	PRESTRESSED GIRDER TYPE I 28–INCH	LF	---	---	---	---	---	458
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	1,630	1,710	1,710	1,620	---	6,670
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	990	5,020	5,010	970	31,810	43,800
506.2605	BEARING PADS ELASTOMERIC NON–LAMINATED	EACH	3	6	6	3	---	18
506.4000.001	STEEL DIAPHRAGMS B–53–73	EACH	---	---	---	---	6	6
509.3500.S	HMA OVERLAY POLYMER–MODIFIED	TON	---	---	---	---	43	43
511.1200.001	TEMPORARY SHORING B–53–73	SF	115	335	366	117	---	933
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	9	---	---	9	---	18
550.0010	PRE–BORING UNCONSOLIDATED MATERIALS	LF	60	---	---	55	---	115
550.2126	PILING CIP CONCRETE 12 3/4 X 0.375–INCH	LF	500	950	950	475	---	2,875
604.0500	SLOPE PAVING CRUSHED AGGREGATE	SY	142	---	---	129	---	271
612.0406	PIPE UNDERDRAIN WRAPPED 6–INCH	LF	60	---	---	55	---	115
614.0150	ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	2	---	---	2	---	4
(NON–BID ITEM)	FILLER	SIZE	---	---	---	---	---	½" & ¾"

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

THE FIRST OR FIRST TWO DIGITS OF A FOUR DIGIT BAR MARK SIGNIFIES THE BAR SIZE.

DIMENSIONS AND ELEVATIONS SHOWN ARE BASED ON THE EXISTING ORIGINAL STRUCTURE PLANS AND EXISTING FIELD SURVEY FROM 2015.

THE EXISTING STRUCTURE (B–53–73) IS A THREE SPAN STEEL GIRDER CONCRETE DECK STRUCTURE WITH AN OVERALL LENGTH OF 157'–5¾" AND A CLEAR ROADWAY WIDTH OF 40'–4" TO BE WIDENED TO 58'–2¾". ORIGINAL CONSTRUCTION YEAR IS 1961.

THE SLOPE OF THE FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH SLOPE PAVING MATERIAL TO THE EXTENT SHOWN ON "GENERAL PLAN" SHEET AND "SLOPE PAVING CRUSHED AGGREGATE" SHEET. MATCH EXISTING SLOPES. MATCH EXISTING BERM ELEVATIONS.

THE FINISHED GRADED SECTION SHALL BE THE UPPER LIMITS OF EXCAVATION FOR STRUCTURES.

AT THE BACKFACE OF ABUTMENT ALL VOLUME WHICH CANNOT BE PLACED BEFORE ABUTMENT CONSTRUCTION AND IS NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH STRUCTURE BACKFILL.

THE HAUNCH CONCRETE QUANTITY IS BASED ON THE AVERAGE HAUNCH SHOWN ON THE "28–INCH PRESTRESSED GIRDER DETAILS" SHEET.

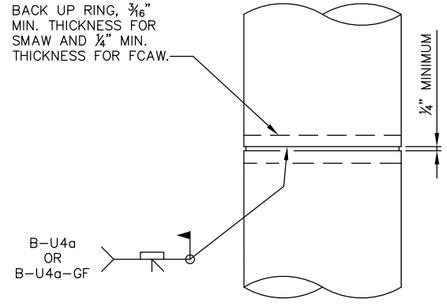
ELASTOMERIC BEARING PADS NEED NOT BE INDIVIDUALLY MOLDED PROVIDED THE CUT EDGES ARE SMOOTH AND TRUE.

CONCRETE FOR ABUTMENT AND PIER DIAPHRAGMS SHALL BE PLACED WITH THE DECK CONCRETE.

BID ITEM "MASONRY ANCHORS TYPE S 1/2–INCH" SHALL BE ADHESIVE ANCHORS WITH THE MANUFACTURER AND PRODUCT NAME ON THE DEPARTMENT'S APPROVED PRODUCT LIST FOR "CONCRETE MASONRY ANCHORS, TYPE L". ANCHORED REINFORCING BAR STEEL SHALL BE PAID FOR SEPARATELY UNDER THE BID ITEM "BAR STEEL REINFORCEMENT HS BRIDGES" AS PROVIDED IN SECTION 505 OF THE STANDARD SPECIFICATIONS FOR BAR STEEL.

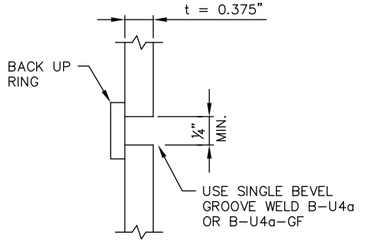
THE GRADATION OF THE STRUCTURAL BACKFILL SHALL MEET THE REQUIREMENTS OF SECTION 209.2.2 OF THE STANDARD SPECIFICATIONS FOR GRADE 1 MATERIAL.

THE QUANTITY FOR BACKFILL STRUCTURE, BID ITEM 210.0100, IS CALCULATED BASED ON THE APPLICABLE FIGURES 12.6–1 AND 12.6–2 IN THE WISCONSIN DEPARTMENT OF TRANSPORTATION BRIDGE MANUAL.



CAST–IN–PLACE 'PIPE PILE'

NOTE: CAST–IN–PLACE PILE SHELL MATERIAL SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATION.



C.I.P. PILE WELD DETAIL

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B–53–73

DRAWN BY MJW | PLANS CK'D JJK

CROSS SECTION, QUANTITIES, NOTES

SHEET 2 OF 32

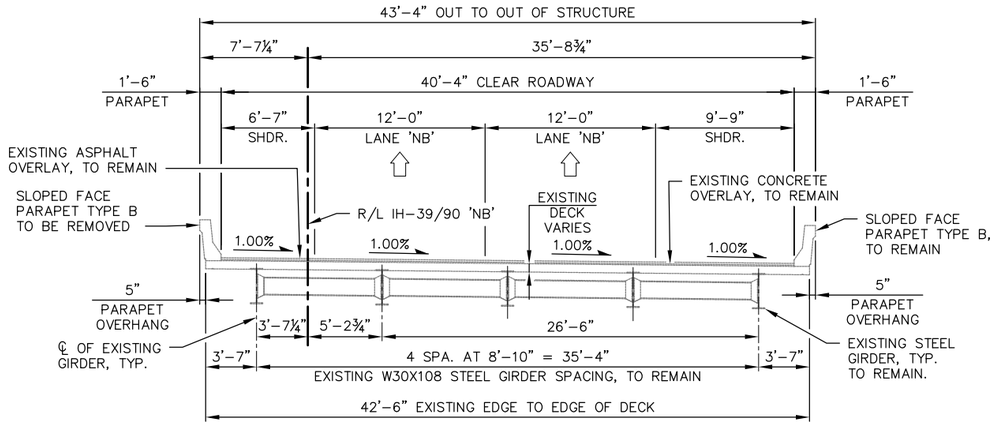
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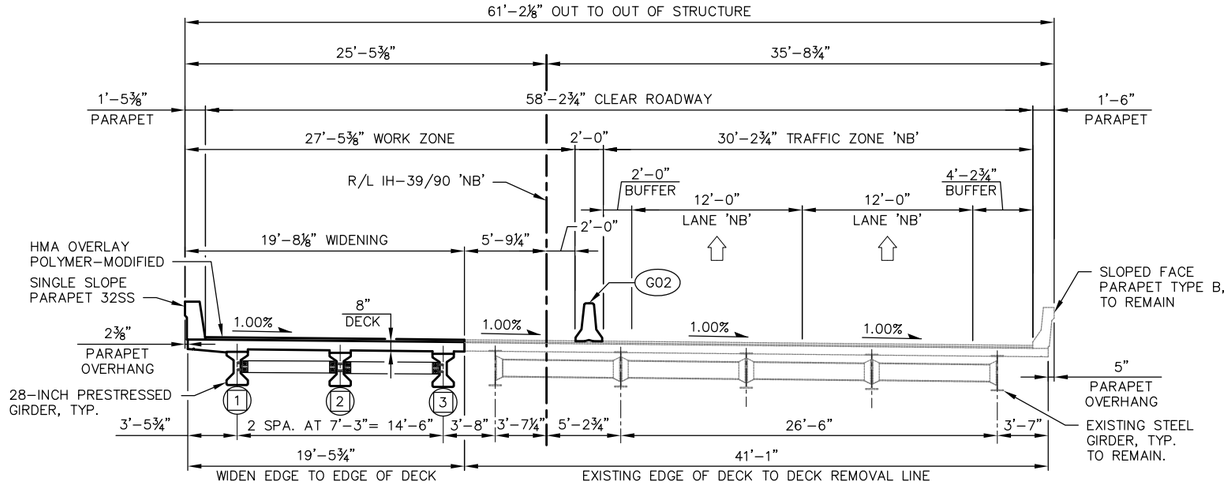
STATE PROJECT NUMBER

1005-10-84



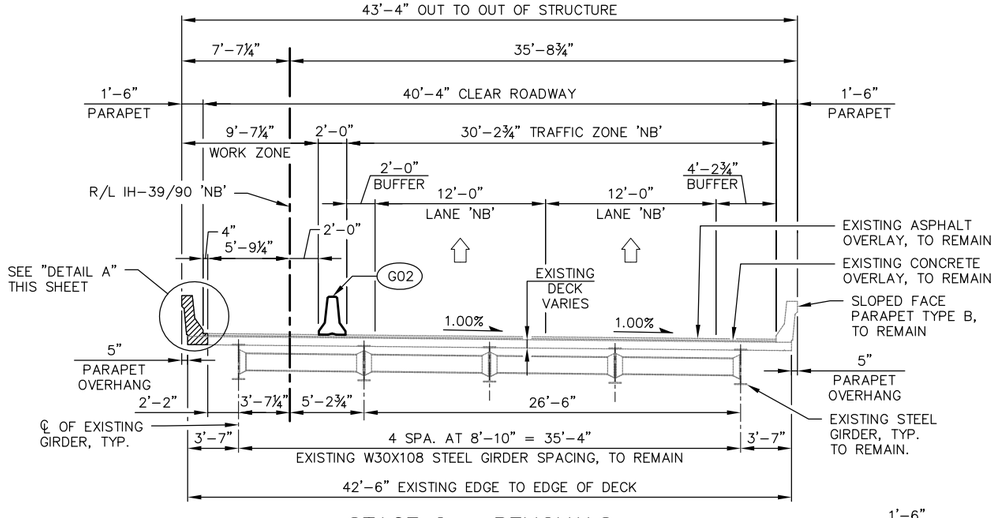
STAGE 1 – EXISTING CROSS SECTION THRU ROADWAY

(LOOKING WEST)



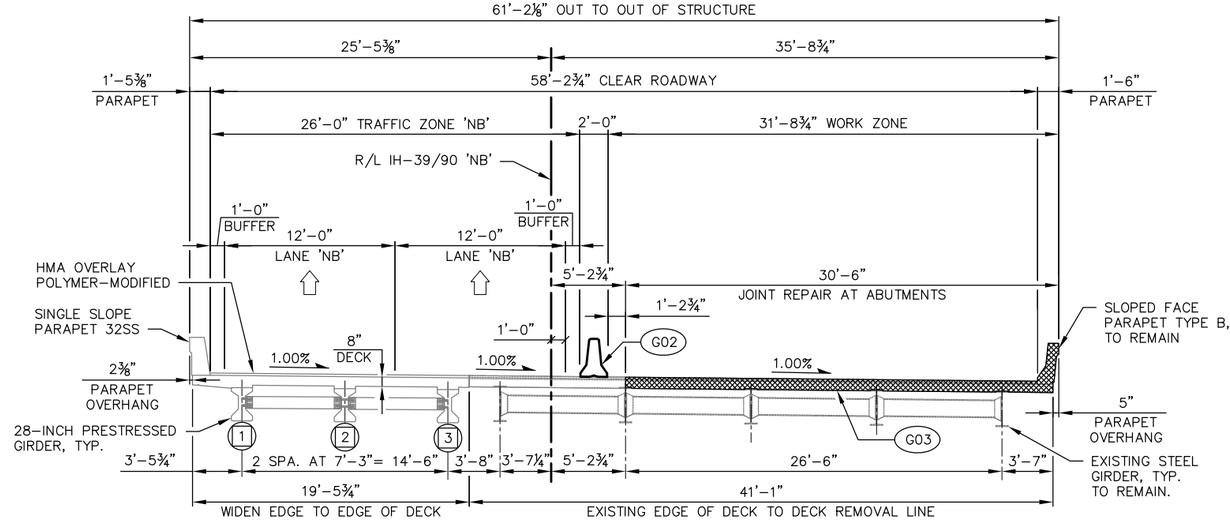
STAGE 2 (CONT'D) – WIDENING TO THE SOUTH

(LOOKING WEST)



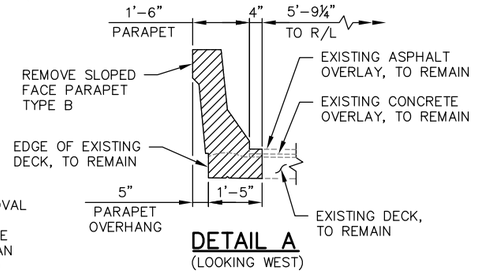
STAGE 2 – REMOVALS

(LOOKING WEST)



STAGE 3 – NORTH SIDE ABUTMENT JOINT REPAIR

(LOOKING WEST)



DETAIL A

(LOOKING WEST)

NOTE
THE CONTRACTOR SHALL SUBMIT A REMOVAL PLAN TO THE ENGINEER PRIOR TO THE REMOVAL OF THE DETAILED PARAPET. THE REMOVAL PLAN SHALL BE STAMPED BY AN ENGINEER REGISTERED IN WISCONSIN AND FAMILIAR WITH THE OVERALL PROJECT.

NOTES

(G02) TEMPORARY PRECAST CONCRETE BARRIER, UN-ANCHORED. SEE ROADWAY PLANS FOR QUANTITIES.

(G03) REMOVE EXISTING DECK, STRIP SEAL/COMPRESSION SEAL AND PAVING BLOCK AT ABUTMENTS AND POUR NEW CONCRETE DIAPHRAGM. SEE ABUTMENT SHEETS FOR DETAILS.

(1) GIRDER 1 LINE DESIGNATION

(2) GIRDER 2 LINE DESIGNATION

(3) GIRDER 3 LINE DESIGNATION

REMOVAL LIMITS

REPAIR LIMITS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-53-73

DRAWN BY MJW | PLANS CK'D JJK

CONSTRUCTION STAGING #1

SHEET 3 OF 32

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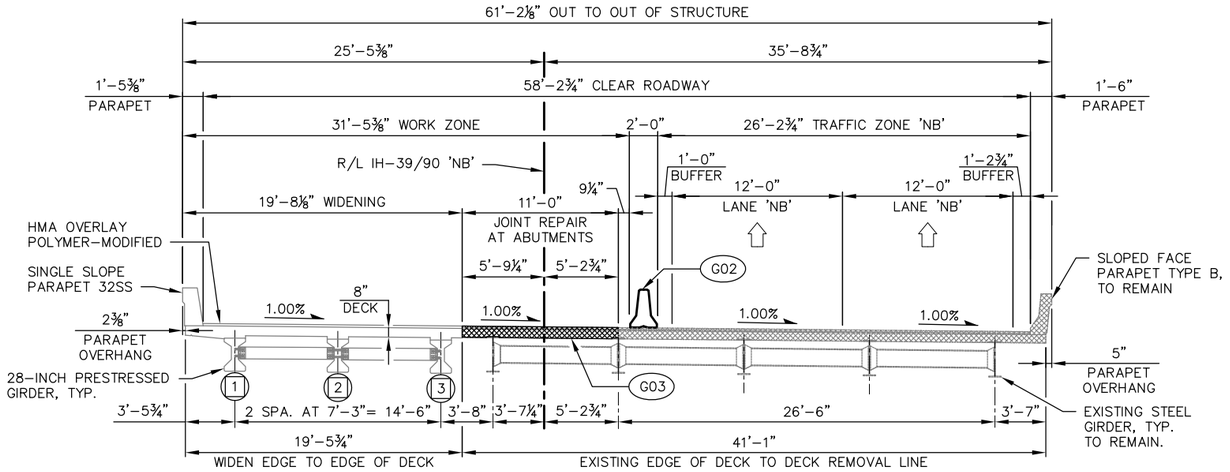
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I.D. 1005-10-84

PLOT DATE: Jul 31, 2015

FILE: 02-04_B530073_gnt.dwg
PLOT SCALE:

STATE PROJECT NUMBER
1005–10–84

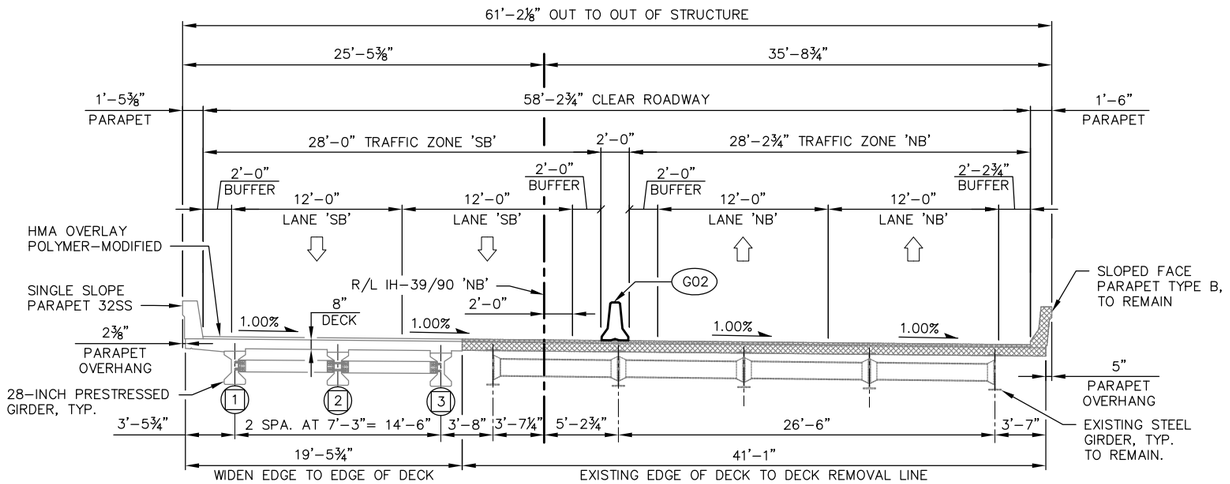


STAGE 4 – SOUTH SIDE ABUTMENT JOINT REPAIR

(LOOKING WEST)

NOTES

- (G02) TEMPORARY PRECAST CONCRETE BARRIER, UN–ANCHORED. SEE ROADWAY PLANS FOR QUANTITIES.
- (G03) REMOVE EXISTING DECK, STRIP SEAL/COMPRESSION SEAL AND PAVING BLOCK AT ABUTMENTS AND POUR NEW CONCRETE DIAPHRAGM. SEE ABUTMENT SHEETS FOR DETAILS.
- (1) GIRDER 1 LINE DESIGNATION
- (2) GIRDER 2 LINE DESIGNATION
- (3) GIRDER 3 LINE DESIGNATION
- REPAIR LIMITS



FINAL LAYOUT

(LOOKING WEST)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B–53–73

DRAWN BY MJW | PLANS CK'D JJK

CONSTRUCTION STAGING #2

SHEET 4 OF 32

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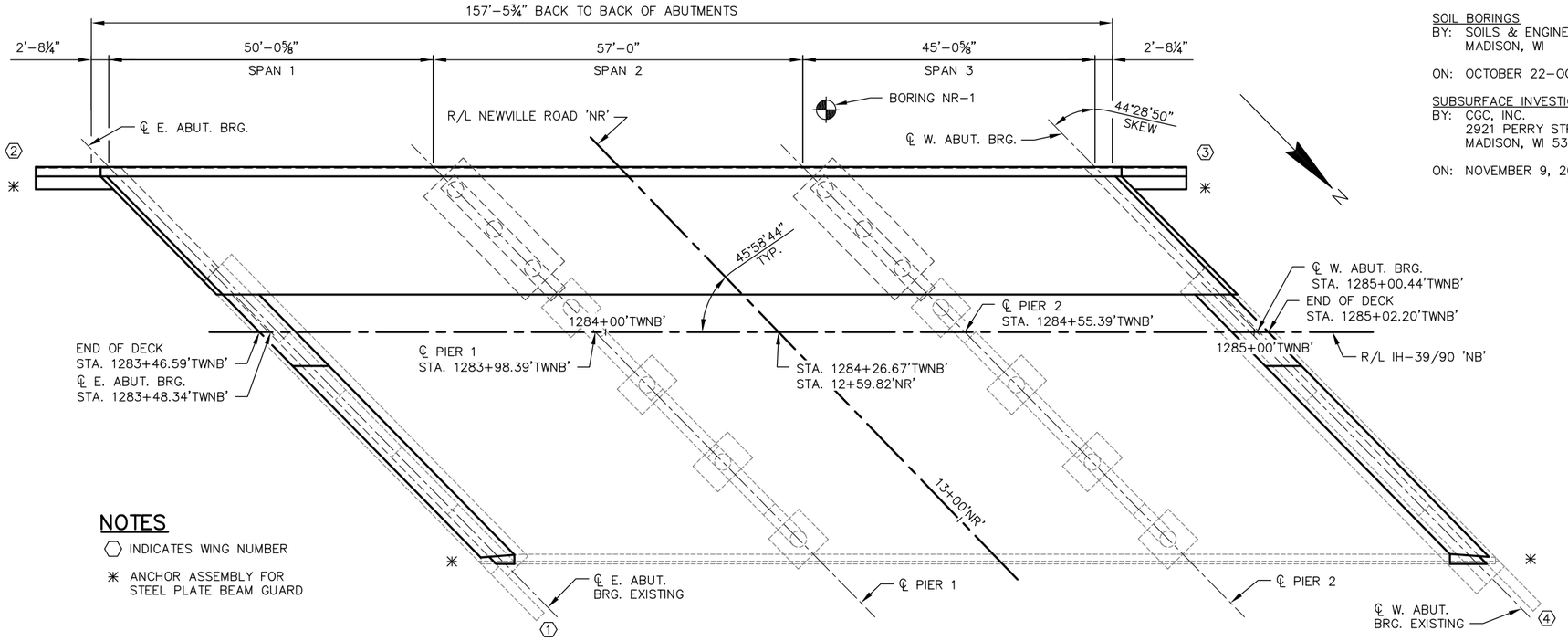
I.D. 1005–10–84

PLOT DATE: Jul 31, 2015

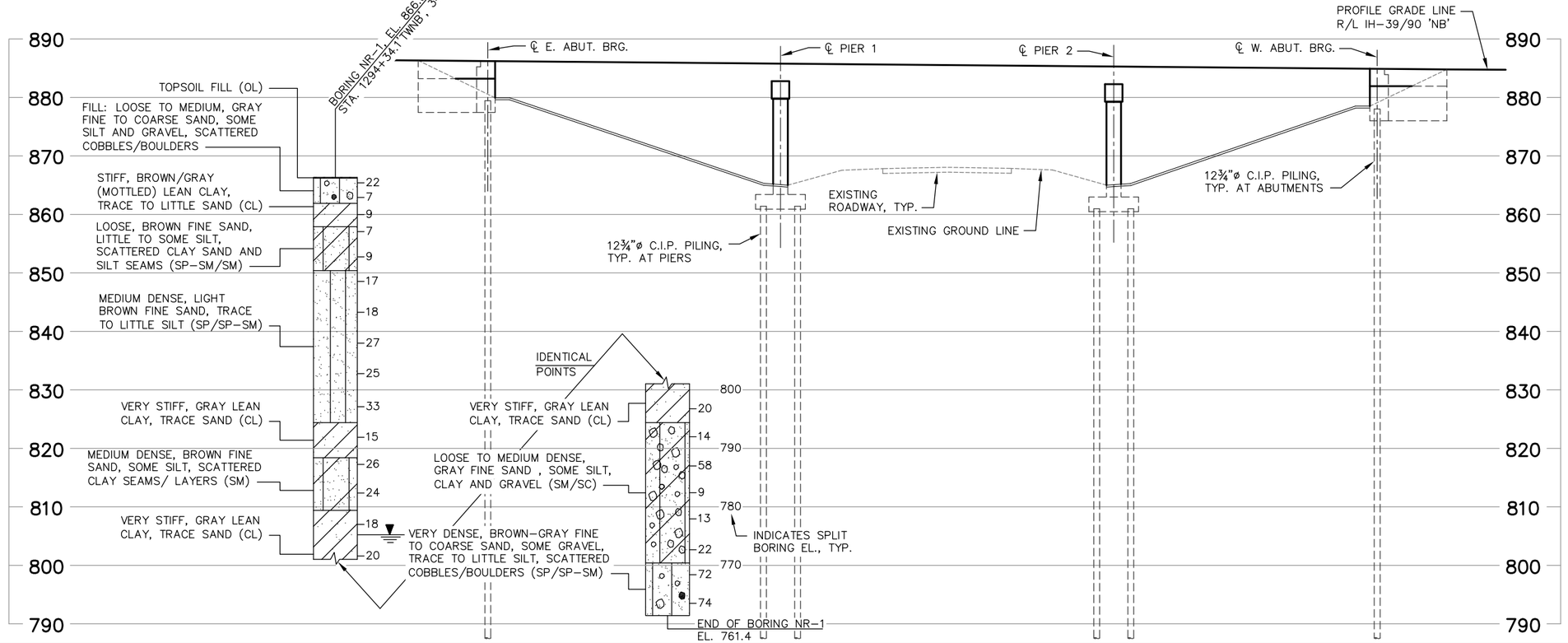
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PLOT SCALE:

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PLAN B-53-73



SOIL BORINGS
BY: SOILS & ENGINEERING SERVICE, INC.
MADISON, WI

ON: OCTOBER 22-OCTOBER 23, 2012

SUBSURFACE INVESTIGATION REPORT
BY: CGC, INC.
2921 PERRY STREET
MADISON, WI 53713

ON: NOVEMBER 9, 2012

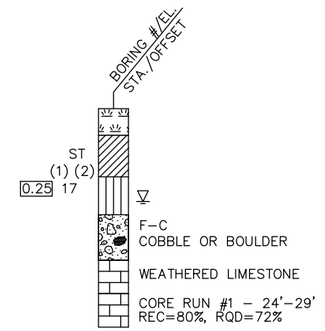
STATE PROJECT NUMBER

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MATERIAL SYMBOLS

ASPHALT	TOPSOIL	PEAT
CONCRETE	FILL	GRAVEL
SAND	CLAY	SILT
BOULDERS OR COBBLES	LIMESTONE	BEDROCK (UNKNOWN)
SHALE	SANDSTONE	IGNEOUS/ META

LEGEND OF BORING



(1) UNCONFINED STRENGTH, AS DETERMINED BY A POCKET PENETROMETER (TSF)

(2) UNLESS OTHERWISE SPECIFIED, THE SPT 'N' VALUE IS BASED ON AASHTO T-206, STANDARD PENETRATION TEST. THE SPT 'N' VALUE PRESENTED HAS NOT BEEN CORRECTED FOR OVERBURDEN PRESSURE OR HAMMER EFFICIENCY.

GROUND WATER ELEVATION

- AT TIME OF DRILLING
- END OF DRILLING
- AFTER DRILLING

ABBREVIATIONS

F-FINE M-MEDIUM C-COARSE ST-SHELBY TUBE

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

BORINGS WERE COMPLETED AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING TO OBTAIN INFORMATION CONCERNING THE CHARACTER OF SUBSURFACE MATERIALS FOUND AT THE SITE. BECAUSE THE INVESTIGATED DEPTHS ARE LIMITED AND THE AREA OF THE BORINGS IS VERY SMALL IN RELATION TO THE ENTIRE SITE, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT SIMILAR SUBSURFACE CONDITIONS BELOW, BETWEEN, OR BEYOND THESE BORINGS. VARIATIONS IN SOIL CONDITIONS SHOULD BE EXPECTED AND FLUCTUATIONS IN GROUNDWATER LEVELS MAY OCCUR.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-53-73

DRAWN BY MJW | PLANS CK'D JJK

SUBSURFACE EXPLORATION

SHEET 5 OF 32

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I.D. 1005-10-84

PLOT DATE: Jul 31, 2015

FILE: 05-B530073_bor.dwg
PLOT SCALE:

8

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STATE PROJECT NUMBER

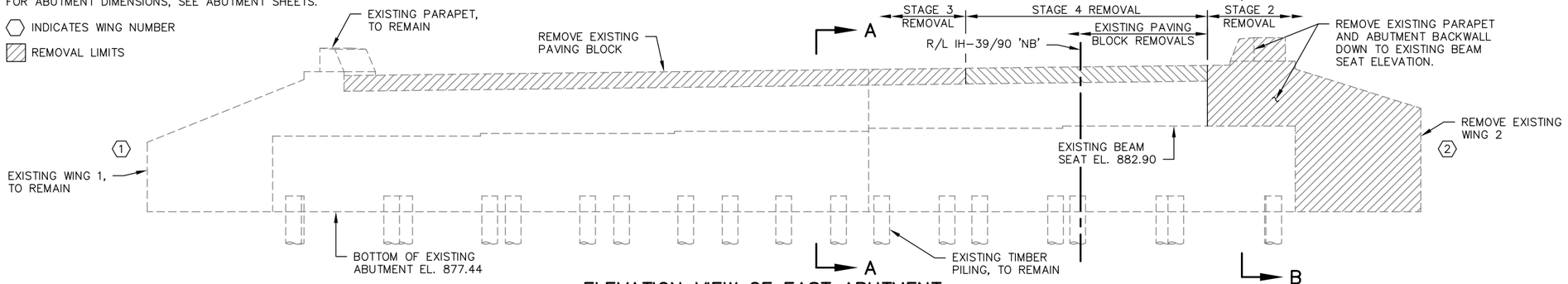
1005-10-84

NOTES

FOR ABUTMENT DIMENSIONS, SEE ABUTMENT SHEETS.

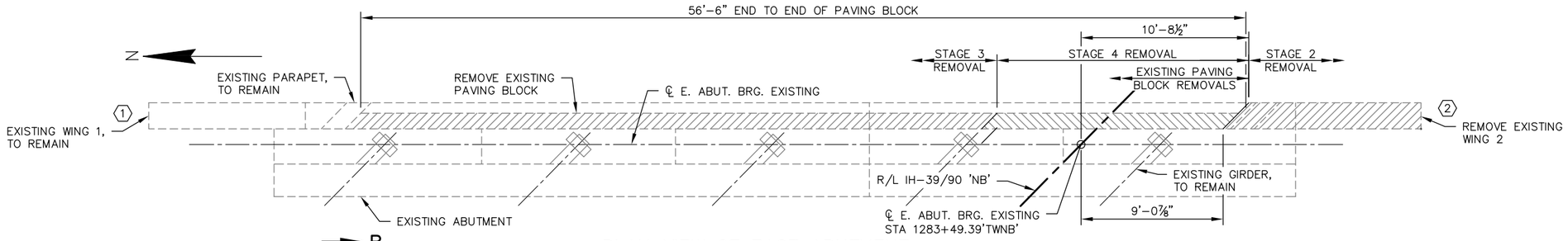
⬡ INDICATES WING NUMBER

▨ REMOVAL LIMITS

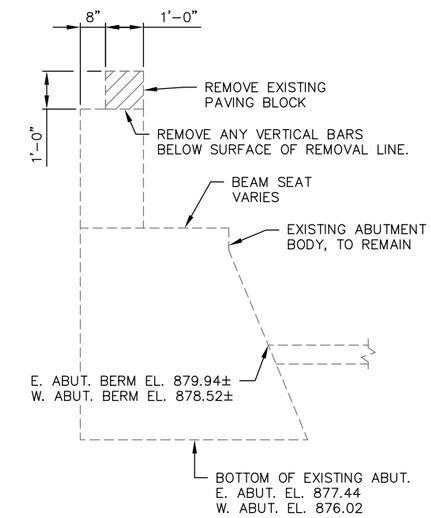


ELEVATION VIEW OF EAST ABUTMENT

(LOOKING EAST)

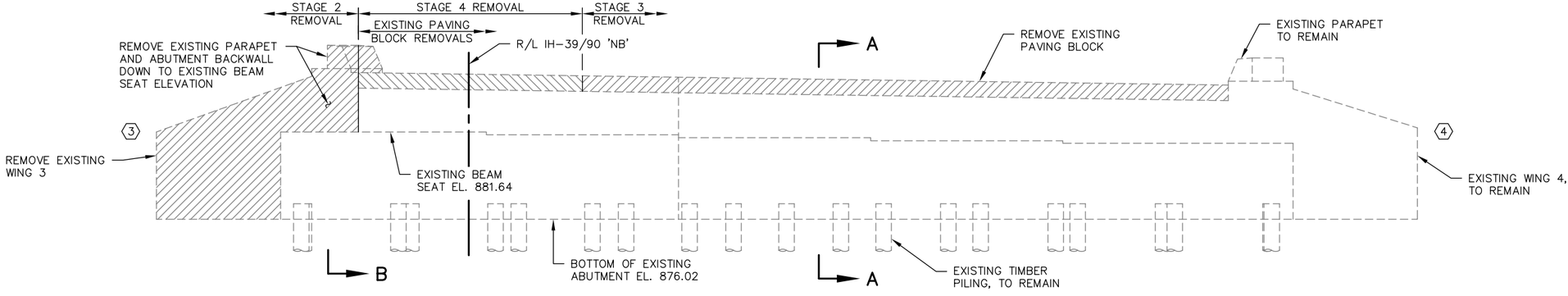


PLAN VIEW OF EAST ABUTMENT



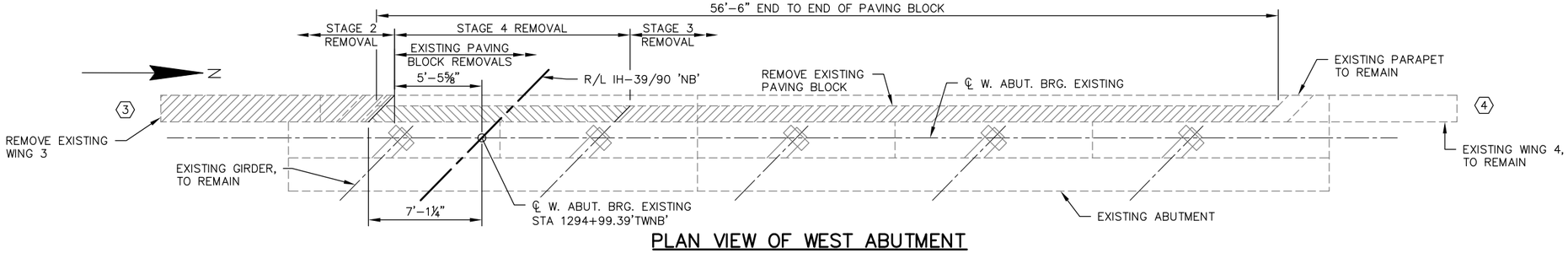
SECTION A-A

(PAVING BLOCK REMOVAL DETAIL)

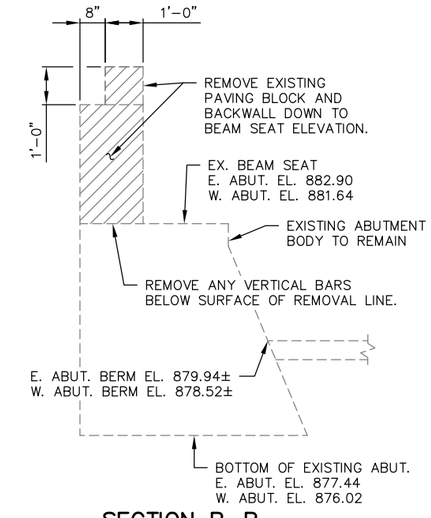


ELEVATION VIEW OF WEST ABUTMENT

(LOOKING WEST)



PLAN VIEW OF WEST ABUTMENT



SECTION B-B

(ABUTMENT BACKWALL REMOVAL DETAIL)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-53-73

DRAWN BY MJW | PLANS CK'D JJK

ABUTMENT REMOVAL

SHEET 6 OF 32

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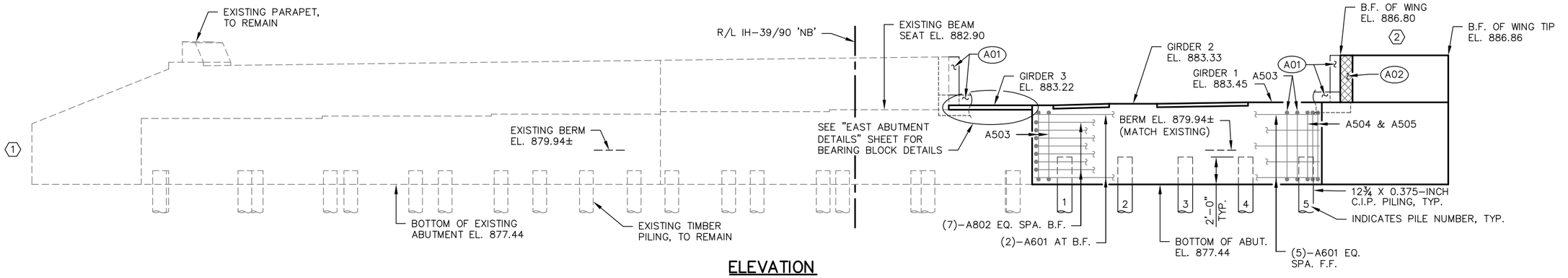
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FILE: 06-12-B530073_abut.dwg
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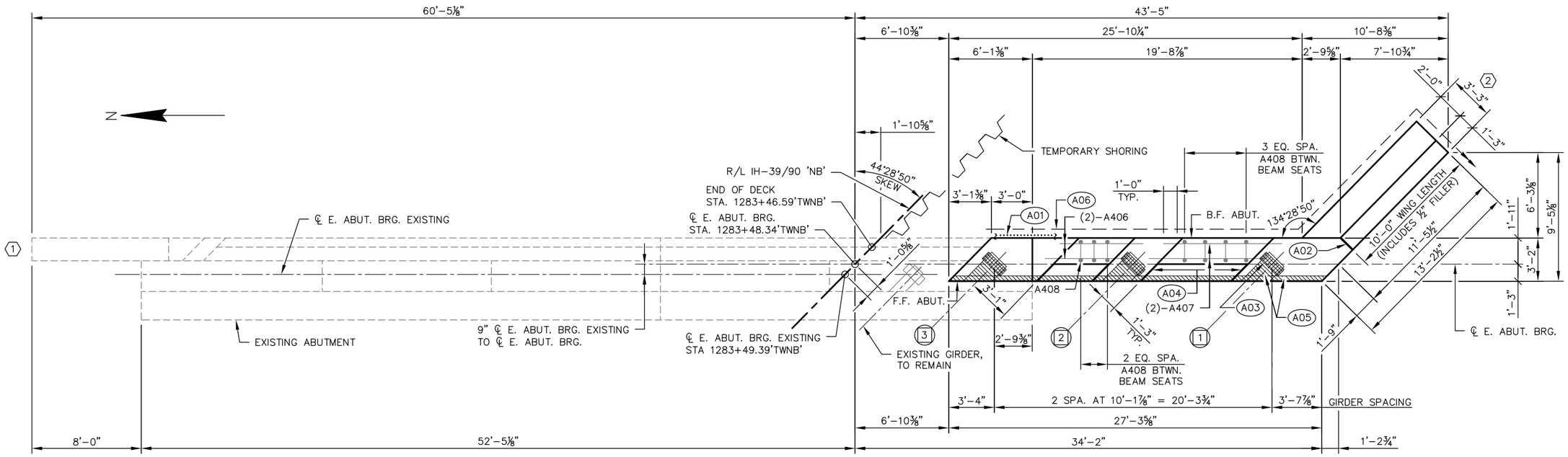
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STATE PROJECT NUMBER
1005–10–84



ELEVATION
(LOOKING EAST)



PLAN

NOTES

FOR TYPICAL SECTION THRU ABUTMENT BODY AND PILE LAYOUT SEE "EAST ABUTMENT DETAILS" SHEET.

EAST ABUTMENT TO BE SUPPORTED ON 12¾" X 0.375–INCH C.I.P. PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 150 TONS PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED 100 FT PILE LENGTHS AT THE EAST ABUTMENT.

SEE "CROSS SECTION, QUANTITIES, NOTES" SHEET FOR CAST–IN–PLACE PILE SPLICE DETAILS.

ROUGHEN CONCRETE ¼" DEEP MINIMUM AT ALL AREAS OF NEW TO EXISTING CONCRETE CONTACT.

(A01) 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACK FACE.

(A02) ½" FILLER–TO EXTEND FROM BRIDGE SEAT TO TOP OF CONCRETE PARAPET.

(A03) ½" X 8" X 1'–10" NON–LAMINATED ELASTOMERIC BEARING PAD, TYP. SEE "BEAM SEAT DETAILS" SHEET.

(A04) ¾" CORK FILLER ON VERTICAL BEAM SEAT FACES THAT RUN PARALLEL WITH GIRDER, TYP.

(A05) ¾" PREFORMED FILLER, TYP. SEE "BEAM SEAT DETAILS" SHEET.

(A06) PIPE UNDERDRAIN WRAPPED (6–INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN AS DETAILED IN "EAST ABUTMENT REINFORCEMENT" SHEET. RODENT SHIELD IS INCLUDED WITH THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6–INCH".

⬡ INDICATES WING NUMBER

◯ INDICATES GIRDER LINE DESIGNATION

F.F. – FRONT FACE
B.F. – BACK FACE

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B–53–73

DRAWN BY MJW | PLANS CK'D JJK

EAST ABUTMENT

SHEET 7 OF 32

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I.D. 1005–10–84

PLOT DATE: Jul 31, 2015

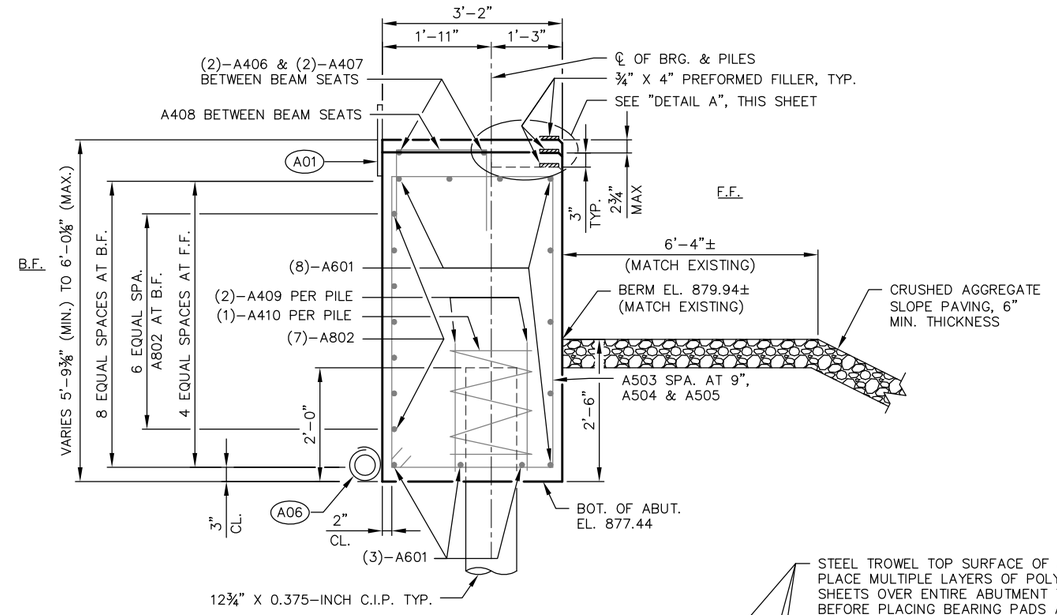
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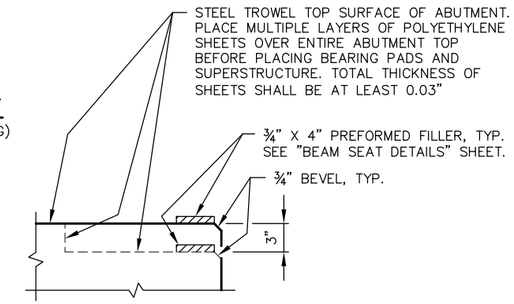
STATE PROJECT NUMBER

1005-10-84

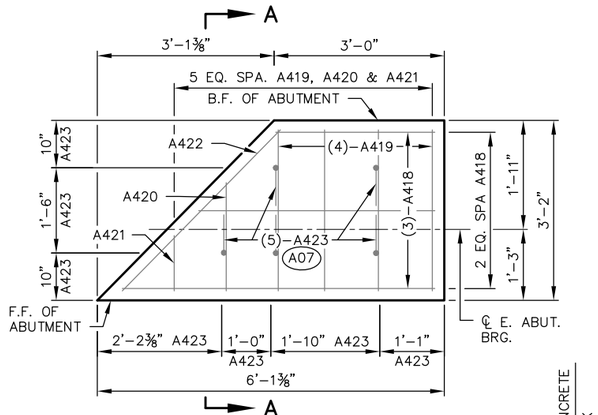


TYPICAL SECTION THRU ABUTMENT

(LOOKING SOUTH, NORMAL TO ℄ EAST ABUTMENT BEARING)

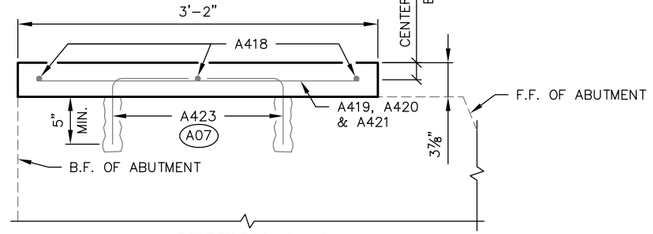


DETAIL A



DETAIL B

(CONCRETE BEARING BLOCK PLAN VIEW)



SECTION A-A

(CROSS SECTION THROUGH CONCRETE BEARING BLOCK, ABUTMENT REINFORCEMENT NOT SHOWN FOR CLARITY)

NOTES

EAST ABUTMENT TO BE SUPPORTED ON 12¾" X 0.375-INCH C.I.P. PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 150 TONS PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED 100 FT PILE LENGTHS AT THE EAST ABUTMENT.

SEE "CROSS SECTION, QUANTITIES, NOTES" SHEET FOR C.I.P. PILE SPLICE DETAILS.

ROUGHEN CONCRETE ¼" DEEP MINIMUM AT ALL AREAS OF NEW TO EXISTING CONCRETE CONTACT.

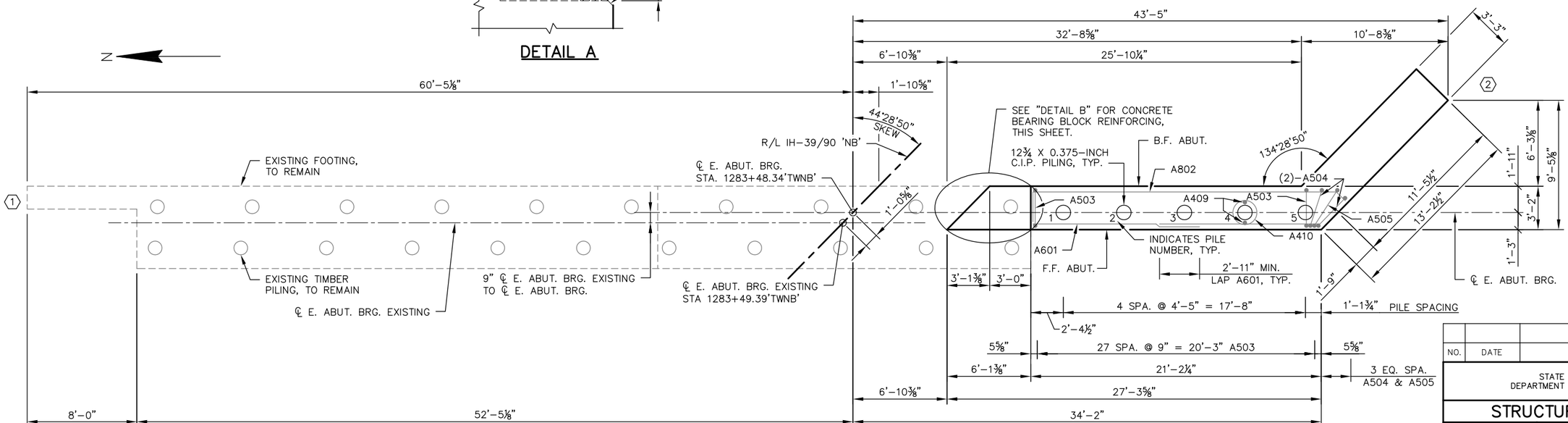
⬡ INDICATES WING NUMBER

(A01) 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACK FACE.

(A06) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN AS DETAILED IN "EAST ABUTMENT REINFORCEMENT" SHEET. RODENT SHIELD IS INCLUDED WITH THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".

(A07) MASONRY ANCHORS A423 TYPE S 1/2-INCH. EMBED A MINIMUM OF 5" INTO EXISTING DECK CONCRETE. ANCHORS SHALL BE APPROVED FOR USE IN CRACKED CONCRETE.

F.F. – FRONT FACE
B.F. – BACK FACE



PILE LAYOUT

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-53-73

DRAWN BY MJW | PLANS CK'D JJK

EAST ABUTMENT DETAILS

SHEET 8 OF 32

147

8

8

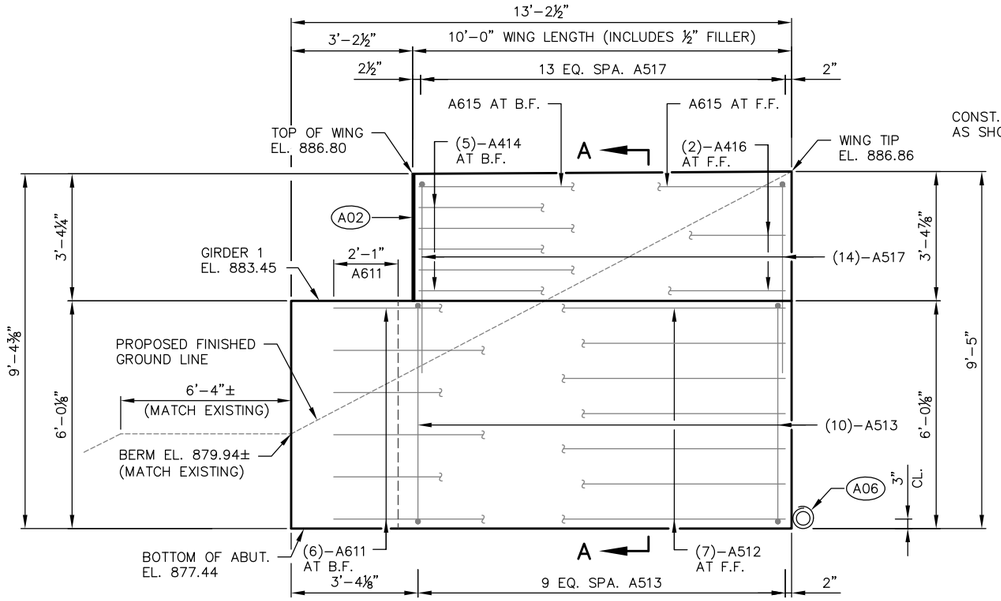
I.D. 1005-10-84

PLOT DATE: Jul 31, 2015

FILE: 06-12-B5300073_abut.dwg
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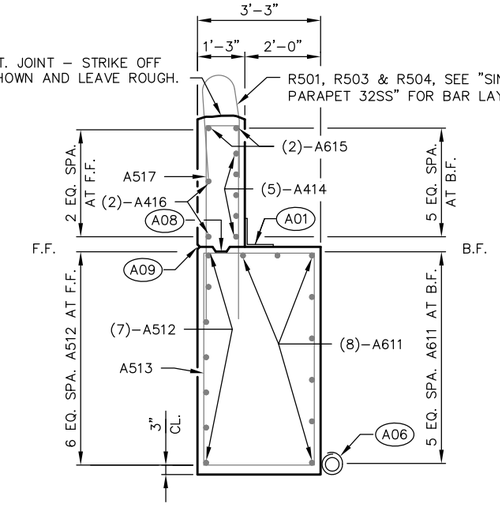
STATE PROJECT NUMBER

1005-10-84



WING 2 ELEVATION

(LOOKING NORTH, FRONT FACE OF WING)
(ABUTMENT STEEL NOT SHOWN FOR CLARITY)



SECTION A-A THRU WING

(LOOKING WEST, NORMAL TO WING)

BILL OF BARS
EAST ABUTMENT

COATED = 680 LBS.
UNCOATED = 1,630 LBS.

MARK	NUMBER COATED	NUMBER UNCOATED	LENGTH	BENT	BAR SERIES	LOCATION	
A601		22	13'-4"			BODY – F.F. & TOP & BOTTOM	HORIZ.
A802		7	25'-8"	X		BODY – B.F.	HORIZ.
A503		28	16'-6"	X		BODY – STIRRUP	VERT.
A504		2	16'-8"	X		BODY – STIRRUP (S. END)	VERT.
A505		1	17'-2"	X		BODY – STIRRUP (S. END)	VERT.
A406		2	6'-1"			BODY – TOP	HORIZ.
A407		2	8'-8"			BODY – TOP	HORIZ.
A408		7	4'-5"	X		BODY – TOP	VERT.
A409		10	2'-3"			BODY – BOTTOM AT PILES	VERT.
A410		5	28'-0"	X		BODY – BOTTOM AT PILES	HORIZ.
A611	8		13'-9"			WING 2 – B.F.	HORIZ.
A512	7		12'-10"			WING 2 – F.F.	HORIZ.
A513	10		17'-8"	X		WING 2 – STIRRUP	VERT.
A414	5		9'-7"			WING 2 – STEM B.F.	HORIZ.
A615	2		9'-7"			WING 2 – STEM TOP	HORIZ.
A416	2		9'-7"			WING 2 – STEM F.F.	HORIZ.
A517	14		11'-2"	X		WING 2 – STEM STIRRUP	VERT.
A418		3	4'-2"		⚠	CONCRETE BEARING BLOCK	HORIZ.
A419		4	2'-10"			CONCRETE BEARING BLOCK	HORIZ.
A420		1	1'-10"			CONCRETE BEARING BLOCK	HORIZ.
A421		1	0'-11"			CONCRETE BEARING BLOCK	HORIZ.
A422		1	3'-11"			CONCRETE BEARING BLOCK	HORIZ.
(A07) A423		5	1'-2"	X		CONCRETE BEARING BLOCK	VERT.

THE FIRST DIGIT OF A BAR MARK SIGNIFIES THE BAR SIZE.

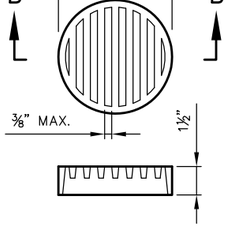
ALL BAR BEND DIMENSIONS ARE OUT TO OUT OF BAR.

⚠ LENGTH SHOWN FOR BARS IN SERIES IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.

BAR SERIES TABLE

MARK	NO. REQ'D	LENGTH
A418	1 SERIES OF 3	2'-9" TO 5'-6"

BUNDLE AND TAG EACH SERIES SEPARATELY.



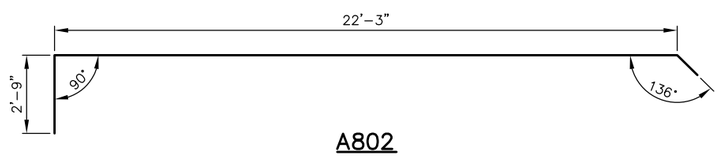
SECTION B-B

* DIMENSIONS ARE APPROXIMATE, THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING. ORIENT SHIELD SO SLOTS ARE VERTICAL.

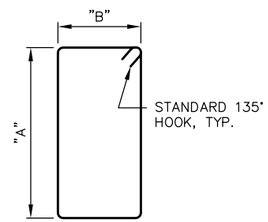
THE RODENT SHIELD SHALL BE A PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALLY AVAILABLE AS A FLOOR STRAINER. A PIPE COUPLING IS REQUIRED FOR THE ATTACHMENT OF THIS SHIELD TO THE EXPOSED END OF THE PIPE UNDERDRAIN. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X 1-INCH STAINLESS STEEL SHEET METAL SCREWS.

THE RODENT SHIELD, PIPE COUPLING AND SCREWS SHALL BE INCLUDED WITH THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".

RODENT SHIELD



A802



A503, A504, A505 & A513

BAR BEND DIM.

MARK	"A"	"B"
A503	5'-1"	2'-10"
A504	5'-1"	2'-11"
A505	5'-1"	3'-2"
A513	5'-7"	2'-11"

LEGEND

F.F. = FRONT FACE
B.F. = BACK FACE

(A01) 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACK FACE.

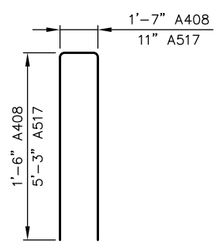
(A02) ½" FILLER-TO EXTEND FROM BRIDGE SEAT TO TOP OF CONCRETE PARAPET.

(A06) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN AS DETAILED ON THIS SHEET. RODENT SHIELD IS INCLUDED WITH THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".

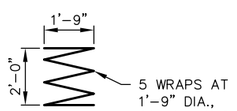
(A07) MASONRY ANCHORS A423 TYPE S 1/2-INCH. EMBED A MINIMUM OF 5" INTO EXISTING DECK CONCRETE. ANCHORS SHALL BE APPROVED FOR USE IN CRACKED CONCRETE.

(A08) OPTIONAL CONSTRUCTION JOINT FORMED BY BEVELED 2" X 6" KEYWAY.

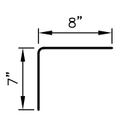
(A09) ¾" "V" GROOVE ON FRONT FACE OF WINGWALL.



A408 & A517



A410



A423

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-53-73

DRAWN BY MJW | PLANS CK'D JJK

EAST ABUTMENT REINFORCEMENT

SHEET 9 OF 32

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I.D. 1005-10-84

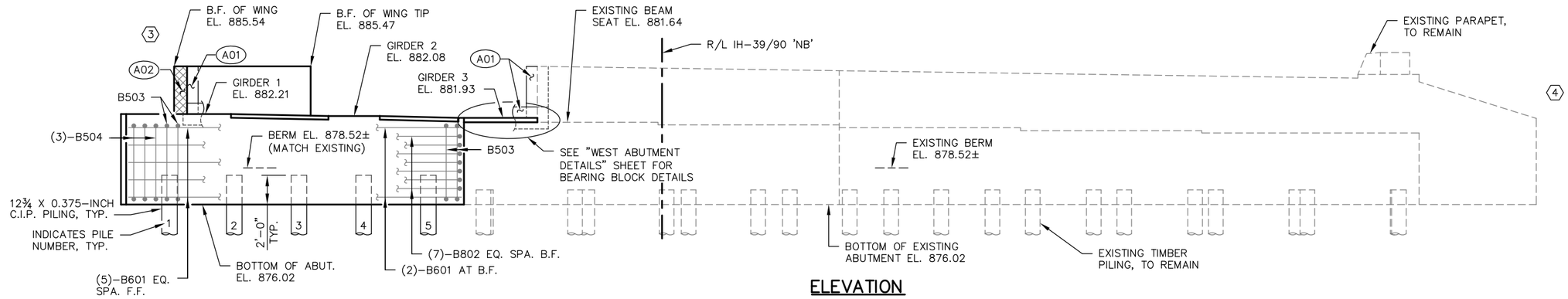
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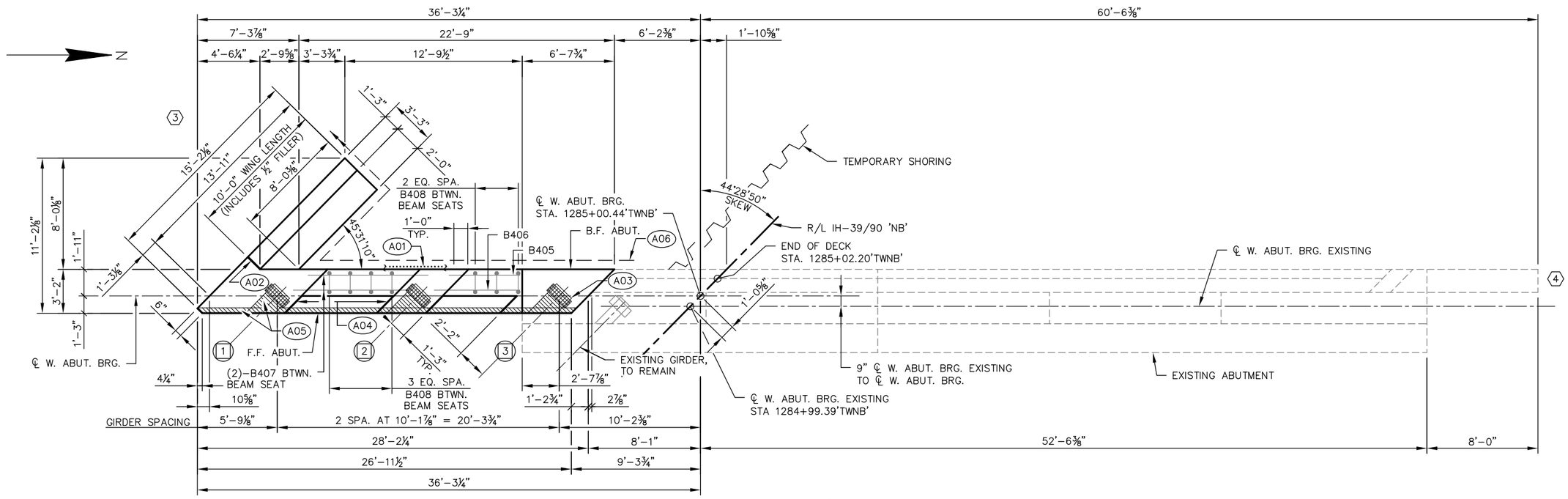
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8

STATE PROJECT NUMBER
1005–10–84



ELEVATION
(LOOKING WEST)



PLAN

NOTES

FOR TYPICAL SECTION THRU ABUTMENT BODY AND PILE LAYOUT SEE "WEST ABUTMENT DETAILS" SHEET.

WEST ABUTMENT TO BE SUPPORTED ON 12¾" X 0.375–INCH C.I.P. PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 150 TONS PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED 95 FT PILE LENGTHS AT THE WEST ABUTMENT.

SEE "CROSS SECTION, QUANTITIES, NOTES" SHEET FOR C.I.P. PILE SPLICE DETAILS.

ROUGHEN CONCRETE ¼" DEEP MINIMUM AT ALL AREAS OF NEW TO EXISTING CONCRETE CONTACT.

(A01) 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACK FACE.

(A02) ½" FILLER–TO EXTEND FROM BRIDGE SEAT TO TOP OF CONCRETE PARAPET.

(A03) ½" X 8" X 1'–10" NON–LAMINATED ELASTOMERIC BEARING PAD, TYP. SEE "BEAM SEAT DETAILS" SHEET.

(A04) ¾" CORK FILLER ON VERTICAL BEAM SEAT FACES THAT RUN PARALLEL WITH GIRDER, TYP.

(A05) ¾" PREFORMED FILLER, TYP. SEE "BEAM SEAT DETAILS" SHEET.

(A06) PIPE UNDERDRAIN WRAPPED (6–INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN AS DETAILED IN "EAST ABUTMENT REINFORCEMENT" SHEET. RODENT SHIELD IS INCLUDED WITH THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6–INCH".

⬡ INDICATES WING NUMBER

⬭ INDICATES GIRDER LINE DESIGNATION

F.F. – FRONT FACE
B.F. – BACK FACE

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B–53–73

DRAWN BY MJW | PLANS CK'D JJK

WEST ABUTMENT

SHEET 10 OF 32

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I.D. 1005–10–84

PLOT DATE: Jul 31, 2015

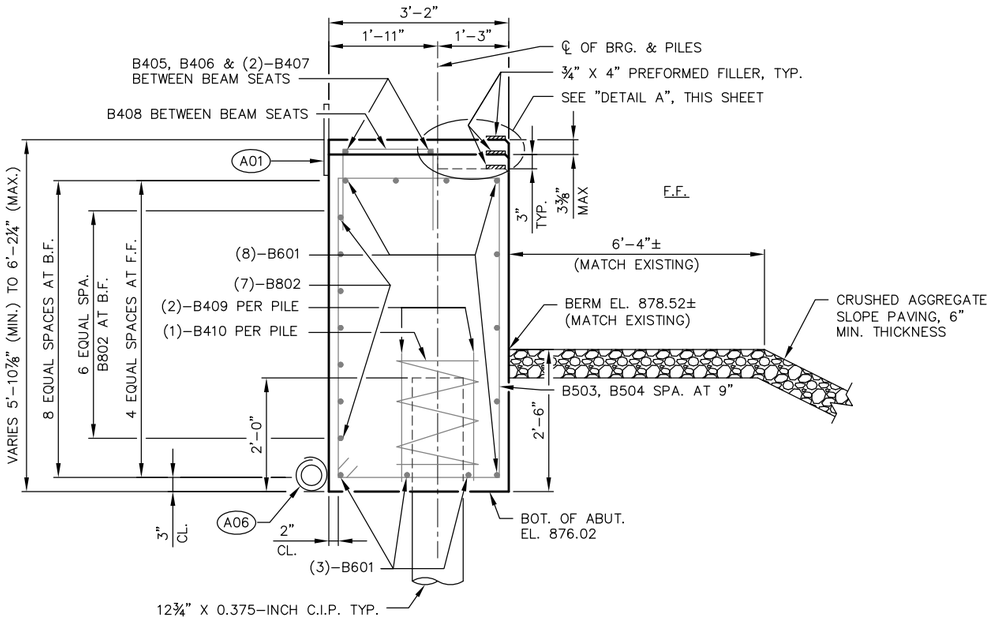
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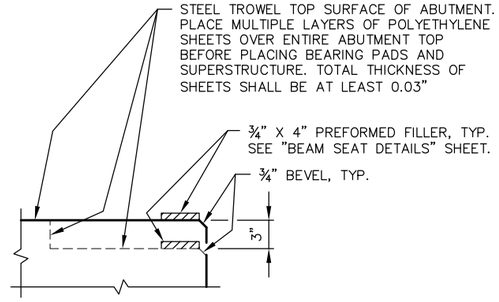
STATE PROJECT NUMBER

1005-10-84

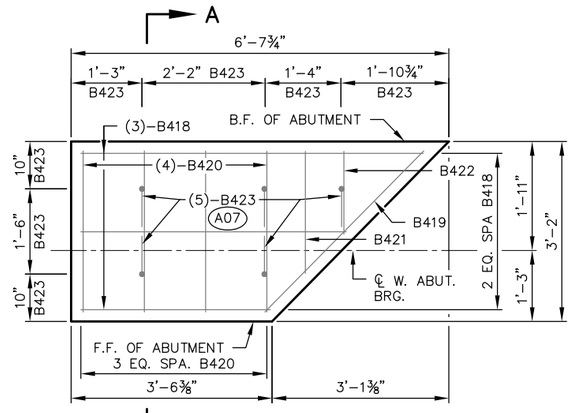


TYPICAL SECTION THRU ABUTMENT

(LOOKING NORTH, NORMAL TO ℄ WEST ABUTMENT BEARING)

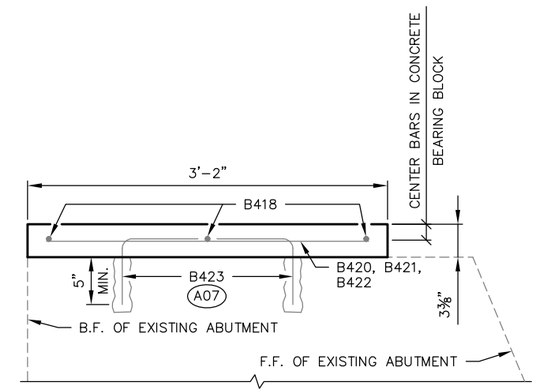


DETAIL A



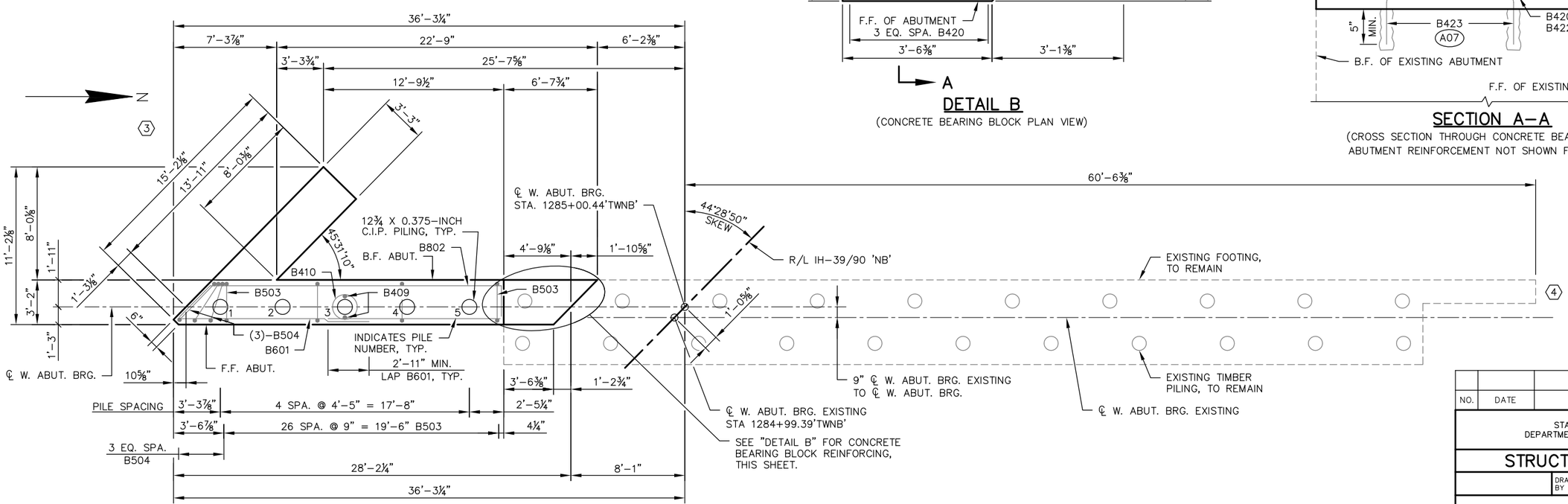
DETAIL B

(CONCRETE BEARING BLOCK PLAN VIEW)



SECTION A-A

(CROSS SECTION THROUGH CONCRETE BEARING BLOCK, ABUTMENT REINFORCEMENT NOT SHOWN FOR CLARITY)



PILE LAYOUT

NOTES

WEST ABUTMENT TO BE SUPPORTED ON 12¾" X 0.375-INCH C.I.P. PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 150 TONS PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED 95 FT PILE LENGTHS AT THE WEST ABUTMENT.

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F.F. - FRONT FACE
B.F. - BACK FACE

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-53-73

DRAWN BY MJW | PLANS CK'D JJK

WEST ABUTMENT DETAILS

SHEET 11 OF 32

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I.D. 1005-10-84

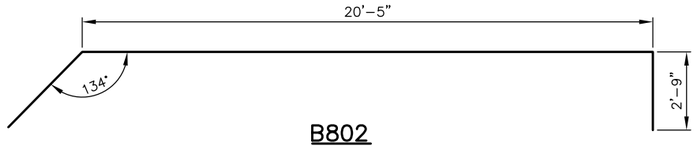
PLOT DATE: Jul 31, 2015

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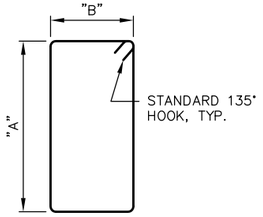
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STATE PROJECT NUMBER
1005–10–84



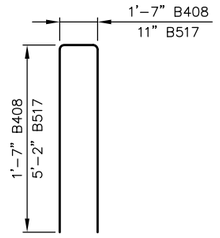
B802



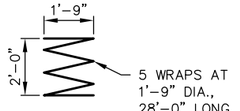
B503, B504 & B513

BAR BEND DIM.

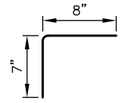
MARK	"A"	"B"
B503	5'–2"	2'–10"
B504	5'–2"	VARIES 2'–11" TO 3'–8"
B513	5'–9"	2'–11"



B408 & B517



B410



B423

BAR SERIES TABLE

MARK	NO. REQ'D	LENGTH
B504	1 SERIES OF 3	16'–10" TO 18'–4"
B418	1 SERIES OF 3	3'–3" TO 6'–1"

BUNDLE AND TAG EACH SERIES SEPARATELY.

BILL OF BARS
WEST ABUTMENT

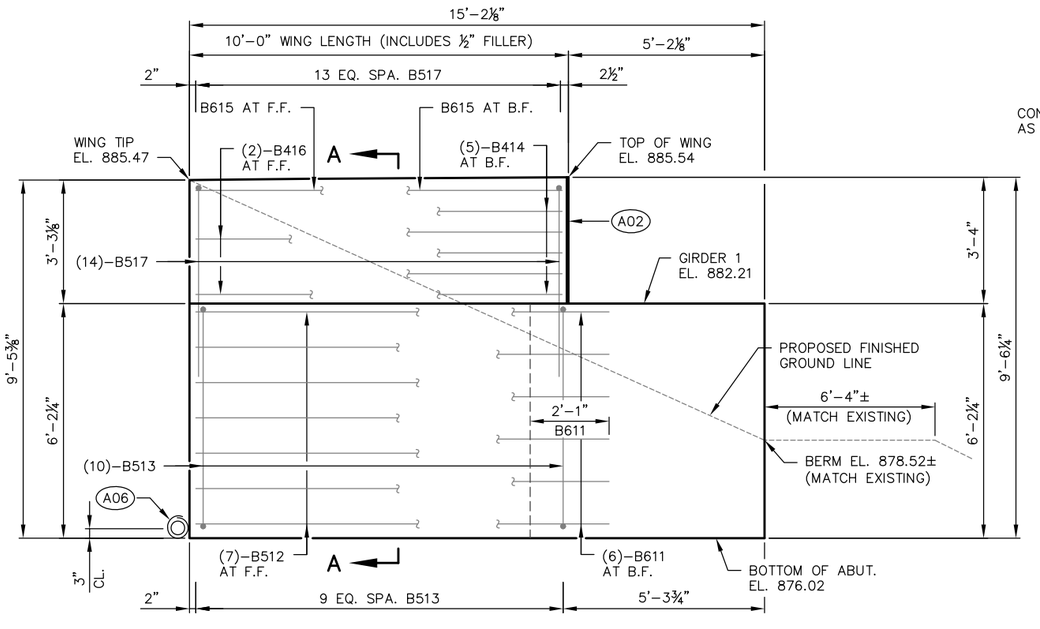
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	B504		3	17'–7"	X	⚠	BODY – STIRRUP (S. END)	VERT.
	B405		1	5'–2"			BODY – TOP	HORIZ.
	B406		1	6'–2"			BODY – TOP	HORIZ.
	B407		2	8'–8"			BODY – TOP	HORIZ.
	B408		7	4'–7"	X		BODY – TOP	VERT.
	B409		10	2'–3"			BODY – BOTTOM AT PILES	VERT.
	B410		5	28'–0"	X		BODY – BOTTOM AT PILES	HORIZ.
	B611	8		10'–2"			WING 3 – B.F.	HORIZ.
	B512	7		14'–10"			WING 3 – F.F.	HORIZ.
	B513	10		18'–0"	X		WING 3 – STIRRUP	VERT.
	B414	5		9'–7"			WING 3 – STEM B.F.	HORIZ.
	B615	2		9'–7"			WING 3 – STEM TOP	HORIZ.
	B416	2		9'–7"			WING 3 – STEM F.F.	HORIZ.
	B517	14		11'–0"	X		WING 3 – STEM STIRRUP	VERT.
	B418		3	4'–8"		⚠	CONCRETE BEARING BLOCK	HORIZ.
	B419		1	3'–11"			CONCRETE BEARING BLOCK	HORIZ.
	B420		4	2'–10"			CONCRETE BEARING BLOCK	HORIZ.
	B421		1	2'–1"			CONCRETE BEARING BLOCK	HORIZ.
	B422		1	1'–5"			CONCRETE BEARING BLOCK	HORIZ.
A07	B423		5	1'–2"	X		CONCRETE BEARING BLOCK	VERT.

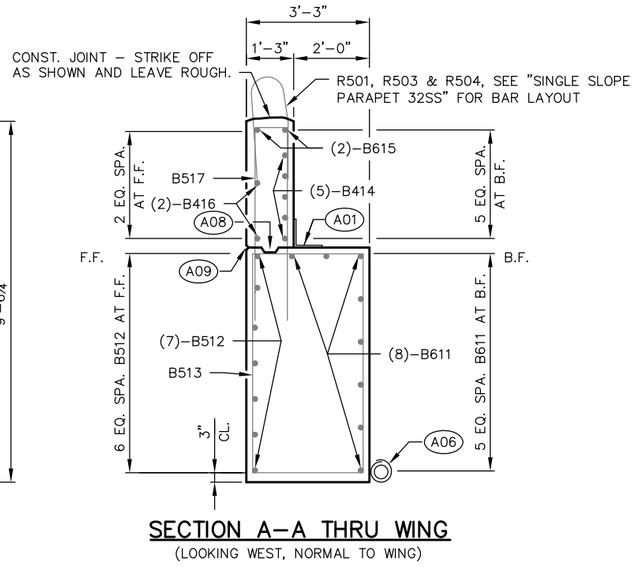
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ALL BAR BEND DIMENSIONS ARE OUT TO OUT OF BAR.

⚠ LENGTH SHOWN FOR BARS IN SERIES IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.



WING 3 ELEVATION
(LOOKING NORTH, FRONT FACE OF WING)
(ABUTMENT STEEL NOT SHOWN FOR CLARITY)



SECTION A–A THRU WING
(LOOKING WEST, NORMAL TO WING)

LEGEND

(A01) 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACK FACE.

(A02) ½" FILLER–TO EXTEND FROM BRIDGE SEAT TO TOP OF CONCRETE PARAPET.

(A06) PIPE UNDERDRAIN WRAPPED (6–INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN AS DETAILED IN "EAST ABUTMENT REINFORCEMENT" SHEET. RODENT SHIELD IS INCLUDED WITH THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6–INCH".

(A07) MASONRY ANCHORS B423 TYPE S 1/2–INCH. EMBED A MINIMUM OF 5" INTO EXISTING DECK CONCRETE. ANCHORS SHALL BE APPROVED FOR USE IN CRACKED CONCRETE.

(A08) OPTIONAL CONSTRUCTION JOINT FORMED BY BEVELED 2" X 6" KEYWAY.

(A09) ¾" "V" GROOVE ON FRONT FACE OF WINGWALL.

F.F. = FRONT FACE
B.F. = BACK FACE

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B–53–73

DRAWN BY MJW | PLANS CK'D JJK

WEST ABUTMENT REINFORCEMENT

SHEET 12 OF 32

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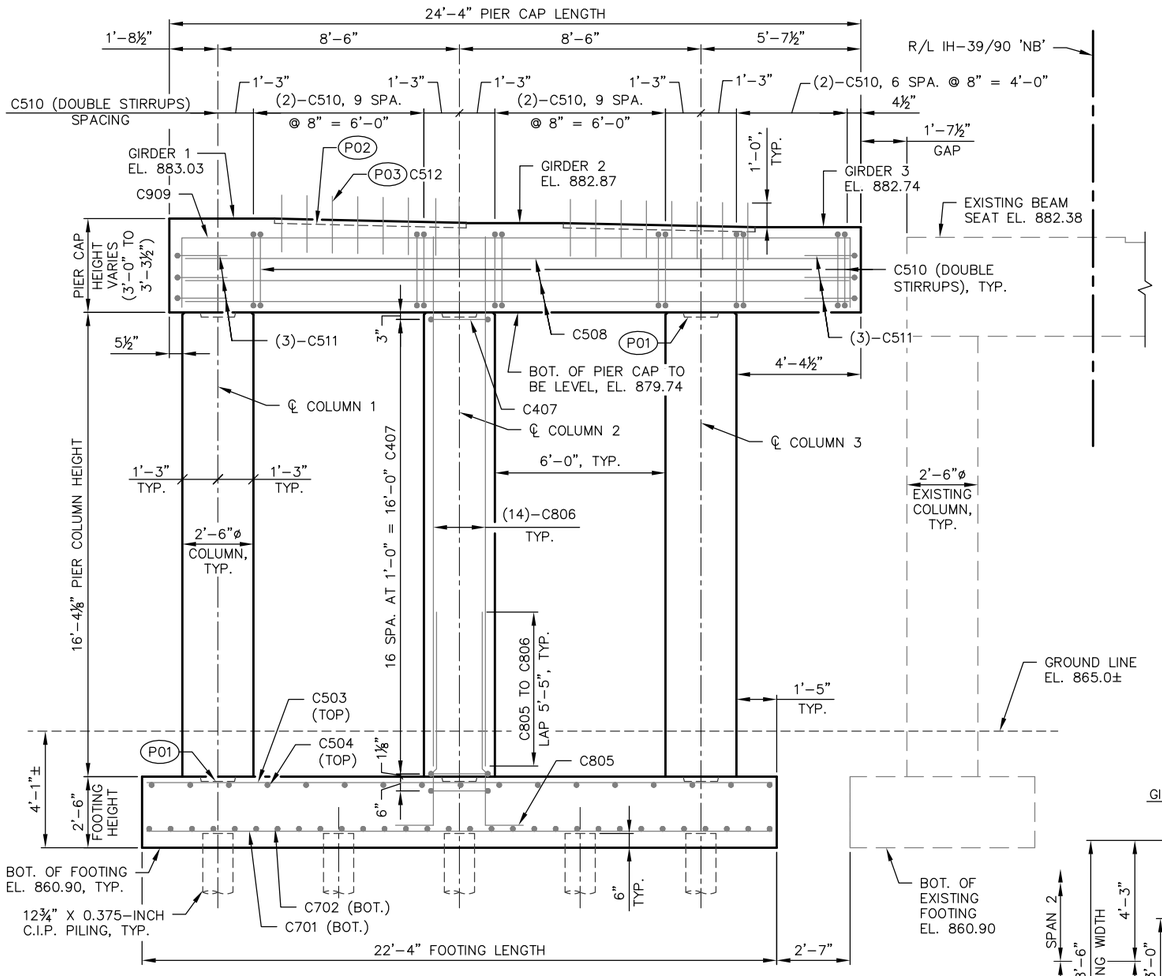
I.D. 1005–10–84

PLOT DATE: Jul 31, 2015

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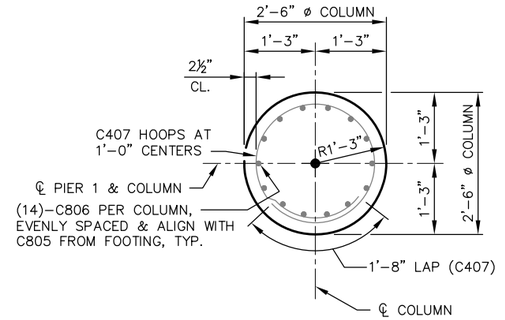
STATE PROJECT NUMBER

1005-10-84

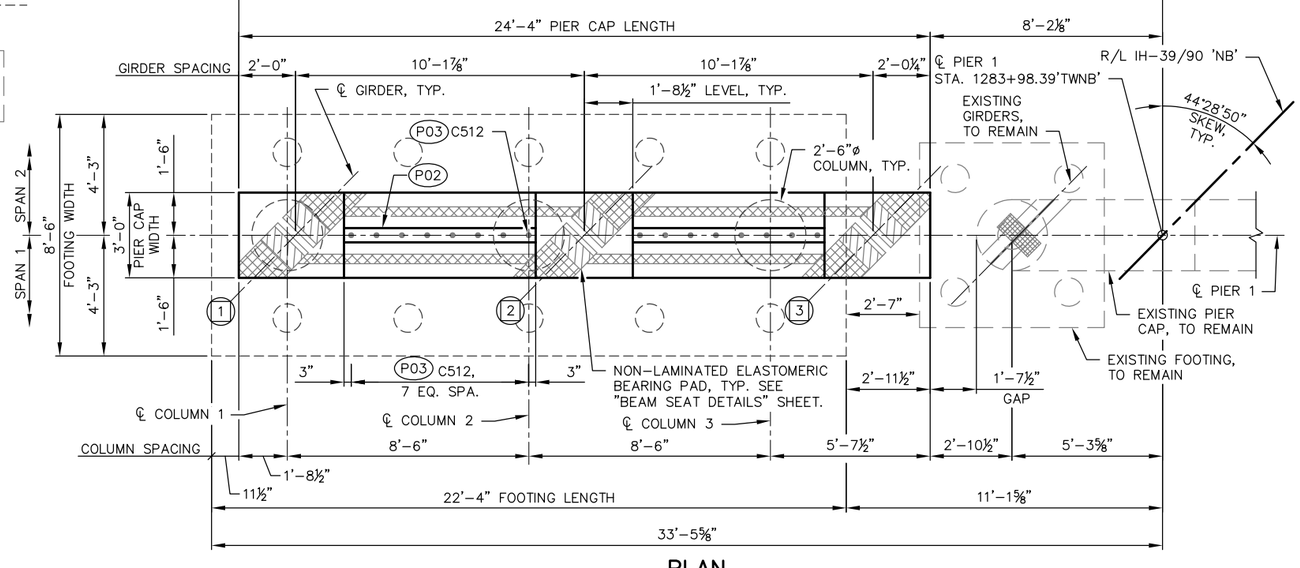


ELEVATION

(LOOKING WEST)



TYPICAL SECTION THRU COLUMN



PLAN

NOTES

FOR END VIEW, TYPICAL SECTION THRU PIER CAP AND FOOTING LAYOUT, SEE "PIER 1 DETAILS" SHEET.

PIER 1 TO BE SUPPORTED ON 12¾" X 0.375" C.I.P. PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 200 TONS PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATE 95 FT PILE LENGTHS.

ROUGHEN CONCRETE ¼" DEEP MINIMUM AT ALL AREAS OF NEW TO EXISTING CONCRETE CONTACT.

(□) INDICATES GIRDER LINE DESIGNATION

(P01) KEYED CONSTRUCTION JOINT FOR ALL COLUMNS AND FOOTING FORMED BY BEVELED 1'-3" X 1'-3" X 2". RUN BAR STEEL THRU JOINT.

(P02) KEYED CONSTRUCTION JOINT BETWEEN BEAM SEATS FORMED BY BEVELED 2" X 6".

(P03) C512 BARS MAY BE PLACED AFTER CONCRETE HAS BEEN POURED BUT PRIOR TO ITS INITIAL SET. EMBED BAR 1'-0".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-53-73

DRAWN BY MJW | PLANS CK'D JJK

PIER 1

SHEET 13 OF 32

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I.D. 1005-10-84

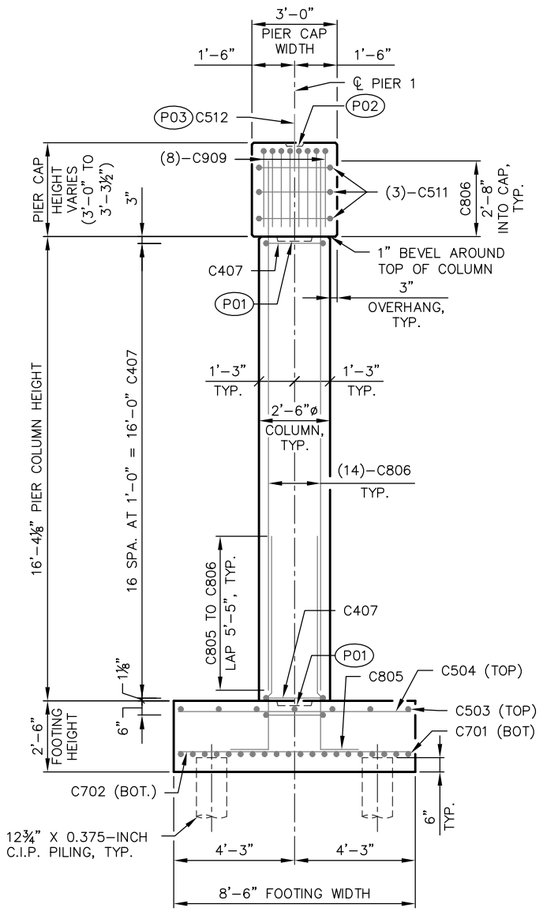
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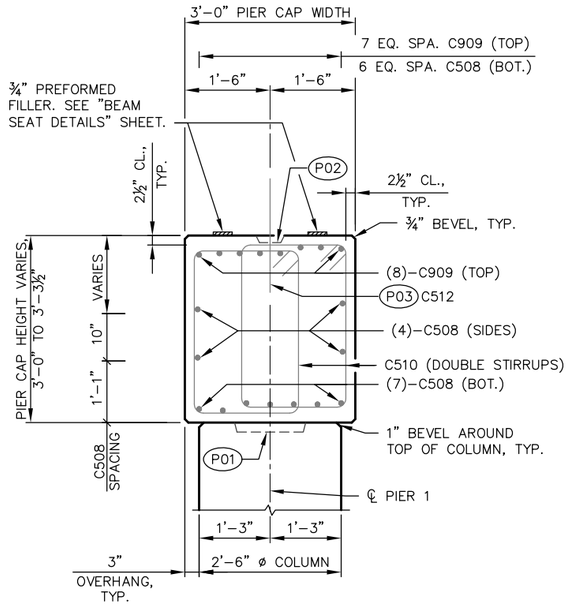
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STATE PROJECT NUMBER
1005–10–84



END VIEW
(LOOKING NORTH)



TYPICAL SECTION THRU PIER CAP

NOTES

PIER 1 TO BE SUPPORTED ON 12¾" X 0.375" C.I.P. PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 200 TONS PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATE 95 FT PILE LENGTHS.

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(P01) KEYED CONSTRUCTION JOINT FOR ALL COLUMNS AND FOOTING FORMED BY BEVELED 1'–3" X 1'–3" X 2". RUN BAR STEEL THRU JOINT.

(P02) KEYED CONSTRUCTION JOINT BETWEEN BEAM SEATS FORMED BY BEVELED 2" X 6".

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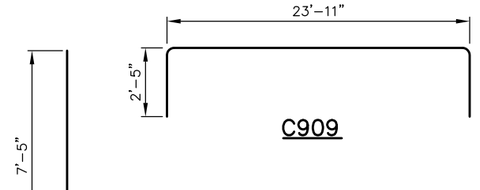
BILL OF BARS
PIER 1

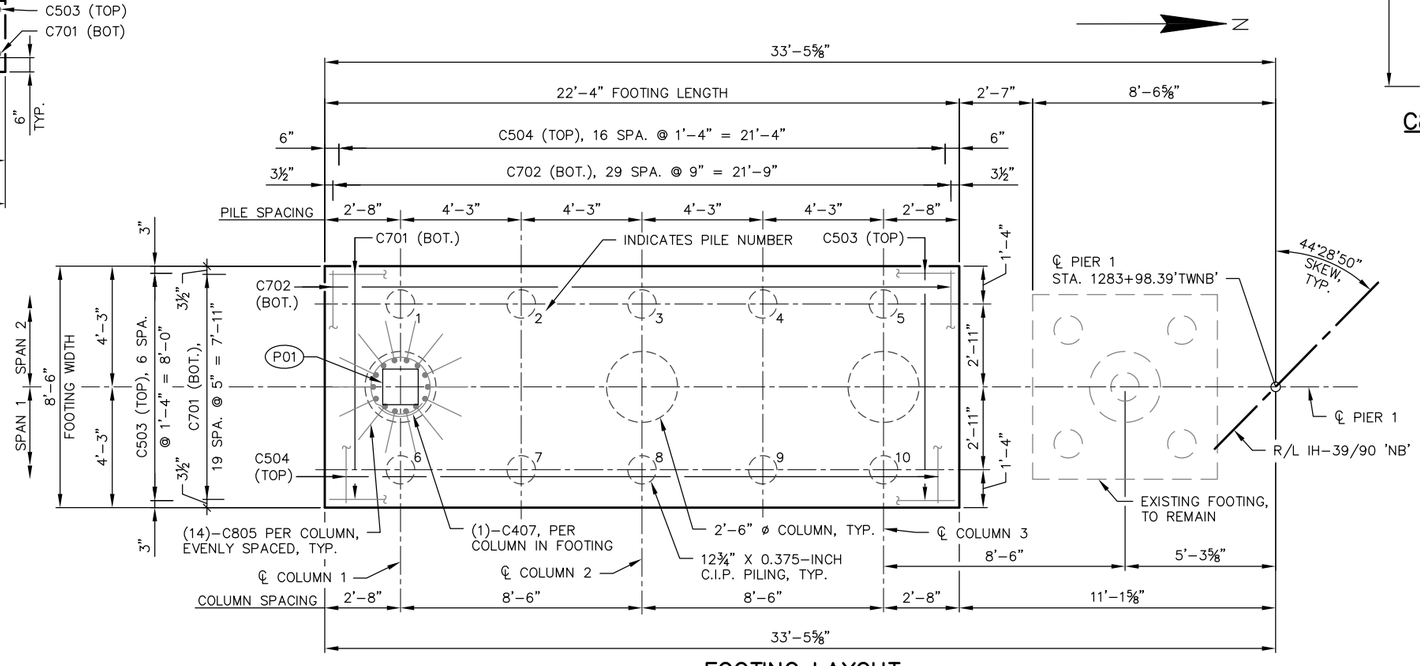
COATED = 5,020 LBS.
UNCOATED = 1,710 LBS.

	MARK	NUMBER COATED	NUMBER UNCOATED	LENGTH	BENT	BAR SERIES	LOCATION	
	C701		20	22'–0"			FOOTING – BOTTOM	HORIZ.
	C702		30	8'–2"			FOOTING – BOTTOM	HORIZ.
	C503		7	22'–0"			FOOTING – TOP	HORIZ.
	C504		17	8'–2"			FOOTING – TOP	HORIZ.
	C805	42		8'–7"	X		FOOTING – DOWELS	VERT.
	C806	42		19'–0"			COLUMN	VERT.
	C407	54		8'–3"	X		COLUMN – STIRRUP	HORIZ.
	C508	11		23'–11"			PIER CAP – BOTTOM & SIDES	HORIZ.
	C909	8		28'–3"	X		PIER CAP – TOP	HORIZ.
	C510	54		9'–0"	X		PIER CAP – STIRRUP	VERT.
	C511	6		5'–10"	X		PIER CAP – END STIRRUP	HORIZ.
(P03)	C512	16		2'–0"			PIER CAP – DOWELS	VERT.

THE FIRST DIGIT OF A BAR MARK SIGNIFIES THE BAR SIZE.

ALL BAR BEND DIMENSIONS ARE OUT TO OUT OF BAR.





FOOTING LAYOUT

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B–53–73

DRAWN BY MJW | PLANS CK'D JJK

PIER 1 DETAILS

SHEET 14 OF 32

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I.D. 1005–10–84

PLOT DATE: Jul 31, 2015

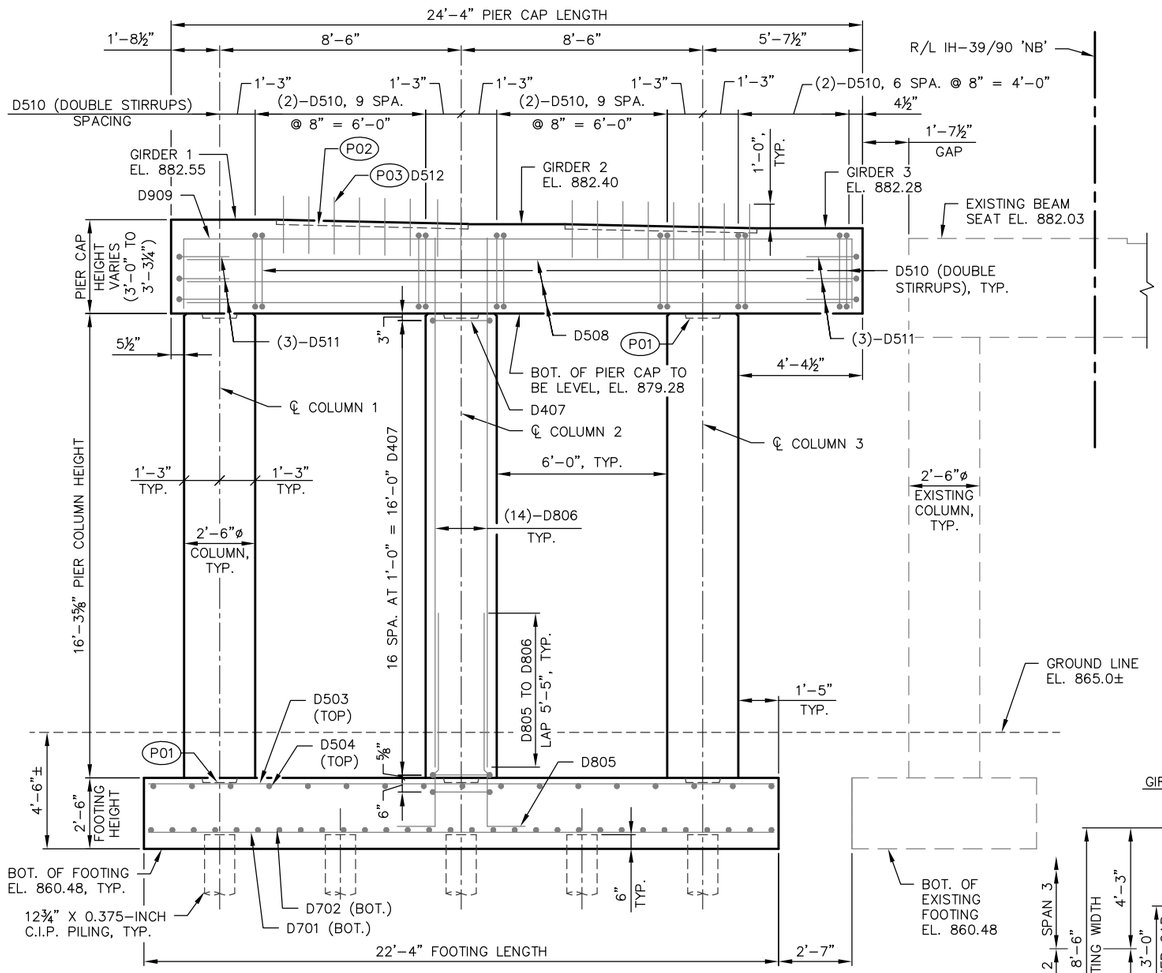
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PLOT SCALE:

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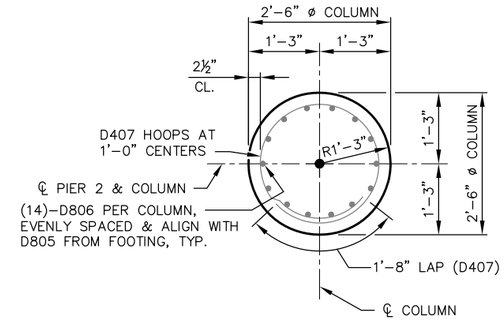
STATE PROJECT NUMBER

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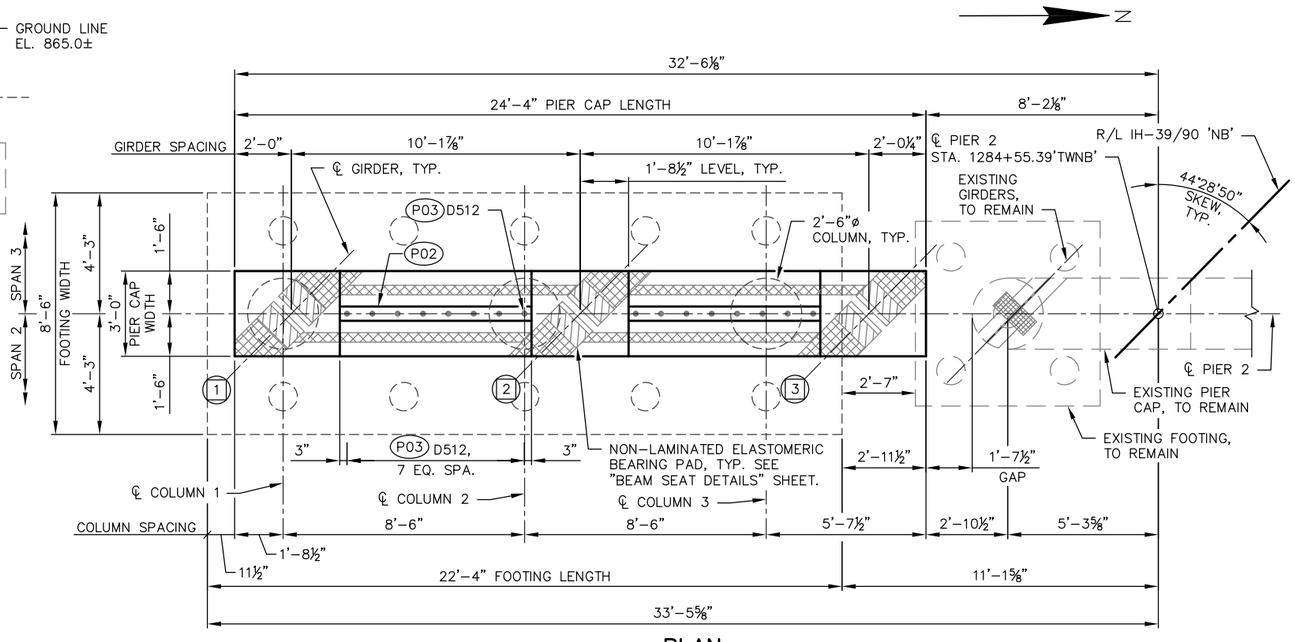


ELEVATION

(LOOKING WEST)



TYPICAL SECTION THRU COLUMN



PLAN

NOTES

FOR END VIEW, TYPICAL SECTION THRU PIER CAP AND FOOTING LAYOUT, SEE "PIER 2 DETAILS" SHEET.

PIER 2 TO BE SUPPORTED ON 12¾" X 0.375" C.I.P. PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 200 TONS PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATE 95 FT PILE LENGTHS.

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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-53-73

DRAWN BY MJW | PLANS CK'D JJK

PIER 2

SHEET 15 OF 32

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I.D. 1005-10-84

PLOT DATE: Jul 31, 2015

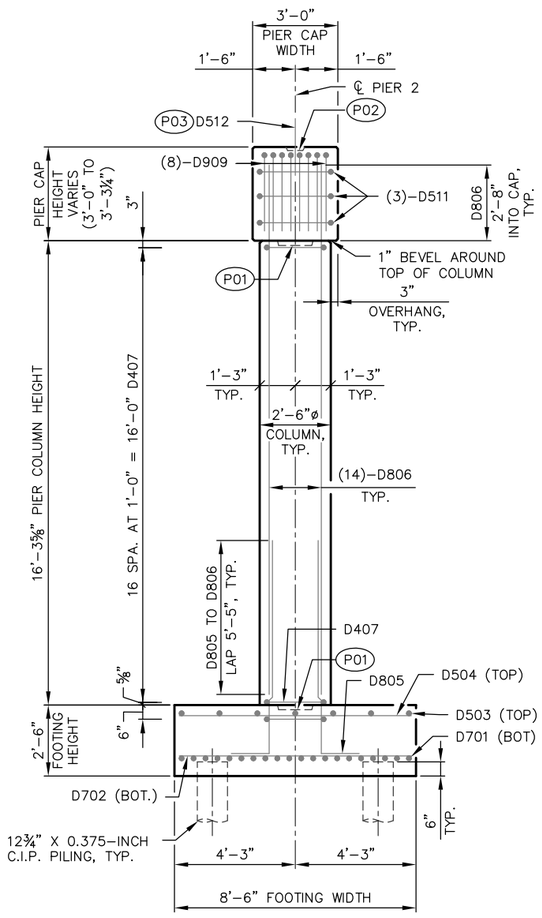
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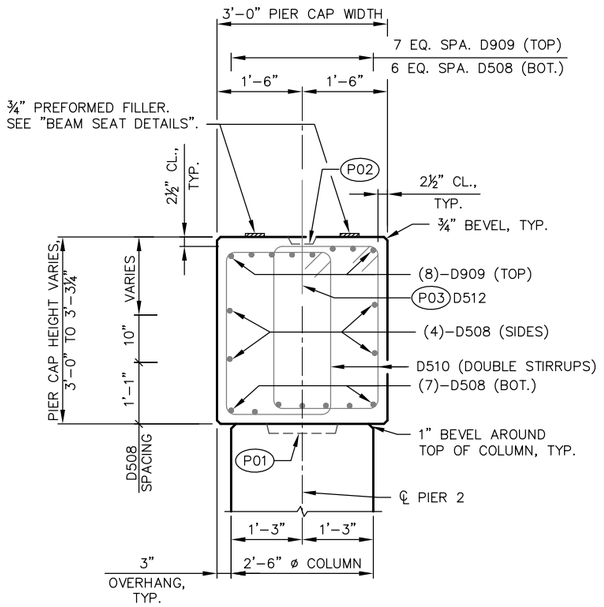
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STATE PROJECT NUMBER

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END VIEW
(LOOKING NORTH)



TYPICAL SECTION THRU PIER CAP

NOTES

PIER 2 TO BE SUPPORTED ON 12¾" X 0.375" C.I.P. PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 200 TONS PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATE 95 FT PILE LENGTHS.

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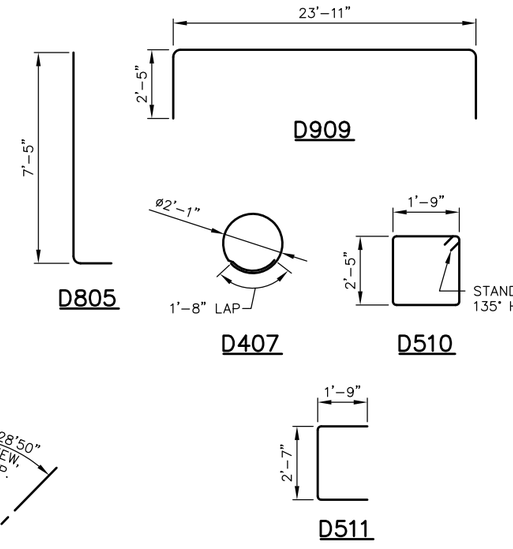
BILL OF BARS
PIER 2

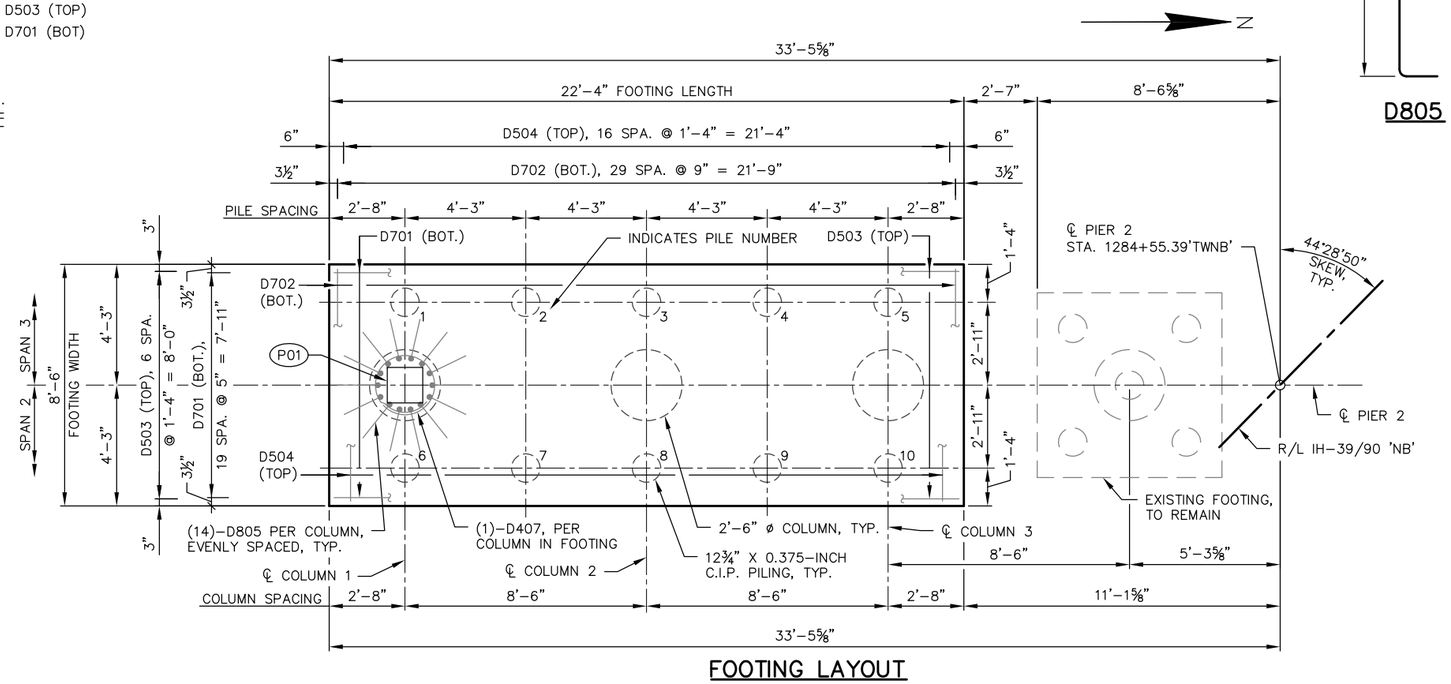
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UNCOATED = 1,710 LBS.

	MARK	NUMBER COATED	NUMBER UNCOATED	LENGTH	BENT	BAR SERIES	LOCATION	
	D701		20	22'-0"			FOOTING - BOTTOM	HORIZ.
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	D503		7	22'-0"			FOOTING - TOP	HORIZ.
	D504		17	8'-2"			FOOTING - TOP	HORIZ.
	D805	42		8'-7"	X		FOOTING - DOWELS	VERT.
	D806	42		18'-11"			COLUMN	VERT.
	D407	54		8'-3"	X		COLUMN - STIRRUP	HORIZ.
	D508	11		23'-11"			PIER CAP - BOTTOM & SIDES	HORIZ.
	D909	8		28'-3"	X		PIER CAP - TOP	HORIZ.
	D510	54		9'-0"	X		PIER CAP - STIRRUP	VERT.
	D511	6		5'-10"	X		PIER CAP - END STIRRUP	HORIZ.
P03	D512	16		2'-0"			PIER CAP - DOWELS	VERT.

THE FIRST DIGIT OF A BAR MARK SIGNIFIES THE BAR SIZE.

ALL BAR BEND DIMENSIONS ARE OUT TO OUT OF BAR.





FOOTING LAYOUT

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-53-73

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PIER 2 DETAILS

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I.D. 1005-10-84

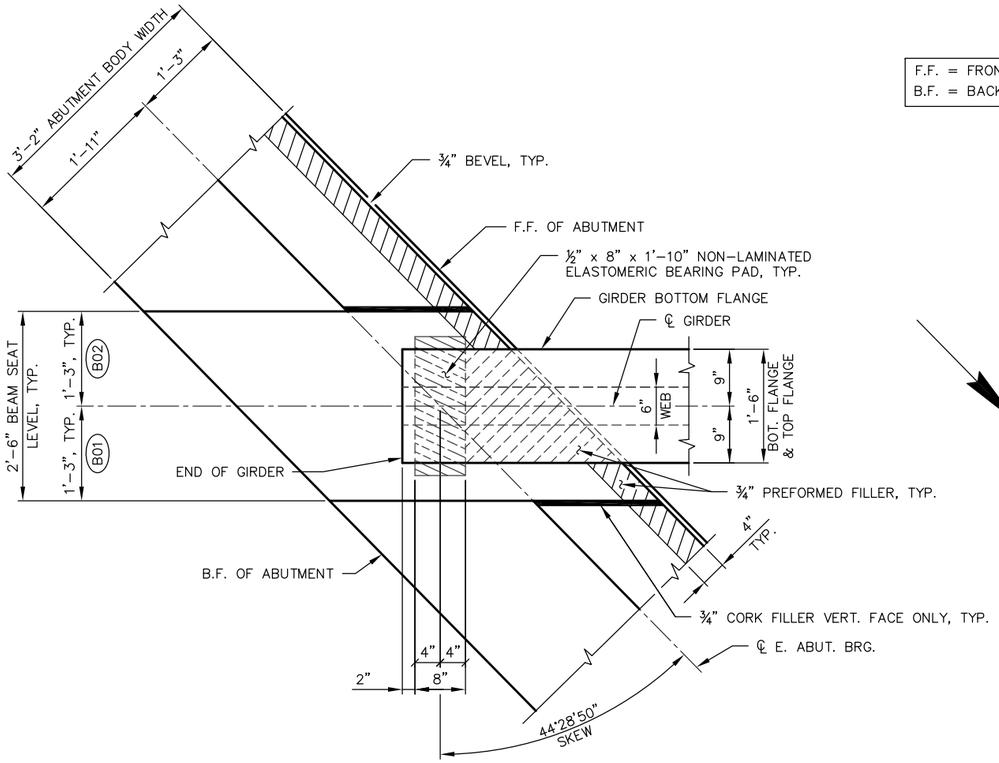
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PLOT SCALE:

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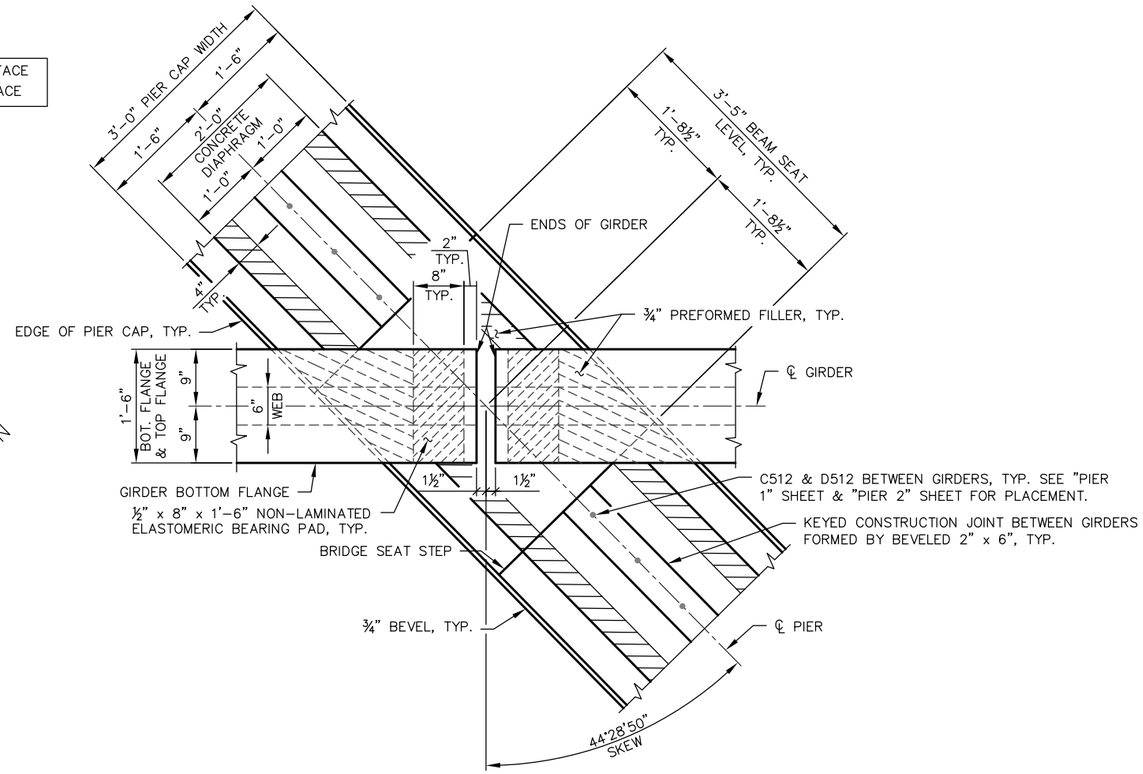
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ABUTMENT BEAM SEAT DETAIL

(EAST ABUTMENT SHOWN, WEST ABUTMENT SIMILAR)

F.F. = FRONT FACE
B.F. = BACK FACE



PIER BEAM SEAT DETAIL

(ALL PIERS ARE SIMILAR)

TOP OF DECK ELEVATIONS

SPAN 1											
	℄ E. ABUT. BRG.	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	℄ PIER 1
∗S. EDGE OF DECK	886.79	886.76	886.73	886.72	886.68	886.63	886.58	886.53	886.48	886.44	886.40
∗ GIRDER 1	886.75	886.73	886.71	886.69	886.64	886.59	886.53	886.48	886.44	886.41	886.36
∗ GIRDER 2	886.65	886.63	886.60	886.55	886.49	886.44	886.39	886.36	886.32	886.27	886.23
∗ GIRDER 3	886.54	886.50	886.44	886.39	886.34	886.30	886.26	886.22	886.18	886.13	886.09
∗N. EDGE OF DECK	886.52	886.47	886.42	886.37	886.31	886.27	886.24	886.20	886.15	886.11	886.06
R/L IH–39/90 'NB'	886.57	886.52	886.47	886.42	886.38	886.35	886.30	886.26	886.21	886.17	886.12

SPAN 2											
	℄ PIER 1	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	℄ PIER 2
∗S. EDGE OF DECK	886.40	886.35	886.30	886.25	886.20	886.14	886.09	886.04	885.97	885.94	885.92
∗ GIRDER 1	886.36	886.31	886.26	886.21	886.16	886.10	886.05	885.99	885.93	885.92	885.88
∗ GIRDER 2	886.23	886.18	886.13	886.07	886.02	885.97	885.90	885.86	885.84	885.80	885.75
∗ GIRDER 3	886.09	886.03	885.98	885.93	885.87	885.81	885.77	885.76	885.71	885.66	885.62
∗N. EDGE OF DECK	886.06	886.01	885.95	885.90	885.84	885.78	885.76	885.73	885.68	885.64	885.60
R/L IH–39/90 'NB'	886.12	886.07	886.02	885.96	885.89	885.87	885.85	885.79	885.75	885.71	885.67

SPAN 3											
	℄ PIER 2	2.1	2.2	2.3	2.4	2.5	2.6	2.7	2.8	2.9	℄ W. ABUT. BRG.
∗S. EDGE OF DECK	885.92	885.88	885.84	885.81	885.78	885.75	885.72	885.66	885.61	885.58	885.55
∗ GIRDER 1	885.88	885.84	885.81	885.78	885.75	885.71	885.67	885.62	885.58	885.55	885.52
∗ GIRDER 2	885.75	885.72	885.69	885.66	885.62	885.57	885.52	885.49	885.46	885.44	885.41
∗ GIRDER 3	885.62	885.59	885.56	885.51	885.46	885.42	885.39	885.37	885.34	885.31	885.27
∗N. EDGE OF DECK	885.60	885.57	885.53	885.48	885.43	885.40	885.37	885.35	885.32	885.29	885.24
R/L IH–39/90 'NB'	885.67	885.63	885.58	885.54	885.51	885.48	885.45	885.43	885.39	885.34	885.28

NOTES

BEAM SEAT ELEVATIONS SHOWN ON ABUTMENT AND PIER SHEETS.

(B01) 2'–2" AT GIRDER LINE 3 AT WEST ABUTMENT.

(B02) 3'–1" AT GIRDER LINE 3 AT EAST ABUTMENT.

∗ ALL DECK ELEVATIONS ARE BASED ON EXISTING SURVEY INFORMATION FROM 2015. TOP OF DECK ELEVATIONS ARE PRIOR TO PLACEMENT OF 2" HMA OVERLAY POLYMER–MODIFIED.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B–53–73

DRAWN BY MJW | PLANS CK'D JJK

BEAM SEAT DETAILS

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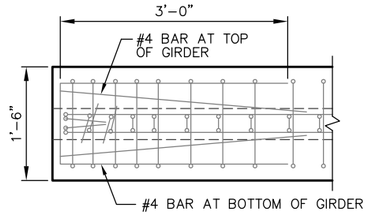
I.D. 1005–10–84

PLOT DATE: Jul 31, 2015

FILE: 17–B530073_beam.dwg
PLOT SCALE:

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PLAN VIEW OF GIRDER ENDS

STIRRUP SPACING TABLE

SPAN	GIRDER	GIRDER LENGTH "L"	"A"	"B"	"C"	"D"
1	1-3	50'-5⅛"	11 SPA. @ 6" = 5'-6"	8 SPA. @ 8" = 5'-4"	1'-3⅛"	11 SPA. @ 1'-6" = 16'-6"
2	1-3	56'-9"	3 SPA. @ 4½" = 1'-1½"	17 SPA. @ 8" = 11'-4"	1'-1½"	17 SPA. @ 1'-2" = 19'-10"
3	1-3	45'-5⅛"	10 SPA. @ 6" = 5'-0"	6 SPA. @ 10" = 5'-0"	1'-1⅛"	9 SPA. @ 1'-6" = 13'-6"

GIRDER NOTES

TOP OF GIRDER TO BE ROUGH FLOATED AND BROOMED TRANSVERSELY, EXCEPT THE OUTSIDE 2" OF GIRDER, WHICH SHALL RECEIVE A SMOOTH FINISH. AN APPROVED CONCRETE SEALER SHALL BE APPLIED TO ALL SMOOTH SURFACES INCLUDING THE OUTSIDE 2" 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 THE END OF GIRDER. FOR GIRDER ENDS EMBEDDED COMPLETELY IN CONCRETE, ENDS 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 APPLICATION OF THE SEALER.

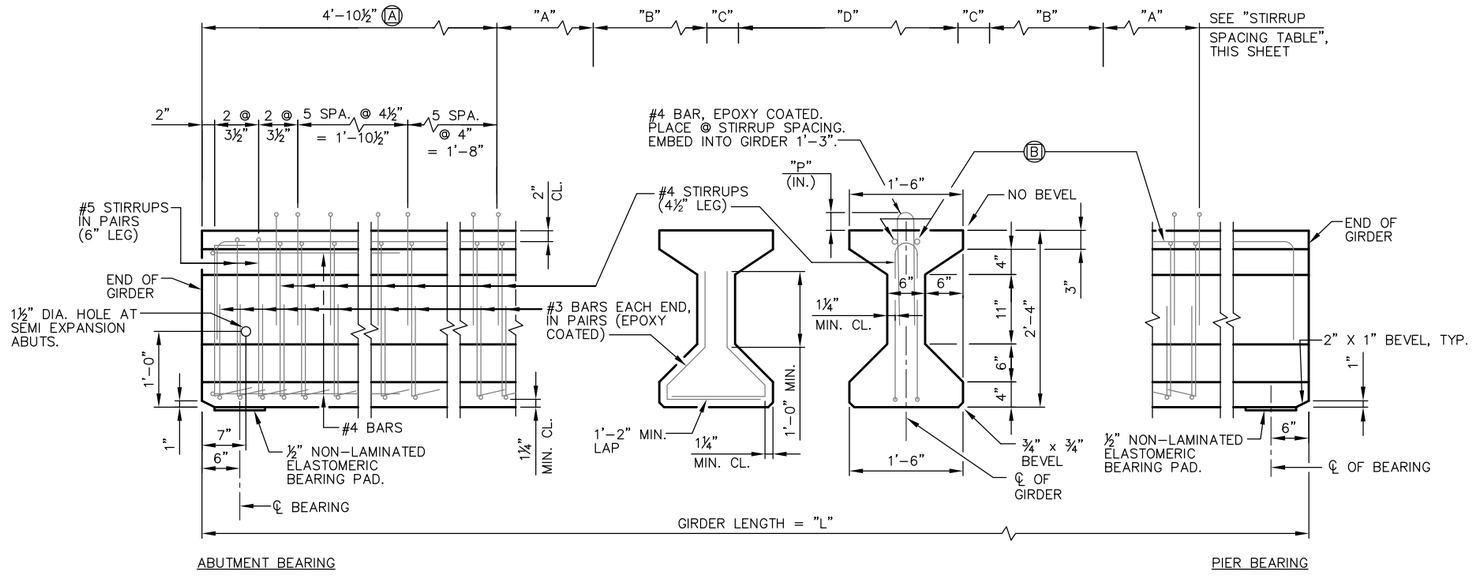
ALL GIRDERS SHALL BE CAST FULL LENGTH AS SHOWN.

FOR DIAPHRAGM INSERT & CONNECTION DETAILS, SEE "INTERMEDIATE STEEL DIAPHRAGM" SHEET.

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.



SIDE VIEW & TYPICAL SECTION IN SPAN

Ⓐ DETAIL TYP. AT EACH END

Ⓑ (2) – #5 BARS, FULL LENGTH, MIN. LAP = 2'-5" (SPANS 1 & 3)
(2) – #4 BARS, FULL LENGTH, MIN. LAP = 1'-11" (SPAN 2)
BEND BARS TO BE 16 BAR DIAMETERS.

*MINIMUM CYLINDER STRENGTH OF CONCRETE @ TIME OF TRANSFER OF PRESTRESS FORCE

GIRDER DATA

SPAN	GIRDER	GIRDER LENGTH "L"	DEAD LOAD DEFLECTION (IN.) 1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	CONC. STRGTH. f'c (psi)	"P" 1st ⅓ OF GIRDER	"P" MID ⅓ OF GIRDER	"P" END ⅓ OF GIRDER	DIA. OF STRAND (IN.)	DRAPED PATTERN TOTAL NO. OF STRANDS	DRAPED PATTERN f'ci (psi) *	DRAPED PATTERN (IN.) "A"	"B" MIN	"B" MAX	"C"	UNDRAPED PATTERN TOTAL NO. OF STRANDS	UNDRAPED PATTERN f'ci (psi) *
1	1-3	50'-5⅛"	0.2	0.4	0.5	0.6	0.6	0.6	0.5	0.4	0.2	8,000	7.25"	6.75"	7.25"	0.6	---	---	--	--	--	--	14	6,800
2	1-3	56'-9"	0.3	0.6	0.8	0.9	1.0	0.9	0.8	0.6	0.3	8,000	7.25"	6.5"	7.25"	0.6	---	---	--	--	--	--	14	6,800
3	1-3	45'-5⅛"	0.1	0.2	0.3	0.4	0.4	0.4	0.3	0.2	0.1	8,000	7.25"	6.5"	7.25"	0.6	---	---	--	--	--	--	14	6,800

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-53-73

DRAWN BY MJW | PLANS CK'D JJK

28-INCH PRESTRESSED GIRDER

SHEET 18 OF 32

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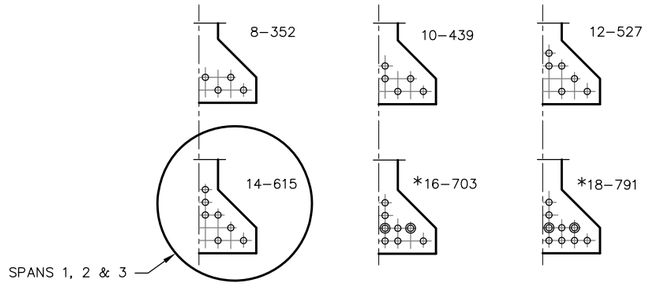
I.D. 1005-10-84

PLOT DATE: Jul 31, 2015

FILE: 18-19-B53073_girder.dwg
PLOT SCALE:

8

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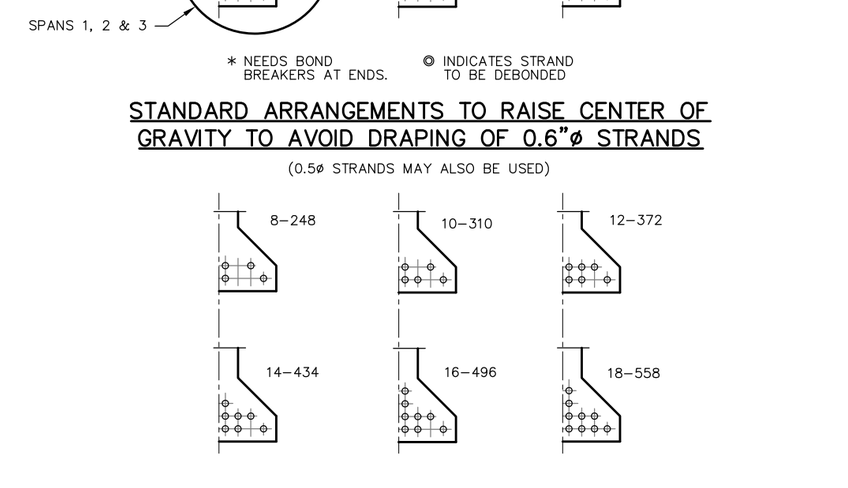


* NEEDS BOND BREAKERS AT ENDS.
◎ INDICATES STRAND TO BE DEBONDED

STANDARD ARRANGEMENTS TO RAISE CENTER OF GRAVITY TO AVOID DRAPING OF 0.6"ø STRANDS

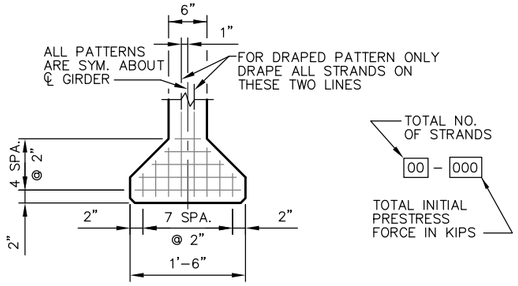
(0.5ø STRANDS MAY ALSO BE USED)

ARRANGEMENT AT ℄ SPAN – FOR GIRDERS WITH DRAPED 0.5"ø STRANDS



DRAPED STRAND PROFILE

(SEE GIRDER DATA TABLE ON "28-INCH PRESTRESSED GIRDER" SHEET)

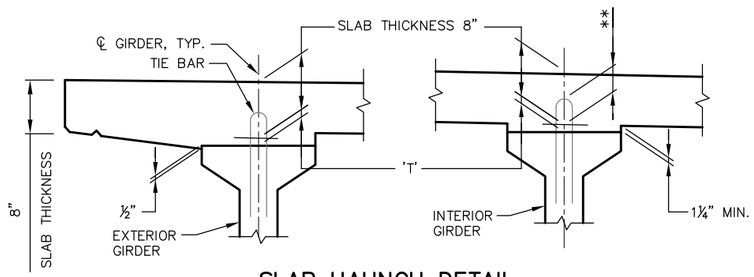


TYPICAL STRAND PATTERN

* 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	1.6
2	1.9
3	1.4

THESE VALUES ARE NOT TO BE USED IN DETERMINING 'T', USE ACTUAL GIRDER SHOTS.
THESE VALUES ARE FOR INFORMATIONAL PURPOSES ONLY.



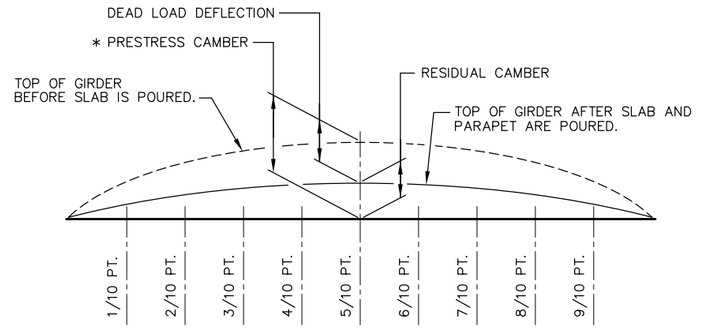
SLAB HAUNCH DETAIL

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 SLAB 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', ELEVATIONS OF TOP OF GIRDERS AT ℄ OF SUBSTRUCTURE UNITS & AT 1/10 POINTS OF EACH SPAN SHALL BE TAKEN. THEN FOLLOW THIS PROCESS:

TOP OF DECK ELEVATION AT FINAL GRADE (SEE "BEAM SEAT DETAILS" SHEET)
– TOP OF GIRDER ELEVATION
+ DEAD LOAD DEFLECTION
– SLAB THICKNESS
= HAUNCH HEIGHT 'T'

NOTE: AN AVERAGE HAUNCH ('T') OF 2.86" WAS USED IN THE QUANTITY "CONCRETE MASONRY BRIDGES".



DEAD LOAD DEFLECTION AND CAMBER DIAGRAM

(SEE GIRDER DATA TABLE ON "28-INCH PRESTRESSED GIRDER" SHEET)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-53-73

DRAWN BY MJW | PLANS CK'D JJK

28-INCH PRESTRESSED GIRDER DETAILS

SHEET 19 OF 32

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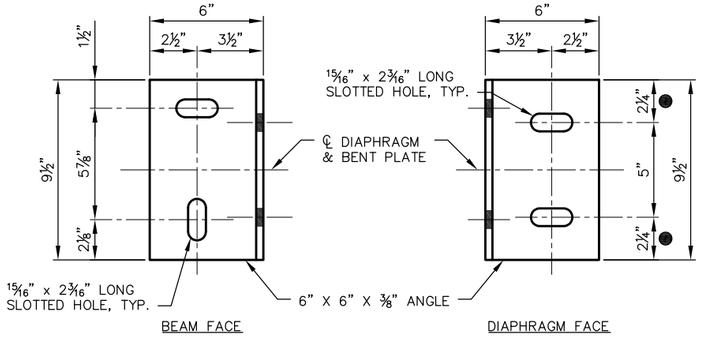
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PLOT SCALE:

I.D. 1005-10-84

PLOT DATE: Jul 31, 2015

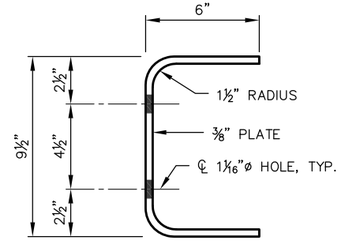
STATE PROJECT NUMBER

1005-10-84

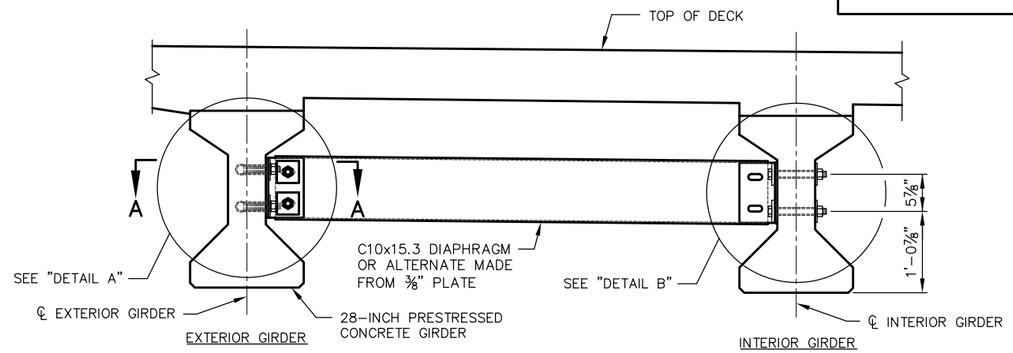


DIAPHRAGM SUPPORT

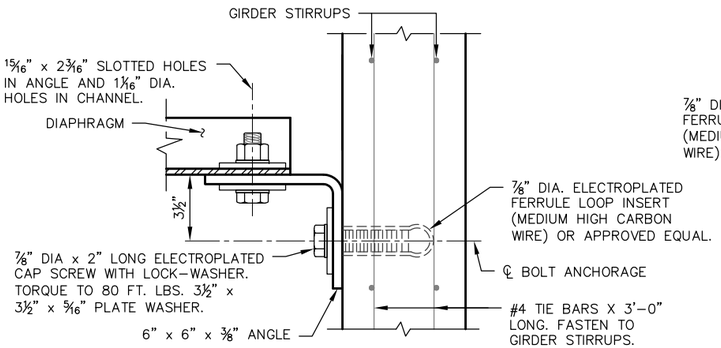
● DIMENSION CHANGES TO 2½" WHEN ALTERNATE PLATE DIAPHRAGM IS USED.



SECTION THROUGH ALTERNATE DIAPHRAGM

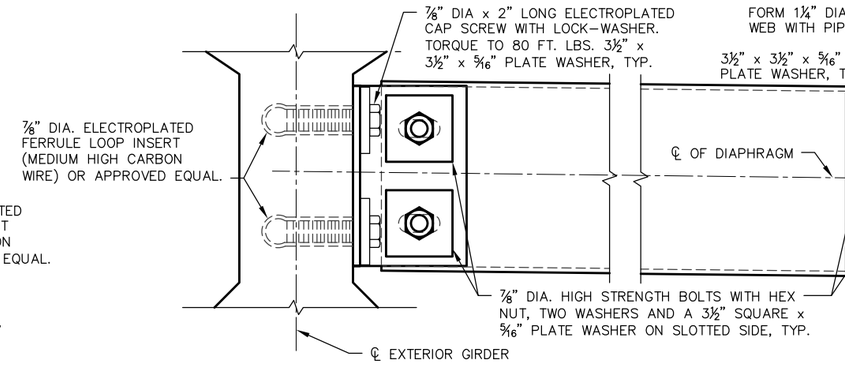


PART TRANSVERSE SECTION AT DIAPHRAGM

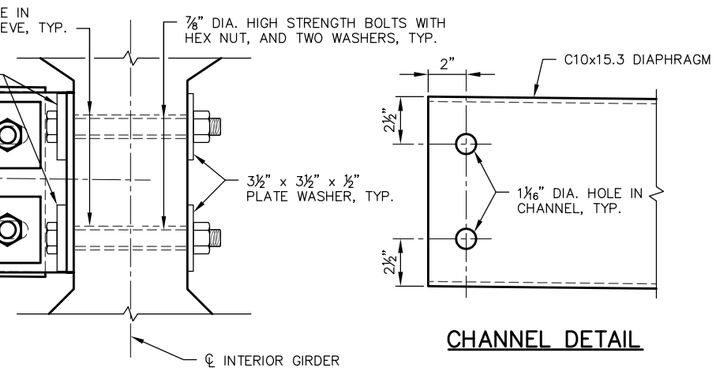


SECTION A-A

(FOR EXTERIOR ATTACHMENT)

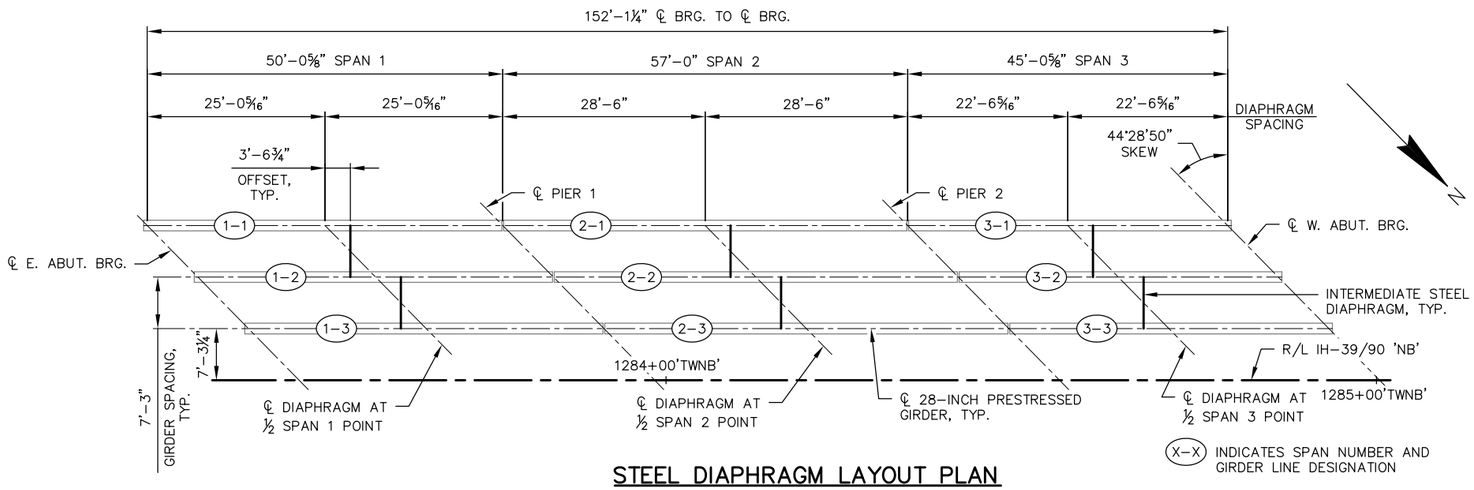


DETAIL A



DETAIL B

CHANNEL DETAIL



STEEL DIAPHRAGM LAYOUT PLAN

NOTES

ALL DIAPHRAGM MATERIAL NOT EMBEDDED IN THE CONCRETE GIRDER SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "STEEL DIAPHRAGMS B-53-73", 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-53-73

DRAWN BY MJW | PLANS CK'D JJK

INTERMEDIATE STEEL DIAPHRAGM

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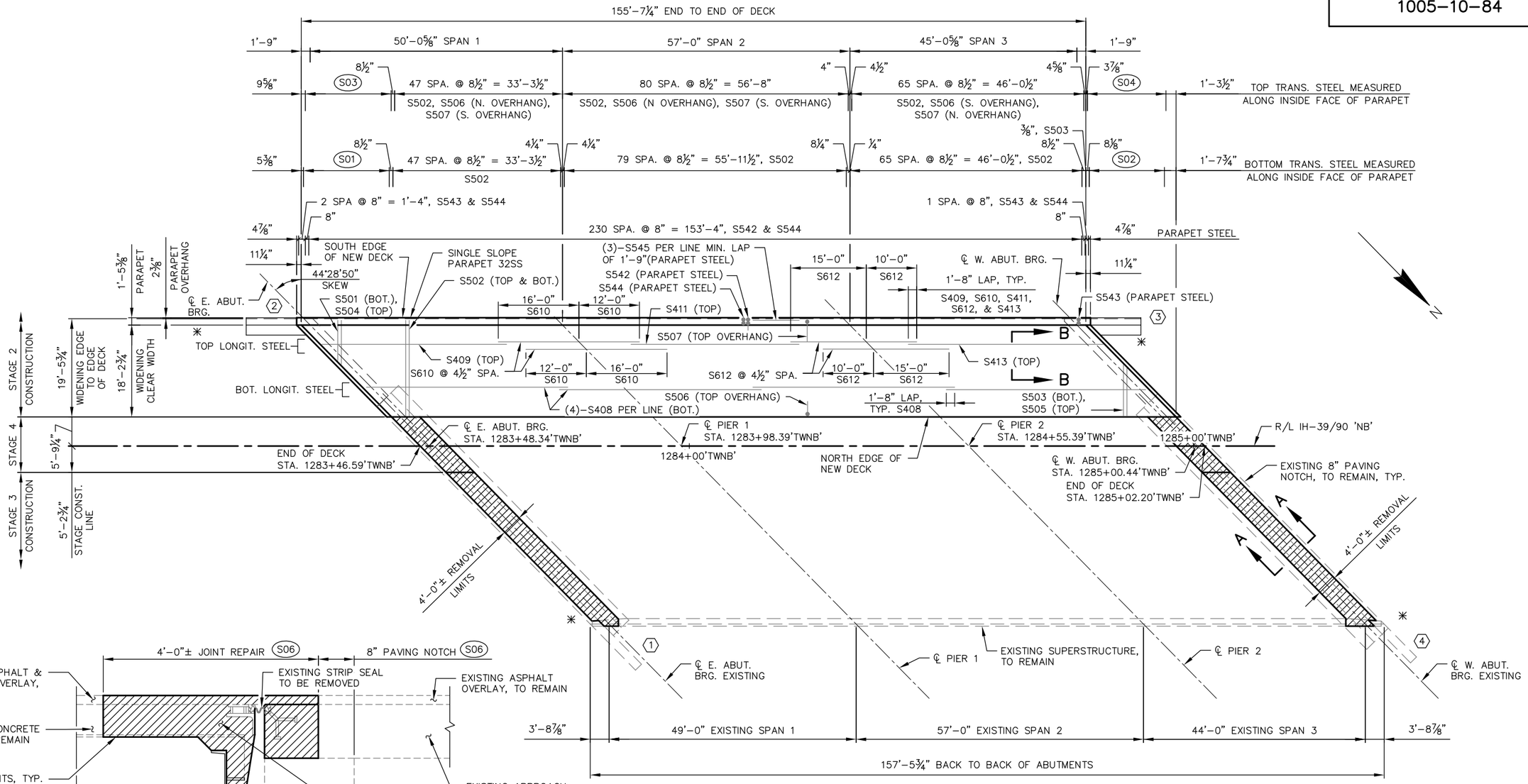
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I.D. 1005-10-84

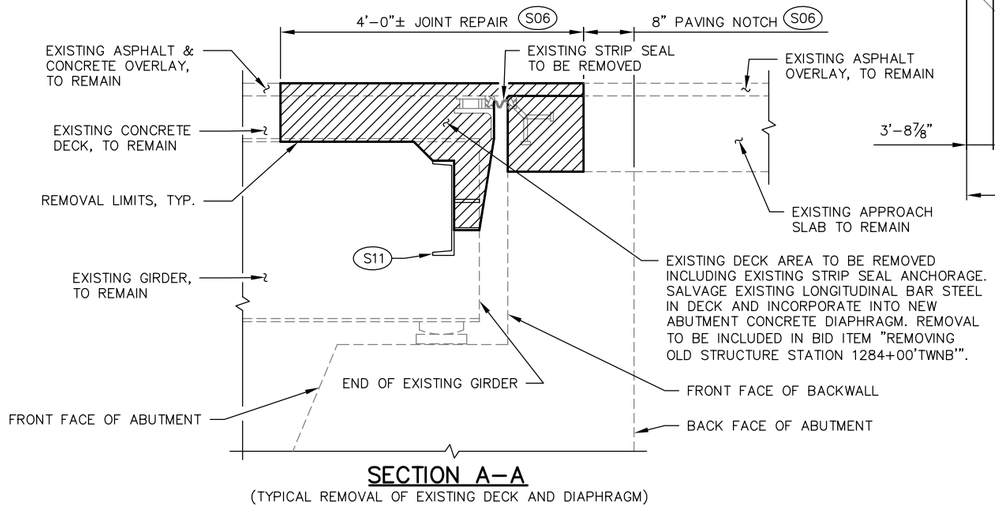
PLOT DATE: Jul 31, 2015

FILE: 20-B53073_dia.dwg
PLOT SCALE:

STATE PROJECT NUMBER
1005–10–84



DECK PLAN SHOWING BAR REINFORCEMENT



SECTION A–A

(TYPICAL REMOVAL OF EXISTING DECK AND DIAPHRAGM)

NOTES

FOR CROSS–SECTION THRU SUPERSTRUCTURE SEE "SUPERSTRUCTURE TYPICAL SECTION" SHEET.

FOR CONCRETE DIAPHRAGM REINFORCEMENT LAYOUT AT ABUTMENTS SEE "DIAPHRAGM REINFORCEMENT AT ABUTMENTS" SHEET AND PIERS SEE "DIAPHRAGM REINFORCEMENT AT PIERS" SHEET.

SECTION B–B SHOWN ON "SUPERSTRUCTURE TYPICAL SECTION" SHEET.

⬡ INDICATES WING NUMBER

✳ ANCHOR ASSEMBLY FOR STEEL PLATE BEAM GUARD

▨ DENOTES REMOVAL AND REPLACEMENT LIMITS AT EXISTING ABUTMENTS.

(S01) 24 SPA. @ 8½" = 17'–0", S501

(S02) 22 SPA. @ 8½" = 15'–7", S503

(S03) 24 SPA. @ 8½" = 17'–0", S504 & S507 (S. OVERHANG)

(S04) 23 SPA. @ 8½" = 16'–3½", S505 & S506 (N. OVERHANG)

(S06) DIMENSION IS TAKEN NORMAL TO ℄ OF SUBSTRUCTURE UNIT.

(S11) SALVAGE EXISTING STEEL DIAPHRAGM AND INCORPORATE INTO NEW CONCRETE DIAPHRAGM.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B–53–73

DRAWN BY MJW | PLANS CK'D JJK

SUPERSTRUCTURE PLAN

SHEET 21 OF 32

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I.D. 1005–10–84

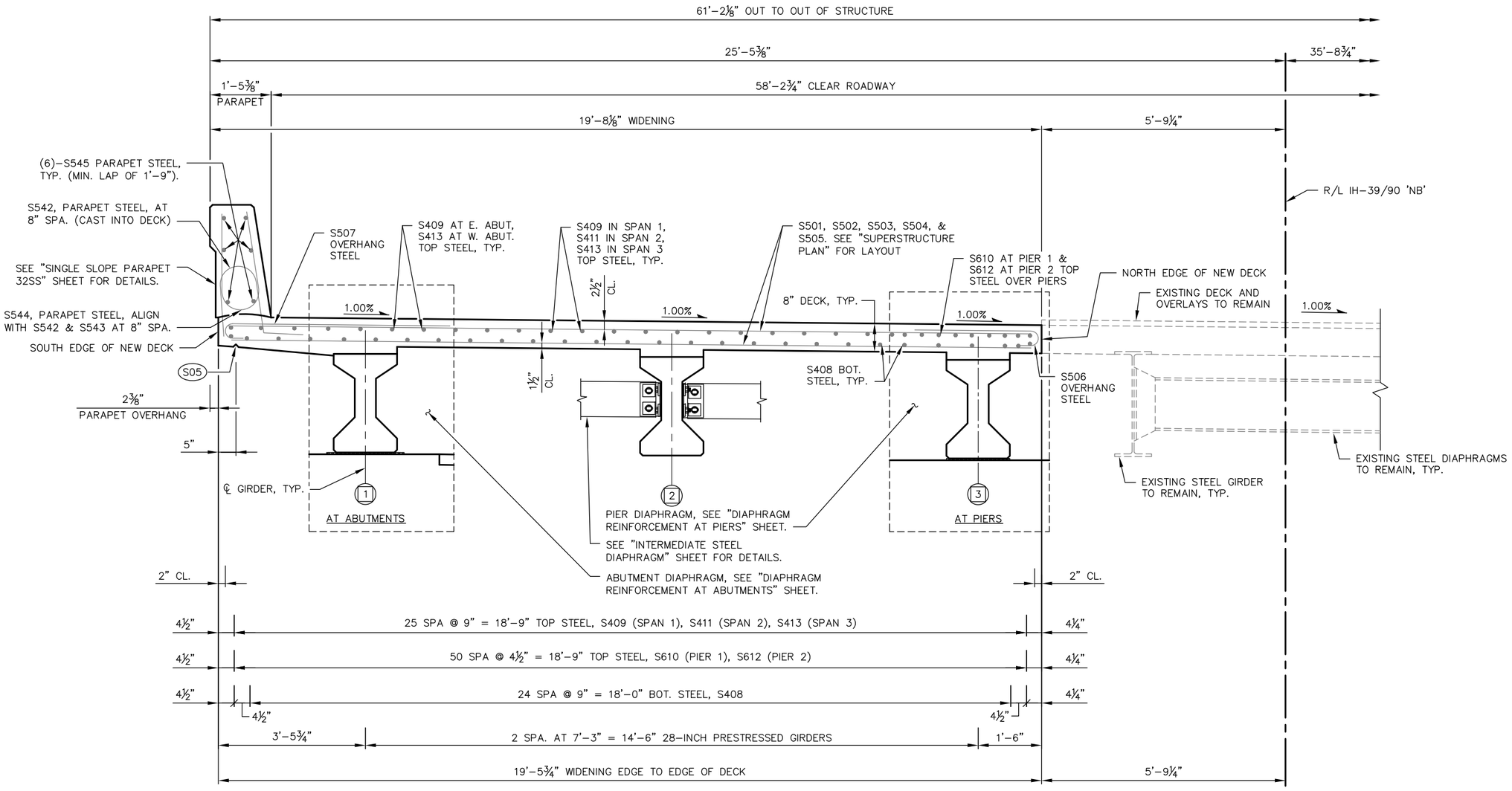
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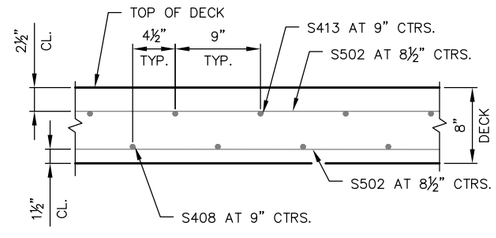
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STATE PROJECT NUMBER
1005–10–84



CROSS SECTION THRU ROADWAY
(LOOKING WEST)



SECTION B–B
(IN SPAN 3 SHOWN, ALL SPANS SIMILAR)

NOTES

1. (1) GIRDER 1 LINE DESIGNATION
2. (2) GIRDER 2 LINE DESIGNATION
3. (3) GIRDER 3 LINE DESIGNATION

(S05) ¾" V–GROOVE, EXTEND V–GROOVE TO 6" FROM FRONT FACE OF ABUTMENT DIAPHRAGM. V–GROOVES ARE REQUIRED.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B–53–73

DRAWN BY MJW | PLANS CK'D JJK

SUPERSTRUCTURE TYPICAL SECTION

SHEET 22 OF 32

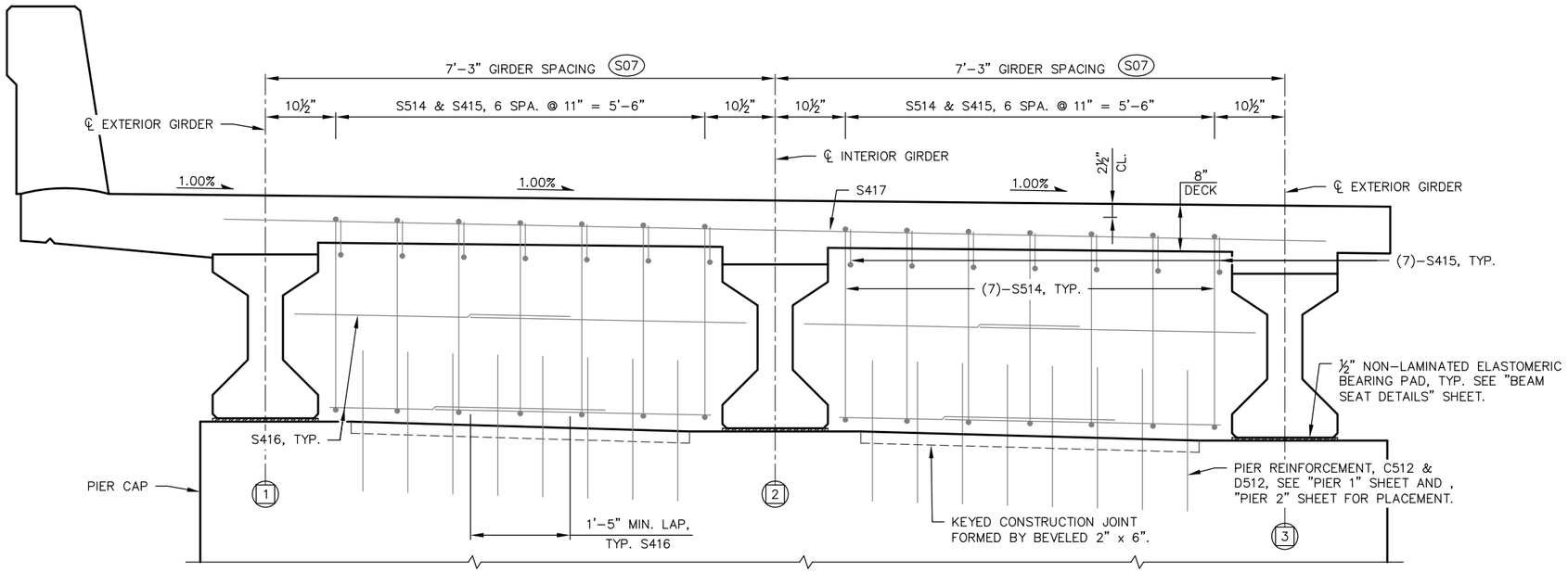
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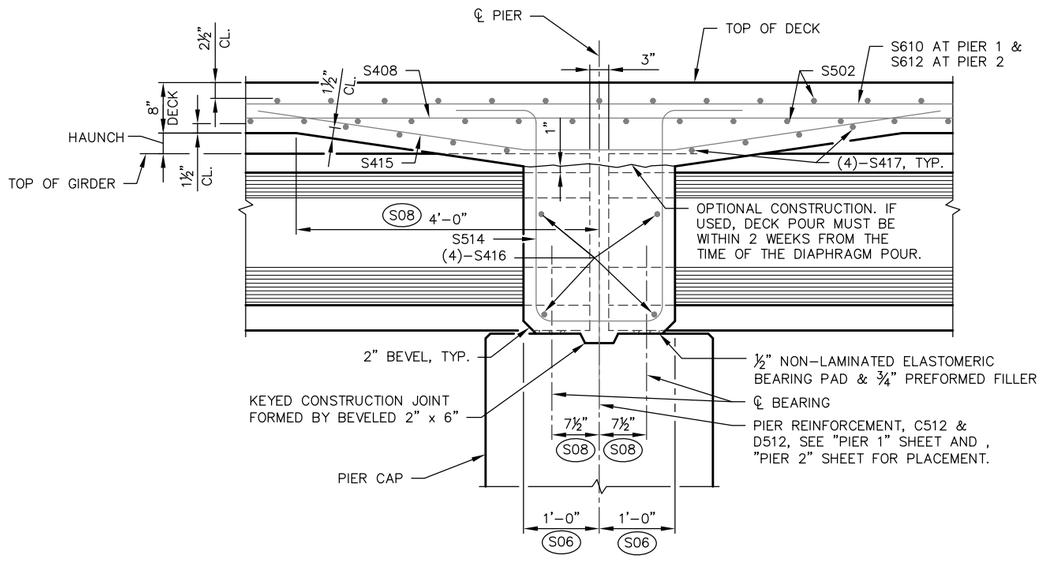
FILE: 21–29–B530073_super.dwg
PLOT SCALE:

STATE PROJECT NUMBER
1005–10–84



DIAPHRAGM REINFORCEMENT AT PIER

(LOOKING WEST, ALL PIERS SIMILAR)
(DECK STEEL AND PARAPET STEEL NOT SHOWN FOR CLARITY)



SECTION THRU DIAPHRAGM AT PIER

NOTES

CONCRETE DIAPHRAGM TO EXTEND BETWEEN OUTSIDE FACES OF EXTERIOR GIRDERS

(S06) DIMENSION IS TAKEN NORMAL TO ℄ OF SUBSTRUCTURE UNIT.

(S07) DIMENSION IS TAKEN NORMAL TO ℄ GIRDERS.

(S08) DIMENSION IS TAKEN PARALLEL TO ℄ OF GIRDER.

(1) GIRDER 1 LINE DESIGNATION

(2) GIRDER 2 LINE DESIGNATION

(3) GIRDER 3 LINE DESIGNATION

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B–53–73

DRAWN BY MJW | PLANS CK'D JJK

DIAPHRAGM REINFORCEMENT AT PIERS

SHEET 23 OF 32

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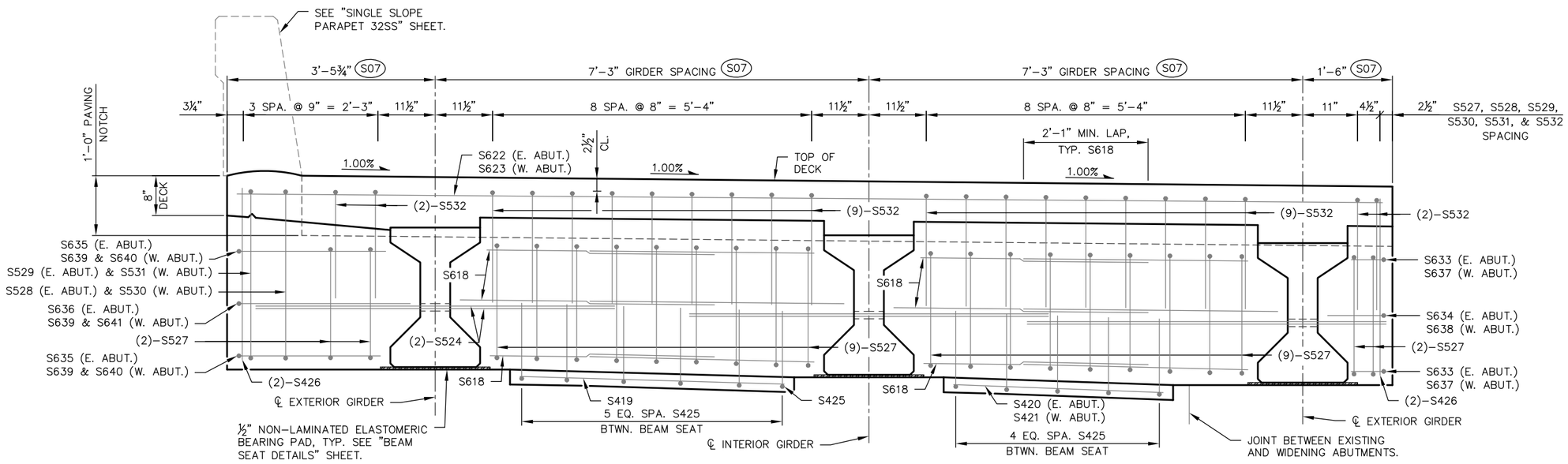
I.D. 1005–10–84

PLOT DATE: Jul 31, 2015

FILE: 21–29–B530073_super.dwg
PLOT SCALE:

STATE PROJECT NUMBER

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DIAPHRAGM REINFORCEMENT AT ABUTMENT

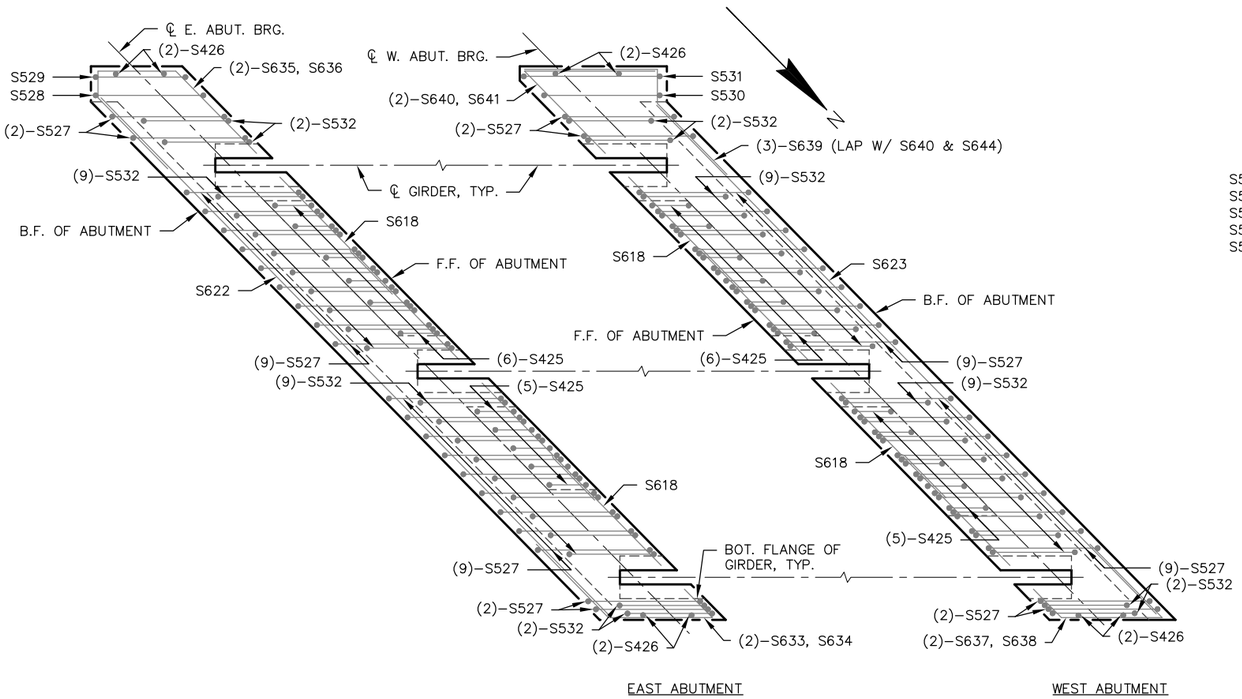
(WEST ABUTMENT LOOKING WEST, EAST ABUTMENT SIMILAR)
(DECK STEEL NOT SHOWN FOR CLARITY)

NOTES

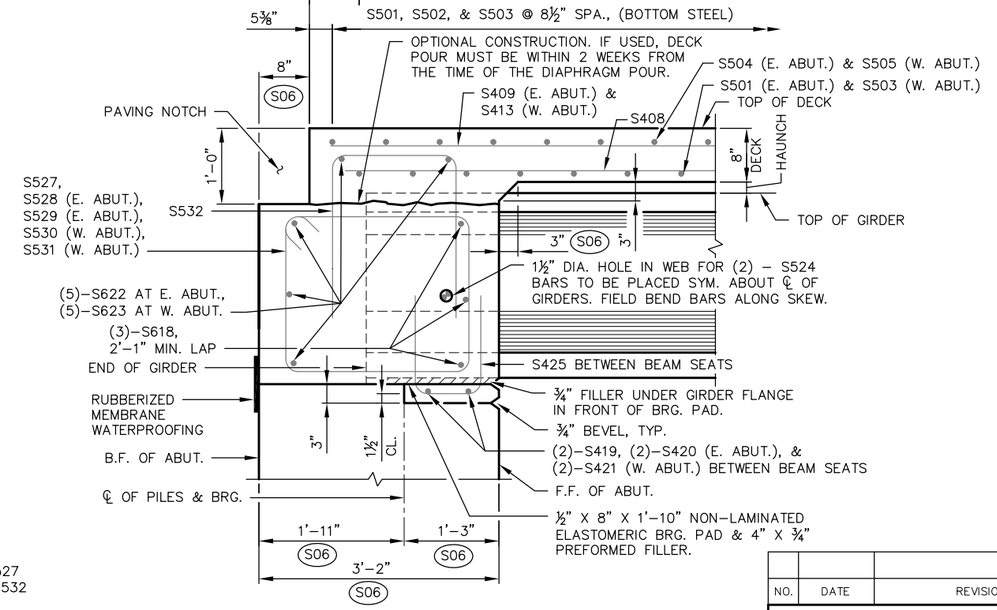
(S06) DIMENSION IS TAKEN NORMAL TO ℄ OF SUBSTRUCTURE UNIT.

(S07) DIMENSION IS TAKEN NORMAL TO ℄ GIRDERS.

F.F. = FRONT FACE
B.F. = BACK FACE



ABUTMENT DIAPHRAGM PLAN VIEW



SECTION THRU DIAPHRAGM AT ABUTMENT

(EAST ABUTMENT LOOKING SOUTH, WEST ABUTMENT SIMILAR)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-53-73

DRAWN BY MJW | PLANS CK'D JJK

DIAPHRAGM REINFORCEMENT AT ABUTMENTS

SHEET 24 OF 32

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I.D. 1005-10-84

PLOT DATE: Jul 31, 2015

FILE: 21-29-B530073_super.dwg
PLOT SCALE:

STATE PROJECT NUMBER

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BILL OF BARS
SUPERSTRUCTURE

COATED = 25,560 LBS.

MARK	NUMBER COATED	NUMBER UNCOATED	LENGTH	BENT	BAR SERIES	LOCATION	
S501	25		9'-11"		⚠	DECK - TRANSVERSE (BOT.)	HORIZ.
S502	388		19'-1"			DECK - TRANSVERSE (TOP & BOT.)	HORIZ.
S503	24		9'-7"		⚠	DECK - TRANSVERSE (BOT.)	HORIZ.
S504	25		10'-4"		⚠	DECK - TRANSVERSE (TOP)	HORIZ.
S505	24		9'-2"		⚠	DECK - TRANSVERSE (TOP)	HORIZ.
S506	218		3'-5"	X		DECK - TRANSVERSE (NORTH OVERHANG)	HORIZ.
S507	219		5'-5"	X		DECK - TRANSVERSE (SOUTH OVERHANG)	HORIZ.
S408	108		40'-0"			DECK - LONGITUDINAL (BOT.)	HORIZ.
S409	26		37'-3"			DECK - LONGITUDINAL (TOP - SPAN 1)	HORIZ.
S610	51		28'-0"			DECK - LONGITUDINAL (TOP - OVER PIER 1)	HORIZ.
S411	26		33'-4"			DECK - LONGITUDINAL (TOP - SPAN 2)	HORIZ.
S612	51		25'-0"			DECK - LONGITUDINAL (TOP - OVER PIER 2)	HORIZ.
S413	26		38'-3"			DECK - LONGITUDINAL (TOP - SPAN 3)	HORIZ.
S514	28		9'-0"	X		PIER DIAPHRAGM - STIRRUP	VERT.
S415	28		8'-5"	X		PIER DIAPHRAGM - TOP	VERT.
S416	32		5'-3"			PIER DIAPHRAGM - TRANSVERSE (BOT.)	HORIZ.
S417	16		21'-11"			PIER DIAPHRAGM - TRANSVERSE (TOP)	HORIZ.
S618	24		5'-7"			ABUT. DIAPHRAGM AT F.F. (BTWN. GIRDER)	HORIZ.
S419	4		6'-0"			ABUT. DIAPHRAGM (BETWEEN BEAM SEATS)	HORIZ.
S420	2		3'-5"			E. ABUT. DIAPHRAGM (BETWEEN BEAM SEATS)	HORIZ.
S421	2		4'-8"			W. ABUT. DIAPHRAGM (BETWEEN BEAM SEATS)	HORIZ.
S622	5		25'-6"			E. ABUT. DIAPHRAGM AT B.F. & TOP	HORIZ.
S623	5		25'-3"			W. ABUT. DIAPHRAGM AT B.F. & TOP	HORIZ.
S524	12		6'-0"			ABUT. DIAPHRAGM - THRU GIRDER	HORIZ.
S425	22		3'-11"	X		ABUT. DIAPHRAGM (BETWEEN BEAM SEATS)	VERT.
S426	8		2'-11"			ABUT. DIAPHRAGM - ENDS	VERT.
S527	44		12'-4"	X		ABUT. DIAPHRAGM - STIRRUP	VERT.
S528	1		14'-2"	X		E. ABUT. DIAPHRAGM - STIRRUP (S. SIDE)	VERT.
S529	1		12'-8"	X		E. ABUT. DIAPHRAGM - STIRRUP (S. SIDE)	VERT.
S530	1		15'-0"	X		W. ABUT. DIAPHRAGM - STIRRUP (S. SIDE)	VERT.
S531	1		16'-2"	X		W. ABUT. DIAPHRAGM - STIRRUP (S. SIDE)	VERT.
S532	44		6'-9"	X		ABUT. DIAPHRAGM - STIRRUP (TOP)	VERT.
S633	2		7'-6"	X		E. ABUT. DIAPHRAGM (N. SIDE)	HORIZ.
S634	1		8'-2"	X		E. ABUT. DIAPHRAGM (N. SIDE)	HORIZ.
S635	2		10'-3"	X		E. ABUT. DIAPHRAGM (S. SIDE)	HORIZ.
S636	1		10'-11"	X		E. ABUT. DIAPHRAGM (S. SIDE)	HORIZ.
S637	2		7'-6"	X		W. ABUT. DIAPHRAGM (N. SIDE)	HORIZ.
S638	1		8'-2"	X		W. ABUT. DIAPHRAGM (N. SIDE)	HORIZ.
S639	3		9'-3"	X		W. ABUT. DIAPHRAGM (S. SIDE)	HORIZ.
S640	2		7'-11"	X		W. ABUT. DIAPHRAGM (S. SIDE)	HORIZ.
S641	1		8'-7"	X		W. ABUT. DIAPHRAGM (S. SIDE)	HORIZ.
S542	231		4'-5"	X		PARAPET - STIRRUP	VERT.
S543	5		5'-10"	X		PARAPET - STIRRUP	VERT.
S544	236		5'-0"	X		PARAPET - STIRRUP	VERT.
S545	18		53'-7"			PARAPET - LONGITUDINAL	HORIZ.

THE FIRST DIGIT OF A BAR MARK SIGNIFIES THE BAR SIZE.

ALL BAR BEND DIMENSIONS ARE OUT TO OUT OF BAR.

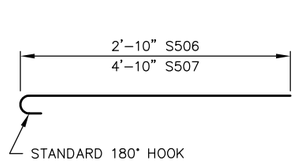
⚠ LENGTH SHOWN FOR BARS IN SERIES IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.

BAR SERIES TABLE

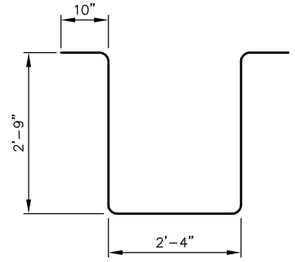
MARK	NO. REQ'D	LENGTH
S501	1 SERIES OF 25	1'-3" TO 18'-7"
S503	1 SERIES OF 24	1'-3" TO 17'-10"
S504	1 SERIES OF 25	1'-8" TO 18'-11"
S505	1 SERIES OF 24	10" TO 17'-6"

BUNDLE AND TAG EACH SERIES SEPARATELY.

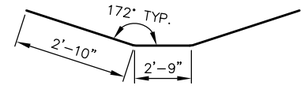
F.F. = FRONT FACE
B.F. = BACK FACE



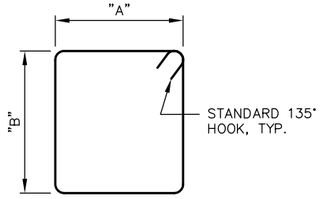
S506 & S507



S514



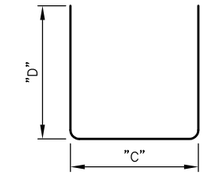
S415



S527, S528, S529, S530, & S531

BAR BEND DIM.

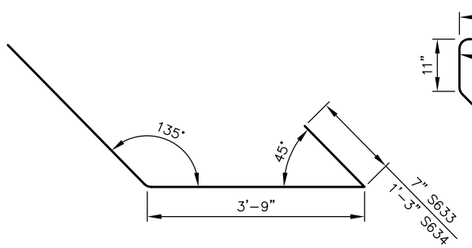
MARK	"A"	"B"
S527	3'-11"	1'-11"
S528	3'-10"	2'-11"
S529	3'-1"	2'-11"
S530	4'-3"	2'-11"
S531	4'-10"	2'-11"



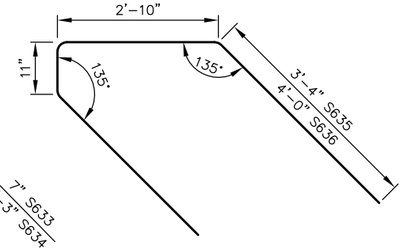
S425 & S532

BAR BEND DIM.

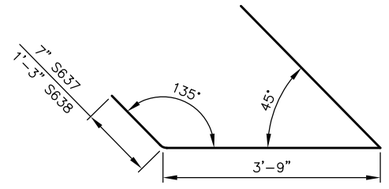
MARK	"C"	"D"
S425	1'-3"	1'-5"
S532	3'-0"	2'-0"



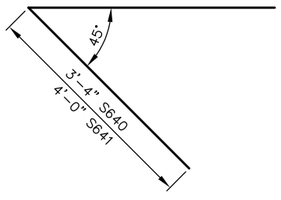
S633 & S634



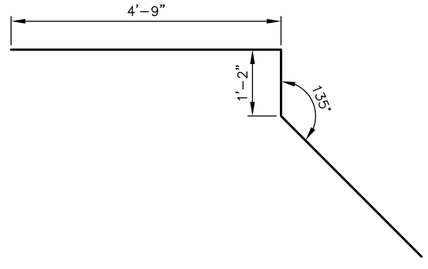
S635 & S636



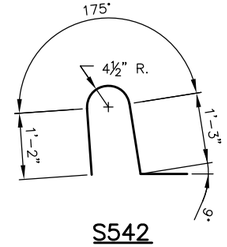
S637 & S638



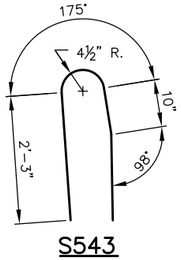
S640 & S641



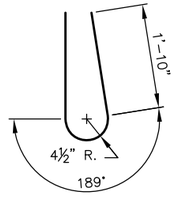
S639



S542



S543



S544

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-53-73

DRAWN BY MJW | PLANS CK'D JJK

SUPERSTRUCTURE REINFORCEMENT

SHEET 25 OF 32

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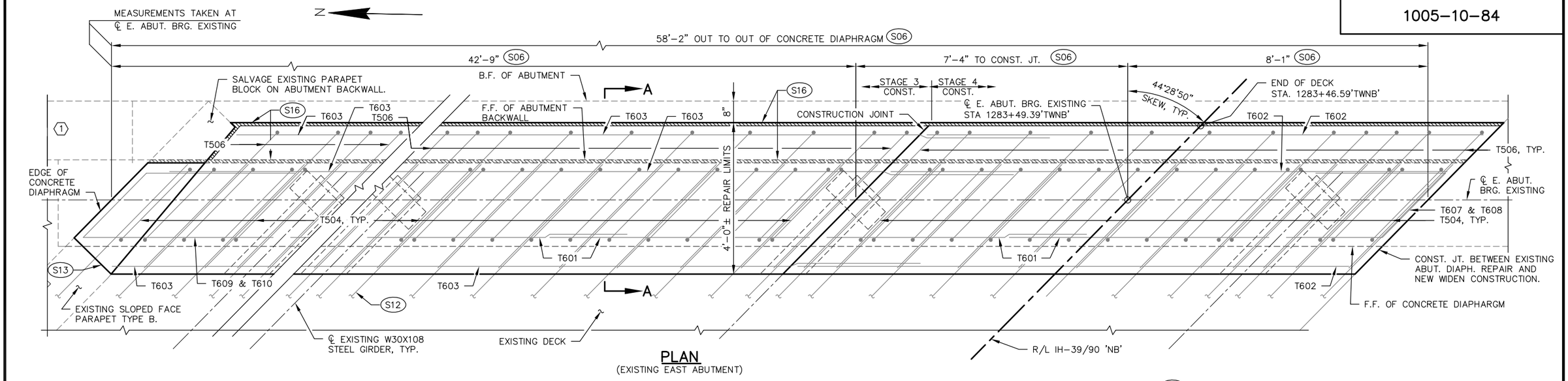
I.D. 1005-10-84

PLOT DATE: Jul 31, 2015

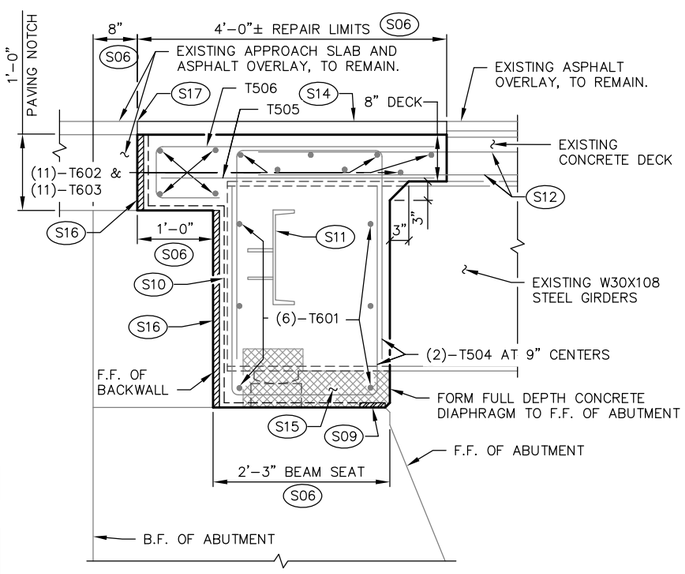
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PLOT SCALE:

STATE PROJECT NUMBER

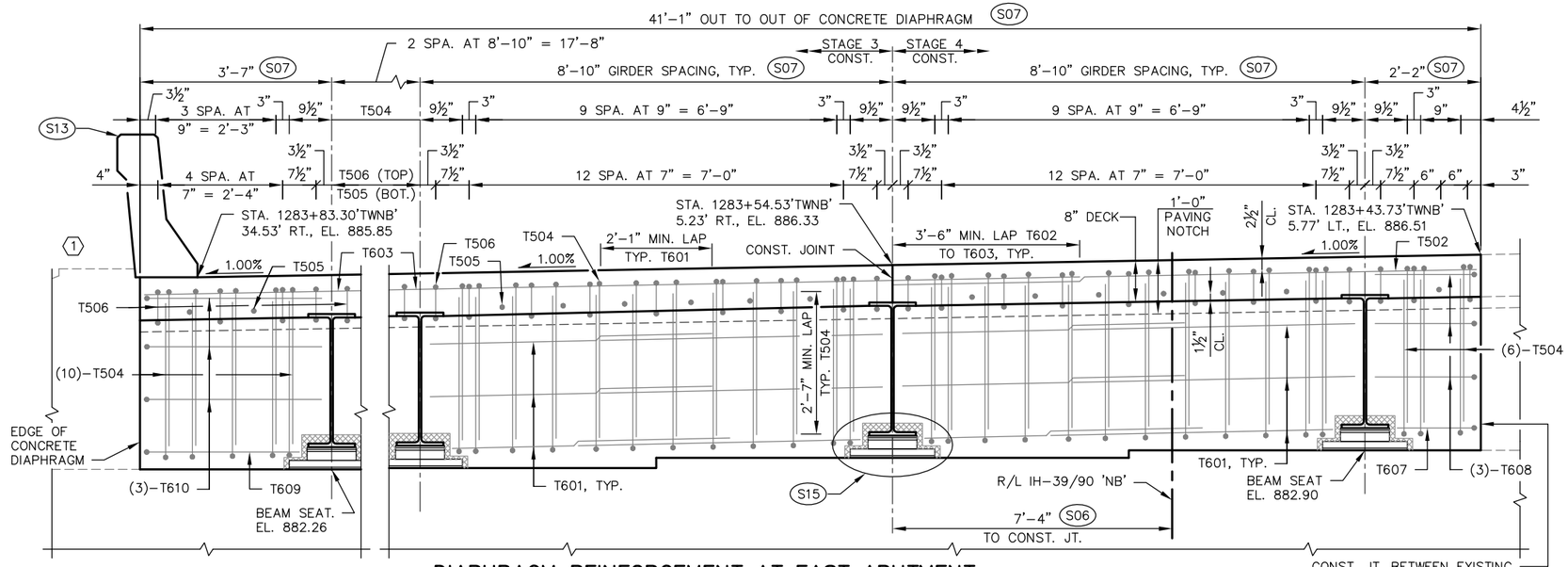
1005-10-84



PLAN
(EXISTING EAST ABUTMENT)



SECTION A-A THRU DIAPHRAGM AT EAST ABUTMENT
(LOOKING SOUTH)



DIAPHRAGM REINFORCEMENT AT EAST ABUTMENT
(LOOKING EAST)
(DECK STEEL NOT SHOWN FOR CLARITY)

NOTES

⬡ INDICATES WING NUMBER

(S06) DIMENSION IS TAKEN NORMAL TO ℄ OF SUBSTRUCTURE UNIT.

(S07) DIMENSION IS TAKEN NORMAL TO ℄ GIRDERS.

(S09) ¾" X 4" PREFORMED FILLER.

(S10) PLACE MULTIPLE LAYERS OF POLYETHYLENE SHEETS OVER ENTIRE EXISTING ABUTMENT BEFORE POURING DIAPHRAGM. TOTAL THICKNESS OF SHEETS SHALL BE AT LEAST 0.03". CLEAN ALL DEBRIS FROM SURFACES SHOWN ALONG ABUTMENT PRIOR TO PLACEMENT OF POLYETHYLENE SHEETS.

(S11) SALVAGE EXISTING STEEL DIAPHRAGM AND INCORPORATE INTO NEW CONCRETE DIAPHRAGM.

(S12) SALVAGE EXISTING LONGITUDINAL REBAR AND INCORPORATE INTO NEW CONCRETE DIAPHRAGM. LAP T505 WITH EXISTING BOTTOM LONGITUDINAL REBAR & LAP T506 WITH EXISTING TOP LONGITUDINAL REBAR.

(S13) SEE "SLOPED FACE PARAPET TYPE B REPAIR" SHEET FOR PARAPET DETAILS.

(S14) SEE "HMA OVERLAY POLYMER-MODIFIED" SHEET FOR OVERLAY DETAILS.

(S15) ISOLATE THE EXISTING BEARINGS FROM THE NEW FULL DEPTH CONCRETE DIAPHRAGM. PLACE RIGID FOAM INSULATION AROUND THE EXISTING BEARINGS AND UNDER THE BOTTOM FLANGES OF THE EXISTING GIRDERS. PROVIDE A MINIMUM THICKNESS OF 1-INCH OF RIGID FOAM INSULATION AROUND ALL BEARING ELEMENTS. SEAL AND SECURE THE RIGID FOAM INSULATION TO PREVENT MOVEMENT AND MORTAR INTRUSION PRIOR TO PLACEMENT OF CONCRETE. THE COST OF MATERIALS AND LABOR FOR ISOLATING THE EXISTING BEARINGS SHALL BE INCLUDED WITH THE COST OF THE BID ITEM "CONCRETE MASONRY BRIDGES".

(S16) PLACE A 1-INCH THICK COMPRESSIBLE MAT ON THE ENTIRE FRONT FACE OF THE EXISTING ABUTMENT BACK WALL AND AT THE FRONT FACE OF THE EXISTING APPROACH SLAB. THE COMPRESSIBLE MAT SHALL HAVE A COMPRESSIVE STRENGTH BETWEEN 200 PSF AND 1500 PSF AND HAVE A MINIMUM OF 1/2-INCH OF COMPRESSIBILITY. PLACE POLYETHYLENE SHEETS AFTER INSTALLING COMPRESSIBLE MAT. THE COMPRESSIBLE MAT SHALL BE INCLUDED WITH THE COST OF THE BID ITEM "CONCRETE MASONRY STRUCTURES".

(S17) SAW CUT HMA OVERLAY POLYMER-MODIFIED CONSTRUCTION JOINT 1/2-INCH WIDE AND FILL TO WITHIN 1/8-INCH OF SURFACE WITH JOINT SEALER. COST INCLUDED IN BID ITEM "HMA OVERLAY POLYMER-MODIFIED".

F.F. = FRONT FACE
B.F. = BACK FACE

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-53-73

DRAWN BY MJW | PLANS CK'D JJK

EAST ABUTMENT DIAPHRAGM REPAIR SECTION

SHEET 26 OF 32

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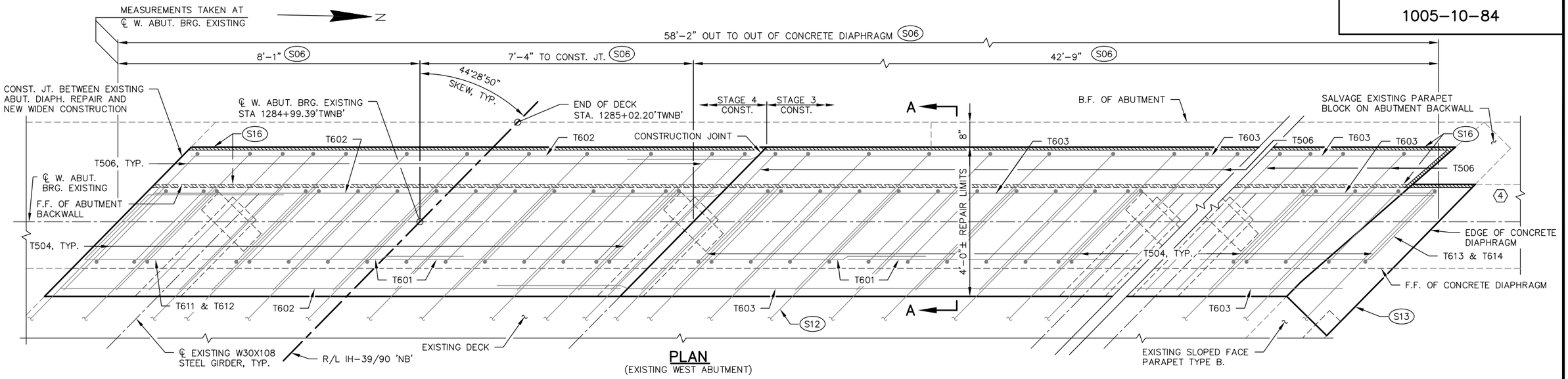
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I.D. 1005-10-84

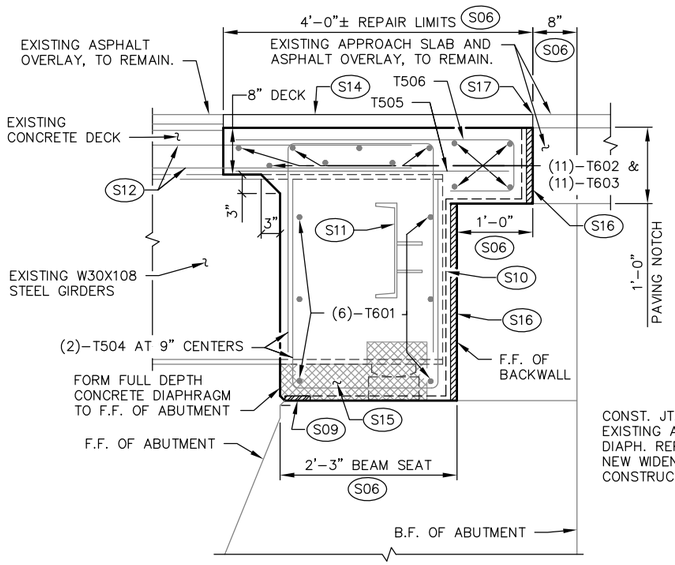
PLOT DATE: Jul 31, 2015

FILE: 21-29-B530073_super.dwg
PLOT SCALE:

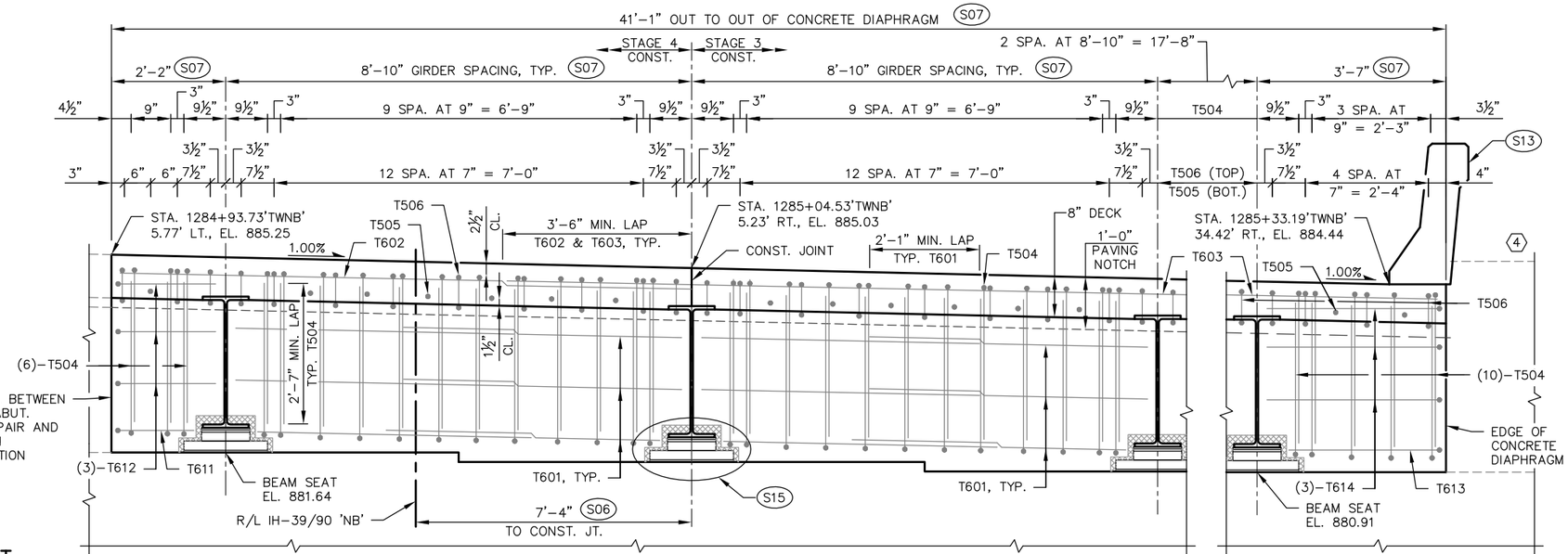
STATE PROJECT NUMBER
1005-10-84



PLAN
(EXISTING WEST ABUTMENT)



SECTION A-A THRU DIAPHRAGM AT WEST ABUTMENT
(LOOKING SOUTH)



DIAPHRAGM REINFORCEMENT AT WEST ABUTMENT
(LOOKING WEST)
(DECK STEEL NOT SHOWN FOR CLARITY)

NOTES

⬡ INDICATES WING NUMBER

(S06) DIMENSION IS TAKEN NORMAL TO ℄ OF SUBSTRUCTURE UNIT.

(S07) DIMENSION IS TAKEN NORMAL TO ℄ GIRDERS.

(S09) ¾" X 4" PREFORMED FILLER.

(S10) PLACE MULTIPLE LAYERS OF POLYETHYLENE SHEETS OVER ENTIRE EXISTING ABUTMENT BEFORE POURING DIAPHRAGM. TOTAL THICKNESS OF SHEETS SHALL BE AT LEAST 0.03". CLEAN ALL DEBRIS FROM SURFACES SHOWN ALONG ABUTMENT PRIOR TO PLACEMENT OF POLYETHYLENE SHEETS.

(S11) SALVAGE EXISTING STEEL DIAPHRAGM AND INCORPORATE INTO NEW CONCRETE DIAPHRAGM.

(S12) SALVAGE EXISTING LONGITUDINAL REBAR AND INCORPORATE INTO NEW CONCRETE DIAPHRAGM. LAP T505 WITH EXISTING BOTTOM LONGITUDINAL REBAR & LAP T506 WITH EXISTING TOP LONGITUDINAL REBAR.

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(S14) SEE "HMA OVERLAY POLYMER-MODIFIED" SHEET FOR OVERLAY DETAILS.

(S15) ISOLATE THE EXISTING BEARINGS FROM THE NEW FULL DEPTH CONCRETE DIAPHRAGM. PLACE RIGID FOAM INSULATION AROUND THE EXISTING BEARINGS AND UNDER THE BOTTOM FLANGES OF THE EXISTING GIRDERS. PROVIDE A MINIMUM THICKNESS OF 1-INCH OF RIGID FOAM INSULATION AROUND ALL BEARING ELEMENTS. SEAL AND SECURE THE RIGID FOAM INSULATION TO PREVENT MOVEMENT AND MORTAR INTRUSION PRIOR TO PLACEMENT OF CONCRETE. THE COST OF MATERIALS AND LABOR FOR ISOLATING THE EXISTING BEARINGS SHALL BE INCLUDED WITH THE COST OF THE BID ITEM "CONCRETE MASONRY BRIDGES".

(S16) PLACE A 1-INCH THICK COMPRESSIBLE MAT ON THE ENTIRE FRONT FACE OF THE EXISTING ABUTMENT BACK WALL AND AT THE FRONT FACE OF THE EXISTING APPROACH SLAB. THE COMPRESSIBLE MAT SHALL HAVE A COMPRESSIVE STRENGTH BETWEEN 200 PSF AND 1500 PSF AND HAVE A MINIMUM OF 1/2-INCH OF COMPRESSIBILITY. PLACE POLYETHYLENE SHEETS AFTER INSTALLING COMPRESSIBLE MAT. THE COMPRESSIBLE MAT SHALL BE INCLUDED WITH THE COST OF THE BID ITEM "CONCRETE MASONRY STRUCTURES".

(S17) SAW CUT HMA OVERLAY POLYMER-MODIFIED CONSTRUCTION JOINT 1/2-INCH WIDE AND FILL TO WITHIN 1/8-INCH OF SURFACE WITH JOINT SEALER. COST INCLUDED IN BID ITEM "HMA OVERLAY POLYMER-MODIFIED".

F.F. = FRONT FACE
B.F. = BACK FACE

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-53-73

DRAWN BY MJW | PLANS CK'D JJK

WEST ABUTMENT DIAPHRAGM REPAIR SECTION

SHEET 27 OF 32

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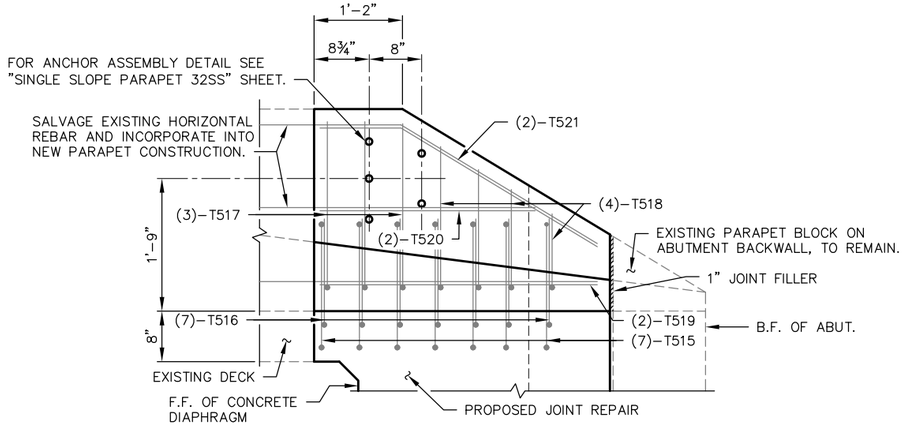
I.D. 1005-10-84

PLOT DATE: Jul 31, 2015

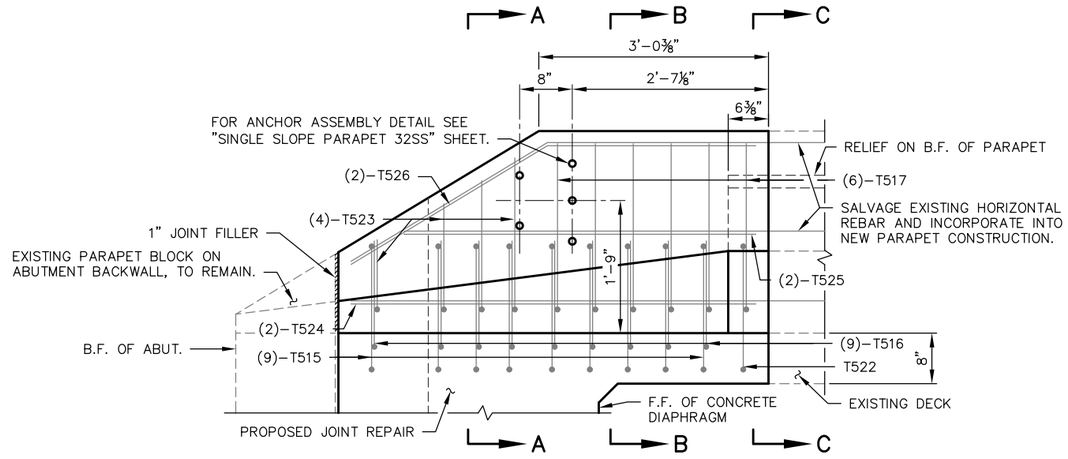
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PLOT SCALE:

STATE PROJECT NUMBER

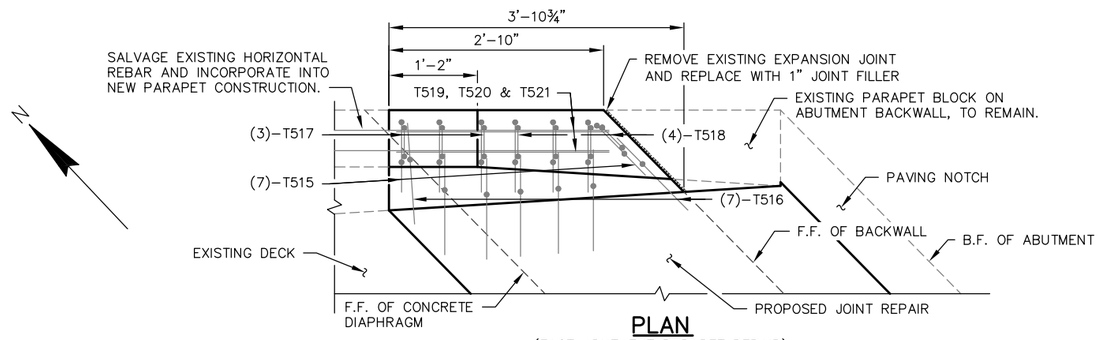
1005-10-84



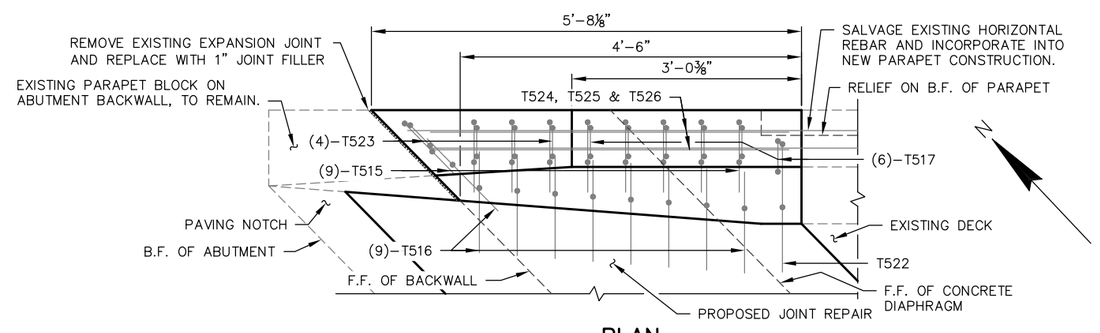
INSIDE ELEVATION OF EAST PARAPET
(DECK STEEL NOT SHOWN FOR CLARITY)



INSIDE ELEVATION OF WEST PARAPET
(DECK STEEL NOT SHOWN FOR CLARITY)



PLAN
(EAST ABUTMENT PARAPET REPAIR)
(DECK STEEL NOT SHOWN FOR CLARITY)



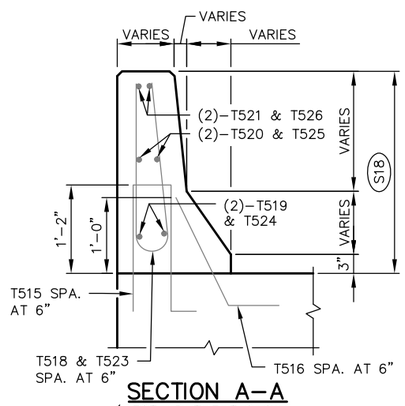
PLAN
(WEST ABUTMENT PARAPET REPAIR)
(DECK STEEL NOT SHOWN FOR CLARITY)

NOTES

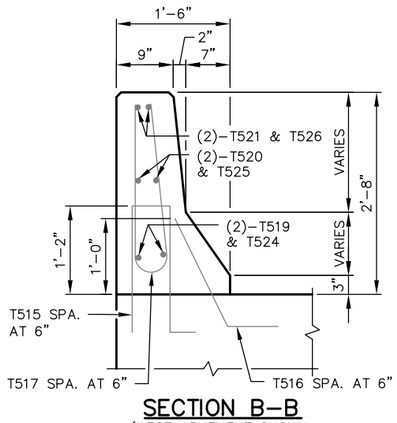
ALL DIMENSIONS ARE APPROXIAMTE AND SHOULD BE FIELD VERIFIED. NEW PARAPET CONSTRUCTION TO MATCH EXISTING PARAPETS.

(S18) 1'-0⅛" TO 2'-8" AT EAST ABUTMENT PARAPET & 1'-0⅞" TO 2'-8 AT WEST ABUTMENT PARAPET.

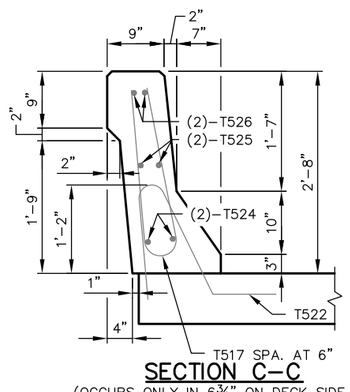
F.F. = FRONT FACE
B.F. = BACK FACE



SECTION A-A
(WEST ABUTMENT SHOWN, EAST ABUTMENT SIMILAR)



SECTION B-B
(WEST ABUTMENT SHOWN, EAST ABUTMENT SIMILAR)



SECTION C-C
(OCCURS ONLY IN 6⅜" ON DECK SIDE OF WEST ABUTMENT PARAPET REPAIR)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-53-73

DRAWN BY MJW | PLANS CK'D JJK

SLOPED FACE PARAPET TYPE B REPAIR

SHEET 28 OF 32

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I.D. 1005-10-84

PLOT DATE: Jul 31, 2015

FILE: 21-29-B530073_super.dwg
PLOT SCALE:

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8

STATE PROJECT NUMBER
1005–10–84

BILL OF BARS
SUPERSTRUCTURE REPAIR

COATED = 6,250 LBS.

MARK	NUMBER COATED	NUMBER UNCOATED	LENGTH	BENT	BAR SERIES	LOCATION	
T601	96		7'–0"			ABUT. DIAPHRAGM AT F.F. & B.F. (BTWN. GIRDERS)	HORIZ.
T602	22		15'–2"			ABUT. DIAPHRAGM AT TOP – SOUTH SIDE OF JOINT	HORIZ.
T603	22		45'–6"			ABUT. DIAPHRAGM AT TOP – NORTH SIDE OF JOINT	HORIZ.
T504	224		8'–2"	X		ABUT. DIAPHRAGM – STIRRUP	VERT.
T505	56		5'–1"			ABUT. DIAPHRAGM – TOP	HORIZ.
T506	88		6'–3"	X		ABUT. DIAPHRAGM – TOP	HORIZ.
T607	1		5'–11"	X		E. ABUT. DIAPHRAGM – SOUTH SIDE	HORIZ.
T608	3		7'–1"	X		E. ABUT. DIAPHRAGM – SOUTH SIDE	HORIZ.
T609	1		9'–11"	X		E. ABUT. DIAPHRAGM – NORTH SIDE	HORIZ.
T610	3		11'–1"	X		E. ABUT. DIAPHRAGM – NORTH SIDE	HORIZ.
T611	1		5'–11"	X		W. ABUT. DIAPHRAGM – SOUTH SIDE	HORIZ.
T612	3		7'–1"	X		W. ABUT. DIAPHRAGM – SOUTH SIDE	HORIZ.
T613	1		9'–11"	X		W. ABUT. DIAPHRAGM – NORTH SIDE	HORIZ.
T614	3		11'–1"	X		W. ABUT. DIAPHRAGM – NORTH SIDE	HORIZ.
T515	16		4'–5"	X		PARAPET REPAIR	VERT.
T516	16		2'–4"	X		PARAPET REPAIR	VERT.
T517	9		4'–9"	X		PARAPET REPAIR	VERT.
T518	4		3'–5"	X	⚠	E. ABUT. PARAPET REPAIR	VERT.
T519	2		3'–0"			E. ABUT. PARAPET REPAIR	HORIZ.
T520	2		2'–7"			E. ABUT. PARAPET REPAIR	HORIZ.
T521	2		3'–3"	X		E. ABUT. PARAPET REPAIR	HORIZ.
T522	1		4'–2"	X		W. ABUT. PARAPET REPAIR	VERT.
T523	4		3'–4"	X	⚠	W. ABUT. PARAPET REPAIR	VERT.
T524	2		4'–11"			W. ABUT. PARAPET REPAIR	HORIZ.
T525	2		4'–7"			W. ABUT. PARAPET REPAIR	HORIZ.
T526	2		5'–7"	X		W. ABUT. PARAPET REPAIR	HORIZ.

THE FIRST DIGIT OF A BAR MARK SIGNIFIES THE BAR SIZE.

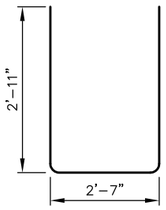
ALL BAR BEND DIMENSIONS ARE OUT TO OUT OF BAR.

⚠ LENGTH SHOWN FOR BARS IN SERIES IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.

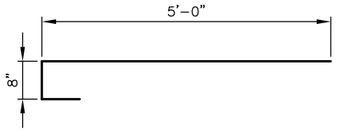
BAR SERIES TABLE

MARK	NO. REQ'D	LENGTH
T518	1 SERIES OF 4	2'–10" TO 4'–0"
T523	1 SERIES OF 4	2'–4" TO 4'–4"

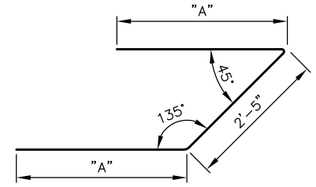
BUNDLE AND TAG EACH SERIES SEPARATELY.



T504



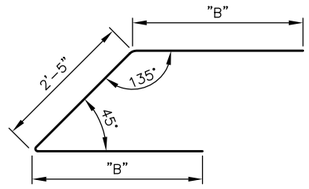
T506



T607, T608,
T613, & T614

BAR BEND DIM.

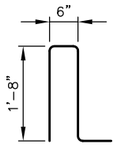
MARK	"A"
T607	1'–11"
T608	2'–6"
T613	3'–11"
T614	4'–6"



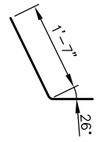
T609, T610,
T611, & T612

BAR BEND DIM.

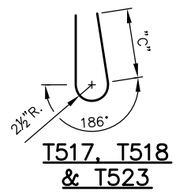
MARK	"B"
T609	3'–11"
T610	4'–6"
T611	1'–11"
T612	2'–6"



T515



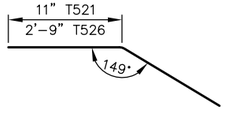
T516



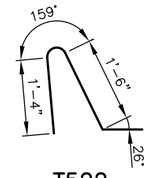
T517, T518
& T523

BAR BEND DIM.

MARK	"C"
T517	2'–0"
T518	1'–1" TO 1'–8"
T523	10" TO 1'–10"



T521 & T526



T522

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B–53–73

DRAWN BY MJW | PLANS CK'D JJK

SUPERSTRUCTURE REPAIR REINFORCEMENT

SHEET 29 OF 32

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I.D. 1005–10–84 PLOT DATE: Jul 31, 2015

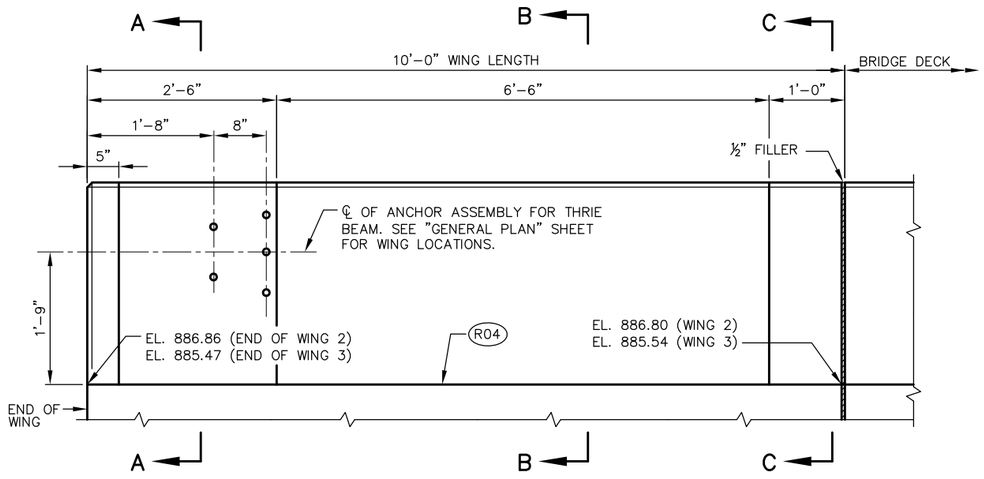
FILE: 21–29–B530073_super.dwg
PLOT SCALE:

8

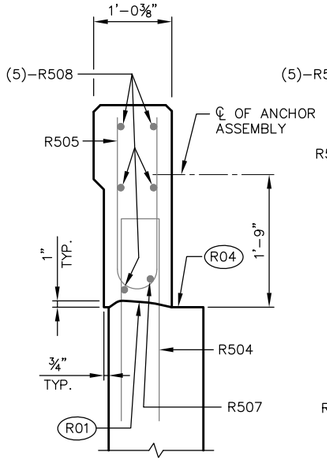
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STATE PROJECT NUMBER

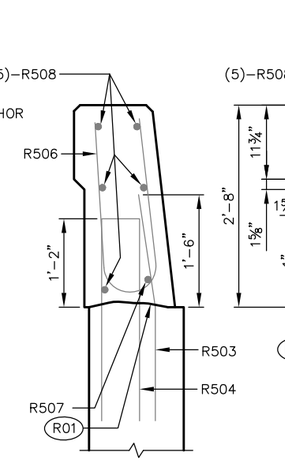
1005-10-84



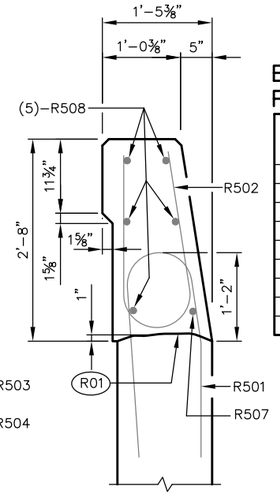
INSIDE ELEVATION OF PARAPET



SECTION A-A



SECTION B-B



SECTION C-C

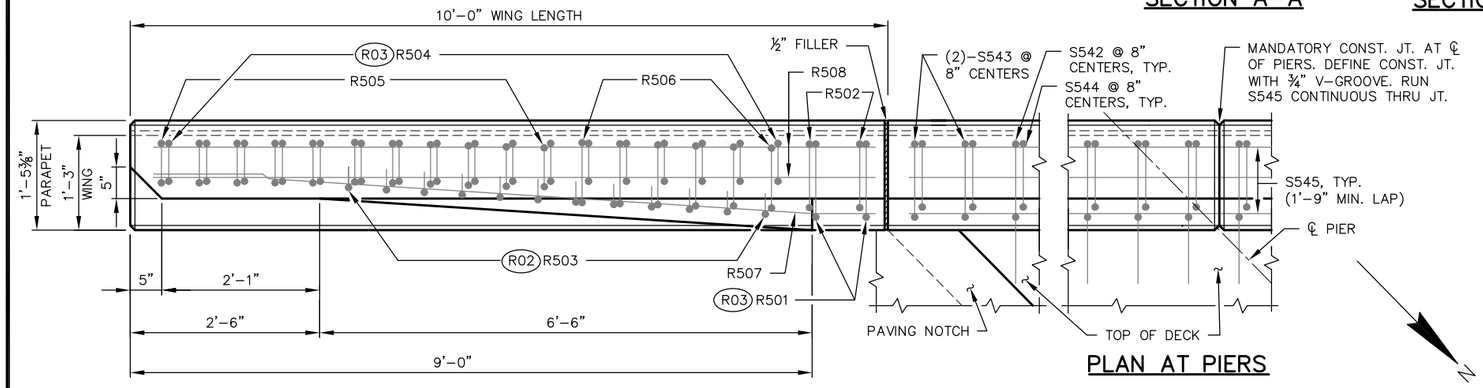
BILL OF BARS
PARAPETS ON WINGS

E. ABUT. = 310 LBS.
W. ABUT. = 310 LBS.

BAR MARK	COAT	NO. REQ'D. E. ABUT.	NO. REQ'D. W. ABUT.	LENGTH	BENT	LOCATION
R501	X	2	2	5-10	X	PARAPET VERT.
R502	X	2	2	5-0	X	PARAPET VERT.
R503	X	12	12	3-0	X	PARAPET VERT.
R504	X	17	17	5-7	X	PARAPET VERT.
R505	X	11	11	4-9	X	PARAPET VERT.
R506	X	6	6	4-10	X	PARAPET VERT.
R507	X	1	1	9-7	X	PARAPET HORIZ.
R508	X	5	5	9-8		PARAPET HORIZ.

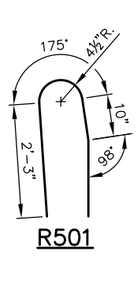
THE FIRST DIGIT OF A BAR MARK SIGNIFIES THE BAR SIZE.

ALL BAR BEND DIMENSIONS ARE OUT TO OUT OF BAR.

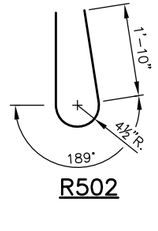


PLAN OF PARAPET
(WING 2 SHOWN, WING 3 SIMILAR)

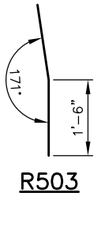
PLAN AT PIERS



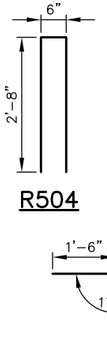
R501



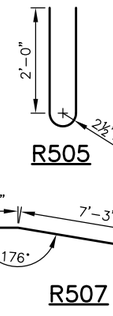
R502



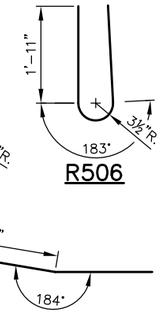
R503



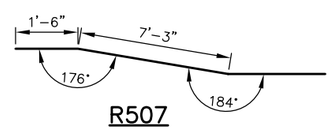
R504



R505



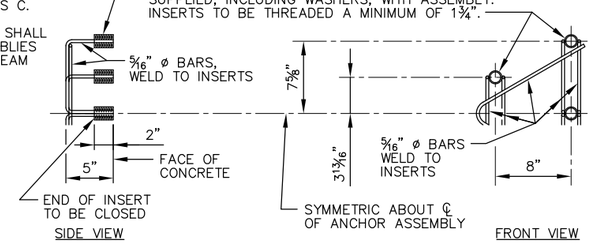
R506



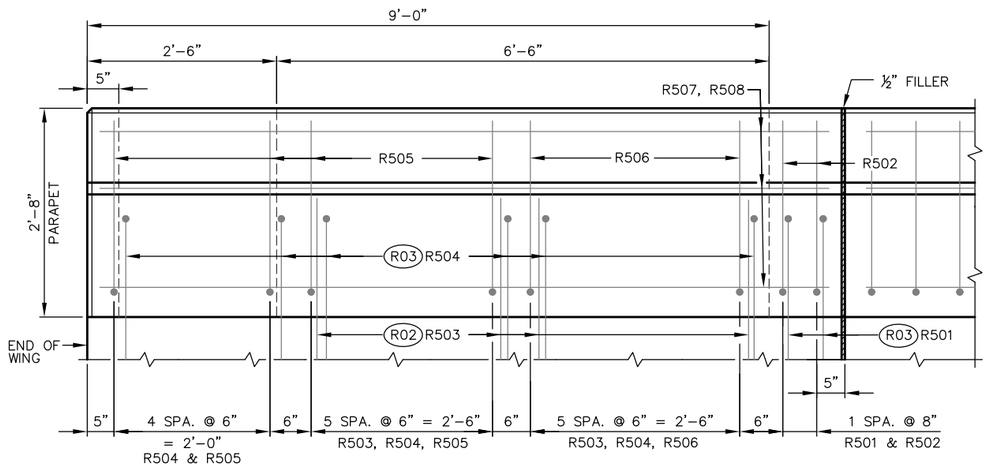
R507

NOTE: HEX HEAD CAP SCREWS & WASHERS TO BE GALVANIZED IN ACCORDANCE WITH AASHTO M232 CLASS C.

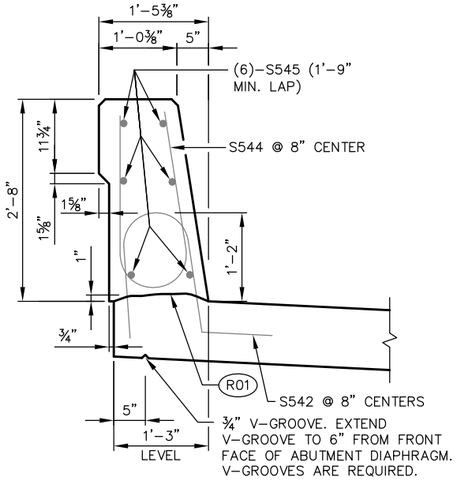
ASSEMBLY BID ITEM SHALL BE "ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD", EACH.



DETAIL OF ANCHOR ASSEMBLY



OUTSIDE ELEVATION OF PARAPET



SECTION THRU PARAPET ON BRIDGE
(LOOKING WEST, DECK STEEL NOT SHOWN FOR CLARITY)
(S542, S544 & S545 ARE INCLUDED IN SUPERSTR. BAR STEEL QNTY.)

NOTES

STEEL & CONCRETE QUANTITIES FOR PARAPETS ON WINGS INCLUDED IN ABUTMENT QUANTITIES ON "CROSS SECTION, QUANTITIES, NOTES" SHEET.

(R01) CONST. JOINT – STRIKE OFF AS SHOWN AND LEAVE ROUGH.

(R02) R503 BARS MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. USE CARE TO PLACE R503 CORRECTLY ALONG TRANSITION OF PARAPET.

(R03) R501 AND R504 BARS TO BE TIED TO WING STEEL BEFORE WING IS POURED.

(R04) FINISH CONCRETE NOT COVERED BY THE PARAPET. MATCH ROADWAY OR APPROACH SLAB CROSS SLOPE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-53-73

DRAWN BY MJW | PLANS CK'D JJK

SINGLE SLOPE PARAPET 32SS

SHEET 30 OF 32

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8

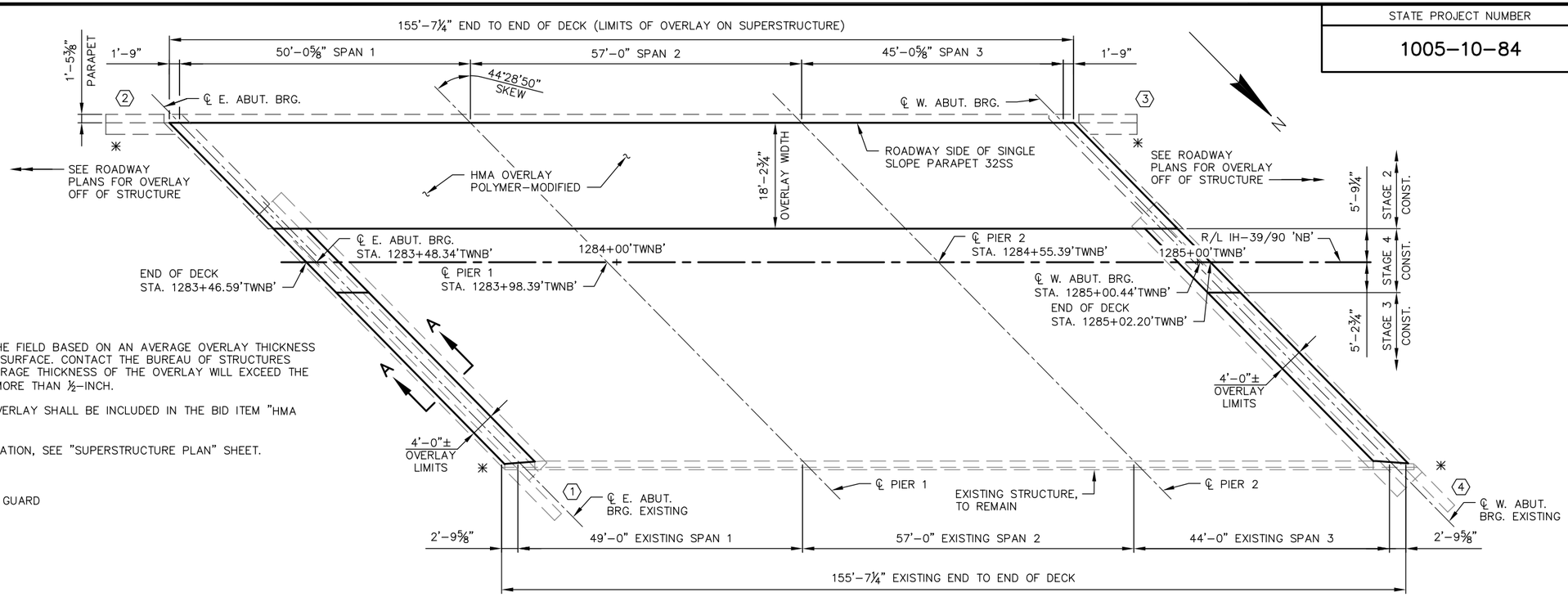
8

I.D. 1005-10-84

PLOT DATE: Jul 31, 2015

FILE: 30-B530073_parapet.dwg
PLOT SCALE:

STATE PROJECT NUMBER
1005–10–84



HMA OVERLAY POLYMER–MODIFIED PLAN

NOTES

PROFILE GRADE LINE SHALL BE DETERMINED IN THE FIELD BASED ON AN AVERAGE OVERLAY THICKNESS OF 2–INCH PLACED ABOVE THE CONCRETE DECK SURFACE. CONTACT THE BUREAU OF STRUCTURES BEFORE PLACEMENT OF THE OVERLAY IF THE AVERAGE THICKNESS OF THE OVERLAY WILL EXCEED THE AVERAGE THICKNESS SHOWN ON THE PLANS BY MORE THAN ½–INCH.

ANY EXCAVATION REQUIRED TO COMPLETE THE OVERLAY SHALL BE INCLUDED IN THE BID ITEM "HMA OVERLAY POLYMER–MODIFIED".

FOR DECK REMOVAL LIMITS AT END OF DECK LOCATION, SEE "SUPERSTRUCTURE PLAN" SHEET.

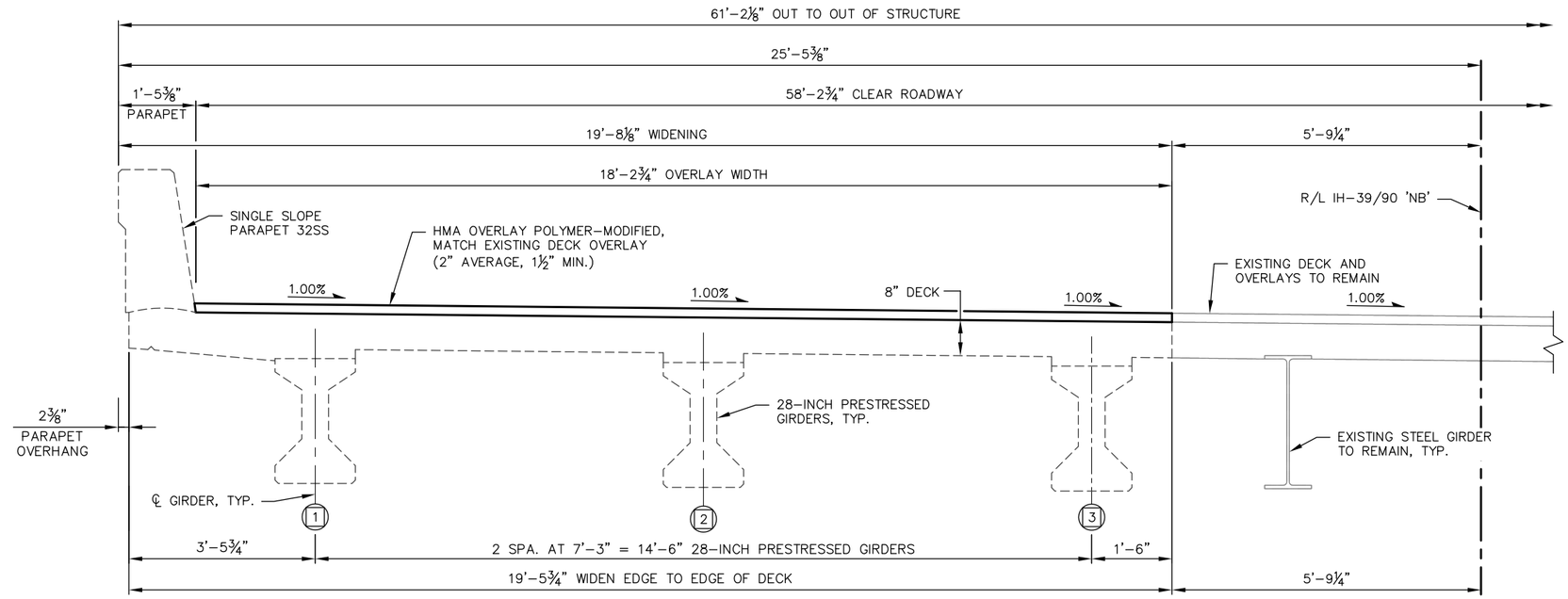
⬡ INDICATES WING NUMBER

✳ ANCHOR ASSEMBLY FOR STEEL PLATE BEAM GUARD

(1) GIRDER 1 LINE DESIGNATION

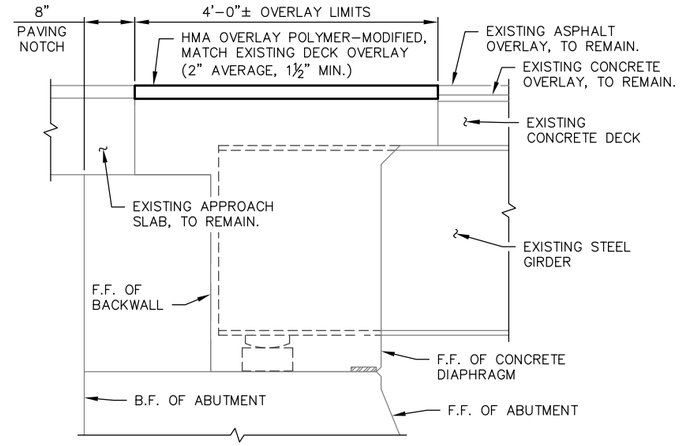
(2) GIRDER 2 LINE DESIGNATION

(3) GIRDER 3 LINE DESIGNATION



CROSS SECTION THRU ROADWAY IN SPAN SHOWING HMA OVERLAY POLYMER–MODIFIED

(LOOKING WEST)



SECTION A–A THRU EXISTING ABUTMENT SHOWING HMA OVERLAY POLYMER–MODIFIED

(EXISTING EAST ABUTMENT LOOKING SOUTH, WEST ABUTMENT SIMILAR)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B–53–73

DRAWN BY MJW | PLANS CK'D JJK

HMA OVERLAY POLYMER–MODIFIED

SHEET 31 OF 32

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I.D. 1005–10–84

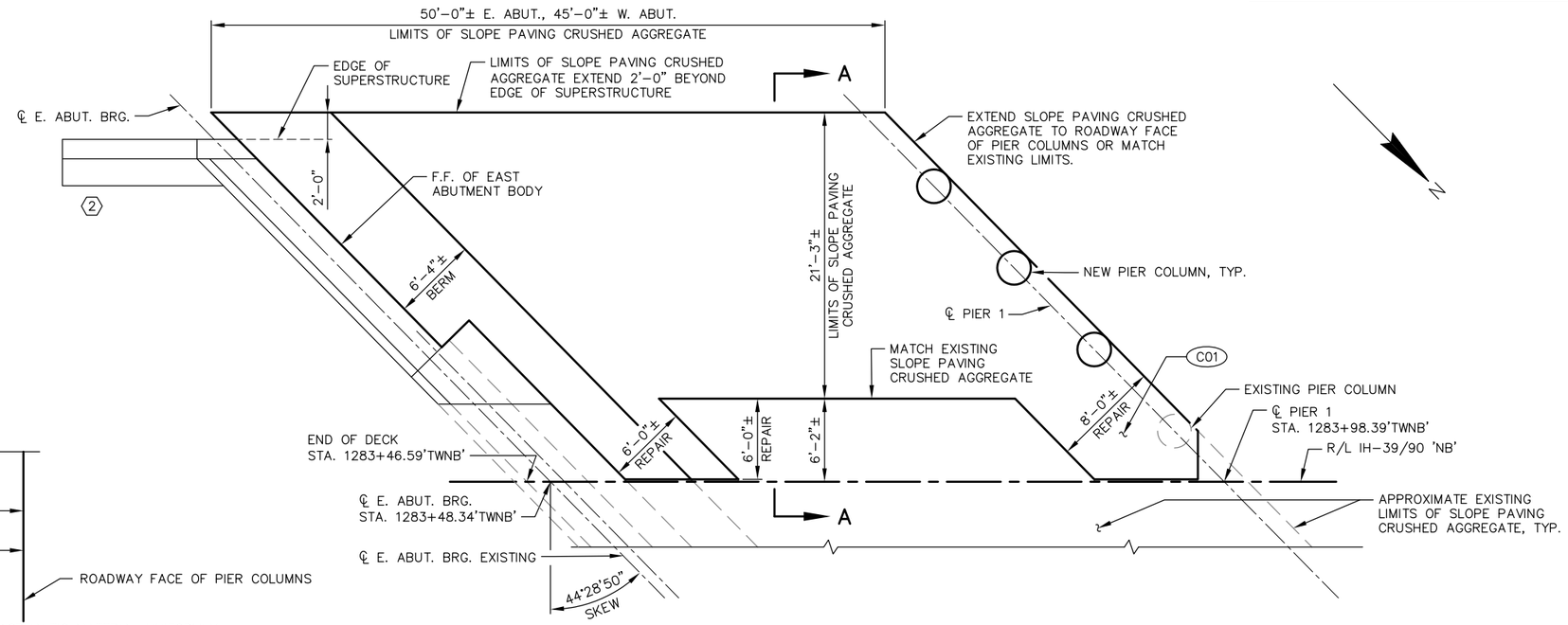
PLOT DATE: Jul 31, 2015

FILE: 31–B530073_overlay.dwg
PLOT SCALE:

8

8

STATE PROJECT NUMBER
1005–10–84

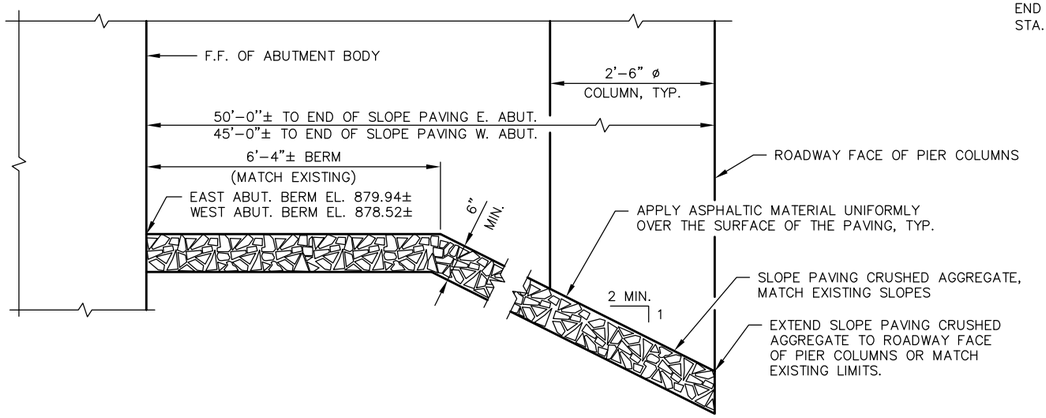


PLAN VIEW SHOWING LIMITS OF SLOPE PAVING CRUSHED AGGREGATE

(EAST ABUTMENT SHOWN, WEST ABUTMENT SIMILAR)

⬡ INDICATES WING NUMBER

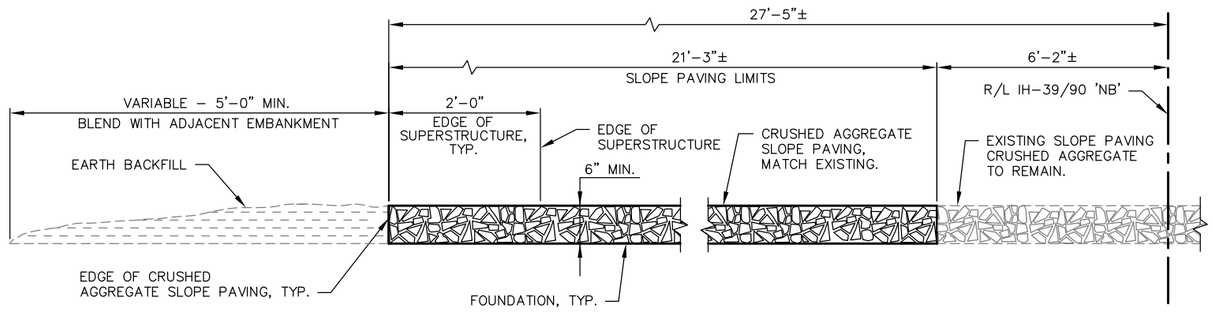
(C01) REPAIR SLOPE PAVING DISTURBED DURING ABUTMENT AND PIER EXCAVATION.



TYPICAL SECTION THRU SLOPE PAVING CRUSHED AGGREGATE

(ROUND STONE WILL NOT BE ACCEPTED.)

F.F. – FRONT FACE
B.F. – BACK FACE



SECTION A–A

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B–53–73

DRAWN BY MJW | PLANS CK'D JJK

SLOPE PAVING CRUSHED AGGREGATE

SHEET 32 OF 32

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I.D. 1005–10–84

PLOT DATE: Jul 31, 2015

FILE: 32–B530073_slppav.dwg
PLOT SCALE:

8

8

DIVISION 2-1/CAT. 1000 (STA 1265+85 - STA 1300+00): STAGE 2 CONSTRUCTION - NB IH 39/90 TEMPORARY WIDENING 'TWNB'

STATION	Distance	Area				Incremental Volume (Unadjusted)				Cumulative Vol (CY)			Mass Ordinate
		Cut (SF)	Salvaged/Unusable Pavement Material (SF)	Fill (SF)	EBS (SF)	Cut Note 1 (CY)	Salvaged/Unusable Pavement Material Note 2 (CY)	Fill Note 3 (CY)	EBS Note 4 (CY)	Cut 1.00 Note 5	Fill 1.00 Note 6	EBS 1.00	Note 7
1265+85		14.26	0.29	4.91	9.50								
1266+00	15	16.01	0.29	2.33	10.45	8	0	2	6	8	2	6	6
1267+00	100	26.95	0.29	0	6.60	80	1	4	32	88	6	37	82
1268+00	100	22.27	0.29	0.44	9.75	91	1	1	30	179	7	67	172
1269+00	100	17.91	0.29	3.28	13.30	74	1	7	43	254	14	110	239
1270+00	100	19.72	0.29	3.47	9.13	70	1	13	42	323	27	152	297
1271+00	100	16.10	0.29	8.68	17.25	66	1	23	49	390	49	200	340
1272+00	100	17.17	0.29	9.3	16.10	62	1	33	62	451	82	262	369
1273+00	100	14.09	0.29	12.45	15.60	58	1	40	59	509	123	321	386
1274+00	100	12.63	0.29	19.72	15.95	49	1	60	58	558	182	379	376
1275+00	100	13.63	0.29	25.19	14.00	49	1	83	55	607	265	435	342
1276+00	100	12.35	0.29	27.36	18.60	48	1	97	60	655	363	495	293
1277+00	100	13.37	0.29	35.19	21.60	48	1	116	74	703	478	570	224
1278+00	100	11.71	0.29	31.98	27.28	46	1	124	91	749	603	660	146
1279+00	100	9.86	0.29	34.74	32.00	40	1	124	110	789	726	770	63
1280+00	100	14.41	0.29	36.37	35.10	45	1	132	124	834	858	894	-24
1281+00	100	18.13	0.29	27.79	29.16	60	1	119	119	894	977	1013	-83
1282+00	100	17.72	0.29	30.24	25.48	66	1	107	101	961	1084	1114	-124
1283+00	100	14.05	0.29	27.63	26.10	59	1	107	96	1020	1192	1210	-172
1285+01		12.91	0.29	39.11	20.75								
1286+00	99	18.69	0.29	24.64	20.00	58	1	117	75	1078	1308	1285	-231
1287+00	100	14.11	0.29	21.18	21.56	61	1	85	77	1138	1393	1362	-255
1288+00	100	18.17	0.29	18.21	18.50	60	1	73	74	1198	1466	1436	-268
1289+00	100	17.50	0.29	21.34	17.75	66	1	73	67	1264	1539	1503	-275
1290+00	100	19.71	0.29	15.71	15.41	69	1	69	61	1333	1608	1564	-275
1291+00	100	20.51	0.29	12.72	12.10	74	1	53	51	1407	1661	1615	-253
1292+00	100	18.74	0.29	7.04	9.45	73	1	37	40	1480	1697	1655	-217
1293+00	100	16.47	0.29	7.82	7.35	65	1	28	31	1545	1725	1686	-180
1294+00	100	22.50	0.29	2.77	3.25	72	1	20	20	1617	1744	1706	-127
1295+00	100	18.84	0.29	13.14	4.20	77	1	29	14	1694	1774	1720	-80
1296+00	100	22.96	0.29	4.92	0.00	77	1	33	8	1771	1807	1727	-36
1297+00	100	19.78	0.29	1.27	0.00	79	1	11	0	1851	1819	1727	32
1298+00	100	28.80	0.29	0	0.00	90	1	2	0	1941	1821	1727	119
1299+00	100	36.75	0.29	0	0.00	121	1	0	0	2062	1821	1727	241
1300+00	100	36.65	0.29	0	0.00	136	1	0	0	2198	1821	1727	377
Column totals						2,198	35	1,821	1,727				

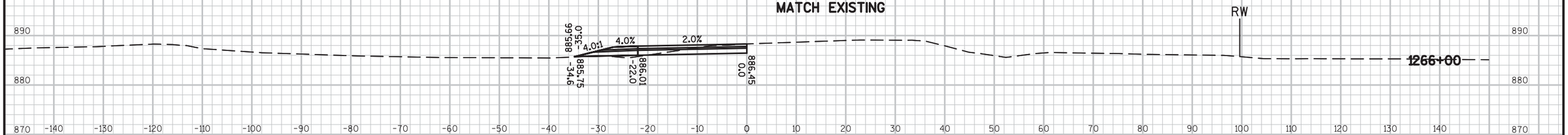
Notes:
1 - Cut: Cut includes Salvaged/Unusable Pavement Material
2 - Salvaged/Unusable Pavement Material: This does not show up in cross sections
3 - Fill: Does not include Unusable Pavement Excavation volume
4 - EBS:
- Assumed that EBS excavation starts 4' from the outside edge of existing driving lanes since existing base is to remain in place.
- Assumed that EBS excavation starts at 6" (depth of topsoil) below existing ground.
- No EBS can be used for backfill since the fill material will be used in future Project.
5 - Cut: Cut includes Salvaged/Unusable Pavement Material
6 - Fill: Does not include Unusable Pavement Excavation volume
7 - Mass Ordinate: [Cut - Fill] (Not Fill Factor Adjusted)

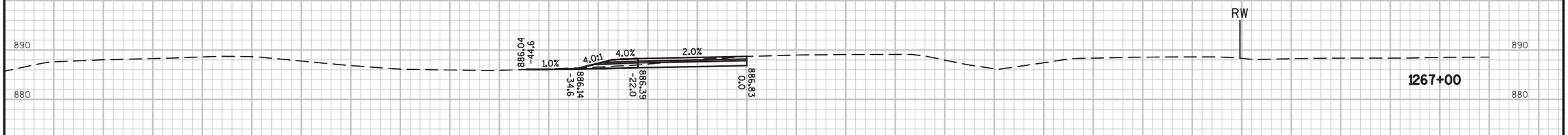
DIVISION 3-1/CAT. 1000 (STA 1269+15 - STA 1296+40): STAGE 3 CONSTRUCTION - NB IH 39/90 TEMPORARY WIDENING 'TWNB'

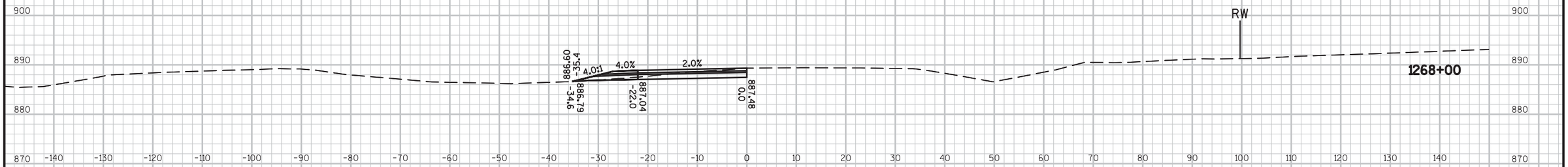
STATION	Distance	Area				Incremental Volume (Unadjusted)				Cumulative Vol (CY)			Mass Ordinate
		Cut (SF)	Salvaged/Unusable Pavement Material (SF)	Fill (SF)	EBS (SF)	Cut Note 1 (CY)	Salvaged/Unusable Pavement Material Note 2 (CY)	Fill Note 3 (CY)	EBS Note 4 (CY)	Cut 1.00 Note 5	Fill 1.00 Note 6	EBS 1.00	Note 7
1269+15		10.11	0.00	0.4	10.40								
1270+00	85	7.48	0.00	0.82	10.40	28	0	2	33	28	2	33	26
1271+00	100	8.58	0.00	0.69	6.24	30	0	3	31	57	5	64	53
1272+00	100	8.02	0.00	3.29	12.48	31	0	7	35	88	12	98	76
1273+00	100	9.81	0.00	13.9	29.12	33	0	32	77	121	44	175	77
1274+00	100	5.86	0.00	47.16	35.36	29	0	113	119	150	157	295	-7
1275+00	100	7.97	0.00	52.02	40.56	26	0	184	141	176	341	435	-165
1276+00	100	5.50	0.00	71.15	42.64	25	0	228	154	201	569	589	-368
1277+00	100	6.75	0.00	40.56	31.20	23	0	207	137	223	776	726	-552
1278+00	100	17.85	0.00	0	14.56	46	0	75	85	269	851	811	-582
1279+00	100	50.59	0.00	0	5.20	127	0	0	37	396	851	847	-455
1280+00	100	9.10	0.00	28.38	28.08	111	0	53	62	506	903	909	-397
1281+00	100	3.08	0.00	78.39	47.84	23	0	198	141	529	1101	1050	-572
1282+00	100	2.87	0.00	36.51	41.60	11	0	213	166	540	1314	1215	-774
1283+00	100	4.39	0.00	52.31	59.28	13	0	164	187	553	1478	1402	-925
1283+71	71	6.23	0.00	43.26	59.28	14	0	126	156	567	1604	1558	-1037
1285+40		5.93	0.00	44.28	5.21								
1286+00	60	7.47	0.00	50.84	44.52	15	0	106	55	582	1710	1613	-1128
1287+00	100	2.87	0.00	65.01	45.78	19	0	215	167	601	1924	1780	-1323
1288+00	100	6.69	0.00	48.37	41.44	18	0	210	162	619	2134	1942	-1515
1289+00	100	8.48	0.00	45.88	43.70	28	0	175	158	647	2309	2100	-1662
1290+00	100	7.97	0.00	33.9	40.12	30	0	148	155	677	2456	2255	-1779
1291+00	100	5.56	0.00	26.69	37.20	25	0	112	143	702	2569	2398	-1866
1292+00	100	8.75	0.00	20.81	29.52	26	0	88	124	729	2657	2522	-1928
1293+00	100	6.98	0.00	24.77	30.00	29	0	84	110	758	2741	2632	-1983
1294+00	100	7.71	0.00	23.85	28.75	27	0	90	109	785	2831	2741	-2046
1295+00	100	6.44	0.00	25.04	30.00	26	0	91	109	811	2922	2849	-2110
1296+00	100	6.82	0.00	29.88	30.00	25	0	102	111	836	3023	2961	-2187
1296+40	40	7.62	0.00	25.57	30.00	11	0	41	44	847	3064	3005	-2218
Column totals						847	0	3,064	3,005				

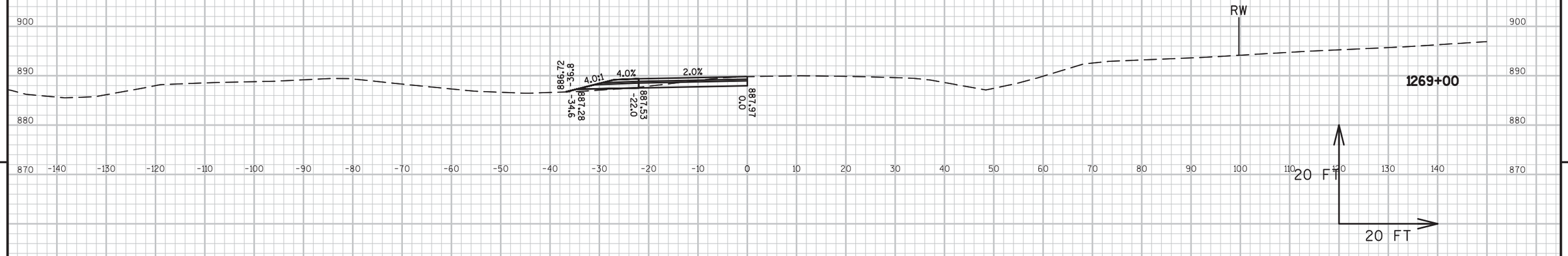
Notes:
1 - Cut: Cut includes Salvaged/Unusable Pavement Material
2 - Salvaged/Unusable Pavement Material: This does not show up in cross sections
3 - Fill: Does not include Unusable Pavement Excavation volume
4 - EBS:
- Assumed that EBS excavation starts 10' from the outside edge of existing driving lanes since existing base is to remain in place.
- Assumed that EBS excavation starts at 6" (depth of topsoil) below existing ground.
- No EBS can be used for backfill since the fill material will be used in future Project.
5 - Cut: Cut includes Salvaged/Unusable Pavement Material
6 - Fill: Does not include Unusable Pavement Excavation volume
7 - Mass Ordinate: [Cut - Fill] (Not Fill Factor Adjusted)

BEGIN PROJECT 1005-10-84
STA. 1265+85 'TWNB'
MATCH EXISTING







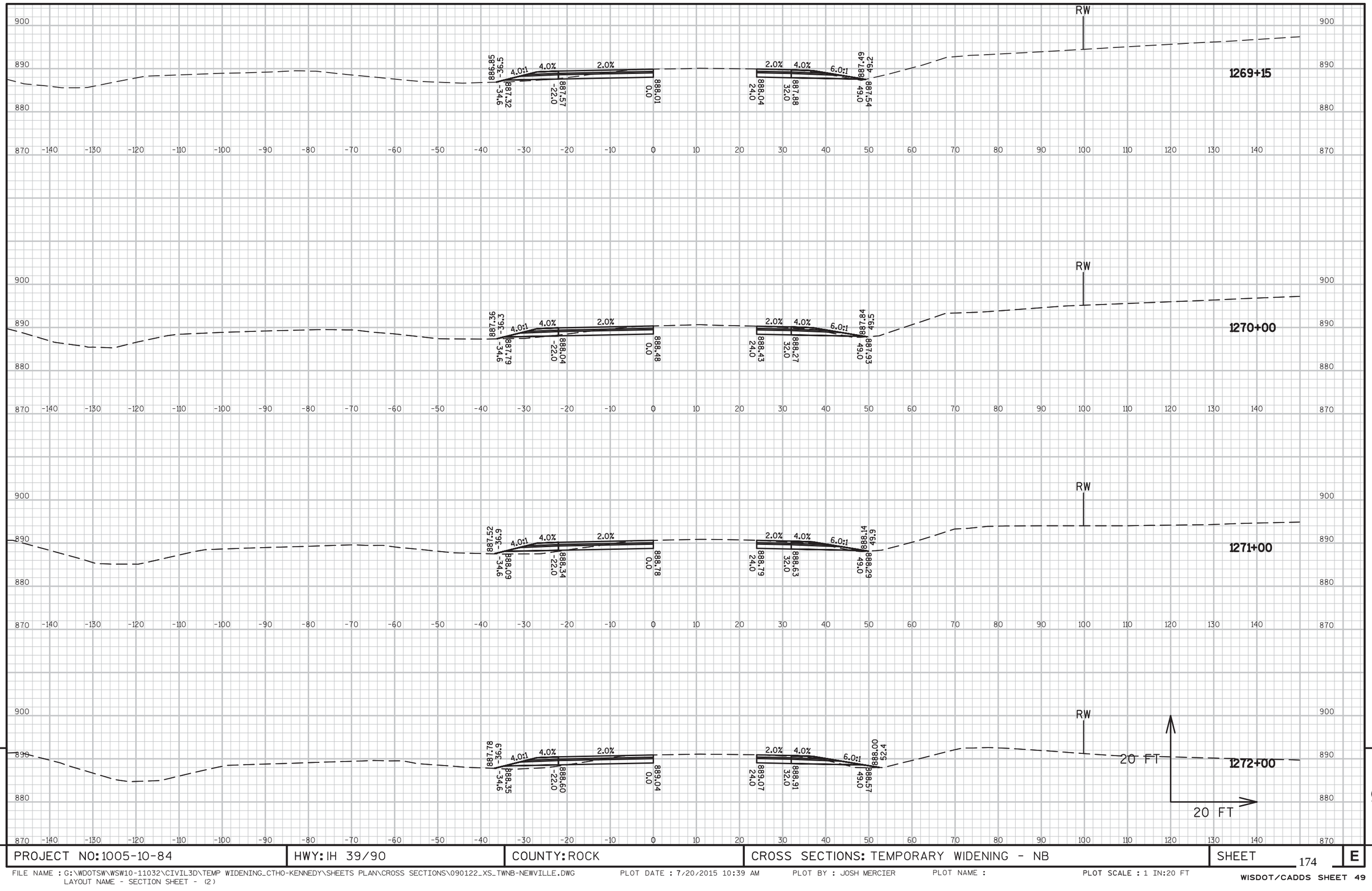


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PROJECT NO: 1005-10-84	HWY: IH 39/90	COUNTY: ROCK	CROSS SECTIONS: TEMPORARY WIDENING - NB	SHEET 173	E

FILE NAME : G:\WDOTSW\WSW10-11032\CIVIL3D\TEMP WIDENING_CTHO-KENNEDY\SHEETS PLAN\CROSS SECTIONS\090122_XS_TWNB-NEWVILLE.DWG
LAYOUT NAME - SECTION SHEET - (1)
PLOT DATE : 7/20/2015 10:39 AM PLOT BY : JOSH MERCIER PLOT NAME : PLOT SCALE : 1 IN:20 FT

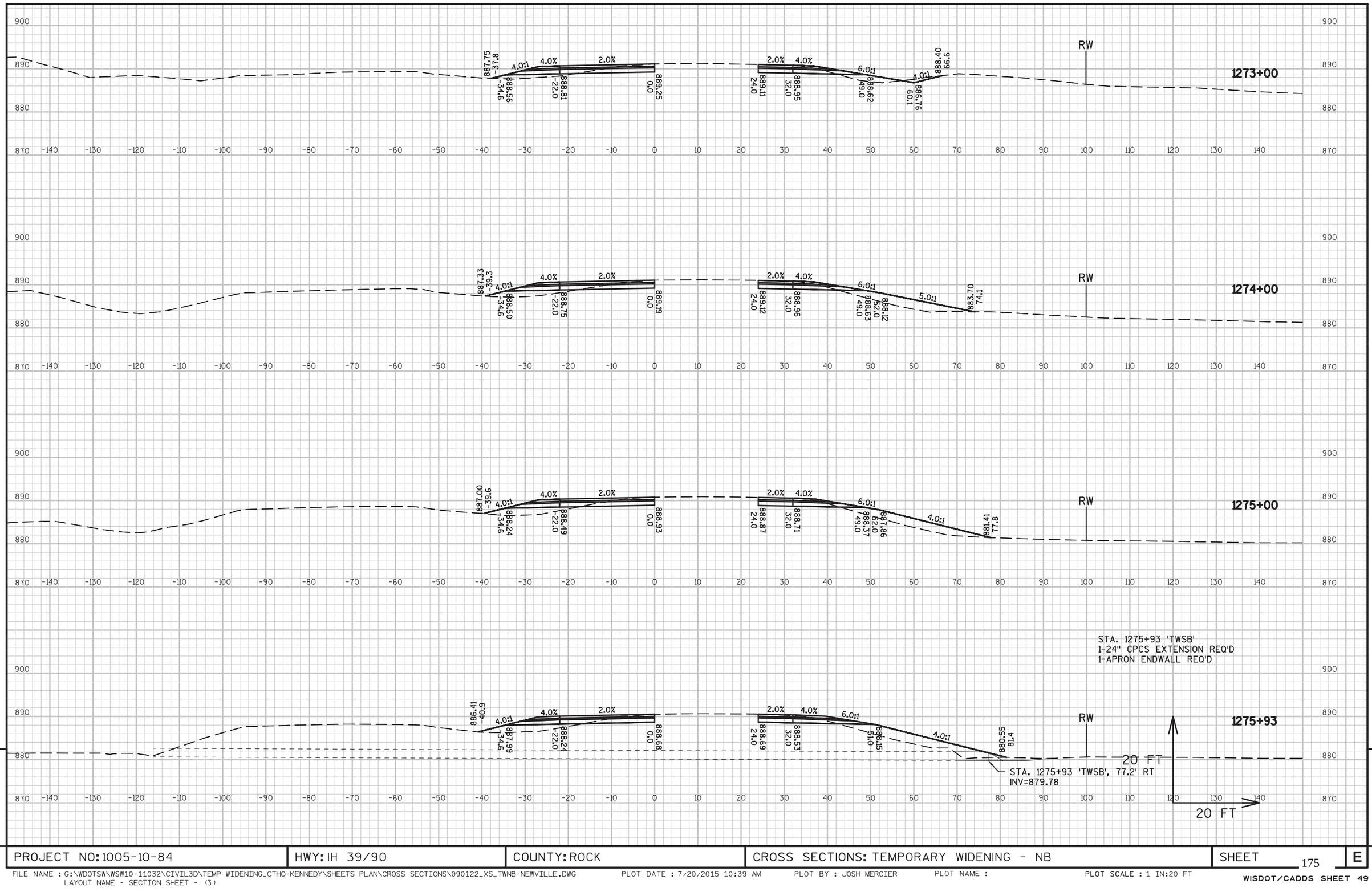


9

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PROJECT NO: 1005-10-84	HWY: IH 39/90	COUNTY: ROCK	CROSS SECTIONS: TEMPORARY WIDENING - NB	SHEET 174	E

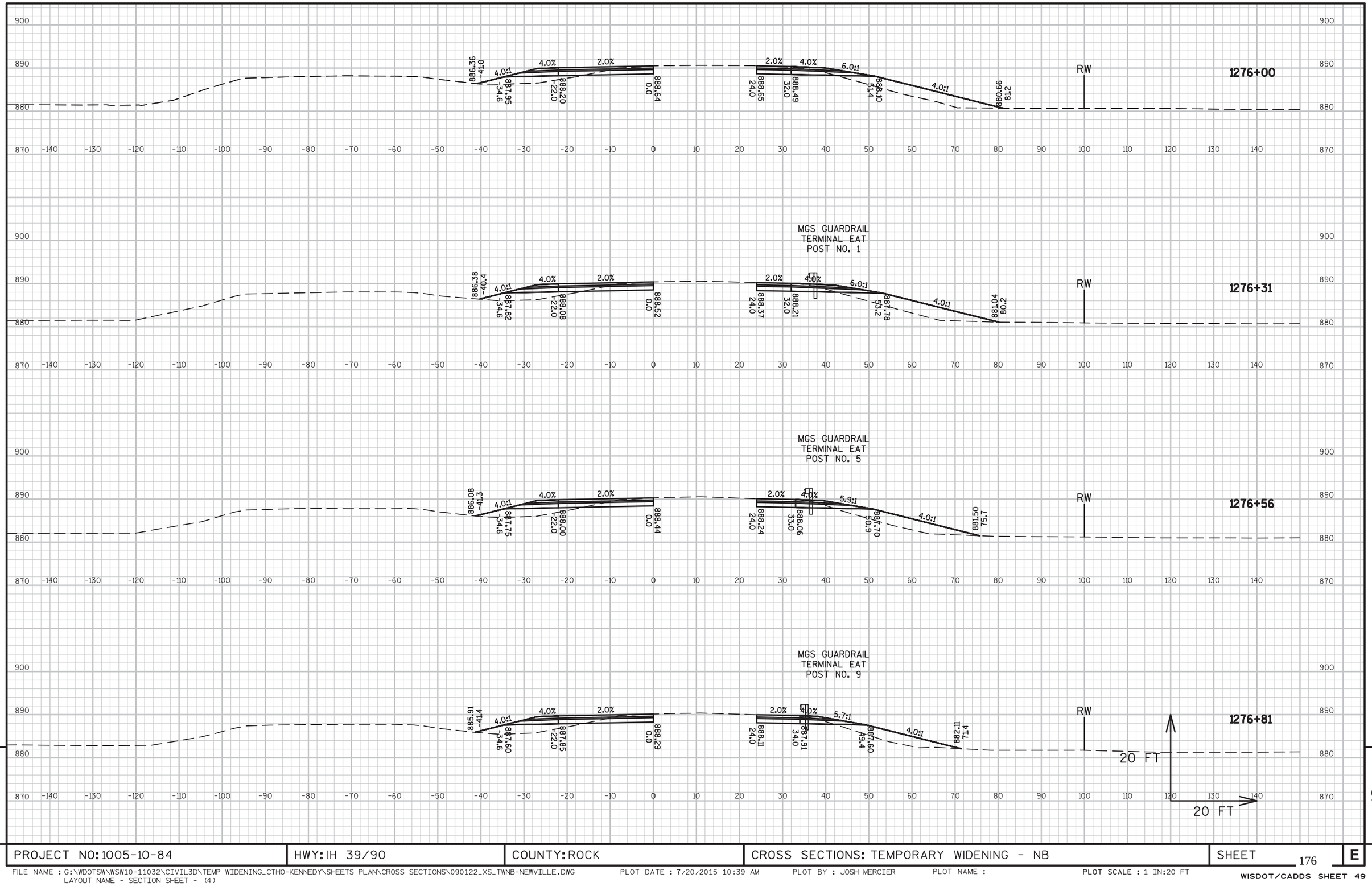
FILE NAME : G:\WDOTSW\WSW10-11032\CIVIL3D\TEMP WIDENING_CTHO-KENNEDY\SHEETS PLAN\CROSS SECTIONS\090122_XS_TWNB-NEWVILLE.DWG
LAYOUT NAME - SECTION SHEET - (2)
PLOT DATE : 7/20/2015 10:39 AM PLOT BY : JOSH MERCIER PLOT NAME : PLOT SCALE : 1 IN:20 FT
WISDOT/CADDS SHEET 49



9

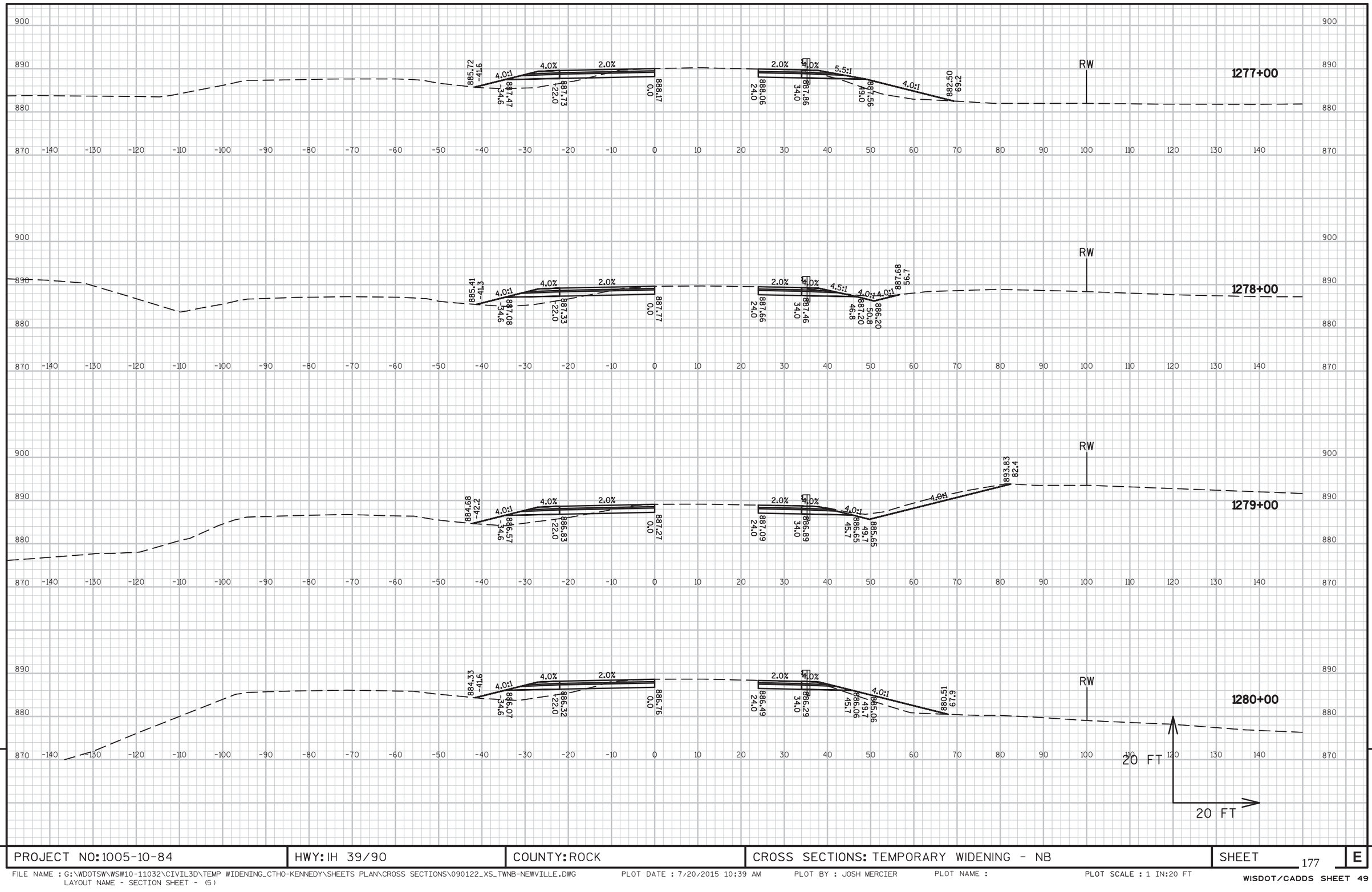
9

PROJECT NO: 1005-10-84	HWY: IH 39/90	COUNTY: ROCK	CROSS SECTIONS: TEMPORARY WIDENING - NB	SHEET 175	E



9 9

PROJECT NO: 1005-10-84	HWY: IH 39/90	COUNTY: ROCK	CROSS SECTIONS: TEMPORARY WIDENING - NB	SHEET 176 E



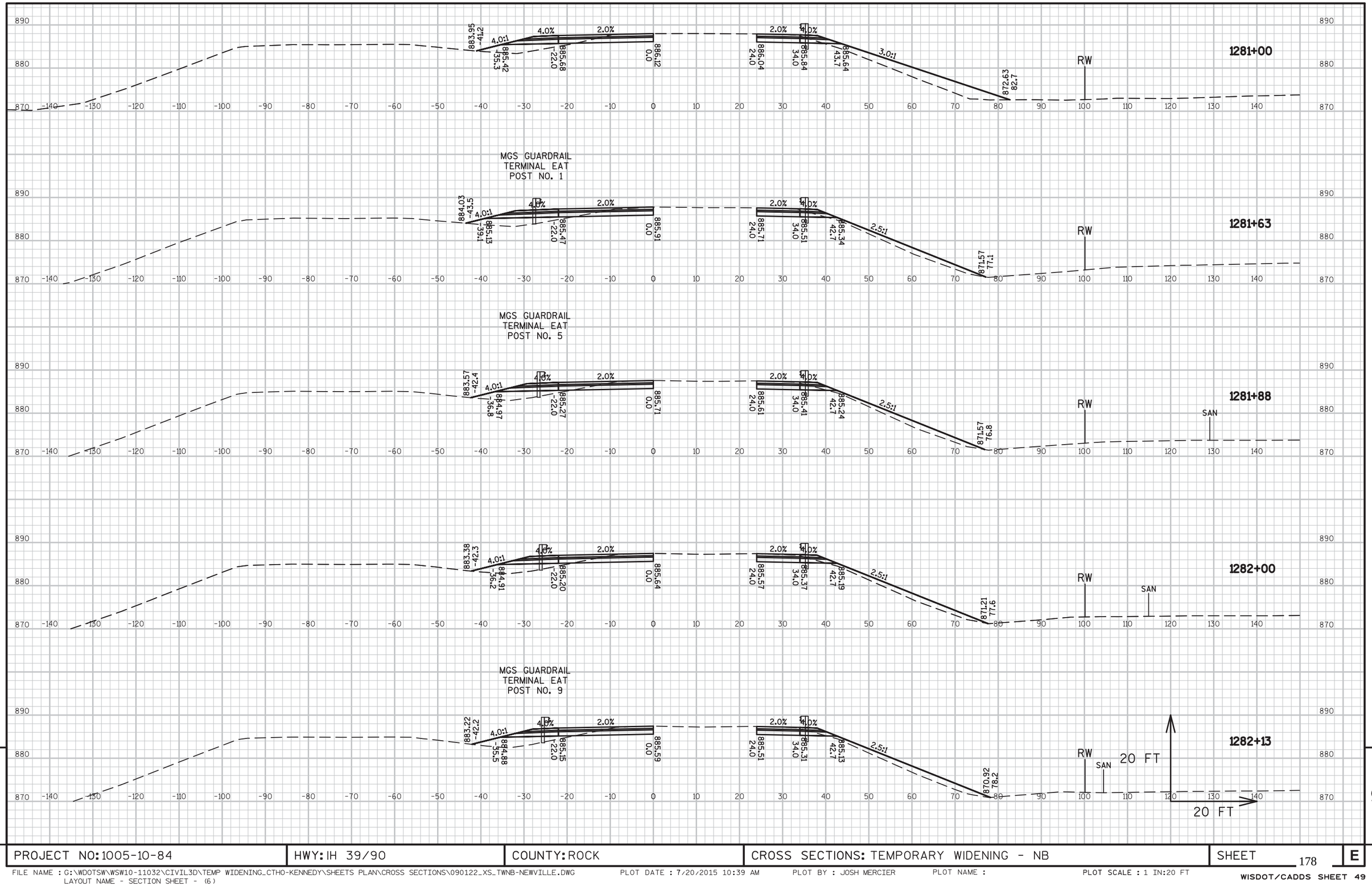
9

9

PROJECT NO: 1005-10-84	HWY: IH 39/90	COUNTY: ROCK	CROSS SECTIONS: TEMPORARY WIDENING - NB	SHEET 177 E

FILE NAME : G:\WDOTSW\WSW10-11032\CIVIL3D\TEMP WIDENING_CTHO-KENNEDY\SHEETS PLAN\CROSS SECTIONS\090122_XS_TWNB-NEWVILLE.DWG
LAYOUT NAME - SECTION SHEET - (5)

PLOT DATE : 7/20/2015 10:39 AM PLOT BY : JOSH MERCIER PLOT NAME : PLOT SCALE : 1 IN:20 FT



PROJECT NO: 1005-10-84	HWY: IH 39/90	COUNTY: ROCK	CROSS SECTIONS: TEMPORARY WIDENING - NB	SHEET 178 E

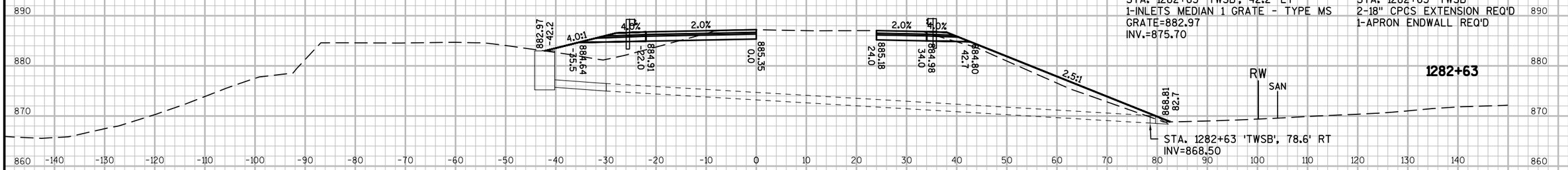
FILE NAME : G:\WDOTSW\WSW10-11032\CIVIL3D\TEMP WIDENING_CTHO-KENNEDY\SHEETS PLAN\CROSS SECTIONS\090122_XS_TWNB-NEWVILLE.DWG
LAYOUT NAME - SECTION SHEET - (6)

PLOT DATE : 7/20/2015 10:39 AM PLOT BY : JOSH MERCIER PLOT NAME : PLOT SCALE : 1 IN:20 FT

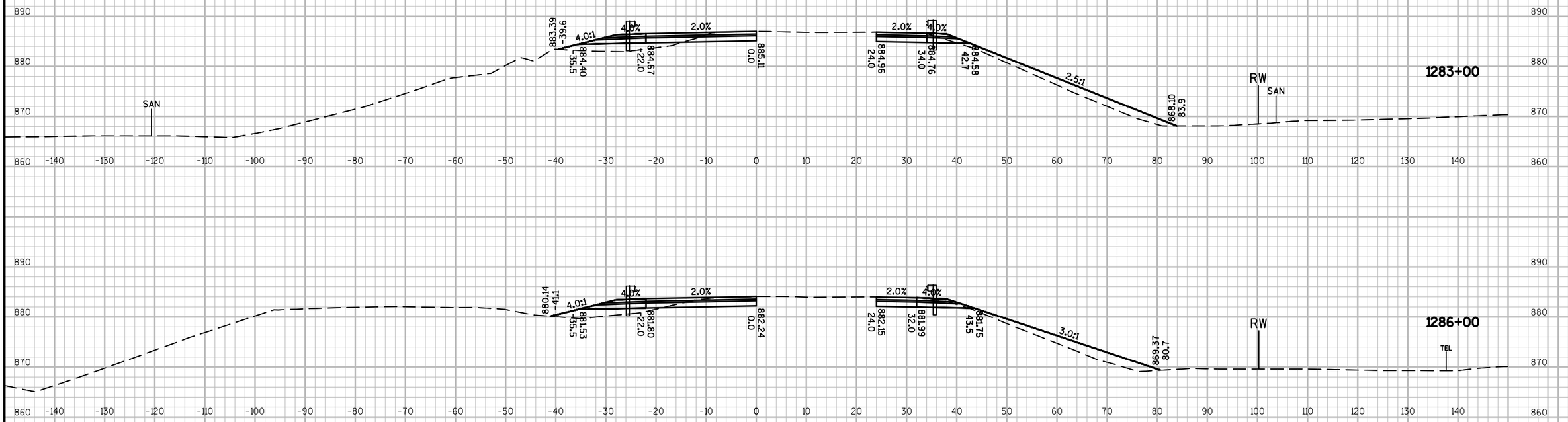
WISDOT/CADDS SHEET 49

STA. 1282+63 'TWSB', 42.2' LT
1-INLETS MEDIAN 1 GRATE - TYPE MS
GRATE=882.97
INV.=875.70

STA. 1282+63 'TWSB'
2-18" CPCS EXTENSION REQ'D
1-APRON ENDWALL REQ'D

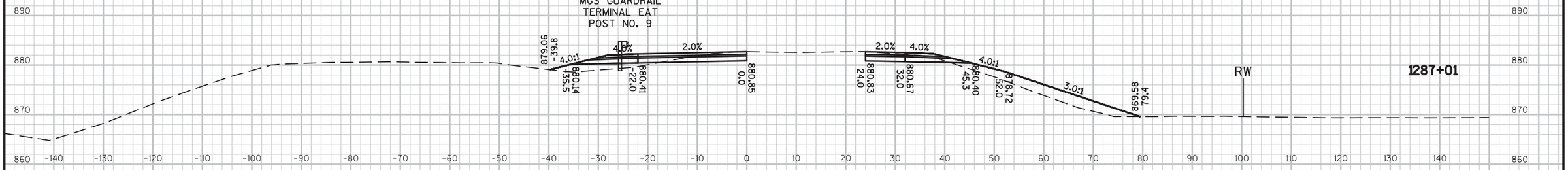


MATCH B-53-0073
STA. 1283+48.45 'TWNB' - STA. 1285+00.84

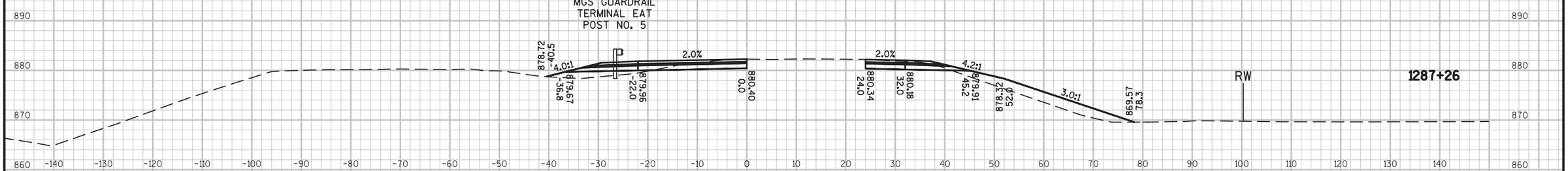


PROJECT NO: 1005-10-84	HWY: IH 39/90	COUNTY: ROCK	CROSS SECTIONS: TEMPORARY WIDENING - NB	SHEET 179 E

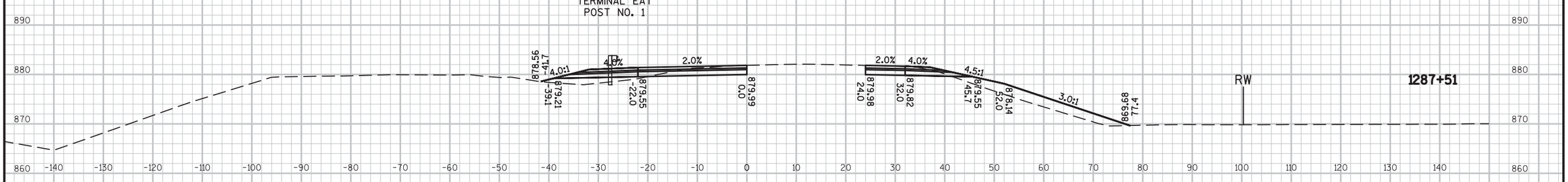
MGS GUARDRAIL
TERMINAL EAT
POST NO. 9

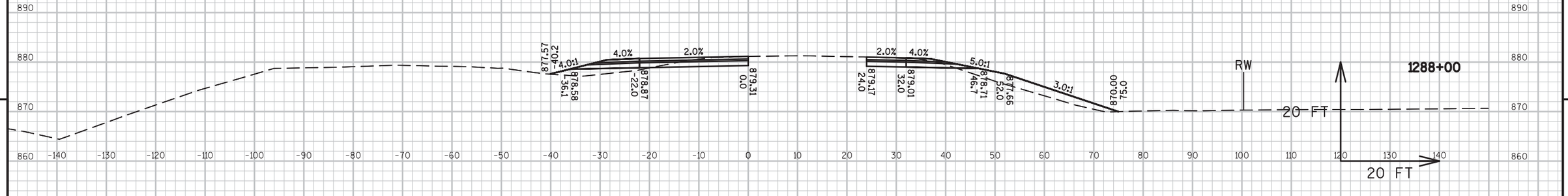


MGS GUARDRAIL
TERMINAL EAT
POST NO. 5



MGS GUARDRAIL
TERMINAL EAT
POST NO. 1



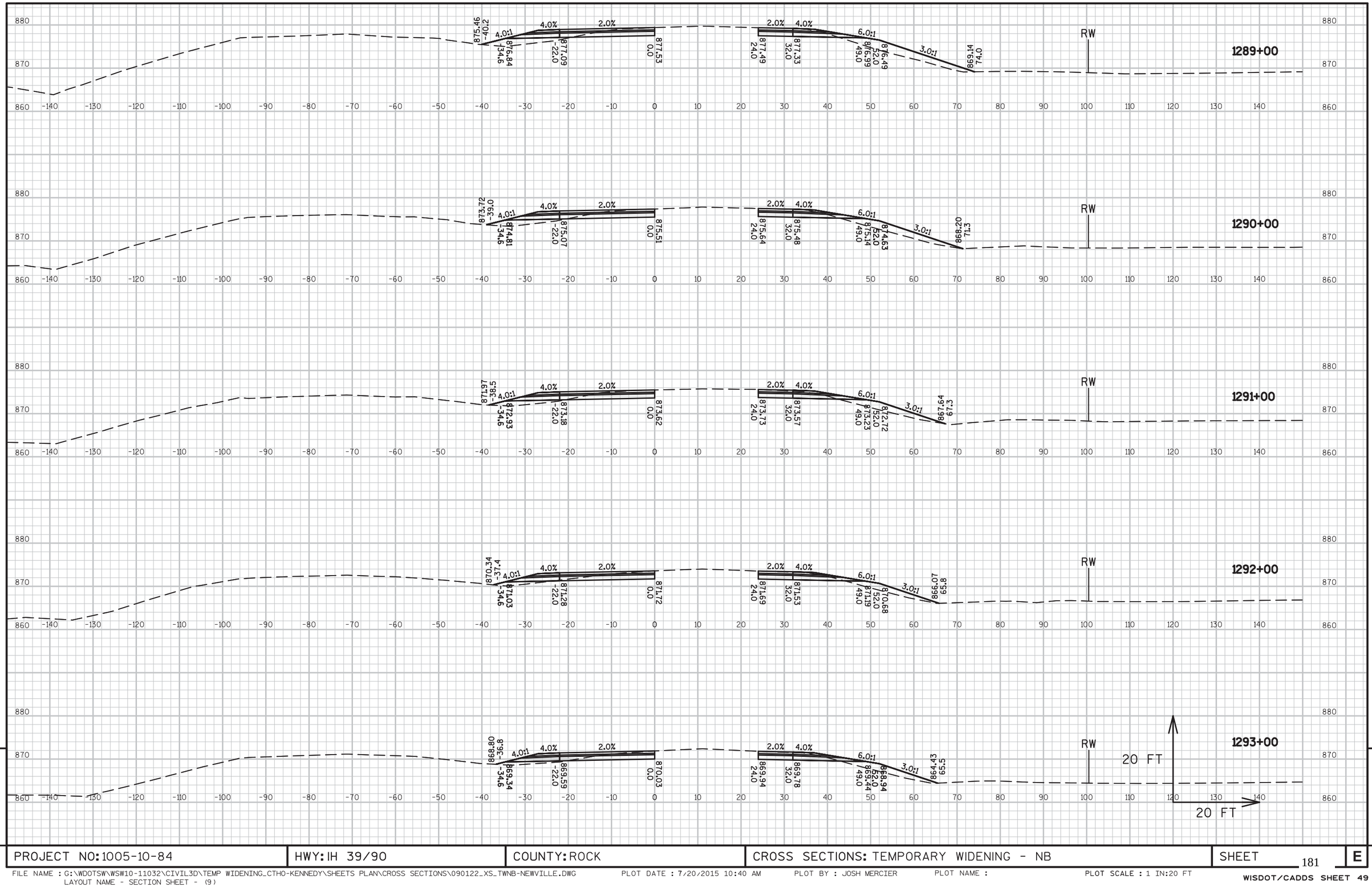


9

9

PROJECT NO: 1005-10-84	HWY: IH 39/90	COUNTY: ROCK	CROSS SECTIONS: TEMPORARY WIDENING - NB	SHEET 180	E

FILE NAME : G:\WDOTSW\WSW10-11032\CIVIL3D\TEMP WIDENING_CTHO-KENNEDY\SHEETS PLAN\CROSS SECTIONS\090122_XS_TWNB-NEWVILLE.DWG
LAYOUT NAME - SECTION SHEET - (8)
PLOT DATE : 7/20/2015 10:40 AM PLOT BY : JOSH MERCIER PLOT NAME : PLOT SCALE : 1 IN:20 FT
WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 1005-10-84	HWY: IH 39/90	COUNTY: ROCK	CROSS SECTIONS: TEMPORARY WIDENING - NB	SHEET 181	E

FILE NAME : G:\WDOTSW\WSW10-11032\CIVIL3D\TEMP WIDENING_CTHO-KENNEDY\SHEETS PLAN\CROSS SECTIONS\090122_XS_TWNB-NEWVILLE.DWG
LAYOUT NAME - SECTION SHEET - (9)
PLOT DATE : 7/20/2015 10:40 AM
PLOT BY : JOSH MERCIER
PLOT NAME :
PLOT SCALE : 1 IN:20 FT
WISDOT/CADDS SHEET 49

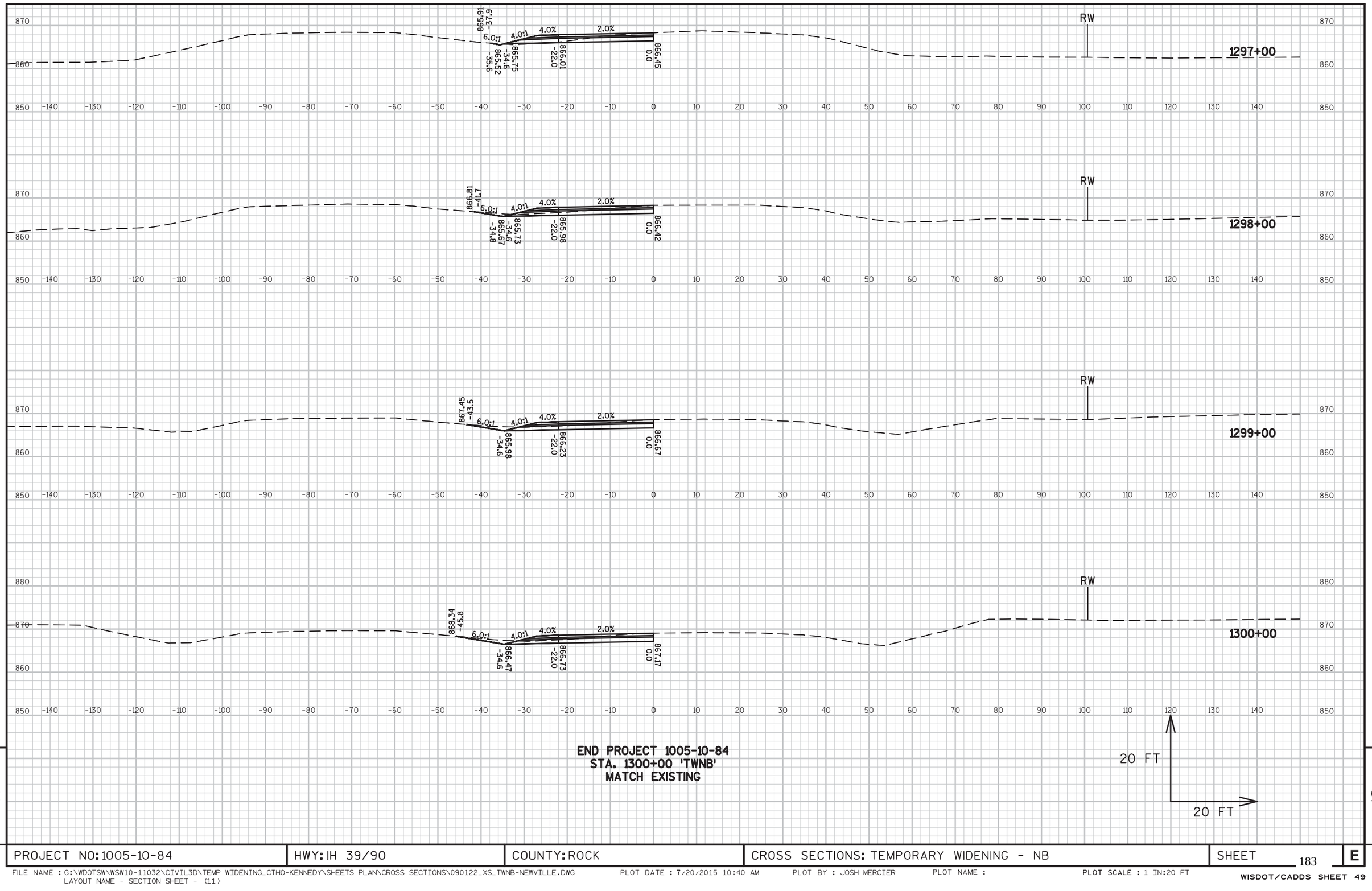


9

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PROJECT NO: 1005-10-84	HWY: IH 39/90	COUNTY: ROCK	CROSS SECTIONS: TEMPORARY WIDENING - NB	SHEET 182	E

FILE NAME : \\KL1NAS\DATA1\WDOTSW\WSW10-11032\CIVIL3D\TEMP WIDENING_CTHO-KENNEDY\SHEETS PLAN\CROSS SECTIONS\090122_XS_TWNB-NEWVILLE.DWG LAYOUT NAME - SECTION SHEET - (10)
PLOT DATE : 11/23/2015 2:18 PM PLOT BY : DAN RYAN PLOT NAME : PLOT SCALE : 1 IN:20 FT



END PROJECT 1005-10-84
STA. 1300+00 'TWNB'
MATCH EXISTING

9

9

PROJECT NO: 1005-10-84	HWY: IH 39/90	COUNTY: ROCK	CROSS SECTIONS: TEMPORARY WIDENING - NB	SHEET 183	E

FILE NAME : G:\WDOTSW\WSW10-11032\CIVIL3D\TEMP WIDENING_CTHO-KENNEDY\SHEETS PLAN\CROSS SECTIONS\090122_XS_TWNB-NEWVILLE.DWG
LAYOUT NAME - SECTION SHEET - (11)
PLOT DATE : 7/20/2015 10:40 AM PLOT BY : JOSH MERCIER PLOT NAME : PLOT SCALE : 1 IN:20 FT

Wisconsin Department of Transportation

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