WIS

AUG 2014

PROJECT ID: 1166-08-72, 1166-08-82

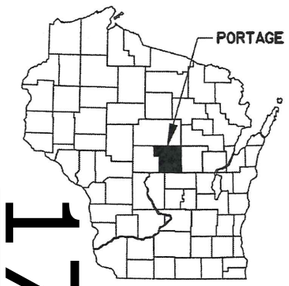
WITH:

COUNTY: PORTAGE

**ORDER OF SHEETS**


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


**TOTAL SHEETS = 356**




17

**DESIGN DESIGNATION**

| | | IH 39 | RESERVE ST |
|---|---|---|---|
| A.A.D.T. (2014) | = | 27,400 | 1,800 |
| A.A.D.T. (2034) | = | 43,400 | 2,600 |
| D.H.V. (K100) | = | 3,159 | 416 |
| D.D. | = | 60/40 | 58/42 |
| T. (DHV) | = | 12.65% | 3.3% |
| DESIGN SPEED | = | 70 MPH | 40 MPH |
| ESALS | = | 9,577,600 | 160,600 |

**CONVENTIONAL SYMBOLS**

**PLAN**

- CORPORATE LIMITS
- PROPERTY LINE (PL + 58.1)
- LOT LINE
- LIMITED HIGHWAY EASEMENT
- EXISTING RIGHT OF WAY
- PROPOSED OR NEW R/W LINE
- SLOPE INTERCEPT
- REFERENCE LINE
- EXISTING CULVERT
- PROPOSED CULVERT (Box or Pipe)
- COMBUSTIBLE FLUIDS (CAUTION)
- MARSH AREA
- WOODED OR SHRUB AREA

**PROFILE**

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

**UTILITIES**

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

# STATE OF WISCONSIN
# DEPARTMENT OF TRANSPORTATION

**PLAN OF PROPOSED IMPROVEMENT**

# PLAINFIELD - STEVENS POINT

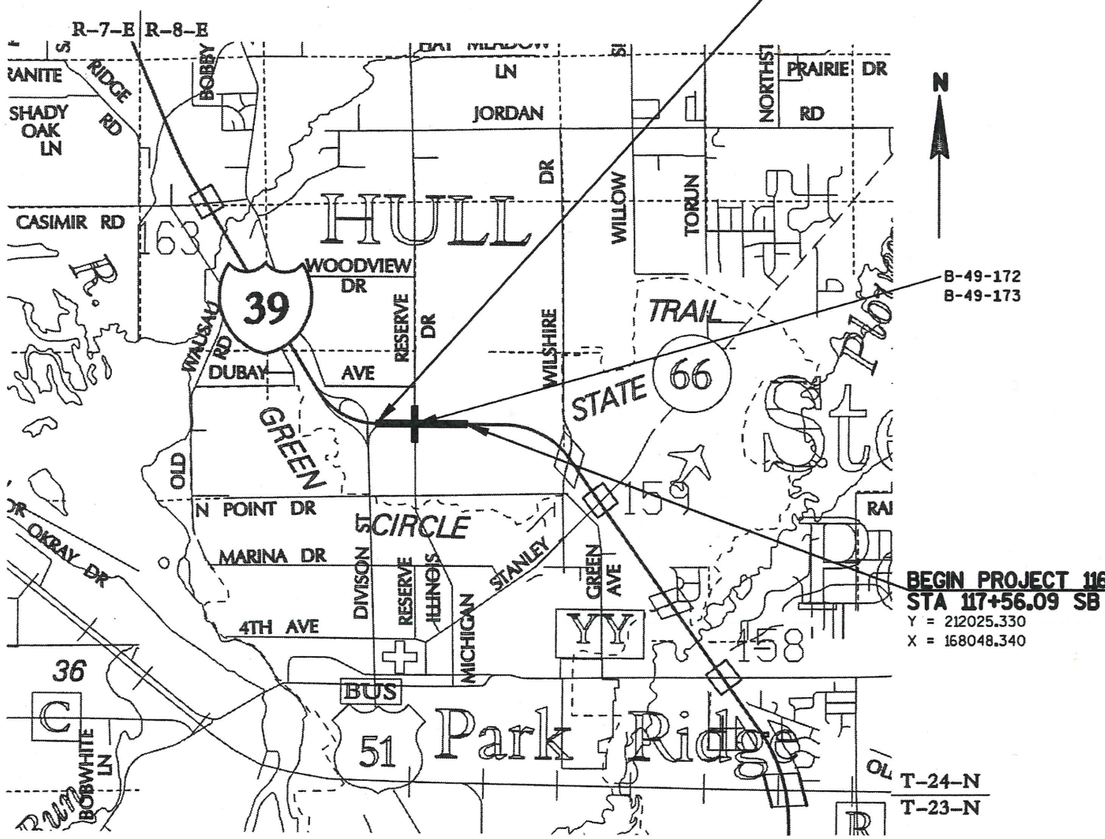
**RESERVE ST BRIDGE B-49-172, B-49-173**

## IH 39

## PORTAGE COUNTY

| STATE PROJECT | FEDERAL PROJECT | |
|---|---|---|
| | PROJECT | CONTRACT |
| 1166-08-72 | WISC 2014309 | 1 |
| 1166-08-82 | WISC 2014310 | 1 |
| | | |
| | | |

STATE PROJECT NUMBER
**1166-08-72/82**




**LAYOUT**

SCALE 0 1/2 MI. 1 MI.

TOTAL NET LENGTH OF CENTERLINE 1166-08-72 = 0.335 MI. IH 39
TOTAL NET LENGTH OF CENTERLINE 1166-08-72 = 0.347 MI. RESERVE ST

COORDINATES ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), PORTAGE COUNTY NAD 1983 (2007). ELEVATIONS SHOWN ON THIS PLAN ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1998 NAVD 88 (91)

ORIGINAL PLANS PREPARED BY
OMNNI ASSOCIATES

WISCONSIN
JUDITH ANN WILSON
E-22940
NEENAH, WI
PROFESSIONAL ENGINEER
6/11/14

**STATE OF WISCONSIN**
**DEPARTMENT OF TRANSPORTATION**

PREPARED BY

| | |
|---|---|
| Surveyor | OMNNI ASSOCIATES, INC. |
| Designer | OMNNI ASSOCIATES, INC. |
| Project Manager | JEFFREY STEWART, P.E. |
| Regional Examiner | NC REGION |
| Regional Supervisor | MICHAEL KRETSCHMER, P.E. |
| C.O. Examiner | |

APPROVED FOR THE DEPARTMENT

DATE: 6/12/2014 (Signature)

E

## GENERAL NOTES

LOCATIONS OF EXISTING AND PROPOSED UTILITY FACILITIES AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY FACILITIES WITHIN THE PROJECT AREA THAT ARE NOT SHOWN.

STATIONING, DISTANCES, AND OFFSETS FOR SIGNS SHOWN ON PLANS ARE APPROXIMATE.

WHEN THE QUANTITY OF THE ITEM OF BASE OR ASPHALT PAVEMENT IS MEASURED FOR PAYMENT BY THE TON, THE DEPTH IS APPROXIMATE AND THE ACTUAL THICKNESS WILL DEPEND ON THE DISTRIBUTION OF THE MATERIAL AS DIRECTED BY THE ENGINEER.

CONTRACTOR WILL BE RESPONSIBLE FOR RESHAPING AND SEEDING ANY PREVIOUSLY GRASSED AREAS WHICH ARE DISTURBED BY HIS OPERATION OUTSIDE THE NORMAL CONSTRUCTION LIMITS.

## ORDER OF "SECTION 2" SHEETS

SHEET TITLE

GENERAL NOTES
PROJECT OVERVIEW
TYPICAL SECTIONS
CONSTRUCTION DETAILS
PAVING DETAILS
INVASIVE SPECIES
EROSION CONTROL
WETLAND IMPACTS
STORM SEWER PLAN
SANITARY AND WATER MAIN PLAN
PERMANENT SIGNING PLAN
LIGHTING PLAN
PAVEMENT MARKING PLAN
TRAFFIC CONTROL - IH 39
TRAFFIC CONTROL - RESERVE STREET
CONSTRUCTION STAGING - IH 39
ALIGNMENT PLAN

## EROSION CONTROL NOTES

RUNOFF COEFFICIENT FOR THIS PROJECT: EXISTING PAVEMENT 0.95, EXISTING SLOPES 0.30, NEW PAVEMENT 0.95, NEW SLOPES 0.30.

TOTAL PROJECT AREA = 33.7 ACRES.
TOTAL AREA OUTSIDE OF THE EXISTING ROADWAY EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 9.18 ACRES.

## UTILITIES

**GAS**
WISCONSIN PUBLIC SERVICE CORP
2001 PLOVER ROAD
PLOVER, WI 54467
ATTN: ELIZABETH STEMPIHAR
TELEPHONE: 715-345-7582
EMAIL: eastempihar@wisconsinpublicservice.com

**ELECTRIC**
WISCONSIN PUBLIC SERVICE CORP
2001 PLOVER ROAD
PLOVER, WI 54467
ATTN: DAVE MEZERA
TELEPHONE: 715-345-7552
EMAIL: demezera@wisconsinpublicservice.com

**COMMUNICATIONS**
CHARTER COMMUNICATIONS
5024 HEFFRON ST
STEVENS POINT, WI 54481
ATTN: RUDI RUDIGER
TELEPHONE: 715-302-1550
EMAIL: rudi.rudiger@charter.com

**COMMUNICATIONS**
PACKERLAND BROADBAND
1700 INDUSTRIAL DRIVE
GREEN BAY, WI 54302
ATTN: DENNIS LAFAVE
TELEPHONE: 920-619-9774
EMAIL: dlafave@mi-tech.us

**COMMUNICATIONS**
AT&T WISCONSIN
3086 VOYAGER DRIVE, SUITE 3
GREEN BAY, WI 54311
ATTN: MATT MEIDAM, DEBAUCHE COMMUNICATIONS
TELEPHONE: 920-288-8991
EMAIL: mmeidam@debauche.org

**COMMUNICATIONS**
SENTRY INSURANCE
1800 NORTHPOINT DRIVE
STEVENS POINT, WI 54481
ATTN: MARK KOENIG
TELEPHONE: 715-346-7056
EMAIL: mark.koenig@sentry.com

## UTILITIES - CONTINUED

**WATER**
CITY OF STEVENS POINT
300 BLISS AVENUE
STEVENS POINT, WI 54481
ATTN: GARY KUPLIC
TELEPHONE: 715-342-4846
EMAIL: gkuplic@stevenspoint.com

**SEWER**
CITY OF STEVENS POINT
1515 STRONGS AVE
STEVENS POINT, WI 54481
ATTN: ROB MOLSKI
TELEPHONE: 715-341-2012
EMAIL: rmolski@stevenspoint.com

**STREET LIGHTING**
CITY OF STEVENS POINT
1515 STRONGS AVE
STEVENS POINT, WI 54481
ATTN: SCOTT SCHATSCHNEIDER
TELEPHONE: 715-346-1561
EMAIL: sschatschneider@stevenspoint.com

THE CONTRACTOR SHALL NOTIFY DIGGER'S HOTLINE AND AFFECTED UTILITIES PRIOR TO THE START OF WORK. ANY UTILITY WHICH IS NOT A MEMBER OF DIGGER'S HOTLINE MUST BE CONTACTED SEPERATELY.

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

## OTHER CONTACTS

**DNR LIAISON**
WISCONSIN DEPARTMENT OF NATURAL RESOURCES
DNR SERVICE CENTER
473 GRIFFITH AVENUE
WISCONSIN RAPIDS, WI 54494
ATTN: MARC HERSHFIELD
TELEPHONE: 715-421-7867
EMAIL: marc.hershfield@wi.gov

**WISDOT STOC**
STATE TRAFFIC OPERATIONS CENTER
433 W. ST. PAUL AVE, SUITE 300
MILWAUKEE, WI 53203
TELEPHONE: 414-227-2166
EMAIL: statewide.toc@dot.wi.gov

2

2

N

RESERVE STREET

ACCESS ROUTE
DURING CONSTRUCTION

FALCONS COVE

EXIT
161

DU BAY AVE

END CONSTRUCTION
STA 26+64.70

HARMONY
LIVING
CENTER

BLUEBELL LN

28+87

25+00

END PROJECT
STA 135+26.12 SB

EXIT
161

EAGLE SUMMIT

20+00

PROJECT 1166-08-72

MILE 161

INTERSTATE 39 10 51

160+00 155+00 150+00 145+00 140+00 135+00 130+00 125+00 120+00 115+00 110+00 105+00 100+00 95+00 90+00 86+92

BEGIN PROJECT
STA 117+56.09 SB

15+00

2ND ST

10+00

7+00

RESERVE STREET

BEGIN CONSTRUCTION
STA 8+65.34

SENTRY
INSURANCE

SENTRY WORLD
GOLF COURSE

BUS 51

NORTHPOINT DR

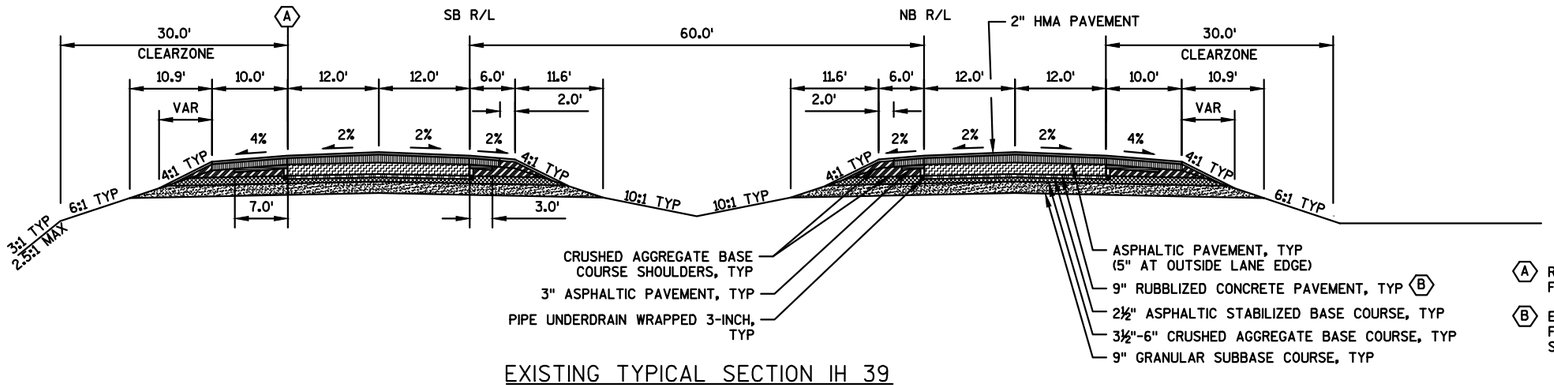
NORTHPOINT DR

ACCESS ROUTE
DURING CONSTRUCTION

| PROJECT NO: 1166-08-72/82 | HWY: IH 39 | COUNTY: PORTAGE | PROJECT OVERVIEW | SHEET 4 | E |
|---|---|---|---|---|---|

FILE NAME : F:\TR\JOBS\E2031A12\CIVIL 3D\SHEETSPLAN\11660872_020201_PO.DWG PLOT DATE : 2/27/2014 2:48 PM PLOT BY : ANDREW WESTBROOK PLOT NAME : ----------

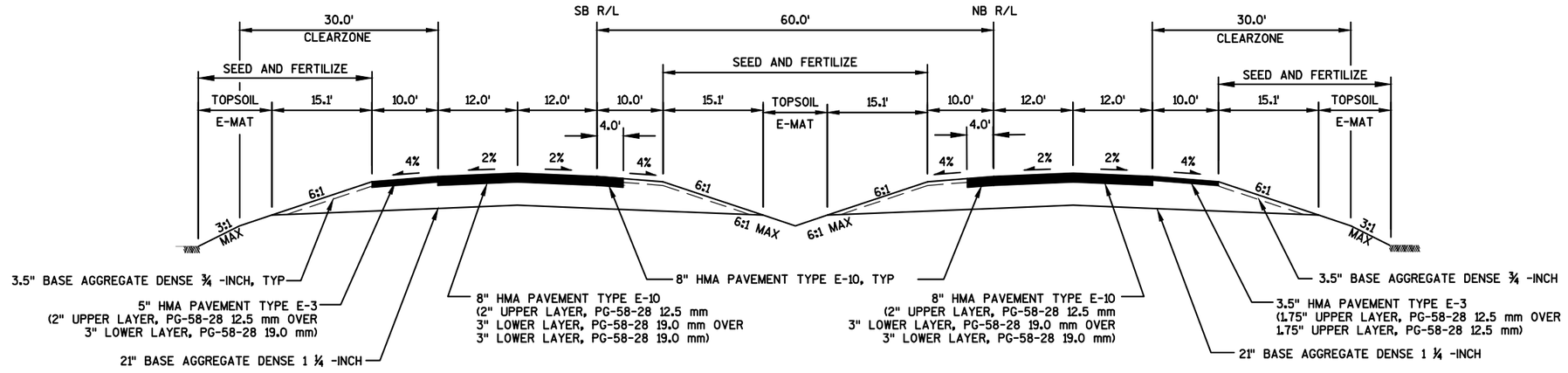
WISDOT/CADDS SHEET 42



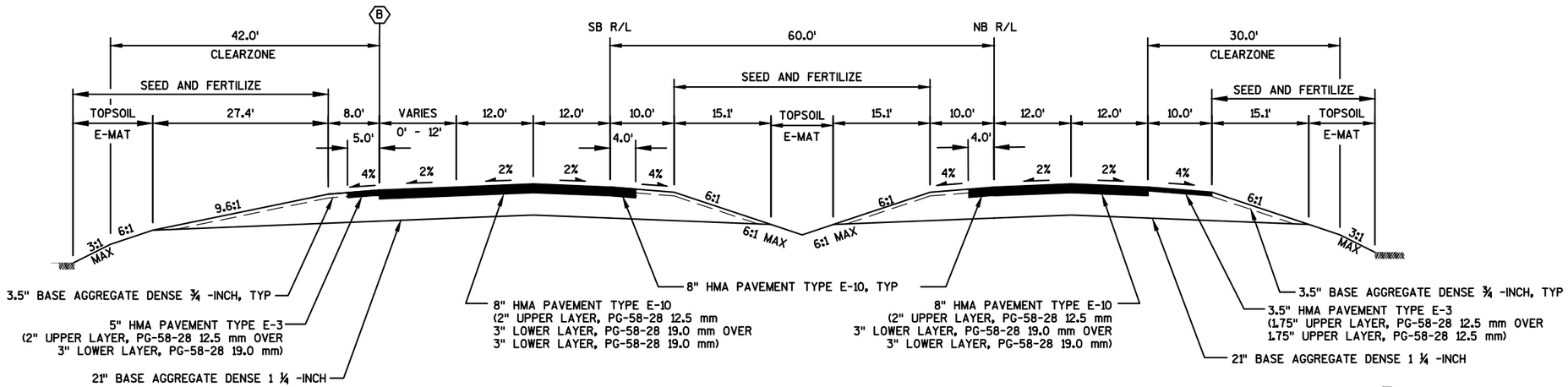

A RAMP LANE VARIES 0' - 12' AT THIS LOCATION FROM STA 129+15.25 TO STA 135+26.16

B EXISTING CONCRETE PAVEMENT NOT RUBBLIZED FROM STA 126+25 TO STA 129+25 AND STA 130+60 TO STA 133+60

## EXISTING TYPICAL SECTION IH 39
STA 117+56.09 TO STA 135+26.12




## FINISHED TYPICAL SECTION IH 39
STA 117+56.09 TO STA 125+39.95

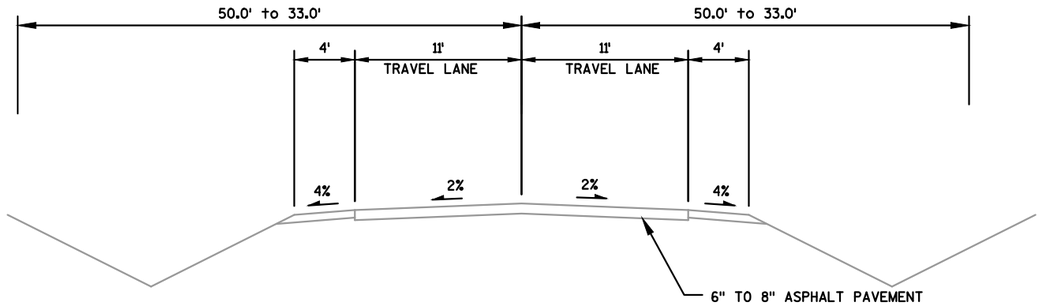



B SUBGRADE AND SLOPE INTERCEPT ACCOMMODATE A 12' FUTURE LANE AT THIS LOCATION

## FINISHED TYPICAL SECTION IH 39
STA 125+39.95 TO STA 135+26.12

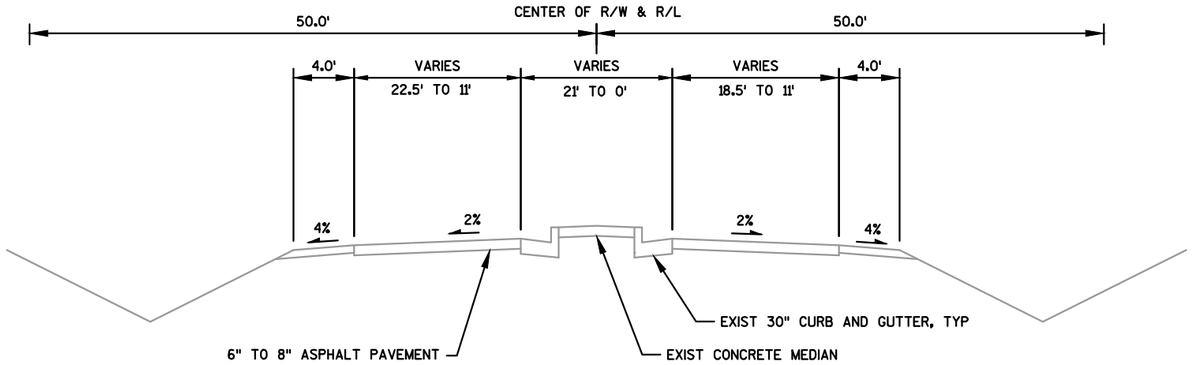
| PROJECT NO: 1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | TYPICAL SECTIONS IH 39 | SHEET 5 | E |
|---|---|---|---|---|---|

2




EXISTING TYPICAL SECTION RESERVE ST

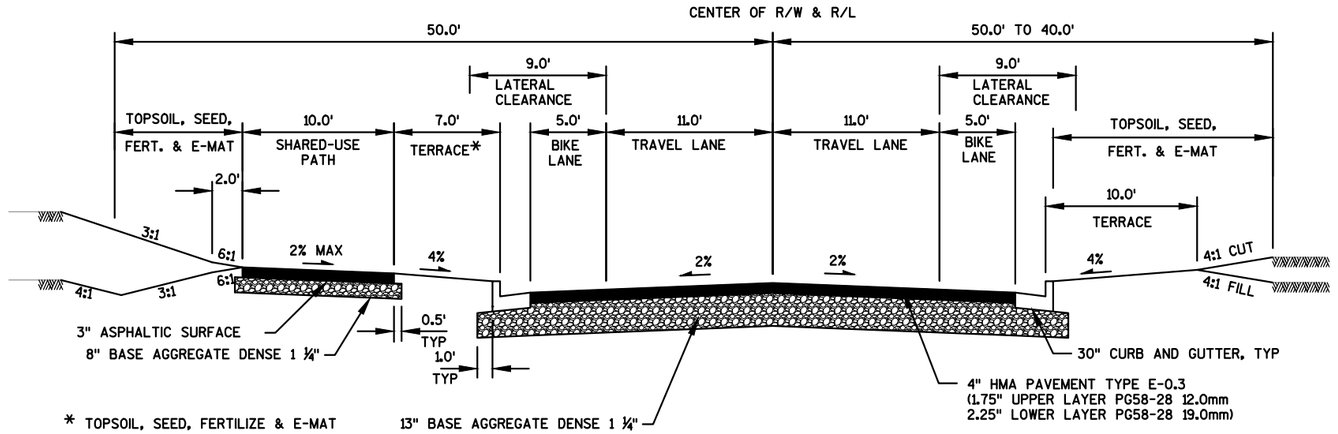
STA. 10+82 TO STA. 26+64.70




EXISTING TYPICAL SECTION RESERVE ST

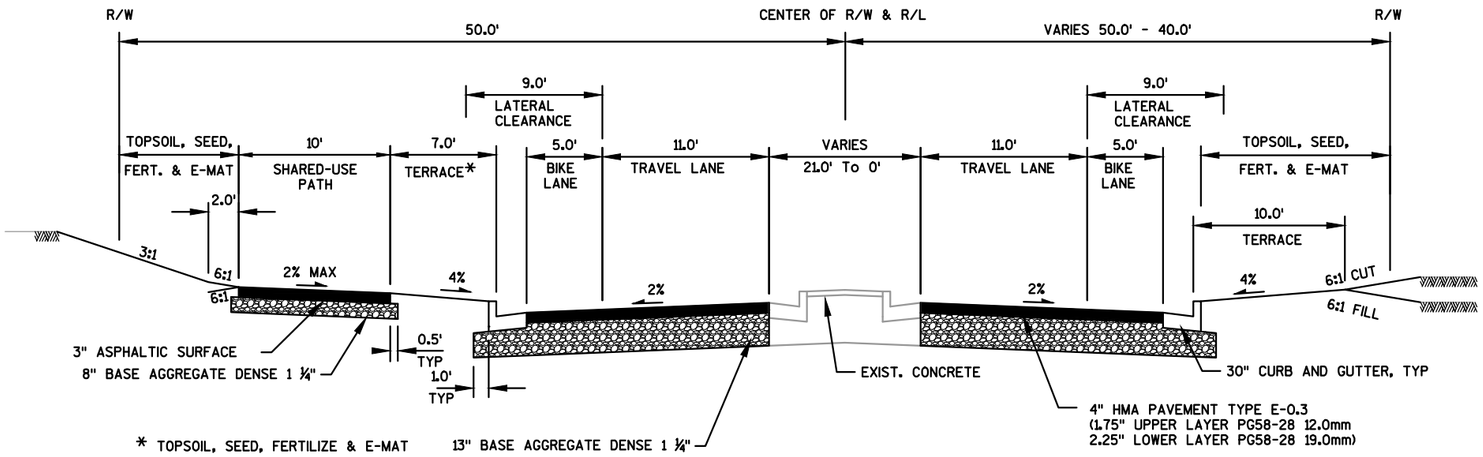
STA. 8+65.34 TO STA. 10+82

| PROJECT NO: 1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | RESERVE STREET TYPICAL SECTIONS | SHEET 6 | E |
|---|---|---|---|---|---|




FINISHED TYPICAL SECTION RESERVE ST

STA 10+82 TO STA 26+64.70

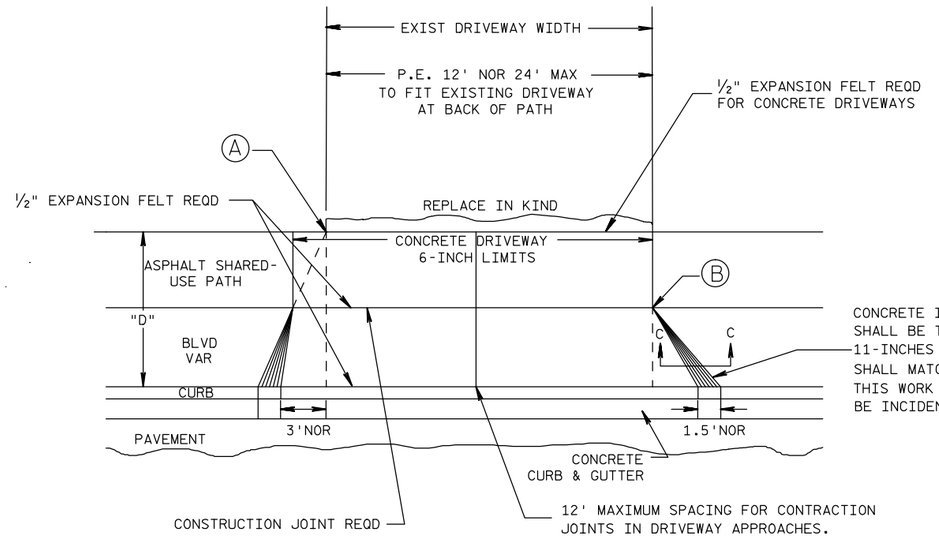



FINISHED TYPICAL SECTION RESERVE ST

STA 8+65.34 TO STA 10+82

| PROJECT NO: 1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | RESERVE STREET TYPICAL SECTIONS | SHEET 7 | E |
|---|---|---|---|---|---|

# DRIVEWAY ENTRANCE DETAIL WITH ASPHALT SHARED-USE PATH, CURB & GUTTER

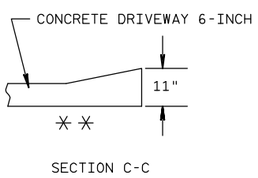


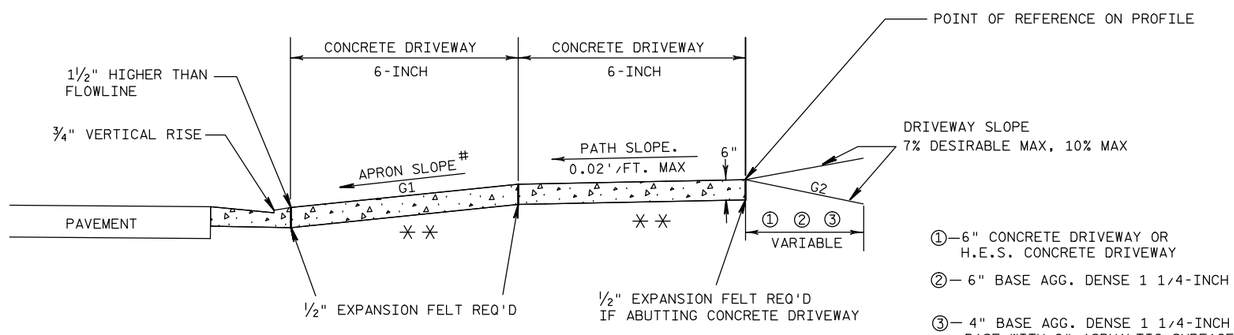

CONCRETE IN THE 1.5' TAPER AREA SHALL BE TAPERED TO A DEPTH OF 11-INCHES AND THE EXPANSION FELT SHALL MATCH THIS DEPTH. THIS WORK AND MATERIAL WILL BE INCIDENTAL TO THE BID ITEM.

## PLAN VIEW

Ⓐ WHEN "D" IS 13' OR LESS, ALIGN TAPER WITH BACK OF PATH

Ⓑ WHEN "D" IS GREATER THAN 13', ALIGN TAPER WITH FRONT OF PATH




## TYPICAL DRIVEWAY SECTION

①—6" CONCRETE DRIVEWAY OR H.E.S. CONCRETE DRIVEWAY

②— 6" BASE AGG. DENSE 1 1/4-INCH

③— 4" BASE AGG. DENSE 1 1/4-INCH BASE WITH 2" ASPHALTIC SURFACE

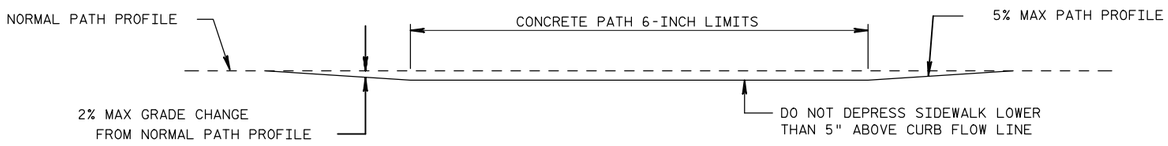
✳✳ = 6" BASE AGG. DENSE 1 1/4-INCH REQD UNDER CONCRETE DRWY

# 

| TERRACE WIDTH | APRON SLOPE (G1) MIN % | DESIRABLE % | MAX % |
|---|---|---|---|
| 3 FT | 7.0 | 8.5 | 9.0 |
| 4 FT | 5.0 | 7.0 | 9.0 |
| 5 FT | 4.0 | 7.0 | 9.0 |
| 6 FT | 4.0 | 7.0 | 9.0 |
| 7 FT | 3.5 | 7.0 | 9.0 |
| 8 FT | 3.0 | 7.0 | 9.0 |

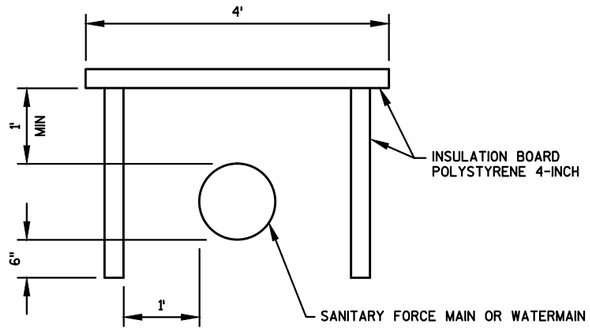
NOTE: ALGEBRAIC DIFFERENCE BETWEEN TANGENT GRADES G1 & G2 TO NOT EXCEED 15%

DEPRESS PATH PROFILE IF DRIVEWAY APRON EXCEEDS MAX SLOPE



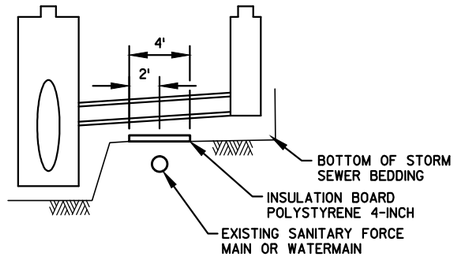

## DEPRESSED PATH PROFILE DETAIL

2

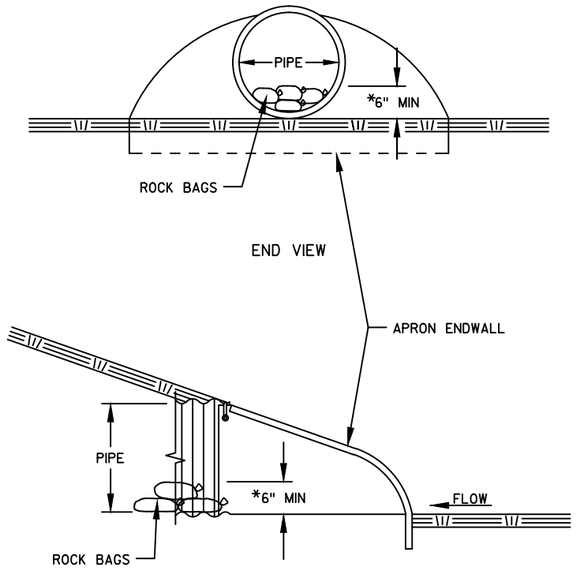



INSULATION BOARD POLYSTYRENE DETAIL

USE FOR WATERMAIN AND SANITARY FORCE MAIN WHEN COVER FROM FINAL GRADE IS LESS THAN 7.5 FEET.




INSULATION BOARD POLYSTYRENE AT STORM SEWER LATERALS

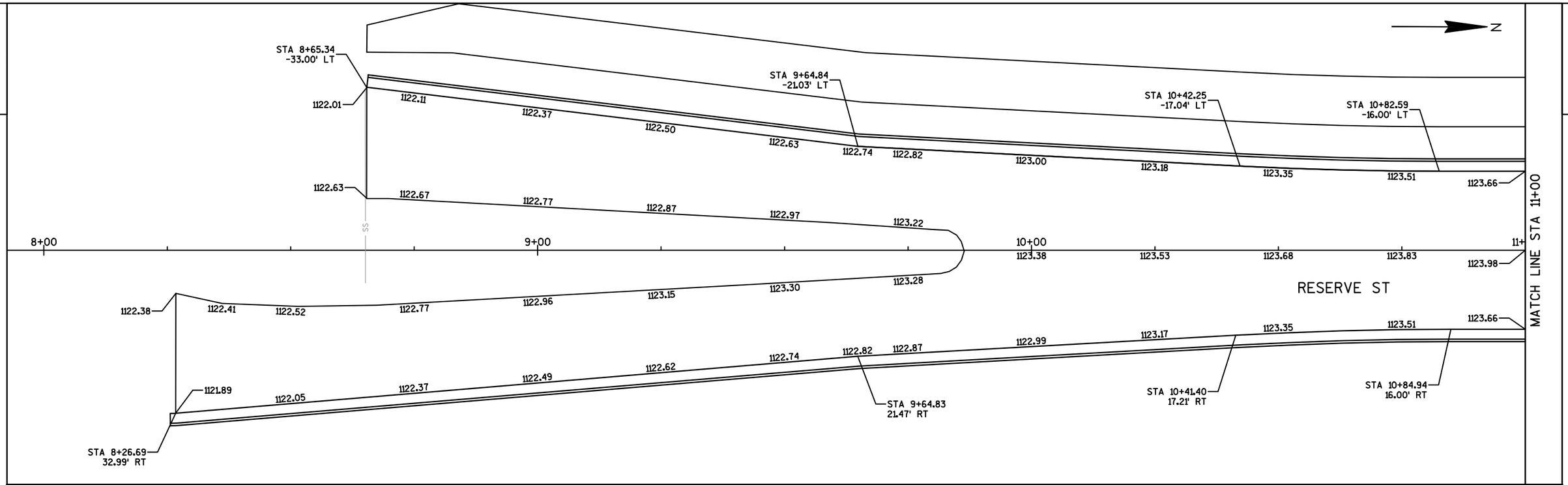


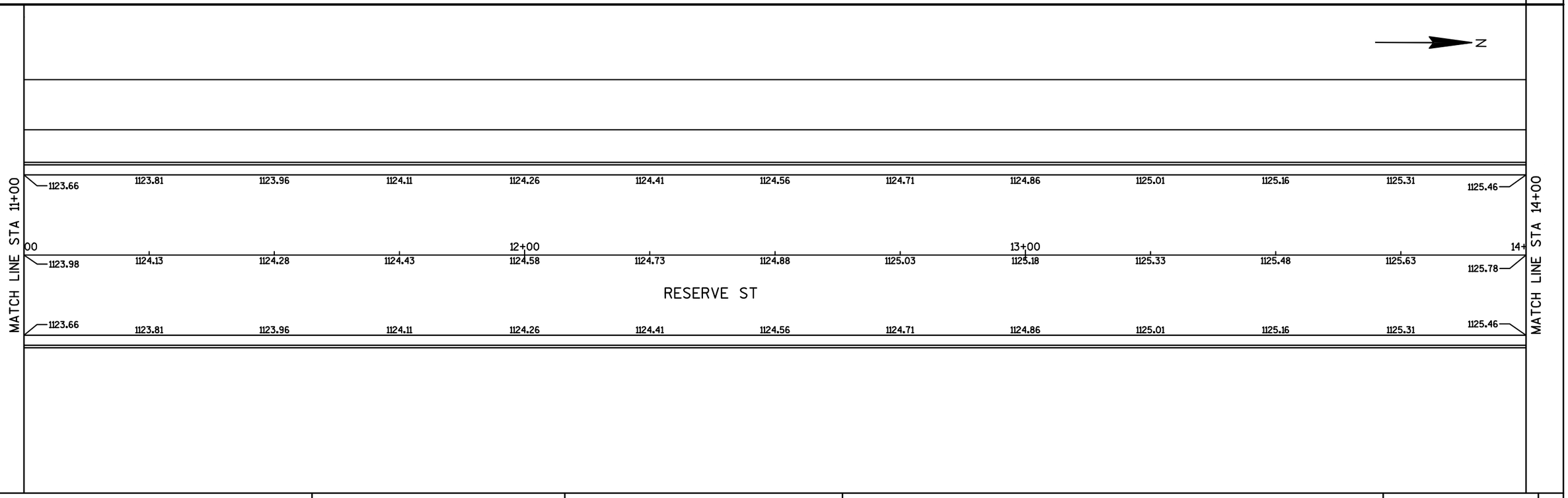

*OR AS DIRECTED BY THE ENGINEER

CULVERT PIPE CHECKS

INSTALL ON INLET END ONLY

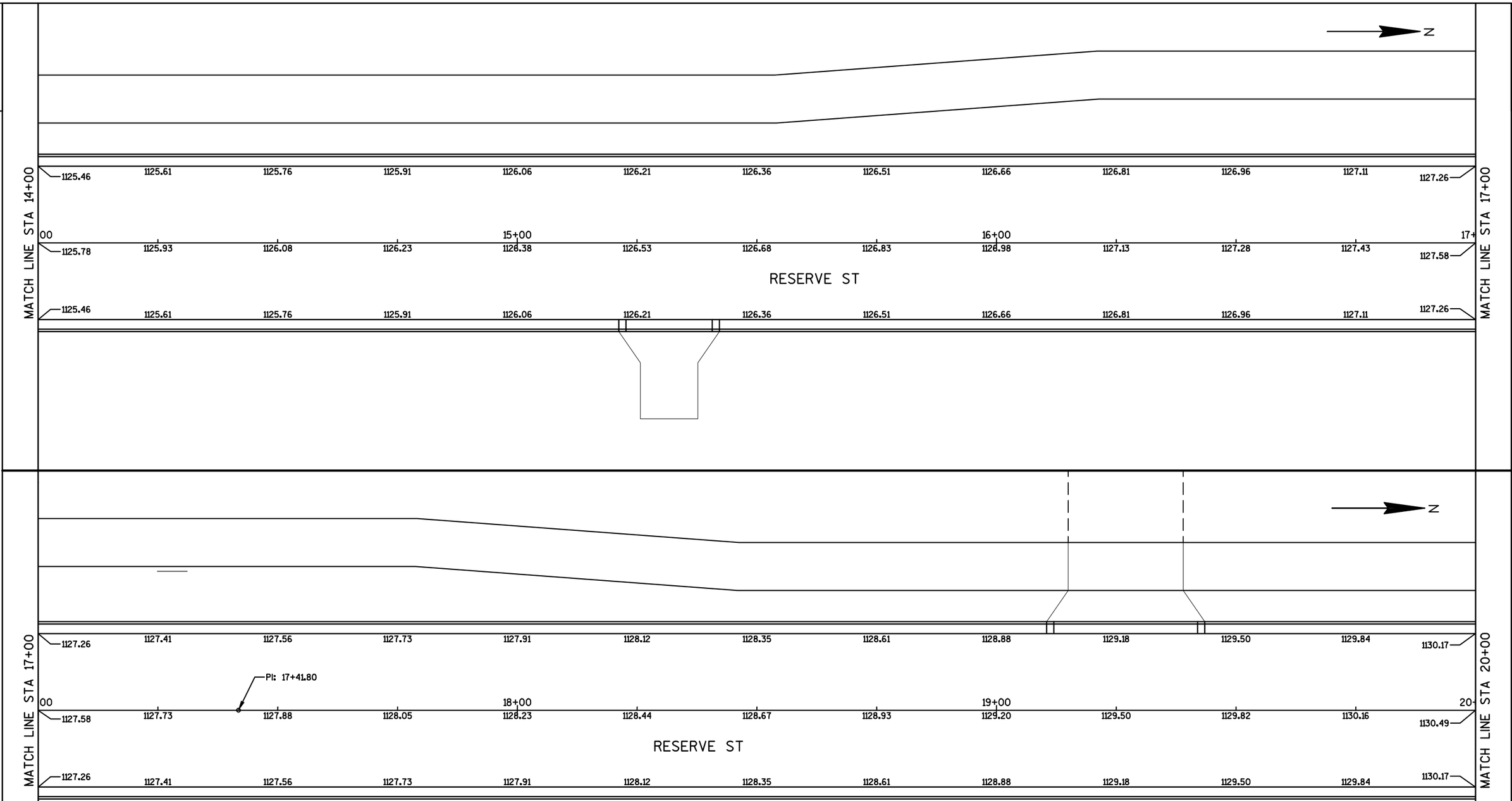
| PROJECT NO:1166-08-72 | HWY:IH 39 | COUNTY:PORTAGE | CONSTRUCTION DETAILS | SHEET 9 | E |
|---|---|---|---|---|---|




| PROJECT NO: 1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | PAVING DETAILS: RESERVE ST | SHEET 10 | E |
|---|---|---|---|---|---|

FILE NAME : F:\TR\JOBS\E2031A12\CIVIL 3D\SHEETSPLAN\11660872_021201_PD.DWG
11660872_021201_pd
PLOT DATE : 1/30/2014 1:20 PM
PLOT BY : OMNNI ASSOCIATES, INC - DAVE PERRY




2

| PROJECT NO: 1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | PAVING DETAILS: RESERVE ST | SHEET 11 | E |
|---|---|---|---|---|---|

FILE NAME : F:\TR\JOBS\E2031A12\CIVIL 3D\SHEETSPLAN\11660872_021201_PD.DWG
11660872_021202_pd
PLOT DATE : 1/30/2014 1:20 PM
PLOT BY : OMNNI ASSOCIATES, INC - DAVE PERRY

2

N

1130.17 1130.51 1130.84 1131.17 1131.47 1131.75 1132.02 1132.26 1132.49 1132.69 1132.87 1133.05 1133.22

00 1130.49 1130.83 1131.16 1131.49 21+00 1131.79 1132.07 20+00 1132.34 1132.58 22+00 1132.81 1133.01 1133.19 1133.37 23- 1133.54

RESERVE ST

1130.17 1130.51 1130.84 1131.17 1131.47 1131.50 1131.75 1131.62 1131.63 1131.85 1132.02 1131.89 EAGLE SUMMIT 1131.89 1131.83 1131.85 1132.26 1132.44 1132.49 1132.69 1132.87 1133.05 1133.22

STA 21+02.76
46.00' RT

30' R

STA 21+94.76
46.00' RT

30' R

N

STA 25+29.42
-56.00' LT

40' R

STA 25+87.73
-37.35' LT

3.5'R

1134.18 1134.28 1134.11 1134.65 1134.66 BLUEBELL LANE

1134.46 1134.58 1134.78 1134.81 1135.10 1135.19

MATCH LINE STA 23+00

00 1133.54 1133.71 1133.89 1134.06 24+00 1134.23 1134.40 1134.75 25+00 1134.92 PI: 25+35.00 1135.10 1135.27 1135.44 26- 1135.54

RESERVE ST

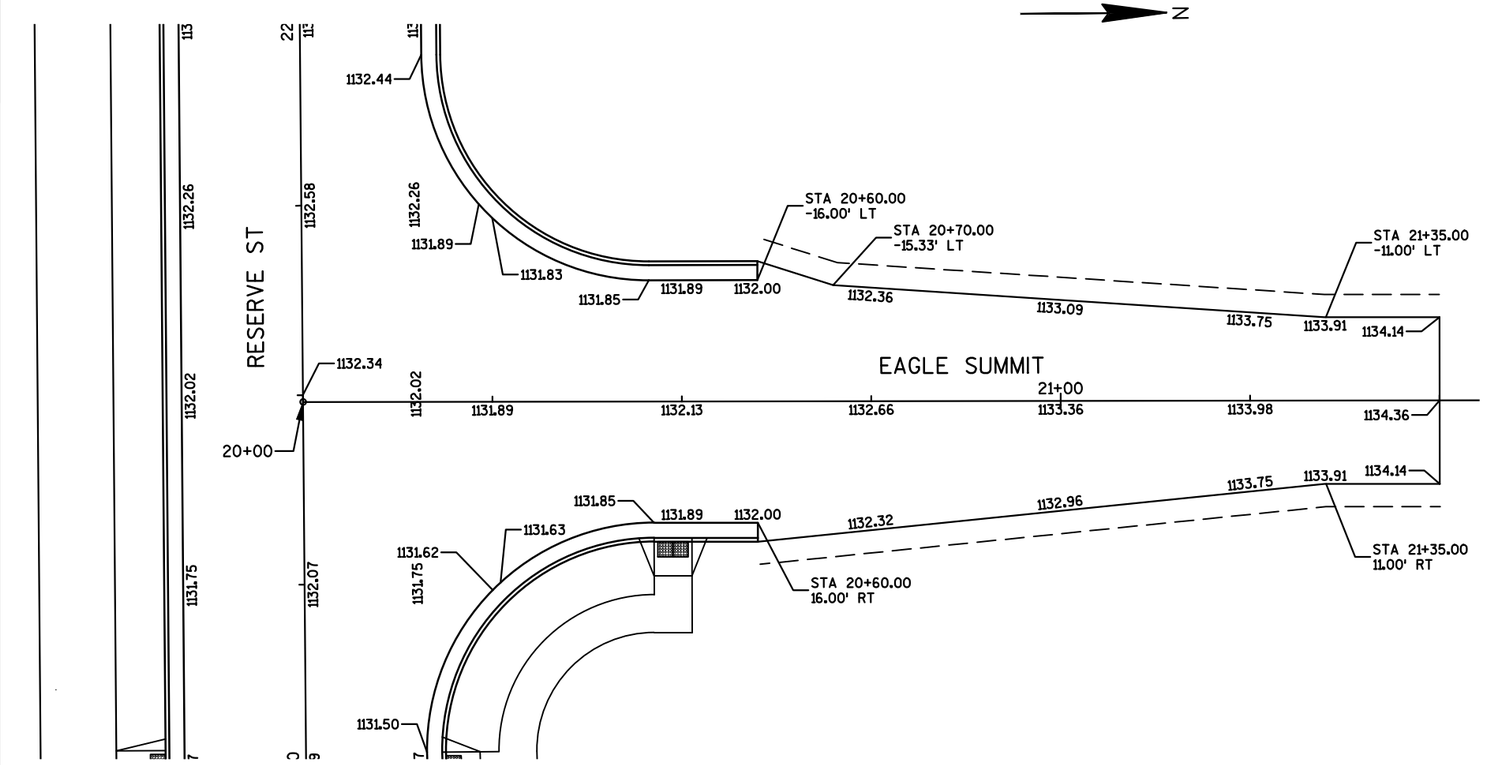
1133.22 1133.39 1133.57 1133.74 1133.91 1134.08 1134.43 1134.60 1134.78 1134.85 1134.93 1135.13 1135.25

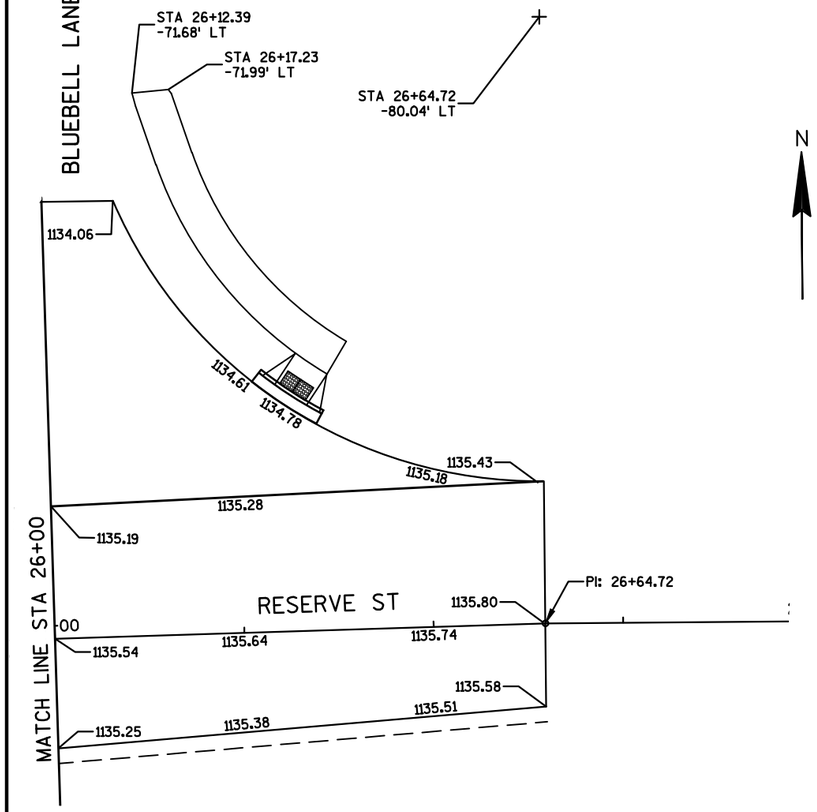
STA 25+35.00
16.00' RT

MATCH LINE STA 26+00

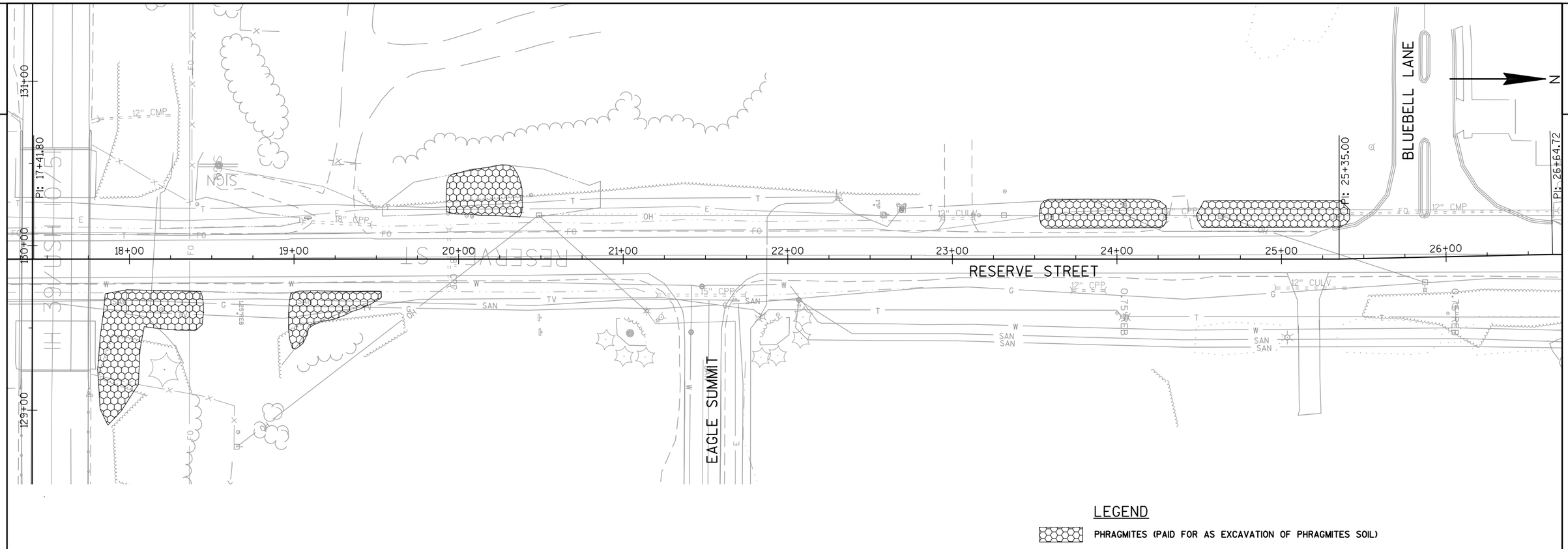
| PROJECT NO: 1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | PAVING DETAILS: RESERVE ST | SHEET 12 | E |
|---|---|---|---|---|---|

FILE NAME : F:\TR\JOBS\E2031A12\CIVIL 3D\SHEETSPLAN\11660872_021201_PD.DWG PLOT DATE : 4/1/2014 10:24 AM PLOT BY : OMNNI ASSOCIATES, INC - ANDREW WESTBROOK




| PROJECT NO: 1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | PAVING DETAILS: RESERVE ST / EAGLE SUMMIT | SHEET 13 | E |
|---|---|---|---|---|---|




LEGEND

PHRAGMITES (PAID FOR AS EXCAVATION OF PHRAGMITES SOIL)

| PROJECT NO:1166-08-72 | HWY:IH 39 | COUNTY:PORTAGE | INVASIVE SPECIES | SHEET 14 | E |
|---|---|---|---|---|---|

2

SLOPE INTERCEPT, TYP

IH 39 SB

101'SB' 102'SB' 103'SB' 104'SB' 105'SB' 106'SB' 107'SB' 108'SB' 109'SB' 110'SB' 111'SB' 112'SB' 113'SB' 114'SB' 115'SB'

INLET PROTECTION, TYPE A

101'NB' 102'NB' 103'NB' 104'NB' 105'NB' 106'NB' 107'NB' 108'NB' 109'NB' 110'NB' 111'NB' 112'NB' 113'NB' 114'NB' 115'NB'

IH 39 NB

INL

GOLF GREEN

GOLF COURSE

SIGN

MH

N

MATCH LINE STA 115+50'NB'

2

EROSION CONTROL LEGEND

- EROSION MAT CLASS I, TYPE B
- SILT FENCE
- INLET PROTECTION
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECK
- SURFACE WATER FLOW
- SLOPE INTERCEPT
- RIPRAP

RIPRAP

SLOPE INTERCEPT, TYP

IH 39 SB

116'SB' 117'SB' 118'SB' 119'SB' 120'SB' 121'SB' 122'SB' 123'SB' 124'SB' 125'SB' 126'SB' 127'SB' 128'SB' 129'SB' 130'SB'

INLET PROTECTION, TYPE A

116'NB' 117'NB' 118'NB' 119'NB' 120'NB' 121'NB' 122'NB' 123'NB' 124'NB' 125'NB' 126'NB' 127'NB' 128'NB' 129'NB' 130'NB'

IH 39 NB

SIGN

FOOTBRIDGE

FLAG

FOOTBRIDGE

RESERVE ST

N

MATCH LINE STA 115+50'NB'

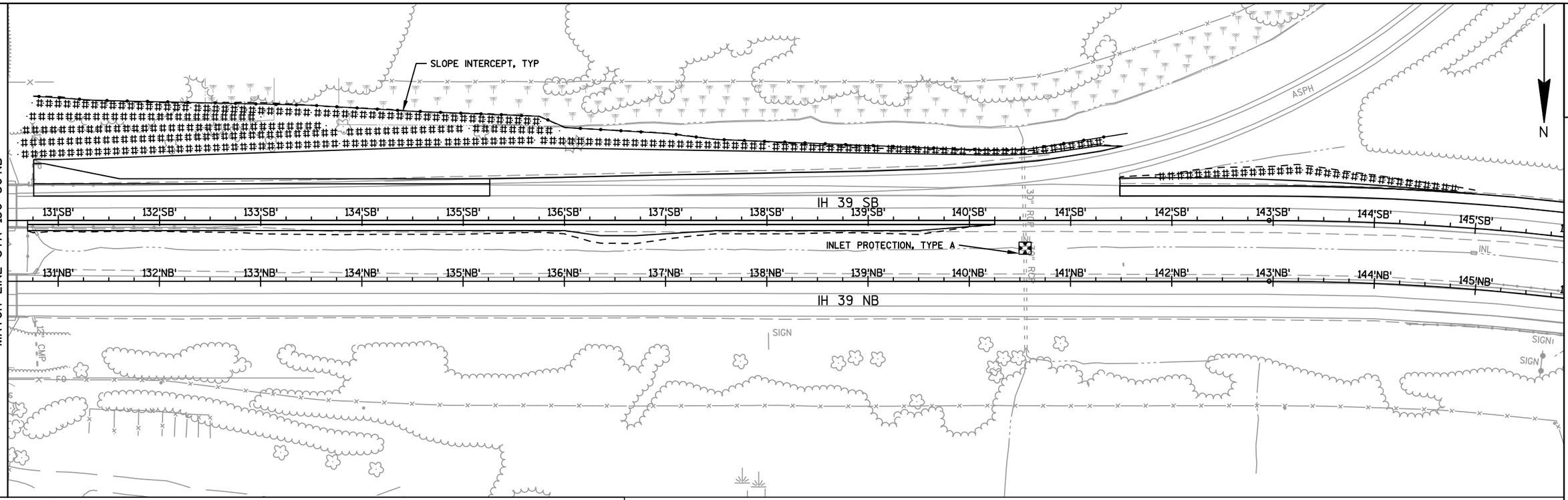
MATCH LINE STA 130+50'NB'

| PROJECT NO: 1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | EROSION CONTROL STAGES 1 AND 2 | SHEET 15 | E |
|---|---|---|---|---|---|

FILE NAME : F:\TR\JOBS\E2031A12\CIVIL 3D\SHEETSPLAN\11660872_022000_EC_S1_2.DWG PLOT DATE : 2/27/2014 9:08 AM PLOT BY : OMNNI ASSOCIATES, INC - ANDREW WESTBROOK

WISDOT/CADDS SHEET 44

2




2

EROSION CONTROL LEGEND

| | |
|---|---|
| ###### EROSION MAT CLASS I, TYPE B | CULVERT PIPE CHECK |
| SILT FENCE | SURFACE WATER FLOW |
| INLET PROTECTION | SLOPE INTERCEPT |
| TEMPORARY DITCH CHECK | RIPRAP |

| PROJECT NO:1166-08-72 | HWY:IH 39 | COUNTY:PORTAGE | EROSION CONTROL STAGES 1 AND 2 | SHEET 16 | E |
|---|---|---|---|---|---|

2

2

INL

GOLF GREEN

INL

GOLF COURSE

N

IH 39 SB

101'SB' 102'SB' 103'SB' 104'SB' 105'SB' 106'SB' 107'SB' 108'SB' 109'SB' 110'SB' 111'SB' 112'SB' 113'SB' 114'SB' 115'SB'

INL

INL

101'NB' 102'NB' 103'NB' 104'NB' 105'NB' 106'NB' 107'NB' 108'NB' 109'NB' 110'NB' 111'NB' 112'NB' 113'NB' 114'NB' 115'NB'

IH 39 NB

MATCH LINE STA 115+50'NB'

SIGN

EROSION CONTROL LEGEND

- EROSION MAT CLASS I, TYPE B
- SILT FENCE
- INLET PROTECTION
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECK
- SURFACE WATER FLOW
- SLOPE INTERCEPT
- RIPRAP

RIPRAP

MH

MATCH LINE STA 115+50'NB'

IH 39 SB

116'SB' 117'SB' 118'SB' 119'SB' 120'SB' 121'SB' 124'SB' 125'SB' 126'SB' 127'SB' 128'SB' 129'SB' 130'SB'

120'NB' 121'NB' 122'NB' 123'NB' 124'NB' 125'NB' 126'NB' 127'NB' 128'NB' 129'NB' 130'NB'

IH 39 NB

SLOPE INTERCEPT, TYP

MATCH LINE STA 130+50'NB'

N

SIGN

FOOTBRIDGE

FLAG

FOOTBRIDGE

SIGN

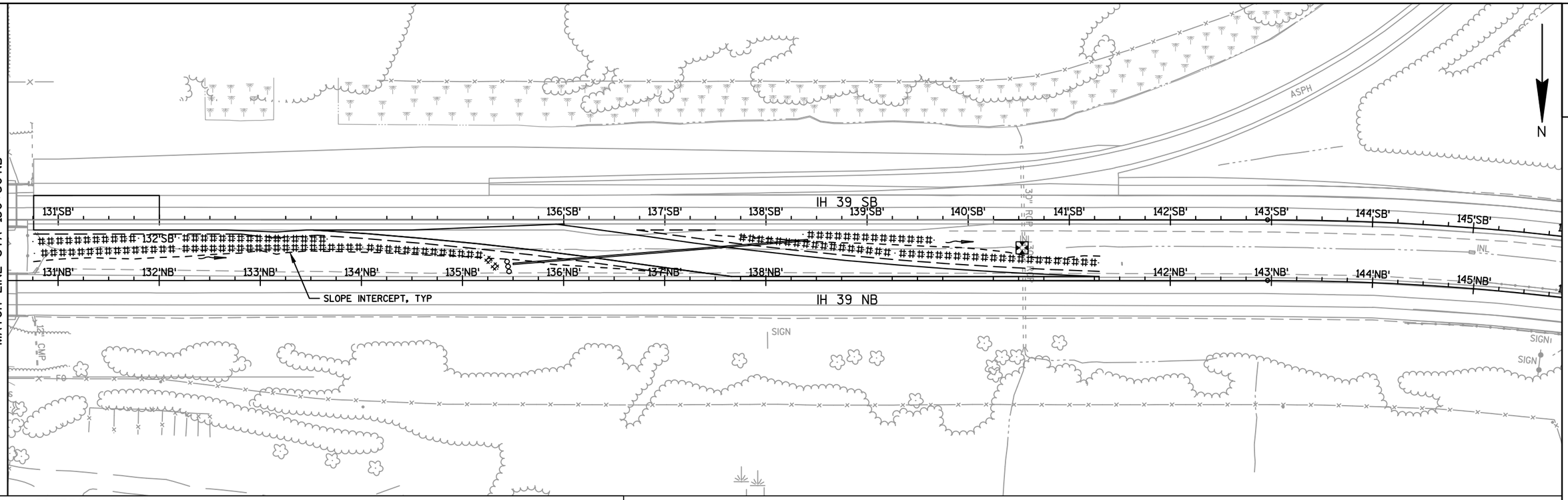
SIGN

FO

RESERVE ST

| PROJECT NO: 1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | EROSION CONTROL STAGE 3 | SHEET 17 | E |
|---|---|---|---|---|---|

2




EROSION CONTROL LEGEND

| | |
|---|---|
| ###### EROSION MAT CLASS I, TYPE B | CULVERT PIPE CHECK |
| SILT FENCE | SURFACE WATER FLOW |
| INLET PROTECTION | SLOPE INTERCEPT |
| TEMPORARY DITCH CHECK | RIPRAP |

| PROJECT NO:1166-08-72 | HWY:IH 39 | COUNTY:PORTAGE | EROSION CONTROL STAGE 3 | SHEET 18 | E |
|---|---|---|---|---|---|

2

2

GOLF GREEN

GOLF COURSE

INL

IH 39 SB

101'SB' 102'SB' 103'SB' 104'SB' 105'SB' 106'SB' 107'SB' 108'SB' 109'SB' 110'SB' 111'SB' 112'SB' 113'SB' 114'SB' 115'SB'

101'NB' 102'NB' 103'NB' 104'NB' 105'NB' 106'NB' 107'NB' 108'NB' 109'NB' 110'NB' 111'NB' 112'NB' 113'NB' 114'NB' 115'NB'

IH 39 NB

SIGN

MH

N

MATCH LINE STA 115+50'NB'

EROSION CONTROL LEGEND

- ###### EROSION MAT CLASS I, TYPE B
- SILT FENCE
- INLET PROTECTION
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECK
- SURFACE WATER FLOW
- SLOPE INTERCEPT
- RIPRAP

RIPRAP

MATCH LINE STA 115+50'NB'

IH 39 SB

116'SB' 117'SB' 118'SB' 119'SB' 120'SB' 121'SB' 122'SB' 123'SB' 124'SB' 125'SB' 126'SB' 127'SB' 128'SB' 129'SB' 130'SB'

116'NB' 117'NB' 118'NB' 119'NB' 120'NB' 121'NB' 122'NB' 123'NB' 124'NB' 125'NB' 126'NB' 127'NB' 128'NB' 129'NB' 130'NB'

IH 39 NB

SLOPE INTERCEPT, TYP

SIGN

FOOTBRIDGE

FLAG

FOOTBRIDGE

FO

RESERVE ST

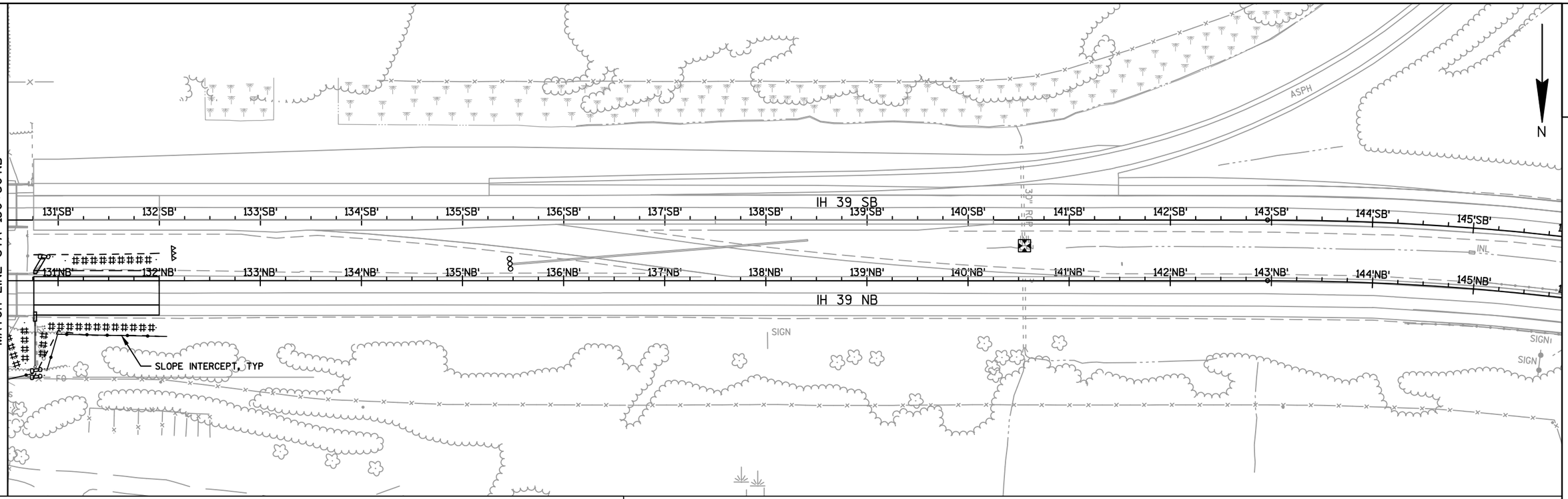
MATCH LINE STA 130+50'NB'

N

| PROJECT NO: 1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | EROSION CONTROL STAGE 4 | SHEET 19 | E |
|---|---|---|---|---|---|

FILE NAME : F:\TR\JOBS\E2031A12\CIVIL 3D\SHEETSPLAN\11660872_022000_EC_S4.DWG PLOT DATE : 2/27/2014 9:26 AM PLOT BY : OMNNI ASSOCIATES, INC - ANDREW WESTBROOK

WISDOT/CADDS SHEET 44




2

EROSION CONTROL LEGEND

| | |
|---|---|
| ###### EROSION MAT CLASS I, TYPE B | CULVERT PIPE CHECK |
| SILT FENCE | SURFACE WATER FLOW |
| INLET PROTECTION | SLOPE INTERCEPT |
| TEMPORARY DITCH CHECK | RIPRAP |

| PROJECT NO:1166-08-72 | HWY:IH 39 | COUNTY:PORTAGE | EROSION CONTROL STAGE 4 | SHEET 20 | E |
|---|---|---|---|---|---|

EROSION CONTROL LEGEND

- EROSION MAT CLASS I, TYPE B
- SILT FENCE
- INLET PROTECTION
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECK
- SURFACE WATER FLOW
- SLOPE INTERCEPT
- RIPRAP

2

INL

GOLF GREEN

GOLF COURSE

IH 39 SB

101'SB' 102'SB' 103'SB' 104'SB' 105'SB' 106'SB' 107'SB' 108'SB' 109'SB' 110'SB' 111'SB' 112'SB' 113'SB' 114'SB' 115'SB'

101'NB' 102'NB' 103'NB' 104'NB' 105'NB' 106'NB' 107'NB' 108'NB' 109'NB' 110'NB' 111'NB' 112'NB' 113'NB' 114'NB' 115'NB'

IH 39 NB

SIGN

MH

N

MATCH LINE STA 115+50'NB'

2

MATCH LINE STA 115+50'NB'

RIPRAP

SLOPE INTERCEPT, TYP

IH 39 SB

116'SB' 117'SB' 118'SB' 119'SB' 120'SB' 121'SB' 122'SB' 123'SB' 124'SB' 125'SB' 126'SB' 127'SB' 128'SB' 129'SB' 130'SB'

116'NB' 117'NB' 118'NB' 119'NB' 120'NB' 121'NB' 122'NB' 123'NB' 124'NB' 125'NB' 126'NB' 127'NB' 128'NB' 129'NB' 130'NB'

IH 39 NB

SIGN

FOOTBRIDGE

FLAG

FOOTBRIDGE

SIGN

SIGN

FO

RESERVE ST

N

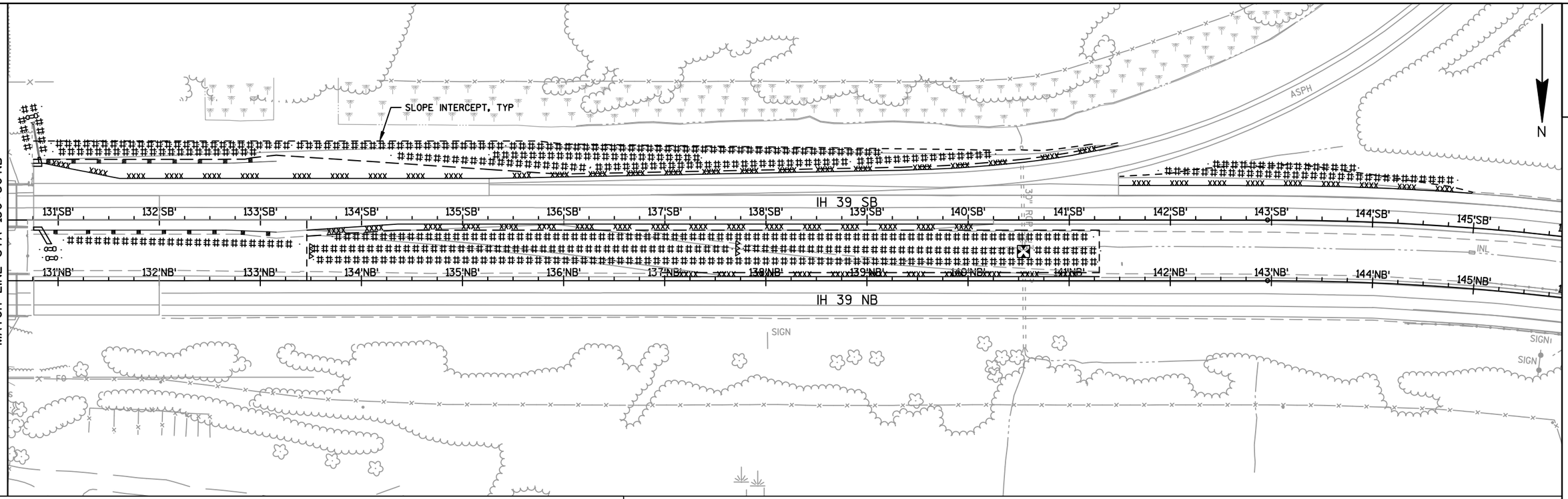
MATCH LINE STA 130+50'NB'

| PROJECT NO: 1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | EROSION CONTROL STAGE 5 | SHEET 21 | E |
|---|---|---|---|---|---|

FILE NAME : F:\TR\JOBS\E2031A12\CIVIL 3D\SHEETSPLAN\11660872_022000_EC_S5.DWG

PLOT DATE : 2/27/2014 9:29 AM

PLOT BY : OMNNI ASSOCIATES, INC - ANDREW WESTBROOK




2

EROSION CONTROL LEGEND

| | | | |
|---|---|---|---|
| ###### | EROSION MAT CLASS I, TYPE B | OOO | CULVERT PIPE CHECK |
| ——•——•—— | SILT FENCE | ~~~→ | SURFACE WATER FLOW |
| ⊠ | INLET PROTECTION | _ _ _ / | SLOPE INTERCEPT |
| △△△ | TEMPORARY DITCH CHECK | ⊂⊃⊂⊃⊂⊃⊂⊃ | RIPRAP |

| PROJECT NO:1166-08-72 | HWY:IH 39 | COUNTY:PORTAGE | EROSION CONTROL STAGE 5 | SHEET 22 | E |
|---|---|---|---|---|---|

2

SENTRY INSURANCE

BP: 7+00.00

7+00 8+00 9+00 10+00 RESERVE STREET 11+00 12+00 13+

MATCH LINE STA 13+00

N

2

EROSION CONTROL LEGEND

- EROSION MAT CLASS I, TYPE B
- SILT FENCE
- INLET PROTECTION
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECK
- SURFACE WATER FLOW
- SLOPE INTERCEPT
- RIPRAP

MATCH LINE STA 13+00

00 14+00 15+00 RESERVE STREET 16+00

IH 39/USH 10/51 SB

130+00

17+00

PI: 17+41.80

IH 39/USH 10/51 NB

18+00

19+

MATCH LINE STA 19+00

| PROJECT NO:1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | EROSION CONTROL | SHEET 23 | E |
|---|---|---|---|---|---|

FILE NAME : F:\TR\JOBS\E2031A12\CIVIL 3D\SHEETSPLAN\11660872_022001_EC_RESERVE.DWG PLOT DATE : 4/17/2014 9:01 AM PLOT BY : OMNNI ASSOCIATES, INC - ANDREW WESTBROOK

2

MATCH LINE STA 19+00

MATCH LINE STA 25+00

MATCH LINE STA 25+00

RESERVE STREET

EAGLE SUMMIT

BLUEBELL LANE

RESERVE STREET

EP: 28+86.95

26+64.72

18" CPP

12" CULVERT

12" CPP

12" CMP

12" CULVERT

??? CULVERT

0.75% REB

0.75% REB

SAN

FO

OH

W

T

E

G

EROSION CONTROL LEGEND

| | |
|---|---|
| ###### EROSION MAT CLASS I, TYPE B | CULVERT PIPE CHECK |
| SILT FENCE | SURFACE WATER FLOW |
| INLET PROTECTION | SLOPE INTERCEPT |
| TEMPORARY DITCH CHECK | RIPRAP |

| PROJECT NO: 1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | EROSION CONTROL | SHEET 24 | E |
|---|---|---|---|---|---|

EAGLE SUMMIT

PROPOSED SLOPE INTERCEPT, TYP

WETLAND IMPACT AREA, TYP

WETLAND DELINATION BOUNDARY, TYP

RESERVE STREET

EAGLE SUMMIT

IH 39 NORTHBOUND

IH 39 SOUTHBOUND

RESERVE STREET

PROPOSED SLOPE INTERCEPT, TYP

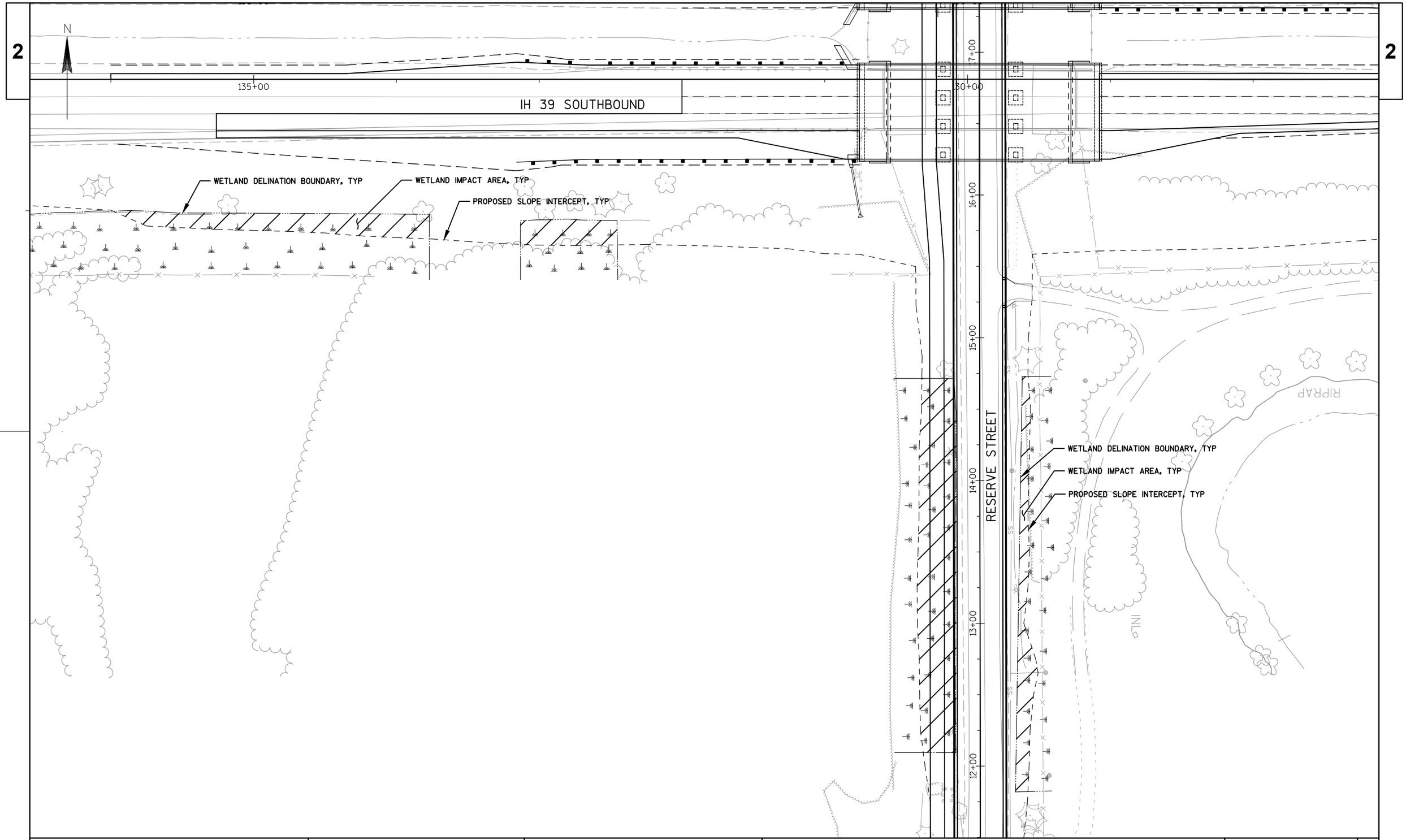
WETLAND IMPACT AREA, TYP

WETLAND DELINATION BOUNDARY, TYP

| PROJECT NO: 1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | IH 39 WETLAND IMPACTS | SHEET 25 | E |
|---|---|---|---|---|---|

FILE NAME : F:\TR\JOBS\E2031A12\CIVIL 3D\SHEETSPLAN\1166087 2_022500_WL.DWG PLOT DATE : 2/27/2014 10:31 AM PLOT BY : ANDREW WESTBROOK PLOT NAME : ----------

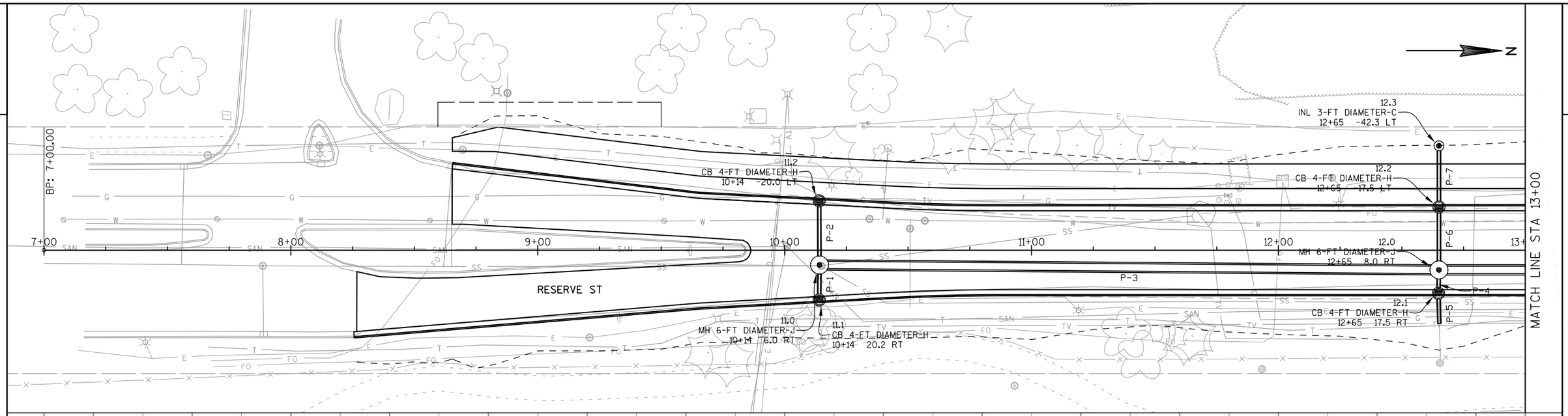
WISDOT/CADDS SHEET 42

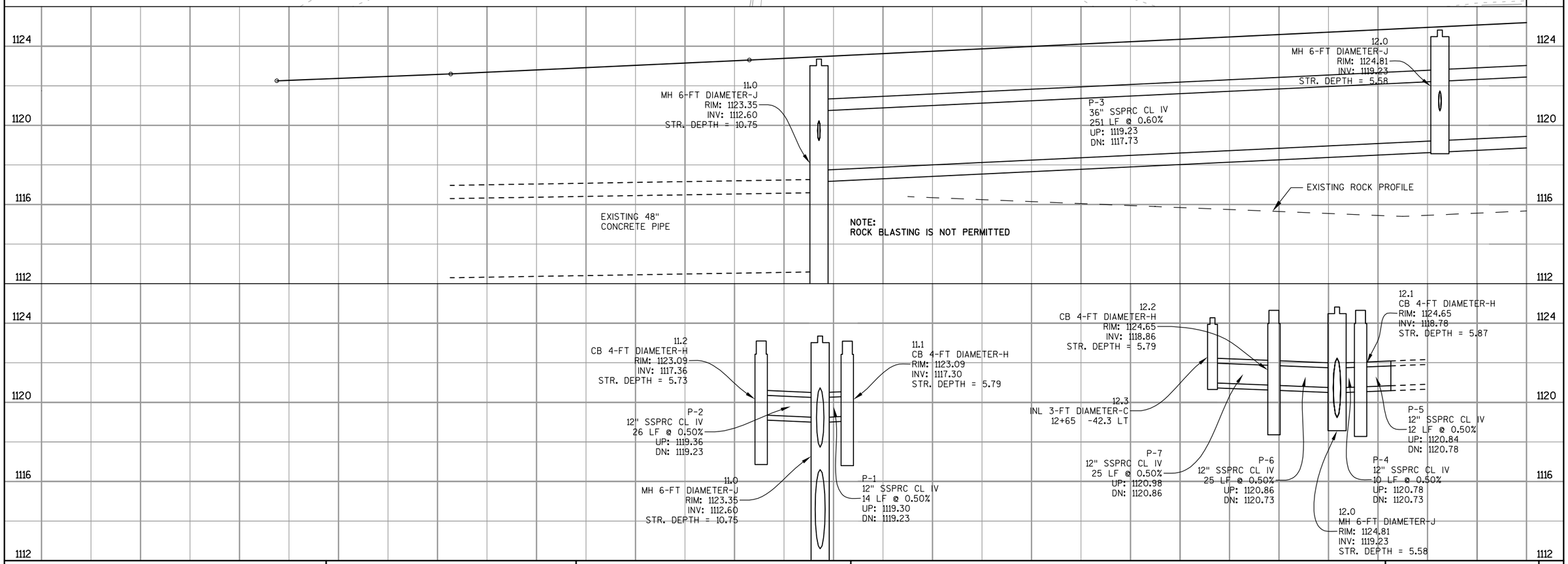



| PROJECT NO: 1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | IH 39 WETLAND IMPACTS | SHEET 26 | E |
|---|---|---|---|---|---|

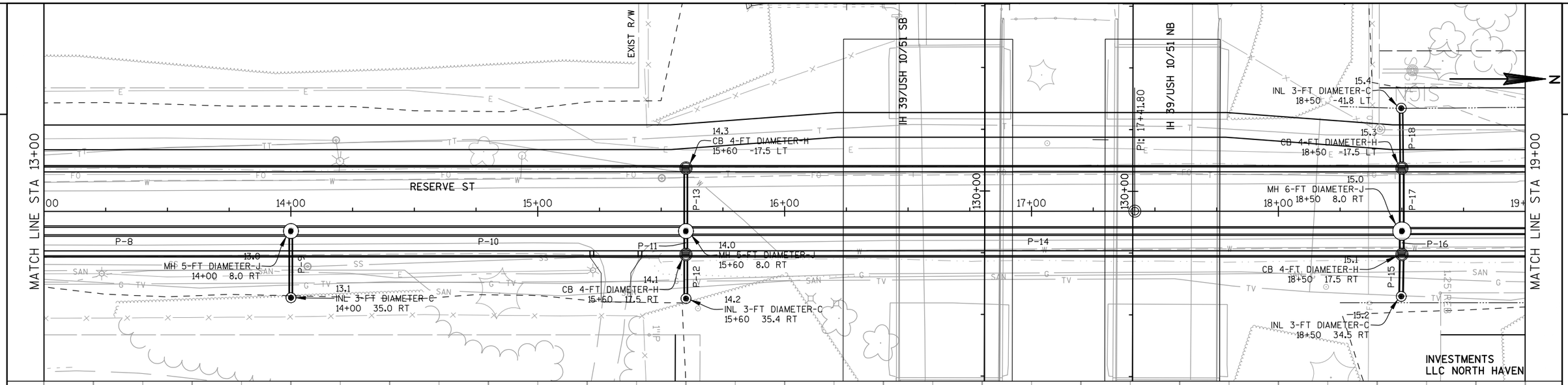
FILE NAME : F:\TR\JOBS\E2031A12\CIVIL 3D\SHEETSPLAN\11660872_022500_WL.DWG PLOT DATE : 2/27/2014 10:14 AM PLOT BY : ANDREW WESTBROOK PLOT NAME : ----------

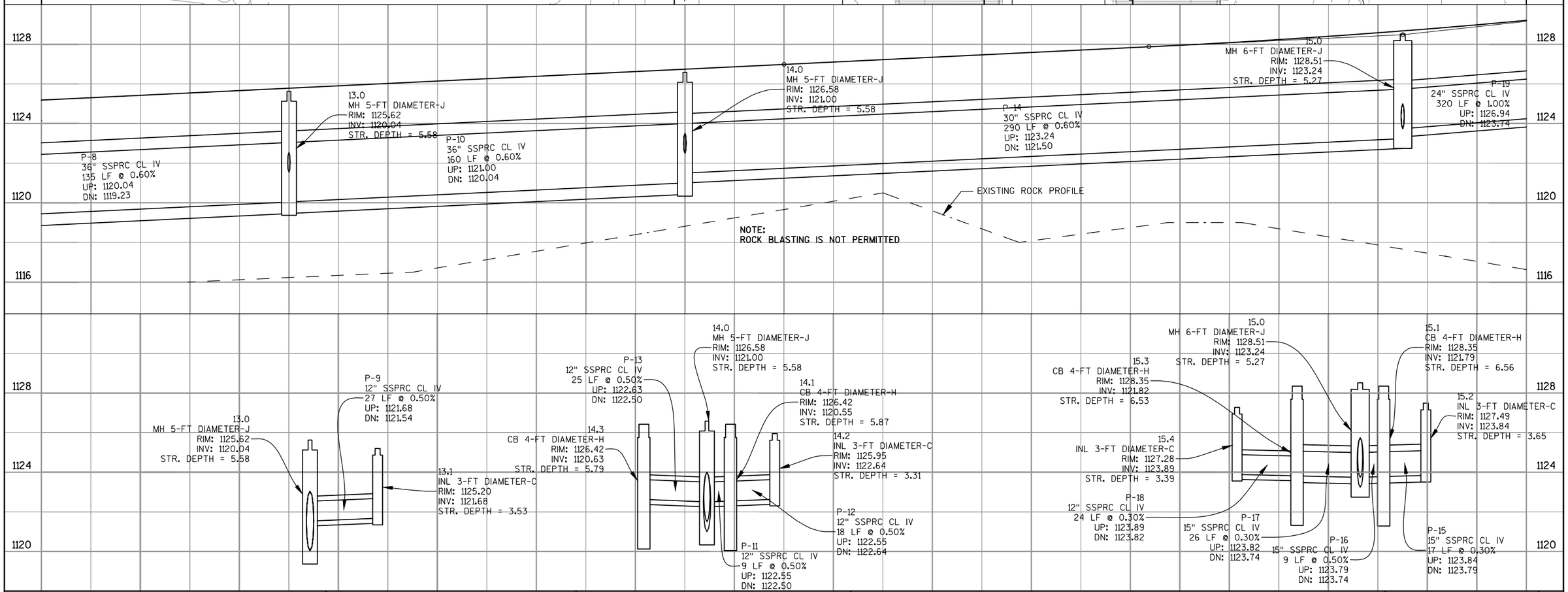
WISDOT/CADDS SHEET 42




| PROJECT NO:1166-08-72 | HWY:IH 39 | COUNTY:PORTAGE | STORM SEWER: RESERVE STREET | SHEET 27 | E |
|---|---|---|---|---|---|




| PROJECT NO:1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | STORM SEWER: RESERVE STREET | SHEET 28 | E |
|---|---|---|---|---|---|

2

MATCH LINE STA 19+00

MATCH LINE STA 24+90

P-37 TO BE STUBBED OUT
AND CAPPED FOR FUTURE USE

RESERVE ST

EAGLE SUMMIT

16.0
MH 5-FT DIAMETER-J
21+70 8.0 RT

P: 20+00.00

16.1
CB 4-FT DIAMETER-HS
21+70 32.7 RT

16.2
INL MEDIAN 2G-MS
21+73 85.0 RT

16.3
INL MEDIAN 2G-MS
21+22 85.0 RT

17.0
MH 5-FT DIAMETER-J
22+50 8.0 RT

17.1
CB 4-FT DIAMETER-H
22+50 17.5 RT

17.2
INL 3-FT DIAMETER-C
22+50 35.3 RT

17.3
CB 4-FT DIAMETER-H
22+50 17.5 LT

17.4
INL 3-FT DIAMETER-C
23+25 -45.0 LT

19.0
MH 5-FT DIAMETER-J
24+75 8.0 RT

19.1
CB 4-FT DIAMETER-H
24+75 17.5 RT

19.2
INL 3-FT DIAMETER-C
24+75 35.5 RT

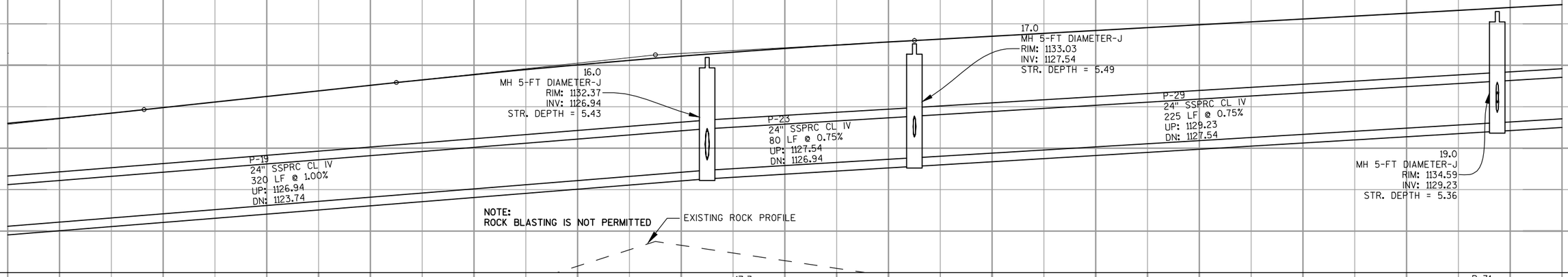
19.3
CB 4-FT DIAMETER-H
24+75 17.5 LT

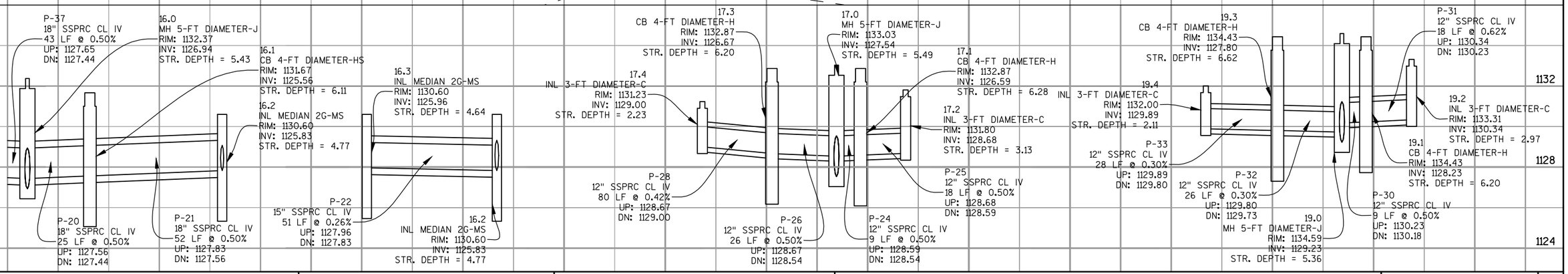
19.4
INL 3-FT DIAMETER-C
24+75 -45.8 LT

P-19
P-20
P-21
P-22
P-23
P-24
P-25
P-26
P-28
P-29
P-30
P-31
P-32
P-33
P-37
P-38

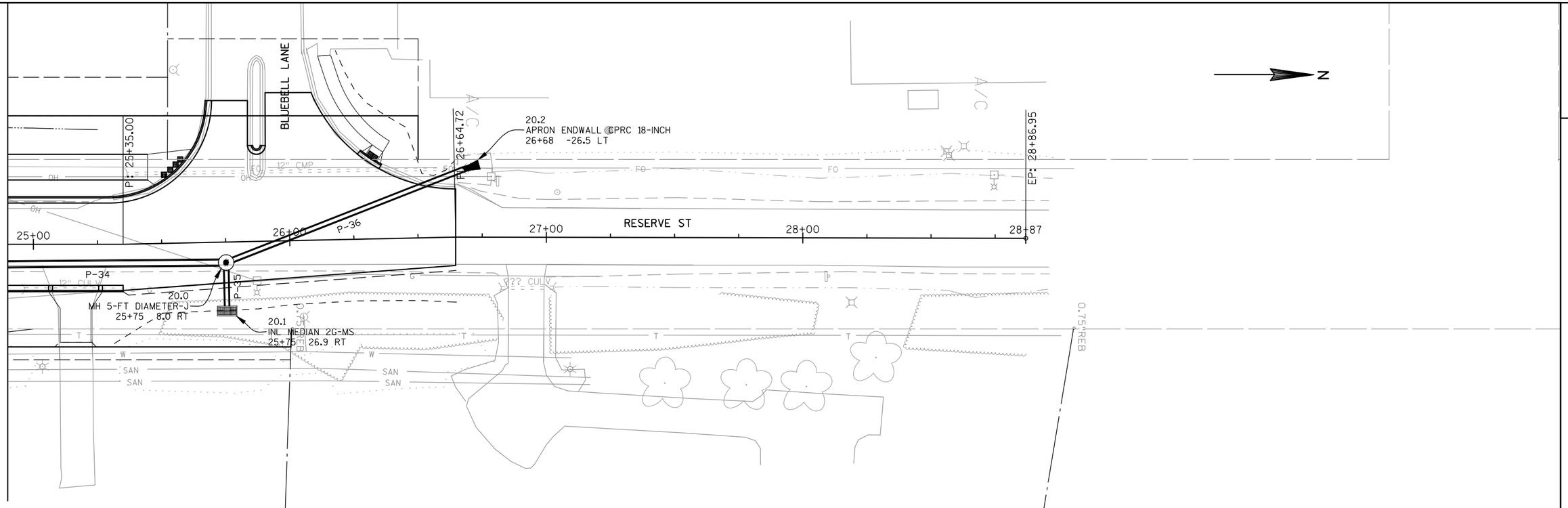
18" CPP
15" CPP
12" CPP
24" CULVO
12" CULVO
0.75% SLOPE

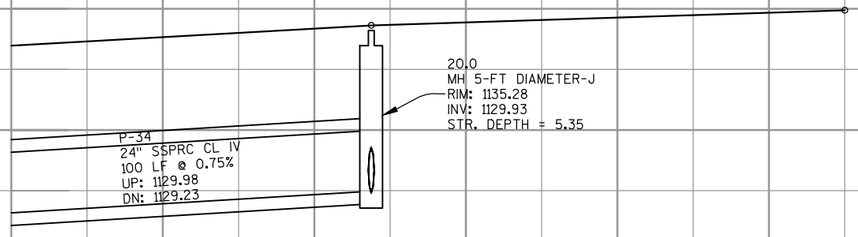
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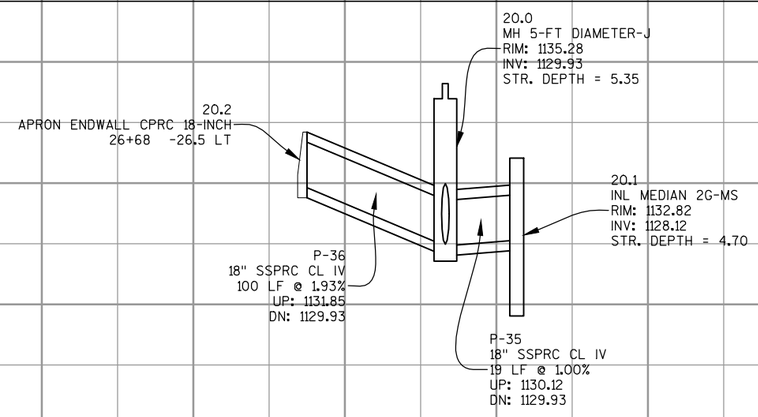



| PROJECT NO: 1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | STORM SEWER: RESERVE STREET | SHEET 29 | E |
|---|---|---|---|---|---|




| PROJECT NO:1166-08-72 | HWY: IH 39 | COUNTY:PORTAGE | STORM SEWER: RESERVE STREET | SHEET 30 | E |
|---|---|---|---|---|---|

2

REMOVE EXISTING 45° BEND AND CONNECT TO PROPOSED 8" WATER MAIN WITH 22½° BEND

EXIST R/W

IH 39/USH 10/51 SB

IH 39/USH 10/51 NB

PI: 17+41.80

22½° BEND

15 LF

MATCH LINE STA 13+00

14+00

RESERVE ST

15+00

16+00

200 LF

8" WATER MAIN

17+00

135 LF

18+00

22½° BEND

65 LF

MATCH LINE STA 19+00

70 LF

SAN

4" SANITARY FORCE MAIN

22½° BEND

22½° BEND

NOTE: FOR TEMPORARY WATER CONNECT TO 6" STAND PIPE LOCATED ON SENTRY PROPERTY AT STA 12+44, 138' RT OF C/L.

INVESTMENTS LLC NORTH HAVEN

1128

1124

1120

1116

1112

1108

1104

EXISTING 4" FORCE MAIN

PROPOSED SS

PROPOSED 8" WATER MAIN 280 LF

EXISTING 8" WATER MAIN

EXISTING 4" FORCE MAIN

PROPOSED 4" SANITARY FORCE MAIN 274 LF

EXISTING 8" WATER MAIN

EXISTING ROCK PROFILE

ROCK EXCAVATION LIMITS STA 15+80 - 16+60. NO BLASTING OF ROCK IS PERMITTED

NOTE: PROVIDE 4" POLYSTYRENE INSULATION OVER FORCE MAINS IN AREAS WHERE DEPTH OF COVER IS LESS THAN 7'6". SEE CONSTRUCTION DETAIL.

| PROJECT NO: 1166-08-82 | HWY: IH 39 | COUNTY: PORTAGE | SANITARY & WATER UTILITIES: RESERVE STREET | SHEET 31 | E |
|---|---|---|---|---|---|

2

MATCH LINE STA 19+00

RESERVE ST

20+00 | 21+00 | 22+00 | 23+00 | 24+00

EP: 20+00.00

PI: 21+57.87

EAGLE SUMMIT

PARCEL 4 | CURB STOPS | WATER SERVICE MANHOLE | PARCEL 5

5' | 2'

INSTALL 8x6 LIVE TAP FOR TEMPORARY WATER CONNECTION AND 20.0 LF OF 6" DUCTILE IRON FOR WATER SERVICE

WATER SERVICE MANHOLE WITH ROADWAY CASTING

RECONSTRUCT MANHOLE

1½" SANITARY LATERAL 99 LF x 2

2" WATER SERVICE 89 LF

N

NOTE: PROVIDE 4" POLYSTYRENE INSULATION OVER FORCE MAINS IN AREAS WHERE DEPTH OF COVER IS LESS THAN 7'6". SEE CONSTRUCTION DETAIL.

1132 | 1128 | 1124 | 1120

EXISTING 8" WATER MAIN

PROPOSED SS

EXISTING 4" FORCE MAIN

EXISTING ROCK PROFILE

RECONSTRUCT MANHOLE

EXISTING 8" WATER MAIN

EXISTING 4" FORCE MAIN

EXISTING 3" FORCE MAIN

| PROJECT NO: 1166-08-82 | HWY: IH 39 | COUNTY: PORTAGE | SANITARY & WATER UTILITIES: RESERVE STREET | SHEET 32 | E |
|---|---|---|---|---|---|

2

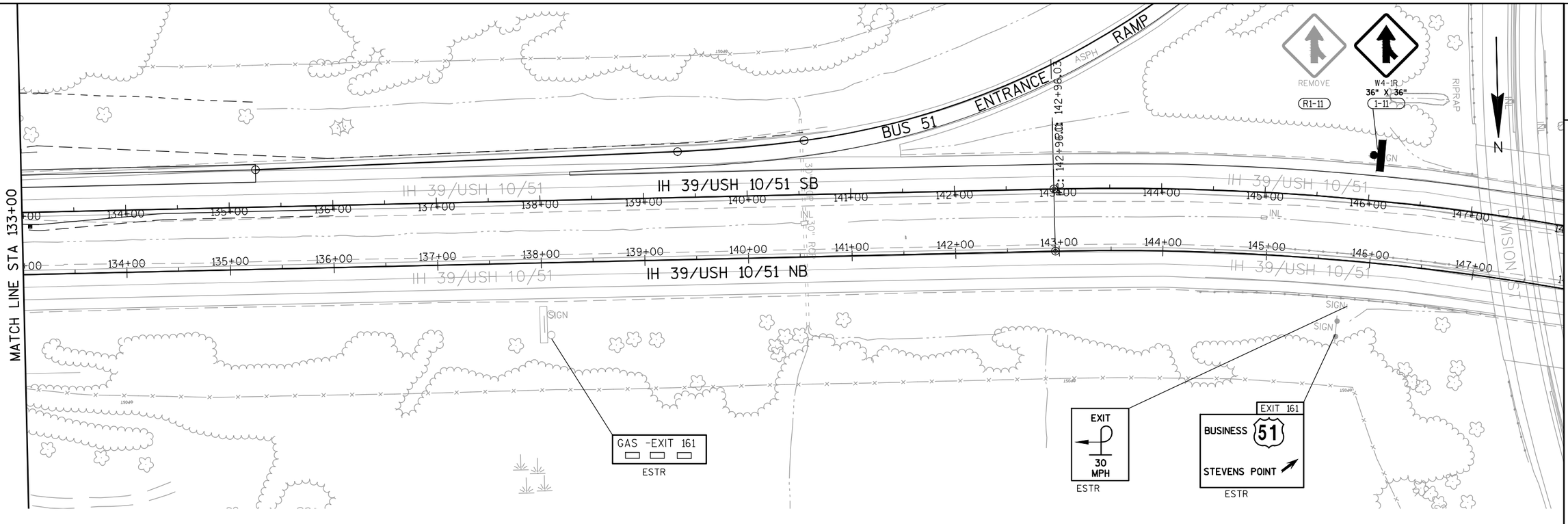
LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON SIGNAL, UTILITY POLE, OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON SIGNAL, UTILITY POLE, OR SIGN BRIDGE
- FLAGS, 16" X 16" MIN; ORANGE
- (X-XX) DENOTES PROPOSED SIGN NUMBER, SIGN TO BE INSTALLED
- (RX-XX) DENOTES EXISTING SIGN NUMBER, SIGN TO BE REMOVED
- (MX-XX) DENOTES EXISTING SIGN NUMBER, SIGN TO BE MOVED
- ESTR EXISTING SIGN TO REMAIN IN PLACE
- * DOUBLE YELLOW DELINEATOR

GOLF GREEN
GOLF COURSE
INL
R3-4B 36"X48" 1-01
REMOVE R1-01
SLOWER TRAFFIC KEEP RIGHT REMOVE R1-03
R4-3 48"X60" 1-03
M1-01 MOVE AT END OF STAGE 1 TO AVOID TEMPORARY PAVEMENT
MILE 161 REMOVE R1-04
D10-3 12"X48" 1-04
N
IH 39/USH 10/51 SB
IH 39/USH 10/51 NB
103+00 104+00 105+00 106+00 107+00 108+00 109+00 110+00 111+00 112+00 113+00 114+00 115+00 116+00 117+00 118+00
SIGN
WISCONSIN CONSERVATION HALL OF FAME EXIT 161 ESTR
R1-02 REMOVE
1-02 R3-4B 36"X48"
MH
FOOTBRIDGE
FLAG
MATCH LINE STA 118+00

EXIT 159
66 EAST
STEVENS POINT ROSHOLT 1 MILE
M1-02
MOVE AT END OF STAGE 1 TO STATION 115+00, 62.2' LT TO AVOID TEMPORARY PAVEMENT
SPEED LIMIT 65 REMOVE R1-05
SPEED LIMIT 65 R2-1 48"x60" 1-05
MOVE AT END OF STAGE 1 TO AVOID TEMPORARY PAVEMENT
SOUTH EAST SOUTH 39 10 51 J1-3 108" X 57" 1-06
M1-03 MOVE AT END OF STAGE 1 TO AVOID TEMPORARY PAVEMENT
SOUTH EAST SOUTH 39 10 51 REMOVE R1-06
W5-52R 18"x54" 1-09
REMOVE R1-09
W5-52L 18"x54" 1-10
REMOVE R1-10
IH 39/USH 10/51 SB
IH 39/USH 10/51 NB
119+00 120+00 121+00 122+00 123+00 124+00 125+00 126+00 127+00 128+00 129+00 130+00 131+00 132+00 133+00
15+00 16+00 17+00 18+00
RESERVE STREET
P: 17+41.80
LODGING -EXIT 161 ESTR
FOOD -EXIT 161 ESTR
1-07 R1-07 W5-52L 18"x54"
1-08 R1-08 W5-52R 18"x54"
MATCH LINE STA 133+00

| PROJECT NO: 1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | PERMANENT SIGNING | SHEET 33 | E |
|---|---|---|---|---|---|




LEGEND

| | |
|---|---|
| | EXISTING SIGN MOUNTED ON POST(S) |
| | EXISTING SIGN MOUNTED ON SIGNAL, UTILITY POLE, OR SIGN BRIDGE |
| | PROPOSED SIGN MOUNTED ON POST(S) |
| | PROPOSED SIGN MOUNTED ON SIGNAL, UTILITY POLE, OR SIGN BRIDGE |
| | FLAGS, 16" X 16" MIN; ORANGE |
| X-XX | DENOTES PROPOSED SIGN NUMBER, SIGN TO BE INSTALLED |
| RX-XX | DENOTES EXISTING SIGN NUMBER, SIGN TO BE REMOVED |
| MX-XX | DENOTES EXISTING SIGN NUMBER, SIGN TO BE MOVED |
| ESTR | EXISTING SIGN TO REMAIN IN PLACE |
| * | DOUBLE YELLOW DELINEATOR |

2

SENTRY INSURANCE

BP: 7+00.00

REMOVE
R2-02

R4-7
24"X30"
2-02

BIKE LANE AHEAD
REMOVE
R2-03

R7-1D
18"X24"
2-03

N

7+00 8+00 9+00 10+00 RESERVE STREET 11+00 12+00 13+

MATCH LINE STA 13+00

2-01
R7-1D
18"X24"

R2-01
REMOVE

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON SIGNAL, UTILITY POLE, OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON SIGNAL, UTILITY POLE, OR SIGN BRIDGE
- FLAGS, 16" X 16" MIN; ORANGE
- (X-XX) DENOTES PROPOSED SIGN NUMBER, SIGN TO BE INSTALLED
- (RX-XX) DENOTES EXISTING SIGN NUMBER, SIGN TO BE REMOVED
- (MX-XX) DENOTES EXISTING SIGN NUMBER, SIGN TO BE MOVED
- ESTR EXISTING SIGN TO REMAIN IN PLACE
- * DOUBLE YELLOW DELINEATOR

12" CMP

R7-1D
18"X24"
2-05

IH 39/USH 10/51 SB

IH 39/USH 10/51 NB

PI: 17+41.80

NOT TO SCALE

MATCH LINE STA 13+00

14+00 15+00 RESERVE STREET 16+00 17+00 18+00 19+

MATCH LINE STA 19+00

2-04
R7-1D
18"X24"

| PROJECT NO: 1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | PERMANENT SIGNING | SHEET 35 | E |
|---|---|---|---|---|---|

2

MATCH LINE STA 19+00

MATCH LINE STA 25+00

RESERVE STREET

EAGLE SUMMIT

BLUEBELL LANE

RESERVE ST

N

R7-1D
18"X24"
2-07

R7-1D
18"X24"
2-11

2-06
R7-1D
18"X24"

R2-04
STOP
REMOVE

2-08
STOP
R1-1
30" X 30"

2-09
R7-1D
18"X24"

2-10
R3-17
30" X 24"
BIKE LANE
ENDS
R3-17B
30" X 12"

R3-17
30" X 24"
BIKE LANE
AHEAD
R3-17A
30" X 12"
2-12

STOP
ESTR

SPEED LIMIT 35
ESTR

LOW SHOULDER
ESTR

PI: 25+35.00

PI: 26+64.72

EP: 28+86.95

20+00 21+00 22+00 23+00 24+00 25+00 26+00 27+00 28+00 28+87

18" CPP
15" CPP
12" CPP
12" CULVERT
12" CMP
??? CULVERT
0.75% REB

LEGEND

| | |
|---|---|
| | EXISTING SIGN MOUNTED ON POST(S) |
| | EXISTING SIGN MOUNTED ON SIGNAL, UTILITY POLE, OR SIGN BRIDGE |
| | PROPOSED SIGN MOUNTED ON POST(S) |
| | PROPOSED SIGN MOUNTED ON SIGNAL, UTILITY POLE, OR SIGN BRIDGE |
| | FLAGS, 16" X 16" MIN; ORANGE |
| (X-XX) | DENOTES PROPOSED SIGN NUMBER, SIGN TO BE INSTALLED |
| (RX-XX) | DENOTES EXISTING SIGN NUMBER, SIGN TO BE REMOVED |
| (MX-XX) | DENOTES EXISTING SIGN NUMBER, SIGN TO BE MOVED |
| ESTR | EXISTING SIGN TO REMAIN IN PLACE |
| * | DOUBLE YELLOW DELINEATOR |

| PROJECT NO: 1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | PERMANENT SIGNING | SHEET 36 | E |
|---|---|---|---|---|---|

FILE NAME : F:\TR\JOBS\E2031A12\CIVIL 3D\SHEETSPLAN\11660872_023201_PS.DWG PLOT DATE : 4/17/2014 9:21 AM PLOT BY : OMNNI ASSOCIATES, INC - ANDREW WESTBROOK

2

CONNECT PROPOSED CONDUIT TO EXISTING PULLBOX

AT&T / SENTRY INSURANCE

TLE

EXIST RW

SENTRY INSURANCE

CITY OF STEVENS POINT

WPS

PROPOSED LIGHT POLE BY OTHERS, TYP

PROPOSED 2-IN CONDUIT LOCATED 1 FT BEHIND PROPOSED BACK OF CURB, TYP. ROUTE CONDUIT AROUND STORM SEWER STRUCTURES WHERE NECESSARY.

AT&T

N

7+00 8+00 9+00 10+00 11+00 12+00 13+

RESERVE STREET R/L

RESERVE ST

MATCH LINE STA 13+00

SENTRY INSURANCE

CONNECT PROPOSED CONDUIT TO EXISTING CONDUIT

EXIST RW

SENTRY INSURANCE

CITY OF STEVENS POINT

CHARTER COMMUNICATIONS

PROPOSED 2-IN CONDUIT LOCATED 1 FT BEHIND PROPOSED BACK OF CURB, TYP. ROUTE CONDUIT AROUND STORM SEWER STRUCTURES WHERE NECESSARY.

AT&T

SENTRY INSURANCE

2

SENTRY INSURANCE

EXIST R/W

WPS

PROPOSED 2-IN CONDUIT LOCATED 1 FT BEHIND PROPOSED BACK OF CURB, TYP. ROUTE CONDUIT AROUND STORM SEWER STRUCTURES WHERE NECESSARY.

AT&T

B-49-173

PROPOSED LIGHT POLE BY OTHERS, TYP

12" CMP

B-49-172

PROPOSED LIGHT POLE BY OTHERS, TYP

EXIST R/W

SENTRY INSURANCE

N

TLE

R/W

MATCH LINE STA 13+00

14+00 15+00 16+00 17+00 18+00 19+

RESERVE ST

RESERVE STREET R/L

SAN

WPS

EXIST R/W

CITY OF STEVENS POINT

CHARTER COMMUNICATIONS

IH 39/USH 10/51 SB

IH 39/USH 10/51 NB

PROPOSED 2-IN CONDUIT LOCATED 1 FT BEHIND PROPOSED BACK OF CURB, TYP. ROUTE CONDUIT AROUND STORM SEWER STRUCTURES WHERE NECESSARY.

R/W

EXIST R/W

INVESTMENTS LLC NORTH HAVEN

PACKERLAND BROADBAND (APPROXIMATE LOCATION)

SENTRY INSURANCE

MATCH LINE STA 19+00

| PROJECT NO:1166-08-82 | HWY:IH 39 | COUNTY:PORTAGE | LIGHTING PLAN | SHEET 37 | E |
|---|---|---|---|---|---|

2

SENTRY INSURANCE

N

SOWEIJA DAVID A. &
AUFDERMAUER NANCY

PROPOSED 2-IN CONDUIT LOCATED 1 FT BEHIND PROPOSED BACK OF CURB, TYP. ROUTE CONDUIT TLE AROUND STORM SEWER STRUCTURES WHERE NECESSARY.

WPS

AT&T

PULLBOX, TYP

RONALD J.
AUFDERMAUER

TLE

R/W

PROPOSED LIGHT POLE BY OTHERS, TYP

EXIST R/W

MATCH LINE STA 19+00

RESERVE ST

RESERVE STREET R/L

MATCH LINE STA 25+00

20+00

21+00

22+00

23+00

24+00

CS2

CS3

PULLBOX, TYP

PROPOSED LIGHT POLE BY OTHERS, TYP

EXIST R/W

R/W

TLE

WPS

CITY OF STEVENS POINT

CHARTER COMMUNICATIONS

PROPOSED CONTROL CABINET BY OTHERS

PROPOSED 3-IN CONDUIT

PROPOSED 2-IN CONDUIT LOCATED 1 FT BEHIND PROPOSED BACK OF CURB, TYP. ROUTE CONDUIT AROUND STORM SEWER STRUCTURES WHERE NECESSARY.

CITY OF STEVENS POINT

EAGLE SUMMIT

INVESTMENTS
LLC NORTH HAVEN

EAGLE POINT INC

BRIAN C. &
SANDRA M. SMITH

N

SOWEIJA DAVID A. &
AUFDERMAUER NANCY

BLUEBELL LANE

TLE

R/W

WPS

PULLBOX, TYP

PROPOSED LIGHT POLE BY OTHERS, TYP

EXIST R/W

MATCH LINE STA 25+00

CS2

CS3

PROPOSED 3-IN CONDUIT

RESERVE ST

26+00

27+00

28+00

28+87

EXIST R/W

R/W

TLE

PROPOSED 2-IN CONDUIT LOCATED 1 FT BEHIND PROPOSED BACK OF CURB, TYP. ROUTE CONDUIT AROUND STORM SEWER STRUCTURES WHERE NECESSARY.

CITY OF
STEVENS POINT

BRIAN C. &
SANDRA M. SMITH

| PROJECT NO: 1166-08-82 | HWY: IH 39 | COUNTY: PORTAGE | LIGHTING PLAN | SHEET 38 | E |
|---|---|---|---|---|---|

FILE NAME : F:\TR\JOBS\E2031A12\CIVIL 3D\SHEETSPLAN\11660882_023500_LP.DWG PLOT DATE : 4/17/2014 9:11 AM PLOT BY : OMNNI ASSOCIATES, INC - ANDREW WESTBROOK

2

## LEGEND

PAVEMENT MARKING (EPOXY) UNLESS NOTED OTHERWISE

- (A) EDGELINE 4-INCH (YELLOW)
- (B) EDGELINE 4-INCH (WHITE)
- (C) LANE LINE 4-INCH (WHITE) GROOVED WET REFLECTIVE TAPE 12.5' LINE, 37.5' GAP
- (D) DOTTED EDGELINE 4-INCH (WHITE) 3' LINE, 9' GAP
- (E) CHANNELIZING 8-INCH (WHITE) GROOVED WET REFLECTIVE TAPE
- (F) CENTERLINE 4-INCH (YELLOW) 12.5' LINE, 37.5' GAP
- (G) CENTERLINE 4-INCH (YELLOW)
- (H) DIAGONAL 12-INCH (YELLOW)
- (I) CROSSWALK 6-INCH (WHITE)
- (J) ARROWS BIKE LANE (WHITE)
- (K) WORDS BIKE LANE (WHITE)

STA 100+00

IH 39/USH 10/51 SB

IH 39/USH 10/51 NB

STA 113+93.82

MATCH LINE STA 118+00

MATCH LINE STA 118+00

MATCH LINE STA 133+00

RESERVE STREET

P: 17+41.80

GOLF GREEN

GOLF COURSE

FOOTBRIDGE

FLAG

SIGN

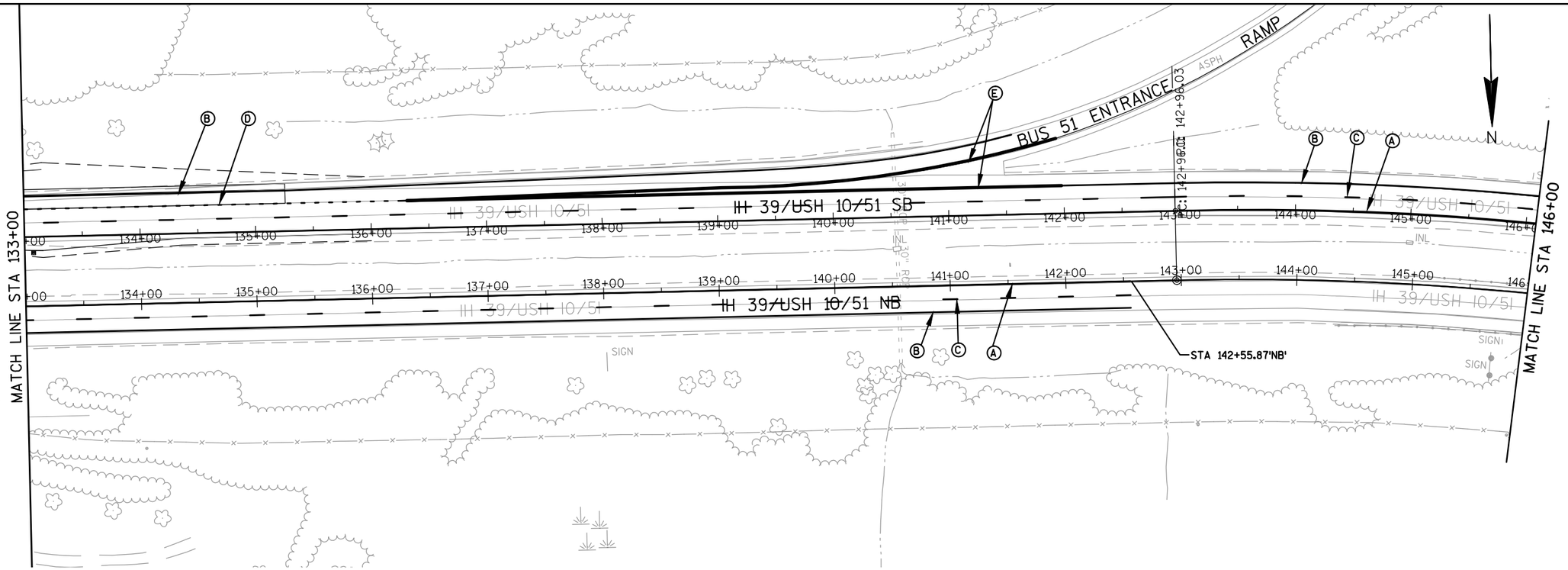
RIPRAP

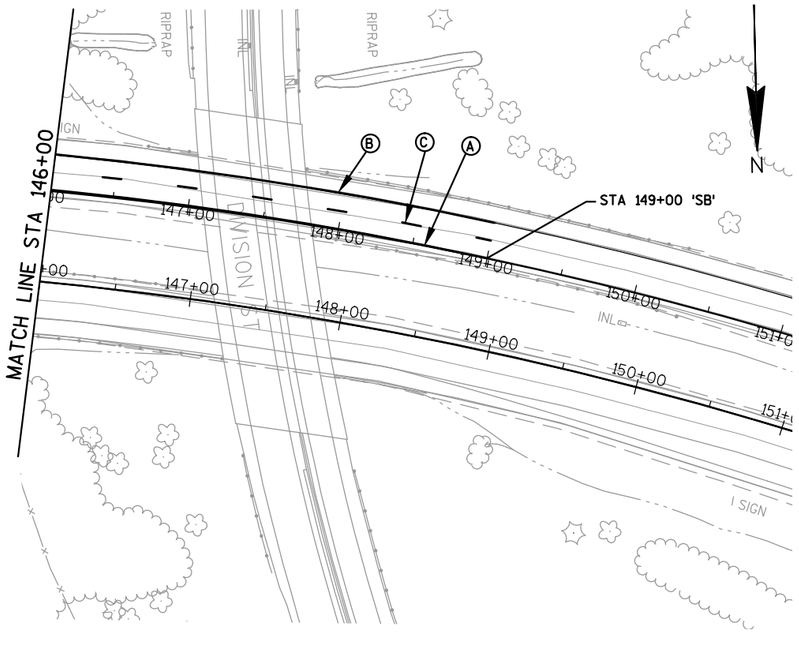
| PROJECT NO: 1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | PAVEMENT MARKING | SHEET 39 | E |
|---|---|---|---|---|---|

FILE NAME : F:\TR\JOBS\E2031A12\CIVIL 3D\SHEETSPLAN\11660872_024501_PM I39.DWG
11660872_024501_pm

PLOT DATE : 4/17/2014 10:56 AM PLOT BY : OMNNI ASSOCIATES, INC - DAVE PERRY

2




## LEGEND

PAVEMENT MARKING (EPOXY) UNLESS NOTED OTHERWISE

- (A) EDGELINE 4-INCH (YELLOW)
- (B) EDGELINE 4-INCH (WHITE)
- (C) LANE LINE 4-INCH (WHITE) GROOVED WET REFLECTIVE TAPE 12.5' LINE, 37.5' GAP
- (D) DOTTED EDGELINE 4-INCH (WHITE) 3' LINE, 9' GAP
- (E) CHANNELIZING 8-INCH (WHITE) GROOVED WET REFLECTIVE TAPE
- (F) CENTERLINE 4-INCH (YELLOW) 12.5' LINE, 37.5' GAP
- (G) CENTERLINE 4-INCH (YELLOW)
- (H) DIAGONAL 12-INCH (YELLOW)
- (I) CROSSWALK 6-INCH (WHITE)
- (J) ARROWS BIKE LANE (WHITE)
- (K) WORDS BIKE LANE (WHITE)

2

2

SENTRY INSURANCE

BP: 7+00.00

7+00 8+00 9+00 10+00 11+00 12+00 13+00

RESERVE STREET

STA 8+65

MATCH LINE STA 13+00

N

## LEGEND

PAVEMENT MARKING (EPOXY) UNLESS NOTED OTHERWISE

- (A) EDGELINE 4-INCH (YELLOW)
- (B) EDGELINE 4-INCH (WHITE)
- (C) LANE LINE 4-INCH (WHITE) GROOVED WET REFLECTIVE TAPE 12.5' LINE, 37.5' GAP
- (D) DOTTED EDGELINE 4-INCH (WHITE) 3' LINE, 9' GAP
- (E) CHANNELIZING 8-INCH (WHITE) GROOVED WET REFLECTIVE TAPE
- (F) CENTERLINE 4-INCH (YELLOW) 12.5' LINE, 37.5' GAP
- (G) CENTERLINE 4-INCH (YELLOW)
- (H) DIAGONAL 12-INCH (YELLOW)
- (I) CROSSWALK 6-INCH (WHITE)
- (J) ARROWS BIKE LANE (WHITE)
- (K) WORDS BIKE LANE (WHITE)

MATCH LINE STA 13+00

14+00 15+00 16+00 17+00 18+00 19+00

RESERVE STREET

IH 39/USH 10/51 SB

IH 39/USH 10/51 NB

PI: 17+41.80

12" CMP

MATCH LINE STA 19+00

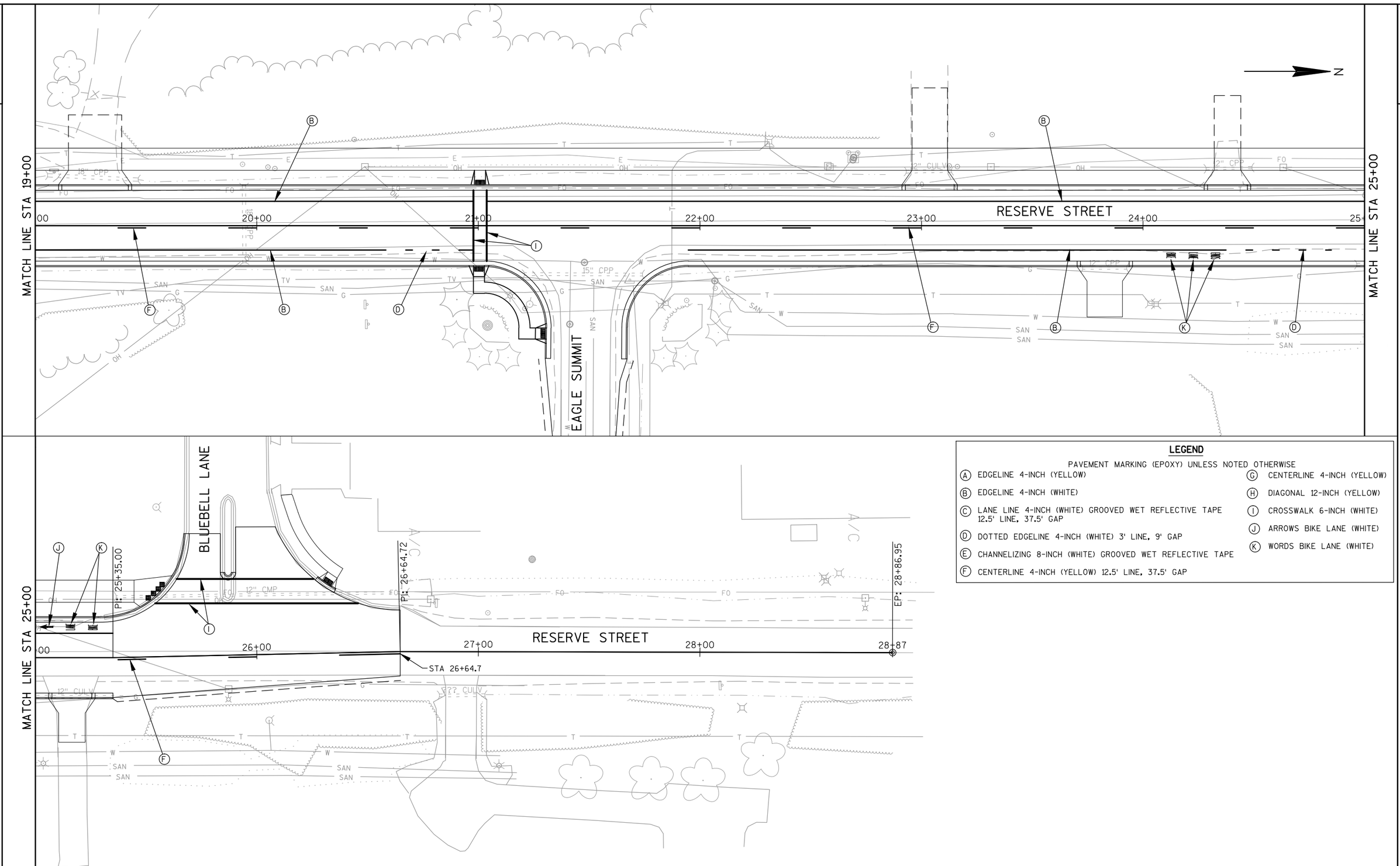
| PROJECT NO: 1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | PAVEMENT MARKING | SHEET 41 | E |
|---|---|---|---|---|---|

FILE NAME : F:\TR\JOBS\E2031A12\CIVIL 3D\SHEETSPLAN\11660872_024502_PM RESERVE STREET.DWG
11660872_024503_pm

PLOT DATE : 4/17/2014 10:59 AM PLOT BY : OMNNI ASSOCIATES, INC - DAVE PERRY

WISDOT/CADDS SHEET 44

2




**LEGEND**

PAVEMENT MARKING (EPOXY) UNLESS NOTED OTHERWISE

- (A) EDGELINE 4-INCH (YELLOW)
- (B) EDGELINE 4-INCH (WHITE)
- (C) LANE LINE 4-INCH (WHITE) GROOVED WET REFLECTIVE TAPE 12.5' LINE, 37.5' GAP
- (D) DOTTED EDGELINE 4-INCH (WHITE) 3' LINE, 9' GAP
- (E) CHANNELIZING 8-INCH (WHITE) GROOVED WET REFLECTIVE TAPE
- (F) CENTERLINE 4-INCH (YELLOW) 12.5' LINE, 37.5' GAP
- (G) CENTERLINE 4-INCH (YELLOW)
- (H) DIAGONAL 12-INCH (YELLOW)
- (I) CROSSWALK 6-INCH (WHITE)
- (J) ARROWS BIKE LANE (WHITE)
- (K) WORDS BIKE LANE (WHITE)

| PROJECT NO: 1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | PAVEMENT MARKING | SHEET 42 | E |
|---|---|---|---|---|---|

2

## GENERAL NOTES FOR TRAFFIC CONTROL

1. THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.
2. THE SPACING BETWEEN PROPOSED SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) DISTANCE TO EXISTING SIGNS.
3. CONFLICTING TRAFFIC SIGNS SHALL BE COVERED OR REMOVED AS DIRECTED BY THE ENGINEER.
4. ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.
5. "WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS ORANGE.
6. FOR NIGHTTIME OPERATION ALL DRUMS IN TAPERS SHALL HAVE A TYPE C WARNING LIGHT.
7. ALL TYPE III BARRICADES SHALL BE 8' WIDE, UNLESS OTHERWISE NOTED, AND EQUIPPED WITH TWO TYPE "A" (LOW INTENSITY FLASHING) LIGHTS.
8. CONCRETE BARRIER TEMPORARY PRECAST THAT IS SHOWN AS MATCHING PERMANENT CONCRETE BARRIER SHALL BE TIED TO THE PERMANENT BARRIER AS SHOWN IN S.D.D " CONCRETE BARRIER TEMPORARY PRECAST 12'-6" ".
9. ANCHOR CONCRETE BARRIER TEMPORARY PRECAST PER SDD "CONCRETE BARRIER TEMPORARY PRECAST 12'-6" AND IN TAPER LOCATIONS.
10. ADJUST TRAFFIC CONTROL PORTABLE CHANGEABLE MESSAGE SIGNS (PCMS) MESSAGE AS NEEDED BASED ON WORK ZONE AREAS AND CONSTRUCTION SCHEDULE.
11. CONSIDER ROADWAY GEOMETRY WHEN LOCATING PORTABLE CHANGEABLE MESSAGE SIGNS (PCMS SO THE APPROACHING DRIVER WILL HAVE AN UNOBSTRUCTED VIEW OF THE PCMS FOR A MINIMUM OF 1000 FEET PRIOR TO PASSING THE PORTABLE CHANGEABLE MESSAGE SIGN.
12. PLACE PORTABLE CHANGEABLE MESSAGE SIGNS AS FAR AWAY FROM LIVE TRAFFIC LANES AS POSSIBLE WITHOUT HAMPERING VISIBILITY. IN ADVANCE OF INTERSTATE CONSTRUCTION PROJECTS, THE PCMS SHOULD BE PLACED ON THE BACK SLOPE BEYOND THE DITCH. THE LOCATION SELECTED SHOULD BE AT OR SLIGHTLY ABOVE THE ELEVATION OF THE ROADWAY.THIS IMPROVES VISIBILITY, MINIMIZES THE CHANCE OF A VEHICLE HIT, AND ALSO IMPROVES SAFETY FOR THE SIGN MAINTENANCE WORKER. FOR INTERMITTENT WORK SUCH AS FREEWAY LANE CLOSURE, OR WHERE SITE CONDITIONS DO NOT ALLOW OTHERWISE, THE SIGNS MAY BE PLACED ON THE SHOULDER. THE SITE SHOULD BE VISITED TO ASSURE VISIBILITY, SAFETY AND MAINTENANCE CONSIDERATIONS. A TAPER OF REFLECTORIZED DRUMS OR BARRICADES SHOULD BE PLACED AHEAD OF THE PCMS IF THE PCMS IS PLACED ON THE SHOULDER AND IS NOT SHIELDED BY A BARRIER.
13. ONE WEEK PRIOR TO CONSTRUCTION, PLACE ONE PCMS AT EACH END OF THE CONSTRUCTION LIMITS. AFTER CONSTRUCTION BEGINS, RELOCATE THE PCMS TO THE LOCATIONS SHOWN ON THE PLANS. COST TO RELOCATE THE PCMS IS CONSIDERED INCIDENTAL TO THE ITEM.
14. TRAFFIC CONTROL PORTABLE CHANGEABLE MESSAGE SIGNS ARE ALSO FOR WORK ZONE INCIDENT MANAGEMENT.
15. PRIOR TO STAGE 2, THE 11' MAXIMUM LANE WIDTH NEEDS TO BE ENTERED INTO THE LANE CLOSURE SYSTEM.

## 1166-08-72 CONSTRUCTION STAGING SUMMARY

### STAGE 1

MAINTENANCE OF TRAFFIC:

- IH 39 NORTHBOUND TRAFFIC REMAINS ON EXISTING LANES.
- IH 39 SOUTHBOUND TRAFFIC REMAINS ON EXISTING LANES WITH OFF PEAK SINGLE LANE CLOSURES AS NEEDED.
- BUSINESS 51 SOUTHBOUND ENTRANCE RAMP TO REMAIN OPEN.
- CLOSE RESERVE STREET TO TRAFFIC.

CONSTRUCTION ACTIVITIES TO BE COMPLETED:

- IH 39 SOUTHBOUND INSIDE SHOULDER WIDENING FROM STA 115'SB'+50 TO 139'SB'+50.

### STAGE 2

MAINTENANCE OF TRAFFIC

- IH 39 NORTHBOUND TRAFFIC REMAINS ON EXISTING LANES.
- IH 39 SOUTHBOUND TRAFFIC SHIFTED TO INSIDE LANE AND TEMPORARY WIDENING.
- BUSINESS 51 SOUTHBOUND ENTRANCE RAMP TO REMAIN OPEN WITH RECONFIGURATION OF RAMP TAPER.
- RESERVE STREET WILL REMAIN CLOSED TO ALL TRAFFIC

CONSTRUCTION ACTIVITIES TO BE COMPLETED:

- REMOVE OUTSIDE PORTION OF STRUCTURE B-49-31 (SB).
- CONSTRUCT OUTSIDE HALF OF STRUCTURE B-49-173 (SB) AND APPROACHES.
- CONSTRUCT TEMPORARY OUTSIDE SHOULDER WIDENING FROM STA 102'SB'+50 TO 141'SB'+28 AND STA 141'SB'+50 TO STA 145'SB'+00.
- BEGIN RECONSTRUCTION OF RESERVE STREET.

### STAGE 3

MAINTENANCE OF TRAFFIC

- IH 39 NORTHBOUND TRAFFIC REMAINS ON EXISTING LANES WITH OFF PEAK SINGLE LANE CLOSURES AS NEEDED.
- IH 39 SOUTHBOUND TRAFFIC SHIFTED TO OUTSIDE SHOULDER / TEMPORARY WIDENING.
- BUSINESS 51 SOUTHBOUND ENTRANCE RAMP TO REMAIN OPEN WITH RECONFIGURATION OF RAMP TAPER.
- RESERVE STREET WILL REMAIN CLOSED TO ALL TRAFFIC

CONSTRUCTION ACTIVITIES TO BE COMPLETED:

- REMOVE INSIDE PORTION OF STRUCTURE B-49-31 (SB).
- CONSTRUCT INSIDE HALF OF STRUCTURE B-49-173 (SB) AND APPROACHES.
- CONSTRUCT TEMPORARY MEDIAN CROSSOVERS.
- CONTINUE RECONSTRUCTION OF RESERVE STREET.

### STAGE 4

MAINTENANCE OF TRAFFIC:

- IH 39 NORTHBOUND TRAFFIC WILL UTILIZE TEMPORARY CROSSOVERS (STA 113'NB'+94 TO STA 142'NB'+56) AND INSIDE HALF OF STRUCTURE B-49-173 (SB). TEMPORARY CONCRETE BARRIER WILL SEPARATE NORTHBOUND AND SOUTHBOUND TRAFFIC OVER STRUCTURE B-49-173 (SB).
- IH 39 SOUTHBOUND TRAFFIC WILL REMAIN SHIFTED ONTO OUTSIDE SHOULDER / TEMPORARY WIDENING ALONG IH 39 SOUTHBOUND.
- BUSINESS 51 SOUTHBOUND ENTRANCE RAMP TO REMAIN OPEN.
- RESERVE STREET WILL REMAIN CLOSED TO ALL TRAFFIC.

CONSTRUCTION ACTIVITIES TO BE COMPLETED:

REMOVE STRUCTURE B-49-39 (NB) AND APPROACHES
CONSTRUCT STRUCTURE B-49-172 (NB) AND APPROACHES.
COMPLETE RECONSTRUCTION OF RESERVE STREET

### STAGE 5

MAINTENANCE OF TRAFFIC:

- IH 39 NORTHBOUND TRAFFIC ON PROPOSED LANES WITH OFF PEAK SINGLE LANE CLOSURES AS NEEDED.
- IH 39 SOUTHBOUND TRAFFIC ON PROPOSED LANES WITH OFF PEAK SINGLE LANE CLOSURES AS NEEDED.
- BUSINESS 51 SOUTHBOUND ENTRANCE RAMP OPEN TO TRAFFIC
- OPEN RECONSTRUCTED RESERVE STREET TO TRAFFIC

CONSTRUCTION ACTIVITIES TO BE COMPLETED:

- REMOVE TEMPORARY CROSS-OVERS (STA 113'NB'+94 TO STA 142'NB'+56).
- REMOVE IH 39 SOUTHBOUND INSIDE SHOULDER WIDENING FROM STA 115'SB'+50 TO 139'SB'+50.
- REMOVE IH 39 SOUTHBOUND OUTSIDE SHOULDER WIDENING FROM STA 102'SB'+50 TO 141'SB'+28 AND STA 141'SB'+50 TO STA 145'SB'+00.
- FINAL GRADE SHOULDER AND MEDIAN AREAS.
- INSTALL RUMBLE STRIPS.

2

| PROJECT NO: 1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | TRAFFIC CONTROL - GENERAL NOTES AND STAGING SUMMARY | SHEET 43 | E |
|---|---|---|---|---|---|

2

LEGEND

- XX — PROPOSED PORTABLE CHANGEABLE MESSAGE SIGNS (PCMS)
- WORK AREA
- SIGNS ON PERMANENT SUPPORT
- EXISTING MAINTENANCE CROSSOVER
- G — EXISTING RAMP GATE
- * — TWO SIGNS TO BE USED AT EACH LOCATION FOR MULTILANE HIGHWAYS

Ⓐ* ROAD WORK AHEAD (W20-1) — MILE 162.25

Ⓑ* LEFT SHOULDER CLOSED AHEAD (W21-5B) — MILE 161.95

Ⓒ* LEFT SHOULDER CLOSED (W21-5A) — MILE 161.76

Ⓓ* END ROAD WORK (G20-2A, 48" X 24") — MILE 160.58

ROAD WORK 500 FT (W20-1)

ROAD WORK AHEAD (W20-1)

SOUTH (MB3-3, 24"X12")

INTERSTATE 39 (M1-1, 24"X24")

MILE 165

MILE 164.0 S1

MILE 162.0 S2

MILE 160 G

MILE 158.30 N2

MILE 156.30 N1

EXIT 165

EXIT 163

EXIT 159

EXIT 158

EXIT 156

CASIMIR RD

RESERVE STREET (UNDER I 39/US 51/US 10)

CONSTRUCTION LIMITS

NORTHPOINT

2ND ST

BUSINESS 51

STEVENS POINT

CN

| EXISTING MAINTENANCE CROSSOVER LOCATION |
|---|
| APPROXIMATE MILE MARKER |
| 157.8 |
| 159.2 |
| 160.9 |
| 162.6 |
| 162.9 |

| PROJECT NO: 1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | TRAFFIC CONTROL - PCMS & ADVANCED WZTC - STAGE 1 | SHEET 44 | E |
|---|---|---|---|---|---|

2

Ⓐ* ROAD WORK AHEAD — W20-1 — MILE 163.66
2 MILES AHEAD
W057-52 36"X24"

Ⓑ* MAX. 11' WIDTH — W12-52 — MILE 162.66
1 MILES AHEAD
W057-52 36"X24"

Ⓒ* SPEED LIMIT 55 — W03-5 — MILE 162.57

W21-62Q 48"X30"
WORK ZONE
Ⓓ* SPEED LIMIT 55 — MILE 162.66
R2-1 48"X60"
FINES DOUBLE
W21-62R 30" X 48"

Ⓔ* ROAD WORK 1/2 MILE — W20-1 — MILE 162.16

Ⓕ* ROAD WORK 1500 FT — W20-1 — MILE 161.95

Ⓖ* END ROAD WORK — G20-2A 48" X 24" — MILE 160.58

EXISTING MAINTENANCE CROSSOVER LOCATION
APPROXIMATE MILE MARKER
157.8
159.2
160.9
162.6
162.9

LEGEND
XX PROPOSED PORTABLE CHANGEABLE MESSAGE SIGNS (PCMS)
WORK AREA
SIGNS ON PERMANENT SUPPORT
EXISTING MAINTENANCE CROSSOVER
G EXISTING RAMP GATE
* TWO SIGNS TO BE USED AT EACH LOCATION FOR MULTILANE HIGHWAYS

Ⓗ* SPEED LIMIT 65 — MILE 160.49
R2-1 48"X60"

2

X E 10 HH M G 66 Y K J YY

EXIT 165
MILE 165
39 (INTERSTATE)
MILE 164.00 S1
CASIMIR RD
EXIT 163
MILE 162.00 S2
RESERVE STREET (UNDER I 39/US 51/US 10)
CONSTRUCTION LIMITS
NORTHPOINT 2ND ST
ROAD WORK 500 FT — W20-1
BUSINESS 51
ROAD WORK AHEAD — W20-1
SOUTH MB3-3 24"X12"
39 (INTERSTATE) M1-1 24"X24"
STEVENS POINT
MAX. 11' WIDTH — W12-52
SOUTH MB3-3 24"X12"
39 (INTERSTATE) M1-1 24"X24"
MILE 160
EXIT 159
N2 MILE 158.30
EXIT 158
N1 MILE 156.30
EXIT 156
CN

| PROJECT NO: 1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | TRAFFIC CONTROL - PCMS & ADVANCED WZTC - STAGE 2 & 3 | SHEET 45 | E |
|---|---|---|---|---|---|

FILE NAME : F:\TR\JOBS\E2031A12\CIVIL 3D\SHEETSPLAN\11660872_025001_TC.DWG PLOT DATE : 4/22/2014 10:41 AM PLOT BY : CAMIE FERRIER PLOT NAME : ---------- PLOT SCALE : **********

Ⓐ * ROAD WORK AHEAD W20-1 — MILE 163.66
2 MILES AHEAD W057-52 36"X24"

Ⓑ * MAX. 11' WIDTH W12-52 — MILE 162.66
1 MILES AHEAD W057-52 36"X24"

Ⓒ * SPEED LIMIT 55 W03-5 — MILE 162.57

W21-62Q 48"X30" WORK ZONE
Ⓓ * SPEED LIMIT 55 — MILE 162.66
R2-1 48"X60"
FINES DOUBLE W21-62R 30" X 48"

Ⓔ * ROAD WORK 1/2 MILE W20-1 — MILE 162.16

Ⓕ * ROAD WORK 1500 FT W20-1 — MILE 161.95

Ⓖ * END ROAD WORK G20-2A 48" X 24" — MILE 160.58

Ⓗ * SPEED LIMIT 65 R2-1 48"X60" — MILE 160.49

LEGEND
- XX — PROPOSED PORTABLE CHANGEABLE MESSAGE SIGNS (PCMS)
- WORK AREA
- SIGNS ON PERMANENT SUPPORT
- EXISTING MAINTENANCE CROSSOVER
- G — EXISTING RAMP GATE
- * — TWO SIGNS TO BE USED AT EACH LOCATION FOR MULTILANE HIGHWAYS

Ⓢ * SPEED LIMIT 65 R2-1 48"X60" — MILE 161.79

Ⓣ * END ROAD WORK G20-2A 48" X 24" — MILE 161.70

Ⓤ * ROAD WORK 1500 FT W20-1 — MILE 160.41

Ⓥ * ROAD WORK 1/2 MILE W20-1 — MILE 160.20

W21-62Q 48"X30" WORK ZONE
Ⓦ * SPEED LIMIT 55 R2-1 48"X60" — MILE 160.10
FINES DOUBLE W21-62R 30" X 48"

Ⓧ * SPEED LIMIT 55 W03-5 — MILE 159.80

Ⓨ * MAX. 11' WIDTH W12-52 — MILE 159.70
1 MILES AHEAD W057-52 36"X24"

Ⓩ * ROAD WORK AHEAD W20-1 — MILE 158.70
2 MILES AHEAD W057-52 36"X24"

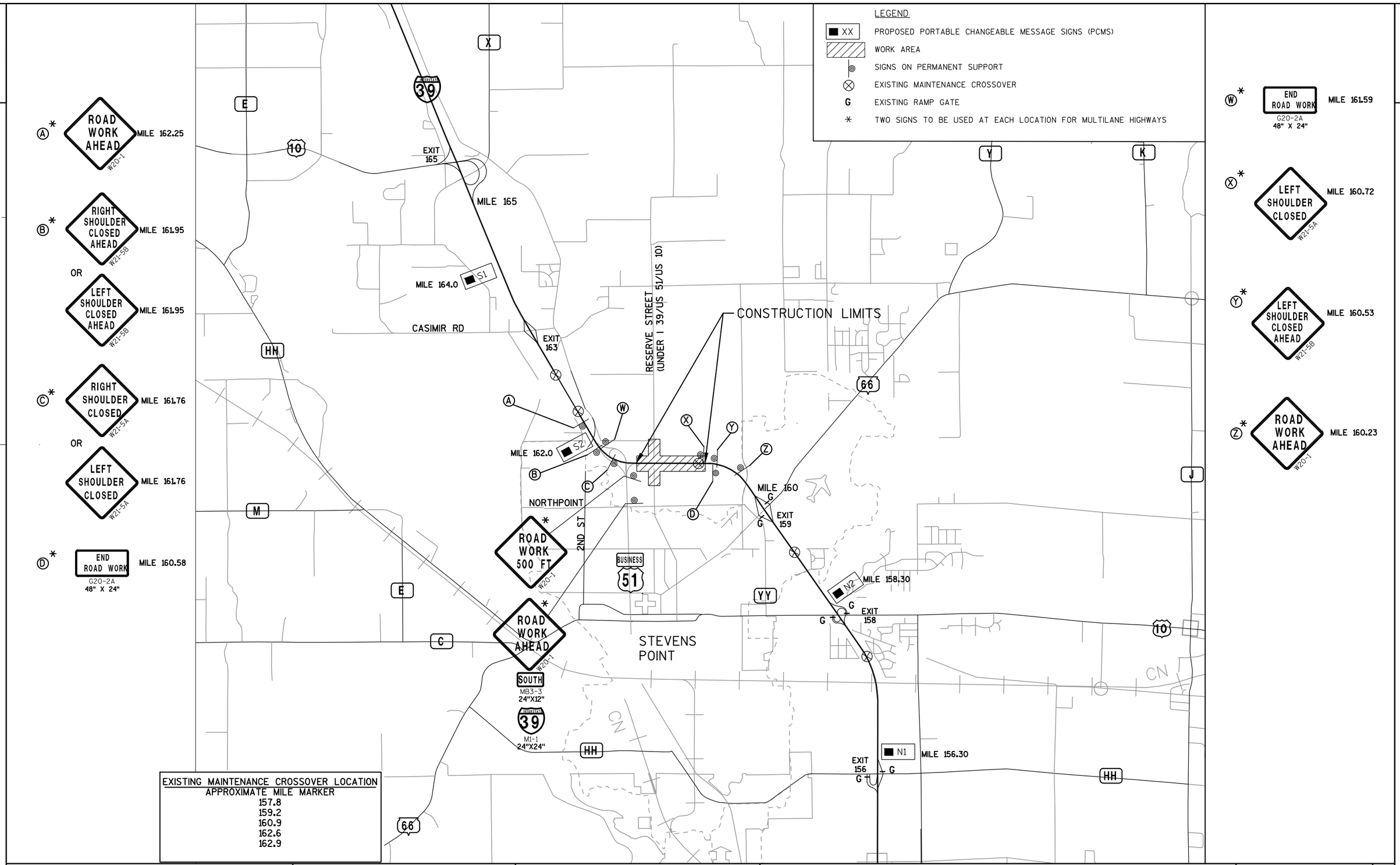
Ⓐⓐ * MAX. 11' WIDTH W12-52 — MILE 158.15
2.5MILES AHEAD W057-52 36"X24"

EXISTING MAINTENANCE CROSSOVER LOCATION
APPROXIMATE MILE MARKER
157.8
159.2
160.9
162.6
162.9

EXIT 165 — MILE 165 — INTERSTATE 39
MILE 164.00 S1
CASIMIR RD — EXIT 163
RESERVE STREET (UNDER I 39/US 51/US 10)
CONSTRUCTION LIMITS
ROAD WORK 500 FT W20-1 *
MILE 162.00 S2
NORTHPOINT 2ND ST
ROAD WORK 500 FT W20-1 *
ROAD WORK AHEAD W20-1 *
SOUTH MB3-3 24"X12"
INTERSTATE 39 M1-1 24"X24"
BUSINESS 51
STEVENS POINT
MAX. 11' WIDTH W12-52 *
SOUTH MB3-3 24"X12"
INTERSTATE 39 M1-1 24"X24"
MILE 160
EXIT 159
MILE 158.30 N2
EXIT 158
EXIT 156
MILE 156.30 N1
MAX. 11' WIDTH W12-52 *
NORTH MB3-1 24"X12"
INTERSTATE 39 M1-1 24"X24"
ROAD WORK AHEAD W20-1 *
NORTH MB3-1 24"X12"
INTERSTATE 39 M1-1 24"X24"
CN
X E 10 HH M C E 66 Y K YY AA J

| PROJECT NO: 1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | TRAFFIC CONTROL - PCMS & ADVANCED WZTC - STAGE 4 | SHEET E |
|---|---|---|---|---|

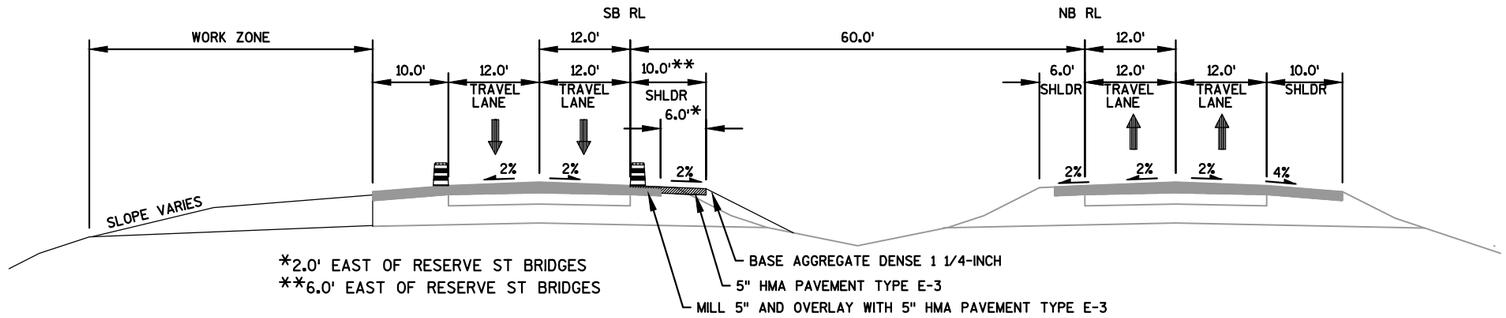
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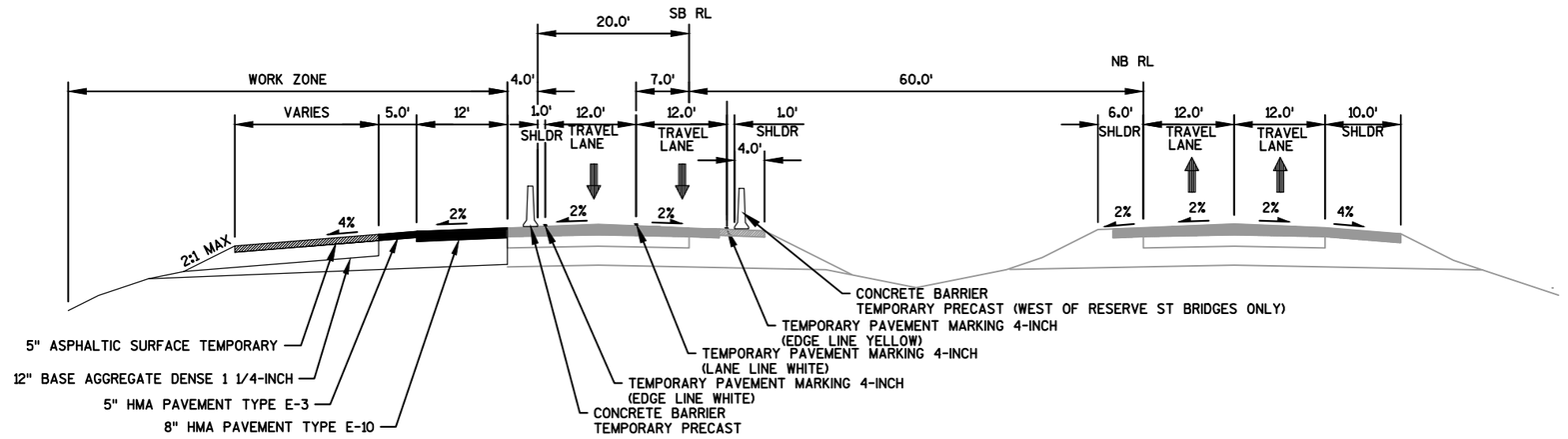

EXISTING MAINTENANCE CROSSOVER LOCATION
APPROXIMATE MILE MARKER
157.8
159.2
160.9
162.6
162.9

| PROJECT NO: 1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | TRAFFIC CONTROL - PCMS & ADVANCED WZTC - STAGE 5 | SHEET 47 | E |
|---|---|---|---|---|---|

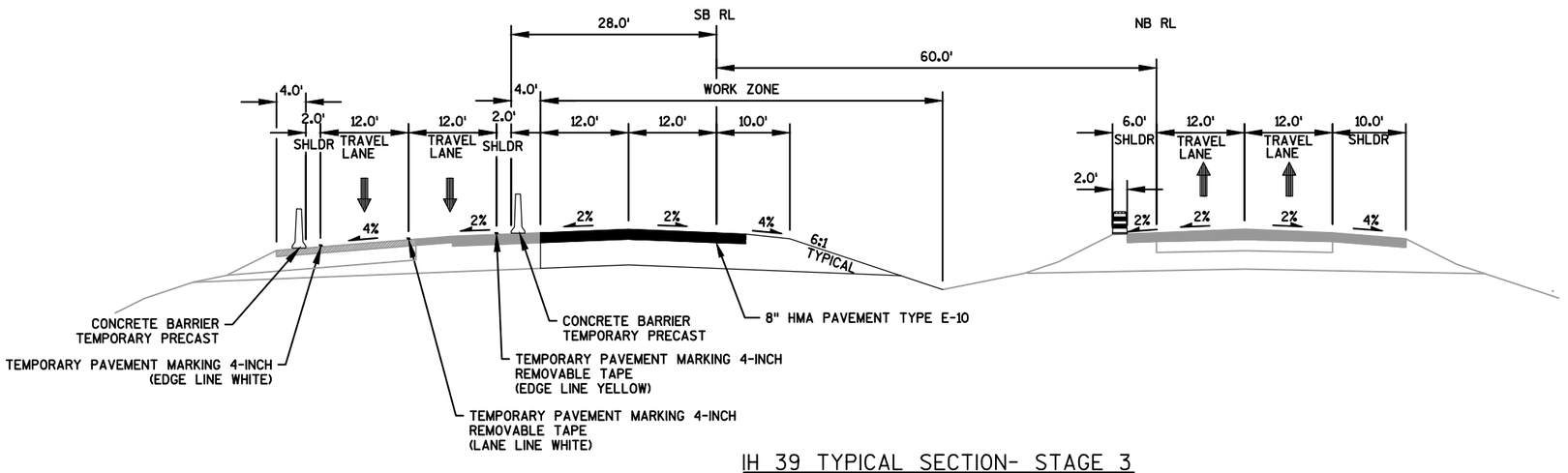
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IH 39 TYPICAL SECTION- STAGE 1

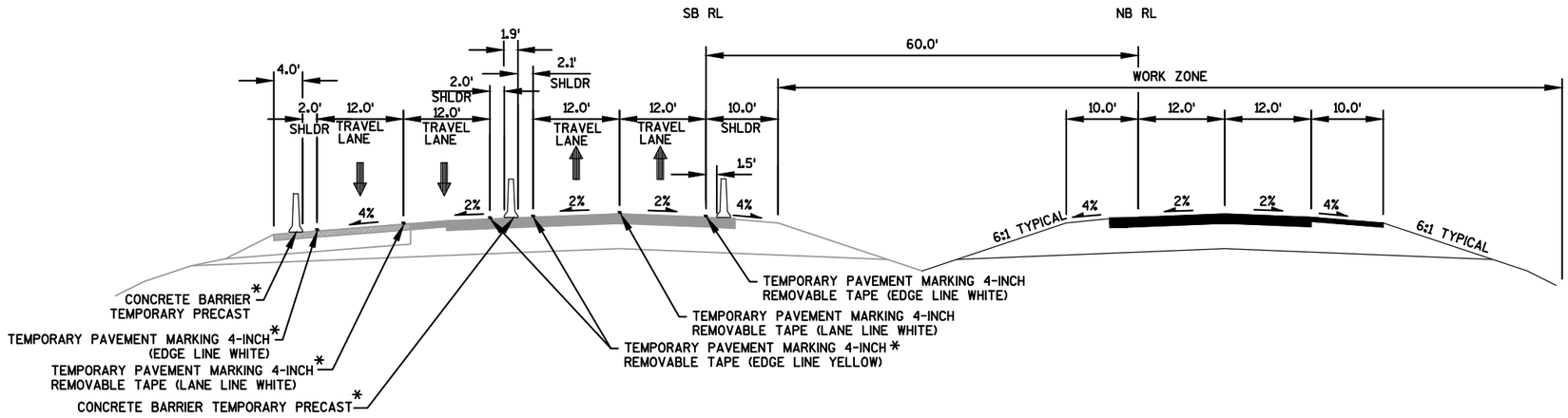



IH 39 TYPICAL SECTION- STAGE 2



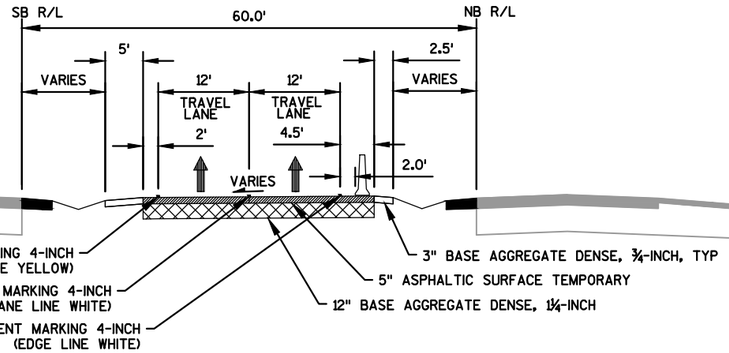

IH 39 TYPICAL SECTION- STAGE 3

| PROJECT NO: 1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | TRAFFIC CONTROL TYPICAL SECTION | SHEET 48 | E |
|---|---|---|---|---|---|

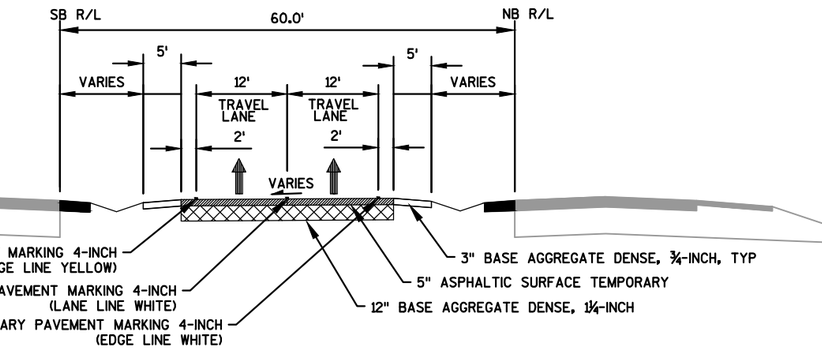



IH 39 TYPICAL SECTION- STAGE 4

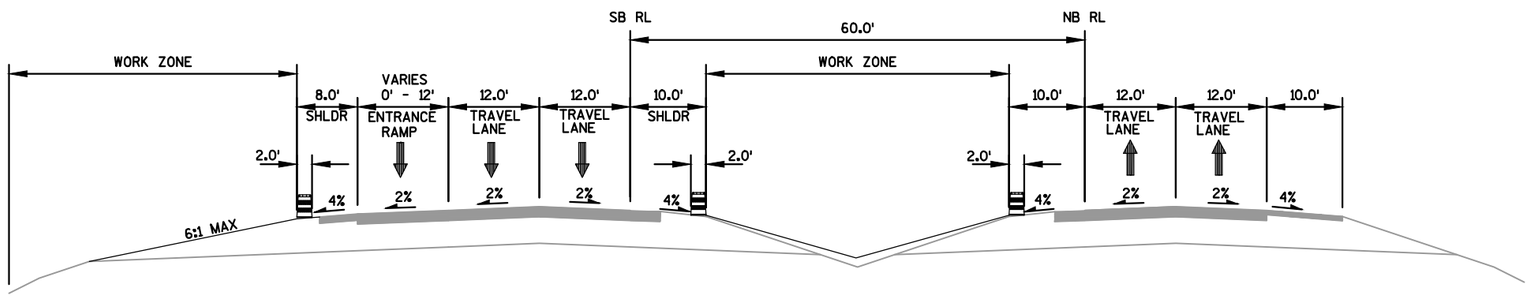
* PLACED IN STAGE 3




PROPOSED TYPICAL SECTION MEDIAN CROSSOVER - EAST




PROPOSED TYPICAL SECTION MEDIAN CROSSOVER - WEST




IH 39 TYPICAL SECTION- STAGE 5

| PROJECT NO: 1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | TRAFFIC CONTROL TYPICAL SECTION | SHEET 49 | E |
|---|---|---|---|---|---|

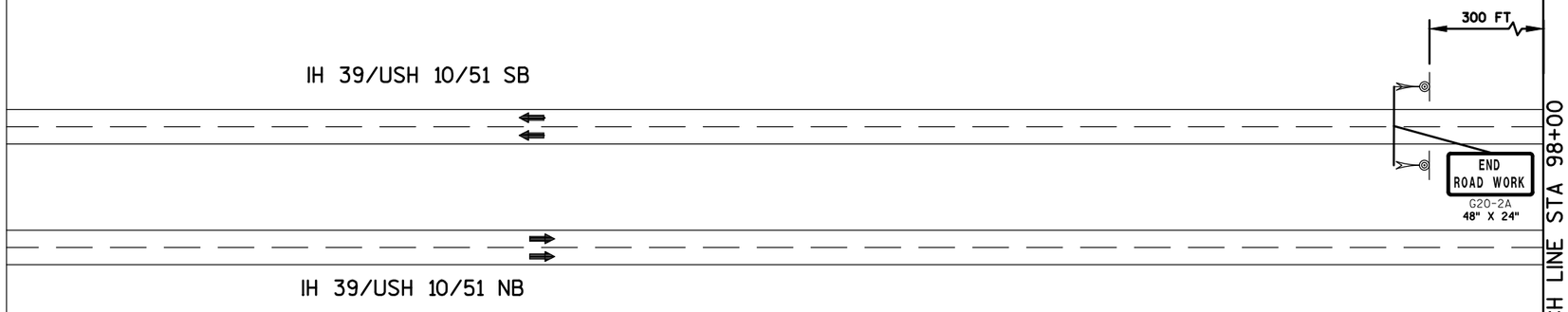
| | | | PRIOR TO CONSTRUCTION | | STAGE 1 | | STAGE 2 | | STAGE 3 | | STAGE 4 | | STAGE 5 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SITE NO | LOCATION | ROADWAY CONDITION/ CONSTRUCTION | FRAME I (2 SEC) | FRAME II (2 SEC) | FRAME I (2 SEC) | FRAME II (2 SEC) | FRAME I (2 SEC) | FRAME II (2 SEC) | FRAME I (2 SEC) | FRAME II (2 SEC) | FRAME I (2 SEC) | FRAME II (2 SEC) | FRAME I (2 SEC) | FRAME II (2 SEC) |
| N1, N2, S1, S2 | SEE BELOW | INCIDENT MANAGEMENT | TRAFFIC STOPPED AHEAD | BE PREPARED TO STOP | TRAFFIC STOPPED AHEAD | BE PREPARED TO STOP | TRAFFIC STOPPED AHEAD | BE PREPARED TO STOP | TRAFFIC STOPPED AHEAD | BE PREPARED TO STOP | TRAFFIC STOPPED AHEAD | BE PREPARED TO STOP | TRAFFIC STOPPED AHEAD | BE PREPARED TO STOP |
| N1 | ON NB IH 39 APPROX. 3 MILES SOUTH OF WIS 66 EAST INTERCHANGE | GENERAL | IH 39 ROAD WORK | BEGINS XX/XX/XX | (NO MESSAGE) | | (NO MESSAGE) | | (NO MESSAGE) | | (NO MESSAGE) | | (NO MESSAGE) | |
| N2 | ON NB IH 39 APPROX. 1 MILES SOUTH OF WIS 66 EAST INTERCHANGE | GENERAL | IH 39 ROAD WORK | BEGINS XX/XX/XX | (NO MESSAGE) | | (NO MESSAGE) | | (NO MESSAGE) | | (NO MESSAGE) | | (NO MESSAGE) | |
| S1 | ON SB IH 39 APPROX. 3 MILES NORTH OF BUS 51 INTERCHANGE | GENERAL | IH 39 ROAD WORK | BEGINS XX/XX/XX | (NO MESSAGE) | | (NO MESSAGE) | | (NO MESSAGE) | | (NO MESSAGE) | | (NO MESSAGE) | |
| S2 | ON SB IH 39 APPROX. 1 MILES NORTH OF BUS 51 INTERCHANGE | GENERAL | IH 39 ROAD WORK | BEGINS XX/XX/XX | (NO MESSAGE) | | (NO MESSAGE) | | (NO MESSAGE) | | (NO MESSAGE) | | (NO MESSAGE) | |

2

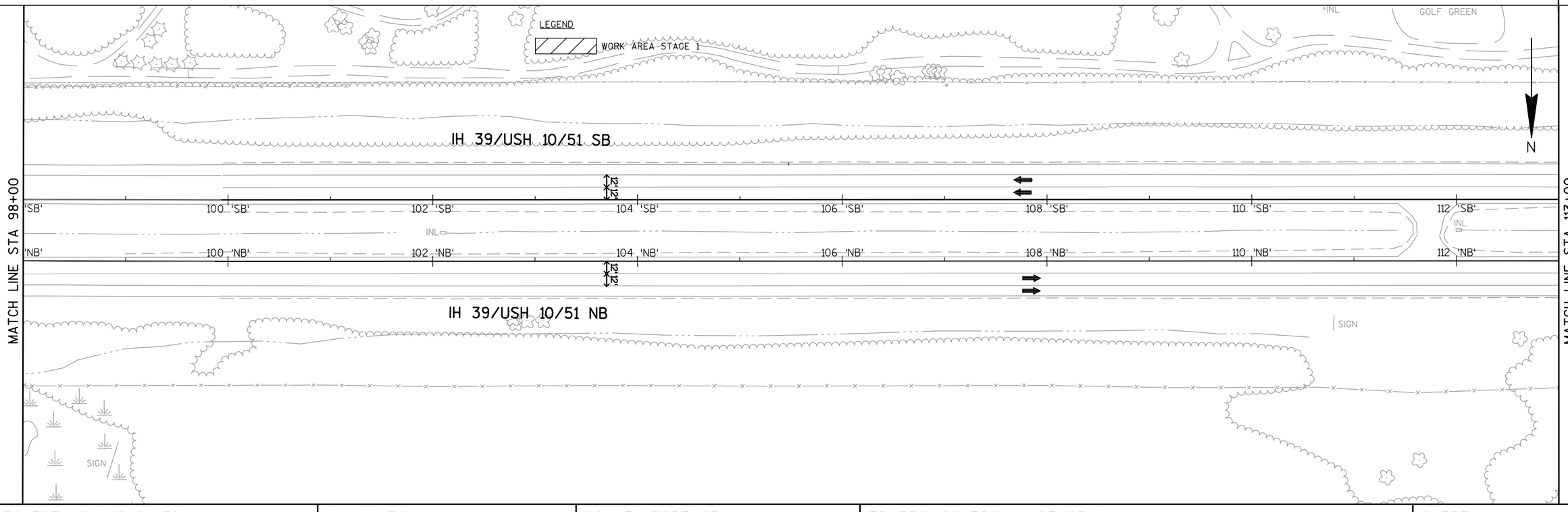
2

TRAFFIC CONTROL LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- TEMPORARY DELINEATOR (STEEL POST W/ SINGLE DELINEATOR) COLOR OF DELINEATOR SHALL MATCH THE COLOR OF THE RESPECTIVE EDGE LINE PAINT
- CC — CRASH CUSHION
- CONCRETE BARRIER TEMPORARY PRECAST
- TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)
- DIRECTION OF TRAFFIC
- MB — PORTABLE CHANGEABLE MESSAGE SIGN




2




| PROJECT NO:1166-08-72 | HWY:IH 39 | COUNTY:PORTAGE | TRAFFIC CONTROL - STAGE 1 | SHEET 51 | E |
|---|---|---|---|---|---|

2

MATCH LINE STA 113+00

GOLF COURSE

N

FOR OFF PEAK CLOSURES

SEE SDD " TRAFFIC CONTROL, LANE CLOSURES, SPEEDS GREATER THAN 40 M.P.H."

IH 39/USH 10/51 SB

SIGN

100'

TYP

18" RCP

SIGN

12'

114 'SB' 116 'SB' 118 'SB' 120 'SB' 122 'SB' 124 'SB' 126 'SB' 128

INL

114 'NB' 116 'NB' 118 'NB' 120 'NB' 122 'NB' 124 'NB' 126 'NB' 128

12'

IH 39/USH 10/51 NB

SIGN

FO

0.75% REB

SIGN

0.75% REB

SIGN

FOOTBRIDGE

MH

FOOTBRIDGE

FLAG

LEGEND

WORK AREA STAGE 1

RIPRAP

MATCH LINE STA 128+00

2

FOR OFF PEAK CLOSURES

SEE SDD " TRAFFIC CONTROL, LANE CLOSURES, SPEEDS GREATER THAN 40 M.P.H."

IH 39/USH 10/51 SB

12" CMP

100'

TYP

12'

'SB' 130 'SB' 132 'SB' 134 'SB' 136 'SB' 138 'SB' 140 'SB' 142 'SB'

30" RCP

INL

30" RCP

'NB' 130 'NB' 132 'NB' 134 'NB' 136 'NB' 138 'NB' 140 'NB' 142 'NB'

12'

IH 39/USH 10/51 NB

SIGN

12" CMP

FO

T

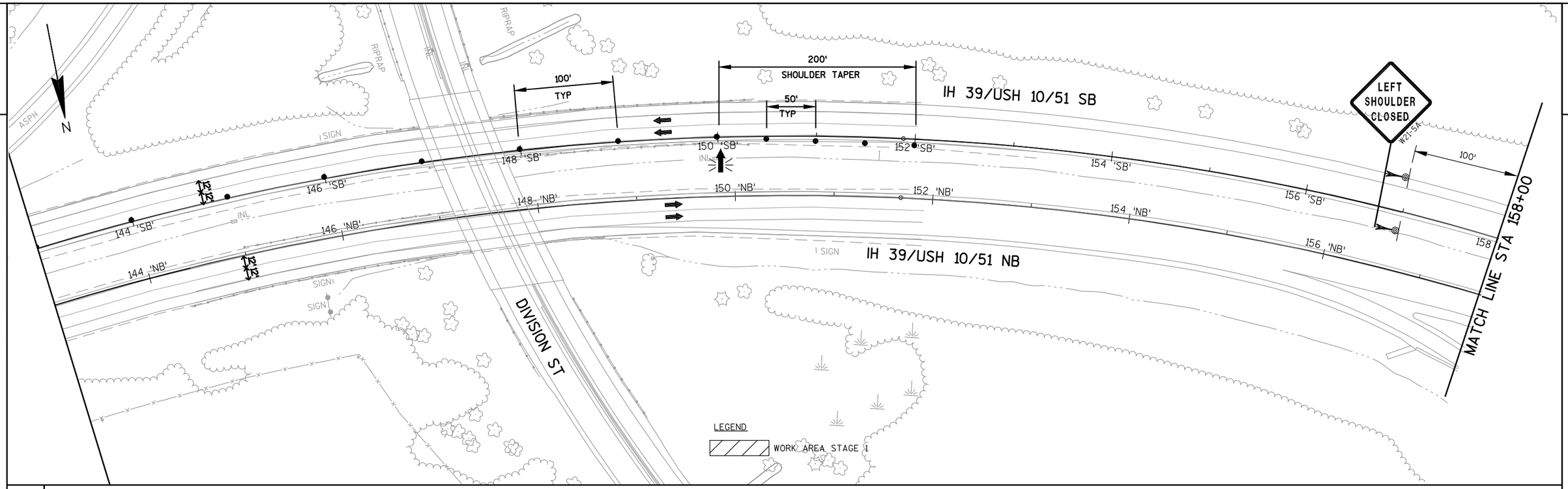
W

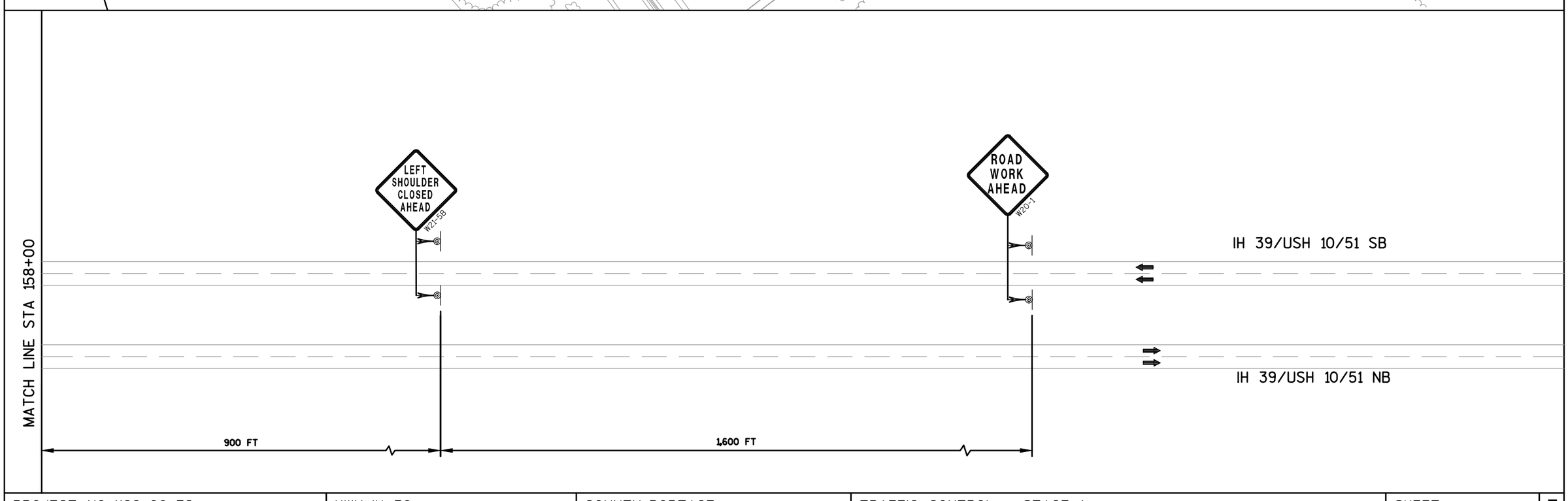
T

W

T

W




| PROJECT NO:1166-08-72 | HWY:IH 39 | COUNTY:PORTAGE | TRAFFIC CONTROL - STAGE 1 | SHEET 53 | E |
|---|---|---|---|---|---|

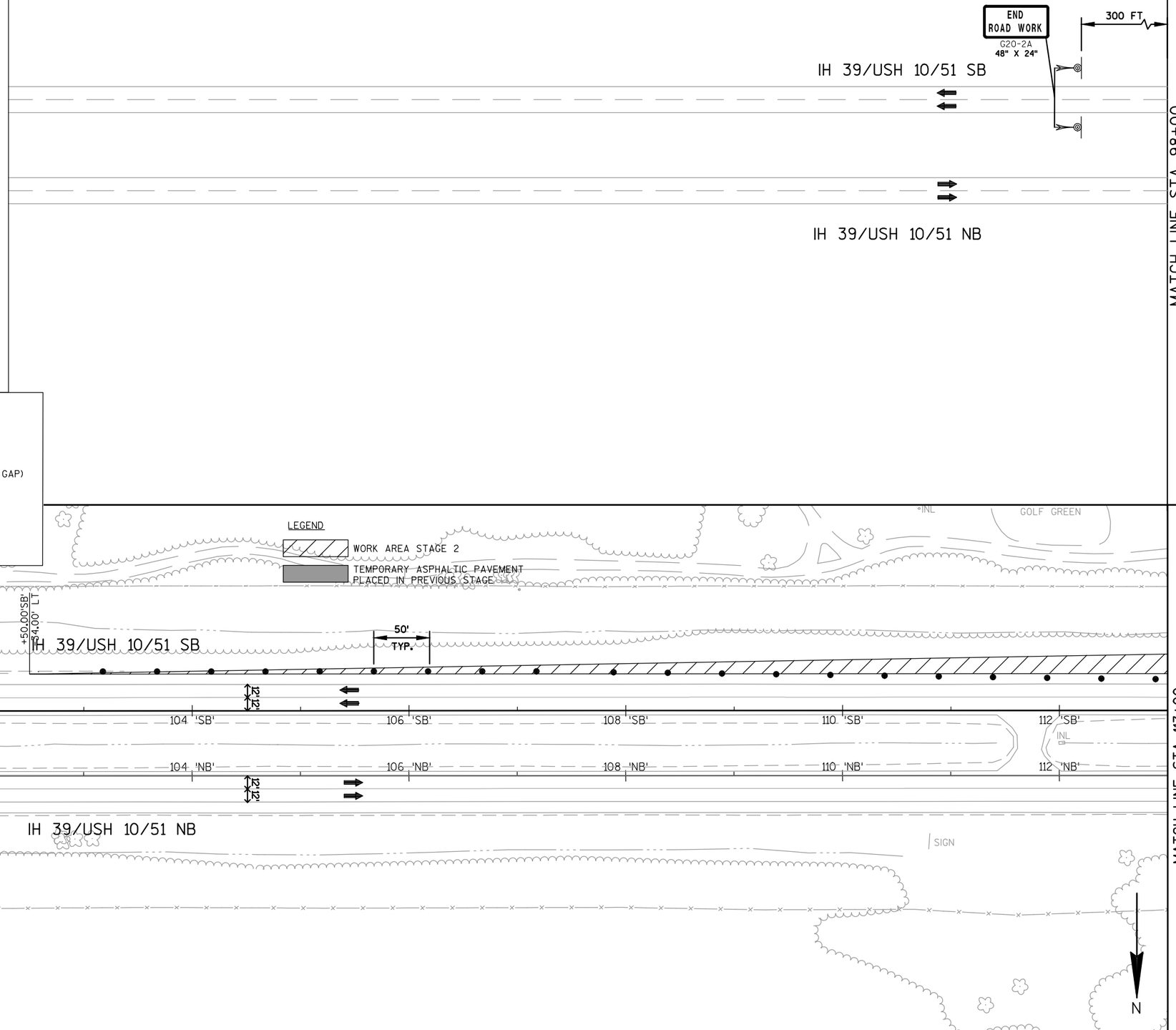
2

## TRAFFIC CONTROL LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- TEMPORARY DELINEATOR (STEEL POST W/ SINGLE DELINEATOR) COLOR OF DELINEATOR SHALL MATCH THE COLOR OF THE RESPECTIVE EDGE LINE PAINT
- CC — CRASH CUSHION
- CONCRETE BARRIER TEMPORARY PRECAST
- TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)
- DIRECTION OF TRAFFIC
- MB — PORTABLE CHANGEABLE MESSAGE SIGN

## TEMPORARY PAVEMENT MARKING LEGEND

- (A) TEMPORARY PAVEMENT MARKING 4-INCH LANE LINE WHITE (12.5' LINE, 37.5' GAP)
- (B) TEMPORARY PAVEMENT MARKING 4-INCH EDGE LINE WHITE
- (C) TEMPORARY PAVEMENT MARKING 4-INCH EDGE LINE YELLOW
- (D) TEMPORARY PAVEMENT MARKING 8-INCH WHITE (3' LINE, 9' GAP)
- (E) TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH LANE LINE WHITE (12.5' LINE, 37.5' GAP)
- (F) TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH EDGE LINE WHITE
- (G) TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH EDGE LINE YELLOW
- (H) TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH WHITE
- (I) TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH WHITE (3' LINE, 9' GAP)
- (J) TEMPORARY PAVEMENT MARKING 4-INCH LANE LINE WHITE
- (K) TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH LANE LINE WHITE




| PROJECT NO:1166-08-72 | HWY:IH 39 | COUNTY:PORTAGE | TRAFFIC CONTROL - STAGE 2 | SHEET 54 | E |
|---|---|---|---|---|---|

2

MATCH LINE STA 113+00

MATCH LINE STA 128+00

GOLF COURSE

IH 39/USH 10/51 SB

IH 39/USH 10/51 NB

+50.00'SB' -60.00' LT

+56.09'SB' -60.00' LT

50' TYP.

50' TYP.

+50.00'SB' 6.00' RT

325' SHIFTING TAPER
116+50, 5' RT - 113+25, 0' RT

W01-4B

114 'SB' 116 'SB' 118 'SB' 120 'SB' 122 'SB' 124 'SB' 126 'SB' 128

114 'NB' 116 'NB' 118 'NB' 120 'NB' 122 'NB' 124 'NB' 126 'NB' 128

12'

12'

INL

SIGN

FOOTBRIDGE

MH

RIPRAP

FO

N

LEGEND

WORK AREA STAGE 2

TEMPORARY ASPHALTIC PAVEMENT PLACED IN PREVIOUS STAGE

TEMPORARY PAVEMENT MARKING LEGEND

- (A) TEMPORARY PAVEMENT MARKING 4-INCH LANE LINE WHITE (12.5' LINE, 37.5' GAP)
- (B) TEMPORARY PAVEMENT MARKING 4-INCH EDGE LINE WHITE
- (C) TEMPORARY PAVEMENT MARKING 4-INCH EDGE LINE YELLOW
- (D) TEMPORARY PAVEMENT MARKING 8-INCH WHITE (3' LINE, 9' GAP)
- (E) TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH LANE LINE WHITE (12.5' LINE, 37.5' GAP)
- (F) TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH EDGE LINE WHITE
- (G) TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH EDGE LINE YELLOW
- (H) TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH WHITE
- (I) TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH WHITE (3' LINE, 9' GAP)
- (J) TEMPORARY PAVEMENT MARKING 4-INCH LANE LINE WHITE
- (K) TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH LANE LINE WHITE

505' ENTRANCE RAMP TAPER
139+95, 47' LT - 134+90, 19' LT

200' SHOULDER TAPER

W5-52L 18" X 54"

+26.12'SB' -72.00' LT

+50.00'SB' -72.00' LT

+88.06'SB' -19.55' LT

R1-2 36" X 30"

W5-52R 18" X 54"

+17.10'SB' -64.63' LT

+28.44'SB' -73.66' LT

W03-2

+00.00'SB'

+50.00'SB' -42.00' LT

+00.00'SB' -42.00' LT

+76.38'SB' -66.27' LT

+25.00'SB' 6.00' RT

+75.00'SB' 10.00' RT

+00.00'SB' 10.00' RT

+35.00'SB' 15.00' RT

+70.00'SB' 15.00' RT

+50.00'SB' 10.00' RT

50' TYP

+50.00'SB' 10.00' RT

50' TYP

130 'SB' 132 'SB' 134 'SB' 136 'SB' 138 'SB' 140 'SB' 142 'SB'

130 'NB' 132 'NB' 134 'NB' 136 'NB' 138 'NB' 140 'NB' 142 'NB'

TYP.

W5-52L 18" X 54"

W5-52L 18" X 54"

325' SHIFTING TAPER
140+75, 0' RT - 137+50, 5' RT

RESERVE ST

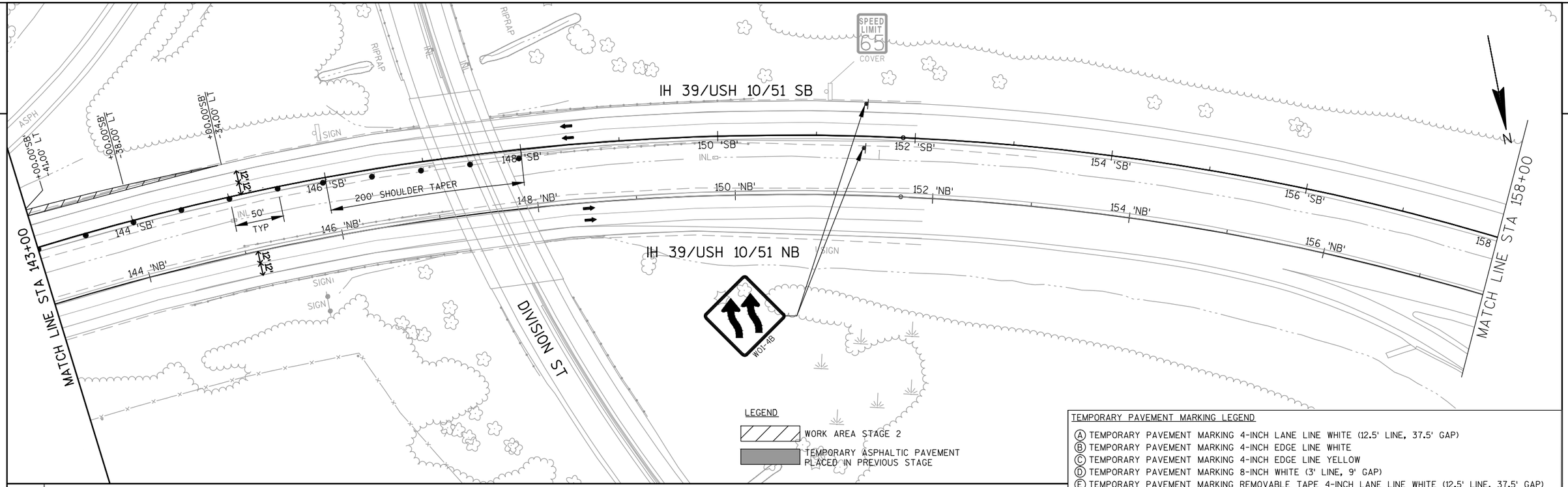
CMP

OH

N

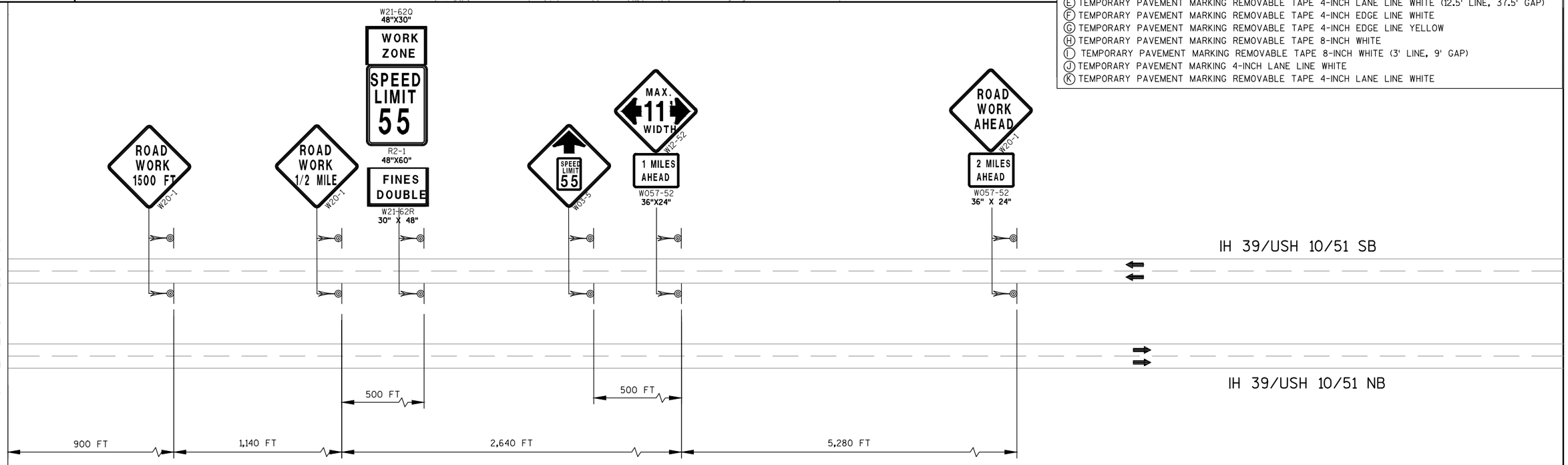
| PROJECT NO:1166-08-72 | HWY:IH 39 | COUNTY:PORTAGE | TRAFFIC CONTROL - STAGE 2 | SHEET 55 | E |
|---|---|---|---|---|---|

2




TEMPORARY PAVEMENT MARKING LEGEND

- (A) TEMPORARY PAVEMENT MARKING 4-INCH LANE LINE WHITE (12.5' LINE, 37.5' GAP)
- (B) TEMPORARY PAVEMENT MARKING 4-INCH EDGE LINE WHITE
- (C) TEMPORARY PAVEMENT MARKING 4-INCH EDGE LINE YELLOW
- (D) TEMPORARY PAVEMENT MARKING 8-INCH WHITE (3' LINE, 9' GAP)
- (E) TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH LANE LINE WHITE (12.5' LINE, 37.5' GAP)
- (F) TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH EDGE LINE WHITE
- (G) TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH EDGE LINE YELLOW
- (H) TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH WHITE
- (I) TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH WHITE (3' LINE, 9' GAP)
- (J) TEMPORARY PAVEMENT MARKING 4-INCH LANE LINE WHITE
- (K) TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH LANE LINE WHITE




| PROJECT NO: 1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | TRAFFIC CONTROL - STAGE 2 | SHEET 56 | E |
|---|---|---|---|---|---|

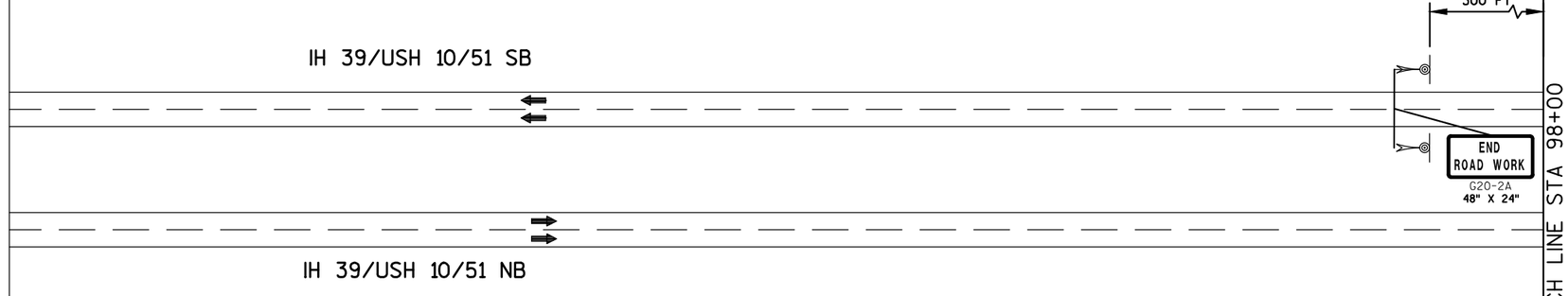
2

## TRAFFIC CONTROL LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- TEMPORARY DELINEATOR (STEEL POST W/ SINGLE DELINEATOR) COLOR OF DELINEATOR SHALL MATCH THE COLOR OF THE RESPECTIVE EDGE LINE PAINT
- CC — CRASH CUSHION
- CONCRETE BARRIER TEMPORARY PRECAST
- TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)
- DIRECTION OF TRAFFIC
- MB — PORTABLE CHANGEABLE MESSAGE SIGN

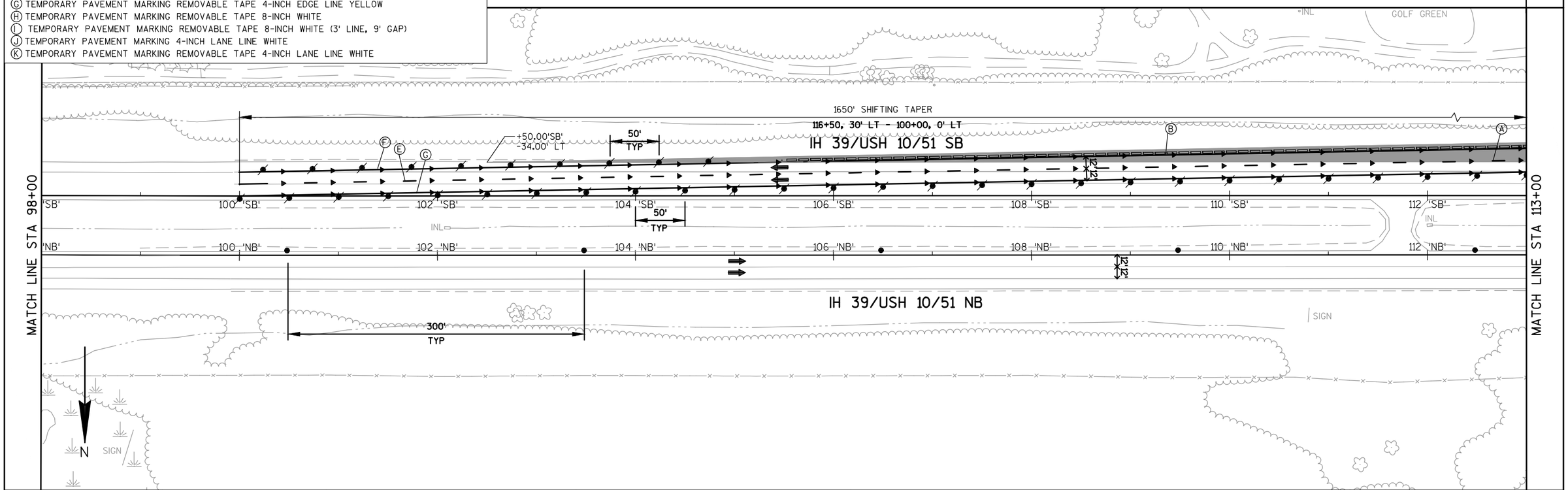
## TEMPORARY PAVEMENT MARKING LEGEND

- (A) TEMPORARY PAVEMENT MARKING 4-INCH LANE LINE WHITE (12.5' LINE, 37.5' GAP)
- (B) TEMPORARY PAVEMENT MARKING 4-INCH EDGE LINE WHITE
- (C) TEMPORARY PAVEMENT MARKING 4-INCH EDGE LINE YELLOW
- (D) TEMPORARY PAVEMENT MARKING 8-INCH WHITE (3' LINE, 9' GAP)
- (E) TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH LANE LINE WHITE (12.5' LINE, 37.5' GAP)
- (F) TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH EDGE LINE WHITE
- (G) TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH EDGE LINE YELLOW
- (H) TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH WHITE
- (I) TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH WHITE (3' LINE, 9' GAP)
- (J) TEMPORARY PAVEMENT MARKING 4-INCH LANE LINE WHITE
- (K) TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH LANE LINE WHITE




LEGEND

- WORK AREA STAGE 3
- TEMPORARY ASPHALTIC PAVEMENT PLACED IN PREVIOUS STAGE




| PROJECT NO:1166-08-72 | HWY: IH 39 | COUNTY:PORTAGE | TRAFFIC CONTROL - STAGE 3 | SHEET 57 | E |
|---|---|---|---|---|---|

2

MATCH LINE STA 113+00

GOLF COURSE

1650' SHIFTING TAPER
116+50, 30' LT - 100+00, 0' LT

+50.00'SB'
-60.00' LT

IH 39/USH 10/51 SB

50'
TYP

12'

114 'SB' 116 'SB' 118 'SB' 120 'SB' 122 'SB' 124 'SB' 126 'SB' 128

+93.82'NB'
-7.00' LT

114 'NB' 116 'NB' 118 'NB' 120 'NB' 122 'NB' 124 'NB' 126 'NB' 128

IH 39/USH 10/51 NB

W01-4B

N

300'
TYP

SEE SDD "TRAFFIC CONTROL LANE CLOSURE SPEEDS GREATER THAN 40 MPH FOR NB LANE CLOSURE WHEN CONSTRUCTING MEDIAN CROSSOVERS ADJACENT TO NB PAVEMENT

TEMPORARY PAVEMENT MARKING LEGEND

- (A) TEMPORARY PAVEMENT MARKING 4-INCH LANE LINE WHITE (12.5' LINE, 37.5' GAP)
- (B) TEMPORARY PAVEMENT MARKING 4-INCH EDGE LINE WHITE
- (C) TEMPORARY PAVEMENT MARKING 4-INCH EDGE LINE YELLOW
- (D) TEMPORARY PAVEMENT MARKING 8-INCH WHITE (3' LINE, 9' GAP)
- (E) TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH LANE LINE WHITE (12.5' LINE, 37.5' GAP)
- (F) TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH EDGE LINE WHITE
- (G) TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH EDGE LINE YELLOW
- (H) TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH WHITE
- (I) TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH WHITE (3' LINE, 9' GAP)
- (J) TEMPORARY PAVEMENT MARKING 4-INCH LANE LINE WHITE
- (K) TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH LANE LINE WHITE

LEGEND

- WORK AREA STAGE 3
- TEMPORARY ASPHALTIC PAVEMENT PLACED IN PREVIOUS STAGE

2

MATCH LINE STA 128+00

360' ENTRANCE RAMP TAPER
134+60, 66' LT - 131+00, 54' LT

660' ACCELERATION LANE
141+20 - 134+60

1350' SHIFTING TAPER
149+00, 0' LT - 135+50, 30' LT

+21.91'SB'
-60.00' LT

+61.41'SB'
-60.00' LT

+00.00'SB'
-60.00' LT

+59.80'SB'
-72.00' LT

+50.00'SB'
-72.00' LT

+87.08'SB'
-50.96' LT

+17.10'SB'
-64.63' LT

+76.38'SB'
-66.27' LT

+66.72'SB'
-44.74' LT

+28.44'SB'
-73.66' LT

IH 39/USH 10/51 SB

R1-2
36" X 31"

W5-52R
18" X 54"

8:1 TAPER

50'
TYP

12'

SB 130 'SB' 132 'SB' 134 'SB' 136 'SB' 138 'SB' 140 'SB' 142 'SB'

'NB' 130 'NB' 132 'NB' 134 'NB' 136 'NB' 138 'NB' 140 'NB' 142 'NB'

IH 39/USH 10/51 NB

300'
TYP

+55.87'NB'
-7.00' LT

RESERVE ST

W5-52L
18" X 54"

W5-52L
18" X 54"

W01-6
48" X 24"

TYPE III BARRICADE

SEE SDD "TRAFFIC CONTROL LANE CLOSURE SPEEDS GREATER THAN 40 MPH FOR NB LANE CLOSURE WHEN CONSTRUCTING MEDIAN CROSSOVERS ADJACENT TO NB PAVEMENT

W03-2

W01-6
48" X 24"

TYPE III BARRICADE

N

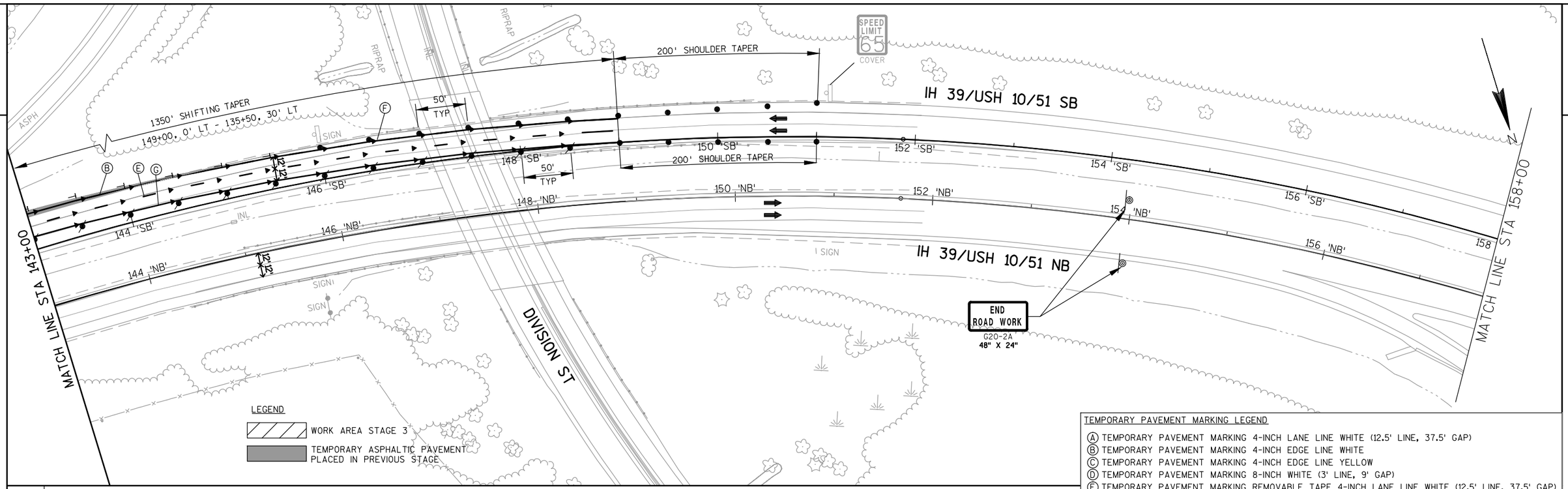
MATCH LINE STA 143+00

| PROJECT NO: 1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | TRAFFIC CONTROL - STAGE 3 | SHEET 58 | E |
|---|---|---|---|---|---|

FILE NAME : F:\TR\JOBS\E2031A12\CIVIL 3D\SHEETSPLAN\11660872_025050_TC.DWG
11660872_025051_s3

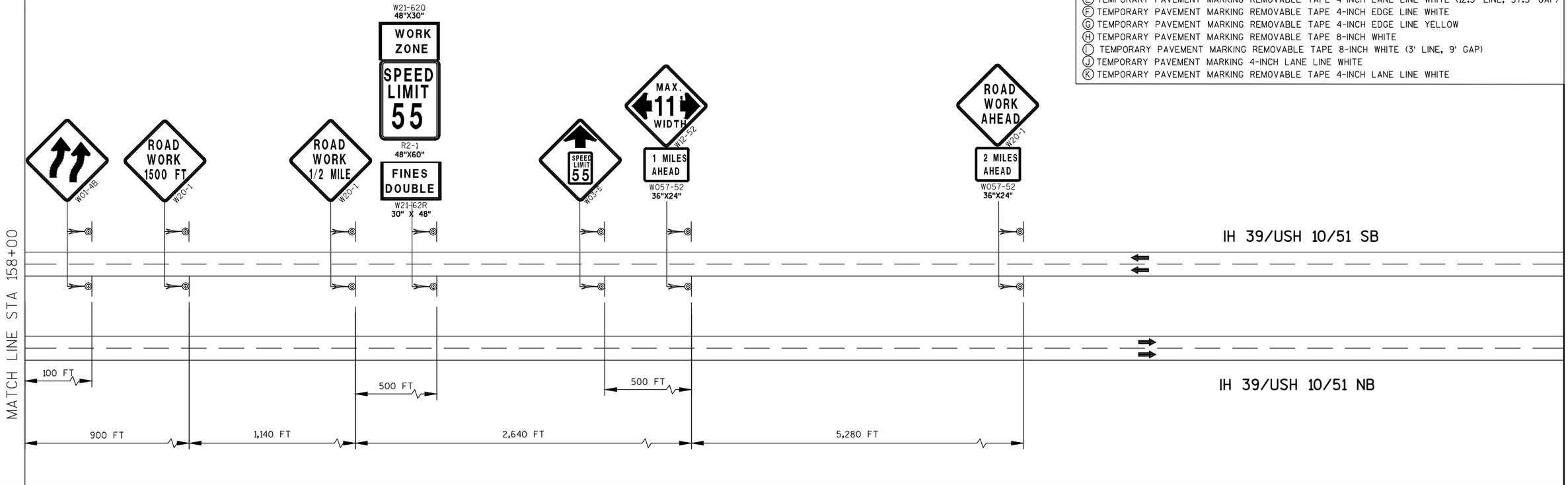
PLOT DATE : 4/16/2014 9:16 AM PLOT BY : OMNNI ASSOCIATES, INC - DAVE PERRY

2




TEMPORARY PAVEMENT MARKING LEGEND

- (A) TEMPORARY PAVEMENT MARKING 4-INCH LANE LINE WHITE (12.5' LINE, 37.5' GAP)
- (B) TEMPORARY PAVEMENT MARKING 4-INCH EDGE LINE WHITE
- (C) TEMPORARY PAVEMENT MARKING 4-INCH EDGE LINE YELLOW
- (D) TEMPORARY PAVEMENT MARKING 8-INCH WHITE (3' LINE, 9' GAP)
- (E) TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH LANE LINE WHITE (12.5' LINE, 37.5' GAP)
- (F) TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH EDGE LINE WHITE
- (G) TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH EDGE LINE YELLOW
- (H) TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH WHITE
- (I) TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH WHITE (3' LINE, 9' GAP)
- (J) TEMPORARY PAVEMENT MARKING 4-INCH LANE LINE WHITE
- (K) TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH LANE LINE WHITE




| PROJECT NO:1166-08-72 | HWY: IH 39 | COUNTY:PORTAGE | TRAFFIC CONTROL - STAGE 3 | SHEET 59 | E |
|---|---|---|---|---|---|

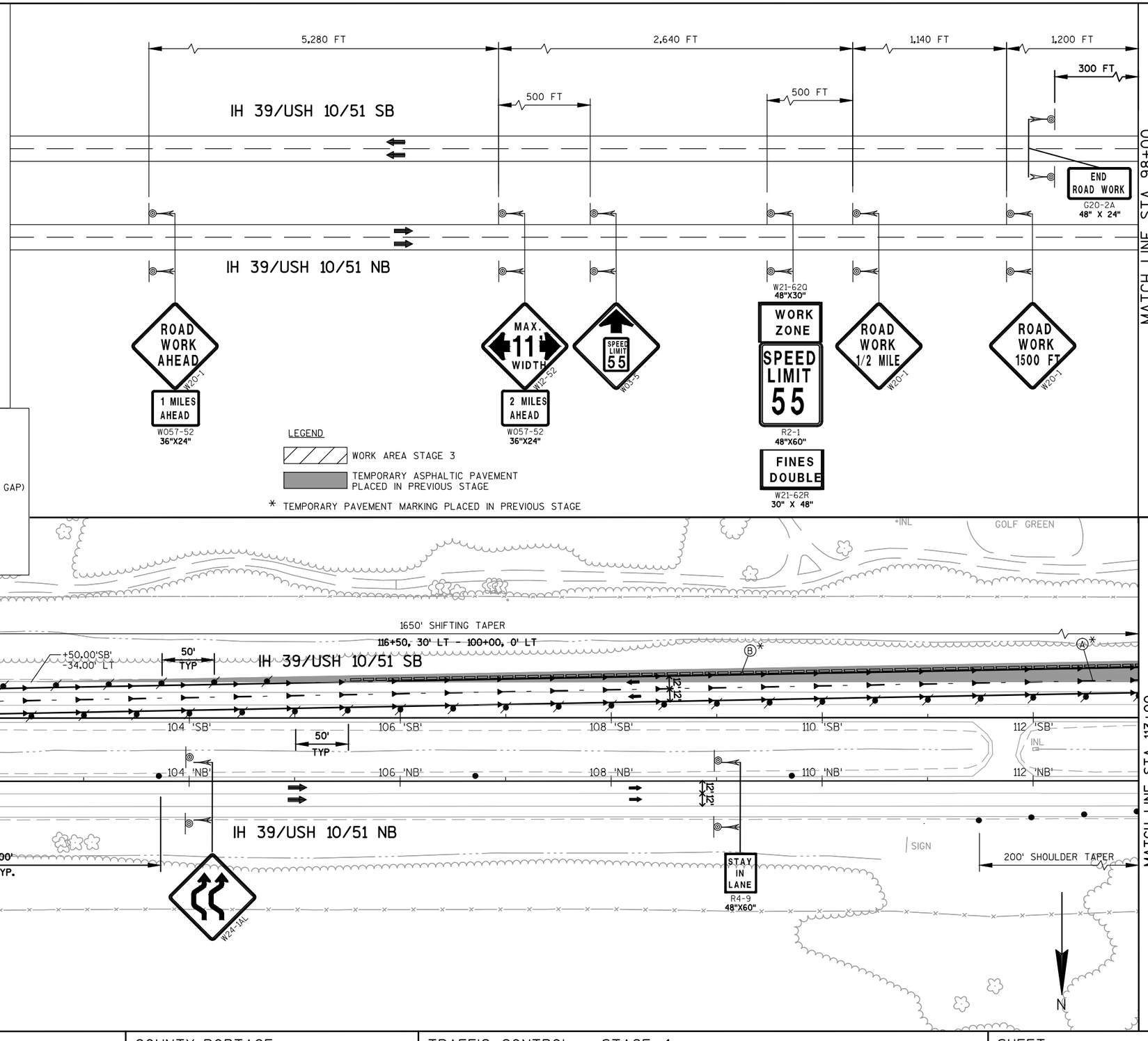
2

## TRAFFIC CONTROL LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- TEMPORARY DELINEATOR (STEEL POST W/ SINGLE DELINEATOR) COLOR OF DELINEATOR SHALL MATCH THE COLOR OF THE RESPECTIVE EDGE LINE PAINT
- CC — CRASH CUSHION
- CONCRETE BARRIER TEMPORARY PRECAST
- TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)
- DIRECTION OF TRAFFIC
- MB — PORTABLE CHANGEABLE MESSAGE SIGN

## TEMPORARY PAVEMENT MARKING LEGEND

- (A) TEMPORARY PAVEMENT MARKING 4-INCH LANE LINE WHITE (12.5' LINE, 37.5' GAP)
- (B) TEMPORARY PAVEMENT MARKING 4-INCH EDGE LINE WHITE
- (C) TEMPORARY PAVEMENT MARKING 4-INCH EDGE LINE YELLOW
- (D) TEMPORARY PAVEMENT MARKING 8-INCH WHITE (3' LINE, 9' GAP)
- (E) TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH LANE LINE WHITE (12.5' LINE, 37.5' GAP)
- (F) TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH EDGE LINE WHITE
- (G) TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH EDGE LINE YELLOW
- (H) TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH WHITE
- (I) TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH WHITE (3' LINE, 9' GAP)
- (J) TEMPORARY PAVEMENT MARKING 4-INCH LANE LINE WHITE
- (K) TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH LANE LINE WHITE




| PROJECT NO: 1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | TRAFFIC CONTROL - STAGE 4 | SHEET 60 | E |
|---|---|---|---|---|---|

2

MATCH LINE STA 113+00

MATCH LINE STA 128+00

MATCH LINE STA 128+00

MATCH LINE STA 143+00

GOLF COURSE

1650' SHIFTING TAPER
116+50, 30' LT - 100+00, 0' LT

+50.00'SB'
-60.00' LT

TYPE III BARRICADE

IH 39/USH 10/51 SB

TYPE III BARRICADE

N

12'12'

114 'SB' | 50' TYP | 116 'SB' | 118 'SB' | 120 'SB' | 122 'SB' | 124 'SB' | 126 'SB' | 128

+93.82'NB'
-7.00' LT

114 'NB' | 116 'NB' | 118 'NB' | 120 'NB' | 122 'NB' | 124 'NB' | 126 'NB' | 128

TRAFFIC CONTROL CROSSOVER

IH 39/USH 10/51 NB

200' SHOULDER TAPER

R11-2
48" X 30"
ROAD CLOSED

W01-6
48" X 24"

W5-52R
18" X 54"

W01-6
48" X 24"

R11-2
48" X 30"
ROAD CLOSED

SIGN

FOOTBRIDGE

FLAG

MH

TYPE III BARRICADE | TYPE III BARRICADE | TYPE III BARRICADE | TYPE III BARRICADE

LEGEND

WORK AREA STAGE 4

TEMPORARY ASPHALTIC PAVEMENT PLACED IN PREVIOUS STAGE

* TEMPORARY PAVEMENT MARKING PLACED IN PREVIOUS STAGE

RIPRAP

TEMPORARY PAVEMENT MARKING LEGEND

(A) TEMPORARY PAVEMENT MARKING 4-INCH LANE LINE WHITE (12.5' LINE, 37.5' GAP)
(B) TEMPORARY PAVEMENT MARKING 4-INCH EDGE LINE WHITE
(C) TEMPORARY PAVEMENT MARKING 4-INCH EDGE LINE YELLOW
(D) TEMPORARY PAVEMENT MARKING 8-INCH WHITE (3' LINE, 9' GAP)
(E) TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH LANE LINE WHITE (12.5' LINE, 37.5' GAP)
(F) TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH EDGE LINE WHITE
(G) TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH EDGE LINE YELLOW
(H) TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH WHITE
(I) TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH WHITE (3' LINE, 9' GAP)
(J) TEMPORARY PAVEMENT MARKING 4-INCH LANE LINE WHITE
(K) TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH LANE LINE WHITE

360' TAPER
134+60, 66' LT - 131+00, 54' LT

660' ACCELERATION LANE
141+20 - 134+60

149+00, 0' LT - 135+50, 30' LT

+21.91'SB'
-60.00' LT

+61.41'SB'
-60.00' LT

+00.00'SB'
-60.00' LT

IH 39/USH 10/51 SB

+59.80'SB'
-72.00' LT

+50.00'SB'
-72.00' LT

YIELD
R1-2
36" X 31"

+87.08'SB'
-50.96' LT

+17.10'SB'
-64.63' LT

+76.38'SB'
-66.27' LT

+66.72'SB'
-44.74' LT

W5-52R
18" X 54"

+28.44'SB'
-73.66' LT

12'12'

130 'SB' | 132 'SB' | 134 'SB' | 136 'SB' | 138 'SB' | 140 'SB' | 142 'SB'

50' TYP

130 'NB' | 132 'NB' | 134 'NB' | 136 'NB' | 138 'NB' | 140 'NB' | 142 'NB'

IH 39/USH 10/51 NB

+55.87'NB'
-7.00' LT

TRAFFIC CONTROL CROSSOVER

RESERVE ST

R11-2
48" X 30"
ROAD CLOSED

W01-6
48" X 24"

W03-2

W01-6
48" X 24"

TYPE III BARRICADE | TYPE III BARRICADE | TYPE III BARRICADE | TYPE III BARRICADE | TYPE III BARRICADE

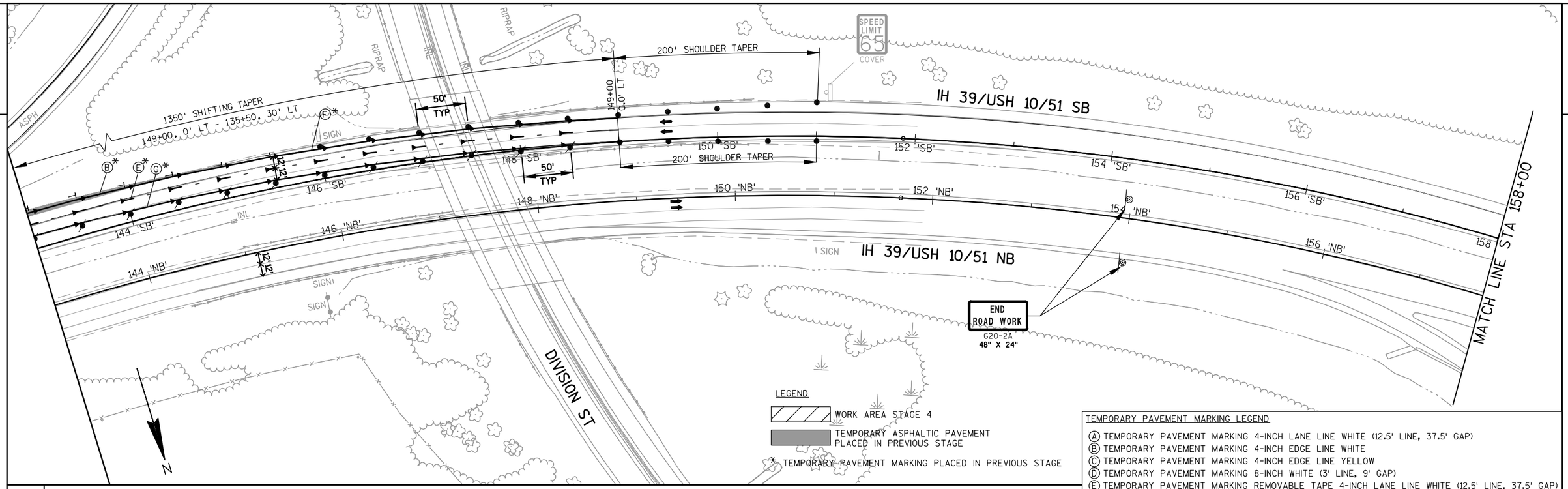
| PROJECT NO:1166-08-72 | HWY: IH 39 | COUNTY:PORTAGE | TRAFFIC CONTROL - STAGE 4 | SHEET 61 | E |
|---|---|---|---|---|---|

FILE NAME : F:\TR\JOBS\E2031A12\CIVIL 3D\SHEETSPLAN\11660872_025060_TC.DWG
11660872_025061_s4

PLOT DATE : 4/16/2014 9:22 AM

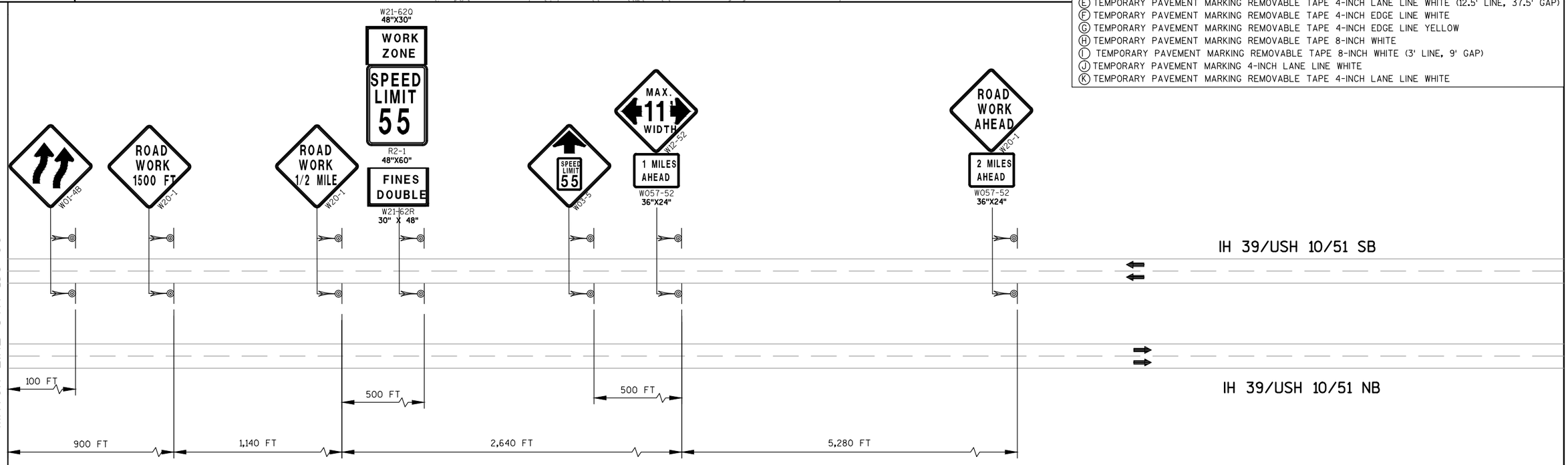
PLOT BY : OMNNI ASSOCIATES, INC - DAVE PERRY

2




TEMPORARY PAVEMENT MARKING LEGEND

- (A) TEMPORARY PAVEMENT MARKING 4-INCH LANE LINE WHITE (12.5' LINE, 37.5' GAP)
- (B) TEMPORARY PAVEMENT MARKING 4-INCH EDGE LINE WHITE
- (C) TEMPORARY PAVEMENT MARKING 4-INCH EDGE LINE YELLOW
- (D) TEMPORARY PAVEMENT MARKING 8-INCH WHITE (3' LINE, 9' GAP)
- (E) TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH LANE LINE WHITE (12.5' LINE, 37.5' GAP)
- (F) TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH EDGE LINE WHITE
- (G) TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH EDGE LINE YELLOW
- (H) TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH WHITE
- (I) TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH WHITE (3' LINE, 9' GAP)
- (J) TEMPORARY PAVEMENT MARKING 4-INCH LANE LINE WHITE
- (K) TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH LANE LINE WHITE

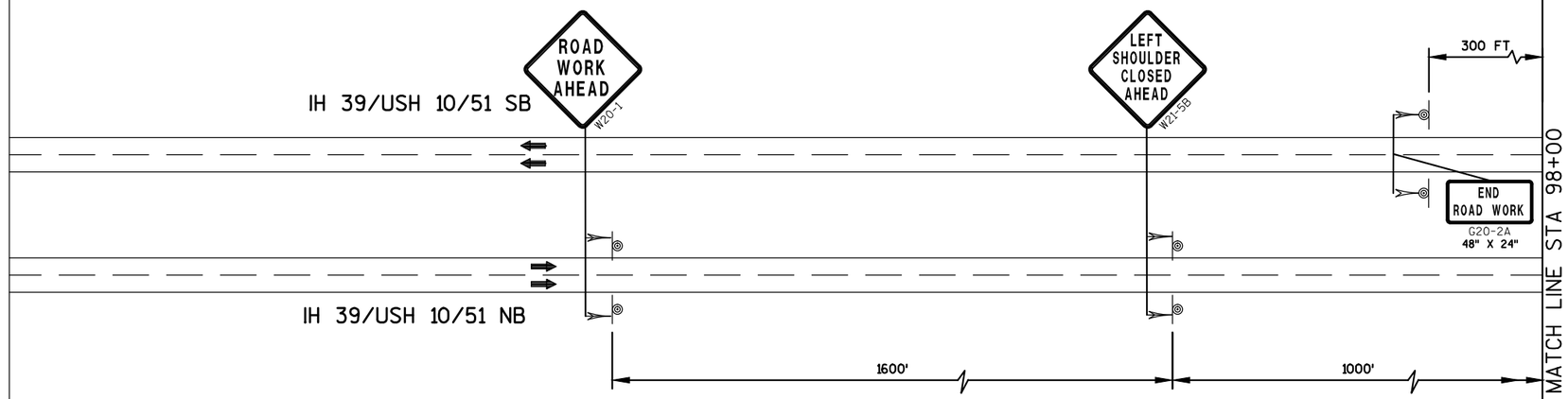


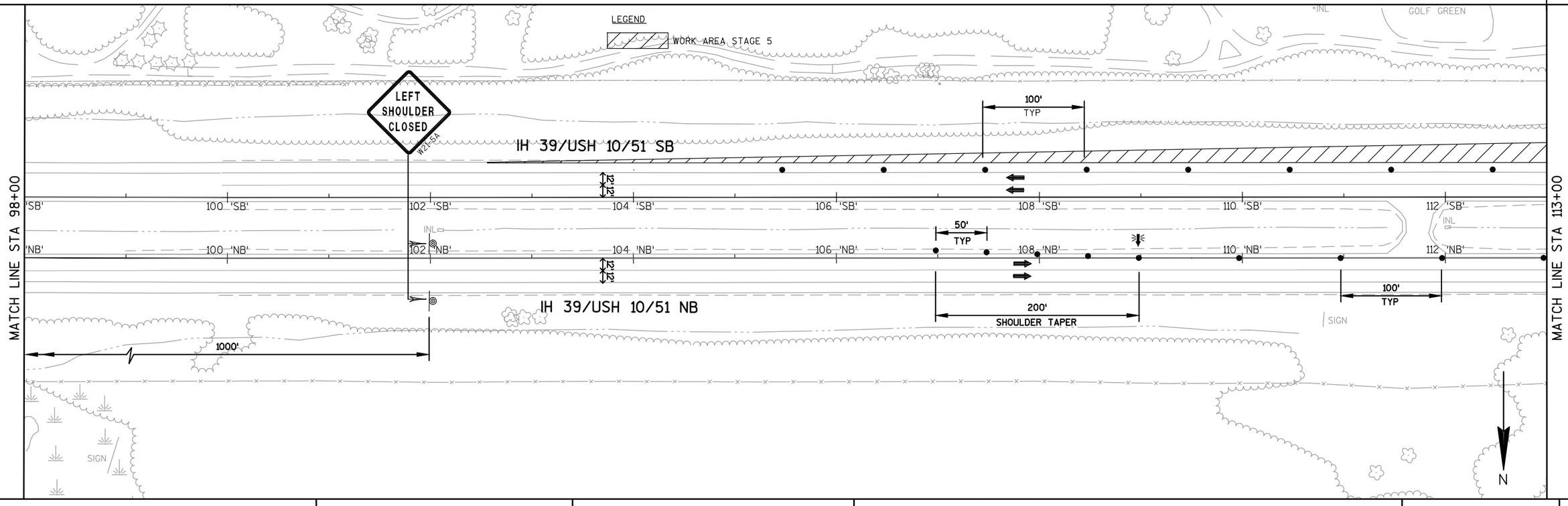

| PROJECT NO: 1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | TRAFFIC CONTROL - STAGE 4 | SHEET 62 | E |
|---|---|---|---|---|---|

2

TRAFFIC CONTROL LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- TEMPORARY DELINEATOR (STEEL POST W/ SINGLE DELINEATOR) COLOR OF DELINEATOR SHALL MATCH THE COLOR OF THE RESPECTIVE EDGE LINE PAINT
- CC — CRASH CUSHION
- CONCRETE BARRIER TEMPORARY PRECAST
- TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)
- DIRECTION OF TRAFFIC
- MB — PORTABLE CHANGEABLE MESSAGE SIGN




| PROJECT NO:1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | TRAFFIC CONTROL - STAGE 5 | SHEET 63 | E |
|---|---|---|---|---|---|


FILE NAME : F:\TR\JOBS\E2031A12\CIVIL 3D\SHEETSPLAN\11660872_025070_TC.DWG
11660872_025070_s5

PLOT DATE : 4/16/2014 9:31 AM

PLOT BY : OMNNI ASSOCIATES, INC - DAVE PERRY

WISDOT/CADDS SHEET 44

2

MATCH LINE STA 113+00

GOLF COURSE

N

FOR OFF PEAK CLOSURES
SEE SDD " TRAFFIC CONTROL, LANE CLOSURES, SPEEDS GREATER THAN 40 M.P.H."

100' TYP

IH 39/USH 10/51 SB

12'

114 'SB' 116 'SB' 118 'SB' 120 'SB' 122 'SB' 124 'SB' 126 'SB' 128

114 'NB' 116 'NB' 118 'NB' 120 'NB' 122 'NB' 124 'NB' 126 'NB' 128

12'

100' TYP

SIGN

IH 39/USH 10/51 NB

FOR OFF PEAK CLOSURES
SEE SDD " TRAFFIC CONTROL, LANE CLOSURES, SPEEDS GREATER THAN 40 M.P.H."

FOOTBRIDGE

MH

LEGEND

WORK AREA STAGE 5

FLAG

FOOTBRIDGE

RIPRAP

SIGN

SIGN

FO

MATCH LINE STA 128+00

MATCH LINE STA 143+00

FOR OFF PEAK CLOSURES
SEE SDD " TRAFFIC CONTROL, LANE CLOSURES, SPEEDS GREATER THAN 40 M.P.H."

100' TYP

IH 39/USH 10/51 SB

200' SHOULDER TAPER

12'

SB' 130 'SB' 132 'SB' 134 'SB' 136 'SB' 138 'SB' 140 'SB' 142 'SB'

NB' 130 'NB' 132 'NB' 134 'NB' 136 'NB' 138 'NB' 140 'NB' 142 'NB'

12'

100' TYP

IH 39/USH 10/51 NB

SIGN

FOR OFF PEAK CLOSURES
SEE SDD " TRAFFIC CONTROL, LANE CLOSURES, SPEEDS GREATER THAN 40 M.P.H."

RESERVE STREET

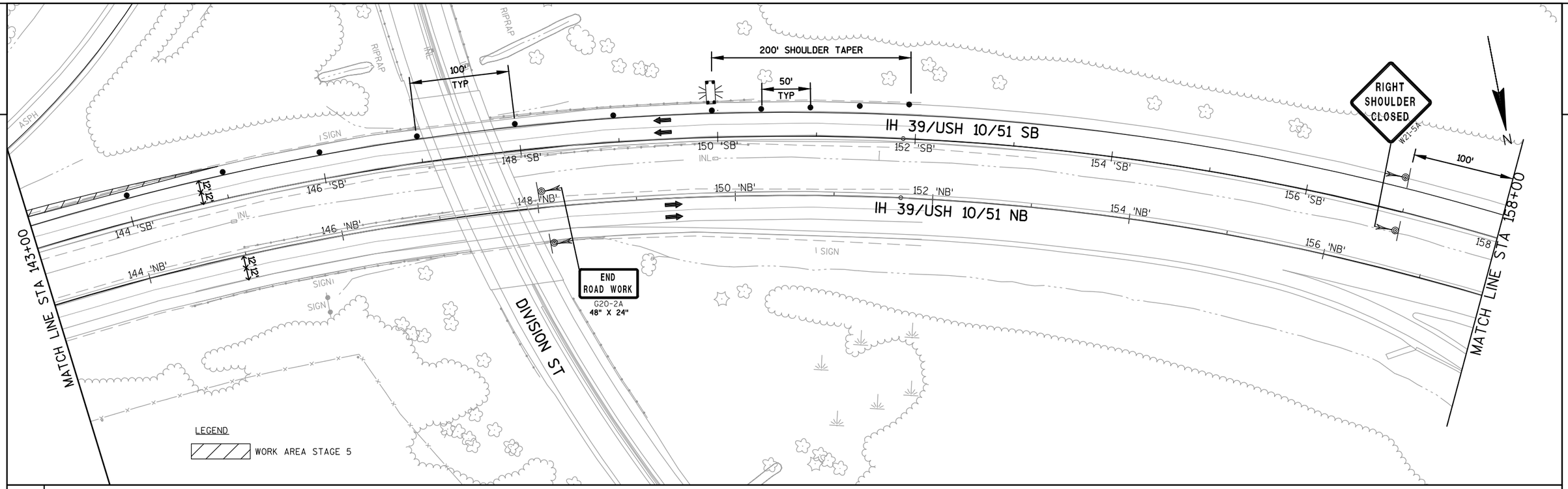
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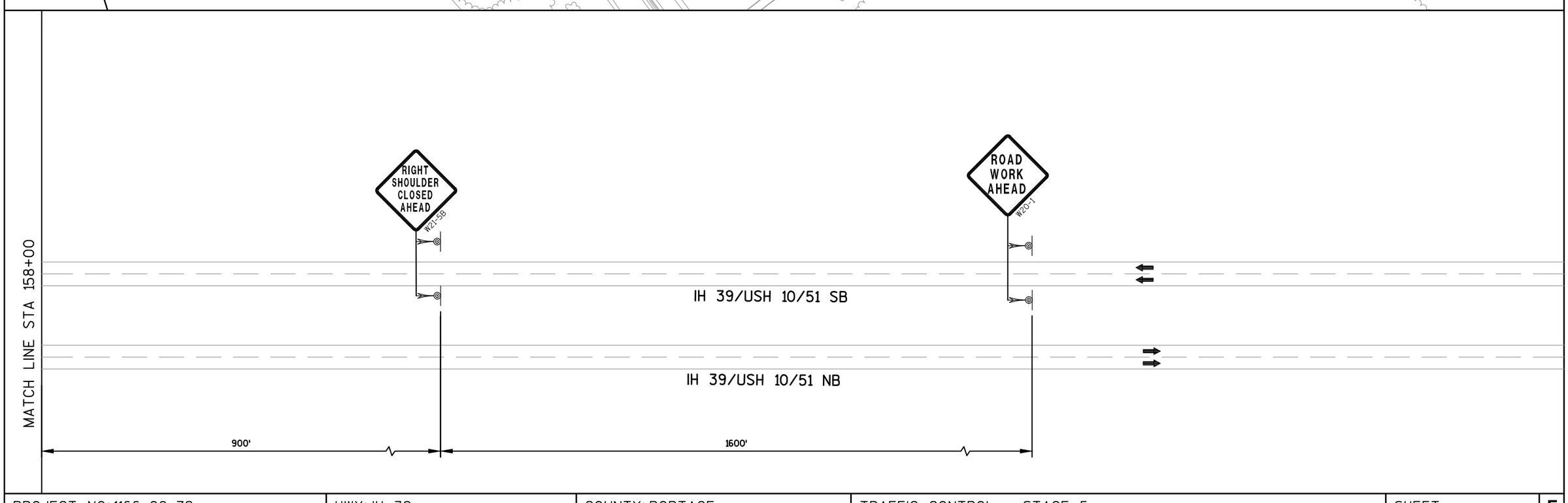
| PROJECT NO: 1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | TRAFFIC CONTROL - STAGE 5 | SHEET 64 | E |
|---|---|---|---|---|---|

FILE NAME : F:\TR\JOBS\E2031A12\CIVIL 3D\SHEETSPLAN\11660872_025070_TC.DWG
11660872_025071_s5

PLOT DATE : 4/15/2014 7:39 AM PLOT BY : OMNNI ASSOCIATES, INC - DAVE PERRY

WISDOT/CADDS SHEET 44




| PROJECT NO: 1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | TRAFFIC CONTROL - STAGE 5 | SHEET 65 | E |
|---|---|---|---|---|---|

2

NORTHPOINT DRIVE

R9-3A R5-6
24"X24" 24"X24"
DETOUR
M4-9L
30" X 24"

SENTRY INSURANCE

R5-6
24"X24"
R9-3A
24"X24"

TYPE III BARRICADE

R11-2
48" X 30"
ROAD CLOSED

TYPE III BARRICADE

8+00 9+00 10+00 11+00 RESERVE STREET 12+00 13+

N

2

MATCH LINE STA 13+00

NORTHPOINT DRIVE

500'

ROAD CLOSED AHEAD
W20-3

ROAD CLOSED 500 FT
W20-3

R9-3A
24"X24"
R5-6
24"X24"

TYPE III BARRICADE

**LEGEND**

- SIGN ON TEMPORARY SUPPORT
- TYPE III BARICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- SAFETY FENCE
- WORK AREA

R5-6
24"X24"
R9-3A
24"X24"

12" CMP

IH 39/USH 10/51 SB

IH 39/USH 10/51 NB

Pi: 17+41.80

R9-3A
24"X24"
R5-6
24"X24"

MATCH LINE STA 13+00

14+00 15+00 RESERVE STREET 16+00 17+00 18+00 19+

MATCH LINE STA 19+00

R5-6
24"X24"
R9-3A
24"X24"

R9-3A
24"X24"
R5-6
24"X24"

| PROJECT NO:1166-08-72 | HWY: IH 39 | COUNTY:PORTAGE | TRAFFIC CONTROL - RESERVE STREET | SHEET 66 | E |
|---|---|---|---|---|---|

FILE NAME : F:\TR\JOBS\E2031A12\CIVIL 3D\SHEETSPLAN\11660872_025080_TC RESERVE STREET.DWG
11660872_025081_tc

PLOT DATE : 1/31/2014 8:07 AM

PLOT BY : OMNNI ASSOCIATES, INC - DAVE PERRY

WISDOT/CADDS SHEET 44

2

2

MATCH LINE STA 19+00

MATCH LINE STA 25+00

RESERVE STREET

EAGLE SUMMIT

BLUEBELL LANE

DU BAY AVE

N

R9-3A 24"X24"

R5-6 24"X24"

ROAD CLOSED 500 FT W20-3

ROAD CLOSED 400 FT W20-3

ROAD CLOSED AHEAD W20-3

R11-2 48" X 30" ROAD CLOSED

TYPE III BARICADE

SIDEWALK CLOSED R5-8

500'

400'

PI: 25+35.00

BP: 26+64.72

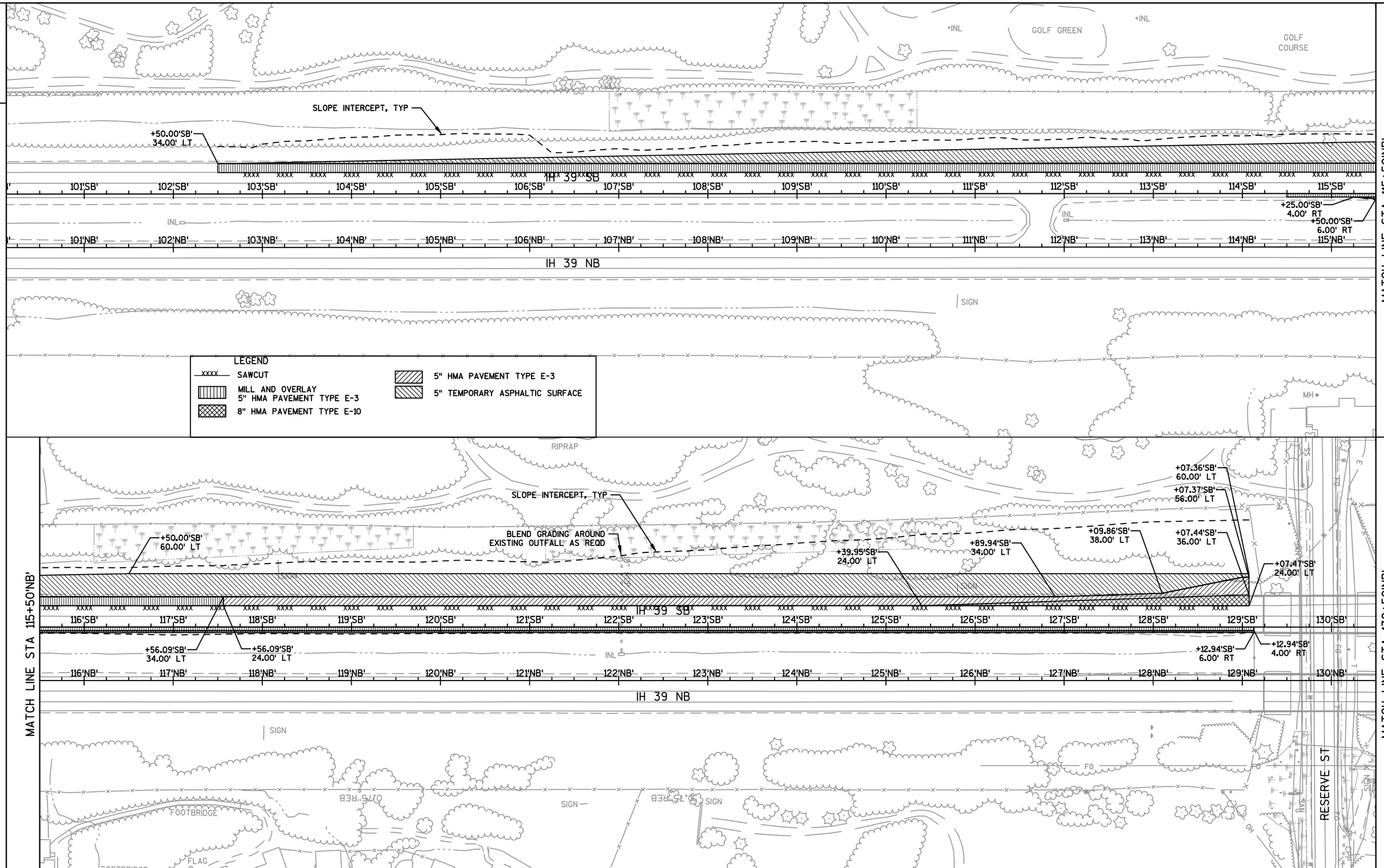
EP: 28+86.95

20+00 21+00 22+00 23+00 24+00 25+00 26+00 27+00 28+00 28+87

**LEGEND**

- SIGN ON TEMPORARY SUPPORT
- TYPE III BARICADE
- TYPE III BARICADE WITH ATTACHED SIGN
- SAFETY FENCE
- WORK AREA

| PROJECT NO:1166-08-72 | HWY:IH 39 | COUNTY:PORTAGE | TRAFFIC CONTROL - RESERVE STREET | SHEET 67 | E |
|---|---|---|---|---|---|




| PROJECT NO:1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | CONSTRUCTION STAGING DETAIL STAGES 1 AND 2 | SHEET 68 | E |
|---|---|---|---|---|---|

2

2

MATCH LINE STA 130+50'NB'

MATCH LINE STA 145+50'NB'

+75.75'SB' 60.00' LT
+75.75'SB' 56.00' LT
+75.75'SB' 36.00' LT
+75.75'SB' 24.00' LT
+00.00'SB' 60.00' LT
+60.71'SB' 41.00' LT
SLOPE INTERCEPT, TYP
+59.90'SB' 72.00' LT
+50.00'SB' 72.00' LT
+26.12'SB' 41.00' LT
+26.12'SB' 24.00' LT
+83.55'SB' 68.32' LT
+76.38'SB' 66.27' LT
BLEND GRADING TO EXISTING OUTFALL AS REQD
+17.10'SB' 64.63' LT
+28.44'SB' 73.66' LT
+51.07'SB' 73.18' LT
+48.66'SB' 41.75' LT
+48.65'SB' 34.00' LT
+96.41'SB' 34.00' LT
ASPH
IH 39 SB
131'SB' 132'SB' 133'SB' 134'SB' 135'SB' 136'SB' 137'SB' 138'SB' 139'SB' 140'SB' 141'SB' 142'SB' 143'SB' 144'SB' 145'
+69.62'SB' 4.00' RT
+69.62'SB' 10.00' RT
+00.00'SB' 10.00' RT
+35.00'SB' 15.00' RT
+70.00'SB' 15.00' RT
+50.00'SB' 10.00' RT
+50.00'SB' 10.00' RT
+25.00'SB' 4.00' RT
131'NB' 132'NB' 133'NB' 134'NB' 135'NB' 136'NB' 137'NB' 138'NB' 139'NB' 140'NB' 141'NB' 142'NB' 143'NB' 144'NB' 145'
IH 39 NB
SIGN
FO
RIPRAP
INL
RIPRAP
INL
INL
I SIGN
+00.00'SB' 34.00' LT
+00.00'SB' 24.00' LT
146'SB' 147'SB' 148'SB' 149'SB' 150'SB' 151'SB' 152'SB' 153'SB' 154'SB' 155'SB'
146'NB' 147'NB' 148'NB' 149'NB' 150'NB' 151'NB' 152'NB' 153'NB'
SIGN
SIGN
INL
I SIGN

N

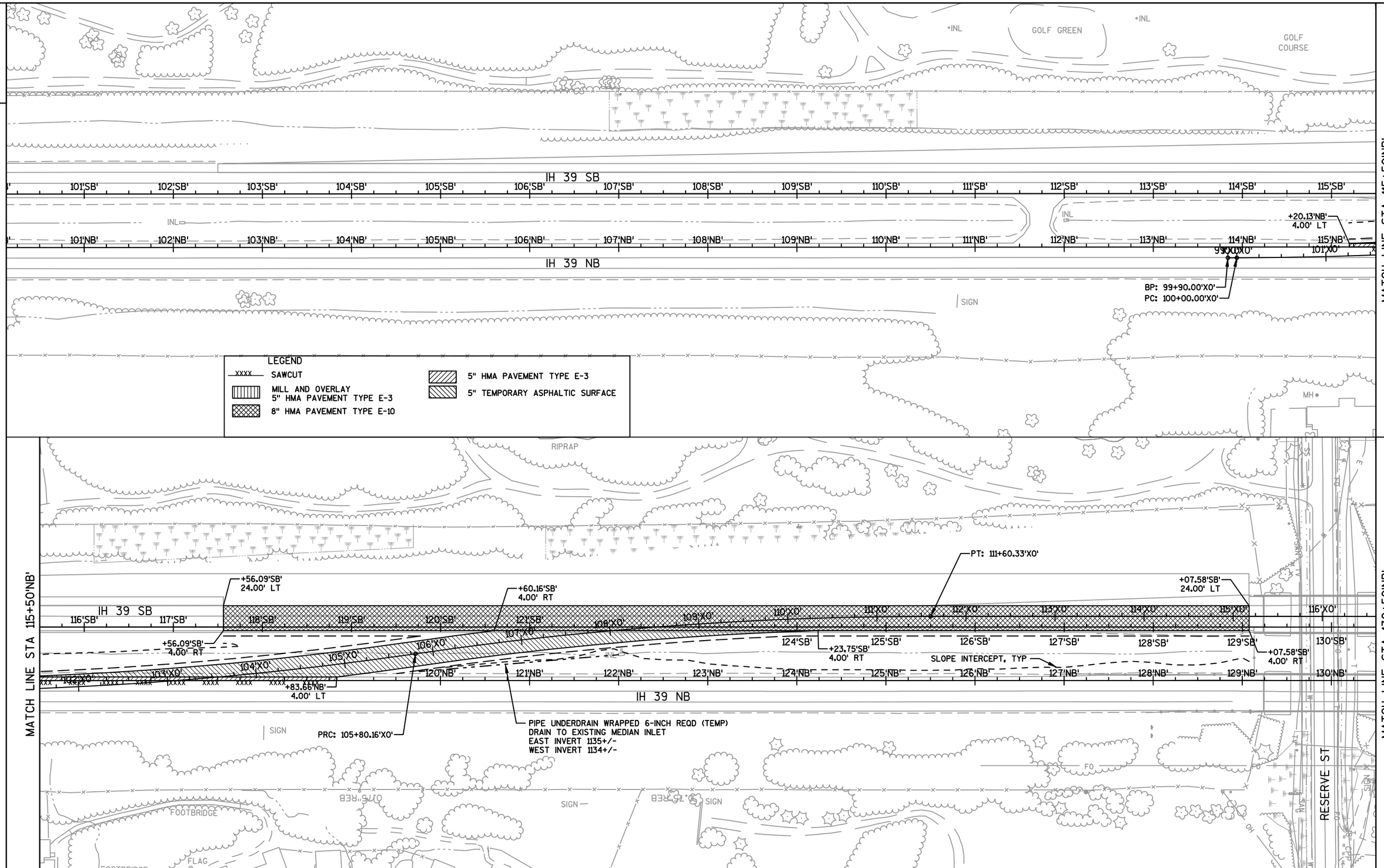
N

LEGEND

- XXXX SAWCUT
- MILL AND OVERLAY 5" HMA PAVEMENT TYPE E-3
- 8" HMA PAVEMENT TYPE E-10
- 5" HMA PAVEMENT TYPE E-3
- 5" TEMPORARY ASPHALTIC SURFACE

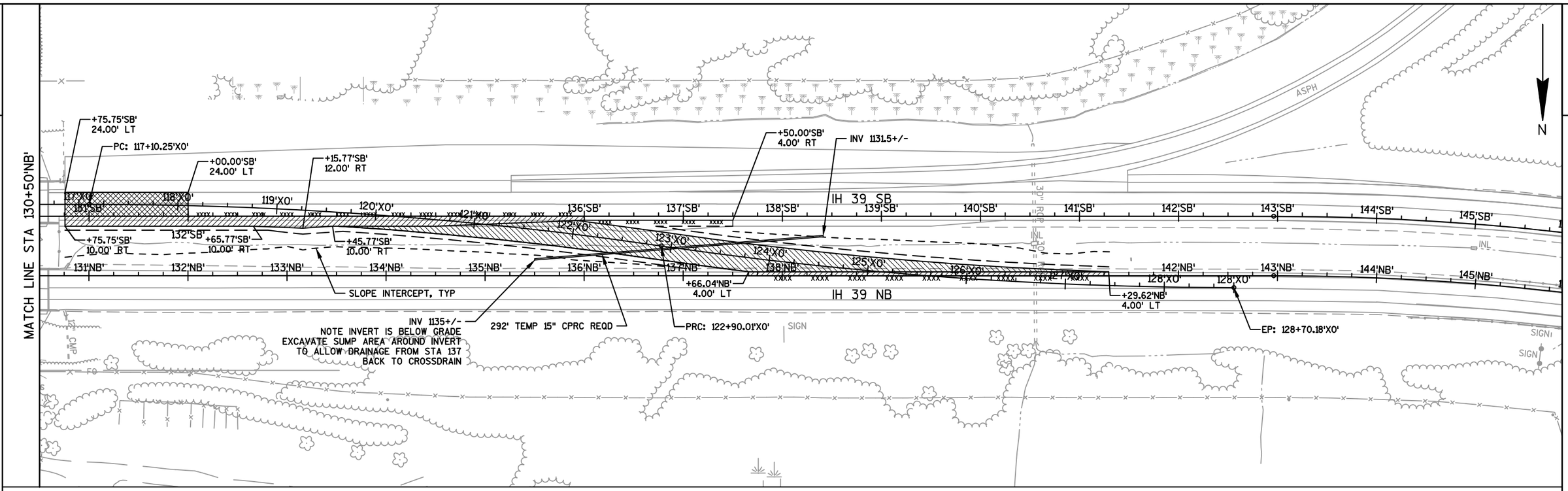
| PROJECT NO: 1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | CONSTRUCTION STAGING DETAIL STAGES 1 AND 2 | SHEET 69 | E |
|---|---|---|---|---|---|

2




| PROJECT NO: 1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | CONSTRUCTION STAGING DETAIL STAGE 3 | SHEET 70 | E |
|---|---|---|---|---|---|


FILE NAME : F:\TR\JOBS\E2031A12\CIVIL 3D\SHEETSPLAN\11660872_026301_S3.DWG
11660872_026301_s3
PLOT DATE : 1/31/2014 8:11 AM
PLOT BY : OMNNI ASSOCIATES, INC - DAVE PERRY
WISDOT/CADDS SHEET 44




LEGEND

| | |
|---|---|
| xxxx SAWCUT | 5" HMA PAVEMENT TYPE E-3 |
| MILL AND OVERLAY 5" HMA PAVEMENT TYPE E-3 | 5" TEMPORARY ASPHALTIC SURFACE |
| 8" HMA PAVEMENT TYPE E-10 | |

2

2

GOLF GREEN

GOLF COURSE

INL

INL

INL

IH 39 SB

101'SB' 102'SB' 103'SB' 104'SB' 105'SB' 106'SB' 107'SB' 108'SB' 109'SB' 110'SB' 111'SB' 112'SB' 113'SB' 114'SB' 115'SB'

101'NB' 102'NB' 103'NB' 104'NB' 105'NB' 106'NB' 107'NB' 108'NB' 109'NB' 110'NB' 111'NB' 112'NB' 113'NB' 114'NB' 115'NB'

IH 39 NB

SIGN

MH

MATCH LINE STA 115+50'NB'

N

LEGEND

| | |
|---|---|
| XXXX SAWCUT | 3" HMA PAVEMENT TYPE E-3 |
| MILL AND OVERLAY 5" HMA PAVEMENT TYPE E-3 | 5" TEMPORARY ASPHALTIC SURFACE |
| 8" HMA PAVEMENT TYPE E-10 | |

RIPRAP

MATCH LINE STA 115+50'NB'

IH 39 SB

116'SB' 117'SB' 118'SB' 119'SB' 120'SB' 121'SB' 122'SB' 123'SB' 124'SB' 125'SB' 126'SB' 127'SB' 128'SB' 129'SB' 130'SB'

116'NB' 117'NB' 118'NB' 119'NB' 120'NB' 121'NB' 122'NB' 123'NB' 124'NB' 125'NB' 126'NB' 127'NB' 128'NB' 129'NB' 130'NB'

IH 39 NB

+75.00'NB' 4.00' LT

+47.59'NB' 4.00' LT

+67.77'NB' 12.00' LT

+17.77'NB' 9.99' LT

+07.79'NB' 10.00' LT

+75.00'NB' 34.00' RT

SLOPE INTERCEPT, TYP

+37.81'NB' 34.00' RT

+67.77'NB' 36.00' RT

+17.77'NB' 34.00' RT

+07.79'NB' 34.00' RT

SIGN

SIGN

SIGN

FOOTBRIDGE

FOOTBRIDGE

FLAG

FO

RESERVE ST

MATCH LINE STA 130+50'NB'

N

| PROJECT NO:1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | CONSTRUCTION STAGING DETAIL STAGE 4 | SHEET 72 | E |
|---|---|---|---|---|---|

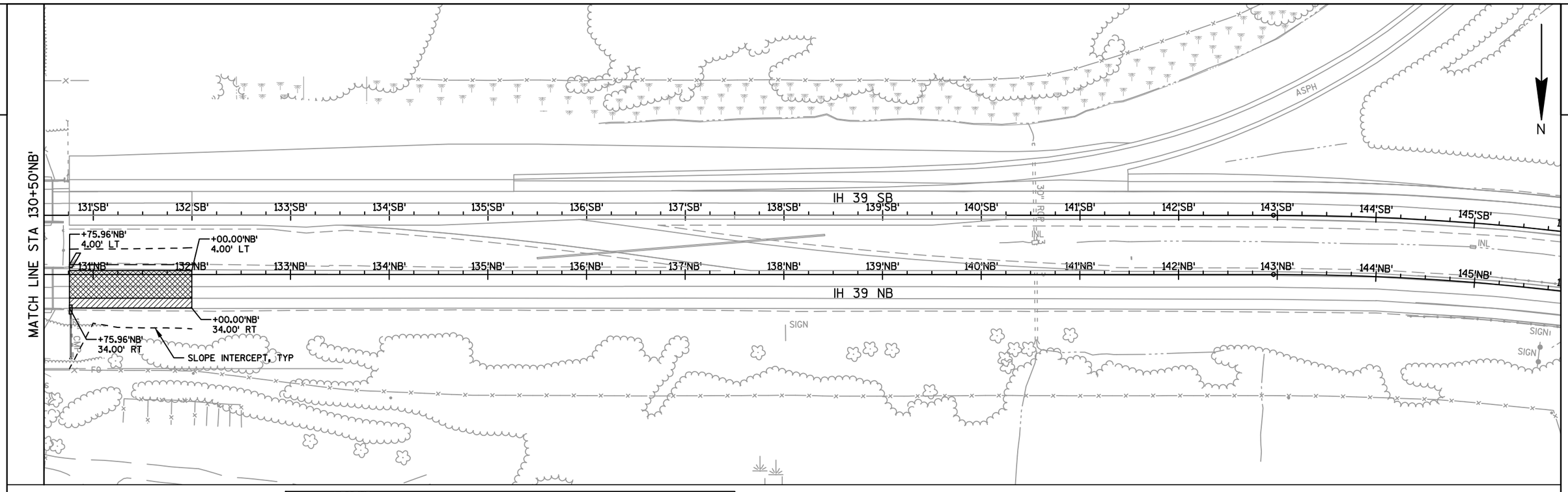
FILE NAME : F:\TR\JOBS\E2031A12\CIVIL 3D\SHEETSPLAN\11660872_026401_S4.DWG

PLOT DATE : 1/29/2014 1:22 PM

PLOT BY : OMNNI ASSOCIATES, INC - ANDREW WESTBROOK

WISDOT/CADDS SHEET 44

2




LEGEND

| | |
|---|---|
| xxxx SAWCUT | 3" HMA PAVEMENT TYPE E-3 |
| MILL AND OVERLAY 5" HMA PAVEMENT TYPE E-3 | 5" TEMPORARY ASPHALTIC SURFACE |
| 8" HMA PAVEMENT TYPE E-10 | |

| PROJECT NO:1166-08-72 | HWY: IH 39 | COUNTY:PORTAGE | CONSTRUCTION STAGING DETAIL STAGE 4 | SHEET 73 | E |
|---|---|---|---|---|---|

FILE NAME : F:\TR\JOBS\E2031A12\CIVIL 3D\SHEETSPLAN\11660872_026401_S4.DWG
PLOT DATE : 1/29/2014 1:23 PM
PLOT BY : OMNNI ASSOCIATES, INC - ANDREW WESTBROOK

2

GOLF GREEN

GOLF COURSE

INL

INL

INL

+50.00'SB'
34.00' LT

IH 39 SB

101'SB' 102'SB' 103'SB' 104'SB' 105'SB' 106'SB' 107'SB' 108'SB' 109'SB' 110'SB' 111'SB' 112'SB' 113'SB' 114'SB' 115'SB'

+19.95'NB'
56.00' LT

+19.95'NB'
4.00' LT

101'NB' 102'NB' 103'NB' 104'NB' 105'NB' 106'NB' 107'NB' 108'NB' 109'NB' 110'NB' 111'NB' 112'NB' 113'NB' 114'NB' 115'NB'

IH 39 NB

SIGN

MH

RIPRAP

SLOPE INTERCEPT, TYP

+89.94'SB'
34.00' LT

+09.90'SB'
38.00' LT

+99.92'SB'
56.00' LT

+23.75'SB'
4.00' RT

IH 39 SB

116'SB' 117'SB' 118'SB' 119'SB' 120'SB' 121'SB' 122'SB' 123'SB' 124'SB' 125'SB' 126'SB' 127'SB' 128'SB' 129'SB' 130'SB'

116'NB' 117'NB' 118'NB' 119'NB' 120'NB' 121'NB' 122'NB' 123'NB' 124'NB' 125'NB' 126'NB' 127'NB' 128'NB' 129'NB' 130'NB'

IH 39 NB

+52.36'NB'
4.00' LT

SIGN

SIGN

SIGN

FOOTBRIDGE

FOOTBRIDGE

FLAG

FO

RESERVE ST

MATCH LINE STA 115+50'NB'

MATCH LINE STA 115+50'NB'

MATCH LINE STA 130+50'NB'

N

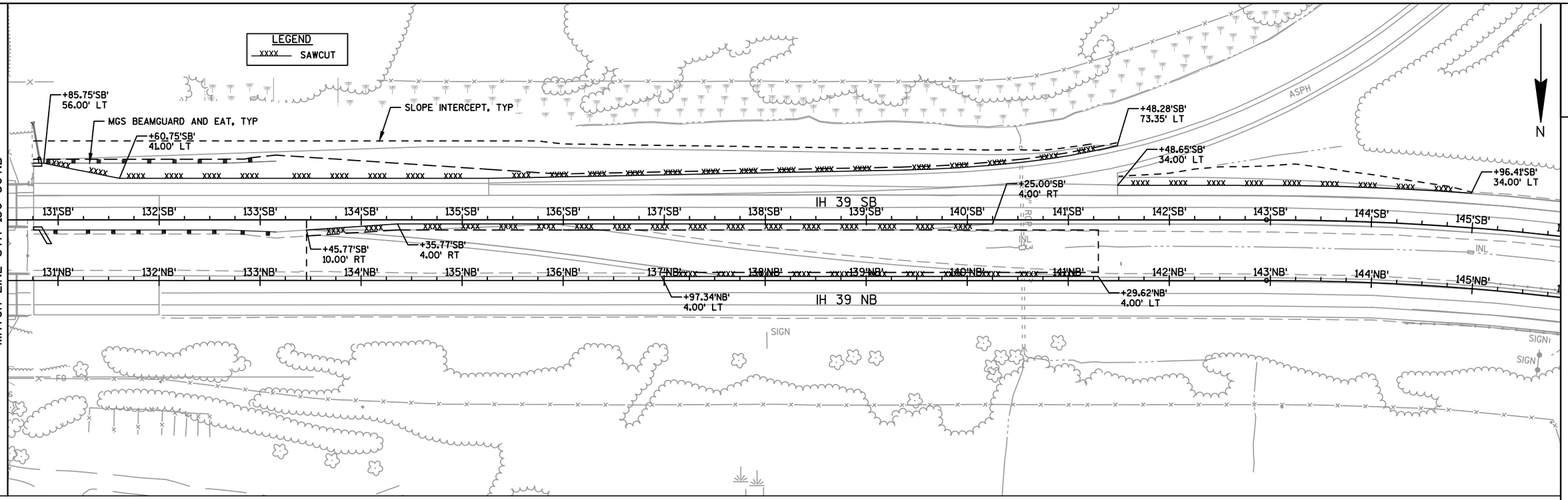
N

2

LEGEND
xxxx SAWCUT

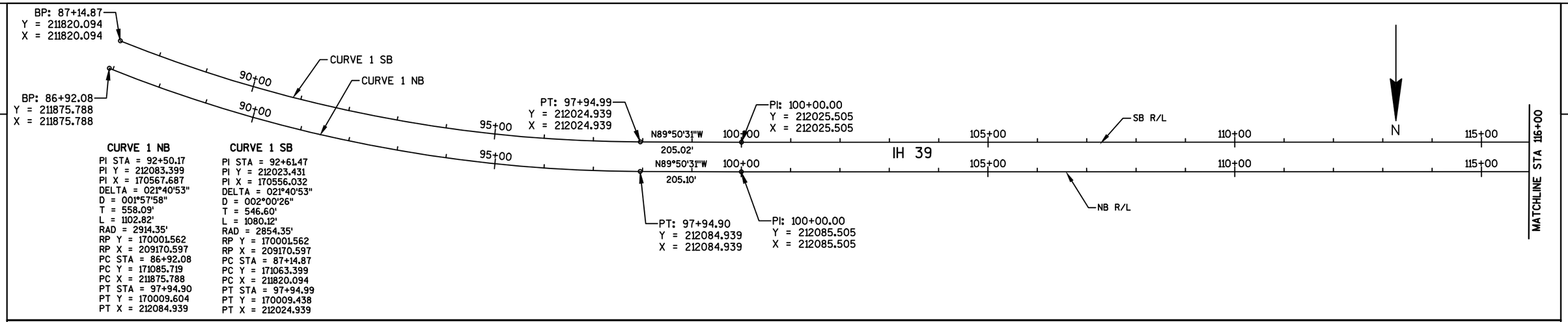
| PROJECT NO:1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | CONSTRUCTION STAGING DETAIL STAGE 5 | SHEET 74 | E |
|---|---|---|---|---|---|

2




2

| PROJECT NO:1166-08-72 | HWY:IH 39 | COUNTY:PORTAGE | CONSTRUCTION STAGING DETAIL STAGE 5 | SHEET 75 | E |
|---|---|---|---|---|---|

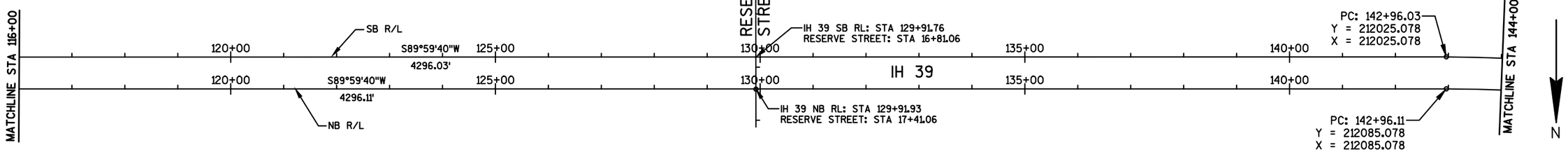


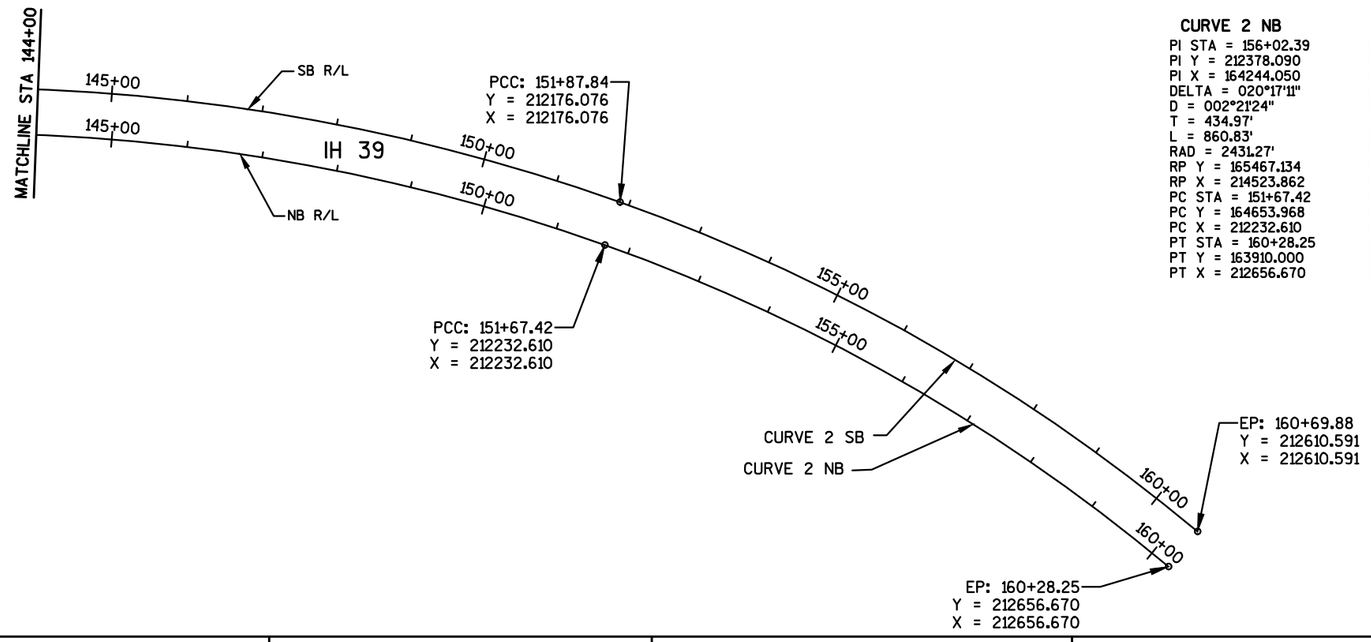

**CURVE 1 NB**

PI STA = 92+50.17
PI Y = 212083.399
PI X = 170567.687
DELTA = 021°40'53"
D = 001°57'58"
T = 558.09'
L = 1102.82'
RAD = 2914.35'
RP Y = 170001.562
RP X = 209170.597
PC STA = 86+92.08
PC Y = 171085.719
PC X = 211875.788
PT STA = 97+94.90
PT Y = 170009.604
PT X = 212084.939

**CURVE 1 SB**

PI STA = 92+61.47
PI Y = 212023.431
PI X = 170556.032
DELTA = 021°40'53"
D = 002°00'26"
T = 546.60'
L = 1080.12'
RAD = 2854.35'
RP Y = 170001.562
RP X = 209170.597
PC STA = 87+14.87
PC Y = 171063.399
PC X = 211820.094
PT STA = 97+94.99
PT Y = 170009.438
PT X = 212024.939



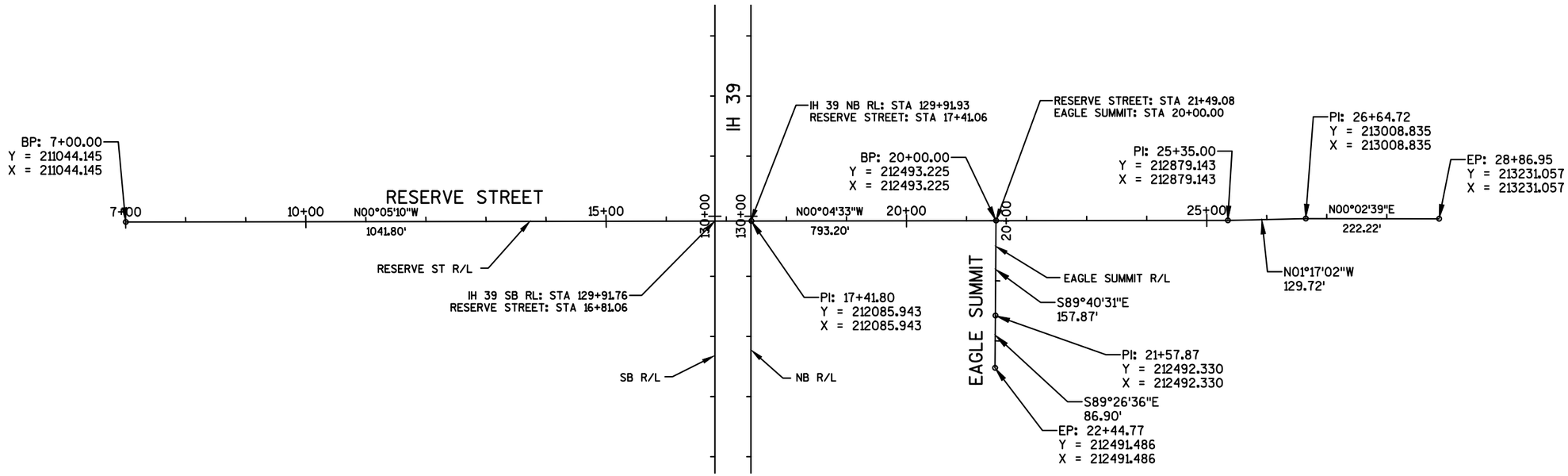

**CURVE 2 NB**

PI STA = 156+02.39
PI Y = 212378.090
PI X = 164244.050
DELTA = 020°17'11"
D = 002°21'24"
T = 434.97'
L = 860.83'
RAD = 2431.27'
RP Y = 165467.134
RP X = 214523.862
PC STA = 151+67.42
PC Y = 164653.968
PC X = 212232.610
PT STA = 160+28.25
PT Y = 163910.000
PT X = 212656.670

**CURVE 2 SB**

PI STA = 156+33.52
PI Y = 212325.146
PI X = 164213.854
DELTA = 020°17'09"
D = 002°18'00"
T = 445.69'
L = 882.04'
RAD = 2491.27'
RP Y = 165467.134
RP X = 214523.862
PC STA = 151+87.84
PC Y = 164633.871
PC X = 212176.076
PT STA = 160+69.88
PT Y = 163871.572
PT X = 212610.591

2




| PROJECT NO: 1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | ALIGNMENT DIAGRAMS | SHEET 77 | E |
|---|---|---|---|---|---|

FILE NAME : F:\TR\JOBS\E2031A12\CIVIL 3D\SHEETSPLAN\11660872_027201_AD.DWG
11660872_027202_ad
PLOT DATE : 1/29/2014 9:14 AM
PLOT BY : OMNNI ASSOCIATES, INC - DAVE PERRY
WISDOT/CADDS SHEET 42

DATE 20JUN14 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 | 1166-08-72 QUANTITY | 1166-08-82 QUANTITY |
|---|---|---|---|---|---|---|
| 0010 | 201.0105 | CLEARING | STA | 28.000 | 28.000 | |
| 0020 | 201.0120 | CLEARING | ID | 16.000 | 16.000 | |
| 0030 | 201.0205 | GRUBBING | STA | 28.000 | 28.000 | |
| 0040 | 201.0220 | GRUBBING | ID | 16.000 | 16.000 | |
| 0050 | 203.0100 | REMOVING SMALL PIPE CULVERTS | EACH | 8.000 | 8.000 | |
| 0060 | 203.0200 | REMOVING OLD STRUCTURE (STATION) 01. 129+91 | LS | 1.000 | 1.000 | |
| 0070 | 203.0200 | REMOVING OLD STRUCTURE (STATION) 02. 129+91 | LS | 1.000 | 1.000 | |
| 0080 | 203.0210.S | ABATEMENT OF ASBESTOS CONTAINING MATERIAL (STRUCTURE) 01. B-49-31 | LS | 1.000 | 1.000 | |
| 0090 | 203.0210.S | ABATEMENT OF ASBESTOS CONTAINING MATERIAL (STRUCTURE) 02. B-49-39 | LS | 1.000 | 1.000 | |
| 0100 | 204.0100 | REMOVING PAVEMENT | SY | 2,405.000 | 2,405.000 | |
| 0110 | 204.0115 | REMOVING ASPHALTIC SURFACE BUTT JOINTS | SY | 12.000 | 12.000 | |
| 0120 | 204.0120 | REMOVING ASPHALTIC SURFACE MILLING | SY | 3,580.000 | 3,580.000 | |
| 0130 | 204.0150 | REMOVING CURB & GUTTER | LF | 115.000 | 115.000 | |
| 0140 | 204.0165 | REMOVING GUARDRAIL | LF | 700.000 | 700.000 | |
| 0150 | 204.0180 | REMOVING DELINEATORS AND MARKERS | EACH | 27.000 | 27.000 | |
| 0160 | 204.0190 | REMOVING SURFACE DRAINS | EACH | 4.000 | 4.000 | |
| 0170 | 204.0210 | REMOVING MANHOLES | EACH | 2.000 | 2.000 | |
| 0180 | 204.0245 | REMOVING STORM SEWER (SIZE) 01. 18-INCH | LF | 700.000 | 700.000 | |
| 0190 | 204.9060.S | REMOVING (ITEM DESCRIPTION) 01. BRICK SUBDIVISION SIGN | EACH | 2.000 | 2.000 | |
| 0200 | 205.0100 | EXCAVATION COMMON | CY | 30,623.000 | 30,623.000 | |
| 0210 | 205.0200 | EXCAVATION ROCK | CY | 20.000 | | 20.000 |
| 0220 | 206.1000 | EXCAVATION FOR STRUCTURES BRIDGES (STRUCTURE) 01. B-49-172 | LS | 1.000 | 1.000 | |
| 0230 | 206.1000 | EXCAVATION FOR STRUCTURES BRIDGES (STRUCTURE) 02. B-49-173 | LS | 1.000 | 1.000 | |
| 0240 | 206.6000.S | TEMPORARY SHORING | SF | 450.000 | 450.000 | |
| 0250 | 208.0100 | BORROW | CY | 6,535.000 | 6,535.000 | |
| 0260 | 210.0100 | BACKFILL STRUCTURE | CY | 520.000 | 520.000 | |
| 0270 | 213.0100 | FINISHING ROADWAY (PROJECT) 01. 1166-08-72 | EACH | 1.000 | 1.000 | |
| 0280 | 305.0110 | BASE AGGREGATE DENSE 3/4-INCH | TON | 5,560.000 | 5,560.000 | |
| 0290 | 305.0120 | BASE AGGREGATE DENSE 1 1/4-INCH | TON | 48,649.000 | 48,649.000 | |
| 0300 | 416.0160 | CONCRETE DRIVEWAY 6-INCH | SY | 206.000 | 206.000 | |
| 0310 | 416.1010 | CONCRETE SURFACE DRAINS | CY | 8.000 | 8.000 | |
| 0320 | 455.0105 | ASPHALTIC MATERIAL PG58-28 | TON | 420.000 | 420.000 | |
| 0330 | 455.0605 | TACK COAT | GAL | 900.000 | 900.000 | |
| 0340 | 460.1100 | HMA PAVEMENT TYPE E-0.3 | TON | 1,670.000 | 1,670.000 | |
| 0350 | 460.1103 | HMA PAVEMENT TYPE E-3 | TON | 2,300.000 | 2,300.000 | |
| 0360 | 460.1110 | HMA PAVEMENT TYPE E-10 | TON | 3,670.000 | 3,670.000 | |
| 0370 | 460.2000 | INCENTIVE DENSITY HMA PAVEMENT | DOL | 4,610.000 | 4,610.000 | |
| 0380 | 460.4110.S | REHEATING HMA PAVEMENT LONGITUDINAL JOINTS | LF | 10,059.000 | 10,059.000 | |
| 0390 | 465.0105 | ASPHALTIC SURFACE | TON | 310.000 | 310.000 | |
| 0400 | 465.0125 | ASPHALTIC SURFACE TEMPORARY | TON | 3,650.000 | 3,450.000 | 200.000 |
| 0410 | 465.0400 | ASPHALTIC SHOULDER RUMBLE STRIPS | LF | 9,140.000 | 9,140.000 | |
| 0420 | 502.0100 | CONCRETE MASONRY BRIDGES | CY | 2,087.000 | 2,087.000 | |
| 0430 | 502.3200 | PROTECTIVE SURFACE TREATMENT | SY | 2,387.000 | 2,387.000 | |
| 0440 | 505.0405 | BAR STEEL REINFORCEMENT HS BRIDGES | LB | 30,660.000 | 30,660.000 | |
| 0450 | 505.0605 | BAR STEEL REINFORCEMENT HS COATED BRIDGES | LB | 302,560.000 | 302,560.000 | |

3

DATE 20JUN14 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 | 1166-08-72 QUANTITY | 1166-08-82 QUANTITY |
|---|---|---|---|---|---|---|
| 0460 | 505.0904 | BAR COUPLERS NO. 4 | EACH | 12.000 | 12.000 | |
| 0470 | 505.0905 | BAR COUPLERS NO. 5 | EACH | 360.000 | 360.000 | |
| 0480 | 505.0906 | BAR COUPLERS NO. 6 | EACH | 38.000 | 38.000 | |
| 0490 | 505.0908 | BAR COUPLERS NO. 8 | EACH | 24.000 | 24.000 | |
| 0500 | 505.0909 | BAR COUPLERS NO. 9 | EACH | 24.000 | 24.000 | |
| 0510 | 516.0500 | RUBBERIZED MEMBRANE WATERPROOFING | SY | 58.000 | 58.000 | |
| 0520 | 520.4015 | CULVERT PIPE TEMPORARY 15-INCH | LF | 292.000 | 292.000 | |
| 0530 | 520.8000 | CONCRETE COLLARS FOR PIPE | EACH | 2.000 | 2.000 | |
| 0540 | 521.1012 | APRON ENDWALLS FOR CULVERT PIPE STEEL 12-INCH | EACH | 2.000 | 2.000 | |
| 0550 | 522.0312 | CULVERT PIPE REINFORCED CONCRETE CLASS IV 12-INCH | LF | 42.000 | 42.000 | |
| 0560 | 522.1012 | APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 12-INCH | EACH | 2.000 | 2.000 | |
| 0570 | 522.1018 | APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 18-INCH | EACH | 1.000 | 1.000 | |
| 0580 | 550.1100 | PILING STEEL HP 10-INCH X 42 LB | LF | 1,105.000 | 1,105.000 | |
| 0590 | 601.0411 | CONCRETE CURB & GUTTER 30-INCH TYPE D | LF | 3,468.000 | 3,468.000 | |
| 0600 | 602.0405 | CONCRETE SIDEWALK 4-INCH | SF | 710.000 | 710.000 | |
| 0610 | 602.0505 | CURB RAMP DETECTABLE WARNING FIELD YELLOW | SF | 48.000 | 48.000 | |
| 0620 | 603.8000 | CONCRETE BARRIER TEMPORARY PRECAST DELIVERED | LF | 7,465.000 | 7,465.000 | |
| 0630 | 603.8125 | CONCRETE BARRIER TEMPORARY PRECAST INSTALLED | LF | 10,153.000 | 10,153.000 | |
| 0640 | 604.0400 | SLOPE PAVING CONCRETE | SY | 656.000 | 656.000 | |
| 0650 | 606.0200 | RIPRAP MEDIUM | CY | 10.000 | 10.000 | |
| 0660 | 608.0412 | STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 12-INCH | LF | 434.000 | 434.000 | |
| 0670 | 608.0415 | STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 15-INCH | LF | 103.000 | 103.000 | |
| 0680 | 608.0418 | STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 18-INCH | LF | 239.000 | 239.000 | |
| 0690 | 608.0424 | STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 24-INCH | LF | 725.000 | 725.000 | |
| 0700 | 608.0430 | STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 30-INCH | LF | 290.000 | 290.000 | |
| 0710 | 608.0436 | STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 36-INCH | LF | 546.000 | 546.000 | |
| 0720 | 611.0420 | RECONSTRUCTING MANHOLES | EACH | 1.000 | | 1.000 |
| 0730 | 611.0530 | MANHOLE COVERS TYPE J | EACH | 9.000 | 9.000 | |
| 0740 | 611.0612 | INLET COVERS TYPE C | EACH | 9.000 | 9.000 | |
| 0750 | 611.0624 | INLET COVERS TYPE H | EACH | 12.000 | 12.000 | |
| 0760 | 611.0639 | INLET COVERS TYPE H-S | EACH | 1.000 | 1.000 | |
| 0770 | 611.0642 | INLET COVERS TYPE MS | EACH | 6.000 | 6.000 | |
| 0780 | 611.1004 | CATCH BASINS 4-FT DIAMETER | EACH | 13.000 | 13.000 | |
| 0790 | 611.2005 | MANHOLES 5-FT DIAMETER | EACH | 6.000 | 6.000 | |
| 0800 | 611.2006 | MANHOLES 6-FT DIAMETER | EACH | 3.000 | 3.000 | |
| 0810 | 611.3003 | INLETS 3-FT DIAMETER | EACH | 9.000 | 9.000 | |
| 0820 | 611.3902 | INLETS MEDIAN 2 GRATE | EACH | 3.000 | 3.000 | |
| 0830 | 612.0212 | PIPE UNDERDRAIN UNPERFORATED 12-INCH | LF | 80.000 | 80.000 | |
| 0840 | 612.0406 | PIPE UNDERDRAIN WRAPPED 6-INCH | LF | 845.000 | 845.000 | |
| 0850 | 612.0902.S | INSULATION BOARD POLYSTYRENE (INCH) 01. 4-INCH | SY | 788.000 | | 788.000 |
| 0860 | 614.0150 | ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD | EACH | 8.000 | 8.000 | |

DATE 20JUN14 — 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 | 1166-08-72 QUANTITY | 1166-08-82 QUANTITY |
|---|---|---|---|---|---|---|
| 0870 | 614.0905 | CRASH CUSHIONS TEMPORARY | EACH | 5.000 | 5.000 | |
| 0880 | 614.2300 | MGS GUARDRAIL 3 | LF | 600.000 | 600.000 | |
| 0890 | 614.2500 | MGS THRIE BEAM TRANSITION | LF | 158.000 | 158.000 | |
| 0900 | 614.2610 | MGS GUARDRAIL TERMINAL EAT | EACH | 4.000 | 4.000 | |
| 0910 | 616.0700.S | FENCE SAFETY | LF | 145.000 | 145.000 | |
| 0920 | 618.0100 | MAINTENANCE AND REPAIR OF HAUL ROADS (PROJECT) 01. 1166-08-72 | EACH | 1.000 | 1.000 | |
| 0930 | 619.1000 | MOBILIZATION | EACH | 1.000 | 1.000 | |
| 0940 | 625.0100 | TOPSOIL | SY | 42,100.000 | 42,100.000 | |
| 0950 | 628.1504 | SILT FENCE | LF | 7,875.000 | 7,875.000 | |
| 0960 | 628.1520 | SILT FENCE MAINTENANCE | LF | 7,875.000 | 7,875.000 | |
| 0970 | 628.1905 | MOBILIZATIONS EROSION CONTROL | EACH | 18.000 | 18.000 | |
| 0980 | 628.1910 | MOBILIZATIONS EMERGENCY EROSION CONTROL | EACH | 7.000 | 7.000 | |
| 0990 | 628.2008 | EROSION MAT URBAN CLASS I TYPE B | SY | 42,100.000 | 42,100.000 | |
| 1000 | 628.7005 | INLET PROTECTION TYPE A | EACH | 33.000 | 33.000 | |
| 1010 | 628.7015 | INLET PROTECTION TYPE C | EACH | 20.000 | 20.000 | |
| 1020 | 628.7504 | TEMPORARY DITCH CHECKS | LF | 528.000 | 528.000 | |
| 1030 | 628.7555 | CULVERT PIPE CHECKS | EACH | 20.000 | 20.000 | |
| 1040 | 629.0210 | FERTILIZER TYPE B | CWT | 27.000 | 27.000 | |
| 1050 | 630.0130 | SEEDING MIXTURE NO. 30 | LB | 1,110.000 | 1,110.000 | |
| 1060 | 630.0160 | SEEDING MIXTURE NO. 60 | LB | 75.000 | 75.000 | |
| 1070 | 630.0200 | SEEDING TEMPORARY | LB | 300.000 | 300.000 | |
| 1080 | 633.0100 | DELINEATOR POSTS STEEL | EACH | 27.000 | 27.000 | |
| 1090 | 633.0500 | DELINEATOR REFLECTORS | EACH | 29.000 | 29.000 | |
| 1100 | 633.1100 | DELINEATORS TEMPORARY | EACH | 42.000 | 42.000 | |
| 1110 | 633.5200 | MARKERS CULVERT END | EACH | 1.000 | 1.000 | |
| 1120 | 634.0614 | POSTS WOOD 4X6-INCH X 14-FT | EACH | 10.000 | 10.000 | |
| 1130 | 634.0616 | POSTS WOOD 4X6-INCH X 16-FT | EACH | 2.000 | 2.000 | |
| 1140 | 634.0618 | POSTS WOOD 4X6-INCH X 18-FT | EACH | 14.000 | 14.000 | |
| 1150 | 635.0200 | SIGN SUPPORTS STRUCTURAL STEEL HS | LB | 696.000 | 696.000 | |
| 1160 | 636.0100 | SIGN SUPPORTS CONCRETE MASONRY | CY | 3.200 | 3.200 | |
| 1170 | 636.0500 | SIGN SUPPORTS STEEL REINFORCEMENT | LB | 196.000 | 196.000 | |
| 1180 | 637.2210 | SIGNS TYPE II REFLECTIVE H | SF | 157.680 | 157.680 | |
| 1190 | 637.2230 | SIGNS TYPE II REFLECTIVE F | SF | 43.000 | 43.000 | |
| 1200 | 638.2101 | MOVING SIGNS TYPE I | EACH | 2.000 | 2.000 | |
| 1210 | 638.2102 | MOVING SIGNS TYPE II | EACH | 2.000 | 2.000 | |
| 1220 | 638.2602 | REMOVING SIGNS TYPE II | EACH | 15.000 | 15.000 | |
| 1230 | 638.3000 | REMOVING SMALL SIGN SUPPORTS | EACH | 16.000 | 16.000 | |
| 1240 | 638.4000 | MOVING SMALL SIGN SUPPORTS | EACH | 3.000 | 3.000 | |
| 1250 | 638.4100 | MOVING STRUCTURAL STEEL SIGN SUPPORTS | EACH | 2.000 | 2.000 | |
| 1260 | 642.5201 | FIELD OFFICE TYPE C | EACH | 1.000 | 1.000 | |
| 1270 | 643.0100 | TRAFFIC CONTROL (PROJECT) 01. 1166-08-72 | EACH | 1.000 | 1.000 | |
| 1280 | 643.0300 | TRAFFIC CONTROL DRUMS | DAY | 16,587.000 | 16,587.000 | |
| 1290 | 643.0420 | TRAFFIC CONTROL BARRICADES TYPE III | DAY | 2,659.000 | 2,659.000 | |
| 1300 | 643.0705 | TRAFFIC CONTROL WARNING LIGHTS TYPE A | DAY | 5,317.000 | 5,317.000 | |
| 1310 | 643.0715 | TRAFFIC CONTROL WARNING LIGHTS TYPE C | DAY | 9,579.000 | 9,579.000 | |
| 1320 | 643.0800 | TRAFFIC CONTROL ARROW BOARDS | DAY | 150.000 | 150.000 | |
| 1330 | 643.0900 | TRAFFIC CONTROL SIGNS | DAY | 13,259.000 | 13,259.000 | |
| 1340 | 643.0920 | TRAFFIC CONTROL COVERING SIGNS TYPE II | EACH | 1.000 | 1.000 | |
| 1350 | 643.1050 | TRAFFIC CONTROL SIGNS PCMS | DAY | 594.000 | 594.000 | |
| 1360 | 645.0130 | GEOTEXTILE FABRIC TYPE R | SY | 50.000 | 50.000 | |
| 1370 | 646.0106 | PAVEMENT MARKING EPOXY 4-INCH | LF | 20,461.000 | 20,461.000 | |
| 1380 | 646.0600 | REMOVING PAVEMENT MARKINGS | LF | 16,731.000 | 16,731.000 | |

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DATE 20JUN14 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 | 1166-08-72 QUANTITY | 1166-08-82 QUANTITY |
|---|---|---|---|---|---|---|
| 1390 | 646.0881.S | PAVEMENT MARKING GROOVED WET REFLECTIVE TAPE 4-INCH | LF | 1,225.000 | 1,225.000 | |
| 1400 | 646.0883.S | PAVEMENT MARKING GROOVED WET REFLECTIVE TAPE 8-INCH | LF | 1,133.000 | 1,133.000 | |
| 1410 | 647.0206 | PAVEMENT MARKING ARROWS BIKE LANE EPOXY | EACH | 5.000 | 5.000 | |
| 1420 | 647.0406 | PAVEMENT MARKING WORDS BIKE LANE EPOXY | EACH | 13.000 | 13.000 | |
| 1430 | 647.0726 | PAVEMENT MARKING DIAGONAL EPOXY 12-INCH | LF | 26.000 | 26.000 | |
| 1440 | 647.0766 | PAVEMENT MARKING CROSSWALK EPOXY 6-INCH | LF | 218.000 | 218.000 | |
| 1450 | 649.0100 | TEMPORARY PAVEMENT MARKING 4-INCH | LF | 6,674.000 | 6,674.000 | |
| 1460 | 649.0400 | TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH | LF | 19,475.000 | 19,475.000 | |
| 1470 | 649.0701 | TEMPORARY PAVEMENT MARKING 8-INCH | LF | 39.000 | 39.000 | |
| 1480 | 649.0801 | TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH | LF | 831.000 | 831.000 | |
| 1490 | 649.2100 | TEMPORARY RAISED PAVEMENT MARKERS | EACH | 732.000 | 732.000 | |
| 1500 | 650.4000 | CONSTRUCTION STAKING STORM SEWER | EACH | 35.000 | 35.000 | |
| 1510 | 650.4500 | CONSTRUCTION STAKING SUBGRADE | LF | 11,293.000 | 11,293.000 | |
| 1520 | 650.5000 | CONSTRUCTION STAKING BASE | LF | 13,637.000 | 13,637.000 | |
| 1530 | 650.5500 | CONSTRUCTION STAKING CURB GUTTER AND CURB & GUTTER | LF | 3,488.000 | 3,488.000 | |
| 1540 | 650.6000 | CONSTRUCTION STAKING PIPE CULVERTS | EACH | 3.000 | 3.000 | |
| 1550 | 650.6500 | CONSTRUCTION STAKING STRUCTURE LAYOUT (STRUCTURE) 01. B-49-172 | LS | 1.000 | 1.000 | |
| 1560 | 650.6500 | CONSTRUCTION STAKING STRUCTURE LAYOUT (STRUCTURE) 02. B-49-173 | LS | 1.000 | 1.000 | |
| 1570 | 650.8500 | CONSTRUCTION STAKING ELECTRICAL INSTALLATIONS (PROJECT) 01. 1166-08-82 | LS | 1.000 | | 1.000 |
| 1580 | 650.9910 | CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (PROJECT) 01. 1166-08-72 | LS | 1.000 | 1.000 | |
| 1590 | 650.9910 | CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (PROJECT) 01. 1166-08-82 | LS | 1.000 | | 1.000 |
| 1600 | 650.9920 | CONSTRUCTION STAKING SLOPE STAKES | LF | 19,809.000 | 19,809.000 | |
| 1610 | 652.0225 | CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH | LF | 2,915.000 | | 2,915.000 |
| 1620 | 652.0335 | CONDUIT RIGID NONMETALLIC SCHEDULE 80 3-INCH | LF | 245.000 | | 245.000 |
| 1630 | 653.0135 | PULL BOXES STEEL 24X36-INCH | EACH | 5.000 | | 5.000 |
| 1640 | 690.0150 | SAWING ASPHALT | LF | 14,466.000 | 14,466.000 | |
| 1650 | 690.0250 | SAWING CONCRETE | LF | 30.000 | 30.000 | |
| 1660 | 715.0502 | INCENTIVE STRENGTH CONCRETE STRUCTURES | DOL | 12,522.000 | 12,522.000 | |
| 1670 | ASP.1T0A | ON-THE-JOB TRAINING APPRENTICE AT $5.00/HR | HRS | 2,400.000 | 2,400.000 | |
| 1680 | ASP.1T0G | ON-THE-JOB TRAINING GRADUATE AT $5.00/HR | HRS | 1,980.000 | 1,980.000 | |
| 1690 | SPV.0035 | SPECIAL 01. EXCAVATION OF PHRAGMITES SOIL | CY | 1,130.000 | 1,130.000 | |
| 1700 | SPV.0045 | SPECIAL 01. PCMS CELLULAR COMMUNICATION | DAY | 594.000 | 594.000 | |
| 1710 | SPV.0060 | SPECIAL 01. STANDARD WATER SERVICE MANHOLE | EACH | 2.000 | | 2.000 |
| 1720 | SPV.0085 | SPECIAL 01. BAR STEEL REINFORCEMENT HS STAINLESS BRIDGES | LB | 4,012.000 | 4,012.000 | |
| 1730 | SPV.0090 | SPECIAL 01. SANITARY SEWER FORCE MAIN (4-INCH) | LF | 270.000 | | 270.000 |
| 1740 | SPV.0090 | SPECIAL 02. SANITARY SEWER LATERAL (1.5-INCH) | LF | 198.000 | | 198.000 |
| 1750 | SPV.0090 | SPECIAL 03. WATER MAIN (6-INCH) | LF | 20.000 | | 20.000 |
| 1760 | SPV.0090 | SPECIAL 04. WATER MAIN (8-INCH) | LF | 280.000 | | 280.000 |

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DATE 20JUN14 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 | 1166-08-72 QUANTITY | 1166-08-82 QUANTITY |
|---|---|---|---|---|---|---|
| 1770 | SPV.0090 | SPECIAL 05. WATER SERVICE LATERAL (2-INCH) | LF | 89.000 | | 89.000 |
| 1780 | SPV.0105 | SPECIAL 01. CONSTRUCTION STAKING SANITARY AND WATER MAIN | LS | 1.000 | | 1.000 |
| 1790 | SPV.0105 | SPECIAL 02. TEMPORARY WATER SERVICE | LS | 1.000 | | 1.000 |



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## CLEARING AND GRUBBING

| STATION | TO | STATION | LOCATION | 201.0105 CLEARING STA | 201.0120 CLEARING ID | 201.0205 GRUBBING STA | 201.0220 GRUBBING ID |
|---|---|---|---|---|---|---|---|
| PROJECT 1166-08-72 | | | | | | | |
| CATEGORY 0010 | | | | | | | |
| 102+00 | - | 106+00 | IH 39 SB | 4 | --- | 4 | --- |
| 114+00 | - | 115+00 | IH 39 SB | --- | 8 | --- | 8 |
| 121+00 | - | 130+00 | IH 39 SB | 9 | --- | 9 | --- |
| 130+00 | - | 137+00 | IH 39 SB | 5 | 8 | 5 | 8 |
| 128+00 | - | 132+00 | IH 39 NB | 4 | --- | 4 | --- |
| 13+00 | - | 19+00 | RESERVE ST | 1 | --- | 1 | --- |
| 19+00 | - | 22+00 | RESERVE ST | 2 | --- | 2 | --- |
| 20+60 | - | 21+50 | EAGLE SUMMIT | --- | --- | --- | --- |
| CATEGORY 0010 SUBTOTALS | | | | 25 | 16 | 25 | 16 |
| CATEGORY 0040 | | | | | | | |
| 8+27 | - | 13+00 | RESERVE ST | 2 | --- | 2 | --- |
| 22+00 | - | 25+00 | RESERVE ST | 1 | --- | 1 | --- |
| 25+00 | - | 26+65 | RESERVE ST | --- | --- | --- | --- |
| CATEGORY 0040 SUBTOTALS | | | | 3 | 0 | 3 | 0 |
| PROJECT 1166-08-72 TOTALS | | | | 28 | 16 | 28 | 16 |

## REMOVING CURB & GUTTER

| STATION | TO | STATION | DIRECTION | LOCATION | 204.0150 REMOVING CURB & GUTTER LF |
|---|---|---|---|---|---|
| PROJECT 1166-08-72 | | | | | |
| CATEGORY 0010 | | | | | |
| 8+25 | - | 8+30 | RT | RESERVE ST | 5 |
| 8+65 | - | 8+75 | LT | RESERVE ST | 10 |
| 25+31 | - | 25+71 | LT | RESERVE ST | 60 |
| 25+84 | - | 25+91 | LT | RESERVE ST | 30 |
| 26+28 | - | 26+36 | LT | RESERVE ST | 10 |
| PROJECT 1166-08-72 TOTAL | | | | | 115 |

## REMOVING DELINEATORS

| STAGE | STATION | TO | STATION | LOCATION | 204.0180 REMOVING DELINEATORS AND MARKERS EACH | REMARKS |
|---|---|---|---|---|---|---|
| PROJECT 1166-08-72 | | | | | | |
| CATEGORY 0010 | | | | | | |
| 2 | 102+50 | - | 130+00 | IH 39 SB | 7 | |
| 2 | 130+00 | - | 146+00 | IH 39 SB | 14 | |
| 4 | 115+00 | - | 130+00 | IH 39 NB | 3 | |
| 4 | 130+00 | - | 145+00 | IH 39 NB | 1 | |
| 5 | 111+00 | - | 112+25 | IH 39 NB | 2 | MAINTENANCE CROSSOVER |
| PROJECT 1166-08-72 TOTAL | | | | | 27 | |

## REMOVING PAVEMENT

| STAGE | STATION | TO | STATION | LOCATION | 204.0100 REMOVING PAVEMENT SY |
|---|---|---|---|---|---|
| PROJECT 1166-08-72 | | | | | |
| CATEGORY 0010 | | | | | |
| 3 | 126+25 | - | 129+25 | IH 39 SB | 800 |
| 3 | 130+60 | - | 132+00 | IH 39 SB | 380 |
| 4 | 126+25 | - | 129+25 | IH 39 NB | 800 |
| 4 | 130+60 | - | 132+00 | IH 39 NB | 370 |
| CATEGORY 0010 SUBTOTAL | | | | | 2,350 |
| CATEGORY 0040 | | | | | |
| 4 | 25+03 | - | 25+29 | RESERVE ST | 55 |
| CATEGORY 0040 SUBTOTAL | | | | | 55 |
| PROJECT 1166-08-72 TOTAL | | | | | 2,405 |

## REMOVING GUARDRAIL

| STAGE | STATION | TO | STATION | DIRECTION | LOCATION | 204.0165 REMOVING GUARDRAIL LF |
|---|---|---|---|---|---|---|
| PROJECT 1166-08-72 | | | | | | |
| CATEGORY 0010 | | | | | | |
| 1 | 130+70 | - | 132+95 | RT | IH 39 SB | 225 |
| 2 | 130+70 | - | 131+95 | LT | IH 39 SB | 125 |
| 4 | 127+90 | - | 129+15 | RT | IH 39 NB | 125 |
| 4 | 126+90 | - | 129+15 | LT | IH 39 NB | 225 |
| PROJECT 1166-08-72 TOTAL | | | | | | 700 |

## REMOVING SMALL PIPE CULVERTS & SURFACE DRAINS

| STAGE | STATION | DIR. | LOCATION | 203.0100 REMOVING SMALL PIPE CULVERTS EACH | 204.0190 REMOVING SURFACE DRAINS EACH |
|---|---|---|---|---|---|
| PROJECT 1166-08-72 | | | | | |
| CATEGORY 0010 | | | | | |
| 2 | 130+75 | LT | IH 39 SB | --- | 1 |
| 3 | 130+75 | RT | IH 39 SB | --- | 1 |
| 4 | 130+75 | LT | IH 39 NB | --- | 1 |
| 4 | 130+75 | RT | IH 39 NB | --- | 1 |
| 4 | 19+27 | LT | RESERVE ST | 1 | --- |
| 4 | 19+94 | LT&RT | RESERVE ST | 1 | --- |
| 4 | 21+49 | RT | RESERVE ST | 1 | --- |
| CATEGORY 0010 SUBTOTALS | | | | 3 | 4 |
| CATEGORY 0040 | | | | | |
| 4 | 23+04 | LT | RESERVE ST | 1 | --- |
| 4 | 23+83 | RT | RESERVE ST | 1 | --- |
| 4 | 24+38 | LT | RESERVE ST | 1 | --- |
| 4 | 25+16 | RT | RESERVE ST | 1 | --- |
| 4 | 26+03 | LT | RESERVE ST | 1 | --- |
| CATEGORY 0040 SUBTOTALS | | | | 5 | 0 |
| PROJECT 1166-08-72 TOTALS | | | | 8 | 4 |

## REMOVING MANHOLES

| STATION | DIR | LOCATION | 204.0210 REMOVING MANHOLES EACH |
|---|---|---|---|
| PROJECT 1166-08-72 CATEGORY 0010 | | | |
| 10+15 | RT | RESERVE ST | 1 |
| 14+07 | RT | RESERVE ST | 1 |
| PROJECT 1166-08-72 TOTAL | | | 2 |

## REMOVING STORM SEWER

| STATION TO STATION | LOCATION | 204.0245 18-INCH LF |
|---|---|---|
| PROJECT 1166-08-72 | CATEGORY 0010 | |
| 8+65 - 22+00 | RESERVE ST | 700 |
| PROJECT 1166-80-72 TOTAL | | 700 |

## REMOVING BRICK SUBDIVISION SIGN

| LOCATION | 204.9060.S1 EA |
|---|---|
| PROJECT 1166-08-72 | |
| CATEGORY 0010 | |
| EAGLE SUMMIT ENTRANCE | 2 |
| PROJECT 1166-08-72 TOTAL | 2 |

## EARTHWORK SUMMARY

| ROADWAY | STATION TO STATION | 205.0100 EXCAVATION COMMON (CY) | | SALVAGED / UNUSABLE PAVEMENT MATERIAL (CY) | AVAILABLE MATERIAL (CY) NOTE 1 | UNEXPANDED FILL (CY) NOTE 5 | PHRAGMITES SOIL FILL (CY) NOTE 4 | EXPANDED FILL (CY) NOTE 2 FACTOR 1.25 | MASS ORDINATE (CY) NOTE 3 | WASTE (CY) | 208.0100 BORROW (CY) | COMMENT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PROJECT 1166-08-72 | | | | | | | | | | | | |
| CATEGORY 0010 | | | | | | | | | | | | |
| IH39 STAGE 1/2 | 102+50 - 144+96 | 4,746 | 0 | 0 | 4,746 | 9,024 | 680 | 11,280 | -6,534 | 0 | 6,535 | |
| IH39 STAGE 3 | 115+25 - 141+30 | 6,084 | 0 | 542 | 5,541 | 641 | 0 | 801 | 4,740 | 4,740 | 0 | |
| IH39 STAGE 4 | 120+75 - 132+00 | 5,304 | 0 | 516 | 4,788 | 485 | 0 | 606 | 4,182 | 4,182 | 0 | |
| IH39 STAGE 5 | 102+75 - 144+92 | 8,080 | 0 | 0 | 8,080 | 118 | 0 | 148 | 7,932 | 7,932 | 0 | |
| RESERVE ST | 13+00 - 22+00 | 3,167 | 0 | 0 | 3,167 | 1,083 | 0 | 1,353 | 1,814 | 1,814 | 0 | |
| EAGLE SUMMIT | 20+25 - 21+50 | 437 | 0 | 0 | 437 | 30 | 0 | 38 | 399 | 399 | 0 | |
| | 0010 CATEGORY TOTALS | 27,819 | 0 | 1,059 | 26,760 | 11,381 | 680 | 14,226 | 12,534 | 19,067 | 6,535 | |
| CATEGORY 0040 | | | | | | | | | | | | |
| RESERVE ST | 8+50 - 13+00 / 22+00 - 27+00 | 2,804 | 0 | 0 | 2,804 | 838 | 0 | 1,048 | 1,757 | 1,757 | 0 | |
| | PROJECT 1166-80-72 TOTALS | 30,623 | | 1,059 | 29,564 | 12,219 | 680 | 15,274 | 14,291 | 20,824 | 6,535 | |

NOTE 1: ALL EXCAVATED ASPHALT MATERIAL ASSUMED USABLE AS FILL.
NOTE 2: EXPANDED FILL = (FILL EXPANSION FACTOR) * (UNEXPANDED FILL).
NOTE 3: MASS ORDINATE = (AVAILABLE MATERIAL) - (EXPANDED FILL).
NOTE 4: PHRAGMITES SOIL EXCAVATION QUANTITIES ARE LISTED IN ITEM TABLE. EXCAVATION VOLUME REDUCED BY 0.60 TO DETERMINE REQUIRED VOLUME IN FILL.
NOTE 5: UNEXPANDED FILL VOLUME DOES NOT INCLUDE VOLUME TO BE TAKEN BY PHRAGMITES SOIL.

## EXCAVATION ROCK

| STATION | TO | STATION | DIRECTION | LOCATION | 205.0200 EXCAVATION ROCK CY | REMARKS |
|---|---|---|---|---|---|---|
| PROJECT 1166-08-82 | | | | | | |
| CATEGORY 0020 | | | | | | |
| 15+80 | - | 16+60 | LT/RT | RESERVE ST. | 20 | |

PROJECT 1166-08-82 TOTALS 20

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## BASE AGGREGATE DENSE

| STAGE | STATION TO STATION | LOCATION | 305.0110 BASE AGGREGATE DENSE 3/4-INCH TON | 305.0120 BASE AGGREGATE DENSE 1 1/4-INCH TON |
|---|---|---|---|---|
| PROJECT 1166-08-72 | | | | |
| CATEGORY 0010 | | | | |
| 1 | 102+50 - 130+00 | IH 39 | --- | 50 |
| 1 | 130+00 - 149+00 | IH 39 | --- | 50 |
| 2 | 102+50 - 130+00 | IH 39 | --- | 9,600 |
| 2 | 130+00 - 149+00 | IH 39 | --- | 4,500 |
| 3 | 102+50 - 130+00 | IH 39 | 480 | 7,600 |
| 3 | 130+00 - 149+00 | IH 39 | 220 | 3,200 |
| 4 | 102+50 - 130+00 | IH 39 | 680 | 7,300 |
| 4 | 130+00 - 149+00 | IH 39 | 100 | 1,250 |
| 5 | 102+50 - 130+00 | IH 39 | 2,400 | 3,400 |
| 5 | 130+00 - 149+00 | IH 39 | 1,550 | 3,300 |
| 4 | 8+27 - 13+00 | RESERVE ST | --- | 1,570 |
| 4 | 13+00 - 19+00 | RESERVE ST | 10 | 1,980 |
| 4 | 19+00 - 22+00 | RESERVE ST | 20 | 1,160 |
| 4 | 20+60 - 21+50 | EAGLE SUMMIT | 30 | 300 |
| | | CATEGORY 0010 SUBTOTAL | 5,490 | 45,260 |
| CATEGORY 0040 | | | | |
| 4 | 22+00 - 25+00 | RESERVE ST | 50 | 1,020 |
| 4 | 25+00 - 26+65 | RESERVE ST | 20 | 740 |
| 4 | 8+65 - 13+00 | SHARED USE PATH | --- | 250 |
| 4 | 22+00 - 25+00 | SHARED USE PATH | --- | 160 |
| 4 | 25+00 - 25+63 | SHARED USE PATH | --- | 30 |
| | | CATEGORY 0040 SUBTOTAL | 70 | 2,200 |
| CATEGORY 0050 | | | | |
| 4 | 13+00 - 19+00 | SHARED USE PATH | --- | 340 |
| 4 | 19+00 - 22+00 | SHARED USE PATH | --- | 160 |
| | | CATEGORY 0050 SUBTOTAL | 0 | 500 |
| | | PROJECT 1166-08-72 TOTALS | 5,560 | 47,960 |

## CONCRETE DRIVEWAYS

| STATION | LOCATION | DIR | 416.0160 6-INCH SY |
|---|---|---|---|
| PROJECT 1166-08-72 | | | |
| CATEGORY 0010 | | | |
| 15+32 | RESERVE ST | RT | 28 |
| 19+27 | RESERVE ST | LT | 47 |
| | CATEGORY 0010 SUBTOTAL | | 75 |
| CATEGORY 0040 | | | |
| 23+04 | RESERVE ST | LT | 33 |
| 23+83 | RESERVE ST | RT | 44 |
| 24+38 | RESERVE ST | LT | 25 |
| 25+16 | RESERVE ST | RT | 29 |
| | CATEGORY 0040 SUBTOTAL | | 131 |
| | PROJECT 1166-08-72 TOTAL | | 206 |

3

## ASPHALTIC ITEMS

| STAGE | STATION | TO | STATION | LOCATION | 455.0605 TACK COAT GAL | 455.0105 ASPHALTIC MATERIAL PG58-28 TON | 460.1100 HMA PAVEMENT TYPE E-0.3 TON | 460.1103 HMA PAVEMENT TYPE E-3 TON | 460.1110 HMA PAVEMENT TYPE E-10 TON | 465.0105 ASPHALTIC SURFACE TON | 465.0125 ASPHALTIC SURFACE TEMPORARY TON | 460.4110.S REHEATING LONG. JOINTS LF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PROJECT 1166-08-72 | | | | | | | | | | | | |
| CATEGORY 0010 | | | | | | | | | | | | |
| 1 | 115+00 | - | 130+00 | IH 39 SB | 20 | 20 | --- | 280 | --- | --- | --- | --- |
| 1 | 130+00 | - | 145+00 | IH 39 SB | 30 | 20 | --- | 310 | --- | --- | --- | --- |
| 2 | 115+00 | - | 130+00 | IH 39 SB | 220 | 50 | --- | 830 | 120 | --- | 1,580 | --- |
| 2 | 130+00 | - | 149+00 | IH 39 SB | 110 | 40 | --- | 400 | 280 | --- | 720 | --- |
| 3 | 115+00 | - | 130+00 | IH 39 NB - MEDIAN CROSSOVER | 40 | 0 | --- | 50 | --- | --- | 470 | --- |
| 3 | 130+00 | - | 145+00 | IH 39 NB - MEDIAN CROSSOVER | 40 | 0 | --- | 50 | --- | --- | 380 | --- |
| 3 | 115+00 | - | 130+00 | IH 39 SB | 90 | 90 | --- | --- | 1,650 | --- | --- | 3,450 |
| 3 | 130+00 | - | 145+00 | IH 39 SB | 20 | 20 | --- | 160 | 150 | --- | --- | 375 |
| 4 | 115+00 | - | 130+00 | IH 39 NB | 90 | 80 | --- | 190 | 1,290 | --- | --- | 2,499 |
| 4 | 130+00 | - | 145+00 | IH 39 NB | 10 | 10 | --- | 30 | 180 | --- | --- | 375 |
| 4 | 8+65 | - | 13+00 | RESERVE ST. | 40 | 20 | 390 | --- | --- | --- | --- | 630 |
| 4 | 13+00 | - | 19+00 | RESERVE ST. | 50 | 30 | 490 | --- | --- | --- | --- | 1,200 |
| 4 | 19+00 | - | 22+00 | RESERVE ST. | 30 | 20 | 290 | --- | --- | --- | --- | 600 |
| 4 | 20+60 | - | 21+50 | EAGLE SUMMIT | 10 | 0 | 60 | --- | --- | --- | --- | --- |
| UNDISTRIBUTED | | | | | --- | --- | --- | --- | --- | --- | 300 | --- |
| | | | | CATEGORY 0010 SUBTOTALS | 800 | 400 | 1,230 | 2,300 | 3,670 | 0 | 3,450 | 9,129 |
| CATEGORY 0040 | | | | | | | | | | | | |
| 4 | 8+65 | - | 13+00 | RESERVE ST. TRAIL | 10 | --- | --- | --- | --- | 80 | --- | --- |
| 4 | 22+00 | - | 25+00 | RESERVE ST. TRAIL | 10 | --- | --- | --- | --- | 50 | --- | --- |
| 4 | 25+00 | - | 25+45 | RESERVE ST. TRAIL | 0 | --- | --- | --- | --- | 10 | --- | --- |
| 4 | 22+00 | - | 25+00 | RESERVE ST. | 30 | 10 | 250 | --- | --- | --- | --- | 600 |
| 4 | 25+00 | - | 26+65 | RESERVE ST. | 20 | 10 | 190 | --- | --- | --- | --- | 330 |
| | | | | CATEGORY 0040 SUBTOTALS | 70 | 20 | 440 | 0 | 0 | 140 | 0 | 930 |
| CATEGORY 0050 | | | | | | | | | | | | |
| 4 | 13+00 | - | 19+00 | RESERVE ST. TRAIL | 20 | --- | --- | --- | --- | 120 | --- | --- |
| 4 | 19+00 | - | 22+00 | RESERVE ST. TRAIL | 10 | --- | --- | --- | --- | 50 | --- | --- |
| | | | | CATEGORY 0050 SUBTOTALS | 30 | 0 | 0 | 0 | 0 | 170 | 0 | 0 |
| | | | | PROJECT 1166-08-72 TOTALS | 900 | 420 | 1,670 | 2,300 | 3,670 | 310 | 3,450 | 10,059 |
| PROJECT 1166-08-82 | | | | | | | | | | | | |
| CATEGORY 0020 | | | | | | | | | | | | |
| UNDISTRIBUTED | | | | RESERVE ST | --- | --- | --- | --- | --- | --- | 200 | --- |
| | | | | PROJECT 1166-08-82 TOTALS | --- | --- | --- | --- | --- | --- | 200* | --- |

* FOR 6" THICK TEMPORARY PATCH OVER UTILITY TRENCHES PRIOR TO FULL REOCNSTRUCTION OF RESERVE ST.

3

## RUMBLE STRIPS

| STAGE | STATION | TO | STATION | LOCATION | 204.0115 REMOVING ASPHALTIC SURFACE BUTT JOINTS SY | 204.0120 REMOVING ASPHALTIC SURFACE MILLING SY | 465.0400 ASPHALT SHOULDER RUMBLE STRIP LF | REMARKS |
|---|---|---|---|---|---|---|---|---|
| PROJECT 1166-08-72 | | | | | | | | |
| CATEGORY 0010 | | | | | | | | |
| 1 | 114+50 | - | 130+00 | IH 39 SB | 1 | 650 | --- | RT - MILL 4' SHOULDER TO 5" |
| 1 | 130+00 | - | 140+25 | IH 39 SB | 1 | 420 | --- | RT - MILL 4' SHOULDER TO 5" |
| 2 | 102+50 | - | 117+56 | IH 39 SB | 2 | 1,670 | --- | LT - MILL 10' SHOULDER TO 5" |
| 2 | 141+50 | - | 149+00 | IH 39 SB | 4 | 840 | --- | LT - MILL 10' SHOULDER TO 5" |
| 3 | 115+00 | - | 130+00 | IH 39 NB | 2 | --- | --- | LT |
| 3 | 130+00 | - | 142+00 | IH 39 NB | 2 | --- | --- | LT |
| 4 | 120+75 | - | 130+00 | IH 39 NB | --- | --- | 1,670 | LT & RT |
| 4 | 130+00 | - | 132+00 | IH 39 NB | --- | --- | 250 | LT & RT |
| 5 | 102+50 | - | 130+00 | IH 39 SB | --- | --- | 4,140 | LT & RT |
| 5 | 130+00 | - | 141+50 | IH 39 SB | --- | --- | 1,450 | LT & RT |
| 5 | 141+50 | - | 149+00 | IH 39 SB | --- | --- | 760 | LT |
| 5 | 115+00 | - | 130+00 | IH 39 NB | --- | --- | 435 | LT (CROSSOVER) |
| 5 | 130+00 | - | 145+00 | IH 39 NB | --- | --- | 435 | LT (CROSSOVER) |
| | | | PROJECT 1166-08-72 TOTALS | | 12 | 3,580 | 9,140 | |

## CONCRETE CURB & GUTTER

| STAGE | STATION TO STATION | LOCATION | 601.0411 CONCRETE CURB & GUTTER 30-INCH TYPE D LF |
|---|---|---|---|
| PROJECT 1166-08-72 | | | |
| CATEGORY 0010 | | | |
| 4 | 13+00 - 19+00 | RESERVE ST | 1,200 |
| 4 | 19+00 - 22+00 | RESERVE ST | 624 |
| | CATEGORY 0010 SUBTOTAL | | 1,824 |
| CATEGORY 0040 | | | |
| 4 | 8+27 - 13+00 | RESERVE ST | 910 |
| 4 | 22+00 - 25+00 | RESERVE ST | 600 |
| 4 | 25+00 - 26+65 | RESERVE ST | 134 |
| | CATEGORY 0040 SUBTOTAL | | 1,644 |
| | PROJECT 1166-08-72 TOTAL | | 3,468 |

## CONCRETE SIDEWALK

| STATION TO STATION | DIR | LOCATION | 602.0405 CONCRETE SIDEWALK 4-INCH SF | 602.0505 CURB RAMP DETECTABLE WARNING FIELD YELLOW SF |
|---|---|---|---|---|
| PROJECT 1166-08-72 | | | | |
| CATEGORY 0010 | | | | |
| 20+96 - 21+05 | LT | RESERVE ST | 45 | 8 |
| 20+96 - 21+30 | RT | RESERVE ST | 275 | 16 |
| CATEGORY 0010 SUBTOTALS | | | 320 | 24 |
| CATEGORY 0040 | | | | |
| 25+45 - 25+63 | LT | RESERVE ST | 140 | 16 |
| 26+12 - 26+40 | LT | RESERVE ST | 250 | 8 |
| CATEGORY 0040 SUBTOTALS | | | 390 | 24 |
| PROJECT 1166-08-72 TOTALS | | | 710 | 48 |

## TEMPORARY CONCRETE BARRIER

| STAGE | STA TO STA | LOCATION | DIR | 603.8000 CONCRETE BARRIER TEMPORARY PRECAST DELIVERED LF | 603.8125 CONCRETE BARRIER TEMPORARY PRECAST INSTALLED LF | 614.0905 CRASH CUSHIONS TEMPORARY ** EACH | CRASH CUSHION OBJECT MARKING PATTERN | REMARKS |
|---|---|---|---|---|---|---|---|---|
| PROJECT 1166-08-72 | | | | | | | | |
| CATEGORY 0010 | | | | | | | | |
| 2 | 116+50 - 130+00 | IH 39 SB | LT | 1,350 | 1,350 | --- | | |
| 2 | 130+00 - 139+55 | IH 39 SB | LT | 955 | 955 | 1 | OM-3R | |
| 2 | 130+00 - 136+35 | IH 39 SB | RT | 565 | 565 | 1 | OM-3L | |
| 3 | 105+50 - 130+00 | IH 39 SB | LT | 2,375 | 2,375 | --- | | |
| 3 | 130+00 - 141+00 | IH 39 SB | LT | 1,040 | 1,040 | 1 | OM-3R | |
| 3 | 116+50 - 130+00 | IH 39 SB | LT | --- | 1,350 | --- | OM-3L | RELOCATE FROM STAGE 2 |
| 3 | 130+00 - 136+60 | IH 39 SB | LT | --- | 661 | 1 | | RELOCATE FROM STAGE 2 |
| 4 | 105+50 - 130+00 | IH 39 SB | LT | --- | --- | --- | | INSTALLED IN STAGE 3 |
| 4 | 130+00 - 141+00 | IH 39 SB | LT | --- | --- | --- | | INSTALLED IN STAGE 3 |
| 4 | 117+50 - 130+00 | IH 39 SB | LT | --- | --- | --- | | INSTALLED IN STAGE 3 |
| 4 | 130+00 - 135+65 | IH 39 SB | LT | --- | 465 | --- | | RELOCATE FROM STAGE 3 |
| 4 | 117+00 - 130+00 | IH 39 NB | LT & RT | 1,180 | 1,292 | 1 | OM-3R | RELOCATE FROM STAGE 3 |
| 4 | 130+00 - 131+00 | IH 39 NB | LT | --- | 100 | --- | | RELOCATE FROM STAGE 3 |
| | PROJECT 1166-08-72 TOTALS | | | 7,465 | 10,153 | 5 | | |

** CRASH CUSHION DESIGN PARAMETERS
CRASH TEST CONDITION TL-3
WIDTH REQUIREMENTS L = 22', N = 6', F = 2'

## STORM SEWER PIPE

| STRUCTURE FROM | STRUCTURE TO | 608.0412 REIN. CONC. CLASS IV 12-INCH LF | 608.0415 REIN. CONC. CLASS IV 15-INCH LF | 608.0418 REIN. CONC. CLASS IV 18-INCH LF | 608.0424 REIN. CONC. CLASS IV 24-INCH LF | 608.0430 REIN. CONC. CLASS IV 30-INCH LF | 608.0436 REIN. CONC. CLASS IV 36-INCH LF | 520.8000 CONCRETE COLLARS FOR PIPE EACH | ** INSUL. BOARD POLYSTYRENE 4-INCH SY** | * JOINT TIES EACH | REMARK |
|---|---|---|---|---|---|---|---|---|---|---|---|
| PROJECT 1166-08-72 | | | | | | | | | | | |
| CATEGORY 0010 | | | | | | | | | | | |
| EX PIPE | 11.0 | --- | --- | --- | --- | --- | --- | 1 | --- | --- | |
| 11.0 | 12.0 | --- | --- | --- | --- | --- | 251 | --- | --- | --- | |
| 11.0 | 11.1 | 14 | --- | --- | --- | --- | --- | --- | 4 | --- | 10+14 RT SAN |
| 11.0 | 11.2 | 26 | --- | --- | --- | --- | --- | --- | 4 | --- | 10+14 LT WAT |
| 12.0 | 13.0 | --- | --- | --- | --- | --- | 135 | --- | --- | --- | |
| 12.0 | 12.1 | 10 | --- | --- | --- | --- | --- | --- | --- | --- | |
| 12.1 | EX PIPE | 12 | --- | --- | --- | --- | --- | 1 | 4 | --- | 12+65 RT SAN |
| 12.0 | 12.2 | 25 | --- | --- | --- | --- | --- | --- | 4 | --- | 12+65 LT WAT |
| 12.2 | 12.3 | 25 | --- | --- | --- | --- | --- | --- | --- | --- | |
| 13.0 | 14.0 | --- | --- | --- | --- | --- | 160 | --- | --- | --- | |
| 13.0 | 13.1 | 27 | --- | --- | --- | --- | --- | --- | 4 | --- | 14+00 RT SAN |
| 14.0 | 15.0 | --- | --- | --- | --- | 290 | --- | --- | --- | --- | |
| 14.0 | 14.1 | 9 | --- | --- | --- | --- | --- | --- | --- | --- | |
| 14.1 | 14.2 | 18 | --- | --- | --- | --- | --- | --- | 4 | --- | 15+60 RT SAN |
| 14.0 | 14.3 | 25 | --- | --- | --- | --- | --- | --- | 4 | --- | 15+60 LT WAT |
| 15.0 | 16.0 | --- | --- | --- | 320 | --- | --- | --- | --- | --- | |
| 15.0 | 15.1 | --- | 9 | --- | --- | --- | --- | --- | 4 | --- | 18+50 RT WAT |
| 15.1 | 15.2 | --- | 17 | --- | --- | --- | --- | --- | 4 | --- | 18+50 RT SAN |
| 15.0 | 15.3 | --- | 26 | --- | --- | --- | --- | --- | --- | --- | |
| 15.3 | 15.4 | 24 | --- | --- | --- | --- | --- | --- | --- | --- | |
| 16.0 | 17.0 | --- | --- | --- | 80 | --- | --- | --- | --- | --- | |
| 16.0 | 16.1 | --- | --- | 25 | --- | --- | --- | --- | 8 | --- | 21+70 RT WAT AND SAN |
| 16.1 | 16.2 | --- | --- | 52 | --- | --- | --- | --- | --- | --- | |
| 16.2 | 16.3 | --- | 51 | --- | --- | --- | --- | --- | 4 | --- | 21+22 LT |
| 16.0 | FUTURE | --- | --- | 43 | --- | --- | --- | --- | --- | --- | |
| CATEGORY 0010 SUBTOTALS | | 215 | 103 | 120 | 400 | 290 | 546 | 2 | 48 | 0 | |
| CATEGORY 0040 | | | | | | | | | | | |
| 17.0 | 17.1 | 9 | --- | --- | --- | --- | --- | --- | --- | --- | |
| 17.1 | 17.2 | 18 | --- | --- | --- | --- | --- | --- | --- | --- | |
| 17.0 | 17.3 | 26 | --- | --- | --- | --- | --- | --- | --- | --- | |
| 17.0 | 19.0 | --- | --- | --- | 225 | --- | --- | --- | --- | --- | |
| 17.3 | 17.4 | 80 | --- | --- | --- | --- | --- | --- | --- | --- | |
| 19.0 | 20.0 | --- | --- | --- | 100 | --- | --- | --- | --- | --- | |
| 19.0 | 19.1 | 9 | --- | --- | --- | --- | --- | --- | --- | --- | |
| 19.1 | 19.2 | 23 | --- | --- | --- | --- | --- | --- | --- | --- | |
| 19.0 | 19.3 | 26 | --- | --- | --- | --- | --- | --- | --- | --- | |
| 19.3 | 19.4 | 28 | --- | --- | --- | --- | --- | --- | --- | --- | |
| 20.0 | 20.1 | --- | --- | 19 | --- | --- | --- | --- | --- | --- | |
| 20.0 | 20.2 | --- | --- | 100 | --- | --- | --- | --- | --- | 6 | |
| CATEGORY 0040 SUBTOTALS | | 219 | 0 | 119 | 325 | 0 | 0 | 0 | 0 | 6 | |
| PROJECT 1166-80-72 TOTALS | | 434 | 103 | 239 | 725 | 290 | 546 | 2 | 48** | 6 | |

* NON-BID ITEM. JOINT TIES FOR CONCRETE PIPE SHALL BE PROVIDED AT ALL CONCRETE APRON ENDWALLS. APRON ENDWALLS SHALL BE TIED FOR THE LAST THREE JOINTS AT BOTH CULVERT ENDS. THE COST OF THESE TIES SHALL BE INCIDENTAL TO THE COST OF THE PIPE.

** FOR INFORMATION ONLY, QUANTITY SHOWN ELSEWHERE

## STORM SEWER STRUCTURES

| STRUCTURE NUMBER | 522.1018 APRON ENDWALLS CPRC 18-INCH EACH | 611.1004 CATCH BASINS 4-FT DIAMETER EACH | 611.3003 INLETS 3-FT DIAMETER EACH | 611.3902 INLETS MEDIAN 2 GRATE EACH | 611.0612 INLET COVERS TYPE C EACH | 611.0624 INLET COVERS TYPE H EACH | 611.0639 INLET COVERS TYPE H-S EACH | 611.0642 INLET COVERS TYPE MS EACH | 611.2005 MANHOLES 5-FT EACH | 611.2006 MANHOLES 6-FT EACH | 611.0530 MANHOLE COVERS TYPE J EACH | 633.5200* MARKERS CULVERT END EACH | ** CONST. STAKING STORM SEWER EACH | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PROJECT 1166-08-72 | | | | | | | | | | | | | | |
| CATEGORY 0010 | | | | | | | | | | | | | | |
| 11.0 | --- | --- | --- | --- | --- | --- | --- | --- | --- | 1 | 1 | --- | 1 | |
| 11.1 | --- | 1 | --- | --- | --- | 1 | --- | --- | --- | --- | --- | --- | 1 | |
| 11.2 | --- | 1 | --- | --- | --- | 1 | --- | --- | --- | --- | --- | --- | 1 | |
| 12.0 | --- | --- | --- | --- | --- | --- | --- | --- | --- | 1 | 1 | --- | 1 | |
| 12.1 | --- | 1 | --- | --- | --- | 1 | --- | --- | --- | --- | --- | --- | 1 | |
| 12.2 | --- | 1 | --- | --- | --- | 1 | --- | --- | --- | --- | --- | --- | 1 | |
| 12.3 | --- | --- | 1 | --- | 1 | --- | --- | --- | --- | --- | --- | --- | 1 | |
| 13.0 | --- | --- | --- | --- | --- | --- | --- | --- | 1 | --- | 1 | --- | 1 | |
| 13.1 | --- | --- | 1 | --- | 1 | --- | --- | --- | --- | --- | --- | --- | 1 | |
| 14.0 | --- | --- | --- | --- | --- | --- | --- | --- | 1 | --- | 1 | --- | 1 | |
| 14.1 | --- | 1 | --- | --- | --- | 1 | --- | --- | --- | --- | --- | --- | 1 | |
| 14.2 | --- | --- | 1 | --- | 1 | --- | --- | --- | --- | --- | --- | --- | 1 | |
| 14.3 | --- | 1 | --- | --- | --- | 1 | --- | --- | --- | --- | --- | --- | 1 | |
| 15.0 | --- | --- | --- | --- | --- | --- | --- | --- | --- | 1 | 1 | --- | 1 | |
| 15.1 | --- | 1 | --- | --- | --- | 1 | --- | --- | --- | --- | --- | --- | 1 | |
| 15.2 | --- | --- | 1 | --- | 1 | --- | --- | --- | --- | --- | --- | --- | 1 | |
| 15.3 | --- | 1 | --- | --- | --- | 1 | --- | --- | --- | --- | --- | --- | 1 | |
| 15.4 | --- | --- | 1 | --- | 1 | --- | --- | --- | --- | --- | --- | --- | 1 | |
| 16.0 | --- | --- | --- | --- | --- | --- | --- | --- | 1 | --- | 1 | --- | 1 | |
| 16.1 | --- | 1 | --- | --- | --- | --- | 1 | --- | --- | --- | --- | --- | 1 | |
| 16.2 | --- | --- | --- | 1 | --- | --- | --- | 2 | --- | --- | --- | --- | 1 | |
| 16.3 | --- | --- | --- | 1 | --- | --- | --- | 2 | --- | --- | --- | --- | 1 | |
| CATEGORY 0010 SUBTOTALS | 0 | 9 | 5 | 2 | 5 | 8 | 1 | 4 | 3 | 3 | 6 | 0 | 22 | |
| CATEGORY 0040 | | | | | | | | | | | | | | |
| 17.0 | --- | --- | --- | --- | --- | --- | --- | --- | 1 | --- | 1 | --- | 1 | |
| 17.1 | --- | 1 | --- | --- | --- | 1 | --- | --- | --- | --- | --- | --- | 1 | |
| 17.2 | --- | --- | 1 | --- | 1 | --- | --- | --- | --- | --- | --- | --- | 1 | |
| 17.3 | --- | 1 | --- | --- | --- | 1 | --- | --- | --- | --- | --- | --- | 1 | |
| 17.4 | --- | --- | 1 | --- | 1 | --- | --- | --- | --- | --- | --- | --- | 1 | |
| 19.0 | --- | --- | --- | --- | --- | --- | --- | --- | 1 | --- | 1 | --- | 1 | |
| 19.1 | --- | 1 | --- | --- | --- | 1 | --- | --- | --- | --- | --- | --- | 1 | |
| 19.2 | --- | --- | 1 | --- | 1 | --- | --- | --- | --- | --- | --- | --- | 1 | |
| 19.3 | --- | 1 | --- | --- | --- | 1 | --- | --- | --- | --- | --- | --- | 1 | |
| 19.4 | --- | --- | 1 | --- | 1 | --- | --- | --- | --- | --- | --- | --- | 1 | |
| 20.0 | --- | --- | --- | --- | --- | --- | --- | --- | 1 | --- | 1 | --- | 1 | |
| 20.1 | --- | --- | --- | 1 | --- | --- | --- | 2 | --- | --- | --- | --- | 1 | |
| 20.2 | 1 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 1 | 1 | |
| CATEGORY 0040 SUBTOTALS | 1 | 4 | 4 | 1 | 4 | 4 | 0 | 2 | 3 | 0 | 3 | 1 | 13 | |
| PROJECT 1166-08-72 TOTALS | 1 | 13 | 9 | 3 | 9 | 12 | 1 | 6 | 6 | 3 | 9 | 1 | 35 | |

*

GENERAL NOTES: LOCATION FOR INLETS AND MANHOLES REFERS TO THE CENTER OF STRUCTURE
LOCATION FOR APRON ENDWALLS REFERS TO THE BEGINNING OF ENDWALL
ELEVATIONS (ON PLAN SHEETS) REFER TO THE CENTER OF STRUCTURE FOR MANHOLES AND FLANGELINE FOR INLETS
STRUCTURE DEPTH (ON PLAN SHEETS) EQUALS THE RIM/FLANGE ELEVATION MINUS THE INVERT ELEVATION
INVERTS OF EXISTING PIPE AND STRUCTURES SHOULD BE VERIFIED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER PRIOR TO ORDERING THE STRUCTURE

SPECIAL NOTES: 1. FLAT TOP REQUIRED ON MH
* ADDITIONAL QUANTITIES SHOWN ELSEWHERE
** FOR INFORMATION ONLY

## SURFACE DRAINS

| STAGE | STATION | DIR | LOCATION | 416.1010 CONCRETE SURFACE DRAINS CY | 612.0212 PIPE UNDERDRAIN UNPERFORATED 12-INCH LF | 521.1012 APRON ENDWALLS CULVERT PIPE STEEL 12-INCH EACH | REMARK |
|---|---|---|---|---|---|---|---|
| PROJECT 1166-08-72 | | | | | | | |
| CATEGORY 0010 | | | | | | | |
| 5 | 130+75 | LT | IH 39 SB | 2 | 35 | 1 | |
| 5 | 130+75 | RT | IH 39 SB | 2 | --- | --- | |
| 4 | 130+75 | LT | IH 39 NB | 2 | --- | --- | |
| 4 | 130+75 | RT | IH 39 NB | 2 | 45 | 1 | |
| | | | PROJECT 1166-08-72 TOTAL | 8 | 80 | 2 | |

## FENCE SAFETY

| STAGE | STATION | TO | STATION | LOCATION | 616.0700.S FENCE SAFETY LF |
|---|---|---|---|---|---|
| PROJECT 1166-08-72 | | | | | |
| CATEGORY 0010 | | | | | |
| 1 THRU 4 | 15+50 | - | 15+50 | RESERVE ST | 70 |
| 1 THRU 4 | 18+50 | - | 18+50 | RESERVE ST | 75 |
| | | | | PROJECT 1166-80-72 TOTAL | 145 |

## BEAM GUARD

| STATION | TO | STATION | ROADWAY | SIDE | HAZARD | HAZARD TYPE | 614.2300 MGS GUARDRAIL 3 LF | 614.2500 MGS THRIE BEAM TRANSITION LF | 614.2610 MGS GUARDRAIL TERMINAL EAT EA |
|---|---|---|---|---|---|---|---|---|---|
| PROJECT 1166-08-72 | | | | | | | | | |
| CATEGORY 0010 | | | | | | | | | |
| 126+63 | - | 129+05 | IH 39-NB | RT | B-49-172 | BRIDGE | 150 | 39 | 1 |
| 126+63 | - | 129+05 | IH 39-NB | LT | B-49-172 | BRIDGE | 150 | 39 | 1 |
| 130+78 | - | 133+20 | IH 39-SB | RT | B-49-173 | BRIDGE | 150 | 39 | 1 |
| 130+78 | - | 133+20 | IH 39-SB | LT | B-49-173 | BRIDGE | 150 | 39 | 1 |
| | | | | | PROJECT 1166-08-72 TOTALS | | 600 | 158 | 4 |

## CULVERT PIPE

| STAGE | STATION | DIR | LOCATION | 520.4015 CULVERT PIPE TEMPORARY 15-INCH LF | 522.0312 CULVERT PIPE REINFORCED CONC. CLASS IV 12-INCH LF | 522.1012 APRON ENDWALLS FOR CPRC 12-INCH EACH | 612.0406 PIPE UNDERDRAIN WRAPPED 6-INCH LF | * JOINT TIES EACH | REMARK |
|---|---|---|---|---|---|---|---|---|---|
| PROJECT 1166-08-72 | | | | | | | | | |
| CATEGORY 0010 | | | | | | | | | |
| 3 | 121+00 | MED. | IH 39 CROSSOVER | --- | --- | --- | 225 | --- | |
| 3 | 136+00 | MED. | IH 39 CROSSOVER | 292 | --- | --- | --- | --- | |
| 4 | 19+27 | LT | RESERVE ST | --- | 42 | 2 | --- | 12 | |
| | | | PROJECT 1166-08-72 TOTAL | 292 | 42 | 2 | 225 | 12 | |

* NON-BID ITEM. JOINT TIES FOR CONCRETE PIPE SHALL BE PROVIDED AT ALL CONCRETE APRON ENDWALLS. APRON ENDWALLS SHALL BE TIED FOR THE LAST THREE JOINTS AT BOTH CULVERT ENDS. THE COST OF THESE TIES SHALL BE INCIDENTAL TO THE COST OF THE PIPE.

## LANDSCAPING

| STAGE | STATION | TO | STATION | LOCATION | 625.0100 TOPSOIL SY | 628.2008 EROSION MAT CLASS I TYPE B SY | 629.0210 FERTILIZER TYPE B CWT | 630.0130 SEEDING MIXTURE NO. 30 LB | 630.0160 SEEDING MIXTURE NO. 60 LB | 630.0200 SEEDING TEMPORARY LB |
|---|---|---|---|---|---|---|---|---|---|---|
| PROJECT 1166-80-72 | | | | | | | | | | |
| CATEGORY 0010 | | | | | | | | | | |
| 1 | 102+50 | - | 130+00 | IH 39 MEDIAN | --- | --- | --- | --- | --- | --- |
| 1 | 130+00 | - | 149+00 | IH 39 MEDIAN | --- | --- | --- | --- | --- | --- |
| 2 | 102+50 | - | 130+00 | IH 39 SB | 7,700 | 7,700 | 4.9 | 140 | --- | --- |
| 2 | 130+00 | - | 152+00 | IH 39 SB | 4,500 | 4,500 | 2.8 | 80 | --- | --- |
| 3 | 115+00 | - | 130+00 | IH 39 MEDIAN | 3,300 | 3,300 | 2.1 | 65 | --- | --- |
| 3 | 130+00 | - | 142+00 | IH 39 MEDIAN | 2,550 | 2,550 | 1.6 | 45 | --- | --- |
| 4 | 120+00 | - | 130+00 | IH 39 NB | 2,600 | 2,600 | 1.7 | 90 | --- | --- |
| 4 | 130+00 | - | 132+00 | IH 39 NB | 400 | 400 | 0.3 | 15 | --- | --- |
| 4 | 13+00 | - | 19+00 | RESERVE ST | 3,100 | 3,100 | 1.9 | 55 | --- | --- |
| 4 | 19+00 | - | 22+00 | RESERVE ST | 1,750 | 1,750 | 1.1 | 30 | --- | --- |
| 4 | 20+60 | - | 21+50 | EAGLE SUMMIT | 350 | 350 | 0.2 | 5 | --- | --- |
| 5 | 115+00 | - | 130+00 | IH 39 MEDIAN | 550 | 550 | 0.4 | 75 | --- | --- |
| 5 | 130+00 | - | 142+00 | IH 39 MEDIAN | 1,400 | 1,400 | 0.9 | 75 | --- | --- |
| 5 | 102+50 | - | 130+00 | IH 39 SB | 2,200 | 2,200 | 1.4 | 130 | --- | --- |
| 5 | 130+00 | - | 149+00 | IH 39 SB | 700 | 700 | 0.4 | 50 | --- | --- |
| UNDISTRIBUTED | | | | | 6,250 | 6,250 | 3.9 | 170 | 50 | 250 |
| CATEGORY 0010 SUBTOTALS | | | | | 37,350 | 37,350 | 24 | 1,025 | 50 | 250 |
| CATEGORY 0040 | | | | | | | | | | |
| 4 | 8+27 | - | 13+00 | RESERVE ST | 1,750 | 1,750 | 1.1 | 30 | --- | --- |
| 4 | 22+00 | - | 25+00 | RESERVE ST | 1,650 | 1,650 | 1.0 | 30 | --- | --- |
| 4 | 25+00 | - | 26+65 | RESERVE ST | 550 | 550 | 0.4 | 10 | --- | --- |
| UNDISTRIBUTED | | | | | 800 | 800 | 0.5 | 15 | 25 | 50 |
| CATEGORY 0040 SUBTOTALS | | | | | 4,750 | 4,750 | 3 | 85 | 25 | 50 |
| PROJECT 1166-08-72 TOTALS | | | | | 42,100 | 42,100 | 27 | 1,110 | 75 | 300 |

## DELINEATORS

| STAGE | STATION | TO | STATION | LOCATION | 633.0100 DELINEATOR POSTS STEEL EACH | 633.0500 DELINEATOR REFLECTORS EACH | REMARKS |
|---|---|---|---|---|---|---|---|
| PROJECT 1166-08-72 | | | | | | | |
| CATEGORY 0010 | | | | | | | |
| 4 | 115+00 | - | 130+00 | IH 39 NB | 3 | 3 | |
| 4 | 130+00 | - | 145+00 | IH 39 NB | 1 | 1 | |
| 5 | 102+50 | - | 130+00 | IH 39 SB | 7 | 7 | |
| 5 | 130+00 | - | 146+00 | IH 39 SB | 14 | 14 | |
| 5 | 111+00 | - | 112+25 | IH 39 NB | 2 | 4 | MAINTENANCE CROSSOVER |
| PROJECT 1166-08-72 TOTALS | | | | | 27 | 29 | |

3

## PERMANENT SIGNS TYPE II AND SIGN SUPPORTS

| STAGE | SIGN NO. | STATION | REF. LINE | FACE DIR. | SIGN CODE | SIGN SIZE | DESCRIPTION | SIGN DIMENSIONS W X H IN X IN | AREA SF | ASSEMBLY NO. | ASSEMBLY WIDTH IN | ASSEMBLY HEIGHT IN | SIGN ON SAME POST AS | 634.0614 POSTS WOOD 4x6-INCH 14 FT EACH | 634.0616 POSTS WOOD 4x6-INCH 16 FT EACH | 634.0618 POSTS WOOD 4x6-INCH 18 FT EACH | 637.2210 SIGNS TYPE II REFLECTIVE H SF | 637.2230 SIGNS TYPE II REFLECTIVE F SF | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PROJECT 1166-08-72 | | | | | | | | | | | | | | | | | | | |
| CATEGORY 0010 | | | | | | | | | | | | | | | | | | | |
| 2 | 1-09 | 130+70 LT | IH 39 SB | SB | W5-52R | 3 | CLEARANCE MARKERS DOWN RIGHT | 18 X 54 | 6.75 | | | | | --- | --- | 1 | --- | 6.75 | |
| 3 | 1-10 | 130+70 RT | IH 39 SB | SB | W5-52L | 3 | CLEARANCE MARKERS DOWN LEFT | 18 X 54 | 6.75 | | | | | --- | --- | 1 | --- | 6.75 | |
| 4 | 1-07 | 129+12 LT | IH 39 NB | NB | W5-52L | 3 | CLEARANCE MARKERS DOWN LEFT | 18 X 54 | 6.75 | | | | | --- | --- | 1 | --- | 6.75 | |
| 4 | 1-08 | 129+12 RT | IH 39 NB | NB | W5-52R | 3 | CLEARANCE MARKERS DOWN RIGHT | 18 X 54 | 6.75 | | | | | --- | --- | 1 | --- | 6.75 | |
| 5 | 1-01 | 111+37 RT | IH 39 SB | SB | R3-4B | 5 | NO U-TURN SYM (W/R3-4A MESSAGE) | 36 X 48 | 12.00 | | | | | --- | --- | 1 | 12.00 | --- | |
| 5 | 1-02 | 112+03 LT | IH 39 NB | NB | R3-4B | 5 | NO U-TURN SYM (W/R3-4A MESSAGE) | 36 X 48 | 12.00 | | | | | --- | --- | 1 | 12.00 | --- | |
| 5 | 1-03 | 116+25 RT | IH 39 SB | SB | R4-3 | 5 | SLOWER TRAFFIC KEEP RIGHT | 48 X 60 | 20.00 | | | | | --- | --- | 2 | 20.00 | --- | |
| 5 | 1-04 | 116+25 LT | IH 39 SB | SB | D10-3 | 5 | MILE MARKER | 12 X 48 | 4.00 | | | | | --- | --- | 1 | 4.00 | --- | MILE 161 |
| 5 | 1-05 | 122+95 LT | IH 39 SB | SB | R2-1 | 5 | SPEED LIMIT XX MPH | 48 X 60 | 20.00 | | | | | --- | --- | 2 | 20.00 | --- | 65 MPH |
| 5 | 1-06 | 125+80 LT | IH 39 SB | SB | M3-3 | 5 | SOUTH | 36 X 18 | 4.50 | J1-3 | 108 | 54 | | --- | --- | 2 | 40.50 | --- | |
| | | | | | M1-1 | 5 | INTERSTATE ROUTE MARKER 2D | 36 X 36 | 7.03 | | | | 1-06 | --- | --- | --- | --- | --- | IH 39 |
| | | | | | M3-2 | 5 | EAST | 36 X 18 | 3.13 | | | | 1-06 | --- | --- | --- | --- | --- | |
| | | | | | M1-4 | 5 | US ROUTE MARKER | 36 X 36 | 9.00 | | | | 1-06 | --- | --- | --- | --- | --- | USH 10 |
| | | | | | M3-3 | 5 | SOUTH | 36 X 18 | 3.13 | | | | 1-06 | --- | --- | --- | --- | --- | |
| | | | | | M1-4 | 5 | US ROUTE MARKER | 36 X 36 | 9.00 | | | | 1-06 | --- | --- | --- | --- | --- | USH 51 |
| 5 | 1-11 | 146+05 LT | IH 39 SB | SB | W4-1R | 5 | MERGE AHEAD | 48 X 48 | 16.00 | | | | | --- | --- | 1 | --- | 16.00 | |
| | | | | | | | | | | | | | CATEGORY 0010 SUBTOTALS | 0 | 0 | 14 | 108.50 | 43.00 | |
| CATEGORY 0040 | | | | | | | | | | | | | | | | | | | |
| 4 | 2-01 | 9+25 RT | RESERVE ST | NB | R7-1D | 2S | NO PARKING ANY TIME <--> | 18 X 24 | 3.00 | | | | | 1 | | --- | 3.00 | --- | |
| 4 | 2-02 | 9+61 RT | RESERVE ST | SB | R4-7 | 2S | KEEP RIGHT | 24 X 30 | 5.00 | | | | | --- | 1 | --- | 5.00 | --- | |
| 4 | 2-03 | 12+00 LT | RESERVE ST | SB | R7-1D | 2S | NO PARKING ANY TIME <--> | 18 X 24 | 3.00 | | | | | 1 | --- | --- | 3.00 | --- | |
| 4 | 2-04 | 14+25 RT | RESERVE ST | NB | R7-1D | 2S | NO PARKING ANY TIME <--> | 18 X 24 | 3.00 | | | | | 1 | --- | --- | 3.00 | --- | |
| 4 | 2-05 | 16+00 LT | RESERVE ST | SB | R7-1D | 2S | NO PARKING ANY TIME <--> | 18 X 24 | 3.00 | | | | | 1 | --- | --- | 3.00 | --- | |
| 4 | 2-06 | 19+25 RT | RESERVE ST | NB | R7-1D | 2S | NO PARKING ANY TIME <--> | 18 X 24 | 3.00 | | | | | 1 | --- | --- | 3.00 | --- | |
| 4 | 2-07 | 20+00 LT | RESERVE ST | SB | R7-1D | 2S | NO PARKING ANY TIME <--> | 18 X 24 | 3.00 | | | | | 1 | --- | --- | 3.00 | --- | |
| 4 | 2-08 | 21+86 RT | RESERVE ST | WB | R1-1 | 2S | STOP | 30 X 30 | 5.18 | | | | | --- | 1 | --- | 5.18 | --- | EAGLE SUMMIT |
| 4 | 2-09 | 23+00 RT | RESERVE ST | NB | R7-1D | 2S | NO PARKING ANY TIME <--> | 18 X 24 | 3.00 | | | | | 1 | --- | --- | 3.00 | --- | |
| 4 | 2-10 | 24+00 RT | RESERVE ST | NB | R3-17 | 2S | BIKE LANE | 30 X 24 | 5.00 | | | | | 1 | --- | --- | 5.00 | --- | |
| | | | | | R3-17B | 2S | ENDS | 30 X 12 | 2.50 | | | | 2-10 | --- | --- | --- | 2.50 | --- | |
| 4 | 2-11 | 24+00 LT | RESERVE ST | SB | R7-1D | 2S | NO PARKING ANY TIME <--> | 18 X 24 | 3.00 | | | | | 1 | --- | --- | 3.00 | --- | |
| 4 | 2-12 | 27+75 LT | RESERVE ST | SB | R3-17 | 2S | BIKE LANE | 30 X 24 | 5.00 | | | | | 1 | --- | --- | 5.00 | --- | |
| | | | | | R3-17A | 2S | AHEAD | 30 X 12 | 2.50 | | | | 2-12 | | --- | --- | 2.50 | --- | |
| | | | | | | | | | | | | | CATEGORY 0040 SUBTOTALS | 10 | 2 | 0 | 49.18 | 0.00 | |
| | | | | | | | | | | | | | PROJECT 1166-08-72 TOTALS | 10 | 2 | 14 | 157.68 | 43.00 | |

3

## MOVING SIGNS AND MOVING SIGN SUPPORTS

| STAGE | SIGN NO. | FROM STATION | TO STATION | REFERENCE LINE | FACE DIR. | DESCRIPTION | 635.0200 SIGN SUPPORTS STRUCTURAL STEEL HS LB | 636.0100 SIGNS SUPPORTS CONCRETE MASONRY CY | 636.0500 SIGN SUPPORTS STEEL REINFORCEMENT LB | 638.2101 MOVING SIGNS TYPE I EACH | 638.2102 MOVING SIGNS TYPE II EACH | 638.4000 MOVING SMALL SIGN SUPPORTS EACH | 638.4100 MOVING STRUCTURAL STEEL SIGN SUPPORTS EACH | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PROJECT 1166-08-72 | | | | | | | | | | | | | | |
| CATEGORY 0010 | | | | | | | | | | | | | | |
| 1 | M1-01 | 116+25 42' LT | 116+25 71' LT | IH 39 SB | SB | MILE MARKER | --- | --- | --- | --- | 1 | 1 | --- | MILE 161 |
| 1 | M1-02 | 118+18 58' LT | 115+00 62.2' LT | IH 39 SB | SB | ADVANCE GUIDE SIGN | --- | 1.6 | 98 | 1 | --- | --- | 2 | STEVENS POINT/ ROSHOLT 1 MILE |
| 1 | M1-03 | 125+80 51' LT | 125+80 76' LT | IH 39 SB | SB | SOUTH | --- | --- | --- | --- | 1 | 2 | --- | |
| | | | | | | INTERSTATE ROUTE MARKER 2D | --- | --- | --- | --- | --- | --- | --- | IH 39, ON SAME SIGN POST AS M1-03 |
| | | | | | | EAST | --- | --- | --- | --- | --- | --- | --- | ON SAME SIGN POST AS M1-03 |
| | | | | | | US ROUTE MARKER | --- | --- | --- | --- | --- | --- | --- | USH 10, ON SAME SIGN POST AS M1-03 |
| | | | | | | SOUTH | --- | --- | --- | --- | --- | --- | --- | ON SAME SIGN POST AS M1-03 |
| | | | | | | US ROUTE MARKER | --- | --- | --- | --- | --- | --- | --- | USH 51, ON SAME SIGN POST AS M1-03 |
| 5 | M1-02 | 115+00 62.2' LT | 118+18 58' LT | IH 39 SB | SB | ADVANCE GUIDE SIGN | 696 | 1.6 | 98 | 1 | --- | --- | --- | STEVENS POINT/ ROSHOLT 1 MILE |
| | | | | | | CATEGORY 0010 SUBTOTALS | 696 | 3.2 | 196 | 2 | 2 | 3 | 2 | |
| | | | | | | PROJECT 1166-08-72 TOTALS | 696 | 3.2 | 196 | 2 | 2 | 3 | 2 | |

3

## REMOVING SIGNS

| STAGE | SIGN NO. | STATION | REFERENCE LINE | FACE DIRECTION | DESCRIPTION | 638.2602 REMOVING SIGNS TYPE II EACH | 638.3000 REMOVING SMALL SIGN SUPPORTS EACH | REMARKS |
|---|---|---|---|---|---|---|---|---|
| PROJECT 1166-08-72 | | | | | | | | |
| CATEGORY 0010 | | | | | | | | |
| 2 | R1-09 | 130+70 LT | IH 39 SB | SB | CLEARANCE MARKERS DOWN RIGHT | 1 | 1 | |
| 3 | R1-10 | 130+70 RT | IH 39 SB | SB | CLEARANCE MARKERS DOWN LEFT | 1 | 1 | |
| 4 | R1-07 | 129+12 LT | IH 39 NB | NB | CLEARANCE MARKERS DOWN LEFT | 1 | 1 | |
| 4 | R1-08 | 129+12 RT | IH 39 NB | NB | CLEARANCE MARKERS DOWN RIGHT | 1 | 1 | |
| 5 | R1-01 | 112+06 RT | IH 39 SB | SB | NO U-TURN SYMBOL (W/R3-4A MESSAGE) | 1 | 1 | |
| 5 | R1-02 | 111+37 LT | IH 39 NB | NB | NO U-TURN SYMBOL (W/R3-4A MESSAGE) | 1 | 1 | |
| 5 | R1-03 | 116+25 RT | IH 39 SB | SB | SLOWER TRAFFIC KEEP RIGHT | 1 | 1 | |
| 5 | R1-04 | 116+25 LT | IH 39 SB | SB | MILE MARKER | 1 | 1 | |
| 2 | R1-05 | 122+95 LT | IH 39 SB | SB | SPEED LIMIT XX MPH | 1 | 1 | |
| 5 | R1-06 | 125+80 LT | IH 39 SB | SB | SOUTH | 1 | 2 | |
| | | | | | INTERSTATE ROUTE MARKER 2D | --- | --- | |
| | | | | | EAST | --- | --- | |
| | | | | | US ROUTE MARKER | --- | --- | |
| | | | | | SOUTH | --- | --- | |
| | | | | | US ROUTE MARKER | --- | --- | |
| 5 | R1-11 | 146+05 LT | IH 39 SB | SB | MERGE AHEAD | 1 | 1 | |
| | | | | | CATEGORY 0010 SUBTOTALS | 11 | 12 | |

| STAGE | SIGN NO. | STATION | REFERENCE LINE | FACE DIRECTION | DESCRIPTION | 638.2602 REMOVING SIGNS TYPE II EACH | 638.3000 REMOVING SMALL SIGN SUPPORTS EACH | REMARKS |
|---|---|---|---|---|---|---|---|---|
| CATEGORY 0040 | | | | | | | | |
| 2 | R2-01 | 9+25 RT | RESERVE ST | NB | NO PARKING ANY TIME <--> | 1 | 1 | |
| 2 | R2-02 | 9+61 RT | RESERVE ST | SB | DIVIDED HIGHWAY | 1 | 1 | |
| 2 | R2-03 | 10+40 LT | RESERVE ST | SB | BIKE LANE AHEAD | 1 | 1 | |
| 2 | R2-04 | 21+86 RT | RESERVE ST | WB | STOP | 1 | 1 | EAGLE SUMMIT |
| | | | | | CATEGORY 0040 SUBTOTALS | 4 | 4 | |
| | | | | | PROJECT 1166-08-72 TOTALS | 15 | 16 | |

## TRAFFIC CONTROL

| STAGE | LOCATION | EST. SERVICE PERIOD DAYS | 633.1100 DELINEATORS TEMPORARY EACH | 643.0300 DRUMS NO | 643.0300 DRUMS DAYS | 643.0420 BARRICADES TYPE III NO | 643.0420 BARRICADES TYPE III DAYS | 643.0705 WARNING LIGHTS TYPE A NO | 643.0705 WARNING LIGHTS TYPE A DAYS | 643.0715 WARNING LIGHTS TYPE C NO | 643.0715 WARNING LIGHTS TYPE C DAYS | 643.0800 ARROW BOARDS NO | 643.0800 ARROW BOARDS DAYS | 643.0900 SIGNS NO | 643.0900 SIGNS DAYS | 643.0920 TYPE II SIGN COVERING EACH | 643.1050 SIGNS PCMS NO | 643.1050 SIGNS PCMS DAYS | SPV.0045.01 PCMS CELLULAR COMMUNICATION DAYS | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PROJECT 1166-08-72 | | | | | | | | | | | | | | | | | | | | |
| CATEGORY 0010 | | | | | | | | | | | | | | | | | | | | |
| --- | PROJECT 1166-08-02 | --- | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| 1 | IH 39 NORTHBOUND - ADVANCED WZTC | 8 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0 | 2 | 30 | 30 | NOTE A |
| 1 | IH 39 SOUTHBOUND - ADVANCED WZTC | 8 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 8 | 64 | 0 | 2 | 30 | 30 | NOTE B |
| 1 | IH 39 NORTHBOUND | 8 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0 | -- | -- | -- | |
| 1 | IH 39 SOUTHBOUND | 8 | -- | 71 | 568 | 3 | 24 | 6 | 48 | 16 | 128 | 2 | 16 | 11 | 88 | 0 | -- | -- | -- | |
| 1 | BUS 51 NORTHBOUND | 8 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 8 | 64 | 0 | -- | -- | -- | |
| 1 | RESERVE ST | 8 | -- | -- | -- | 15 | 120 | 30 | 240 | -- | -- | -- | -- | 32 | 256 | 0 | -- | -- | -- | |
| | | | | | | | | | | | | | | | | | | | | |
| 2 | IH 39 NORTHBOUND - ADVANCED WZTC | 31 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0 | 2 | 62 | 62 | |
| 2 | IH 39 SOUTHBOUND - ADVANCED WZTC | 31 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 24 | 744 | 0 | 2 | 62 | 62 | |
| 2 | IH 39 NORTHBOUND | 31 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0 | -- | -- | -- | |
| 2 | IH 39 SOUTHBOUND | 31 | -- | 60 | 1,860 | -- | -- | -- | -- | 14 | 434 | -- | -- | 10 | 310 | 1 | -- | -- | -- | NOTE C |
| 2 | BUS 51 NORTHBOUND | 31 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 14 | 434 | 0 | -- | -- | -- | |
| 2 | RESERVE ST | 31 | -- | -- | -- | 15 | 465 | 30 | 930 | -- | -- | -- | -- | 32 | 992 | 0 | -- | -- | -- | |
| | | | | | | | | | | | | | | | | | | | | |
| 3 | IH 39 NORTHBOUND - ADVANCED WZTC | 34 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0 | 2 | 68 | 68 | |
| 3 | IH 39 SOUTHBOUND - ADVANCED WZTC | 34 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 24 | 816 | 0 | 2 | 68 | 68 | |
| 3 | IH 39 NORTHBOUND | 34 | -- | 74 | 2,516 | 3 | 102 | 6 | 204 | 14 | 476 | 2 | 68 | 11 | 374 | 0 | -- | -- | -- | |
| 3 | IH 39 SOUTHBOUND | 34 | 8 | 87 | 2,958 | 2 | 68 | 4 | 136 | 77 | 2,618 | -- | -- | 11 | 374 | 0 | -- | -- | -- | |
| 3 | BUS 51 NORTHBOUND | 34 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 14 | 476 | 0 | -- | -- | -- | |
| 3 | RESERVE ST | 34 | -- | -- | -- | 15 | 510 | 30 | 1,020 | -- | -- | -- | -- | 32 | 1,088 | 0 | -- | -- | -- | |
| | | | | | | | | | | | | | | | | | | | | |
| 4 | IH 39 NORTHBOUND - ADVANCED WZTC | 42 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 28 | 1,176 | 0 | 2 | 84 | 84 | |
| 4 | IH 39 SOUTHBOUND - ADVANCED WZTC | 42 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 24 | 1,008 | 0 | 2 | 84 | 84 | |
| 4 | IH 39 NORTHBOUND | 42 | 22 | 39 | 1,638 | 8 | 336 | 16 | 672 | 34 | 1,428 | -- | -- | 9 | 378 | 0 | -- | -- | -- | |
| 4 | IH 39 SOUTHBOUND | 42 | 8 | 87 | 3,654 | 2 | 84 | 4 | 168 | 77 | 3,234 | -- | -- | 10 | 420 | 0 | -- | -- | -- | |
| 4 | STH 66 SOUTHBOUND | 42 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 11 | 462 | 0 | -- | -- | -- | |
| 4 | BUS 51 NORTHBOUND | 42 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 14 | 588 | 0 | -- | -- | -- | |
| 4 | RESERVE ST | 42 | -- | -- | -- | 15 | 630 | 30 | 1,260 | -- | -- | -- | -- | 32 | 1,344 | 0 | -- | -- | -- | |
| | | | | | | | | | | | | | | | | | | | | |
| 5 | IH 39 NORTHBOUND - ADVANCED WZTC | 13 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 8 | 104 | 0 | 2 | 26 | 26 | |
| 5 | IH 39 SOUTHBOUND - ADVANCED WZTC | 13 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 8 | 104 | 0 | 2 | 26 | 26 | |
| 5 | IH 39 NORTHBOUND | 13 | -- | 74 | 962 | 3 | 39 | 6 | 78 | 14 | 182 | 2 | 26 | 11 | 143 | 0 | -- | -- | -- | |
| 5 | IH 39 SOUTHBOUND | 13 | -- | 71 | 923 | 3 | 39 | 6 | 78 | 16 | 208 | 2 | 26 | 11 | 143 | 0 | -- | -- | -- | |
| 5 | BUS 51 NORTHBOUND | 13 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 8 | 104 | 0 | -- | -- | -- | |
| | | | | | | | | | | | | | | | | | | | | |
| --- | UNDISTRIBUTED | --- | 4 | 1508 | | 242 | | 483 | | 871 | | 14 | | 1205 | | 0 | 54 | | 54 | |
| | CATEGORY 0010 TOTALS | | 42 | 16,587 | | 2,659 | | 5,317 | | 9,579 | | 150 | | 13,259 | | 1 | 594 | | 594 | |
| | PROJECT 1166-08-72 TOTALS | | 42 | 16,587 | | 2,659 | | 5,317 | | 9,579 | | 150 | | 13,259 | | 1 | 594 | | 594 | |

NOTE A: ONE PORTABLE CHANGEABLE MESSAGE SIGN TO BE LOCATED ON IH 39 AT THE SOUTH CONSTRUCTION LIMITS 1 WEEK PRIOR TO CONSTRUCTION. THEN IT WILL BE RELOCATED TO THE PLANNED LOCATION ON IH 39 NORTH OF USH 10 AND A SECOND ONE PLACED NORTH OF CTH HH.

NOTE B: ONE PORTABLE CHANGEABLE MESSAGE SIGN TO BE LOCATED ON IH 39 AT THE NORTH CONSTRUCTION LIMITS 1 WEEK PRIOR TO CONSTRUCITON. THEN IT WILL BE RELOCATED TO THE PLANNED LOCATION ON IH 39 NORTH OF BUS 51 AND AND A SECOND ONE PLACED SOUTH OF USH 10.

NOTE C: SIGN TO BE COVERED AT BEGINNING OF STAGE 2 AND TO BE UNCOVERED AT END OF STAGE 4.

3

## EROSION CONTROL

| STAGE | STATION | TO | STATION | LOCATION | 606.0200 RIPRAP MEDIUM CY | 645.0130 GEOTEXTILE FABRIC TYPE R SY | 628.1504 SILT FENCE LF | 628.1520 SILT FENCE MAINT. LF | 628.7005 INLET PROTECTION TYPE A EA | 628.7015 INLET PROTECTION TYPE C EA | 628.7504 TEMPORARY DITCH CHECKS LF | 628.7555 CULVERT PIPE CHECKS EACH | 628.1905 MOBILIZATIONS EROSION CONTROL EACH | 628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PROJECT 1166-08-72 | | | | | | | | | | | | | | |
| CATEGORY 0010 | | | | | | | | | | | | | | |
| 1 | 102+50 | - | 130+00 | IH 39 MEDIAN | --- | --- | --- | --- | 2 | --- | --- | --- | 1 | --- |
| 1 | 130+00 | - | 149+00 | IH 39 MEDIAN | --- | --- | --- | --- | 1 | --- | --- | --- | 1 | --- |
| 2 | 102+50 | - | 130+00 | IH 39 SB | --- | --- | 2,700 | 2,700 | --- | --- | --- | --- | 1 | --- |
| 2 | 130+00 | - | 152+00 | IH 39 SB | --- | --- | 1,100 | 1,100 | --- | --- | --- | --- | 1 | --- |
| 3 | 115+00 | - | 130+00 | IH 39 MEDIAN | --- | --- | --- | --- | --- | --- | 24 | --- | 1 | --- |
| 3 | 130+00 | - | 142+00 | IH 39 MEDIAN | --- | --- | --- | --- | --- | --- | --- | 5 | 1 | --- |
| 4 | 120+00 | - | 130+00 | IH 39 NB | --- | --- | 900 | 900 | --- | --- | 24 | --- | 1 | --- |
| 4 | 130+00 | - | 132+00 | IH 39 NB | 4 | 20 | 200 | 200 | --- | --- | 12 | --- | 1 | --- |
| 4 | 13+00 | - | 19+00 | RESERVE ST | --- | --- | 500 | 500 | 8 | 4 | 48 | --- | 1 | --- |
| 4 | 19+00 | - | 22+00 | RESERVE ST | --- | --- | 0 | 0 | 1 | 1 | 36 | 1 | 1 | --- |
| 4 | 20+60 | - | 21+50 | EAGLE SUMMIT | --- | --- | 0 | 0 | 2 | --- | 24 | --- | 1 | --- |
| 5 | 115+00 | - | 130+00 | IH 39 MEDIAN | --- | --- | --- | --- | --- | --- | 48 | --- | 1 | --- |
| 5 | 130+00 | - | 142+00 | IH 39 MEDIAN | --- | --- | --- | --- | --- | --- | 24 | --- | 1 | --- |
| 5 | 102+50 | - | 130+00 | IH 39 SB | --- | --- | --- | --- | --- | --- | --- | --- | 1 | --- |
| 5 | 130+00 | - | 149+00 | IH 39 SB | 4 | 20 | --- | --- | --- | --- | --- | --- | 1 | --- |
| UNDISTRIBUTED | | | | | 2 | 10 | 1,350 | 1,350 | 2 | 2 | 120 | 6 | --- | 5 |
| CATEGORY 0010 SUBTOTALS | | | | | 10 | 50 | 6,750 | 6,750 | 16 | 7 | 360 | 12 | 15 | 5 |
| CATEGORY 0040 | | | | | | | | | | | | | | |
| 4 | 7+89 | - | 13+00 | RESERVE ST | --- | --- | 900 | 900 | 5 | 6 | 0 | --- | 1 | --- |
| 4 | 22+00 | - | 25+00 | RESERVE ST | --- | --- | 0 | 0 | 9 | 4 | 84 | --- | 1 | --- |
| 4 | 25+00 | - | 26+65 | RESERVE ST | --- | --- | 0 | 0 | 1 | --- | 24 | 4 | 1 | --- |
| UNDISTRIBUTED | | | | | 0 | 0 | 225 | 225 | 2 | 3 | 60 | 4 | --- | 2 |
| CATEGORY 0040 SUBTOTALS | | | | | 0 | 0 | 1,125 | 1,125 | 17 | 13 | 168 | 8 | 3 | 2 |
| PROJECT 1166-08-72 TOTALS | | | | | 10 | 50 | 7,875 | 7,875 | 33 | 20 | 528 | 20 | 18 | 7 |

3

## REMOVING PAVEMENT MARKINGS

| STAGE | STATION | TO | STATION | LOCATION | 646.0600 REMOVING PAVEMENT MARKINGS LF |
|---|---|---|---|---|---|
| PROJECT 1166-80-72 | | | | | |
| CATEGORY 0010 | | | | | |
| 2 | 113+25 | - | 130+00 | IH 39 SB | 3,859 |
| 2 | 130+00 | - | 140+75 | IH 39 SB | 3,647 |
| 3 | 100+00 | - | 130+00 | IH 39 SB | 2,982 |
| 3 | 130+00 | - | 149+00 | IH 39 SB | 2,332 |
| 4 | 113+00 | - | 130+00 | IH 39 NB | 1,535 |
| 4 | 130+00 | - | 149+00 | IH 39 NB | 2,376 |
| | | | PROJECT 1166-08-72 TOTALS | | 16,731 |

## PAVEMENT MARKING

| STAGE | STATION | TO | STATION | LOCATION | 646.0106 PAVEMENT MARKING EPOXY 4-INCH (WHITE) LF | 646.0106 PAVEMENT MARKING EPOXY 4-INCH (YELLOW) LF | 646.0881.S PAVEMENT MARKING GROOVED WET REFLECTIVE 4-INCH LF | 646.0883.S PAVEMENT MARKING GROOVED WET REFLECTIVE 8-INCH LF | 647.0206 PAVEMENT MARKING ARROWS BIKE LANE EPOXY EACH | 647.0406 PAVEMENT MARKING WORDS BIKE LANE EPOXY EACH | 647.0726 PAVEMENT MARKING DIAGONAL EPOXY 12-INCH LF | 647.0766 PAVEMENT MARKING CROSSWALK EPOXY 6-INCH LF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PROJECT 1166-08-72 | | | | | | | | | | | | |
| CATEGORY 0010 | | | | | | | | | | | | |
| 4 | 13+00 | - | 19+00 | RESERVE STREET | 1,200 | 325 | --- | --- | 2 | 4 | --- | --- |
| 4 | 19+00 | - | 22+00 | RESERVE STREET | 462 | 75 | --- | --- | --- | --- | --- | 64 |
| 4 | 119+00 | - | 130+00 | IH 39 NB | 1,375 | 1,100 | --- | --- | --- | --- | --- | --- |
| 4 | 130+00 | - | 138+00 | IH 39 NB | 1,000 | 800 | --- | --- | --- | --- | --- | --- |
| 5 | 100+00 | - | 130+00 | IH 39 SB | 3,000 | 3,000 | 750 | --- | --- | --- | --- | --- |
| 5 | 130+00 | - | 149+00 | IH 39 SB | 1,958 | 1,900 | 475 | 1,133 | --- | --- | --- | --- |
| 5 | 113+94 | - | 119+00 | IH 39 NB | 634 | 507 | --- | --- | --- | --- | --- | --- |
| 5 | 138+00 | - | 142+56 | IH 39 NB | 570 | 456 | --- | --- | --- | --- | --- | --- |
| | | | CATEGORY 0010 SUBTOTALS | | 10,199 | 8,163 | 1,225 | 1,133 | 2 | 4 | 0 | 64 |
| CATEGORY 0040 | | | | | | | | | | | | |
| 4 | 8+65 | - | 13+00 | RESERVE STREET | 796 | 603 | --- | --- | 2 | 4 | 26 | --- |
| 4 | 22+00 | - | 25+00 | RESERVE STREET | 548 | 75 | --- | --- | | 3 | --- | --- |
| 4 | 25+00 | - | 26+65 | RESERVE STREET | 35 | 42 | --- | --- | 1 | 2 | --- | 154 |
| | | | CATEGORY 0040 SUBTOTALS | | 1,379 | 720 | 0 | 0 | 3 | 9 | 26 | 154 |
| | | | PROJECT 1166-08-72 TOTALS | | 11,578 | 8,883 | 1,225 | 1,133 | 5 | 13 | 26 | 218 |

## TEMPORARY PAVEMENT MARKING

| STAGE | STATION | TO | STATION | LOCATION | 649.0100 TEMPORARY PAVEMENT MARKING 4-INCH (WHITE) LF | 649.0100 TEMPORARY PAVEMENT MARKING 4-INCH (YELLOW) LF | 649.0400 TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE) LF | 649.0400 TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW) LF | 649.0701 TEMPORARY PAVEMENT MARKING 8-INCH (WHITE) LF | 649.0801 TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH (WHITE) LF | 649.2100 TEMPORARY RAISED PAVEMENT MARKERS EACH |
|---|---|---|---|---|---|---|---|---|---|---|---|
| PROJECT 1166-08-72 | | | | | | | | | | | |
| CATEGORY 0010 | | | | | | | | | | | |
| 2 | 113+25 | - | 130+00 | IH 39 SB | --- | --- | 2,094 | 1,675 | --- | --- | 42 |
| 2 | 130+00 | - | 140+75 | IH 39 SB | --- | --- | 1,328 | 1,075 | --- | 484 | 42 |
| 3 | 100+00 | - | 130+00 | IH 39 SB | 2824 | --- | 928 | 3,000 | --- | --- | 201 |
| 3 | 130+00 | - | 149+00 | IH 39 SB | 1450 | --- | 1,095 | 2,063 | 39 | 347 | 165 |
| 4 | 113+00 | - | 130+00 | IH 39 NB | 748 | 419 | 2,473 | 1,192 | --- | --- | 141 |
| 4 | 130+00 | - | 143+00 | IH 39 NB | 772 | 461 | 1,753 | 799 | --- | --- | 141 |
| | | | PROJECT 1166-08-72 TOTALS | | 5,794 | 880 | 9,671 | 9,804 | 39 | 831 | 732 |

## CONSTRUCTION STAKING

| STAGE | REFERENCE LINE | 650.4000 STORM SEWER EACH | 650.4500 SUBGRADE LF | 650.5000 BASE LF | 650.5500 CURB, GUTTER, AND CURB AND GUTTER LF | 650.6000 PIPE CULVERTS EACH | 650.6500 STRUCTURE LAYOUT LS | 650.9910 SUPPLEMENTAL CONTROL LS | 650.9920 SLOPE STAKES LF |
|---|---|---|---|---|---|---|---|---|---|
| PROJECT 1166-08-72 | | | | | | | | | |
| CATEGORY 0010 | | | | | | | | | |
| 1 | IH 39 SB | --- | --- | 2,344 | --- | --- | --- | --- | 2,344 |
| 2 | IH 39 SB | --- | 4,078 | 4,078 | --- | --- | --- | --- | 4,482 |
| 3 | IH 39 SB | --- | 1,826 | 1,826 | --- | 2 | --- | --- | 1,826 |
| 3 | CROSSOVER ALIGNMENT | --- | 2,443 | 2,443 | --- | --- | --- | --- | 2,443 |
| 4 | IH 39 NB | --- | 958 | 958 | --- | --- | --- | --- | 958 |
| 4 | RESERVE ST | 22 | 900 | 1,373 | 1824 | 1 | --- | --- | 900 |
| 4 | EAGLE SUMMIT | --- | 150 | 150 | | --- | --- | --- | 150 |
| 5 | IH 39 SB | --- | --- | --- | --- | --- | --- | --- | 4,078 |
| 5 | IH 39 NB | --- | --- | --- | --- | --- | --- | --- | 1,690 |
| --- | PROJECT | --- | --- | --- | --- | --- | --- | 0.8 | --- |
| | CATEGORY 0010 SUBTOTALS | 22 | 10,355 | 13,172 | 1,824 | 3 | 0 | 0.8 | 18,871 |
| CATEGORY 0020 | | | | | | | | | |
| 4 | STRUCTURE B-49-172 | --- | --- | --- | --- | --- | 1 | --- | --- |
| | CATEGORY 0020 SUBTOTALS | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| CATEGORY 0030 | | | | | | | | | |
| 2 & 3 | STRUCTURE B-49-173 | --- | --- | --- | --- | --- | 1 | --- | --- |
| | CATEGORY 0030 SUBTOTALS | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| CATEGORY 0040 | | | | | | | | | |
| 4 | RESERVE ST | 13 | 938 | 465 | 1664 | --- | --- | --- | 938 |
| | PROJECT | --- | --- | --- | --- | --- | --- | 0.2 | --- |
| | CATEGORY 0040 SUBTOTALS | 13 | 938 | 465 | 1,664 | 0 | 0 | 0.2 | 938 |
| | PROJECT 1166-08-72 TOTALS | 35 | 11,293 | 13,637 | 3,488 | 3 | 2 | 1 | 19,809 |

## CONSTRUCTION STAKING

| LOCATION | | 650.8500 ELECTRICAL INSTALLATIONS LS | 650.9910 SUPPLEMENTAL CONTROL LS | SPV.0105.01 CONSTRUCTION STAKING SANITARY AND WATER LS |
|---|---|---|---|---|
| PROJECT 1166-08-82 | | | | |
| CATEGORY 0010 | | | | |
| | PROJECT | 1 | 1 | --- |
| | CATEGORY 0010 TOTALS | 1 | 1 | 0 |
| CATEGORY 0020 | | | | |
| | PROJECT | --- | --- | 1 |
| | CATEGORY 0020 TOTALS | 0 | 0 | 1 |
| | PROJECT 1166-08-82 TOTALS | 1 | 1 | 1 |

## LIGHTING

| STATION | TO | STATION | OFFSET | DIR | LOCATION | 652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH LF | 652.0335 CONDUIT RIGID NONMETALLIC SCHEDULE 80 3-INCH LF | 653.0135 PULL BOXES STEEL 24X36-INCH EA | **** LIGHT POLE | **** CONTROL CABINENT |
|---|---|---|---|---|---|---|---|---|---|---|
| PROJECT 1166-08-82 | | | | | | | | | | |
| CATEGORY 0010 | | | | | | | | | | |
| 8+18 | - | 16+07 | - | RT | RESERVE ST | 795 | --- | --- | --- | --- |
| 8+71 | - | 16+07 | - | LT | RESERVE ST | 740 | --- | --- | --- | --- |
| 17+92 | - | 25+37 | - | LT | RESERVE ST | 745 | --- | --- | --- | --- |
| 17+92 | - | 21+13 | - | RT | RESERVE ST | 320 | --- | --- | --- | --- |
| 21+93 | - | 24+97 | - | RT | RESERVE ST | 305 | --- | --- | --- | --- |
| 26+60 | - | 26+68 | - | LT | RESERVE ST | 10 | --- | --- | --- | --- |
| 21+16 | - | 21+90 | - | RT | RESERVE ST | --- | 75 | --- | --- | --- |
| 21+92 | | | - | - | RESERVE ST | --- | 50 | --- | --- | --- |
| 25+40 | - | 26+57 | - | LT | RESERVE ST | --- | 120 | --- | --- | --- |
| 21+14.6 | | | 23.6 | RT | RESERVE ST | --- | --- | 1 | --- | --- |
| 21+92 | | | 22.0 | RT | RESERVE ST | --- | --- | 1 | --- | --- |
| 21+92 | | | 21.5 | LT | RESERVE ST | --- | --- | 1 | --- | --- |
| 25+38.8 | | | 22.1 | LT | RESERVE ST | --- | --- | 1 | --- | --- |
| 26+59 | | | 23.6 | LT | RESERVE ST | --- | --- | 1 | --- | --- |
| 9+19 | | | 31.3 | RT | RESERVE ST | --- | --- | --- | 1 | --- |
| 10+19 | | | 23.7 | LT | RESERVE ST | --- | --- | --- | 1 | --- |
| 11+19 | | | 22.0 | RT | RESERVE ST | --- | --- | --- | 1 | --- |
| 12+25 | | | 21.5 | LT | RESERVE ST | --- | --- | --- | 1 | --- |
| 13+23 | | | 22.0 | RT | RESERVE ST | --- | --- | --- | 1 | --- |
| 14+20 | | | 21.5 | LT | RESERVE ST | --- | --- | --- | 1 | --- |
| 15+20 | | | 22.0 | RT | RESERVE ST | --- | --- | --- | 1 | --- |
| 16+08 | | | 22.0 | LT | RESERVE ST | --- | --- | --- | 1 | --- |
| 16+08 | | | 22.0 | RT | RESERVE ST | --- | --- | --- | 1 | --- |
| 17+91 | | | 22.0 | LT | RESERVE ST | --- | --- | --- | 1 | --- |
| 17+91 | | | 22.0 | RT | RESERVE ST | --- | --- | --- | 1 | --- |
| 18+78 | | | 22.0 | RT | RESERVE ST | --- | --- | --- | 1 | --- |
| 19+93 | | | 21.5 | LT | RESERVE ST | --- | --- | --- | 1 | --- |
| 21+08 | | | 22.0 | RT | RESERVE ST | --- | --- | --- | 1 | --- |
| 22+03 | | | 21.5 | LT | RESERVE ST | --- | --- | --- | 1 | --- |
| 22+98 | | | 22.0 | RT | RESERVE ST | --- | --- | --- | 1 | --- |
| 24+13 | | | 21.5 | LT | RESERVE ST | --- | --- | --- | 1 | --- |
| 24+99 | | | 22.0 | RT | RESERVE ST | --- | --- | --- | 1 | --- |
| 25+30 | | | 21.5 | LT | RESERVE ST | --- | --- | --- | 1 | --- |
| 26+69 | | | 22.8 | LT | RESERVE ST | --- | --- | --- | 1 | |
| 21+89 | | | 34.3 | RT | RESERVE ST | --- | --- | --- | --- | 1 |
| | | | | | CATEGORY 0010 SUBTOTALS | 2,915 | 245 | 5 | | |
| | | | | | PROJECT 1166-08-82 SUBTOTALS | 2,915 | 245 | 5 | | |

**** WORK BY OTHERS, FOR INFORMATION PUROPOSES ONLY

3

## SAWCUTS

| STAGE | STATION | TO | STATION | LOCATION | 690.0150 ASPHALT LF | 690.0250 CONCRETE LF |
|---|---|---|---|---|---|---|
| PROJECT 1166-08-72 | | | | | | |
| CATEGORY 0010 | | | | | | |
| 1 | 115+00 | - | 130+00 | IH 39 SB | 1,460 | --- |
| 1 | 130+00 | - | 149+00 | IH 39 SB | 955 | --- |
| 2 | 102+50 | - | 130+00 | IH 39 SB | 2,680 | --- |
| 2 | 130+00 | - | 149+00 | IH 39 SB | 1,260 | --- |
| 3 | 115+00 | - | 130+00 | IH 39 SB | 28 | --- |
| 3 | 130+00 | - | 145+00 | IH 39 SB | 580 | --- |
| 3 | 115+00 | - | 130+00 | IH 39 NB | 370 | --- |
| 3 | 130+00 | - | 145+00 | IH 39 NB | 370 | --- |
| 4 | 115+00 | - | 130+00 | IH 39 NB | 38 | --- |
| 4 | 130+00 | - | 145+00 | IH 39 NB | 38 | --- |
| 5 | 115+00 | - | 130+00 | IH 39 SB | 3,570 | --- |
| 5 | 130+00 | - | 145+00 | IH 39 SB | 2,100 | --- |
| 5 | 115+00 | - | 130+00 | IH 39 NB | 440 | --- |
| 5 | 130+00 | - | 145+00 | IH 39 NB | 440 | --- |
| 4 | 8+27 | - | 13+00 | RESERVE ST | 50 | 5 |
| 4 | 21+50 | - | 21+50 | EAGLE SUMMIT | 22 | --- |
| | | | | CATEGORY 0010 SUBTOTALS | 14,401 | 5 |
| CATEGORY 0040 | | | | | | |
| 4 | 25+00 | - | 26+65 | RESERVE ST | 65 | 25 |
| | | | | CATEGORY 0040 SUBTOTALS | 65 | 25 |
| | | | | PROJECT 1166-08-72 TOTALS | 14,466 | 30 |

## EXCAVATION OF PHRAGMITES SOIL

| STATION TO STATION | DIR | LOCATION | SPV.0035.01 CY |
|---|---|---|---|
| PROJECT 1166-08-72 | | | |
| CATEGORY 0010 | | | |
| 17+85 - 1845 | RT | RESERVE ST | 386 |
| 19+00 - 19+45 | RT | RESERVE ST | 148 |
| 19+95 - 20+35 | LT | RESERVE ST | 186 |
| | | CATEGORY 0010 SUBTOTAL | 720 |
| CATEGORY 0040 | | | |
| 23+50 - 24+30 | LT | RESERVE ST | 194 |
| 24+50 - 25+40 | LT | RESERVE ST | 216 |
| | | CATEGORY 0040 SUBTOTAL | 410 |
| | | PROJECT 1166-08-72 TOTAL | 1,130 |

NOTE: PLACE EXCAVATED PHRAGMITES SOIL IN FILL SLOPES NEAR STA 128+50 TO STA 131+00 AS SHOWN IN THE CROSS SECTIONS. PLACE A MINIMUM OF 4' BELOW FINAL GRADE. REDUCTION FACTOR OF 0.60 USED TO DETERMINE AN IN PLACE FILL VOLUME OF 680 CY.

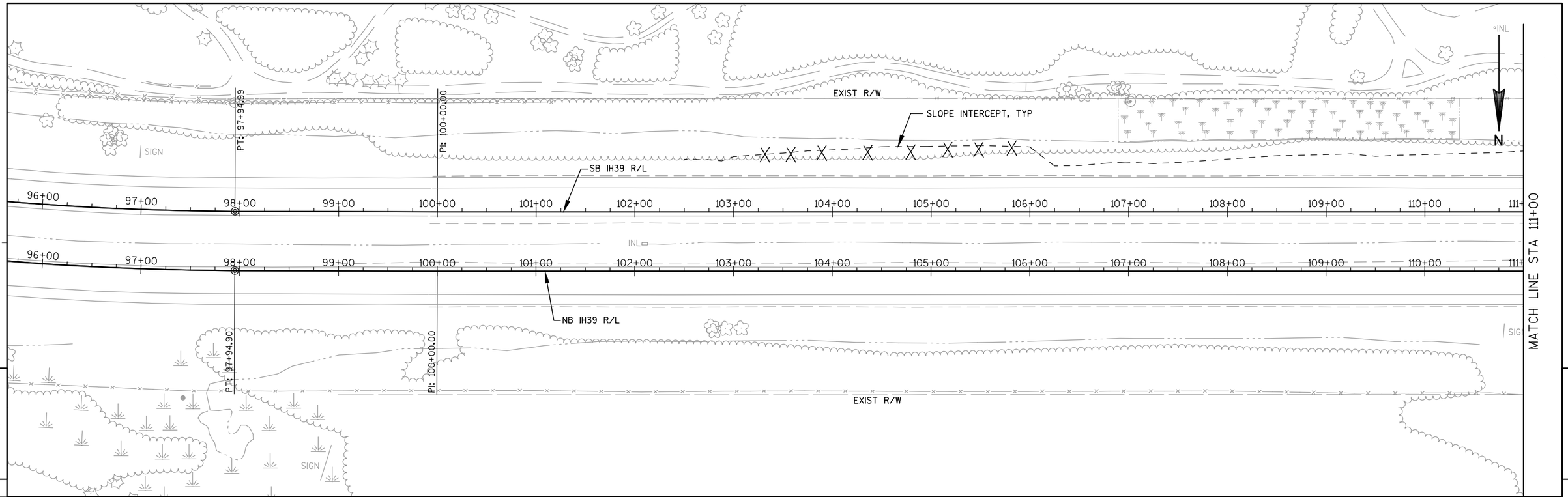
## TEMPORARY WATER SERVICE

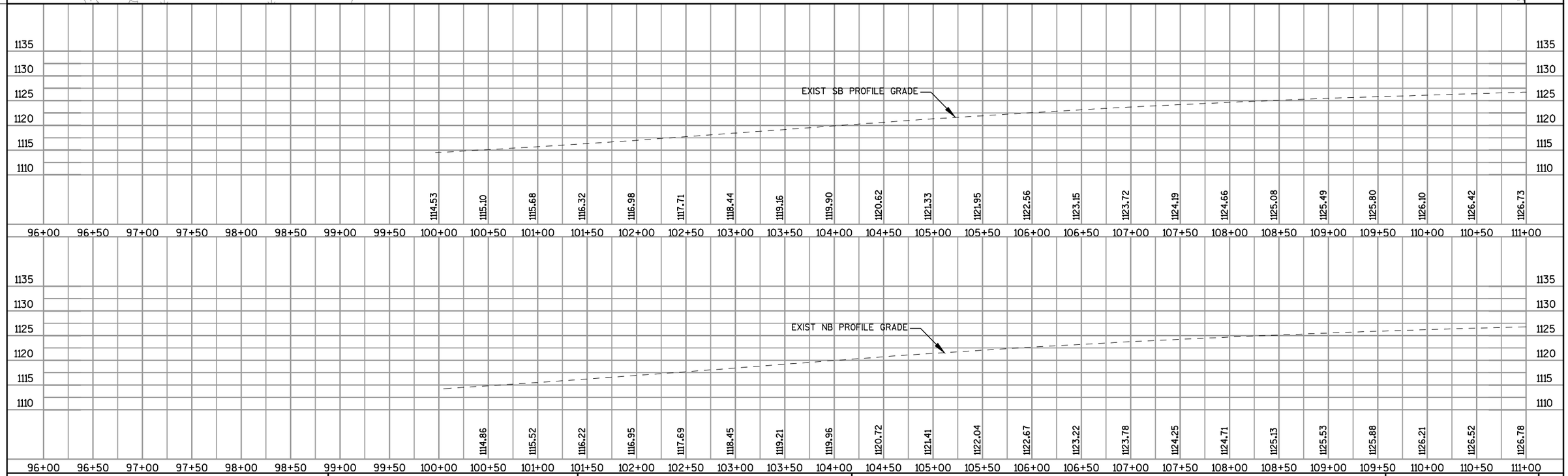
| LOCATION | SPV.0105.02 LS |
|---|---|
| PROJECT 1166-08-82 | |
| CATEGORY 0020 | |
| RESERVE ST | 1 |
| PROJECT 1166-08-72 TOTAL | 1 |

3

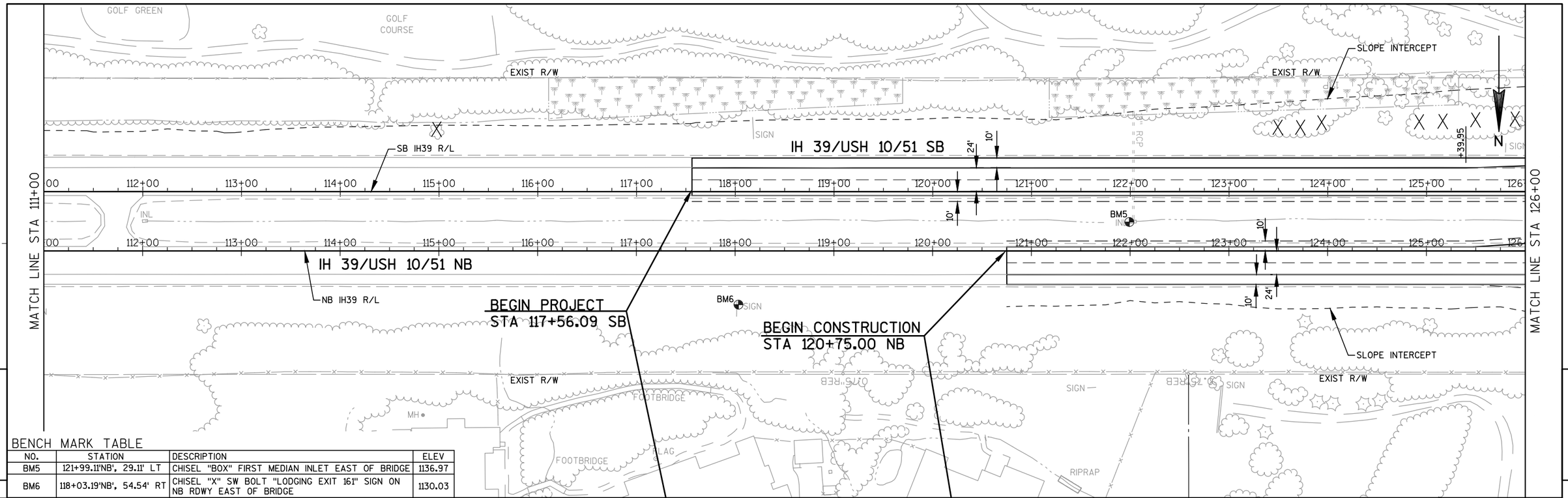
## SANITARY AND WATER UTILITES

| STATION | TO | STATION | DIRECTION | LOCATION | 611.0420 RECONSTRUCTING MANHOLES EACH | SPV.0060.01 STANDARD WATER SERVICE MANHOLE EACH | SPV.0090.01 SANITARY SEWER FORCE MAIN (4-INCH) LF | SPV.0090.02 SANITARY SEWER LATERAL (1.5-INCH) LF | SPV.0090.03 WATER MAIN (6-INCH) LF | SPV.0090.04 WATER MAIN (8-INCH) LF | SPV.0090.05 WATER SERVICE LATERAL (2-INCH) LF | 612.0902.S INSULATED BOARD POLYSTYRENE 4-INCH SY | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PROJECT 1166-08-82 | | | | | | | | | | | | | |
| CATEGORY 0010 | | | | | | | | | | | | | |
| STORM SEWER PIPE CROSSINGS | | | | RESERVE ST. | --- | --- | --- | --- | --- | --- | --- | 16 | |
| 22+05 | - | --- | RT | RESERVE ST. | 1 | --- | --- | --- | --- | --- | --- | --- | |
| 23+97 | - | --- | LT/RT | RESERVE ST. | --- | --- | --- | 99 | --- | --- | --- | --- | |
| 24+02 | - | --- | LT/RT | RESERVE ST. | --- | 1 | --- | --- | --- | --- | 89 | --- | |
| 24+07 | - | --- | LT/RT | RESERVE ST. | --- | --- | --- | 99 | --- | --- | --- | --- | |
| 24+07 | - | --- | LT/RT | RESERVE ST. | --- | --- | --- | --- | --- | --- | --- | --- | |
| | | | | CATEGORY 0010 TOTALS | 1 | 1 | 0 | 198 | 0 | 0 | 89 | 16 | |
| CATEGORY 0020 | | | | | | | | | | | | | |
| 15+68 | - | 18+45 | LT/RT | RESERVE ST. | --- | --- | --- | --- | --- | 280 | --- | 375 | |
| 15+78 | - | 18+41 | RT | RESERVE ST. | --- | --- | 270 | --- | --- | --- | --- | 365 | |
| 20+60 | - | --- | RT | EAGLE SUMMIT | --- | 1 | --- | --- | 20 | --- | --- | --- | |
| STORM SEWER PIPE CROSSINGS | | | | RESERVE ST. | --- | --- | --- | --- | --- | --- | --- | 32 | |
| | | | | CATEGORY 0020 TOTALS | 0 | 1 | 270 | 0 | 20 | 280 | 0 | 772 | |
| | | | | PROJECT 1166-08-82 TOTALS | 1 | 2 | 270 | 198 | 20 | 280 | 89 | 788 | |




| PROJECT NO: 1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | PLAN AND PROFILE: IH 39 | SHEET 101 | E |
|---|---|---|---|---|---|

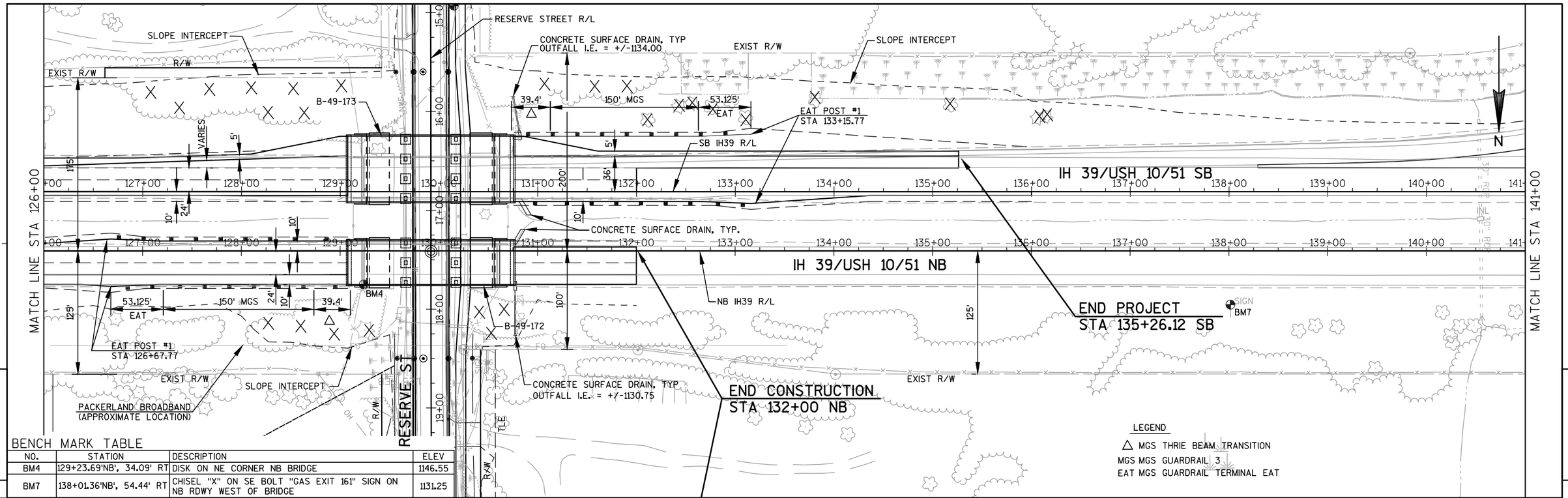



5

5

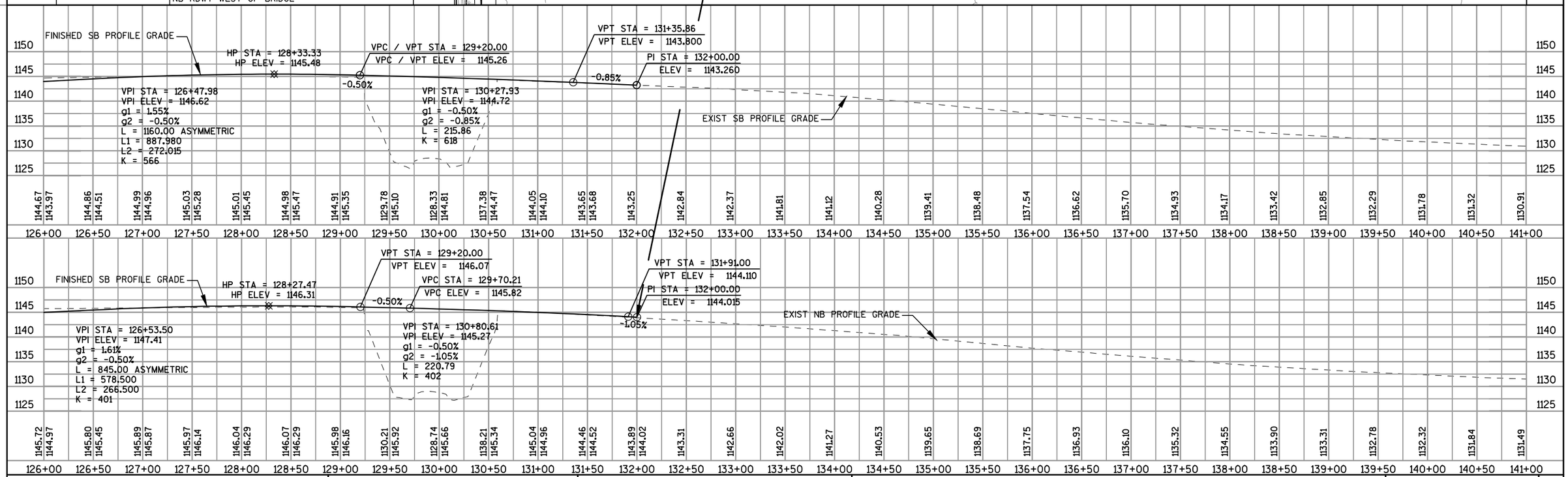
BENCH MARK TABLE

| NO. | STATION | DESCRIPTION | ELEV |
|---|---|---|---|
| BM5 | 121+99.11'NB', 29.11' LT | CHISEL "BOX" FIRST MEDIAN INLET EAST OF BRIDGE | 1136.97 |
| BM6 | 118+03.19'NB', 54.54' RT | CHISEL "X" SW BOLT "LODGING EXIT 161" SIGN ON NB RDWY EAST OF BRIDGE | 1130.03 |

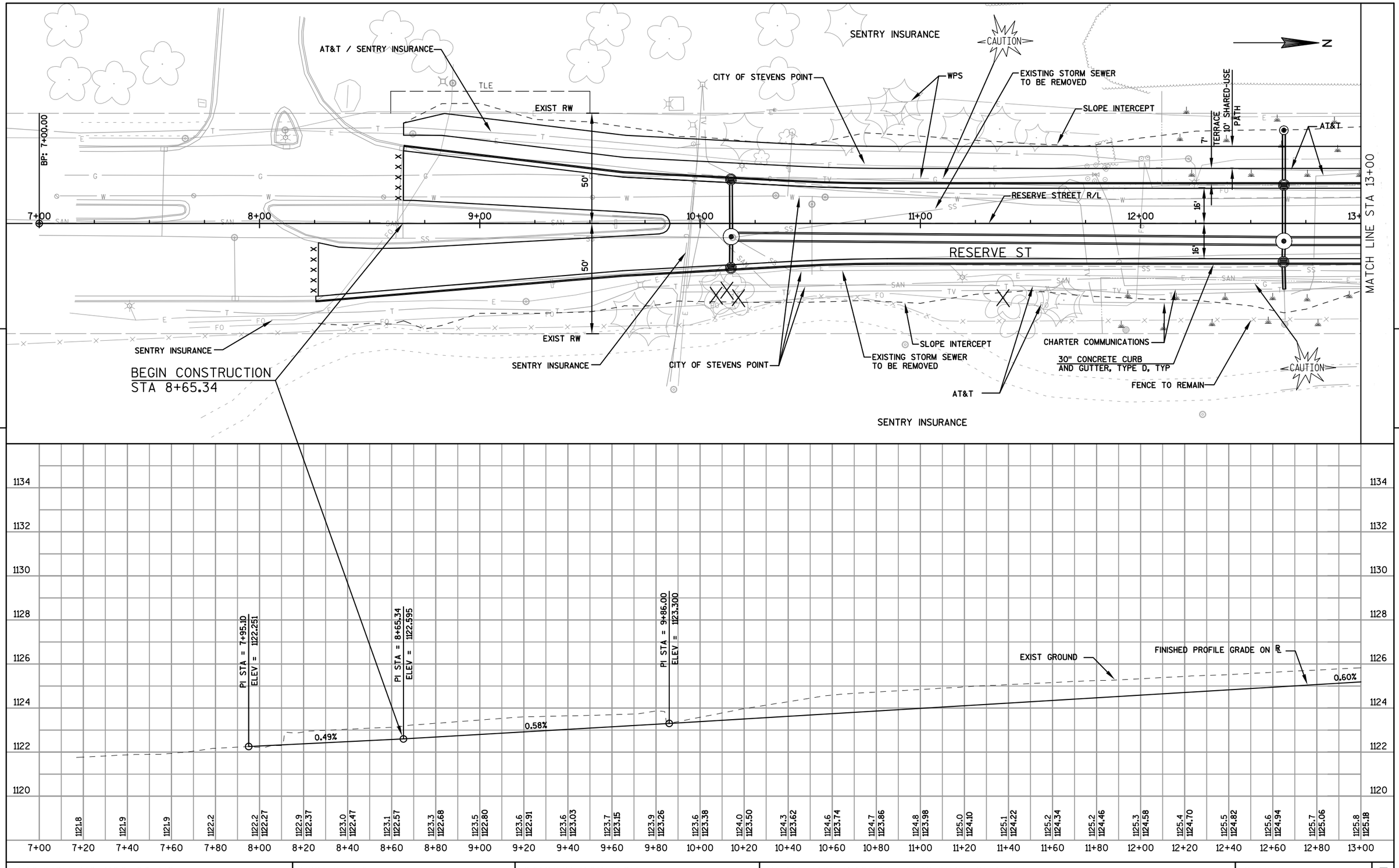



BENCH MARK TABLE

| NO. | STATION | DESCRIPTION | ELEV |
|---|---|---|---|
| BM4 | 129+23.69'NB', 34.09' RT | DISK ON NE CORNER NB BRIDGE | 1146.55 |
| BM7 | 138+01.36'NB', 54.44' RT | CHISEL "X" ON SE BOLT "GAS EXIT 161" SIGN ON NB RDWY WEST OF BRIDGE | 1131.25 |



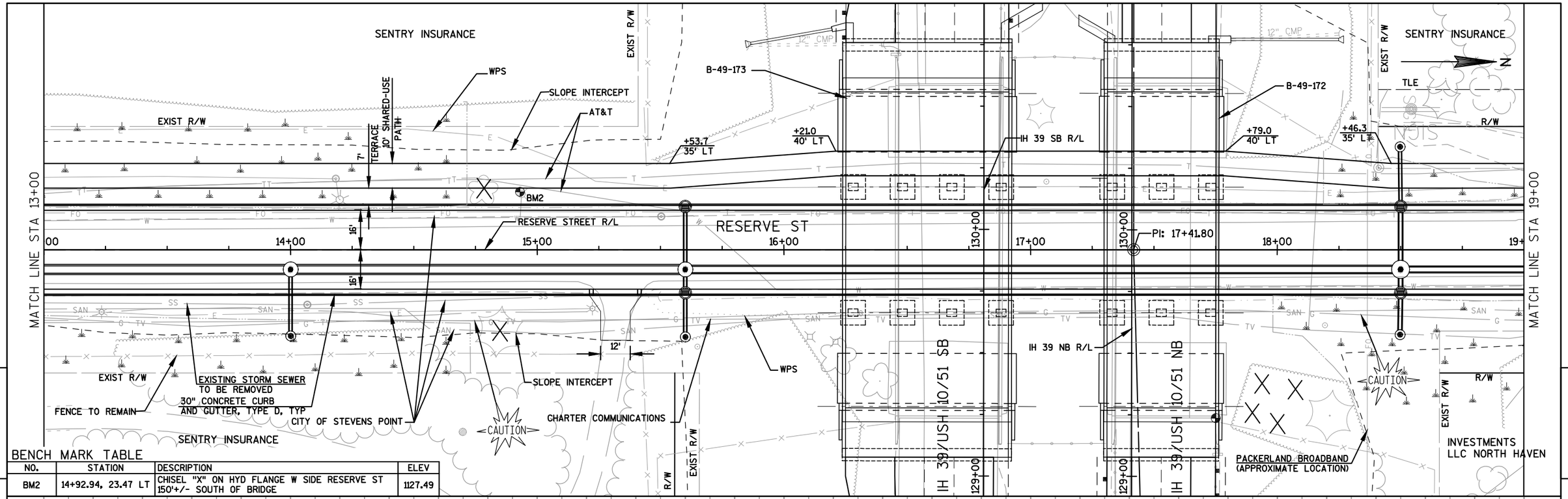

| PROJECT NO: 1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | PLAN AND PROFILE: IH 39 | SHEET 103 E |
|---|---|---|---|---|




5

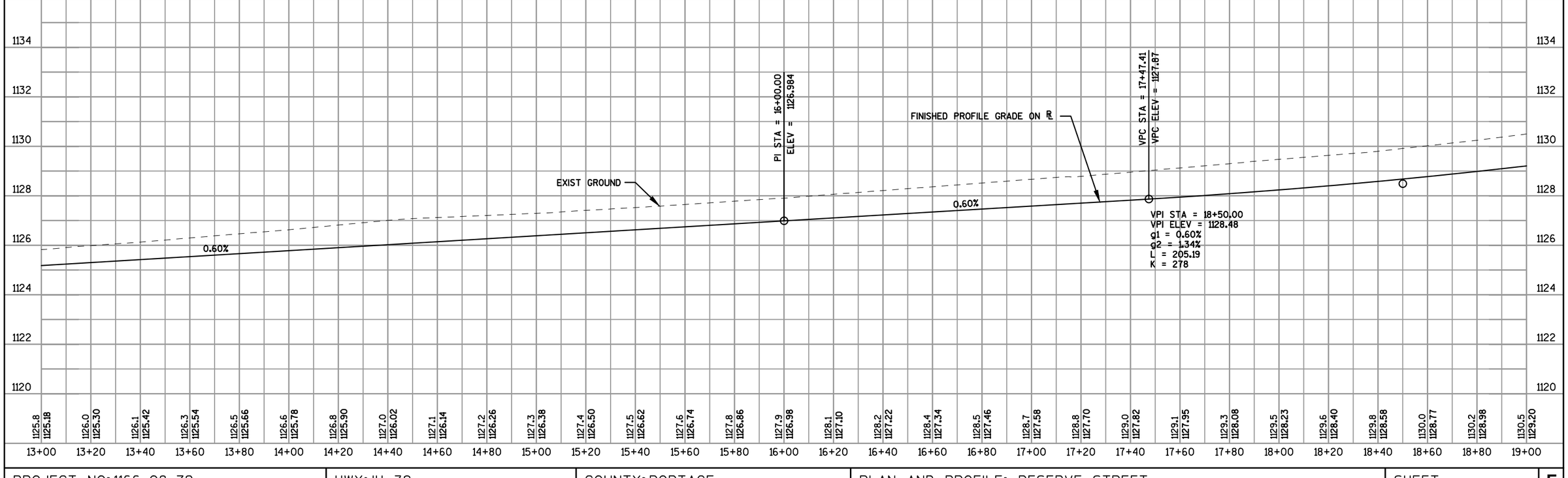
5

| PROJECT NO: 1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | PLAN AND PROFILE: RESERVE STREET | SHEET 104 | E |
|---|---|---|---|---|---|

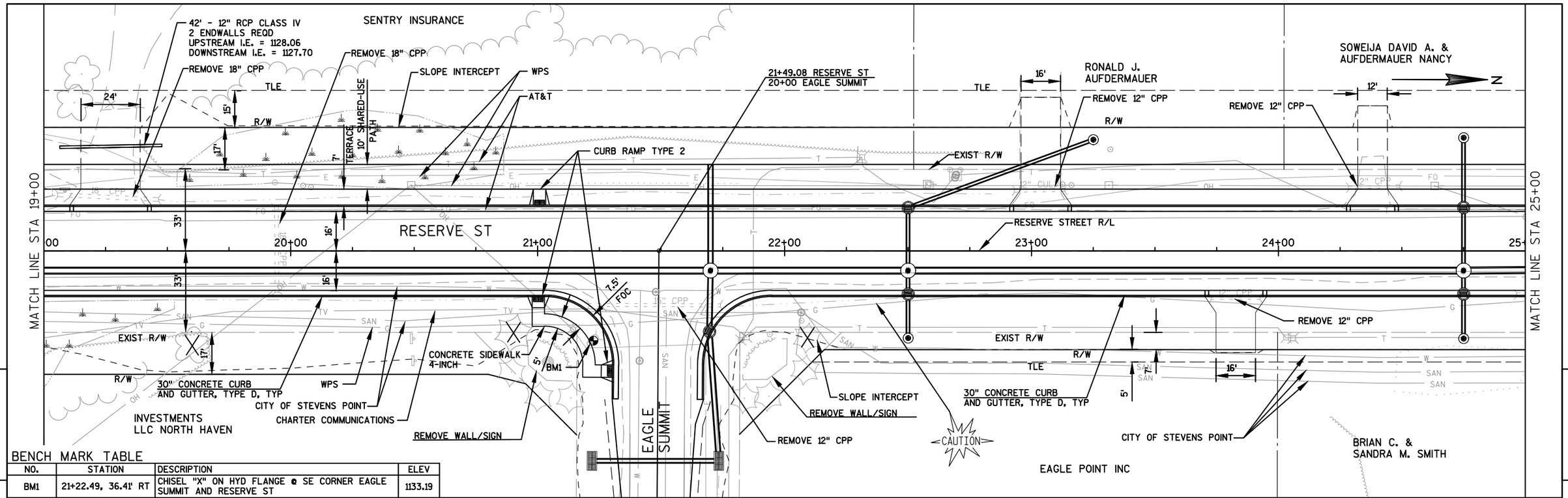



BENCH MARK TABLE

| NO. | STATION | DESCRIPTION | ELEV |
|---|---|---|---|
| BM2 | 14+92.94, 23.47 LT | CHISEL "X" ON HYD FLANGE W SIDE RESERVE ST 150'+/- SOUTH OF BRIDGE | 1127.49 |

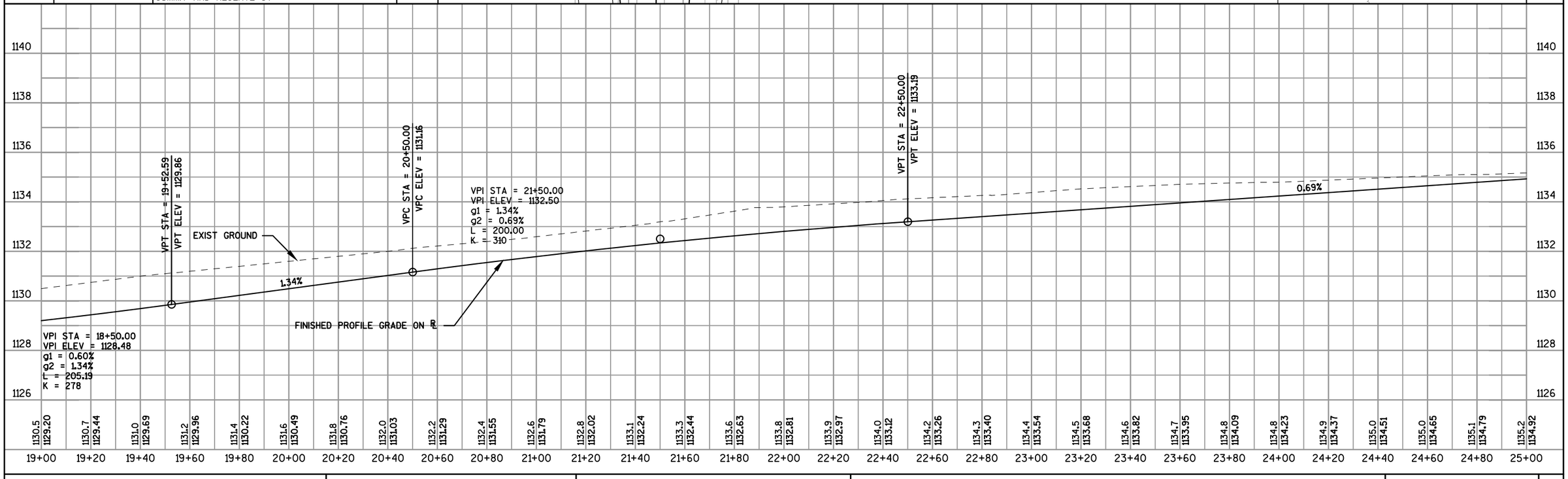



| PROJECT NO: 1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | PLAN AND PROFILE: RESERVE STREET | SHEET 105 | E |
|---|---|---|---|---|---|




BENCH MARK TABLE

| NO. | STATION | DESCRIPTION | ELEV |
|---|---|---|---|
| BM1 | 21+22.49, 36.41' RT | CHISEL "X" ON HYD FLANGE @ SE CORNER EAGLE SUMMIT AND RESERVE ST | 1133.19 |




| PROJECT NO: 1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | PLAN AND PROFILE: RESERVE STREET | SHEET 106 | E |
|---|---|---|---|---|---|

SOWEIJA DAVID A. &
AUFDERMAUER NANCY

BLUEBELL LANE

CONCRETE SIDEWALK 4-INCH

REMOVE 12" CMP

END SHARED-USE PATH

TLE

SLOPE INTERCEPT

R/W

WPS

5'

5' FOC

SAWCUT AND MATCH EXIST

EXIST R/W

EP: 28+86.95

MATCH LINE STA 25+00

12" CMP

CURB RAMP TYPE 2

PI: 26+64.72

CROWN LINE TRANSITION

PI: 25+35.00

+35

RESERVE ST

2.73' LT

25+00

26+00

27+00

28+00

28+87

12" CULV

SLOPE INTERCEPT

R/W

TLE

12'

EXIST R/W

CAUTION

CITY OF STEVENS POINT

30" CONCRETE CURB AND GUTTER, TYPE D, TYP

END CONSTRUCTION
STA 26+64.70

BRIAN C. &
SANDRA M. SMITH

N

PI STA = 25+75.00
ELEV = 135.444

PI STA = 26+99.99
ELEV = 135.944

EXISTING GROUND

0.40%

MATCH EXISTING GRADE

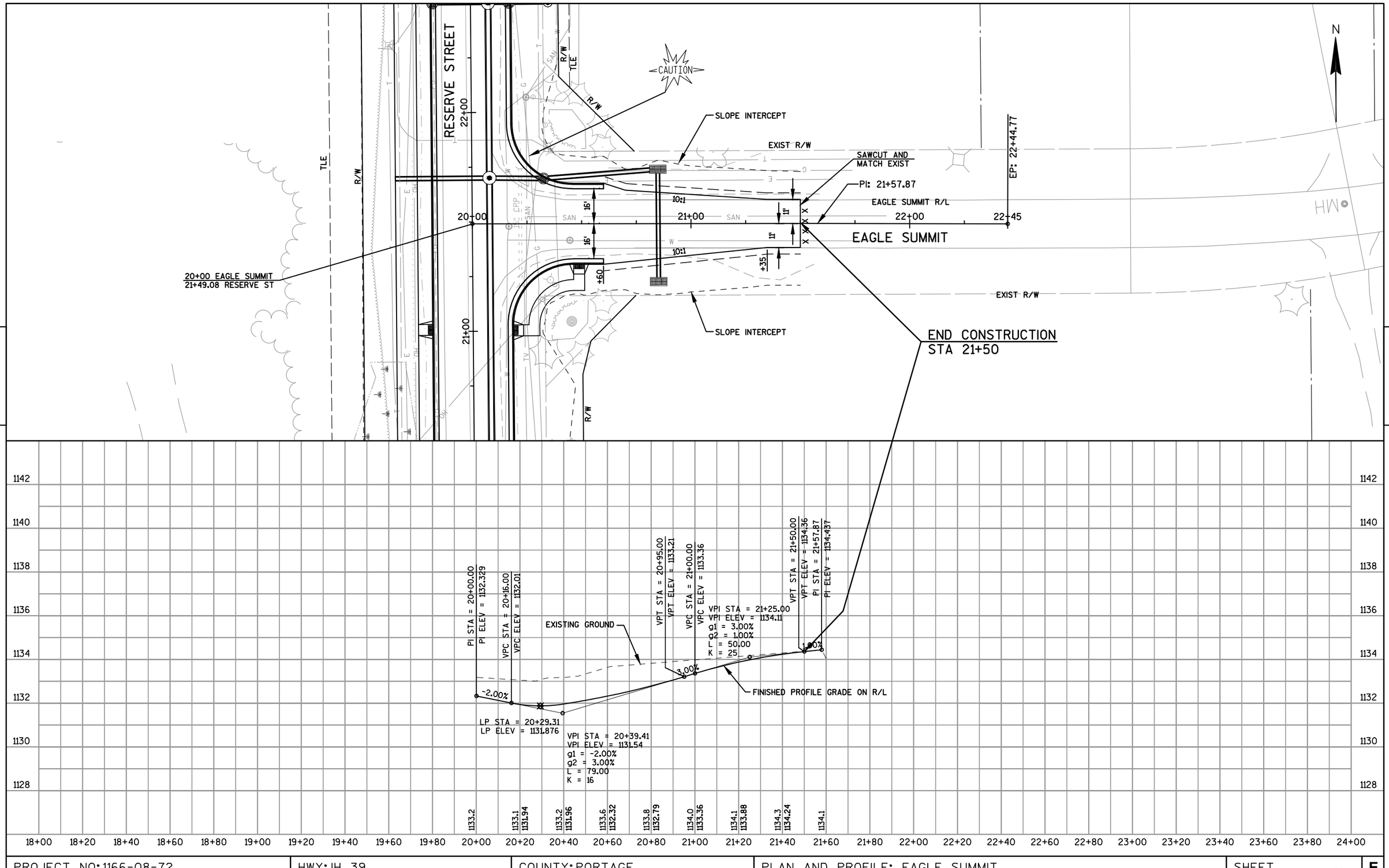
FINISHED PROFILE GRADE R/L

1142 1140 1138 1136 1134 1132 1130 1128

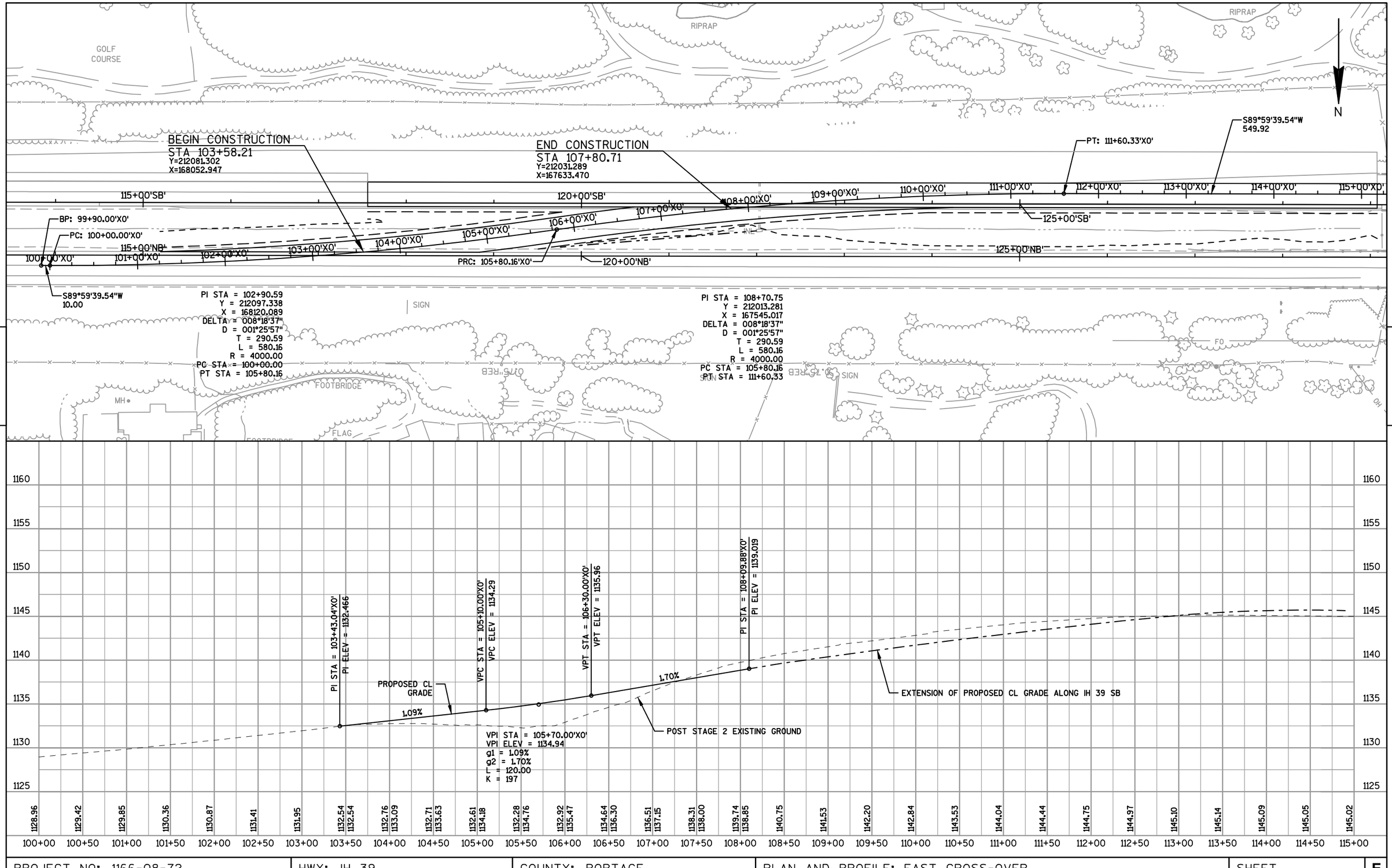
1135.2 1134.92 | 1135.2 1135.06 | 1135.3 1135.20 | 1135.4 1135.34 | 1135.5 1135.46 | 1135.6 1135.54 | 1135.7 1135.62 | 1135.8 1135.70 | 1135.8 1135.78 | 1135.9 1135.86 | 1136.0 | 1136.1 | 1136.2 | 1136.2 | 1136.3 | 1136.4 | 1136.5 | 1136.6 | 1136.6 | 1136.7

25+00 25+20 25+40 25+60 25+80 26+00 26+20 26+40 26+60 26+80 27+00 27+20 27+40 27+60 27+80 28+00 28+20 28+40 28+60 28+80 29+00 29+20 29+40 29+60 29+80 30+00 30+20 30+40 30+60 30+80 31+00

| PROJECT NO: 1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | PLAN AND PROFILE: RESERVE STREET | SHEET 107 | E |
|---|---|---|---|---|---|



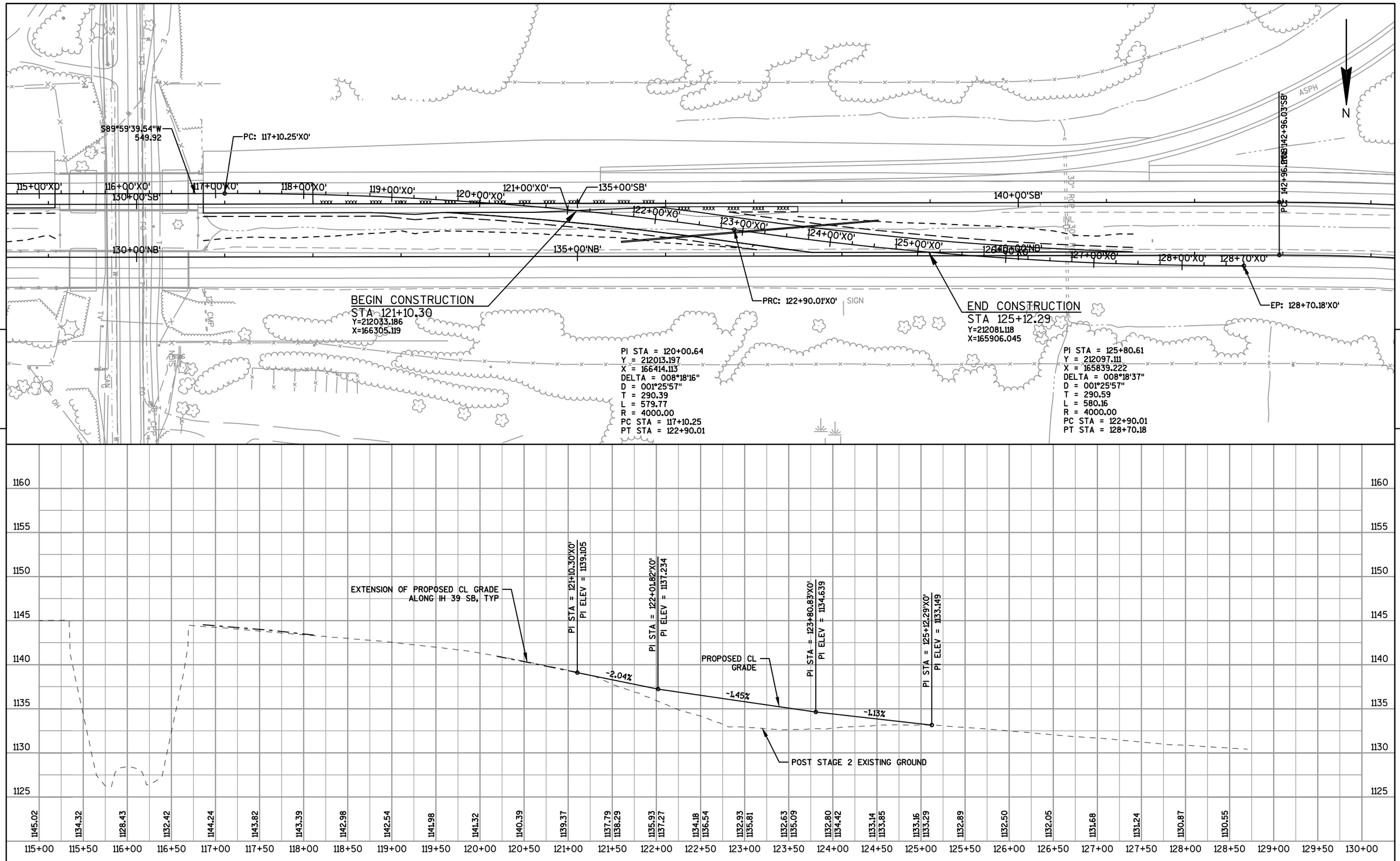

| PROJECT NO: 1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | PLAN AND PROFILE: EAGLE SUMMIT | SHEET 108 | E |
|---|---|---|---|---|---|




5

5

| PROJECT NO: 1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | PLAN AND PROFILE: EAST CROSS-OVER | SHEET 109 | E |
|---|---|---|---|---|---|




5 5

| PROJECT NO: 1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | PLAN AND PROFILE: WEST CROSS OVER | SHEET 110 E |
|---|---|---|---|---|

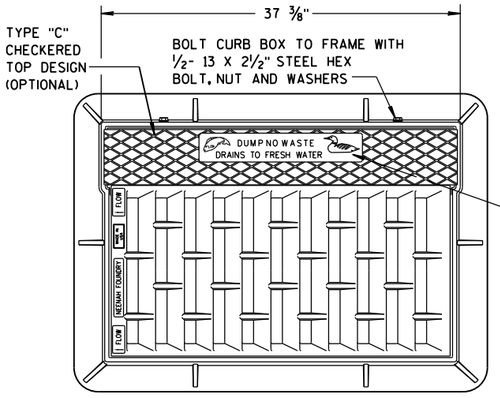
FILE NAME : F:\TR\JOBS\E2031A12\CIVIL 3D\SHEETSPLAN\11660872_050120_PP OVER.DWG PLOT DATE : 1/22/2014 5:55 AM PLOT BY : OMNNI ASSOCIATES, INC - ANDREW WESTBROOK

WISDOT/CADDS SHEET 44

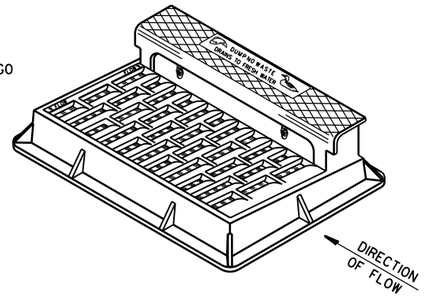
# Standard Detail Drawing List

| | |
|---|---|
| 08A05-19A | INLET COVERS TYPE A, H, A-S, H-S & Z |
| 08A05-19B | INLET COVERS TYPE B, B-A, C, MS, MS-A, & WM |
| 08A05-19D | INLET COVER TYPE BW, MANHOLE COVERS, TYPE K, J, J-S, L & M |
| 08A08-01 | CATCH BASINS 3-FT, 4-FT, 5-FT AND 6-FT DIAMETER |
| 08B09-01 | MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT AND 8-FT DIAMETER |
| 08C06-01 | INLETS 3-FT AND 4-FT DIAMETER |
| 08C08-01 | INLETS MEDIAN 1 AND 2 GRATE |
| 08D01-17 | CONCRETE CURB, CONCRETE CURB AND GUTTER AND TIES |
| 08D02-06 | CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES |
| 08D05-15A | CURB RAMPS TYPES 1 AND 1-A |
| 08D05-15B | CURB RAMPS TYPES 2 AND 3 |
| 08D05-15C | CURB RAMPS TYPES 4A AND 4A1 |
| 08D05-15D | CURB RAMPS TYPE 4B AND 4B1 |
| 08D05-15E | CURB RAMPS TYPES 5, 6, 7A, 7B & 8 |
| 08E08-03 | TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS |
| 08E09-06 | SILT FENCE |
| 08E10-02 | INLET PROTECTION TYPE A, B, C AND D |
| 08F01-11 | APRON ENDWALLS FOR CULVERT PIPE |
| 08F04-07 | JOINT TIES FOR CONCRETE PIPE  AND CONCRETE COLLAR DETAIL |
| 08F07-05 | STEEL APRON ENDWALLS FOR CULVERT PIPE AND PIPE ARCH SLOPED SIDE FRAINS |
| 09B02-07 | CONDUIT |
| 09B04-10 | PULL BOX |
| 12A03-10 | NAME PLATE (STRUCTURES) |
| 13A05-05A | SHOULDER RUMBLE STRIP, MILLING |
| 13A05-05B | SHOULDER RUMBLE STRIP, MILLING |
| 14B07-13A | CONCRETE BARRIER TEMPORARY PRECAST, 12'-6" |
| 14B07-13B | CONCRETE BARRIER TEMPORARY PRECAST, 12'-6" |
| 14B07-13C | CONCRETE BARRIER TEMPORARY PRECAST, 12'-6" |
| 14B07-13D | CONCRETE BARRIER TEMPORARY PRECAST, 12'-6" |
| 14B07-13E | CONCRETE BARRIER TEMPORARY PRECAST, 12'-6" |
| 14B07-13F | CONCRETE BARRIER TEMPORARY PRECAST, 12'-6" |
| 14B07-13G | CONCRETE BARRIER TEMPORARY PRECAST, 12'-6" |
| 14B07-13H | CONCRETE BARRIER TEMPORARY PRECAST, 12'-6" |
| 14B08-01A | CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS |
| 14B08-01B | CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS |
| 14B08-01C | CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS |
| 14B08-01D | CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS |
| 14B08-01E | CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS |
| 14B42-02A | MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL |
| 14B42-02B | MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL |
| 14B42-02C | MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL |
| 14B44-01A | MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS) |
| 14B44-01B | MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS) |
| 14B44-01C | MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS) |
| 14B45-03A | MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS) |
| 14B45-03B | MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS) |
| 14B45-03C | MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS) |
| 14B45-03D | MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS) |
| 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 |
| 15C02-05A | BARRICADES AND SIGNS FOR MAINLINE CLOSURES |
| 15C02-05B | BARRICADES AND SIGNS FOR MAINLINE CLOSURES |
| 15C03-02 | BARRICADES AND SIGNS FOR SIDEROAD CLOSURES |
| 15C08-16A | PAVEMENT MARKING (MAINLINE) |
| 15C08-16B | PAVEMENT MARKING (INTERSECTIONS) |
| 15C29-03A | BICYCLE LANE MARKING |
| 15C29-03D | URBAN BICYCLE LANE MARKING |
| 15C29-03E | PAVEMENT MARKING FOR BIKE LANES |
| 15C31-01A | PAVEMENT MARKING (RAMPS AND GORES) |
| 15C31-01D | PAVEMENT MARKING FOR PARALLEL ON-RAMP AND PARALLEL OFF-RAMP |
| 15C33-01 | STOP LINE AND CROSSWALK PAVEMENT MARKING |
| 15D12-04 | TRAFFIC CONTROL, LANE CLOSURE, SPEEDS GREATER THAN 40 M.P.H. |
| 15D27-02 | TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY,  SPEEDS GREATER THAN 40 MPH |
| 15D30-01 | TRAFFIC CONTROL, SIDEWALK CLOSURE |

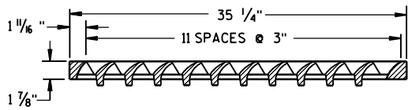
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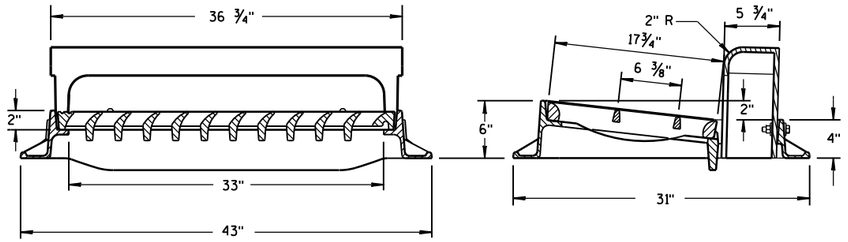


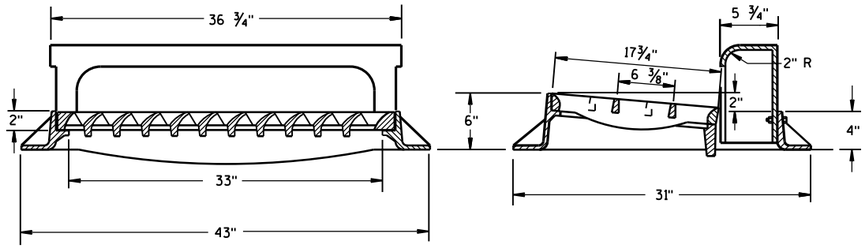

**NOTE:**
**GRATE IS REVERSIBLE.**




NOTE: CURB BOX HEIGHT ADJUSTABLE 6" TO 9"

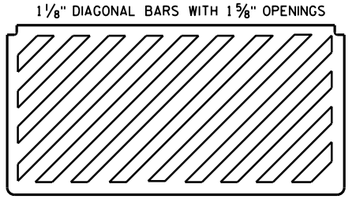



## TYPE "H"

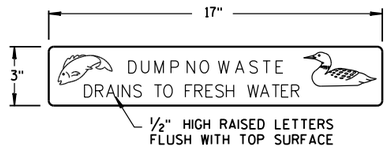
**NOTE: EITHER CASTING IS ACCEPTABLE**



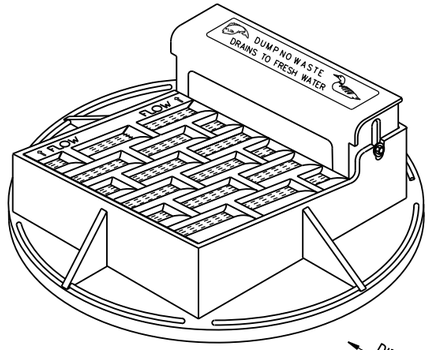

**SPECIAL GRATE FOR TYPE "H" COVER**

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

(NOTED AS TYPE H-S ON DRAINAGE TABLE)

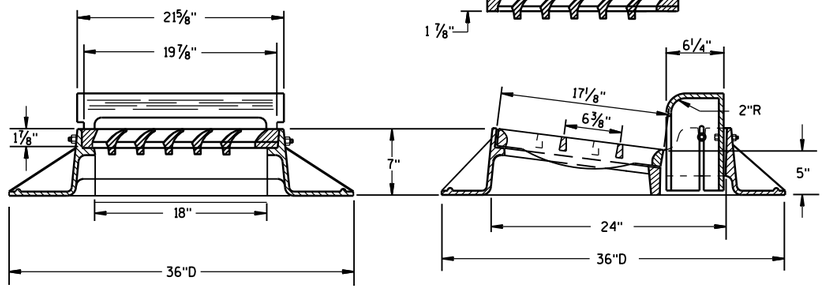



**LOGO DETAIL**




NOTE: CURB BOX ADJUSTABLE 4" TO 9"

**NOTE:**
**GRATE IS REVERSIBLE.**



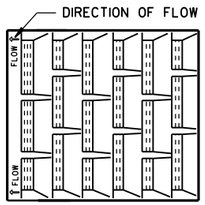

## TYPE "A"

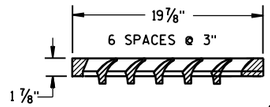
## GENERAL NOTES

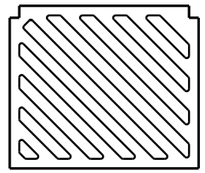
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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

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



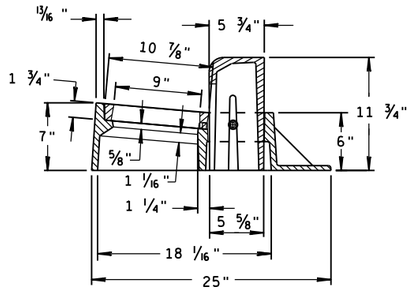



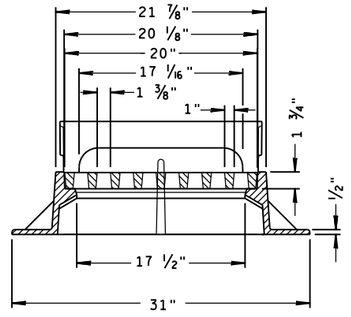




**SPECIAL GRATE FOR TYPE "A" COVER**

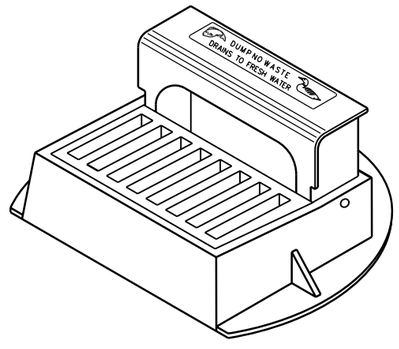
(MEASURES 19 3/4" X 17" X 1 7/8")

(NOTED AS TYPE A-S ON DRAINAGE TABLE)




## TYPE "Z"




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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

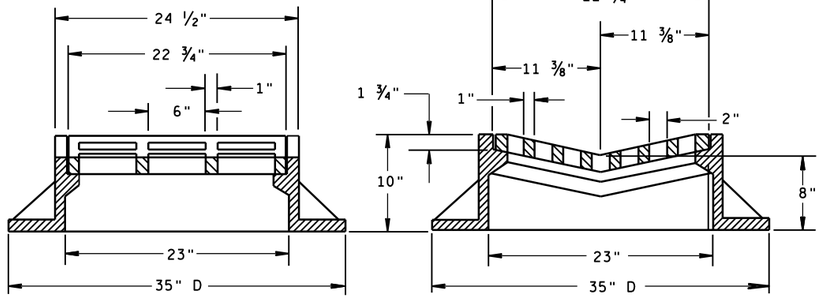
APPROVED
11-27-13 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
FHWA

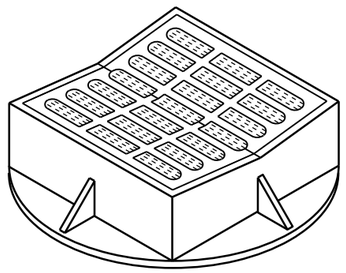


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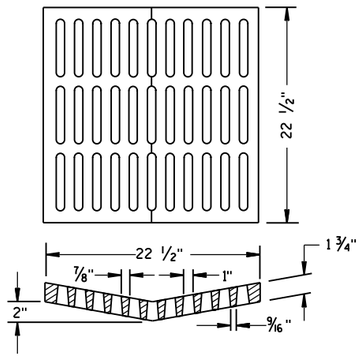


S.D.D. 8 A 5-19a



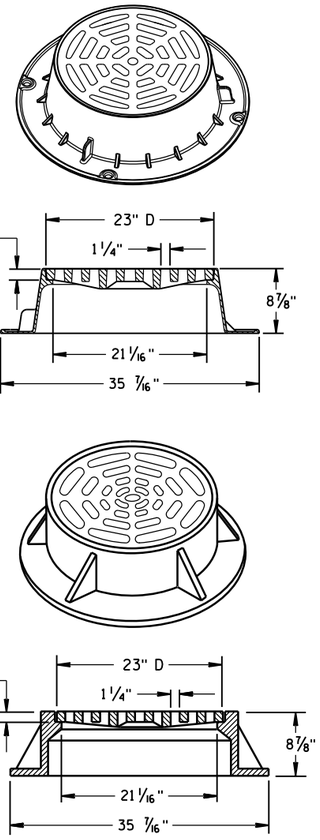



TYPE "B"




ALTERNATIVE GRATE FOR TYPE "B" COVER

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




TYPE "C"

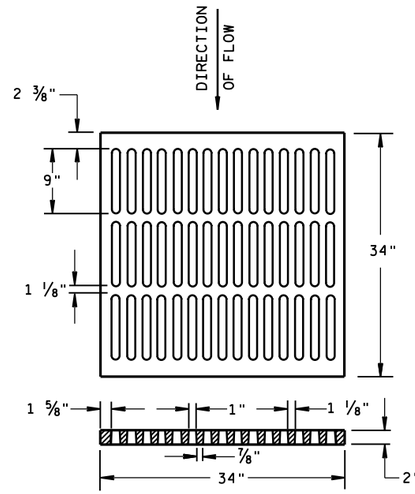
NOTE: EITHER CASTING IS ACCEPTABLE

## GENERAL NOTES

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

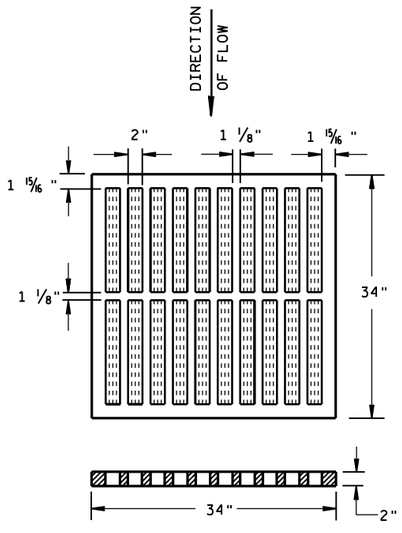
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR CATCH BASIN, MANHOLE AND INLET COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

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



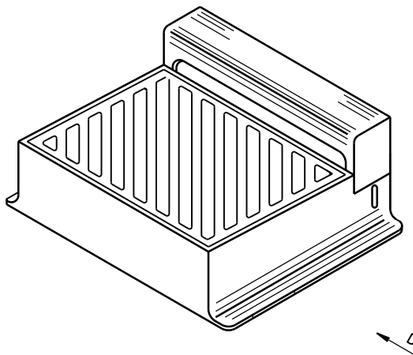

ALTERNATIVE TYPE "MS"

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

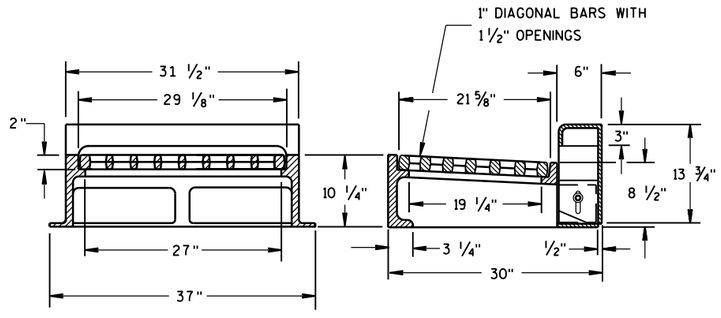



TYPE "MS"

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




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




NOTE: CURB BOX HEIGHT ADJUSTABLE 6" TO 9"

TYPE "WM"

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

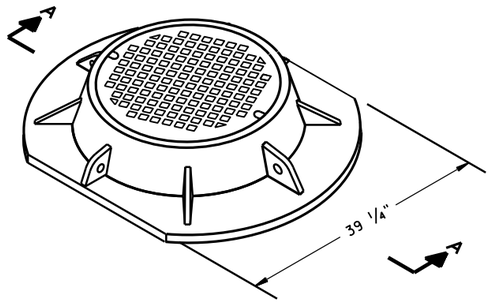
APPROVED
11/27/2013 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

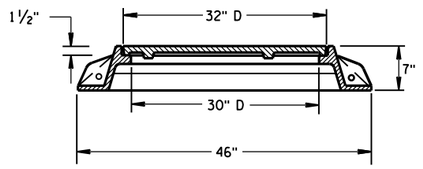




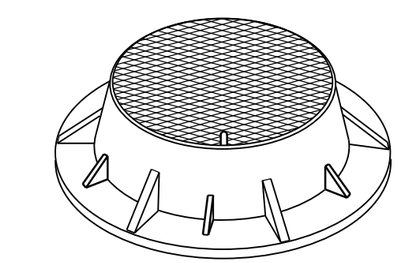
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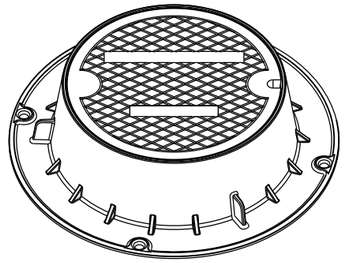
S.D.D. 8 A 5-19b

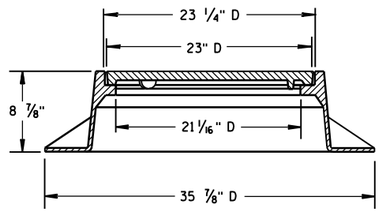


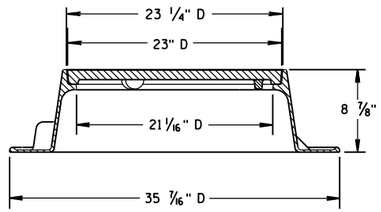




SECTION A-A
TYPE "K"







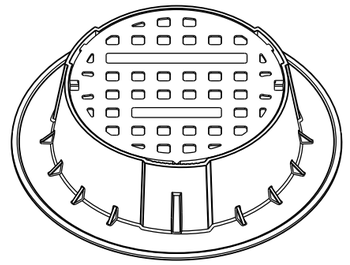

TYPE "J"
NOTE: EITHER CASTING IS ACCEPTABLE

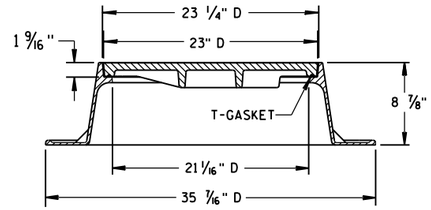
## GENERAL NOTES

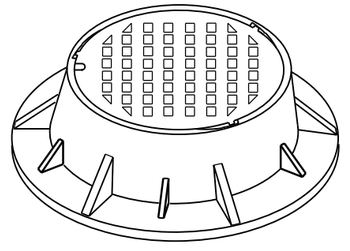
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

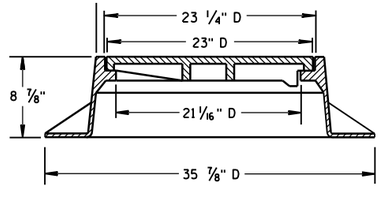
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR MANHOLE COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

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

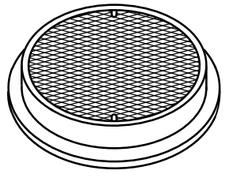


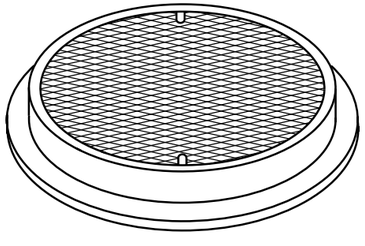


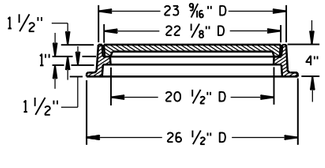





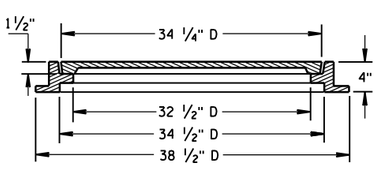

TYPE "J" SPECIAL
TYPE "B" NON-ROCKING SELF-SEAL LID
(NOTED AS TYPE J-S ON THE DRAINAGE TABLE)
NOTE: EITHER CASTING IS ACCEPTABLE



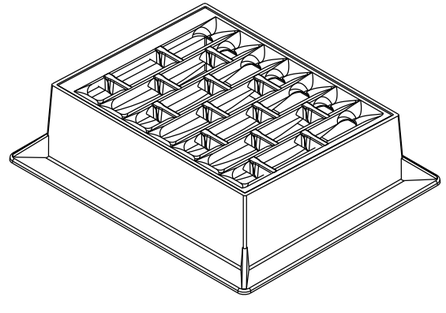


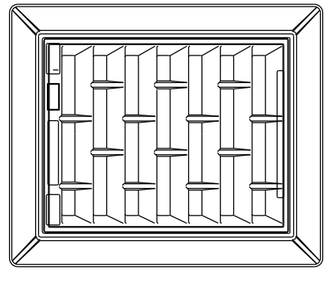


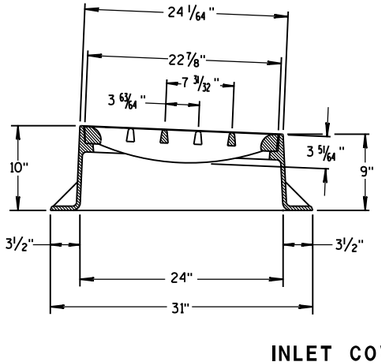

TYPE "L"

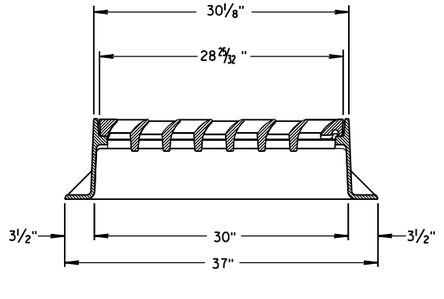



TYPE "M"








INLET COVER TYPE "BW"

INLET COVER TYPE BW
MANHOLE COVERS, TYPE K, J, J-S, L & M

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11/27/2013
DATE
FHWA

/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER

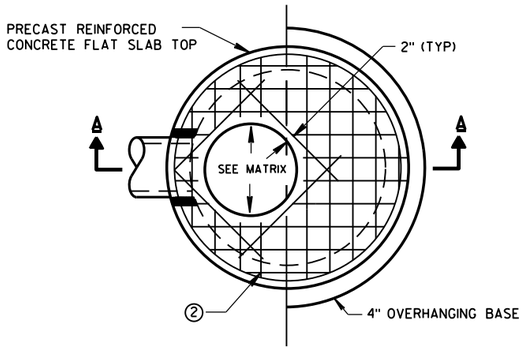


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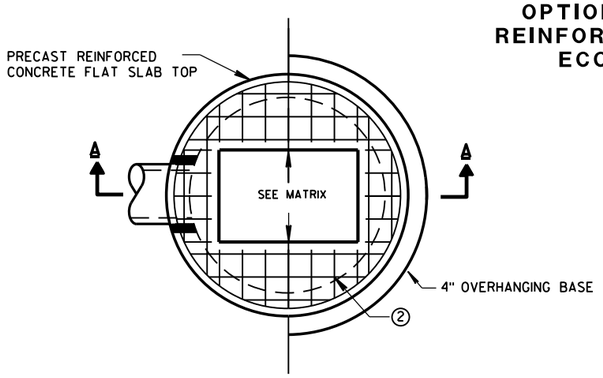
S.D.D. 8 A 5-19d

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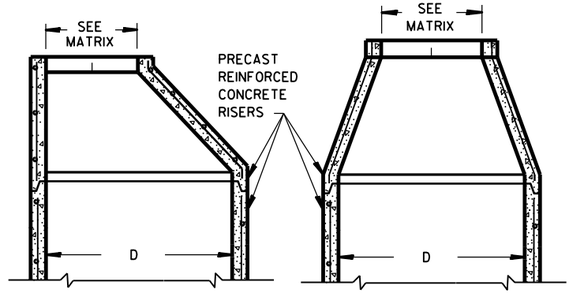
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PLAN VIEW CIRCULAR OPENING



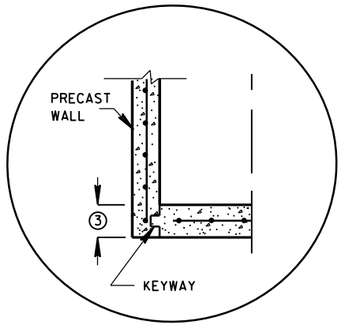

PLAN VIEW RECTANGULAR OPENING



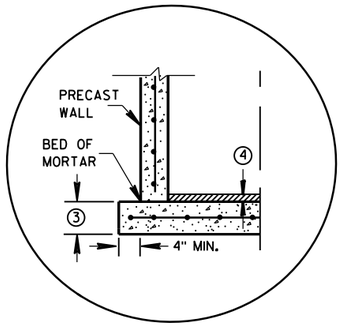

OPTIONAL PRECAST REINFORCED CONCRETE ECCENTRIC TOP




OPTIONAL PRECAST REINFORCED CONCRETE CONCENTRIC TOP

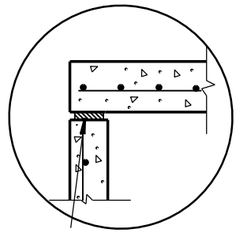



PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION



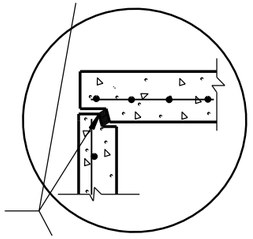

SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

DETAIL "A"

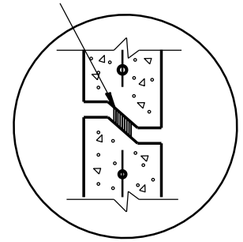


TOP WITH PLAIN END JOINT

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

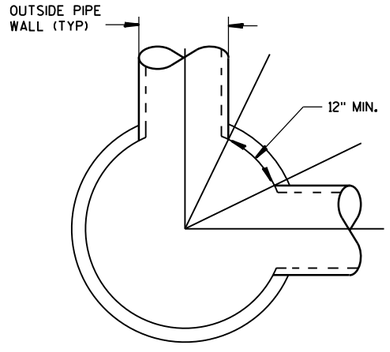


TOP WITH TONGUE AND GROOVE JOINT

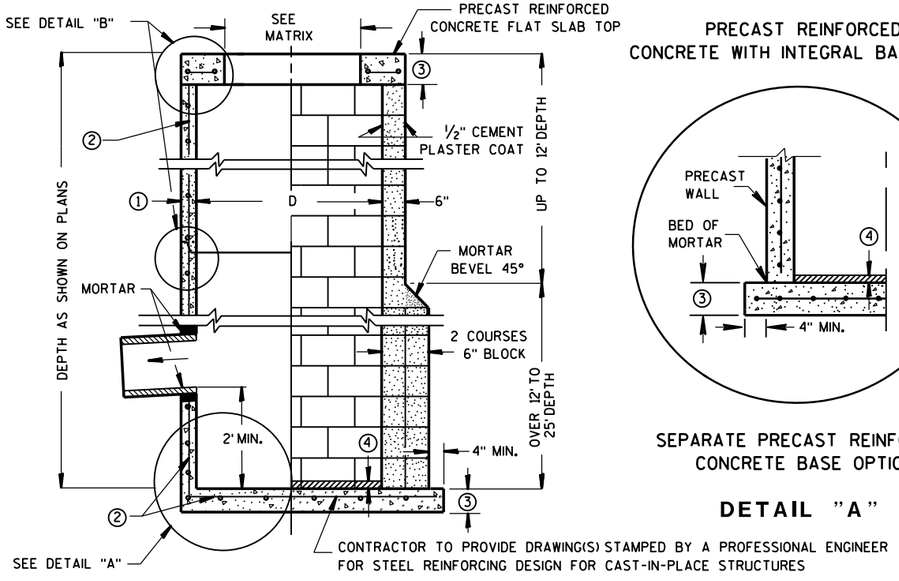


RISER WITH TONGUE AND GROOVE JOINT

DETAIL "B"




DETAIL "C"




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

SECTION A-A

PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

CONCRETE BLOCK WITH CAST-IN-PLACE OR PRECAST REINFORCED CONCRETE BASE ②

## 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 CATCH BASIN UNITS REQUIRED FOR THE PROJECT UNTIL A LIST OF SIZES IS FURNISHED BY THE ENGINEER.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR UNDERGROUND DRAINAGE STRUCTURES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ALL DRAINAGE STRUCTURES ARE DESIGNATED ON THE PLANS AS "MANHOLES 3X3-L", "CATCH BASINS 4-B", "INLETS 2X3-H", ETC. THE FIRST NUMBERS DESIGNATE THE SIZE OF THE STRUCTURE, AND THE FOLLOWING LETTER DESIGNATES THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

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

PRECAST REINFORCED CONCRETE CONE TOPS (ECCENTRIC OR CONCENTRIC) OR PRECAST REINFORCED CONCRETE FLAT SLAB TOPS MAY BE USED ON CONCRETE BLOCK STRUCTURES. THE TOPS SHALL BE INSTALLED ON A BED OF MORTAR.

ECCENTRIC CONE TOPS MAY BE USED ON ALL STRUCTURES, AND CONCENTRIC CONE TOPS SHALL BE USED ONLY ON STRUCTURES 5 FEET OR LESS IN DEPTH, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

STEPS MEETING AASHTO M199 AND THE FOLLOWING REQUIREMENTS SHALL BE INSTALLED IN ALL STRUCTURES OVER 5 FEET IN DEPTH: 16 INCH C-C MAXIMUM SPACING; PROJECT A MINIMUM CLEAR DISTANCE OF 4 INCHES FROM THE WALL AT THE POINT OF EMBEDMENT; MINIMUM LENGTH OF 10 INCHES; MINIMUM WALL EMBEDMENT OF 3 INCHES. FERROUS METAL STEPS NOT PAINTED OR TREATED TO RESIST CORROSION SHALL HAVE A MINIMUM CROSS SECTIONAL DIMENSION OF 1 INCH.

STEPS OF APPROVED POLYPROPYLENE PLASTIC COATED REINFORCEMENT BAR ARE ACCEPTABLE. REINFORCING BAR MUST BE A MINIMUM OF 1/2 INCH AND MEET THE REQUIREMENTS OF ASTM A615.

CERTIFICATION SHALL BE PROVIDED THAT INSTALLED STEPS WHEN TESTED IN ACCORDANCE WITH SECTION 10 OF AASHTO T280 CAN WITHSTAND A VERTICAL LOAD OF 800 LBS. AND A HORIZONTAL LOAD OF 400 LBS.

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

ALL PRECAST INLET UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF AASHTO DESIGNATION M199.

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

CONCRETE BLOCK WILL NOT BE PERMITED FOR STRUCTURES GREATER THAN 4 FEET IN DIAMETER.

4" OVERHANGING BASES ARE REQUIRED FOR ALL CONCRETE BLOCK INSTALLATIONS. 4" OVERHANG IS REQUIRED WHEN SEPARATE PRECAST BASE IS PROVIDED. OVERHANG IS NOT REQUIRED ON PRECAST STRUCTURES WITH AN INTEGRAL OR MONOLITHIC BASE.

FOR ADDITIONAL CONFIGURATIONS, MAINTAIN A MINIMUM OF 12 INCHES AS MEASURED FROM THE INSIDE OF THE STRUCTURE WALL BETWEEN THE OUTSIDE PIPE WALLS OF ADJACENT PIPES. SEE DETAIL "C".

① MINIMUM WALL THICKNESS SHALL BE 4 INCHES FOR 3-FT, 5 INCHES FOR 4-FT, 6 INCHES FOR 5-FT AND 7 INCHES FOR 6-FT DIAMETER PRECAST CATCH BASINS.

② FOR PRECAST CATCH BASINS PROVIDE REINFORCING STEEL IN ACCORDANCE TO AASHTO M199.

③ PRECAST FLAT SLAB TOPS AND BASES WITH A DIAMETER OF 48" AND LESS SHALL HAVE A MINIMUM THICKNESS OF 6". PRECAST FLAT SLAB TOPS AND BASES WITH A DIAMETER LARGER THAN 48" SHALL HAVE A MINIMUM THICKNESS OF 8".

④ 1" CONCRETE KEY POURED AFTER INSTALLATION. 2' SUMP MEASURED FROM TOP OF KEY.

## CATCH BASIN COVER OPENING MATRIX

| CATCH BASIN SIZE | INLET COVER TYPE | ALL A'S | ALL B'S | BW | C | F | ALL H'S | S | T | V | WM | Z |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | OPENING SIZE (FT) | | | | | | | | | | | |
| 3-FT | 2X2 | X | X | | | | | X | | X | | |
| | 2 DIA. | | | | X | | | | | | | X |
| 4-FT-6-FT | 2X2 | X | X | | | | | X | | X | | |
| | 2X2.5 | | | X | | | | X | X | X | X | |
| | 2 DIA. | | | | X | | | | | | | X |
| | 2X3 | | | | | | X | | | | | |
| | 2.5X3 | | | | | X | | | | | | |

## PIPE MATRIX

| CATCH BASIN SIZE | MAXIMUM INSIDE PIPE DIAMETER FOR TWO PIPES | |
|---|---|---|
| | 180° SEPARATION (IN) | 90° SEPARATION (IN) |
| 3-FT | 15 | 12 |
| 4-FT | 24 | 18 |
| 5-FT | 36 | 24 |
| 6-FT | 42 | 30 |

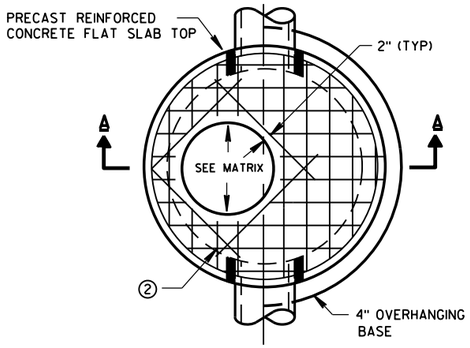
CATCH BASINS 3-FT, 4-FT, 5-FT AND 6-FT DIAMETER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

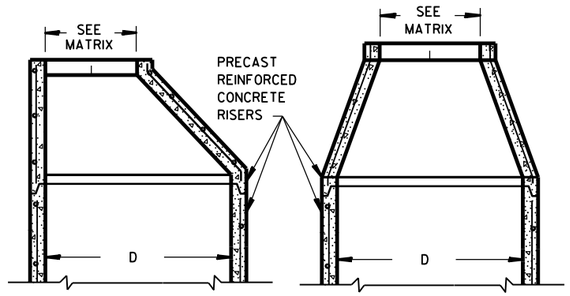
APPROVED
6/5/2012 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
FHWA




S.D.D. 8 A 8-1

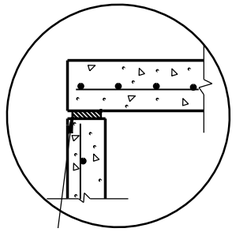



PLAN VIEW CIRCULAR OPENING

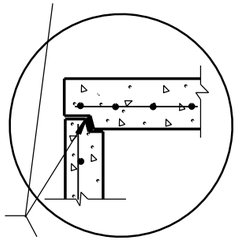



OPTIONAL PRECAST REINFORCED CONCRETE ECCENTRIC TOP

OPTIONAL PRECAST REINFORCED CONCRETE CONCENTRIC TOP

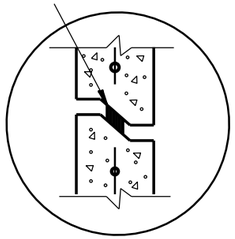


TOP WITH PLAIN END JOINT



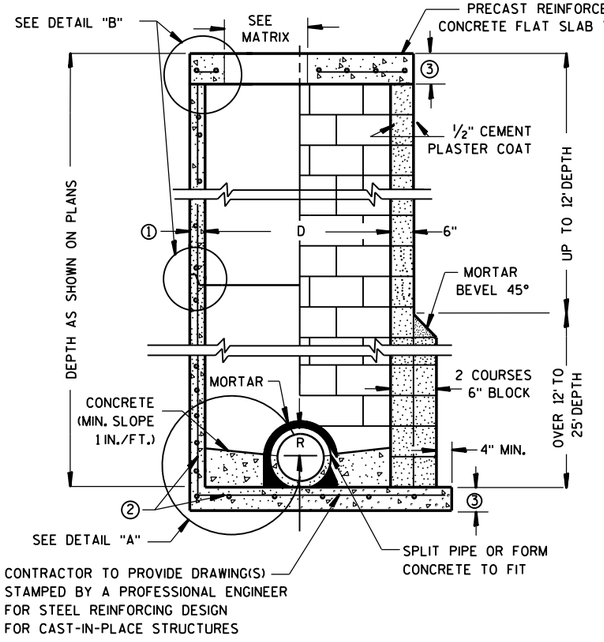
JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C990 (TYP)

TOP WITH TONGUE AND GROOVE JOINT



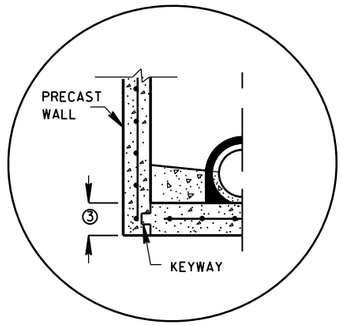
RISER WITH TONGUE AND GROOVE JOINT

DETAIL "B"

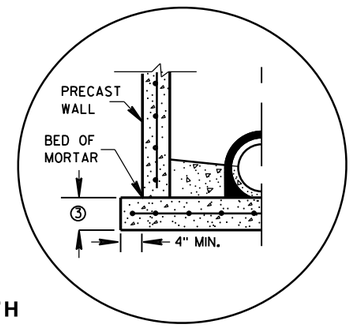



PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

CONCRETE BLOCK WITH CAST-IN-PLACE OR PRECAST REINFORCED CONCRETE BASE ②

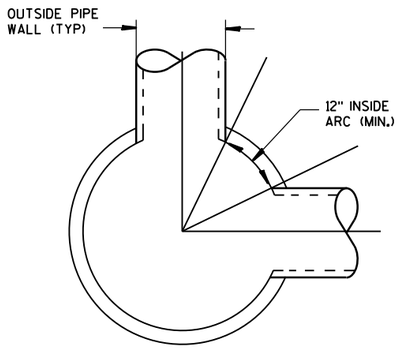



PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION




SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

DETAIL "A"




DETAIL "C"

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PRECAST REINFORCED CONE TOPS (ECCENTRIC OR CONCENTRIC) OR PRECAST REINFORCED FLAT SLAB TOPS MAY BE USED ON CONCRETE BLOCK STRUCTURES. THE CONE TOPS SHALL BE INSTALLED ON A BED OF MORTAR.

ECCENTRIC CONE TOPS MAY BE USED ON ALL STRUCTURES, AND CONCENTRIC CONE TOPS SHALL BE USED ONLY ON STRUCTURES 5 FEET OR LESS IN DEPTH, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

STEPS MEETING AASHTO M199 AND THE FOLLOWING REQUIREMENTS SHALL BE INSTALLED IN ALL STRUCTURES OVER 5 FEET IN DEPTH: 16 INCH C-C MAXIMUM SPACING; PROJECT A MINIMUM CLEAR DISTANCE OF 4 INCHES FROM THE WALL AT THE POINT OF EMBEDMENT; MINIMUM LENGTH OF 10 INCHES; MINIMUM WALL EMBEDMENT OF 3 INCHES. FERROUS METAL STEPS NOT PAINTED OR TREATED TO RESIST CORROSION SHALL HAVE A MINIMUM CROSS SECTIONAL DIMENSION OF 1 INCH.

STEPS OF APPROVED POLYPROPYLENE PLASTIC COATED REINFORCEMENT BAR ARE ACCEPTABLE. REINFORCING BAR MUST BE A MINIMUM OF ½" AND MEET THE REQUIREMENTS OF ASTM A615.

CERTIFICATION SHALL BE PROVIDED THAT INSTALLED STEPS WHEN TESTED IN ACCORDANCE WITH SECTION 10 OF AASHTO T280 CAN WITHSTAND A VERTICAL LOAD OF 800 LBS. AND A HORIZONTAL LOAD OF 400 LBS.

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

CONCRETE BLOCK WILL NOT BE PERMITED FOR STRUCTURES GREATER THAN 4 FEET IN DIAMETER.

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

ALL PRECAST MANHOLE UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF AASHTO DESIGNATION M 199.

4" OVERHANGING BASES ARE REQUIRED FOR ALL CONCRETE BLOCK INSTALLATIONS. 4" OVERHANG IS REQUIRED WHEN SEPARATE PRECAST BASE IS PROVIDED. OVERHANG IS NOT REQUIRED ON PRECAST STRUCTURES WITH AN INTEGRAL OR MONOLITHIC BASE.

FOR ADDITIONAL CONFIGURATIONS, MAINTAIN A MINIMUM OF 12 INCHES AS MEASURED FROM THE INSIDE OF THE STRUCTURE WALL BETWEEN THE OUTSIDE PIPE WALLS OF ADJACENT PIPES. SEE DETAIL "C".

① MINIMUM WALL THICKNESS SHALL BE 4 INCHES FOR 3-FT, 5 INCHES FOR 4-FT, 6 INCHES FOR 5-FT, 7 INCHES FOR 6-FT, 8 INCHES FOR 7-FT AND 9 INCHES FOR 8-FT DIAMETER PRECAST MANHOLES.

② FOR PRECAST MANHOLES PROVIDE REINFORCING STEEL IN ACCORDANCE TO AASHTO M199.

③ PRECAST FLAT SLAB TOPS AND BASES WITH A DIAMETER OF 48" AND LESS SHALL HAVE A MINIMUM THICKNESS OF 6". PRECAST FLAT SLAB TOPS AND BASES WITH A DIAMETER LARGER THAN 48" SHALL HAVE A MINIMUM THICKNESS OF 8".

## MANHOLE COVER OPENING MATRIX

| MANHOLE COVER TYPE | C | ALL J'S | K | L | M |
|---|---|---|---|---|---|
| OPENING SIZE (FT) | | | | | |
| 2 DIA. | X | X | | X | |
| 3 DIA. | | | X | | X |

## PIPE MATRIX

| MANHOLE SIZE | MAXIMUM INSIDE PIPE DIAMETER FOR TWO PIPES | |
|---|---|---|
| | 180° SEPARATION (IN) | 90° SEPARATION (IN) |
| 3-FT | 15 | 12 |
| 4-FT | 24 | 18 |
| 5-FT | 36 | 24 |
| 6-FT | 42 | 36 |
| 7-FT | 48 | 36 |
| 8-FT | 60 | 42 |

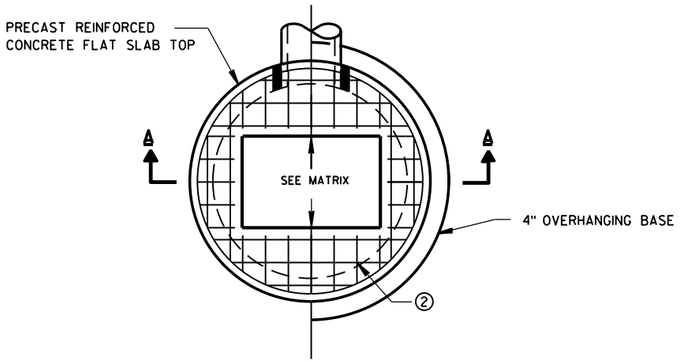
MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT AND 8-FT DIAMETER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

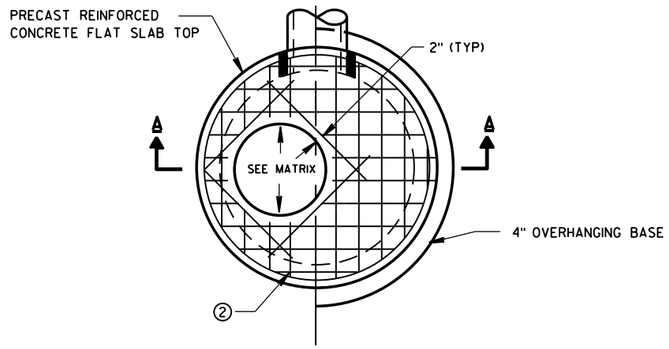
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6/5/2012 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA



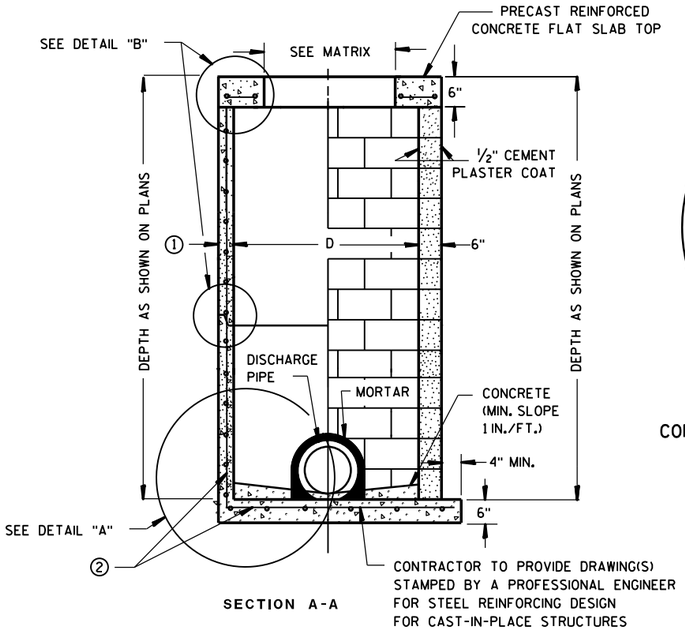

6
S.D.D. 8 B 9-1




PLAN VIEW RECTANGULAR OPENING




PLAN VIEW CIRCULAR OPENING

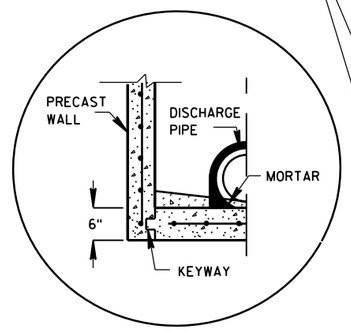



SECTION A-A

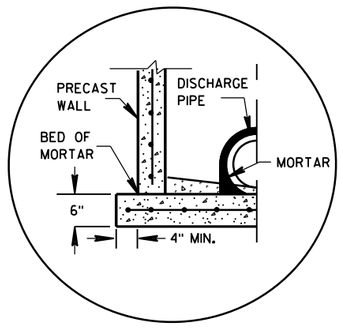
PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

CONCRETE BLOCK WITH CAST-IN-PLACE OR PRECAST REINFORCED CONCRETE BASE ②

CIRCULAR INLETS W/ FLAT TOP

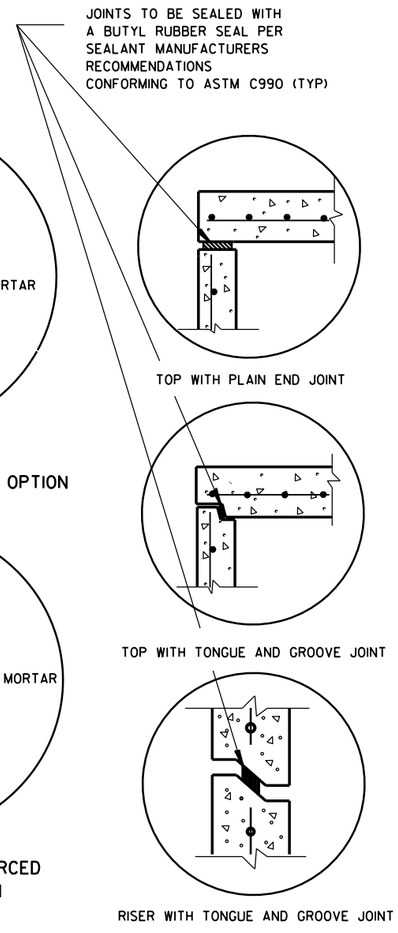



PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION




SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

DETAIL "A"




DETAIL "B"

## GENERAL NOTES

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

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

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR UNDERGROUND DRAINAGE STRUCTURES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ALL DRAINAGE STRUCTURES ARE DESIGNATED ON THE PLANS AS "MANHOLES 3X3-L", "CATCH BASINS 4-B", "INLETS 2X3-H", ETC. THE FIRST NUMBERS DESIGNATE THE SIZE OF THE STRUCTURE, AND THE FOLLOWING LETTER DESIGNATES THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

BASES SHALL BE PLACED ON A BED OF MATERIAL AT LEAST 6 INCHES IN DEPTH, WHICH MEETS THE REQUIREMENTS OF 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.

ALL PRECAST INLET UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF AASHTO DESIGNATION M199.

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

4" OVERHANGING BASES ARE REQUIRED FOR ALL CONCRETE BLOCK INSTALLATIONS. 4" OVERHANG IS REQUIRED WHEN SEPARATE PRECAST BASE IS PROVIDED. OVERHANG IS NOT REQUIRED ON PRECAST STRUCTURES WITH AN INTEGRAL OR MONOLITHIC BASE.

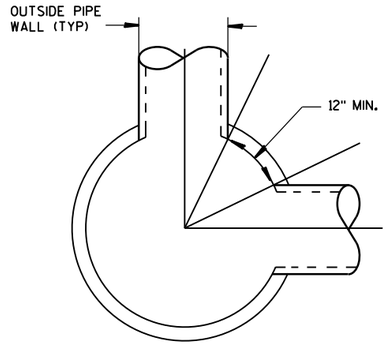
FOR ADDITIONAL CONFIGURATIONS, MAINTAIN A MINIMUM OF 12 INCHES AS MEASURED FROM THE INSIDE OF THE STRUCTURE WALL BETWEEN THE OUTSIDE PIPE WALLS OF ADJACENT PIPES. SEE DETAIL "C".

① MINIMUM WALL THICKNESS SHALL BE 4-IN FOR 3-FT DIAMETER AND 5-IN FOR 4-FT DIAMETER PRECAST INLETS.

② FOR PRECAST CATCH BASINS PROVIDE REINFORCING STEEL IN ACCORDANCE TO AASHTO M199.

## INLET COVER OPENING MATRIX

| | INLET COVER TYPE | ALL A'S | ALL B'S | BW | C | F | ALL H'S | S | T | V | WM | Z |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| INLET SIZE | OPENING SIZE (FT) | | | | | | | | | | | |
| 3-FT | 2 DIA. | | | | X | | | | | | | X |
| | 2X2 | X | X | | | | | X | | X | | |
| 4-FT | 2 DIA. | | | | X | | | | | | | X |
| | 2X2 | X | X | | | | | X | | X | | |
| | 2X2.5 | | | X | | | | X | X | X | X | |
| | 2X3 | | | | | | X | | | | | |
| | 2.5X3 | | | | | X | | | | | | |




DETAIL "C"

## PIPE MATRIX

| INLET SIZE | MAXIMUM INSIDE PIPE DIAMETER FOR TWO PIPES | |
|---|---|---|
| | 180° SEPARATION (IN) | 90° SEPARATION (IN) |
| 3-FT | 15 | 12 |
| 4-FT | 24 | 18 |

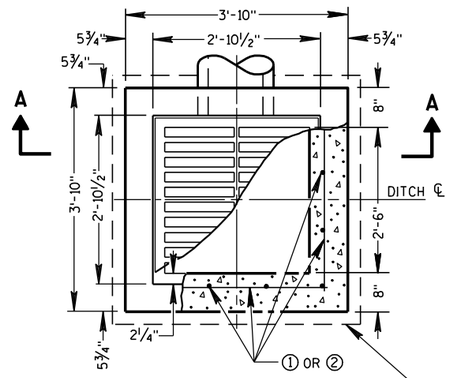
INLETS 3-FT AND 4-FT DIAMETER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

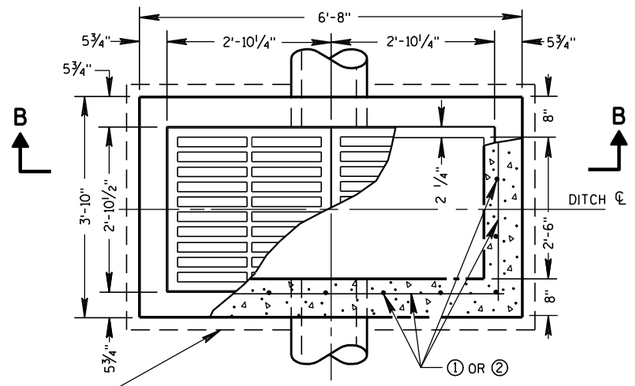
APPROVED
6/5/2012 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

INLETS 3-FT AND 4-FT DIAMETER


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

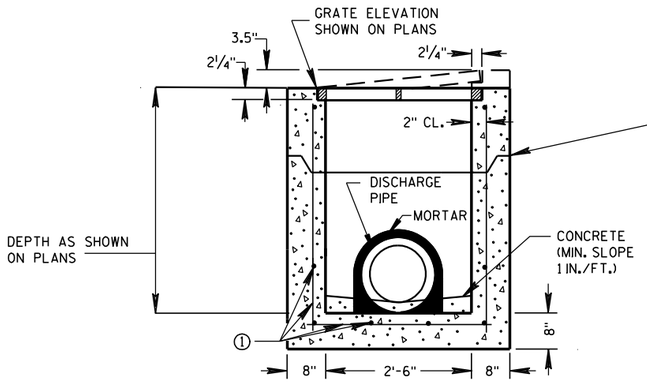



PLAN VIEW

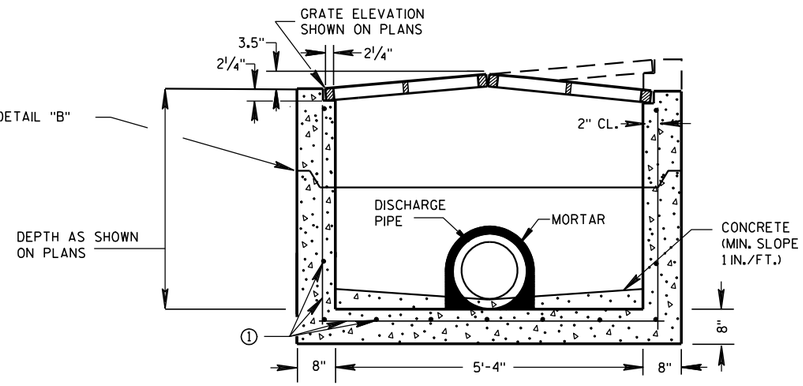



PLAN VIEW

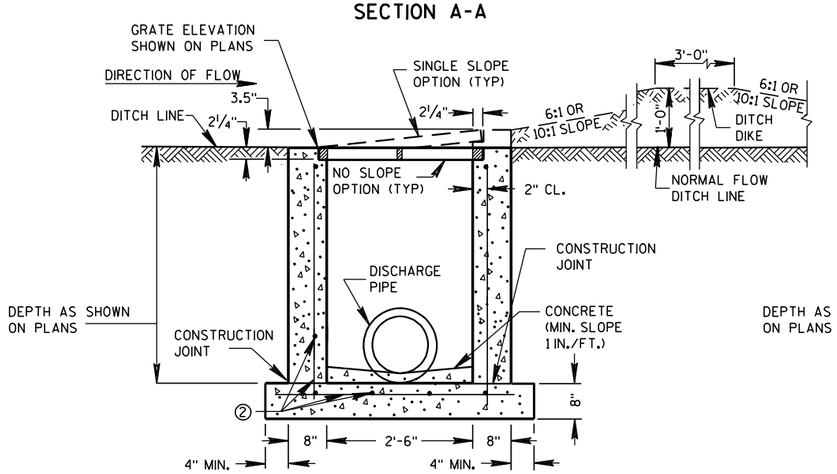
4" OVERHANGING BASE ON REINFORCED CAST-IN-PLACE CONCRETE INLETS



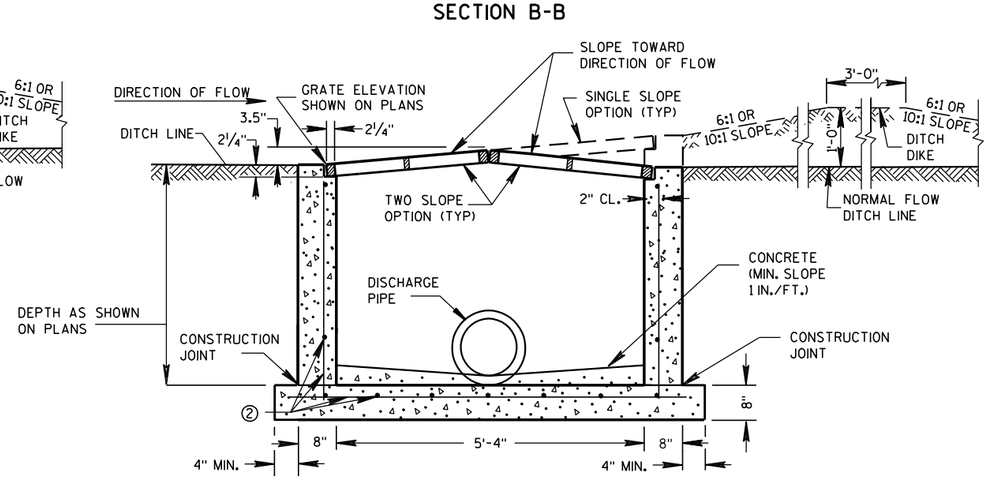

PRECAST REINFORCED CONCRETE SECTION A-A




PRECAST REINFORCED CONCRETE SECTION B-B




REINFORCED CAST-IN-PLACE CONCRETE SECTION A-A




REINFORCED CAST-IN-PLACE CONCRETE SECTION B-B

**INLETS MEDIAN 1 GRATE**

**INLETS MEDIAN 2 GRATE**

## GENERAL NOTES

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

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

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

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

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

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

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

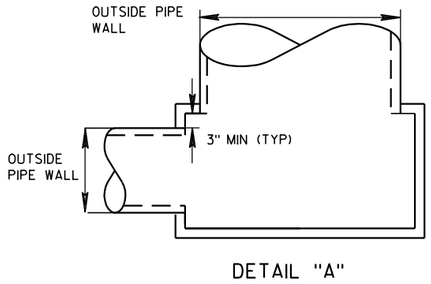
MAXIMUM INSIDE PIPE DIAMETER DETERMINED BY 3" CLEARANCE ON EACH SIDE OF THE OUTSIDE WALL OF THE PIPE. SEE DETAIL "A". ASSUMES PIPE ENTERS PERPENDICULAR TO THE STRUCTURE.

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

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

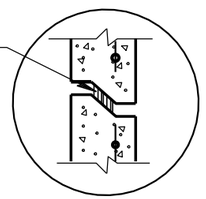
### PIPE MATRIX

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




DETAIL "A"

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



DETAIL "B"

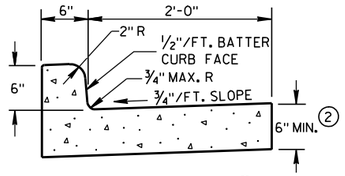
**INLETS MEDIAN 1 AND 2 GRATE**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

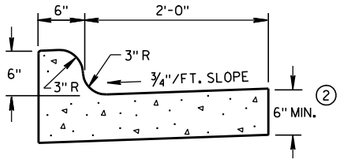
APPROVED
6/5/2012 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA



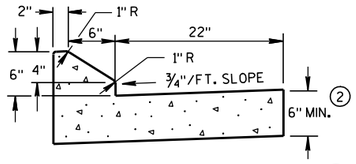

6
S.D.D. 8 C 8-1



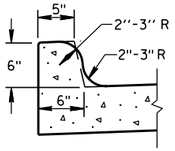

TYPES A & D (1)



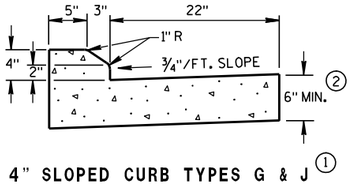

TYPES K & L (1)




6" SLOPED CURB TYPES G & J (1)

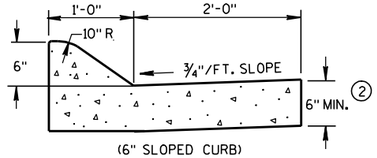



OPTIONAL CURB SHAPE FOR TYPES K & L (1)

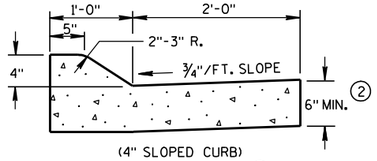



4" SLOPED CURB TYPES G & J (1)

## CONCRETE CURB & GUTTER 30"

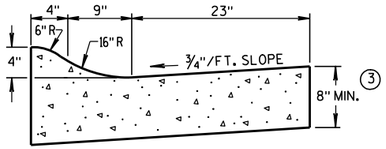



(6" SLOPED CURB)



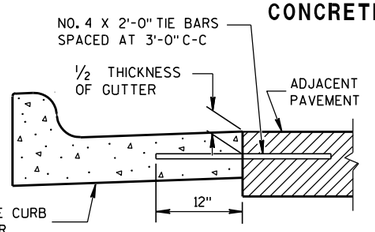

(4" SLOPED CURB)

TYPES A & D (1)

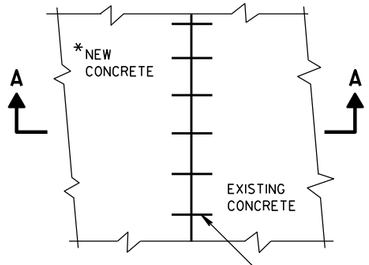



4" SLOPED CURB TYPES R & T (1) (4)

## CONCRETE CURB & GUTTER 36"

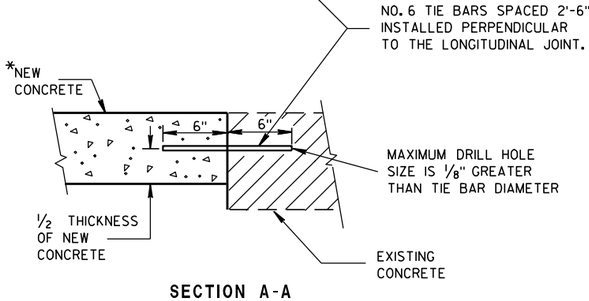



TYPICAL TIE BAR LOCATION (1)



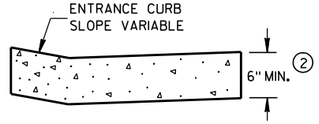

*NEW CURB & GUTTER, SURFACE DRAINS, CONCRETE PAVEMENT OR OTHER NEW CONCRETE.

PLAN VIEW



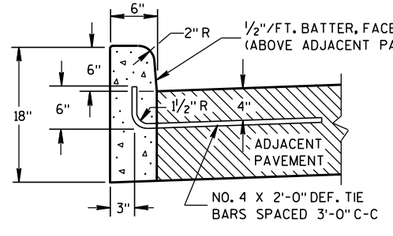

SECTION A-A

TIE BARS DRILLED INTO EXISTING PAVEMENT



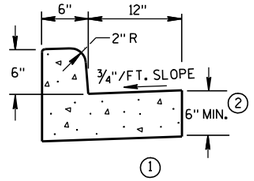

DRIVEWAY ENTRANCE CURB

(WHEN DIRECTED BY THE ENGINEER)




(1)

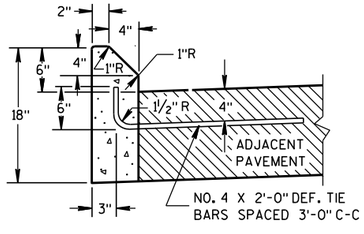
TYPES A & D




(1)

TYPES A & D

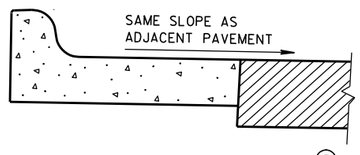
CONCRETE CURB & GUTTER 18"




(1)

TYPES G & J

CONCRETE CURB




(5)

REVERSE SLOPE GUTTER

(TYPICAL FOR ALL CURB & GUTTER TYPES)

## GENERAL NOTES

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

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

INTEGRAL CURB & GUTTER SHALL CONFORM TO THE DETAILS SHOWN FOR CONCRETE CURB & GUTTER INCLUDING THE TRANSVERSE GUTTER SLOPE. A LONGITUDINAL CONSTRUCTION JOINT IS NOT REQUIRED WITH INTEGRAL CURB AND GUTTER.

WHERE THE TRANSVERSE JOINTS IN THE PAVEMENT ARE REQUIRED TO BE SEALED, THE JOINTS IN THE INTEGRAL CURB AND GUTTER SHALL BE SEALED TO THE FACE OF CURB WITH THE SAME TYPE OF SEALANT. THE COST OF FURNISHING AND INSTALLING THIS SEALANT SHALL BE INCIDENTAL TO THE ITEM CONCRETE CURB AND GUTTER.

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

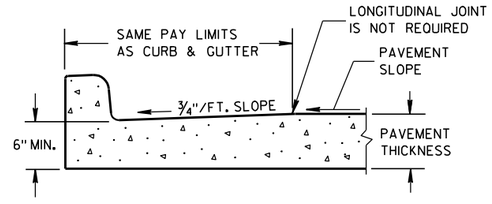
(1) TIE BARS ARE REQUIRED FOR CURB AND GUTTER TYPES A, G, K AND R.

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

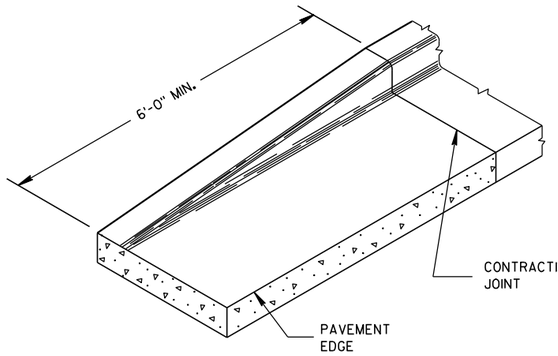
(3) THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 8" MINIMUM GUTTER THICKNESS IS MAINTAINED.

(4) THE FACE OF CURB IS 6" FROM THE BACK OF CURB.

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




PARTIAL SECTION OF PAVEMENT WITH INTEGRAL CURB & GUTTER




END SECTION CURB & GUTTER

CONCRETE CURB, CONCRETE CURB & GUTTER AND TIES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
9/4/08 DATE
/S/ Jerry H. [illegible]
ROADWAY STANDARDS ENGINEER

FHWA



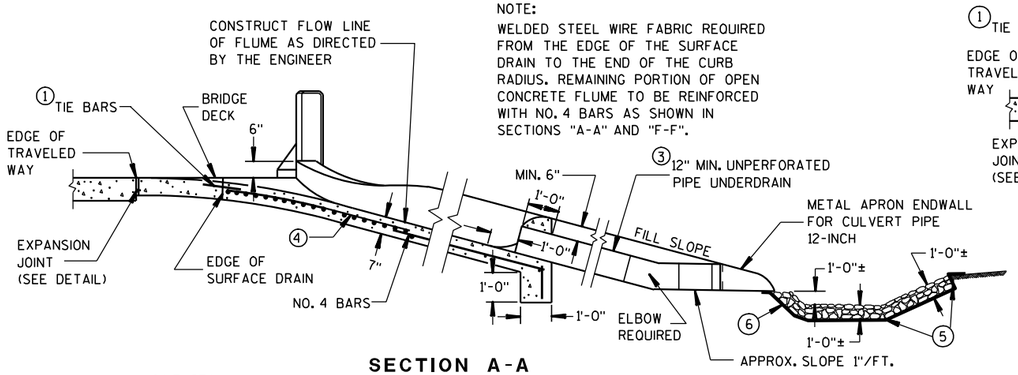
ENT

6

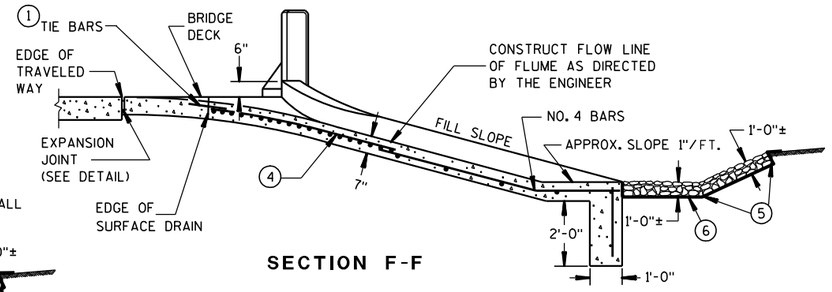
S.D.D. 8 D 1-17

6

S.D.D. 8 D 1-17




SECTION A-A




SECTION F-F

## GENERAL NOTES

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

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

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

(2) NO. 4 X 2'-0" TIE BARS SPACED AT 12" CENTERS TO BE PLACED BY BRIDGE CONTRACTOR, OR DRILLED TIE BARS PLACED AS DIRECTED BY THE ENGINEER.

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

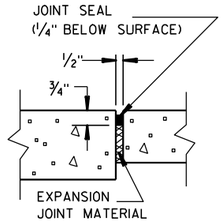
(4) MINIMUM REINFORCEMENT SHALL BE 6" X 6" - W4.0 X W4.0 OR NO. 3 BARS LONGITUDINAL AND TRANSVERSE SPACING 12" C-C.

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

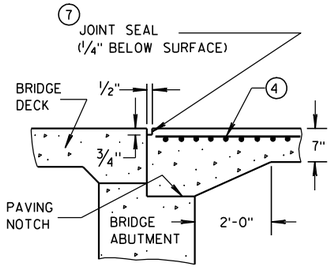
(6) GEOTEXTILE FABRIC, TYPE 'R"

(7) HOT POURED SEALANT UNLESS OTHERWISE SPECIFIED.

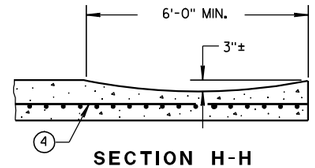
(8) THIS DIMENSION MAY VARY DEPENDING ON THE SPACING OF POSTS FOR THE STEEL PLATE BEAM GUARD. THE TYPICAL LOCATION FOR THE SURFACE DRAIN IS WHERE THE POST SPACING WIDENS TO 3'-1½".



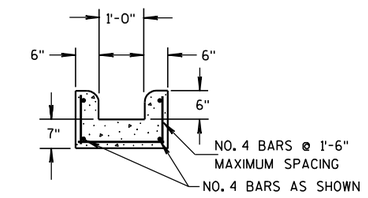

EXPANSION JOINT DETAIL



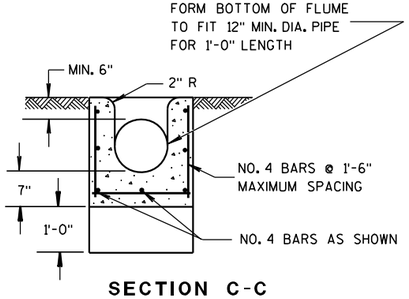

SECTION D-D



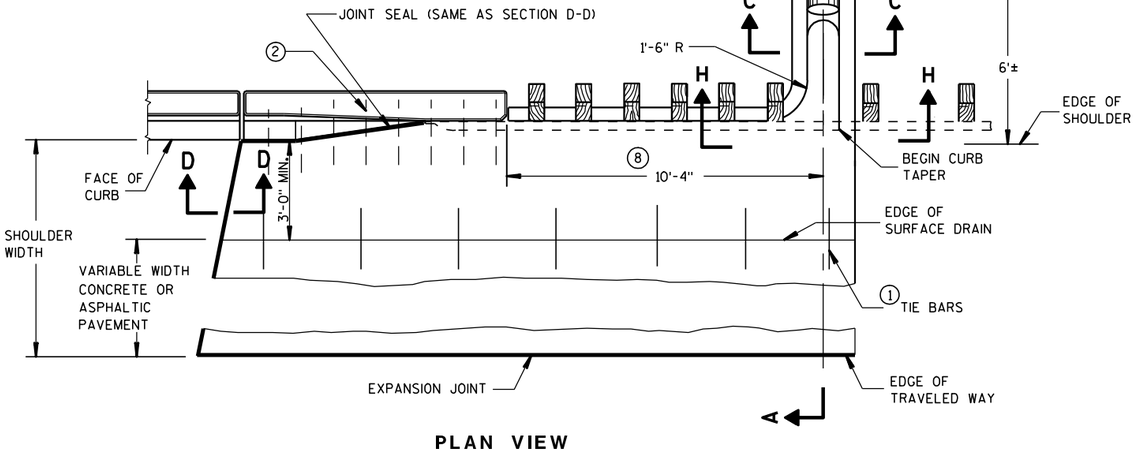

SECTION H-H



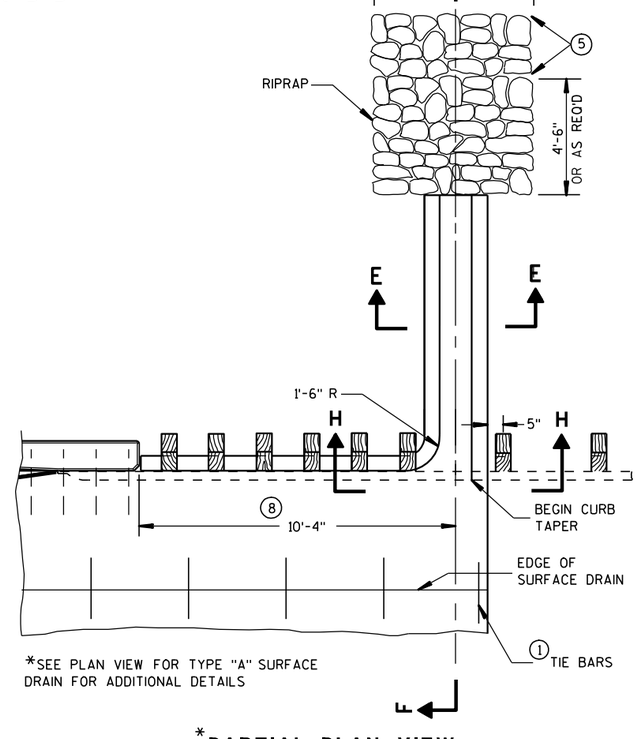

SECTION E-E




SECTION C-C

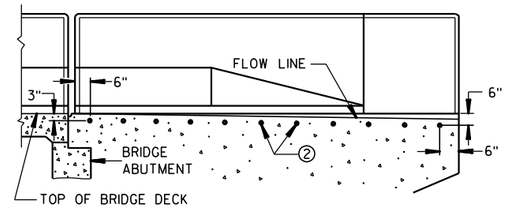



PLAN VIEW
SURFACE DRAIN WITH PIPE
TYPE "A"




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

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




LOCATION OF
TIE BARS IN WINGWALL

CONCRETE SURFACE DRAINS
FLUME TYPE
AT STRUCTURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

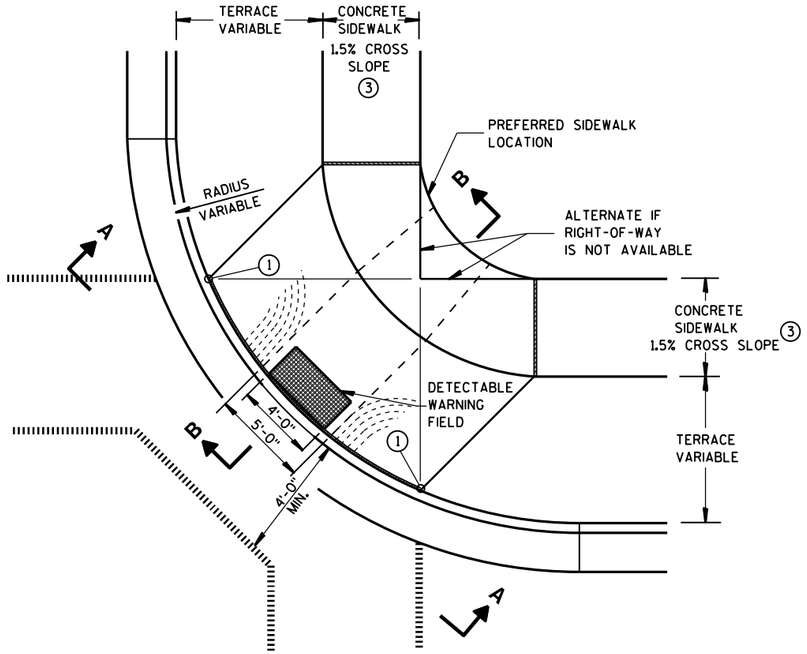
APPROVED
9/4/08
DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER
120
FHWA

6

S.D.D. 8 D 2-6

6

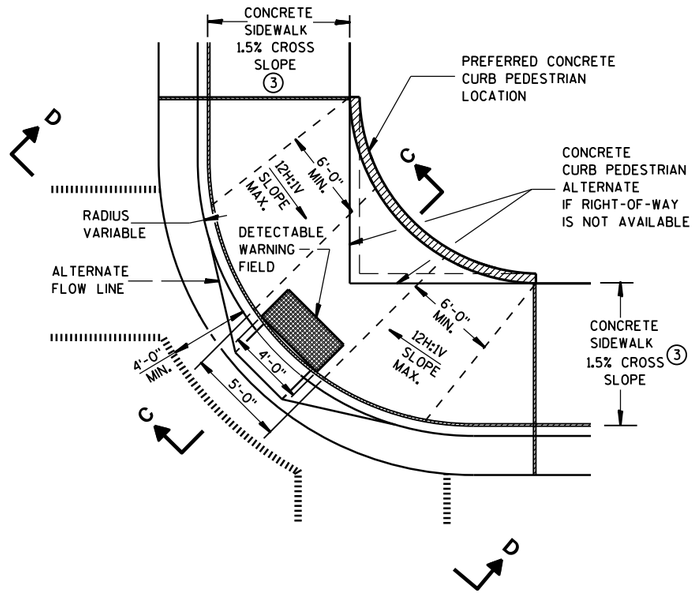
S.D.D. 8 D 2-6




PLAN VIEW

## TYPE 1 RAMP

(CENTER OF CORNER RADIUS)




PLAN VIEW

## TYPE 1-A RAMP

(NO TERRACE)

## 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.

RAMPS SHALL BE BUILT AT 12H:1V OR FLATTER. WHEN NECESSARY, THE SIDEWALK ELEVATION MAY BE LOWERED TO MEET THE HIGH POINT ON THE RAMP.

**TYPE 1 RAMPS SHALL HAVE A NORMAL SIDEWALK APRON AND CURB ON BOTH SIDES OF RAMP.**

DETECTABLE WARNING FIELD SHALL BE MEASURED AND PAID BY THE SQUARE FOOT AS "CURB RAMP DETECTABLE WARNING FIELD". THE CONCRETE PEDESTRIAN CURB, IF NEEDED, SHALL BE MEASURED AND PAID BY THE LINEAL FOOT AS "CONCRETE CURB PEDESTRIAN". CONCRETE SIDEWALK IN THE CURB RAMP AREA SHALL BE MEASURED AND PAID BY THE SQUARE FOOT AS CONCRETE SIDEWALK, INCLUDING THE AREA UNDER THE DETECTABLE WARNING FIELD.

SELECT CURB RAMP DETECTABLE WARNING FIELD MATERIALS AND DEVICES FROM THE DEPARTMENT'S APPROVED MATERIALS LIST. THE COLOR OF THE DETECTABLE WARNING FIELD IS SPECIFIED ELSEWHERE AND IS INCIDENTAL TO THE BID ITEM OF "CURB RAMP DETECTABLE WARNING FIELD".

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

SURFACE TEXTURE OF THE RAMP SHALL BE OBTAINED BY COARSE BROOMING TRANSVERSE TO THE SLOPE OF THE RAMP.

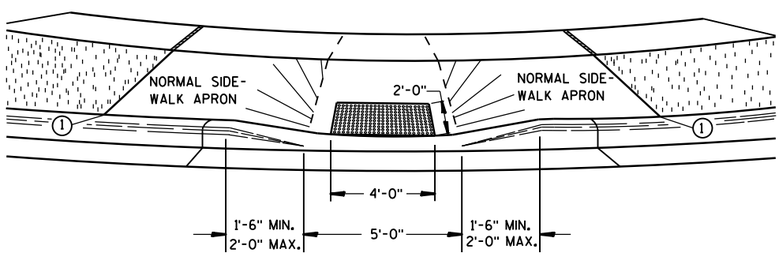
① THIS POINT IS AN EXTENSION OF OUTSIDE EDGE OF APPROACHING SIDEWALK WHERE IT MEETS THE BACK OF CONCRETE CURB.

② GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. PROVIDE DRAINAGE AWAY FROM CURB RAMP AT GUTTER FLAG INTERFACE.

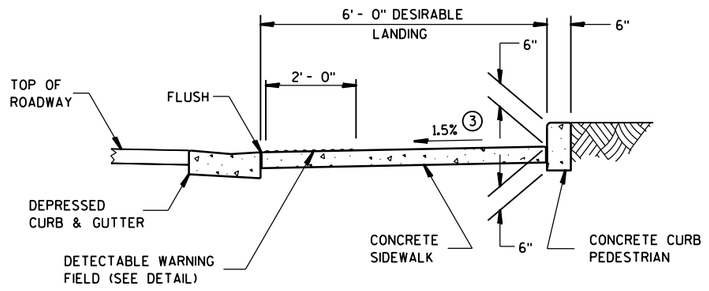
③ ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

### LEGEND

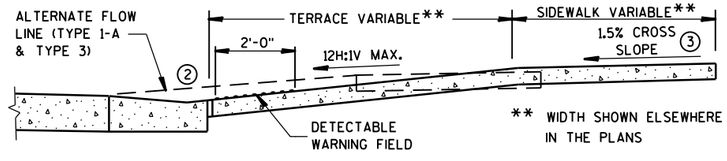
- ½" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)
- ALTERNATIVE LAYOUT



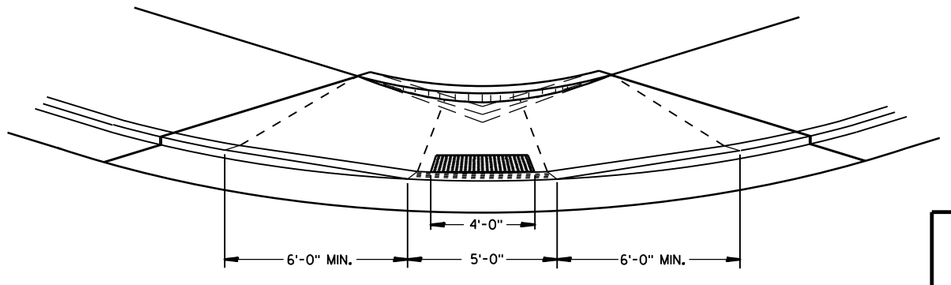

VIEW A-A




SECTION C-C




SECTION B-B




VIEW D-D

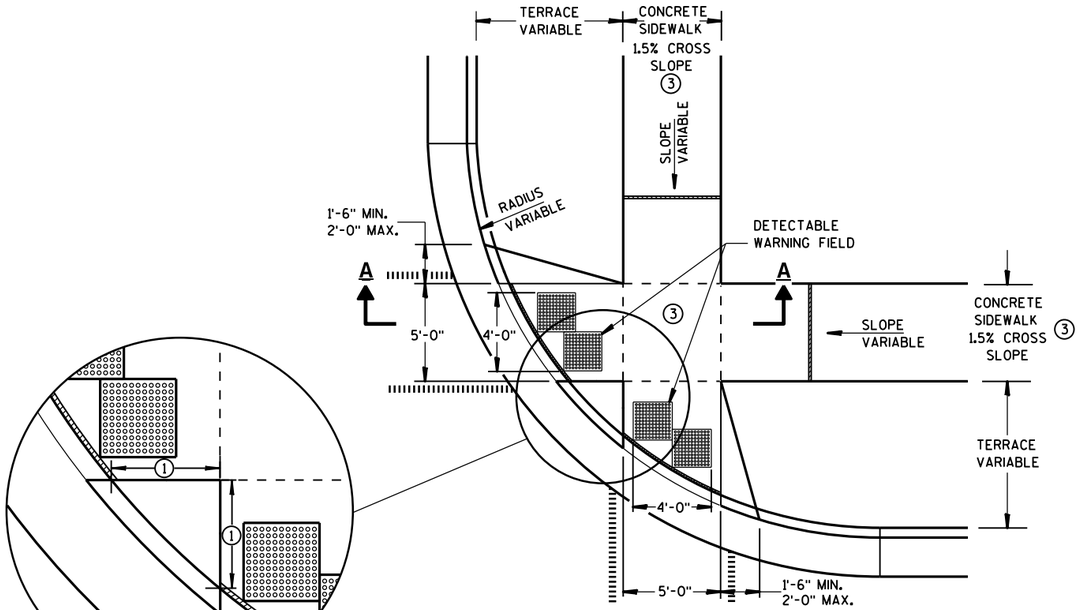
## CURB RAMPS TYPES 1 AND 1-A

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR




6

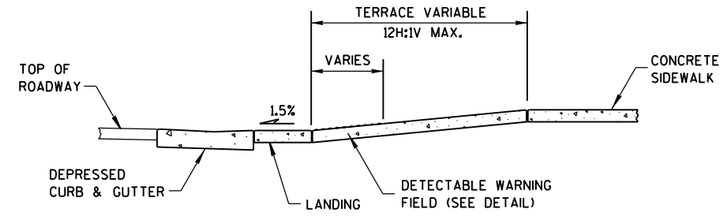
S.D.D. 8 D 5-15a



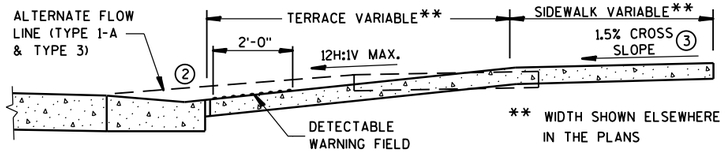

**PLAN VIEW**

## TYPE 2 RAMP

(ON LINE WITH SIDEWALK)




**SECTION A-A**




**SECTION B-B**

## GENERAL NOTES

USE THE TYPE 3 RAMP ONLY WHEN A TYPE 1 OR TYPE 2 CANNOT BE ACHIEVED BECAUSE OF FIELD CONDITIONS.

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

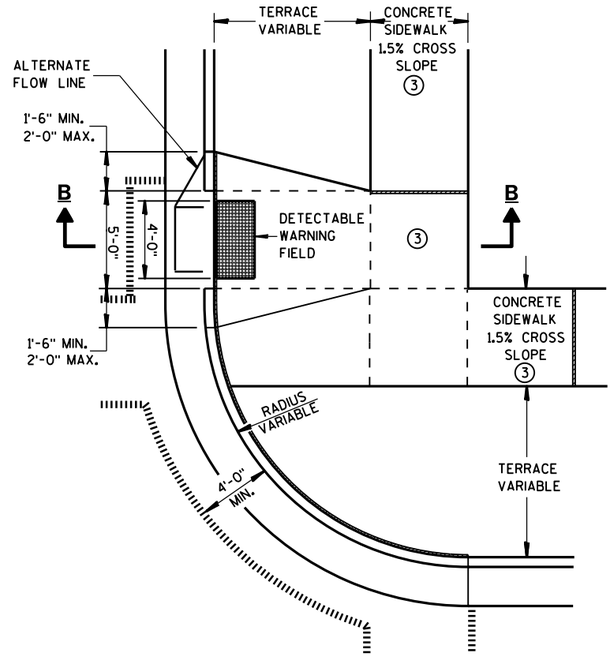
① WHEN THIS DISTANCE IS LESS THAN 6'-0" IT MAY BE DIFFICULT TO ACHIEVE A 12H:1V SLOPE, OR FLATTER, ON THE RAMP. REDUCE CURB HEIGHT IN TRIANGLE AREA TO ACHIEVE 12H:1V SLOPE, OR FLATTER, ON RAMP. 2" MINIMUM CURB HEIGHT.

② GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. PROVIDE DRAINAGE AWAY FROM CURB RAMP AT GUTTER FLAG INTERFACE.

③ ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

### LEGEND

- ½" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)
- ALTERNATIVE LAYOUT




**PLAN VIEW**

## TYPE 3 RAMP

(OUTSIDE OF CROSSWALK AREA)

**CURB RAMPS TYPES 2 AND 3**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

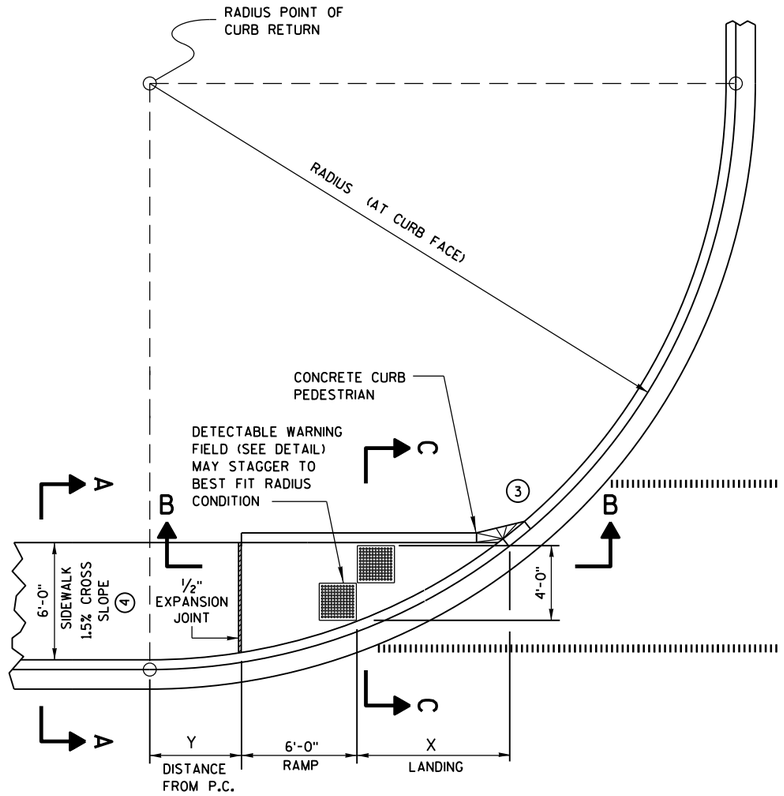




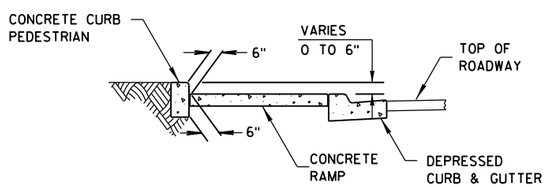


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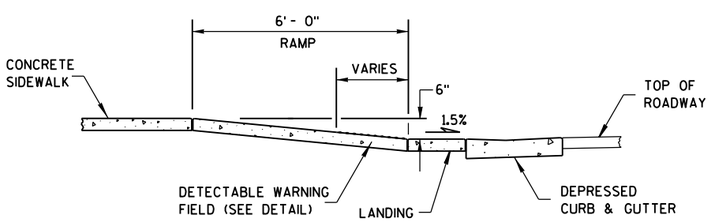
S.D.D. 8 D 5-15b




## CURB RAMP TYPE 4A
### PLAN VIEW



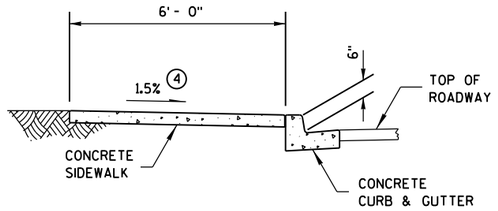

SECTION C-C FOR TYPE 4A




SECTION B-B FOR TYPE 4A

| RADIUS (AT CURB FACE) | X | Y |
|---|---|---|
| 20 FEET | 6'-1¾" | 2'-7¼" |
| 30 FEET | 7'-11¾" | 4'-8¼" |
| 40 FEET | 9'-5¼" | 6'-5" |
| 50 FEET | 10'-8¾" | 7'-11¼" |
| 60 FEET | 11'-10¼" | 9'-3½" |

INTERMEDIATE RADII CAN BE INTERPOLATED




SECTION A-A FOR TYPE 4A

## GENERAL NOTES

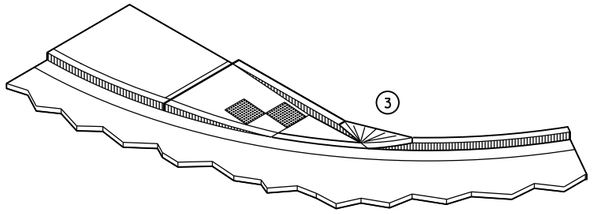
AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

RAMP SLOPES SHALL NOT BE STEEPER THAN 12:1.

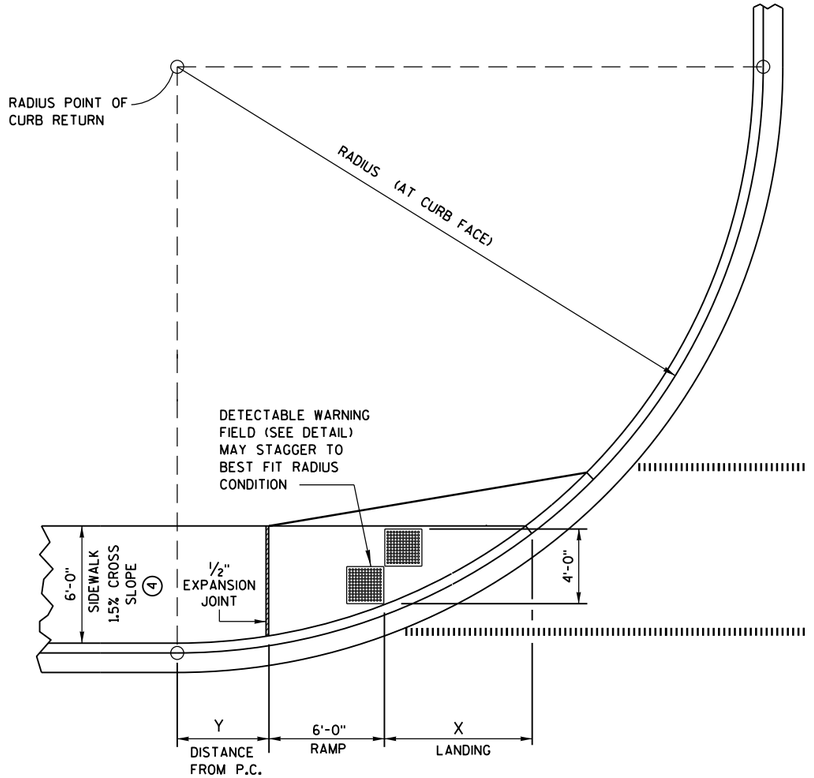
DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

(3) INSTALL TRANSITION NOSE. (INCIDENTAL TO OTHER PAY ITEMS.) DO NOT MARK TRANSITION NOSE.

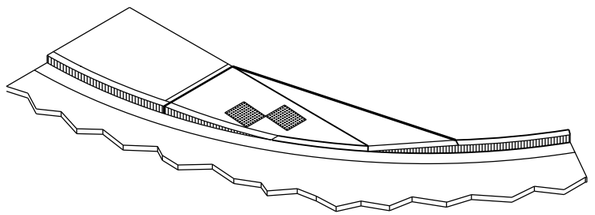
(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.




ISOMETRIC VIEW FOR TYPE 4A




## CURB RAMP TYPE 4A1
### PLAN VIEW



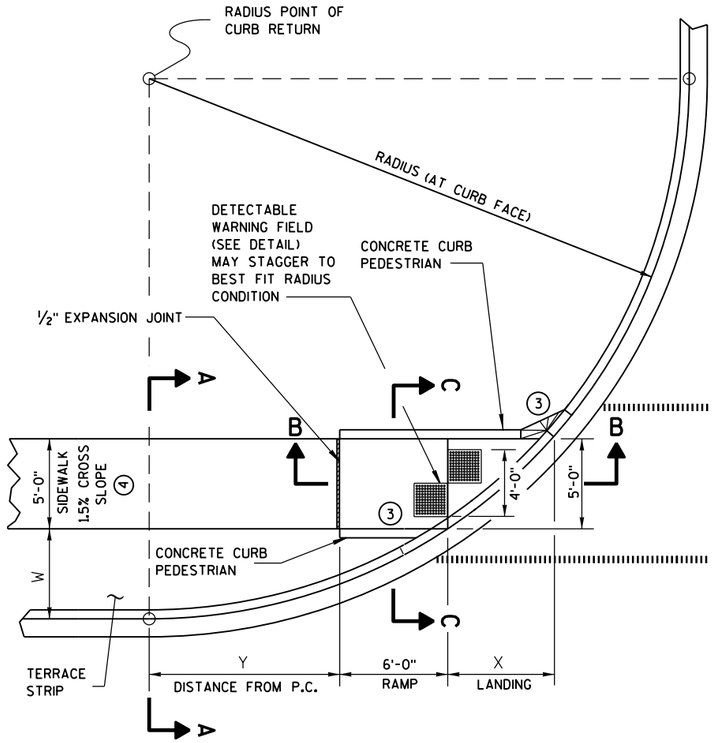
ISOMETRIC VIEW FOR TYPE 4A1

### LEGEND

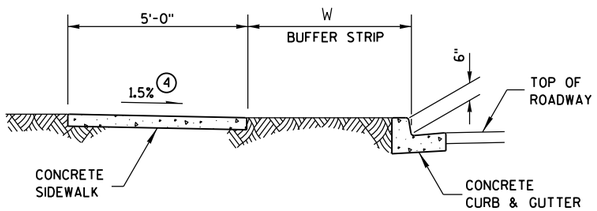
- ½" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)

CURB RAMPS
TYPES 4A AND 4A1

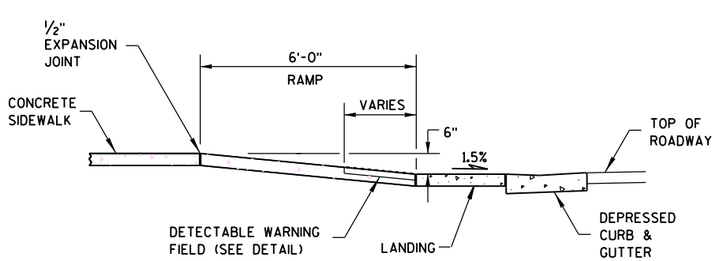
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR



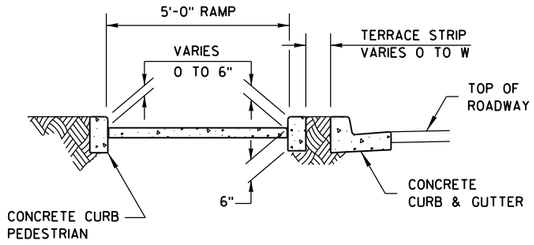

## CURB RAMP TYPE 4B
### PLAN VIEW




SECTION A-A FOR TYPE 4B




SECTION B-B FOR TYPE 4B




SECTION C-C FOR TYPE 4B

**LEGEND**

½" EXPANSION JOINT-SIDEWALK

CONTRACTION JOINT FIELD LOCATED

PAVEMENT MARKING CROSSWALK (WHITE)

| RADIUS (AT CURB FACE) | W = 3'-0" | | W = 4'-0" | | W = 5'-0" | | W = 6'-0" | | W = 7'-0" | |
|---|---|---|---|---|---|---|---|---|---|---|
| | X | Y | X | Y | X | Y | X | Y | X | Y |
| 20 FEET | 5'-5½" | 4'-6½" | 4'-8½" | 6'-0" | 4'-1" | 7'-2¾" | 3'-7" | 8'-3½" | 3'-1½" | 9'-2½" |
| 30 FEET | 7'-3¾" | 7'-1" | 6'-5½" | 8'-11½" | 5'-9¼" | 10'-7" | 5'-2½" | 12'-0" | 4'-8¾" | 13'-3¼" |
| 40 FEET | 8'-9½" | 9'-2½" | 7'-10" | 11'-5¼" | 7'-1" | 13'-4½" | 6'-5¾" | 15'-¾" | 5'-11½" | 16'-7¼" |
| 50 FEET | 10'-¾" | 11'-¾" | 9'-¼" | 13'-7¼" | 8'-2½" | 15'-9½" | 7'-6½" | 17'-9" | 6'-11¾" | 19'-6¼" |
| 60 FEET | 11'-2½" | 12'-8¾" | 10'-¾" | 15'-6½" | 9'-2¼" | 17'-11¾" | 8'-5¾" | 20'-1¾" | 7'-10½" | 22'-1½" |

INTERMEDIATE RADII CAN BE INTERPOLATED

## GENERAL NOTES

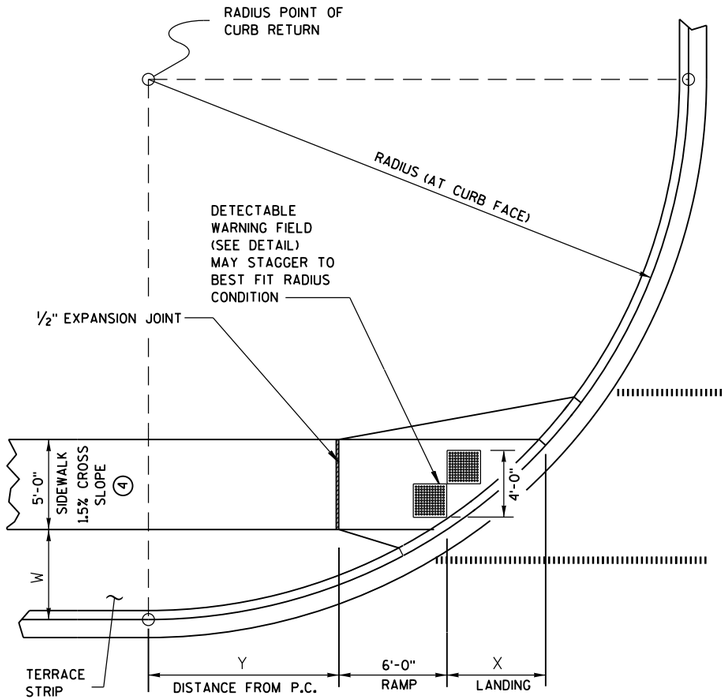
AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

RAMP SLOPES SHALL NOT BE STEEPER THAN 12:1.

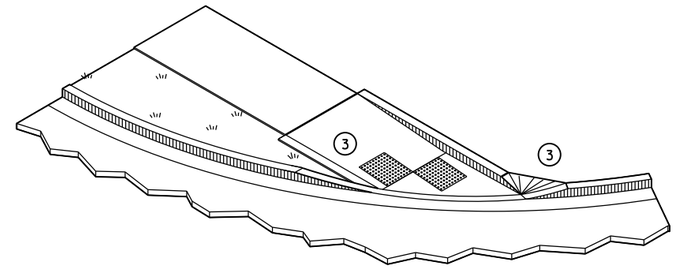
DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

(3) INSTALL TRANSITION NOSE. (INCIDENTAL TO OTHER PAY ITEMS.) DO NOT MARK TRANSITION NOSE.

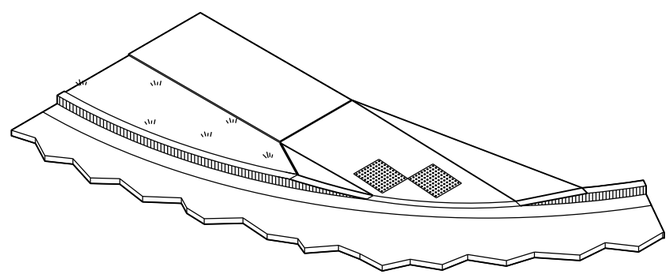
(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.




## CURB RAMP TYPE 4B1
### PLAN VIEW




ISOMETRIC VIEW FOR TYPE 4B



ISOMETRIC VIEW FOR TYPE 4B1

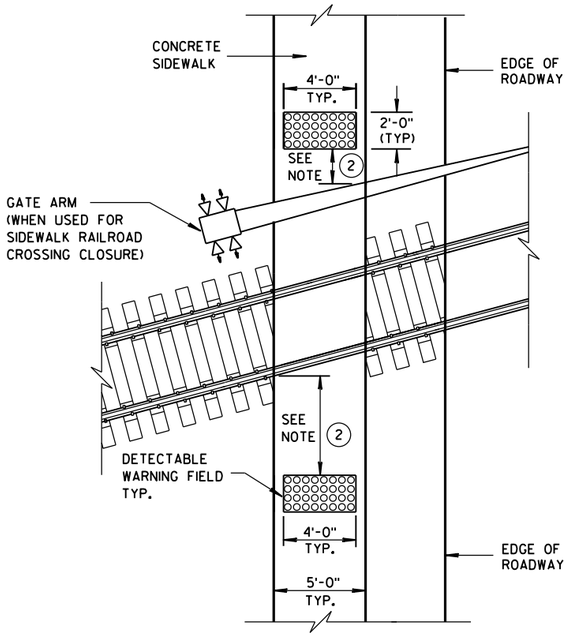
**CURB RAMPS TYPE 4B AND 4B1**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

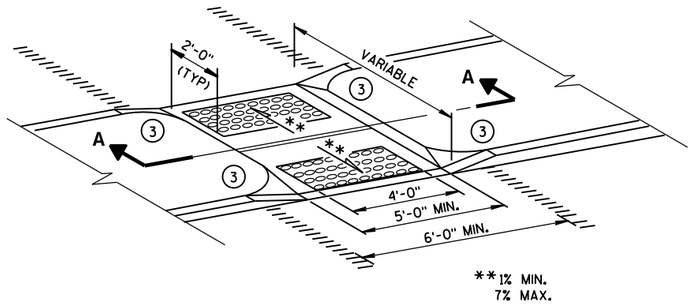



6

S.D.D. 8 D 5-15d




**TYPE 8**
**DETECTABLE WARNINGS AT RAILROAD CROSSING**




**MEDIAN ISLAND**
**NON-ELEVATED CROSSING**
**TYPE 5**

## GENERAL NOTES

SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2%.

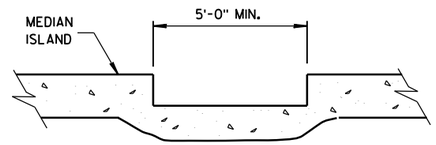
DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

(1) SLOPE SIDEWALK TOWARD LANDING AS SHOWN WHERE THERE IS NO TERRACE OR WHERE THE TERRACE WIDTH IS LESS THAN 6 FEET WIDE.

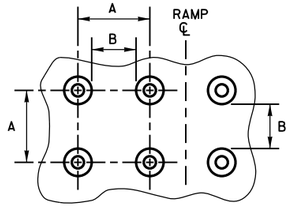
(2) THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO A RAILROAD CROSSING SHALL BE 1.5 FEET ± 0.1' FROM THE FACE OF THE GATE ARM IF THE GATE ARM EXTENDS ACROSS THE SIDEWALK. WHERE THERE IS NO PEDESTRIAN GATE, THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO THE RAILROAD CROSSING SHALL BE 15 FEET FROM THE NEAREST RAIL.

(3) INSTALL TRANSITION NOSE. (INCIDENTAL TO OTHER PAY ITEMS.) DO NOT MARK TRANSITION NOSE.

(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.



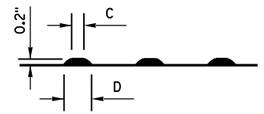

**SECTION A-A**



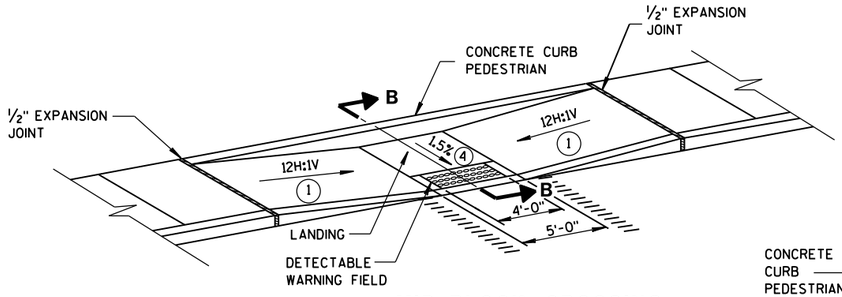

**PLAN VIEW**

| | MIN. | MAX. |
|---|---|---|
| A | 1.6" | 2.4" |
| B | 0.65" | 1.5" |
| C | * | * |
| D | 0.9" | 1.4" |

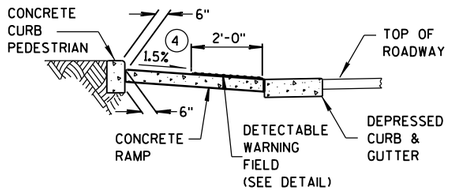
* THE C DIMENSION IS 50% TO 65% OF THE D DIMENSION.




**ELEVATION VIEW**

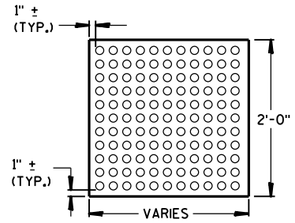



**MID-BLOCK CROSSING**
**TYPE 7A**



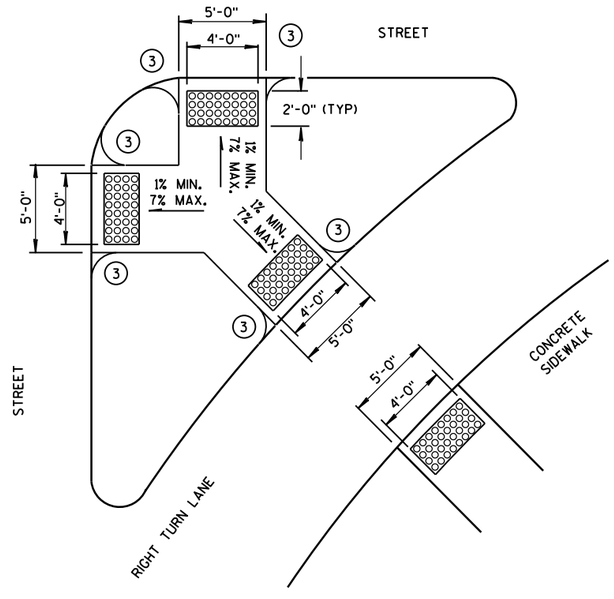

**SECTION B-B**

## TRUNCATED DOMES
### DETECTABLE WARNING PATTERN DETAIL

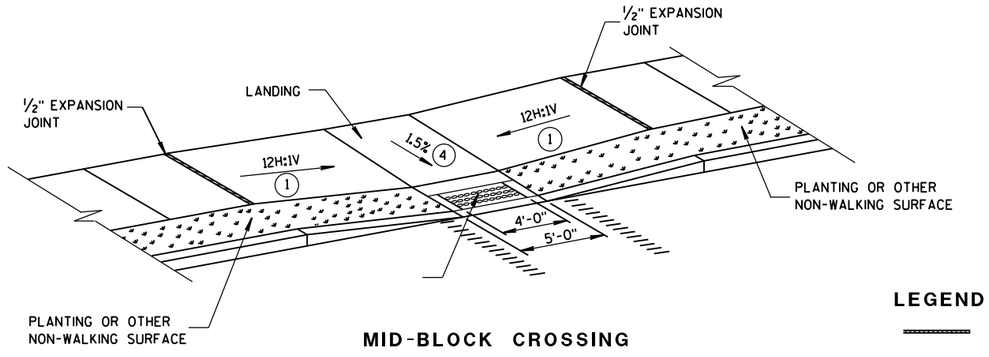



**PLAN VIEW**

## DETECTABLE WARNING FIELD (TYPICAL)




**TYPE 6**
**DETECTABLE WARNING AT ISLANDS**




**MID-BLOCK CROSSING**
**TYPE 7B**

NOTE: THESE PARALLEL AND PARALLEL/PERPENDICULAR CURB RAMPS MAY BE USED AT INTERSECTIONS AND MID BLOCK LOCATIONS.

**LEGEND**

- ½" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)

**CURB RAMPS**
**TYPES 5, 6, 7A, 7B & 8**

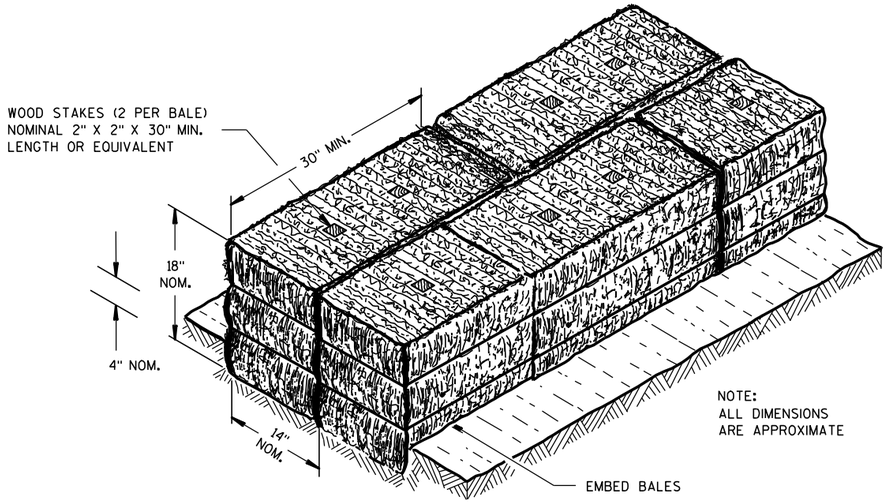
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
2-6-2013 DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS [illegible] ENGINEER
FHWA

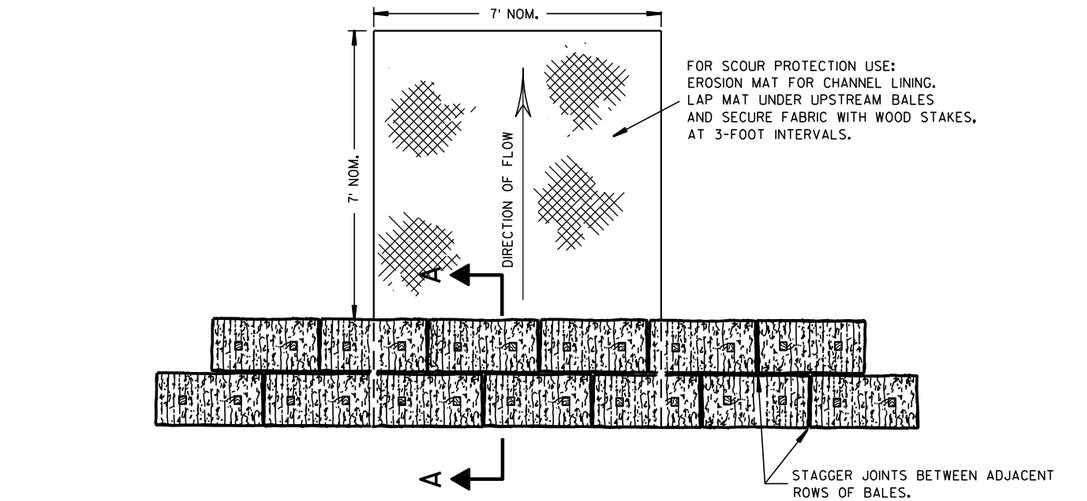



6

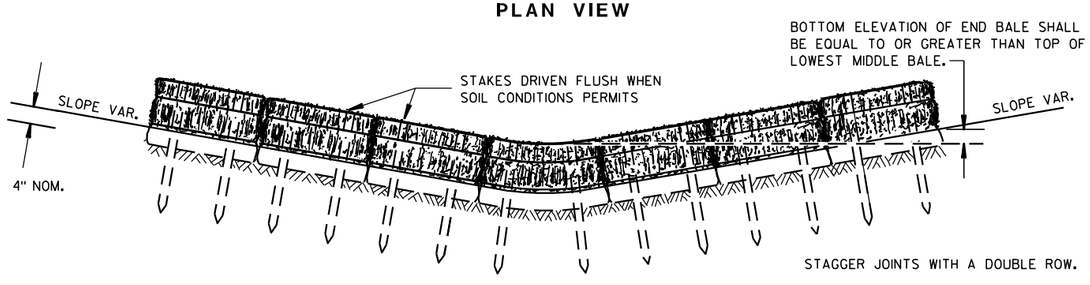
S.D.D. 8 D 5-15e




**SECTION A-A**




**PLAN VIEW**



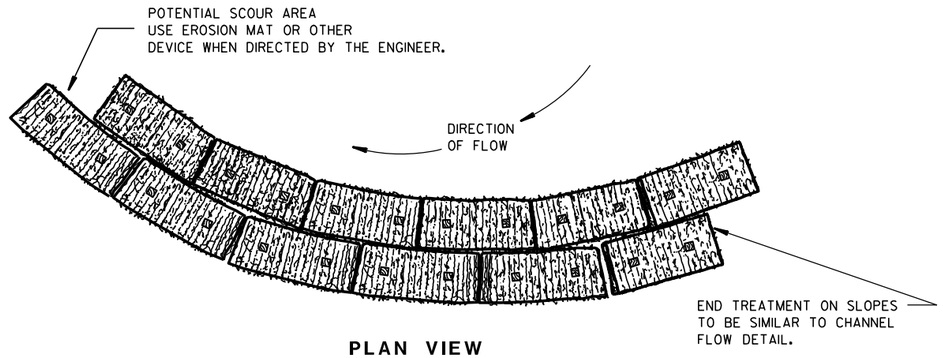

**FRONT ELEVATION**

## TEMPORARY DITCH CHECK USING EROSION BALES (1)

## GENERAL NOTES

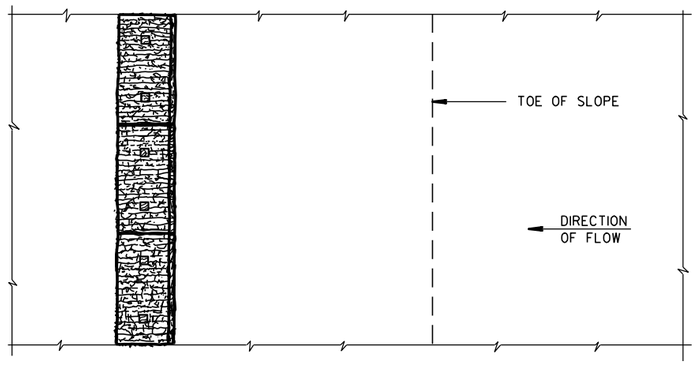
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

(1) TEMPORARY DITCH CHECKS EITHER EROSION BALES OR MANUFACTURED SHALL BE PAID FOR UNDER THE BID ITEM OF TEMPORARY DITCH CHECK. THE DEPARTMENT WILL NOT PAY FOR TEMPORARY DITCH CHECKS CONSTRUCTED OF A SINGLE ROW OF EROSION BALES.

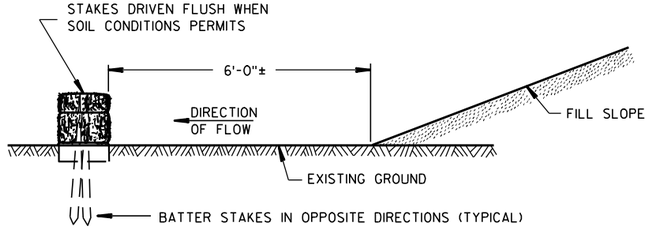



**PLAN VIEW**

WHEN ALTERING THE DIRECTION OF FLOW




**PLAN VIEW**




**FRONT ELEVATION**

WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE

## EROSION BALES FOR SHEET FLOW

**TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

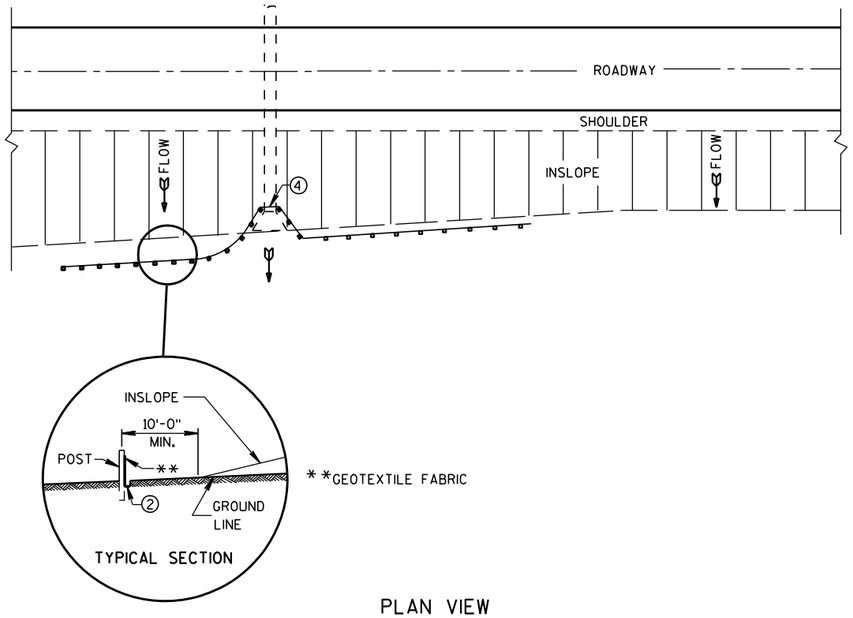


6

S.D.D. 8 E 8-3

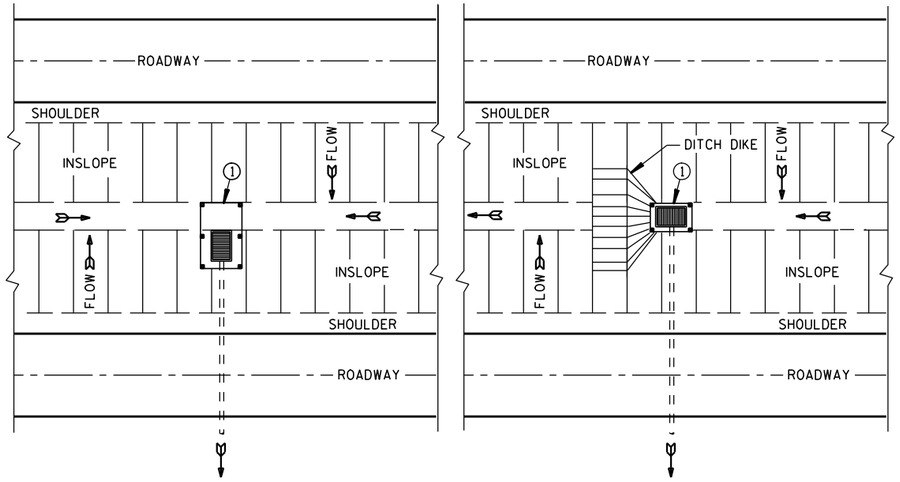
6

S.D.D. 8 E 8-3




PLAN VIEW

## TYPICAL APPLICATION OF SILT FENCE




PLAN VIEW

## SILT FENCE AT MEDIAN SURFACE DRAINS

## GENERAL NOTES

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

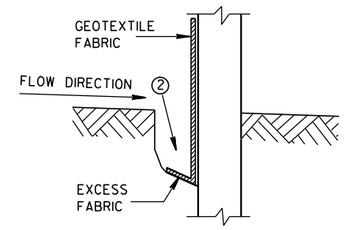
① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.

② FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.

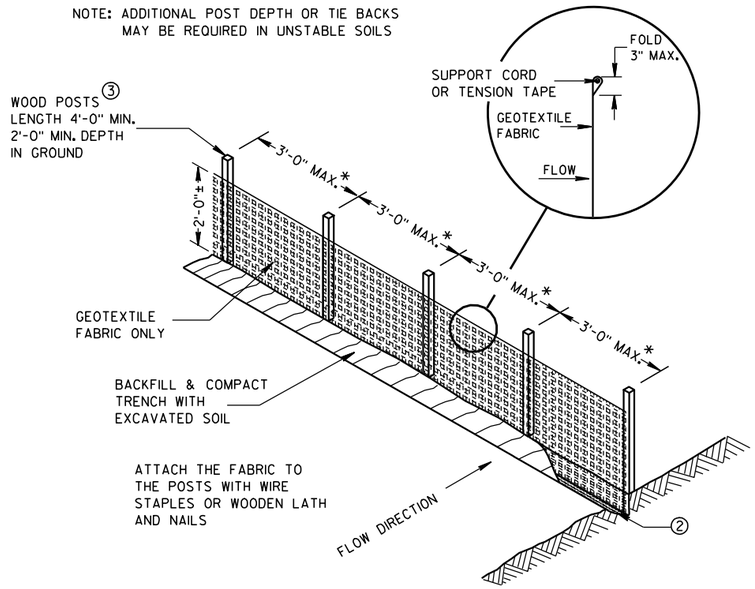
③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1⅛" X 1⅛" OF OAK OR HICKORY.

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

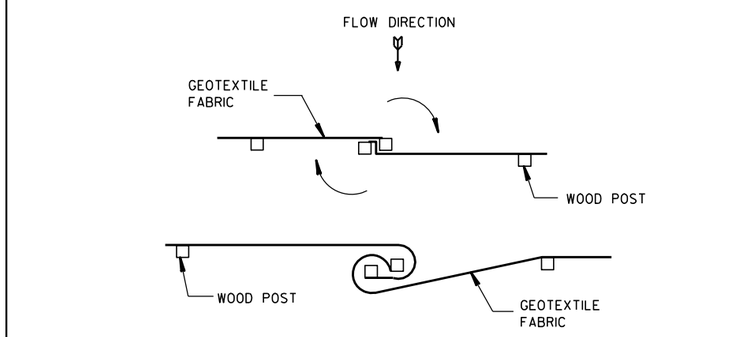
⑤ CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



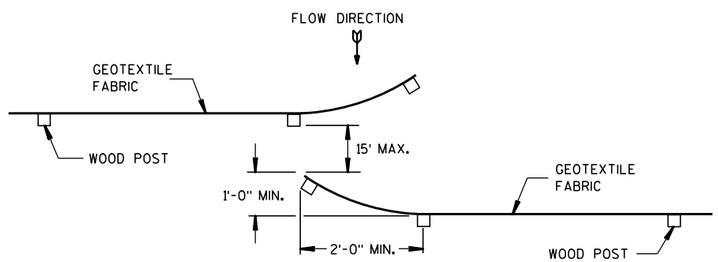

## TRENCH DETAIL




## SILT FENCE

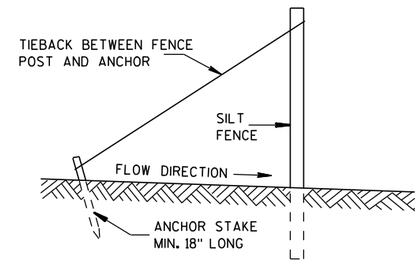



TWIST METHOD




HOOK METHOD

## JOINING TWO LENGTHS OF SILT FENCE ⑤




## SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

**SILT FENCE**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

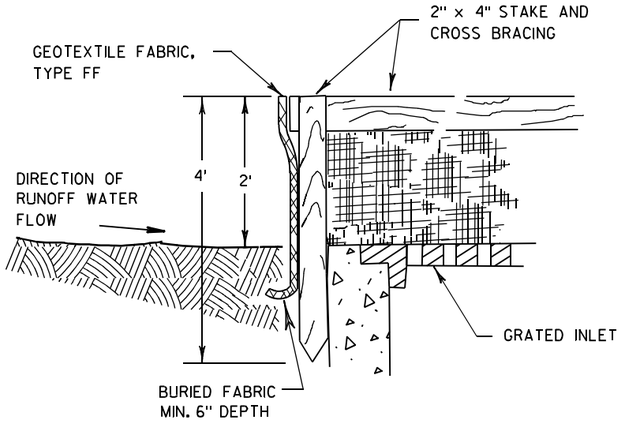


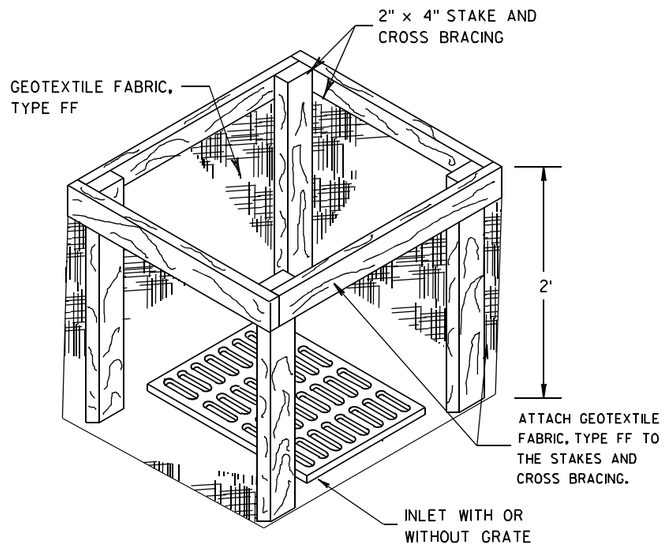
6

S.D.D. 8 E 9-6

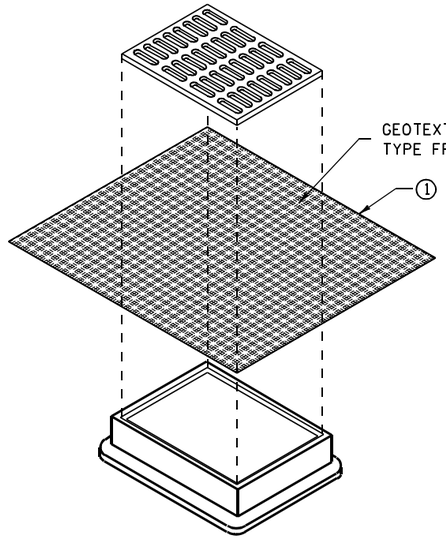
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S.D.D. 8 E 9-6



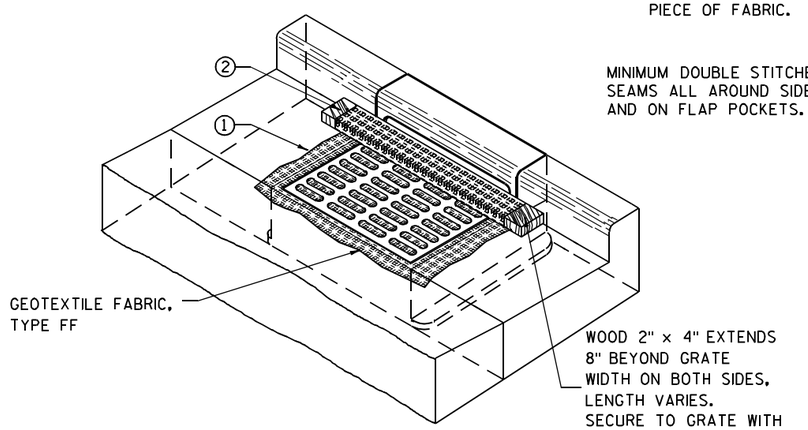




## INLET PROTECTION, TYPE A

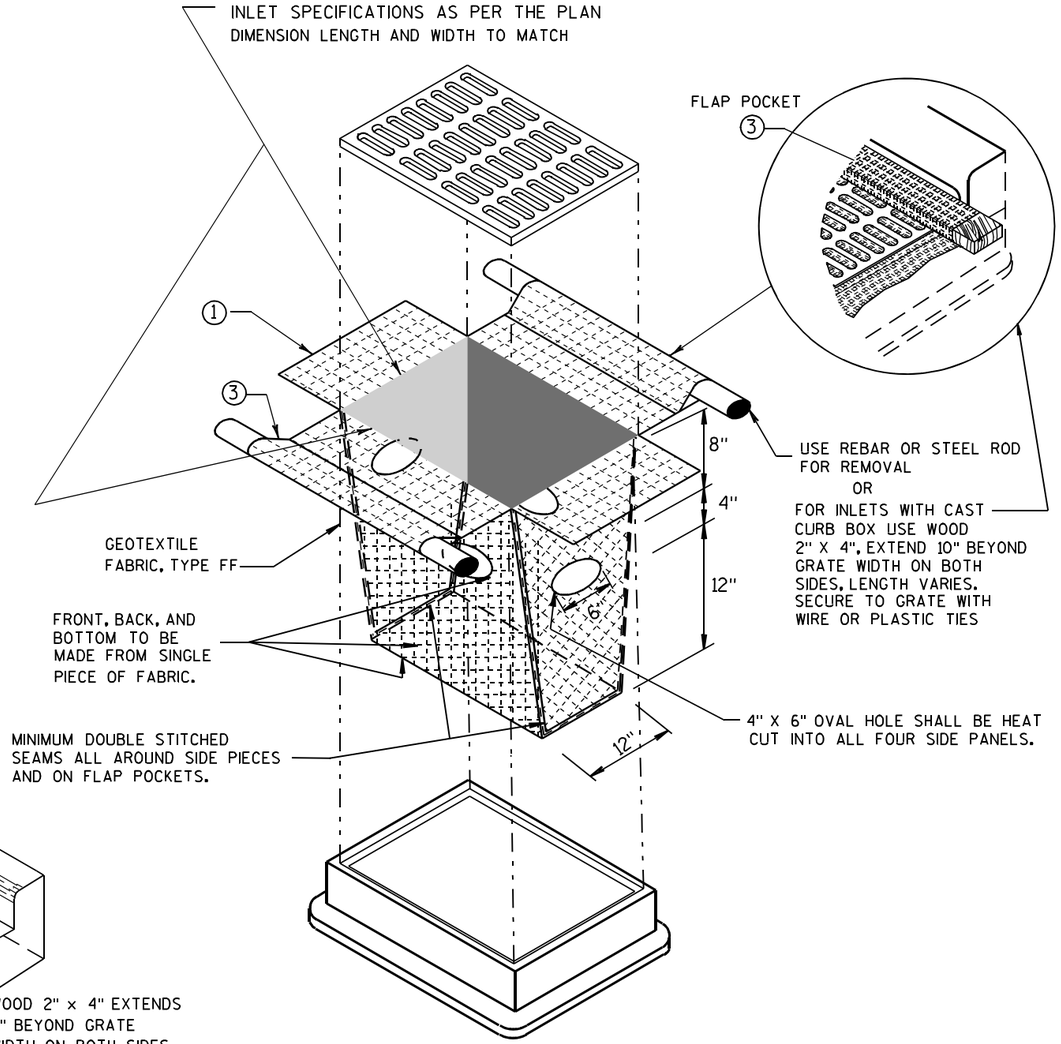



## INLET PROTECTION, TYPE B
## (WITHOUT CURB BOX)

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




## INLET PROTECTION, TYPE C (WITH CURB BOX)




## INLET PROTECTION, TYPE D

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

## GENERAL NOTES

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

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

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

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

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

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

## INSTALLATION NOTES

### TYPE B & C

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

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

### TYPE D

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

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

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

**INLET PROTECTION**
**TYPE A, B, C, AND D**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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




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

## METAL APRON ENDWALLS

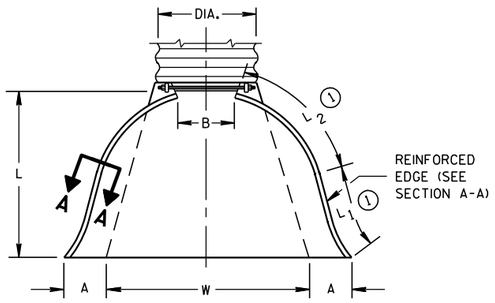
| PIPE DIA. (IN.) | MIN. THICK. (Inches) STEEL | MIN. THICK. (Inches) ALUM. | DIMENSIONS (Inches) A (±1") | B (MAX.) | H (±1") | L (±1 1/2") | L1 ① | L2 ① | W (±2") | APPROX. SLOPE | BODY |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 12 | .064 | .060 | 6 | 6 | 6 | 21 | 12 | 17 1/2 | 24 | 2 1/2 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

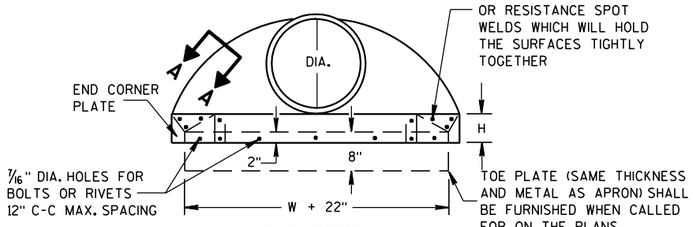
## REINFORCED CONCRETE APRON ENDWALLS

| 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 |

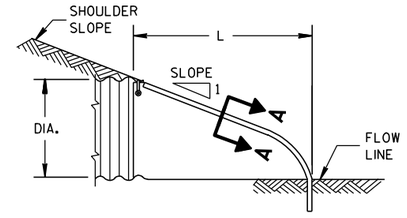
* MINIMUM
** MAXIMUM




PLAN VIEW

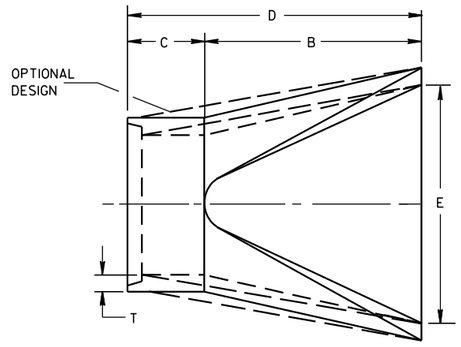



END VIEW

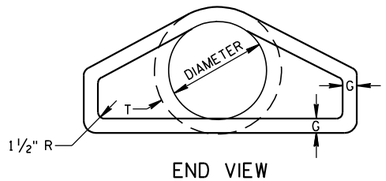



SIDE ELEVATION

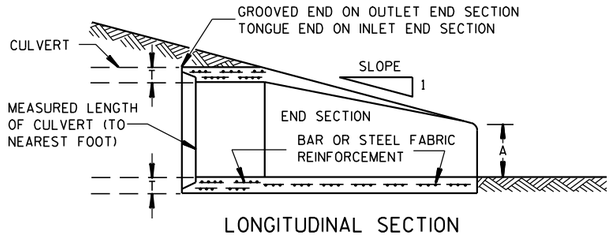
## METAL ENDWALLS




PLAN

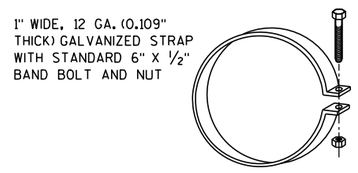



END VIEW



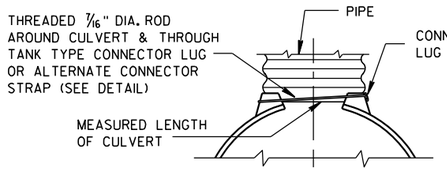

LONGITUDINAL SECTION

## CONCRETE ENDWALLS

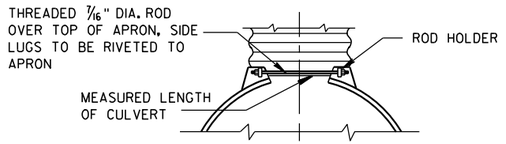



ALTERNATE FOR TYPE 1 CONNECTION

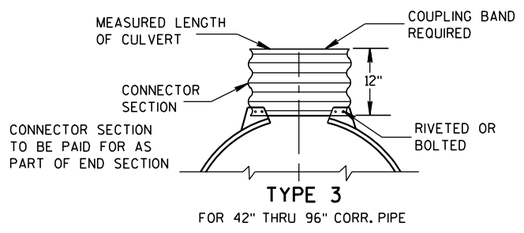
## END SECTION CONNECTOR STRAP



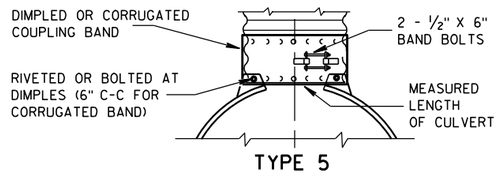

TYPE 1
FOR 12" THRU 24" CORR. PIPE




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

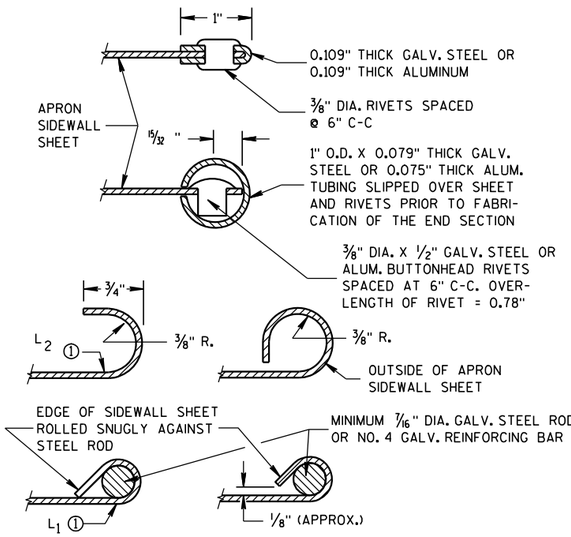
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL. AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

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.

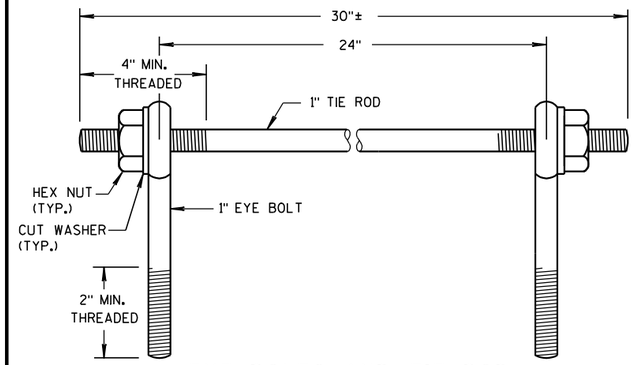
# APRON ENDWALLS FOR CULVERT PIPE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

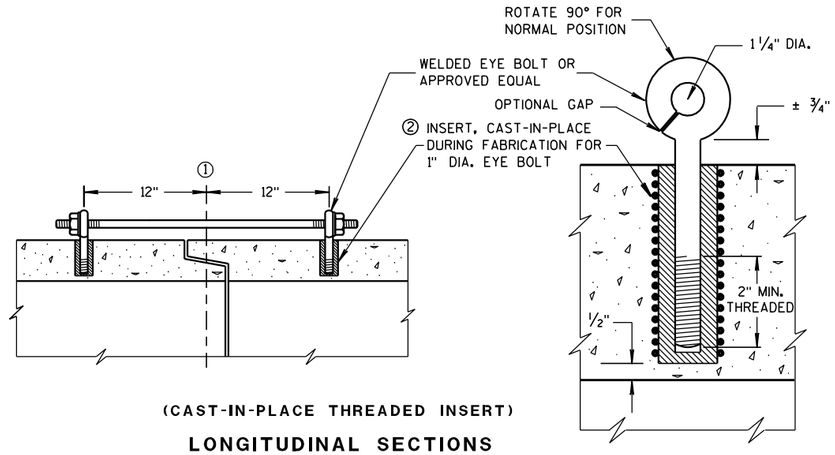
APPROVED
11/30/94 DATE
/S/ Rory L. Rhinesmith
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA




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.

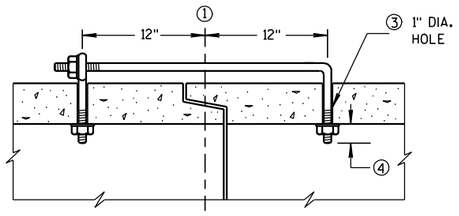
② THE INSIDE OF THE THREADED INSERTS SHALL BE CLEAN TO ALLOW THE INSERTION OF THREADED EYE BOLTS.

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

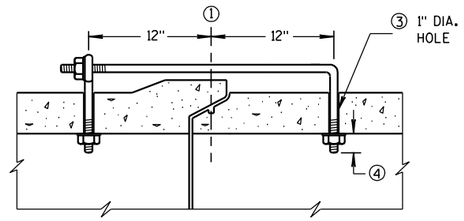
④ BOLT PROJECTION INSIDE OF PIPE SHALL NOT EXCEED 2 INCHES.

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)

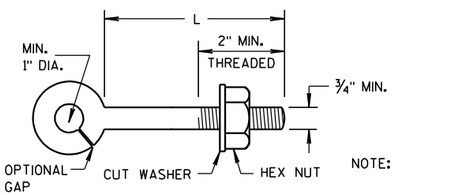



(MODIFIED BELL PIPE)

LONGITUDINAL SECTION

**EYE BOLT DIMENSION TABLE**

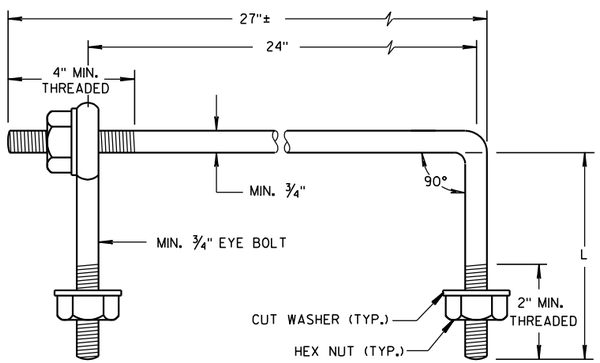
| PIPE SIZE | L = LENGTH | |
|---|---|---|
| | TONGUE & GROOVE PIPE | MODIFIED BELL PIPE |
| 18" TO 24" | 4 1/2" | 6 1/4" |
| 30" | 5" | 7" |
| 36" | 5 1/2" | 7" |
| 42" | 6" | |
| 48" | 6 1/2" | |
| 60" | 7 1/2" | |
| 66" | 8" | |




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

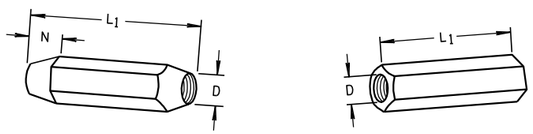
(JOINT TIES FOR 18" TO 66" DIA. CONCRETE PIPE)

# 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 |

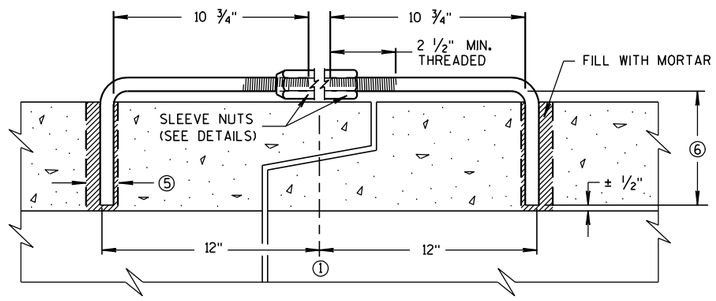
DIMENSIONS SHOWN ARE IN INCHES




TAPERED PLAIN

RIGHT AND LEFT THREADS

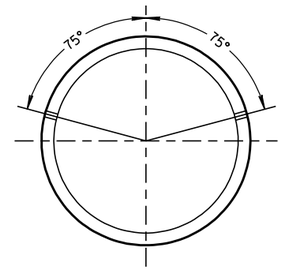
SLEEVE NUTS




LONGITUDINAL SECTION

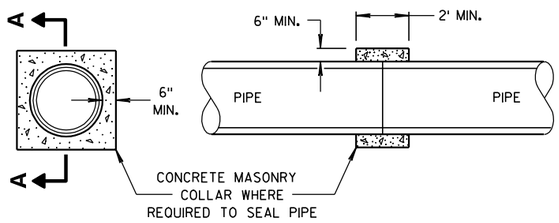
(JOINT TIES FOR 12" TO 108" DIA. CONCRETE PIPE)

# 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

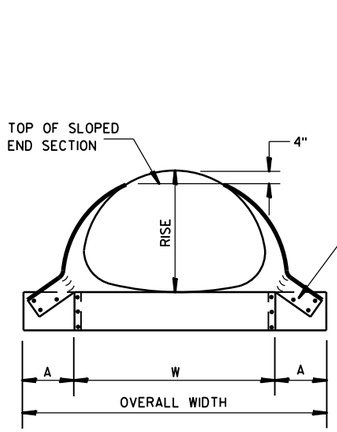
APPROVED
6/5/2012 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
130
FHWA

6

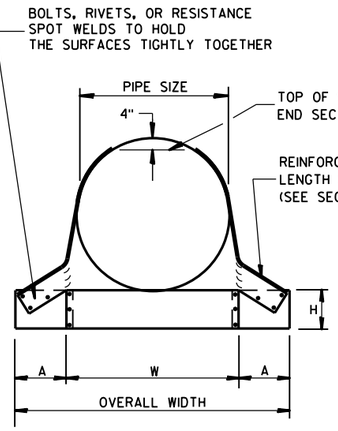
S.D.D. 8 F 4-7

6

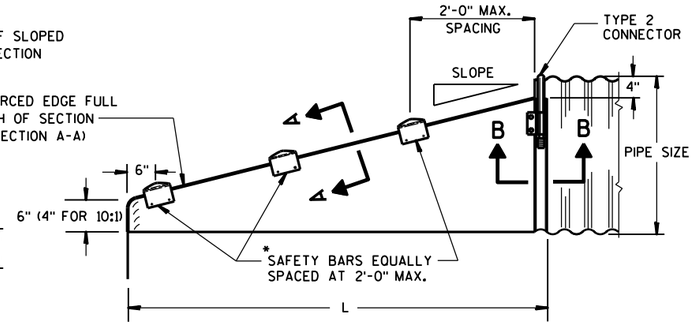
S.D.D. 8 F 4-7




FRONT VIEW




FRONT VIEW




SIDE VIEW

## GENERAL NOTES

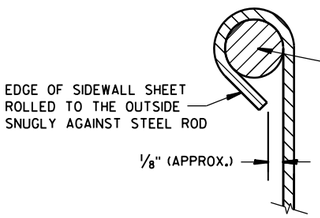
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

SLOPED END SECTIONS SHALL CONFORM TO THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS, SECTION 521 FOR STEEL APRON ENDWALLS.

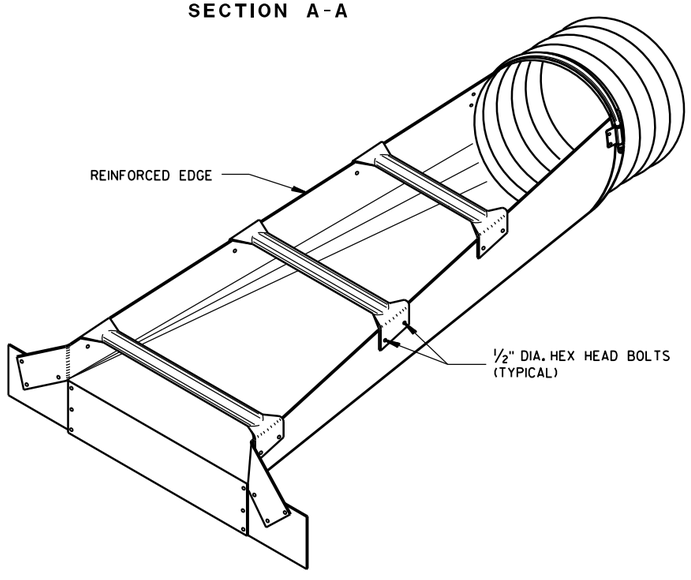
SAFETY BARS SHALL BE FABRICATED FROM GALVANIZED STEEL PIPE MEETING THE REQUIREMENTS OF ASTM A-53, GRADE B, SCHEDULE 40 OR APPROVED EQUAL.

**STEEL APRON ENDWALLS FOR CULVERT PIPE**
**SLOPED SIDE DRAINS**

| PIPE DIA. (IN.) | MIN. THICK. (Inches) | DIMENSIONS (Inches) | | | | L DIMENSIONS | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | A | H | W | OVERALL WIDTH | SLOPE | LENGTH INCHES | SLOPE | LENGTH INCHES | SLOPE | LENGTH INCHES |
| 15 | .064 | 8 | 6 | 21 | 37 | 4:1 | 20 | 6:1 | 30 | 10:1 | 70 |
| 18 | .064 | 8 | 6 | 24 | 40 | 4:1 | 32 | 6:1 | 48 | 10:1 | 100 |
| 21 | .064 | 8 | 6 | 27 | 43 | 4:1 | 44 | 6:1 | 66 | 10:1 | 130 |
| 24 | .064 | 8 | 6 | 30 | 46 | 4:1 | 56 | 6:1 | 84 | 10:1 | 160 |
| 30 | .109 | 12 | 9 | 36 | 60 | 4:1 | 80 | 6:1 | 120 | 10:1 | 220 |
| 36 | .109 | 12 | 9 | 42 | 66 | 4:1 | 104 | 6:1 | 156 | 10:1 | 280 |
| 42 | .109 | 16 | 12 | 48 | 80 | 4:1 | 128 | 6:1 | 192 | —— | —— |
| 48 | .109 | 16 | 12 | 54 | 86 | 4:1 | 152 | 6:1 | 228 | —— | —— |
| 54 | .109 | 16 | 12 | 60 | 92 | 4:1 | 176 | 6:1 | 264 | —— | —— |
| 60 | .109 | 16 | 12 | 66 | 98 | 4:1 | 200 | 6:1 | 300 | —— | —— |



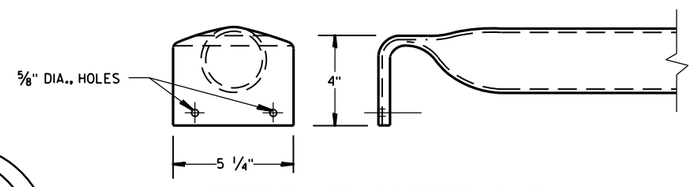

SECTION A-A



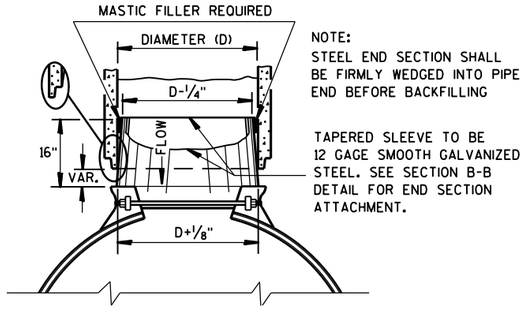

ISOMETRIC VIEW

*NOTE:
THREE SAFETY BARS ARE SHOWN. ACTUAL NUMBER OF BARS REQUIRED AT A 2'-0" C-C MAX. SPACING WILL VARY DEPENDING ON THE LENGTH OF THE END SECTION.

3" GALVANIZED PIPE. FLATTEN ENDS, THEN BEND OUTSIDE 4" TO MATCH END SECTION SIDES.




DETAIL OF SAFETY BAR

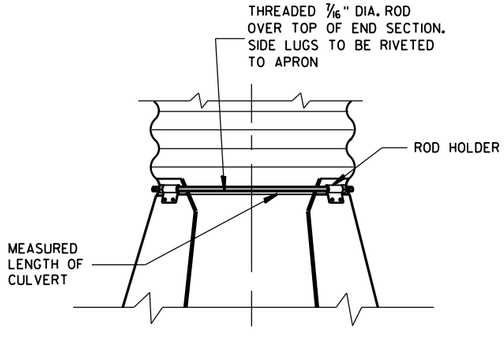



STEEL ADAPTER SLEEVE FOR CONCRETE PIPE

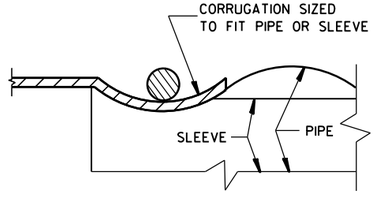
**STEEL APRON ENDWALLS FOR PIPE ARCH**
**SLOPED SIDE DRAINS**

| EQUIV. DIA. (Inches) | (Inches) SPAN | (Inches) RISE | MIN. THICK. (Inches) ① | DIMENSIONS (Inches) A | H | W | OVERALL WIDTH | L DIMENSIONS SLOPE | LENGTH INCHES | SLOPE | LENGTH INCHES | SLOPE | LENGTH INCHES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 15 | 17 | 13 | .064 * | 7 | 6 | 30 | 44 | 4:1 | 19 | 6:1 | 30 | 10:1 ② | 70 |
| 18 | 21 | 15 | .064 * | 8 | 6 | 27 | 43 | 4:1 | 20 | 6:1 | 30 | 10:1 | 70 |
| 21 | 24 | 18 | .064 * | 8 | 6 | 30 | 46 | 4:1 | 32 | 6:1 | 48 | 10:1 | 100 |
| 24 | 28 | 20 | .064 * | 8 | 6 | 34 | 50 | 4:1 | 40 | 6:1 | 60 | 10:1 | 120 |
| 30 | 35 | 24 | .079 * | 12 | 9 | 41 | 65 | 4:1 | 56 | 6:1 | 84 | 10:1 | 160 |
| 36 | 42 | 29 | .109 * | 12 | 9 | 48 | 72 | 4:1 | 76 | 6:1 | 114 | 10:1 | 210 |
| 42 | 49 | 33 | .109 | 16 | 12 | 55 | 87 | 4:1 | 92 | 6:1 | 138 | —— | —— |
| 48 | 57 | 38 | .109 | 16 | 12 | 63 | 95 | 4:1 | 112 | 6:1 | 168 | —— | —— |
| 54 | 64 | 43 | .109 | 16 | 12 | 70 | 102 | 4:1 | 132 | 6:1 | 198 | —— | —— |

① * MINIMUM THICKNESS OF ALL 10:1 SLOPED SIDE DRAINS IS 0.109".
② ACTUAL SLOPE GREATER THAN 10:1.




TYPE 2
CONNECTION DETAIL




SECTION B-B

**STEEL APRON ENDWALLS FOR CULVERT PIPE AND PIPE ARCH SLOPED SIDE DRAINS**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
9/14/2012 — DATE
/S/ Jerry H. Zoda — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

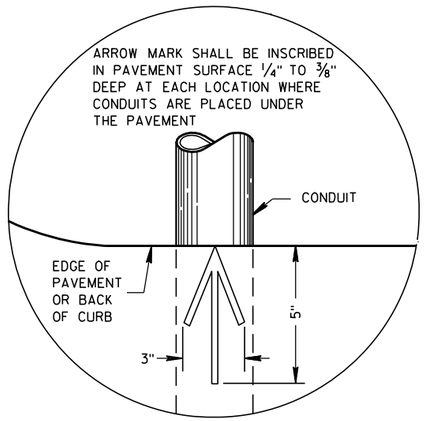


6

S.D.D. 8 F 7-5

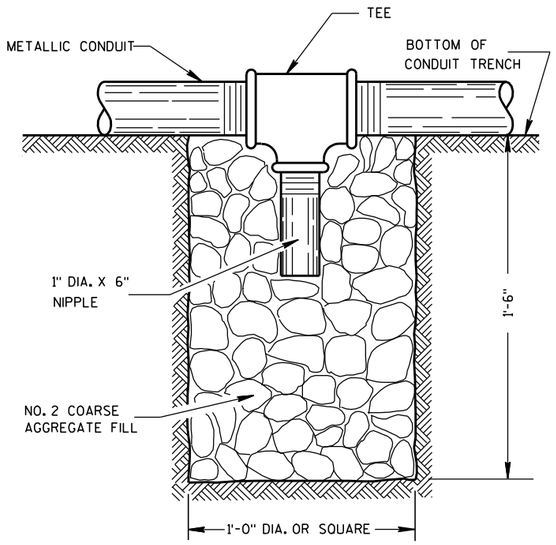
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S.D.D. 8 F 7-5



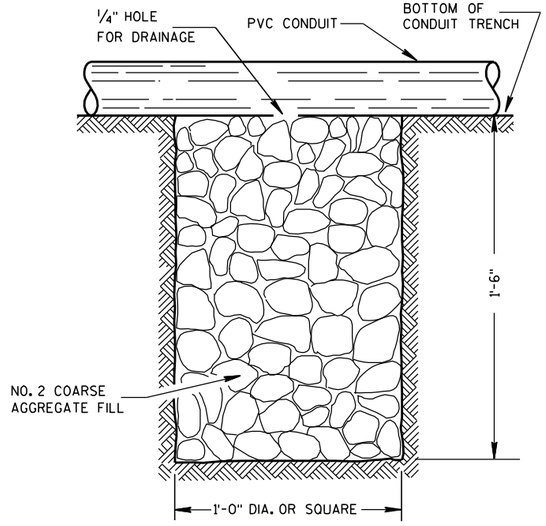

PLAN VIEW

**ARROW MARK**




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

**DRAIN SUMP FOR METALLIC CONDUIT**




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

**DRAIN SUMP FOR PVC CONDUIT**

## GENERAL NOTES

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

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

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

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

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

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

ALL METALLIC CONDUIT RACEWAY ENDS SHALL BE REAMED AND THREADED.

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

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

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

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

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

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

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

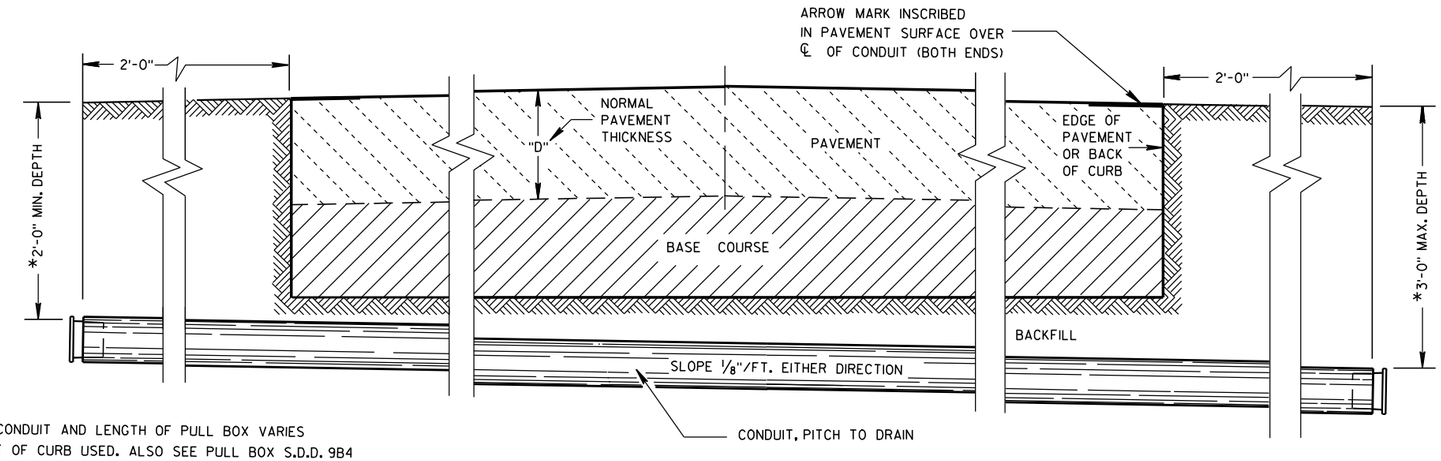
PRIOR TO CONDUIT ACCEPTANCE, CONDUIT CAPS OR PLUGS SHALL BE REMOVED, AND THE CAPS, PLUGS AND CONDUIT ENDS SHALL BE THOROUGHLY CLEANED AND THEN THE CAPS OR PLUGS REINSTALLED TO ENSURE THAT THE CAPS OR PLUGS CAN BE EASILY REMOVED IN THE FUTURE.

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

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

POLY ROPE OR A PULL WIRE SHALL BE INSTALLED AS STATED IN THE STANDARD SPECIFICATION, ITEM 652.3.1.1.

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




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

SIDE ELEVATION

**DETAIL FOR CONDUIT UNDER PAVED HIGHWAYS**

**CONDUIT**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

10/23/03 DATE

/S/ Balu Ananthanarayanan
STATE ELECTRICAL ENGI

FHWA




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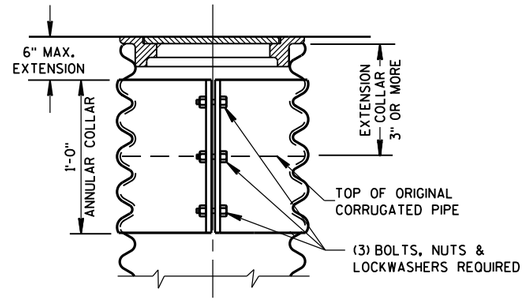
S.D.D. 9 B 2-7

## TABLE OF NOMINAL DIMENSIONS AND WEIGHTS

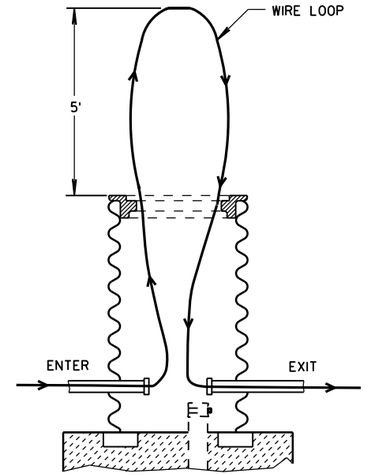
| DIMENSION IN INCHES | | CORRUGATED STEEL PIPE | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| PIPE DIAMETER (INSIDE) | A | 12 | 12 | 12 | 18 | 18 | 18 | 24 | 24 | 24 |
| PIPE LENGTH ** | B | 24 | 30 | 36 | 24 | 30 | 36 | 36 | 42 | 48 |
| WALL THICKNESS | C | 0.064 | 0.064 | 0.064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

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

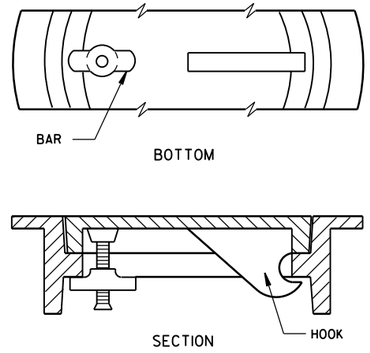
** NORMALLY USED LENGTHS. THE PROJECT ENGINEER SHALL DETERMINE IF PIPE LENGTHS, OTHER THAN THOSE SPECIFIED, SHALL BE USED, TO A MAXIMUM OF 48" (CONTINUOUS LENGTH, NON-SPLICED). THE ADDITIONAL LENGTH SHALL BE INCIDENTAL TO THE PULL BOX BID PRICE.




CORRUGATED PIPE EXTENDER

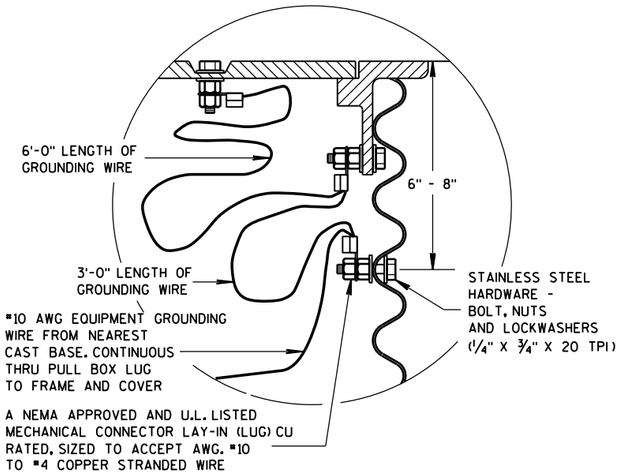



MEASUREMENT DETAIL FOR WIRE/CABLE IN THE PULL BOX

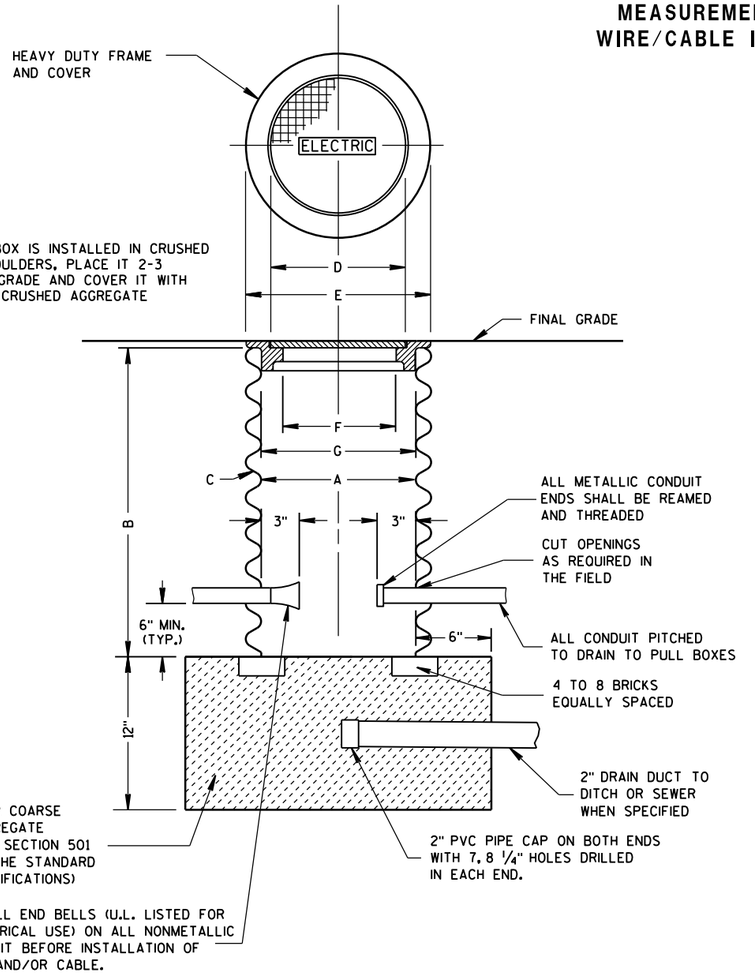



ALTERNATE COVER (LOCKING)

TIGHTENING BAR TYPE




EQUIPMENT GROUNDING LUG AND LOCATION IN STEEL PULL BOXES




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

PULL BOX

## GENERAL NOTES

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

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

PULL BOXES LOCATED IN THE ROADWAYS SHALL HAVE LOCKING COVERS.

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

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

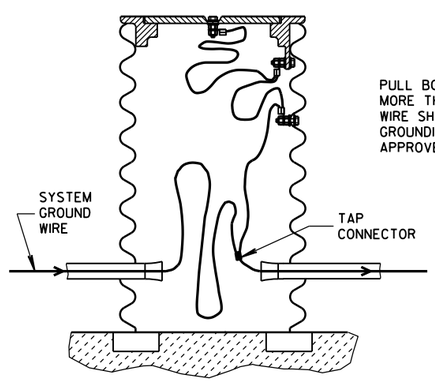
GROUNDING LUGS (MECHANICAL CONNECTORS) SHALL BE U.L. LISTED AND APPROVED FOR USE WITH COPPER WIRE.

GROUNDING LUGS ARE NOT REQUIRED IN PULL BOXES WHEN VOLTAGES OF LESS THAN 50 VOLTS AC ARE THE ONLY VOLTAGES ENCOUNTERED IN THE BOXES.

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

S.D.D. 9B2, "CONDUIT", APPLIES TO THIS DRAWING.

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




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

EQUIPMENT GROUNDING LUG AND LOCATION IN STEEL PULL BOXES

PULL BOX

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

2-7-2013
DATE

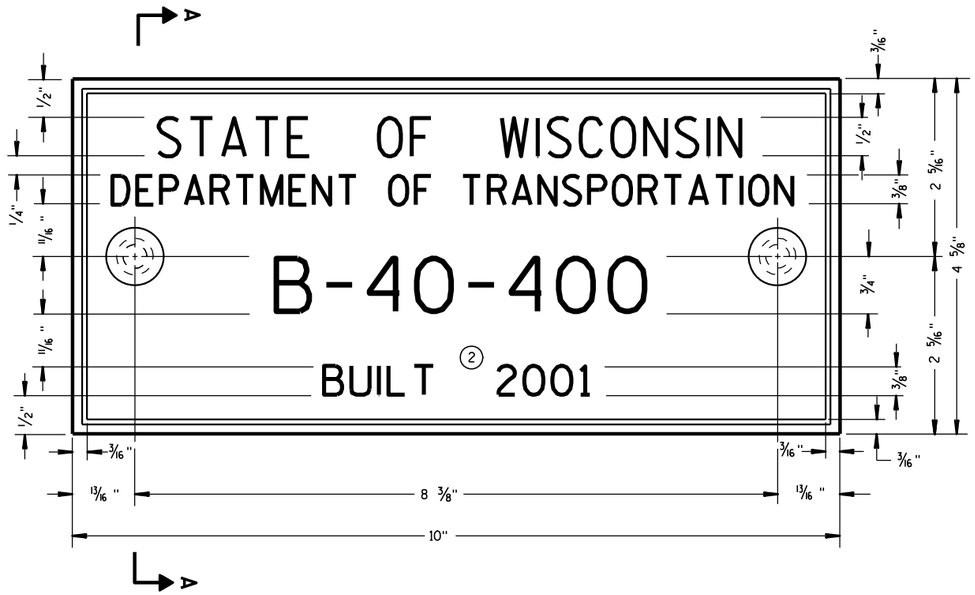
/S/ Ahmet Demirbilek
STATE ELECTRICAL

FHWA



6

S.D.D. 9 B 4-10




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

FOR MULTI-UNIT STRUCTURES
LINE 3 ABOVE SHALL READ

B = BRIDGE
C = CULVERT
R = RETAINING WALL

COUNTY NO.

BRIDGE NO.

UNIT NO. FOR MULTIPLE UNIT BRIDGE

B-40-400-1A

**NUMBERING DESIGNATION**
**MULTI-UNIT STRUCTURES**

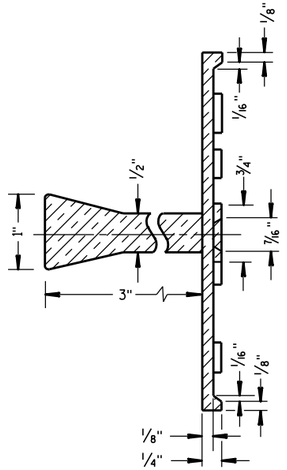
## GENERAL NOTES

NAME PLATES TO BE INSTALLED ON BRIDGES, CULVERTS, AND RETAINING WALLS SHALL CONFORM TO THE REQUIREMENTS OF SECTION 502.3.11 OF THE STANDARD SPECIFICATIONS.

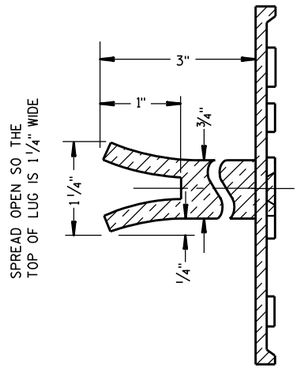
THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

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

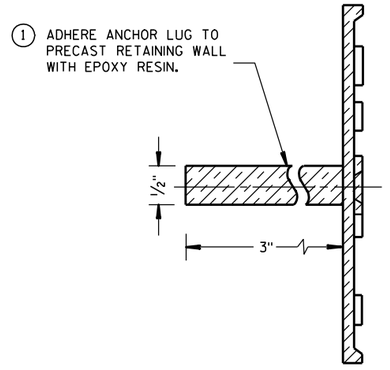
(2) REHABILITATION OF AN EXISTING STRUCTURE SHOULD USE THE DATE OF ORIGINAL STRUCTURE CONSTRUCTION.




**SECTION A-A**




**ALTERNATE LUG**




**ALTERNATE LUG**
(FOR ATTACHMENT TO PRECAST STRUCTURES)

**NAME PLATE (STRUCTURES)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

3/26/10 DATE

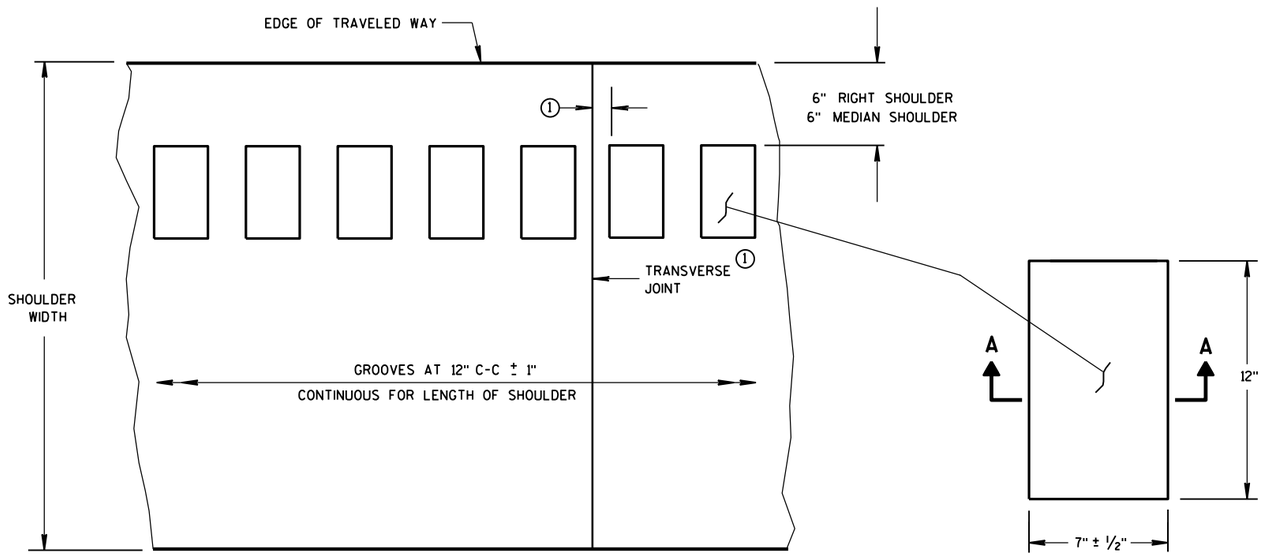
/S/ Scot Beck-- CHIEF STRUCTURAL DEVELOP ENGINEER

FHWA



6

S.D.D. 12 A 3-10




PLAN VIEW
SHOULDER WITH GROOVES

PLAN VIEW
(SINGLE GROOVE)

## PLACEMENT DETAIL FOR MILLED RUMBLE STRIP

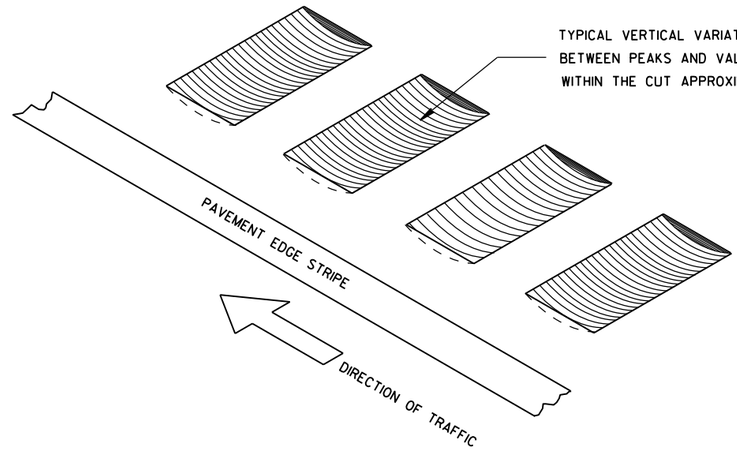
## GENERAL NOTES

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

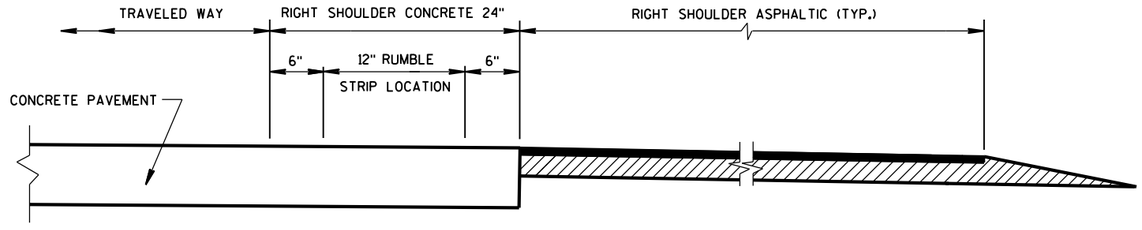
RUMBLE STRIPS ON EXPRESSWAYS

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

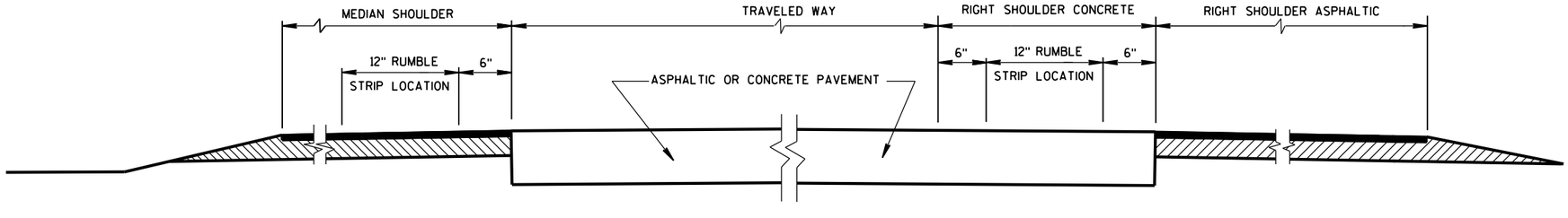
(1) CONCRETE PAVEMENT - RUMBLE STRIPS SHALL BE A MINIMUM OF 6" AWAY FROM TRANSVERSE JOINTS.




ISOMETRIC



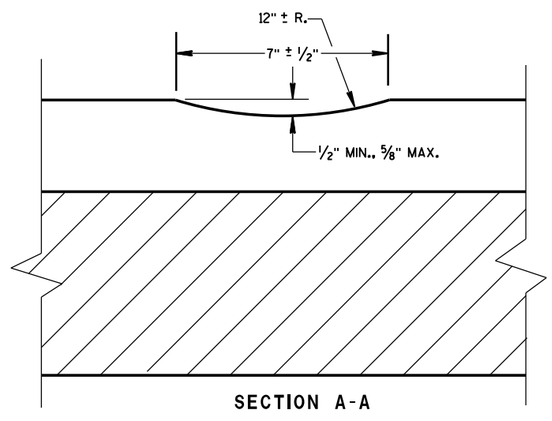

SECTION VIEW
CONCRETE PAVEMENT EXTENDS INTO RIGHT SHOULDER)




SECTION VIEW

## TYPICAL LOCATIONS OF SHOULDER RUMBLE STRIPS IN RURAL DIVIDED HIGHWAYS

(ONE ROADWAY IS SHOWN)




SECTION A-A

SHOULDER RUMBLE STRIP, MILLING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

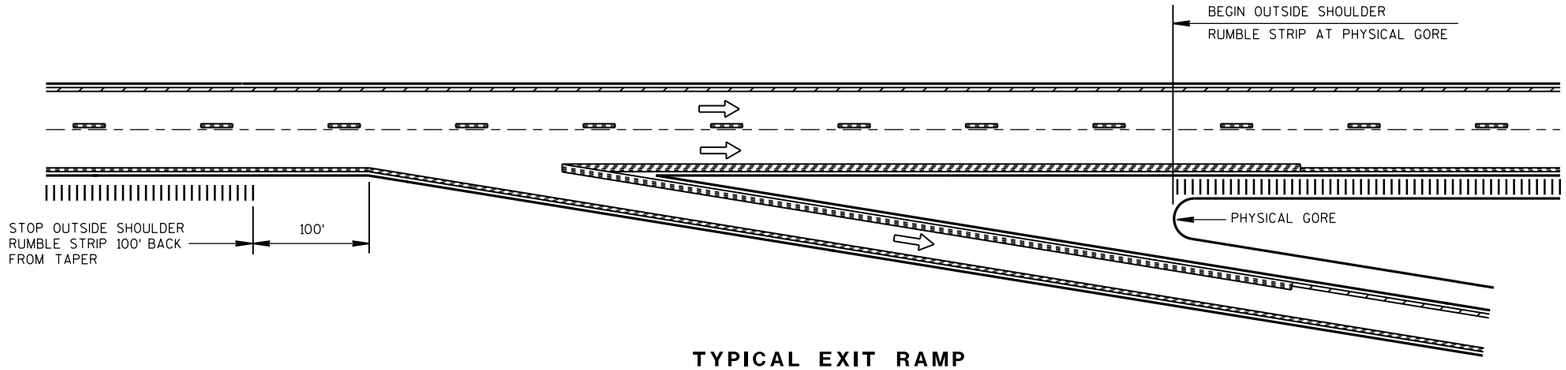


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S.D.D. 13 A 5-5a

6

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



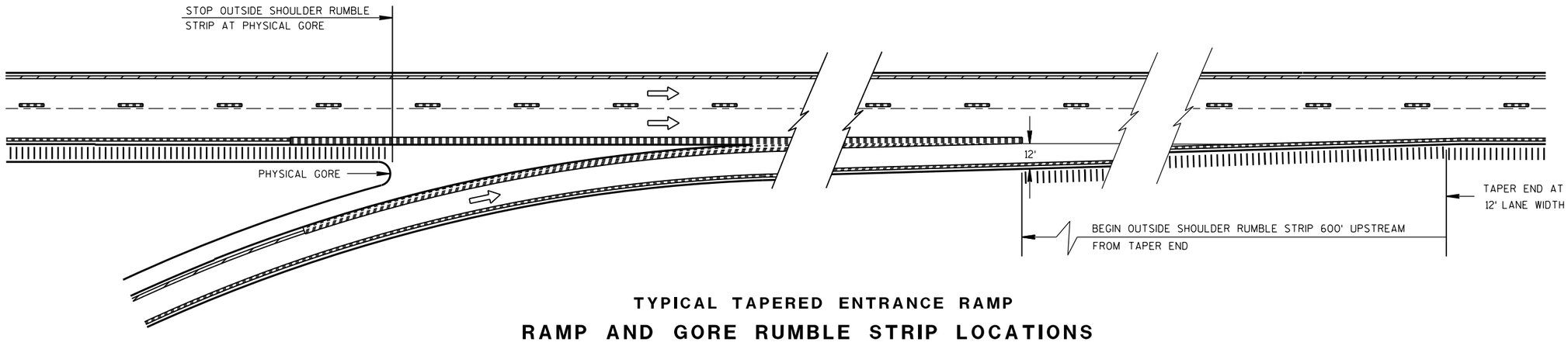

**TYPICAL EXIT RAMP**

## NOTES:

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

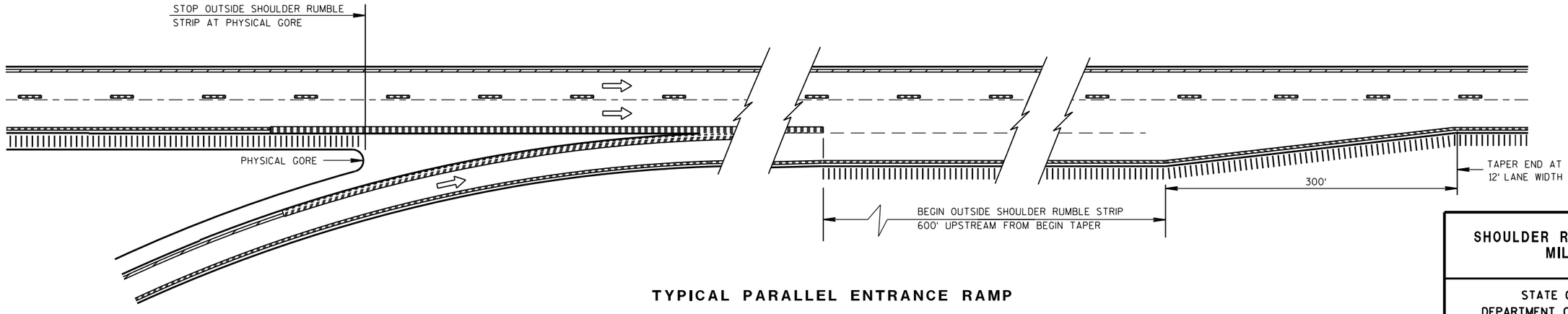
PAVEMENT MARKING DETAILS AND SPECIFICATIONS ARE PROVIDED ELSEWHERE IN THE CONTRACT.

NOTE:
ARROW SYMBOL ( ⇨ )
SHOWS DIRECTION OF TRAVEL




**TYPICAL TAPERED ENTRANCE RAMP**

## RAMP AND GORE RUMBLE STRIP LOCATIONS




**TYPICAL PARALLEL ENTRANCE RAMP**

## RAMP AND GORE RUMBLE STRIP LOCATIONS

**SHOULDER RUMBLE STRIP, MILLING**

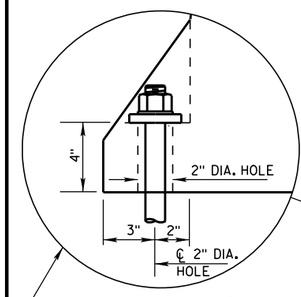
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
12/17/2012 — DATE
/S/ Jerry H. Zoga — ROADWAY STANDARDS ENGINEER
FHWA

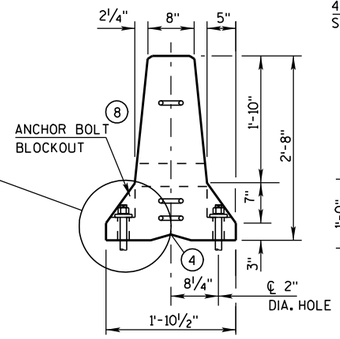


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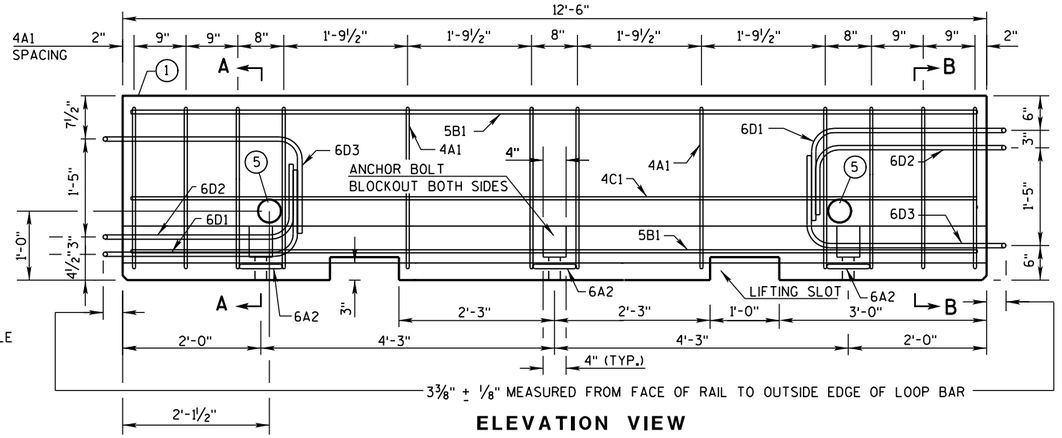
S.D.D. 13 A 5-5b



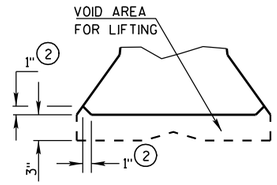

ANCHOR ON TRAFFIC SIDE (8) ONLY WHEN REQUIRED (SEE SHEET D FOR ADDITIONAL ANCHOR DETAIL)



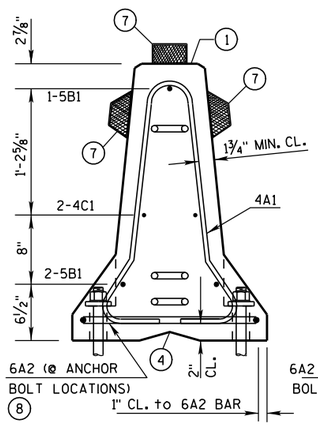

**END VIEW**



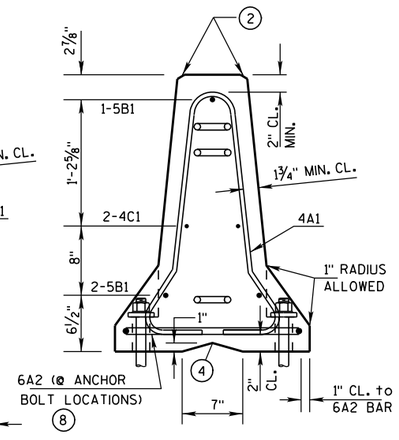

**ELEVATION VIEW**



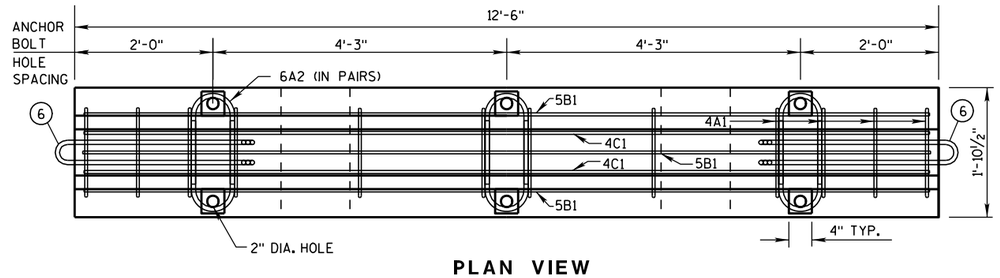

**DETAIL "B"**
**LIFTING SLOT DETAIL**




**SECTION A-A**
(STIRRUP PLACEMENT)

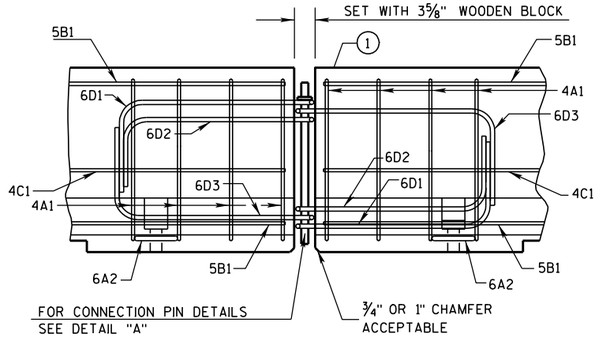



**SECTION B-B**
(STIRRUP PLACEMENT)

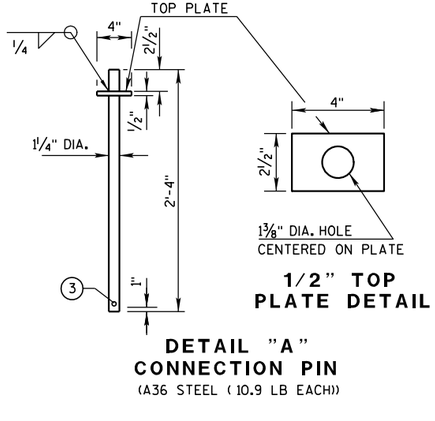



**PLAN VIEW**

## DETAILS OF BARRIER SECTION

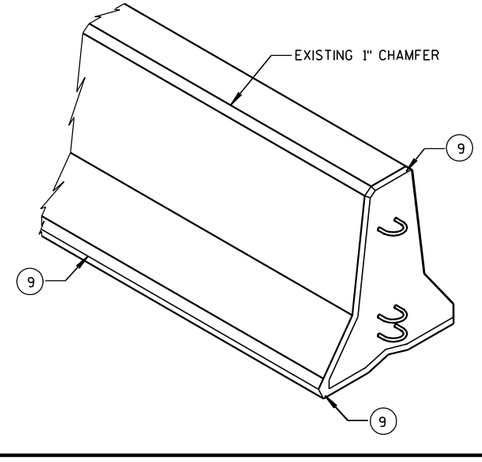



## DETAILS OF BARRIER CONNECTION




**1/2" TOP PLATE DETAIL**

**DETAIL "A"**
**CONNECTION PIN**
(A36 STEEL ( 10.9 LB EACH))




## GENERAL NOTES

THESE GENERAL NOTES APPLY TO SHEETS 14B7-13(a) THRU 14B7-13(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 EPOXY 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: WICBTP
- 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.

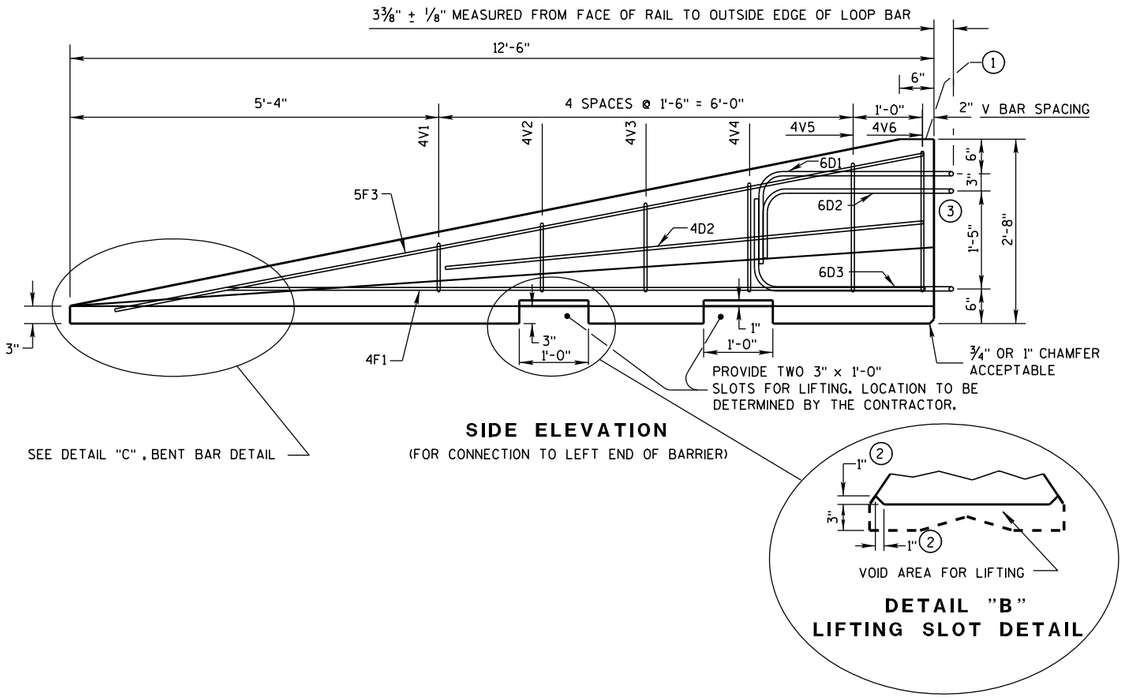
**CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO.....




6

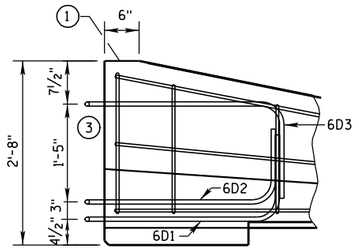
S.D.D. 14 B 7-13a




**SIDE ELEVATION**
(FOR CONNECTION TO LEFT END OF BARRIER)



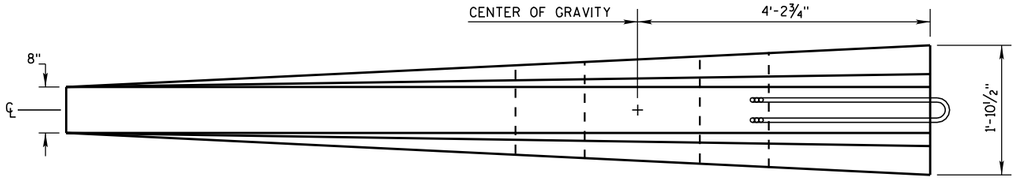

**DETAIL "B"**
**LIFTING SLOT DETAIL**



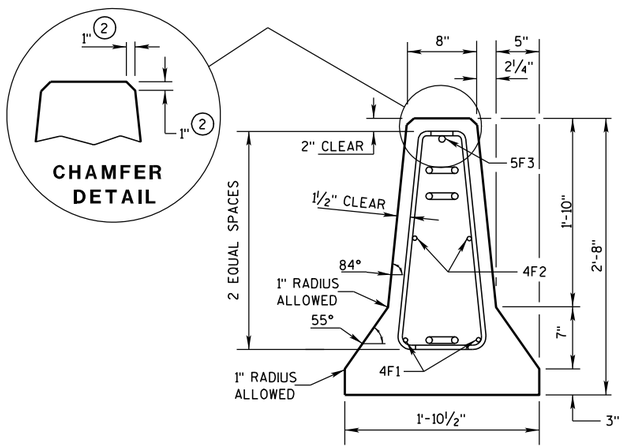

**SIDE ELEVATION**
LOOP BAR ASSEMBLY INVERTED
FOR OPPOSITE END.
(FOR CONNECTION TO RIGHT END OF BARRIER)

## GENERAL NOTES

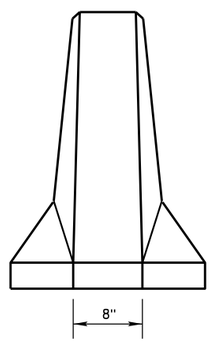
1. MARK ONE END OF EACH BARRIER PERMANENTLY BY FORMING INTO THE BARRIER THE FOLLOWING INFORMATION:
   a. TYPE WICBTP
   b. MANUFACTURER
   c. DATE MANUFACTURED (MONTH AND YEAR)
2. 1" CHAMFER TO PREVENT SPALLING.
3. NEVER USE LOOP BARS (6D1, 6D2 OR 6D3) TO LIFT, MOVE OR REPOSITION THE BARRIER.



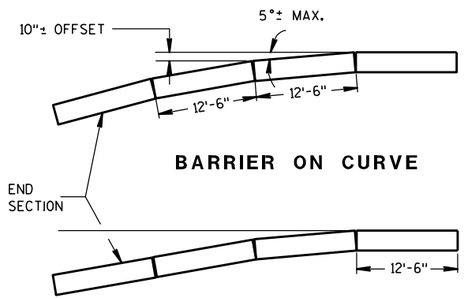

**PLAN VIEW**




**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 TRANSPORTATION



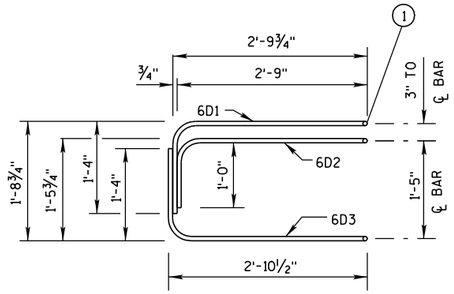

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S.D.D. 14 B 7-13b

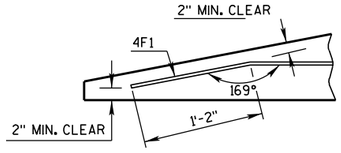
## BARRIER TAPER SECTION BILL OF MATERIALS

(PER 12'-6" BARRIER TAPER SECTION)

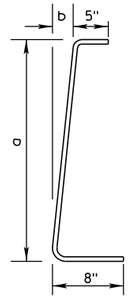
| BAR | BAR SIZE | NO. OF BARS | LENGTH FT. |
|---|---|---|---|
| 4V1 | 4 | 2 | 1'-11" |
| 4V2 | 4 | 2 | 2'-2" |
| 4V3 | 4 | 2 | 2'-6" |
| 4V4 | 4 | 2 | 2'-9" |
| 4V5 | 4 | 2 | 3'-2" |
| 4V6 | 4 | 2 | 3'-4" |
| 4F1 | 4 | 2 | 12'-0" |
| 4F2 | 4 | 2 | 7'-6" |
| 5F3 | 5 | 1 | 11'-9" |
| **LOOP ASSEMBLY**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




ELEVATION
LOOP BAR ASSEMBLY




DETAIL "C"
BENT BAR DETAIL




| BAR | a | b |
|---|---|---|
| V1 | 10" | 1" |
| V2 | 1'-1" | 1¼" |
| V3 | 1'-5" | 1⅝" |
| V4 | 1'-8" | 1⅞" |
| V5 | 2'-0½" | 2⅜" |
| V6 | 2'-3" | 2¾" |

**4V BARS**
2 AT EACH SIZE REQUIRED
FOR STIRRUP ASSEMBLY

## TAPER BARRIER SECTION

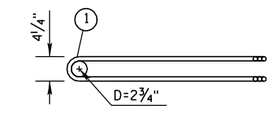
## GENERAL NOTES

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

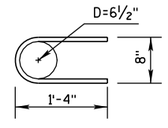
## BARRIER SECTION BILL OF MATERIALS

(PER 12'-6" BARRIER SECTION)

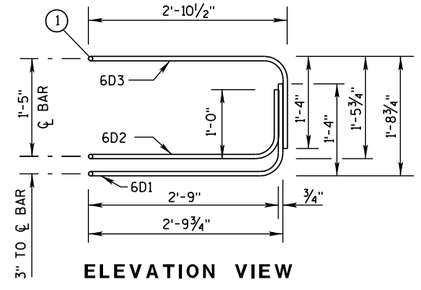
| BAR | BAR SIZE | NO. OF BARS | LENGTH FT. |
|---|---|---|---|
| 4A1 | 4 | 12 | 6'-0" |
| 6A2 | 6 | 6 | 2'-11" |
| 5B1 | 5 | 3 | 12'-2" |
| 4C1 | 4 | 2 | 12'-2" |
| **LOOP ASSEMBLY** | | | |
| 6D1 | 6 | 2 | 8'-5" |
| 6D2 | 6 | 2 | 7'-7" |
| 6D3 | 6 | 2 | 8'-6" |



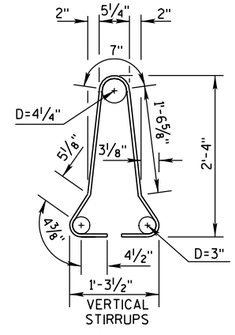

PLAN VIEW
LOOP BAR ASSEMBLY
(MARKED END SHOWN, INVERT FOR OTHER END)




6A2




ELEVATION VIEW




4A1

## BARRIER SECTION

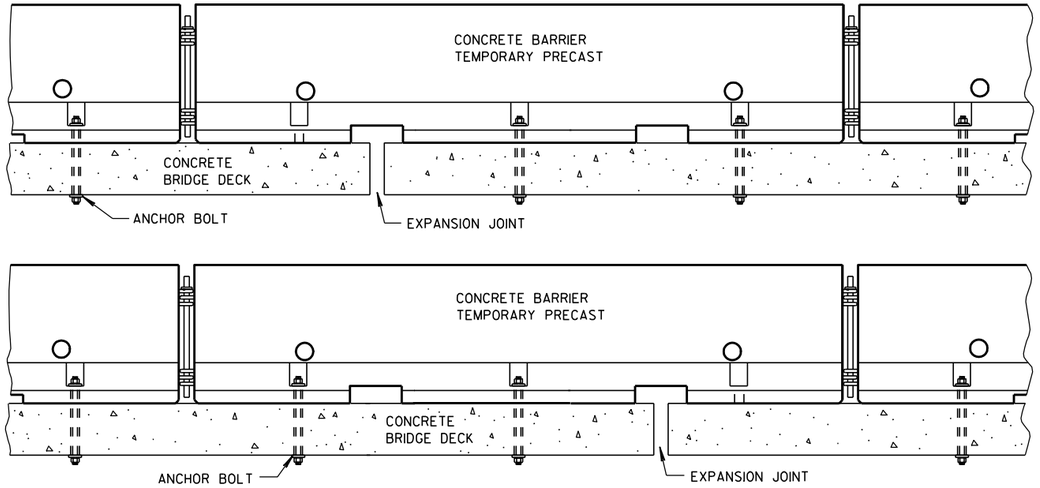
CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



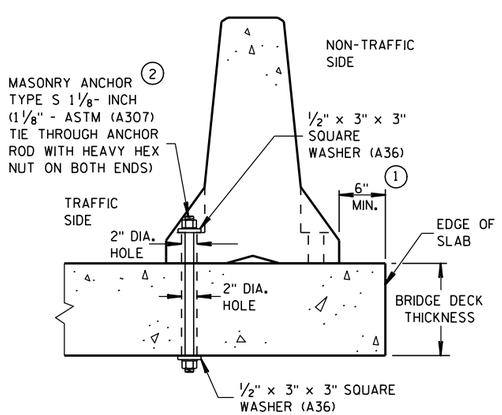


6
S.D.D. 14 B 7-13c



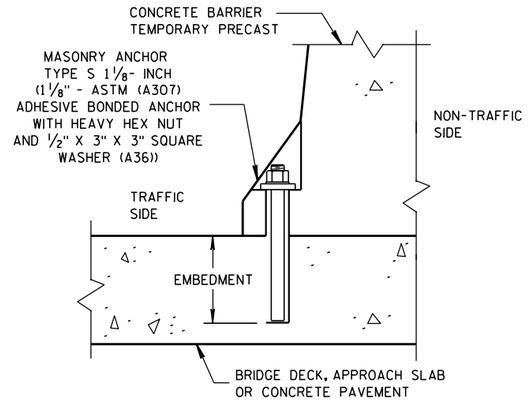

## TREATMENT AT BRIDGE DECK EXPANSION JOINTS

(NO SINGLE CONCRETE BARRIER SECTION SHALL BE ANCHORED TO BOTH THE BRIDGE DECK AND THE APPROACH SLAB. ALL ANCHOR BOLT LOCATIONS SHALL BE ANCHORED TO THE DECK IN ACCORDANCE WITH THE DETAIL. NO MORE THAN ONE ANCHOR BOLT SHALL BE ELIMINATED FROM A BARRIER SECTION WHEN SPANNING AN EXPANSION JOINT.)




### THROUGH BOLTED ANCHOR INSTALLATION ON BRIDGE DECK

(DO NOTUSE ON CONCRETE BRIDGE DECK WITH ASPHALT OVERLAY)




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

2

(DO NOT USE ON CONCRETE WITH AN ASPHALTIC OVERLAY)

## GENERAL NOTES

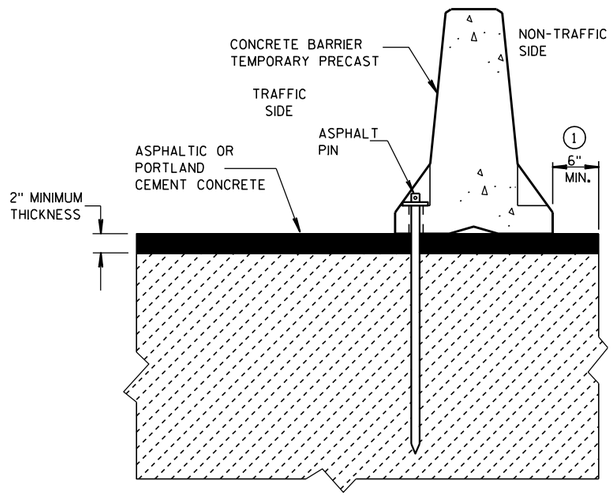
1. CONCRETE BARRIER TEMPORARY PRECAST, 12'-6" SHALL BE ANCHORED IF:
   THE DISTANCE TO A 2 FOOT OR GREATER DROPOFF THAT IS STEEPER THAN 3H : 1V, FOR EXAMPLE THE EDGE OF A BRIDGE DECK OR A DROPOFF AT THE EDGE OF PAVEMENT, IS LESS THAN 4 FEET FROM THE SIDE OF THE BARRIER CLOSEST TO THE DROPOFF AND THE POSTED SPEED IS 45 MPH OR GREATER, OR

   THE DISTANCE TO A 2 FOOT OR GREATER DROPOFF THAT IS STEEPER THAN 3H : 1V, FOR EXAMPLE THE EDGE OF A BRIDGE DECK OR A DROPOFF AT THE EDGE OF PAVEMENT. IS LESS THAN 2 FEET FROM THE SIDE OF THE BARRIER CLOSEST TO THE DROPOFF AND THE POSTED SPEED IS 40 MPH OR LESS.

2. ANCHORING IS INCIDENTAL TO CONCRETE BARRIER TEMPORARY PRECAST.

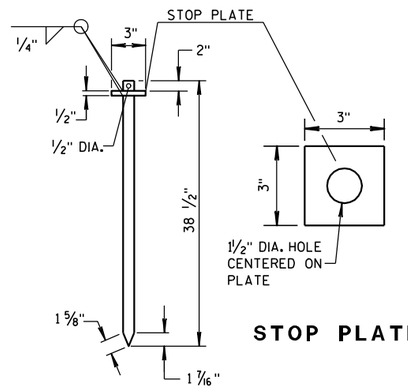
   WITH THE APPROVAL OF THE ENGINEER, REMOVABLE ADHESIVE BONDED (EPOXY) ANCHOR BOLT INSTALLATION MAY BE USED IN LIEU OF THROUGH BOLTED ANCHOR INSTALLATION. THE ADHESIVE BONDED ANCHOR BOLT MUST BE REMOVABLE. USE ASTM (A307) MASONRY ANCHORS TYPE S 1⅛-INCH, EMBEDDED TO A DEPTH SUFFICIENT TO DEVELOP THE ULTIMATE CAPACITY OF THE ANCHOR BOLT AND PROVIDE DOCUMENTATION TO CONFIRM THIS.

   UPON REMOVAL OR RELOCATION OF THE BARRIER UNITS, REMOVE ALLANCHOR 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 EPOXY MATERIAL IDENTIFIED ON THE CURRENT WISDOT APPROVED PRODUCTS LIST.




### STAKE DOWN INSTALLATION FOR ASPHALTIC OR PORTLAND CEMENT CONCRETE SURFACE

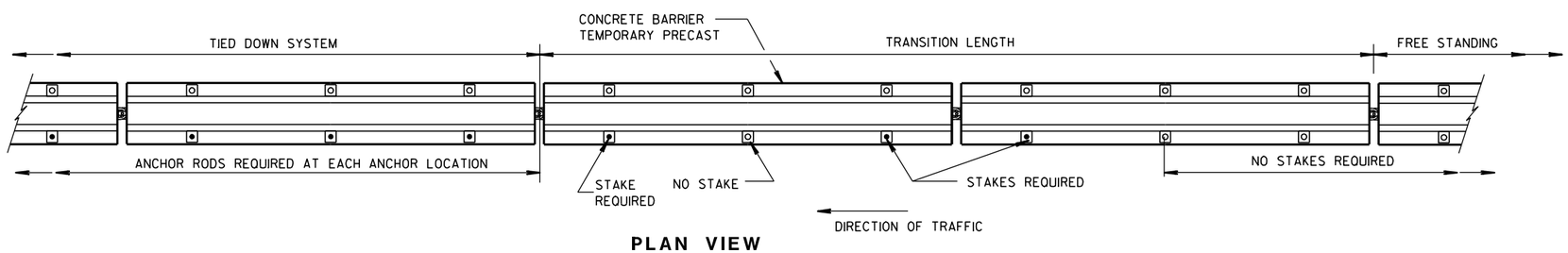
(STAKING IS INCIDENTAL TO CONCRETE BARRIER TEMPORARY PRECAST)




### STOP PLATE

### ASPHALT PIN

(ASTM A36 STEEL)




PLAN VIEW

### FREE STANDING TRANSITION TO TIED-DOWN SYSTEM

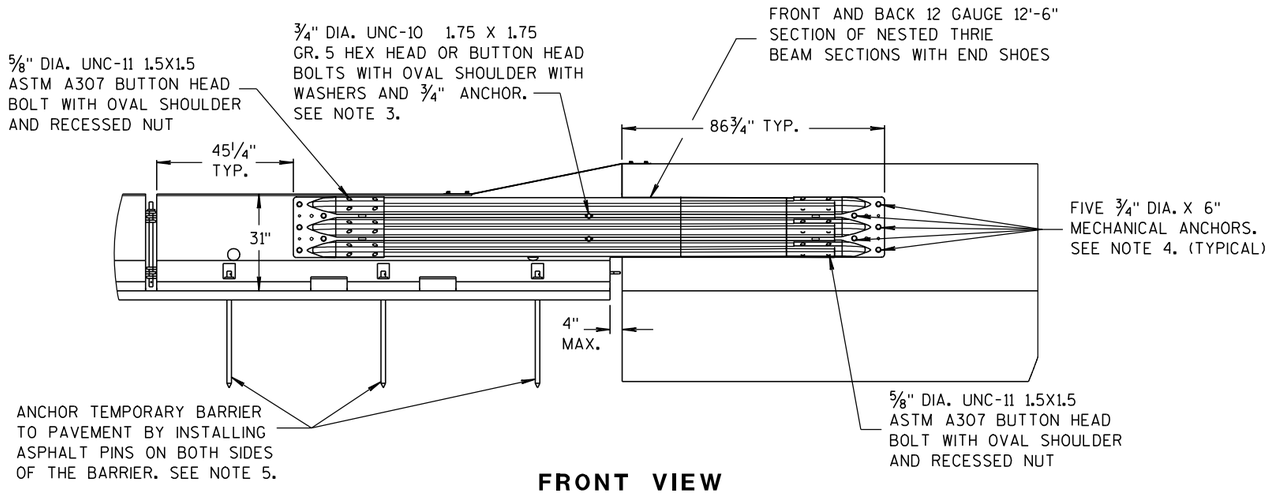
(PLACE TRANSITION IN A TANGENT SECTION OF BARRIER PARALLEL TO THE ROADWAY. IF TRANSITION OCCURS ON STRUCTURAL SLAB, ANCHOR AS SHOWN.)

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO...



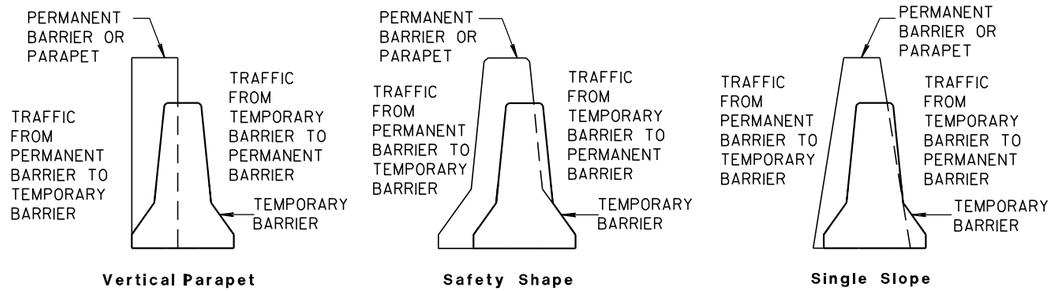

6
S.D.D. 14 B 7-13d

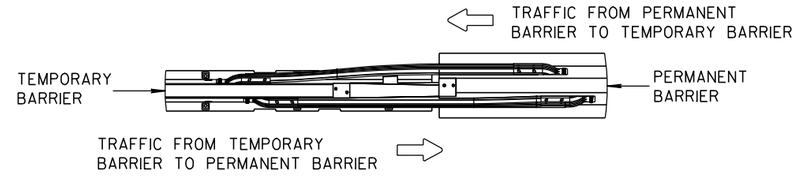



**FRONT VIEW**

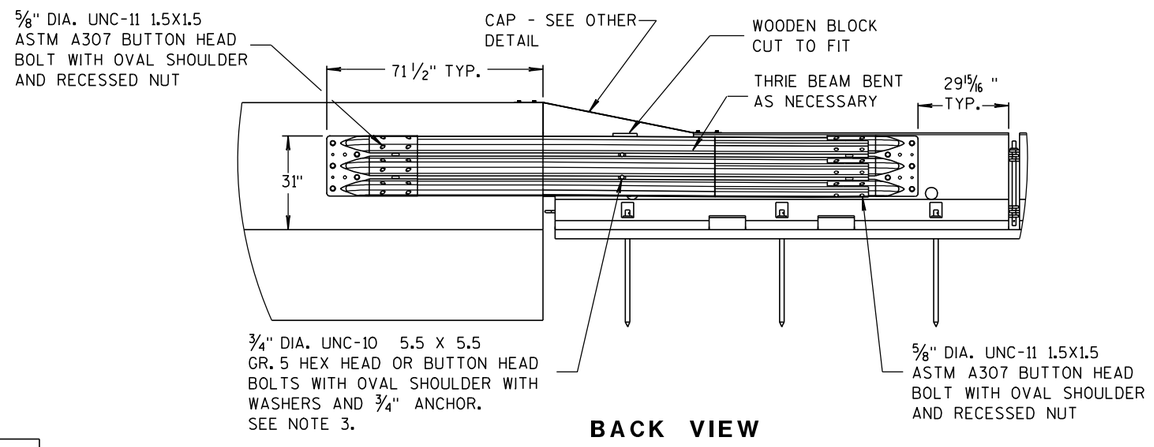
## NOTES

1. CAP END PLATE PLACED FLUSH WITH UPSTREAM END OF PERMANENT BARRIER OR PARAPET.
2. THRIE BEAM PIECES ARE OFFSET 15¼" TO PREVENT INTERFERENCE FROM THE ANCHORS ON OPPOSING SIDES.
3. MINIMUM MECHANICAL OR EPOXY ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 9.48 KIPS AND ULTIMATE SHEAR LOAD 10.48 KIPS.
4. MINIMUM MECHANICAL OR EPOXY 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 EPOXY ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 12.14 KIPS AND ULTIMATE SHEAR LOAD 17.5 KIPS.

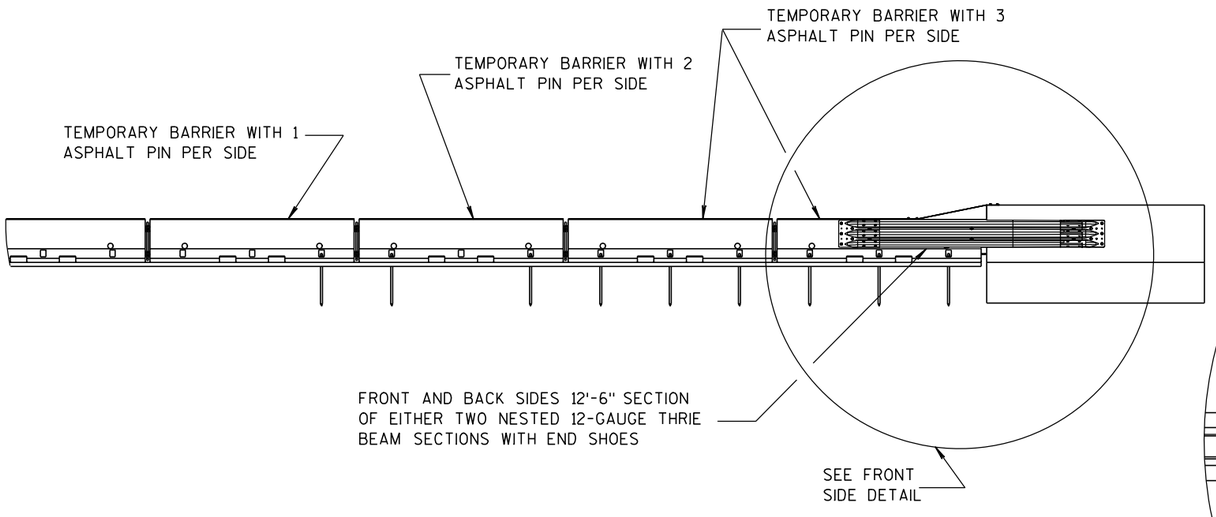


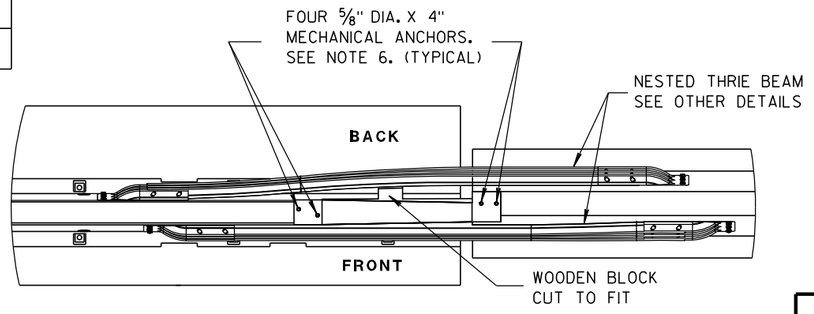

## TEMPORARY BARRIER PLACEMENT FOR BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM




**BACK VIEW**




**FRONT VIEW**




**PLAN VIEW**

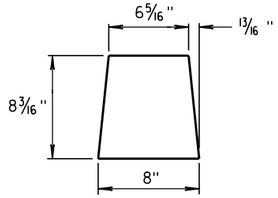
## BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM

**CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"**

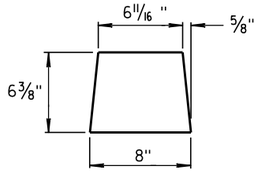
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



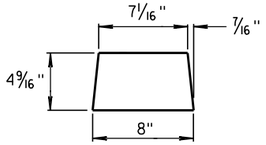

6
S.D.D. 14 B 7-13e



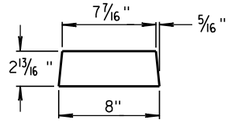

GUSSET 1




GUSSET 2

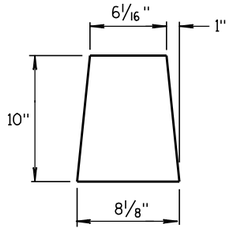



GUSSET 3

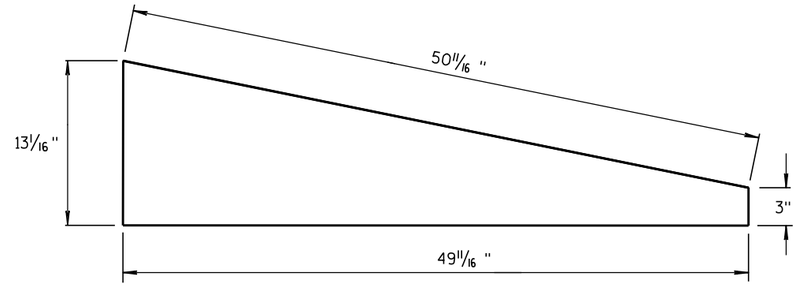



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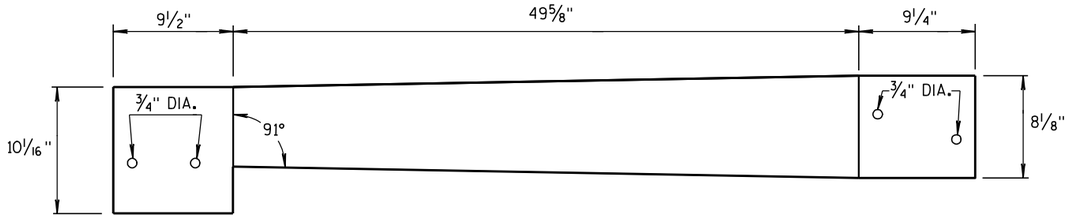
GUSSETS

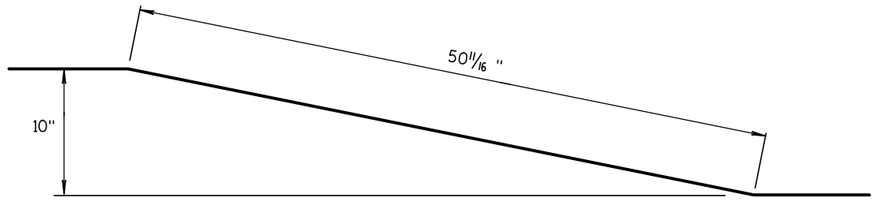



END PLATE

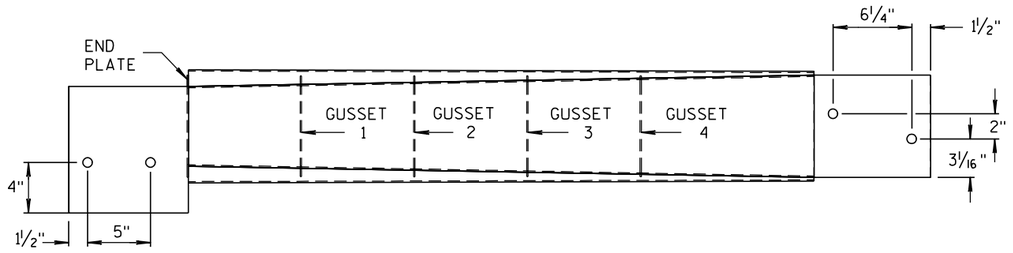


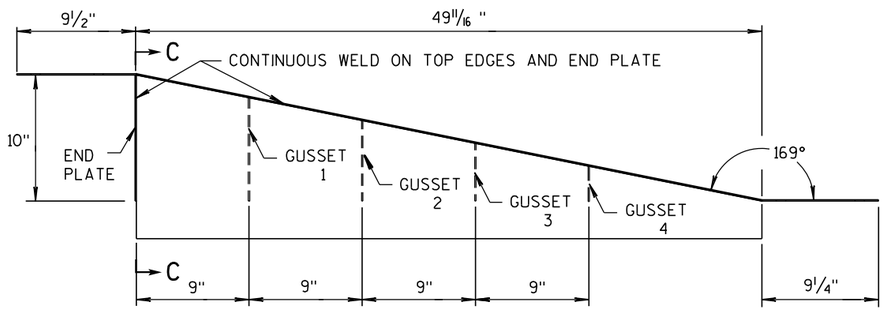

SIDE PLATE

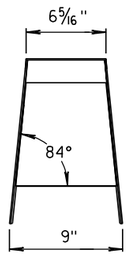



TOP PLATE




SECTION C-C

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.

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

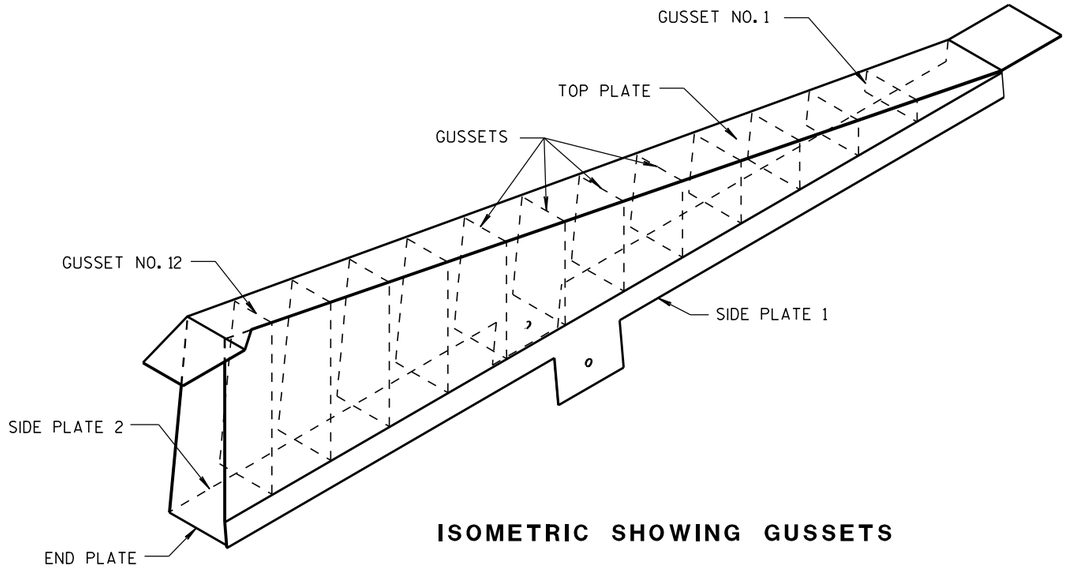
CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

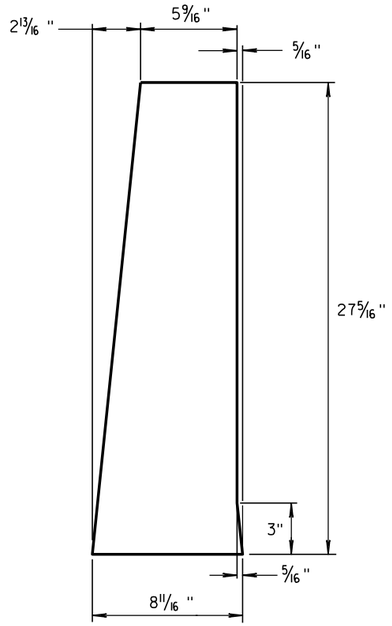



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S.D.D. 14 B 7-13f

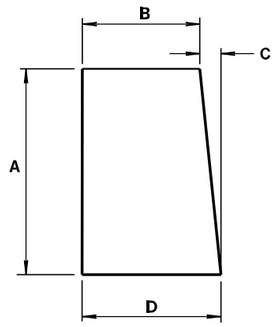



**ISOMETRIC SHOWING GUSSETS**




**END PLATE**

1/8" STEEL PLATE




**GUSSETS 1 - 12**

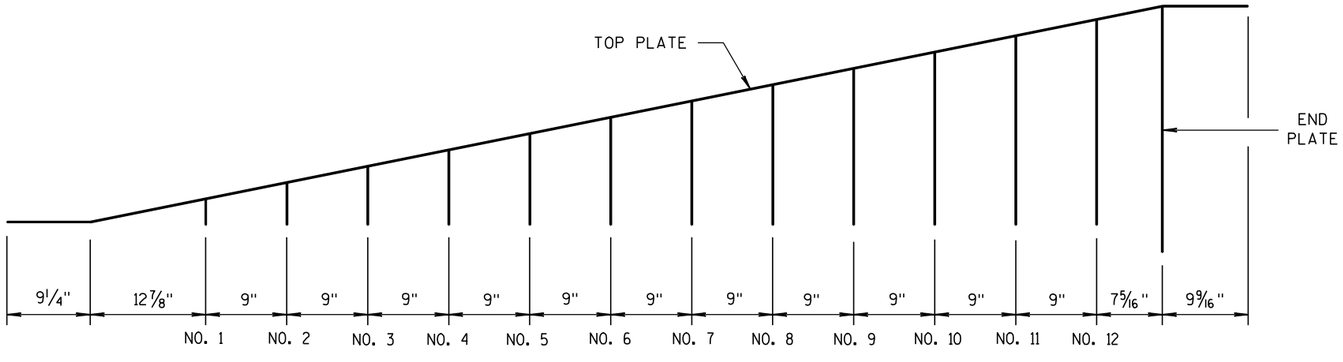
ALL GUSSETS 1/8" STEEL PLATE

**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 TRANSPORTATION

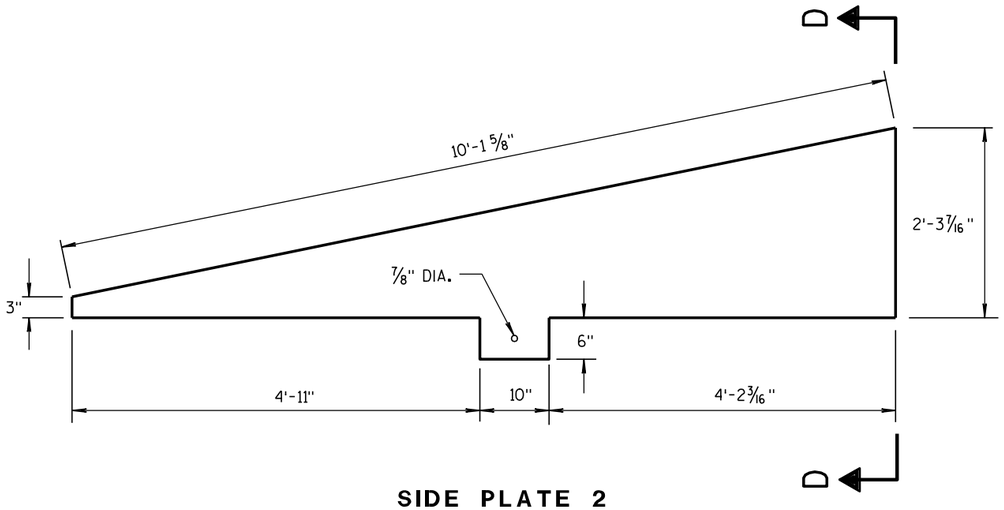


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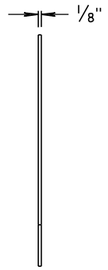
S.D.D. 14 B 7-13g

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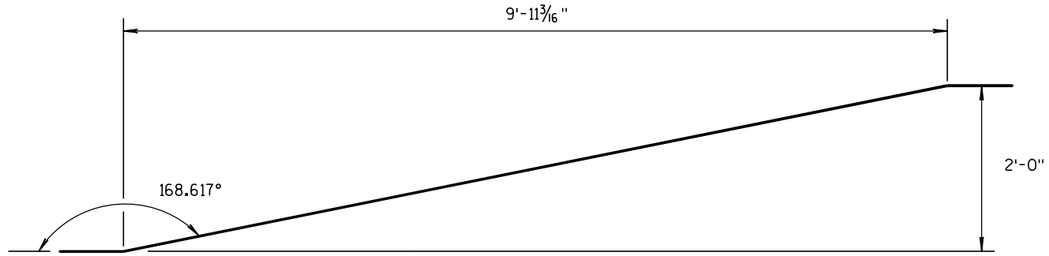
S.D.D. 14 B 7-13g




SIDE PLATE 2

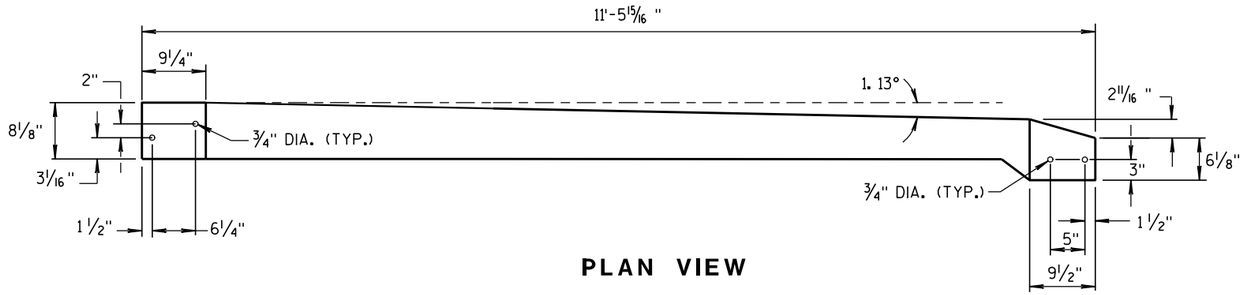



END VIEW



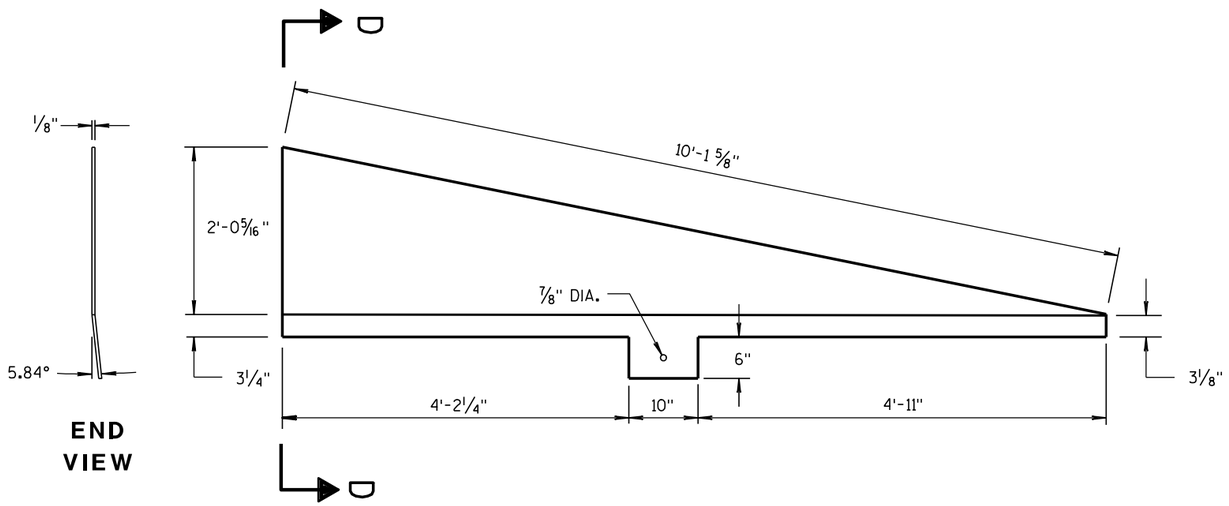

SIDE VIEW

TOP PLATE



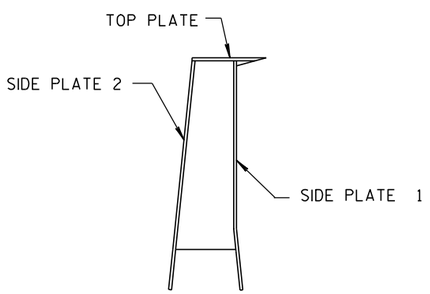

PLAN VIEW

TOP PLATE




END VIEW

SIDE PLATE 1




SECTION D-D

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

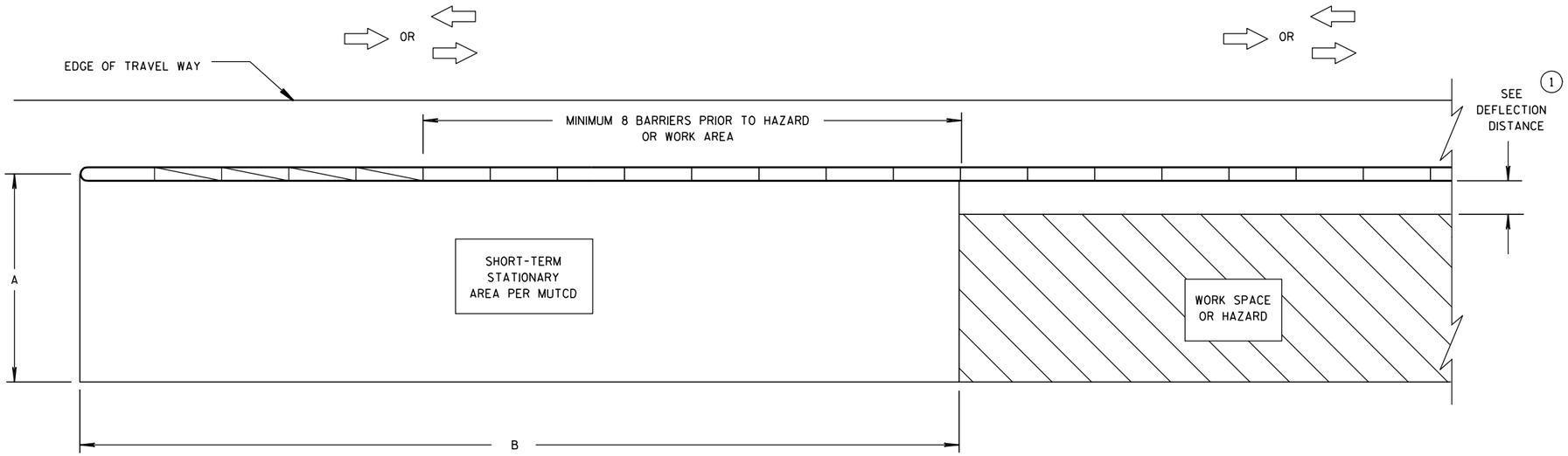
| CONCRETE BARRIER TEMPORARY PRECAST, 12'-6" | |
|---|---|
| STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION | |
| APPROVED | |
| 8/31/2012 DATE | /S/ Jerry H. ROADWAY STANDARDS ENGINEER |
| FHWA | 144 ENT |

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S.D.D. 14 B 7-13h

6

S.D.D. 14 B 7-13h



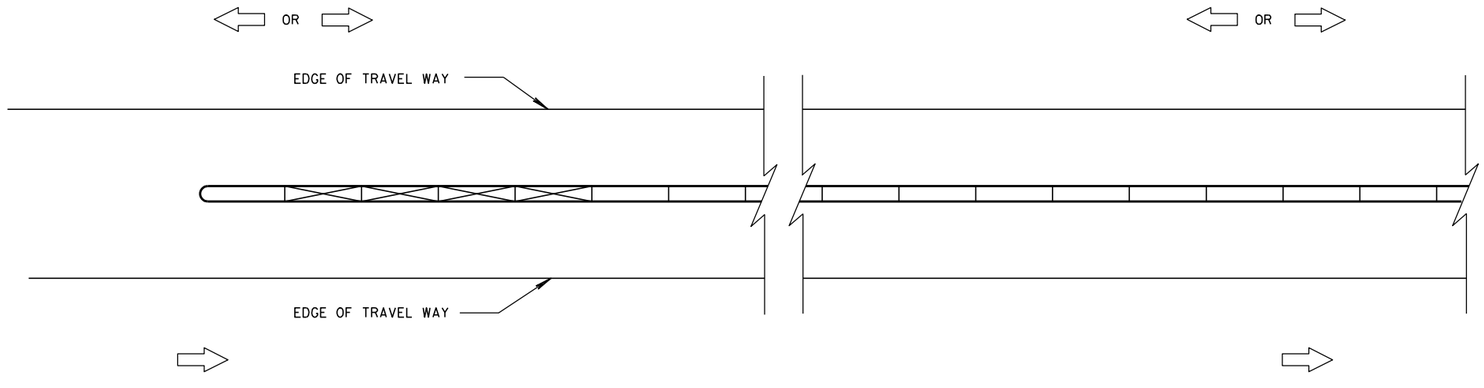

## CRASH CUSHION/SAND BARREL ARRAY AND TEMPORARY BARRIER INSTALLATION FOR TRAFFIC ON ONE SIDE OF BARRIER

### 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.

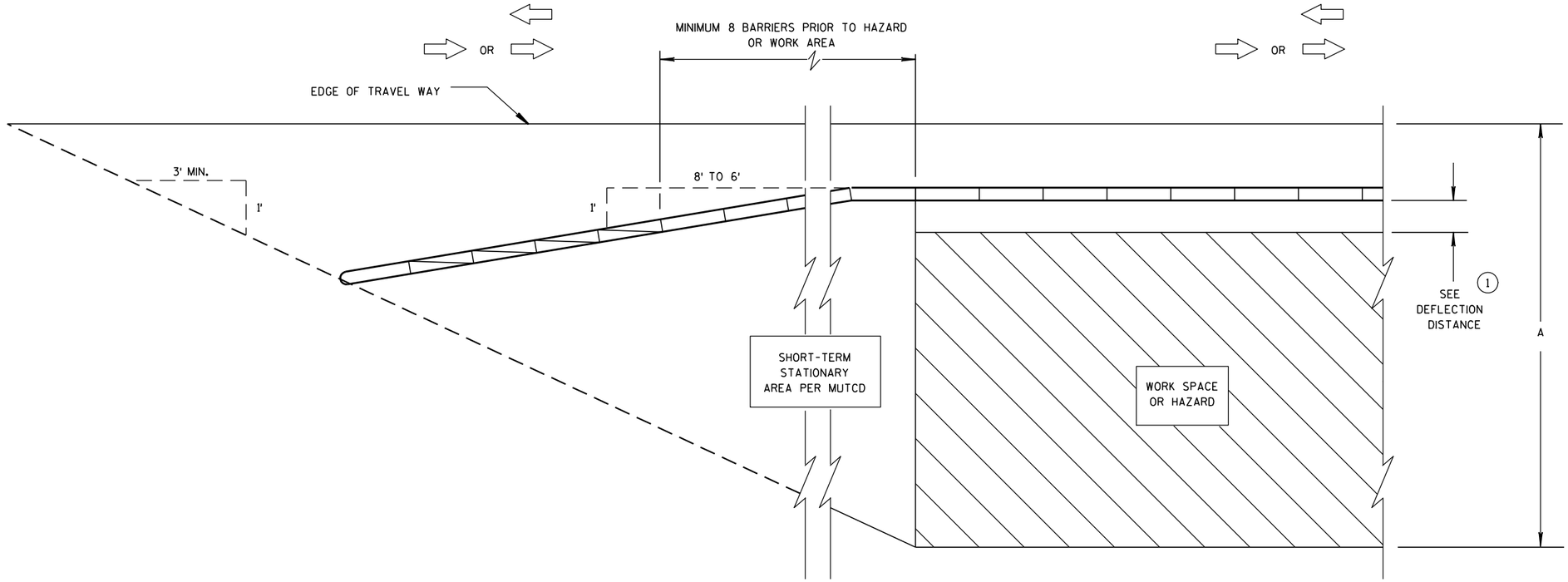
**CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

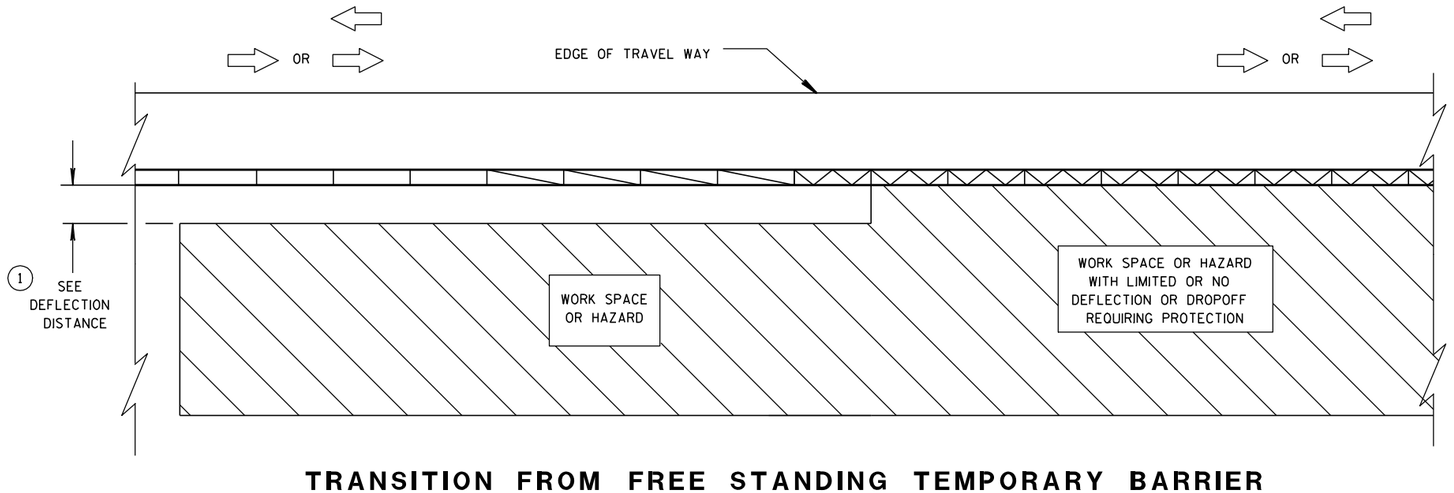



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S.D.D. 14 B 8-1a




## 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

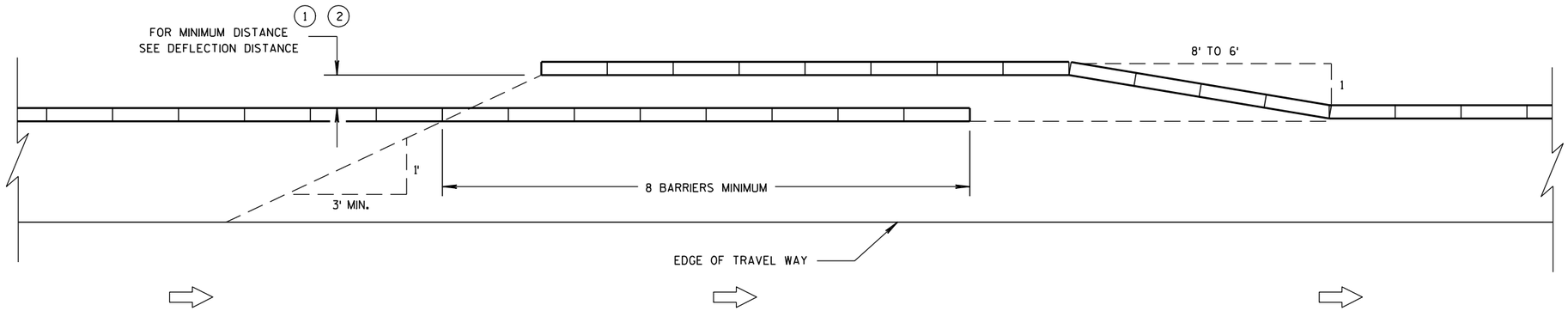
**CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

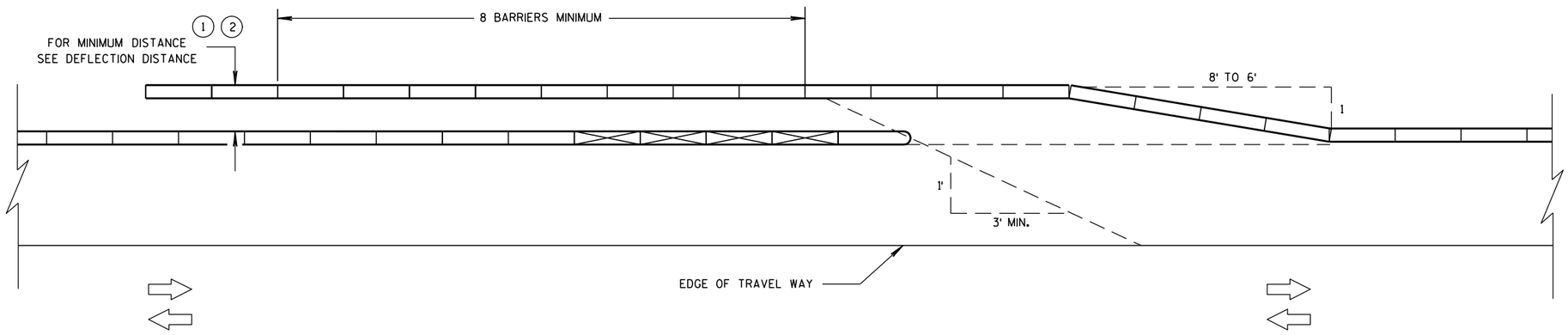



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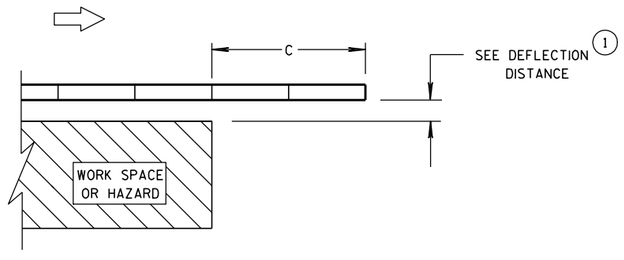
S.D.D. 14 B 8-1b



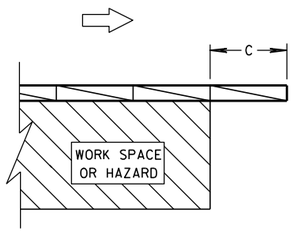

## TEMPORARY BARRIER OVERLAP - ONE-WAY TRAFFIC




## TEMPORARY BARRIER OVERLAP - TWO-WAY TRAFFIC




## ENDING TEMPORARY BARRIER DOWNSTREAM - UNANCHORED




## ENDING TEMPORARY BARRIER DOWNSTREAM - ANCHORED

### LEGEND

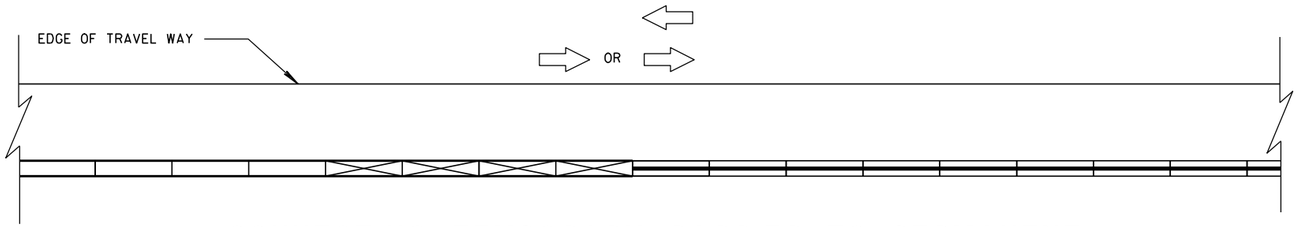
- DIRECTION OF TRAVEL
- CRASH CUSHION OR SAND BARREL ARRAY
- SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS
- SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS
- 3 PINS PLACED ON TRAFFIC SIDE OF BARRIER
- PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET
- FREE STANDING TEMPORARY BARRIER

**CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS**

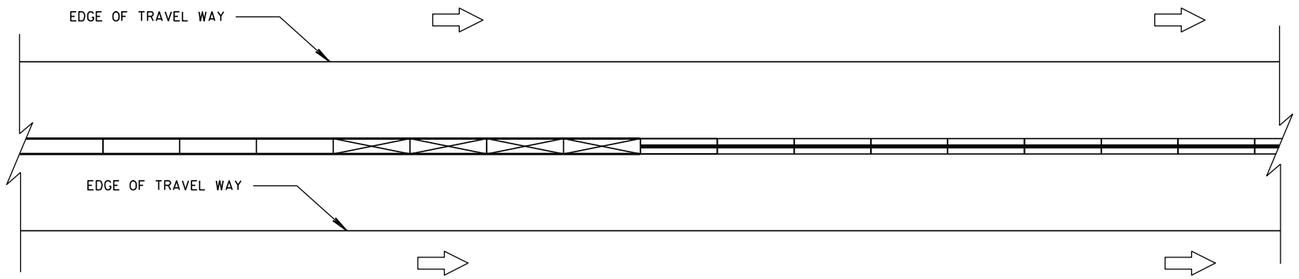
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION




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S.D.D. 14 B 8-1c




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

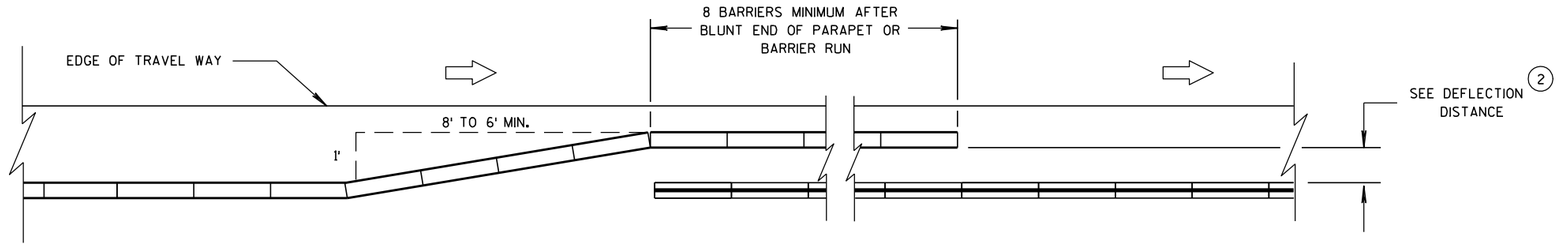
SEE FREE STANDING TRANSITION
TO TIED-DOWN SYSTEM DETAILS

SEE BI-DIRECTIONAL TRANSITION
TO TIED-DOWN SYSTEM DETAILS

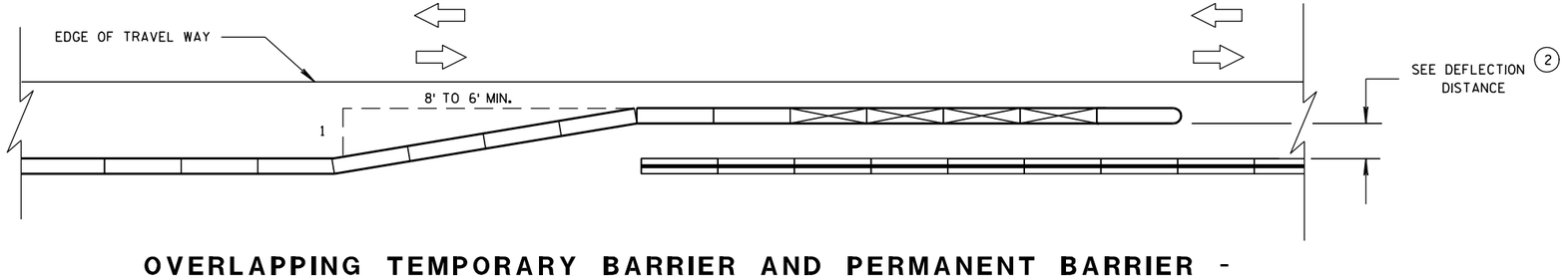
3 PINS PLACED ON
TRAFFIC SIDE OF BARRIER

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 TRANSPO...





6
S.D.D. 14 B 8-1d

## 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

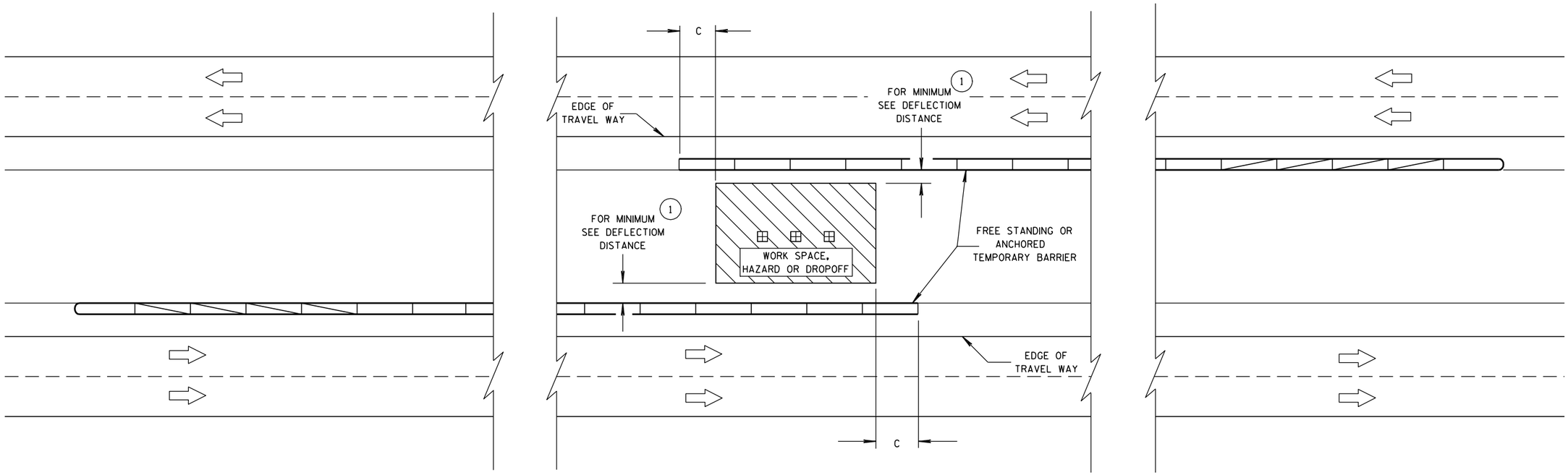
3 PINS PLACED ON TRAFFIC SIDE OF BARRIER

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

8/31/2012
DATE

/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINNER

FHWA



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S.D.D. 14 B 8-1e

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S.D.D. 14 B 8-1e

## GENERAL NOTES

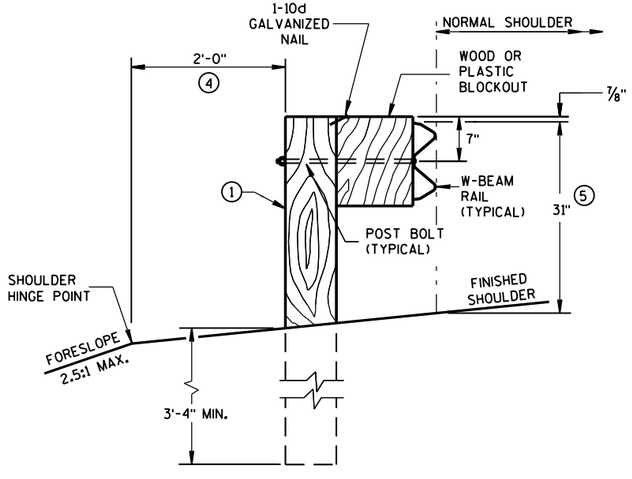
1. WOOD OR STEEL POSTS (w6X9 OR w6X8.5) MAY BE USED. DO NOT INTERMIX WOOD AND STEEL POSTS. INSTALL STEEL POSTS WITH HOLES ON APPROACHING TRAFFIC SIDE.

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 2½INCHES 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.

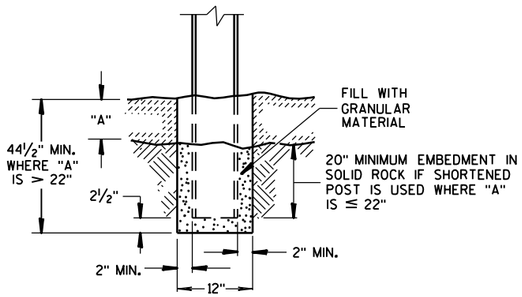
4. WHEN THE DISTANCE FROM BACK OF POST TO SHOULDER HINGE POINT IS LESS THAN 2 FEET INSTALL LONGER POST AT HALF POST SPACING (K).

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".



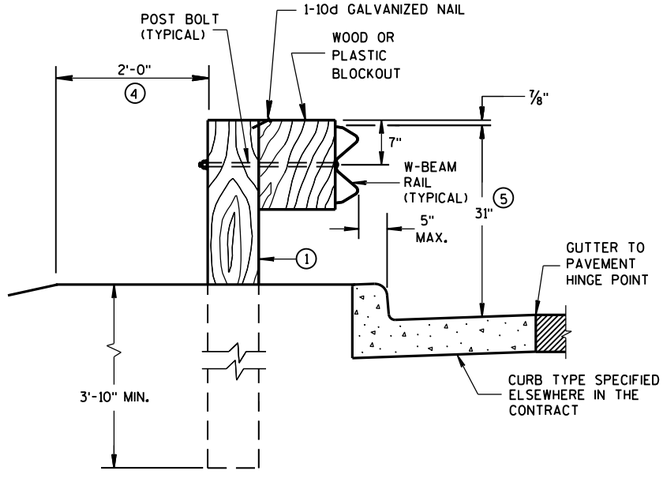

END VIEW

LOCATED ALONG A ROADWAY SHOULDER
STANDARD INSTALLATION



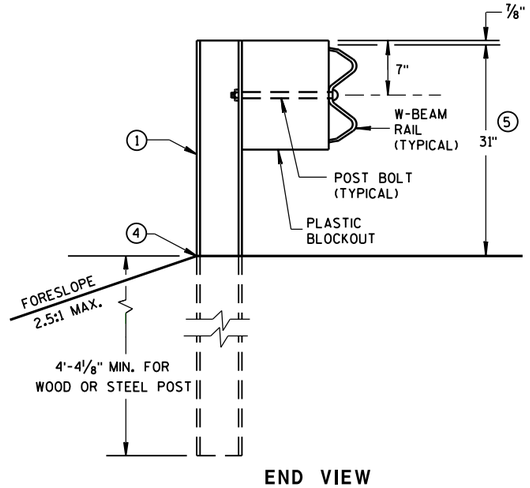

END VIEW

SETTING STEEL OR WOOD POST IN ROCK ③



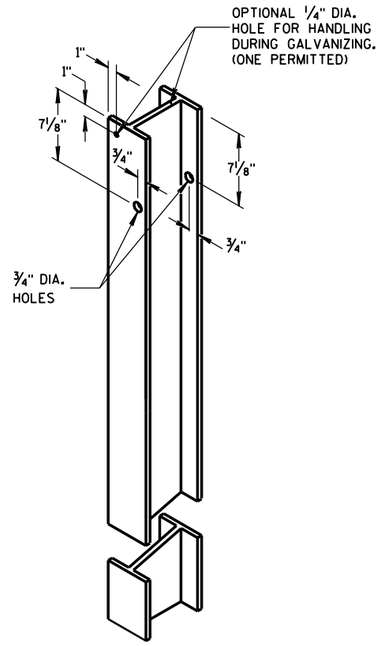

END VIEW

LOCATED ALONG A CURBED ROADWAY

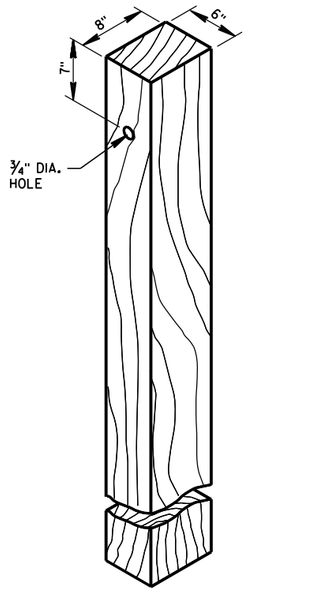



END VIEW

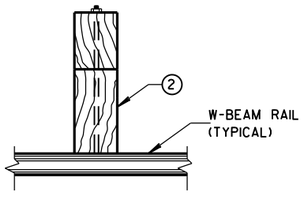
MGS LONGER POST AT HALFPOST SPACING W BEAM (K)



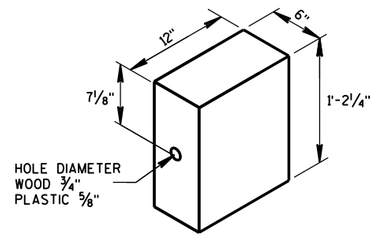

STEEL POST &
HOLE PUNCHING DETAIL
(w6X9) ①



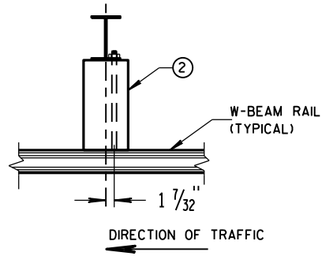

WOOD POST
(6" X 8") NOMINAL ①




PLAN VIEW
WOOD POST,
BLOCKOUT & BEAM




WOOD OR
PLASTIC BLOCKOUT ②




PLAN VIEW
STEEL POST,
PLASTIC BLOCKOUT & BEAM

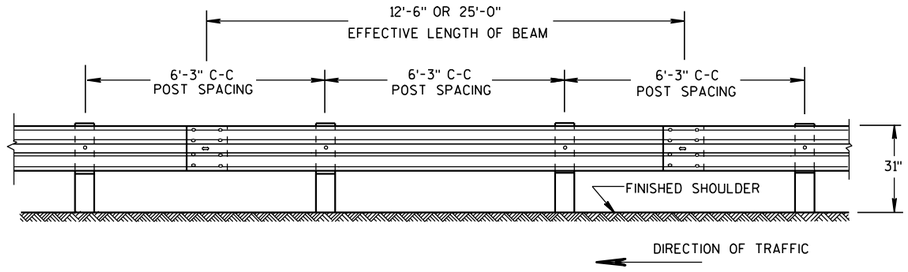
MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI



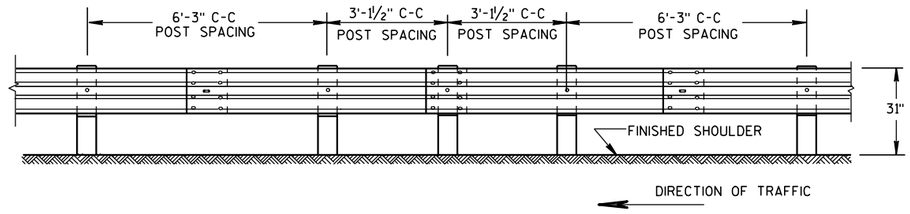


6
S.D.D. 14 B 42-2a



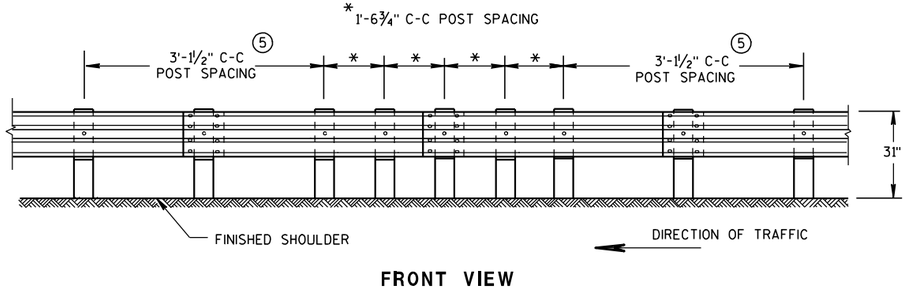

FRONT VIEW

## POST SPACING STANDARD INSTALLATION



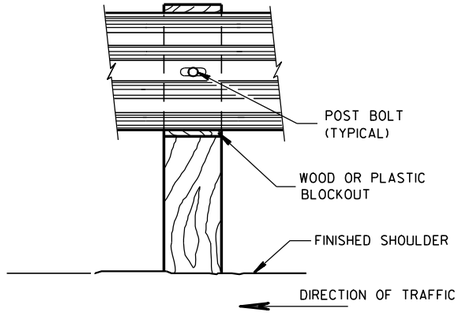

FRONT VIEW

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

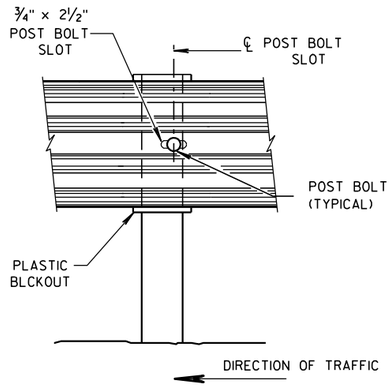



FRONT VIEW

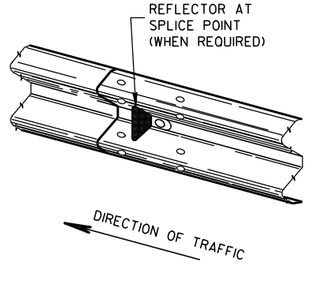
## QUARTER POST SPACING (QS)

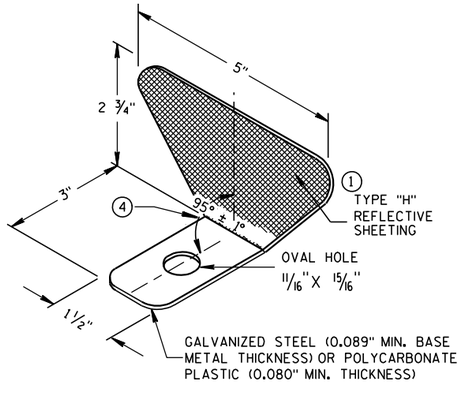



FRONT VIEW AT WOOD POST




FRONT VIEW AT STEEL POST




## ONE SIDED REFLECTOR DETAIL AND TYPICAL INSTALLATION ①

## GENERAL NOTES

① PROVIDE TYPE "H" SILVER REFLECTIVE SHEETING ON ALL REFLECTORS EXCEPT THOSE LOCATED ALONG THE LEFT EDGE OF ONE-WAY ROADWAYS, WHICH SHALL BE PROVIDED WITH TYPE "H" YELLOW REFLECTIVE SHEETING.

② 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.

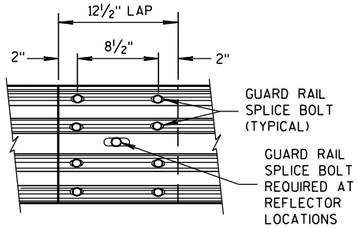
③ REVERSE EVERY OTHER REFLECTOR FOR 2-WAY VISIBILITY. THE CONTRACTOR MAY FURNISH TWO-SIDED REFLECTORS IN LIEU OF ONE-SIDED REFLECTORS.

④ PROVIDE AN ANGLE OF BEND OF 90° ± 1° FOR TWO-SIDED REFLECTORS.

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

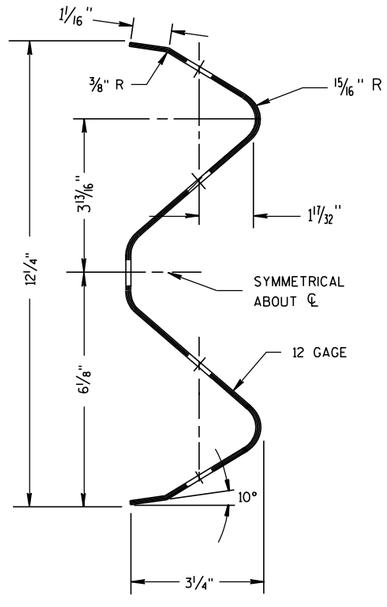
POST BOLTS ARE A ⅝" DIAMETER ASTM A307 GUARDRAIL BOLT. A POST BOLT REQUIRES ⅝" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT AND ⅝" DIAMETER F844 FLAT WASHER. POST BOLTS MAY BE LONGER IF MULTIPLE BLOCKOUTS ARE BEING USED.

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




FRONT VIEW

MID-SPAN BEAM SPLICE




SECTION THRU W-BEAM RAIL

### REFLECTOR SPACING ②

| | BEAM GUARD LENGTH | REFLECTOR SPACING | NO. SURFACES REFLECTORIZED | MIN. NO. REFLECTORS |
|---|---|---|---|---|
| ONE WAY TRAFFIC | < 200'<br>> 200' | 50' C-C<br>100' C-C | 1<br>1 | 3 |
| TWO WAY TRAFFIC | < 200'<br>> 200' | 25' C-C<br>50' C-C | 1 ③<br>1 | 6 |
| TWO WAY TRAFFIC | < 200'<br>> 200' | 50' C-C<br>100' C-C | 2 ④<br>2 | 3 |

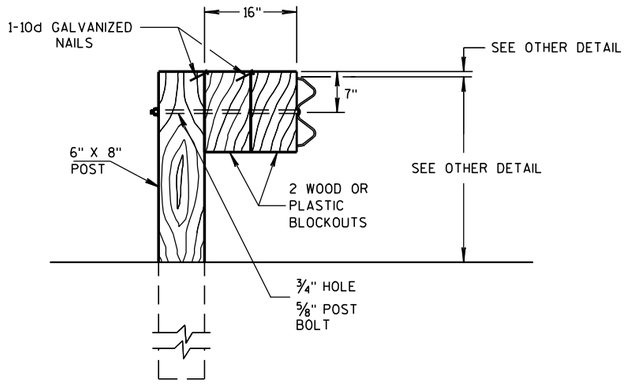
MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



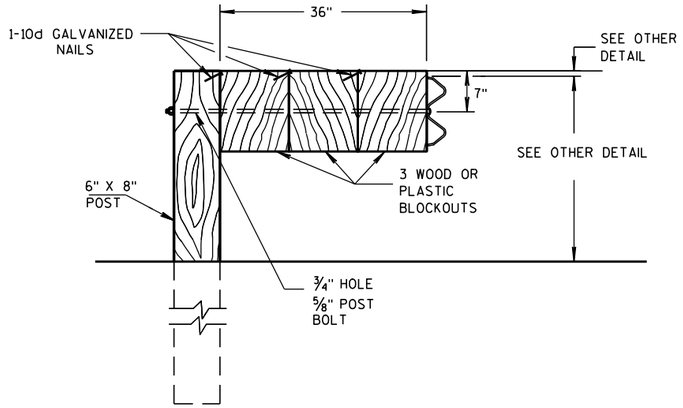
S.D.D. 14 B 42-2b

S.D.D. 14 B 42-2b




## 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.

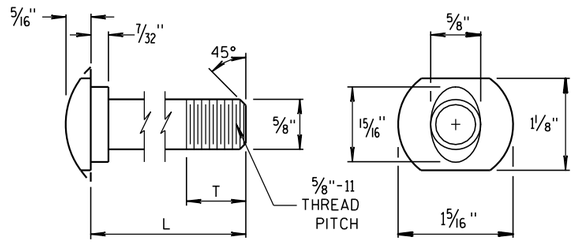



## DETAIL FOR 36" BLOCKOUT DEPTH

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.

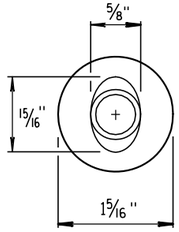
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.

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.

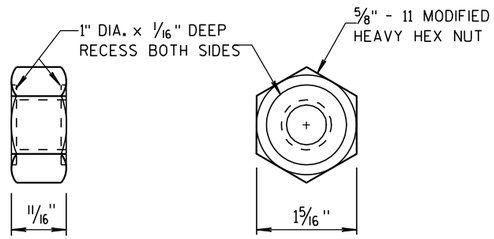



### POST BOLT TABLE

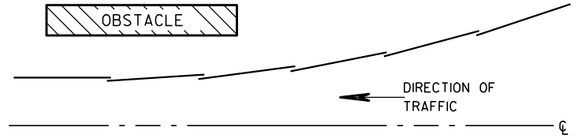
| L | T (MIN.) |
|---|---|
| 1 1/4" | 1 1/8" |
| 2" | 1 3/4" |
| 10" | 4" |
| 14" | 4 1/16" |
| 18" | 4" |
| 21" | 4 1/16" |
| 25" | 4" |




ALTERNATE BOLT HEAD

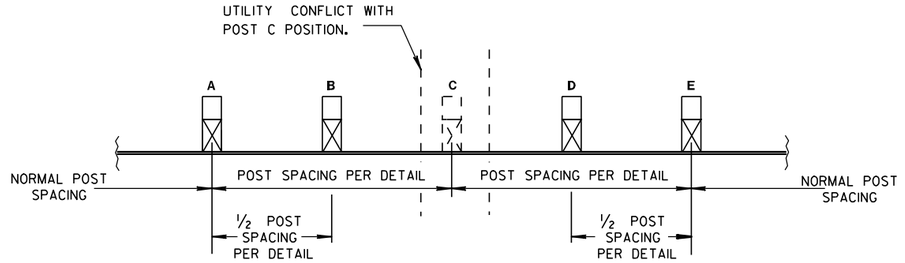



## POST BOLT AND RECESS NUT

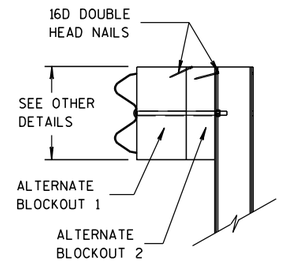



PLAN VIEW

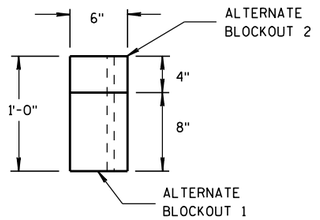
## BEAM LAPPING DETAIL




## 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

11/15/2011
DATE

/S/ Jerry H. [illegible]
ROADWAY STANDARDS ENGINEER

FHWA



ENT

6

S.D.D. 14 B 42-2c

6

S.D.D. 14 B 42-2c

## GENERAL NOTES

(A) THE SLOPE IN THE AREA BOUNDED BY THE EXTENDED VEHICLE RUNOUT PATH (EVRP), 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) SHEETING IS ATTACHED TO 0.040 ALUMINUM SHEET AND ATTACHED TO E.A.T. HEAD USING 4 STAINLESS STEEL SELF-TAPPING SCREWS. ONE SCREW PER CORNER OF E.A.T.

(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.

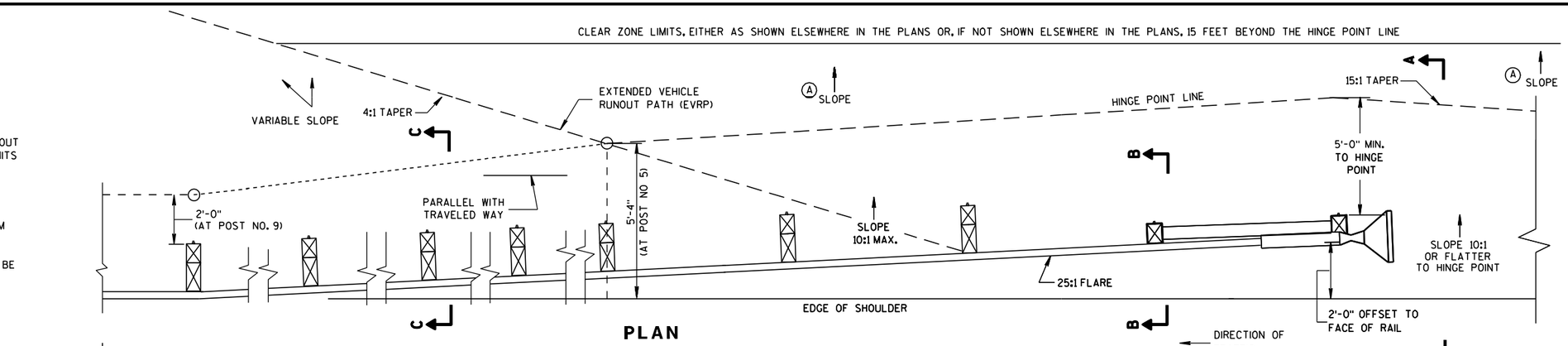
* DO NOT ATTACH BLOCKOUTS TO POSTS 1 AND 2.

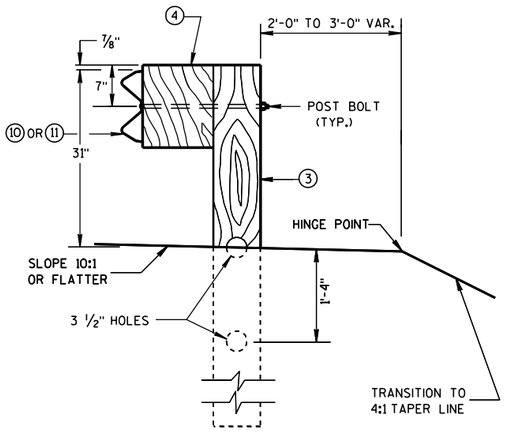
DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

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.

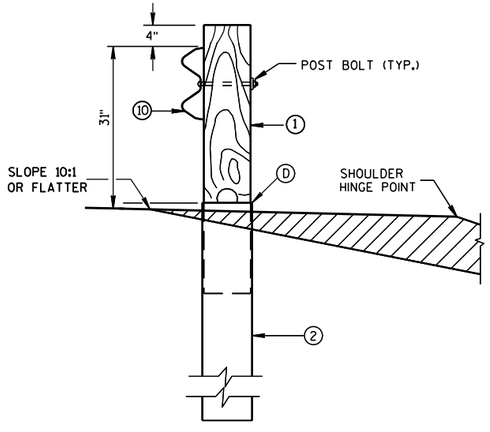
PATTERN AND COLORS ON REFLECTIVE SHEETING TYPE H ARE TO CONFORM TO OM3-L OR OM3-R OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

THE CENTER OF THE UPPER 3½" DIAMETER HOLE ON POST NUMBER 3 THROUGH POST 9 IS TO BE FLUSH WITH THE GROUND LINE ( ± ¾")

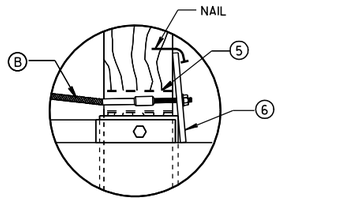


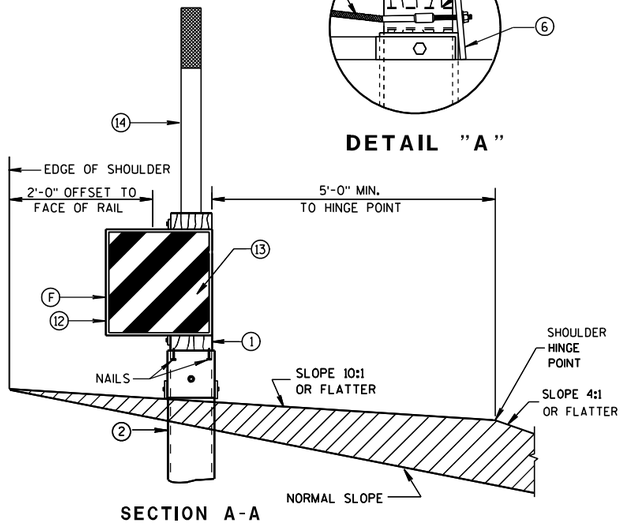




SECTION C-C
TYPICAL AT POST NOS. 3-9

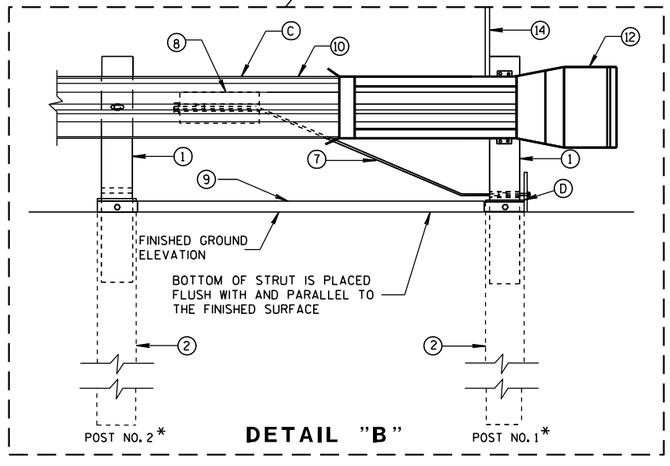



SECTION B-B
TYPICAL AT POST NO. 2*




SECTION A-A
TYPICAL AT POST NO. 1*



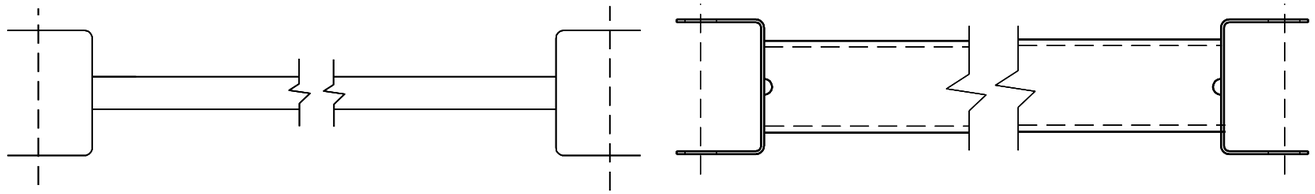

DETAIL "B"

**MIDWEST GUARDRAIL SYSTEM**
**ENERGY ABSORBING TERMINAL (MGS)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION




6
S.D.D. 14 B 44-1a

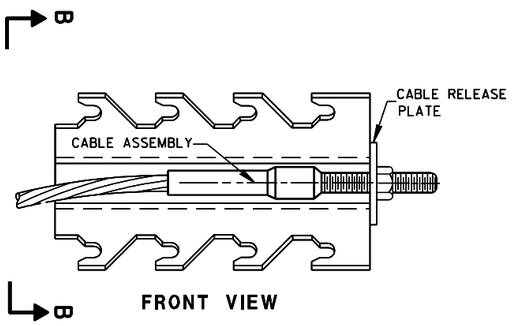


(9) (H)

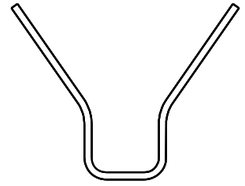
## GENERIC GROUND STRUT

## BILL OF MATERIALS

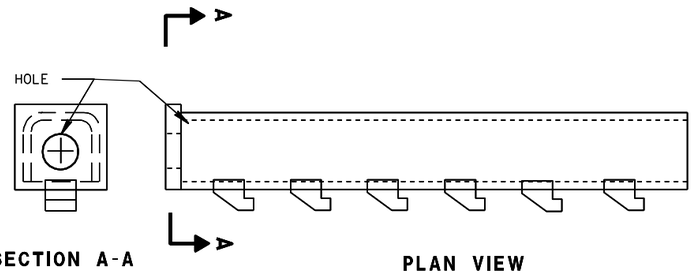
| PART NO. | DESCRIPTION<br>MATERIALS PROVIDED BY MGS EAT MANUFACTURER.<br>SEE MANUFACTURER'S DETAILS FOR MORE INFORMATION. |
|---|---|
| (1) | WOOD BREAKAWAY POST |
| (2) | 6" X 8" X 0.188", 6'-0" LONG FOUNDATION TUBE<br>AT POSTS 1 AND 2 |
| (3) | WOOD CRT |
| (4) | WOOD BLOCKOUT |
| (5) | PIPE SLEEVE |
| (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.<br>SECTIONS VARY IN LENGTH. |
| (12) | END SECTION EAT |
| (13) | 0.040" ALUMINUM SHEET WITH REFLECTIVE SHEETING TYPE H<br>(ONLY THE SHEETING IS SUPPLIED BY THE MANUFACTURER) |
| (14) | EAT MARKER POST - YELLOW<br>(SEE APPROVED PRODUCTS LIST) |




FRONT VIEW



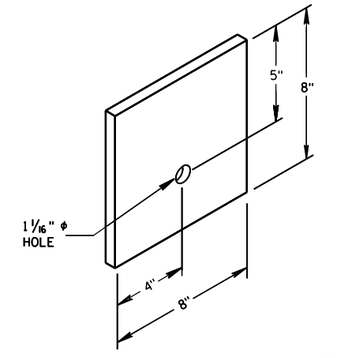
SECTION B-B




SECTION A-A

PLAN VIEW

## GENERIC ANCHOR CABLE BOX (8) (H)




## BEARING PLATE (6)

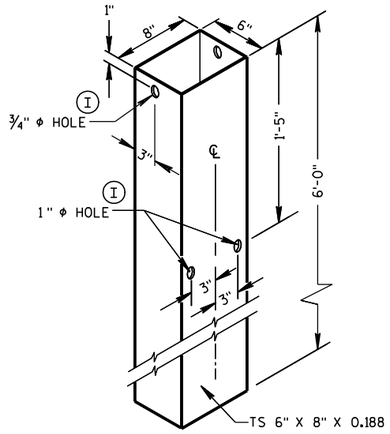
MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

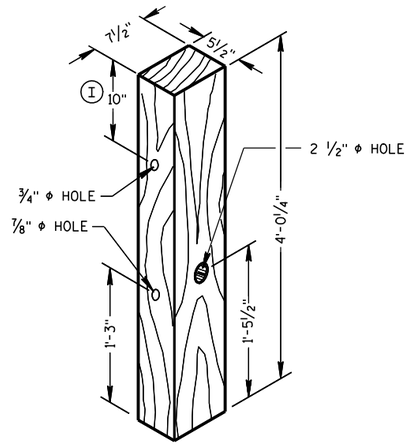



6


S.D.D. 14 B 44-1b

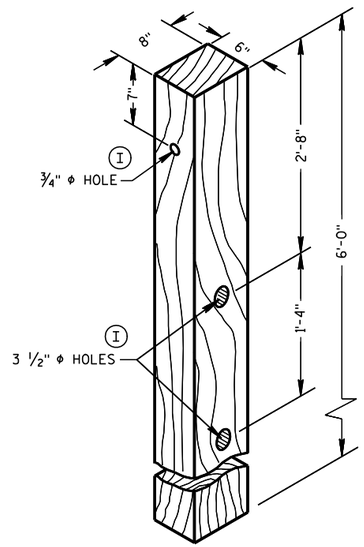



## FOUNDATION TUBE (2)



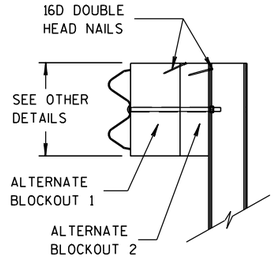

POSTS NUMBER 1 AND 2

## WOOD BREAKAWAY POST (1)

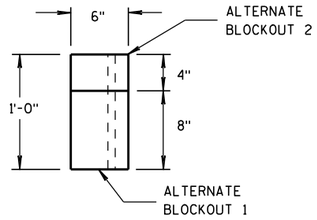



POSTS NUMBER 3-9

## WOOD CRT POST (3)

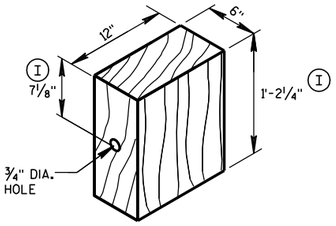



SIDE VIEW



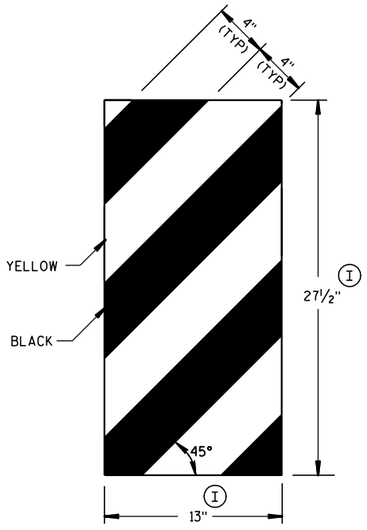

TOP VIEW

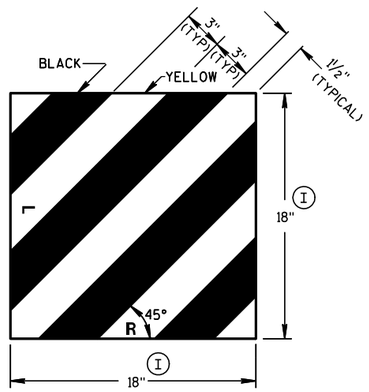
## ALTERNATE WOOD BLOCKOUT DETAIL



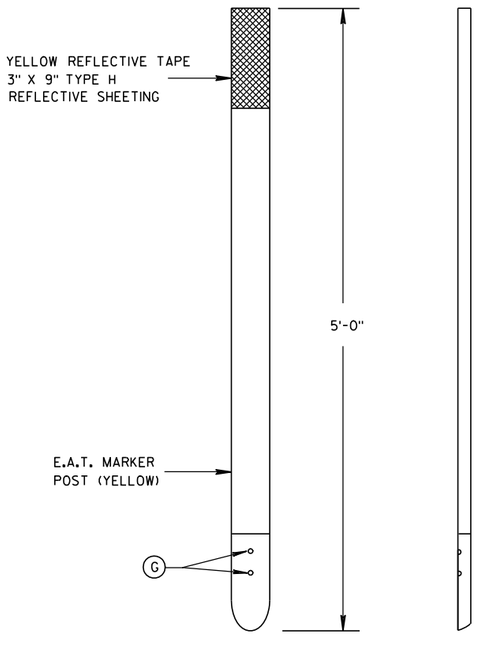

## WOOD BLOCKOUT (4)

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



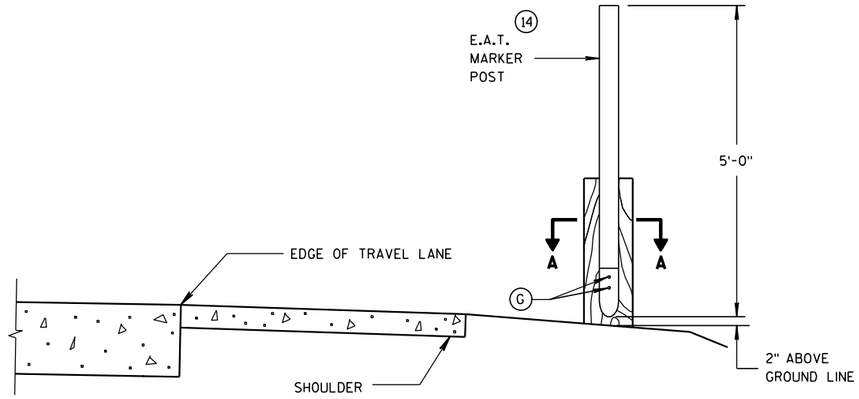

## GENERIC REFLECTIVE SHEETING (13) (H)




FRONT VIEW

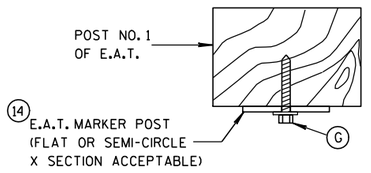
SIDE VIEW

## 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

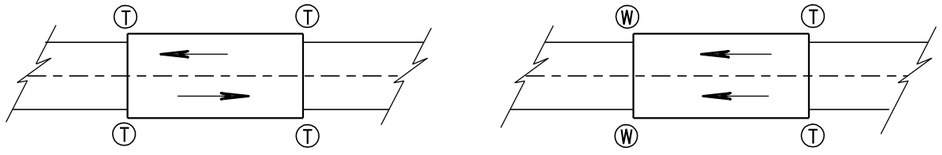
**MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
5/23/2011
DATE
/S/ Jerry H. [illegible]
ROADWAY STANDARDS 155 tENT
ENGINEER
FHWA


6

S.D.D. 14 B 44-1c




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

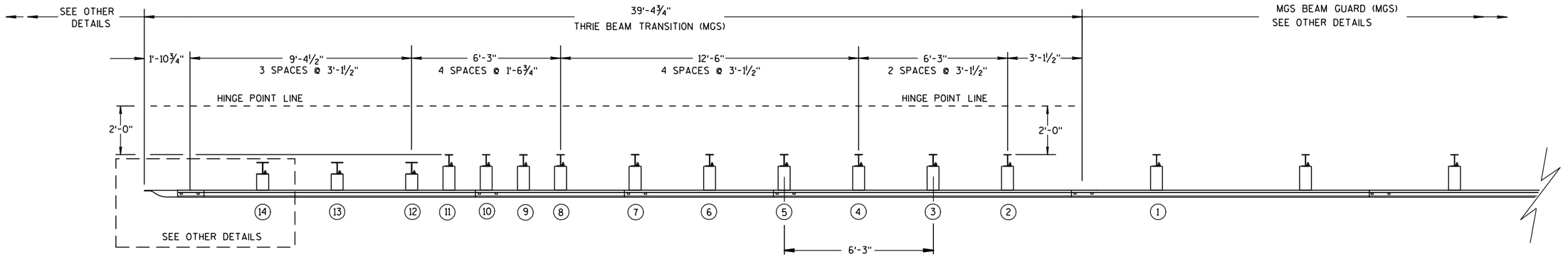
BOLT THE THRIE BEAM TO ALL POSTS AND BLOCKOUTS. DRILL OR PUNCH BOLT HOLES IN THE BEAM IF THE POST SPACING IS LESS THAN 6'-3.

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

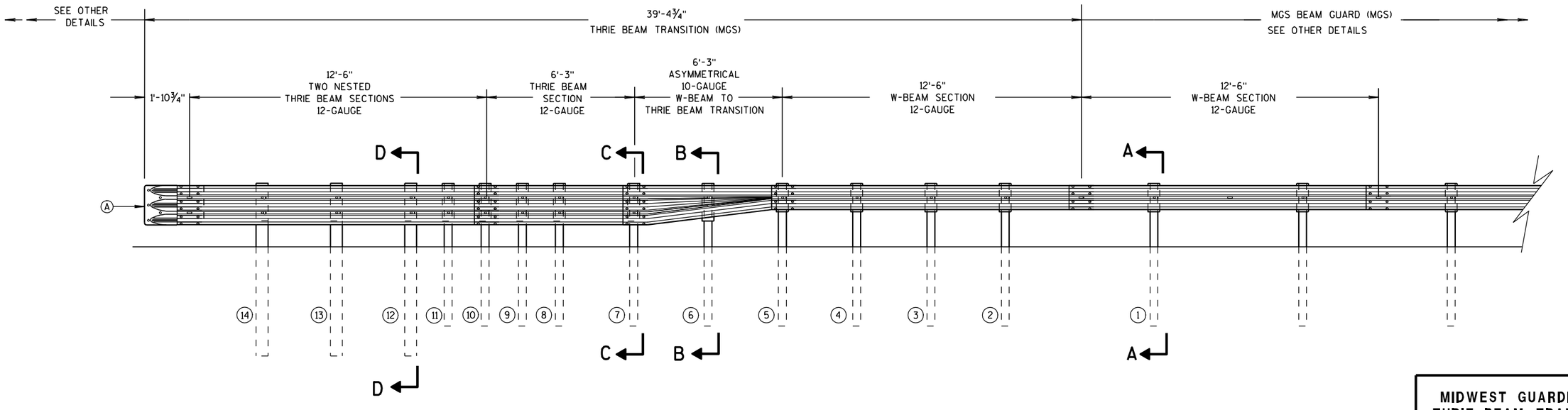
TRANSITION USES STEEL POSTS ONLY.

SEE STANDARD DETAIL DRAWING 14 B 42 FOR MORE INFORMATION.

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




PLAN VIEW




ELEVATION VIEW

## MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

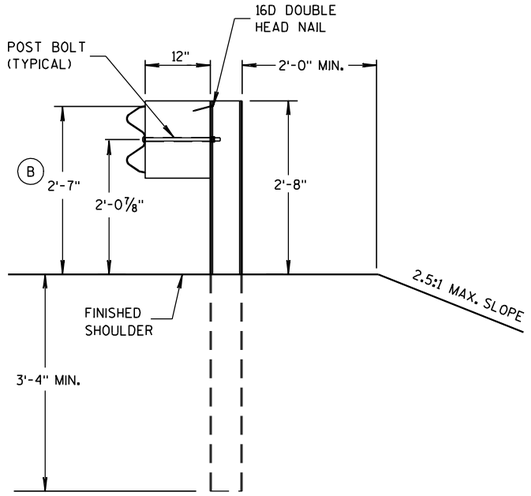




6
S.D.D. 14 B 45-3a

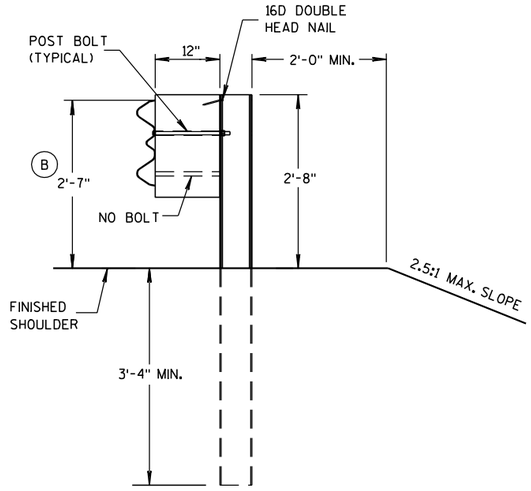
## GENERAL NOTES

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



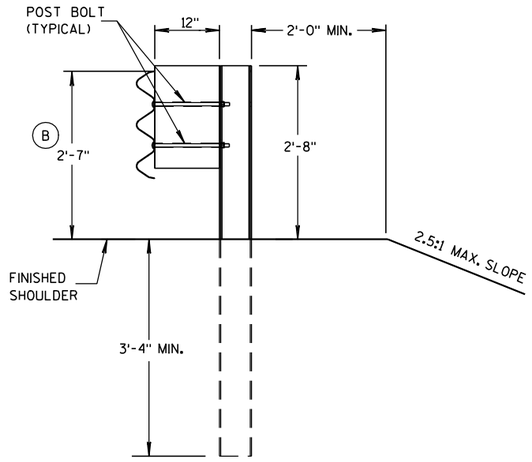

SECTION A-A

**POSTS 1-5**



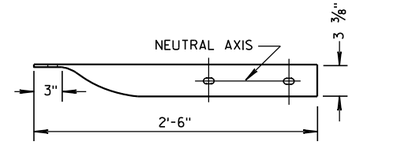

SECTION B-B

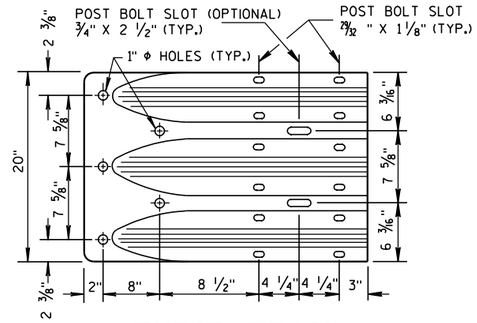
**POST 6**



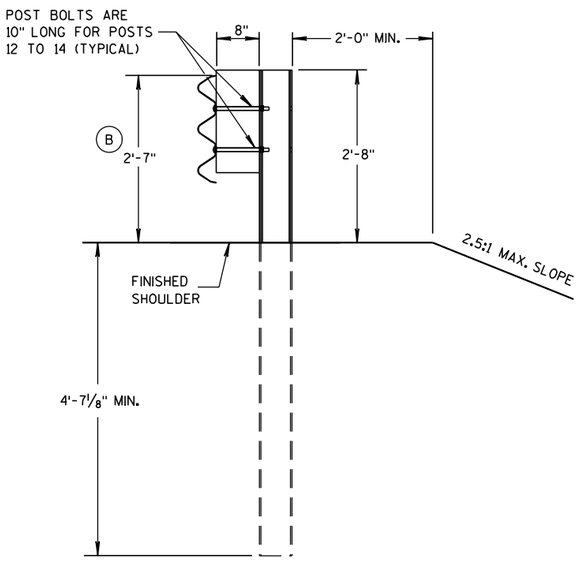

SECTION C-C

**POSTS 7-11**




**THRIE BEAM TERMINAL CONNECTOR**




SECTION D-D

**POSTS 12-14**

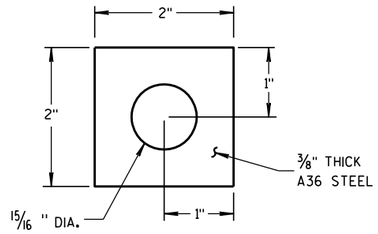
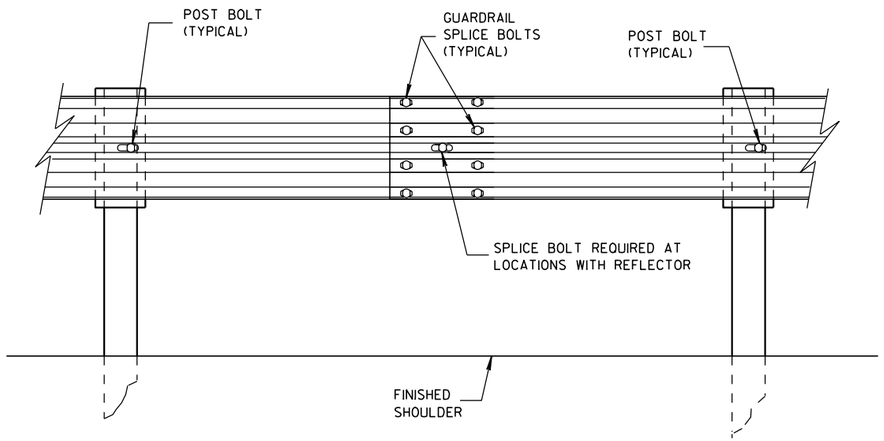
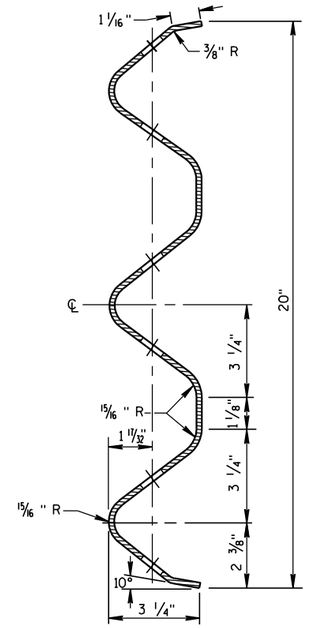



PLATE WASHER DETAIL




**SPLICE DETAIL**




**SECTION THRU THRIE BEAM RAIL ELEMENT**

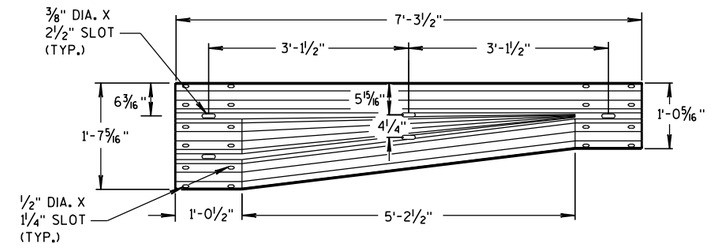
**MIDWEST GUARDRAIL SYSTEM**
**THRIE BEAM TRANSITION (MGS)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

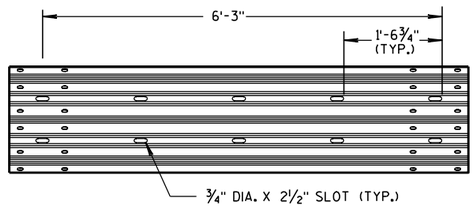



6

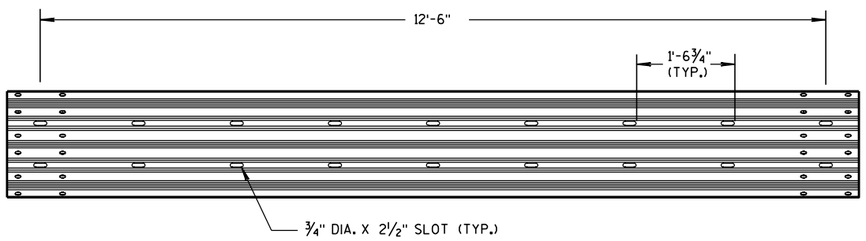
S.D.D. 14 B 45-3b



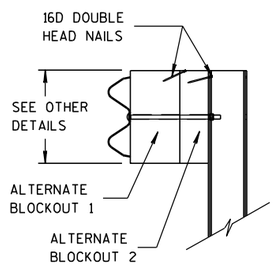

## W-BEAM TO THRIE BEAM TRANSITION SECTION



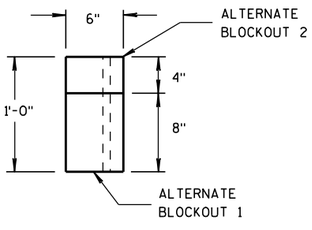

## 6'-3" THRIE BEAM SECTION




## 12'-6" THRIE BEAM SECTION

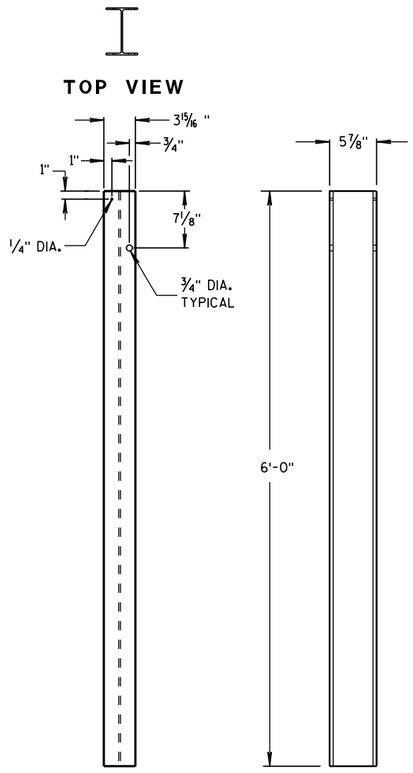



SIDE VIEW



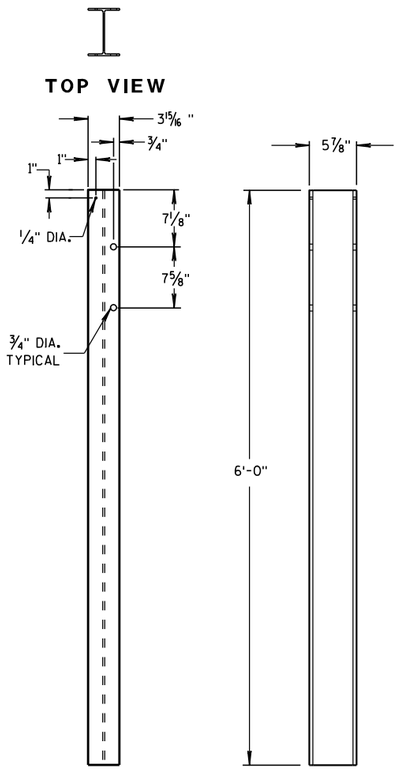

TOP VIEW

## ALTERNATE WOOD BLOCKOUT DETAIL



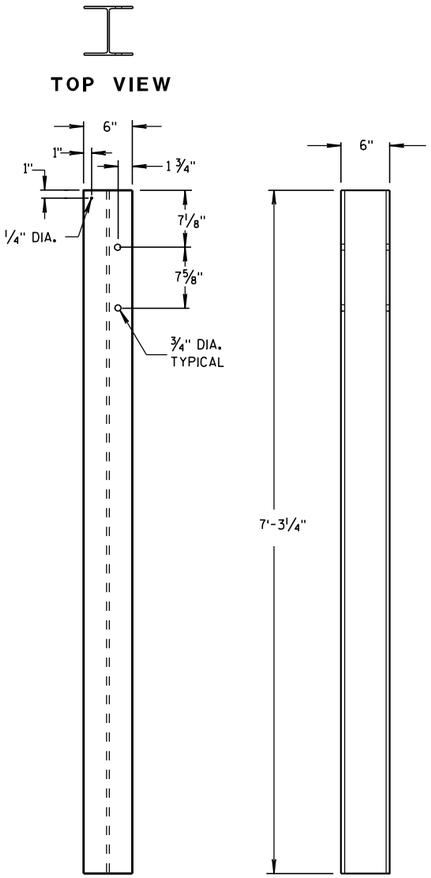

FRONT VIEW SIDE VIEW

## STEEL POSTS 1-5




FRONT VIEW SIDE VIEW

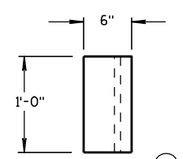
## STEEL POSTS 6-11



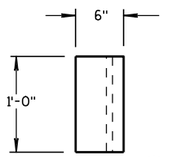

FRONT VIEW SIDE VIEW

## STEEL POSTS 12-14

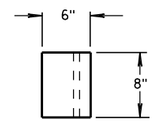
(1) WOOD BLOCKS MAY BE CONSTRUCTED OUT OF 2 WOOD BLOCKS. SEE ALTERNATE WOOD BLOCK DETAIL.



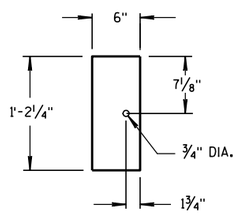

TOP VIEW (1)




TOP VIEW (1)

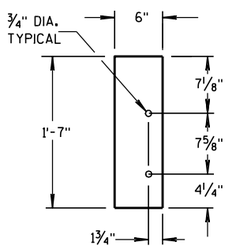



TOP VIEW



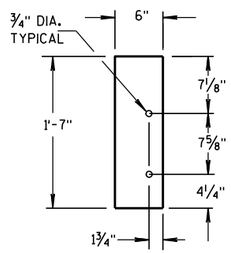

FRONT VIEW

## BLOCKOUT POSTS 1-5




FRONT VIEW

## BLOCKOUT POSTS 6-11




FRONT VIEW

## BLOCKOUT POSTS 12-14

### STEEL POST SIZES

| POST NUMBER | SECTION TYPE | LENGTH |
|---|---|---|
| 1 | W6x9 | 72" |
| 2 | W6x9 | 72" |
| 3 | W6x9 | 72" |
| 4 | W6x9 | 72" |
| 5 | W6x9 | 72" |
| 6 | W6x9 | 72" |
| 7 | W6x9 | 72" |
| 8 | W6x9 | 72" |
| 9 | W6x9 | 72" |
| 10 | W6x9 | 72" |
| 11 | W6x9 | 72" |
| 12 | W6x15 | 87 1/8" |
| 13 | W6x15 | 87 1/8" |
| 14 | W6x15 | 87 1/8" |

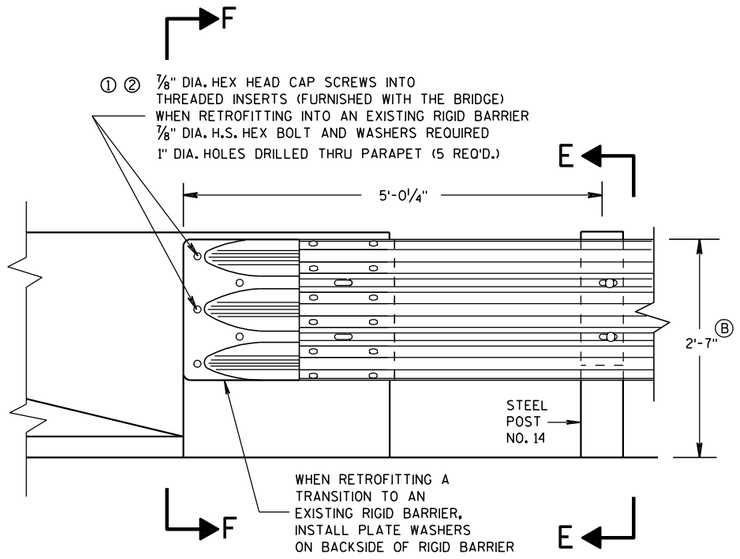
**MIDWEST GUARDRAIL SYSTEM**
**THRIE BEAM TRANSITION (MGS)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

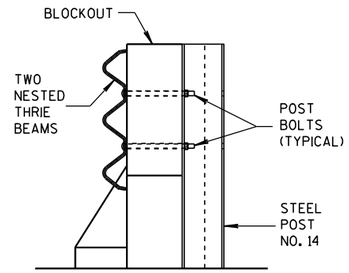




6
S.D.D. 14 B 45-3c




FRONT VIEW




SECTION E-E

## GENERAL NOTES

THESE ARE TYPICAL CONNECTION DETAILS. ADJUST THE POSTION OF CONNECTIONS TO EXISTING BRIDGES TO FIT THE ACTUAL BRIDGE AND SITE DIMENSIONS.

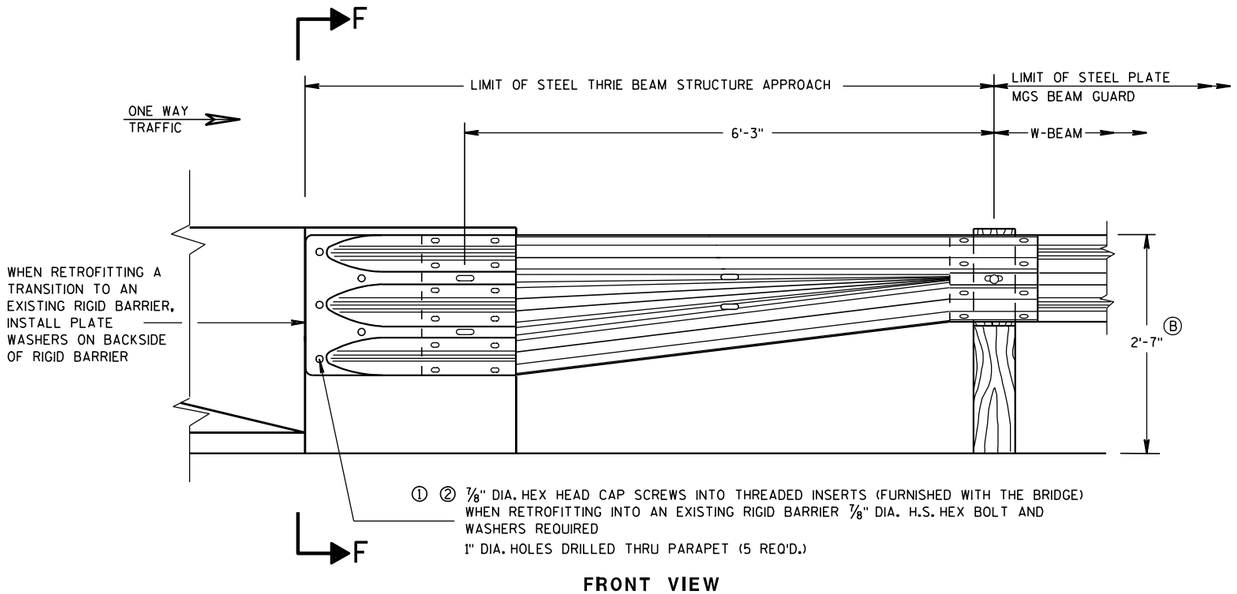
① DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

② 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.

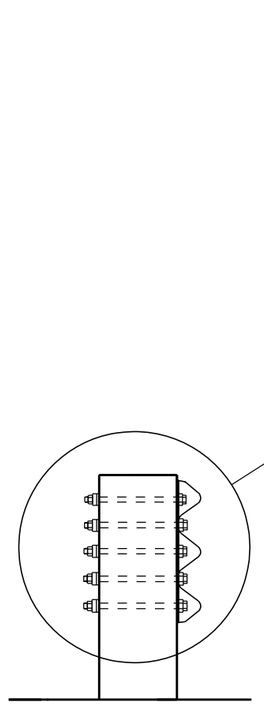
③ THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3 1/2".

Ⓑ TOLERANCE FOR TOP OF BEAM IS ± 1".

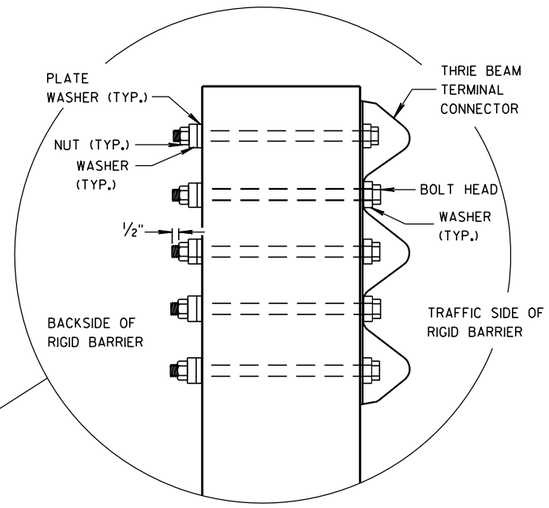
# THRIE BEAM CONNECTION TO BRIDGE PARAPET WITH SQUARE ENDS




FRONT VIEW



SECTION F-F




# 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

8/31/2012
DATE

/S/ Jerry H. [illegible]
ROADWAY STANDARDS DEVELOPMENT ENGINEER

FHWA

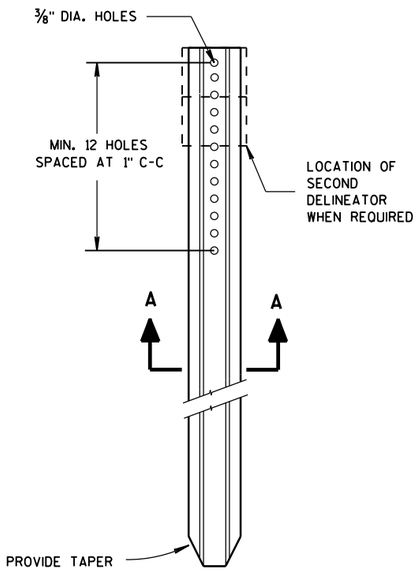


6

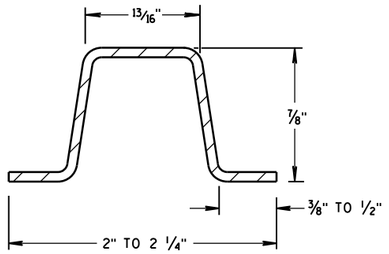
S.D.D. 14 B 45-3d

6

S.D.D. 14 B 45-3d

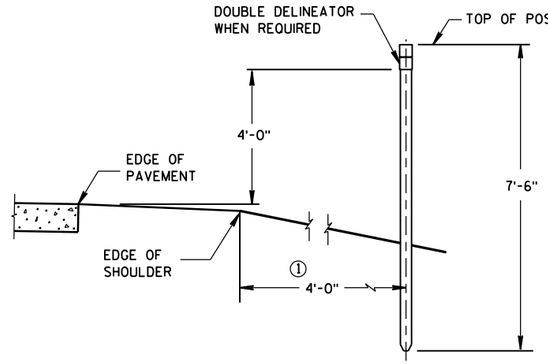


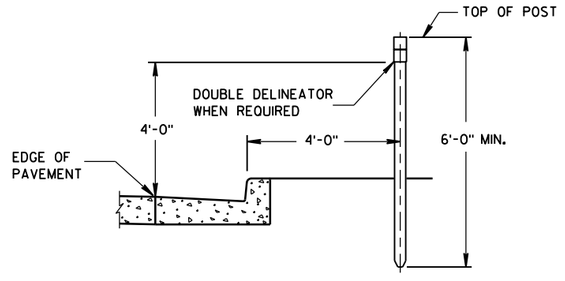

## DELINEATOR POST




## SECTION A-A

WEIGHT 1.12 LBS PER FT. ± 0.1 LB.



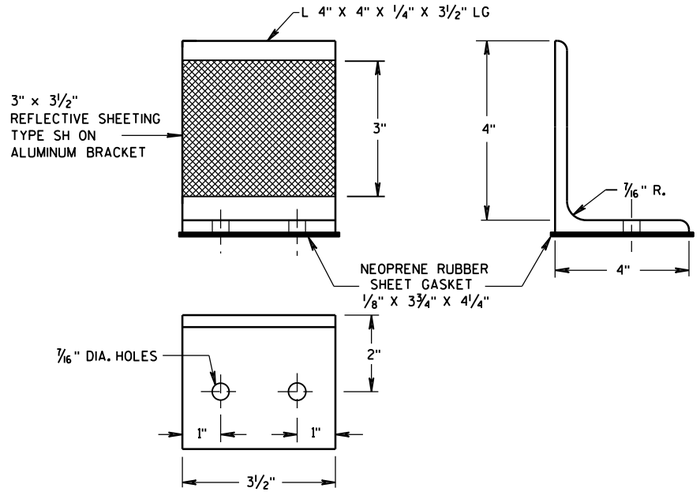




## TYPICAL INSTALLATIONS OF DELINEATOR POSTS

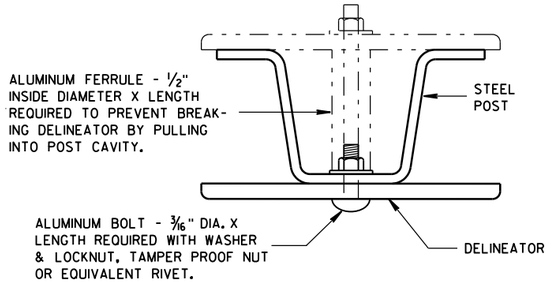
## GENERAL NOTES

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

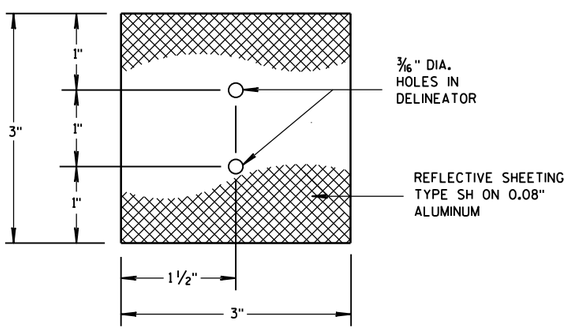
① DELINEATORS SHALL BE PLACED AT A CONSTANT DISTANCE FROM THE EDGE OF THE SHOULDER FOR THE LENGTH OF THE INSTALLATION.



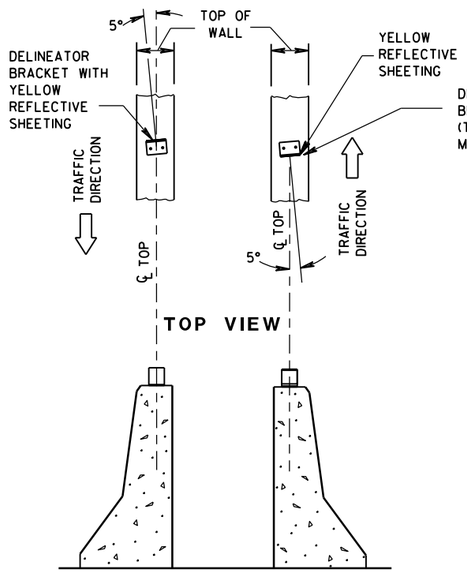

## DELINEATOR BRACKET



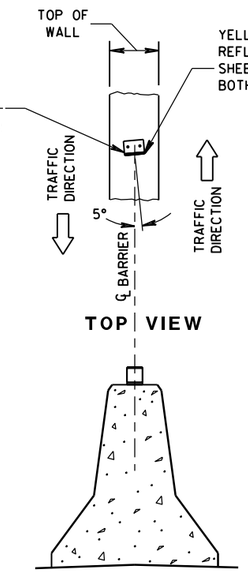

## MOUNTING DETAIL FOR DELINEATOR



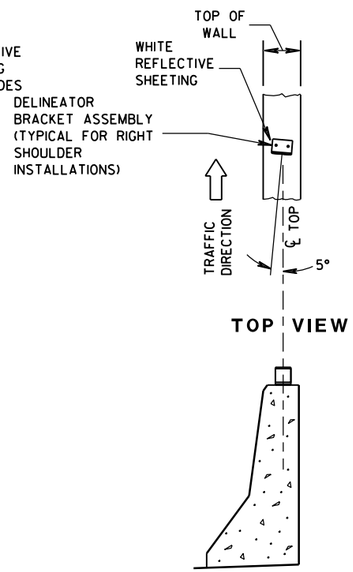

## 3"x 3" DELINEATOR




## DOUBLE BARRIERS IN MEDIAN

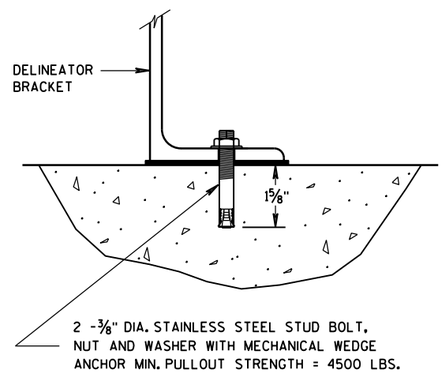



## MEDIAN BARRIER




## 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

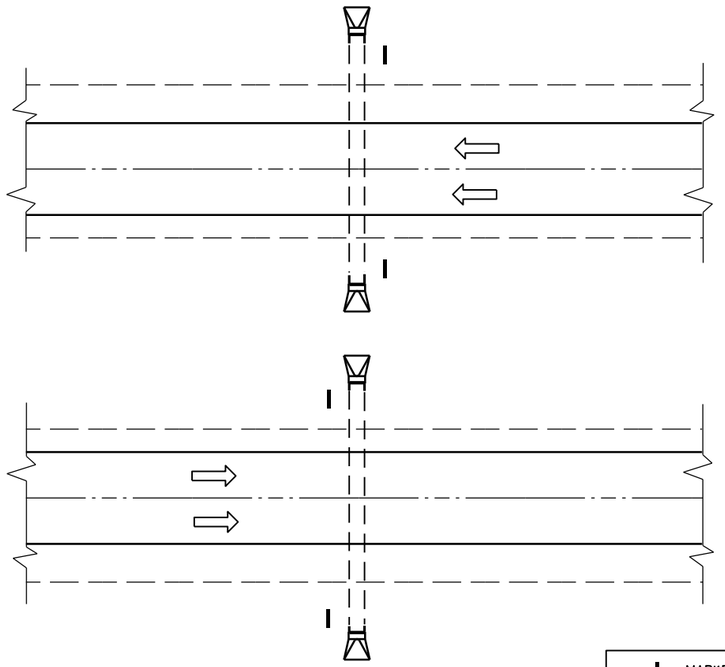


6

S.D.D. 15 A 2-8

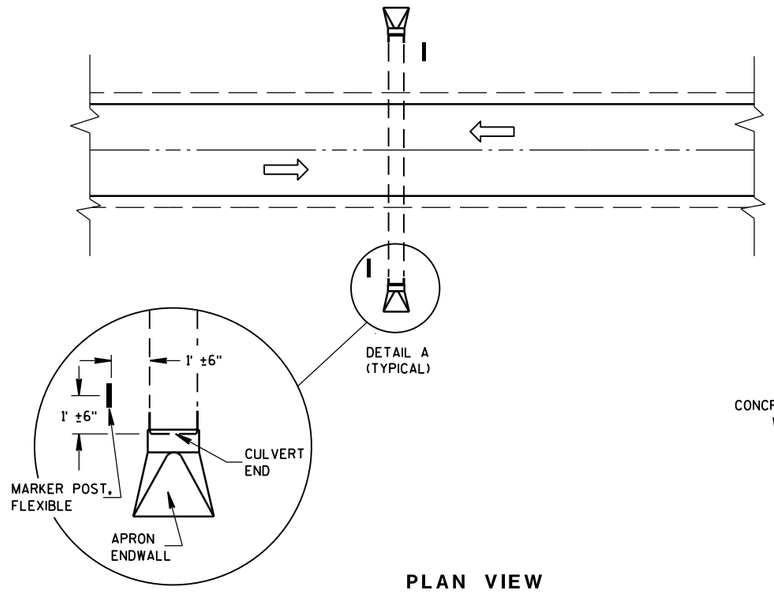
6

S.D.D. 15 A 2-8



PLAN VIEW

## DIVIDED HIGHWAY




DETAIL A
(TYPICAL)

PLAN VIEW

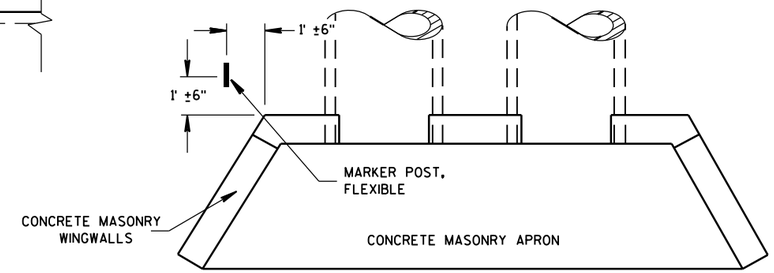
## UNDIVIDED HIGHWAY

MARKER POST, FLEXIBLE

DIRECTION OF TRAFFIC FLOW

## GENERAL NOTES

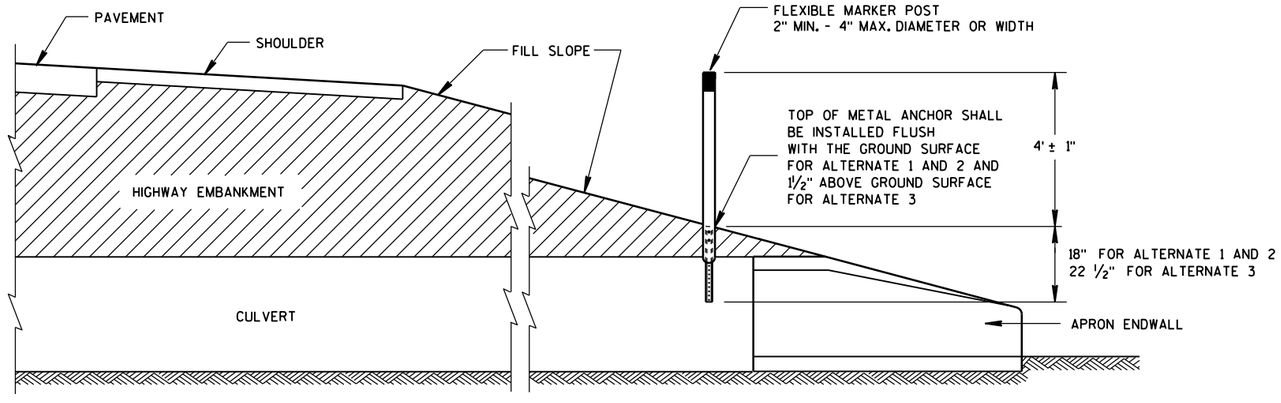
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.




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

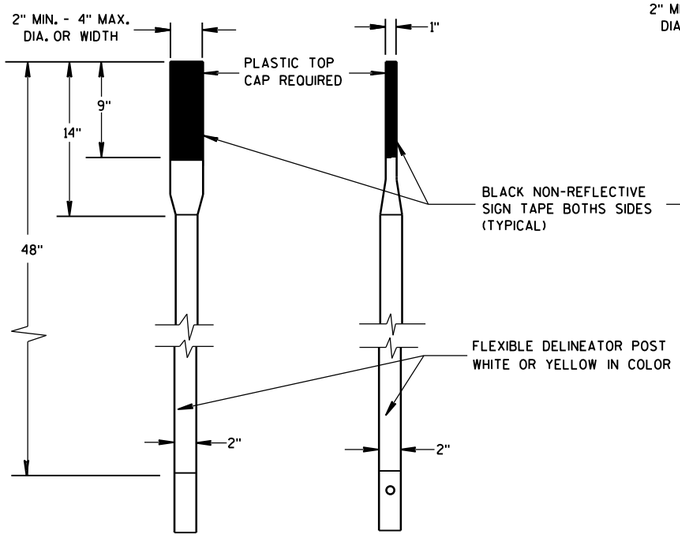


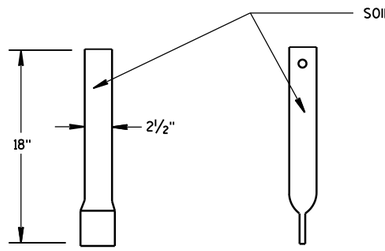
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S.D.D. 15 A 3-2a

6

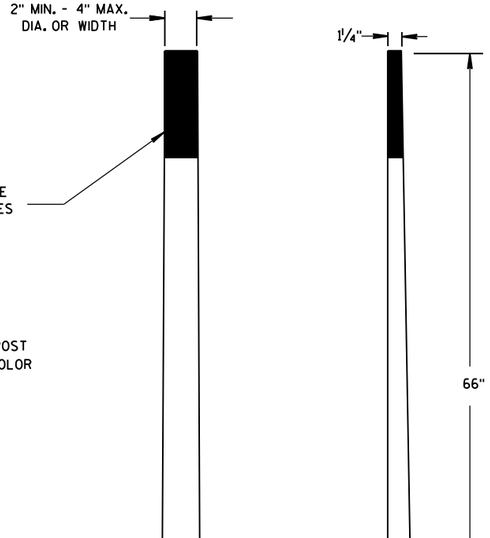
S.D.D. 15 A 3-2a



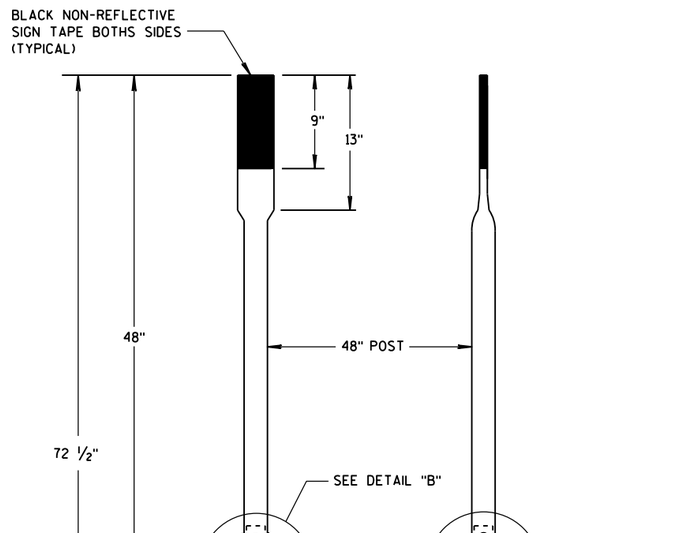

FRONT VIEW SIDE VIEW

ALTERNATE 1




FRONT VIEW SIDE VIEW

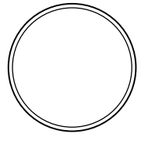
ALTERNATE 2



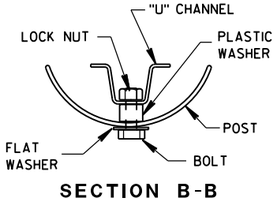

FRONT VIEW SIDE VIEW

ALTERNATE 3

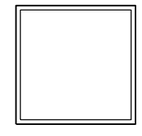
## FLEXIBLE MARKER POSTS



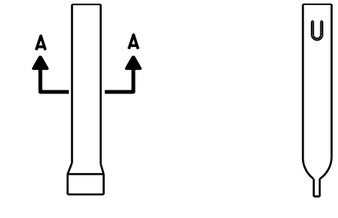
SECTION A-A




SECTION B-B

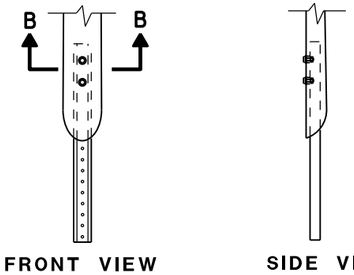


SECTION C-C



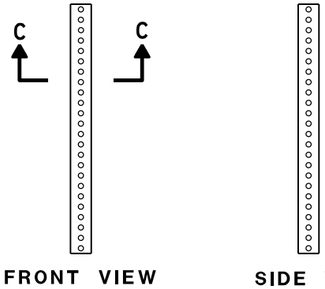

FRONT VIEW SIDE VIEW

ALTERNATE 1




FRONT VIEW SIDE VIEW

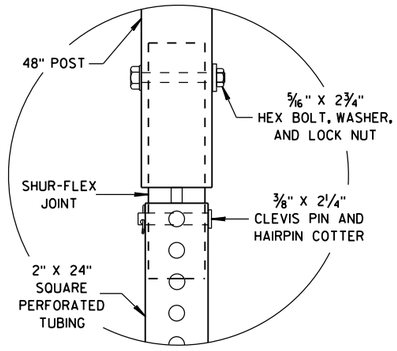
ALTERNATE 2



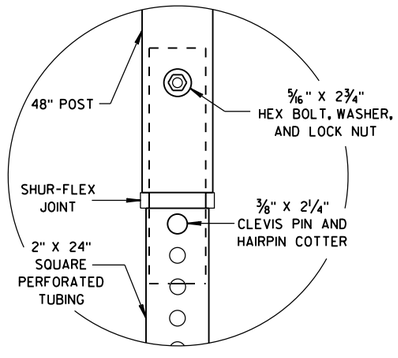

FRONT VIEW SIDE VIEW

ALTERNATE 3

## FLEXIBLE MARKER POST ANCHORS




DETAIL B




DETAIL C

FLEXIBLE MARKER POST
FOR CULVERT END

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
10/1/2012 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
FHWA



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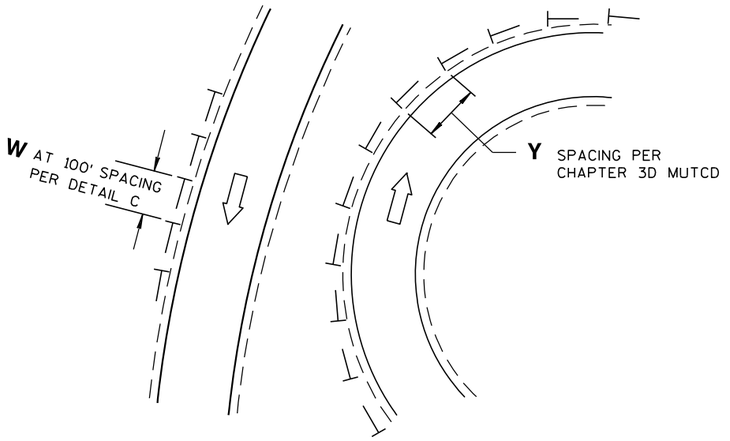
S.D.D. 15 A 3-2b

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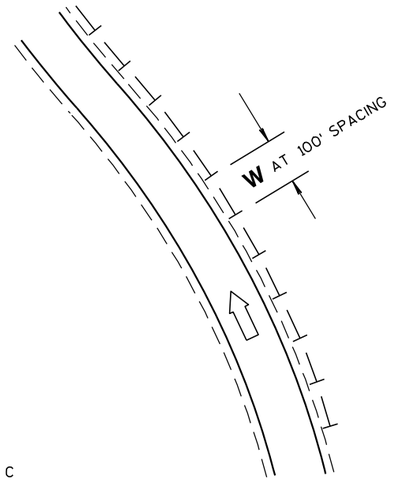
S.D.D. 15 A 3-2b

## GENERAL NOTES

* USE DOUBLE DELINEATOR ALONG ACCELERATION-DECELERATION LANES AND TAPERS. USE SINGLE DELINEATOR WHEN RAMP PAVEMENT IS FULL WIDTH.



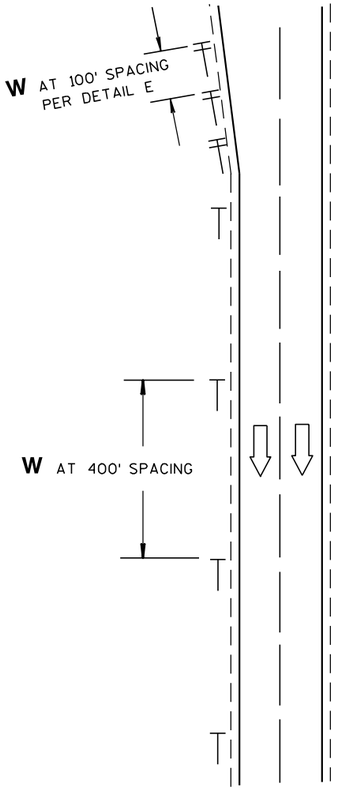

**DETAIL A**
**DELINEATOR LAYOUT AT CURVED RAMP**



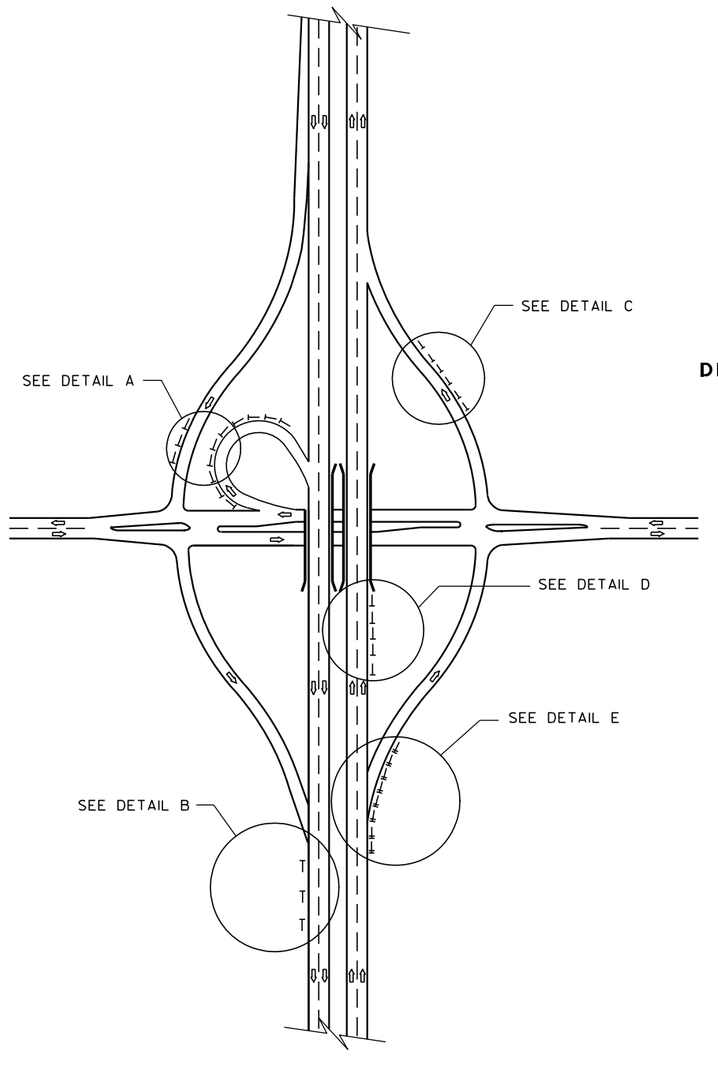

**DETAIL C**
**DELINEATOR LAYOUT ALONG RAMP**

**LEGEND**

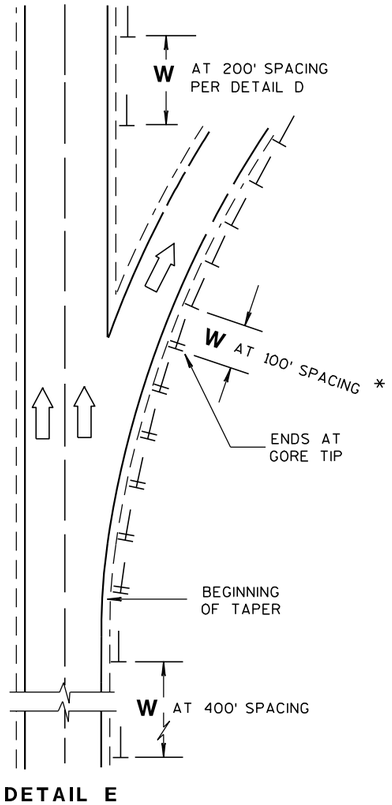
- DIRECTION OF TRAFFIC FLOW
- SINGLE DELINEATOR
- DOUBLE DELINEATOR
- W — WHITE
- Y — YELLOW



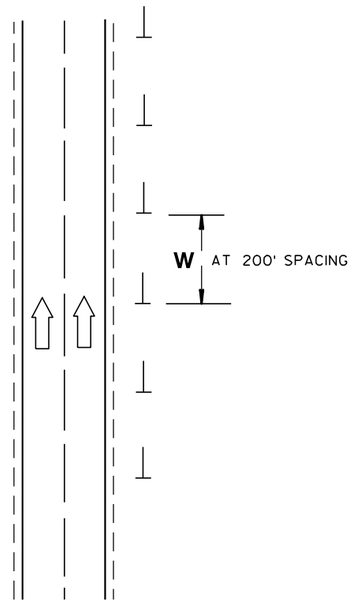

**DETAIL B**
**DELINEATOR LAYOUT ALONG MAINLINE**




**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

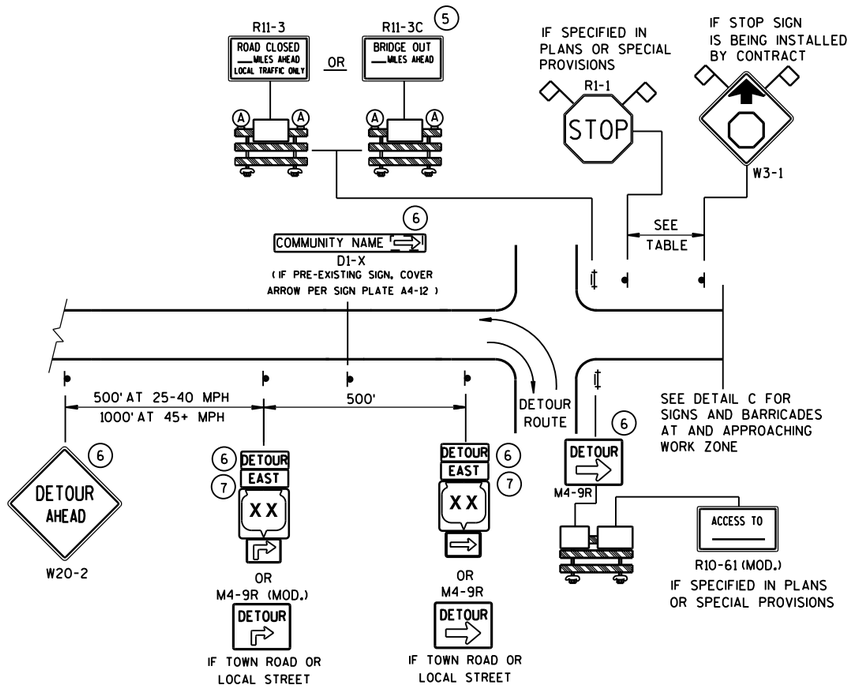


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S.D.D. 15 A 6-2

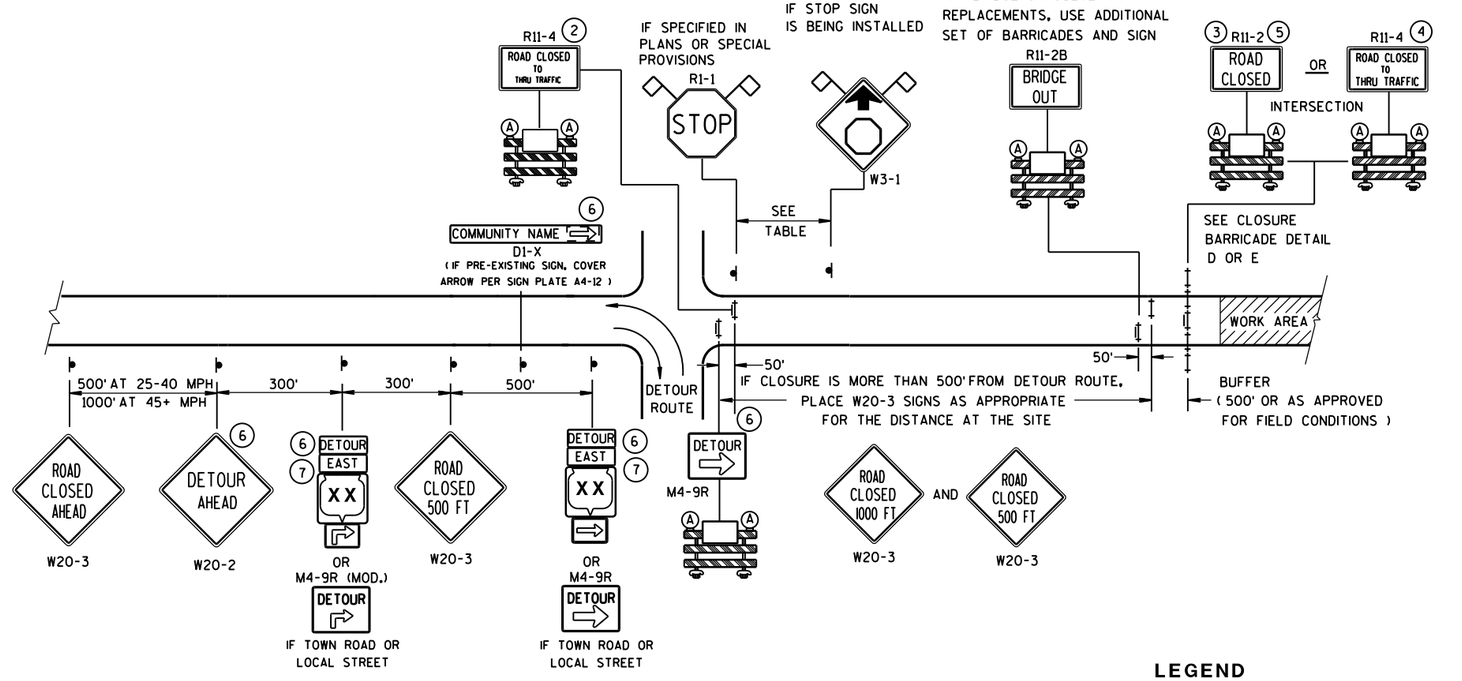
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S.D.D. 15 A 6-2



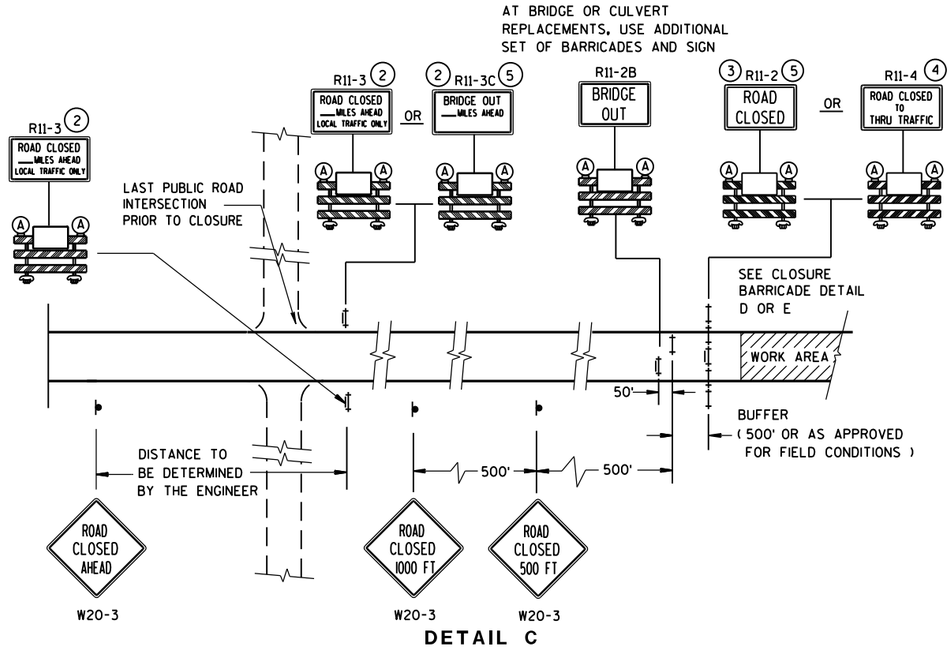

## DETAIL A
## MAINLINE CLOSURE WITH POSTED DETOUR

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

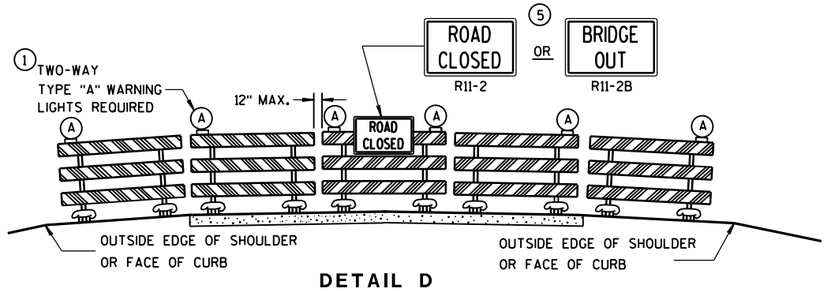
8/2013 DATE — /S/ Travis Feltes STATE TRAFFIC ENGINEER — DESIGN

FHWA




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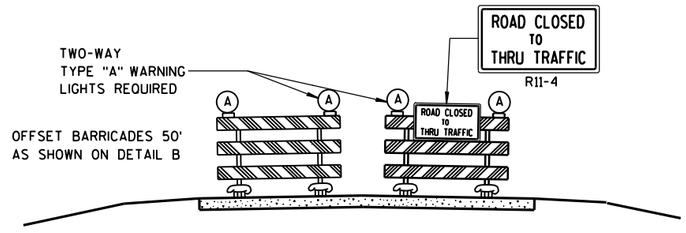
S.D.D. 15 C 2-5a




**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**

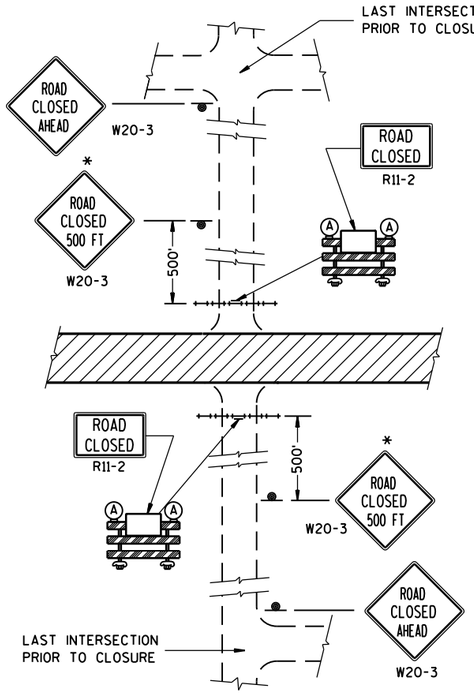
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

8/2013 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
DESIGN
FHWA



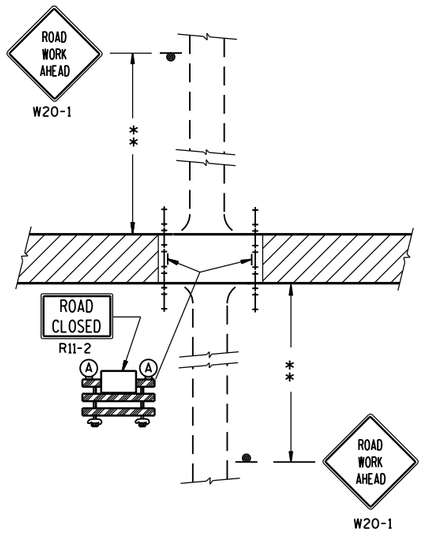

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S.D.D. 15 C 2-5b



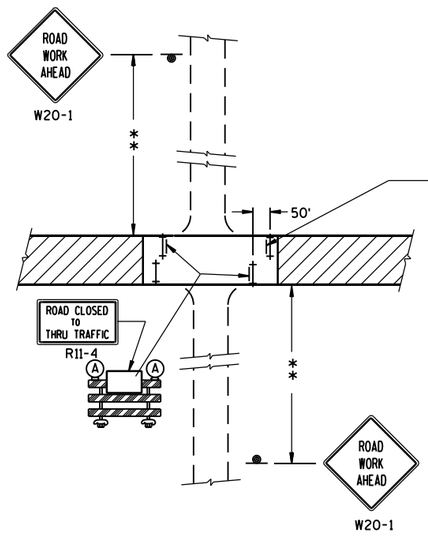

**DETAIL 1**

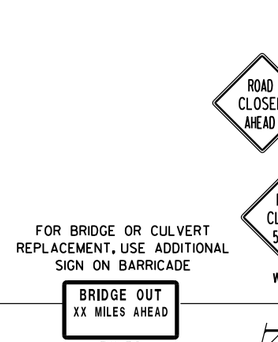
(NO ACCESS TO PROJECT)




**DETAIL 2**

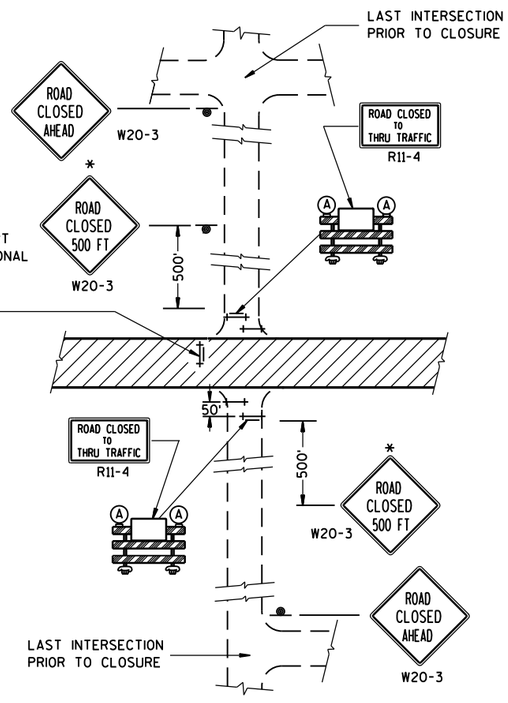
(PUBLIC CROSS-TRAFFIC MAINTAINED. NO ACCESS TO PROJECT).




**DETAIL 3**

(PUBLIC CROSS-TRAFFIC MAINTAINED. CONTRACTOR, LOCAL BUSINESS AND RESIDENT ACCESS).




**DETAIL 4**

(CONTRACTOR, LOCAL BUSINESS AND RESIDENT ACCESS TO PROJECT)

## GENERAL NOTES

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

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

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

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

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

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

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

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

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

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:
R11-2 SHALL BE 48" X 30".
R11-4 AND R11-3 SHALL BE 60" X 30".

*OMIT THE "ROAD CLOSED 500 FT." SIGN IF THE LAST INTERSECTION IS 500 FT. OR LESS FROM THE WORK ZONE.

**500' MAX. OR AT LAST INTERSECTION WHICHEVER IS CLOSER.

## LEGEND

- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- (A) TYPE "A" WARNING LIGHT (FLASHING)
- WORK AREA

**BARRICADES AND SIGNS FOR SIDEROAD CLOSURES**

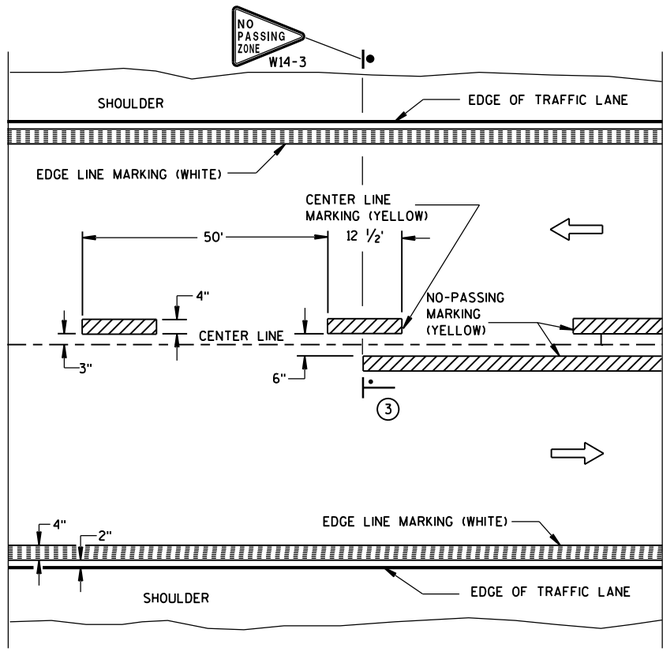
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
8/2013 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
FHWA

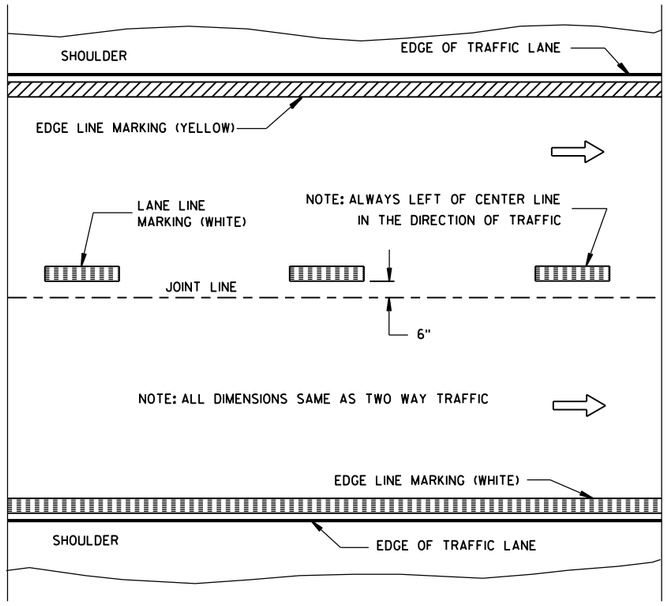



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S.D.D. 15 C 3-2

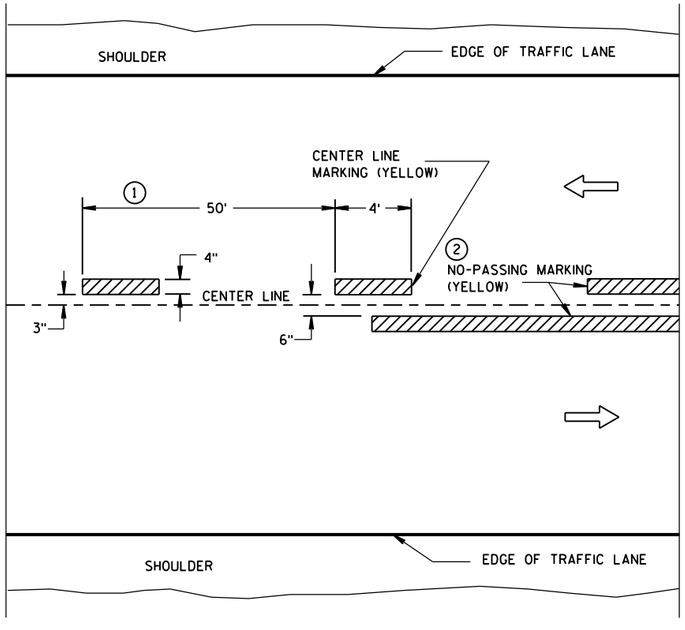



TWO WAY TRAFFIC

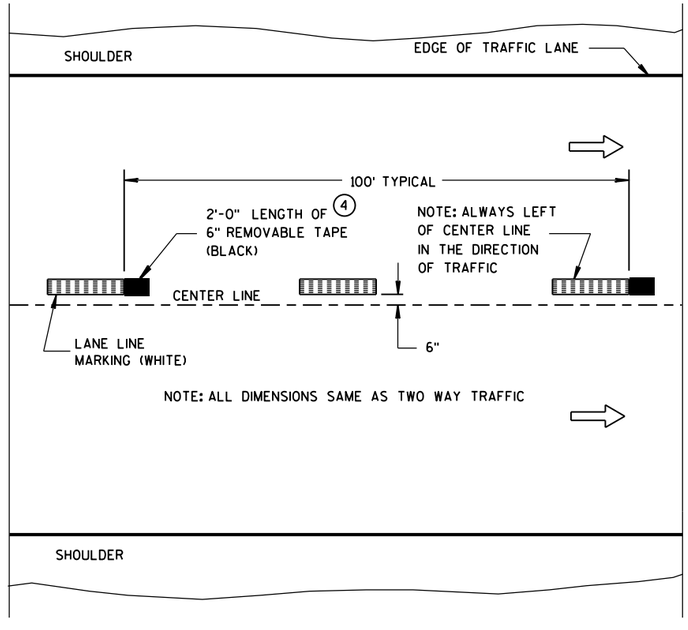



ONE WAY TRAFFIC

## PERMANENT PAVEMENT MARKING




TWO WAY TRAFFIC




ONE WAY TRAFFIC

## TEMPORARY (INTERMEDIATE) PAVEMENT MARKING

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

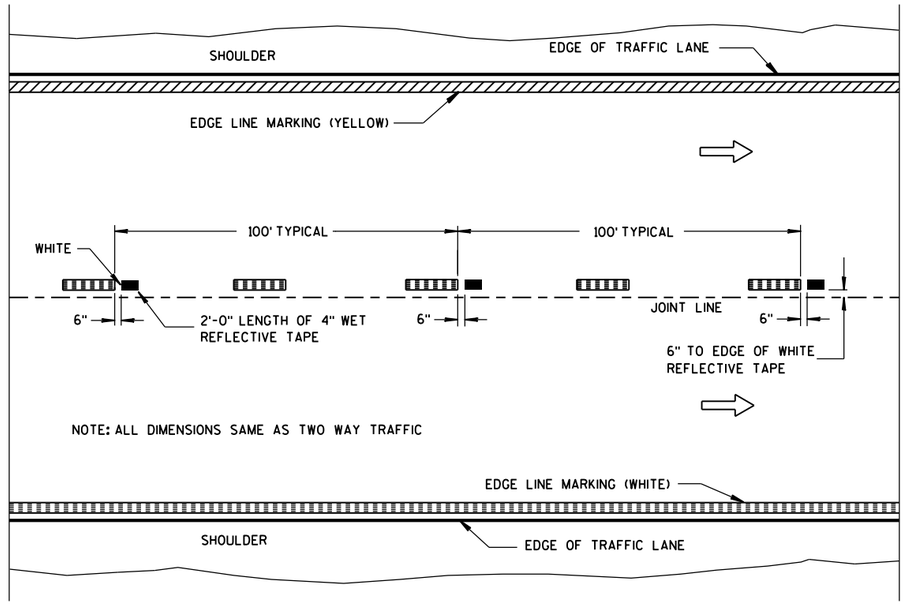
## GENERAL NOTES

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

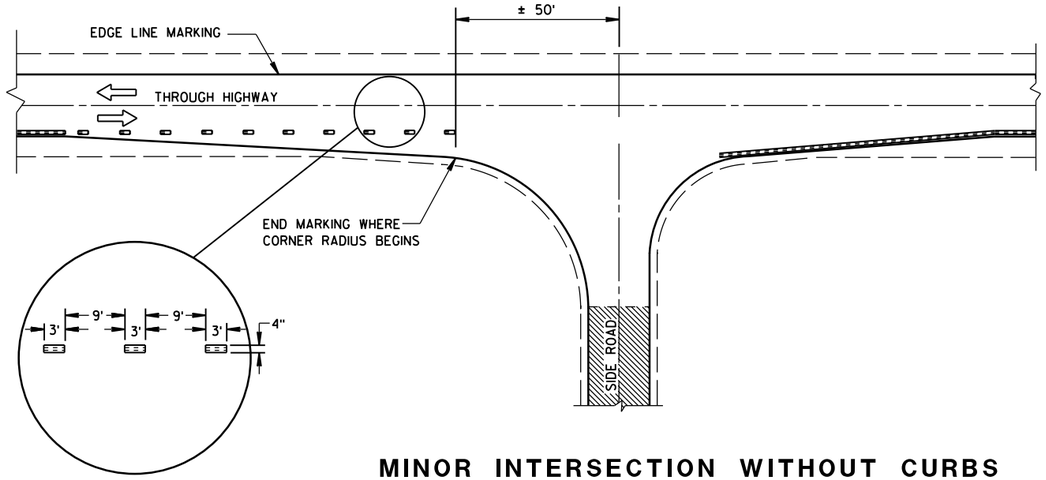


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S.D.D. 15 C 8-16a

6

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




## MINOR INTERSECTION WITHOUT CURBS

## GENERAL NOTES

EDGE LINES SHALL BE OMITTED THROUGH INTERSECTIONS. EDGE LINES SHALL BE CONTINUED THROUGH DRIVEWAYS.

(1) WHEN DISTANCE "A" IS LESS THAN 250 FEET, OMIT LANE LINE.

(2) WHEN DISTANCE "B" IS LESS THAN 100 FEET, OMIT CHANNELIZING LANE LINE.

(3) ALTERNATIVE MARKING SHALL BE PROVIDED WHEN SPECIFIED IN THE CONTRACT. TYPICAL SITUATIONS WHERE THIS MARKING MAY BE REQUIRED ARE WHERE THE INTERSECTION IS ON A SHARP HORIZONTAL CURVE OR CREST VERTICAL CURVE IN AN UNLIGHTED AREA SUCH THAT THE EDGE LINE MAY BE MISLEADING TO THE MOTORIST OR DISAPPEAR FROM SIGHT.

(4) THE EDGE LINE IN THE TAPER AREAS OF THE BYPASS LANE AND THE BYPASS LANE SHALL BE LOCATED 1-FOOT FROM EDGE OF PAVEMENT TO THE OUTSIDE EDGE OF EDGE LINE.

(5) BARRIER LINE ENDS AT SIDE ROAD PAVEMENT/SURFACE EDGE EXTENSION.

(6) BARRIER LINE STARTS 500 FEET PRIOR TO THE BYPASS TAPER.

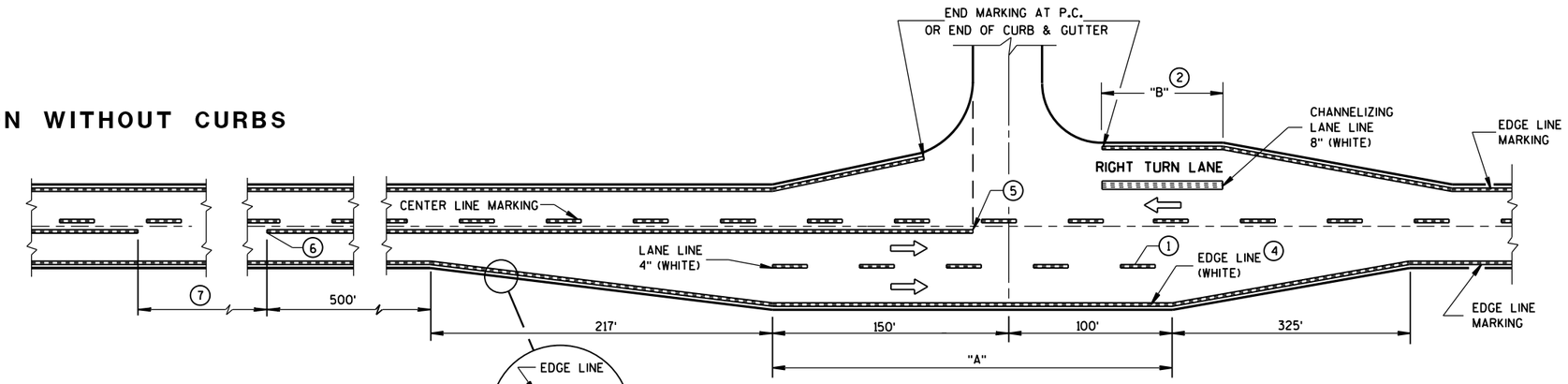
(7) IF THE DISTANCE BETWEEN 2 SUCCESSIVE NO-PASSING ZONES IS LESS THAN THE MINIMUM DISTANCE BETWEEN ZONES, CONNECT THE 2 ZONES.

(8) 3' LINE 9' GAP, EXCEPT RETRACE THE EXISTING LINE - GAP PATTERN WHERE EXISTING MARKINGS ARE IN PLACE.

ARROW SYMBOL ( ⇨ ) SHOWS DIRECTION OF TRAVEL

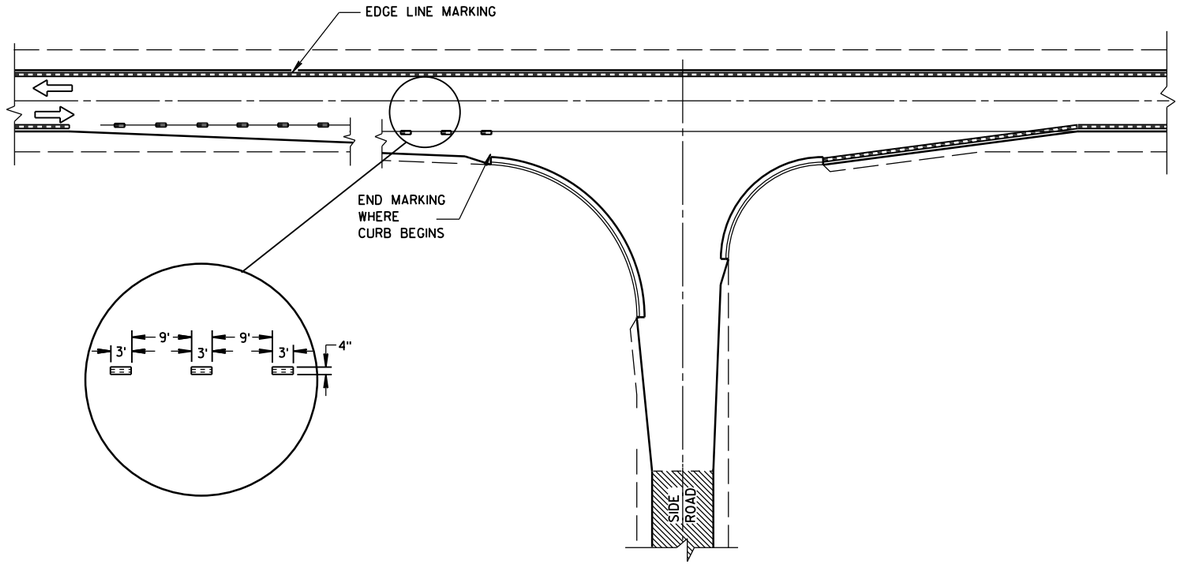
(7)

| POSTED SPEED (MPH) | MINIMUM DISTANCE BETWEEN ZONES (FEET) |
|---|---|
| 25 - 30 | 528 |
| 35 - 40 | 528 |
| 45 - 50 | 686 |
| 55 | 792 |



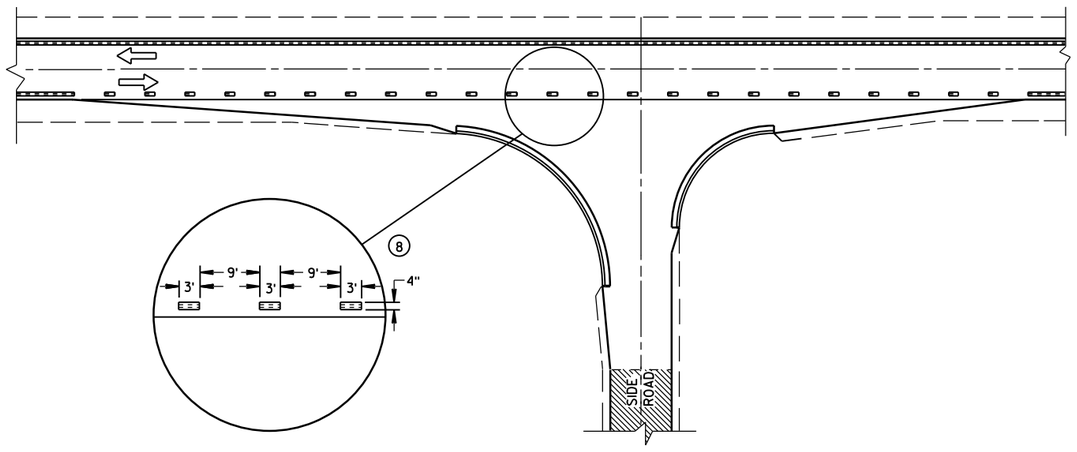

## MAJOR INTERSECTIONS

(INTERSECTION WITH FULL RIGHT TURN LANE OR BYPASS LANES)




## MINOR INTERSECTION WITH CURBS

(TYPICAL MARKING)




## MINOR INTERSECTION WITH CURBS

(3) (FOR SPECIAL CONDITIONS AS SPECIFIED)

PAVEMENT MARKING
(INTERSECTIONS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

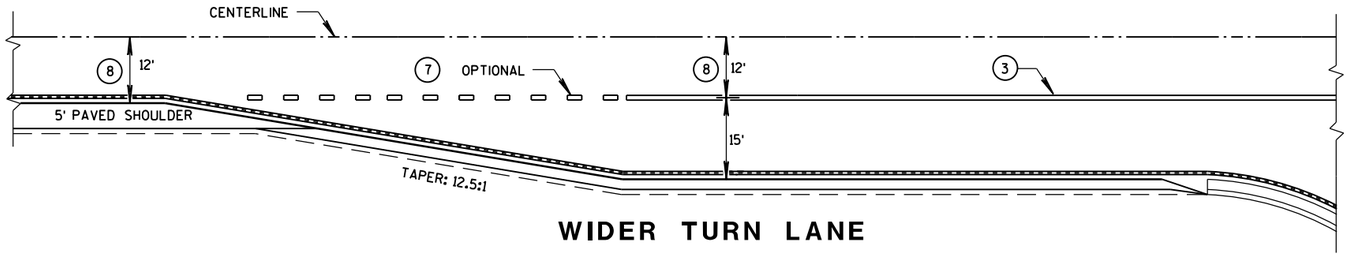


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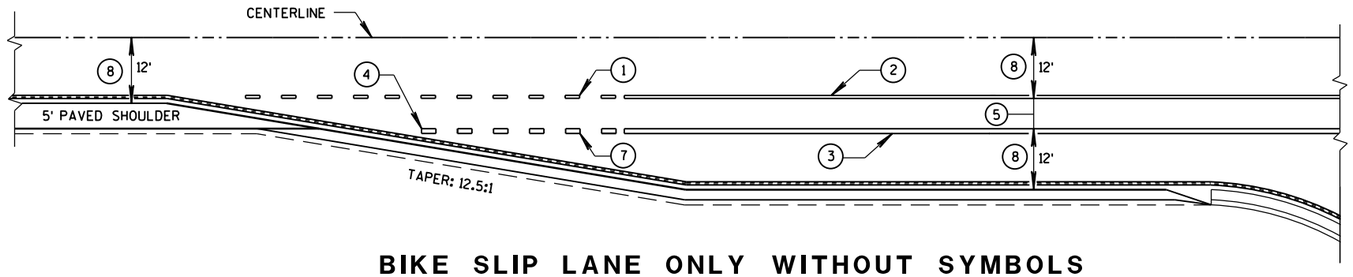
S.D.D. 15 C 8-16b

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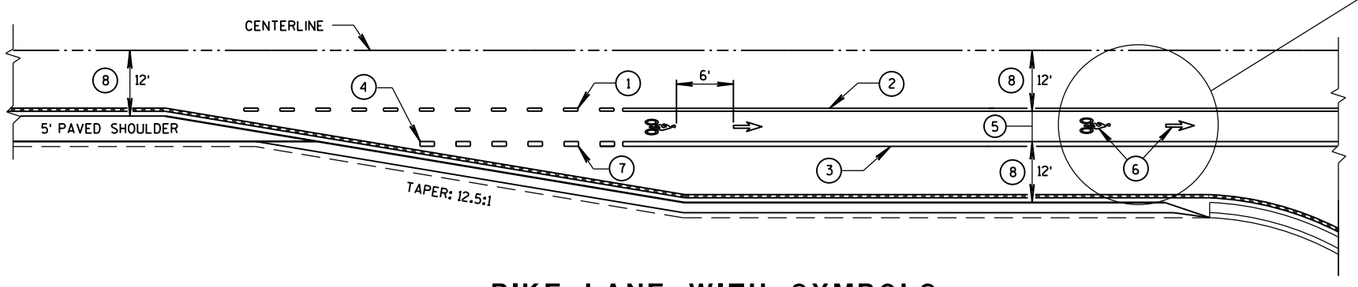
S.D.D. 15 C 8-16b



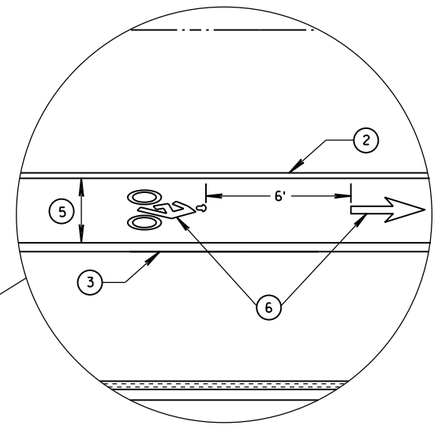

WIDER TURN LANE




BIKE SLIP LANE ONLY WITHOUT SYMBOLS




BIKE LANE WITH SYMBOLS




## GENERAL NOTES

1. 3' LINE, 9' GAP - 4-INCH WIDE, WHITE.
2. 4-INCH, WHITE.
3. 8-INCH, WHITE.
4. IF SIGNED AND/OR MARKED AS A BICYCLE FACILITY INCLUDE SECOND LINE OF LINE-SPACE MARKING, OTHERWISE DO NOT.
5. BIKE ACCOMMODATION FOR CONCRETE PAVEMENT IS 5' WIDE. BIKE ACCOMMODATION FOR ASPHALT PAVEMENT IS A MINIMUM OF 4', 5' AT ≥ 45 MPH.
6. REQUIRED ONLY WHEN SPECIFIED IN THE CONTRACT.
7. 3' LINE, 9' GAP - 8-INCH WIDE, WHITE.
8. REFER TO CONTRACT PLANS.

6

S.D.D. 15 C 29-3a

BICYCLE LANE MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

4/30/2013
DATE

/S/ Travis Feltes
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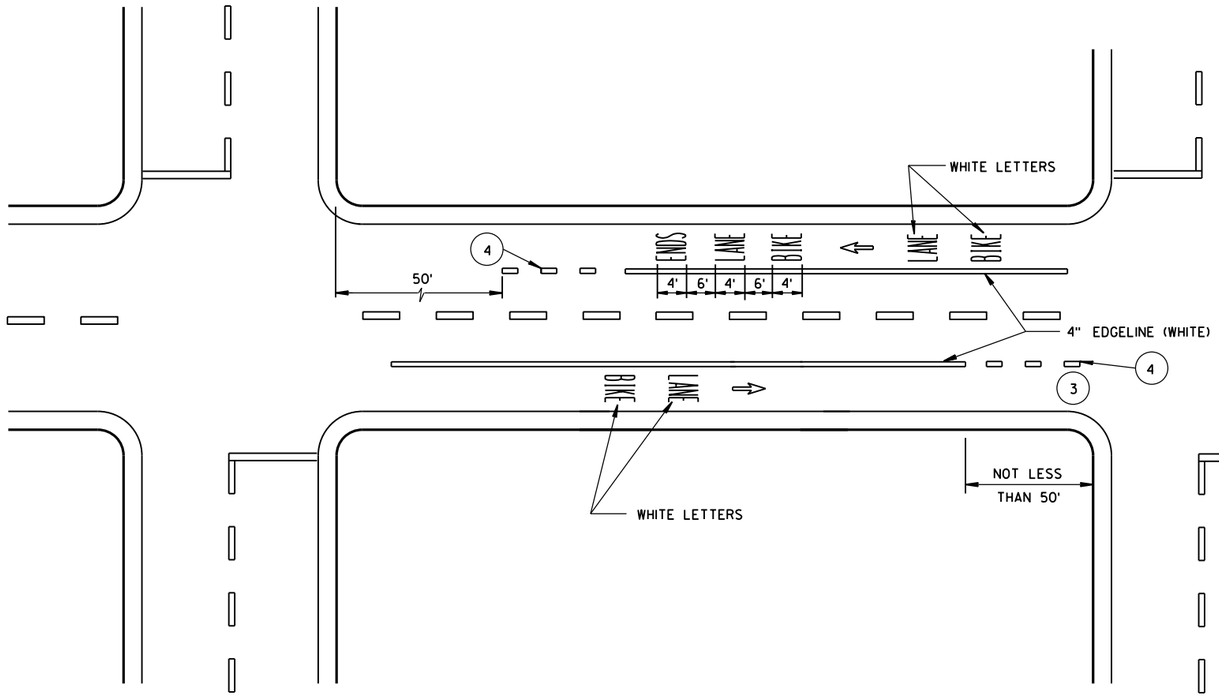


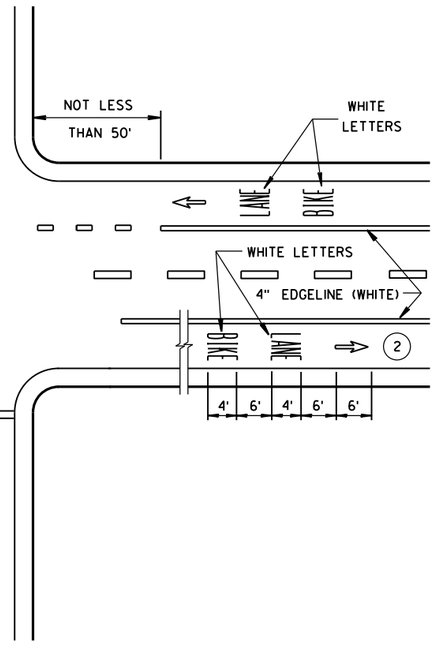
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S.D.D. 15 C 29-3a

## GENERAL NOTES

1. DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS.
2. THE SERIES OF PAVEMENT MARKING SYMBOLS SHALL BE REPEATED AFTER INTERSECTIONS AND SPACED A MAXIMUM OF 250'. NO PAVEMENT MARKING WILL TAKE PLACE IN THE CROSSWALK.
3. DOTTED LINES SHOULD BE USED 50' TO 200' IN ADVANCE OF AN INTERSECTION WHERE THERE IS NO RIGHT TURN ONLY LANE AND THERE IS HEAVY RIGHT TURN TRAFFIC OR THERE IS A NEAR-SIDE BUS STOP. AT OTHER INTERSECTIONS WHERE RIGHT TURN TRAFFIC IS LIGHT TO MODERATE, A SOLID LINE CAN BE USED UP TO THE INTERSECTION.
4. 3' LINE, 9' GAP - 4" WIDE, WHITE.




## DESIGNATED BICYCLE LANE
## NO PARKING

| URBAN BICYCLE LANE MARKING | |
|---|---|
| STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION | |
| APPROVED | |
| 4/30/2013 DATE | /S/ Travis Feltes STATE TRAFFIC EN |
| FHWA | |



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S.D.D. 15 C 29-3d

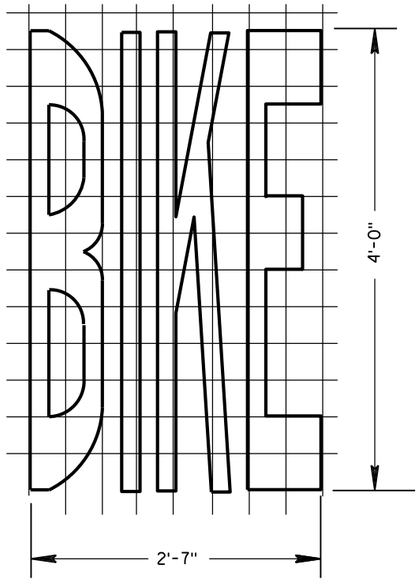
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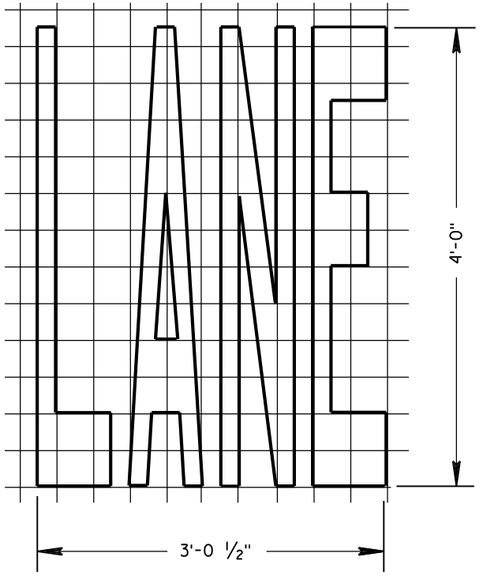
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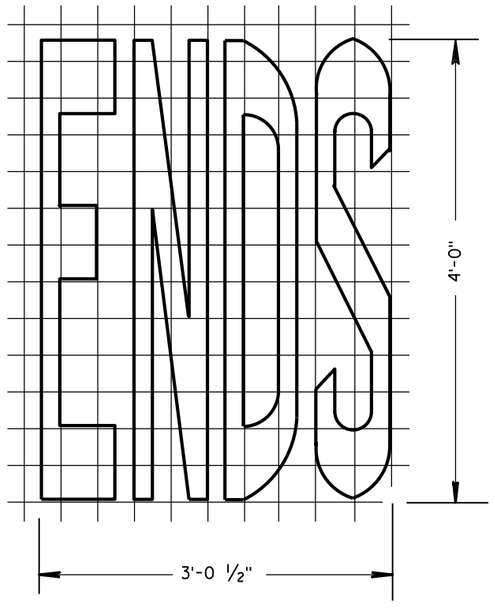
## GENERAL NOTES

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

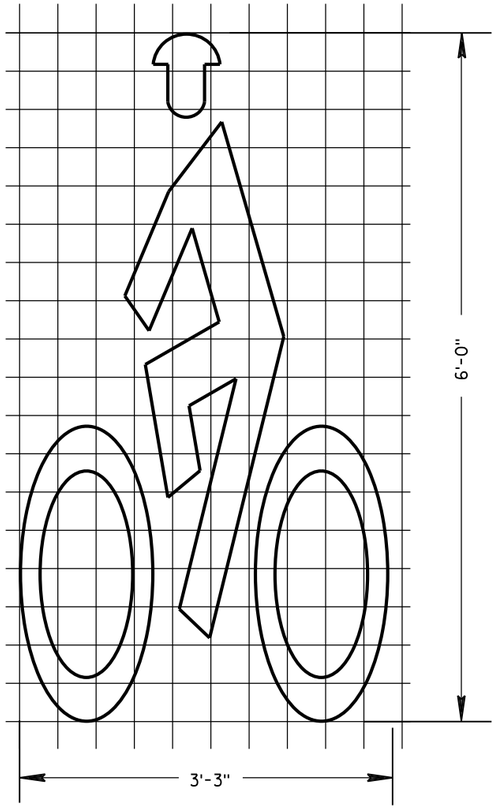
ALL LETTERS, ARROWS AND SYMBOLS SHALL BE IN CONFORMANCE WITH REQUIREMENTS INCLUDED IN "STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKING" BOOK BY THE FEDERAL HIGHWAY ADMINISTRATION. ALL LETTERS, ARROWS AND SYMBOLS SHALL BE WHITE AND REFLECTORIZED. SMALL DIFFERENCES IN DIMENSIONS WITHIN THE TOLERANCES OF THAT BOOK ARE ACCEPTABLE.



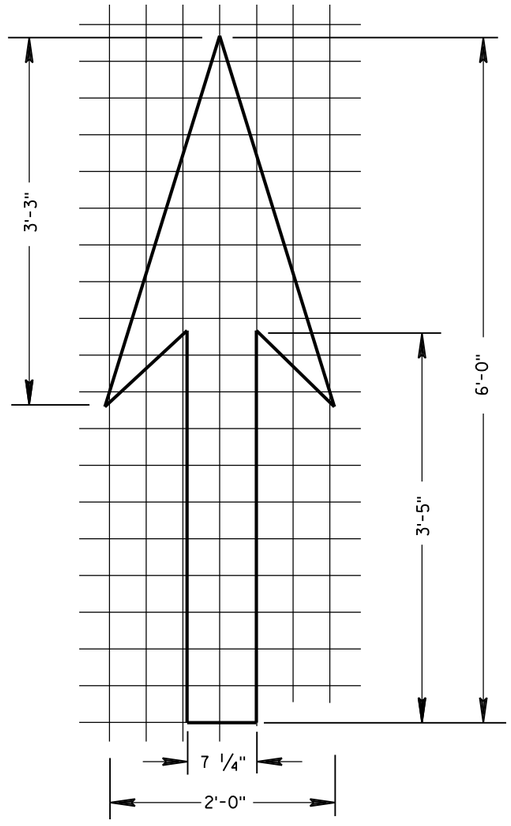



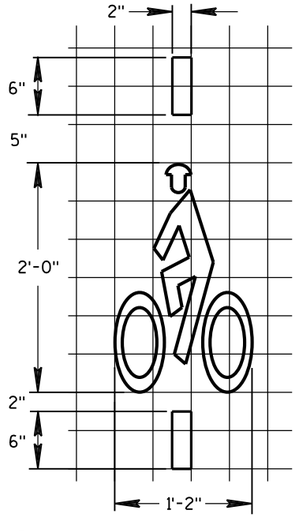

BIKE LANE WORDS




BIKE LANE SYMBOL




BIKE LANE ARROW




BICYCLE DETECTOR PAVEMENT MARKING

PAVEMENT MARKING FOR BIKE LANES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
4-30-2013
DATE

/S/ Travis Feltes
STATE TRAFFIC EN

FHWA

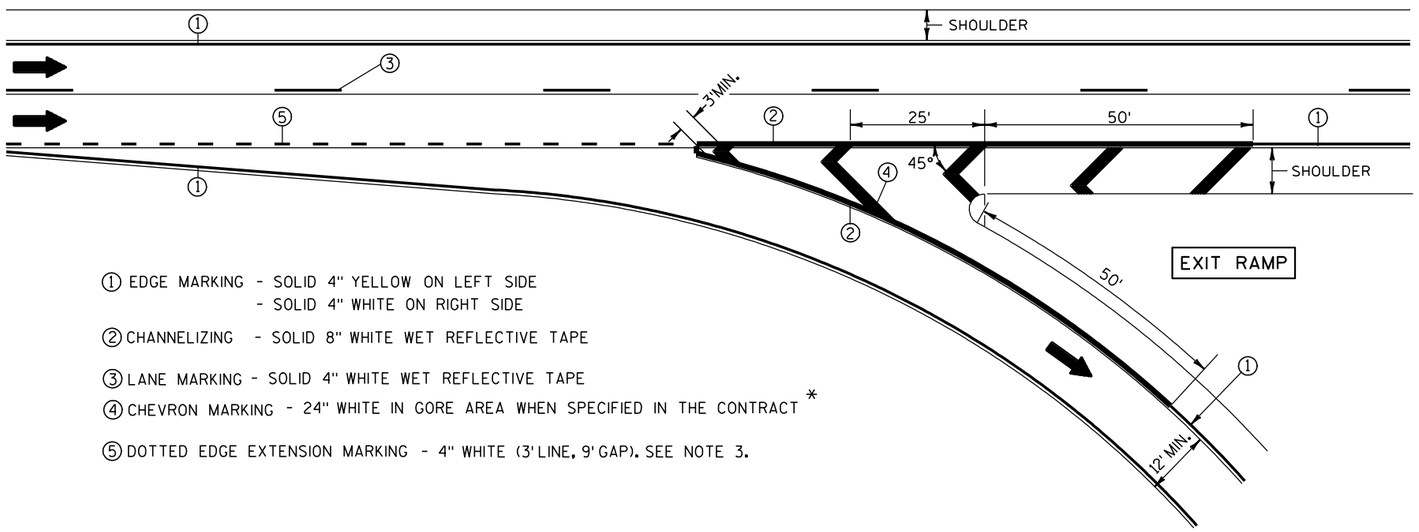


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S.D.D. 15 C 29-3e

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S.D.D. 15 C 29-3e




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:

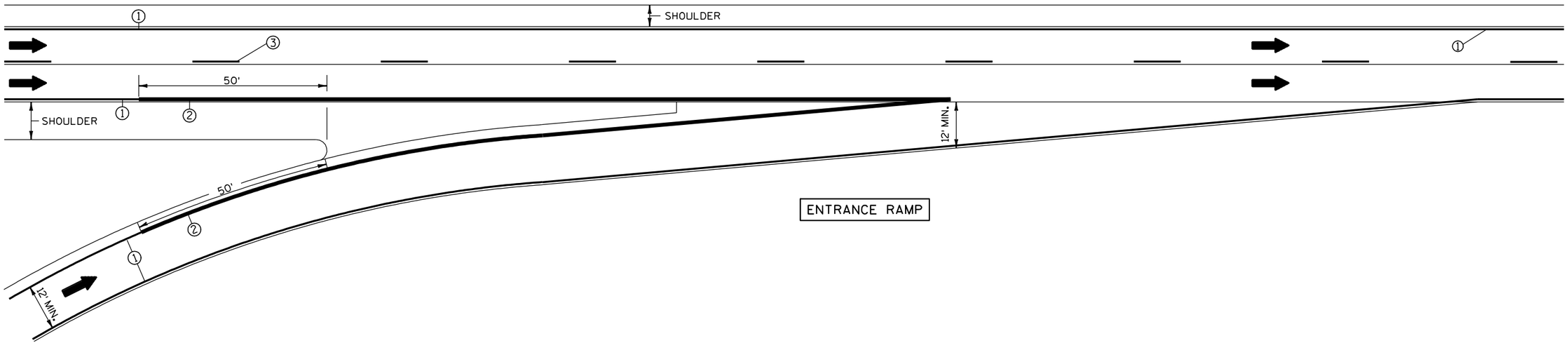
1. ARROWS SHOWN ON THIS MARKING PLAN DESIGNATE TRAFFIC FLOW, AND SHALL NOT BE TAKEN AS PROPOSED PAVEMENT MARKINGS.

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.




6

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

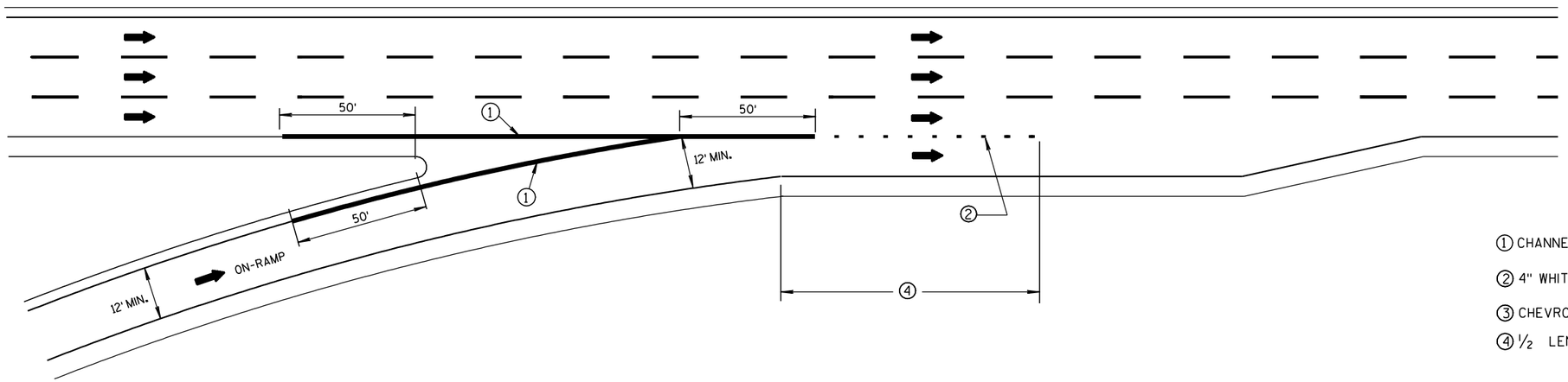
S.D.D. 15 C 31-1a

**PAVEMENT MARKING**
**(RAMPS AND GORES)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

NOTES:

1. AHEAD 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. RETRACE EXISTING DIAGONAL MARKINGS.



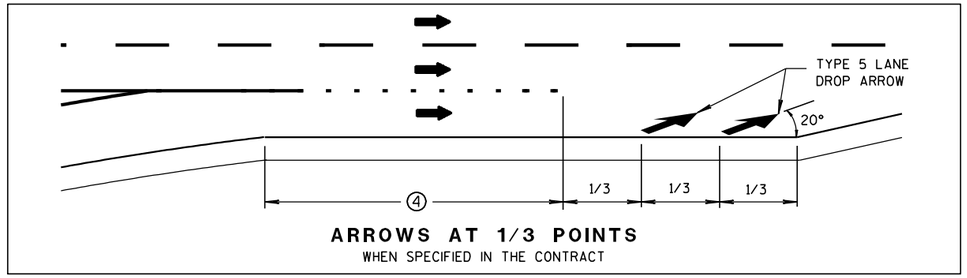

① CHANNELIZING - SOLID 8" WHITE WET REFLECTIVE TAPE IN GORE AREA.

② 4" WHITE (3' LINE, 9' GAP).

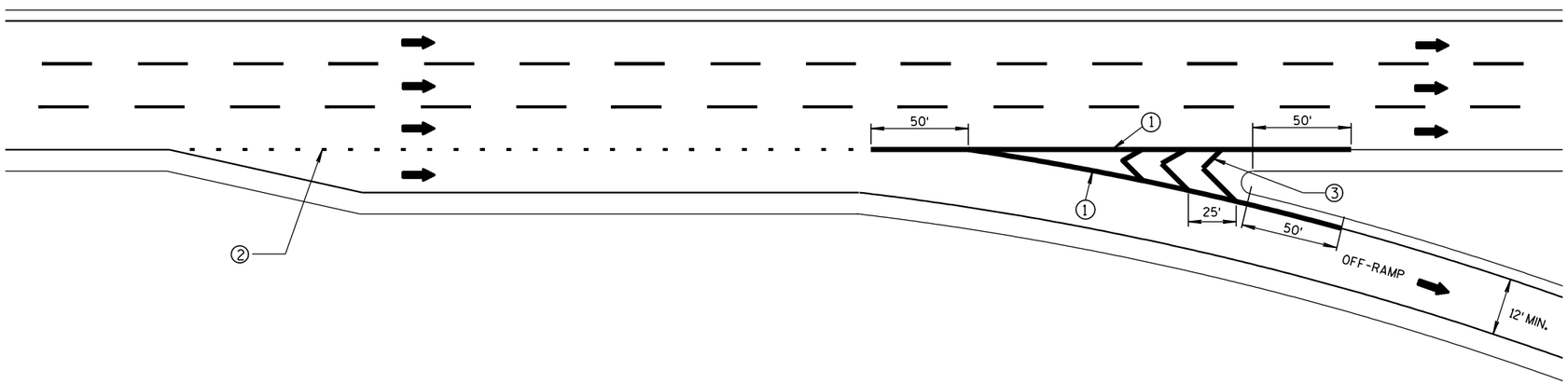
③ CHEVRON MARKING - 24" WHITE WHEN SPECIFIED IN THE CONTRACT.

④ ½ LENGTH OF FULL WIDTH ACCELERATION LANE.

## SERVICE INTERCHANGE PAVEMENT MARKING FOR PARALLEL ENTRANCE-RAMP




**ARROWS AT 1/3 POINTS**
WHEN SPECIFIED IN THE CONTRACT




## SERVICE INTERCHANGE PAVEMENT MARKING FOR PARALLEL EXIT-RAMP

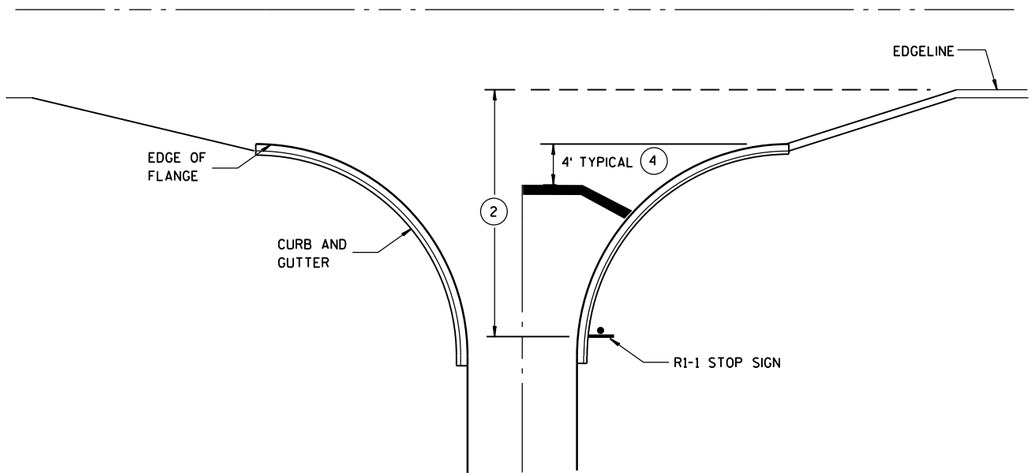
**PAVEMENT MARKING FOR PARALLEL ON-RAMP AND PARALLEL OFF-RAMP**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

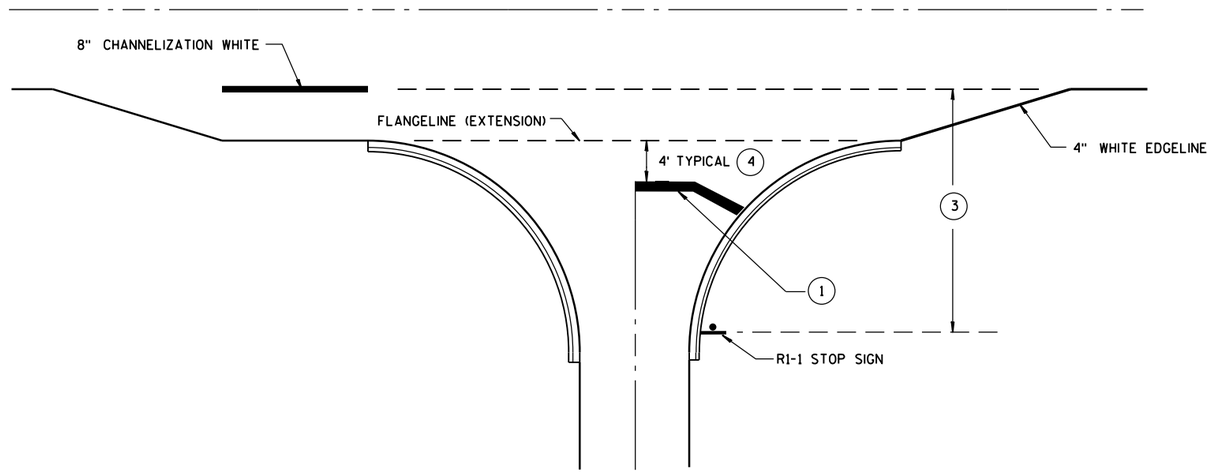
APPROVED
6/23/2011 DATE
/S/ Thomas N. Nothem STATE TRAFFIC ENGINE 173 SIGN
FHWA



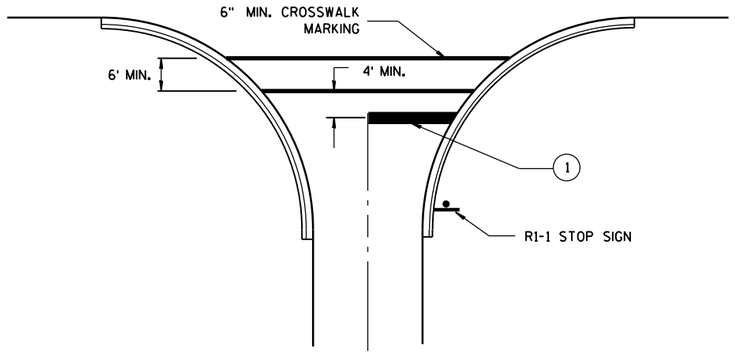
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S.D.D. 15 C 31-1d



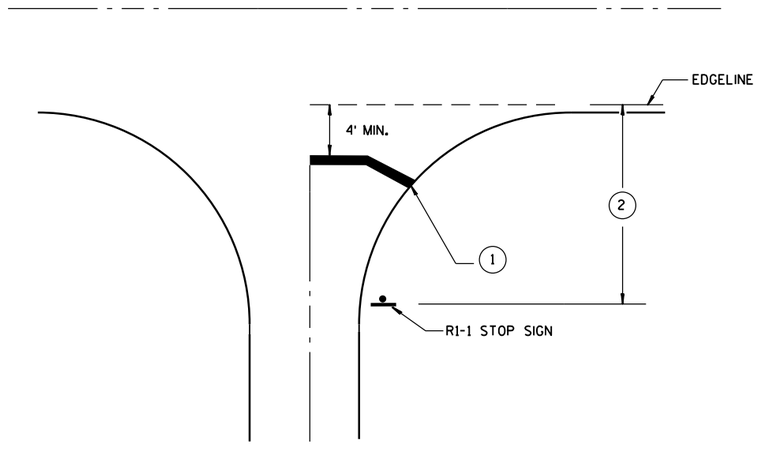

**TYPICAL STOP LINE PAVEMENT MARKING WITH CURB AND GUTTER**




**TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH RIGHT TURN LANE**




**TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH CROSSWALK MARKING**




**TYPICAL STOP LINE PAVEMENT MARKING WITHOUT CURB AND GUTTER**

## GENERAL NOTES

1. 18-INCH STOP LINES MAY BE DELETED OR ADDED BY THE PROJECT ENGINEER BASED ON VISIBILITY AND SIGHT LINES.
2. IF STOP SIGN IS LESS THAN OR EQUAL TO 40 FEET FROM THE EDGELINE THAN NO STOP LINE IS REQUIRED.
3. IF STOP SIGN IS LESS THAN OR EQUAL TO 30 FEET FROM THE FLANGELINE EXTENSION THAN NO STOP LINE IS REQUIRED.
4. MOVE CLOSER TO EDGE OF TRAVEL LANE AS NEEDED FOR VISIBILITY AND SIGHT LINES.

**STOP LINE AND CROSSWALK PAVEMENT MARKING**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

4/30/2013
DATE

/S/ Travis Feltes
STATE TRAFFIC E

FHWA



6



S.D.D. 15 C 33-1

## LEGEND

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

# GENERAL NOTES

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

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

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

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

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

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

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

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

REMOVE PAVEMENT MARKINGS IF LANE CLOSURE IS TO BE IN PLACE FOR LONGER THAN 4 OR MORE DAYS AND NIGHTS.

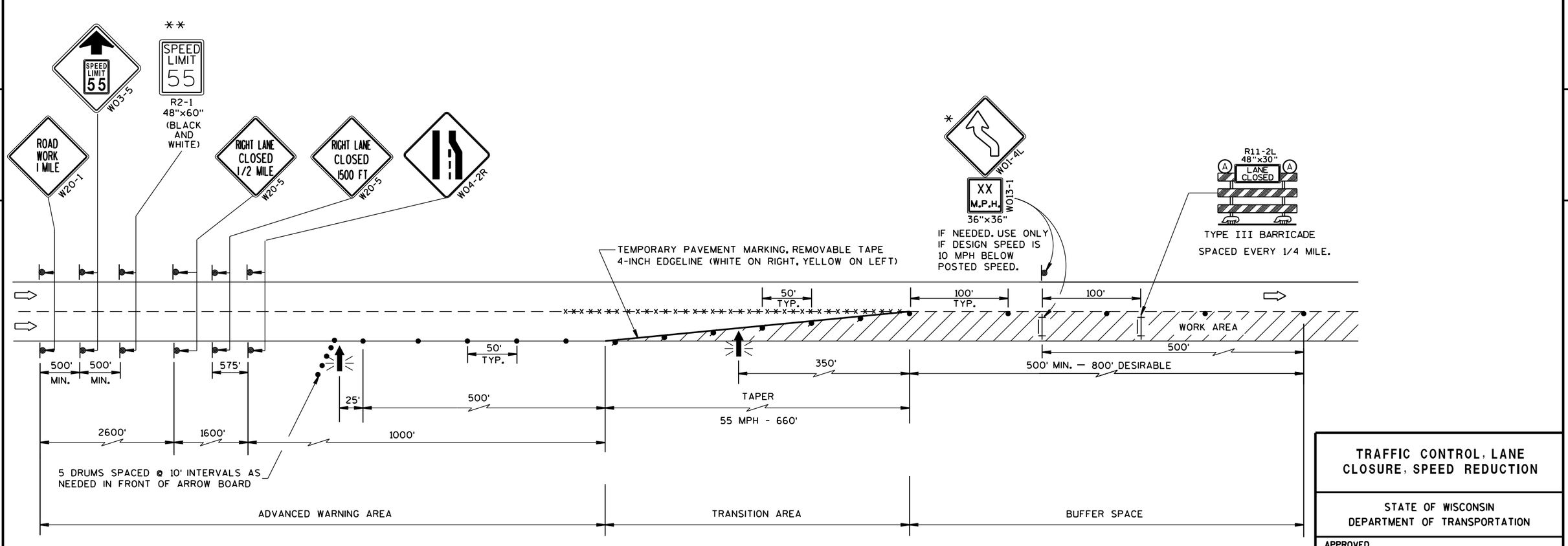
WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

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

ADJUSTMENTS IN BUFFER SPACE NEED TO BE INCORPORATED WHEN THE LANE CLOSURE OCCURS NEAR AN INTERCHANGE EXIT OR ENTRANCE RAMP. THE LANE CLOSURE MUST MUST TAKE PLACE FAR ENOUGH IN ADVANCE OF AN EXIT OR ENTRANCE RAMP TO STILL ALLOW FOR ADEQUATE BUFFER SPACE. THE MINIMUM LENGTH OF THE BUFFER SPACE BEFORE AN EXIT RAMP SHOULD BE 1/2 THE LENGTH OF THE TRANSITION AREA. THE ENTRANCE RAMP SHOULD BE FOLLOWED BY THE ORIGINAL BUFFER SPACE LENGTH OF 800 FEET DESIRABLE PRIOR TO ANOTHER TRAFFIC CONTROL CHANGE SUCH AS A CROSSOVER MANEUVER.

* THE LEFT REVERSE CURVE SIGN (W01-4L) IS ONLY REQUIRED WHEN THIS DETAIL IS USED IN COMBINATION WITH "SINGLE LANE CROSSOVER" DETAIL.

** A SPEED LIMIT SIGN SHALL BE LOCATED 1500 FEET BEYOND THE END OF THE ACCELERATION LANE OF EACH ENTRANCE RAMP. THERE SHOULD BE A SPEED LIMIT SIGN INCORPORATED A MINIMUM OF EVERY 2 OR 3 MILES. INCLUDE A 65 MPH RESUME SPEED LIMIT SIGN 200 FEET MINIMUM (500 FEET DESIREABLE) BEYOND THE "END OF ROADWORK" SIGN.




# TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
3-2014 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
FHWA



S.D.D. 15 D 12-4

S.D.D. 15 D 12-4

## 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.

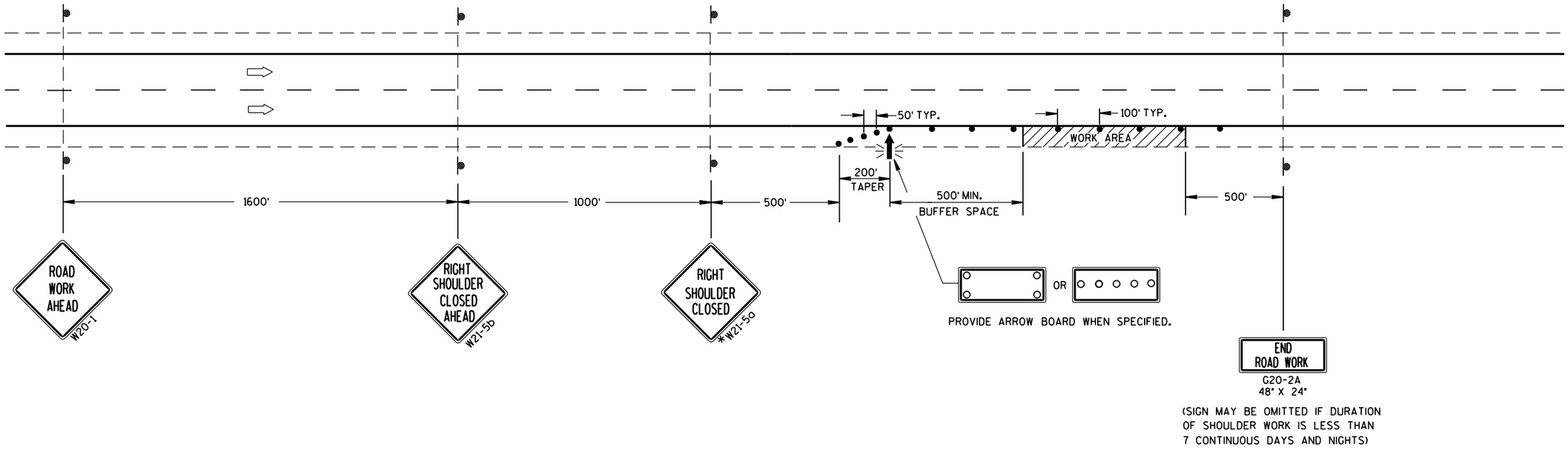
SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

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



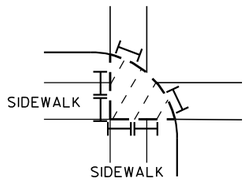
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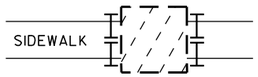
S.D.D. 15 D 27-2

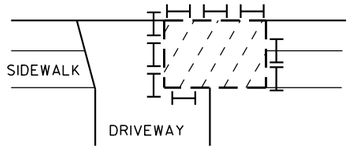
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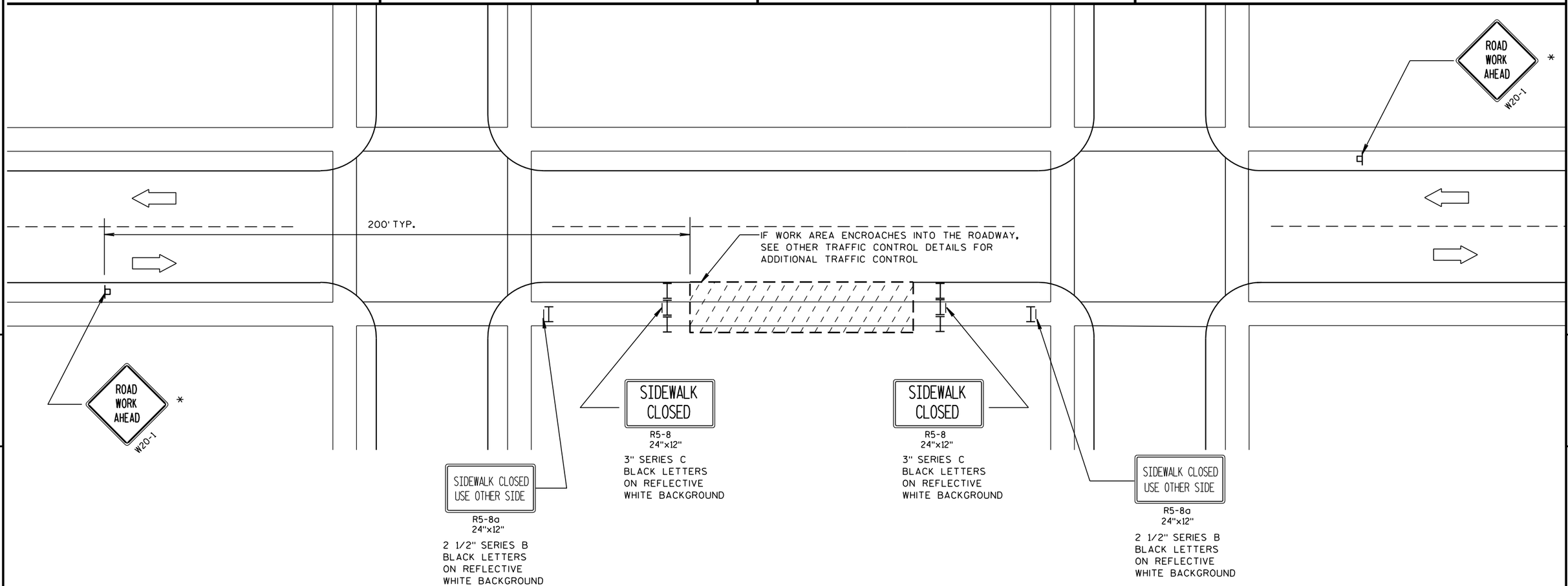
S.D.D. 15 D 27-2

# WARNING OF LOCALIZED SIDEWALK WORK AREAS




## LEGEND

- POST MOUNTED SIGN
- TYPE II BARRICADE WITH/WITHOUT SIGN (ALL WITH ONE WARNING LIGHT, TYPE A, LOW-INTENSITY FLASHING)
- WORK AREA
- DIRECTION OF TRAFFIC FLOW

## GENERAL NOTES :

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS, 36"x36" SIGNS MAY BE USED INSTEAD OF 48"x48" SIGNS, IF APPROVED BY DISTRICT TRAFFIC UNIT.

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

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

* "ROAD WORK AHEAD" SIGNS ARE NOT REQUIRED IF THE SIDEWALK CLOSURE OCCURS WITHIN A LARGER WORK ZONE WHERE ADVANCE WARNING SIGNS ARE ALREADY PRESENT, OR IF THE WORK AREA AND EQUIPMENT ARE MORE THAN 2 FEET BEHIND THE CURB.

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

TRAFFIC CONTROL, SIDEWALK CLOSURE

**TRAFFIC CONTROL, SIDEWALK CLOSURE**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

5/23/2000 DATE

/S/ Chester J. [illegible]
CHIEF SIGNS AND MARK[illegible] [illegible]NEER

FHWA





6

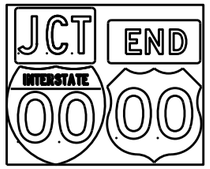


S.D.D. 15 D 30-1

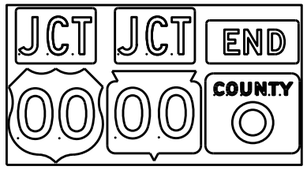
## TYPICAL ASSEMBLIES



J1-1



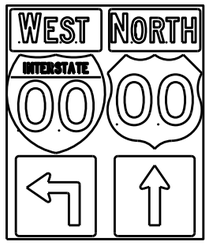
J1-2



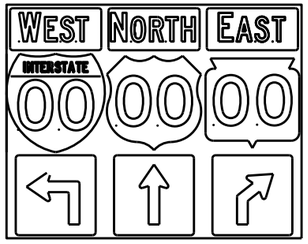
J1-3



J2-1



J2-2

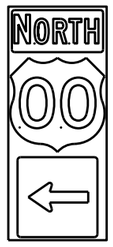


J2-3

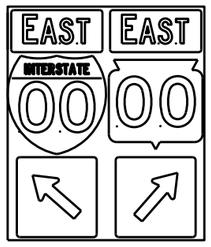


JV

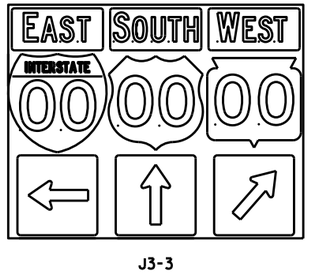
( Typical Vertical J-Assembly
See Note 10 and 11 )



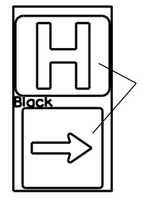
J3-1



J3-2



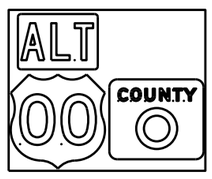
J3-3



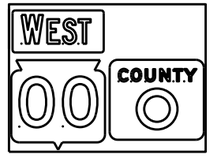
JH-1



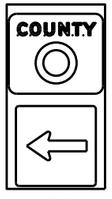
J4-1



J4-2



J4-2



J13-1



J12-1



J32-1



J33-1

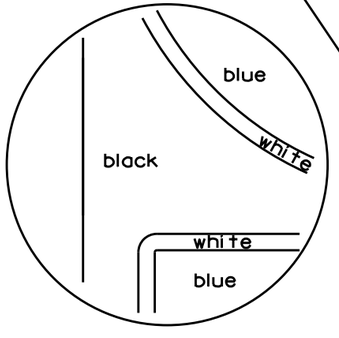


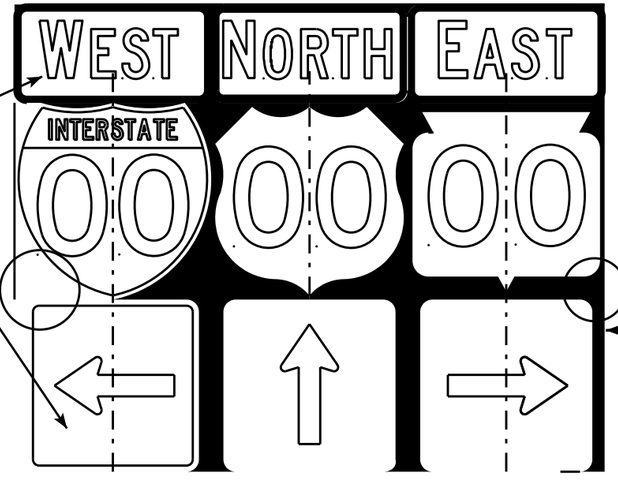
J23-1

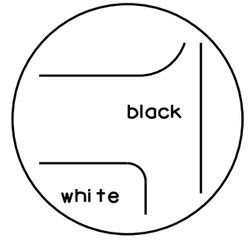


J22-1

blue background
with interstate




black background

### NOTES

1. Signs are Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Black Non-reflective
   Message - see Note 5
3. Message Series - See Note 5
4. Corners shall be square or rounded if base material is plywood. If base material is metal the corners shall be rounded.
5. The colors and message spacing on each marker shall be according to the applicable route marker panel specifications.
6. Certain marker heads require the component pieces to be the same color. As an example, all the components used with an M1-1 Interstate marker shall be blue.
7. Single panel j-assemblies shall only be used with route marker shields that are same size. If the route marker shields are different size use multiple piece component.
8. Route assemblies that have 24 inch route shields and have dimensions greater than 48 inches (both vertical and horizontal) shall have one horizontal splice between the arrows and route shields. Vertical splices shall not be used on route assemblies with a horizontal dimension of 144 inches or less. The contractor shall not use more than one vertical joint per sign and the joint shall be between route shields.
9. Route assemblies that have 36 inch shields and have dimensions greater than 48 inchs (both vertical and horizontal) shall have two horizontal splices. One horizontal splice shall be between the cardinal direction and route shields and the other horizontal splice shall be between the arrows and route shields. Vertical splices shall not be used on route assemblies with a horizontal dimension of 144 or less. The contractor shall not use more than one vertical joint per sign and the joint shall be between route shields.
10. All Vertical J Assemblies are given a Sign Code of JV
11. For JV Assemblies that have a mixture of Interstate and non Interstate shields, arrows and cardinals shall be white on blue.

ROUTE MARKERS & COMPONENTS
IN TYPICAL ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

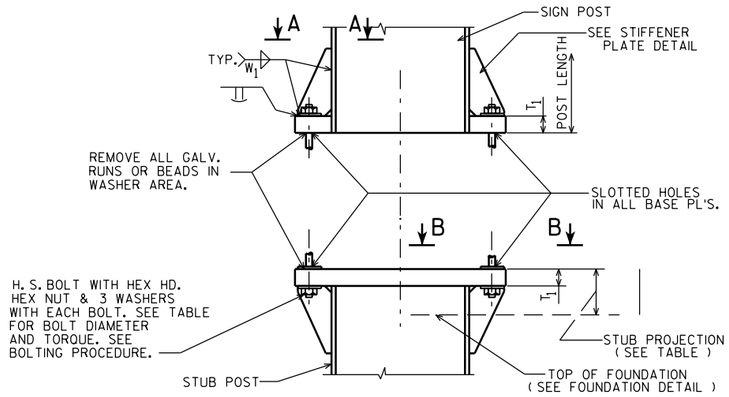
DATE 2/06/14 PL... A2-1S.8



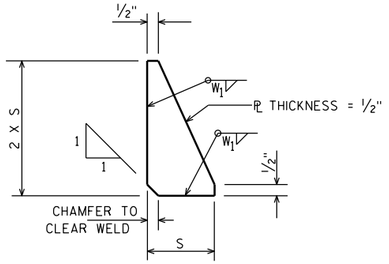
PROJECT NO: | SHEET NO: E



FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A21S.DGN PLOT DATE : 06-FEB-2014 14:10 PLOT BY : mscsja PLOT NAME :
WISDOT/CADDS SHEET 42

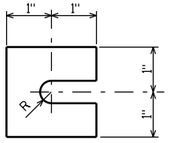



## SIGN POST AND STUB POST ELEVATION



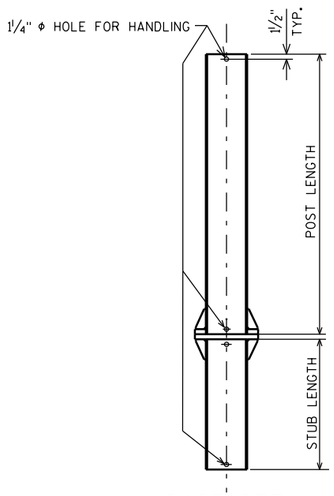

## STIFFENER PLATE DETAIL

( SEE TABLE FOR DIMENSIONS )




FURNISH 2 @ .012" ± THICK AND 2 @ .032" ± THICK SHIMS PER POST. SHIMS SHALL BE FABRICATED FROM BRASS SHIM STOCK OR STRIP CONFORMING TO A.S.T.M.- B36.

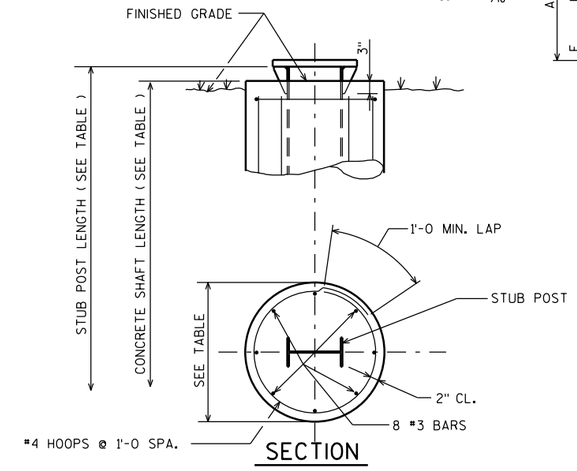
## SHIM DETAIL



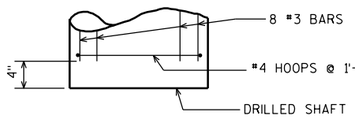

## POST DETAIL

| QUANTITIES FOR 1 FOOTING | | |
|---|---|---|
| | CONC. MASONRY C.Y. | REINF. STEEL LBS. |
| A | 0.6 | 34 |
| B | 0.8 | 49 |
| C | 0.9 | 50 |
| D | 0.9 | 56 |
| ⑦ E | 1.0 | 62 |
| | | |

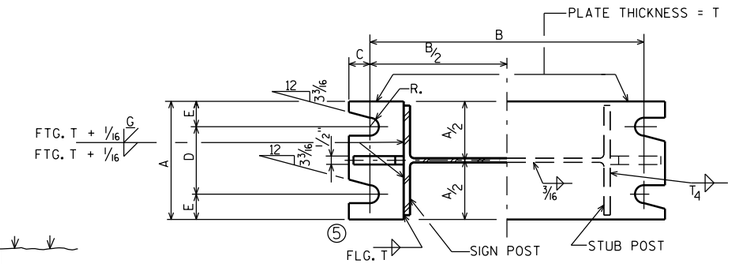
| REINF. TYPE | #3 | #4 |
|---|---|---|
| A | 8 @ 4'-5 | 5 @ 6'-3 |
| B | 8 @ 6'-5 | 7 @ 6'-3 |
| C | 8 @ 6'-11 | 7 @ 6'-3 |
| D | 8 @ 7'-5 | 8 @ 6'-3 |
| ⑦ E | 8 @ 7'-11 | 9 @ 6'-3 |



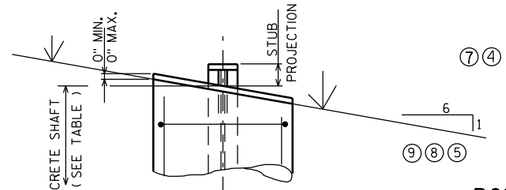

## SECTION



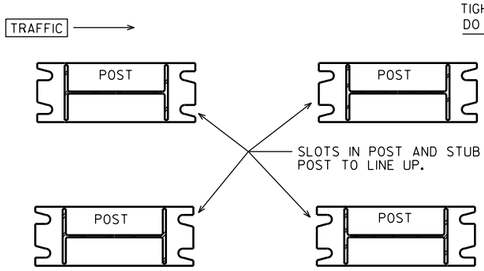

## FOUNDATION DETAIL




## SECTION A-A SECTION B-B




## SHAFT PLACEMENT




## POST SLOT ORIENTATION ⑦

## DESIGN DATA

WIND PRESSURE = 75 M.P.H.
WIND COMPONENTS - NORMAL = 1.0 TRANSVERSE = 0.0
ICE LOAD = 3 P.S.F.

| GROUP LOADS | PERCENT OF ALLOWABLE STRESS |
|---|---|
| 1. DEAD | 100 |
| 2. DEAD & WIND | 140 |
| 3. DEAD, ICE & ½ WIND[4] | 140 [4]25 P.S.F. MIN. |

ALLOWABLE SOIL PRESSURE = 1½T / SQ. FT.
WIND LOAD WAS APPLIED TO THE AREA OF THE SIGN AND TO THE SUPPORTING MEMBERS.
ICE LOAD WAS APPLIED TO ONE FACE OF THE SIGN AND AROUND THE SURFACE OF THE SUPPORTING MEMBERS.

## GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.
DESIGN CONFORMS WITH A.A.S.H.T.O. SPECIFICATIONS 1985.
ALL POSTS, POST STUBS & ATTACHMENTS SHALL BE A.S.T.M. A709 GRADE 50.
⑨ THE POST, BASE PLATES, UPPER SIX INCHES OF STUB POST FLANGE SPLICE PLATE AND FUSE PLATE SHALL BE GALVANIZED AFTER FABRICATION.
H.S. BOLTS, WASHERS & NUTS SHALL BE A325 GALVANIZED WHEN POSTS, POST STUBS AND ATTACHMENTS ARE A709 GRADE 50 AND GALVANIZED.

## BOLTING PROCEDURE - BASE CONNECTION

1. ASSEMBLE SIGN POST TO STUB POST WITH BOLTS AND ONE OF THE FLAT WASHERS ON EACH BOLT BETW. PLATES.
2. SHIM AS REQ'D. TO PLUMB POST.
3. PRIOR TO BOLT TIGHTENING LUBRICATE BASE CONNECTION BOLTS WITH BEESWAX OR OTHER HIGH-WAX LUBRICANT.
4. TIGHTEN ALL BOLTS THE MAXIMUM POSSIBLE WITH 12" OR 15" WRENCH TO BED WASHERS & SHIMS AND TO CLEAN BOLT THREADS, THEN LOOSEN EACH BOLT IN TURN AND RETIGHTEN IN A SYSTEMATIC ORDER TO THE PRESCRIBED TORQUE. ( SEE TABLE )
5. BURR THREADS AT JUNCTION WITH NUT USING A CENTER PUNCH TO PREVENT NUT LOOSENING.

NOTE:
TIGHTEN THE HIGH STRENGTH BOLTS TO THE TORQUE SHOWN. DO NOT OVERTIGHTEN.

## BASE CONNECTION DATA TABLE

| TYPE | DIMENSION / POST SIZE | BOLT SIZE & TORQUE | A | B | C | D | E | $T_1$ | $T_4$ | $W_1$ | R | S | FOUNDATION DATA: STUB LENGTH | STUB PROJECTION | SHAFT DIAMETER | SHAFT LENGTH | ② K |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ④ A | W10"X12.0 #/FT. | ¾" ϕ @ 75"-FT. | 5¼" | 1'-0⅜" | ⅞" | 3½" | ⅞" | 1" | ⅜" | 5/16" | 13/32" | 2⅛" | 3'-6 | 3" | 2'-0 ϕ | 5'-0 | 76.0# ④ |
| ④ B | W12"X16.0 #/FT. | ⅞" ϕ @ 85"-FT. | 5½" | 1'-4¼" | 1" | 3½" | 1" | 1¼" | ¼" | 5/16" | 15/32" | 3" | 5'-6 | 3" | 2'-0 ϕ | 7'-0 | 146.5# ④ |
| C | W12"X19.0 #/FT. | ⅞" ϕ @ 85"-FT. | 5½" | 1'-4¼" | 1" | 3½" | 1" | 1½" | 5/16" | 5/16" | 15/32" | 3" | 6'-0 | 3" | 2'-0 ϕ | 7'-6 | 182.1# |
| D | W12"X22.0 #/FT. | ⅞" ϕ @ 85"-FT. | 5½" | 1'-4¼" | 1" | 3½" | 1" | 1½" | ⅜" | 5/16" | 15/32" | 3" | 6'-6 | 3" | 2'-0 ϕ | 8'-0 | 210.5# |
| ③ E | W12"X26.0 #/FT. | 1" ϕ @ 90"-FT. | 7" | 1'-4¼" | 1¼" | 4" | 1½" | 1½" | ⅜" | 5/16" | 17/32" | 3" | 7'-0 | 3" | 2'-0 ϕ | 8'-6 | 293.0# ③ |
| | | | | | | | | | | | | | | | | | |

① ⑥ ①

STRUCTURAL CARBON STEEL PAY WTS. ( 1 POST ) = K+ ( POST LENGTH X POST WT. )
" K " INCLUDES STUB, BASE PLATES, STIFFS., BOLTS, AND WASHERS.

WISCONSIN DEPT OF TRANSPORTATION
APPROVED Matthew R Rauch for State Traffic Engineer
DATE 2/06/14 PLATE NO. A3-1.14

| NO. | DATE | REVISION |
|---|---|---|
| ⑩ | 1-21-14 | LUBRICATION OF BASE BOLTS |
| ⑨ | 4-26-11 | REMOVE NON-GALVANIZED |
| ⑧ | 10-30-96 | NOT GALVANIZED/GALVANIZED |
| ⑦ | 10-30-92 | QUANT., A588 EXCEPT., ADD SLOT VIEW |
| ⑥ | 8-24-87 | BASE CONN. WELD |
| ⑤ | 10-13-81 | BASE CONN. WELD & FUSE ℄ WASHERS |
| ④ | 10-19-79 | POST A & B, A572 GR. 50, & K |
| ② | 11-28-78 | "K" ③ 4-23-79 TYPE "E" |
| ① | 5-4-78 | $T_1$ , $T_2$ & $W_1$ |

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

TYPE A, B, C, D, & E

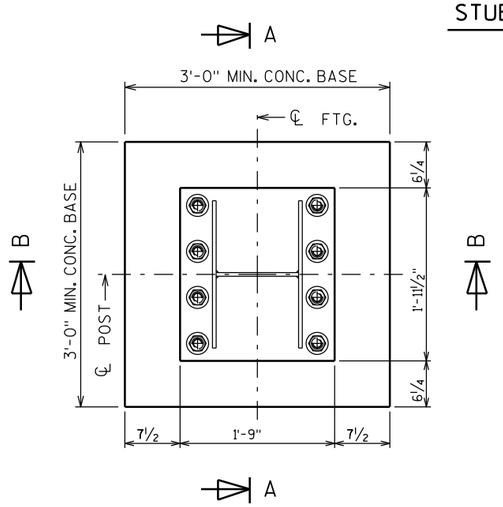
| CONST. SPEC. | DRAWN BY | PLANS CK'D. |
|---|---|---|
| 2011 | JPH | |

FTG. & SIGN SUPPORT DETAILS GROUND MOUNT BREAK-AWAY SIGNS

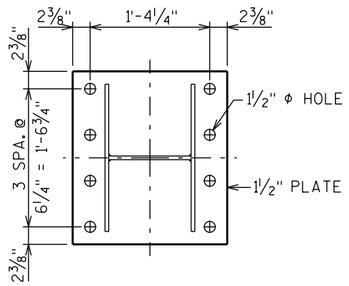
SHEET 179

PROJECT NO: | HWY: | COUNTY: | SHEET NO: E

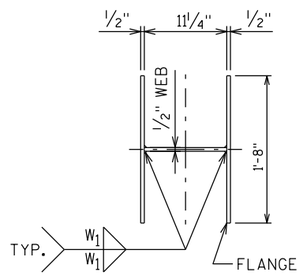
## STUB AND MASONRY ANCHOR DETAILS




STUB SECTION



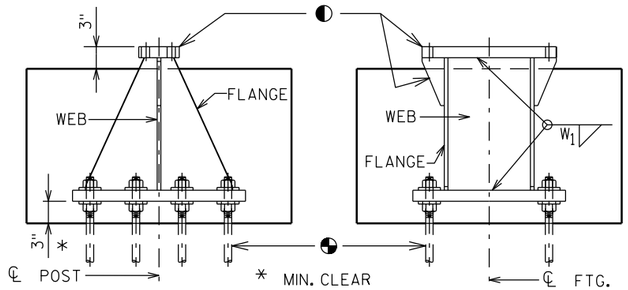

BASE PLATE



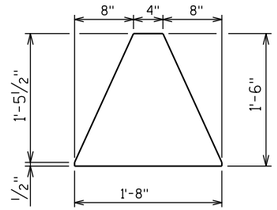

STUB

◐ SEE PLATE NO. A3-1 FOR DETAILS

◒ MASONRY ANCHORS TYPE S 1¼-INCHES (ADHESIVE). ALLOWABLE PULL OUT CAPACITY 14,995 KIPS. EMBED 1'-3" IN ROCK.




SECTION A SECTION B



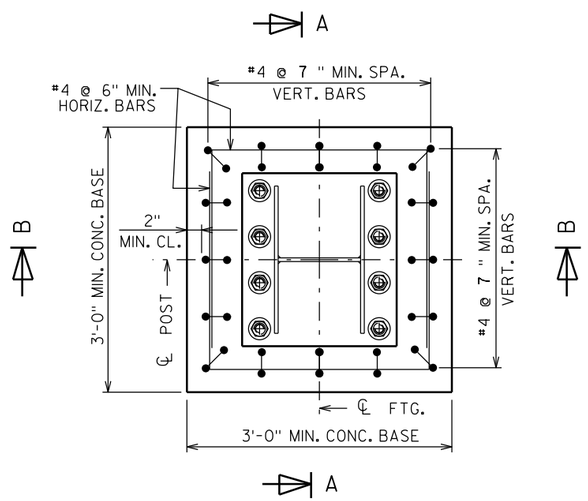

FLANGE

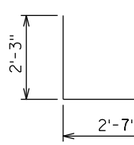
### GENERAL NOTES

1. Quantities per Base:
   - REINFORCING BAR STEEL = 62 LBS
   - CONCRETE = 0.6 C.Y.
   - STEEL WEIGHT = 335 LBS
2. All materials, except anchor rod, nuts and washers, are to be A.S.T.M. A709 grade 50. All materials to be galvanized after fabrication.
3. If the contractor encounters rock before reaching the footing depth, per the A3-1 Sign Detail, determine the pull-out capacity of a test adhesive anchor installed in the rock. If the test result equals or exceeds the pull-out capacity of 14,995 KIPS, the contractor may install the breakaway stub for rock, according to this detail.

## CONCRETE BASE AND REINFORCING STEEL DETAILS

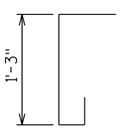
### CONCRETE BASE SECTION



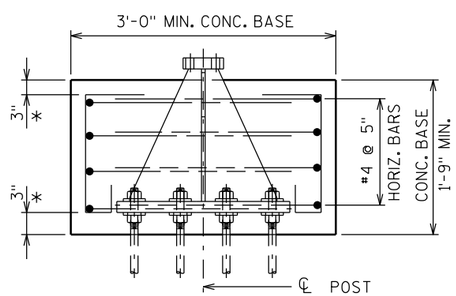

HORIZONTAL BAR

8 BARS @ 6'-11" LENGTH



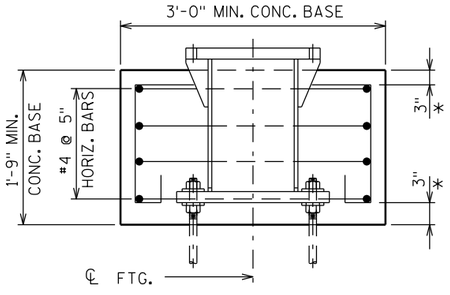

VERTICAL BARS

16 BARS @ 2'-4" LENGTH
MAY BE PLACED IN SKEW
FOR CLEARANCE NEED




SECTION A

* MIN. CLEAR




SECTION B

ALTERNATE BREAK-AWAY BASE ON ROCK
A3-1M

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

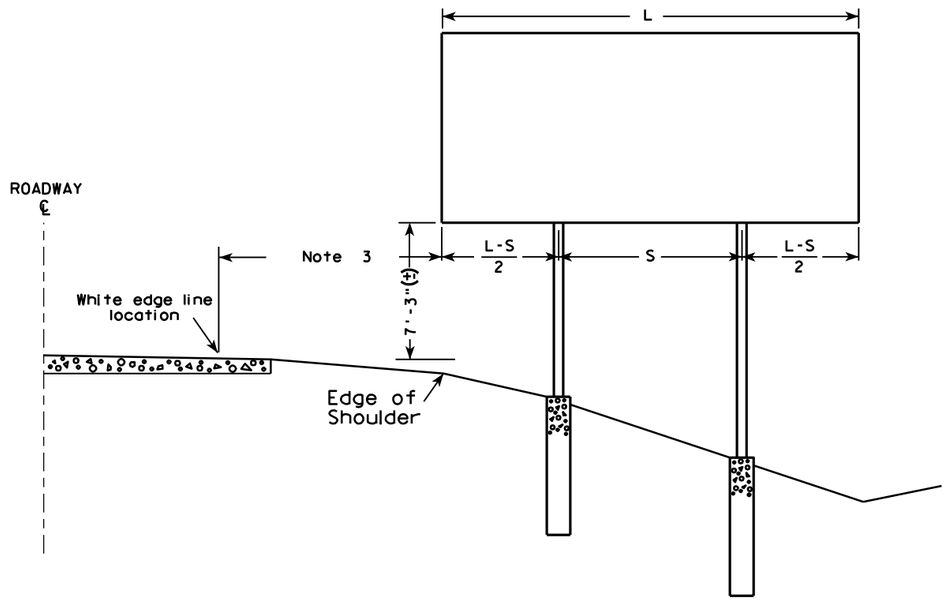
DATE 2/06/2014 PLATE A3-1M.1

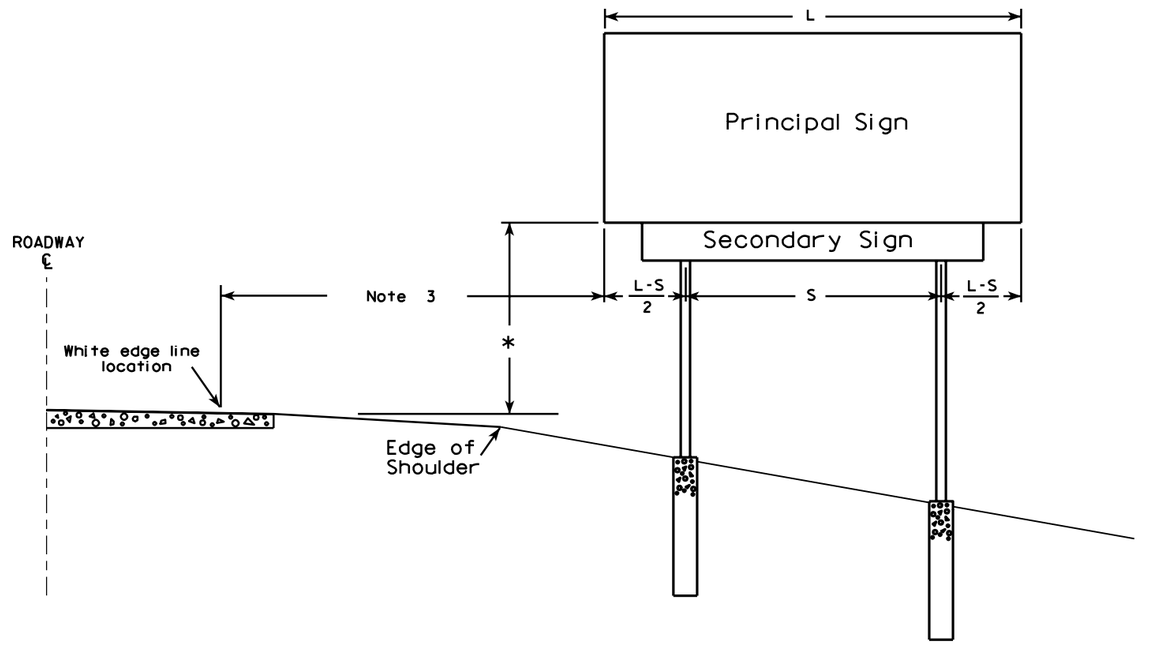


| PROJECT NO: | HWY: | COUNTY: | | SHEET NO: | E |
|---|---|---|---|---|---|

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\A31M.DGN PLOT DATE : 10-MAR-2014 15:16 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 1.556674:1.000000

WISDOT/CADDS SHEET 42




## GENERAL NOTES

1. For a 2 post installation, S equals 3L/5, but shall not be less than 9 ft.
2. For a 3 post installation, S equals 5L/7, but shall not be less than 18 ft., and the space between any two posts shall not be less than 9 ft.
3. Unless noted in the plan, the sign offset distance shall be a minimum of 17'-6", desirable 30'-0".
4. The (±) tolerance shown on this sheet is 3 in.
5. The vertical sign height clearance detailed is measured from the bottom of the sign to the near edge of pavement.
6. Post lengths shown in the miscellaneous quantities are estimated lengths. The contractor shall verify post lengths at the time of final grading.
7. Refer to the Traffic Guidelines Manual for further guidance on minimum vertical clearance requirements.

* Clearance is 8'-3"(±) when the secondary sign is 3 ft. or less in height. For secondary signs larger than 3 ft., the clearance to the bottom of the secondary sign shall be 5'-3"(±).

7

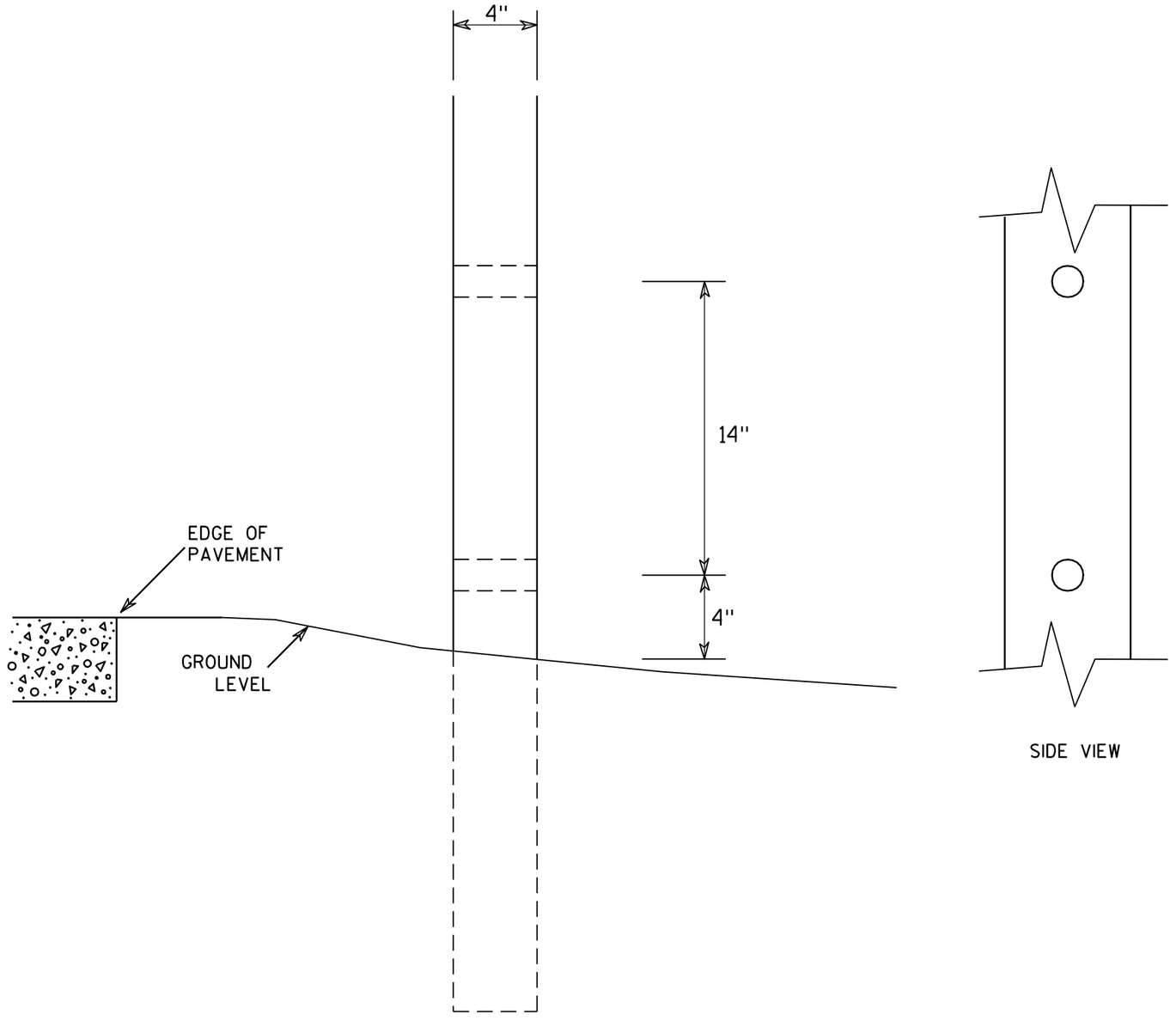
7

# TYPICAL INSTALLATION OF TYPE I SIGNS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/02/08 PLATE NO. A4-1.9






SIDE VIEW

GENERAL NOTES

1. All 4 x 6 Wood Posts shall be modified by having two 1½" diameter holes drilled perpendicular to the roadway centerline.

7

7

# 4 X 6 WOOD POST MODIFICATIONS

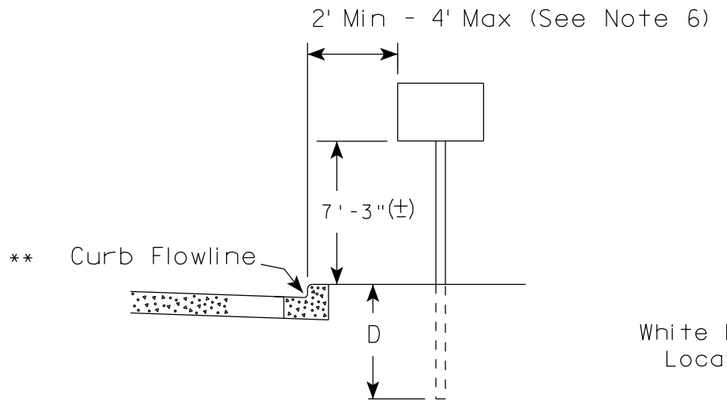
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spang for State Traffic Engineer

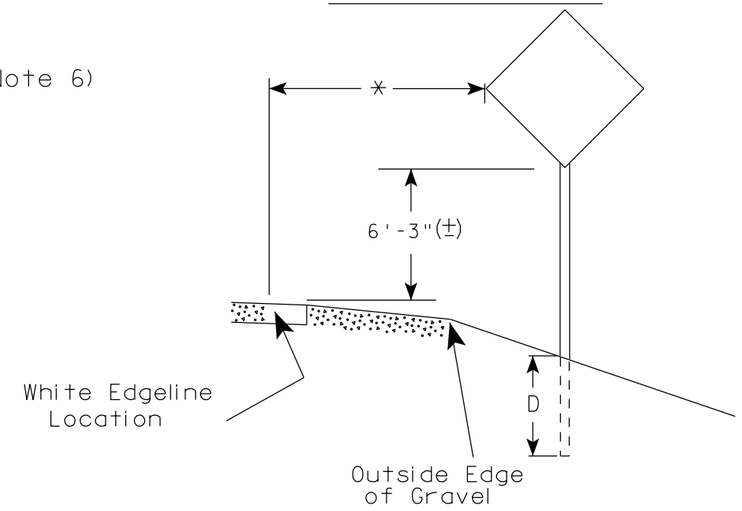
DATE 3/27/97 PLATE NO. A4-11.2

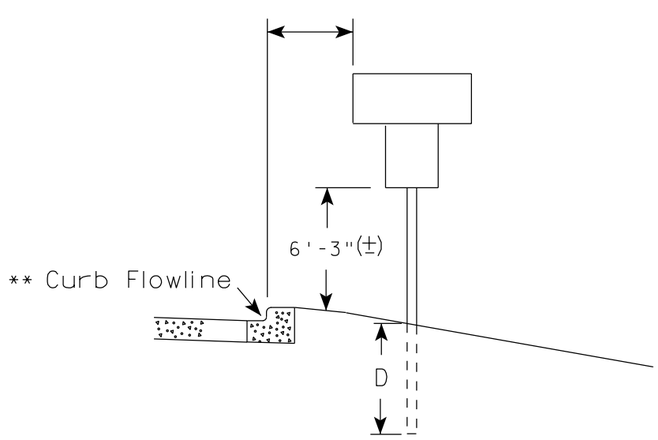
| PROJECT NO: | HWY: | COUNTY: | | SHEET NO: 182 | E |
|---|---|---|---|---|---|

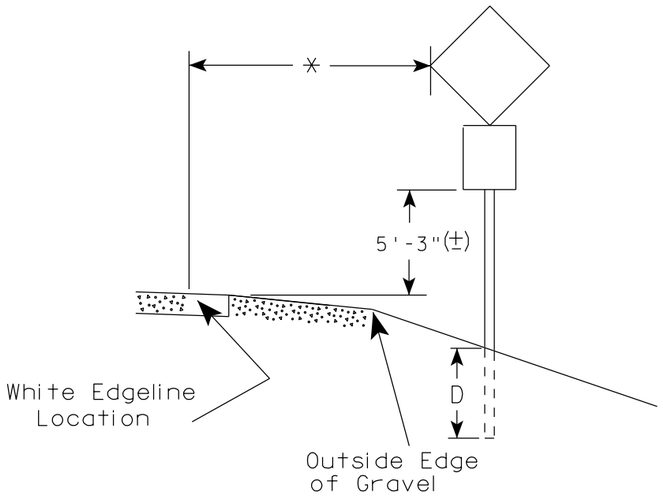
## URBAN AREA




## RURAL AREA (See Note 2)




** The existence of curb and gutter does not in itself mandate the vertical clearance illustrated. That height is typically measured where there is sidewalk adjacent to the roadway or parking is permitted. In the absence of sidewalk vertical clearance is measured from the top of the curb. Offset of signs is measured from the flow line.

* 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.

## GENERAL NOTES

1. Signs wider than 4 feet, 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.
2. If signs are mounted on barrier wall, see A4-10 sign plate.
3. For expressways and freeways, mounting height is 7'- 3" (±) or 6'-3" (±) depending upon existence of a sub-sign.
4. Minimum mounting height for J assemblies (A4-5) is 7'-3" (±) or 6'-3" (±) per urban or rural detail respectively.
5. Minimum mounting height for signs mounted on traffic signal poles is 5'- 3" (±).
6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
7. The (±) tolerance for mounting height is 3 inches.
8. Folding stop signs (R1-1F) shall be mounted at a height of 5'-3" (±) or as directed by the Engineer.
9. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Enhanced Reference Markers, Clearance Markers (W5-52), Mile Markers (D10 series) & End of Rod Markers (W5-56 & W5-56A) shall be mounted at a height of 4'-3" (+).

## POST EMBEDMENT DEPTH

| Area of Sign Installation ( Sq. Ft. ) | D ( Min ) |
|---|---|
| 20 or Less | 4' |
| Greater than 20 | 5' |

# TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

*WISCONSIN DEPT OF TRANSPORTATION*

APPROVED Matthew R Rauch
for State Traffic Engineer

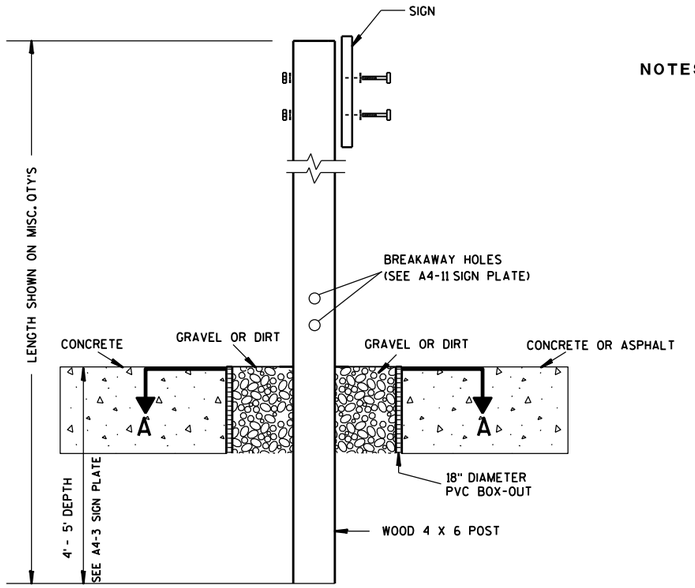
DATE 9/30/13 PLATE NO. A4-3.18



| PROJECT NO: | HWY: | COUNTY: | | SHEET NO: | E |
|---|---|---|---|---|---|



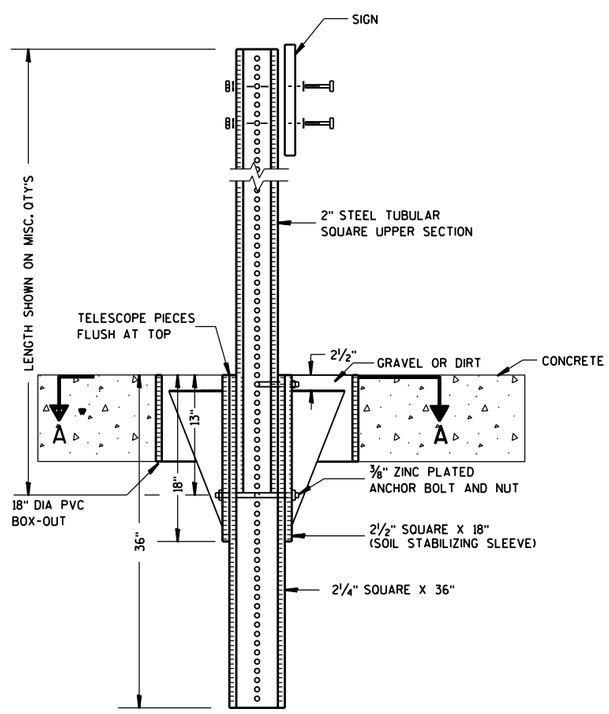

7




**ELEVATION VIEW**

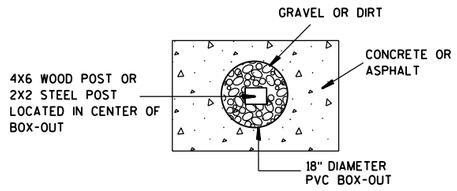
**DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT**

NOTES:
1. ALL MATERIAL TO BE APPROVED BY ENGINEER PRIOR TO INSTALLATION
2. SEE SIGN PLATE A4-8 FOR SIGN HARDWARE REQUIREMENTS
3. 18 INCH X 18 INCH SQUARE BOX-OUTS MAY BE USED FOR INSTALLATIONS IN EXISTING CONCRETE OR ASPHALT LOCATIONS.




**ELEVATION VIEW**

**DETAIL OF STEEL 2 X 2 SIGN POST IN BOX-OUT**




**PLAN VIEW**

**FOR NEW CONCRETE/ASPHALT INSTALLATIONS**

# SIGN POST BOX-OUTS A4-3B

*WISCONSIN DEPT OF TRANSPORTATION*

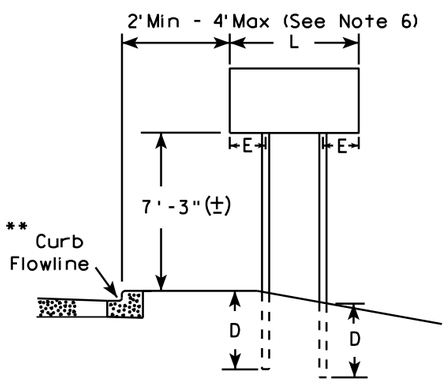
APPROVED Matthew R Rauch
for State Traffic Engineer

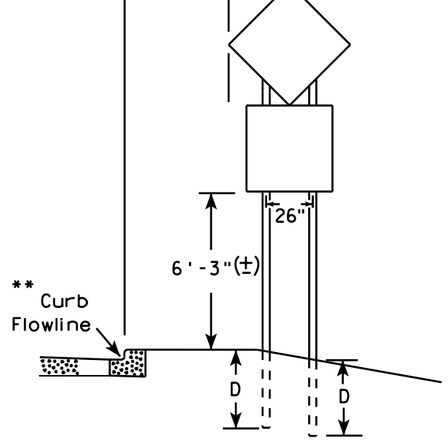
DATE 1/27/14 PLATE NO. A4-3B.1



| PROJECT NO: | HWY: | COUNTY: | | SHEET NO: | E |
|---|---|---|---|---|---|

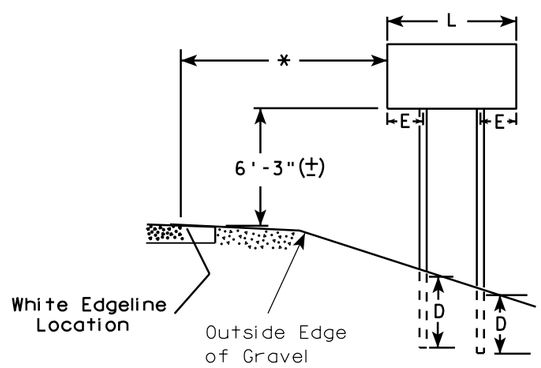
## URBAN AREA

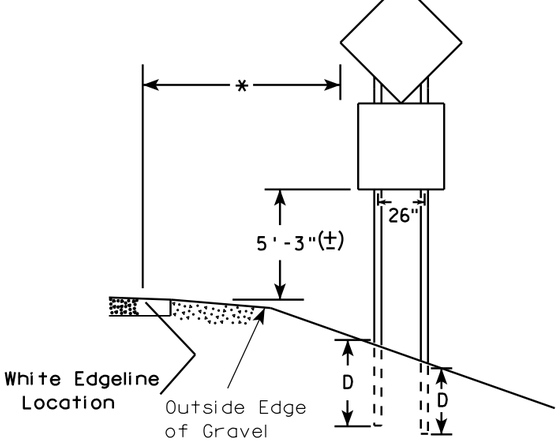


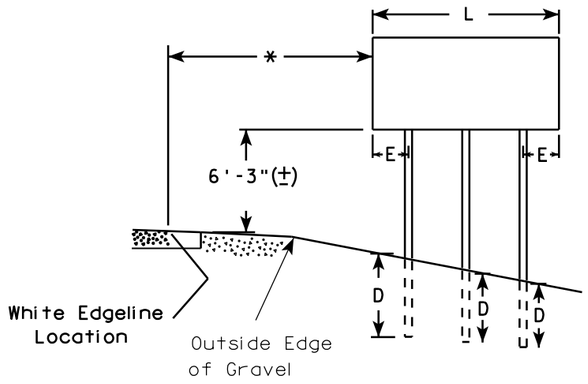

48" DIAMOND WARNING SIGN

## RURAL AREA (See Note 3)




48" DIAMOND WARNING SIGN




### GENERAL NOTES

1. For 3 or 4 post installations, individual post spacing shall be greater than 3'-6".
2. See tables below for required number of posts.
3. For expressways and freeways, mounting height is 7'-3" (±) or 6'-3" (±) depending upon existence of sub-sign.
4. The (±) tolerance for mounting height is 3 inches.
5. Minimum mounting height for J assemblies (A4-5) is 7'-3" (±) or 6'-3" (±) per urban or rural detail respectively.
6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
7. Folding stop signs (R1-1F) shall be mounted at a height of 5'-3" (±) or as directed by the engineer.
8. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Clearance Markers (W5-52), Mile Markers (D10 series) & End of Road Markers (W5-56 & W5-56A) shall be mounted at a height of 4"-3" (±).

* 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.

** The existence of curb and gutter does not in itself mandate the vertical clearance illustrated. That height is typically measured where there is sidewalk adjacent to the roadway or parking is permitted. In the absence of sidewalk vertical clearance is measured from the top of the curb. Offset of signs is measured from the flow line.

*** See A4-3 sign plate for signs 4' or less in width or less than 20 S.F. in area.

| SIGN SHAPE OTHER THAN DIAMOND (TWO POSTS REQUIRED) | |
|---|---|
| L | E |
| Greater than 48" Less than 60" | 12" |
| 60" to 120" | L/5 |

***

| SIGN SHAPE OTHER THAN DIAMOND (THREE POSTS REQUIRED) | |
|---|---|
| L | E |
| Greater than 120" less than 168" | 12" |

| SIGN SHAPE OTHER THAN DIAMOND (FOUR POSTS REQUIRED) | |
|---|---|
| L | E |
| 168" and greater | 12" |

### POST EMBEDMENT DEPTH

| Area of Sign Installation ( Sq. Ft. ) | D ( Min ) |
|---|---|
| 20 or Less | 4' |
| Greater than 20 | 5' |

TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

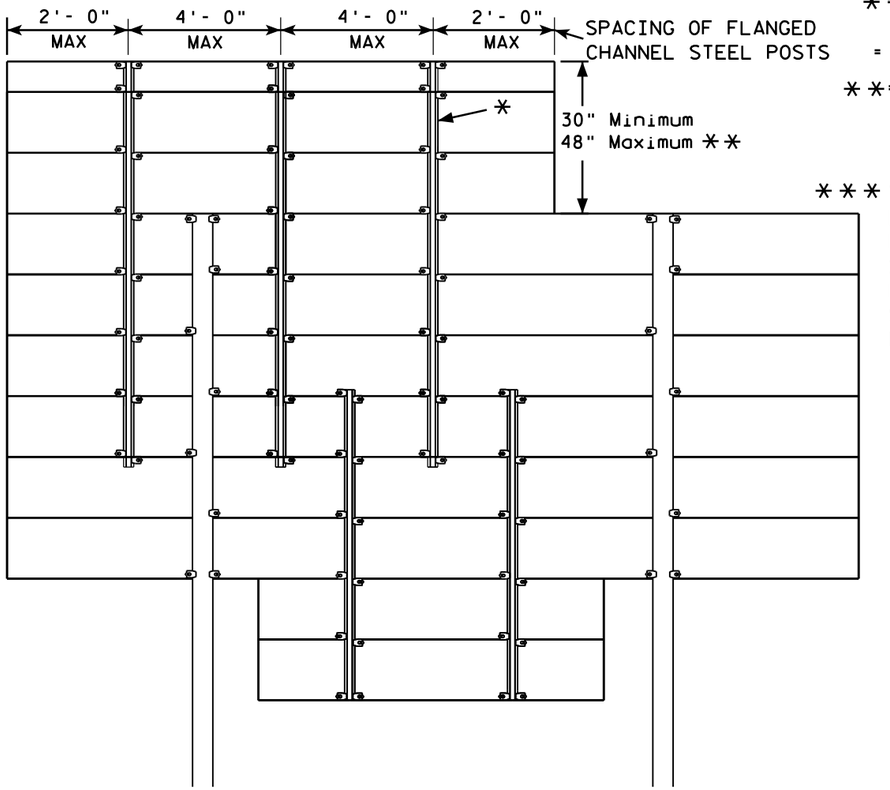
DATE 4/29/14 PLATE NO. A4-4 13



| PROJECT NO: | HWY: | COUNTY: | | SHEET NO: | E |
|---|---|---|---|---|---|

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A44.DGN PLOT DATE : 30-APR-2014 13:10 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 107.021305:1.000000 WISDOT/CADDS SHEET 42

## GROUND MOUNTED SIGN

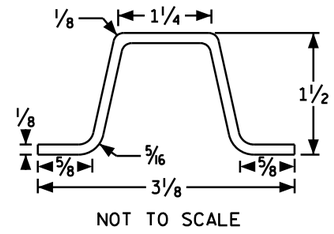



* =2.00 lb/ft FLANGED CHANNEL, MIN. YIELD STRENGTH = 60,000 PSI (GRADE 60) GALVANIZED

** =FOR 48" HEIGHT PANELS ON OVERHEAD STRUCTURES, ENTIRE SIGN SHALL BE CENTERED VERTICALLY ABOUT THE DEPTH OF THE TRUSS.

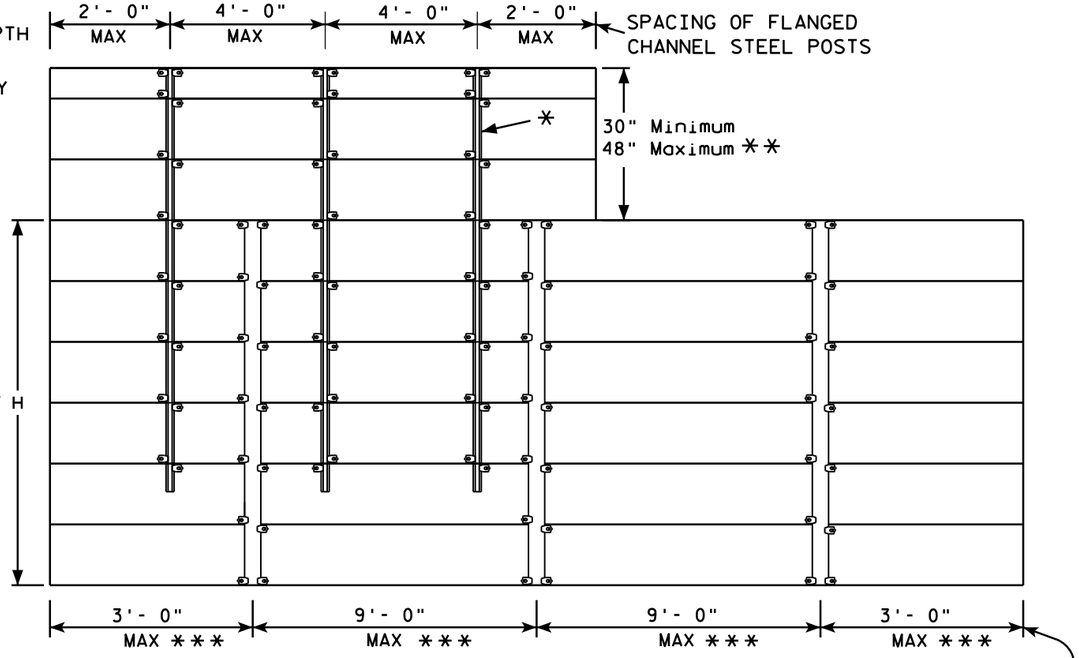
*** THESE SPACING DISTANCES SHALL ONLY BE USED WHEN THE MAIN SIGN HAS A MAXIMUM HEIGHT (DIMENSION H) OF 16 FT OR LESS. FOR SIGNS WITH A HEIGHT OF GREATER THAN 16 FT, STRUCTURAL CALCULATIONS SHALL BE PERFORMED.

### FLANGE CHANNEL DETAIL




NOT TO SCALE

## SIGN BRIDGE MOUNTED SIGN




SPACING OF ALUMINUM SIGN SUPPORTS
5" X 3.5" X 3.7 LBS./ft.

### GENERAL NOTES

1. Flanged channel steel posts shall conform to size and material above, and shall be considered as incidental to other items in the contract.
2. Number of Flanged channel steel supports varies with length of panel and shall be spaced as shown:

   PANEL LENGTH 8'-0" OR LESS = 2 CHANNELS
   PANEL LENGTH 9'- 0" - 12'- 0" = 3 CHANNELS
   PANEL LENGTH 13'- 0" OR MORE = 4 CHANNELS

   If the flanged channel steel posts can not be horizontally spaced as shown, they can be moved so as to securely hold the sign.
3. The EXIT NUMBER PANEL shall normally be positioned above the guide sign aligned with the right edge of the guide sign. If the guide sign indicates a left exit, the EXIT NUMBER PANEL shall be aligned with the left edge of the guide sign.
4. If the bolt holes in the top panel (EXIT NUMBER), or sub panel (NEXT EXIT) line up with holes in main sign panel, stitch bolts shall be used in addition to the channels.
5. Provide post clips for each sign as shown. (Please note the differences between a ground mounted versus Sign bridge mounted sign as far as number of clips required on the main supports or beams)
6. Structural steel sign supports shall extend to the top of the main signs, as shown on the above details.

# ATTACHMENT OF GUIDE SIGNS TO SUPPORTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/05/13 PLAT A4-6.12

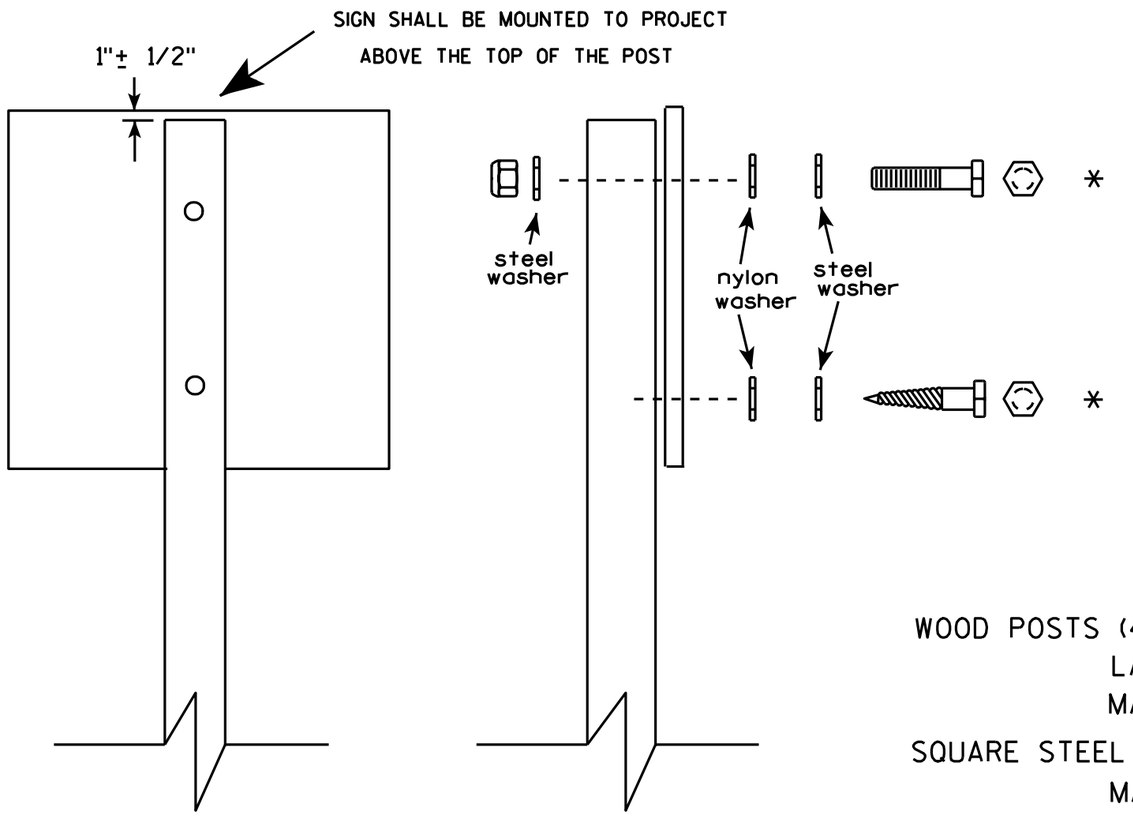


PROJECT NO: | SHEET NO: E



FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A46.DGN PLOT DATE : 05-DEC-2013 12:47 PLOT BY : mscsja

WISDOT/CADDS SHEET 42




Nuts, bolts and lags used for mounting signs shall have hexagonal heads and shall be either :

a. Hot dip galvanized in accordance with ASTM Designation: A 153, Class D, or SC 3

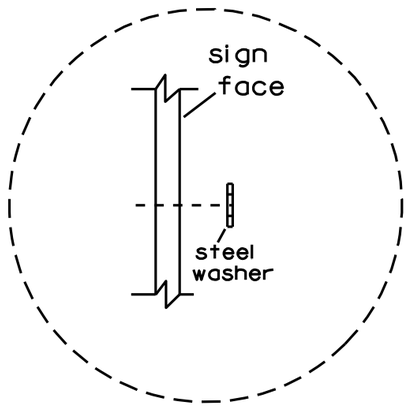
b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.

Threads on bolts and nuts shall be manufactured with sufficient allowance for the cadmium plate or galvanized coating to permit the nuts to run freely on the bolts.

WOOD POSTS (4" x 4" or 4" x 6")
LAG SCREWS - 3/8" X 3"
MACHINE BOLTS - 5/16" X 6-1/2" or 7" Length w/ nuts

SQUARE STEEL POSTS (2" x 2")
MACHINE BOLTS - 3/8" X 3-1/4" Length w/ nuts
RIVETS - 9/32 " (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL
O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH

WASHERS (ALL POSTS) -
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON for all Type H signs.




Washer Placement when Sign Has Other Than Type H or Type F Face

* Two different fastening systems are shown for illustration purposes. On any individual sign, either one or the other system shall be used. Actual number of fasteners per sign varies with the sign area, but normally there are two. For a single post installation, all signs greater than 9 sq. ft. require the use of 3 fasteners.

# ATTACHMENT OF SIGNS TO POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/23/10 PLATE NO. A4-8.7

7

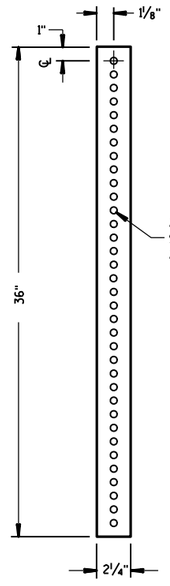
7

PROJECT NO:

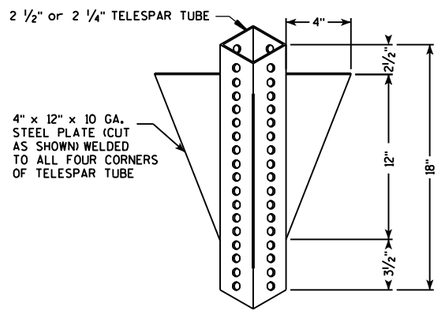
SHEET NO: 187 E

## TELESCOPIC TUBING ANCHORS
## TWO PIECE SYSTEM

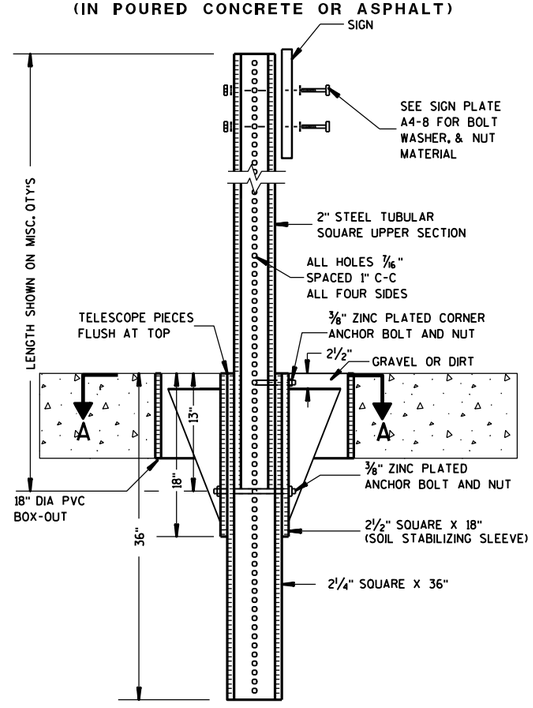
**2 1/4 " SQUARE**
**12 GAUGE**
**PERFORATED**
**GALVANIZED FINISH**



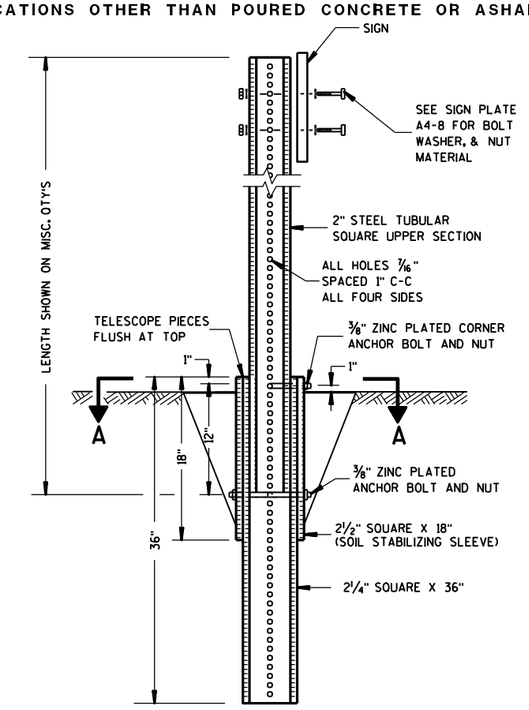

**2 1/2 " SQUARE**
**12 GAUGE**
**OMNI-DIRECTIONAL**
**PERFORATED**
**SOIL STABILIZING SLEEVE**
**GALVANIZED FINISH**

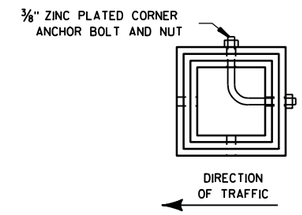



## DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)




## DETAIL OF TUBULAR STEEL SIGN POST
(IN LOCATIONS OTHER THAN POURED CONCRETE OR ASHALT)




SECTION A-A

| Area of Sign Installation (Sq. Ft.) | Number of Required Posts |
|---|---|
| 9 or less | 1 |
| Greater than 9 less than or equal to 18 | 2 |
| Greater than 18 less than or equal to 27 | 3 |

**Signs wider than 3 feet or larger than 9 sq. ft shall be mounted on multiple posts (see above table).**

# TUBULAR STEEL SIGN POST A4-9

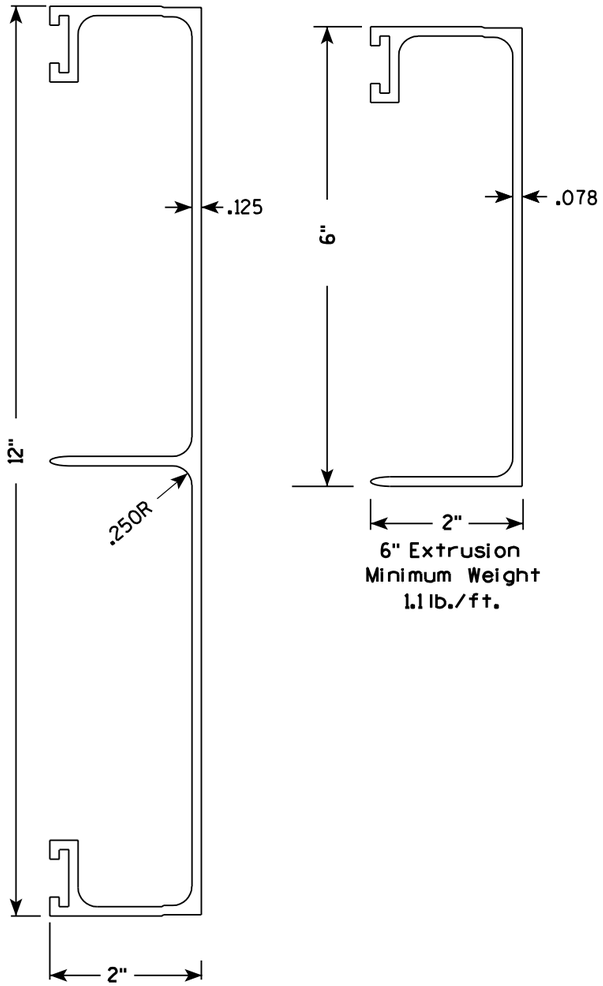
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/30/12 PLATE NO. A4-9.7

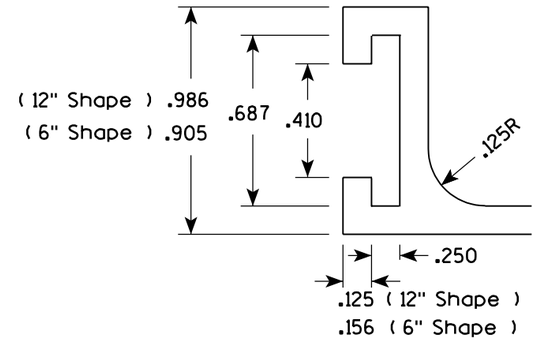
| PROJECT NO: | HWY: | COUNTY: | | SHEET NO: 188 | E |
|---|---|---|---|---|---|

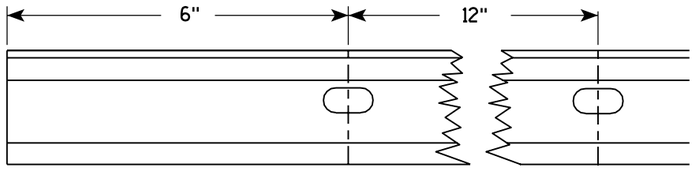
## Extruded Shape



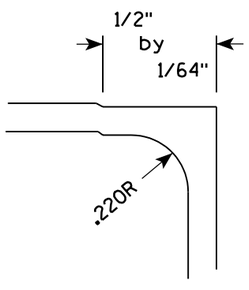







Punch 7/16" x 7/8" oval holes beginning 6" in from end of extrusion 12" CC on both edges of 6" and 12" panels.

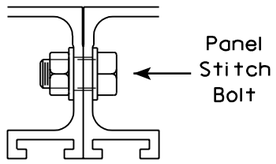



## Hardware

### STITCH BOLT, WASHER & NUT

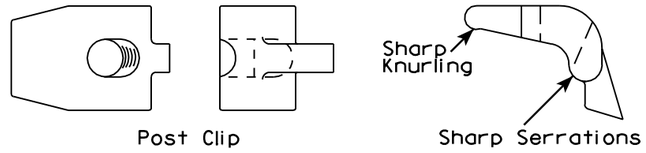
The hardware includes:

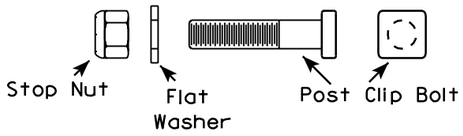
3/8 " - 16 X 3/4 " Economy Bolt 2024-T4 alloy
3/8 " - Stainless steel stop nut
3/8" X .064 Flat Washers, Alclad 2024-T4 alloy




### POST CLIP, POST CLIP BOLT, WASHER & NUT

Post Clip shall be Alum. Alloy 356-T6
Post Clip Bolt shall be Stainless Steel.
Flat washer shall be 3/8" X .091, Stainless Steel.
Stop nut shall be stainless steel.




### NOTES

1. The contractor may select any brand of extrusion that conforms to the illustrations or meets with the approval of the engineer, but all extrusions used on this contract shall be of the same brand.
2. Panel Stitch Bolts shall be used to assemble adjacent panels. Maximum stitch bolt spacing shall be 24" C-C, and a minimum of 4 bolts shall be used to connect any two extrusions.
3. Post Clips shall be used to attach the sign panel to the sign support.

# ALUMINUM EXTRUSIONS FOR TYPE I SIGNS

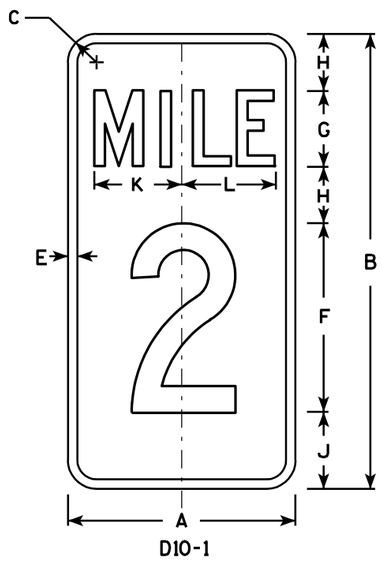
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spang
for State Traffic Engineer

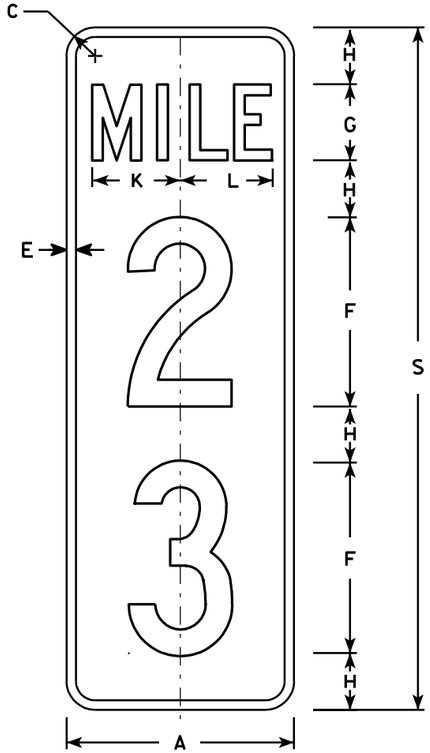
DATE 11/18/99 PLATE NO. A5-2.9

PROJECT NO:

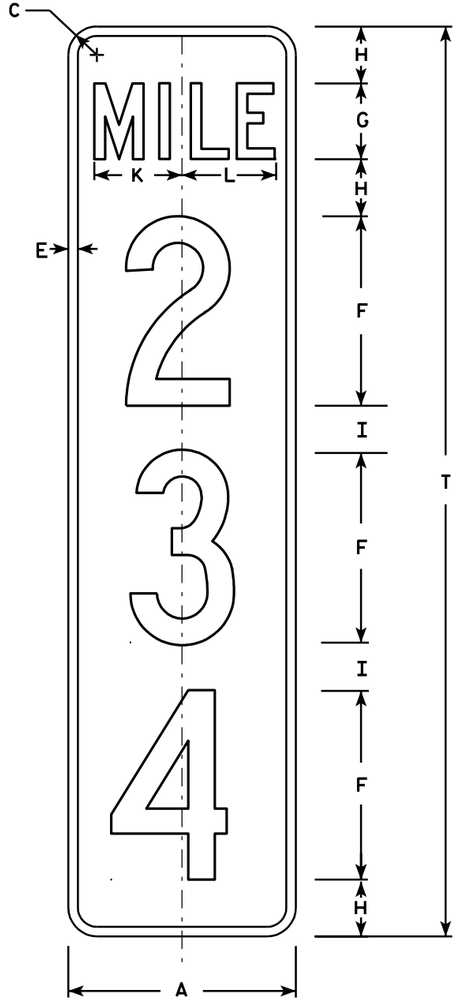
SHEET NO: 189 E



D10-1



D10-2



D10-3

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Green
   Message - White - Type H Reflective
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Optically adjust numerals about the centerline of the sign to achieve proper balance.

Metric equivalent for this sign is:

| PHY. SIZE | |
|---|---|
| 12 X 24 | 300 mm X 600 mm |
| 12 X 36 | 300 mm X 900 mm |
| 12 X 48 | 300 mm X 1200 mm |
| | |
| | |

| SIZE | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | 12 | 24 | 1 ½ | | ½ | 10 | 4 | 3 | 2 ½ | 4 | 4 ⅝ | 4 ⅞ | | | | | | | 36 | 48 | | | | | | |
| 5 | 12 | 24 | 1 ½ | | ½ | 10 | 4 | 3 | 2 ½ | 4 | 4 ⅝ | 4 ⅞ | | | | | | | 36 | 48 | | | | | | |

| D10-1 | D10-2 | D10-3 |
|---|---|---|
| Area sq. ft. | Area sq. ft. | Area sq. ft. |
| 2.0 | 3.0 | 4.0 |
| Area m2 | Area m2 | Area m2 |
| .19 | .28 | .38 |
| | | |

STANDARD SIGN
D10-1 , D10-2 & D10-3

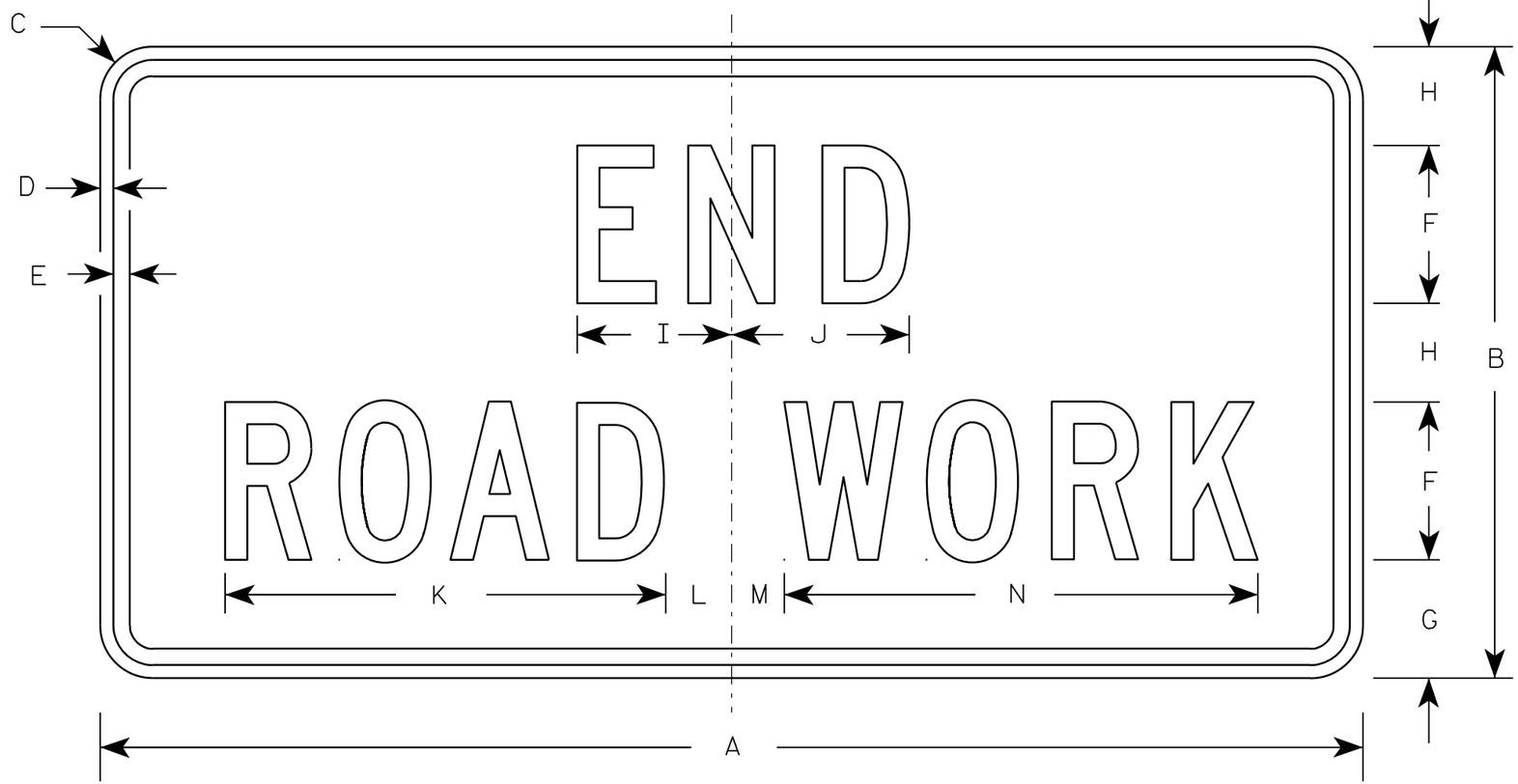
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spang for Director, Office of Traffic

DATE 1/16/02 PLATE NO. D10-3.2

PROJECT NO:

SHEET NO: 190 E




G20-2A

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

Metric equivalent for this sign is:

| SIZE | |
|---|---|
| 1 | 900 mm X 450 mm |
| 2 | 1200 mm X 600 mm |
| 3 | 1200 mm X 600 mm |
| 4 | 1200 mm X 600 mm |
| 5 | 1200 mm X 600 mm |

| SIZE | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area sq. ft. | Area m2 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 36 | 18 | 1 1/8 | 3/8 | 1/2 | 4 | 3 3/4 | 2 1/2 | 4 1/8 | 4 1/8 | 11 1/8 | 2 | 1 | 12 1/8 | | | | | | | | | | | | | 4.5 | 0.41 |
| 2 | 48 | 24 | 1 1/2 | 1/2 | 5/8 | 6 | 4 1/2 | 3 3/4 | 5 7/8 | 6 3/4 | 16 3/4 | 2 1/2 | 1 3/4 | 18 1/2 | | | | | | | | | | | | | 8.0 | 0.72 |
| 3 | 48 | 24 | 1 1/2 | 1/2 | 5/8 | 6 | 4 1/2 | 3 3/4 | 5 7/8 | 6 3/4 | 16 3/4 | 2 1/2 | 1 3/4 | 18 1/2 | | | | | | | | | | | | | 8.0 | 0.72 |
| 4 | 48 | 24 | 1 1/2 | 1/2 | 5/8 | 6 | 4 1/2 | 3 3/4 | 5 7/8 | 6 3/4 | 16 3/4 | 2 1/2 | 1 3/4 | 18 1/2 | | | | | | | | | | | | | 8.0 | 0.72 |
| 5 | 48 | 24 | 1 1/2 | 1/2 | 5/8 | 6 | 4 1/2 | 3 3/4 | 5 7/8 | 6 3/4 | 16 3/4 | 2 1/2 | 1 3/4 | 18 1/2 | | | | | | | | | | | | | 8.0 | 0.72 |

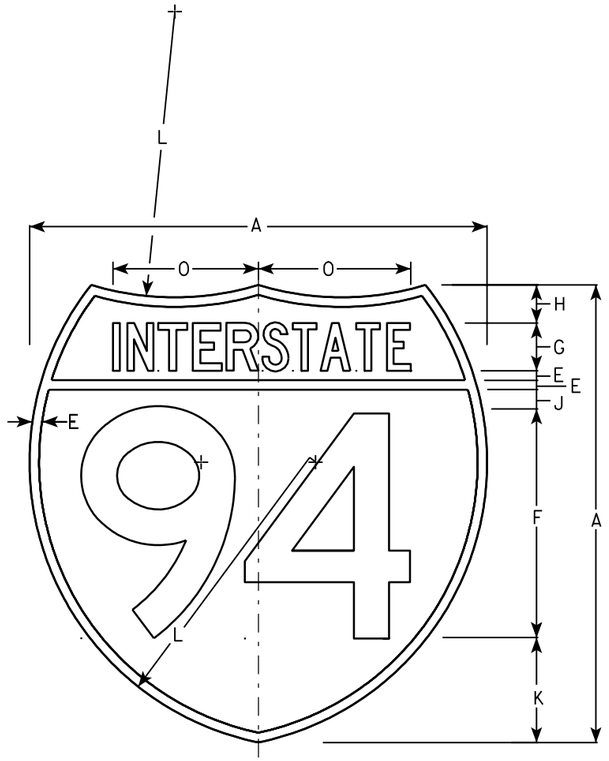
STANDARD SIGN
G20-2A

WISCONSIN DEPT OF TRANSPORTATION

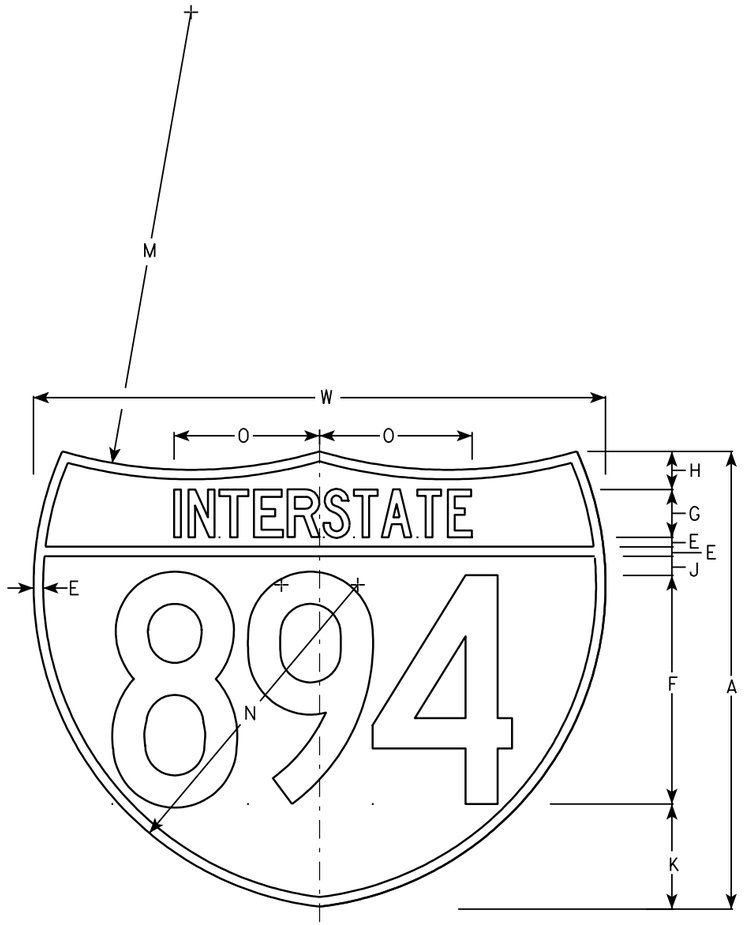
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 9/30/09 PLATE NO. G20-2A.8

| PROJECT NO: | HWY: | COUNTY: | | SHEET NO: 191 | E |
|---|---|---|---|---|---|




M1-1




M1-1A

NOTES

1. Sign is Type II - See Note 6 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Top Red - Bottom Blue (See Note 6)
   Message - White - See Note 6
3. Message Series - See note 5
4. Substitute appropriate numerals & ajust spacing as per plate A10-1.
5. M1-1 - Numerals - D
   Interstate - C
   M1-1A - All copy - C
6. Permanent Signs
   Message - Type H Reflective
   Detour or other temporary signs
   Background - Reflective
   Message - Reflective

Metric equivalent for these signs are:

| SIZE | M1-1 | SIZE | M1-1A |
|---|---|---|---|
| 1 | | | |
| 2 | 600 mm X 600 mm | 2 | 600 mm X 750 mm |
| 3 | 900 mm X 900 mm | 3 | 900 mm X 1125 mm |
| 4 | 900 mm X 900 mm | 4 | 900 mm X 1125 mm |
| 5 | 900 mm X 900 mm | 5 | 900 mm X 1125 mm |

| SIZE | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | M1-1 Area sq. ft. | M1-1A Area sq. ft. | M1-1 Area m2 | M1-1A Area m2 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | 24 | | | | 1/2 | 12 | 2 1/2 | 2 | | 1 | 5 1/2 | 15 | 24 | 17 | 7 7/8 | | | | | | | | 30 | | | 3.13 | 3.91 | .36 | .46 |
| 3 | 36 | | | | 3/4 | 18 | 3 3/4 | 3 | | 1 1/2 | 8 1/4 | 22 1/2 | 36 | 25 1/2 | 11 3/4 | | | | | | | | 45 | | | 7.03 | 8.79 | .81 | 1.05 |
| 4 | 36 | | | | 3/4 | 18 | 3 3/4 | 3 | | 1 1/2 | 8 1/4 | 22 1/2 | 36 | 25 1/2 | 11 3/4 | | | | | | | | 45 | | | 7.03 | 8.79 | .81 | 1.05 |
| 5 | 36 | | | | 3/4 | 18 | 3 3/4 | 3 | | 1 1/2 | 8 1/4 | 22 1/2 | 36 | 25 1/2 | 11 3/4 | | | | | | | | 45 | | | 7.03 | 8.79 | .81 | 1.05 |

INTERSTATE ROUTE MARKER
M1-1 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

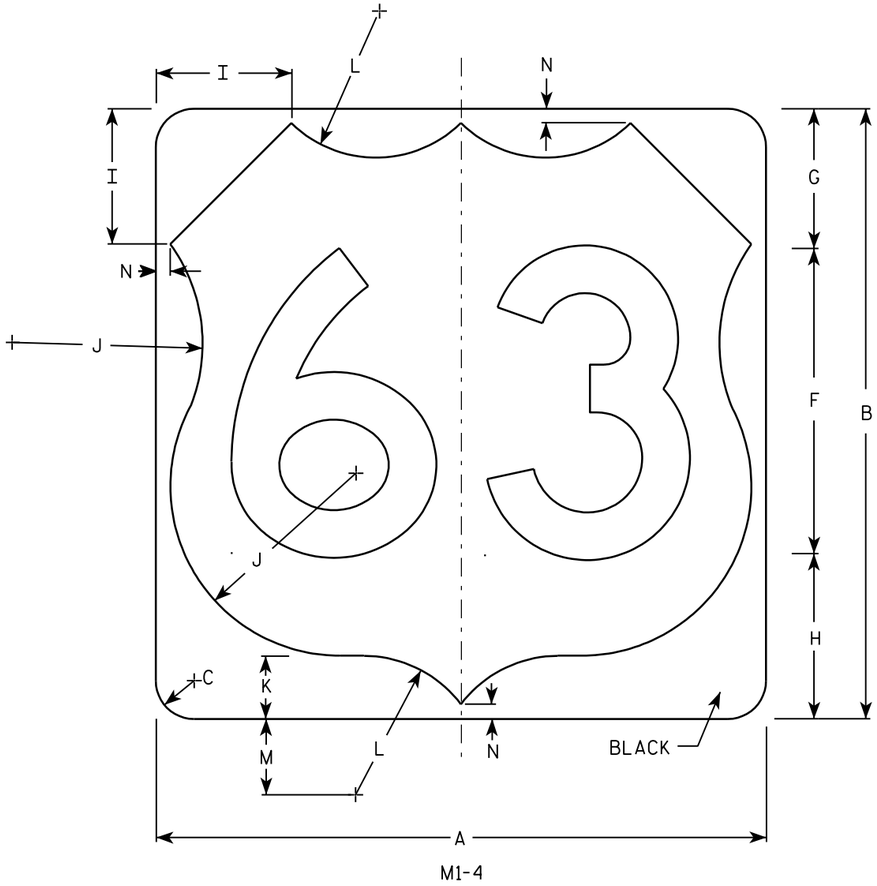
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 08/23/05 PLATE NO. M1-1.8

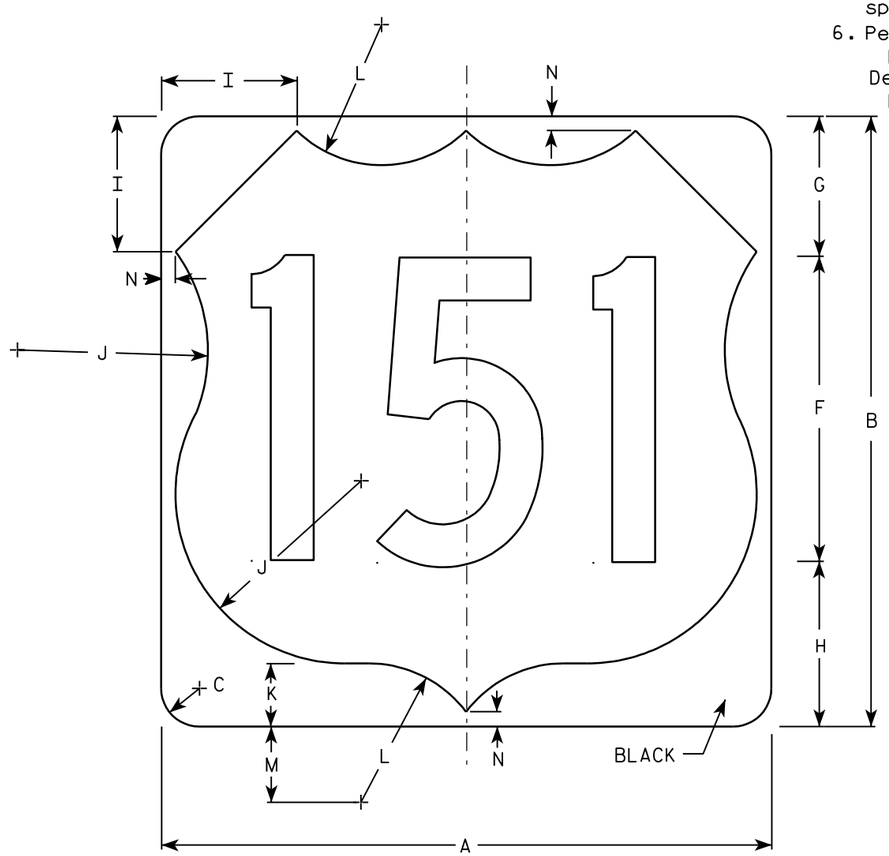
| PROJECT NO: | HWY: | COUNTY: | | SHEET NO: 192 | E |
|---|---|---|---|---|---|

NOTES

1. Sign is Type II - See Note 6 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White & Black - See Note 6
   Message - Black
3. Message Series - See note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate numerals and adjust spacing as per Plate A10-1.
6. Permanent Signs
   Background - Type H Reflective
   Detour or other temporary signs
   Background - Reflective




M1-4




M1-4

Metric equivalent for this sign is:

| SIZE | |
|---|---|
| 1 | |
| 2 | 600 mm X 600 mm |
| 3 | 900 mm X 900 mm |
| 4 | 900 mm X 900 mm |
| 5 | 900 mm X 900 mm |

| SIZE | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area sq. ft. | Area m2 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | 24 | 24 | 1 1/2 | | | 12 | 5 1/2 | 6 1/2 | 5 | 7 1/2 | 2 1/2 | 5 1/2 | 3 | 1/2 | | | | | | | | | | | | | 4.0 | .36 |
| 3 | 36 | 36 | 2 1/4 | | | 18 | 8 1/4 | 9 1/4 | 7 1/4 | 11 1/4 | 3 3/4 | 8 1/4 | 4 1/2 | 3/4 | | | | | | | | | | | | | 9.0 | .81 |
| 4 | 36 | 36 | 2 1/4 | | | 18 | 8 1/4 | 9 1/4 | 7 1/4 | 11 1/4 | 3 3/4 | 8 1/4 | 4 1/2 | 3/4 | | | | | | | | | | | | | 9.0 | .81 |
| 5 | 36 | 36 | 2 1/4 | | | 18 | 8 1/4 | 9 1/4 | 7 1/4 | 11 1/4 | 3 3/4 | 8 1/4 | 4 1/2 | 3/4 | | | | | | | | | | | | | 9.0 | .81 |

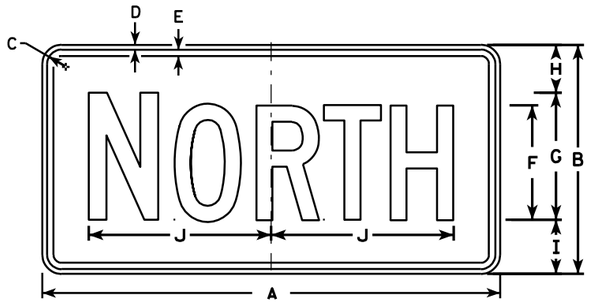
# USH MARKER
# M1-4 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

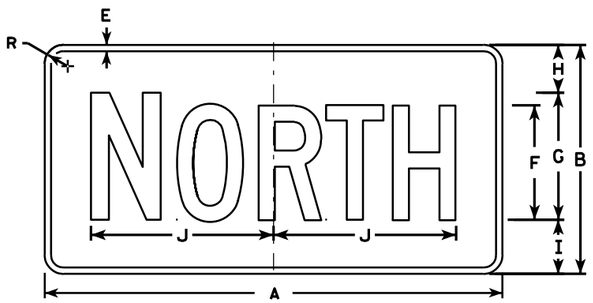
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 08/25/05 PLATE NO. M1-4.9

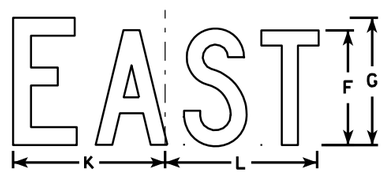
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 193 | E




M3-1
MK3-1
MO3-1



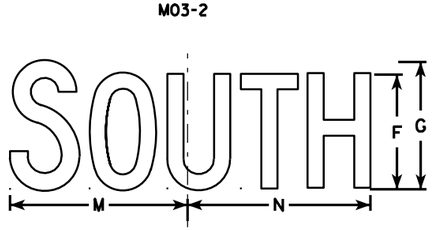

MB3-1
MG3-1
MM3-1
MN3-1



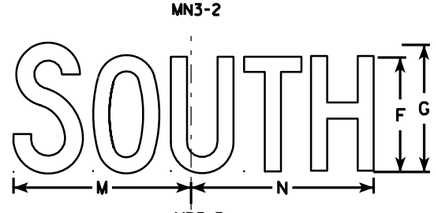

M3-2
MK3-2
MO3-2



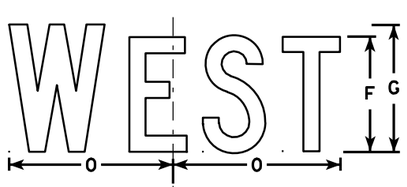

MB3-2
MG3-2
MM3-2
MN3-2



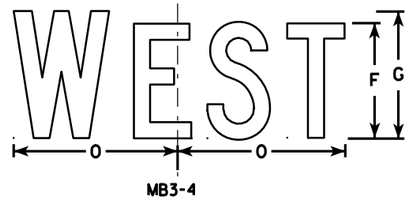

M3-3
MK3-3
MO3-3




MB3-3
MG3-3
MM3-3
MN3-3




M3-4
MK3-4
MO3-4




MB3-4
MG3-4
MM3-4
MN3-4

## NOTES

1. All Signs Type II - See Note 5 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - See note 5
   Message - See note 5
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. M3-1 thru M3-4 Background - White - Type H Reflective
   (Detour or temporary signs - Reflective)
   Message - Black
   MB3-1 thru MB3-4 Background - Blue
   Message - White - Type H Reflective
   (Detour or temporary signs - Reflective)
   MG3-1 thru MG3-4 Background - Green
   Message - White - Type H Reflective
   MK3-1 thru MK3-4 Background - Green
   Message - White - Type H Reflective
   MM3-1 thru MM3-4 Background - White - Type H Reflective
   Message - Green
   MN3-1 thru MN3-4 Background - Brown
   Message - White - Type H Reflective
   M03-1 thru M03-4 Background - Orange - Reflective
   Message - Black
6. Note the first letter of each direction is larger than the remainder of the message.

| SIZE | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area sq. ft. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | 24 | 12 | 1 1/8 | 3/8 | 3/8 | 6 | 7 | 2 1/4 | 2 3/4 | 10 1/4 | 7 7/8 | 8 3/8 | 10 1/4 | 9 3/4 | 8 3/4 | | | 1 1/2 | | | | | | | | | 2.00 |
| 3 | 36 | 18 | 1 1/8 | 3/8 | 1/2 | 9 | 10 | 3 3/4 | 4 1/4 | 14 3/8 | 12 | 12 1/8 | 14 | 14 1/8 | 13 | | | 1 1/2 | | | | | | | | | 4.5 |
| 4 | 36 | 18 | 1 1/8 | 3/8 | 1/2 | 9 | 10 | 3 3/4 | 4 1/4 | 14 3/8 | 12 | 12 1/8 | 14 | 14 1/8 | 13 | | | 1 1/2 | | | | | | | | | 4.5 |
| 5 | 36 | 18 | 1 1/8 | 3/8 | 1/2 | 9 | 10 | 3 3/4 | 4 1/4 | 14 3/8 | 12 | 12 1/8 | 14 | 14 1/8 | 13 | | | 1 1/2 | | | | | | | | | 4.5 |

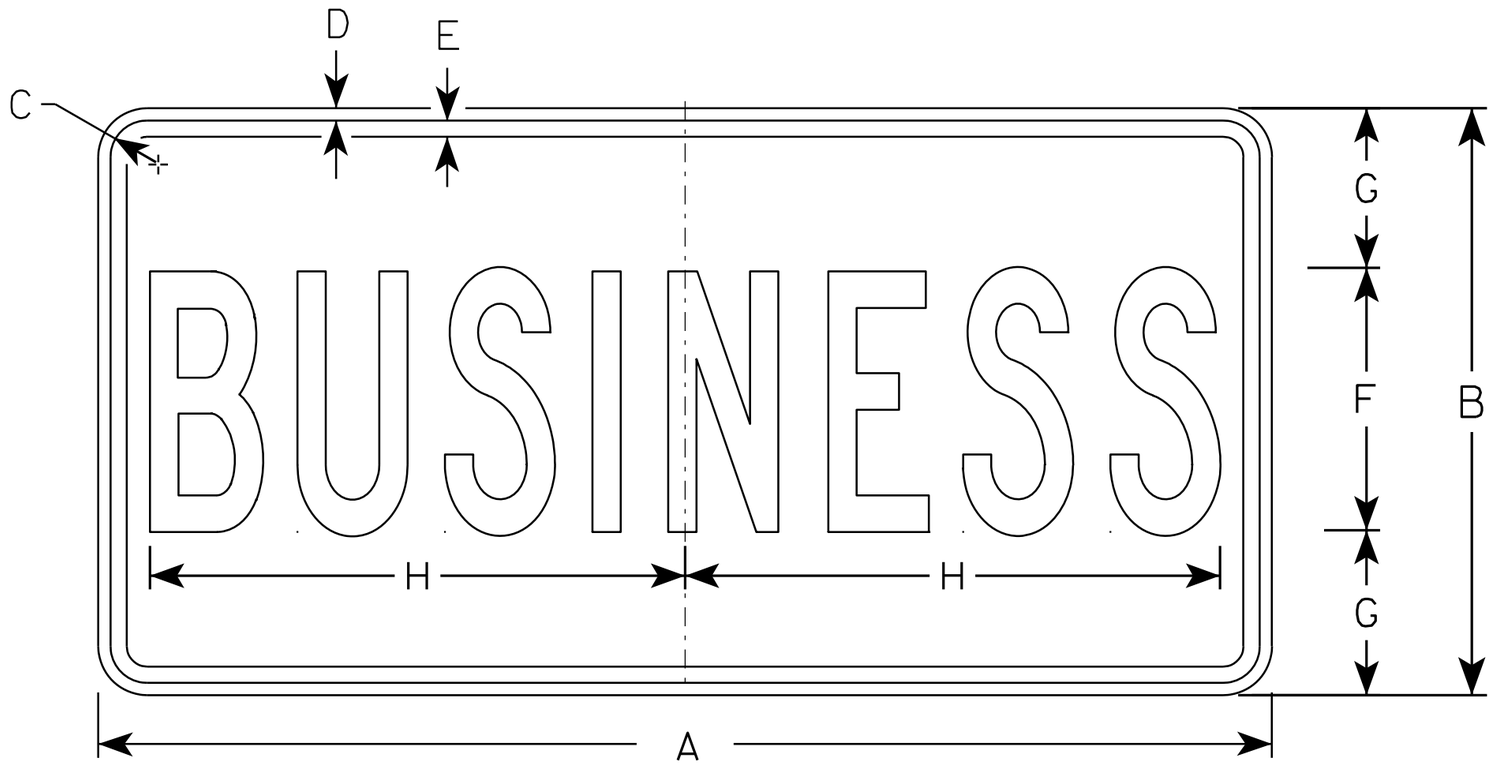
STANDARD SIGNS
M3-1 thur M3-4
SERIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

DATE 11/10/10 PLATE NO. M3-1.12

| PROJECT NO: | HWY: | COUNTY: | | SHEET NO: 194 | E |
|---|---|---|---|---|---|




M4-3

NOTES

1. Sign is Type II - See Note 5 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White - See Note 5
   Message - Black
3. Message Series - B
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Permanent Signs
   Background - Type H Reflective
   Detour or other temporary Signs
   Background - Reflective

| SIZE | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area sq. ft. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | 24 | 12 | 1 1/8 | 3/8 | 3/8 | 5 | 3 1/2 | 9 5/8 | | | | | | | | | | | | | | | | | | | 2.0 |
| 3 | 36 | 18 | 1 1/8 | 3/8 | 1/2 | 8 | 5 | 16 3/8 | | | | | | | | | | | | | | | | | | | 4.5 |
| 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | |

STANDARD SIGN
M4-3

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/10/10 PLATE NO. M4-3.5

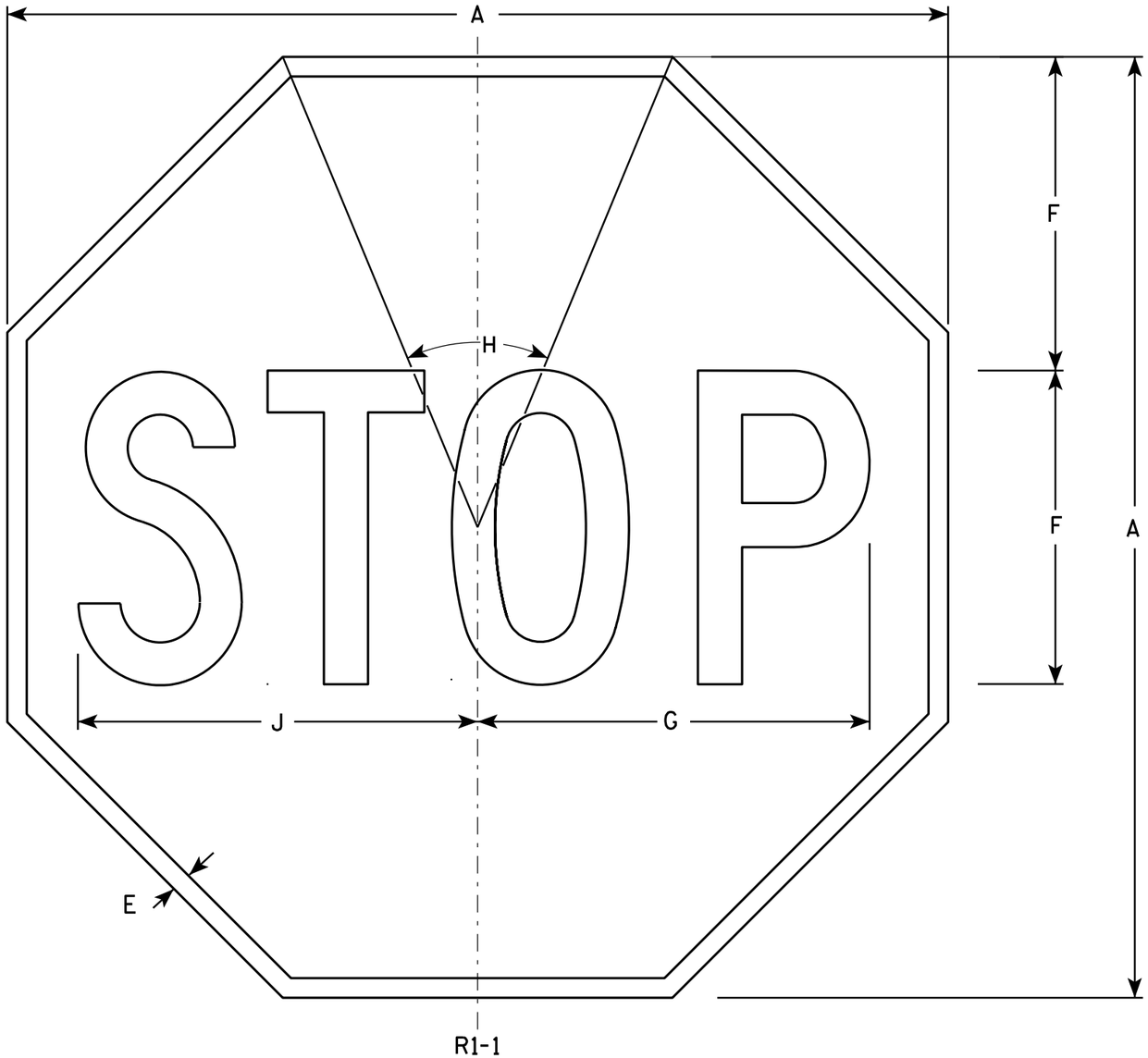
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 195 | E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\M43.DGN PLOT DATE : 10-NOV-2010 10:45 PLOT BY : ditjph PLOT NAME : PLOT SCALE : 4.648056:1.000000

WISDOT/CADDS SHEET 42

7

7




NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Red
   Message - White
3. Message Series - C

| SIZE | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area sq. ft. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 24 | | | | 3/8 | 8 | 10 | 45° | | 10 1/4 | | | | | | | | | | | | | | | | | 3.31 |
| 2S | 30 | | | | 5/8 | 10 | 12 1/2 | 45° | | 12 3/4 | | | | | | | | | | | | | | | | | 5.18 |
| 2M | 36 | | | | 3/4 | 12 | 15 | 45° | | 15 3/8 | | | | | | | | | | | | | | | | | 7.46 |
| 3 | 36 | | | | 3/4 | 12 | 15 | 45° | | 15 3/8 | | | | | | | | | | | | | | | | | 7.46 |
| 4 | 48 | | | | 1 | 16 | 20 | 45° | | 20 1/2 | | | | | | | | | | | | | | | | | 13.25 |
| 5 | 48 | | | | 1 | 16 | 20 | 45° | | 20 1/2 | | | | | | | | | | | | | | | | | 13.25 |
| 6 | 18 | | | | 3/8 | 6 | 7 3/4 | 45° | | 7 3/4 | | | | | | | | | | | | | | | | | 1.86 |
| 7 | 12 | | | | 1/4 | 4 | 5 | 45° | | 5 1/8 | | | | | | | | | | | | | | | | | 0.78 |

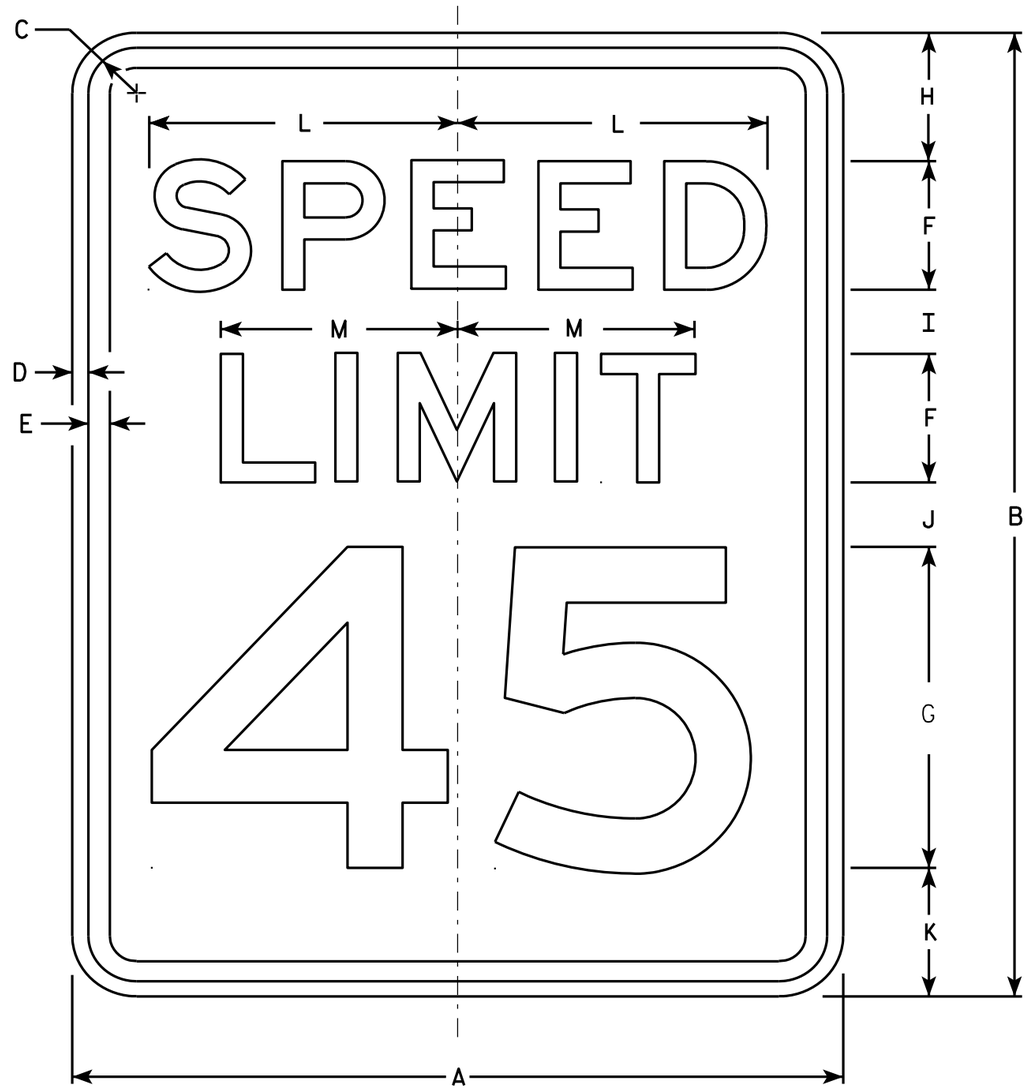
STANDARD SIGN
R1-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/03/10 PLATE NO. R1-1.12

| PROJECT NO: | HWY: | COUNTY: | | SHEET NO: 196 | E |
|---|---|---|---|---|---|




R2-1

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - E
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate numerals and optically adjust spacing to achieve proper balance.

| SIZE | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area sq. ft. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 18 | 24 | 1 1/8 | 3/8 | 1/2 | 3 | 8 | 3 | 2 | 2 | 3 | 7 1/4 | 5 1/2 | | | | | | | | | | | | | | 3.0 |
| 2S | 24 | 30 | 1 1/8 | 3/8 | 1/2 | 4 | 10 | 3 | 2 1/4 | 3 3/8 | 3 3/8 | 9 5/8 | 7 3/8 | | | | | | | | | | | | | | 5.0 |
| 2M | 30 | 36 | 1 3/8 | 1/2 | 5/8 | 5 | 12 | 5 | 2 1/2 | 2 1/2 | 4 | 12 | 9 1/4 | | | | | | | | | | | | | | 7.5 |
| 3 | 36 | 48 | 1 3/8 | 1/2 | 5/8 | 6 | 14 | 6 | 5 | 5 | 6 | 14 3/8 | 11 | | | | | | | | | | | | | | 12.0 |
| 4 | 36 | 48 | 1 3/8 | 1/2 | 5/8 | 6 | 14 | 6 | 5 | 5 | 6 | 14 3/8 | 11 | | | | | | | | | | | | | | 12.0 |
| 5 | 48 | 60 | 2 1/4 | 3/4 | 1 | 8 | 20 | 6 | 4 1/2 | 6 3/4 | 6 3/4 | 19 1/4 | 14 5/8 | | | | | | | | | | | | | | 20.0 |

STANDARD SIGN
R2-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/26/10 PLATE NO. R2-1.13

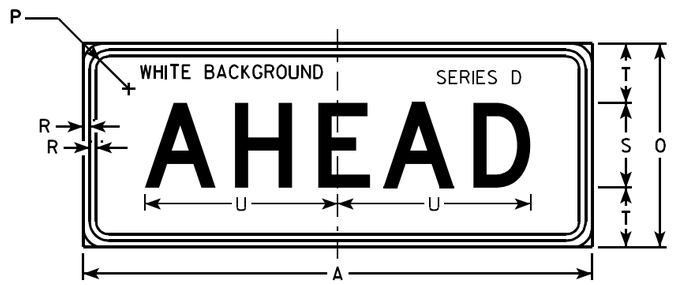
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 197 | E



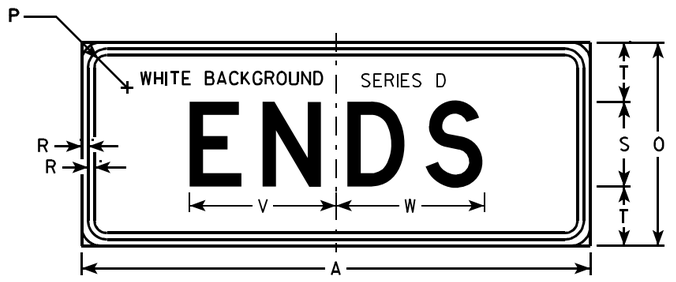

R3-17

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - AS SHOWN
   Message - BLACK
3. Message Series - C or as noted on the Signs.
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.




R3-17ap




R3-17bp

| SIZE | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | R3-17 Area sq. ft. | R3-17ap Area sq. ft. | R3-17bp Area sq. ft. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2S | 30 | 24 | 1 1/8 | 3/8 | 1/2 | 2 | 4 | 4 1/8 | 7 7/8 | 6 3/8 | 9 1/2 | 2 5/8 | 7/8 | 13 | 12 | 1 1/8 | 3 3/8 | 3/8 | 5 | 3 1/2 | 11 3/8 | 8 5/8 | 8 3/4 | 2 3/8 | 15 5/8 | 8 | 5.0 | 2.5 | 2.5 |
| 2M | 30 | 24 | 1 1/8 | 3/8 | 1/2 | 2 | 4 | 4 1/8 | 7 7/8 | 6 3/8 | 9 1/2 | 2 5/8 | 7/8 | 13 | 12 | 1 1/8 | 3 3/8 | 3/8 | 5 | 3 1/2 | 11 3/8 | 8 5/8 | 8 3/4 | 2 3/8 | 15 5/8 | 8 | 5.0 | 2.5 | 2.5 |
| 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

STANDARD SIGN
R3-17 & R3-17a&bp

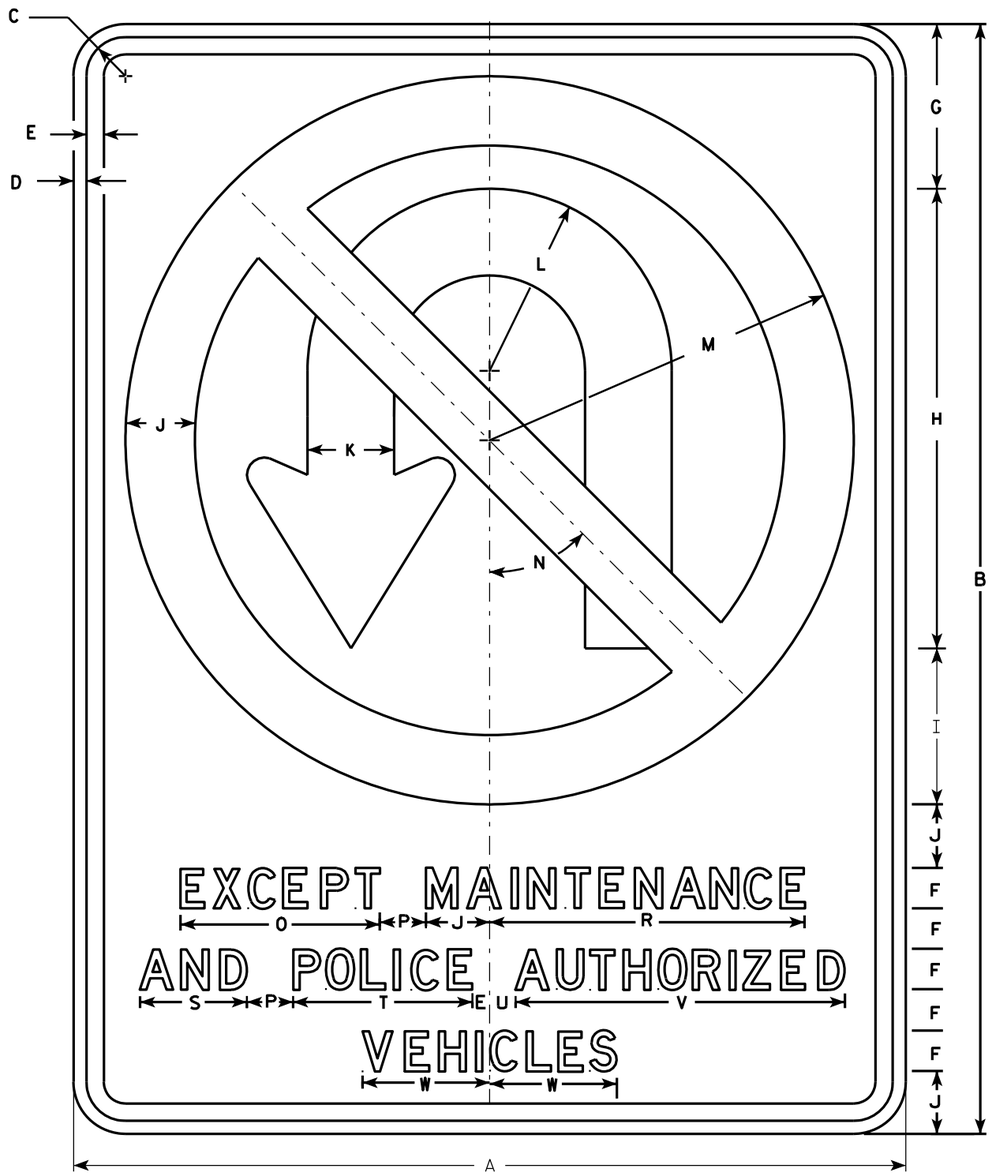
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/12/2011 PLATE NO. R3-17.2

PROJECT NO:

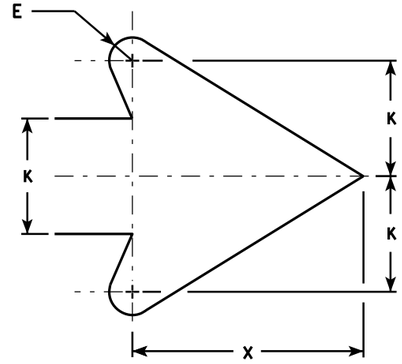
SHEET NO: 198 E




R3-4B

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. Border & Arrow are non reflective black, the circle with diagonal bar is reflective red.




ARROW DETAIL

| SIZE | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area sq. ft. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2S | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2M | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | 36 | 48 | 1 5/8 | 5/8 | 3/4 | 1 3/4 | 7 1/8 | 19 7/8 | 6 3/4 | 2 3/4 | 3 3/4 | 7 7/8 | 15 3/4 | 45° | 8 5/8 | 2 | | 13 5/8 | 4 5/8 | 7 3/4 | 1 1/8 | 14 1/4 | 5 1/2 | 7 5/8 | | | 12.0 |
| 5 | 36 | 48 | 1 5/8 | 5/8 | 3/4 | 1 3/4 | 7 1/8 | 19 7/8 | 6 3/4 | 2 3/4 | 3 3/4 | 7 7/8 | 15 3/4 | 45° | 8 5/8 | 2 | | 13 5/8 | 4 5/8 | 7 3/4 | 1 1/8 | 14 1/4 | 5 1/2 | 7 5/8 | | | 12.0 |

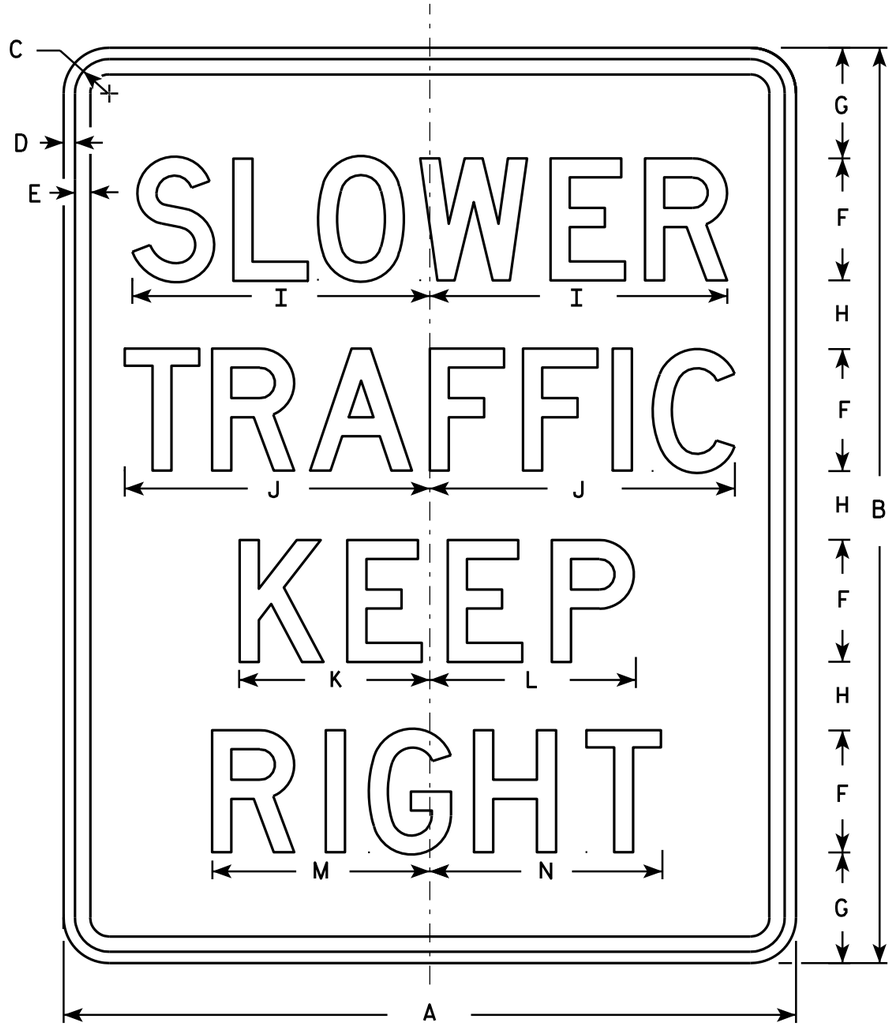
# STANDARD SIGN
# R3-4B

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/17/2011 PLATE NO. R3-4B.2

| PROJECT NO: | HWY: | COUNTY: | | SHEET NO: 199 | E |
|---|---|---|---|---|---|




R4-3

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

| SIZE | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area sq. ft. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2S | 24 | 30 | 1 1/8 | 3/8 | 1/2 | 4 | 3 5/8 | 2 1/4 | 9 3/4 | 10 | 6 1/4 | 6 3/4 | 7 1/8 | 7 5/8 | | | | | | | | | | | | | 5.0 |
| 2M | 24 | 30 | 1 1/8 | 3/8 | 1/2 | 4 | 3 5/8 | 2 1/4 | 9 3/4 | 10 | 6 1/4 | 6 3/4 | 7 1/8 | 7 5/8 | | | | | | | | | | | | | 5.0 |
| 3 | 36 | 48 | 1 5/8 | 5/8 | 3/4 | 6 | 6 | 4 | 14 5/8 | 15 | 9 3/8 | 10 | 10 3/4 | 11 3/8 | | | | | | | | | | | | | 12.0 |
| 4 | 36 | 48 | 1 5/8 | 5/8 | 3/4 | 6 | 6 | 4 | 14 5/8 | 15 | 9 3/8 | 10 | 10 3/4 | 11 3/8 | | | | | | | | | | | | | 12.0 |
| 5 | 48 | 60 | 2 1/4 | 3/4 | 1 | 8 | 7 1/4 | 4 1/2 | 19 1/2 | 20 | 12 1/2 | 13 1/2 | 14 1/4 | 15 1/4 | | | | | | | | | | | | | 20.0 |

STANDARD SIGN
R4-3

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/25/2011 PLATE NO. R4-3.8

PROJECT NO:

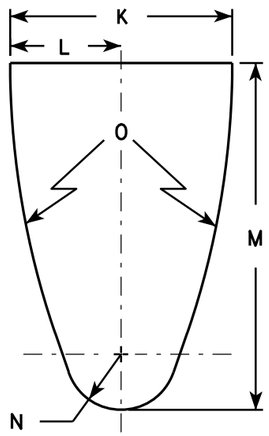
SHEET NO: 200 E

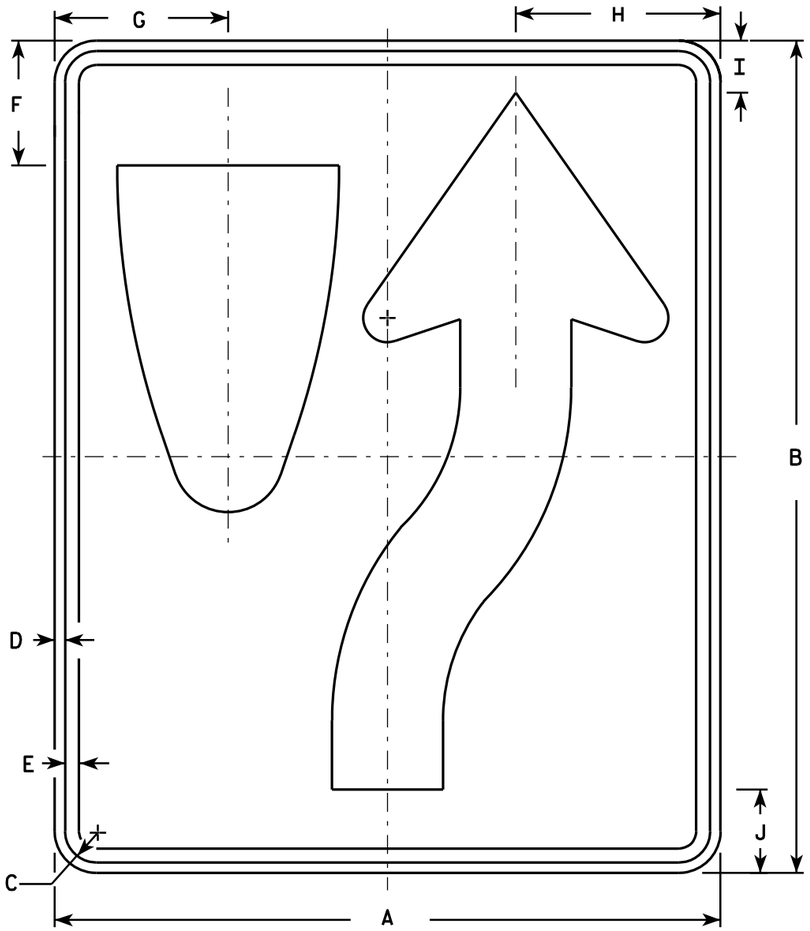
FILE NAME : C:\Users\PROJECTS\tr_stdplate\R43.DGN PLOT DATE : 25-MAR-2011 13:40 PLOT BY : mscsja

WISDOT/CADDS SHEET 42

7

7

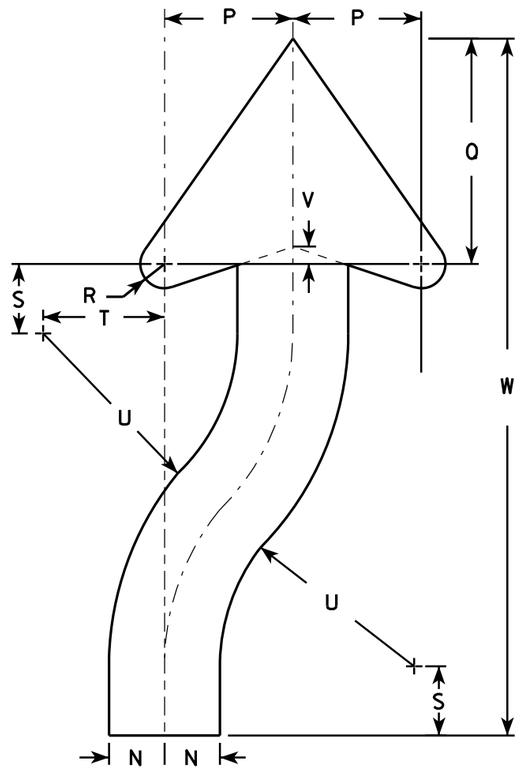



R4-7

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition. material is plywood but borders shall be rounded
2. Color:
   Background - White
   Message - Black
3. Corners may be square or rounded when base as shown. When base material is metal, the corners and borders shall be rounded.
4. R4-8 is the same as R4-7 except Legend is reversed.




ARROW DETAIL

| SIZE | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area sq. ft. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 18 | 24 | 1 1/8 | 3/8 | 1/2 | 3 3/8 | 4 3/4 | 5 1/2 | 1 3/8 | 2 1/4 | 6 | 3 | 9 3/8 | 1 1/2 | 22 1/2 | 3 1/2 | 6 1/8 | 5/8 | 1 7/8 | 3 1/4 | 6 3/4 | 1/2 | 20 3/8 | | | | 3.0 |
| 2S | 24 | 30 | 1 1/8 | 3/8 | 1/2 | 4 1/2 | 6 1/4 | 7 3/8 | 1 7/8 | 3 | 8 | 4 | 12 1/2 | 2 | 30 | 4 5/8 | 8 1/8 | 7/8 | 2 1/2 | 4 3/8 | 9 | 5/8 | 25 1/8 | | | | 5.0 |
| 2M | 24 | 30 | 1 1/8 | 3/8 | 1/2 | 4 1/2 | 6 1/4 | 7 3/8 | 1 7/8 | 3 | 8 | 4 | 12 1/2 | 2 | 30 | 4 5/8 | 8 1/8 | 7/8 | 2 1/2 | 4 3/8 | 9 | 5/8 | 25 1/8 | | | | 5.0 |
| 3 | 36 | 48 | 1 3/4 | 1/2 | 5/8 | 6 3/4 | 9 3/8 | 11 1/8 | 2 7/8 | 4 1/2 | 12 | 6 | 18 3/4 | 3 | 45 | 6 7/8 | 12 1/4 | 1 1/4 | 3 3/4 | 6 5/8 | 13 1/2 | 1 | 40 3/4 | | | | 12.0 |
| 4 | 36 | 48 | 1 3/4 | 1/2 | 5/8 | 6 3/4 | 9 3/8 | 11 1/8 | 2 7/8 | 4 1/2 | 12 | 6 | 18 3/4 | 3 | 45 | 6 7/8 | 12 1/4 | 1 1/4 | 3 3/4 | 6 5/8 | 13 1/2 | 1 | 40 3/4 | | | | 12.0 |
| 5 | 48 | 60 | 2 1/4 | 3/4 | 1 | 9 | 12 1/2 | 14 3/4 | 3 3/4 | 6 | 16 | 8 | 25 | 4 | 60 | 9 1/4 | 16 1/4 | 1 5/8 | 5 | 8 3/4 | 18 | 1 1/4 | 50 1/4 | | | | 20.0 |

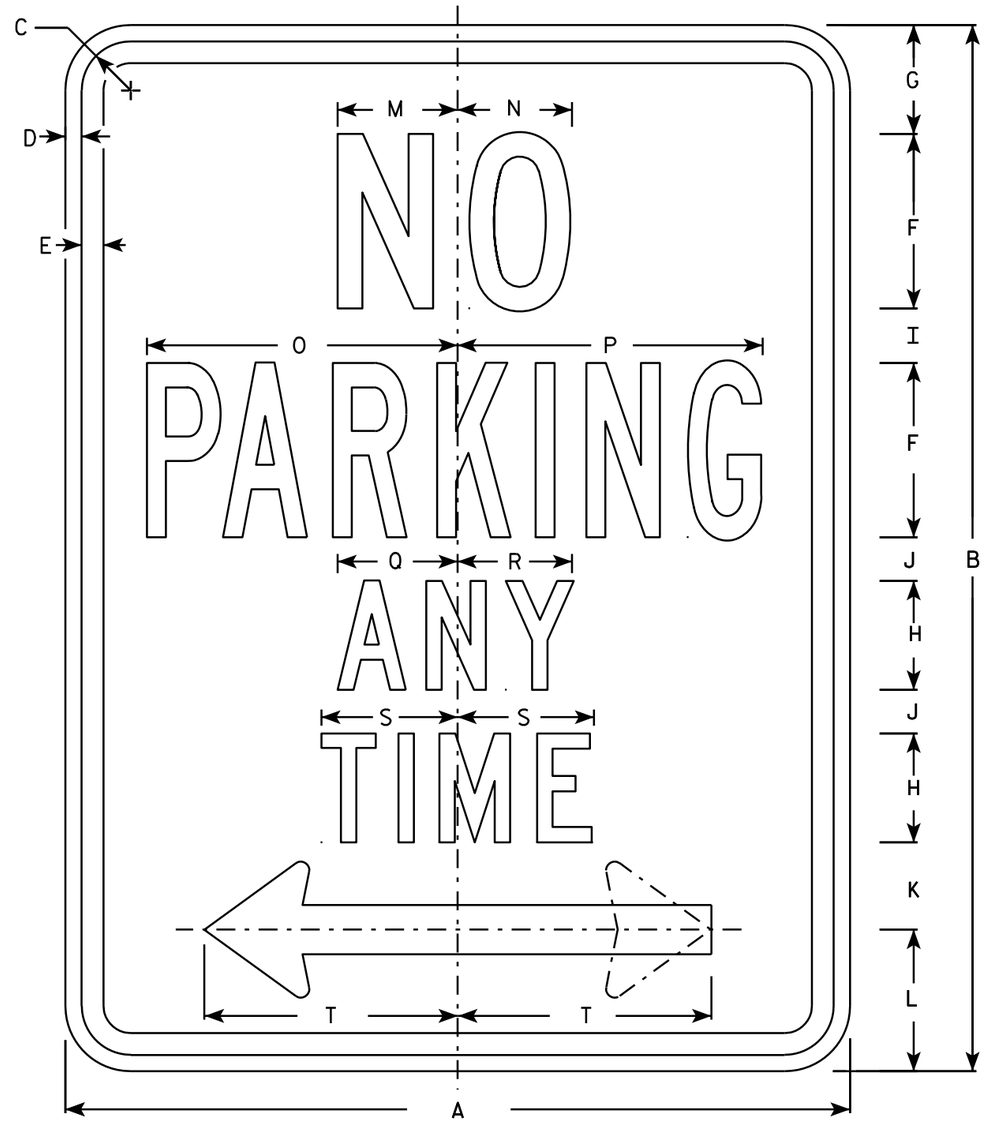
STANDARD SIGN
R4-7 & R4-8

WISCONSIN DEPT OF TRANSPORTATION

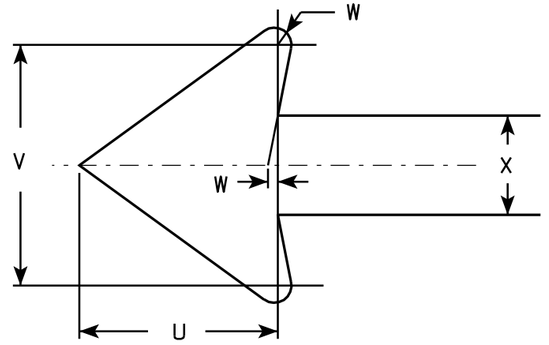
APPROVED Matthew R Rauch for State Traffic Engineer

DATE 3/25/2011 PLATE NO. R4-7.8

| PROJECT NO: | HWY: | COUNTY: | | SHEET NO: 201 | E |
|---|---|---|---|---|---|




R7-1




NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Red
3. Message Series - See Note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Lines 1, 3 and 4 are series C, line 2 is series B.
6. R7-1D (double arrow)
   R7-1L (left arrow)
   R7-1R (right arrow)

| SIZE | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area sq. ft. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 12 | 18 | 1 1/8 | 3/8 | 3/8 | 3 | 1 7/8 | 2 | 7/8 | 5/8 | 1 1/2 | 2 1/2 | 2 | 2 | 4 7/8 | 4 7/8 | 2 1/4 | 2 1/8 | 2 1/2 | 3 7/8 | 1 1/2 | 1 3/4 | 1/8 | 3/4 | | | 1.5 |
| 2S | 18 | 24 | 1 1/8 | 3/8 | 1/2 | 4 | 2 1/2 | 2 1/2 | 1 1/4 | 1 | 2 | 3 1/4 | 2 3/4 | 2 5/8 | 7 1/8 | 7 | 2 3/4 | 2 5/8 | 3 1/8 | 5 7/8 | 2 1/4 | 2 5/8 | 1/4 | 1 1/8 | | | 3.0 |
| 2M | 24 | 30 | 1 1/8 | 3/8 | 1/2 | 5 | 3 | 3 | 2 | 1 1/4 | 2 1/2 | 4 | 3 1/4 | 3 3/8 | 9 1/4 | 9 1/4 | 3 1/4 | 3 1/4 | 3 3/4 | 7 3/4 | 3 | 3 1/2 | 1/4 | 1 1/2 | | | 5.0 |
| 3 | 24 | 30 | 1 1/8 | 3/8 | 1/2 | 5 | 3 | 3 | 2 | 1 1/4 | 2 1/2 | 4 | 3 1/4 | 3 3/8 | 9 1/4 | 9 1/4 | 3 1/4 | 3 1/4 | 3 3/4 | 7 3/4 | 3 | 3 1/2 | 1/4 | 1 1/2 | | | 5.0 |
| 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | |

STANDARD SIGN
R7-1

WISCONSIN DEPT OF TRANSPORTATION

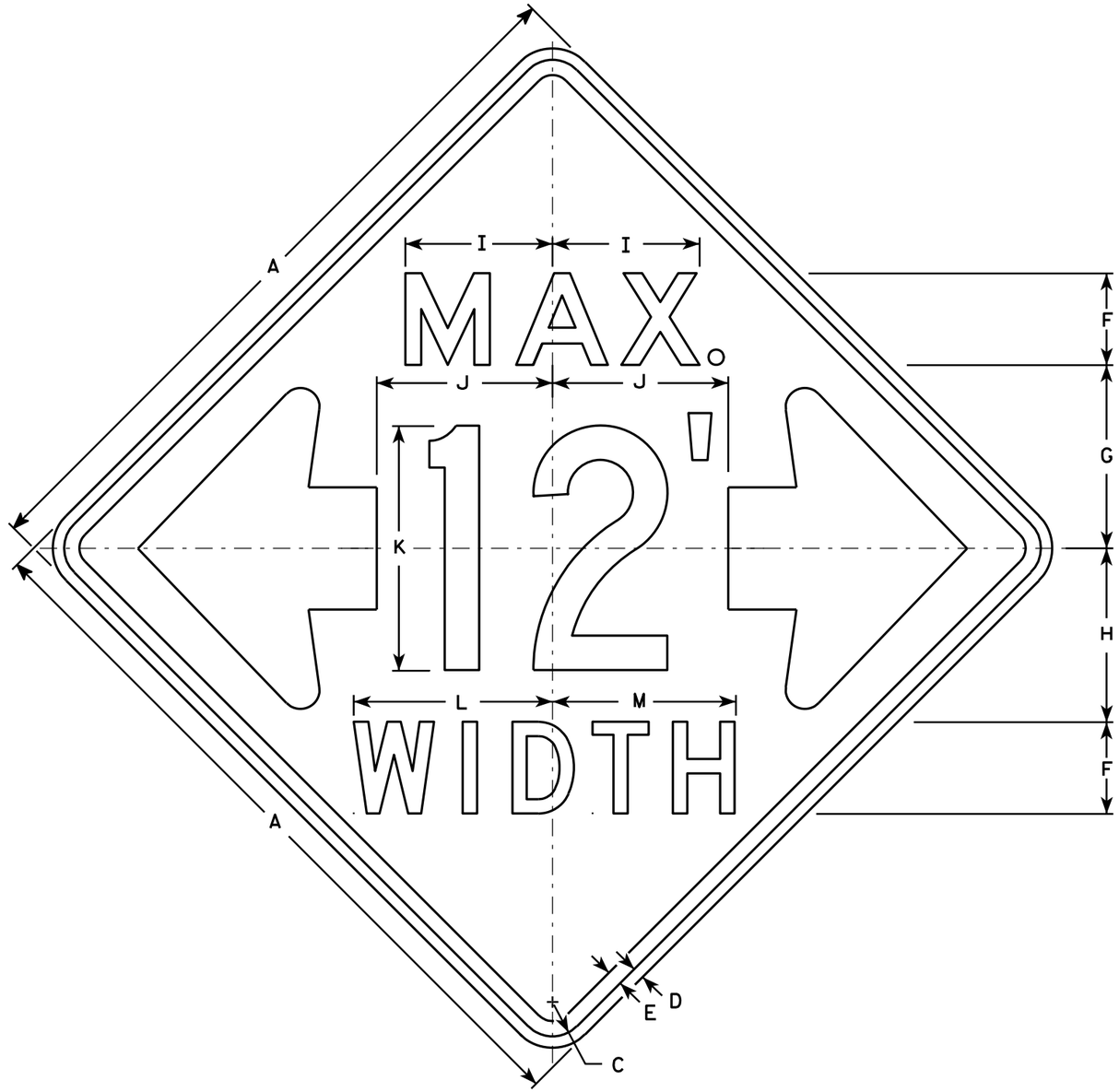
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/31/2011 PLATE NO. R7-1.9

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 202 | E


7

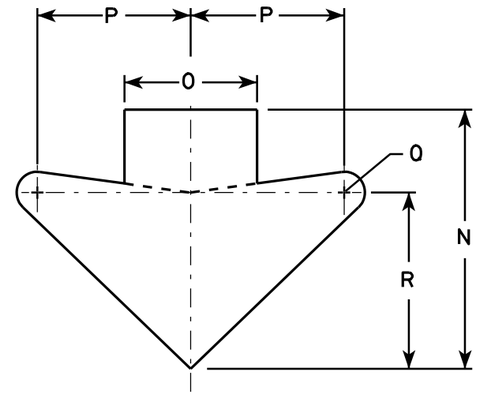
FILE NAME : C:\Users\PROJECTS\tr_stdplate\R71.DGN PLOT DATE : 31-MAR-2011 09:20 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 3.476110:1.000000
WISDOT/CADDS SHEET 42




W12-52

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - See note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. The top line is series E, the numerals are series C, and the bottom line is series D.
6. Substitute appropriate numerals and adjust spacing as required.




ARROW DETAIL

| SIZE | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area sq. ft. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2S | 48 | | 2 1/4 | 3/4 | 1 | 6 | 12 | 11 3/8 | 9 5/8 | 11 1/2 | 16 | 13 | 12 | 15 5/8 | 8 | 9 1/4 | 1 1/4 | 10 5/8 | | | | | | | | | 16.0 |
| 2M | 48 | | 2 1/4 | 3/4 | 1 | 6 | 12 | 11 3/8 | 9 5/8 | 11 1/2 | 16 | 13 | 12 | 15 5/8 | 8 | 9 1/4 | 1 1/4 | 10 5/8 | | | | | | | | | 16.0 |
| 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | |

STANDARD SIGN
W12-52

WISCONSIN DEPT OF TRANSPORTATION

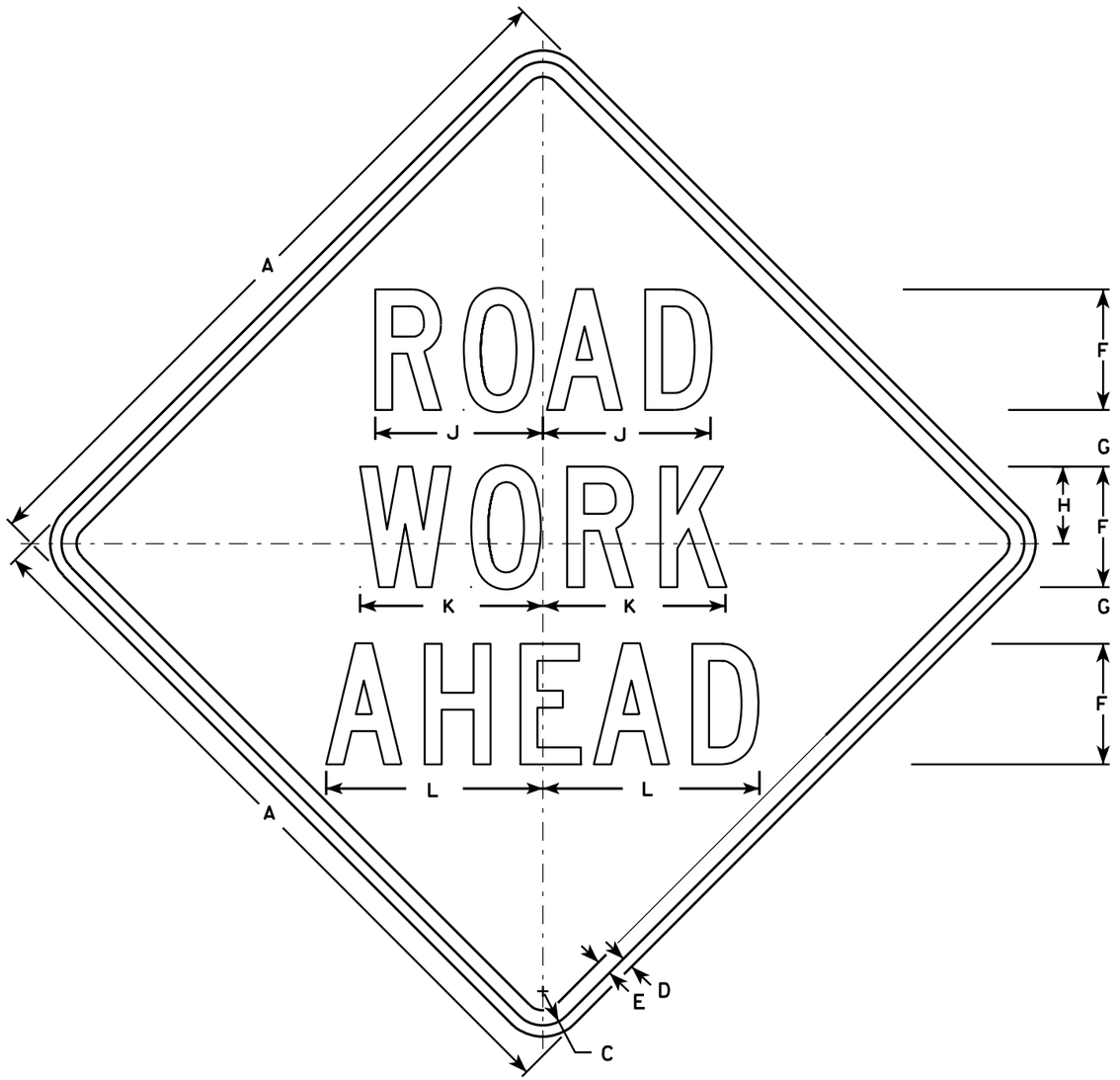
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/16/11 PLATE NO. W12-52.7

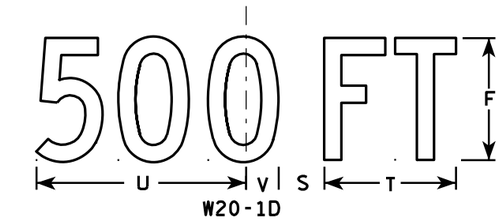
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 203 | E


7

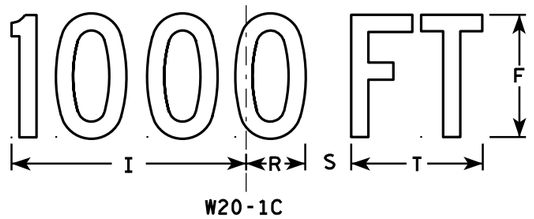
FILE NAME : C:\Users\PROJECTS\tr_stdplate\W1252.DGN PLOT DATE : 16-MAR-2011 14:45 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 9.137199:1.000000
WISDOT/CADDS SHEET 42



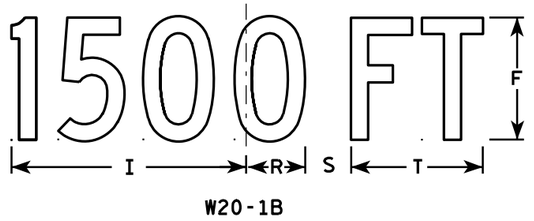

W20-1A




W20-1D



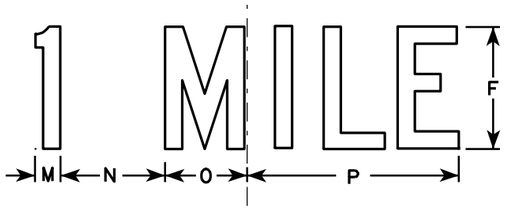

W20-1C




W20-1B




W20-1G




W20-1F

## NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

| SIZE | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area sq. ft. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 36 | | 1 3/8 | 1/2 | 5/8 | 5 | 2 5/8 | 3 1/4 | 10 1/8 | 7 | 7 5/8 | 8 7/8 | 1 1/8 | 4 1/2 | 3 1/2 | 9 | | 2 1/2 | 1 7/8 | 5 5/8 | 9 | 1 3/8 | 8 | 1 3/4 | 10 3/4 | 6 | 9.0 |
| 2S | 48 | | 2 1/4 | 3/4 | 1 | 8 | 3 3/4 | 5 1/8 | 15 3/8 | 11 1/8 | 12 1/8 | 14 3/8 | 1 5/8 | 6 7/8 | 5 3/8 | 13 7/8 | | 3 7/8 | 3 | 8 5/8 | 13 3/4 | 2 1/8 | 11 7/8 | 2 3/4 | 16 3/8 | 9 | 16.0 |
| 2M | 48 | | 2 1/4 | 3/4 | 1 | 8 | 3 3/4 | 5 1/8 | 15 3/8 | 11 1/8 | 12 1/8 | 14 3/8 | 1 5/8 | 6 7/8 | 5 3/8 | 13 7/8 | | 3 7/8 | 3 | 8 5/8 | 13 3/4 | 2 1/8 | 11 7/8 | 2 3/4 | 16 3/8 | 9 | 16.0 |
| 3 | 48 | | 2 1/4 | 3/4 | 1 | 8 | 3 3/4 | 5 1/8 | 15 3/8 | 11 1/8 | 12 1/8 | 14 3/8 | 1 5/8 | 6 7/8 | 5 3/8 | 13 7/8 | | 3 7/8 | 3 | 8 5/8 | 13 3/4 | 2 1/8 | 11 7/8 | 2 3/4 | 16 3/8 | 9 | 16.0 |
| 4 | 48 | | 2 1/4 | 3/4 | 1 | 8 | 3 3/4 | 5 1/8 | 15 3/8 | 11 1/8 | 12 1/8 | 14 3/8 | 1 5/8 | 6 7/8 | 5 3/8 | 13 7/8 | | 3 7/8 | 3 | 8 5/8 | 13 3/4 | 2 1/8 | 11 7/8 | 2 3/4 | 16 3/8 | 9 | 16.0 |
| 5 | 48 | | 2 1/4 | 3/4 | 1 | 8 | 3 3/4 | 5 1/8 | 15 3/8 | 11 1/8 | 12 1/8 | 14 3/8 | 1 5/8 | 6 7/8 | 5 3/8 | 13 7/8 | | 3 7/8 | 3 | 8 5/8 | 13 3/4 | 2 1/8 | 11 7/8 | 2 3/4 | 16 3/8 | 9 | 16.0 |

STANDARD SIGN
W20-1A, B, C, D, F & G

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/18/11 PLATE NO. W20-1.9

PROJECT NO:

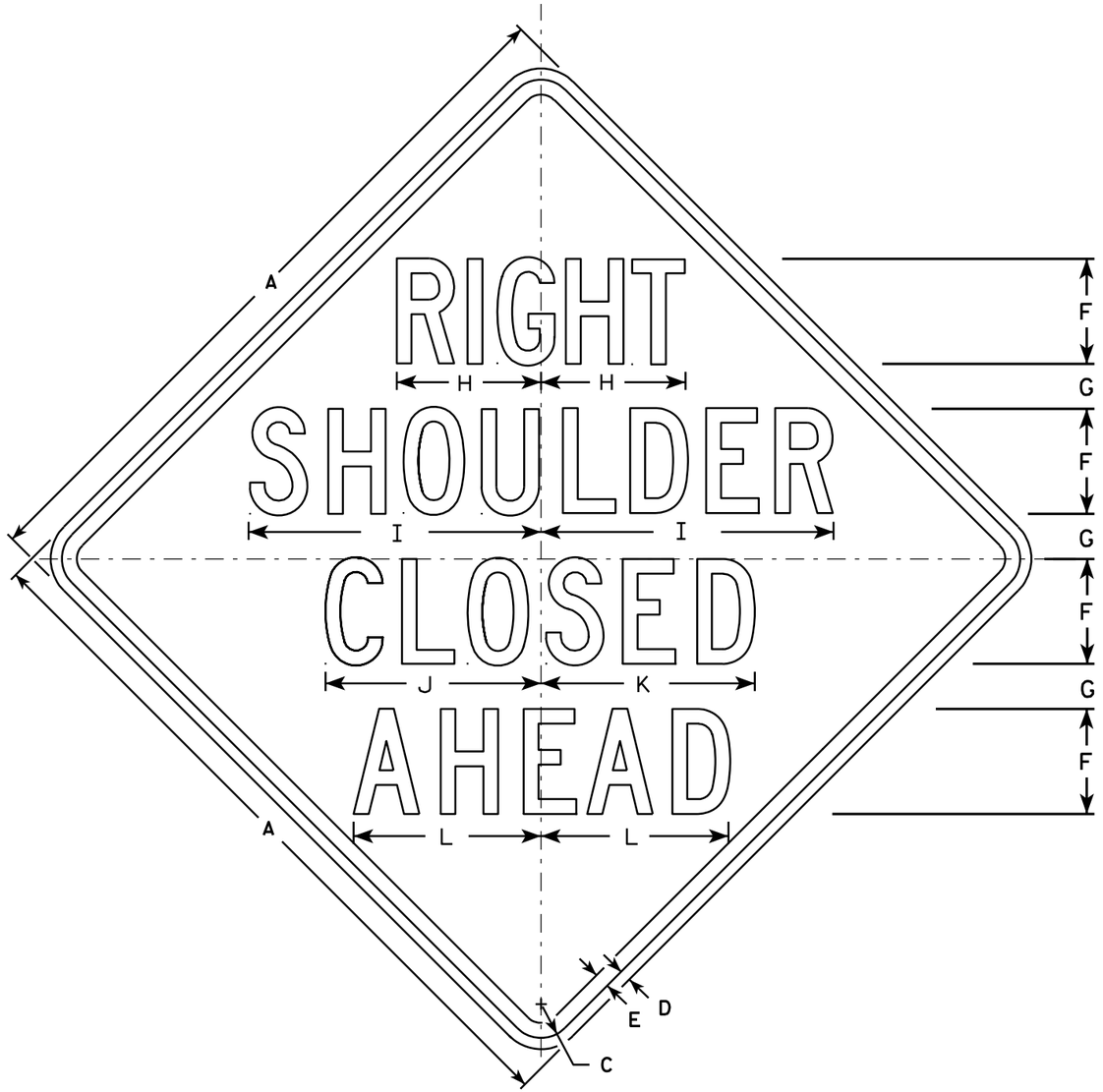
SHEET NO: 204 E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\W201.DGN PLOT DATE : 18-MAR-2011 09:56 PLOT BY : mscj9h

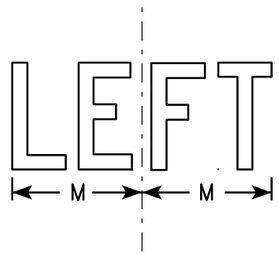
WISDOT/CADDS SHEET 42

7

7




W21-5B




W21-5BL

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

| SIZE | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area sq. ft. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 36 | | 1 5/8 | 5/8 | 3/4 | 5 | 2 1/4 | 7 3/8 | 14 1/4 | 10 1/4 | 10 1/8 | 8 7/8 | 6 1/4 | | | | | | | | | | | | | | 9.0 |
| 2S | 48 | | 2 1/4 | 3/4 | 1 | 7 | 3 | 9 5/8 | 19 1/2 | 14 3/8 | 14 1/4 | 12 1/2 | 8 1/2 | | | | | | | | | | | | | | 16.0 |
| 2M | 48 | | 2 1/4 | 3/4 | 1 | 7 | 3 | 9 5/8 | 19 1/2 | 14 3/8 | 14 1/4 | 12 1/2 | 8 1/2 | | | | | | | | | | | | | | 16.0 |
| 3 | 48 | | 2 1/4 | 3/4 | 1 | 7 | 3 | 9 5/8 | 19 1/2 | 14 3/8 | 14 1/4 | 12 1/2 | 8 1/2 | | | | | | | | | | | | | | 16.0 |
| 4 | 48 | | 2 1/4 | 3/4 | 1 | 7 | 3 | 9 5/8 | 19 1/2 | 14 3/8 | 14 1/4 | 12 1/2 | 8 1/2 | | | | | | | | | | | | | | 16.0 |
| 5 | 48 | | 2 1/4 | 3/4 | 1 | 7 | 3 | 9 5/8 | 19 1/2 | 14 3/8 | 14 1/4 | 12 1/2 | 8 1/2 | | | | | | | | | | | | | | 16.0 |

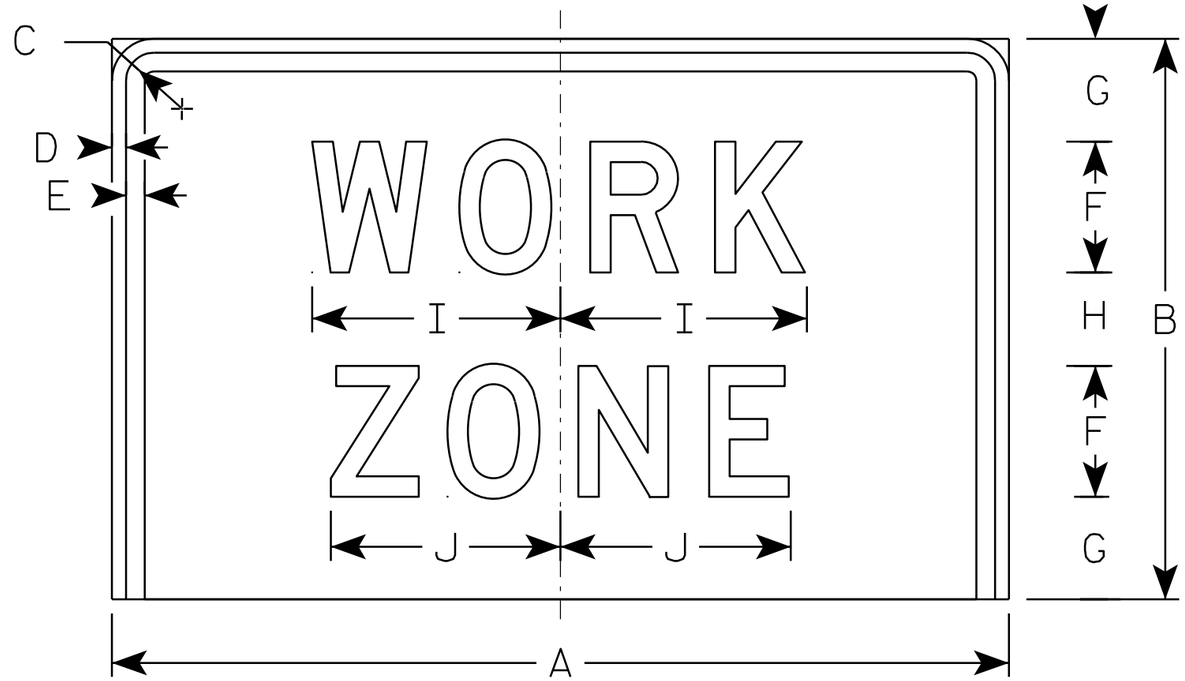
STANDARD SIGN
W21-5B

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/21/11 PLATE NO. W21-5B.3

| PROJECT NO: | HWY: | COUNTY: | | SHEET NO: 205 | E |
|---|---|---|---|---|---|




W21-620

NOTES

1. Sign is Type II - Type F - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - D

| SIZE | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area sq. ft. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2S | 48 | 30 | 2 1/4 | 3/4 | 1 | 7 | 5 1/2 | 5 | 13 1/4 | 12 1/4 | | | | | | | | | | | | | | | | | 10.0 |
| 2M | 48 | 30 | 2 1/4 | 3/4 | 1 | 7 | 5 1/2 | 5 | 13 1/4 | 12 1/4 | | | | | | | | | | | | | | | | | 10.0 |
| 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | |

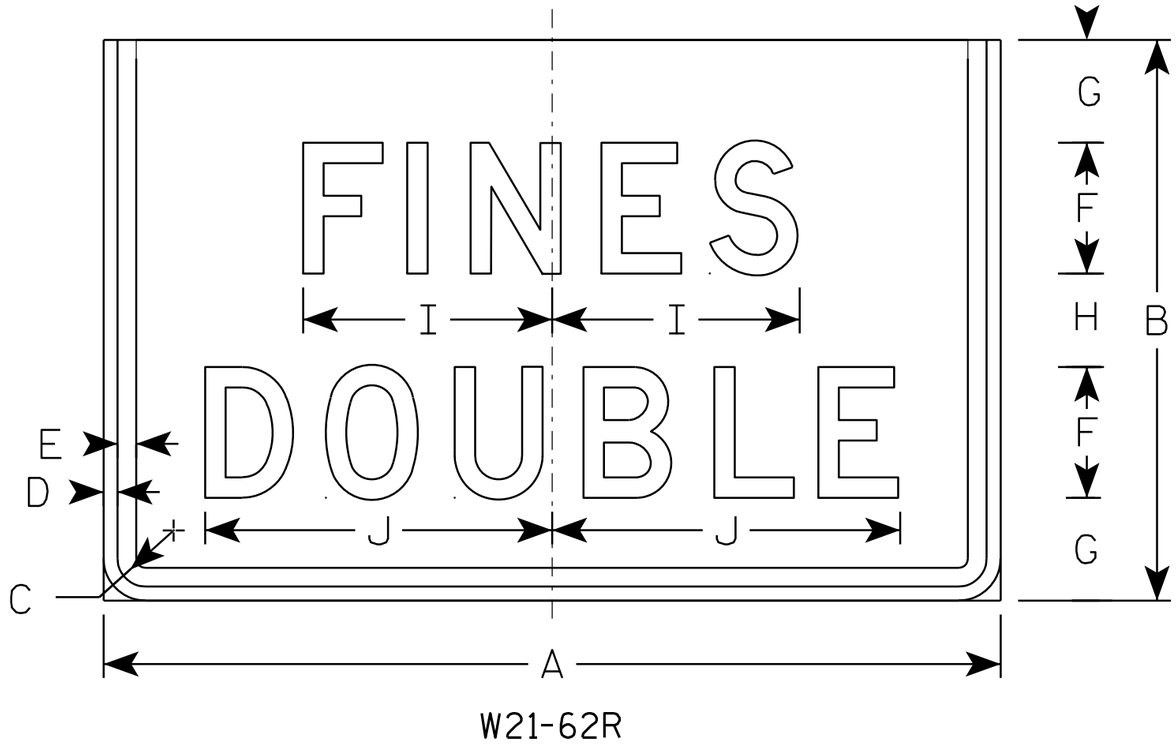
STANDARD SIGN
W21-620

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/21/11 PLATE NO. W21-620.2

| PROJECT NO: | HWY: | COUNTY: | | SHEET NO: 206 | E |
|---|---|---|---|---|---|




W21-62R

NOTES

1. Sign is Type II - Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - D

| SIZE | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area sq. ft. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2S | 48 | 30 | 2 1/4 | 3/4 | 1 | 7 | 5 1/2 | 5 | 13 1/4 | 18 5/8 | | | | | | | | | | | | | | | | | 10.0 |
| 2M | 48 | 30 | 2 1/4 | 3/4 | 1 | 7 | 5 1/2 | 5 | 13 1/4 | 18 5/8 | | | | | | | | | | | | | | | | | 10.0 |
| 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | |

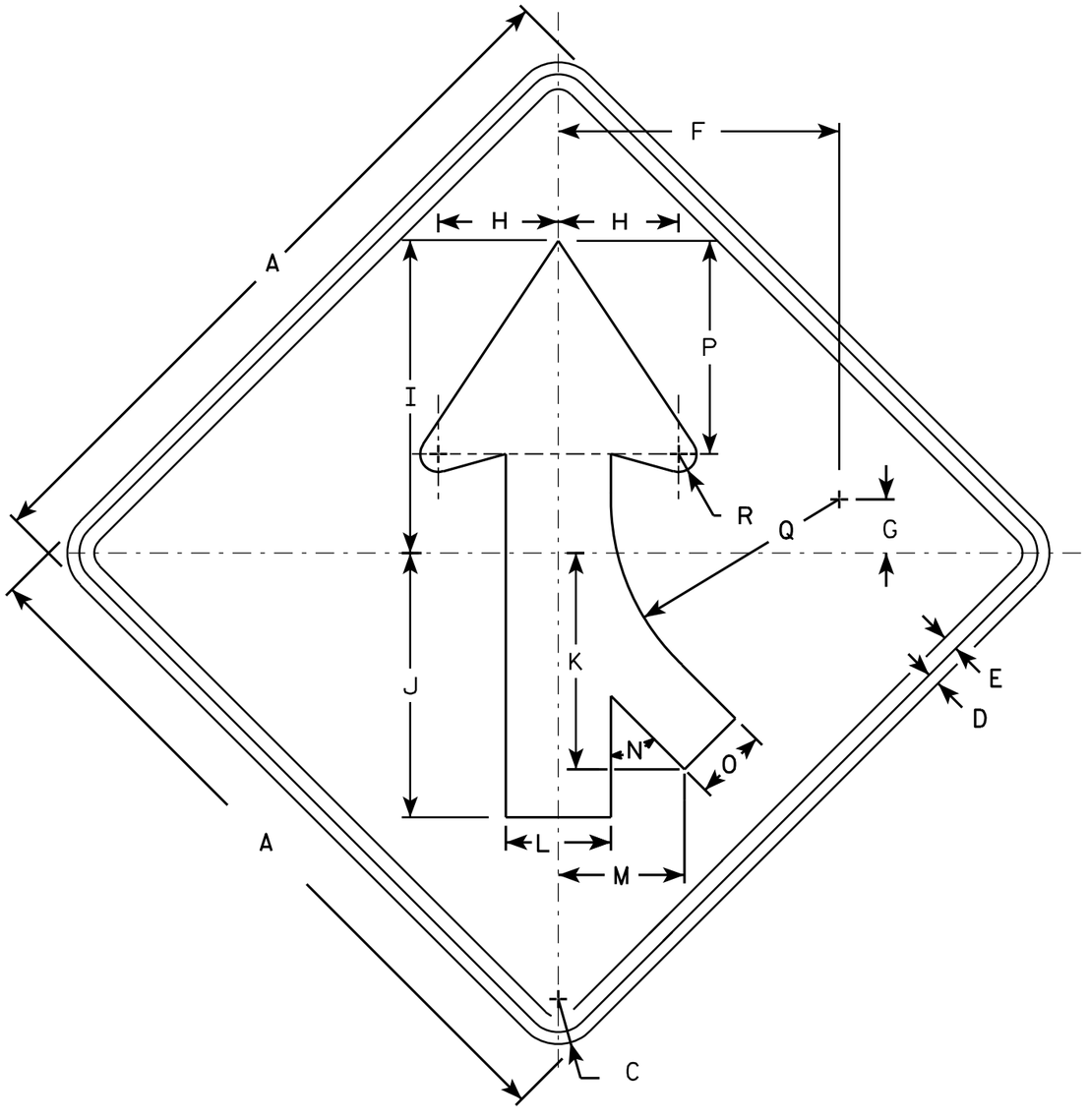
STANDARD SIGN
W21-62R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/21/11 PLATE NO. W21-62R.2

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 207 | E




W4-1 R

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. W4-1L is the same as W4-1R except the arrow is reversed along the vertical centerline.

| SIZE | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area sq. ft. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 30 | | 1 3/8 | 1/2 | 5/8 | 11 5/8 | 2 1/2 | 5 | 13 | 11 | 9 | 4 3/8 | 5 1/4 | 45° | 3 | 8 7/8 | 9 1/2 | 3/4 | | | | | | | | | 6.25 |
| 2S | 36 | | 1 5/8 | 5/8 | 3/4 | 14 | 2 3/4 | 6 | 15 3/4 | 13 1/4 | 10 1/4 | 5 1/4 | 6 3/8 | 45° | 3 5/8 | 10 5/8 | 11 3/8 | 7/8 | | | | | | | | | 9.0 |
| 2M | 36 | | 1 5/8 | 5/8 | 3/4 | 14 | 2 3/4 | 6 | 15 3/4 | 13 1/4 | 10 1/4 | 5 1/4 | 6 3/8 | 45° | 3 5/8 | 10 5/8 | 11 3/8 | 7/8 | | | | | | | | | 9.0 |
| 3 | 36 | | 1 5/8 | 5/8 | 3/4 | 14 | 2 3/4 | 6 | 15 3/4 | 13 1/4 | 10 1/4 | 5 1/4 | 6 3/8 | 45° | 3 5/8 | 10 5/8 | 11 3/8 | 7/8 | | | | | | | | | 9.0 |
| 4 | 48 | | 2 1/4 | 3/4 | 1 | 18 3/4 | 3 5/8 | 8 | 20 1/2 | 17 1/2 | 14 3/8 | 7 | 8 3/8 | 45° | 4 3/4 | 14 1/4 | 15 1/4 | 1 1/4 | | | | | | | | | 16.0 |
| 5 | 48 | | 2 1/4 | 3/4 | 1 | 18 3/4 | 3 5/8 | 8 | 20 1/2 | 17 1/2 | 14 3/8 | 7 | 8 3/8 | 45° | 4 3/4 | 14 1/4 | 15 1/4 | 1 1/4 | | | | | | | | | 16.0 |

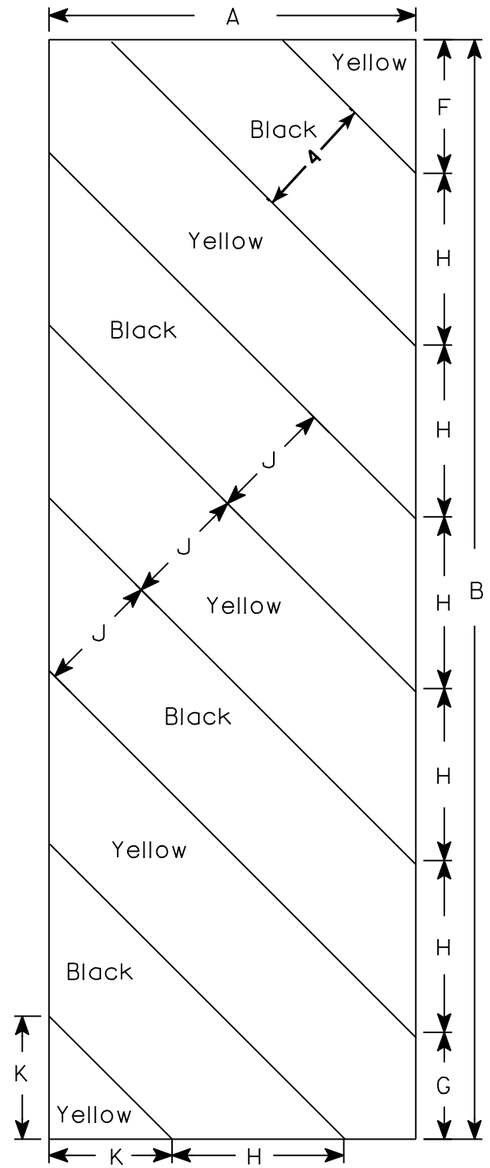
STANDARD SIGN
W4-1

WISCONSIN DEPT OF TRANSPORTATION

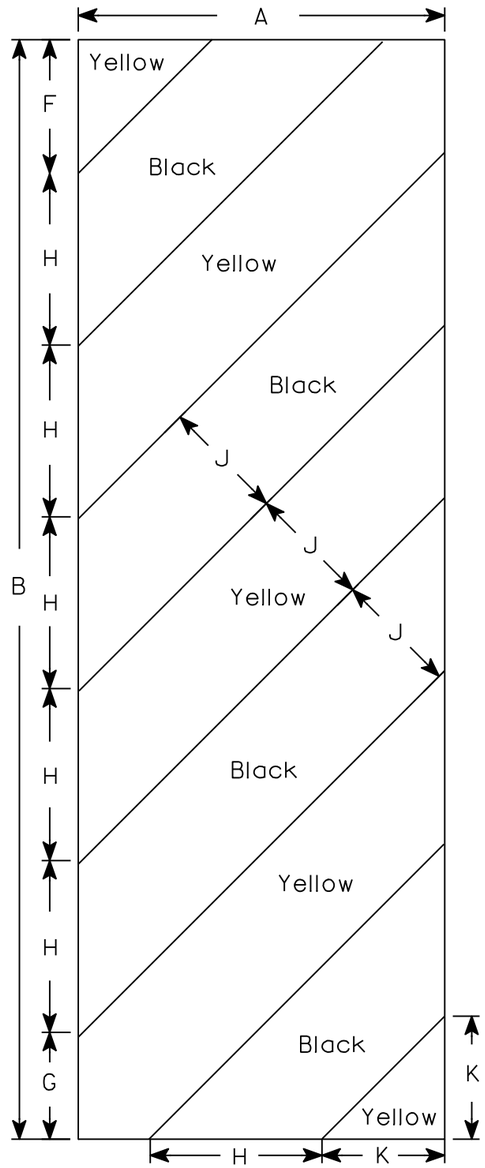
APPROVED Matthew R Rausch for State Traffic Engineer

DATE 03/12/13 PLATE NO. W4-1.14

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 208 | E




W5-52L




W5-52R

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. Alternate colors of stripes as shown.

| SIZE | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area sq. ft. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2S | 12 | 36 | | | | 4 3/8 | 3 1/2 | 5 5/8 | 45° | 4 | 4 | | | | | | | | | | | | | | | | 3.0 |
| 2M | 12 | 36 | | | | 4 3/8 | 3 1/2 | 5 5/8 | 45° | 4 | 4 | | | | | | | | | | | | | | | | 3.0 |
| 3 | 18 | 54 | | | | 6 | 5 1/2 | 8 1/2 | 45° | 6 | 6 9/16 | | | | | | | | | | | | | | | | 6.75 |
| 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | |

STANDARD SIGN

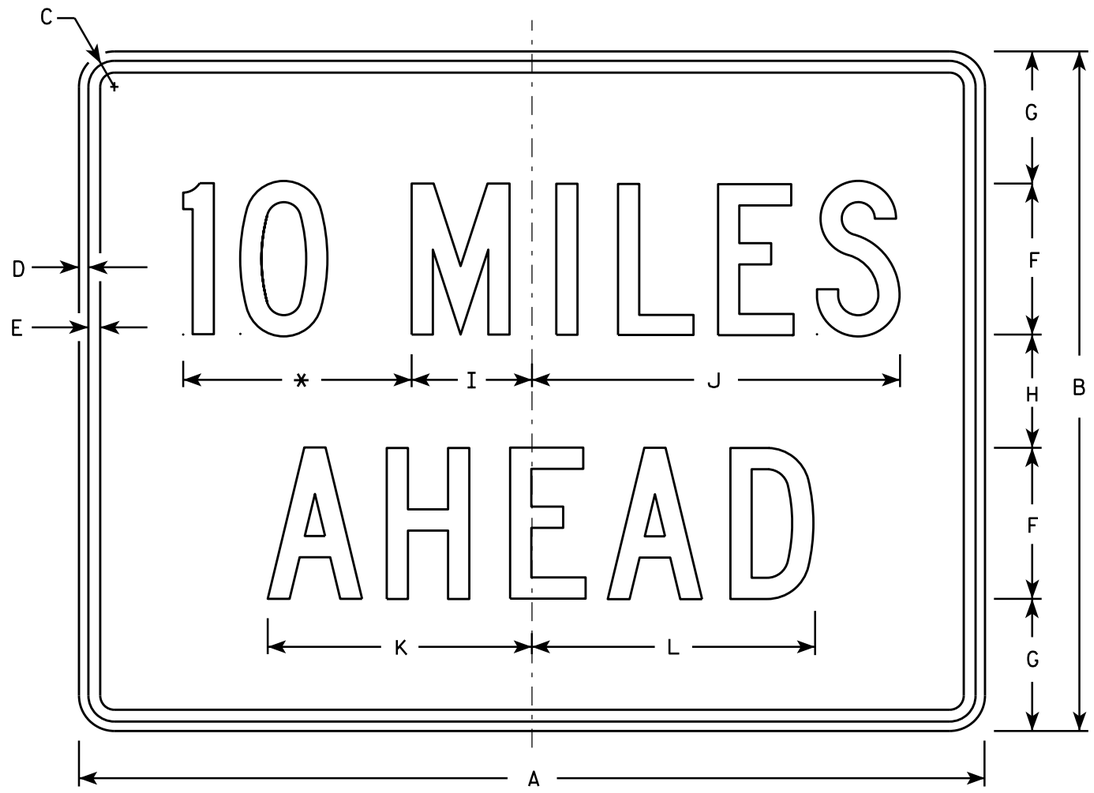
W5-52L & W5-52R

*WISCONSIN DEPT OF TRANSPORTATION*

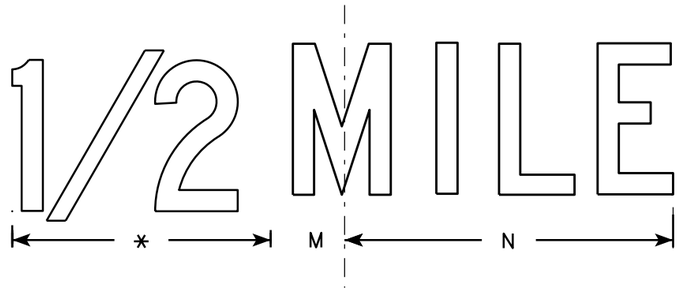
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/29/12 PLATE NO. W5-52.9

| PROJECT NO: | HWY: | COUNTY: | | SHEET NO: 209 | E |
|---|---|---|---|---|---|




W057-52




NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate numerals and optically adjust spacing to achieve proper balance.

* See note 5

| SIZE | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area sq. ft. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 36 | 24 | 1 1/8 | 3/8 | 1/2 | 6 | 4 1/2 | 3 | 4 3/4 | 14 5/8 | 10 5/8 | 11 3/8 | 2 | 13 | | | | | | | | | | | | | 6.0 |
| 2S | 48 | 36 | 1 3/8 | 1/2 | 5/8 | 8 | 7 | 6 | 6 3/8 | 19 1/2 | 14 | 15 | 2 3/4 | 17 3/8 | | | | | | | | | | | | | 12.0 |
| 2M | 48 | 36 | 1 3/8 | 1/2 | 5/8 | 8 | 7 | 6 | 6 3/8 | 19 1/2 | 14 | 15 | 2 3/4 | 17 3/8 | | | | | | | | | | | | | 12.0 |
| 3 | 48 | 36 | 1 3/8 | 1/2 | 5/8 | 8 | 7 | 6 | 6 3/8 | 19 1/2 | 14 | 15 | 2 3/4 | 17 3/8 | | | | | | | | | | | | | 12.0 |
| 4 | 48 | 36 | 1 3/8 | 1/2 | 5/8 | 8 | 7 | 6 | 6 3/8 | 19 1/2 | 14 | 15 | 2 3/4 | 17 3/8 | | | | | | | | | | | | | 12.0 |
| 5 | 48 | 36 | 1 3/8 | 1/2 | 5/8 | 8 | 7 | 6 | 6 3/8 | 19 1/2 | 14 | 15 | 2 3/4 | 17 3/8 | | | | | | | | | | | | | 12.0 |

# STANDARD SIGN
# W057-52

WISCONSIN DEPT OF TRANSPORTATION

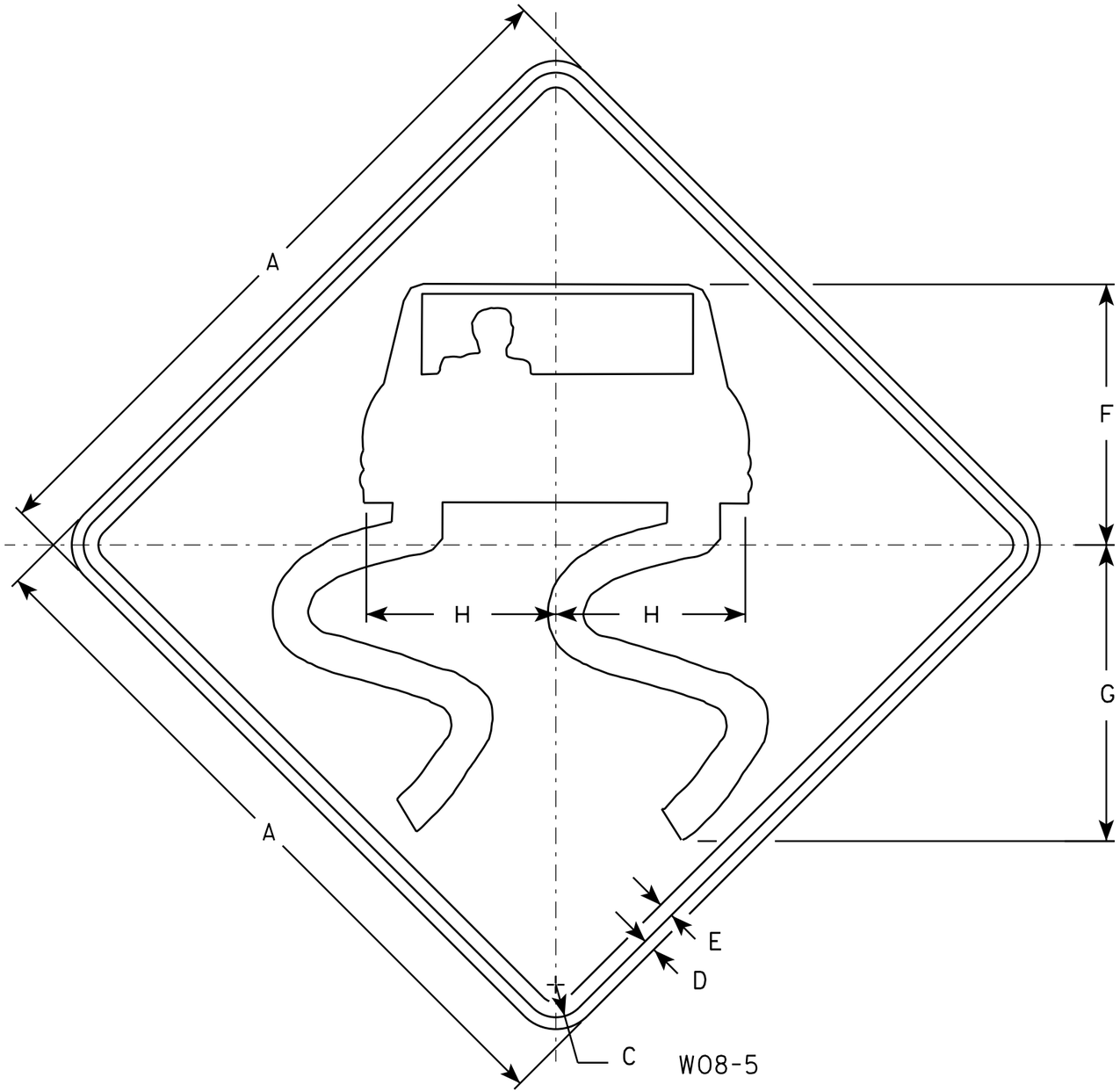
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/20/13 PLATE W057-52.1



| PROJECT NO: | HWY: | COUNTY: | | SHEET NO: | E |
|---|---|---|---|---|---|

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W05752.DGN PLOT DATE : 28-FEB-2014 11:42 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 8.026599:1.000000 WISDOT/CADDS SHEET 42




NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

| SIZE | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area sq. ft. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 36 | | 1 5/8 | 5/8 | 3/4 | 13 | 14 7/8 | 9 1/2 | | | | | | | | | | | | | | | | | | | 9.0 |
| 2S | 48 | | 2 1/4 | 3/4 | 1 | 17 3/8 | 19 3/4 | 12 5/8 | | | | | | | | | | | | | | | | | | | 16.0 |
| 2M | 48 | | 2 1/4 | 3/4 | 1 | 17 3/8 | 19 3/4 | 12 5/8 | | | | | | | | | | | | | | | | | | | 16.0 |
| 3 | 48 | | 2 1/4 | 3/4 | 1 | 17 3/8 | 19 3/4 | 12 5/8 | | | | | | | | | | | | | | | | | | | 16.0 |
| 4 | 48 | | 2 1/4 | 3/4 | 1 | 17 3/8 | 19 3/4 | 12 5/8 | | | | | | | | | | | | | | | | | | | 16.0 |
| 5 | 48 | | 2 1/4 | 3/4 | 1 | 17 3/8 | 19 3/4 | 12 5/8 | | | | | | | | | | | | | | | | | | | 16.0 |

# STANDARD SIGN
# W08-5

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

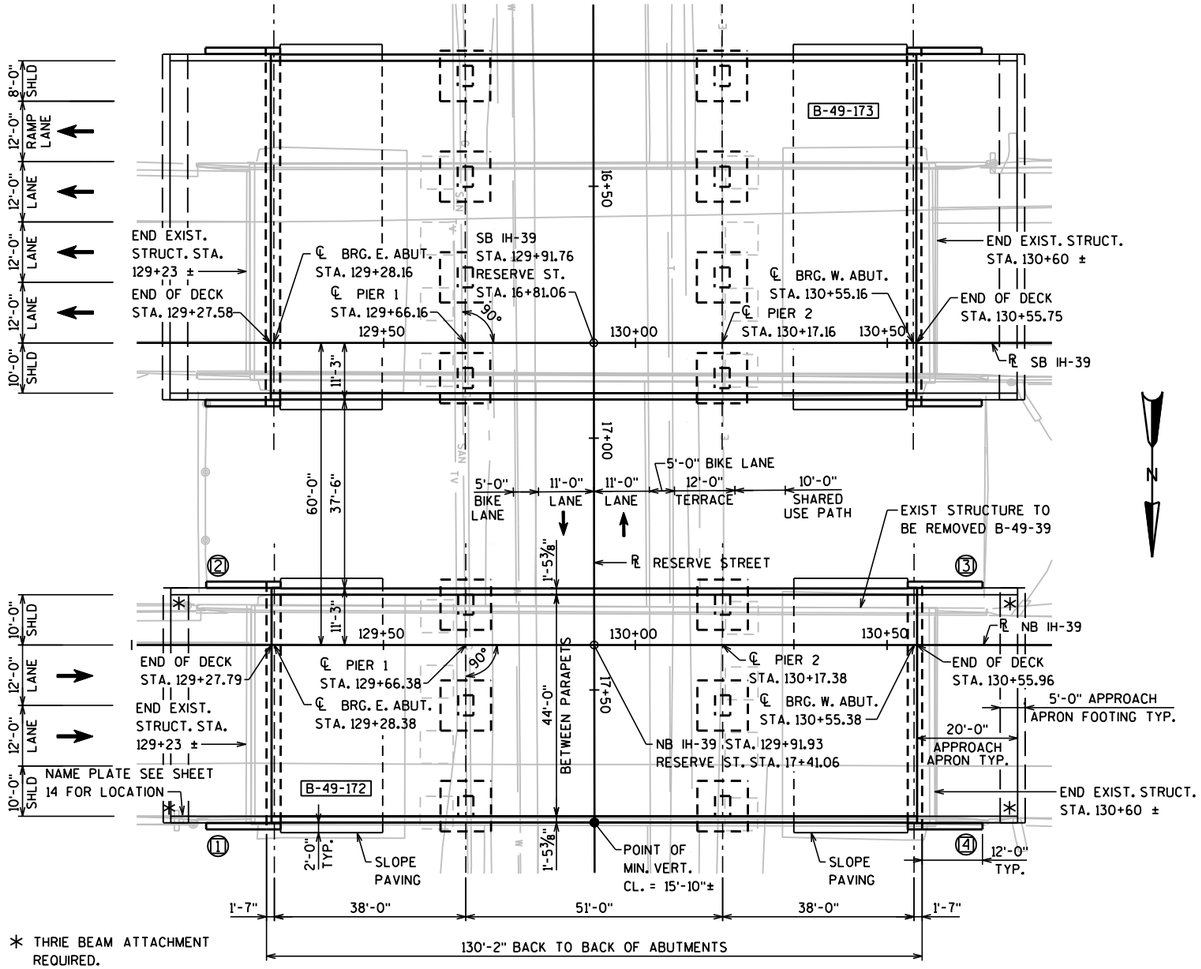
DATE 11/20/13 PLATE NO W05-5.1

PROJECT NO: | HWY: | COUNTY: | | SHEET NO: E



FILE NAME : C:\CAEFiles\Projects\tr_stdplate\W085.DGN PLOT DATE : 20-NOV-2013 13:34 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 6.742482:1.000000
WISDOT/CADDS SHEET 42

| STATE PROJECT NUMBER |
|---|
| 1166-08-72 |

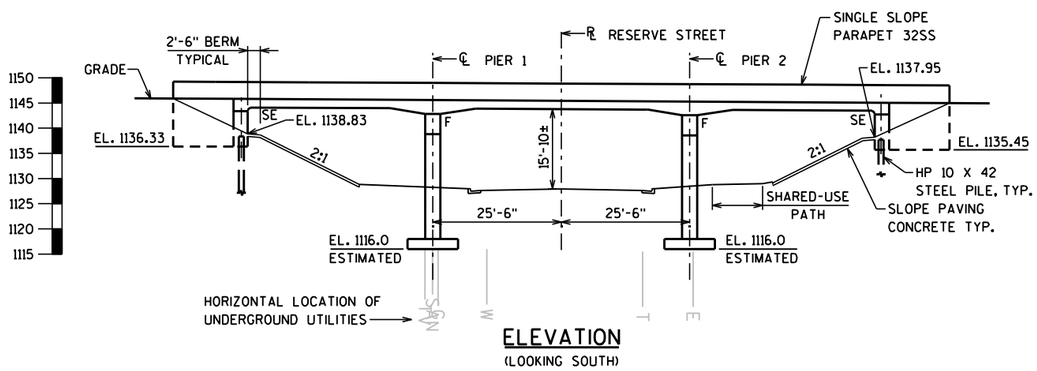



✳ THRIE BEAM ATTACHMENT REQUIRED.

⑪ INDICATES WING NUMBER

## PLAN

3-SPAN HAUNCHED CONCRETE SLAB BRIDGE




## ELEVATION

(LOOKING SOUTH)

## LIST OF DRAWINGS


1. GENERAL PLAN
2. CROSS SECTION & QUANTITIES
3. SUBSURFACE EXPLORATION
4. EAST ABUTMENT
5. EAST ABUTMENT DETAILS
6. WEST ABUTMENT
7. WEST ABUTMENT DETAILS
8. PIER 1
9. PIER 2
10. SUPERSTRUCTURE
11. SUPERSTRUCTURE DETAILS
12. STRUCTURAL APPROACH SLAB
13. STRUCTURAL APPROACH SLAB DETAILS
14. SINGLE SLOPE 32SS PARAPET
15. SLOPE PAVING (CONCRETE CAST-IN-PLACE)


## TRAFFIC VOLUME

| IH 39 | RESERVE STREET |
|---|---|
| A.D.T. 43,400 (2034) | A.D.T. 2,600 (2034) |
| R.D.S.= 70 M.P.H. | R.D.S.= 40 M.P.H. |

## DESIGN DATA

LIVE LOAD:

DESIGN LOADING ——— HL-93
INVENTORY RATING FACTOR ——— RF = 1.05
OPERATING RATING FACTOR ——— RF = 1.37
WISCONSIN STANDARD PERMIT VEHICLE —— 250 (KIPS)
STRUCTURE IS DESIGNED FOR A FUTURE WEARING SURFACE OF 20 POUNDS PER SQUARE FOOT

ULTIMATE DESIGN STRESSES:

CONCRETE MASONRY
SLAB ——— f'c = 4,000 P.S.I.
ALL OTHER ——— f'c = 3,500 P.S.I.
HIGH STRENGTH BAR STEEL
REINFORCEMENT, GRADE 60 ——— fy = 60,000 P.S.I.

## FOUNDATION DATA

ABUTMENTS TO BE SUPPORTED ON HP 10 X 42 STEEL PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 180 TONS ** PER PILE DETERMINED BY THE MODIFIED GATES DYNAMIC EQUATION.
ESTIMATED 30 FEET LONG AT WEST ABUTMENT.
ESTIMATED 35 FEET LONG AT EAST ABUTMENT.

PIERS TO BE SUPPORTED WITH SPREAD FOOTINGS ON WEATHERED BEDROCK WITH A REQUIRED FACTORED BEARING RESISTANCE OF 9,000 PSF. A GEOTECHNICAL ENGINEER WILL DETERMINE THE FACTORED BEARING RESISTANCE BY VISUAL INSPECTION PRIOR TO CONSTRUCTION OF THE PIER FOOTINGS. EXISTING PIER FOOTINGS SHALL BE REMOVED AND PROPOSED FOOTINGS SHALL BE CONSTRUCTED AT THE SAME ELEVATION. ELEVATIONS SHOWN ARE APPROXIMATE BASED ON EXISTING PLANS AVAILABLE FROM THE WISCONSIN DEPARTMENT OF TRANSPORTATION.

** THE FACTORED AXIAL RESISTANCE OF PILES IN COMPRESSION USED FOR DESIGN IS THE REQUIRED DRIVING RESISTANCE MULTIPLIED BY A RESISTANCE FACTOR OF 0.5 USING MODIFIED GATES TO DETERMINE DRIVEN PILE CAPACITY.

WISCONSIN
KRISTOFER R. OLSON
E-35236
APPLETON, WI
PROFESSIONAL ENGINEER

3/17/2014


CONSULTANT CONTACT
KRISTOFER OLSON
OMNNI ASSOCIATES, INC.
(920) 735-6900

BRIDGE OFFICE CONTACT
WILLIAM DREHER
(608) 266-8489


| NO. | DATE | REVISION | BY |
|---|---|---|---|
| | | | |

ORIGINAL PLANS PREPARED BY
OMNNI ASSOCIATES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher KAR 05/07/14
CHIEF STRUCTURES DESIGN ENGINEER DATE

# STRUCTURE B-49-172

IH 39 NB OVER RESERVE STREET

| COUNTY | CITY |
|---|---|
| PORTAGE | STEVENS POINT |

DESIGN SPEC. AASHTO LRFD BRIDGE DESIGN SPECIFICATION — LOAD HL-93

| DESIGNED BY | DESIGN CK'D. | DRAWN BY | PLANS CK'D. |
|---|---|---|---|
| KRO | JAW | BRE | KRO |

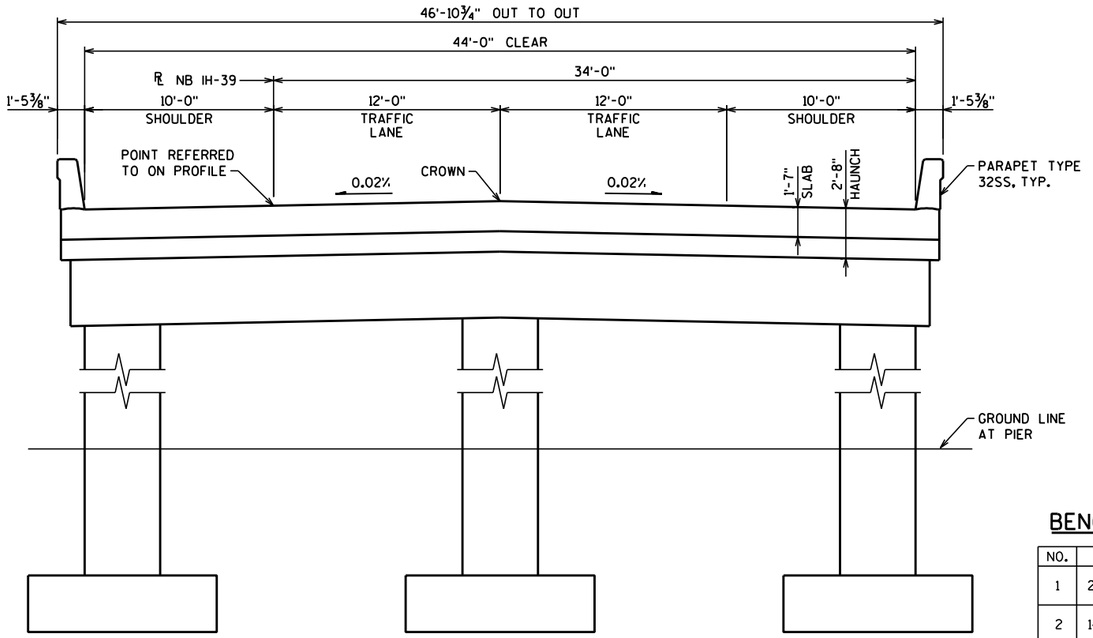
GENERAL PLAN

SHEET 1 OF 15

212

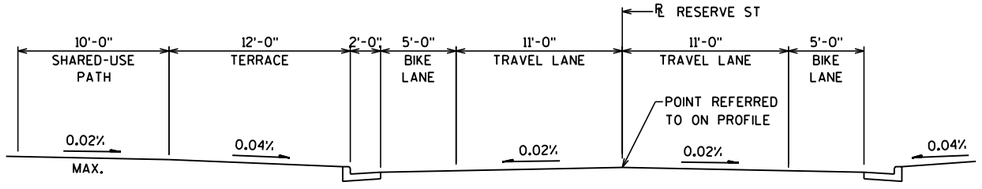
8

8




## CROSS SECTION

(LOOKING WEST)




## TYPICAL FINISHED SECTION RESERVE ST

LOOKING NORTH

## BENCH MARKS

| NO. | STATION | DESCRIPTION | ELEV. |
|---|---|---|---|
| 1 | 21+22 36'RT. | CHISEL "X" ON FLANGE OF HYDRANT AT S.E. CORNER OF EAGLE SUMMIT & RESERVE STREET | 1133.19 |
| 2 | 14+94 23'LT. | CHISEL "X" ON FLANGE OF HYDRANT, 150'± SOUTH OF B-49-39, WEST SIDE OF RESERVE ST | 1127.49 |
| 3 | 10+42 41'LT. | ARROW ON HYDRANT 250'± N. OF "NORTH SENTRY INSURANCE" ENTRANCE, W. SIDE RESERVE ST | 1126.00 |
| 4 | 129+24 34'RT. | DISK ON THE NE CORNER OF B-49-39 | 1146.55 |

## TOTAL ESTIMATED QUANTITIES

| ITEM NO. | BID ITEMS | UNIT | SUPER. | WEST ABUT. | EAST ABUT. | PIER 1 | PIER 2 | APPROACH APRONS | TOTALS |
|---|---|---|---|---|---|---|---|---|---|
| 203.0200 | REMOVING OLD STRUCTURE STA. 129NB+91 | LS | --- | --- | --- | --- | --- | --- | 1 |
| 203.0210.S | ABATEMENT OF ASBESTOS CONTAINING MATERIAL STRUCTURE (B-49-39) | LS | --- | --- | --- | --- | --- | --- | 1 |
| 206.1000 | EXCAVATION FOR STRUCTURES BRIDGES B-49-172 | LS | --- | --- | --- | --- | --- | --- | 1 |
| 210.0100 | BACKFILL STRUCTURE | CY | --- | 100 | 100 | --- | --- | --- | 200 |
| 305.0120 | BASE AGGREGATE DENSE 1 1/4-INCH | TON | --- | --- | --- | --- | --- | 279 | 279 |
| 502.0100 | CONCRETE MASONRY BRIDGES | CY | 426 | 61 | 62 | 98 | 98 | 127 | 872 |
| 502.3200 | PROTECTIVE SURFACE TREAMENT | SY | 760 | --- | --- | --- | --- | 230 | 990 |
| 505.0405 | BAR STEEL REINFORCEMENT HS BRIDGES | LB | --- | 3390 | 3410 | 2700 | 2700 | --- | 12,200 |
| 505.0605 | BAR STEEL REINFORCEMENT HS COATED BRIDGES | LB | 84140 | 1680 | 1690 | 11140 | 11080 | 21370 | 131,100 |
| 516.0500 | RUBBERIZED MEMBRANE WATERPROOFING | SY | --- | 13 | 13 | --- | --- | --- | 26 |
| 550.1100 | PILING STEEL HP 10-INCH X 42 LB | LF | --- | 245 | 210 | --- | --- | --- | 455 |
| 604.0400 | SLOPE PAVING CONCRETE | SY | --- | 127 | 142 | --- | --- | --- | 269 |
| 612.0406 | PIPE UNDERDRAIN WRAPPED 6-INCH | LF | --- | 76 | 76 | --- | --- | 114 | 266 |
| 614.0150 | ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD | EACH | 4 | --- | --- | --- | --- | --- | 4 |
| SPV.0085.01 | BAR STEEL REINFORCEMENT HS STAINLESS BRIDGES | LB | --- | --- | --- | --- | --- | 1632 | 1,632 |
| | | | | | | | | | |
| | NON-BID ITEMS | | | | | | | | |
| | FILLER | SIZE | ----- | ----- | ----- | ----- | ----- | ----- | ½"&¾" |

## GENERAL NOTES:

DRAWING SHALL NOT BE SCALED.

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

BEVEL EXPOSED EDGES OF CONCRETE ¾" UNLESS OTHERWISE NOTED.

SLAB FALSEWORK SHALL BE SUPPORTED ON PILES OR THE SUBSTRUCTURE UNLESS AN ALTERNATE METHOD IS APPROVED BY THE ENGINEER.

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

AT ABUTMENTS ALL SPACES EXCAVATED AND NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH STRUCTURE BACKFILL.

THE EXISTING GROUND LINE SHALL BE THE UPPER LIMITS OF EXCAVATION FOR STRUCTURES.

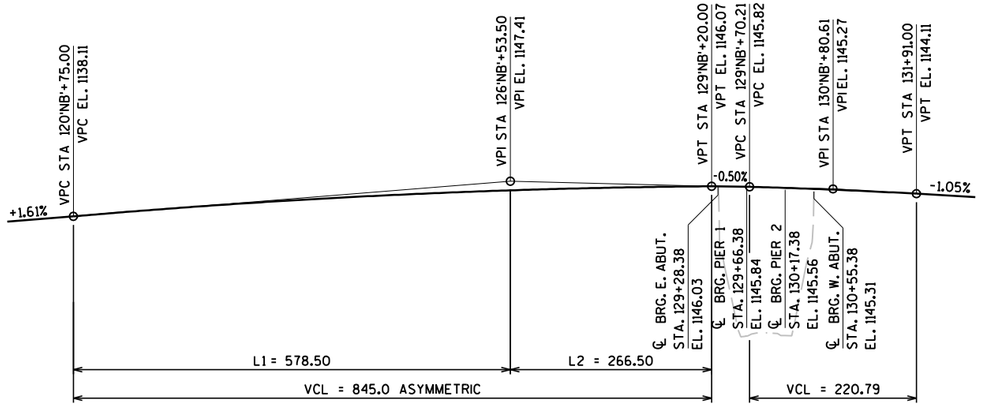
THE GRADATION OF THE STRUCTURE BACKFILL SHALL MEET THE REQUIREMENTS OF SECTION 209.2.2 OF THE STANDARD SPECIFICATIONS FOR GRADE 1 MATERIAL.

EXISTING BRIDGE B-49-39 IS A THREE SPAN HAUNCHED VOIDED CONCRETE SLAB WITH AN OVERALL WIDTH OF 43'-0" AND AN OVERALL LENGTH OF 137'-2".

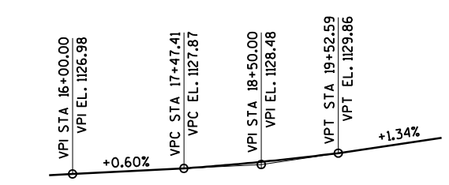
THE SLOPE OF THE FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH SLOPE PAVING CONCRETE TO THE EXTENT SHOWN ON SHEET 1 AND IN THE ABUTMENT DETAILS.

PROTECTIVE SURFACE TREATMENT SHALL BE APPLIED TO THE FOLLOWING COMPLETED SURFACES: TOP OF DECK SLAB, PAVING NOTCH, TOPS OF APPROACH APRONS, TOP AND INSIDE FACES OF PARAPETS ON BOTH THE BRIDGE DECK AND APROACH APRONS.

ALL STATIONS AND ELEVATIONS ARE IN FEET. ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).




## PROFILE GRADE LINE - NORTHBOUND IH 39




## PROFILE GRADE LINE - RESERVE STREET

| NO. | DATE | REVISION | BY |
|---|---|---|---|
| | | | |

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-49-172

DRAWN BY BRE | PLANS CK'D. KRO

CROSS SECTION & QUANTITIES

SHEET 2 OF 15

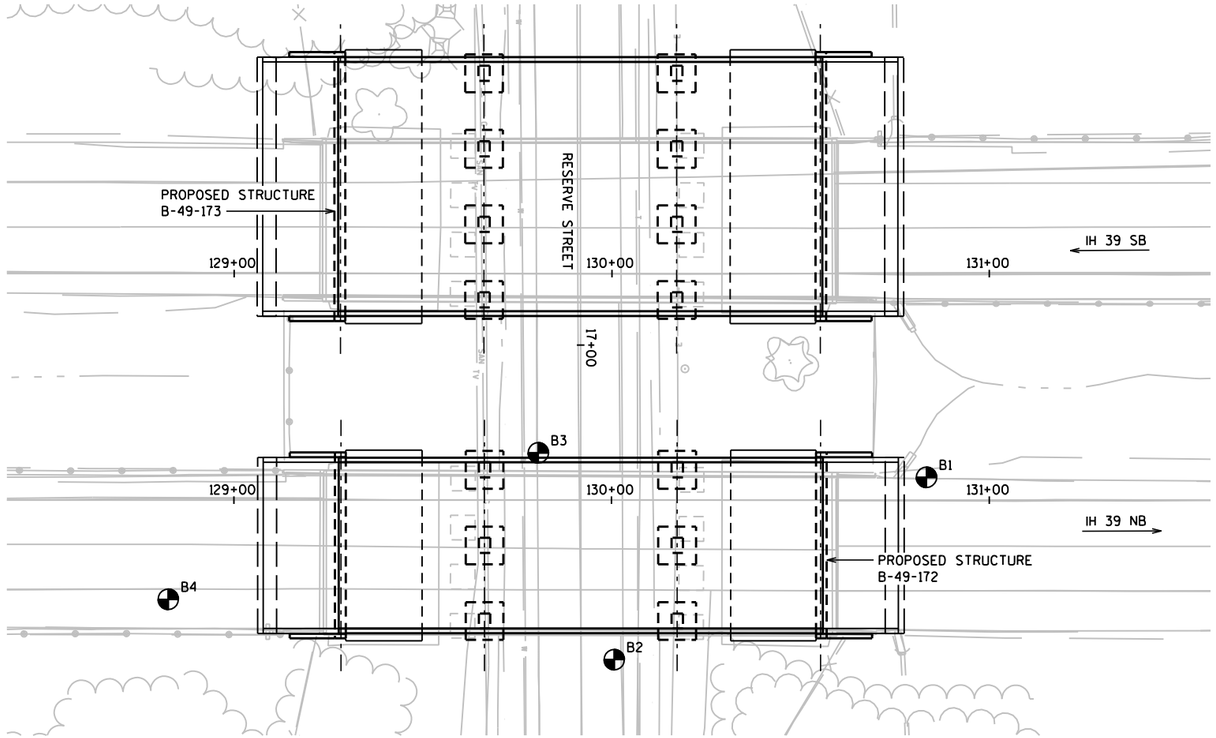
213

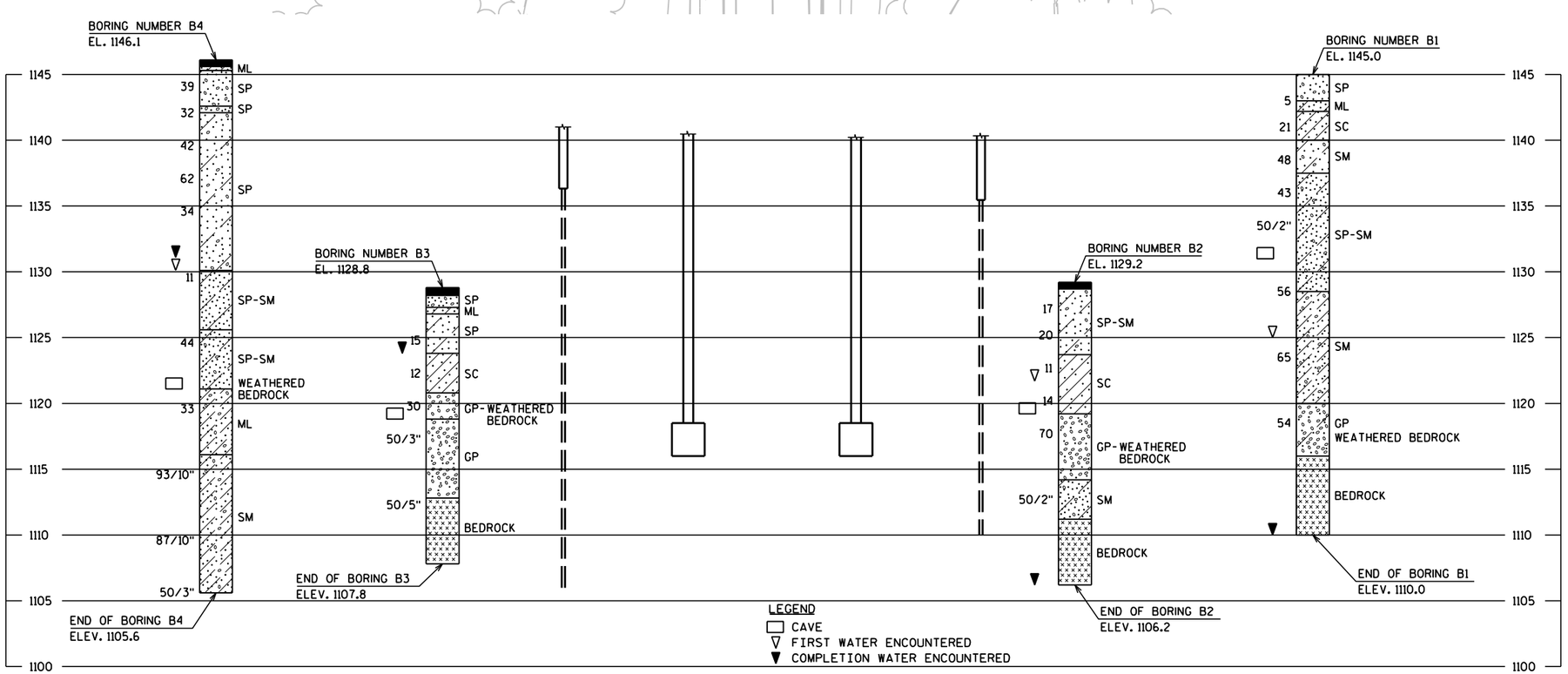
STATE PROJECT NUMBER
1166-08-72

8

8

| STATE PROJECT NUMBER |
|---|
| 1166-08-72 |



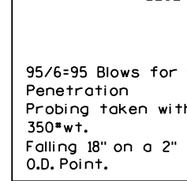

ABBREVIATIONS

F — Fine M — Medium C — Coarse
Ws — Weathered So — Sound

MATERIAL SYMBOLS

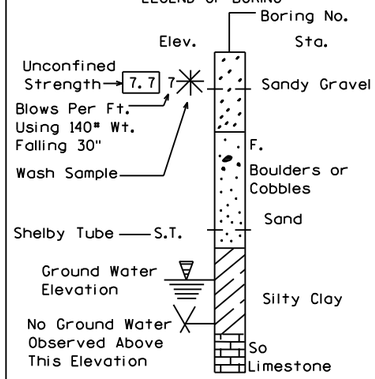
Topsoil, Silt, Sandstone
Sand, Peat, Limestone
Gravel, Clay, Igneous Rock

LEGEND OF PROBING




95/6=95 Blows for 6" Penetration
Probing taken with a 350#wt.
Falling 18" on a 2" O.D. Point.

LEGEND OF BORING




Unless otherwise specified, the blows per foot at the locations indicated are based on driving a O.D. x 1. 4" I.D. split spoon sampler with a 140# hammer having a free fall of 30". The blow count is taken in undisturbed soil immediately below a cased or open hole eliminating side friction on the drive pipe.

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

To obtain relative data concerning the character of material in and upon which the foundation might be built, borings and/or soundings were made at points approximately as indicated on this drawing. The data presented herein represents the findings of the subsurface explorations made. However, because the depths investigated are limited and the area of the borings and/or soundings is very small in relation to the entire area, the Division of Highways does not warrant conditions below the depths investigated or that the classification of material encountered in these investigations is necessarily typical of the entire site.

| NO. | DATE | REVISION | BY |
|---|---|---|---|
| | | | |

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-49-172

DRAWN BY BRE | PLANS CK'D. KRO

SUBSURFACE EXPLORATION

SHEET 3 OF 15

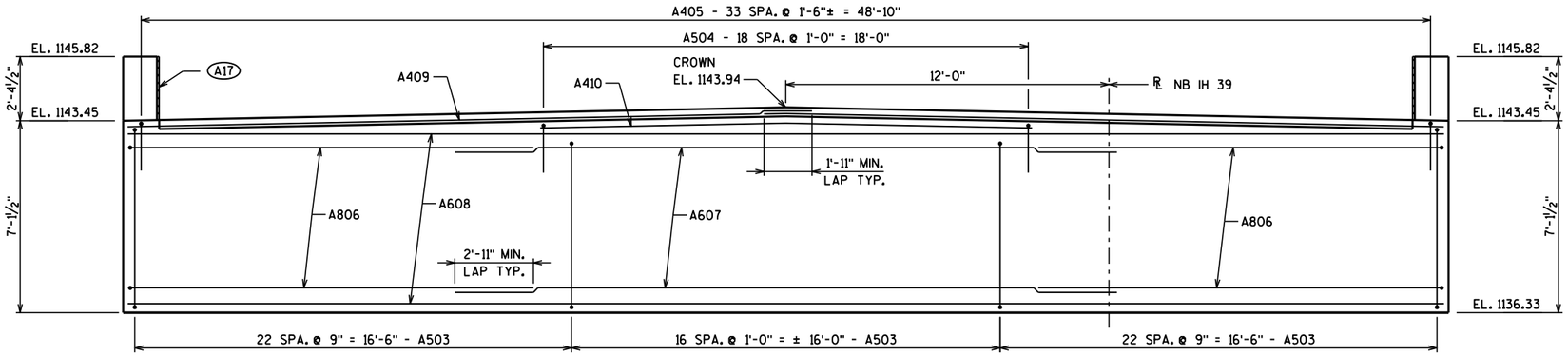
214

8

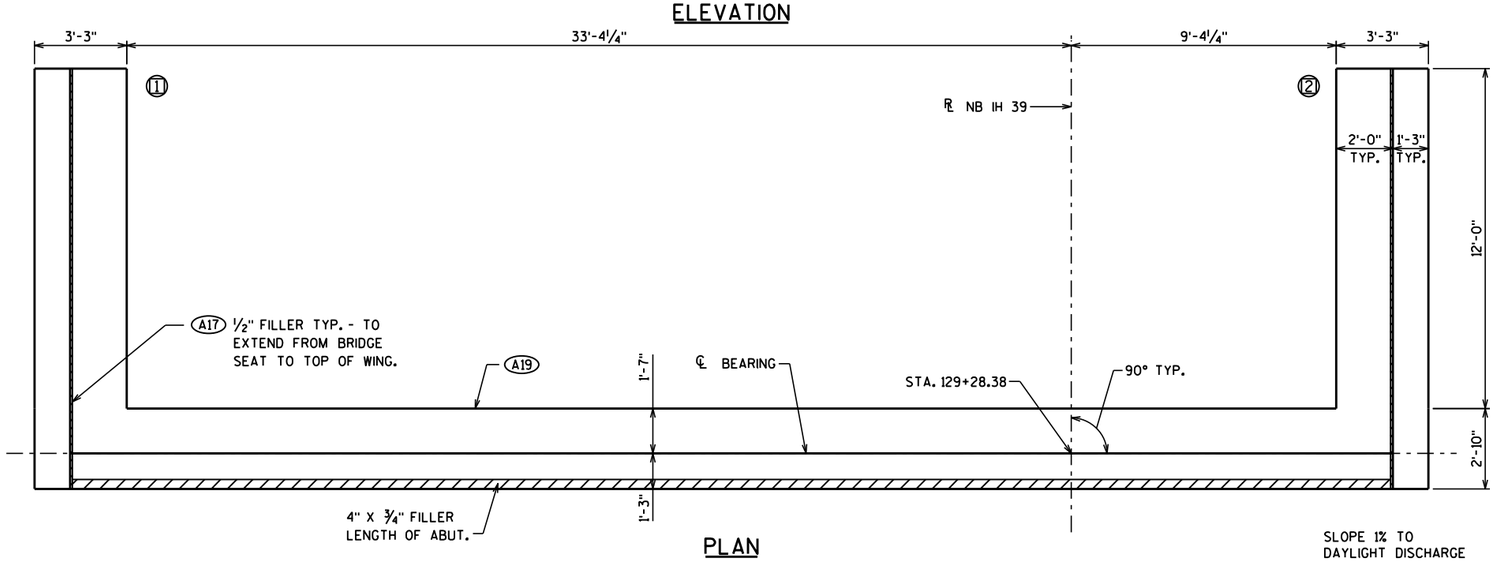
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STATE PROJECT NUMBER

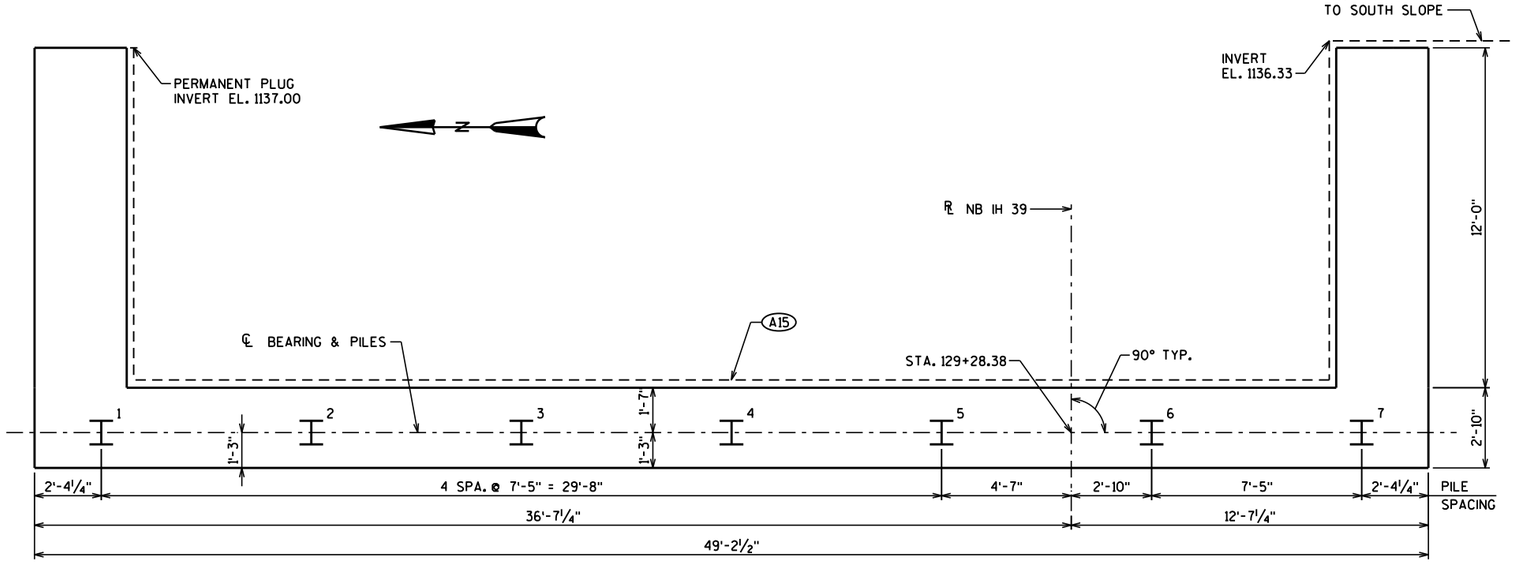
1166-08-72




ELEVATION




PLAN




PILE PLAN

A15 PIPE UNDERDRAIN WRAPPED 6-INCH. SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SCREEN AT ENDS OF PIPE UNDERDRAIN, SEE SHEET 5 FOR DETAILS.

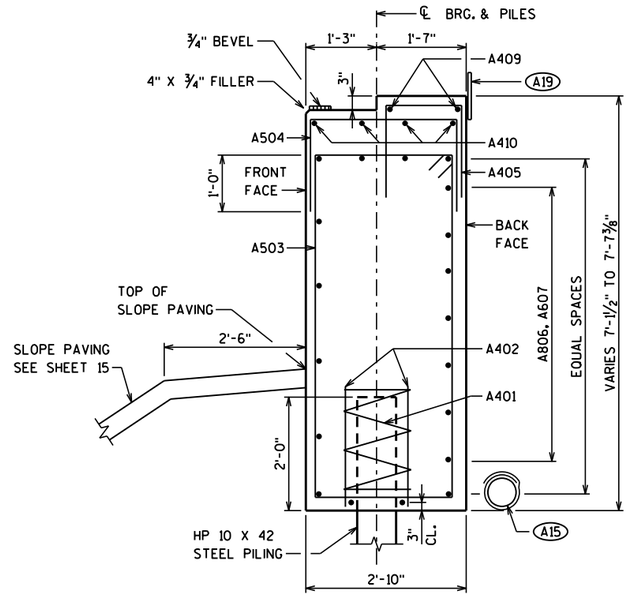
A17 SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE.)

A19 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE.

SEE SHEET 5 FOR BILL OF BARS, BAR BENDING DIAGRAMS AND PILE SPLICE DETAILS.

ABUTMENTS TO BE SUPPORTED ON HP 10 X 42 STEEL PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 180 TONS PER PILE. ESTIMATED LENGTH = 35' AT EAST ABUTMENT.

(X) INDICATES WING NUMBER




SECTION THRU ABUTMENT BODY

HORIZ. BARS NOT OTHERWISE IDENTIFIED ARE A608 BARS

8

8

| NO. | DATE | REVISION | BY |
|---|---|---|---|
| | | | |

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-49-172

DRAWN BY BRE | PLANS CK'D. JAW

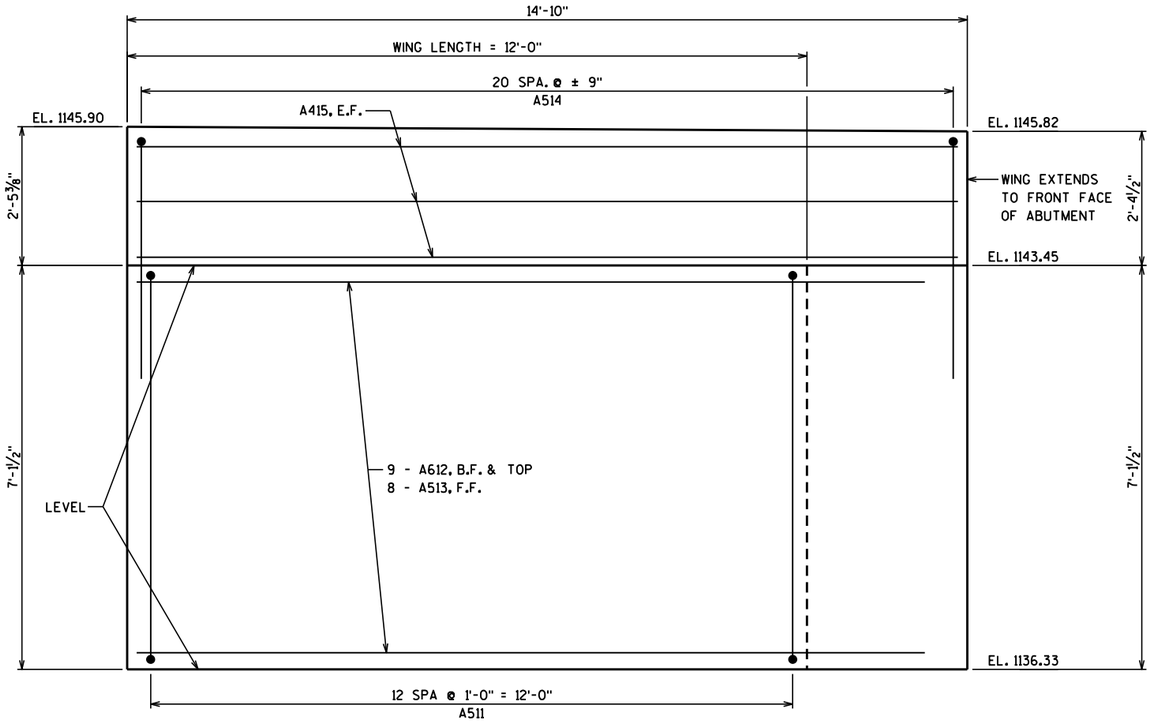
EAST ABUTMENT

SHEET 4 OF 15

215

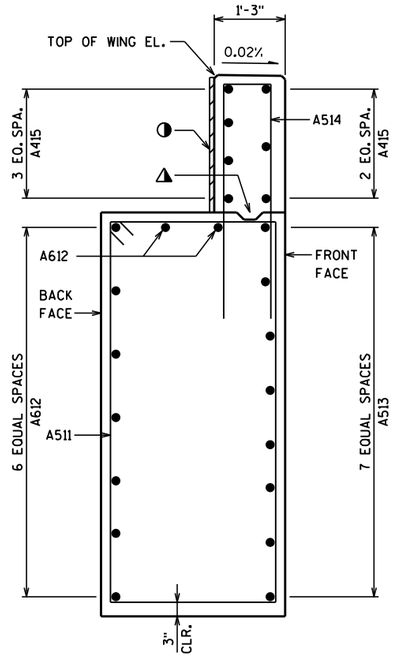
FILE NAME : F:±TR±JOBS±E2031A12±Sheets±Bridge±B-49-172 NB±B-49-172 04 east abut.dgn PLOT BY : epleyb PLOT DATE: 3/14/2014 1:35:49 PM

STATE PROJECT NUMBER
1166-08-72




## WING 1 ELEVATION

(WING 2 SIMILAR, OPPOSITE HAND)




## WING 1 SECTION

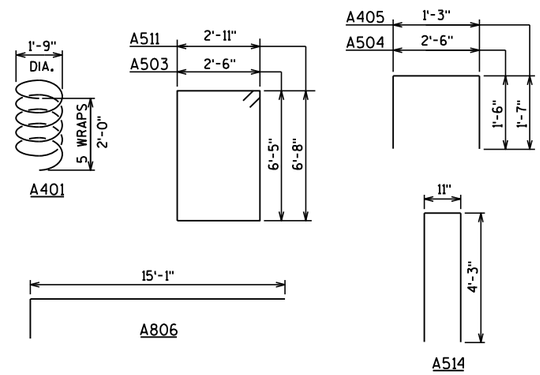
(WING 2 SIMILAR, OPPOSITE HAND)

⚠ OPTIONAL CONST. JOINT: KEYWAY FORMED BY BEVELED 2" X 6". (18" R.M.W. @ B.F. & ¾" "V" GROOVE @ F.F. IF JOINT IS USED.)

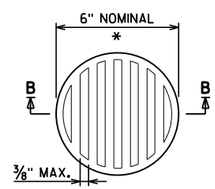
◑ ½" FILLER, SEALER (EXTEND TO TOP OF WING)

## BILL OF BARS

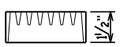
| BAR MARK | COAT | NO. REQ'D. | LENGTH | BENT | LOCATION |
|---|---|---|---|---|---|
| A401 | | 7 | 28'-0" | X | BODY - ONE PER PILE |
| A402 | | 14 | 2'-3" | | BODY - TWO PER PILE |
| A503 | | 61 | 18'-5" | X | BODY - STIRRUPS |
| A504 | | 19 | 5'-3" | X | BODY - VERTICAL, TOP |
| A405 | | 34 | 4'-3" | X | BODY - VERTICAL, TOP |
| A806 | | 14 | 16'-3" | X | BODY - HORIZONTAL B.F. |
| A607 | | 7 | 24'-7" | | BODY - HORIZONTAL B.F. |
| A608 | | 12 | 48'-11" | | BODY - HORIZONTAL F.F., TOP |
| A409 | | 4 | 25'-5" | | BODY - HORIZONTAL TOP |
| A410 | | 4 | 18'-0" | | BODY - HORIZONTAL TOP |
| A511 | X | 26 | 19'-9" | X | WINGS - STIRRUPS |
| A612 | X | 18 | 13'-11" | | WINGS - HORIZONTAL, B.F. |
| A513 | X | 16 | 13'-11" | | WINGS - HORIZONTAL, F.F. |
| A514 | X | 42 | 9'-2" | X | WINGS - VERTICAL |
| A415 | X | 14 | 14'-6" | | WINGS - HORIZONTAL |




## BAR BENDING DIAGRAMS




## RODENT SCREEN DETAIL

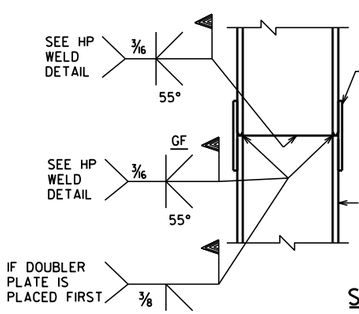


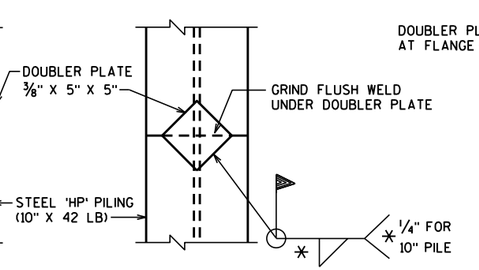

## SECTION B-B

* DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING. ORIENT SO SLOTS ARE VERTICAL.

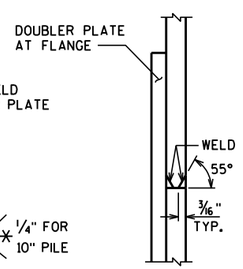
THE RODENT SCREEN, PIPE COUPLING AND SCREWS SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".

THE RODENT SCREEN 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 SCREEN TO THE EXPOSED END OF THE PIPE UNDERDRAIN. THE SCREEN SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X 1-INCH SHEET METAL SCREWS.




## STEEL 'HP' SHAPES




## HP WELD DETAIL

FLANGE SHOWN, WEB SIMILAR

| NO. | DATE | REVISION | BY |
|---|---|---|---|
| | | | |

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-49-172

DRAWN BY BRE | PLANS CK'D. JAW

EAST ABUTMENT DETAILS

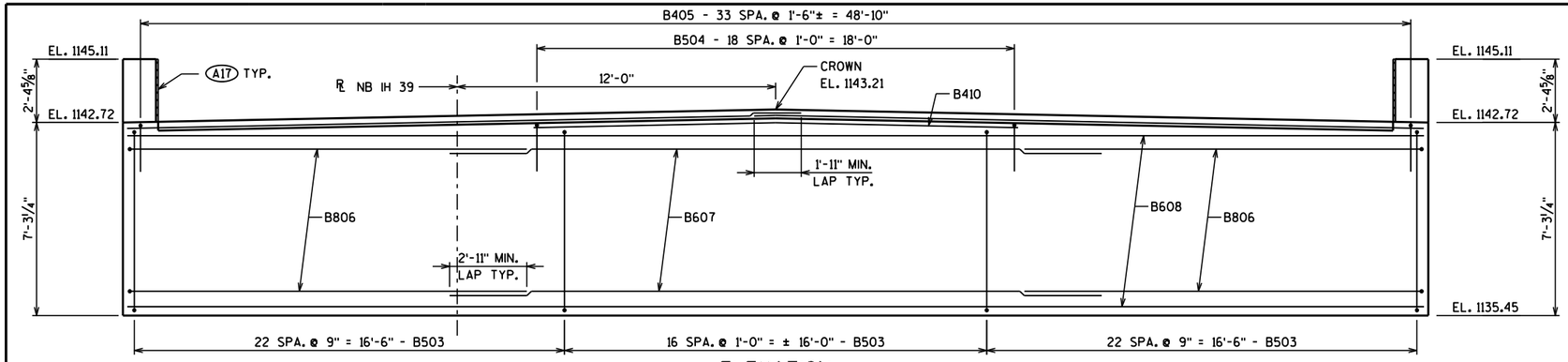
SHEET 5 OF 15

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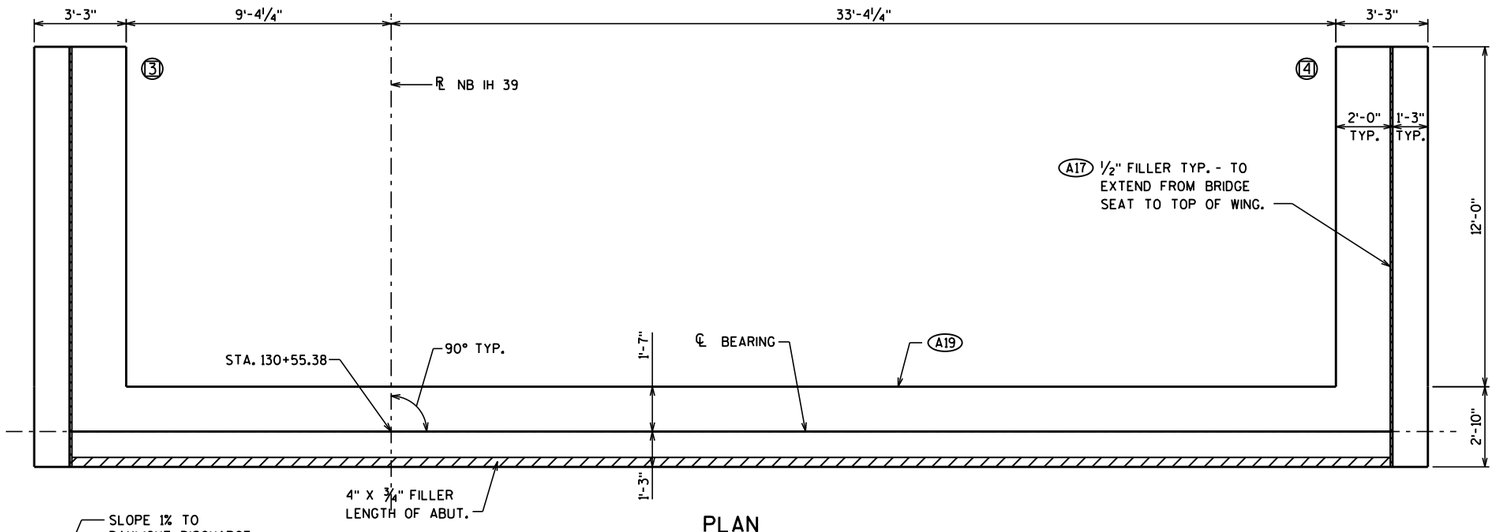
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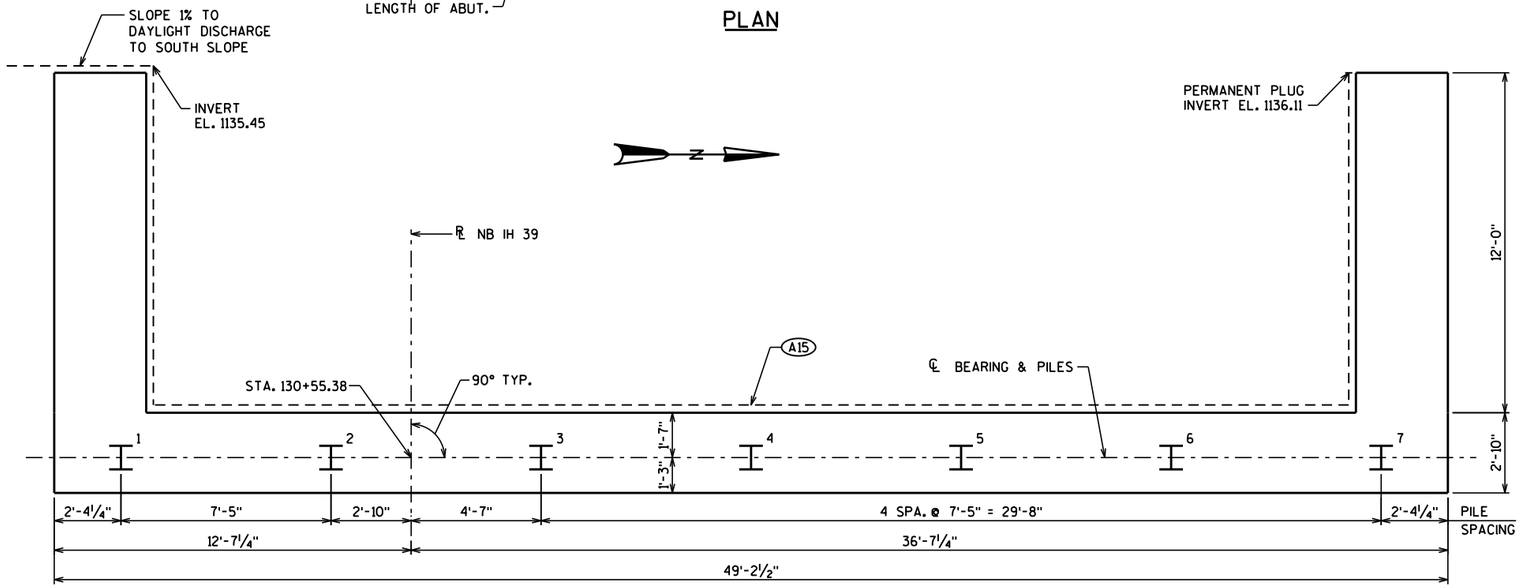
| STATE PROJECT NUMBER |
|---|
| 1166-08-72 |




ELEVATION




PLAN




PILE PLAN

(A15) PIPE UNDERDRAIN WRAPPED 6-INCH. SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SCREEN AT ENDS OF PIPE UNDERDRAIN, SEE SHEET 5 FOR DETAILS.

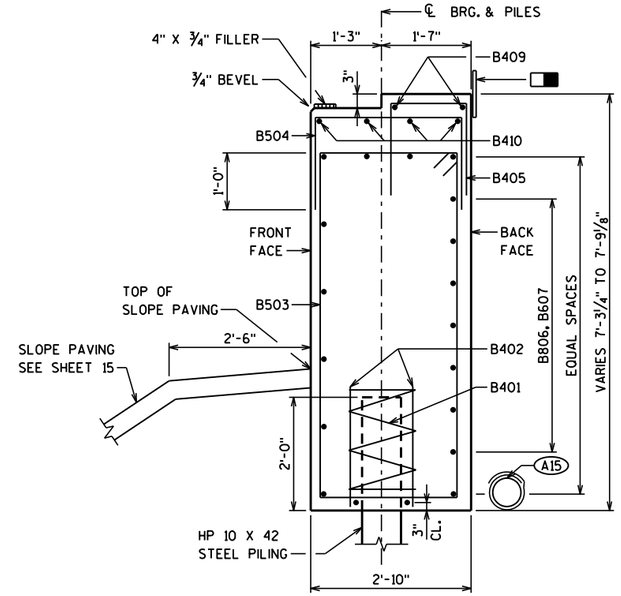
(A17) SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE.)

(A19) 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE.

SEE SHEET 7 FOR BILL OF BARS, BAR BENDING DIAGRAMS AND PILE SPLICE DETAILS.

ABUTMENTS TO BE SUPPORTED ON HP 10 X 42 STEEL PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 180 TONS PER PILE. ESTIMATED LENGTH = 30' AT WEST ABUTMENT.

(X) INDICATES WING NUMBER




SECTION THRU ABUTMENT BODY

HORIZ. BARS NOT OTHERWISE IDENTIFIED ARE B608 BARS

| NO. | DATE | REVISION | BY |
|---|---|---|---|
| | | | |

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-49-172

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WEST ABUTMENT

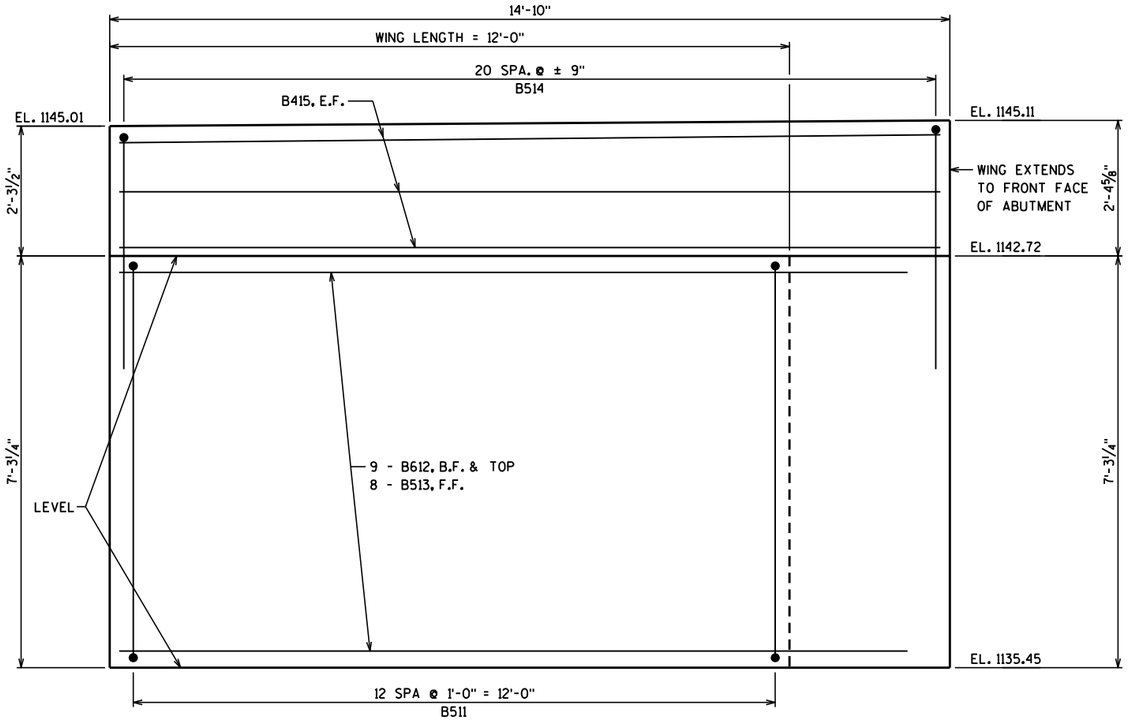
SHEET 6 OF 15

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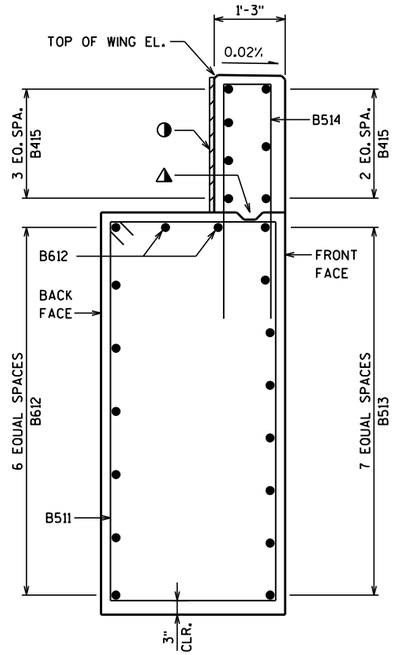
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STATE PROJECT NUMBER
1166-08-72




## WING 3 ELEVATION
(WING 4 SIMILAR, OPPOSITE HAND)



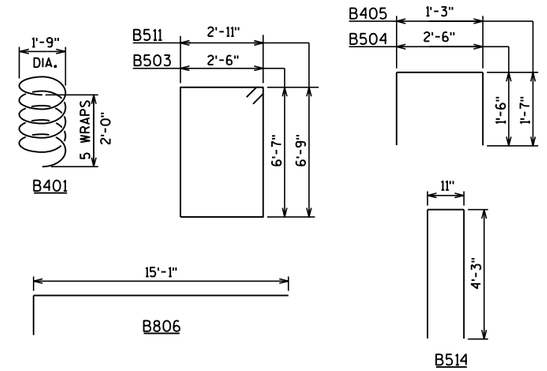

## WING 3 SECTION
(WING 4 SIMILAR, OPPOSITE HAND)

⚠ OPTIONAL CONST. JOINT: KEYWAY FORMED BY BEVELED 2" X 6". (18" R.M.W. @ B.F. & ¾" "V" GROOVE @ F.F. IF JOINT IS USED.)

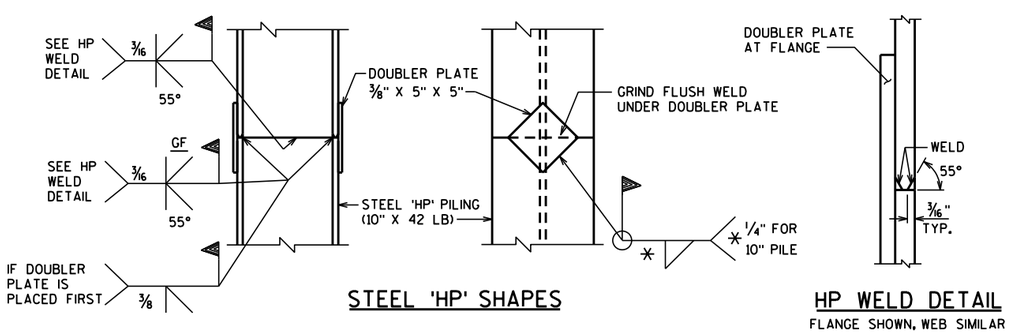
◑ ½" FILLER, SEALER (EXTEND TO TOP OF WING)

## BILL OF BARS

| BAR MARK | COAT | NO. REQ'D. | LENGTH | BENT | LOCATION |
|---|---|---|---|---|---|
| B401 | | 7 | 28'-0" | X | BODY - ONE PER PILE |
| B402 | | 14 | 2'-3" | | BODY - TWO PER PILE |
| B503 | | 61 | 18'-9" | X | BODY - STIRRUPS |
| B504 | | 19 | 5'-3" | X | BODY - VERTICAL, TOP |
| B405 | | 34 | 4'-3" | X | BODY - VERTICAL, TOP |
| B806 | | 14 | 16'-3" | X | BODY - HORIZONTAL B.F. |
| B607 | | 7 | 24'-7" | | BODY - HORIZONTAL B.F. |
| B608 | | 12 | 48'-11" | | BODY - HORIZONTAL F.F., TOP |
| B409 | | 4 | 25'-5" | | BODY - HORIZONTAL TOP |
| B410 | | 4 | 18'-0" | | BODY - HORIZONTAL TOP |
| B511 | X | 26 | 19'-11" | X | WINGS - STIRRUPS |
| B612 | X | 18 | 13'-11" | | WINGS - HORIZONTAL, B.F. |
| B513 | X | 16 | 13'-11" | | WINGS - HORIZONTAL, F.F. |
| B514 | X | 42 | 9'-2" | X | WINGS - VERTICAL |
| B415 | X | 14 | 14'-6" | | WINGS - HORIZONTAL |

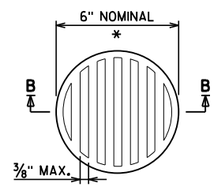



## BAR BENDING DIAGRAMS

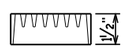



## STEEL 'HP' SHAPES

## HP WELD DETAIL
FLANGE SHOWN, WEB SIMILAR




## RODENT SCREEN DETAIL




## SECTION B-B

* DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING. ORIENT SO SLOTS ARE VERTICAL.

THE RODENT SCREEN, PIPE COUPLING AND SCREWS SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".

THE RODENT SCREEN 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 SCREEN TO THE EXPOSED END OF THE PIPE UNDERDRAIN. THE SCREEN SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X 1-INCH SHEET METAL SCREWS.

| NO. | DATE | REVISION | BY |
|---|---|---|---|

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-49-172

DRAWN BY BRE | PLANS CK'D. JAW

WEST ABUTMENT DETAILS

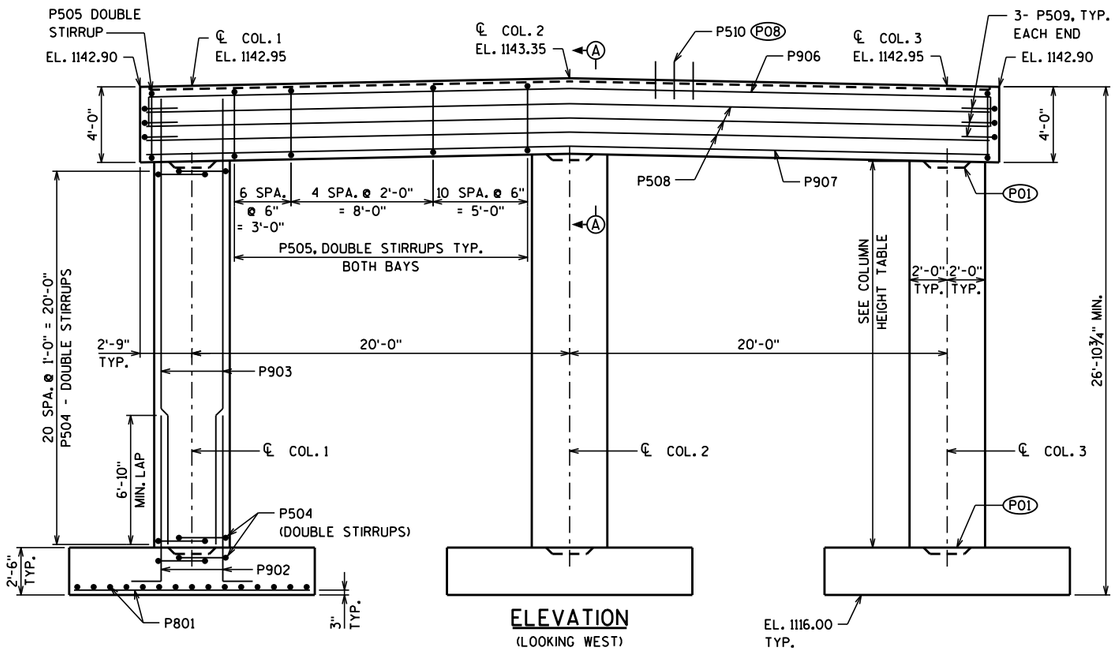
SHEET 7 OF 15

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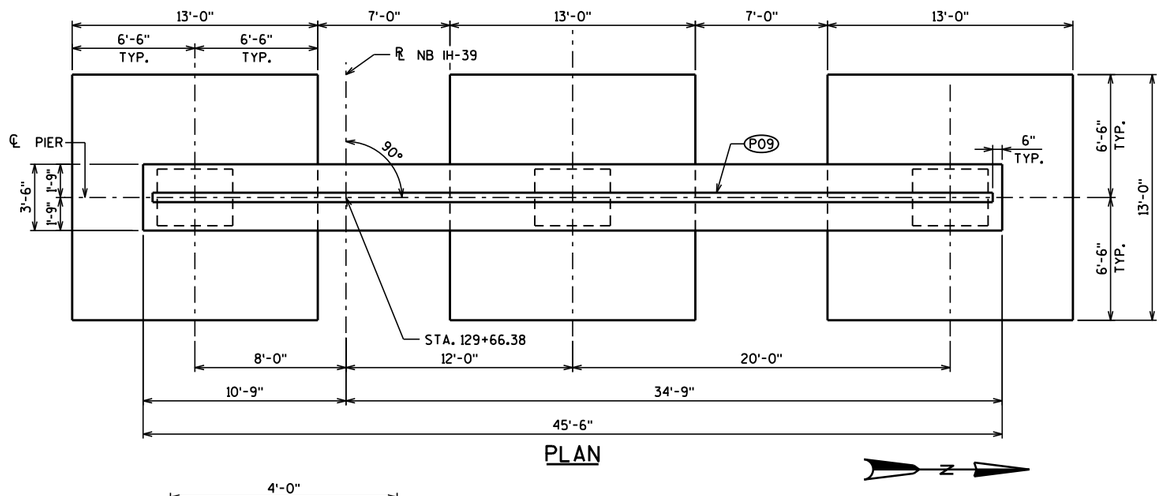
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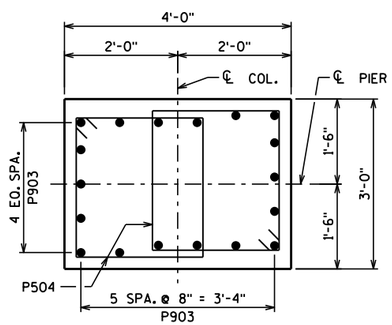
STATE PROJECT NUMBER
1166-08-72



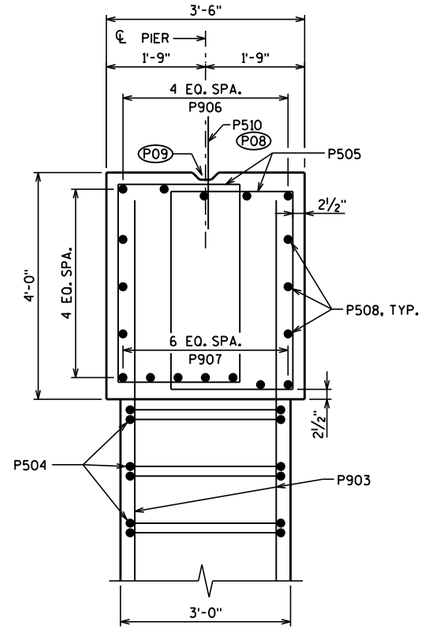

ELEVATION
(LOOKING WEST)




PLAN



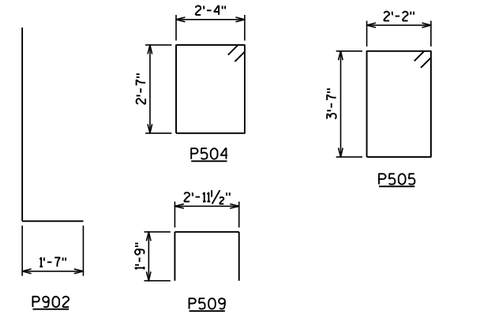

TYPICAL SECTION THRU COLUMN

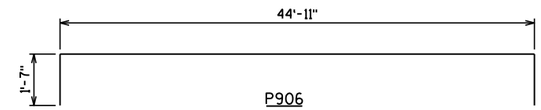



SECTION A-A THRU CAP

## BILL OF BARS

| BAR MARK | COAT | NO. REQ'D. | LENGTH | BENT | LOCATION |
|---|---|---|---|---|---|
| P801 | | 81 | 12'-6" | | FOOTING - HORIZONTAL |
| P902 | X | 54 | 10'-5" | X | FOOTING/COLUMN - VERTICAL |
| P903 | X | 54 | 23'-11" | | COLUMN - VERTICAL |
| P504 | X | 132 | 10'-5" | X | COLUMN - STIRRUPS |
| P505 | X | 88 | 12'-1" | X | CAP - DOUBLE STIRRUPS |
| P906 | X | 5 | 47'-7" | X | CAP - HORIZONTAL - TOP |
| P907 | X | 7 | 45'-0" | | CAP - HORIZONTAL - BOTTOM |
| P508 | X | 6 | 45'-0" | | CAP - HORIZONTAL - SIDES |
| P509 | X | 6 | 6'-3" | X | CAP - ENDS |
| P510 | X | 44 | 2'-0" | | CAP - DOWELS |



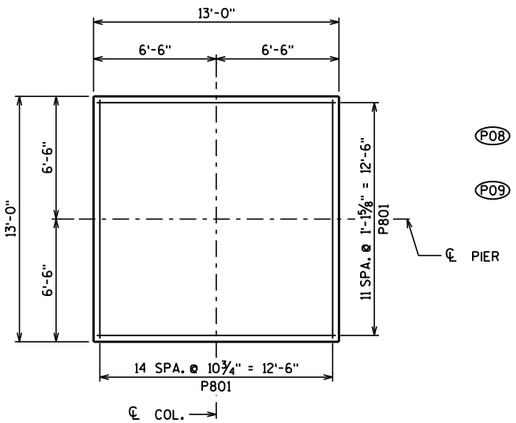




BAR BENDING DIAGRAMS

## COLUMN HEIGHT

DIMENSION IS MEASURED AT CENTERLINE OF COLUMN

| COLUMN | HEIGHT |
|---|---|
| 1 | 20'-5½" |
| 2 | 20'-10¼" |
| 3 | 20'-5½" |




TYP. FOOTING PLAN

## NOTES

(P01) 1'-3" X 2'-6" X 4" CONSTRUCTION JOINT FORMED BY BEVELED KEYWAY.

PIERS TO BE SUPPORTED WITH SPREAD FOOTINGS ON WEATHERED BEDROCK WITH A REQUIRED FACTORED BEARING RESISTANCE OF 9,000 PSF. A GEOTECHNICAL ENGINEER WILL DETERMINE THE FACTORED BEARING RESISTANCE BY VISUAL INSPECTION PRIOR TO CONSTRUCTION OF THE PIER FOOTINGS.

SLOPE TOP OF COLUMNS TO MATCH PIER CAP.

TOP OF PIER CAP SHALL BE PARALLEL TO GRADE.

(P08) P510 BARS @ 1'-0" CTRS. MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. (EMBED 1'-0" INTO CONC.)

(P09) KEYED CONSTRUCTION JOINT-FORMED BY BEVELED 2 X 6.

| NO. | DATE | REVISION | BY |
|---|---|---|---|
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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-49-172

DRAWN BY KRO | PLANS CK'D. BRE

PIER 1

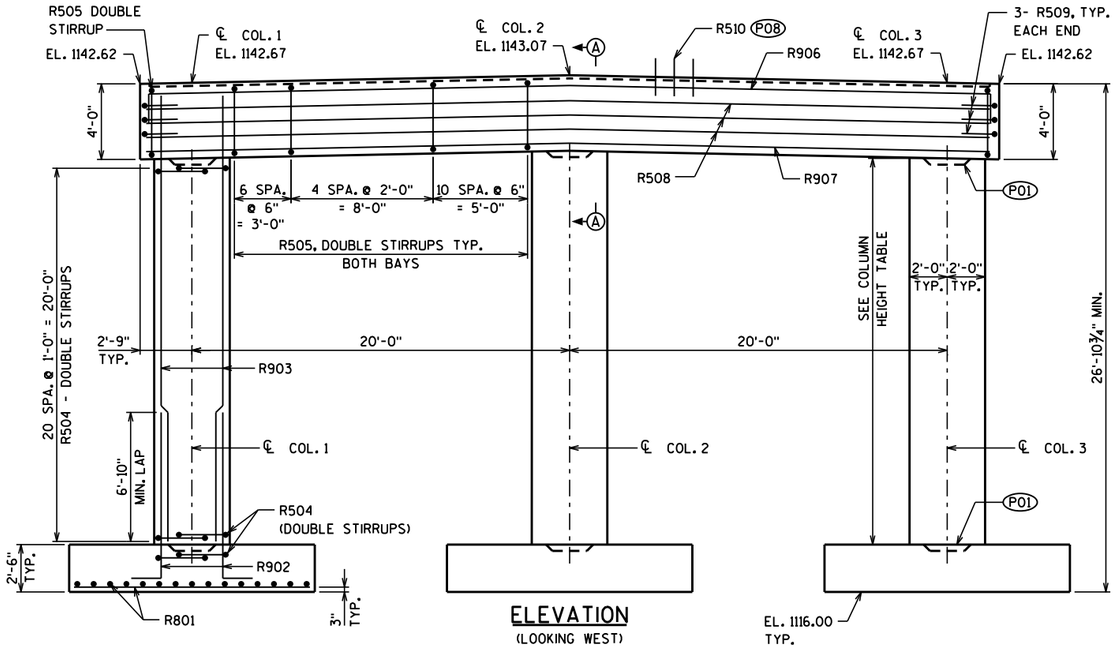
SHEET 8 OF 15

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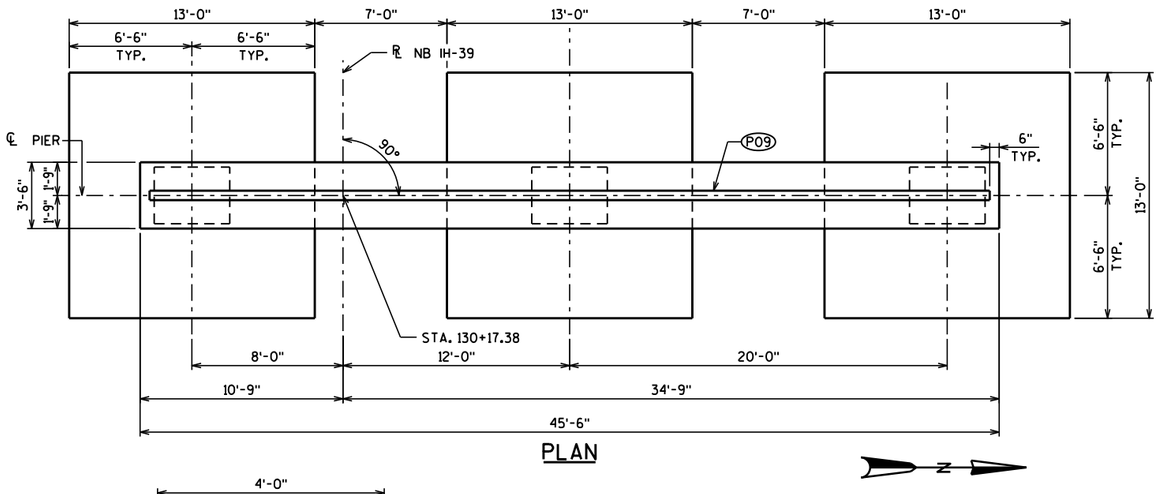
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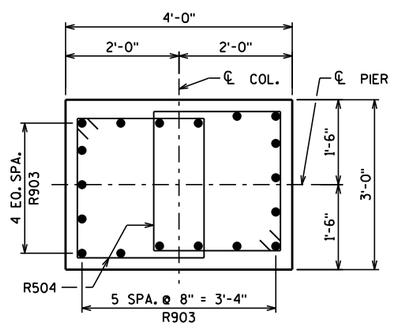
| STATE PROJECT NUMBER |
|---|
| 1166-08-72 |



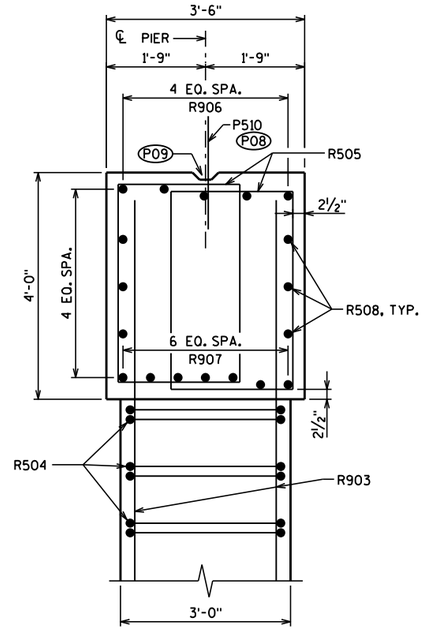

ELEVATION
(LOOKING WEST)




PLAN




TYPICAL SECTION THRU COLUMN

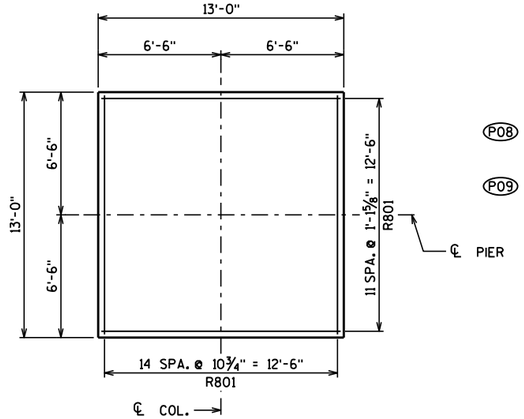



SECTION A-A THRU CAP

## COLUMN HEIGHT

DIMENSION IS MEASURED AT CENTERLINE OF COLUMN

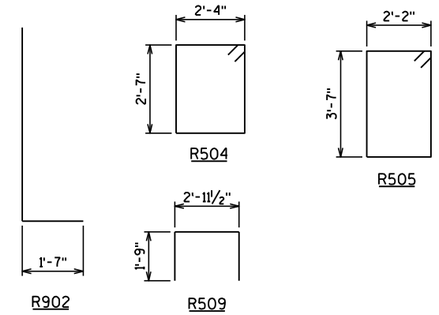
| COLUMN | HEIGHT |
|---|---|
| 1 | 20'-2" |
| 2 | 20'-6¾" |
| 3 | 20'-2" |

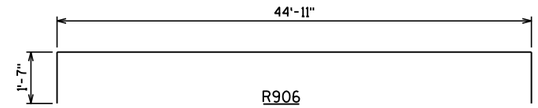



TYP. FOOTING PLAN

## BILL OF BARS

| BAR MARK | COAT | NO. REQ'D. | LENGTH | BENT | LOCATION |
|---|---|---|---|---|---|
| R801 | | 81 | 12'-6" | | FOOTING - HORIZONTAL |
| R902 | X | 54 | 10'-5" | X | FOOTING/COLUMN - VERTICAL |
| R903 | X | 54 | 23'-7" | | COLUMN - VERTICAL |
| R504 | X | 132 | 10'-5" | X | COLUMN - DOUBLE STIRRUPS |
| R505 | X | 88 | 12'-1" | X | CAP - DOUBLE STIRRUPS |
| R906 | X | 5 | 47'-7" | X | CAP - HORIZONTAL - TOP |
| R907 | X | 7 | 45'-0" | | CAP - HORIZONTAL - BOTTOM |
| R508 | X | 6 | 45'-0" | | CAP - HORIZONTAL - SIDES |
| R509 | X | 6 | 6'-3" | X | CAP - ENDS |
| R510 | X | 44 | 2'-0" | | CAP - DOWELS |




## BAR BENDING DIAGRAMS

## NOTES

(P01) 1'-3" X 2'-6" X 4" CONSTRUCTION JOINT FORMED BY BEVELED KEYWAY.

PIERS TO BE SUPPORTED WITH SPREAD FOOTINGS ON WEATHERED BEDROCK WITH A REQUIRED FACTORED BEARING RESISTANCE OF 9,000 PSF. A GEOTECHNICAL ENGINEER WILL DETERMINE THE FACTORED BEARING RESISTANCE BY VISUAL INSPECTION PRIOR TO CONSTRUCTION OF THE PIER FOOTINGS.

SLOPE TOP OF COLUMNS TO MATCH PIER CAP.

TOP OF PIER CAP SHALL BE PARALLEL TO GRADE.

(P08) R510 BARS @ 1'-0" CTRS. MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. (EMBED 1'-0" INTO CONC.)

(P09) KEYED CONSTRUCTION JOINT-FORMED BY BEVELED 2 X 6.

| NO. | DATE | REVISION | BY |
|---|---|---|---|
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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-49-172

DRAWN BY BRE | PLANS CK'D. KRO

PIER 2

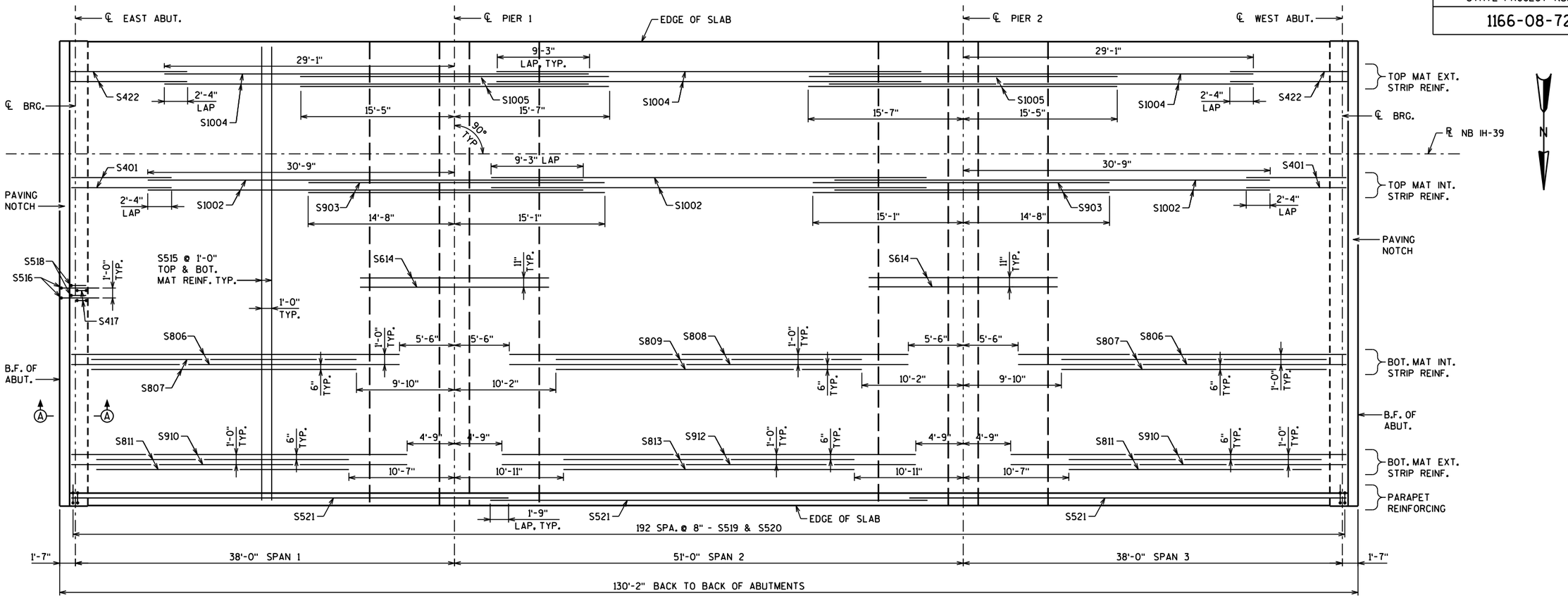
SHEET 9 OF 15

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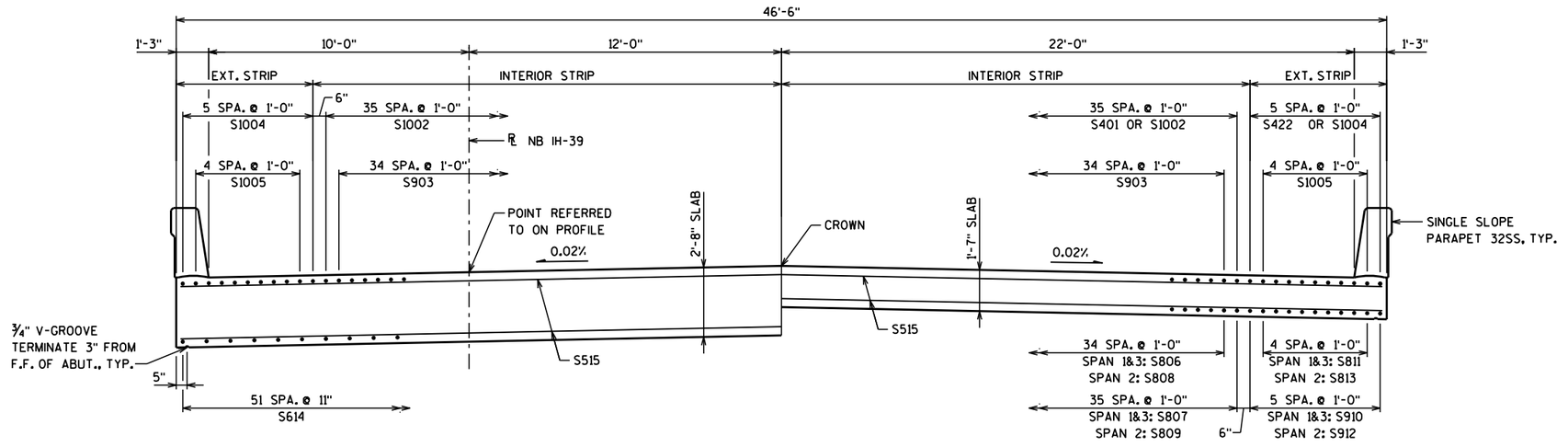
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STATE PROJECT NUMBER
1166-08-72



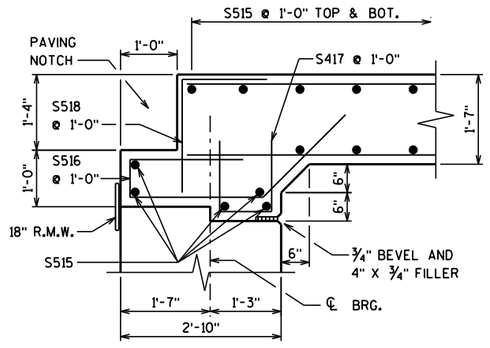

PLAN




AT PIERS

IN SPAN

CROSS SECTION THRU ROADWAY




SECTION A-A

| NO. | DATE | REVISION | BY |
|---|---|---|---|
| | | | |

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-49-172

DRAWN BY BRE | PLANS CK'D. KRO

SUPERSTRUCTURE

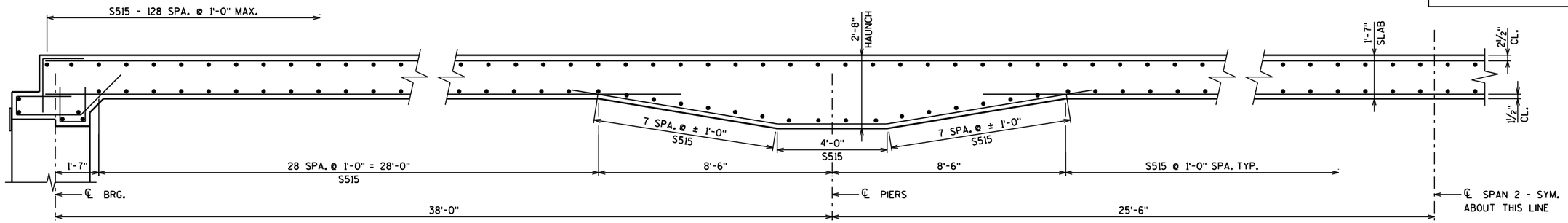
SHEET 10 OF 15

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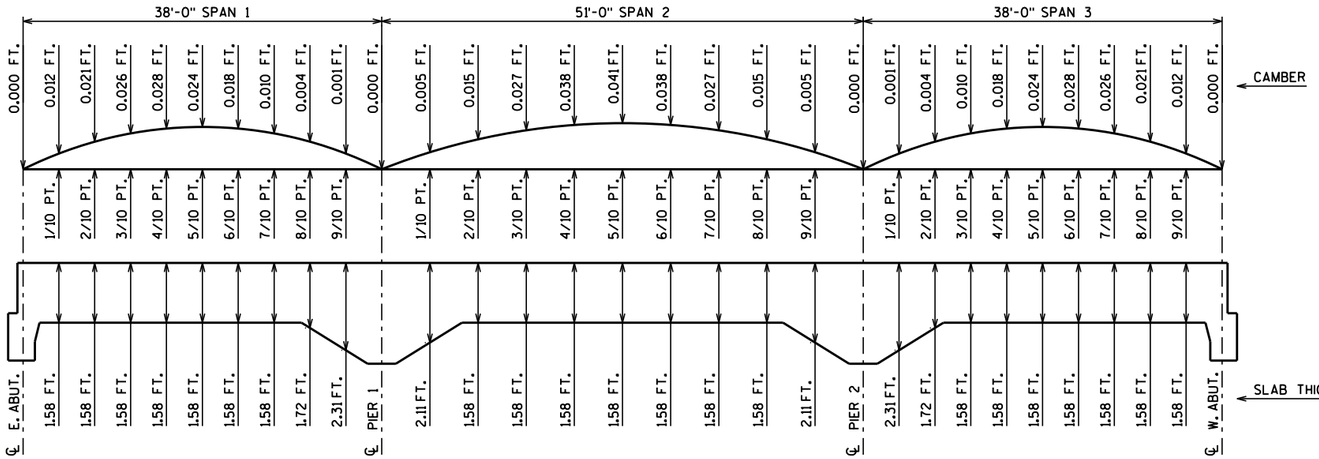
8

8

| STATE PROJECT NUMBER |
|---|
| 1166-08-72 |




## LONGITUDINAL SECTION THRU ROADWAY




### CAMBER DIAGRAM

CAMBER IS BASED ON 3 TIMES DEAD LOAD DEFLECTIONS. CAMBER SPANS AS SHOWN TO PROVIDE FOR DEADLOAD DEFLECTION AND FUTURE CREEP. CAMBER DOES NOT INCLUDE ALLOWANCE FOR FORM SETTLEMENT. PARAPETS SHOWN ABOVE THE HORIZ. CONST. JT. SHALL BE POURED AFTER FALSEWORK HAS BEEN RELEASED.

### TOP OF DECK ELEVATIONS

| LOCATION | E.ABUT. | 1/10 | 2/10 | 3/10 | 4/10 | 5/10 | 6/10 | 7/10 | 8/10 | 9/10 | PIER 1 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| S. EDGE | 1145.81 | 1145.79 | 1145.77 | 1145.75 | 1145.73 | 1145.71 | 1145.69 | 1145.67 | 1145.65 | 1145.64 | 1145.62 |
| CROWN | 1146.27 | 1146.25 | 1146.23 | 1146.21 | 1146.20 | 1146.18 | 1146.16 | 1146.14 | 1146.12 | 1146.10 | 1146.08 |
| N. EDGE | 1145.81 | 1145.79 | 1145.77 | 1145.75 | 1145.73 | 1145.71 | 1145.69 | 1145.67 | 1145.65 | 1145.64 | 1145.62 |

| LOCATION | PIER 1 | 1/10 | 2/10 | 3/10 | 4/10 | 5/10 | 6/10 | 7/10 | 8/10 | 9/10 | PIER 2 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| S. EDGE | 1145.62 | 1145.59 | 1145.56 | 1145.54 | 1145.51 | 1145.48 | 1145.45 | 1145.43 | 1145.40 | 1145.36 | 1145.33 |
| CROWN | 1146.08 | 1146.06 | 1146.03 | 1146.00 | 1145.98 | 1145.95 | 1145.92 | 1145.89 | 1145.86 | 1145.83 | 1145.80 |
| N. EDGE | 1145.62 | 1145.59 | 1145.56 | 1145.54 | 1145.51 | 1145.48 | 1145.45 | 1145.43 | 1145.40 | 1145.36 | 1145.33 |

| LOCATION | PIER 2 | 1/10 | 2/10 | 3/10 | 4/10 | 5/10 | 6/10 | 7/10 | 8/10 | 9/10 | W.ABUT. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| S. EDGE | 1145.33 | 1145.31 | 1145.29 | 1145.26 | 1145.24 | 1145.21 | 1145.19 | 1145.16 | 1145.13 | 1145.11 | 1145.08 |
| CROWN | 1145.80 | 1145.77 | 1145.75 | 1145.73 | 1145.70 | 1145.68 | 1145.65 | 1145.63 | 1145.60 | 1145.57 | 1145.55 |
| N. EDGE | 1145.33 | 1145.31 | 1145.29 | 1145.26 | 1145.24 | 1145.21 | 1145.19 | 1145.16 | 1145.13 | 1145.11 | 1145.08 |

### NOTES

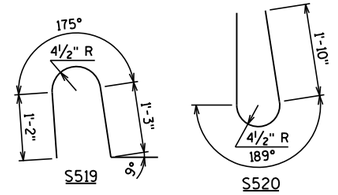
SLAB THICKNESS DIMENSION IS MINIMUM. ANY TOLERANCES TO CORRECT CONSTRUCTION DISCREPANCIES ARE TO BE PLUS (+).

TOP TRANSVERSE BARS IN THE SLAB SHALL BE SUPPORTED BY INDIVIDUAL BAR CHAIRS AT APPROXIMATELY 3'-0" CENTERS EACH WAY. BOTTOM LONGITUDINAL BARS SHALL BE SUPPORTED BY CONTINUOUS BAR CHAIRS AT APPROXIMATELY 4'-0" CENTERS.

TRANSVERSE BARS SHALL BE PLACED PARALLEL TO THE ℄ OF SUBSTRUCTURE UNITS.

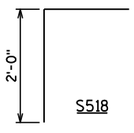
PARAPETS PLACED ON TOP OF THE SLAB SHALL BE POURED AFTER FALSEWORK HAS BEEN RELEASED.

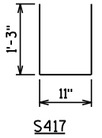
PRIOR TO RELEASING SLAB FALSEWORK, TAKE TOP OF SLAB ELEVATIONS AT THE ℄ OF ABUTMENTS, THE ℄ OF PIERS AND AT 5/10 PTS. TO VERIFY CAMBER. TAKE ELEVATIONS ALONG GUTTER LINES AND CROWN OR ℄.

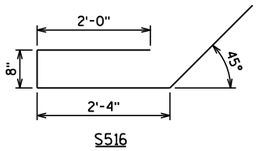


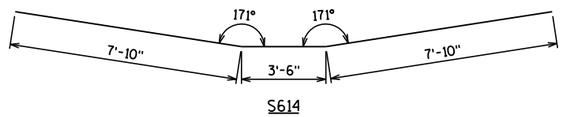






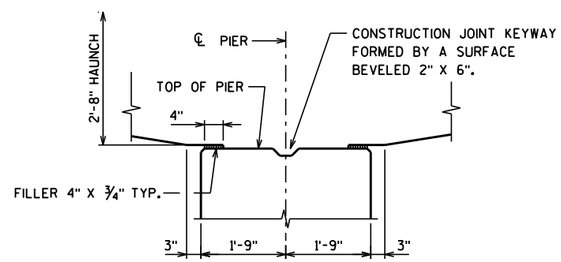




## BILL OF BARS

| BAR MARK | COAT | NO. REQ'D. | LENGTH | BENT | LOCATION |
|---|---|---|---|---|---|
| S401 | X | 72 | 10'-1" | | LONGITUDINAL TOP |
| S1002 | X | 108 | 43'-8" | | LONGITUDINAL TOP, INTERIOR |
| S903 | X | 70 | 29'-9" | | LONGITUDINAL TOP, INTERIOR |
| S1004 | X | 36 | 42'-7" | | LONGITUDINAL TOP, EXTERIOR |
| S1005 | X | 20 | 31'-0" | | LONGITUDINAL TOP, EXTERIOR |
| S806 | X | 70 | 32'-11" | | LONGITUDINAL BOTTOM, INTERIOR |
| S807 | X | 72 | 26'-7" | | LONGITUDINAL BOTTOM, INTERIOR |
| S808 | X | 35 | 40'-0" | | LONGITUDINAL BOTTOM, INTERIOR |
| S809 | X | 36 | 30'-8" | | LONGITUDINAL BOTTOM, INTERIOR |
| S910 | X | 24 | 33'-8" | | LONGITUDINAL BOTTOM, EXTERIOR |
| S811 | X | 20 | 25'-4" | | LONGITUDINAL BOTTOM, EXTERIOR |
| S912 | X | 12 | 41'-6" | | LONGITUDINAL BOTTOM, EXTERIOR |
| S813 | X | 10 | 29'-2" | | LONGITUDINAL BOTTOM, EXTERIOR |
| S614 | X | 104 | 19'-2" | X | LONGITUDINAL BOTTOM AT PIER |
| S515 | X | 264 | 46'-0" | | TRANSVERSE TOP & BOTTOM |
| S516 | X | 94 | 6'-10" | X | END OF SLAB |
| S417 | X | 94 | 3'-3" | X | END OF SLAB |
| S518 | X | 94 | 3'-5" | X | END OF SLAB |
| S519 | X | 386 | 4'-5" | X | PARAPET VERTICAL |
| S520 | X | 386 | 5'-0" | X | PARAPET VERTICAL |
| S521 | X | 36 | 43'-10" | | PARAPET HORIZONTAL |
| S422 | X | 24 | 11'-9" | | LONGITUDINAL TOP |

### BAR BEND DIAGRAMS




PIER DETAIL

| NO. | DATE | REVISION | BY |
|---|---|---|---|
| | | | |

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-49-172

DRAWN BY BRE | PLANS CK'D. JAW

SUPERSTRUCTURE DETAILS

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| STATE PROJECT NUMBER |
|---|
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## NOTES:

(T01) PIPE UNDERDRAIN WRAPPED 6-INCH AT APPROACH SLAB, LOCATED ONLY ON UPHILL SIDE OF APRON FOOTING. SLOPE 0.5% MIN. TO SUITABLE DRAINAGE.

(T02) STEEL TROWEL TOP SURFACE OF FOOTING AND PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHLENE SHEETS OVER THE ENTIRE TOP OF FOOTING.

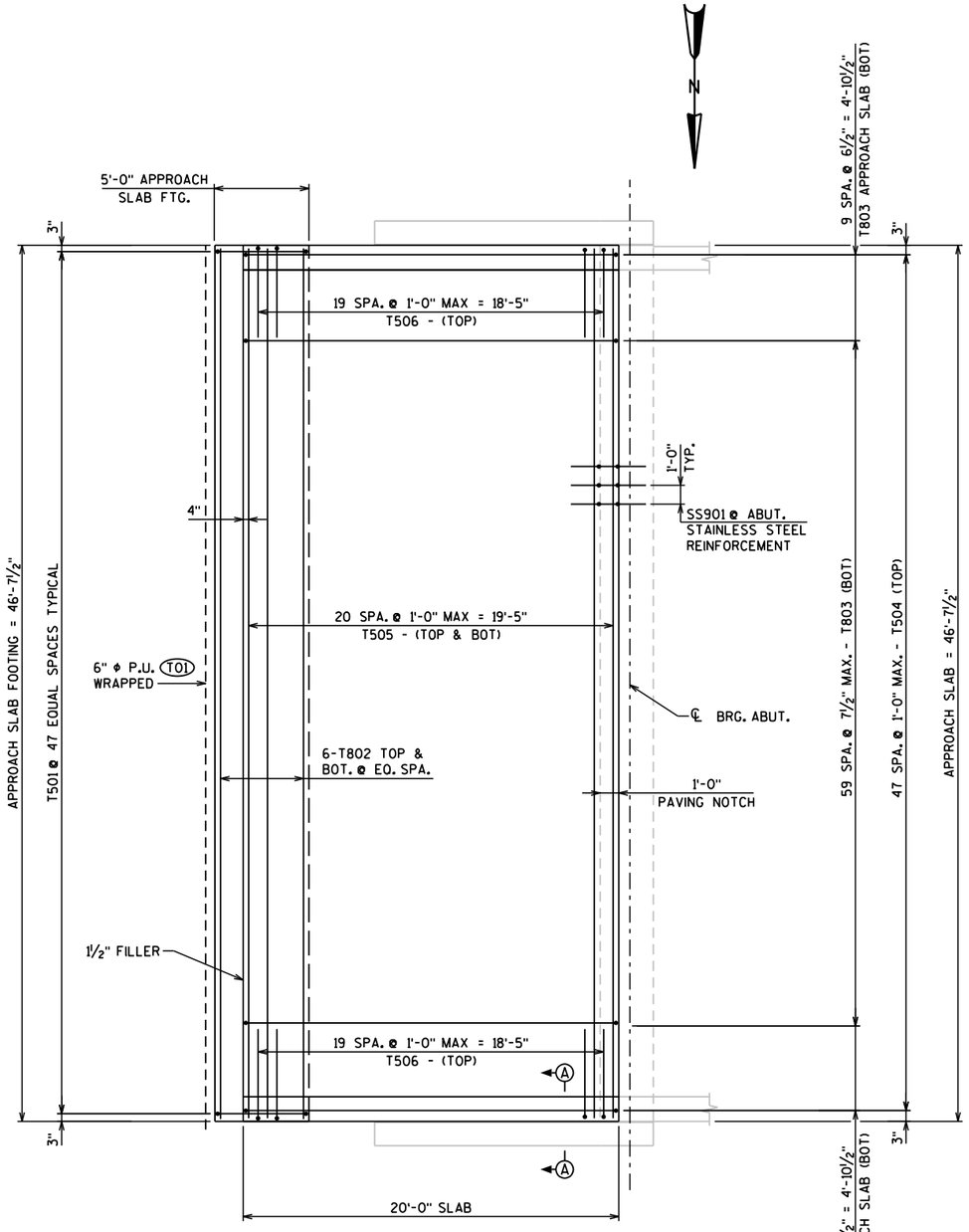
(T03) PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHLENE SHEETS OVER THE ENTIRE TOP OF SUBGRADE BENEATH SLAB.

(A17) SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE.)

* APPLY PROTECTIVE SURFACE TREATMENT TO PAVING NOTCH PRIOR TO POURING STRUCTURAL APPROACH SLAB.

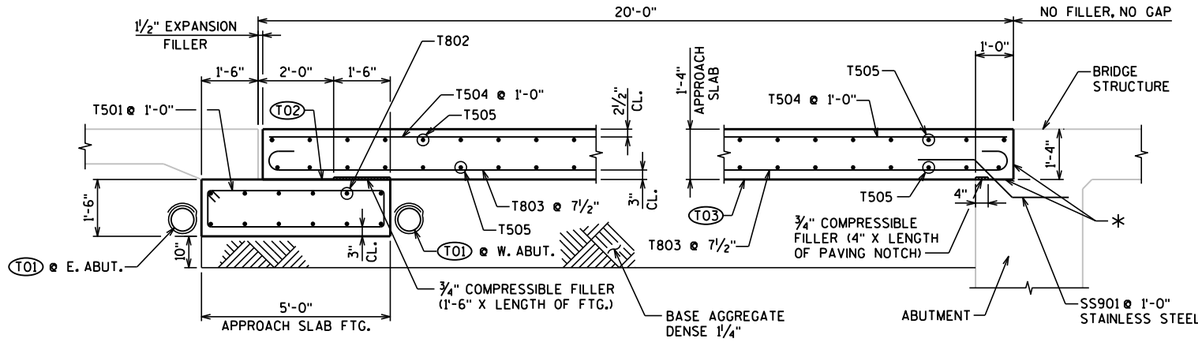
## DESIGN DATA:

| | |
|---|---|
| ALLOWABLE SOIL BEARING PRESSURE: | 2,000 P.S.F. |
| CONCRETE STRENGTH f'c: | 4,000 P.S.I. |
| BAR STEEL REINFORCEMENT, GRADE 60, fy: | 60,000 P.S.I. |



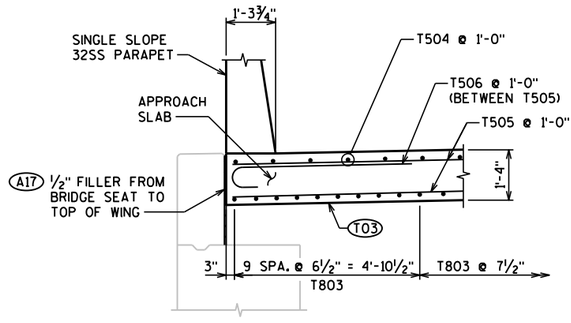

## APPROACH SLAB PLAN

(EAST SLAB SHOWN, WEST SIMILAR)




## TRANSVERSE SECTION THRU APPROACH SLAB

(EAST APRON SHOWN, WEST APRON SIMILAR)




## SECTION A-A

| NO. | DATE | REVISION | BY |
|---|---|---|---|
| | | | |

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-49-172

DRAWN BY BRE | PLANS CK'D. JAW

STRUCTURAL APPROACH SLAB

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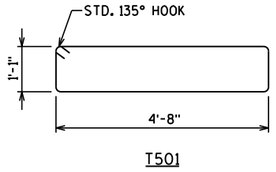
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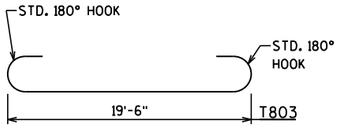
| STATE PROJECT NUMBER |
|---|
| 1166-08-72 |

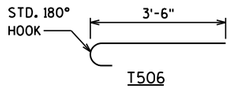
## BILL OF BARS

| BAR MARK | COAT | EAST QTY. | WEST QTY. | LENGTH | BENT | LOCATION |
|---|---|---|---|---|---|---|
| T501 | X | 48 | 48 | 12'-1" | X | FOOTING - STIRRUPS |
| T802 | X | 12 | 12 | 46'-2" | | FOOTING - HORIZONTAL |
| T803 | X | 78 | 78 | 21'-4" | X | SLAB - LONG. - BOTTOM |
| T504 | X | 48 | 48 | 19'-6" | | SLAB - LONG. - TOP |
| T505 | X | 42 | 42 | 46'-2" | | SLAB - TRANS. - TOP & BOT. |
| T506 | X | 40 | 40 | 4'-1" | X | SLAB - TRANS. - TOP |
| T507 | X | 36 | 36 | 4'-5" | X | PARAPET - VERTICAL |
| T508 | X | 36 | 36 | 5'-0" | X | PARAPET - VERTICAL |
| T509 | X | 24 | 24 | 2'-9" | X | PARAPET - VERTICAL |
| T510 | X | 34 | 34 | 4'-4" | X | PARAPET - VERTICAL |
| T511 | X | 22 | 22 | 4'-9" | X | PARAPET - VERTICAL |
| T512 | X | 12 | 12 | 4'-10" | X | PARAPET - VERTICAL |
| T513 | X | 2 | 2 | 19'-6" | X | PARAPET - HORIZONTAL |
| T514 | X | 10 | 10 | 19'-6" | | PARAPET - HORIZONTAL |

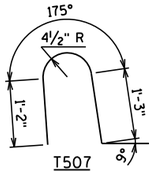


T501

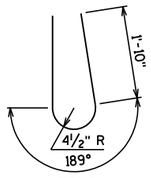


T506



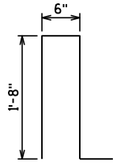
T507



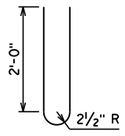
T508



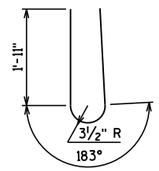
T509



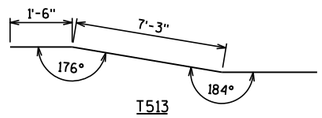
T510



T511



T512



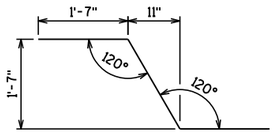
T513

## BAR BENDING DIAGRAMS

8

## BILL OF BARS (STAINLESS STEEL, FOR ONE APPROACH SLAB)

| BAR MARK | COAT | NO. REQ'D. | LENGTH | BENT | LOCATION |
|---|---|---|---|---|---|
| SS901 | | 48 | 5'-0" | X | CONC. DIAPH. @ ABUTS. TO APPROACH APRON |



SS901

| NO. | DATE | REVISION | BY |
|---|---|---|---|
| | | | |

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-49-172

DRAWN BY BRE | PLANS CK'D. JAW

STRUCTURAL APPROACH SLAB DETAILS

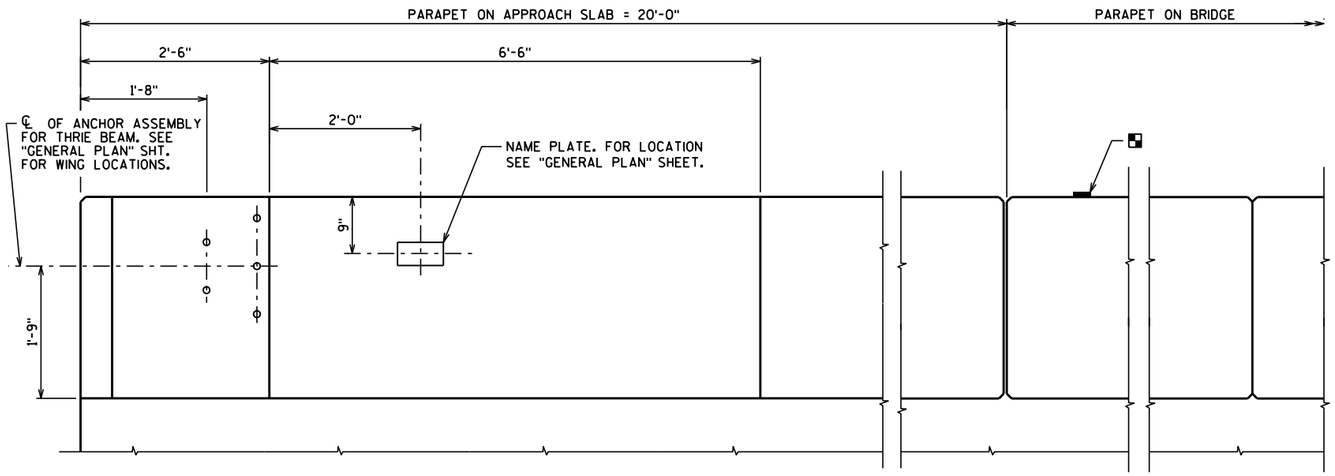
SHEET 13 OF 15

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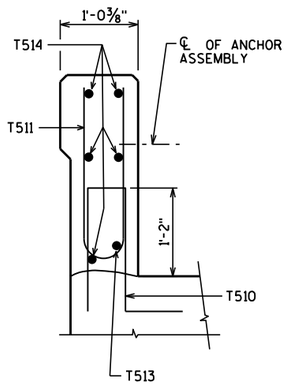
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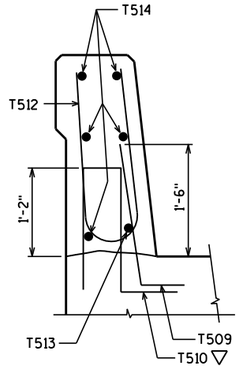
1166-08-72



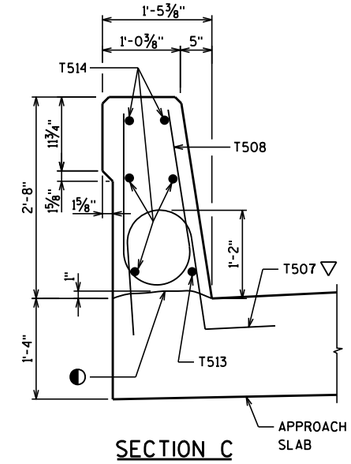

INSIDE ELEVATION



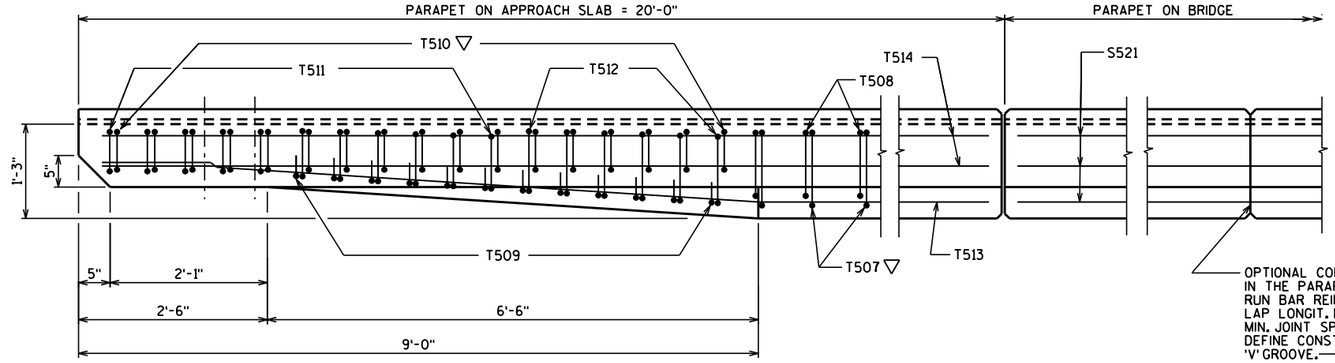

SECTION A




SECTION B

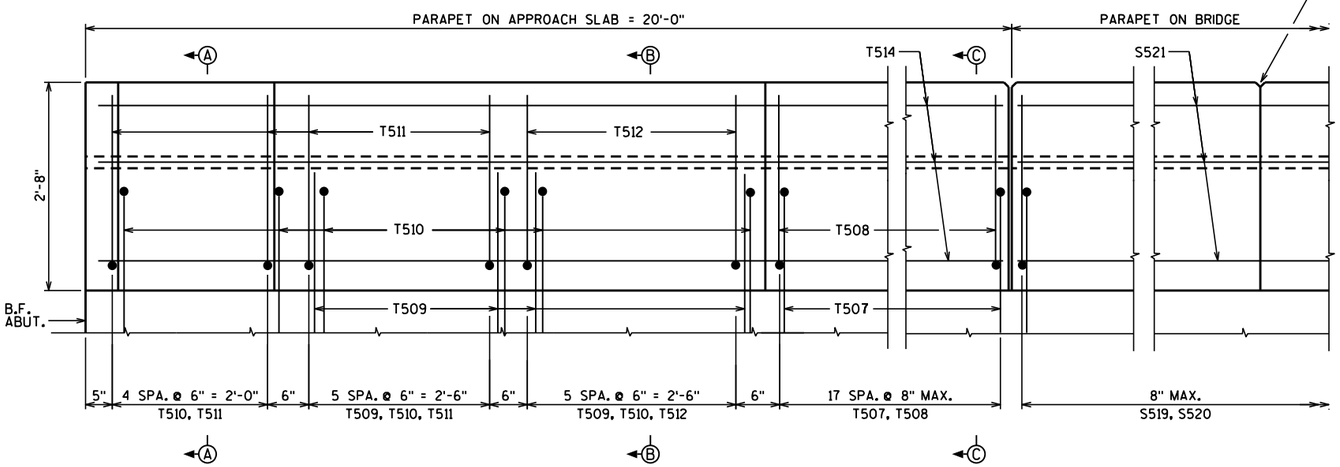



SECTION C

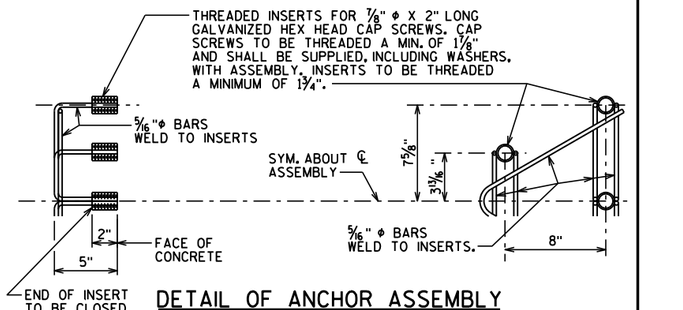



PLAN

OPTIONAL CONSTRUCTION JOINTS IN THE PARAPETS MAY BE USED. RUN BAR REINF. THRU THE JOINT. LAP LONGIT. BARS A MIN. OF 1'-9". MIN. JOINT SPACING OF 80'-0". DEFINE CONST. JOINT WITH A ¾" - 'V' GROOVE.



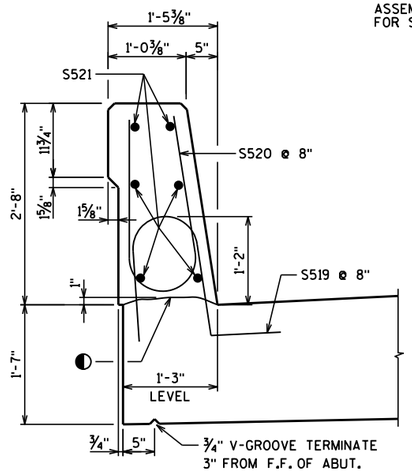

OUTSIDE ELEVATION




DETAIL OF ANCHOR ASSEMBLY

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

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




SECTION THRU PARAPET ON BRIDGE

▽ T507 AND T510 BARS TO BE TIED TO STRUCTURAL APPROACH SLAB STEEL BEFORE STRUCURAL APPROACH SLAB IS POURED.

■ BENCH MARK CAP (WHEN SUPPLIED). AVOID PLACING A BENCH MARK CAP BELOW A RAIL OR FENCE SYSTEM THAT IS ATTACHED TO THE TOP OF THE PARAPET.

◐ CONST. JOINT - STRIKE OFF AS SHOWN.

| NO. | DATE | REVISION | BY |
|---|---|---|---|
| | | | |

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-49-172

DRAWN BY BRE | PLANS CK'D. KRO

SINGLE SLOPE 32SS PARAPET

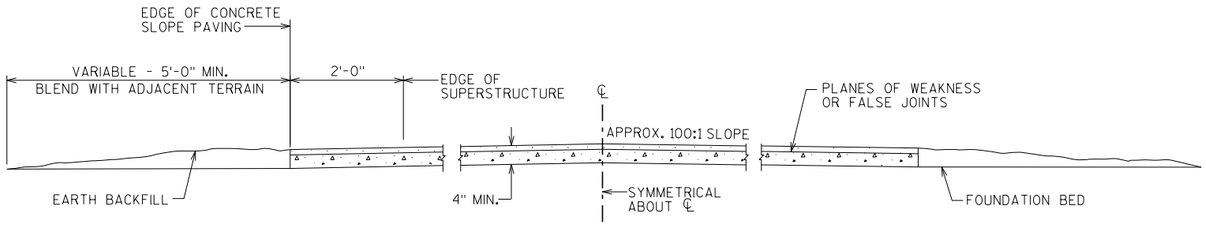
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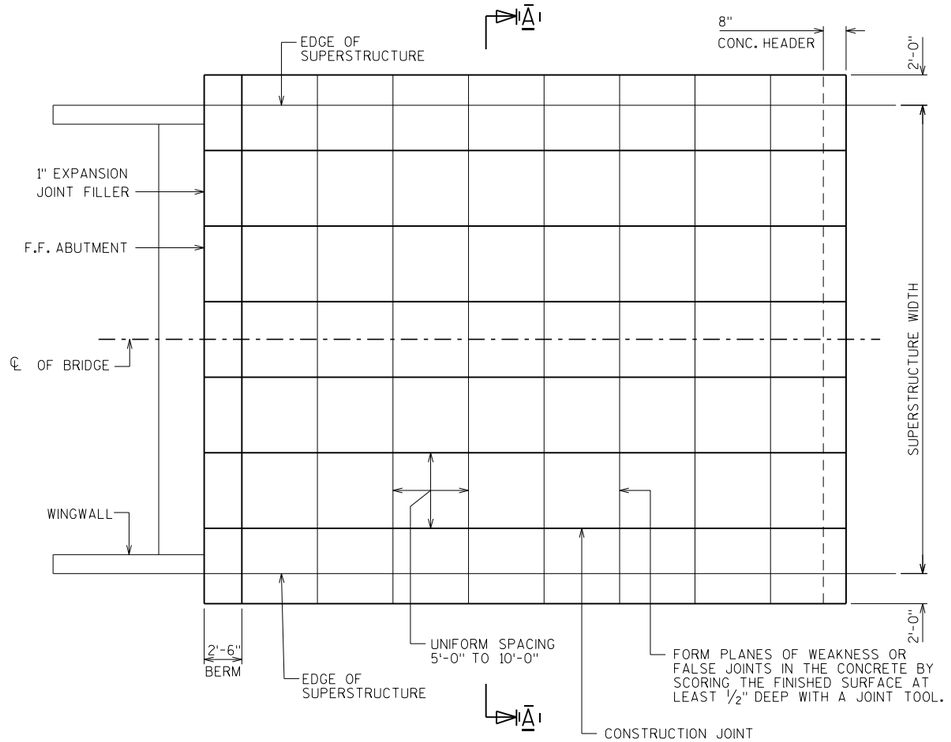
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8

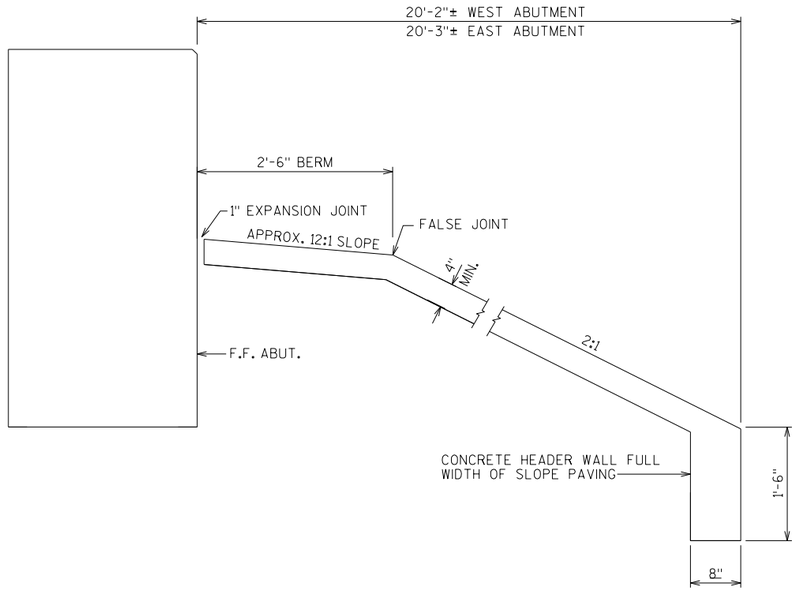
| STATE PROJECT NUMBER |
|---|
| 1166-08-72 |




## SECTION A-A



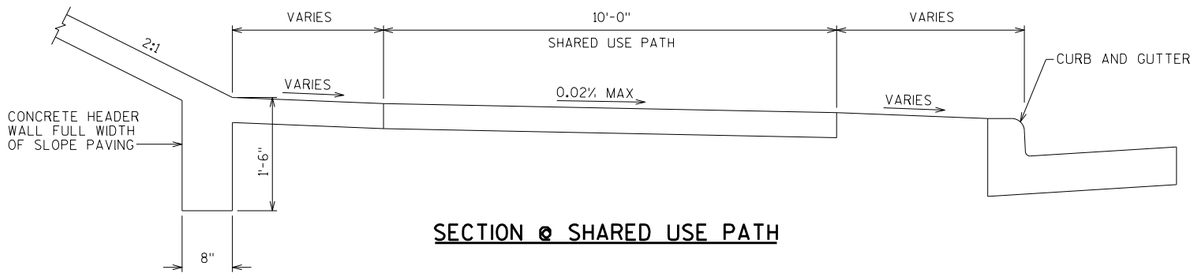

## CONSTRUCTION JOINT DESIGN



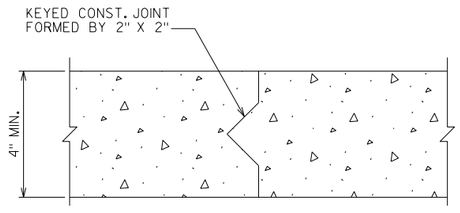

## TYPICAL SECTION

## GENERAL NOTES

DETAILS OF CONSTRUCTION NOT SHOWN SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS.




## SECTION @ SHARED USE PATH




## CONSTRUCTION JOINT

| NO. | DATE | REVISION | BY |
|---|---|---|---|
| | | | |

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-49-172

DRAWN BY BRE | PLANS CK'D. KRO

SLOPE PAVING (CONCRETE CAST-IN-PLACE)

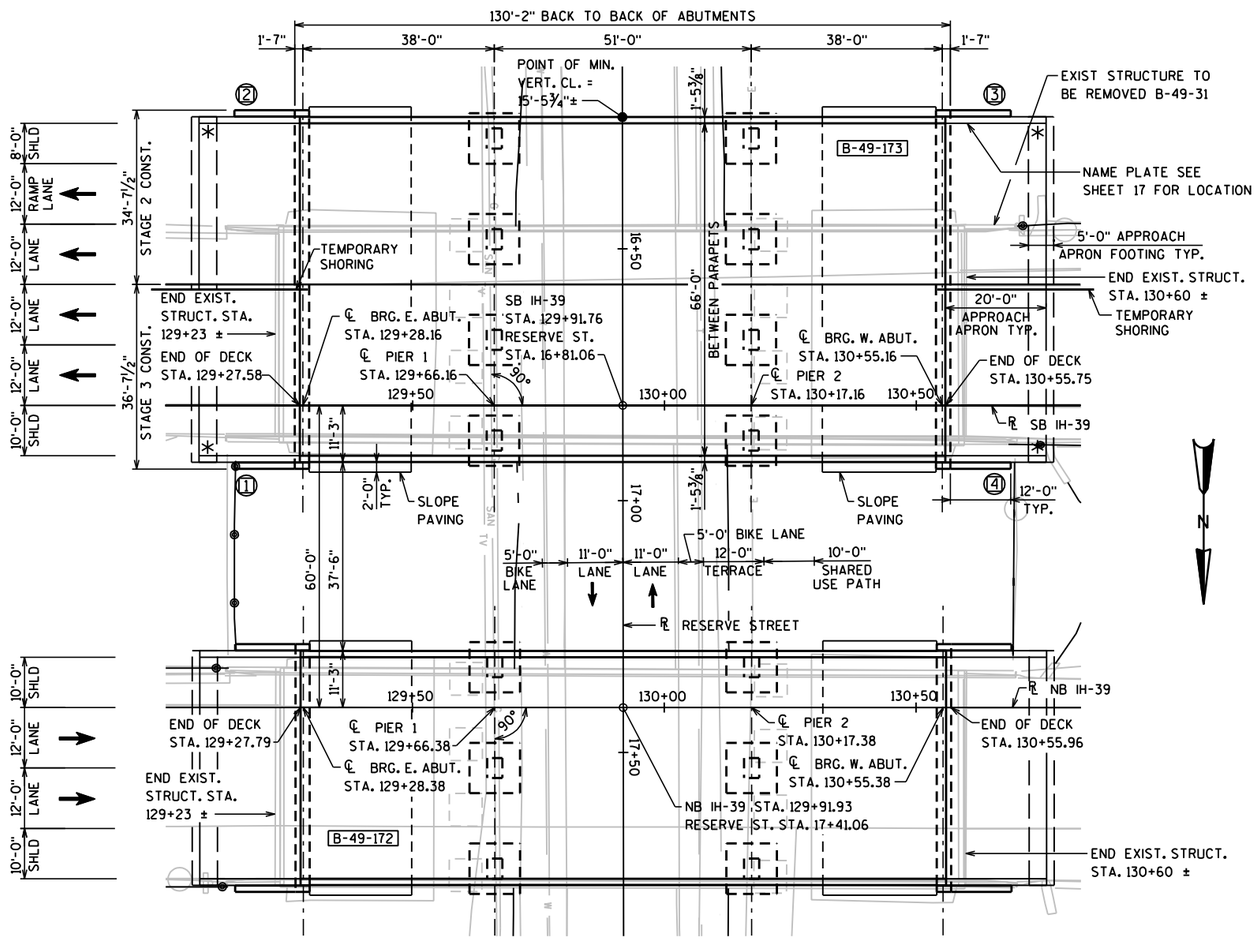
SHEET 15 OF 15

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8

8

| STATE PROJECT NUMBER |
|---|
| 1166-08-72 |

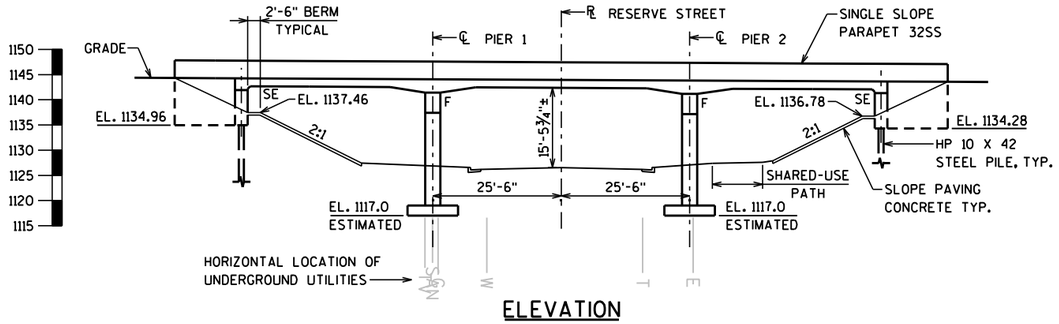



## PLAN

3-SPAN HAUNCHED CONCRETE SLAB BRIDGE

✳ THRIE BEAM ATTACHMENT REQUIRED.

⑪ INDICATES WING NUMBER




## ELEVATION

(LOOKING SOUTH)

## DESIGN DATA

LIVE LOAD:

| | |
|---|---|
| DESIGN LOADING | HL-93 |
| INVENTORY RATING FACTOR | RF = 1.29 |
| OPERATING RATING FACTOR | RF = 1.67 |
| WISCONSIN STANDARD PERMIT VEHICLE | 250 (KIPS) |

STRUCTURE IS DESIGNED FOR A FUTURE WEARING SURFACE OF 20 POUNDS PER SQUARE FOOT

ULTIMATE DESIGN STRESSES:

| | |
|---|---|
| CONCRETE MASONRY | |
| SLAB | f'c = 4,000 P.S.I. |
| ALL OTHER | f'c = 3,500 P.S.I. |
| HIGH STRENGTH BAR STEEL | |
| REINFORCEMENT, GRADE 60 | fy = 60,000 P.S.I. |

## LIST OF DRAWINGS


1. GENERAL PLAN
2. CROSS SECTION & QUANTITIES
3. CONSTRUCTION STAGING
4. SUBSURFACE EXPLORATION
5. TEMPORARY SHORING
6. EAST ABUTMENT
7. EAST ABUTMENT DETAILS
8. WEST ABUTMENT
9. WEST ABUTMENT DETAILS
10. PIER 1
11. PIER 2
12. PIER DETAILS
13. SUPERSTRUCTURE
14. SUPERSTRUCTURE DETAILS
15. APPROACH SLAB
16. APPROACH SLAB DETAILS
17. SINGLE SLOPE 32SS PARAPET
18. SLOPE PAVING


## TRAFFIC VOLUME

| IH 39 | RESERVE STREET |
|---|---|
| A.D.T. 43,400 (2034) | A.D.T. 2,600 (2034) |
| R.D.S.= 70 M.P.H. | R.D.S.= 40 M.P.H. |

## FOUNDATION DATA

ABUTMENTS TO BE SUPPORTED ON HP 10 X 42 STEEL PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 165 TONS ** PER PILE DETERMINED BY THE MODIFIED GATES DYNAMIC EQUATION.
ESTIMATED 30 FEET LONG AT WEST ABUTMENT.
ESTIMATED 35 FEET LONG AT EAST ABUTMENT.

PIERS TO BE SUPPORTED WITH SPREAD FOOTINGS ON WEATHERED BEDROCK WITH A REQUIRED FACTORED BEARING RESISTANCE OF 9,000 PSF. A GEOTECHNICAL ENGINEER WILL DETERMINE THE FACTORED BEARING RESISTANCE BY VISUAL INSPECTION PRIOR TO CONSTRUCTION OF THE PIER FOOTINGS. EXISTING PIER FOOTINGS SHALL BE REMOVED AND PROPOSED FOOTINGS SHALL BE CONSTRUCTED AT THE SAME ELEVATION. ELEVATIONS SHOWN ARE APPROXIMATE BASED ON EXISTING PLANS AVAILABLE FROM THE WISCONSIN DEPARTMENT OF TRANSPORTATION.

** THE FACTORED AXIAL RESISTANCE OF PILES IN COMPRESSION USED FOR DESIGN IS THE REQUIRED DRIVING RESISTANCE MULTIPLIED BY A RESISTANCE FACTOR OF 0.5 USING MODIFIED GATES TO DETERMINE DRIVEN PILE CAPACITY.

WISCONSIN
KRISTOFER R. OLSON
E-35236
APPLETON, WI
PROFESSIONAL ENGINEER

5/8/2014


CONSULTANT CONTACT
KRISTOFER OLSON
OMNNI ASSOCIATES, INC.
(920) 735-6900

BRIDGE OFFICE CONTACT
WILLIAM DREHER
(608) 266-8489


| NO. | DATE | REVISION | BY |
|---|---|---|---|
| | | | |

ORIGINAL PLANS PREPARED BY
OMNNI ASSOCIATES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
ACCEPTED William C. Dreher KAR 05/14/14
CHIEF STRUCTURES DESIGN ENGINEER — DATE

# STRUCTURE B-49-173

IH 39 SB OVER RESERVE STREET

| | | | |
|---|---|---|---|
| COUNTY | PORTAGE | CITY | STEVENS POINT |
| DESIGN SPEC. | AASHTO LRFD BRIDGE DESIGN SPECIFICATION | LOAD | HL-93 |
| DESIGNED BY | KRO | DESIGN CK'D. | JAW |
| DRAWN BY | BRE | PLANS CK'D. | KRO |

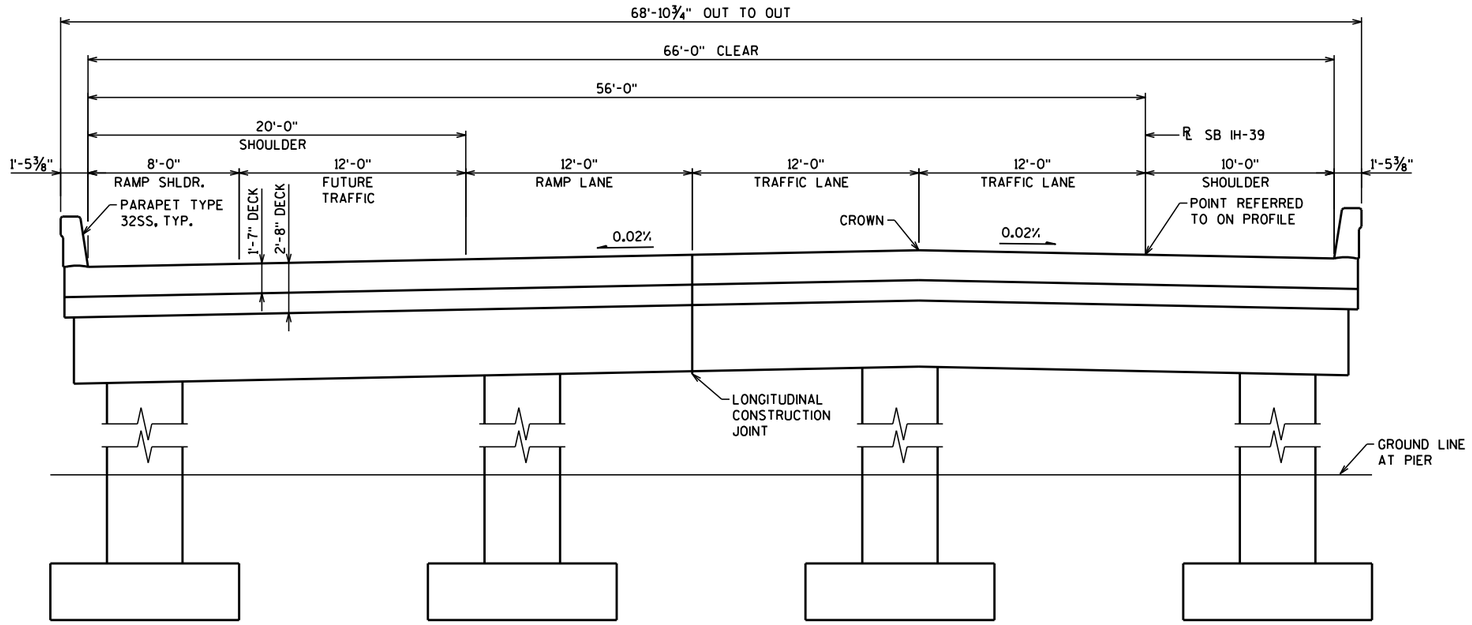
GENERAL PLAN

SHEET 1 OF 18

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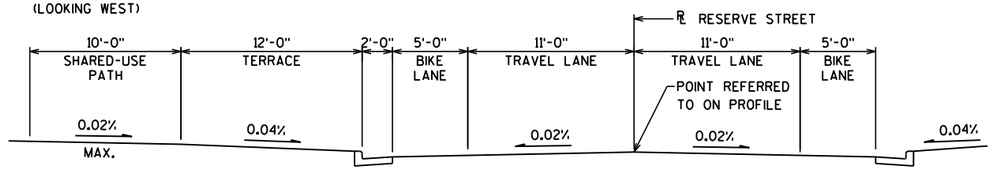
8

8




## CROSS SECTION

(LOOKING WEST)




## TYPICAL FINISHED SECTION RESERVE ST

LOOKING NORTH

## BENCH MARKS

| NO. | STATION | DESCRIPTION | ELEV. |
|---|---|---|---|
| 1 | 21+22 36'RT. | CHISEL "X" ON FLANGE OF HYDRANT AT S.E. CORNER OF EAGLE SUMMIT & RESERVE STREET | 1133.19 |
| 2 | 14+94 23'LT. | CHISEL "X" ON FLANGE OF HYDRANT, 150'± SOUTH OF B-49-39, WEST SIDE OF RESERVE ST | 1127.49 |
| 3 | 10+42 41'LT. | ARROW ON HYDRANT 250'± N. OF "NORTH SENTRY INSURANCE" ENTRANCE, W. SIDE RESERVE ST | 1126.00 |
| 4 | 129+24 34'RT. | DISK ON THE NE CORNER OF B-49-39 | 1146.55 |

## TOTAL ESTIMATED QUANTITIES

| ITEM NO. | BID ITEMS | UNIT | SUPER. | EAST ABUT. | WEST ABUT. | PIER 1 | PIER 2 | APPROACH APRONS | TOTALS |
|---|---|---|---|---|---|---|---|---|---|
| 203.0200 | REMOVING OLD STRUCTURE STA. 129SB+91 | LS | --- | --- | --- | --- | --- | --- | 1 |
| 203.0210.S | ABATEMENT OF ASBESTOS CONTAINING MATERIAL STRUCTURE (B-49-31) | LS | --- | --- | --- | --- | --- | --- | 1 |
| 206.1000 | EXCAVATION FOR STRUCTURES BRIDGES B-49-173 | LS | --- | --- | --- | --- | --- | --- | 1 |
| 206.6000.S.01 | TEMPORARY SHORING B-49-173 | SF | --- | 225 | 225 | --- | --- | --- | 450 |
| 210.0100 | BACKFILL STRUCTURE | CY | --- | 160 | 160 | --- | --- | --- | 320 |
| 305.0120 | BASE AGGREGATE DENSE 1 1/4-INCH | TON | --- | --- | --- | --- | --- | 410 | 410 |
| 502.0100 | CONCRETE MASONRY BRIDGES | CY | 613 | 82 | 81 | 134 | 134 | 183 | 1,227 |
| 502.3200 | PROTECTIVE SURFACE TREAMENT | SY | 1070 | --- | --- | --- | --- | 327 | 1,397 |
| 505.0405 | BAR STEEL REINFORCEMENT HS BRIDGES | LB | --- | 5110 | 5130 | 4970 | 4970 | --- | 20,180 |
| 505.0605 | BAR STEEL REINFORCEMENT HS COATED BRIDGES | LB | 116450 | 1700 | 1700 | 15060 | 14930 | 15070 | 164,910 |
| 505.0904 | BAR COUPLERS NO. 4 | EACH | --- | 6 | 6 | --- | --- | --- | 12 |
| 505.0905 | BAR COUPLERS NO. 5 | EACH | 264 | --- | --- | 6 | 6 | 84 | 360 |
| 505.0906 | BAR COUPLERS NO. 6 | EACH | --- | 19 | 19 | --- | --- | --- | 38 |
| 505.0908 | BAR COUPLERS NO. 8 | EACH | --- | --- | --- | --- | --- | 24 | 24 |
| 505.0909 | BAR COUPLERS NO. 9 | EACH | --- | --- | --- | 12 | 12 | --- | 24 |
| 516.0500 | RUBBERIZED MEMBRANE WATERPROOFING | SY | --- | 16 | 16 | --- | --- | --- | 32 |
| 550.1100 | PILING STEEL HP 10-INCH X 42 LB | LF | --- | 350 | 300 | --- | --- | --- | 650 |
| 604.0400 | SLOPE PAVING CONCRETE | SY | --- | 183 | 204 | --- | --- | --- | 387 |
| 612.0406 | PIPE UNDERDRAIN WRAPPED 6-INCH | LF | --- | 98 | 98 | --- | --- | 158 | 354 |
| 614.0150 | ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD | EACH | 4 | --- | --- | --- | --- | --- | 4 |
| SPV.0085.01 | BAR STEEL REINFORCEMENT HS STAINLESS BRIDGES | LB | --- | --- | --- | --- | --- | 2380 | 2,380 |
| | NON-BID ITEMS | | | | | | | | |
| | FILLER | SIZE | ----- | ----- | ----- | ----- | ----- | ----- | ½"&¾" |

## GENERAL NOTES:

STATE PROJECT NUMBER
1166-08-72

DRAWING SHALL NOT BE SCALED.

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

BEVEL EXPOSED EDGES OF CONCRETE ¾" UNLESS OTHERWISE NOTED.

SLAB FALSEWORK SHALL BE SUPPORTED ON PILES OR THE SUBSTRUCTURE UNLESS AN ALTERNATE METHOD IS APPROVED BY THE ENGINEER.

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

AT ABUTMENTS ALL SPACES EXCAVATED AND NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH STRUCTURE BACKFILL.

THE EXISTING GROUND LINE SHALL BE THE UPPER LIMITS OF EXCAVATION FOR STRUCTURES.

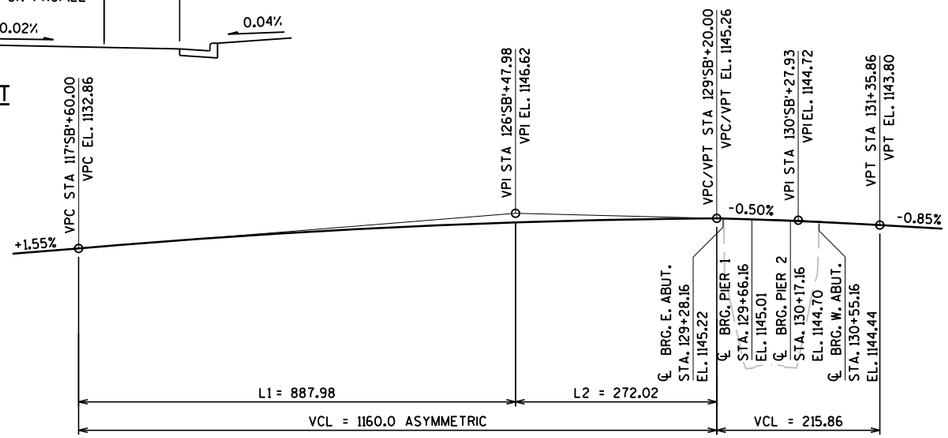
THE GRADATION OF THE STRUCTURE BACKFILL SHALL MEET THE REQUIREMENTS OF SECTION 209.2.2 OF THE STANDARD SPECIFICATIONS FOR GRADE 1 MATERIAL.

EXISTING BRIDGE B-49-31 IS A THREE SPAN HAUNCHED VOIDED CONCRETE SLAB WITH AN OVERALL WIDTH THAT VARIES FROM 43'-0" TO 43'-7" AND AN OVERALL LENGTH OF 137'-2".

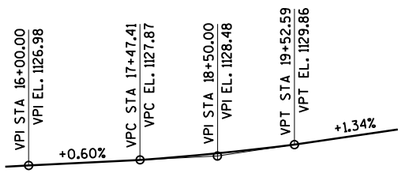
THE SLOPE OF THE FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH SLOPE PAVING CONCRETE TO THE EXTENT SHOWN ON SHEET 1 AND IN THE ABUTMENT DETAILS.

PROTECTIVE SURFACE TREATMENT SHALL BE APPLIED TO THE FOLLOWING COMPLETED SURFACES: TOP OF DECK SLAB, PAVING NOTCH, TOPS OF APPROACH APRONS, TOP AND INSIDE FACES OF PARAPETS ON BOTH THE BRIDGE DECK AND APROACH APRONS.

ALL STATIONS AND ELEVATIONS ARE IN FEET. ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).




## PROFILE GRADE LINE - SOUTHBOUND IH 39




## PROFILE GRADE LINE - RESERVE STREET

| NO. | DATE | REVISION | BY |
|---|---|---|---|
| | | | |

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-49-173

DRAWN BY: BRE | PLANS CK'D.: KRO

CROSS SECTION & QUANTITIES

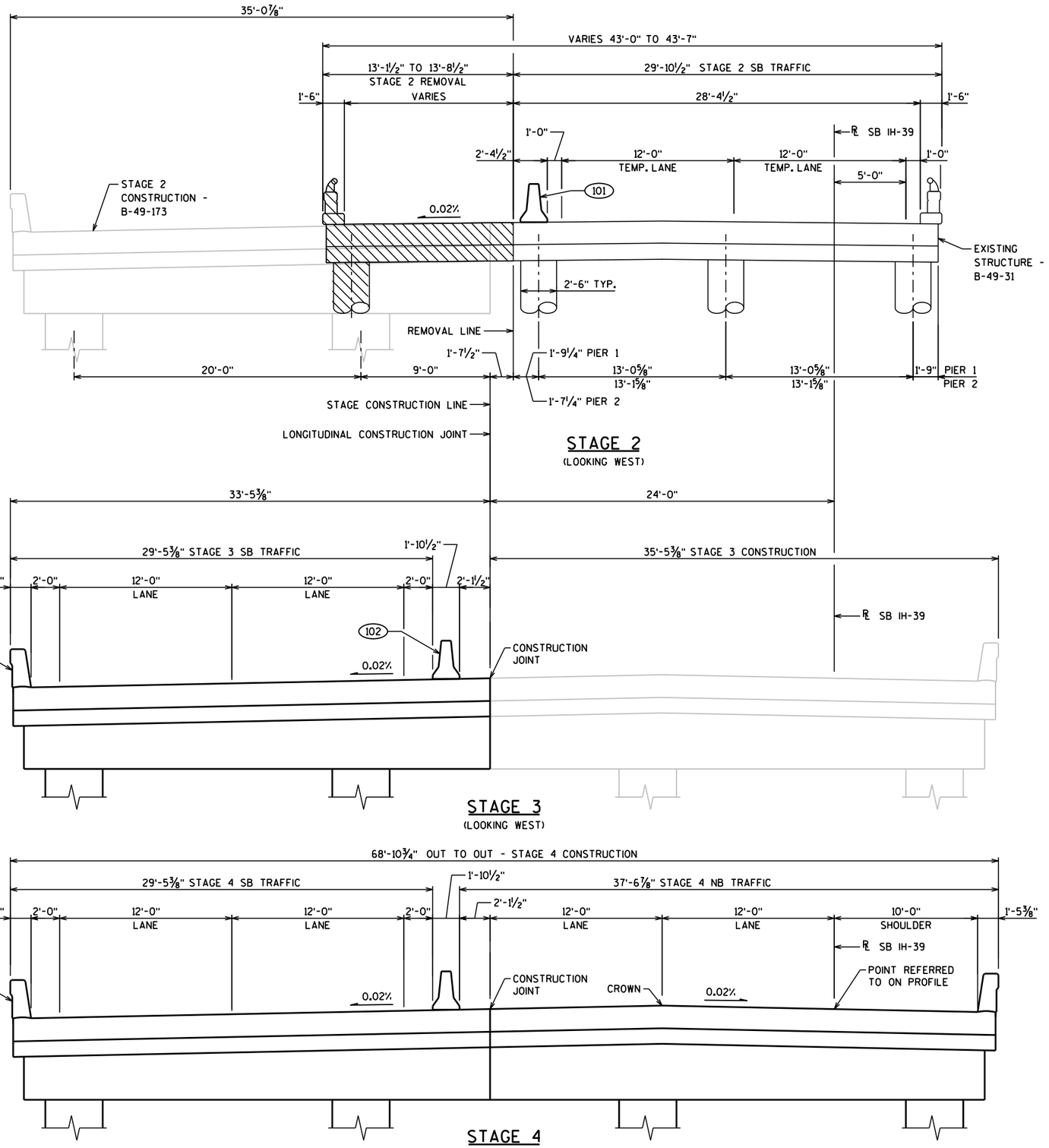
SHEET 2 OF 18

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8

8

| STATE PROJECT NUMBER |
| --- |
| 1166-08-72 |




(101) CONCRETE BARRIER TEMPORARY PRECAST TO BE ANCHORED THROUGH ENTIRE THICKNESS OF VOIDED SLAB. COST TO ANCHOR INCIDENTAL TO CONCRETE BARRIER TEMPORARY PRECAST.

(102) ANCHOR TEMPORARY BARRIER TO NEW SUPERSTRUCTURE.

8

8

| NO. | DATE | REVISION | BY |
| --- | --- | --- | --- |
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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-49-173

DRAWN BY BRE | PLANS CK'D. KRO

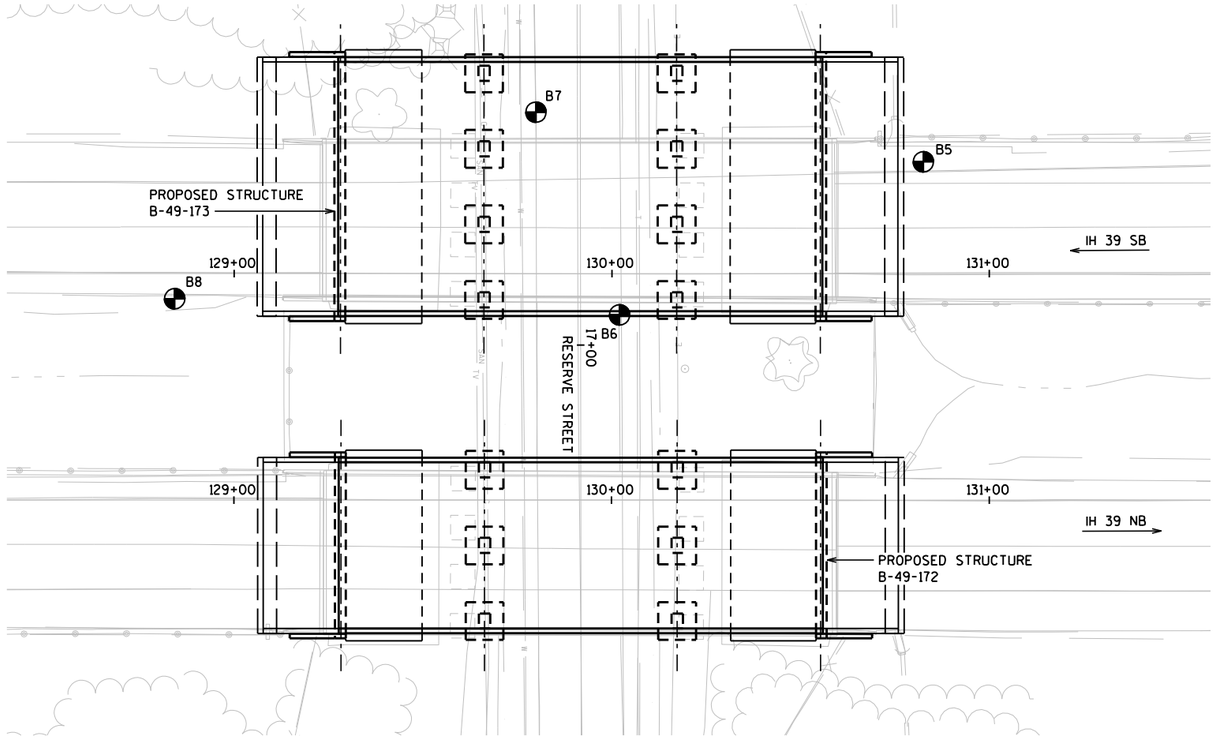
CONSTRUCTION STAGING

SHEET 3 OF 18

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FILE NAME : F:±TR±JOBS±E2031A12±Sheets±Bridge±B-49-173 SB±B-49-173 03 staging.dgn PLOT BY : epleyb PLOT DATE: 4/29/2014 12:38:46 PM

| STATE PROJECT NUMBER |
|---|
| 1166-08-72 |



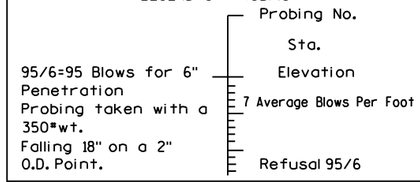

ABBREVIATIONS

F — Fine  M — Medium  C — Coarse
Ws — Weathered  So — Sound

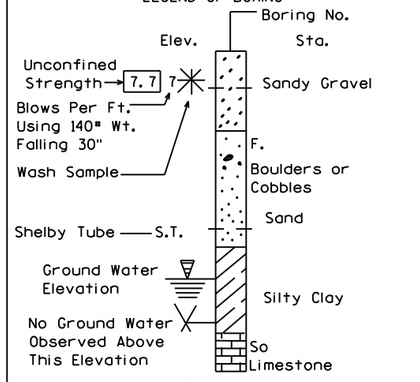
MATERIAL SYMBOLS

Topsoil, Silt, Sandstone
Sand, Peat, Limestone
Gravel, Clay, Igneous Rock

LEGEND OF PROBING



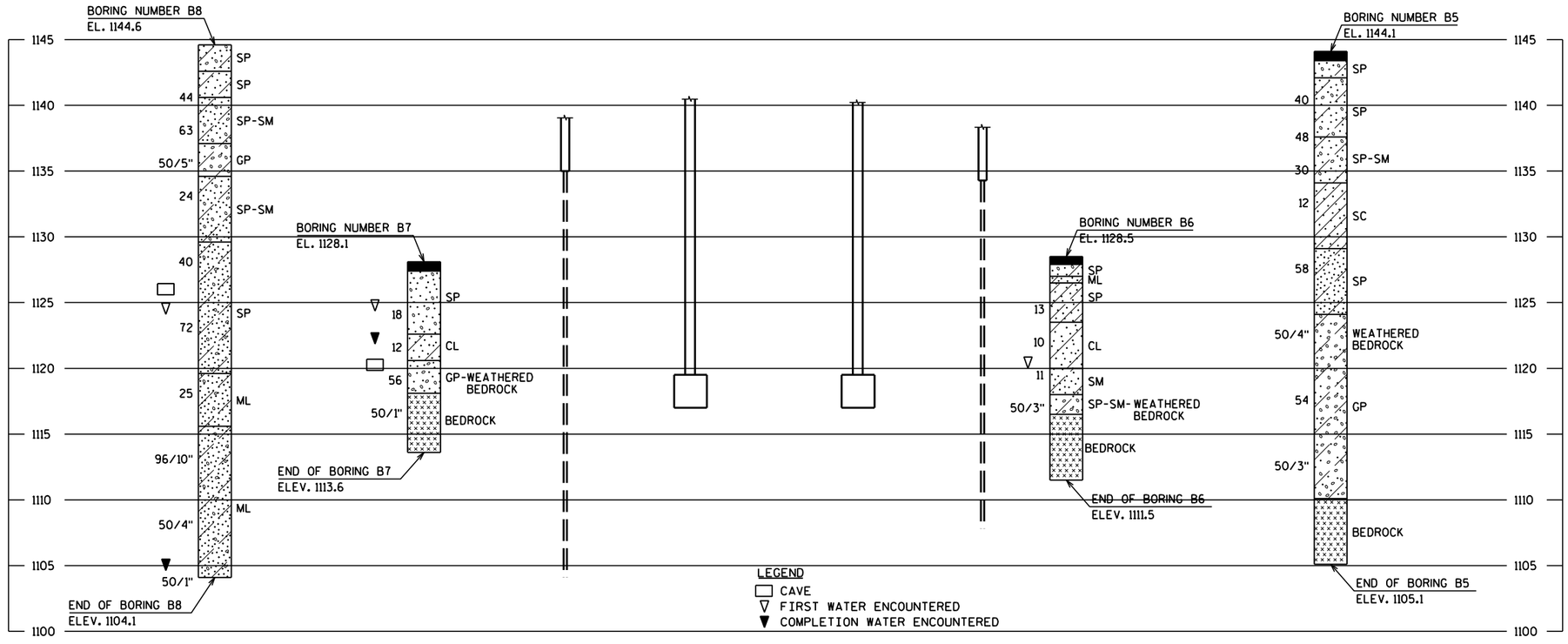

LEGEND OF BORING




Unless otherwise specified, the blows per foot at the locations indicated are based on driving a O.D. x 1. 4" I.D. split spoon sampler with a 140# hammer having a free fall of 30". The blow count is taken in undisturbed soil immediately below a cased or open hole eliminating side friction on the drive pipe.

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

To obtain relative data concerning the character of material in and upon which the foundation might be built, borings and/or soundings were made at points approximately as indicated on this drawing. The data presented herein represents the findings of the subsurface explorations made. However, because the depths investigated are limited and the area of the borings and/or soundings is very small in relation to the entire area, the Division of Highways does not warrant conditions below the depths investigated or that the classification of material encountered in these investigations is necessarily typical of the entire site.




| NO. | DATE | REVISION | BY |
|---|---|---|---|
| | | | |

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-49-173

DRAWN BY BRE | PLANS CK'D. KRO

SUBSURFACE EXPLORATION

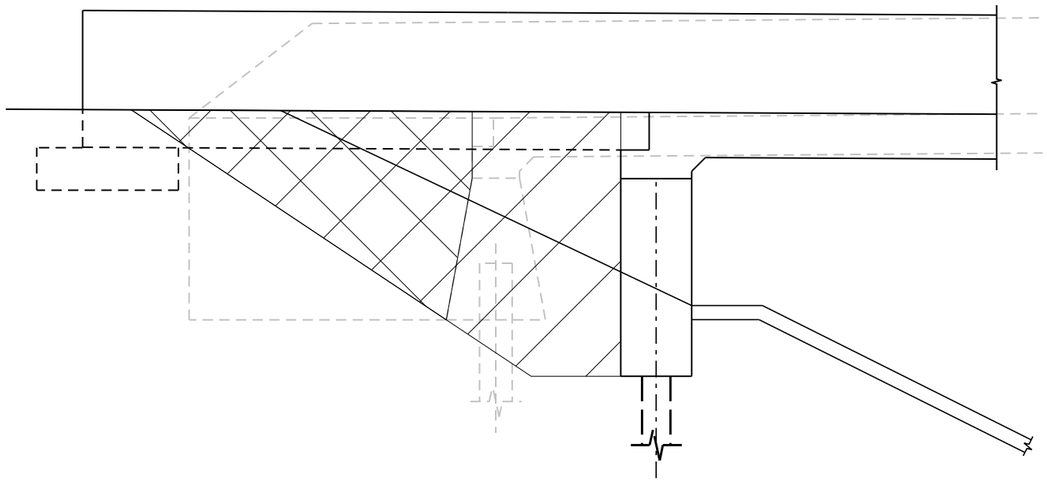
SHEET 4 OF 18

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8

8

| STATE PROJECT NUMBER |
| --- |
| 1166-08-72 |



## TEMPORARY SHORING TYPICAL ELEVATION

EAST ABUTMENT: 225 SF
WEST ABUTMENT: 225 SF

DRAWING DEPICTS APPROXIMATE AREA OF EXPOSED TEMPORARY SHORING.

(QUANTITY INCLUDES BOTH EXISTING STRUCTURE REMOVAL AND NEW STRUCTURE CONSTRUCTION.)

SEE GENERAL PLAN SHEET FOR TEMPORARY SHORING LOCATION.

EXISTING STRUCTURE REMOVAL

NEW STRUCTURE CONSTRUCTION

8

8

| NO. | DATE | REVISION | BY |
| --- | --- | --- | --- |
| | | | |

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-49-173

| DRAWN BY | BRE | PLANS CK'D. | KRO |
| --- | --- | --- | --- |

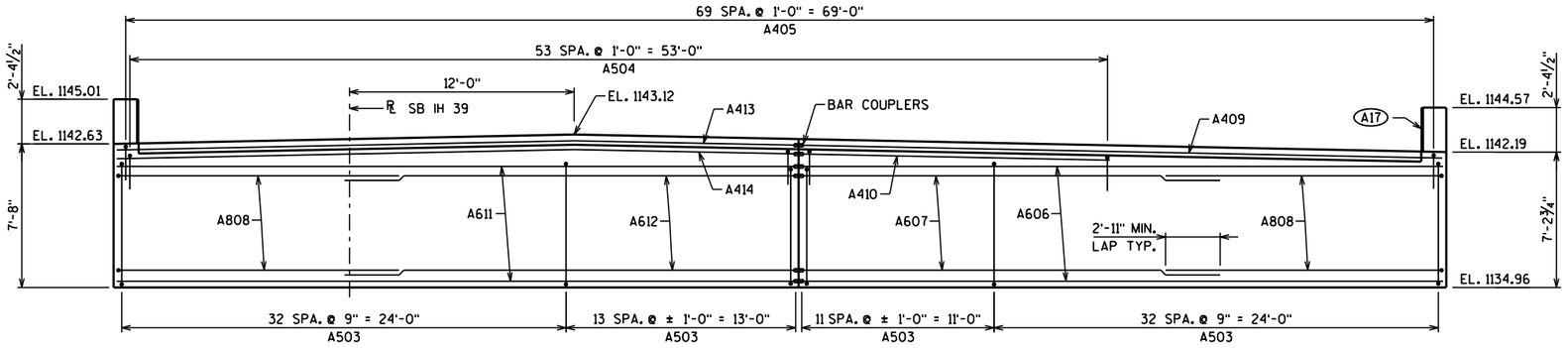
TEMPORARY SHORING

SHEET 5 OF 18

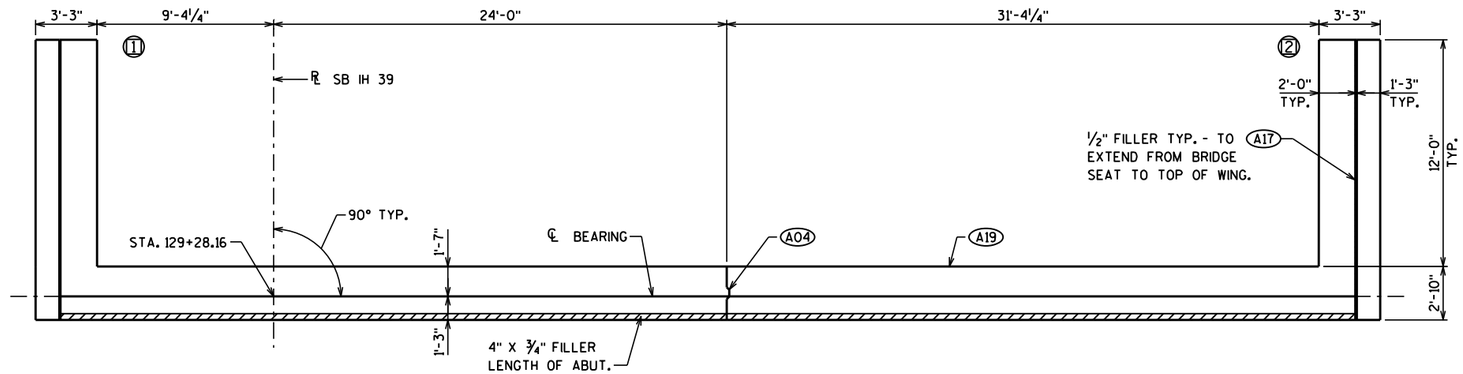
231

FILE NAME : F:±TR±JOBS±E2031A12±Sheets±Bridge±B-49-173 SB±B-49-173 05 temp shor.dgn PLOT BY : epleyb PLOT DATE: 3/17/2014 12:12:28 PM

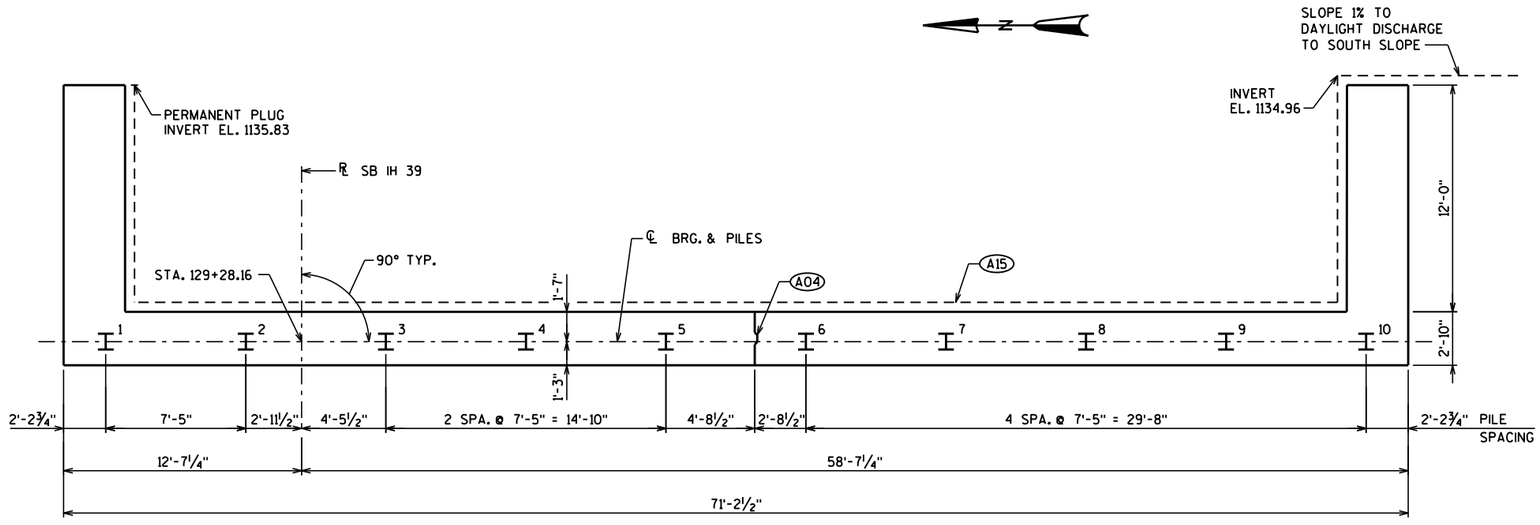
| STATE PROJECT NUMBER |
|---|
| 1166-08-72 |




## ELEVATION




## PLAN




## PILE PLAN

(A04) VERTICAL CONSTRUCTION JOINT: KEYWAY FORMED BY A BEVELED 2" x 8". USE 3/4" "V" GROOVE @ THE FRONT FACE AND 18" R.M.W. @ BACKFACE.

(A15) PIPE UNDERDRAIN WRAPPED 6-INCH. SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SCREEN AT ENDS OF PIPE UNDERDRAIN, SEE SHEET 7 FOR DETAILS.

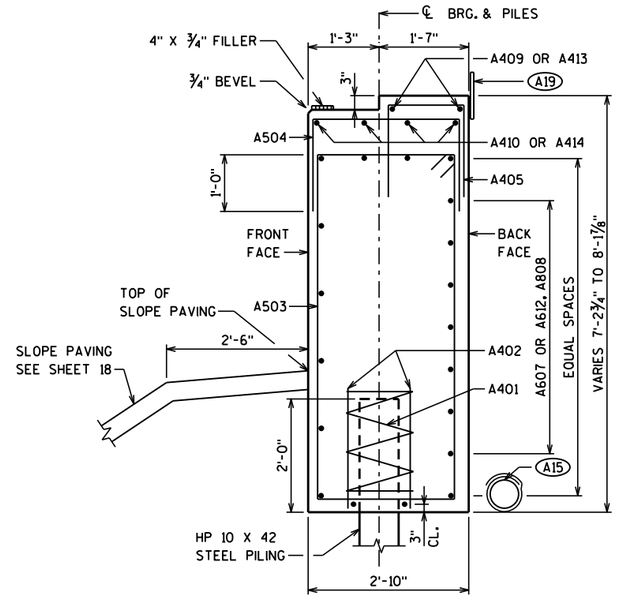
(A17) SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE.)

(A19) 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE.

SEE SHEET 7 FOR BILL OF BARS, BAR BENDING DIAGRAMS AND PILE SPLICE DETAILS.

ABUTMENTS TO BE SUPPORTED ON HP 10 X 42 STEEL PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 165 TONS PER PILE. ESTIMATED LENGTH = 35' AT EAST ABUTMENT.

(X) INDICATES WING NUMBER




## SECTION THRU ABUTMENT BODY

HORIZ. BARS NOT OTHERWISE IDENTIFIED ARE A606 OR A611 BARS

| NO. | DATE | REVISION | BY |
|---|---|---|---|
| | | | |

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-49-173

DRAWN BY BRE | PLANS CK'D. KRO

EAST ABUTMENT

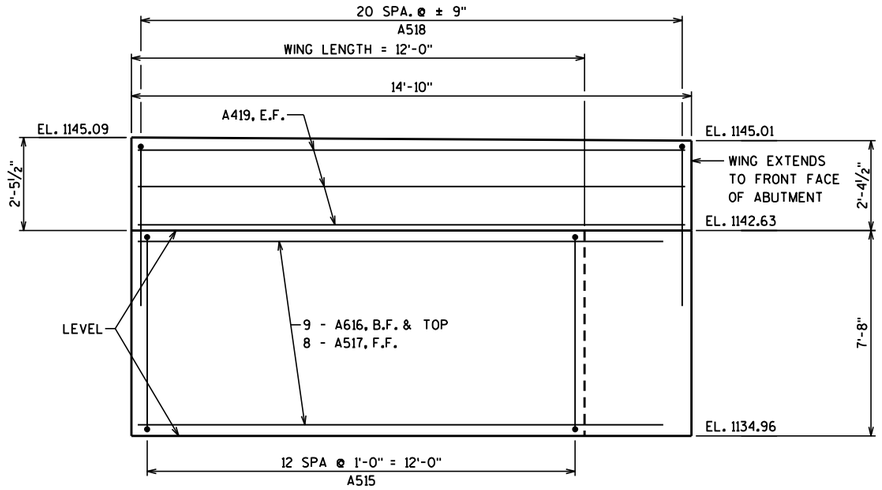
SHEET 6 OF 18

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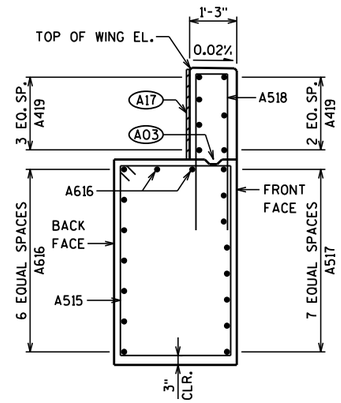
8

8

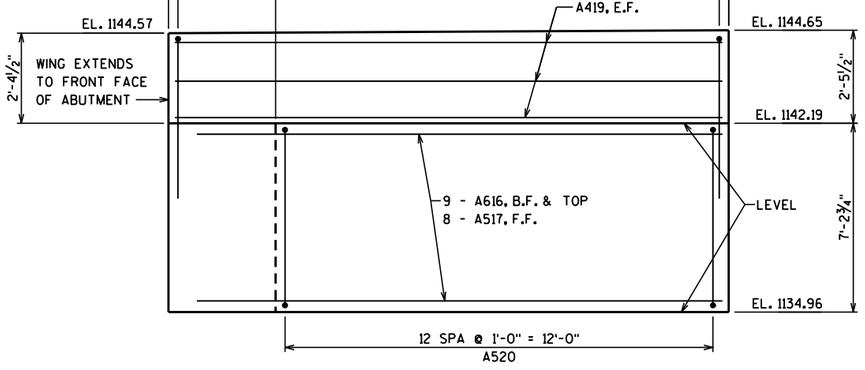
STATE PROJECT NUMBER
1166-08-72



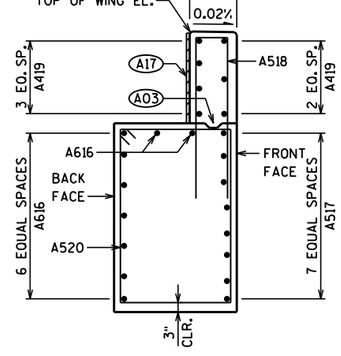

WING 1 ELEVATION




WING 1 SECTION




WING 2 ELEVATION




WING 2 SECTION

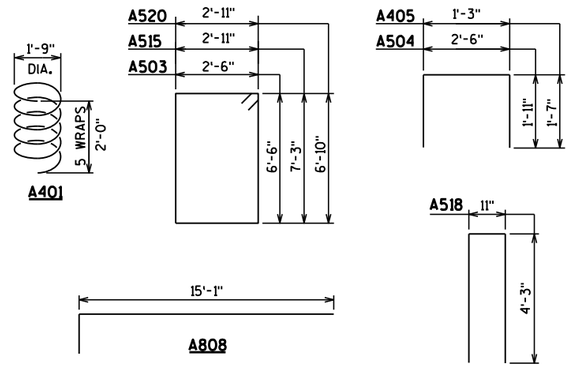
(A03) OPTIONAL CONST. JOINT: KEYWAY FORMED BY BEVELED 2" X 6". (18" R.M.W. @ B.F. & ¾" "V" GROOVE @ F.F. IF JOINT IS USED.)

(A17) ½" FILLER, SEALER (EXTEND TO TOP OF WING)

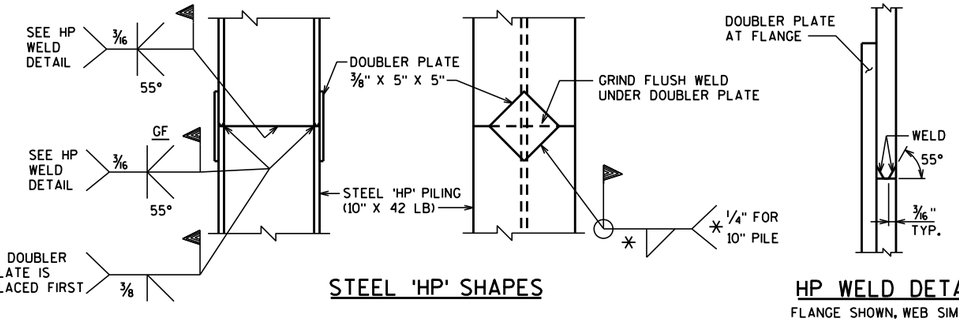
## BILL OF BARS

| BAR MARK | COAT | NO. REQ'D. | LENGTH | BENT | LOCATION |
|---|---|---|---|---|---|
| A401 | | 10 | 28'-0" | X | BODY - ONE PER PILE |
| A402 | | 20 | 2'-3" | | BODY - TWO PER PILE |
| A503 | | 90 | 18'-7" | X | BODY - STIRRUPS |
| A504 | | 54 | 6'-1" | X | BODY - VERTICAL, TOP |
| A405 | | 70 | 4'-3" | X | BODY - VERTICAL, TOP |
| ⬡ A606 | | 12 | 34'-5" | | BODY - HORIZONTAL |
| ⬡ A607 | | 7 | 22'-4" | | BODY - HORIZONTAL B.F. |
| A808 | | 14 | 16'-3" | X | BODY - HORIZONTAL B.F. |
| ⬡ A409 | | 2 | 33'-4" | | BODY - HORIZONTAL TOP |
| ⬡ A410 | | 4 | 16'-8" | | BODY - HORIZONTAL TOP |
| ⬡ A611 | | 12 | 36'-5" | | BODY - HORIZONTAL |
| ⬡ A612 | | 7 | 24'-4" | | BODY - HORIZONTAL B.F. |
| ⬡ A413 | | 2 | 35'-4" | | BODY - HORIZONTAL TOP |
| ⬡ A414 | | 4 | 36'-5" | | BODY - HORIZONTAL TOP |
| A515 | X | 13 | 20'-11" | X | WING 1 - STIRRUPS |
| A616 | X | 18 | 13'-11" | | WINGS - HORIZONTAL |
| A517 | X | 16 | 13'-11" | | WINGS - HORIZONTAL |
| A518 | X | 42 | 9'-2" | X | WINGS - VERTICAL |
| A419 | X | 14 | 14'-6" | | WINGS - HORIZONTAL-TOP |
| A520 | X | 13 | 20'-1" | X | WING 2 - STIRRUPS |

⬡ COUPLED BAR LENGTHS ARE GIVEN AS END TO END AND MAKE NO ALLOWANCE FOR GAPS REQUIRED BY THE COUPLER CHOSEN. ADJUST LENGTH AS REQUIRED FOR COUPLER PLACEMENT.



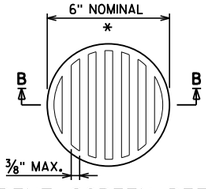

BAR BENDING DIAGRAMS



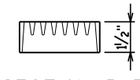

STEEL 'HP' SHAPES




HP WELD DETAIL
FLANGE SHOWN, WEB SIMILAR




RODENT SCREEN DETAIL




SECTION B-B

* DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING. ORIENT SO SLOTS ARE VERTICAL.

THE RODENT SCREEN, PIPE COUPLING AND SCREWS SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".

THE RODENT SCREEN 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 SCREEN TO THE EXPOSED END OF THE PIPE UNDERDRAIN. THE SCREEN SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X 1-INCH SHEET METAL SCREWS.

| NO. | DATE | REVISION | BY |
|---|---|---|---|

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-49-173

DRAWN BY BRE | PLANS CK'D. KRO

EAST ABUTMENT DETAILS

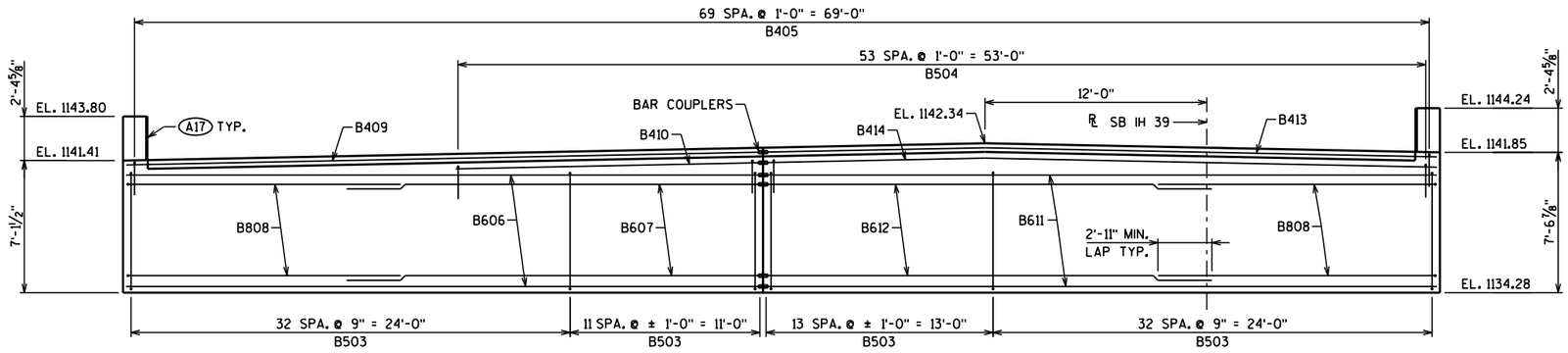
SHEET 7 OF 18

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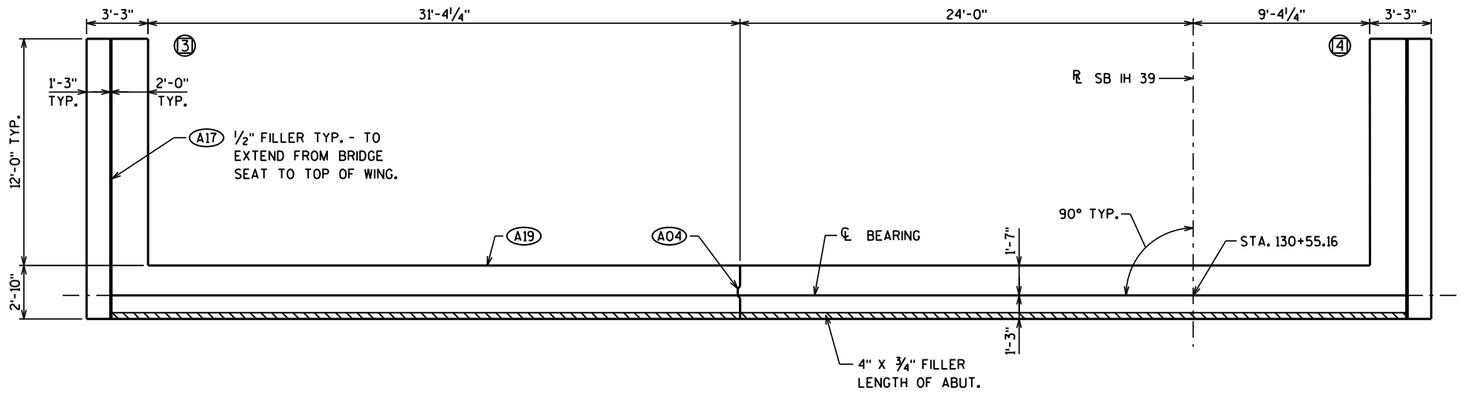
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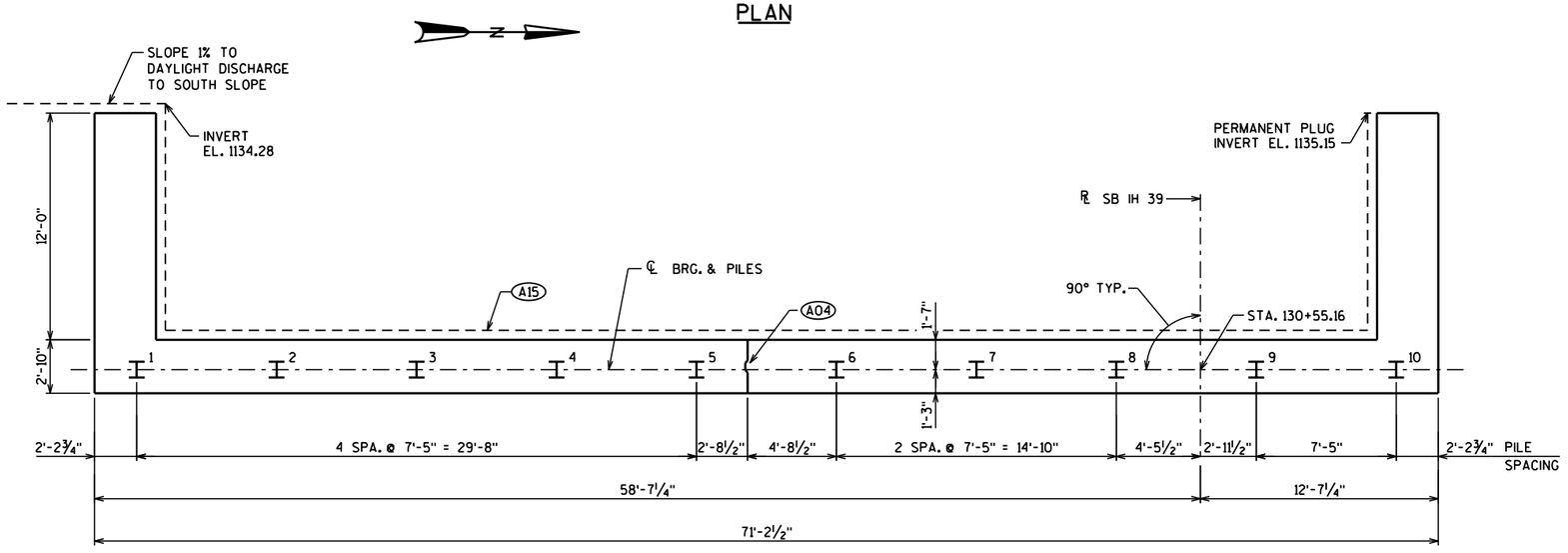
| STATE PROJECT NUMBER |
|---|
| 1166-08-72 |




## ELEVATION




## PLAN




## PILE PLAN

A04 VERTICAL CONSTRUCTION JOINT: KEYWAY FORMED BY A BEVELED 2" x 8". USE 3/4" "V" GROOVE @ THE FRONT FACE AND 18" R.M.W. @ BACKFACE.

A15 PIPE UNDERDRAIN WRAPPED 6-INCH. SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SCREEN AT ENDS OF PIPE UNDERDRAIN, SEE SHEET 9 FOR DETAILS.

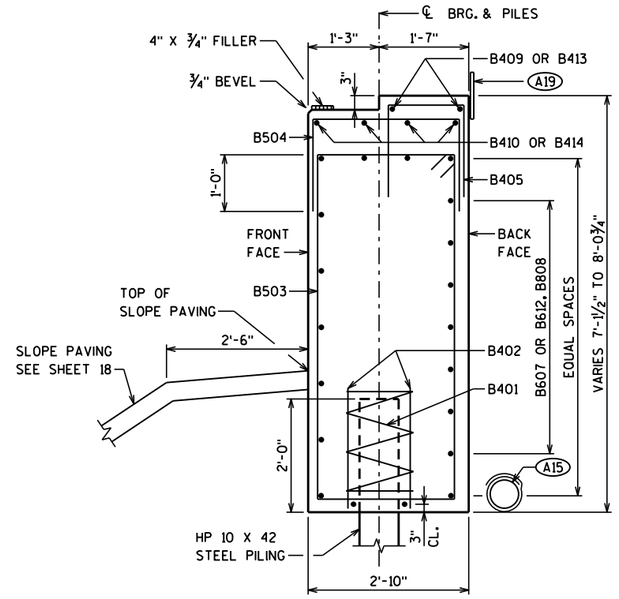
A17 SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE.)

A19 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE.

SEE SHEET 9 FOR BILL OF BARS, BAR BENDING DIAGRAMS AND PILE SPLICE DETAILS.

ABUTMENTS TO BE SUPPORTED ON HP 10 X 42 STEEL PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 165 TONS PER PILE. ESTIMATED LENGTH = 30' AT WEST ABUTMENT.

(X) INDICATES WING NUMBER




## SECTION THRU ABUTMENT BODY

HORIZ. BARS NOT OTHERWISE IDENTIFIED ARE B606 OR B611 BARS

| NO. | DATE | REVISION | BY |
|---|---|---|---|
| | | | |

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-49-173

DRAWN BY BRE | PLANS CK'D. KRO

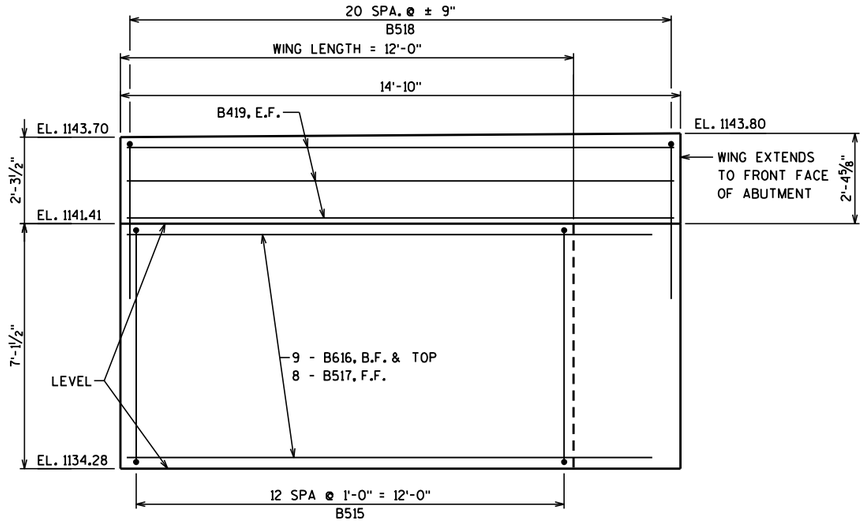
WEST ABUTMENT

SHEET 8 OF 18

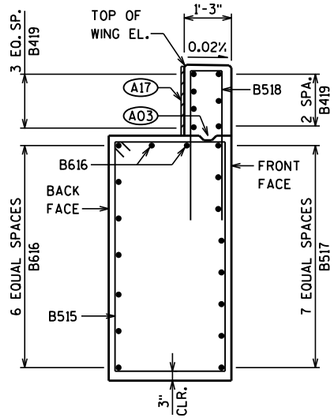
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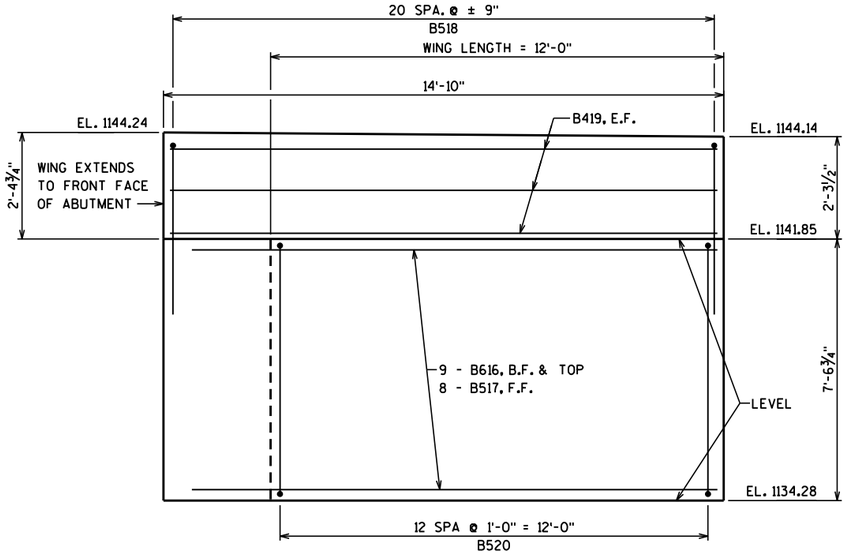
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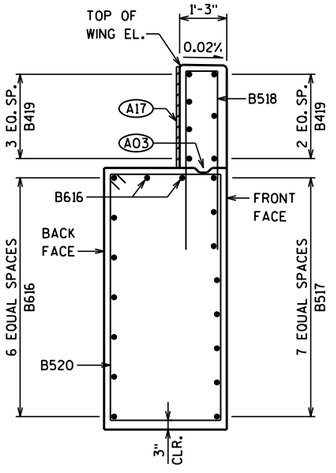

## WING 3 ELEVATION




## WING 3 SECTION




## WING 4 ELEVATION




## WING 4 SECTION

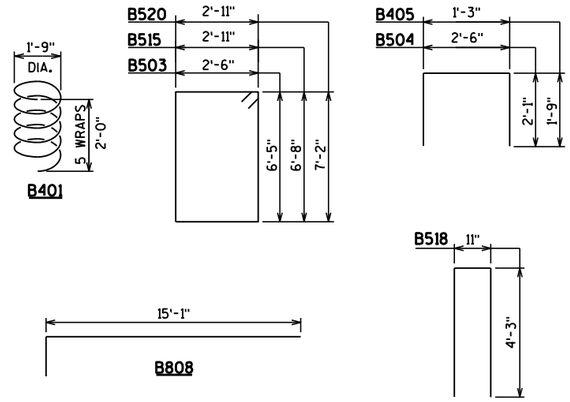
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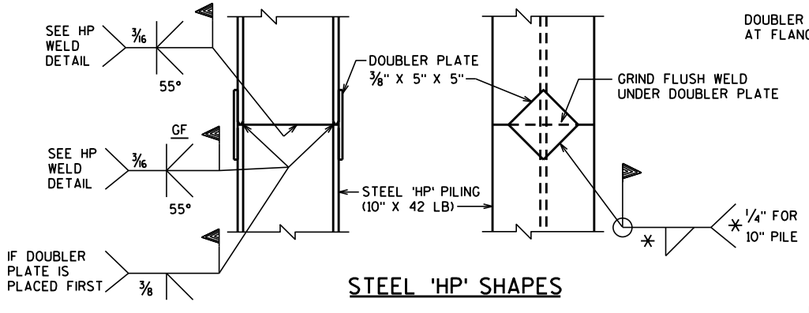
## BILL OF BARS

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| B405 | | 70 | 4'-7" | X | BODY - VERTICAL, TOP |
| ⬡ B606 | | 12 | 34'-5" | | BODY - HORIZONTAL |
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| B515 | X | 13 | 19'-9" | X | WING 3 - STIRRUPS |
| B616 | X | 18 | 13'-11" | | WINGS - HORIZONTAL |
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| B518 | X | 42 | 9'-2" | X | WING 3 - VERTICAL |
| B419 | X | 14 | 14'-6" | | WINGS - HORIZONTAL TOP |
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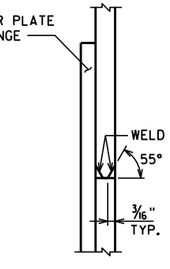
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## BAR BENDING DIAGRAMS

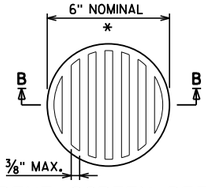



## STEEL 'HP' SHAPES

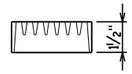



## HP WELD DETAIL

FLANGE SHOWN, WEB SIMILAR




## RODENT SCREEN DETAIL




## SECTION B-B

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STATE PROJECT NUMBER
1166-08-72

| NO. | DATE | REVISION | BY |
|---|---|---|---|

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-49-173

DRAWN BY BRE | PLANS CK'D. KRO

WEST ABUTMENT DETAILS

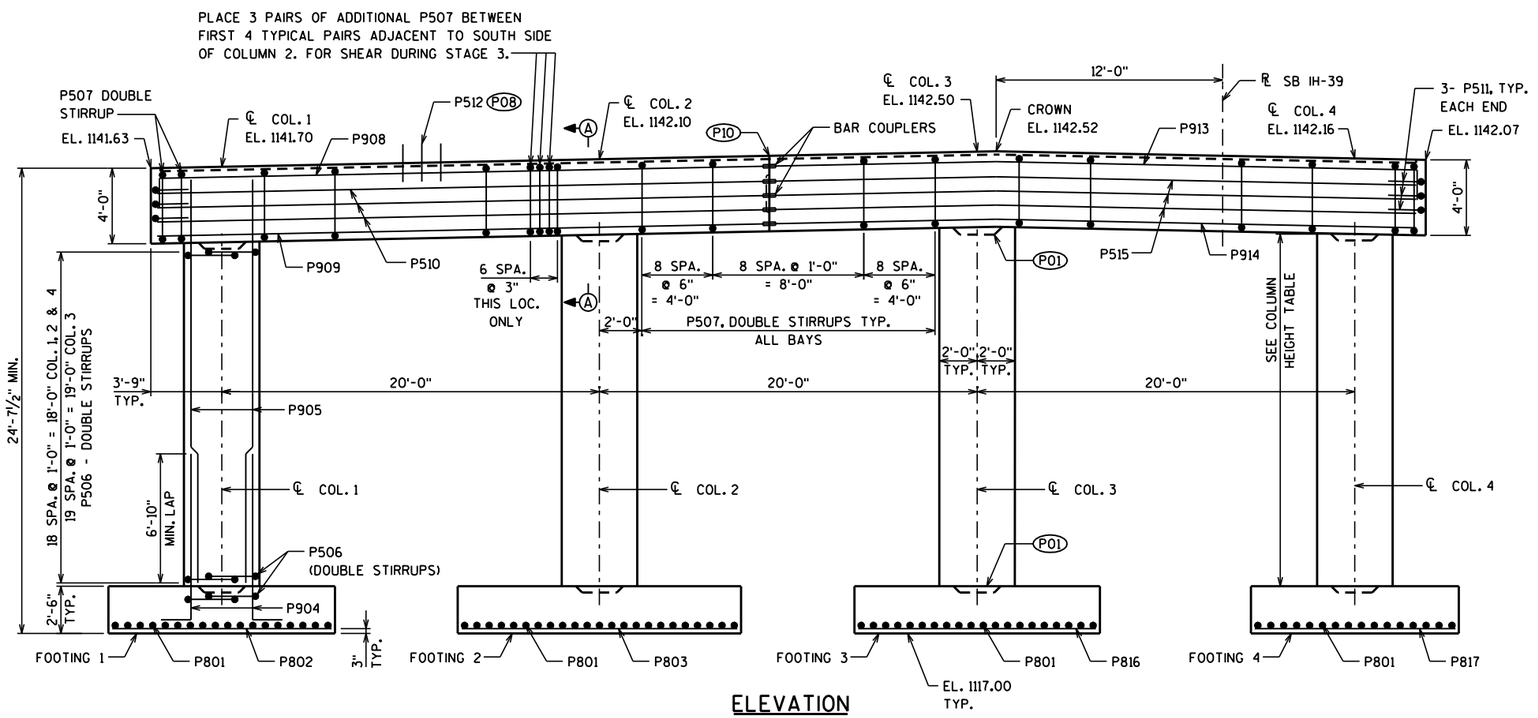
SHEET 9 OF 18

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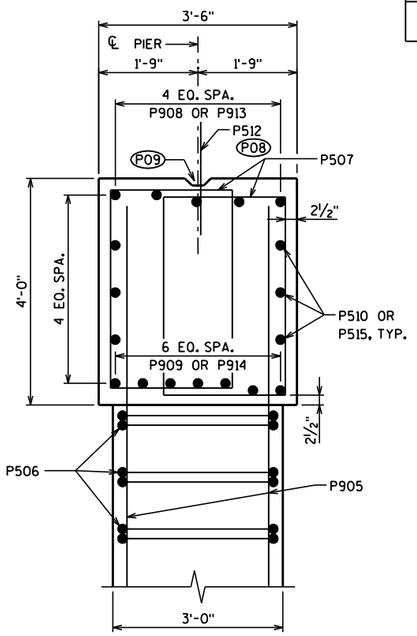
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8

| STATE PROJECT NUMBER |
|---|
| 1166-08-72 |




## ELEVATION
(LOOKING WEST)

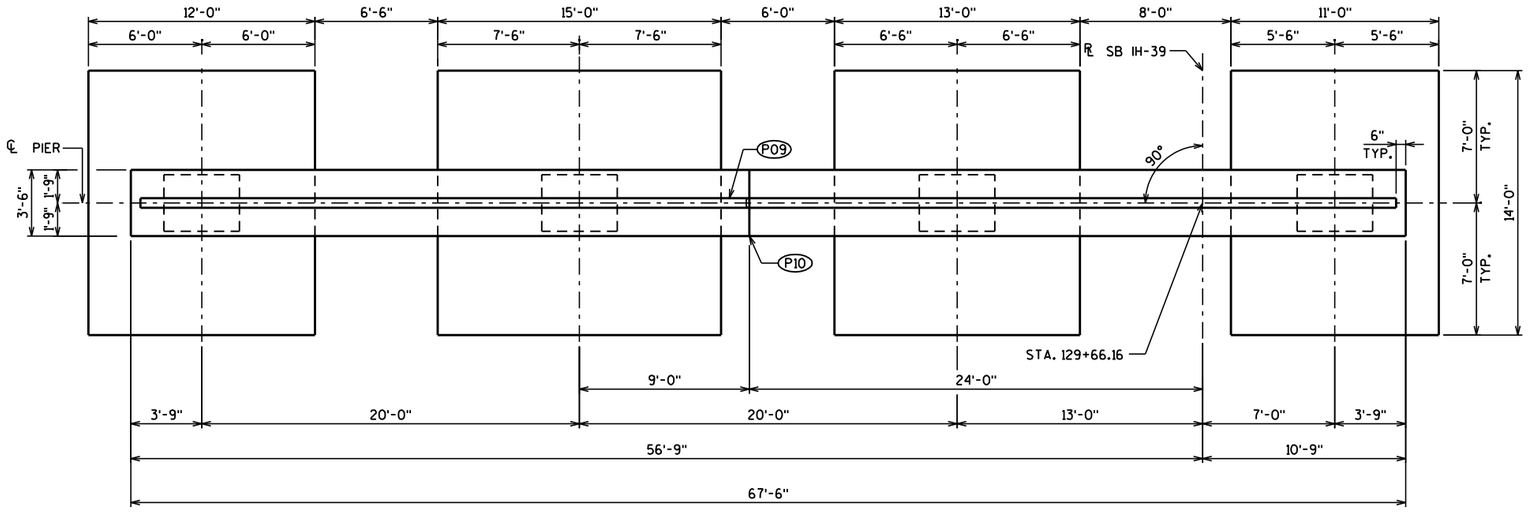



## SECTION A-A THRU CAP

## COLUMN HEIGHT

DIMENSION IS MEASURED AT CENTERLINE OF COLUMN

| COLUMN | HEIGHT |
|---|---|
| 1 | 18'-2½" |
| 2 | 18'-7¼" |
| 3 | 19'-0" |
| 4 | 18'-7⅞" |




## PLAN

## NOTES

(P01) 1'-3" X 2'-0" X 4" CONSTRUCTION JOINT FORMED BY BEVELED KEYWAY.

PIERS TO BE SUPPORTED WITH SPREAD FOOTINGS ON WEATHERED BEDROCK WITH A REQUIRED FACTORED BEARING RESISTANCE OF 9,000 PSF. A GEOTECHNICAL ENGINEER WILL DETERMINE THE FACTORED BEARING RESISTANCE BY VISUAL INSPECTION PRIOR TO CONSTRUCTION OF THE PIER FOOTINGS.

SLOPE TOP OF COLUMNS TO MATCH PIER CAP.

TOP OF PIER CAP SHALL BE PARALLEL TO GRADE.

(P08) P512 BARS @ 1'-0" CTRS. MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. (EMBED 1'-0" INTO CONC.)

(P09) KEYED CONSTRUCTION JOINT-FORMED BY BEVELED 2 X 6.

(P10) VERTICAL CONSTRUCTION JOINT FORMED BY 2" X 6" X 2'-0" BEVELED KEYWAY (NO BEVEL ON EXPOSED SURFACE.)

SEE SHEET 12 FOR DETAILS AND BILL OF BARS.

| NO. | DATE | REVISION | BY |
|---|---|---|---|
| | | | |

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-49-173

DRAWN BY BRE | PLANS CK'D. KRO

PIER 1

SHEET 10 OF 18

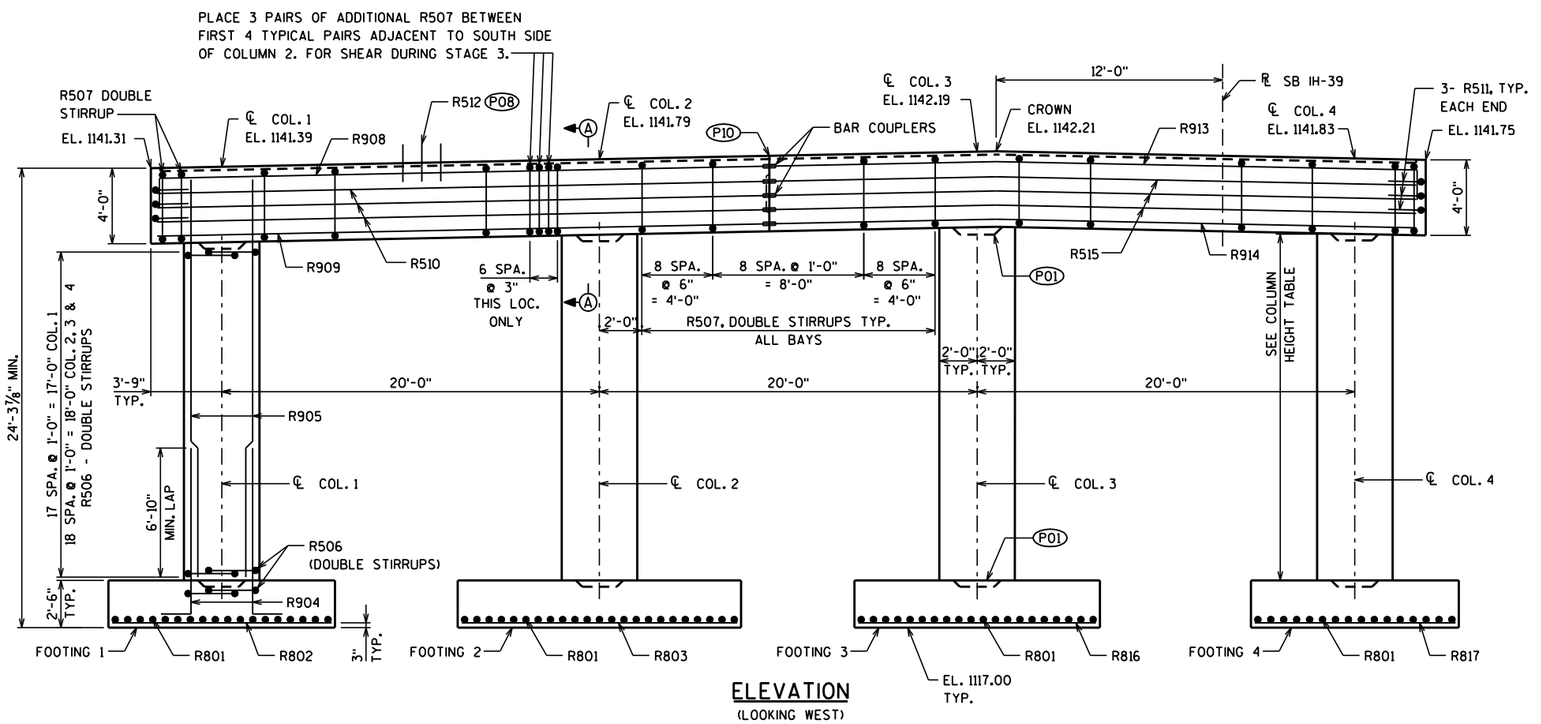
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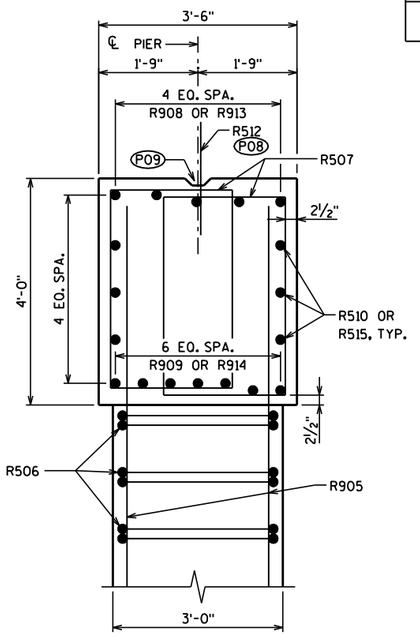
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| STATE PROJECT NUMBER |
|---|
| 1166-08-72 |




ELEVATION
(LOOKING WEST)

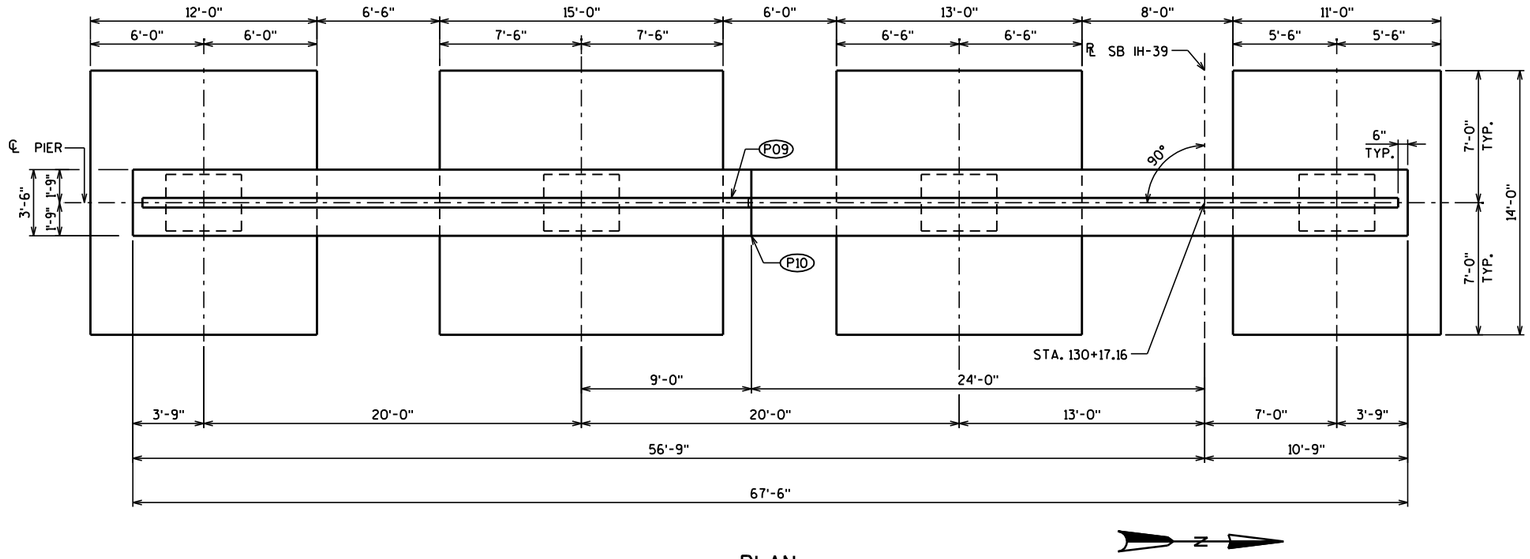



SECTION A-A THRU CAP

## COLUMN HEIGHT

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| COLUMN | HEIGHT |
|---|---|
| 1 | 17'-10¾" |
| 2 | 18'-3½" |
| 3 | 18'-8⅜" |
| 4 | 18'-4" |




PLAN

## NOTES

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SEE SHEET 12 FOR DETAILS AND BILL OF BARS.

| NO. | DATE | REVISION | BY |
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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

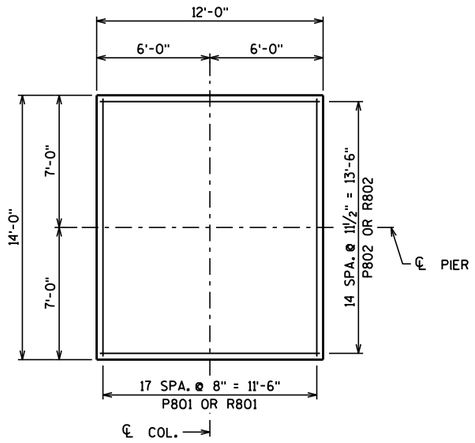
STRUCTURE B-49-173

DRAWN BY BRE | PLANS CK'D. KRO

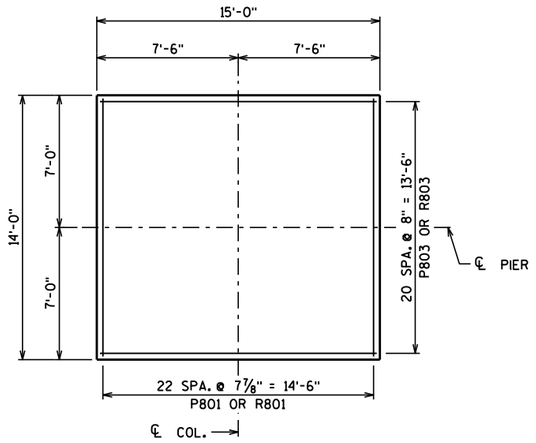
PIER 2

SHEET 11 OF 18

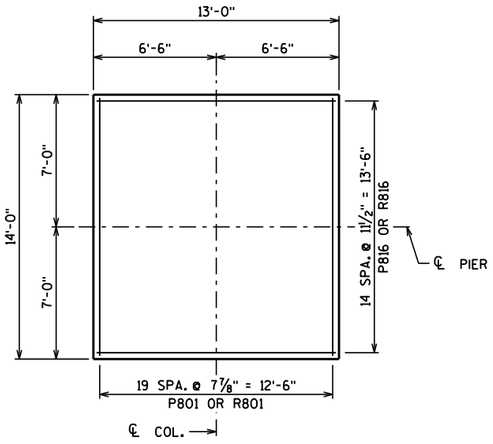
STATE PROJECT NUMBER
1166-08-72



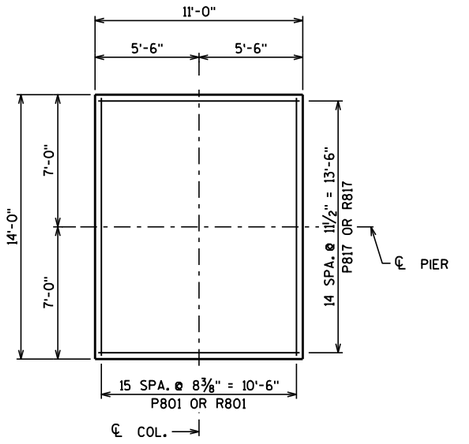

FOOTING 1 PLAN



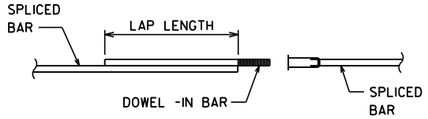

FOOTING 2 PLAN




FOOTING 3 PLAN




FOOTING 4 PLAN




DOWEL BAR SPLICER



ONE PIECE THREADED SPLICER

## SPLICER ALTERNATIVES

## DOWEL BAR SPLICER LAP LENGTHS

| CONCRETE UNDER BAR | BAR SIZE | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
|---|---|---|---|---|---|---|---|---|---|
| 12" OR LESS | f'c = 3500 | 1'-8" | 2'-8" | 3'-2" | 4'-3" | 5'-6" | 7'-0" | 8'-9" | 10'-11" |
| | f'c = 4000 | 1'-8" | 2'-8" | 3'-2" | 4'-0" | 5'-2" | 6'-6" | 8'-3" | 10'-2" |
| MORE THAN 12" | f'c = 3500 | 2'-3" | 2'-11" | 3'-6" | 4'-8" | 6'-1" | 7'-10" | 9'-10" | 12'-1" |
| | f'c = 4000 | 2'-3" | 2'-11" | 3'-6" | 4'-5" | 5'-8" | 7'-4" | 9'-2" | 11'-4" |

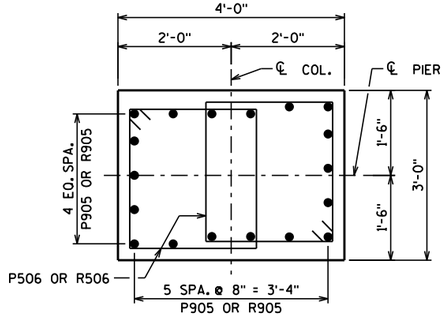
## BILL OF BARS - PIER 1

| BAR MARK | COAT | NO. REQ'D. | LENGTH | BENT | LOCATION |
|---|---|---|---|---|---|
| P801 | | 77 | 13'-6" | | FOOTING - HORIZONTAL |
| P802 | | 15 | 11'-6" | | FOOTING 1 - HORIZONTAL |
| P803 | | 21 | 14'-6" | | FOOTING 2 - HORIZONTAL |
| P904 | X | 72 | 10'-5" | X | FOOTING/COLUMN - VERTICAL |
| P905 | X | 72 | 21'-8" | | COLUMN - VERTICAL |
| P506 | X | 162 | 10'-5" | X | COLUMN - DOUBLE STIRRUPS |
| P507 | X | 164 | 12'-1" | X | CAP - DOUBLE STIRRUPS |
| ⬡ P908 | X | 5 | 33'-10" | X | CAP - HORIZONTAL - TOP |
| ⬡ P909 | X | 7 | 32'-6" | | CAP - HORIZONTAL - BOTTOM |
| ⬡ P510 | X | 6 | 32'-6" | | CAP - HORIZONTAL - SIDES |
| P511 | X | 6 | 6'-3" | X | CAP - ENDS |
| P512 | X | 67 | 2'-0" | | CAP - DOWELS |
| ⬡ P913 | X | 5 | 35'-10" | X | CAP - HORIZONTAL - TOP |
| ⬡ P914 | X | 7 | 34'-6" | | CAP - HORIZONTAL - BOTTOM |
| ⬡ P515 | X | 6 | 34'-6" | | CAP - HORIZONTAL - SIDES |
| P816 | | 15 | 12'-6" | | FOOTING 3 - HORIZONTAL |
| P817 | | 15 | 10'-6" | | FOOTING 4 - HORIZONTAL |

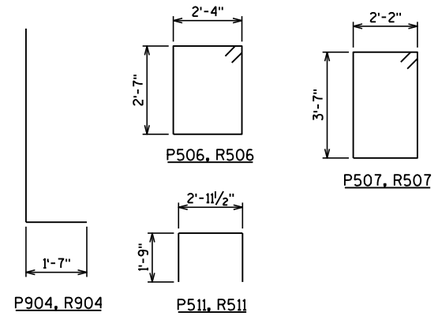
## BILL OF BARS - PIER 2

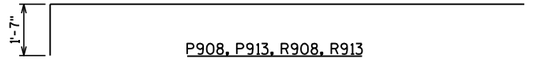
| BAR MARK | COAT | NO. REQ'D. | LENGTH | BENT | LOCATION |
|---|---|---|---|---|---|
| R801 | | 77 | 13'-6" | | FOOTING - HORIZONTAL |
| R802 | | 15 | 11'-6" | | FOOTING 1 - HORIZONTAL |
| R803 | | 21 | 14'-6" | | FOOTING 2 - HORIZONTAL |
| R904 | X | 72 | 10'-5" | X | FOOTING/COLUMN - VERTICAL |
| R905 | X | 72 | 21'-4" | | COLUMN - VERTICAL |
| R506 | X | 158 | 10'-5" | X | COLUMN - DOUBLE STIRRUPS |
| R507 | X | 164 | 12'-1" | X | CAP - DOUBLE STIRRUPS |
| ⬡ R908 | X | 5 | 33'-10" | X | CAP - HORIZONTAL - TOP |
| ⬡ R909 | X | 7 | 32'-6" | | CAP - HORIZONTAL - BOTTOM |
| ⬡ R510 | X | 6 | 32'-6" | | CAP - HORIZONTAL - SIDES |
| R511 | X | 6 | 6'-3" | X | CAP - ENDS |
| R512 | X | 67 | 2'-0" | | CAP - DOWELS |
| ⬡ R913 | X | 5 | 35'-10" | X | CAP - HORIZONTAL - TOP |
| ⬡ R914 | X | 7 | 34'-6" | | CAP - HORIZONTAL - BOTTOM |
| ⬡ R515 | X | 6 | 34'-6" | | CAP - HORIZONTAL - SIDES |
| R816 | | 15 | 12'-6" | | FOOTING 3 - HORIZONTAL |
| R817 | | 15 | 10'-6" | | FOOTING 4 - HORIZONTAL |

⬡ COUPLED BAR LENGTHS ARE GIVEN AS END TO END AND MAKE NO ALLOWANCE FOR GAPS REQUIRED BY THE COUPLER CHOSEN. ADJUST LENGTH AS REQUIRED FOR COUPLER PLACEMENT.




TYPICAL SECTION THRU COLUMN




P908, P913, R908, R913

BAR BENDING DIAGRAMS

## NOTES FOR SPLICER ALTERNATIVES:

STEEL SPLICE (COUPLER) ASSEMBLY SHALL BE AN APPROVED TYPE AND SHALL DEVELOP IN TENSION AT LEAST 125% OF THE YIELD STRENGTH OF THE SPLICED REINFORCEMENT BARS.

DOWEL BAR SPLICERS SHALL BE OF MINIMUM 60 KSI YIELD STRENGTH, AND HAVE TENSILE STRENGTH AREA EQUAL OR GREATER THAN THAT OF THE LAPPED REINFORCEMENT BARS.

DOWEL BAR SPLICERS SHALL MEET THE DEFORMATION REQUIREMENTS FOR STANDARD ASTM DEFORMED REINFORCING BARS.

FOR DOWEL BAR SPLICERS, ALL REINFORCEMENT BARS SHALL BE LAPPED AND TIED TO THE SPLICER BARS.

SPLICER (COUPLER) ASSEMBLY IN THE SLAB SHALL BE EPOXY COATED IN ACCORDANCE WITH THE REQUIREMENTS FOR REINFORCEMENT BARS.

OTHER SYSTEMS OF SIMILAR DESIGN MAY BE SUBMITTED TO THE ENGINEER FOR APPROVAL. APPROVAL SHALL BE BASED ON CERTIFIED TEST RESULTS FROM AN APPROVED TESTING LABORATORY THAT THE PROPOSED SPLICER (COUPLER) ASSEMBLY SATISFIES THE FOLLOWING REQUIREMENT:

MINIMUM CAPACITY = 1.25 X fy X AREA OF SPLICED REINFORCEMENT BAR.
WHERE fy = YIELD STRENGTH OF SPLICED REINFORCEMENT BARS.

BAR LENGTH COMPUTED TO C/L LONGITUDINAL JOINT AND SHALL BE MODIFIED IF REQUIRED TO BAR COUPLER MANUFACTURER RECOMMENDATIONS. PAY BASED ON BARS AS DETAILED.

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| NO. | DATE | REVISION | BY |
|---|---|---|---|
| | | | |

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-49-173

DRAWN BY BRE | PLANS CK'D. KRO

PIER DETAILS

SHEET 12 OF 18

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| STATE PROJECT NUMBER |
|---|
| 1166-08-72 |

℄ EAST ABUT. ℄ PIER 1 EDGE OF SLAB ℄ PIER 2 ℄ WEST ABUT.

℄ BRG. S401 29'-4½" 7'-3" LAP, TYP. 1'-0" TYP. 7'-3" LAP, TYP. 29'-4½" S401 ℄ BRG.

2'-4" LAP S902 15'-11" S903 15'-10" S512 ⌀ 1'-0" TOP & BOT. MAT REINF. TYP. S902 15'-10" S903 15'-11" S902 2'-4" LAP

TOP MAT REINF.

* BAR COUPLERS CONSTRUCTION JOINT

B.F. OF ABUT. B.F. OF ABUT.

S907 1'-0" TYP. 4'-9" 4'-9" S909 4'-9" 4'-9" S907

PAVING NOTCH S808 6" TYP. 10'-10" 11'-2" S810 11'-2" 10'-10" S808 BOT. MAT REINF.

S516 S514 1'-6" TYP. S611 11" TYP. S513 ⌀ 1'-0" TOP & BOT. MAT REINF. TYP. S611 11" TYP. PAVING NOTCH

S415 1'-0" TYP. ℄ SB IH-39

Ⓐ Ⓐ

S520 ⌀ 1'-0" TOP, TYP.

PARAPET REINFORCING

S519 1'-9" LAP, TYP. S519 S519

192 SPA. ⌀ 8" - S517 & S518

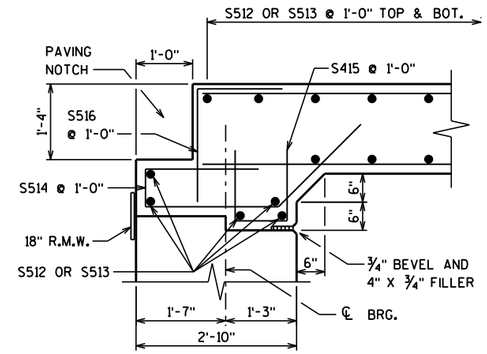
1'-7" 38'-0" SPAN 1 51'-0" SPAN 2 38'-0" SPAN 3 1'-7"

130'-2" BACK TO BACK OF ABUTMENTS

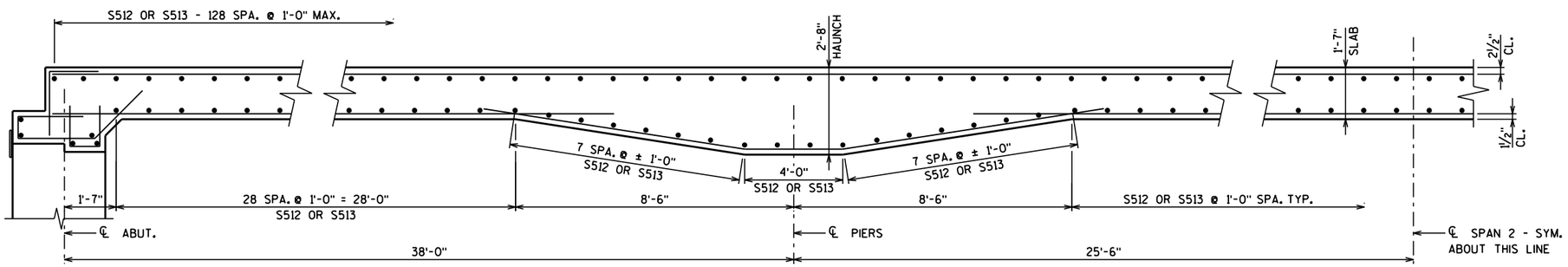
PLAN

* DOWEL BAR SPLICER ALTERNATIVES MAY BE USED. SEE SHEET 12 FOR DETAILS.

N




SECTION A-A




LONGITUDINAL SECTION THRU ROADWAY

| NO. | DATE | REVISION | BY |
|---|---|---|---|
| | | | |

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-49-173

DRAWN BY BRE | PLANS CK'D. KRO

SUPERSTRUCTURE

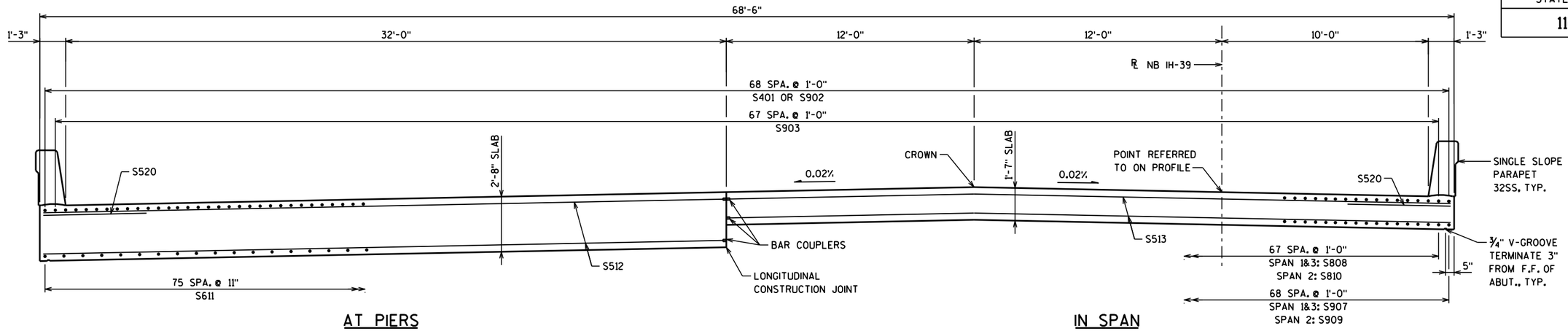
SHEET 13 OF 18

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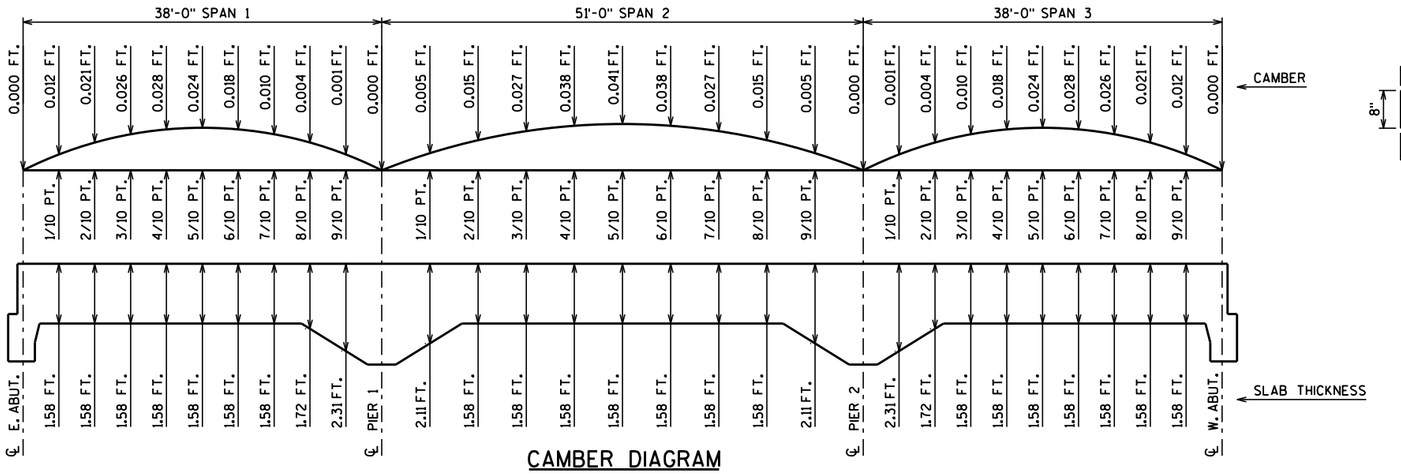
| STATE PROJECT NUMBER |
|---|
| 1166-08-72 |




AT PIERS

IN SPAN

## CROSS SECTION THRU ROADWAY




## CAMBER DIAGRAM

CAMBER IS BASED ON 3 TIMES DEAD LOAD DEFLECTIONS. CAMBER SPANS AS SHOWN TO PROVIDE FOR DEADLOAD DEFLECTION AND FUTURE CREEP. CAMBER DOES NOT INCLUDE ALLOWANCE FOR FORM SETTLEMENT. PARAPETS SHOWN ABOVE THE HORIZ. CONST. JT. SHALL BE POURED AFTER FALSEWORK HAS BEEN RELEASED.

## TOP OF DECK ELEVATIONS

| LOCATION | E.ABUT. | 1/10 | 2/10 | 3/10 | 4/10 | 5/10 | 6/10 | 7/10 | 8/10 | 9/10 | PIER 1 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| N. EDGE | 1145.02 | 1145.00 | 1144.98 | 1144.96 | 1144.94 | 1144.92 | 1144.90 | 1144.88 | 1144.85 | 1144.83 | 1144.81 |
| PROFILE | 1145.22 | 1145.20 | 1145.18 | 1145.16 | 1145.14 | 1145.12 | 1145.10 | 1145.08 | 1145.05 | 1145.03 | 1145.01 |
| CROWN | 1145.46 | 1145.44 | 1145.42 | 1145.40 | 1145.38 | 1145.36 | 1145.34 | 1145.32 | 1145.29 | 1145.27 | 1145.25 |
| CONST. JT. | 1145.22 | 1145.20 | 1145.18 | 1145.16 | 1145.14 | 1145.12 | 1145.10 | 1145.08 | 1145.05 | 1145.03 | 1145.01 |
| S. EDGE | 1144.58 | 1144.56 | 1144.54 | 1144.52 | 1144.50 | 1144.48 | 1144.46 | 1144.44 | 1144.41 | 1144.39 | 1144.37 |

| LOCATION | PIER 1 | 1/10 | 2/10 | 3/10 | 4/10 | 5/10 | 6/10 | 7/10 | 8/10 | 9/10 | PIER 2 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| N. EDGE | 1144.81 | 1144.78 | 1144.75 | 1144.72 | 1144.69 | 1144.66 | 1144.63 | 1144.60 | 1144.56 | 1144.53 | 1144.50 |
| PROFILE | 1145.01 | 1144.98 | 1144.95 | 1144.92 | 1144.89 | 1144.86 | 1144.83 | 1144.80 | 1144.76 | 1144.73 | 1144.70 |
| CROWN | 1145.25 | 1145.22 | 1145.19 | 1145.16 | 1145.13 | 1145.10 | 1145.07 | 1145.04 | 1145.00 | 1144.97 | 1144.94 |
| CONST. JT. | 1145.01 | 1144.98 | 1144.95 | 1144.92 | 1144.89 | 1144.86 | 1144.83 | 1144.80 | 1144.76 | 1144.73 | 1144.70 |
| S. EDGE | 1144.37 | 1144.34 | 1144.31 | 1144.28 | 1144.25 | 1144.22 | 1144.19 | 1144.16 | 1144.12 | 1144.09 | 1144.06 |

| LOCATION | PIER 2 | 1/10 | 2/10 | 3/10 | 4/10 | 5/10 | 6/10 | 7/10 | 8/10 | 9/10 | W.ABUT. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| N. EDGE | 1144.50 | 1144.47 | 1144.45 | 1144.42 | 1144.40 | 1144.37 | 1144.34 | 1144.32 | 1144.29 | 1144.26 | 1144.24 |
| PROFILE | 1144.70 | 1144.67 | 1144.65 | 1144.62 | 1144.60 | 1144.57 | 1144.54 | 1144.52 | 1144.49 | 1144.46 | 1144.44 |
| CROWN | 1144.94 | 1144.91 | 1144.89 | 1144.86 | 1144.84 | 1144.81 | 1144.78 | 1144.76 | 1144.73 | 1144.70 | 1144.68 |
| CONST. JT. | 1144.70 | 1144.67 | 1144.65 | 1144.62 | 1144.60 | 1144.57 | 1144.54 | 1144.52 | 1144.49 | 1144.46 | 1144.44 |
| S. EDGE | 1144.06 | 1144.03 | 1144.01 | 1143.98 | 1143.96 | 1143.93 | 1143.90 | 1143.88 | 1143.85 | 1143.82 | 1143.80 |

## NOTES

SLAB THICKNESS DIMENSION IS MINIMUM. ANY TOLERANCES TO CORRECT CONSTRUCTION DISCREPANCIES ARE TO BE PLUS (+).

TOP TRANSVERSE BARS IN THE SLAB SHALL BE SUPPORTED BY INDIVIDUAL BAR CHAIRS AT APPROXIMATELY 3'-0" CENTERS EACH WAY. BOTTOM LONGITUDINAL BARS SHALL BE SUPPORTED BY CONTINUOUS BAR CHAIRS AT APPROXIMATELY 4'-0" CENTERS.

TRANSVERSE BARS SHALL BE PLACED PARALLEL TO THE ℄ OF SUBSTRUCTURE UNITS.

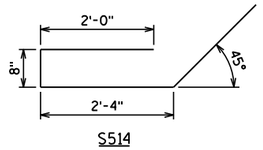
PARAPETS PLACED ON TOP OF THE SLAB SHALL BE POURED AFTER FALSEWORK HAS BEEN RELEASED.

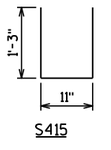
PRIOR TO RELEASING SLAB FALSEWORK, TAKE TOP OF SLAB ELEVATIONS AT THE ℄ OF ABUTMENTS, THE ℄ OF PIERS AND AT 5/10 PTS. TO VERIFY CAMBER. TAKE ELEVATIONS ALONG GUTTER LINES AND CROWN OR ℄.

## BILL OF BARS

| BAR MARK | COAT | NO. REQ'D. | LENGTH | BENT | LOCATION |
|---|---|---|---|---|---|
| S401 | X | 138 | 11'-5" | | LONGITUDINAL TOP |
| S902 | X | 207 | 41'-5" | | LONGITUDINAL TOP, INTERIOR |
| S903 | X | 136 | 31'-9" | | LONGITUDINAL TOP, INTERIOR |
| | | | | | |
| | | | | | |
| | | | | | |
| S907 | X | 138 | 33'-8" | | LONGITUDINAL BOTTOM |
| S808 | X | 136 | 25'-1" | | LONGITUDINAL BOTTOM |
| S909 | X | 69 | 41'-6" | | LONGITUDINAL BOTTOM |
| S810 | X | 68 | 28'-8" | | LONGITUDINAL BOTTOM |
| S611 | X | 152 | 19'-2" | X | LONGITUDINAL BOTTOM AT PIER |
| ⬡ S512 | X | 264 | 33'-1" | | TRANSVERSE TOP & BOTTOM |
| ⬡ S513 | X | 264 | 35'-1" | | TRANSVERSE TOP & BOTTOM |
| S514 | X | 140 | 6'-10" | X | END OF SLAB |
| S415 | X | 140 | 3'-3" | X | END OF SLAB |
| S516 | X | 140 | 3'-5" | X | END OF SLAB |
| S517 | X | 386 | 4'-5" | X | PARAPET VERTICAL |
| S518 | X | 386 | 5'-0" | X | PARAPET VERTICAL |
| S519 | X | 36 | 43'-10" | | PARAPET HORIZONTAL |
| S520 | X | 256 | 5'-0" | | TRANSVERSE EDGE OF SLAB |

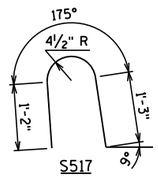
⬡ COUPLED BAR LENGTHS ARE GIVEN AS END TO END AND MAKE NO ALLOWANCE FOR GAPS REQUIRED BY THE COUPLER CHOSEN. ADJUST LENGTH AS REQUIRED FOR COUPLER PLACEMENT.

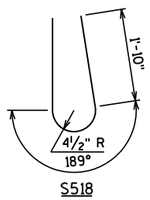


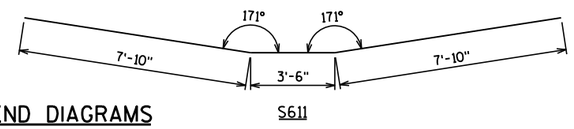





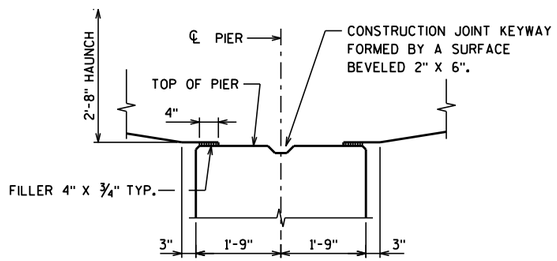





## BAR BEND DIAGRAMS




PIER DETAIL

| NO. | DATE | REVISION | BY |
|---|---|---|---|
| | | | |

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-49-173

DRAWN BY BRE | PLANS CK'D. KRO

SUPERSTRUCTURE DETAILS

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| STATE PROJECT NUMBER |
|---|
| 1166-08-72 |

## NOTES:

(T01) PIPE UNDERDRAIN WRAPPED 6-INCH AT APPROACH SLAB, LOCATED ONLY ON UPHILL SIDE OF APRON FOOTING. SLOPE 0.5% MIN. TO SUITABLE DRAINAGE.

(T02) STEEL TROWEL TOP SURFACE OF FOOTING AND PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHLENE SHEETS OVER THE ENTIRE LENGTH OF THE FOOTING.

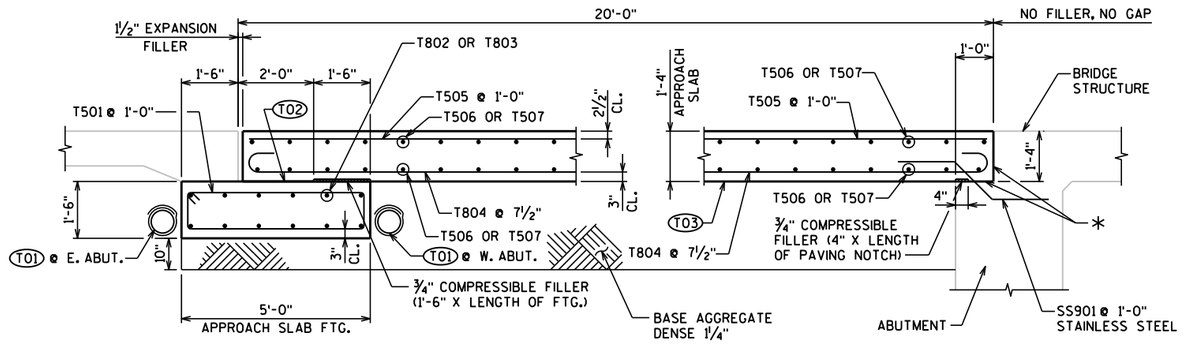
(T03) PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHLENE SHEETS OVER THE ENTIRE LENGTH OF THE SUBGRADE.

(A17) SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE.)

* APPLY PROTECTIVE SURFACE TREATMENT TO PAVING NOTCH PRIOR TO POURING STRUCTURAL APPROACH SLAB.

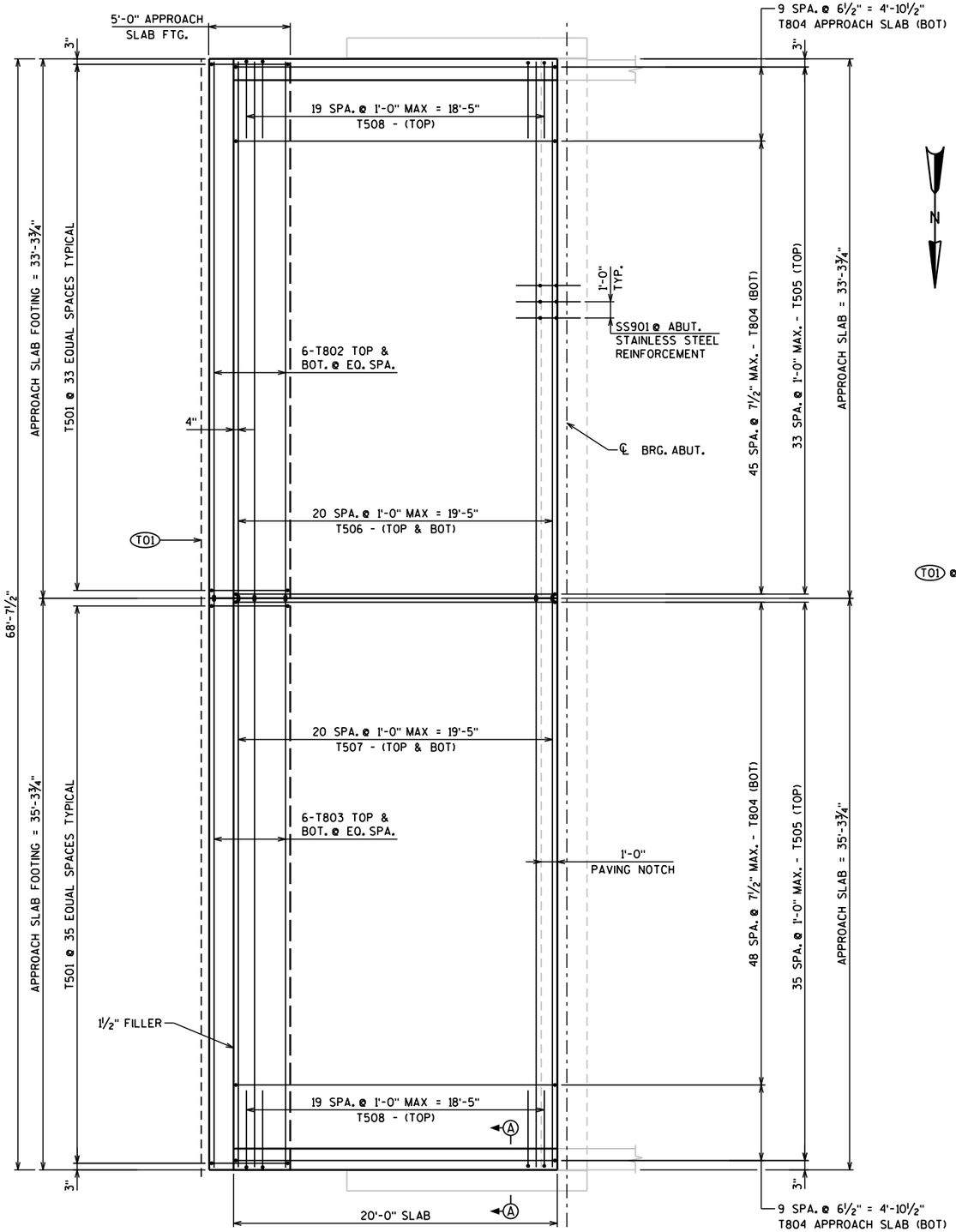
## DESIGN DATA:

| | |
|---|---|
| ALLOWABLE SOIL BEARING PRESSURE: | 2,000 P.S.F. |
| CONCRETE STRENGTH f'c: | 4,000 P.S.I. |
| BAR STEEL REINFORCEMENT, GRADE 60, fy: | 60,000 P.S.I. |



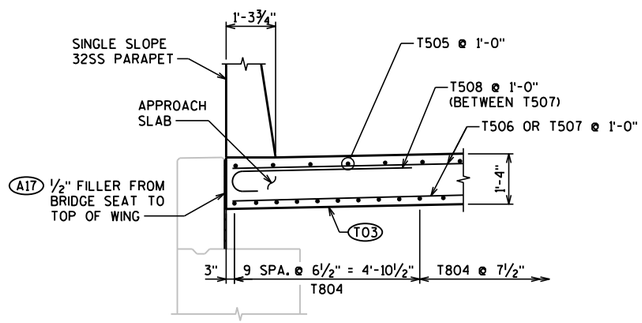

## TRANSVERSE SECTION THRU APPROACH SLAB

(EAST APRON SHOWN, WEST APRON SIMILAR)




## APPROACH SLAB PLAN

(EAST SLAB SHOWN, WEST SIMILAR)




## SECTION A-A

| NO. | DATE | REVISION | BY |
|---|---|---|---|
| | | | |

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-49-173

DRAWN BY: BRE | PLANS CK'D.: KRO

STRUCTURAL APPROACH SLAB

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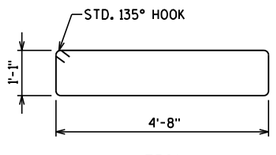
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| STATE PROJECT NUMBER |
|---|
| 1166-08-72 |

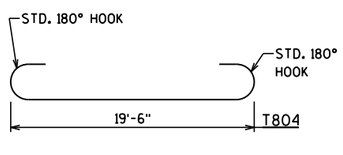
## BILL OF BARS

| BAR MARK | COAT | EAST QTY. | WEST QTY. | LENGTH | BENT | LOCATION |
|---|---|---|---|---|---|---|
| T501 | X | 70 | 70 | 12'-1" | X | FOOTING - STIRRUPS |
| ⬡ T802 | X | 12 | 12 | 33'-1" | | FOOTING - HORIZONTAL |
| ⬡ T803 | X | 12 | 12 | 35'-1" | | FOOTING - HORIZONTAL |
| T804 | X | 113 | 113 | 21'-4" | X | SLAB - LONG. - BOTTOM |
| T505 | X | 70 | 70 | 19'-6" | | SLAB - LONG. - TOP |
| ⬡ T506 | X | 42 | 42 | 33'-1" | | SLAB - TRANS. - TOP & BOT. |
| ⬡ T507 | X | 42 | 42 | 35'-1" | | SLAB - TRANS. - TOP & BOT. |
| T508 | X | 40 | 40 | 4'-1" | X | SLAB - TRANS. - TOP |
| T509 | X | 36 | 36 | 4'-5" | X | PARAPET - VERTICAL |
| T510 | X | 36 | 36 | 5'-0" | X | PARAPET - VERTICAL |
| T511 | X | 24 | 24 | 2'-9" | X | PARAPET - VERTICAL |
| T512 | X | 34 | 34 | 4'-4" | X | PARAPET - VERTICAL |
| T513 | X | 22 | 22 | 4'-9" | X | PARAPET - VERTICAL |
| T514 | X | 12 | 12 | 4'-10" | X | PARAPET - VERTICAL |
| T515 | X | 2 | 2 | 19'-6" | X | PARAPET - HORIZONTAL |
| T516 | X | 10 | 10 | 19'-6" | | PARAPET - HORIZONTAL |

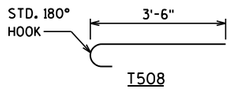
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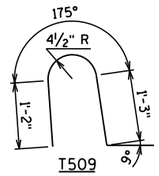
T501



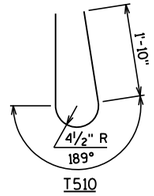
T804



T508



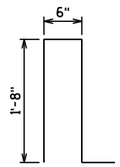
T509



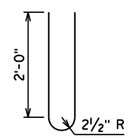
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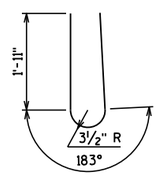
T511



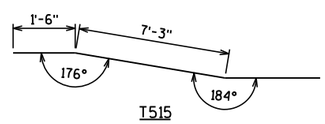
T512



T513



T514

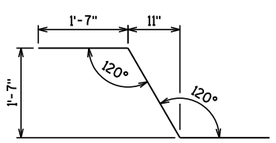


T515

## BAR BENDING DIAGRAMS

## BILL OF BARS (STAINLESS STEEL, FOR ONE APPROACH SLAB)

| BAR MARK | COAT | NO. REQ'D. | LENGTH | BENT | LOCATION |
|---|---|---|---|---|---|
| SS901 | | 70 | 5'-0" | X | CONC. DIAPH. @ ABUTS. TO APPROACH APRON |



SS901

| NO. | DATE | REVISION | BY |
|---|---|---|---|
| | | | |

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-49-173

DRAWN BY BRE | PLANS CK'D. KRO

STRUCTURAL APPROACH SLAB DETAILS

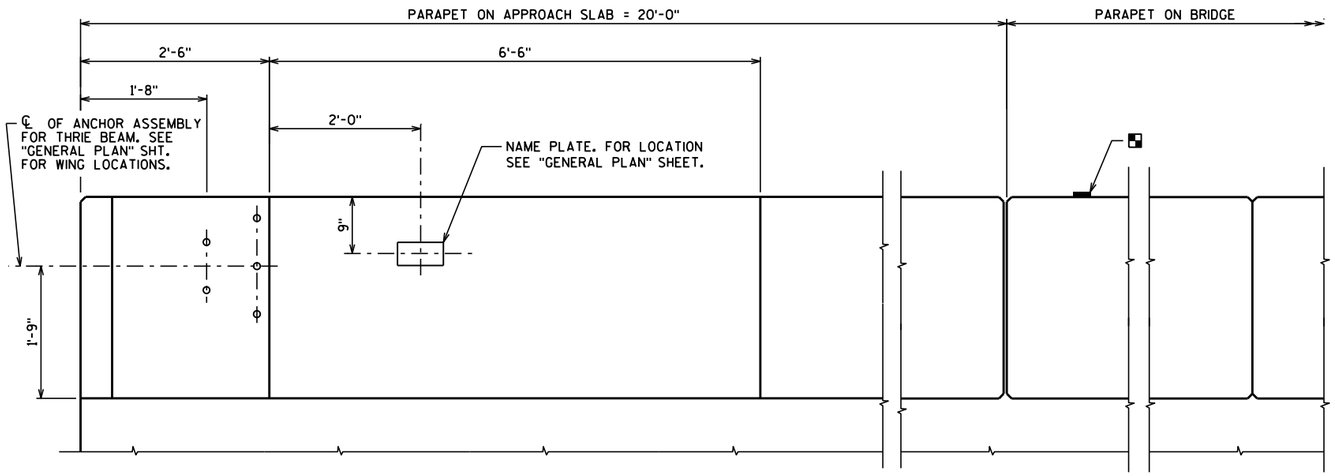
SHEET 16 OF 18

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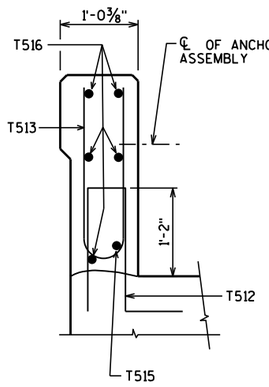
8

8

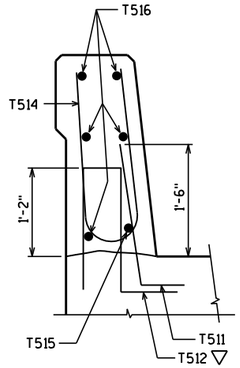
| STATE PROJECT NUMBER |
|---|
| 1166-08-72 |



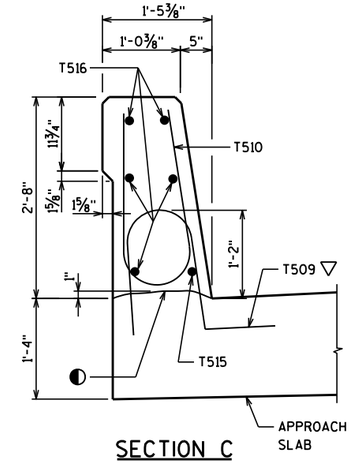

INSIDE ELEVATION



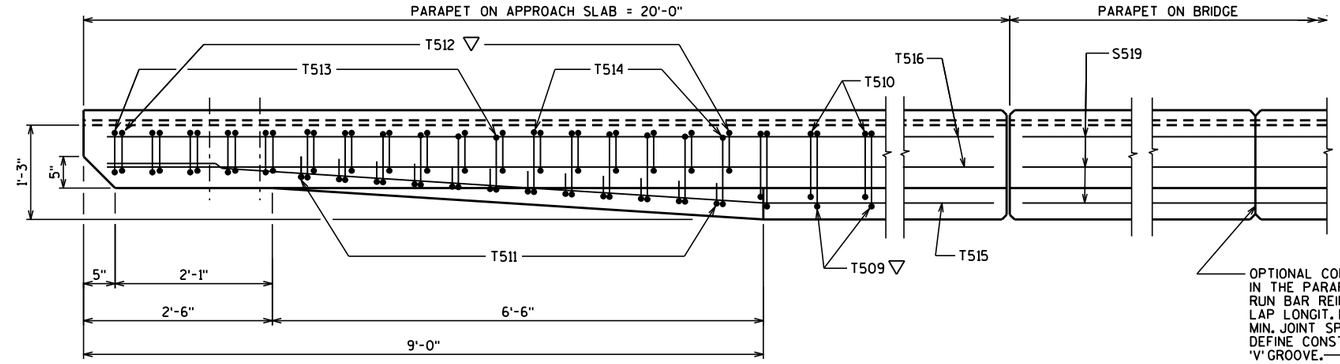

SECTION A




SECTION B

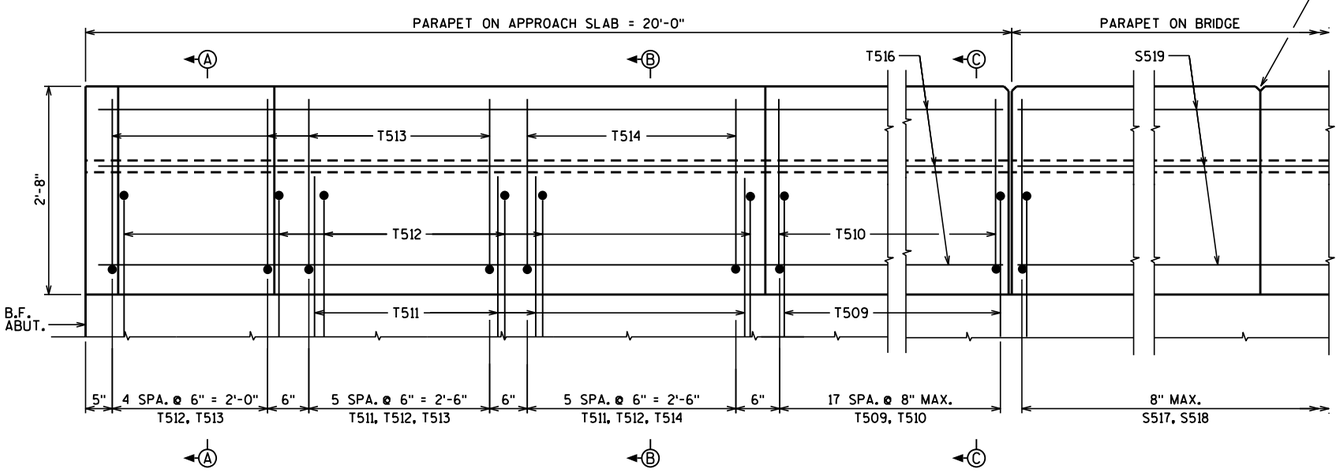



SECTION C

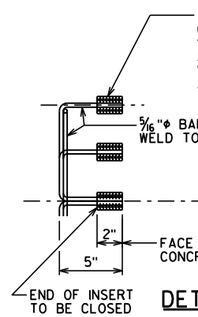



PLAN

OPTIONAL CONSTRUCTION JOINTS IN THE PARAPETS MAY BE USED. RUN BAR REINF. THRU THE JOINT. LAP LONGIT. BARS A MIN. OF 1'-9". MIN. JOINT SPACING OF 80'-0". DEFINE CONST. JOINT WITH A ¾" - 'V' GROOVE.



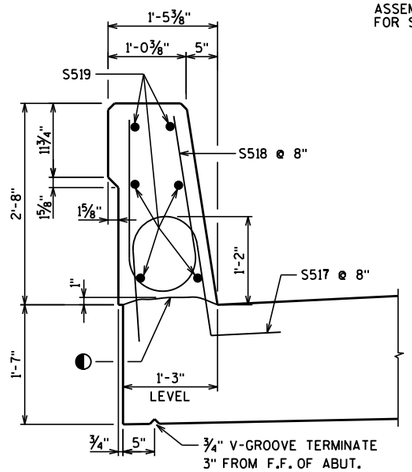

OUTSIDE ELEVATION




DETAIL OF ANCHOR ASSEMBLY

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

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




SECTION THRU PARAPET ON BRIDGE

▽ T509 AND T512 BARS TO BE TIED TO STRUCTURAL APPROACH SLAB STEEL BEFORE STRUCURAL APPROACH SLAB IS POURED.

■ BENCH MARK CAP (WHEN SUPPLIED). AVOID PLACING A BENCH MARK CAP BELOW A RAIL OR FENCE SYSTEM THAT IS ATTACHED TO THE TOP OF THE PARAPET.

◐ CONST. JOINT - STRIKE OFF AS SHOWN.

| NO. | DATE | REVISION | BY |
|---|---|---|---|
| | | | |

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-49-173

DRAWN BY: BRE | PLANS CK'D.: KRO

SINGLE SLOPE 32SS PARAPET

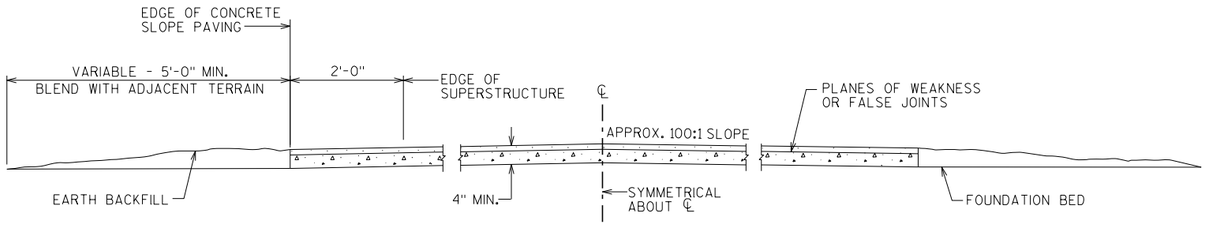
SHEET 17 OF 18

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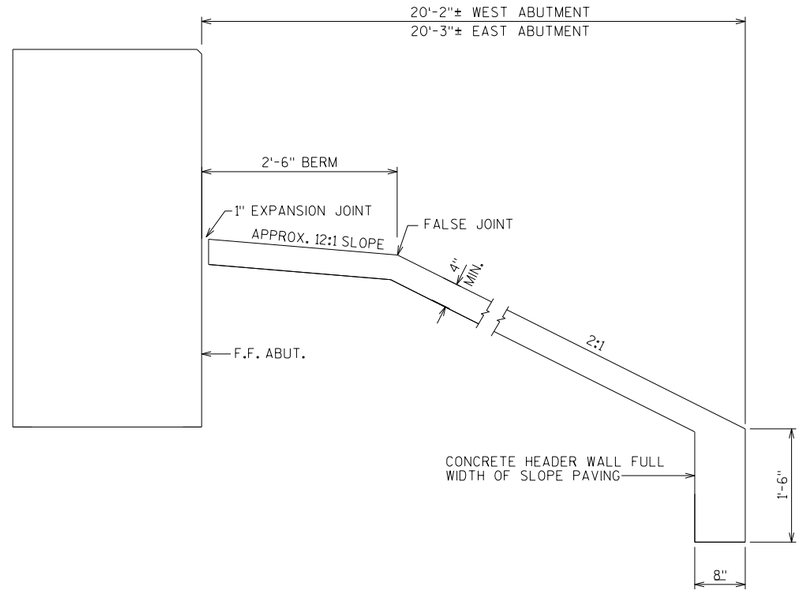
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8

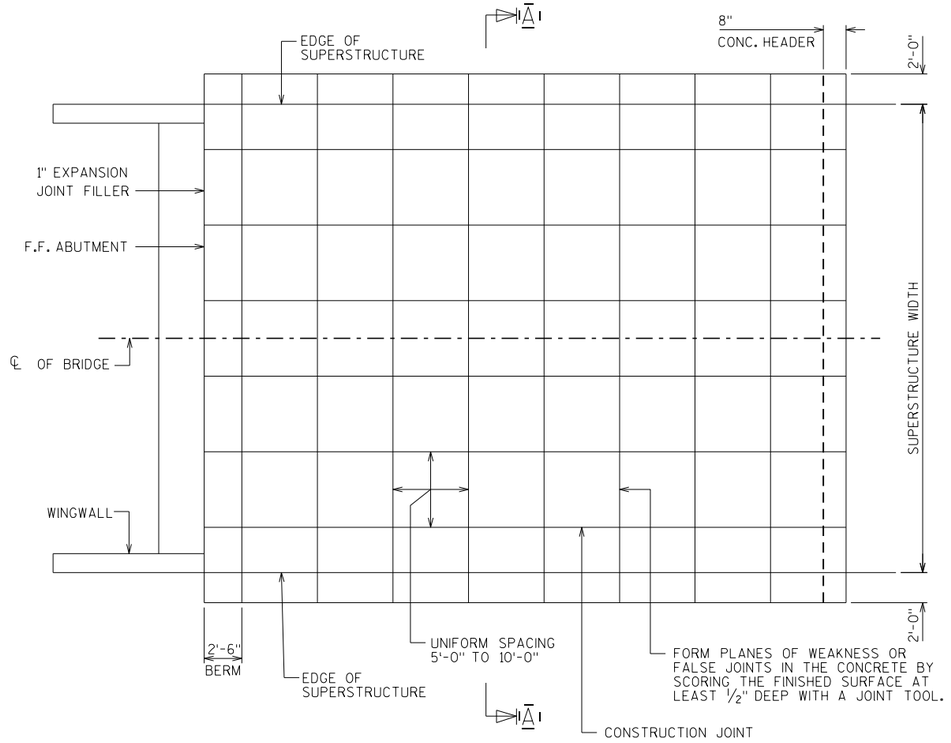
| STATE PROJECT NUMBER |
|---|
| 1166-08-72 |




## SECTION A-A



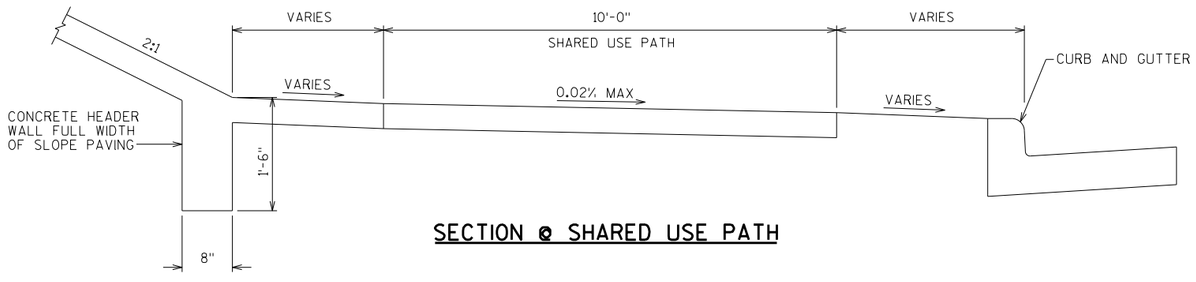

## TYPICAL SECTION



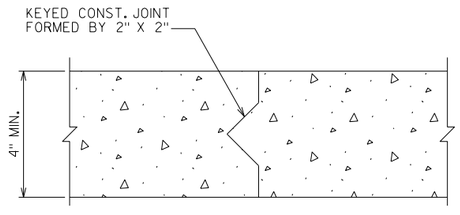

## CONSTRUCTION JOINT DESIGN

## GENERAL NOTES

DETAILS OF CONSTRUCTION NOT SHOWN SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS.




## SECTION @ SHARED USE PATH




## CONSTRUCTION JOINT

| NO. | DATE | REVISION | BY |
|---|---|---|---|
| | | | |

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-49-173

DRAWN BY BRE | PLANS CK'D. KRO

SLOPE PAVING (CONCRETE CAST-IN-PLACE)

SHEET 18 OF 18

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8

8

## CATEGORY 0010 - IH 39 STAGE 1 AND 2 EARTHWORK DETAIL

| STATION | AREA (SF) | | | | INCREMENTAL VOL (CY) (UNADJUSTED) | | | | CULUMLATIVE VOL (CY) | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | CUT | SALVAGED /UNUSABLE PAVEMENT MATERIAL NOTE 1 | FILL NOTE 2 | PHRAGMITES SOIL FILL NOTE 3 | CUT | SALVAGED/ UNUSABLE PAVEMENT MATERIAL NOTE 1 | UNEXPANDED FILL | PHRAGMITES SOIL FILL NOTE 3 | AVAILABLE CUT 1.00 | EXPANDED FILL 1.25 | PHRAGMITES SOIL FILL 1.00 | MASS ORDINATE NOTE 4 |
| 102+50 | 14.64 | 0.00 | 1.63 | 0.00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 103+00 | 15.29 | 0.00 | 3.09 | 0.00 | 28 | 0 | 4 | 0 | 28 | 5 | 0 | 22 |
| 103+50 | 14.04 | 0.00 | 11.00 | 0.00 | 27 | 0 | 13 | 0 | 55 | 22 | 0 | 33 |
| 104+00 | 14.03 | 0.00 | 14.57 | 0.00 | 26 | 0 | 24 | 0 | 81 | 51 | 0 | 29 |
| 104+50 | 15.24 | 0.00 | 14.65 | 0.00 | 27 | 0 | 27 | 0 | 108 | 85 | 0 | 23 |
| 105+00 | 15.12 | 0.00 | 18.58 | 0.00 | 28 | 0 | 31 | 0 | 136 | 124 | 0 | 12 |
| 105+50 | 15.74 | 0.00 | 21.38 | 0.00 | 29 | 0 | 37 | 0 | 165 | 170 | 0 | -5 |
| 106+00 | 17.86 | 0.00 | 12.71 | 0.00 | 31 | 0 | 32 | 0 | 196 | 209 | 0 | -14 |
| 106+50 | 15.69 | 0.00 | 0.00 | 0.00 | 31 | 0 | 12 | 0 | 227 | 224 | 0 | 3 |
| 107+00 | 14.97 | 0.00 | 0.94 | 0.00 | 28 | 0 | 1 | 0 | 255 | 225 | 0 | 30 |
| 107+50 | 15.52 | 0.00 | 0.48 | 0.00 | 28 | 0 | 1 | 0 | 283 | 227 | 0 | 57 |
| 108+00 | 15.62 | 0.00 | 1.97 | 0.00 | 29 | 0 | 2 | 0 | 312 | 230 | 0 | 83 |
| 108+50 | 14.58 | 0.00 | 6.68 | 0.00 | 28 | 0 | 8 | 0 | 340 | 240 | 0 | 101 |
| 109+00 | 14.26 | 0.00 | 10.38 | 0.00 | 27 | 0 | 16 | 0 | 367 | 259 | 0 | 108 |
| 109+50 | 14.84 | 0.00 | 4.89 | 0.00 | 27 | 0 | 14 | 0 | 394 | 277 | 0 | 117 |
| 110+00 | 15.34 | 0.00 | 6.23 | 0.00 | 28 | 0 | 10 | 0 | 422 | 290 | 0 | 132 |
| 110+50 | 14.49 | 0.00 | 11.33 | 0.00 | 28 | 0 | 16 | 0 | 449 | 310 | 0 | 139 |
| 111+00 | 15.35 | 0.00 | 9.40 | 0.00 | 28 | 0 | 19 | 0 | 477 | 334 | 0 | 143 |
| 111+50 | 17.09 | 0.00 | 5.60 | 0.00 | 30 | 0 | 14 | 0 | 507 | 352 | 0 | 156 |
| 112+00 | 19.76 | 0.00 | 4.25 | 0.00 | 34 | 0 | 9 | 0 | 541 | 363 | 0 | 178 |
| 112+50 | 17.04 | 0.00 | 8.13 | 0.00 | 34 | 0 | 11 | 0 | 575 | 377 | 0 | 198 |
| 113+00 | 16.50 | 0.00 | 7.41 | 0.00 | 31 | 0 | 14 | 0 | 606 | 395 | 0 | 211 |
| 113+50 | 18.07 | 0.00 | 10.65 | 0.00 | 32 | 0 | 17 | 0 | 638 | 416 | 0 | 222 |
| 114+00 | 18.83 | 0.00 | 8.83 | 0.00 | 34 | 0 | 18 | 0 | 673 | 439 | 0 | 234 |
| 114+50 | 18.11 | 0.00 | 12.48 | 0.00 | 34 | 0 | 20 | 0 | 707 | 463 | 0 | 243 |
| 115+00 | 18.29 | 0.00 | 12.69 | 0.00 | 34 | 0 | 23 | 0 | 740 | 493 | 0 | 248 |
| 115+25 | 19.25 | 0.00 | 10.91 | 0.00 | 17 | 0 | 11 | 0 | 758 | 506 | 0 | 252 |
| 115+50 | 21.21 | 0.00 | 8.73 | 0.00 | 19 | 0 | 9 | 0 | 777 | 518 | 0 | 259 |
| 116+00 | 23.22 | 0.00 | 5.07 | 0.00 | 41 | 0 | 13 | 0 | 818 | 534 | 0 | 284 |
| 116+50 | 22.63 | 0.00 | 4.92 | 0.00 | 42 | 0 | 9 | 0 | 860 | 545 | 0 | 315 |
| 117+00 | 20.55 | 0.00 | 10.48 | 0.00 | 40 | 0 | 14 | 0 | 900 | 563 | 0 | 337 |
| 117+50 | 19.43 | 0.00 | 13.08 | 0.00 | 37 | 0 | 22 | 0 | 937 | 590 | 0 | 347 |
| 118+00 | 35.64 | 0.00 | 24.26 | 0.00 | 51 | 0 | 35 | 0 | 988 | 633 | 0 | 355 |
| 118+50 | 36.88 | 0.00 | 35.41 | 0.00 | 67 | 0 | 55 | 0 | 1,055 | 703 | 0 | 353 |
| 119+00 | 38.27 | 0.00 | 36.96 | 0.00 | 70 | 0 | 67 | 0 | 1,125 | 786 | 0 | 339 |
| 119+50 | 39.60 | 0.00 | 32.57 | 0.00 | 72 | 0 | 64 | 0 | 1,197 | 867 | 0 | 330 |
| 120+00 | 43.36 | 0.00 | 30.85 | 0.00 | 77 | 0 | 59 | 0 | 1,274 | 940 | 0 | 334 |
| 120+50 | 48.61 | 0.00 | 25.21 | 0.00 | 85 | 0 | 52 | 0 | 1,359 | 1,005 | 0 | 354 |
| 121+00 | 54.15 | 0.00 | 20.12 | 0.00 | 95 | 0 | 42 | 0 | 1,454 | 1,057 | 0 | 397 |
| 121+50 | 59.08 | 0.00 | 19.59 | 0.00 | 105 | 0 | 37 | 0 | 1,559 | 1,103 | 0 | 456 |
| 122+00 | 67.54 | 0.00 | 19.90 | 0.00 | 117 | 0 | 37 | 0 | 1,676 | 1,149 | 0 | 527 |
| 122+50 | 74.94 | 0.00 | 29.52 | 0.00 | 132 | 0 | 46 | 0 | 1,808 | 1,206 | 0 | 602 |
| 123+00 | 77.70 | 0.00 | 54.14 | 0.00 | 141 | 0 | 77 | 0 | 1,949 | 1,303 | 0 | 646 |
| 123+50 | 83.53 | 0.00 | 67.92 | 0.00 | 149 | 0 | 113 | 0 | 2,099 | 1,444 | 0 | 654 |
| 124+00 | 79.67 | 0.00 | 79.44 | 0.00 | 151 | 0 | 136 | 0 | 2,250 | 1,615 | 0 | 635 |

## CATEGORY 0010 - IH 39 STAGE 1 AND 2 EARTHWORK DETAIL CONTINUED

| STATION | AREA (SF) | | | | INCREMENTAL VOL (CY) (UNADJUSTED) | | | | CULUMLATIVE VOL (CY) | | | MASS ORDINATE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | CUT | SALVAGED /UNUSABLE PAVEMENT MATERIAL NOTE 1 | FILL NOTE 2 | PHRAGMITES SOIL FILL NOTE 3 | CUT | SALVAGED/ UNUSABLE PAVEMENT MATERIAL NOTE 1 | UNEXPANDED FILL | PHRAGMITES SOIL FILL NOTE 3 | AVAILABLE CUT 1.00 | EXPANDED FILL 1.25 | PHRAGMITES SOIL FILL 1.00 | NOTE 4 |
| 124+50 | 79.84 | 0.00 | 96.12 | 0.00 | 148 | 0 | 163 | 0 | 2,398 | 1,818 | 0 | 579 |
| 125+00 | 76.12 | 0.00 | 124.44 | 0.00 | 144 | 0 | 204 | 0 | 2,542 | 2,073 | 0 | 468 |
| 125+50 | 71.20 | 0.00 | 159.45 | 0.00 | 136 | 0 | 263 | 0 | 2,678 | 2,402 | 0 | 276 |
| 126+00 | 63.79 | 0.00 | 159.60 | 0.00 | 125 | 0 | 295 | 0 | 2,803 | 2,771 | 0 | 32 |
| 126+50 | 53.61 | 0.00 | 175.90 | 0.00 | 109 | 0 | 311 | 0 | 2,912 | 3,160 | 0 | -248 |
| 127+00 | 49.57 | 0.00 | 201.94 | 0.00 | 96 | 0 | 350 | 0 | 3,008 | 3,597 | 0 | -589 |
| 127+50 | 41.90 | 0.00 | 224.28 | 0.00 | 85 | 0 | 395 | 0 | 3,092 | 4,090 | 0 | -998 |
| 128+00 | 36.30 | 0.00 | 274.87 | 0.00 | 72 | 0 | 462 | 0 | 3,165 | 4,668 | 0 | -1,503 |
| 128+50 | 38.98 | 0.00 | 229.93 | 95.00 | 70 | 0 | 467 | 88 | 3,234 | 5,252 | 88 | -2,018 |
| 129+00 | 35.29 | 0.00 | 232.68 | 125.00 | 69 | 0 | 428 | 204 | 3,303 | 5,788 | 292 | -2,484 |
| 129+07 | 34.46 | 0.00 | 237.00 | 125.00 | 9 | 0 | 61 | 32 | 3,312 | 5,864 | 324 | -2,552 |
| 129+27 | 34.00 | 0.00 | 362.00 | 0.00 | 25 | 0 | 222 | 46 | 3,338 | 6,141 | 370 | -2,804 |
| 129+28 | 0.00 | 0.00 | 0.00 | 0.00 | 1 | 0 | 7 | 0 | 3,338 | 6,149 | 370 | -2,811 |
| 130+54 | 0.00 | 0.00 | 0.00 | 0.00 | 0 | 0 | 0 | 0 | 3,338 | 6,149 | 370 | -2,811 |
| 130+55 | 38.00 | 0.00 | 407.00 | 0.00 | 1 | 0 | 8 | 0 | 3,339 | 6,159 | 370 | -2,820 |
| 130+76 | 37.77 | 0.00 | 241.06 | 166.00 | 29 | 0 | 252 | 65 | 3,368 | 6,474 | 435 | -3,106 |
| 131+00 | 46.80 | 0.00 | 223.07 | 125.00 | 38 | 0 | 206 | 129 | 3,406 | 6,732 | 564 | -3,326 |
| 131+50 | 50.28 | 0.00 | 280.73 | 0.00 | 90 | 0 | 466 | 116 | 3,496 | 7,315 | 680 | -3,819 |
| 132+00 | 58.81 | 0.00 | 254.10 | 0.00 | 101 | 0 | 495 | 0 | 3,597 | 7,934 | 680 | -4,337 |
| 132+50 | 57.02 | 0.00 | 240.09 | 0.00 | 107 | 0 | 458 | 0 | 3,704 | 8,506 | 680 | -4,802 |
| 133+00 | 58.52 | 0.00 | 222.22 | 0.00 | 107 | 0 | 428 | 0 | 3,811 | 9,041 | 680 | -5,230 |
| 133+50 | 59.63 | 0.00 | 197.54 | 0.00 | 109 | 0 | 389 | 0 | 3,920 | 9,527 | 680 | -5,606 |
| 134+00 | 60.69 | 0.00 | 178.16 | 0.00 | 111 | 0 | 348 | 0 | 4,032 | 9,962 | 680 | -5,930 |
| 134+50 | 60.32 | 0.00 | 138.96 | 0.00 | 112 | 0 | 294 | 0 | 4,144 | 10,329 | 680 | -6,185 |
| 135+00 | 65.34 | 0.00 | 119.43 | 0.00 | 116 | 0 | 239 | 0 | 4,260 | 10,628 | 680 | -6,367 |
| 135+50 | 30.67 | 0.00 | 104.90 | 0.00 | 89 | 0 | 208 | 0 | 4,349 | 10,887 | 680 | -6,538 |
| 136+00 | 29.36 | 0.00 | 48.04 | 0.00 | 56 | 0 | 142 | 0 | 4,405 | 11,064 | 680 | -6,660 |
| 136+50 | 31.37 | 0.00 | 30.29 | 0.00 | 56 | 0 | 73 | 0 | 4,461 | 11,155 | 680 | -6,694 |
| 137+00 | 29.57 | 0.00 | 20.60 | 0.00 | 56 | 0 | 47 | 0 | 4,517 | 11,214 | 680 | -6,697 |
| 137+50 | 27.60 | 0.00 | 9.45 | 0.00 | 53 | 0 | 28 | 0 | 4,570 | 11,249 | 680 | -6,678 |
| 138+00 | 25.65 | 0.00 | 6.43 | 0.00 | 49 | 0 | 15 | 0 | 4,620 | 11,267 | 680 | -6,647 |
| 138+50 | 25.24 | 0.00 | 2.26 | 0.00 | 47 | 0 | 8 | 0 | 4,667 | 11,277 | 680 | -6,610 |
| 139+00 | 24.74 | 0.00 | 0.00 | 0.00 | 46 | 0 | 2 | 0 | 4,713 | 11,280 | 680 | -6,567 |
| 139+50 | 2.51 | 0.00 | 0.00 | 0.00 | 25 | 0 | 0 | 0 | 4,738 | 11,280 | 680 | -6,541 |
| 140+00 | 1.62 | 0.00 | 0.00 | 0.00 | 4 | 0 | 0 | 0 | 4,742 | 11,280 | 680 | -6,538 |
| 140+25 | 0.73 | 0.00 | 0.00 | 0.00 | 1 | 0 | 0 | 0 | 4,743 | 11,280 | 680 | -6,537 |
| 140+50 | 0.76 | 0.00 | 0.00 | 0.00 | 1 | 0 | 0 | 0 | 4,744 | 11,280 | 680 | -6,536 |
| 141+00 | 0.89 | 0.00 | 0.00 | 0.00 | 2 | 0 | 0 | 0 | 4,745 | 11,280 | 680 | -6,534 |
| 141+50 | 0.00 | 0.00 | 0.00 | 0.00 | 1 | 0 | 0 | 0 | 4,746 | 11,280 | 680 | -6,534 |
| 142+00 | 0.00 | 0.00 | 0.00 | 0.00 | 0 | 0 | 0 | 0 | 4,746 | 11,280 | 680 | -6,534 |

## CATEGORY 0010 - IH 39 STAGE 1 AND 2 EARTHWORK DETAIL CONTINUED

| STATION | AREA (SF) | | | | INCREMENTAL VOL (CY) (UNADJUSTED) | | | | CULUMLATIVE VOL (CY) | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | CUT | SALVAGED /UNUSABLE PAVEMENT MATERIAL NOTE 1 | FILL NOTE 2 | PHRAGMITES SOIL FILL NOTE 3 | CUT | SALVAGED/ UNUSABLE PAVEMENT MATERIAL NOTE 1 | UNEXPANDED FILL | PHRAGMITES SOIL FILL NOTE 3 | AVAILABLE CUT 1.00 | EXPANDED FILL 1.25 | PHRAGMITES SOIL FILL 1.00 | MASS ORDINATE NOTE 4 |
| 142+50 | 0.00 | 0.00 | 0.00 | 0.00 | 0 | 0 | 0 | 0 | 4,746 | 11,280 | 680 | -6,534 |
| 143+00 | 0.00 | 0.00 | 0.00 | 0.00 | 0 | 0 | 0 | 0 | 4,746 | 11,280 | 680 | -6,534 |
| 143+50 | 0.00 | 0.00 | 0.00 | 0.00 | 0 | 0 | 0 | 0 | 4,746 | 11,280 | 680 | -6,534 |
| 144+00 | 0.00 | 0.00 | 0.00 | 0.00 | 0 | 0 | 0 | 0 | 4,746 | 11,280 | 680 | -6,534 |
| 144+50 | 0.00 | 0.00 | 0.00 | 0.00 | 0 | 0 | 0 | 0 | 4,746 | 11,280 | 680 | -6,534 |
| 144+96 | 0.00 | 0.00 | 0.00 | 0.00 | 0 | 0 | 0 | 0 | 4,746 | 11,280 | 680 | -6,534 |
| | | | TOTALS | | 4,746 | 0 | 9,024 | 680 | | | | |

NOTE 1: ALL EXCAVATED ASPHALT MATERIAL ASSUMED USABLE AS FILL.
NOTE 2: FILL VOLUME DOES NOT INCLUDE VOLUME TO BE TAKEN BY PHRAGMITES SOIL.
NOTE 3: PHRAGMITES SOIL EXCAVATION QUANTITIES ARE LISTED IN ITEM TABLE. EXCAVATION VOLUME REDUCED BY 0.60 TO DETERMINE REQUIRED VOLUME IN FILL.
NOTE 4: MASS ORDINATE = (AVAILABLE MATERIAL) - (EXPANDED FILL).

## CATEGORY 0010 - IH 39 STAGE 3 EARTHWORK DETAIL

| STATION | AREA (SF) | | | INCREMENTAL VOL (CY) (UNADJUSTED) | | | CULUMLATIVE VOL (CY) | | MASS ORDINATE NOTE 2 |
|---|---|---|---|---|---|---|---|---|---|
| | CUT | SALVAGED /UNUSABLE PAVEMENT MATERIAL NOTE 1 | FILL | CUT | SALVAGED/ UNUSABLE PAVEMENT MATERIAL NOTE 1 | FILL | AVAILABLE CUT 1.00 | EXPANDED FILL 1.25 | |
| 115+25 | 9.91 | 0.00 | 2.76 | 0 | 0 | 0 | 0 | 0 | 0 |
| 115+50 | 9.85 | 0.00 | 3.21 | 9 | 0 | 3 | 9 | 3 | 6 |
| 116+00 | 9.54 | 0.00 | 8.94 | 18 | 0 | 11 | 27 | 18 | 10 |
| 116+50 | 9.75 | 0.00 | 13.94 | 18 | 0 | 21 | 45 | 44 | 1 |
| 117+00 | 9.94 | 0.00 | 18.93 | 18 | 0 | 30 | 63 | 82 | -19 |
| 117+50 | 10.89 | 0.00 | 16.99 | 19 | 0 | 33 | 82 | 124 | -41 |
| 117+56 | 94.75 | 0.00 | 17.54 | 12 | 0 | 4 | 94 | 128 | -34 |
| 118+00 | 94.52 | 0.00 | 13.35 | 154 | 0 | 25 | 248 | 160 | 89 |
| 118+50 | 94.14 | 0.00 | 17.02 | 175 | 0 | 28 | 423 | 195 | 228 |
| 119+00 | 92.55 | 0.00 | 17.86 | 173 | 0 | 32 | 596 | 235 | 361 |
| 119+50 | 89.79 | 0.00 | 20.93 | 169 | 0 | 36 | 765 | 280 | 485 |
| 120+00 | 88.78 | 0.00 | 14.27 | 165 | 0 | 33 | 930 | 321 | 609 |
| 120+50 | 91.37 | 0.00 | 5.24 | 167 | 0 | 18 | 1,097 | 344 | 753 |
| 121+00 | 99.12 | 0.00 | 0.00 | 176 | 0 | 5 | 1,273 | 350 | 924 |
| 121+50 | 112.68 | 0.00 | 0.00 | 196 | 0 | 0 | 1,469 | 350 | 1,120 |
| 122+00 | 126.14 | 0.00 | 0.00 | 221 | 0 | 0 | 1,691 | 350 | 1,341 |
| 122+50 | 125.65 | 0.00 | 0.00 | 233 | 0 | 0 | 1,924 | 350 | 1,574 |
| 123+00 | 146.94 | 0.00 | 0.00 | 252 | 0 | 0 | 2,176 | 350 | 1,826 |
| 123+50 | 158.11 | 0.00 | 0.00 | 282 | 0 | 0 | 2,459 | 350 | 2,109 |
| 124+00 | 161.60 | 0.00 | 0.00 | 296 | 0 | 0 | 2,755 | 350 | 2,405 |
| 124+50 | 180.55 | 0.00 | 0.00 | 317 | 0 | 0 | 3,071 | 350 | 2,722 |
| 125+00 | 182.05 | 0.00 | 0.00 | 336 | 0 | 0 | 3,407 | 350 | 3,057 |
| 125+50 | 176.21 | 0.00 | 0.00 | 332 | 0 | 0 | 3,739 | 350 | 3,389 |
| 126+00 | 159.65 | 28.00 | 0.00 | 285 | 26 | 0 | 3,998 | 350 | 3,648 |

## CATEGORY 0010 - IH 39 STAGE 3 EARTHWORK DETAIL CONTINUED

| STATION | AREA (SF) | | | INCREMENTAL VOL (CY) (UNADJUSTED) | | | CULUMLATIVE VOL (CY) | | MASS ORDINATE |
|---|---|---|---|---|---|---|---|---|---|
| | CUT | SALVAGED /UNUSABLE PAVEMENT MATERIAL NOTE 1 | FILL | CUT | SALVAGED/ UNUSABLE PAVEMENT MATERIAL NOTE 1 | FILL | AVAILABLE CUT 1.00 | EXPANDED FILL 1.25 | NOTE 2 |
| 126+50 | 138.35 | 28.00 | 0.00 | 224 | 52 | 0 | 4,170 | 350 | 3,821 |
| 127+00 | 118.59 | 28.00 | 0.00 | 186 | 52 | 0 | 4,304 | 350 | 3,955 |
| 127+50 | 98.50 | 28.00 | 0.00 | 149 | 52 | 0 | 4,402 | 350 | 4,052 |
| 128+00 | 91.81 | 28.00 | 0.00 | 124 | 52 | 0 | 4,474 | 350 | 4,125 |
| 128+50 | 93.00 | 28.00 | 0.00 | 119 | 52 | 0 | 4,542 | 350 | 4,192 |
| 129+00 | 81.68 | 28.00 | 0.00 | 110 | 52 | 0 | 4,600 | 350 | 4,250 |
| 129+07 | 100.40 | 28.00 | 0.00 | 16 | 7 | 0 | 4,609 | 350 | 4,259 |
| 129+27 | 100.00 | 28.00 | 0.00 | 53 | 21 | 0 | 4,642 | 350 | 4,292 |
| 129+28 | 0.00 | 0.00 | 0.00 | 1 | 1 | 0 | 4,642 | 350 | 4,293 |
| 130+54 | 0.00 | 0.00 | 0.00 | 0 | 0 | 0 | 4,642 | 350 | 4,293 |
| 130+55 | 134.50 | 28.00 | 0.00 | 2 | 1 | 0 | 4,644 | 350 | 4,294 |
| 130+76 | 134.50 | 28.00 | 0.00 | 83 | 22 | 0 | 4,705 | 350 | 4,355 |
| 131+00 | 112.10 | 28.00 | 0.00 | 85 | 25 | 0 | 4,765 | 350 | 4,415 |
| 131+50 | 104.90 | 28.00 | 0.00 | 149 | 52 | 0 | 4,862 | 350 | 4,512 |
| 132+00 | 79.56 | 28.00 | 0.00 | 119 | 52 | 0 | 4,929 | 350 | 4,579 |
| 132+50 | 48.18 | 0.00 | 0.00 | 92 | 26 | 0 | 4,995 | 350 | 4,646 |
| 132+66 | 45.69 | 0.00 | 0.00 | 28 | 0 | 0 | 5,023 | 350 | 4,674 |
| 132+91 | 40.72 | 0.00 | 0.00 | 40 | 0 | 0 | 5,063 | 350 | 4,714 |
| 133+00 | 40.07 | 0.00 | 0.00 | 13 | 0 | 0 | 5,077 | 350 | 4,727 |
| 133+16 | 39.97 | 0.00 | 0.00 | 24 | 0 | 0 | 5,100 | 350 | 4,751 |
| 133+50 | 38.97 | 0.00 | 1.28 | 50 | 0 | 1 | 5,150 | 351 | 4,799 |
| 134+00 | 11.06 | 0.00 | 5.34 | 46 | 0 | 6 | 5,196 | 358 | 4,838 |
| 134+50 | 10.59 | 0.00 | 7.79 | 20 | 0 | 12 | 5,216 | 374 | 4,843 |
| 135+00 | 11.76 | 0.00 | 9.31 | 21 | 0 | 16 | 5,237 | 393 | 4,844 |
| 135+50 | 14.02 | 0.00 | 10.22 | 24 | 0 | 18 | 5,261 | 416 | 4,845 |
| 136+00 | 13.23 | 0.00 | 19.90 | 25 | 0 | 28 | 5,286 | 451 | 4,835 |
| 136+50 | 3.22 | 0.00 | 26.63 | 15 | 0 | 43 | 5,302 | 505 | 4,797 |
| 137+00 | 24.66 | 0.00 | 27.68 | 26 | 0 | 50 | 5,327 | 568 | 4,760 |
| 137+50 | 26.52 | 0.00 | 21.68 | 47 | 0 | 46 | 5,375 | 625 | 4,750 |
| 138+00 | 8.58 | 0.00 | 18.10 | 33 | 0 | 37 | 5,407 | 671 | 4,737 |
| 138+50 | 9.14 | 0.00 | 17.48 | 16 | 0 | 33 | 5,424 | 712 | 4,712 |
| 139+00 | 16.00 | 0.00 | 9.38 | 23 | 0 | 25 | 5,447 | 743 | 4,704 |
| 139+50 | 9.56 | 0.00 | 12.06 | 24 | 0 | 20 | 5,471 | 768 | 4,703 |
| 140+00 | 10.98 | 0.00 | 5.81 | 19 | 0 | 17 | 5,490 | 788 | 4,701 |
| 140+25 | 11.67 | 0.00 | 3.67 | 10 | 0 | 4 | 5,500 | 794 | 4,706 |
| 140+50 | 11.87 | 0.00 | 1.01 | 11 | 0 | 2 | 5,511 | 797 | 4,714 |
| 141+00 | 9.57 | 0.00 | 1.09 | 20 | 0 | 2 | 5,531 | 799 | 4,732 |
| 141+30 | 9.55 | 0.00 | 2.18 | 11 | 0 | 2 | 5,541 | 801 | 4,740 |
| | | | TOTALS | 6,084 | 542 | 641 | | | |

NOTE 1. EXISTING CONCRETE PAVEMENT ASSUMED TO BE NOT RUBBLIZED WITHIN 300' OF THE EXISTING BRIDGES. ASSUME 24' WIDTH OF 9" CONCRETE + 5" ASPHALT OVERLAY REMOVED UNDER REMOVING PAVEMENT ITEM

NOTE 2: MASS ORDINATE = (AVAILABLE MATERIAL) - (EXPANDED FILL).

## CATEGORY 0010 - IH 39 STAGE 4 EARTHWORK DETAIL

| STATION | AREA (SF) | | | INCREMENTAL VOL (CY) (UNADJUSTED) | | | CULUMLATIVE VOL (CY) | | MASS ORDINATE |
|---|---|---|---|---|---|---|---|---|---|
| | CUT | SALVAGED/ UNUSABLE PAVEMENT MATERIAL NOTE 1 | FILL | CUT | SALVAGED/ UNUSABLE PAVEMENT MATERIAL NOTE 1 | FILL | AVAILABLE CUT 1.00 | EXPANDED FILL 1.25 | NOTE 2 |
| 120+75 | 119.23 | 0.00 | 4.60 | 0 | 0 | 0 | 0 | 0 | 0 |
| 121+00 | 124.77 | 0.00 | 1.85 | 113 | 0 | 3 | 113 | 4 | 109 |
| 121+50 | 133.94 | 0.00 | 0.80 | 240 | 0 | 2 | 353 | 7 | 346 |
| 122+00 | 143.69 | 0.00 | 0.00 | 257 | 0 | 1 | 610 | 8 | 602 |
| 122+50 | 158.22 | 0.00 | 0.00 | 280 | 0 | 0 | 889 | 8 | 881 |
| 123+00 | 174.32 | 0.00 | 1.18 | 308 | 0 | 1 | 1,197 | 9 | 1,188 |
| 123+50 | 190.28 | 0.00 | 3.40 | 338 | 0 | 4 | 1,535 | 14 | 1,520 |
| 124+00 | 192.63 | 0.00 | 5.68 | 355 | 0 | 8 | 1,889 | 25 | 1,864 |
| 124+50 | 194.07 | 0.00 | 6.00 | 358 | 0 | 11 | 2,247 | 38 | 2,209 |
| 125+00 | 199.33 | 0.00 | 5.92 | 364 | 0 | 11 | 2,611 | 52 | 2,559 |
| 125+50 | 193.53 | 0.00 | 5.86 | 364 | 0 | 11 | 2,975 | 66 | 2,909 |
| 126+00 | 188.12 | 28.00 | 8.29 | 327 | 26 | 13 | 3,277 | 82 | 3,195 |
| 126+50 | 164.75 | 28.00 | 9.78 | 275 | 52 | 17 | 3,500 | 103 | 3,397 |
| 126+68 | 157.93 | 28.00 | 10.23 | 89 | 19 | 7 | 3,570 | 111 | 3,459 |
| 126+93 | 150.71 | 28.00 | 8.46 | 117 | 26 | 9 | 3,661 | 122 | 3,539 |
| 127+00 | 148.32 | 28.00 | 7.91 | 32 | 7 | 2 | 3,685 | 125 | 3,560 |
| 127+18 | 146.35 | 28.00 | 7.47 | 80 | 19 | 5 | 3,746 | 131 | 3,615 |
| 127+50 | 136.20 | 28.00 | 7.19 | 134 | 33 | 9 | 3,847 | 142 | 3,705 |
| 128+00 | 126.91 | 28.00 | 10.24 | 192 | 52 | 16 | 3,987 | 162 | 3,825 |
| 128+50 | 129.49 | 28.00 | 30.44 | 186 | 52 | 38 | 4,121 | 209 | 3,911 |
| 129+00 | 121.91 | 28.00 | 71.57 | 181 | 52 | 94 | 4,250 | 328 | 3,922 |
| 129+07 | 123.84 | 28.00 | 79.57 | 25 | 7 | 20 | 4,267 | 352 | 3,915 |
| 129+27 | 124.00 | 28.00 | 80.00 | 71 | 21 | 59 | 4,318 | 426 | 3,892 |
| 129+28 | 0.00 | 0.00 | 0.00 | 2 | 1 | 1 | 4,319 | 428 | 3,891 |
| 130+54 | 0.00 | 0.00 | 0.00 | 0 | 0 | 0 | 4,319 | 428 | 3,891 |
| 130+55 | 136.00 | 28.00 | 115.00 | 2 | 1 | 2 | 4,320 | 430 | 3,890 |
| 130+76 | 135.88 | 28.00 | 114.90 | 84 | 22 | 89 | 4,383 | 542 | 3,840 |
| 131+00 | 144.40 | 28.00 | 0.00 | 100 | 25 | 51 | 4,457 | 606 | 3,851 |
| 131+50 | 146.72 | 28.00 | 0.00 | 218 | 52 | 0 | 4,623 | 606 | 4,017 |
| 132+00 | 143.05 | 28.00 | 0.00 | 216 | 52 | 0 | 4,788 | 606 | 4,182 |
| | | | TOTALS | 5,304 | 516 | 485 | | | |

NOTE 1. EXISTING CONCRETE PAVEMENT ASSUMED TO BE NOT RUBBLIZED WITHIN 300' OF THE EXISTING BRIDGES. ASSUME 24' WIDTH OF 9" CONCRETE + 5" ASPHALT OVERLAY REMOVED UNDER REMOVING PAVEMENT ITEM

NOTE 2: MASS ORDINATE = (AVAILABLE MATERIAL) - (EXPANDED FILL).

## CATEGORY 0010 - IH 39 STAGE 5 EARTHWORK DETAIL

| STATION | AREA (SF) | | | INCREMENTAL VOL (CY) (UNADJUSTED) | | | CULUMLATIVE VOL (CY) | | |
|---|---|---|---|---|---|---|---|---|---|
| | CUT | SALVAGED/ UNUSABLE PAVEMENT MATERIAL NOTE 1 | FILL | CUT | SALVAGED/ UNUSABLE PAVEMENT MATERIAL NOTE 1 | FILL | AVAILABLE CUT 1.00 | EXPANDED FILL 1.25 | MASS ORDINATE NOTE 2 |
| 102+75 | 0.00 | 0.00 | 0.00 | 0 | 0 | 0 | 0 | 0 | 0 |
| 103+00 | 0.34 | 0.00 | 0.00 | 0 | 0 | 0 | 0 | 0 | 0 |
| 103+50 | 0.68 | 0.00 | 0.00 | 1 | 0 | 0 | 1 | 0 | 1 |
| 104+00 | 1.00 | 0.00 | 0.00 | 2 | 0 | 0 | 3 | 0 | 3 |
| 104+50 | 1.42 | 0.00 | 0.00 | 2 | 0 | 0 | 5 | 0 | 5 |
| 105+00 | 1.67 | 0.00 | 0.00 | 3 | 0 | 0 | 8 | 0 | 8 |
| 105+50 | 1.97 | 0.00 | 0.00 | 3 | 0 | 0 | 11 | 0 | 11 |
| 106+00 | 2.27 | 0.00 | 0.00 | 4 | 0 | 0 | 15 | 0 | 15 |
| 106+50 | 8.79 | 0.00 | 0.00 | 10 | 0 | 0 | 25 | 0 | 25 |
| 107+00 | 9.84 | 0.00 | 0.00 | 17 | 0 | 0 | 43 | 0 | 43 |
| 107+50 | 10.76 | 0.00 | 0.00 | 19 | 0 | 0 | 62 | 0 | 62 |
| 108+00 | 11.63 | 0.00 | 0.00 | 21 | 0 | 0 | 82 | 0 | 82 |
| 108+50 | 12.61 | 0.00 | 0.00 | 22 | 0 | 0 | 105 | 0 | 105 |
| 109+00 | 13.53 | 0.00 | 0.00 | 24 | 0 | 0 | 129 | 0 | 129 |
| 109+50 | 14.34 | 0.00 | 0.00 | 26 | 0 | 0 | 155 | 0 | 155 |
| 110+00 | 15.16 | 0.00 | 0.00 | 27 | 0 | 0 | 182 | 0 | 182 |
| 110+50 | 16.02 | 0.00 | 0.00 | 29 | 0 | 0 | 211 | 0 | 211 |
| 111+00 | 16.36 | 0.00 | 0.00 | 30 | 0 | 0 | 241 | 0 | 241 |
| 111+50 | 17.55 | 0.00 | 0.00 | 31 | 0 | 0 | 272 | 0 | 272 |
| 112+00 | 18.28 | 0.00 | 0.00 | 33 | 0 | 0 | 306 | 0 | 306 |
| 112+50 | 18.98 | 0.00 | 0.00 | 35 | 0 | 0 | 340 | 0 | 340 |
| 113+00 | 18.44 | 0.00 | 0.00 | 35 | 0 | 0 | 375 | 0 | 375 |
| 113+50 | 19.59 | 0.00 | 0.00 | 35 | 0 | 0 | 410 | 0 | 410 |
| 114+00 | 20.92 | 0.00 | 0.00 | 38 | 0 | 0 | 447 | 0 | 447 |
| 114+50 | 21.05 | 0.00 | 0.00 | 39 | 0 | 0 | 486 | 0 | 486 |
| 115+00 | 22.29 | 0.00 | 0.00 | 40 | 0 | 0 | 526 | 0 | 526 |
| 115+50 | 80.34 | 0.00 | 0.00 | 95 | 0 | 0 | 621 | 0 | 621 |
| 116+00 | 87.32 | 0.00 | 0.00 | 155 | 0 | 0 | 777 | 0 | 777 |
| 116+50 | 90.10 | 0.00 | 0.00 | 164 | 0 | 0 | 941 | 0 | 941 |
| 117+00 | 95.90 | 0.00 | 1.86 | 172 | 0 | 2 | 1,113 | 2 | 1,111 |
| 117+50 | 105.34 | 0.00 | 0.49 | 186 | 0 | 2 | 1,300 | 5 | 1,295 |
| 118+00 | 114.43 | 0.00 | 0.00 | 203 | 0 | 0 | 1,503 | 5 | 1,498 |
| 118+50 | 124.63 | 0.00 | 0.00 | 221 | 0 | 0 | 1,724 | 5 | 1,719 |
| 119+00 | 130.20 | 0.00 | 0.00 | 236 | 0 | 0 | 1,960 | 5 | 1,955 |
| 119+50 | 129.77 | 0.00 | 0.00 | 241 | 0 | 0 | 2,201 | 5 | 2,196 |
| 120+00 | 124.46 | 0.00 | 0.00 | 235 | 0 | 0 | 2,436 | 5 | 2,431 |
| 120+50 | 119.79 | 0.00 | 0.00 | 226 | 0 | 0 | 2,663 | 5 | 2,657 |
| 121+00 | 125.16 | 0.00 | 0.00 | 227 | 0 | 0 | 2,889 | 5 | 2,884 |
| 121+50 | 120.27 | 0.00 | 0.00 | 227 | 0 | 0 | 3,117 | 5 | 3,111 |
| 122+00 | 124.61 | 0.00 | 0.00 | 227 | 0 | 0 | 3,343 | 5 | 3,338 |
| 122+50 | 110.15 | 0.00 | 0.00 | 217 | 0 | 0 | 3,561 | 5 | 3,555 |
| 123+00 | 106.19 | 0.00 | 0.00 | 200 | 0 | 0 | 3,761 | 5 | 3,756 |
| 123+50 | 101.35 | 0.00 | 0.00 | 192 | 0 | 0 | 3,953 | 5 | 3,948 |
| 124+00 | 33.85 | 0.00 | 0.00 | 125 | 0 | 0 | 4,078 | 5 | 4,073 |
| 124+50 | 34.70 | 0.00 | 0.00 | 63 | 0 | 0 | 4,142 | 5 | 4,136 |

## CATEGORY 0010 - IH 39 STAGE 5 EARTHWORK DETAIL CONTINUED

| STATION | AREA (SF) | | | INCREMENTAL VOL (CY) (UNADJUSTED) | | | CULUMLATIVE VOL (CY) | | MASS ORDINATE |
|---|---|---|---|---|---|---|---|---|---|
| | CUT | SALVAGED/ UNUSABLE PAVEMENT MATERIAL NOTE 1 | FILL | CUT | SALVAGED/ UNUSABLE PAVEMENT MATERIAL NOTE 1 | FILL | AVAILABLE CUT 1.00 | EXPANDED FILL 1.25 | NOTE 2 |
| 125+00 | 35.28 | 0.00 | 0.00 | 65 | 0 | 0 | 4,207 | 5 | 4,201 |
| 125+50 | 35.87 | 0.00 | 0.00 | 66 | 0 | 0 | 4,273 | 5 | 4,267 |
| 126+00 | 37.05 | 0.00 | 0.00 | 68 | 0 | 0 | 4,340 | 5 | 4,335 |
| 126+50 | 34.45 | 0.00 | 0.00 | 66 | 0 | 0 | 4,406 | 5 | 4,401 |
| 127+00 | 28.08 | 0.00 | 0.00 | 58 | 0 | 0 | 4,464 | 5 | 4,459 |
| 127+50 | 23.69 | 0.00 | 0.00 | 48 | 0 | 0 | 4,512 | 5 | 4,507 |
| 128+00 | 18.55 | 0.00 | 0.00 | 39 | 0 | 0 | 4,551 | 5 | 4,546 |
| 128+50 | 10.24 | 0.00 | 2.06 | 27 | 0 | 2 | 4,578 | 8 | 4,570 |
| 129+00 | 1.26 | 0.00 | 7.63 | 11 | 0 | 9 | 4,589 | 19 | 4,569 |
| 129+07 | 1.27 | 0.00 | 7.70 | 0 | 0 | 2 | 4,589 | 22 | 4,567 |
| 129+27 | 1.27 | 0.00 | 7.70 | 1 | 0 | 6 | 4,590 | 29 | 4,561 |
| 129+28 | 0.00 | 0.00 | 0.00 | 0 | 0 | 0 | 4,590 | 29 | 4,561 |
| 130+54 | 0.00 | 0.00 | 0.00 | 0 | 0 | 0 | 4,590 | 29 | 4,561 |
| 130+55 | 1.80 | 0.00 | 13.78 | 0 | 0 | 0 | 4,590 | 29 | 4,561 |
| 130+76 | 1.83 | 0.00 | 13.78 | 1 | 0 | 11 | 4,591 | 43 | 4,549 |
| 131+00 | 3.02 | 0.00 | 13.92 | 2 | 0 | 12 | 4,593 | 58 | 4,535 |
| 131+50 | 7.84 | 0.00 | 11.14 | 10 | 0 | 23 | 4,603 | 87 | 4,517 |
| 132+00 | 8.95 | 0.00 | 7.66 | 16 | 0 | 17 | 4,619 | 109 | 4,510 |
| 132+50 | 9.62 | 0.00 | 5.23 | 17 | 0 | 12 | 4,636 | 124 | 4,513 |
| 132+66 | 9.95 | 0.00 | 4.58 | 6 | 0 | 3 | 4,642 | 127 | 4,515 |
| 132+91 | 10.13 | 0.00 | 4.78 | 9 | 0 | 4 | 4,651 | 133 | 4,519 |
| 133+00 | 10.23 | 0.00 | 5.09 | 3 | 0 | 2 | 4,655 | 135 | 4,520 |
| 133+16 | 10.57 | 0.00 | 5.37 | 6 | 0 | 3 | 4,661 | 139 | 4,522 |
| 133+50 | 70.56 | 0.00 | 2.51 | 51 | 0 | 5 | 4,712 | 145 | 4,567 |
| 134+00 | 89.46 | 0.00 | 0.00 | 148 | 0 | 2 | 4,860 | 148 | 4,712 |
| 134+50 | 110.20 | 0.00 | 0.00 | 185 | 0 | 0 | 5,045 | 148 | 4,897 |
| 135+00 | 121.52 | 0.00 | 0.00 | 215 | 0 | 0 | 5,260 | 148 | 5,112 |
| 135+50 | 130.67 | 0.00 | 0.00 | 234 | 0 | 0 | 5,493 | 148 | 5,345 |
| 136+00 | 134.39 | 0.00 | 0.00 | 245 | 0 | 0 | 5,738 | 148 | 5,591 |
| 136+50 | 148.62 | 0.00 | 0.00 | 262 | 0 | 0 | 6,001 | 148 | 5,853 |
| 137+00 | 153.10 | 0.00 | 0.00 | 279 | 0 | 0 | 6,280 | 148 | 6,132 |
| 137+50 | 146.19 | 0.00 | 0.00 | 277 | 0 | 0 | 6,557 | 148 | 6,409 |
| 138+00 | 135.36 | 0.00 | 0.00 | 261 | 0 | 0 | 6,818 | 148 | 6,670 |
| 138+50 | 123.48 | 0.00 | 0.00 | 240 | 0 | 0 | 7,057 | 148 | 6,910 |
| 139+00 | 110.03 | 0.00 | 0.00 | 216 | 0 | 0 | 7,274 | 148 | 7,126 |
| 139+50 | 98.80 | 0.00 | 0.00 | 193 | 0 | 0 | 7,467 | 148 | 7,319 |
| 140+00 | 84.36 | 0.00 | 0.00 | 170 | 0 | 0 | 7,637 | 148 | 7,489 |
| 140+50 | 70.59 | 0.00 | 0.00 | 143 | 0 | 0 | 7,780 | 148 | 7,632 |
| 141+00 | 67.89 | 0.00 | 0.00 | 128 | 0 | 0 | 7,908 | 148 | 7,761 |
| 141+30 | 59.37 | 0.00 | 0.00 | 71 | 0 | 0 | 7,979 | 148 | 7,831 |

## CATEGORY 0010 - IH 39 STAGE 5 EARTHWORK DETAIL CONTINUED

| STATION | AREA (SF) | | | INCREMENTAL VOL (CY) (UNADJUSTED) | | | CULUMLATIVE VOL (CY) | | MASS ORDINATE |
|---|---|---|---|---|---|---|---|---|---|
| | CUT | SALVAGED/ UNUSABLE PAVEMENT MATERIAL NOTE 1 | FILL | CUT | SALVAGED/ UNUSABLE PAVEMENT MATERIAL NOTE 1 | FILL | AVAILABLE CUT 1.00 | EXPANDED FILL 1.25 | NOTE 2 |
| 141+50 | 0.00 | 0.00 | 0.00 | 22 | 0 | 0 | 8,001 | 148 | 7,853 |
| 142+00 | 4.23 | 0.00 | 0.00 | 4 | 0 | 0 | 8,005 | 148 | 7,857 |
| 142+50 | 11.45 | 0.00 | 0.00 | 15 | 0 | 0 | 8,019 | 148 | 7,872 |
| 143+00 | 12.19 | 0.00 | 0.00 | 22 | 0 | 0 | 8,041 | 148 | 7,894 |
| 143+50 | 9.45 | 0.00 | 0.00 | 20 | 0 | 0 | 8,061 | 148 | 7,914 |
| 144+00 | 4.25 | 0.00 | 0.00 | 13 | 0 | 0 | 8,074 | 148 | 7,926 |
| 144+50 | 1.16 | 0.00 | 0.00 | 5 | 0 | 0 | 8,079 | 148 | 7,931 |
| 144+92 | 0.00 | 0.00 | 0.00 | 1 | 0 | 0 | 8,080 | 148 | 7,932 |
| | | | TOTALS | 8,080 | 0 | 118 | | | |

NOTE 1: ALL EXCAVATED ASPHALT MATERIAL ASSUMED USABLE AS FILL.
NOTE 2: MASS ORDINATE = (AVAILABLE MATERIAL) - (EXPANDED FILL).

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## CATEGORY 0010 - RESERVE ST EARTHWORK DETAIL

| STATION | AREA (SF) | | | INCREMENTAL VOL (CY) (UNADJUSTED) | | | CULUMLATIVE VOL (CY) | | |
|---|---|---|---|---|---|---|---|---|---|
| | CUT | SALVAGED/ UNUSABLE PAVEMENT MATERIAL NOTE 1 | FILL | CUT | SALVAGED/ UNUSABLE PAVEMENT MATERIAL NOTE 1 | FILL | AVAILABLE CUT 1.00 | EXPANDED FILL 1.25 | MASS ORDINATE NOTE 2 |
| 13+00 | 76.08 | 0.00 | 17.78 | 0 | 0 | 0 | 0 | 0 | 0 |
| 13+50 | 77.85 | 0.00 | 22.53 | 143 | 0 | 37 | 143 | 47 | 96 |
| 14+00 | 79.43 | 0.00 | 27.36 | 146 | 0 | 46 | 288 | 104 | 184 |
| 14+50 | 85.45 | 0.00 | 19.01 | 153 | 0 | 43 | 441 | 158 | 283 |
| 15+00 | 82.15 | 0.00 | 9.75 | 155 | 0 | 27 | 596 | 191 | 405 |
| 15+32 | 90.95 | 0.00 | 24.74 | 103 | 0 | 20 | 699 | 217 | 482 |
| 15+50 | 77.75 | 0.00 | 41.79 | 56 | 0 | 22 | 755 | 245 | 510 |
| 16+00 | 79.13 | 0.00 | 26.54 | 145 | 0 | 63 | 900 | 324 | 576 |
| 16+50 | 93.64 | 0.00 | 32.28 | 160 | 0 | 54 | 1,060 | 392 | 668 |
| 17+00 | 104.56 | 0.00 | 21.86 | 184 | 0 | 50 | 1,244 | 454 | 789 |
| 17+50 | 99.94 | 0.00 | 28.31 | 189 | 0 | 46 | 1,433 | 513 | 920 |
| 18+00 | 97.32 | 0.00 | 52.19 | 183 | 0 | 75 | 1,616 | 606 | 1,010 |
| 18+50 | 102.43 | 0.00 | 33.11 | 185 | 0 | 79 | 1,801 | 704 | 1,096 |
| 19+00 | 105.80 | 0.00 | 27.02 | 193 | 0 | 56 | 1,993 | 774 | 1,219 |
| 19+25 | 143.11 | 0.00 | 17.14 | 115 | 0 | 20 | 2,109 | 800 | 1,309 |
| 19+50 | 181.17 | 0.00 | 23.49 | 150 | 0 | 19 | 2,259 | 823 | 1,436 |
| 20+00 | 92.08 | 0.00 | 48.29 | 253 | 0 | 66 | 2,512 | 906 | 1,606 |
| 20+50 | 88.26 | 0.00 | 61.19 | 167 | 0 | 101 | 2,679 | 1,033 | 1,646 |
| 21+00 | 73.87 | 0.00 | 35.91 | 150 | 0 | 90 | 2,829 | 1,145 | 1,684 |
| 21+50 | 103.77 | 0.00 | 39.41 | 164 | 0 | 70 | 2,993 | 1,232 | 1,761 |
| 22+00 | 84.34 | 0.00 | 65.11 | 174 | 0 | 97 | 3,167 | 1,353 | 1,814 |
| | | | TOTALS | 3,167 | 0 | 1,083 | | | |

NOTE 1: ALL EXCAVATED ASPHALT MATERIAL ASSUMED USABLE AS FILL.
NOTE 2: MASS ORDINATE = (AVAILABLE MATERIAL) - (EXPANDED FILL).

## CATEGORY 0010 - EAGLE SUMMIT EARTHWORK DETAIL

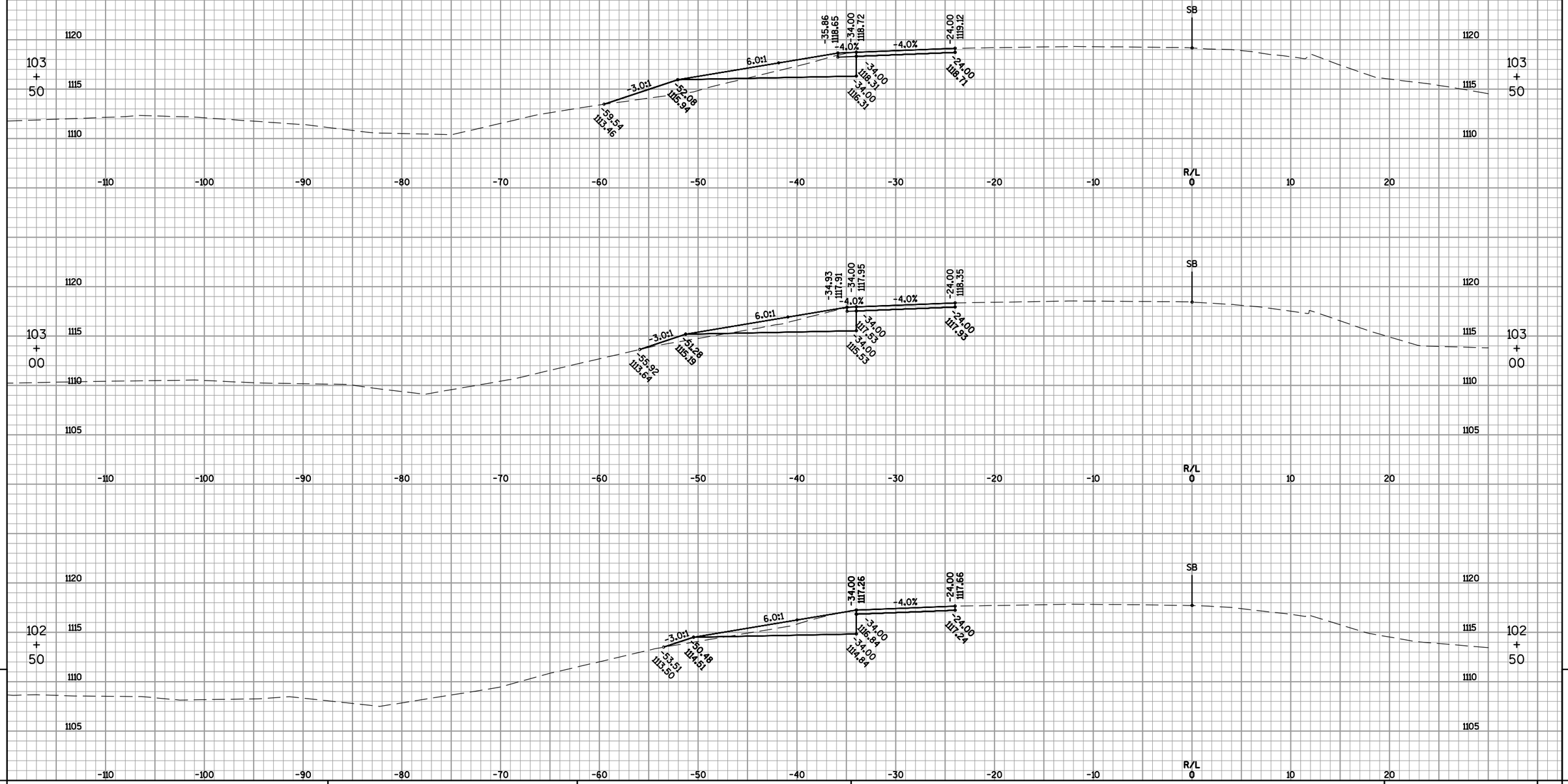
| STATION | AREA (SF) | | | INCREMENTAL VOL (CY) (UNADJUSTED) | | | CULUMLATIVE VOL (CY) | | |
|---|---|---|---|---|---|---|---|---|---|
| | CUT | SALVAGED/ UNUSABLE PAVEMENT MATERIAL NOTE 1 | FILL | CUT | SALVAGED/ UNUSABLE PAVEMENT MATERIAL NOTE 1 | FILL | AVAILABLE CUT 1.00 | EXPANDED FILL 1.25 | MASS ORDINATE NOTE 2 |
| 20+25 | 115.32 | 0.00 | 50.78 | 0 | 0 | 0 | 0 | 0 | 0 |
| 20+50 | 112.80 | 0.00 | 7.32 | 106 | 0 | 27 | 106 | 34 | 72 |
| 20+75 | 109.46 | 0.00 | 0.00 | 103 | 0 | 3 | 209 | 38 | 171 |
| 21+00 | 92.12 | 0.00 | 0.00 | 93 | 0 | 0 | 302 | 38 | 264 |
| 21+25 | 69.90 | 0.00 | 0.00 | 75 | 0 | 0 | 377 | 38 | 339 |
| 21+50 | 60.34 | 0.00 | 0.00 | 60 | 0 | 0 | 437 | 38 | 399 |
| | | | TOTALS | 437 | 0 | 30 | | | |

NOTE 1: ALL EXCAVATED ASPHALT MATERIAL ASSUMED USABLE AS FILL.
NOTE 2: MASS ORDINATE = (AVAILABLE MATERIAL) - (EXPANDED FILL).

## CATEGORY 0040 - RESERVE ST EARTHWORK DETAIL

| STATION | AREA (SF) | | | INCREMENTAL VOL (CY) (UNADJUSTED) | | | CULUMLATIVE VOL (CY) | | MASS ORDINATE |
|---|---|---|---|---|---|---|---|---|---|
| | CUT | SALVAGED/ UNUSABLE PAVEMENT MATERIAL NOTE 1 | FILL | CUT | SALVAGED/ UNUSABLE PAVEMENT MATERIAL NOTE 1 | FILL | AVAILABLE CUT 1.00 | EXPANDED FILL 1.25 | NOTE 2 |
| 8+50 | 35.42 | 0.00 | 0.00 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8+66 | 74.00 | 0.00 | 0.83 | 32 | 0 | 0 | 32 | 0 | 32 |
| 8+75 | 77.89 | 0.00 | 1.04 | 25 | 0 | 0 | 58 | 1 | 57 |
| 9+00 | 88.54 | 0.00 | 0.24 | 77 | 0 | 1 | 135 | 1 | 133 |
| 9+50 | 85.56 | 0.00 | 0.20 | 161 | 0 | 0 | 296 | 2 | 294 |
| 10+00 | 95.39 | 0.00 | 0.00 | 168 | 0 | 0 | 464 | 2 | 461 |
| 10+50 | 108.95 | 0.00 | 0.00 | 189 | 0 | 0 | 653 | 2 | 651 |
| 11+00 | 121.14 | 0.00 | 0.00 | 213 | 0 | 0 | 866 | 2 | 864 |
| 11+50 | 101.45 | 0.00 | 1.62 | 206 | 0 | 2 | 1,072 | 4 | 1,068 |
| 12+00 | 78.74 | 0.00 | 10.49 | 167 | 0 | 11 | 1,239 | 18 | 1,221 |
| 12+50 | 74.93 | 0.00 | 25.98 | 142 | 0 | 34 | 1,381 | 60 | 1,321 |
| 12+99 | 76.08 | 0.00 | 17.78 | 137 | 0 | 40 | 1,518 | 110 | 1,408 |
| 13+00 | 0.00 | 0.00 | 0.00 | 1 | 0 | 0 | 1,519 | 110 | 1,409 |
| 22+00 | 0.00 | 0.00 | 0.00 | 0 | 0 | 0 | 1,519 | 110 | 1,409 |
| 22+01 | 84.34 | 0.00 | 65.11 | 2 | 0 | 1 | 1,521 | 112 | 1,409 |
| 22+50 | 79.46 | 0.00 | 63.75 | 149 | 0 | 117 | 1,670 | 258 | 1,412 |
| 23+00 | 81.99 | 0.00 | 37.49 | 149 | 0 | 94 | 1,819 | 375 | 1,444 |
| 23+50 | 73.59 | 0.00 | 66.20 | 144 | 0 | 96 | 1,963 | 495 | 1,468 |
| 23+80 | 5.08 | 0.00 | 60.84 | 44 | 0 | 71 | 2,007 | 583 | 1,424 |
| 24+00 | 67.14 | 0.00 | 76.11 | 27 | 0 | 51 | 2,034 | 647 | 1,387 |
| 24+37 | 80.59 | 0.00 | 19.37 | 101 | 0 | 65 | 2,135 | 729 | 1,406 |
| 24+50 | 67.95 | 0.00 | 61.37 | 36 | 0 | 19 | 2,171 | 753 | 1,418 |
| 25+00 | 60.75 | 0.00 | 66.70 | 119 | 0 | 119 | 2,290 | 901 | 1,389 |
| 25+17 | 79.63 | 0.00 | 57.00 | 44 | 0 | 39 | 2,334 | 950 | 1,384 |
| 25+50 | 56.83 | 0.00 | 20.39 | 83 | 0 | 47 | 2,417 | 1,009 | 1,408 |
| 26+00 | 125.05 | 0.00 | 5.14 | 168 | 0 | 24 | 2,586 | 1,038 | 1,547 |
| 26+50 | 49.19 | 0.00 | 1.66 | 161 | 0 | 6 | 2,747 | 1,046 | 1,701 |
| 26+64 | 48.16 | 0.00 | 0.69 | 25 | 0 | 1 | 2,772 | 1,047 | 1,725 |
| 27+00 | 0.00 | 0.00 | 0.00 | 32 | 0 | 0 | 2,804 | 1,048 | 1,757 |
| | | | TOTALS | 2,804 | 0 | 838 | | | |

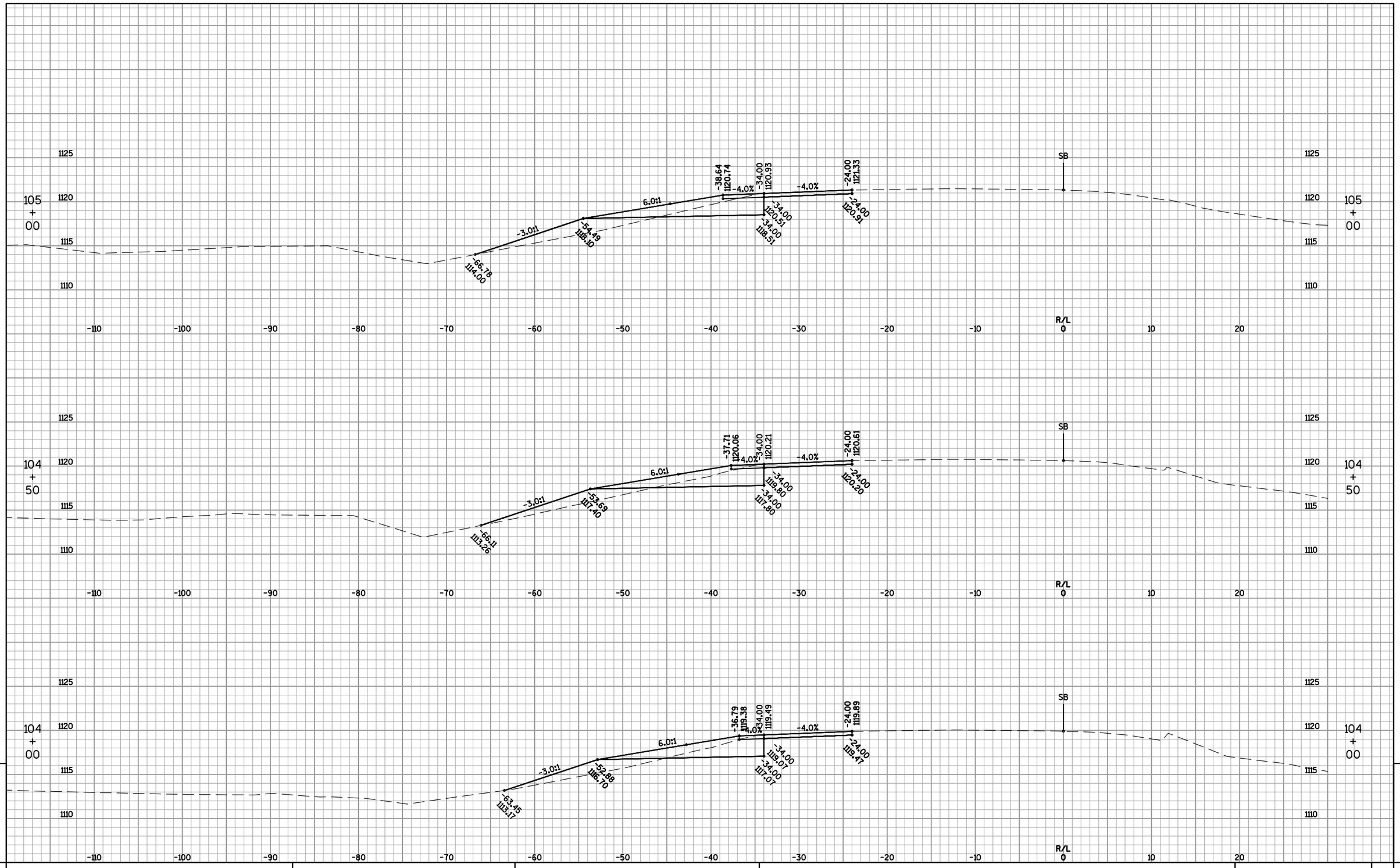
NOTE 1: ALL EXCAVATED ASPHALT MATERIAL ASSUMED USABLE AS FILL.
NOTE 2: MASS ORDINATE = (AVAILABLE MATERIAL) - (EXPANDED FILL).




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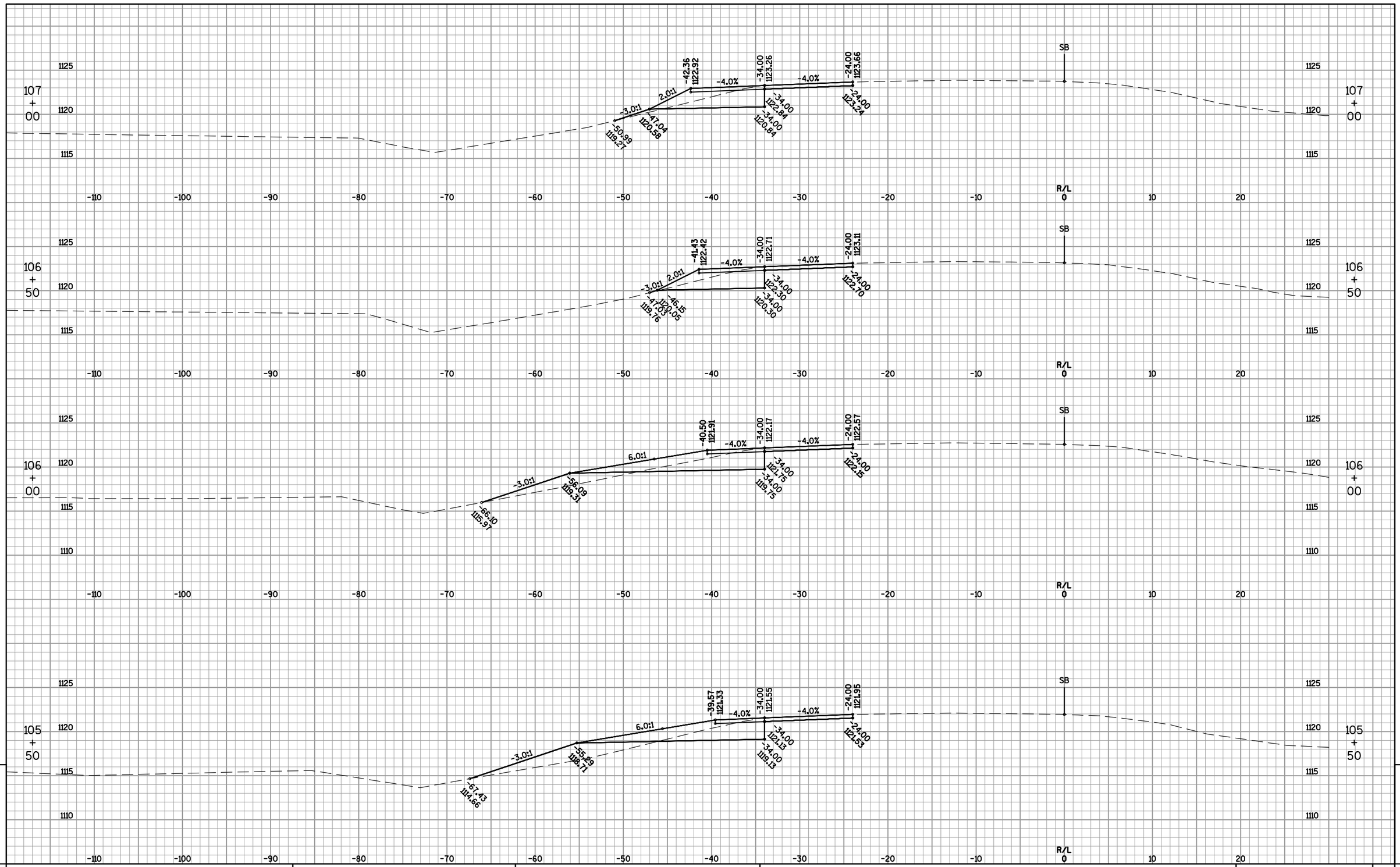
| PROJECT NO: 1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | CROSS SECTIONS: STAGE 1 AND 2 | SHEET 255 | E |
|---|---|---|---|---|---|




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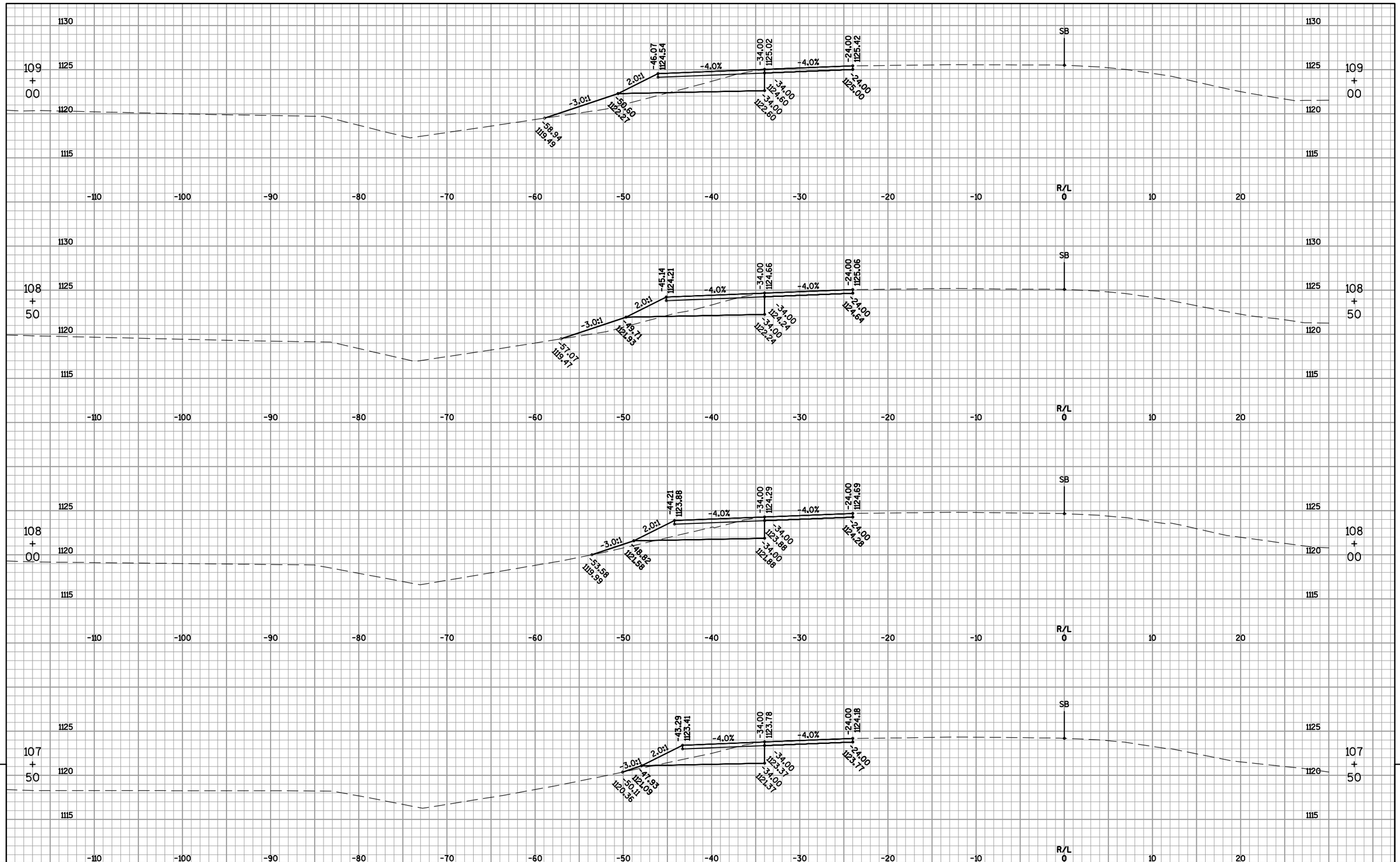
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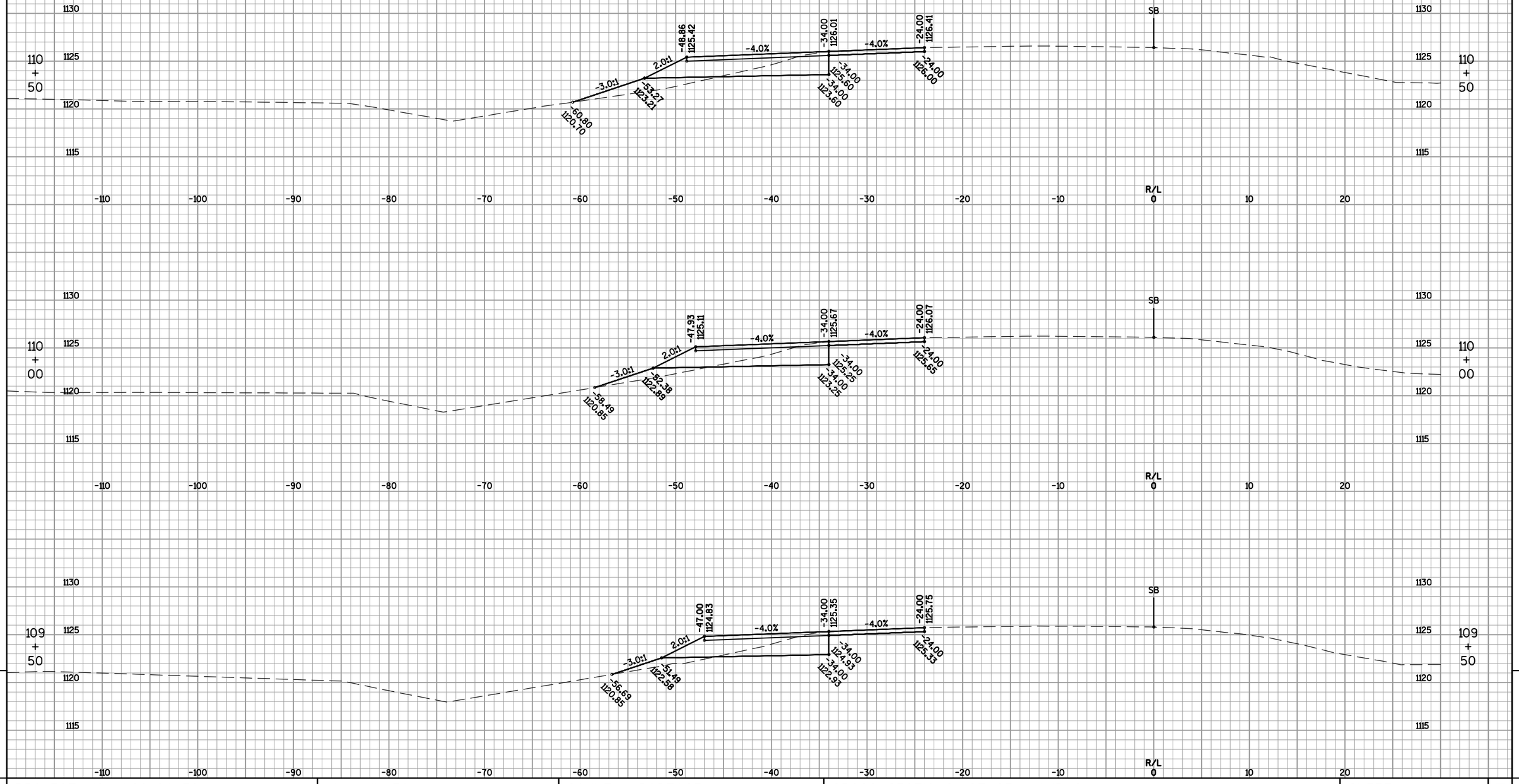
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| PROJECT NO: 1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | CROSS SECTIONS: STAGE 1 AND 2 | SHEET 257 | E |
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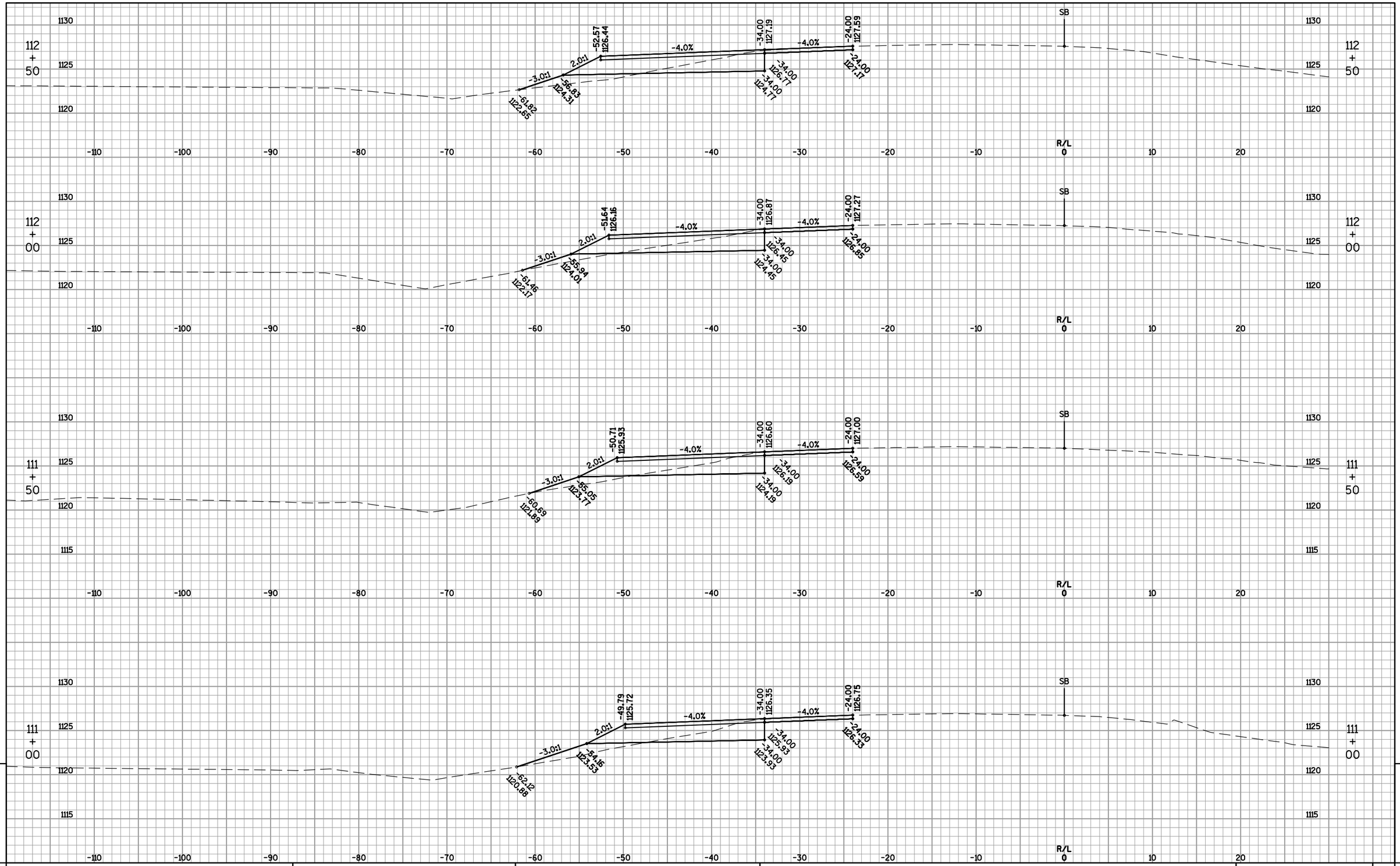
| PROJECT NO: 1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | CROSS SECTIONS: STAGE 1 AND 2 | SHEET 258 | E |
|---|---|---|---|---|---|




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| PROJECT NO: 1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | CROSS SECTIONS: STAGE 1 AND 2 | SHEET 259 | E |
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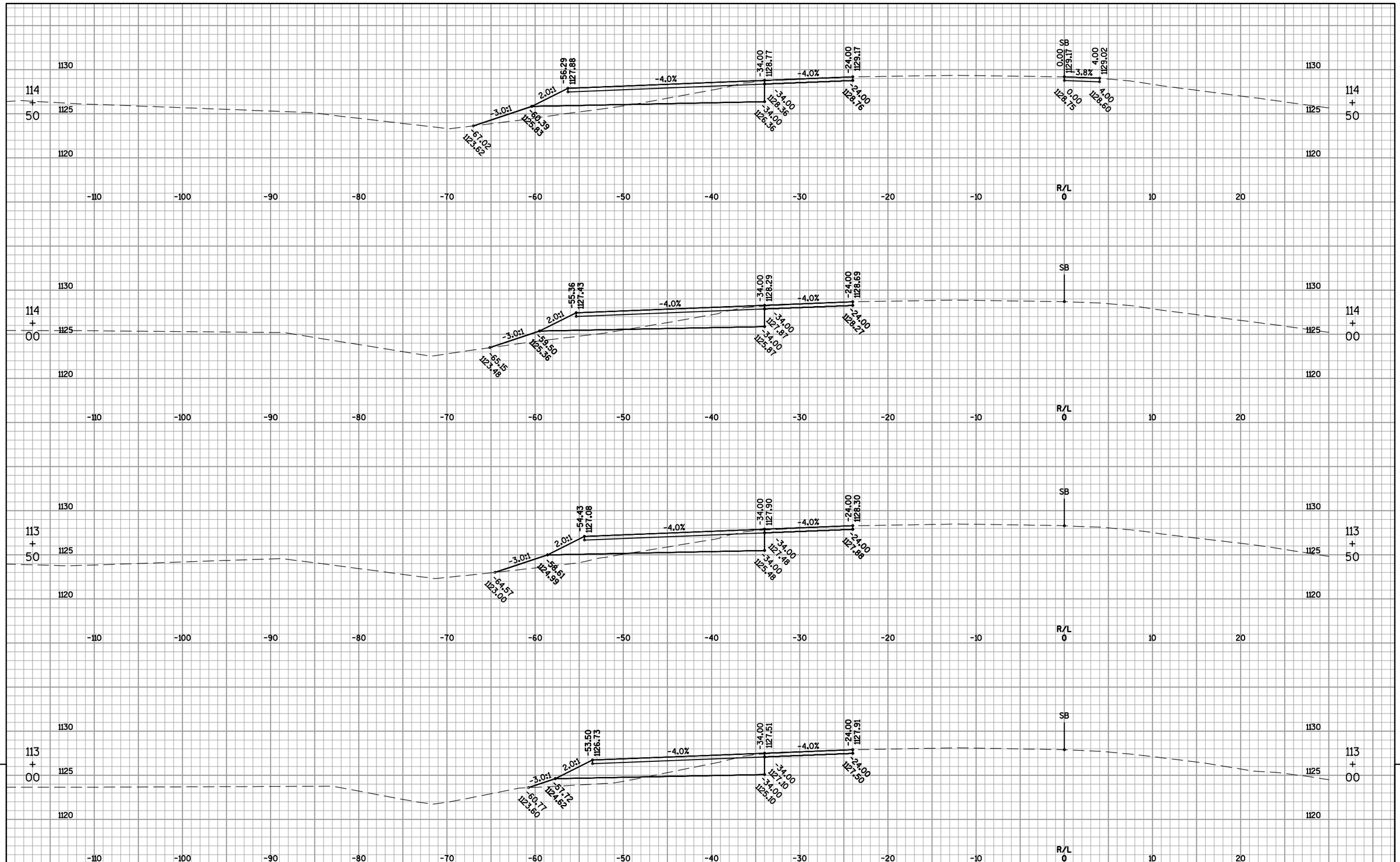
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| PROJECT NO: 1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | CROSS SECTIONS: STAGE 1 AND 2 | SHEET 260 | E |
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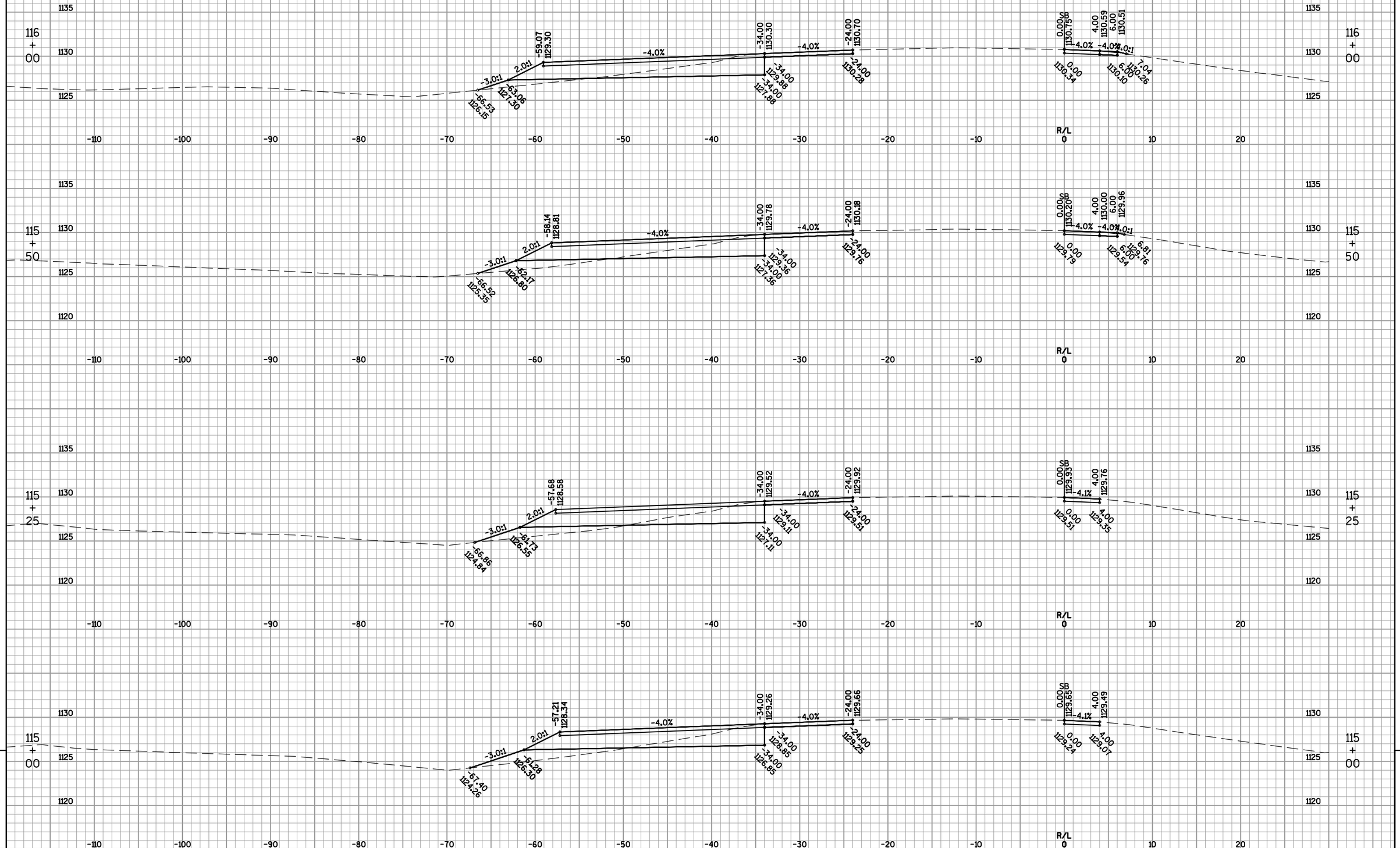
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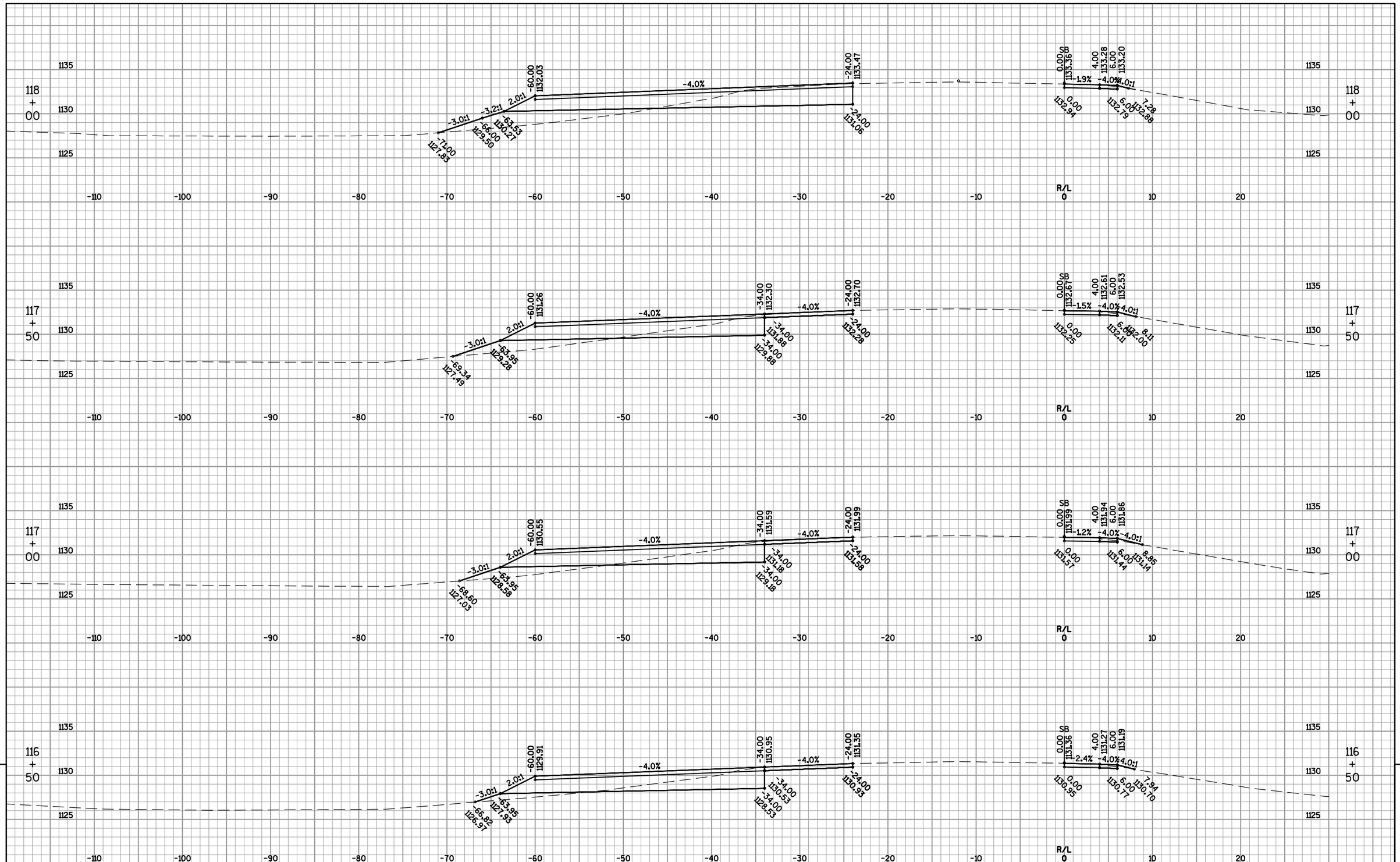
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| PROJECT NO: 1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | CROSS SECTIONS: STAGE 1 AND 2 | SHEET 261 | E |
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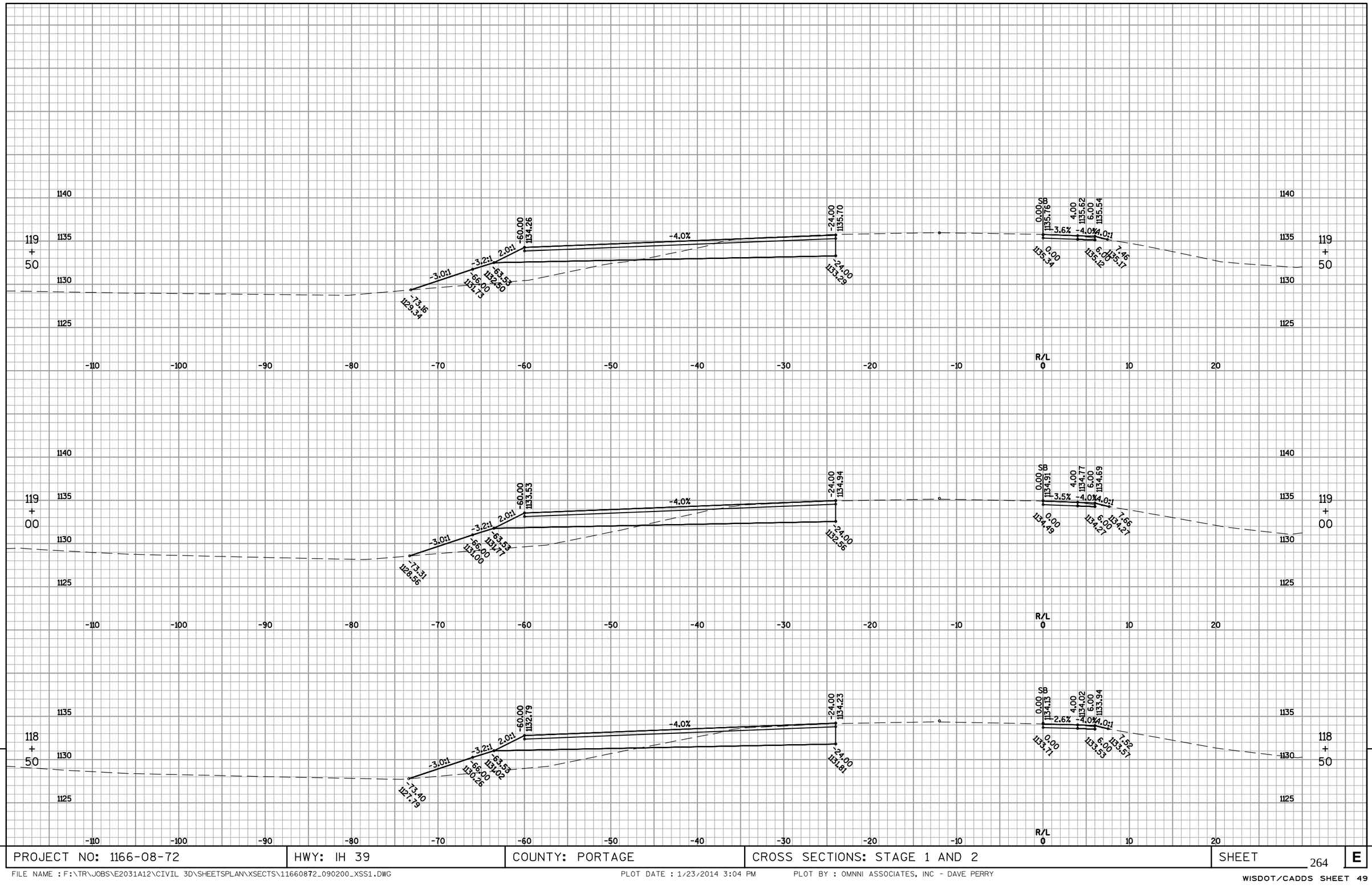

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| PROJECT NO: 1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | CROSS SECTIONS: STAGE 1 AND 2 | SHEET 262 | E |
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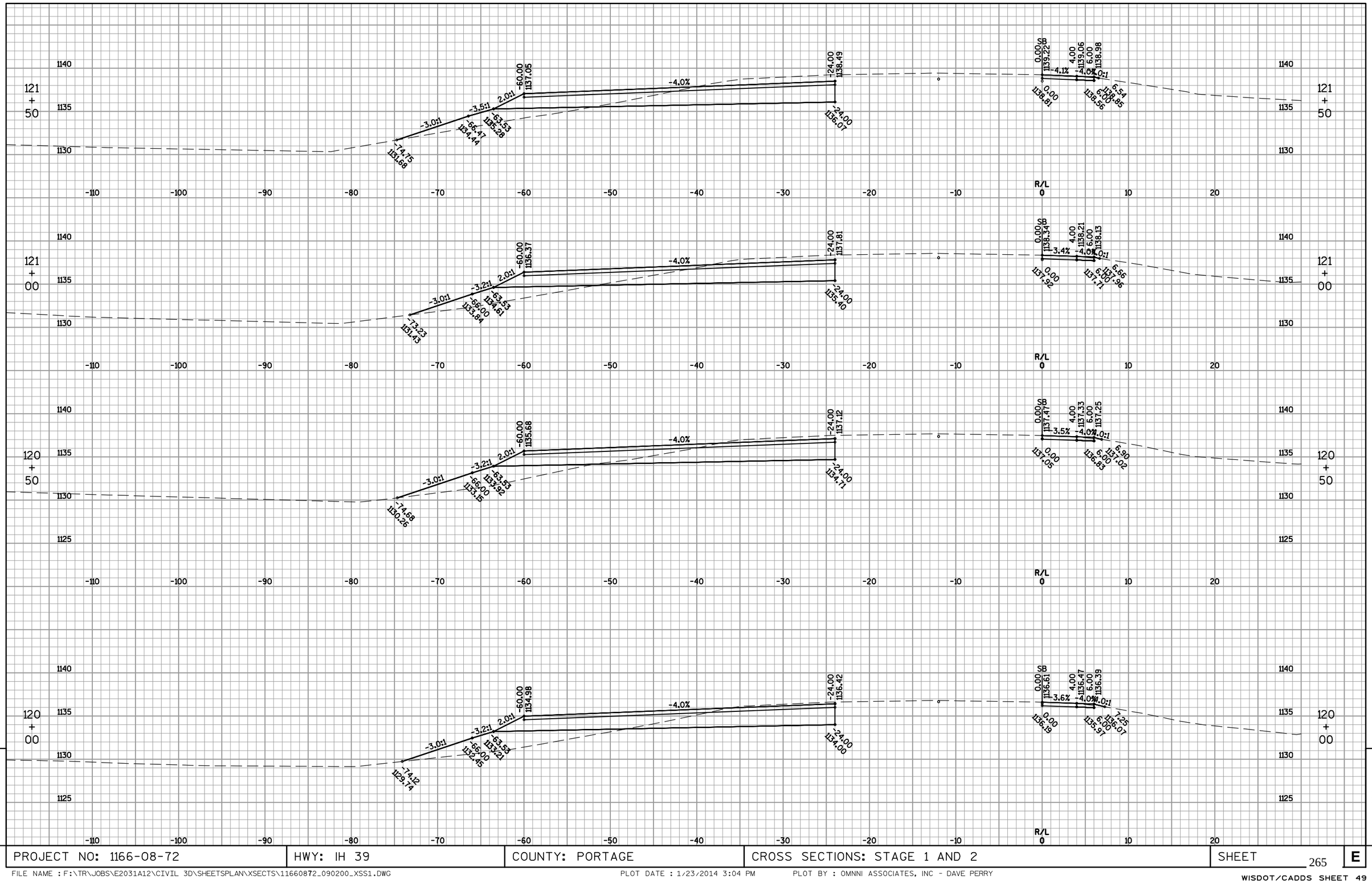
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|---|---|---|---|---|---|




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| PROJECT NO: 1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | CROSS SECTIONS: STAGE 1 AND 2 | SHEET 264 | E |
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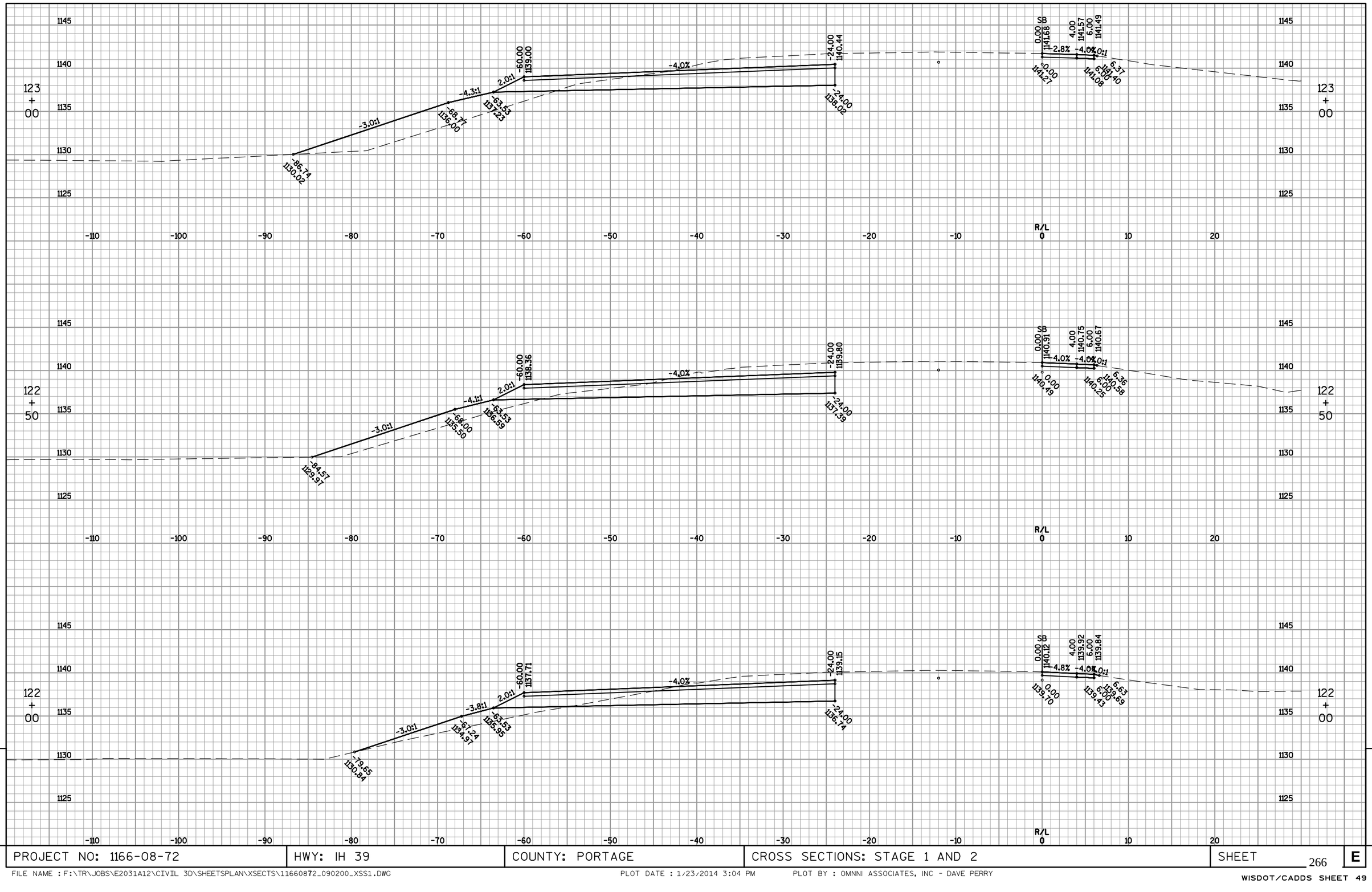



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| PROJECT NO: 1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | CROSS SECTIONS: STAGE 1 AND 2 | SHEET 265 | E |
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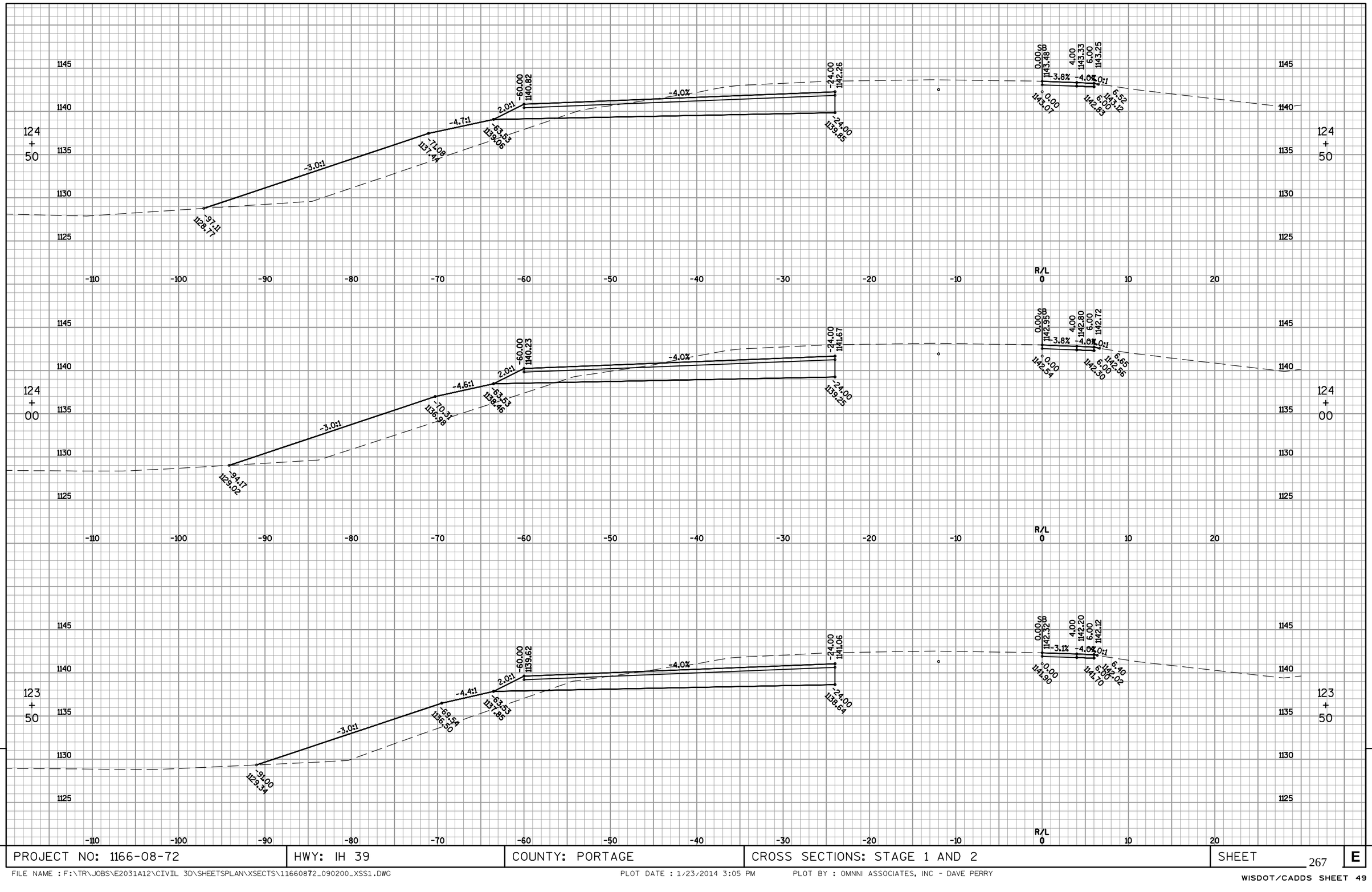
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PLOT DATE : 1/23/2014 3:04 PM
PLOT BY : OMNNI ASSOCIATES, INC - DAVE PERRY
WISDOT/CADDS SHEET 49




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| PROJECT NO: 1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | CROSS SECTIONS: STAGE 1 AND 2 | SHEET 266 | E |
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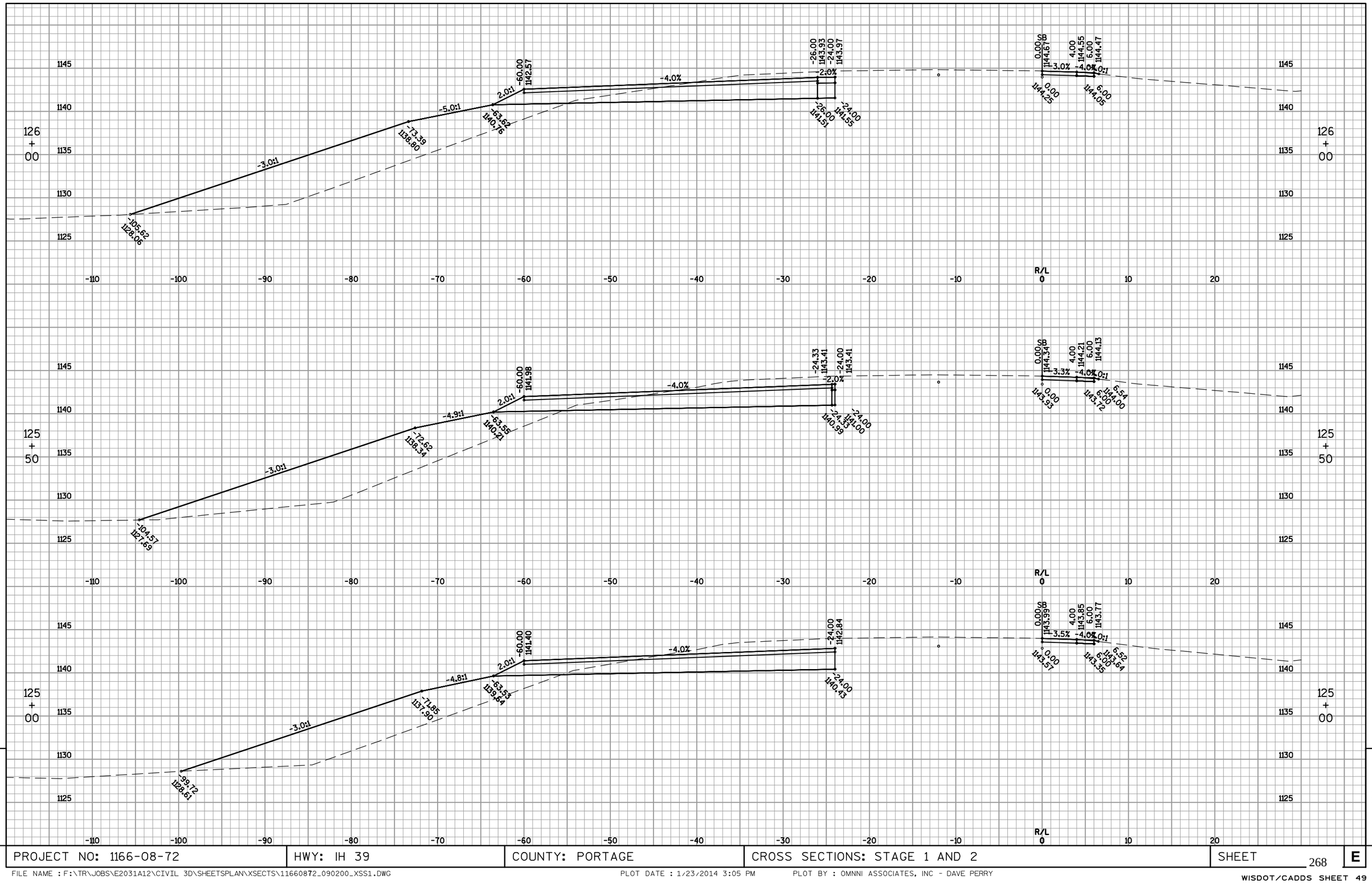



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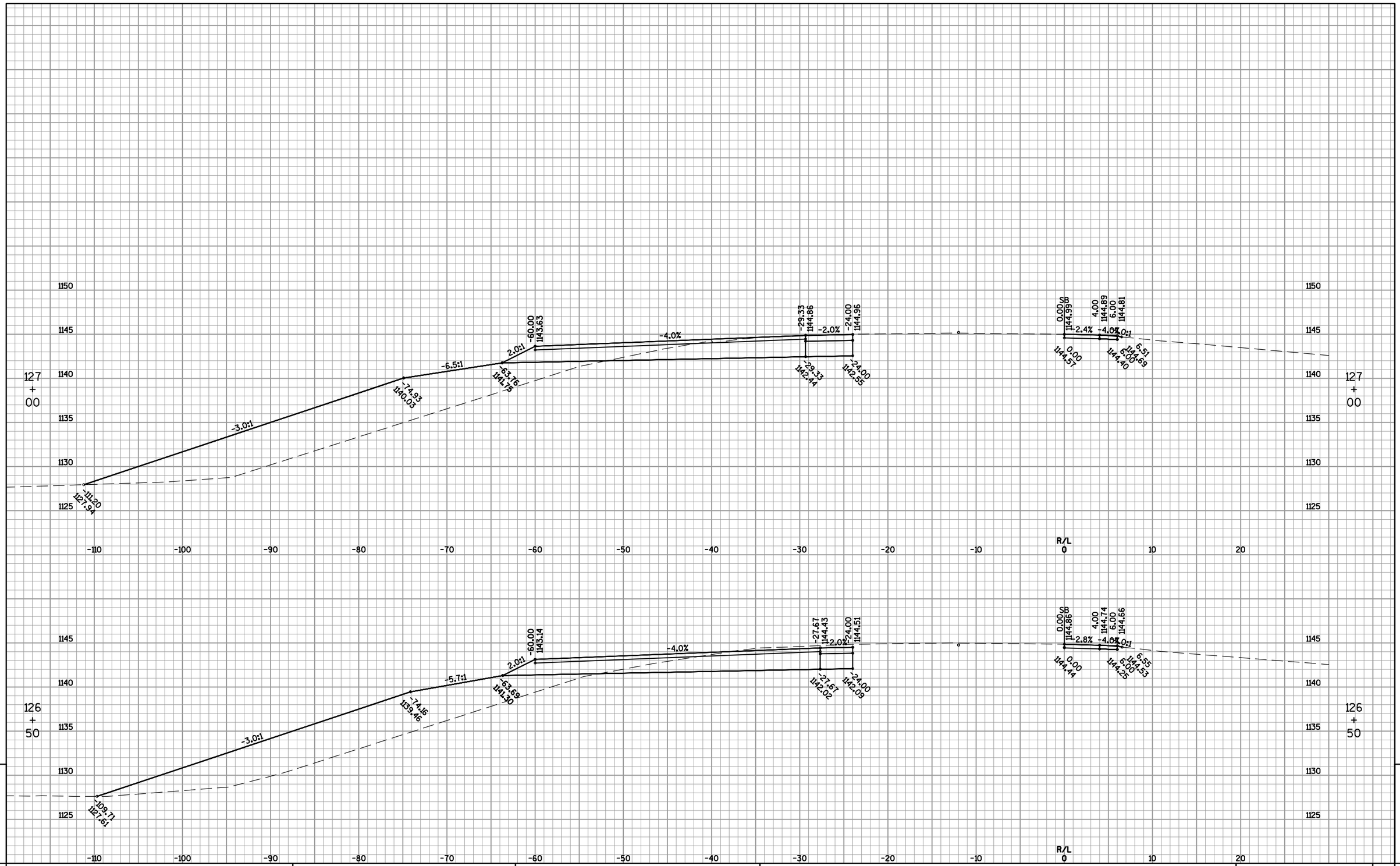
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| PROJECT NO: 1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | CROSS SECTIONS: STAGE 1 AND 2 | SHEET 267 | E |
|---|---|---|---|---|---|

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PLOT DATE : 1/23/2014 3:05 PM
PLOT BY : OMNNI ASSOCIATES, INC - DAVE PERRY
WISDOT/CADDS SHEET 49

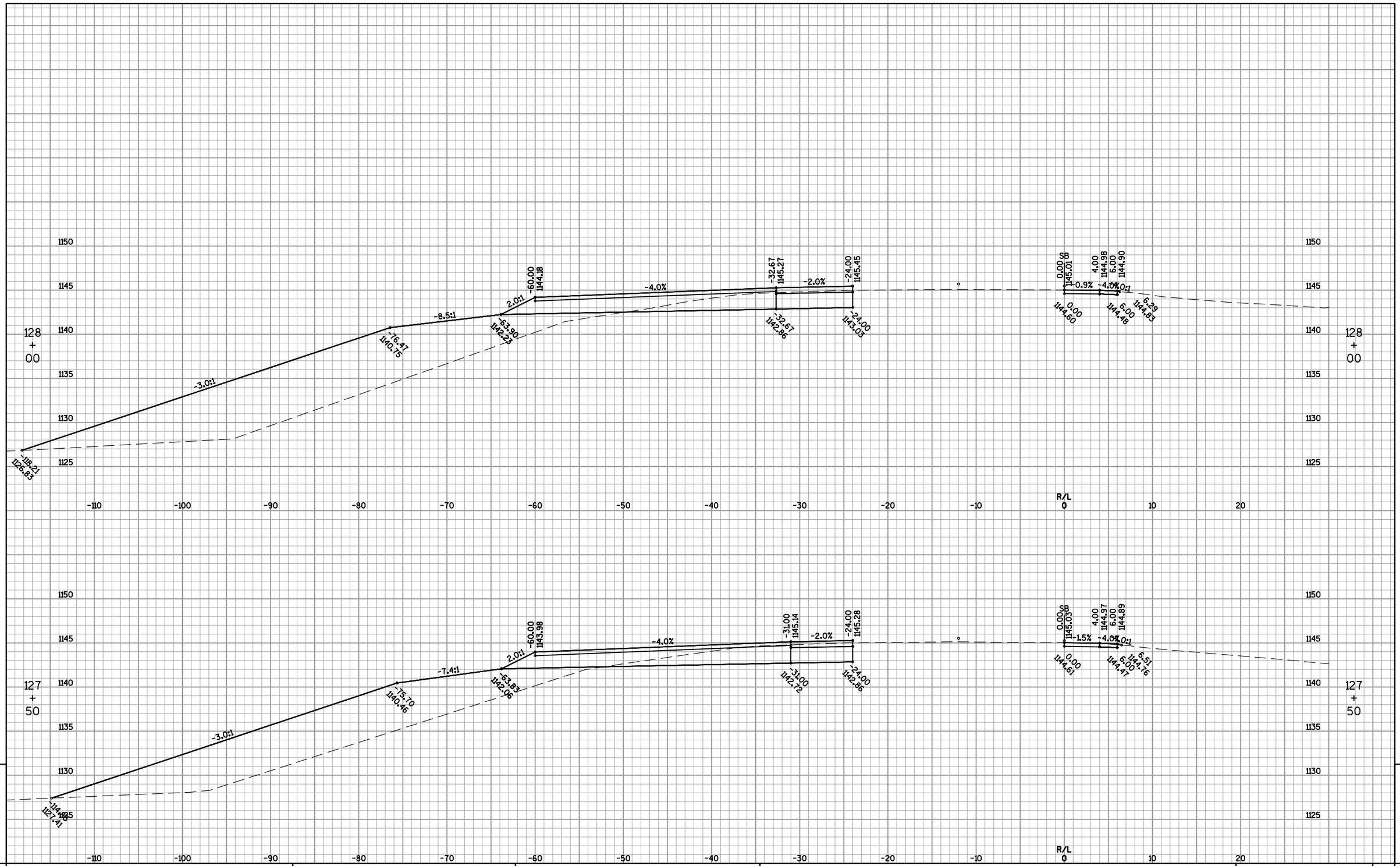



| PROJECT NO: 1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | CROSS SECTIONS: STAGE 1 AND 2 | SHEET 268 | E |
|---|---|---|---|---|---|




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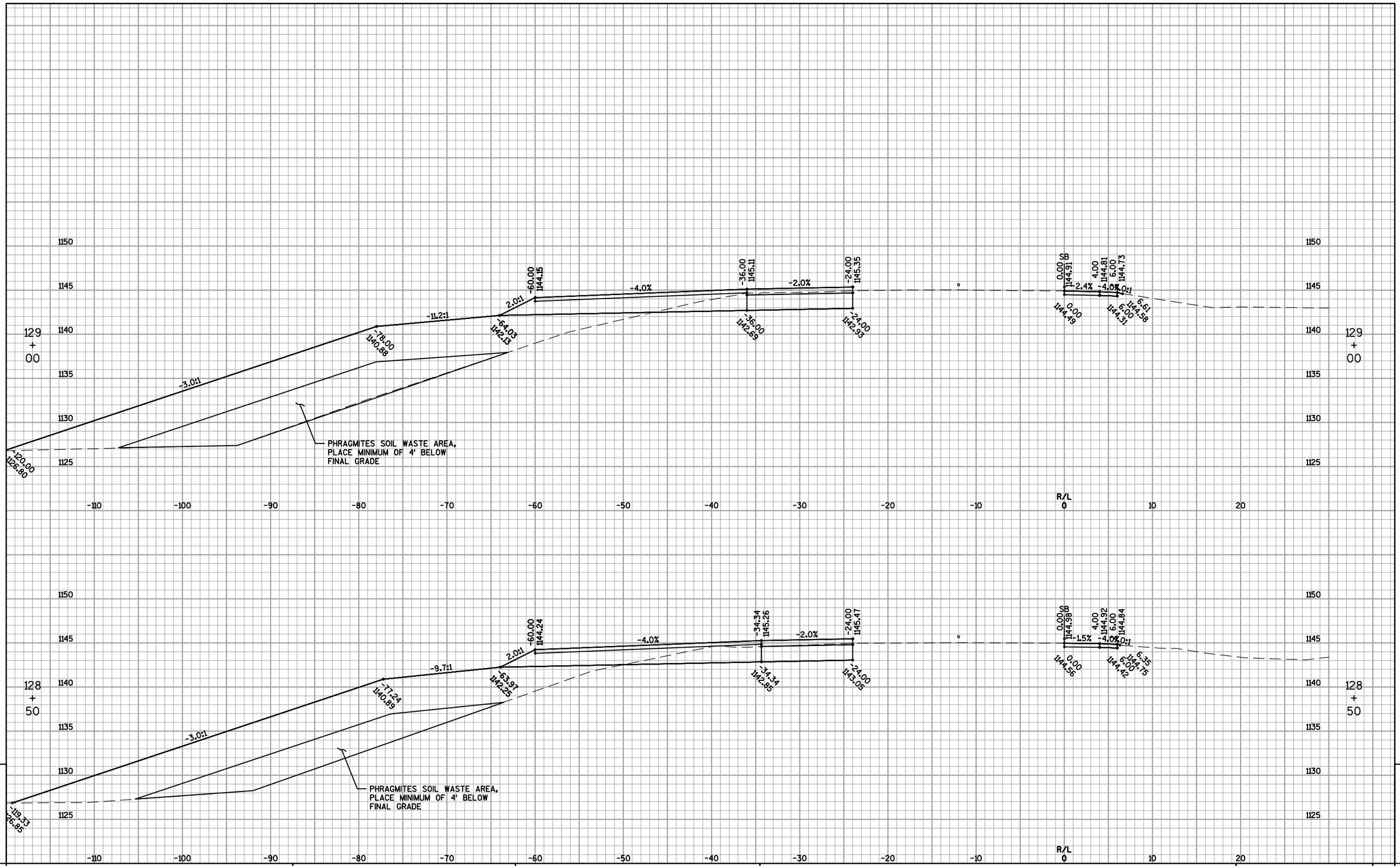
| PROJECT NO: 1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | CROSS SECTIONS: STAGE 1 AND 2 | SHEET 269 | E |
|---|---|---|---|---|---|




| PROJECT NO: 1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | CROSS SECTIONS: STAGE 1 AND 2 | SHEET 270 | E |
|---|---|---|---|---|---|

FILE NAME : F:\TR\JOBS\E2031A12\CIVIL 3D\SHEETSPLAN\XSECTS\1166087 2_090200_XSS1.DWG PLOT DATE : 1/23/2014 3:05 PM PLOT BY : OMNNI ASSOCIATES, INC - DAVE PERRY

WISDOT/CADDS SHEET 49




| PROJECT NO: 1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | CROSS SECTIONS: STAGE 1 AND 2 | SHEET 271 | E |
|---|---|---|---|---|---|

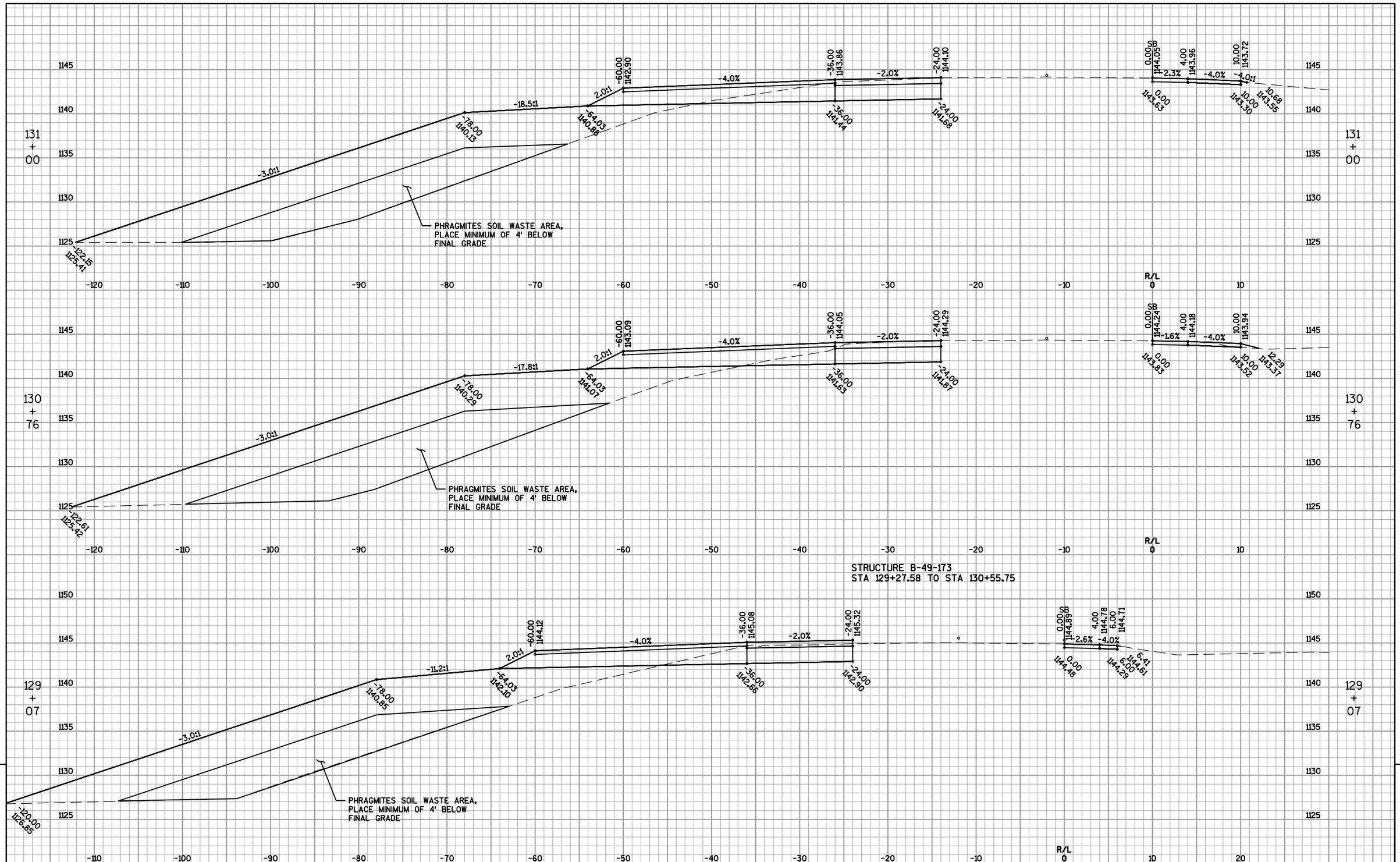
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11660872_0□0236_□□□□1

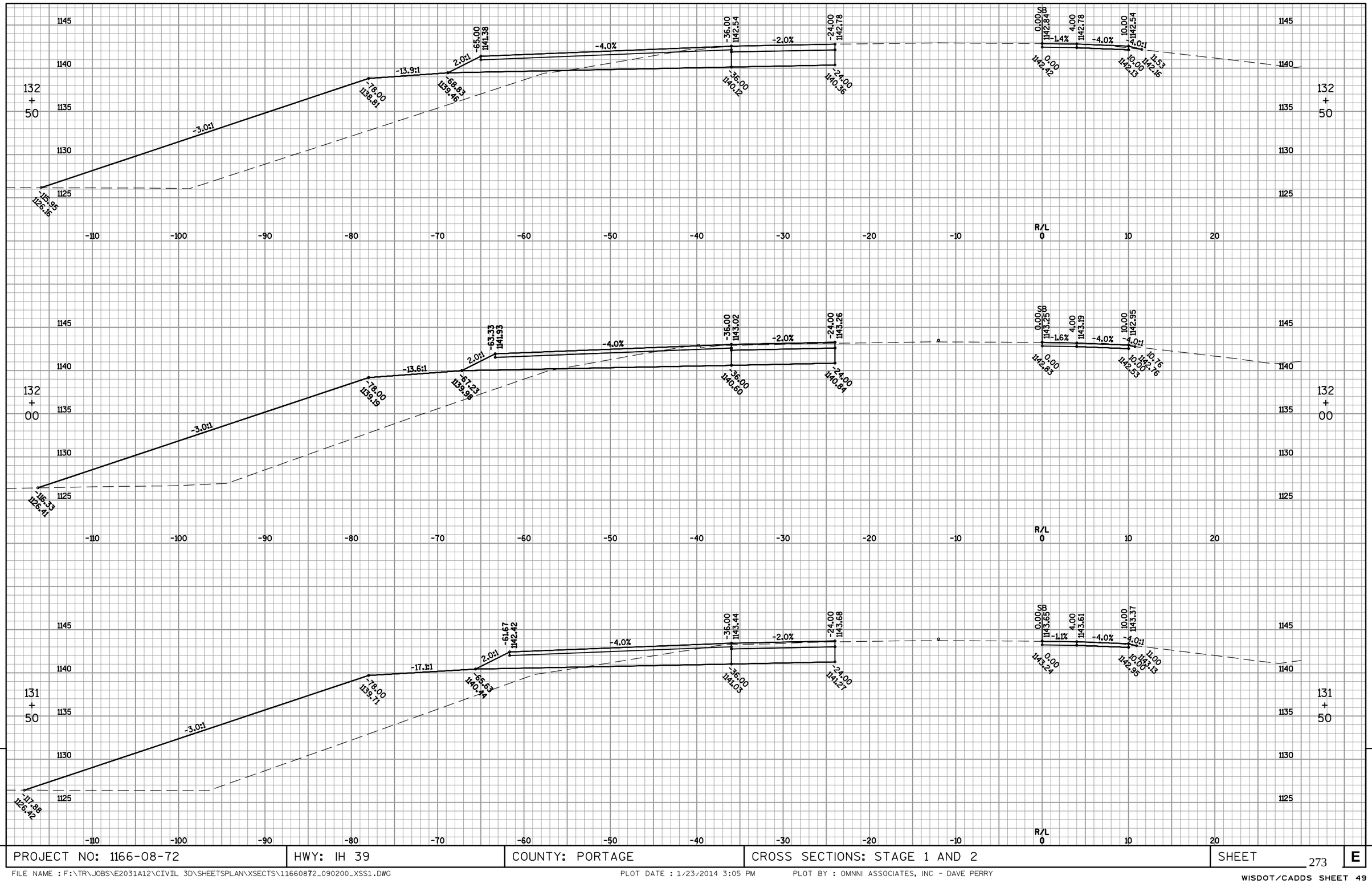
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PLOT BY : OMNNI ASSOCIATES, INC - ANDREW WESTBROOK

WISDOT/CADDS SHEET 49

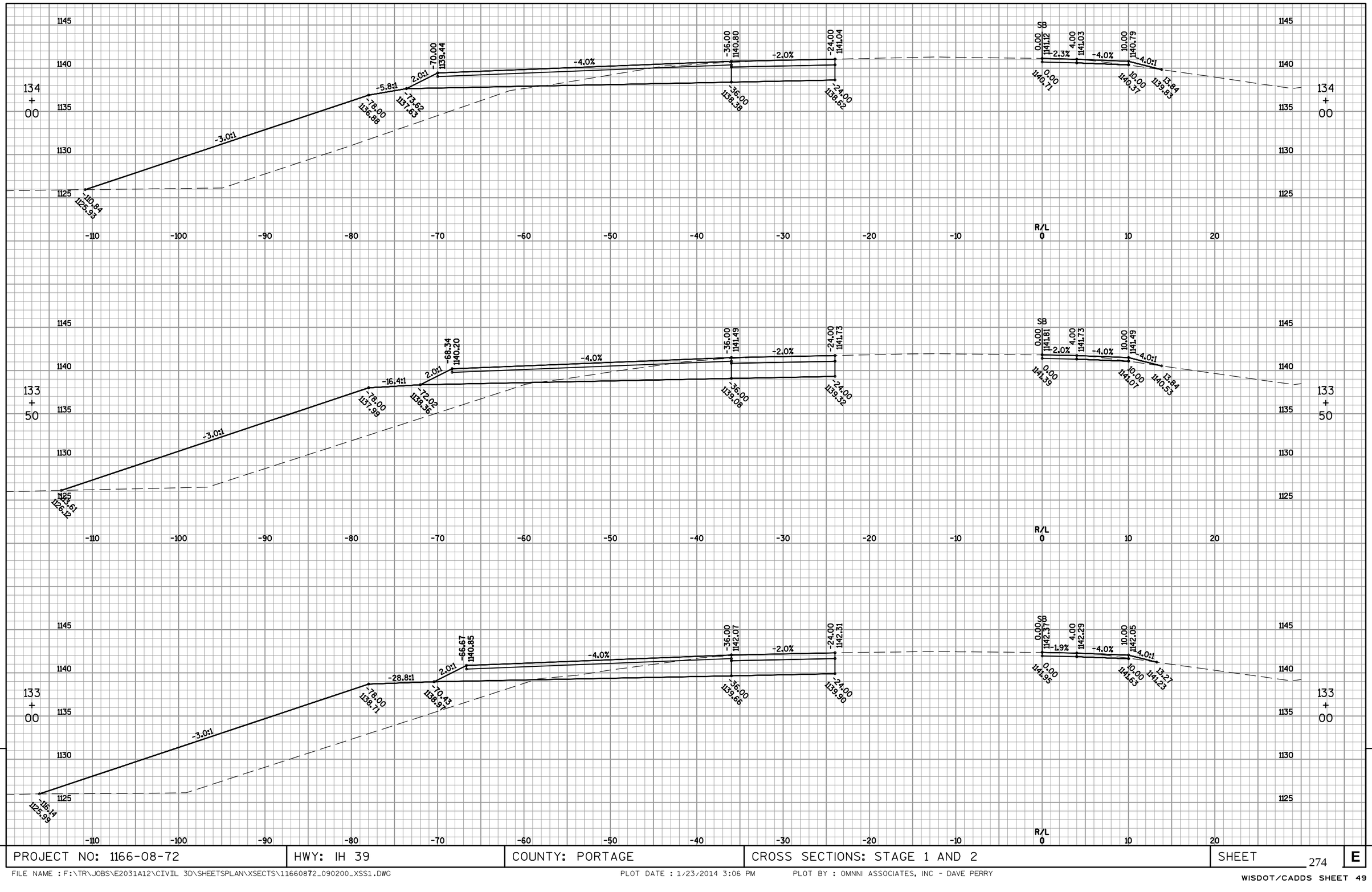



| PROJECT NO: 1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | CROSS SECTIONS: STAGE 1 AND 2 | SHEET 272 | E |
|---|---|---|---|---|---|

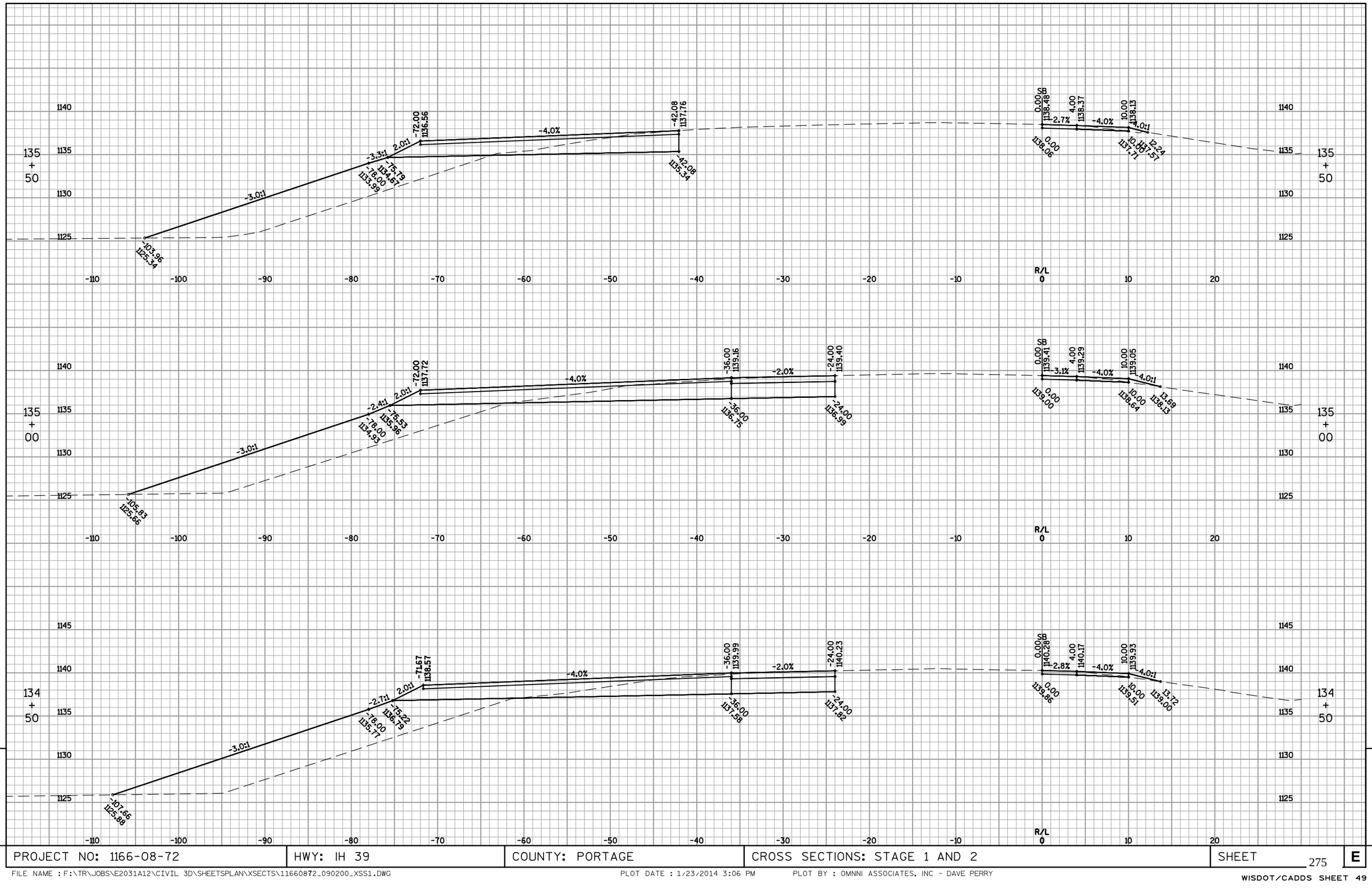



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| PROJECT NO: 1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | CROSS SECTIONS: STAGE 1 AND 2 | SHEET 273 | E |
|---|---|---|---|---|---|




| PROJECT NO: 1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | CROSS SECTIONS: STAGE 1 AND 2 | SHEET 274 | E |
|---|---|---|---|---|---|




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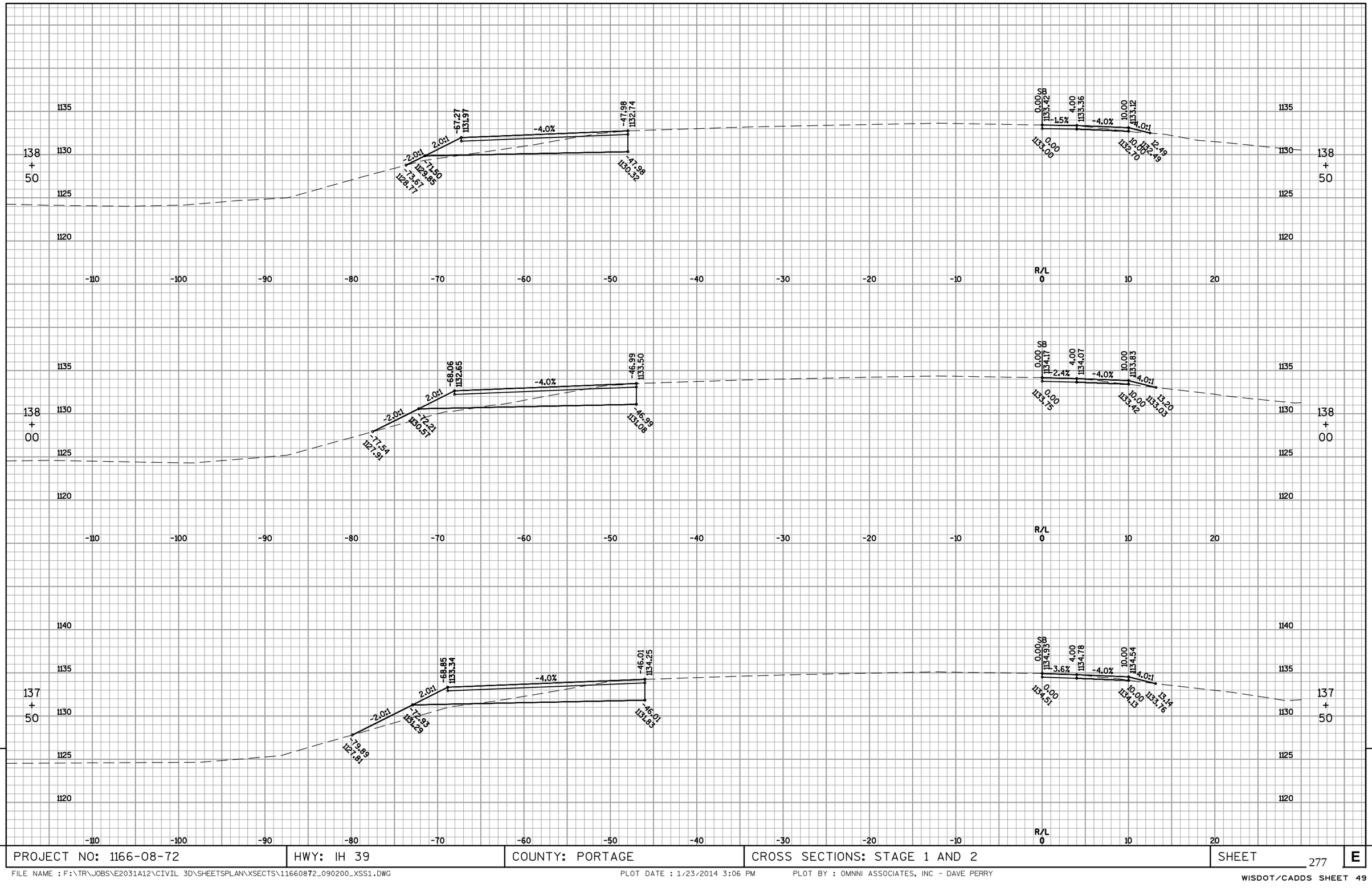
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| PROJECT NO: 1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | CROSS SECTIONS: STAGE 1 AND 2 | SHEET 275 | E |
|---|---|---|---|---|---|

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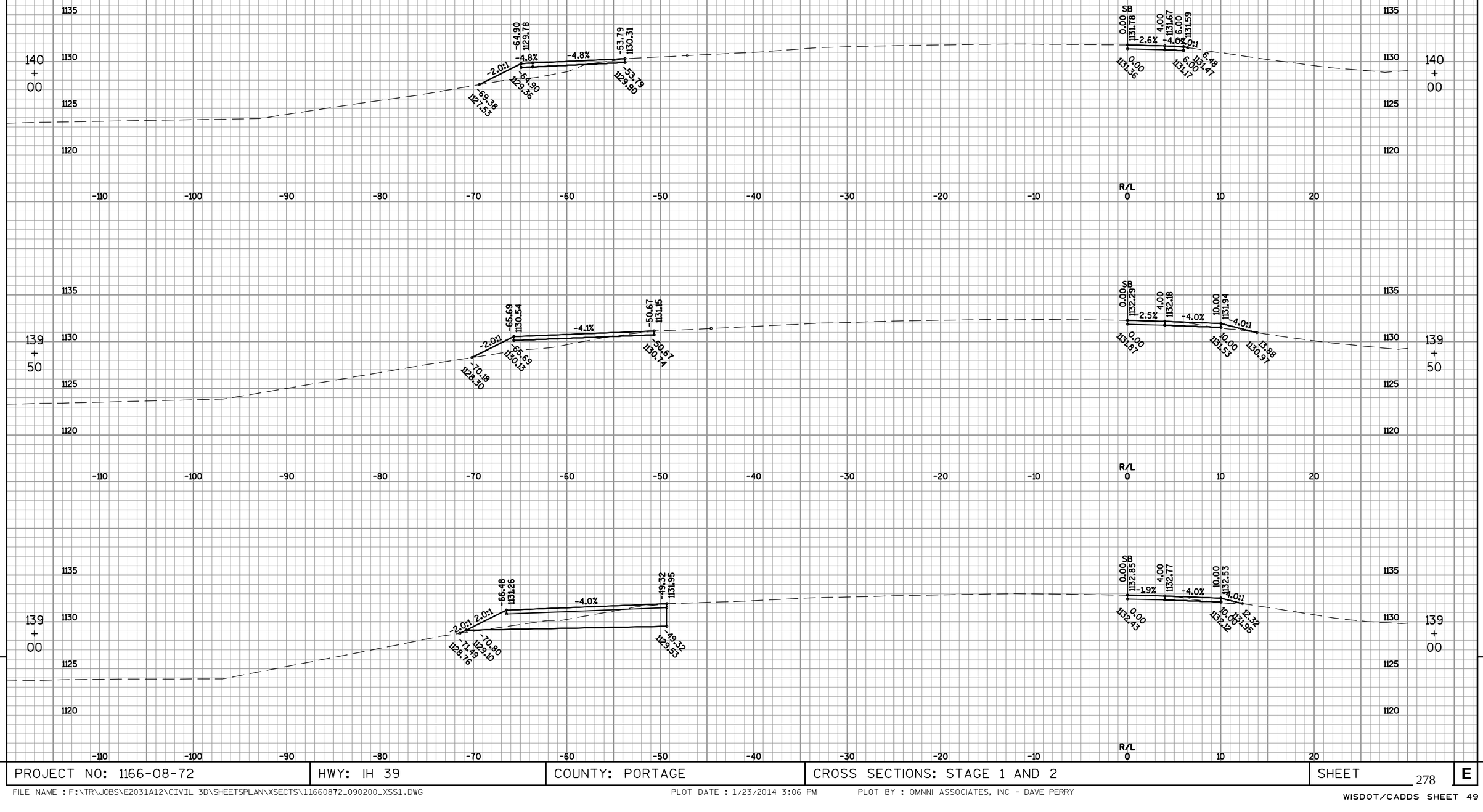
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| PROJECT NO: 1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | CROSS SECTIONS: STAGE 1 AND 2 | SHEET 276 | E |
|---|---|---|---|---|---|



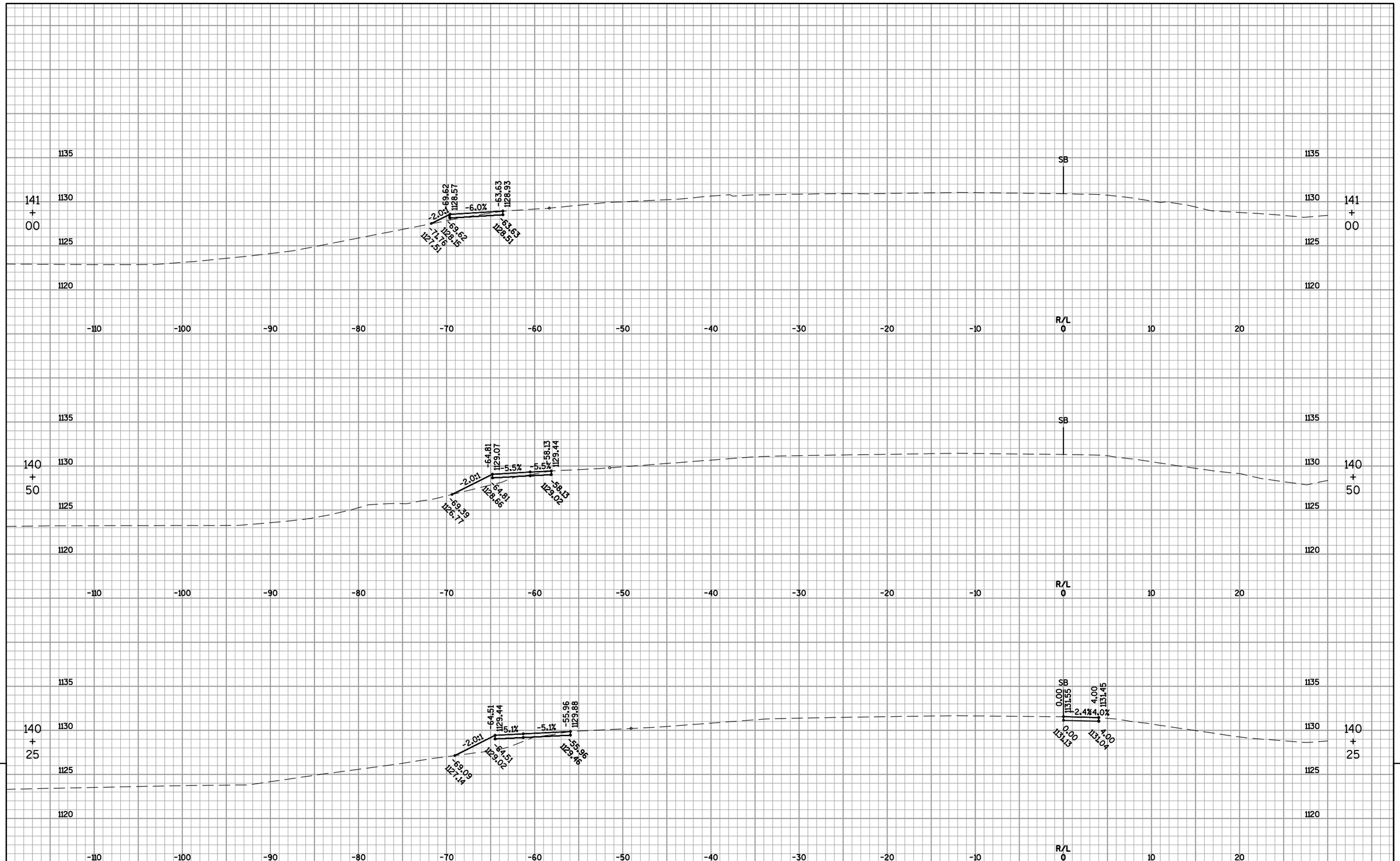

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| PROJECT NO: 1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | CROSS SECTIONS: STAGE 1 AND 2 | SHEET 277 | E |
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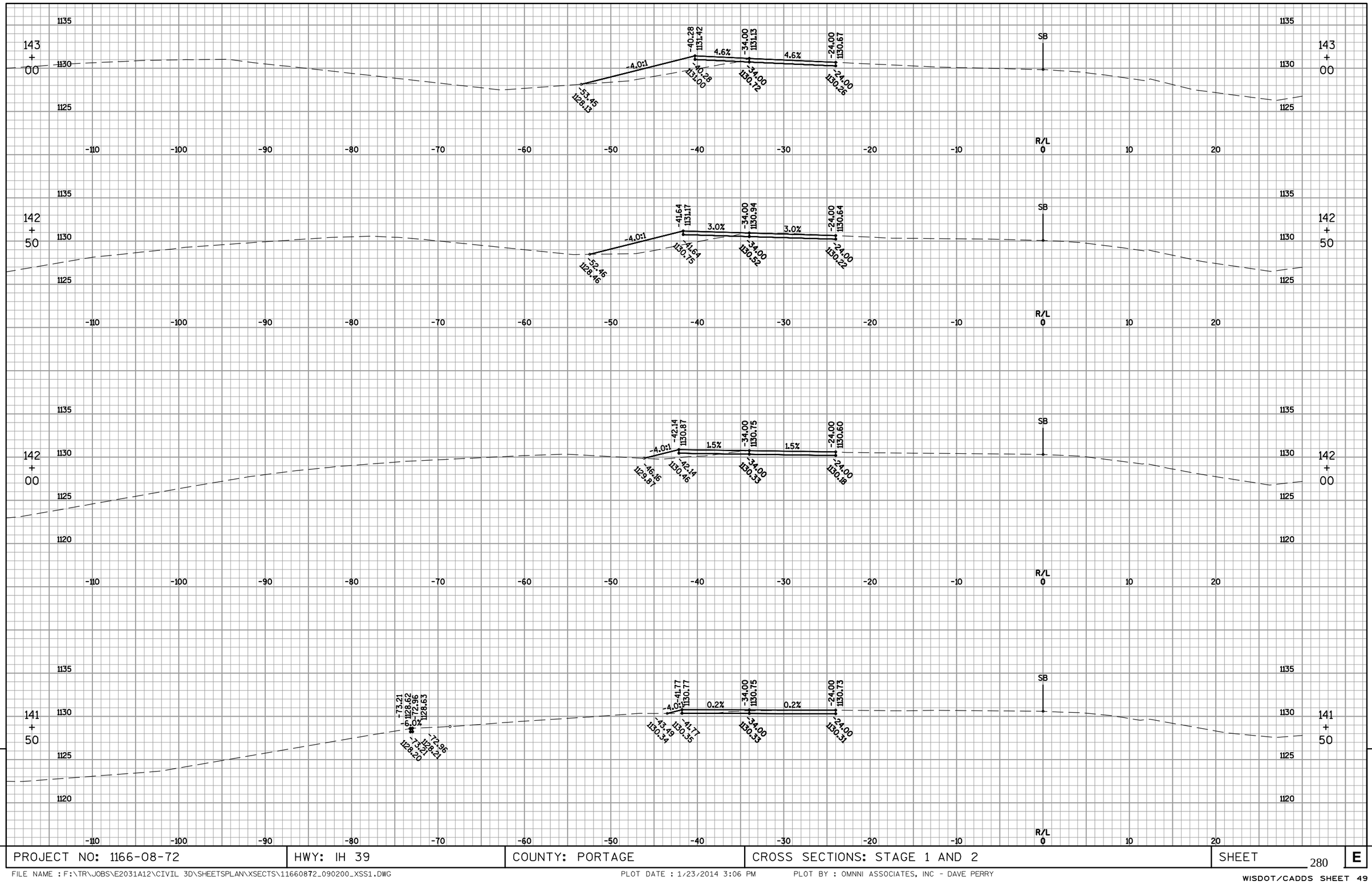
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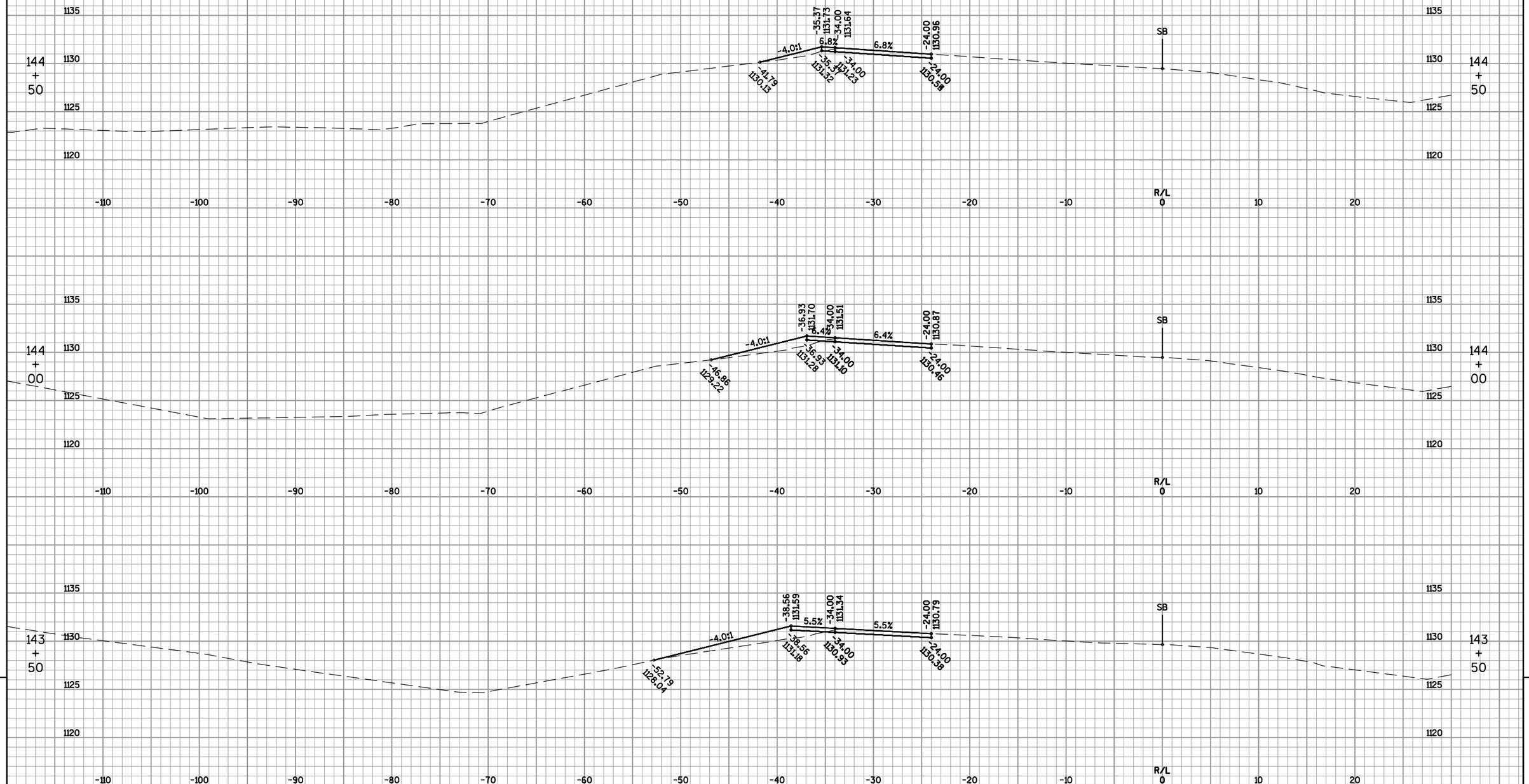
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| PROJECT NO: 1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | CROSS SECTIONS: STAGE 1 AND 2 | SHEET 279 | E |
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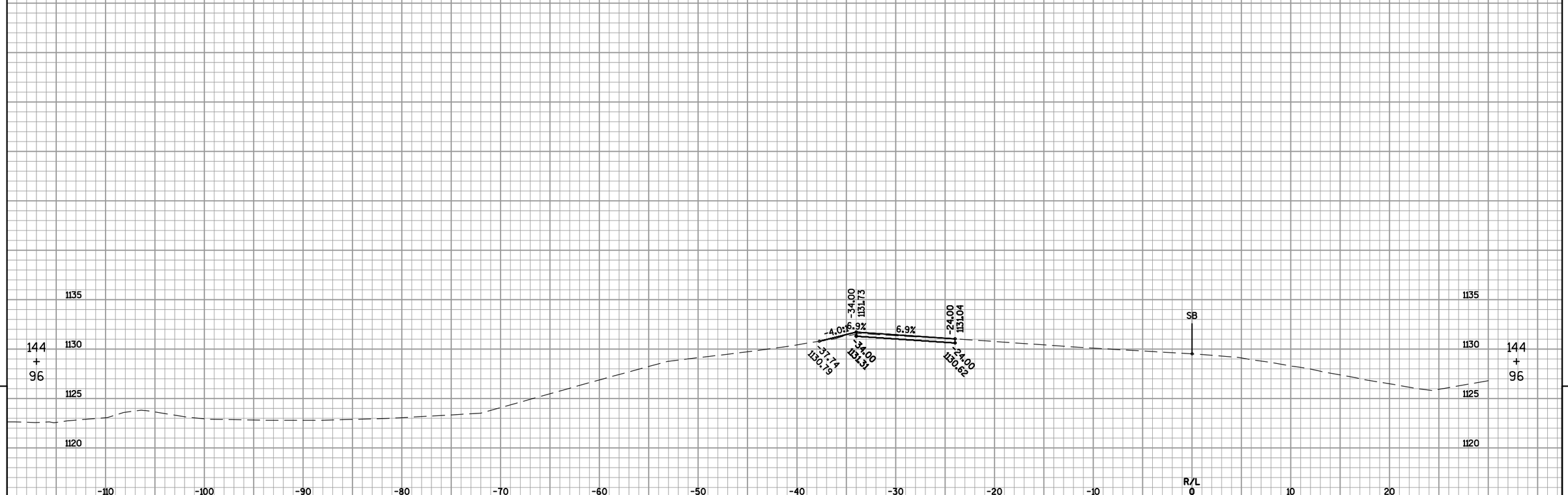

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| PROJECT NO: 1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | CROSS SECTIONS: STAGE 1 AND 2 | SHEET 280 E |

FILE NAME : F:\TR\JOBS\E2031A12\CIVIL 3D\SHEETSPLAN\XSECTS\1166087 2_090200_XSS1.DWG PLOT DATE : 1/23/2014 3:06 PM PLOT BY : OMNNI ASSOCIATES, INC - DAVE PERRY




9

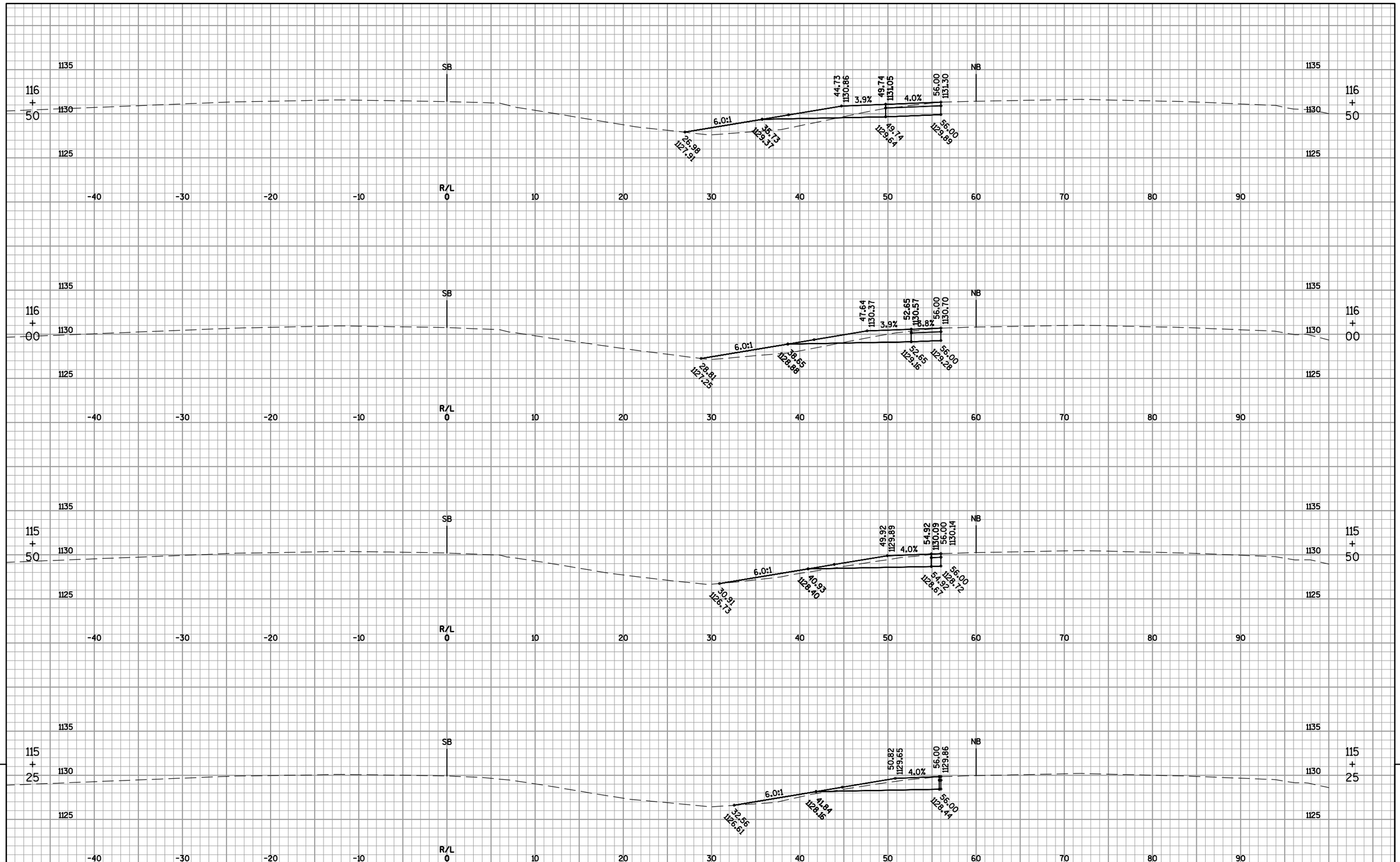
| PROJECT NO: 1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | CROSS SECTIONS: STAGE 1 AND 2 | SHEET 281 | E |
|---|---|---|---|---|---|




9

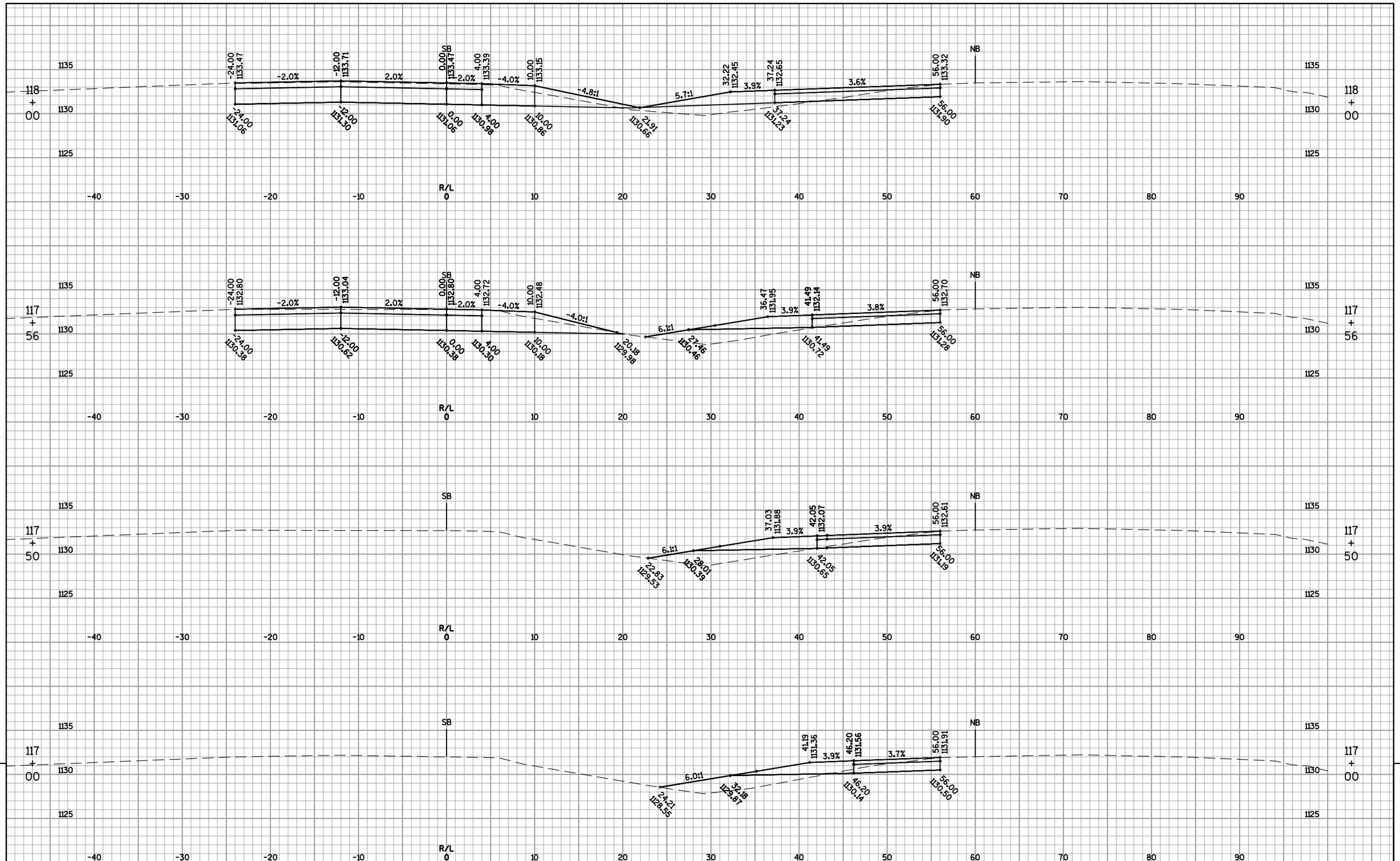
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| PROJECT NO: 1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | CROSS SECTIONS: STAGE 1 AND 2 | SHEET 282 | E |
|---|---|---|---|---|---|




9

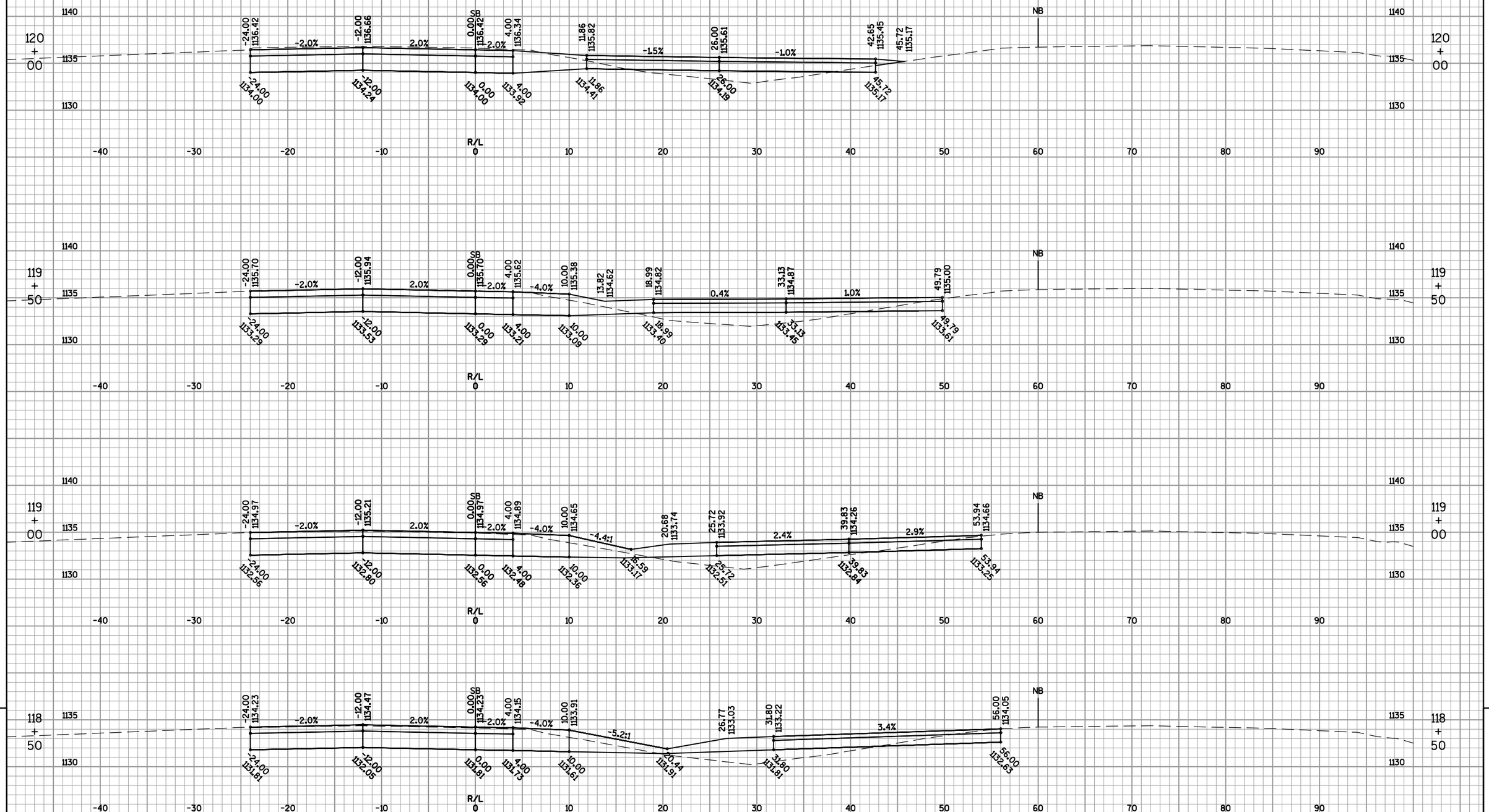
| PROJECT NO: 1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | CROSS SECTIONS: STAGE 3 | SHEET 283 | E |
|---|---|---|---|---|---|




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| PROJECT NO: 1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | CROSS SECTIONS: STAGE 3 | SHEET 284 | E |
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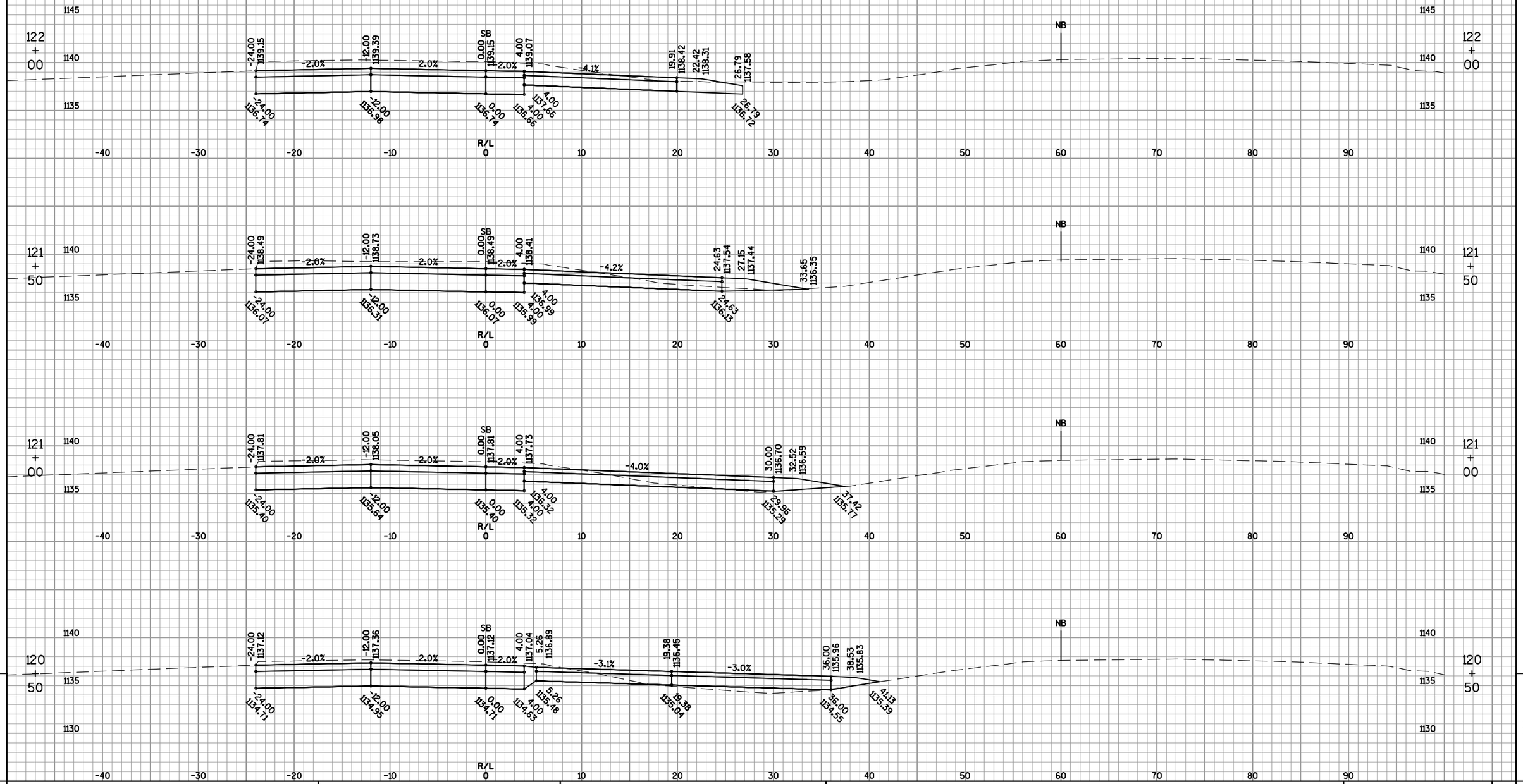



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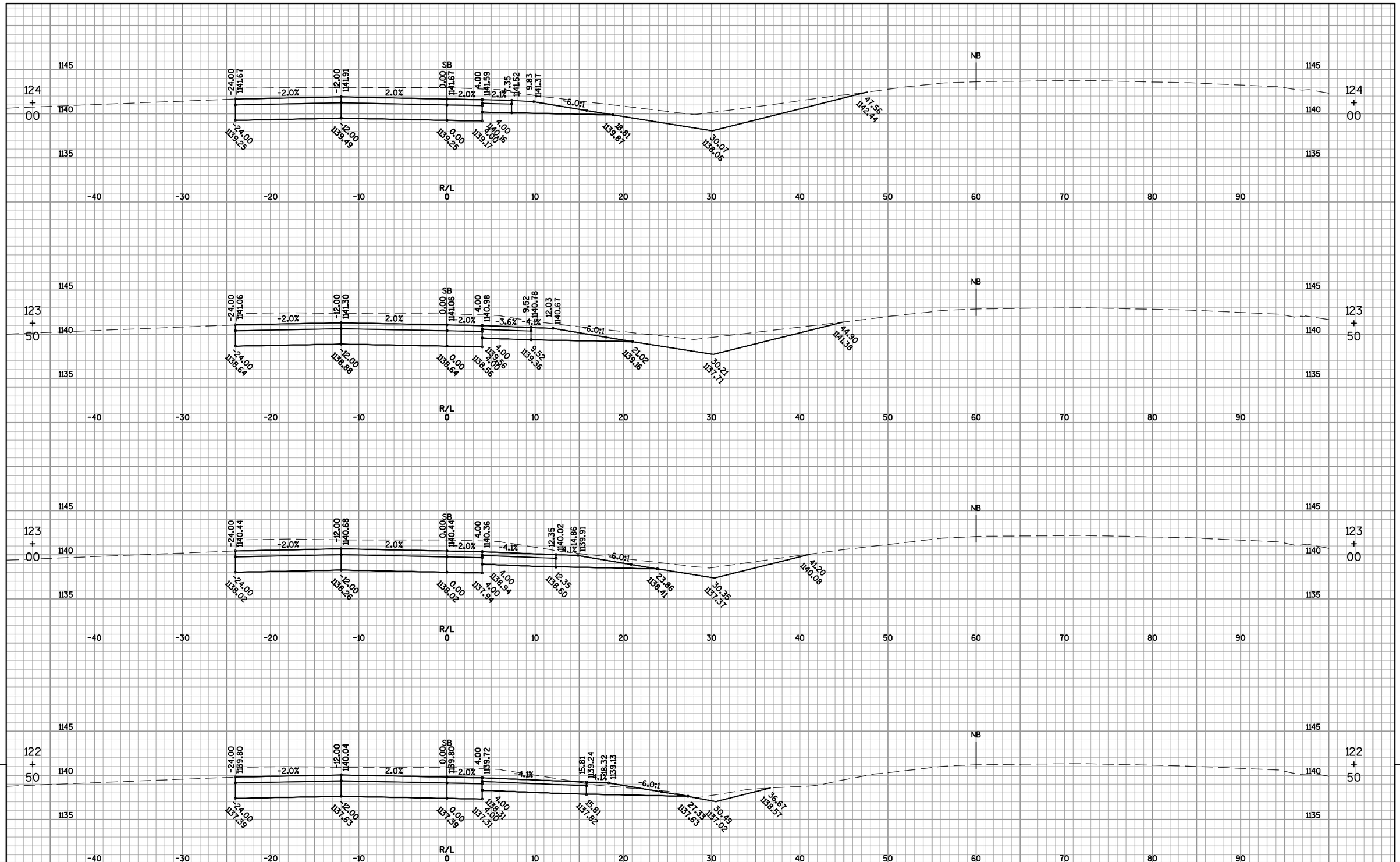
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| PROJECT NO: 1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | CROSS SECTIONS: STAGE 3 | SHEET 285 | E |
|---|---|---|---|---|---|

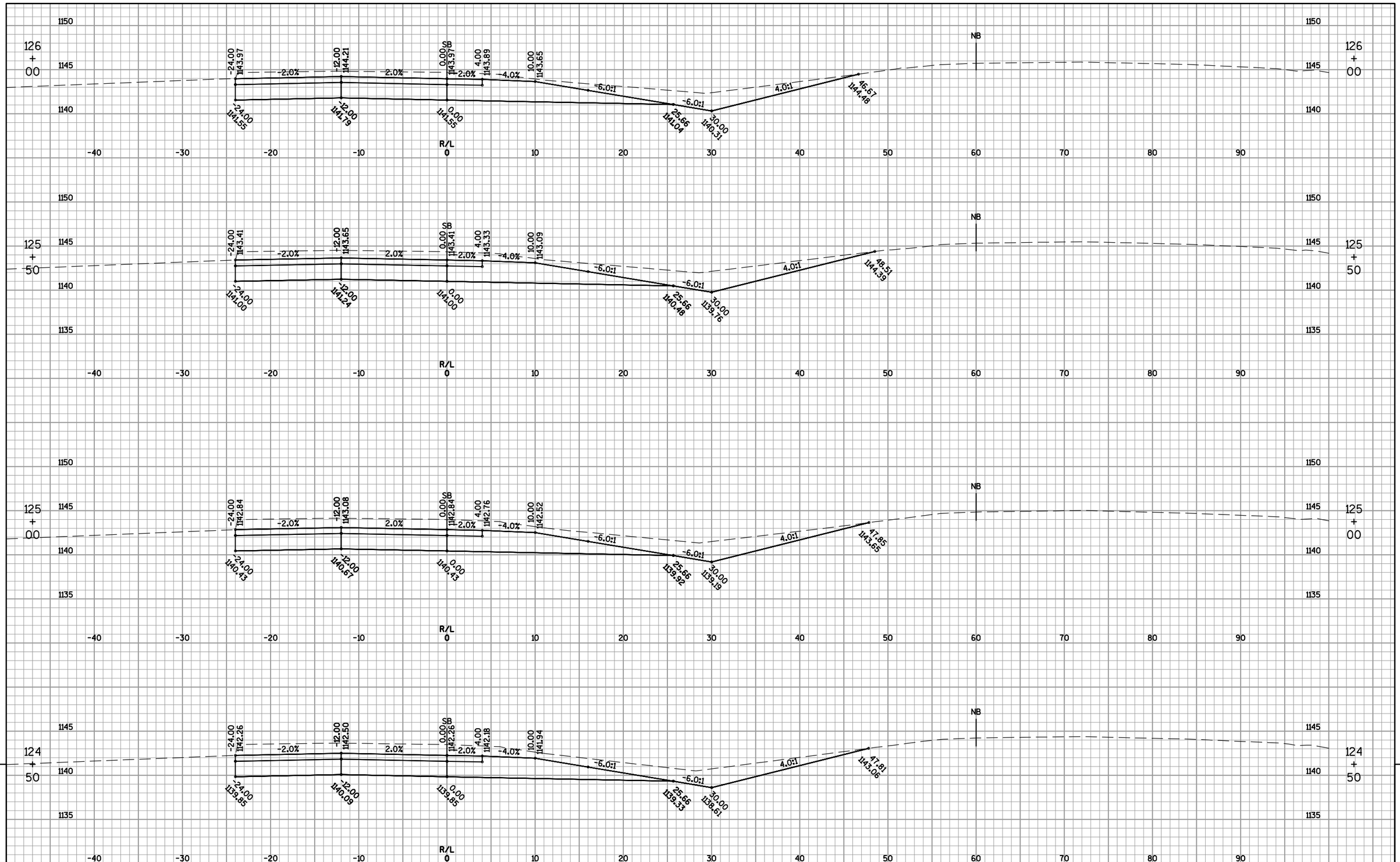
FILE NAME : F:\TR\JOBS\E2031A12\CIVIL 3D\SHEETSPLAN\XSECTS\11660872_090200_XSS3.DWG
11660872_0□02□2_□□_□□
PLOT DATE : 4/2/2014 12:39 PM PLOT BY : OMNNI ASSOCIATES, INC - ANDREW WESTBROOK
WISDOT/CADDS SHEET 49



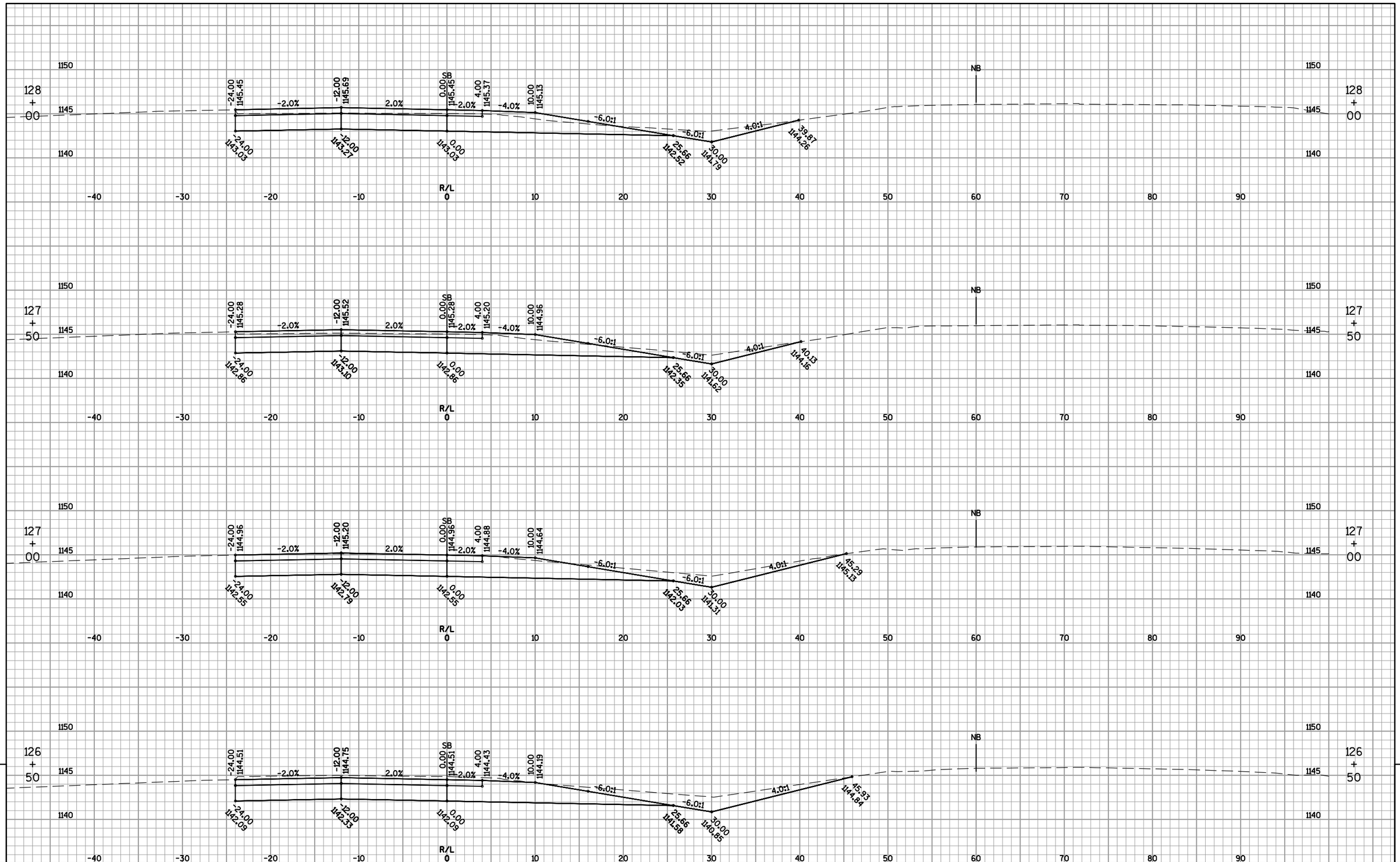

| PROJECT NO: 1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | CROSS SECTIONS: STAGE 3 | SHEET 286 | E |
|---|---|---|---|---|---|



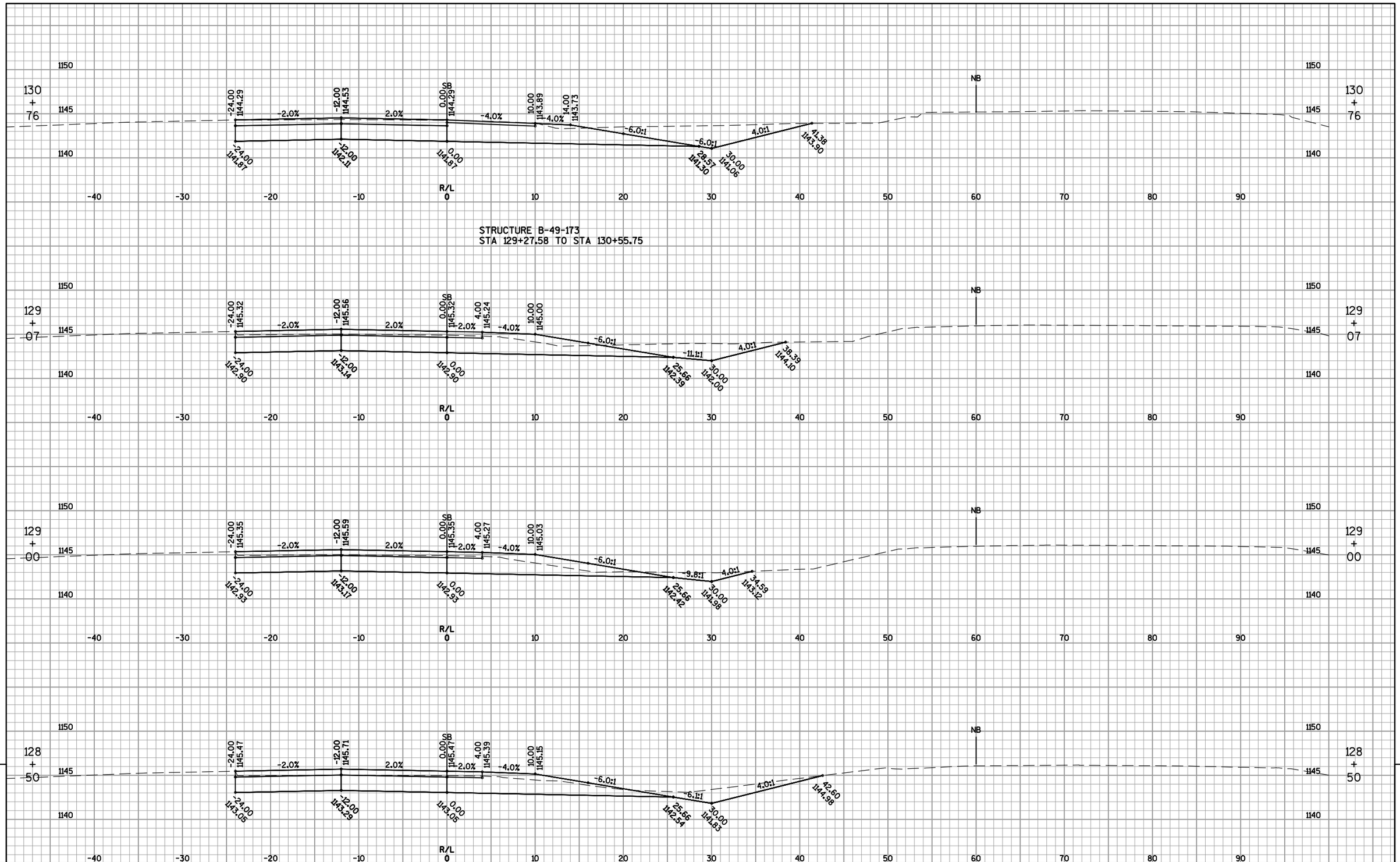

| PROJECT NO: 1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | CROSS SECTIONS: STAGE 3 | SHEET 287 | E |
|---|---|---|---|---|---|




| | | | | |
|---|---|---|---|---|
| PROJECT NO: 1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | CROSS SECTIONS: STAGE 3 | SHEET 288 E |




| PROJECT NO: 1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | CROSS SECTIONS: STAGE 3 | SHEET 289 | E |
|---|---|---|---|---|---|

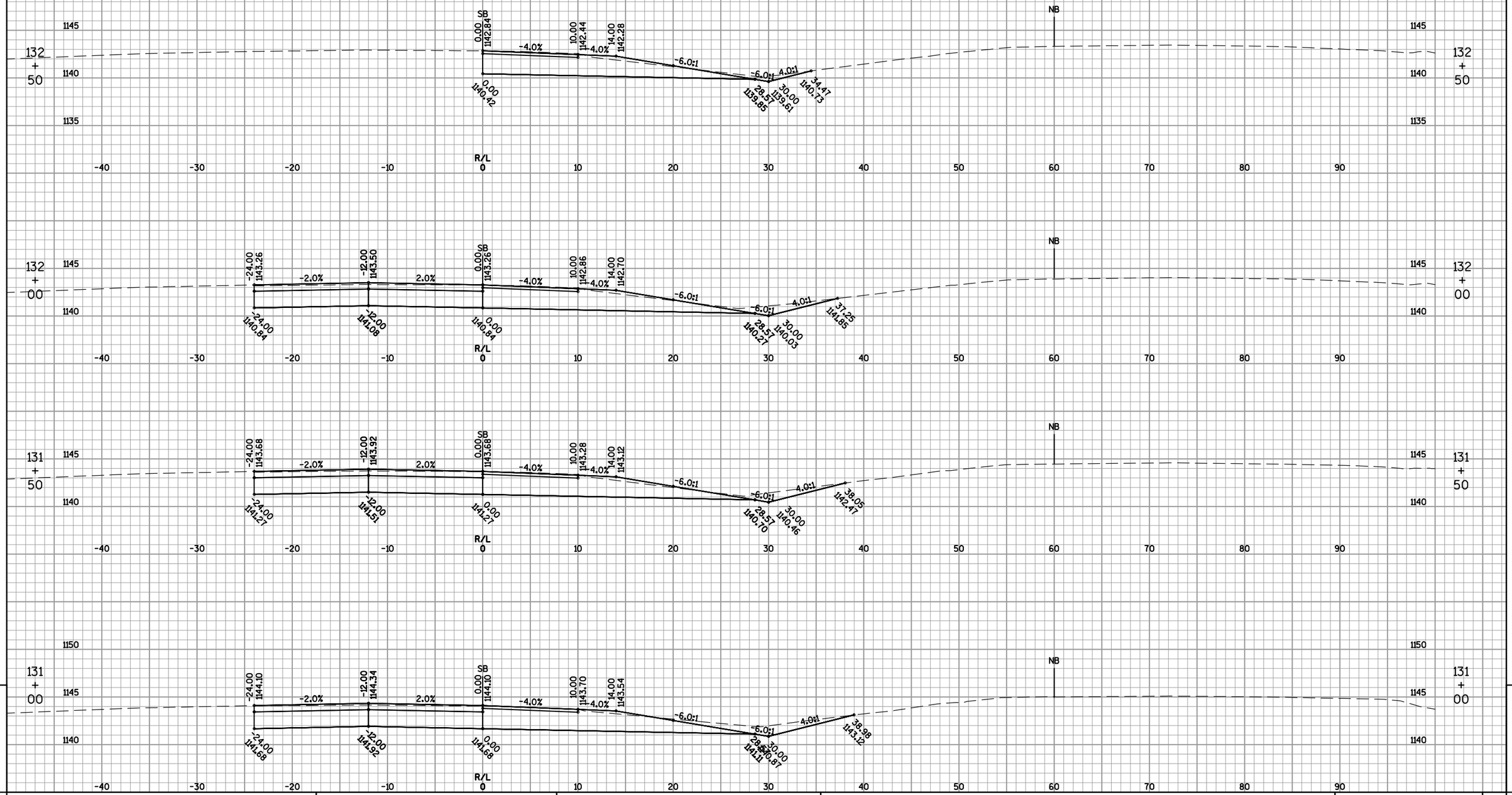



| PROJECT NO: 1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | CROSS SECTIONS: STAGE 3 | SHEET 290 | E |
|---|---|---|---|---|---|

FILE NAME : F:\TR\JOBS\E2031A12\CIVIL 3D\SHEETSPLAN\XSECTS\11660872_090200_XSS3.DWG
11660872_090257_XS_S3

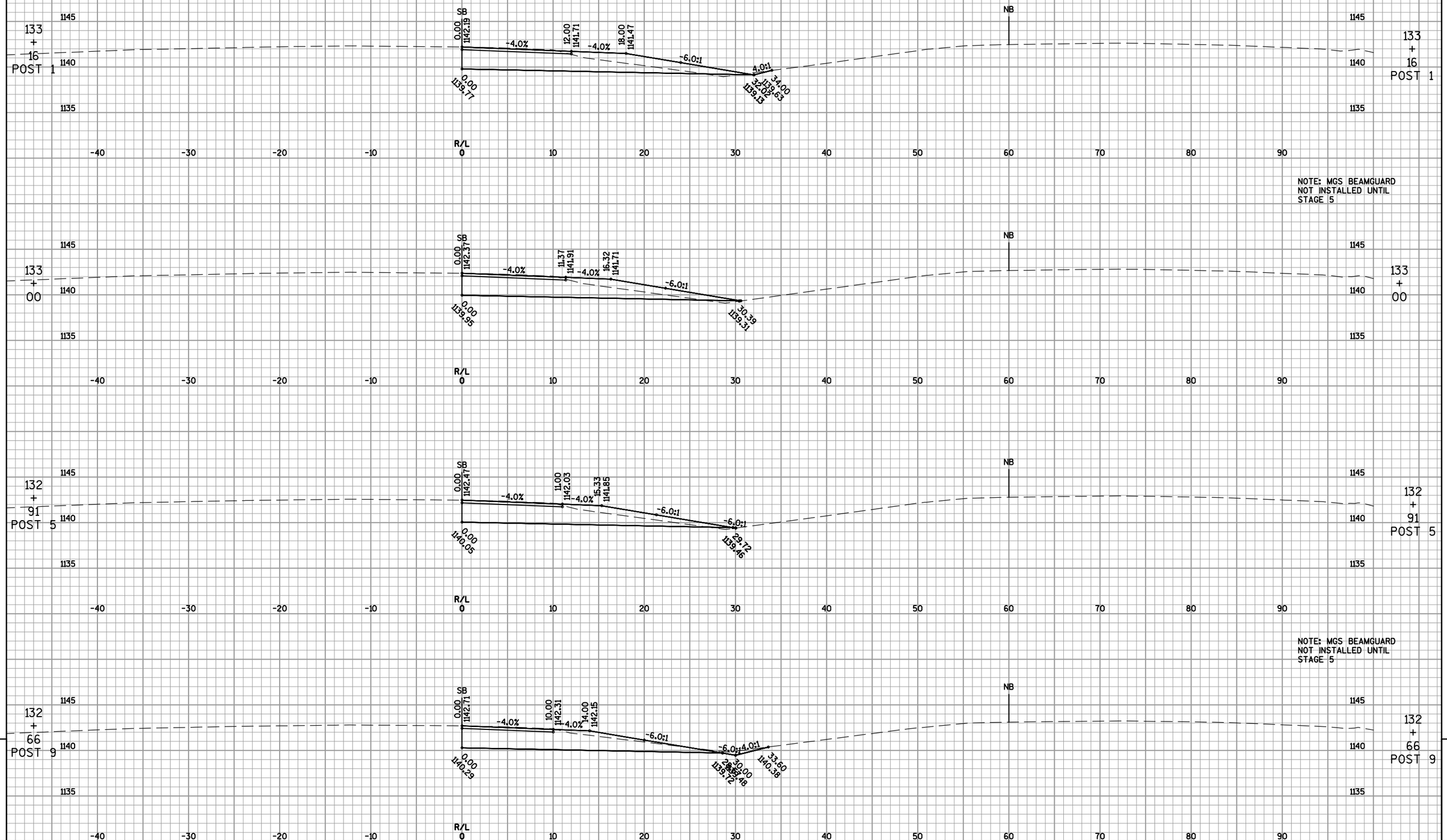
PLOT DATE : 1/24/2014 8:47 AM PLOT BY : OMNNI ASSOCIATES, INC - DAVE PERRY

WISDOT/CADDS SHEET 49

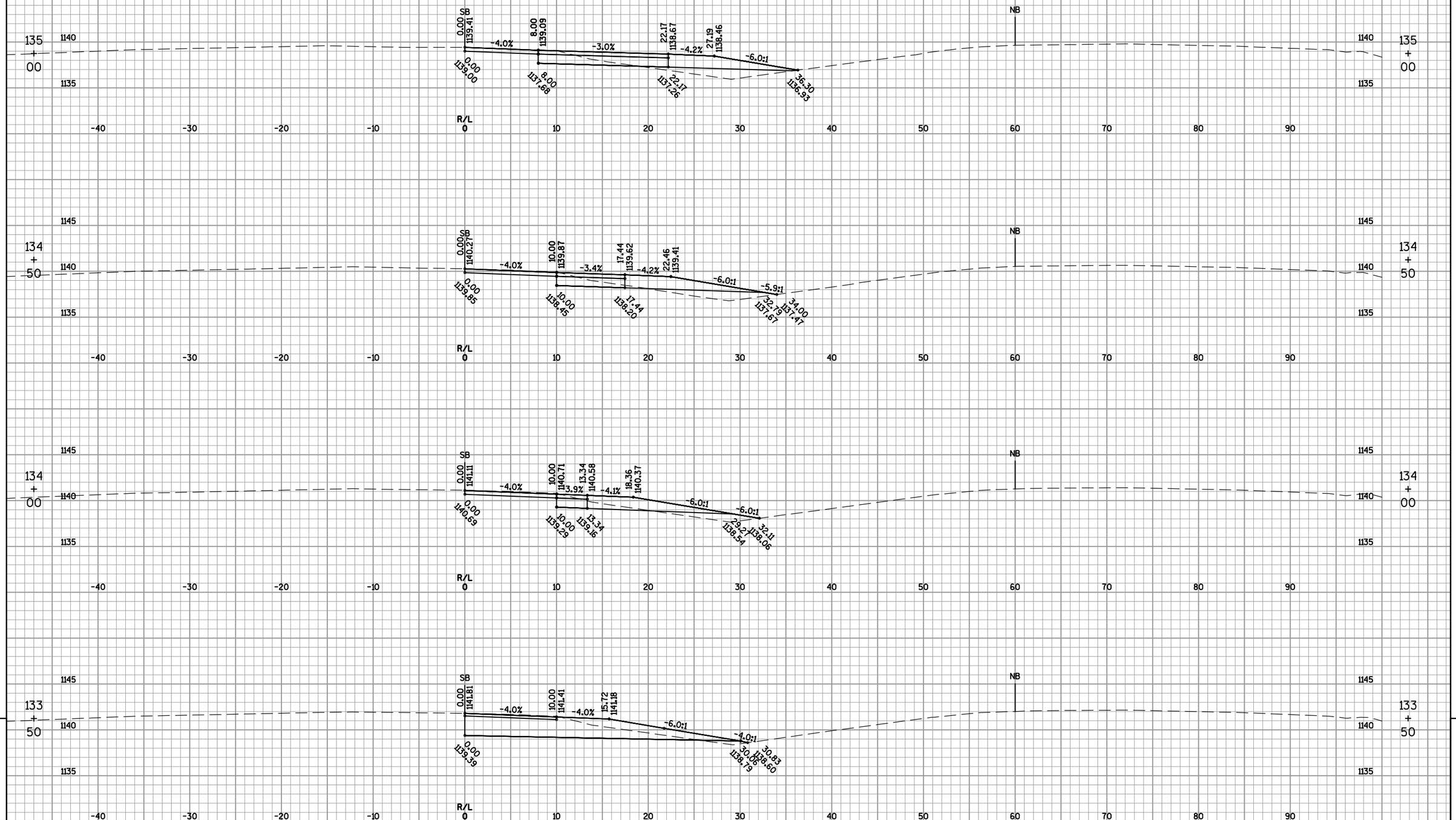



| PROJECT NO: 1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | CROSS SECTIONS: STAGE 3 | SHEET 291 | E |
|---|---|---|---|---|---|

FILE NAME : F:\TR\JOBS\E2031A12\CIVIL 3D\SHEETSPLAN\XSECTS\11660872_090200_XSS3.DWG PLOT DATE : 1/24/2014 8:26 AM PLOT BY : OMNNI ASSOCIATES, INC - DAVE PERRY



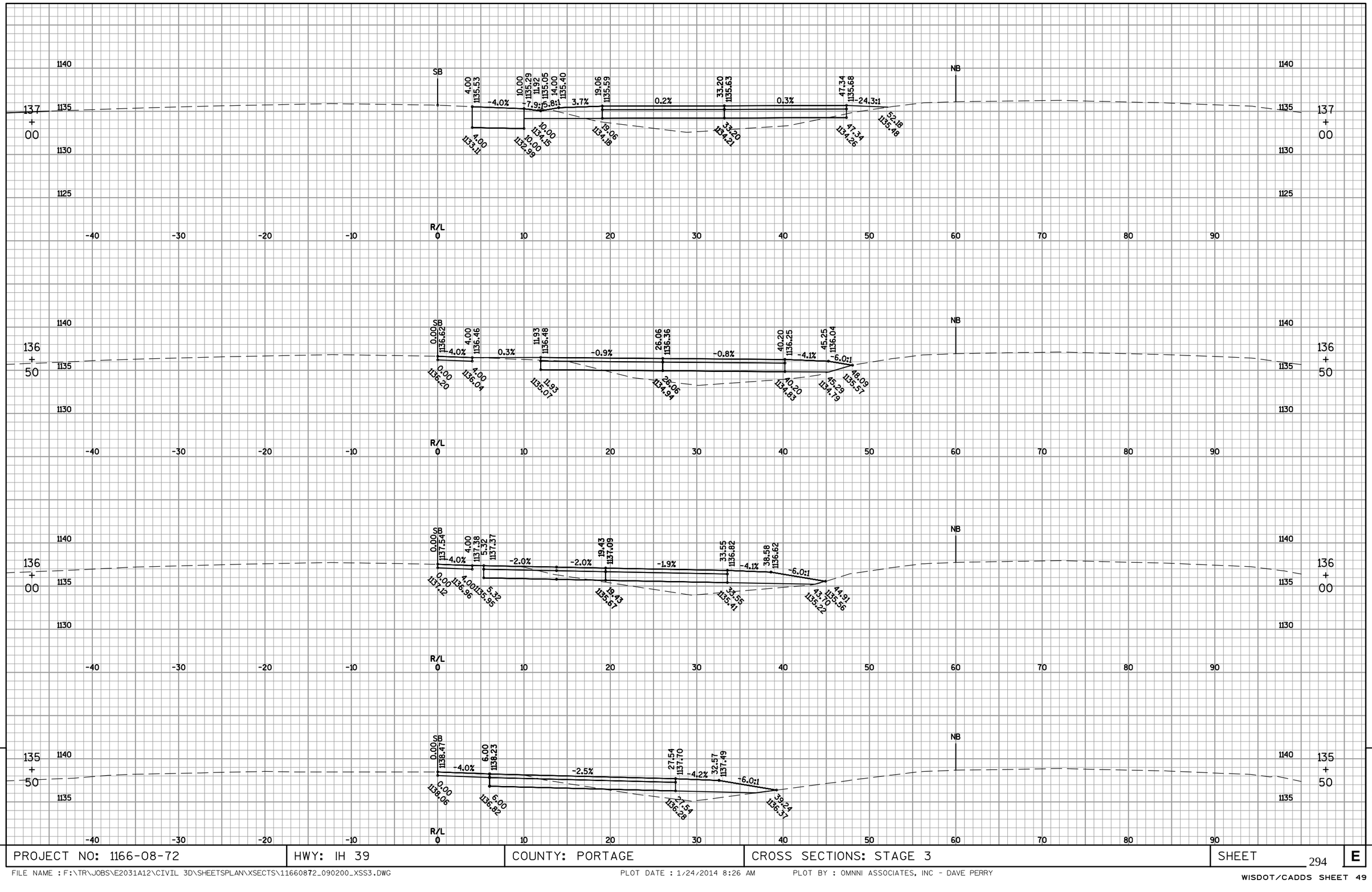

| PROJECT NO: 1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | CROSS SECTIONS: STAGE 3 | SHEET 292 | E |
|---|---|---|---|---|---|



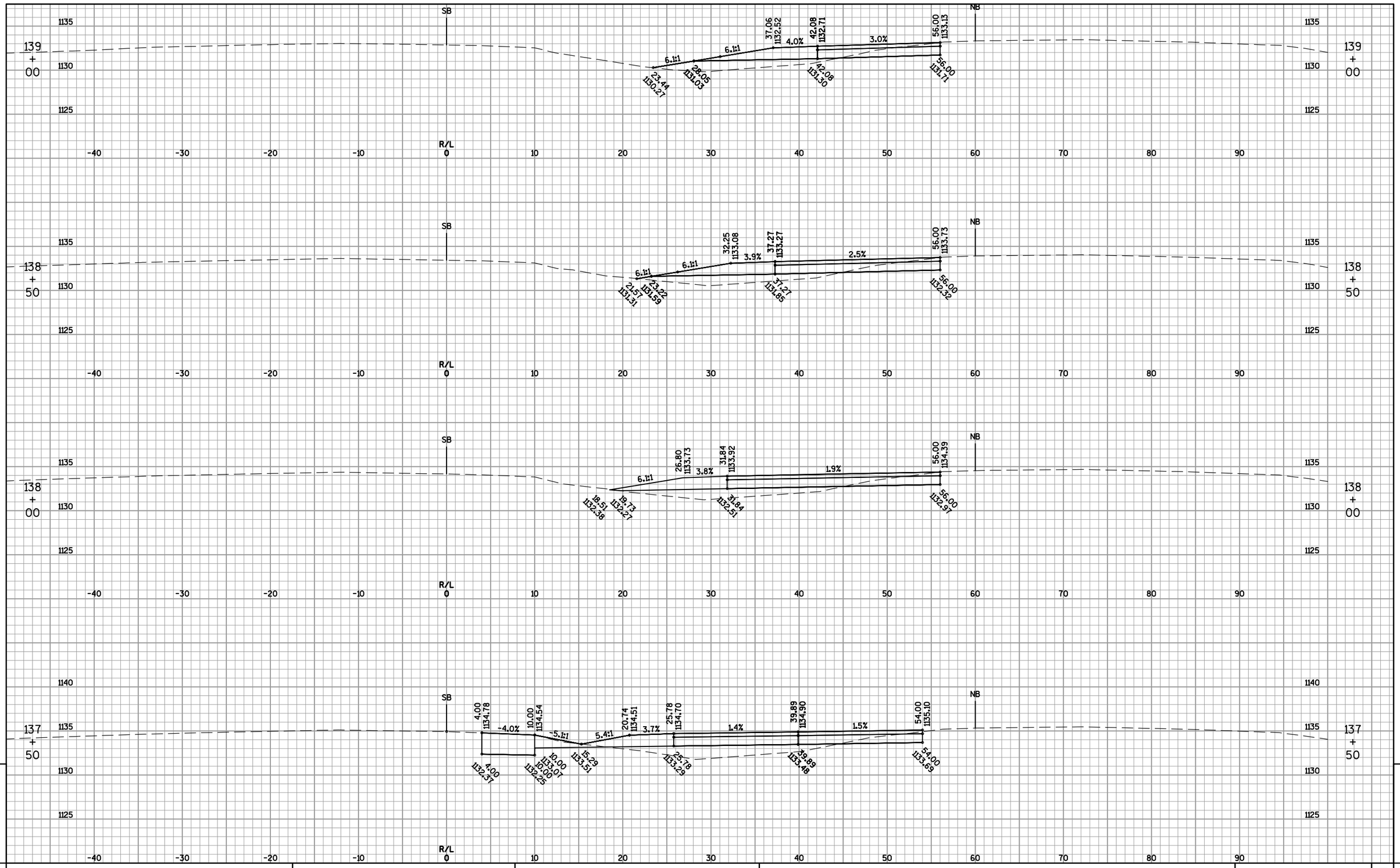

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| PROJECT NO: 1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | CROSS SECTIONS: STAGE 3 | SHEET 293 | E |
|---|---|---|---|---|---|



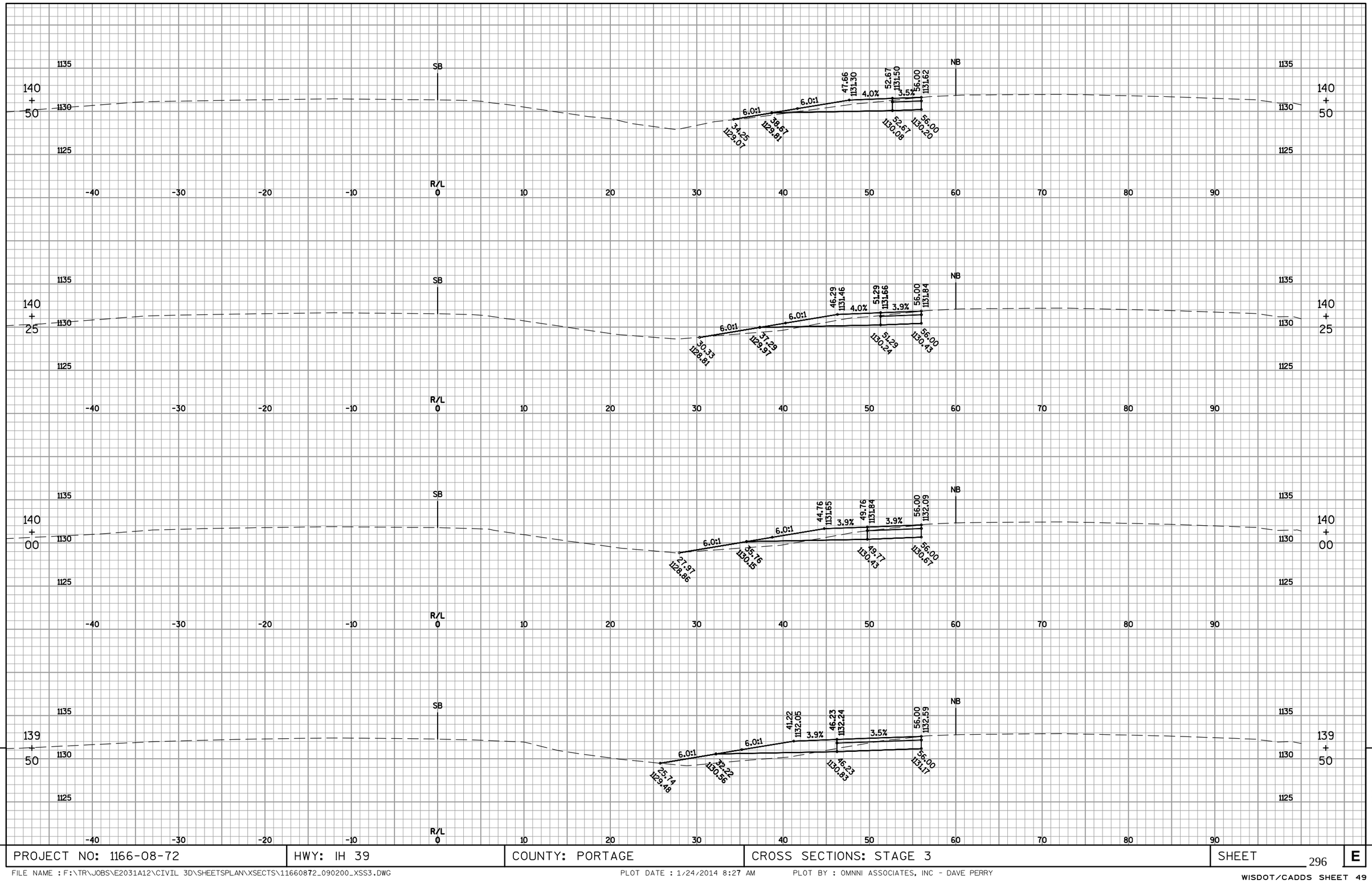

| PROJECT NO: 1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | CROSS SECTIONS: STAGE 3 | SHEET 294 | E |
|---|---|---|---|---|---|




| PROJECT NO: 1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | CROSS SECTIONS: STAGE 3 | SHEET 295 | E |
|---|---|---|---|---|---|

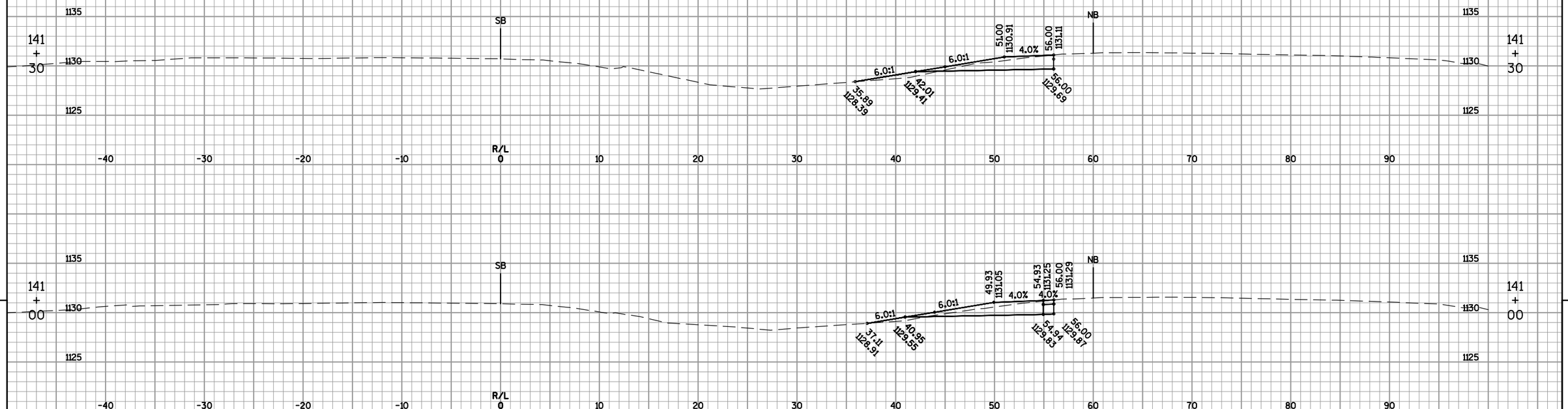
FILE NAME : F:\TR\JOBS\E2031A12\CIVIL 3D\SHEETSPLAN\XSECTS\11660872_090200_XSS3.DWG PLOT DATE : 1/24/2014 8:26 AM PLOT BY : OMNNI ASSOCIATES, INC - DAVE PERRY

WISDOT/CADDS SHEET 49




9

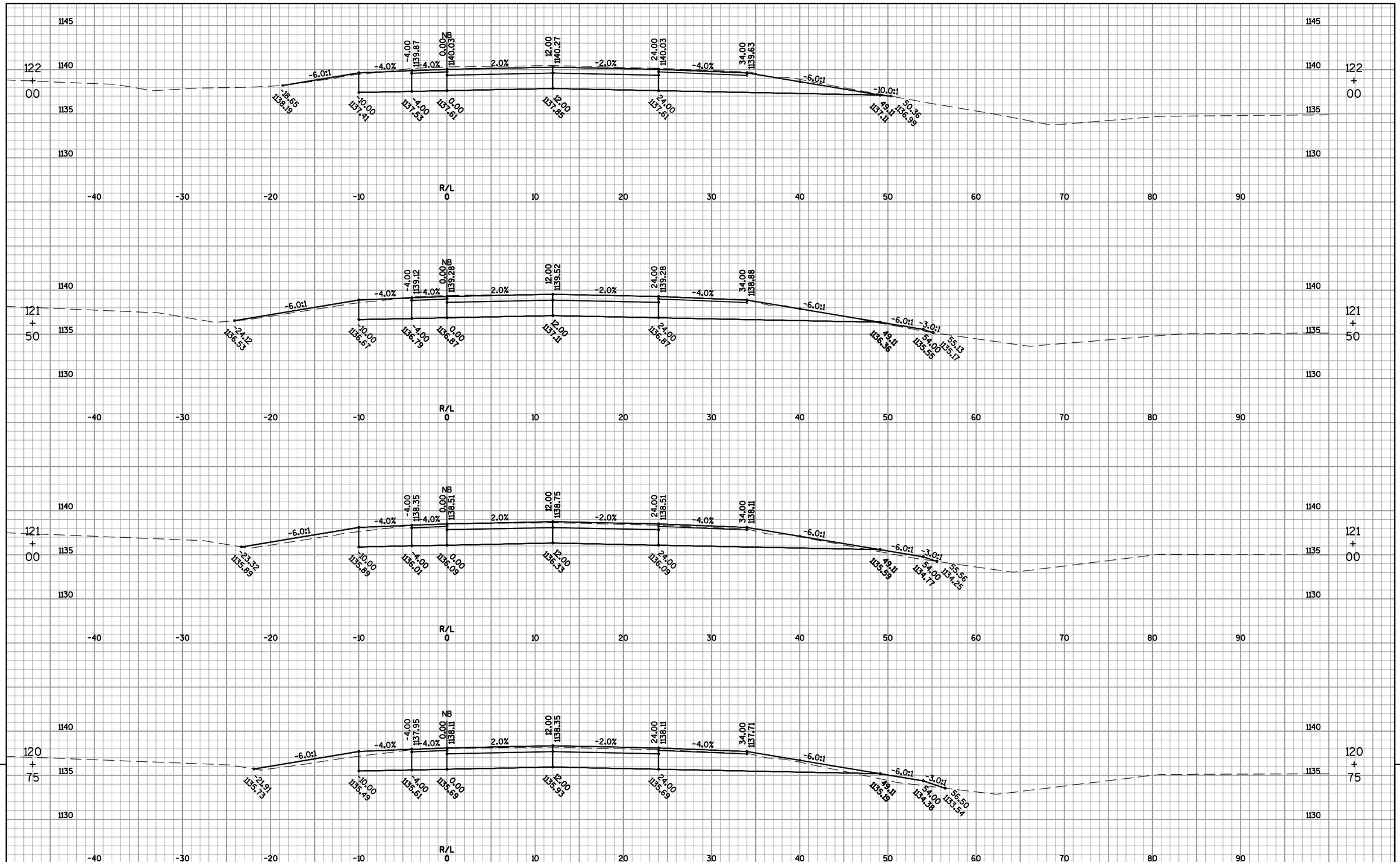
| PROJECT NO: 1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | CROSS SECTIONS: STAGE 3 | SHEET 296 | E |
|---|---|---|---|---|---|



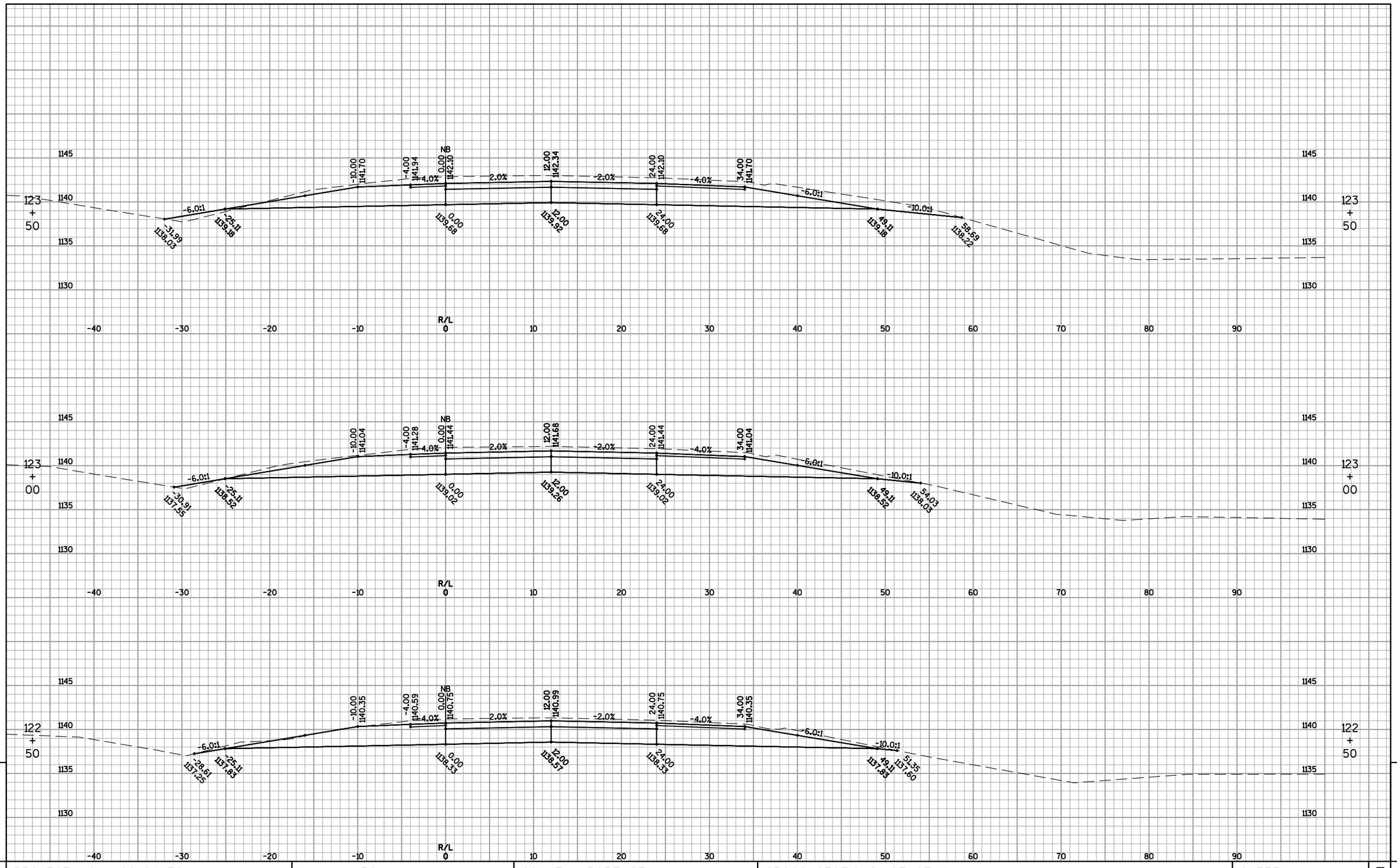

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| PROJECT NO: 1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | CROSS SECTIONS: STAGE 3 | SHEET 297 | E |
|---|---|---|---|---|---|



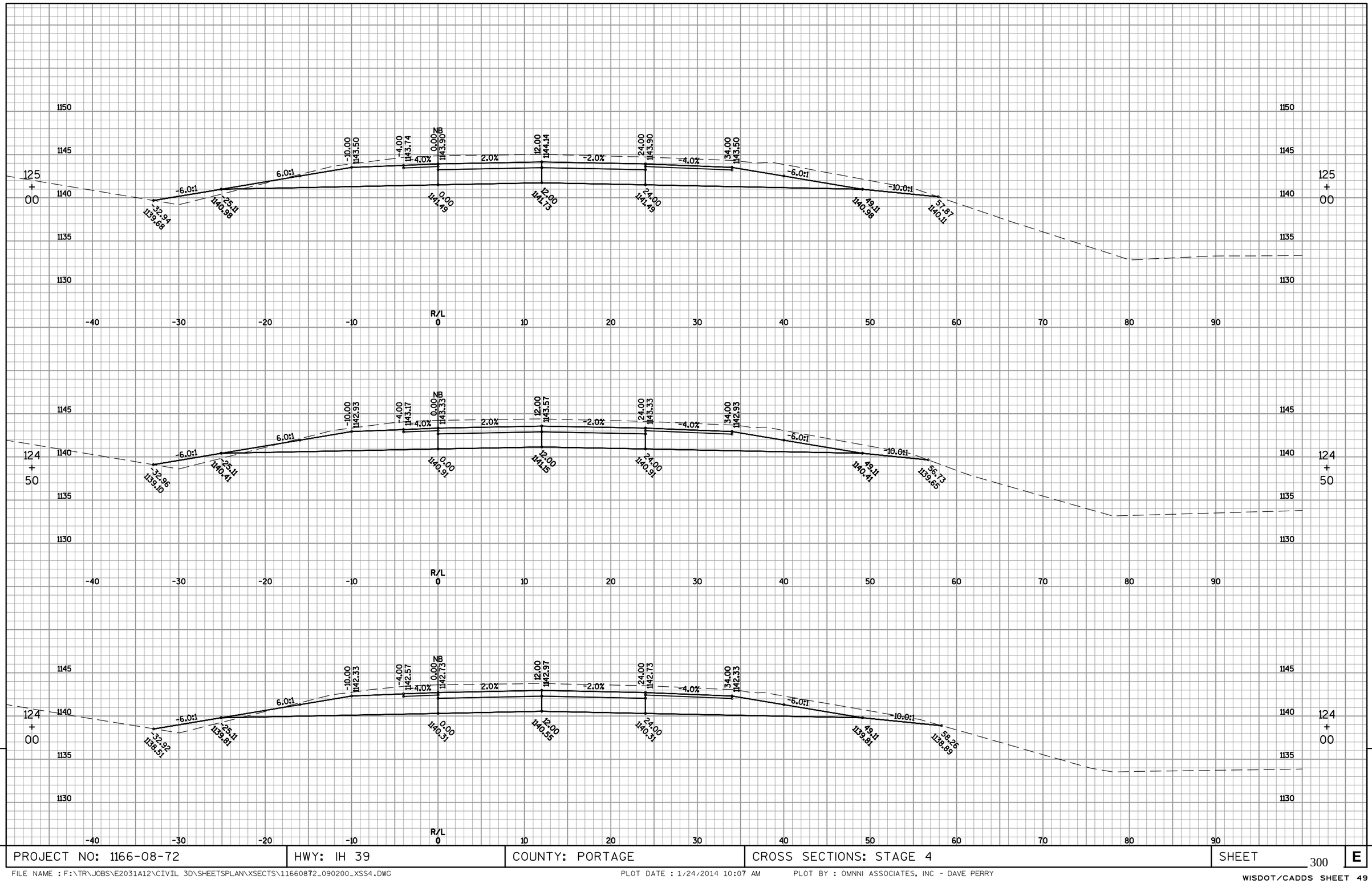

| PROJECT NO: 1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | CROSS SECTIONS: STAGE 4 | SHEET 298 | E |
|---|---|---|---|---|---|




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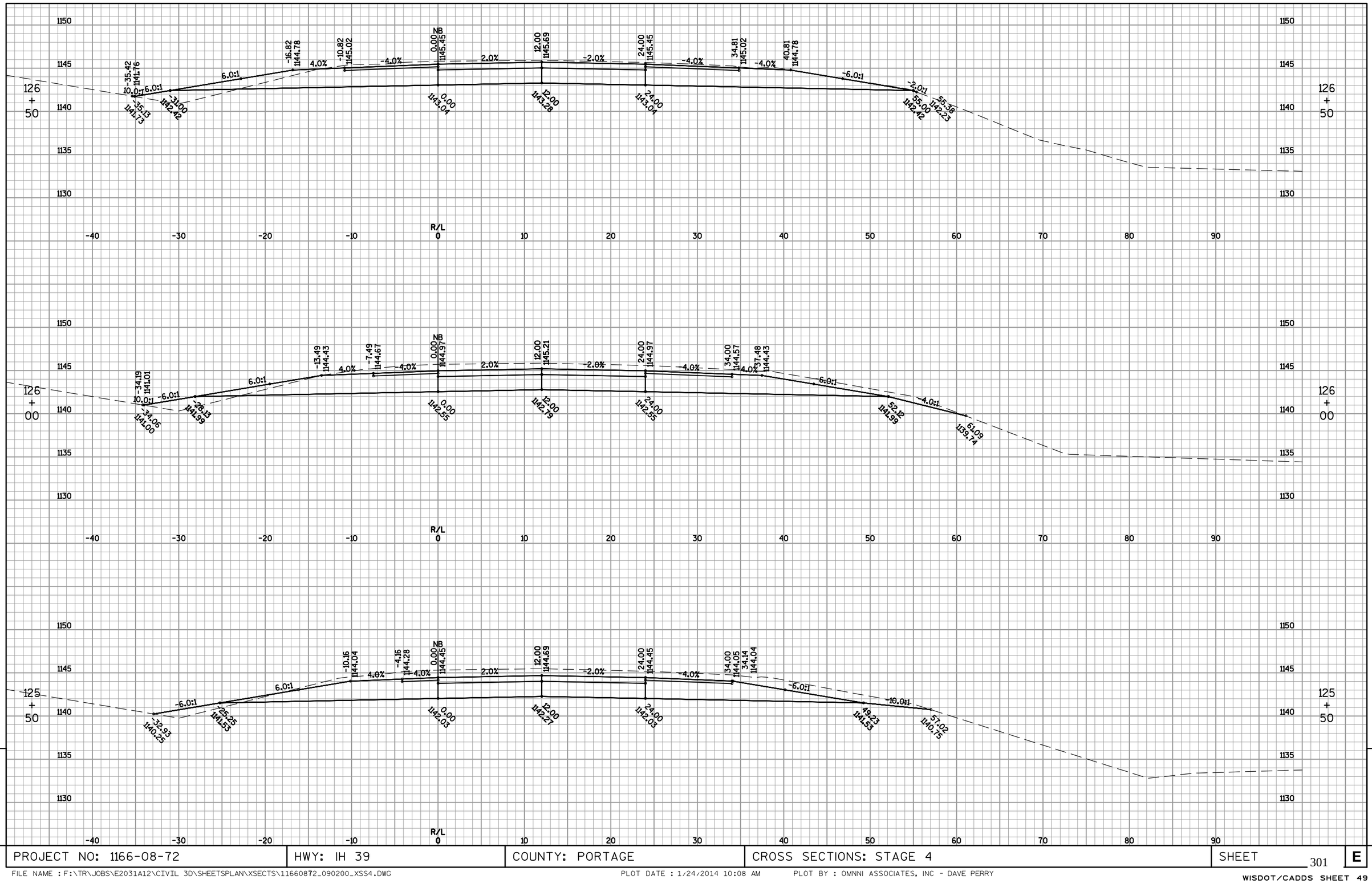
| PROJECT NO: 1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | CROSS SECTIONS: STAGE 4 | SHEET 299 | E |
|---|---|---|---|---|---|




| PROJECT NO: 1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | CROSS SECTIONS: STAGE 4 | SHEET 300 | E |
|---|---|---|---|---|---|

FILE NAME : F:\TR\JOBS\E2031A12\CIVIL 3D\SHEETSPLAN\XSECTS\1166087 2_090200_XSS4.DWG PLOT DATE : 1/24/2014 10:07 AM PLOT BY : OMNNI ASSOCIATES, INC - DAVE PERRY

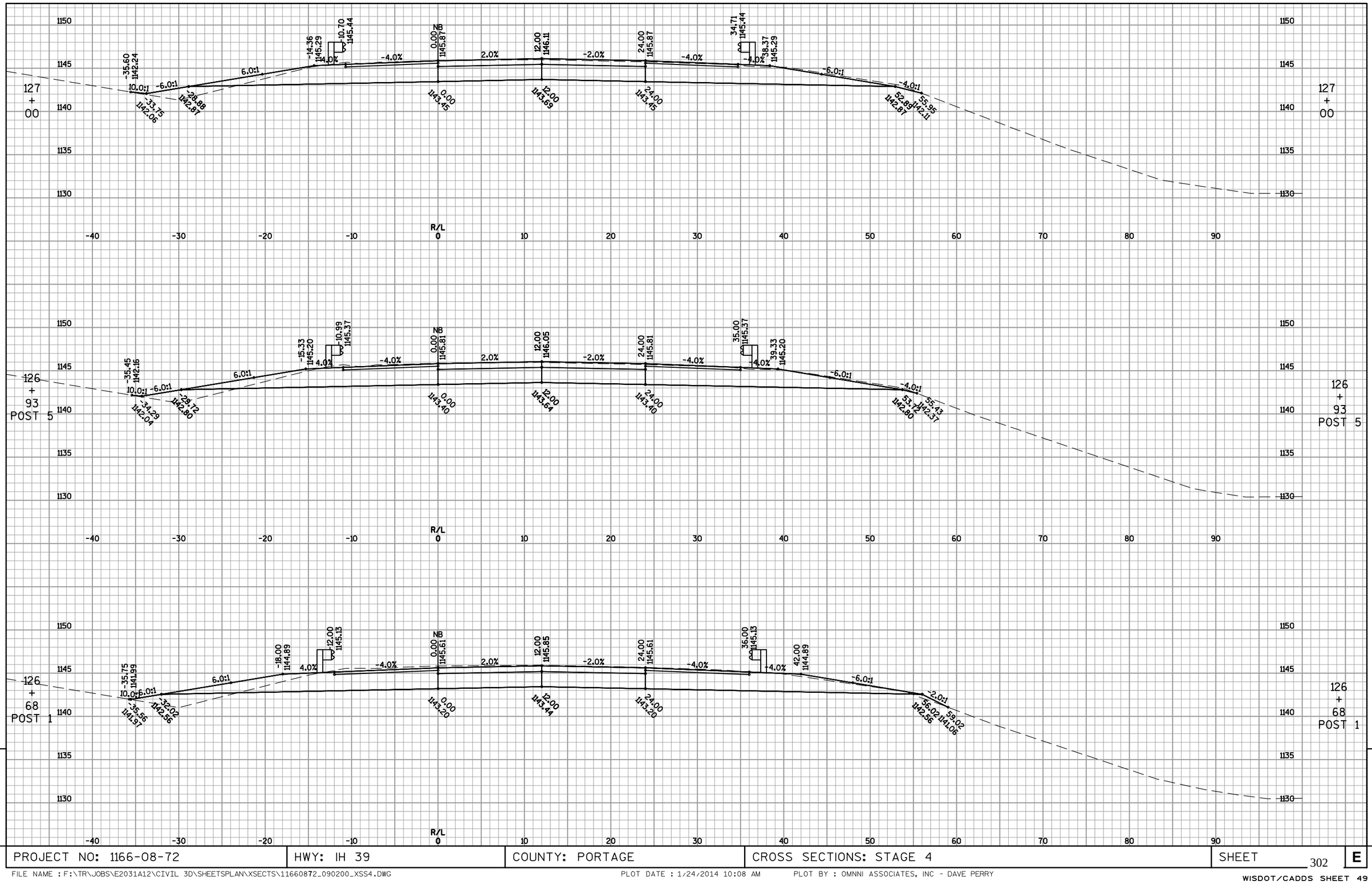
WISDOT/CADDS SHEET 49



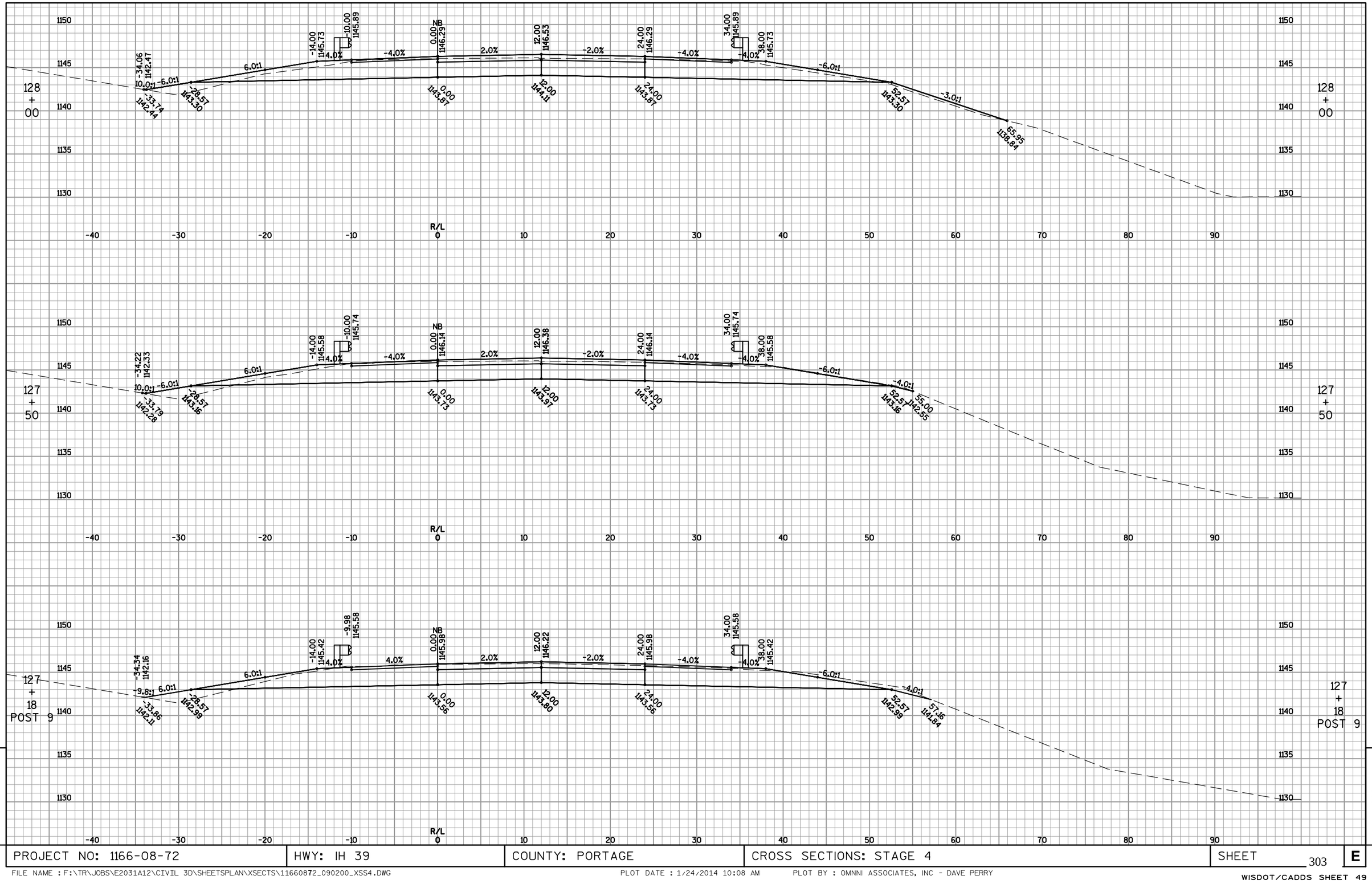

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9

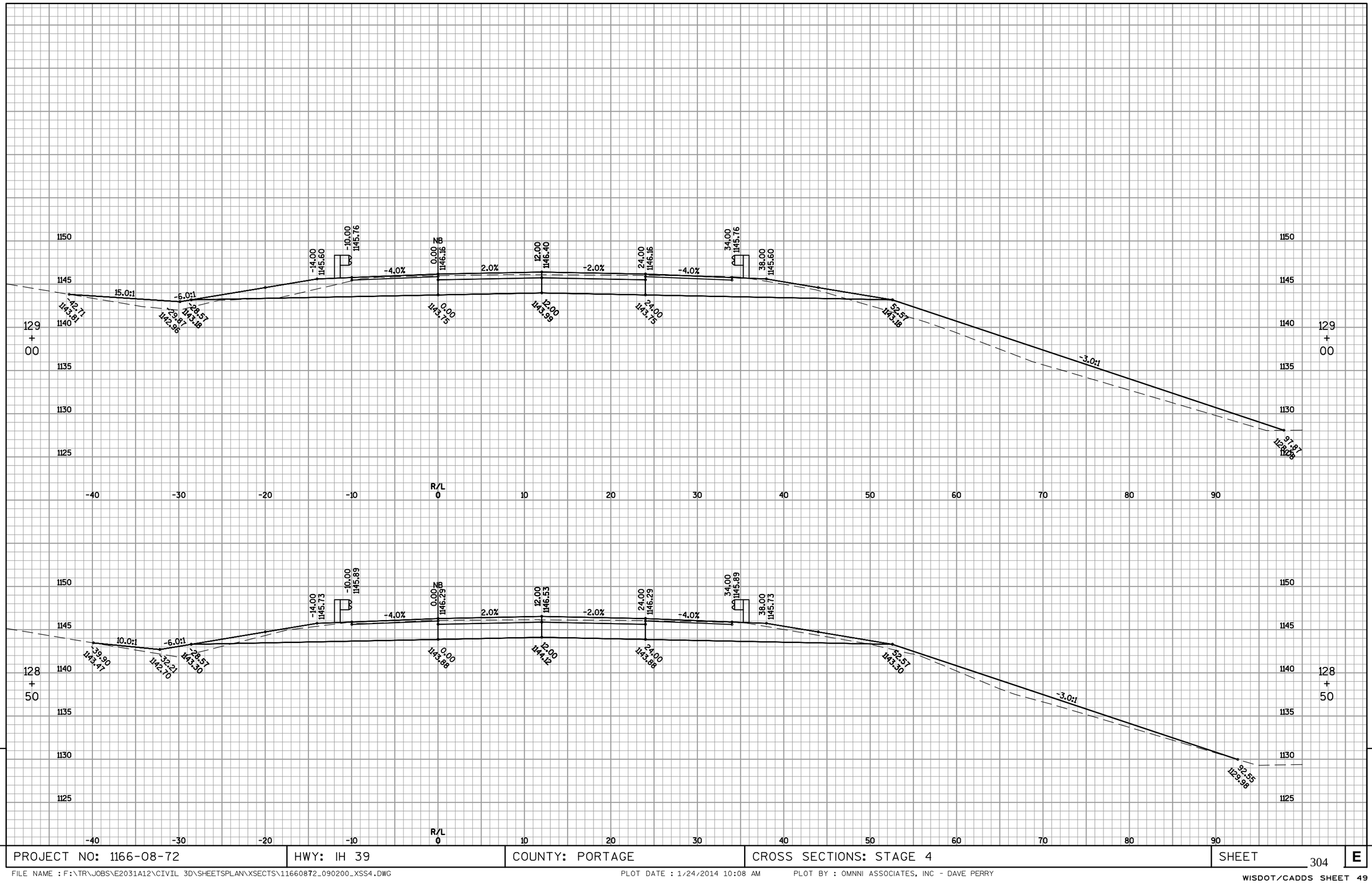
| PROJECT NO: 1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | CROSS SECTIONS: STAGE 4 | SHEET 301 | E |
|---|---|---|---|---|---|



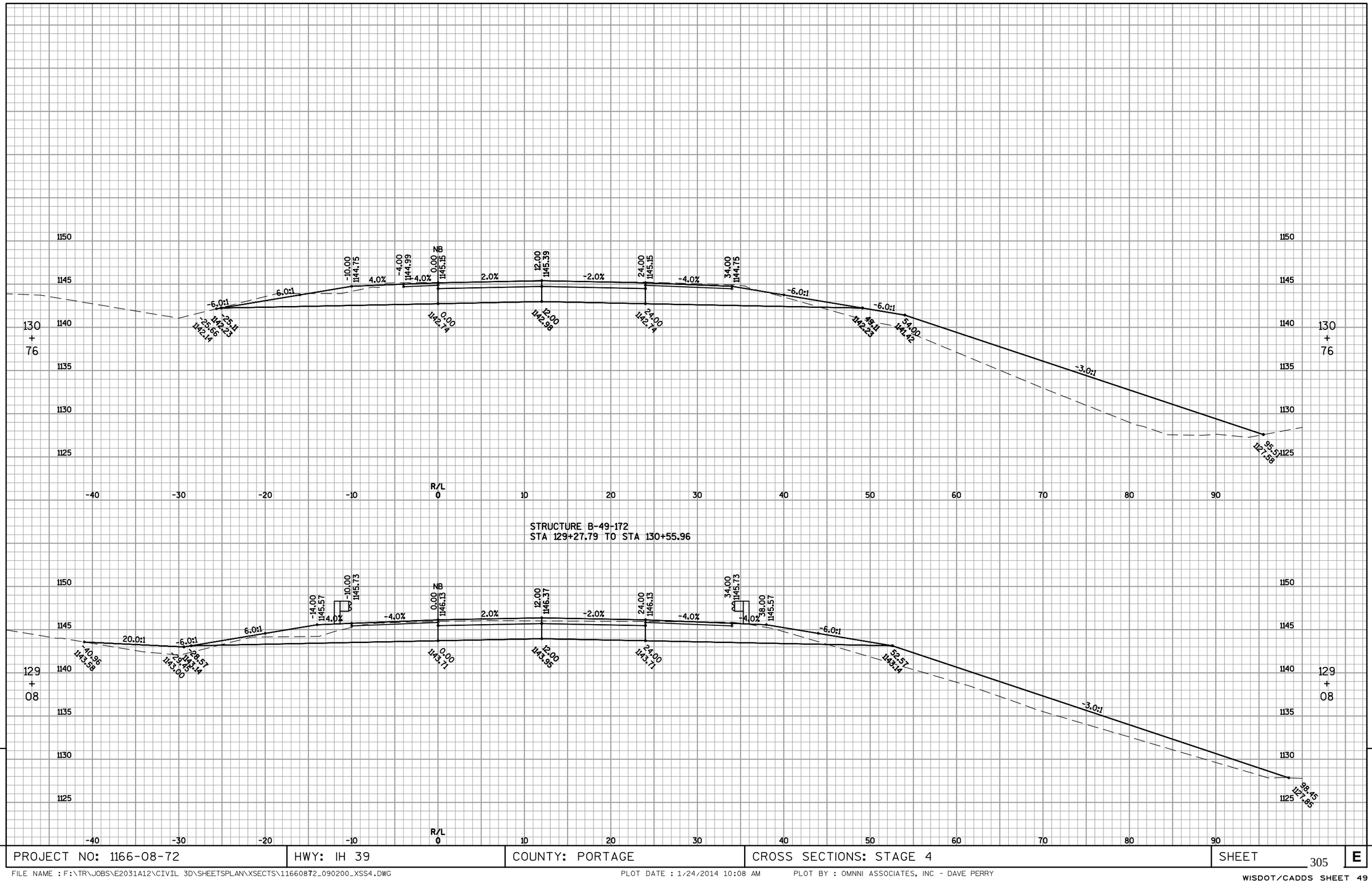

| PROJECT NO: 1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | CROSS SECTIONS: STAGE 4 | SHEET 302 | E |
|---|---|---|---|---|---|



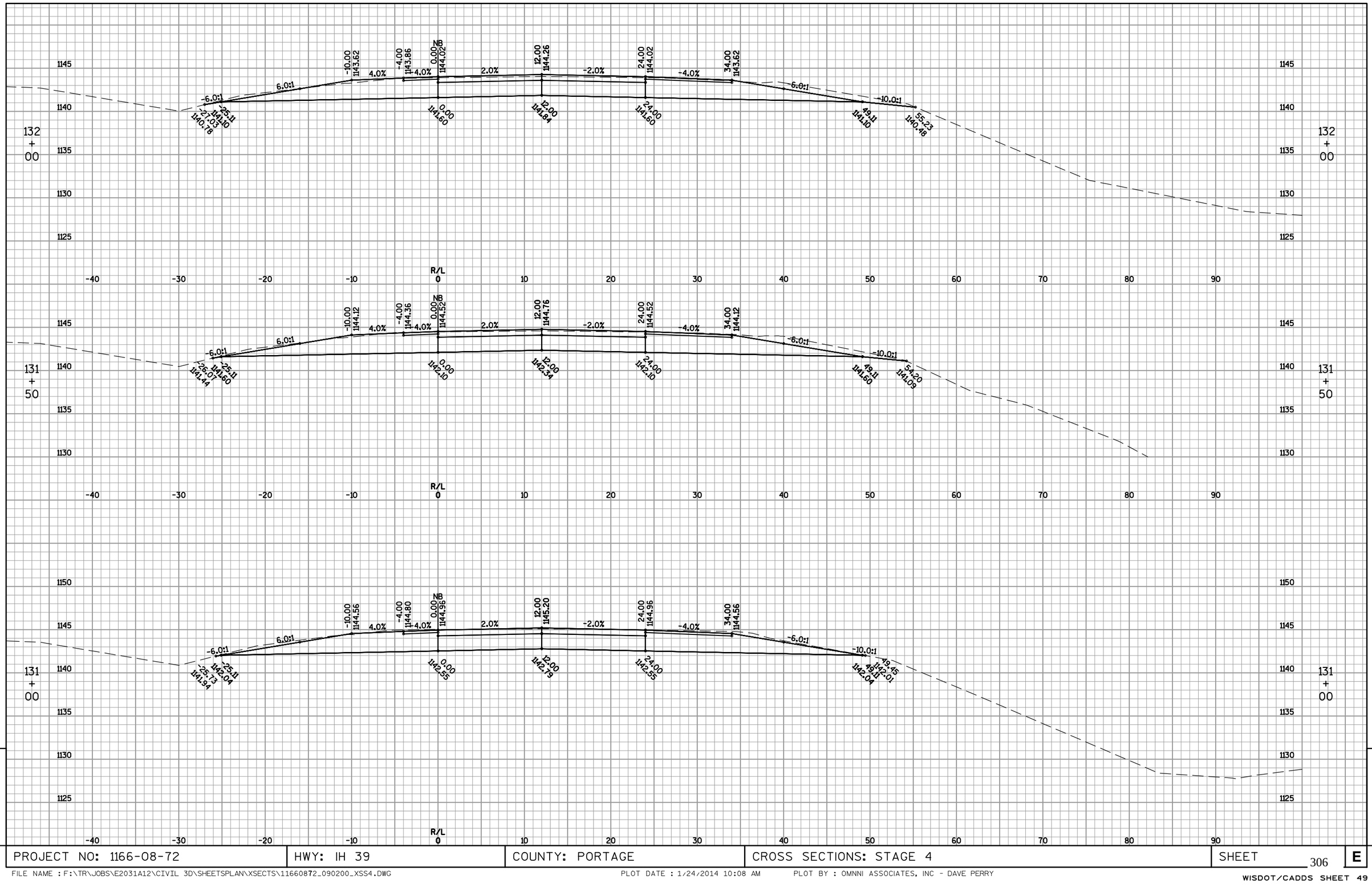

| PROJECT NO: 1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | CROSS SECTIONS: STAGE 4 | SHEET 303 | E |
|---|---|---|---|---|---|




| PROJECT NO: 1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | CROSS SECTIONS: STAGE 4 | SHEET 304 | E |
|---|---|---|---|---|---|



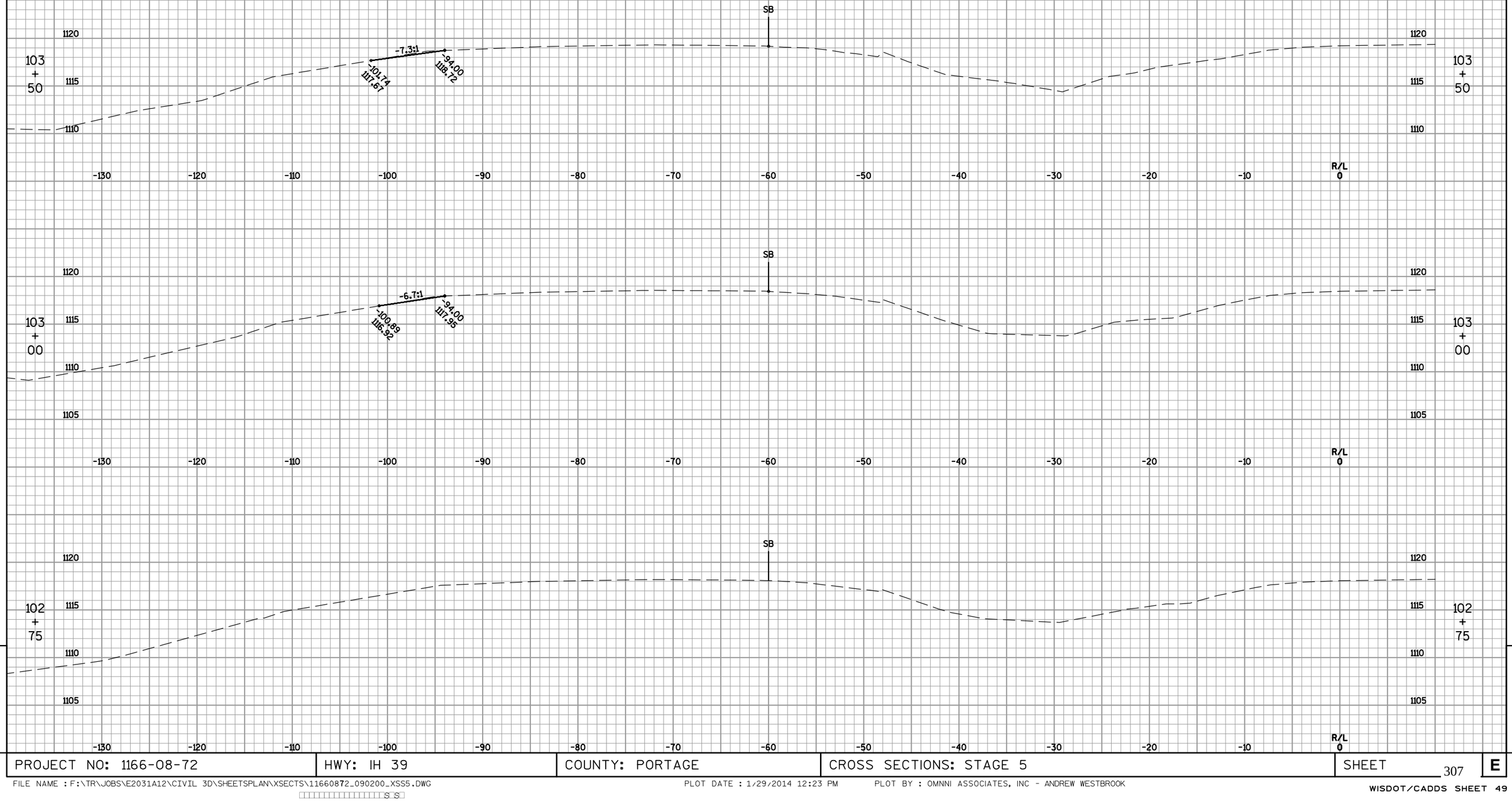

| PROJECT NO: 1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | CROSS SECTIONS: STAGE 4 | SHEET 305 | E |
|---|---|---|---|---|---|




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|---|---|---|---|---|
| PROJECT NO: 1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | CROSS SECTIONS: STAGE 4 | SHEET 306 E |

FILE NAME : F:\TR\JOBS\E2031A12\CIVIL 3D\SHEETSPLAN\XSECTS\1166087 2_090200_XSS4.DWG PLOT DATE : 1/24/2014 10:08 AM PLOT BY : OMNNI ASSOCIATES, INC - DAVE PERRY

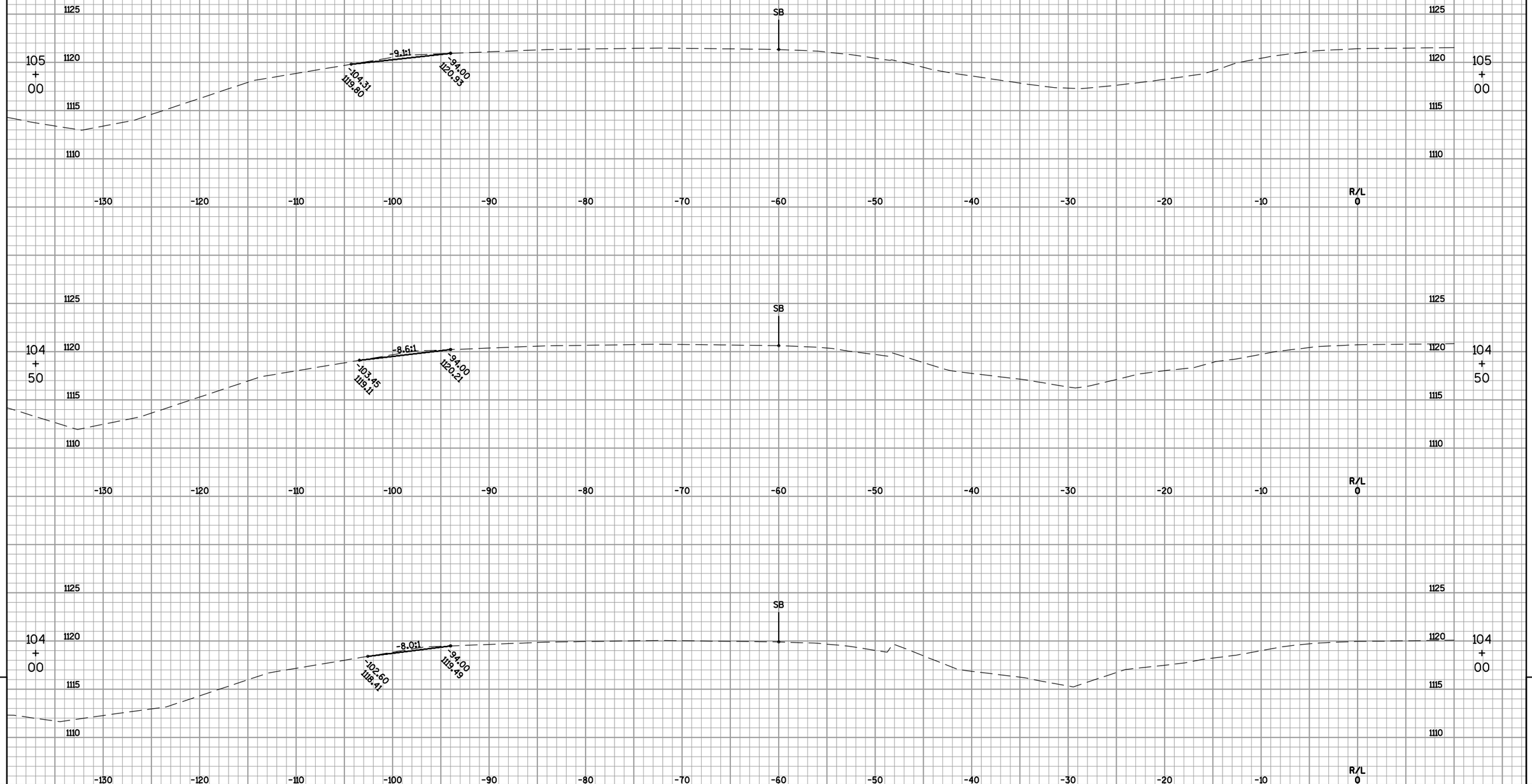
WISDOT/CADDS SHEET 49




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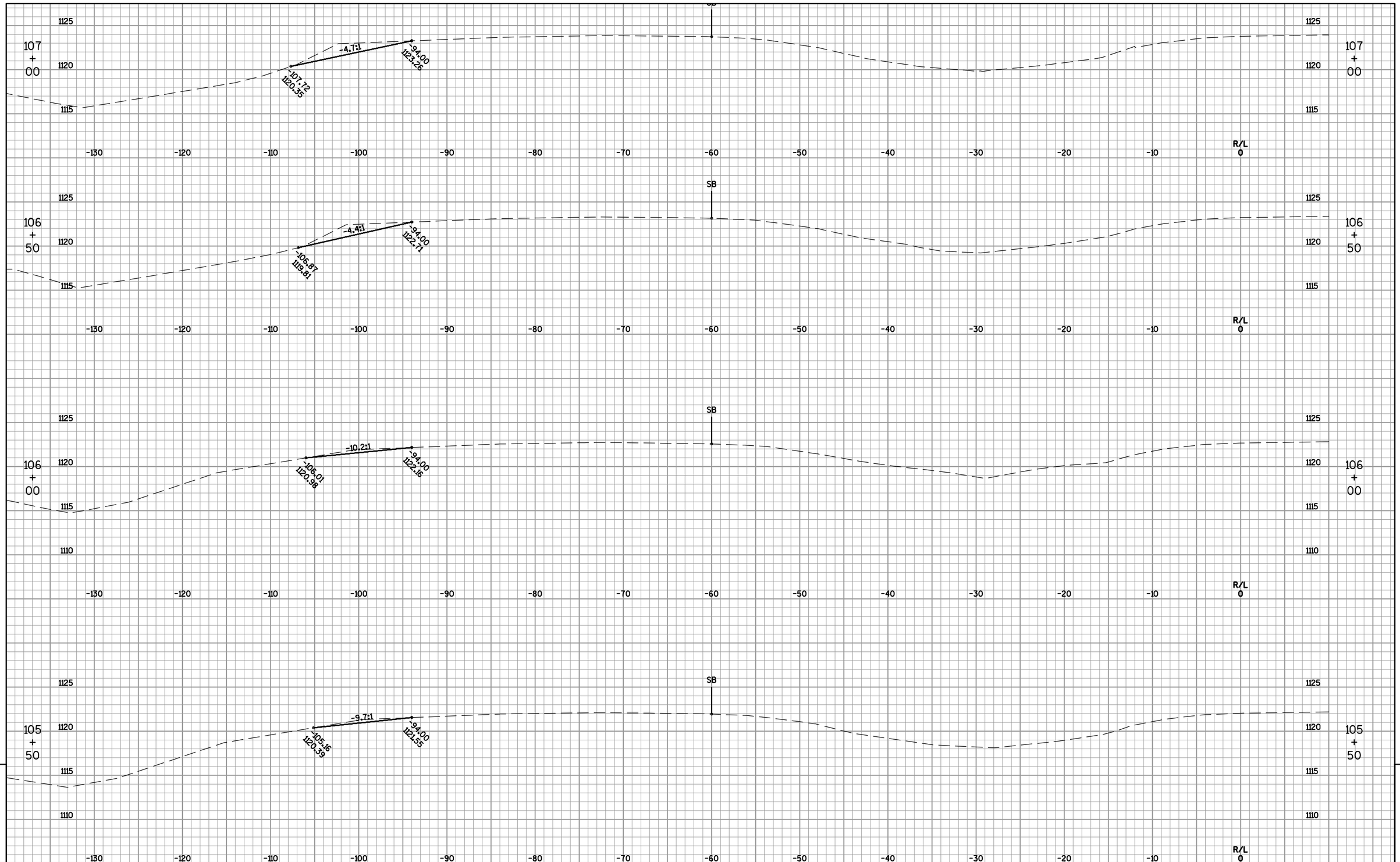
| PROJECT NO: 1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | CROSS SECTIONS: STAGE 5 | SHEET 307 | E |
|---|---|---|---|---|---|



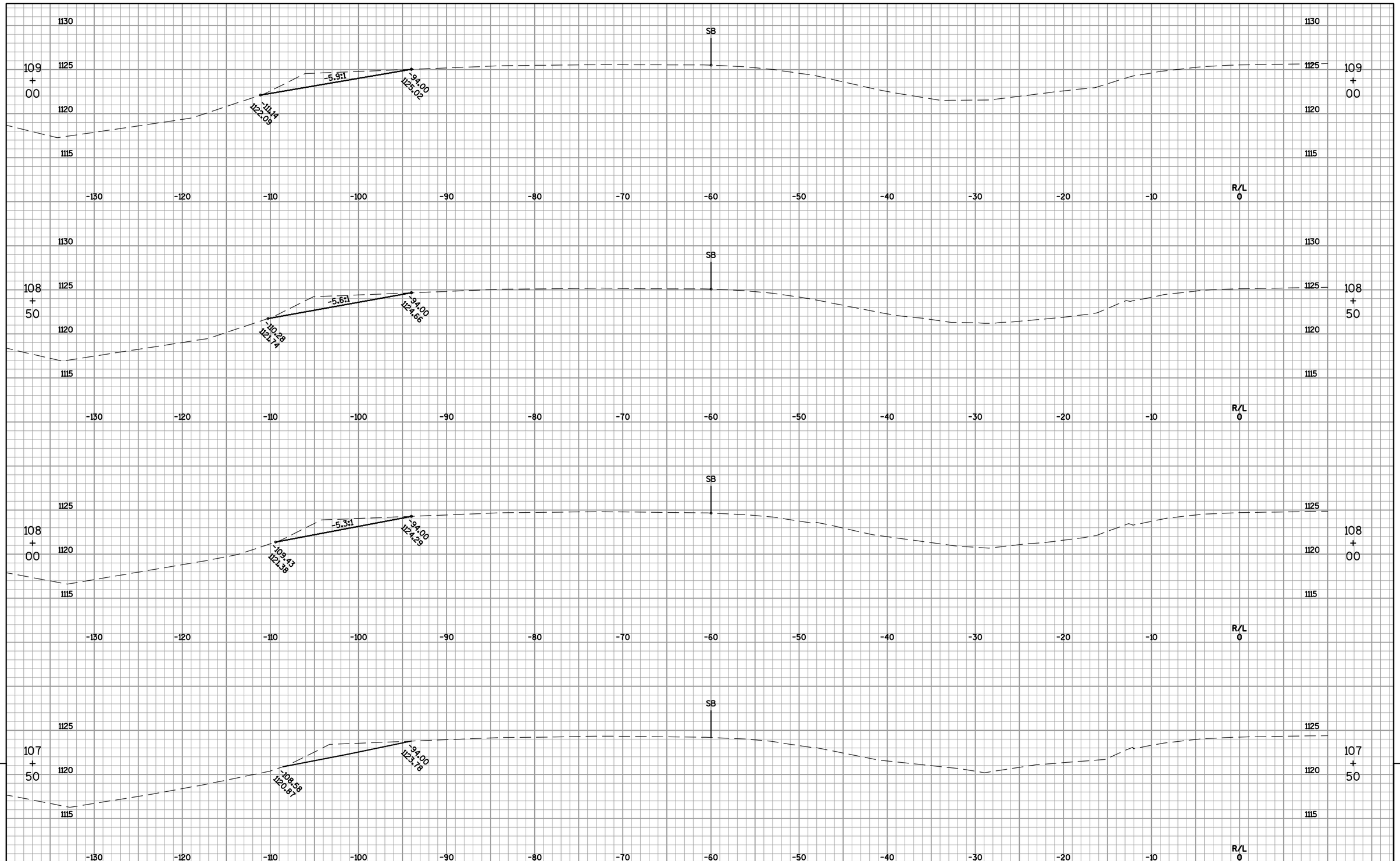

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| PROJECT NO: 1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | CROSS SECTIONS: STAGE 5 | SHEET 308 | E |
|---|---|---|---|---|---|

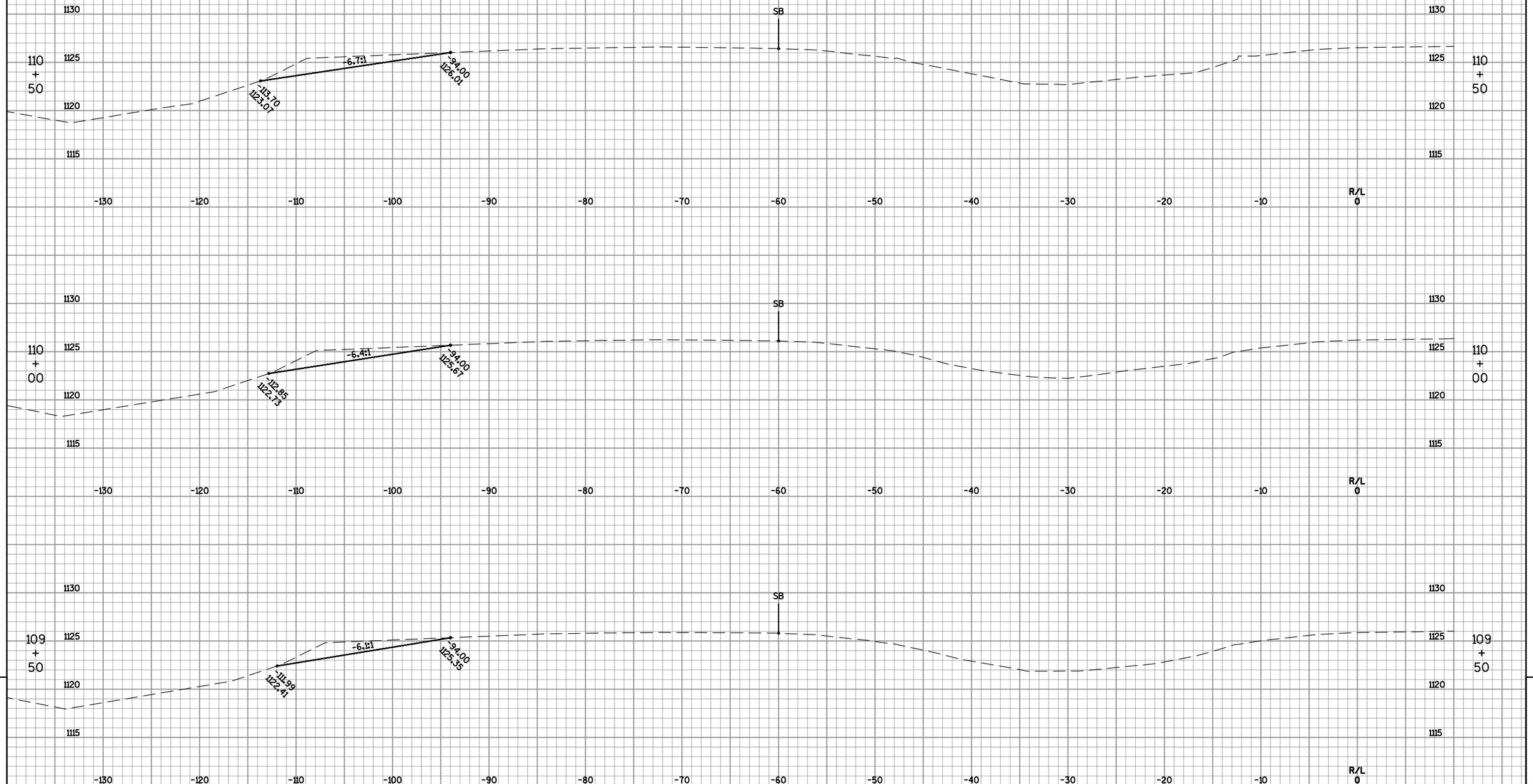



| | | | | |
|---|---|---|---|---|
| PROJECT NO: 1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | CROSS SECTIONS: STAGE 5 | SHEET 309 E |




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| PROJECT NO: 1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | CROSS SECTIONS: STAGE 5 | SHEET 310 | E |
|---|---|---|---|---|---|




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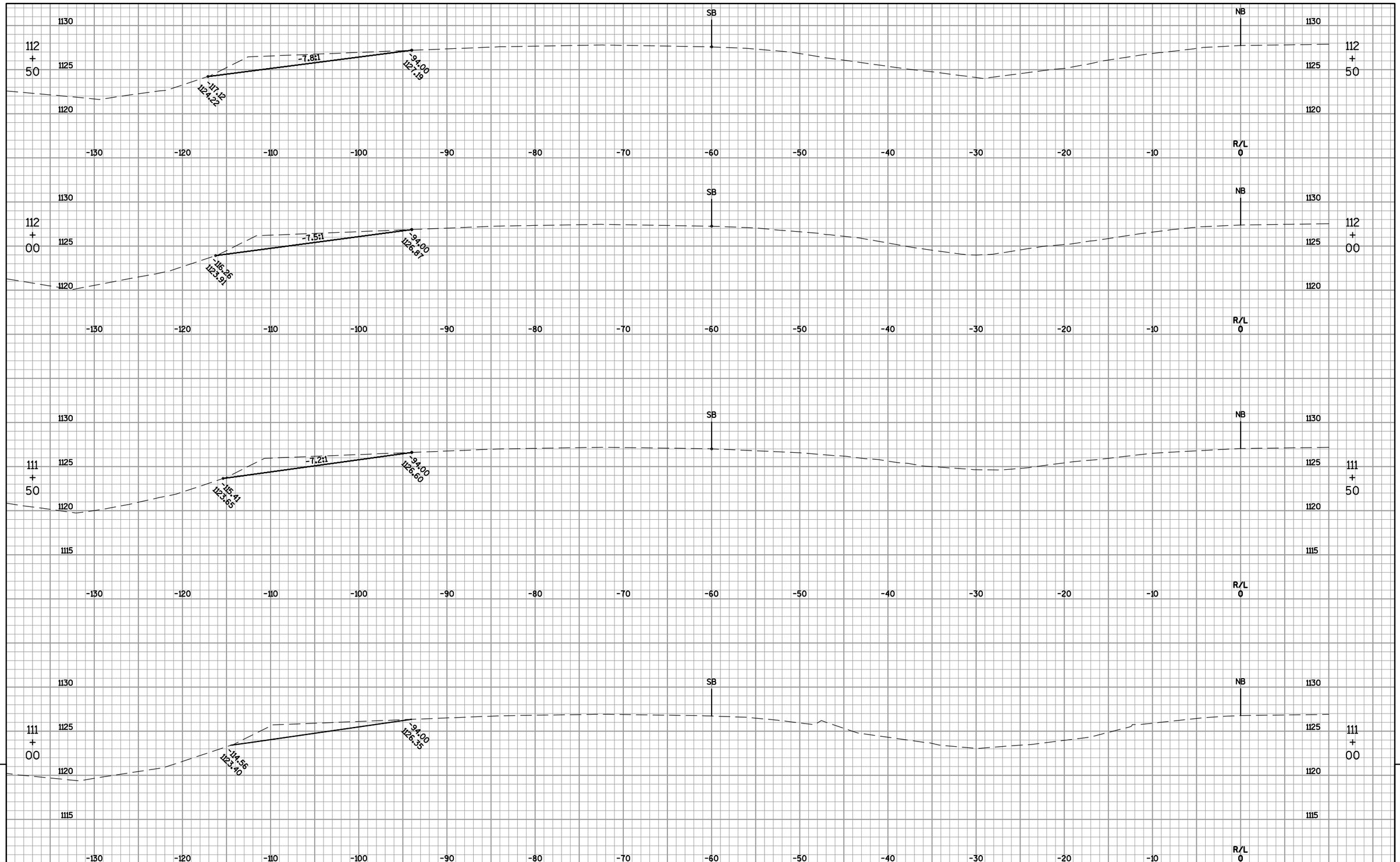
| PROJECT NO: 1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | CROSS SECTIONS: STAGE 5 | SHEET 311 | E |
|---|---|---|---|---|---|

FILE NAME : F:\TR\JOBS\E2031A12\CIVIL 3D\SHEETSPLAN\XSECTS\1166087_090200_XSS5.DWG

PLOT DATE : 1/29/2014 12:23 PM

PLOT BY : OMNNI ASSOCIATES, INC - ANDREW WESTBROOK

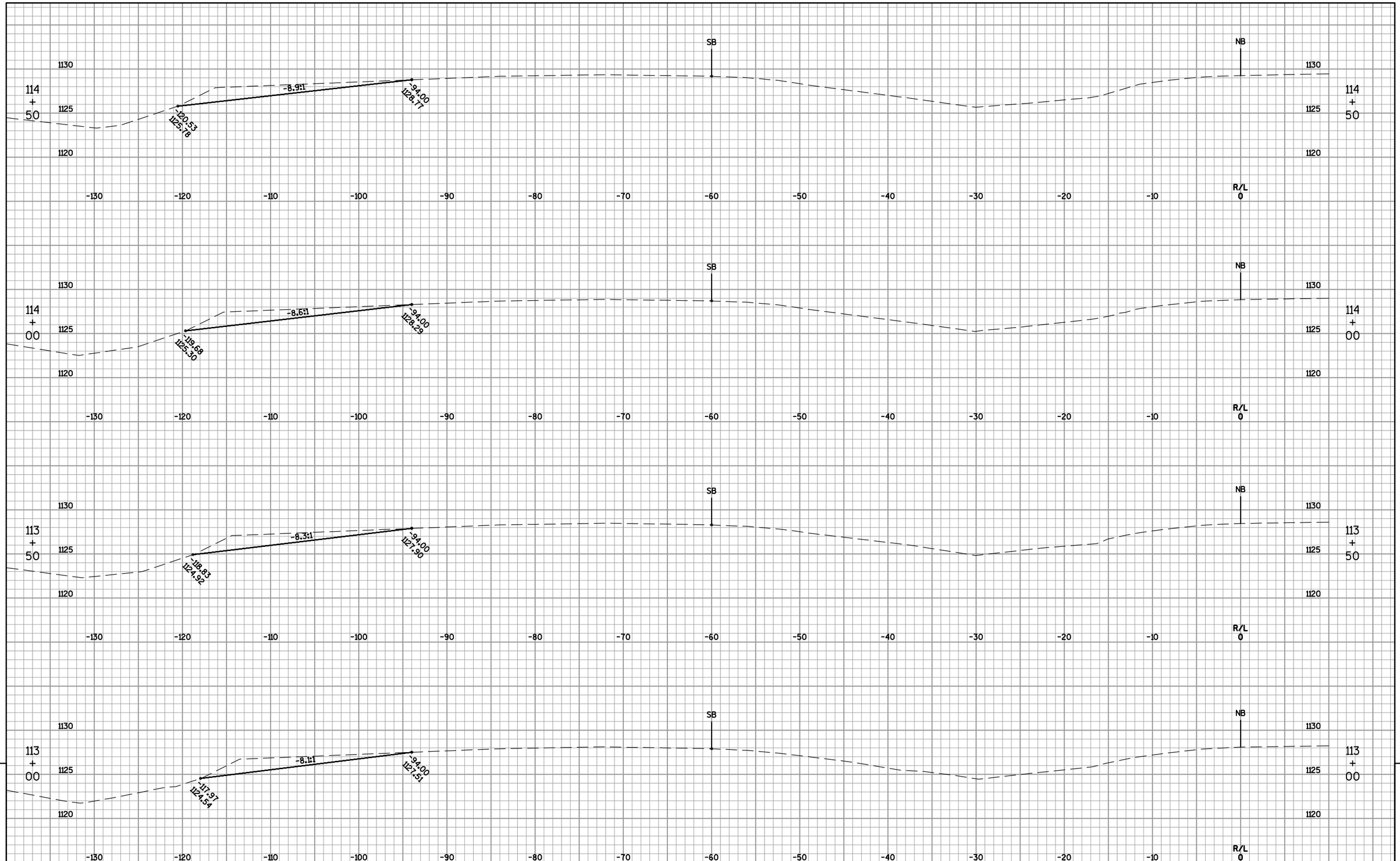
WISDOT/CADDS SHEET 49




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| PROJECT NO: 1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | CROSS SECTIONS: STAGE 5 | SHEET 312 | E |
|---|---|---|---|---|---|

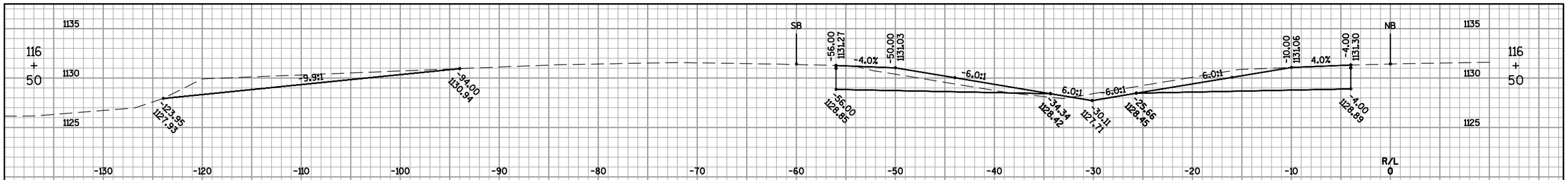
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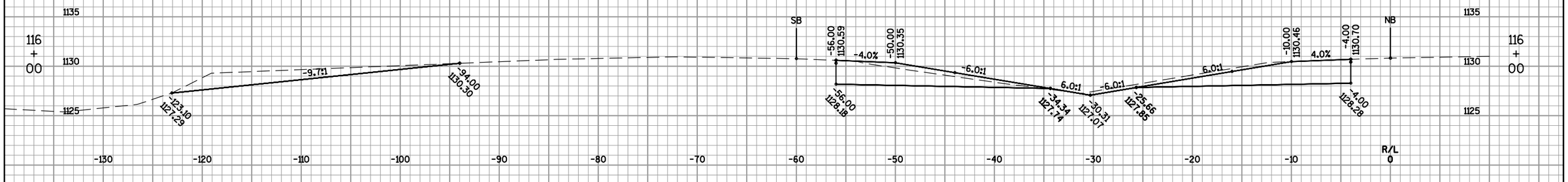


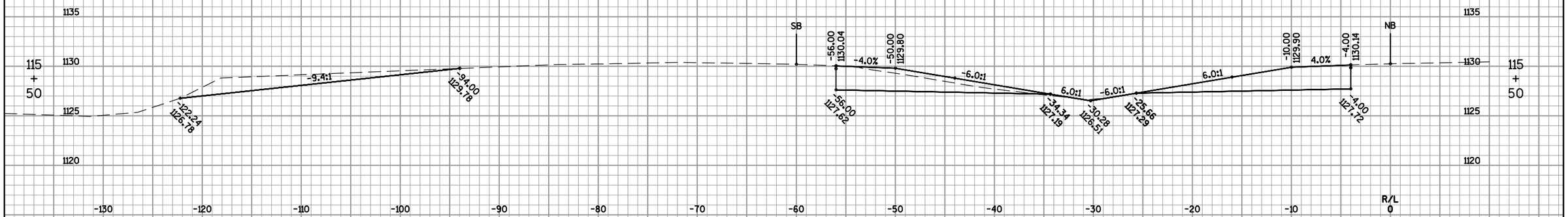

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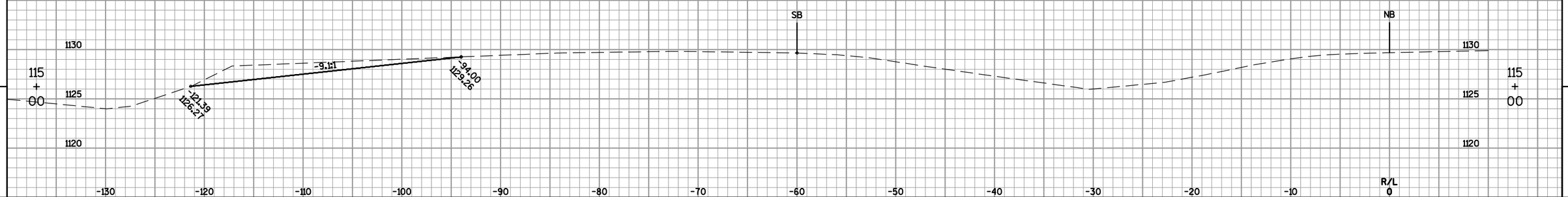
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| PROJECT NO: 1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | CROSS SECTIONS: STAGE 5 | SHEET 313 | E |
|---|---|---|---|---|---|



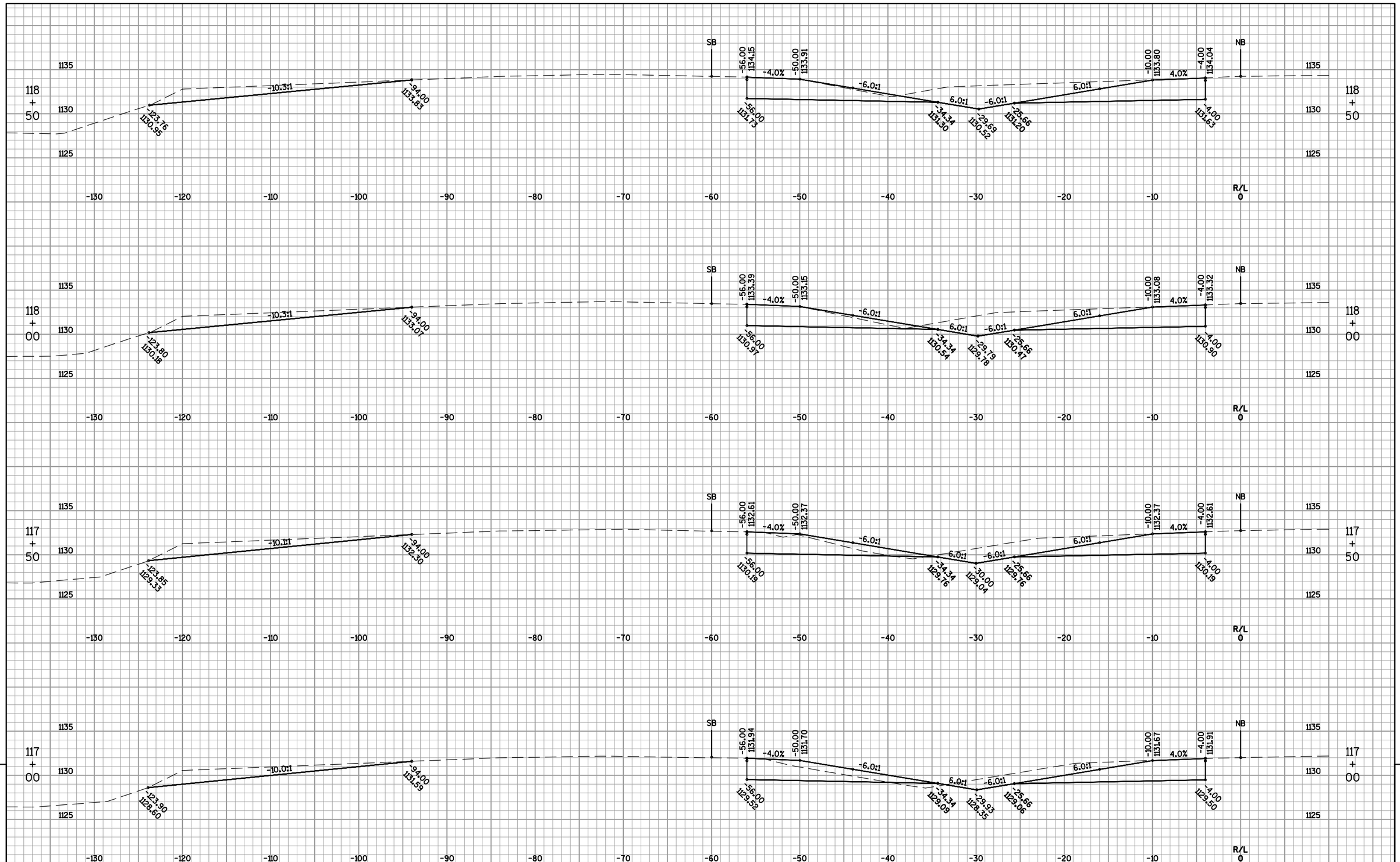




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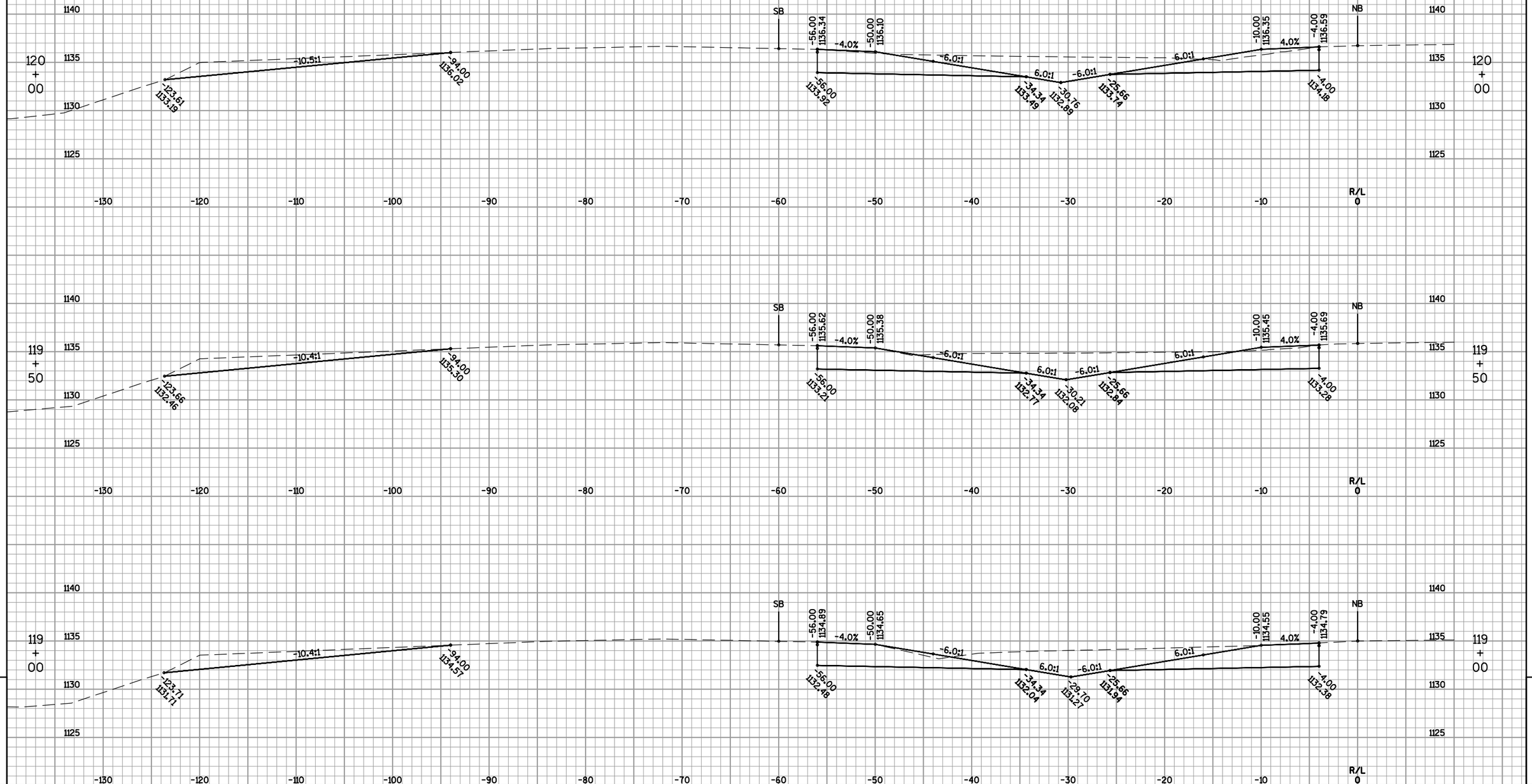
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| PROJECT NO: 1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | CROSS SECTIONS: STAGE 5 | SHEET 314 | E |
|---|---|---|---|---|---|




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| PROJECT NO: 1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | CROSS SECTIONS: STAGE 5 | SHEET 315 | E |
|---|---|---|---|---|---|




9

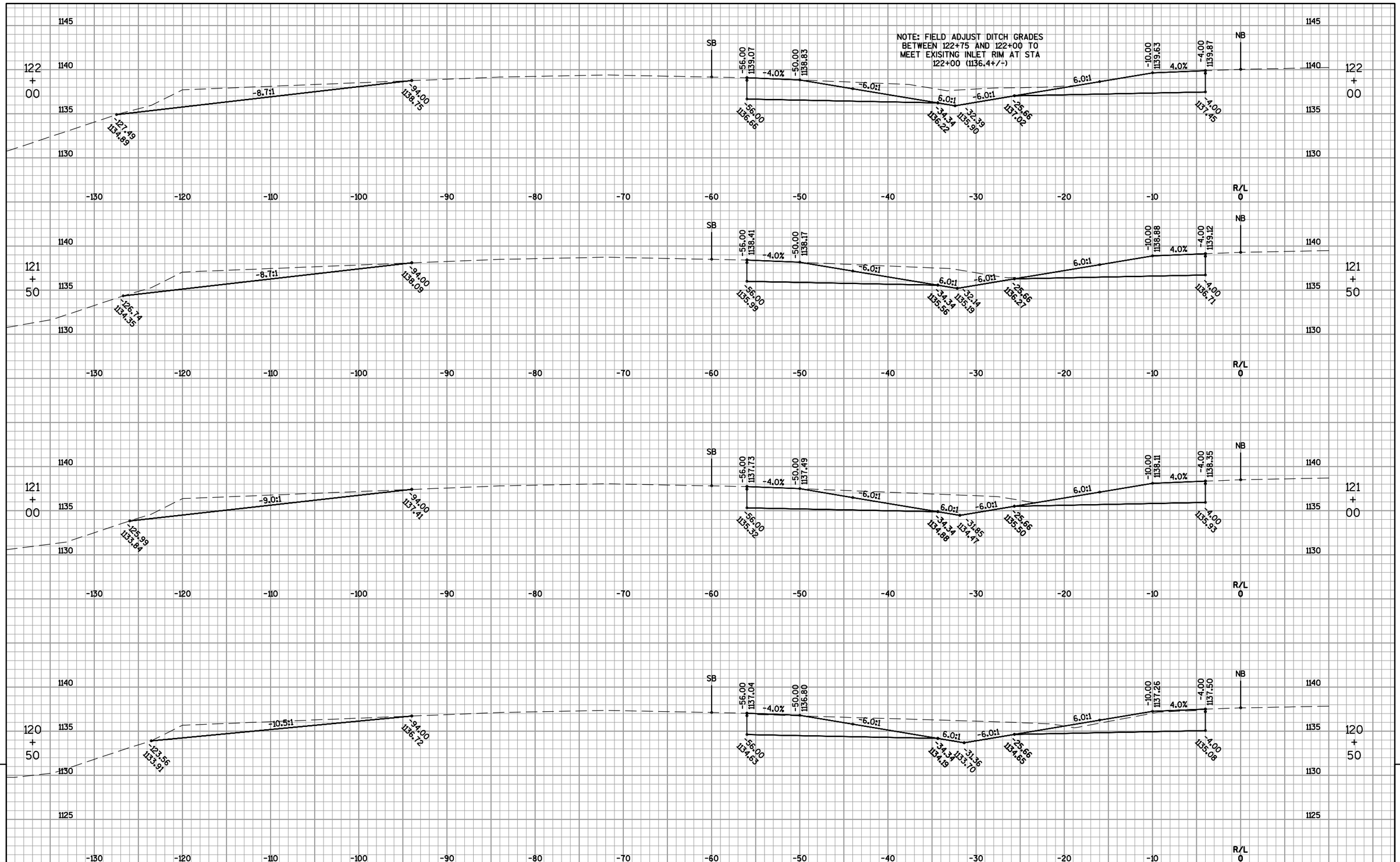
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| PROJECT NO: 1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | CROSS SECTIONS: STAGE 5 | SHEET 316 | E |
|---|---|---|---|---|---|

FILE NAME : F:\TR\JOBS\E2031A12\CIVIL 3D\SHEETSPLAN\XSECTS\1166087 2_090200_XSS5.DWG

PLOT DATE : 1/29/2014 12:24 PM

PLOT BY : OMNNI ASSOCIATES, INC - ANDREW WESTBROOK

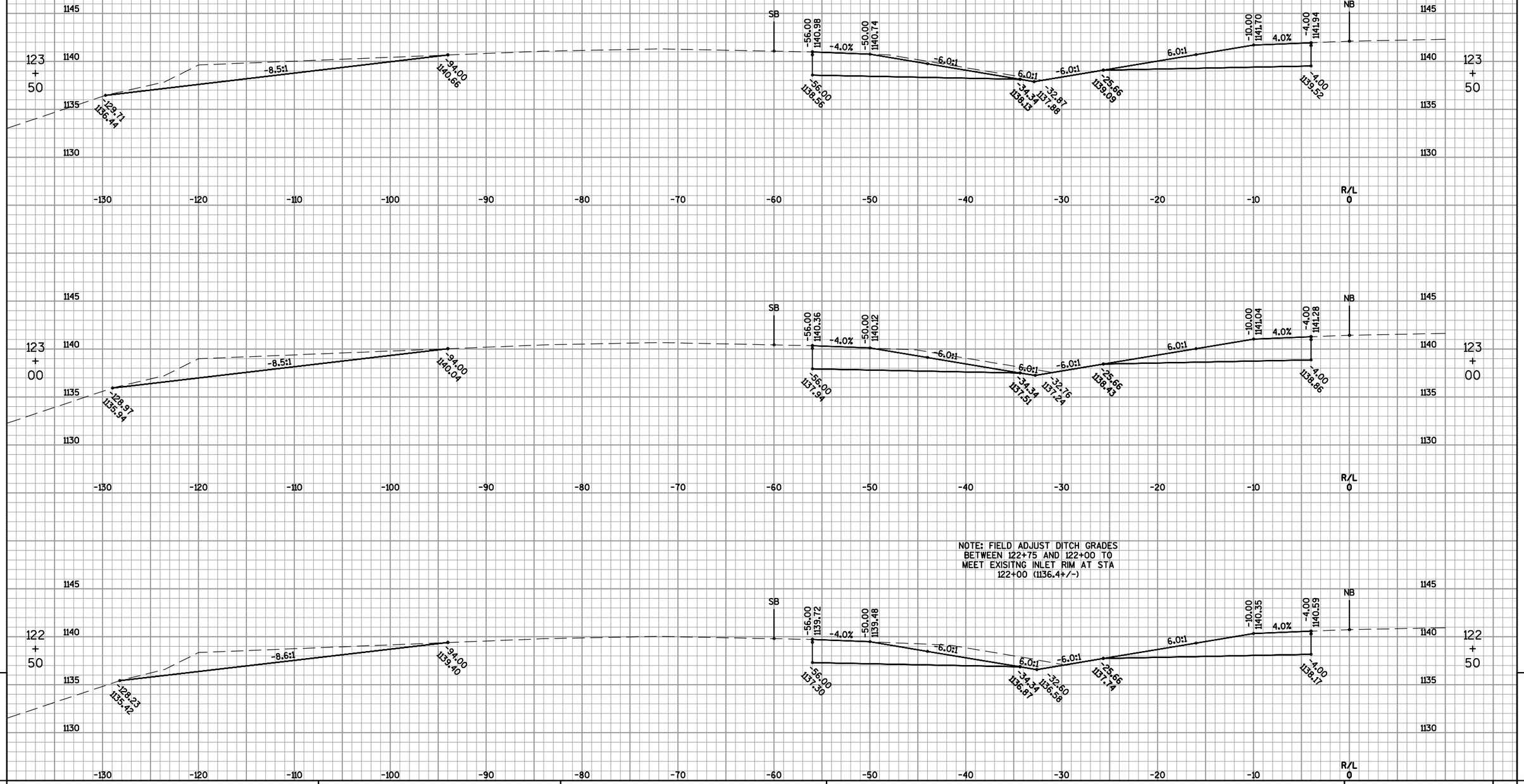



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| PROJECT NO: 1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | CROSS SECTIONS: STAGE 5 | SHEET 317 | E |
|---|---|---|---|---|---|

FILE NAME : F:\TR\JOBS\E2031A12\CIVIL 3D\SHEETSPLAN\XSECTS\1166087_2_090200_XSS5.DWG
PLOT DATE : 1/29/2014 12:24 PM
PLOT BY : OMNNI ASSOCIATES, INC - ANDREW WESTBROOK

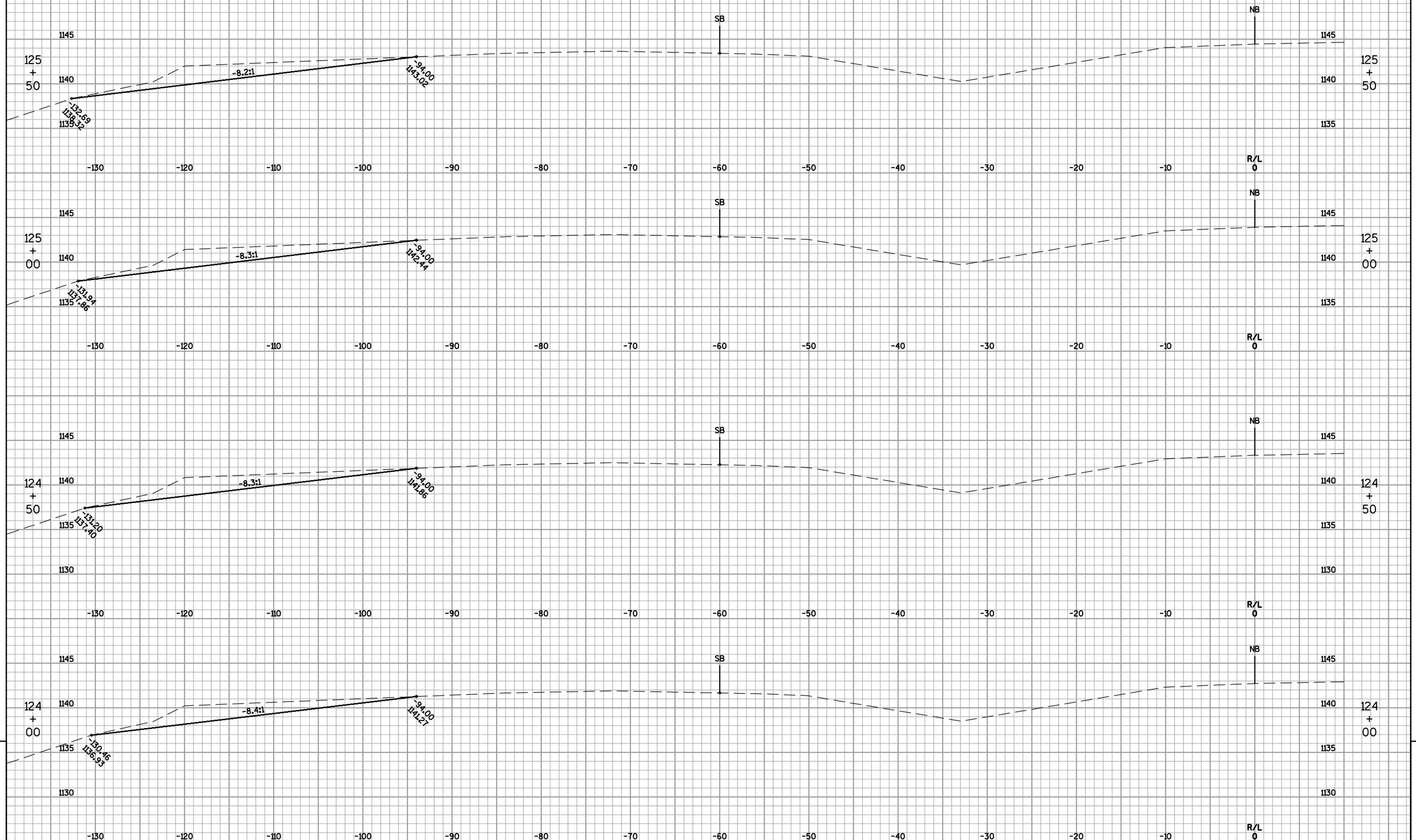



NOTE: FIELD ADJUST DITCH GRADES BETWEEN 122+75 AND 122+00 TO MEET EXISITNG INLET RIM AT STA 122+00 (1136.4+/-)

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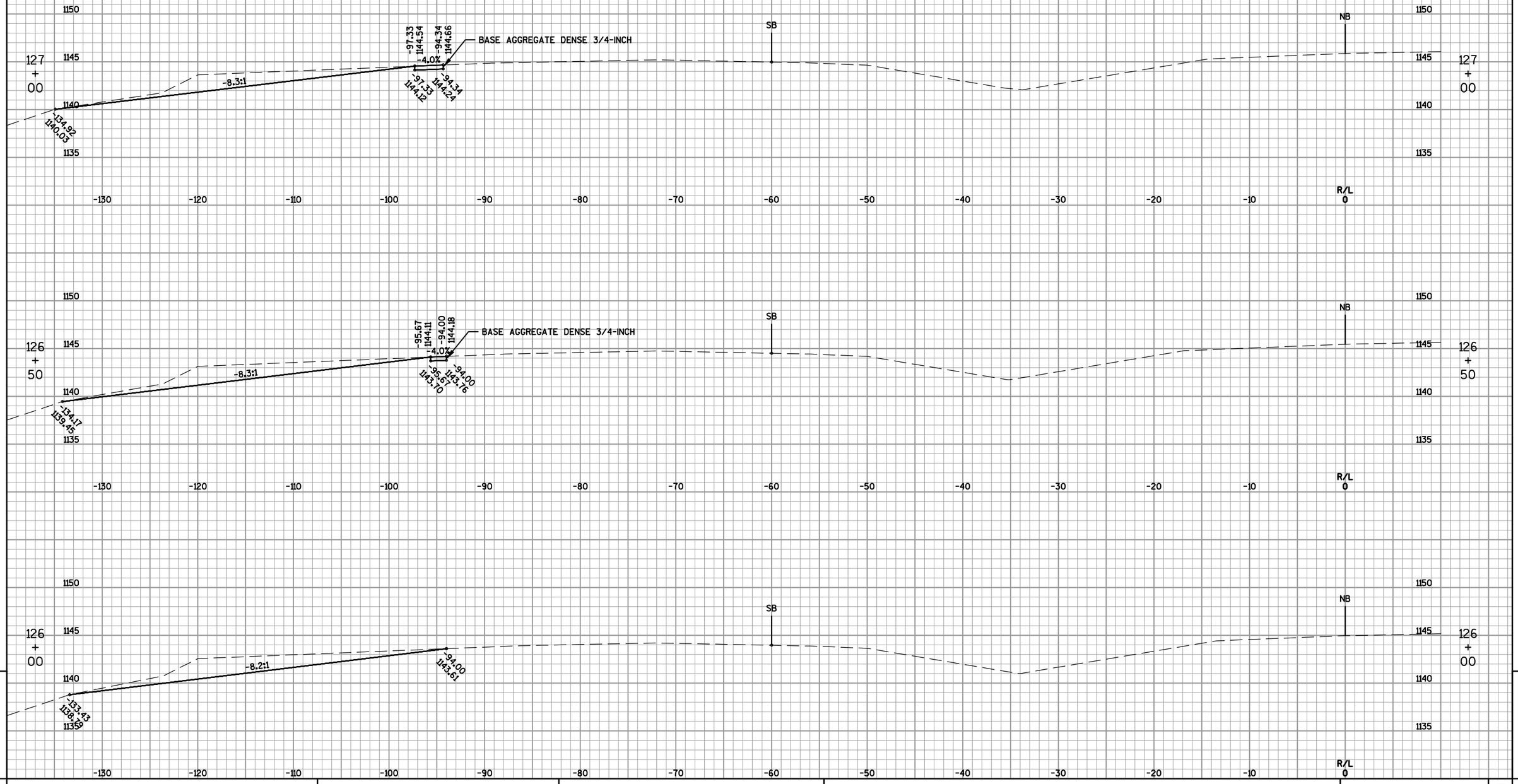
| PROJECT NO: 1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | CROSS SECTIONS: STAGE 5 | SHEET 318 | E |
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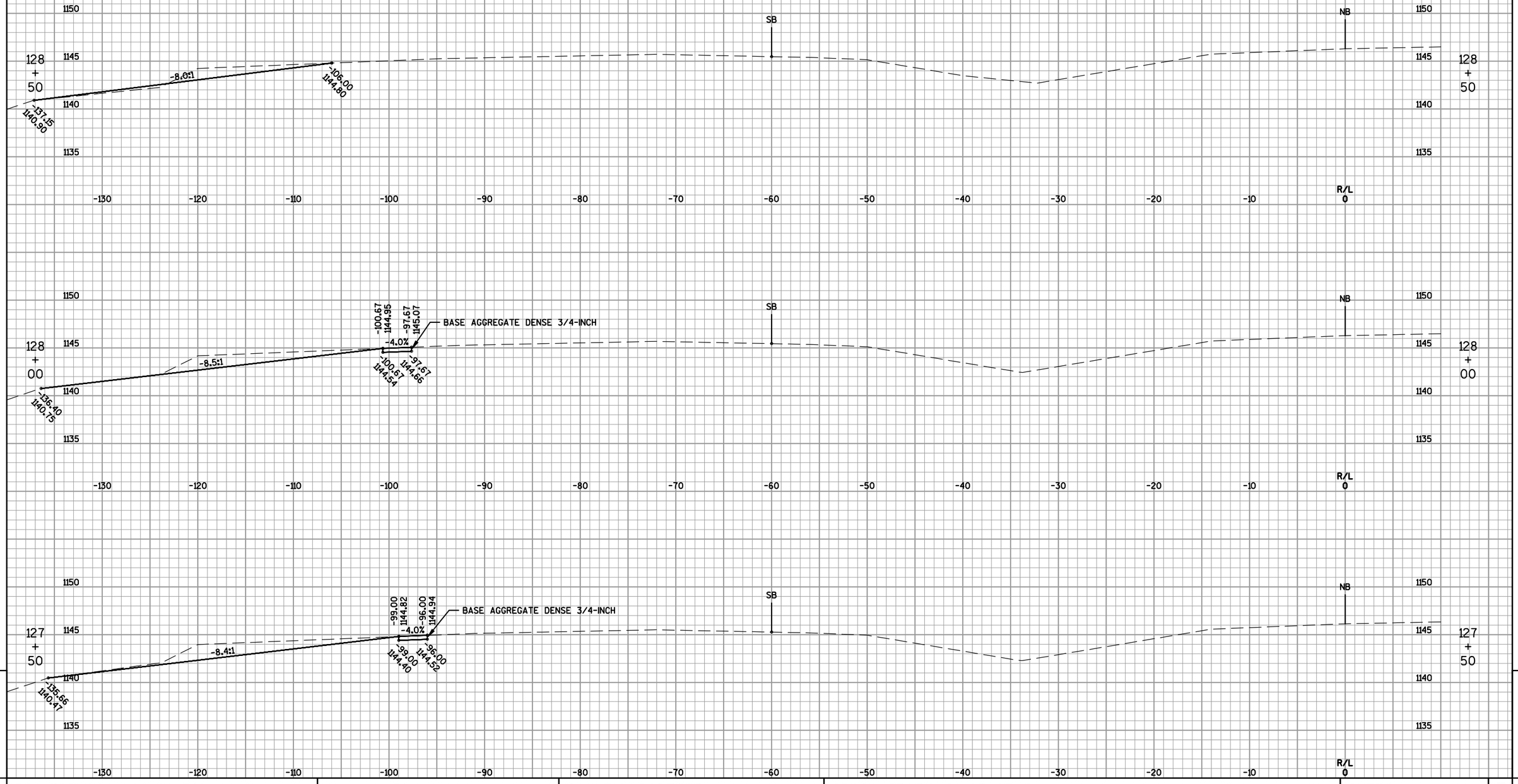
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| PROJECT NO: 1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | CROSS SECTIONS: STAGE 5 | SHEET 319 | E |
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| 9 | PROJECT NO: 1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | CROSS SECTIONS: STAGE 5 | SHEET 320 E |

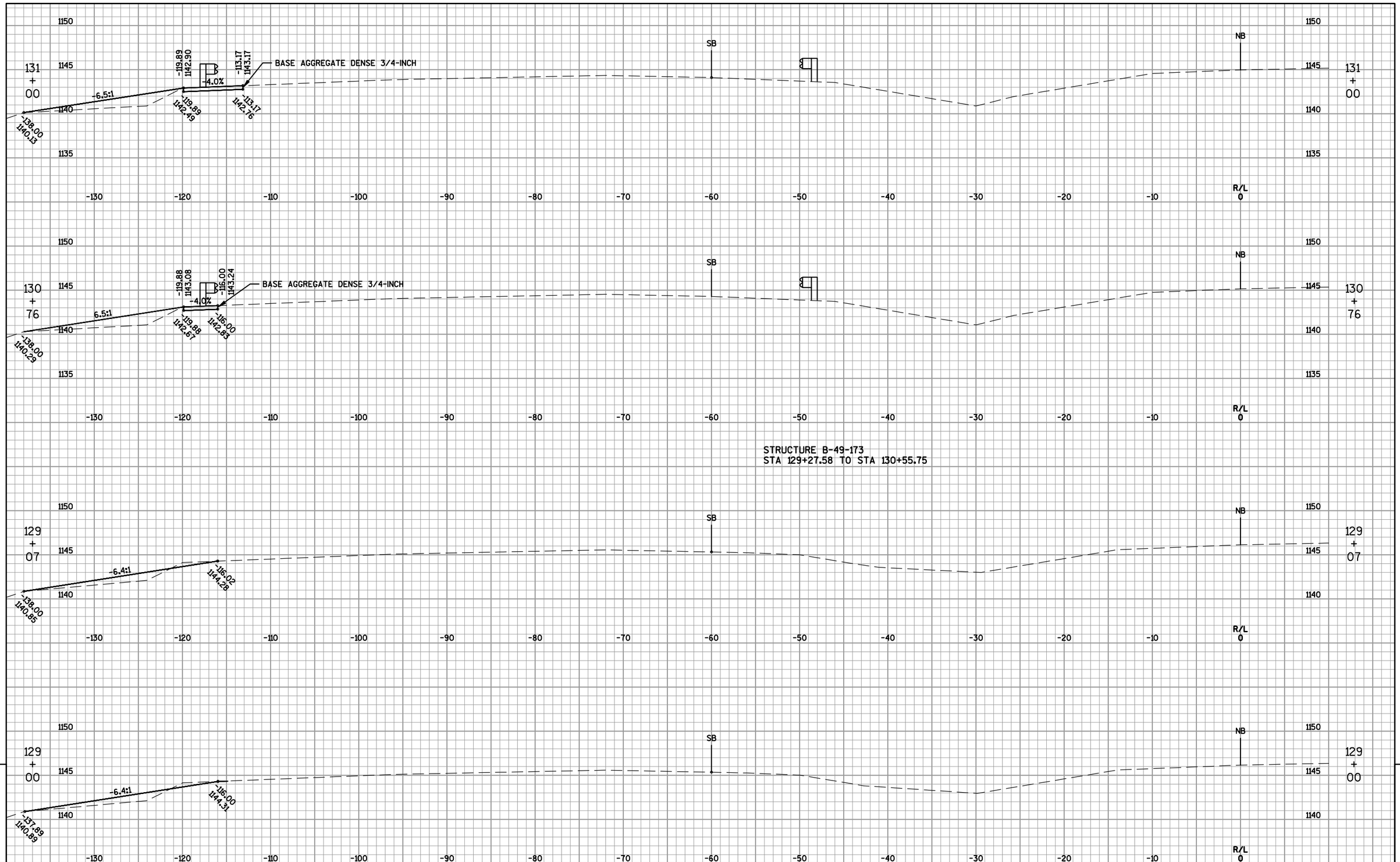
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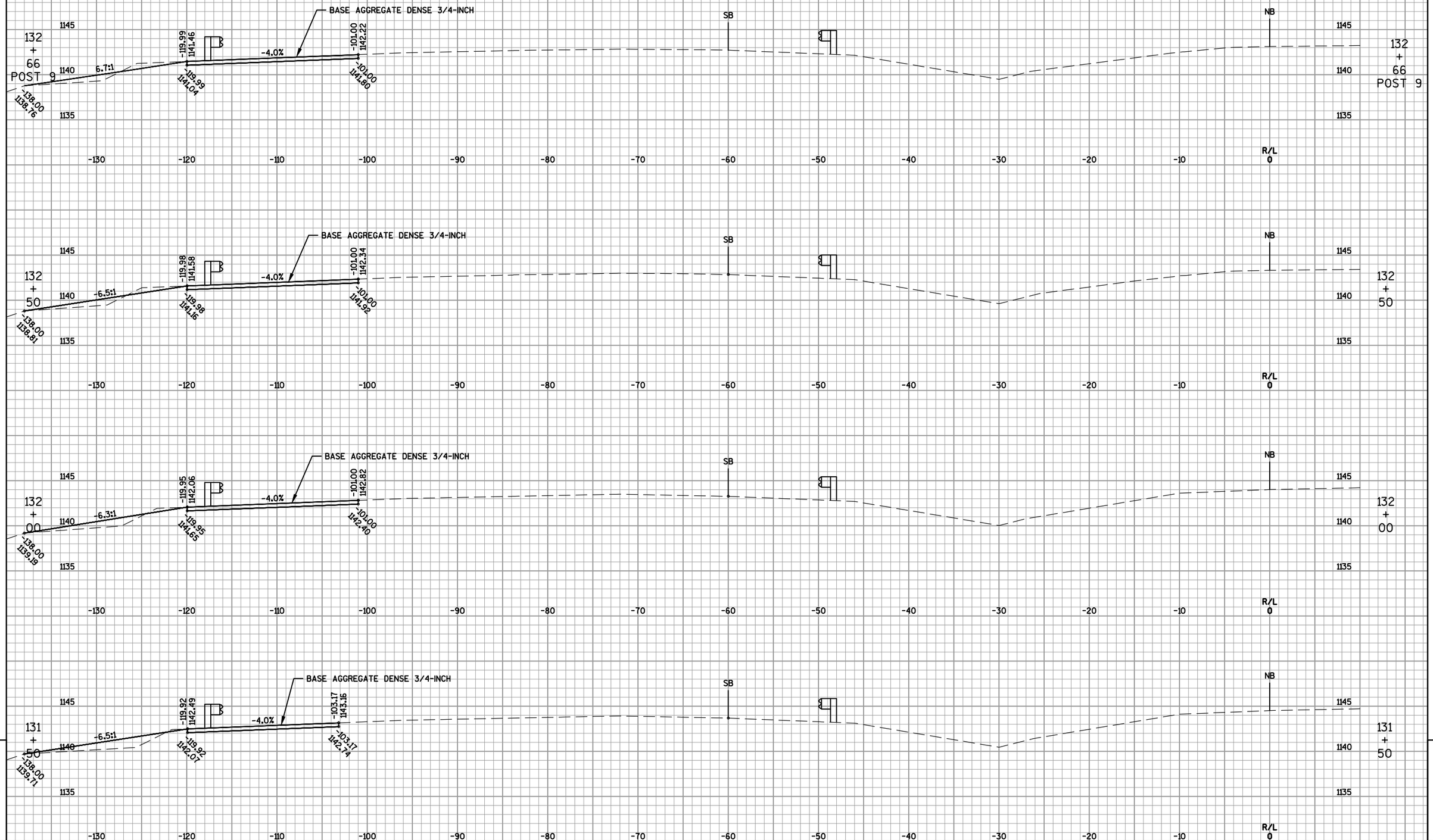
| PROJECT NO: 1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | CROSS SECTIONS: STAGE 5 | SHEET 321 | E |
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STRUCTURE B-49-173
STA 129+27.58 TO STA 130+55.75

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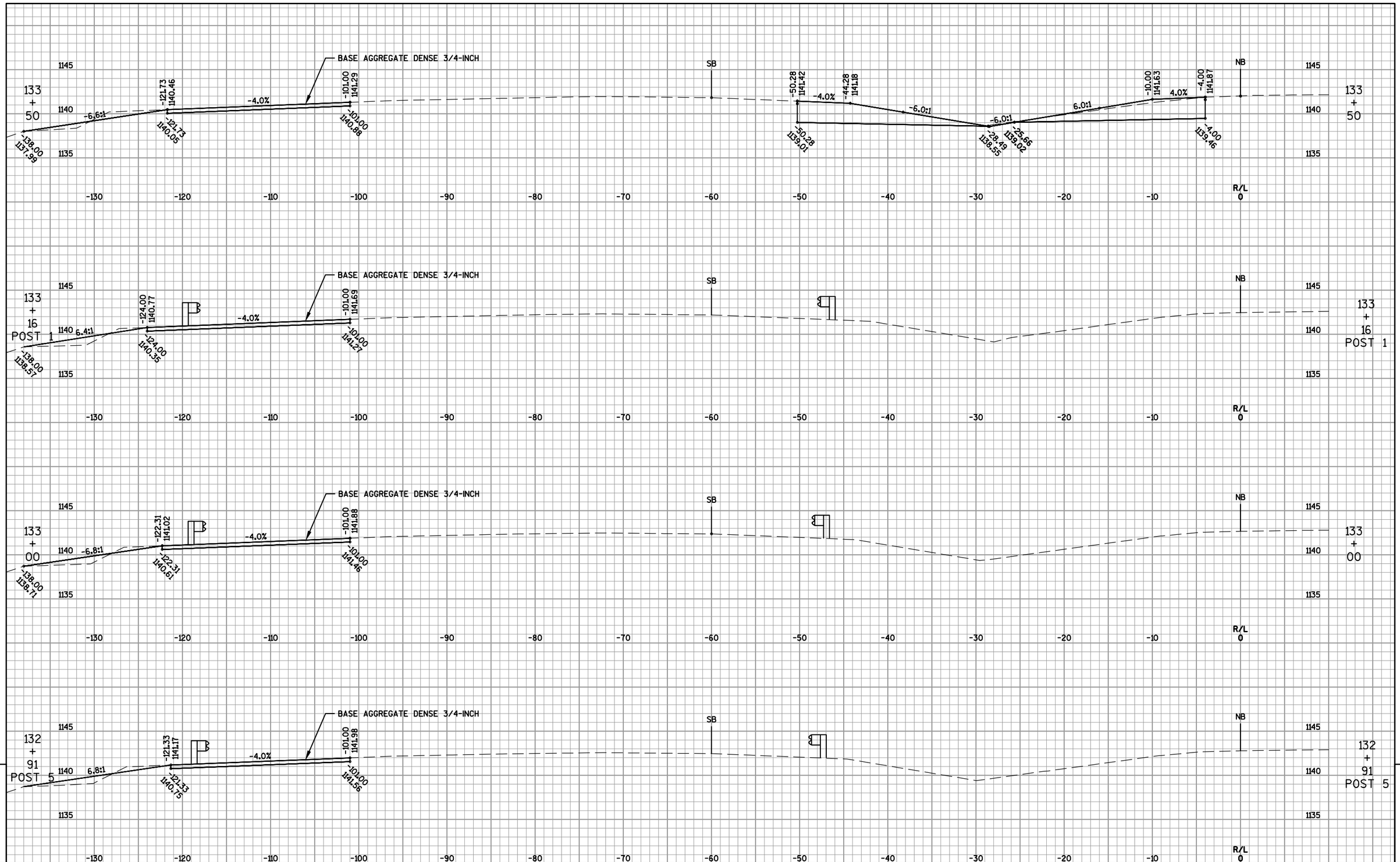
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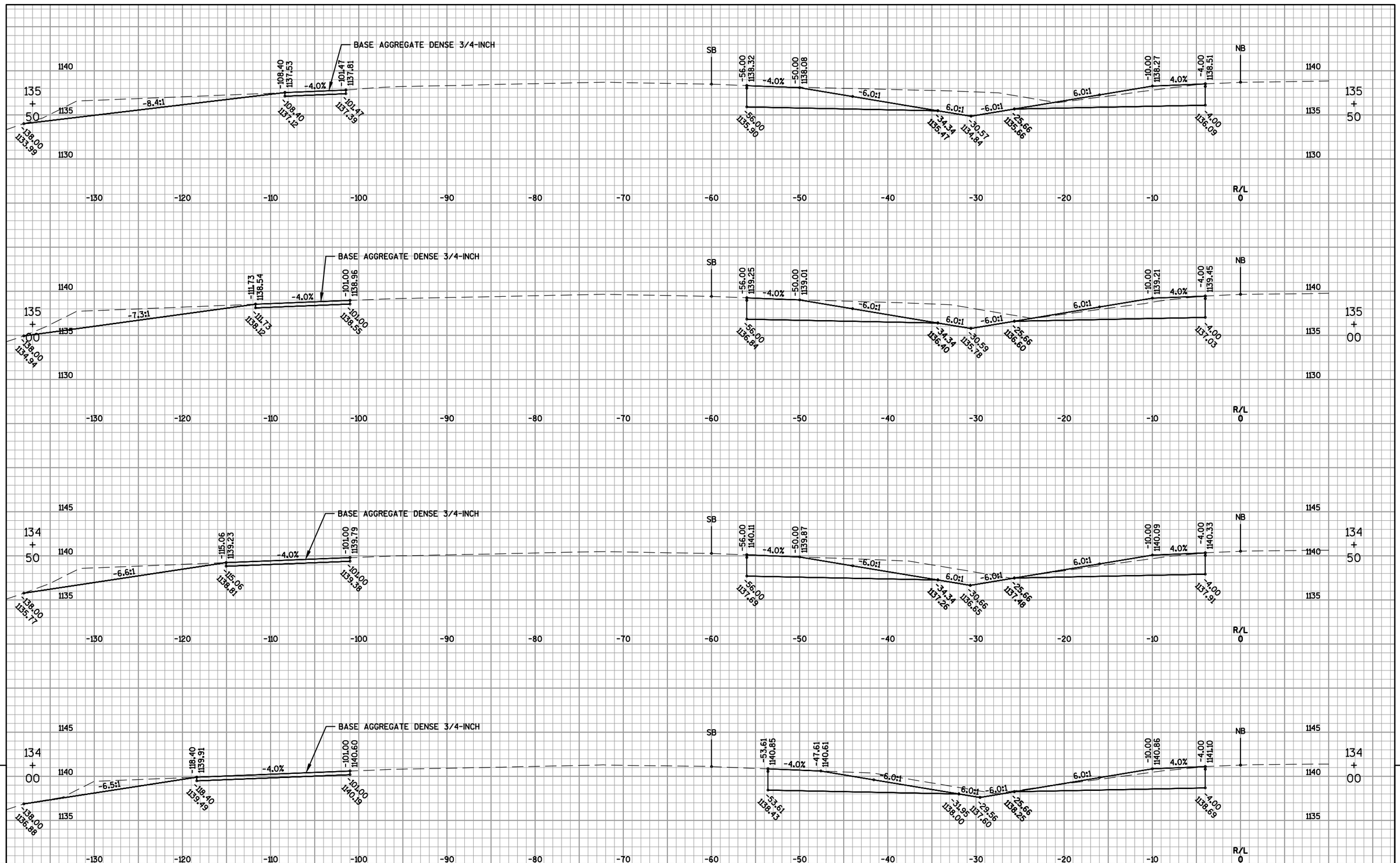
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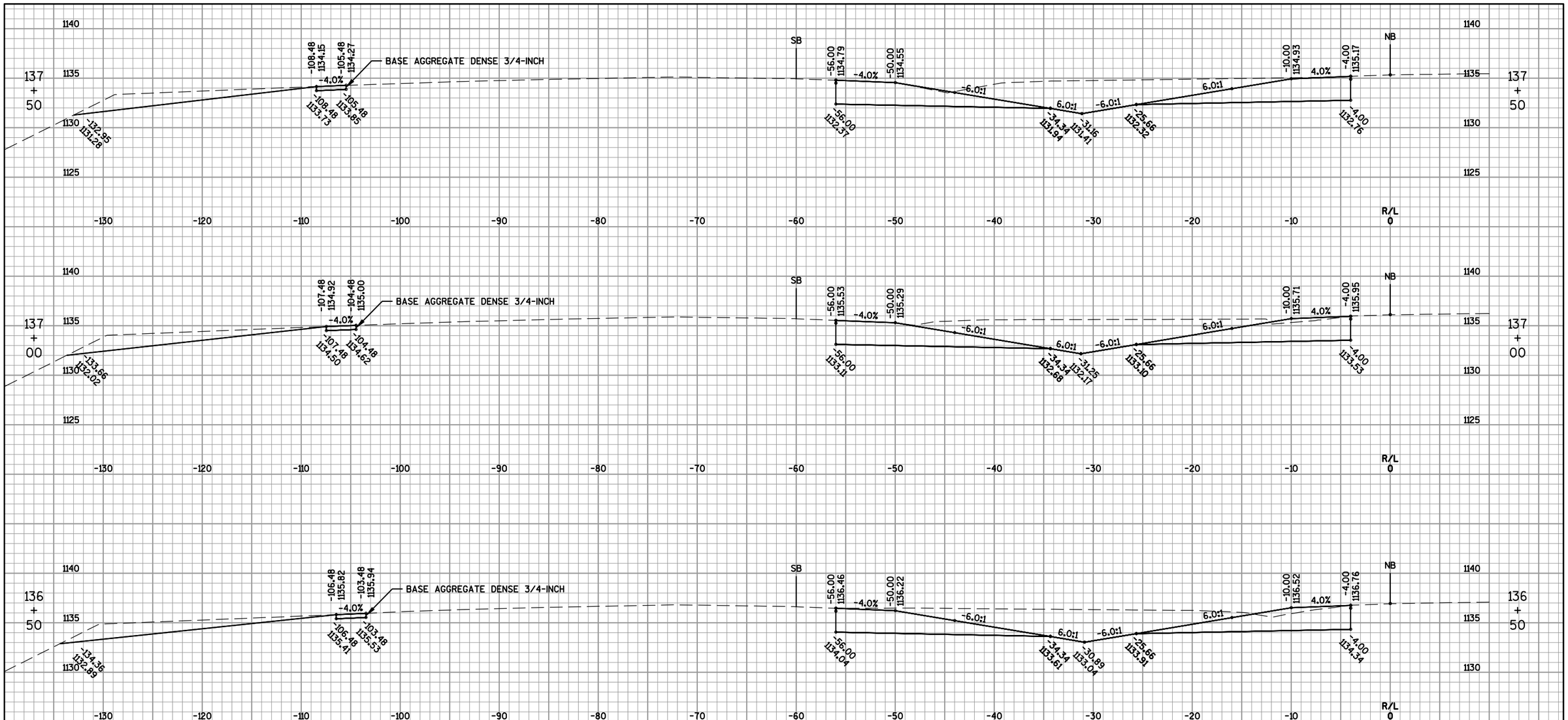
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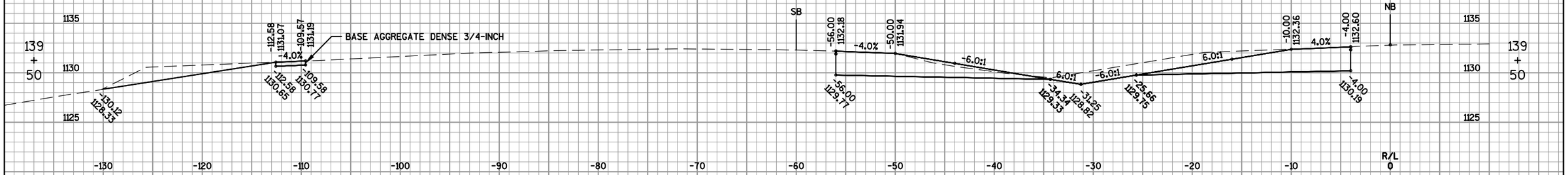

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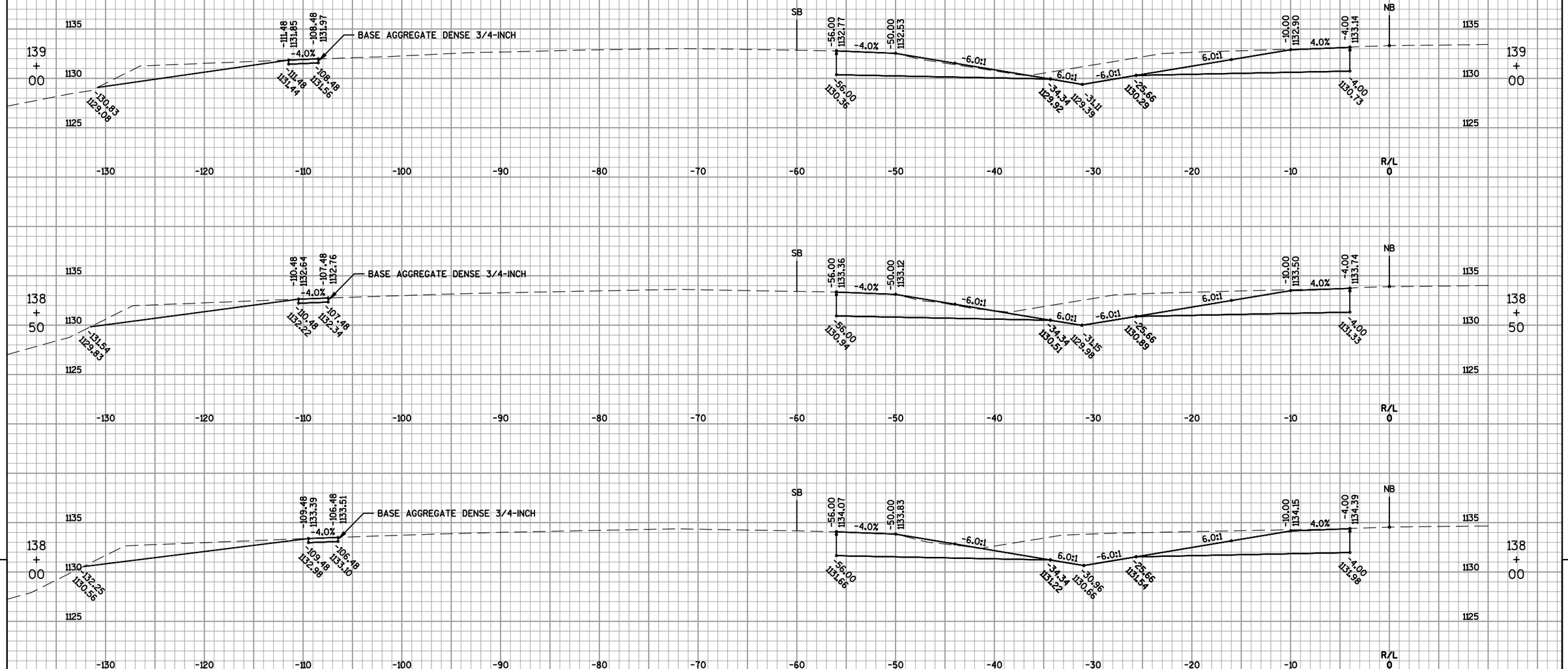
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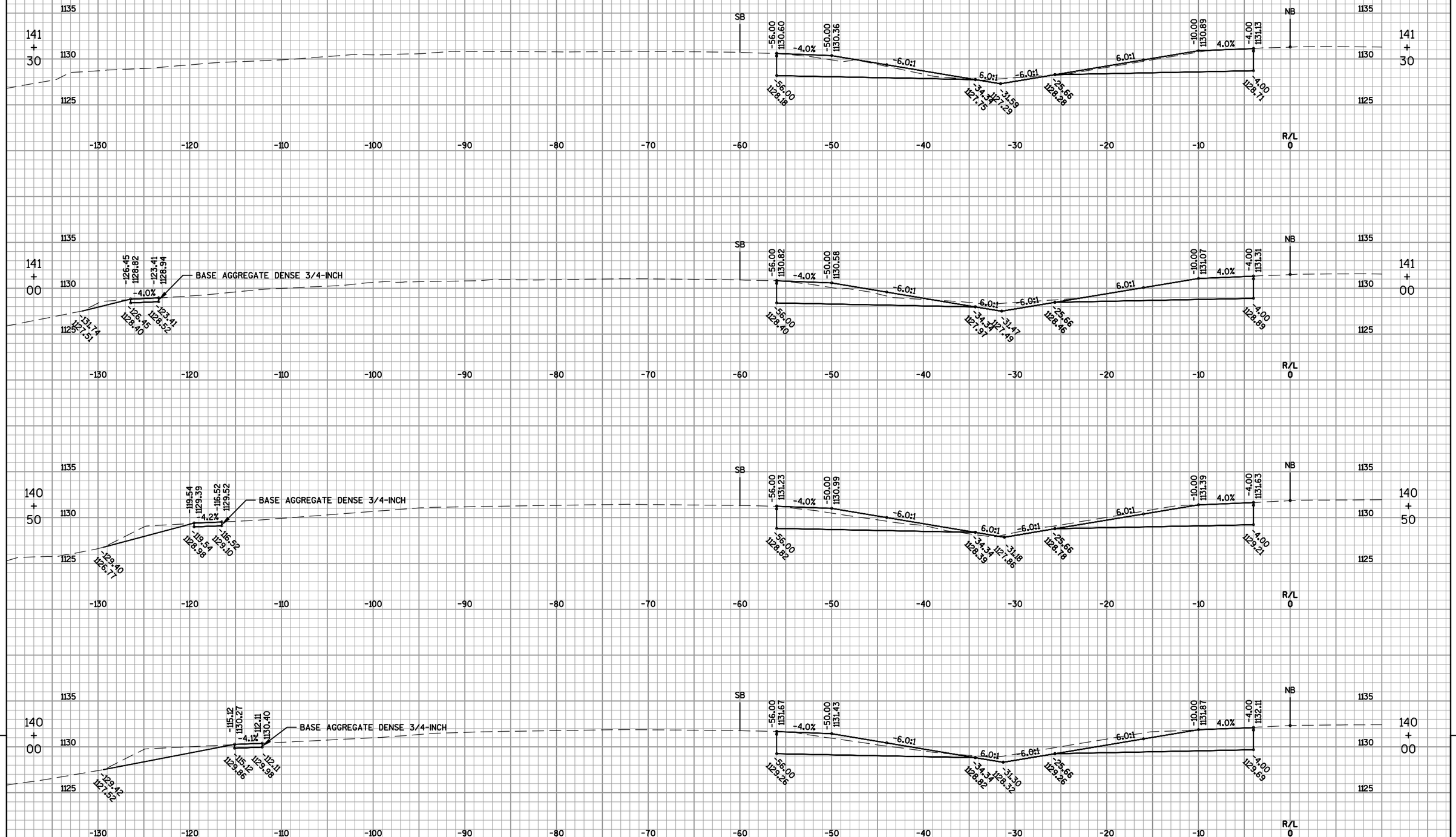





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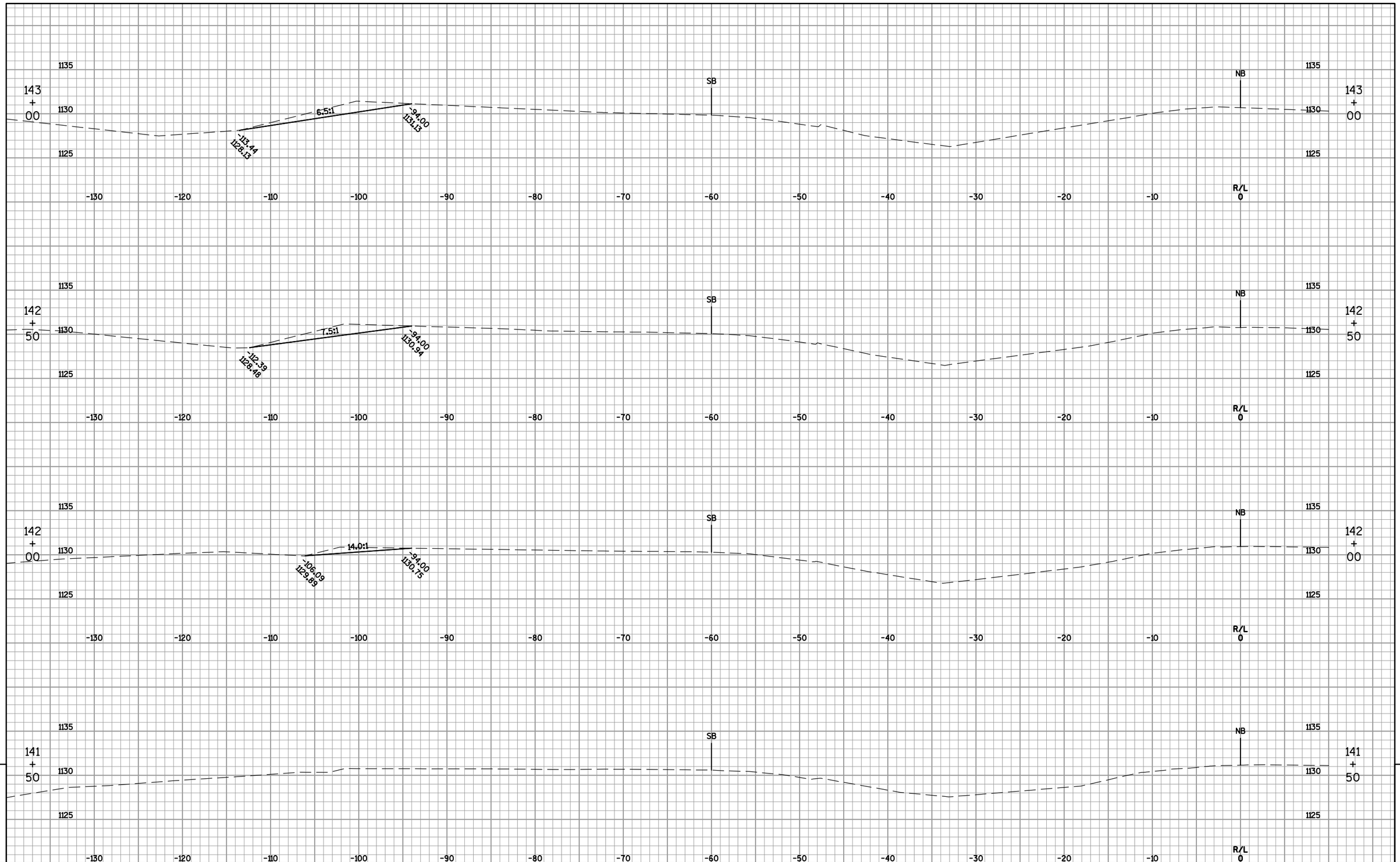
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| PROJECT NO: 1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | CROSS SECTIONS: STAGE 5 | SHEET 328 | E |
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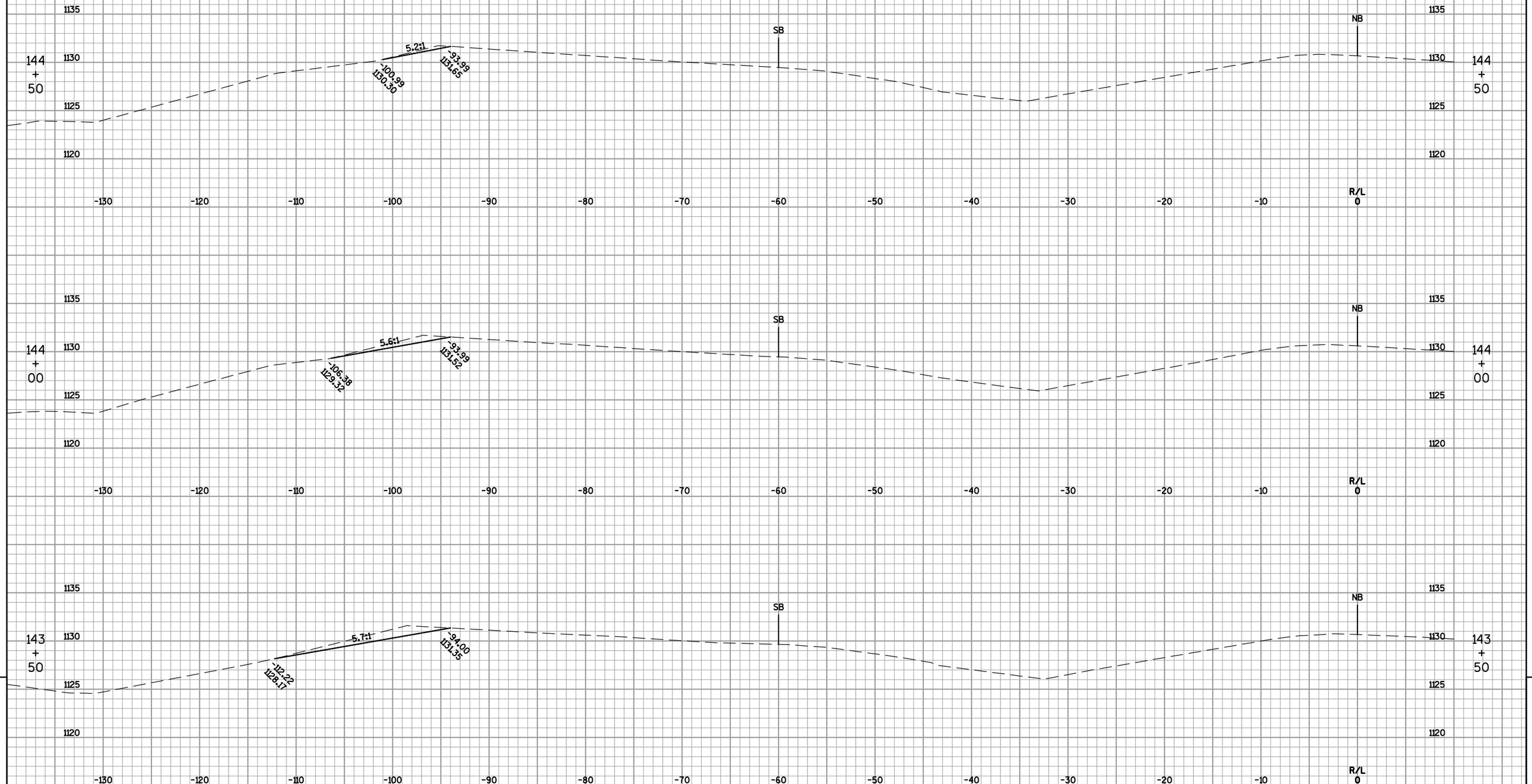
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| PROJECT NO: 1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | CROSS SECTIONS: STAGE 5 | SHEET 329 | E |
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FILE NAME : F:\TR\JOBS\E2031A12\CIVIL 3D\SHEETSPLAN\XSECTS\1166087Z_090200_XSS5.DWG

PLOT DATE : 1/29/2014 12:26 PM

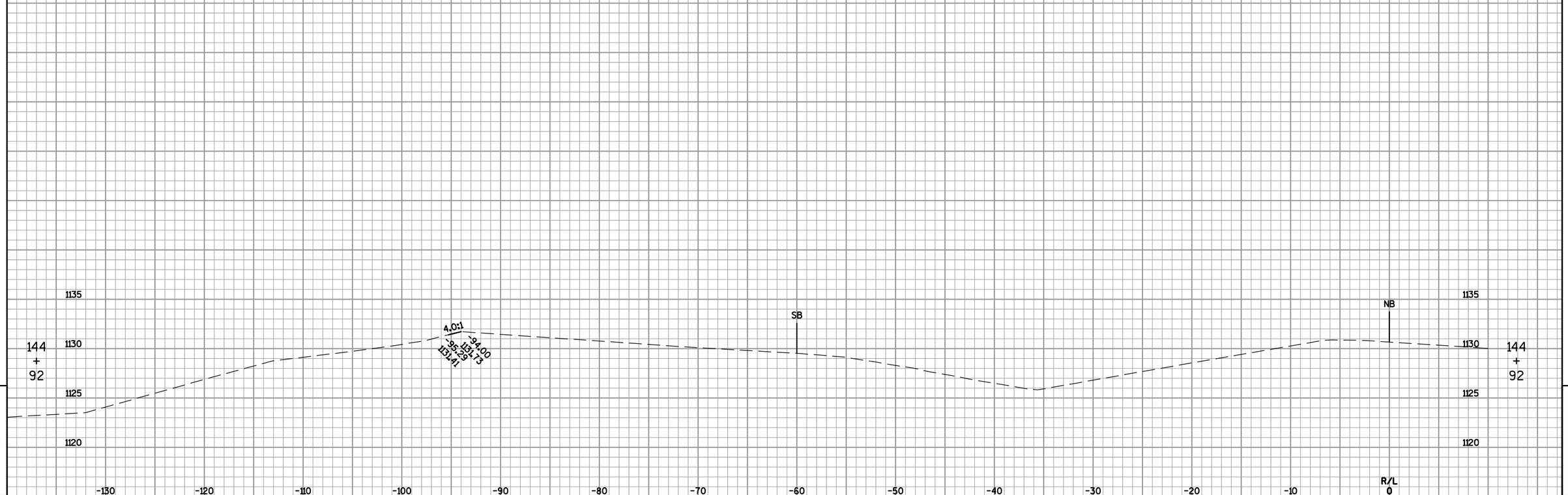
PLOT BY : OMNNI ASSOCIATES, INC - ANDREW WESTBROOK




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| PROJECT NO: 1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | CROSS SECTIONS: STAGE 5 | SHEET 330 | E |
|---|---|---|---|---|---|




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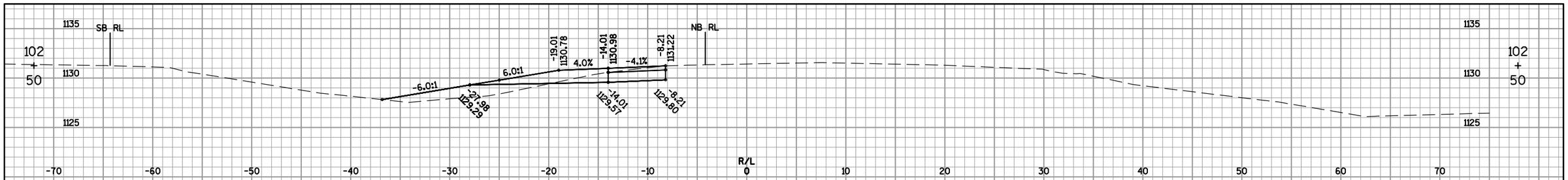
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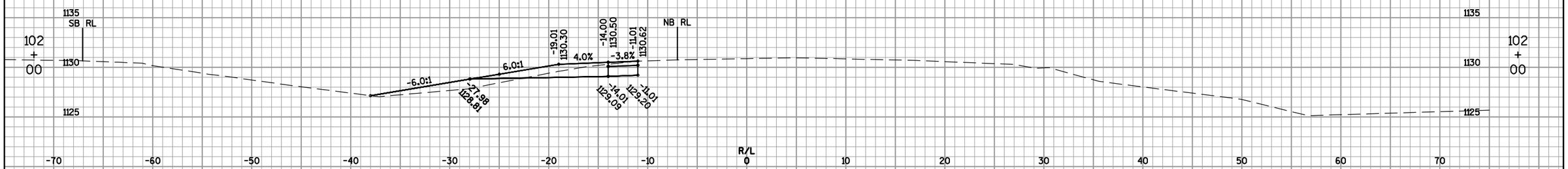
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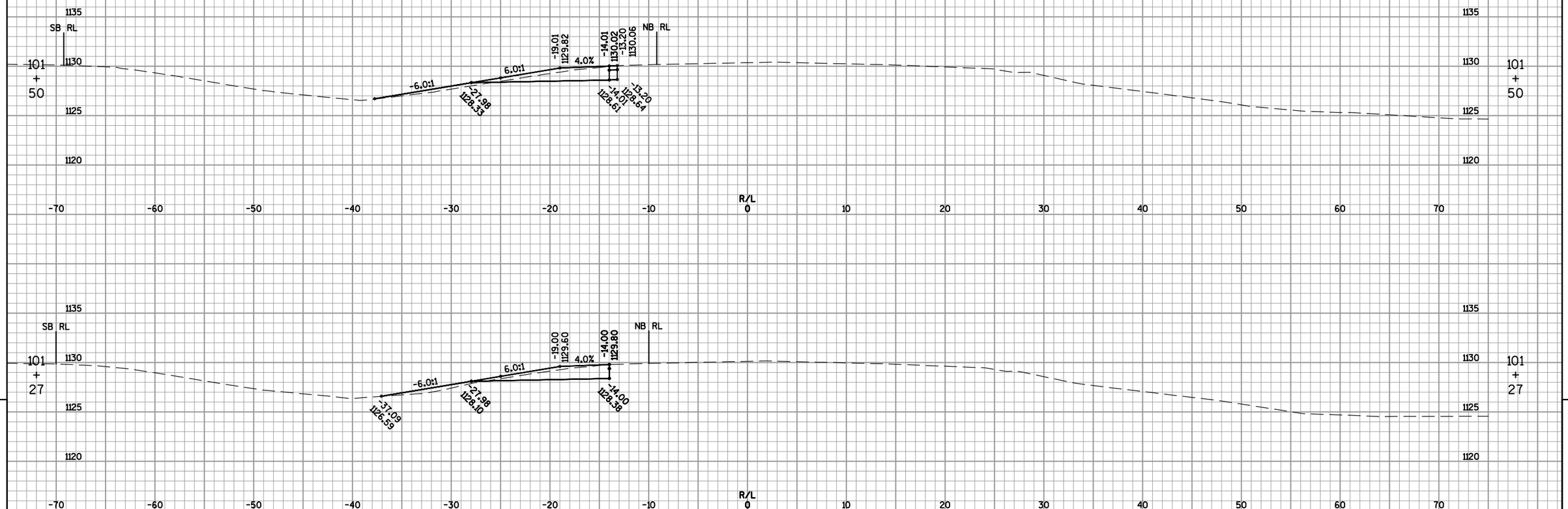
PLOT DATE : 1/29/2014 12:27 PM

PLOT BY : OMNNI ASSOCIATES, INC - ANDREW WESTBROOK

WISDOT/CADDS SHEET 49



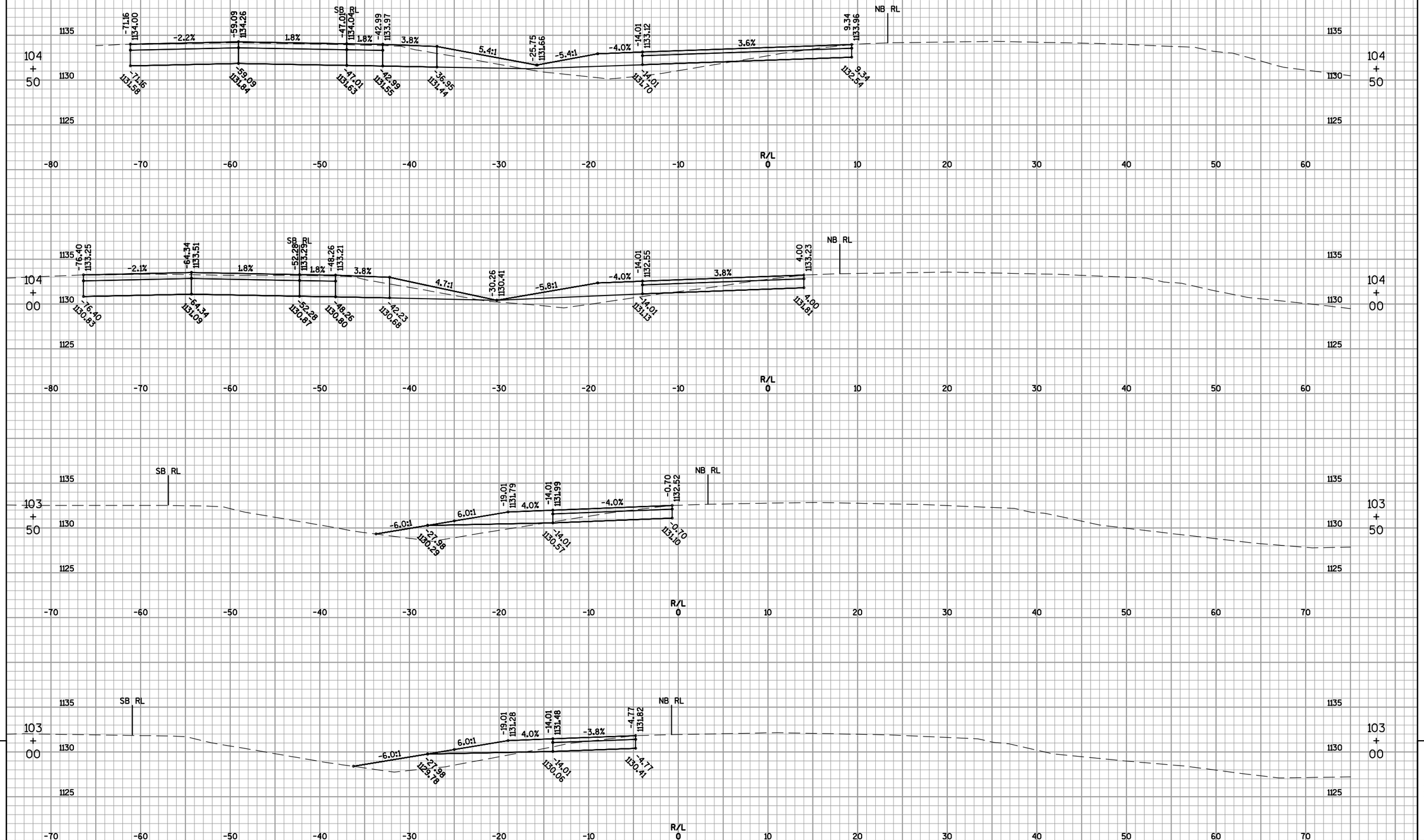




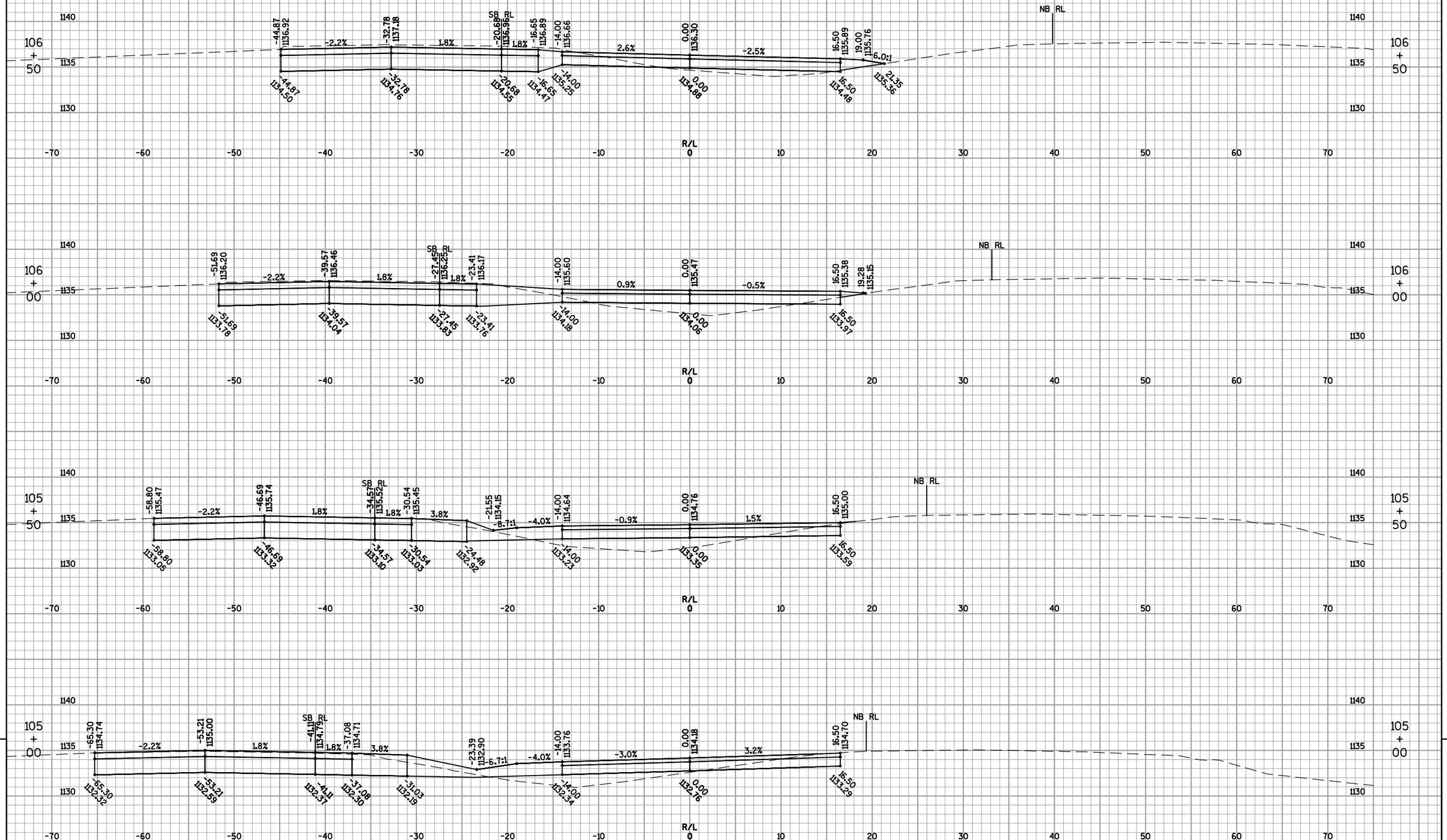
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| PROJECT NO: 1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | CROSS SECTIONS: STAGE 3 MEDIAN CROSSOVER | SHEET 332 | E |
|---|---|---|---|---|---|




| PROJECT NO: 1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | CROSS SECTIONS: STAGE 3 MEDIAN CROSSOVER | SHEET 333 | E |
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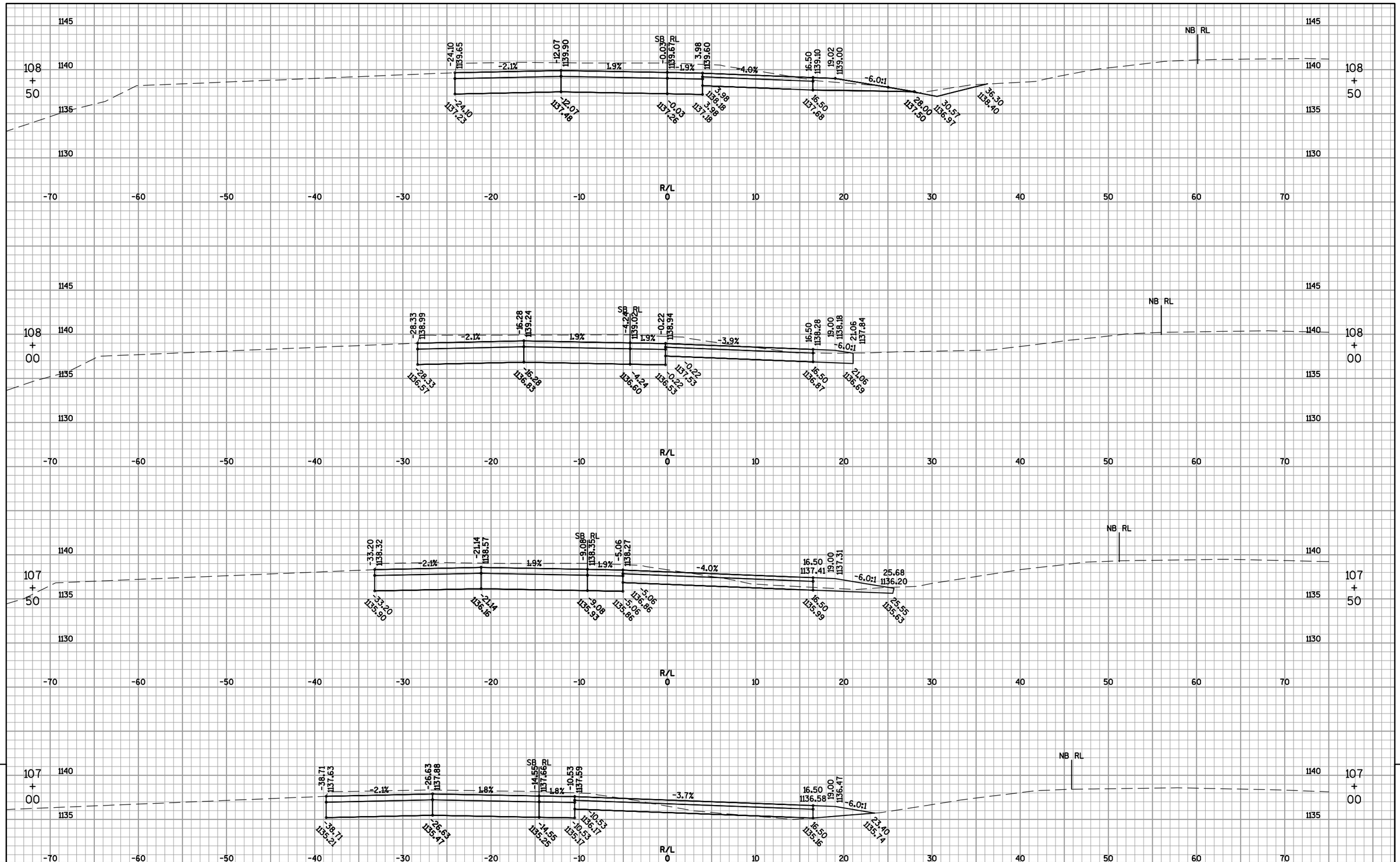



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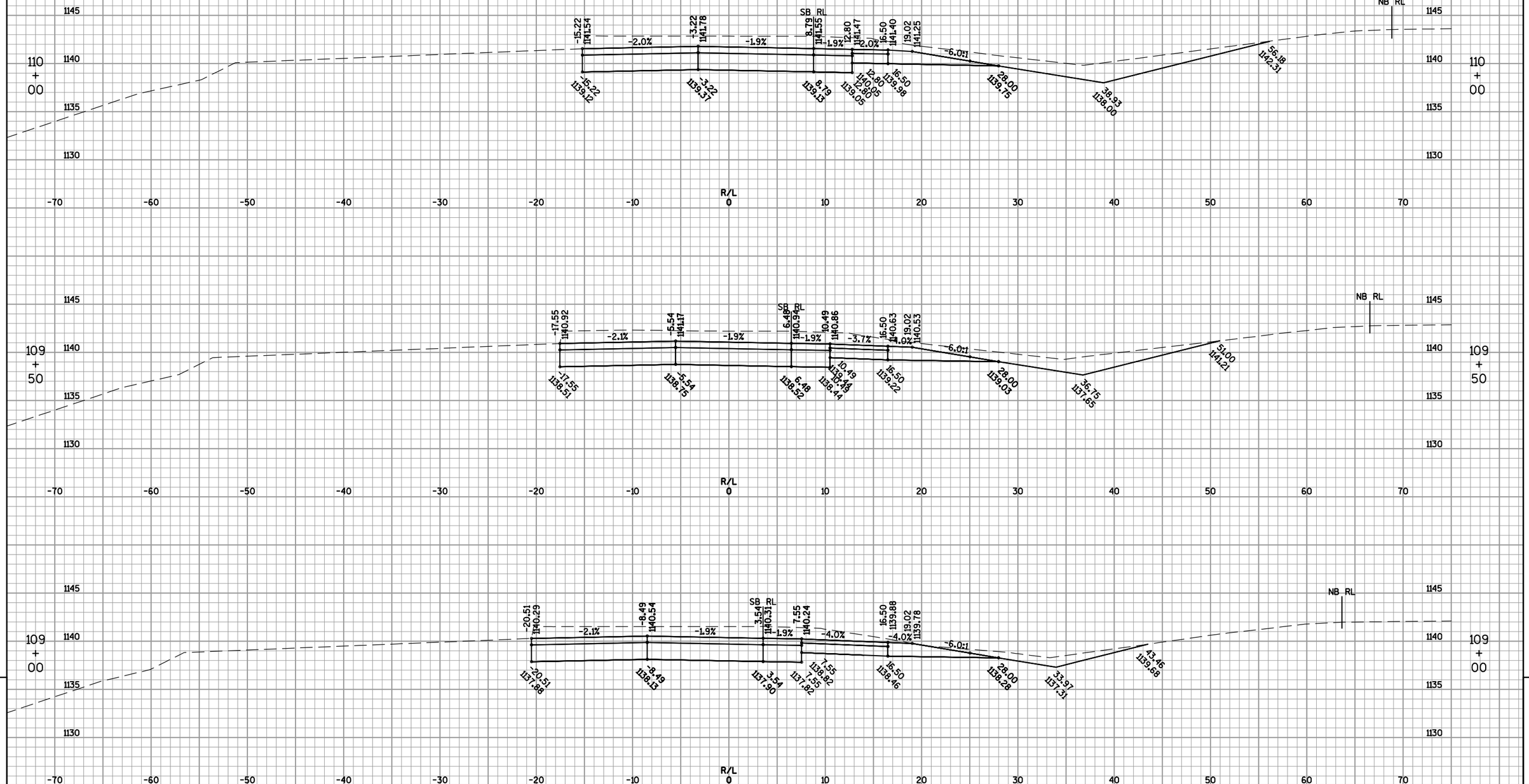
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| PROJECT NO: 1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | CROSS SECTIONS: STAGE 3 MEDIAN CROSSOVER | SHEET 334 | E |
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FILE NAME : F:\TR\JOBS\E2031A12\CIVIL 3D\SHEETSPLAN\XSECTS\11660872_090200_XSXOVER.DWG
11660872_0□0□22_□□_□□□er
PLOT DATE : 4/2/2014 12:35 PM
PLOT BY : OMNNI ASSOCIATES, INC - ANDREW WESTBROOK
WISDOT/CADDS SHEET 49




| PROJECT NO: 1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | CROSS SECTIONS: STAGE 3 MEDIAN CROSSOVER | SHEET 335 | E |
|---|---|---|---|---|---|




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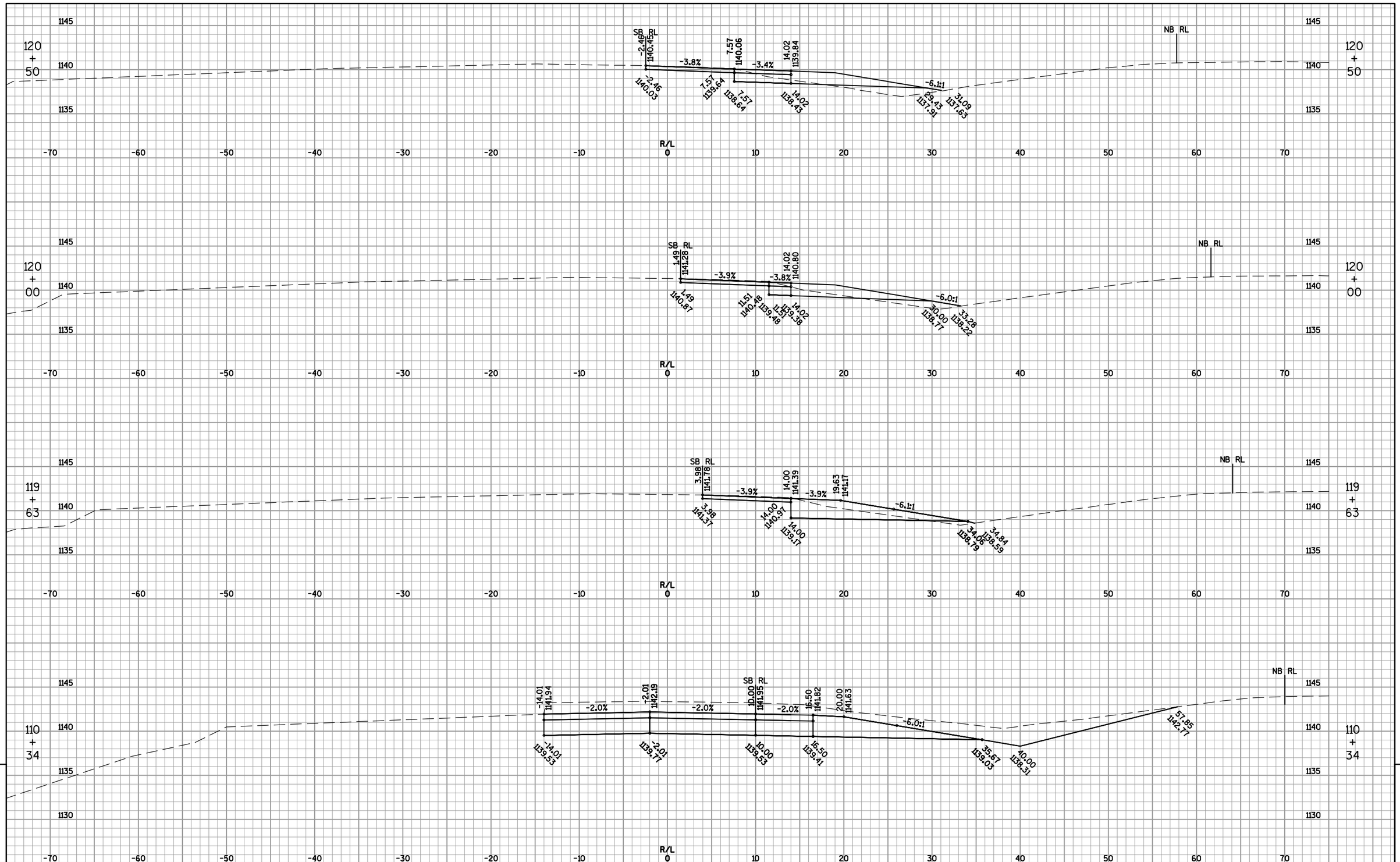
| PROJECT NO: 1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | CROSS SECTIONS: STAGE 3 MEDIAN CROSSOVER | SHEET 336 | E |
|---|---|---|---|---|---|

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11660872_0□□2□_□□_□□□er

PLOT DATE : 4/2/2014 12:35 PM PLOT BY : OMNNI ASSOCIATES, INC - ANDREW WESTBROOK

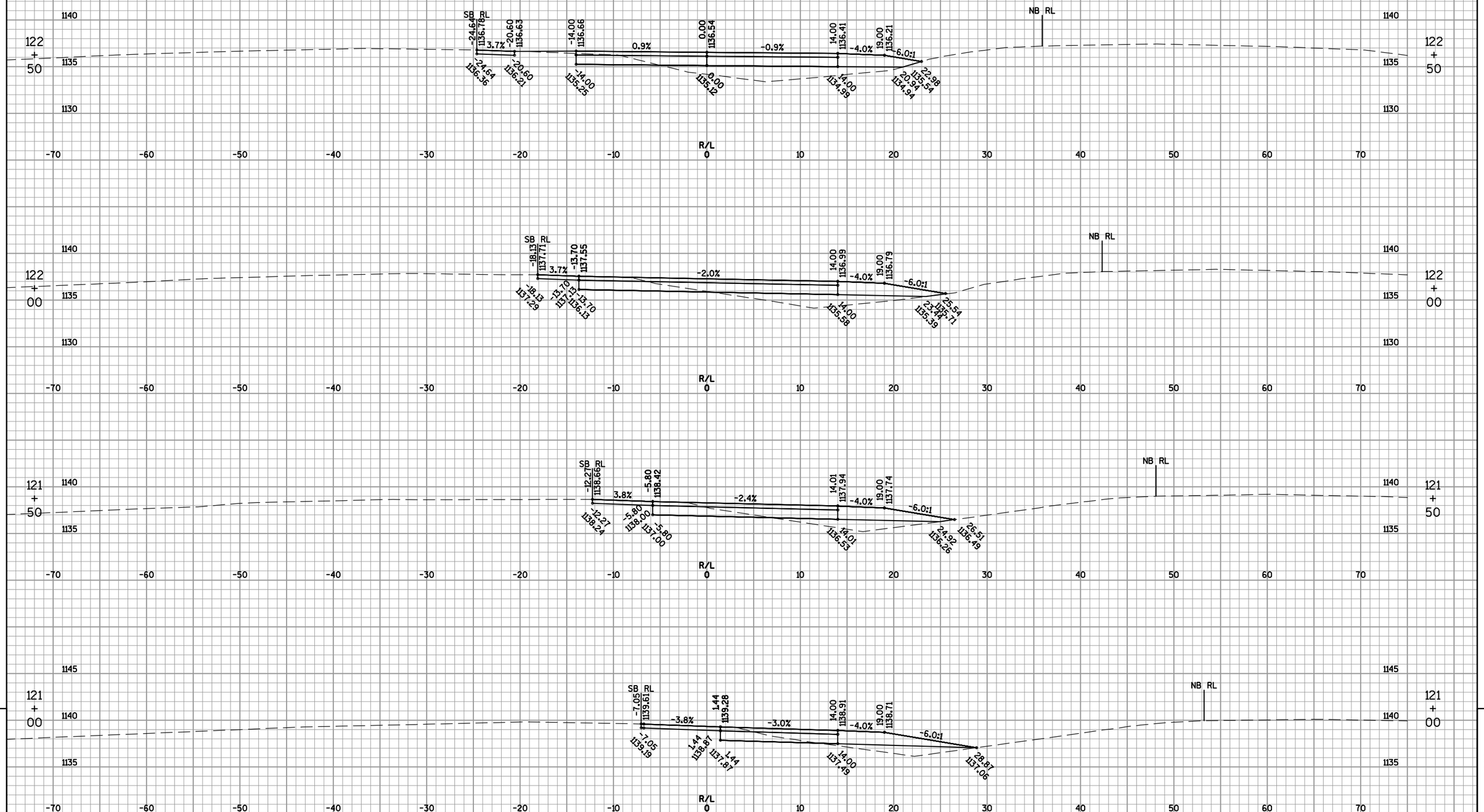
WISDOT/CADDS SHEET 49



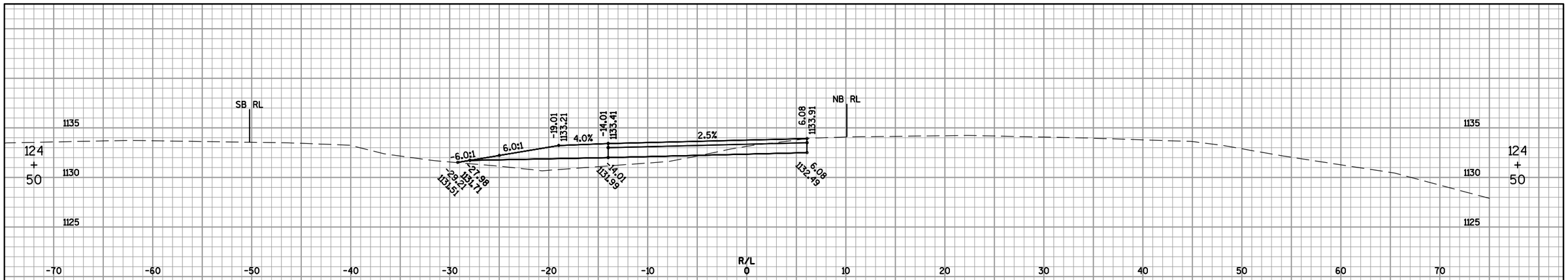

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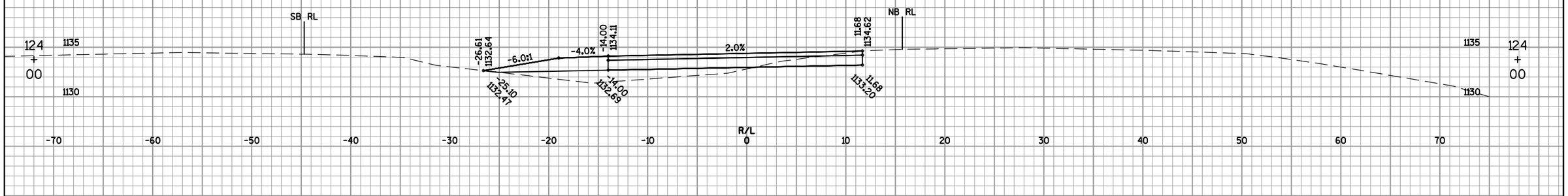
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| PROJECT NO: 1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | CROSS SECTIONS: STAGE 3 MEDIAN CROSSOVER | SHEET 337 | E |
|---|---|---|---|---|---|



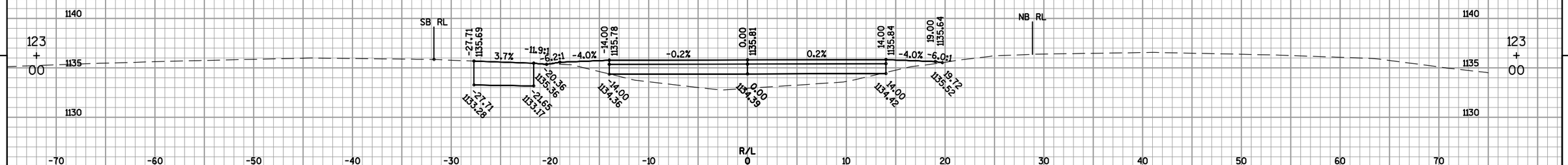

| PROJECT NO: 1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | CROSS SECTIONS: STAGE 3 MEDIAN CROSSOVER | SHEET 338 | E |
|---|---|---|---|---|---|





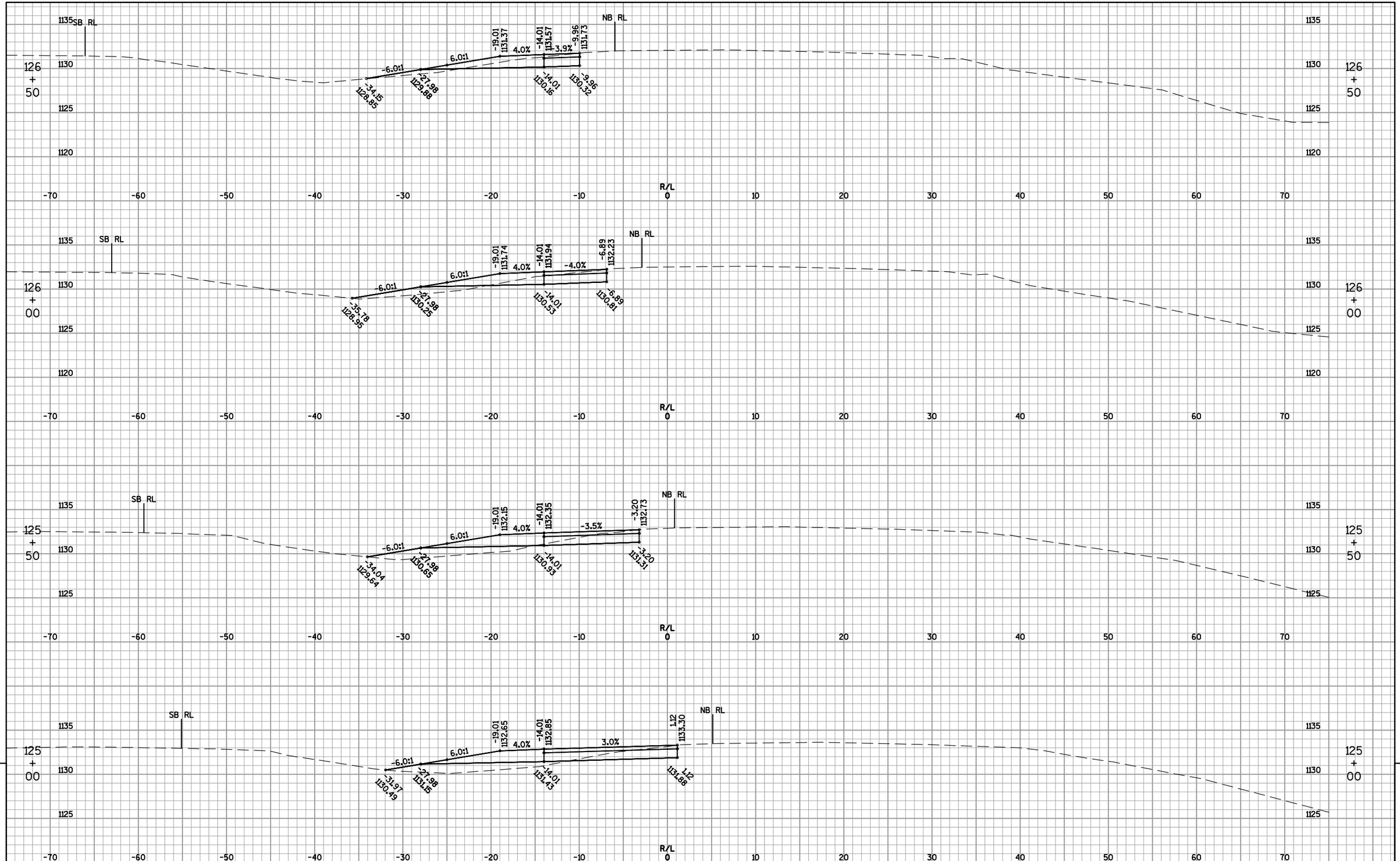




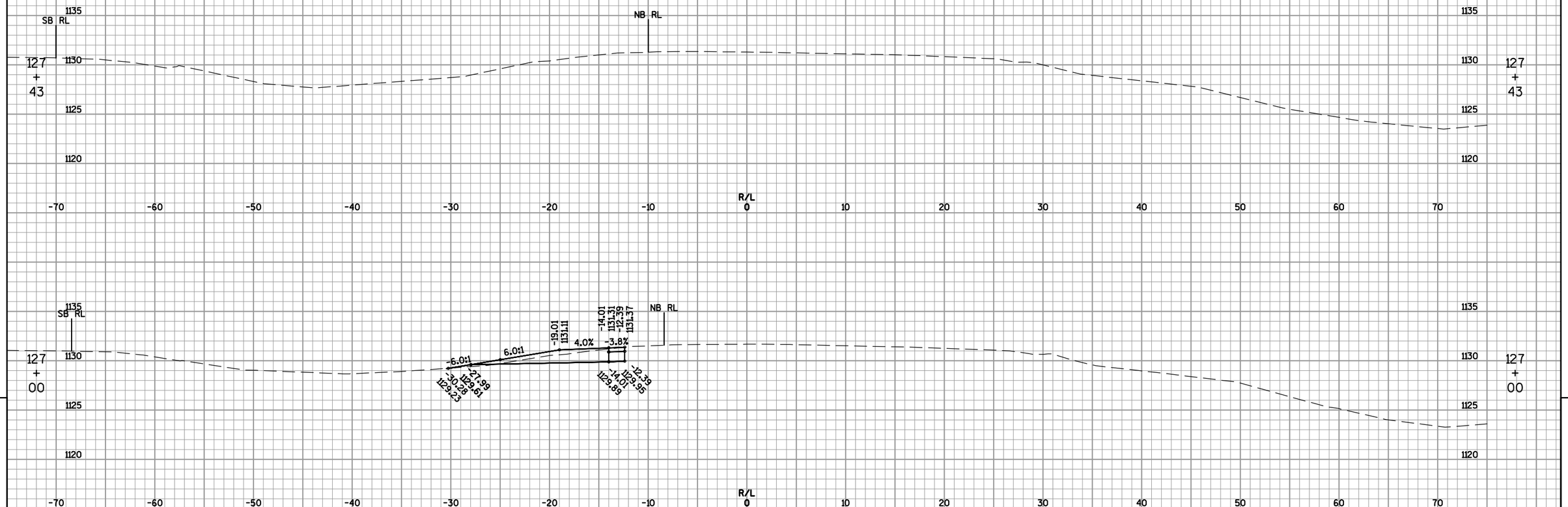

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| PROJECT NO: 1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | CROSS SECTIONS: STAGE 3 MEDIAN CROSSOVER | SHEET 339 | E |
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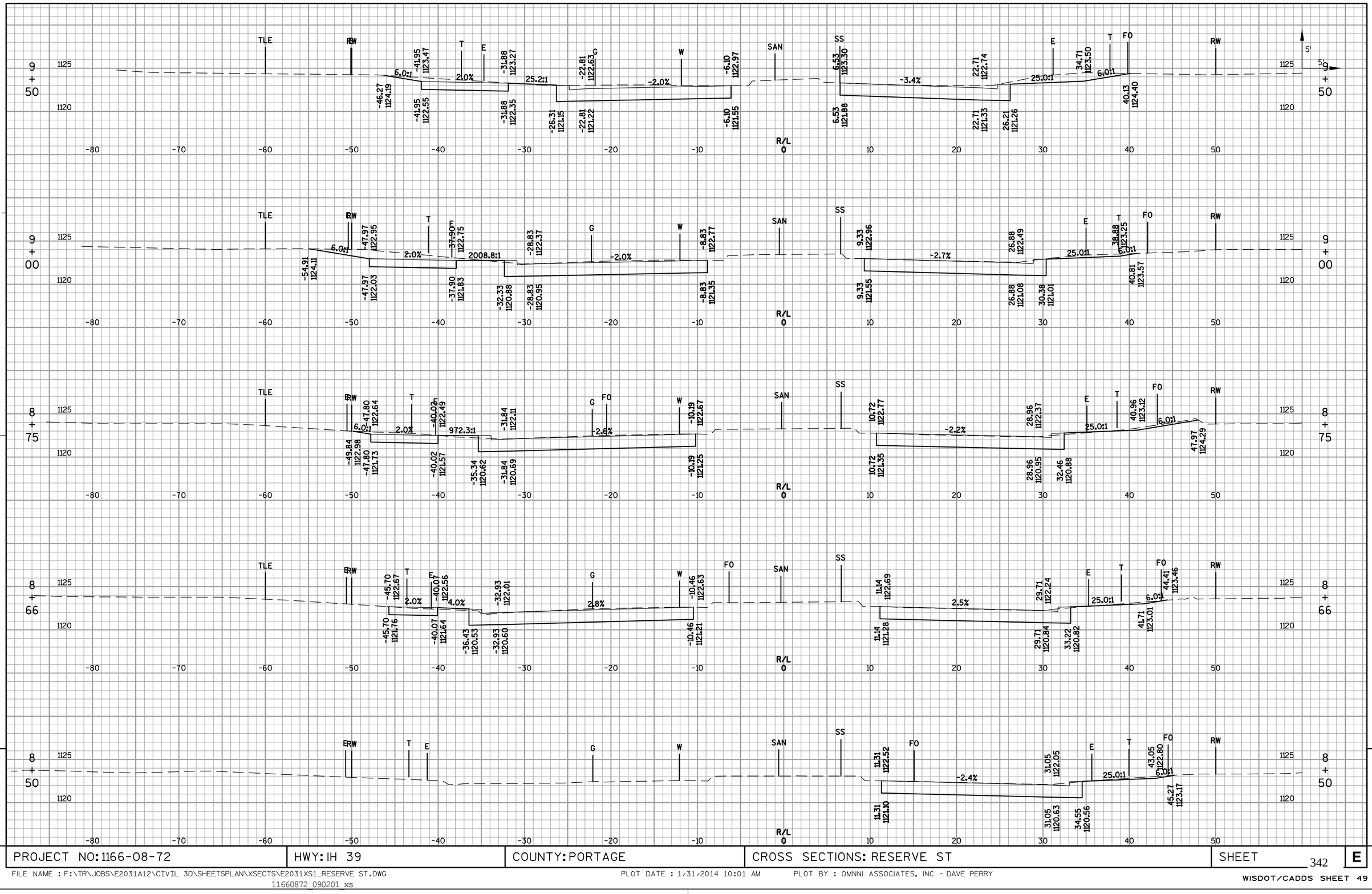

| PROJECT NO: 1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | CROSS SECTIONS: STAGE 3 MEDIAN CROSSOVER | SHEET 340 | E |
|---|---|---|---|---|---|




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| PROJECT NO: 1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | CROSS SECTIONS: STAGE 3 MEDIAN CROSSOVER | SHEET 341 | E |
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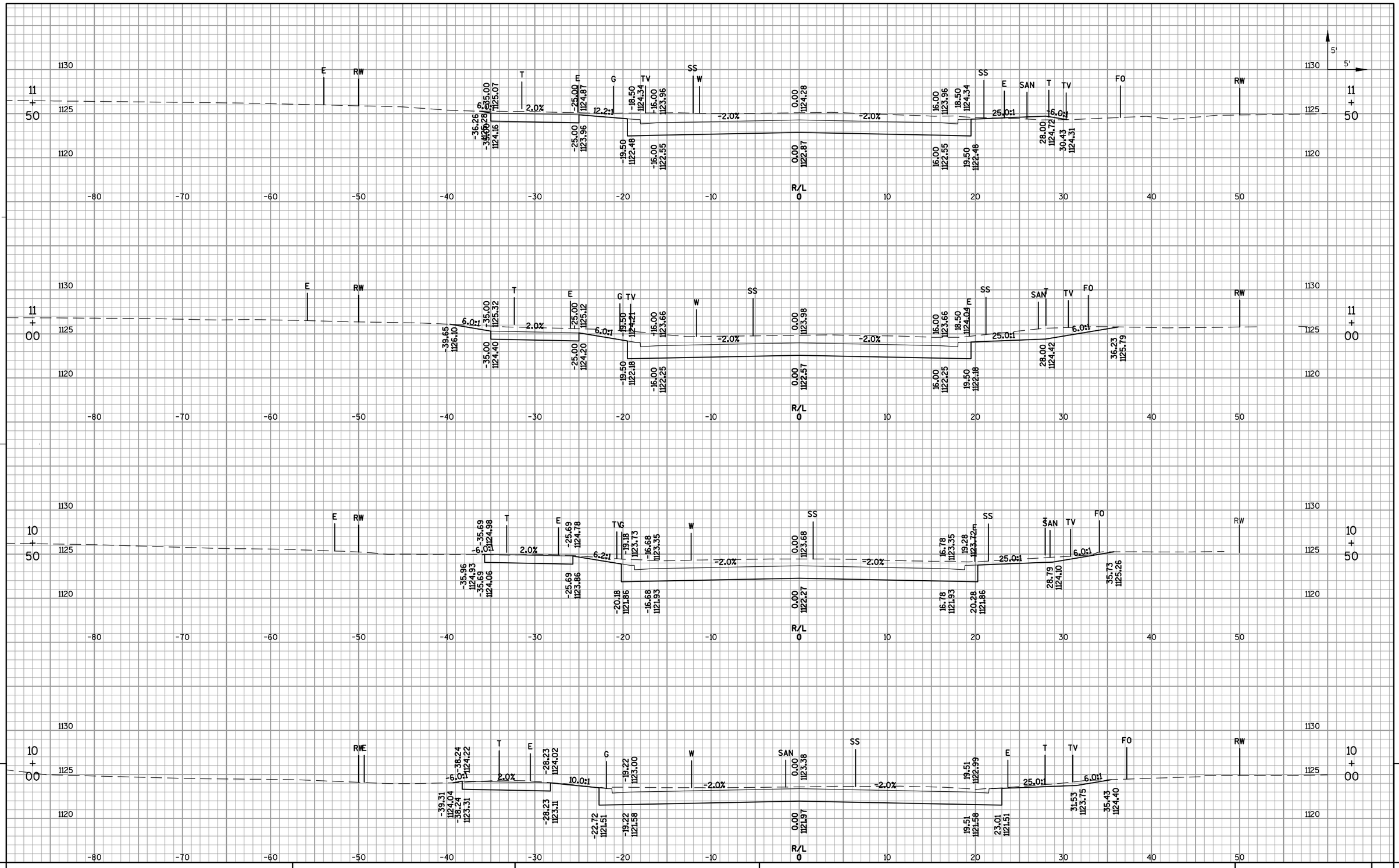
| PROJECT NO: 1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | CROSS SECTIONS: RESERVE ST | SHEET 342 | E |
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FILE NAME : F:\TR\JOBS\E2031A12\CIVIL 3D\SHEETSPLAN\XSECTS\E2031XS1_RESERVE ST.DWG
11660872_090201_xs

PLOT DATE : 1/31/2014 10:01 AM

PLOT BY : OMNNI ASSOCIATES, INC - DAVE PERRY

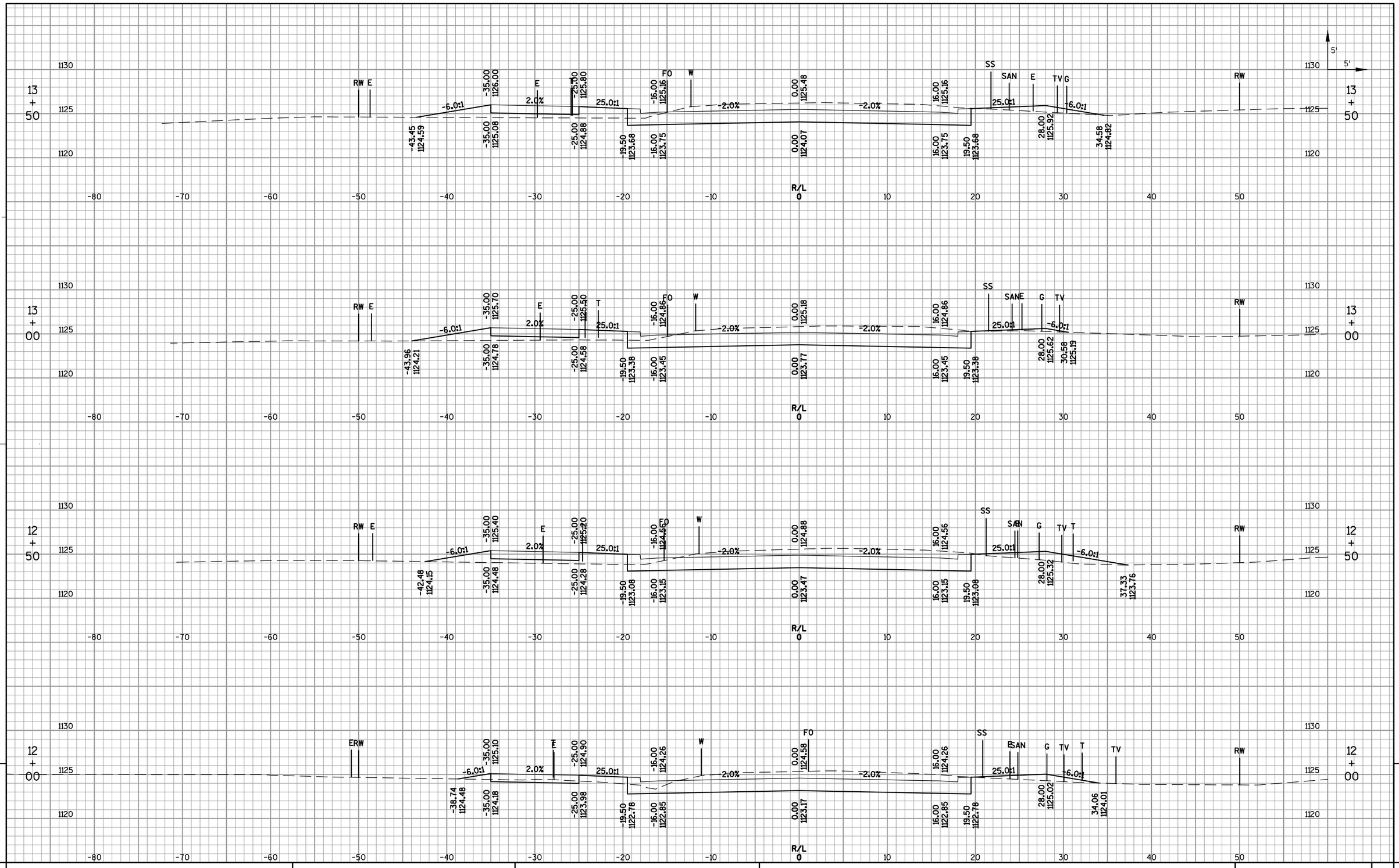
WISDOT/CADDS SHEET 49




| PROJECT NO: 1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | CROSS SECTIONS: RESERVE ST | SHEET 343 | E |
|---|---|---|---|---|---|

FILE NAME : F:\TR\JOBS\E2031A12\CIVIL 3D\SHEETSPLAN\XSECTS\E2031XS1_RESERVE ST.DWG PLOT DATE : 4/17/2014 10:10 AM PLOT BY : OMNNI ASSOCIATES, INC - ANDREW WESTBROOK

WISDOT/CADDS SHEET 49




9

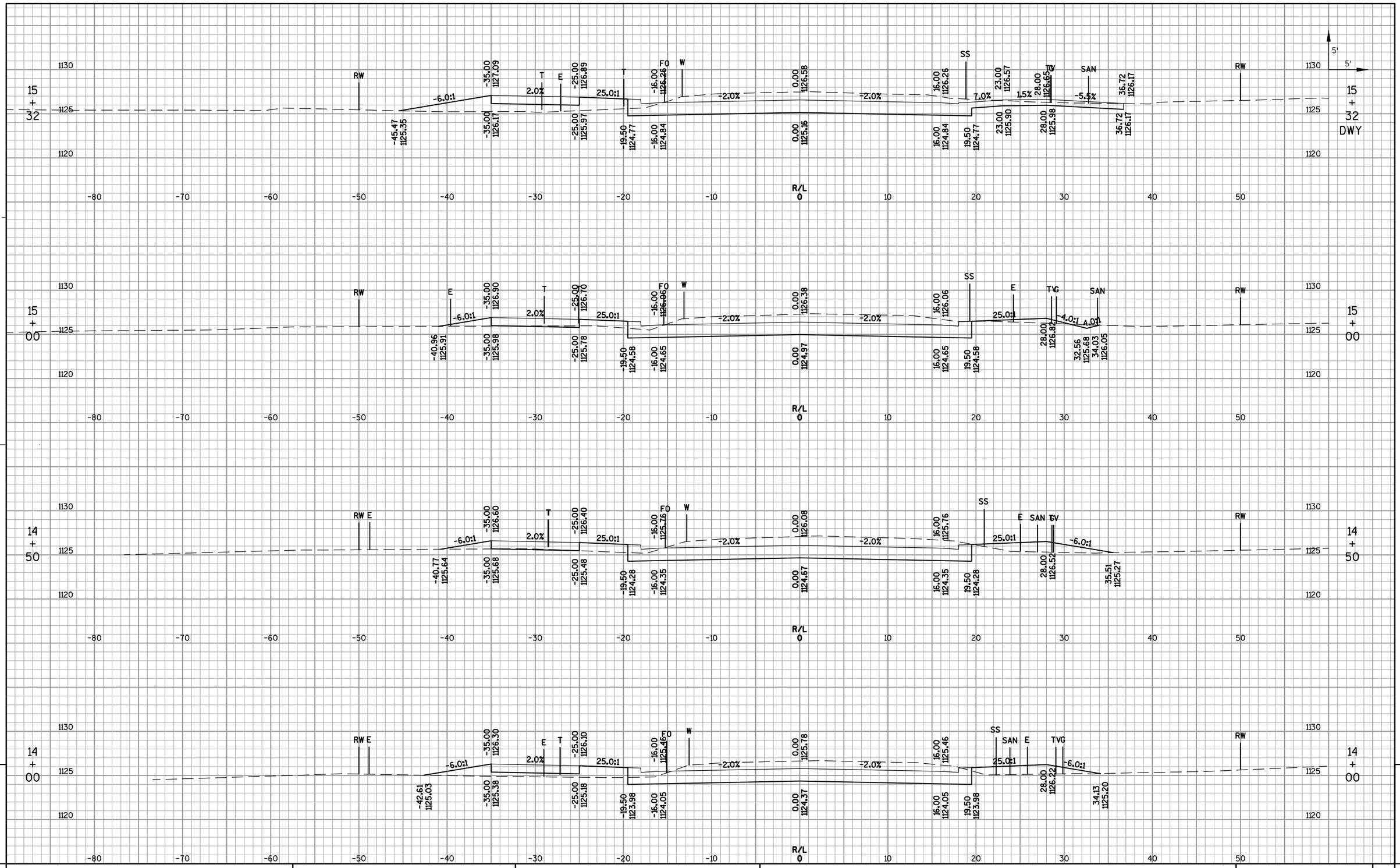
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| PROJECT NO: 1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | CROSS SECTIONS: RESERVE ST | SHEET 344 | E |
|---|---|---|---|---|---|

FILE NAME : F:\TR\JOBS\E2031A12\CIVIL 3D\SHEETSPLAN\XSECTS\E2031XS1_RESERVE ST.DWG
11660872_090203_xs

PLOT DATE : 1/31/2014 10:02 AM

PLOT BY : OMNNI ASSOCIATES, INC - DAVE PERRY




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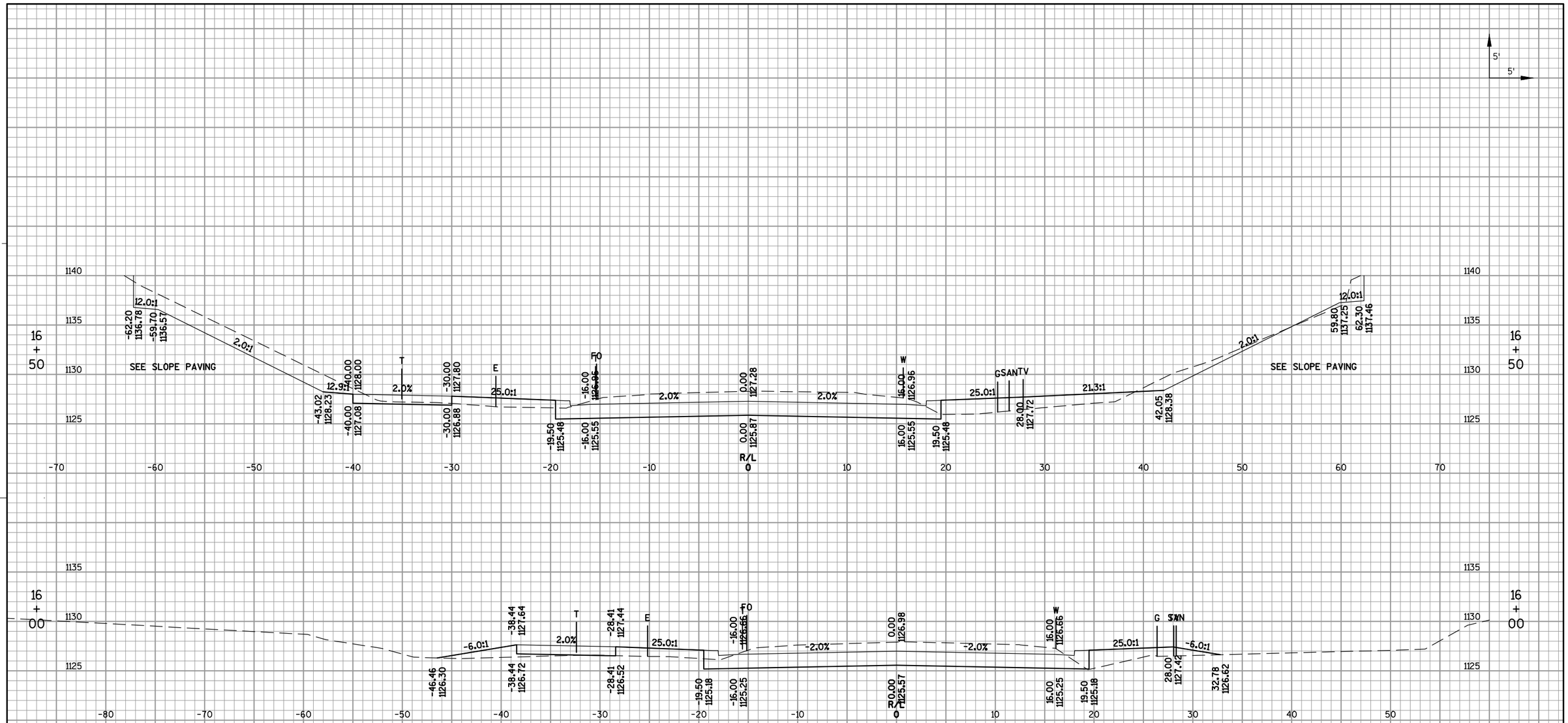
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| PROJECT NO: 1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | CROSS SECTIONS: RESERVE ST | SHEET 345 | E |
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FILE NAME : F:\TR\JOBS\E2031A12\CIVIL 3D\SHEETSPLAN\XSECTS\E2031XS1_RESERVE ST.DWG
11660872_090204_xs

PLOT DATE : 1/31/2014 10:03 AM PLOT BY : OMNNI ASSOCIATES, INC - DAVE PERRY

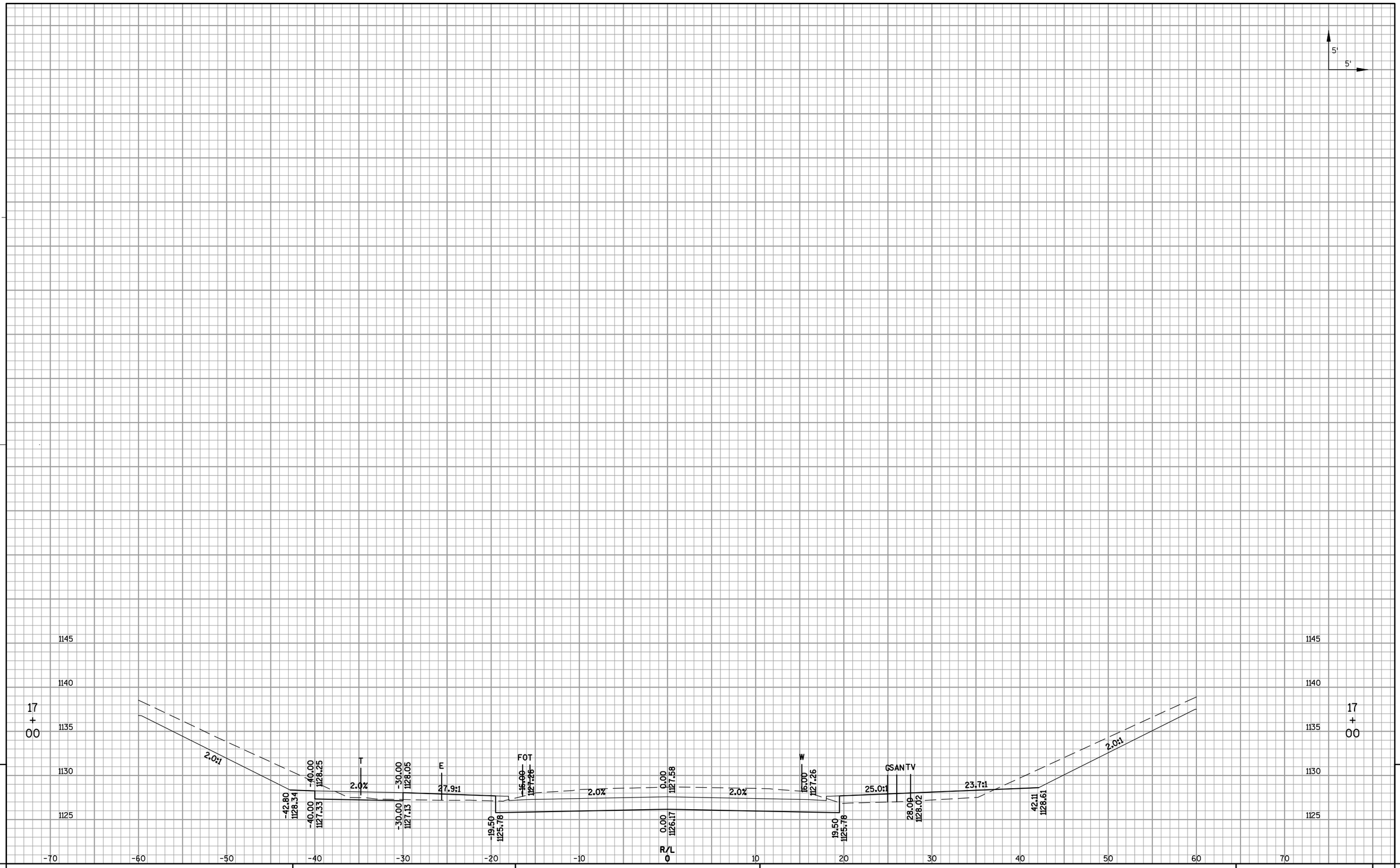
WISDOT/CADDS SHEET 49




| | | | | |
|---|---|---|---|---|
| PROJECT NO: 1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | CROSS SECTIONS: RESERVE ST | SHEET 346 E |

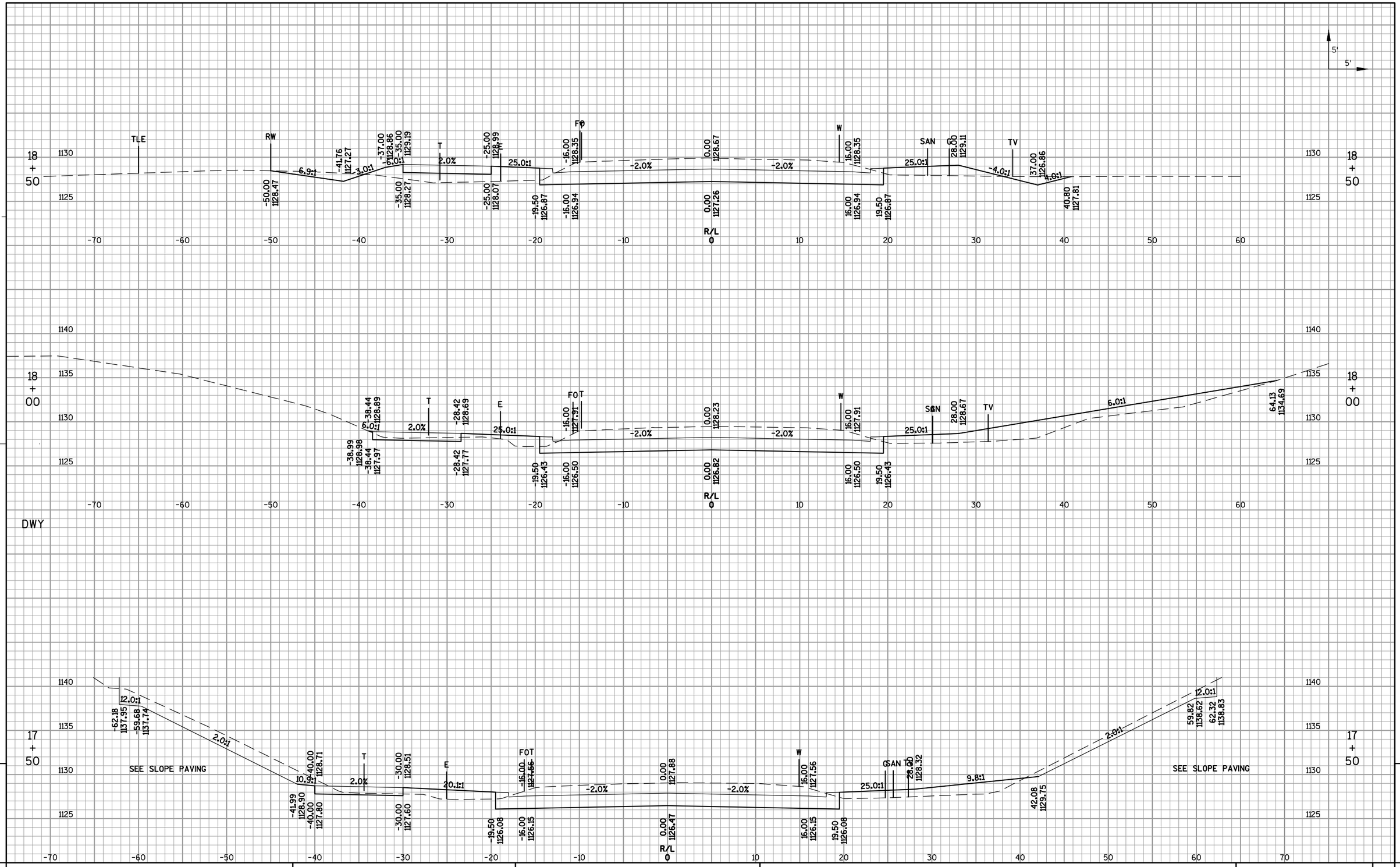
FILE NAME : F:\TR\JOBS\E2031A12\CIVIL 3D\SHEETSPLAN\XSECTS\E2031XS1_RESERVE ST.DWG PLOT DATE : 4/15/2014 1:40 PM PLOT BY : OMNNI ASSOCIATES, INC - ANDREW WESTBROOK

WISDOT/CADDS SHEET 49




| PROJECT NO: 1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | CROSS SECTIONS: RESERVE ST | SHEET 347 | E |
|---|---|---|---|---|---|

FILE NAME : F:\TR\JOBS\E2031A12\CIVIL 3D\SHEETSPLAN\XSECTS\E2031XS1_RESERVE ST.DWG PLOT DATE : 4/15/2014 1:40 PM PLOT BY : OMNNI ASSOCIATES, INC - ANDREW WESTBROOK



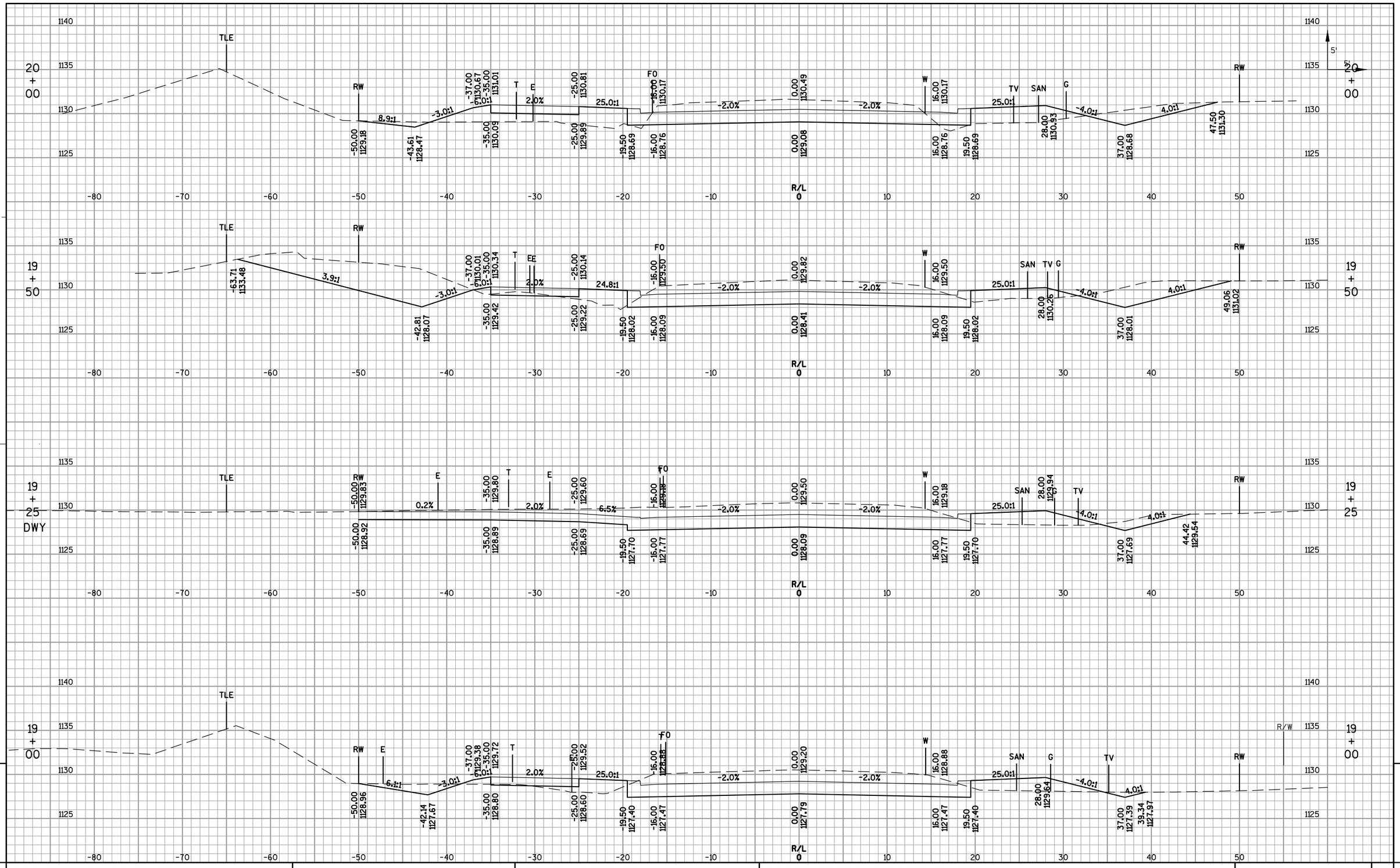

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| PROJECT NO: 1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | CROSS SECTIONS: RESERVE ST | SHEET 348 | E |
|---|---|---|---|---|---|

FILE NAME : F:\TR\JOBS\E2031A12\CIVIL 3D\SHEETSPLAN\XSECTS\E2031XS1_RESERVE ST.DWG PLOT DATE : 4/15/2014 1:41 PM PLOT BY : OMNNI ASSOCIATES, INC - ANDREW WESTBROOK

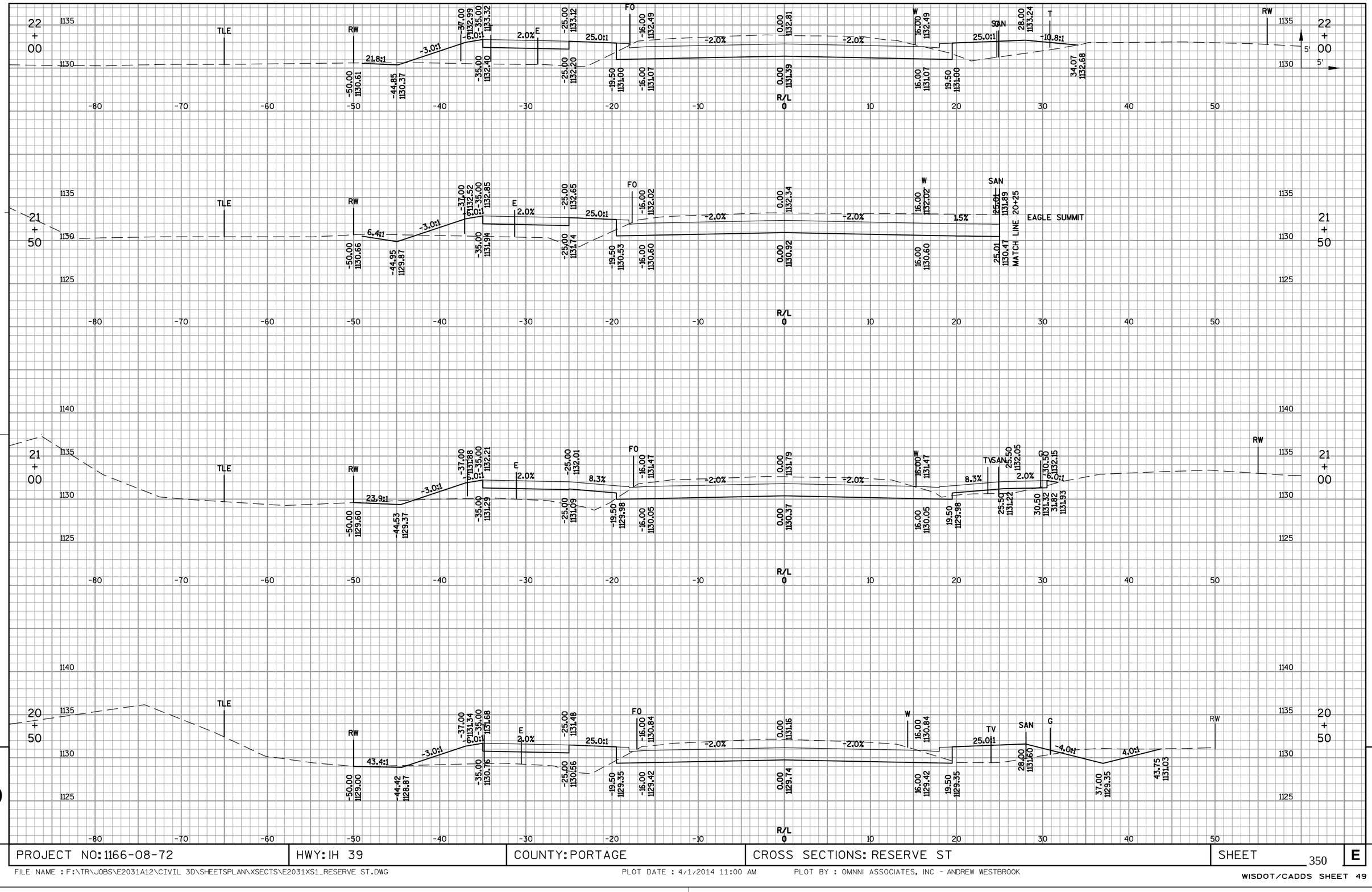
WISDOT/CADDS SHEET 49




9

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| PROJECT NO: 1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | CROSS SECTIONS: RESERVE ST | SHEET 349 | E |
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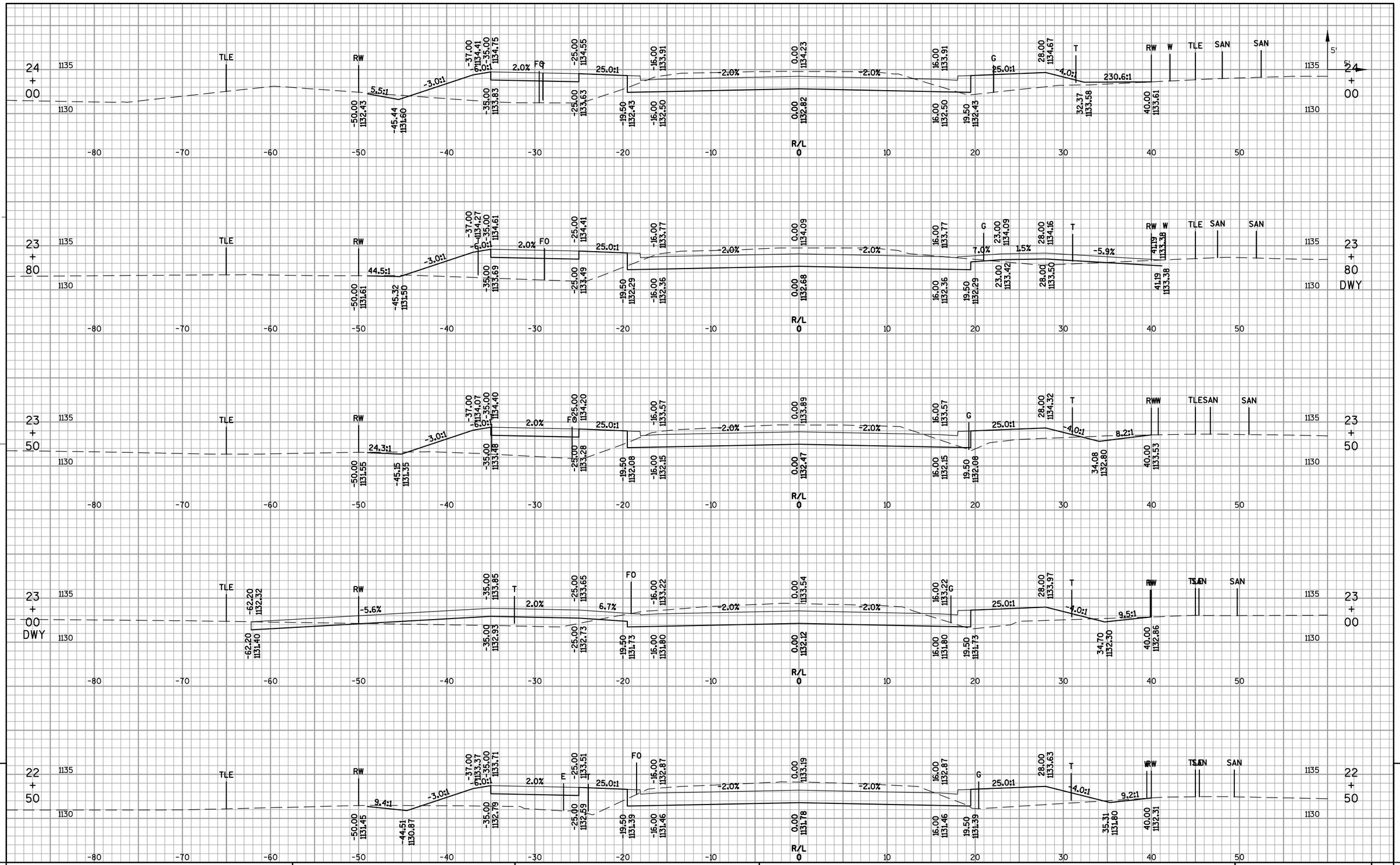



| PROJECT NO: 1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | CROSS SECTIONS: RESERVE ST | SHEET 350 | E |
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FILE NAME : F:\TR\JOBS\E2031A12\CIVIL 3D\SHEETSPLAN\XSECTS\E2031XS1_RESERVE ST.DWG

PLOT DATE : 4/1/2014 11:00 AM

PLOT BY : OMNNI ASSOCIATES, INC - ANDREW WESTBROOK




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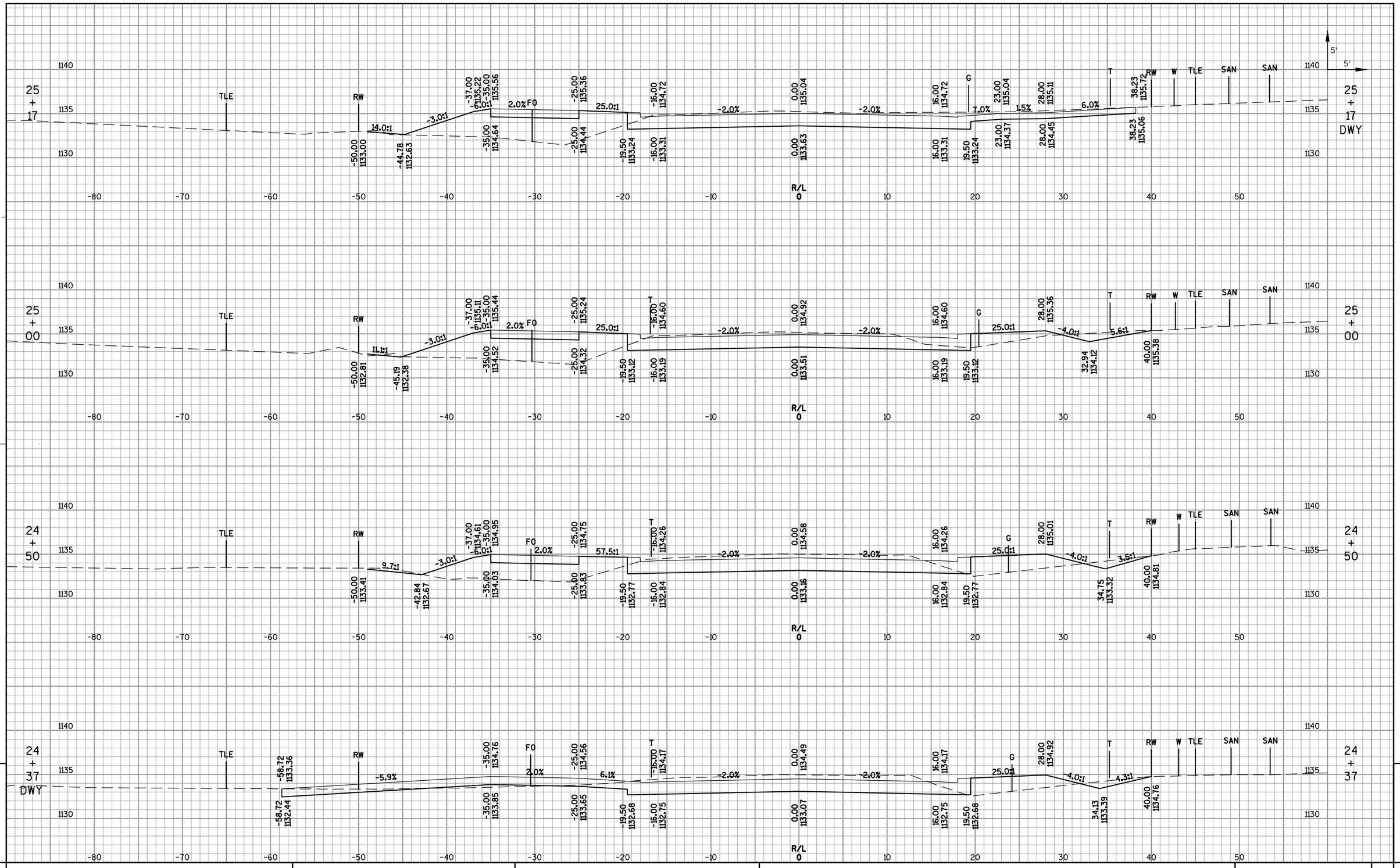
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PLOT DATE : 1/31/2014 10:06 AM

PLOT BY : OMNNI ASSOCIATES, INC - DAVE PERRY

WISDOT/CADDS SHEET 49



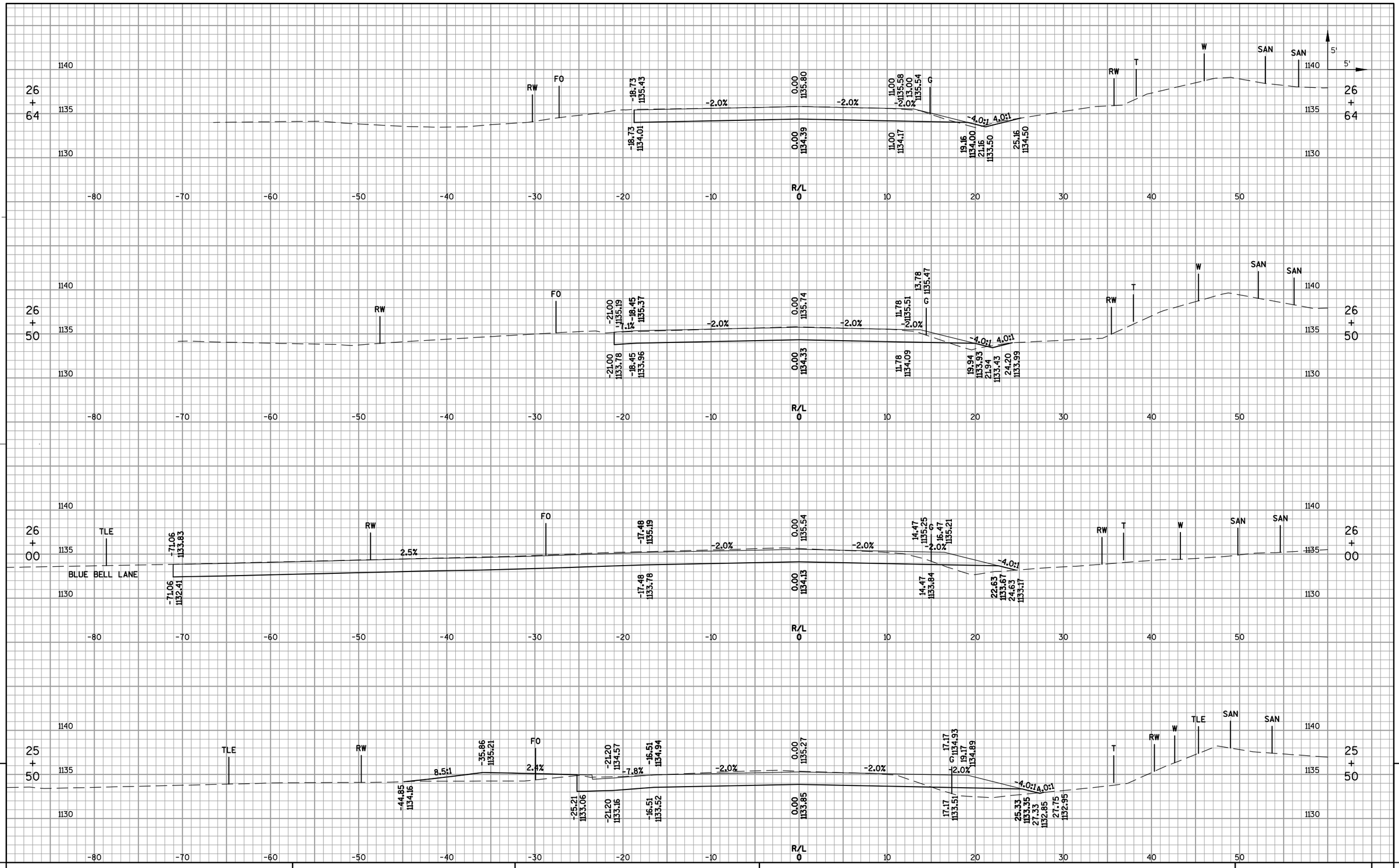

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| PROJECT NO: 1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | CROSS SECTIONS: RESERVE ST | SHEET 352 | E |
|---|---|---|---|---|---|

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WISDOT/CADDS SHEET 49

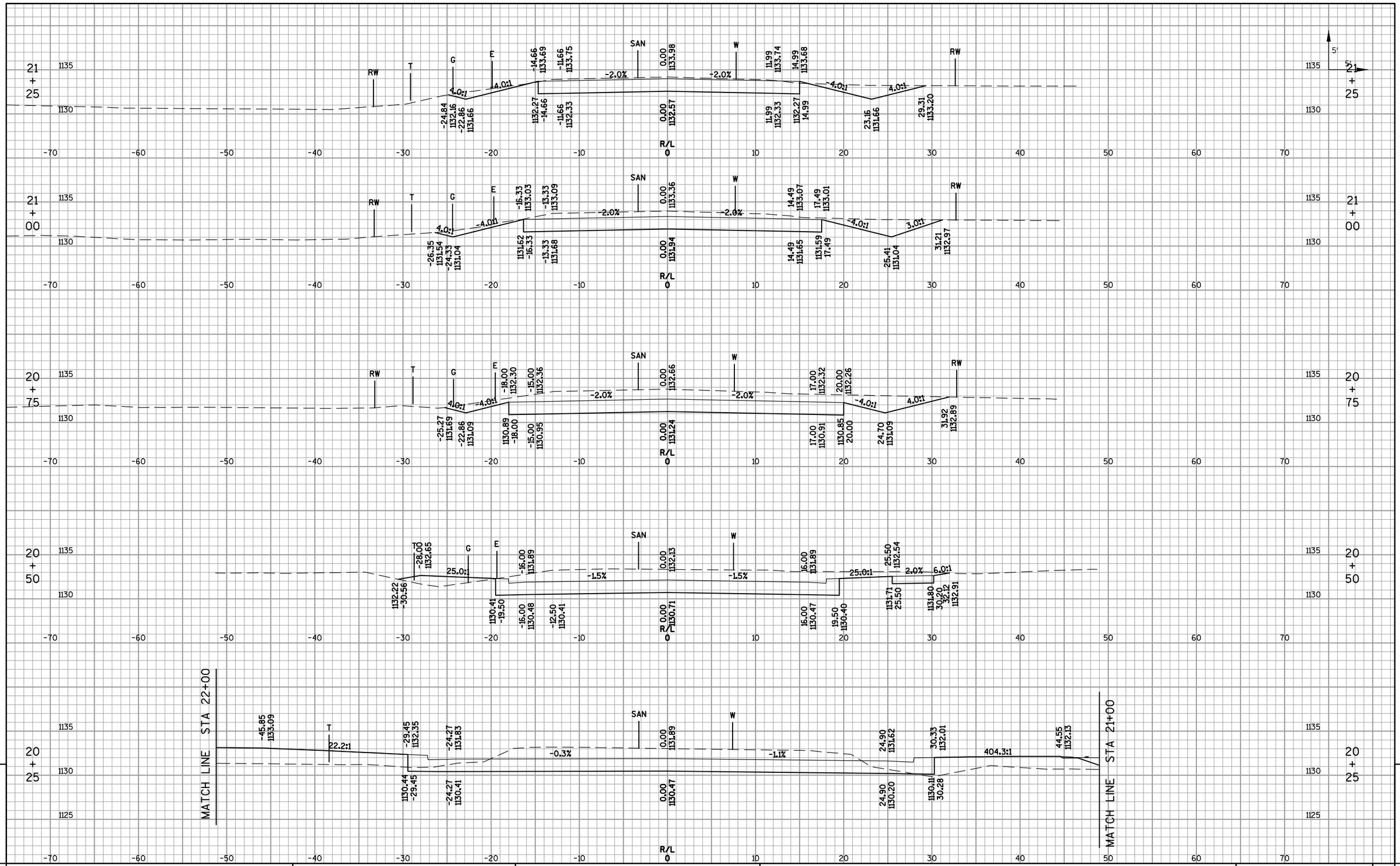



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| PROJECT NO: 1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | CROSS SECTIONS: RESERVE ST | SHEET 353 | E |
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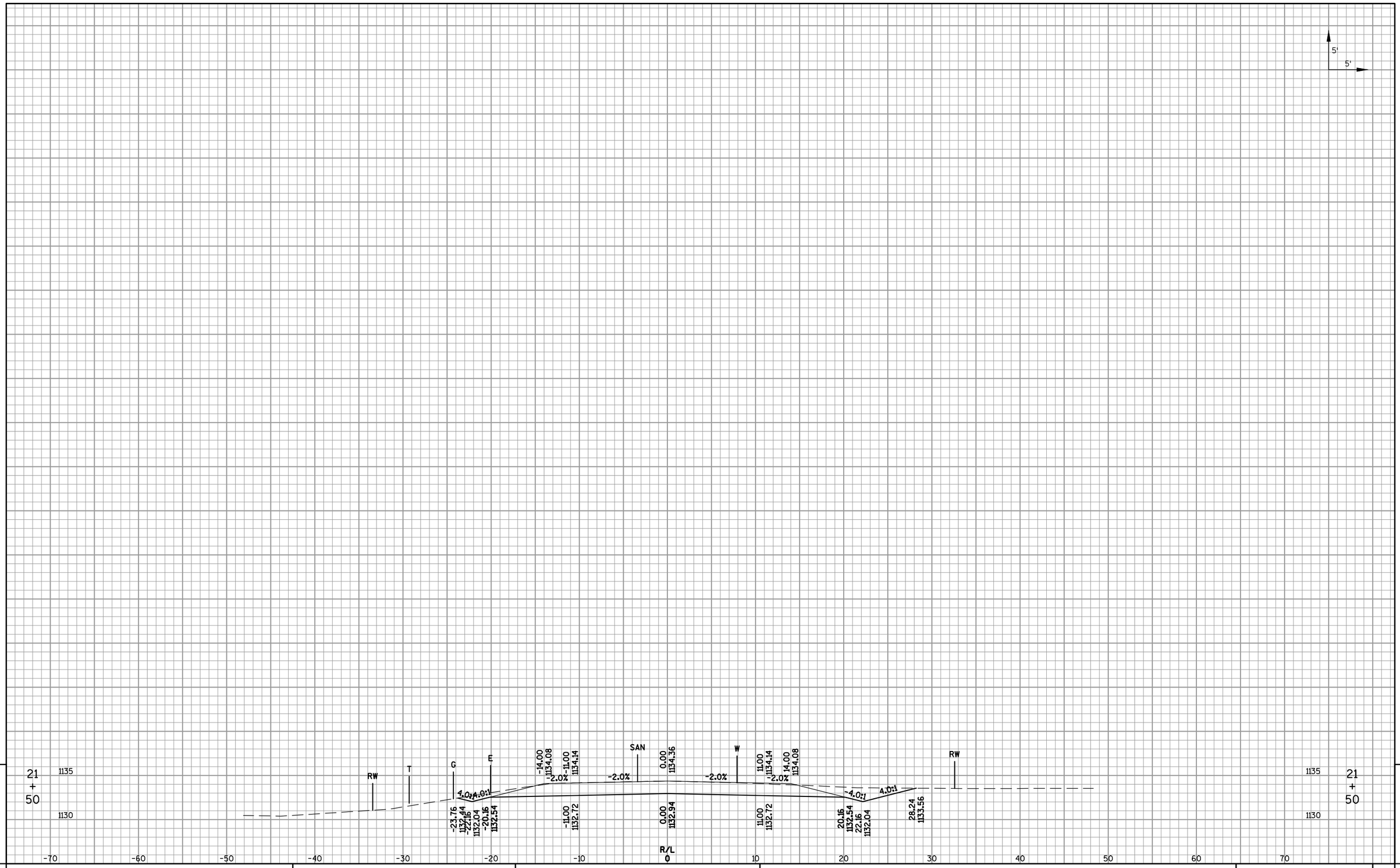
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PLOT BY : OMNNI ASSOCIATES, INC - DAVE PERRY
WISDOT/CADDS SHEET 49




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|---|---|---|---|---|
| PROJECT NO: 1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | CROSS SECTIONS: EAGLE SUMMIT | SHEET 354 E |

FILE NAME : F:\TR\JOBS\E2031A12\CIVIL 3D\SHEETSPLAN\XSECTS\E2031XS1_RESERVE ST.DWG PLOT DATE : 4/1/2014 11:08 AM PLOT BY : OMNNI ASSOCIATES, INC - ANDREW WESTBROOK

WISDOT/CADDS SHEET 49




| PROJECT NO: 1166-08-72 | HWY: IH 39 | COUNTY: PORTAGE | CROSS SECTIONS: EAGLE SUMMIT | SHEET 355 | E |
|---|---|---|---|---|---|

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