WIS

MAR 2014

PROJECT ID: 1053-02-74

WITH: 1053-02-75, 1053-05-60

COUNTY: MARATHON

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 = 656

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
1053-02-74	WISC 2014077	1
1053-02-75	WISC 2014078	1
1053-05-60	———	———

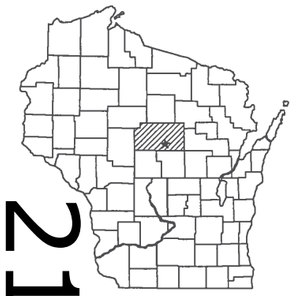
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

WAUSAU - WITTENBERG
STH 29
MARATHON COUNTY

(SUNRISE DRIVE TO BUSINESS 51) (B-37-0136, 0063, 0140, 0079) (SUNRISE DRIVE BRIDGE B-37-0113)

STATE PROJECT NUMBER	STATE PROJECT NUMBER	STATE PROJECT NUMBER
1053-02-74	1053-02-75	1053-05-60

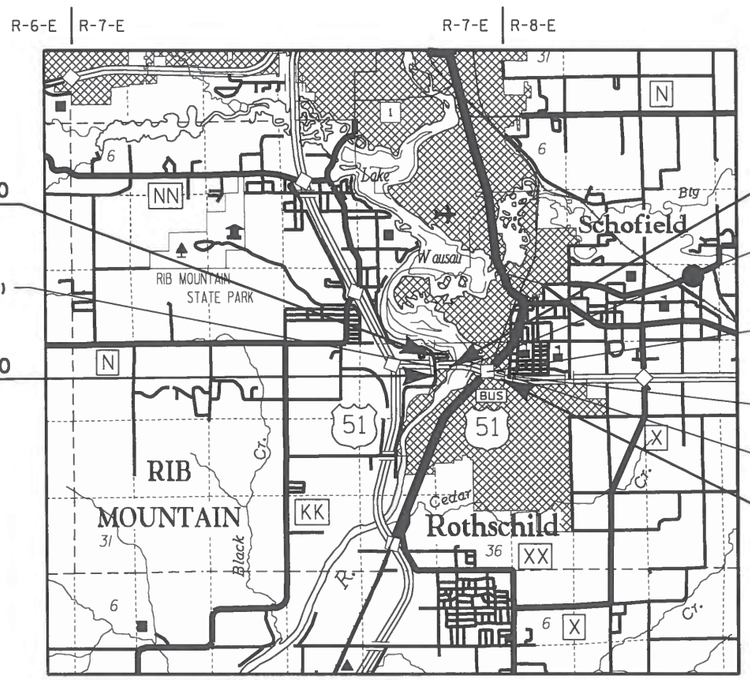


21

N

DESIGN DESIGNATION

		STH 29	SUNRISE DR
A.A.D.T. (2016)	=	37800	730
A.A.D.T. (2036)	=	46300	805
D.H.V.	=	---	---
D.D.	=	59/41	50/50
T.	=	18.3%	3.0%
DESIGN SPEED	=	70 MPH	35 MPH
ESALS	=	23,967,800	43,800



CONVENTIONAL SYMBOLS

PLAN

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

PROFILE

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

UTILITIES

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

LAYOUT

SCALE 0 1 MI.

1053-02-74 TOTAL NET LENGTH OF CENTERLINE = 0.506 MI.
1053-02-75 TOTAL NET LENGTH OF CENTERLINE = 0.000 MI.
1053-05-60 TOTAL NET LENGTH OF CENTERLINE = 0.000 MI.

COORDINATES ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), MARATHON COUNTY.

ELEVATIONS SHOWN ON THIS PLAN ARE REFERENCED TO THE GEODETIC VERTICAL DATUM OF 1929 (NGVD29).

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES

WISCONSIN
MARK R. PETERSEN
E-36785
EAU CLAIRE
WI
PROFESSIONAL ENGINEER

DATE: 10/28/13

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	WISDOT/QUEST CIVIL ENGINEERS, LLC
Designer	AYRES ASSOCIATES INC
Project Manager	MARK STEIDL
Regional Examiner	CHERYL SIMON
Regional Supervisor	SHANNON RILEY

APPROVED FOR THE DEPARTMENT

DATE: 10/30/2013 (Signature)

E

UTILITIES

* WINDSTREAM KDL INC - COMMUNICATIONS
8531 COUNTY ROAD FF
WISCONSIN RAPIDS, WI 54494
ATTN: DENNIS RUESS
(812) 456-1249
dennis.ruess@windstream.com

* FRONTIER COMMUNICATIONS OF WILLC
1851 NORTH 14TH AVENUE
WAUSAU, WI 54401
ATTN: CALVIN KLADE
(715) 847-1525
calvin.klade@ftr.com

* WISCONSIN PUBLIC SERVICE CORPORATION - ELECTRIC
1700 SHERMAN STREET
P.O. BOX 1166
WAUSAU, WI 54402
ATTN: CLAYTON VIRCKS
(715) 848-7317
chvircks@wisconsinpublicservice.com

* WISCONSIN PUBLIC SERVICE CORPORATION - GAS
1700 SHERMAN STREET
P.O. BOX 1166
WAUSAU, WI 54402
ATTN: MICHAEL BOSI, PE
(715) 848-7471
mabosi@wisconsinpublicservice.com

* OWEST COMMUNICATIONS
1310 EAST MARY STREET
OTTUMWA, IA 52501
ATTN: ROBERT SAMPSON
(636) 887-5367
robert.sampson@centurylink.com

* PACKERLAND BROADBAND - COMMUNICATIONS
(LABELED AS CCI SYSTEMS THROUGHOUT PLAN)
1700 INDUSTRIAL DRIVE
GREEN BAY, WI 54302
ATTN: DENNIS LAFAVE
(920) 619-9774
dlafave@mi-tech.us

* CHARTER COMMUNICATIONS
853 MCINTOSH STREET
WAUSAU, WI 54403
ATTN: SCOTT OLSON
(715) 301-4079
scott.olson@charter.com

VILLAGE OF ROTHSCHILD - SANITARY
211 GRAND AVENUE
ROTHSCHILD, WI 54474
ATTN: RICK STOVIAK
(715) 359-3660
rstoviak@rothschildwater.org

VILLAGE OF ROTHSCHILD - WATER
211 GRAND AVENUE
ROTHSCHILD, WI 54474
ATTN: RICK STOVIAK
(715) 359-3660
rstoviak@rothschildwater.org

* MEMBER OF DIGGERS HOTLINE

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

GENERAL NOTES

REMOVALS
NO TREES OR SHRUBS ARE TO BE REMOVED UNLESS INDICATED FOR REMOVAL BY THE ENGINEER.

GRADING/EROSION CONTROL
EXCAVATION BELOW SUBGRADE (EBS) IS NOT USED TO BALANCE YARDAGE AND IS NOT SHOWN ON THE CROSS SECTIONS BUT IS MEASURED AND PAID FOR AS COMMON EXCAVATION. THE LOCATION FOR EBS WILL BE DETERMINED BY THE ENGINEER.

DO NOT APPLY FERTILIZER WITHIN 20 FEET OF A WATER BODY OR WETLAND.

MISCELLANEOUS
A SAWED JOINT WILL BE REQUIRED WHERE NEW PAVEMENT IS TO MEET AN EXISTING PAVED SURFACE.

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

HMA PAVEMENT LAYER THICKNESS

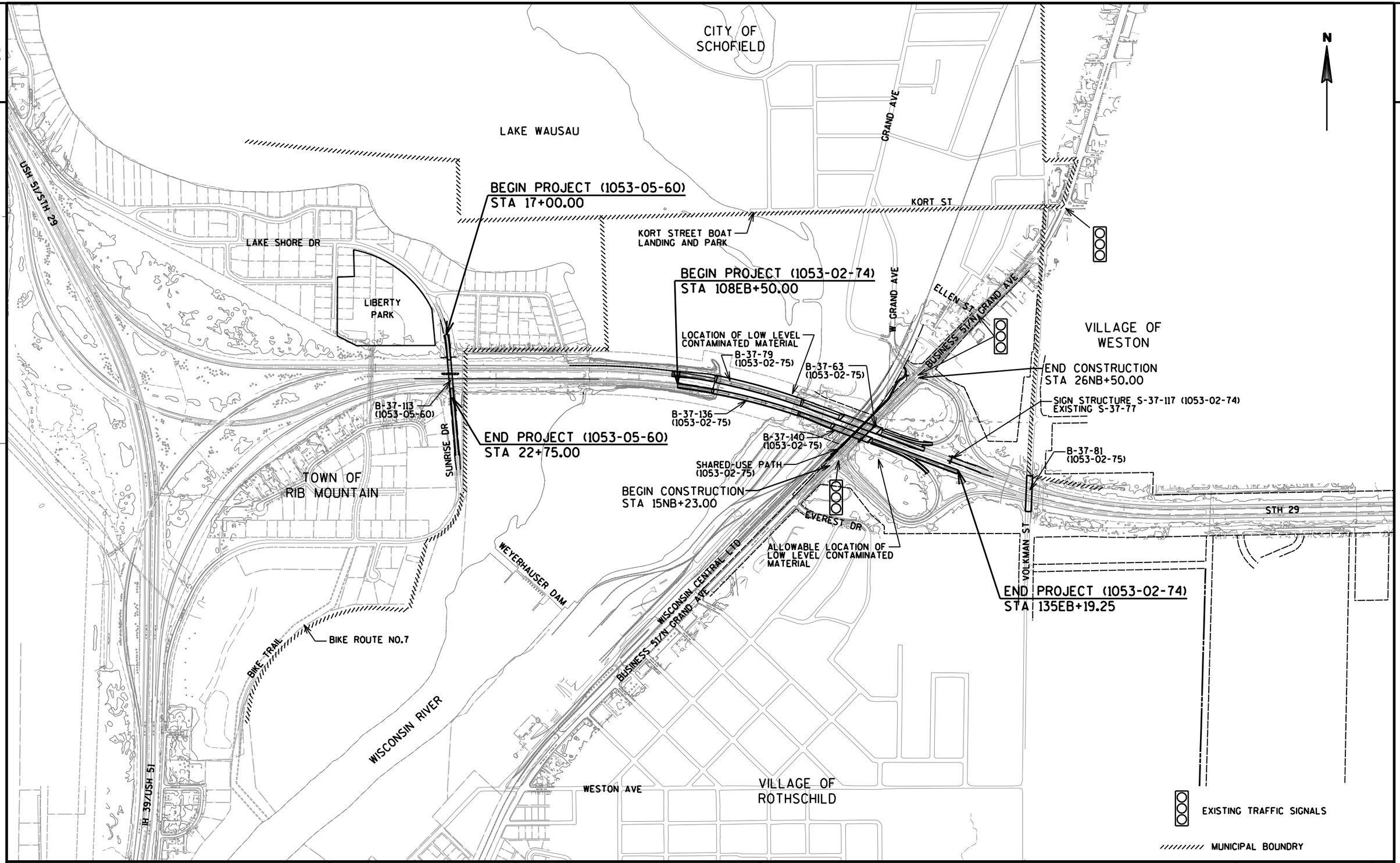
TOTAL LAYER THICKNESS	LAYERS	ASPHALTIC MATERIAL	LOCATION
3.5"	3.5" UPPER LAYER	PG 58-28	SHOULDER - NO TRAFFIC
4"	1.75" UPPER LAYER	PG 58-28	SUNRISE DRIVE
	2.25" LOWER LAYER	PG 58-28	
4.5"	2.25" UPPER LAYER	PG 58-28	BUS 51
	2.25" LOWER LAYER	PG 58-28	
5"	2" UPPER LAYER	PG 58-28	SHOULDER - TRAFFIC
	3" LOWER LAYER	PG 58-28	

ENVIRONMENTAL COORDINATOR

WISCONSIN DEPARTMENT OF NATURAL RESOURCES
473 GRIFFITH AVENUE
WISCONSIN RAPIDS, WI 54494
ATTN: MARC HERSHFIELD
(715) 421-7867

RAILROAD CONTACT

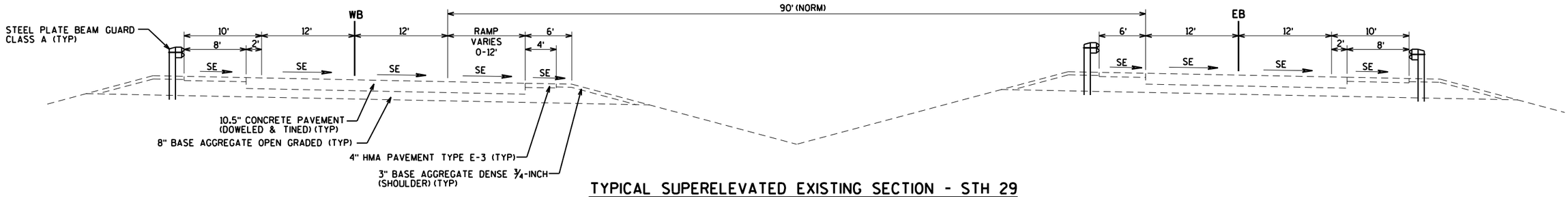
WISCONSIN CENTRAL LTD.
1625 DEPOT STREET
STEVENS POINT, WI 54481
ATTN: JACKIE MACEWICZ
(715) 345-2503
FLAGGING OPERATIONS
ATTN: MARY ELLEN CARMODY
(248) 740-6227



PROJECT NO: 1053-02-74/75/1053-05-60	HWY: STH 29	COUNTY: MARATHON	PROJECT OVERVIEW	SHEET	E

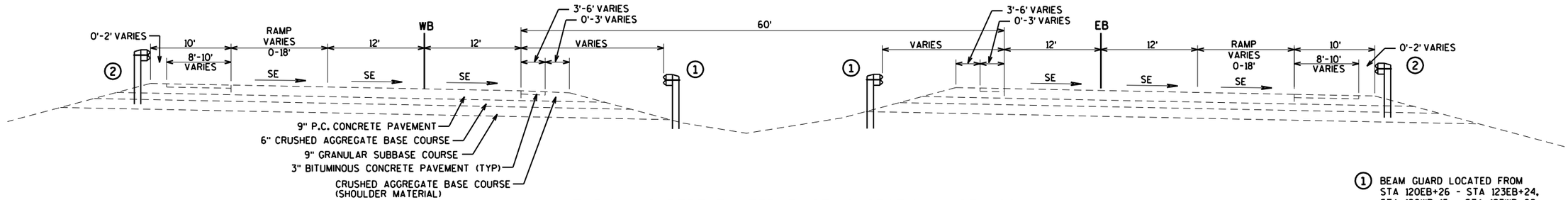
FILE NAME : T:\410637\DGN-DWG\plan\020201_po.dgn PLOT DATE : 1/8/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:800

WISDOT/CADDS SHEET 42



TYPICAL SUPERELEVATED EXISTING SECTION - STH 29

STA 108EB+50.00 - STA 111EB+64.35
STA 108WB+00.00 - STA 111WB+91.07

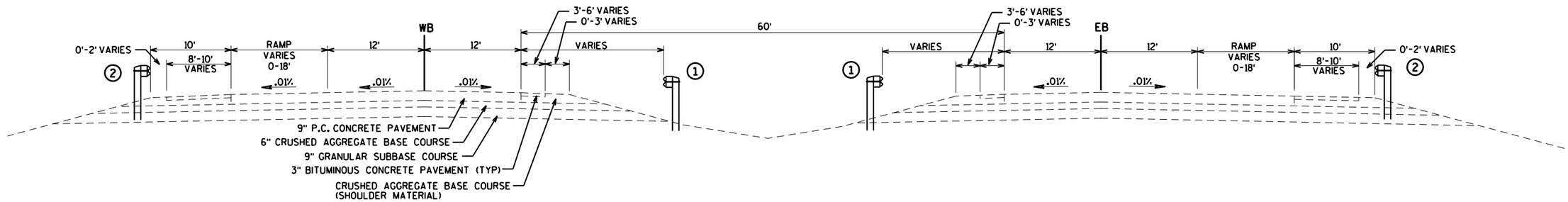


TYPICAL SUPERELEVATED EXISTING SECTION - STH 29

STA 119EB+93.76 - STA 121EB+51.90
STA 120WB+20.14 - STA 120WB+85.16

① BEAM GUARD LOCATED FROM
STA 120EB+26 - STA 123EB+24,
STA 120WB+15 - STA 123WB+08
AND STA 127WB+50 - STA 130WB+42.

② BEAM GUARD LOCATED FROM
STA 119EB+89 - STA 123EB+03,
STA 120WB+09 - STA 123WB+97
AND STA 127WB+74 - STA 128WB+98.

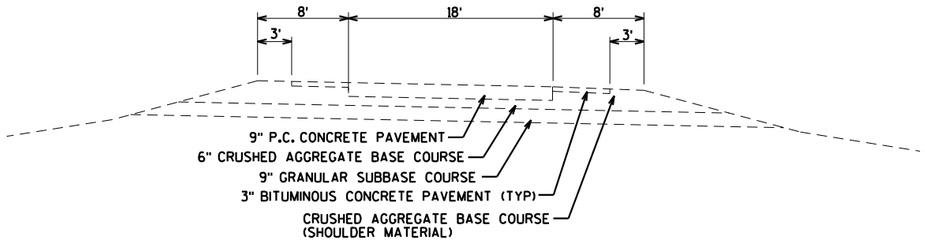


TYPICAL EXISTING SECTION - STH 29

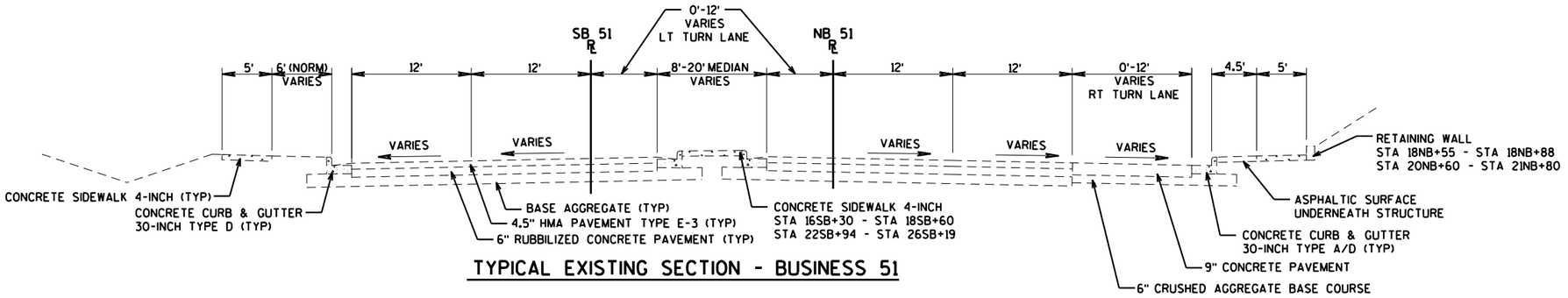
STA 121EB+51.90 - STA 122EB+94.69
STA 120WB+85.16 - STA 123WB+71.46
STA 126EB+94.09 - STA 135EB+19.25
STA 127WB+83.59 - STA 132WB+00.00

PROJECT NO: 1053-02-74/75/1053-05-60	HWY: STH 29	COUNTY: MARATHON	TYPICAL SECTIONS	SHEET 4	E

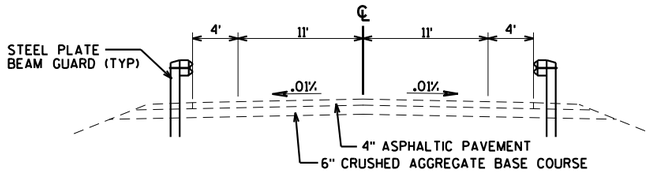
2



TYPICAL EXISTING SECTION - RAMPS



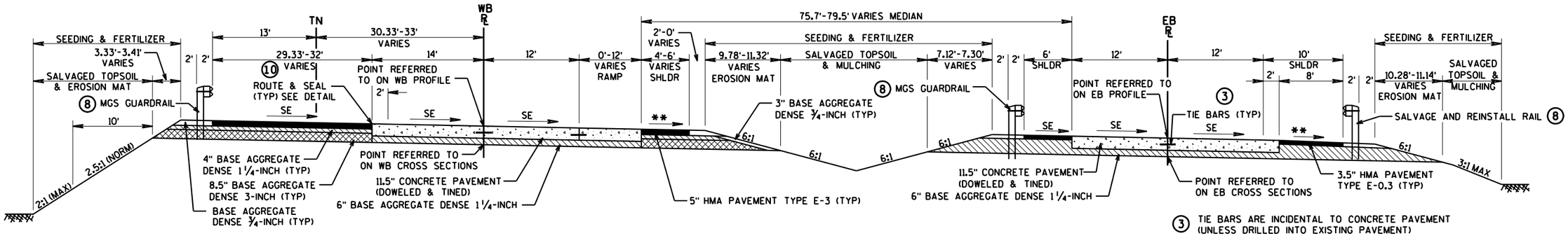
TYPICAL EXISTING SECTION - BUSINESS 51



TYPICAL EXISTING SECTION - SUNRISE DRIVE

PROJECT NO: 1053-02-74/75/1053-05-60	HWY: STH 29	COUNTY: MARATHON	TYPICAL SECTIONS	SHEET 5	E

FILE NAME : T:\410637\DGN-DWG\plan\020301_ts.dgn PLOT DATE : 1/8/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:200



TYPICAL SUPERELEVATED FINISHED SECTION - STH 29

STA 108EB+50.00 - STA 111EB+64.35
STA 108WB+00.00 - STA 111WB+91.07

SEE X-SECTIONS: STH 29 EASTBOUND (STAGE 6), STH 29 WESTBOUND (STAGES 3/4) (TS/TN) AND STH 29 EASTBOUND MEDIAN (STAGE 7)

** THE LOW SIDE SHOULDER SLOPE ON SUPERELEVATED SECTION EQUALS THE SUPERELEVATION RATE WHEN THE SUPERELEVATION RATE IS GREATER THAN 4%. IF THE SUPERELEVATION RATE IS LESS THAN OR EQUAL TO 4%. THE LOW SIDE SHOULDER SLOPE IS 4%. HIGH SIDE SHOULDER SLOPE ON SUPERELEVATED SECTIONS EQUALS THE SUPERELEVATION RATE. SEE SUPERELEVATION TABLES FOR SE.

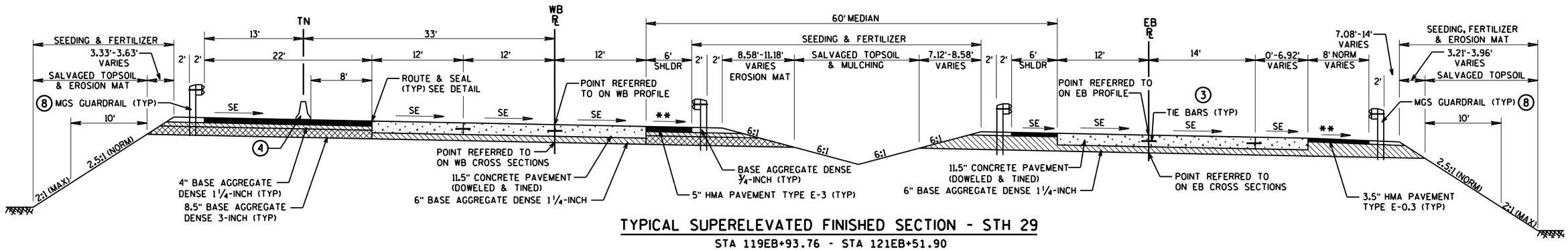
3 TIE BARS ARE INCIDENTAL TO CONCRETE PAVEMENT (UNLESS DRILLED INTO EXISTING PAVEMENT)

4 CONCRETE BARRIER TEMPORARY PRECAST LEFT IN PLACE FROM STA 113WB+88 TO STA 129WB+58 (SEE PAVING DETAIL FOR TERMINAL LAYOUT)

5 MGS GUARDRAIL FROM STA 121EB+51.90 TO STA 122EB+94.69.

8 SEE "PAVING DETAIL AT GUARDRAIL" FOR ADDITIONAL DETAIL.

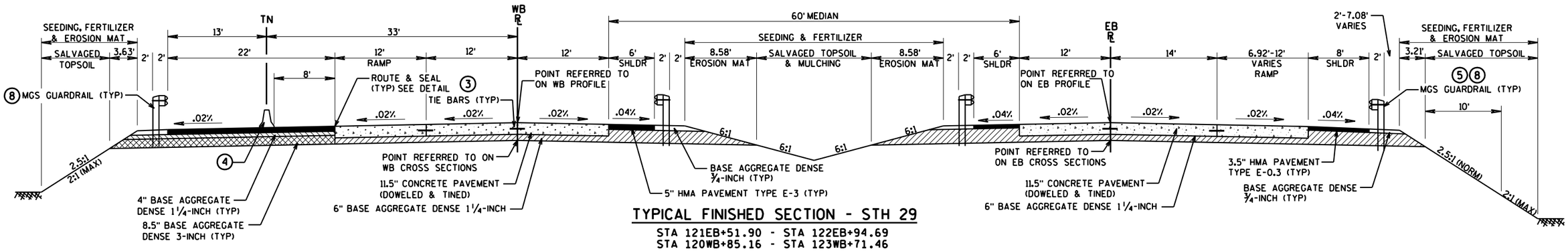
10 TYPICAL SHOWN IS FOR TEMPORARY CONDITION. SEE PAVING DETAIL FOR SAWCUT LOCATIONS.



TYPICAL SUPERELEVATED FINISHED SECTION - STH 29

STA 119EB+93.76 - STA 121EB+51.90
STA 120WB+20.14 - STA 120WB+85.16

SEE X-SECTIONS: STH 29 EASTBOUND (STAGE 6), STH 29 WESTBOUND (STAGES 3/4) (TS/TN) AND STH 29 EASTBOUND MEDIAN (STAGE 7)

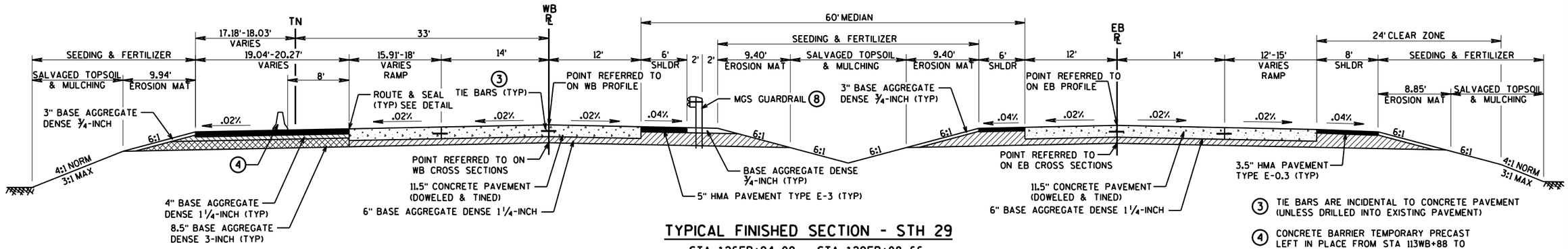


TYPICAL FINISHED SECTION - STH 29

STA 121EB+51.90 - STA 122EB+94.69
STA 120WB+85.16 - STA 123WB+71.46

SEE X-SECTIONS: STH 29 EASTBOUND (STAGE 6), STH 29 WESTBOUND (STAGES 3/4) (TS/TN) AND STH 29 EASTBOUND MEDIAN (STAGE 7)

PROJECT NO: 1053-02-74	HWY: STH 29	COUNTY: MARATHON	TYPICAL SECTIONS	SHEET 6	E



TYPICAL FINISHED SECTION - STH 29

STA 126EB+94.09 - STA 129EB+08.66
STA 127WB+83.59 - STA 128WB+87.97

SEE X-SECTIONS: STH 29 EASTBOUND (STAGE 6), STH 29 WESTBOUND (STAGES 3/4) (TS/TN) AND STH 29 EASTBOUND MEDIAN (STAGE 7)

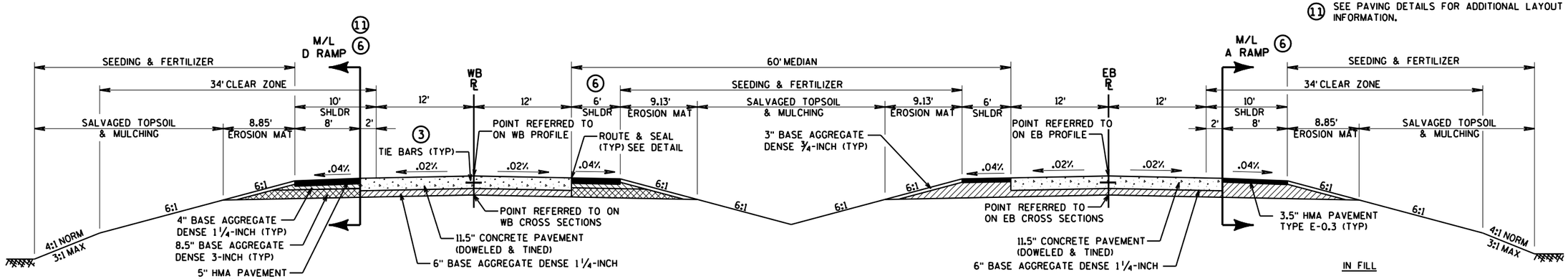
(3) TIE BARS ARE INCIDENTAL TO CONCRETE PAVEMENT (UNLESS DRILLED INTO EXISTING PAVEMENT)

(4) CONCRETE BARRIER TEMPORARY PRECAST LEFT IN PLACE FROM STA 113WB+88 TO STA 129WB+58 (SEE PAVING DETAIL FOR TERMINAL LAYOUT)

(6) SEE PAVING DETAIL SHEET FOR GORE LAYOUTS AND ADDITIONAL SHOULDER LAYOUT INFORMATION.

(8) SEE "PAVING DETAIL AT GUARDRAIL" FOR ADDITIONAL INFORMATION.

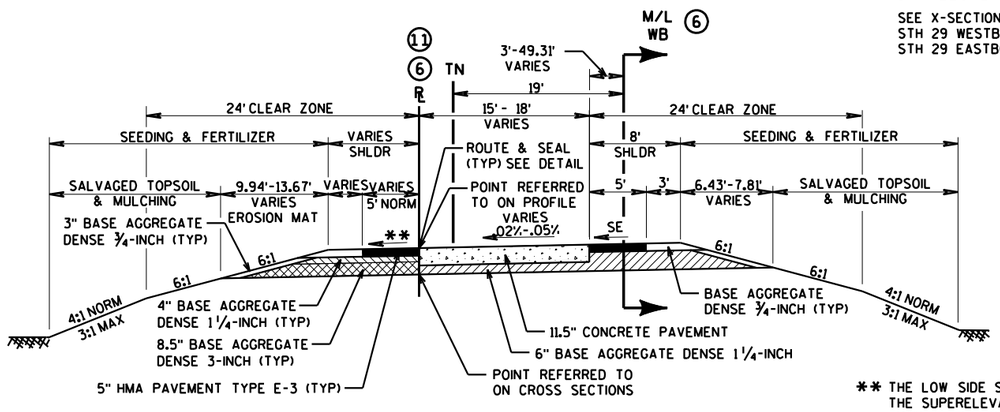
(11) SEE PAVING DETAILS FOR ADDITIONAL LAYOUT INFORMATION.



TYPICAL FINISHED SECTION - STH 29

STA 129EB+08.66 - STA 135EB+19.25
STA 128WB+87.97 - STA 132WB+00.00

SEE X-SECTIONS: STH 29 EASTBOUND (STAGE 6), STH 29 WESTBOUND (STAGES 3/4) (TS/TN) AND STH 29 EASTBOUND MEDIAN (STAGE 7)

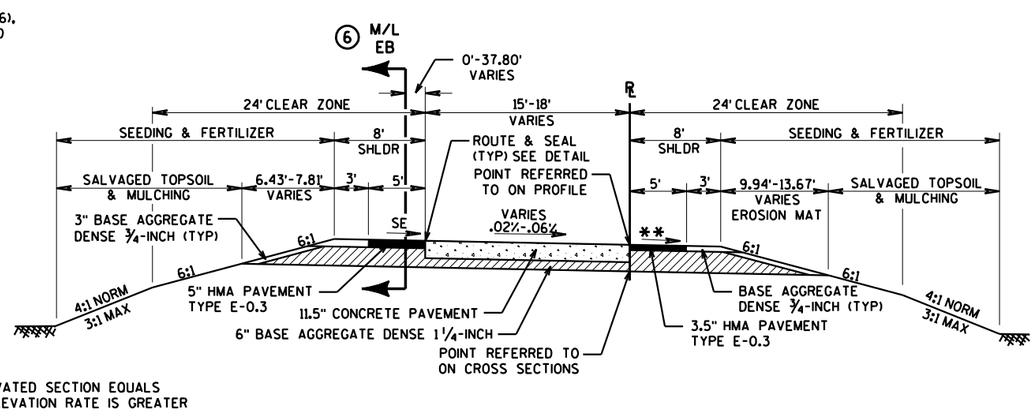


TYPICAL FINISHED RAMP SECTION - D RAMP

STA 128D+88.03 - STA 132D+54.08

SEE X-SECTIONS: D RAMP (STAGE 3A)

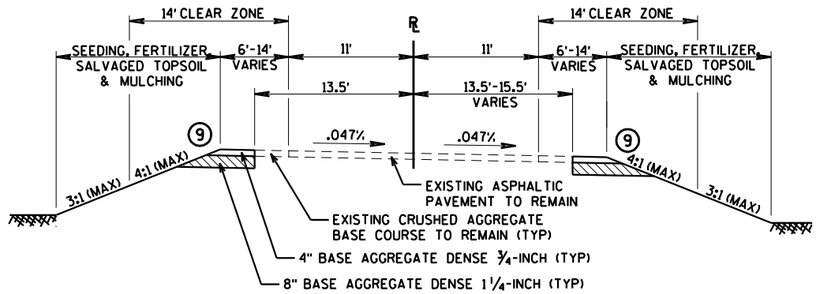
** THE LOW SIDE SHOULDER SLOPE ON SUPERELEVATED SECTION EQUALS THE SUPERELEVATION RATE WHEN THE SUPERELEVATION RATE IS GREATER THAN 4%. IF THE SUPERELEVATION RATE IS LESS THAN OR EQUAL TO 4%. THE LOW SIDE SHOULDER SLOPE IS 4%. HIGH SIDE SHOULDER SLOPE ON SUPERELEVATED SECTIONS EQUALS THE SUPERELEVATION RATE. SEE SUPERELEVATION TABLES FOR SE



TYPICAL FINISHED RAMP SECTION - A RAMP

STA 129A+08.71 - STA 132A+76.16

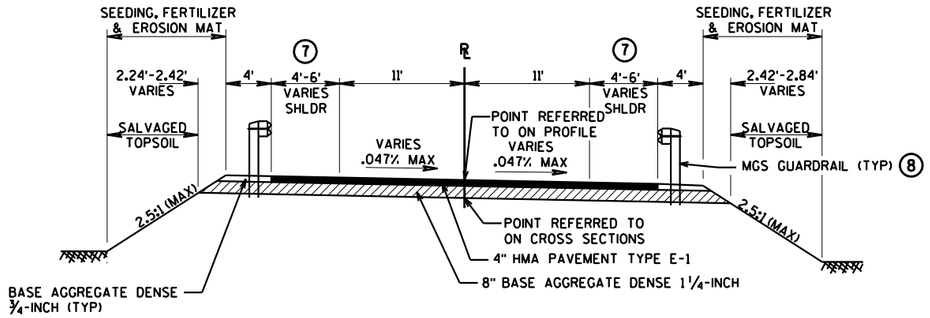
PROJECT NO: 1053-02-74	HWY: STH 29	COUNTY: MARATHON	TYPICAL SECTIONS	SHEET 7	E



TYPICAL FINISHED SECTION - SUNRISE DRIVE

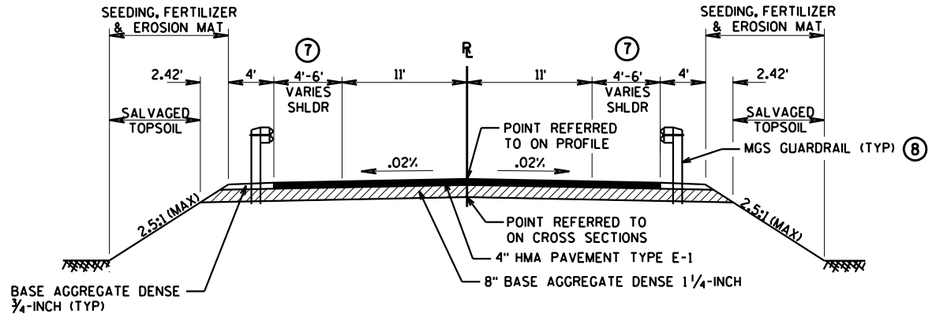
STA 15+50.00 - STA 17+00.00
GRADE SLOPES ONLY

WIDEN SHOULDERS FOR MGS GUARDRAIL AS NECESSARY (SEE CROSS SECTIONS)



TYPICAL FINISHED SECTION - SUNRISE DRIVE

STA 17+00.00 - STA 18+09.61



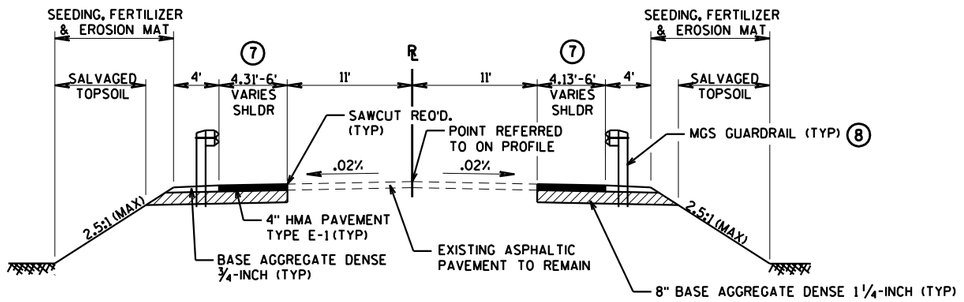
TYPICAL FINISHED SECTION - SUNRISE DRIVE

STA 18+09.61 - STA 19+30.17
STA 21+92.27 - STA 22+75.00

(7) SHOULDER TAPERS TO 4' AT STRUCTURE. SEE PLAN & PROFILE SHEET FOR TRANSITION POINTS.

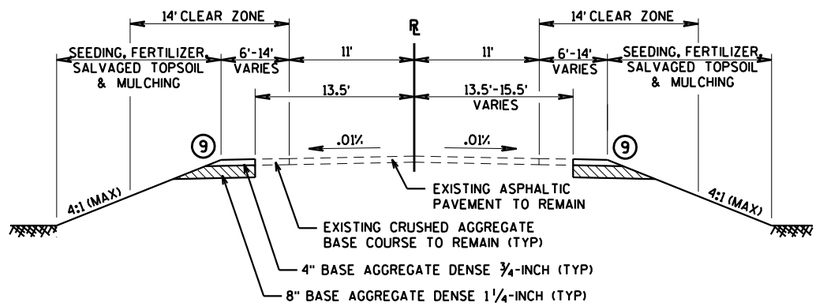
(8) SEE "PAVING DETAIL AT GUARDRAIL" FOR ADDITIONAL DETAIL.

(9) ADDITIONAL BASE AGGREGATE DENSE 3/4-INCH IS REQUIRED FOR WIDENING FOR MGS E.A.T. REQUIREMENTS. SEE CROSS SECTIONS.



TYPICAL FINISHED SECTION - SUNRISE DRIVE

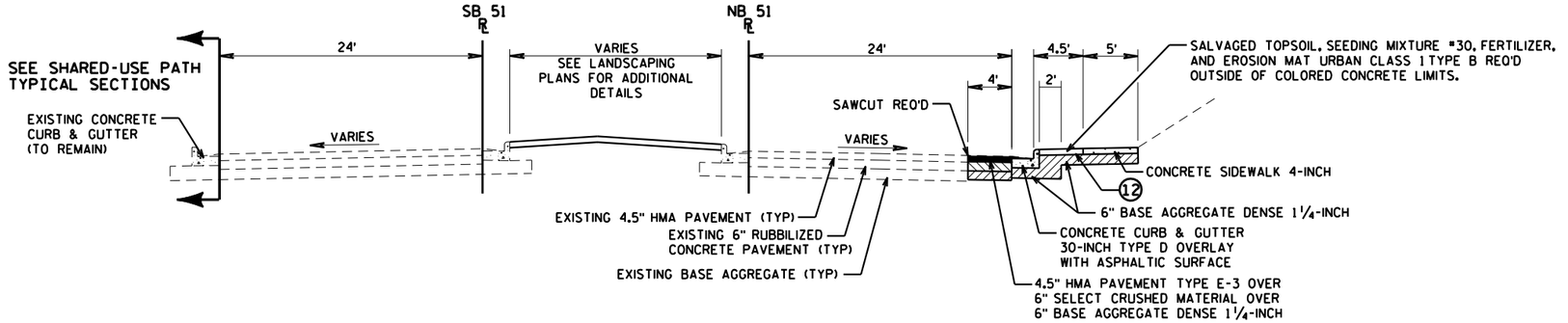
STA 22+75.00 - STA 28+00.00



TYPICAL FINISHED SECTION - SUNRISE DRIVE

STA 28+00.00 - STA 29+50.00
GRADE SLOPES ONLY

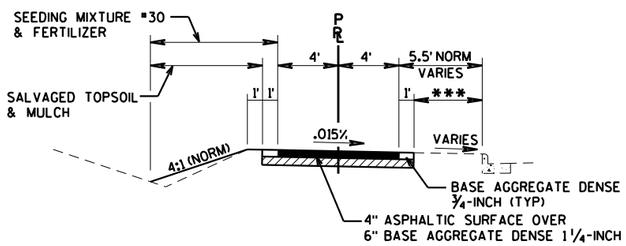
WIDEN SHOULDERS FOR MGS GUARDRAIL AS NECESSARY (SEE CROSS SECTIONS)



TYPICAL FINISHED SECTION - BUSINESS 51

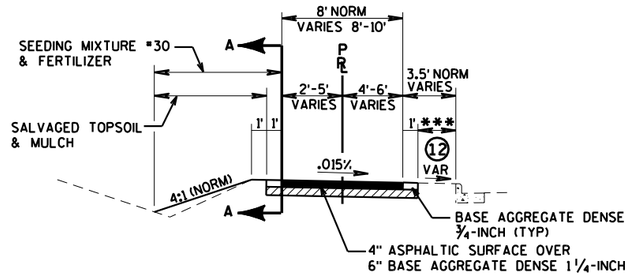
STA 18NB+55.00 - STA 19NB+08.00
STA 20NB+45.00 - STA 20NB+82.00

NO X-SECTIONS INCLUDED FOR THIS WORK



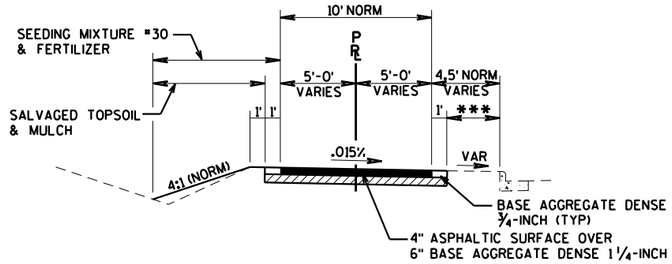
TYPICAL FINISHED SECTION - SHARED-USE PATH

STA 15P+23.00 - STA 17P+90.00



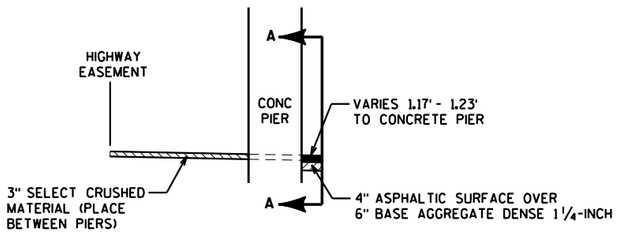
TYPICAL FINISHED SECTION - SHARED-USE PATH

STA 17P+90.00 - STA 22P+00.00



TYPICAL FINISHED SECTION - SHARED-USE PATH

STA 22P+00.00 - STA 26P+73.13

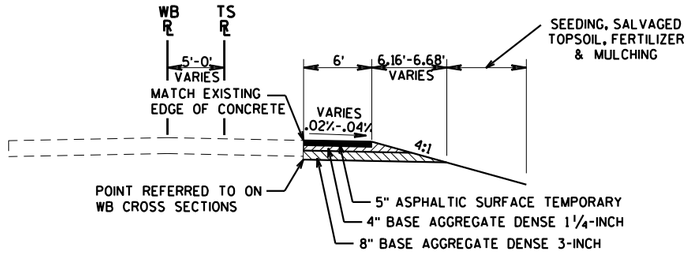


SECTION A-A SHARED-USE PATH

ADJACENT TO PIER COLUMNS

*** SALVAGED TOPSOIL, SEEDING MIXTURE #40, FERTILIZER, AND EROSION MAT URBAN CLASS 1 TYPE B REQ'D

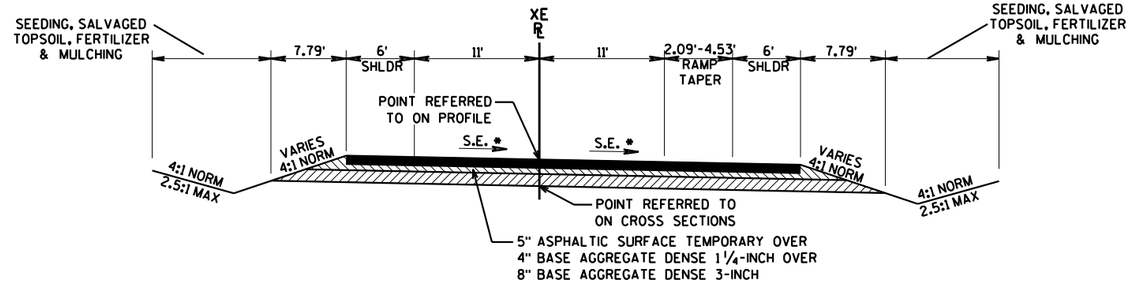
(12) SEE LANDSCAPE PLANS FOR LIMITS OF COLORED CONCRETE BETWEEN PATH/ SIDEWALK AND CURB & GUTTER



TYPICAL FINISHED SECTION - WB WIDENING/TS LINE (STAGE 1)

X-SECTIONS CUT OFF 'WB' LINE
SEE X-SECTIONS: STH 29/'TS' WIDENING (STAGE 1B)

STA 109WB+91.00 - STA 112WB+07.00
STA 120WB+04.00 - STA 123WB+88.00
STA 127WB+40.00 - STA 132WB+50.00

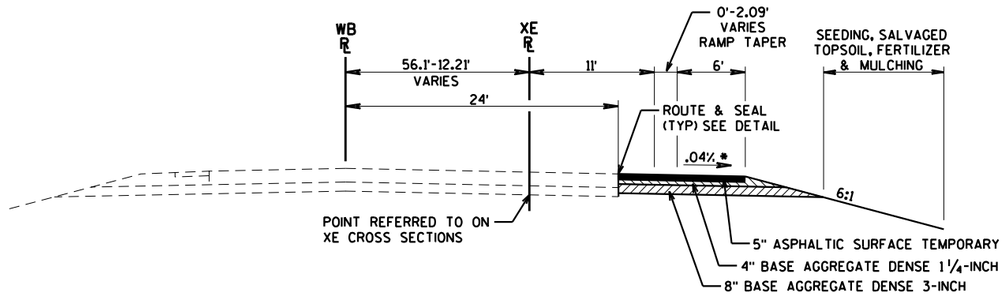


TYPICAL FINISHED SECTION - 'XE' LINE CROSSOVER (STAGES 1/4)

STA 94XE+50.00 - STA 95XE+48.24
STA 132XE+50.00 - STA 148XE+50.00

SEE X-SECTIONS: 'XE' WEST CROSSOVER (STAGE 1)
'XE' EAST CROSSOVER (STAGE 4)

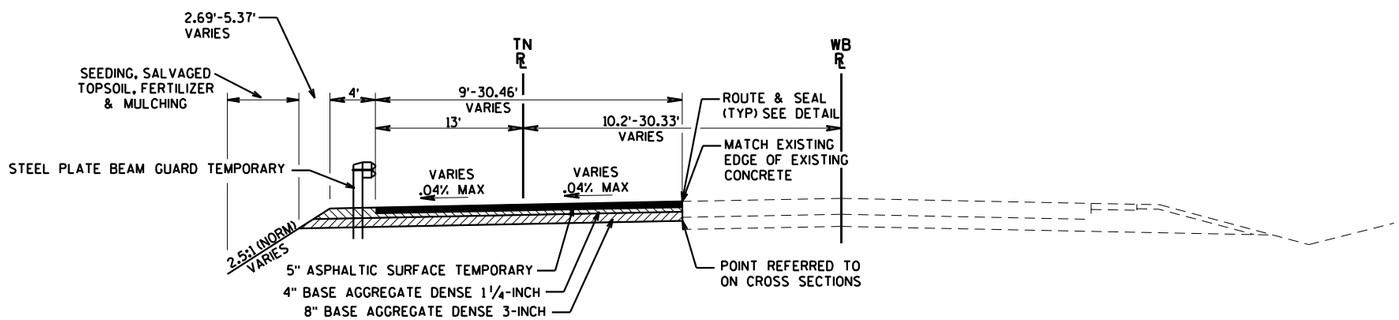
*** TRANSITION FROM 0.04% TO -0.04% BETWEEN STA 93XE+00 - STA 97XE+00**



TYPICAL FINISHED SECTION - 'XE' CROSSOVER (STAGE 1)

STA 95XE+48.24 - STA 101XE+00.00

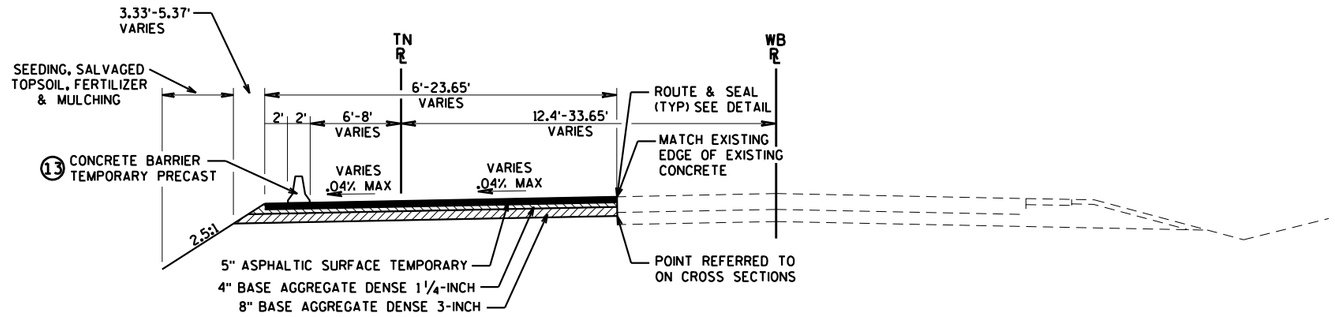
SEE X-SECTIONS: 'XE' WEST CROSSOVER (STAGE 1)



TYPICAL FINISHED SECTION - WB WIDENING (STAGE 3)

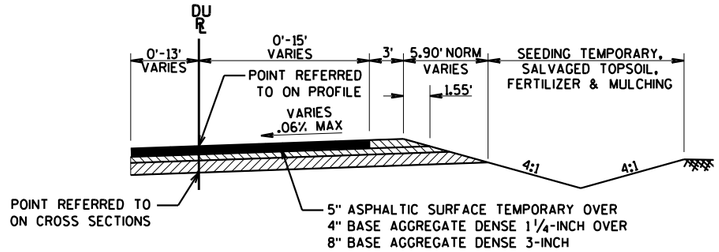
X-SECTIONS CUT OFF 'WB' LINE
SEE X-SECTIONS: STH 29 WB/'TN' WIDENING (STAGE 3)
STA 97WB+50.00 - STA 108WB+00.00

PROJECT NO: 1053-02-74	HWY: STH 29	COUNTY: MARATHON	TYPICAL SECTIONS - TEMPORARY	SHEET 10	E



TYPICAL FINISHED SECTION - WB WIDENING (STAGE 3)

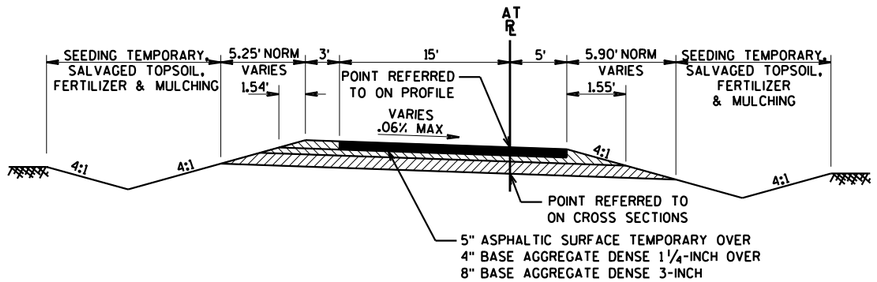
X-SECTIONS CUT OFF 'WB' LINE
SEE X-SECTIONS: STH 29 WB/'TN' WIDENING (STAGE 3)
STA 132WB+00.00 - STA 136WB+00.00



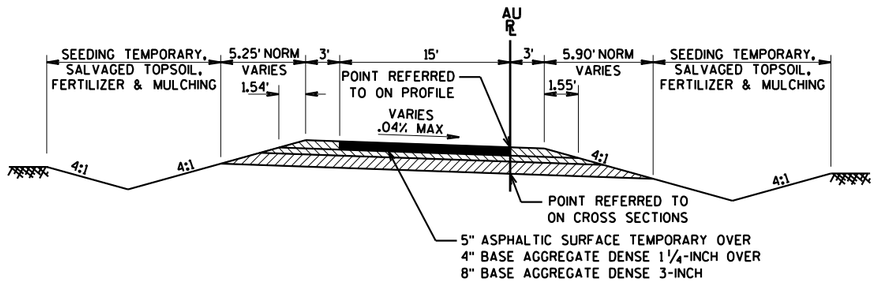
TYPICAL FINISHED SECTION - 'DU' RAMP (STAGE 3)

13 SEE TRAFFIC CONTROL PLANS FOR LIMITS OF CONCRETE BARRIER TEMPORARY PRECAST

NOTE:
'DT' & 'DV' ALIGNMENTS ARE FOR LAYOUT. PAVEMENT FOR THESE ALIGNMENTS IS CONSTRUCTED OFF OTHER ALIGNMENTS.

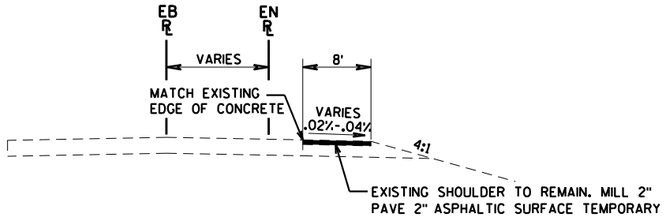


TYPICAL FINISHED SECTION - 'AT' RAMP (STAGE 4)



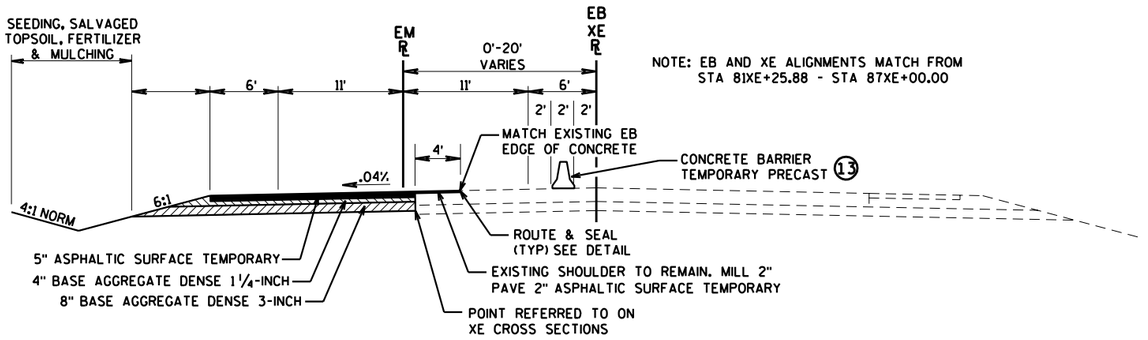
TYPICAL FINISHED SECTION - 'AU' RAMP (STAGES 4/6)

PROJECT NO: 1053-02-74	HWY: STH 29	COUNTY: MARATHON	TYPICAL SECTIONS - TEMPORARY	SHEET 11	E



TYPICAL FINISHED SECTION - EB WIDENING ('EN' LINE) (STAGE 2B)

STA 87EB+45.00 - STA 94EB+50.00



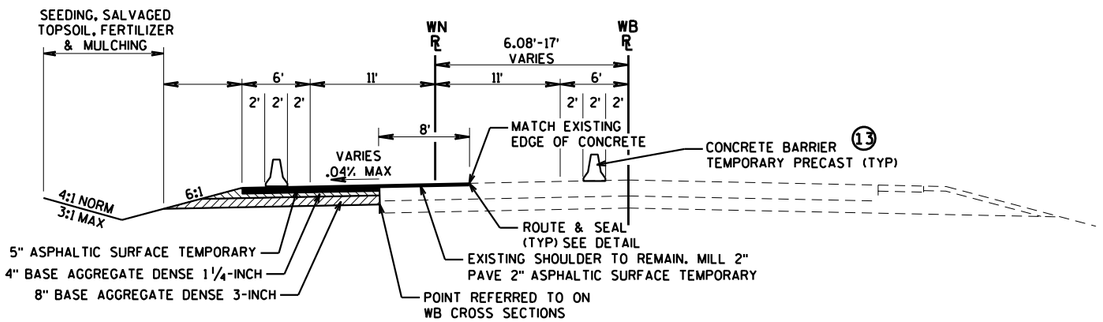
NOTE: EB AND XE ALIGNMENTS MATCH FROM
STA 81XE+25.88 - STA 87XE+00.00

TYPICAL FINISHED SECTION - 'EM' & 'XE' LINES (STAGE 1)

X-SECTIONS CUT OFF 'XE' LINE
SEE X-SECTIONS: 'EM' WIDENING (STAGE 1)

STA 81XE+25.88 - STA 87XE+00.00
STA 81EM+25.88 - STA 86EM+99.99

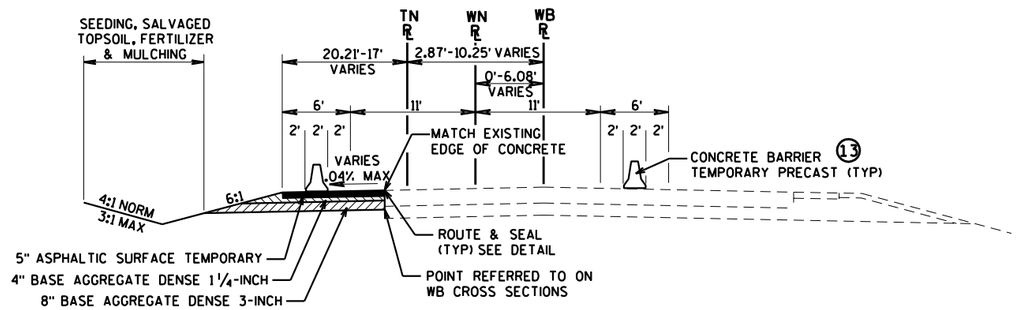
13 SEE TRAFFIC CONTROL PLANS FOR
LIMITS OF CONCRETE BARRIER



TYPICAL FINISHED SECTION - 'WN' LINE (STAGE 1)

X-SECTIONS CUT OFF 'WB' LINE
SEE X-SECTIONS: STH 29 WB/'WN' WIDENING (STAGE 1)

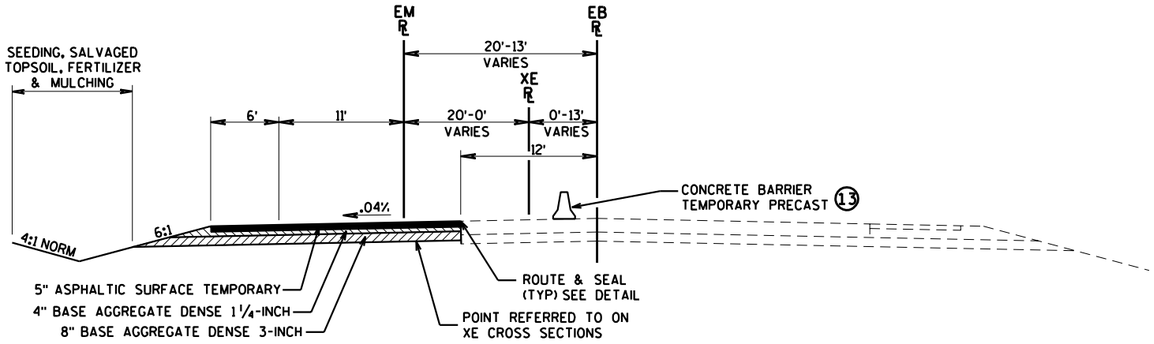
STA 82WB+76.00 - STA 93WB+00.00



TYPICAL FINISHED SECTION - 'WN' LINE (STAGE 1)

X-SECTIONS CUT OFF 'WB' LINE
SEE X-SECTIONS: STH 29 WB/'TN' WIDENING (STAGE 1)

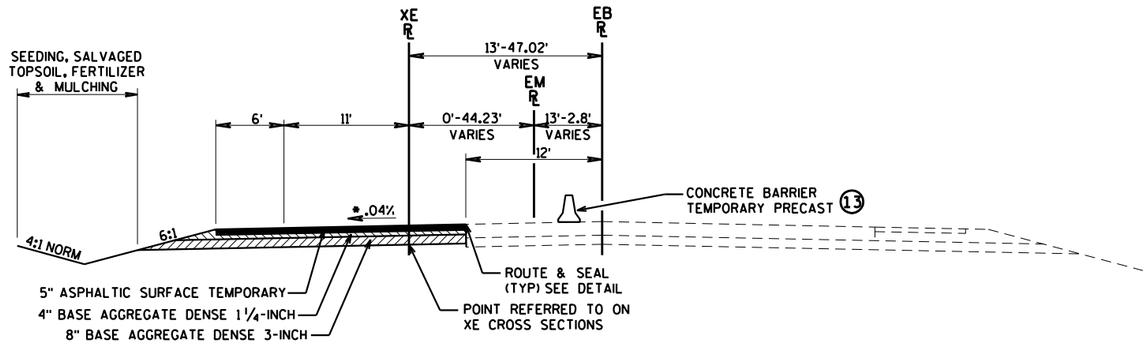
STA 93WB+00.00 - STA 97WB+50.00



TYPICAL FINISHED SECTION - 'EM' & 'XE' LINES (STAGE 1)

X-SECTIONS CUT OFF 'XE' LINE
SEE X-SECTIONS: 'XE' WEST CROSSOVER/'EM' WIDENING (STAGE 1)

STA 87XE+00.00 - STA 90XE+95.11
STA 86EM+99.97 - STA 90EM+74.92



TYPICAL FINISHED SECTION - 'EM' & 'XE' LINES (STAGE 1)

X-SECTIONS CUT OFF 'XE' LINE
SEE X-SECTIONS: 'XE' WEST CROSSOVER/'EM' WIDENING (STAGE 1)

STA 90XE+95.11 - STA 94XE+50.00
STA 90EM+74.92 - STA 94EM+50.20

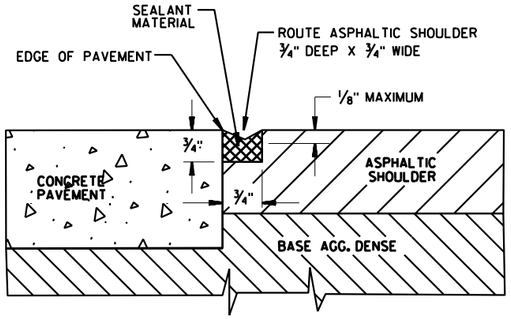
* TRANSITION FROM 0.04% TO -0.04%
BETWEEN STA 93XE+00 - STA 97XE+00

PROJECT NO: 1053-05-60	HWY: STH 29	COUNTY: MARATHON	TYPICAL SECTIONS - TEMPORARY	SHEET 12	E

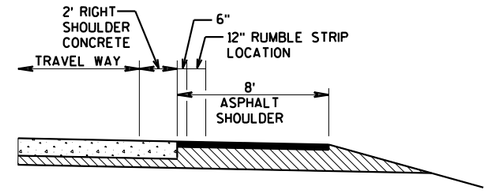
RUNOFF COEFFICIENT TABLE

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

TOTAL PROJECT AREA = 92.8 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 19.1 ACRES

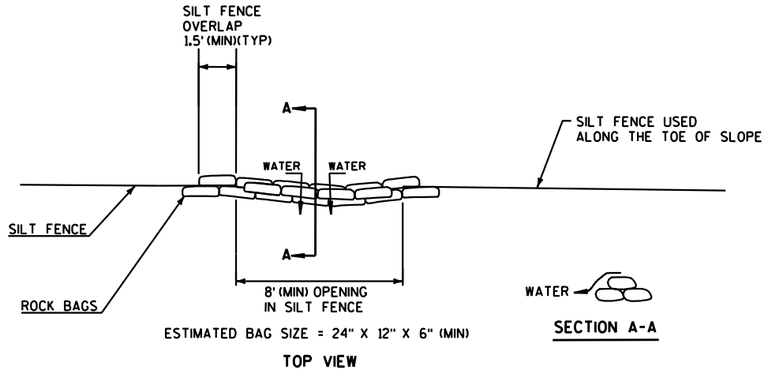


ROUTE AND SEAL DETAIL

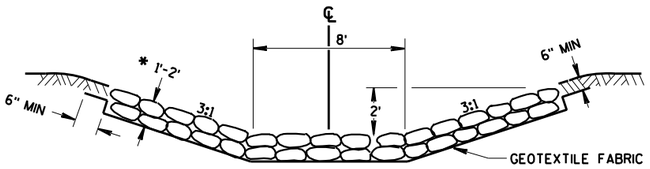


SHOULDER RUMBLE STRIP, MILLING

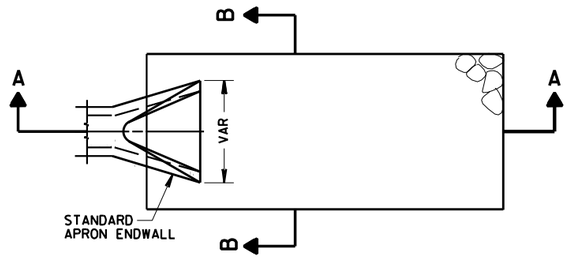
SEE S.D.D. "SHOULDER RUMBLE STRIP, MILLING" FOR ADDITIONAL DETAILS.

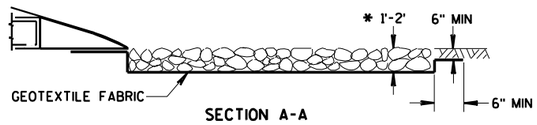


ROCK BAGS FOR SILT FENCE RELIEF DETAIL



SECTION B-B



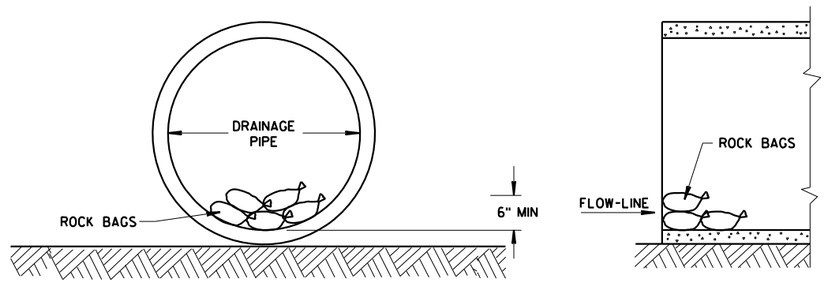


SECTION A-A

RIPRAP AND GEOTEXTILE FABRIC DETAIL

NOTE: SEE MISCELLANEOUS QUANTITIES FOR TYPE OF RIPRAP AND GEOTEXTILE FABRIC TO BE USED.

* USE 1' MIN DEPTH FOR RIPRAP LIGHT
USE 2' MIN DEPTH FOR RIPRAP HEAVY

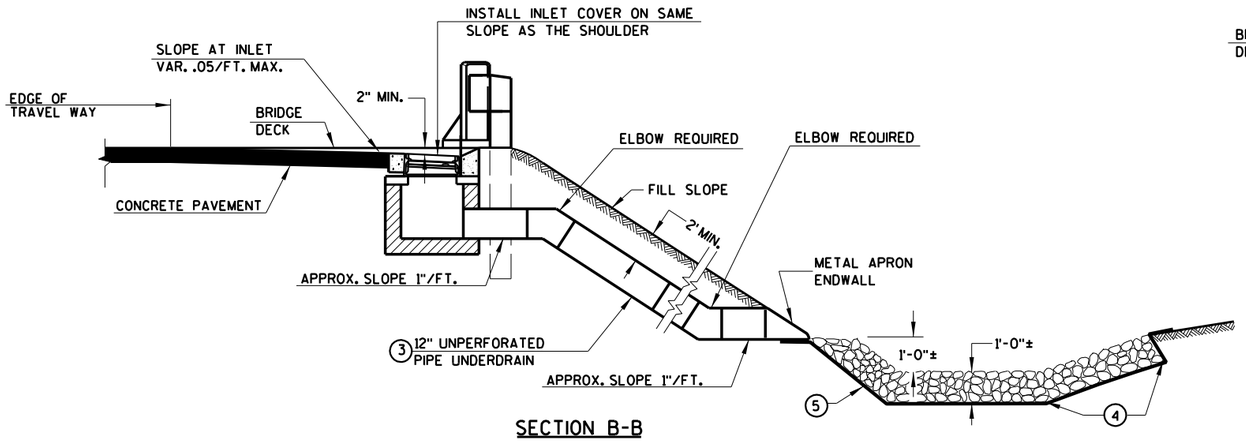


FRONT VIEW

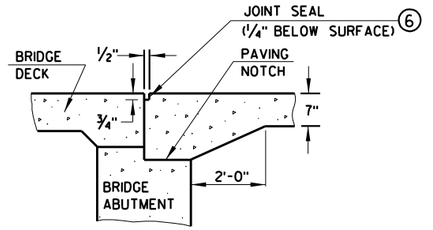
SECTION VIEW

CULVERT PIPE CHECKS

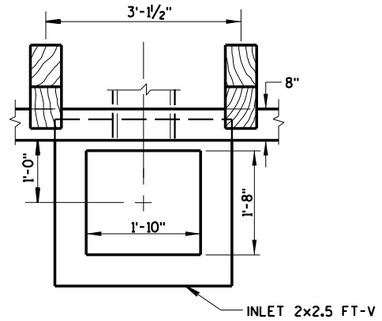
(PLACE AT ALL INLET ENDS OF ALL PIPES)



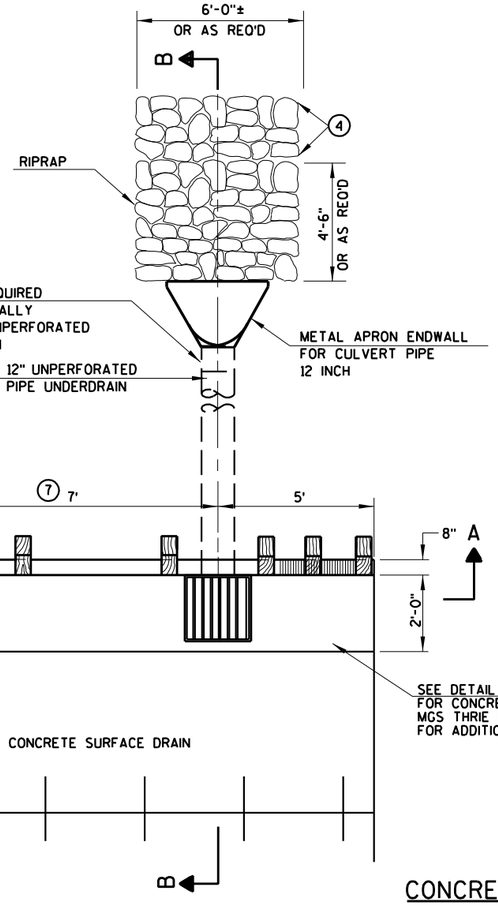
SECTION B-B



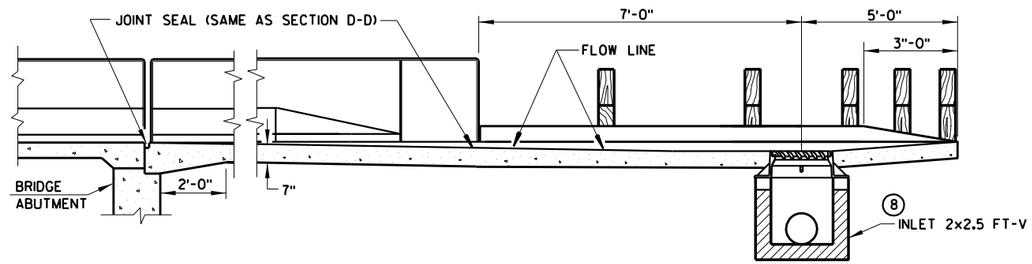
SECTION D-D



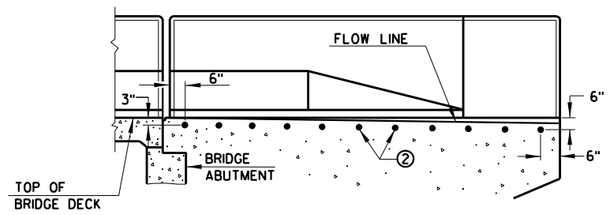
PLAN VIEW



PLAN VIEW



SECTION A-A



LOCATION OF TIE BARS IN WINGWALL

GENERAL NOTES

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.

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

(3) THE PIPE UNDERDRAIN MAY BE ANY ONE OF THE FIVE MATERIALS LISTED IN THE STANDARD SPECIFICATIONS SECTION 612.2.

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

(5) GEOTEXTILE FABRIC, TYPE R

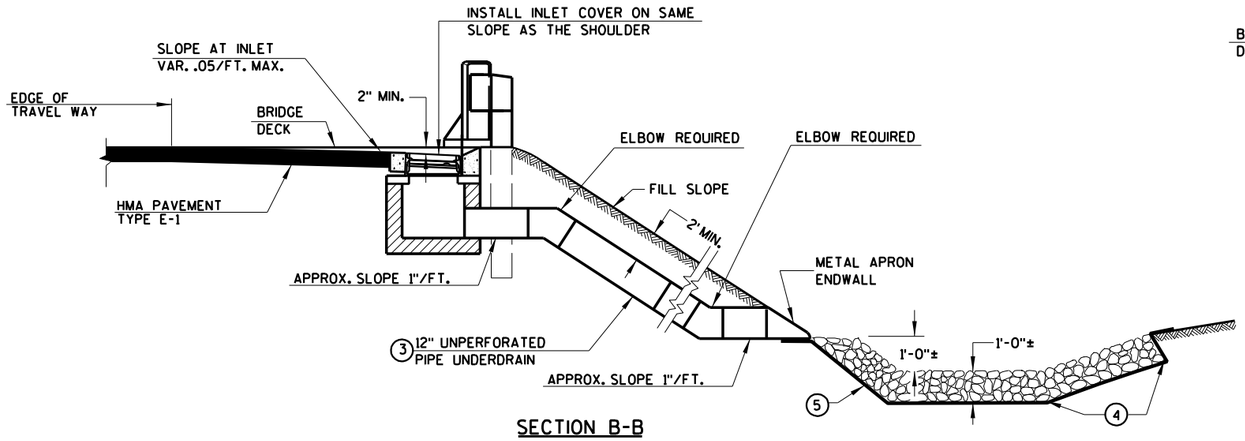
(6) HOT POURED SEALANT UNLESS OTHERWISE SPECIFIED.

(7) THIS DIMENSION MAY VARY DEPENDING ON THE SPACING OF POSTS FOR THE MGS THRIE BEAM TRANSITION. THE TYPICAL LOCATION FOR THE SURFACE DRAIN IS WHERE THE POST SPACING WIDENS TO 3'-1½". LAYOUT POSTS BEFORE INLET INSTALLATION.

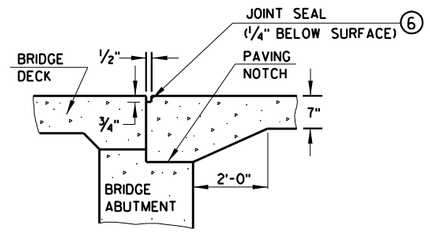
(8) SEE CURRENT STANDARD DETAIL DRAWINGS 8A5 AND 8C1 FOR DETAILS.

CONCRETE SURFACE DRAIN DROP INLET - STH 29

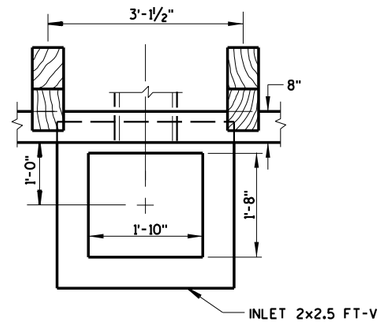
PROJECT NO: 1053-02-74	HWY: STH 29	COUNTY: MARATHON	CONSTRUCTION DETAILS	SHEET 14	E



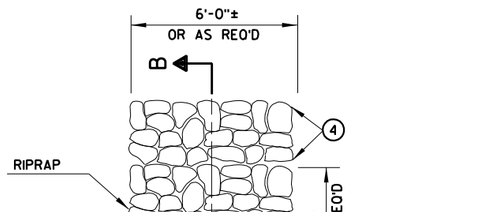
SECTION B-B

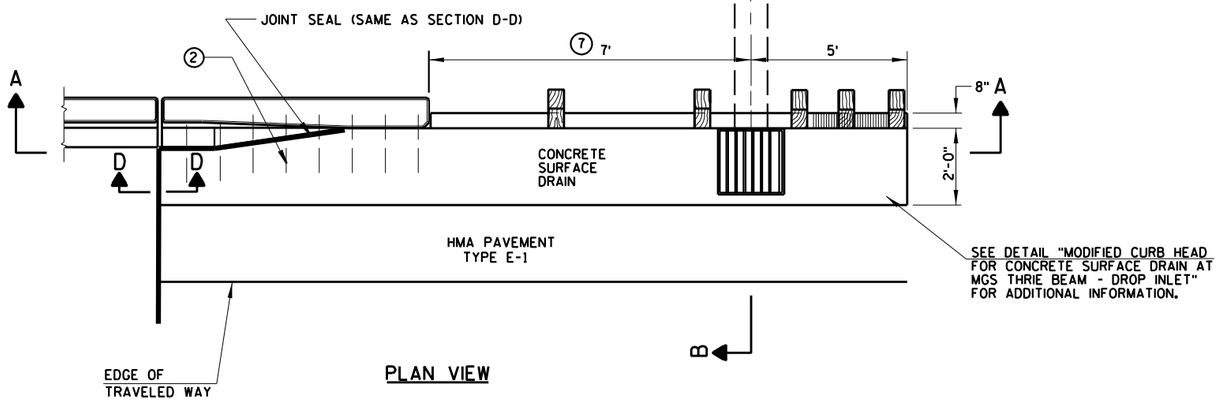


SECTION D-D

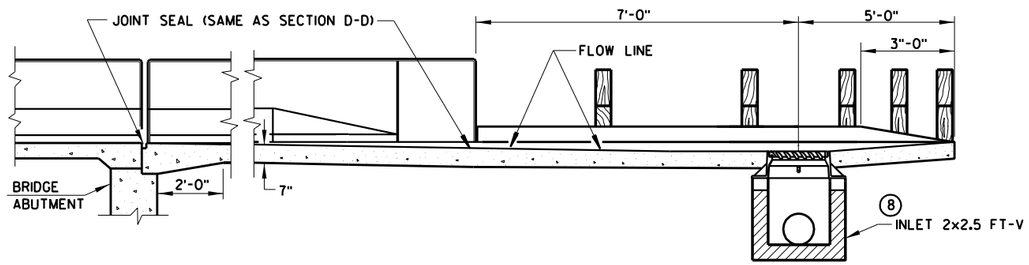


PLAN VIEW

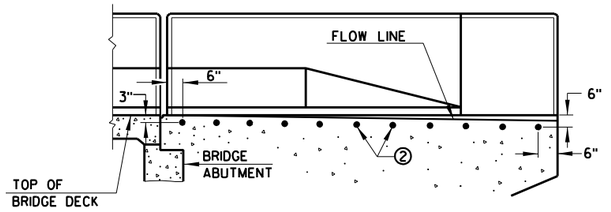




PLAN VIEW



SECTION A-A



LOCATION OF TIE BARS IN WINGWALL

GENERAL NOTES

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

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

(3) THE PIPE UNDERDRAIN MAY BE ANY ONE OF THE FIVE MATERIALS LISTED IN THE STANDARD SPECIFICATIONS SECTION 612.2.

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

(5) GEOTEXTILE FABRIC, TYPE R

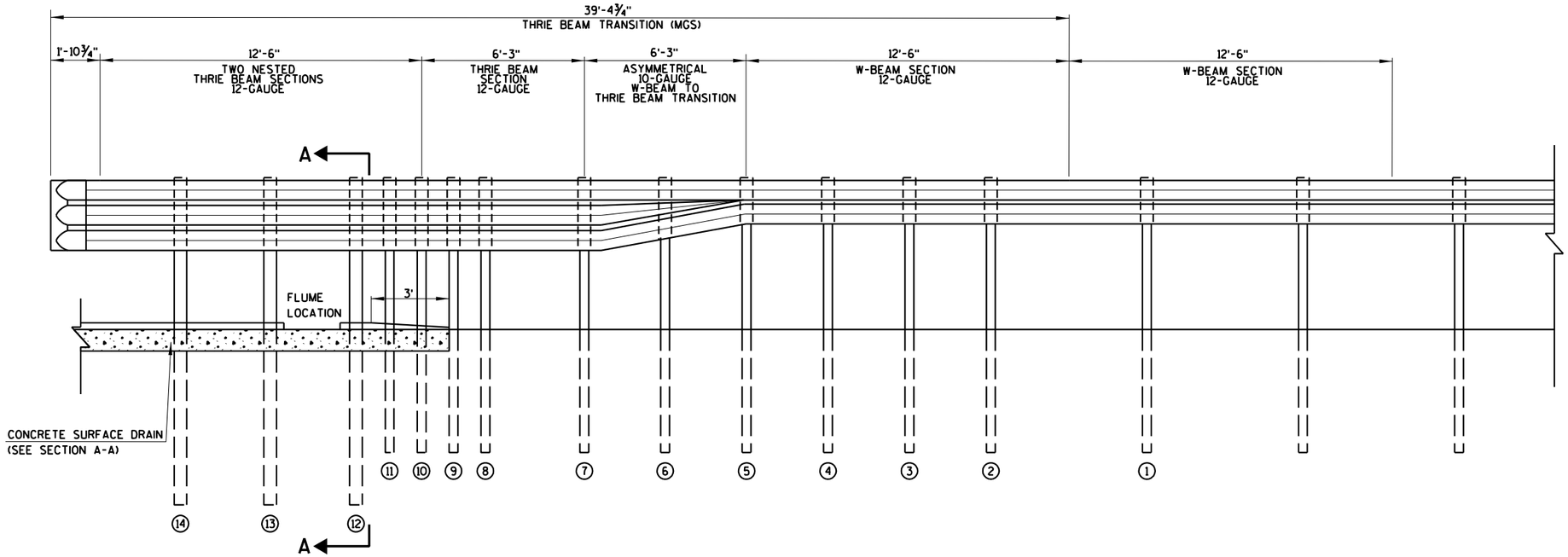
(6) HOT POURED SEALANT UNLESS OTHERWISE SPECIFIED.

(7) THIS DIMENSION MAY VARY DEPENDING ON THE SPACING OF POSTS FOR THE MGS THRIE BEAM TRANSITION. THE TYPICAL LOCATION FOR THE SURFACE DRAIN IS WHERE THE POST SPACING WIDENS TO 3'-1½". LAYOUT POSTS BEFORE INLET INSTALLATION.

(8) SEE CURRENT STANDARD DETAIL DRAWINGS 8A5 AND 8C1 FOR DETAILS.

CONCRETE SURFACE DRAIN DROP INLET - SUNRISE DR

PROJECT NO: 1053-05-60	HWY: STH 29	COUNTY: MARATHON	CONSTRUCTION DETAIL	SHEET 15	E

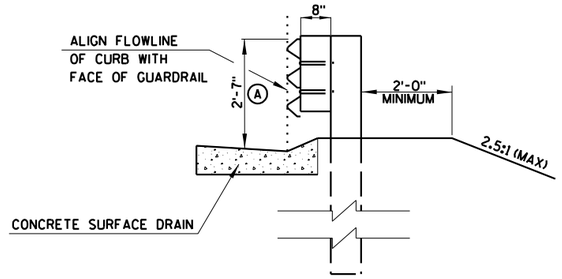


MODIFIED CURB HEAD FOR CONCRETE SURFACE DRAIN AT MGS THRIE BEAM - FLUME

SEE SDD "MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL" AND "MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)" FOR ADDITIONAL DETAIL.

SEE SDD "CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES" FOR ADDITIONAL DETAILS

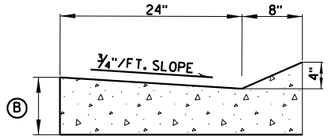
MODIFIED CURB HEAD CONSTRUCTION IS INCIDENTAL TO CONCRETE SURFACE DRAIN



SECTION A-A
POSTS 12-14

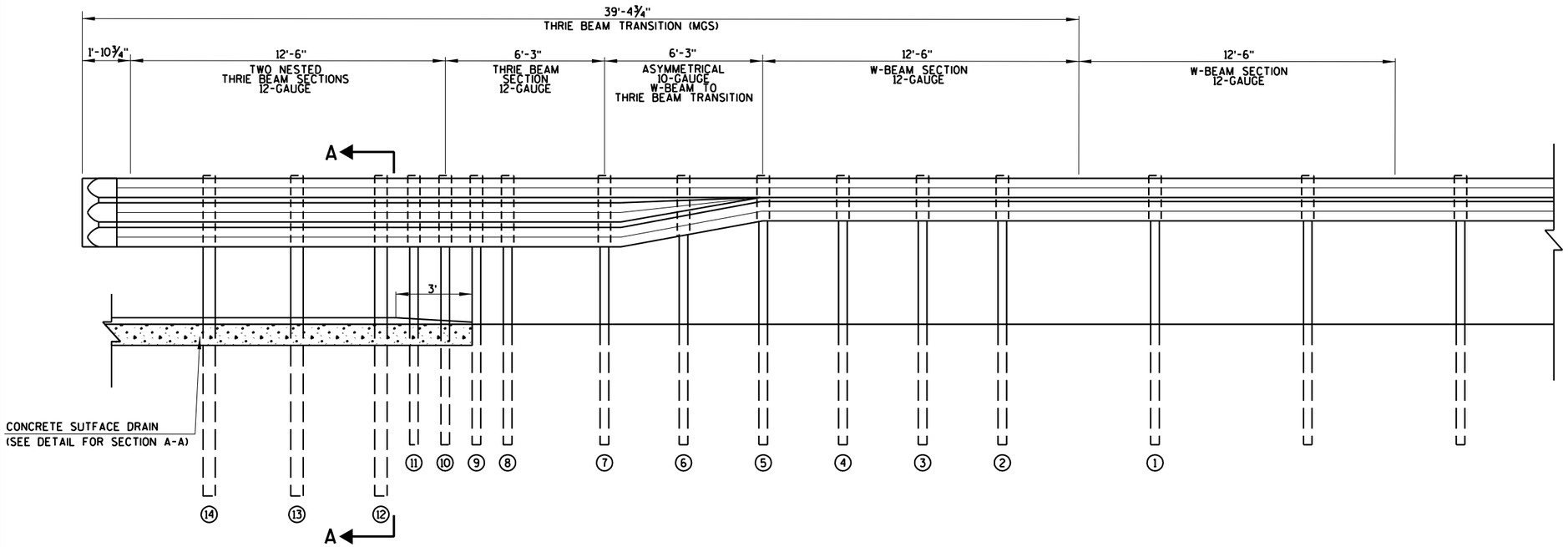
(A) FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS ± 1".

(B) MATCH DEPTH OF CONCRETE SURFACE DRAIN (SEE SDD)



CONCRETE SURFACE DRAIN

PROJECT NO: 1053-02-74/1053-05-60	HWY: STH 29	COUNTY: MARATHON	CONSTRUCTION DETAILS	SHEET 16	E

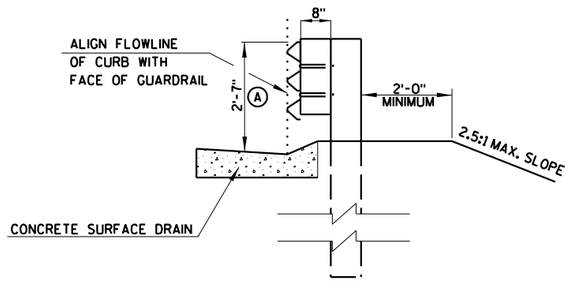


MODIFIED CURB HEAD FOR CONCRETE SURFACE DRAIN AT MGS THRIE BEAM - DROP INLET

SEE SDD "MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL" AND "MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)" FOR ADDITIONAL DETAIL.

SEE SDD "CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES" FOR ADDITIONAL DETAILS

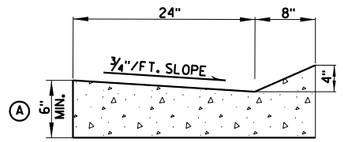
MODIFIED CURB HEAD CONSTRUCTION IS INCIDENTAL TO CONCRETE SURFACE DRAIN



SECTION A-A
POSTS 12-14

(A) FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS ± 1".

(A) 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.

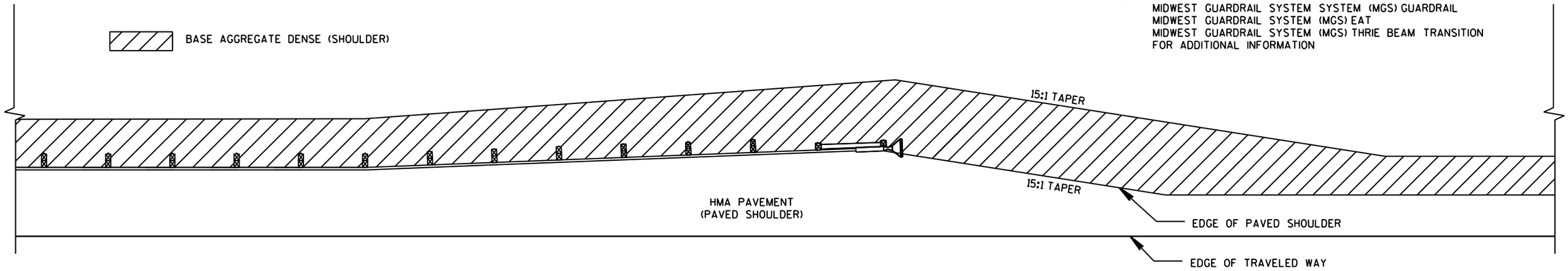


CONCRETE SURFACE DRAIN

PROJECT NO: 1053-02-74/1053-05-60	HWY: STH 29	COUNTY: MARATHON	CONSTRUCTION DETAILS	SHEET 17	E

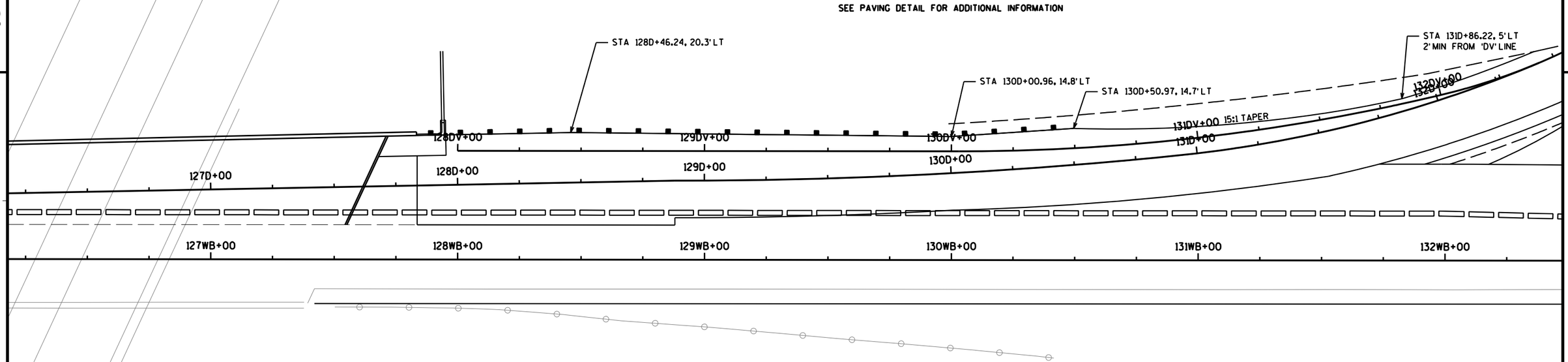
2

NOTE: SEE STANDARD DETAIL DRAWINGS
MIDWEST GUARDRAIL SYSTEM SYSTEM (MGS) GUARDRAIL
MIDWEST GUARDRAIL SYSTEM (MGS) EAT
MIDWEST GUARDRAIL SYSTEM (MGS) THRIE BEAM TRANSITION
FOR ADDITIONAL INFORMATION



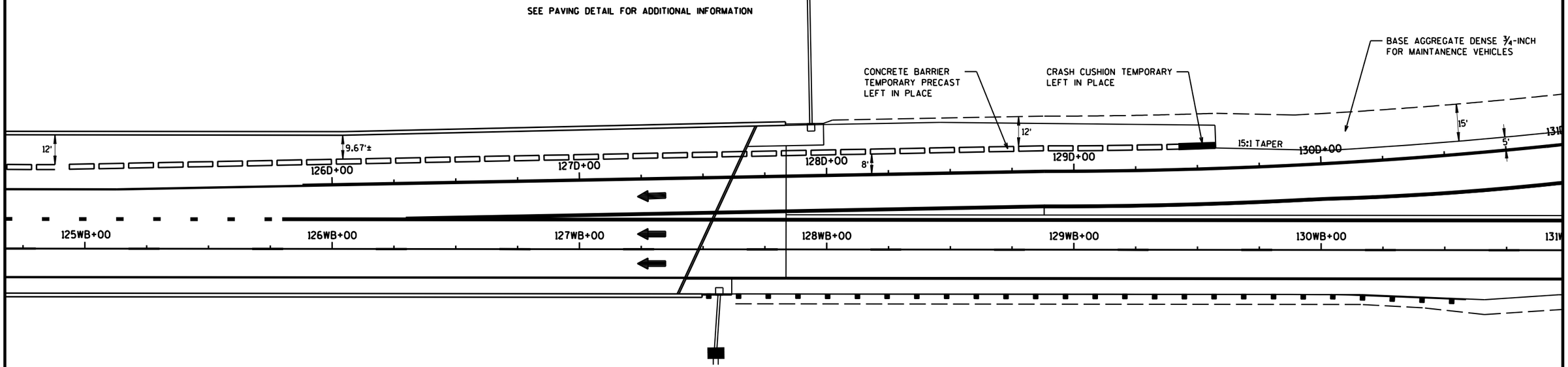
PAVING DETAIL AT GUARDRAIL

SEE PAVING DETAIL FOR ADDITIONAL INFORMATION



TEMPORARY PAVING DETAIL D RAMP (STAGE 3A)

SEE PAVING DETAIL FOR ADDITIONAL INFORMATION



CONCRETE BARRIER TEMPORARY PRECAST LEFT IN PLACE

PROJECT NO: 1053-02-74	HWY: STH 29	COUNTY: MARATHON	CONSTRUCTION DETAILS	SHEET	E

FILE NAME : T:\410637\DGN-DWG\plan\021001_cd.dgn PLOT DATE : 1/8/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:200

WISDOT/CADDS SHEET 42

WISCONSIN CENTRAL LTD

EXISTING HIGHWAY EASEMENT

SAWCUT REQ'D

STA 15P+75 - STA 16P+08
SAWCUT REQ'D

8' SHARED USE PATH

SLOPE INTERCEPT

TLE

STA 15P+23 - STA 26P+00
REMOVING CONCRETE SIDEWALK

HIGHWAY EASEMENT

3" SELECT CRUSHED MATERIAL

STA 20P+99, LT
RECONSTRUCT INLET

15P+00 | 16P+00 | 17P+00 | 18P+00 | 19P+00 | 20P+00 | 21P+00

25:1 TAPER

EXISTING CURB RAMP TO REMAIN

EXISTING SIGNAL POLES TO REMAIN

SLOPE INTERCEPT

25:1 TAPER

15SB+00 | 16SB+00 | 17SB+00 | BUSINESS 51 SB | 18SB+00 | 19SB+00 | 20SB+00 | 21SB+00

15NB+00 | 16NB+00 | 17NB+00 | 18NB+00 | 19NB+00 | 20NB+00 | 21NB+00

BUSINESS 51 NB

STA 18NB+55 - STA 19NB+08
CONCRETE CURB & GUTTER
30-INCH TYPE D

CAUTION

SEE LANDSCAPE PLAN

STA 20NB+45 - STA 20NB+81.7
CONCRETE CURB & GUTTER
30-INCH TYPE D

CAUTION

STA 18NB+55 - STA 19NB+08
CONCRETE SIDEWALK 4-INCH

STA 20NB+45 - STA 20NB+81.7
CONCRETE SIDEWALK 4-INCH

STA 18NB+40 - STA 21NB+79
REMOVING ASPHALTIC SURFACE

STA 18NB+55 - STA 19NB+08
REMOVING CURB & GUTTER
REMOVING CONCRETE SIDEWALK
SAWCUTS REQ'D

STA 20NB+45 - STA 20NB+81.7
REMOVING CURB & GUTTER
REMOVING CONCRETE SIDEWALK
SAWCUTS REQ'D

PI 27P+13.94

EXISTING SIDEWALK TO REMAIN

27P+00

WEST GRAND AVE

PT 26P+73.13

CONCRETE SIDEWALK 4-INCH

STA 26P+46.53, 1.56' LT

STA 26P+46.53, 5' RT

STA 26P+48.09, 9.7' RT

STA 26P+46.53 - STA 26P+73.13
REMOVING CONCRETE SIDEWALK
SAWCUTS REQ'D

WISCONSIN CENTRAL LTD

10' SHARED USE PATH

PI 25P+12.84

PRC 25P+44.12

STA 25P+90.61, 5' LT

25P+00 | 26P+00

EXISTING SIDEWALK TO REMAIN

TLE

HIGHWAY EASEMENT

SLOPE INTERCEPT

STA 22P+21, RT
ADJUSTING MANHOLE

PC 22P+89.73

PT 23P+61.41

EXIST. R/W

24P+00

SEE LANDSCAPE PLAN

PC 24P+79.18

STA 25P+90.61, 5' RT

STA 25P+97.88, 23.5' RT

STA 26P+04.22, 29.6' RT

STA 25P+78.61, 5' RT

STA 25P+78.61, 20' RT R 15'

STA 25P+88.78, 11.6' RT

CONCRETE SIDEWALK 4-INCH

STA 25P+94.98, 27' RT

STA 26P+00.31, 31.7' RT

SAWCUT REQ'D

PI 26P+36.33

21P+00 | 21+25 | 21+50

25:1 TAPER

22P+00

23P+00

CAUTION

REMOVE EXISTING SIDEWALK

PI 23P+25.88

BUSINESS 51 SB

STA 15P+23 - STA 26P+00
REMOVING CONCRETE SIDEWALK

PROJECT NO: 1053-02-74/75	HWY: STH 29	COUNTY: MARATHON	CONSTRUCTION DETAILS - SHARED USE PATH	SHEET 20	E

2

STA 98WB+61 - STA 111WB+98, LT
STA 108EB+62 - STA 111EB+70, LT
MGS GUARDRAIL REO'D.

N

RIPRAP

CONCRETE SURFACE DRAIN FLUME TYPE B AT STRUCTURE (SEE DETAIL "MODIFIED CURB HEAD FOR CONCRETE SURFACE DRAIN AT MGS THRIE BEAM" FOR ADDITIONAL DETAILS.)

STA 111WB+94.10, 54'LT

STA 111WB+97.96, 46'LT

STA 111WB+35.95, 54'LT

62.5'

STA 111WB+35.95, 46'LT

STA 108WB+00 - STA 111WB+35.95 SAWCUT HMA PAVEMENT FOR FINAL CONDITION (REGRADE REMAINING GRAVEL TO DRAIN AWAY FROM WB LANES - INCIDENTAL)

MGS GUARDRAIL 3

STA 98WB+50 - STA 108WB+00 SAWCUT TEMPORARY HMA FOR FINAL CONDITION (REGRADE REMAINING GRAVEL TO DRAIN AWAY FROM WB LANES - INCIDENTAL)

STA 109WB+66.48, 40'LT

FENCE CHAIN LINK 4-FT

15:1 TAPER

32'

14'

12'

6'

B-37-79

113WB+00

112WB+00

111WB+00

110WB+00

109WB+00

108WB+00

107WB+00

STH 29 WB

0.038

0.027

STA 107WB+75.95, 22'LT

1172.97 1173.36 1173.77 1174.22 1174.70 1175.21 1175.67 1176.18 1176.78 1177.40 1178.03

1172.67 1173.08 1173.51 1173.99 1174.50 1175.05 1175.51 1176.06 1176.70 1177.32

STA 110WB+65.38, 14'RT

STA 110WB+20.27, 14'RT

CONCRETE SURFACE DRAIN DROP INLET TYPE AT STRUCTURE

CONCRETE PAVEMENT APPROACH SLAB REO'D. (WB APPROACH SLAB CONSTRUCTED IN STAGES) SEE SDD "CONCRETE PAVEMENT APPROACH SLAB" FOR ADDITIONAL INFORMATION.

MGS GUARDRAIL 3 AND TWO MGS GUARDRAIL TERMINAL TYPE 2

MATCH

MATCH

STA 108WB+00.00, 24'RT

MGS GUARDRAIL 3

6'

12'

14'

8'

111EB+00

110EB+00

109EB+00

108EB+00

107EB+00

STH 29 EB

0.038

112EB+00

B-37-136

CONCRETE SURFACE DRAIN DROP INLET TYPE AT STRUCTURE

STA 110EB+62.71, 30'RT

STA 111EB+59.08, 30'RT

STA 109EB+64.93, 39.5'RT

MATCH EXISTING BEAM GUARD

REMOVE AND REINSTALL RAIL

FENCE CHAIN LINK 4-FT

STA 108EB+50 - STA 111EB+70, RT
SALVAGE AND REINSTALL RAIL

PROJECT NO: 1053-02-74	HWY: STH 29	COUNTY: MARATHON	PAVING DETAIL	SHEET	E

FILE NAME : T:\410637\DGN-DWG\plan\021201_pd.dgn PLOT DATE : 1/8/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:40

WISDOT/CADDS SHEET 42

2

STA 120WB+13 - STA 124WB+04, LT
STA 120WB+18 - STA 123WB+71, RT
STA 119EB+87 - STA 123EB+18, LT
STA 119EB+90 - STA 122EB+93, RT
MGS GUARDRAIL REQ'D.

N

FENCE CHAIN LINK 4-FT

CONCRETE SURFACE DRAIN FLUME TYPE B AT STRUCTURE (SEE DETAIL "MODIFIED CURB HEAD FOR CONCRETE SURFACE DRAIN AT MGS THRIE BEAM" FOR ADDITIONAL DETAILS.)

CONCRETE BARRIER TEMPORARY PRECAST LEFT IN PLACE

MGS GUARDRAIL 3

CONCRETE SURFACE DRAIN DROP INLET TYPE AT STRUCTURE (SEE DETAIL "CONCRETE SURFACE DRAIN DROP INLET - STH 29" FOR ADDITIONAL DETAILS.)

FENCE CHAIN LINK 4-FT

B-37-79

119WB+00 120WB+00 121WB+00 122WB+00 123WB+00 124WB+00 125W

STH 29 WB

D RAMP

1200' PARALLEL EXIT RAMP

B-37-63

12' 8' 12' 12' 12' 6'

CONCRETE PAVEMENT APPROACH SLAB REQ'D. (WB APPROACH SLAB CONSTRUCTED IN STAGES) SEE SDD "CONCRETE PAVEMENT APPROACH SLAB" FOR ADDITIONAL INFORMATION.

CONCRETE SURFACE DRAIN FLUME TYPE B AT STRUCTURE (SEE DETAIL "MODIFIED CURB HEAD FOR CONCRETE SURFACE DRAIN AT MGS THRIE BEAM" FOR ADDITIONAL DETAILS.)

MGS GUARDRAIL 3

CONCRETE SURFACE DRAIN DROP INLET TYPE AT STRUCTURE (SEE DETAIL "CONCRETE SURFACE DRAIN DROP INLET - STH 29" FOR ADDITIONAL DETAILS.)

CONCRETE PAVEMENT APPROACH SLAB REQ'D. (WB APPROACH SLAB CONSTRUCTED IN STAGES) SEE SDD "CONCRETE PAVEMENT APPROACH SLAB" FOR ADDITIONAL INFORMATION.

119EB+00 120EB+00 121EB+00 122EB+00 123EB+00 124EB+00

B-37-136

STH 29 EB

B-37-140

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

1200.98 1201.64 1202.27 1202.94 1203.60 1204.24 1204.87 1205.41 1205.93 1206.44 1206.92 1207.38

1201.56 1202.20 1202.85 1203.48 1204.10 1204.73 1205.25 1205.75 1206.23 1206.69 1207.24

121A+00 122A+00 123A+00 124A+00

250' TAPER

550' (MIN) PARALLEL EXIT RAMP

A RAMP

CONCRETE SURFACE DRAIN DROP INLET TYPE AT STRUCTURE (SEE DETAIL "CONCRETE SURFACE DRAIN DROP INLET - STH 29" FOR ADDITIONAL DETAILS.)

STA 120EB+33.76, 22' RT

STA 120EB+63.97, 16' RT

STA 120EB+18.97, 16' RT

MGS GUARDRAIL 3

STA 122A+56.40

STA 122EB+56.01, 34' RT

CONCRETE SURFACE DRAIN DROP INLET TYPE AT STRUCTURE (SEE DETAIL "CONCRETE SURFACE DRAIN DROP INLET - STH 29" FOR ADDITIONAL DETAILS.)

FENCE CHAIN LINK 4-FT

FENCE CHAIN LINK 4-FT

PROJECT NO: 1053-02-74	HWY: STH 29	COUNTY: MARATHON	PAVING DETAIL	SHEET E

FILE NAME : T:\410637\DGN-DWG\plan\021202_pd.dgn PLOT DATE : 1/8/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:40
WISDOT/CADDS SHEET 42

2

N

CONCRETE BARRIER TEMPORARY PRECAST LEFT IN PLACE

CONCRETE SURFACE DRAIN DROP INLET TYPE AT STRUCTURE

STA 128D+00, 20.27'LT

STA 128D+02.81, 22'LT

SEE DETAIL "CONCRETE BARRIER TEMPORARY PRECAST LEFT IN PLACE" FOR ADDITIONAL DETAILS.

CRASH CUSHION TEMPORARY LEFT IN PLACE

STA 129D+57.68, 22'LT

STA 129D+57.68, 17.2'LT

STA 129D+57.68, 8'LT

STA 129D+89.56, 20'LT

STA 130D+02.79, 5'LT

STA 127WB+50 - STA 130WB+59, RT
STA 128WB+67 - STA 129WB+57, LT
MGS GUARDRAIL REQ'D.

REGRADE REMAINING GRAVEL TO DRAIN AWAY FROM D RAMP (INCIDENTAL)

SAWCUT REQ'D

STA 132D+45, 3'LT (ADJUST TO MATCH EXISTING)

10' TAPER

STA 132D+43.72, 5'LT

133D+00

VARIES

8'

127D+00

128D+00

129D+00

130D+00

15:1 TAPER

B-37-63

127WB+00

128WB+00

129WB+00

130WB+00

131WB+00

132WB+00

133WB+

STH 29 WB

D RAMP

1211.66 1211.72 1211.79 1211.85 1212.18 1212.23 1212.26 1212.28 1212.30 1212.31 1212.32 1212.31 1212.23 1212.09 1211.89 1211.52 1211.08

1211.98 1212.05 1212.13 1212.20 1212.28 1212.35 1212.43 1212.50 1212.57 1212.65 1212.72 1212.80 1212.87 1212.95 1213.02 1213.10

0.02 0.034 0.044 0.044 0.047 0.051 0.059 0.06

15' 15' 16' 17' 18'

18' 5' 5' 3'

R 6'

8' 14' 12' 6'

MATCH

CONCRETE SURFACE DRAIN DROP INLET TYPE AT STRUCTURE (SEE DETAIL "CONCRETE SURFACE DRAIN DROP INLET - STH 29" FOR ADDITIONAL DETAILS.)

CONCRETE SURFACE DRAIN DROP INLET TYPE AT STRUCTURE

CONCRETE PAVEMENT APPROACH SLAB REQ'D. (WB APPROACH SLAB CONSTRUCTED IN STAGES) SEE SDD "CONCRETE PAVEMENT APPROACH SLAB" FOR ADDITIONAL INFORMATION.

MGS GUARDRAIL 3

15:1 TAPER

6' 12'

B-37-140

127EB+00 STH 29 EB 128EB+00 129EB+00 130EB+00 131EB+00 132EB+00

1212.30 1212.42 1212.52 1212.61 1212.69 1212.78 1212.87 1212.96 1213.04 1213.13 1213.22 1213.31 1213.39 1213.48 1213.57 1213.66 1213.74 1213.83 1213.92

0.02 0.02 0.02 0.02

6' 12' 14' 8'

127A+00 128A+00 129A+00 130A+00 131A+00 132A+00

1212.06 1212.18 1212.28 1212.37 1212.45 1212.39 1212.31 1212.25 1212.16 1213.27 1213.12 1213.03 1213.00 1213.04 1213.14 1213.31

0.02 0.041 0.06 0.06 0.038 0.06

8' 14' 12' 6'

A RAMP

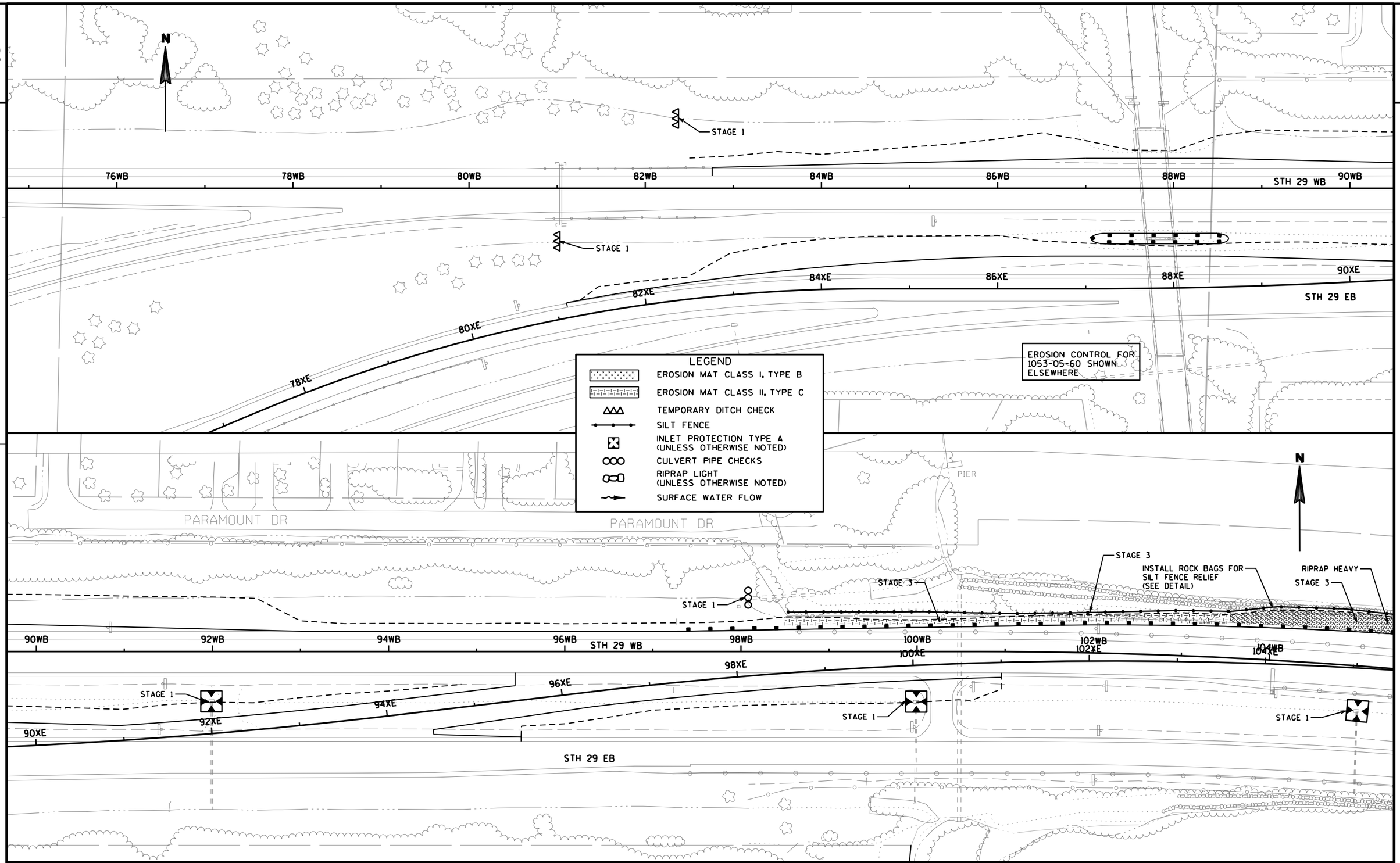
R 6'

3' 5' 18' 5' 3'

CONCRETE SURFACE DRAIN DROP INLET TYPE AT STRUCTURE

PROJECT NO: 1053-02-74	HWY: STH 29	COUNTY: MARATHON	PAVING DETAIL	SHEET	E

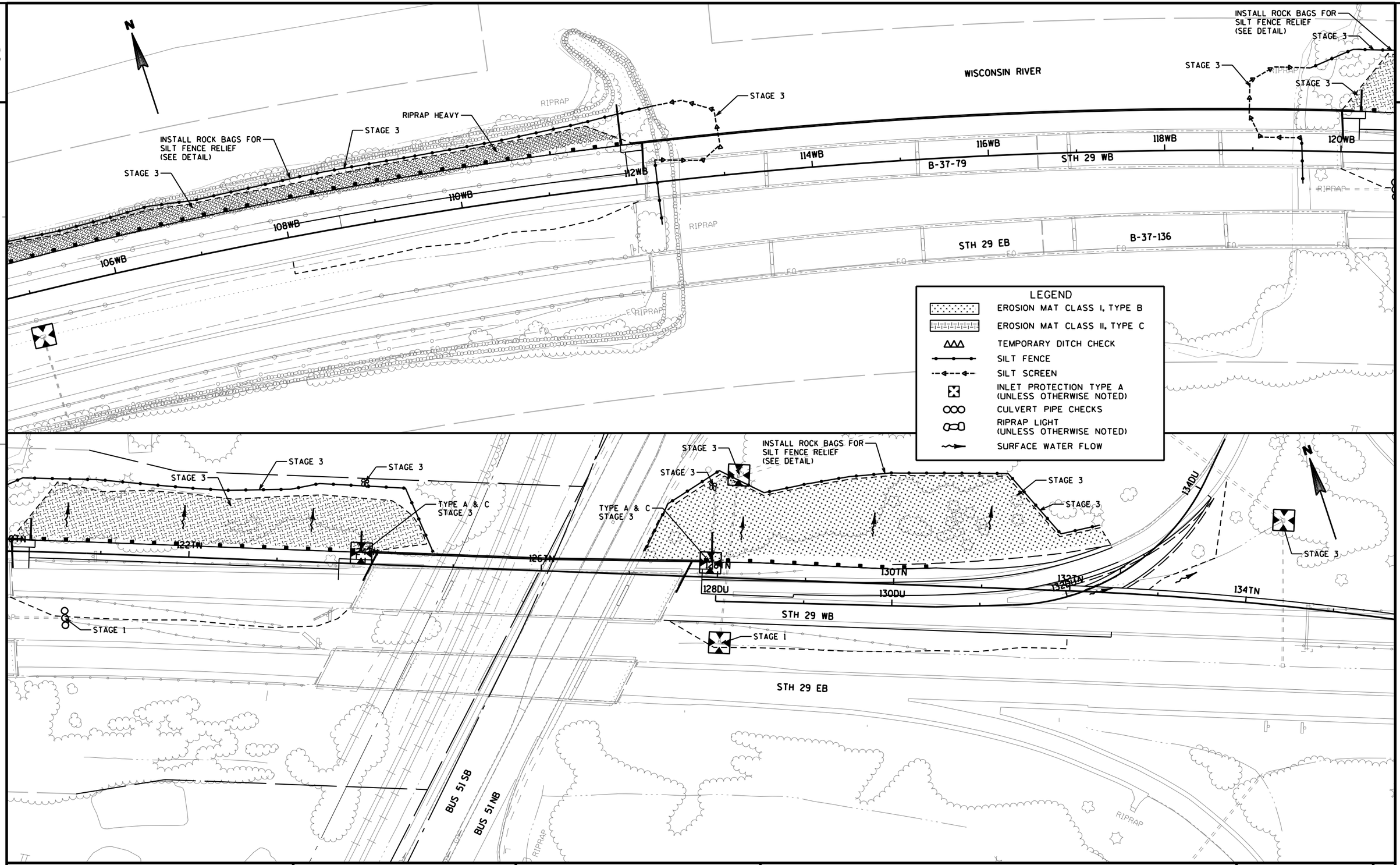
FILE NAME : T:\410637\DGN-DWG\plan\021203_pd.dgn PLOT DATE : 1/8/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:40



PROJECT NO: 1053-02-74	HWY: STH 29	COUNTY: MARATHON	EROSION CONTROL - STAGES 1, 2 & 3	SHEET	E

FILE NAME : T:\410637\DGN-DWG\plan\022001_ec.dgn PLOT DATE : 1/8/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:100

WISDOT/CADDS SHEET 42

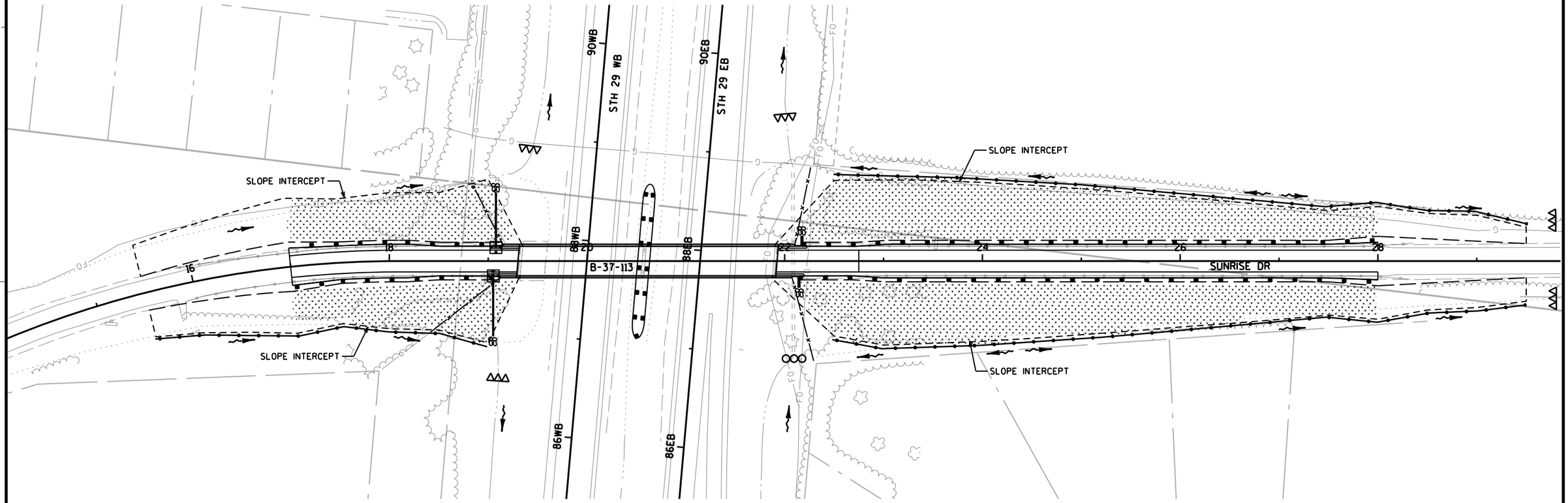


PROJECT NO: 1053-02-74	HWY: STH 29	COUNTY: MARATHON	EROSION CONTROL - STAGES 1, 2 & 3	SHEET 25	E

FILE NAME : T:\410637\DGN-DWG\plan\022002_ec.dgn PLOT DATE : 1/8/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:100

WISDOT/CADDS SHEET 42

2



ALL ITEMS ON THIS SHEET
INSTALLED IN STAGE 2

LEGEND

- EROSION MAT CLASS I, TYPE B
- TEMPORARY DITCH CHECK
- SILT FENCE
- CULVERT PIPE CHECKS
- SURFACE WATER FLOW
- INLET PROTECTION TYPES A & C
- RIPRAP LIGHT

PROJECT NO: 1053-05-60	HWY: STH 29	COUNTY: MARATHON	EROSION CONTROL - STAGES 1, 2 & 3	SHEET 26	E

2

WISCONSIN CENTRAL LTD

SLOPE INTERCEPT

TLE

HIGHWAY EASEMENT

15P+00 16P+00 17P+00 18P+00 19P+00 20P+00 21P+00

EXISTING HIGHWAY EASEMENT

SLOPE INTERCEPT

TYPE C

TYPE C

15SB+00 16SB+00 17SB+00 BUSINESS 51 SB 18SB+00 19SB+00 20SB+00 21SB+00

15NB+00 16NB+00 17NB+00 18NB+00 19NB+00 20NB+00 21NB+00

BUSINESS 51 NB

TYPE C

TYPE C

LEGEND

EROSION MAT URBAN CLASS I, TYPE B

INLET PROTECTION TYPE A (UNLESS OTHERWISE NOTED)

SURFACE WATER FLOW

WISCONSIN CENTRAL LTD

27P+00

WEST GRAND AVE

TLE

HIGHWAY EASEMENT

EXIST. R/W

SLOPE INTERCEPT

21P+00 22P+00 23P+00 24P+00 25P+00 26P+00

SEE LANDSCAPE PLAN

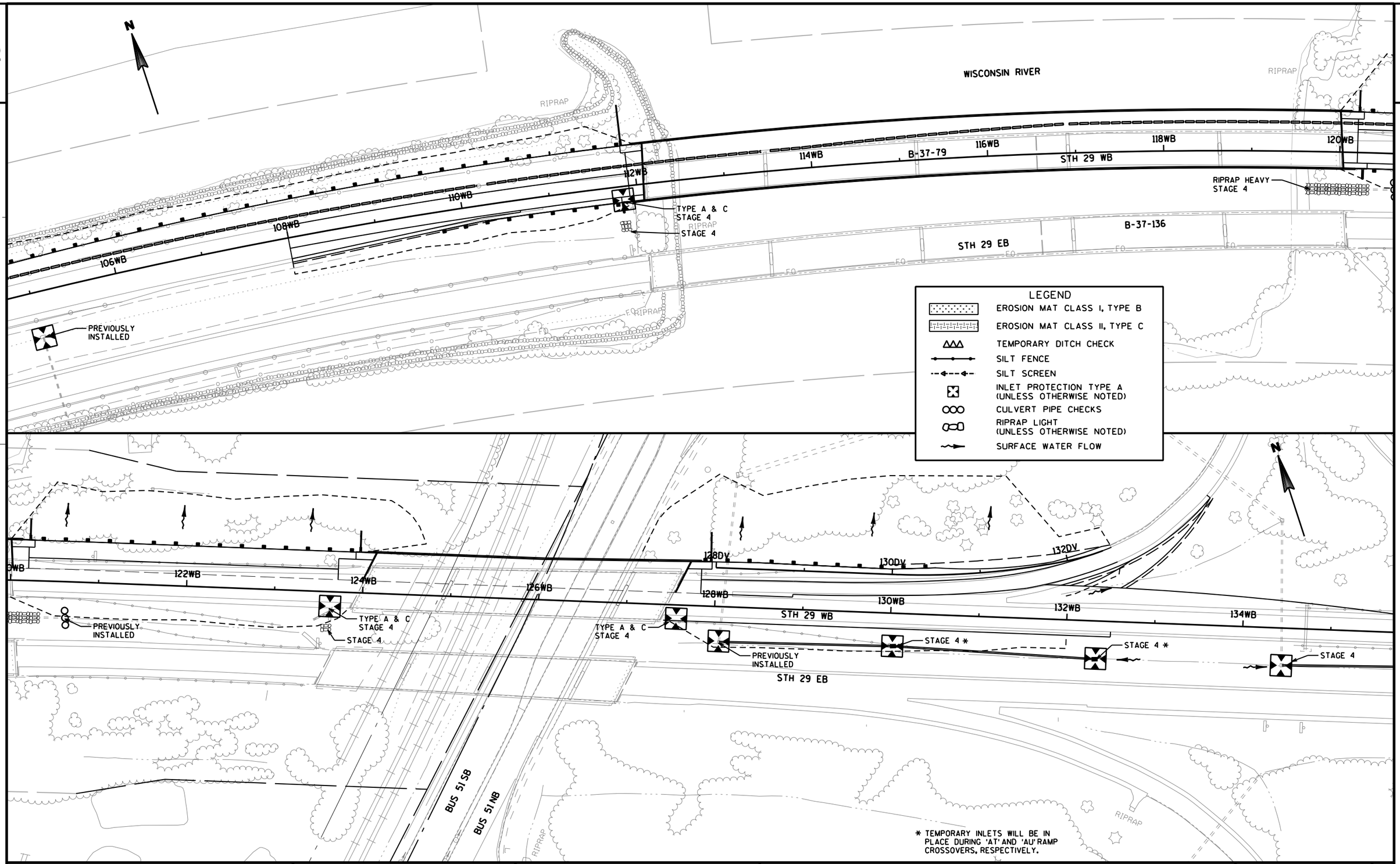
TYPE C

TYPE C

TYPE C

BUSINESS 51 SB

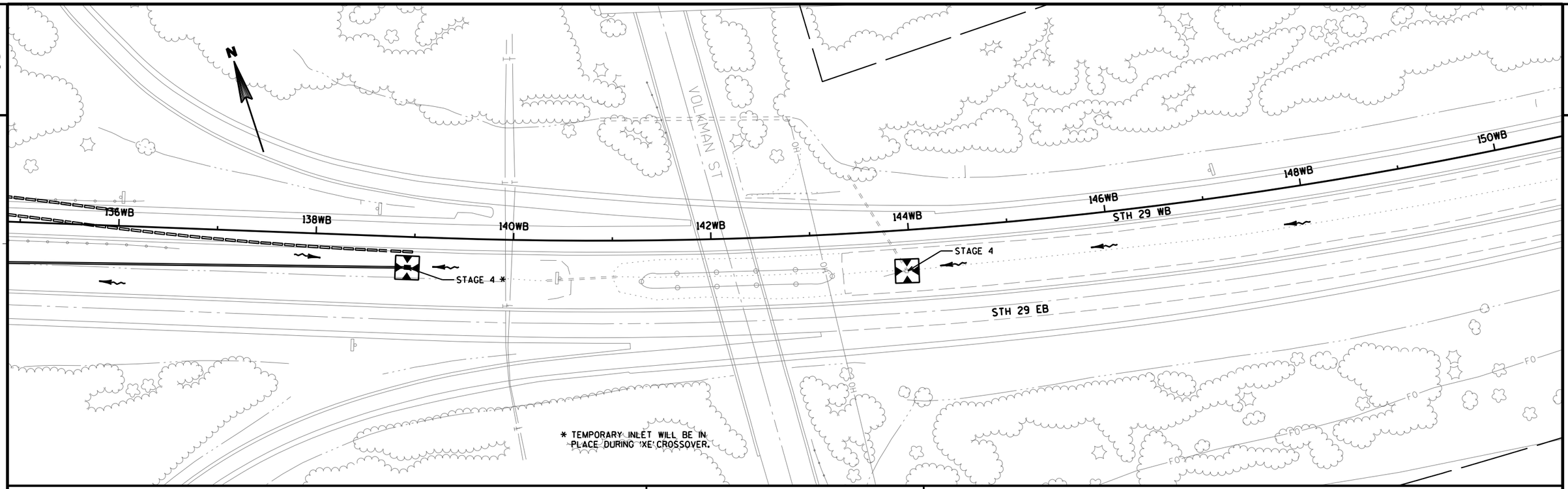
PROJECT NO: 1053-02-75	HWY: STH 29	COUNTY: MARATHON	EROSION CONTROL - STAGES 1, 2 & 3	SHEET 27	E



PROJECT NO: 1053-02-74	HWY: STH 29	COUNTY: MARATHON	EROSION CONTROL - STAGE 4	SHEET	E

FILE NAME : T:\410637\DGN-DWG\plan\022005_ec.dgn PLOT DATE : 1/8/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:100

WISDOT/CADDS SHEET 42



LEGEND

- EROSION MAT CLASS I, TYPE B
- EROSION MAT CLASS II, TYPE C
- TEMPORARY DITCH CHECK
- SILT FENCE
- INLET PROTECTION TYPE A (UNLESS OTHERWISE NOTED)
- CULVERT PIPE CHECKS
- RIPRAP LIGHT (UNLESS OTHERWISE NOTED)
- SURFACE WATER FLOW

PROJECT NO: 1053-02-74	HWY: STH 29	COUNTY: MARATHON	EROSION CONTROL - STAGE 4	SHEET 29	E

2

N

WISCONSIN RIVER

RIPRAP

106XE 108XE 110XE 112XE 114XE 116XE 118XE 120XE

B-37-79

STH 29 WB

106EB 108EB 110EB 112EB 114EB 116EB 118EB 120EB

B-37-136

STH 29 EB

PREVIOUSLY INSTALLED

STAGE 6

TYPE A & C STAGE 6

INSTALL ROCK BAGS FOR SILT FENCE RELIEF (SEE DETAIL)

LEGEND

- EROSION MAT CLASS I, TYPE B
- EROSION MAT CLASS II, TYPE C
- TEMPORARY DITCH CHECK
- SILT FENCE
- SILT SCREEN
- INLET PROTECTION TYPE A (UNLESS OTHERWISE NOTED)
- CULVERT PIPE CHECKS
- RIPRAP LIGHT (UNLESS OTHERWISE NOTED)
- SURFACE WATER FLOW

N

122XE 124XE 126XE 128XE 130XE 132XE 134XE

120EB 122EB 124EB 126EB 128EB 130EB 132EB 134EB

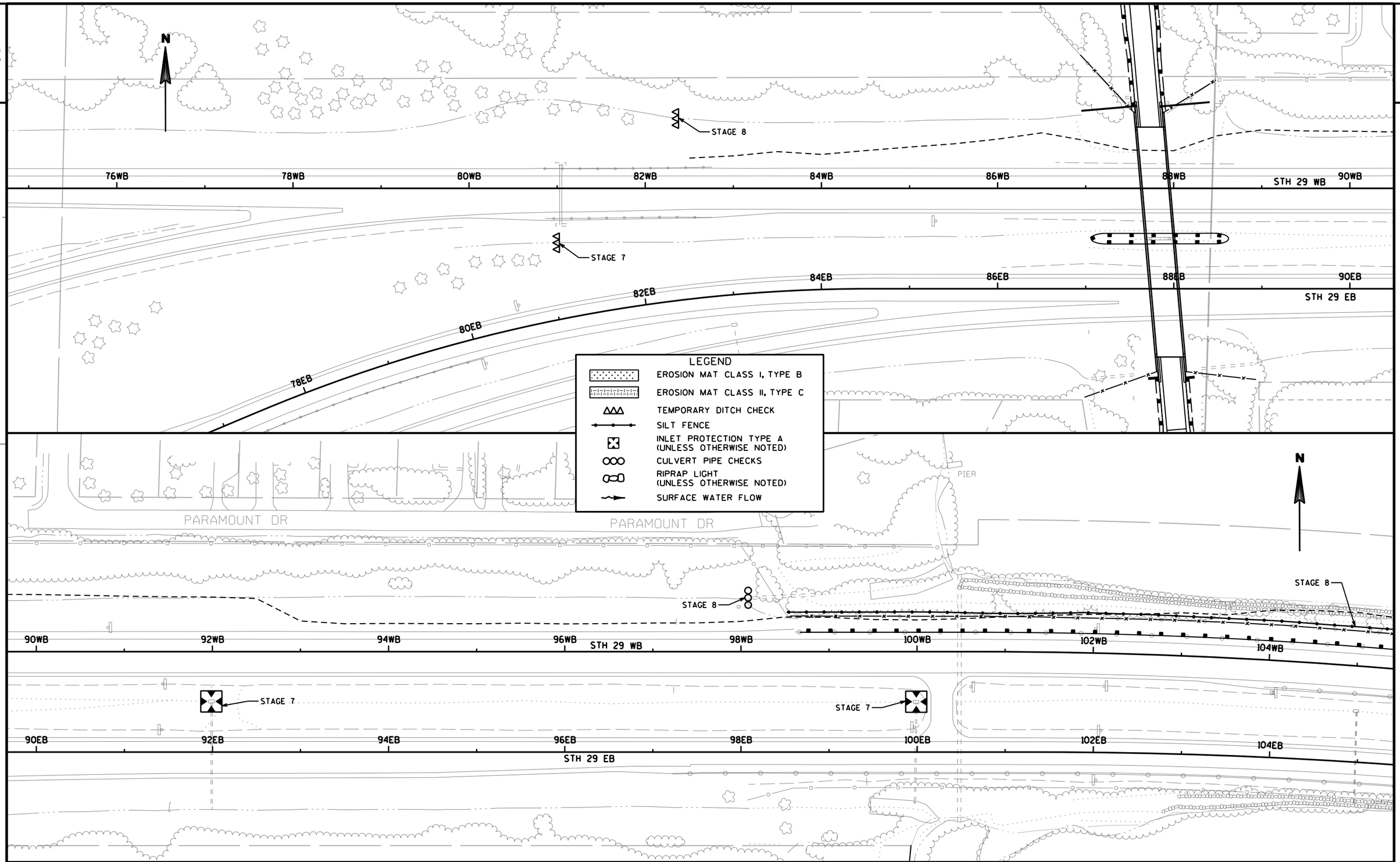
122A 124A 126A 128A 130A 132A 134A

BUS 51 SB

BUS 51 NB

PROJECT NO: 1053-02-74	HWY: STH 29	COUNTY: MARATHON	EROSION CONTROL - STAGES 5 & 6	SHEET 30	E

FILE NAME : T:\410637\DGN-DWG\plan\022007_ec.dgn PLOT DATE : 1/8/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:100



PROJECT NO: 1053-02-74	HWY: STH 29	COUNTY: MARATHON	EROSION CONTROL - STAGES 7 & 8	SHEET	E

FILE NAME : T:\410637\DGN-DWG\plan\022008_ec.dgn PLOT DATE : 1/8/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:100

2

N

WISCONSIN RIVER

RIPRAP

STAGE 8

106WB

108WB

110WB

112WB

114WB

B-37-79

116WB

118WB

120WB

STH 29 WB

106EB

108EB

110EB

112EB

114EB

116EB

B-37-136

118EB

120EB

STH 29 EB

FO

LEGEND

- EROSION MAT CLASS I, TYPE B
- EROSION MAT CLASS II, TYPE C
- TEMPORARY DITCH CHECK
- SILT FENCE
- SILT SCREEN
- INLET PROTECTION TYPE A (UNLESS OTHERWISE NOTED)
- CULVERT PIPE CHECKS
- RIPRAP LIGHT (UNLESS OTHERWISE NOTED)
- SURFACE WATER FLOW

STAGE 4

122WB

124WB

126WB

128WB

130WB

132WB

134WB

122EB

124EB

126EB

128EB

130EB

132EB

134EB

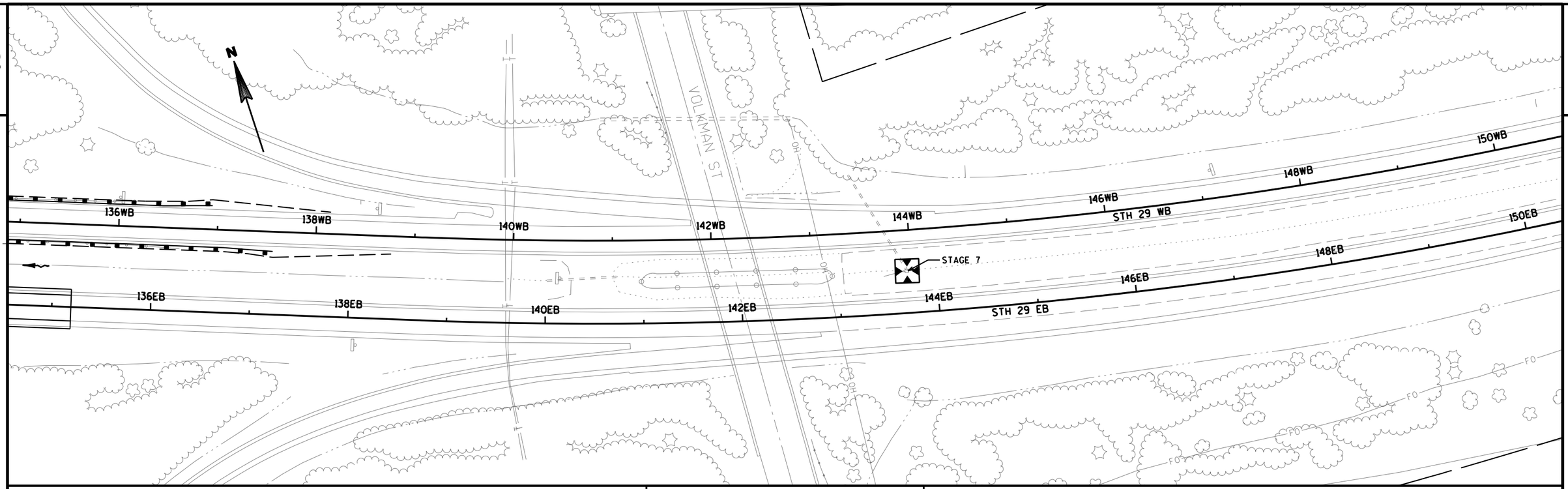
PREVIOUSLY INSTALLED

BUS 51 SB

BUS 51 NB

PROJECT NO: 1053-02-74	HWY: STH 29	COUNTY: MARATHON	EROSION CONTROL - STAGES 7 & 8	SHEET	E

FILE NAME : T:\410637\DGN-DWG\plan\022009_ec.dgn PLOT DATE : 1/8/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:100



LEGEND

- EROSION MAT CLASS I, TYPE B
- EROSION MAT CLASS II, TYPE C
- TEMPORARY DITCH CHECK
- SILT FENCE
- INLET PROTECTION TYPE A (UNLESS OTHERWISE NOTED)
- CULVERT PIPE CHECKS
- RIPRAP LIGHT (UNLESS OTHERWISE NOTED)
- SURFACE WATER FLOW

PROJECT NO: 1053-02-74	HWY: STH 29	COUNTY: MARATHON	EROSION CONTROL - STAGES 7 & 8	SHEET 33	E

2

TLE

R/W

16P+00 17P+00 18P+00 19P+00

CONCRETE SIDEWALK 4-INCH
JOINT SPACING @ 10-FT
COLORING CONCRETE BROWN
18P+40

16SB+00 17SB+00 18SB+00 19SB+00

START: HAPPY
RETURNS DAYLILY
17SB+00
QTY: 59

CONCRETE SIDEWALK 4-INCH
(18-IN EDGE, 24-IN JOINT SPACING TYP)
COLORING CONCRETE BROWN

END: AUTUMN
JOY SEDUM
18SB+58

STA 16SB+30

CONCRETE SIDEWALK 4-INCH
COLORING CONCRETE BROWN

REMOVING CONCRETE SIDEWALK
16SB+30 - 18SB+60

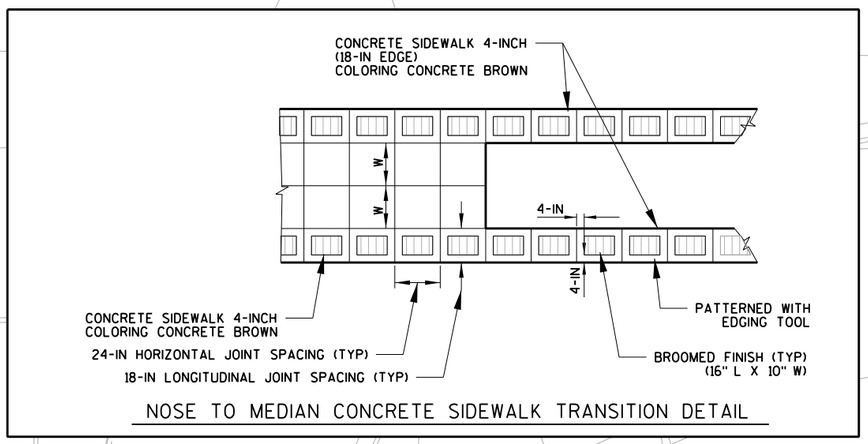
END: HAPPY
RETURNS DAYLILY
17SB+76
START: AUTUMN JOY
SEDUM QTY: 72

CONCRETE SIDEWALK 4-INCH
(10-FT X 2-FT JOINT SPACING)
COLORING CONCRETE BROWN

SEE NOSE TO MEDIAN CONCRETE SIDEWALK TRANSITION DETAIL
FOR LAYOUT AND JOINTING

SEEDING MIXTURE NO. 30

CONCRETE SIDEWALK 4-INCH
JOINT SPACING @ 10-FT
COLORING CONCRETE BROWN
18SB+55



NOSE TO MEDIAN CONCRETE SIDEWALK TRANSITION DETAIL

SCALE, FEET 0 10 20

PROJECT NO: 1053-02-75	HWY: STH 29	COUNTY: MARATHON	LANDSCAPE PLAN	SHEET	E

FILE NAME : V:\ES\Engcad\ENGIN\Rothschild\2013\41063710 Hwy 29 Landscaping\DGN\41063710_s01.dgn PLOT DATE : 1/10/2014 PLOT BY : AYRES ASSOCIATES PLOT NAME : PLOT SCALE : 1:20

WISDOT/CADDS SHEET 42

2

2

N

19P+00

20P+00

21P+00

22P+00

9SB+00

20SB+00

21SB+00

22SB+00

N 45°10'08"

TLE

R/W

CONCRETE SIDEWALK 4-INCH
JOINT SPACING @ 10-FT
COLORING CONCRETE BROWN
20P+40

CONCRETE SIDEWALK 4-INCH
(10-FT X 2-FT JOINT SPACING)
COLORING CONCRETE BROWN

START: HAPPY
RETURNS DAYLILY
QTY: 37

AUTUMN JOY
SEDUM
QTY: 153

AUTUMN BLAZE MAPLE
20SB+75

FLAME GRASS
QTY: 147

20SB+58

3/4-INCH QUICK COUPLING
IRRIGATION VALVE

START: HAPPY
RETURNS DAYLILY
QTY: 74

AUTUMN BLAZE MAPLE
23SB+69

3/4-INCH QUICK COUPLING
IRRIGATION VALVE

BOX OUT FOR EX
SIGN TO BE MOVED
AND REINSTALLED

START: HAPPY
RETURNS DAYLILY
QTY: 16

AUTUMN JOY
SEDUM
QTY: 73

AUTUMN BLAZE MAPLE
23SB+17

START: HAPPY
RETURNS DAYLILY
QTY: 53

CONRETE SIDEWALK 4-INCH
(18-IN EDGE, 24-IN JOINT SPACING TYP)
COLORING CONCRETE BROWN

SEEDING MIXTURE NO. 30

SCALE, FEET 0 10 20

PROJECT NO: 1053-02-74	HWY: STH 29	COUNTY: MARATHON	LANDSCAPE PLAN	SHEET 35	E

2

2

N

R/W

PIN OAK @ 50' O.C.
QTY: 4
24P+88, 8.6'LT
24P+38, 10.5'LT
23P+88, 13.3'LT
23P+38, 15'LT

22P+00

23P+00

24P+00

25P+00

SEE ENLARGEMENT
PLAN AT SIGN BED

3/4-INCH QUICK COUPLING
IRRIGATION VALVE

23SB+93, 37.66'LT

REMOVE WALK

SEEDING MIXTURE NO. 40

IRRIGATED AREA

105' - 4" IRRIGATION SLEEVE
ADJUST TO AVOID UTILITIES

BORED IRRIGATION LINE

22SB+00

22SB+97, 4'RT

23SB+00

24SB+00

25SB+00

10'08" Ex

AUTUMN JOY
SEDUM
QTY: 69

START: HAPPY
RETURNS DAYLILY
23SB+06
QTY: 213

CONCRETE SIDEWALK 4-INCH
(18-IN EDGE, 24-IN JOINT SPACING TYP)
COLORING CONCRETE BROWN

REMOVING CONCRETE SIDEWALK
22SB+99 - 26SB+19

AUTUMN BLAZE MAPLE
22SB+21

3/4-INCH QUICK COUPLING
IRRIGATION VALVE

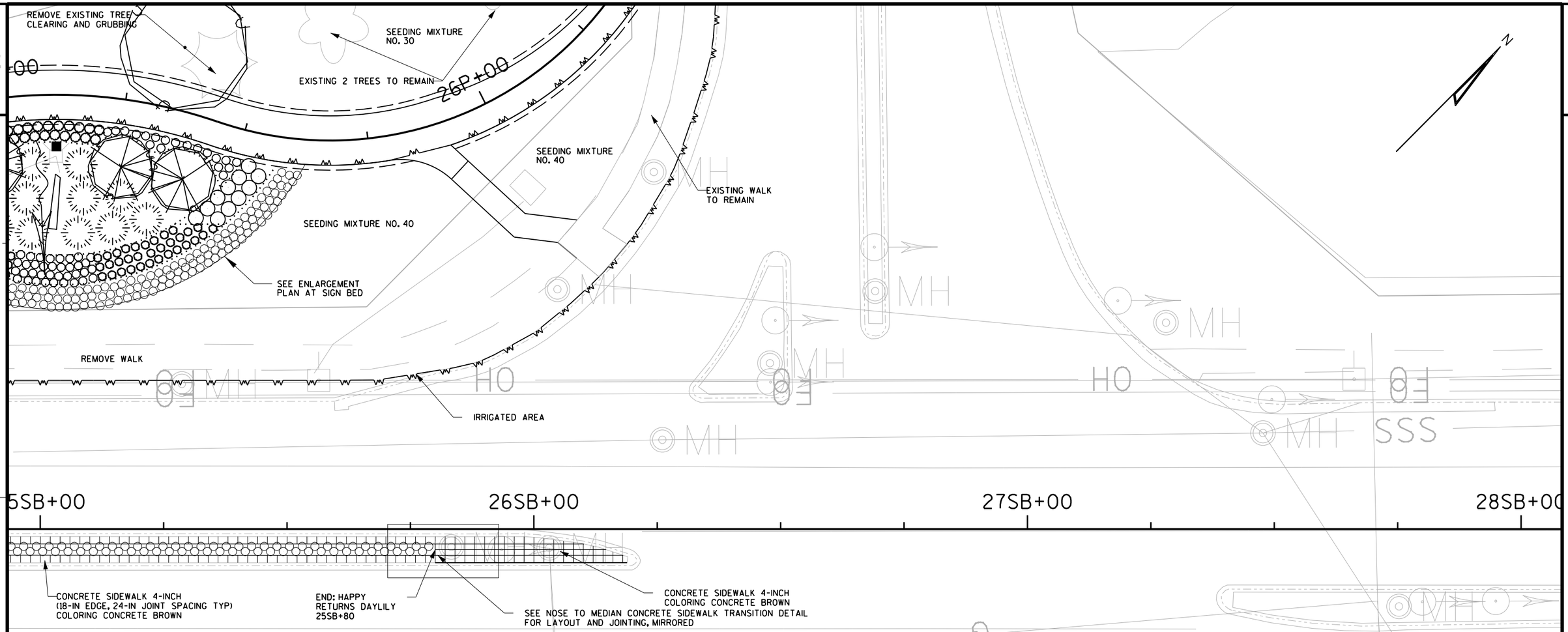
START: HAPPY
RETURNS DAYLILY
QTY: 19

SCALE, FEET 0 10 20

PROJECT NO: 1053-02-75	HWY: STH 29	COUNTY: MARATHON	LANDSCAPE PLAN	SHEET 36	E

FILE NAME : V:\ES\Engcad\ENGIN\Rothschild\2013\41063710 Hwy 29 Landscaping\DGN\41063710_s03.dgn PLOT DATE : 1/10/2014 PLOT BY : AYRES ASSOCIATES PLOT NAME : PLOT SCALE : 1:20

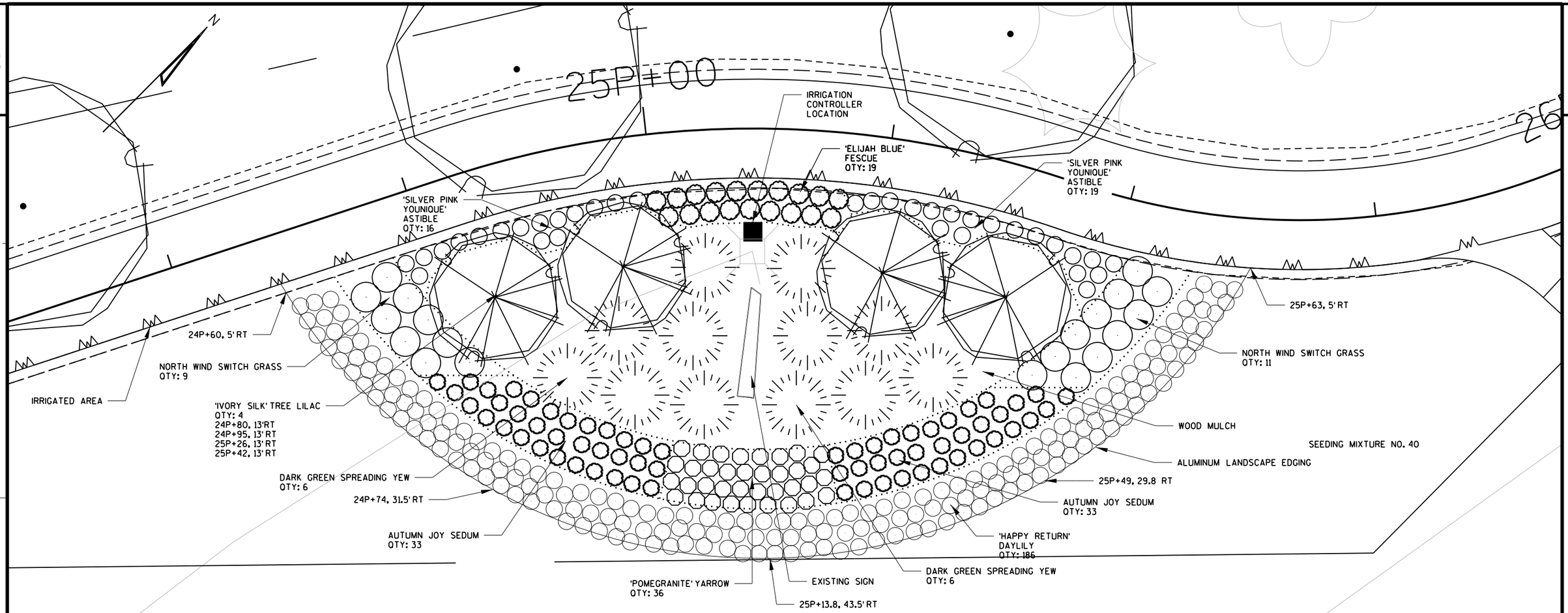
WISDOT/CADDS SHEET 42



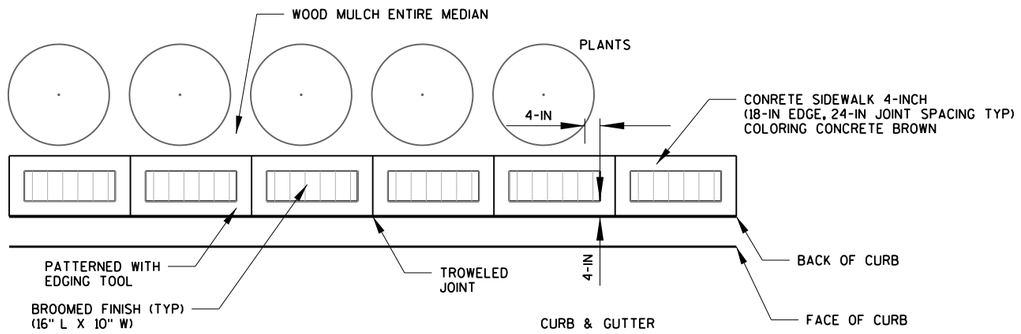
PLANT DATA CHART

COMMON NAME	SCIENTIFIC NAME	SPACING	AVERAGE MATURE HEIGHT	SIZE WHEN PLANTED	ROOT ZONE COND.	MINIMUM BALL OR POT SIZE DIA	MINIMUM BALL OR POT SIZE DEPTH (IN)	MINIMUM HOLE SIZE DIA (IN)	MINIMUM HOLE SIZE DEPTH (IN)	BRACE OR GUY	FERT. UNITS REQ'D.	RODENT PROTEC. REQ'D.	MULCH RING DIAM.
DECIDUOUS TREES													
Northern Pin Oak	Quercus ellipsoidalis	SEE PLAN	40 FT	3 IN	B&B	32 IN	19	56	19	NO	3	NO	5.66 FT
Autumn Blaze Maple	*Acer x freemanii 'Jeffersred'*	SEE PLAN	40 FT	3 IN	B&B	32 IN	19	56	19	NO	3	NO	IN BED
Ivory Silk Tree Lilac	*Syringa reticulata 'Ivory Silk'*	SEE PLAN	20 FT	2.5 IN	B&B	28 IN	17	52	17	NO	3	NO	IN BED
SHRUBS													
Dark Green SpreadingYew	Taxus cuspidata 'Monloo'	6 FT	4 FT	#7	Container	7 gallon		18	16			NO	IN BED
PERENNIALS													
Northwind Switch Grass	Panicum virgatum 'North Wind'	2.5 FT OC	48 IN	#1	Container	1 gallon		12	12			NO	IN BED
Flame Grass	*Miscanthus sinensis 'Purpurescens'*	3 FT OC	48 IN	#1	Container	1 gallon		12	12			NO	IN BED
Pomegranite Yarrow	Achillea 'Pomegranate'	1.5 FT OC	24 IN	#1	Container	1 gallon		12	12			NO	IN BED
Elijah Blue Fescue	*Festuca glauca 'Elijah Blue'*	1.5 FT OC	12 IN	#1	Container	1 gallon		12	12			NO	IN BED
Happy Returns Daylily	*Hemerocallis 'Happy Returns'*	1.5 FT OC	18 IN	#1	Container	1 gallon		12	12			NO	IN BED
Silver Pink Younique Astilbe	*Astilbe 'Younique Silvery Pink'*	2 FT OC	24 IN	#1	Container	1 gallon		12	12			NO	IN BED
Autumn Joy Stonecrop	*Sedum spectabile 'Autumn Joy'*	2 FT OC	18 IN	#1	Container	1 gallon		12	12			NO	IN BED

PROJECT NO: 1053-02-75	HWY: STH 29	COUNTY: MARATHON	LANDSCAPE PLAN	SHEET 37	E



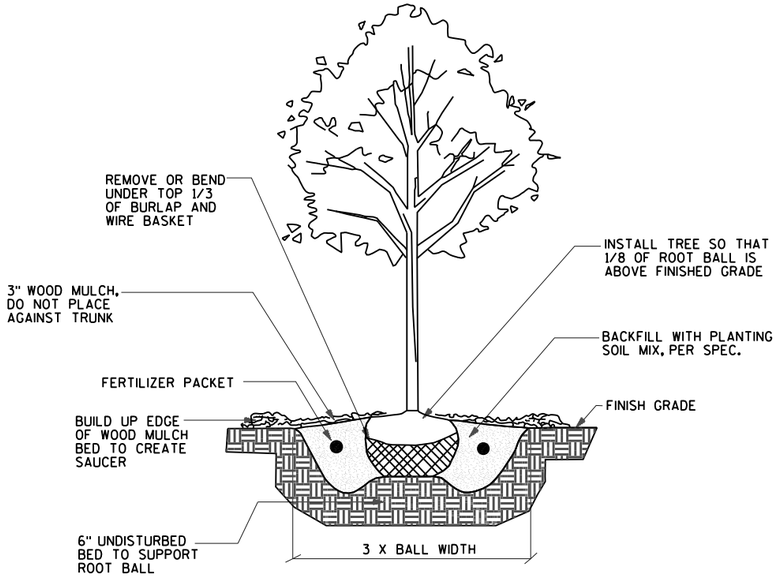
ENLARGEMENT PLAN AT SIGN BED



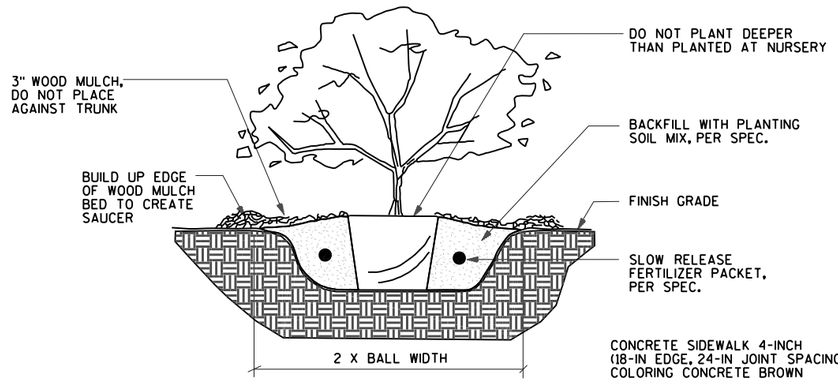
ENLARGEMENT PLAN FOR MEDIAN

PROJECT NO: 1053-02-75	HWY: STH 29	COUNTY: MARATHON	LANDSCAPE PLAN	SHEET	E

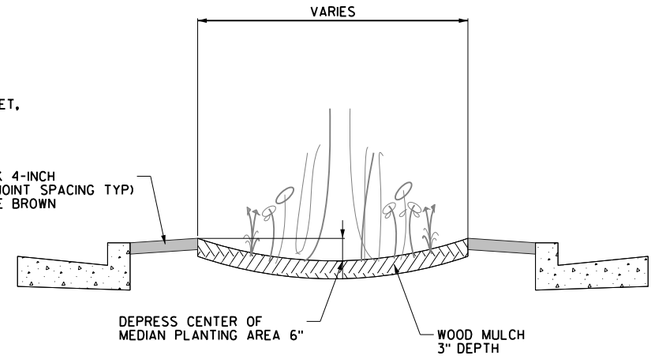
FILE NAME : V:\ES\Engcad\ENGIN\Rothschild\2013\41063710 Hwy 29 Landscaping\DGN\41063710_s05.dgn PLOT DATE : 1/10/2014 PLOT BY : AYRES ASSOCIATES PLOT NAME : PLOT SCALE : 1:10
WISDOT/CADDS SHEET 42



TREE PLANTING
NTS

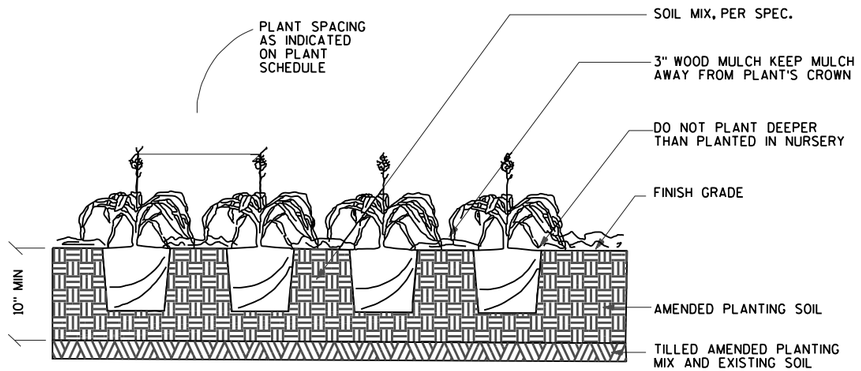


SHRUB PLANTING
NTS

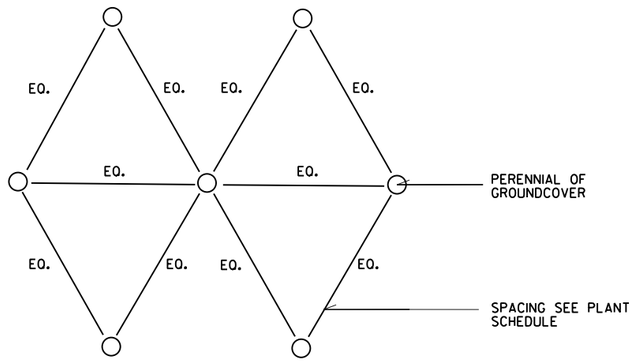


MEDIAN SECTION
NTS

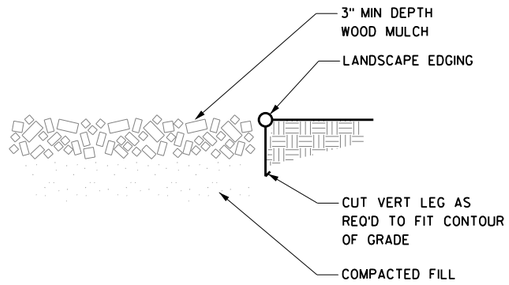
STA. 20SB+58 - 23SB+06 DRAINS TO INLET AT 20SB+90



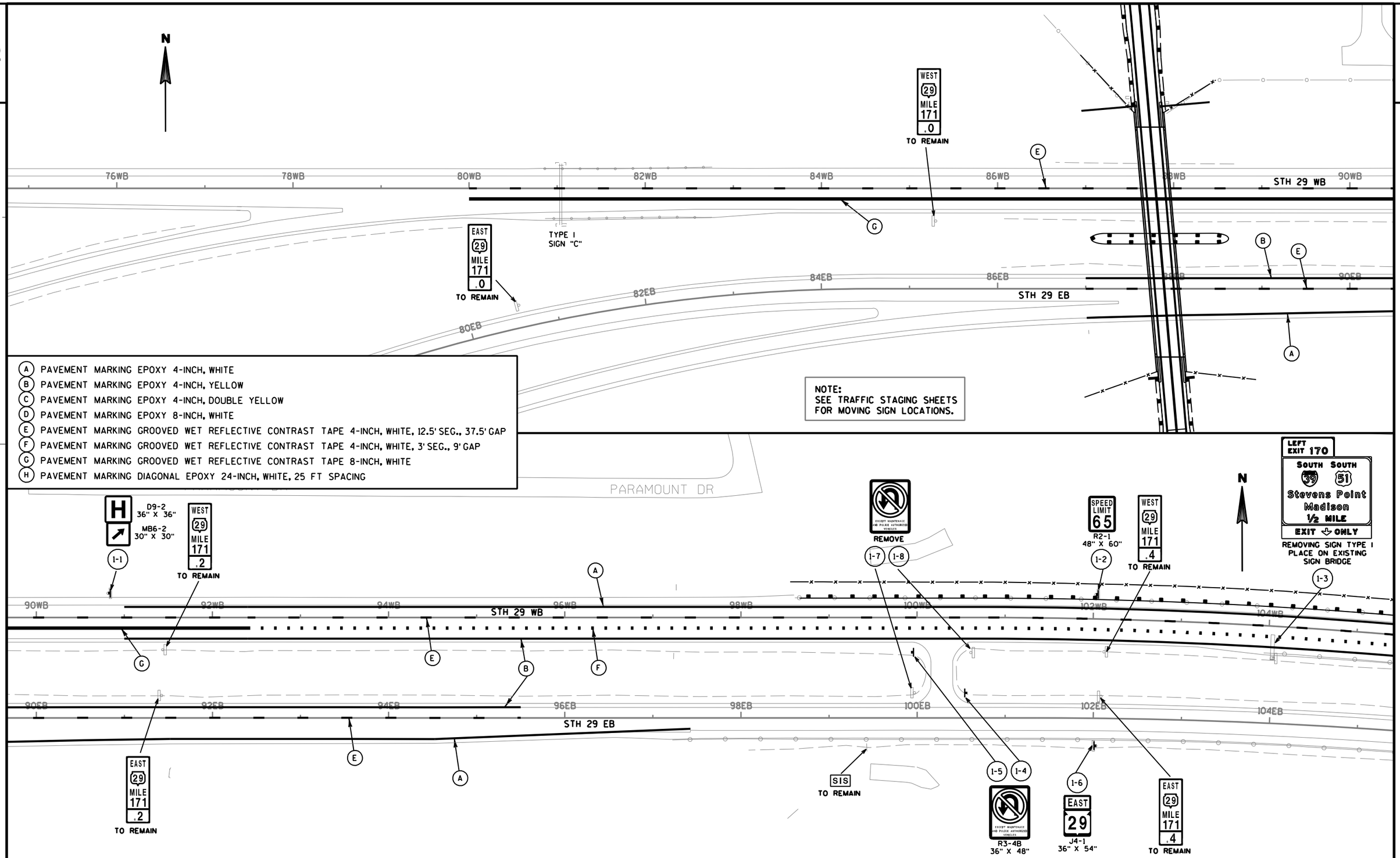
GRASSES / PERENNIAL PLANTING
NTS



GRASSES / PERENNIAL SPACING
NTS



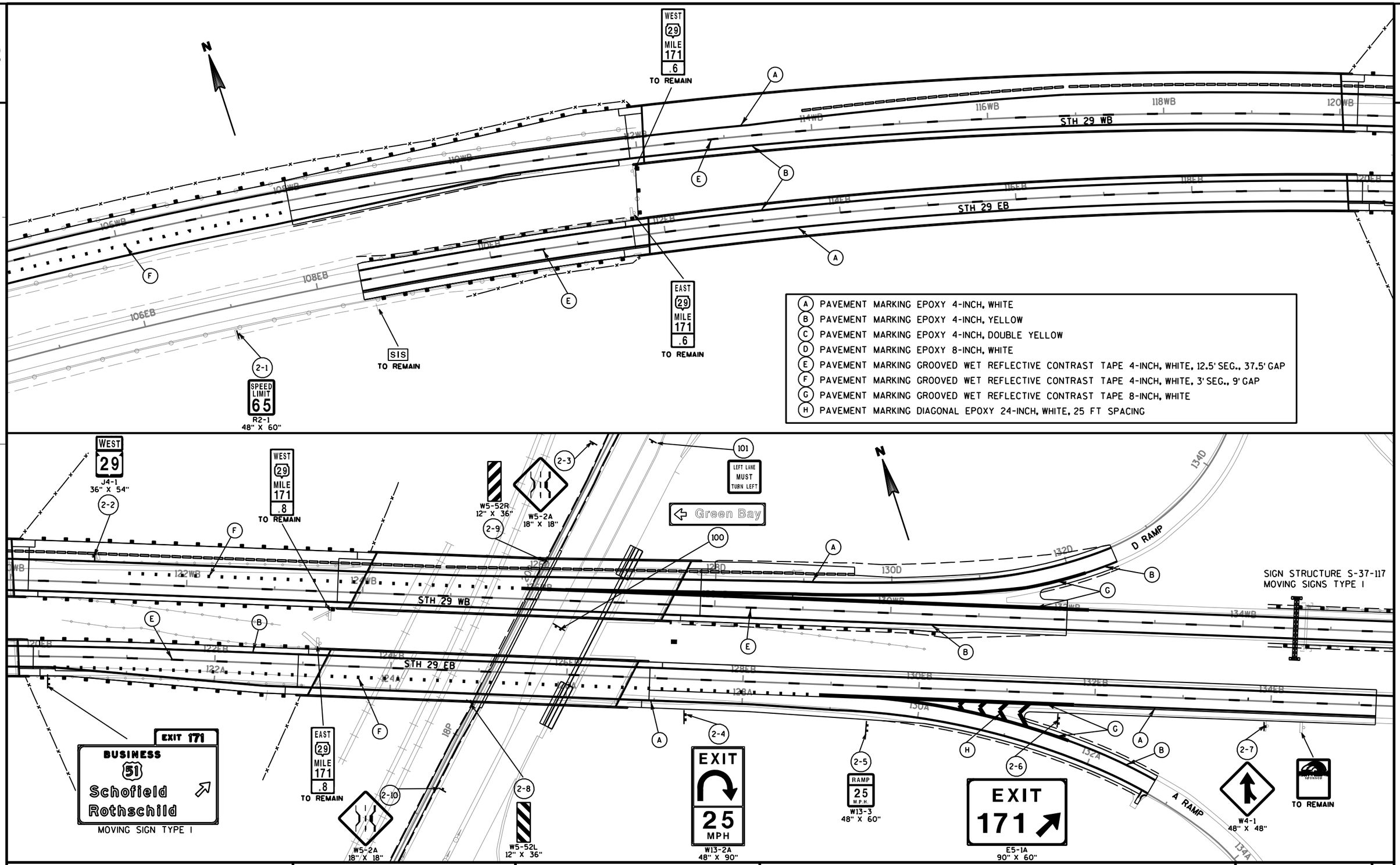
MULCH PERIMETER BED (WOOD)
NTS



PROJECT NO: 1053-02-74	HWY: STH 29	COUNTY: MARATHON	PAVEMENT MARKING & SIGNING	SHEET E

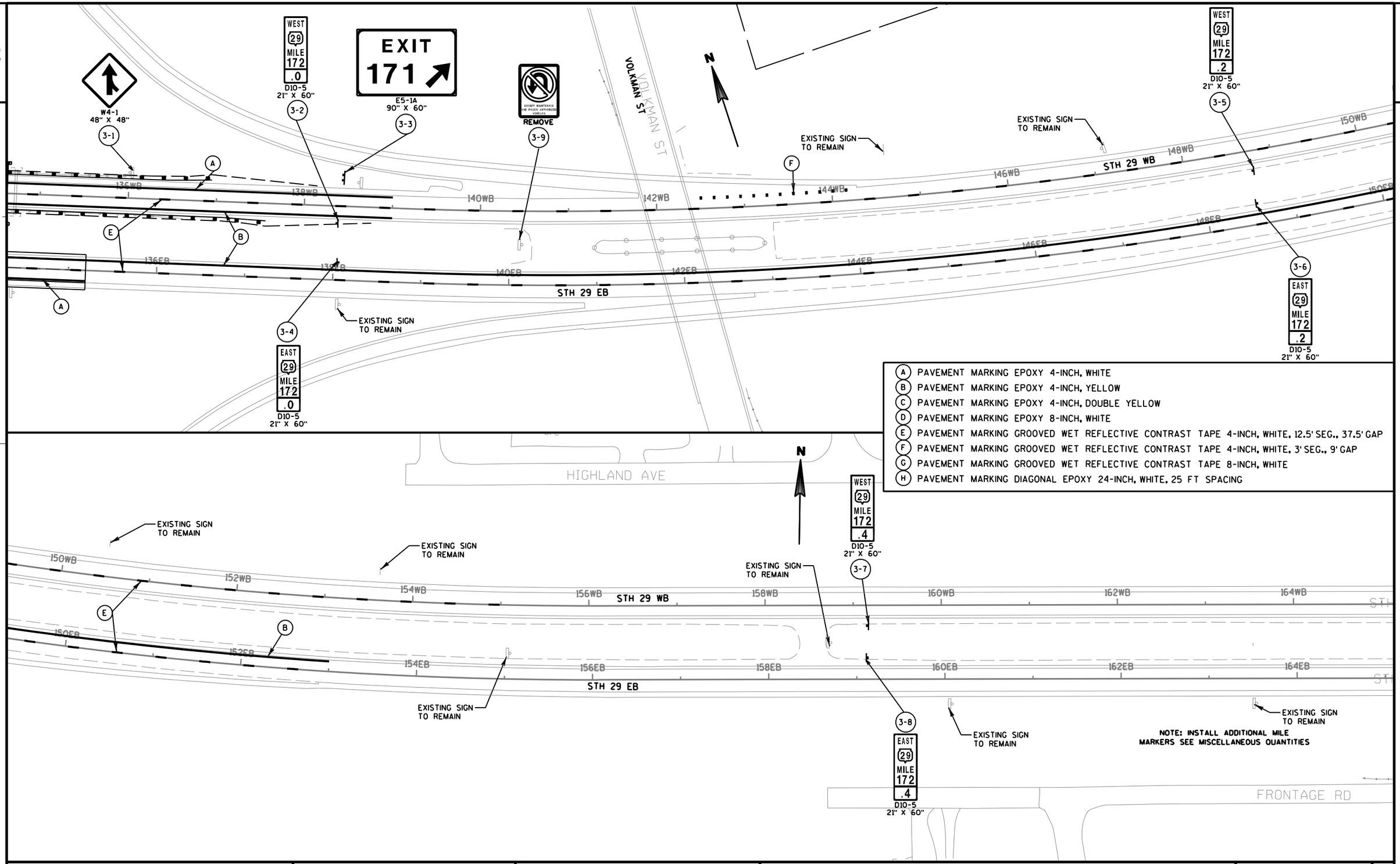
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WISDOT/CADDS SHEET 42



PROJECT NO: 1053-02-74/75	HWY: STH 29	COUNTY: MARATHON	PAVEMENT MARKING & SIGNING	SHEET	E

FILE NAME : T:\410637\DGN-DWG\plan\024502_pm.dgn PLOT DATE : 1/8/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:100



- (A) PAVEMENT MARKING EPOXY 4-INCH, WHITE
- (B) PAVEMENT MARKING EPOXY 4-INCH, YELLOW
- (C) PAVEMENT MARKING EPOXY 4-INCH, DOUBLE YELLOW
- (D) PAVEMENT MARKING EPOXY 8-INCH, WHITE
- (E) PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH, WHITE, 12.5' SEG., 37.5' GAP
- (F) PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH, WHITE, 3' SEG., 9' GAP
- (G) PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH, WHITE
- (H) PAVEMENT MARKING DIAGONAL EPOXY 24-INCH, WHITE, 25 FT SPACING

PROJECT NO: 1053-02-74	HWY: STH 29	COUNTY: MARATHON	PAVEMENT MARKING & SIGNING	SHEET 42	E

2

2

- (A) PAVEMENT MARKING EPOXY 4-INCH, WHITE
- (B) PAVEMENT MARKING EPOXY 4-INCH, YELLOW
- (C) PAVEMENT MARKING EPOXY 4-INCH, DOUBLE YELLOW
- (D) PAVEMENT MARKING EPOXY 8-INCH, WHITE
- (E) PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH, WHITE, 12.5' SEG., 37.5' GAP
- (F) PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH, WHITE, 3' SEG., 9' GAP
- (G) PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH, WHITE
- (H) PAVEMENT MARKING DIAGONAL EPOXY 24-INCH, WHITE, 25 FT SPACING

N

PARAMOUNT

STH 29 WB

STH 29 EB

SUNRISE DRIVE

SPEED LIMIT 30
R2-1
24" X 30"
4-1

SPEED LIMIT 30
R2-1
24" X 30"
4-8

W5-52L
12" X 36"
4-4

W5-52R
12" X 36"
4-3

W5-52R
12" X 36"
4-5

W1-2L
30" X 30"
4-6

W5-52L
12" X 36"
4-7

W1-2R
30" X 30"
4-2

"NEIGHBORHOOD WATCH" SIGN TO BE REMOVED BY OTHERS

PROJECT NO: 1053-05-60	HWY: STH 29	COUNTY: MARATHON	PAVEMENT MARKING & SIGNING	SHEET	E

FILE NAME : T:\410637\DGN-DWG\plan\024504_pm.dgn PLOT DATE : 1/8/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:100
WISDOT/CADDS SHEET 42

2

GENERAL NOTES FOR TRAFFIC CONTROL

DRAWINGS SHOW TRAFFIC CONTROL FOR A TYPICAL SITUATION. ADDITIONAL TRAFFIC CONTROL DEVICES MAY BE REQUIRED AND/OR LAYOUT DETAILS MODIFIED DEPENDING ON METHODS OF SEQUENCE OF OPERATION.

ADJUST SIGN SPACING TO AVOID CONFLICT WITH AND TO PROVIDE A MINIMUM SPACING OF 200 FEET (500 FEET DESIRABLE) TO EXISTING SIGNS.

UNLESS NOTED, ALL WARNING SIGNS ARE 48" X 48". ALL OTHER SIGNS ARE SIZE 5 IF LOCATED ON THE FREEWAY OR RAMPS AND SIZE 2S IF LOCATED ON OTHER ROADWAYS.

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

REMOVE OR COVER ANY TEMPORARY OR EXISTING SIGNS THAT CONFLICT WITH "IN USE" TRAFFIC CONTROL.

ALL TRAFFIC CONTROL SIGNING WILL CONFORM TO PART VI OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, 2009 EDITION, & THE WISCONSIN SUPPLEMENT DATED MAY 25. 2011.

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

IF LANE CLOSURES ARE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS THE ADVANCED WARNING SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS.

INSTALL THE LANE CLOSURE SERIES AS A COMPLETE UNIT THAT INCLUDES ALL ADVANCED WARNING SIGNING, DRUMS, AND ARROW BOARDS.

WARNING LIGHTS SHALL NOT BE WORKING ON "COVERED" OR "DOWNED" SIGN OR BARRICADES.

DURING HOURS OF DARKNESS, ALL BARRICADES USED TO SHIELD A HAZARD SHALL BE EQUIPPED WITH TYPE "A" LIGHTS.

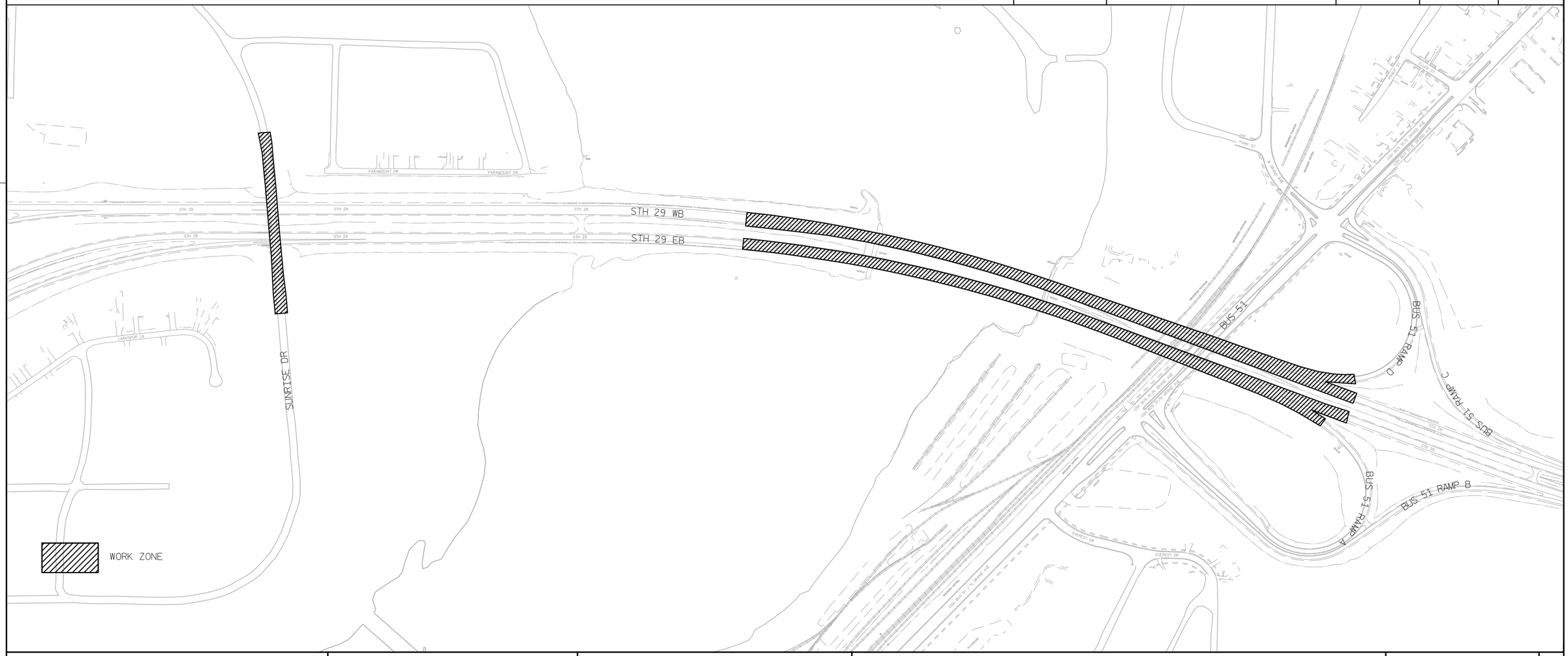
REMOVE ALL EXISTING PAVEMENT MARKINGS CONFLICTING WITH THE TRAFFIC CONTROL OR NOT APPROPRIATE TO THE TRAVEL PATH.

LAYOUT INFORMATION PROVIDED IS NOT INTENDED TO REPLACE WHAT IS PROVIDED IN APPLICABLE STANDARD DETAIL DRAWINGS.

ALL SIGN FLAGS SHOWN ARE 16" X 16" MIN (ORANGE) AND INCIDENTAL TO SIGN.

TEMPORARY ALIGNMENT DESTINATION	ROADWAY SEGMENT	PROJECT ID	CONSTRUCTED IN STAGE	TRAFFIC ON IN STAGE
AT	TEMPORARY 'AT' RAMP	1053-02-74	4	6
AU	TEMPORARY 'AU' RAMP	1053-02-74	6	6A
DT	TEMPORARY 'DT' RAMP (ALIGNMENT ONLY)	1053-02-74	NA	3
DU	TEMPORARY 'DU' RAMP	1053-02-74	3	3A
DV	TEMPORARY 'DV' RAMP (ALIGNMENT ONLY)	1053-02-74	3A	4,6,7
TN	TEMPORARY 'TN' RAMP	1053-02-74	3	4,6,7
TS	TEMPORARY 'TS' RAMP	1053-02-74	1	3
XE	TEMPORARY 'XE' LINE	1053-02-74	1,4	6
BT	TEMPORARY 'BT' RAMP (ALIGNMENT ONLY)	1053-02-74	2B	2C
EM	TEMPORARY 'EM' LINE	1053-05-60	1	2B
EN	TEMPORARY 'EN' LINE (ALIGNMENT ONLY)	1053-05-60	NA	2C
WN	TEMPORARY 'WM' LINE	1053-05-60	1	2C
WM	TEMPORARY 'WN' LINE (ALIGNMENT ONLY)	1053-05-60	NA	2B

2



PROJECT NO: 1053-02-74/75 & 1053-05-60	HWY: STH 29	COUNTY: MARATHON	TRAFFIC CONTROL: NOTES	SHEET 44	E

FOR INFORMATION ONLY:

CONTRACTOR SHALL COMPLY WITH SECT. 107.19 OF THE STANDARD SPECIFICATIONS AND THE SPECIAL PROVISIONS.

N

WORK AREA

WORK ZONE

BUOY

BOAT TRAFFIC PATTERN

BRIDGE W O R K

DANGER BUOY (EXAMPLE)

WISCONSIN RIVER

STH 29 WB

STH 29 EB

25'

50'

MAIN CHANNEL BOAT TRAFFIC

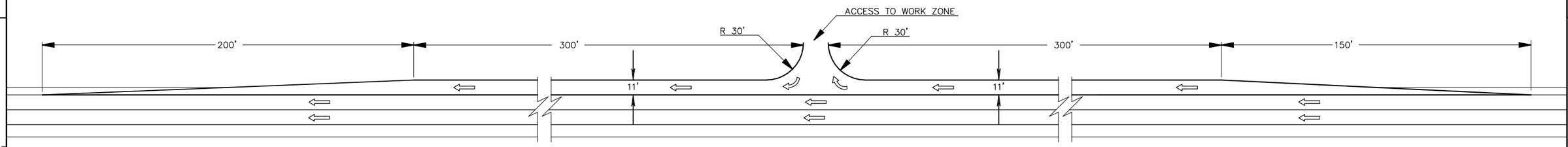
MAIN CHANNEL BOAT TRAFFIC

WISCONSIN RIVER

PROJECT NO: 1053-02-74/75 & 1053-05-60	HWY: STH 29	COUNTY: MARATHON	TRAFFIC CONTROL: BOAT TRAFFIC CONTROL	SHEET 45	E

2

WORK ZONE



AT ALL TIMES CONSIDER THE SAFETY AND CONVENIENCE OF THE TRAVELING PUBLIC. DRIVERS SHALL USE EXTREME CAUTION WHEN ENTERING/EXITING TO MINIMIZE THE DISRUPTION OF TRAFFIC.

IF THE USE OF ANY RIGHT TURN MOVEMENT AND/OR SPEED CHANGE LANE IS CAUSING EXCESSIVE DELAY, DISRUPTION, OR UNSAFE CONDITION TO THE TRAVELING PUBLIC, THE ENGINEER WILL HAVE THE AUTHORITY TO HALT THE USE OF THE RIGHT TURN MOVEMENT AND/OR SPEED CHANGE LANE FOR ANY PERIOD OR DURATION. LANE RENTAL CHARGES MAY ALSO APPLY.

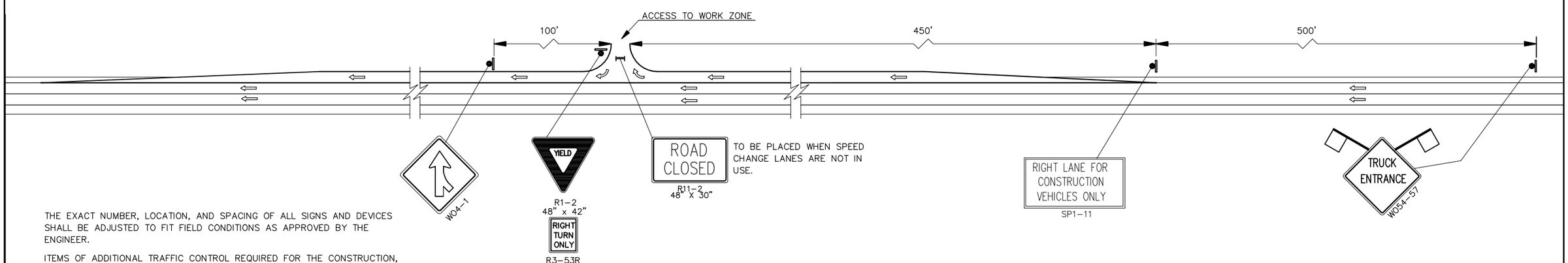
RIGHT TURN MOVEMENTS MAY BE USED FOR HAULING OPERATIONS AS AN OPTION TO THE CONTRACTOR TO GAIN ACCESS TO THE CONSTRUCTION AREA. SPEED CHANGE LANES WILL BE REQUIRED FOR RIGHT TURN MOVEMENTS FOR CONTINUOUS HAULING OPERATIONS. THE CONSTRUCTION OF THE SPEED CHANGE LANES AND ALL NECESSARY MATERIALS, SHALL BE AT THE CONTRACTOR'S EXPENSE.

THIS DETAIL GIVES MINIMUM VALUES FOR THE GEOMETRIC DESIGN OF THE OPTIONAL SPEED CHANGE LANES. ANY CHANGES TO THE DESIGN MUST BE APPROVED BY THE ENGINEER.

THE SPEED CHANGE LANES MUST BE PAVED TO ADEQUATELY SUPPORT CONSTRUCTION VEHICLES THROUGHOUT THE DURATION OF THE PROJECT. THE PAVEMENT DESIGN, INCLUDING THE MIX FORMULA AND PAVEMENT THICKNESS, SHALL BE DETERMINED BY THE CONTRACTOR.

OPTIONAL SPEED CHANGE LANES FOR RIGHT TURNS

WORK ZONE



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

ITEMS OF ADDITIONAL TRAFFIC CONTROL REQUIRED FOR THE CONSTRUCTION, USE, AND REMOVAL OF THE OPTIONAL SPEED CHANGE LANES SHALL BE PLACED AT THE CONTRACTOR'S EXPENSE.

LEGEND

POST MOUNTED SIGN

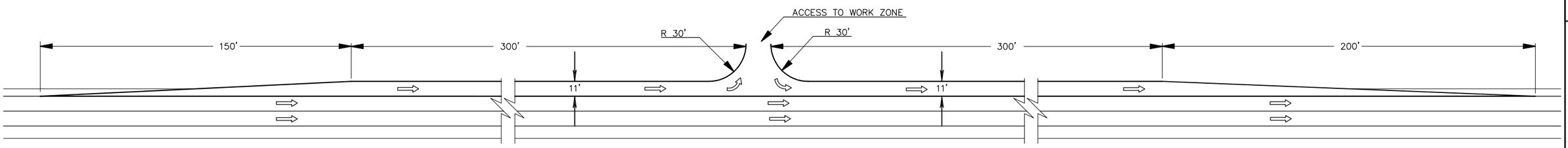
TYPE III BARICADE WITH SIGN

TRAFFIC CONTROL FOR OPTIONAL SPEED CHANGE LANES FOR RIGHT TURNS

PROJECT NO: 1053-02-74	HWY: STH 29	COUNTY: MARATHON	TRAFFIC CONTROL: STH 29	SHEET 46	E

2

WORK ZONE



AT ALL TIMES CONSIDER THE SAFETY AND CONVENIENCE OF THE TRAVELING PUBLIC. DRIVERS SHALL USE EXTREME CAUTION WHEN ENTERING/EXITING TO MINIMIZE THE DISRUPTION OF TRAFFIC.

IF THE USE OF ANY LEFT TURN MOVEMENT AND/OR SPEED CHANGE LANE IS CAUSING EXCESSIVE DELAY, DISRUPTION, OR UNSAFE CONDITION TO THE TRAVELING PUBLIC, THE ENGINEER WILL HAVE THE AUTHORITY TO HALT THE USE OF THE LEFT TURN MOVEMENT AND/OR SPEED CHANGE LANE FOR ANY PERIOD OR DURATION. LANE RENTAL CHARGES MAY ALSO APPLY.

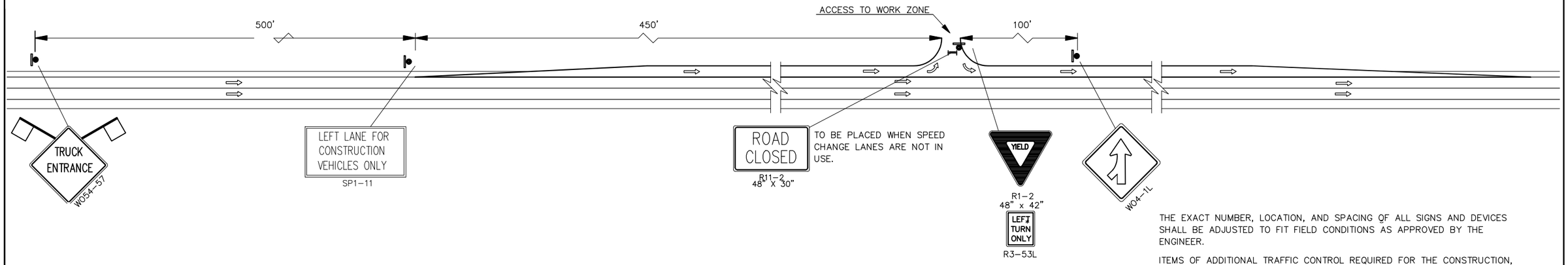
LEFT TURN MOVEMENTS MAY BE USED FOR HAULING OPERATIONS AS AN OPTION TO THE CONTRACTOR TO GAIN ACCESS TO THE CONSTRUCTION AREA. SPEED CHANGE LANES WILL BE REQUIRED FOR LEFT TURN MOVEMENTS FOR CONTINUOUS HAULING OPERATIONS. THE CONSTRUCTION OF THE SPEED CHANGE LANES AND ALL NECESSARY MATERIALS, SHALL BE AT THE CONTRACTOR'S EXPENSE.

THIS DETAIL GIVES MINIMUM VALUES FOR THE GEOMETRIC DESIGN OF THE OPTIONAL SPEED CHANGE LANES. ANY CHANGES TO THE DESIGN MUST BE APPROVED BY THE ENGINEER.

THE SPEED CHANGE LANES MUST BE PAVED TO ADEQUATELY SUPPORT CONSTRUCTION VEHICLES THROUGHOUT THE DURATION OF THE PROJECT. THE PAVEMENT DESIGN, INCLUDING THE MIX FORMULA AND PAVEMENT THICKNESS, SHALL BE DETERMINED BY THE CONTRACTOR.

OPTIONAL SPEED CHANGE LANES FOR LEFT TURNS

WORK ZONE



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

ITEMS OF ADDITIONAL TRAFFIC CONTROL REQUIRED FOR THE CONSTRUCTION, USE, AND REMOVAL OF THE OPTIONAL SPEED CHANGE LANES SHALL BE PLACED AT THE CONTRACTOR'S EXPENSE.

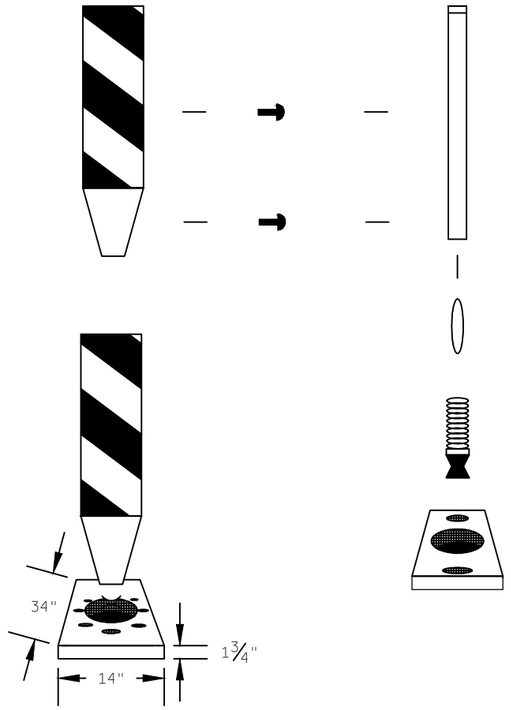
LEGEND

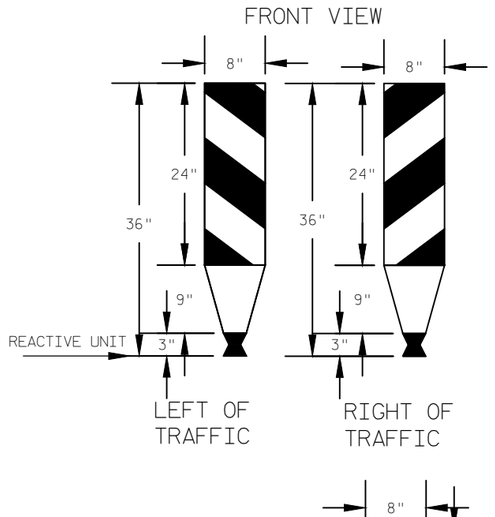
- POST MOUNTED SIGN
- TYPE III BARICADE WITH SIGN

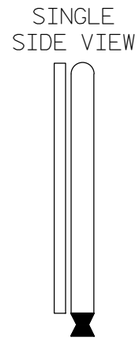
TRAFFIC CONTROL FOR OPTIONAL SPEED CHANGE LANES FOR LEFT TURNS

PROJECT NO: 1053-02-74	HWY: STH 29	COUNTY: MARATHON	TRAFFIC CONTROL: STH 29	SHEET 47	E

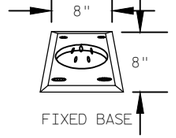
2







8" X 24" WHITE FLEXIBLE HIGH INTENSITY REFLECTIVE SHEETING WITH 4" ORANGE STRIPE. ORANGE POST AND PANEL. OVERALL HEIGHT OF UNIT IS 36".



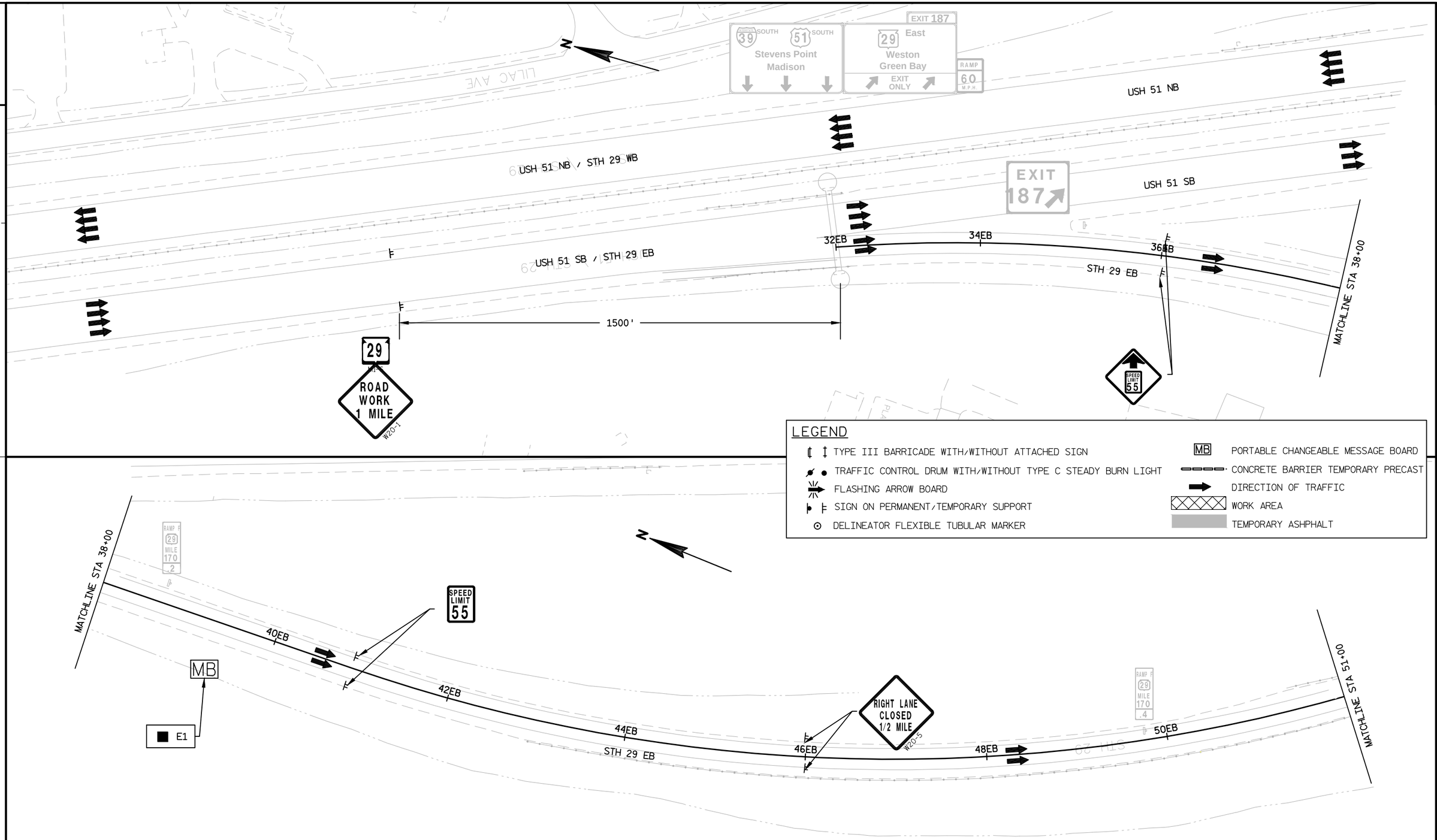
NOTES

1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURERS SPECIFICATIONS.
2. DO NOT SCALE DRAWINGS.
3. POST AND PANEL IS CONSTRUCTED OF FLEXIBLE POLYETHYLENE PLASTIC THAT IS RESISTANT TO: ULTRAVIOLET LIGHT, OZONE, AND HYDROCARBONS.
4. SINGLE PANELED UNIT HAS A REACTIVE SPRING ASSEMBLY TESTED AT 145LBS. TENSION WITH STAINLESS STEEL CABLE. DOUBLE PANELED UNIT HAS A 145LBS, SPRING.
5. SIGN SHALL HAVE AN "ANTI-TWIST" FEATURE THAT ASSURES THE SIGN WILL RETURN TO ITS ORIGINAL POSITION AFTER IMPACT.
6. SIGN MAY HAVE A "QUICK RELEASE" FEATURE WHICH ALLOWS THE SIGN TO BE REMOVED FORM THE BASE WITHOUT THE USE OF TOOLS.
7. UNIT SHALL BE NCHRP-350 APPROVED.
8. UNIT SHALL MEET MUTCD SPECIFICATIONS.

DETAIL FOR TRAFFIC CONTROL VERTICAL PANELS

PROJECT NO: 1053-02-74/75 & 1053-05-60	HWY: STH 29	COUNTY: MARATHON	TRAFFIC CONTROL: BOAT TRAFFIC CONTROL	SHEET 48	E

2



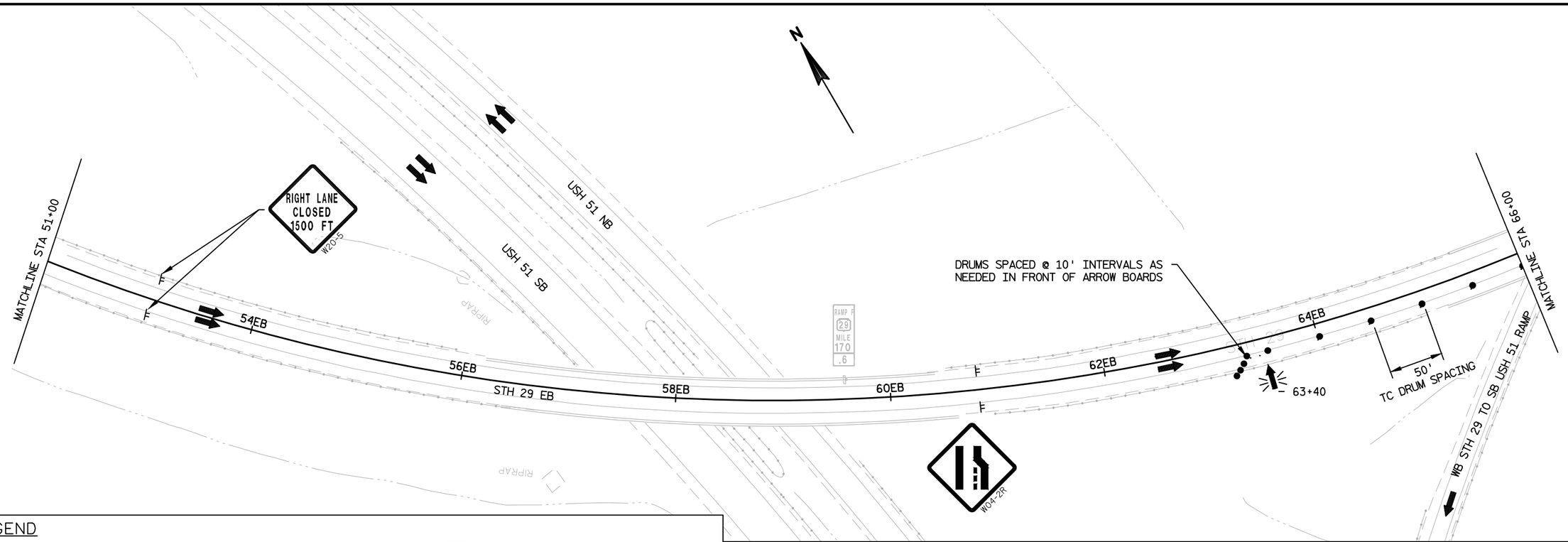
LEGEND

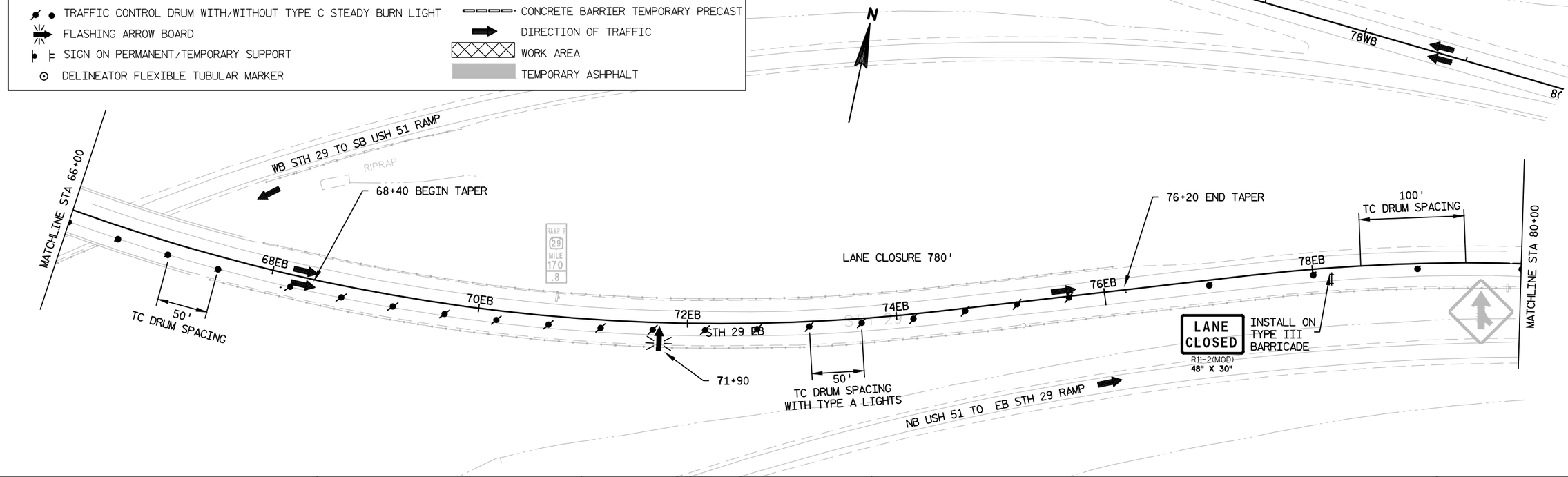
- TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT/TEMPORARY SUPPORT
- DELINEATOR FLEXIBLE TUBULAR MARKER
- MB PORTABLE CHANGEABLE MESSAGE BOARD
- CONCRETE BARRIER TEMPORARY PRECAST
- DIRECTION OF TRAFFIC
- WORK AREA
- TEMPORARY ASHPHALT

PROJECT NO: 1053-02-74	HWY: STH 29	COUNTY: MARATHON	TRAFFIC CONTROL: STH 29 OFF-PEAK RIGHT LANE CLOSURE	SHEET	E

FILE NAME : S:\DESIGN\DESIGN PROJECTS\1053-02-04 (STH 29)-AYRES-NC\C3D\SHEETSPLAN\025003_TC_DETAIL-RT LANE.DWG PLOT DATE : 10/30/2013 7:14 AM PLOT BY : QUEST CIVIL ENG PLOT NAME : PLOT SCALE : 1 IN:100 FT

2

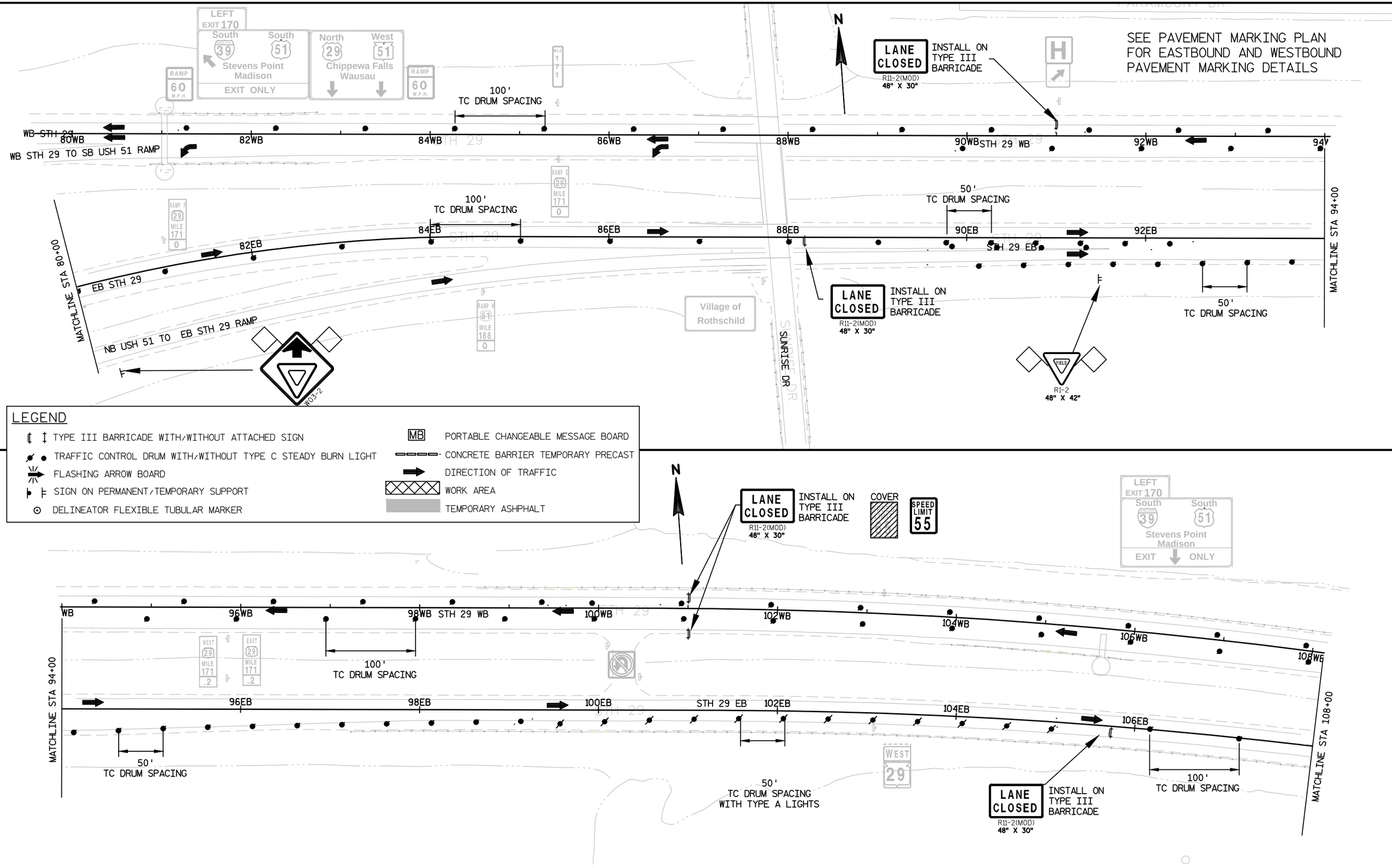




PROJECT NO:1053-02-74	HWY: STH 29	COUNTY: MARATHON	TRAFFIC CONTROL: STH 29 OFF-PEAK RIGHT LANE CLOSURE	SHEET 50	E

FILE NAME : S:\DESIGN\DESIGN PROJECTS\1053-02-04 (STH 29)-AYRES-NC\C3D\SHEETSPLAN\025003_TC_DETAIL-RT LANE.DWG PLOT DATE : 10/30/2013 7:14 AM PLOT BY : QUEST CIVIL ENG PLOT NAME : PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44

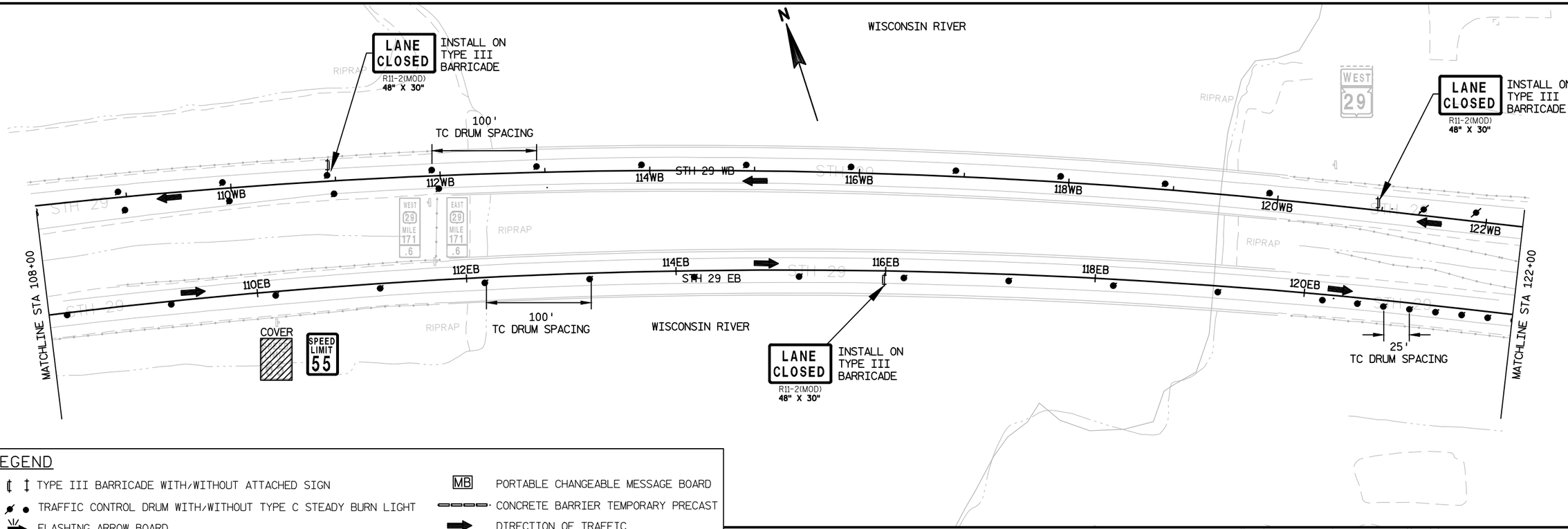
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PROJECT NO: 1053-02-74	HWY: STH 29	COUNTY: MARATHON	TRAFFIC CONTROL: STH 29 OFF-PEAK RIGHT LANE CLOSURE	SHEET	E

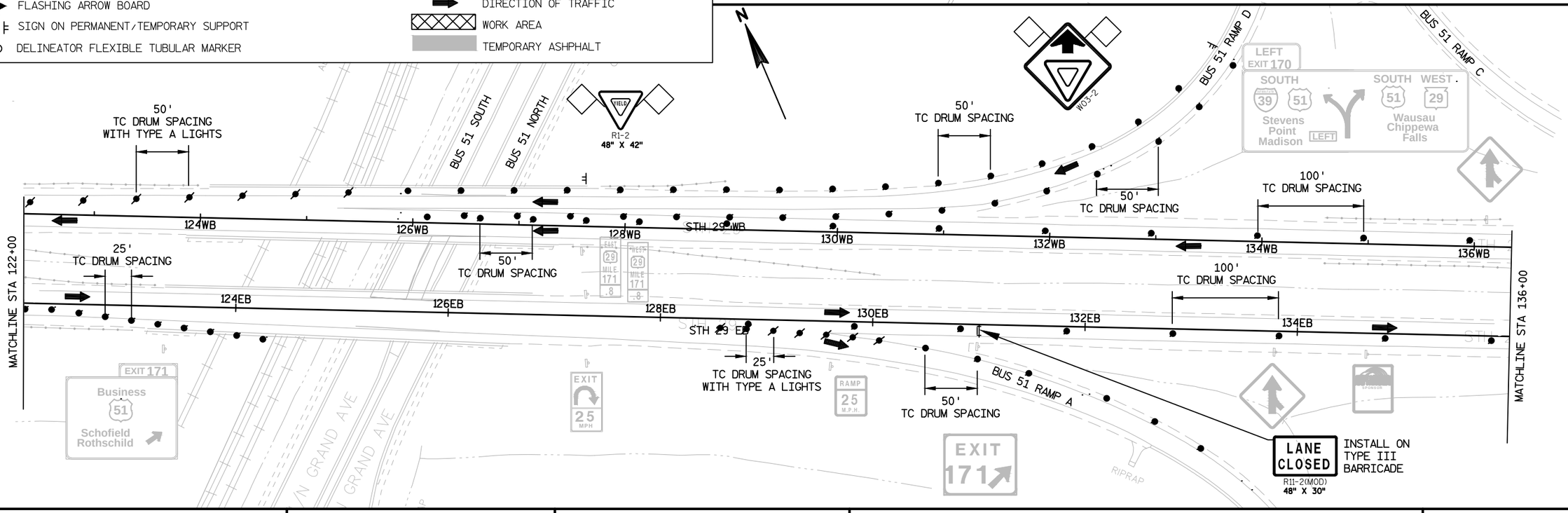
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WISDOT/CADDS SHEET 44

2



LEGEND

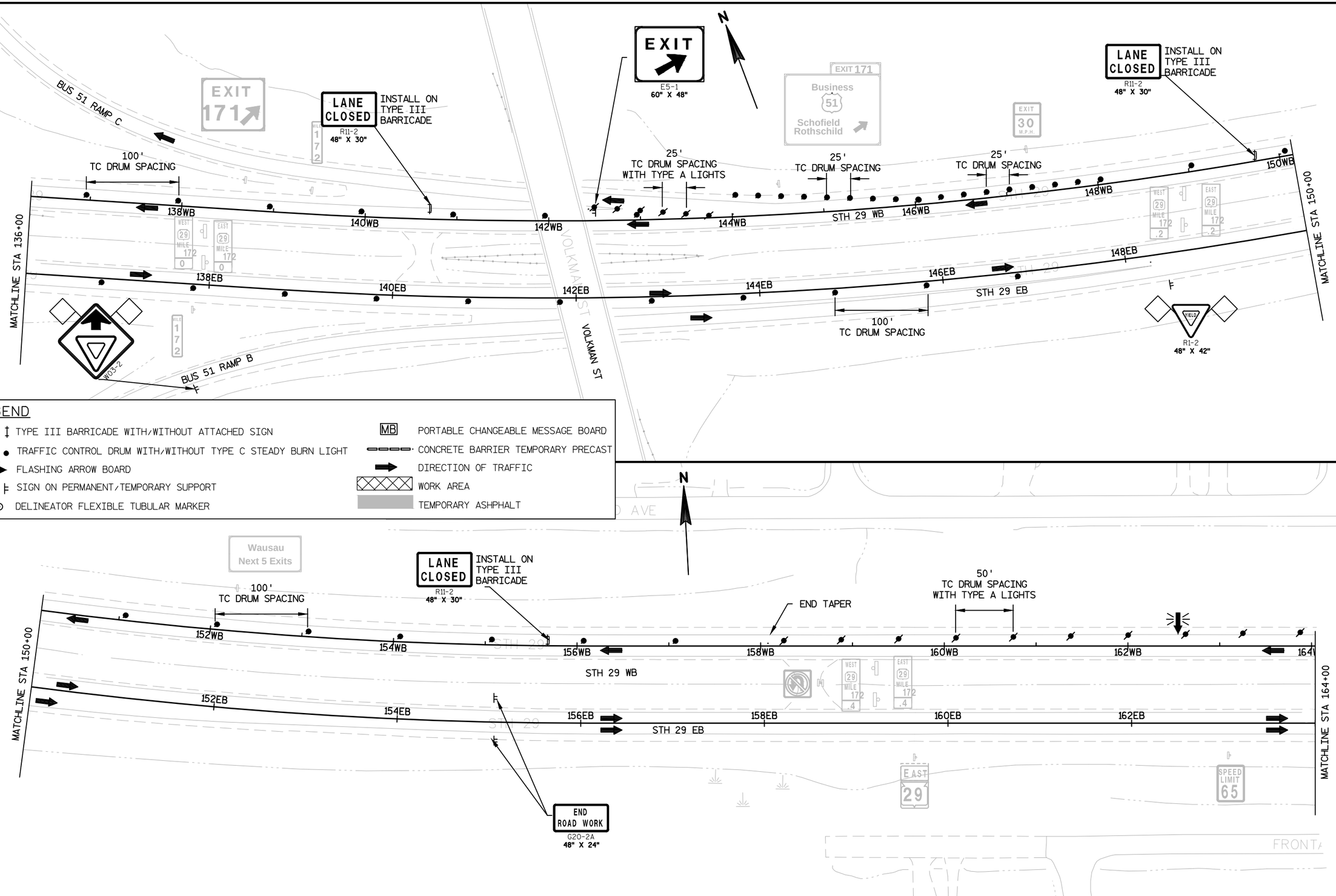
- TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT/TEMPORARY SUPPORT
- DELINEATOR FLEXIBLE TUBULAR MARKER
- MB PORTABLE CHANGEABLE MESSAGE BOARD
- CONCRETE BARRIER TEMPORARY PRECAST
- DIRECTION OF TRAFFIC
- WORK AREA
- TEMPORARY ASHPHALT



PROJECT NO: 1053-02-74	HWY: STH 29	COUNTY: MARATHON	TRAFFIC CONTROL: STH 29 OFF-PEAK RIGHT LANE CLOSURE	SHEET	E

FILE NAME : S:\DESIGN\DESIGN PROJECTS\1053-02-04 (STH 29)-AYRES-NC\C3D\SHEETSPLAN\025003_TC_DETAIL-RT LANE.DWG PLOT DATE : 10/30/2013 7:15 AM PLOT BY : QUEST CIVIL ENG PLOT NAME : PLOT SCALE : **********
WISDOT/CADDS SHEET 44

2

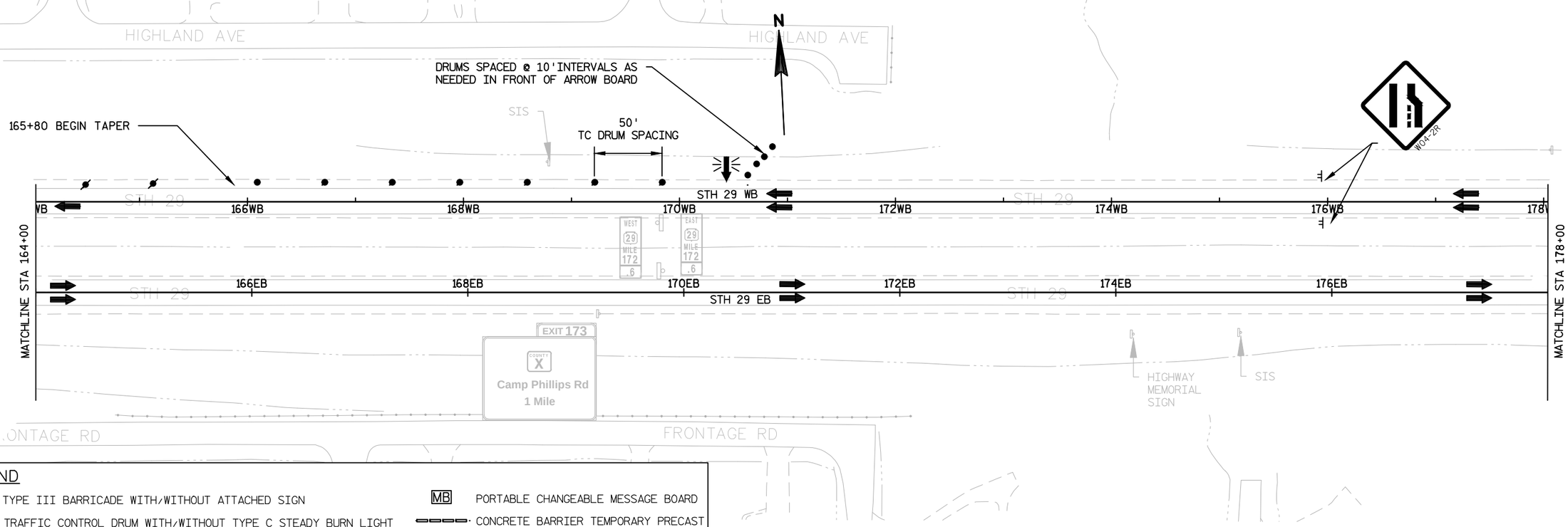


LEGEND

- TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT/TEMPORARY SUPPORT
- DELINEATOR FLEXIBLE TUBULAR MARKER
- MB — PORTABLE CHANGEABLE MESSAGE BOARD
- CONCRETE BARRIER TEMPORARY PRECAST
- DIRECTION OF TRAFFIC
- WORK AREA
- TEMPORARY ASHPHALT

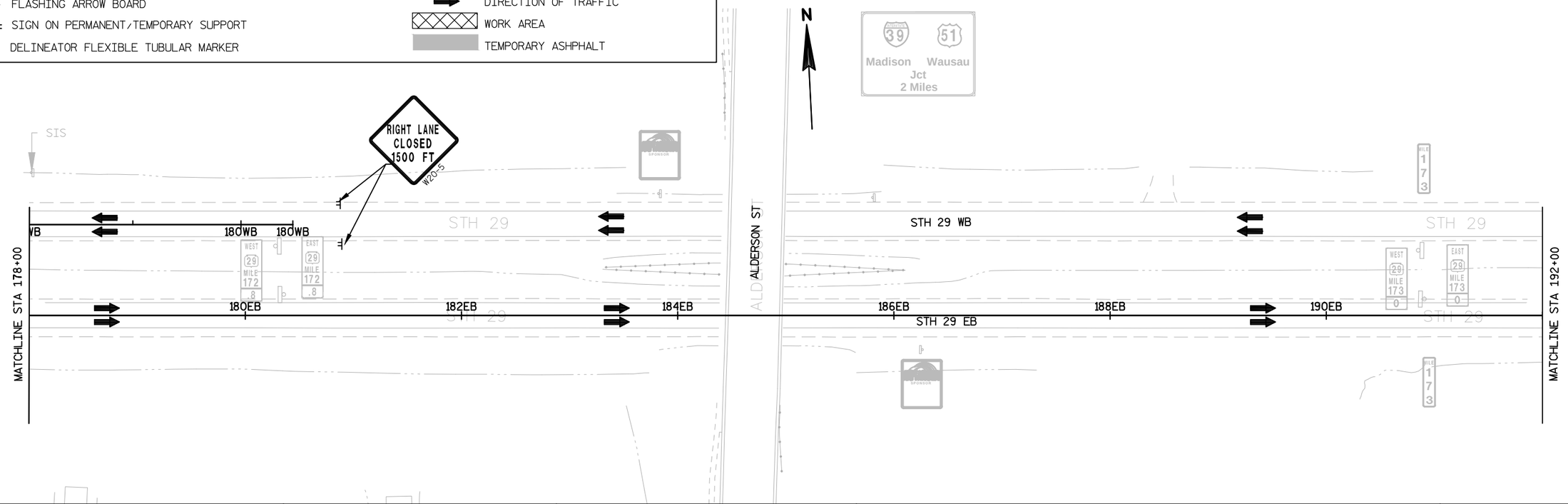
PROJECT NO: 1053-02-74	HWY: STH 29	COUNTY: MARATHON	TRAFFIC CONTROL: STH 29 OFF-PEAK RIGHT LANE CLOSURE	SHEET	E

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WISDOT/CADDS SHEET 44



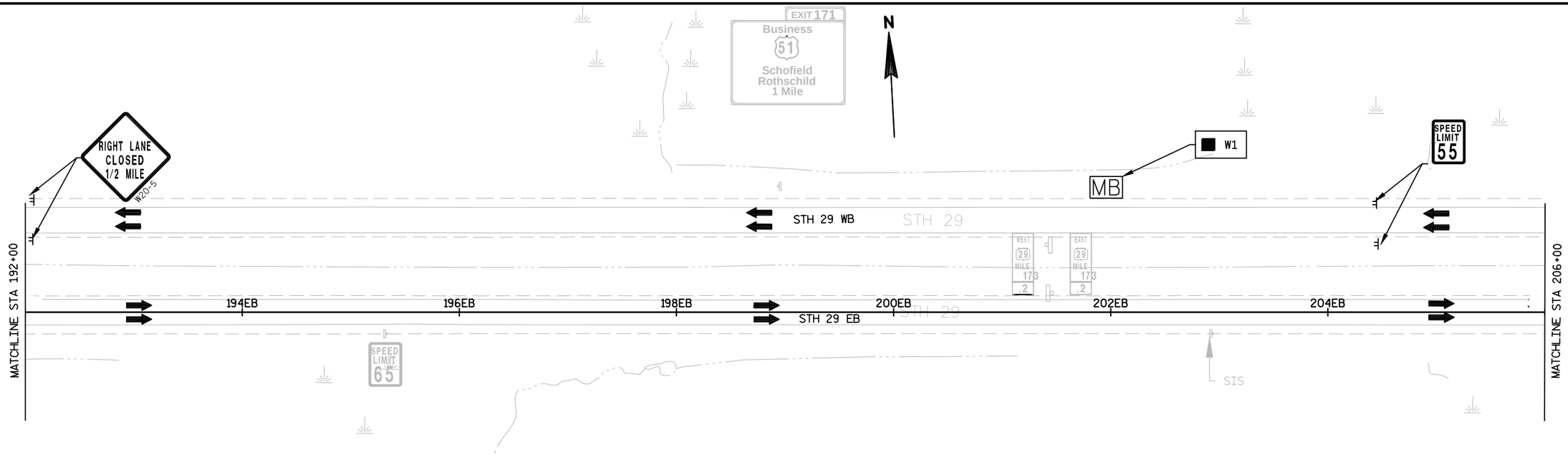
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- TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT/TEMPORARY SUPPORT
- DELINEATOR FLEXIBLE TUBULAR MARKER
- MB PORTABLE CHANGEABLE MESSAGE BOARD
- CONCRETE BARRIER TEMPORARY PRECAST
- DIRECTION OF TRAFFIC
- WORK AREA
- TEMPORARY ASHPHALT



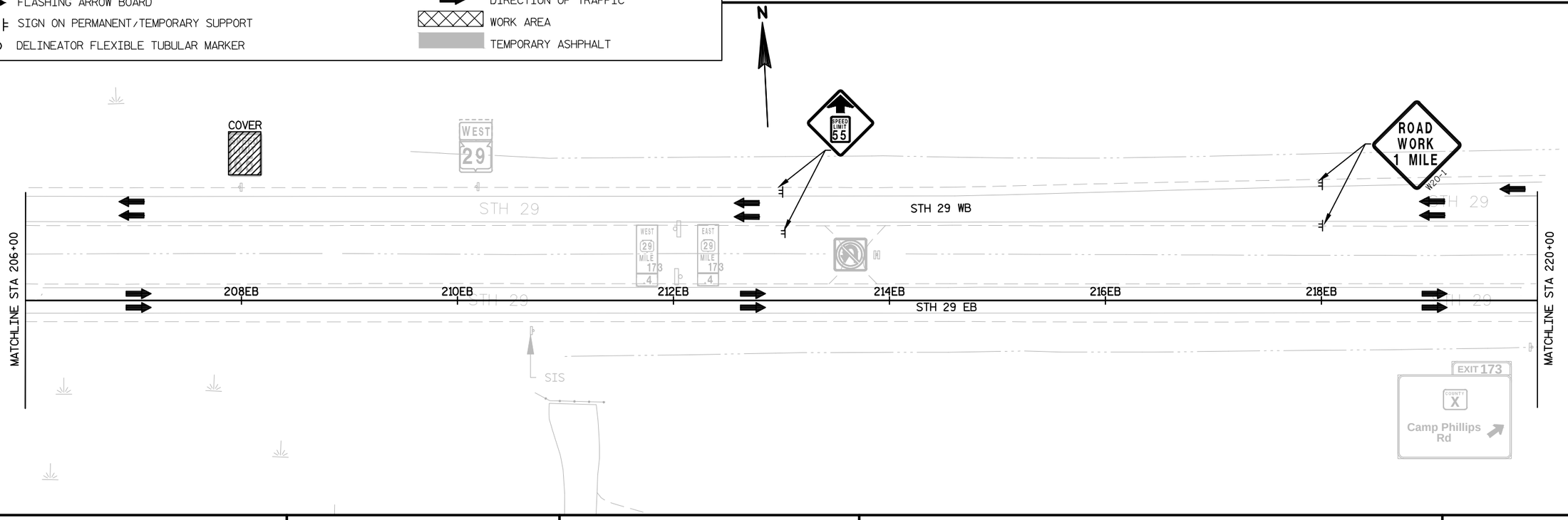
PROJECT NO: 1053-02-74	HWY: STH 29	COUNTY: MARATHON	TRAFFIC CONTROL: STH 29 OFF-PEAK RIGHT LANE CLOSURE	SHEET	E

FILE NAME : S:\DESIGN\DESIGN PROJECTS\1053-02-04 (STH 29)-AYRES-NC\C3D\SHEETSPLAN\025003_TC_DETAIL-RT LANE.DWG PLOT DATE : 10/30/2013 7:16 AM PLOT BY : QUEST CIVIL ENG PLOT NAME : PLOT SCALE : **********



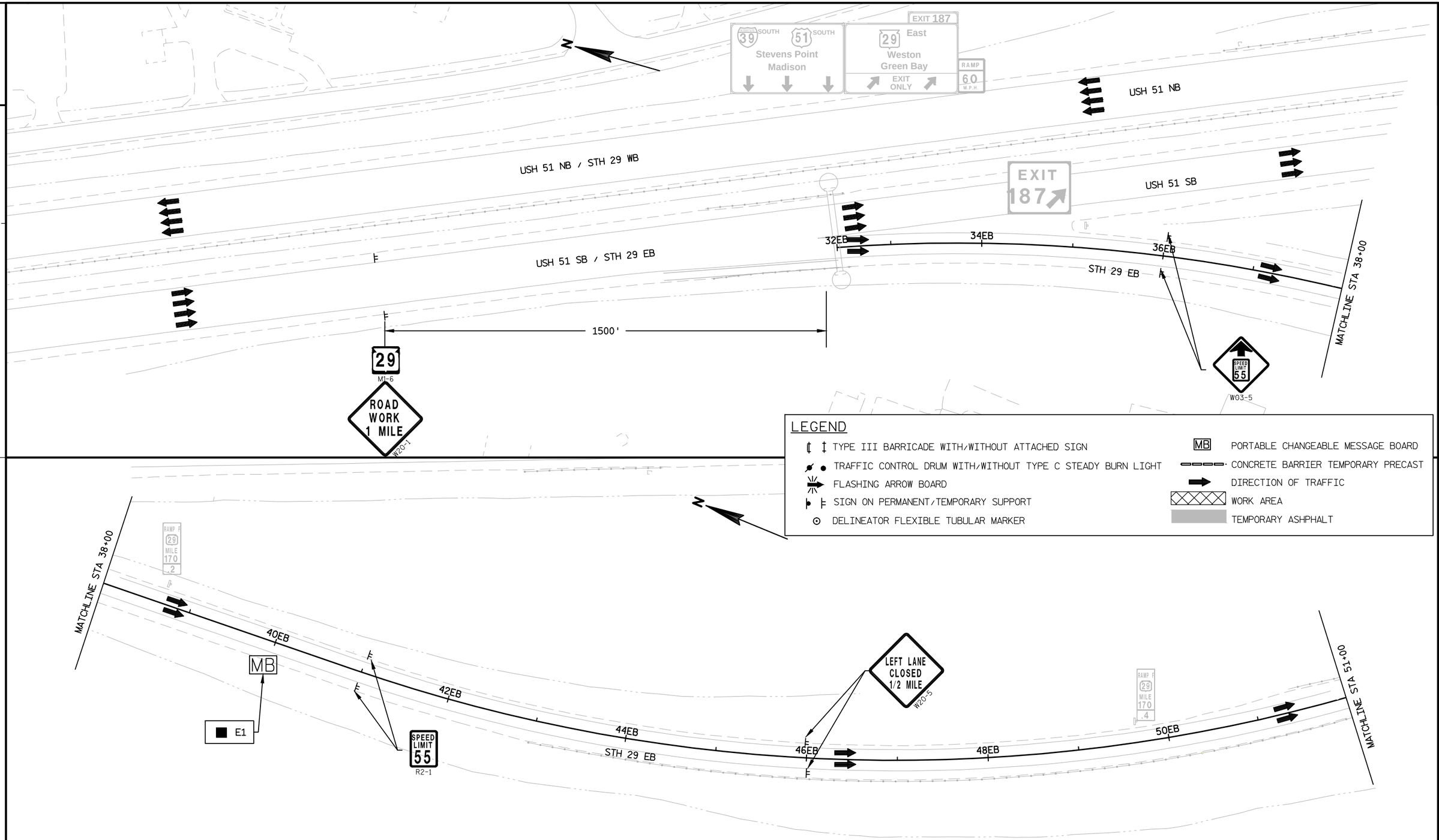
LEGEND

- TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT/TEMPORARY SUPPORT
- DELINEATOR FLEXIBLE TUBULAR MARKER
- MB PORTABLE CHANGEABLE MESSAGE BOARD
- CONCRETE BARRIER TEMPORARY PRECAST
- DIRECTION OF TRAFFIC
- WORK AREA
- TEMPORARY ASHPHALT



PROJECT NO: 1053-02-74	HWY: STH 29	COUNTY: MARATHON	TRAFFIC CONTROL: STH 29 OFF-PEAK RIGHT LANE CLOSURE	SHEET 55	E

FILE NAME : S:\DESIGN\DESIGN PROJECTS\1053-02-04 (STH 29)-AYRES-NC\C3D\SHEETSPLAN\025003_TC_DETAIL-RT LANE.DWG PLOT DATE : 10/30/2013 7:16 AM PLOT BY : QUEST CIVIL ENG PLOT NAME : PLOT SCALE : **********



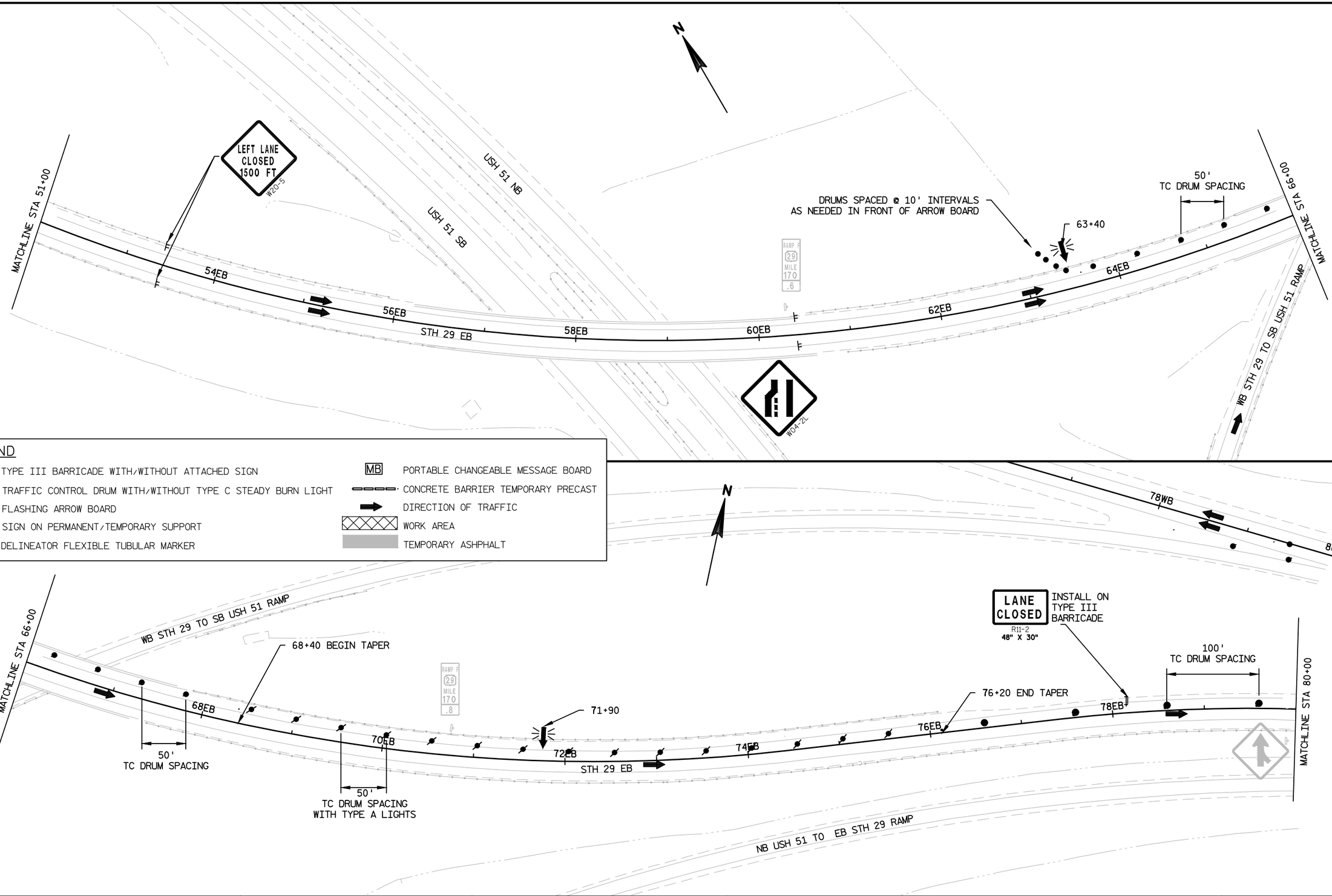
LEGEND

- TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT/TEMPORARY SUPPORT
- DELINEATOR FLEXIBLE TUBULAR MARKER
- MB PORTABLE CHANGEABLE MESSAGE BOARD
- CONCRETE BARRIER TEMPORARY PRECAST
- DIRECTION OF TRAFFIC
- WORK AREA
- TEMPORARY ASHPHALT

PROJECT NO: 1053-02-74	HWY: STH 29	COUNTY: MARATHON	TRAFFIC CONTROL: STH 29 OFF-PEAK LEFT LANE CLOSURE	SHEET	E

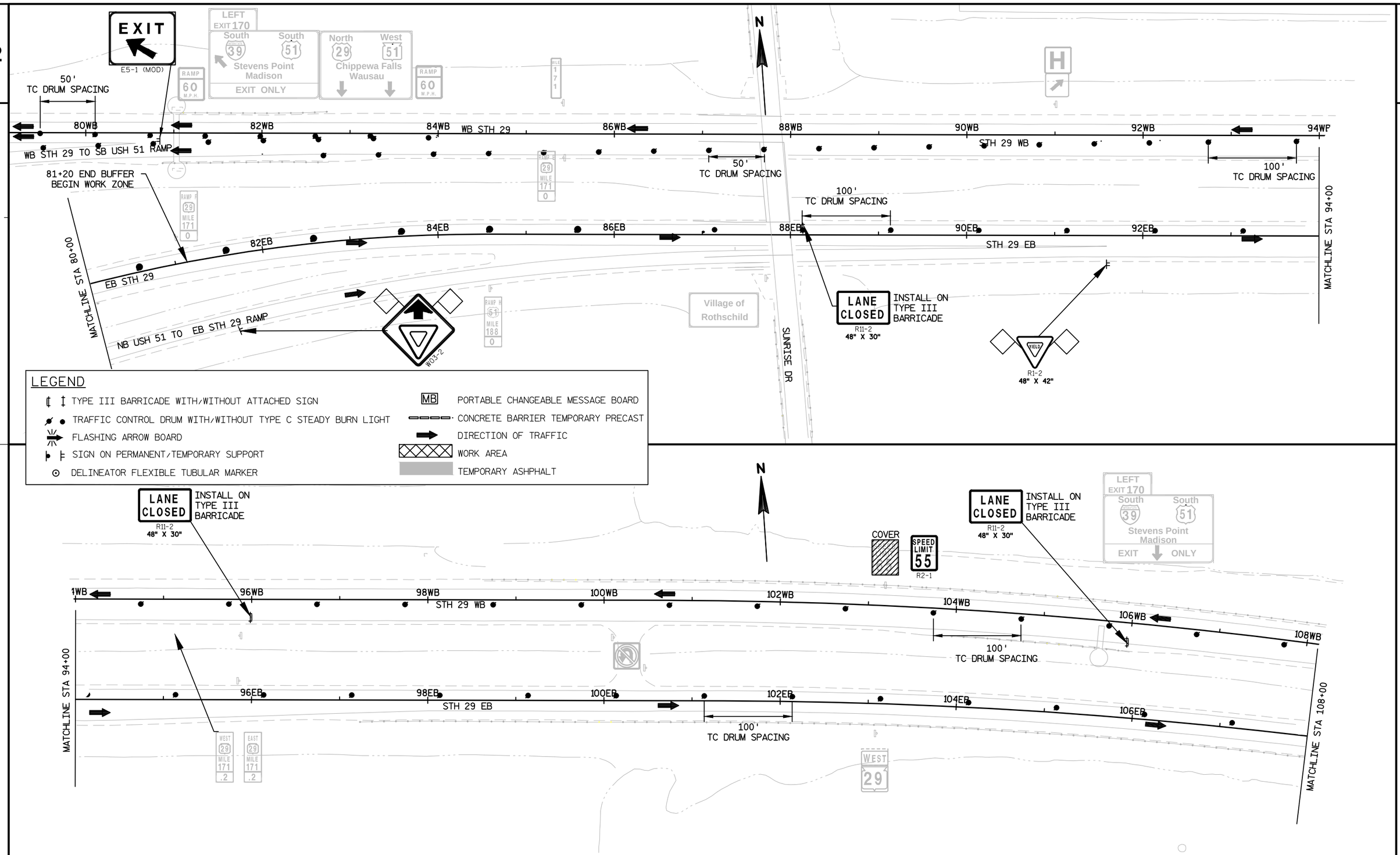
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WISDOT/CADDS SHEET 44

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PROJECT NO:1053-02-74	HWY: STH 29	COUNTY: MARATHON	TRAFFIC CONTROL: STH 29 OFF-PEAK LEFT LANE CLOSURE	SHEET	E

FILE NAME : S:\DESIGN\DESIGN PROJECTS\1053-02-04 (STH 29)-AYRES-NC\C3D\SHEETSPLAN\025004_TC_DETAIL-LT LANE.DWG PLOT DATE : 1/13/2014 7:41 AM PLOT BY : QUEST CIVIL ENG PLOT NAME : PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44



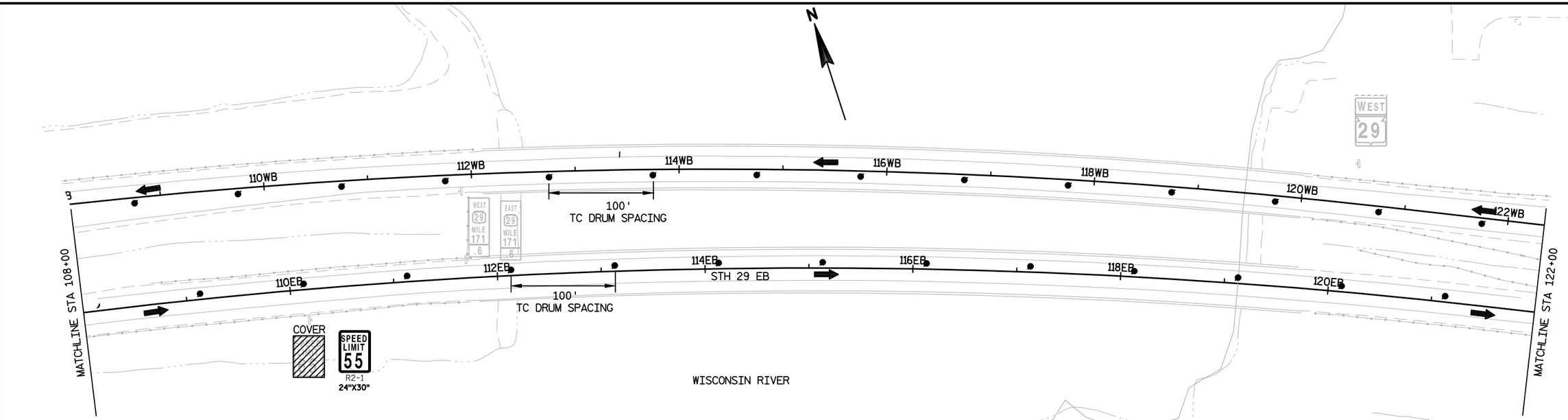
LEGEND

- TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT/TEMPORARY SUPPORT
- DELINEATOR FLEXIBLE TUBULAR MARKER
- MB PORTABLE CHANGEABLE MESSAGE BOARD
- CONCRETE BARRIER TEMPORARY PRECAST
- DIRECTION OF TRAFFIC
- WORK AREA
- TEMPORARY ASHPHALT

PROJECT NO: 1053-02-74	HWY: STH 29	COUNTY: MARATHON	TRAFFIC CONTROL: STH 29 OFF-PEAK LEFT LANE CLOSURE	SHEET	E

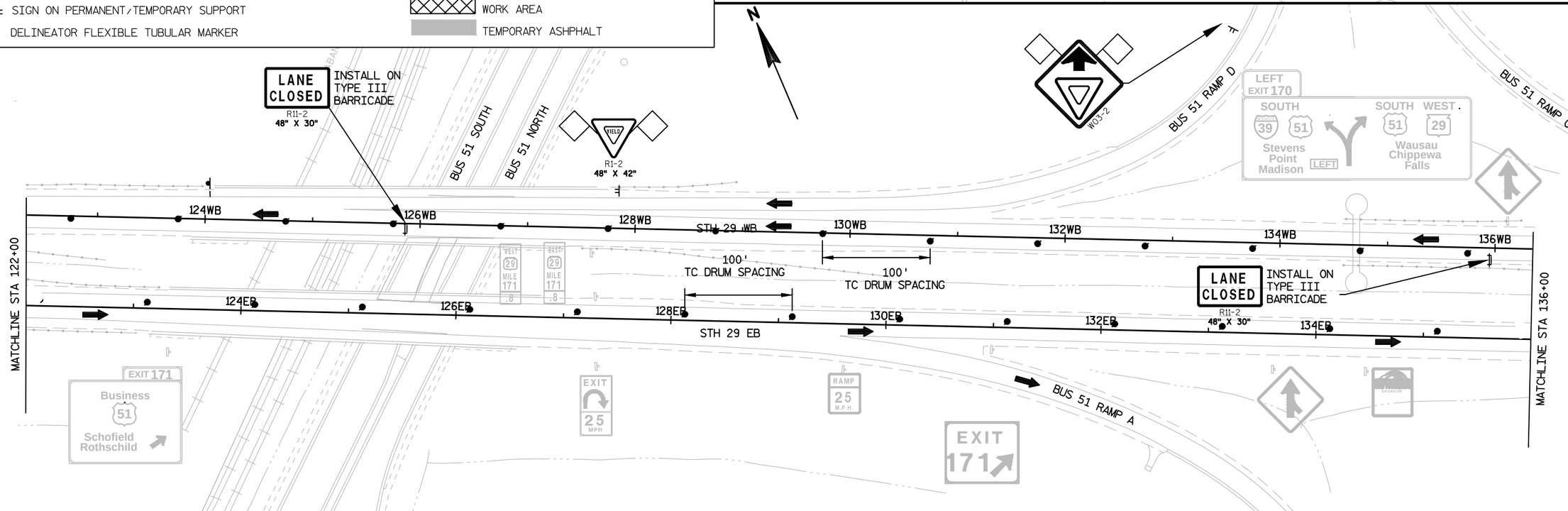
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WISDOT/CADDS SHEET 44

2



LEGEND

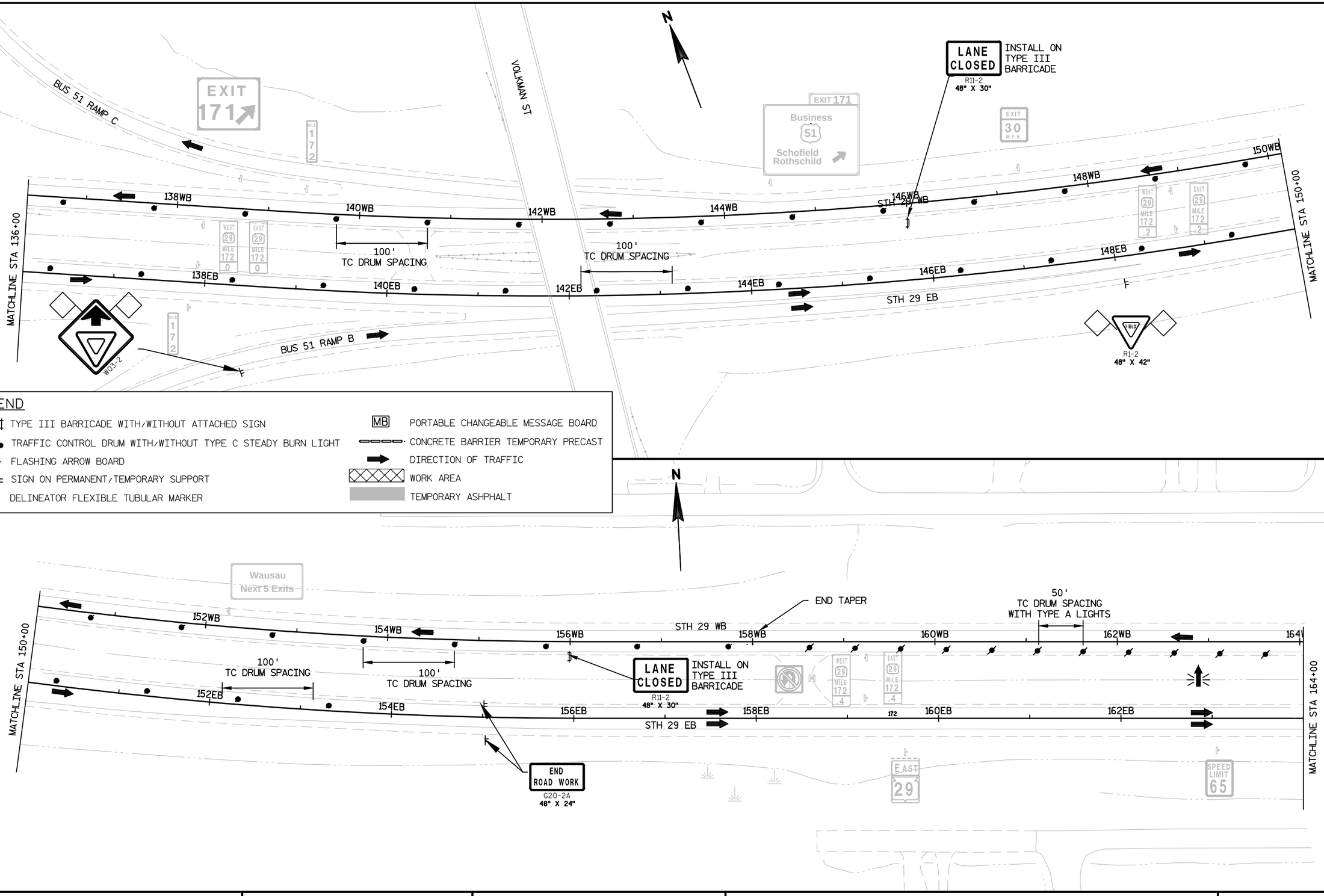
- TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT/TEMPORARY SUPPORT
- DELINEATOR FLEXIBLE TUBULAR MARKER
- MB PORTABLE CHANGEABLE MESSAGE BOARD
- CONCRETE BARRIER TEMPORARY PRECAST
- DIRECTION OF TRAFFIC
- WORK AREA
- TEMPORARY ASHPHALT



PROJECT NO: 1053-02-74	HWY: STH 29	COUNTY: MARATHON	TRAFFIC CONTROL: STH 29 OFF-PEAK LEFT LANE CLOSURE	SHEET	E

FILE NAME : S:\DESIGN\DESIGN PROJECTS\1053-02-04 (STH 29)-AYRES-NC\C3D\SHEETSPLAN\025004_TC_DETAIL-LT LANE.DWG PLOT DATE : 1/13/2014 7:43 AM PLOT BY : QUEST CIVIL ENG PLOT NAME : PLOT SCALE : **********
WISDOT/CADDS SHEET 44

2

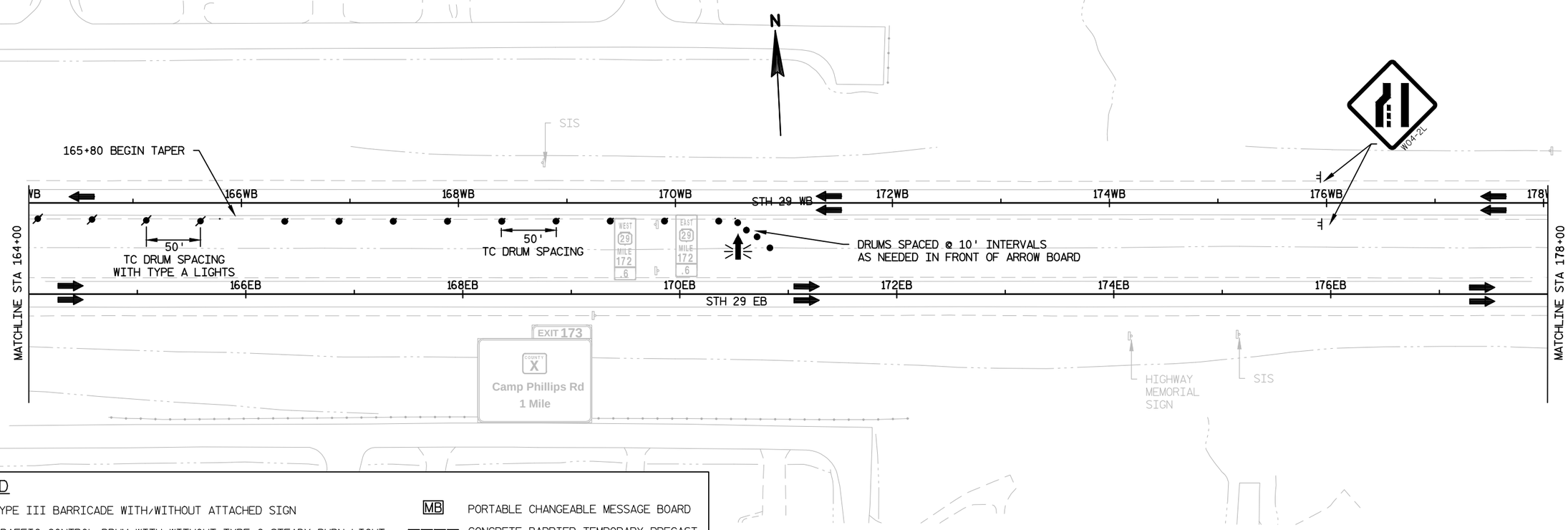


LEGEND

- TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT/TEMPORARY SUPPORT
- DELINEATOR FLEXIBLE TUBULAR MARKER
- MB PORTABLE CHANGEABLE MESSAGE BOARD
- CONCRETE BARRIER TEMPORARY PRECAST
- DIRECTION OF TRAFFIC
- WORK AREA
- TEMPORARY ASHPHALT

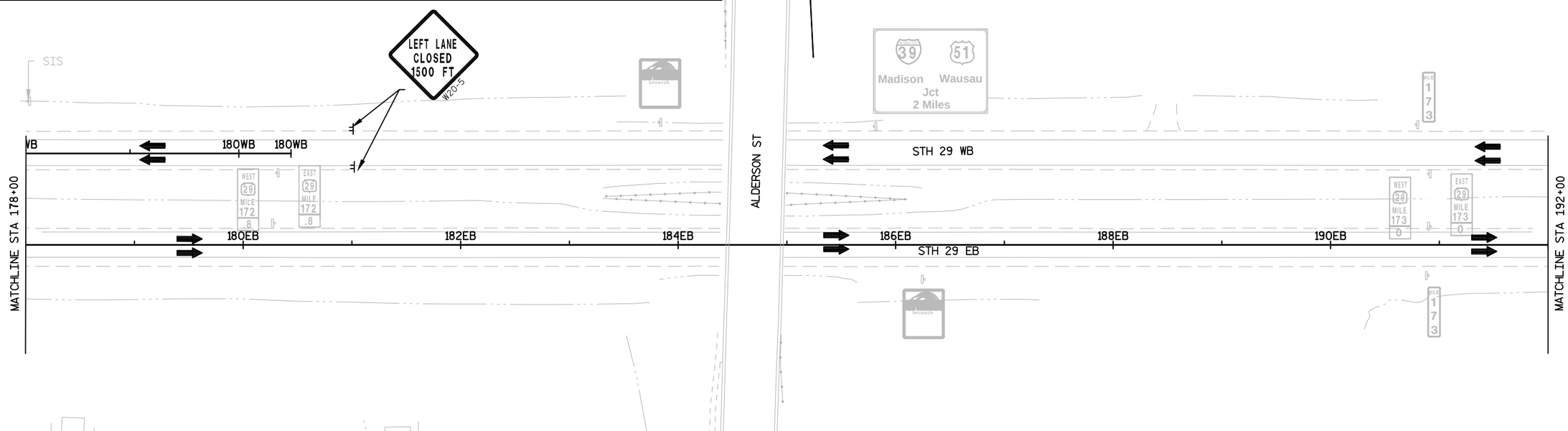
PROJECT NO: 1053-02-74	HWY: STH 29	COUNTY: MARATHON	TRAFFIC CONTROL: STH 29 OFF-PEAK LEFT LANE CLOSURE	SHEET	E

FILE NAME : S:\DESIGN\DESIGN PROJECTS\1053-02-04 (STH 29)-AYRES-NC\C3D\SHEETSPLAN\025004_TC_DETAIL-LT LANE.DWG PLOT DATE : 1/13/2014 7:44 AM PLOT BY : QUEST CIVIL ENG PLOT NAME : PLOT SCALE : **********

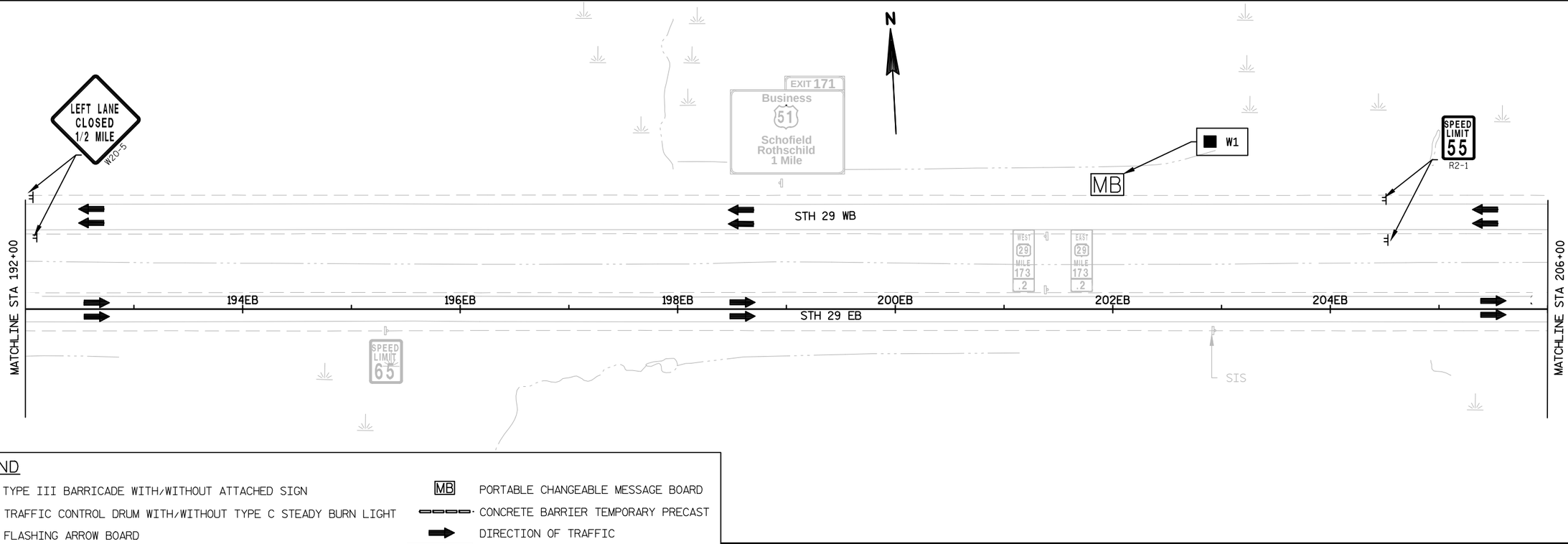


LEGEND

- TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT/TEMPORARY SUPPORT
- DELINEATOR FLEXIBLE TUBULAR MARKER
- MB PORTABLE CHANGEABLE MESSAGE BOARD
- CONCRETE BARRIER TEMPORARY PRECAST
- DIRECTION OF TRAFFIC
- WORK AREA
- TEMPORARY ASHPHALT

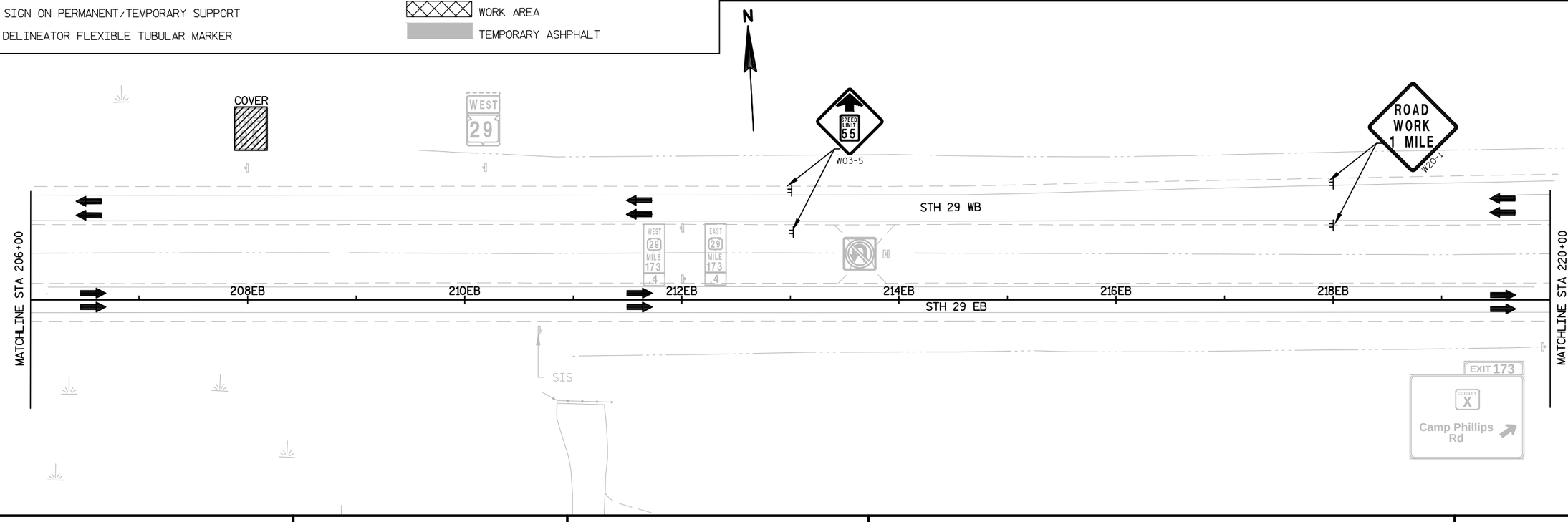


PROJECT NO: 1053-02-74	HWY: STH 29	COUNTY: MARATHON	TRAFFIC CONTROL: STH 29 OFF-PEAK LEFT LANE CLOSURE	SHEET	E



LEGEND

- TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT/TEMPORARY SUPPORT
- DELINEATOR FLEXIBLE TUBULAR MARKER
- MB PORTABLE CHANGEABLE MESSAGE BOARD
- CONCRETE BARRIER TEMPORARY PRECAST
- DIRECTION OF TRAFFIC
- WORK AREA
- TEMPORARY ASHPHALT



PROJECT NO: 1053-02-74	HWY: STH 29	COUNTY: MARATHON	TRAFFIC CONTROL: STH 29 OFF-PEAK LEFT LANE CLOSURE	SHEET	E

FILE NAME : S:\DESIGN\DESIGN PROJECTS\1053-02-04 (STH 29)-AYRES-NC\C3D\SHEETSPLAN\025004_TC_DETAIL-LT LANE.DWG PLOT DATE : 1/13/2014 7:45 AM PLOT BY : QUEST CIVIL ENG PLOT NAME : PLOT SCALE : **********

2

N

WISCONSIN CENTRAL

WISCONSIN CENTRAL

BUS 51

SPEED LIMIT 35

END ROAD WORK
G20-2A
48" X 24"

700'
(TYP)

ROAD WORK AHEAD
W20-1

WINTON AVE

BROWN BLVD

RIGHT LANE CLOSED AHEAD
W20-5

WILSON AVE

YANKEE AVE

W04-2R

NOTE: ALL TRAFFIC CONTROL DRUMS SPACED AT 25'

LEGEND

- TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT/TEMPORARY SUPPORT
- DELINEATOR FLEXIBLE TUBULAR MARKER
- MB PORTABLE CHANGEABLE MESSAGE BOARD
- CONCRETE BARRIER TEMPORARY PRECAST
- DIRECTION OF TRAFFIC
- WORK AREA
- TEMPORARY ASHPHALT

(N) USE THESE SIGNS FOR CLOSURE OF SIDEWALK ALONG NB BUS 51.

(S) USE THESE SIGNS FOR CLOSURE OF SIDEWALK ALONG SB BUS 51.

CLOSE THE SIDEWALK ALONG ONLY ONE SIDE OF BUS 51 AT A TIME.

N

(S) INSTALL ON TYPE II BARRICADE

SIDEWALK CLOSED USE OTHER SIDE
R9-10
48" X 24"

SOUTH BUSINESS 51

LANE CLOSED
R11-2(MOD)
48" X 30"
INSTALL ON TYPE III BARRICADE

LANE CLOSED
R11-2(MOD)
48" X 30"
INSTALL ON TYPE III BARRICADE

WRONG WAY

SPEED LIMIT 35

DO NOT ENTER

NO ENGINE BRAKING EXCEPT IN EMERGENCY

WISCONSIN CENTRAL

BUS 51

9S 10S 12S 13N 14S 14N 16S 16N

MB
B2

245' TAPER

250' BUFFER

SPEED LIMIT 35

JCT 29

WEST 29 EAST 29

EVEREST DR

Green Bay

BEGIN RIGHT TURN LANE
R3-20R
24"X36"

WRONG WAY

EAST 29

DO NOT ENTER

INSTALL ON TYPE II BARRICADE (S) (N)

SIDEWALK CLOSED
R9-9
24" X 12"

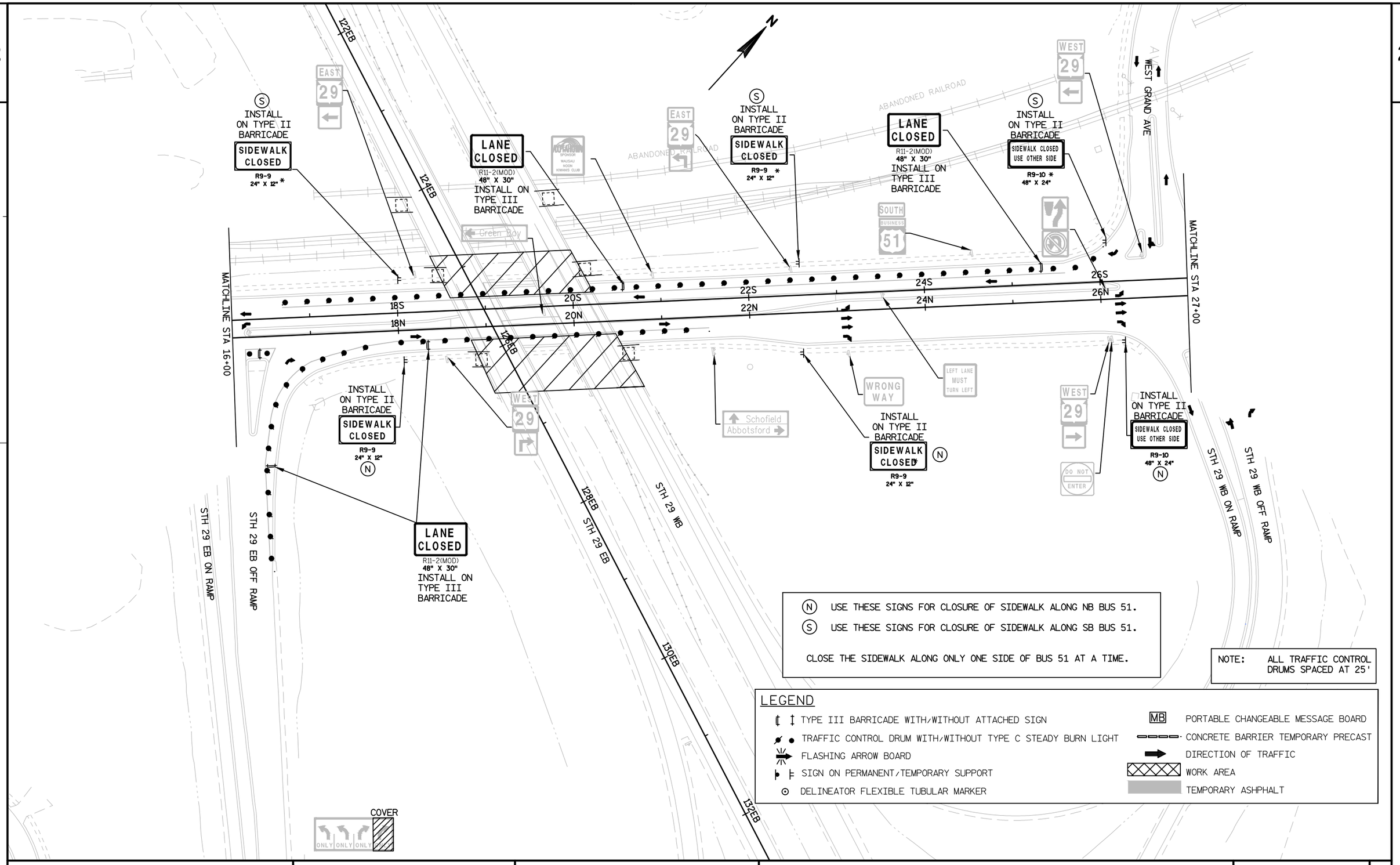
SIDEWALK CLOSED USE OTHER SIDE
R9-10
48" X 24"

STH 29 EB ON RAMP

STH 29 EB OFF RAMP

PROJECT NO: 1053-02-74	HWY: STH 29	COUNTY: MARATHON	TRAFFIC CONTROL: BUSINESS 51 (OFF PEAK-RIGHT LANE CLOSURE)	SHEET 63	E

FILE NAME : S:\DESIGN\DESIGN PROJECTS\1053-02-04 (STH 29)-AYRES-NC\C3D\SHEETSPLAN\025005_TC_B51-RT_1053-02-74.DWG PLOT DATE : 1/13/2014 7:53 AM PLOT BY : QUEST CIVIL ENG PLOT NAME : PLOT SCALE : 1 IN:100 FT



(N) USE THESE SIGNS FOR CLOSURE OF SIDEWALK ALONG NB BUS 51.

(S) USE THESE SIGNS FOR CLOSURE OF SIDEWALK ALONG SB BUS 51.

CLOSE THE SIDEWALK ALONG ONLY ONE SIDE OF BUS 51 AT A TIME.

NOTE: ALL TRAFFIC CONTROL DRUMS SPACED AT 25'

LEGEND

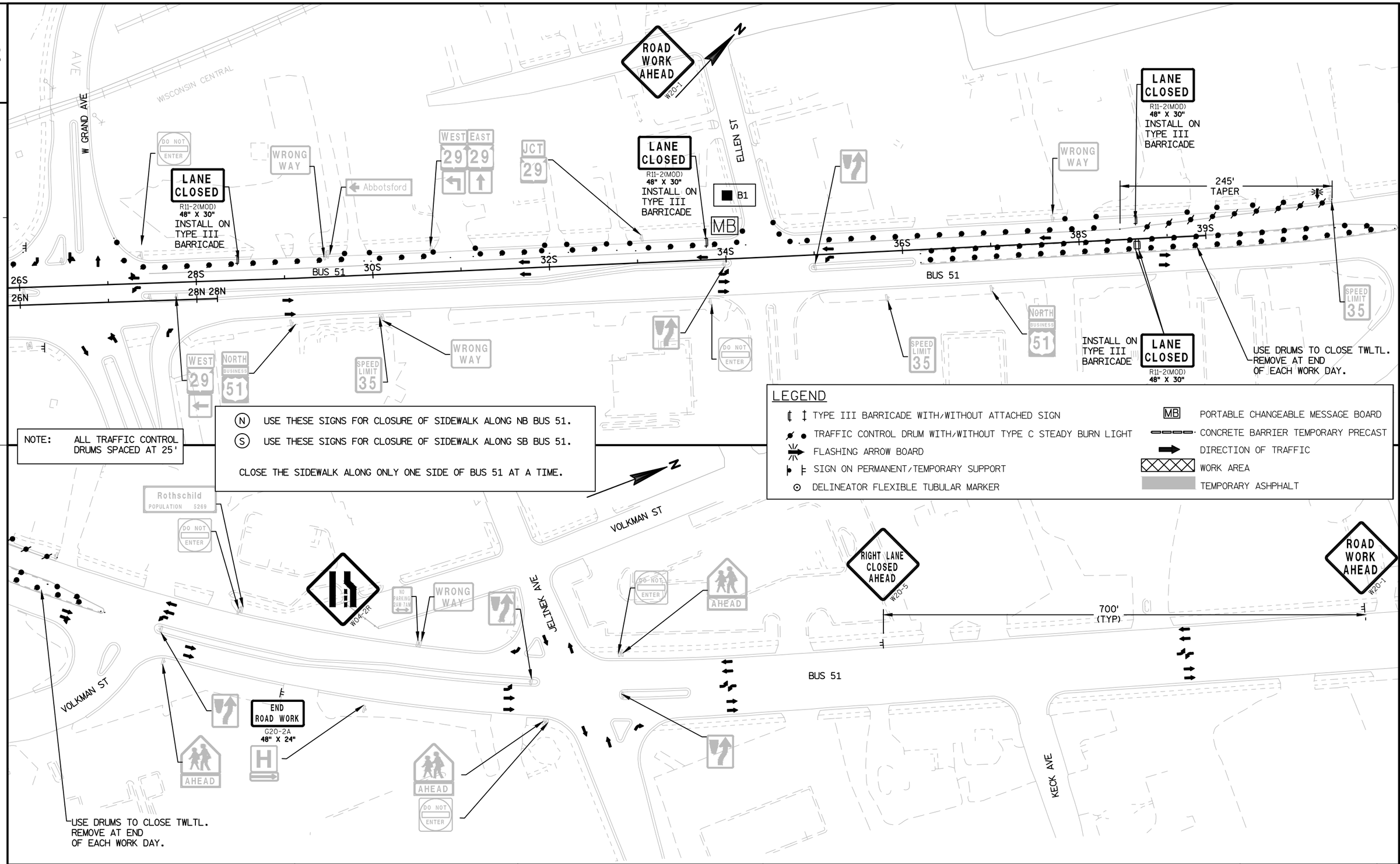
- TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT/TEMPORARY SUPPORT
- DELINEATOR FLEXIBLE TUBULAR MARKER
- MB PORTABLE CHANGEABLE MESSAGE BOARD
- CONCRETE BARRIER TEMPORARY PRECAST
- DIRECTION OF TRAFFIC
- WORK AREA
- TEMPORARY ASHPHALT

PROJECT NO: 1053-02-74	HWY: STH 29	COUNTY: MARATHON	TRAFFIC CONTROL: BUSINESS 51 (OFF PEAK-RIGHT LANE CLOSURE)	SHEET	E

FILE NAME : S:\DESIGN\DESIGN PROJECTS\1053-02-04 (STH 29)-AYRES-NC\C3D\SHEETSPLAN\025005_TC_B51-RT_1053-02-74.DWG PLOT DATE : 1/13/2014 7:54 AM PLOT BY : QUEST CIVIL ENG PLOT NAME : PLOT SCALE : **********

WISDOT/CADDS SHEET 44

2



PROJECT NO:1053-02-74	HWY: STH 29	COUNTY: MARATHON	TRAFFIC CONTROL: BUSINESS 51 (OFF PEAK-RIGHT LANE CLOSURE)	SHEET	E

FILE NAME : S:\DESIGN\DESIGN PROJECTS\1053-02-04 (STH 29)-AYRES-NC\C3D\SHEETSPLAN\025005_TC_B51-RT_1053-02-74.DWG PLOT DATE : 1/13/2014 7:55 AM PLOT BY : QUEST CIVIL ENG PLOT NAME : PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44

2

N

WISCONSIN CENTRAL

BUS 51

SPEED LIMIT 35

END ROAD WORK
G20-2A
48" X 24"

700'
(TYP)

ROAD WORK AHEAD
W20-1

WINTON AVE

BROWN BLVD

LEFT LANE CLOSED AHEAD
W20-5

WILSON AVE

YAWKEY AVE

W04-2L

NOTE: ALL TRAFFIC CONTROL DRUMS SPACED AT 25'

LEGEND

- TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT/TEMPORARY SUPPORT
- DELINEATOR FLEXIBLE TUBULAR MARKER
- MB PORTABLE CHANGEABLE MESSAGE BOARD
- CONCRETE BARRIER TEMPORARY PRECAST
- DIRECTION OF TRAFFIC
- WORK AREA
- TEMPORARY ASHPHALT

N

NO ENGINE BRAKING (EXCEPT IN EMERGENCY)

WISCONSIN CENTRAL

DO NOT ENTER

LANE CLOSED
R11-2(MOD)
48" X 30"
INSTALL ON TYPE III BARRICADE

WRONG WAY

SPEED LIMIT 35

SOUTH BUSINESS 51

BUS 51

9S 10S 12S 13N 14S 14N 16S 16N

MB
B2

245' TAPER

250' BUFFER

EVEREST DR

EAST 29

WRONG WAY

DO NOT ENTER

Green Bay

SPEED LIMIT 35

JCT 29

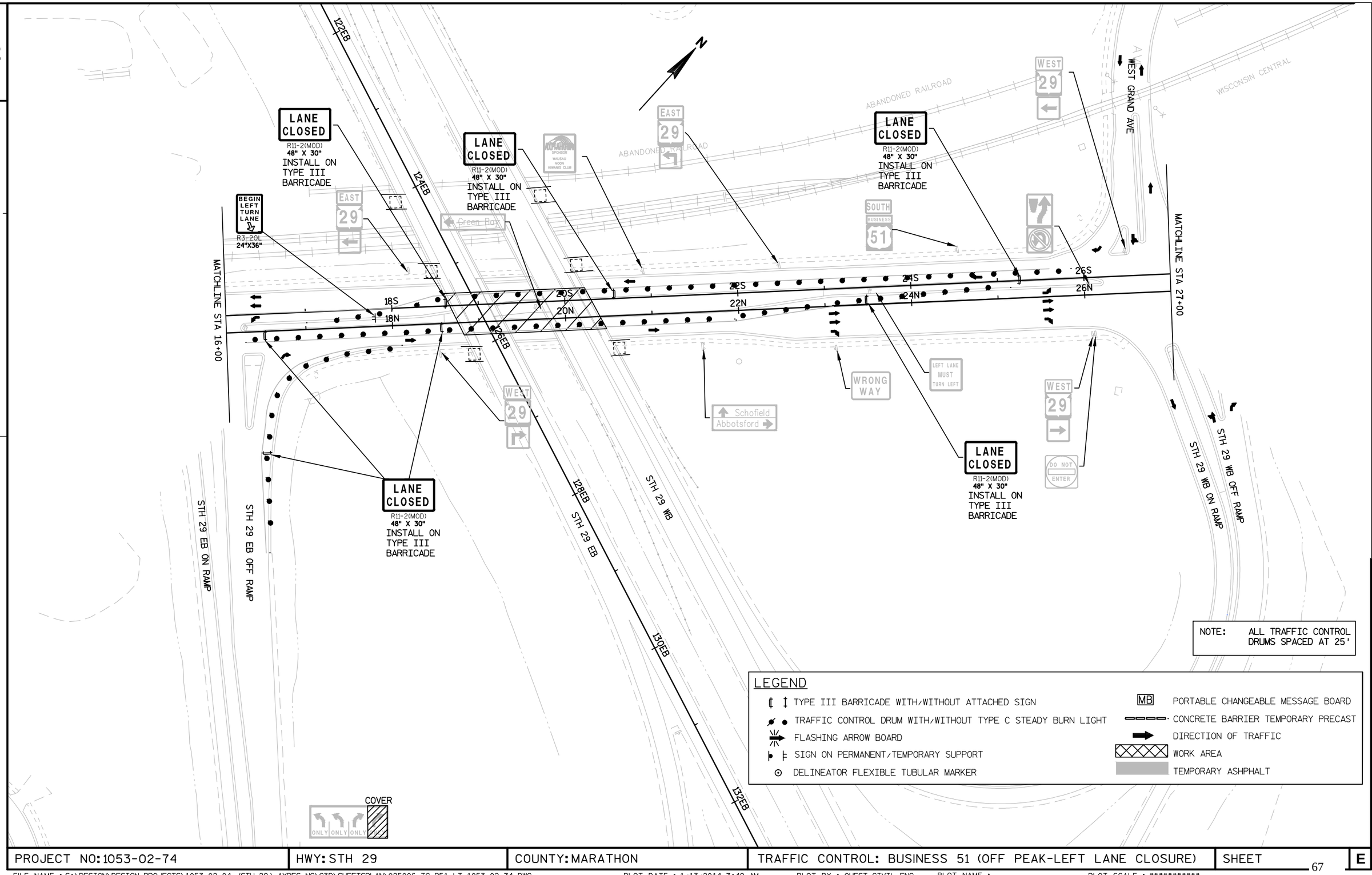
WEST 29 EAST 29

STH 29 EB ON RAMP

STH 29 EB OFF RAMP

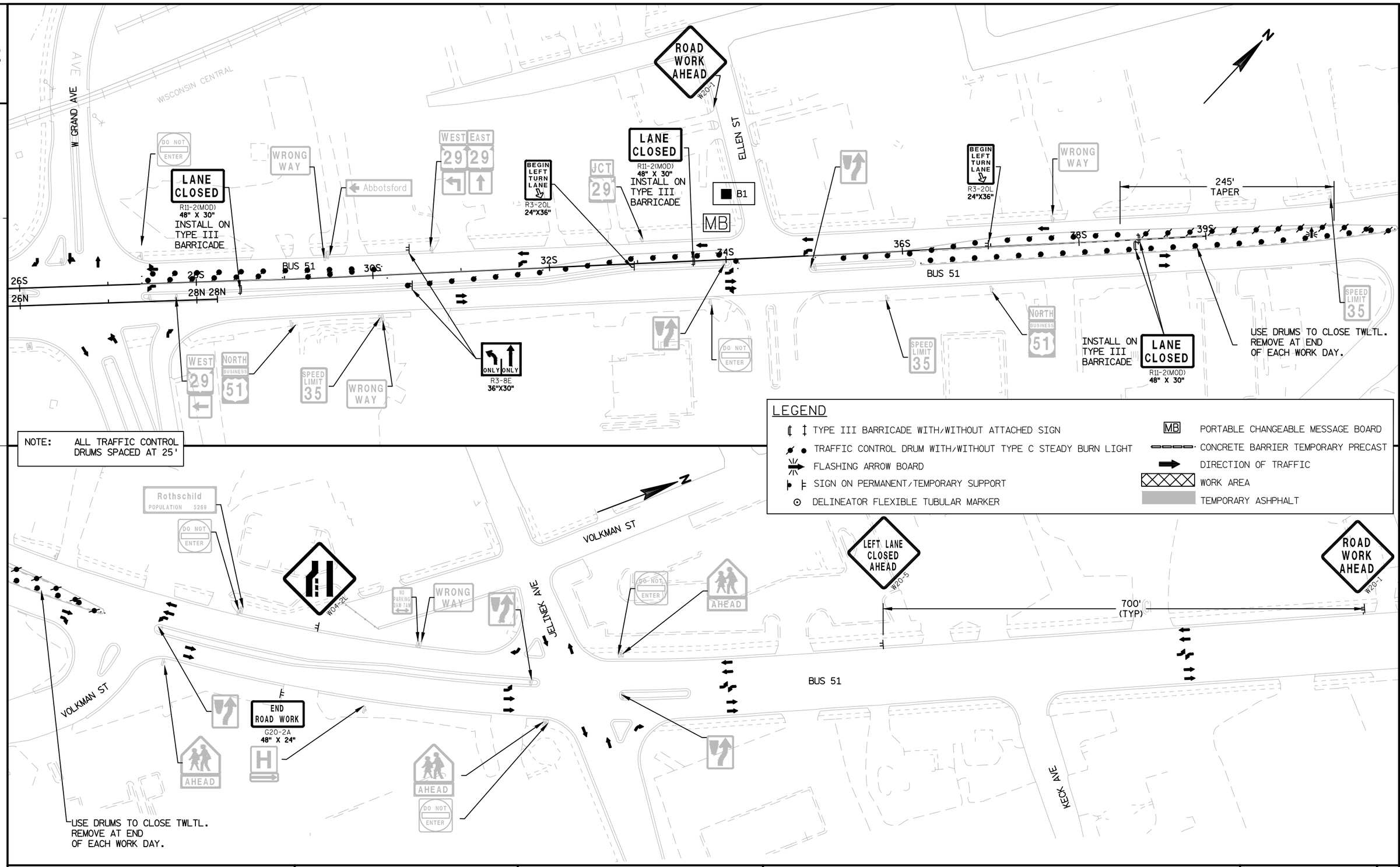
PROJECT NO: 1053-02-74	HWY: STH 29	COUNTY: MARATHON	TRAFFIC CONTROL: BUSINESS 51 (OFF PEAK-LEFT LANE CLOSURE)	SHEET	E

FILE NAME : S:\DESIGN\DESIGN PROJECTS\1053-02-04 (STH 29)-AYRES-NC\C3D\SHEETSPLAN\025006_TC_B51-LT_1053-02-74.DWG PLOT DATE : 1/13/2014 7:48 AM PLOT BY : QUEST CIVIL ENG PLOT NAME : PLOT SCALE : 1 IN:100 FT



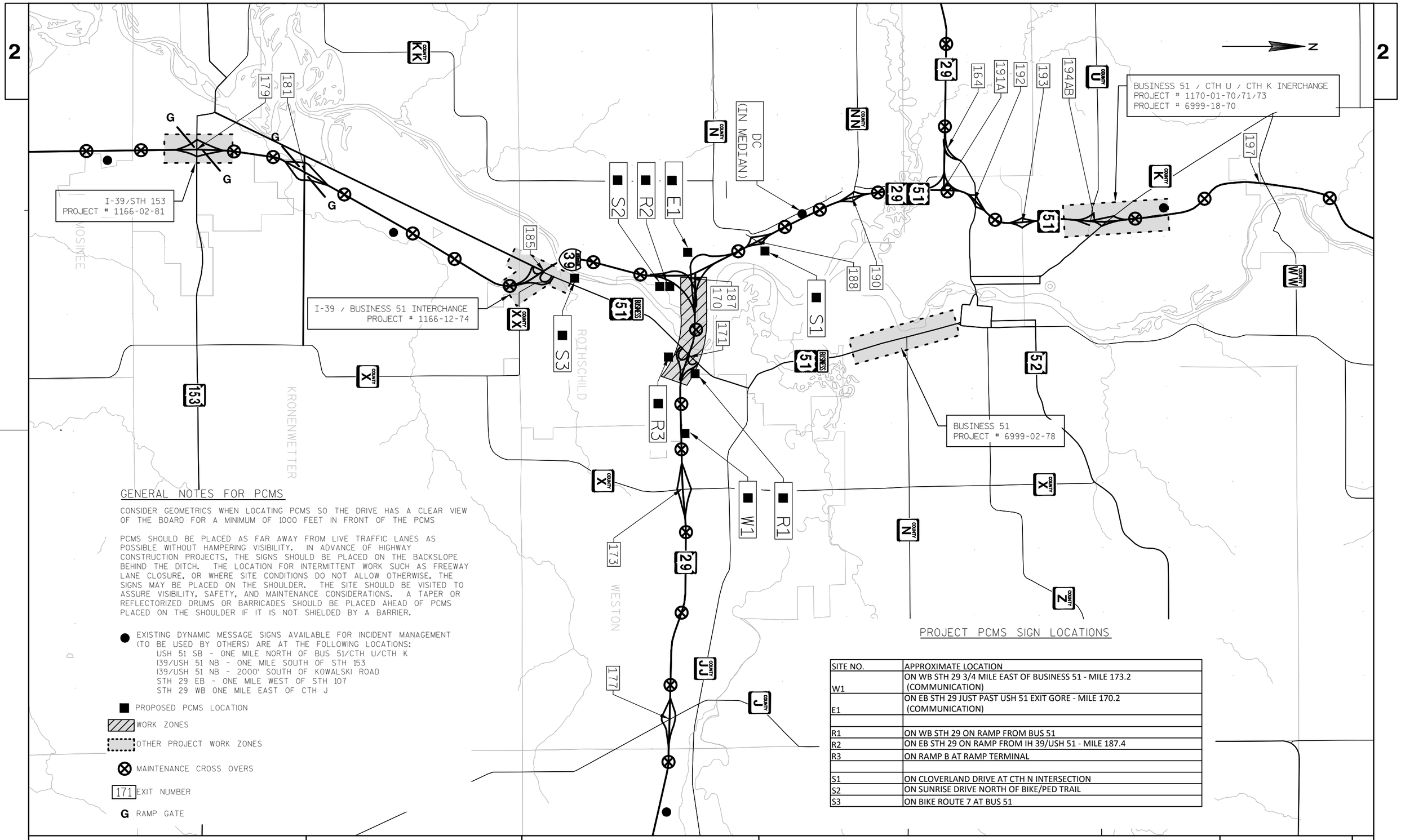
PROJECT NO: 1053-02-74	HWY: STH 29	COUNTY: MARATHON	TRAFFIC CONTROL: BUSINESS 51 (OFF PEAK-LEFT LANE CLOSURE)	SHEET	E

FILE NAME : S:\DESIGN\DESIGN PROJECTS\1053-02-04 (STH 29)-AYRES-NC\C3D\SHEETSPLAN\025006_TC_B51-LT_1053-02-74.DWG PLOT DATE : 1/13/2014 7:49 AM PLOT BY : QUEST CIVIL ENG PLOT NAME : PLOT SCALE : **********
WISDOT/CADDS SHEET 44



PROJECT NO: 1053-02-74	HWY: STH 29	COUNTY: MARATHON	TRAFFIC CONTROL: BUSINESS 51 (OFF PEAK-LEFT LANE CLOSURE)	SHEET 68	E

FILE NAME : S:\DESIGN\DESIGN PROJECTS\1053-02-04 (STH 29)-AYRES-NC\C3D\SHEETSPLAN\025006_TC_B51-LT_1053-02-74.DWG PLOT DATE : 1/13/2014 7:49 AM PLOT BY : QUEST CIVIL ENG PLOT NAME : PLOT SCALE : 1 IN:100 FT



GENERAL NOTES FOR PCMS

CONSIDER GEOMETRICS WHEN LOCATING PCMS SO THE DRIVE HAS A CLEAR VIEW OF THE BOARD FOR A MINIMUM OF 1000 FEET IN FRONT OF THE PCMS

PCMS SHOULD BE PLACED AS FAR AWAY FROM LIVE TRAFFIC LANES AS POSSIBLE WITHOUT HAMPERING VISIBILITY. IN ADVANCE OF HIGHWAY CONSTRUCTION PROJECTS, THE SIGNS SHOULD BE PLACED ON THE BACKSLOPE BEHIND THE DITCH. THE LOCATION 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 OR REFLECTORIZED DRUMS OR BARRICADES SHOULD BE PLACED AHEAD OF PCMS PLACED ON THE SHOULDER IF IT IS NOT SHIELDED BY A BARRIER.

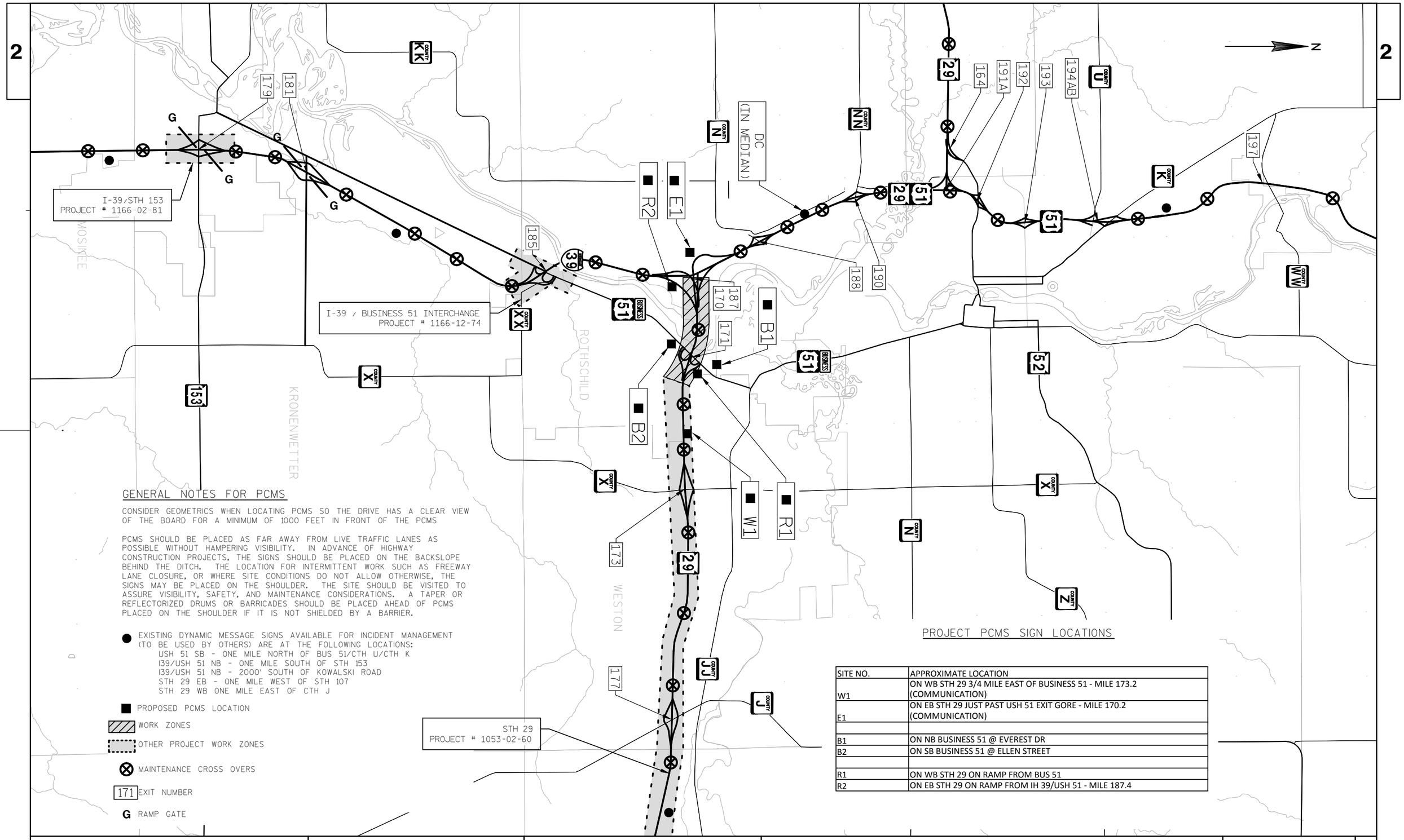
- ● EXISTING DYNAMIC MESSAGE SIGNS AVAILABLE FOR INCIDENT MANAGEMENT (TO BE USED BY OTHERS) ARE AT THE FOLLOWING LOCATIONS:
  - USH 51 SB - ONE MILE NORTH OF BUS 51/CTH U/CTH K
  - I39/USH 51 NB - ONE MILE SOUTH OF STH 153
  - I39/USH 51 NB - 2000' SOUTH OF KOWALSKI ROAD
  - STH 29 EB - ONE MILE WEST OF STH 107
  - STH 29 WB ONE MILE EAST OF CTH J
- ■ PROPOSED PCMS LOCATION
- WORK ZONES
- OTHER PROJECT WORK ZONES
- ⊗ MAINTENANCE CROSS OVERS
- 171 EXIT NUMBER
- G RAMP GATE

PROJECT PCMS SIGN LOCATIONS

SITE NO.	APPROXIMATE LOCATION
W1	ON WB STH 29 3/4 MILE EAST OF BUSINESS 51 - MILE 173.2 (COMMUNICATION)
E1	ON EB STH 29 JUST PAST USH 51 EXIT GORE - MILE 170.2 (COMMUNICATION)
R1	ON WB STH 29 ON RAMP FROM BUS 51
R2	ON EB STH 29 ON RAMP FROM IH 39/USH 51 - MILE 187.4
R3	ON RAMP B AT RAMP TERMINAL
S1	ON CLOVERLAND DRIVE AT CTH N INTERSECTION
S2	ON SUNRISE DRIVE NORTH OF BIKE/PED TRAIL
S3	ON BIKE ROUTE 7 AT BUS 51

PROJECT NO:1053-02-74	HWY: STH 29	COUNTY:MARATHON	TRAFFIC CONTROL: SIGNS PCMS (CONSTRUCTION YEAR 2014)	SHEET 69	E

FILE NAME : S:\DESIGN\DESIGN PROJECTS\1053-02-04 (STH 29)-AYRES-NC\C3D\SHEETSPLAN\026001_PCMS_STH 29_2014.DWG PLOT DATE : 1/13/2014 8:36 AM PLOT BY : QUEST CIVIL ENG PLOT NAME : ---------- PLOT SCALE : 0.000143



GENERAL NOTES FOR PCMS

CONSIDER GEOMETRICS WHEN LOCATING PCMS SO THE DRIVE HAS A CLEAR VIEW OF THE BOARD FOR A MINIMUM OF 1000 FEET IN FRONT OF THE PCMS

PCMS SHOULD BE PLACED AS FAR AWAY FROM LIVE TRAFFIC LANES AS POSSIBLE WITHOUT HAMPERING VISIBILITY. IN ADVANCE OF HIGHWAY CONSTRUCTION PROJECTS, THE SIGNS SHOULD BE PLACED ON THE BACKSLOPE BEHIND THE DITCH. THE LOCATION 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 OR REFLECTORIZED DRUMS OR BARRICADES SHOULD BE PLACED AHEAD OF PCMS PLACED ON THE SHOULDER IF IT IS NOT SHIELDED BY A BARRIER.

- ● EXISTING DYNAMIC MESSAGE SIGNS AVAILABLE FOR INCIDENT MANAGEMENT (TO BE USED BY OTHERS) ARE AT THE FOLLOWING LOCATIONS:
  - USH 51 SB - ONE MILE NORTH OF BUS 51/CTH U/CTH K
  - I39/USH 51 NB - ONE MILE SOUTH OF STH 153
  - I39/USH 51 NB - 2000' SOUTH OF KOWALSKI ROAD
  - STH 29 EB - ONE MILE WEST OF STH 107
  - STH 29 WB ONE MILE EAST OF CTH J
- ■ PROPOSED PCMS LOCATION
- WORK ZONES
- OTHER PROJECT WORK ZONES
- ⊗ MAINTENANCE CROSS OVERS
- 171 EXIT NUMBER
- **G** RAMP GATE

PROJECT PCMS SIGN LOCATIONS

SITE NO.	APPROXIMATE LOCATION
W1	ON WB STH 29 3/4 MILE EAST OF BUSINESS 51 - MILE 173.2 (COMMUNICATION)
E1	ON EB STH 29 JUST PAST USH 51 EXIT GORE - MILE 170.2 (COMMUNICATION)
B1	ON NB BUSINESS 51 @ EVEREST DR
B2	ON SB BUSINESS 51 @ ELLEN STREET
R1	ON WB STH 29 ON RAMP FROM BUS 51
R2	ON EB STH 29 ON RAMP FROM IH 39/USH 51 - MILE 187.4

PROJECT NO:1053-02-74	HWY: STH 29	COUNTY:MARATHON	TRAFFIC CONTROL: SIGNS PCMS (CONSTRUCTION YEAR 2015-2016)	SHEET 70	E

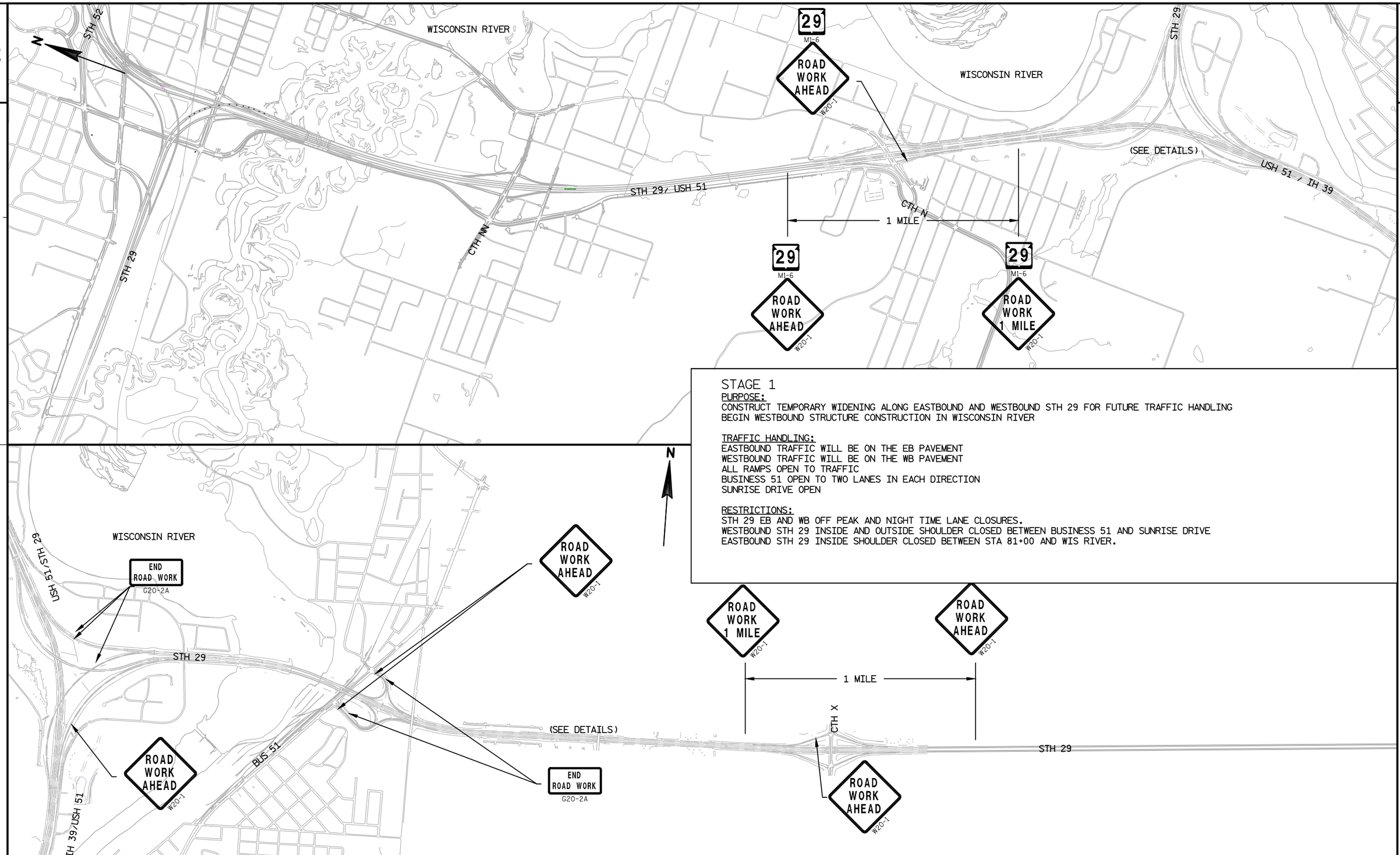
2

2014			PRIOR TO CONSTRUCTION 2014		STAGE 1		STAGE 2		STAGE 2A		STAGE 2B		STAGE 2C	
	SITE NO.	ROADWAY CONDITION/ CONSTRUCTION	PHASE 1 (2 SEC)	PHASE 2 (2 SEC)	PHASE 1 (2 SEC)	PHASE 2 (2 SEC)	PHASE 1 (2 SEC)	PHASE 2 (2 SEC)	PHASE 1 (2 SEC)	PHASE 2 (2 SEC)	PHASE 1 (2 SEC)	PHASE 2 (2 SEC)	PHASE 1 (2 SEC)	PHASE 2 (2 SEC)
	SITES W1,E1,R2	INCIDENT MANAGEMENT	NO MESSAGE BOARD USED		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
	SITE W1	GENERAL	STH 29 ROAD WORK	BEGINS XX/XX/XX	(NO MESSAGE)		(NO MESSAGE)		(NO MESSAGE)		(NO MESSAGE)		(NO MESSAGE)	
	SITE E1	GENERAL	STH 29 ROAD WORK	BEGINS XX/XX/XX	(NO MESSAGE)		(NO MESSAGE)		(NO MESSAGE)		(NO MESSAGE)		(NO MESSAGE)	
	SITE R1	GENERAL	STH 29 ROAD WORK	BEGINS XX/XX/XX	NO MESSAGE BOARD USED		NO MESSAGE BOARD USED		NO MESSAGE BOARD USED		NO MESSAGE BOARD USED		NO MESSAGE BOARD USED	
	SITE R2	GENERAL	STH 29 ROAD WORK	BEGINS XX/XX/XX	(NO MESSAGE)		(NO MESSAGE)		RAMP TO CLOSE XX/XX/XX		RAMP CLOSED		(NO MESSAGE)	
	SITES R3	BUSINESS 51CLOSURES	NO MESSAGE BOARD USED		NO MESSAGE BOARD USED		NO MESSAGE BOARD USED		FLAGGER AHEAD	BE PREPARED TO STOP	NO MESSAGE BOARD USED		NO MESSAGE BOARD USED	
	SITES S1	SUNRISE CLOSURE	NO MESSAGE BOARD USED		BRIDGE OVER HWY 29	TO CLOSE XX/XX/XX	NO MESSAGE BOARD USED		SUNRISE CLOSED OVER 29	USE ALT ROUTE	NO MESSAGE BOARD USED		NO MESSAGE BOARD USED	
	SITES S2, S3	BIKE ROUTE CLOSURE	NO MESSAGE BOARD USED		BRIDGE OVER HWY 29	TO CLOSE XX/XX/XX	NO MESSAGE BOARD USED		NO MESSAGE BOARD USED		NO MESSAGE BOARD USED		NO MESSAGE BOARD USED	

2015			STAGE 2 PRIOR TO CONSTRUCTION 2015		STAGE 3		STAGE 4		STAGES 3 AND 4 (PRIOR TO WB LANE AND RAMP CLOSURE**)		STAGES 3 AND 4 (DURING LANE AND RAMP CLOSURE)	
	SITE NO.	ROADWAY CONDITION/ CONSTRUCTION	PHASE 1 (2 SEC)	PHASE 2 (2 SEC)	PHASE 1 (2 SEC)	PHASE 2 (2 SEC)	PHASE 1 (2 SEC)	PHASE 2 (2 SEC)	PHASE 1 (2 SEC)	PHASE 2 (2 SEC)	PHASE 1 (2 SEC)	PHASE 2 (2 SEC)		
	W1,E1,R2	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		
	SITE W1	LANE CLOSURE	STH 29 ROAD WORK	RESUMES XX/XX/XX	RT LANE EXIT ONLY	1/2 MILE MERGE LEFT	RT LANE EXIT ONLY	1/2 MILE MERGE LEFT	RT LANE EXIT ONLY	1/2 MILE MERGE LEFT	RT LANE EXIT ONLY	1/2 MILE MERGE LEFT		
	SITE E1	GENERAL	STH 29 ROAD WORK	RESUMES XX/XX/XX	(NO MESSAGE)		(NO MESSAGE)		(NO MESSAGE)		(NO MESSAGE)			
	SITE R1	GENERAL	STH 29 ROAD WORK	RESUMES XX/XX/XX	NO MESSAGE BOARD USED		NO MESSAGE BOARD USED		WB 29 RAMP TO CLOSE	XX PM - XX AM XX/XX/XX	WB 29 RAMP CLOSED	USE ALT ROUTE		
	SITE R2	GENERAL	STH 29 ROAD WORK	RESUMES XX/XX/XX	(NO MESSAGE)		(NO MESSAGE)		(NO MESSAGE)		(NO MESSAGE)			
	SITE B1	BUSINESS 51CLOSURES ON RAMP CLOSURES	BUS 51 LANE CLOSURES	BEGIN XX/XX/XX	NO MESSAGE BOARD USED		NO MESSAGE BOARD USED		WB 29 RAMP TO CLOSE	XX PM - XX AM XX/XX/XX	WB 29 RAMP CLOSED	USE ALT ROUTE		
	SITE B2	BUSINESS 51CLOSURES ON RAMP CLOSURES	BUS 51 LANE CLOSURES	BEGIN XX/XX/XX	WEST 29 LEFT LANE	BUS 51 EAST 29 RIGHT LN	NO MESSAGE BOARD USED		WB 29 RAMP TO CLOSE	XX PM - XX AM XX/XX/XX	WB 29 RAMP CLOSED	USE ALT ROUTE		

2

			STAGE 5 PRIOR TO CONSTRUCTION 2016, 2017		STAGE 6		STAGE 6 (PRIOR TO WB LANE AND RAMP CLOSURE**)		STAGES 6 (DURING LANE AND RAMP CLOSURE)		STAGE 7		STAGE 8	
	SITE NO.	ROADWAY CONDITION/ CONSTRUCTION	PHASE 1 (2 SEC)	PHASE 2 (2 SEC)	PHASE 1 (2 SEC)	PHASE 2 (2 SEC)	PHASE 1 (2 SEC)	PHASE 2 (2 SEC)	PHASE 1 (2 SEC)	PHASE 2 (2 SEC)	PHASE 1 (2 SEC)	PHASE 2 (2 SEC)	PHASE 1 (3 SEC)	PHASE 2 (3 SEC)
	W1E1R2	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
2016	SITE W1	LANE CLOSURE	STH 29 ROAD WORK	RESUMES XX/XX/XX	RT LANE EXIT ONLY	1/2 MILE MERGE LEFT	RT LANE EXIT ONLY	1/2 MILE MERGE LEFT	RT LANE EXIT ONLY	1/2 MILE MERGE LEFT	(NO MESSAGE)		(NO MESSAGE)	
	SITE E1	GENERAL	STH 29 ROAD WORK	RESUMES XX/XX/XX	(NO MESSAGE)		(NO MESSAGE)		(NO MESSAGE)		(NO MESSAGE)		(NO MESSAGE)	
	SITE R1	GENERAL	STH 29 ROAD WORK	RESUMES XX/XX/XX	NO MESSAGE BOARD USED		WB 29 RAMP TO CLOSE	XX PM - XX AM XX/XX/XX	NO MESSAGE BOARD USED		NO MESSAGE BOARD USED		NO MESSAGE BOARD USED	
	SITE R2	GENERAL	STH 29 ROAD WORK	RESUMES XX/XX/XX	(NO MESSAGE)		(NO MESSAGE)		(NO MESSAGE)		(NO MESSAGE)		(NO MESSAGE)	
	SITES B1B2	BUSINESS 51CLOSURES	BUS 51 ROAD WORK	RESUMES XX/XX/XX	NO MESSAGE BOARD USED		WB 29 RAMP TO CLOSE	XX PM - XX AM XX/XX/XX	WB 29 RAMP CLOSED	USE ALT ROUTE	NO MESSAGE BOARD USED		NO MESSAGE BOARD USED	



STAGE 1

PURPOSE:
CONSTRUCT TEMPORARY WIDENING ALONG EASTBOUND AND WESTBOUND STH 29 FOR FUTURE TRAFFIC HANDLING
BEGIN WESTBOUND STRUCTURE CONSTRUCTION IN WISCONSIN RIVER

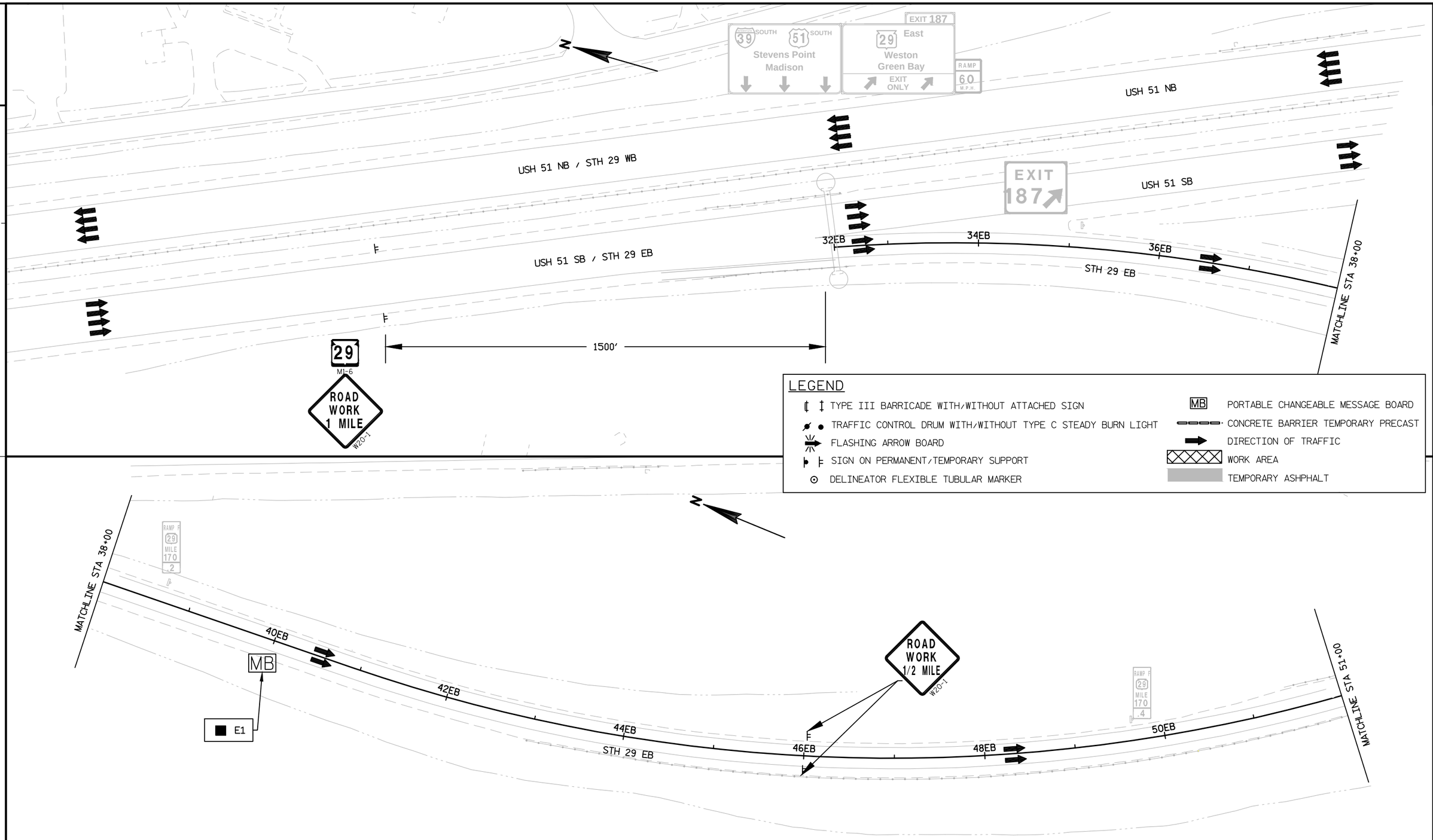
TRAFFIC HANDLING:
EASTBOUND TRAFFIC WILL BE ON THE EB PAVEMENT
WESTBOUND TRAFFIC WILL BE ON THE WB PAVEMENT
ALL RAMPS OPEN TO TRAFFIC
BUSINESS 51 OPEN TO TWO LANES IN EACH DIRECTION
SUNRISE DRIVE OPEN

RESTRICTIONS:
STH 29 EB AND WB OFF PEAK AND NIGHT TIME LANE CLOSURES.
WESTBOUND STH 29 INSIDE AND OUTSIDE SHOULDER CLOSED BETWEEN BUSINESS 51 AND SUNRISE DRIVE
EASTBOUND STH 29 INSIDE SHOULDER CLOSED BETWEEN STA 81+00 AND WIS RIVER.

PROJECT NO: 1053-02-74	HWY: STH 29	COUNTY: MARATHON	TRAFFIC CONTROL: STAGE 1 ADVANCED WARNING	SHEET	E

FILE NAME : S:\DESIGN\DESIGN PROJECTS\1053-02-04 (STH 29)-AYRES-NC\C3D\SHEETSPLAN\026101_TC_S1_OVERVIEW_1053-02-74.DWG PLOT DATE : 10/30/2013 7:20 AM PLOT BY : QUEST CIVIL ENG PLOT NAME : PLOT SCALE : 1 IN:2000 FT
WISDOT/CADDS SHEET 44

2



PROJECT NO:1053-02-74	HWY: STH 29	COUNTY: MARATHON	TRAFFIC CONTROL: STAGE 1	SHEET	E

FILE NAME : S:\DESIGN\DESIGN PROJECTS\1053-02-04 (STH 29)-AYRES-NC\C3D\SHEETSPLAN\026111_TC_S1_1053-02-74.DWG PLOT DATE : 1/2/2014 8:38 AM PLOT BY : QUEST CIVIL ENG PLOT NAME : PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44

2

2

N

USH 51 NB

USH 51 SB

MATCHLINE STA 51+00

54EB

56EB

58EB

60EB

62EB

64EB

MATCHLINE STA 66+00

WB STH 29 TO SB USH 51 RAMP

RAMP F
29
MILE
170
.6

LEGEND

- TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT/TEMPORARY SUPPORT
- DELINEATOR FLEXIBLE TUBULAR MARKER
- MB PORTABLE CHANGEABLE MESSAGE BOARD
- CONCRETE BARRIER TEMPORARY PRECAST
- DIRECTION OF TRAFFIC
- WORK AREA
- TEMPORARY ASHPHALT

N

78WB

80

WB STH 29 TO SB USH 51 RAMP

MATCHLINE STA 66+00

68EB

70EB

72EB

74EB

76EB

78EB

LEFT SHOULDER CLOSED AHEAD
W21-5B

MATCHLINE STA 80+00

STH 29 EB

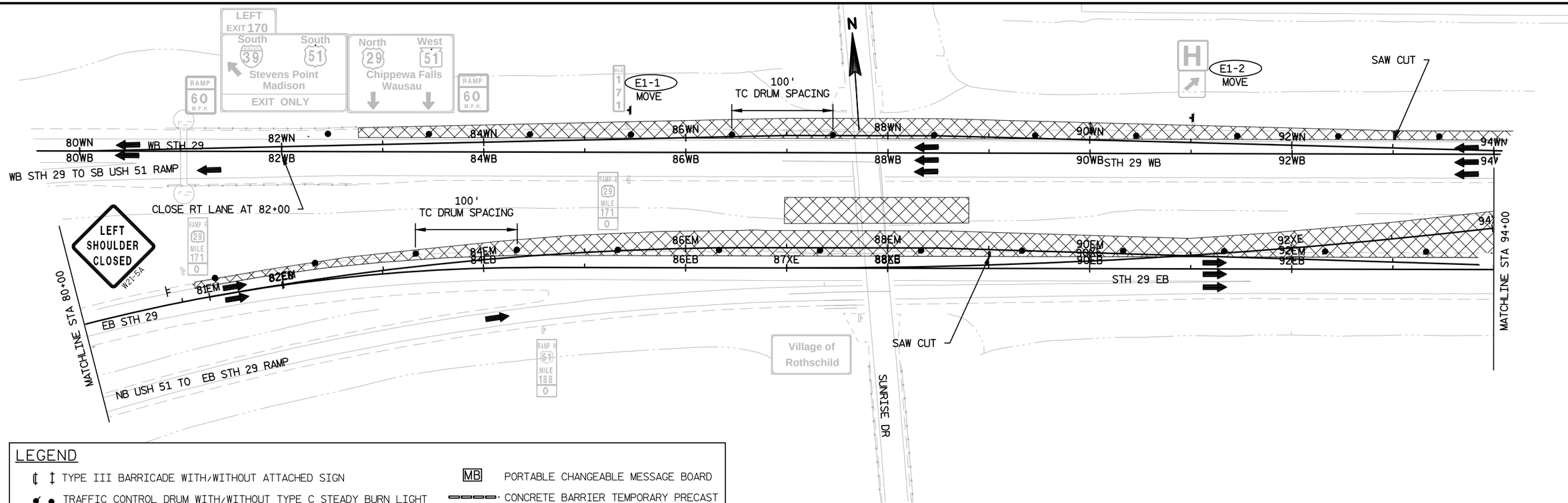
NB USH 51 TO EB STH 29 RAMP

RAMP F
29
MILE
170
.8

PROJECT NO:1053-02-74	HWY: STH 29	COUNTY: MARATHON	TRAFFIC CONTROL: STAGE 1	SHEET	E

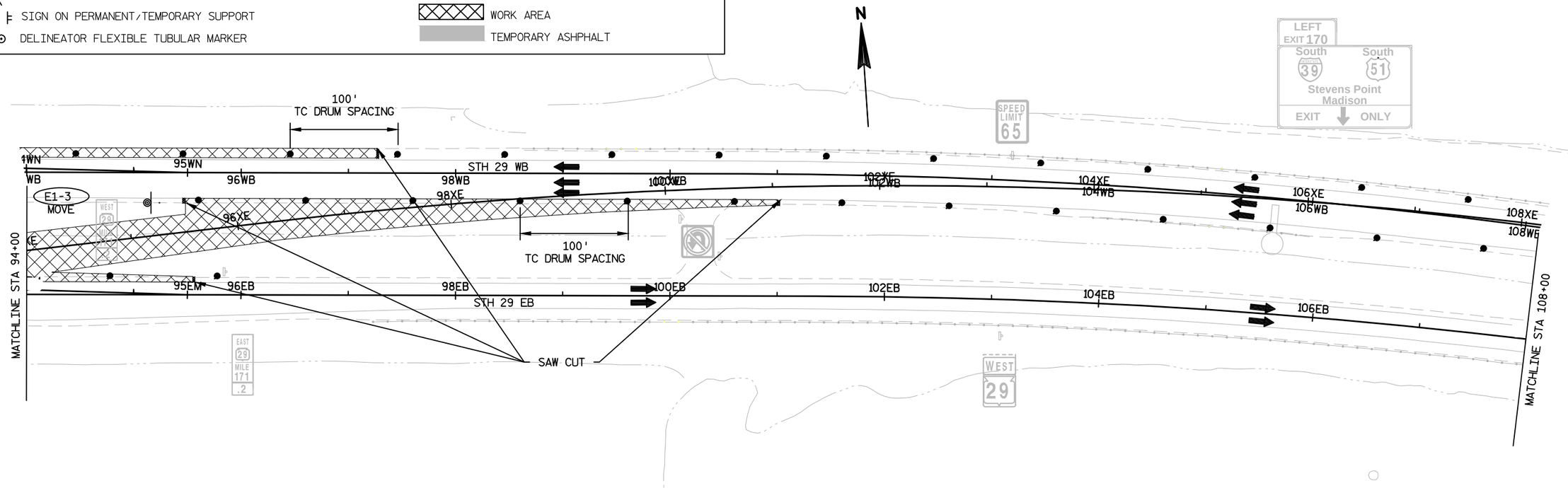
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WISDOT/CADDS SHEET 44

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LEGEND

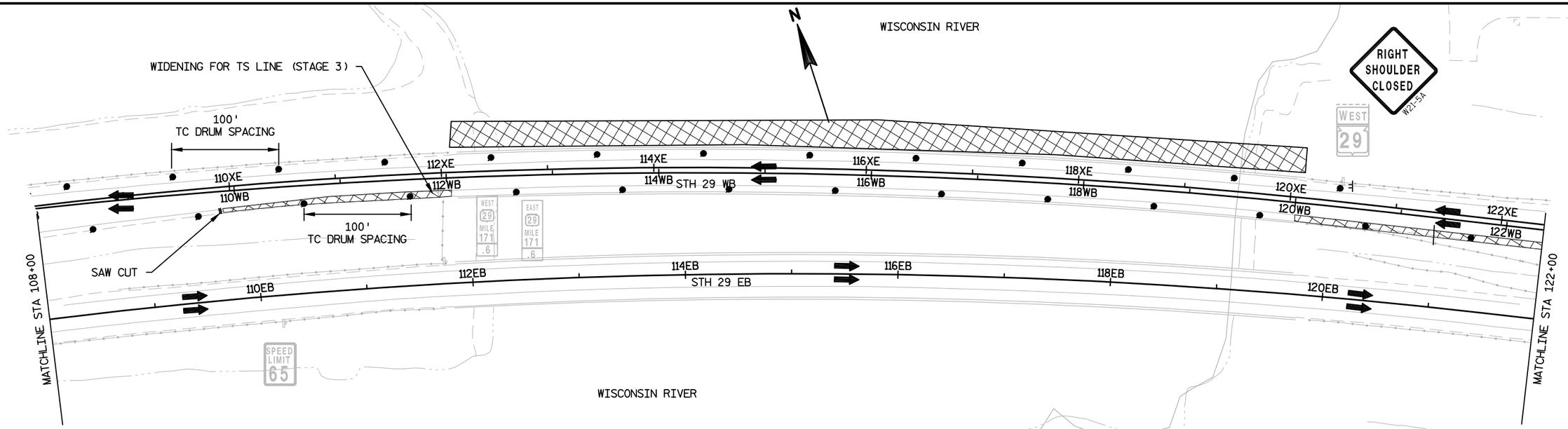
- TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT/TEMPORARY SUPPORT
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- MB PORTABLE CHANGEABLE MESSAGE BOARD
- CONCRETE BARRIER TEMPORARY PRECAST
- DIRECTION OF TRAFFIC
- WORK AREA
- TEMPORARY ASHPHALT

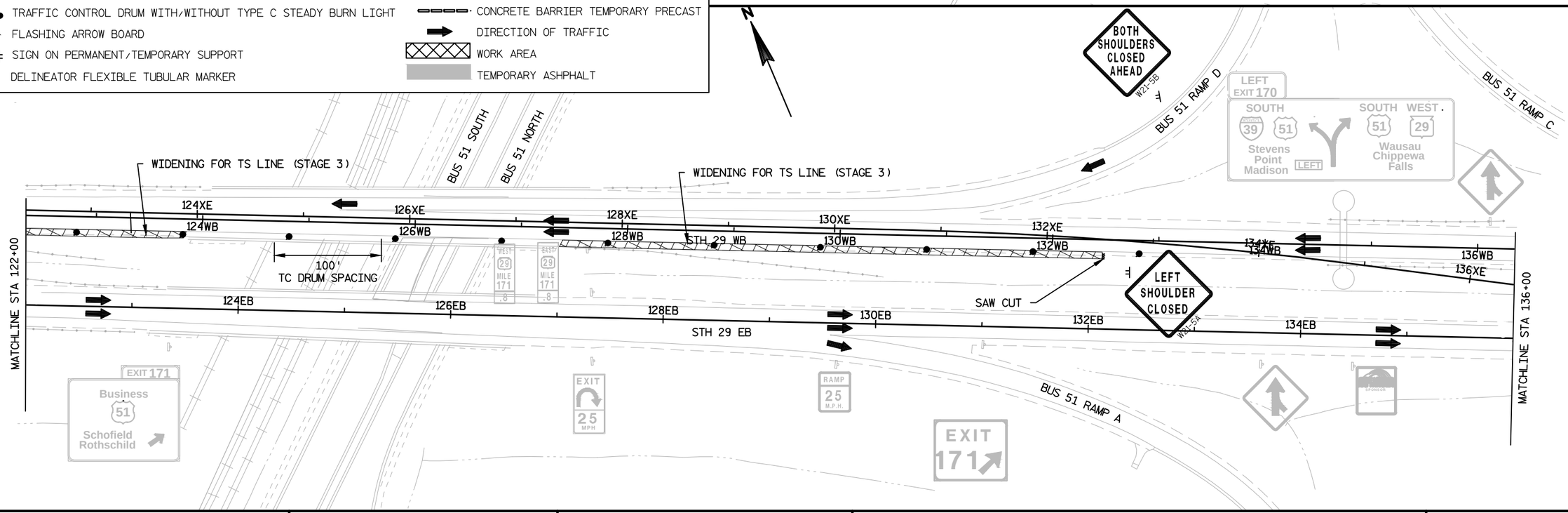


PROJECT NO: 1053-02-74	HWY: STH 29	COUNTY: MARATHON	TRAFFIC CONTROL: STAGE 1	SHEET	E

FILE NAME : S:\DESIGN\DESIGN PROJECTS\1053-02-04 (STH 29)-AYRES-NC\C3D\SHEETSPLAN\026111_TC_S1_1053-02-74.DWG PLOT DATE : 1/2/2014 8:39 AM PLOT BY : QUEST CIVIL ENG PLOT NAME : PLOT SCALE : **********

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LEGEND

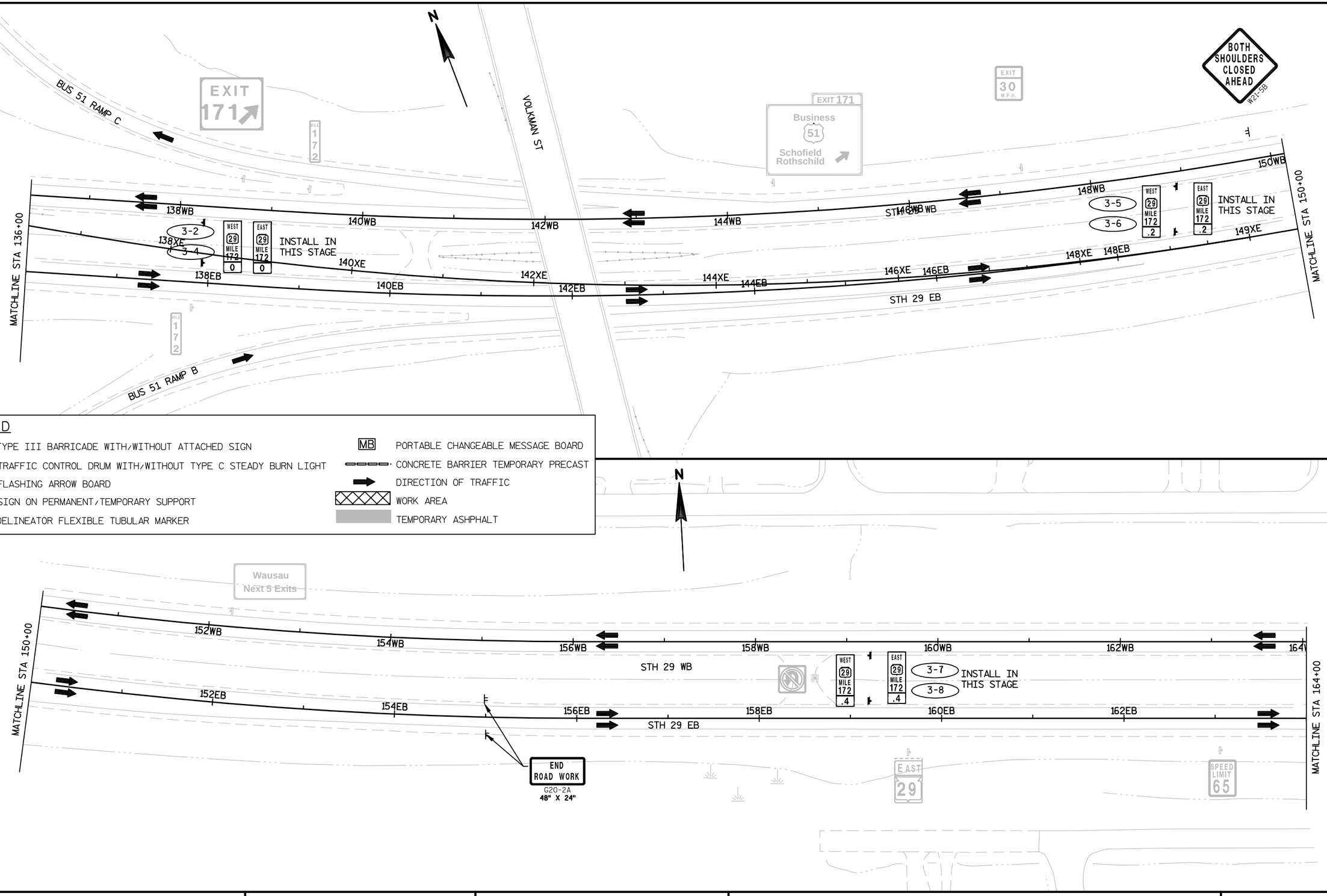
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- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT/TEMPORARY SUPPORT
- DELINEATOR FLEXIBLE TUBULAR MARKER
- MB PORTABLE CHANGEABLE MESSAGE BOARD
- CONCRETE BARRIER TEMPORARY PRECAST
- DIRECTION OF TRAFFIC
- WORK AREA
- TEMPORARY ASHPHALT

PROJECT NO: 1053-02-74	HWY: STH 29	COUNTY: MARATHON	TRAFFIC CONTROL: STAGE 1	SHEET	E

FILE NAME : S:\DESIGN\DESIGN PROJECTS\1053-02-04 (STH 29)-AYRES-NC\C3D\SHEETSPLAN\026111_TC_S1_1053-02-74.DWG PLOT DATE : 1/2/2014 8:40 AM PLOT BY : QUEST CIVIL ENG PLOT NAME : PLOT SCALE : **********

WISDOT/CADDS SHEET 44

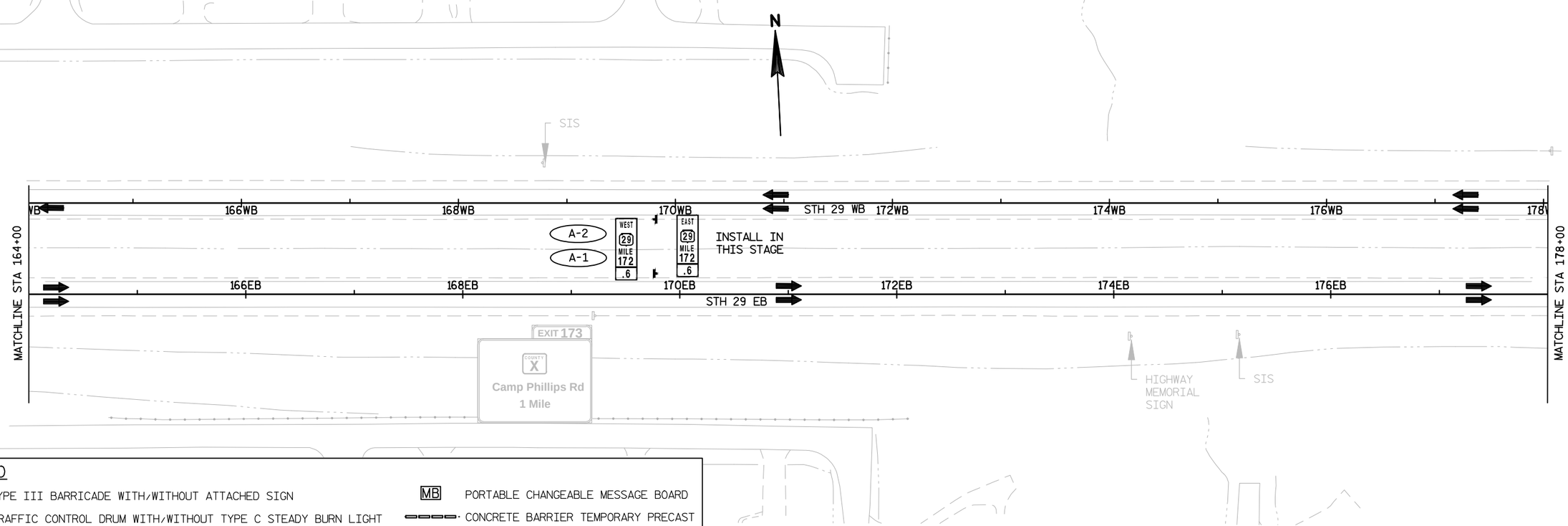
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PROJECT NO: 1053-02-74	HWY: STH 29	COUNTY: MARATHON	TRAFFIC CONTROL: STAGE 1	SHEET	E

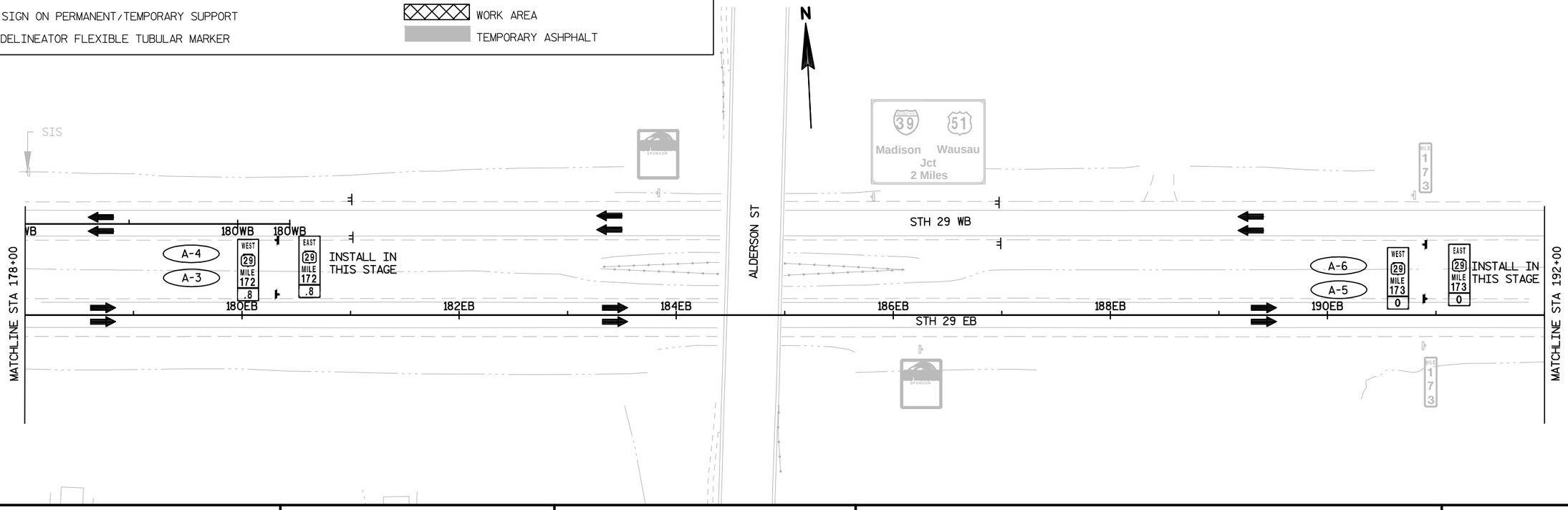
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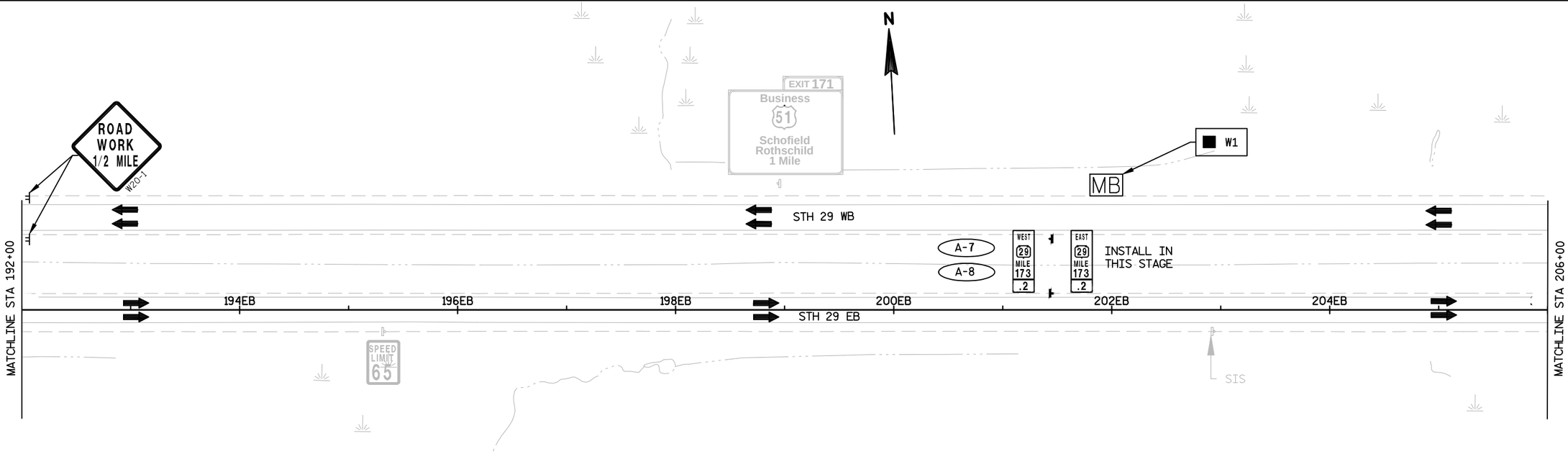
LEGEND

- TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT/TEMPORARY SUPPORT
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- MB PORTABLE CHANGEABLE MESSAGE BOARD
- CONCRETE BARRIER TEMPORARY PRECAST
- DIRECTION OF TRAFFIC
- WORK AREA
- TEMPORARY ASHPHALT



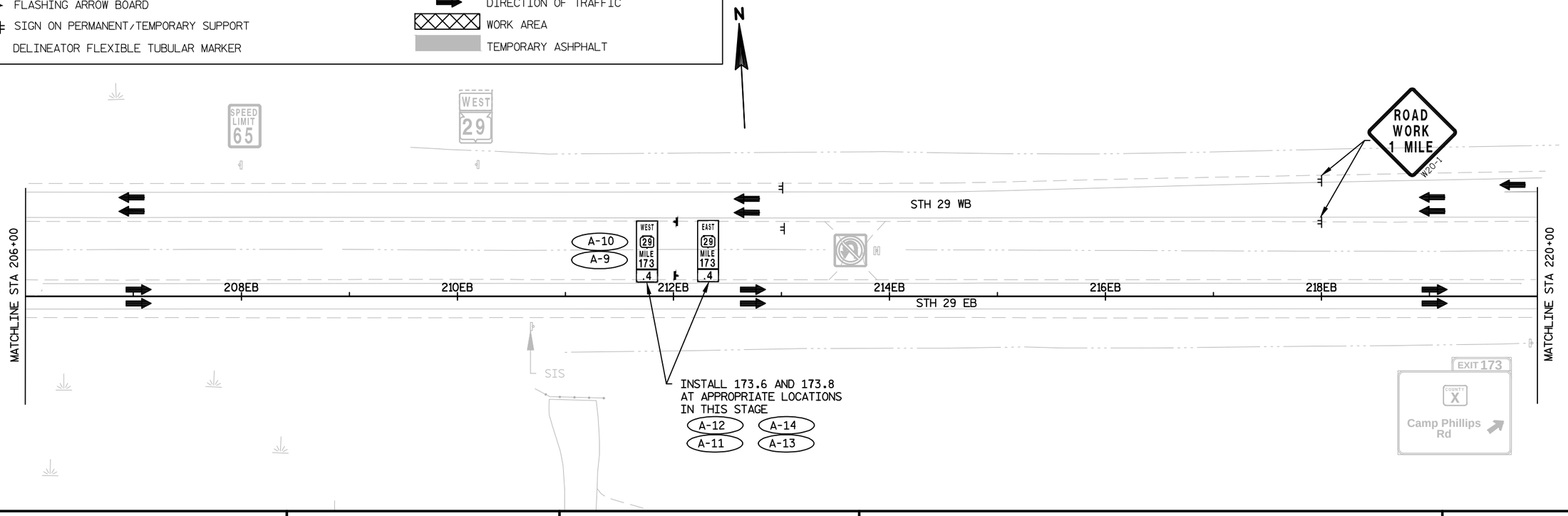
PROJECT NO: 1053-02-74	HWY: STH 29	COUNTY: MARATHON	TRAFFIC CONTROL: STAGE 1	SHEET	E

FILE NAME : S:\DESIGN\DESIGN PROJECTS\1053-02-04 (STH 29)-AYRES-NC\C3D\SHEETSPLAN\026111_TC_S1_1053-02-74.DWG PLOT DATE : 1/2/2014 8:42 AM PLOT BY : QUEST CIVIL ENG PLOT NAME : PLOT SCALE : **********



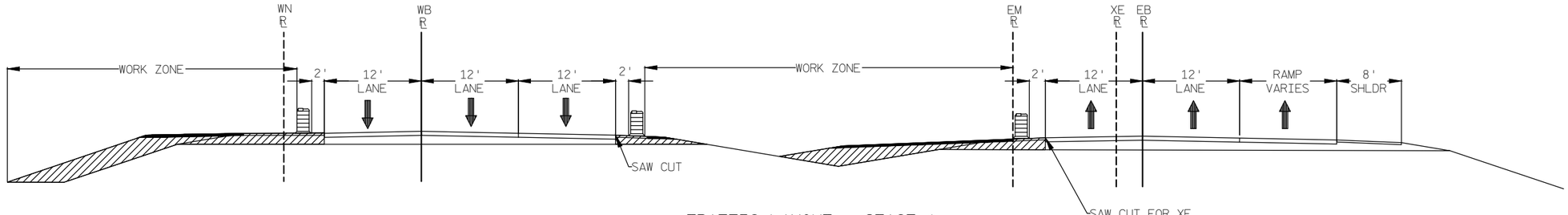
LEGEND

- TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT/TEMPORARY SUPPORT
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- MB PORTABLE CHANGEABLE MESSAGE BOARD
- CONCRETE BARRIER TEMPORARY PRECAST
- DIRECTION OF TRAFFIC
- WORK AREA
- TEMPORARY ASHPHALT

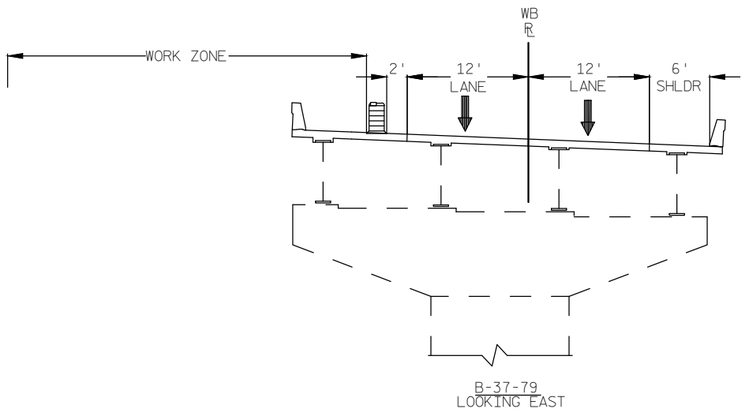


PROJECT NO:1053-02-74	HWY: STH 29	COUNTY: MARATHON	TRAFFIC CONTROL: STAGE 1	SHEET	E

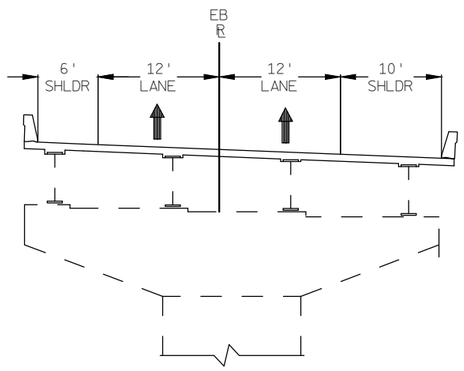
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WISDOT/CADDS SHEET 44



TRAFFIC LAYOUT - STAGE 1
STH 29 BETWEEN SUNRISE DRIVE AND WIS RIVER

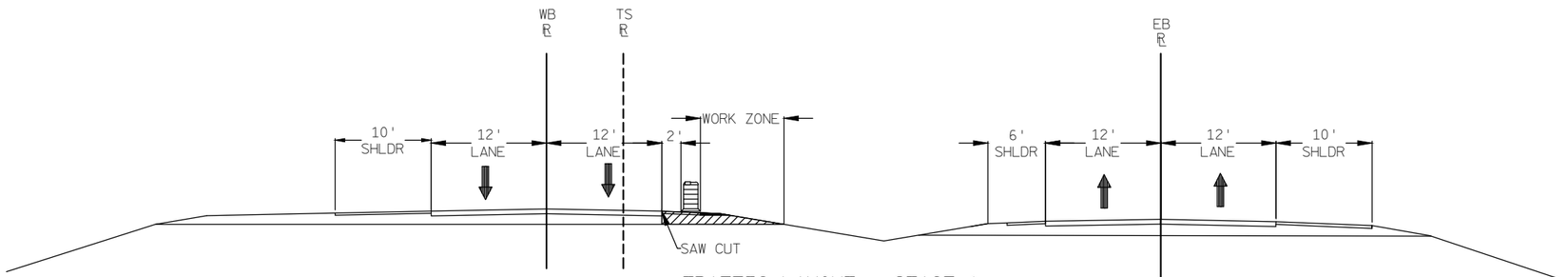


B-37-79
LOOKING EAST



B-37-136
LOOKING EAST

TRAFFIC LAYOUT - STAGE 1
STH 29 BRIDGE OVER WIS RIVER



TRAFFIC LAYOUT - STAGE 1
STH 29 BETWEEN BUS 51 RAMPS

PROJECT NO: 1053-02-74	HWY: STH 29	COUNTY: MARATHON	TRAFFIC CONTROL: STAGE 1 TYPICAL LAYOUT	SHEET 81	E

STAGE 2

PURPOSE:
CONTINUE STRUCTURE CONSTRUCTION IN WISCONSIN RIVER
STAGE 2A: RAISE, REPAIR, AND OVERLAY B-37-113; INSTALL FENCE ON VOLKMAN AVE STRUCTURE OVER STH 29.
STAGE 2B: PAINT B-37-113 OVER STH 29 OUTSIDE LANES
STAGE 2C: PAINT B-37-113 OVER STH 29 MEDIAN LANES

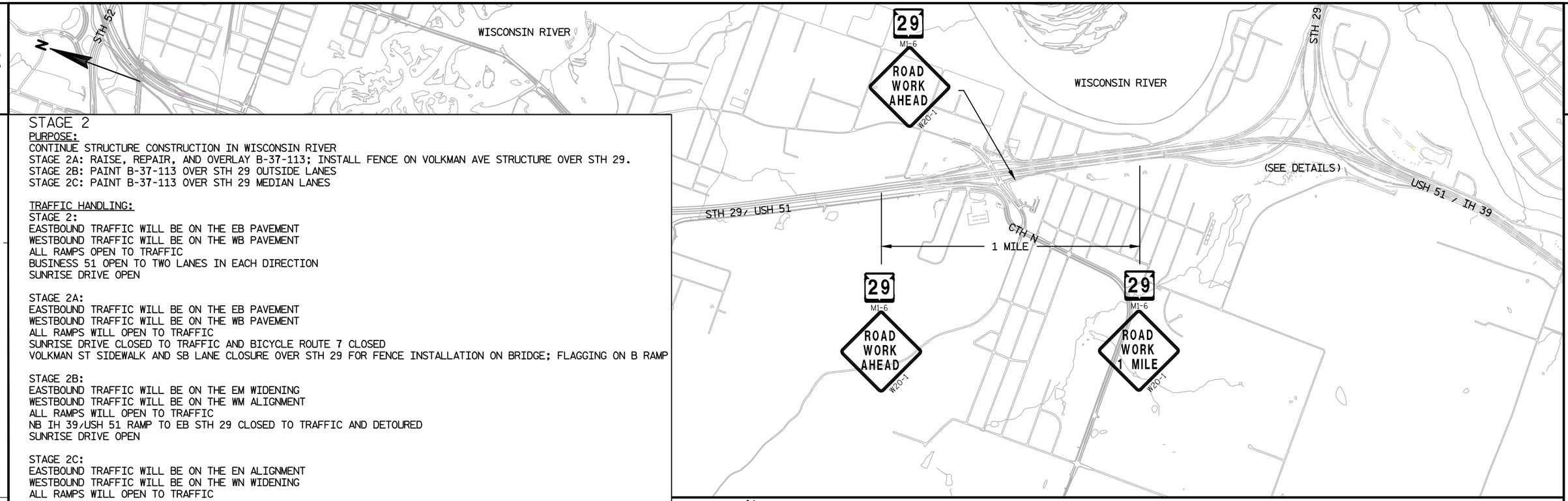
TRAFFIC HANDLING:
STAGE 2:
EASTBOUND TRAFFIC WILL BE ON THE EB PAVEMENT
WESTBOUND TRAFFIC WILL BE ON THE WB PAVEMENT
ALL RAMPS OPEN TO TRAFFIC
BUSINESS 51 OPEN TO TWO LANES IN EACH DIRECTION
SUNRISE DRIVE OPEN

STAGE 2A:
EASTBOUND TRAFFIC WILL BE ON THE EB PAVEMENT
WESTBOUND TRAFFIC WILL BE ON THE WB PAVEMENT
ALL RAMPS WILL OPEN TO TRAFFIC
SUNRISE DRIVE CLOSED TO TRAFFIC AND BICYCLE ROUTE 7 CLOSED
VOLKMAN ST SIDEWALK AND SB LANE CLOSURE OVER STH 29 FOR FENCE INSTALLATION ON BRIDGE; FLAGGING ON B RAMP

STAGE 2B:
EASTBOUND TRAFFIC WILL BE ON THE EM WIDENING
WESTBOUND TRAFFIC WILL BE ON THE WM ALIGNMENT
ALL RAMPS WILL OPEN TO TRAFFIC
NB IH 39/USH 51 RAMP TO EB STH 29 CLOSED TO TRAFFIC AND DETOURED
SUNRISE DRIVE OPEN

STAGE 2C:
EASTBOUND TRAFFIC WILL BE ON THE EN ALIGNMENT
WESTBOUND TRAFFIC WILL BE ON THE WN WIDENING
ALL RAMPS WILL OPEN TO TRAFFIC
SUNRISE DRIVE OPEN

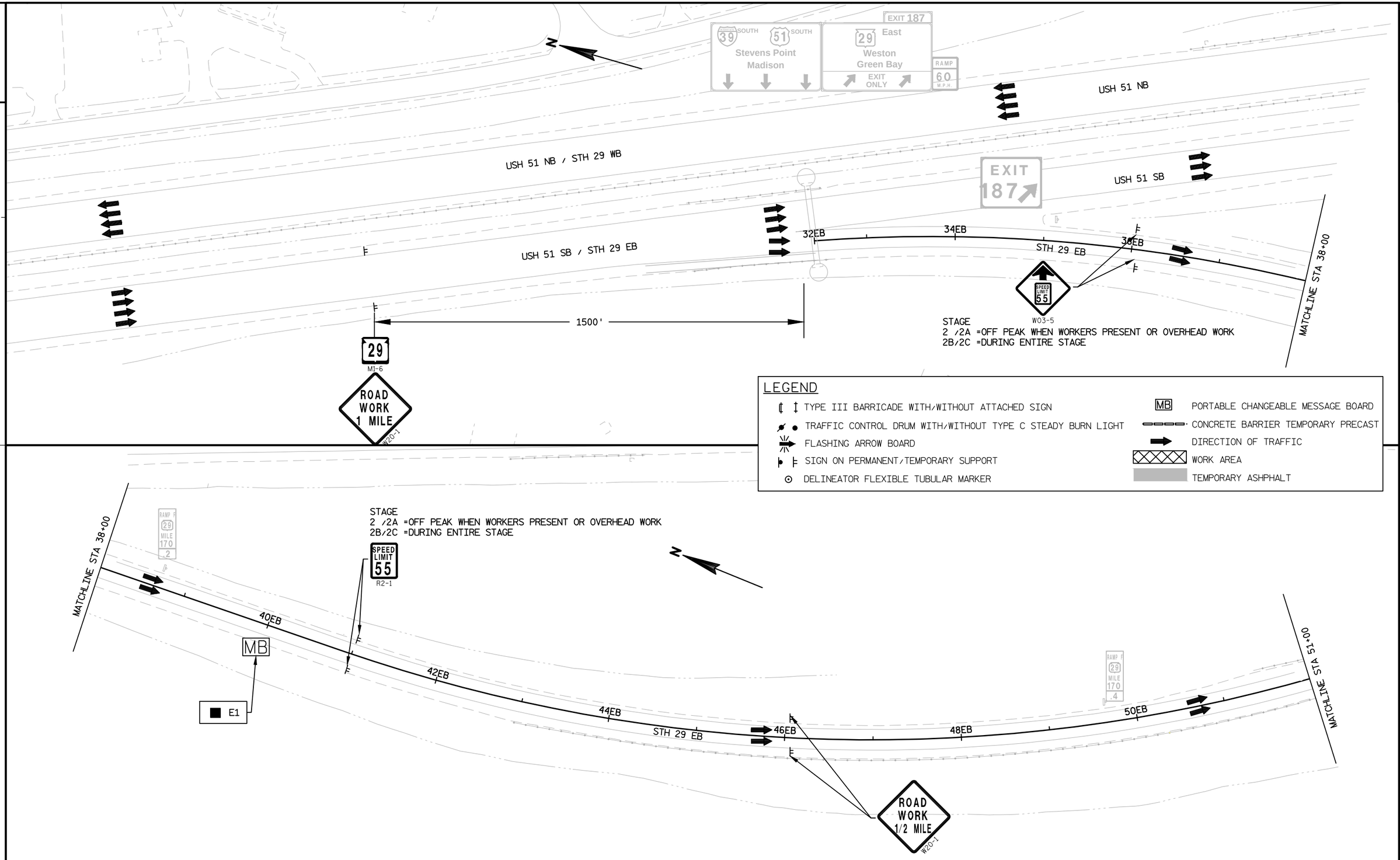
RESTRICTIONS:
STH 29 EB AND WB OFF PEAK AND NIGHT TIME LANE CLOSURES AS NEEDED FOR OVERHEAD WORK
WESTBOUND OUTSIDE SHOULDER CLOSED BETWEEN BUSINESS 51 AND SUNRISE DRIVE



PROJECT NO: 1053-02-74/1053-05-60	HWY: STH 29	COUNTY: MARATHON	TRAFFIC CONTROL: STAGE 2 ADVANCED WARNING	SHEET	E

FILE NAME : S:\DESIGN\DESIGN PROJECTS\1053-02-04 (STH 29)-AYRES-NC\C3D\SHEETSPLAN\026201_TC_S2_OVERVIEW_1053-02-74.DWG PLOT DATE : 10/30/2013 7:24 AM PLOT BY : QUEST CIVIL ENG PLOT NAME : PLOT SCALE : 1 IN:2000 FT
WISDOT/CADDS SHEET 44

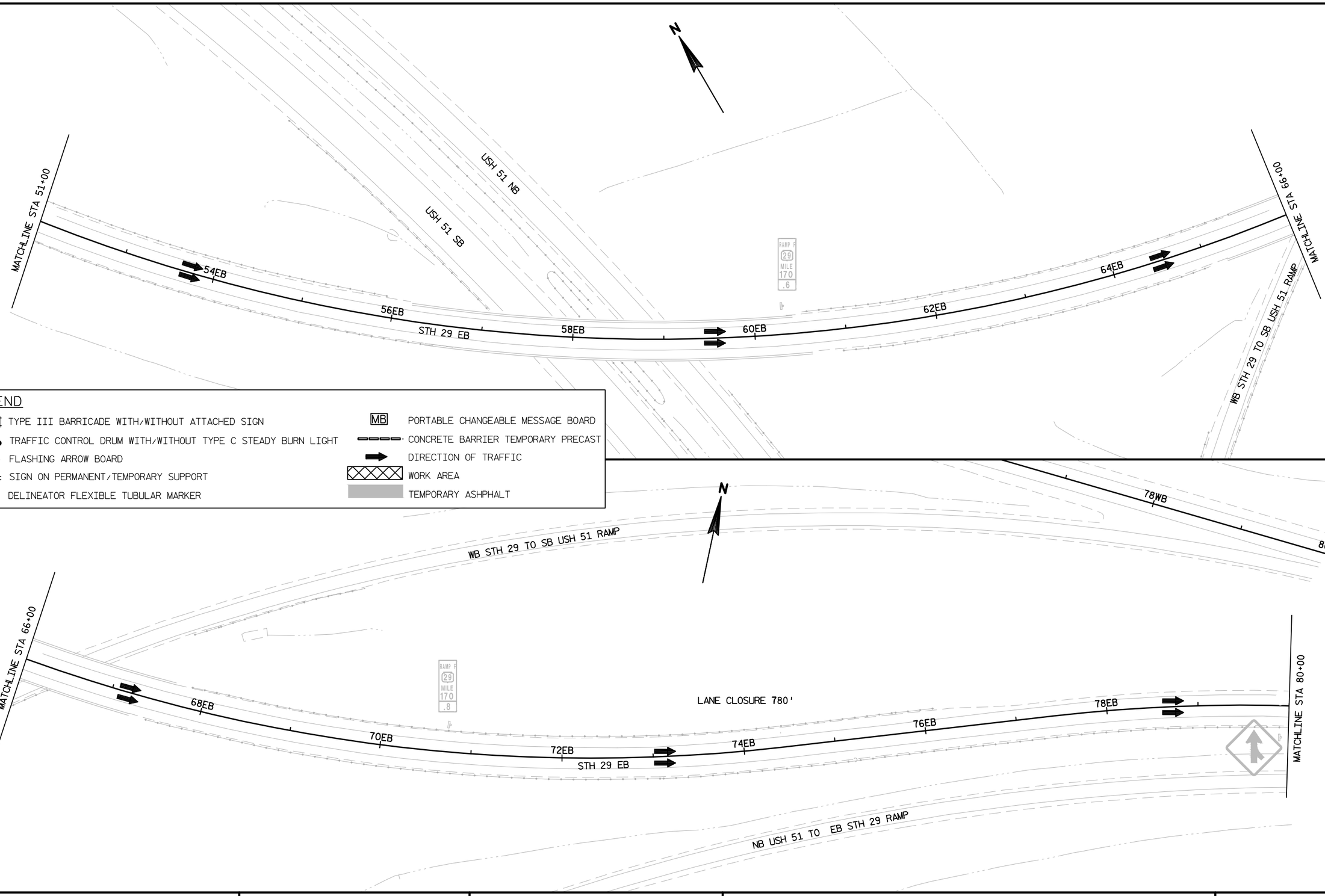
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PROJECT NO:1053-02-74	HWY: STH 29	COUNTY: MARATHON	TRAFFIC CONTROL: STAGE 2 /WINTER 2014-15	SHEET	E

FILE NAME : S:\DESIGN\DESIGN PROJECTS\1053-02-04 (STH 29)-AYRES-NC\C3D\SHEETSPLAN\026211_TC_S2_1053-02-74.DWG PLOT DATE : 10/30/2013 7:41 AM PLOT BY : QUEST CIVIL ENG PLOT NAME : PLOT SCALE : 1 IN:100 FT

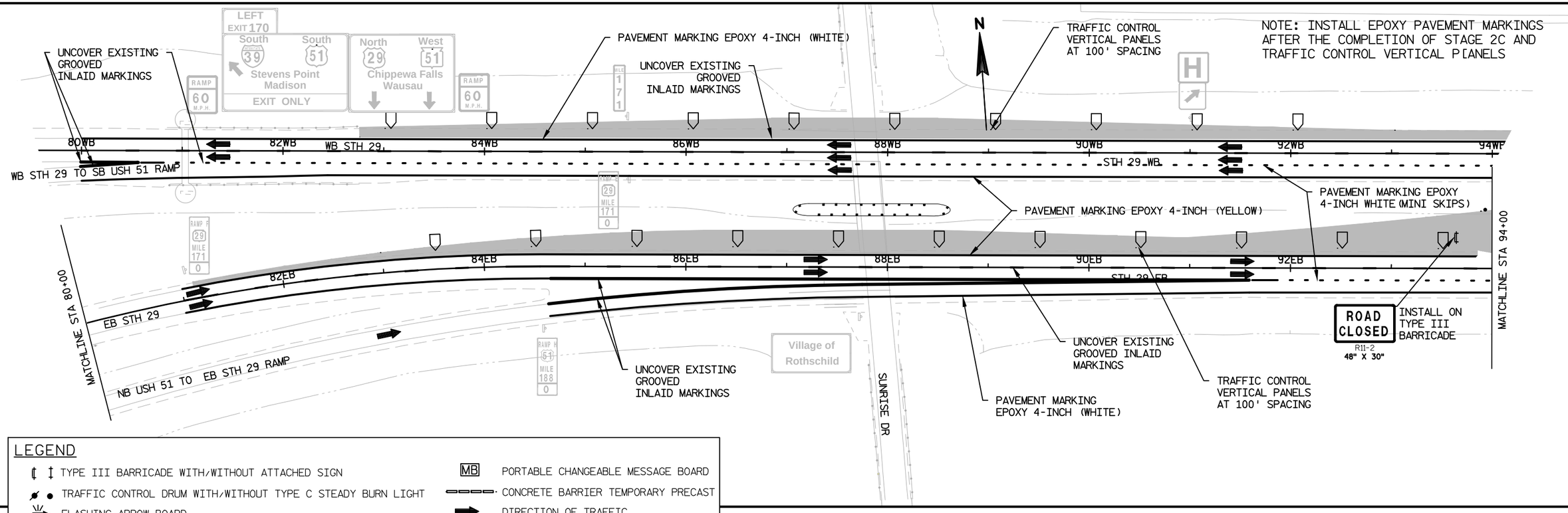
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LEGEND

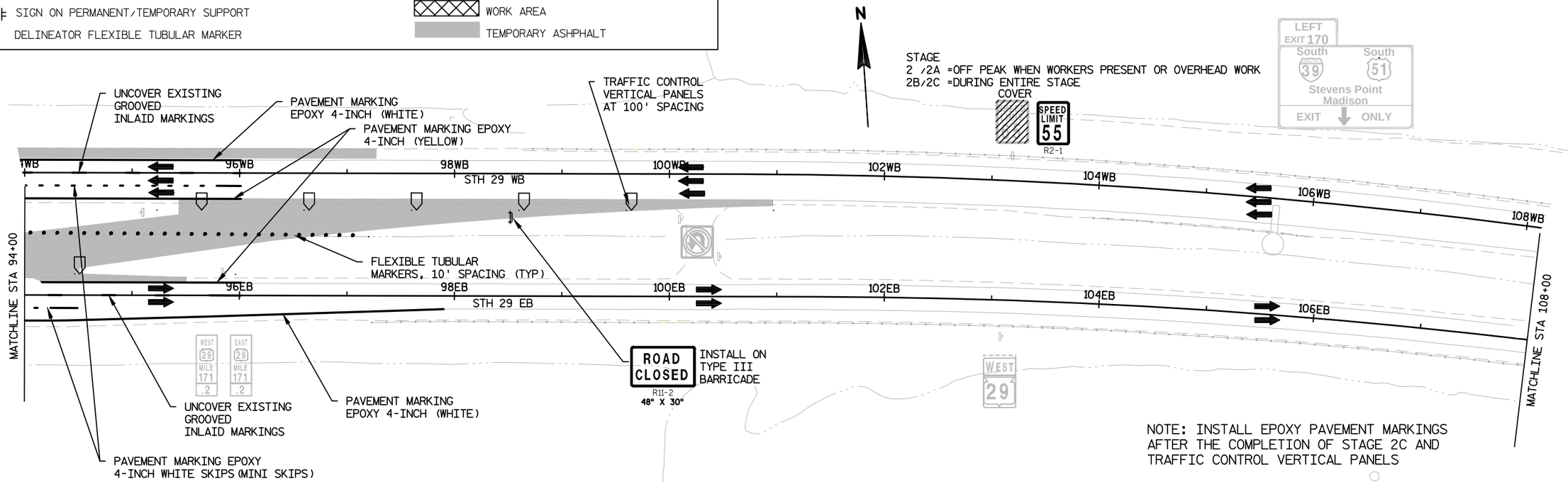
- TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT/TEMPORARY SUPPORT
- DELINEATOR FLEXIBLE TUBULAR MARKER
- MB PORTABLE CHANGEABLE MESSAGE BOARD
- CONCRETE BARRIER TEMPORARY PRECAST
- DIRECTION OF TRAFFIC
- WORK AREA
- TEMPORARY ASHPHALT

PROJECT NO: 1053-02-74	HWY: STH 29	COUNTY: MARATHON	TRAFFIC CONTROL: STAGE 2 /WINTER 2014-15	SHEET 84	E



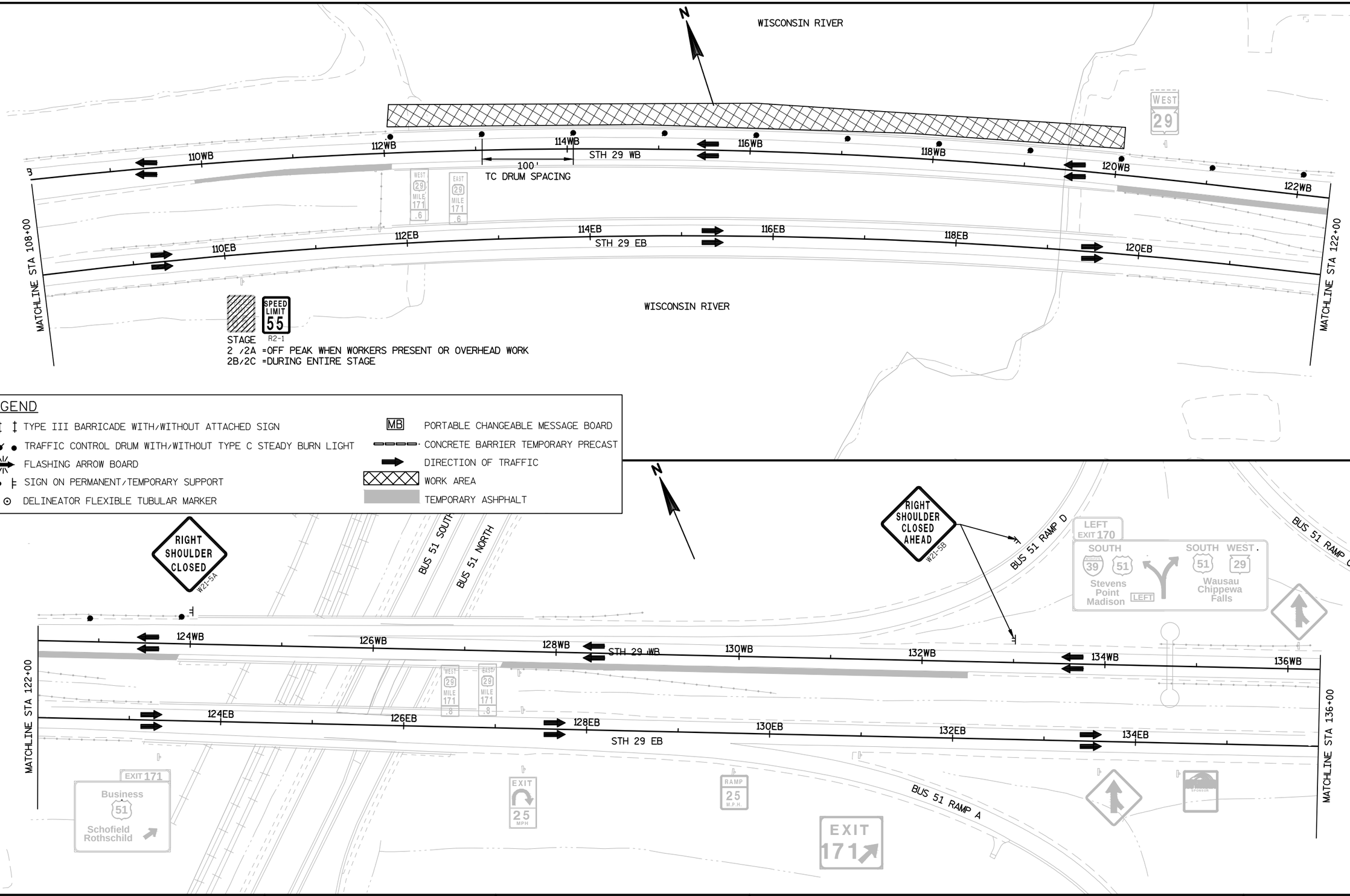
LEGEND

- TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C STEADY BURN LIGHT
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- WORK AREA
- TEMPORARY ASHPHALT



PROJECT NO: 1053-02-74	HWY: STH 29	COUNTY: MARATHON	TRAFFIC CONTROL: STAGE 2 /WINTER 2014-15	SHEET	E

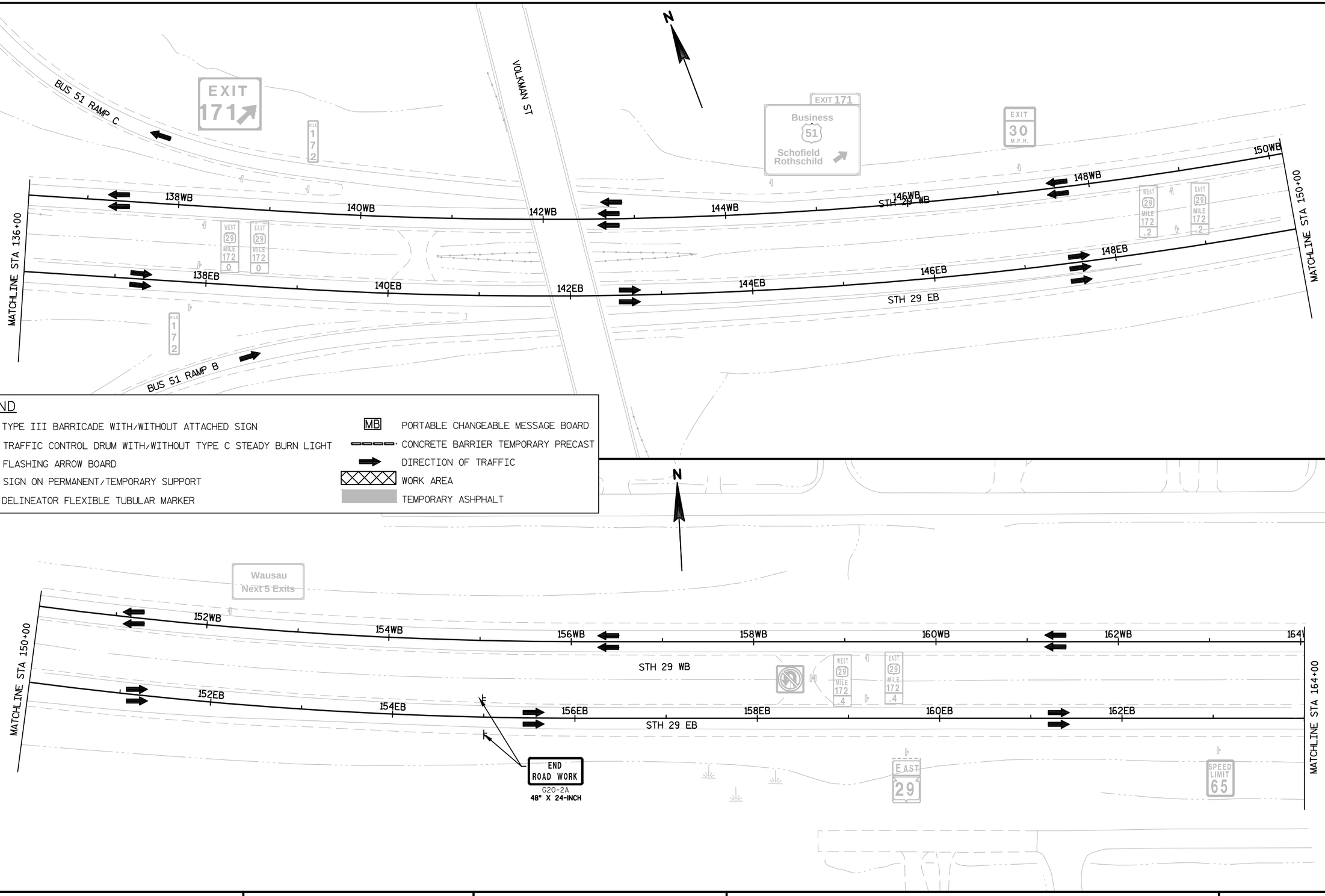
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WISDOT/CADDS SHEET 44



PROJECT NO: 1053-02-74	HWY: STH 29	COUNTY: MARATHON	TRAFFIC CONTROL: STAGE 2 /WINTER 2014-15	SHEET	E

FILE NAME : S:\DESIGN\DESIGN PROJECTS\1053-02-04 (STH 29)-AYRES-NC\C3D\SHEETSPLAN\026211_TC_S2_1053-02-74.DWG PLOT DATE : 10/30/2013 7:43 AM PLOT BY : QUEST CIVIL ENG PLOT NAME : PLOT SCALE : **********

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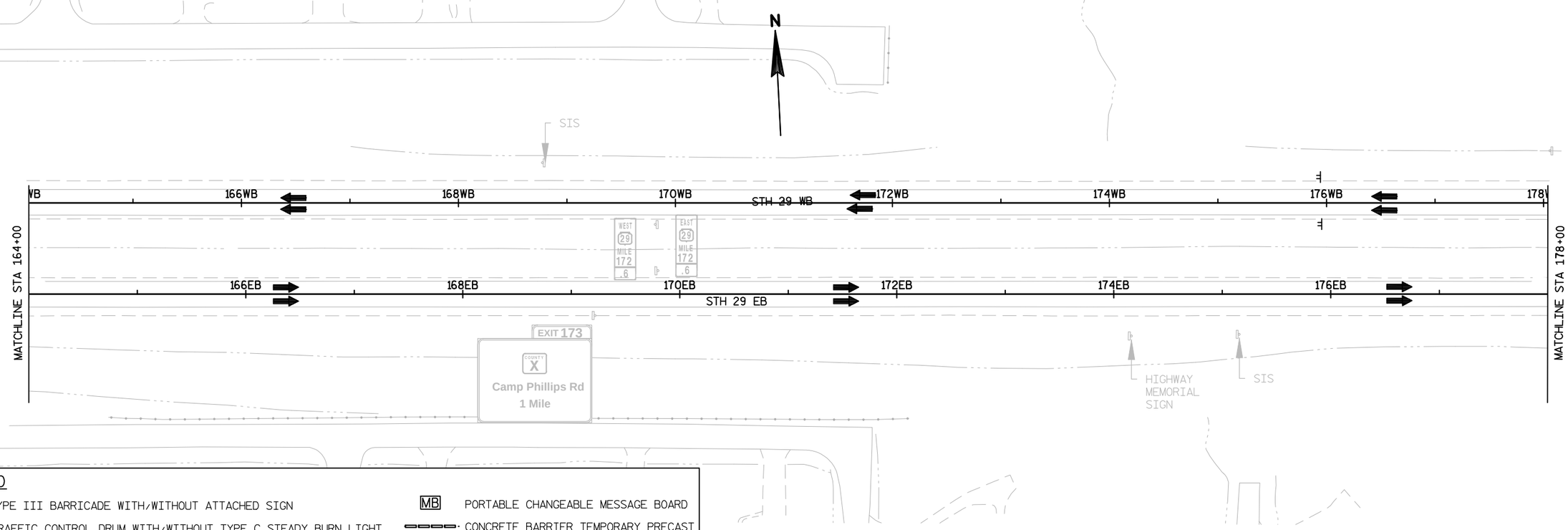
LEGEND

- TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
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- DIRECTION OF TRAFFIC
- WORK AREA
- TEMPORARY ASHPHALT

PROJECT NO: 1053-02-74	HWY: STH 29	COUNTY: MARATHON	TRAFFIC CONTROL: STAGE 2 /WINTER 2014-15	SHEET	E

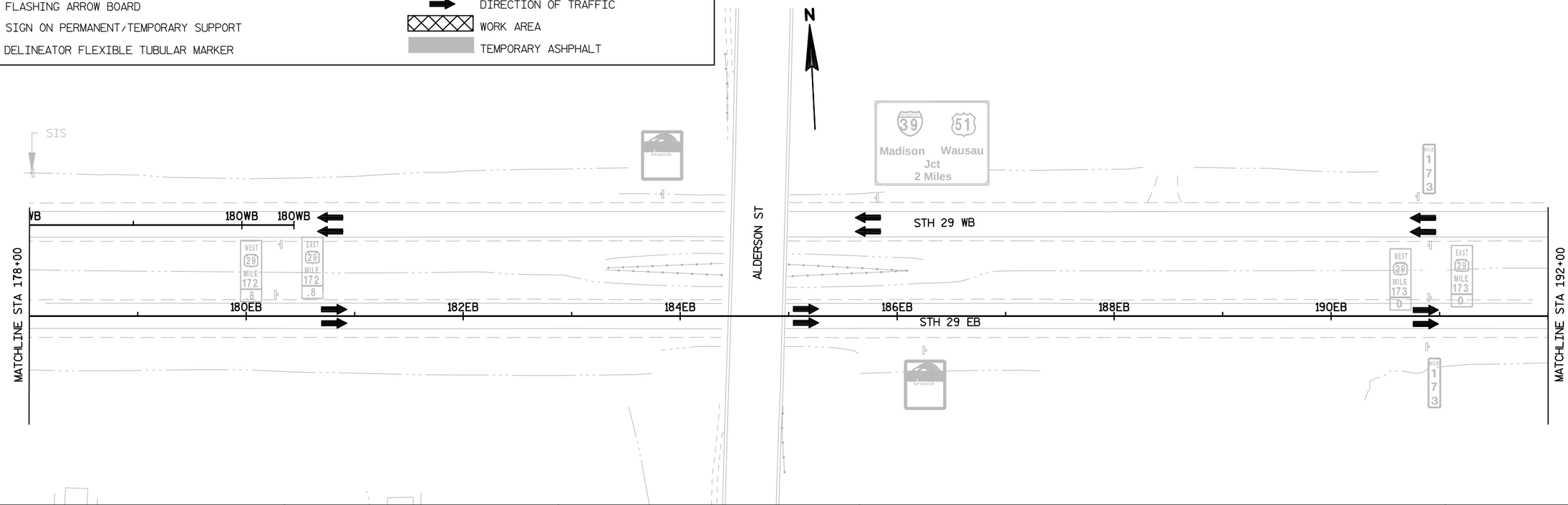
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2



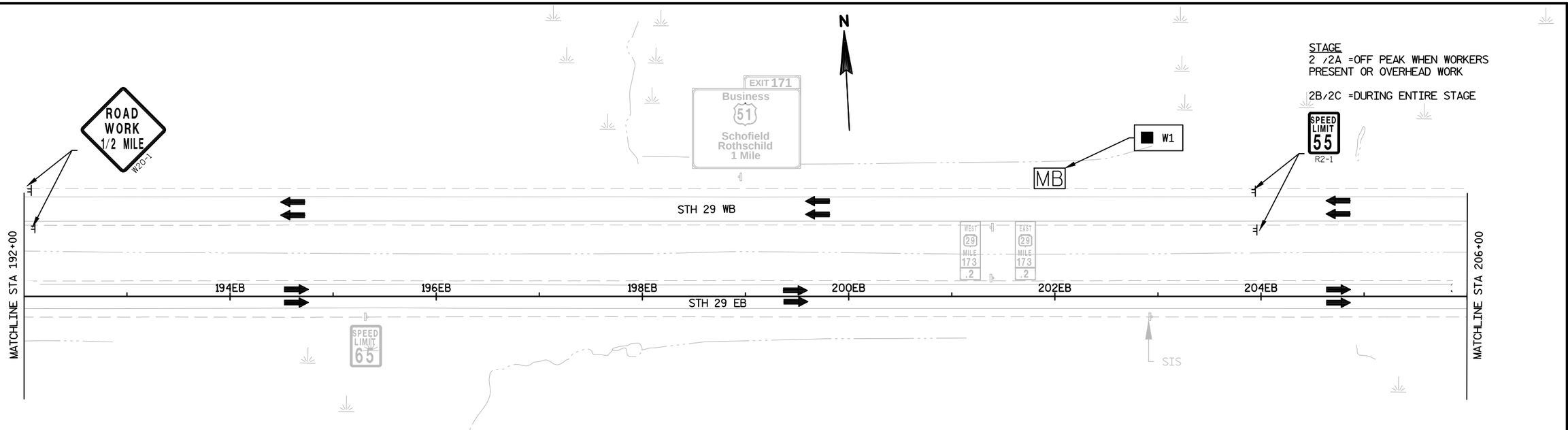
LEGEND

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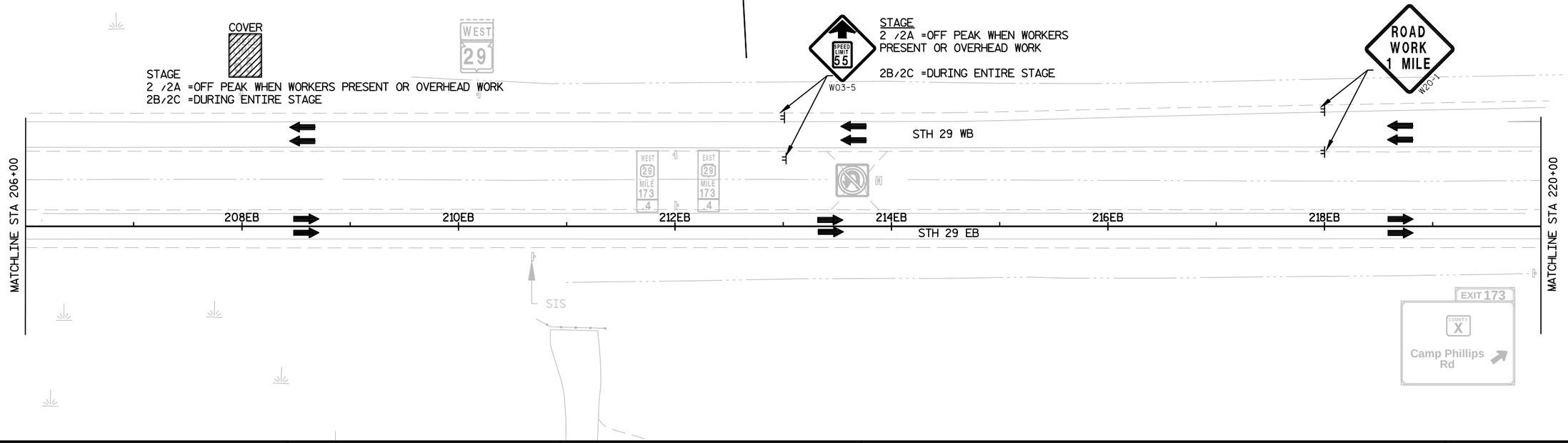
PROJECT NO: 1053-02-74	HWY: STH 29	COUNTY: MARATHON	TRAFFIC CONTROL: STAGE 2 /WINTER 2014-15	SHEET	E

FILE NAME : S:\DESIGN\DESIGN PROJECTS\1053-02-04 (STH 29)-AYRES-NC\C3D\SHEETSPLAN\026211_TC_S2_1053-02-74.DWG PLOT DATE : 10/30/2013 7:43 AM PLOT BY : QUEST CIVIL ENG PLOT NAME : PLOT SCALE : **********
WISDOT/CADDS SHEET 44



LEGEND

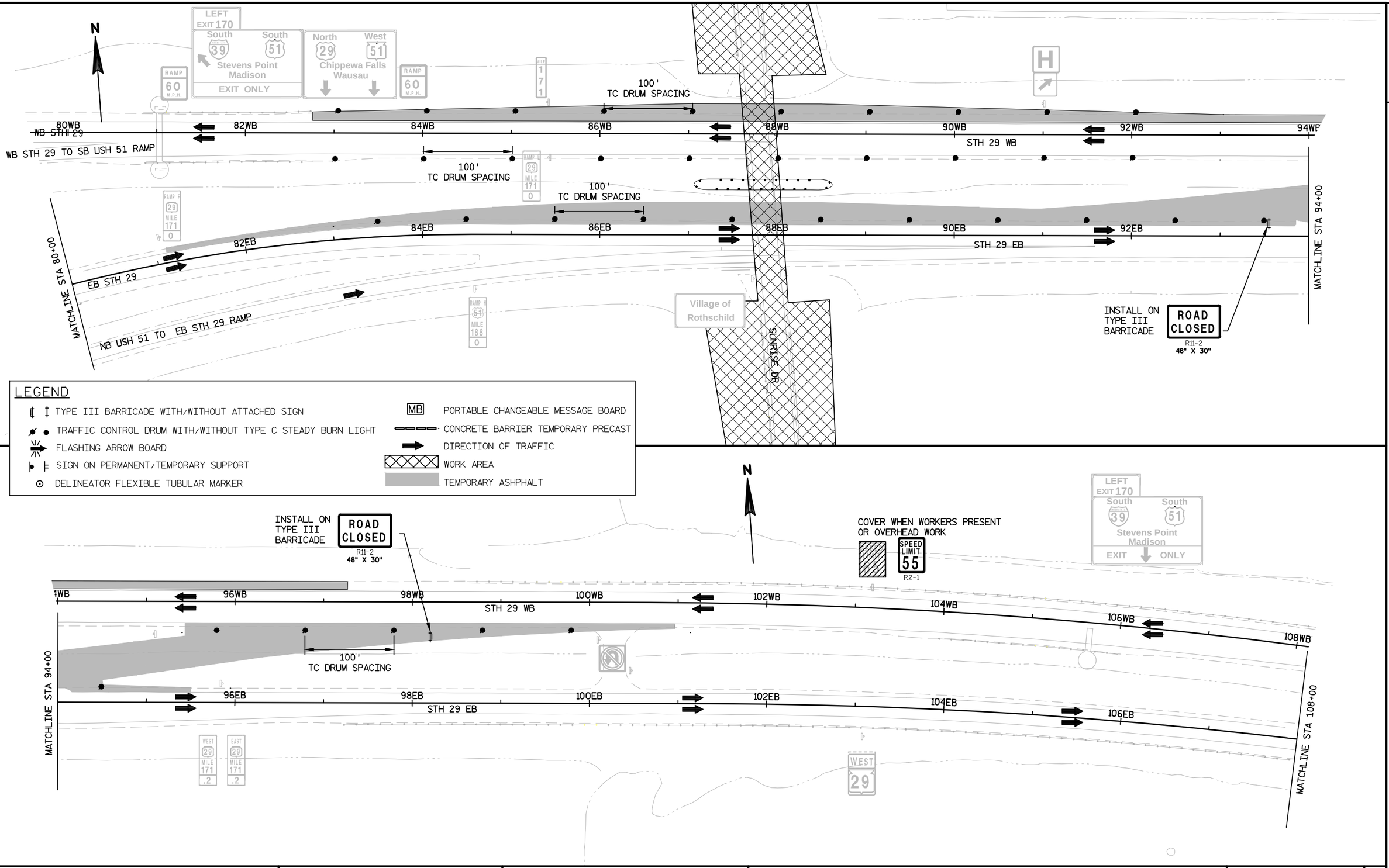
- TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT/TEMPORARY SUPPORT
- DELINEATOR FLEXIBLE TUBULAR MARKER
- MB PORTABLE CHANGEABLE MESSAGE BOARD
- CONCRETE BARRIER TEMPORARY PRECAST
- DIRECTION OF TRAFFIC
- WORK AREA
- TEMPORARY ASHPHALT



PROJECT NO:1053-02-74	HWY: STH 29	COUNTY: MARATHON	TRAFFIC CONTROL: STAGE 2 /WINTER 2014-15	SHEET	E

FILE NAME : S:\DESIGN\DESIGN PROJECTS\1053-02-04 (STH 29)-AYRES-NC\C3D\SHEETSPLAN\026211_TC_S2_1053-02-74.DWG PLOT DATE : 10/30/2013 7:44 AM PLOT BY : QUEST CIVIL ENG PLOT NAME : PLOT SCALE : **********

WISDOT/CADDS SHEET 44



PROJECT NO: 1053-05-60	HWY: STH 29	COUNTY: MARATHON	TRAFFIC CONTROL: STAGE 2A	SHEET	E

FILE NAME : S:\DESIGN\DESIGN PROJECTS\1053-02-04 (STH 29)-AYRES-NC\C3D\SHEETSPLAN\026221_TC_S2A_1053-02-74.DWG PLOT DATE : 10/17/2013 8:47 AM PLOT BY : QUEST CIVIL ENG PLOT NAME : PLOT SCALE : **********

2

N

CTH KK

CTH N

FOX GLOVE RD

CTH N

USH 51 / STH 29

MORNING GLORY RD

LILAC AVE

S1

MB

BRIDGE CLOSED OVER HWY 29

T2-3

BRIDGE OUT
1.5 MILES AHEAD
LOCAL TRAFFIC ONLY

TYPE III BARRICADE

IH 39/USH 51

AZALEA RD

LAKESHORE DR

BRIDGE OUT
0.9 MILES AHEAD
LOCAL TRAFFIC ONLY

TYPE III BARRICADE

BIKE ROUTE 7 CLOSED
2.5 MILES AHEAD

T2-4

MB

S3

MB

SUNRISE DR

S2

BUS 51

STH 29

BRIDGE CLOSED OVER HWY 29

T2-5

BRIDGE CLOSED OVER HWY 29

T2-7

BIKE ROUTE 7 CLOSED .3 MILES AHEAD

T2-8

T2-6

BIKE ROUTE 7 CLOSED .9 MILES AHEAD

PCMS S3
PLACE TEN DAYS
PRIOR TO CLOSURE

BRIDGE OVER HWY 29

TO CLOSE XX/XX/XX

PCMS S2
PLACE TEN DAYS
PRIOR TO CLOSURE

BRIDGE OVER HWY 29

TO CLOSE XX/XX/XX

BUS 51

BRIDGE CLOSED OVER HWY 29

T2-9

BIKE ROUTE 7 CLOSED 1.9 MILES AHEAD

T2-10

PCMS S1
PLACE TEN DAYS
PRIOR TO CLOSURE

BRIDGE OVER HWY 29

TO CLOSE XX/XX/XX

SUNRISE CLOSED OVER 29

USE ALT ROUTE

DURING CLOSURE

LEGEND

- TYPE III BARRICADE WITH/WITHOUT SIGN
- MB PCMS
- TC SIGN
- WORK ZONE
- MARATHON COUNTY BIKE ROUTE #7

PROJECT NO: 1053-05-60	HWY: STH 29	COUNTY: MARATHON	TRAFFIC CONTROL: STAGE 2A (SUNRISE DRIVE)	SHEET 91	E

2

IH 39 / USH 51

AZALEA RD

SUNRISE DR

SUNRISE CT

STH 29

LAKESHORE DR

LIBERTY PARK ENTRANCE

ROAD CLOSED 1000 FT
W20-3

ROAD CLOSED 500 FT
W20-3

ROAD CLOSED TO THRU TRAFFIC
R11-4
60" X 30"
PLACE ON TYPE III BARRICADE

R11-2B
48" X 30"
BRIDGE OUT
TYPE III BARRICADE

BP: 0+00.00

PC: 2+63.07

PT: 18+19.41

EP: 29+84.69

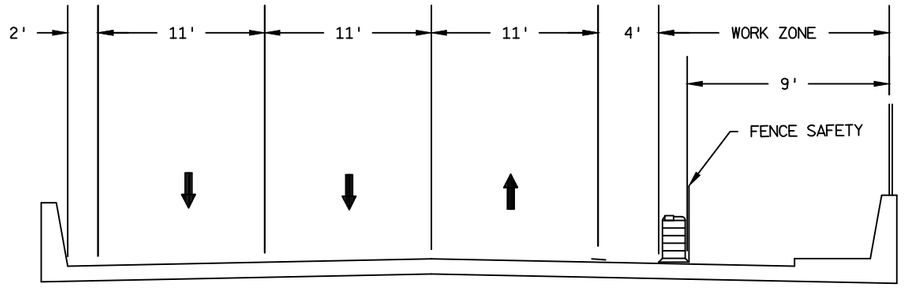
LEGEND

- ↕/↕ TYPE III BARRICADE WITH/WITHOUT SIGN
- MB PCMS
- TC SIGN
- WORK ZONE
- MARATHON COUNTY BIKE ROUTE #7

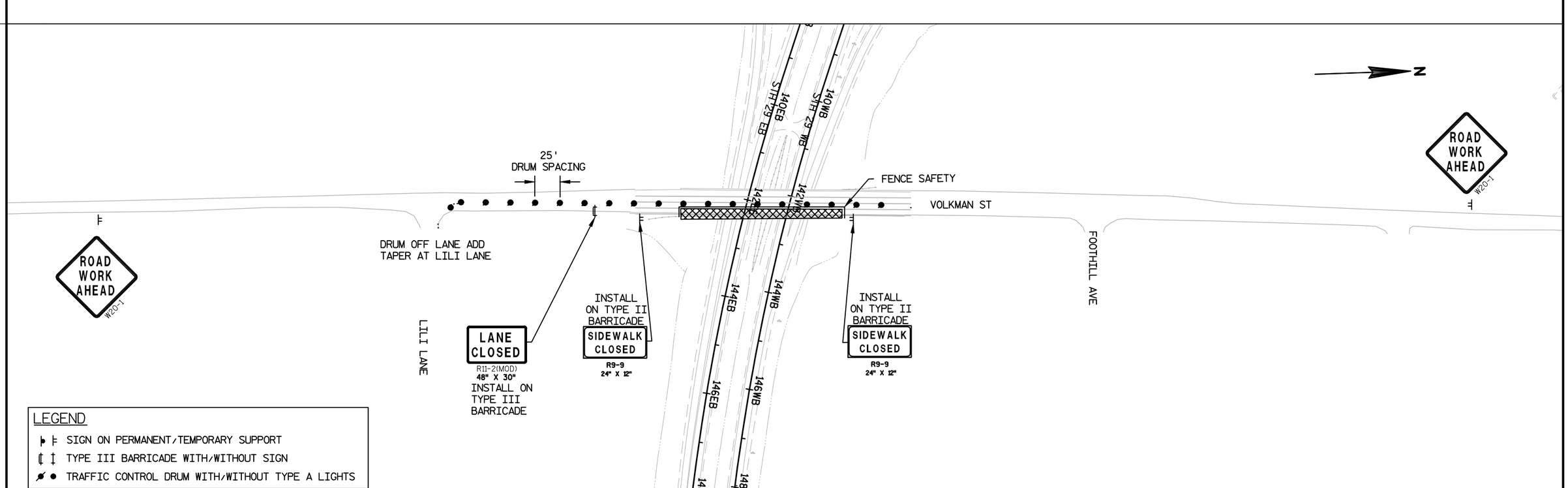
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FILE NAME : S:\DESIGN\DESIGN PROJECTS\1053-02-04 (STH 29)-AYRES-NC\C3D\SHEETSPLAN\026222_TC_S2A(SUNRISE)_1053-02-74.DWG PLOT DATE : 10/30/2013 11:43 AM PLOT BY : QUEST CIVIL ENG PLOT NAME : PLOT SCALE : 1 IN:500 FT

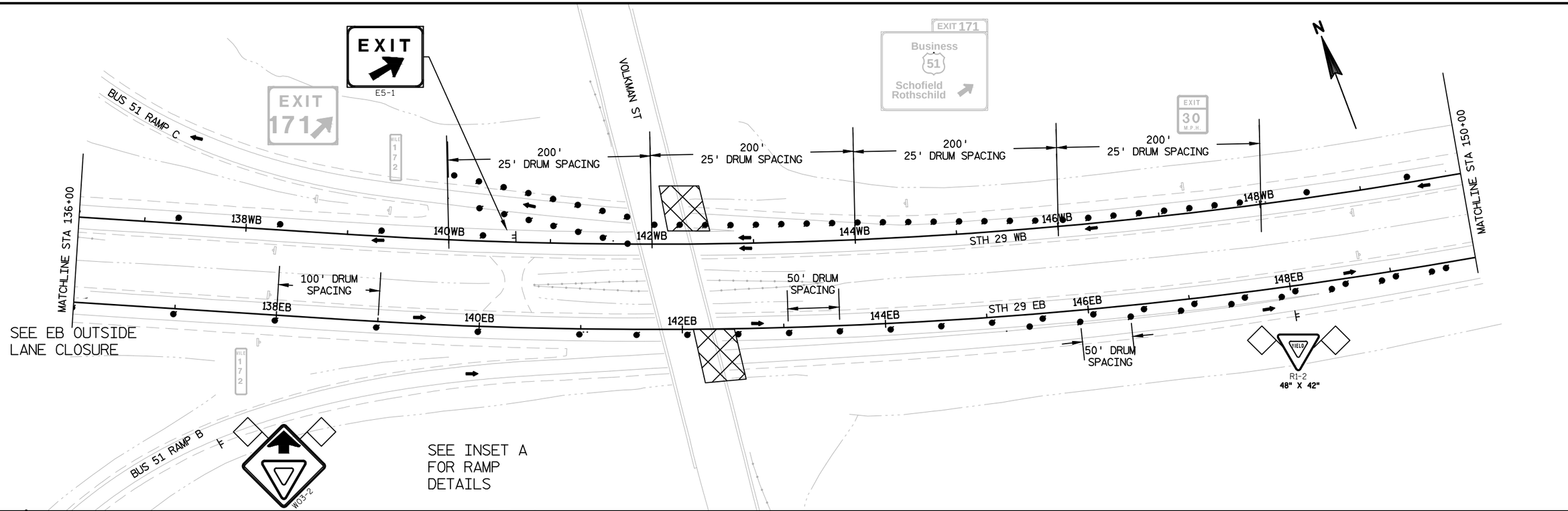
WISDOT/CADDS SHEET 42

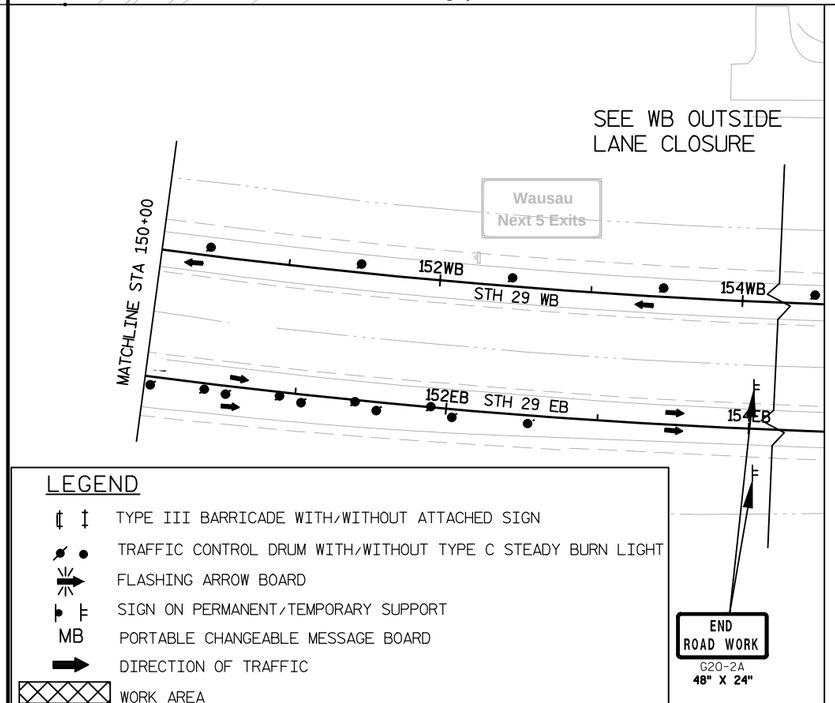


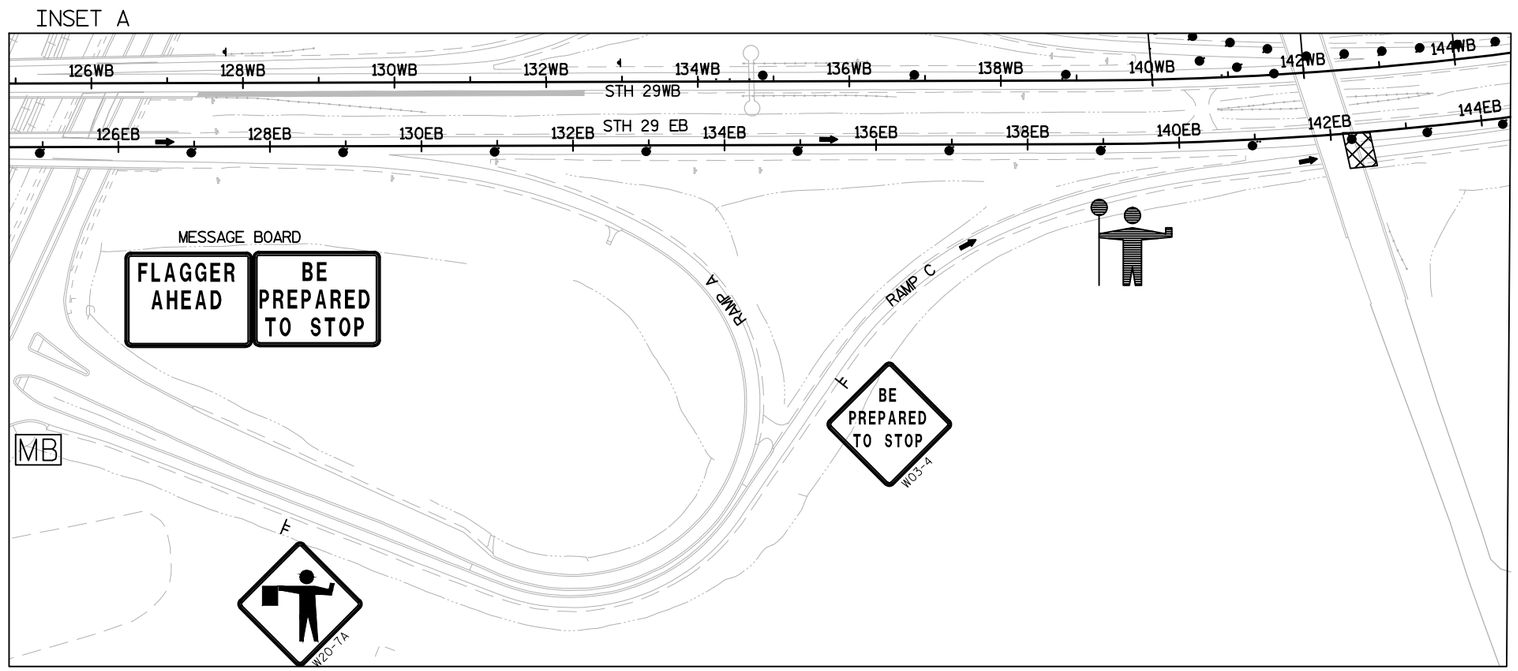
TYPICAL SECTION OVER STRUCTURE



PROJECT NO: 1053-02-74	HWY: STH 29	COUNTY: MARATHON	TRAFFIC CONTROL: STAGE 2A /VOLKMAN STREET FENCE	SHEET 93	E







PROJECT NO: 1053-02-74	HWY: STH 29	COUNTY: MARATHON	TRAFFIC CONTROL: STAGE 2A /VOLKMAN FENCE OVER STH 29 AND RAMPS	SHEET 94	E

TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE 4-INCH (WHITE)

TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE 8-INCH (WHITE)

WB STH 29

WB STH 29 TO SB USH 51 RAMP

TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE 4-INCH (YELLOW)

LEFT EXIT 170
South 39 Stevens Point Madison
South 51
EXIT ONLY
North 29 Chippewa Falls Wausau
West 51

RAMP 60 M.P.H.

50' TC DRUM SPACING

SUNRISE DR (OPEN)

N

TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE 4-INCH (WHITE) WITH TEMPORARY RAISED PAVEMENT MARKERS @ 25' SPACING

TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE 4-INCH (YELLOW) WITH TEMPORARY RAISED PAVEMENT MARKERS @ 25' SPACING

STH 29 WB

100' TC DRUM SPACING

TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE 4-INCH (YELLOW) WITH TEMPORARY RAISED PAVEMENT MARKERS @ 25' SPACING

TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE 4-INCH (WHITE) WITH TEMPORARY RAISED PAVEMENT MARKERS @ 25' SPACING

100' TC DRUM SPACING

STAY IN LANE R4-9 24"X30"

MATCHLINE STA 80+00

EB STH 29

INSTALL CRASH CUSHION TEMPORARY

XXXXXXXXXXXXXXX NB USH 51 TO EB STH 29 RAMP (CLOSED) XXXXXXXXXXXXXXX XXXXXXXXXXXXXXX XXXXXXXXXXXXXXX XXXXXXXXXXXXXX

TEMPORARY PAVEMENT MARKING REMOVABLE TAPE, 4-INCH (WHITE)

LEFT EXIT 170 — South 39 / South 51 — Stevens Point Madison — EXIT ONLY

North 29 / West 51 — Chippewa Falls Wausau

RAMP 60 M.P.H.

80WB — WB STH 29

WB STH 29 TO SB USH 51 RAMP

TEMPORARY PAVEMENT MARKING REMOVABLE TAPE, 4-INCH (WHITE MINI SKIPS)

INSTALL CRASH CUSHION TEMPORARY

MATCHLINE STA 80+00

EB STH 29

81EN — 82EB — 82WN — 82WB — 84WN — 84WB — 86WN — 86WB — 86EB — 86EN — 88EB — 88EN — 90WN — 90WB — 90EB — 90EN — 92WN — 92WB — 92EN — 94WB

STH 29 WB — STH 29 EB

TEMPORARY PAVEMENT MARKING REMOVABLE TAPE, 4-INCH (YELLOW)

TEMPORARY PAVEMENT MARKING REMOVABLE TAPE, 4-INCH (WHITE)

STAY IN LANE — R4-9 — 24"X30"

NB USH 51 TO EB STH 29 RAMP

TEMPORARY PAVEMENT MARKING REMOVABLE TAPE, 8-INCH (WHITE)

Village of Rothschild

SUNRISE DR (OPEN)

TEMPORARY PAVEMENT MARKING REMOVABLE TAPE, 4-INCH (WHITE) WITH TEMPORARY RAISED PAVEMENT MARKERS @ 25' SPACING

100' TC DRUM SPACING

TEMPORARY PAVEMENT MARKING REMOVABLE TAPE, 4-INCH (YELLOW) WITH TEMPORARY RAISED PAVEMENT MARKERS @ 25' SPACING

TEMPORARY PAVEMENT MARKING REMOVABLE TAPE, 4-INCH (WHITE MINI SKIPS)

ROAD CLOSED — R11-2 — 48" X 30" — INSTALL ON TYPE III BARRICADE

TEMPORARY PAVEMENT MARKING REMOVABLE TAPE, 4-INCH (WHITE)

MATCHLINE STA 94+00

INSTALL AT STA 76+00 EB RT & LT — W24-1AR

N

LEGEND

- TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT/TEMPORARY SUPPORT
- DELINEATOR FLEXIBLE TUBULAR MARKER
- MB — PORTABLE CHANGEABLE MESSAGE BOARD
- CONCRETE BARRIER TEMPORARY PRECAST
- DIRECTION OF TRAFFIC
- WORK AREA
- TEMPORARY ASHPHALT

PARAMOUNT DR

TEMPORARY PAVEMENT MARKING REMOVABLE TAPE, 4-INCH (YELLOW)

TEMPORARY PAVEMENT MARKING REMOVABLE TAPE, 4-INCH (WHITE)

STAY IN LANE — R4-9 — 24"X30"

CRASH CUSHION INSTALLED FROM STAGE 2B

LANE CLOSED — R11-2(MOD) — 48" X 30" — INSTALL ON TYPE III BARRICADE

W24-1AR

COVER

SPEED LIMIT 55 — R2-1

LEFT EXIT 170 — South 39 / South 51 — Stevens Point Madison

LEFT 1/2 MILE — RETAIN FROM STAGE 2B

95WB — 96WB — 98WB — 100WB — 102WB — 104WB — 106WB — 108WB

STH 29 WB

20' MIN

8:1 TAPER MIN

TEMPORARY PAVEMENT MARKING REMOVABLE TAPE, 4-INCH (WHITE) WITH TEMPORARY RAISED PAVEMENT MARKERS @ 25' SPACING

NO CRASH CUSHION TEMPORARY NEEDED

100' TC DRUM SPACING

EXTEND DRUMS TO STA 112+00

95EN — 96EB — 98EB — 100EB — 102EB — 104EB — 106EB

STH 29 EB

MATCHLINE STA 94+00

MATCHLINE STA 108+00

ROAD CLOSED — R11-2 — 48" X 30" — INSTALL ON TYPE III BARRICADE

WEST 29 MILE 171 .2 — EAST 29 MILE 171 .2

WEST 29

LANE CLOSED — R11-2(MOD) — 48" X 30" — INSTALL ON TYPE III BARRICADE

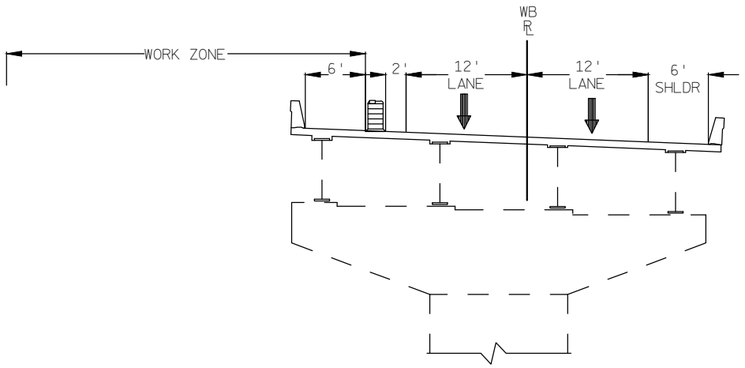
TEMPORARY PAVEMENT MARKING REMOVABLE TAPE, 4-INCH (YELLOW) WITH TEMPORARY RAISED PAVEMENT MARKERS @ 25' SPACING

TEMPORARY PAVEMENT MARKING REMOVABLE TAPE, 4-INCH (WHITE MINI SKIPS)

TEMPORARY PAVEMENT MARKING REMOVABLE TAPE, 4-INCH (WHITE)

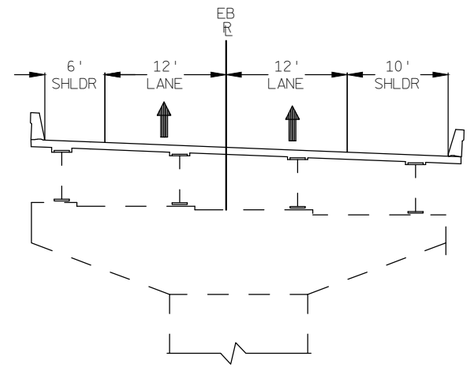
PROJECT NO: 1053-05-60	HWY: STH 29	COUNTY: MARATHON	TRAFFIC CONTROL: STAGE 2C TRAFFIC CONTROL	SHEET	E

FILE NAME : S:\DESIGN\DESIGN PROJECTS\1053-02-04 (STH 29)-AYRES-NC\C3D\SHEETSPLAN\026241_TC_S2C_1053-02-74.DWG PLOT DATE : 10/18/2013 11:04 AM PLOT BY : QUEST CIVIL ENG PLOT NAME : PLOT SCALE : ********** WISDOT/CADDS SHEET 44

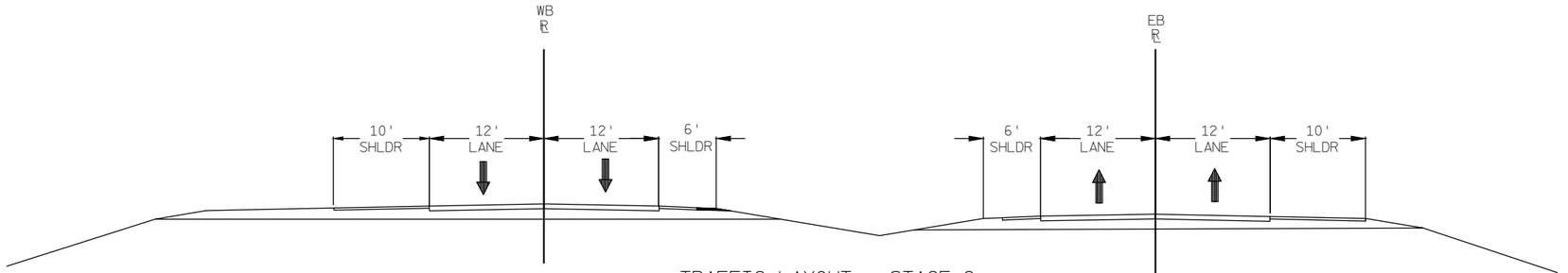


B-37-79
LOOKING EAST

TRAFFIC LAYOUT - STAGE 2
STH 29 BRIDGE OVER WIS RIVER

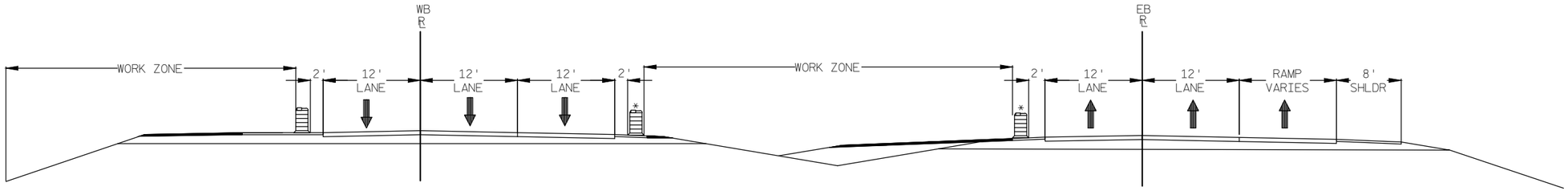


B-37-136
LOOKING EAST



TRAFFIC LAYOUT - STAGE 2
STH 29 BETWEEN BUS 51 RAMPS

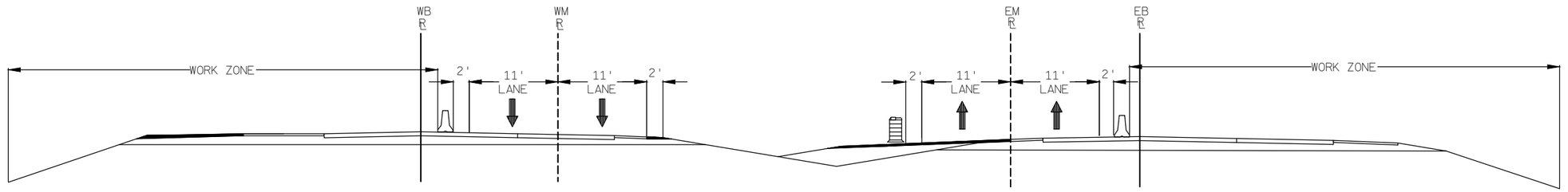
PROJECT NO: 1053-02-74	HWY: STH 29	COUNTY: MARATHON	TRAFFIC CONTROL: STAGE 2 TYPICAL LAYOUT	SHEET 97	E



TRAFFIC LAYOUT - STAGE 2 AND 2A

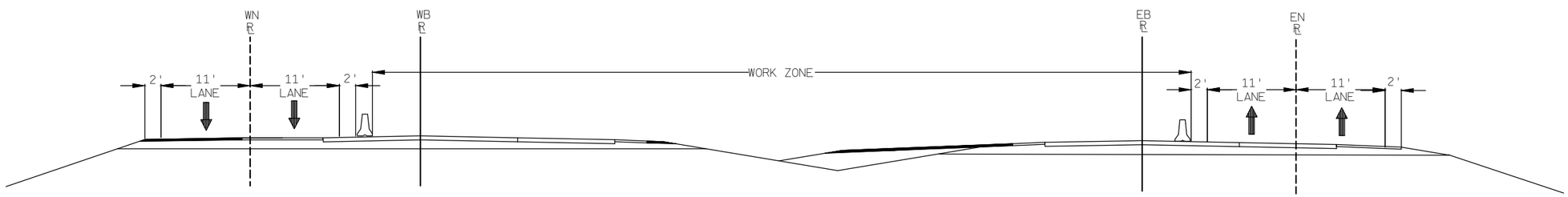
STH 29 BETWEEN SUNRISE DRIVE AND WIS RIVER

* MEDIAN DRUMS IN STAGE 2A ONLY



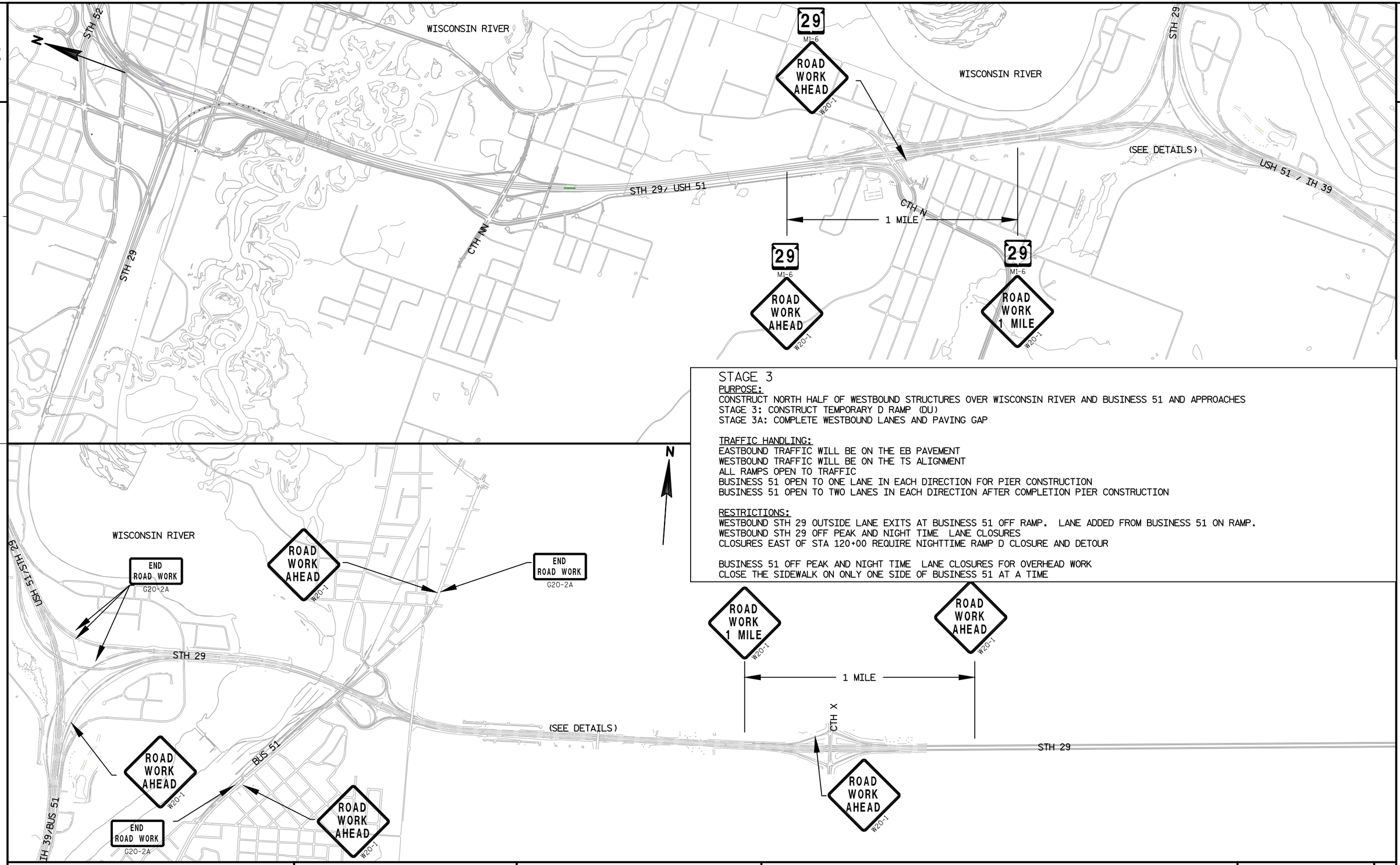
TRAFFIC LAYOUT - STAGE 2B

STH 29 BETWEEN SUNRISE DRIVE AND WIS RIVER



TRAFFIC LAYOUT - STAGE 2C

STH 29 BETWEEN SUNRISE DRIVE AND WIS RIVER



STAGE 3

PURPOSE:
CONSTRUCT NORTH HALF OF WESTBOUND STRUCTURES OVER WISCONSIN RIVER AND BUSINESS 51 AND APPROACHES
STAGE 3: CONSTRUCT TEMPORARY D RAMP (DU)
STAGE 3A: COMPLETE WESTBOUND LANES AND PAVING GAP

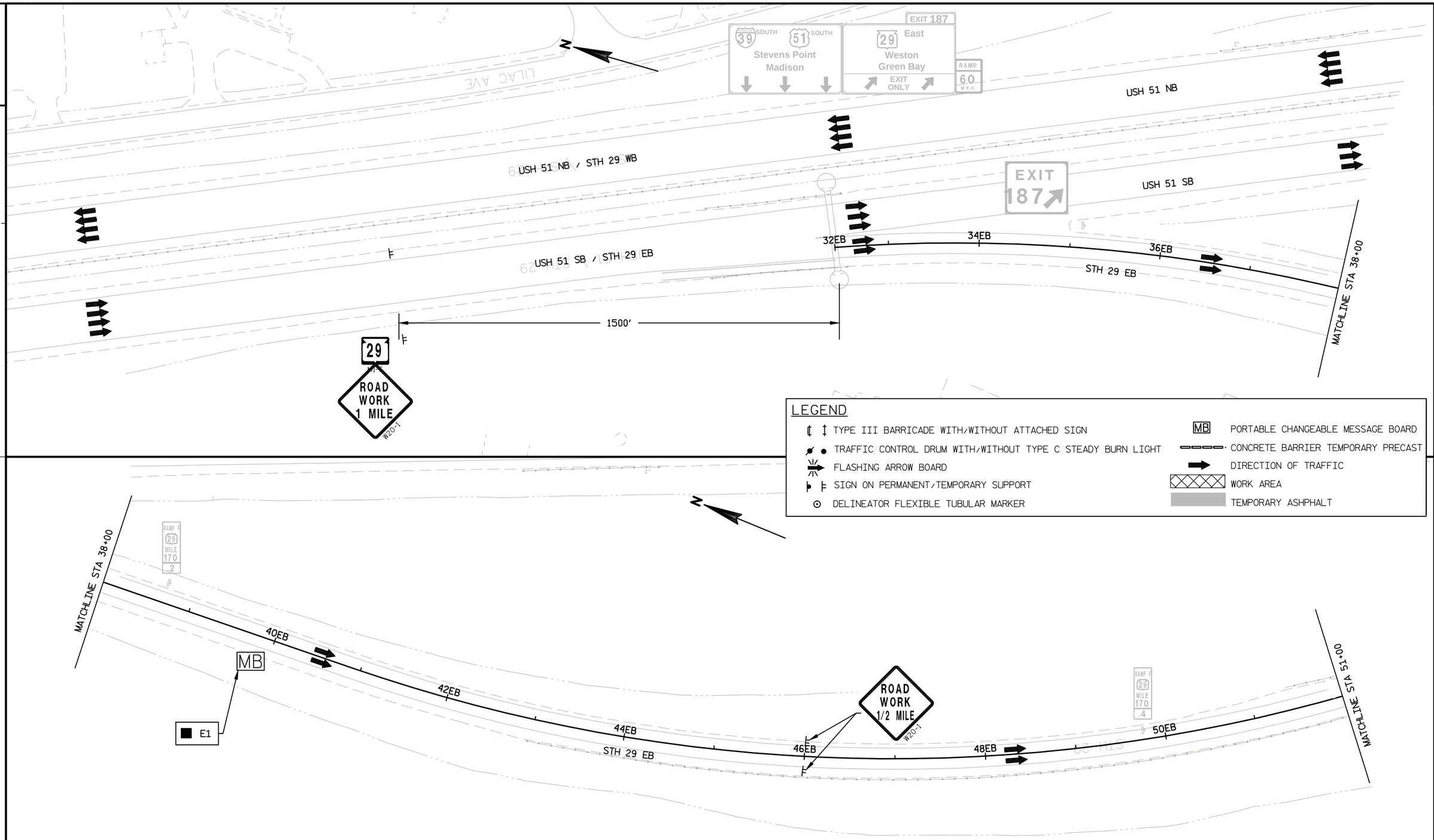
TRAFFIC HANDLING:
EASTBOUND TRAFFIC WILL BE ON THE EB PAVEMENT
WESTBOUND TRAFFIC WILL BE ON THE TS ALIGNMENT
ALL RAMPS OPEN TO TRAFFIC
BUSINESS 51 OPEN TO ONE LANE IN EACH DIRECTION FOR PIER CONSTRUCTION
BUSINESS 51 OPEN TO TWO LANES IN EACH DIRECTION AFTER COMPLETION PIER CONSTRUCTION

RESTRICTIONS:
WESTBOUND STH 29 OUTSIDE LANE EXITS AT BUSINESS 51 OFF RAMP. LANE ADDED FROM BUSINESS 51 ON RAMP.
WESTBOUND STH 29 OFF PEAK AND NIGHT TIME LANE CLOSURES
CLOSURES EAST OF STA 120+00 REQUIRE NIGHTTIME RAMP D CLOSURE AND DETOUR

BUSINESS 51 OFF PEAK AND NIGHT TIME LANE CLOSURES FOR OVERHEAD WORK
CLOSE THE SIDEWALK ON ONLY ONE SIDE OF BUSINESS 51 AT A TIME

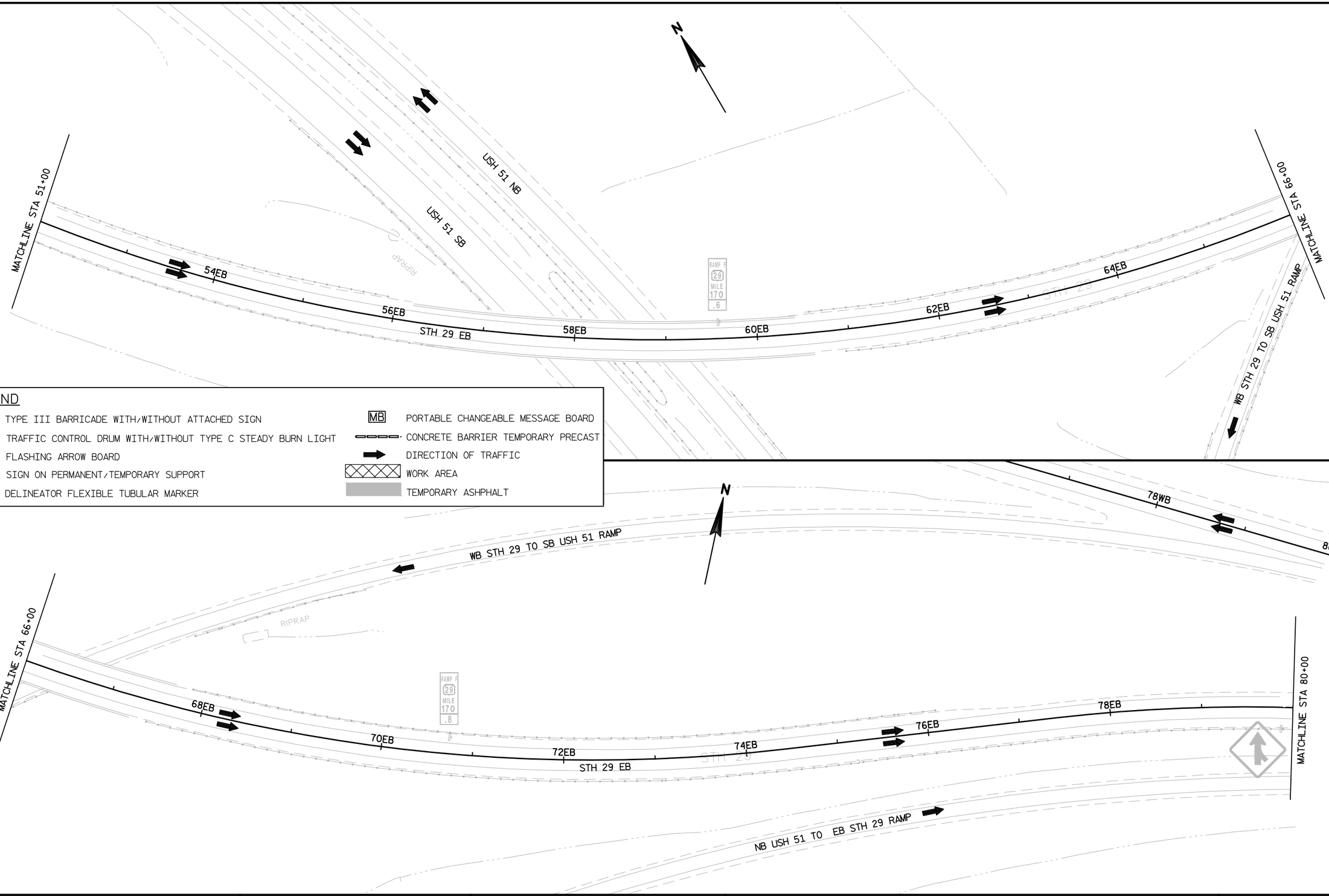
PROJECT NO:1053-02-74	HWY: STH 29	COUNTY: MARATHON	TRAFFIC CONTROL: STAGE 3 TRAFFIC CONTROL ADVANCED WARNING	SHEET 99	E

2



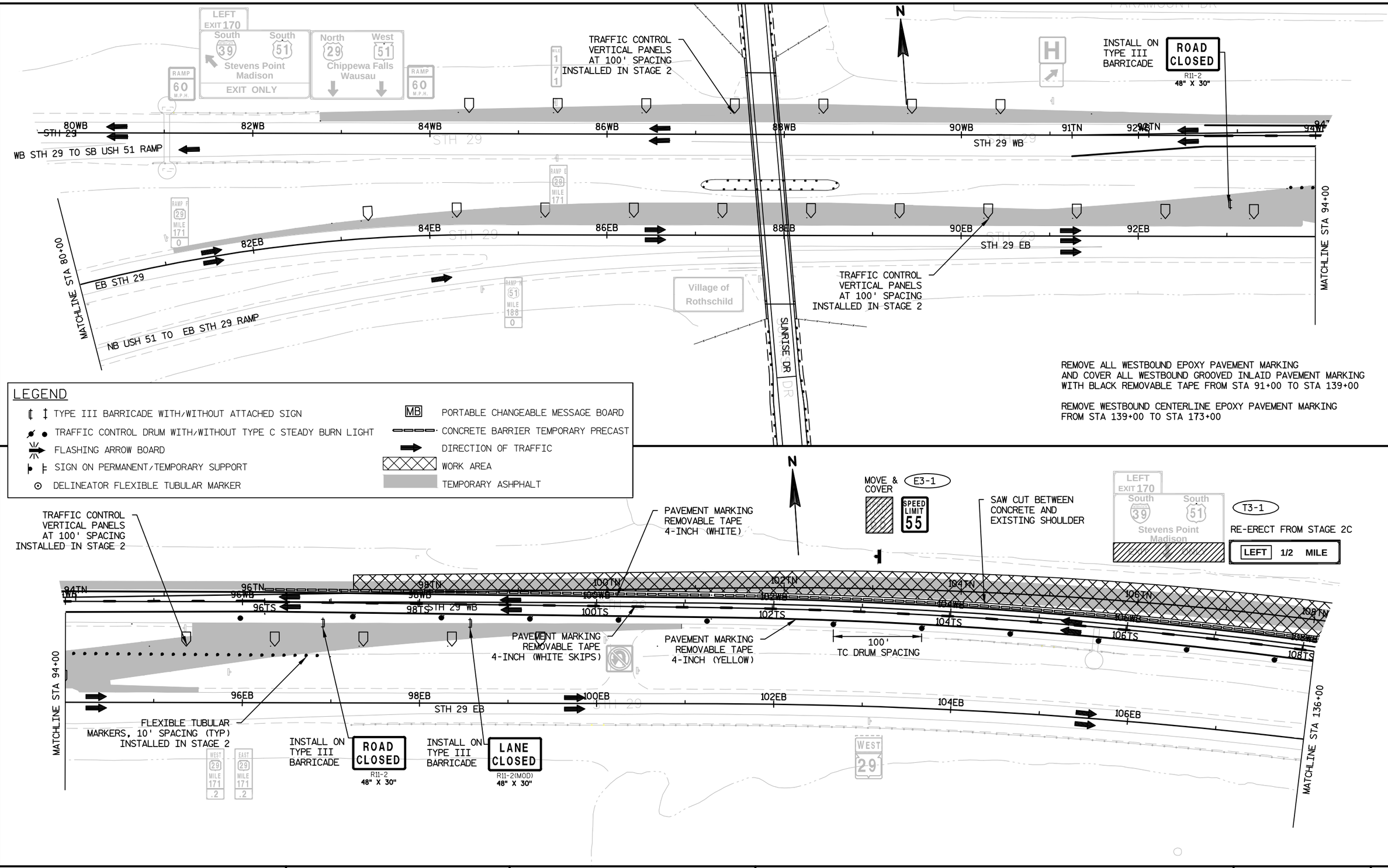
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2



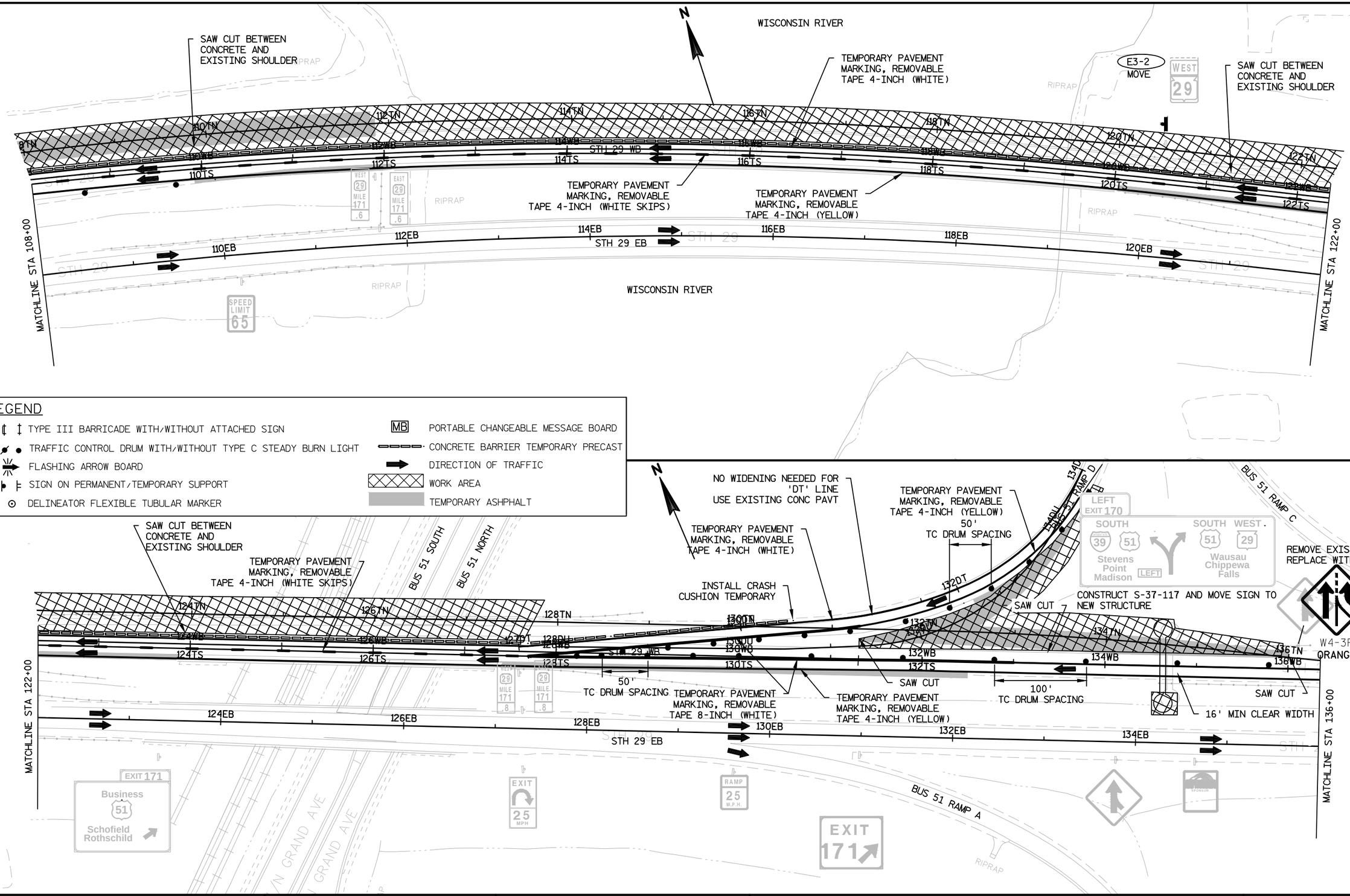
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FILE NAME : S:\DESIGN\DESIGN PROJECTS\1053-02-04 (STH 29)-AYRES-NC\C3D\SHEETSPLAN\026321_TC_S3_1053-02-74.DWG PLOT DATE : 1/2/2014 9:59 AM PLOT BY : QUEST CIVIL ENG PLOT NAME : PLOT SCALE : 1 IN:100 FT



PROJECT NO: 1053-02-74	HWY: STH 29	COUNTY: MARATHON	TRAFFIC CONTROL: STAGE 3	SHEET	E

FILE NAME : S:\DESIGN\DESIGN PROJECTS\1053-02-04 (STH 29)-AYRES-NC\C3D\SHEETSPLAN\026321_TC_S3_1053-02-74.DWG PLOT DATE : 1/2/2014 9:59 AM PLOT BY : QUEST CIVIL ENG PLOT NAME : PLOT SCALE : **********
WISDOT/CADDS SHEET 44



LEGEND

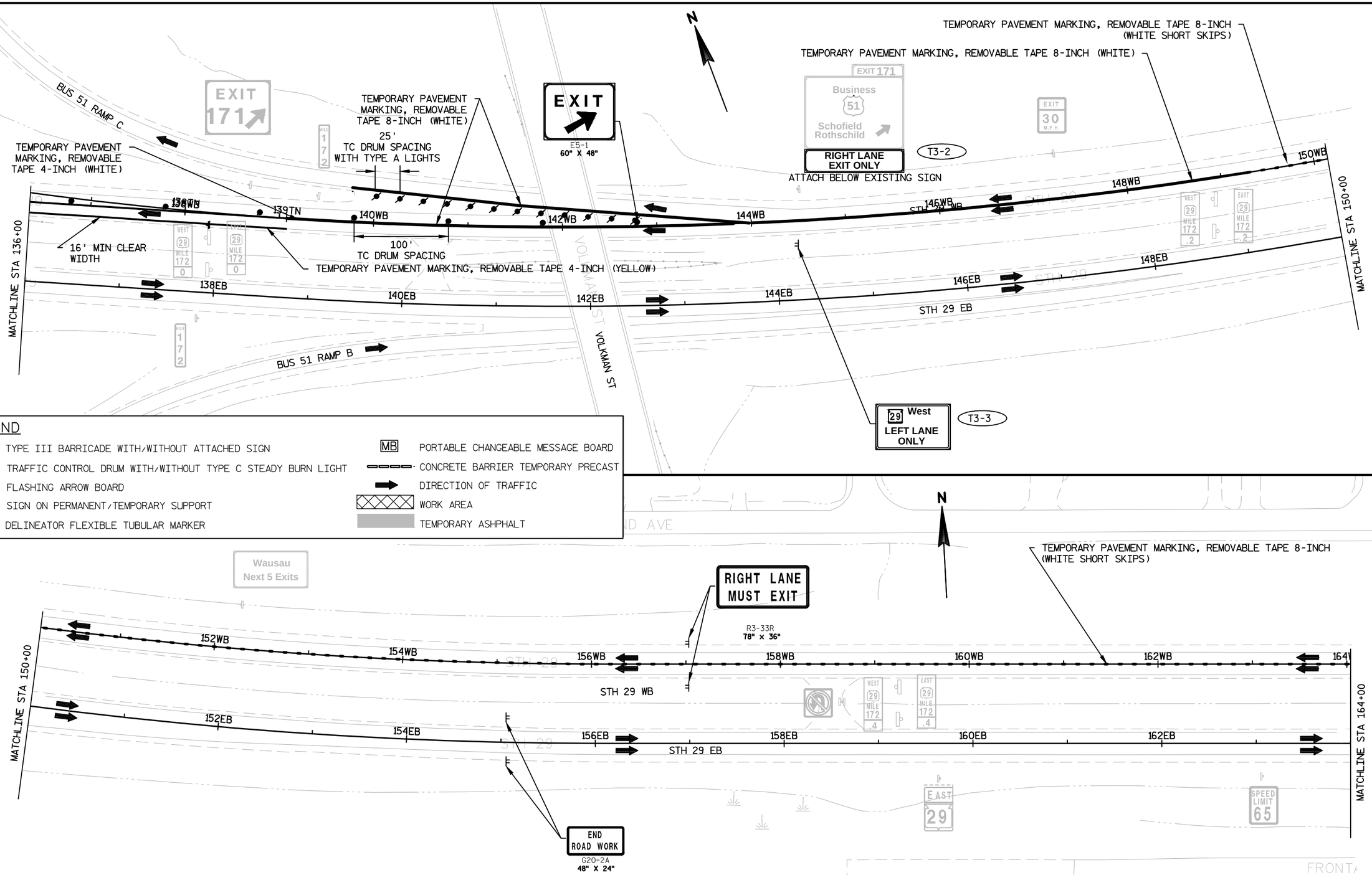
- TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT/TEMPORARY SUPPORT
- DELINEATOR FLEXIBLE TUBULAR MARKER
- MB PORTABLE CHANGEABLE MESSAGE BOARD
- CONCRETE BARRIER TEMPORARY PRECAST
- DIRECTION OF TRAFFIC
- WORK AREA
- TEMPORARY ASHPHALT

PROJECT NO: 1053-02-74	HWY: STH 29	COUNTY: MARATHON	TRAFFIC CONTROL: STAGE 3	SHEET	E

FILE NAME : S:\DESIGN\DESIGN PROJECTS\1053-02-04 (STH 29)-AYRES-NC\C3D\SHEETSPLAN\026321_TC_S3_1053-02-74.DWG PLOT DATE : 1/2/2014 10:00 AM PLOT BY : QUEST CIVIL ENG PLOT NAME : PLOT SCALE : **********

WISDOT/CADDS SHEET 44

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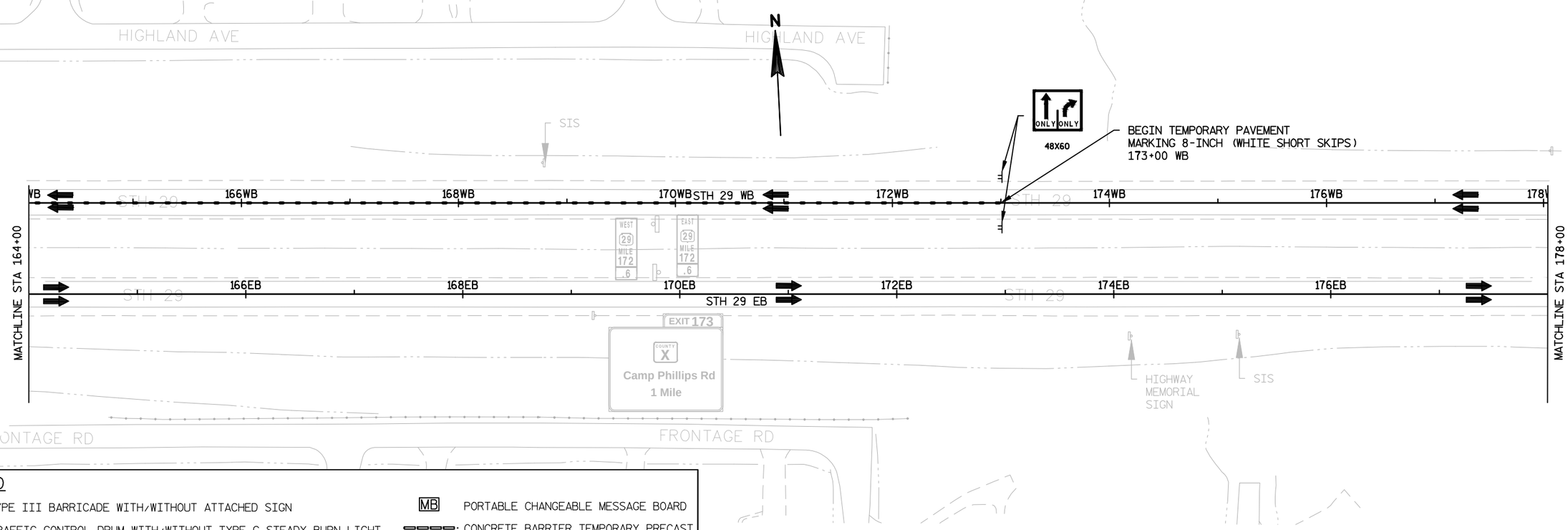
LEGEND

- TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT/TEMPORARY SUPPORT
- DELINEATOR FLEXIBLE TUBULAR MARKER
- MB PORTABLE CHANGEABLE MESSAGE BOARD
- CONCRETE BARRIER TEMPORARY PRECAST
- DIRECTION OF TRAFFIC
- WORK AREA
- TEMPORARY ASHPHALT

PROJECT NO: 1053-02-74	HWY: STH 29	COUNTY: MARATHON	TRAFFIC CONTROL: STAGE 3	SHEET	E

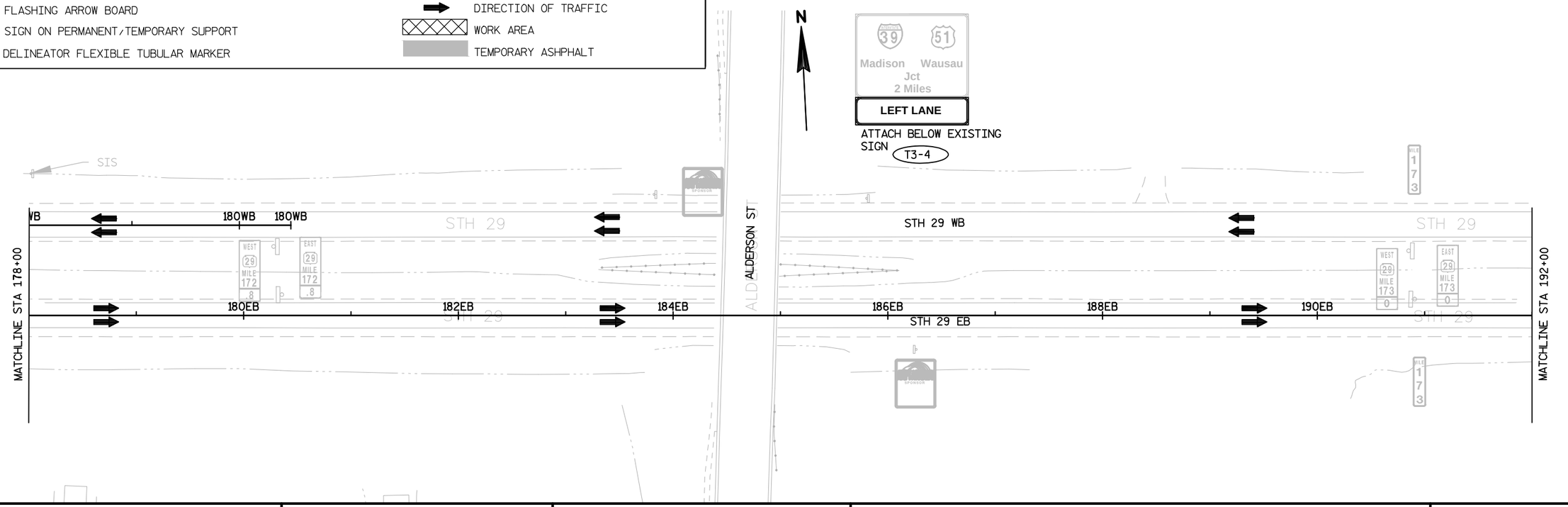
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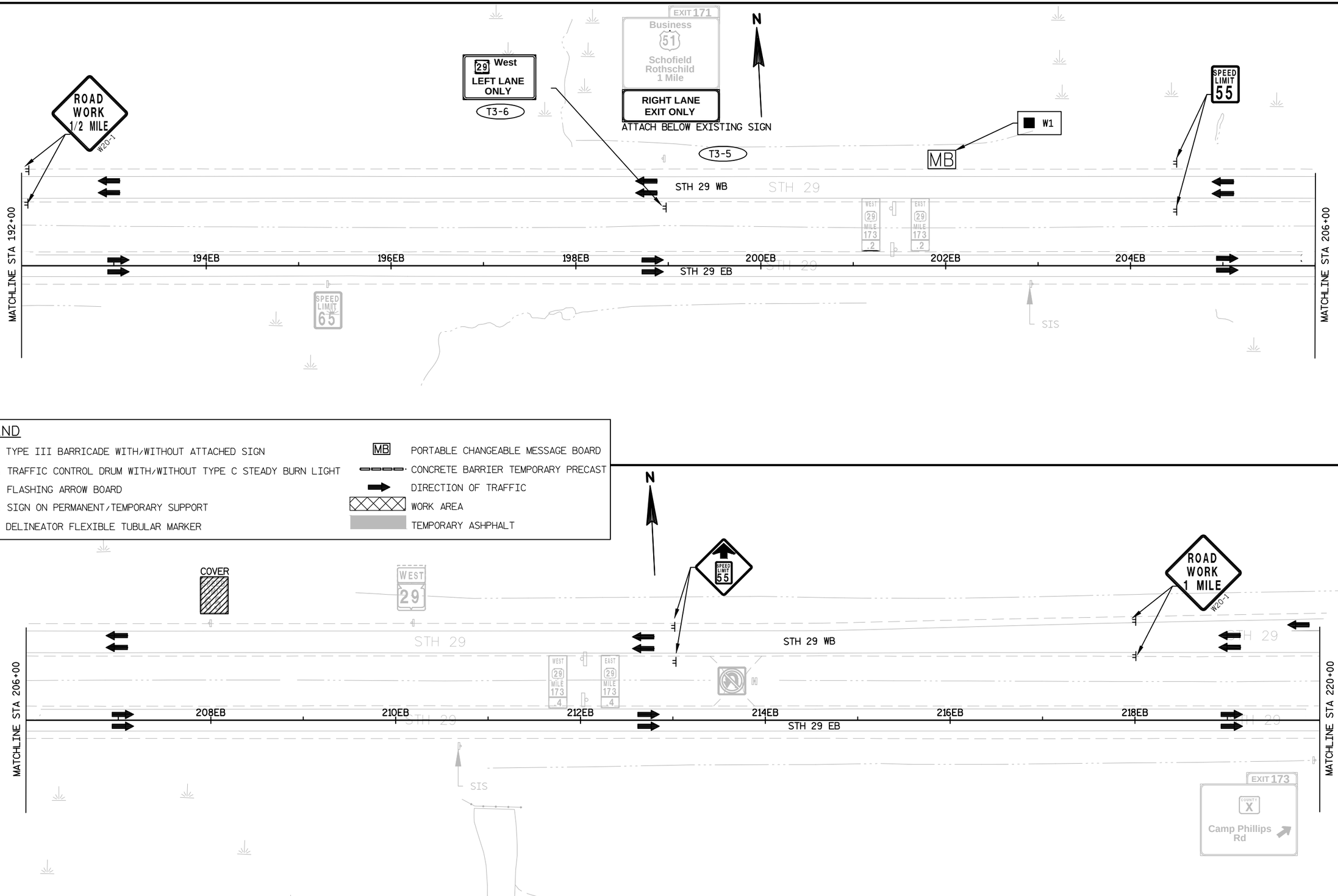
LEGEND

- TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT/TEMPORARY SUPPORT
- DELINEATOR FLEXIBLE TUBULAR MARKER
- MB — PORTABLE CHANGEABLE MESSAGE BOARD
- CONCRETE BARRIER TEMPORARY PRECAST
- DIRECTION OF TRAFFIC
- WORK AREA
- TEMPORARY ASHPHALT



PROJECT NO: 1053-02-74	HWY: STH 29	COUNTY: MARATHON	TRAFFIC CONTROL: STAGE 3	SHEET	E

FILE NAME : S:\DESIGN\DESIGN PROJECTS\1053-02-04 (STH 29)-AYRES-NC\C3D\SHEETSPLAN\026321_TC_S3_1053-02-74.DWG PLOT DATE : 1/2/2014 10:02 AM PLOT BY : QUEST CIVIL ENG PLOT NAME : PLOT SCALE : **********
WISDOT/CADDS SHEET 44

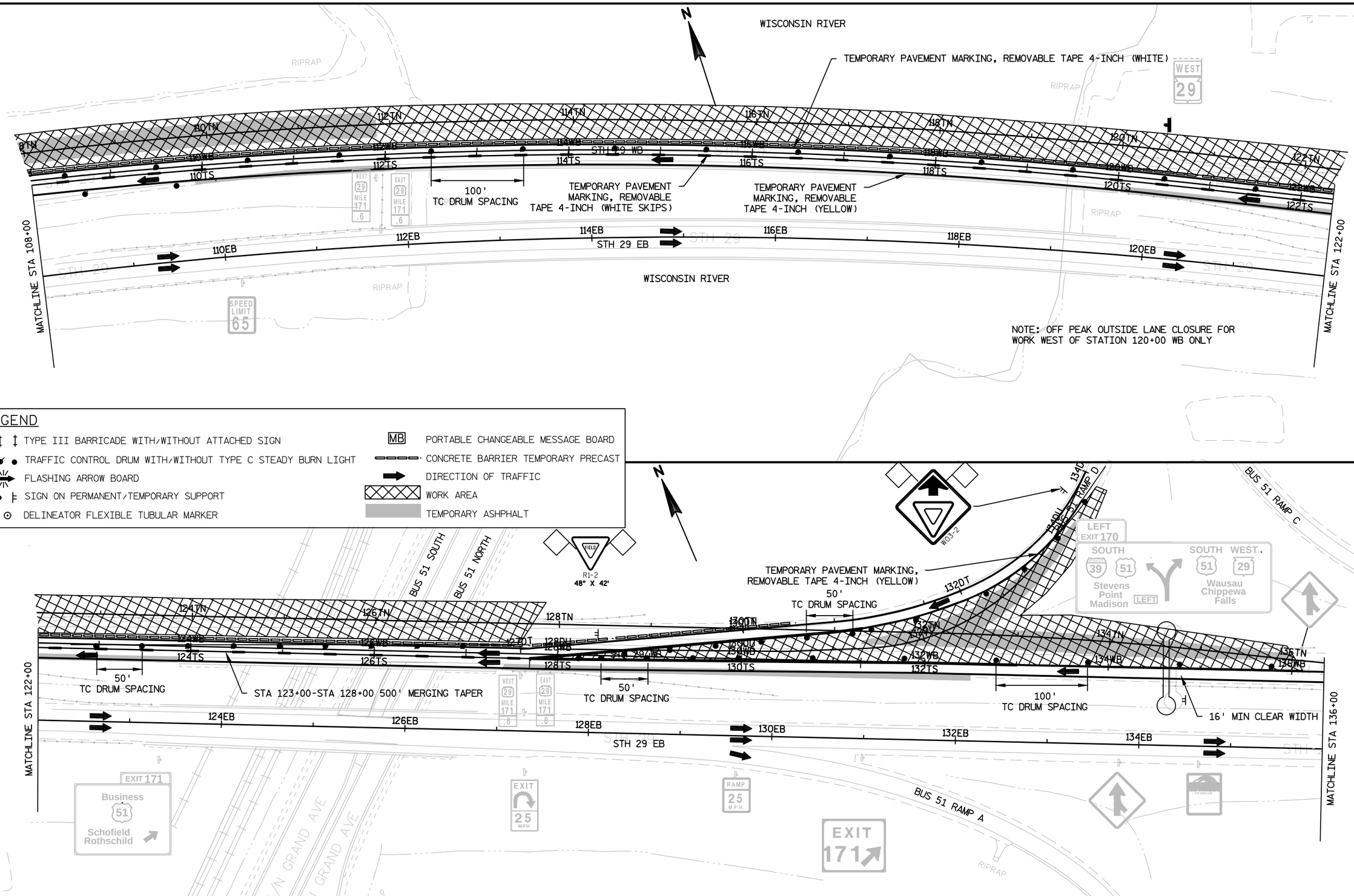


LEGEND

- TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT/TEMPORARY SUPPORT
- DELINEATOR FLEXIBLE TUBULAR MARKER
- MB PORTABLE CHANGEABLE MESSAGE BOARD
- CONCRETE BARRIER TEMPORARY PRECAST
- DIRECTION OF TRAFFIC
- WORK AREA
- TEMPORARY ASHPHALT

PROJECT NO:1053-02-74	HWY: STH 29	COUNTY: MARATHON	TRAFFIC CONTROL: STAGE 3	SHEET	E

FILE NAME : S:\DESIGN\DESIGN PROJECTS\1053-02-04 (STH 29)-AYRES-NC\C3D\SHEETSPLAN\026321_TC_S3_1053-02-74.DWG PLOT DATE : 1/2/2014 10:03 AM PLOT BY : QUEST CIVIL ENG PLOT NAME : PLOT SCALE : **********



LEGEND

- TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT/TEMPORARY SUPPORT
- DELINEATOR FLEXIBLE TUBULAR MARKER
- MB — PORTABLE CHANGEABLE MESSAGE BOARD
- CONCRETE BARRIER TEMPORARY PRECAST
- DIRECTION OF TRAFFIC
- WORK AREA
- TEMPORARY ASHPHALT

PROJECT NO: 1053-02-74	HWY: STH 29	COUNTY: MARATHON	TRAFFIC CONTROL: STAGE 3 OFF PEAK LANE CLOSURE	SHEET	E

FILE NAME : S:\DESIGN\DESIGN PROJECTS\1053-02-04 (STH 29)-AYRES-NC\C3D\SHEETSPLAN\026321_TC_S3_DAY-NIGHT_1053-02-74.DWG PLOT DATE : 10/17/2013 9:07 AM PLOT BY : QUEST CIVIL ENG PLOT NAME : PLOT SCALE : **********

2

2

WISCONSIN CENTRAL

SPEED LIMIT 35

WISCONSIN CENTRAL

BUS 51

700' (TYP)

ROAD WORK AHEAD W20-1

WINTON AVE

BROWN BLVD

RIGHT LANE CLOSED AHEAD W20-5

WILSON AVE

YAWKEY AVE

W04-2R

LEGEND

- TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT/TEMPORARY SUPPORT
- DELINEATOR FLEXIBLE TUBULAR MARKER
- MB PORTABLE CHANGEABLE MESSAGE BOARD
- CONCRETE BARRIER TEMPORARY PRECAST
- DIRECTION OF TRAFFIC
- WORK AREA
- TEMPORARY ASHPHALT

NOTE: ALL TRAFFIC CONTROL DRUMS SPACED AT 25'

(N) USE THESE SIGNS FOR CLOSURE OF SIDEWALK ALONG NB BUS 51.

(S) USE THESE SIGNS FOR CLOSURE OF SIDEWALK ALONG SB BUS 51.

CLOSE THE SIDEWALK ALONG ONLY ONE SIDE OF BUS 51 AT A TIME.

(S) INSTALL ON TYPE II BARRICADE

SOUTH BUSINESS 51

LANE CLOSED R11-2(MOD) 48" X 30" INSTALL ON TYPE III BARRICADE

SIDEWALK CLOSED USE OTHER SIDE R9-10 48" X 24"

WRONG WAY

SPEED LIMIT 35

LANE CLOSED R11-2(MOD) 48" X 30" INSTALL ON TYPE III BARRICADE

DO NOT ENTER

NO ENGINE BRAKING EXCEPT IN EMERGENCY

END ROAD WORK G20-2A 48" X 24"

TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE 4-INCH (WHITE)

WISCONSIN CENTRAL

TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE 4-INCH (WHITE)

16S 16N 14S 14N 13N 12S 9S10S

BUS 51

245' TAPER

250' BUFFER

EVEREST DR

MB B2

SPEED LIMIT 35

JCT 29

WEST 29 EAST 29

REMOVE 4" EPOXY SKIPS IN TAPER REPLACE EPOXY AT THE CONCLUSION OF STAGE

BEGIN RIGHT TURN LANE R3-20R 24"X36"

Green Bay

WRONG WAY

EAST 29

DO NOT ENTER

(S) INSTALL ON TYPE II BARRICADES (N)

SIDEWALK CLOSED R9-9 24" X 12"

SIDEWALK CLOSED USE OTHER SIDE R9-10 48" X 24"

STH 29 EB ON RAMP

STH 29 EB OFF RAMP

PROJECT NO: 1053-02-74	HWY: STH 29	COUNTY: MARATHON	TRAFFIC CONTROL: STAGE 3 BUSINESS 51 (BRIDGE PIERS)	SHEET	E

FILE NAME : S:\DESIGN\DESIGN PROJECTS\1053-02-04 (STH 29)-AYRES-NC\C3D\SHEETSPLAN\026322_TC_S3_B51_1053-02-74.DWG PLOT DATE : 10/29/2013 7:56 AM PLOT BY : QUEST CIVIL ENG PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

REMOVE 4" SKIPS STA 23+50 - STA 26+00.
REPLACE EPOXY AT CONCLUSION IF STAGE.

N

122EB

124EB

128EB

130EB

132EB

STH 29 EB ON RAMP

STH 29 EB OFF RAMP

STH 29 WB

STH 29 WB ON RAMP

STH 29 WB OFF RAMP

STH 29 EB

ABANDONED RAILROAD

WISCONSIN CENTRAL

WEST GRAND AVE

MATCHLINE STA 16+00

MATCHLINE STA 27+00

Green Bay

Schofield
Abbotsford

EAST 29

WEST 29

SOUTH BUSINESS 51

WAUSAU NOON KIWANIS CLUB SPONSOR

(S) INSTALL ON TYPE II BARRICADE
SIDEWALK CLOSED
R9-9
24" X 12" *

SAW CUT SIDEWALK

(S) INSTALL ON TYPE II BARRICADE
SIDEWALK CLOSED
R9-9 *
24" X 12"

(S) INSTALL ON TYPE II BARRICADE
SIDEWALK CLOSED USE OTHER SIDE
R9-10 *
48" X 24"

TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE 4-INCH (YELLOW)

200' BUFFER

200' SHIFT TAPER

18S
18N
20S
20N
22S
22N
24S
24N
26S
26N

(N) INSTALL ON TYPE II BARRICADE
SIDEWALK CLOSED
R9-9
24" X 12"

SAW CUT SIDEWALK AND ASPHALT TERRACE

SAW CUT SIDEWALK AND ASPHALT TERRACE

TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE 4-INCH (WHITE)

LEFT LANE MUST TURN LEFT

WRONG WAY

(N) INSTALL ON TYPE II BARRICADE
SIDEWALK CLOSED USE OTHER SIDE
R9-10
48" X 24"

(N) INSTALL ON TYPE II BARRICADE
SIDEWALK CLOSED
R9-9
24" X 12"

COVER

ONLY ONLY ONLY

(N) USE THESE SIGNS FOR CLOSURE OF SIDEWALK ALONG NB BUS 51.

(S) USE THESE SIGNS FOR CLOSURE OF SIDEWALK ALONG SB BUS 51.

CLOSE THE SIDEWALK ALONG ONLY ONE SIDE OF BUS 51 AT A TIME.

NOTE: ALL TRAFFIC CONTROL DRUMS SPACED AT 25'

LEGEND

- TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT/TEMPORARY SUPPORT
- DELINEATOR FLEXIBLE TUBULAR MARKER
- MB PORTABLE CHANGEABLE MESSAGE BOARD
- CONCRETE BARRIER TEMPORARY PRECAST
- DIRECTION OF TRAFFIC
- WORK AREA
- TEMPORARY ASHPHALT

PROJECT NO: 1053-02-74	HWY: STH 29	COUNTY: MARATHON	TRAFFIC CONTROL: STAGE 3 BUSINESS 51 (BRIDGE PIERS)	SHEET	E

FILE NAME : S:\DESIGN\DESIGN PROJECTS\1053-02-04 (STH 29)-AYRES-NC\C3D\SHEETSPLAN\026322_TC_S3_B51_1053-02-74.DWG PLOT DATE : 10/29/2013 7:56 AM PLOT BY : QUEST CIVIL ENG PLOT NAME : PLOT SCALE : **********
WISDOT/CADDS SHEET 44

REMOVE 8' PAVEMENT MARKING STA 28+00 - 31+00
REPLACE EPOXY AT CONCLUSION OF STAGE

ROAD WORK AHEAD W20-1

500'

WEST GRAND AVE

WISCONSIN CENTRAL

INSTALL IN TYPE III BARRICADE

LANE CLOSED
R11-2(MOD)
48" X 30"

WEST 29

DO NOT ENTER

WRONG WAY

Abbotsford

BEGIN LEFT TURN LANE
R3-20LL
24"X36"

COVER

WEST EAST 29 29

SOUTH BUSINESS 51

JCT 29

MOVE TO 36S

ROAD WORK AHEAD W20-1

ELLEN ST

MESSAGE BOARD B1

BUS 51 EAST 29 RIGHT LN

WEST 29 LEFT LANE

B1

MB

JCT 29
M1-6
24"X24"
MOVED FROM 33S

SPEED LIMIT 35

WRONG WAY

N

26S
26N
28S
28N
30S
32S
34S
36S
38S
39S

BUS 51

EXISTING SIGNAL LOOPS

STH 29 WB ON RAMP

STH 29 WB OFF RAMP

NORTH BUSINESS 51

SPEED LIMIT 35

WRONG WAY

TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE 4-INCH (WHITE)

TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE 4-INCH (YELLOW)

WEST 29

ONLY ONLY
R3-8E
36"X30"

LANE CLOSED
R11-2(MOD)
48" X 30"

INSTALL IN TYPE III BARRICADE

NOTE: ALL TRAFFIC CONTROL DRUMS SPACED AT 25'

NORTH BUSINESS 51

SPEED LIMIT 35

VOLKMAN ST

LEGEND

- TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT/TEMPORARY SUPPORT
- DELINEATOR FLEXIBLE TUBULAR MARKER
- MB PORTABLE CHANGEABLE MESSAGE BOARD
- CONCRETE BARRIER TEMPORARY PRECAST
- DIRECTION OF TRAFFIC
- WORK AREA
- TEMPORARY ASHPHALT

Rothschild
POPULATION 5269

DO NOT ENTER

E KORT ST

VOLKMAN ST

NO PARKING 2AM 7AM

WRONG WAY

AHEAD

ROAD WORK AHEAD W20-1

END ROAD WORK
G20-2A
48" X 24"

VOLKMAN ST

H

AHEAD

DO NOT ENTER

BUS 51

JELINEK AVE

KECK AVE

(N) USE THESE SIGNS FOR CLOSURE OF SIDEWALK ALONG NB BUS 51.

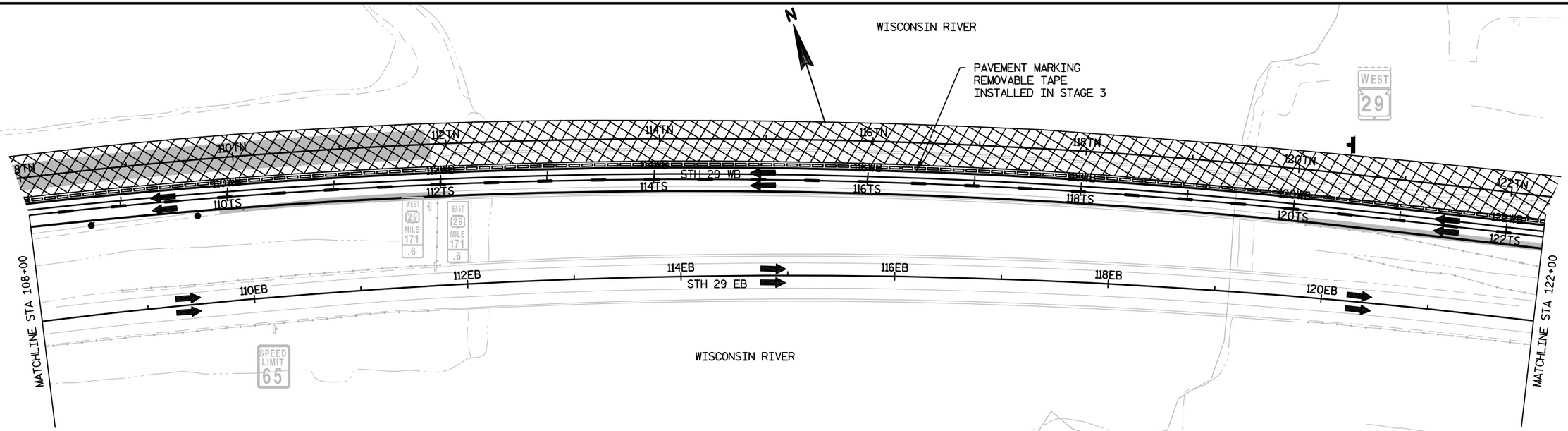
(S) USE THESE SIGNS FOR CLOSURE OF SIDEWALK ALONG SB BUS 51.

CLOSE THE SIDEWALK ALONG ONLY ONE SIDE OF BUS 51 AT A TIME.

PROJECT NO:1053-02-74	HWY: STH 29	COUNTY: MARATHON	TRAFFIC CONTROL: STAGE 3 BUSINESS 51 (BRIDGE PIERS)	SHEET	E

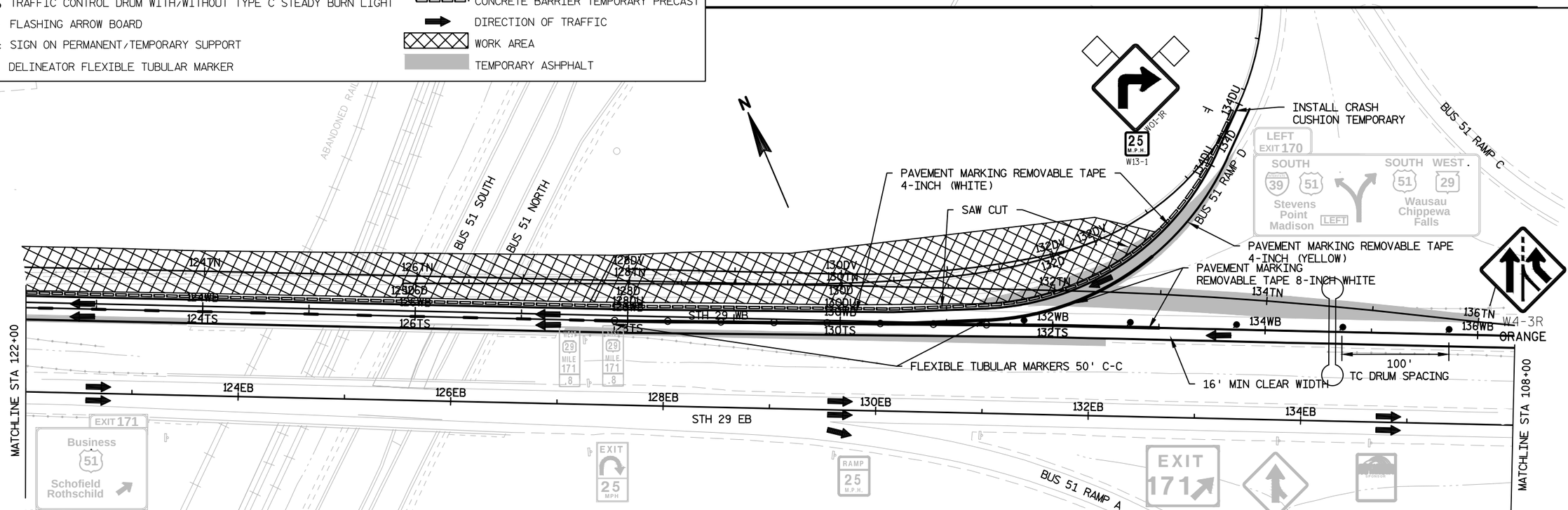
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WISDOT/CADDS SHEET 44

2



LEGEND

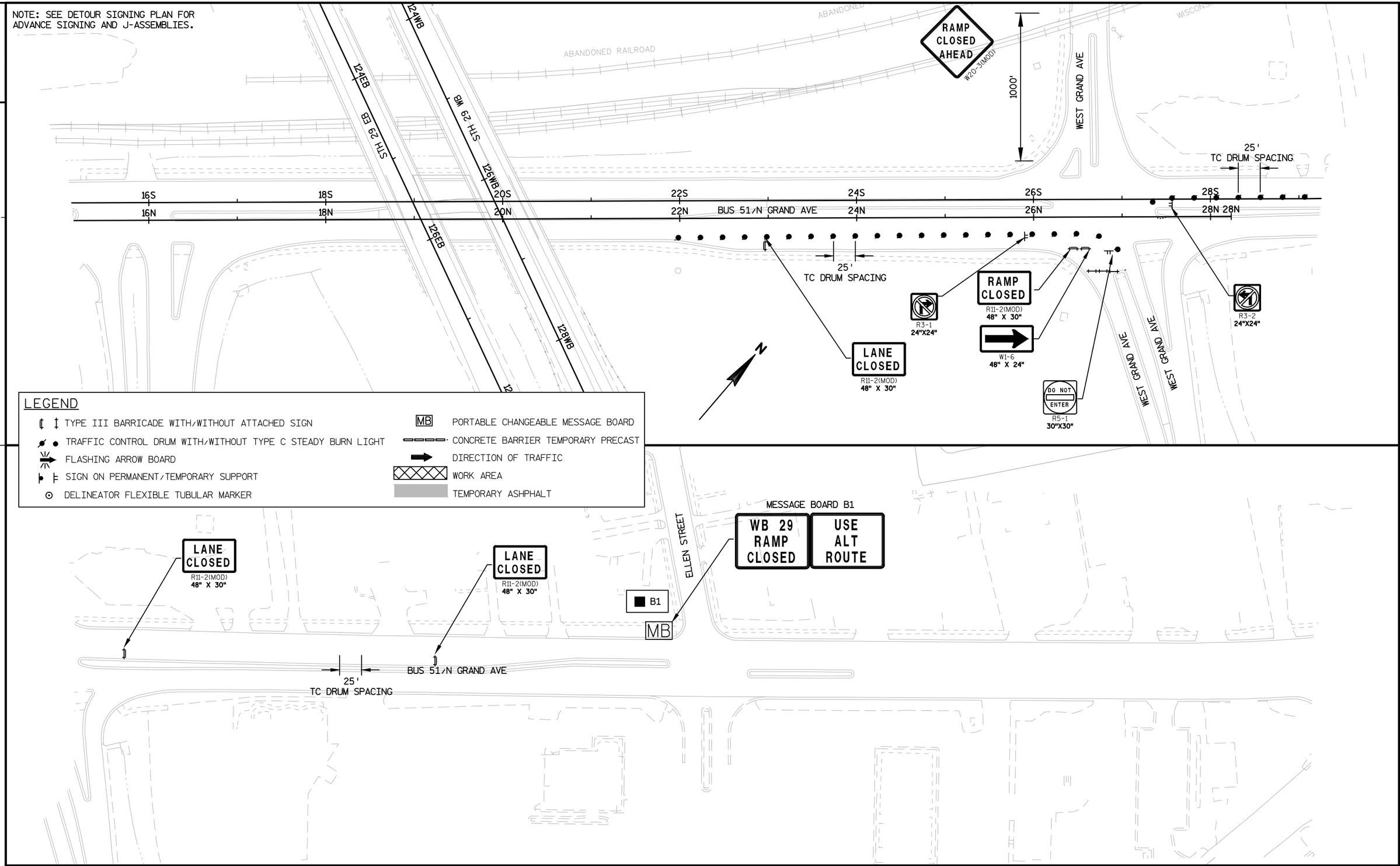
- TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT/TEMPORARY SUPPORT
- DELINEATOR FLEXIBLE TUBULAR MARKER
- MB — PORTABLE CHANGEABLE MESSAGE BOARD
- CONCRETE BARRIER TEMPORARY PRECAST
- DIRECTION OF TRAFFIC
- WORK AREA
- TEMPORARY ASHPHALT



PROJECT NO: 1053-02-74	HWY: STH 29	COUNTY: MARATHON	TRAFFIC CONTROL: STAGE 3A	SHEET E

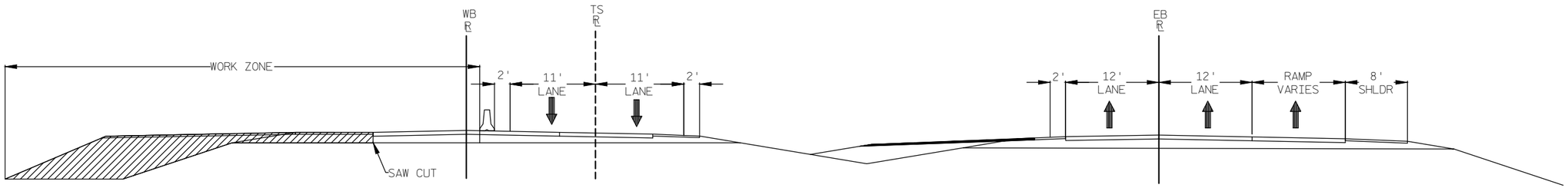
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NOTE: SEE DETOUR SIGNING PLAN FOR ADVANCE SIGNING AND J-ASSEMBLIES.



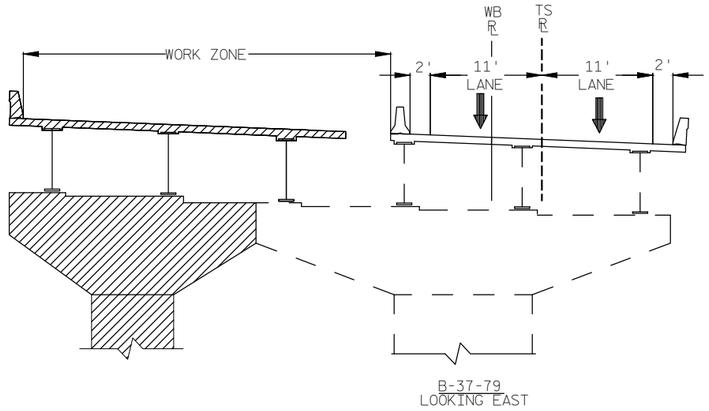
PROJECT NO: 1053-02-74	HWY: STH 29	COUNTY: MARATHON	TRAFFIC CONTROL: STAGE 3/4 WB STH 29 ON RAMP CLOSURE	SHEET E

FILE NAME : S:\DESIGN\DESIGN PROJECTS\1053-02-04 (STH 29)-AYRES-NC\C3D\SHEETSPLAN\026352_TC_S3_LANE-RAMP_CLOSURE_1053-02-74.DWG PLOT DATE : 10/17/2013 9:15 AM PLOT BY : QUEST CIVIL ENG PLOT NAME : PLOT SCALE : **********

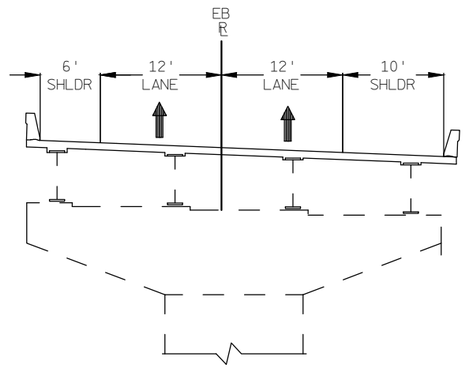


TRAFFIC LAYOUT - STAGE 3

STH 29 BETWEEN SUNRISE DRIVE AND WIS RIVER



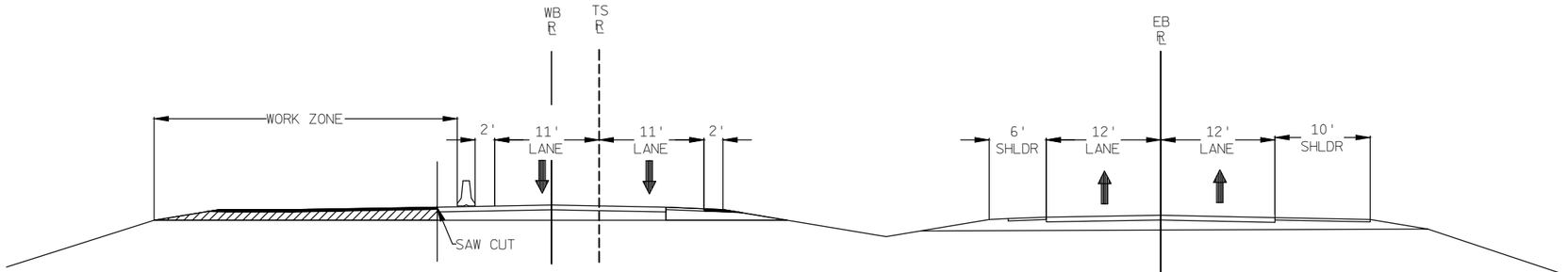
B-37-79
LOOKING EAST



B-37-136
LOOKING EAST

TRAFFIC LAYOUT - STAGE 3

STH 29 BRIDGE OVER WIS RIVER



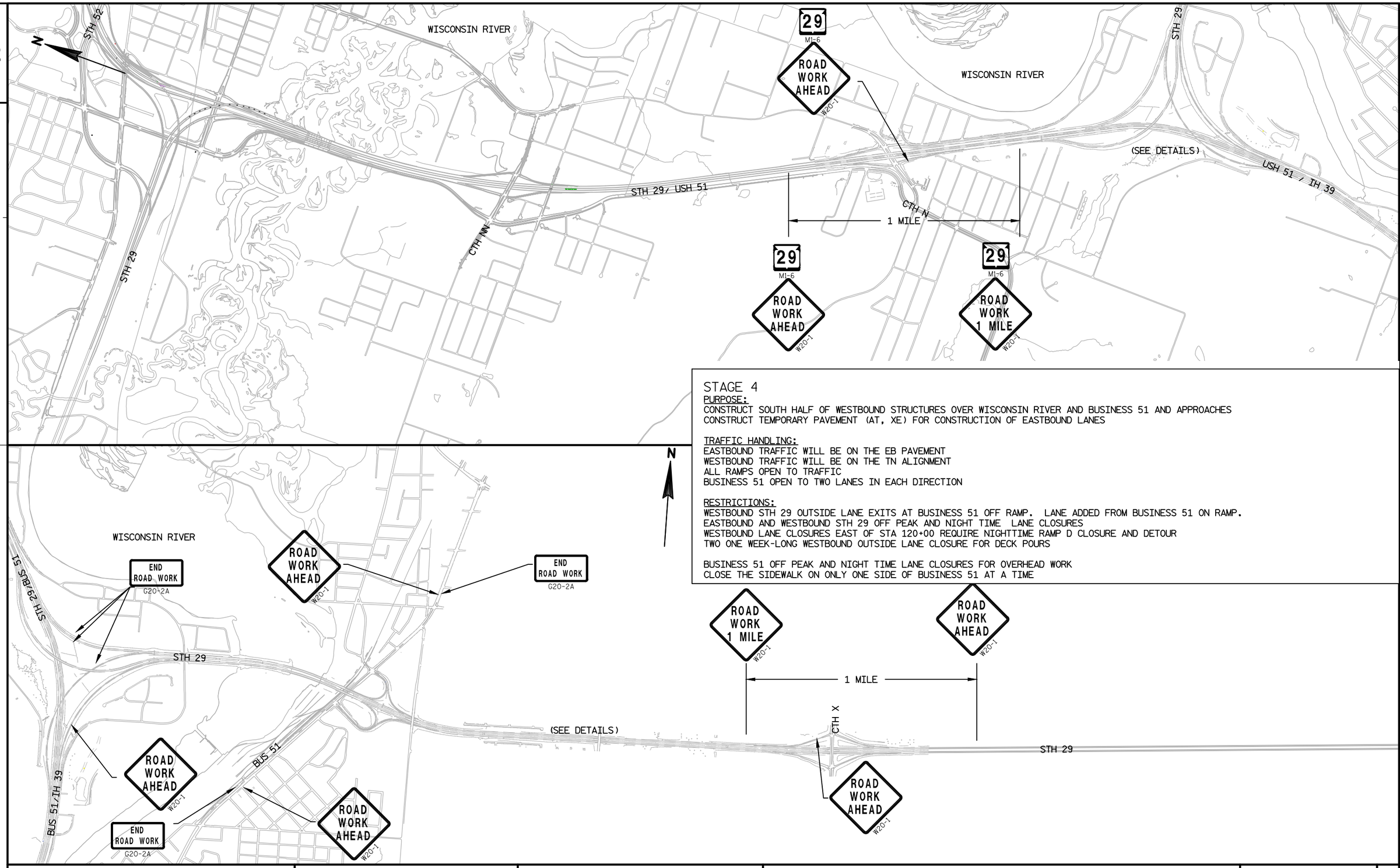
TRAFFIC LAYOUT - STAGE 3

STH 29 BETWEEN BUS 51 RAMPS

PROJECT NO: 1053-02-74	HWY: STH 29	COUNTY: MARATHON	TRAFFIC CONTROL: STAGE 3 TYPICAL LAYOUT	SHEET 113	E

FILE NAME : S:\DESIGN\DESIGN PROJECTS\1053-02-04 (STH 29)-AYRES-NC\C3D\SHEETSPLAN\020301_TS_STH 29.DWG PLOT DATE : 10/17/2013 10:57 AM PLOT BY : QUEST CIVIL ENG PLOT NAME :

WISDOT/CADDS SHEET 44



STAGE 4

PURPOSE:
CONSTRUCT SOUTH HALF OF WESTBOUND STRUCTURES OVER WISCONSIN RIVER AND BUSINESS 51 AND APPROACHES
CONSTRUCT TEMPORARY PAVEMENT (AT, XE) FOR CONSTRUCTION OF EASTBOUND LANES

TRAFFIC HANDLING:
EASTBOUND TRAFFIC WILL BE ON THE EB PAVEMENT
WESTBOUND TRAFFIC WILL BE ON THE TN ALIGNMENT
ALL RAMPS OPEN TO TRAFFIC
BUSINESS 51 OPEN TO TWO LANES IN EACH DIRECTION

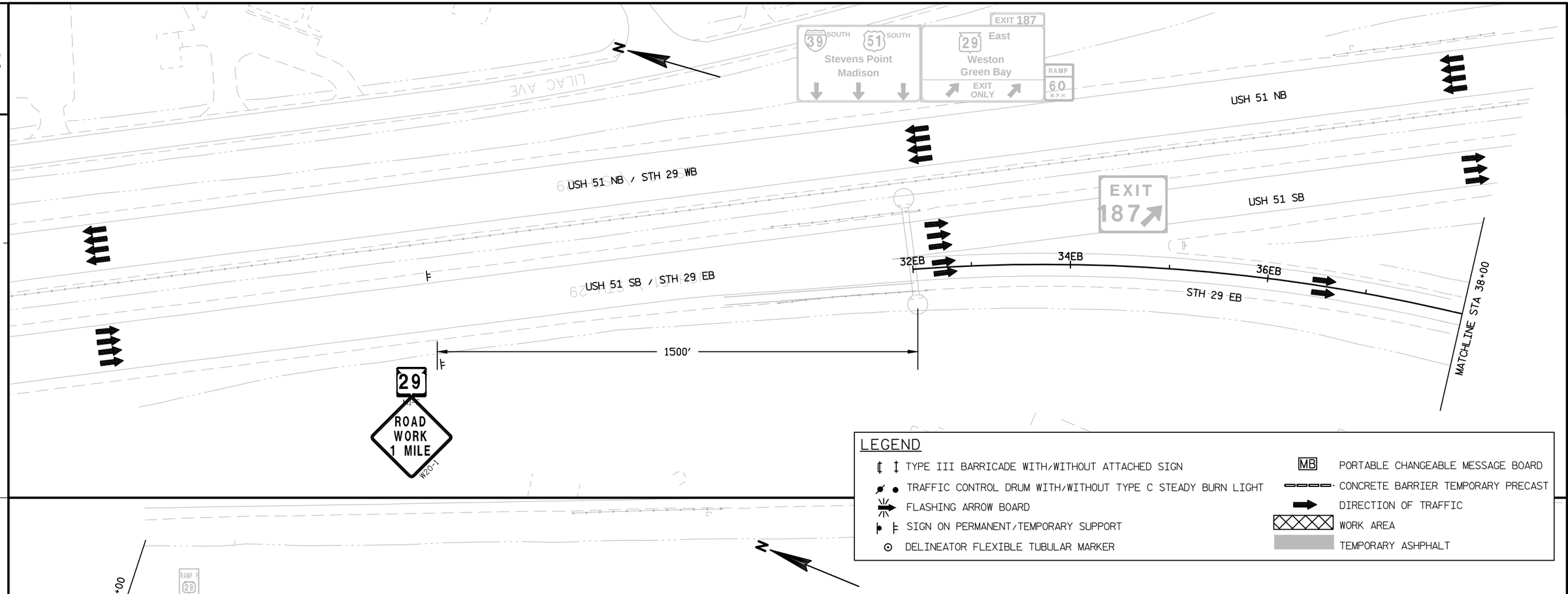
RESTRICTIONS:
WESTBOUND STH 29 OUTSIDE LANE EXITS AT BUSINESS 51 OFF RAMP. LANE ADDED FROM BUSINESS 51 ON RAMP.
EASTBOUND AND WESTBOUND STH 29 OFF PEAK AND NIGHT TIME LANE CLOSURES
WESTBOUND LANE CLOSURES EAST OF STA 120+00 REQUIRE NIGHTTIME RAMP D CLOSURE AND DETOUR
TWO ONE WEEK-LONG WESTBOUND OUTSIDE LANE CLOSURE FOR DECK POURS

BUSINESS 51 OFF PEAK AND NIGHT TIME LANE CLOSURES FOR OVERHEAD WORK
CLOSE THE SIDEWALK ON ONLY ONE SIDE OF BUSINESS 51 AT A TIME

PROJECT NO: 1053-02-74	HWY: STH 29	COUNTY: MARATHON	TRAFFIC CONTROL: STAGE 4 ADVANCED WARNING	SHEET	E

FILE NAME : S:\DESIGN\DESIGN PROJECTS\1053-02-04 (STH 29)-AYRES-NC\C3D\SHEETSPLAN\026401_TC_S4_OVERVIEW_1053-02-74.DWG PLOT DATE : 10/30/2013 7:31 AM PLOT BY : QUEST CIVIL ENG PLOT NAME : PLOT SCALE : 1 IN:2000 FT
WISDOT/CADDS SHEET 44

2

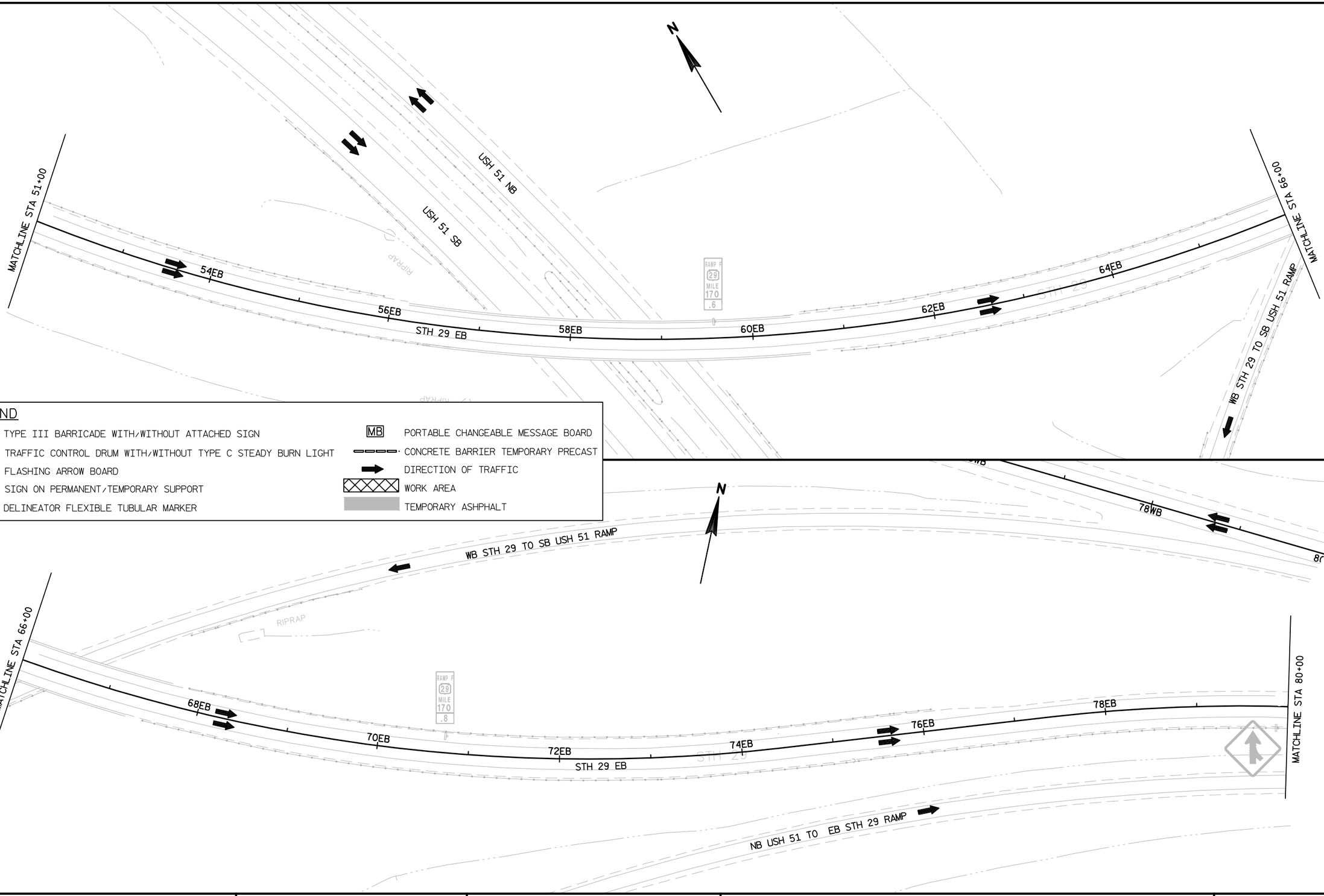


PROJECT NO:1053-02-74	HWY: STH 29	COUNTY: MARATHON	TRAFFIC CONTROL: STAGE 4	SHEET	E

FILE NAME : S:\DESIGN\DESIGN PROJECTS\1053-02-04 (STH 29)-AYRES-NC\C3D\SHEETSPLAN\026411_TC_S4_1053-02-74.DWG PLOT DATE : 10/30/2013 12:25 PM PLOT BY : QUEST CIVIL ENG PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

2

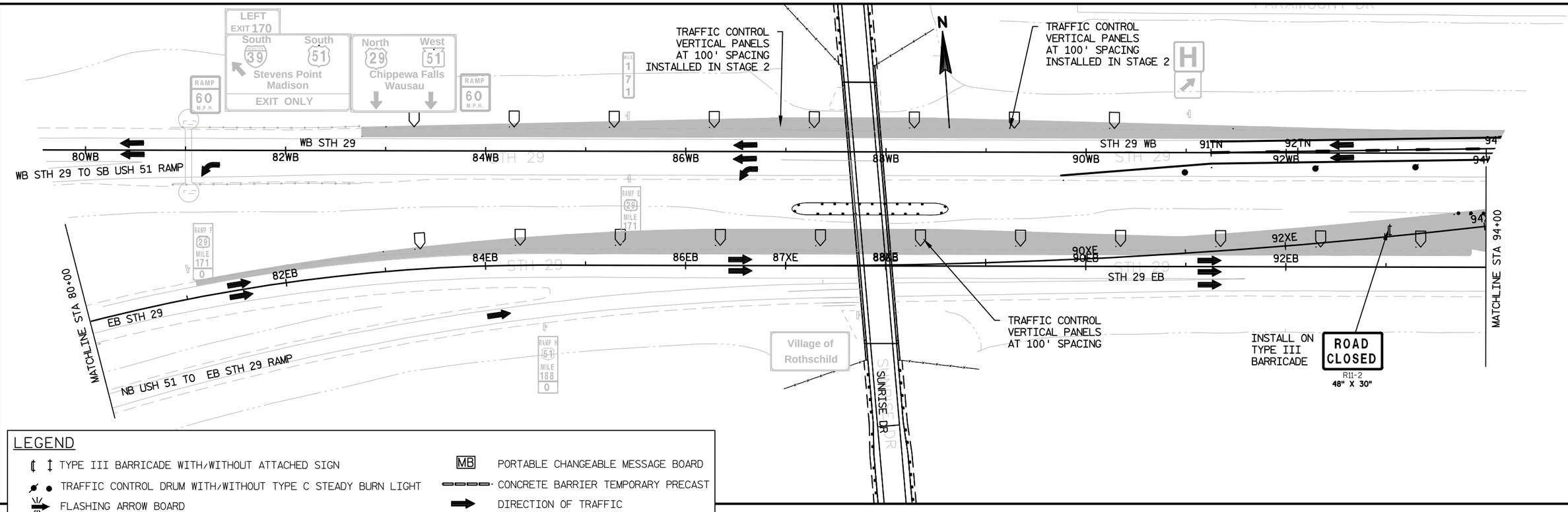


LEGEND

- TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT/TEMPORARY SUPPORT
- DELINEATOR FLEXIBLE TUBULAR MARKER
- MB PORTABLE CHANGEABLE MESSAGE BOARD
- CONCRETE BARRIER TEMPORARY PRECAST
- DIRECTION OF TRAFFIC
- WORK AREA
- TEMPORARY ASHPHALT

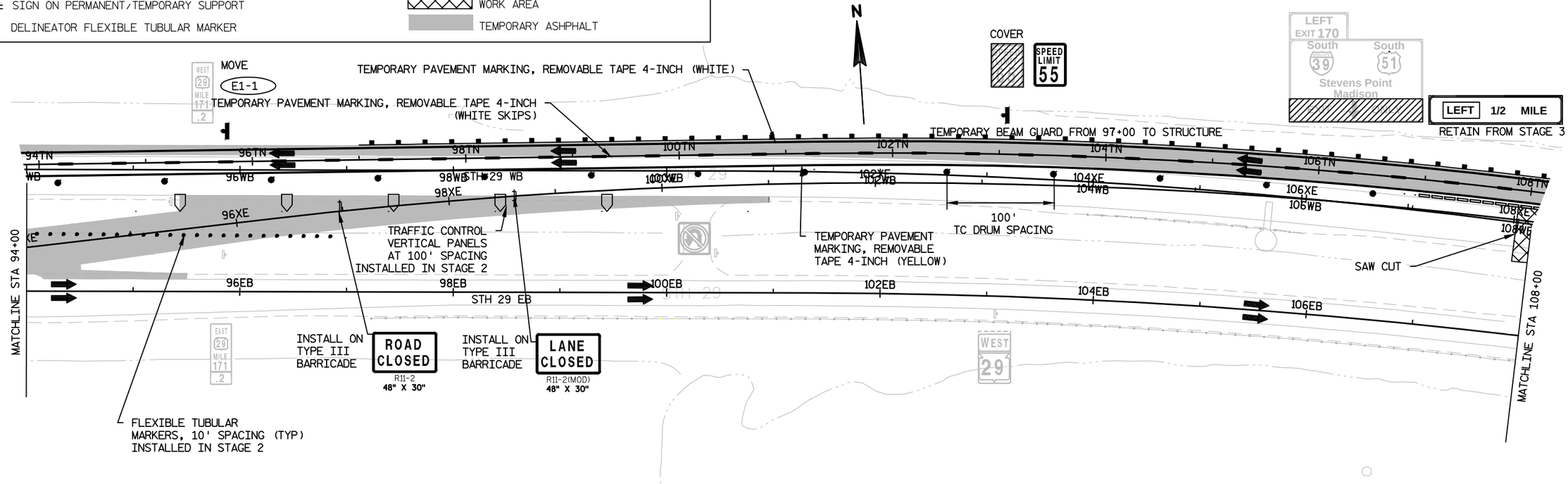
PROJECT NO:1053-02-74	HWY: STH 29	COUNTY: MARATHON	TRAFFIC CONTROL: STAGE 4	SHEET	E

FILE NAME : S:\DESIGN\DESIGN PROJECTS\1053-02-04 (STH 29)-AYRES-NC\C3D\SHEETSPLAN\026411_TC_S4_1053-02-74.DWG PLOT DATE : 10/30/2013 12:26 PM PLOT BY : QUEST CIVIL ENG PLOT NAME : PLOT SCALE : 1 IN:100 FT



LEGEND

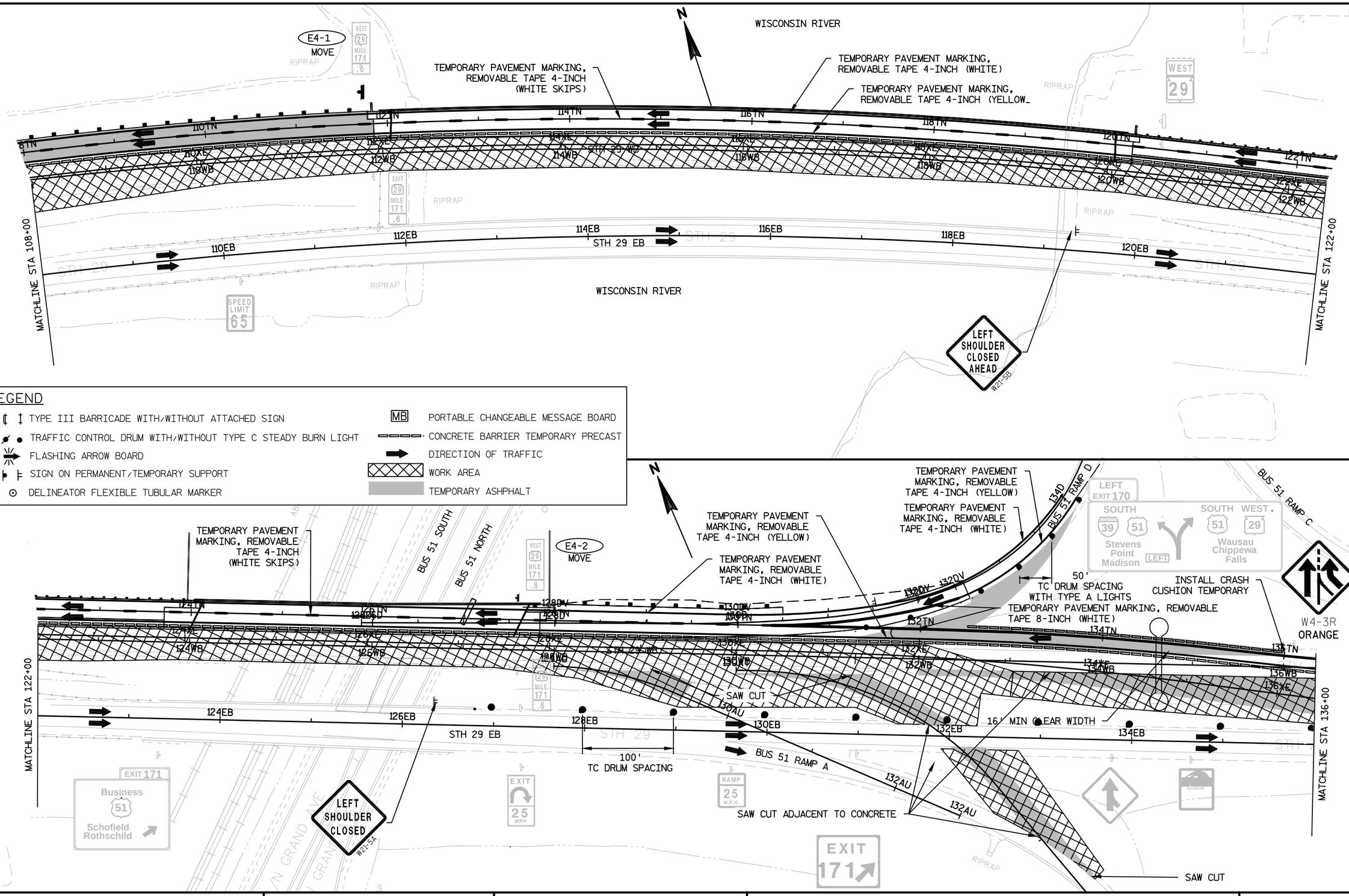
- TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT/TEMPORARY SUPPORT
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- DIRECTION OF TRAFFIC
- WORK AREA
- TEMPORARY ASHPHALT



PROJECT NO: 1053-02-74	HWY: STH 29	COUNTY: MARATHON	TRAFFIC CONTROL: STAGE 4	SHEET	E

FILE NAME : S:\DESIGN\DESIGN PROJECTS\1053-02-04 (STH 29)-AYRES-NC\C3D\SHEETSPLAN\026411_TC_S4_1053-02-74.DWG PLOT DATE : 10/30/2013 12:26 PM PLOT BY : QUEST CIVIL ENG PLOT NAME : PLOT SCALE : **********

2



LEGEND

- TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT/TEMPORARY SUPPORT
- DELINEATOR FLEXIBLE TUBULAR MARKER
- MB PORTABLE CHANGEABLE MESSAGE BOARD
- CONCRETE BARRIER TEMPORARY PRECAST
- DIRECTION OF TRAFFIC
- WORK AREA
- TEMPORARY ASHPHALT

PROJECT NO:1053-02-74	HWY: STH 29	COUNTY: MARATHON	TRAFFIC CONTROL: STAGE 4	SHEET	E

FILE NAME : S:\DESIGN\DESIGN PROJECTS\1053-02-04 (STH 29)-AYRES-NC\C3D\SHEETSPLAN\026411_TC_S4_1053-02-74.DWG PLOT DATE : 10/30/2013 12:27 PM PLOT BY : QUEST CIVIL ENG PLOT NAME : PLOT SCALE : ********** WISDOT/CADDS SHEET 44

TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE 4-INCH (WHITE)

TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE 4-INCH (YELLOW)

TEMPORARY PAVEMENT MARKING
EAST OF STA 139+00
INSTALLED IN STAGE 3

W01-4R

EXIT
E5-1
60" X 48"

TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE 8-INCH (WHITE SHORT SKIPS)

TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE 8-INCH (WHITE)

EXIT 171
Business 51
Schofield
Rothschild

RIGHT LANE
EXIT ONLY

RETAIN FROM STAGE 3

EXIT 30 M.P.H.

BUS 51 RAMP C

16' MIN CLEAR WIDTH

MOVE E4-3

EXIT 171

TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH (WHITE)

25' TC DRUM SPACING WITH TYPE A LIGHTS

138TN 139TN 140WB 142WB 144WB 146WB 148WB 150WB

INSTALL CRASH CUSHION

STH 29 WB

MATCHLINE STA 136+00

138XE 138EB 140XE 140EB 142XE 142EB 144XE 144EB 146XE 146EB 148XE 148EB 149XE

SAW CUT

MOVE E4-4

100' TC DRUM SPACING

VOLKMAN ST

BUS 51 RAMP B

SAW CUT ADJACENT TO CONCRETE

STH 29 EB

MATCHLINE STA 150+00

SAW CUT

29 West
LEFT LANE ONLY

RETAIN FROM STAGE 3

LEGEND

- TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT/TEMPORARY SUPPORT
- DELINEATOR FLEXIBLE TUBULAR MARKER
- MB PORTABLE CHANGEABLE MESSAGE BOARD
- CONCRETE BARRIER TEMPORARY PRECAST
- DIRECTION OF TRAFFIC
- WORK AREA
- TEMPORARY ASHPHALT

N

Wausau
Next 5 Exits

TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE 8-INCH (WHITE SHORT SKIPS)

RIGHT LANE MUST EXIT

R3-33R
78" X 36"

MATCHLINE STA 150+00

152WB 154WB 156WB 158WB 160WB 162WB

STH 29 WB

152EB 154EB 156EB 158EB 160EB 162EB

STH 29 EB

MATCHLINE STA 164+00

EAST 29

SPEED LIMIT 65

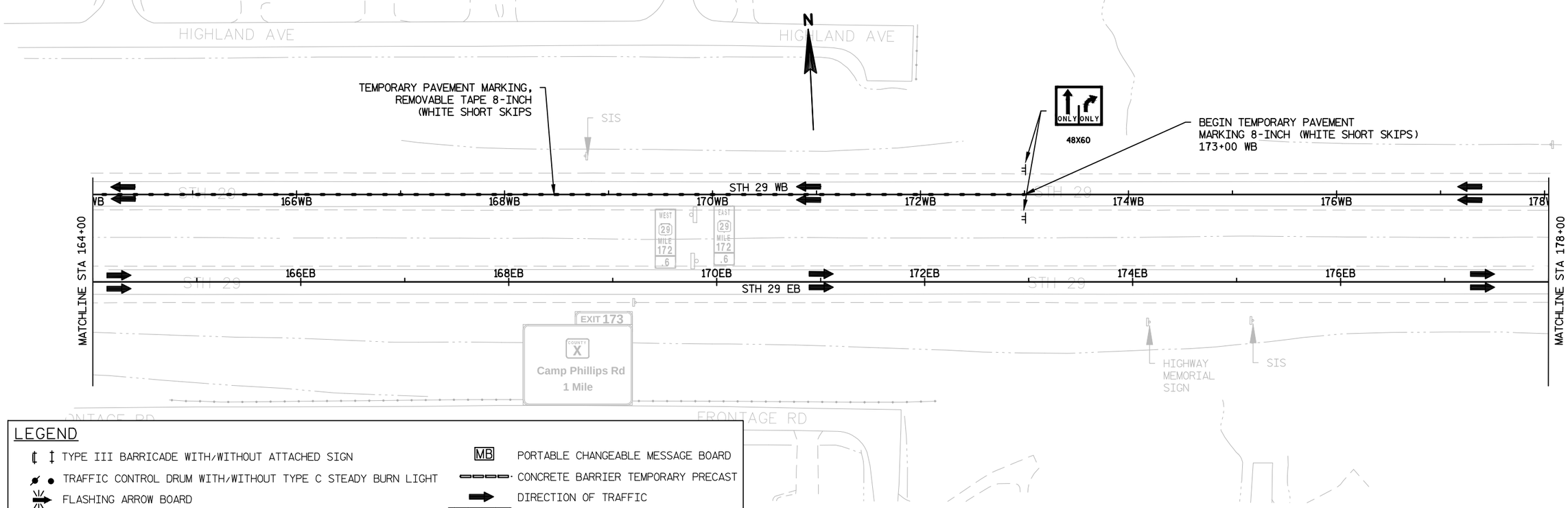
END ROAD WORK
G20-2A
48" X 24"

PROJECT NO:1053-02-74	HWY:STH 29	COUNTY:MARATHON	TRAFFIC CONTROL: STAGE 4	SHEET	E

FILE NAME : S:\DESIGN\DESIGN PROJECTS\1053-02-04 (STH 29)-AYRES-NC\C3D\SHEETSPLAN\026411_TC_S4_1053-02-74.DWG PLOT DATE : 10/30/2013 12:27 PM PLOT BY : QUEST CIVIL ENG PLOT NAME : PLOT SCALE : **********

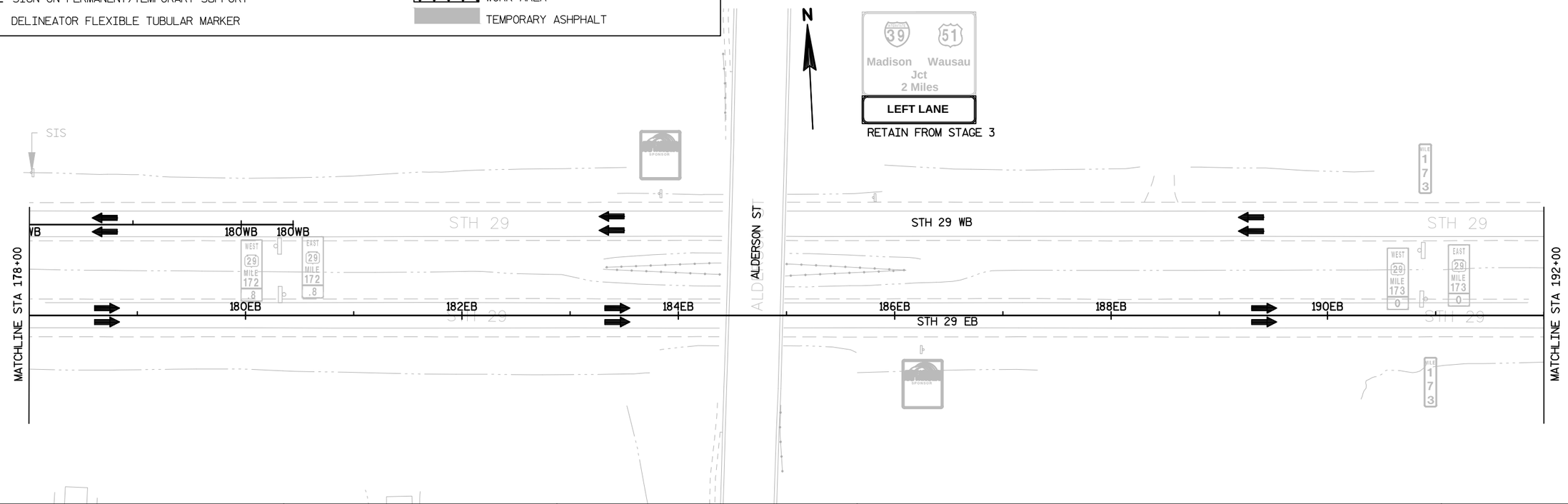
WISDOT/CADDS SHEET 44

2



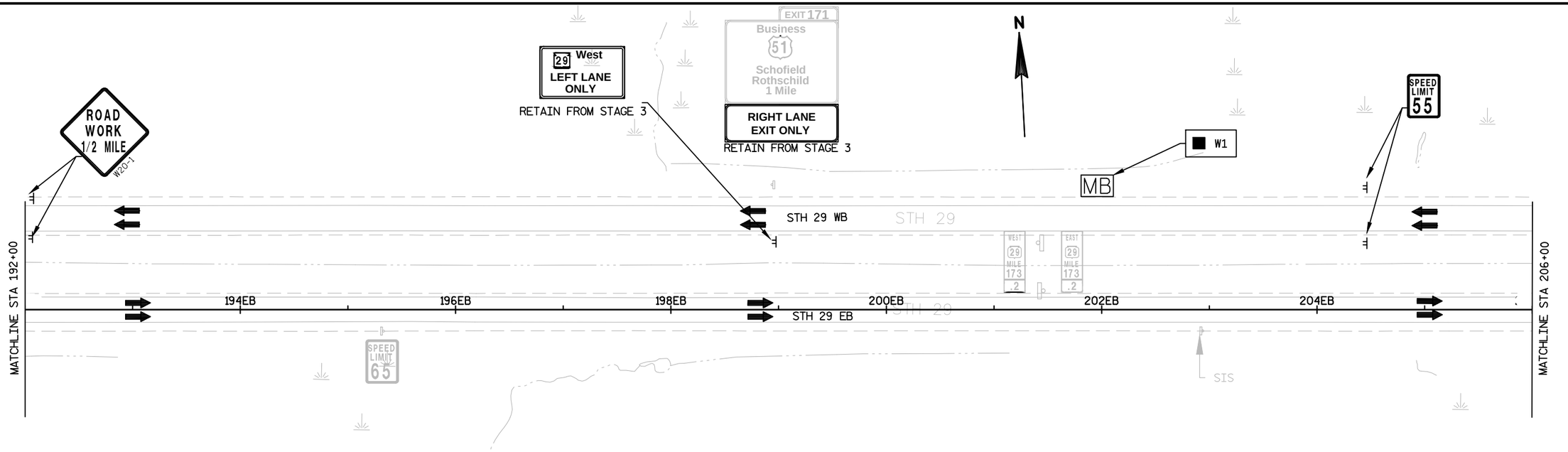
LEGEND

- TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
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- MB PORTABLE CHANGEABLE MESSAGE BOARD
- CONCRETE BARRIER TEMPORARY PRECAST
- DIRECTION OF TRAFFIC
- WORK AREA
- TEMPORARY ASHPHALT



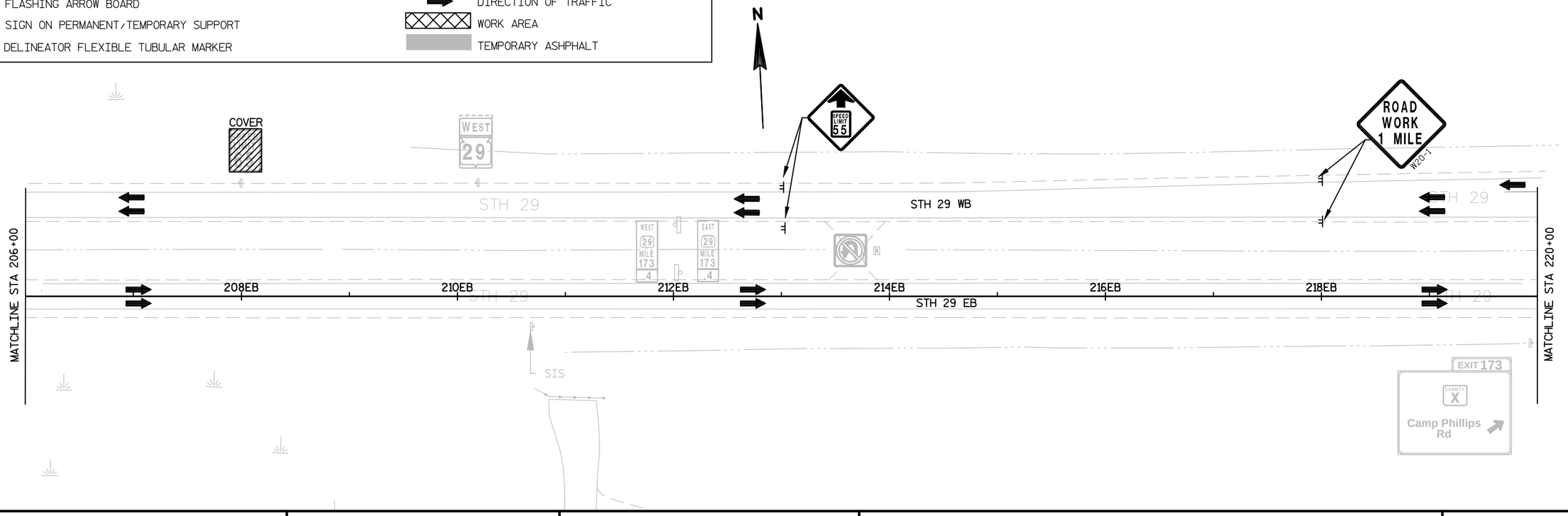
PROJECT NO: 1053-02-74	HWY: STH 29	COUNTY: MARATHON	TRAFFIC CONTROL: STAGE 4	SHEET	E

FILE NAME : S:\DESIGN\DESIGN PROJECTS\1053-02-04 (STH 29)-AYRES-NC\C3D\SHEETSPLAN\026411_TC_S4_1053-02-74.DWG PLOT DATE : 10/30/2013 12:28 PM PLOT BY : QUEST CIVIL ENG PLOT NAME : PLOT SCALE : **********
WISDOT/CADDS SHEET 44



LEGEND

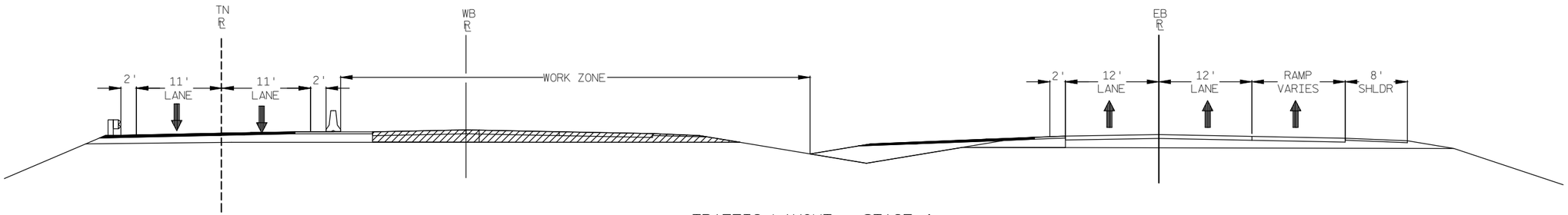
- TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT/TEMPORARY SUPPORT
- DELINEATOR FLEXIBLE TUBULAR MARKER
- MB PORTABLE CHANGEABLE MESSAGE BOARD
- CONCRETE BARRIER TEMPORARY PRECAST
- DIRECTION OF TRAFFIC
- WORK AREA
- TEMPORARY ASHPHALT



PROJECT NO:1053-02-74	HWY: STH 29	COUNTY: MARATHON	TRAFFIC CONTROL: STAGE 4	SHEET E

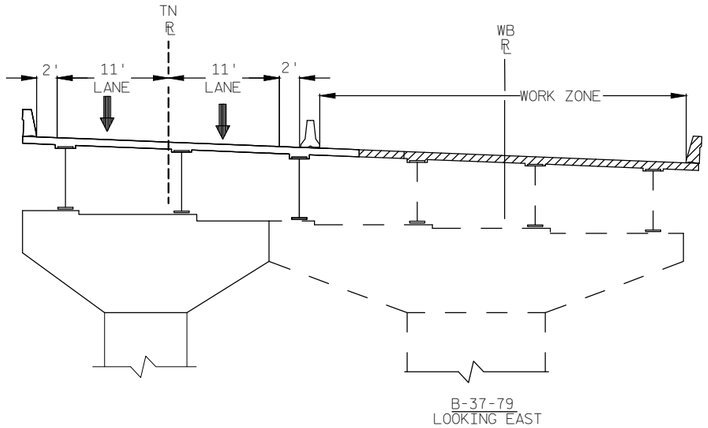
FILE NAME : S:\DESIGN\DESIGN PROJECTS\1053-02-04 (STH 29)-AYRES-NC\C3D\SHEETSPLAN\026411_TC_S4_1053-02-74.DWG PLOT DATE : 10/30/2013 12:28 PM PLOT BY : QUEST CIVIL ENG PLOT NAME : PLOT SCALE : **********

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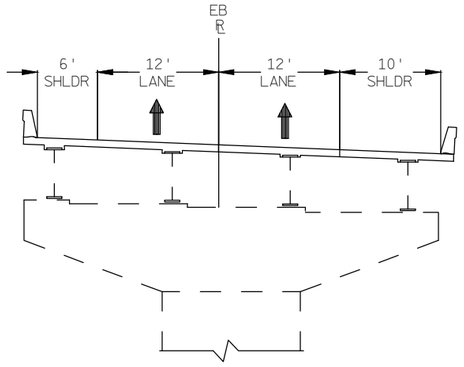


TRAFFIC LAYOUT - STAGE 4

STH 29 BETWEEN SUNRISE DRIVE AND WIS RIVER



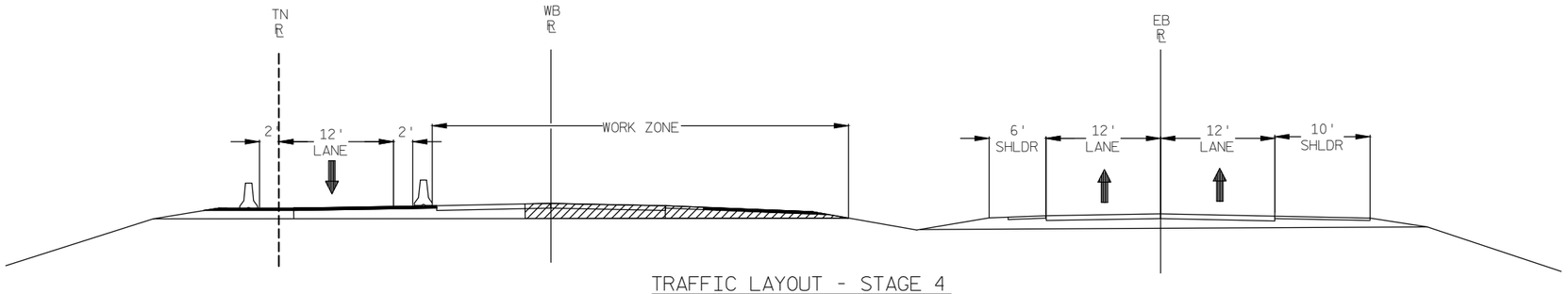
B-37-79
LOOKING EAST



B-37-136
LOOKING EAST

TRAFFIC LAYOUT - STAGE 4

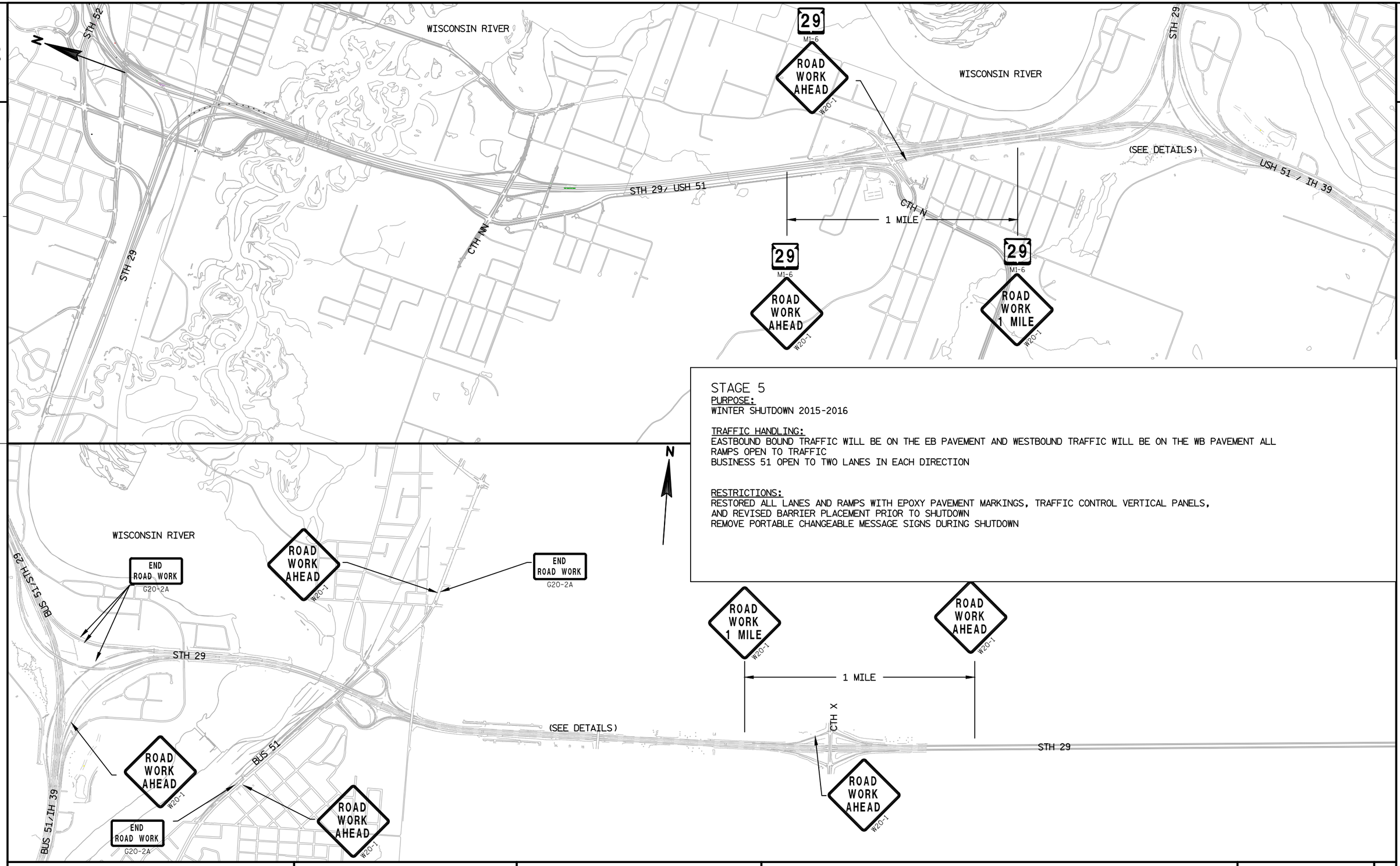
STH 29 BRIDGE OVER WIS RIVER



TRAFFIC LAYOUT - STAGE 4

STH 29 BETWEEN BUS 51 RAMPS

PROJECT NO: 1053-02-74	HWY: STH 29	COUNTY: MARATHON	TRAFFIC CONTROL: STAGE 4 TYPICAL LAYOUT	SHEET 122	E



STAGE 5

PURPOSE:
WINTER SHUTDOWN 2015-2016

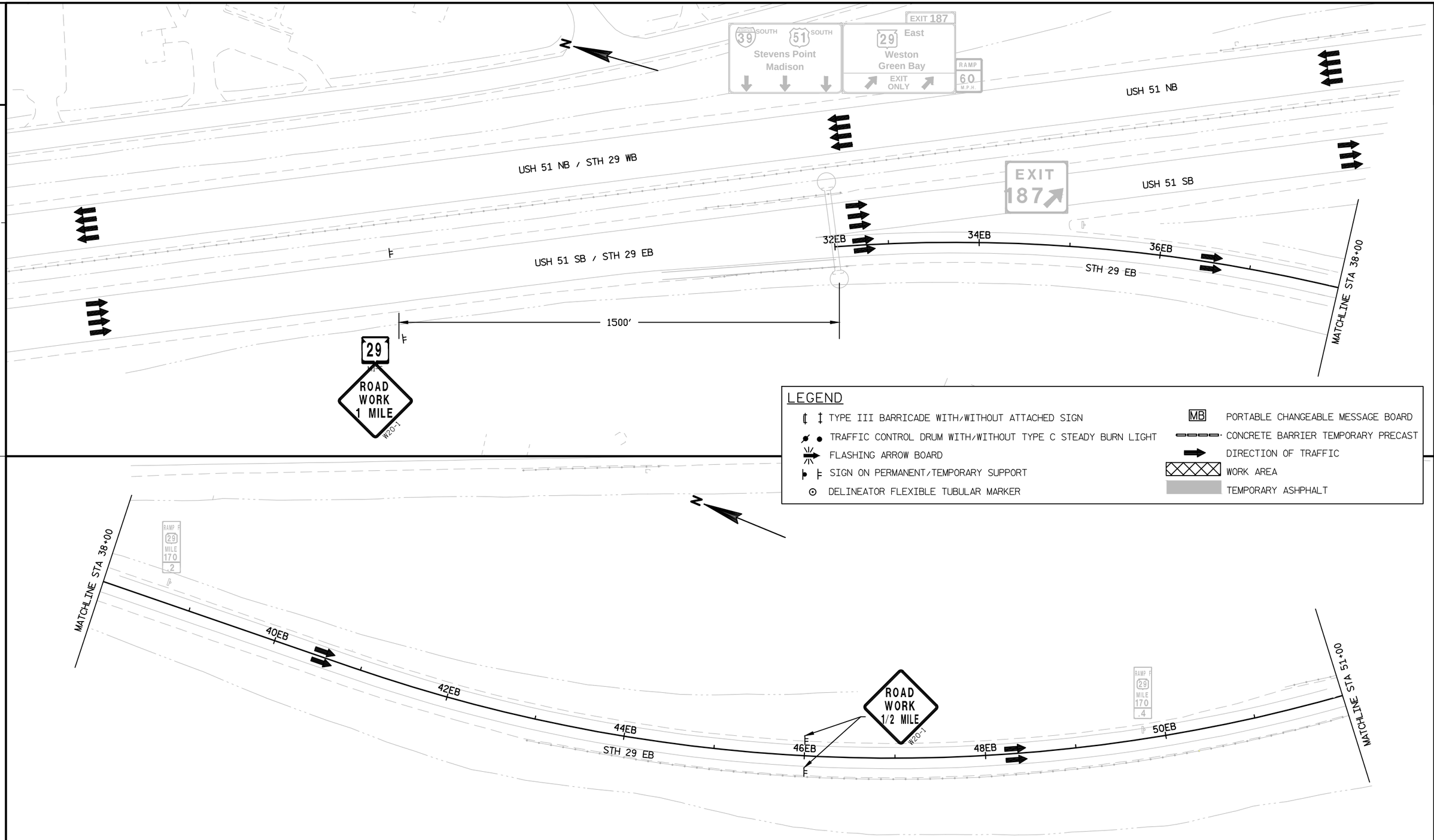
TRAFFIC HANDLING:
EASTBOUND BOUND TRAFFIC WILL BE ON THE EB PAVEMENT AND WESTBOUND TRAFFIC WILL BE ON THE WB PAVEMENT ALL RAMPS OPEN TO TRAFFIC
BUSINESS 51 OPEN TO TWO LANES IN EACH DIRECTION

RESTRICTIONS:
RESTORED ALL LANES AND RAMPS WITH EPOXY PAVEMENT MARKINGS, TRAFFIC CONTROL VERTICAL PANELS, AND REVISED BARRIER PLACEMENT PRIOR TO SHUTDOWN
REMOVE PORTABLE CHANGEABLE MESSAGE SIGNS DURING SHUTDOWN

PROJECT NO: 1053-02-74	HWY: STH 29	COUNTY: MARATHON	TRAFFIC CONTROL: STAGE 5 ADVANCED WARNING WINTER 2015-16	SHEET	E

FILE NAME : S:\DESIGN\DESIGN PROJECTS\1053-02-04 (STH 29)-AYRES-NC\C3D\SHEETSPLAN\026501_TC_S5_OVERVIEW_1053-02-74.DWG PLOT DATE : 10/18/2013 8:43 AM PLOT BY : QUEST CIVIL ENG PLOT NAME : PLOT SCALE : 1 IN:2000 FT
WISDOT/CADDS SHEET 44

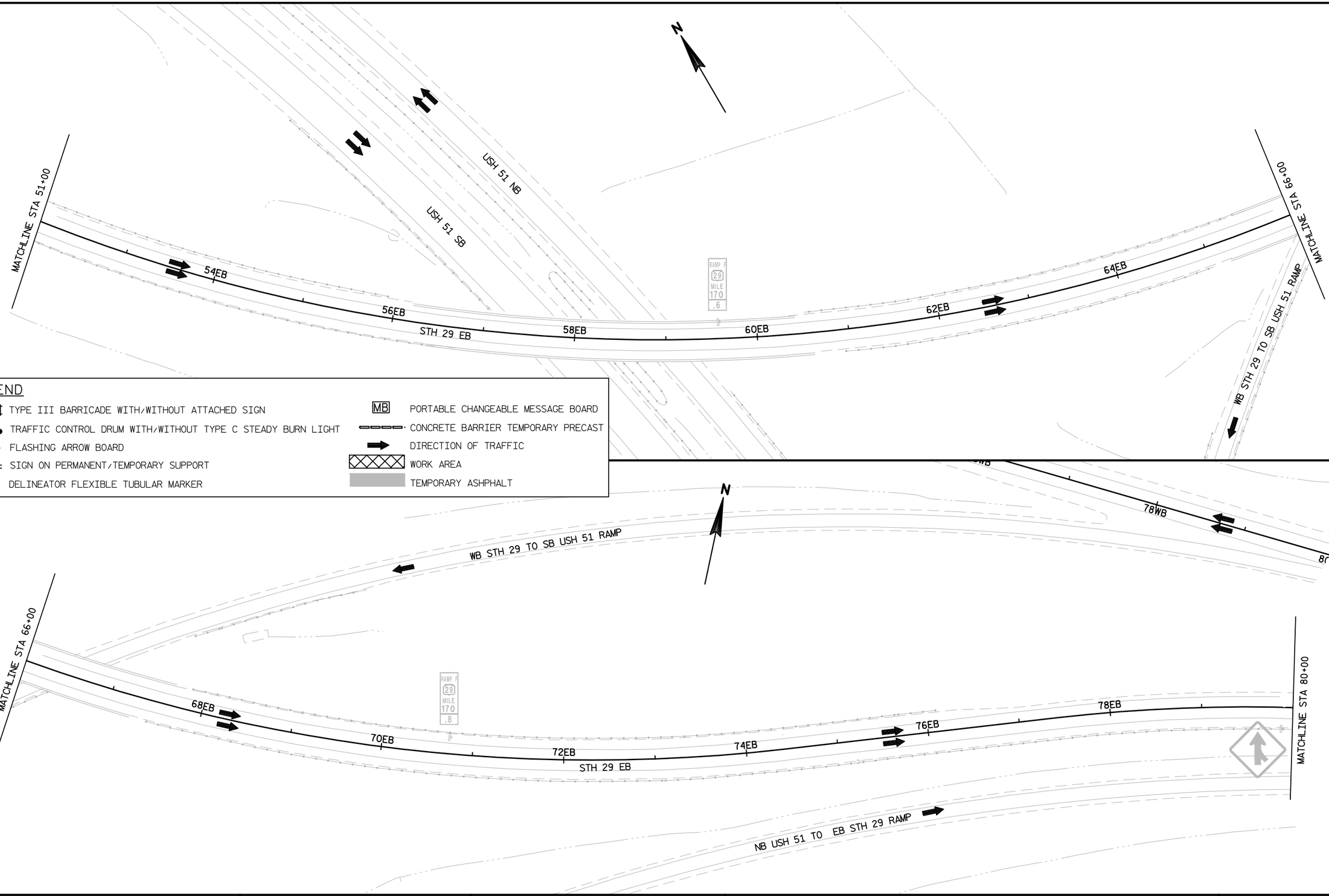
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PROJECT NO:1053-02-75	HWY: STH 29	COUNTY: MARATHON	TRAFFIC CONTROL: STAGE 5 WINTER 2015-16	SHEET	E

FILE NAME : S:\DESIGN\DESIGN PROJECTS\1053-02-04 (STH 29)-AYRES-NC\C3D\SHEETSPLAN\026511_TC_S5_1053-02-74_WINTER1516.DWG PLOT DATE : 10/21/2013 8:40 AM PLOT BY : QUEST CIVIL ENG PLOT NAME : PLOT SCALE : 1 IN:100 FT

2



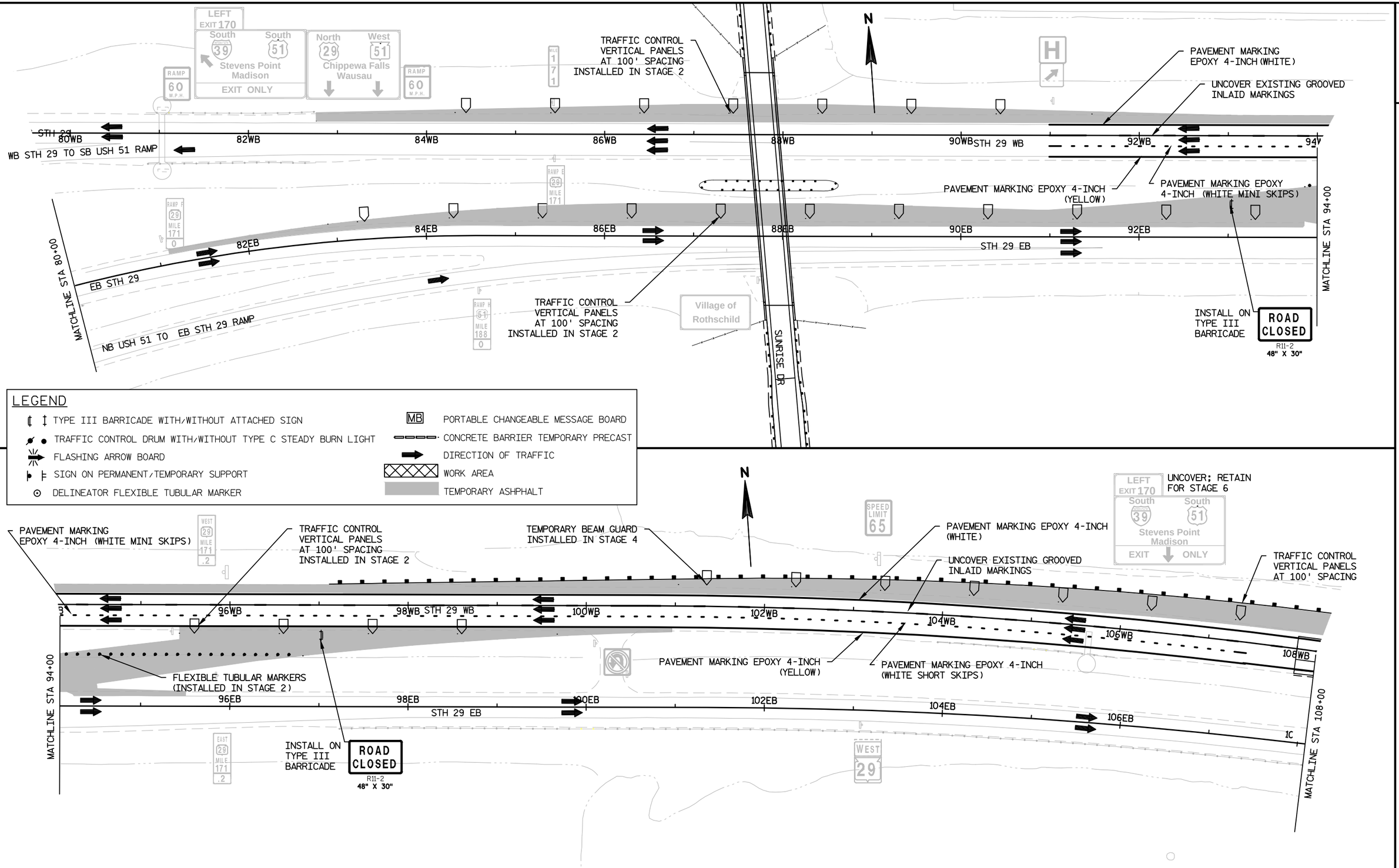
LEGEND

- TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT/TEMPORARY SUPPORT
- DELINEATOR FLEXIBLE TUBULAR MARKER
- MB PORTABLE CHANGEABLE MESSAGE BOARD
- CONCRETE BARRIER TEMPORARY PRECAST
- DIRECTION OF TRAFFIC
- WORK AREA
- TEMPORARY ASHPHALT

PROJECT NO: 1053-02-75	HWY: STH 29	COUNTY: MARATHON	TRAFFIC CONTROL: STAGE 5 WINTER 2015-16	SHEET	E

FILE NAME : S:\DESIGN\DESIGN PROJECTS\1053-02-04 (STH 29)-AYRES-NC\C3D\SHEETSPLAN\026511_TC_S5_1053-02-74_WINTER1516.DWG PLOT DATE : 10/21/2013 8:40 AM PLOT BY : QUEST CIVIL ENG PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44



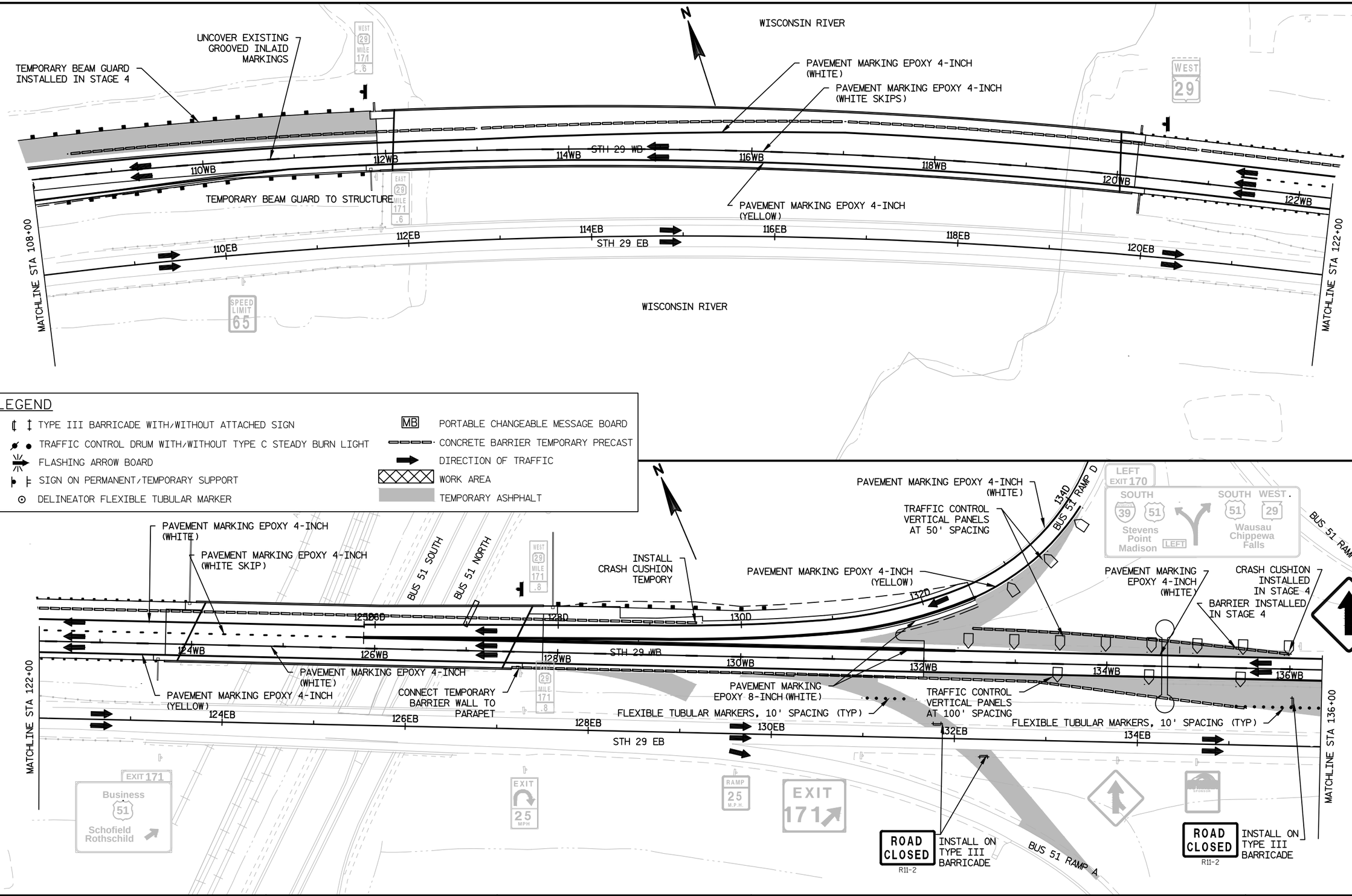
LEGEND

- TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT/TEMPORARY SUPPORT
- DELINEATOR FLEXIBLE TUBULAR MARKER
- MB PORTABLE CHANGEABLE MESSAGE BOARD
- CONCRETE BARRIER TEMPORARY PRECAST
- DIRECTION OF TRAFFIC
- WORK AREA
- TEMPORARY ASHPHALT

PROJECT NO: 1053-02-75	HWY: STH 29	COUNTY: MARATHON	TRAFFIC CONTROL: STAGE 5 WINTER 2015-16	SHEET	E

FILE NAME : S:\DESIGN\DESIGN PROJECTS\1053-02-04 (STH 29)-AYRES-NC\C3D\SHEETSPLAN\026511_TC_S5_1053-02-74_WINTER1516.DWG PLOT DATE : 10/21/2013 8:41 AM PLOT BY : QUEST CIVIL ENG PLOT NAME : PLOT SCALE : **********

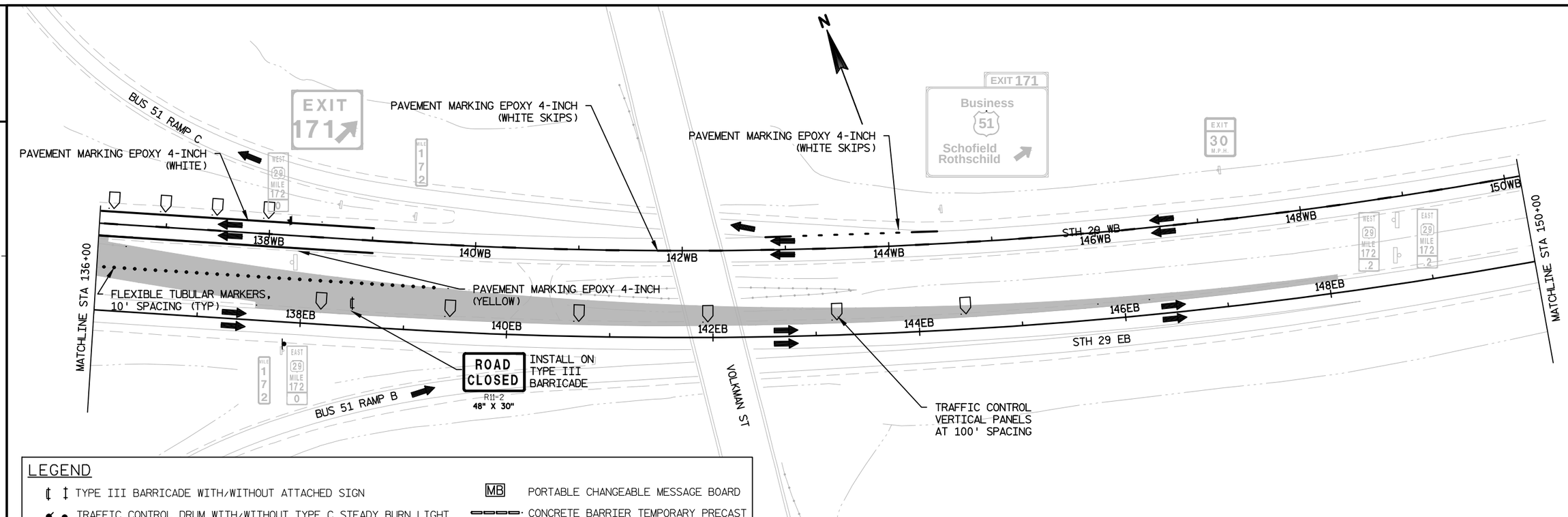
WISDOT/CADDS SHEET 44



PROJECT NO: 1053-02-75	HWY: STH 29	COUNTY: MARATHON	TRAFFIC CONTROL: STAGE 5 WINTER 2015-16	SHEET	E

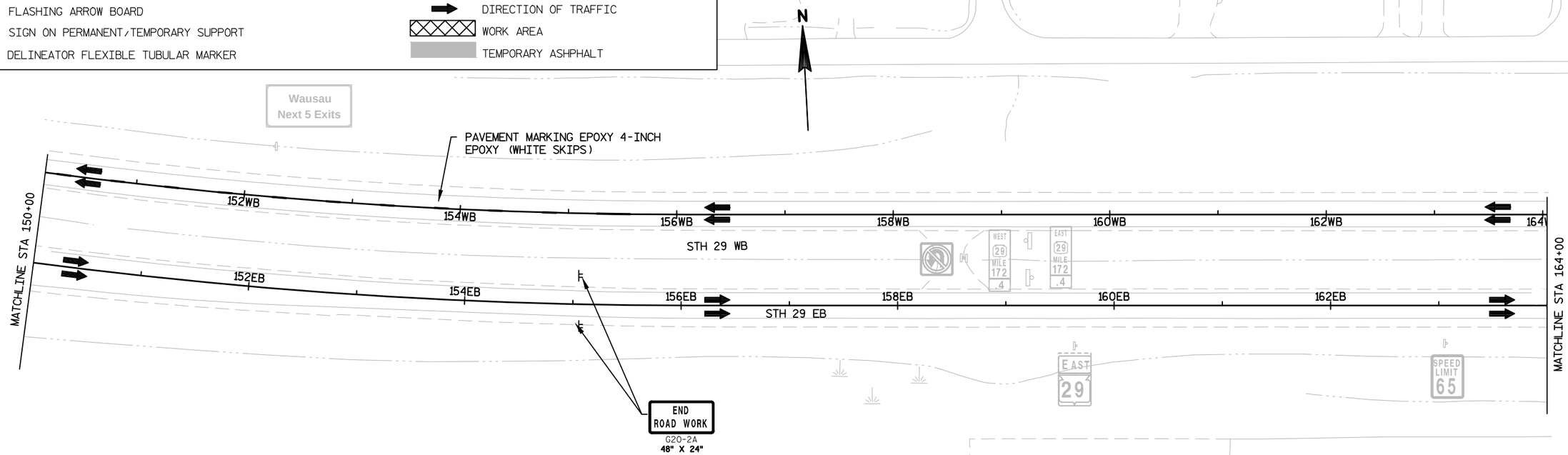
FILE NAME : S:\DESIGN\DESIGN PROJECTS\1053-02-04 (STH 29)-AYRES-NC\C3D\SHEETSPLAN\026511_TC_S5_1053-02-74_WINTER1516.DWG PLOT DATE : 10/21/2013 8:41 AM PLOT BY : QUEST CIVIL ENG PLOT NAME : PLOT SCALE : **********

2



LEGEND

- TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT/TEMPORARY SUPPORT
- DELINEATOR FLEXIBLE TUBULAR MARKER
- MB PORTABLE CHANGEABLE MESSAGE BOARD
- CONCRETE BARRIER TEMPORARY PRECAST
- DIRECTION OF TRAFFIC
- WORK AREA
- TEMPORARY ASHPHALT



PROJECT NO: 1053-02-75	HWY: STH 29	COUNTY: MARATHON	TRAFFIC CONTROL: STAGE 5 WINTER 2015-16	SHEET	E

FILE NAME : S:\DESIGN\DESIGN PROJECTS\1053-02-04 (STH 29)-AYRES-NC\C3D\SHEETSPLAN\026511_TC_S5_1053-02-74_WINTER1516.DWG PLOT DATE : 10/21/2013 8:42 AM PLOT BY : QUEST CIVIL ENG PLOT NAME : PLOT SCALE : **********

2

N

SIS

STH 29 WB

166WB 168WB 170WB 172WB 174WB 176WB

MATCHLINE STA 164+00

MATCHLINE STA 178+00

WEST 29 MILE 172 .6

EAST 29 MILE 172 .6

166EB 168EB 170EB 172EB 174EB 176EB

STH 29 EB

EXIT 173

COUNTY X

Camp Phillips Rd
1 Mile

HIGHWAY MEMORIAL SIGN

SIS

LEGEND

- TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT/TEMPORARY SUPPORT
- DELINEATOR FLEXIBLE TUBULAR MARKER
- MB PORTABLE CHANGEABLE MESSAGE BOARD
- CONCRETE BARRIER TEMPORARY PRECAST
- DIRECTION OF TRAFFIC
- WORK AREA
- TEMPORARY ASHPHALT

N

Madison Wausau
Jct
2 Miles

SIS

WB 180WB 180WB

WEST 29 MILE 172 .8

EAST 29 MILE 172 .8

MATCHLINE STA 178+00

180EB 182EB 184EB

ALDERSON ST

STH 29 WB

MILE 173

WEST 29 MILE 173 0

EAST 29 MILE 173 0

186EB 188EB 190EB

STH 29 EB

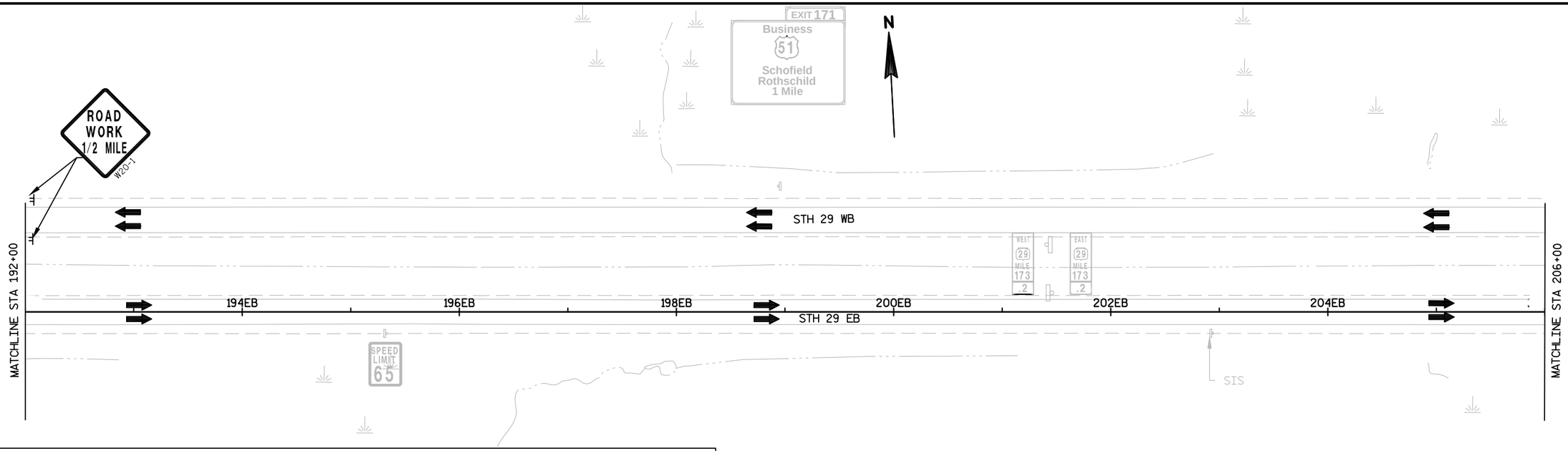
MILE 173

MATCHLINE STA 192+00

PROJECT NO: 1053-02-75	HWY: STH 29	COUNTY: MARATHON	TRAFFIC CONTROL: STAGE 5 WINTER 2015-16	SHEET	E

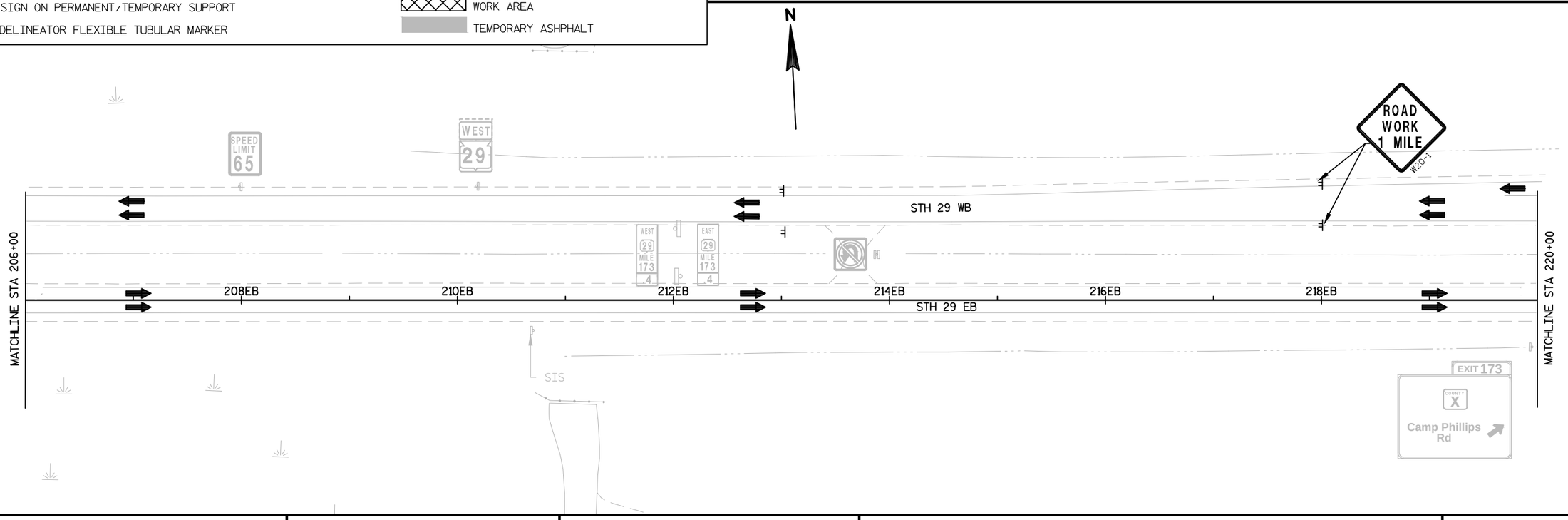
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WISDOT/CADDS SHEET 44

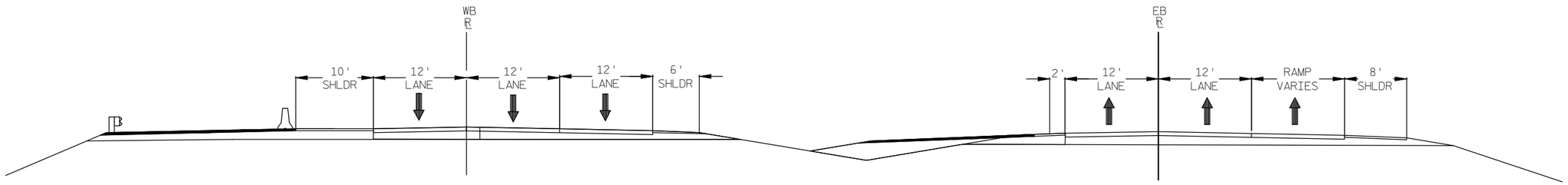


LEGEND

- TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
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- DIRECTION OF TRAFFIC
- WORK AREA
- TEMPORARY ASHPHALT

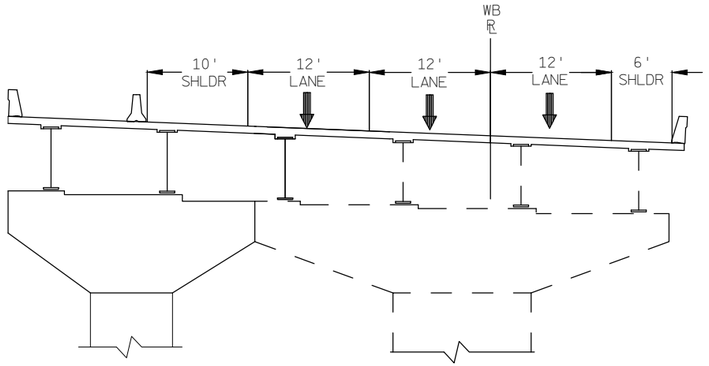


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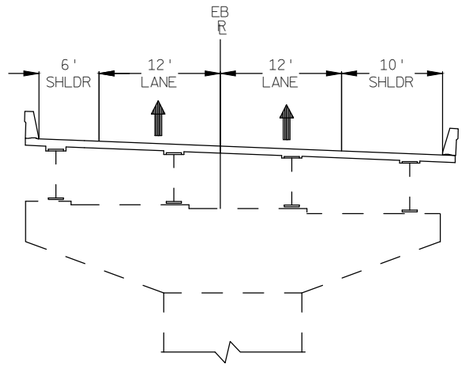


TRAFFIC LAYOUT - STAGE 5

STH 29 BETWEEN SUNRISE DRIVE AND WIS RIVER



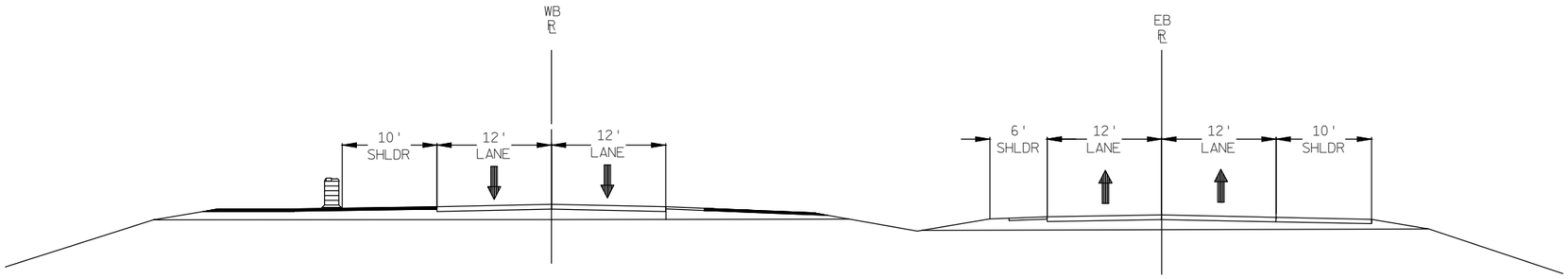
B-37-79
LOOKING EAST



B-37-136
LOOKING EAST

TRAFFIC LAYOUT - STAGE 5

STH 29 BRIDGE OVER WIS RIVER



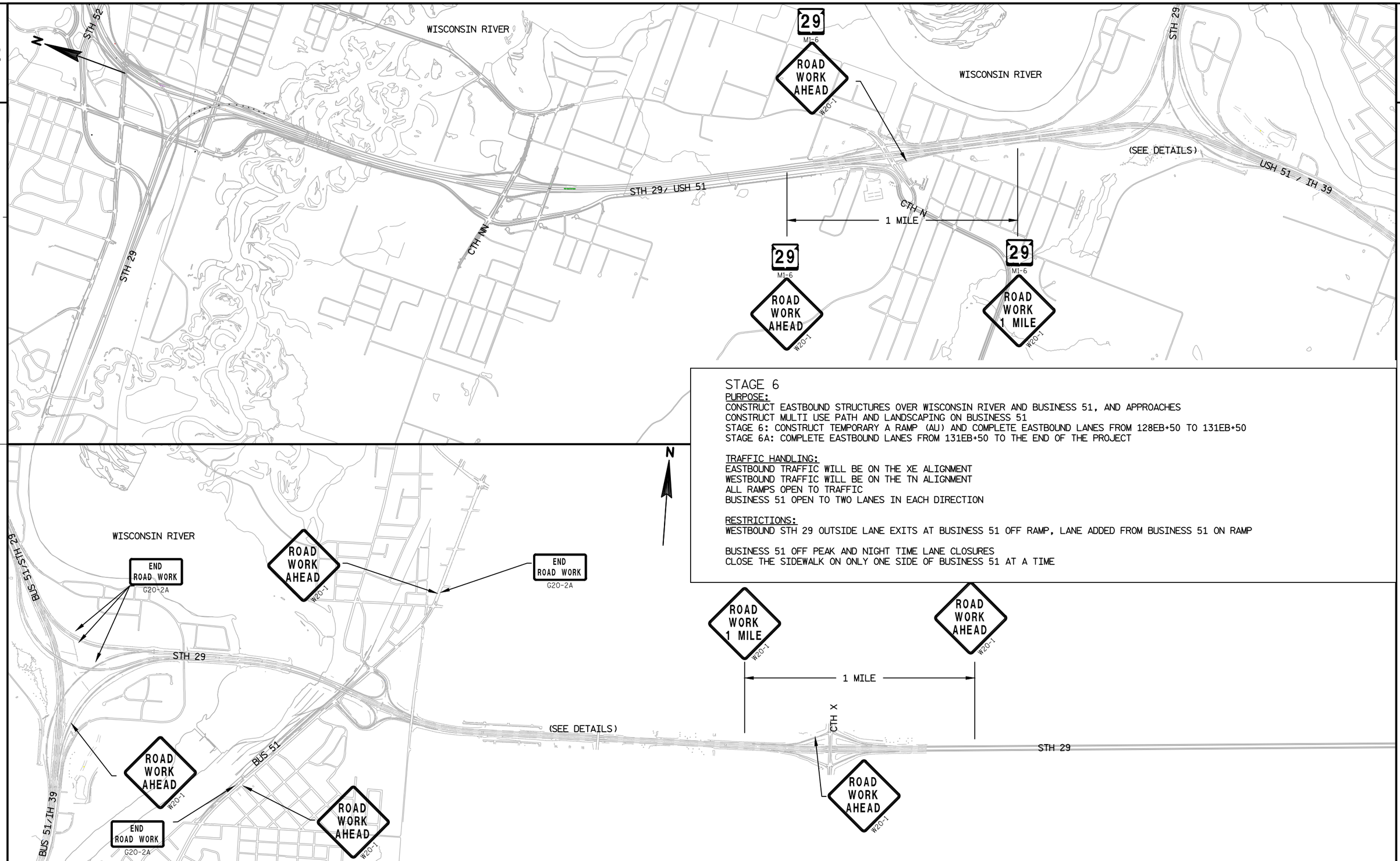
TRAFFIC LAYOUT - STAGE 5

STH 29 BETWEEN BUS 51 RAMPS

PROJECT NO: 1053-02-74	HWY: STH 29	COUNTY: MARATHON	TRAFFIC CONTROL: STAGE 5 TYPICAL LAYOUT	SHEET 131	E

FILE NAME : S:\DESIGN\DESIGN PROJECTS\1053-02-04 (STH 29)-AYRES-NC\C3D\SHEETSPLAN\020301_TS_STH 29.DWG PLOT DATE : 10/17/2013 10:10 AM PLOT BY : QUEST CIVIL ENG PLOT NAME :

WISDOT/CADDS SHEET 44



STAGE 6

PURPOSE:
CONSTRUCT EASTBOUND STRUCTURES OVER WISCONSIN RIVER AND BUSINESS 51, AND APPROACHES
CONSTRUCT MULTI USE PATH AND LANDSCAPING ON BUSINESS 51
STAGE 6: CONSTRUCT TEMPORARY A RAMP (AU) AND COMPLETE EASTBOUND LANES FROM 128EB+50 TO 131EB+50
STAGE 6A: COMPLETE EASTBOUND LANES FROM 131EB+50 TO THE END OF THE PROJECT

TRAFFIC HANDLING:
EASTBOUND TRAFFIC WILL BE ON THE XE ALIGNMENT
WESTBOUND TRAFFIC WILL BE ON THE TN ALIGNMENT
ALL RAMPS OPEN TO TRAFFIC
BUSINESS 51 OPEN TO TWO LANES IN EACH DIRECTION

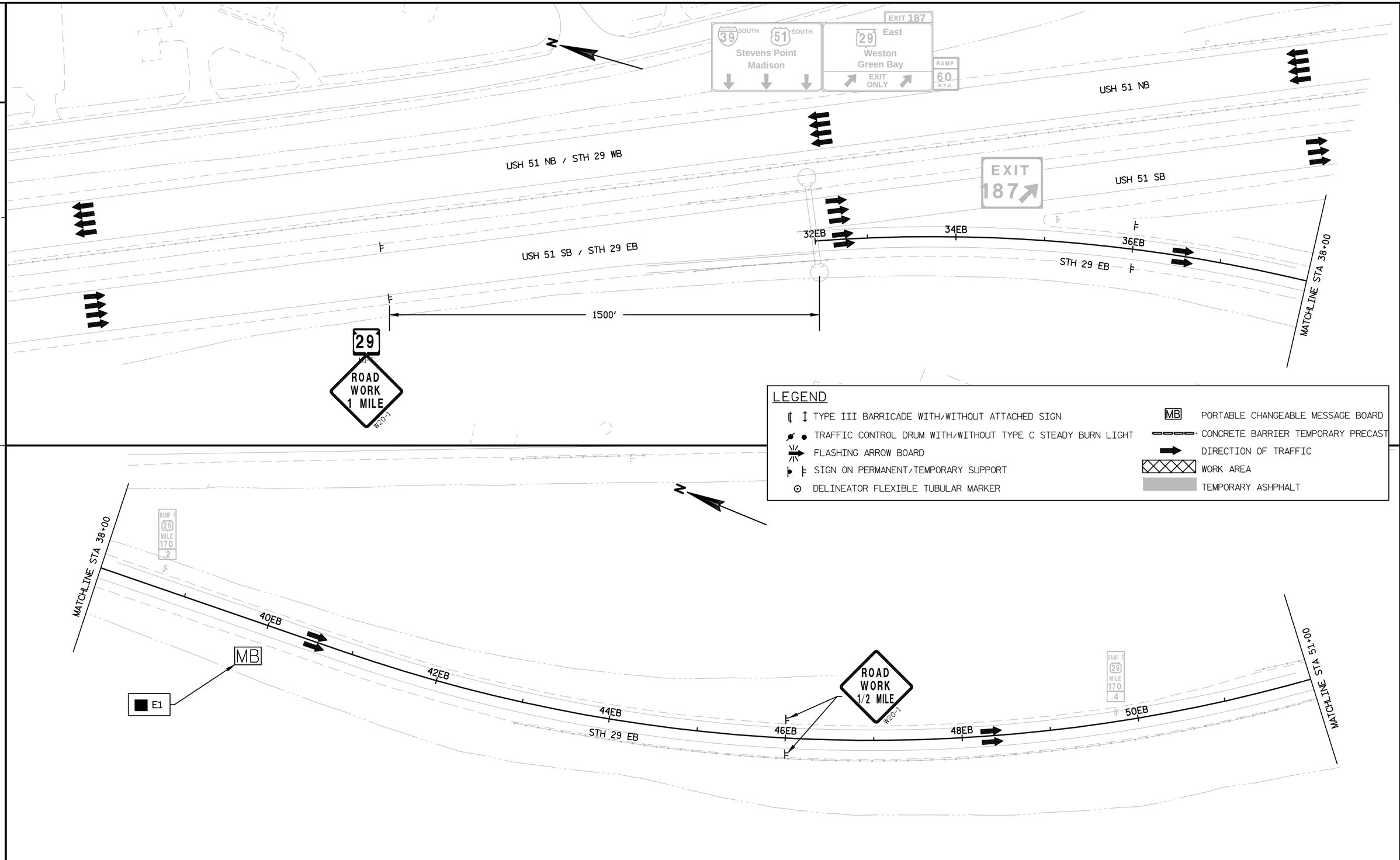
RESTRICTIONS:
WESTBOUND STH 29 OUTSIDE LANE EXITS AT BUSINESS 51 OFF RAMP, LANE ADDED FROM BUSINESS 51 ON RAMP

BUSINESS 51 OFF PEAK AND NIGHT TIME LANE CLOSURES
CLOSE THE SIDEWALK ON ONLY ONE SIDE OF BUSINESS 51 AT A TIME

PROJECT NO: 1053-02-74	HWY: STH 29	COUNTY: MARATHON	TRAFFIC CONTROL: STAGE 6 ADVANCED WARNING	SHEET	E

FILE NAME : S:\DESIGN\DESIGN PROJECTS\1053-02-04 (STH 29)-AYRES-NC\C3D\SHEETSPLAN\026601_TC_S6_OVERVIEW_1053-02-74.DWG PLOT DATE : 10/30/2013 7:34 AM PLOT BY : QUEST CIVIL ENG PLOT NAME : PLOT SCALE : 1 IN:2000 FT
WISDOT/CADDS SHEET 44

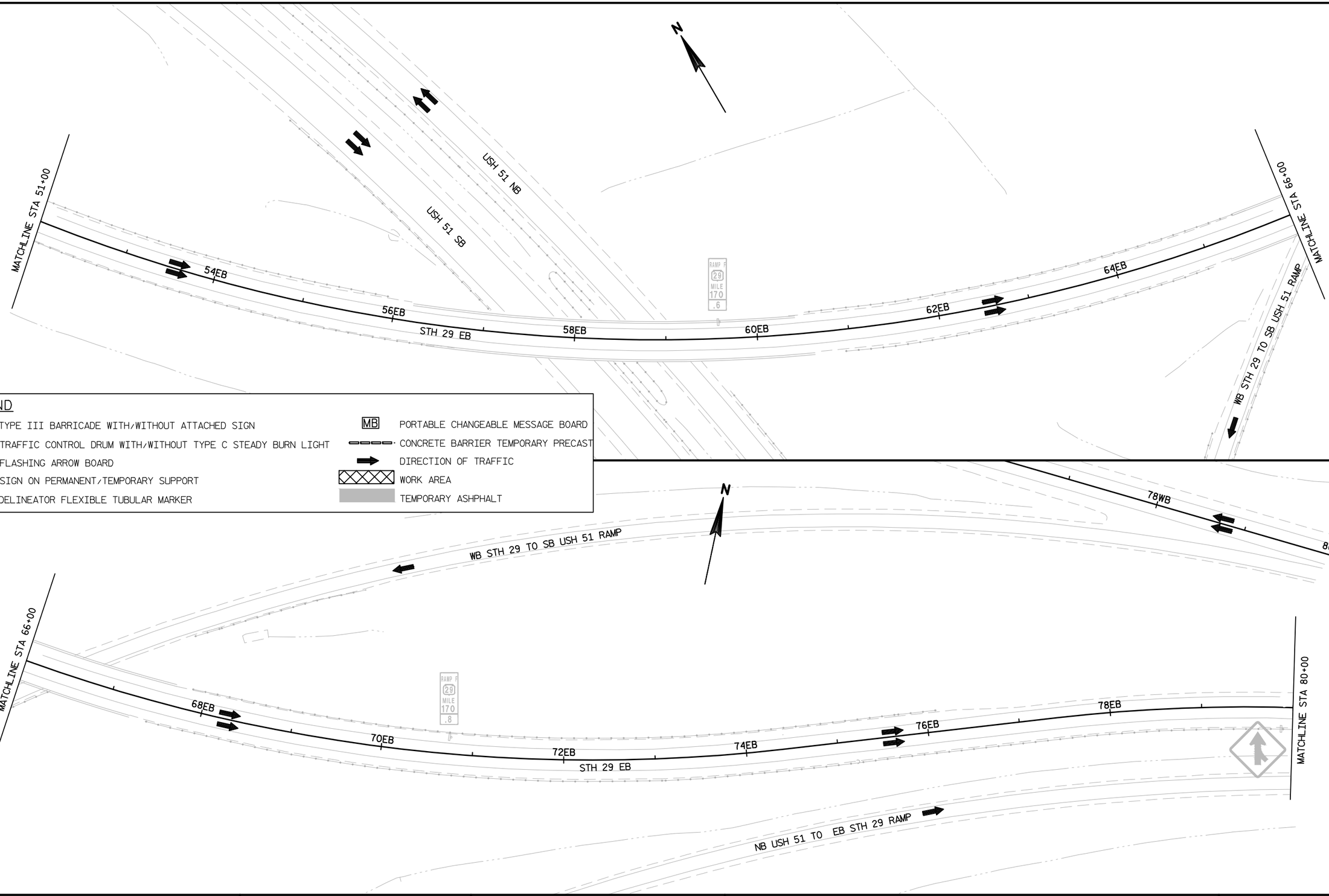
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PROJECT NO:1053-02-74	HWY: STH 29	COUNTY: MARATHON	TRAFFIC CONTROL: STAGE 6	SHEET	E

FILE NAME : S:\DESIGN\DESIGN PROJECTS\1053-02-04 (STH 29)-AYRES-NC\C3D\SHEETSPLAN\026611_TC_S6_1053-02-74.DWG PLOT DATE : 10/30/2013 12:18 PM PLOT BY : QUEST CIVIL ENG PLOT NAME : PLOT SCALE : 1 IN:100 FT

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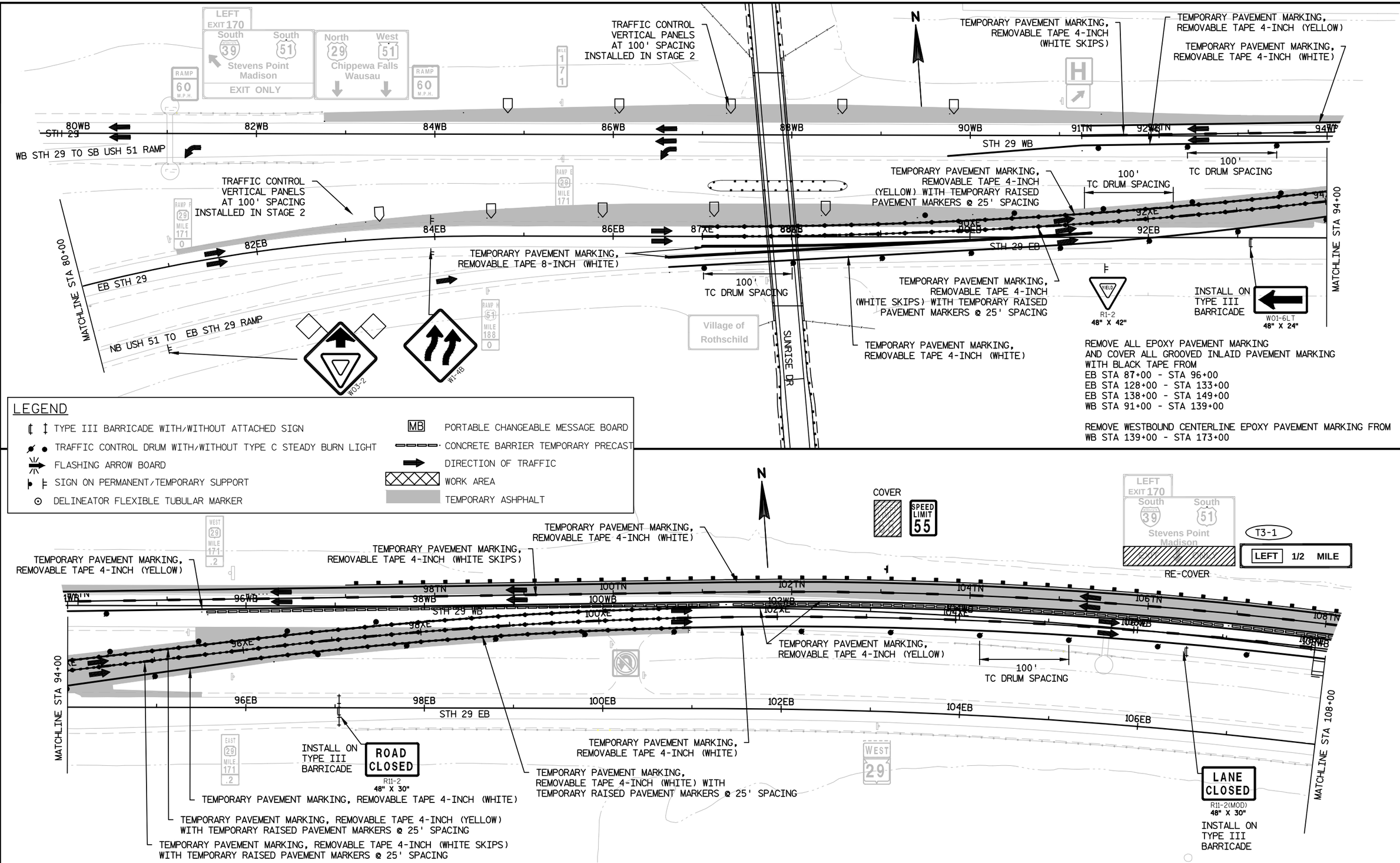


LEGEND

- TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT/TEMPORARY SUPPORT
- DELINEATOR FLEXIBLE TUBULAR MARKER
- MB PORTABLE CHANGEABLE MESSAGE BOARD
- CONCRETE BARRIER TEMPORARY PRECAST
- DIRECTION OF TRAFFIC
- WORK AREA
- TEMPORARY ASHPHALT

PROJECT NO:1053-02-74	HWY: STH 29	COUNTY:MARATHON	TRAFFIC CONTROL: STAGE 6	SHEET	E

FILE NAME : S:\DESIGN\DESIGN PROJECTS\1053-02-04 (STH 29)-AYRES-NC\C3D\SHEETSPLAN\026611_TC_S6_1053-02-74.DWG PLOT DATE : 10/30/2013 12:19 PM PLOT BY : QUEST CIVIL ENG PLOT NAME : PLOT SCALE : 1 IN:100 FT



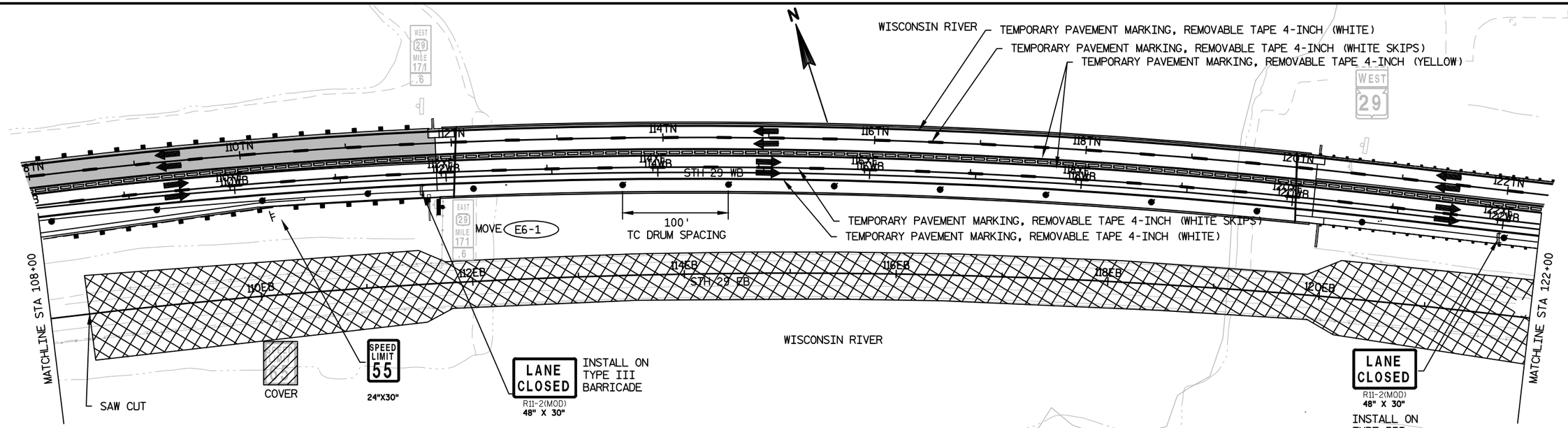
LEGEND

- TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT/TEMPORARY SUPPORT
- DELINEATOR FLEXIBLE TUBULAR MARKER
- MB PORTABLE CHANGEABLE MESSAGE BOARD
- CONCRETE BARRIER TEMPORARY PRECAST
- DIRECTION OF TRAFFIC
- WORK AREA
- TEMPORARY ASHPHALT

PROJECT NO:1053-02-74	HWY:STH 29	COUNTY:MARATHON	TRAFFIC CONTROL: STAGE 6	SHEET	E

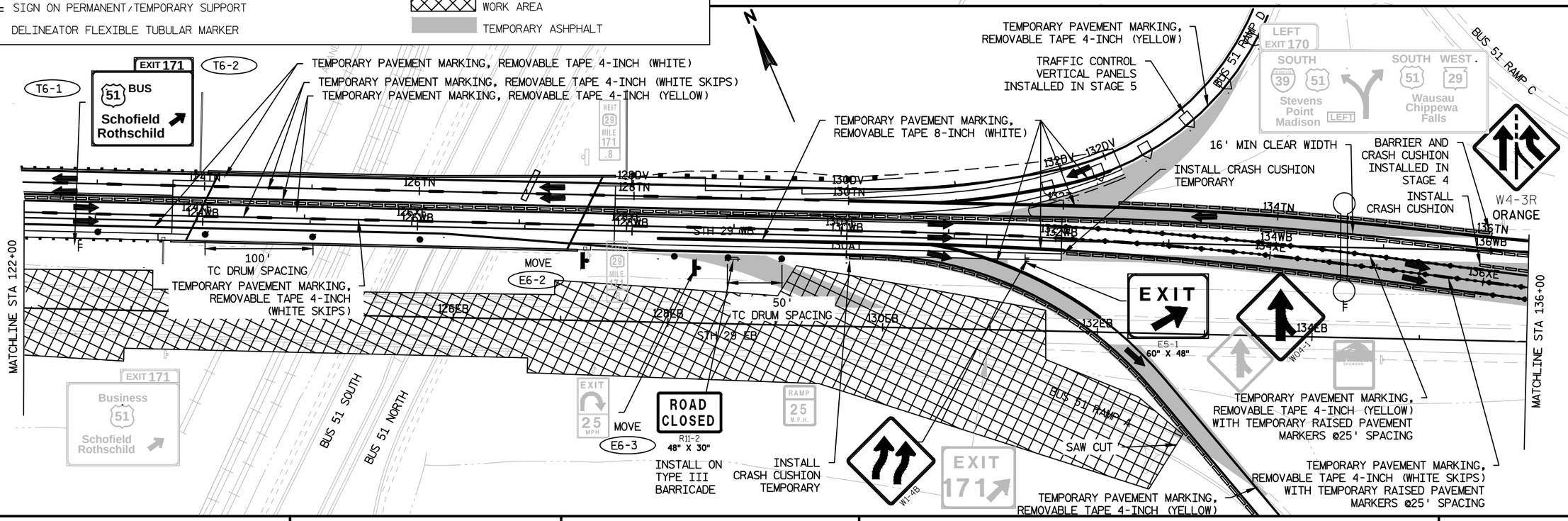
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WISDOT/CADDS SHEET 44

2



LEGEND

- TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT/TEMPORARY SUPPORT
- DELINEATOR FLEXIBLE TUBULAR MARKER
- MB PORTABLE CHANGEABLE MESSAGE BOARD
- CONCRETE BARRIER TEMPORARY PRECAST
- DIRECTION OF TRAFFIC
- WORK AREA
- TEMPORARY ASHPHALT



PROJECT NO: 1053-02-74	HWY: STH 29	COUNTY: MARATHON	TRAFFIC CONTROL: STAGE 6	SHEET	E

FILE NAME : S:\DESIGN\DESIGN PROJECTS\1053-02-04 (STH 29)-AYRES-NC\C3D\SHEETSPLAN\026611_TC_S6_1053-02-74.DWG PLOT DATE : 10/30/2013 12:20 PM PLOT BY : QUEST CIVIL ENG PLOT NAME : PLOT SCALE : **********

2

TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE 4-INCH (WHITE)

BUS 51 RAMP C

EXIT 171

W01-4R

EXIT

E5-1
60" X 48"

N

TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE 8-INCH (WHITE SHORT SKIPS)

TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE 8-INCH (WHITE)

EXIT 171
Business 51
Schofield
Rothschild

T3-2
RE-ERECT SIGN

RIGHT LANE EXIT ONLY

ATTACH BELOW EXISTING SIGN

EXIT 30 M.P.H.

100' TC DRUM SPACING

16' MIN CLEAR WIDTH

25' TC DRUM SPACING WITH TYPE A LIGHTS

136WB 138WB 139TN 140WB 142WB 144WB 146WB 148WB 150WB

INSTALL CRASH CUSHION TEMPORY

TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE 8-INCH (WHITE)

MATCHLINE STA 136+00

138XE 140XE 142XE 144XE 146XE 148XE 148EB 149XE

138EB 140EB 142EB 144EB 146EB

TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE 4-INCH (YELLOW)

STH 29 EB

TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE 4-INCH (WHITE SKIPS)

MATCHLINE STA 150+00

100' TC DRUM SPACING

BUS 51 RAMP B

TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE 4-INCH (WHITE SKIPS) WITH TEMPORARY RAISED PAVEMENT MARKINGS @ 25' SPACING

VOLKMAN ST

TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE 4-INCH (WHITE) WITH TEMPORARY RAISED PAVEMENT MARKINGS @ 25' SPACING

TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE 8-INCH (WHITE)

29 West
LEFT LANE ONLY

T3-3
RE-ERECT SIGN

LEGEND

- TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT/TEMPORARY SUPPORT
- DELINEATOR FLEXIBLE TUBULAR MARKER
- MB PORTABLE CHANGEABLE MESSAGE BOARD
- CONCRETE BARRIER TEMPORARY PRECAST
- DIRECTION OF TRAFFIC
- WORK AREA
- TEMPORARY ASHPHALT

N

TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE 8-INCH (WHITE SHORT SKIPS)

Wausau
Next 5 Exits

RIGHT LANE MUST EXIT

R3-33R
78" X 36"

152WB 154WB 156WB 158WB 160WB 162WB 164

MATCHLINE STA 150+00

STH 29 WB

152EB 154EB 156EB 158EB 160EB 162EB

STH 29 EB

MATCHLINE STA 164+00

EAST 29

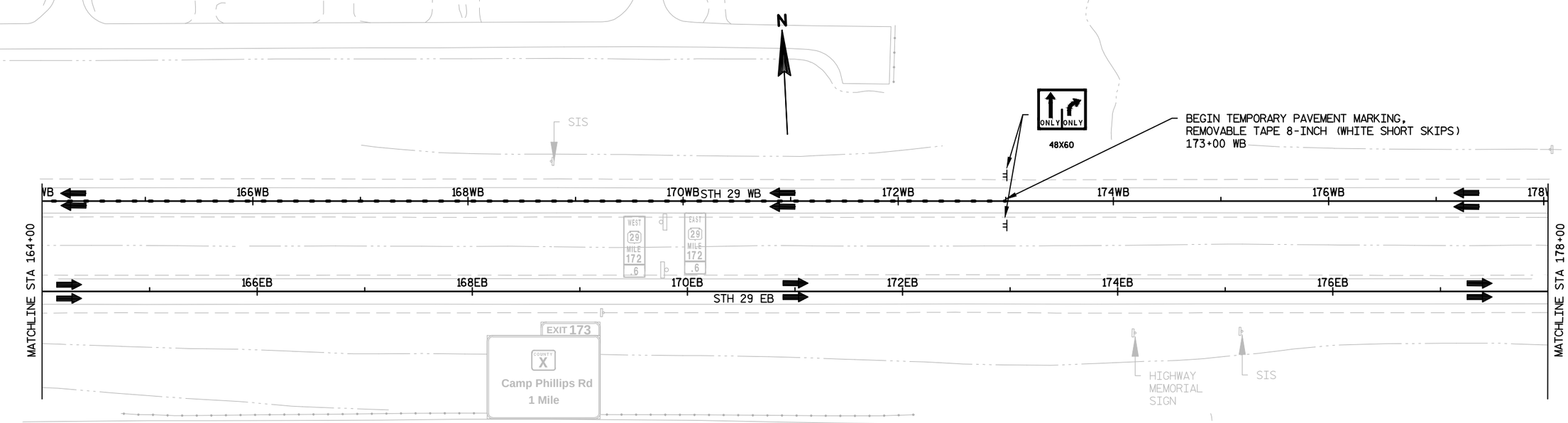
SPEED LIMIT 65

END ROAD WORK
G20-2A
48" X 24"

PROJECT NO: 1053-02-74	HWY: STH 29	COUNTY: MARATHON	TRAFFIC CONTROL: STAGE 6	SHEET	E

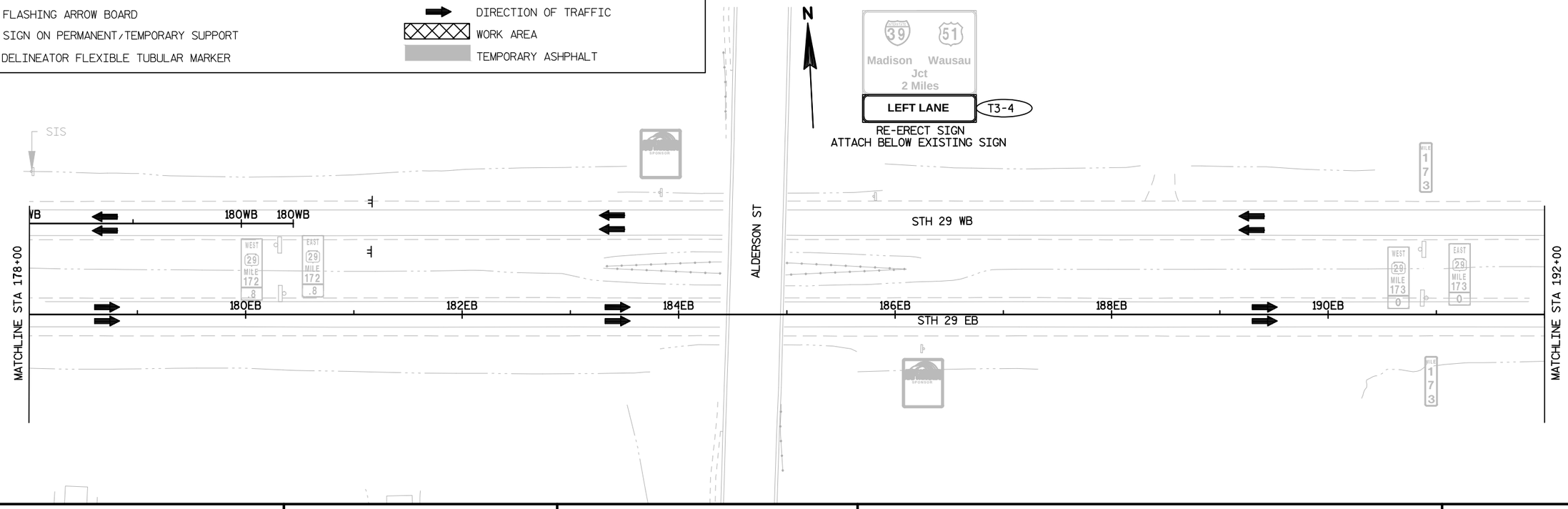
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2



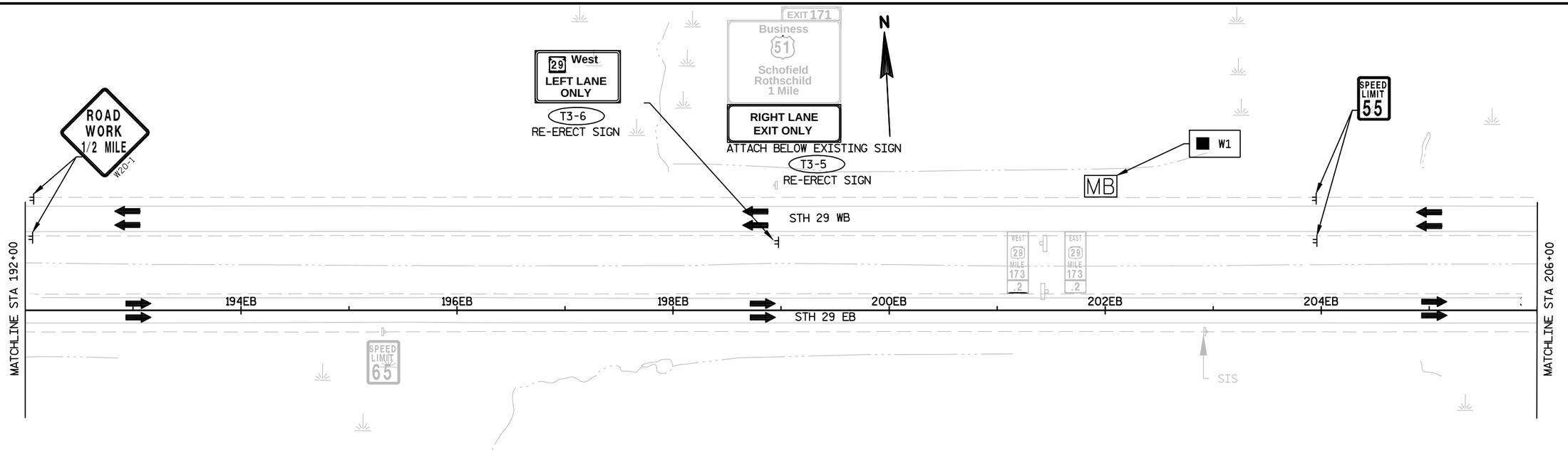
LEGEND

- TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT/TEMPORARY SUPPORT
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- MB PORTABLE CHANGEABLE MESSAGE BOARD
- CONCRETE BARRIER TEMPORARY PRECAST
- DIRECTION OF TRAFFIC
- WORK AREA
- TEMPORARY ASHPHALT



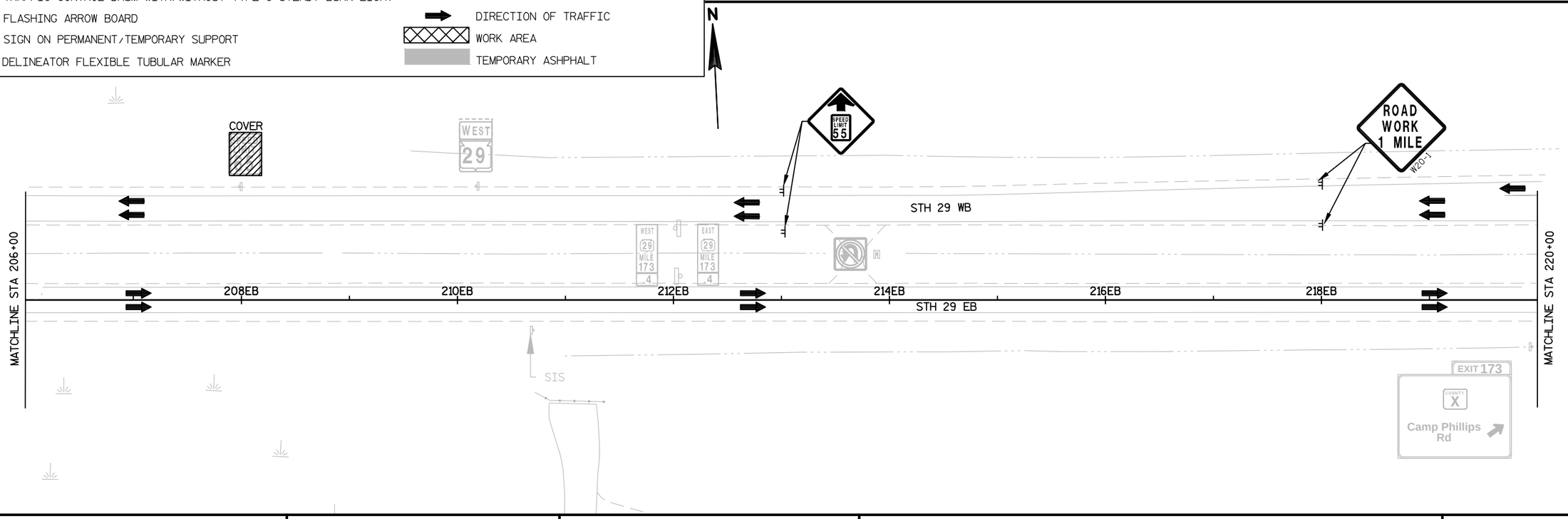
PROJECT NO: 1053-02-74	HWY: STH 29	COUNTY: MARATHON	TRAFFIC CONTROL: STAGE 6	SHEET	E

FILE NAME : S:\DESIGN\DESIGN PROJECTS\1053-02-04 (STH 29)-AYRES-NC\C3D\SHEETSPLAN\026611_TC_S6_1053-02-74.DWG PLOT DATE : 10/30/2013 12:21 PM PLOT BY : QUEST CIVIL ENG PLOT NAME : PLOT SCALE : **********
WISDOT/CADDS SHEET 44



LEGEND

- TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT/TEMPORARY SUPPORT
- DELINEATOR FLEXIBLE TUBULAR MARKER
- MB PORTABLE CHANGEABLE MESSAGE BOARD
- CONCRETE BARRIER TEMPORARY PRECAST
- DIRECTION OF TRAFFIC
- WORK AREA
- TEMPORARY ASHPHALT



PROJECT NO: 1053-02-74	HWY: STH 29	COUNTY: MARATHON	TRAFFIC CONTROL: STAGE 6	SHEET	E

FILE NAME : S:\DESIGN\DESIGN PROJECTS\1053-02-04 (STH 29)-AYRES-NC\C3D\SHEETSPLAN\026611_TC_S6_1053-02-74.DWG PLOT DATE : 10/30/2013 12:21 PM PLOT BY : QUEST CIVIL ENG PLOT NAME : PLOT SCALE : **********
WISDOT/CADDS SHEET 44

2

WISCONSIN RIVER

TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE 4-INCH (WHITE)
TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE 4-INCH (WHITE SKIPS)
TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE 4-INCH (YELLOW)

WEST 29 MILE 171 .6

110TN 112TN 114TN 116TN 118TN 120TN 122TN
110WB 112WB 114WB 116WB 118WB 120WB 122WB
STH 29 WB

100'
TC DRUM SPACING

EAST 29 MILE 171 .6

TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE 4-INCH (WHITE SKIPS)
TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE 4-INCH (WHITE)

MATCHLINE STA 108+00

110EB 112EB 114EB 116EB 118EB 120EB
STH 29 EB

WISCONSIN RIVER

MATCHLINE STA 122+00

COVER

SPEED LIMIT 55
24"X30"

LANE CLOSED
R11-2(MOD)
48" X 30"
INSTALL ON TYPE III BARRICADE

LEGEND

- TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT/TEMPORARY SUPPORT
- DELINEATOR FLEXIBLE TUBULAR MARKER
- MB PORTABLE CHANGEABLE MESSAGE BOARD
- CONCRETE BARRIER TEMPORARY PRECAST
- DIRECTION OF TRAFFIC
- WORK AREA
- TEMPORARY ASHPHALT

EXIT 171
51 BUS
Schofield
Rothschild

TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE 4-INCH (WHITE)
TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE 4-INCH (WHITE SKIPS)
TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE 4-INCH (YELLOW)

WEST 29 MILE 171 .8

124TN 126TN 128OV 128TN 130OV 130TN 132DV 132TN 134TN 136TN
124WB 126WB 128WB 130WB 132WB 134WB 136WB
STH 29 WB

TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE 8-INCH (WHITE)

MATCHLINE STA 122+00

126EB 128EB 130AU 130EB 132EB 134EB 136XE
STH 29 EB

EXIT 171
Business
51
Schofield
Rothschild

BUS 51 SOUTH
BUS 51 NORTH

EXIT 25 MPH MOVE
E6-3

EXIT
E5-1
60" X 48"

RAMP 25 M.P.H.

EXIT 171

TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE 4-INCH (YELLOW)
TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE 4-INCH (WHITE)

TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE 4-INCH (YELLOW)
TRAFFIC CONTROL VERTICAL PANEL AT 50' SPACING INSTALLED IN STAGE 5
TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE 4-INCH (YELLOW)
TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE 8-INCH (WHITE)

BUS 51 RAMP D
BUS 51 RAMP C

LEFT EXIT 170
SOUTH 39 51 Stevens Point Madison
LEFT
SOUTH WEST 51 29 Wausau Chippewa Falls

TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE 4-INCH (YELLOW) WITH TEMPORARY RAISED PAVEMENT MARKINGS AT 25' SPACING

16' MIN CLEAR WIDTH
BARRIER AND CRASH CUSHIONS INSTALLED IN STAGE 4

W4-3R
ORANGE

WK-45

CRASH CUSHION AND BARRIER FROM STAGE 6

BUS 51 RAMP A

W04-1

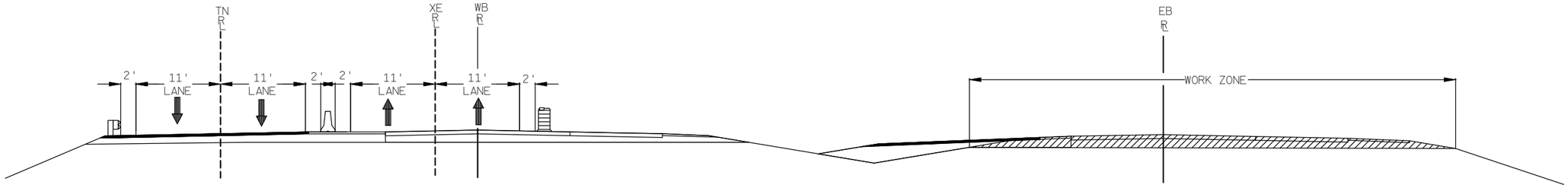
CRASH CUSHION AND BARRIER FROM STAGE 6

SAW CUT

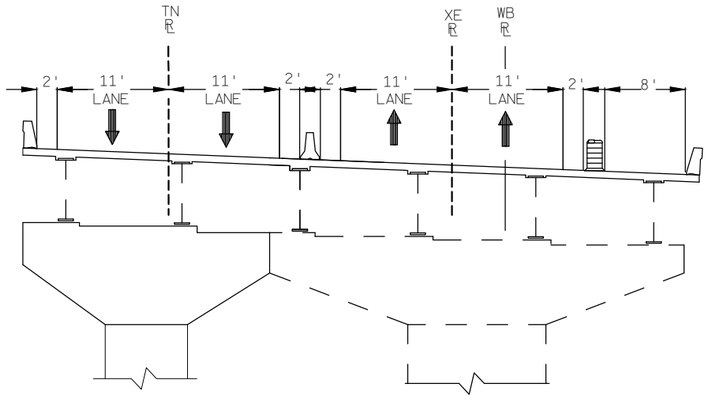
TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE 4-INCH (WHITE SKIP) WITH TEMPORARY RAISED PAVEMENT MARKINGS AT 25' SPACING

MATCHLINE STA 136+00

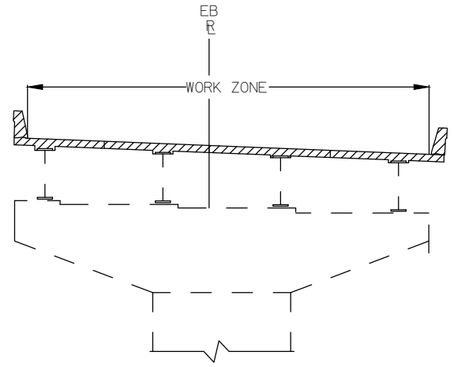
PROJECT NO:1053-02-74	HWY: STH 29	COUNTY: MARATHON	TRAFFIC CONTROL: STAGE 6A	SHEET 140	E



TRAFFIC LAYOUT - STAGE 6
STH 29 BETWEEN SUNRISE DRIVE AND WIS RIVER

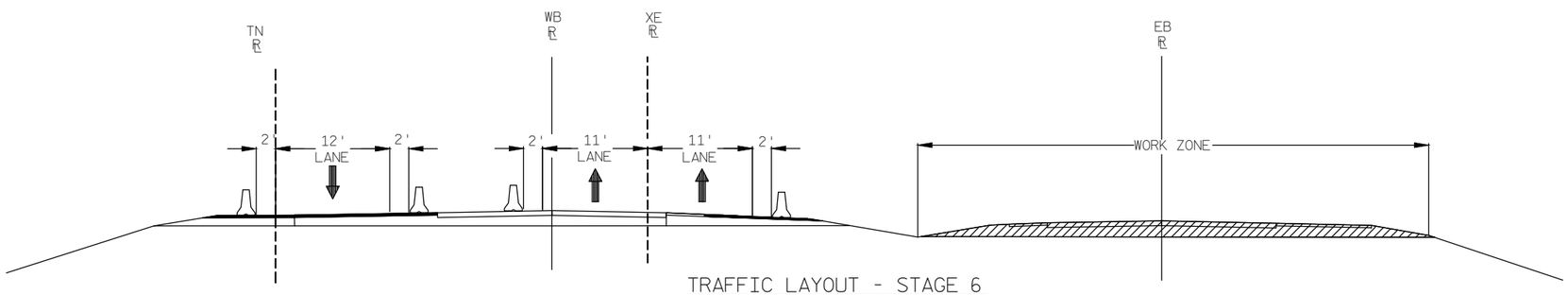


B-37-79
LOOKING EAST



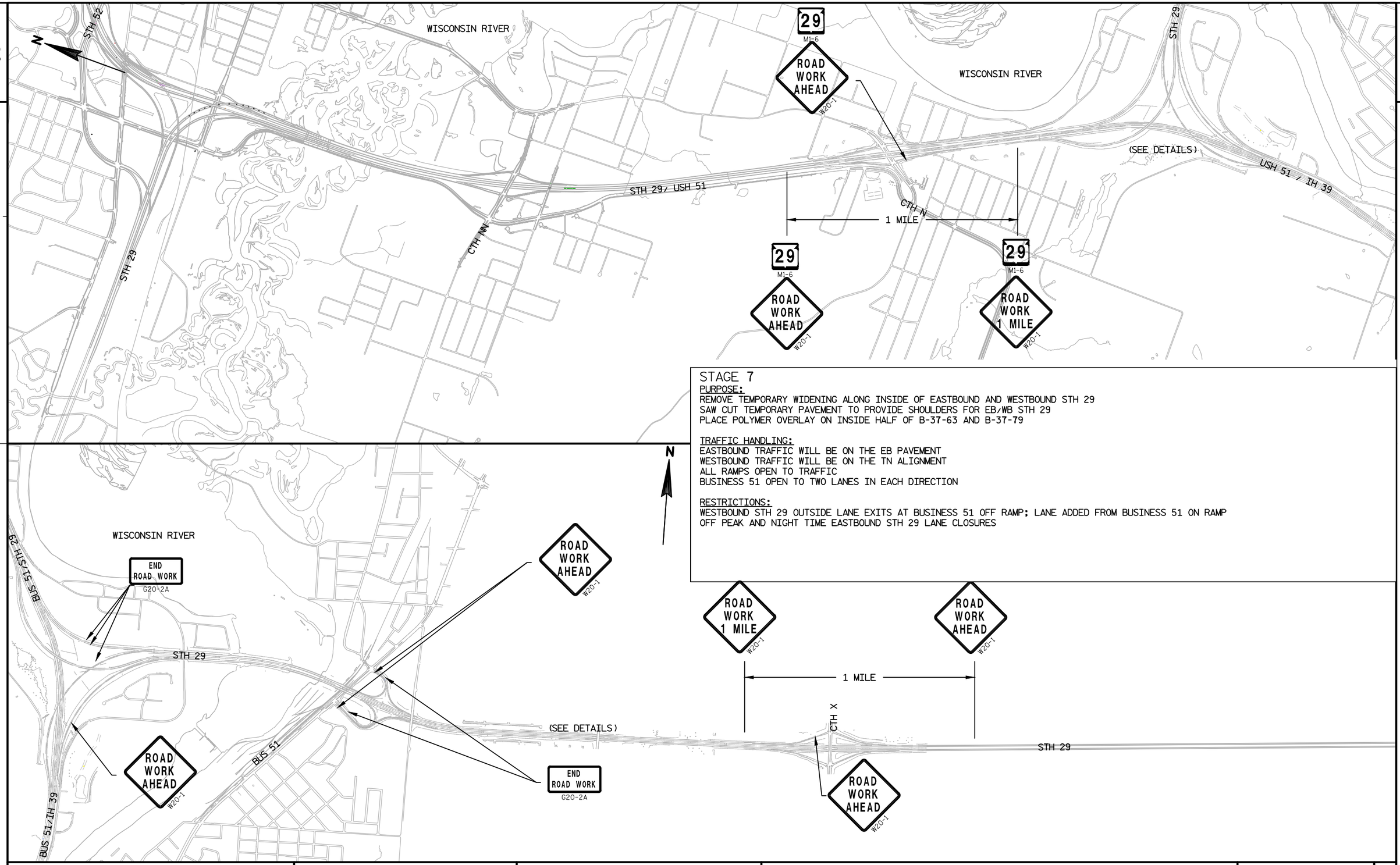
B-37-136
LOOKING EAST

TRAFFIC LAYOUT - STAGE 6
STH 29 BRIDGE OVER WIS RIVER



TRAFFIC LAYOUT - STAGE 6
STH 29 BETWEEN BUS 51 RAMPS

PROJECT NO: 1053-02-74	HWY: STH 29	COUNTY: MARATHON	TRAFFIC CONTROL: STAGE 6 TYPICAL LAYOUT	SHEET 141	E



STAGE 7

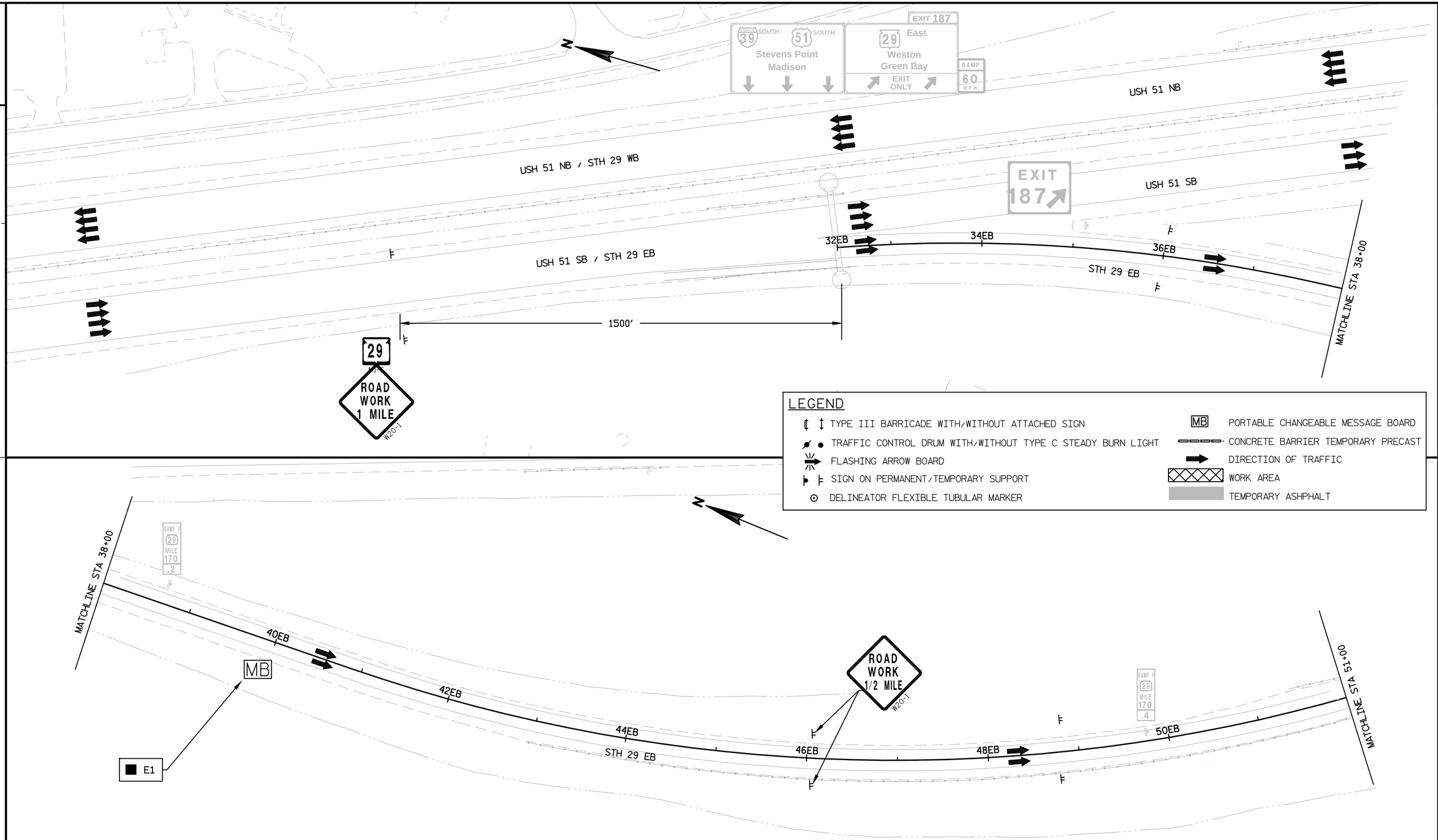
PURPOSE:
REMOVE TEMPORARY WIDENING ALONG INSIDE OF EASTBOUND AND WESTBOUND STH 29
SAW CUT TEMPORARY PAVEMENT TO PROVIDE SHOULDERS FOR EB/WB STH 29
PLACE POLYMER OVERLAY ON INSIDE HALF OF B-37-63 AND B-37-79

TRAFFIC HANDLING:
EASTBOUND TRAFFIC WILL BE ON THE EB PAVEMENT
WESTBOUND TRAFFIC WILL BE ON THE TN ALIGNMENT
ALL RAMPS OPEN TO TRAFFIC
BUSINESS 51 OPEN TO TWO LANES IN EACH DIRECTION

RESTRICTIONS:
WESTBOUND STH 29 OUTSIDE LANE EXITS AT BUSINESS 51 OFF RAMP; LANE ADDED FROM BUSINESS 51 ON RAMP
OFF PEAK AND NIGHT TIME EASTBOUND STH 29 LANE CLOSURES

PROJECT NO: 1053-02-74	HWY: STH 29	COUNTY: MARATHON	TRAFFIC CONTROL: STAGE 7 ADVANCED WARNING	SHEET	E

FILE NAME : S:\DESIGN\DESIGN PROJECTS\1053-02-04 (STH 29)-AYRES-NC\C3D\SHEETSPLAN\026701_TC_S7_OVERVIEW_1053-02-74.DWG PLOT DATE : 10/30/2013 7:35 AM PLOT BY : QUEST CIVIL ENG PLOT NAME : PLOT SCALE : 1 IN:2000 FT
WISDOT/CADDS SHEET 44



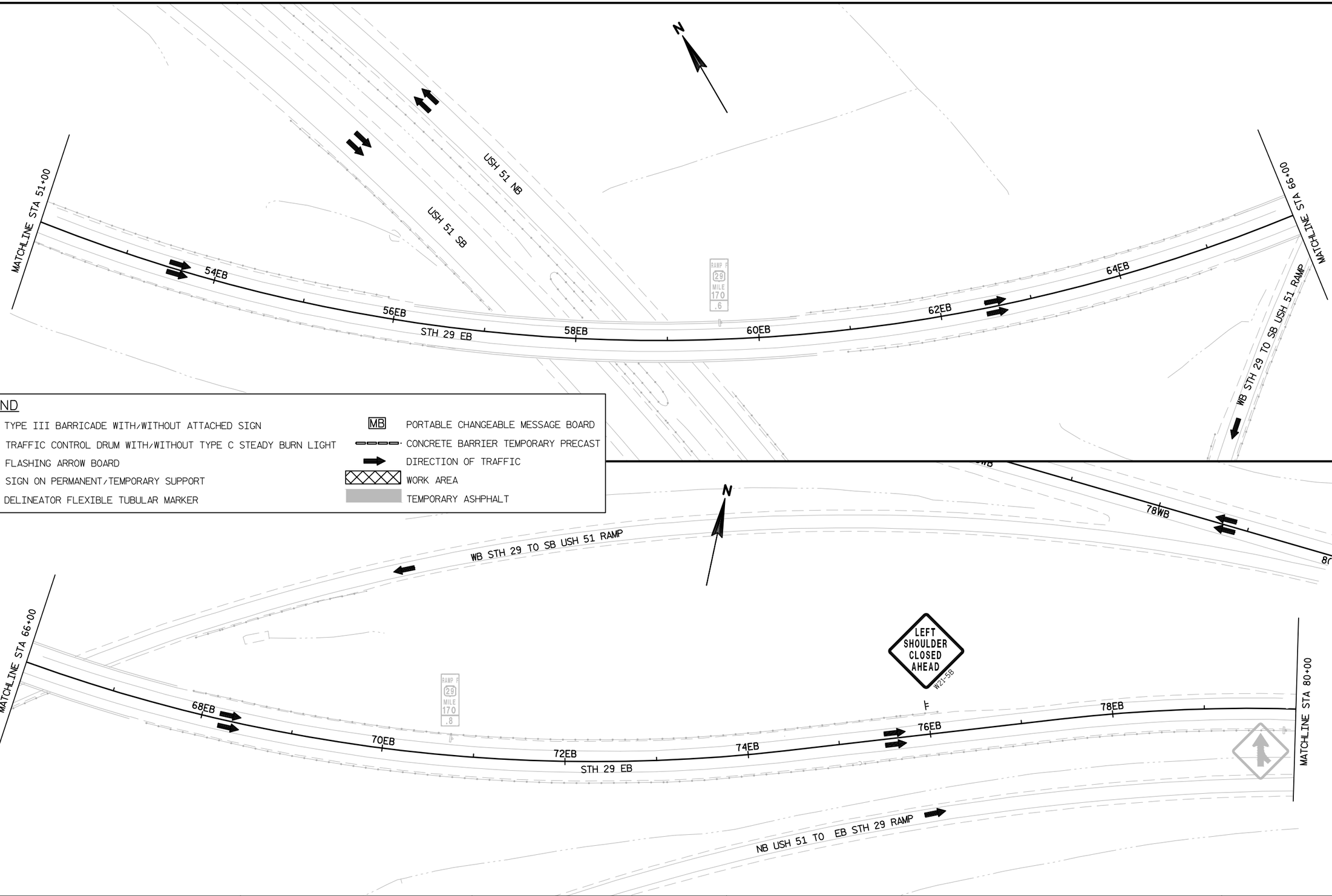
LEGEND

- TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT/TEMPORARY SUPPORT
- DELINEATOR FLEXIBLE TUBULAR MARKER
- MB PORTABLE CHANGEABLE MESSAGE BOARD
- CONCRETE BARRIER TEMPORARY PRECAST
- DIRECTION OF TRAFFIC
- WORK AREA
- TEMPORARY ASHPHALT

PROJECT NO: 1053-02-74	HWY: STH 29	COUNTY: MARATHON	TRAFFIC CONTROL: STAGE 7	SHEET E

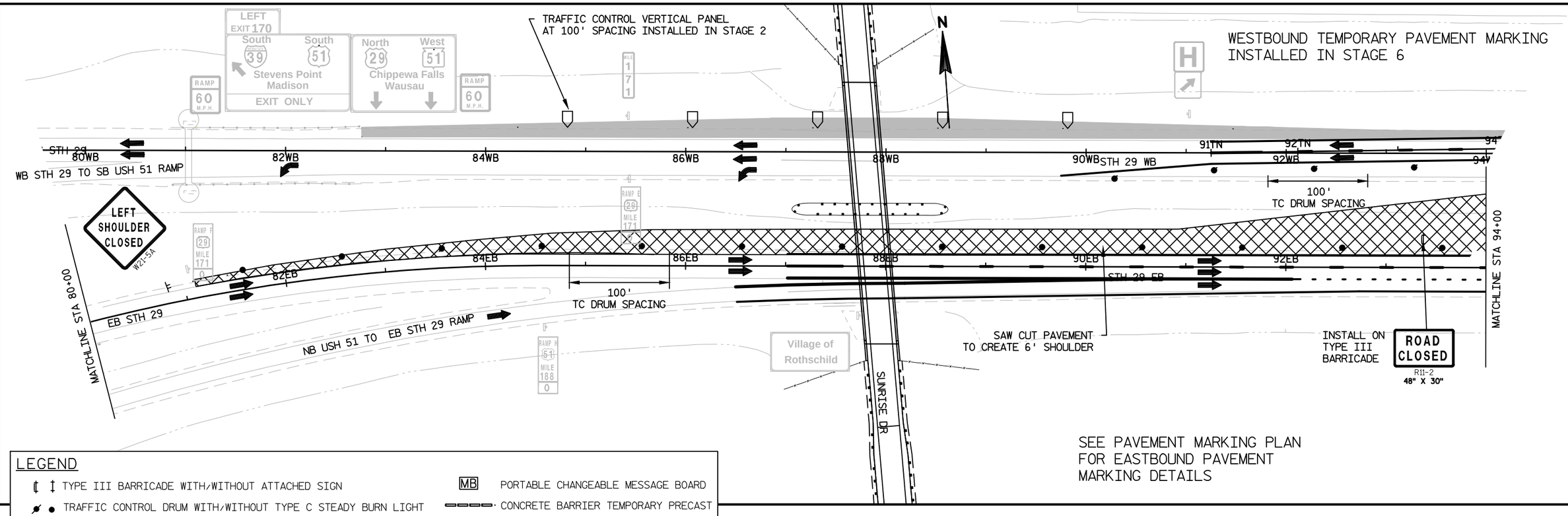
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2



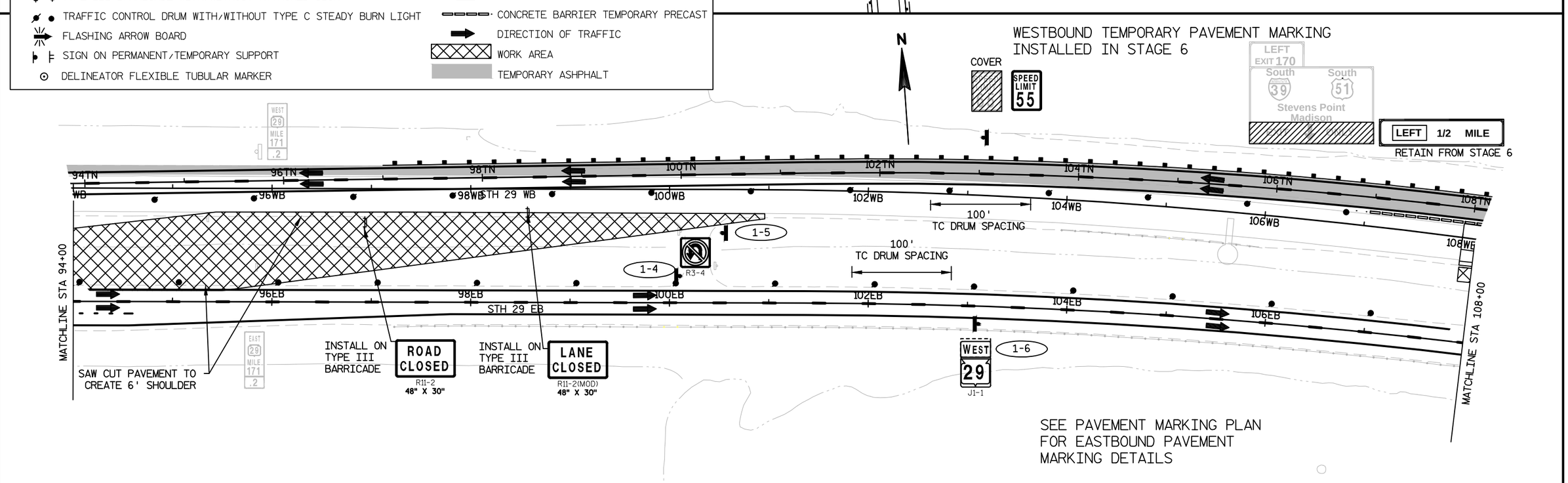
PROJECT NO:1053-02-74	HWY: STH 29	COUNTY:MARATHON	TRAFFIC CONTROL: STAGE 7	SHEET	E

FILE NAME : S:\DESIGN\DESIGN PROJECTS\1053-02-04 (STH 29)-AYRES-NC\C3D\SHEETSPLAN\026711_TC_S7_1053-02-74.DWG PLOT DATE : 10/30/2013 12:32 PM PLOT BY : QUEST CIVIL ENG PLOT NAME : PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44



LEGEND

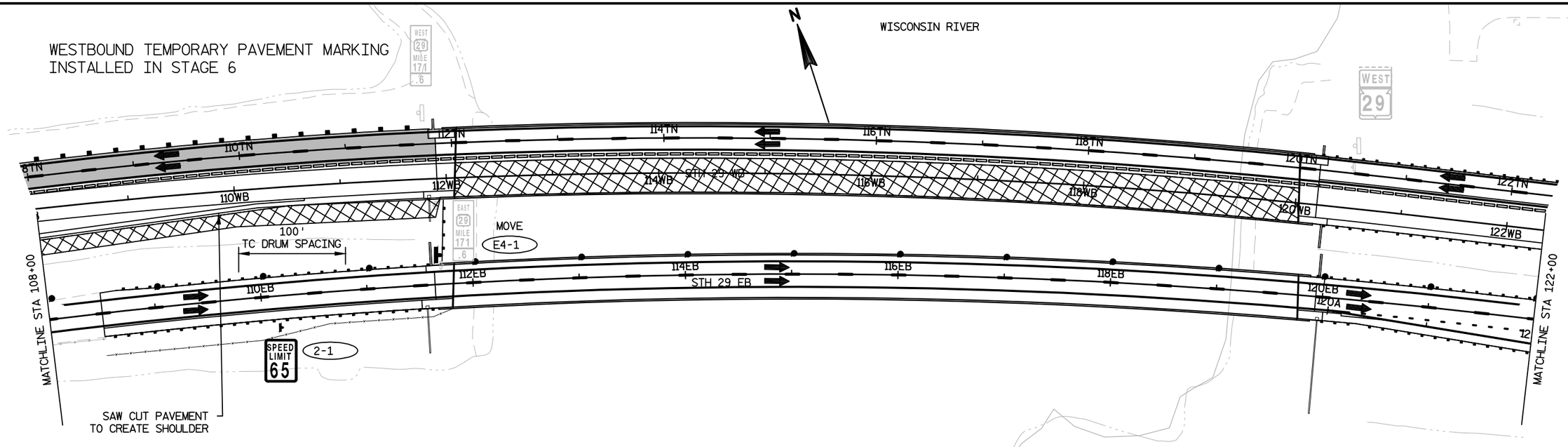
- TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
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- WORK AREA
- TEMPORARY ASHPHALT



PROJECT NO: 1053-02-74	HWY: STH 29	COUNTY: MARATHON	TRAFFIC CONTROL: STAGE 7	SHEET	E

FILE NAME : S:\DESIGN\DESIGN PROJECTS\1053-02-04 (STH 29)-AYRES-NC\C3D\SHEETSPLAN\026711_TC_S7_1053-02-74.DWG PLOT DATE : 10/30/2013 12:32 PM PLOT BY : QUEST CIVIL ENG PLOT NAME : PLOT SCALE : **********

WESTBOUND TEMPORARY PAVEMENT MARKING
INSTALLED IN STAGE 6

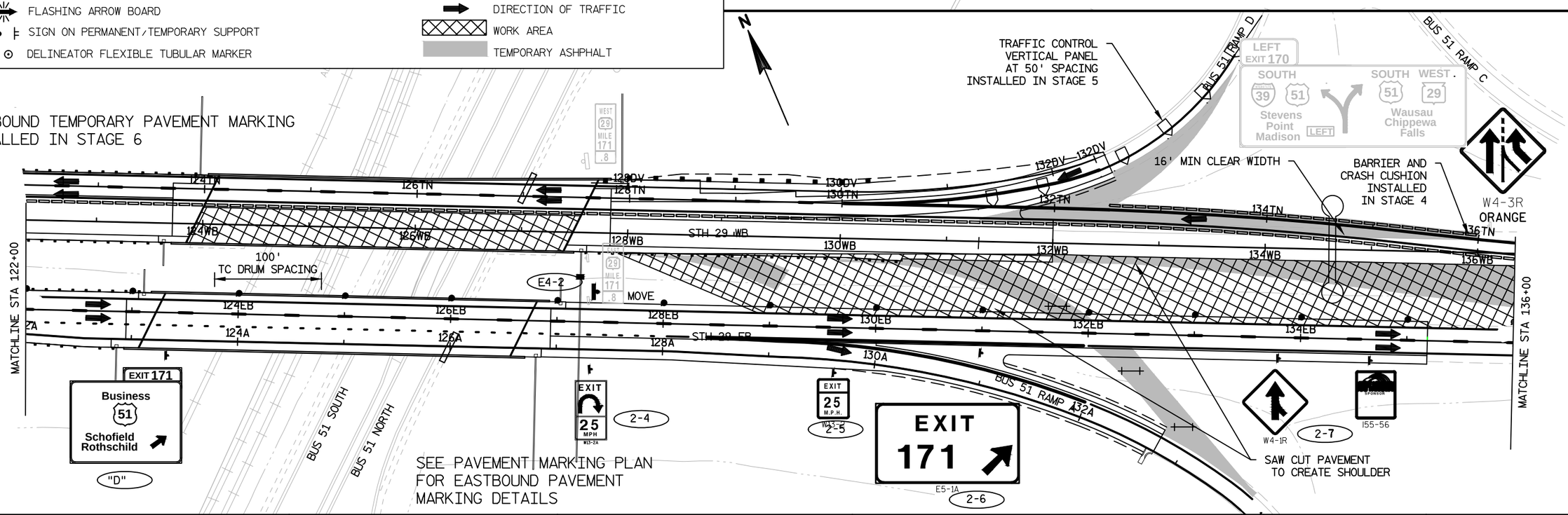


SEE PAVEMENT MARKING PLAN
FOR EASTBOUND PAVEMENT
MARKING DETAILS

LEGEND

- TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT/TEMPORARY SUPPORT
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- CONCRETE BARRIER TEMPORARY PRECAST
- DIRECTION OF TRAFFIC
- WORK AREA
- TEMPORARY ASHPHALT

WESTBOUND TEMPORARY PAVEMENT MARKING
INSTALLED IN STAGE 6



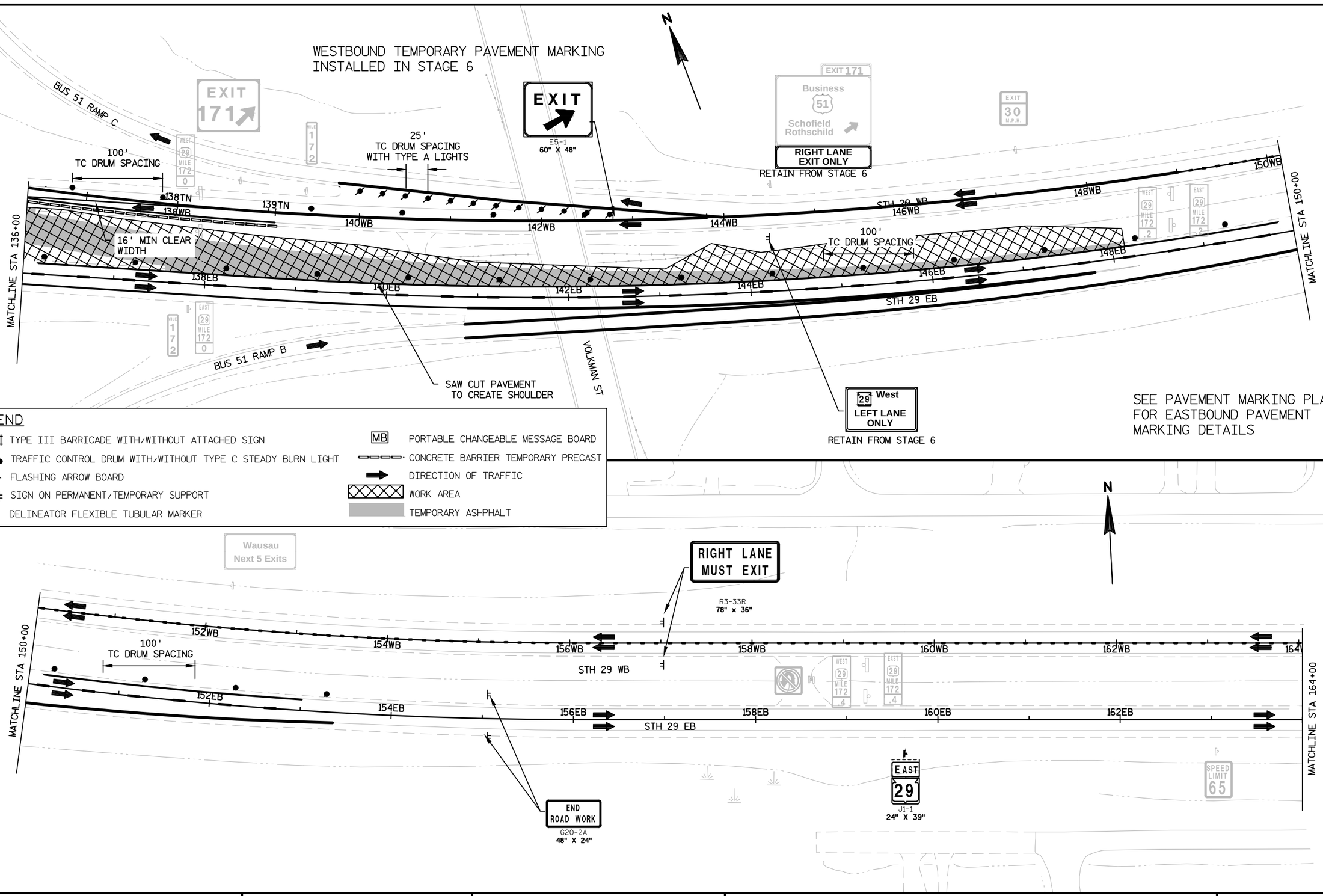
SEE PAVEMENT MARKING PLAN
FOR EASTBOUND PAVEMENT
MARKING DETAILS

PROJECT NO: 1053-02-74	HWY: STH 29	COUNTY: MARATHON	TRAFFIC CONTROL: STAGE 7	SHEET	E

FILE NAME : S:\DESIGN\DESIGN PROJECTS\1053-02-04 (STH 29)-AYRES-NC\C3D\SHEETSPLAN\026711_TC_S7_1053-02-74.DWG PLOT DATE : 10/30/2013 12:32 PM PLOT BY : QUEST CIVIL ENG PLOT NAME : PLOT SCALE : **********
WISDOT/CADDS SHEET 44

2

WESTBOUND TEMPORARY PAVEMENT MARKING
INSTALLED IN STAGE 6



SEE PAVEMENT MARKING PLAN
FOR EASTBOUND PAVEMENT
MARKING DETAILS

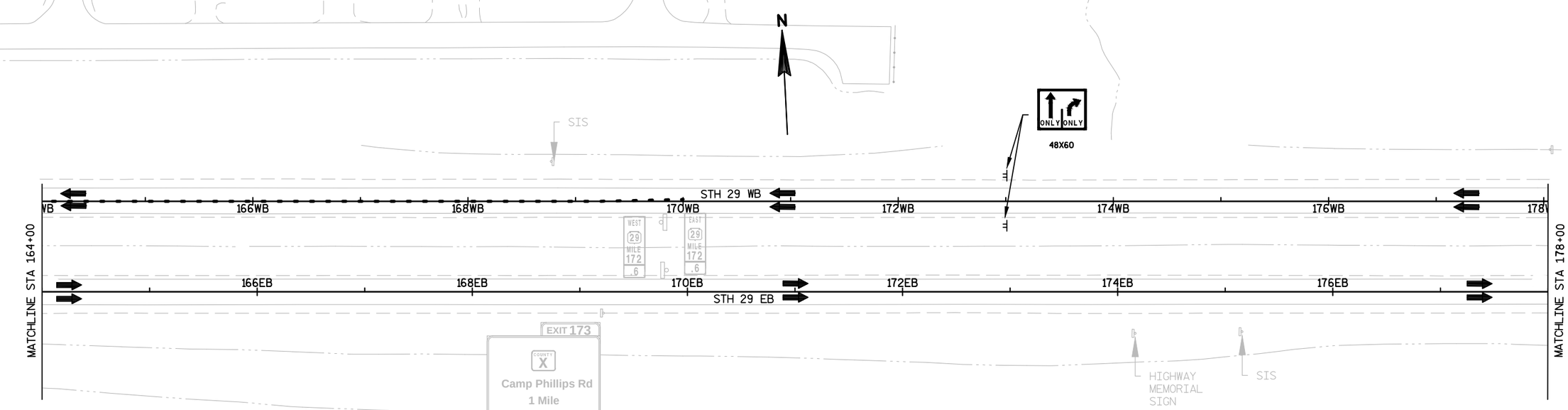
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- WORK AREA
- TEMPORARY ASHPHALT

PROJECT NO: 1053-02-74	HWY: STH 29	COUNTY: MARATHON	TRAFFIC CONTROL: STAGE 7	SHEET	E

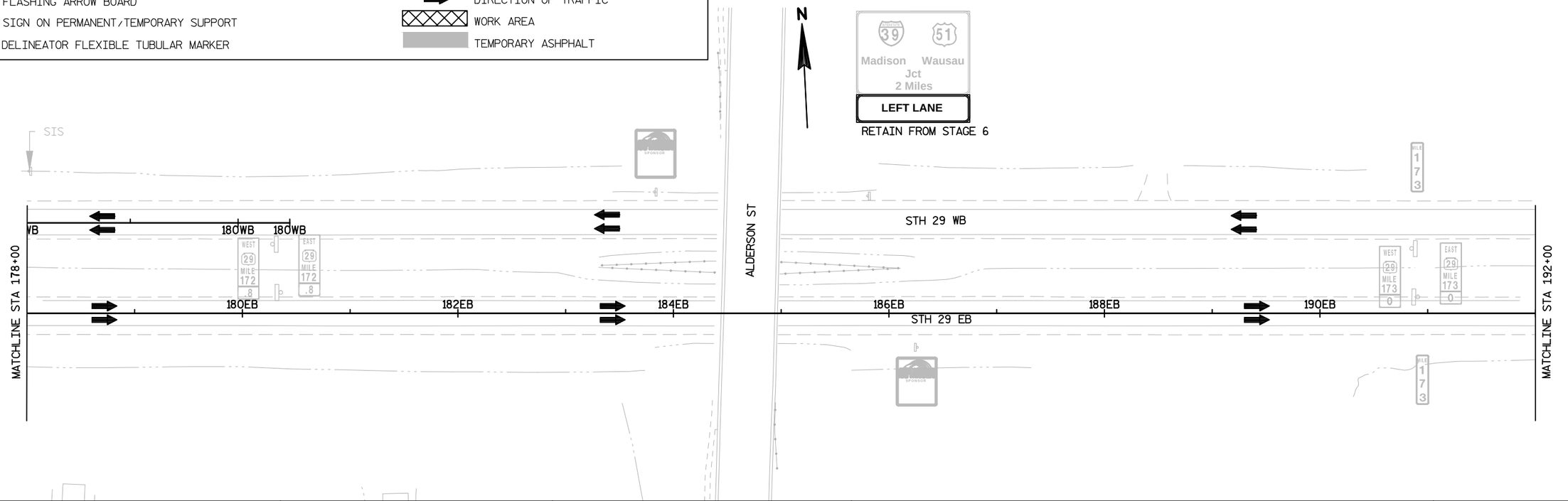
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2



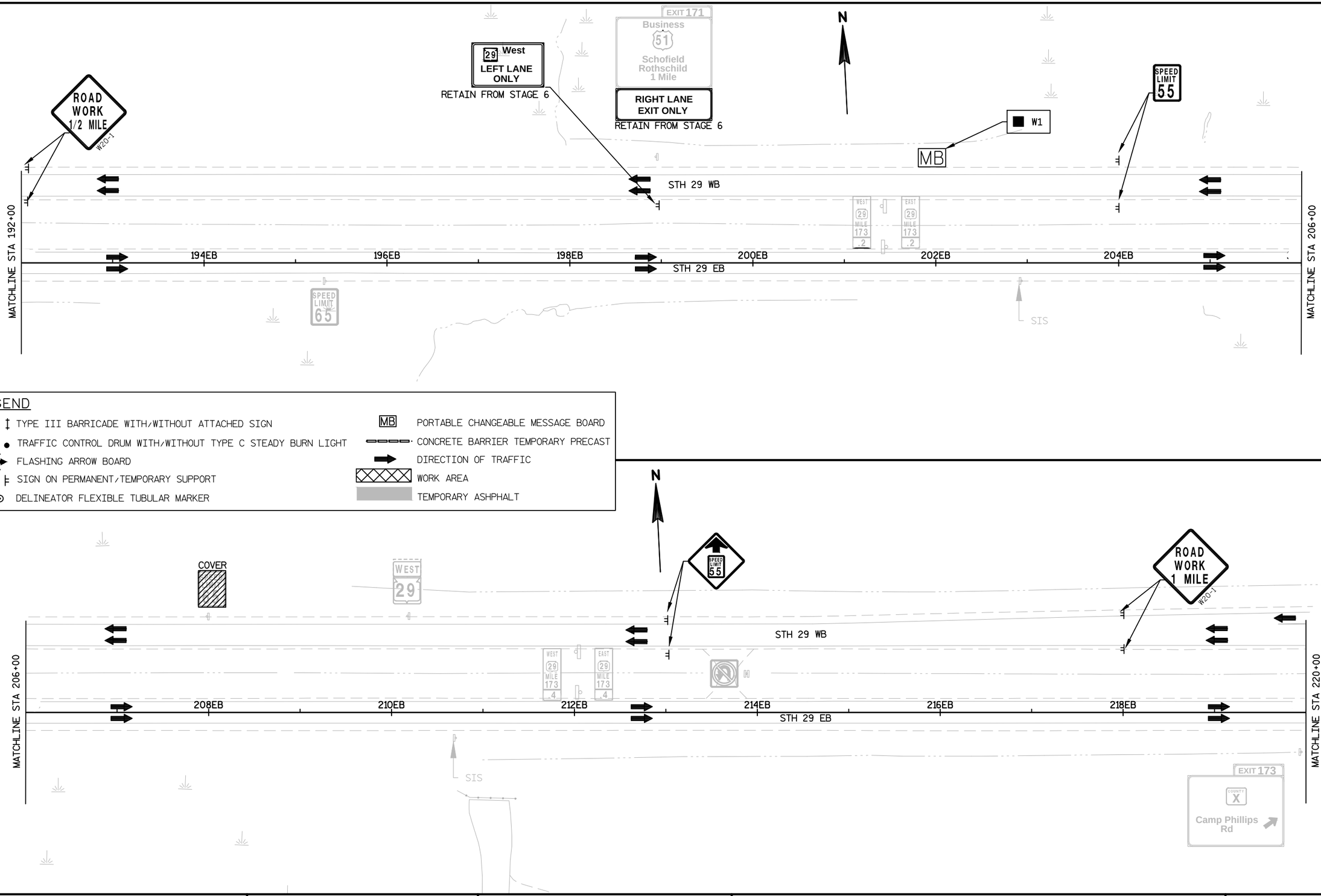
LEGEND

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- WORK AREA
- TEMPORARY ASHPHALT



PROJECT NO: 1053-02-74	HWY: STH 29	COUNTY: MARATHON	TRAFFIC CONTROL: STAGE 7	SHEET	E

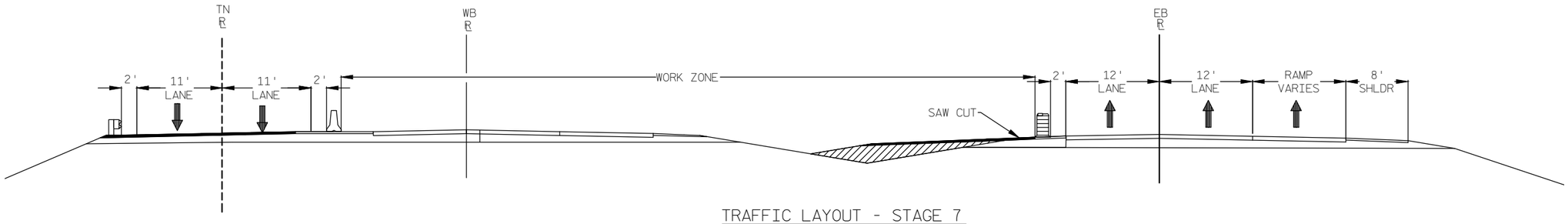
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PROJECT NO: 1053-02-74	HWY: STH 29	COUNTY: MARATHON	TRAFFIC CONTROL: STAGE 7	SHEET	E

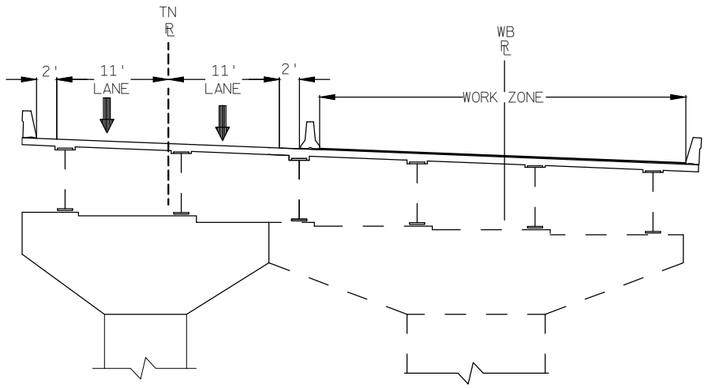
FILE NAME : S:\DESIGN\DESIGN PROJECTS\1053-02-04 (STH 29)-AYRES-NC\C3D\SHEETSPLAN\026711_TC_S7_1053-02-74.DWG PLOT DATE : 10/30/2013 12:34 PM PLOT BY : QUEST CIVIL ENG PLOT NAME : PLOT SCALE : **********

2



TRAFFIC LAYOUT - STAGE 7

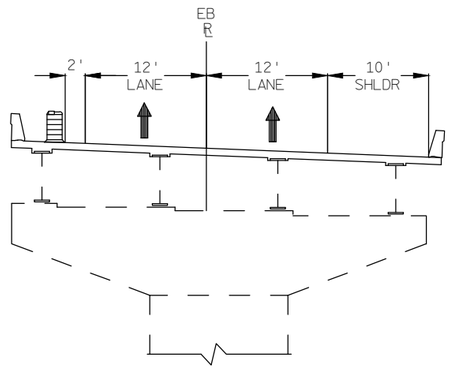
STH 29 BETWEEN SUNRISE DRIVE AND WIS RIVER



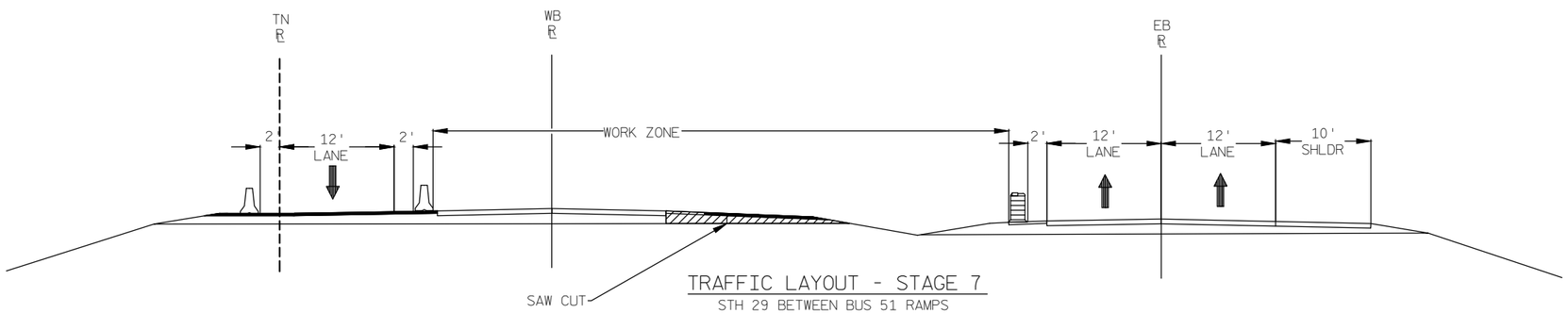
B-37-79
LOOKING EAST

TRAFFIC LAYOUT - STAGE 7

STH 29 BRIDGE OVER WIS RIVER



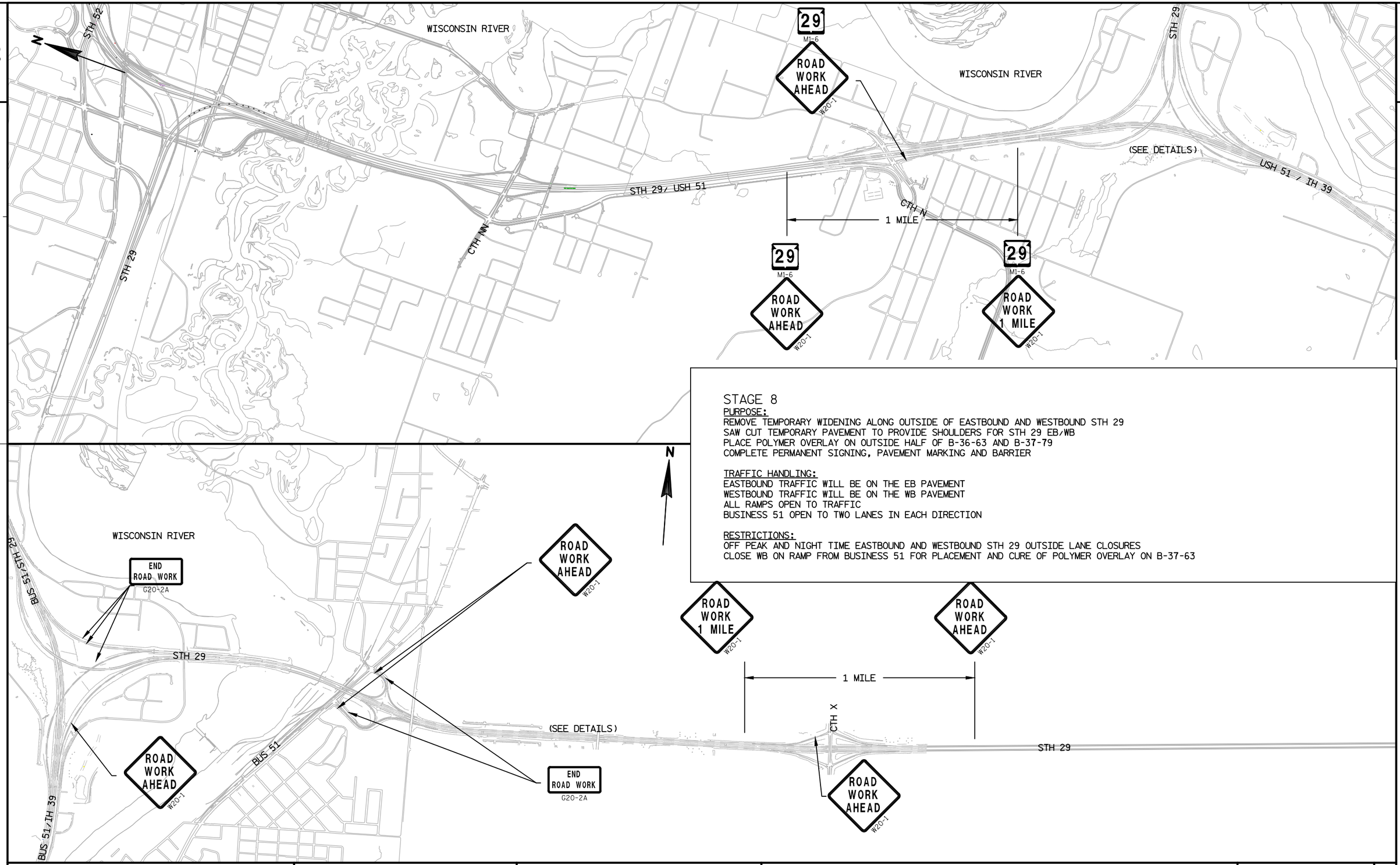
B-37-136
LOOKING EAST



TRAFFIC LAYOUT - STAGE 7

STH 29 BETWEEN BUS 51 RAMPS

PROJECT NO: 1053-02-74	HWY: STH 29	COUNTY: MARATHON	TRAFFIC CONTROL: STAGE 7 TYPICAL LAYOUT	SHEET 150	E



STAGE 8

PURPOSE:
REMOVE TEMPORARY WIDENING ALONG OUTSIDE OF EASTBOUND AND WESTBOUND STH 29
SAW CUT TEMPORARY PAVEMENT TO PROVIDE SHOULDERS FOR STH 29 EB/WB
PLACE POLYMER OVERLAY ON OUTSIDE HALF OF B-36-63 AND B-37-79
COMPLETE PERMANENT SIGNING, PAVEMENT MARKING AND BARRIER

TRAFFIC HANDLING:
EASTBOUND TRAFFIC WILL BE ON THE EB PAVEMENT
WESTBOUND TRAFFIC WILL BE ON THE WB PAVEMENT
ALL RAMPS OPEN TO TRAFFIC
BUSINESS 51 OPEN TO TWO LANES IN EACH DIRECTION

RESTRICTIONS:
OFF PEAK AND NIGHT TIME EASTBOUND AND WESTBOUND STH 29 OUTSIDE LANE CLOSURES
CLOSE WB ON RAMP FROM BUSINESS 51 FOR PLACEMENT AND CURE OF POLYMER OVERLAY ON B-37-63

PROJECT NO: 1053-02-74	HWY: STH 29	COUNTY: MARATHON	TRAFFIC CONTROL: STAGE 8 ADVANCED WARNING	SHEET	E

FILE NAME : S:\DESIGN\DESIGN PROJECTS\1053-02-04 (STH 29)-AYRES-NC\C3D\SHEETSPLAN\026801_TC_S8_OVERVIEW_1053-02-74.DWG PLOT DATE : 10/30/2013 7:38 AM PLOT BY : QUEST CIVIL ENG PLOT NAME : PLOT SCALE : 1 IN:2000 FT
WISDOT/CADDS SHEET 44

2

N

USH 51 NB / STH 29 WB

USH 51 SB / STH 29 EB

USH 51 NB

USH 51 SB

EXIT 187

SOUTH 39 SOUTH 51
Stevens Point
Madison

EXIT 187
29 East
Weston
Green Bay
EXIT ONLY
RAMP 60 M.P.H.

32EB 34EB 36EB

STH 29 EB

1500'

29
ROAD WORK 1 MILE
W20-1

MATCHLINE STA 38+00

N

RAMP 29 MILE 170 .2

MATCHLINE STA 38+00

40EB 42EB 44EB 46EB 48EB 50EB

STH 29 EB

MB
E1

ROAD WORK 1/2 MILE
W20-1

RAMP 29 MILE 170 .4

MATCHLINE STA 51+00

LEGEND

- TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT/TEMPORARY SUPPORT
- DELINEATOR FLEXIBLE TUBULAR MARKER
- MB PORTABLE CHANGEABLE MESSAGE BOARD
- CONCRETE BARRIER TEMPORARY PRECAST
- DIRECTION OF TRAFFIC
- WORK AREA
- TEMPORARY ASHPHALT

PROJECT NO:1053-02-74	HWY: STH 29	COUNTY: MARATHON	TRAFFIC CONTROL: STAGE 8	SHEET E

FILE NAME : S:\DESIGN\DESIGN PROJECTS\1053-02-04 (STH 29)-AYRES-NC\C3D\SHEETSPLAN\026811_TC_S8_1053-02-74.DWG PLOT DATE : 10/30/2013 8:11 AM PLOT BY : QUEST CIVIL ENG PLOT NAME : PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44

2

2

N

MATCHLINE STA 51+00

USH 51 NB

USH 51 SB

RIPRAP

RAMP F
29
MILE
170
.6

54EB

56EB

STH 29 EB

58EB

60EB

62EB

64EB

STH 29

MATCHLINE STA 66+00

WB STH 29 TO SB USH 51 RAMP

LEGEND

- TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT/TEMPORARY SUPPORT
- DELINEATOR FLEXIBLE TUBULAR MARKER
- MB PORTABLE CHANGEABLE MESSAGE BOARD
- CONCRETE BARRIER TEMPORARY PRECAST
- DIRECTION OF TRAFFIC
- WORK AREA
- TEMPORARY ASHPHALT

N

WB STH 29 TO SB USH 51 RAMP

78WB

RIPRAP

MATCHLINE STA 66+00

RAMP F
29
MILE
170
.8

68EB

70EB

72EB

STH 29 EB

74EB

76EB

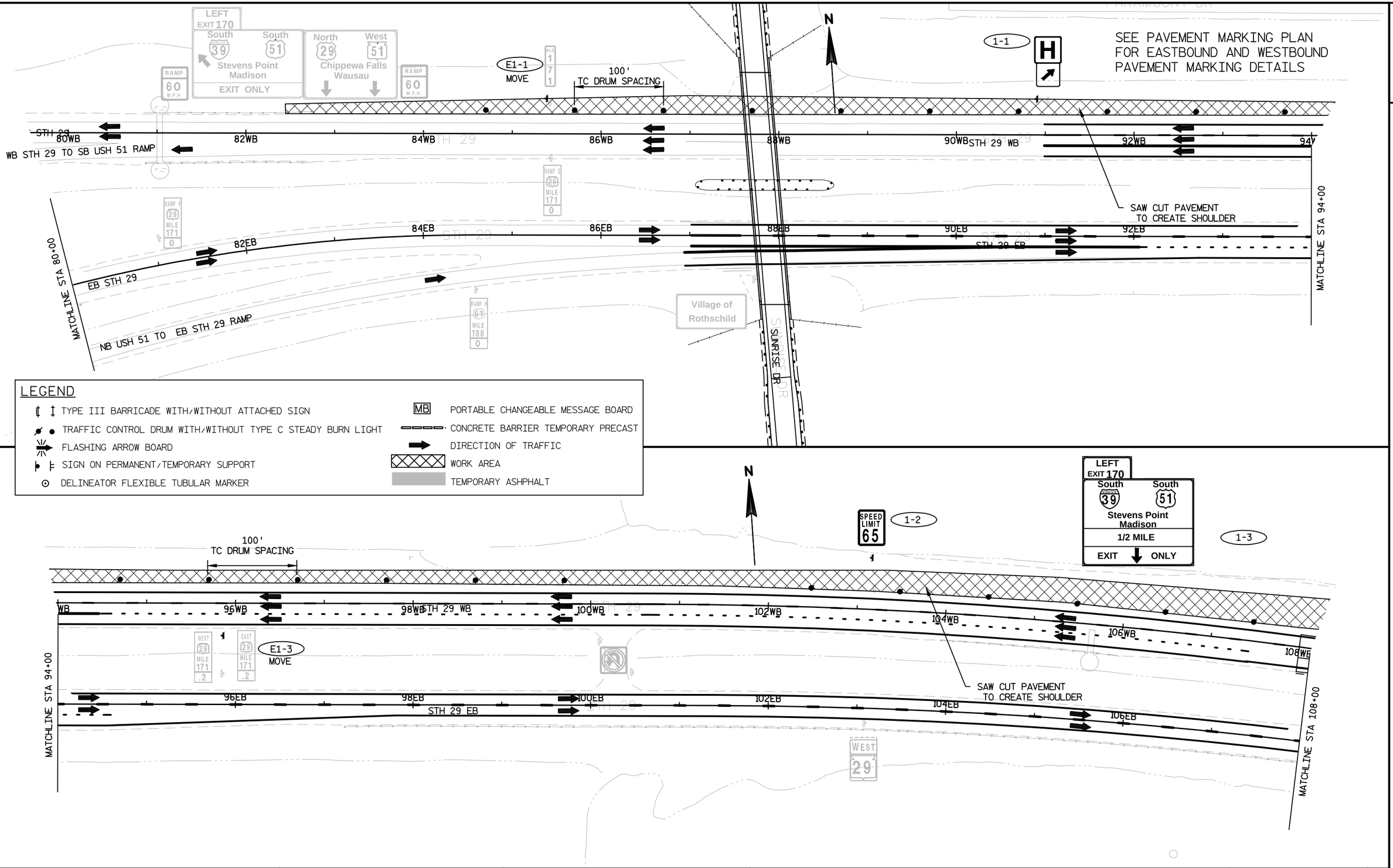
78EB

MATCHLINE STA 80+00

NB USH 51 TO EB STH 29 RAMP

PROJECT NO:1053-02-74	HWY: STH 29	COUNTY: MARATHON	TRAFFIC CONTROL: STAGE 8	SHEET	E

FILE NAME : S:\DESIGN\DESIGN PROJECTS\1053-02-04 (STH 29)-AYRES-NC\C3D\SHEETSPLAN\026811_TC_S8_1053-02-74.DWG PLOT DATE : 10/30/2013 8:11 AM PLOT BY : QUEST CIVIL ENG PLOT NAME : PLOT SCALE : 1 IN:100 FT



LEGEND

- TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT/TEMPORARY SUPPORT
- DELINEATOR FLEXIBLE TUBULAR MARKER
- MB PORTABLE CHANGEABLE MESSAGE BOARD
- CONCRETE BARRIER TEMPORARY PRECAST
- DIRECTION OF TRAFFIC
- WORK AREA
- TEMPORARY ASHPHALT

PROJECT NO:1053-02-74	HWY: STH 29	COUNTY: MARATHON	TRAFFIC CONTROL: STAGE 8	SHEET	E

FILE NAME : S:\DESIGN\DESIGN PROJECTS\1053-02-04 (STH 29)-AYRES-NC\C3D\SHEETSPLAN\026811_TC_S8_1053-02-74.DWG PLOT DATE : 10/30/2013 8:11 AM PLOT BY : QUEST CIVIL ENG PLOT NAME : PLOT SCALE : **********

SEE PAVEMENT MARKING PLAN
FOR EASTBOUND AND WESTBOUND
PAVEMENT MARKING DETAILS

WISCONSIN RIVER

REMOVE TEMPORARY BARRIER TO INSTALL POLYMER OVERLAY.
REPLACE BARRIER WHEN COMPLETE

100'
TC DRUM SPACING

SAW CUT PAVEMENT
TO CREATE SHOULDER

MOVE E4-1

MATCHLINE STA 108+00

MATCHLINE STA 122+00

110WB 112WB 114WB STH 29 WB 116WB 118WB 120WB 122WB

110EB 112EB 114EB STH 29 EB 116EB 118EB 120EB 120A

RIPRAP

SPEED LIMIT 65

WEST 29 MILE 171.6

EAST 29 MILE 171.6

WEST 29 2-2 J1-1

LEGEND

- TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT/TEMPORARY SUPPORT
- DELINEATOR FLEXIBLE TUBULAR MARKER
- MB PORTABLE CHANGEABLE MESSAGE BOARD
- CONCRETE BARRIER TEMPORARY PRECAST
- DIRECTION OF TRAFFIC
- WORK AREA
- TEMPORARY ASHPHALT

CLOSE ON RAMP TO INSTALL
POLYMER OVERLAY ON B-37-63

100'
TC DRUM SPACING

BUS 51 SOUTH

BUS 51 NORTH

SAW CUT PAVEMENT
TO CREATE SHOULDER

50'
TC DRUM SPACING

RIGHT SHOULDER CLOSED AHEAD W21-5B

BUS 51 RAMP D 134D

BUS 51 RAMP C

LEFT EXIT 170
SOUTH 39 51 Stevens Point Madison
LEFT
SOUTH 51 WEST 29 Wausau Chippewa Falls

50'
TC DRUM SPACING

3-1 W4-1R 48 X 48

MATCHLINE STA 122+00

124WB 126WB 128WB STH 29 WB 130WB 132WB 134WB 136WB

E4-2
MOVE

124EB 126EB 128EB STH 29 EB 130EB 132EB 134EB

124A 126A 128A 130A BUS 51 RAMP A 132A

MATCHLINE STA 136+00

EXIT 171
Business 51
Schofield Rothschild

EXIT 25 MPH

RAMP 25 M.P.H.

EXIT 171

100'
TC DRUM SPACING

SAW CUT PAVEMENT
TO CREATE SHOULDER

50'
TC DRUM SPACING

RIPRAP

N GRAND AVE

PROJECT NO:1053-02-74	HWY: STH 29	COUNTY: MARATHON	TRAFFIC CONTROL: STAGE 8	SHEET	E

FILE NAME : S:\DESIGN\DESIGN PROJECTS\1053-02-04 (STH 29)-AYRES-NC\C3D\SHEETSPLAN\026811_TC_S8_1053-02-74.DWG PLOT DATE : 10/30/2013 8:12 AM PLOT BY : QUEST CIVIL ENG PLOT NAME : PLOT SCALE : **********
WISDOT/CADDS SHEET 44

SEE PAVEMENT MARKING PLAN
FOR EASTBOUND AND WESTBOUND
PAVEMENT MARKING DETAILS

RIGHT SHOULDER CLOSED
W21-5A

BUS 51 RAMP C

EXIT 171
E5-1A

3-3

RIGHT SHOULDER CLOSED AHEAD
W21-5B

EXIT 171
Business 51
Schofield
Rothschild

EXIT 30 M.P.H.

MATCHLINE STA 136+00

138WB 140WB 142WB 144WB STH 29 WB 146WB 148WB 150WB

E4-3 MOVE

E4-4 MOVE

138EB 140EB 142EB 144EB 146EB 148EB STH 29 EB

100' TC DRUM SPACING

BUS 51 RAMP B

VOLKMAN ST

MATCHLINE STA 150+00

MATCHLINE STA 150+00

152WB 154WB 156WB 158WB 160WB 162WB 164WB STH 29 WB

152EB 154EB 156EB 158EB 160EB 162EB STH 29 EB

MATCHLINE STA 164+00

END ROAD WORK
G20-2A
48" X 24"

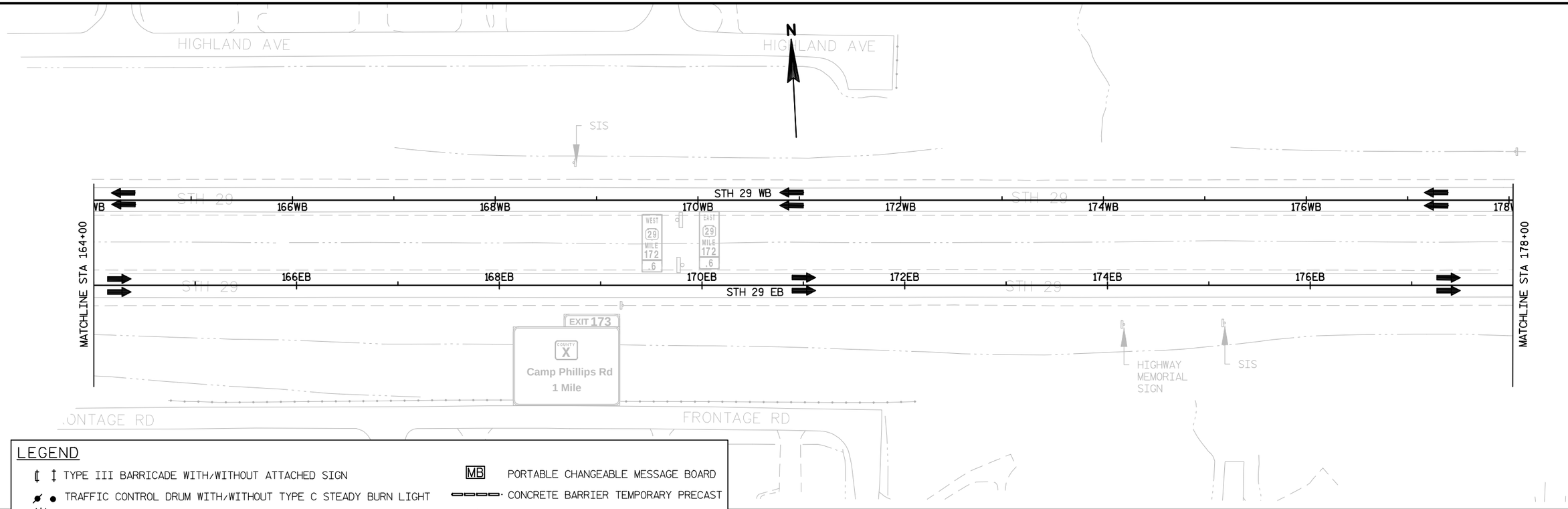
SPEED LIMIT 65

LEGEND

- TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT/TEMPORARY SUPPORT
- DELINEATOR FLEXIBLE TUBULAR MARKER
- MB PORTABLE CHANGEABLE MESSAGE BOARD
- CONCRETE BARRIER TEMPORARY PRECAST
- DIRECTION OF TRAFFIC
- WORK AREA
- TEMPORARY ASHPHALT

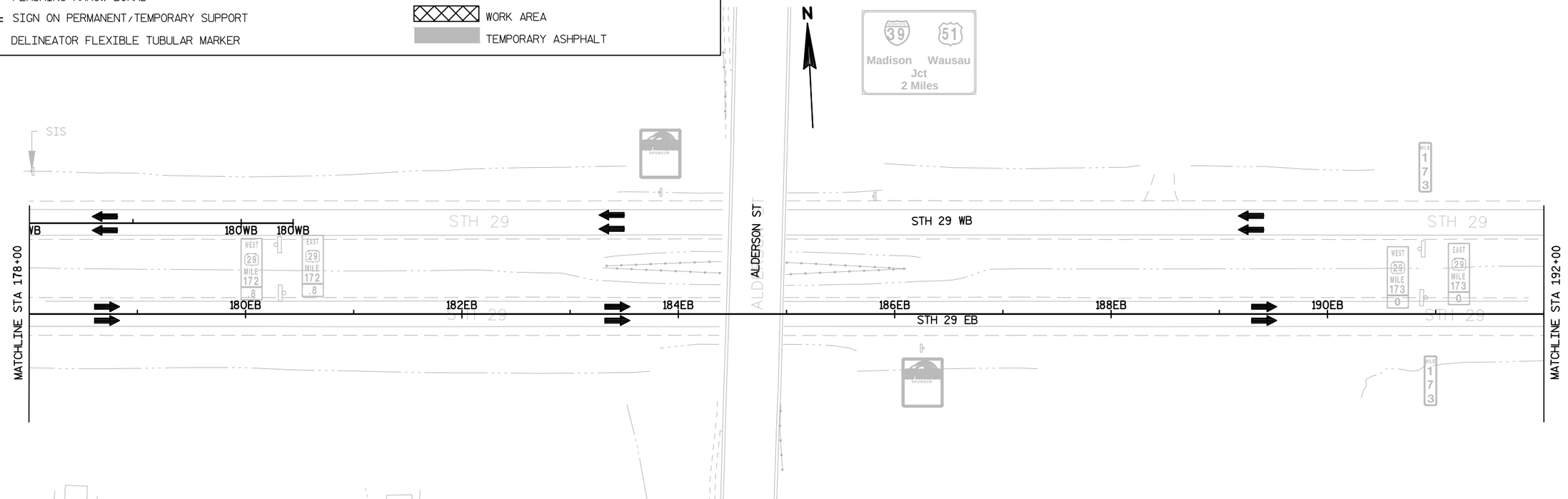
PROJECT NO: 1053-02-74	HWY: STH 29	COUNTY: MARATHON	TRAFFIC CONTROL: STAGE 8	SHEET	E

FILE NAME : S:\DESIGN\DESIGN PROJECTS\1053-02-04 (STH 29)-AYRES-NC\C3D\SHEETSPLAN\026811_TC_S8_1053-02-74.DWG PLOT DATE : 10/30/2013 8:12 AM PLOT BY : QUEST CIVIL ENG PLOT NAME : PLOT SCALE : **********
WISDOT/CADDS SHEET 44



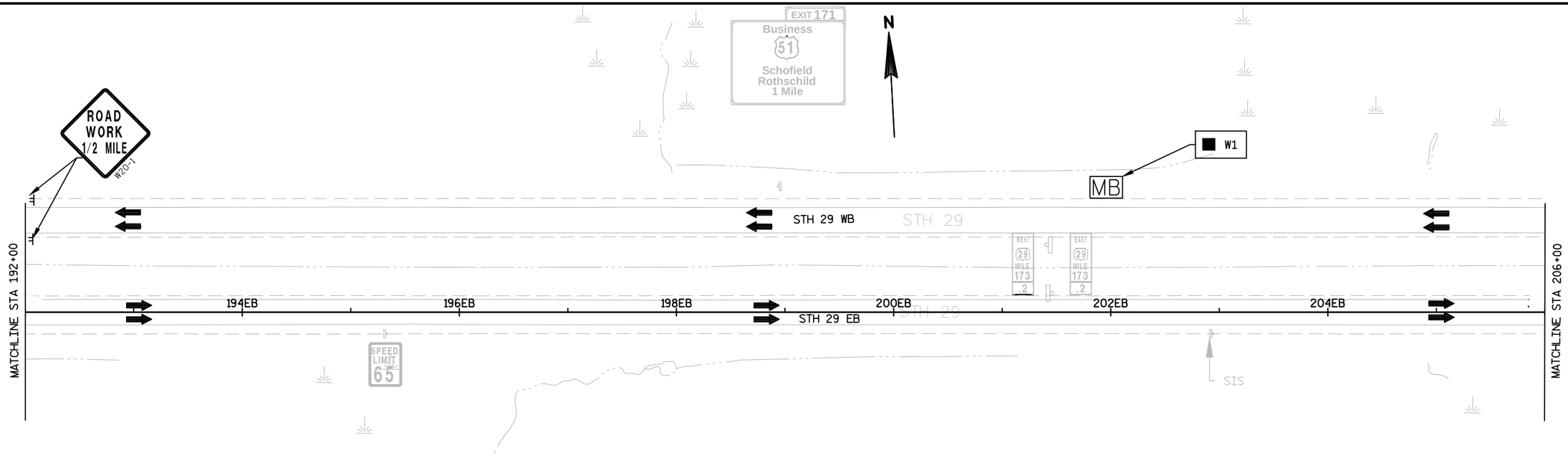
LEGEND

- TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT/TEMPORARY SUPPORT
- DELINEATOR FLEXIBLE TUBULAR MARKER
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- CONCRETE BARRIER TEMPORARY PRECAST
- DIRECTION OF TRAFFIC
- WORK AREA
- TEMPORARY ASHPHALT



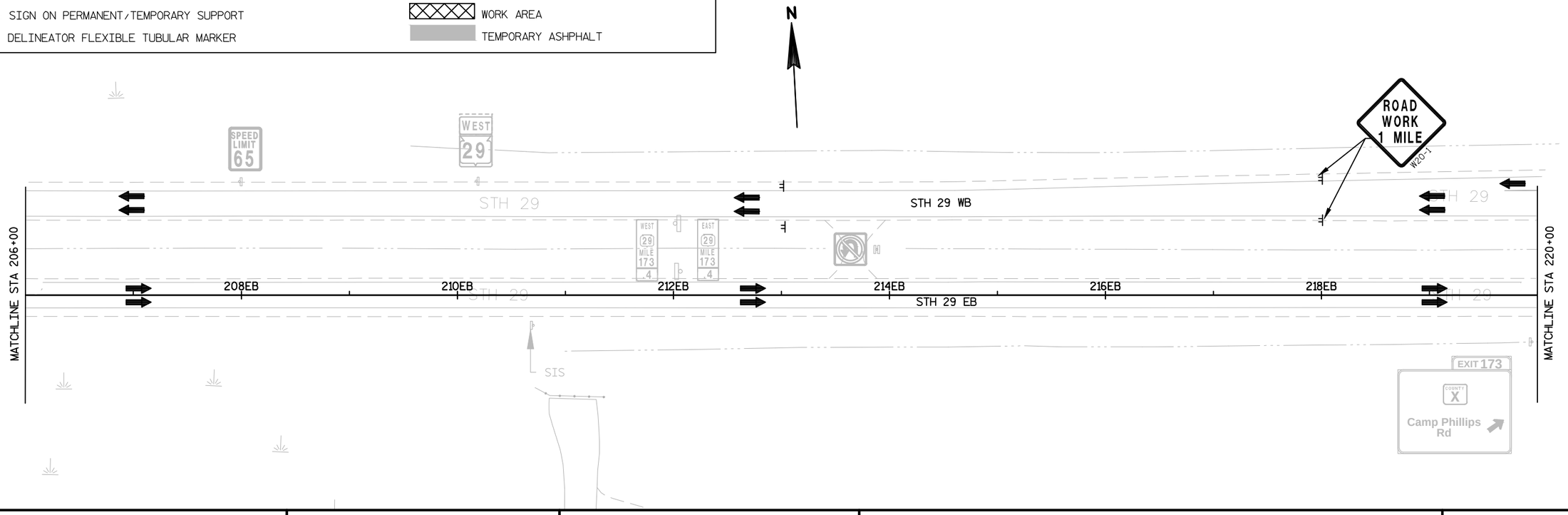
PROJECT NO: 1053-02-74	HWY: STH 29	COUNTY: MARATHON	TRAFFIC CONTROL: STAGE 8	SHEET	E

FILE NAME : S:\DESIGN\DESIGN PROJECTS\1053-02-04 (STH 29)-AYRES-NC\C3D\SHEETSPLAN\026811_TC_S8_1053-02-74.DWG PLOT DATE : 10/30/2013 8:13 AM PLOT BY : QUEST CIVIL ENG PLOT NAME : PLOT SCALE : ********** WISDOT/CADDS SHEET 44



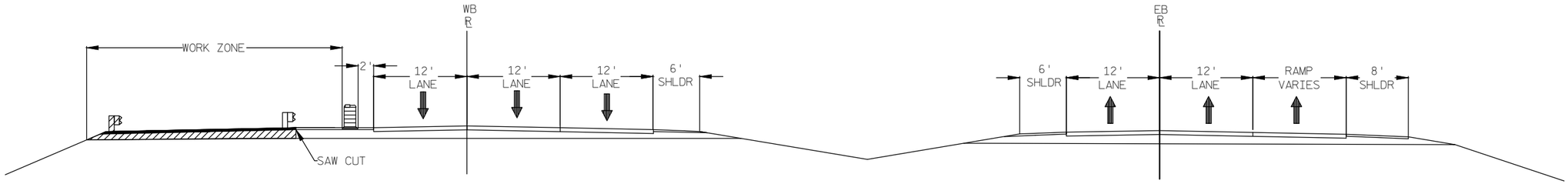
LEGEND

- TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT/TEMPORARY SUPPORT
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- DIRECTION OF TRAFFIC
- WORK AREA
- TEMPORARY ASHPHALT

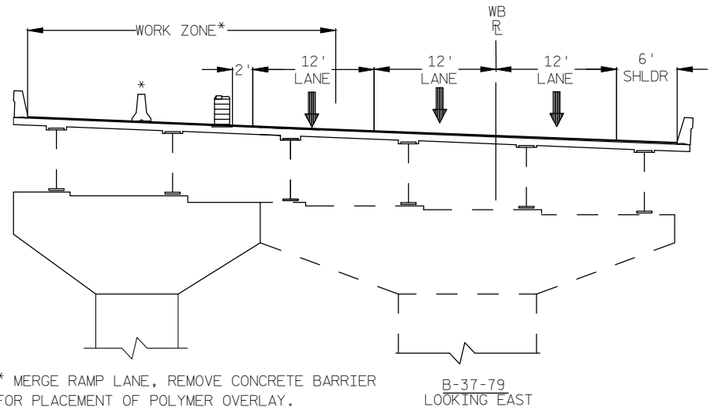


PROJECT NO: 1053-02-74	HWY: STH 29	COUNTY: MARATHON	TRAFFIC CONTROL: STAGE 8	SHEET	E

FILE NAME : S:\DESIGN\DESIGN PROJECTS\1053-02-04 (STH 29)-AYRES-NC\C3D\SHEETSPLAN\026811_TC_S8_1053-02-74.DWG PLOT DATE : 10/30/2013 8:13 AM PLOT BY : QUEST CIVIL ENG PLOT NAME : PLOT SCALE : **********



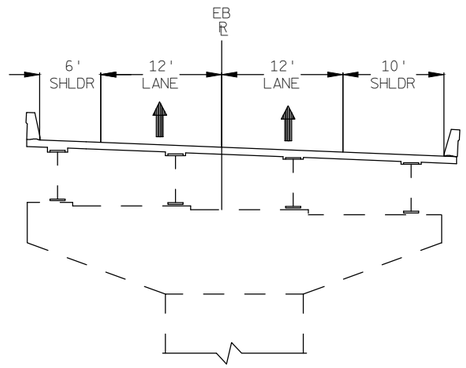
TRAFFIC LAYOUT - STAGE 8
STH 29 BETWEEN SUNRISE DRIVE AND WIS RIVER



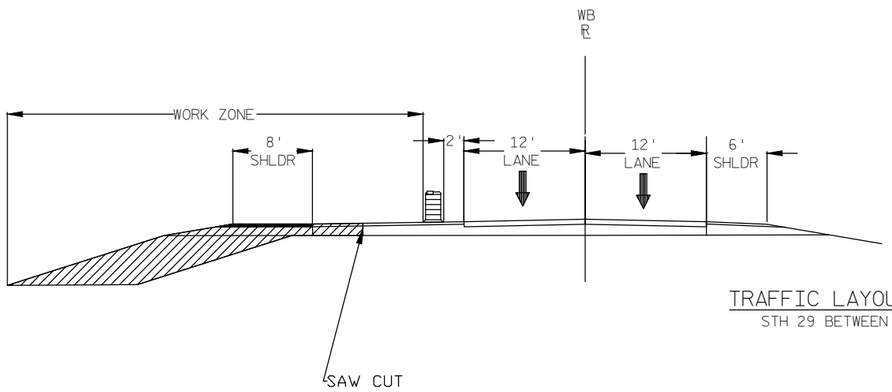
* MERGE RAMP LANE, REMOVE CONCRETE BARRIER FOR PLACEMENT OF POLYMER OVERLAY.

B-37-79
LOOKING EAST

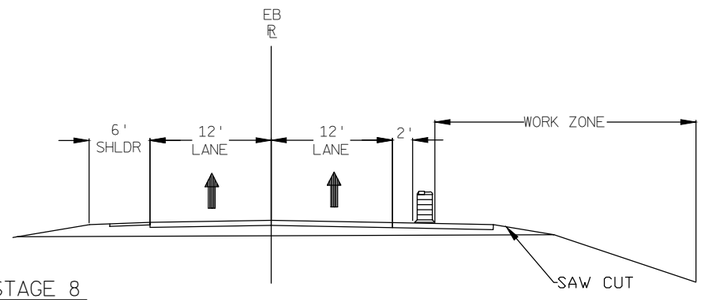
TRAFFIC LAYOUT - STAGE 8
STH 29 BRIDGE OVER WIS RIVER



B-37-136
LOOKING EAST



TRAFFIC LAYOUT - STAGE 8
STH 29 BETWEEN BUS 51 RAMPS



PROJECT NO: 1053-02-74	HWY: STH 29	COUNTY: MARATHON	TRAFFIC CONTROL: STAGE 8 TYPICAL LAYOUT	SHEET 159	E

2

2

CTH N

USH 51 / IH 39

END DETOUR
STH 29 EB

N

DETOUR ROUTE OVERVIEW

NB USH 51 RAMP TO STH 29 EB DETOUR GOES THROUGH CTH N INTERCHANGE.

NOTE: SEE TRAFFIC CONTROL PLANS FOR LANE AND RAMP CLOSURE SIGNING.
ALL DETOUR J ASSEMBLIES SHALL HAVE ORANGE DIRECTIONAL ARROWS.

STH 29

51

BUSINESS

EXISTING RAMP CLOSED

BEGIN DETOUR
STH 29 EB

LEGEND

TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN

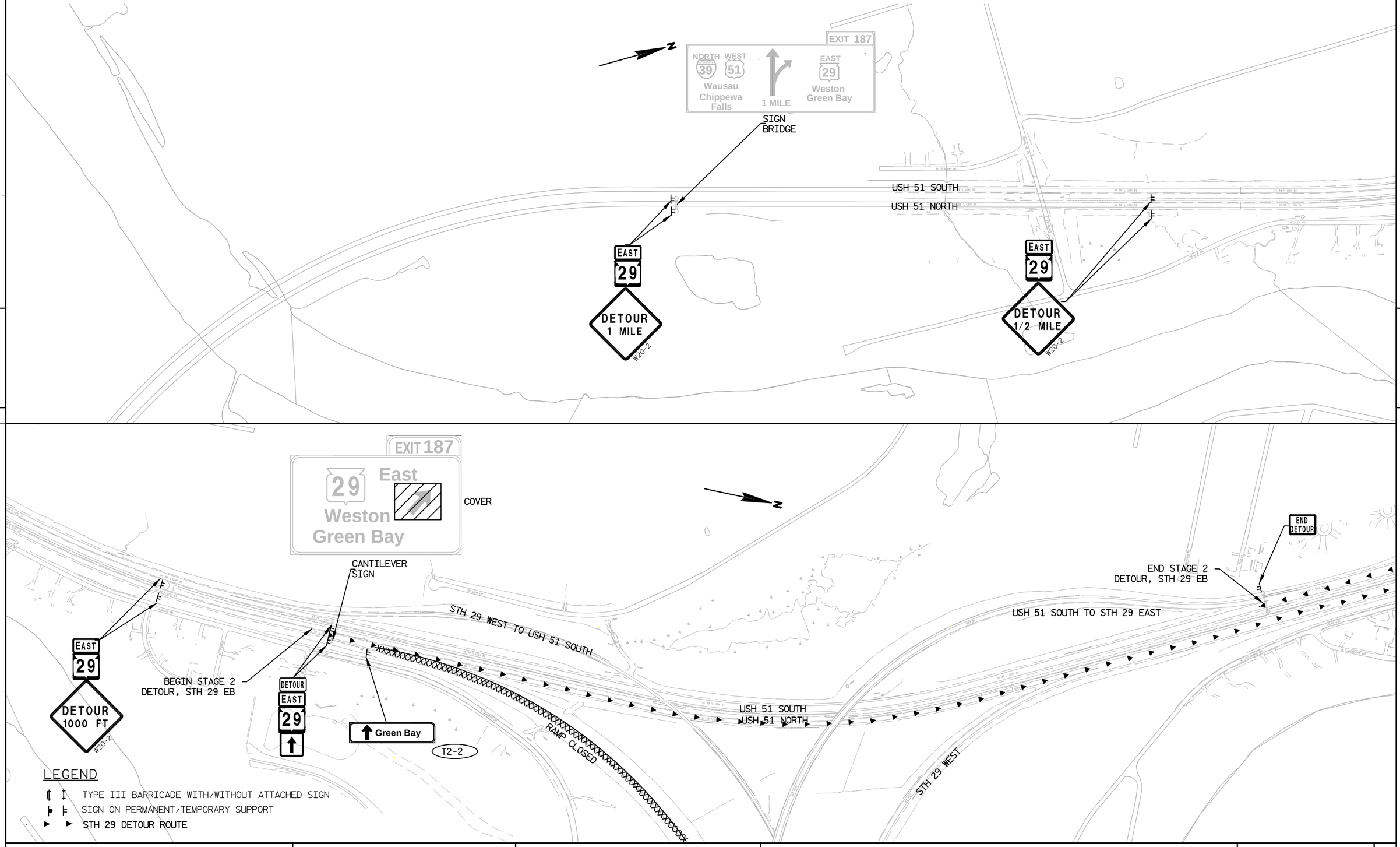
STH 29 DETOUR ROUTE

EXISTING SIGNALS

PROJECT NO: 1053-02-74	HWY: STH 29	COUNTY: MARATHON	DETOUR PLAN: STAGE 2B NB I-39 TO EB STH 29	SHEET	E

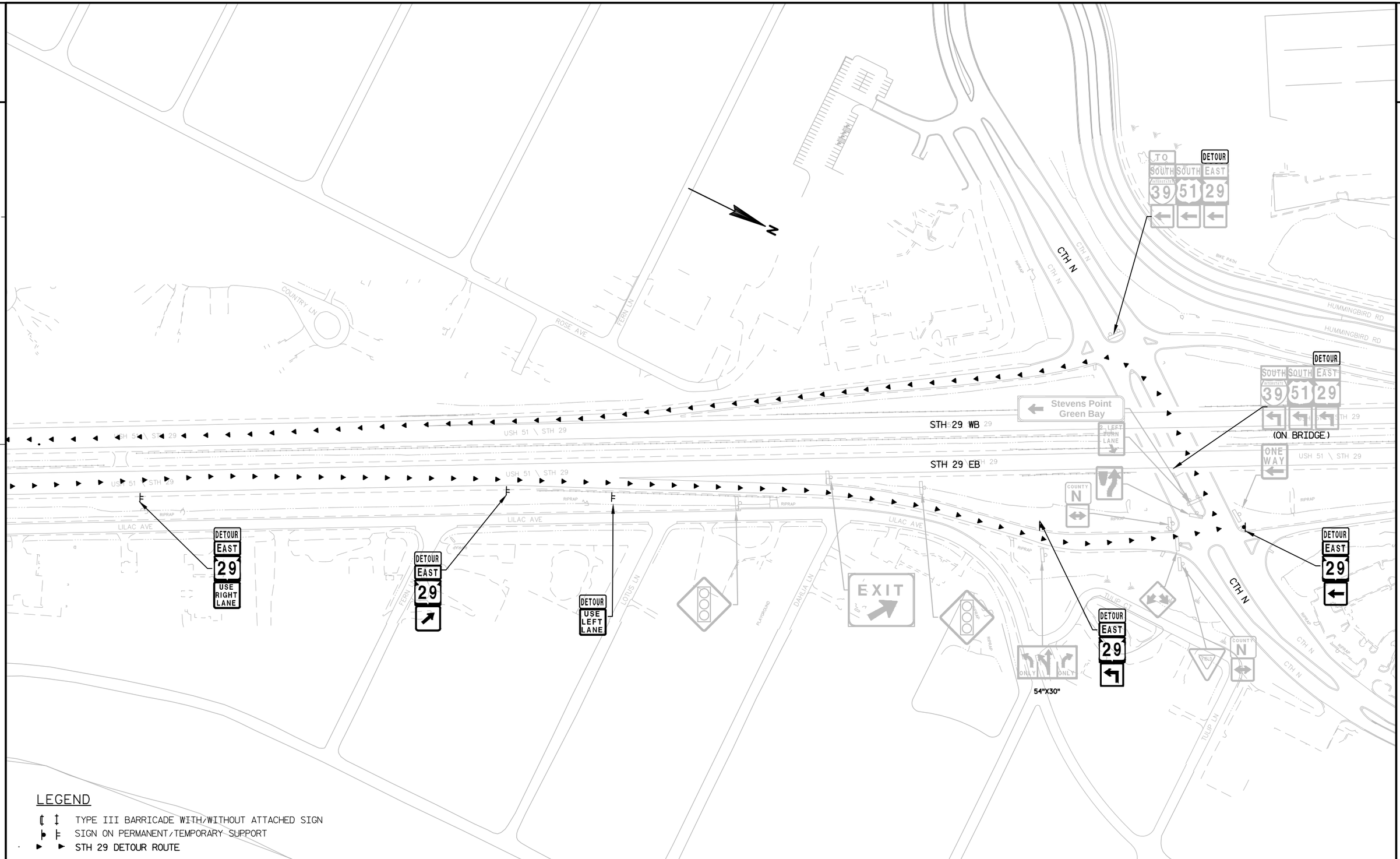
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WISDOT/CADDS SHEET 42



PROJECT NO: 1053-02-74	HWY: STH 29	COUNTY: MARATHON	DETOUR PLAN: STAGE 2B NB I-39 TO EB STH 29	SHEET 161	E

2



LEGEND

- TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN
- SIGN ON PERMANENT/TEMPORARY SUPPORT
- STH 29 DETOUR ROUTE

PROJECT NO:1053-02-74	HWY:STH 29	COUNTY:MARATHON	DETOUR PLAN: STAGE 2B NB I-39 TO EB STH 29	SHEET	E

FILE NAME : S:\DESIGN\DESIGN PROJECTS\1053-02-04 (STH 29)-AYRES-NC\C3D\SHEETSPLAN\027221_DT_S2B_1053-02-74 STH 29.DWG PLOT DATE : 10/18/2013 8:39 AM PLOT BY : QUEST CIVIL ENG PLOT NAME : PLOT SCALE : 1 IN:200 FT
WISDOT/CADDS SHEET 42

2

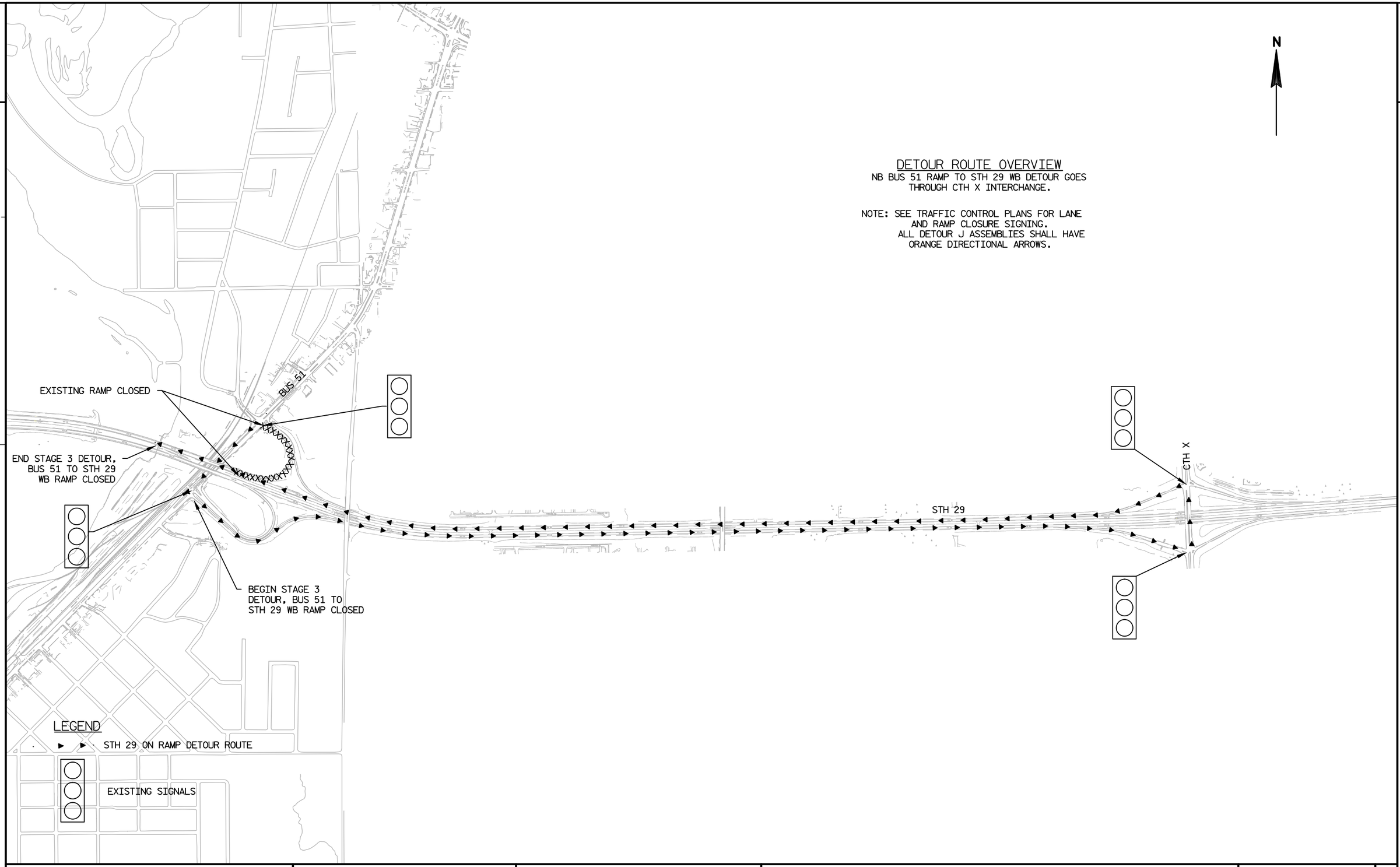
2

N

DETOUR ROUTE OVERVIEW

NB BUS 51 RAMP TO STH 29 WB DETOUR GOES THROUGH CTH X INTERCHANGE.

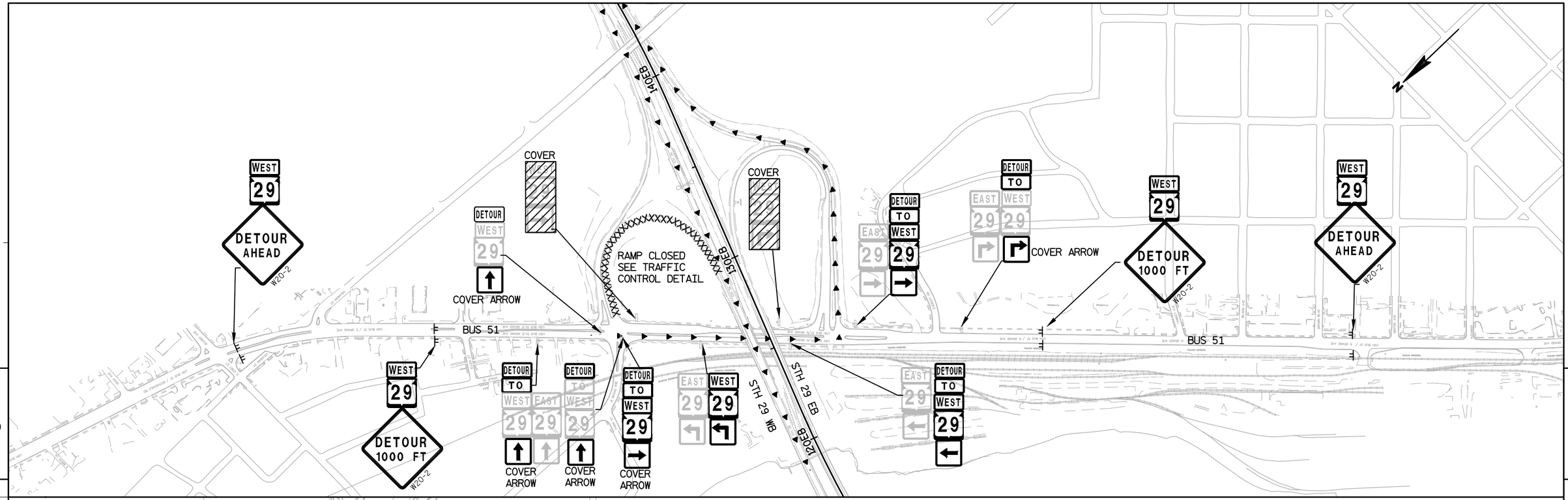
NOTE: SEE TRAFFIC CONTROL PLANS FOR LANE AND RAMP CLOSURE SIGNING. ALL DETOUR J ASSEMBLIES SHALL HAVE ORANGE DIRECTIONAL ARROWS.



PROJECT NO: 1053-02-74	HWY: STH 29	COUNTY: MARATHON	DETOUR PLAN: STAGES 3 & 4 RAMP D	SHEET	E

FILE NAME : S:\DESIGN\DESIGN PROJECTS\1053-02-04 (STH 29)-AYRES-NC\C3D\SHEETSPLAN\027303_DT_S3_1053-02-74 BUS51 TO CTHX.DWG PLOT DATE : 10/18/2013 8:46 AM PLOT BY : QUEST CIVIL ENG PLOT NAME : PLOT SCALE : 1 IN:1000 FT

WISDOT/CADDS SHEET 42



PROJECT NO: 1053-02-74	HWY: STH 29	COUNTY: MARATHON	DETOUR PLAN: STAGES 3 & 4 RAMP D	SHEET	E

FILE NAME : S:\DESIGN\DESIGN PROJECTS\1053-02-04 (STH 29)-AYRES-NC\C3D\SHEETSPLAN\027303_DT_S3_1053-02-74 BUS51 TO CTHX.DWG PLOT DATE : 10/18/2013 8:47 AM PLOT BY : QUEST CIVIL ENG PLOT NAME : _____ PLOT SCALE : **********

2

N

END DETOUR

STH 29 WB

STH 29 EB

220EB

230EB

240EB

EXIT 173

DETOUR TO WEST 29

EXIT 173

COUNTY X

Camp Phillips Rd

DETOUR USE LEFT LANE

DETOUR WEST 29

DETOUR TO WEST 29

CTH X

PEDESTRIANS BICYCLES NON MOTORIZED TRAFFIC MOTOR BICYCLES PROHIBITED

DO NOT ENTER

LEFT TURN LANE

RIPRAP

SIS SIGN

ONLY

WRONG WAY

NO PARKING EXCEPT CRASH INVESTIGATION VEHICLES

Mountain-Bay State Trail

H

YIELD

ONE WAY

LEGEND

= SIGN ON PERMANENT/TEMPORARY SUPPORT

= STH 29 ON RAMP DETOUR ROUTE

PROJECT NO:1053-02-74	HWY:STH 29	COUNTY:MARATHON	DETOUR PLAN: STAGES 3 & 4 RAMP D	SHEET	E

FILE NAME : S:\DESIGN\DESIGN PROJECTS\1053-02-04 (STH 29)-AYRES-NC\C3D\SHEETSPLAN\027303_DT_S3_1053-02-74 BUS51 TO CTHX.DWG PLOT DATE : 10/18/2013 8:47 AM PLOT BY : QUEST CIVIL ENG PLOT NAME : PLOT SCALE : 0.000045

WISDOT/CADDS SHEET 42

2

2

BUSINESS 51

METRO DR

CTH JJ

ALDERSON ST

ALDERSON ST

N

BIRCH ST

CTH X

CTH JJ

BIRCH ST

CTH X

CTH X

DETOUR ROUTE OVERVIEW

STH 29 WB DETOUR ROUTES THROUGH CTH X TO CTH JJ TO BUS 51 TO STH 29 INTERCHANGE.

DETOUR FOR REPLACEMENT OF SIGN STUCTURE S-37-77/117.

ALL DETOUR J ASSEMBLIES SHALL HAVE ORANGE DIRECTIONAL ARROWS.

STH 29

51

BUSINESS

REMOVE AND REPLACE SIGN BRIDGE

END STAGE 3A DETOUR, STH 29 EB

STH 29

BEGIN STAGE 2B DETOUR, STH 29 EB

LEGEND

STH 29 DETOUR ROUTE

EXISTING SIGNALS

PROJECT NO: 1053-02-74	HWY: STH 29	COUNTY: MARATHON	DETOUR PLAN: STAGE 3 WESTBOUND STH 29	SHEET	E

FILE NAME : S:\DESIGN\DESIGN PROJECTS\1053-02-04 (STH 29)-AYRES-NC\C3D\SHEETSPLAN\027321_DT_S3A_1053-02-74 STH 29.DWG PLOT DATE : 10/30/2013 8:26 AM PLOT BY : QUEST CIVIL ENG PLOT NAME : PLOT SCALE : 1 IN:1000 FT

WISDOT/CADDS SHEET 42

2

N

PRIOR TO CLOSURE MESSAGE BOARD

WB 29 TO CLOSE AT CTH X	10 PM TO 5 PM

DURING CLOSURE MESSAGE BOARD

ROAD CLOSED AHEAD	FOLLOW DETOUR

COVER (CLOSE RIGHT TURN LANE)

LANE CLOSED — INSTALL ON TYPE III BARRICADES
R11-2(MOD) 48" X 30"

COVER

TC DRUMS SPACED AT 25'

RAMP CLOSED — INSTALL ON TYPE III BARRICADES
R11-2(MOD) 48" X 30"

RAMP CLOSED

230EB

240EB

250EB

259EB

DETOUR WEST 29 (→)

DETOUR WEST 29

DETOUR WEST 29 — COVER ARROW

DETOUR WEST 29 (↗)

LANE CLOSED — INSTALL ON TYPE III BARRICADES
R11-2(MOD) 48" X 30"

DETOUR WEST 29 (↱)

W04-2L

LEFT LANE CLOSED 1500 FT W20-5

LEFT LANE CLOSED 1/2 MILE W20-5

MB

WEST 29 DETOUR AHEAD W20-2

ROAD CLOSED AHEAD W20-3

500' TC DRUMS 50' C-C W/ TYPE A LIGHTS

500' TC DRUMS 100' C-C

800' TAPER TC DRUMS 50'C-C W/TYPE A LIGHTS

500' TC DRUMS 50'C-C

500'

750'

850'

2600'

1000'

TC DRUMS SPACED AT 25'

DETOUR WEST 29

COVER ARROW

WEST 29

DETOUR AHEAD W20-2

ROAD CLOSED — INSTALL ON TYPE III BARRICADES
R11-2 48" X 30"

(CLOSE LEFT TURN LANE)

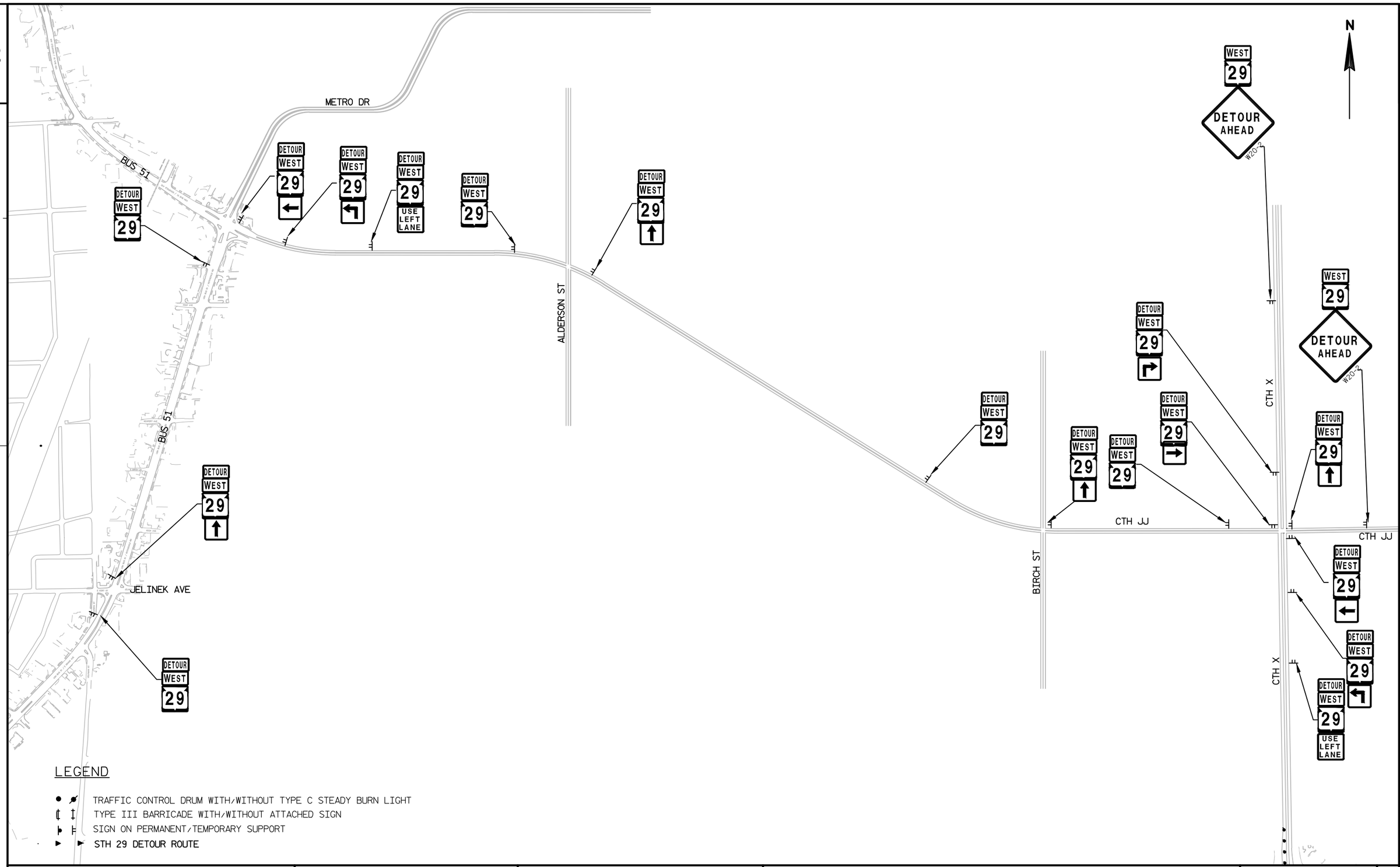
LANE CLOSED — INSTALL ON TYPE III BARRICADES
R11-2(MOD) 48" X 30"

LEGEND

- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C STEADY BURN LIGHT
- TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN
- SIGN ON PERMANENT/TEMPORARY SUPPORT
- STH 29 DETOUR ROUTE

PROJECT NO:1053-02-74	HWY:STH 29	COUNTY:MARATHON	DETOUR PLAN: STAGE 3 WESTBOUND STH 29	SHEET	E

FILE NAME : S:\DESIGN\DESIGN PROJECTS\1053-02-04 (STH 29)-AYRES-NC\C3D\SHEETSPLAN\027321_DT_S3A_1053-02-74 STH 29.DWG PLOT DATE : 10/30/2013 8:26 AM PLOT BY : QUEST CIVIL ENG PLOT NAME : PLOT SCALE : 1 IN:500 FT



PROJECT NO: 1053-02-74	HWY: STH 29	COUNTY: MARATHON	DETOUR PLAN: STAGE 3 WESTBOUND STH 29	SHEET E

FILE NAME : S:\DESIGN\DESIGN PROJECTS\1053-02-04 (STH 29)-AYRES-NC\C3D\SHEETSPLAN\027321_DT_S3A_1053-02-74 STH 29.DWG PLOT DATE : 10/30/2013 8:27 AM PLOT BY : QUEST CIVIL ENG PLOT NAME : PLOT SCALE : 0.001446

WISDOT/CADDS SHEET 42

2

2

120EB

STH 29 EB

STH 29 WB

130EB

STH 29

RIPRAP

ABANDONED RAILROAD

WISCONSIN CENTRAL

PARK ST

W GRAND AVE

WEST GRAND AVE

USH BUS 51/N GRAND AVE

BUS 51

USH BUS 51/E GRAND AVE

ELLEN ST

VOLKMAN ST

E KORT ST

DETOUR
WEST
29

DETOUR
WEST
29

DETOUR
WEST
29
USE
LEFT
LANE
R3-54L

END
DETOUR
24" X 18"

EXISTING SIGN STRUCTURE S-37-77
NEW SIGN STRUCTURE S-37-117

N

LEGEND

- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C STEADY BURN LIGHT
- TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN
- SIGN ON PERMANENT/TEMPORARY SUPPORT
- STH 29 DETOUR ROUTE

PROJECT NO: 1053-02-74	HWY: STH 29	COUNTY: MARATHON	DETOUR PLAN: STAGE 3 WESTBOUND STH 29	SHEET 169	E

FILE NAME : S:\DESIGN\DESIGN PROJECTS\1053-02-04 (STH 29)-AYRES-NC\C3D\SHEETSPLAN\027321_DT_S3A_1053-02-74 STH 29.DWG PLOT DATE : 10/30/2013 8:27 AM PLOT BY : QUEST CIVIL ENG PLOT NAME : PLOT SCALE : **********

WISDOT/CADDS SHEET 42

2

STH 29 WESTBOUND (WB)

Station	Type	Left	Right
98+65.03	End NC	-0.020000	-0.020000
99+55.03	Zero Super	0.000000	-0.020000
100+45.03	Rev. Crown	0.020000	-0.020000
101+26.03	Begin FS	0.038000	-0.038000
120+28.16	End FS	0.038000	-0.038000
121+09.16	Rev. Crown	0.020000	-0.020000
121+99.16	Zero Super	0.000000	-0.020000
122+89.16	Begin NC	-0.020000	-0.020000
136+97.68	End NC	-0.020000	-0.020000
137+87.68	Zero Super	-0.020000	0.000000
138+77.68	Rev. Crown	-0.020000	0.020000
139+67.68	Begin FS	-0.040000	0.040000
155+52.37	End FS	-0.040000	0.040000
156+42.37	Rev. Crown	-0.020000	0.020000
157+32.37	Zero Super	-0.020000	0.000000
158+22.37	Begin NC	-0.020000	-0.020000

STH 29 EASTBOUND (EB)

Station	Type	Left	Right
74+72.22	End NC	-0.020000	-0.020000
75+62.22	Zero Super	0.000000	-0.020000
76+52.22	Rev. Crown	0.020000	-0.020000
78+32.22	Begin FS	0.060000	-0.060000
83+65.33	End FS	0.060000	-0.060000
85+45.33	Rev. Crown	0.020000	-0.020000
86+35.33	Zero Super	0.000000	-0.020000
87+25.33	Begin NC	-0.020000	-0.020000
99+31.78	End NC	-0.020000	-0.020000
100+21.78	Zero Super	0.000000	-0.020000
101+11.78	Rev. Crown	0.020000	-0.020000
101+92.78	Begin FS	0.038000	-0.038000
120+64.90	End FS	0.038000	-0.038000
121+45.90	Rev. Crown	0.020000	-0.020000
122+35.90	Zero Super	0.000000	-0.020000
123+25.90	Begin NC	-0.020000	-0.020000
136+67.46	End NC	-0.020000	-0.020000
137+57.46	Zero Super	-0.020000	0.000000
138+47.46	Rev. Crown	-0.020000	0.020000
139+37.46	Begin FS	-0.040000	0.040000
155+53.39	End FS	-0.040000	0.040000
156+43.39	Rev. Crown	-0.020000	0.020000
157+33.39	Zero Super	-0.020000	0.000000
158+23.39	Begin NC	-0.020000	-0.020000

A RAMP (A)

Station	Type	Left	Right
128+60.72	Rev. Crown	0.020000	-0.020000
129+56.72	Begin FS	0.060000	-0.060000
140+05.22	End FS	0.060000	-0.060000

B RAMP (B)

Station	Type	Left	Right
128+97.73	Rev. Crown	-0.020000	0.020000
129+01.37	Begin FS	-0.022000	0.022000
130+78.03	End FS	-0.022000	0.022000
131+20.37	Begin FS	-0.048000	0.048000
132+14.72	End FS	-0.048000	0.048000
132+80.06	Begin FS	-0.060000	0.060000
138+49.18	End FS	-0.060000	0.060000

SUNRISE DRIVE

Station	Type	Left	Right
1+57.14	End NC	-0.020000	-0.020000
1+98.41	Zero Super	0.000000	-0.020000
2+39.69	Rev. Crown	0.020000	-0.020000
2+95.41	Begin FS	0.047000	-0.047000
17+87.07	End FS	0.047000	-0.047000
18+42.79	Rev. Crown	0.020000	-0.020000
18+84.07	Zero Super	0.000000	-0.020000
19+25.35	Begin NC	-0.020000	-0.020000

2

2

P.I. DATA

P.I. 0+40.97
N 180637.21
E 280133.55

CURVE DATA

P.I. 12+18.03
N 180644.87
E 281310.59
△ = 85°30'41"
D = 5°30'00"
T = 963.17'
L = 1554.75'
E = 377.03'
R = 1041.74'
P.C. 2+54.86
P.T. 18+09.61
S.E. 4.7 %
L.R. 97.00'
D.S. 40 MPH

P.I. DATA

P.I. 29+84.69
N 178514.31
E 281491.80

P.I. DATA

P.I. 74WB+14.93
N 179498.54
E 280043.97

CURVE DATA

P.I. 110WB+87.63
N 179490.26
E 283716.66
△ = 20°09'40"
D = 1°00'00"
T = 1018.59'
L = 2016.12'
E = 89.84'
R = 5729.58'
P.C. 100WB+69.03
P.T. 120WB+85.16
S.E. 3.8 %
L.R. 171.00'
D.S. 70 MPH

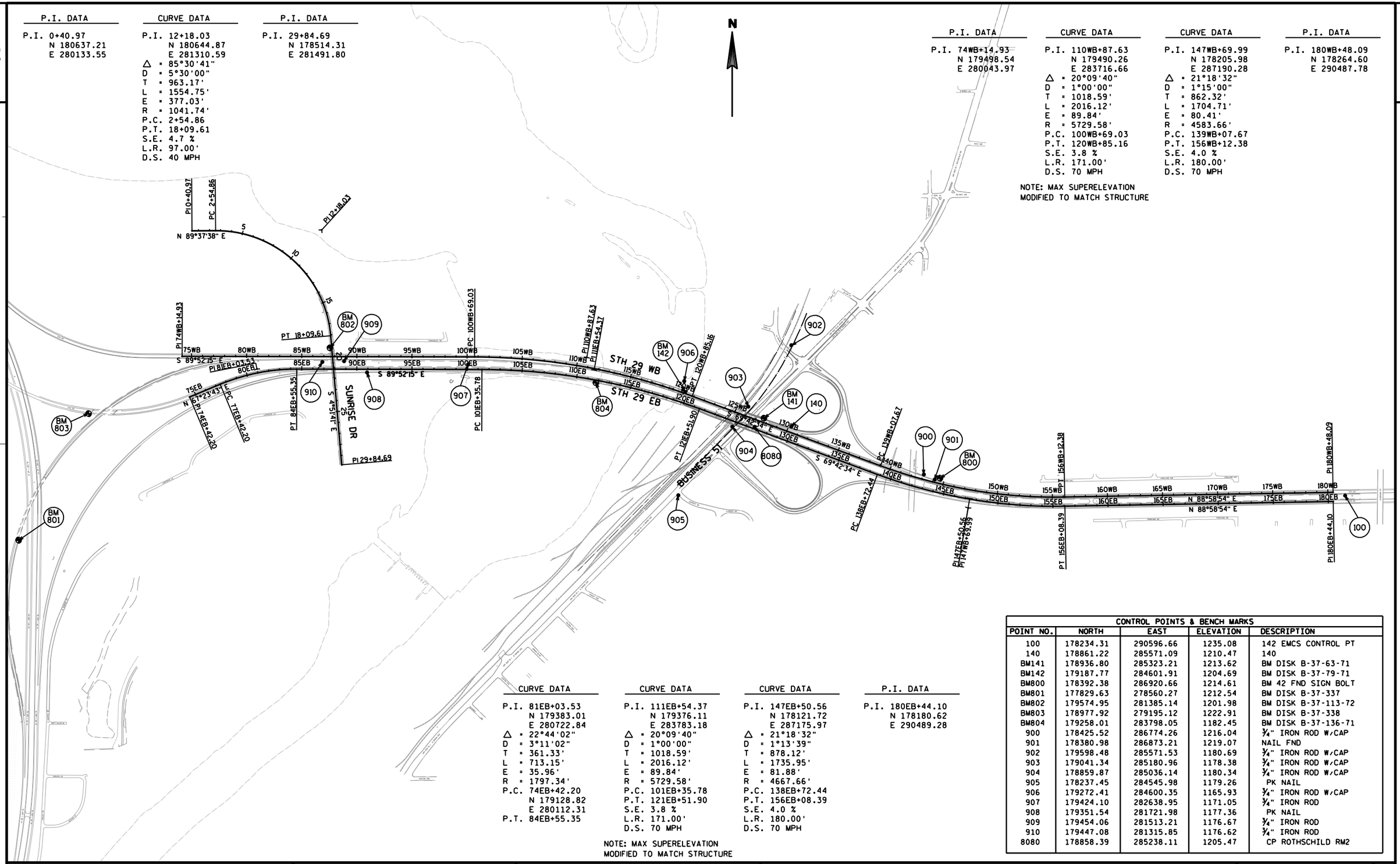
CURVE DATA

P.I. 147WB+69.99
N 178205.98
E 287190.28
△ = 21°18'32"
D = 1°15'00"
T = 862.32'
L = 1704.71'
E = 80.41'
R = 4583.66'
P.C. 139WB+07.67
P.T. 156WB+12.38
S.E. 4.0 %
L.R. 180.00'
D.S. 70 MPH

P.I. DATA

P.I. 180WB+48.09
N 178264.60
E 290487.78

NOTE: MAX SUPERELEVATION
MODIFIED TO MATCH STRUCTURE



CURVE DATA

P.I. 81EB+03.53
N 179383.01
E 280722.84
△ = 22°44'02"
D = 3°11'02"
T = 361.33'
L = 713.15'
E = 35.96'
R = 1797.34'
P.C. 74EB+42.20
N 179128.82
E 280112.31
P.T. 84EB+55.35

CURVE DATA

P.I. 111EB+54.37
N 179376.11
E 283783.18
△ = 20°09'40"
D = 1°00'00"
T = 1018.59'
L = 2016.12'
E = 89.84'
R = 5729.58'
P.C. 101EB+35.78
P.T. 121EB+51.90
S.E. 3.8 %
L.R. 171.00'
D.S. 70 MPH

CURVE DATA

P.I. 147EB+50.56
N 178121.72
E 287175.97
△ = 21°18'32"
D = 1°13'39"
T = 878.12'
L = 1735.95'
E = 81.88'
R = 4667.66'
P.C. 138EB+72.44
P.T. 156EB+08.39
S.E. 4.0 %
L.R. 180.00'
D.S. 70 MPH

P.I. DATA

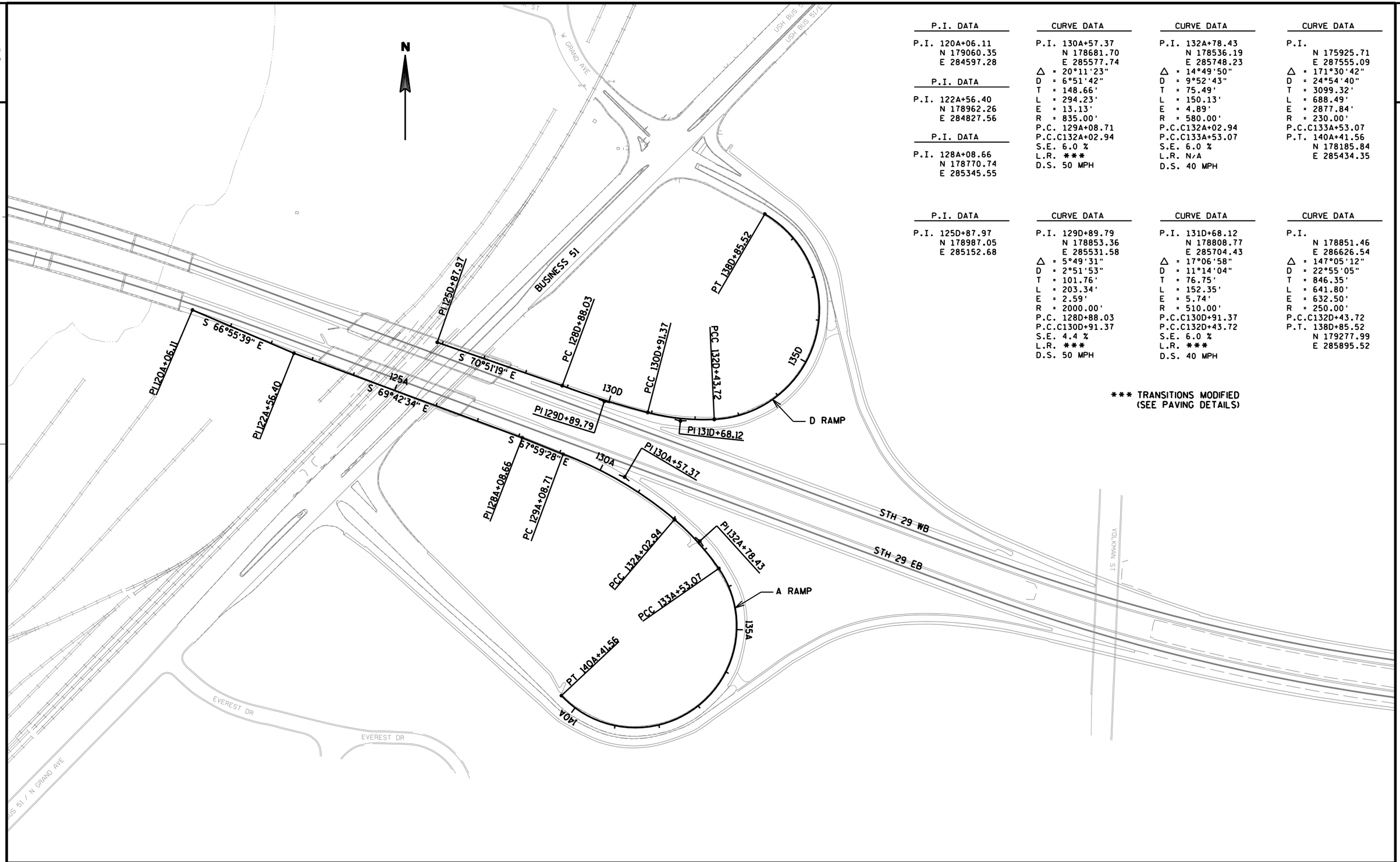
P.I. 180EB+44.10
N 178180.62
E 290489.28

NOTE: MAX SUPERELEVATION
MODIFIED TO MATCH STRUCTURE

CONTROL POINTS & BENCH MARKS

POINT NO.	NORTH	EAST	ELEVATION	DESCRIPTION
100	178234.31	290596.66	1235.08	142 EMCS CONTROL PT
140	178861.22	285571.09	1210.47	140
BM141	178936.80	285323.21	1213.62	BM DISK B-37-63-71
BM142	179187.77	284601.91	1204.69	BM DISK B-37-79-71
BM800	178392.38	286920.66	1214.61	BM 42 FND SIGN BOLT
BM801	177829.63	278560.27	1212.54	BM DISK B-37-337
BM802	179574.95	281385.14	1201.98	BM DISK B-37-113-72
BM803	178977.92	279195.12	1222.91	BM DISK B-37-338
BM804	179258.01	283798.05	1182.45	BM DISK B-37-136-71
900	178425.52	286774.26	1216.04	¾" IRON ROD W/CAP
901	178380.98	286873.21	1219.07	NAIL FND
902	179598.48	285571.53	1180.69	¾" IRON ROD W/CAP
903	179041.34	285180.96	1178.38	¾" IRON ROD W/CAP
904	178859.87	285036.14	1180.34	¾" IRON ROD W/CAP
905	178237.45	284545.98	1179.26	PK NAIL
906	179272.41	284600.35	1165.93	¾" IRON ROD W/CAP
907	179424.10	282638.95	1171.05	¾" IRON ROD
908	179351.54	281721.98	1177.36	PK NAIL
909	179454.06	281513.21	1176.67	¾" IRON ROD
910	179447.08	281315.85	1176.62	¾" IRON ROD
8080	178858.39	285238.11	1205.47	CP ROTHSCHILD RM2

PROJECT NO: 1053-02-74/1053-05-60	HWY: STH 29	COUNTY: MARATHON	ALIGNMENT DIAGRAM - STH 29/SUNRISE DRIVE	SHEET 171	E



P.I. DATA

P.I. 120A+06.11
N 179060.35
E 284597.28

P.I. DATA

P.I. 122A+56.40
N 178962.26
E 284827.56

P.I. DATA

P.I. 128A+08.66
N 178770.74
E 285345.55

P.I. DATA

P.I. 125D+87.97
N 178987.05
E 285152.68

CURVE DATA

P.I. 130A+57.37
N 178681.70
E 285577.74
△ = 20°11'23"
D = 6°51'42"
T = 148.66'
L = 294.23'
E = 13.13'
R = 835.00'
P.C. 129A+08.71
P.C.C132A+02.94
S.E. 6.0 %
L.R. ***
D.S. 50 MPH

CURVE DATA

P.I. 129D+89.79
N 178853.36
E 285531.58
△ = 5°49'31"
D = 2°51'53"
T = 101.76'
L = 203.34'
E = 2.59'
R = 2000.00'
P.C. 128D+88.03
P.C.C130D+91.37
S.E. 4.4 %
L.R. ***
D.S. 50 MPH

CURVE DATA

P.I. 132A+78.43
N 178536.19
E 285748.23
△ = 14°49'50"
D = 9°52'43"
T = 75.49'
L = 150.13'
E = 4.89'
R = 580.00'
P.C.C132A+02.94
P.C.C133A+53.07
S.E. 6.0 %
L.R. N/A
D.S. 40 MPH

CURVE DATA

P.I. 131D+68.12
N 178808.77
E 285704.43
△ = 17°06'58"
D = 11°14'04"
T = 76.75'
L = 152.35'
E = 5.74'
R = 510.00'
P.C.C130D+91.37
P.C.C132D+43.72
S.E. 6.0 %
L.R. ***
D.S. 40 MPH

CURVE DATA

P.I.
N 175925.71
E 287555.09
△ = 171°30'42"
D = 24°54'40"
T = 3099.32'
L = 688.49'
E = 2877.84'
R = 230.00'
P.C.C133A+53.07
P.T. 140A+41.56
N 178185.84
E 285434.35

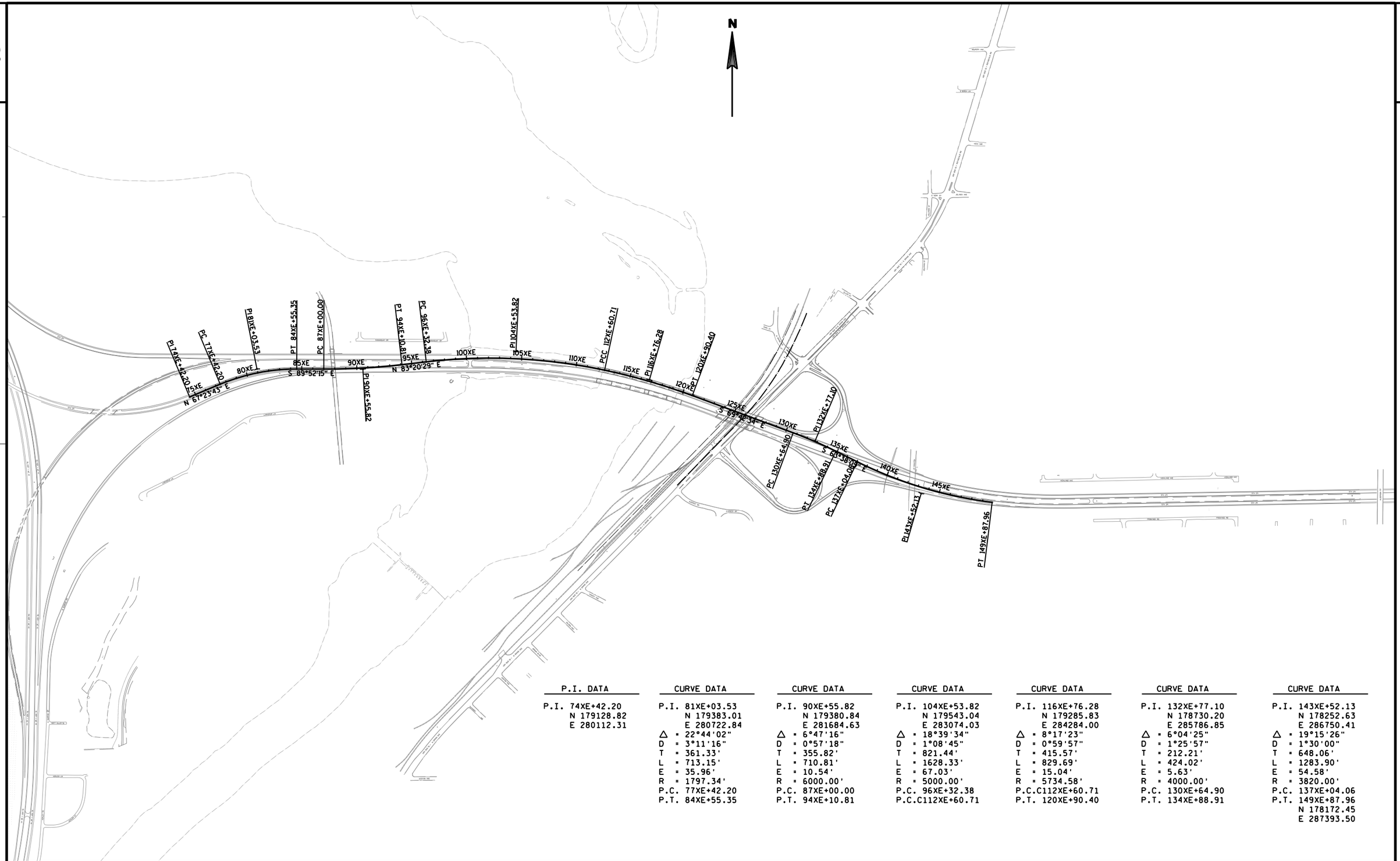
CURVE DATA

P.I.
N 178851.46
E 286626.54
△ = 147°05'12"
D = 22°55'05"
T = 846.35'
L = 641.80'
E = 632.50'
R = 250.00'
P.C.C132D+43.72
P.T. 138D+85.52
N 179277.99
E 285895.52

*** TRANSITIONS MODIFIED
(SEE PAVING DETAILS)

2

PROJECT NO: 1053-02-74	HWY: STH 29	COUNTY: MARATHON	ALIGNMENT DIAGRAM - RAMPS	SHEET 172	E



P.I. DATA
P.I. 74XE+42.20
N 179128.82
E 280112.31

CURVE DATA
P.I. 81XE+03.53
N 179383.01
E 280722.84
△ = 22°44'02"
D = 3°11'16"
T = 361.33'
L = 713.15'
E = 35.96'
R = 1797.34'
P.C. 77XE+42.20
P.T. 84XE+55.35

CURVE DATA
P.I. 90XE+55.82
N 179380.84
E 281684.63
△ = 6°47'16"
D = 0°57'18"
T = 355.82'
L = 710.81'
E = 10.54'
R = 6000.00'
P.C. 87XE+00.00
P.T. 94XE+10.81

CURVE DATA
P.I. 104XE+53.82
N 179543.04
E 283074.03
△ = 18°39'34"
D = 1°08'45"
T = 821.44'
L = 1628.33'
E = 67.03'
R = 5000.00'
P.C. 96XE+32.38
P.C.C112XE+60.71

CURVE DATA
P.I. 116XE+76.28
N 179285.83
E 284284.00
△ = 8°17'23"
D = 0°59'57"
T = 415.57'
L = 829.69'
E = 15.04'
R = 5734.58'
P.C.C112XE+60.71
P.T. 120XE+90.40

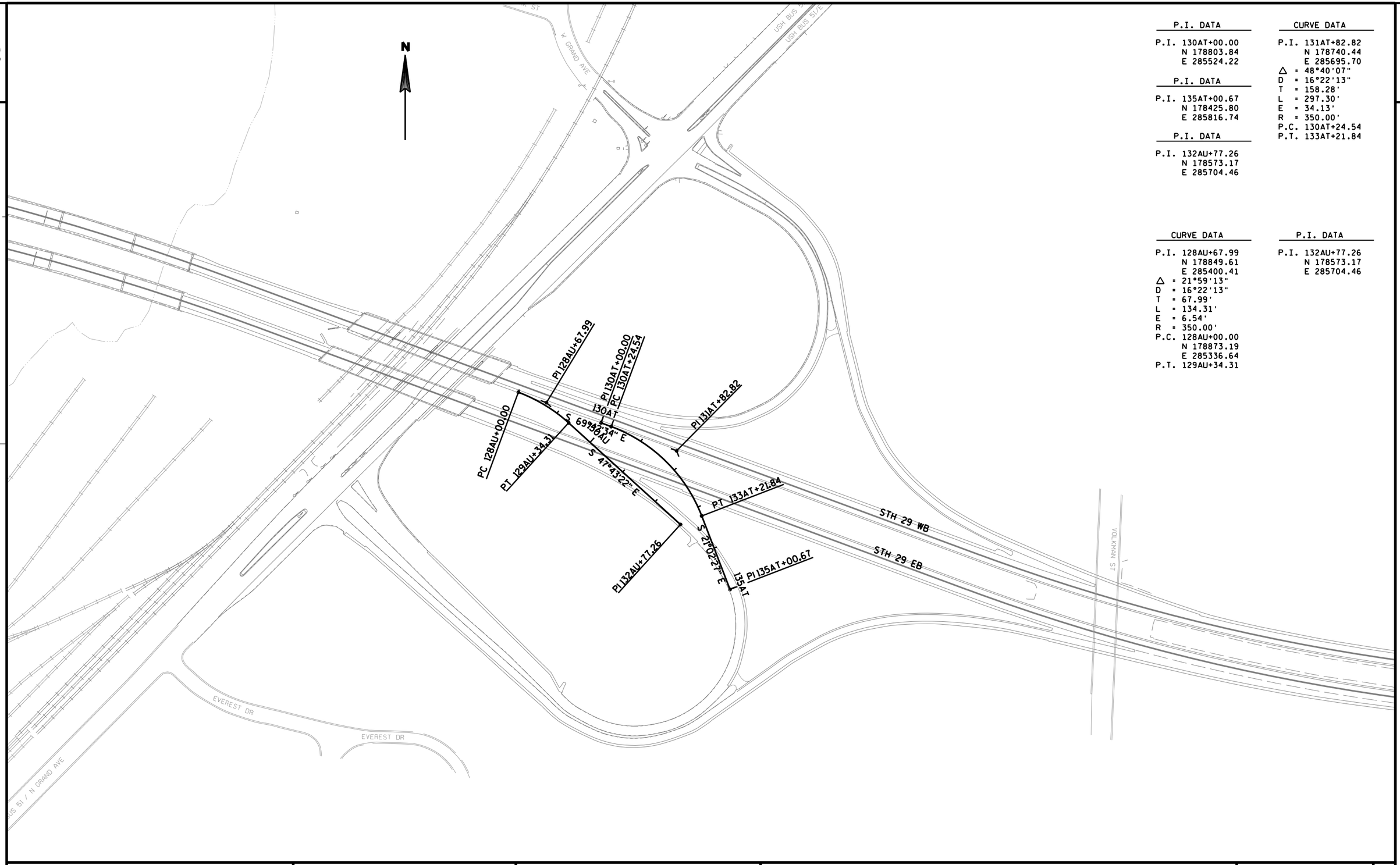
CURVE DATA
P.I. 132XE+77.10
N 178730.20
E 285786.85
△ = 6°04'25"
D = 1°25'57"
T = 212.21'
L = 424.02'
E = 5.63'
R = 4000.00'
P.C. 130XE+64.90
P.T. 134XE+88.91

CURVE DATA
P.I. 143XE+52.13
N 178252.63
E 286750.41
△ = 19°15'26"
D = 1°30'00"
T = 648.06'
L = 1283.90'
E = 54.58'
R = 3820.00'
P.C. 137XE+04.06
P.T. 149XE+87.96
N 178172.45
E 287393.50

PROJECT NO: 1053-02-74/1053-05-60	HWY: STH 29	COUNTY: MARATHON	ALIGNMENT DIAGRAM - TEMPORARY	SHEET 173	E

FILE NAME : T:\410637\DGN-DWG\plan\027203_adt.dgn PLOT DATE : 1/8/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:800

WISDOT/CADDS SHEET 42



P.I. DATA

P.I. 130AT+00.00
N 178803.84
E 285524.22

P.I. DATA

P.I. 135AT+00.67
N 178425.80
E 285816.74

P.I. DATA

P.I. 132AU+77.26
N 178573.17
E 285704.46

CURVE DATA

P.I. 131AT+82.82
N 178740.44
E 285695.70
△ = 48°40'07"
D = 16°22'13"
T = 158.28'
L = 297.30'
E = 34.13'
R = 350.00'
P.C. 130AT+24.54
P.T. 133AT+21.84

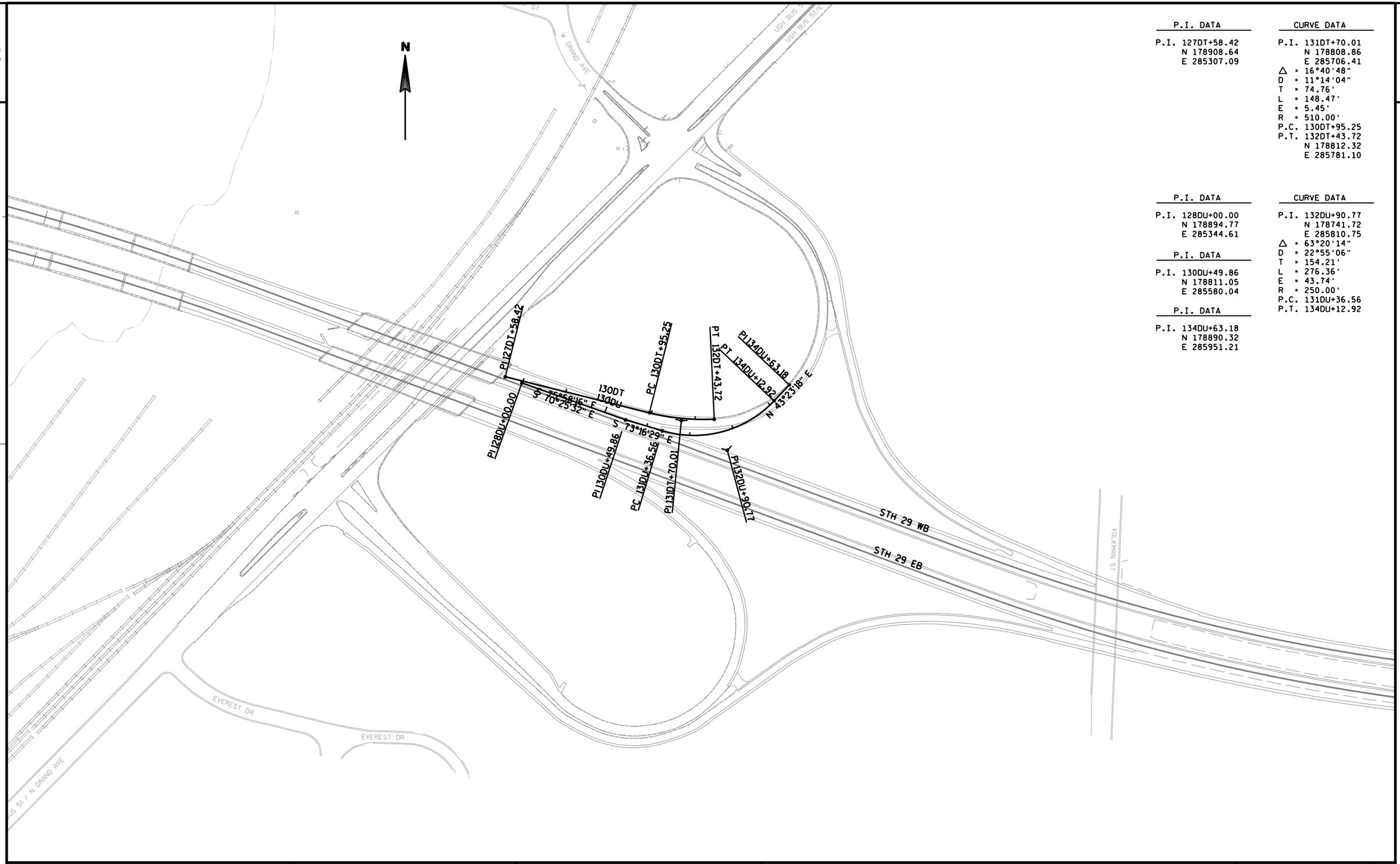
CURVE DATA

P.I. 128AU+67.99
N 178849.61
E 285400.41
△ = 21°59'13"
D = 16°22'13"
T = 67.99'
L = 134.31'
E = 6.54'
R = 350.00'
P.C. 128AU+00.00
N 178873.19
E 285336.64
P.T. 129AU+34.31

P.I. DATA

P.I. 132AU+77.26
N 178573.17
E 285704.46

PROJECT NO: 1053-02-74	HWY: STH 29	COUNTY: MARATHON	ALIGNMENT DIAGRAM - TEMPORARY	SHEET 174	E



P.I. DATA

P.I. 127DT+58.42
N 178908.64
E 285307.09

CURVE DATA

P.I. 131DT+70.01
N 178808.86
E 285706.41
△ = 16°40'48"
D = 11°14'04"
T = 74.76'
L = 148.47'
E = 5.45'
R = 510.00'
P.C. 130DT+95.25
P.T. 132DT+43.72
N 178812.32
E 285781.10

P.I. DATA

P.I. 128DU+00.00
N 178894.77
E 285344.61

P.I. DATA

P.I. 130DU+49.86
N 178811.05
E 285580.04

P.I. DATA

P.I. 134DU+63.18
N 178890.32
E 285951.21

CURVE DATA

P.I. 132DU+90.77
N 178741.72
E 285810.75
△ = 63°20'14"
D = 22°55'06"
T = 154.21'
L = 276.36'
E = 43.74'
R = 250.00'
P.C. 131DU+36.56
P.T. 134DU+12.92

2

PROJECT NO: 1053-02-74	HWY: STH 29	COUNTY: MARATHON	ALIGNMENT DIAGRAM - TEMPORARY	SHEET	E

FILE NAME : T:\410637\DGN-DWG\plan\027205_adt.dgn PLOT DATE : 1/8/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:200

P.I. DATA
P.I. 91TN+13.31
N 179494.69
E 281754.04

CURVE DATA
P.I. 106TN+90.62
N 179517.00
E 283331.19
△ = 12°48'41"
D = 1°08'22"
T = 564.49'
L = 1124.26'
E = 31.59'
R = 5028.00'
P.C. 101TN+26.13
P.C.C112TN+50.39

CURVE DATA
P.I. 116TN+67.99
N 179312.80
E 284291.81
△ = 8°17'23"
D = 0°59'39"
T = 417.60'
L = 833.74'
E = 15.11'
R = 5762.58'
P.C.C112TN+50.39
P.T. 120TN+84.13

CURVE DATA
P.I. 133TN+75.03
N 178720.32
E 285894.29
△ = 5°19'38"
D = 1°30'00"
T = 177.72'
L = 355.18'
E = 4.13'
R = 3820.00'
P.C. 131TN+97.32
P.R.C135TN+52.49

CURVE DATA
P.I. 137TN+30.21
N 178566.65
E 286214.78
△ = 5°19'38"
D = 1°30'00"
T = 177.72'
L = 355.18'
E = 4.13'
R = 3820.00'
P.R.C135TN+52.49
P.T. 139TN+07.67
N 178505.02
E 286381.47

N

PI 91TN+13.31
PARAMOUNT DR
95TN
N 89°11'22" E
100TN
PC 101TN+26.13
PI 106TN+90.62
105TN
PI 111TS+17.74
110TN
PCC 112TN+50.39
115TN
PI 116TN+67.99
120TN
PT 120TN+84.13
125TN
S 69°42'34" E
130TN
PC 131TN+97.32
PI 133TN+75.03
135TN
PRC 135TN+52.49
PT 139TN+07.67
PI 137TN+30.21
S 70°25'32" E
PI 128TS+00.00
PI 132TS+00.03
PT 120TS+85.16
S 89°15'60" E
100TS
105TS
110TS
115TS
120TS
125TS
PI 96TS+26.73
PC 101TS+31.13
E KORT ST
JELINEK AVE
VOLKMAN ST
USH 8(S) W / E GRAND AVE
ELLEN ST
PARK ST
EVEREST DR
YANKEE AVE
USH 8(S) W / N GRAND AVE

P.I. DATA
P.I. 96TS+26.73
N 179493.56
E 282254.04

CURVE DATA
P.I. 111TS+17.74
N 179474.48
E 283744.93
△ = 19°33'26"
D = 1°00'03"
T = 986.61'
L = 1954.02'
E = 84.40'
R = 5724.58'
P.C. 101TS+31.13
P.T. 120TS+85.16

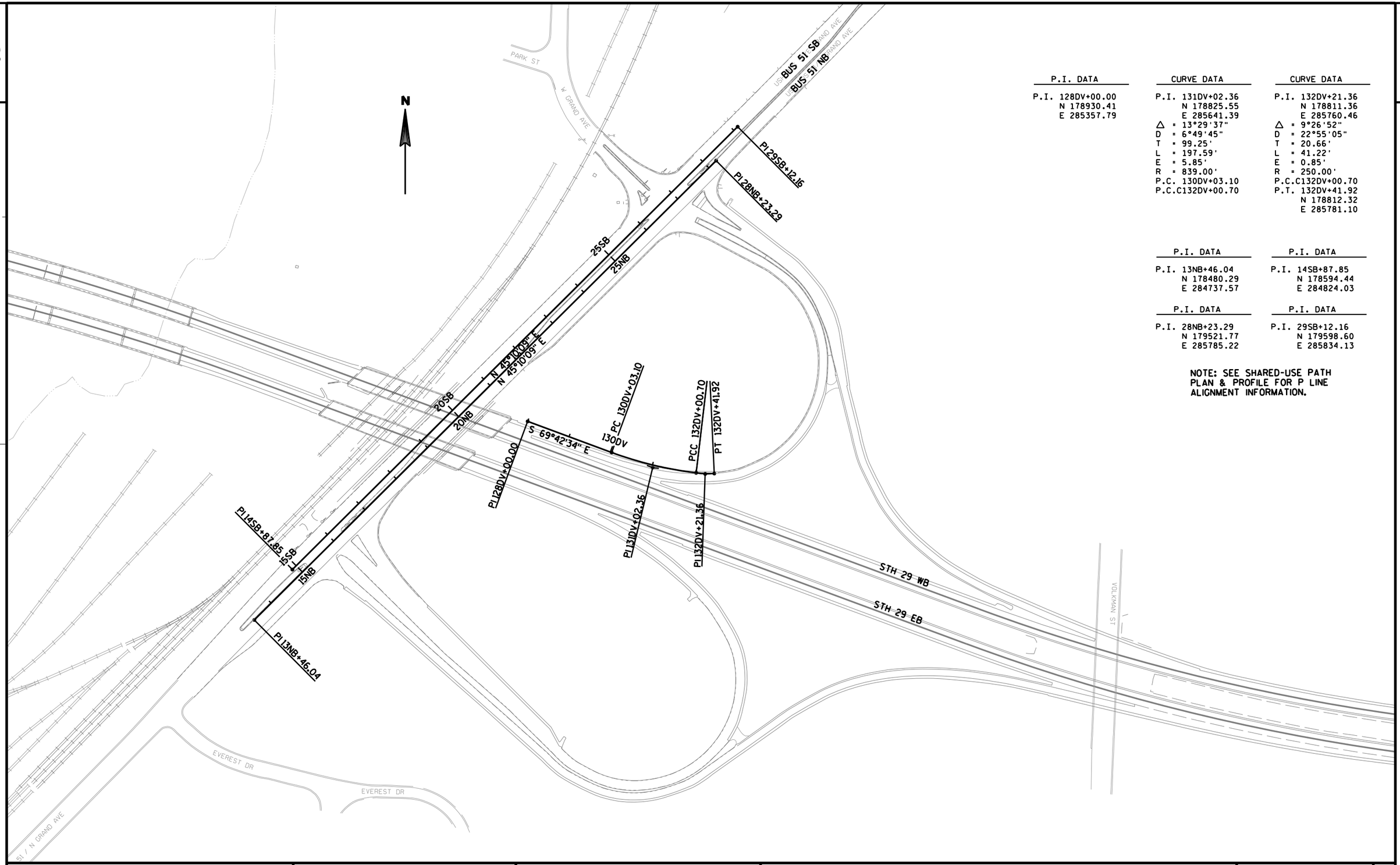
P.I. DATA
P.I. 128TS+00.00
N 178884.45
E 285340.80

P.I. DATA
P.I. 132TS+00.03
N 178750.43
E 285717.71

PROJECT NO: 1053-02-74/1053-05-60	HWY: STH 29	COUNTY: MARATHON	ALIGNMENT DIAGRAM - TEMPORARY	SHEET	E

FILE NAME : T:\410637\DGN-DWG\plan\027206_adt.dgn PLOT DATE : 1/8/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:400

WISDOT/CADDS SHEET 42



P.I. DATA
P.I. 128DV+00.00
N 178930.41
E 285357.79

CURVE DATA
P.I. 131DV+02.36
N 178825.55
E 285641.39
△ = 13°29'37"
D = 6°49'45"
T = 99.25'
L = 197.59'
E = 5.85'
R = 839.00'
P.C. 130DV+03.10
P.C.C132DV+00.70

CURVE DATA
P.I. 132DV+21.36
N 178811.36
E 285760.46
△ = 9°26'52"
D = 22°55'05"
T = 20.66'
L = 41.22'
E = 0.85'
R = 250.00'
P.C.C132DV+00.70
P.T. 132DV+41.92
N 178812.32
E 285781.10

P.I. DATA
P.I. 13NB+46.04
N 178480.29
E 284737.57

P.I. DATA
P.I. 14SB+87.85
N 178594.44
E 284824.03

P.I. DATA
P.I. 28NB+23.29
N 179521.77
E 285785.22

P.I. DATA
P.I. 29SB+12.16
N 179598.60
E 285834.13

NOTE: SEE SHARED-USE PATH PLAN & PROFILE FOR P LINE ALIGNMENT INFORMATION.

2

PROJECT NO: 1053-02-74	HWY: STH 29	COUNTY: MARATHON	ALIGNMENT DIAGRAM - BUS 51 & TEMPORARY	SHEET	E

FILE NAME : T:\410637\DGN-DWG\plan\027207_adt.dgn PLOT DATE : 1/8/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:200
WISDOT/CADDS SHEET 42

2

P.I. DATA

P.I. 80WM+00.00
N 179497.22
E 280629.04

P.I. DATA

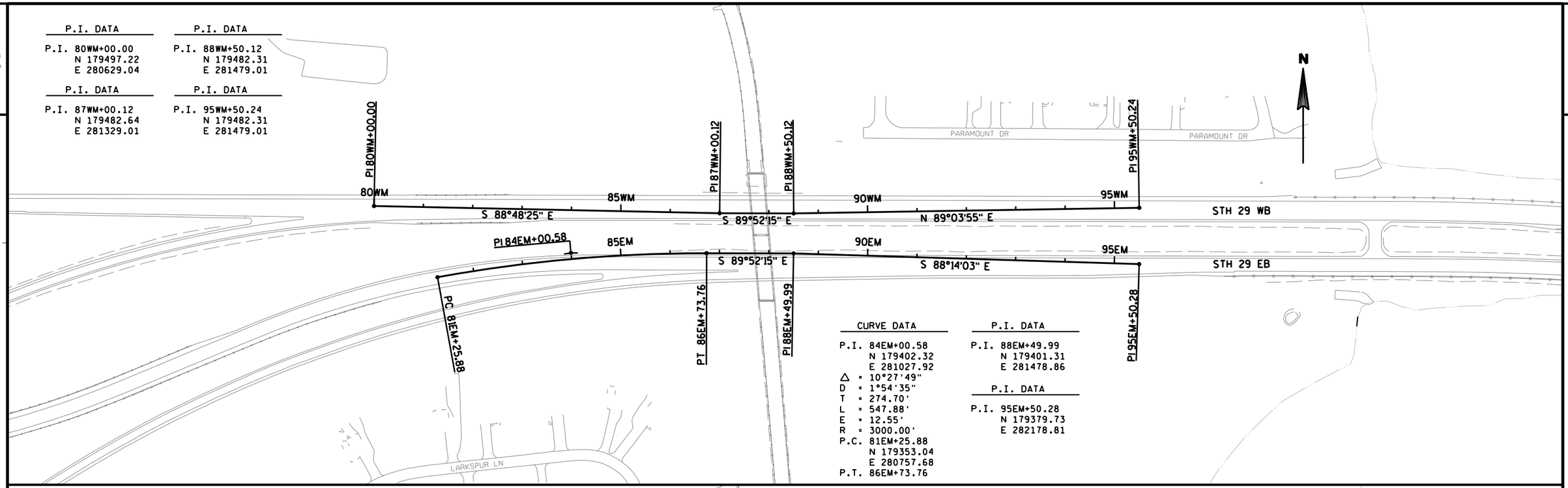
P.I. 88WM+50.12
N 179482.31
E 281479.01

P.I. DATA

P.I. 87WM+00.12
N 179482.64
E 281329.01

P.I. DATA

P.I. 95WM+50.24
N 179482.31
E 281479.01



CURVE DATA

P.I. 84EM+00.58
N 179402.32
E 281027.92
△ = 10°27'49"
D = 1°54'35"
T = 274.70'
L = 547.88'
E = 12.55'
R = 3000.00'
P.C. 81EM+25.88
N 179353.04
E 280757.68
P.T. 86EM+73.76

P.I. DATA

P.I. 88EM+49.99
N 179401.31
E 281478.86

P.I. DATA

P.I. 95EM+50.28
N 179379.73
E 282178.81

P.I. DATA

P.I. 80WN+00.00
N 179497.22
E 280629.04

P.I. DATA

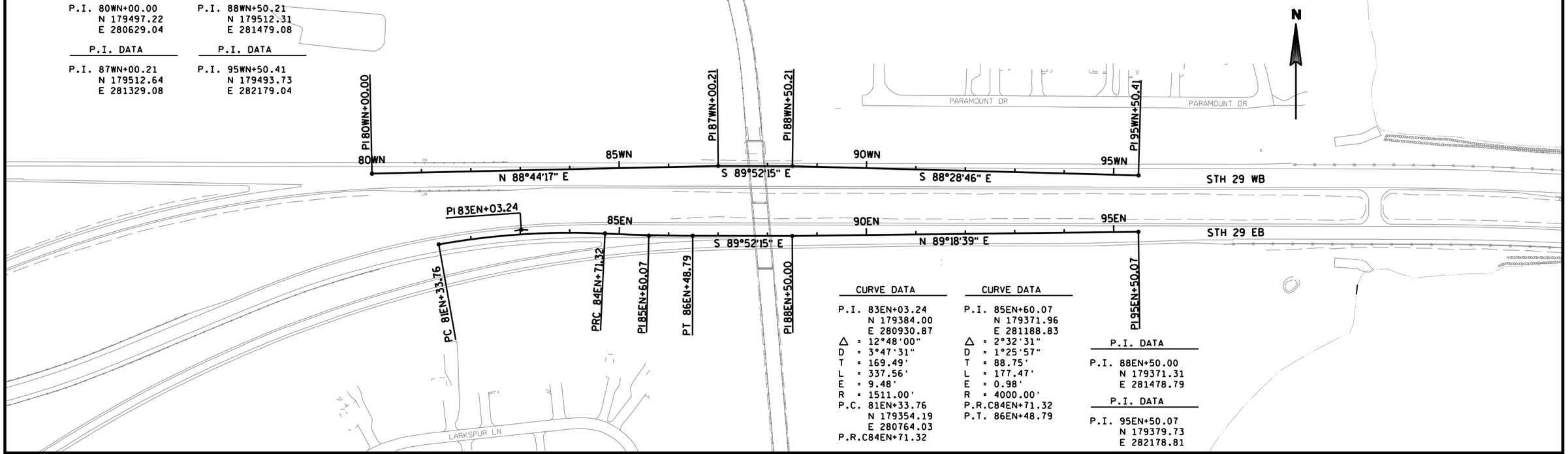
P.I. 88WN+50.21
N 179512.31
E 281479.08

P.I. DATA

P.I. 87WN+00.21
N 179512.64
E 281329.08

P.I. DATA

P.I. 95WN+50.41
N 179493.73
E 282179.04



CURVE DATA

P.I. 83EN+03.24
N 179384.00
E 280930.87
△ = 12°48'00"
D = 3°47'31"
T = 169.49'
L = 337.56'
E = 9.48'
R = 1511.00'
P.C. 81EN+33.76
N 179354.19
E 280764.03
P.R.C84EN+71.32

CURVE DATA

P.I. 85EN+60.07
N 179371.96
E 281188.83
△ = 2°32'31"
D = 1°25'57"
T = 88.75'
L = 177.47'
E = 0.98'
R = 4000.00'
P.R.C84EN+71.32
P.T. 86EN+48.79

P.I. DATA

P.I. 88EN+50.00
N 179371.31
E 281478.79

P.I. DATA

P.I. 95EN+50.07
N 179379.73
E 282178.81

PROJECT NO: 1053-05-60	HWY: STH 29	COUNTY: MARATHON	ALIGNMENT DIAGRAM - TEMPORARY	SHEET	E

FILE NAME : T:\410637\DGN-DWG\plan\027208_adt.dgn PLOT DATE : 1/8/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:200

WISDOT/CADDS SHEET 42

DATE 27JAN14 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	1053-02-74 QUANTITY	1053-02-75 QUANTITY	1053-05-60 QUANTITY
0010	201.0105	CLEARING	STA	37.000	26.000	1.000	10.000
0020	201.0205	GRUBBING	STA	37.000	26.000	1.000	10.000
0030	203.0100	REMOVING SMALL PIPE CULVERTS	EACH	8.000	6.000		2.000
0040	203.0200	REMOVING OLD STRUCTURE (STATION) 01. STA. 125+82.92 WB	LS	1.000		1.000	
0050	203.0200	REMOVING OLD STRUCTURE (STATION) 02. STA. 125+08.64 EB	LS	1.000		1.000	
0060	203.0200	REMOVING OLD STRUCTURE (STATION) 03. 20+34.04	LS	1.000		1.000	
0070	203.0200	REMOVING OLD STRUCTURE (STATION) 04. STA. 20+57.30	LS	1.000			1.000
0080	203.0210.S	ABATEMENT OF ASBESTOS CONTAINING MATERIAL (STRUCTURE) 01. B-37-113	LS	1.000			1.000
0090	203.0210.S	ABATEMENT OF ASBESTOS CONTAINING MATERIAL (STRUCTURE) 02. B-37-136	LS	1.000		1.000	
0100	203.0210.S	ABATEMENT OF ASBESTOS CONTAINING MATERIAL (STRUCTURE) 03. B-37-140	LS	1.000		1.000	
0110	203.0225.S	DEBRIS CONTAINMENT (STRUCTURE) 01. B-37-63	LS	1.000		1.000	
0120	203.0225.S	DEBRIS CONTAINMENT (STRUCTURE) 02. B-37-140	LS	1.000		1.000	
0130	203.0225.S	DEBRIS CONTAINMENT (STRUCTURE) 03. B-37-113	LS	1.000			1.000
0140	203.0600.S	REMOVING OLD STRUCTURE OVER WATERWAY WITH MINIMAL DEBRIS (STATION) 01. STA. 116+05.60 WB	LS	1.000		1.000	
0150	203.0600.S	REMOVING OLD STRUCTURE OVER WATERWAY WITH MINIMAL DEBRIS (STATION) 02. STA. 115+79.50 EB	LS	1.000		1.000	
0160	204.0100	REMOVING PAVEMENT	SY	9,935.000	9,931.000	4.000	
0170	204.0110	REMOVING ASPHALTIC SURFACE	SY	2,647.000	2,519.000	111.000	17.000
0180	204.0120	REMOVING ASPHALTIC SURFACE MILLING	SY	2,134.000			2,134.000
0190	204.0150	REMOVING CURB & GUTTER	LF	90.000	90.000		
0200	204.0155	REMOVING CONCRETE SIDEWALK	SY	970.000	116.000	854.000	
0210	204.0165	REMOVING GUARDRAIL	LF	5,595.000	3,684.000		1,911.000
0220	204.0170	REMOVING FENCE	LF	2,501.000	2,172.000		329.000
0230	204.0180	REMOVING DELINEATORS AND MARKERS	EACH	30.000	30.000		
0240	204.0190	REMOVING SURFACE DRAINS	EACH	6.000	4.000		2.000
0250	204.0220	REMOVING INLETS	EACH	9.000	7.000		2.000
0260	204.0270	ABANDONING CULVERT PIPES	EACH	1.000	1.000		
0270	205.0100	EXCAVATION COMMON	CY	15,404.000	14,000.000	410.000	994.000
0280	206.1000	EXCAVATION FOR STRUCTURES BRIDGES (STRUCTURE) 01. B-37-63	LS	1.000		1.000	
0290	206.1000	EXCAVATION FOR STRUCTURES BRIDGES (STRUCTURE) 02. B-37-79	LS	1.000		1.000	
0300	206.1000	EXCAVATION FOR STRUCTURES BRIDGES (STRUCTURE) 03. B-37-113	LS	1.000			1.000
0310	206.1000	EXCAVATION FOR STRUCTURES BRIDGES (STRUCTURE) 04. B-37-136	LS	1.000		1.000	
0320	206.1000	EXCAVATION FOR STRUCTURES BRIDGES (STRUCTURE) 05. B-37-140	LS	1.000		1.000	
0330	206.1050.S	UNDERWATER FOUNDATION INSPECTION 01. B-37-79	EACH	3.000		3.000	
0340	206.5000	COFFERDAMS (STRUCTURE) 01. B-37-79	LS	1.000		1.000	
0350	206.6000.S	TEMPORARY SHORING	SF	9,200.000		9,200.000	
0360	209.0100	BACKFILL GRANULAR	CY	20,513.000	11,851.000	36.000	8,626.000
0370	210.0100	BACKFILL STRUCTURE	CY	1,140.000		1,115.000	25.000

3

DATE 27JAN14 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	1053-02-74 QUANTITY	1053-02-75 QUANTITY	1053-05-60 QUANTITY
0380	213.0100	FINISHING ROADWAY (PROJECT) 01. 1053-02-74	EACH	1.000	1.000		
0390	213.0100	FINISHING ROADWAY (PROJECT) 03. 1053-05-60	EACH	1.000			1.000
0400	305.0110	BASE AGGREGATE DENSE 3/4-INCH	TON	1,335.000	900.000	150.000	285.000
0410	305.0120	BASE AGGREGATE DENSE 1 1/4-INCH	TON	14,920.000	12,760.000	400.000	1,760.000
0420	305.0130	BASE AGGREGATE DENSE 3-INCH	TON	13,810.000	12,350.000		1,460.000
0430	312.0110	SELECT CRUSHED MATERIAL	TON	55.000	55.000		
0440	415.0115	CONCRETE PAVEMENT 11 1/2-INCH	SY	10,215.000	10,215.000		
0450	415.0410	CONCRETE PAVEMENT APPROACH SLAB	SY	819.000	819.000		
0460	415.6000.S	ROUT AND SEAL	LF	13,139.000	13,139.000		
0470	416.0620	DRILLED DOWEL BARS	EACH	108.000	108.000		
0480	416.1010	CONCRETE SURFACE DRAINS	CY	82.700	73.300		9.400
0490	455.0105	ASPHALTIC MATERIAL PG58-28	TON	106.300	82.300		24.000
0500	455.0605	TACK COAT	GAL	638.000	452.000	30.000	156.000
0510	460.1100	HMA PAVEMENT TYPE E-0.3	TON	526.000	526.000		
0520	460.1101	HMA PAVEMENT TYPE E-1	TON	414.000			414.000
0530	460.1103	HMA PAVEMENT TYPE E-3	TON	966.000	966.000		
0540	460.2000	INCENTIVE DENSITY HMA PAVEMENT	DOL	1,220.000	950.000		270.000
0550	465.0105	ASPHALTIC SURFACE	TON	274.000	4.000	270.000	
0560	465.0125	ASPHALTIC SURFACE TEMPORARY	TON	4,367.000	3,448.000		919.000
0570	465.0315	ASPHALTIC FLUMES	SY	14.000	14.000		
0580	465.0400	ASPHALTIC SHOULDER RUMBLE STRIP	LF	10,095.000	10,095.000		
0590	502.0100	CONCRETE MASONRY BRIDGES	CY	6,158.000		6,136.000	22.000
0600	502.1100	CONCRETE MASONRY SEAL	CY	854.000		854.000	
0610	502.3100	EXPANSION DEVICE (STRUCTURE) 01. B-37-63	LS	1.000		1.000	
0620	502.3100	EXPANSION DEVICE (STRUCTURE) 02. B-37-113	LS	1.000			1.000
0630	502.3100	EXPANSION DEVICE (STRUCTURE) 03. B-37-140	LS	1.000	1.000		
0640	502.3110.S	EXPANSION DEVICE MODULAR (STRUCTURE) 01. B-37-79	LS	1.000	1.000		
0650	502.3110.S	EXPANSION DEVICE MODULAR (STRUCTURE) 02. B-37-136	LS	1.000	1.000		
0660	502.3200	PROTECTIVE SURFACE TREATMENT	SY	3,415.000	2,135.000	1,280.000	
0670	502.5005	MASONRY ANCHORS TYPE L NO. 5 BARS	EACH	1,926.000	1,608.000	318.000	
0680	502.5010	MASONRY ANCHORS TYPE L NO. 6 BARS	EACH	90.000	90.000		
0690	502.5020	MASONRY ANCHORS TYPE L NO. 8 BARS	EACH	48.000	48.000		
0700	502.5030	MASONRY ANCHORS TYPE L NO. 10 BARS	EACH	20.000	20.000		
0710	502.6102	MASONRY ANCHORS TYPE S 1/2-INCH	EACH	214.000	86.000	128.000	
0720	502.6105	MASONRY ANCHORS TYPE S 5/8-INCH	EACH	428.000	428.000		
0730	502.6110	MASONRY ANCHORS TYPE S 3/4-INCH	EACH	10.000	10.000		
0740	503.0155	PRESTRESSED GIRDER TYPE I 54W-INCH	LF	1,231.000	1,231.000		
0750	505.0405	BAR STEEL REINFORCEMENT HS BRIDGES	LB	113,400.000	113,400.000		
0760	505.0605	BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB	1,184,790.000	1,179,550.000	5,240.000	
0770	506.0605	STRUCTURAL STEEL HS	LB	547,000.000	547,000.000		
0780	506.2605	BEARING PADS ELASTOMERIC NON-LAMINATED	EACH	37.000	37.000		
0790	506.2610	BEARING PADS ELASTOMERIC LAMINATED	EACH	119.000	111.000		8.000
0800	506.3025	WELDED STUD SHEAR CONNECTORS 7/8X8-INCH	EACH	2,946.000	2,946.000		
0810	506.4000	STEEL DIAPHRAGMS (STRUCTURE) 01. B-37-63	EACH	63.000	63.000		
0820	506.4000	STEEL DIAPHRAGMS (STRUCTURE) 02. B-37-140	EACH	53.000	53.000		
0830	506.5000	BEARING ASSEMBLIES FIXED (STRUCTURE) 01. B-37-79	EACH	12.000	12.000		

3

DATE 27JAN14 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	1053-02-74 QUANTITY	1053-02-75 QUANTITY	1053-05-60 QUANTITY
0840	506.5000	BEARING ASSEMBLIES FIXED (STRUCTURE) 02. B-37-136	EACH	8.000		8.000	
0850	506.6000	BEARING ASSEMBLIES EXPANSION (STRUCTURE) 01. B-37-79	EACH	24.000		24.000	
0860	506.6000	BEARING ASSEMBLIES EXPANSION (STRUCTURE) 02. B-37-136	EACH	16.000		16.000	
0870	506.7050.S	REMOVING BEARINGS (STRUCTURE) 01. B-37-63	EACH	64.000		64.000	
0880	506.7050.S	REMOVING BEARINGS (STRUCTURE) 02. B-37-79	EACH	24.000		24.000	
0890	506.7050.S	REMOVING BEARINGS (STRUCTURE) 03. B-37-113	EACH	8.000			8.000
0900	506.7050.S	REMOVING BEARINGS (STRUCTURE) 04. B-37-136	EACH	24.000		24.000	
0910	506.7050.S	REMOVING BEARINGS (STRUCTURE) 05. B-37-140	EACH	56.000		56.000	
0920	506.7060.S	BRIDGE JACKING (STRUCTURE) 01. B-37-113	LS	1.000			1.000
0930	509.0301	PREPARATION DECKS TYPE 1	SY	260.000			260.000
0940	509.0302	PREPARATION DECKS TYPE 2	SY	105.000			105.000
0950	509.0500	CLEANING DECKS	SY	870.000			870.000
0960	509.1000	JOINT REPAIR	SY	30.000			30.000
0970	509.1500	CONCRETE SURFACE REPAIR	SF	400.000		300.000	100.000
0980	509.2000	FULL-DEPTH DECK REPAIR	SY	45.000			45.000
0990	509.2500	CONCRETE MASONRY OVERLAY DECKS	CY	64.000			64.000
1000	509.5100.S	POLYMER OVERLAY	SY	13,880.000		13,880.000	
1010	509.9050.S	CLEANING PARAPETS	LF	570.000			570.000
1020	514.0445	FLOOR DRAINS TYPE GC	EACH	6.000		6.000	
1030	514.2625	DOWNSPOUT 6-INCH	LF	60.000		60.000	
1040	516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	147.000		128.000	19.000
1050	517.0600	PAINTING EPOXY SYSTEM (STRUCTURE) 01. B-37-79	LS	1.000		1.000	
1060	517.0600	PAINTING EPOXY SYSTEM (STRUCTURE) 02. B-37-136	LS	1.000		1.000	
1070	517.0900.S	PREPARATION AND COATING OF TOP FLANGES (STRUCTURE) 01. B-37-79	LS	1.000		1.000	
1080	517.0900.S	PREPARATION AND COATING OF TOP FLANGES (STRUCTURE) 02. B-37-136	LS	1.000		1.000	
1090	517.1010.S	CONCRETE STAINING (STRUCTURE) 01. B-37-63	SF	17,720.000		17,720.000	
1100	517.1010.S	CONCRETE STAINING (STRUCTURE) 02. B-37-140	SF	16,610.000		16,610.000	
1110	517.1800.S	STRUCTURE REPAINTING RECYCLED ABRASIVE (STRUCTURE) 01. B-37-79	LS	1.000		1.000	
1120	517.1800.S	STRUCTURE REPAINTING RECYCLED ABRASIVE (STRUCTURE) 02. B-37-113	LS	1.000			1.000
1130	517.1800.S	STRUCTURE REPAINTING RECYCLED ABRASIVE (STRUCTURE) 03. B-37-136	LS	1.000		1.000	
1140	517.4000.S	CONTAINMENT AND COLLECTION OF WASTE MATERIALS (STRUCTURE) 01. B-37-79	LS	1.000		1.000	
1150	517.4000.S	CONTAINMENT AND COLLECTION OF WASTE MATERIALS (STRUCTURE) 02. B-37-136	LS	1.000		1.000	
1160	517.4500.S	NEGATIVE PRESSURE CONTAINMENT AND COLLECTION OF WASTE MATERIALS (STRUCTURE) 01. B-37-79	LS	1.000		1.000	
1170	517.4500.S	NEGATIVE PRESSURE CONTAINMENT AND COLLECTION OF WASTE MATERIALS (STRUCTURE) 02. B-37-113	LS	1.000			1.000

3

DATE 27JAN14 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	1053-02-74 QUANTITY	1053-02-75 QUANTITY	1053-05-60 QUANTITY
1180	517.4500.S	NEGATIVE PRESSURE CONTAINMENT AND COLLECTION OF WASTE MATERIALS (STRUCTURE) 03. B-37-136	LS	1.000		1.000	
1190	517.6001.S	PORTABLE DECONTAMINATION FACILITY	EACH	3.000		2.000	1.000
1200	521.1012	APRON ENDWALLS FOR CULVERT PIPE STEEL 12-INCH	EACH	12.000	10.000		2.000
1210	522.0118	CULVERT PIPE REINFORCED CONCRETE CLASS III 18-INCH	LF	876.000	876.000		
1220	522.0124	CULVERT PIPE REINFORCED CONCRETE CLASS III 24-INCH	LF	113.000	113.000		
1230	522.1024	APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 24-INCH	EACH	1.000	1.000		
1240	550.0500	PILE POINTS	EACH	63.000		63.000	
1250	550.1100	PILING STEEL HP 10-INCH X 42 LB	LF	2,640.000		2,640.000	
1260	601.0411	CONCRETE CURB & GUTTER 30-INCH TYPE D	LF	90.000	90.000		
1270	602.0405	CONCRETE SIDEWALK 4-INCH	SF	7,590.000	450.000	7,140.000	
1280	603.8000	CONCRETE BARRIER TEMPORARY PRECAST DELIVERED	LF	11,580.000	8,450.000		3,130.000
1290	603.8125	CONCRETE BARRIER TEMPORARY PRECAST INSTALLED	LF	21,430.000	16,500.000		4,930.000
1300	604.0400	SLOPE PAVING CONCRETE	SY	585.000		585.000	
1310	606.0100	RIPRAP LIGHT	CY	51.000	43.000		8.000
1320	606.0300	RIPRAP HEAVY	CY	3,235.000	1,640.000	1,595.000	
1330	611.0430	RECONSTRUCTING INLETS	EACH	1.000		1.000	
1340	611.0642	INLET COVERS TYPE MS	EACH	8.000	8.000		
1350	611.0654	INLET COVERS TYPE V	EACH	13.000	11.000		2.000
1360	611.3225	INLETS 2X2.5-FT	EACH	13.000	11.000		2.000
1370	611.3902	INLETS MEDIAN 2 GRATE	EACH	4.000	4.000		
1380	611.8110	ADJUSTING MANHOLE COVERS	EACH	1.000		1.000	
1390	612.0212	PIPE UNDERDRAIN UNPERFORATED 12-INCH	LF	720.000	584.000		136.000
1400	612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	370.000		370.000	
1410	614.0150	ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	20.000		16.000	4.000
1420	614.0220	STEEL THRIE BEAM BULLNOSE TERMINAL	EACH	2.000			2.000
1430	614.0230	STEEL THRIE BEAM	LF	100.000			100.000
1440	614.0250	STEEL THRIE BEAM STRUCTURE APPROACH TEMPORARY	LF	78.000	78.000		
1450	614.0360	STEEL PLATE BEAM GUARD TEMPORARY	LF	1,600.000	1,600.000		
1460	614.0380	STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL TEMPORARY	EACH	1.000	1.000		
1470	614.0905	CRASH CUSHIONS TEMPORARY	EACH	12.000	9.000		3.000
1480	614.0920	SALVAGED RAIL	LF	1,754.000	1,754.000		
1490	614.0925	SALVAGED GUARDRAIL END TREATMENTS	EACH	2.000	2.000		
1500	614.1000	MGS GUARDRAIL TEMPORARY	LF	2,050.000	2,050.000		
1510	614.1100	MGS GUARDRAIL TEMPORARY THRIE BEAM TRANSITION	LF	117.000	117.000		
1520	614.1200	MGS GUARDRAIL TEMPORARY TRANSITION EAT	EACH	2.000	2.000		
1530	614.2300	MGS GUARDRAIL 3	LF	4,579.000	3,329.000		1,250.000
1540	614.2500	MGS THRIE BEAM TRANSITION	LF	585.000	429.000		156.000
1550	614.2610	MGS GUARDRAIL TERMINAL EAT	EACH	8.000	4.000		4.000
1560	614.2620	MGS GUARDRAIL TERMINAL TYPE 2	EACH	5.000	5.000		
1570	616.0204	FENCE CHAIN LINK 4-FT	LF	2,464.000	2,135.000		329.000
1580	616.0206	FENCE CHAIN LINK 6-FT	LF	910.000		310.000	600.000
1590	618.0100	MAINTENANCE AND REPAIR OF HAUL ROADS (PROJECT) 01. 1053-02-74	EACH	1.000	1.000		
1600	619.1000	MOBILIZATION	EACH	1.000	0.110	0.840	0.050

3

DATE 27JAN14 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	1053-02-74 QUANTITY	1053-02-75 QUANTITY	1053-05-60 QUANTITY
1610	624.0100	WATER	MGAL	364.000	320.000	4.000	40.000
1620	625.0500	SALVAGED TOPSOIL	SY	65,168.000	50,962.000	1,180.000	13,026.000
1630	627.0200	MULCHING	SY	59,622.000	42,862.000	510.000	16,250.000
1640	628.1504	SILT FENCE	LF	9,500.000	7,250.000		2,250.000
1650	628.1520	SILT FENCE MAINTENANCE	LF	19,000.000	14,500.000		4,500.000
1660	628.1550	SILT SCREEN	LF	480.000	480.000		
1670	628.1905	MOBILIZATIONS EROSION CONTROL	EACH	25.000	19.000	1.000	5.000
1680	628.1910	MOBILIZATIONS EMERGENCY EROSION CONTROL	EACH	25.000	19.000	1.000	5.000
1690	628.2004	EROSION MAT CLASS I TYPE B	SY	21,195.000	10,300.000		10,895.000
1700	628.2008	EROSION MAT URBAN CLASS I TYPE B	SY	770.000		770.000	
1710	628.2027	EROSION MAT CLASS II TYPE C	SY	5,550.000	5,550.000		
1720	628.6510	SOIL STABILIZER TYPE B	ACRE	0.600	0.600		
1730	628.7005	INLET PROTECTION TYPE A	EACH	26.000	23.000	1.000	2.000
1740	628.7015	INLET PROTECTION TYPE C	EACH	13.000	11.000		2.000
1750	628.7504	TEMPORARY DITCH CHECKS	LF	200.000	140.000		60.000
1760	628.7555	CULVERT PIPE CHECKS	EACH	35.000	25.000		10.000
1770	628.7570	ROCK BAGS	EACH	500.000	500.000		
1780	629.0205	FERTILIZER TYPE A	CWT	47.300	35.000	2.300	10.000
1790	630.0120	SEEDING MIXTURE NO. 20	LB	415.000			415.000
1800	630.0130	SEEDING MIXTURE NO. 30	LB	1,441.000	1,376.000	65.000	
1810	630.0140	SEEDING MIXTURE NO. 40	LB	40.000		40.000	
1820	630.0200	SEEDING TEMPORARY	LB	943.000	688.000	35.000	220.000
1830	632.0101	TREES (SPECIES, ROOT, SIZE) 01. NORTHERN PIN OAK, B&B, 3-INCH	EACH	4.000		4.000	
1840	632.0101	TREES (SPECIES, ROOT, SIZE) 02. AUTUMN BLAZE MAPLE, B&B, 3-INCH	EACH	4.000		4.000	
1850	632.0101	TREES (SPECIES, ROOT, SIZE) 03. IVORY SILK TREE LILAC, B&B, 2.5-INCH	EACH	4.000		4.000	
1860	632.0201	SHRUBS (SPECIES, ROOT, SIZE) 01. DARK GREEN SPREADING YEW, CONTAINER, #7	EACH	12.000		12.000	
1870	633.0100	DELINEATOR POSTS STEEL	EACH	30.000	30.000		
1880	633.0500	DELINEATOR REFLECTORS	EACH	40.000	40.000		
1890	633.1000	DELINEATOR BRACKETS	EACH	32.000	32.000		
1900	633.5200	MARKERS CULVERT END	EACH	1.000	1.000		
1910	634.0612	POSTS WOOD 4X6-INCH X 12-FT	EACH	8.000		4.000	4.000
1920	634.0614	POSTS WOOD 4X6-INCH X 14-FT	EACH	1.000			1.000
1930	634.0616	POSTS WOOD 4X6-INCH X 16-FT	EACH	30.000	28.000		2.000
1940	634.0618	POSTS WOOD 4X6-INCH X 18-FT	EACH	2.000	2.000		
1950	634.0620	POSTS WOOD 4X6-INCH X 20-FT	EACH	6.000	6.000		
1960	635.0200	SIGN SUPPORTS STRUCTURAL STEEL HS	LB	500.000	500.000		
1970	636.0100	SIGN SUPPORTS CONCRETE MASONRY	CY	29.600	29.600		
1980	636.1000	SIGN SUPPORTS STEEL REINFORCEMENT HS	LB	3,464.000	3,464.000		
1990	637.1220	SIGNS TYPE I REFLECTIVE SH	SF	236.000	236.000		
2000	637.1230	SIGNS TYPE I REFLECTIVE F	SF	53.600	53.600		
2010	637.2210	SIGNS TYPE II REFLECTIVE H	SF	360.250	350.250		10.000
2020	637.2230	SIGNS TYPE II REFLECTIVE F	SF	117.000	82.000	10.500	24.500
2030	638.2101	MOVING SIGNS TYPE I	EACH	2.000	2.000		
2040	638.2102	MOVING SIGNS TYPE II	EACH	23.000	21.000	2.000	
2050	638.2601	REMOVING SIGNS TYPE I	EACH	3.000	3.000		
2060	638.2602	REMOVING SIGNS TYPE II	EACH	21.000	14.000		7.000
2070	638.3000	REMOVING SMALL SIGN SUPPORTS	EACH	25.000	18.000		7.000
2080	638.3100	REMOVING STRUCTURAL STEEL SIGN SUPPORTS	EACH	1.000	1.000		
2090	638.4000	MOVING SMALL SIGN SUPPORTS	EACH	24.000	21.000	3.000	
2100	641.6600	SIGN BRIDGE (STRUCTURE) 01. S-37-0117	LS	1.000	1.000		

3

DATE 27JAN14 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	1053-02-74 QUANTITY	1053-02-75 QUANTITY	1053-05-60 QUANTITY
2110	642.5201	FIELD OFFICE TYPE C	EACH	1.000	1.000		
2120	643.0200	TRAFFIC CONTROL SURVEILLANCE AND MAINTENANCE (PROJECT) 01. 1053-02-74	DAY	935.000	935.000		
2130	643.0200	TRAFFIC CONTROL SURVEILLANCE AND MAINTENANCE (PROJECT) 03. 1053-05-60	DAY	89.000			89.000
2140	643.0300	TRAFFIC CONTROL DRUMS	DAY	89,777.000	83,606.000		6,171.000
2150	643.0410	TRAFFIC CONTROL BARRICADES TYPE II	DAY	464.000	450.000		14.000
2160	643.0420	TRAFFIC CONTROL BARRICADES TYPE III	DAY	5,408.000	4,330.000		1,078.000
2170	643.0500	TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER POSTS	EACH	92.000	92.000		
2180	643.0600	TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER BASES	EACH	92.000	92.000		
2190	643.0705	TRAFFIC CONTROL WARNING LIGHTS TYPE A	DAY	1,211.000	90.000		1,121.000
2200	643.0715	TRAFFIC CONTROL WARNING LIGHTS TYPE C	DAY	11,520.000	11,160.000		360.000
2210	643.0800	TRAFFIC CONTROL ARROW BOARDS	DAY	306.000	270.000		36.000
2220	643.0900	TRAFFIC CONTROL SIGNS	DAY	43,564.000	38,175.000		5,389.000
2230	643.0910	TRAFFIC CONTROL COVERING SIGNS TYPE I	EACH	2.000			2.000
2240	643.0920	TRAFFIC CONTROL COVERING SIGNS TYPE II	EACH	313.000	276.000		37.000
2250	643.1000	TRAFFIC CONTROL SIGNS FIXED MESSAGE	SF	634.750	543.000		91.750
2260	643.1050	TRAFFIC CONTROL SIGNS PCMS	DAY	2,711.000	2,638.000		73.000
2270	643.2000	TRAFFIC CONTROL DETOUR (PROJECT) 01. 1053-02-74	EACH	1.000	1.000		
2280	643.2000	TRAFFIC CONTROL DETOUR (PROJECT) 03. 1053-05-60	EACH	1.000			1.000
2290	643.3000	TRAFFIC CONTROL DETOUR SIGNS	DAY	1,728.000	1,119.000		609.000
2300	645.0120	GEOTEXTILE FABRIC TYPE HR	SY	3,230.000	2,490.000	740.000	
2310	645.0130	GEOTEXTILE FABRIC TYPE R	SY	214.000	182.000		32.000
2320	646.0106	PAVEMENT MARKING EPOXY 4-INCH	LF	41,148.000	36,748.000		4,400.000
2330	646.0126	PAVEMENT MARKING EPOXY 8-INCH	LF	5,210.000	5,210.000		
2340	646.0600	REMOVING PAVEMENT MARKINGS	LF	36,275.000	29,925.000		6,350.000
2350	646.0841.S	PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH	LF	3,962.000	3,962.000		
2360	646.0843.S	PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH	LF	3,235.000	3,235.000		
2370	647.0746	PAVEMENT MARKING DIAGONAL EPOXY 24-INCH	LF	100.000	100.000		
2380	649.0400	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH	LF	73,311.000	54,520.000		18,791.000
2390	649.0801	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH	LF	13,570.000	12,970.000		600.000
2400	649.2100	TEMPORARY RAISED PAVEMENT MARKERS	EACH	584.000	240.000		344.000
2410	650.4000	CONSTRUCTION STAKING STORM SEWER	EACH	5.000	5.000		
2420	650.4500	CONSTRUCTION STAKING SUBGRADE	LF	13,597.000	9,862.000	1,150.000	2,585.000
2430	650.5000	CONSTRUCTION STAKING BASE	LF	10,266.000	6,531.000	1,150.000	2,585.000
2440	650.6500	CONSTRUCTION STAKING STRUCTURE LAYOUT (STRUCTURE) 01. B-37-63	LS	1.000		1.000	
2450	650.6500	CONSTRUCTION STAKING STRUCTURE LAYOUT (STRUCTURE) 02. B-37-79	LS	1.000		1.000	
2460	650.6500	CONSTRUCTION STAKING STRUCTURE LAYOUT (STRUCTURE) 03. B-37-113	LS	1.000			1.000
2470	650.6500	CONSTRUCTION STAKING STRUCTURE LAYOUT (STRUCTURE) 04. S-37-0117	LS	1.000	1.000		
2480	650.6500	CONSTRUCTION STAKING STRUCTURE LAYOUT (STRUCTURE) 05. B-37-136	LS	1.000		1.000	
2490	650.6500	CONSTRUCTION STAKING STRUCTURE LAYOUT (STRUCTURE) 06. B-37-140	LS	1.000		1.000	
2500	650.7000	CONSTRUCTION STAKING CONCRETE PAVEMENT	LF	3,331.000	3,331.000		

DATE 27JAN14 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	1053-02-74 QUANTITY	1053-02-75 QUANTITY	1053-05-60 QUANTITY
2510	650.9910	CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (PROJECT) 01. 1053-02-74	LS	1.000	1.000		
2520	650.9910	CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (PROJECT) 03. 1053-05-60	LS	1.000			1.000
2530	650.9920	CONSTRUCTION STAKING SLOPE STAKES	LF	13,897.000	9,862.000	1,150.000	2,885.000
2540	652.0125	CONDUIT RIGID METALLIC 2-INCH	LF	404.000		404.000	
2550	652.0225	CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH	LF	4,520.000		4,520.000	
2560	653.0222	JUNCTION BOXES 18X12X6-INCH	EACH	10.000		10.000	
2570	690.0150	SAWING ASPHALT	LF	9,338.000	8,198.000		1,140.000
2580	690.0250	SAWING CONCRETE	LF	628.000	584.000	44.000	
2590	715.0415	INCENTIVE STRENGTH CONCRETE PAVEMENT	DOL	3,064.000	3,064.000		
2600	715.0502	INCENTIVE STRENGTH CONCRETE STRUCTURES	DOL	42,456.000		41,940.000	516.000
2610	ASP.1T0A	ON-THE-JOB TRAINING APPRENTICE AT $5. 00/HR	HRS	2,100.000	2,100.000		
2620	ASP.1T0G	ON-THE-JOB TRAINING GRADUATE AT $5.00/HR	HRS	4,800.000	4,800.000		
2630	SPV.0035	SPECIAL 01. CONCRETE MASONRY DECK PATCHING	CY	80.000		80.000	
2640	SPV.0035	SPECIAL 02. REUSE OF LOW LEVEL CONTAMINATED MATERIAL **P**	CY	255.000		255.000	
2650	SPV.0035	SPECIAL 03. COLORING CONCRETE BROWN	CY	88.000		88.000	
2660	SPV.0045	SPECIAL 21. PORTABLE CHANGEABLE MESSAGE SIGN (PCMS) CELLULAR COMMUNICATIONS	DAY	1,560.000	1,560.000		
2670	SPV.0060	SPECIAL 01. PRECAST CONCRETE BEARING BLOCK	EACH	60.000		52.000	8.000
2680	SPV.0060	SPECIAL 02. CLEANING AND PAINTING BEARINGS	EACH	4.000			4.000
2690	SPV.0060	SPECIAL 03. PREPARATION AND COATING OF EXISTING STIFFENERS, HINGES, AND WEBS	EACH	44.000		44.000	
2700	SPV.0060	SPECIAL 04. NORTHWIND SWITCH GRASS #1 CG	EACH	20.000		20.000	
2710	SPV.0060	SPECIAL 05. FLAME GRASS #1 CG	EACH	147.000		147.000	
2720	SPV.0060	SPECIAL 06. ELIJAH BLUE FESCUE #1 CG	EACH	19.000		19.000	
2730	SPV.0060	SPECIAL 07. HAPPY RETURNS DAYLILY #1 CG	EACH	597.000		597.000	
2740	SPV.0060	SPECIAL 08. SILVER PINK YOUNIQUE ASTILBE #1 CG	EACH	35.000		35.000	
2750	SPV.0060	SPECIAL 09. AUTUMN JOY STONECROP #1 CG	EACH	433.000		433.000	
2760	SPV.0060	SPECIAL 10. POMEGRANITE YARROW #1 CG	EACH	36.000		36.000	
2770	SPV.0060	SPECIAL 12. CRASH CUSHION TEMPORARY LEFT IN PLACE	EACH	1.000	1.000		
2780	SPV.0060	SPECIAL 13. MOBILIZATION PAVEMENT AND STRUCTURE REPAIR	EACH	1.000	1.000		
2790	SPV.0060	SPECIAL 14. MOBILIZATION EMERGENCY PAVEMENT AND STRUCTURE REPAIR	EACH	1.000	1.000		
2800	SPV.0060	SPECIAL 15. EXISTING PIN AND HANGER RETROFIT	EACH	8.000		8.000	
2810	SPV.0060	SPECIAL 21. TRAFFIC CONTROL, VERTICAL PANELS	EACH	59.000	59.000		
2820	SPV.0090	SPECIAL 01. ALUMINUM LANDSCAPE EDGING	LF	117.000		117.000	
2830	SPV.0090	SPECIAL 02. REMOVE AND REINSTALL GUARDRAIL	LF	320.000	320.000		
2840	SPV.0090	SPECIAL 03. CONCRETE BARRIER TEMPORARY PRECAST LEFT IN PLACE	LF	1,572.000	1,572.000		
2850	SPV.0105	SPECIAL 01. TEMPORARY RIVER ACCESS	LS	1.000		1.000	
2860	SPV.0105	SPECIAL 03. CRASH CUSHION TEMPORARY ONSITE	LS	1.000	1.000		
2870	SPV.0105	SPECIAL 05. LAWN SPRINKLER SYSTEM	LS	1.000		1.000	

3

DATE 27JAN14 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	1053-02-74 QUANTITY	1053-02-75 QUANTITY	1053-05-60 QUANTITY
2880	SPV.0105	SPECIAL 06. PROTECTING FIBER OPTIC LINE REMOVING OLD STRUCTURE & CONCRETE MASONRY	LS	1.000		1.000	
2890	SPV.0105	SPECIAL 07. PROTECTING FIBER OPTIC LINE STRUCTURE REPAINTING	LS	1.000		1.000	
2900	SPV.0105	SPECIAL 08. LANDSCAPE SURVEILLANCE AND CARE CYCLE	LS	1.000		1.000	
2910	SPV.0105	SPECIAL 30. REMOVING SIGN BRIDGE S-37-0077	LS	1.000	1.000		
2920	SPV.0120	SPECIAL 01. WATER FOR SEEDED AREAS	MGAL	1,400.000	1,000.000	200.000	200.000
2930	SPV.0180	SPECIAL 04. TOPSOIL SPECIAL	SY	700.000		700.000	
2940	SPV.0180	SPECIAL 05. WOOD MULCH	SY	700.000		700.000	
2950	SPV.0180	SPECIAL 06. PREPARING TOPSOIL FOR LAWN TYPE TURF	SY	1,180.000		1,180.000	
2960	SPV.0195	SPECIAL 01. WALLEYE SPAWNING SURFACE MATERIAL	TON	20.000		20.000	
2970	SPV.0195	SPECIAL 02. COLD PATCH	TON	100.000	100.000		
2980	SPV.0195	SPECIAL 03. JOINT PATCHING	TON	100.000	100.000		

3

CLEARING AND GRUBBING

STATION TO STATION	LOCATION	201.0105 CLEARING STA	201.0205 GRUBBING STA
108WB+00 - 112WB+00	STH 29, WB	4	4
120WB+00 - 124WB+00	STH 29, WB	4	4
109EB+00 - 112EB+00	STH 29, EB	3	3
119EB+00 - 123EB+00	STH 29, EB	4	4
133EB+00 - 135EB+00	STH 29, EB	2	2
128D+00 - 132D+00	D RAMP	4	4
126A+00 - 131A+00	A RAMP	5	5
PROJECT ID TOTALS		**26**	**26**

REMOVING SMALL PIPE CULVERTS

STATION	LOCATION	DIAMETER	MATERIAL	LENGTH	203.0100 EACH
111EB+70	EXISITNG DROP INLET	24"	CPRC	40	1
122EB+85	EXISITNG DROP INLET	24"	CPRC	70	1
139XE+00	TEMPORARY PIPE	18"	CPRC	450	1
141XE+00	LT	18"	CMCP	70	1
132AT+25	TEMPORARY PIPE	18"	CPRC	228	1
130AU+00	TEMPORARY PIPE	18"	CPRC	198	1
PROJECT ID TOTAL					**6**

REMOVING PAVEMENT

STATION TO STATION	LOCATION	204.0100 SY
108WB+00 - 112WB+09	STH 29, WB	1373
120WB+03 - 123WB+93	STH 29, WB	1269
127WB+49 - 132WB+00	STH 29, WB	1212
127D+62 - 132D+54	D RAMP	820
108EB+50 - 111EB+82	STH 29, EB	939
119EB+77 - 123EB+06	STH 29, EB	943
126EB+62 - 135EB+19	STH 29, EB	2331
126A+56 - 132A+76	A RAMP	1044
PROJECT ID TOTAL		**9931**

REMOVING ASPHALTIC SURFACE

STATION TO STATION	LOCATION	204.0110 SY
18NB+55 - 19NB+08	RT	24
20NB+45 - 20NB+82	RT	17
98WB+50 - 111WB+35.95	LT	1766
129WB+57 - 131WB+82	LT	169
131WB+70 - 136WB+00	LT	543
PROJECT ID TOTAL		**2519**

REMOVING CURB AND GUTTER

STATION TO STATION	LOCATION	204.0150 LF
18NB+55 - 19NB+08	RT	53
20NB+45 - 20NB+82	RT	37
PROJECT ID TOTAL		**90**

REMOVING CONCRETE SIDEWALK

STATION TO STATION	LOCATION	204.0155 SY
18SB+25 - 18SB+85	LT	33
18NB+55 - 19NB+08	RT	29
20SB+00 - 20SB+50	LT	33
20NB+45 - 20NB+82	RT	21
PROJECT ID TOTAL		**116**

REMOVING GUARDRAIL

CATEGORY	STATION TO STATION	LOCATION	204.0165 LF
0030	98WB+61 - 112WB+03	LT	1342
	111WB+95	RT	60
	120WB+09 - 123WB+98	LT	390
	120WB+12 - 123WB+08	RT	300
	127WB+50 - 130WB+42	RT	292
	134WB+59 - 136WB+25	LT	166
	134WB+59 - 136WB+62	RT	204
	108EB+60 - 111EB+76	LT	315
	119EB+89 - 123EB+03	RT	315
	120EB+26 - 123EB+24	LT	300
CATEGORY 0030 TOTAL			**3684**

REMOVING FENCE

STATION TO STATION	LOCATION	204.0170 LF
98WB+53 - 112WB+03	LT	1350
120WB+07 - 120WB+85	LT	145
124WB+00 - 124WB+36	LT	104
108EB+50 - 111EB+65	RT	315
119EB+85 - 120EB+45	RT	140
122EB+59 - 123EB+04	RT	118
PROJECT ID TOTAL		**2172**

REMOVING DELINEATORS AND MARKERS

LOCATION	204.0180 EACH	COMMENTS
ENTIRE PROJECT, STH 29	29	DELINEATORS
ENTIRE PROJECT, STH 29	1	CULVERT PIPE MARKER POST
PROJECT ID TOTAL	**30**	

REMOVING SURFACE DRAINS

LOCATION	204.0190 EACH
SW QUAD B-37-136	1
SW QUAD B-37-79	1
SW QUAD B-37-63	1
SW QUAD B-37-140	1
PROJECT ID TOTAL	**4**

REMOVING INLETS

STATION	LOCATION	204.0220 EACH	COMMENTS
111EB+70	RT	2	EXISTING DROP INLETS
122EB+85	RT	1	EXISTING DROP INLET
127EB+71	LT	1	EXISTING MEDIAN INLET
139XE+00	LT	1	TEMPORARY INLET
132AT+25	LT	1	TEMPORARY INLET
130AU+00	LT	1	TEMPORARY INLET
PROJECT ID TOTAL		**7**	

ABONDONING CULVERT PIPES

STATION	LOCATION	DIAMETER	204.0270 EACH
127EB+71	WB LANES	18"	1
PROJECT ID TOTAL			**1**

FINISHING ROADWAY

LOCATION	213.0100 EACH
01.1053-02-74	1
PROJECT ID TOTAL	**1**

ALL ITEMS ON THIS SHEET
ARE CATEGORY 0010
UNLESS OTHERWISE NOTED

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EARTHWORK SUMMARY

DIVISION	STATION TO STATION	LOCATION	CUT CY	205.0100 EXCAVATION COMMON CY	SALVAGED/ UNUSABLE PAVEMENT MATERIAL CY	(9) AVAILABLE MATERIAL CY	(8) EBS CY	UNEXPANDED FILL CY	(2) (4) EXPANDED FILL CY	(5) MASS ORDINATE +/- CY	(1) WASTE CY	(3) 209.0100 BACKFILL GRANULAR CY
	110WB+00 - 132WB+50	TS LINE	680	680	---	680	---	23	29	651		
	88XE+50 - 101XE+50	XE WEST CROSSOVER	919	919	---	919	---	634	793	126		
	127EB+00 - 130A+00	CONTAMINATED COVER	---	---	---	---	---	640	800	-800		
	UNDISTRIBUTED		---	---	---	---	801	801	1001	-200		
DIVISION 2 SUBTOTAL				1599	---	1599	801	2099	2623	-223	---	223
	93WB+00 - 108WB+00	TN LINE	1047	1047	---	1047	---	509	636	411		
	108WB+00 - 132WB+00	WB LINE	2372	2372	1124	1248	---	6520	8150	-6902		
	132WB+00 - 136WB+00	TN LINE	361	361	---	361	---	126	158	203		
	132DU+00 - 134DU+50	DU RAMP	63	63	---	63	---	175	219	-156		
	129D+00 - 132D+54	D RAMP	806	806	239	567	---	3099	3874	-3307		
	130AT+00 - 134AT+50	AT RAMP	144	144	---	144	---	350	438	-294		
	128AU+00 - 130AU+50	AU RAMP	34	34	---	34	---	182	227	-193		
	132XE+50 - 148XE+50	XE EAST CROSSOVER	1143	1143	---	1143	---	675	844	299		
DIVISION 3/3A/4 SUBTOTAL				5970	1363	4607	---	11637	14546	-9939	---	9939
	108EB+50 - 135EB+19.25	EB LINE	1937	1937	1230	707	---	944	1180	-473		
	129A+00 - 132A+76.36	A RAMP	619	619	305	314	---	1224	1530	-1216		
DIVISION 6/6A SUBTOTAL				2556	1535	1021	---	2168	2710	-1689	---	1689
		EB LINE (MEDIAN)	3074	3074	---	3074	---	135	169	2905		
DIVISION 7 SUBTOTAL				3074	---	3074	---	135	169	2905	2905	---
PROJECT ID TOTALS				**14000**								**11851**

(1) WASTE = EXPANDED FILL - AVAILABLE MATERIAL (FOR INFORMATION ONLY - NOT A BID ITEM)
(2) EXPANSION FACTOR = 1.25
(3) BACKFILL GRANULAR = EXPANDED FILL -AVAILABLE MATERIAL
(4) EXPANDED FILL = UNEXPANDED FILL * EXPANSION FACTOR
(5) THE MASS ORDINATE + OR - QTY CALCULATED FOR THE DIVISION. PLUS QUANTITY INDICATES AN EXCESS OF MATERIAL WITHIN THE DIVISION. MINUS INDICATES A SHORTAGE OF MATERIAL WITHIN THE
(8) EBS PAID FOR AS EXCAVATION COMMON.
(9) AVAILABLE MATERIAL = COMMON EXCAVATION - SALVAGED/UNUSABLE MATERIAL.

BASE AGGREGATE DENSE

STATION TO STATION	LOCATION	305.0110 3/4-INCH TON	305.0120 1 1/4-INCH TON	305.0130 3-INCH TON
108WB+00 - 112WB+10	WB LANES AND SHOULDERS	55	950	1000
120WB+01 - 124WB+10	WB LANES AND SHOULDERS	50	850	600
127WB+43 - 132WB+00	WB LANES AND SHOULDERS	65	700	600
108EB+50 - 111EB+82	EB LANES AND SHOULDERS	25	1050	---
119EB+77 - 123EB+28	EB LANES AND SHOULDERS	25	1100	---
126EB+61 - 135EB+19	EB LANES AND SHOULDERS	60	2000	100
126A+94 - 132A+76	A RAMP AND SHOULDERS	65	1250	100
127D+84 - 132D+54	D RAMP AND SHOULDERS	180	700	900
18NB+55 - 19NB+00	BUS 51	---	30	---
20NB+45 - 20NB+82	BUS 51	---	30	---
82WB+78 - 109WB+15	TN WIDENING	140	1200	2700
132TN+08 - 136TN+00	TN WIDENING	10	200	400
130AT+00 - 134AT+66	AT RAMP	50	200	550
129AU+15 - 130AU+75	AU RAMP	40	100	250
130DT+01 - 134DT+50	DT RAMP	25	200	350
81XE+12 - 101XE+00	XE CROSSOVER	60	1300	2800
132XE+06 - 148XE+50	XE CROSSOVER	50	900	2000
PROJECT ID TOTALS		**900**	**12760**	**12350**

ALL ITEMS ON THIS SHEET
ARE CATEGORY 0010
UNLESS OTHERWISE NOTED

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SELECT CRUSHED MATERIAL

STATION TO STATION	LOCATION	312.0110 TONS
18NB+55 - 19NB+00	BUS 51	10
20NB+45 - 20NB+82	BUS 51	10
	UNDER B-37-63	20
	UNDER B-37-140	15
PROJECT ID TOTAL		**55**

CONCRETE PAVEMENT 11 1/2-INCH

STATION TO STATION	LOCATION	415.0115 SY
108WB+00 - 111WB+91	STH 29, WB	1328
120WB+20 - 123WB+72	STH 29, WB	1406
127WB+84 - 132WB+00	STH 29, WB	1400
108EB+50 - 111EB+64	STH 29, EB	908
119EB+94 - 122EB+95	STH 29, EB	1085
126EB+94 - 135EB+19.25	STH 29, EB	2687
128A+08.66 - 132A+76.16	RAMP A	730
128D+88 - 132D+54	RAMP D	671
PROJECT ID TOTAL		**10215**

CONCRETE PAVEMENT APPROACH SLAB

STATION TO STATION	LOCATION	415.0410 SY
111WB+91 - 112WB+06	STH 29, WB	97
120WB+05 - 120WB+20	STH 29, WB	97
123WB+72 - 123WB+87	STH 29, WB	152
127WB+69 - 127WB+84	STH 29, WB	168
111EB+64 - 111EB+79	STH 29, EB	49
119EB+79 - 119EB+94	STH 29, EB	48
122EB+95 - 123EB+10	STH 29, EB	104
126EB+79 - 126EB+94	STH 29, EB	104
PROJECT ID TOTAL		**819**

DRILLED DOWEL BARS

STATION	416.0620 EACH
109EB+00	20
135EB+19	20
109WB+15	26
132WB+00	20
132D+54	11
132A+76	11
PROJECT ID TOTAL	**108**

ROUTE AND SEAL

STATION TO STATION	LOCATION	415.6000.S LF
82WB+45 - 111WB+91	LT	2946
95WB+44 - 100WB+96	RT	552
108WB+00 - 111WB+91	RT	391
120WB+20 - 123WB+71	RT	351
120WB+20 - 123WB+91	LT	371
127WB+63 - 136WB+45	RT	882
128WB+88 - 136WB+00	LT	712
81EB+12 - 95EB+50	LT	1438
108EB+50 - 111EB+51	RT	301
108EB+50 - 111EB+57	LT	307
120EB+01 - 123EB+06	LT	305
120EB+02 - 122EB+81	RT	279
127EB+08 - 135EB+19	LT	811
130EB+01 - 135EB+19	RT	518
137EB+56 - 148EB+09	LT	1053
126A+86 - 132A+76	RT	590
129A+99 - 133A+76	LT	377
127D+84 - 132D+54	LT	470
128D+88 - 133D+73	RT	485
PROJECT ID TOTAL		**13139**

HMA PAVEMENT ITEMS

STATION TO STATION	LOCATION	460.1100 HMA PAVEMENT TYPE E-0.3 TON	460.1103 HMA PAVEMENT TYPE E-3 TON	465.0105 ASPHALTIC SURFACE TON	465.0125 ASPHALTIC SURFACE TEMPORARY TON	455.0105 ASPHALTIC MATERIAL PG58-28 TON	455.0605 TACK COAT GAL
108WB+00 - 111WB+91	LT	---	384	---	---	21.1	34
108WB+00 - 111WB+78	RT	---	55	---	---	3.0	5
120WB+27 - 123WB+92	LT	---	249	---	---	13.7	22
120WB+32 - 123WB+59	RT	---	62	---	---	3.4	6
127WB+62 - 132WB+00	RT	---	85	---	---	4.7	7
128WB+88 - 132WB+00	LT	---	109	---	---	6.0	10
131D+96 - 132D+54	RT	---	10	---	---	0.6	1
108EB+50 - 111EB+57	LT	43	---	---	---	2.4	5
108EB+50 - 111EB+51	RT	54	---	---	---	3.0	7
120EB+01 - 123EB+06	LT	42	---	---	---	2.3	5
120EB+02 - 122EB+81	RT	49	---	---	---	2.7	6
126EB+86 - 129EB+09	RT	40	---	---	---	2.2	5
127EB+08 - 135EB+19	LT	110	---	---	---	6.1	14
131EB+27 - 135EB+19	RT	71	---	---	---	3.9	9
129A+09 - 132A+68	RT	46	---	---	---	2.5	6
130A+00 - 132A+76	LT	71	---	---	---	3.9	6
97WB+50 - 108WB+00		---	---	---	653	---	57
109WB+91 - 112WB+07		---	---	---	37	---	3
120WB+04 - 123WB+88		---	---	---	77	---	7
127WB+40 - 132WB+50		---	---	---	99	---	9
131WB+30 - 136WB+00	LT	---	---	---	266	---	23
130AT+00 - 134AT+66	AT RAMP	---	---	---	204	---	18
128AU+00 - 130AU+50	AU RAMP	---	---	---	79	---	7
132DU+06 - 134DU+22	DU RAMP	---	---	---	103	---	9
90XE+50 - 101XE+00	XE LINE	---	---	---	927	---	81
132XE+55 - 148XE+50	XE LINE	---	---	---	1003	---	88
18NB+55 - 19NB+00	RT	---	6	2	---	0.4	1
20NB+45 - 20NB+82	RT	---	6	2	---	0.4	1
PROJECT ID TOTALS		**526**	**966**	**4**	**3448**	**82.3**	**452**

CONCRETE SURFACE DRAINS

STATION TO STATION	LOCATION	416.1010 CY
111WB+85 - 112WB+11	NW QUADRANT OF B-37-79	5.6
111WB+78 - 112WB+07	SW QUADRANT OF B-37-79	4.0
120WB+00 - 120WB+27	NE QUADRANT OF B-37-79	5.6
120WB+04 - 120WB+31	SE QUADRANT OF B-37-79	5.2
111EB+57 - 111EB+83	NW QUADRANT OF B-37-136	5.1
111EB+51 - 111EB+80	SW QUADRANT OF B-37-136	5.3
119EB+76 - 120EB+01	NE QUADRANT OF B-37-136	4.9
119EB+78 - 120EB+02	SE QUADRANT OF B-37-136	4.3
123WB+92 - 124WB+14	NW QUADRANT OF B-37-63	3.7
123WB+59 - 123WB+87	SW QUADRANT OF B-37-63	3.7
127WB+68 - 128WB+00	NE QUADRANT OF B-37-63	5.6
127WB+40 - 127WB+62	SE QUADRANT OF B-37-63	2.9
123EB+09 - 123EB+31	NW QUADRANT OF B-37-140	3.3
122EB+81 - 123EB+10	SW QUADRANT OF B-37-140	5.0
126EB+78 - 127EB+10	NE QUADRANT OF B-37-140	4.0
126EB+57 - 126EB+83	SE QUADRANT OF B-37-140	5.1
PROJECT ID TOTAL		**73.3**

ASPHALTIC FLUME

STATION	LOCATION	465.0315 SY
132A+76	RT	14
PROJECT ID TOTAL		**14**

ALL ITEMS ON THIS SHEET
ARE CATEGORY 0010
UNLESS OTHERWISE NOTED

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ASPHALTIC SHOULDER RUMBLE STRIP

STATION TO STATION	LOCATION	465.0400 LF
82WB+76 - 111WB+91	LT	2915
120WB+20 - 123WB+71	LT	351
120WB+31 - 123WB+59	RT	328
127WB+62 - 136WB+45	RT	883
131WB+75 - 136WB+00	LT	425
81EB+27 - 95EB+50	LT	1423
88EB+50 - 94EB+50	RT	600
108EB+50 - 111EB+57	LT	307
108EB+50 - 111EB+51	RT	301
120EB+00 - 123EB+06	LT	306
127EB+08 - 135EB+19	LT	811
131EB+27 - 135EB+19	RT	392
137EB+55 - 148EB+08	LT	1053
PROJECT ID TOTAL		**10095**

CONCRETE CURB & GUTTER 30-INCH TYPE D

STATION TO STATION	LOCATION	601.0411 LF
18NB+55 - 19NB+08	RT	53
20NB+45 - 20NB+82	RT	37
PROJECT ID TOTAL		**90**

CONCRETE SIDEWALK 4-INCH

STATION TO STATION	LOCATION	602.0405 SF
18NB+55 - 19NB+08	RT	265
20NB+45 - 20NB+82	RT	185
PROJECT ID TOTAL		**450**

DROP INLETS

STATION	OFFSET	LOCATION	611.3225 INLETS 2x2.5-FT EACH	611.0654 INLET COVERS TYPE V EACH	521.1012 APRON ENDWALLS FOR CULVERT PIPE STEEL 12-INCH EACH	612.0212 PIPE UNDERDRAIN UNPERFORATED 12-INCH LF	GRATE ELEV	TOP OF BOX ELEV	OUTLET INVERT ELEV	STRUCTURE DEPTH FT	COMMENTS
111WB+83	17.0' RT	SW QUADRANT OF B-37-79	1	1	1	24	1176.88	1175.63	1173.13	2.50	
111EB+56	21.0' RT	SW QUADRANT OF B-37-136	1	1	1	44	1179.55	1178.30	1175.80	2.50	
119EB+97	21.0' RT	SE QUADRANT OF B-37-136	1	1	1	90	1200.57	1199.32	1196.82	2.50	
122WB+86	33.0' RT	SW QUADRANT OF B-37-140	1	1	1	68	1206.51	1205.26	1202.76	2.50	
123EB+11	17.0' LT	NW QUADRANT OF B-37-140	1	1	1	24	1208.43	1207.18	1204.68	2.50	
123WB+64	17.0' RT	SW QUADRANT OF B-37-63	1	1	1	24	1208.36	1207.11	1204.61	2.50	
123WB+97	45.0' LT	NW QUADRANT OF B-37-63	1	1	1	76	1208.83	1207.58	1205.08	2.50	
126EB+81	33.0' RT	SE QUADRANT OF B-37-140	1	1	1	104	1211.63	1210.38	1207.88	2.50	
127EB+03	17.0' LT	NE QUADRANT OF B-37-140	1	1	1	24	1212.11	1210.86	1208.36	2.50	
127WB+57	17.0' RT	SE QUADRANT OF B-37-63	1	1	---	24	1211.64	1210.39	1207.89	2.50	TIE INTO MEDIAN INLET
127WB+94	49.4' LT	NE QUADRANT OF B-37-63	1	1	1	82	1211.18	1209.93	1207.43	2.50	
PROJECT ID TOTALS			**11**	**11**	**10**	**584**					

NOTES
- ALL SUBSURFACE ELEVATIONS ARE PIPE FLOWLINES
- STRUCTURE DEPTH = DISTANCE FROM TOP OF BOX TO DISCHARGE ELEVATION
- TOP OF BOX ELEVATION = GRATE ELEVATION - INLET COVER DEPTH - 6" ADJUSTMENT
- GRATE ELEVATION MEASURED FROM THE FLOWLINE OF THE INLET
- OFFSETS ARE MEASURED TO THE CENTER OF THE INLET

CULVERT PIPES REINFORCED CONCRETE AND APRON ENDWALL

STATION	LOCATION	522.0118 CLASS III 18-INCH LF	522.0124 CLASS III 24-INCH LF	611.3902 INLETS MEDIAN 2 GRATES EACH	611.0642 INLET COVERS TYPE MS EACH	522.1024 APRON ENDWALLS 24-INCH EACH	GRATE ELEV	TOP OF BOX ELEV	OUTLET INVERT ELEV	PIPE DISCHARGE ELEV	STRUCTURE DEPTH FT	JOINT TIES	COMMENTS
127EB+20	42' LT	---	113	1	2	1	1208.17	1208.17	1204.17	1200.00	4	3	TIE PIPE UNDERDRAIN INTO INLET
139XE+00	25' LT	450	---	1	2	---	1214.46	1214.46	1211.46	1207.35	3	---	TIE INTO EXISTING INLET AT 134XE+50
132AT+25	35' LT	228	---	1	2	---	1210.00	1210.00	1207.50	1206.24	2.5	---	TIE INTO INLET AT 130AU+00
130AU+00	32' LT	198	---	1	2	---	1209.24	1209.24	1206.24	1204.66	3	---	TIE INTO EXISTING INLET AT 128AU+00
PROJECT ID TOTALS		**876**	**113**	**4**	**8**	**1**							

NOTES
- ALL SUBSURFACE ELEVATIONS ARE PIPE FLOWLINES
- STRUCTURE DEPTH = DISTANCE FROM TOP OF BOX TO DISCHARGE ELEVATION
- TOP OF BOX ELEVATION = GRATE ELEVATION - INLET COVER DEPTH - 6" ADJUSTMENT
- JOINT TIES ARE INCIDENTAL TO PIPE

ALL ITEMS ON THIS SHEET ARE CATEGORY 0010 UNLESS OTHERWISE NOTED

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STEEL PLATE BEAM GUARD TEMPORARY ITEMS

STATION TO STATION	LOCATION	614.0360 LF	614.0250 THRIE BEAM STRUCTURE APPROACH LF	614.0380 EAT EACH
97WB+35 - 111WB+98	LT	1425	39	---
127WB+83 - 130WB+50	LT	175	39	1
PROJECT ID TOTALS		**1600**	**78**	**1**

SALVAGED RAIL & GUARDRAIL END TREATMENTS

STATION TO STATION	LOCATION	614.0920 SALVAGED RAIL LF	614.0925 GUARDRAIL END TREATMENTS EACH
98WB+61 - 112WB+02	LT	1342	---
127WB+76 - 128WB+94	LT	120	1
127WB+50 - 130WB+42	RT	292	1
PROJECT ID TOTALS		**1754**	**2**

MGS GUARDRAIL ITEMS

CATEGORY	STATION TO STATION	LOCATION	614.2500 MGS THRIE BEAM TRANSITION LF	614.2300 MGS GUARDRAIL 3 LF	614.2610 MGS GUARDRAIL TERMINAL EAT EACH	614.2620 TYPE 2 EACH
0030	98WB+67 - 111WB+98	LT	39	1300	---	1
	111WB+95	RT, MEDIAN	---	50	---	2
	120WB+13 - 124WB+04	LT	78	317	---	---
	120WB+18 - 123WB+71	RT	78	278	---	---
	127WB+50 - 130WB+66	RT	39	225	1	---
	134WB+29 - 136WB+70	LT	---	187.5	1	1
	134WB+29 - 137WB+45	RT	---	262.5	1	1
	108EB+55 - 111EB+70	LT	39	225	1	---
	119EB+87 - 123EB+18	LT	78	256	---	---
	119EB+90 - 122EB+93	RT	78	228	---	---
CATEGORY 0030 TOTALS			**429**	**3329**	**4**	**5**

SALVAGED TOPSOIL, MULCHING, FERTILIZER, & SEEDING

STATION TO STATION	LOCATION	STAGE	625.0500 SALVAGED TOPSOIL SY	627.0200 MULCHING SY	629.0205 FERTILIZER TYPE A CWT	630.0130 SEEDING MIXTURE NO. 30 LB	630.0200 SEEDING TEMPORARY LB
110WB+00 - 132WB+50	RT, MEDIAN	1	863	863	1	23	12
88XE+50 - 101XE+50	LT/RT	1	4585	4585	3	124	62
93WB+00 - 108WB+00	LT	3	1345	585	1	36	18
108WB+00 - 132WB+50	LT	3	6426	4146	4	174	87
131WB+00 - 136WB+50	LT	3	1072	1072	1	29	14
129D+00 - 133D+00	LT	3	3003	---	2	81	41
15P+25 - 26P+75	LT	3	951	951	1	26	13
131DU+50 - 134DU+00	RT	3	375	375	1	10	5
108WB+00 - 132WB+50	RT	4	1654	1654	1	45	22
130AT+00 - 135AT+00	LT/RT	4	1055	1055	1	28	14
128AU+00 - 130AU+00	LT/RT	4	664	664	1	18	9
132XE+00 - 149XE+50	LT/RT	4	5131	5131	3	139	69
108EB+50 - 135EB+50	LT	6	3495	3495	2	94	47
108EB+50 - 135EB+50	RT	6	4228	2838	3	114	57
129A+50 - 133A+00	LT	6	2293	2293	1	62	31
129A+50 - 133A+00	RT	6	648	---	1	17	9
81EB+00 - 148EB+00	LT	7	10750	10750	7	290	145
UNDISTRIBUTED			7872	7853	5	213	106
PROJECT ID TOTALS			**50962**	**42862**	**35**	**1376**	**688**

FENCE CHAIN LINK 4-FT

STATION TO STATION	LOCATION	616.0204 LF
98WB+53 - 112WB+00	LT	1358
120WB+09 - 120WB+85	LT	125
124WB+07 - 124WB+36	LT	85
108EB+50 - 111EB+65	RT	320
119EB+85 - 120EB+45	RT	142
122EB+59 - 123EB+00	RT	105
PROJECT ID TOTAL		**2135**

MAINTENANCE AND REPAIR OF HAUL ROADS

LOCATION	618.0100 EACH
01. 1053-02-74	1
PROJECT ID TOTAL	**1**

SOIL STABILIZER TYPE B

LOCATION	DESCRIPTION	628.6510 ACRE
UNDISTRIBUTED	DUST CONTROL	0.6
PROJECT ID TOTAL		**0.6**

MOBILIZATION

LOCATION	619.1000 EACH
1053-02-74	0.11
PROJECT ID TOTAL	**0.11**

WATER

LOCATION	624.0100 MGAL
BASE COMPACTION	250
DUST CONTROL	70
PROJECT ID TOTAL	**320**

ALL ITEMS ON THIS SHEET
ARE CATEGORY 0010
UNLESS OTHERWISE NOTED

3

RIPRAP & GEOTEXTILE FABRIC

STATION TO STATION	LOCATION	STAGE	606.0100 RIPRAP LIGHT CY	606.0300 RIPRAP HEAVY CY	645.0120 FABRIC TYPE HR SY	645.0130 FABRIC TYPE R SY
103WB+50 - 111WB+90	LT	3	---	1270	1900	---
111WB+86	RT	4	2	---	---	8
119WB+60 - 120WB+25	RT	4	---	40	90	---
123WB+64	RT	4	2	---	---	8
123WB+97	LT	4	2	---	---	8
127WB+91	LT	4	2	---	---	8
119EB+97	RT	6	2	---	---	8
122EB+86	RT	6	2	---	---	8
123EB+14	LT	6	2	---	---	8
127EB+02	LT	6	2	---	---	8
127EB+20	RT	6	16	---	---	70
126A+74	RT	6	2	---	---	8
132A+76	FLUME END, RT	6	4	---	---	16
UNDISTRIBUTED			5	330	500	24
PROJECT ID TOTALS			**43**	**1640**	**2490**	**182**

SILT FENCE

STATION TO STATION	LOCATION	STAGE	628.1504 LF	628.1520 MAINTENANCE LF
98WB+50 - 112WB+27	LT	3	1390	2780
112WB+23	RT	3	75	150
119WB+55	RT	3	75	150
119WB+65 - 124WB+73	LT	3	565	1130
127D+50 - 132D+45	LT	3	585	1170
108EB+50 - 112EB+00	RT	6	440	880
119EB+26 - 123EB+52	RT	6	600	1200
126A+50 - 132A+90	RT	6	740	1480
98WB+50 - 112WB+27	LT	8	1350	2700
UNDISTRIBUTED			1430	2860
PROJECT ID TOTALS			**7250**	**14500**

MOBILIZATIONS EROSION CONTROL & EMERGENCY EROSION CONTROL

LOCATION	STAGE	628.1905 EACH	629.1910 EMERGENCY EACH
1053-02-74	1	3	3
	2	2	2
	3	3	3
	4	3	3
	5	2	2
	6	3	3
	7	2	2
	8	1	1
PROJECT ID TOTALS		**19**	**19**

TEMPORARY DITCH CHECKS

STATION	LOCATION	STAGE	628.7504 LF
81WB+00	RT	1	10
82WB+50	LT	1	10
81WB+00	RT	7	10
82WB+50	LT	8	10
UNDISTRIBUTED			100
PROJECT ID TOTAL			**140**

INLET PROTECTION

STATION	LOCATION	STAGE	628.7005 TYPE A EACH	628.7015 TYPE C EACH
92WB+00	RT	1	1	---
100WB+00	RT	1	1	---
105WB+00	RT	1	1	---
128WB+00	RT	1	1	---
127D+94	LT	3	1	1
124WB+00	LT	3	1	1
128WB+15	LT	3	1	---
134WB+40	LT	3	1	---
111WB+83	RT	4	1	1
123WB+64	RT	4	1	1
127WB+56	RT	4	1	1
130WB+00	RT	4	1	---
132WB+35	RT	4	1	---
134WB+45	RT	4	1	---
138WB+90	RT	4	1	---
144WB+00	RT	4	1	---
111EB+44	RT	6	1	1
119EB+97	RT	6	1	1
123EB+11	LT	6	1	1
127EB+03	LT	6	1	1
127EB+20	LT	6	1	---
122A+86	RT	6	1	1
126A+81	RT	6	1	1
92WB+00	RT	7	1	---
100WB+00	RT	7	1	---
144WB+00	RT	7	1	---
128WB+15	LT	8	1	---
134WB+40	LT	8	1	---
PROJECT ID TOTALS			**23**	**11**

ROCK BAGS

STATION	LOCATION	STAGE	628.7570 EACH
104WB+00	LT	3	25
108WB+00	LT	3	25
120WB+50	LT	3	25
130D+00	LT	4	25
109EB+00	RT	6	25
119EB+80	RT	6	25
127EB+00	RT	6	25
UNDISTRIBUTED			325
PROJECT ID TOTAL			**500**

CULVERT PIPE CHECKS

STATION	LOCATION	STAGE	628.7555 EACH
98WB+00	LT	1	7
120WB+55	RT	1	2
133A+62	LT	6	3
98WB+00	LT	8	7
UNDISTRIBUTED			6
PROJECT ID TOTAL			**25**

DELINEATOR

LOCATION	633.0100 POST STEEL EACH	633.0500 REFLECTORS EACH	633.1000 BRACKETS EACH
STH 29 WB	15	20	16
STH 29 EB	15	20	16
PROJECT ID TOTALS	**30**	**40**	**32**

MARKERS CULVERT END

STATION	LOCATION	633.5200 EACH
127EB+20	RT	1
PROJECT ID TOTAL		**1**

SILT SCREEN

STATION TO STATION	LOCATION	STAGE	628.1550 LF
112WB+27 - 113WB+00	LT	3	195
119WB+95 - 119WB+66	LT	3	188
UNDISTRIBUTED			97
PROJECT ID TOTAL			**480**

EROSION MAT

STATION TO STATION	LOCATION	STAGE	628.2004 CLASS I TYPE B SY	628.2027 CLASS II TYPE C SY
98WB+50 - 103WB+50	LT	3	---	760
120EB+00 - 124WB+00	LT	3	---	2280
127D+56 - 132D+45	LT	3	3900	---
119EB+80 - 123EB+00	RT	6	---	1390
126A+60 - 130A+50	RT	6	4335	---
UNDISTRIBUTED			2065	1120
PROJECT ID TOTAL			**10300**	**5550**

ALL ITEMS ON THIS SHEET
ARE CATEGORY 0010
UNLESS OTHERWISE NOTED

SIGNS TYPE II REFLECTIVE & POSTS WOOD

SIGN NO.	STATION	SIGN CODE	SIZE	634.0616 POSTS WOOD 4X6-INCH 16-FT EACH	634.0618 18-FT EACH	634.0620 20-FT EACH	637.2210 SIGNS TYPE II REFLECTIVE H SF	637.2230 F SF	COMMENTS
1-1	90WB+80, LT	D9-2	36 X 36	1	---	---	9.00	---	
	90WB+80, LT	MB6-2	30 X 30	---	---	---	6.25	---	
1-2	102WB+05, LT	R2-1	48 X 60	1	---	---	20.00	---	
1-4	100EB+60, LT	R3-4B	36 X 36	1	---	---	9.00	---	
1-5	99WB+95, RT	R3-4B	36 X 36	1	---	---	9.00	---	
1-6	102EB+00, RT	J4-1	36 X 54	1	---	---	13.50	---	
2-1	107EB+00, RT	R2-1	48 X 60	1	---	---	20.00	---	
2-2	121WB+95, LT	J4-1	36 X 54	1	---	---	13.50	---	
2-4	127A+30, RT	W13-2A	48 X 90	---	---	2	---	30.00	
2-5	129A+40, RT	W13-3	48 X 60	1	---	---	---	20.00	
2-6	131EB+50, RT	E5-1A	90 X 60	---	---	2	37.50	---	
2-7	133EB+90, LT	W4-1	48 X 48	---	1	---	---	16.00	
3-1	136WB+00, LT	W4-1	48 X 48	---	1	---	---	16.00	
3-2	138WB+39, RT	D10-5	21 X 60	1	---	---	8.75	---	
3-3	138WB+40, LT	E5-1A	90 X 60	---	---	2	37.5	---	
3-4	148EB+58, LT	D10-5	21 X 60	1	---	---	8.75	---	
3-5	148WB+77, RT	D10-5	21 X 60	1	---	---	8.75	---	
3-6	148EB+56, LT	D10-5	21 X 60	1	---	---	8.75	---	
3-7	159WB+12, RT	D10-5	21 X 60	1	---	---	8.75	---	
3-8	159EB+12, LT	D10-5	21 X 60	1	---	---	8.75	---	
A-1	169EB+68 (EB LANES)	D10-5	21 X 60	1	---	---	8.75	---	EAST 29, MILE 172.6
A-2	169EB+68 (WB LANES)	D10-5	21 X 60	1	---	---	8.75	---	WEST 29, MILE 172.6
A-3	180EB+24 (EB LANES)	D10-5	21 X 60	1	---	---	8.75	---	EAST 29, MILE 172.8
A-4	180EB+24 (WB LANES)	D10-5	21 X 60	1	---	---	8.75	---	WEST 29, MILE 172.8
A-5	190EB+80 (EB LANES)	D10-5	21 X 60	1	---	---	8.75	---	EAST 29, MILE 173.0
A-6	190EB+80 (WB LANES)	D10-5	21 X 60	1	---	---	8.75	---	WEST 29, MILE 173.0
A-7	201EB+36 (EB LANES)	D10-5	21 X 60	1	---	---	8.75	---	EAST 29, MILE 173.2
A-8	201EB+36 (WB LANES)	D10-5	21 X 60	1	---	---	8.75	---	WEST 29, MILE 173.2
A-9	211EB+92 (EB LANES)	D10-5	21 X 60	1	---	---	8.75	---	EAST 29, MILE 173.4
A-10	211EB+92 (WB LANES)	D10-5	21 X 60	1	---	---	8.75	---	WEST 29, MILE 173.4
A-11	222EB+48 (EB LANES)	D10-5	21 X 60	1	---	---	8.75	---	EAST 29, MILE 173.6
A-12	222EB+48 (WB LANES)	D10-5	21 X 60	1	---	---	8.75	---	WEST 29, MILE 173.6
A-13	233EB+04 (EB LANES)	D10-5	21 X 60	1	---	---	8.75	---	EAST 29, MILE 173.8
A-14	233EB+04 (WB LANES)	D10-5	21 X 60	1	---	---	8.75	---	WEST 29, MILE 173.8
PROJECT ID TOTALS				**28**	**2**	**6**	**350.25**	**82.00**	

FIELD OFFICE TYPE C

PROJECT	642.5201 EACH
1053-02-74	1

REMOVING SIGNS TYPE II

SIGN NO.	STATION	SIGN MESSAGE	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH
1-3	90WB+80, LT	HOSPITAL	1	1
1-7	99EB+95, LT	NO U TURN	1	1
1-8	100WB+60, RT	NO U TURN	1	1
1-2	102WB+05, LT	SPEED LIMIT 65	1	1
1-6	102EB+00, RT	EAST STH 29	1	1
2-1	107EB+00, RT	SPEED LIMIT 65	1	1
2-2	121WB+95, LT	WEST STH 29	1	1
2-4	127A+30, RT	EXIT, 25 MPH	1	2
2-5	129A+40, RT	RAMP, 25 MPH	1	2
2-6	131EB+55, RT	EXIT 171	1	2
2-7	133EB+90, RT	THRU TRAFFIC MERGE LEFT	1	1
3-1	136WB+05, LT	THRU TRAFFIC MERGE LEFT	1	1
3-3	138WB+40, LT	EXIT 171	1	2
3-9	140WB+50, RT	NO U TURN	1	1
PROJECT ID TOTALS			**14**	**18**

MOVING SIGNS TYPE I

STATION	SIGN DESCRIPTION	635.0200 SIGN SUPPORTS STRUCTURAL STEEL HS LB	636.0100 SIGN SUPPORTS CONCRETE MASONRY CY	636.1000 SIGN SUPPORTS STEEL REINFORCEMENT HS LB	638.2101 MOVING SIGNS TYPE 1 EACH	638.3100 REMOVING STRUCTURAL STEEL SIGN SUPPORTS EACH	COMMENTS
122A+58	BUSINESS 51, SCHOFIELD, ROTHSCHILD	500	3.6	224	1	1	MOVE TO 120EB+15
134WB+70	39/51 STEVENS POINT, MADISON, WAUSAU	---	---	---	1	---	MOVE TO NEW SIGN STRUCTURE 134WB+60
PROJECT ID TOTALS		**500**	**3.6**	**224**	**2**	**1**	

ALL ITEMS ON THIS SHEET ARE CATEGORY 0010 UNLESS OTHERWISE NOTED

3

PAVEMENT MARKING EPOXY

STATION TO STATION	DESCRIPTION	646.0106 4-INCH WHITE LF	646.0106 4-INCH YELLOW LF	647.0746 DIAGONAL 24-INCH LF	COMMENT
87EB+00 - 95EB+50	EDGELINE	---	850	---	
87EB+00 - 97EB+50	EDGELINE	1050	---	---	
91WB+00 - 132D+50	EDGELINE	4150	---	---	
91WB+00 - 139WB+00	EDGELINE	---	4800	---	
108EB+50 - 153EB+00	EDGELINE	---	4450	---	
108EB+50 - 132A+80	EDGELINE	2430	---	---	
130EB50 - 131EB+50	DIAGONAL	---	---	100	GORE BETWEEN 'EB' & 'A' ALIGNMENTS
131A+75 - 132A+75	EDGELINE	---	100	---	
131EB+80 - 135EB+20	EDGELINE	340	---	---	
132D+15 - 132D+55	EDGELINE	---	40	---	
132WB+25 - 139WB+00	EDGELINE	675	---	---	
SUB TOTALS		8645	10240	100	
TOTALS		**18885**		**100**	
PROJECT ID TOTALS		**36748***		**100**	

PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE

STATION TO STATION	DESCRIPTION	646.0841.S 4-INCH WHITE LF	646.0843.S 8-INCH WHITE LF	COMMENT
80WB+00 - 92WB+50	CHANNELIZING	---	1250	
80WB+00 - 155WB+00	DASHED	1875	---	12.5-FT SEGMENTS
87EB+00 - 95EB+50	DASHED	213	---	12.5-FT SEGMENTS
92WB+50 - 108WB+00	DASHED	388	---	3-FT SEGMENTS
108EB+50 - 153EB+00	DASHED	1113	---	12.5-FT SEGMENTS
120A+15 - 128A+00	DASHED	216	---	3-FT SEGMENTS
121WB+30 - 125WB+80	DASHED	113	---	3-FT SEGMENTS
125D+80 - 132D+20	CHANNELIZING	---	640	GORE
125WB+80 - 132WB+25	CHANNELIZING	---	645	GORE
128EB+80 - 131EB+75	CHANNELIZING	---	295	GORE
129A+40 - 131A+70	CHANNELIZING	---	230	GORE
142WB+50 - 144WB+25	DASHED	44	175	3-FT SGEMENTS
PROJECT ID TOTALS		**3962**	**3235**	

TYPE I SIGNS

SIGN NO.	STATION	SIGN CODE	SIZE	637.1220 SIGNS TYPE I SH SF	637.1230 REFLECTIVE F SF	638.2601 REMOVING SIGNS TYPE I EACH	COMMENTS
1-3	104WB+05	E1-5bP	132 X 48	44.00	5.60	3	"LEFT" PLAQUE TYPE F REFLECTIVE
		E8-1A	192 X 144	192.00	--		
		E11-1	192 X 36	---	48.00		
PROJECT ID TOTALS				**236.00**	**53.60**	**3**	

CONSTRUCTION STAKING

STATION TO STATION	LOCATION	650.4500 SUBGRADE LF	650.5000 BASE LF	650.7000 CONCRETE PAVEMENT LF	650.9920 SLOPE STAKES LF
108EB+50 - 111EB+64.35	STH 28 EB	314	---	314	314
119EB+93.76 - 122EB+94.69	STH 28 EB	301	---	301	301
126EB+94.09 - 135EB+19.25	STH 28 EB	825	---	825	825
108WB+00 - 111WB+91.07	STH 29 WB	391	---	391	391
120WB+20.14 - 123WB+71.46	STH 29 WB	351	---	351	351
127WB+83.59 - 132WB+00	STH 29 WB	416	---	416	416
129A+08.71 - 132A+76.16	A RAMP	367	---	367	367
128D+88.03 - 132D+54.08	D RAMP	366	---	366	366
109WB+91 - 112WB+07	TS LINE	216	216	---	216
120WB+04 - 123WB+88	TS LINE	384	384	---	384
127WB+40 - 132WB+50	TS LINE	510	510	---	510
93WB+00 - 108WB+00	TN LINE	1500	1500	---	1500
132WB+00 - 136WB+00	TN LINE	400	400	---	400
88XE+50 - 99XE+00	XE LINE (WEST)	1050	1050	---	1050
132XE+00 - 148XE+50	XE LINE (EAST)	1650	1650	---	1650
130AT+00 - 134AT+40	AT RAMP	440	440	---	440
128AU+00 - 130AU+35	AU RAMP	235	235	---	235
132DU+50 - 133DU+96	DU RAMP	146	146	---	146
PROJECT ID TOTALS		**9862**	**6531**	**3331**	**9862**

CONSTRUCTION STAKING STORM SEWER

STATION		650.4000 EACH
127EB+00	ENDWALL	1
127EB+20	INLET	1
139XE+00	INLET	1
132AT+25	INLET	1
130AU+00	INLET	1
PROJECT ID TOTAL		**5**

CONSTRUCTION STAKING SUPPLEMENTAL CONTROL

PROJECT	650.9910 LS
01. 1053-02-74	1

*** OTHER QUANTITIES LOCATED ELSEWHERE IN PLAN**

ALL ITEMS ON THIS SHEET ARE CATEGORY 0010 UNLESS OTHERWISE NOTED

3

SAWING

STATION TO STATION	LOCATION	STAGE	690.0150 ASPHALT LF	690.0250 CONCRETE LF
88EB+50	LT - EXISTING SHOULDER	1	4	---
93WB+00	LT - EXISTING SHOULDER	1	8	---
95WB+00	RT - EXISTING SHOULDER	1	4	---
95EB+50	LT - EXISTING SHOULDER	1	4	---
101WB+00	RT - EXISTING SHOULDER	1	4	---
109WB+91	RT - EXISTING SHOULDER	1	4	---
132WB+50	RT - EXISTING SHOULDER	1	4	---
120WB+00 - 124WB+00	LT - EXISTING RAMP TAPER	3	---	400
134D+00	RT - EXISTING SHOULDER	3	5	---
131WB+30	LT - EXISTING SHOULDER	3	10	---
136WB+00	LT - EXISTING SHOULDER	3	8	---
132D+54	EXISTING D RAMP LANES	3	5	18
18NB+55	BUSINESS 51 SIDEWALK	3	---	5
19NB+08	BUSINESS 51 SIDEWALK	3	---	5
20NB+45	BUSINESS 51 SIDEWALK	3	---	5
20NB+82	BUSINESS 51 SIDEWALK	3	---	5
18NB+55	BUSINESS 51 CURB AND GUTTER	3	---	3
19NB+08	BUSINESS 51 CURB AND GUTTER	3	---	3
20NB+45	BUSINESS 51 CURB AND GUTTER	3	---	3
20NB+82	BUSINESS 51 CURB AND GUTTER	3	---	3
18NB+55 - 19NB+08	BUSINESS 51 NB LANES	3	61	---
20NB+45 - 20NB+82	BUSINESS 51 NB LANES	3	45	---
108WB+00	EXISTING WB LANES	4	4	38
132WB+00	EXISTING WB LANES	4	---	26
136XE+50	EXISTING WB SHOULDER	4	4	---
138XE+00	EXISTING EB SHOULDER	4	4	---
148XE+50	EXISTING EB SHOULDER	4	4	---
131EB+50	EXISTING EB SHOULDER	4	4	---
132EB+30	EXISTING EB SHOULDER	4	4	---
132EB+00	EXISTING EB SHOULDER	4	8	---
132EB+50	EXISTING EB SHOULDER	4	8	---
132A+75	EXISTING A RAMP SHOULDER	4	5	---
133A+75	EXISTING A RAMP SHOULDER	4	5	---
108EB+50	EXISTING EB LANES	6	15	26
135EB+19.25	EXISTING EB LANES	6A	12	26
132A+76.36	EXISTING A RAMP LANES	6	10	18
81EB+00 - 95EB+50	FINAL SHOULDER	7	1450	---
95WB+50 - 101WB+00	FINAL SHOULDER	7	550	---
128WB+00 - 136WB+20	FINAL SHOULDER	7	820	---
129EB+50 - 130EB+00	FINAL SHOULDER	7	50	---
137EB+50 - 148EB+00	FINAL SHOULDER	7	1050	---
82WB+50 - 111WB+35.95	FINAL SHOULDER	8	2886	---
128D+67.65 - 131D+50	FINAL SHOULDER	8	302	---
131WB+70 - 136WB+00	FINAL SHOULDER	8	567	---
131A+00 - 133A+70	FINAL SHOULDER	8	270	---
PROJECT ID TOTALS			**8198**	**584**

CRASH CUSHION TEMPORARY LEFT IN PLACE

STATION	LOCATION	SPV.0060.12 EACH	CRASH TEST LEVEL	SHIELDS	BACK WIDTH	OBJECT MARKING PATTERN	TRAFFIC DIRECTION
129WB+60	LT	1	TL-3	CONCRETE BARRIER TEMPORARY PRECAST LEFT IN PLACE	2'	OM-3R	UNIDIRECTIONAL
PROJECT ID TOTAL		**1**					

REMOVE & REINSTALL GUARDRAIL

STATION TO STATION	LOCATION	SPV.0090.02 LF
108EB+50 - 111EB+73	RT	320
PROJECT ID TOTAL		**320**

CONCRETE BARRIER TEMPORARY PRECAST LEFT IN PLACE

STATION TO STATION	LOCATION	SPV.0090.03 LF
113WB+88 - 129WB+60	LT	1572
PROJECT ID TOTAL		**1572**

CRASH CUSHION TEMPORARY ONSITE

LOCATION	SPV.0105.03 LS
ENTIRE PROJECT	1

WATER FOR SEEDED AREAS

LOCATION	SPV.0120.01 MGAL
ENTIRE PROJECT	1000
PROJECT ID TOTAL	**1000**

MAINTENANCE OF STH 29 DURING CONSTRUCTION

LOCATION	SPV.0060.13 MOBILIZATION PAVEMENT EACH	SPV.0060.14 MOBILIZATION EMERGENCY AND STRUCTURE REPAIR EACH	SPV.0195.02 COLD PATCH TON	SPV.0195.03 JOINT PATCHING TON
UNDISTRIBUTED	1	1	100	100
PROJECT ID TOTALS	**1**	**1**	**100**	**100**

ALL ITEMS ON THIS SHEET
ARE CATEGORY 0010
UNLESS OTHERWISE NOTED

3

CONCRETE BARRIER TEMPORARY PRECAST

STAGE		603.8000 DELIVERED LF	603.8125 INSTALLED LF
STAGE 1	STH 29	---	---
STAGE 2	STH 29	---	---
STAGE 3	STH 29	3500	3500
STAGE 3	BUS 51 NB	450	450
STAGE 3	BUS 51 SB	470	470
STAGE 3A	STH 29	300	300
STAGE 4	STH 29	1050	3150
STAGE 5	STH 29	1000	3150
STAGE 6	STH 29	1680	5480
STAGE 6A	STH 29	---	---
STAGE 7	STH 29	---	---
STAGE 8	STH 29	---	---
PROJECT ID TOTALS		**8450**	**16500**

CRASH CUSHION TEMPORARY

STAGE	LOCATION	614.0905 EACH	BACK WIDTH FT	OBJECT MARKING PATTERN	CRASH TEST LEVEL	TRAFFIC DIRECTION	TRAFFIC LOCATION	CRASH CUSHION SHIELDS
STAGE 3	130+25 DT	1	2	OM-3R	TL-2	UNIDIRECTIONAL	R	TEMP BARRIER ON OUTSIDE SHOULDER OF RAMP
STAGE 3A	134+25 DU	1	2	OM-3R	TL-2	UNIDIRECTIONAL	R	TEMP BARRIER ON OUTSIDE SHOULDER OF RAMP
STAGE 4	136+00 TN	1	2	OM-3R	TL-3	UNIDIRECTIONAL	R	TEMP BARRIER ON OUTSIDE SHOULDER
STAGE 4	139+00 TN	1	2	OM-3L	TL-3	UNIDIRECTIONAL	L	TEMP BARRIER ON INSIDE SHOULDER
STAGE 5	129+50 D	1	2	OM-3R	TL-3	UNIDIRECTIONAL	R	TEMP BARRIER ON OUTSIDE SHOULDER
STAGE 6	130+00 AT	1	2	OM-3R	TL-3	UNIDIRECTIONAL	R	TEMP BARRIER ON OUTSIDE SHOULDER OF RAMP
STAGE 6	132+00 XE	1	2	OM-3R	TL-3	UNIDIRECTIONAL	R	TEMP BARRIER ON OUTSIDE SHOULDER
STAGE 6	136+00 XE	1	2	OM-3L	TL-3	UNIDIRECTIONAL	L	TEMP BARRIER ON INSIDE SHOULDER
STAGE 6	139+00 TN	1	2	OM-3L	TL-3	UNIDIRECTIONAL	L	TEMP BARRIER ON INSIDE SHOULDER
PROJECT ID TOTAL		**9**						

MGS GUARDRAIL TEMPORARY

INSTALL IN		LOCATION	614.1000 LF	614.1100 TRANSITION LF	614.2100 TRANSITION EAT EACH
STAGE 3	WB STH 29	NW CORNER B-37-79	1500	39	---
STAGE 3	WB STH 29	SW CORNER B-37-79	200	39	1
STAGE 4	WB STH 29	NE CORNER B-37-63	350	39	1
PROJECT ID TOTALS			**2050**	**117**	**2**

TRAFFIC CONTROL SIGNS FIXED MESSAGE

NO.	INSTALL IN	STATION/LOCATION	MESSAGE	TO REMAIN FOR STAGE	SIZE IN X IN	643.1000 SF	NOTES
T3-1	STAGE 2B	105+75 WB STH 29 LT	LEFT 1/2 MILE	2C,3,4,6,7	144 X 24	---	PAID FOR UNDER PROJECT 1053-05-60, STAGE 2B
T3-2	STAGE 3	144+50 WB STH 29 RT	RIGHT LANE EXIT ONLY	4,6,7	144 X 48	48	BELOW EXIT SIGN
T3-3	STAGE 3	144+50 WB STH 29 LT	WEST 29 / LEFT LANE ONLY	4,6,7	144 X 108	108	MOUNT ON POSTS IN MEDIAN
T3-4	STAGE 3	186+00 WB STH 29 RT	LEFT LANE	4,6,7	144 X 36	36	MOUNT ON POSTS IN MEDIAN
T3-5	STAGE 3	199+00 WB STH 29 RT	RIGHT LANE EXIT ONLY	4,6,7	144 X 48	48	BELOW EXIT SIGN
T3-6	STAGE 3	199+00 WB STH 29 LT	WEST 29 / LEFT LANE ONLY	4,6,7	144 X 108	108	MOUNT ON POSTS IN MEDIAN
T6-1	STAGE 6	123+00 EB STH 29 RT	BUSINESS 51 SCHOFIELD ROTHSCHILD EXIT	---	204 X 120	170	MOUNT ON POSTS ADJACENT TO GORE
T6-2	STAGE 6	123+00 EB STH 29 RT	EXIT 171	---	120 X 30	25	MOUNT ABOVE SIGN T6-1
PROJECT ID TOTAL						**543**	

NOTE:
SIGNS USED IN STAGE 2C ARE TO BE REMOVED AT THE COMPLETION OF STAGE 2C AND REINSTALLED AT THE BEGINNING OF STAGE 3
SIGNS USED IN STAGE 4 ARE TO BE REMOVED AT THE COMPLETION OF STAGE 4 AND REINSTALLED AT THE BEGINNING OF STAGE 6

ALL ITEMS ON THIS SHEET ARE CATEGORY 0010 UNLESS OTHERWISE NOTED

TRAFFIC CONTROL

STAGE	DESCRIPTION	DAYS	643.0300 DRUMS NUMBER	643.0300 DRUMS DAYS	643.0410 BARRICADES TYPE II NUMBER	643.0410 BARRICADES TYPE II DAYS	643.0420 BARRICADES TYPE III NUMBER	643.0420 BARRICADES TYPE III DAYS	643.0500 FLEXIBLE TUBULAR POSTS EACH	643.0600 MARKERS BASES EACH	643.0705 WARNING LIGHTS TYPE A NUMBER	643.0705 WARNING LIGHTS TYPE A DAYS	643.0715 WARNING LIGHTS TYPE C NUMBER	643.0715 WARNING LIGHTS TYPE C DAYS	643.0800 ARROW BOARDS NUMBER	643.0800 ARROW BOARDS DAYS	643.0900 SIGNS NUMBER	643.0900 SIGNS DAYS	643.0920 COVERING SIGNS TYPE 2 CYCLES	643.0920 COVERING SIGNS TYPE 2 NUMBER	643.0920 COVERING SIGNS TYPE 2 EACH	643.3000 DETOUR SIGNS NUMBER	643.3000 DETOUR SIGNS DAYS
STAGE 1	STH 29	45	93	4185	---	---	---	---	---	---	---	---	---	---	---	---	36	1620	1	---	---	---	---
STAGE 2	STH 29	180	12	2160	---	---	2	360	30	30	---	---	---	---	---	---	34	6120	1	---	---	---	---
STAGE 3	STH 29	77	82	6314	---	---	3	231	---	---	---	---	16	1232	---	---	39	3003	1	2	2	---	---
STAGE 3	WB 29 DETOUR	1	78	78	---	---	11	11	---	---	18	18	26	26	2	2	27	27	1	4	4	93	93
STAGE 3	BUS 51 NB	30	56	1680	4	120	2	60	---	---	---	---	10	300	1	30	11	330	1	---	---	---	---
STAGE 3	BUS 51 SB	30	54	1620	5	150	2	60	---	---	---	---	12	360	1	30	21	630	1	---	---	---	---
STAGE 3A	STH 29	77	76	5852	---	---	3	231	12	12	12	---	---	16	1232	---	---	39	3003	1	---	---	---	---
STAGE 4	STH 29	147	99	14553	---	---	3	441	---	---	---	---	---	16	2352	---	---	43	6321	1	---	---	---	---
STAGE 5	STH 29	151	51	7701	---	---	5	755	50	50	50	---	---	---	---	---	---	32	4832	1	---	---	---	---
STAGE 6	STH 29	138	98	13524	---	---	8	1104	---	---	---	---	---	16	2208	---	---	49	6762	1	2	2	---	---
STAGE 6A	STH 29	18	99	1782	---	---	8	144	---	---	---	---	---	16	288	---	---	49	882	1	---	---	---	---
STAGE 7	STH 29	24	116	2784	---	---	1	24	---	---	---	---	---	16	384	---	---	44	1056	1	---	---	---	---
STAGE 8	STH 29	30	93	2790	---	---	---	---	---	---	---	---	---	---	---	---	---	36	1080	1	---	---	---	---
LANE CLOSURE	EB STH 29 INSIDE	15	105	1575	---	---	2	30	---	---	---	---	---	16	240	2	30	17	255	15	1	15	---	---
LANE CLOSURE	EB STH 29 OUTSIDE	11	39	429	---	---	5	55	---	---	---	---	---	16	176	2	22	20	220	11	1	11	---	---
LANE CLOSURE	WB STH 29 INSIDE	5	98	490	---	---	6	30	---	---	---	---	---	16	80	2	10	17	85	5	2	10	---	---
LANE CLOSURE	WB STH 29 OUTSIDE	33	213	7029	---	---	8	264	---	---	---	---	---	34	1122	2	66	21	693	33	2	66	---	---
DETOUR	RAMP D	18	60	1080	---	---	5	90	---	---	---	4	72	20	360	---	---	22	396	18	7	126	57	1026
LANE CLOSURE	NB BUS 51 INSIDE	20	99	1980	---	---	3	60	---	---	---	---	---	10	200	1	20	5	100	20	1	20	---	---
LANE CLOSURE	NB BUS 51 OUTSIDE	20	62	1240	4	80	3	60	---	---	---	---	---	10	200	1	20	9	180	20	1	20	---	---
LANE CLOSURE	SB BUS 51 INSIDE	20	116	2320	---	---	8	160	---	---	---	---	---	10	200	1	20	12	240	20	---	---	---	---
LANE CLOSURE	SB BUS 51 OUTSIDE	20	122	2440	5	100	8	160	---	---	---	---	---	10	200	1	20	17	340	20	---	---	---	---
PROJECT ID TOTALS				**83606**		**450**		**4330**		**92**	**92**		**90**		**11160**		**270**		**38175**			**276**		**1119**

MOVING SIGNS

NO.	INSTALL IN	LOCATION	STATION	MESSAGE	638.2102 MOVING SIGNS TYPE II EACH	638.4000 MOVING SMALL SIGN SUPPORTS EACH	NOTES
E1-1	STAGE 1	WB STH 29	84+50 RT	MM 171	1	1	RETURN IN STAGE 8
E1-2	STAGE 1	WB STH 29	91+00 RT	HOSPITAL RT	1	1	REPLACE WITH SIGN 1-1 IN STAGE 8
E1-3	STAGE 1	WB STH 29	95+00 LT	MM 171.2	1	1	MOVE IN STAGE 4
E3-1	STAGE 3	WB STH 29	103+00 RT	SPEED LIMIT 65	1	1	REPLACE WITH SIGN 1-2 IN STAGE 8
E3-2	STAGE 3	WB STH 29	120+50 RT	WEST 29	1	1	REPLACE WITH SIGN 2-2 IN STAGE 8
E1-1	STAGE 4	WB STH 29	95+00 LT	MM 171.2	1	1	MOVE TO RT; RETURN IN STAGE 8
E4-1	STAGE 4	WB STH 29	112+00 LT	MM 171.6	1	1	MOVE TO RT; RETURN IN STAGE 8
E4-2	STAGE 4	WB STH 29	128+00 LT	MM 171.8	1	1	MOVE TO RT; RETURN IN STAGE 8
E4-3	STAGE 4	WB STH 29	138+00 LT	MM 172.0	1	1	MOVE TO RT; RETURN IN STAGE 8
E4-4	STAGE 4	EB STH 29	138+00 LT	MM 172.0	1	1	MOVE TO RT; RETURN IN STAGE 8
E6-1	STAGE 6	EB STH 29	112+00 LT	MM 171.6	1	1	MOVE ACROSS MEDIAN;RETURN IN STAGE 7
E6-2	STAGE 6	EB STH 29	128+00 LT	MM 171.8	1	1	MOVE ACROSS MEDIAN;RETURN IN STAGE 7
E6-3	STAGE 6	EB STH 29	128+50 RT	EXIT CURVE 25 MPH	1	1	MOVE ACROSS MEDIAN
E6-3	STAGE 6A	EB STH 29	128+50 RT	EXIT CURVE 25 MPH	1	1	SHIFT WEST FOR REVISED EXIT
E4-1	STAGE 7	WB STH 29	112+00 LT	MM 171.6	1	1	RETURN TO ORIGINAL LOCATION
E4-2	STAGE 7	WB STH 29	128+00 LT	MM 171.8	1	1	RETURN TO ORIGINAL LOCATION
E1-3	STAGE 8	WB STH 29	95+00 LT	MM 171.2	1	1	RETURN TO ORIGINAL LOCATION
E4-1	STAGE 8	WB STH 29	112+00 LT	MM 171.6	1	1	RETURN TO ORIGINAL LOCATION
E4-2	STAGE 4	WB STH 29	128+00 LT	MM 171.8	1	1	RETURN TO ORIGINAL LOCATION
E4-3	STAGE 8	WB STH 29	138+00 LT	MM 172.0	1	1	RETURN TO ORIGINAL LOCATION
E4-4	STAGE 8	EB STH 29	138+00 LT	MM 172.0	1	1	RETURN TO ORIGINAL LOCATION
PROJECT ID TOTALS					**21**	**21**	

TRAFFIC CONTROL

PROJECT	643.0200.01 SURVEILLANCE AND MAINTAINANCE PROJECT DAY	643.2000.01 TRAFFIC CONTROL DETOUR PROJECT EACH
1053-02-74	935	1
PROJECT ID TOTALS	**935**	**1**

ALL ITEMS ON THIS SHEET ARE CATEGORY 0010 UNLESS OTHERWISE NOTED

3

TRAFFIC CONTROL SIGNS PCMS

SIGN	2014 DAYS	2015 DAYS	2016 DAYS	2017 DAYS	643.1050 TRAFFIC CONTROL SIGNS PCMS NUMBER	643.1050 TRAFFIC CONTROL SIGNS PCMS DAYS	SPV.0045.21 PCMS CELLULAR COMMUNICATIONS NUMBER	SPV.0045.21 PCMS CELLULAR COMMUNICATIONS DAYS
PCMS W1	245	320	210	10	1	785	1	785
PCMS WB	---	5	---	---	1	80	---	---
PCMS E1	245	320	210	---	1	775	1	775
PCMS R1	10	60	10	---	1	80	---	---
PCMS R2	245	320	210	---	1	775	---	---
PCMS R3	3	---	---	---	1	3	---	---
PCMS B1	---	60	10	---	1	70	---	---
PCMS B2	---	60	10	---	1	70	---	---
PROJECT ID TOTALS						**2638**		**1560**

TRAFFIC CONTROL PAVEMENT MARKING

STAGE	646.0600 REMOVING PAVEMENT MARKING 4-INCH LF	646.0600 REMOVING PAVEMENT MARKING 8-INCH (2X 4-INCH) LF	646.0106 PAVEMENT MARKING EPOXY 4-INCH WHITE LF	646.0106 PAVEMENT MARKING EPOXY 4-INCH YELLOW LF	646.0126 PAVEMENT MARKING EPOXY 8-INCH WHITE LF	649.0400 TEMPORARY PAVEMENT MARKING 4-INCH WHITE LF	649.0400 TEMPORARY PAVEMENT MARKING 4-INCH YELLOW LF	649.0400 TEMPORARY PAVEMENT MARKING 4-INCH BLACK LF	649.0801 REMOVABLE TAPE 8-INCH BLACK LF	649.0801 REMOVABLE TAPE 8-INCH WHITE LF
STAGE 1	---	---	---	---	---	---	---	---	---	---
STAGE 2	---	---	3525	3300	2660	---	---	---	---	---
STAGE 3	8350	2800	---	---	---	6388	5100	525	---	2450
STAGE 3	63	---	---	---	---	1430	300	---	---	---
STAGE 3	50	400	50	---	---	750	600	---	---	---
STAGE 3A	---	---	---	---	---	700	900	---	---	2050
STAGE 4	---	---	---	---	---	4850	3850	---	---	1050
STAGE 5	---	---	6538	4450	2550	---	---	---	---	---
STAGE 6	13863	4400	---	---	---	14133	11175	700	950	4750
STAGE 6A	---	---	---	---	---	2070	1050	---	---	1720
STAGE 7	---	---	---	---	---	---	---	---	---	---
STAGE 8	---	---	---	---	---	---	---	---	---	---
SUBTOTALS	22325	7600	10113	7750	5210	30320	22975	1225	950	12020
PROJECT ID TOTALS		**29925**		**36748 ***	**5210**		**54520**			**12970**

TEMPORARY RAISED PAVEMENT MARKERS & VERTICAL PANELS

STAGE	DESCRIPTION	649.2100 TEMPORARY RAISED PAVEMENT MARKERS YELLOW EACH	649.2100 TEMPORARY RAISED PAVEMENT MARKERS WHITE EACH	SPV.0060.21 TRAFFIC CONTROL VERTICAL PANELS EACH
STAGE 1	STH 29	---	---	---
STAGE 2	STH 29	---	---	28
STAGE 3	STH 29	---	---	---
STAGE 3	WB 29 DETOUR	---	---	---
STAGE 3	BUS 51 NB	---	---	---
STAGE 3	BUS 51 SB	---	---	---
STAGE 3A	STH 29	---	---	---
STAGE 4	STH 29	---	---	31
STAGE 5	STH 29	78	162	---
STAGE 6	STH 29	---	---	---
STAGE 6A	STH 29	---	---	---
STAGE 7	STH 29	---	---	---
STAGE 8	STH 29	---	---	---
SUBTOTALS		**78**	**162**	**59**
PROJECT ID TOTALS			**240**	**59**

*** OTHER QUANTITIES LOCATED ELSEWHERE IN PLAN**

ALL ITEMS ON THIS SHEET ARE CATEGORY 0010 UNLESS OTHERWISE NOTED

3

CLEARING AND GRUBBING

STATION TO STATION	LOCATION	201.0105 CLEARING STA	201.0205 GRUBBING STA
25P+00 - 26P+00	SHARED-USE PATH	1	1
PROJECT ID TOTALS		**1**	**1**

REMOVING PAVEMENT

STATION TO STATION	LOCATION	204.0100 SY
15P+75 - 16P+08	DRIVEWAY	4
PROJECT ID TOTAL		**4**

REMOVING ASPHALTIC SURFACE

STATION TO STATION	LOCATION	204.0110 SY
18NB+40 - 18NB+55	RT	7
19NB+08 - 20NB+45	RT	61
20NB+82 - 21NB+79	RT	43
PROJECT ID TOTAL		**111**

REMOVING CONCRETE SIDEWALK

STATION TO STATION	LOCATION	204.0155 SY
16SB+30 - 18SB+60	MEDIAN BUSINESS 51	133
22SB+99 - 26SB+19	MEDIAN BUSINESS 51	184
15P+23 - 18P+25	SIDEWALK	168
18P+85 - 20P+00	SIDEWALK	64
20P+50 - 26P+00	SIDEWALK	305
PROJECT ID TOTAL		**854**

BASE AGGREGATE DENSE

STATION TO STATION	LOCATION	305.0110 3/4-INCH TON	305.0120 1 1/4-INCH TON
15P+23 - 26P+73.13	SHARED-USE PATH	150	400
PROJECT ID TOTALS		**150**	**400**

ASPHALTIC SURFACE

STATION TO STATION	LOCATION	465.0105 TON	455.0605 TACK COAT GAL
15P+23 - 26P+45.53	SHARED-USE PATH	270	30
PROJECT ID TOTALS		**270**	**30**

EARTHWORK SUMMARY

DIVISION	STATION TO STATION	LOCATION	CUT CY	205.0100 EXCAVATION COMMON CY	SALVAGED/ UNUSABLE PAVEMENT MATERIAL CY	(9) AVAILABLE MATERIAL CY	UNEXPANDED FILL CY	(2) (4) EXPANDED FILL CY	(5) MASS ORDINATE +/- CY	(3) 209.0100 BACKFILL GRANULAR CY
1053-02-75	15P+23 - 26P+73.13	BUS 51 PATH	410	410	102	308	275	344	-36	
DIVISION 3/3A/4 SUBTOTAL				410	102	308	275	344	-36	36
PROJECT ID TOTALS				**410**						**36**

(2) EXPANSION FACTOR = 1.25
(3) BACKFILL GRANULAR = EXPANDED FILL -AVAILABLE MATERIAL
(4) EXPANDED FILL = UNEXPANDED FILL * EXPANSION FACTOR
(5) THE MASS ORDINATE + OR - QTY CALCULATED FOR THE DIVISION. PLUS QUANTITY INDICATES AN EXCESS OF MATERIAL WITHIN THE DIVISION. MINUS
(9) AVAILABLE MATERIAL = COMMON EXCAVATION - SALVAGED/UNUSABLE MATERIAL.

CONCRETE SIDEWALK 4-INCH

STATION TO STATION	LOCATION	602.0405 SF	SPV.0035.03 COLORING CONCRETE BROWN CY
16SB+30 - 26SB+19	MEDIAN	5638	70
18P+40 - 20P+40	BLVD	557	7
18NB+55 - 20NB+80	BLVD	906	11
25P+88.78 - 26P+04.22	SIDEWALK	16	---
26P+45.53 - 26P+73.13	SIDEWALK	23	---
PROJECT ID TOTAL		**7140**	**88**

RECONSTRUCTING INLET

STATION	LOCATION	611.0430 EACH	COMMENTS
20P+99	SHARED-USE PATH	1	ADD RISER TO EXISTING INLET
PROJECT ID TOTAL		**1**	

ADJUSTING MANHOLE COVER

CATEGORY	STATION	LOCATION	611.8110 EACH
0080	22P+21	SHARED-USE PATH	1
PROJECT ID TOTAL			**1**

SALVAGED TOPSOIL, MULCHING, FERTILIZER, & SEEDING

STATION TO STATION	LOCATION	625.0500 SALVAGED TOPSOIL SY	627.0200 MULCHING SY	629.0205 FERTILIZER TYPE A CWT	630.0130 SEEDING MIXTURE NO. 30 LB	630.0140 SEEDING MIXTURE NO. 40 LB	630.0200 SEEDING TEMPORARY LB	SPV.0180.06 PREPARING TOPSOIL FOR LAWN TYPE TURF SY
15P+23 - 26P+73.13	SHARED-USE PATH	1130	410	1.7	58	38	33	1130
18NB+40 - 21NB+79	NB TERRACE	50	---	0.1	2	---	1	50
UNDISTRIBUTED		---	100	0.5	5	2	1	---
PROJECT ID TOTALS		**1180**	**510**	**2.3**	**65**	**40**	**35**	**1180**

MOBILIZATIONS EROSION CONTROL & EMERGENCY EROSION CONTROL

LOCATION	628.1905 EACH	628.1910 EMERGENCY EACH
1053-02-75	1	1
PROJECT ID TOTALS	**1**	**1**

WATER

LOCATION	624.0100 MGAL
BASE COMPACTION	2
DUST CONTROL	2
PROJECT ID TOTAL	**4**

EROSION MAT URBAN CLASS I TYPE B

STATION TO STATION	LOCATION	STAGE	628.2008 SY
15P+23 - 26P+73.13	SHARED-USE PATH	3	576
18NB+40 - 21NB+79	NB TERRACE	3	50
UNDISTRIBUTED			144
PROJECT ID TOTAL			**770**

INLET PROTECTION TYPE A

STATION	LOCATION	STAGE	628.7005 EACH
20P+99	LT	3	1
PROJECT ID TOTAL			**1**

ALL ITEMS ON THIS SHEET ARE CATEGORY 0060 UNLESS OTHERWISE NOTED

3

SIGNS TYPE II REFLECTIVE F & POSTS WOOD 4X6-INCH 12-FT

SIGN NO.	STATION	SIGN CODE	SIZE	634.0612 POST EACH	637.2230 SIGN SF	COMMENTS
2-3	21P+50, LT	W5-2A	18 X 18	1	2.25	LOCATED ALONG PATH
2-8	18P+40, LT	W5-52L	12 X 36	1	3.00	LOCATED ALONG PATH
2-9	20P+30, LT	W5-52R	12 X 36	1	3.00	LOCATED ALONG PATH
2-10	17P+20, RT	W5-2A	18 X 18	1	2.25	LOCATED ALONG PATH
PROJECT ID TOTALS				**4**	**10.50**	

MOVING SIGNS & SMALL SIGN SUPPORTS

SIGN NO.	EXISTING STATION	NEW STATION	638.2102 TYPE II EACH	638.4000 SMALL SIGN SUPPORTS EACH
100	19SB+35, RT	19SB+35, RT	1	2
101	23SB+75, RT	23SB+75, RT	1	1
PROJECT ID TOTALS			**2**	**3**

CONSTRUCTION STAKING

STATION TO STATION	650.4500 SUBGRADE LF	650.5000 BASE LF	650.9920 SLOPE STAKES LF
15P+23 - 26P+73.13	1150	1150	1150
PROJECT ID TOTALS	**1150**	**1150**	**1150**

SAWING CONCRETE

STATION TO STATION	LOCATION	STAGE	690.0250 LF
15P+25, RT	EXISTING SIDEWALK	3	6
15P+75 - 16P+08, RT	EXISTING DRIVEWAY	3	33
26P+00, RT	EXISTING SIDEWALK	3	5
PROJECT ID TOTAL			**44**

ALL ITEMS ON THIS SHEET
ARE CATEGORY 0060
UNLESS OTHERWISE NOTED

NORTHERN PIN OAK, B & B, 3-INCH

STATION	LOCATION	632.0101.01 EACH
24P+88	BLVD	1
24P+38	BLVD	1
23P+88	BLVD	1
23P+38	BLVD	1
PROJECT ID TOTAL		**4**

AUTUMN BLAZE MAPLE, B & B, 3-INCH

STATION	LOCATION	632.0101.02 EACH
20+75	MEDIAN	1
23+17	MEDIAN	1
23+69	MEDIAN	1
22+24	MEDIAN	1
PROJECT ID TOTAL		**4**

IVORY SILK TREE LILAC, B & B, 2.5-INCH

STATION	LOCATION	632.0101.03 EACH
24P+80	SIGN BED	1
24P+95	SIGN BED	1
25P+26	SIGN BED	1
25P+42	SIGN BED	1
PROJECT ID TOTAL		**4**

DARK GREEN SPREADING YEWS, CONTAINER, #7

STATION TO STATION	LOCATION	632.0201.01 EACH
24P+86 - 25P+39	SIGN BED	12
PROJECT ID TOTAL		**12**

NORTHWIND SWITCH GRASS #1 CG

STATION TO STATION	LOCATION	SPV.0060.04 EACH
24P+68 - 24P+76	SIGN BED	9
25P+45 - 25P+55	SIGN BED	11
PROJECT ID TOTAL		**20**

FLAME GRASS #1 CG

STATION TO STATION	LOCATION	SPV.0060.05 EACH
20+58 - 23+06	MEDIAN	147
PROJECT ID TOTAL		**147**

ELIJAH BLUE FESCUE #1 CG

STATION TO STATION	LOCATION	SPV.0060.06 EACH
25P+00 - 25P+22	SIGN BED	19
PROJECT ID TOTAL		**19**

HAPPY RETURNS DAYLILY #1 CG

STATION TO STATION	LOCATION	SPV.0060.07 EACH
17+00 - 17+76	MEDIAN	59
20+58 - 23+06	MEDIAN	139
23+06 - 25+80	MEDIAN	213
24P+60 - 25P+62	SIGN BED	186
PROJECT ID TOTAL		**597**

SILVER PINK YOUNIQUE ASTILBE #1 CG

STATION TO STATION	LOCATION	SPV.0060.08 EACH
24P+72 - 24P+98	SIGN BED	16
25P+22 - 25P+50	SIGN BED	19
PROJECT ID TOTAL		**35**

AUTUMN JOY STONECROP #1 CG

STATION TO STATION	LOCATION	SPV.0060.09 EACH
17+76 - 18+58	MEDIAN	72
20+58 - 23+06	MEDIAN	295
24P+72 - 24P+96	SIGN BED	33
25P+25 - 25P+50	SIGN BED	33
PROJECT ID TOTAL		**433**

POMEGRANITE YARROW #1 CG

STATION TO STATION	LOCATION	SPV.0060.10 EACH
25P+00 - 25P+22	SIGN BED	36
PROJECT ID TOTAL		**36**

LANDSCAPE SURVEILLANCE AND CARE CYCLE

LOCATION	SPV.0105.08 LS
BUSINESS 51	1

ALUMINUM LANDSCAPE EDGING

LOCATION	SPV.0090.01 LF
SIGN BED	117
PROJECT ID TOTAL	**117**

LAWN SPRINKLER SYSTEM

CATEGORY	LOCATION	SPV.0105.05 LS
0070	BUSINESS 51	1

WATER FOR SEEDED AREAS

LOCATION	SPV.0120.01 MGAL
ENTIRE PROJECT	200
PROJECT ID TOTAL	**200**

SALVAGED TOPSOIL SPECIAL & WOOD MULCH

STATION TO STATION	LOCATION	SPV.0180.04 TOPSOIL SPECIAL SY	SPV.0180.05 WOOD MULCH SY
17SB+00 - 18SB+58	MEDIAN	41	41
20SB+58 - 25SB+80	MEDIAN	382	382
24P+60 - 25P+62	SIGN BED	277	277
PROJECT ID TOTALS		**700**	**700**

SEE LANDSCAPE PLAN FOR ADDITIONAL PLANTING INFORMATION.

ALL ITEMS ON THIS SHEET ARE CATEGORY 0060 UNLESS OTHERWISE NOTED

3

CLEARING AND GRUBBING

STATION TO STATION	LOCATION	201.0105 CLEARING STA	201.0205 GRUBBING STA
15+00 - 20+00	RT/LT	5	5
21+00 - 24+00	RT/LT	3	3
28+00 - 30+00	RT	2	2
PROJECT ID TOTALS		**10**	**10**

REMOVING ASPHALTIC SURFACE

STATION TO STATION	LOCATION	204.0110 SY
15+85	RT, FLUME	17
PROJECT ID TOTAL		**17**

REMOVING FENCE

STATION TO STATION	LOCATION	204.0170 LF
18+83 - 19+15	LT	70
18+40 - 19+12	RT	92
22+10 - 22+26	LT	80
22+07 - 22+29	RT	87
PROJECT ID TOTAL		**329**

REMOVING GUARDRAIL

STATION TO STATION	LOCATION	204.0165 LF
15+85 - 19+17	LT	332
15+89 - 19+14	RT	325
22+09 - 28+36	LT	627
22+06 - 28+33	RT	627
PROJECT ID TOTAL		**1911**

REMOVING SMALL PIPE CULVERTS

STATION	LOCATION	DIAMETER	MATERIAL	LENGTH	203.0100 EACH
19+09	LT	24"	CPCM	70'	1
19+06	RT	24"	CPCM	60'	1
PROJECT ID TOTAL					**2**

REMOVING SURFACE DRAINS

STATION TO STATION	LOCATION	204.0190 EACH
19+06 - 19+31	LT	1
19+04 - 19+29	RT	1
PROJECT ID TOTAL		**2**

REMOVING INLETS

STATION	LOCATION	204.0220 EACH	COMMENTS
19+09	LT	1	DROP INLET
19+06	RT	1	DROP INLET
PROJECT ID TOTAL		**2**	

EARTHWORK SUMMARY

DIVISION	STATION TO STATION	LOCATION	CUT CY	205.0100 EXCAVATION COMMON CY	SALVAGED/ UNUSABLE PAVEMENT MATERIAL CY	(9) AVAILABLE MATERIAL CY	(8) EBS CY	UNEXPANDED FILL CY	(2) (4) EXPANDED FILL CY	(5) MASS ORDINATE +/- CY	(1) WASTE CY	(3) 209.0100 BACKFILL GRANULAR CY	(6) 208.0100 BORROW CY
1053-05-60	81XE +00- 88XE+50	EM LINE	243	243	---	243	---	348	435	-192			
1053-05-60	82WB+50 - 93WB+00	WN LINE	286	286	---	286	---	559	699	-413			
1053-05-60	15+00 - 29+50	SUNRISE DRIVE	465	465	---	465	---	6789	8486	-8021			
DIVISION 2 SUBTOTAL				994	---	994	---	7696	9620	-8626	---	8626	---
PROJECT ID TOTALS				**994**								**8626**	**---**

(1) WASTE = EXPANDED FILL - EXCAVATION COMMON (FOR INFORMATION ONLY - NOT A BID ITEM)
(2) EXPANSION FACTOR = 1.25
(3) BACKFILL GRANULAR = EXPANDED FILL -AVAILABLE MATERIAL
(4) EXPANDED FILL = UNEXPANDED FILL * EXPANSION FACTOR
(5) THE MASS ORDINATE + OR - QTY CALCULATED FOR THE DIVISION. PLUS QUANTITY INDICATES AN EXCESS OF MATERIAL WITHIN THE DIVISION. MINUS INDICATES A SHORTAGE
(6) BORROW REQUIRED TO BE PLACED OVER PROPOSED AREA FOR REUSE OF LOW-LEVEL CONTAMINATED MATERIAL. BACKFILL GRANULAR IS NOT ALLOWED AS FILL OVER THIS MATERIAL.
(8) EBS PAID FOR AS EXCAVATION COMMON.
(9) AVAILABLE MATERIAL = COMMON EXCAVATION - SALVAGED/UNUSABLE MATERIAL.

FINISHING ROADWAY

LOCATION	213.0100 EACH
03. 1053-05-60	1
PROJECT ID TOTAL	**1**

REMOVING ASPHALTIC SURFACE MILLING

STATION TO STATION	LOCATION	204.0120 SY
82WB+76 - 97WB+50	WB WIDENING OUTSIDE	1311
81XE+27 - 90XE+50	EB WIDENING MEDIAN	411
87EN+45 - 94EN+50	EB WIDENING OUTSIDE	412
PROJECT ID TOTAL		**2134**

BASE AGGREGATE DENSE

STATION TO STATION	LOCATION	305.0110 3/4-INCH TON	305.0120 1 1/4-INCH TON	305.0130 3-INCH TON
15+50 - 17+00	LT/RT SHOULDER	50	---	---
17+00 - 19+30	SUNRISE DR	50	500	---
21+92 - 22+75	SUNRISE DR	15	180	---
22+75 - 28+00	LT/RT SHOULDER	120	400	---
28+00 - 29+50	LT/RT SHOULDER	50	---	---
82WB+76 - 97WB+50	WB WIDENING OUTSIDE	---	280	620
81XE+27 - 90XE+50	EB WIDENING MEDIAN	---	400	840
PROJECT ID TOTALS		**285**	**1760**	**1460**

CONCRETE SURFACE DRAINS

STATION TO STATION	LOCATION	TYPE	416.1010 CY
19+03 - 19+31	LT	DROP INLET	3.2
19+00 - 19+29	RT	DROP INLET	3.2
21+93 - 22+22	LT	FLUME	1.5
21+91 - 22+20	RT	FLUME	1.5
PROJECT ID TOTAL			**9.4**

ALL ITEMS ON THIS SHEET
ARE CATEGORY 0010
UNLESS OTHERWISE NOTED

3

HMA PAVEMENT ITEMS

STATION TO STATION	LOCATION	460.1101 HMA PAVEMENT TYPE E-1 TON	455.0105 ASPHALTIC MATERIAL PG58-28 TON	455.0605 TACK COAT GAL	465.0125 ASPHALTIC SURFACE TEMPORARY TON
17+00 - 19+30	SUNRISE DR	190	11	21	---
21+92 - 22+75	SUNRISE DR	61	4	7	---
22+75 - 28+00	LT/RT SHOULDER	163	9	18	---
82WB+76 - 97WB+50	WB WIDENING OUTSIDE	---	---	53	393
81XE+27 - 90XE+50	EB WIDENING MEDIAN	---	---	47	476
87EN+45 - 94EN+50	EB WIDENING OUTSIDE	---	---	10	50
PROJECT ID TOTALS		**414**	**24**	**156**	**919**

MOBILIZATIONS EROSION CONTROL

LOCATION	628.1905 EACH
1053-05-60	5
PROJECT ID TOTAL	**5**

RIPRAP LIGHT & GEOTEXTILE FABRIC TYPE R

STATION	LOCATION	STAGE	606.0100 RIPRAP LIGHT CY	645.0130 GEOTEXTILE FABRIC TYPE R SY
19+06	LT	2	2	8
19+03	RT	2	2	8
22+14	RT	2	2	8
22+17	LT	2	2	8
PROJECT ID TOTALS			**8**	**32**

MOBILIZATIONS EMERGENCY EROSION CONTROL

LOCATION	628.1910 EACH
1053-05-60	5
PROJECT ID TOTAL	**5**

DROP INLETS

STATION	LOCATION	611.3225 INLETS 2x2.5-FT EACH	611.0654 INLET COVERS TYPE V EACH	521.1012 APRON ENDWALLS FOR CULVERT PIPE STEEL 12-INCH EACH	612.0212 PIPE UNDERDRAIN UNPERFORATED 12-INCH LF	GRATE ELEV	TOP OF BOX ELEV	OUTLET INVERT ELEV	STRUCTURE DEPTH FT	COMMENTS
19+06	LT	1	1	1	68					
19+03	RT	1	1	1	68					
PROJECT ID TOTALS		**2**	**2**	**2**	**136**					

NOTES
- ALL SUBSURFACE ELEVATIONS ARE PIPE FLOWLINES
- STRUCTURE DEPTH = DISTANCE FROM TOP OF BOX TO DISCHARGE ELEVATION
- FINAL LOCATION TO BE DETERMINED BY ENGINEER
- TOP OF BOX ELEVATION = GRATE ELEVATION - INLET COVER DEPTH - 6" ADJUSTMENT

STEEL THRIE BEAM

STATION TO STATION	LOCATION	614.0220 BULLNOSE TERMINAL EACH	614.0230 LF
87WB+06 - 87WB+59	RT, MEDIAN	1	---
87WB+59 - 88WB+09	RT, MEDIAN	---	100
88WB+09 - 88WB+63	RT, MEDIAN	1	---
PROJECT ID TOTALS		**2**	**100**

MGS GUARDRAIL

STATION TO STATION	LOCATION	614.2500 MGS THRIE BEAM TRANSITION LF	614.2300 MGS GUARDRAIL 3 LF	614.2610 MGS GUARDRAIL TERMINAL EAT EACH
17+00 - 19+15	LT	39	125	1
17+00 - 19+12	RT	39	125	1
22+10 - 28+00	LT	39	500	1
22+07 - 28+00	RT	39	500	1
PROJECT ID TOTALS		**156**	**1250**	**4**

FENCE CHAIN LINK 4-FT

STATION TO STATION	LOCATION	616.0204 LF
18+83 - 19+15	LT	70
18+40 - 19+12	RT	92
22+10 - 22+26	LT	80
22+07 - 22+29	RT	87
PROJECT ID TOTAL		**329**

MOBILIZATION

LOCATION	619.1000 EACH
1053-05-60	0.02
PROJECT ID TOTAL	**0.02**

WATER

LOCATION	624.0100 MGAL
BASE COMPACTION	15
DUST CONTROL	25
PROJECT ID TOTAL	**40**

ALL ITEMS ON THIS SHEET ARE CATEGORY 0010 UNLESS OTHERWISE NOTED

3

SALVAGED TOPSOIL, MULCHING, FERTILIZER, & SEEDING

STATION TO STATION	LOCATION	625.0500 SALVAGED TOPSOIL SY	627.0200 MULCHING SY	629.0205 FERTILIZER TYPE A CWT	630.0120 SEEDING MIXTURE NO. 20 LB	630.0200 SEEDING TEMPORARY LB
15+50 - 19+30	LT	2043	2043	1	55	28
15+50 - 19+30	RT	1813	1813	1	55	24
21+92 - 29+50	LT	3773	3773	2	55	51
21+92 - 29+50	RT	1479	1479	1	55	20
82WB+76 - 93WB+00	WB WIDENING OUTSIDE	2390	2390	2	55	32
81XE+27 - 88XE+50	EB WIDENING MEDIAN	1528	1528	1	55	21
UNDISTRIBUTED			3224	2	84	44
PROJECT ID TOTALS		**13026**	**16250**	**10**	**415**	**220**

SILT FENCE

STATION TO STATION	LOCATION	STAGE	628.1504 LF	628.1520 MAINTENANCE LF
15+50 - 19+00	RT	2	350	700
22+50 - 29+50	LT	2	700	1400
22+50 - 29+50	RT	2	700	1400
UNDISTRIBUTED			500	1000
PROJECT ID TOTALS			**2250**	**4500**

EROSION MAT CLASS I TYPE B

STATION TO STATION	LOCATION	STAGE	628.2004 SY
17+00 - 19+30	LT	2	1227
17+00 - 19+30	RT	2	1121
22+00 - 28+00	LT	2	3130
22+00 - 28+00	RT	2	3238
UNDISTRIBUTED			2179
PROJECT ID TOTAL			**10895**

INLET PROTECTION

STATION	LOCATION	STAGE	628.7005 TYPE A EACH	628.7015 TYPE C EACH
19+06	DROP INLET, LT	2	1	1
19+03	DROP INLET, RT	2	1	1
PROJECT ID TOTALS			**2**	**2**

TEMPORARY RAISED PAVEMENT MARKERS

STAGE	649.2100 YELLOW EACH	649.2100 WHITE EACH
STAGE 2A	---	---
STAGE 2B	63	121
STAGE 2C	34	126
SUBTOTALS	97	247
PROJECT ID TOTAL	**344**	

CULVERT PIPE CHECKS

STATION	LOCATION	STAGE	628.7555 EACH
22+00	RT	2	5
UNDISTRIBUTED			5
PROJECT ID TOTAL			**10**

CONCRETE BARRIER TEMPORARY PRECAST

STAGE	LOCATION	603.8000 DELIVERED LF	603.8125 INSTALLED LF
STAGE 2A	STH 29	---	---
STAGE 2B	STH 29	1730	1730
STAGE 2C	STH 29	1400	3200
PROJECT ID TOTALS		**3130**	**4930**

TEMPORARY DITCH CHECKS

STATION	LOCATION	STAGE	628.7504 LF
19+00	LT	2	10
19+00	RT	2	10
22+00	LT	2	10
29+50	LT	2	10
29+50	RT	2	10
UNDISTRIBUTED			10
PROJECT ID TOTAL			**60**

WATER FOR SEEDED AREAS

LOCATION	SPV.0120.01 MGAL
ENTIRE PROJECT	200
PROJECT ID TOTAL	200

PAVEMENT MARKING EPOXY 4-INCH

STATION TO STATION	DESCRIPTION	646.0106 WHITE LF	646.0106 YELLOW LF
17+00 - 28+00	LT/RT EDGELINE	2200	---
17+00 - 28+00	DOUBLE YELLOW	---	2200
SUB-TOTALS		**2200**	**2200**
PROJECT ID TOTAL		**4400**	

SIGNS TYPE II REFLECTIVE & WOOD POSTS

SIGN NO.	STATION	SIGN CODE	SIZE	634.0612 POSTS WOOD 4X6-INCH 12-FT EACH	634.0614 POSTS WOOD 4X6-INCH 14-FT EACH	634.0616 POSTS WOOD 4X6-INCH 16-FT EACH	637.2210 SIGNS TYPE II REFLECTIVE H SF	637.2230 SIGNS TYPE II REFLECTIVE F SF	COMMENT
4-1	15+05, RT	R2-1	24 X 30	---	1	---	5.0	---	"30"
4-2	27+50, RT	W1-2R	30 X 30	---	---	1	---	6.3	
4-3	19+05, RT	W5-52R	12 X 36	1	---	---	---	3.0	
4-4	19+05, LT	W5-52L	12 X 36	1	---	---	---	3.0	
4-5	22+15, LT	W5-52R	12 X 36	1	---	---	---	3.0	
4-6	23+50, LT	W1-2L	30 X 30	---	---	1	---	6.3	
4-7	22+15, LT	W5-52L	12 X 36	1	---	---	---	3.0	
4-8	15+85, LT	R2-1	24 X 30	---	1	---	5.0	---	"30"
PROJECT ID TOTALS				**4**	**1**	**2**	**10.0**	**24.5**	

REMOVING SIGNS TYPE II

STATION	SIGN MESSAGE	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH
15+05, RT	SPEED LIMIT 30 MPH	1	1
18+88, RT	ROAD CURVES RIGHT	1	1
19+05, LT&RT	BRIDGE MARKER	2	2
22+15, LT&RT	BRIDGE MARKER	2	2
23+50, LT	ROAD CURVES LEFT	1	1
PROJECT ID TOTALS		**7**	**7**

ALL ITEMS ON THIS SHEET ARE CATEGORY 0010 UNLESS OTHERWISE NOTED

3

CONSTRUCTION STAKING

STATION TO STATION	650.4500 SUBGRADE LF	650.5000 BASE LF	650.9920 SLOPE STAKES LF
15+50 - 17+00	---	---	150
17+00 - 19+30	230	230	230
21+92 - 28+00	608	608	608
28+00 - 29+50	---	---	150
82WB+76 - 93WB+00	1024	1024	1024
81XE+27 - 88XE+50	723	723	723
PROJECT ID TOTALS	**2585**	**2585**	**2885**

CONSTRUCTION STAKING SUPPLEMENTAL CONTROL

PROJECT	650.9910.03 LS
1053-05-60	1

SAWING ASPHALT

STATION TO STATION	LOCATION	690.0150 LF
15+80 - 16+10	RT	30
17+00	SUNRISE DR	30
22+75	SUNRISE DR	22
22+75 - 28+00	LT	529
22+75 - 28+00	RT	529
PROJECT ID TOTAL		**1140**

CRASH CUSHION TEMPORARY

STAGE	LOCATION	614.0905 EACH	BACK WIDTH FT	OBJECT MARKING PATTERN	CRASH TEST LEVEL	TRAFFIC DIRECTION	TRAFFIC LOCATION	CRASH CUSHION SHIELDS
STAGE 2B	81+00 EB	1	2	OM-3R	TL-3	UNIDIRECTIONAL	R	TEMP BARRIER ON OUTSIDE SHOULDER
STAGE 2B	95+00 WB	1	2	OM-3R	TL-3	UNIDIRECTIONAL	R	TEMP BARRIER ON OUTSIDE SHOULDER
STAGE 2C	81+00 EB	1	2	OM-3L	TL-3	UNIDIRECTIONAL	L	TEMP BARRIER ON INSIDE SHOULDER
PROJECT ID TOTAL		**3**						

TRAFFIC CONTROL SIGNS FIXED MESSAGE

NO.	INSTALL IN	STATION/LOCATION	MESSAGE	ALSO USED IN STAGE	SIZE IN X IN	643.1000 SF	NOTES
T2-2	STAGE 2B	NB IH 39	GREEN BAY AHEAD	---	60 X 15	6.25	FOR DETOUR
T2-3	STAGE 2A	FOX GLOVE RD	BRIDGE CLOSED OVER HWY 29	---	54 X 18	6.75	
T2-4	STAGE 2A	BUS 51/BIKE RTE 7	BIKE ROUTE 7 CLOSED 2.5 MI	---	72 X 15	7.50	ADJACENT TO TRAIL EAST OF BUS 51
T2-5	STAGE 2A	BIKE RTE 7 AT WI RIVER	BRIDGE CLOSED OVER HWY 29	---	54 X 18	6.75	
T2-6	STAGE 2A	BIKE RTE 7 AT WI RIVER	BIKE ROUTE 7 CLOSED .9 MI	---	54 X 24	9.00	
T2-7	STAGE 2A	SUNRISE DR AT SUNRISE CT	BRIDGE CLOSED OVER HWY 29	---	54 X 18	6.75	
T2-8	STAGE 2A	SUNRISE DR AT SUNRISE CT	BIKE ROUTE 7 CLOSED .3 MI	---	54 X 24	9.00	
T2-9	STAGE 2A	LILAC AVE AT TULIP LN	BRIDGE CLOSED OVER HWY 29	---	54 X 18	6.75	
T2-10	STAGE 2A	LILAC AVE AT TULIP LN	BIKE ROUTE 7 CLOSED 1.9 MI	---	54 X 24	9.00	
T3-1	STAGE 2B	105+75 WB STH 29 LT	LEFT 1/2 MILE	2C,3,4,6,7	144 X 24	24.00	ALSO USE IN PROJECT 1053-04-74
PROJECT ID TOTAL						**91.75**	

SIGNS USED IN STAGE 2C ARE TO BE REMOVED AT THE COMPLETION OF STAGE 2C AND REINSTALLED AT THE BEGINNING OF STAGE 3

TRAFFIC CONTROL

STAGE	DESCRIPTION	DAYS	643.0300 DRUMS NUMBER	643.0300 DRUMS DAYS	643.0410 BARRICADES TYPE II NUMBER	643.0410 BARRICADES TYPE II DAYS	643.0420 BARRICADES TYPE III NUMBER	643.0420 BARRICADES TYPE III DAYS	643.0705 WARNING LIGHTS TYPE A NUMBER	643.0705 WARNING LIGHTS TYPE A DAYS	643.0715 TYPE C NUMBER	643.0715 TYPE C DAYS	643.0800 ARROW BOARDS NUMBER	643.0800 ARROW BOARDS DAYS	643.0900 SIGNS NUMBER	643.0900 SIGNS DAYS	CYCLES	643.0910 COVERING SIGNS TYPE I NUMBER	643.0910 COVERING SIGNS TYPE I EACH	643.0920 TYPE II NUMBER	643.0920 TYPE II EACH	643.3000 DETOUR SIGNS NUMBER	643.3000 DETOUR SIGNS DAYS
STAGE 2A	STH 29	46	50	2300	---	---	2	92	---	---	---	---	---	---	36	1656	1	---	---	---	---	---	---
STAGE 2A	VOLKMAN	7	38	266	2	14	1	7	---	---	---	---	---	---	7	49	1	---	---	---	---	---	---
STAGE 2A	SUNRISE	46	---	---	---	---	16	736	23	1058	---	---	---	---	10	460	1	---	---	---	---	---	---
STAGE 2B	STH 29/ IH 39	21	68	1428	---	---	3	63	3	63	---	---	---	---	62	1302	1	1	1	3	3	---	---
STAGE 2B	NB-EB DETOUR	21	---	---	---	---	---	---	---	---	---	---	---	---	18	378	1	1	1	7	7	29	609
STAGE 2C	STH 29	22	7	154	---	---	4	88	---	---	---	---	---	---	55	1210	1	---	---	---	---	---	---
LANE CLOSURE	EB STH 29 INSIDE	5	105	525	---	---	2	10	---	---	16	80	2	10	17	85	5	---	---	1	5	---	---
LANE CLOSURE	EB STH 29 OUTSIDE	4	39	156	---	---	6	24	---	---	16	64	2	8	20	80	4	---	---	1	4	---	---
LANE CLOSURE	WB STH 29 INSIDE	5	98	490	---	---	6	30	---	---	16	80	2	10	17	85	5	---	---	2	10	---	---
LANE CLOSURE	WB STH 29 OUTSIDE	4	213	852	---	---	7	28	---	---	34	136	2	8	21	84	4	---	---	2	8	---	---
PROJECT ID TOTALS				**6171**		**14**		**1078**		**1121**		**360**		**36**		**5389**			**2**		**37**		**609**

ALL ITEMS ON THIS SHEET
ARE CATEGORY 0010
UNLESS OTHERWISE NOTED

3

TRAFFIC CONTROL

PROJECT	643.0200.03 SURVEILLANCE AND MAINTAINANCE PROJECT DAY	643.2000.03 TRAFFIC CONTROL DETOUR PROJECT EACH
1053-05-60	89	1
PROJECT ID TOTALS	**89**	**1**

TRAFFIC CONTROL SIGNS PCMS

SIGN	2014 DAYS	643.1050 NUMBER	643.1050 DAYS
PCMS S1	53	1	53
PCMS S2	10	1	10
PCMS S3	10	1	10
PROJECT ID TOTAL			**73**

TRAFFIC CONTROL PAVEMENT MARKING

STAGE	646.0600 REMOVING PAVEMENT MARKING 4-INCH LF	649.0400 TEMPORARY PAVEMENT MARKING 4-INCH WHITE LF	649.0400 4-INCH YELLOW LF	649.0400 4-INCH BLACK LF	649.0801 REMOVABLE TAPE 8-INCH BLACK LF	649.0801 8-INCH WHITE LF
STAGE 2A	---	---	---	---	---	---
STAGE 2B	6350	4288	3150	838	300	300
STAGE 2C	---	7105	3410	---	---	---
SUBTOTALS	6350	11393	6560	838	300	300
PROJECT ID TOTALS	**6350**		**18791**		**600**	

3

ALL ITEMS ON THIS SHEET
ARE CATEGORY 0010
UNLESS OTHERWISE NOTED

STATE OF WISCONSIN - MARATHON COUNTY
RECORDED
08/21/2013 2:54:41 AM
MICHAEL J. SYDOW, REGISTER OF DEEDS

DOC# 1655919

TRANSPORTATION PROJECT PLAT NO: 1053-02-24 - 4.01

LOCATED IN THE SOUTHWEST 1/4 OF THE NORTHEAST 1/4 OF SECTION 24, TOWNSHIP 28 NORTH, RANGE 7 EAST, VILLAGE OF ROTHSCHILD, MARATHON COUNTY, WISCONSIN

RELOCATION ORDER STH 29, WAUSAU - WITTENBERG (SUNRISE DRIVE TO BUSINESS 51)

TO PROPERLY ESTABLISH, LAY OUT, WIDEN, ENLARGE, EXTEND, CONSTRUCT, RECONSTRUCT, IMPROVE, OR MAINTAIN A PORTION OF THE HIGHWAY DESIGNATED ABOVE, THE STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DEEMS IT NECESSARY TO RELOCATE OR CHANGE SAID HIGHWAY AND ACQUIRE CERTAIN LANDS AND INTERESTS OR RIGHTS IN LANDS FOR THE ABOVE PROJECT.

TO EFFECT THIS CHANGE, PURSUANT TO AUTHORITY GRANTED UNDER SECTION 84.02 (3) AND 84.09, WISCONSIN STATUTES, THE DEPARTMENT OF TRANSPORTATION

1. THAT PORTION OF SAID HIGHWAY AS SHOWN ON THIS PLAT IS LAID OUT AND ESTABLISHED TO THE LINES AND WIDTHS AS SO SHOWN FOR THE ABOVE PROJECT.
2. THE LANDS OR INTERESTS OR RIGHTS IN LANDS AS SHOWN ON THIS PLAT ARE REQUIRED BY THE DEPARTMENT FOR THE ABOVE PROJECT AND SHALL BE ACQUIRED IN THE NAME OF THE STATE OF WISCONSIN, PURSUANT TO THE PROVISIONS OF SECTION 84.09 (1) OR (2), WISCONSIN STATUTES.

Doc.# 1655919
REGISTER OF DEEDS
Marathon County, Wis.
Received for Record this 21st
day of August A.D. 2013
at 9:54 o'clock A.M. in Plat
Cabinet No. 3 on page 536B
Michael J. Sydow
REGISTRAR

RESERVED FOR REGISTER OF DEEDS
PROJECT NUMBER 1053-02-24 - 4.01
AMENDMENT NO:...

NOTES:

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

ALL NEW RIGHT-OF-WAY MONUMENTS WILL BE TYPE 2 (TYPICALLY 1" I.D. X 24" IRON PIPE), UNLESS OTHERWISE NOTED, AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT.

ALL RIGHT-OF-WAY LINES DEPICTED IN THE NON-ACQUISITION AREAS ARE INTENDED TO RE-ESTABLISH EXISTING RIGHT-OF-WAY LINES AS DETERMINED FROM PREVIOUS PROJECTS, OTHER RECORDED DOCUMENTS, OR FROM CENTERLINE OF EXISTING PAVEMENTS.

RIGHT-OF-WAY BOUNDARIES ARE DEFINED WITH COURSES OF THE PERIMETER OF THE HIGHWAY LANDS REFERENCED TO THE U.S. PUBLIC LAND SURVEY SYSTEM OR OTHER "SURVEYS" OF PUBLIC RECORD.

A TEMPORARY LIMITED EASEMENT (TLE) IS A RIGHT FOR CONSTRUCTION PURPOSES, AS DEFINED HEREIN, INCLUDING THE RIGHT TO OPERATE NECESSARY EQUIPMENT THEREON, THE RIGHT OF INGRESS AND EGRESS, AS LONG AS REQUIRED FOR SUCH PUBLIC PURPOSE, INCLUDING THE RIGHT TO PRESERVE, PROTECT, REMOVE, OR PLANT THEREON ANY VEGETATION THAT THE HIGHWAY AUTHORITIES MAY DEEM DESIRABLE. ALL (TLE'S) ON THIS PLAT EXPIRE AT THE COMPLETION OF THE CONSTRUCTION PROJECT FOR WHICH THIS INSTRUMENT IS GIVEN.

A HIGHWAY EASEMENT (HE) IS AN EASEMENT FOR HIGHWAY PURPOSES, AS LONG AS SO USED, INCLUDING THE RIGHT TO PRESERVE, PROTECT, REMOVE, OR PLANT THEREON ANY VEGETATION THAT THE HIGHWAY AUTHORITIES MAY DEEM NECESSARY OR DESIRABLE.

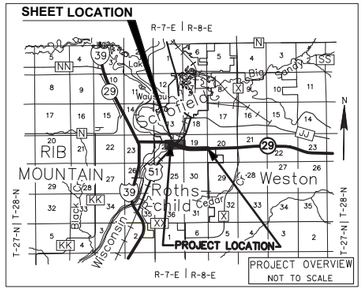
PROPERTY LINES SHOWN ON THIS PLAT ARE DRAWN FROM DATA DERIVED FROM MAPS AND DOCUMENTS OF PUBLIC RECORD AND/OR EXISTING OCCUPATIONAL LINES. THIS PLAT MAY NOT BE A TRUE REPRESENTATION OF EXISTING PROPERTY LINES, EXCLUDING RIGHT-OF-WAY, AND SHOULD NOT BE USED AS A SUBSTITUTE FOR AN ACCURATE FIELD SURVEY.

FOR THE LATEST ACCESS/DRIVEWAY INFORMATION, CONTACT THE PLANNING UNIT OF THE WISCONSIN DEPARTMENT OF TRANSPORTATION OFFICE IN WISCONSIN RAPIDS.

PARCEL IDENTIFICATION NUMBERS MAY NOT POINT TO ALL AREAS OF ACQUISITION, AS NOTED ON THE SCHEDULE OF LANDS & INTERESTS REQUIRED.

EXISTING HIGHWAY RIGHT-OF-WAY SHOWN HEREIN IS BASED ON THE FOLLOWING POINTS OF REFERENCE:
EXISTING HIGHWAY RIGHT-OF-WAY FOR S.T.H. 29 & BUS. 51 ESTABLISHED FROM PREVIOUS PROJECT 1053-02-04 ESTABLISHED FROM PROJECTS 1054-01-23 & 1054/02-21

SHEET LOCATION



CONVENTIONAL ABBREVIATIONS

ACCESS RIGHTS	AR	POINT OF COMPOUND CURVE	PCC	
ACRES	AC	POINT OF INTERSECTION	PI	
AHEAD	AH	PROPERTY LINE	PL	
ALUMINUM	ALUM	RECORDED AS	(100')	
AND OTHERS	ET AL	REFERENCE LINE	R/L	
BACK	BK	REMAINING	REM	
BLOCK	BLK	RIGHT	RT	
CENTERLINE	C/L	RIGHT OF WAY	R/W	
CERTIFIED SURVEY MAP	CSM	SECTION	SEC	
CONCRETE	CONC	SEPTIC VENT	SEPV	
COUNTY	CO	SQUARE FEET	SF	
COUNTY TRUNK HIGHWAY	CTH	STATE TRUNK HIGHWAY	STH	
DISTANCE	DIST	STATION	STA	
CORNER	COR	SUBDIVISION	SUBD	
DOCUMENT NUMBER	DOC	TANGENT	TAN	
EASEMENT	EASE	TELEPHONE PEDESTAL	TP	
EXISTING	EX	TEMPORARY LIMITED EASEMENT	TLE	
GAS VALVE	GV	TRANSPORTATION PROJECT PLAT	TPP	
GRID NORTH	GN	UNITED STATES HIGHWAY	USH	
HIGHWAY EASEMENT	HE	VOLUME	V	
IDENTIFICATION	ID			
LAND CONTRACT	LC			
LEFT	LT			
MONUMENT	MON			
NATIONAL GEODETIC SURVEY	NGS			
NUMBER	NO			
OUTLOT	OL			
PAGE	P			
POINT OF TANGENCY	PT			
PERMANENT LIMITED EASEMENT	PLE			
POINT OF BEGINNING	POB			
POINT OF CURVATURE	PC			

CURVE DATA

LONG CHORD	LC
LONG CHORD BEARING	LCB
RADIUS	R
DEGREE OF CURVE	D
CENTRAL ANGLE OR DELTA	Δ
LENGTH OF CURVE	L
TANGENT	T
DIRECTION AHEAD	DA
DIRECTION BACK	DB

CONVENTIONAL SYMBOLS

SECTION LINE
QUARTER LINE
SIXTEENTH LINE
NEW REFERENCE LINE
NEW R/W LINE
EXISTING R/W LINE
PROPERTY LINE
LOT, TIE & OTHER MINOR LINES
CORPORATE LIMITS
UNDERGROUND FACILITY (COMMUNICATIONS, ELECTRIC, ETC)
FEE ACQUISITION AREA (WATCHING VARIES BY OWNER)
TEMPORARY LIMITED EASEMENT AREA
EASEMENT AREA (HIGHWAY, PERMANENT LIMITED, OR RESTRICTED DEVELOPMENT)
TRANSMISSION STRUCTURES
BUILDING
NATIONAL GEODETIC SURVEY MONUMENT
SIXTEENTH CORNER MONUMENT
BRIDGE
EXISTING MONUMENT NUMBER
R/W BOUNDARY POINT NUMBER

SECTION
CORNER
NOTATION FOR COMBUSTIBLE FLUIDS
NOTATION FOR HIGH VOLTAGE TRANSMISSION LINES
R/W MONUMENT
NON-MONUMENTED R/W POINT
FOUND IRON PIN
VALVE (GAS, WATER, ETC.)
SIGN
OFF-PREMISE SIGN
PARCEL NUMBER
UTILITY NUMBER

	COMPOSABLE	NON-COMPOSABLE
ELECTRIC POLE		
TELEPHONE POLE		
PEDESTAL (LABEL TYPE) (TV, TEL, ELEC, ETC.)		
LIGHT POLE		

ACCESS CONTROLLED BY ACQUISITION
NO ACCESS (BY STATUTORY AUTHORITY)
ACCESS RESTRICTED (BY PREVIOUS PROJECT OR CONTROL)

CONVENTIONAL UTILITY SYMBOLS

WATER
GAS
TELEPHONE
OVERHEAD TRANSMISSION LINES
ELECTRIC
CABLE TELEVISION
FIBER OPTIC
SANITARY SEWER
STORM SEWER

CURVE 202 - 203
L = 292.91'
LC = 292.81'
LCB = N41° 23' 55"E
R = 3238.24'

CURVE 425 - 424
L = 13.84'
LC = 13.84'
LCB = S39° 52' 42"W
R = 3640.80'

CURVE 204- 425
L = 126.33'
LC = 126.32'
LCB = S37° 10' 13"W
R = 3067.71'

SCHEDULE OF LANDS AND INTERESTS REQUIRED		OWNER NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY AND ARE SUBJECT TO CHANGE PRIOR TO THE TRANSFER OF LAND INTERESTS TO THE DEPARTMENT					
PARCEL NUMBER	OWNERS	INTEREST REQUIRED	R/W AC. REQUIRED			TLE S.F. REQUIRED	HE S.F. REQUIRED
			NEW	EXISTING	TOTAL		
52	WISCONSIN CENTRAL LTD	TLE, HE	---	---	---	6,307	8,611

UTILITY INTERESTS REQUIRED		
UTILITY #	OWNER(S)	INTEREST REQUIRED
UA200	VILLAGE OF ROTHSCHILD (WATER)	---
UA201	VILLAGE OF ROTHSCHILD (SAN. SEWER)	---

BASIS OF EXISTING R/W TABLE				
ROAD NAME	PROJECT / SURVEY	P=PARCEL L=LOT NO.	VOL. / PAGE	YEAR
U.S.H. 51/S.T.H. 29	1054-01-23/1054-02-21	52	117/473	1971

VILLAGE OF ROTHSCHILD

BEGIN PROJECT 1053-02-24
STA. 11+11.36SB, 0.00' RT.
Y = 178316.459
X = 284570.126
= STA 28+84.21, 2.50' RT.
(PROJECT 1053-02-04)

END PROJECT 1053-02-24
STA. 22+98.62SB, 0.00' RT.
Y = 179166.045
X = 285399.018
= STA 16+97.27, 7.85' RT
(PROJECT 1053-02-04)

BUSINESS "51" (EAST GRAND AVE.)

S.T.H. "29"

RAIL ROAD PROPERTY LINE
EXISTING HIGHWAY EASEMENT LINE
WISCONSIN CENTRAL LTD
P.O.S. BY: RONALD JACOBSON S-2059
TLE FOR SLOPES 25.00'
HE REQUIRED 25.00'
STH 29 WB BRIDGE OVER BUS. 51 (EAST GRAND AVE.)
STH 29 EB BRIDGE OVER BUS. 51 (EAST GRAND AVE.)
VILLAGE OF ROTHSCHILD SAN. SEWER — UA201
VILLAGE OF ROTHSCHILD WATER — UA200
FND 2" IRON PIPE — County Coordinates Y = 178315.050 X = 281435.132
FND 4"X 4" STONE — County Coordinates Y = 180916.556 X = 284134.928
FND SURVEY SPIKE — County Coordinates Y = 175671.540 X = 284002.662
FND SURVEY SPIKE — County Coordinates Y = 180857.001 X = 286829.215
FND CHISELED CROSS — County Coordinates Y = 178317.393 X = 286649.017
SW-NE SEC-24
QUARTER LINE
SECTION LINE
EVEREST DR.
P.I. 14+81.85
R/L= N42°22'29"E 502.41'
R/L= S69°42'34"E 1250.00WB
R/L= S69°42'34"E 1284.32'EB
1424.32'
1822.51'
1720.54'
126+27.43WB= 19+90.73SB Y=178948.982 X=285180.669
125+53.25EB= 18+98.14SB Y=178883.702 X=285115.004
40 LINE = STA 128+45.59WB Y = 178873.329 X = 285385.288
40 LINE = STA 128+37.01EB Y = 178785.299 X = 285381.159
PROP404 PROP406 PROP409 PROP421 PROP422 PROP423 PROP424 PROP425 PROP426 PROP480 PROP481
TLE250 TLE251 TLE252 TLE253
200 201 202 203 204
52
10+00SB 11+00SB 12+00SB 13+00SB 14+00SB 15+00SB 16+00SB 17+00SB 18+00SB 19+00SB 20+00SB 21+00SB 22+00SB 23+00SB 24+00SB 25+00SB
VARIES
350.00'
100.00'
P.L.
W
SAN
SAN W
GRID NORTH

SCALE, FEET
0 50 100

R/W STATION AND OFFSET TABLE TO SB BUS. 51/E. GRAND AVE. R/L		
POINT #	STATION	OFFSET
200	14+95.38	42.71'L
201	16+97.40	45.38'L
202	18+33.59	47.92'L
203	21+25.77	67.17'L
204	22+69.98	58.07'L
TLE250	14+95.27	52.71'L
TLE251	16+97.24	55.38'L
TLE252	18+33.59	57.92'L
TLE253	21+24.66	77.11'L
404	20+71.71	134.60'L
406	16+91.23	123.10'L
409	23+45.19	42.65'L
421	10+96.79	32.56'L
422	10+97.61	54.55'L
423	14+95.41	40.00'L
424	22+31.10	39.22'L
425	21+44.88	40.49'L
426	10+81.13	33.07'L
480	21+15.94	39.24'L
481	17+29.90	39.71'L

R/W STATION AND OFFSET TABLE TO WB R/L		
POINT #	STATION	OFFSET
202	125+17.85	122.40'R
203	126+23.30	150.76'L
252	125+08.69	118.38'R
253	126+13.82	153.94'L
404	125+39.38	130.09'L
406	123+89.76	219.93'R
480	126+44.51	130.10'L
481	124+81.68	219.92'R

EXISTING MONUMENTS			
Point #	Y	X	DESCRIPTION
404	179101.528	285143.199	1" IRON PIPE
406	178825.123	284881.479	1" IRON PIPE
409	179229.125	285401.976	1" IRON PIPE
421	178327.656	284536.251	1" IRON PIPE
422	178343.091	284520.572	1" IRON PIPE
423	178628.137	284801.194	1" IRON PIPE
424	179075.755	285252.569	1" IRON PIPE
425	179086.377	285261.444	1" IRON PIPE
426	178316.439	284525.318	1" IRON PIPE
480	179065.081	285241.805	1" IRON PIPE
481	178793.254	284967.697	1" IRON PIPE

R/W COORDINATE TABLE		
Point #	Y	X
200	178630.042	284799.260
201	178774.364	284940.649
202	178872.174	285035.440
203	179091.821	285229.077
204	179187.037	285337.767
250	178637.057	284792.134
251	178781.341	284933.485
252	178879.126	285028.252
253	179098.089	285221.284

SECTION COURSE TABLE		
COURSE	BEARING	DISTANCE
311-305	N 89°58'27" E	5213.29'
311-426	N 89°58'27" E	3089.59'
305-306	N 03°54'19" E	2645.75'
306-307	S 89°08'24" W	2694.59'
307-304	S 01°26'40" W	5246.68'

R/W COURSE TABLE		
COURSE	BEARING	DISTANCE
426-421	N 44°15'55" E	15.66'
421-422	N 45°26'53" W	22.00'
422-423	S 44°33'07" W	400.00'
423-200	N 45°26'53" W	2.72'
200-201	N 44°24'43" E	202.04'
201-202	N 44°06'07" E	136.21'
203-204	N 48°46'51" E	144.50'
424-480	S 45°14'22" W	15.16'
480-481	S 45°14'22" W	386.04'
481-423	S 45°14'22" W	234.49'

KOLBY F. SCHERTZ S-2862 SHIOCTON WI LAND SURVEYOR

QUEST
Civil Engineers, LLC
2811 8th Street South, Suite 8
Wisconsin Rapids, WI 54494
Office: 715-423-3526
Fax: 715-423-3597

I HEREBY CERTIFY THAT THIS PLAT MEETS ALL REQUIREMENTS OF SECTION 84.095, WISCONSIN STATUTES, THIS PLAT WAS PREPARED BY OR UNDER THE DIRECTION OF

KOLBY SCHERTZ — PRINTED NAME
Kolby Schertz — SIGNATURE
08/16/2013 — DATE

THIS PLAT AND RELOCATION ORDER ARE APPROVED FOR THE WISCONSIN DEPARTMENT OF TRANSPORTATION

BRENT L STELLA — PRINTED NAME
Brent L Stella — SIGNATURE
8-19-13 — DATE

FILE NAME : S:\DESIGN\DESIGN PROJECTS\1053-02-04 (STH 29)-AYRES-NC\SURVEY\TPP- BUS.51 HE AND TLE'S\DRAWING FILES\TPP 4.01.DWG
PLOT DATE : August 16, 2013
PLOT BY : KOLBY SCHERTZ
PLOT NAME : STH 29
PLOT SCALE : 1" = 100'
APPRAISAL PLAT DATE : ----------

N

WPS

RIPRAP

P 111EB+50.37

112WB

110WB

108WB

106WB

SLOPE INTERCEPT

110EB

108EB

106EB

112EB

114WB

B-37-79

116WB

STH 29 WB

118WB

120WB

114EB

116EB

B-37-136

118EB

120EB

STH 29 EB

F.O.

CCI SYSTEMS

REMOVING SURFACE DRAINS

SLOPE INTERCEPT

STA 111EB+70
REMOVING INLET (2)
REMOVING SMALL PIPE CULVERTS

STA 108EB+50 - STA 111EB+65, RT
STA 119EB+85 - STA 120EB+45, RT
REMOVING FENCE

STA 108EB+60 - STA 111EB+76, LT
REMOVING GUARDRAIL

STA 108EB+50 - STA 111EB+73, RT
REMOVE AND REINSTALL GUARDRAIL

VILLAGE OF ROTHSCHILD

WPS

RIPRAP

SLOPE INTERCEPT

120EB

SLOPE INTERCEPT

CCI SYSTEMS/ QWEST

5

5

BEGIN PROJECT 1053-02-74
STA 108EB+50.00
N 179332.34
E 283476.86
MATCH EXISTING SAWCUT REO'D.

200.00'VC
K = 222.22

VPC STA 108+50.00
VPC EL1173.66

VPT STA 110+50.00
VPT EL1177.76

VPI STA 109+50.00
VPI EL1175.26

+1.60 %

+2.50 %

EXISTING PROFILE

STA 115EB+79.50
STRUCTURE B-37-136 REO'D.
5-SPAN CONTINUOUS HAUNCHED STEEL PLATE GIRDER BRIDGE
790'-0" CLEAR ROADWAY, 795'-4" OVERALL LENGTH
0° SKEW

FINISHED PROFILE

+2.50 %

+2.66 %

VPI STA 120+00.00
VPI EL1201.51

1200 1195 1190 1185 1180 1175 1170 1165

| | | |

VILLAGE OF ROTHSCHILD

WISCONSIN CENTRAL LTD

BUSINESS 51

122WB 124WB 126WB 128WB 130WB 132WB 134WB 136WB

B-37-63

STH 29 WB

SLOPE INTERCEPT

122EB 124EB 126EB 128EB 130EB 132EB 134EB 136EB

122A 124A 126A 128A 130A 132A

B-37-140

STH 29 EB

S 69°42'34" E

PT 122EB+51.90

SLOPE INTERCEPT

CCI SYSTEMS/ QWEST

KDL INC

VILLAGE OF ROTHSCHILD

REMOVING SURFACE DRAINS

CAUTION

VILLAGE OF ROTHSCHILD

CCI SYSTEMS

WPS/CHARTER

WPS

FRONTIER

GRADE TO DRAIN

EXISTING ASPHALTIC FLUME (TO REMAIN)

STA 127EB+00 - STA 130A+00
ALLOWABLE AREA FOR REUSE OF LOW-LEVEL CONTAMINATED MATERIAL

STA 127EB+71
REMOVING INLET

SLOPE INTERCEPT

MATCH LINE BETWEEN STH 29 EB AND A RAMP

SLOPE INTERCEPT

END PROJECT 1053-02-74
STA 135EB+19.25
MATCH EXISTING
SAWCUT REQ'D.

STA 122EB+59 - STA 123EB+04, RT
REMOVING FENCE

STA 119EB+89 - STA 123EB+03, RT
STA 120EB+26 - STA 123EB+24, LT
REMOVING GUARDRAIL

VPI STA 123+75.00
VPI EL 1211.49

VPT STA 127+50.00
VPT EL 1212.80

+2.66 %

+0.35 %

FINISHED PROFILE

EXISTING PROFILE

K = 324.68
750.00' VC

STA 127EB+20
1-INLET MEDIAN 2 GRATES
1-24" CPRC CLASS III

STA 125EB+08.64
STRUCTURE B-37-140 REQ'D.
4-SPAN 54" PRESTRESSED GIRDER BRIDGE
344'-0" CLEAR ROADWAY, 350'-5¼" OVERALL LENGTH
24°53' SKEW

VPOT STA 135+19.25
VPOT EL 1215.49

1220 1215 1210 1205 1200 1195 1190 1185

1203.50 1204.02 1204.58 1205.15 1205.57 1206.21 1206.50 1207.20 1207.33 1208.10 1190.27 1208.93 1178.05 1209.69 1180.63 1210.36 1178.63 1210.96 1180.02 1211.48 1179.47 1211.93 1196.47 1212.29 1211.24 1212.58 1211.43 1212.80 1211.67 1212.97 1211.91 1213.15 1212.14 1213.32 1212.38 1213.50 1212.64 1213.67 1212.84 1213.85 1213.10 1214.02 1213.38 1214.20 1213.67 1214.37 1213.95 1214.55 1214.23 1214.72 1214.51 1214.90 1214.78 1215.07 1215.04 1215.25 1215.36 1215.42 1215.70 1216.05

121 121+50 122 122+50 123 123+50 124 124+50 125 125+50 126 126+50 127 127+50 128 128+50 129 129+50 130 130+50 131 131+50 132 132+50 133 133+50 134 134+50 135 135+50 13

PROJECT NO: 1053-02-74	HWY: STH 29	COUNTY: MARATHON	PLAN & PROFILE - STH 29 EASTBOUND	SHEET E

FILE NAME : T:\410637\DGN-DWG\plan\050102_pp.dgn PLOT DATE : 1/8/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:100

WISDOT/CADDS SHEET 40

BEGIN CONSTRUCTION
STA 108WB+00.00
WB LANES
MATCH EXISTING
SAWCUT REQ'D.

SLOPE INTERCEPT
WPS
CAUTION
PI 110WB+87.63
RIPRAP
106WB
108WB
110WB
112WB
106EB
108EB
110EB
112EB
SLOPE INTERCEPT
REMOVING SURFACE DRAINS

STA 98WB+53 - STA 112WB+03, LT
STA 120WB+07 - STA 120WB+85, LT
REMOVING FENCE

STA 111WB+95, RT
STA 98WB+61 - STA 112WB+03, LT
REMOVING GUARDRAIL

STA 113WB+88 - STA 129WB+60, LT
CONCRETE BARRIER TEMPORARY PRECAST
LEFT IN PLACE

25:1 TAPER
114WB
B-37-79
116WB
118WB
120WB
STH 29 WB
114EB
116EB
B-37-136
118EB
120EB
STH 29 EB
CCI SYSTEMS

VILLAGE OF ROTHSCHILD
WPS
RIPRAP
SLOPE INTERCEPT
CAUTION
SLOPE INTERCEPT
PI 120WB+85.16
CCI SYSTEMS/ OWEST

5
5

STA 116WB+05.60
STRUCTURE B-37-79 REQ'D.
5-SPAN CONTINUOUS HAUNCHED STEEL PLATE GIRDER BRIDGE
790'-0" CLEAR ROADWAY, 795'-4" OVERALL LENGTH
0° SKEW

230.00'VC
K = 199.62
VPC STA 108+00.00
VPC EL1172.94
VPT STA 110+30.00
VPT EL1177.36
VPI STA 109+15.00
VPI EL1174.49
VPI STA 120+15.00
VPI EL1201.99
+1.35 %
+2.50 %
+2.50 %
EXISTING PROFILE
FINISHED PROFILE

| | | |

STA 120WB+09 - STA 123WB+98, LT
STA 120WB+12 - STA 123WB+08, RT
REMOVING GUARDRAIL

STA 124WB+00 - STA 124WB+36, LT
REMOVING FENCE

STA 127WB+50 - STA 130WB+42, RT
STA 134WB+59 - STA 136WB+25, LT
STA 134WB+59 - STA 136WB+62, RT
REMOVING GUARDRAIL

STA 128WB+06, RT
REMOVING INLET &
ABANDONING CULVERT
PIPE (STAGE 7)

STA 131WB+70 - STA 136WB+00
SAWCUT HMA PAVEMENT FOR FINAL CONDITION
(REGRADE REMAINING GRAVEL TO DRAIN AWAY
FROM WB LANES - INCIDENTAL)

END CONSTRUCTION
STA 132WB+00.00
WB LANES
MATCH EXISTING
SAWCUT REQ'D.

STA 134WB+60
SIGN BRIDGE S-37-117

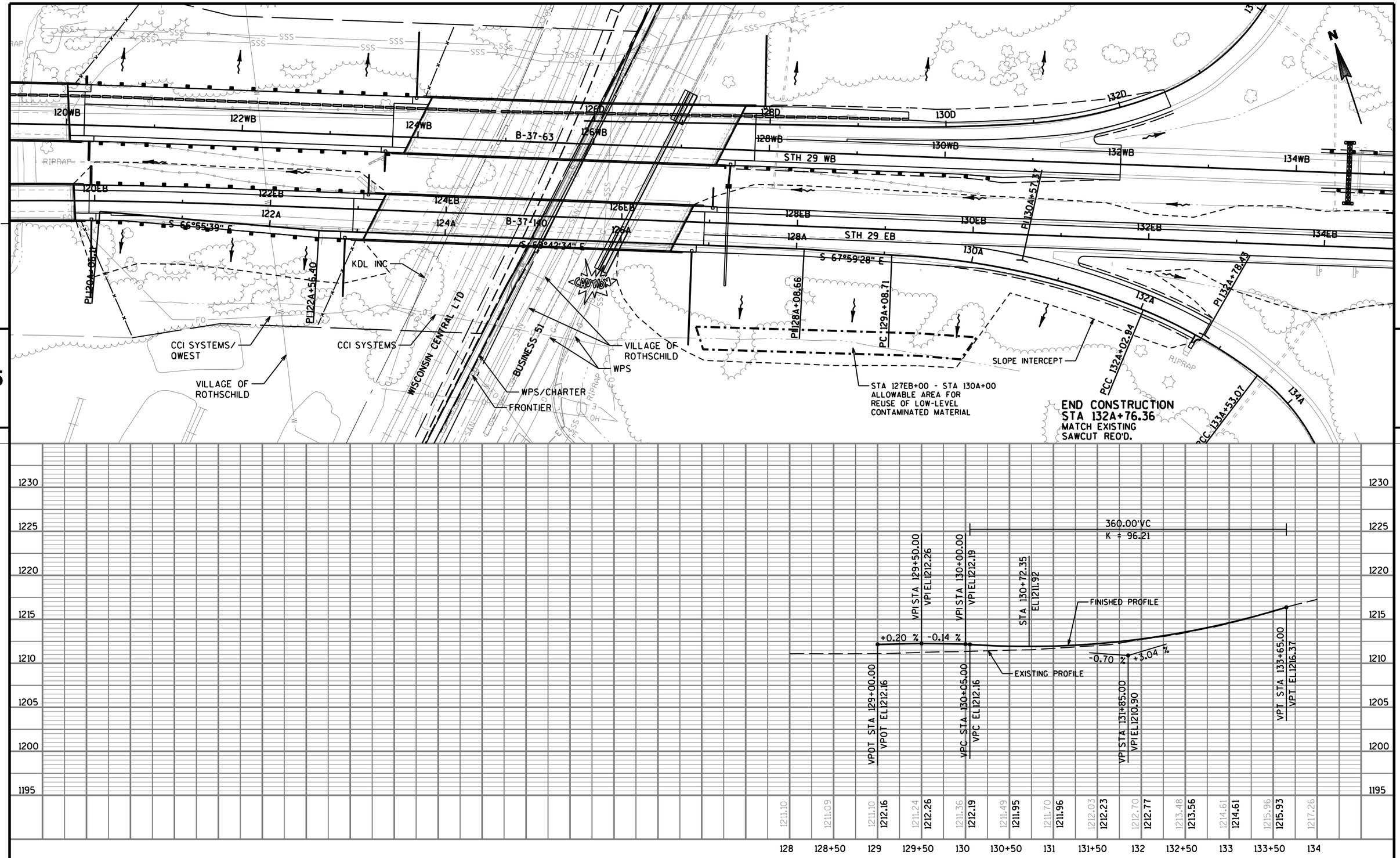
STA 134WB+70
REMOVE EXISTING
SIGN BRIDGE S-37-0077

VILLAGE OF ROTHSCHILD
SLOPE INTERCEPT
VILLAGE OF ROTHSCHILD
FRONTIER
WPS/CHARTER
KDL, INC
VILLAGE OF ROTHSCHILD
CAUTION
WPS
SLOPE INTERCEPT
MATCH LINE BETWEEN STH 29 WB AND D RAMP
N
134D
132D
130D
128D
126D
122WB
124WB
126WB
128WB
130WB
132WB
134WB
136WB
B-37-63
STH 29 WB
S 69°42'34" E
SLOPE INTERCEPT
REMOVING SURFACE DRAINS
SLOPE INTERCEPT
120WB+85.16
122EB
124EB
126EB
128EB
130EB
132EB
134EB
136B
122A
124A
126A
128A
130A
132A
B-37-140
STH 29 EB
WISCONSIN CENTRAL LTD
BUSINESS 51
CCI SYSTEMS/ OWEST
RIPRAP
RIPRAP
134

VPI STA 123+75.00
VPI EL 1210.99
VPT STA 127+35.00
VPT EL 1212.06
VPI STA 132+00.00
VPI EL 1213.45
FINISHED PROFILE
EXISTING PROFILE
+2.50 %
+0.30 %
K = 326.88
720.00' VC

STA 125WB+82.92
STRUCTURE B-37-63 REQ'D.
4-SPAN 54" PRESTRESSED GIRDER BRIDGE
349'-6" CLEAR ROADWAY, 355'-11¼" OVERALL LENGTH
24°53' SKEW

| | | |



PROJECT NO: 1053-02-74	HWY: STH 29	COUNTY: MARATHON	PLAN & PROFILE - A RAMP	SHEET 212	E

FILE NAME : T:\410637\DGN-DWG\plan\050105_pp.dgn PLOT DATE : 1/8/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:100

WISDOT/CADDS SHEET 40

VILLAGE OF ROTHSCHILD

KDL INC

WISCONSIN CENTRAL LTD

FRONTIER

WPS/CHARTER

WPS

CAUTION

VILLAGE OF ROTHSCHILD

SLOPE INTERCEPT

PI 125+87.97

PC 128+88.03

PCC 130+91.37

PCC 132+43.72

134D

132D

130D

128D

126D

END CONSTRUCTION
STA 132D+54.00
MATCH EXISTING
SAWCUT REQ'D.

N

122WB

124WB

126WB

128WB

130WB

132WB

134WB

B-37-63

S 70°51'19" E

STH 29 WB

PI 127+18.96

PI 131+68.12

120EB

122EB

124EB

126EB

128EB

130EB

132EB

134EB

122A

124A

126A

128A

130A

132A

B-37-140

STH 29 EB

BUSINESS 51

CCI SYSTEMS/
QWEST

5

5

VPI STA 129+00.00
VPI EL 1211.67

VPI STA 130+00.00
VPI EL 1211.64

VPC STA 130+50.00
VPC EL 1211.57

VPI STA 132+50.00
VPI EL 1211.31

FINISHED PROFILE

-0.14 %

+0.08 %

-0.13 %

-3.02 %

EXISTING PROFILE

VPI STA 129+50.00
VPI EL 1211.60

VPT STA 134+50.00
VPT EL 1201.27

K = 81.83
400.00' VC

	1225	1220	1215	1210	1205	1200	1195	1190
128	1211.15							
128+50	1211.41							
129	1211.50	1211.67						
129+50	1211.50	1211.60						
130	1211.45	1211.64						
130+50	1211.33	1211.57						
131	1211.14	1211.36						
131+50	1210.71	1210.83						
132	1210.00	1210.00						
132+50	1208.89	1208.87						
133	1207.37	1207.43						
133+50	1205.60	1205.68						
134	1203.49	1203.63						
134+50	1201.15	1201.27						

PROJECT NO: 1053-02-74	HWY: STH 29	COUNTY: MARATHON	PLAN & PROFILE - D RAMP	SHEET 213	E

FILE NAME : T:\410637\DGN-DWG\plan\050106_pp.dgn PLOT DATE : 1/8/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:100

STA 15+85 - STA 19+17, LT
REMOVING GUARDRAIL

STA 18+83 - STA 19+15, LT
REMOVING FENCE

CONCRETE SURFACE DRAIN DROP INLET TYPE AT STRUCTURE (SEE DETAIL "CONCRETE SURFACE DRAIN DROP INLET - SUNRISE DR" FOR ADDITIONAL INFORMATION)

STA 19+06 - STA 19+31, LT
REMOVING SURFACE DRAINS

STA 19+09, LT
REMOVING INLET
REMOVING SMALL PIPE CULVERTS

CONCRETE SURFACE DRAIN FLUME TYPE B AT STRUCTURE (SEE DETAIL "MODIFIED CURB HEAD FOR CONCRETE SURFACE DRAIN AT MGS THRIE BEAM" FOR ADDITIONAL INFORMATION)

STA 22+09 - STA 28+36, LT
REMOVING GUARDRAIL

STA 22+10 - STA 22+26, LT
REMOVING FENCE

N

STH 29 WB

STH 29 EB

90WB

90EB

88WB

88EB

86WB

86EB

FRONTIER

SLOPE INTERCEPT

WPS

BEGIN CONSTRUCTION
STA 15+00.00
SHOULDER LT/RT &
SLOPE GRADING
MATCH EXISTING

END CONSTRUCTION
STA 29+50.00
SHOULDER LT/RT &
SLOPE GRADING
MATCH EXISTING

STA 18+52.37, 15' LT
STA 18+20.37, 17' LT

STA 22+72.94, 15' LT
STA 23+04.94, 17' LT

B-37-113

S 4°51'41" E

SUNRISE DR

STA 23+01.98, 17' RT

STA 22+69.98, 15' RT

PT 18+09.61

STA 18+49.49, 15' RT
STA 18+17.49, 17' RT

STA 15+90, RT
SAWCUT REQ'D.

SLOPE INTERCEPT

CCI SYSTEMS

OWEST

STA 22+75 - STA 28+00,
11' LT & 11' RT
SAWCUT REQ'D.

STA 28+00, LT/RT
MATCH EXISTING SHOULDER
SAWCUT REQ'D.

PI 29+84.69

BEGIN PROJECT 1053-05-60
STA 17+00.00
N 179793.69
E 281377.20
MATCH EXISTING
SAWCUT REQ'D.

STA 15+89 - STA 19+14, RT
REMOVING GUARDRAIL

STA 18+40 - STA 19+12, RT
REMOVING FENCE

STA 19+06, RT
REMOVING INLET
REMOVING SMALL PIPE CULVERTS

STA 19+046 - STA 19+29, RT
REMOVING SURFACE DRAINS

END PROJECT 1053-05-60
STA 22+75.00
MATCH EXISTING
SAWCUT REQ'D.

STA 22+06 - STA 28+33, RT
REMOVING GUARDRAIL

STA 22+06 - STA 28+33, RT
REMOVING FENCE

VPI STA 22+05.00
VPI EL1212.74

FINISHED PROFILE

EXISTING PROFILE

VPC STA 18+07.00
VPC EL1196.81

100.00'VC
K = 200.00

+4.00 %

-3.50 %

-3.69 %

K = 103.47
796.00'VC

STA 22+20.87
EL1205.09

VPOT STA 16+50.00

VPOT EL1190.91
VPC STA 16+75.00
VPC EL1191.79

VPI STA 17+25.00
VPI EL1193.54

VPT STA 17+75.00
VPT EL1195.54

VPT STA 26+03.00
VPT EL1198.04

VPOT STA 26+50.00
VPOT EL1196.30

STA 20+61.30
STRUCTURE B-37-113 REQ'D.
2-SPAN CONTINUOUS STEEL PLATE GIRDER BRIDGE
258'-0" CLEAR ROADWAY, 263'-4 1/4" OVERALL LENGTH
5° SKEW

| | | |

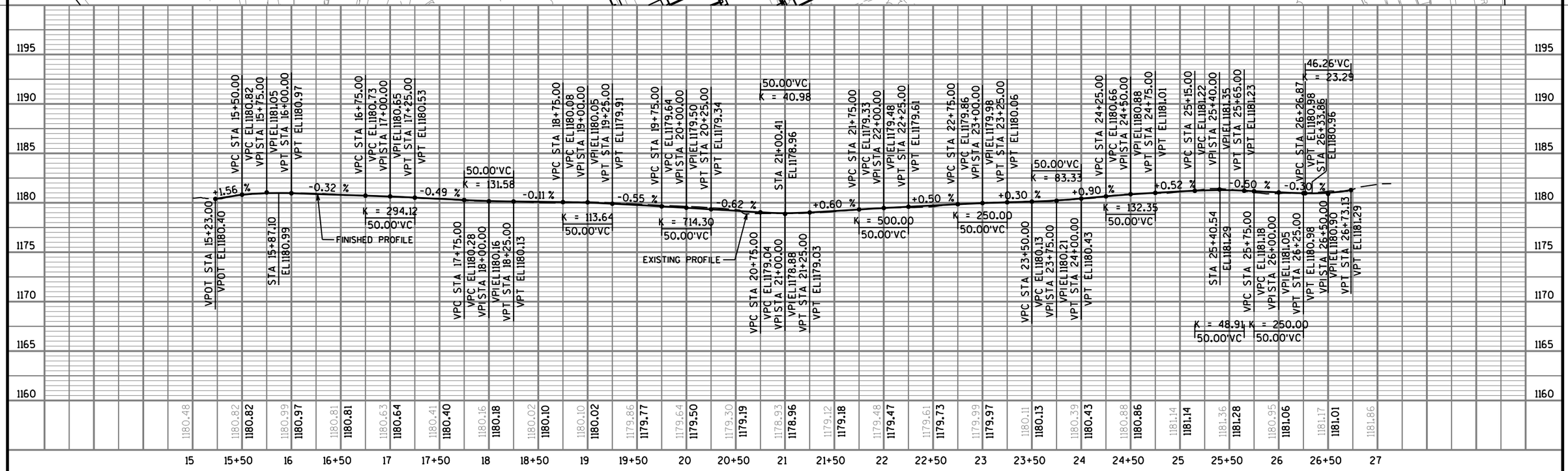
P.I. DATA	CURVE DATA	CURVE DATA	CURVE DATA	P.I. DATA
P.I. 15P+00.00 N 178628.53 E 284807.27	P.I. 23P+25.88 N 179210.07 E 285393.69 △ = 18°15'11" D = 25°27'53" T = 36.15' L = 71.68' E = 2.88' R = 225.00' P.C. 22P+89.73 P.T. 23P+61.41 S.E. 2.0%	P.I. 25P+12.84 N 179377.22 E 285478.81 △ = 37°12'10" D = 57°17'45" T = 33.66' L = 64.93' E = 5.51' R = 100.00' P.C. 24P+79.18 P.R.C25P+44.12 S.E. 2.0%	P.I. 26P+36.33 N 179432.03 E 285592.12 △ = 105°35'48" D = 81°51'04" T = 92.22' L = 129.01' E = 45.77' R = 70.00' P.R.C25P+44.12 P.T. 26P+73.13 S.E. 2.0%	P.I. 27P+13.94 N 179531.80 E 285504.14

BEGIN SHARED USE PATH
STA 15P+23.00
MATCH EXISTING
SAWCUT REQ'D

END SHARED USE PATH
STA 26P+73.13
MATCH EXISTING
SAWCUT REQ'D

STH 29 EB
STH 29 WB
WEST GRAND AVE
WISDOT
KDL INC
CCI SYSTEMS/
QWEST
WPS
WPS/CHARTER
FRONTIER
HIGHWAY EASEMENT
SLOPE INTERCEPT
WISCONSIN CENTRAL LTD
VILLAGE OF ROTHSCHILD
10' SHARED USE PATH
8' SHARED USE PATH
EXIST R/W
SEE LANDSCAPE PLAN
BUSINESS 51
CCI SYSTEMS
RIPRAP
PI 15P+00.00
PC 22P+89.73
PT 23P+61.41
PC 24P+79.18
PI 25P+12.84
PRC 25P+44.12
PI 27P+13.94
PT 26P+73.13
PI 23P+25.88
PI 26P+36.33
N 41°24'27" W
N 26°39'11" E
N 45°41'33" E

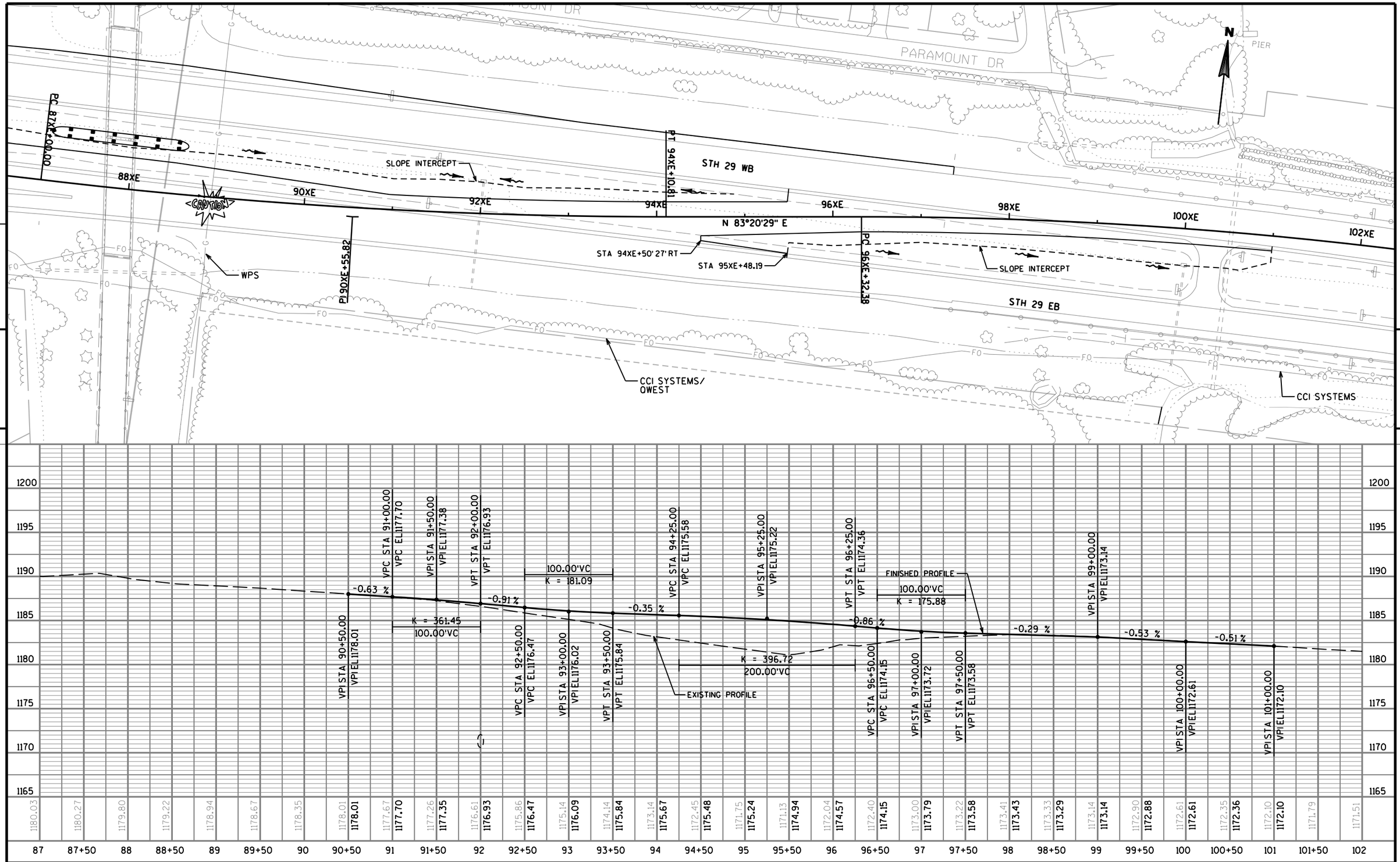
14NB 16SB 16NB 18SB 18NB 20SB 20NB 22SB 22NB 24SB 24NB 26SB 26NB 28SB 28NB



PROJECT NO: 1053-02-75	HWY: STH 29	COUNTY: MARATHON	PLAN & PROFILE - SHARED-USE PATH	SHEET 215 E

FILE NAME : T:\410637\DGN-DWG\plan\050108_pp.dgn PLOT DATE : 1/8/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:100

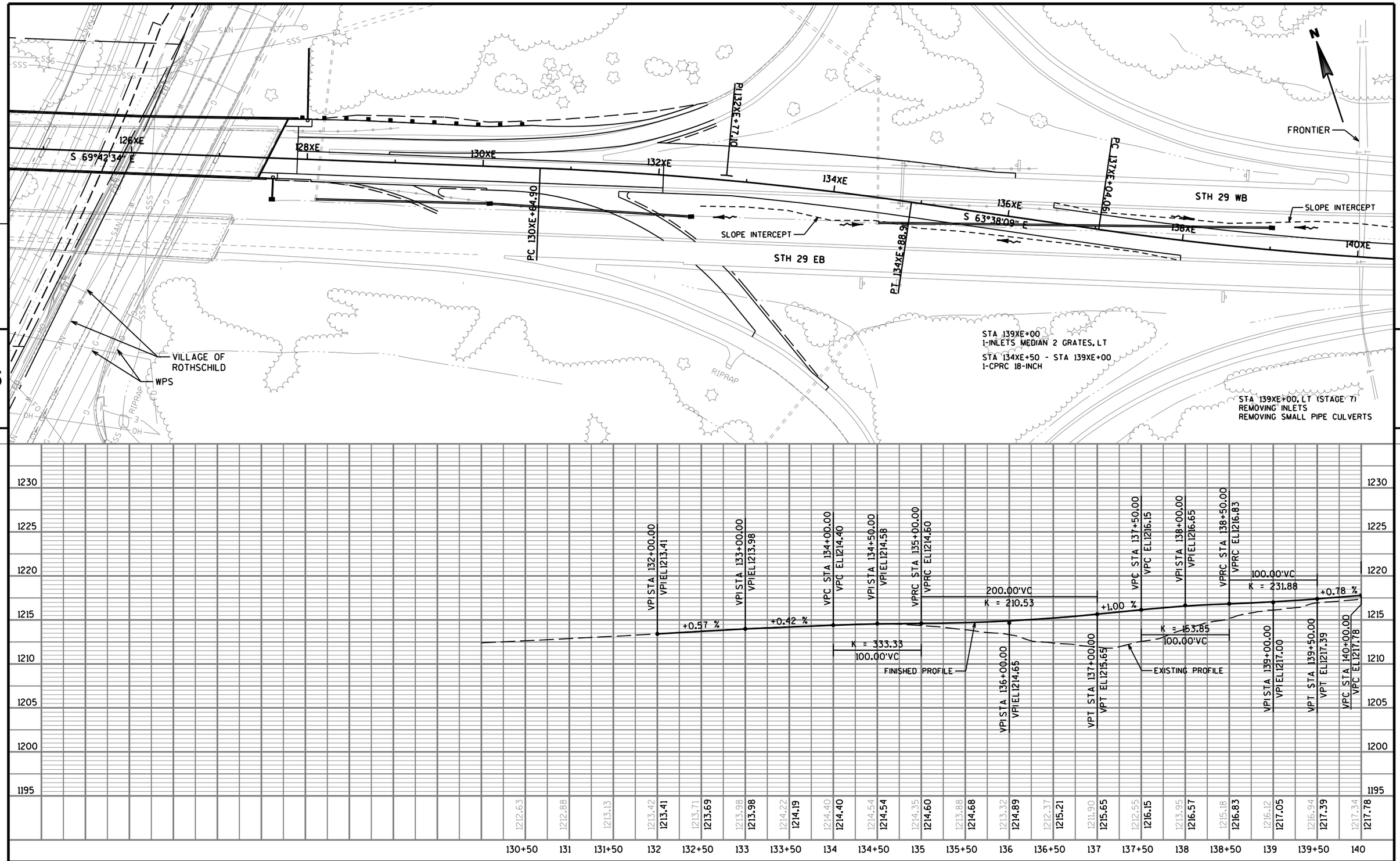
WISDOT/CADDS SHEET 40



PROJECT NO: 1053-02-74	HWY: STH 29	COUNTY: MARATHON	PLAN & PROFILE - XE WEST CROSSOVER (STAGE 1)	SHEET E

FILE NAME : T:\410637\DGN-DWG\plan\050108_pptmp.dgn PLOT DATE : 1/8/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:100

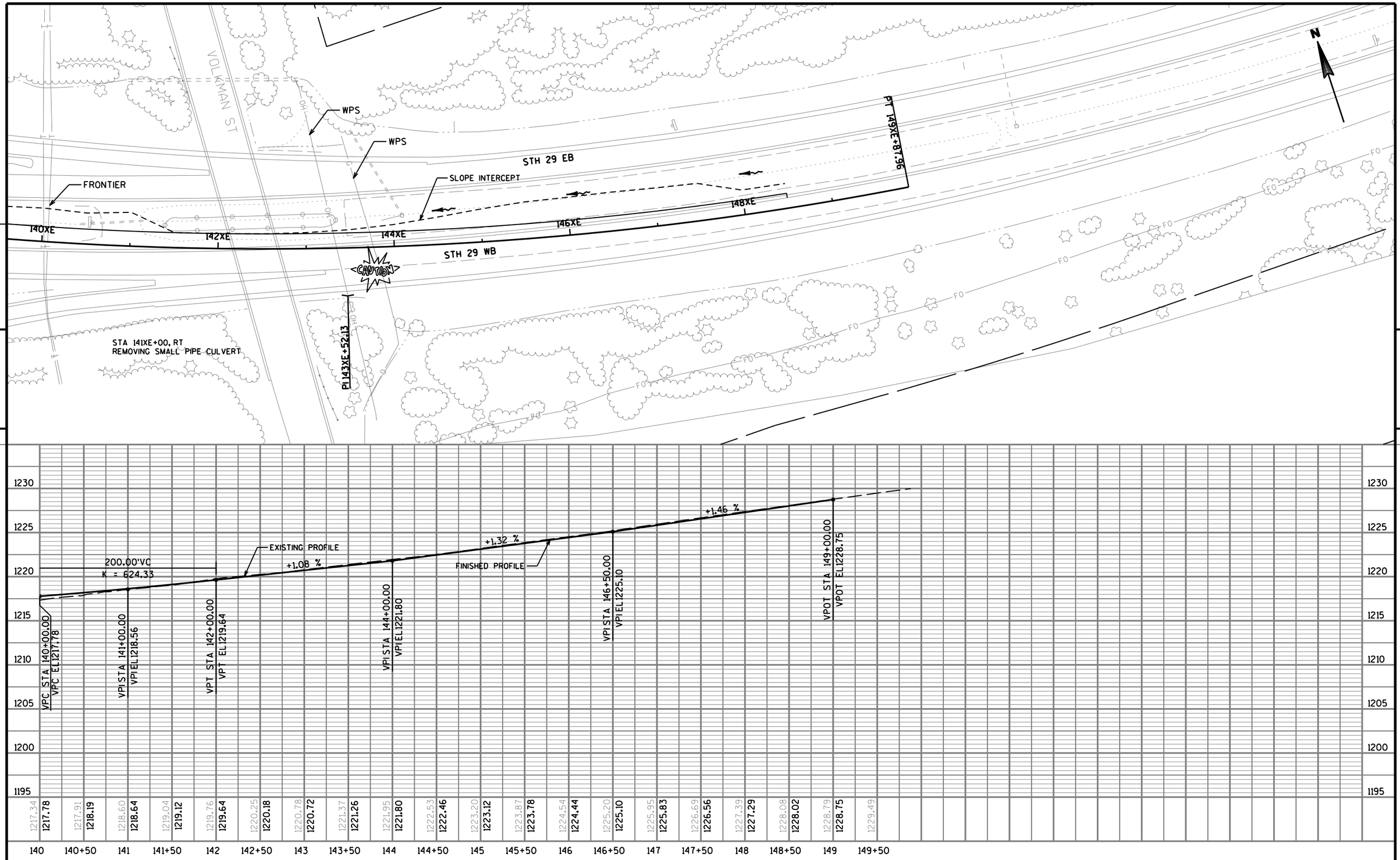
WISDOT/CADDS SHEET 40



PROJECT NO: 1053-02-74	HWY: STH 29	COUNTY: MARATHON	PLAN & PROFILE - XE EAST CROSSOVER (STAGE 4)	SHEET 217 E

FILE NAME : T:\410637\DGN-DWG\plan\050109_pptmp.dgn PLOT DATE : 1/8/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:100

WISDOT/CADDS SHEET 40



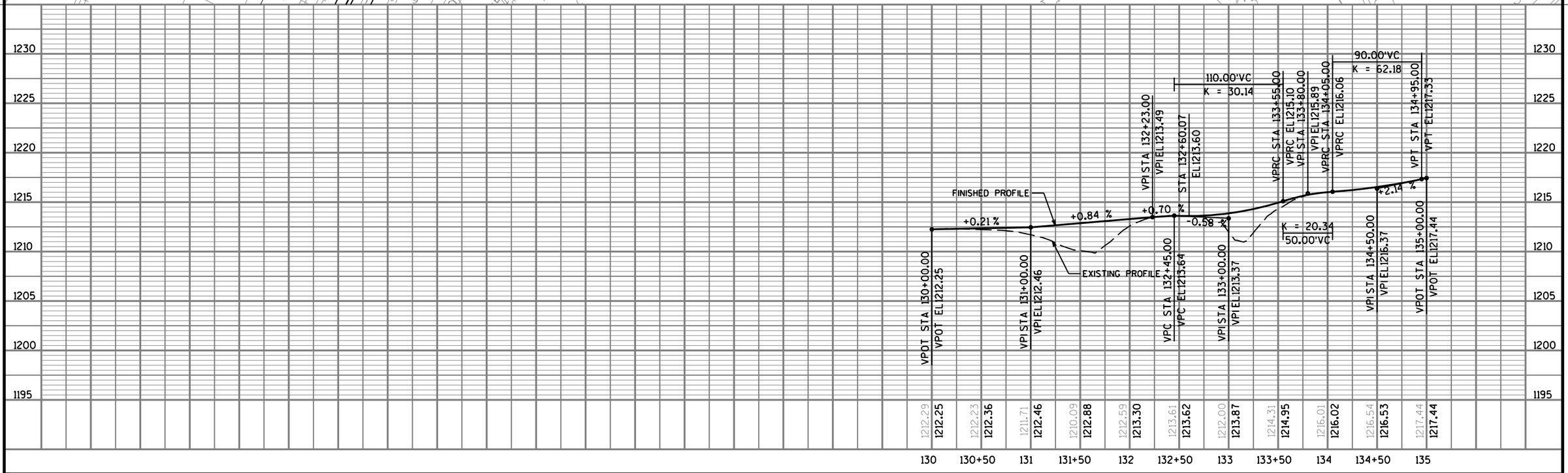
PROJECT NO: 1053-02-74	HWY: STH 29	COUNTY: MARATHON	PLAN & PROFILE - 'XE' EAST CROSSOVER (STAGE 4)	SHEET 218 E

FILE NAME : T:\410637\DGN-DWG\plan\050110_pptmp.dgn PLOT DATE : 1/8/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:100

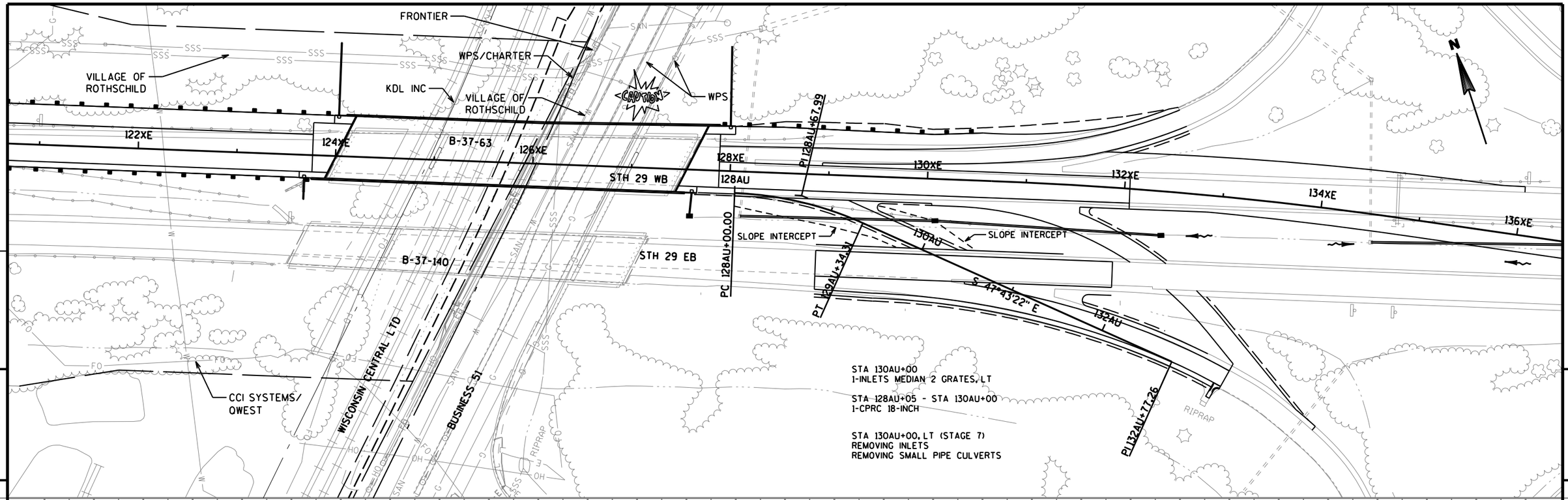
WISDOT/CADDS SHEET 40

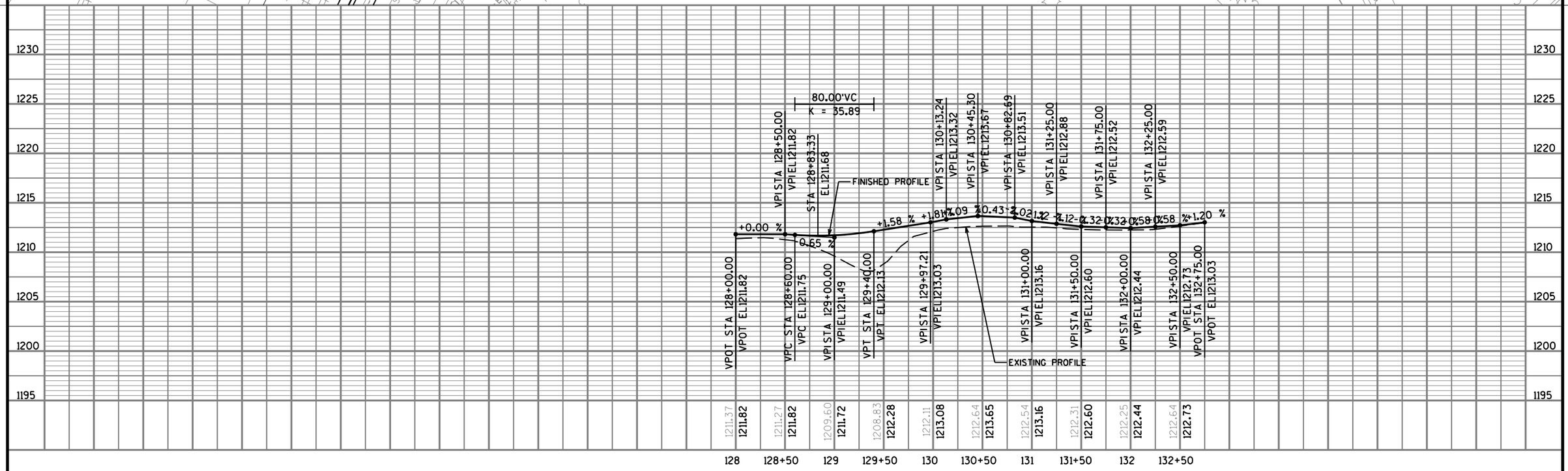
FRONTIER
WPS/CHARTER
VILLAGE OF ROTHSCHILD
KDL INC
VILLAGE OF ROTHSCHILD
CAUTION
WPS
122XE
124XE
B-37-63
126XE
128XE
130XE
STH 29 WB
130AT
132XE
131AT+82.68
134XE
136XE
S 69°42'34" E
SLOPE INTERCEPT
132AT
B-37-140
STH 29 EB
PI 130AT+00.00
PC 130AT+24.54
WISCONSIN CENTRAL LTD
BUSINESS 51
CCI SYSTEMS/ QWEST
STA 132AT+25
1-INLETS MEDIAN 2 GRATES, LT
STA 130AT+00 - STA 132AT+25
1-CPRC 18-INCH
STA 132AT+25'LT (STAGE 7)
REMOVING INLETS
REMOVING SMALL PIPE CULVERTS
PI 133AT+21.84
S 21°02'27" E
135AT
SLOPE INTERCEPT
PI 135AT+00.67
RIPRAP
N

5



PROJECT NO: 1053-02-74	HWY: STH 29	COUNTY: MARATHON	PLAN & PROFILE - 'AT' RAMP (STAGE 4)	SHEET 219 E





PROJECT NO: 1053-02-74	HWY: STH 29	COUNTY: MARATHON	PLAN & PROFILE - 'AU' RAMP (STAGES 4/6)	SHEET 220	E

FRONTIER
WPS/CHARTER
VILLAGE OF ROTHSCHILD
KDL INC
WPS
CAUTION
122TN
124TN
126TN
128TN
130TN
132TN
134TN
136TN
B-37-63
STH 29 WB
B-37-140
STH 29 EB
128DU
130DU
132DU
PC 131DU+36.56
PT 134DU+12.92
PI 134DU+63.18
134DU
N 43°23'18" E
S 70°25'32" E
S 73°16'29" E
SLOPE INTERCEPT
PI 128DU+00.00
PI 130DU+49.86
PI 132DU+90.77
N
WISCONSIN CENTRAL LTD
BUSINESS 51
VILLAGE OF ROTHSCHILD
CCI SYSTEMS/ QWEST
RIPRAP
5
5

1225
1220
1215
1210
1205
1200
1195
1190

VPOT STA 131+00.00
VPOT EL 1212.82
VPI STA 131+50.00
VPI EL 1212.87
VPC STA 131+75.00
VPC EL 1212.77
VPI STA 132+50.00
VPI EL 1212.47
VPI STA 133+25.00
VPI EL 1208.81
VPI STA 133+50.00
VPI EL 1207.59
VPOT STA 134+00.00
VPOT EL 1205.16
+0.10 %
-0.40 %
-4.88 %
-4.86 %
K = 33.48
150.00' VC
FINISHED PROFILE
EXISTING PROFILE

1211.43 1211.65 1211.92 1212.17 1212.40 1212.62 1212.82 1212.82 1212.87 1212.87 1212.07 1212.58 1209.64 1211.63 1209.25 1209.94 1207.59 1207.59 1205.16 1205.16 1202.46

128 128+50 129 129+50 130 130+50 131 131+50 132 132+50 133 133+50 134 134+50

PROJECT NO: 1053-02-74	HWY: STH 29	COUNTY: MARATHON	PLAN & PROFILE - 'DU' RAMP (STAGE 3)	SHEET 221	E

FILE NAME : T:\410637\DGN-DWG\plan\050113_pptmp.dgn PLOT DATE : 1/8/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:100

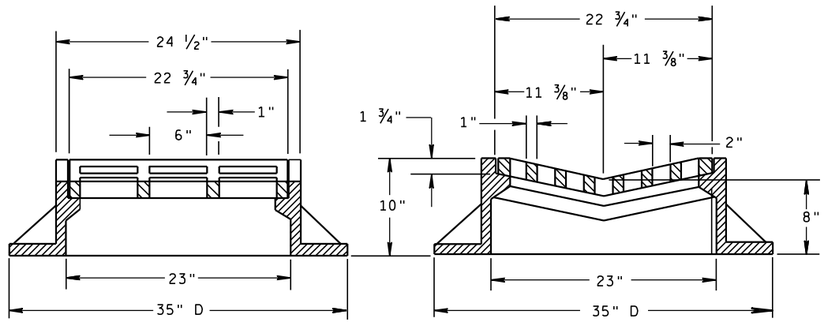
Standard Detail Drawing List

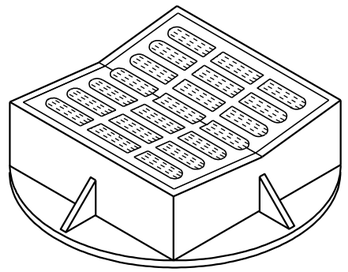
08A05-18B	INLET COVERS TYPE B, B-A, C, MS, MS-A, & WM
08A05-18C	INLET COVERS TYPE F, HM, HM-S, S, T, V, HM-GJ, & HM-GJ-S
08C07-01	INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT
08C08-01	INLETS MEDIAN 1 AND 2 GRATE
08D01-17	CONCRETE CURB, CONCRETE CURB AND GUTTER AND TIES
08D02-06	CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES
08D03-06	CONCRETE SURFACE DRAINS DROP INLET TYPE AT STRUCTURES
08D04-05	CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
08E12-01	SILT SCREEN
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
08F04-07	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
11A01-05	MAINTENANCE CROSSOVER FOR FREEWAYS
12A03-10	NAME PLATE (STRUCTURES)
12A04-03	STRUCTURE IDENTIFICATION PLAQUES, RAMP GATES, SIGN BRIDGES & OVERHEAD SIGN SUPPORTS & TRAFFIC SIGNALS
13A05-05A	SHOULDER RUMBLE STRIP, MILLING
13A05-05B	SHOULDER RUMBLE STRIP, MILLING
13B02-06	CONCRETE PAVEMENT APPROACH SLAB
13C01-16	CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES
13C11-11A	RURAL DOWELED CONCRETE PAVEMENT
13C11-11B	RURAL DOWELED CONCRETE PAVEMENT
13C17-01A	CONCRETE JOINT DETAIL FOR EXIT RAMP TERMINI
13C17-01B	CONCRETE JOINT DETAIL FOR ENTRANCE RAMP TERMINI
14A02-01	TREE PLANTING DETAIL
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
14B15-07A	STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATION & ELEMENTS
14B15-07B	STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATION & ELEMENTS
14B15-07C	STEEL PLATE BEAM GUARD, CLASS "A", INSTALLATION & ELEMENTS
14B18-06A	STEEL PLATE BEAM GUARD, CLASS "A" (AT BRIDGES, OBSTACLES AND SIDEROADS/DRIVEWAYS)
14B20-11A	STEEL THRIE BEAM STRUCTURE APPROACH
14B20-11B	STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTION TO SQUARE END PARAPETS
14B20-11C	STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTION TO VERTICAL FACED PARAPETS
14B20-11D	STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTION TO SLOPED END PARAPETS
14B20-11E	STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTION TO BRIDGE RAILING TYPES "F" AND "W"
14B20-11F	STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTION TO BRIDGE RAILING TYPE "M"
14B20-11G	STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTOR PLATE DETAIL
14B20-11H	STEEL THRIE BEAM STRUCTURE APPROACH, SINGLE SLOPE ATTACHMENT
14B24-07A	STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL
14B24-07B	STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL
14B24-07C	STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL
14B26-02A	STEEL THRIE BEAM BULLNOSE TERMINAL
14B26-02B	STEEL THRIE BEAM BULLNOSE TERMINAL
14B26-02C	STEEL THRIE BEAM BULLNOSE TERMINAL
14B26-02D	STEEL THRIE BEAM BULLNOSE TERMINAL
14B26-02E	STEEL THRIE BEAM BULLNOSE TERMINAL
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)

Standard Detail Drawing List

14B45-03D	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-03E	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-03F	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-03G	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-03H	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-03I	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-03J	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B47-01A	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B47-01B	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B47-01C	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
15A02-08	DELINEATOR POST, DELINEATOR, AND DELINEATOR BRACKET WITH REFLECTIVE SHEETING
15A03-02A	FLEXIBLE MARKER POST FOR CULVERT END
15A03-02B	FLEXIBLE MARKER POST FOR CULVERT END
15A06-02	DELINEATOR LAYOUT
15B03-13A	FENCE CHAIN LINK
15B03-13B	FENCE CHAIN LINK
15C02-05A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-05B	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-05C	DETOUR SIGNING FOR MAINLINE CLOSURES
15C08-16A	PAVEMENT MARKING (MAINLINE)
15C11-05	FLEXIBLE TUBULAR MARKER POST, ANCHOR & BASES
15C12-04	TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS)
15C19-02C	MOVING PAVEMENT MARKING OPERATION MULTI-LANE DIVIDED ROADWAY
15C31-01A	PAVEMENT MARKING (RAMPS AND GORES)
15C31-01B	LANE DROP PAVEMENT MARKING
15C31-01D	PAVEMENT MARKING FOR PARALLEL ON-RAMP AND PARALLEL OFF-RAMP
15D04-01	TRAFFIC CONTROL, RAMP CONSTRUCTION STAGING
15D07-03	TRAFFIC CONTROL, TEMPORARY EXIT RAMP CROSSOVER
15D08-04	TRAFFIC CONTROL, TEMPORARY ENTRANCE RAMP CROSSOVER
15D09-03	TRAFFIC CONTROL, SINGLE LANE CROSSOVER EXIT
15D12-03	TRAFFIC CONTROL, LANE CLOSURE, SPEEDS GREATER THAN 40 M.P.H.
15D15-01	TRAFFIC CONTROL, EXIT AND ENTRANCE RAMP WITHIN LANE CLOSURE
15D16-02	TRAFFIC CONTROL, EXIT RAMP CLOSURE
15D20-02	TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY
15D21-02	TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE
15D27-02	TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH
15D29-03	TRAFFIC CONTROL, VEHICLE ENTRANCE/EXIT OR HAUL ROAD
15D30-01	TRAFFIC CONTROL, SIDEWALK CLOSURE

6

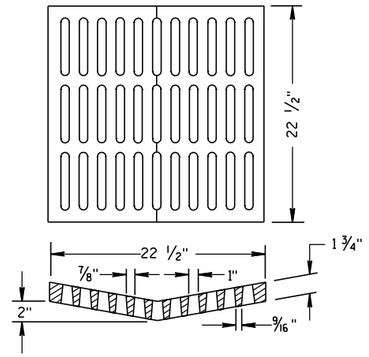




TYPE "B"

(APPROXIMATE WEIGHT 405 LBS.)

FRAME..... 294 LBS.
GRATE..... 111 LBS.

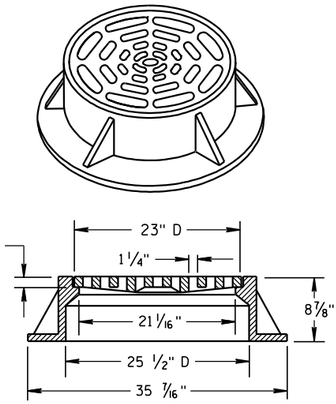


ALTERNATIVE GRATE FOR TYPE "B" COVER

(APPROXIMATE GRATE WEIGHT 134 LBS.)

USE WHERE PEDESTRIAN OR BICYCLE TRAFFIC IS POSSIBLE.

NOTED AS TYPE B-A ON THE DRAINAGE TABLE



TYPE "C"

(APPROXIMATE WEIGHT 259 LBS.)

FRAME..... 152 LBS.
GRATE..... 107 LBS.

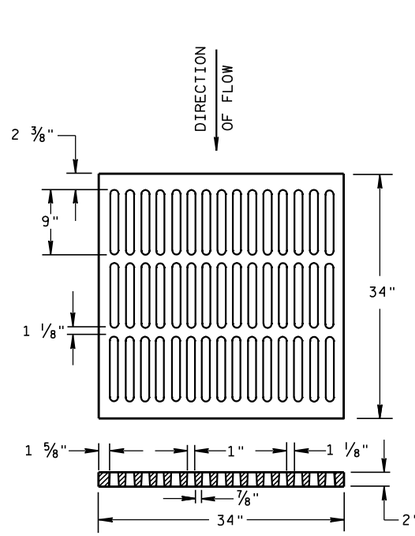
GENERAL NOTES

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.

THE ACTUAL WEIGHT OF COVERS MAY VARY WITHIN 5 PERCENT, PLUS OR MINUS, OF THE APPROXIMATE WEIGHT.

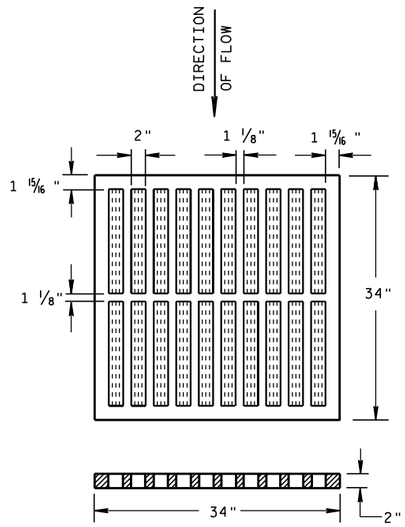


ALTERNATIVE TYPE "MS"

(APPROXIMATE GRATE WEIGHT 329 LBS.)

USE WHERE PEDESTRIAN OR BICYCLE TRAFFIC IS PERMITTED

NOTED AS TYPE MS-A ON THE DRAINAGE TABLE

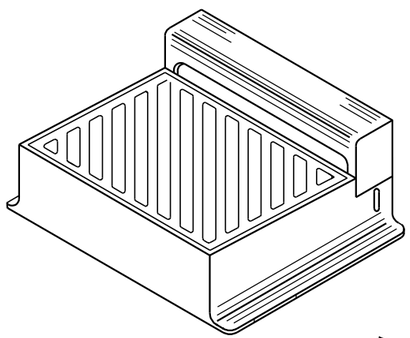


TYPE "MS"

(APPROXIMATE GRATE WEIGHT 268 LBS.)

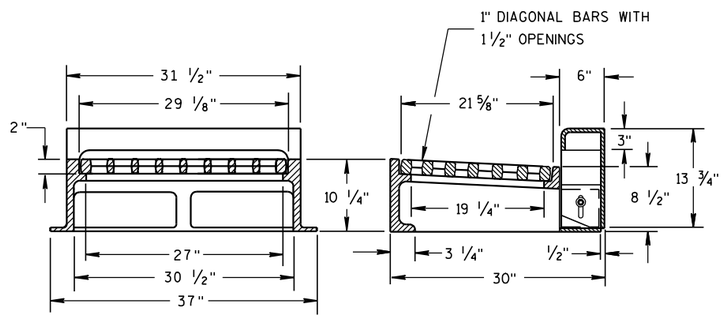
USE ON FREEWAYS AND EXPRESSWAYS

NOTED AS TYPE MS ON DRAINAGE TABLE



DIRECTION OF FLOW

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"

(APPROXIMATE WEIGHT 648 LBS.)

FRAME..... 355 LBS.
GRATE..... 156 LBS.
CURB BOX..... 137 LBS.

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

6/5/2012 DATE

/S/ Jerry H. Zaas
ROADWAY STANDARDS ENGINEER

224

ENT

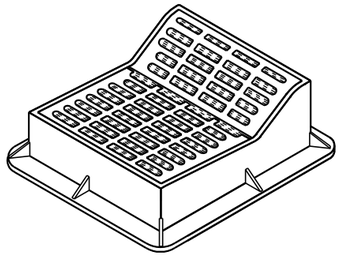
FHWA

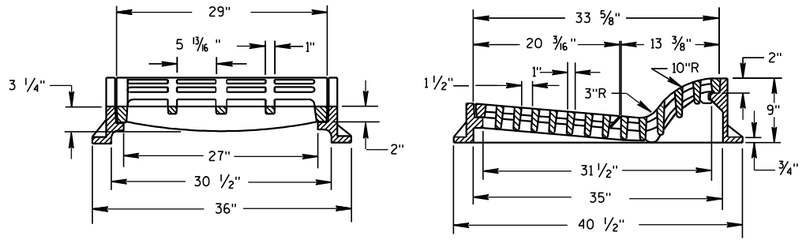
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S.D.D. 8 A 5-18b

6

S.D.D. 8 A 5-18b



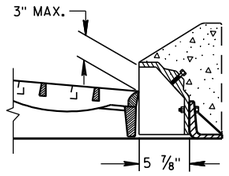


TYPE "F"

(APPROXIMATE WEIGHT 644 LBS.)

FRAME.....302 LBS.
GRATE.....160 LBS.
GRATE.....182 LBS.

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



ALTERNATIVE CURB BOX FOR TYPE "HM" COVER

(APPROXIMATE WEIGHT CURB BOX 68 LBS.)

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

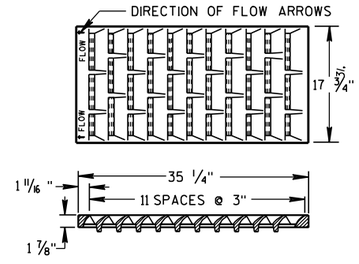
NOTE:
SPECIAL GRATE FOR THE
TYPE "H" COVER MAY ALSO BE
USED FOR THE TYPE "HM-GJ" COVER
NOTED AS TYPE HM-GJ-S ON DRAINAGE TABLE

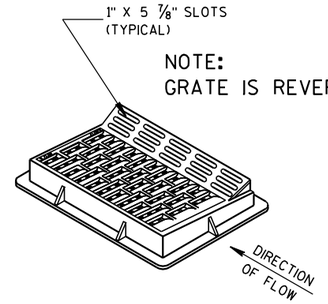
GENERAL NOTES

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

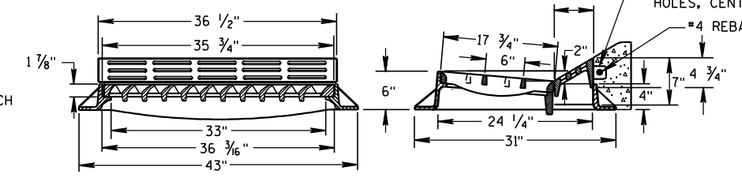
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR INLET COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

THE ACTUAL WEIGHT OF COVERS MAY VARY WITHIN 5 PERCENT, PLUS OR MINUS, OF THE APPROXIMATE WEIGHT.





NOTE:
GRATE IS REVERSIBLE.

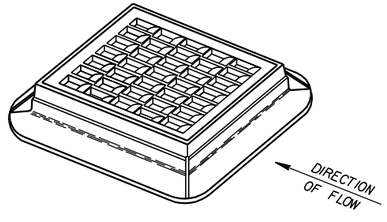


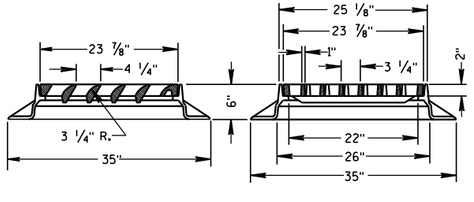
TYPE "HM"

(APPROXIMATE WEIGHT 414 LBS.)
FRAME..... 181 LBS.
GRATE..... 159 LBS.
CURB BOX..... 74 LBS.

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

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

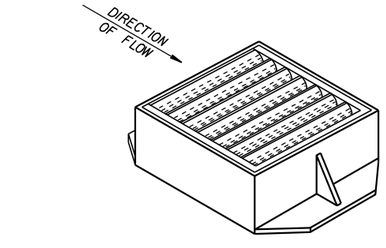


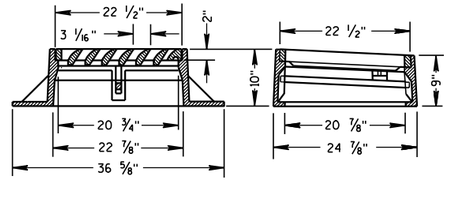


TYPE "S"

(APPROXIMATE WEIGHT 333 LBS.)

FRAME.....164 LBS.
GRATE..... 169 LBS.

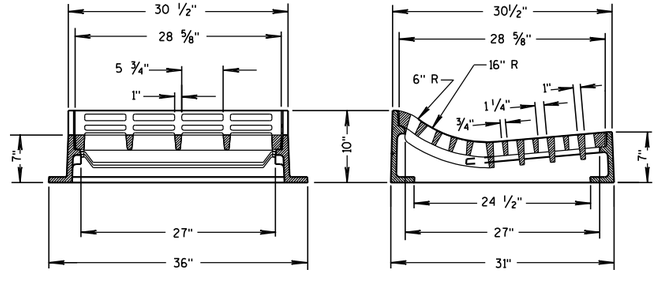




TYPE "V"

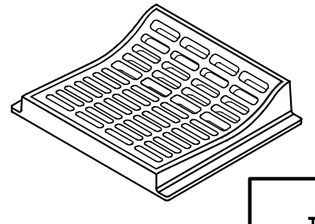
(APPROXIMATE WEIGHT 410 LBS.)

FRAME..... 269 LBS.
GRATE..... 136 LBS.
SAFETY BAR..... 5 LBS.



TYPE "T"

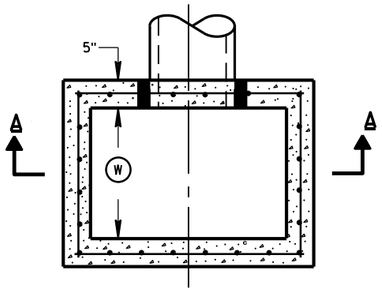
(APPROXIMATE WEIGHT 530 LBS.)
FRAME.....270 LBS.
GRATE.....260 LBS.
USE WITH TYPES R & T CONCRETE CURB & GUTTER, 36 INCH.



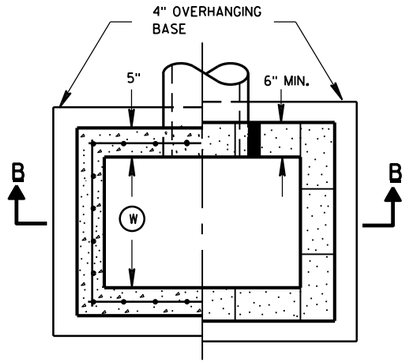
INLET COVERS TYPE F, HM, HM-S, S, T, V, HM-GJ, & HM-GJ-S

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

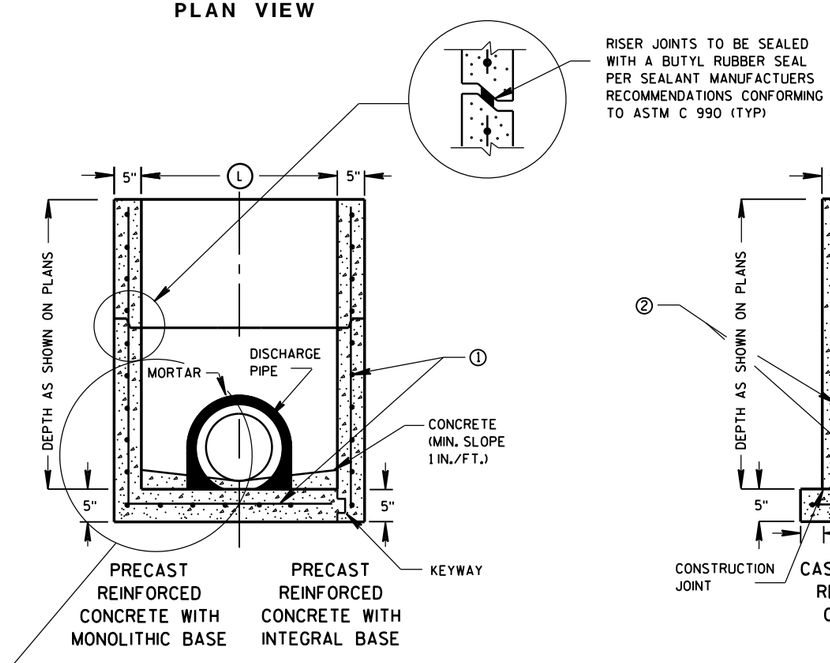
APPROVED
6/5/2012 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
FHWA



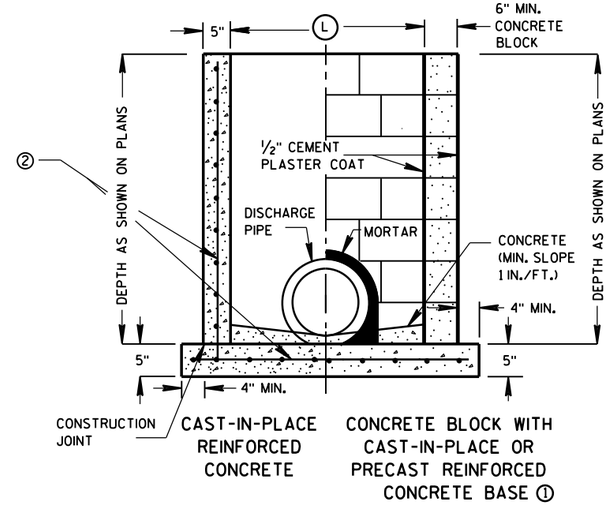
PLAN VIEW



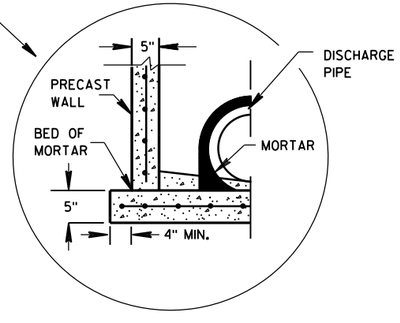
PLAN VIEW



SECTION A-A



SECTION B-B



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

GENERAL NOTES

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

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

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

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

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

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

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

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

4" OVERHANGING BASES ARE REQUIRED FOR CAST-IN-PLACE REINFORCED CONCRETE AND CONCRETE BLOCK INSTALLATIONS.
4" OVERHANG IS REQUIRED WHEN SEPARATE PRECAST BASE IS PROVIDED.
OVERHANG IS NOT REQUIRED ON PRECAST STRUCTURES WITH AN INTEGRAL OR MONOLITHIC BASE.

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

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

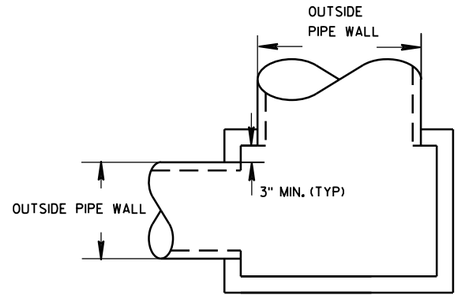
② CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.

INLET COVER MATRIX

INLET SIZE		INLET COVER TYPE	ALL A'S	ALL B'S	BW	F	ALL H'S	S	T	V	WM
	WIDTH (W) (FT)	LENGTH (L) (FT)									
2X2-FT	2	2	X	X				X		X	
2X2.5-FT	2	2.5			X			X	X	X	X
2X3-FT	2	3					X				
2.5X3-FT	2.5	3				X					

PIPE MATRIX

INLET SIZE	MAXIMUM INSIDE PIPE DIAMETER	
	WIDTH (IN)	LENGTH (IN)
2X2-FT	12	12
2X2.5-FT	12	18
2X3-FT	12	24
2.5X3-FT	18	24



DETAIL "A"

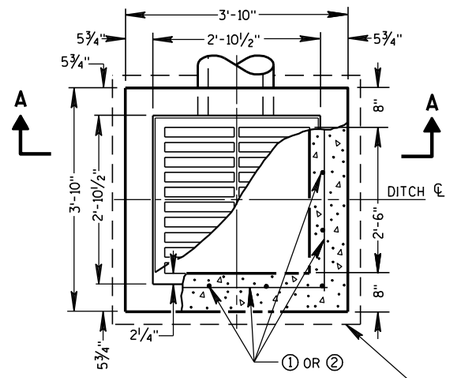
INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

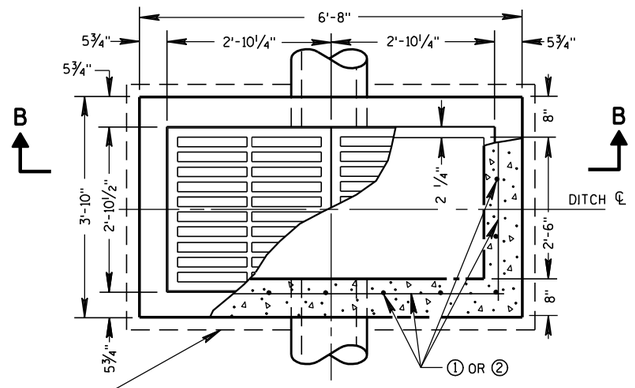
APPROVED
6/5/2012
DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS DE ENGINEER
FHWA

6

S.D.D. 8 C 7-1

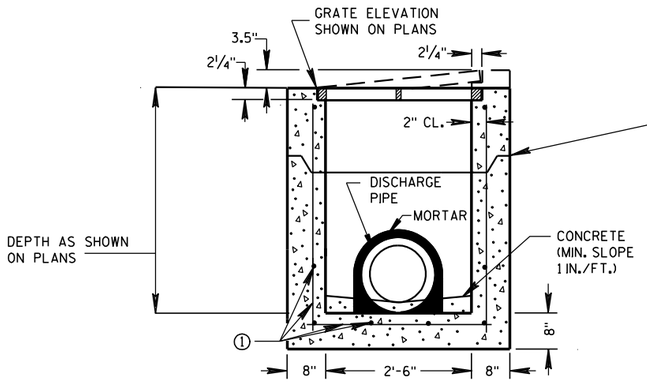


PLAN VIEW

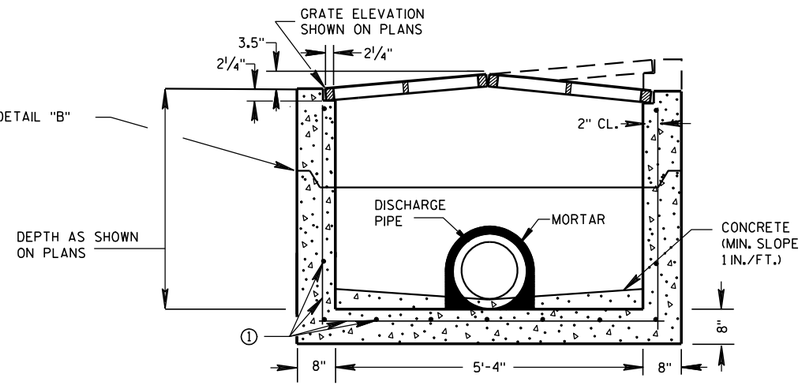


PLAN VIEW

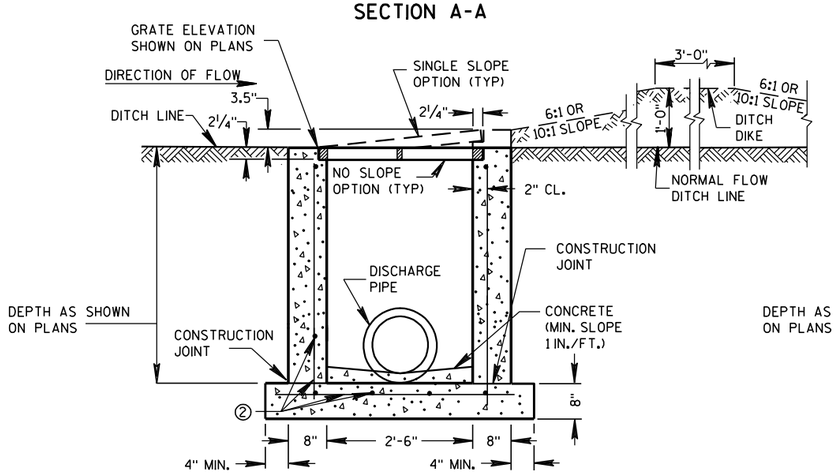
4" OVERHANGING BASE ON REINFORCED CAST-IN-PLACE CONCRETE INLETS



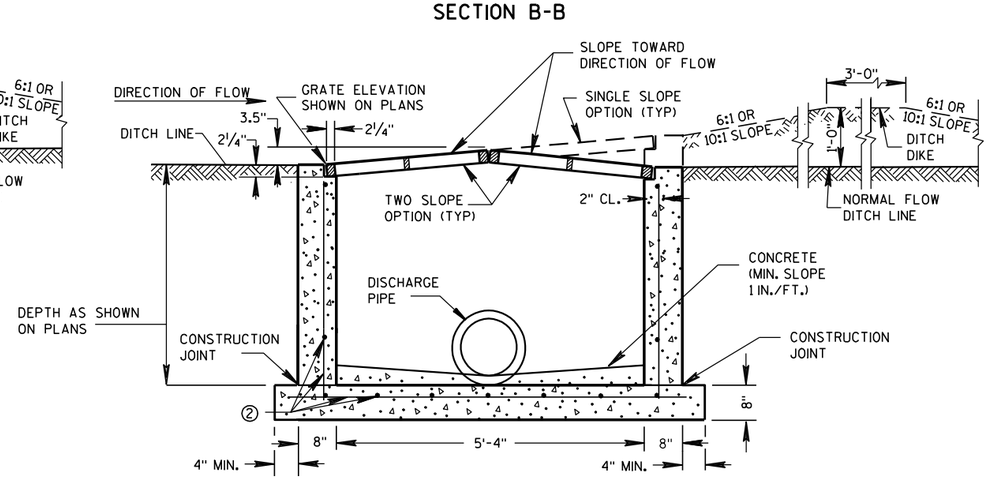
PRECAST REINFORCED CONCRETE SECTION A-A



PRECAST REINFORCED CONCRETE SECTION B-B



REINFORCED CAST-IN-PLACE CONCRETE SECTION A-A



REINFORCED CAST-IN-PLACE CONCRETE SECTION B-B

INLETS MEDIAN 1 GRATE

INLETS MEDIAN 2 GRATE

GENERAL NOTES

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

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

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

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

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

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

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

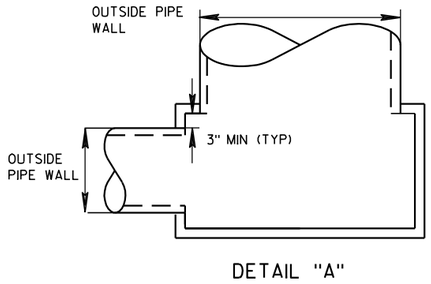
MAXIMUM INSIDE PIPE DIAMETER DETERMINED BY 3" CLEARANCE ON EACH SIDE OF THE OUTSIDE WALL OF THE PIPE. SEE DETAIL "A". ASSUMES PIPE ENTERS PERPENDICULAR TO THE STRUCTURE.

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

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

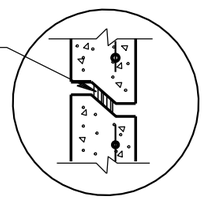
PIPE MATRIX

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



DETAIL "A"

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



DETAIL "B"

INLETS MEDIAN 1 AND 2 GRATE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

6/5/2012
DATE

/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER

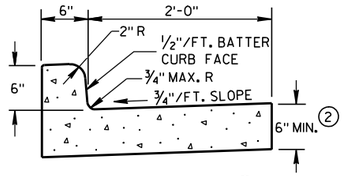
FHWA

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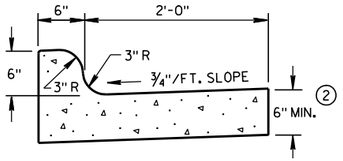
S.D.D. 8 C 8-1

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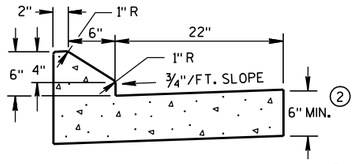
S.D.D. 8 C 8-1



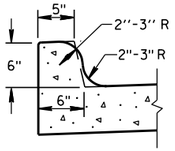
TYPES A & D (1)



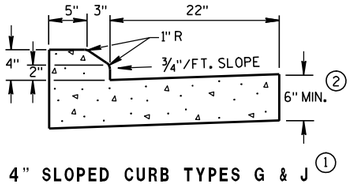
TYPES K & L (1)



6" SLOPED CURB TYPES G & J (1)

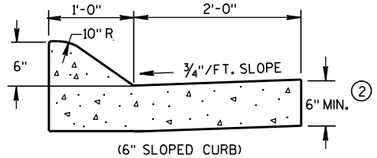


OPTIONAL CURB SHAPE FOR TYPES K & L (1)

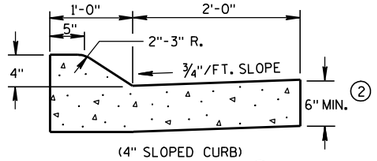


4" SLOPED CURB TYPES G & J (1)

CONCRETE CURB & GUTTER 30"

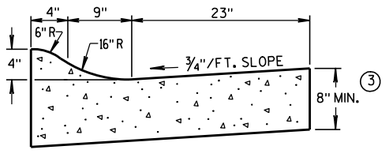


(6" SLOPED CURB)



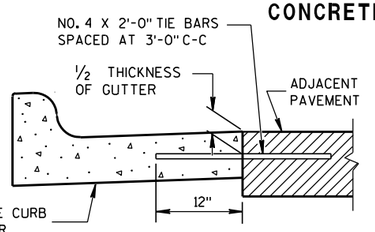
(4" SLOPED CURB)

TYPES A & D (1)

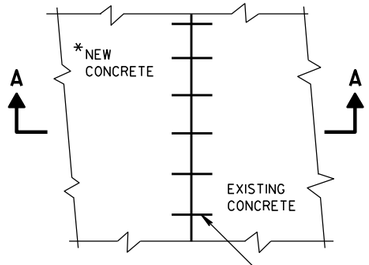


4" SLOPED CURB TYPES R & T (1) (4)

CONCRETE CURB & GUTTER 36"

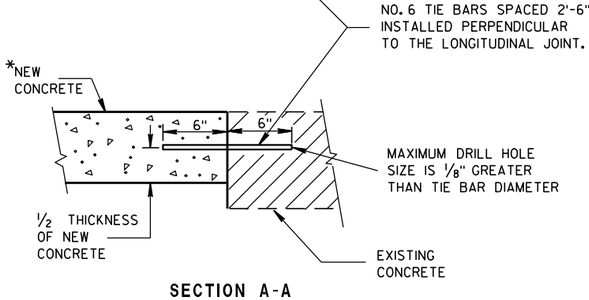


TYPICAL TIE BAR LOCATION (1)



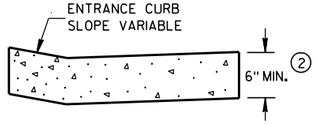
*NEW CURB & GUTTER, SURFACE DRAINS, CONCRETE PAVEMENT OR OTHER NEW CONCRETE.

PLAN VIEW



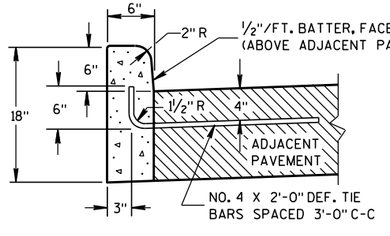
SECTION A-A

TIE BARS DRILLED INTO EXISTING PAVEMENT



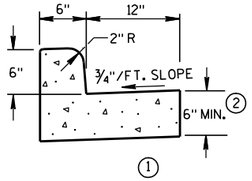
DRIVEWAY ENTRANCE CURB

(WHEN DIRECTED BY THE ENGINEER)



(1)

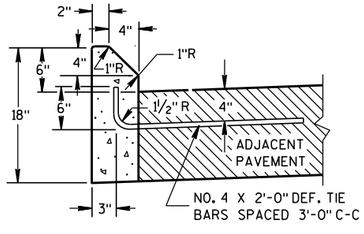
TYPES A & D



(1)

TYPES A & D

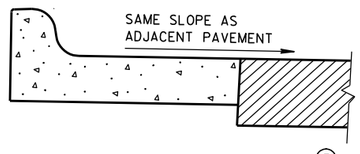
CONCRETE CURB & GUTTER 18"



(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.

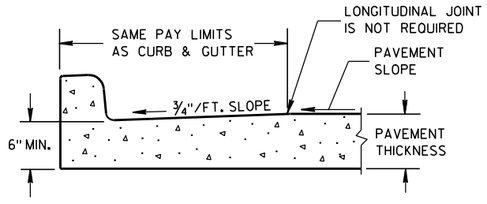
(1) TIE BARS ARE REQUIRED FOR CURB AND GUTTER TYPES A, G, K AND R.

(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.

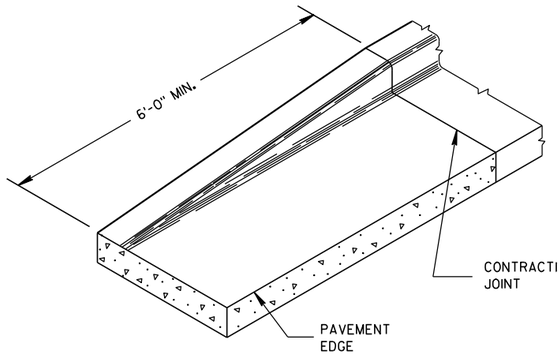
(3) THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 8" MINIMUM GUTTER THICKNESS IS MAINTAINED.

(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

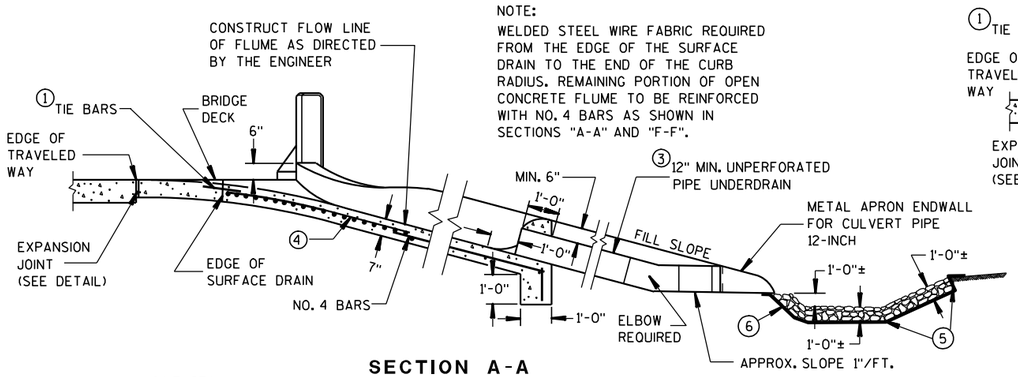
CONCRETE CURB, CONCRETE CURB & GUTTER AND TIES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

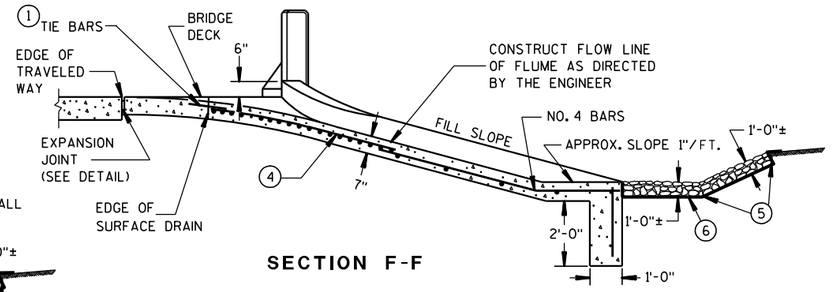
APPROVED
9/4/08 DATE
/S/ Jerry H. [illegible]
ROADWAY STANDARDS ENGINEER
228
FHWA

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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.

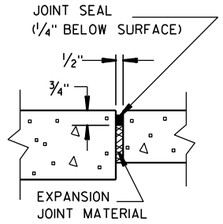
(4) MINIMUM REINFORCEMENT SHALL BE 6" X 6" - W4.0 X W4.0 OR NO. 3 BARS LONGITUDINAL AND TRANSVERSE SPACING 12" C-C.

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

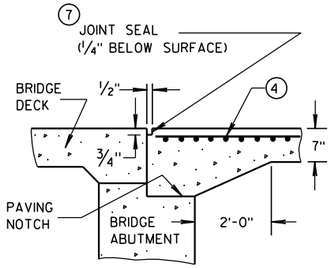
(6) GEOTEXTILE FABRIC, TYPE 'R"

(7) HOT POURED SEALANT UNLESS OTHERWISE SPECIFIED.

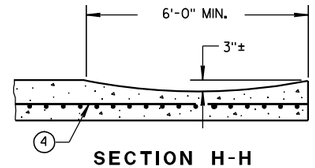
(8) THIS DIMENSION MAY VARY DEPENDING ON THE SPACING OF POSTS FOR THE STEEL PLATE BEAM GUARD. THE TYPICAL LOCATION FOR THE SURFACE DRAIN IS WHERE THE POST SPACING WIDENS TO 3'-1½".



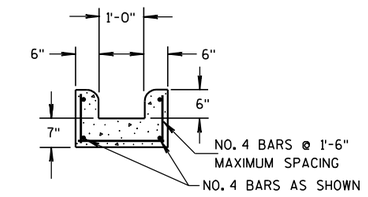
EXPANSION JOINT DETAIL



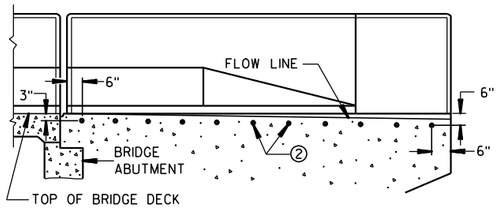
SECTION D-D



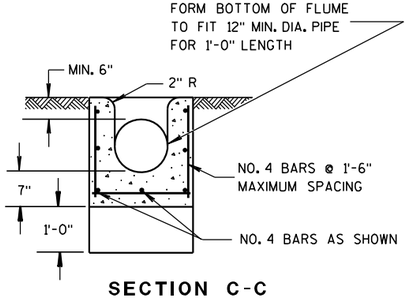
SECTION H-H



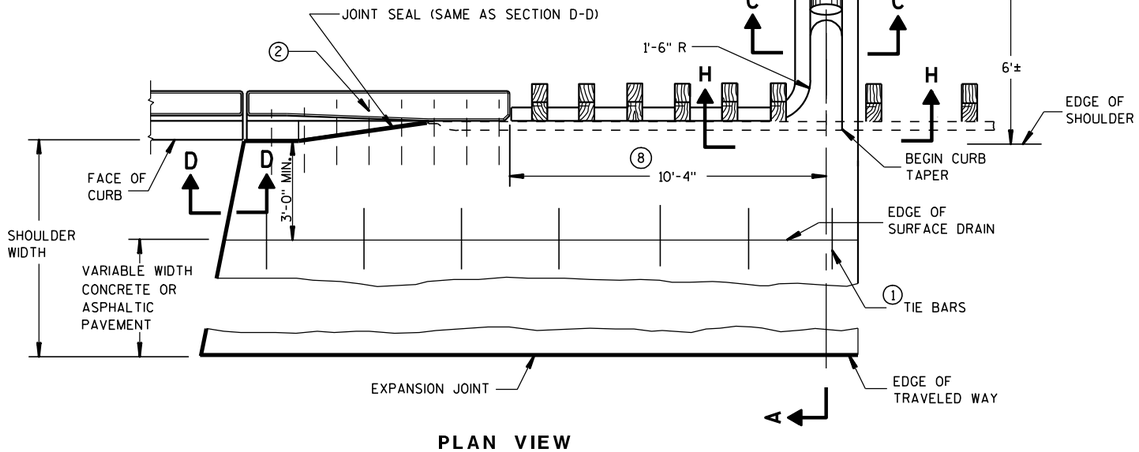
SECTION E-E



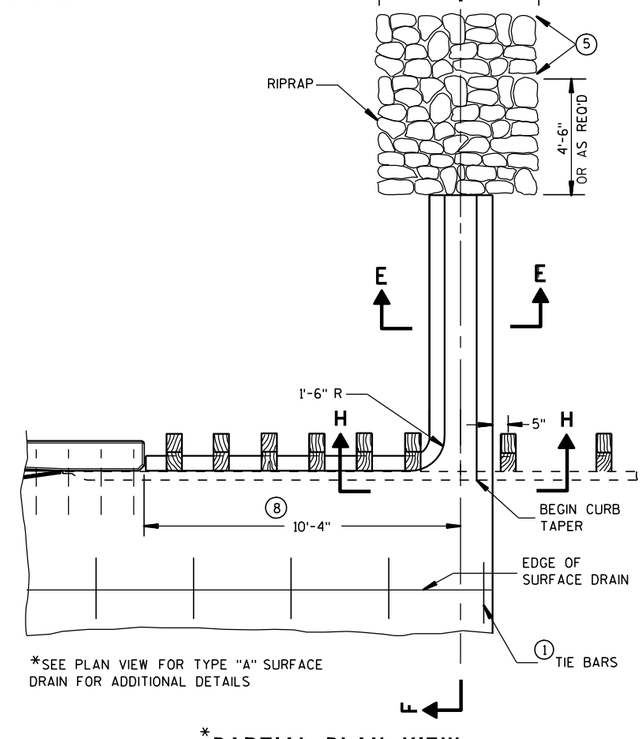
LOCATION OF TIE BARS IN WINGWALL



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"

CONCRETE SURFACE DRAINS
FLUME TYPE
AT STRUCTURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

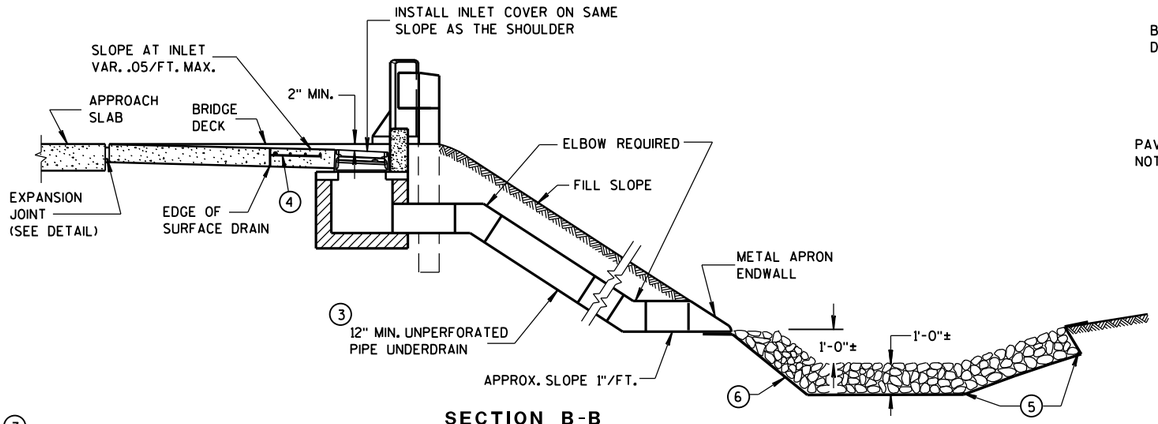
APPROVED
9/4/08 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
229
FHWA

6

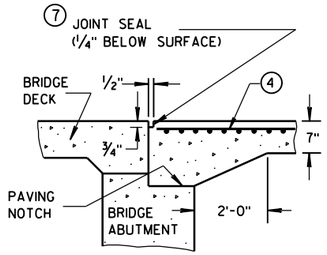
S.D.D. 8 D 2-6

6

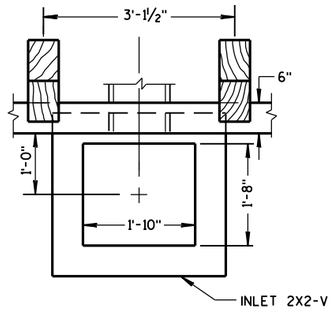
S.D.D. 8 D 2-6



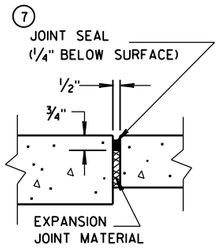
SECTION B-B



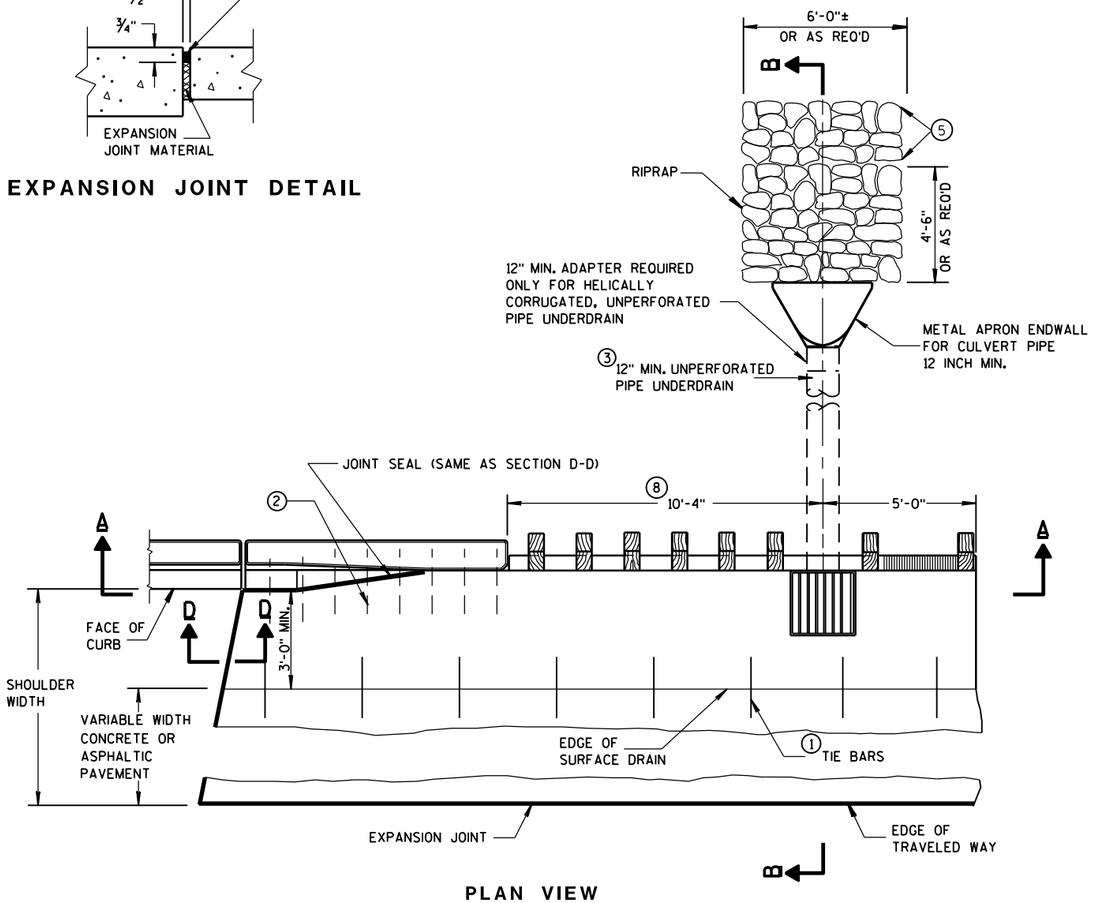
SECTION D-D



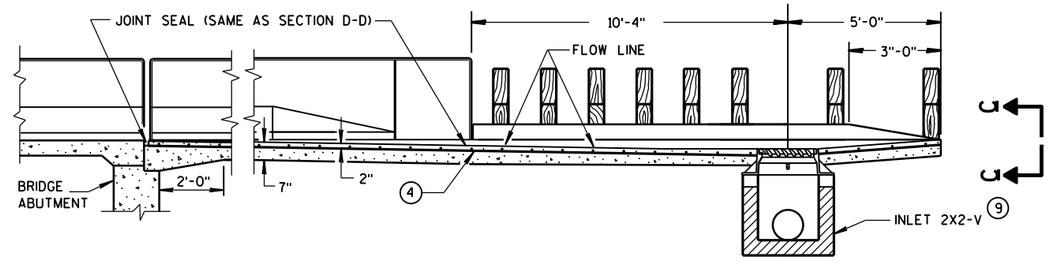
PLAN VIEW



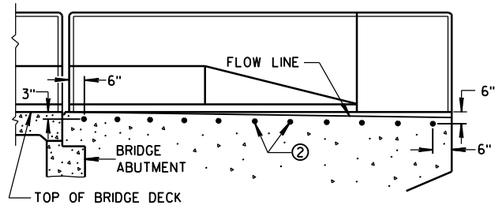
EXPANSION JOINT DETAIL



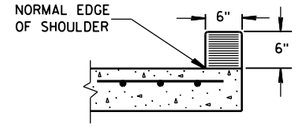
PLAN VIEW



SECTION A-A



LOCATION OF TIE BARS IN WINGWALL



SECTION C-C

GENERAL NOTES

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

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

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

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

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

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

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

(6) GEOTEXTILE FABRIC, 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".

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

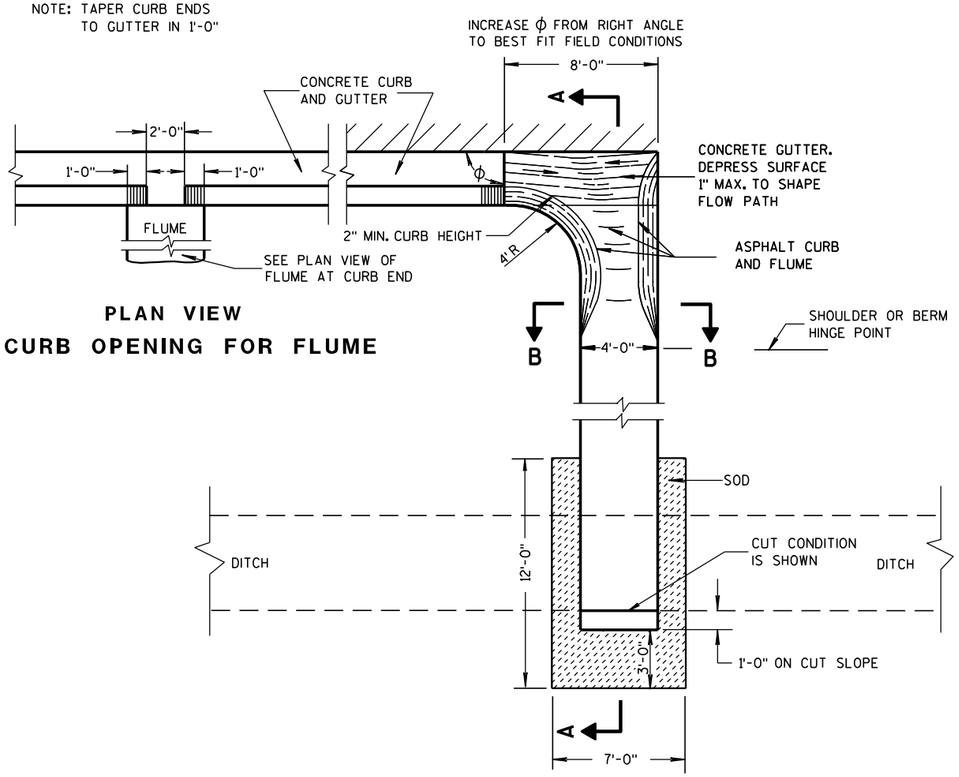
CONCRETE SURFACE DRAINS DROP INLET TYPE AT STRUCTURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

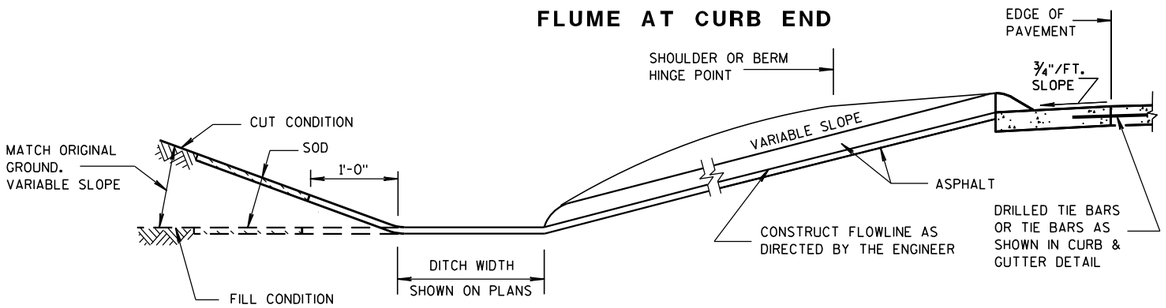
6
S.D.D. 8 D 3-6

ASPHALTIC FLUME

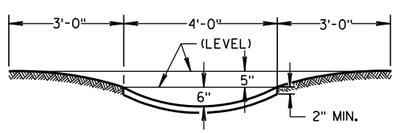


PLAN VIEW
CURB OPENING FOR FLUME

PLAN VIEW
FLUME AT CURB END



SECTION A-A



SECTION B-B

GENERAL NOTES

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

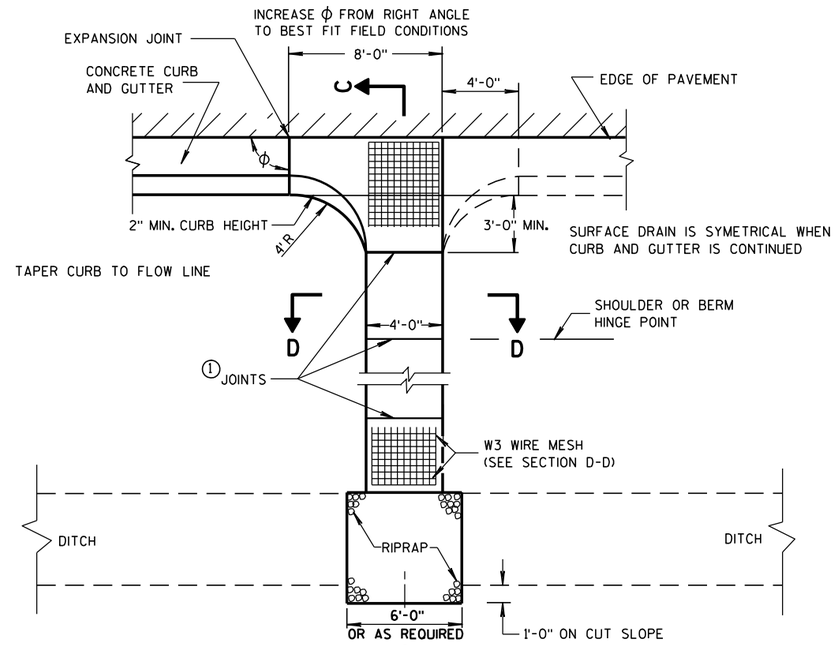
WELDED STEEL WIRE FABRIC SHALL BE IN ACCORDANCE WITH AASHTO SPECIFICATION M55.

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

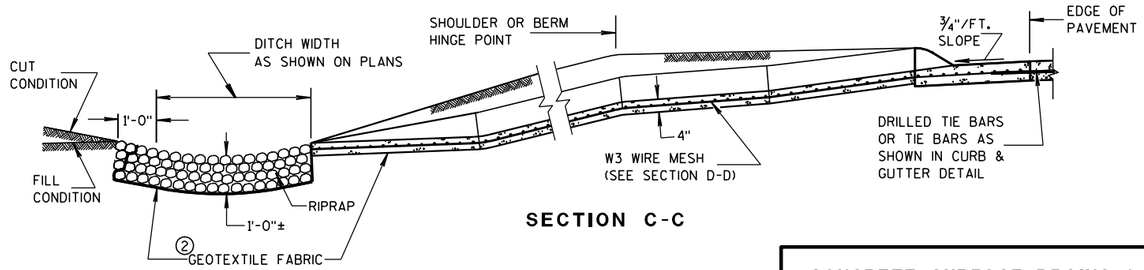
② GEOTEXTILE FABRIC TYPE "R" SHALL UNDERLAY THE FULL LENGTH AND WIDTH OF THE CONCRETE SURFACE DRAIN AND RIPRAP.

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

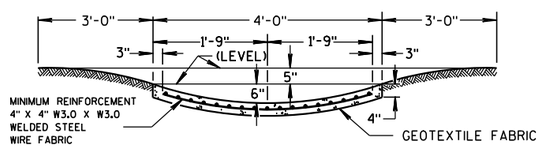
③ CONCRETE SURFACE DRAIN



PLAN VIEW



SECTION C-C



SECTION D-D

CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

9-4-08 DATE — /S/ Jerry H. Zogg ROADWAY STANDARDS ENGINEER — MENT

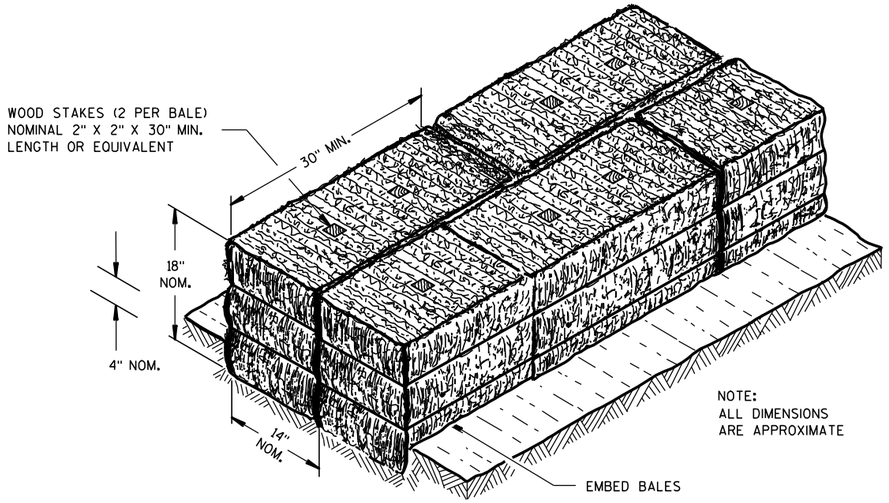
FHWA

6

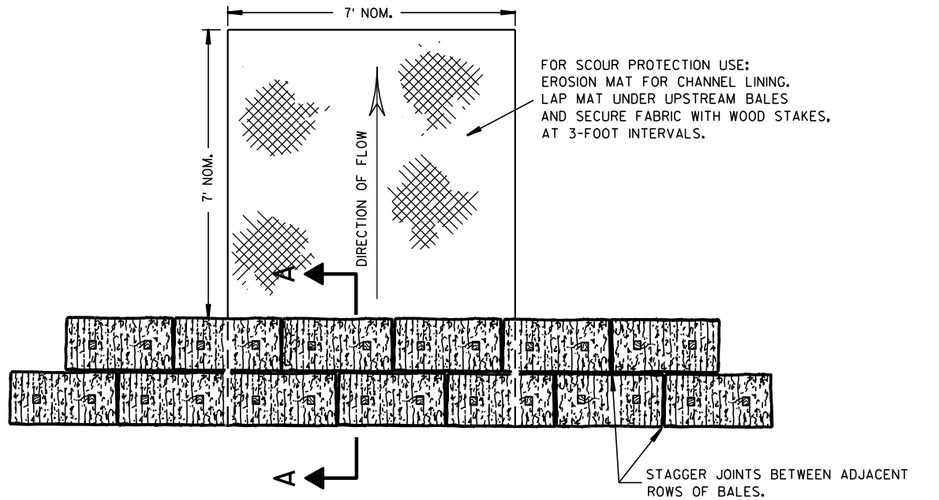
S.D.D. 8 D 4-5

6

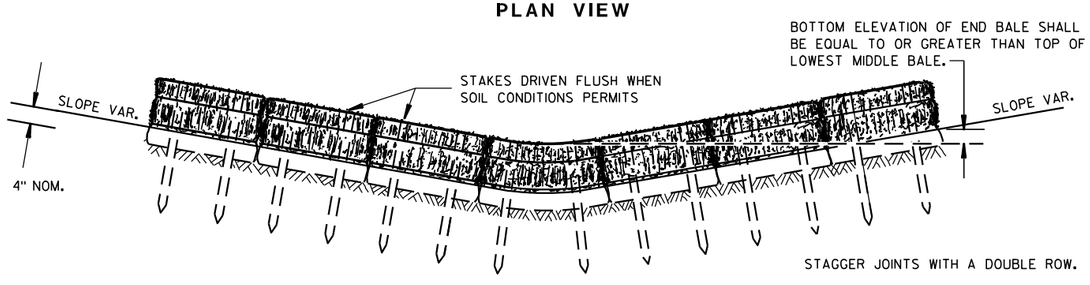
S.D.D. 8 D 4-5



SECTION A-A



PLAN VIEW



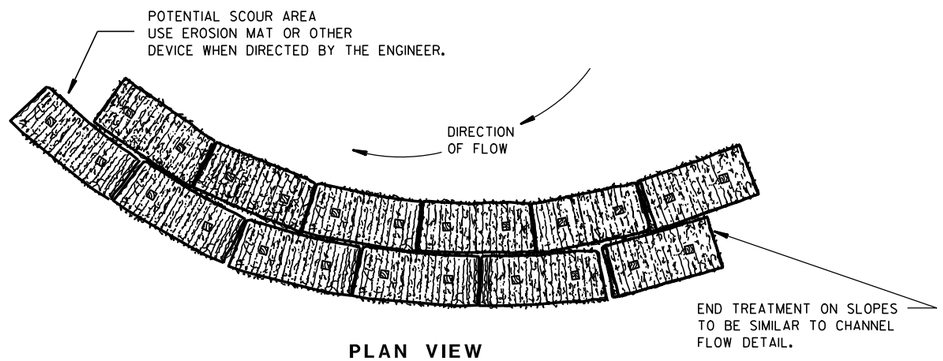
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES (1)

GENERAL NOTES

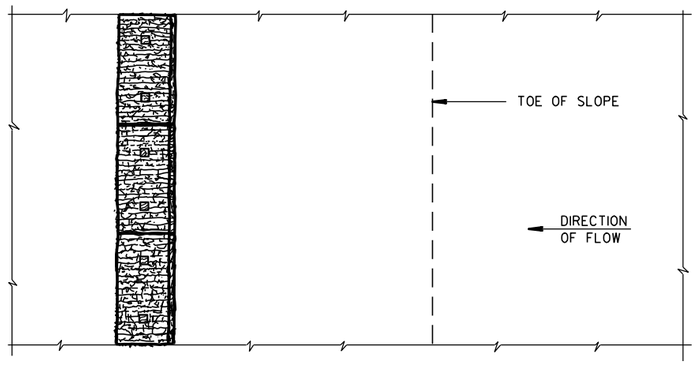
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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

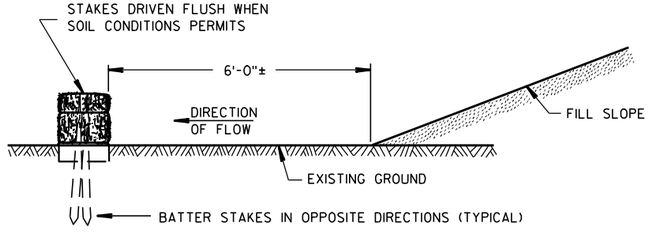


PLAN VIEW

WHEN ALTERING THE DIRECTION OF FLOW



PLAN VIEW



FRONT ELEVATION

WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE

EROSION BALES FOR SHEET FLOW

TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

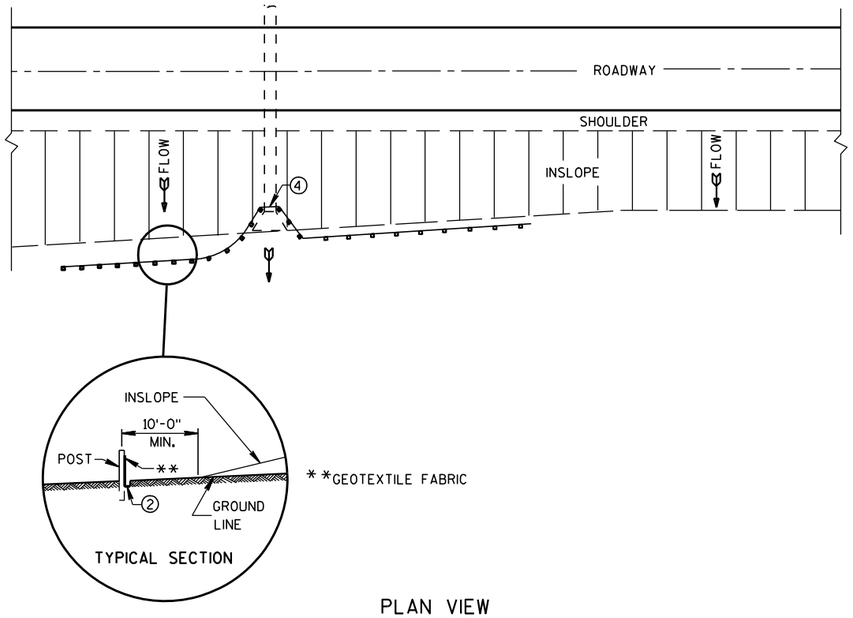
APPROVED
6/04/02 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6

S.D.D. 8 E 8-3

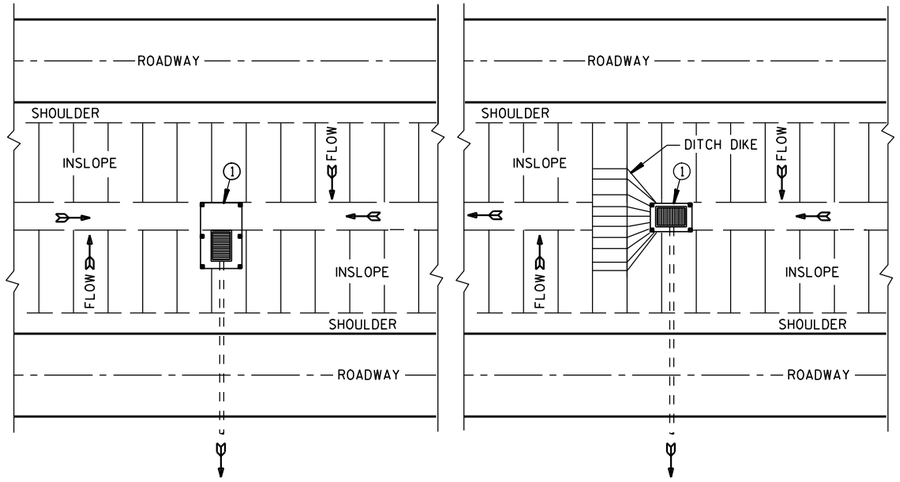
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S.D.D. 8 E 8-3



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

GENERAL NOTES

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

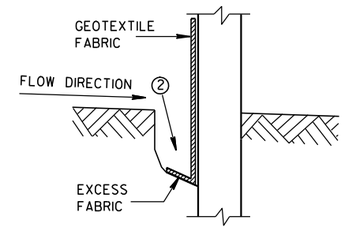
① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.

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

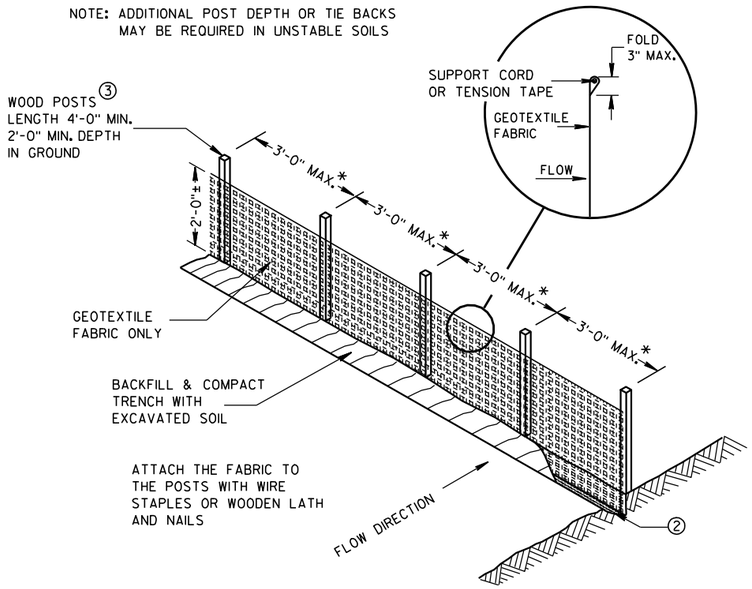
③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1⅛" X 1⅛" OF OAK OR HICKORY.

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

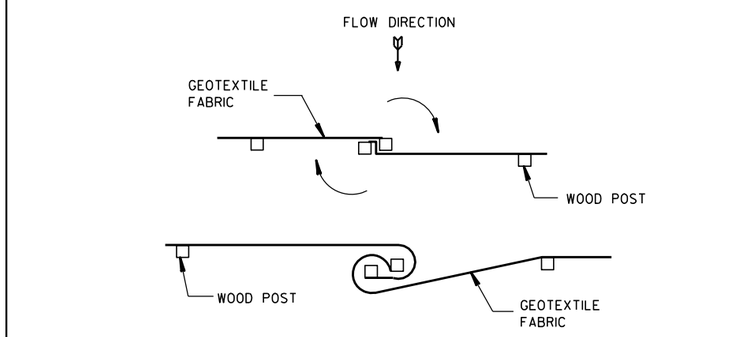
⑤ CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



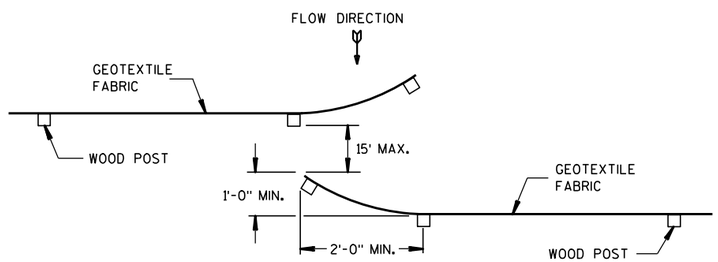
TRENCH DETAIL



SILT FENCE

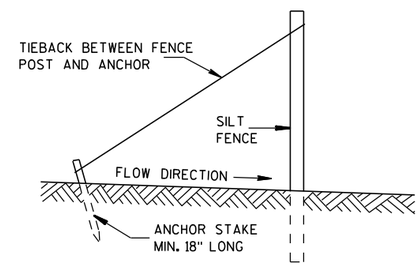


TWIST METHOD



HOOK METHOD

JOINING TWO LENGTHS OF SILT FENCE ⑤



SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

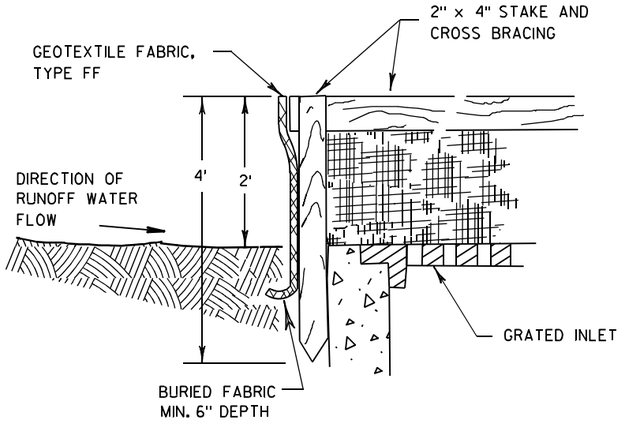
APPROVED
4-29-05 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

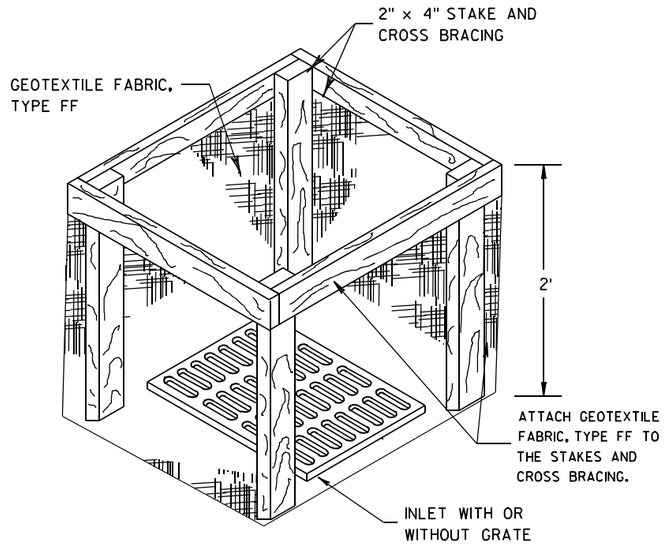
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S.D.D. 8 E 9-6

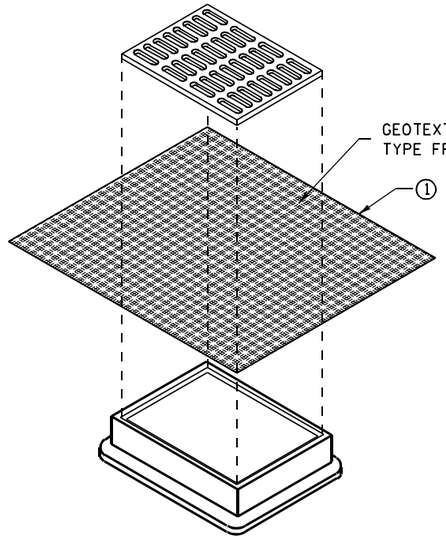
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S.D.D. 8 E 9-6



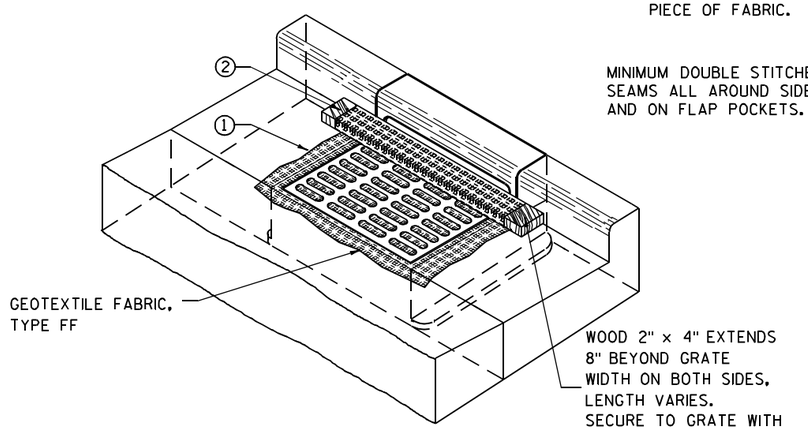


INLET PROTECTION, TYPE A

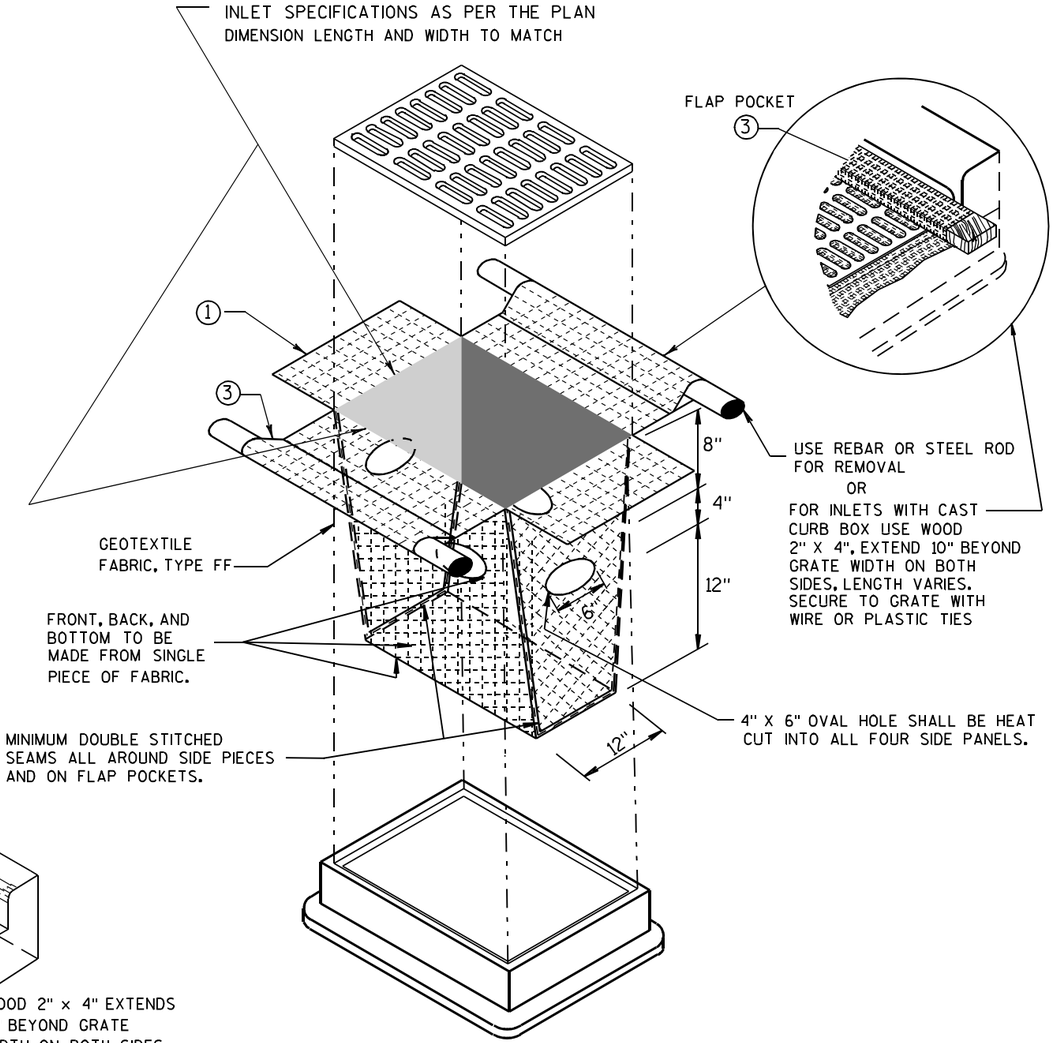


INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)

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



INLET PROTECTION, TYPE C (WITH CURB BOX)



INLET PROTECTION, TYPE D

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

GENERAL NOTES

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

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

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

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

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

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

INSTALLATION NOTES

TYPE B & C

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

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

TYPE D

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

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

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

INLET PROTECTION
TYPE A, B, C, AND D

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

10/16/02
DATE

/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER

FHWA

6

S.D.D. 8 E 10-2

6

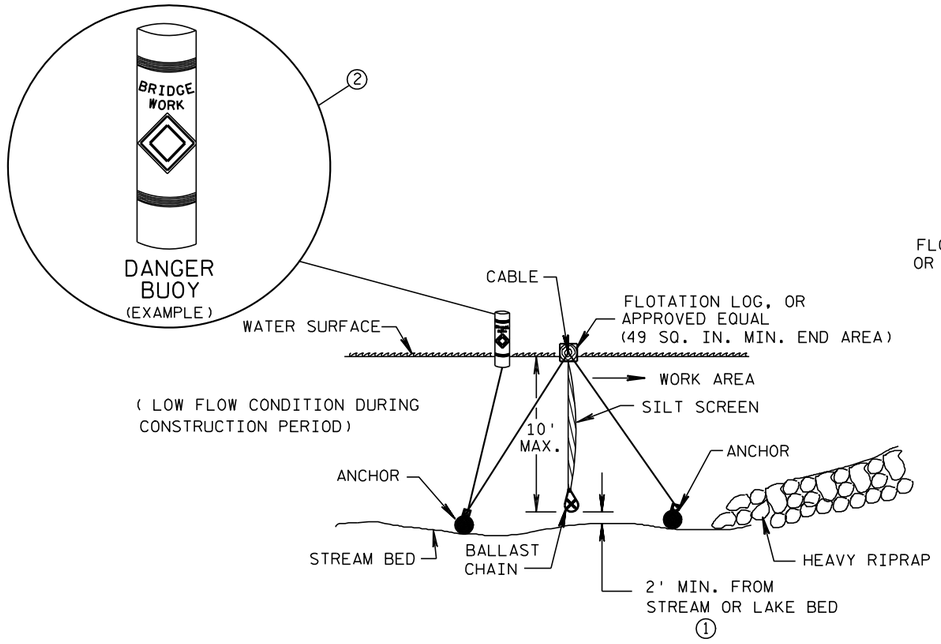
S.D.D. 8 E 10-2

GENERAL NOTES

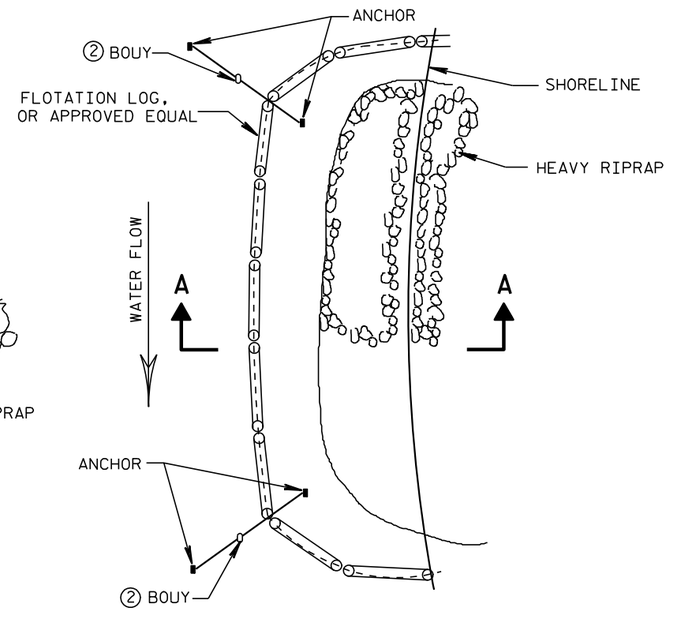
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

① 2' MINIMUM SHALL BE MAINTAINED DURING CONSTRUCTION PERIOD.

② USE AS DIRECTED BY COAST GUARD OR DNR PERMIT WHEN WORKING IN NAVIGABLE WATERWAYS.



SECTION A-A



PLAN VIEW

SILT SCREEN PLACEMENT DETAIL

SILT SCREEN
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION
APPROVED 6/04/02 DATE /S/ Beth Cannestra CHIEF ROADWAY DEVELOPMENT ENGINEER FHWA

METAL APRON ENDWALLS

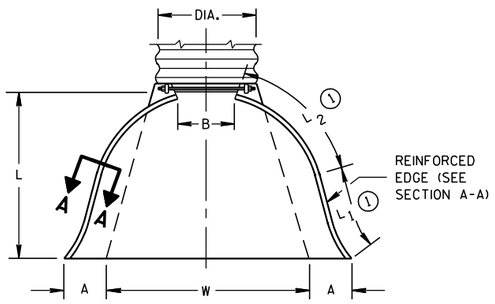
PIPE DIA. (IN.)	MIN. THICK. (Inches) STEEL	MIN. THICK. (Inches) ALUM.	DIMENSIONS (Inches) A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")	APPROX. SLOPE	BODY
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1	1 Pc.
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1	1 Pc.
18	.064	.060	8	10	6	31	15	28 1/4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

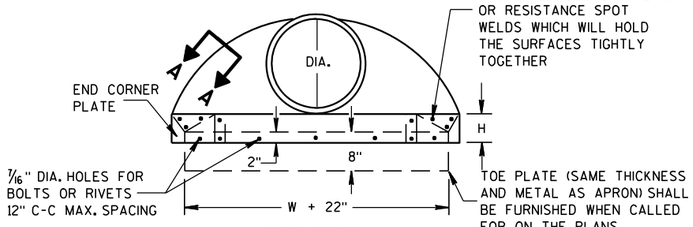
REINFORCED CONCRETE APRON ENDWALLS

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

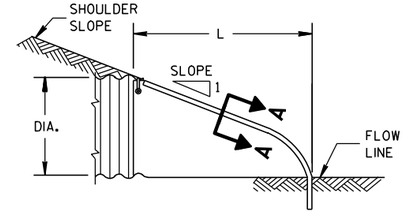
*MINIMUM
**MAXIMUM



PLAN VIEW

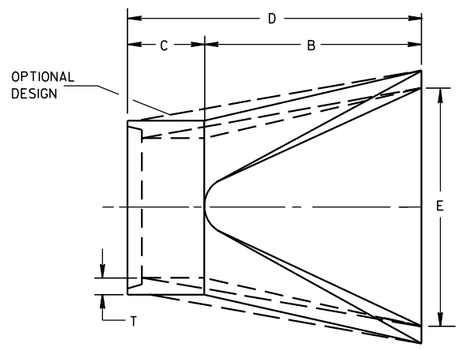


END VIEW

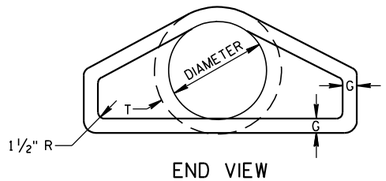


SIDE ELEVATION

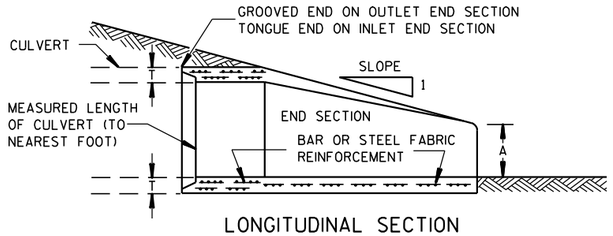
METAL ENDWALLS



PLAN

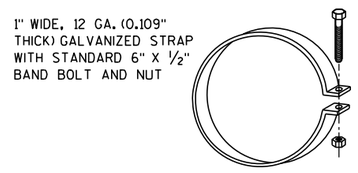


END VIEW



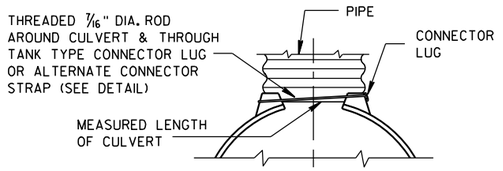
LONGITUDINAL SECTION

CONCRETE ENDWALLS

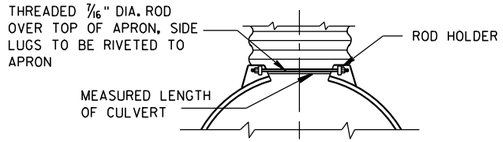


ALTERNATE FOR TYPE 1 CONNECTION

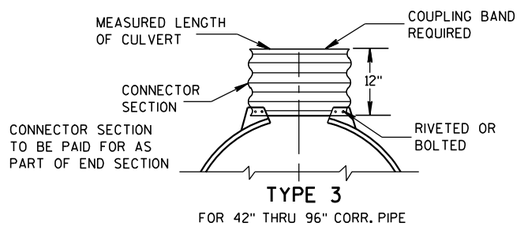
END SECTION CONNECTOR STRAP



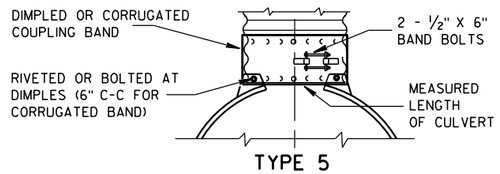
TYPE 1
FOR 12" THRU 24" CORR. PIPE



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

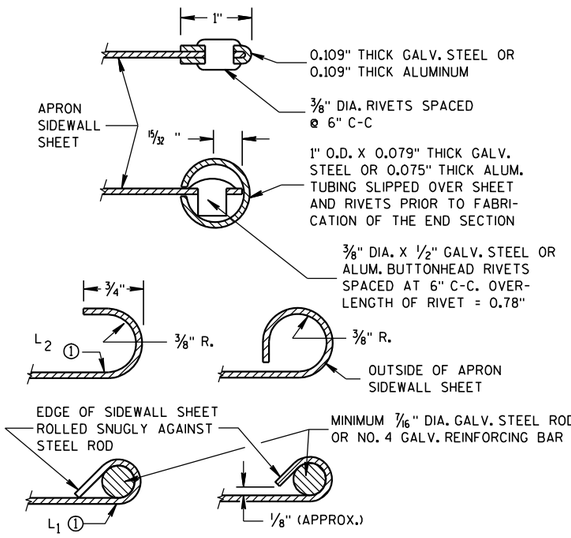
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL. AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

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.

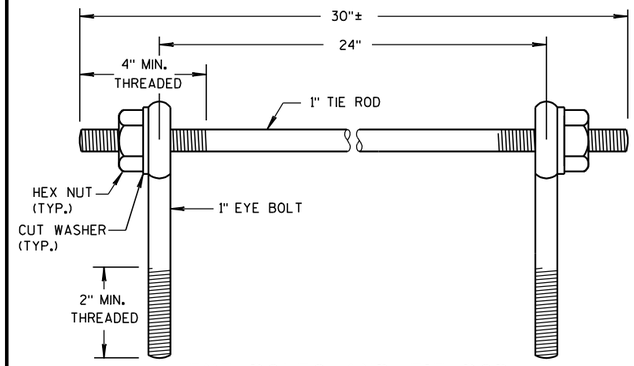
① FOR PIPE SIZES UP TO 60" DIAMETER, A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

APRON ENDWALLS FOR CULVERT PIPE

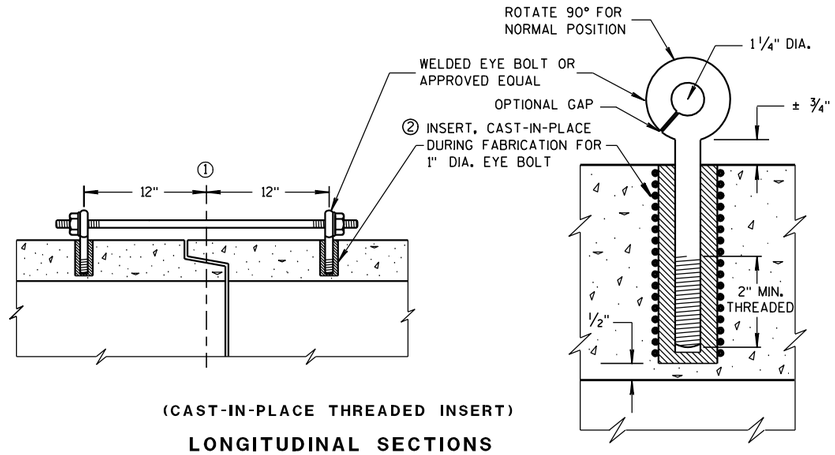
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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.

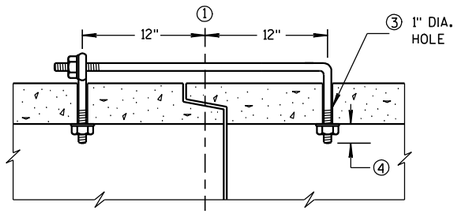
② THE INSIDE OF THE THREADED INSERTS SHALL BE CLEAN TO ALLOW THE INSERTION OF THREADED EYE BOLTS.

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

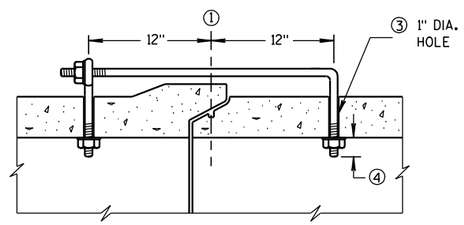
④ BOLT PROJECTION INSIDE OF PIPE SHALL NOT EXCEED 2 INCHES.

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)

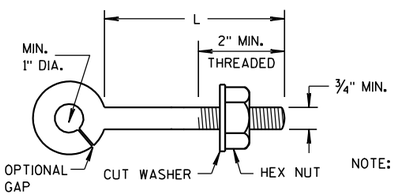


(MODIFIED BELL PIPE)

LONGITUDINAL SECTION

EYE BOLT DIMENSION TABLE

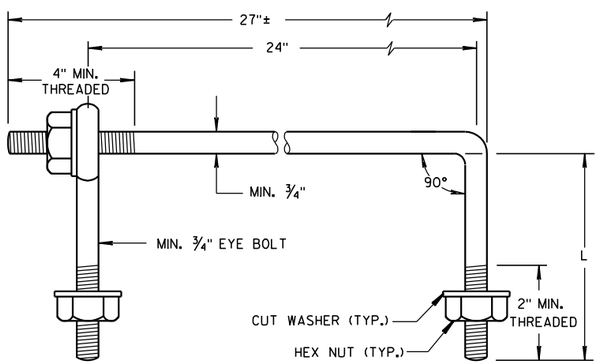
PIPE SIZE	L = LENGTH	
	TONGUE & GROOVE PIPE	MODIFIED BELL PIPE
18" TO 24"	4 1/2"	6 1/4"
30"	5"	7"
36"	5 1/2"	7"
42"	6"	
48"	6 1/2"	
60"	7 1/2"	
66"	8"	



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

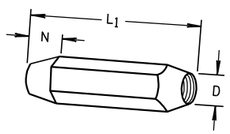
(JOINT TIES FOR 18" TO 66" DIA. CONCRETE PIPE)

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

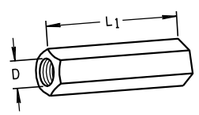
ADJUSTABLE TIE ROD TABLE

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



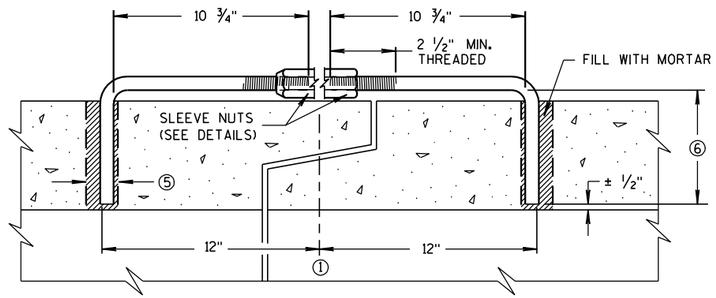
TAPERED



PLAIN

RIGHT AND LEFT THREADS

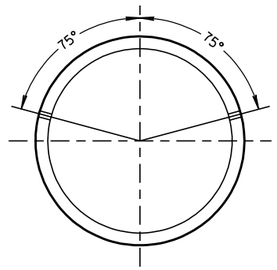
SLEEVE NUTS



LONGITUDINAL SECTION

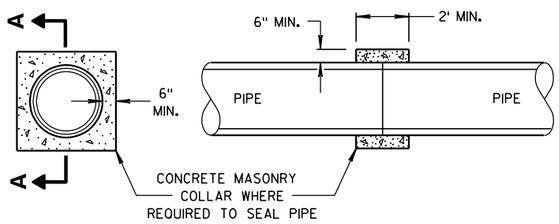
(JOINT TIES FOR 12" TO 108" DIA. CONCRETE PIPE)

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

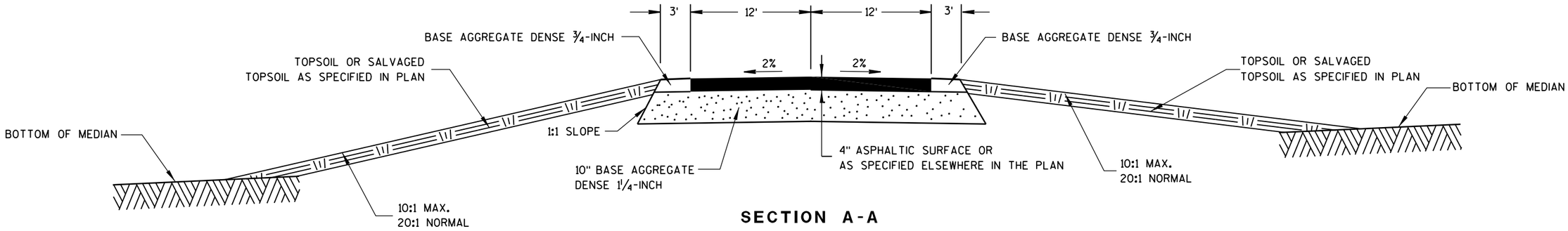
APPROVED
6/5/2012 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
237
FHWA

6

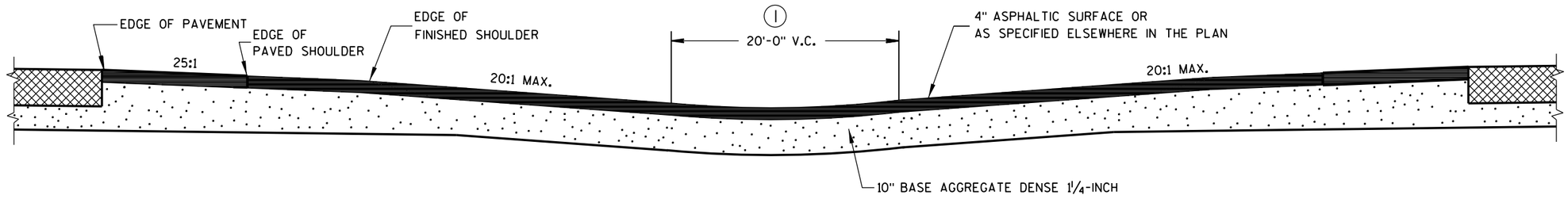
S.D.D. 8 F 4-7

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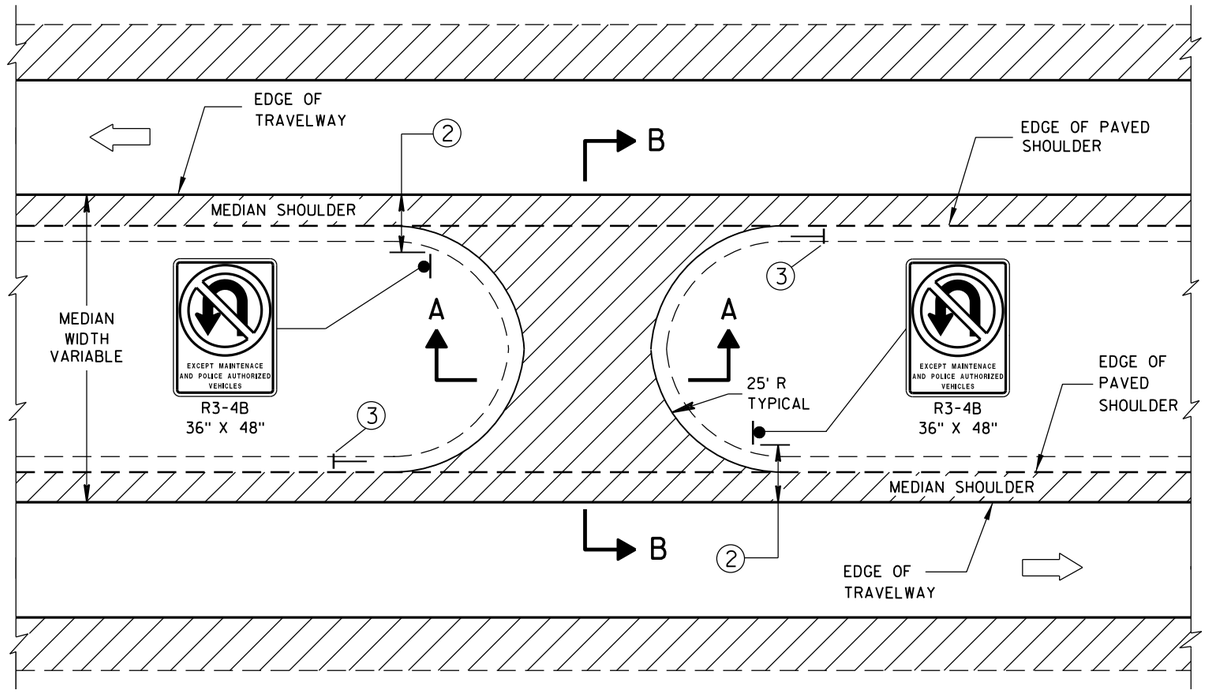
S.D.D. 8 F 4-7



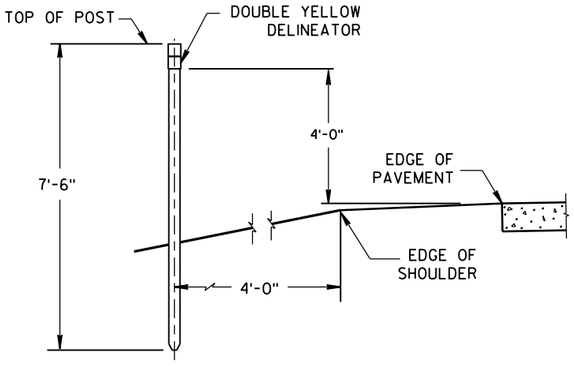
SECTION A-A



SECTION B-B



PLAN VIEW



DOUBLE YELLOW DELINEATOR INSTALLATION

GENERAL NOTES

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

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

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

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

MAINTENANCE CROSSOVER FOR FREEWAYS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8/2013 — DATE

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

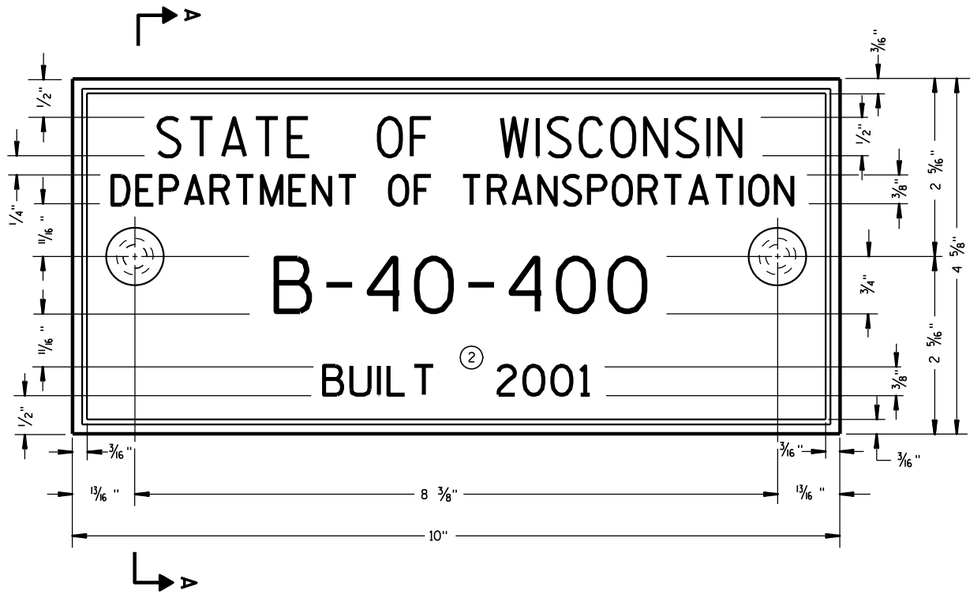
FHWA

6

S.D.D. 11 A 1-5

6

S.D.D. 11 A 1-5



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

NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES

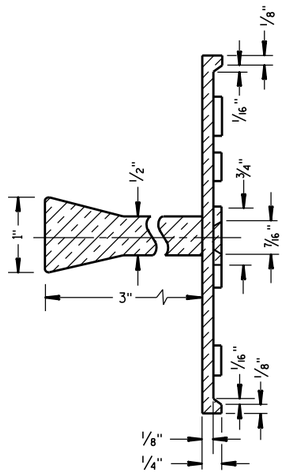
GENERAL NOTES

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

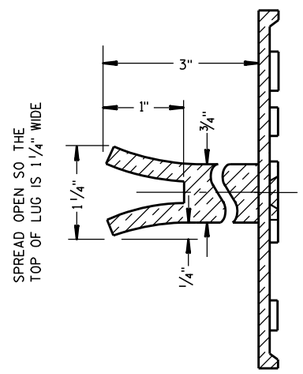
THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

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

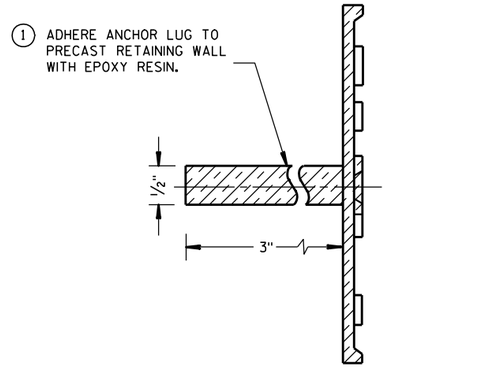
(2) REHABILITATION OF AN EXISTING STRUCTURE SHOULD USE THE DATE OF ORIGINAL STRUCTURE CONSTRUCTION.



SECTION A-A



ALTERNATE LUG



ALTERNATE LUG
(FOR ATTACHMENT TO PRECAST STRUCTURES)

NAME PLATE (STRUCTURES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

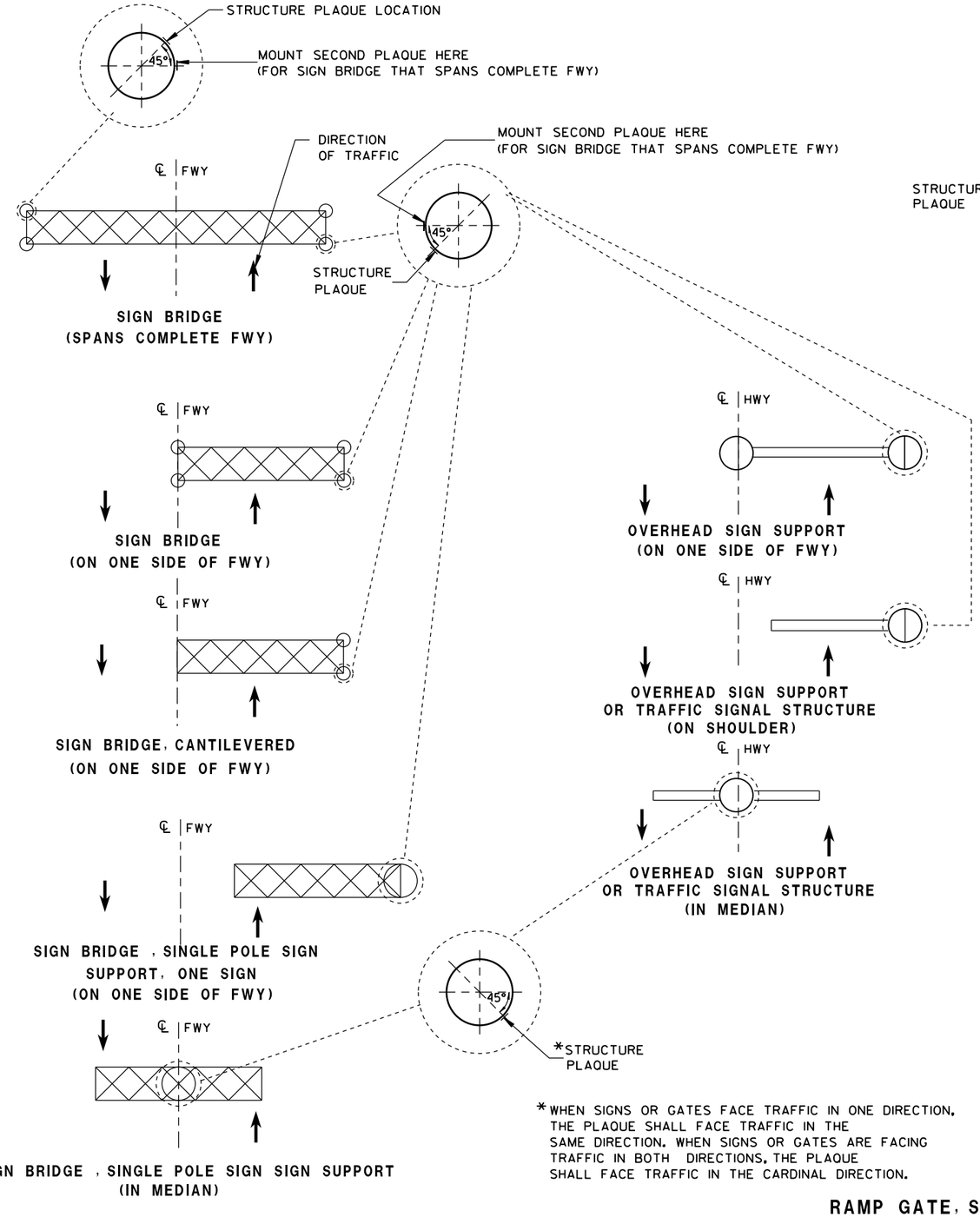
3/26/10 DATE

/S/ Scot Beck-- CHIEF STRUCTURAL DEVELOP ENGINEER

FHWA

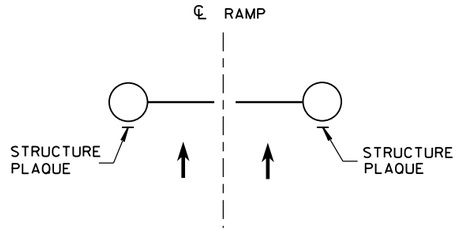
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S.D.D. 12 A 3-10

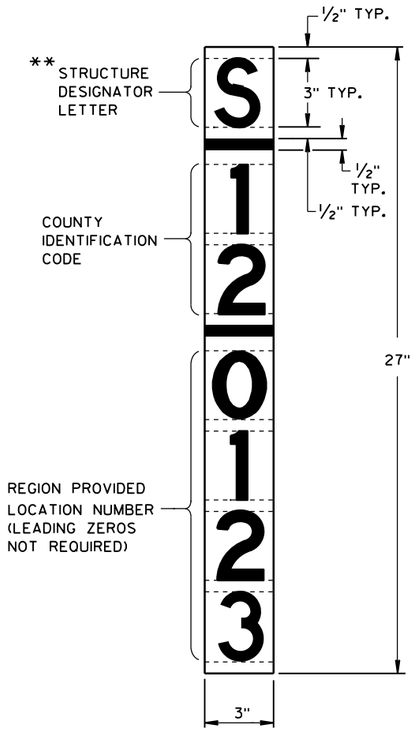


*WHEN SIGNS OR GATES FACE TRAFFIC IN ONE DIRECTION, THE PLAQUE SHALL FACE TRAFFIC IN THE SAME DIRECTION. WHEN SIGNS OR GATES ARE FACING TRAFFIC IN BOTH DIRECTIONS, THE PLAQUE SHALL FACE TRAFFIC IN THE CARDINAL DIRECTION.

LOCATION OF RAMP GATE, SIGN BRIDGE, OVERHEAD SIGN SUPPORT & TRAFFIC SIGNAL STRUCTURE PLAQUES



**RAMP GATE
(ACROSS FWY ON-RAMP)**



RAMP GATE, SIGN BRIDGE, OVERHEAD SIGN SUPPORT AND TRAFFIC SIGNAL STRUCTURE PLAQUE FOR SIGN BRIDGES AND OVERHEAD SIGN SUPPORT WHICH ARE NOT STRUCTURE MOUNTED

** LETTER "G" UTILIZED FOR RAMP GATES. LETTER "S" UTILIZED FOR SIGN BRIDGES, OVERHEAD SIGN SUPPORTS, AND TRAFFIC SIGNALS.

GENERAL NOTES

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

PLAQUES SHALL BE INCIDENTAL TO ALL NEW INSTALLATIONS.

IF THE PROPOSED SIGN BRIDGE OR OVERHEAD SIGN SUPPORT IS REPLACING AN EXISTING SIGN BRIDGE OR OVERHEAD SIGN SUPPORT, A NEW IDENTIFICATION PLAQUE WILL BE REQUIRED.

FASTEN TOP, CENTER AND BOTTOM OF PLAQUE TO POLE OR OTHER LOCATION AS FOLLOWS:

GALVANIZED STEEL SHAFT - 3 STAINLESS STEEL POP RIVETS

A588 STEEL SHAFT - SHIM FOR DRAINAGE WITH STAINLESS WASHERS; FASTEN WITH STAINLESS SELF-TAPPING SCREWS

ALUMINUM SHAFTS - 3 ALUMINUM POP RIVETS

MOUNTING HEIGHT SHALL BE APPROXIMATELY 5.0' ABOVE CURB OR SHOULDER. ADJUST IF IT IS KNOWN THAT REQUIRED TRAFFIC SIGNS WILL OBSTRUCT.

PLAQUE MATERIALS:

BASE - SHEET ALUMINUM, 0.060" THICK.

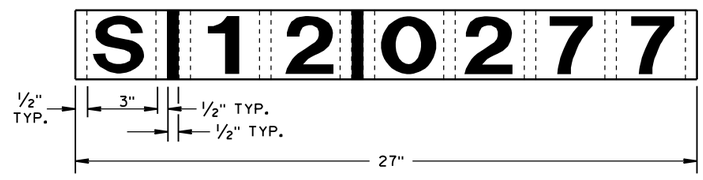
FACE - WHITE, SELF-ADHESIVE VINYL SHEETING, NON-RETROREFLECTIVE

LINES - BLACK, ½" WIDE, SELF-ADHESIVE

CHARACTERS:- BLACK, SELF ADHESIVE, SERIES "D", SIZE AS SHOWN.

FOR SIGN BRIDGES, STRUCTURE MOUNTED, THE STRUCTURE PLAQUE SHALL BE MOUNTED HORIZONTALLY AS SHOWN ON THE DRAWING. THE STRUCTURE PLAQUE SHALL BE MOUNTED HORIZONTALLY TO THE BACK OF THE SIGN, BETWEEN THE ALUMINUM EXTRUSIONS, NEAR THE TOP LEFT HAND CORNER OF THE SIGN. THE BASE MATERIAL SHALL BE OMITTED AND THE FACE ADHERED DIRECTLY TO THE ALUMINUM SURFACE. PRIOR TO ADHERING THE MATERIAL, THE ALUMINUM SURFACE SHALL BE SMOOTH, CLEAN AND DRY.

WHERE SIGN BRIDGE ILLUMINATION IS PROVIDED, THE STRUCTURE MUST ALSO HAVE A SIGN BRIDGE CIRCUIT PLAQUE AS SHOWN IN THE ELECTRICAL DETAILS.



IDENTIFICATION PLAQUE FOR SIGN BRIDGE, STRUCTURE MOUNTED

STRUCTURE IDENTIFICATION PLAQUES, RAMP GATES, SIGN BRIDGES, OVERHEAD SIGN SUPPORTS, & TRAFFIC SIGNALS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
12/4/2012 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER

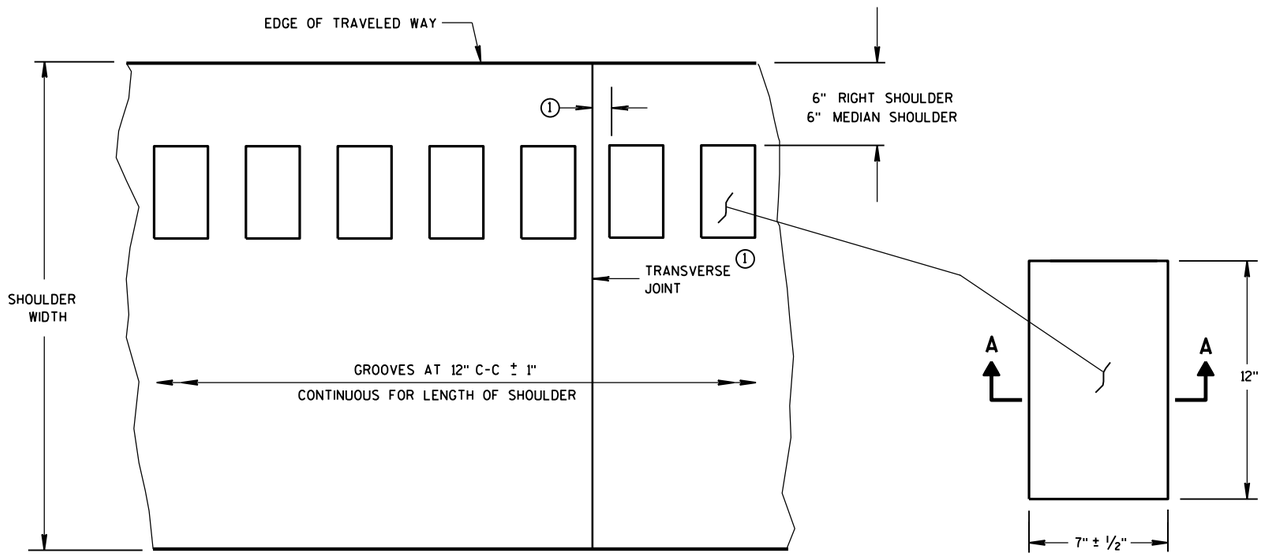
FHWA

6

S.D.D. 12 A 4-3

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S.D.D. 12 A 4-3



PLAN VIEW
SHOULDER WITH GROOVES

PLAN VIEW
(SINGLE GROOVE)

PLACEMENT DETAIL FOR MILLED RUMBLE STRIP

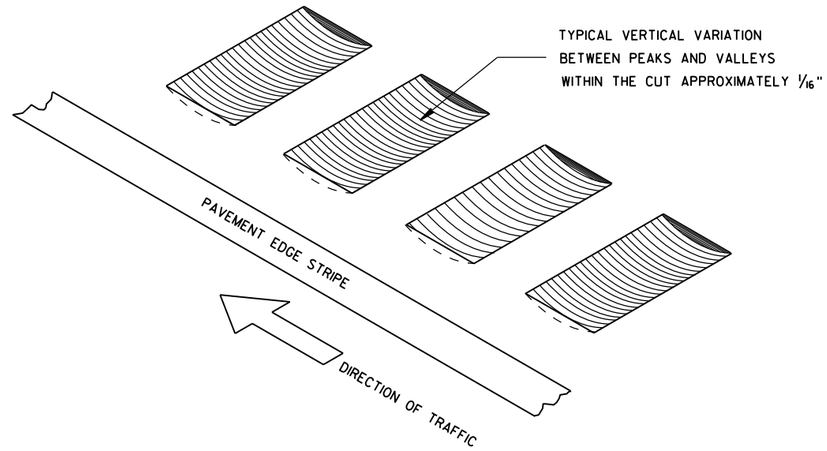
GENERAL NOTES

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

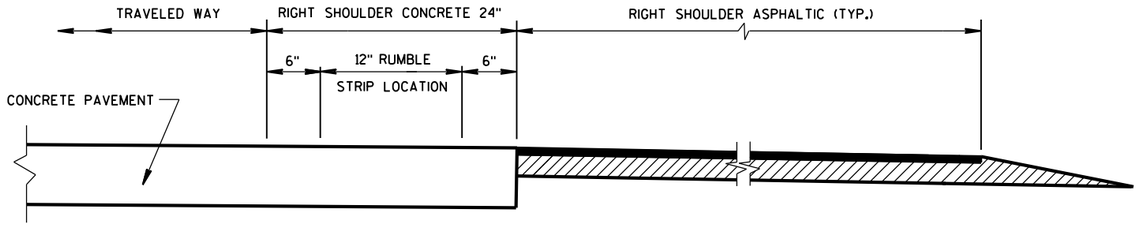
RUMBLE STRIPS ON EXPRESSWAYS

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.

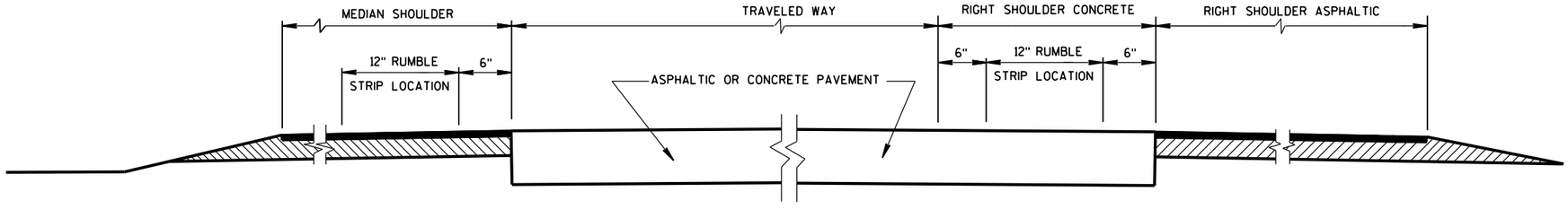
(1) CONCRETE PAVEMENT - RUMBLE STRIPS SHALL BE A MINIMUM OF 6" AWAY FROM TRANSVERSE JOINTS.



ISOMETRIC



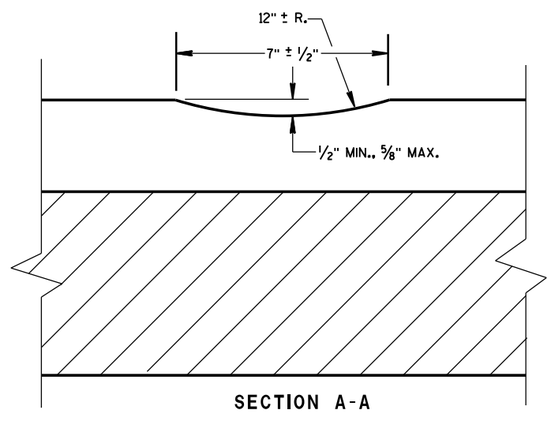
SECTION VIEW
CONCRETE PAVEMENT EXTENDS INTO RIGHT SHOULDER)



SECTION VIEW

TYPICAL LOCATIONS OF SHOULDER RUMBLE STRIPS IN RURAL DIVIDED HIGHWAYS

(ONE ROADWAY IS SHOWN)



SECTION A-A

SHOULDER RUMBLE STRIP, MILLING

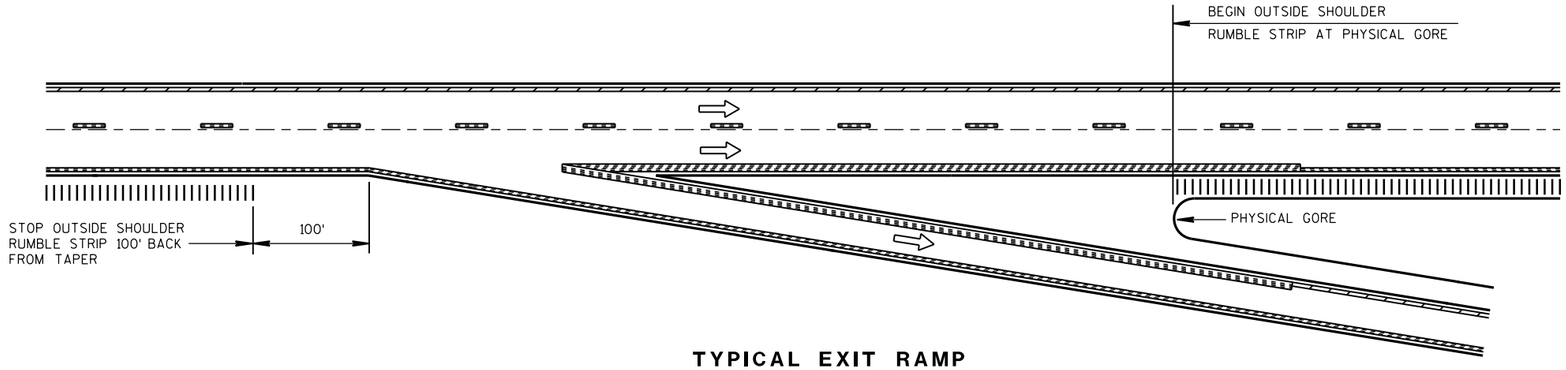
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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

6

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



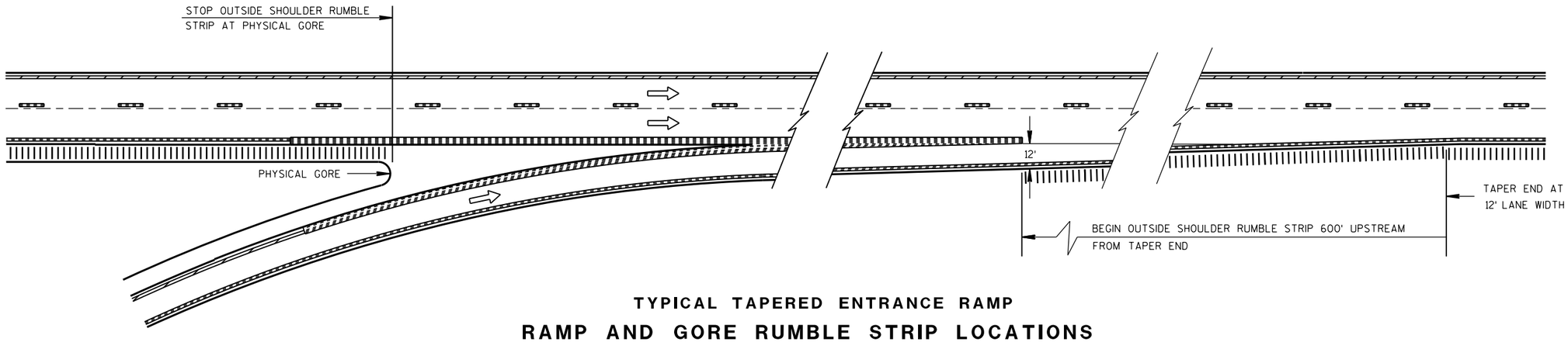
TYPICAL EXIT RAMP

NOTES:

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

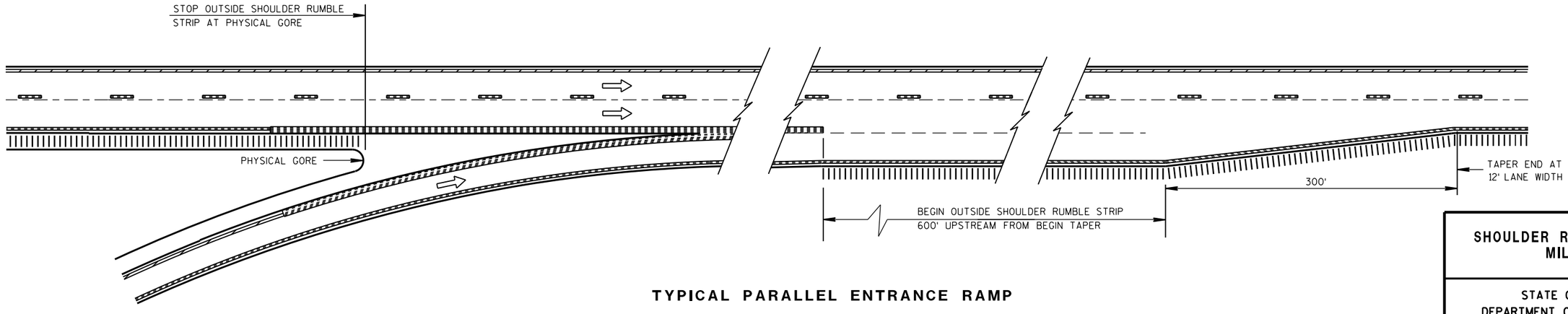
PAVEMENT MARKING DETAILS AND SPECIFICATIONS ARE PROVIDED ELSEWHERE IN THE CONTRACT.

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

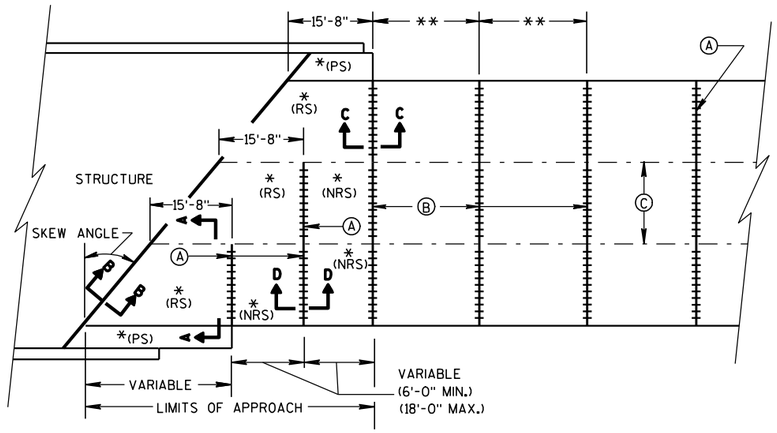
FHWA

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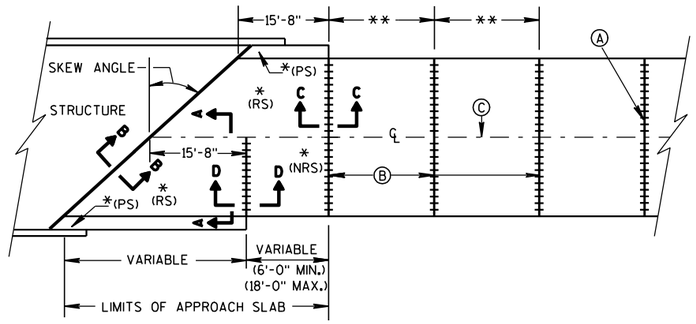
S.D.D. 13 A 5-5b

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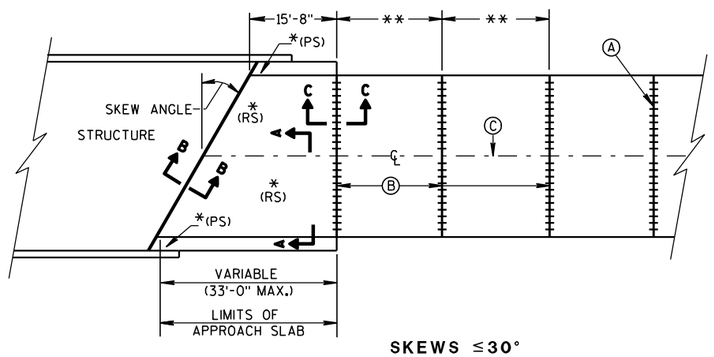
S.D.D. 13 A 5-5b



SKEWED APPROACH
(PAVEMENT MORE THAN 2 LANES)



SKEWS >30°
(PAVEMENT WIDTH ≤30')



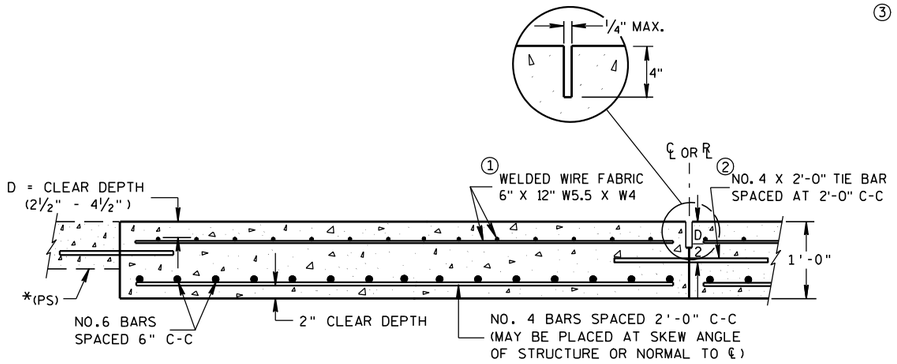
SKEWS ≤30°
(PAVEMENT WIDTH ≤30')

APPROACH SLAB AND ADJACENT PAVEMENT

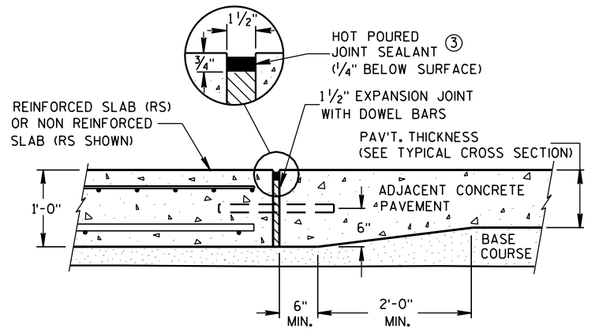
*(RS) = REINFORCED CONCRETE SLAB
*(PS) = PAVED CONCRETE SHOULDER: CONCRETE PAVEMENT, OR CONCRETE SURFACE DRAIN
(SEE DETAILS ELSEWHERE IN THE PLAN)
*(NRS) = NON-REINFORCED CONCRETE SLAB

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

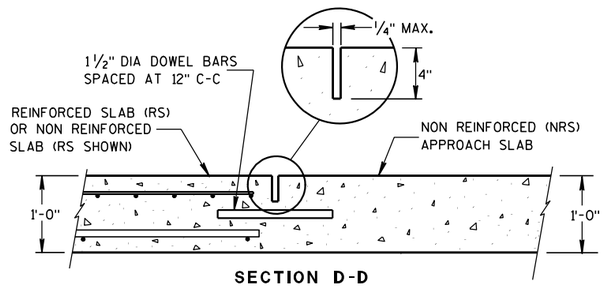
(A) STANDARD CONTRACTION JOINT NORMAL TO ℄ OR ℄
(B) 1½" EXPANSION JOINT WITH DOWEL BARS NORMAL TO ℄ OR ℄
(C) STANDARD LONGITUDINAL JOINT AND TIE BARS.



SECTION A-A
REINFORCEMENT POSITIONING DETAIL



SECTION C-C
TRANSITION DETAIL
APPROACH SLAB TO ADJACENT PAVEMENT



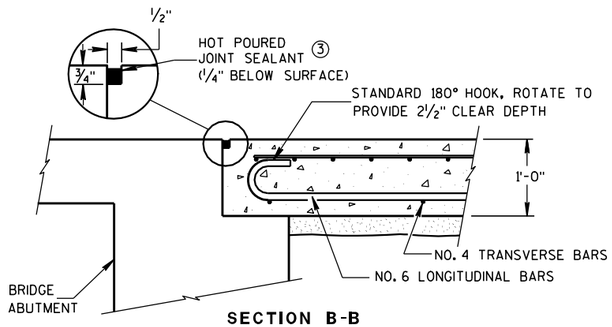
SECTION D-D
CONTRACTION JOINT

GENERAL NOTES

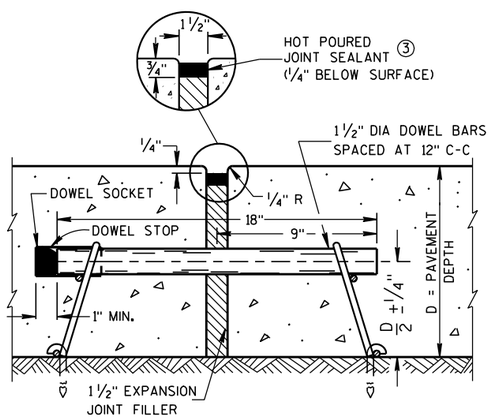
APPROACH SLABS ABUTTING AN HMA PAVEMENT OVER BASE COURSE DO NOT NEED TO BE DOWELED.

THE CONTRACTOR MAY SPLICE NO. 6 BARS IN THE APPROACH SLAB FOR SKEWED STRUCTURES ONLY. STAGGER SPLICES WITH A MAXIMUM OF ONE SPLICE PER BAR. THE LENGTH OF LAP IS 20 INCHES.

1. THE CONTRACTOR MAY USE NO. 4 BARS SPACED AT 2'-0" C-C IN BOTH THE LONGITUDINAL AND TRANSVERSE DIRECTIONS FOR TOP REINFORCEMENT AS AN ALTERNATIVE TO THE WELDED WIRE FABRIC.
2. THE CONTRACTOR MAY OMIT TIE BARS BETWEEN REINFORCED SLABS WHERE SLAB REINFORCEMENT BARS EXTEND ACROSS THE CENTERLINE OR REFERENCE LINE.
3. USE A JOINT SEALANT MEETING THE REQUIREMENTS OF ASTM D6690.



SECTION B-B
BEND DETAIL
BOTTOM REINFORCEMENT



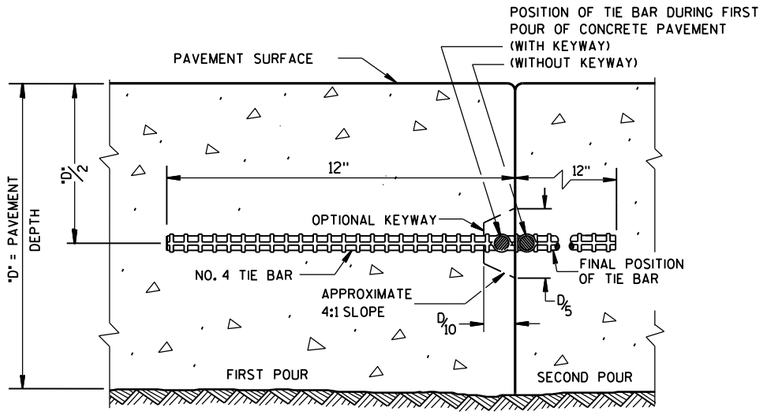
EXPANSION JOINT

CONCRETE PAVEMENT APPROACH SLAB

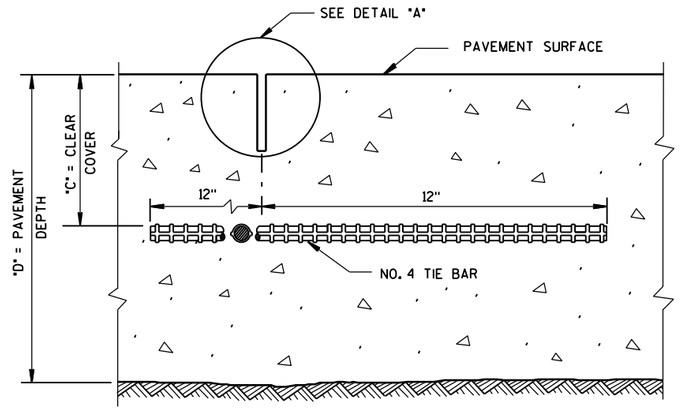
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
12/11/2009 — DATE
/S/ Deb Bischoff — PAVEMENT POLICY & DESIGN ENGINEER
FHWA

6
S.D.D. 13 B 2-6



CONSTRUCTION JOINT



SAWED JOINT

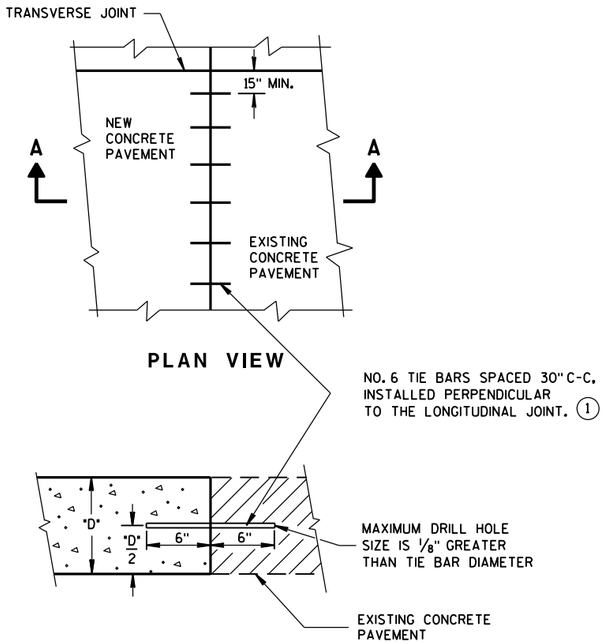
GENERAL NOTES

DO NOT SEAL OR FILL LONGITUDINAL JOINTS.

CREATE A LONGITUDINAL JOINT FOR PAVEMENT WIDTHS GREATER THAN 15 FEET.

CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.

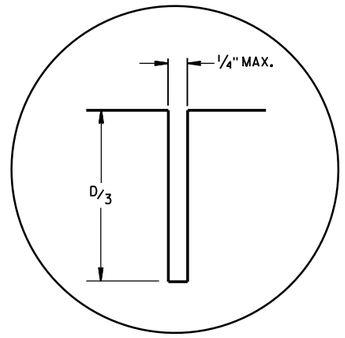
(1) ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.



PLAN VIEW

SECTION A-A

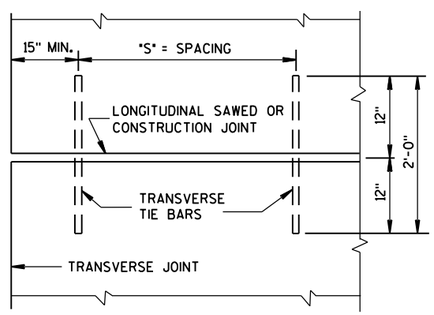
LONGITUDINAL CONSTRUCTION JOINT
TIE BARS ANCHORED
INTO EXISTING PAVEMENT



DETAIL "A"

TIE BAR TABLE

PAVEMENT DEPTH "D"	CLEAR COVER "C"	MAXIMUM TIE BAR SPACING "S"	
		PAVEMENT WIDTH	
		24' OR 26'	≥ 30'
6, 6 1/2"	3"±1/2"	48"	42"
7, 7 1/2"	3 1/4"±1"	45"	36"
8, 8 1/2"	3 3/4"±1"	39"	30"
9, 9 1/2"	4 1/4"±1"	33"	27"
10, 10 1/2"	4 3/4"±1"	30"	24"
11, 11 1/2"	5 1/4"±1"	27"	21"
12"	5 3/4"±1"	24"	21"



PLAN VIEW
SHOWING LOCATION OF TIE BARS

CONCRETE PAVEMENT
LONGITUDINAL JOINTS AND TIES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

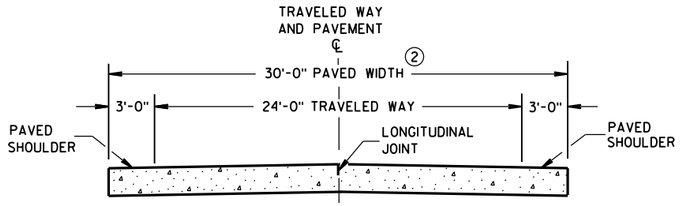
5-3-2013
DATE

/S/ Deb Bischoff
PAVEMENT POLICY & DE ENGINEER

FHWA

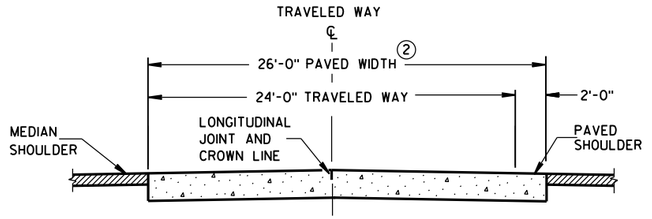
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S.D.D. 13 C 1-16

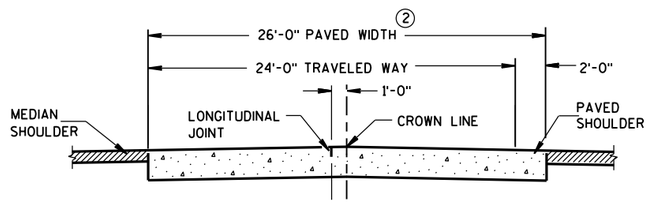


SECTION A-A ①

TWO-LANE TWO-WAY HIGHWAY



SECTION B-B



ALTERNATIVE SECTION B-B ①

DIVIDED HIGHWAY

GENERAL NOTES

CONTRACTION JOINTS

CONSTRUCT TRANSVERSE CONTRACTION JOINTS NORMAL TO THE CENTERLINE. SHOW THE LOCATION OF CONTRACTION JOINTS THROUGH INTERSECTIONS ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

DO NOT SEAL OR FILL CONTRACTION JOINTS.

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

FOR PAVEMENT SLABS OF VARYING WIDTHS, LOCATE THE OUTER MOST DOWEL BAR SO THAT THE CENTER OF THE BAR IS A MINIMUM OF 6 INCHES AND A MAXIMUM OF 18 INCHES FROM THE FREE EDGE OF PAVEMENT.

CONSTRUCTION JOINTS

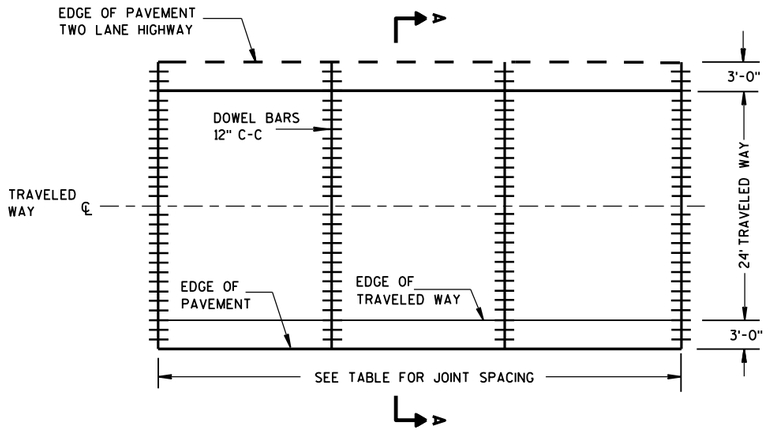
LOCATE CONSTRUCTION JOINTS A MINIMUM OF 6 FEET FROM THE NEAREST CONTRACTION JOINT AND ALIGN PARALLEL TO CONTRACTION JOINTS.

① REFER TO TYPICAL CROSS SECTIONS FOR ADDITIONAL DETAILS.

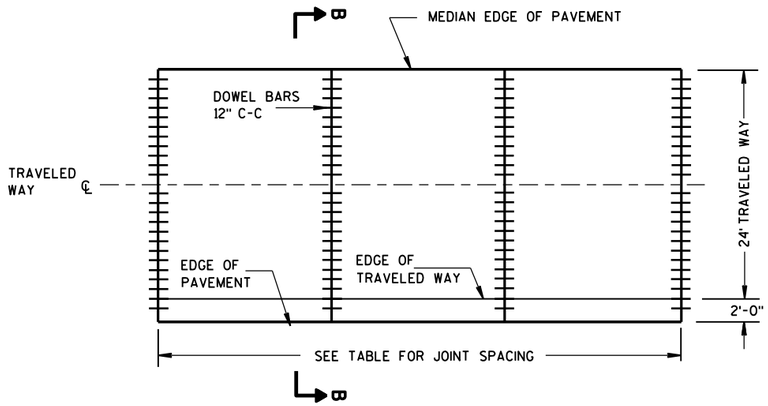
② MEASURE THE ENTIRE PAVED WIDTH INCLUDING THE PORTION(S) LABELED PAVED SHOULDER AS CONCRETE PAVEMENT.

PAVEMENT DEPTH, DOWEL BAR SIZE AND JOINT SPACING TABLE

PAVEMENT DEPTH (D)	DOWEL BAR DIAMETER	CONTRACTION JOINT SPACING
5 ½", 6", 6 ½"	NONE	12'
7", 7 ½"	1"	14'
8", 8 ½"	1 ¼"	15'
9", 9 ½"	1 ¼"	15'
10" & ABOVE	1 ½"	15'



CONTRACTION JOINT LAYOUT
FOR TWO-LANE TWO-WAY HIGHWAY



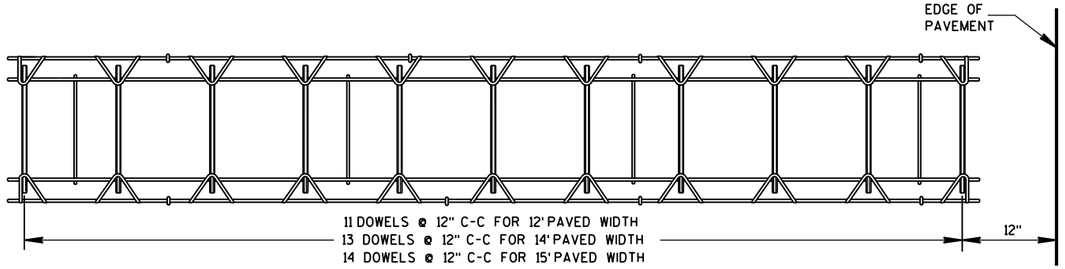
CONTRACTION JOINT LAYOUT
FOR DIVIDED HIGHWAY

RURAL DOWELED
CONCRETE PAVEMENT

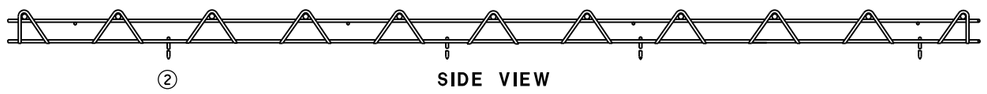
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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S.D.D. 13 C 11-11a



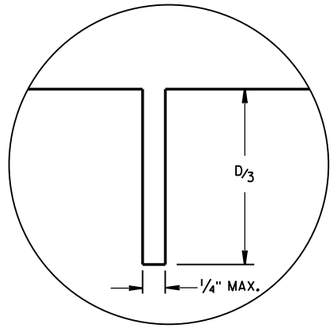
PLAN VIEW



SIDE VIEW

(NORMAL TO CENTERLINE)

CONTRACTION JOINT DOWEL ASSEMBLY ①



JOINT DETAIL

GENERAL NOTES

① OBTAIN THE ENGINEER'S APPROVAL FOR THE USE OF ALTERNATIVE DESIGNS OF THE DOWEL ASSEMBLY. USE MECHANICAL DOWEL BAR INSERTERS OR DOWEL ASSEMBLIES WHEN CONSTRUCTING CONTRACTION JOINTS.

② SECURE BASKETS WITH ANCHORS TO HOLD DOWEL BARS IN THE CORRECT POSITION AND ALIGNMENT. TYPE, LOCATION, NUMBER AND LENGTH OF ANCHORS ARE DEPENDENT UPON FIELD CONDITIONS.

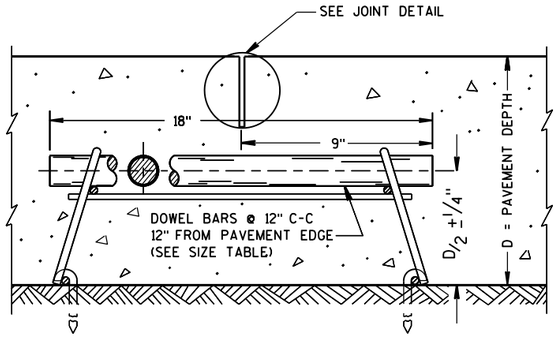
③ FORM OR SAW CONSTRUCTION JOINTS. PROVIDE A 1/4-INCH RADIUS AT FORMED JOINTS.

④ PROVIDE A SMOOTH VERTICAL FACE FOR THE ENTIRE DEPTH OF THE PAVEMENT WHEN FORMING CONSTRUCTION JOINTS.

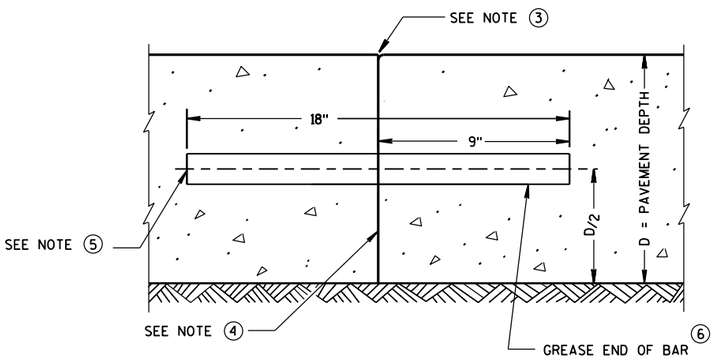
⑤ INSTALL DOWEL BARS AT CONSTRUCTION JOINTS BY FORMING OR DRILLING. INSTALL FORMED DOWEL BARS 12 INCHES C-C AND 12 INCHES FROM PAVEMENT EDGE. REMOVE EXCESS CONCRETE FROM THE FREE END OF THE DOWEL BAR IF DOWEL BARS ARE FORMED THROUGH A HEADER BOARD. INSTALL DRILLED DOWEL BARS ACCORDING TO *DRILLED DOWEL BAR CONSTRUCTION JOINT* DETAIL.

⑥ APPLY A THIN UNIFORM COATING OF SURFACE TREATMENT TO THE FREE END OF DOWEL BARS TO PREVENT BONDING.

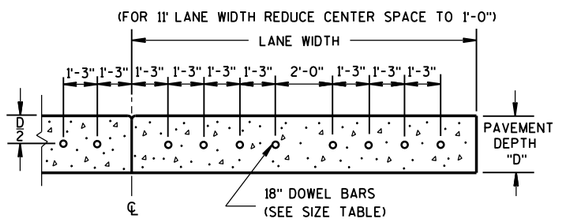
⑦ ANCHOR DOWEL BARS INTO DRILLED HOLES WITH AN EPOXY. MAXIMUM DRILLED HOLE SIZE IS 1/8-INCH GREATER THAN DOWEL BAR DIAMETER, 9 INCHES IN LENGTH.



DOWELED CONTRACTION JOINT



TRANSVERSE CONSTRUCTION JOINT



DRILLED DOWEL BAR CONSTRUCTION JOINT ⑦

RURAL DOWELED CONCRETE PAVEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

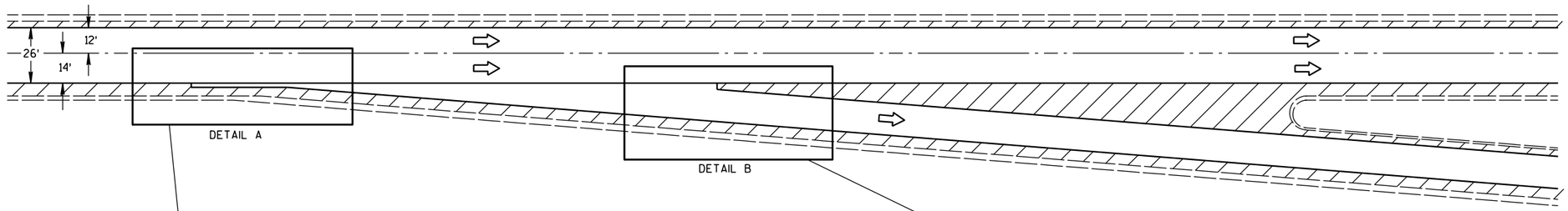
APPROVED
5/3/2013 DATE
/S/ Deb Bischoff PAVEMENT POLICY & DE ENGINEER
FHWA

6

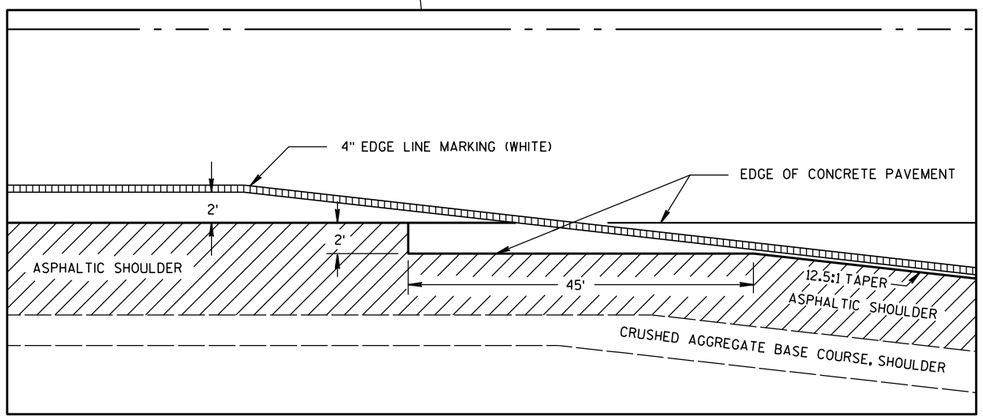
S.D.D. 13 C 11-11b

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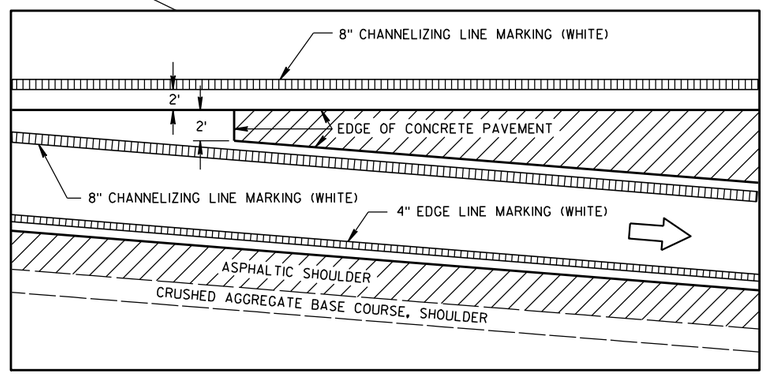
S.D.D. 13 C 11-11b



EXIT RAMP DETAIL



DETAIL A



DETAIL B

CONCRETE JOINT PAVING DETAILS

GENERAL NOTES

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

SEE SDD 13 A 4-4c OR SDD 13 A 5-1b FOR RAMP AND GORE RUMBLE STRIP LOCATION.

CONCRETE JOINT DETAIL FOR EXIT RAMP TERMINI

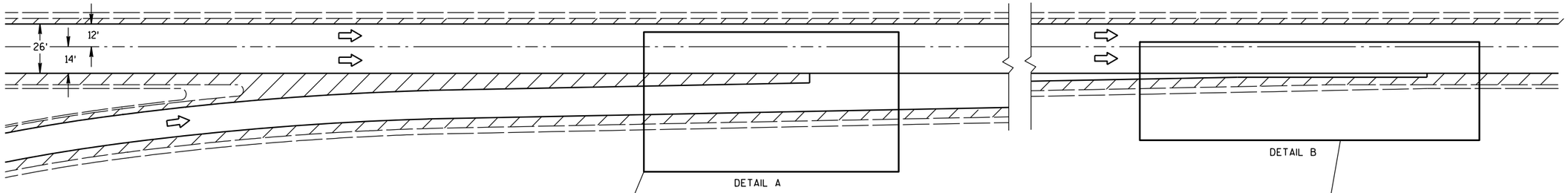
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

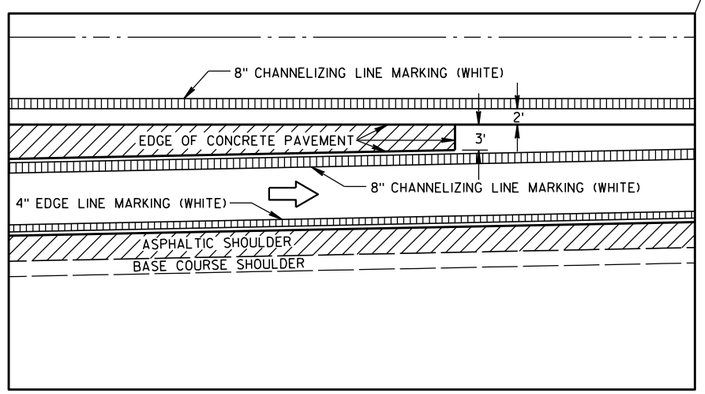
S.D.D. 13 C 17-1a

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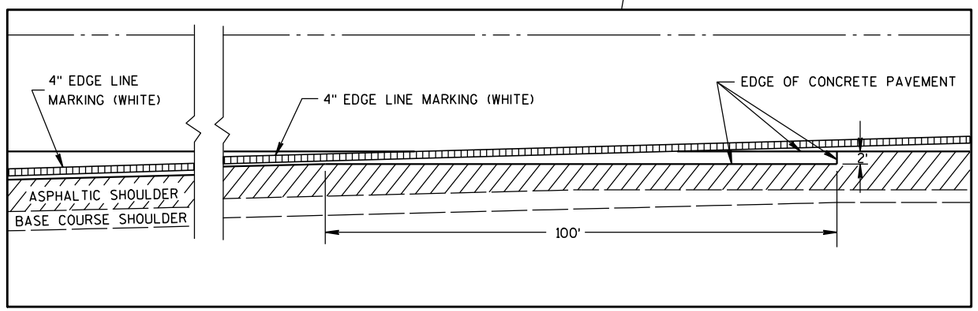
S.D.D. 13 C 17-1a



ENTRANCE RAMP DETAIL



DETAIL A



DETAIL B

CONCRETE JOINT PAVING DETAILS

GENERAL NOTES

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

SEE SDD 13 A 4-4c OR SDD 13 A 5-1b FOR RAMP AND GORE RUMBLE STRIP LOCATION.

CONCRETE JOINT DETAIL FOR ENTRANCE RAMP TERMINI

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

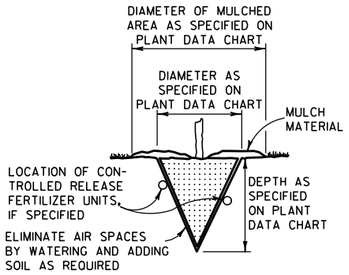
5/27/98
DATE

/S/ Rory L. Rhinesmith
CHIEF ROADWAY DEVELOPMENT ENGINEER

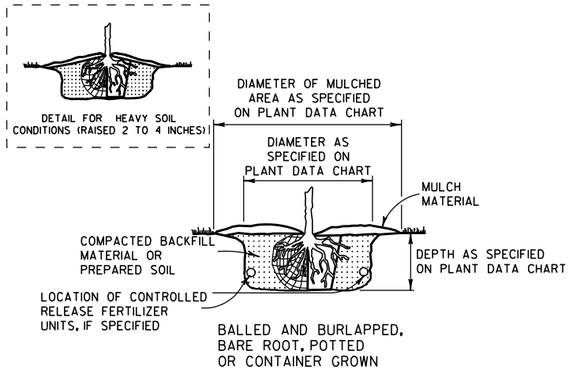
FHWA

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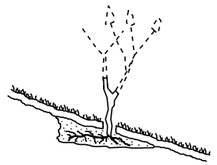
S.D.D. 13 C 17-1b



MACHINE MOVED

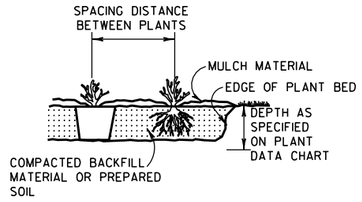


BALLED AND BURLAPPED, BARE ROOT, POTTED OR CONTAINER GROWN



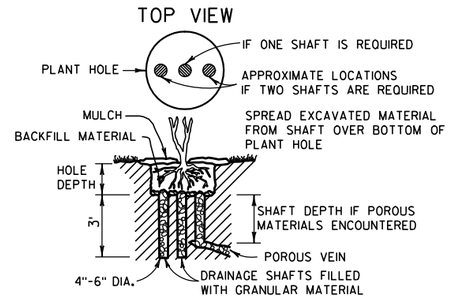
ACCOMMODATE ROOTS (SMOOTH AND STAGHORN SUMAC)

NOTE:
1) ENGINEER SHALL REQUIRE 3 SLITS IN POT TO SPEED DETERIORATION
2) METAL, PLASTIC OR OTHER NONDEGRADABLE POTS SHALL BE REMOVED PRIOR TO PLANTING



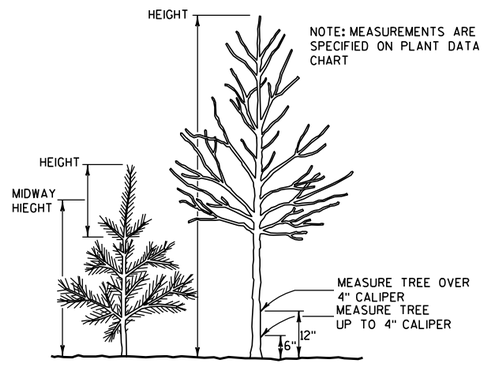
PREPARED BED (BARE ROOT AND POTTED)

PLANTING

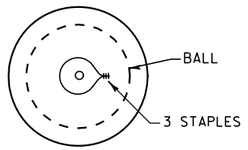


NOTE:
DRAINAGE SHAFT AS SPECIFIED ON PLANT DATA CHART

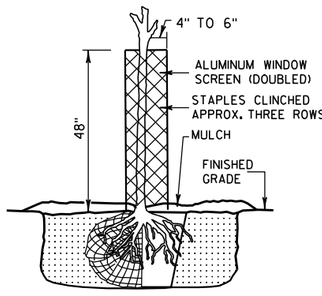
DRAINING



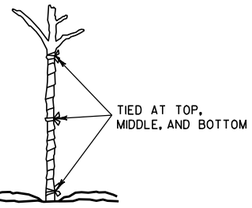
MEASURING



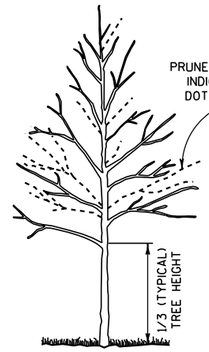
TOP VIEW



RODENT PROTECTION



WRAPPING



TALL DECIDUOUS TREES (ASH, MAPLE, LINDEN, OAK)

SINGLE STEMMED LOW DECIDUOUS TREES (CRABS AND OTHER SINGLE STEM TYPE)

MULTI-STEMMED LOW DECIDUOUS TREES OR LARGE SHRUBS (HAWTHORN, SERVICEBERRY)

NOTE: WHEN PRUNING, PRESERVE CHARACTER AND SHAPE OF TREE. AVOID LEAVING STUBS - REMOVE BRANCH OR TWIG BACK TO THE NEAREST CROTCH
1) PRUNE TO REMOVE DEAD AND BROKEN BRANCHES
2) PRUNE TO REMOVE BRANCHES THAT TOUCH OR ARE TOO CLOSE TO OTHER BRANCHES

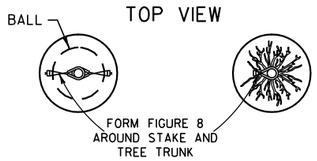


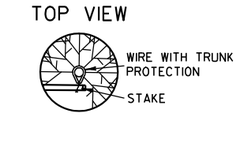
SHRUBS (GRAY DOGWOOD ARROWWOOD VIBURNUM)

SUMAC

TREE TYPE EVERGREENS (PINE, SPRUCE, FIR) EVERGREENS USUALLY ARE NOT PRUNED

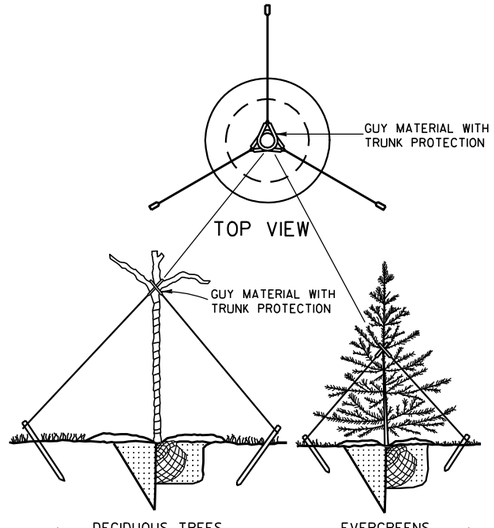
PRUNING





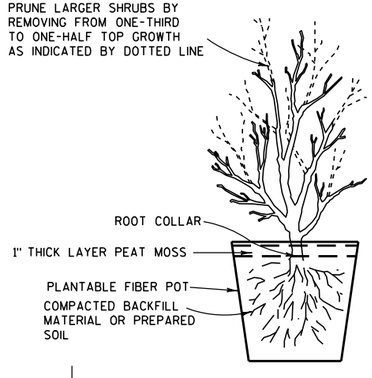
NOTE: BRACING STAKE
1) SHALL BE DRIVEN INTO THE GROUND AS CLOSE TO THE TREE AS POSSIBLE WITHOUT DAMAGING THE BRANCHES.
2) MAY BE DRIVEN AT SUCH AN ANGLE THAT IT DOES NOT PENETRATE THE BALL OR POT.
3) SHALL NOT PROTRUDE ABOVE THE TOP OF THE TREE; AND
4) SHALL HAVE A HOLE NEAR THE TOP TO HOLD THE WIRE IN PLACE.

BRACING



GUYING

PRUNE LARGER SHRUBS BY REMOVING FROM ONE-THIRD TO ONE-HALF TOP GROWTH AS INDICATED BY DOTTED LINE



POTTING

NOTES

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

BRACING, WRAPPING, GUYING, RODENT PROTECTION, FERTILIZER AND MULCH SHALL BE USED ONLY WHEN SPECIFIED ON THE PLANT DATA CHART (PART OF PLAN) OR SPECIAL PROVISIONS.

TREE PLANTING DETAIL

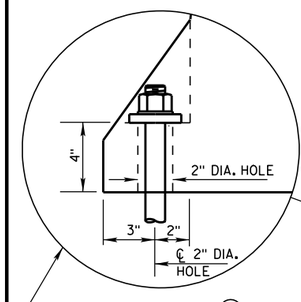
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

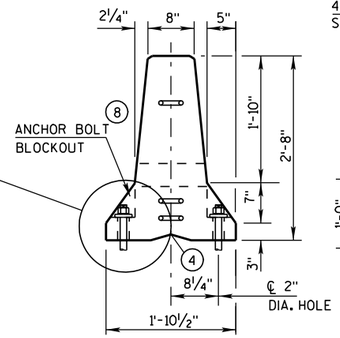
APPROVED
4/11/94 — DATE
/S/ Rory L. Rhinesmith — CHIEF METHODS DEVELOPMENT ENGINEER
FHWA

S.D.D. 14 A 2-1

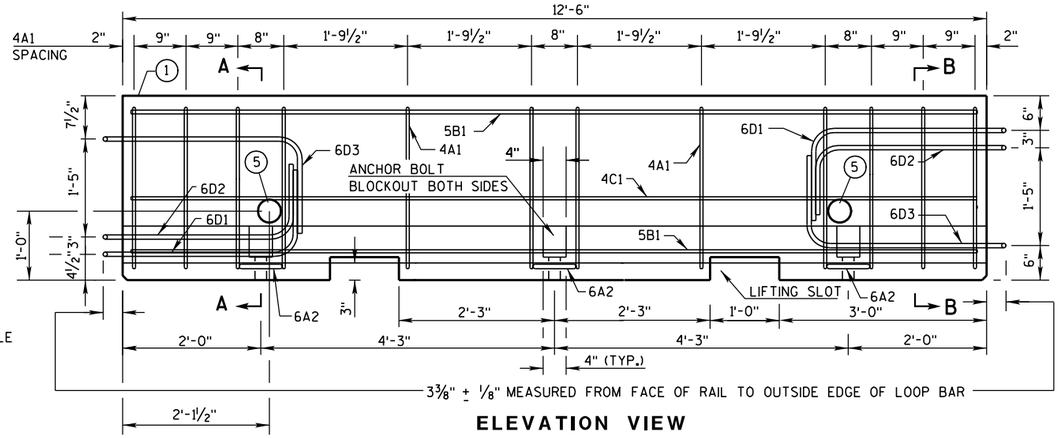
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S.D.D. 14 A 2-1

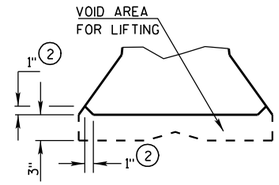




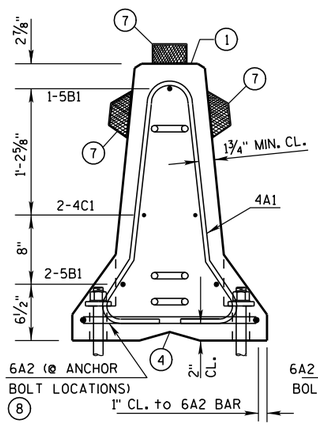
END VIEW



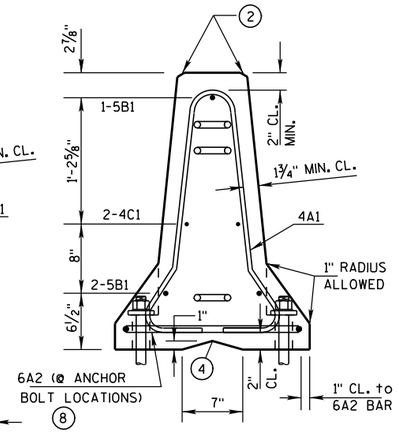
ELEVATION VIEW



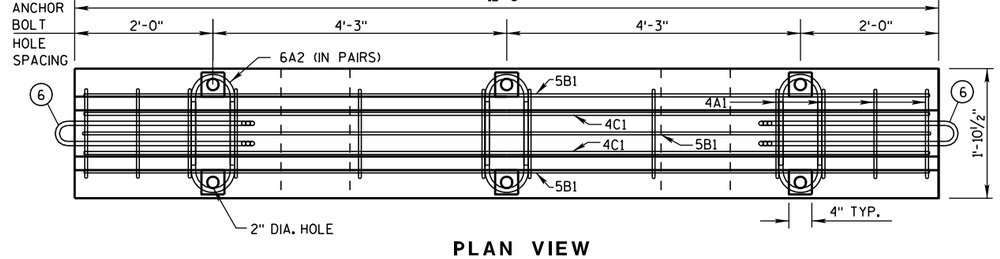
DETAIL "B"
LIFTING SLOT DETAIL



SECTION A-A
(STIRRUP PLACEMENT)

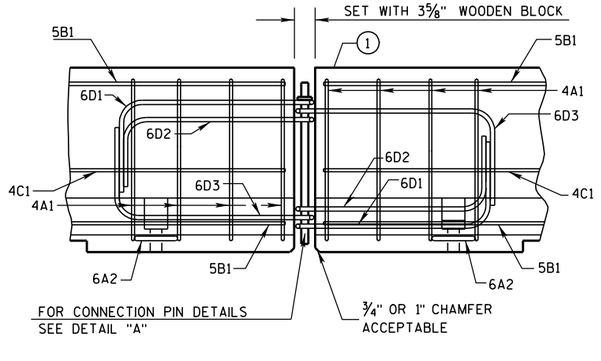


SECTION B-B
(STIRRUP PLACEMENT)

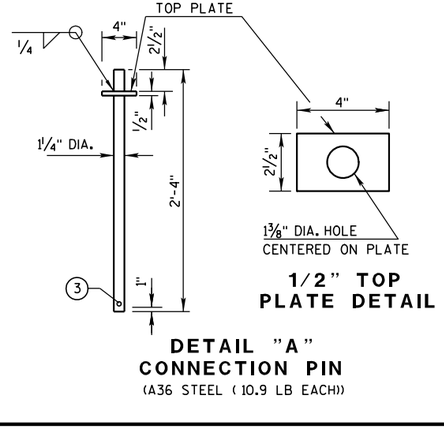


PLAN VIEW

DETAILS OF BARRIER SECTION

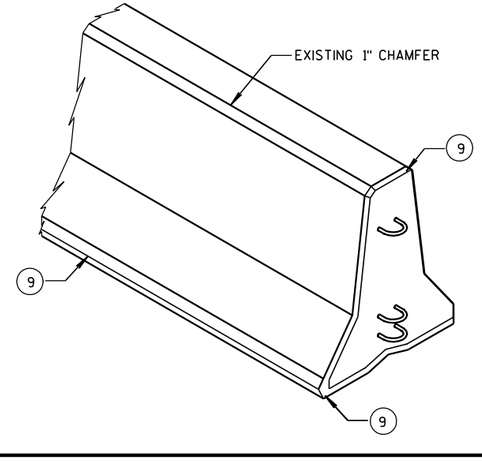


DETAILS OF BARRIER CONNECTION



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.

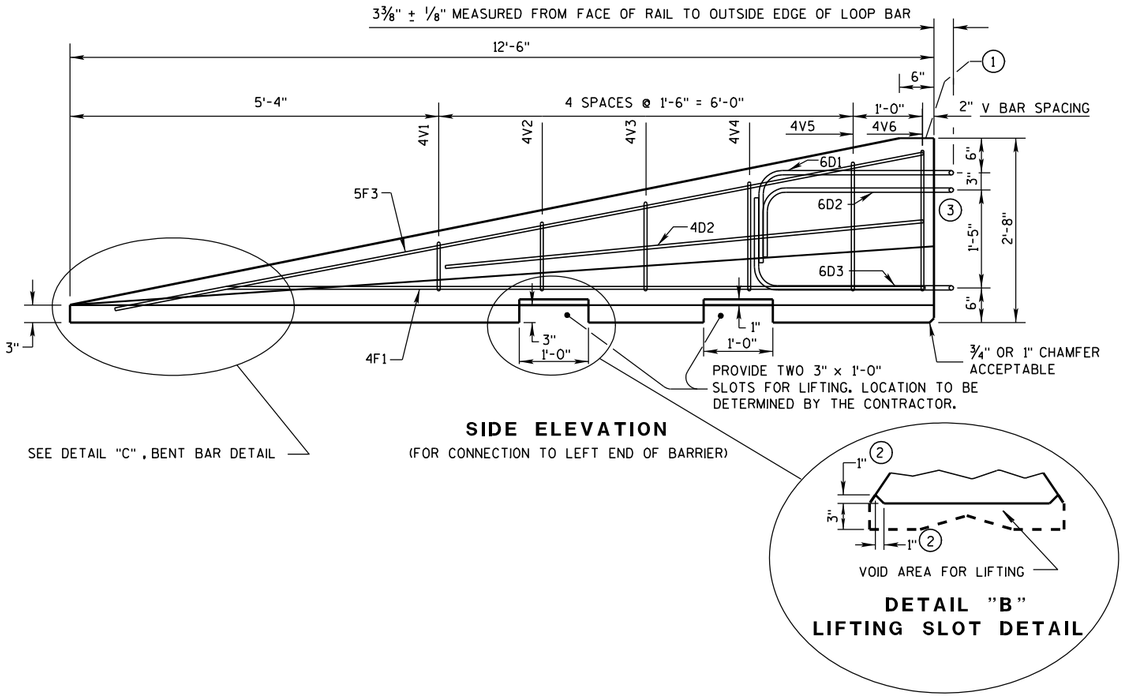
(9) 1" CHAMFER OPTIONAL.

CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO.....

6

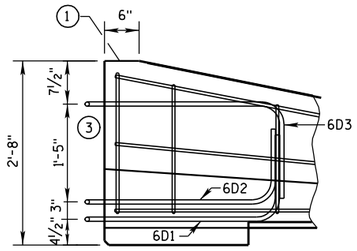
S.D.D. 14 B 7-13a



SIDE ELEVATION

(FOR CONNECTION TO LEFT END OF BARRIER)

DETAIL "B"
LIFTING SLOT DETAIL

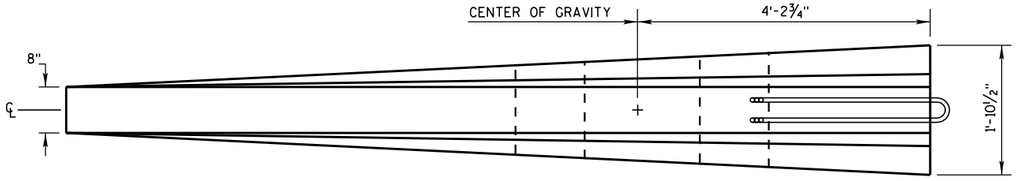


SIDE ELEVATION

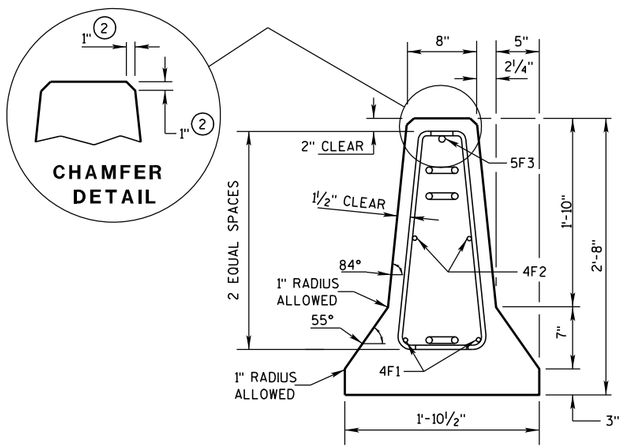
LOOP BAR ASSEMBLY INVERTED
FOR OPPOSITE END.
(FOR CONNECTION TO RIGHT END OF BARRIER)

GENERAL NOTES

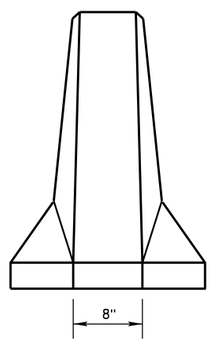
1. MARK ONE END OF EACH BARRIER PERMANENTLY BY FORMING INTO THE BARRIER THE FOLLOWING INFORMATION:
   a. TYPE WICBTP
   b. MANUFACTURER
   c. DATE MANUFACTURED (MONTH AND YEAR)
2. 1" CHAMFER TO PREVENT SPALLING.
3. NEVER USE LOOP BARS (6D1, 6D2 OR 6D3) TO LIFT, MOVE OR REPOSITION THE BARRIER.



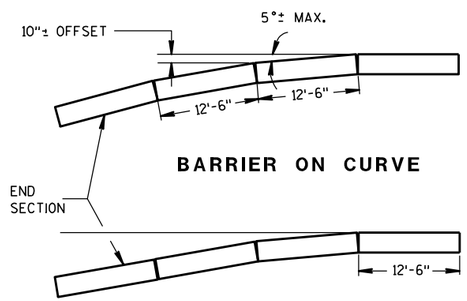
PLAN VIEW



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

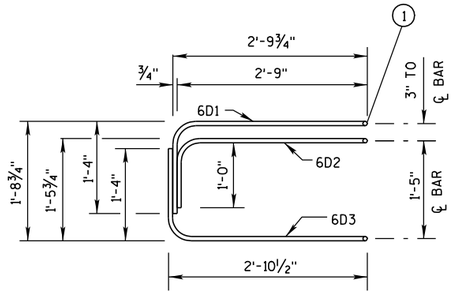
6

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

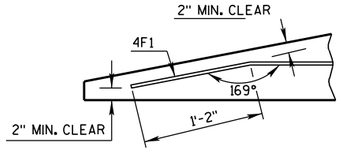
BARRIER TAPER SECTION BILL OF MATERIALS

(PER 12'-6" BARRIER TAPER SECTION)

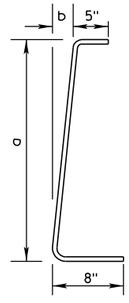
BAR	BAR SIZE	NO. OF BARS	LENGTH FT.
4V1	4	2	1'-11"
4V2	4	2	2'-2"
4V3	4	2	2'-6"
4V4	4	2	2'-9"
4V5	4	2	3'-2"
4V6	4	2	3'-4"
4F1	4	2	12'-0"
4F2	4	2	7'-6"
5F3	5	1	11'-9"
LOOP ASSEMBLY			
6D1	6	1	8'-5"
6D2	6	1	7'-7"
6D3	6	1	8'-6"



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

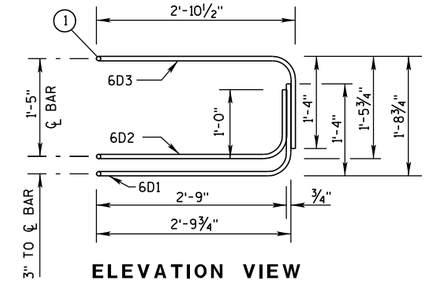
GENERAL NOTES

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

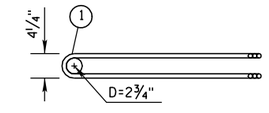
BARRIER SECTION BILL OF MATERIALS

(PER 12'-6" BARRIER SECTION)

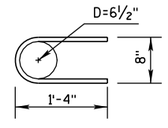
BAR	BAR SIZE	NO. OF BARS	LENGTH FT.
4A1	4	12	6'-0"
6A2	6	6	2'-11"
5B1	5	3	12'-2"
4C1	4	2	12'-2"
LOOP ASSEMBLY			
6D1	6	2	8'-5"
6D2	6	2	7'-7"
6D3	6	2	8'-6"



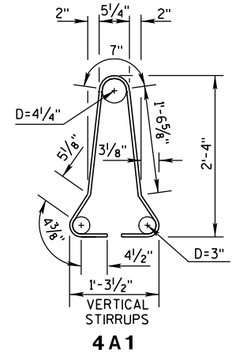
ELEVATION VIEW



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



6A2



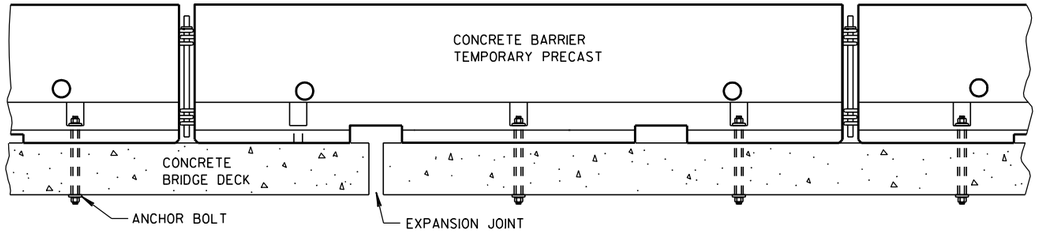
4A1

BARRIER SECTION

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

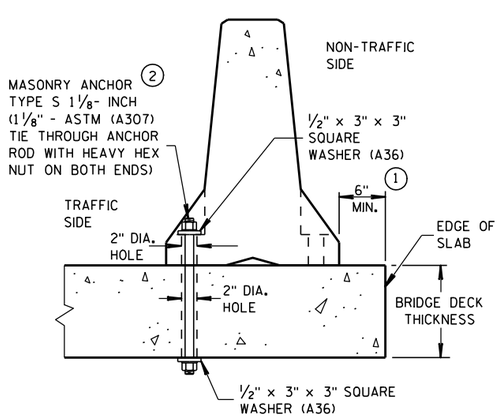
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



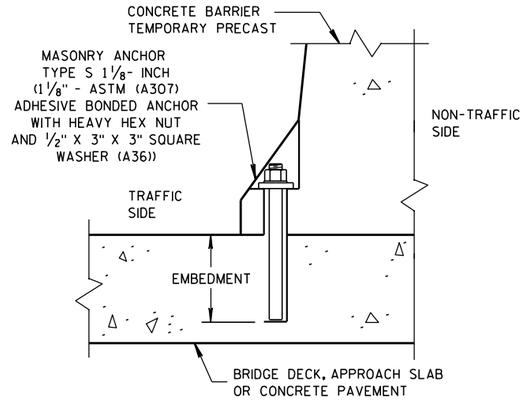
TREATMENT AT BRIDGE DECK EXPANSION JOINTS

(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 (2) INSTALLATION ON CONCRETE BRIDGE DECK, CONCRETE APPROACH SLAB, OR CONCRETE PAVEMENT

(DO NOT USE ON CONCRETE WITH AN ASPHALTIC OVERLAY)

GENERAL NOTES

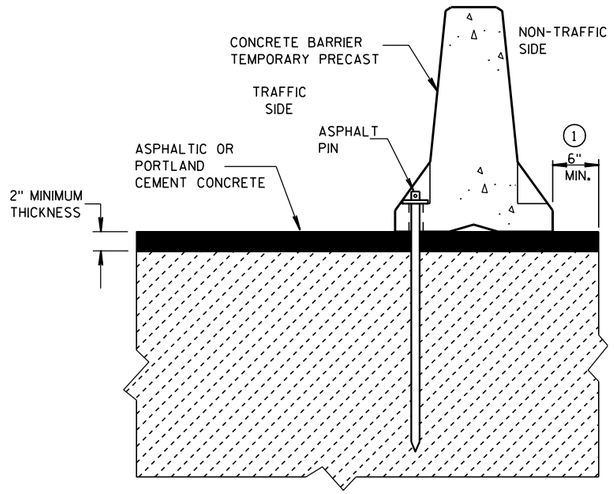
(1) CONCRETE BARRIER TEMPORARY PRECAST, 12'-6" SHALL BE ANCHORED IF:
THE DISTANCE TO A 2 FOOT OR GREATER DROPOFF THAT IS STEEPER THAN 3H : 1V, FOR EXAMPLE THE EDGE OF A BRIDGE DECK OR A DROPOFF AT THE EDGE OF PAVEMENT, IS LESS THAN 4 FEET FROM THE SIDE OF THE BARRIER CLOSEST TO THE DROPOFF AND THE POSTED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

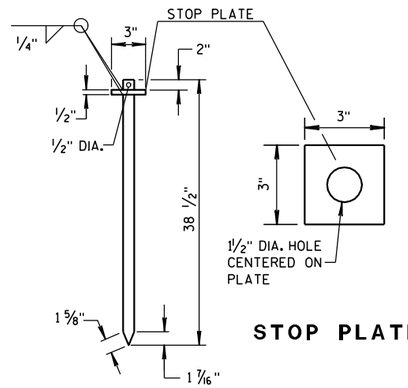
THE DISTANCE TO A 2 FOOT OR GREATER DROPOFF THAT IS STEEPER THAN 3H : 1V, FOR EXAMPLE THE EDGE OF A BRIDGE DECK OR A DROPOFF AT THE EDGE OF PAVEMENT. IS LESS THAN 2 FEET FROM THE SIDE OF THE BARRIER CLOSEST TO THE DROPOFF AND THE POSTED SPEED IS 40 MPH OR LESS.

(2) ANCHORING IS INCIDENTAL TO CONCRETE BARRIER TEMPORARY PRECAST.

WITH THE APPROVAL OF THE ENGINEER, REMOVABLE ADHESIVE BONDED (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.



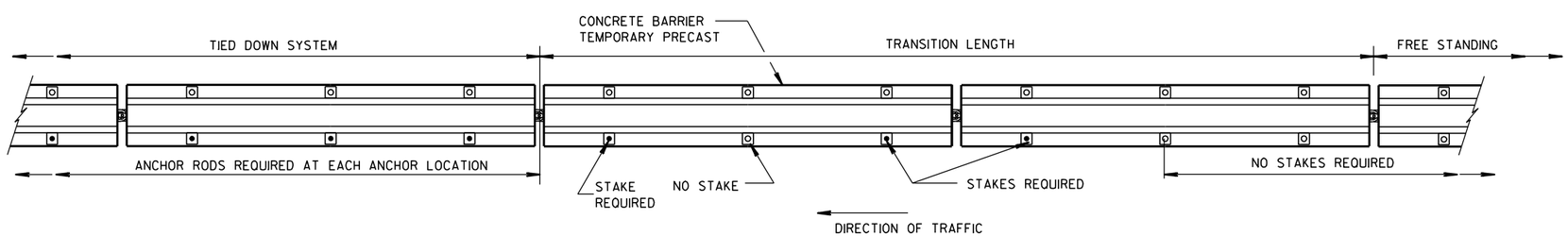


STOP PLATE

ASPHALT PIN
(ASTM A36 STEEL)

STAKE DOWN INSTALLATION FOR ASPHALTIC OR PORTLAND CEMENT CONCRETE SURFACE

(STAKING IS INCIDENTAL TO CONCRETE BARRIER TEMPORARY PRECAST)



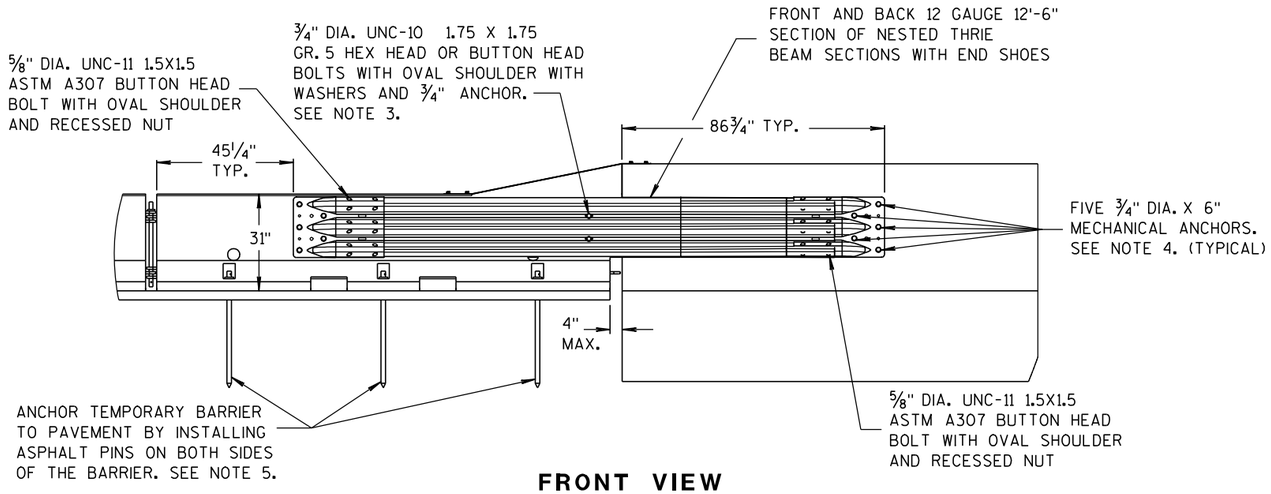
PLAN VIEW

FREE STANDING TRANSITION TO TIED-DOWN SYSTEM

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

CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"

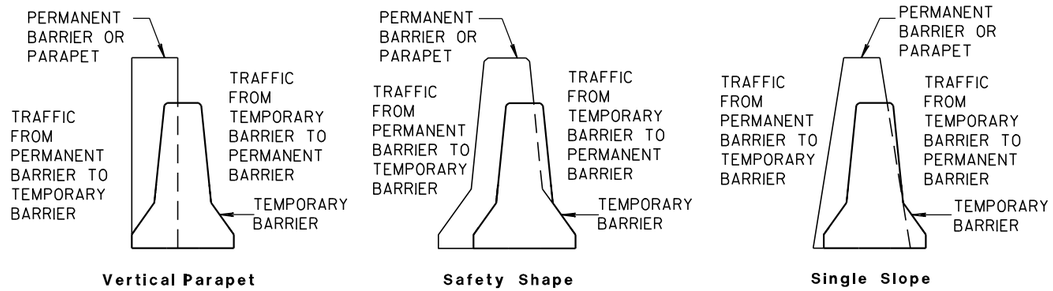
STATE OF WISCONSIN
DEPARTMENT OF TRANSPO...

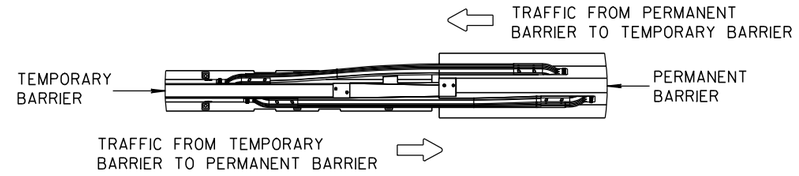


FRONT VIEW

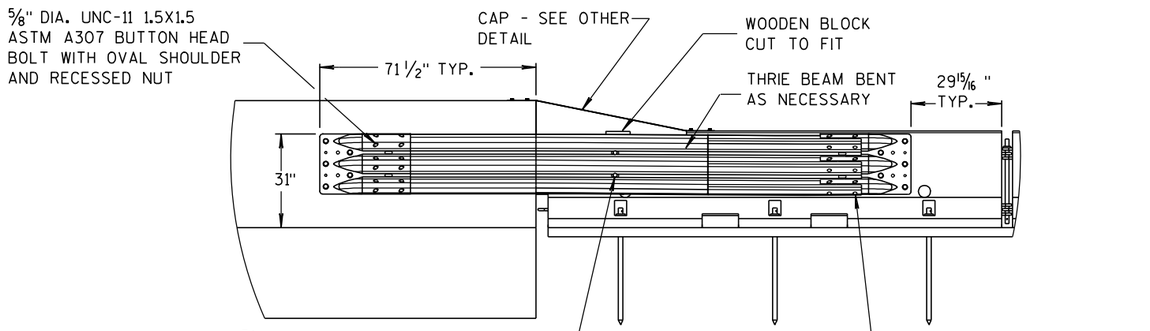
NOTES

1. CAP END PLATE PLACED FLUSH WITH UPSTREAM END OF PERMANENT BARRIER OR PARAPET.
2. THRIE BEAM PIECES ARE OFFSET 15 1/4" TO PREVENT INTERFERENCE FROM THE ANCHORS ON OPPOSING SIDES.
3. MINIMUM MECHANICAL OR 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.

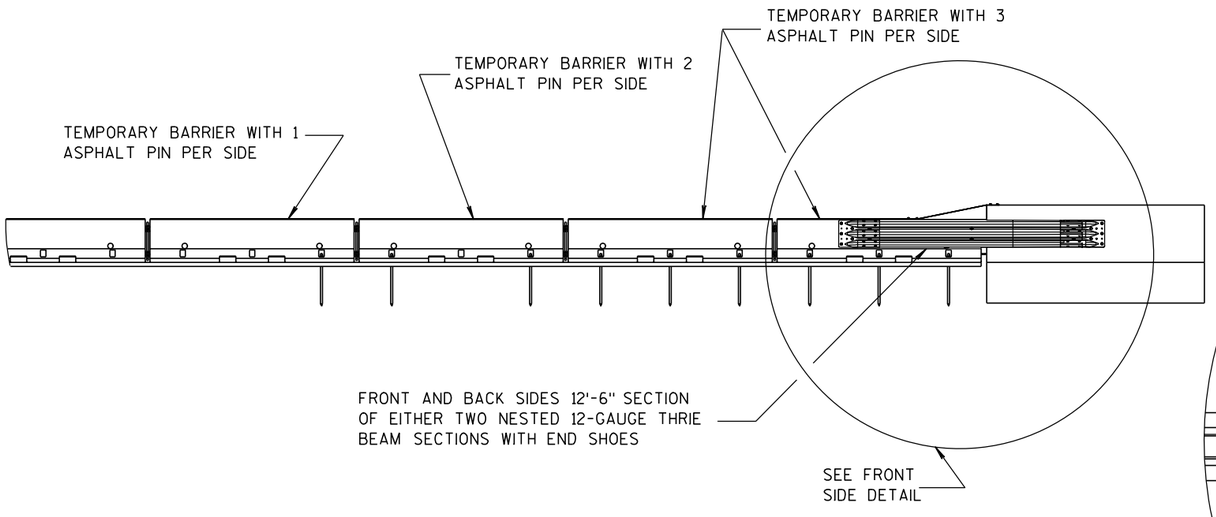




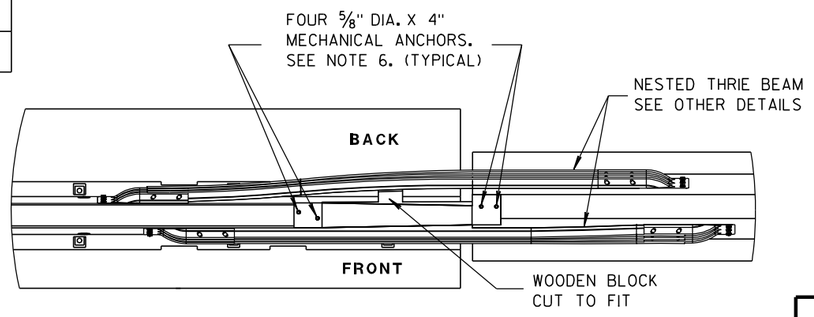
TEMPORARY BARRIER PLACEMENT FOR BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM



BACK VIEW



FRONT VIEW



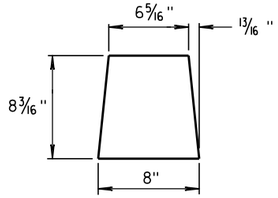
PLAN VIEW

BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM

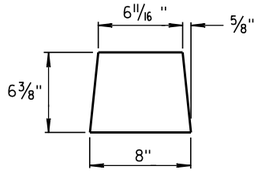
CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

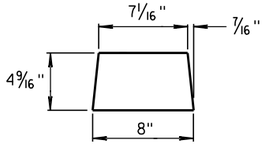
6
S.D.D. 14 B 7-13e



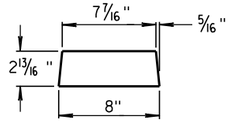
GUSSET 1



GUSSET 2

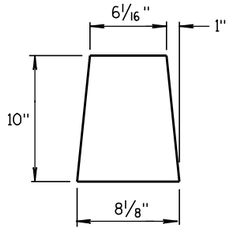


GUSSET 3

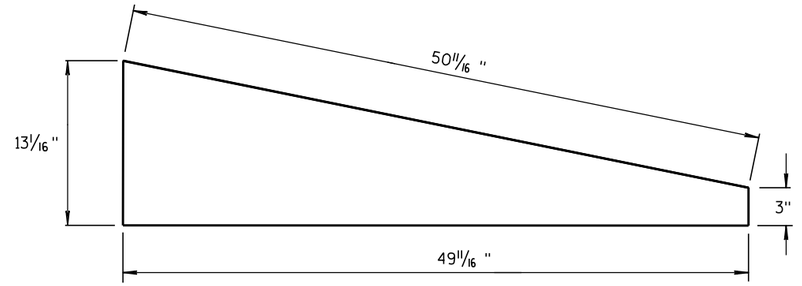


GUSSET 4

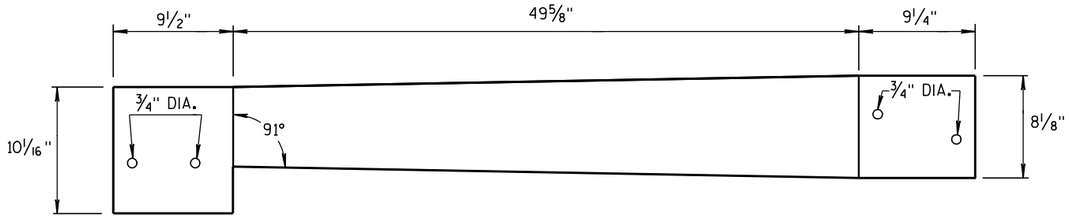
GUSSETS

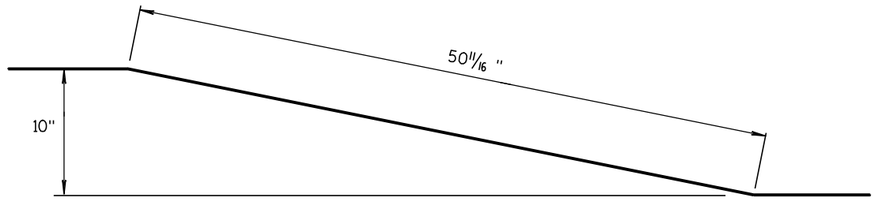


END PLATE

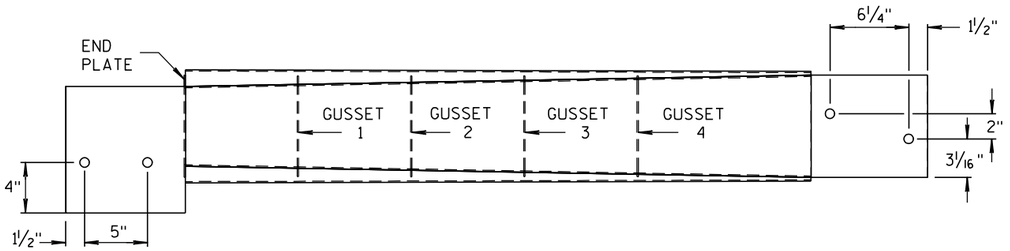


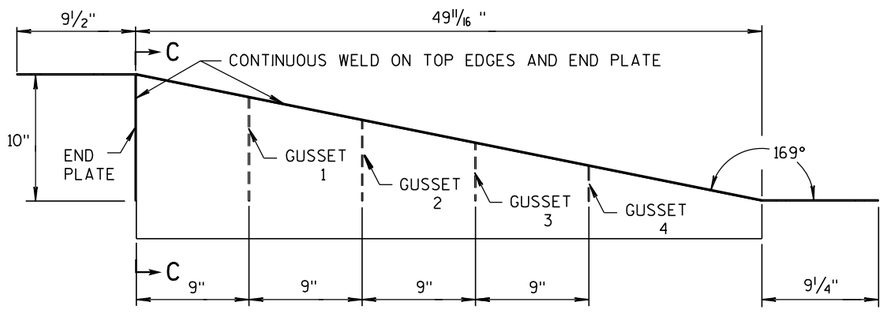
SIDE PLATE

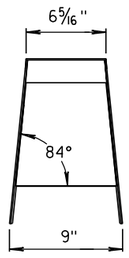




TOP PLATE







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

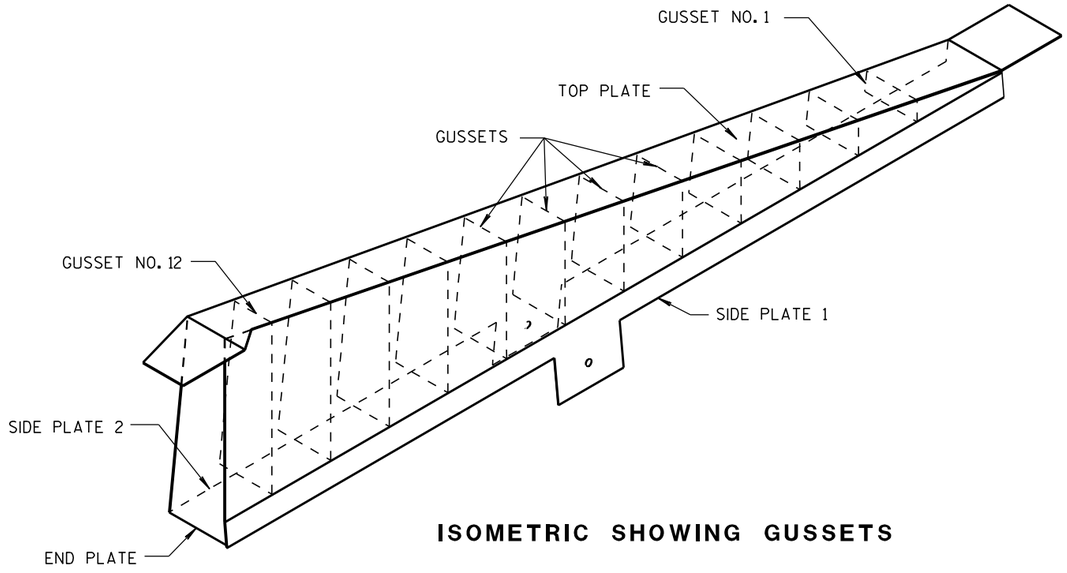
1. FOUR GUSSETS AND END PLATE ARE STITCH WELDED ON THREE SIDES.
2. TWO TRIANGULAR SIDE PLATES ARE STITCH WELDED TO TOP PLATE, END PLATE, AND GUSSETS.

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

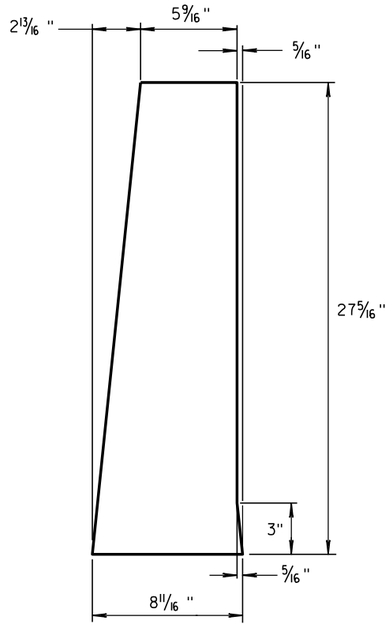
CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

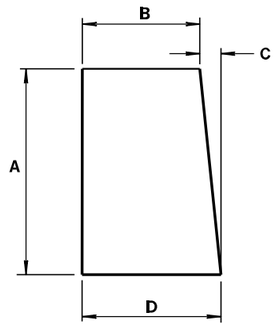


ISOMETRIC SHOWING GUSSETS



END PLATE

1/8" STEEL PLATE



GUSSETS 1 - 12

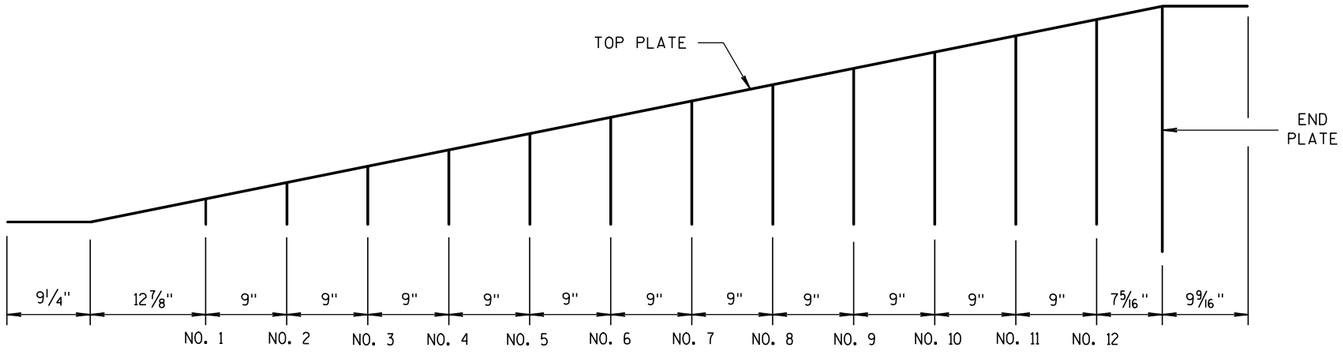
ALL GUSSETS 1/8" STEEL PLATE

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"

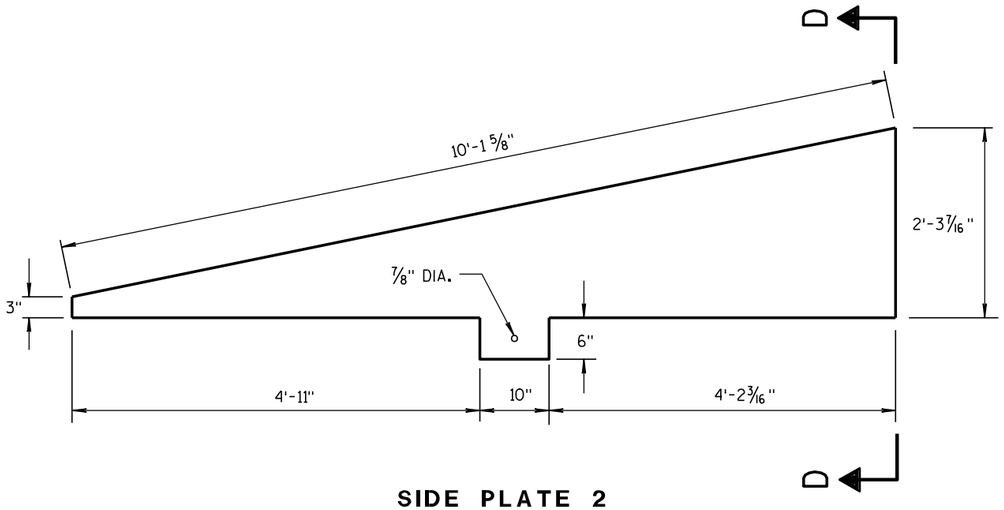
STATE OF WISCONSIN
DEPARTMENT OF TRANSPO...

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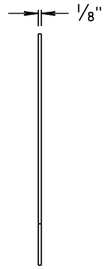
S.D.D. 14 B 7-13g

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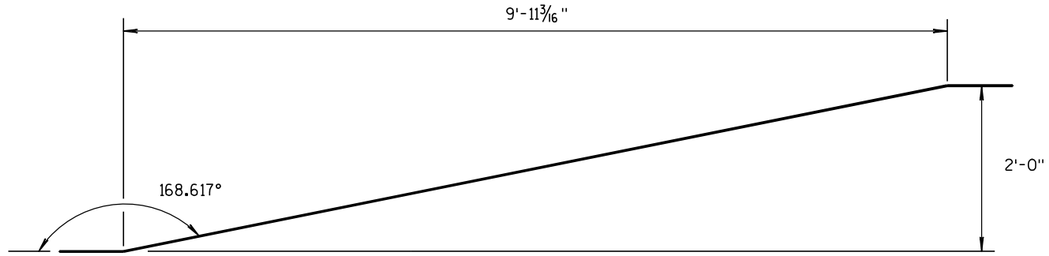
S.D.D. 14 B 7-13g



SIDE PLATE 2

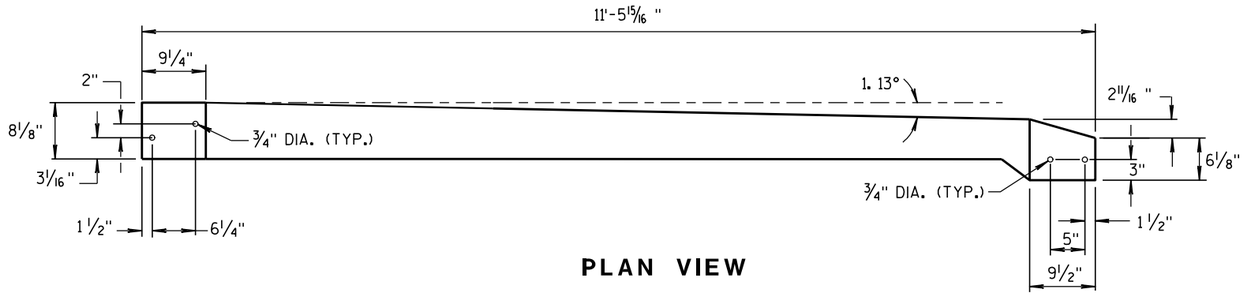


END VIEW



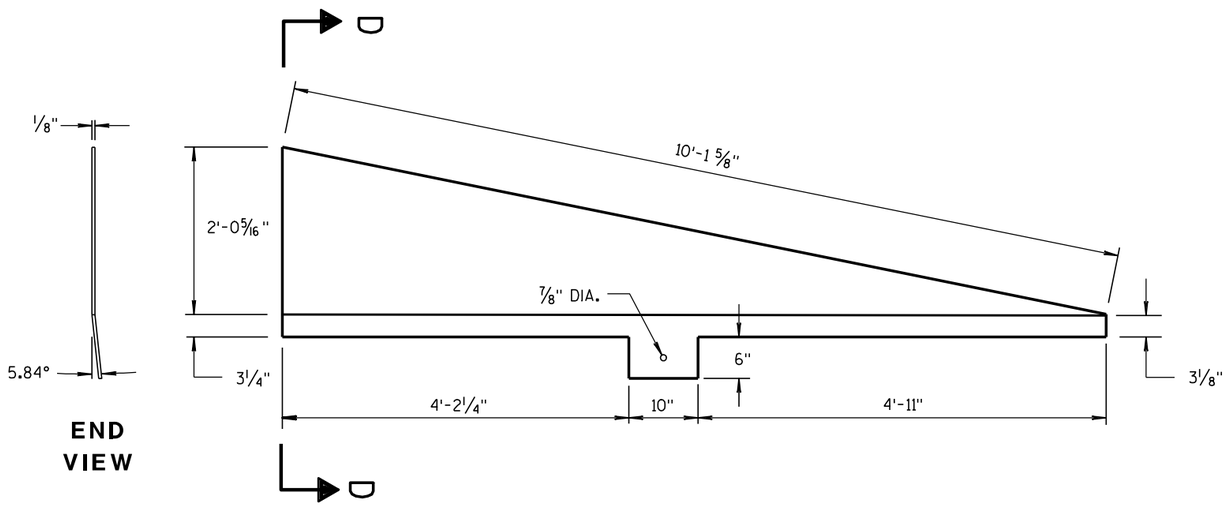
SIDE VIEW

TOP PLATE



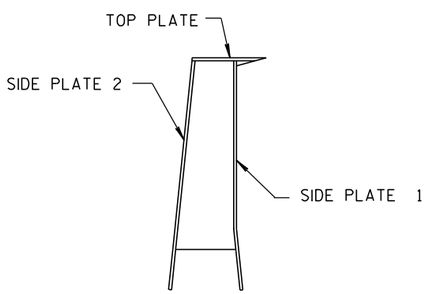
PLAN VIEW

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

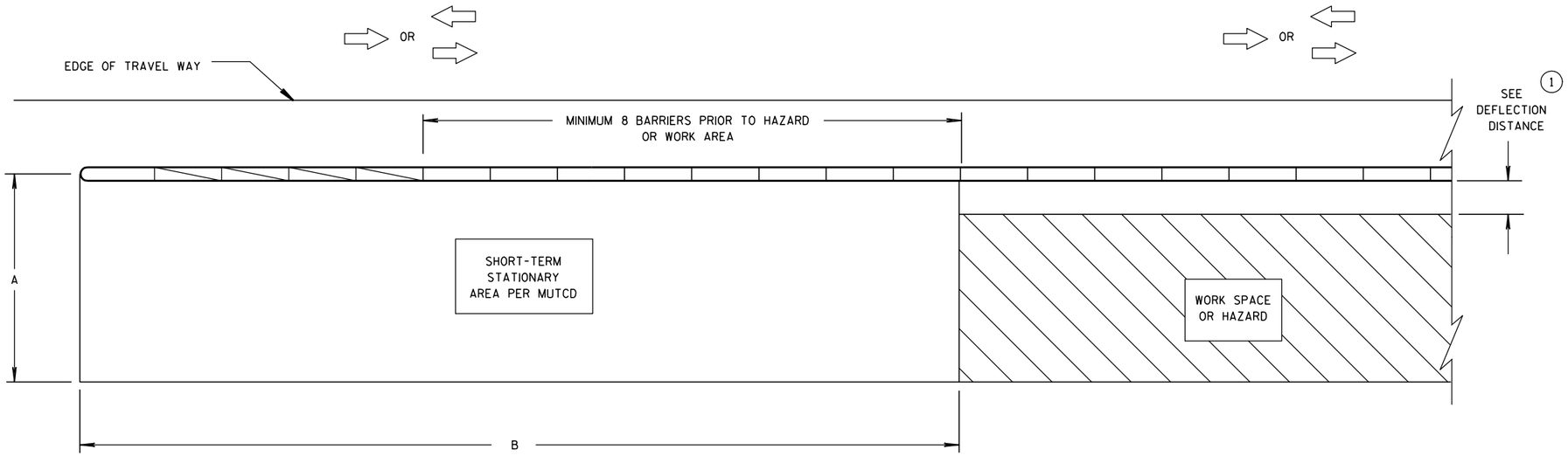
APPROVED
8/31/2012 — DATE
/S/ Jerry H. ---- — ROADWAY STANDARDS ENGINEER
257 — ENT
FHWA

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

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



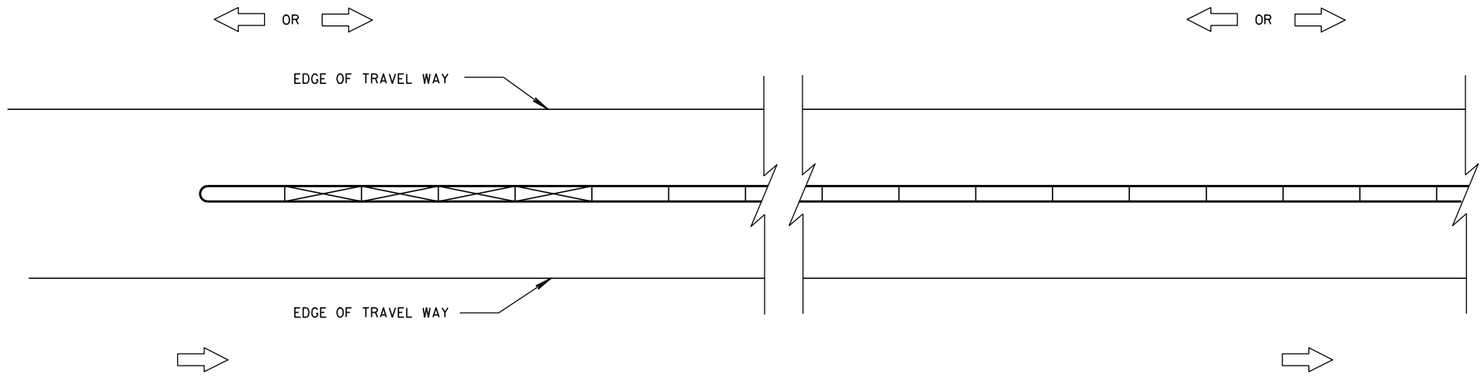
CRASH CUSHION/SAND BARREL ARRAY AND TEMPORARY BARRIER INSTALLATION FOR TRAFFIC ON ONE SIDE OF BARRIER

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.

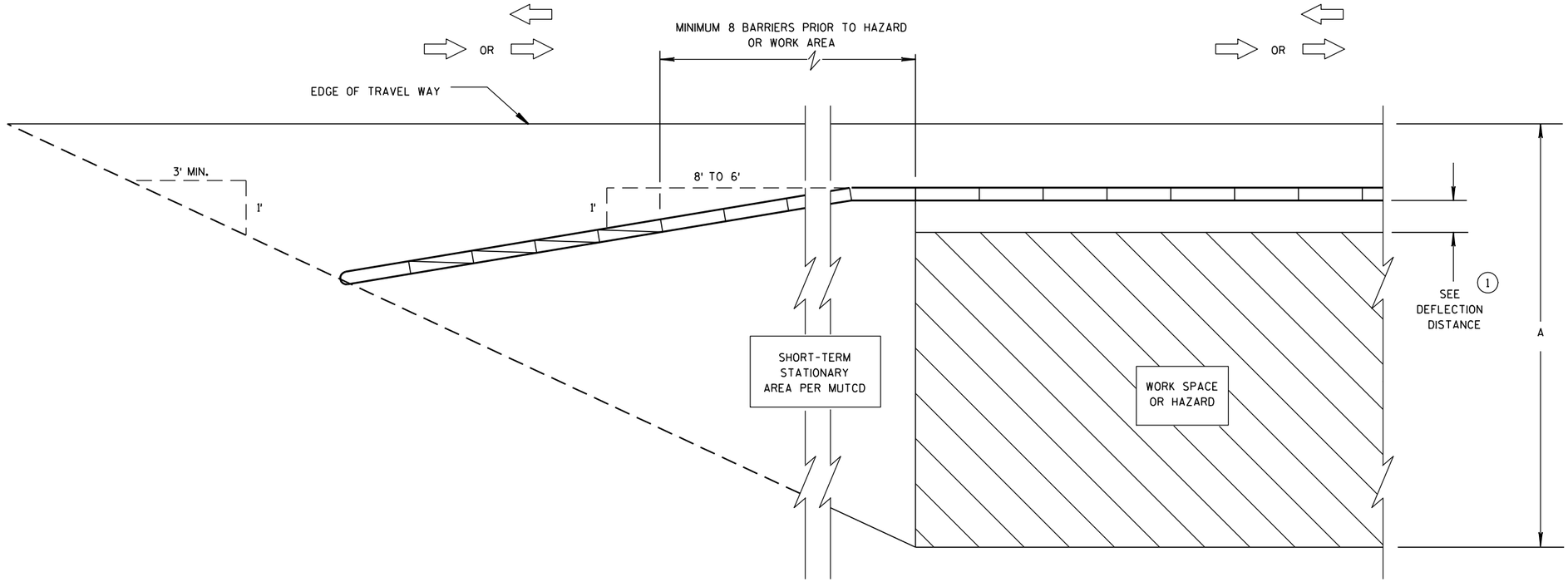
(2) VALUES PROVIDED MAY NOT FIT ALL POSSIBLE SITUATIONS OR SITE CONDITIONS. SEE OTHER SECTIONS OF THE CONTRACT OR PROJECT ENGINEER FOR MORE DETAILS.

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

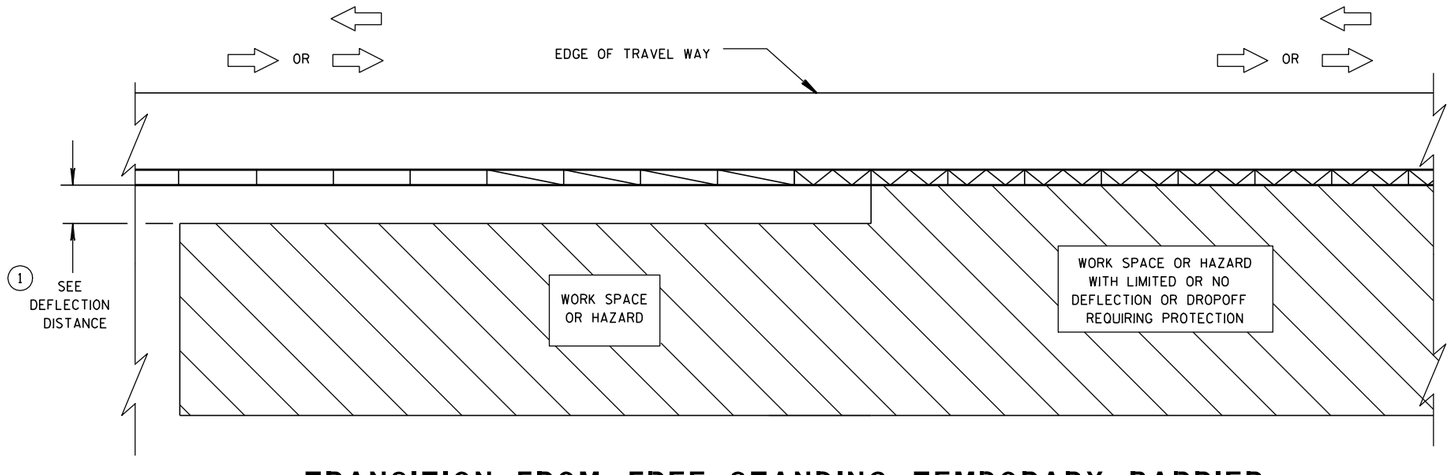
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

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

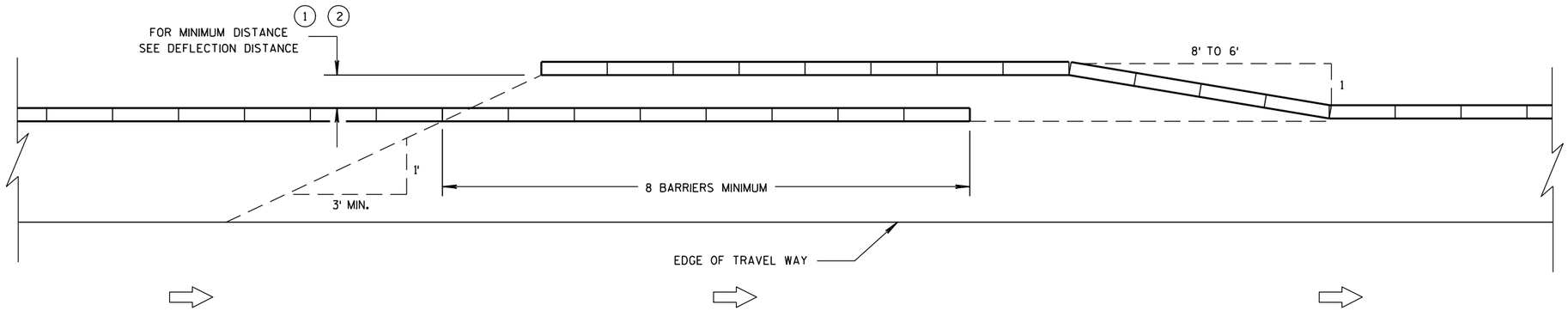
- DIRECTION OF TRAVEL
- CRASH CUSHION OR SAND BARREL ARRAY
- SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS
- SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS
- 3 PINS PLACED ON TRAFFIC SIDE OF BARRIER
- PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET
- FREE STANDING TEMPORARY BARRIER

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

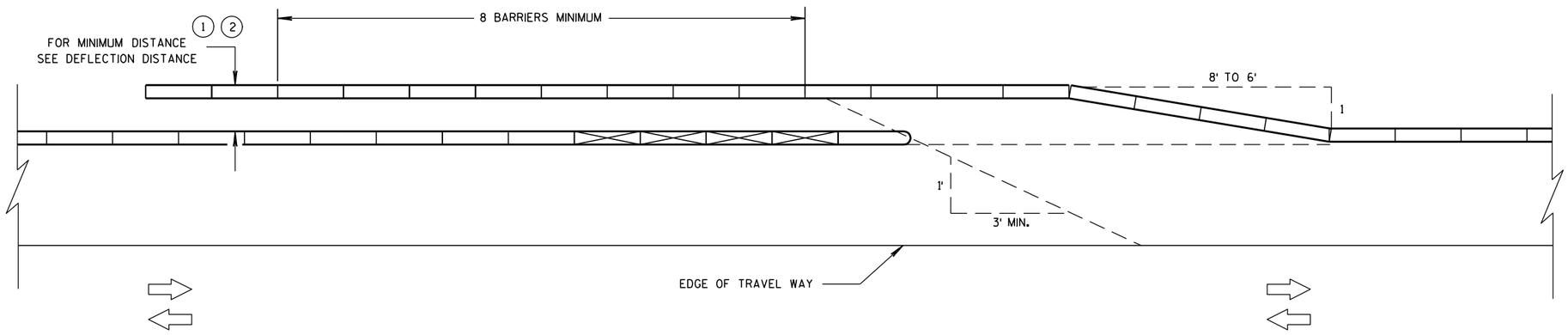
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

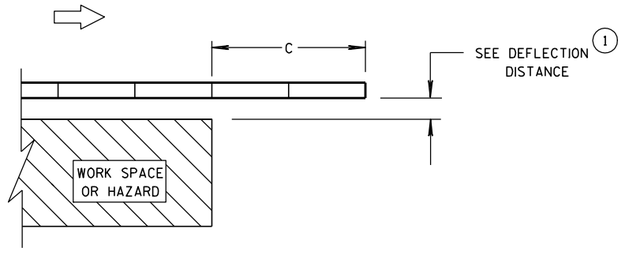
S.D.D. 14 B 8-1b



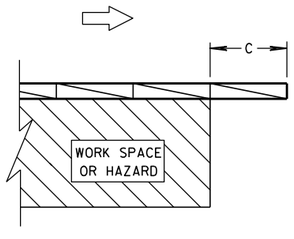
TEMPORARY BARRIER OVERLAP - ONE-WAY TRAFFIC



TEMPORARY BARRIER OVERLAP - TWO-WAY TRAFFIC



ENDING TEMPORARY BARRIER DOWNSTREAM - UNANCHORED



ENDING TEMPORARY BARRIER DOWNSTREAM - ANCHORED

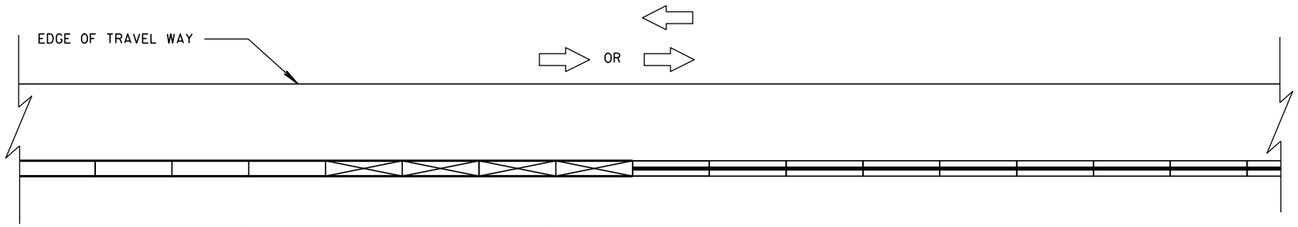
LEGEND

- 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

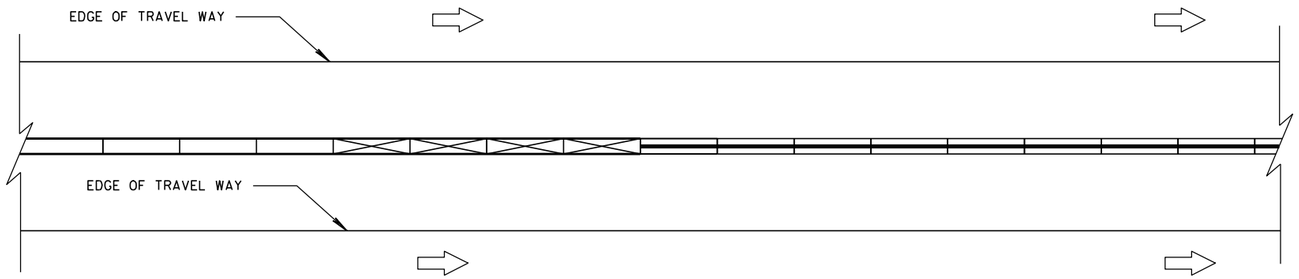
CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
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

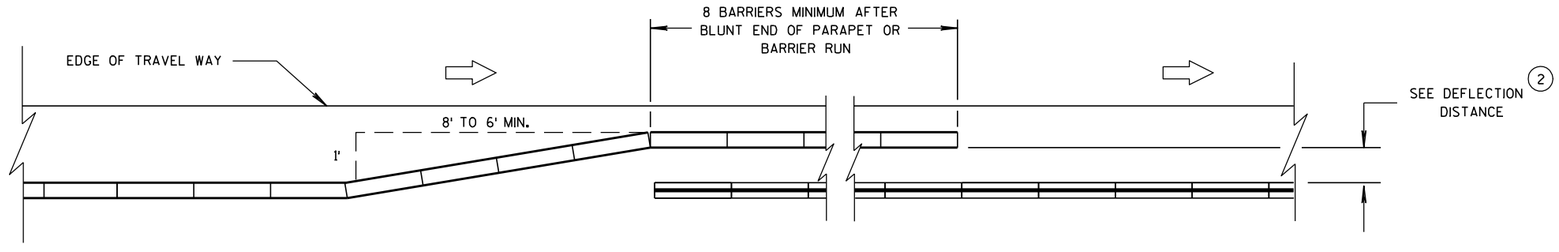
SEE FREE STANDING TRANSITION
TO TIED-DOWN SYSTEM DETAILS

SEE BI-DIRECTIONAL TRANSITION
TO TIED-DOWN SYSTEM DETAILS

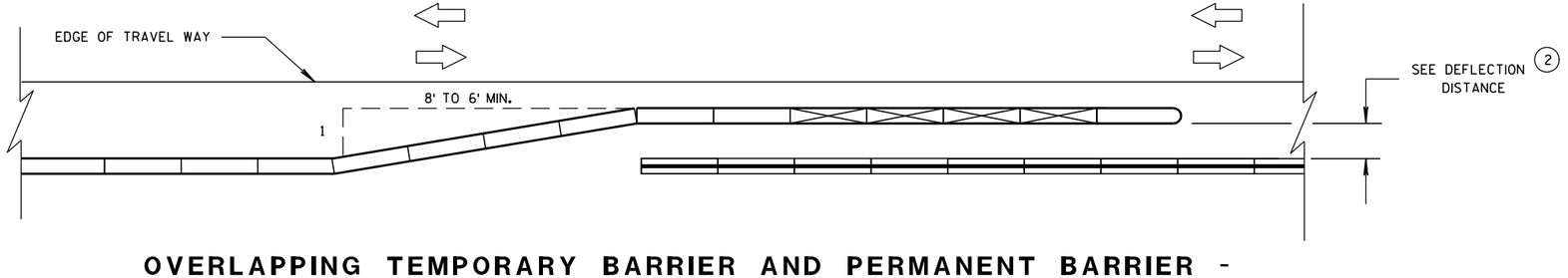
3 PINS PLACED ON
TRAFFIC SIDE OF BARRIER

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

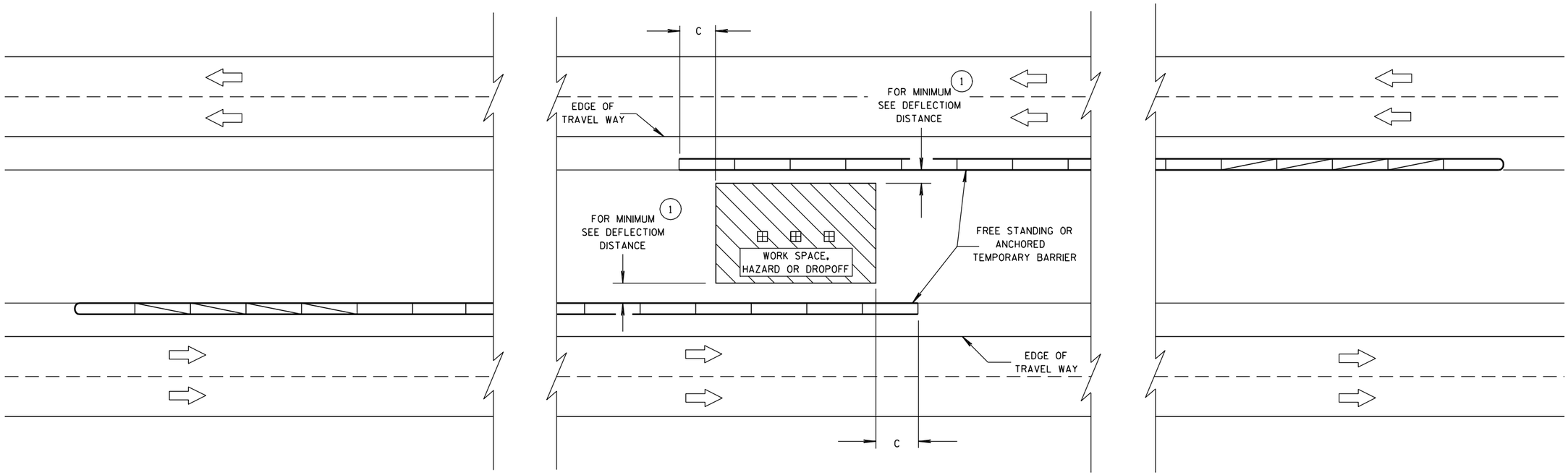
3 PINS PLACED ON TRAFFIC SIDE OF BARRIER

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

6

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

6

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

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) W6 X 9 OR W6 X 8.5 STEEL POSTS AND NOTCHED PLASTIC BLOCKOUTS ARE ACCEPTABLE ALTERNATIVES FOR 6" X 8" WOOD POSTS WITH WOOD OR PLASTIC BLOCKOUTS. USE APPROVED NOTCHED PLASTIC BLOCKOUTS WITH STEEL POSTS. APPROVED PLASTIC BLOCKOUT DESIGNS MAY VARY FROM THIS TYPICAL DETAIL WHEN USED IN CONJUNCTION WITH STEEL POSTS.

DO NOT MIX STEEL POSTS AND WOOD POSTS IN A SINGLE INSTALLATION.

(2) USE STRUCTURAL STEEL POSTS CONFORMING TO ASTM A 36. GALVANIZED POSTS ACCORDING TO AASHTO M 111. EITHER SET THE POSTS IN DRILLED HOLES OR DRIVE TO GRADE. REMOVE MUSHROOMING CAUSED BY DRIVING AND REPAIR DAMAGED SPELTER COATING ON GALVANIZED POSTS.

(3) INSTALL STEEL POSTS WITH HOLES ON APPROACHING TRAFFIC SIDE.

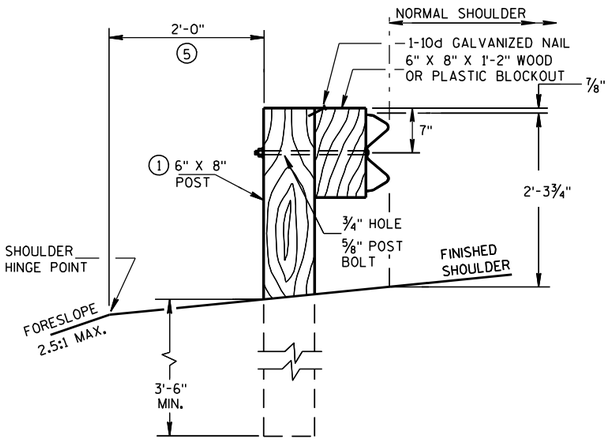
(4) USE EITHER WOOD OR APPROVED PLASTIC BLOCKOUTS ON WOOD POSTS.

(5) IF THE DISTANCE FROM BACK OF POST TO SHOULDER HINGE POINT IS LESS THAN 2 FEET INSTALL LONGER POST AT HALF POST SPACING, W BEAM (LHW).

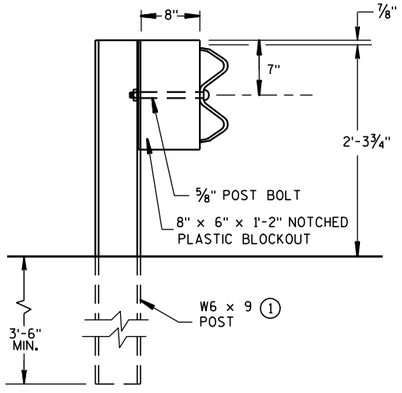
(6) IF ROCK IS ENCOUNTERED DURING EXCAVATION, THE ENGINEER MAY APPROVE USING A 12 INCH DIAMETER POST HOLE EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE APPROXIMATELY 2½ INCHES DEEP. CUT THE POSTS TO LENGTH AND PLACE IN YHE HOLE. BACKFILL WITH MATERIAL EXCAVATED FROM THE HOLE AND COMPACT ADEQUATEY.

INSTALL BEAM GUARD SECTIONS AND ALL NECESSARY HARDWARE ACCORDING TO THE APPLICABLE PLAN AND CURRENT STANDARD AND SUPPLEMENTAL SPECIFICATIONS.

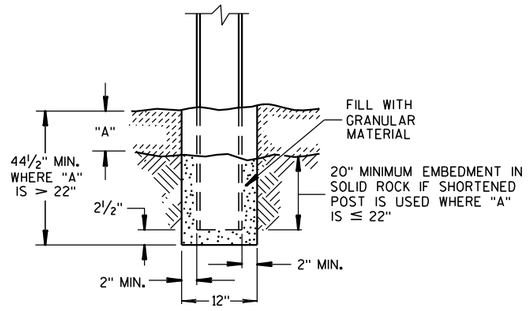
ALL DIMENSIONS ARE SUBJECT TO MANUFACTURER'S TOLERANCES EXCEPT WHERE ALLOWABLE TOLERANCES ARE SHOWN.



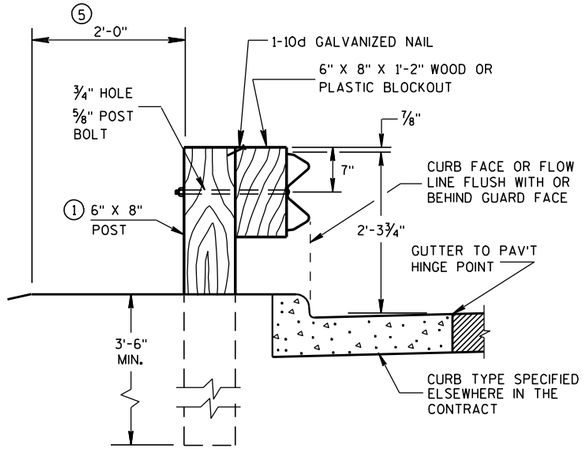
END VIEW
LOCATED ALONG A ROADWAY SHOULDER
STANDARD INSTALLATION



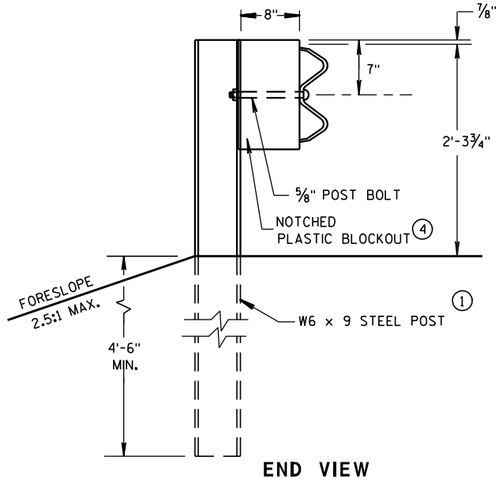
END VIEW
STEEL POST & NOTCHED
PLASTIC BLOCKOUT ALTERNATIVE
STANDARD INSTALLATION



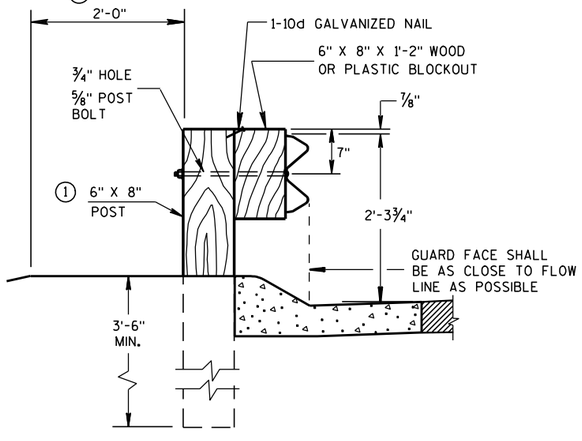
END VIEW
SETTING STEEL OR WOOD POST IN ROCK (6)



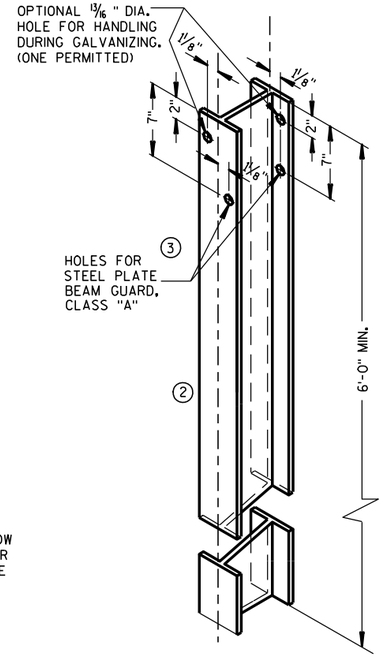
END VIEW
LOCATED ALONG A CURBED ROADWAY



END VIEW
LONGER POST AT HALF
POST SPACING W BEAM
(LHW)

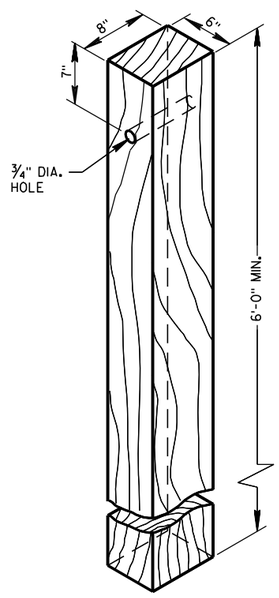


END VIEW
LOCATED ALONG A
MOUNTABLE CURBED ROADWAY

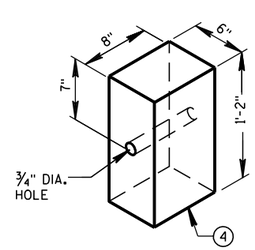


STEEL POST &
HOLE PUNCHING DETAIL
(W6 X 9) (1)

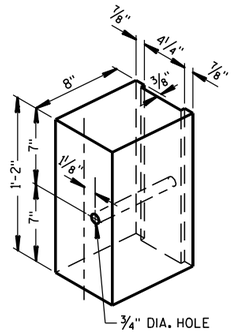
ALL HOLES 13/16" DIAMETER EXCEPT AS NOTED



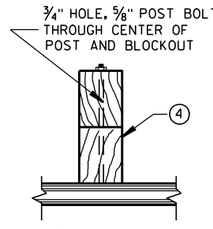
WOOD POST
(6"X8") NOMINAL



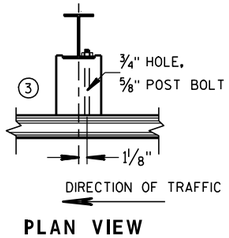
WOOD OR PLASTIC
BLOCKOUT FOR
WOOD POSTS



TYPICAL NOTCHED (1)
PLASTIC BLOCKOUT
FOR STEEL POSTS



PLAN VIEW
WOOD POST,
BLOCKOUT & BEAM



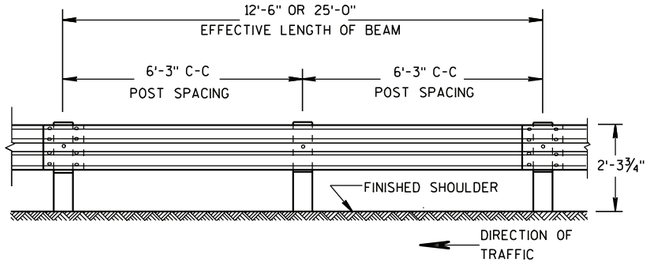
PLAN VIEW
STEEL POST, NOTCHED
PLASTIC BLOCKOUT & BEAM

TYPICAL INSTALLATION OF STEEL PLATE BEAM GUARD

STEEL PLATE BEAM GUARD,
CLASS "A"
INSTALLATION & ELEMENTS

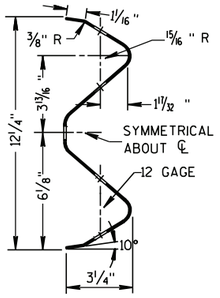
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
S.D.D. 14 B 15-7a

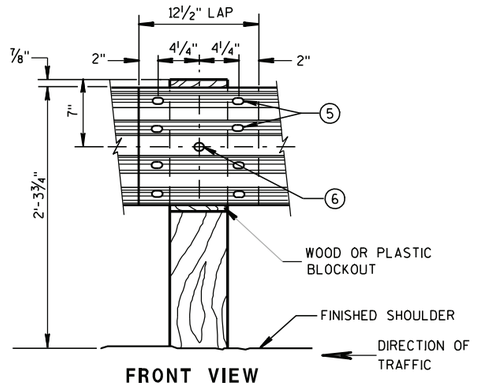


FRONT VIEW

POST SPACING STANDARD INSTALLATION



SECTION THRU W BEAM

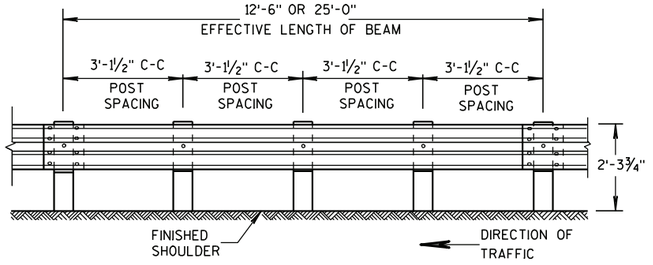


FRONT VIEW

BEAM SPLICE AT WOOD POST AND POST MOUNTING DETAIL

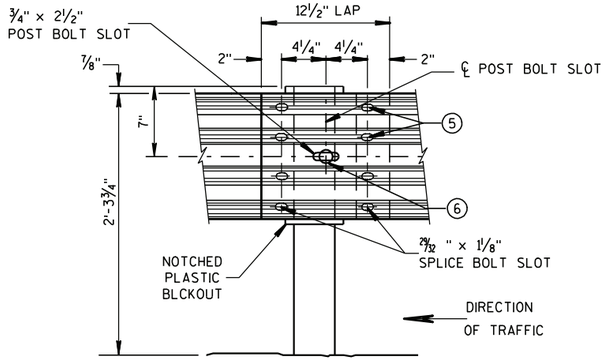
GENERAL NOTES

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.
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. 8 - 5/8" ϕ X 2 " BUTTON HEAD BOLTS WITH OVAL SHOULDERS & RECESS NUTS.
6. 5/8" ϕ X 1'-6" BUTTON HEAD BOLT AND AND RECESS NUT WITH ROUND WASHER UNDER NUT.



FRONT VIEW

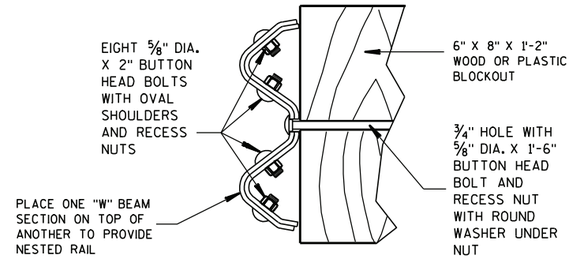
POST SPACING FOR LONGER POST AT HALF POST SPACING W BEAM (LHW)



FRONT VIEW

BEAM SPLICE AT STEEL POST

TYPICAL SPLICING DETAILS OF STEEL PLATE BEAM GUARD

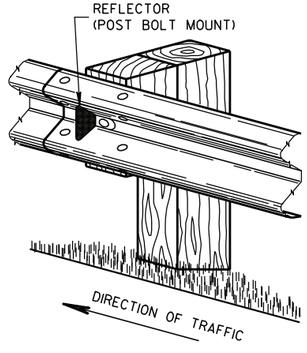


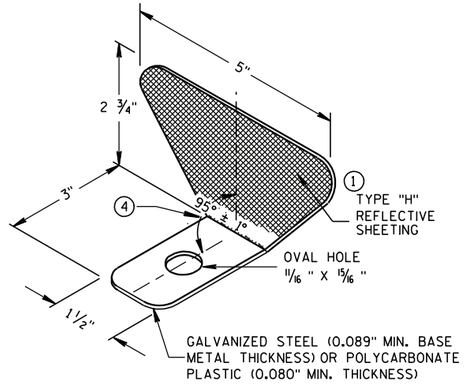
NESTED W BEAM (NW)

USE ALL OTHER STANDARD BEAM GUARD DETAILS FOR CONSTRUCTING NESTED W BEAM (NW)

REFLECTOR SPACING (2)

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



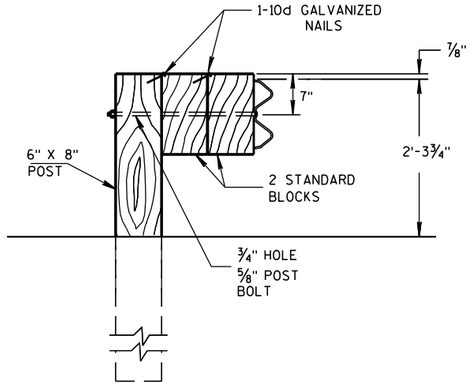


ONE SIDED REFLECTOR DETAIL AND TYPICAL INSTALLATION (1)

STEEL PLATE BEAM GUARD, CLASS "A", INSTALLATION & ELEMENTS

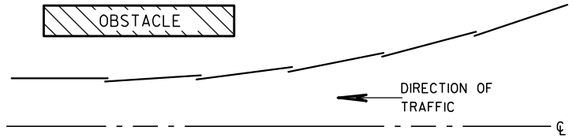
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
S.D.D. 14 B 15-7b

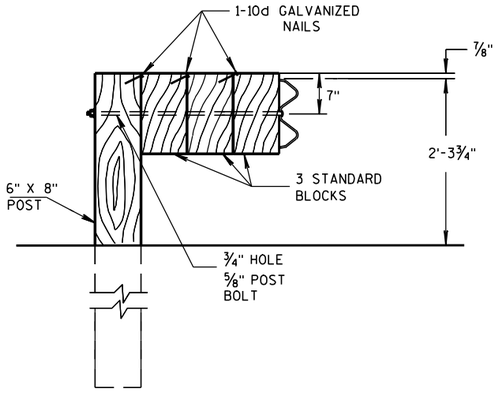


DETAIL FOR DOUBLE BLOCKS

THE NUMBER OF DOUBLE BLOCK POSTS WITHIN A BARRIER RUN IS UNLIMITED

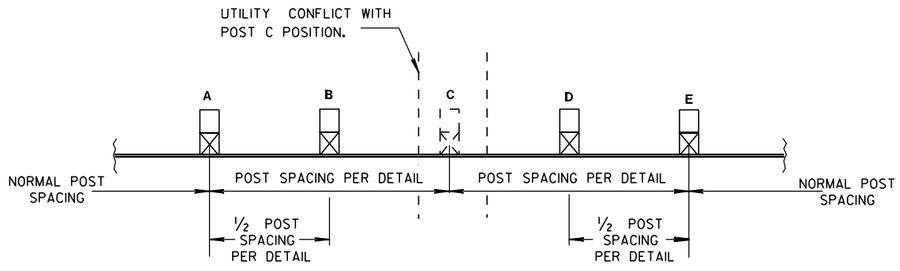


PLAN VIEW
BEAM LAPPING DETAIL



DETAIL FOR TRIPLE BLOCKS

TRIPLE BLOCK DETAIL IS LIMITED TO ONE LOCATION WITHIN A BEAM GUARD RUN.



POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION

NOTES: USE DOUBLE OR TRIPLE BLOCKS WHEN UNDERGROUND OBSTACLES PREVENT THE POST FROM BEING INSTALLED.

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

STEEL PLATE BEAM GUARD, CLASS "A", INSTALLATION & ELEMENTS

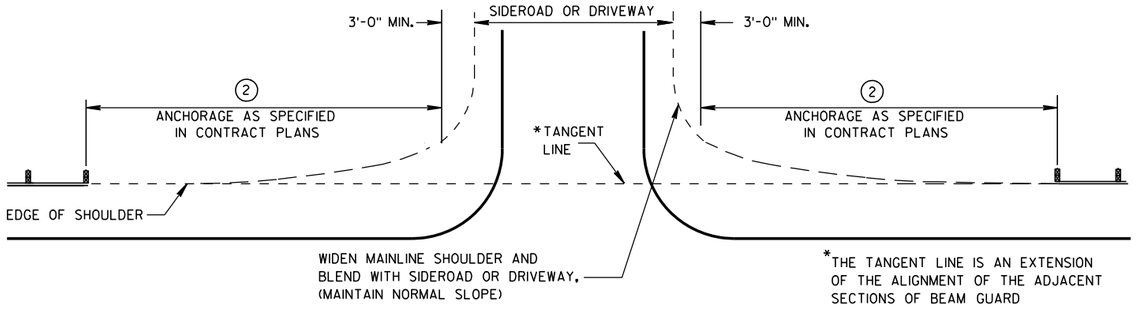
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

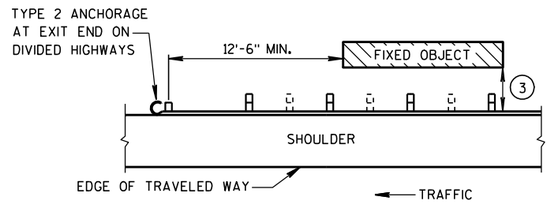
5/23/11	/S/ Jerry H. Zogg	
DATE	ROADWAY STANDARDS ENGINEER	ENT

FHWA

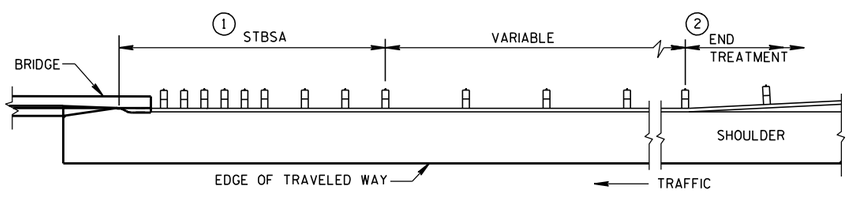
6
S.D.D. 14 B 15-7c



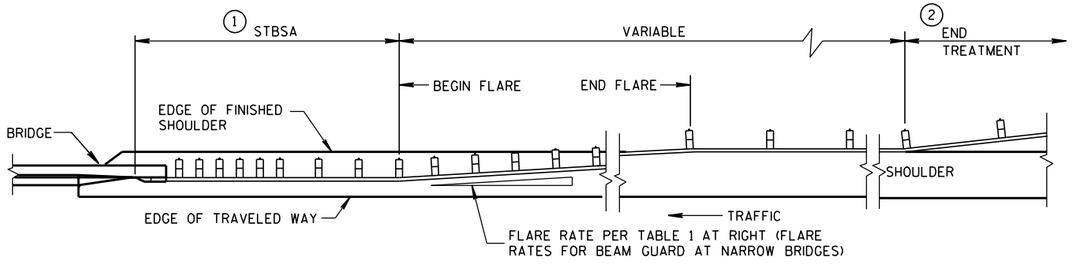
BEAM GUARD AT SIDEROADS OR DRIVEWAYS



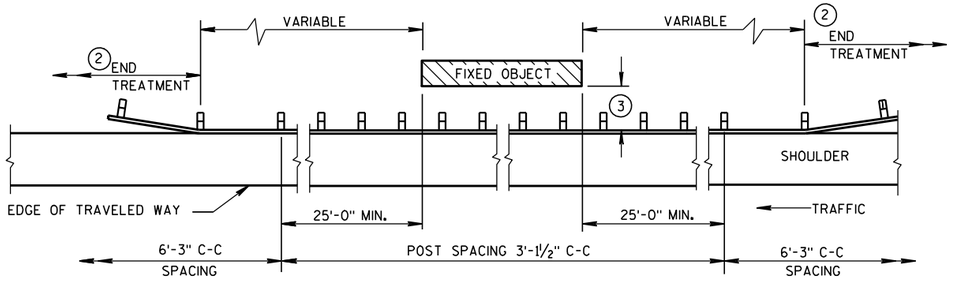
BEAM GUARD AT OBSTACLES EXIT END - ONE WAY TRAFFIC



BEAM GUARD AT FULL WIDTH BRIDGES



BEAM GUARD AT NARROW BRIDGES
(FLARED TO SHOULDER EDGE, THEN PARALLEL TO ROADWAY)



BEAM GUARD AT OBSTACLES - TWO WAY TRAFFIC
(RAIL TO OBSTACLE CLEARANCE 3'-6" TO 4'-6")

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE PERTINENT STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

W6 X 9 OR W6 X 8.5 STEEL POSTS WITH NOTCHED PLASTIC BLOCKOUTS ARE ACCEPTABLE ALTERNATIVES FOR 6" X 8" WOOD POSTS WITH WOOD OR PLASTIC BLOCKOUTS. USE APPROVED NOTCHED PLASTIC BLOCKOUTS WITH STEEL POSTS.

THE LOCATIONS AND LENGTHS OF BEAM GUARD ARE SHOWN ELSEWHERE IN THE PLAN.

(1) STEEL THRIE BEAM STRUCTURAL APPROACH (STBSA) - SEE CURRENT SDD 14B20.

(2) USE AN APPROVED END TREATMENT FOR THE TRAFFIC APPROACH SIDE OF BRIDGE/OBSTACLES. USE TYPE 2 ANCHORAGE ONLY AT THE DOWNSTREAM ENDS OF BEAM GUARD LOCATED ALONG ROADWAYS WITH ONE WAY TRAFFIC.

(3)

MINIMUM LATERAL DISTANCE FROM FACE OF BEAM GUARD TO FIXED OBJECT	POST SPACING
3'-6"	3' - 1½"
4'-6"	6' - 3"

TABLE 1
FLARE RATES FOR BEAM GUARD AT NARROW BRIDGES

POSTED SPEED (MPH)	FLARE RATE
25	13:1
30	15:1
35	16:1
40	18:1
45	21:1
50	24:1
55	26:1
65	30:1

STEEL PLATE BEAM GUARD CLASS "A" AT BRIDGES, OBSTACLES AND SIDEROADS/DRIVEWAYS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

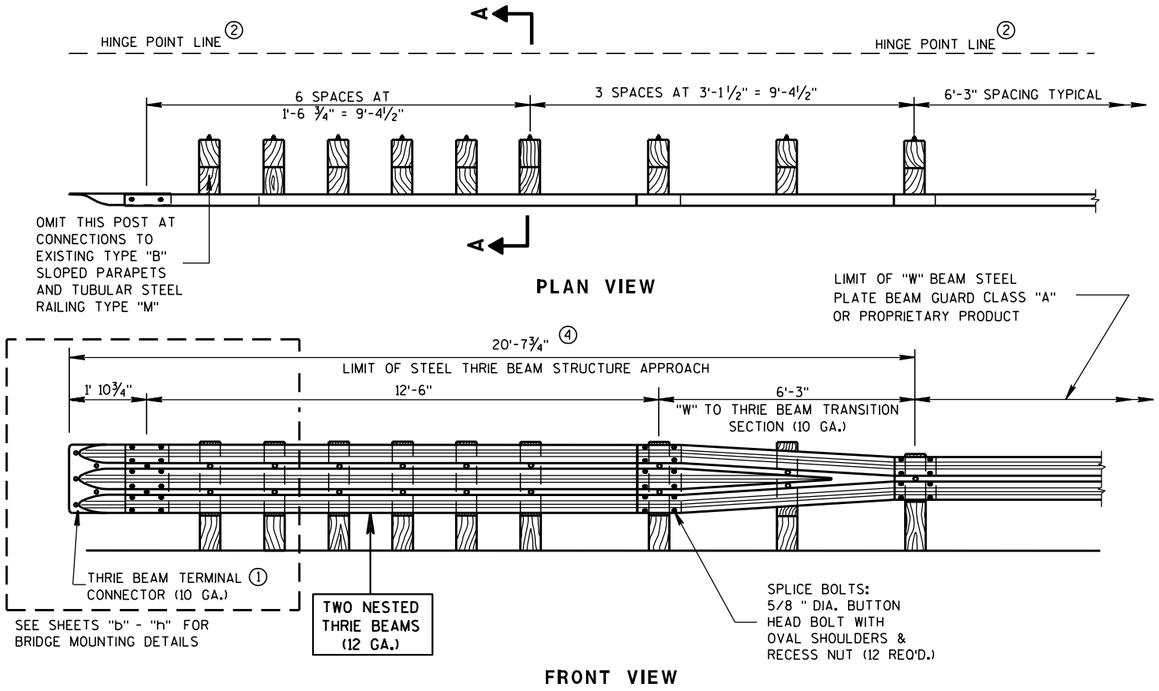
APPROVED
8-21-07 DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

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S.D.D. 14 B 18-6a

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S.D.D. 14 B 18-6a



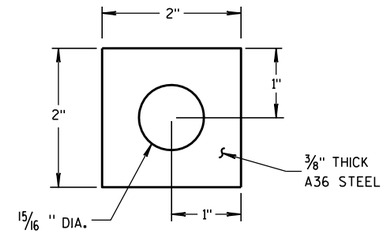


PLATE WASHER DETAIL

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".

DO NOT USE STEEL POSTS AND NOTCHED PLASTIC BLOCKOUTS IN THE STEEL THRIE BEAM STRUCTURAL APPROACH AND THE TRANSITION SECTION OF STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATIONS.

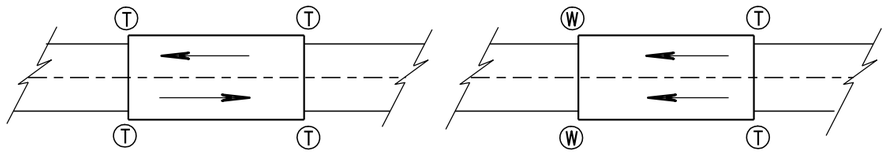
IF ROCK IS ENCOUNTERED, REMOVE ROCK TO FULL DEPTH OF POST PLUS 2 1/2" , AND 12" DIAMETER AROUND POST. SEE 14B15 FOR MORE DETAILS.

① BRIDGE RAILING TYPE "W" DOES NOT REQUIRE A TERMINAL CONNECTOR.

② MINIMUM EMBEDMENT SHALL BE 4'-0". WHERE EXISTING CONDITIONS DO NOT PERMIT THE APPROPRIATE EARTHWORK SHOWN ON THE PLAN TYPICAL SECTIONS OR DETAILS, THE ENGINEER MAY ALLOW THE REDUCTION OR ELIMINATION OF THE 2 FOOT DISTANCE TO THE HINGE POINT. OTHERWISE BUILD AS THE PLAN SHOWS OR AS THE ENGINEER DIRECTS. IF THE 2 FOOT DISTANCE TO THE HINGE POINT IS REDUCED OR ELIMINATED, INCREASE THE POST EMBEDMENT DEPTH TO 4'-6" OR MORE.

③ POST BOLTS ARE 5/8" DIAMETER ASTM A307 BUTTON HEAD BOLT. A POST BOLT REQUIRES A 5/8" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX AND A 5/8" DIAMETER F844 FLAT WASHER. LENGTH OF POST BOLT MAY VARY.

④ ALL WOOD POSTS MUST BE 6" X 8" AND AT LEAST 7'-0" LONG.



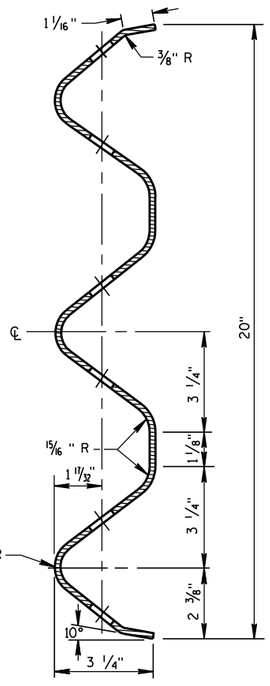
TWO WAY TRAFFIC

ONE WAY TRAFFIC

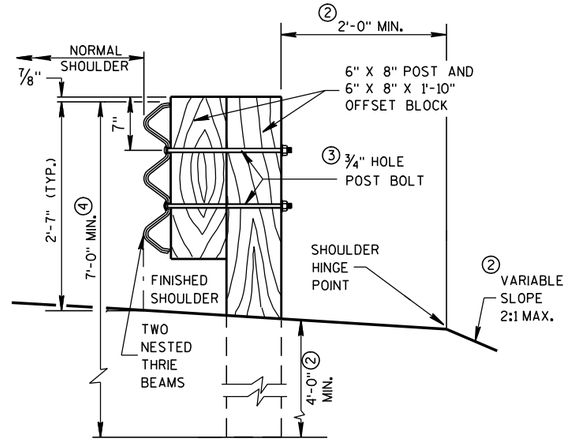
(T) THRIE BEAM CONNECTION

(W) W-BEAM CONNECTION WHEN REQUIRED

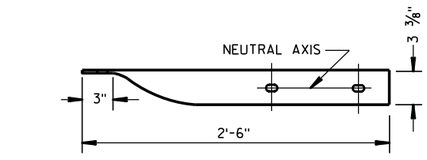
TYPICAL LOCATIONS OF THRIE BEAM AND W-BEAM CONNECTIONS TO BRIDGE

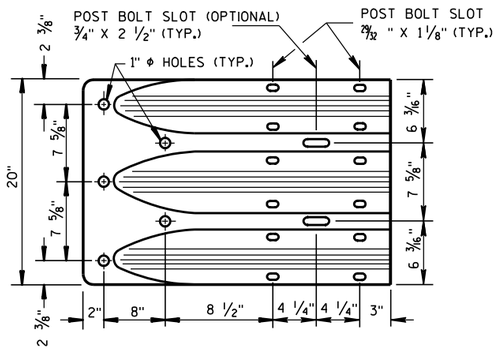


SECTION THRU THRIE BEAM RAIL ELEMENT

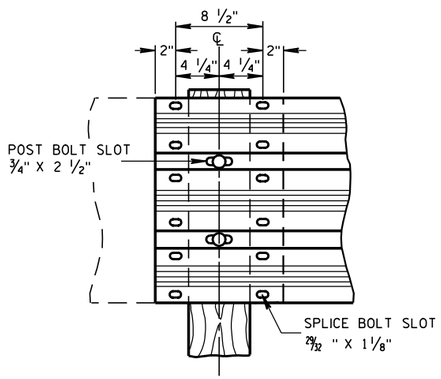


SECTION A-A





THRIE BEAM TERMINAL CONNECTOR



THRIE BEAM SPLICE

STEEL THRIE BEAM STRUCTURE APPROACH

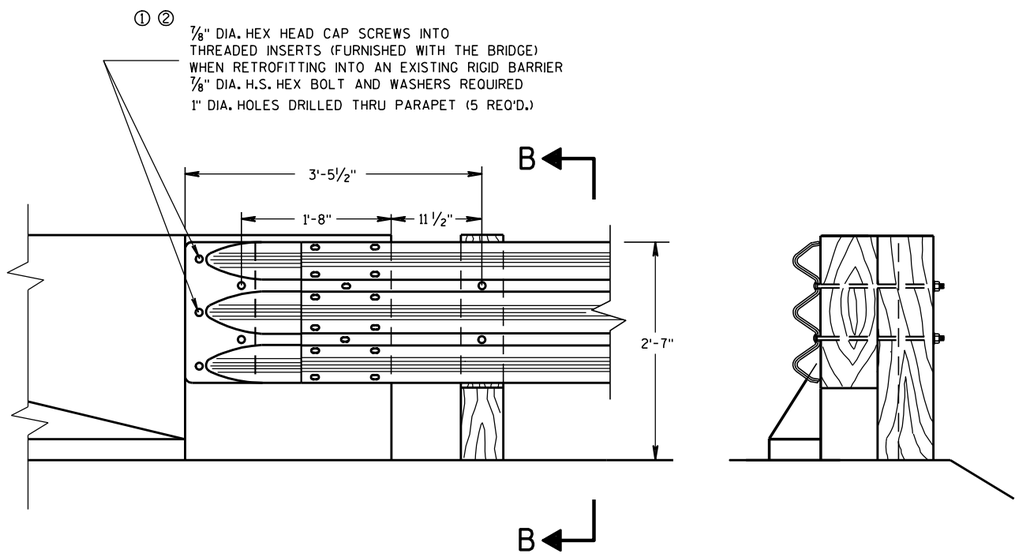
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APPROVED

8/31/2012
DATE

/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER

FHWA



FRONT VIEW

SECTION B-B

THRIE BEAM CONNECTION TO BRIDGE PARAPET WITH SQUARE ENDS

GENERAL NOTES

THESE ARE TYPICAL CONNECTION DETAILS. ADJUST THE POSTION OF CONNECTIONS TO EXISTING BRIDGES TO FIT THE ACTUAL BRIDGE AND SITE DIMENSIONS.

BOLTS, NUTS AND WASHERS SHALL CONFORM TO ASTM A325, A449 AND GALVANIZED PER STANDARD SPECIFICATIONS 614.

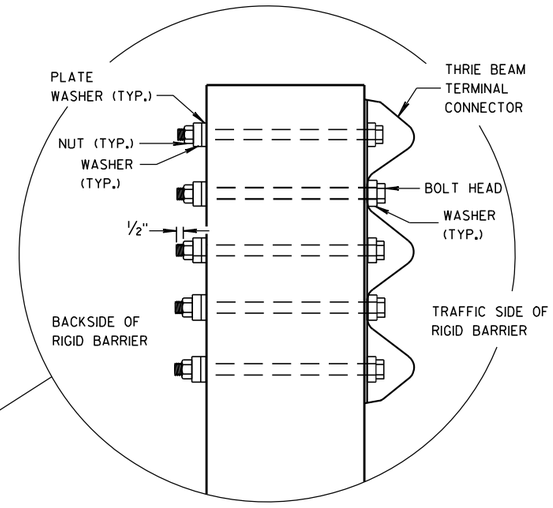
① DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

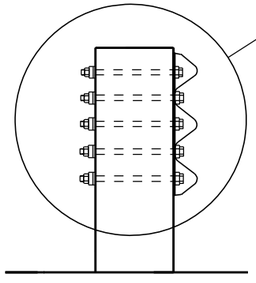
② BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM TERMINAL CONNECTOR. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X ⅝" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.

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 ½".

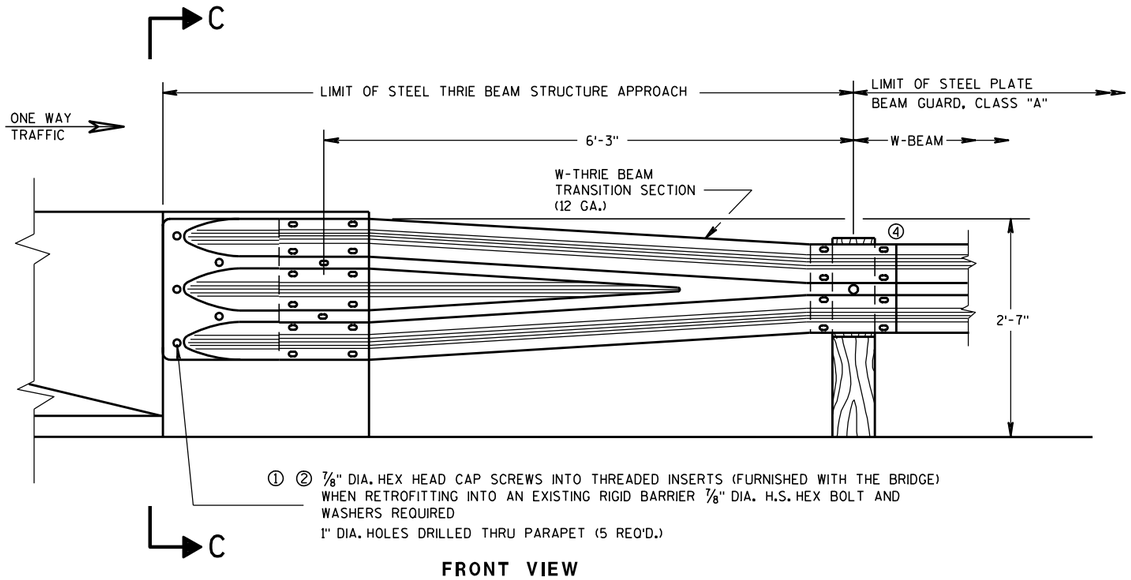
④ W6 X 9 OR W6 X 8.5 STEEL POSTS AND NOTCHED PLASTIC BLOCKOUTS ARE ACCEPTABLE ALTERNATIVES FOR 6" X 8" WOOD POST WITH WOOD OR PLASTIC BLOCKOUTS. USE APPROVED NOTCHED PLASTIC BLOCKOUTS WITH STEEL POSTS.

DO NOT USE STEEL POSTS AND NOTCHED PLASTIC BLOCKOUTS IN THE STEEL THRIE BEAM STRUCTURAL APPROACH AND THE TRANSITION SECTION OF STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATIONS.





SECTION C-C



① ② ⅞" DIA. HEX HEAD CAP SCREWS INTO THREADED INSERTS (FURNISHED WITH THE BRIDGE) WHEN RETROFITTING INTO AN EXISTING RIGID BARRIER ⅞" DIA. H.S. HEX BOLT AND WASHERS REQUIRED
1" DIA. HOLES DRILLED THRU PARAPET (5 REQ'D.)

FRONT VIEW

W BEAM TRANSITION AND CONNECTION TO BRIDGE PARAPETS WITH SQUARE ENDS

(USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)

STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTION TO SQUARE END PARAPETS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8/31/2012
DATE

/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER

FHWA

GENERAL NOTES

THESE ARE TYPICAL CONNECTION DETAILS. ADJUST THE POSTION OF CONNECTIONS TO EXISTING BRIDGES TO FIT THE ACTUAL BRIDGE AND SITE DIMENSIONS.

BOLTS, NUTS AND WASHERS SHALL CONFORM TO ASTM A325, A449 AND GALVANIZED PER STANDARD SPECIFICATIONS 614.

① DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

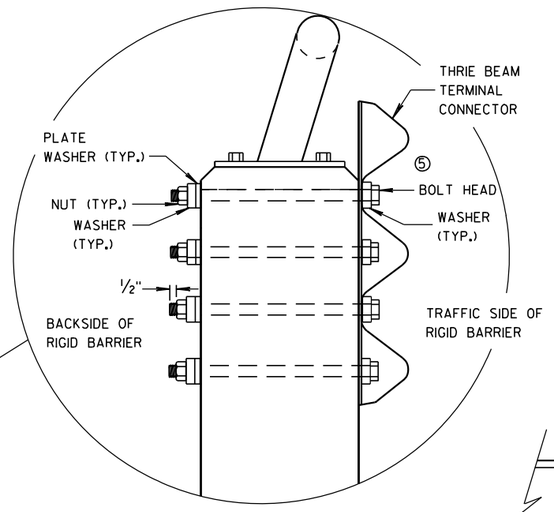
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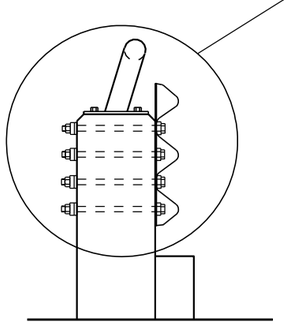
③ THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3 ½".

④ W6 X 9 OR W6 X 8.5 STEEL POSTS AND NOTCHED PLASTIC BLOCKOUTS ARE ACCEPTABLE ALTERNATIVES FOR 6" X 8" WOOD POST WITH WOOD OR PLASTIC BLOCKOUTS. USE APPROVED NOTCHED PLASTIC BLOCKOUTS WITH STEEL POSTS.

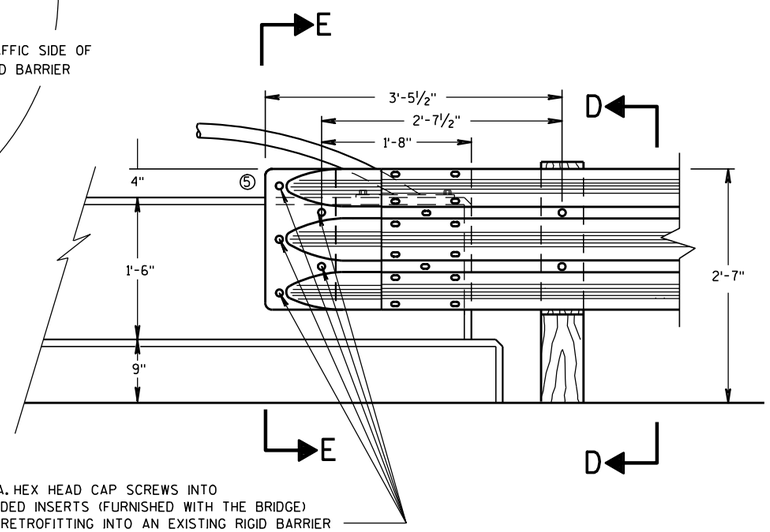
⑤ BOLT, NUT AND WASHERS NOT REQUIRED FOR THIS LOCATION WHEN RETROFITTING AN EXISTING PAPAPET AND THE HOLE IS EITHER ABOVE PARAPET OR WITHIN 4 INCHES OF THE EDGE OF PARAPET.

DO NOT USE STEEL POSTS AND NOTCHED PLASTIC BLOCKOUTS IN THE STEEL THRIE BEAM STRUCTURAL APPROACH AND THE TRANSITION SECTION OF STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATIONS.





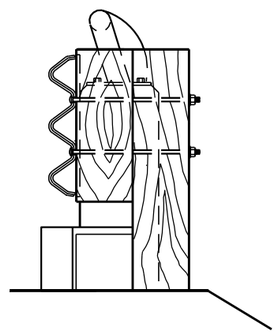
SECTION E-E



① ② ⅞" DIA. HEX HEAD CAP SCREWS INTO THREADED INSERTS (FURNISHED WITH THE BRIDGE) WHEN RETROFITTING INTO AN EXISTING RIGID BARRIER ⅞" DIA. H.S. HEX BOLT AND WASHERS REQUIRED

1" DIA. HOLES DRILLED THRU PARAPET (4 REQ'D.)

FRONT VIEW

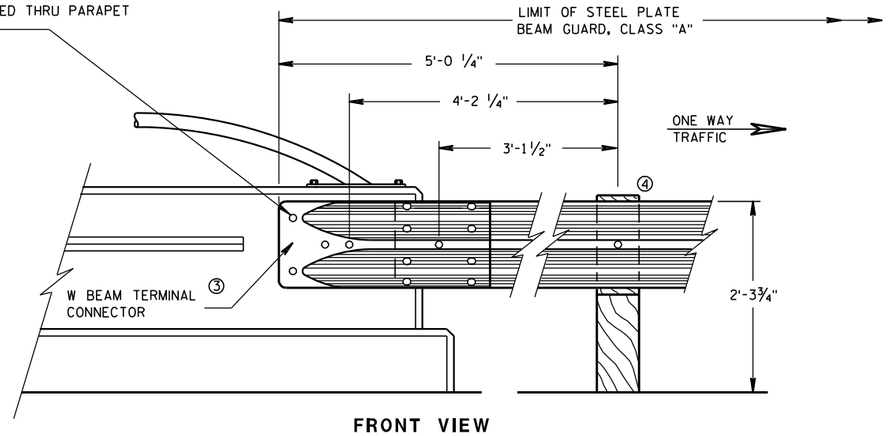


SECTION D-D

THRIE BEAM CONNECTION TO VERTICAL FACED PARAPETS

① ② ⅞" DIA. HEX HEAD CAP SCREWS INTO THREADED INSERTS (FURNISHED WITH THE BRIDGE) WHEN RETROFITTING INTO AN EXISTING RIGID BARRIER ⅞" DIA. H.S. HEX BOLT AND WASHERS REQUIRED

1" DIA. HOLES DRILLED THRU PARAPET (4 REQ'D.)



FRONT VIEW

W BEAM CONNECTION TO VERTICAL FACE PARAPET

(USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)

STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTION TO VERTICAL FACED PARAPETS

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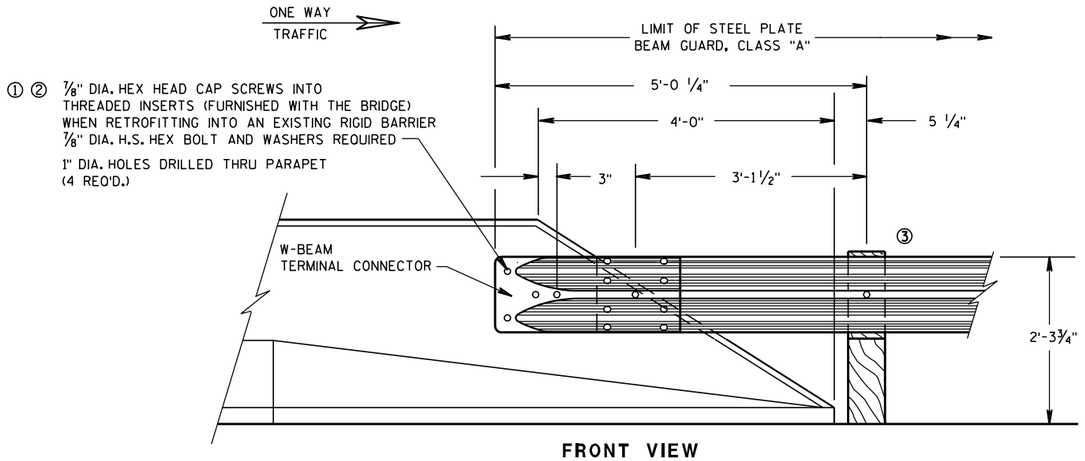
8/31/2012
DATE

/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER

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FRONT VIEW

W BEAM CONNECTION TO PARAPETS WITH SLOPED ENDS

(USE ONLY AT TRAFFIC EXIT END OF ONE WAY BRIDGE)

GENERAL NOTES

THESE ARE TYPICAL CONNECTION DETAILS. ADJUST THE POSTION OF CONNECTIONS TO EXISTING BRIDGES TO FIT THE ACTUAL BRIDGE AND SITE DIMENSIONS.

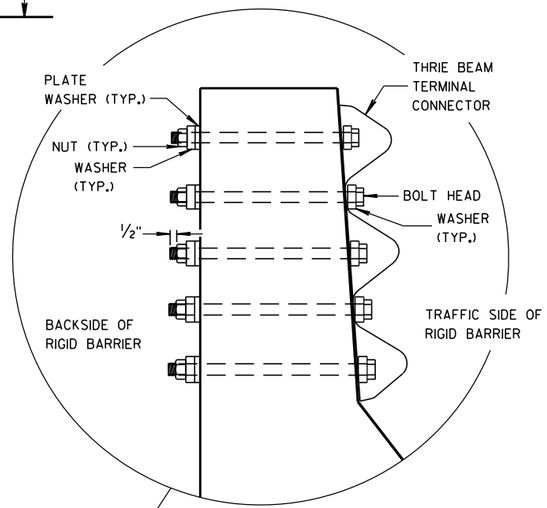
BOLTS, NUTS AND WASHERS SHALL CONFORM TO ASTM A325, A449 AND GALVANIZED PER STANDARD SPECIFICATIONS 614.

① DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

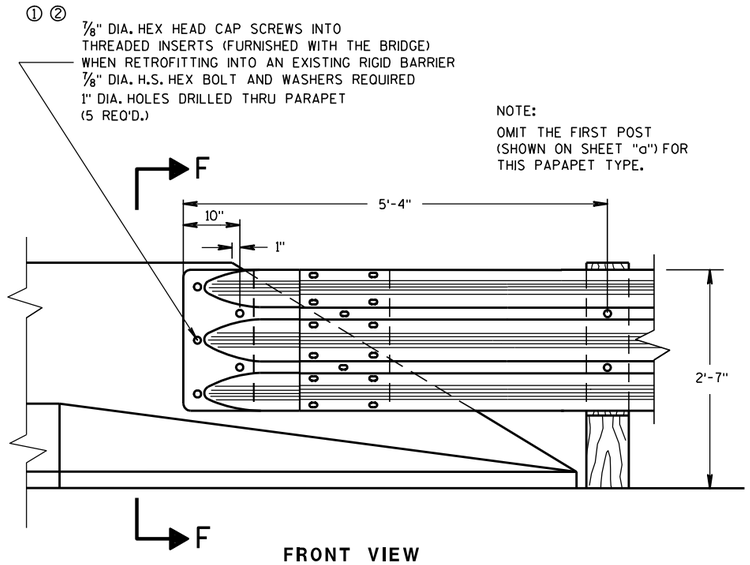
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③ W6 X 9 OR W6 X 8.5 STEEL POSTS AND NOTCHED PLASTIC BLOCKOUTS ARE ACCEPTABLE ALTERNATIVES FOR 6" X 8" WOOD POST WITH WOOD OR PLASTIC BLOCKOUTS. USE APPROVED NOTCHED PLASTIC BLOCKOUTS WITH STEEL POSTS.

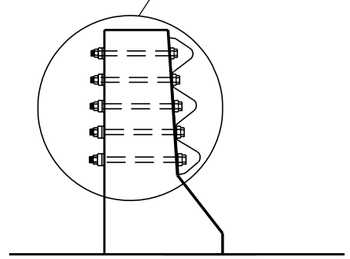
DO NOT USE STEEL POSTS AND NOTCHED PLASTIC BLOCKOUTS IN THE STEEL THRIE BEAM STRUCTURAL APPROACH AND THE TRANSITION SECTION OF STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATIONS.



DRILL HOLE LOCATION AND PATTERN FOR THRIE BEAM CONNECTION



FRONT VIEW



SECTION F-F

THRIE BEAM CONNECTION TO BRIDGE PARAPETS WITH SLOPED ENDS

STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTION TO SLOPED END PARAPETS

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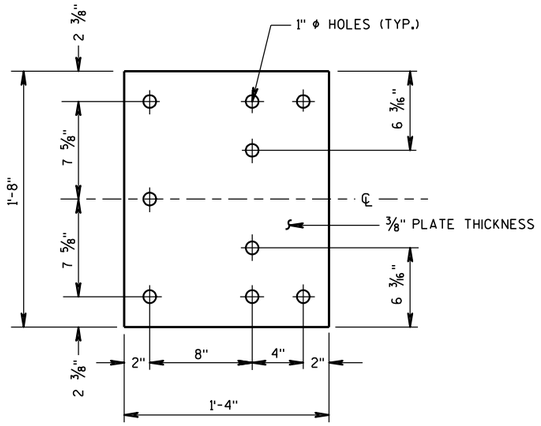
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8/31/2012 — DATE
/S/ Jerry H. [illegible] — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

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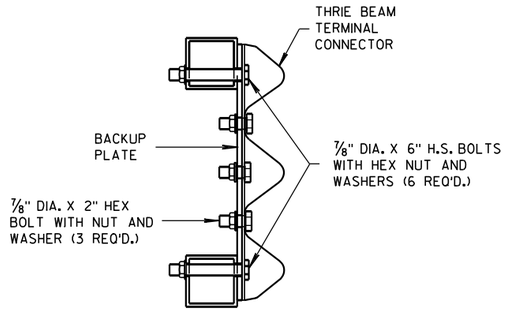
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S.D.D. 14 B 20-11d



BACK-UP PLATE DETAIL



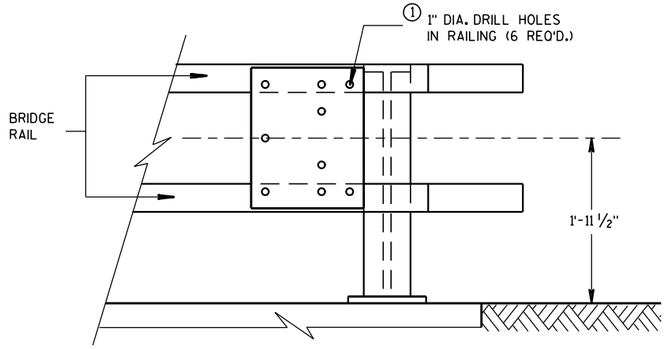
SECTION G-G

GENERAL NOTES

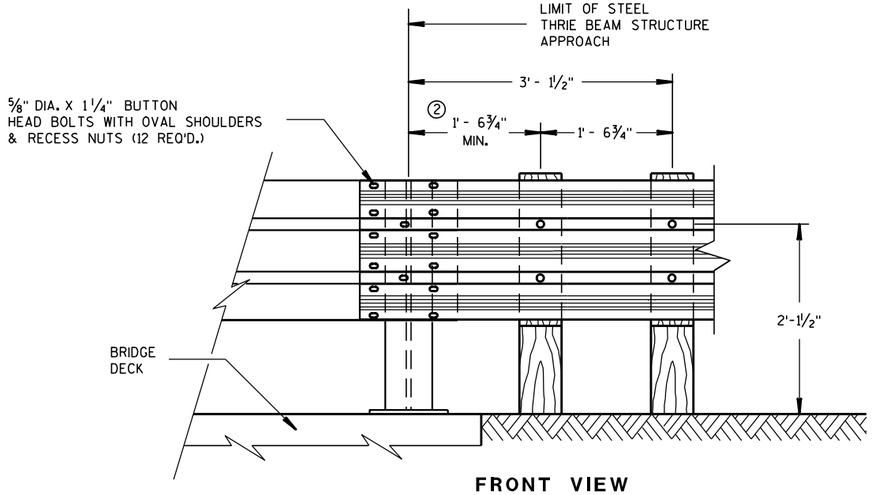
BOLTS, PLATES, NUTS AND WASHERS SHALL CONFORM TO THE REQUIREMENTS OF ASTM SPECIFICATION A 325 AND BE GALVANIZED IN ACCORDANCE WITH ASTM A 153.

① DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

② VARY THIS DIMENSION DEPENDING ON ABUTMENT TYPE, WINGWALL DETAILS, AND ANGLE OF SKEW. PLACE THE FIRST WOOD POST OFF THE BRIDGE SHALL AS CLOSE AS FEASIBLE TO THE STEEL END POST.

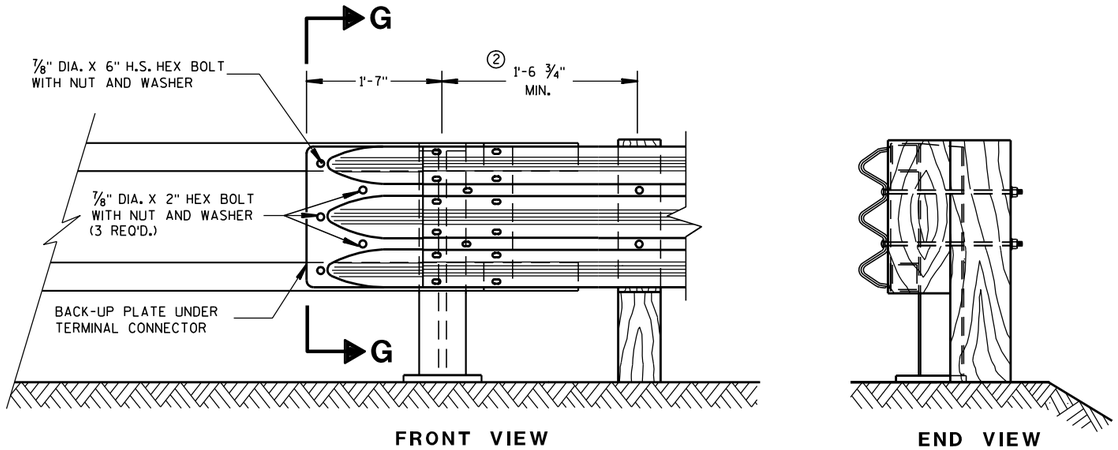


BACK-UP PLATE MOUNTING ONTO BRIDGE RAILING



FRONT VIEW

THRIE BEAM CONNECTION TO STEEL RAILING TYPE "W"



FRONT VIEW

END VIEW

THRIE BEAM CONNECTION TO TUBULAR RAILING TYPE "F"

STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTION TO BRIDGE RAILING TYPES "F" AND "W"

STATE OF WISCONSIN
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APPROVED
8/31/2012 DATE
/S/ Jerry H ... ROADWAY STANDARDS ENGINEER
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FHWA

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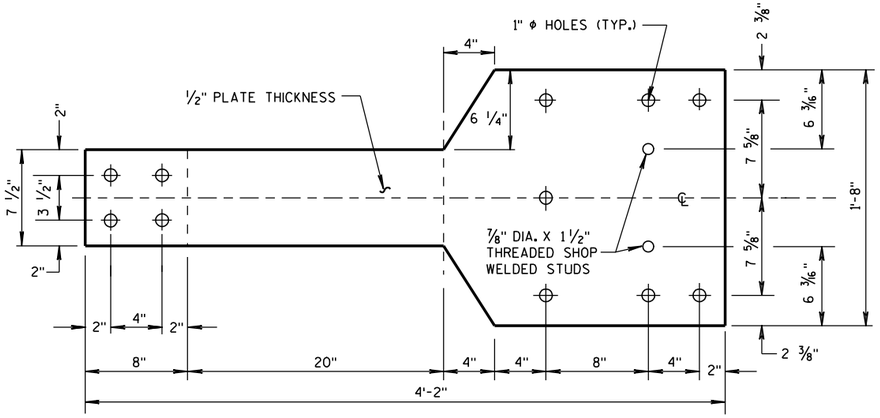
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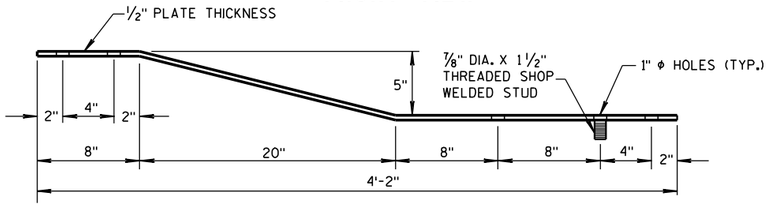
S.D.D. 14 B 20-11e

GENERAL NOTES

① VARY THIS DIMENSION DEPENDING ON ABUTMENT TYPE, WINGWALL DETAILS, AND ANGLE OF SKEW. PLACE THE FIRST WOOD POST OFF THE BRIDGE SHALL BE AS CLOSE AS FEASIBLE TO THE STEEL END POST.

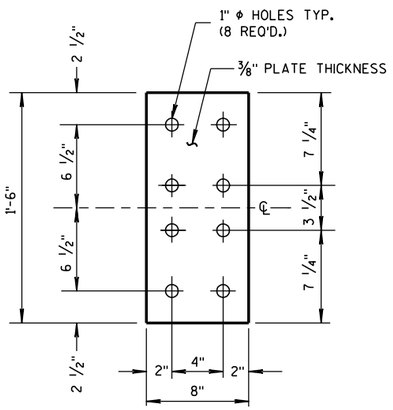


FRONT VIEW



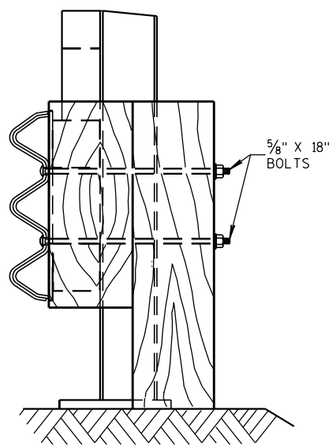
PLAN VIEW

BACK-UP PLATE DETAIL, TYPE "M"

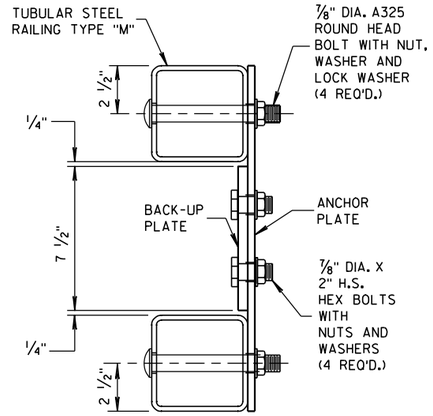


FRONT VIEW

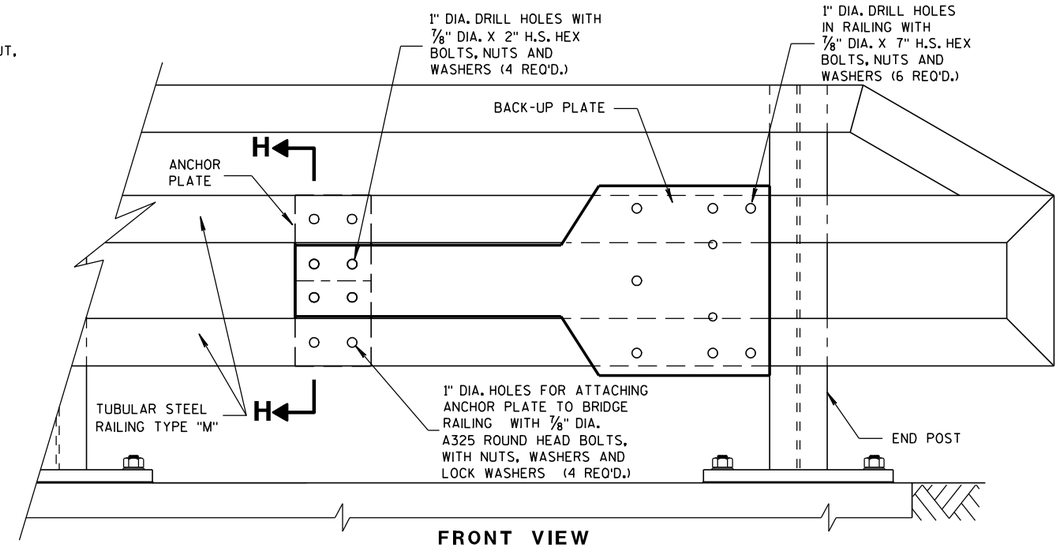
ANCHOR PLATE DETAIL, TYPE "M"



SECTION I-I

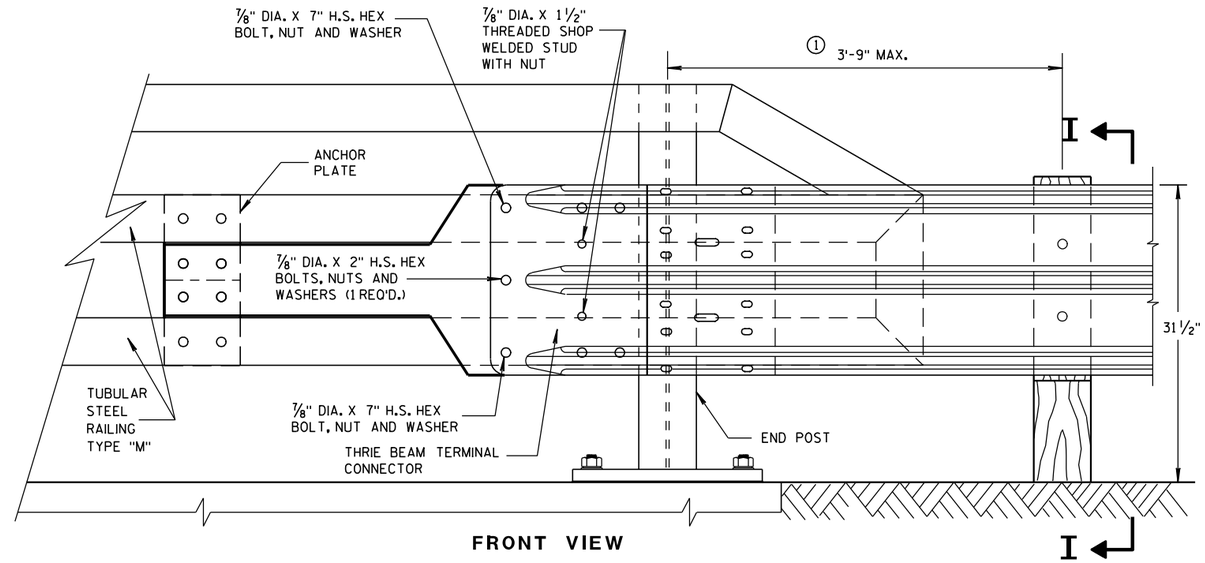


SECTION H-H

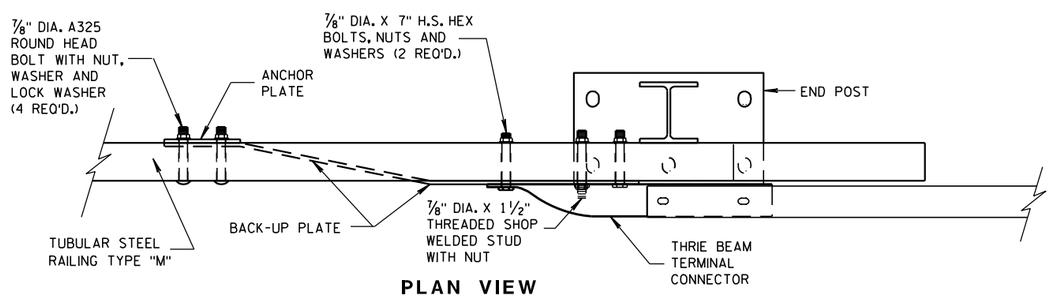


FRONT VIEW

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



FRONT VIEW



PLAN VIEW

THRIE BEAM CONNECTION TO TUBULAR RAILING, TYPE "M"

STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTION TO BRIDGE RAILING TYPE "M"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
8/31/2012 — DATE
/S/ Jerry H. [illegible] — ROADWAY STANDARDS ENGINEER

FHWA

6 S.D.D. 14 B 20-11f

GENERAL NOTES

COVER PLATE PANELS ARE 3/16" THICK.

ALL STIFFENERS ARE 1/4" THICK.

CONNECTOR PLATE SHALL BE FABRICATED FROM ASTM GRADE A36 STEEL AND GALVANIZED.

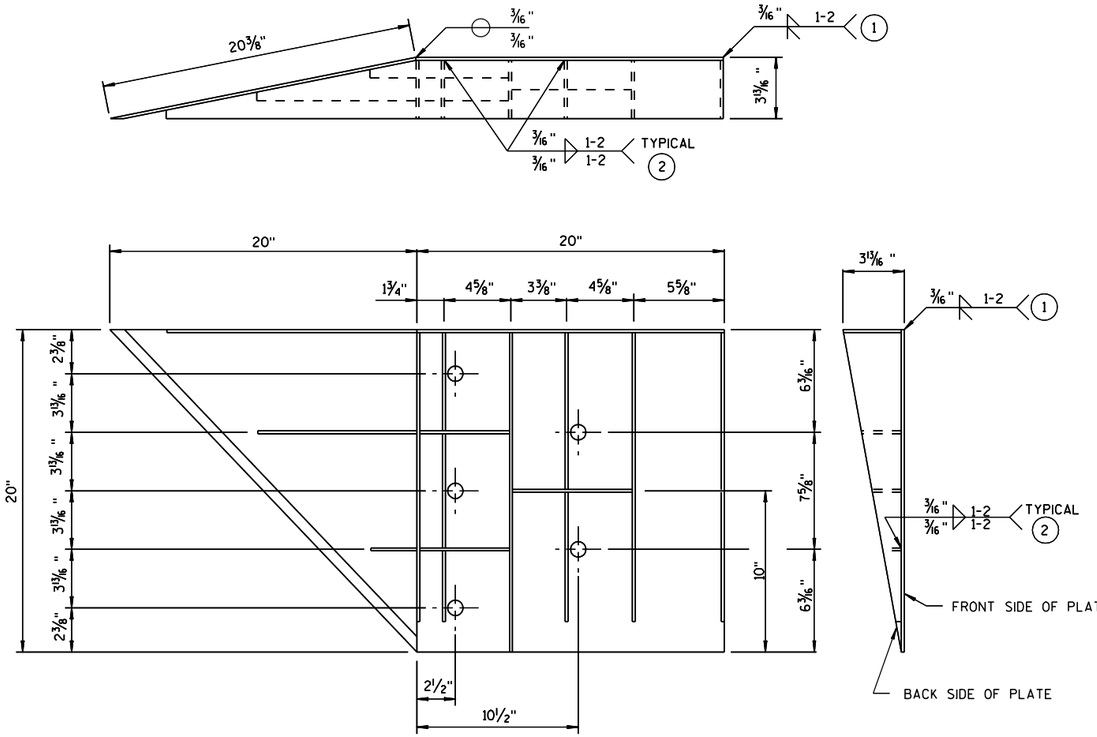
FOR GALVANIZED REQUIREMENTS, SEE SECTION 614 OF THE STANDARD SPECIFICATIONS.

ALL HOLE DIAMETERS SHALL BE 1".

FOR OPPOSITE SIDE INSTALLATION MIRROR DRAWINGS.

(1) STIFFENERS LOCATED AT THE OUTSIDE EDGES OF THE COVER PLATES SHALL BE WELDED AS FOLLOWS:
SINGLE BEVEL GROOVE WELD ON EXTERNAL SIDES AND 3/16" FILLET WELD BY 1" LONG SPACED AT 2" ON INTERNAL SIDES.

(2) STIFFENERS LOCATED ON THE INSIDE OF THE COVER PLATE SHALL BE WELDED AS FOLLOWS:
3/16" FILLET WELD BY 1" LONG SPACED AT 2".



WELDING INSTRUCTION

(VIEWED FROM BACK SIDE OF PLATE)

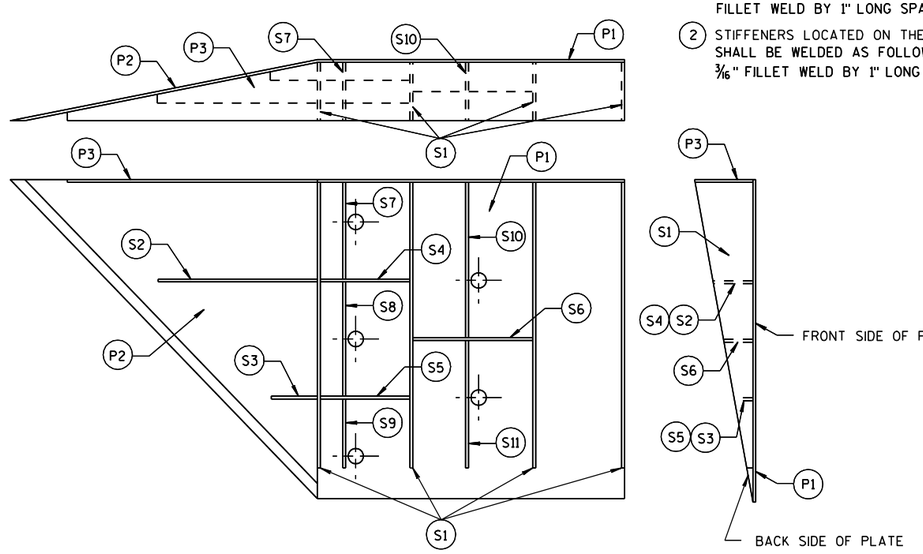


PLATE AND STIFFENER IDENTIFICATION

(VIEWED FROM BACK SIDE OF PLATE)

CONNECTOR PLATE DIMENSION (PER ASSEMBLY)

PLATE	QUANTITY	SHAPE	SIZE (A x B x C x D)	THICKNESS
P1	1		20" x 20"	3/16"
P2	1		20" x 20" x 28 9/16"	3/16"
P3	1		39" x 3 5/8" x 20" x 19 5/16"	3/16"
S1	4		18 7/16" x 3 5/8" x 18 3/4"	1/4"
S2	1		10 1/4" x 2 7/16" x 10 3/8" x 1/2"	1/4"
S3	1		3" x 1 1/16" x 3 1/8" x 1/2"	1/4"
S4	1		6 1/8" x 2 7/16"	1/4"
S5	1		6 1/8" x 1 1/16"	1/4"
S6	1		7 3/4" x 1 3/4"	1/4"
S7	1		2 9/16" x 6" x 3 5/8" x 5 7/8"	1/4"
S8	1		1 5/32" x 7 1/2" x 2 1/2" x 7 3/8"	1/4"
S9	1		6 1/16" x 6 3/16" x 1 3/32"	1/4"
S10	1		1 7/8" x 9 7/8" x 3 5/8" x 9 11/16"	1/4"
S11	1		8 1/2" x 8 3/4" x 1 13/16"	1/4"

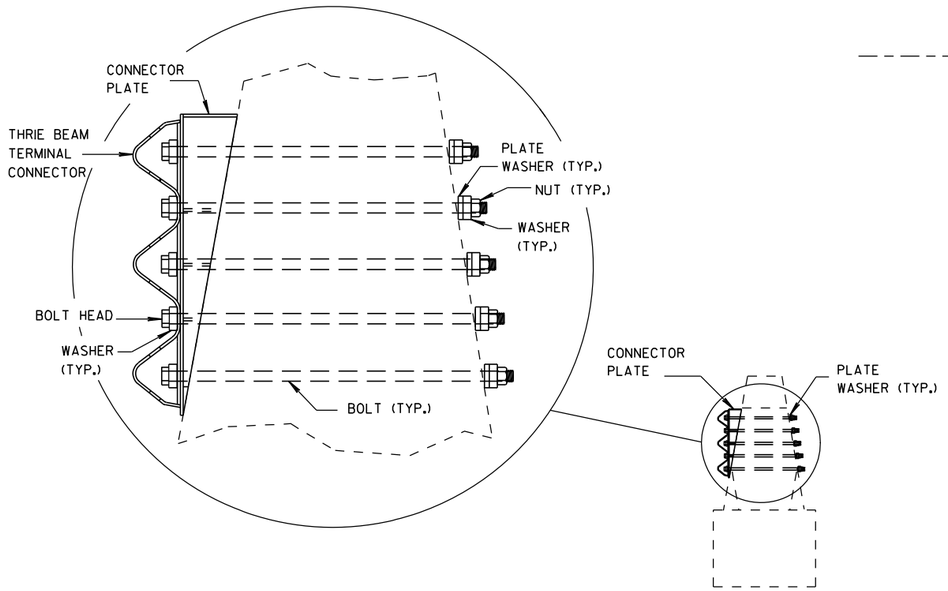
STEEL THRIE BEAM STRUCTURE APPROACH

STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTOR PLATE DETAIL

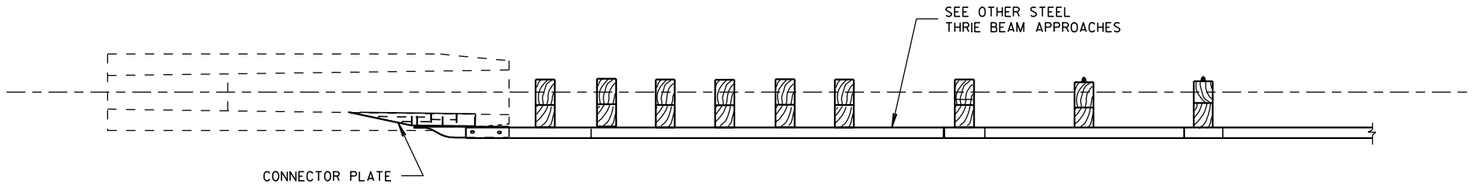
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
8/31/2012 DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER
FHWA

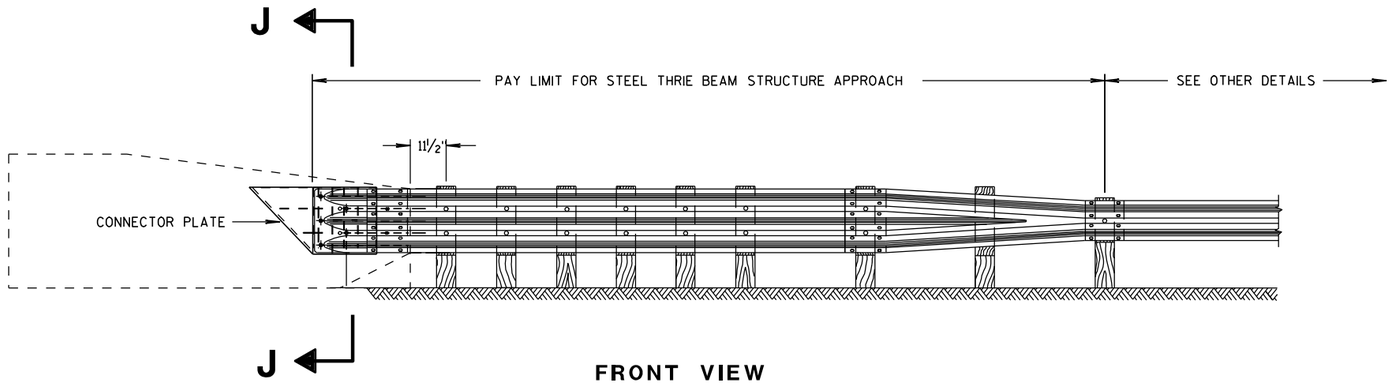
6
S.D.D. 14 B 20-11g



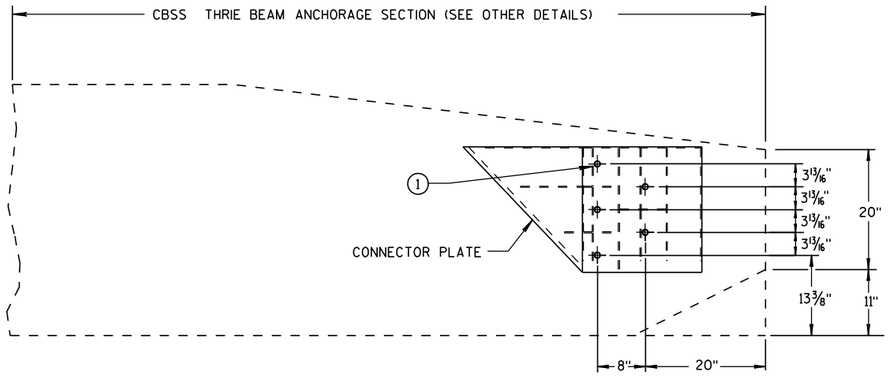
SECTION J-J



PLAN VIEW



FRONT VIEW



CONNECTOR PLATE LOCATION

GENERAL NOTES

CONSTRUCT PER STANDARD SPECIFICATION 614.

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

(1) 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 TERMINAL CONNECTOR. 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.

STEEL THRIE BEAM STRUCTURE APPROACH

STEEL THRIE BEAM STRUCTURE APPROACH, SINGLE SLOPE ATTACHMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8/31/2012
DATE

/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER

274

FHWA

6

S.D.D. 14 B 20-11h

BILL OF MATERIALS

NOTE NO.	QTY.	DESCRIPTION
(1)	4	WOOD BREAKAWAY TERMINAL POST: 5½" X 7½" X 3'-9"
(2)	**	STEEL TUBE: OPTION 1 - QUANITY OF 4 TS 8" X 6" X 0.188", 4'-6" LONG OR OPTION 2 - QUANITY OF 2 TS 8" X 6" X 0.188", 6'-0" AND 2 TS 8" X 6" X 0.188", 4'-6" LONG
(3)	2	SOIL PLATE: 2'-0" X 1'-6" X ¼" **
(4)	4	WOOD BREAKAWAY CRT POST: 6" X 8" X 6'-0"
(5)	6	WOOD OFFSET BLOCKS: 6' X 8" X 1'-2"
(6)	1	PIPE SLEEVE: 2" X 5 ½" STANDARD PIPE
(7)	1	BEARING PLATE
(8)	1	BCT CABLE ASSEMBLY
(9)	1	CABLE ANCHOR BOX
(10)	1	STRUT & YOKE
(11)	1	STEEL PLATE BEAM, END PANEL 12 GA. 13'-6½" LONG FOR SKT-350, ET-2000 AND ET-2000 PLUS
(12)	3	STEEL PLATE BEAM: 12 GA. 13'-6½"
(13)	1	ET-2000/ET-2000 PLUS GUARDRAIL EXTRUDER OR SKT-350 IMPACT HEAD: AS FURNISHED BY MANUFACTURER
(14)	1	REFLECTIVE SHEETING TYPE H: 18" X 18"
(15)	1	E.A.T. MARKER POST

GENERAL NOTES

FOLLOW MANUFACTURE'S BOLTING RECOMMENDATIONS. IF NONE ARE AVAILABLE, INSTALL ⅝" ϕ X 1'-6" BUTTON HEAD BOLTS AT ALL POSTS EXCEPT FOR POST 1.

(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) THE 13 SLOT FIRST RAIL PANEL MAY BE USED IN LIEU OF THE 3 SLOT RAIL PANEL ON SKT-350 ONLY.

(D) THE TOP OF THE STEEL TUBE ON POSTS 1 THROUGH 4 SHALL NOT BE MORE THAN 3" ABOVE THE FINISH GROUND ELEVATION.

(E) THE CENTER OF THE UPPER 3½" DIAMETER HOLE ON POST 5 THROUGH 8 SHALL BE ¾" ABOVE THE FINISHED GROUND LINE.

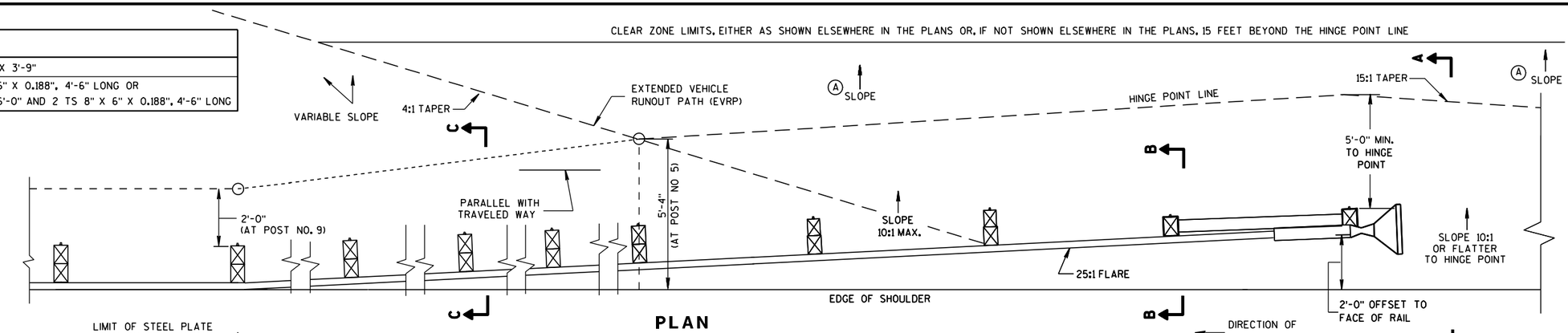
(F) SHEETING IS ATTACHED TO 0.040 ALUMINUM SHEET AND ATTACHED TO E.A.T. HEAD USING 4 STAINLESS STEEL SELF-TAPPING SCREWS. ONE SCREW PER CORNER OF E.A.T.

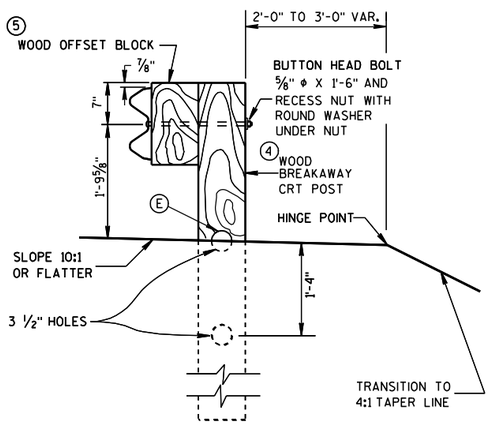
STEEL POSTS SHALL NOT BE ALLOWED FOR USE WITH ENERGY ABSORBING TERMINALS.

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

* DO NOT ATTACH BLOCKOUTS TO POSTS 1 AND 2.

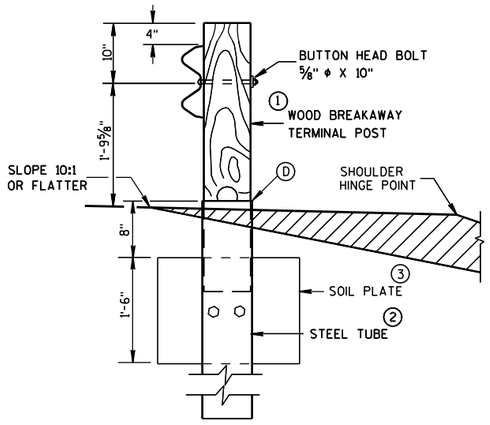
** SDD SHOWS 4 - 54 INCH STEEL TUBES WITH SOIL PLATES INSTALLED ON POST 1 AND POST 2. POST 3 AND 4 DO NOT NEED SOIL PLATES. AN ALTERNATIVE INSTALLATION WOULD CONSIST OF 2 - 72 INCH STEEL TUBES ON POST 1 AND POST 2 AND 54 INCH SOIL TUBES ON POSTS 3 AND 4. THE ALTERNATIVE INSTALLATION DOES NOT REQUIRE SOIL PLATES.





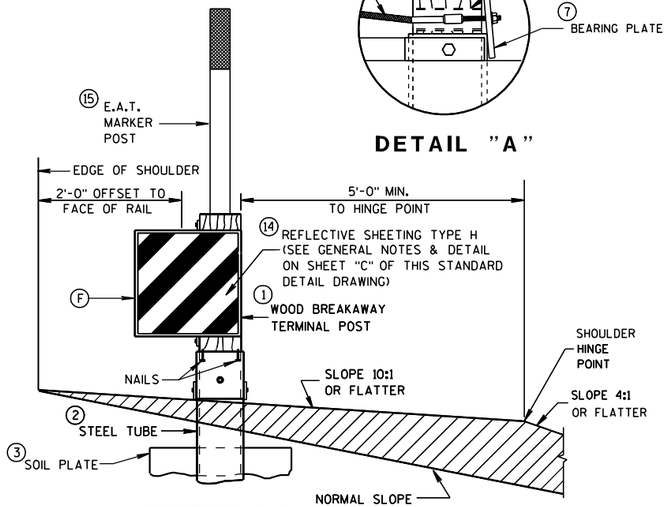
SECTION C-C

TYPICAL AT POST NOS. 6, 8



SECTION B-B

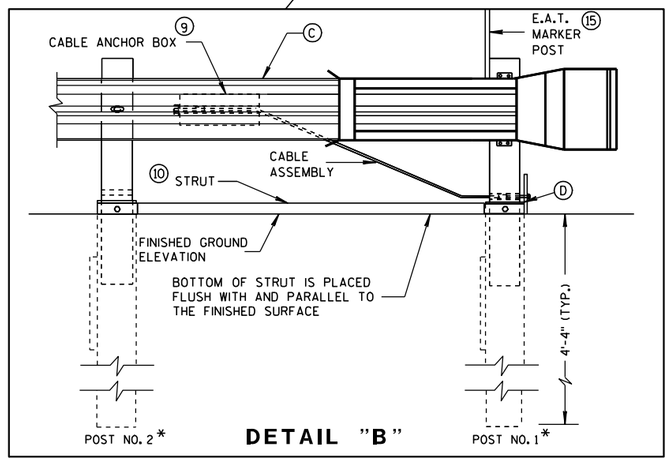
TYPICAL AT POST NO. 2*



DETAIL "A"

SECTION A-A

TYPICAL AT POST NO. 1*

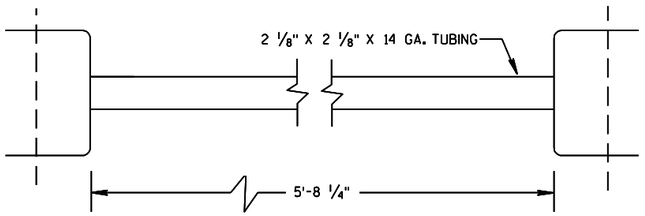


DETAIL "B"

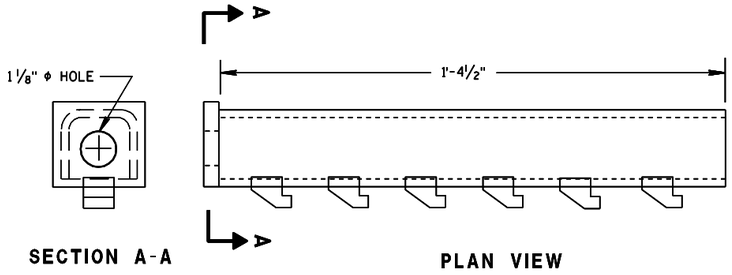
STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

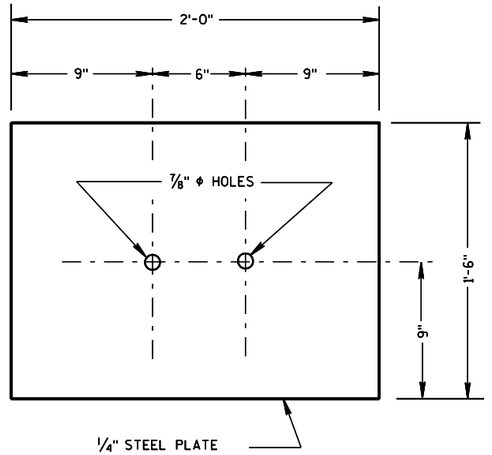
6
S.D.D. 14 B 24-7a



⑩ STRUT DETAIL (SKT-350)

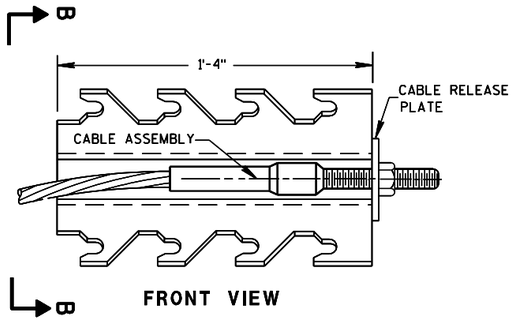


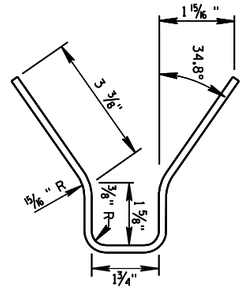
⑨ CABLE ANCHOR BOX (ET-2000/ET-2000 PLUS)



③ SOIL PLATE

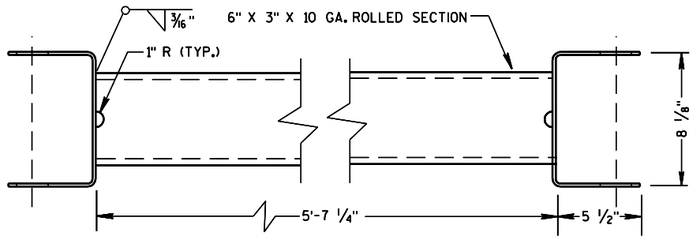
(SKT-350, ET-2000/ET-2000 PLUS)





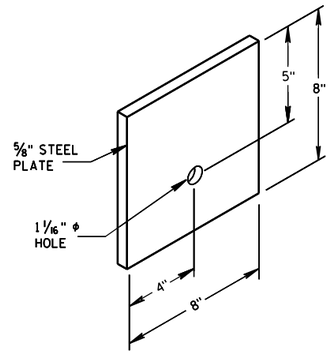
⑨ CABLE ANCHOR BOX (SKT-350)

(SKT-350)



⑩ STRUT DETAIL (ET-2000/ET-2000 PLUS)

(ET-2000/ET-2000 PLUS)



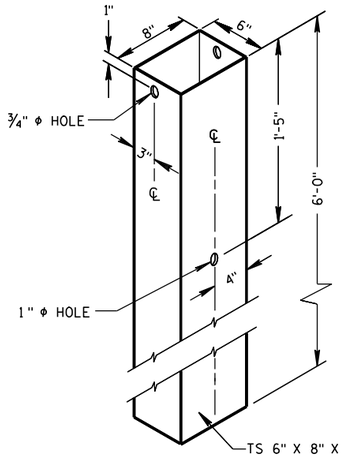
⑦ STEEL BEARING PLATE

(SKT-350, ET-2000/ET-2000 PLUS)

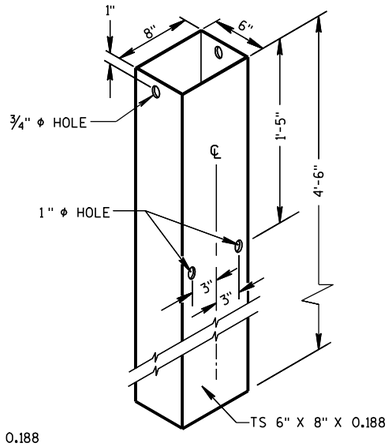
STEEL PLATE BEAM GUARD
ENERGY ABSORBING TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

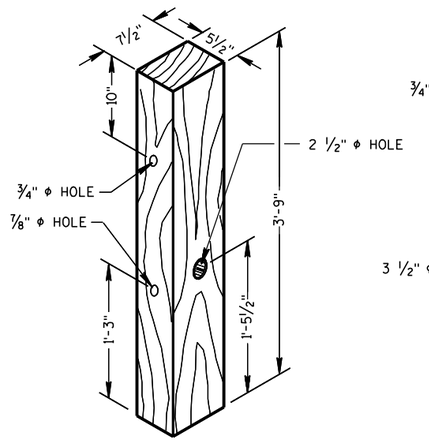
6
S.D.D. 14 B 24-7b



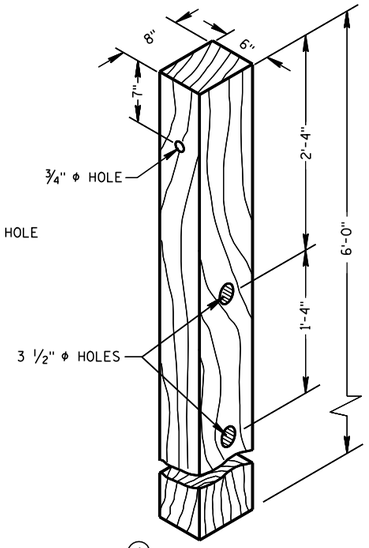
② 72" STEEL TUBE
(POSTS NO. 1-4



② 54" STEEL TUBE
(POSTS NO. 1-4



① TERMINAL POST
(POSTS NO. 1-4



④ CRT POST
(POSTS NO'S 5-8

WOOD BREAKAWAY POSTS

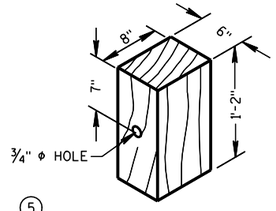
GENERAL NOTES

STEEL PLATE BEAM GUARD, ENERGY ABSORBING TERMINAL SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE EACH, WHICH SHALL INCLUDE HARDWARE, STEEL PLATE BEAM GUARD, POSTS, REFLECTIVE SHEETING AND INSTALLATION AS SHOWN.

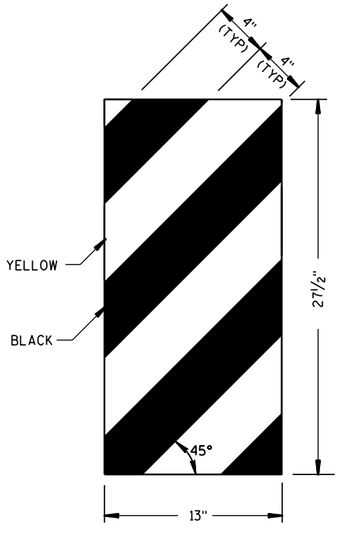
WHEN ROCK IS ENCOUNTERED DURING EXCAVATION, A 12 INCH DIA. POST HOLE EXTENDING 20 INCHES DEEP INTO THE ROCK MAY BE USED IF APPROVED BY THE ENGINEER. GRANULAR MATERIAL SHALL BE PLACED IN THE BOTTOM OF THE HOLE APPROXIMATELY 2 ½" INCHES DEEP TO PROVIDE DRAINAGE. THE SOIL TUBES SHALL BE FIELD CUT TO LENGTH, PLACED IN THE HOLE AND BACKFILLED WITH ADEQUATELY COMPACTED MATERIAL EXCAVATED FROM THE HOLE.

SEE APPROVED PRODUCTS LIST FOR ACCEPTABLE E. A. T. MARKER POST.

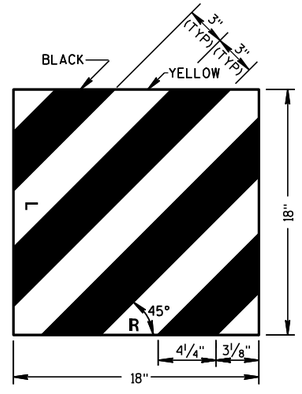
(G) ½" DIA. X 3" LAG BOLT WITH WASHER.



⑤ WOOD OFFSET BLOCK
REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2

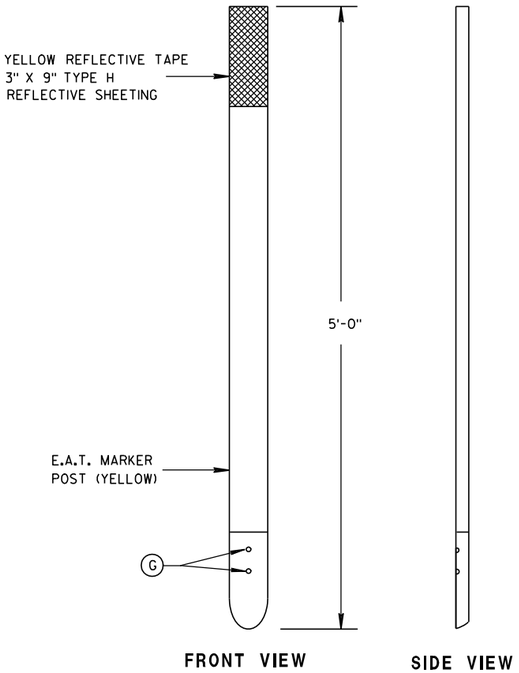


ET-2000 PLUS ONLY



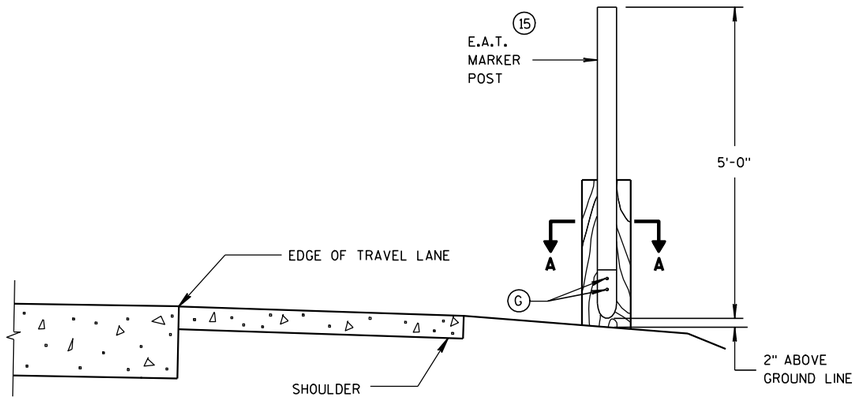
ET-2000 AND SKT-350

⑭ REFLECTIVE SHEETING DETAILS

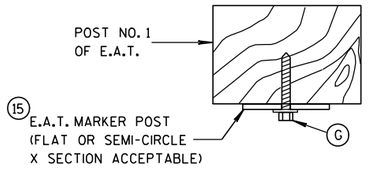


FRONT VIEW SIDE VIEW

⑮ E.A.T. MARKER POST



TYPICAL INSTALLATION OF E.A.T.
MARKER POST BACKSIDE OF POST NO. 1
(E.A.T. AND RAIL REMOVED FOR CLARITY)



SECTION A-A

STEEL PLATE BEAM GUARD
ENERGY ABSORBING TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

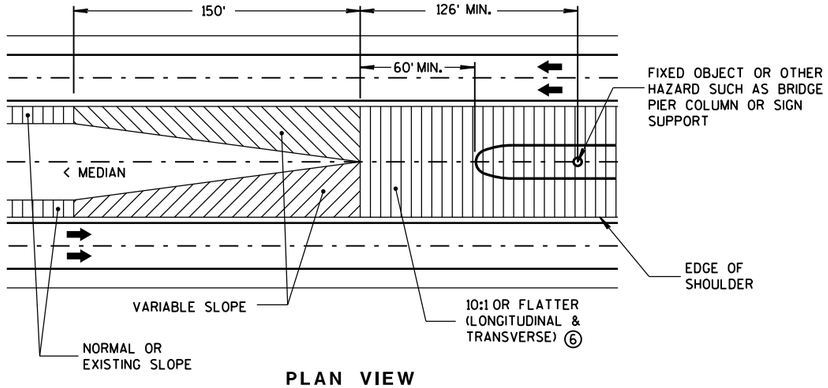
APPROVED
4-12-10 DATE
/S/ Jerry H. [illegible] ROADWAY STANDARDS ENGINEER
277
FHWA

6

S.D.D. 14 B 24-7c

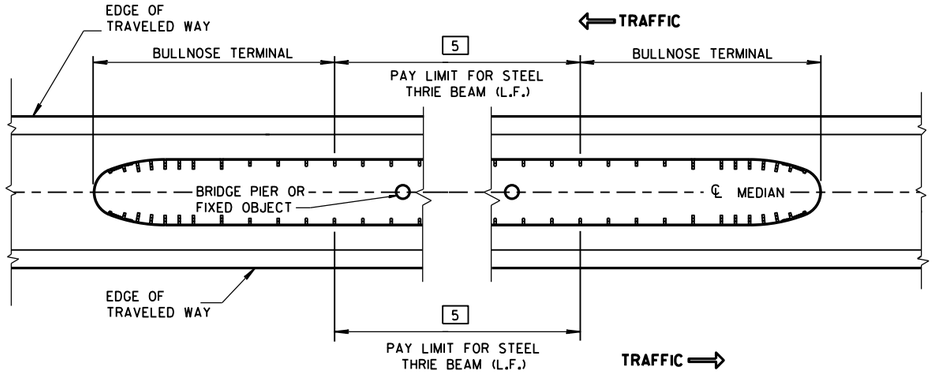
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S.D.D. 14 B 24-7c

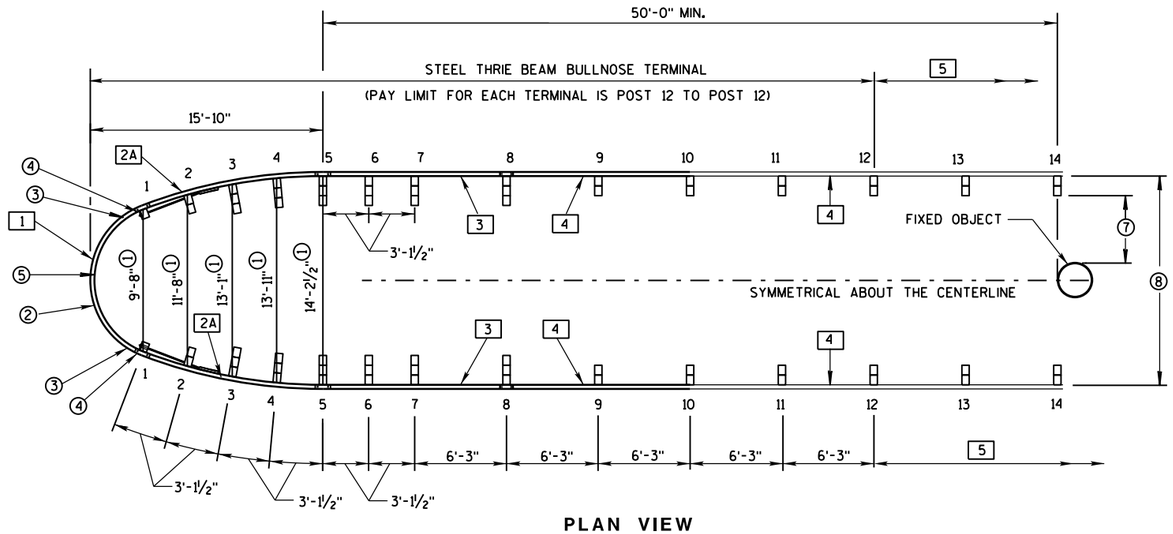


PLAN VIEW

GRADING AT BULLNOSE
(ALL INSTALLATIONS)

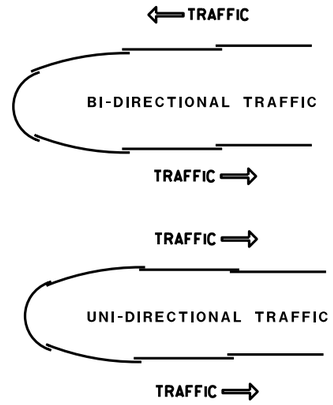


MEDIAN HAZARD PROTECTION PAY LIMITS



PLAN VIEW

TYPICAL BULLNOSE LAYOUT



LAPPING DETAIL
(ALL INSTALLATIONS)

GENERAL NOTES

SEE STANDARD DETAIL DRAWINGS 14 B 26a-e.

PUNCHING, DRILLING, CUTTING OR WELDING IS NOT PERMITTED ON ANY GALVANIZED THRIE BEAM ACCESSORY OR TERMINAL ACCESSORY.

OTHER ANCHOR CABLE ASSEMBLIES HAVING 40,000 LBS. MIN. BREAKING STRENGTH MAY BE USED.

FOR POSTS 2 THROUGH 14, IF POST CANNOT BE INSTALLED AT SPECIFIED LOCATION 1 EXTRA STANDARD WOOD BLOCK MAY BE ADDED.

THE USE OF STEEL POSTS ON THE BULLNOSE IS NOT ALLOWED.

BOLTS AND ALL NECESSARY HARDWARE SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A 153.

ALL THRIE BEAM SHALL BE 12-GAUGE.

[1] SLOTTED THRIE BEAM RAIL NO. 1. (POST 1 TO POST 1)

[2A] SLOTTED THRIE BEAM RAIL NO. 2A. (POST 1 TO POST 5)

[3] SLOTTED THRIE BEAM RAIL NO. 3. (POST 5 TO POST 8)

[4] UNBENT STANDARD THRIE-BEAM RAIL NO.4. (POST 8 TO POST 10 & POST 10 TO POST 12)

[5] BEYOND POST 12: CONSTRUCT STEEL THRIE BEAM - USE UNBENT STANDARD THRIE BEAM RAIL NO. 5.

① DIMENSIONS ARE FROM BACK OF RAIL TO BACK OF RAIL WHERE RAIL IS BOLTED TO POST OR BLOCK.

② U-BOLT CABLE CLIPS (3 PER CABLE) SPACED OUT ON NOSE, TO HOLD CABLE TO BACKSIDE OF THE RAIL.

③ NOSE CABLE W/SWAGGED END BUTTONS.

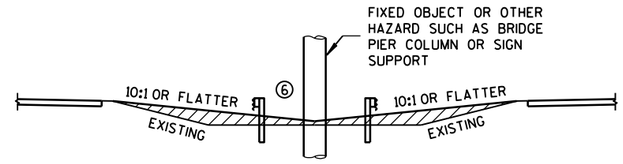
④ NOSE CABLE ANCHOR PLATE (BACKSIDE OF SPLICE).

⑤ THE SLACK IN THE NOSE CABLES SHALL BE EVENLY DISTRIBUTED BETWEEN THE CABLE CLIP FASTENERS AND POST NO. 1 ON EITHER SIDE OF THE NOSE.

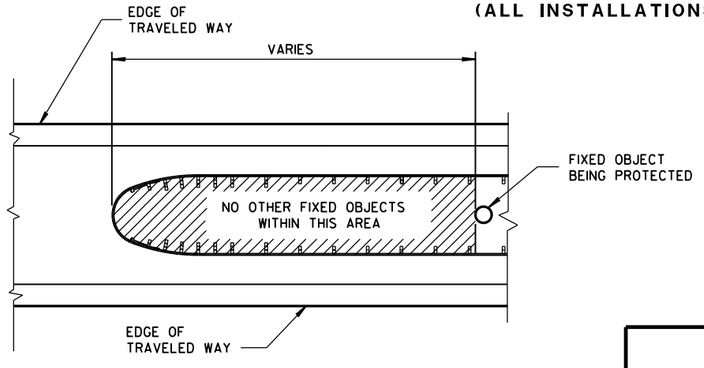
⑥ PROVIDE SUITABLE DRAINAGE WHEN MEDIAN GRADING IMPEDES NORMAL FLOW.

⑦ 2'-6" MINIMUM LATERAL DISTANCE BETWEEN BACK OF POST AND FACE OF FIXED OBJECT.

⑧ MAXIMUM WIDTH OF SYSTEM IS 14'-2½" MEASURED FROM BACK OF RAIL TO BACK OF RAIL WHERE RAIL IS BOLTED TO A POST OR BLOCK.



MEDIAN GRADING SECTION
(ALL INSTALLATIONS)



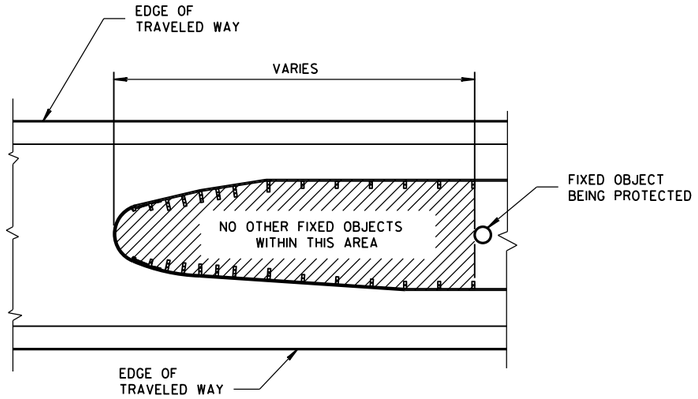
HAZARD FREE AREA INSIDE BULLNOSE

STEEL THRIE BEAM BULLNOSE TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

S.D.D. 14 B 26-2a



HAZARD FREE
AREA INSIDE BULLNOSE

GENERAL NOTES

SEE STANDARD DETAIL DRAWINGS 14 B 26a-e.

FOR POSTS 2 THROUGH 14, IF POST CANNOT BE INSTALLED AT SPECIFIED LOCATION 1 EXTRA STANDARD WOOD BLOCK MAY BE ADDED.

[1] SLOTTED THRIE BEAM RAIL NO. 1. (POST 1 TO POST 1)

[2A] SLOTTED THRIE BEAM RAIL NO. 2A, (POST 1 TO POST 5)

[2B] SLOTTED THRIE BEAM RAIL NO. 2B, (POST 1 TO POST 5)

[3] SLOTTED THRIE BEAM RAIL NO. 3. (POST 5 TO POST 8)

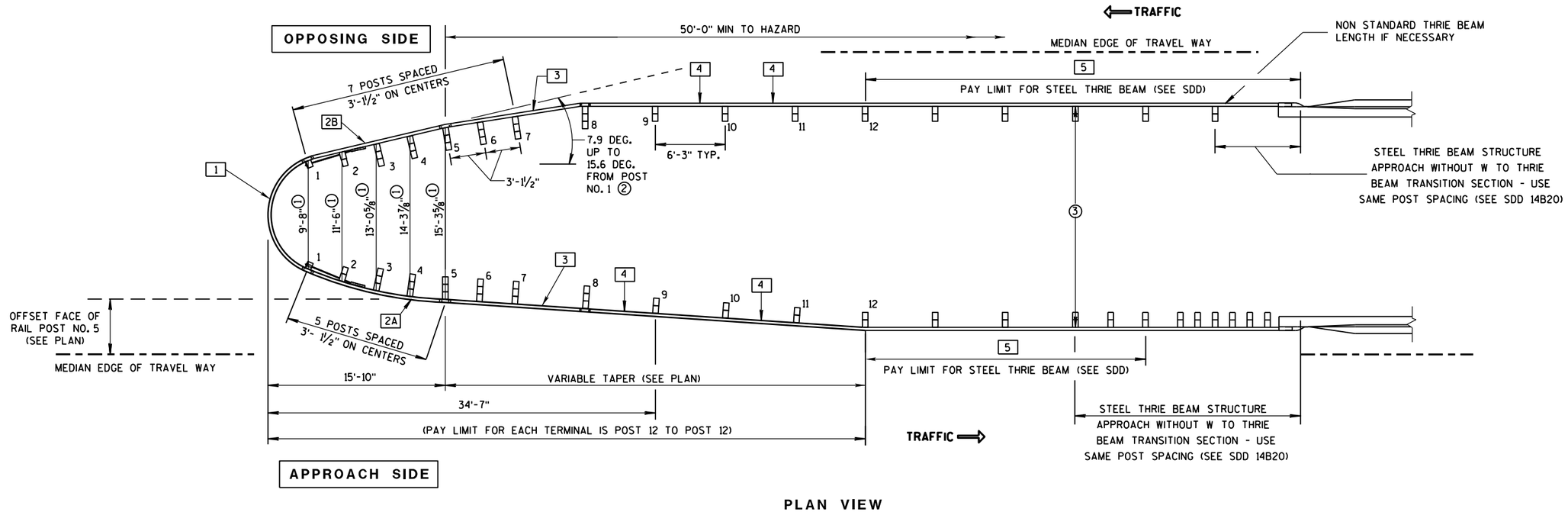
[4] UNBENT STANDARD THRIE-BEAM RAIL NO. 4, (POST 8 TO POST 10 & POST 10 TO POST 12)

[5] BEYOND POST 12: CONSTRUCT STEEL THRIE BEAM - USE UNBENT STANDARD THRIE BEAM RAIL NO. 5.

① DIMENSIONS ARE FROM BACK OF RAIL TO BACK OF RAIL WHERE RAIL IS BOLTED TO POST.

② TAPER BEGINNING AT POST NO. 1 MUST CONTINUE TO POST NO. 5. PAST POST NO. 5 TAPER MAY END OR BE EXTENDED UP TO 15.6 DEGREES TO FIT VARIABLE MEDIAN WIDTHS. (SEE PLAN)

③ FOR MEDIANS WIDER THAN 14'-2½" MEASURED FROM BACK OF RAIL TO BACK OF RAIL WHERE RAIL IS BOLTED TO A POST OR BLOCK.



PLAN VIEW

WIDENED BULLNOSE DESIGN

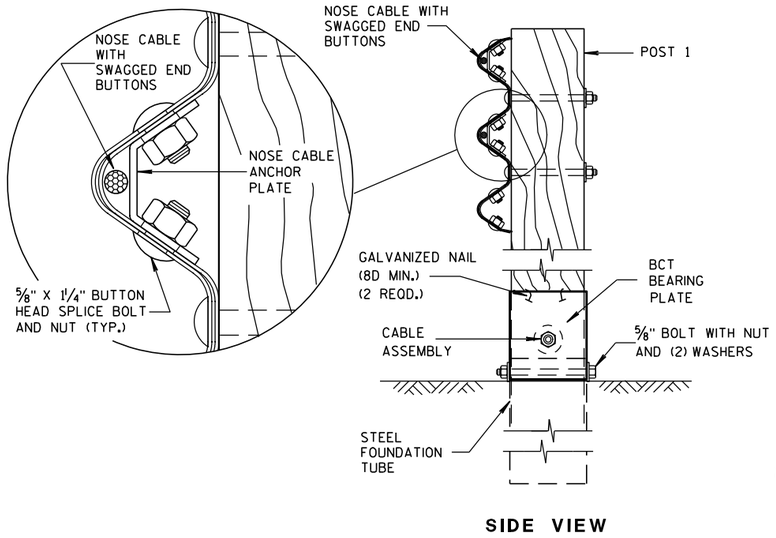
(INSTALLATION AT TWIN BRIDGES WITH BI-DIRECTIONAL TRAFFIC SHOWN)

STEEL THRIE BEAM
BULLNOSE TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

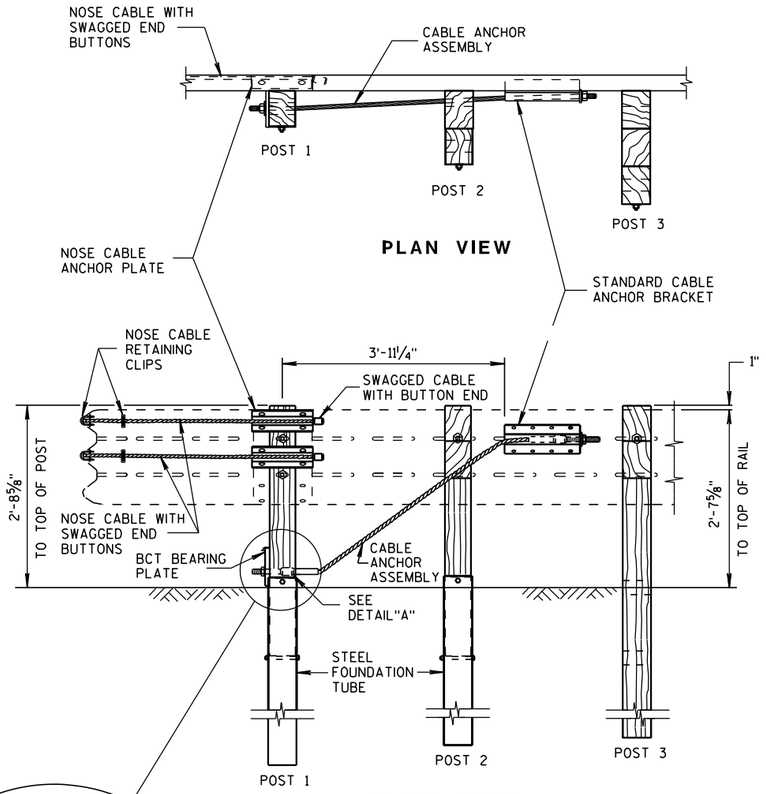
6

S.D.D. 14 B 26-2b



SIDE VIEW

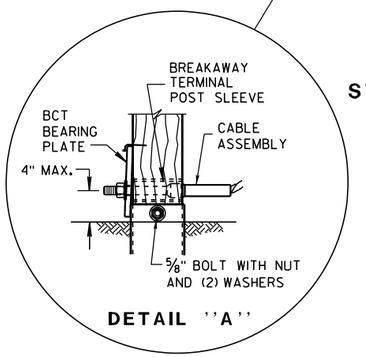
NOSE CABLE ASSEMBLY AT POST NO. 1



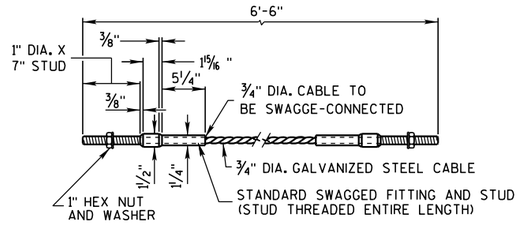
PLAN VIEW

FRONT VIEW

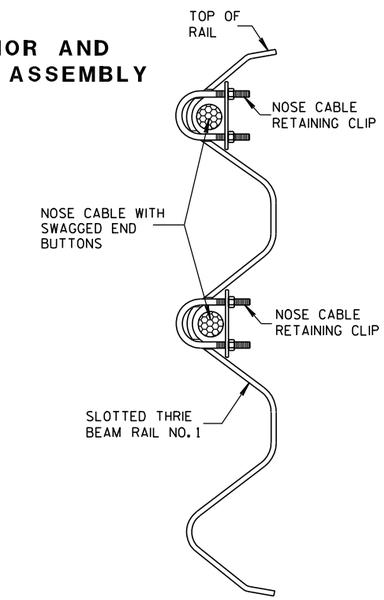
NOSE CABLE ANCHOR AND STANDARD BRACKET ASSEMBLY



DETAIL ''A''



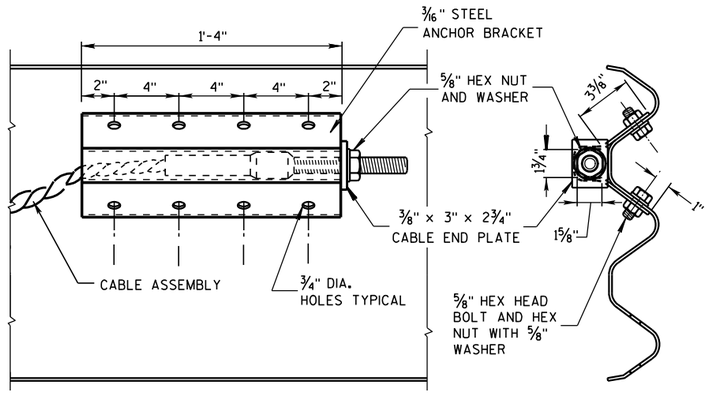
DETAILS OF CABLE ANCHOR ASSEMBLY



PLACEMENT OF NOSE CABLE RETAINING CLIP

GENERAL NOTES

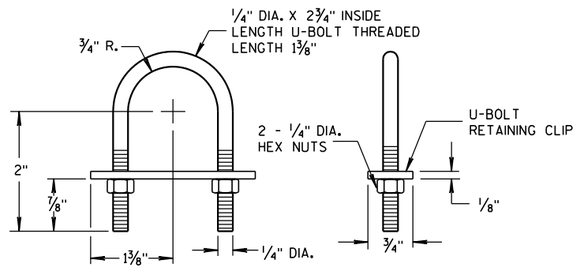
SEE STANDARD DETAIL DRAWINGS 14 B 26a-e.



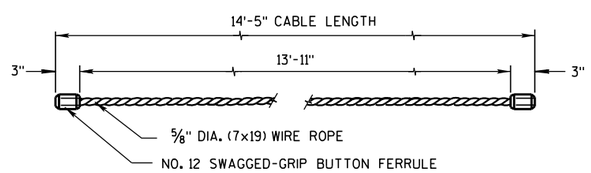
FRONT VIEW

END VIEW

DETAILS OF CABLE ANCHOR BRACKET

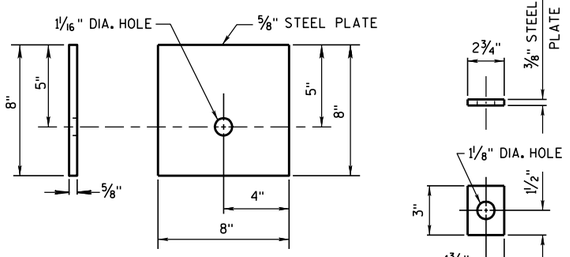


NOSE CABLE RETAINING CLIP

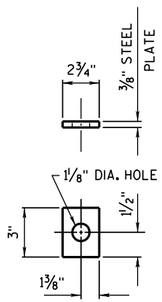


NOSE CABLE WITH SWAGGED END BUTTONS

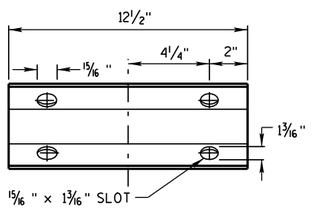
TO PULL OFF SWAGGED GRIP BUTTON FERRULE FROM WIRE ROPE REQUIRES A FORCE EQUAL TO 98% OF THE WIRE ROPE'S BREAKING STRENGHT.



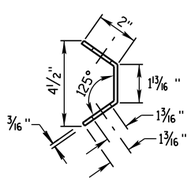
BCT BEARING PLATE



CABLE END PLATE



ELEVATION VIEW



END VIEW

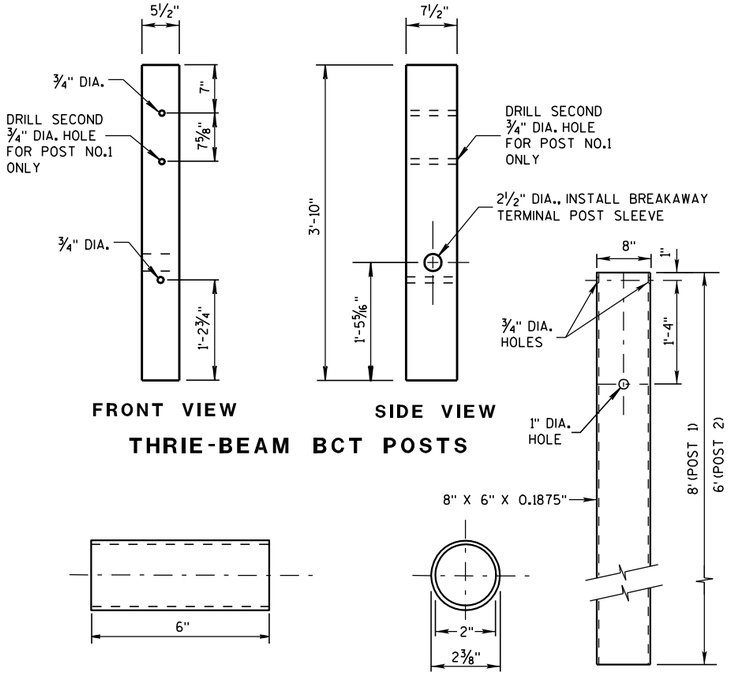
NOSE CABLE ANCHOR PLATE

NOTE: 12 1/2" x 5 13/16" x 3/16" STEEL PLATE (A306)

STEEL THRIE BEAM BULLNOSE TERMINAL
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

6

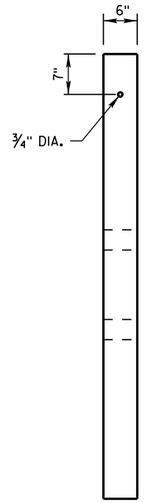
S.D.D. 14 B 26-2c

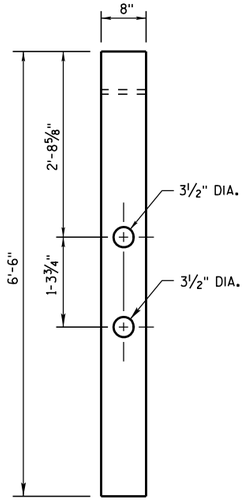


THRIE-BEAM BCT POSTS

BREAKAWAY TERMINAL POST SLEEVE

STEEL FOUNDATION TUBE

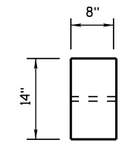


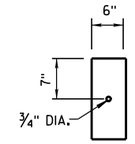


THRIE-BEAM CRT WOOD POSTS

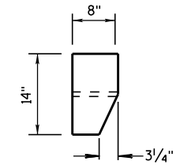
GENERAL NOTES

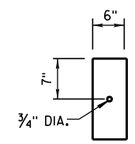
SEE STANDARD DETAIL DRAWINGS 14 B 26a-e.



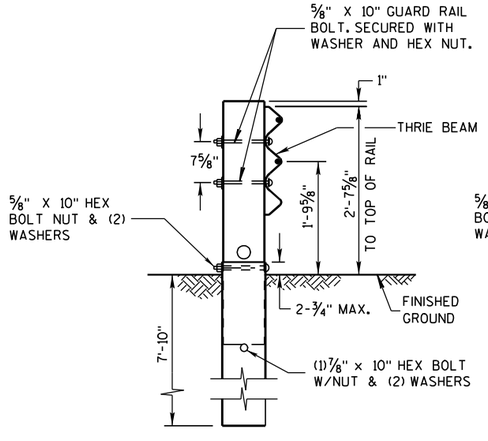


STANDARD WOOD BLOCK



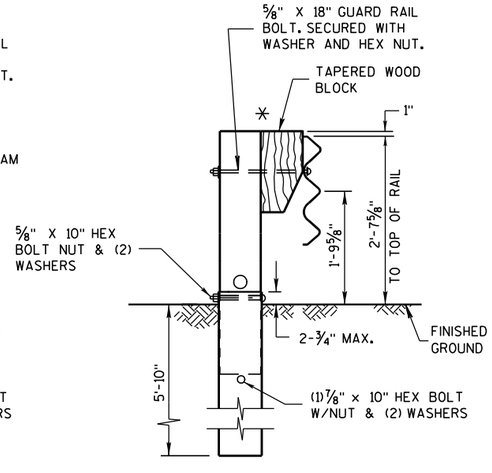


TAPERED WOOD BLOCK



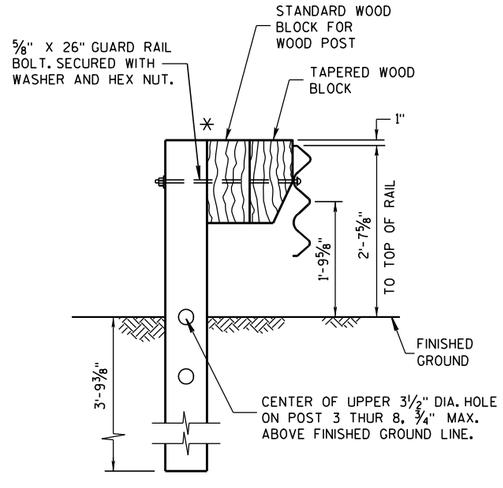
THRIE-BEAM BCT POST
(WITH 8'-0" FOUNDATION TUBE)

POST NO. 1



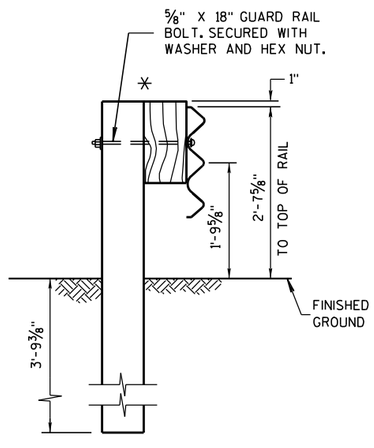
THRIE-BEAM BCT POST
(WITH 6'-0" FOUNDATION TUBE AND 1'-2" TAPERED BLOCK)

POST NO. 2



THRIE-BEAM CRT POST
(6'-6" LONG POST WITH 1'-2" BLOCK AND 1'-2" TAPERED BLOCK)

POST NO. 3,4,5,6,7, & 8



THRIE-BEAM POST
(6'-6" LONG POST WITH 1'-2" BLOCK)

POST NO. 9,10,11,& 12
(ALSO USE FOR STEEL THRIE BEAM BEYOND POST 12)

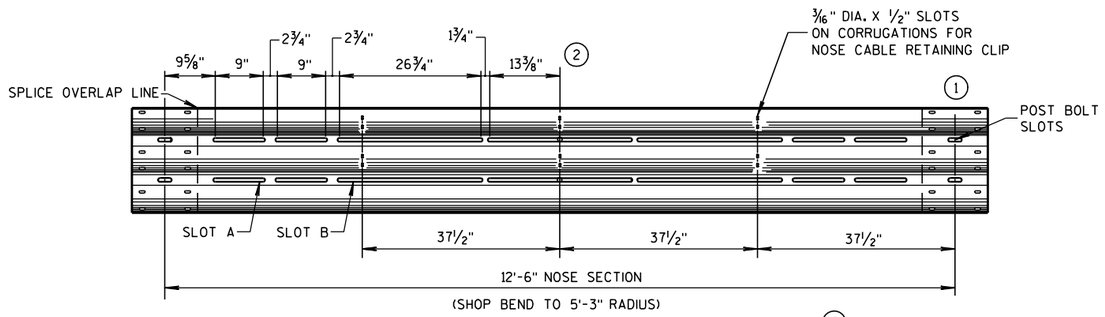
✳ IF NEEDED DUE TO AN UNDERGROUND OBSTACLE ADD 1 ADDITIONAL STANDARD BLOCKOUT TO POST.

STEEL THRIE BEAM BULLNOSE TERMINAL

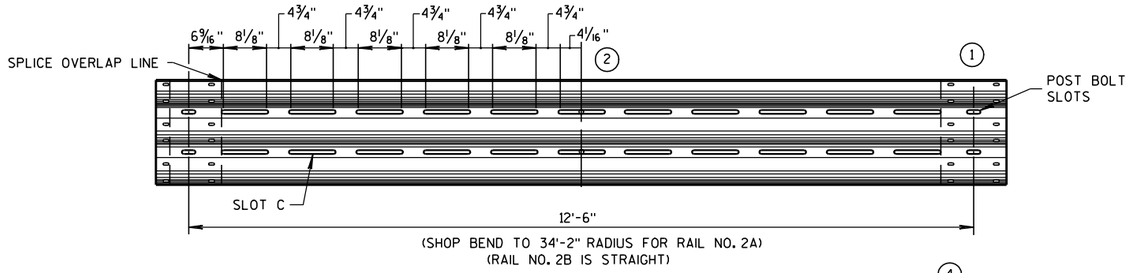
STATE OF WISCONSIN
DEPARTMENT OF TRANSPO...

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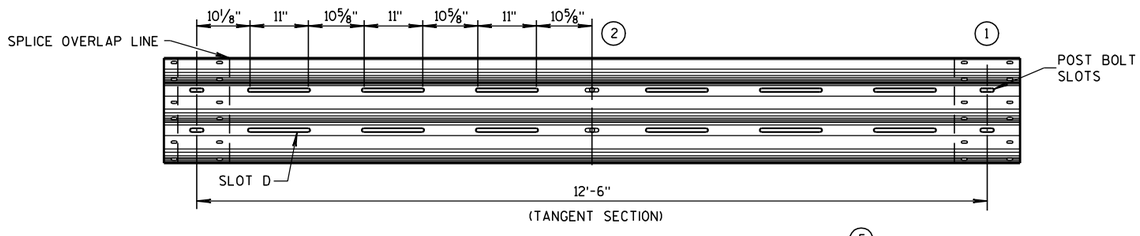
S.D.D. 14 B 26-2d



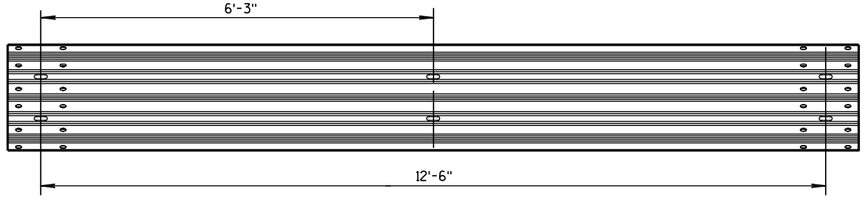
SLOTTED THRIE BEAM RAIL NO. 1 (3)



SLOTTED THRIE BEAM RAILS NO. 2A AND NO. 2B (4)



SLOTTED THRIE BEAM RAIL NO. 3 (5)



UNBENT STANDARD THRIE BEAM RAIL NO. 4 AND NO. 5

GENERAL NOTES

SEE STANADRD DETAIL DRAWINGS 14 B 26a-e.

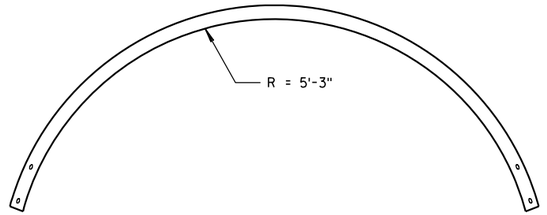
(1) SLOTTED THRIE BEAM RAIL DIMENSIONS SHOWN ARE BEFORE BENDING TO THE RADIUS SHOWN.

(2) SLOT SIZE AND SPACING SYMMETRIC.

(3) SLOTTED THRIE BEAM RAIL NO. 1, 12'-6", SHOP BEND TO R=5'-3".

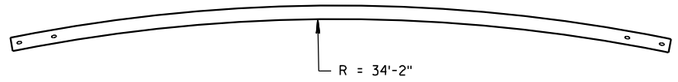
(4) SLOTTED THRIE BEAM RAIL NO. 2A, 12'-6", SHOP BEND TO R=34'-2".
SLOTTED THRIE BEAM RAIL NO. 2B, 12'-6", RAIL IS STRAIGHT.

(5) SLOTTED THRIE BEAM RAIL NO. 3, 12'-6", TANGENT.



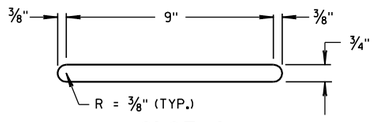
PLAN VIEW

SLOTTED THRIE BEAM RAIL NO. 1

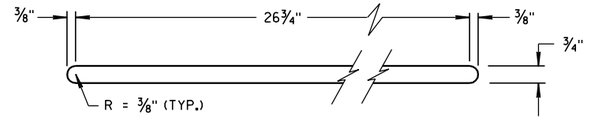


PLAN VIEW

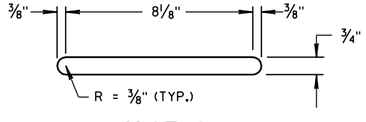
SLOTTED THRIE BEAM RAIL NO. 2A



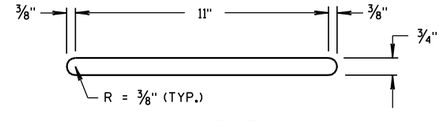
SLOT A



SLOT B



SLOT C



SLOT D

SLOT DETAILS

STEEL THRIE BEAM BULLNOSE TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

9-16-2010
DATE

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

FHWA

GENERAL NOTES

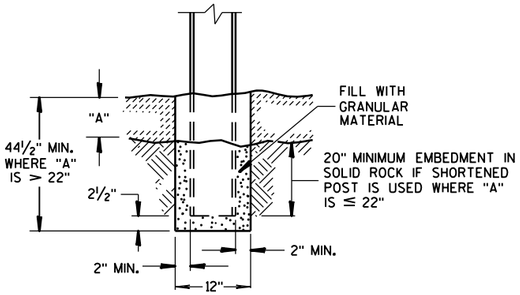
1. WOOD OR STEEL POSTS (w6X9 OR w6X8.5) MAY BE USED. DO NOT INTERMIX WOOD AND STEEL POSTS. INSTALL STEEL POSTS WITH HOLES ON APPROACHING TRAFFIC SIDE.

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

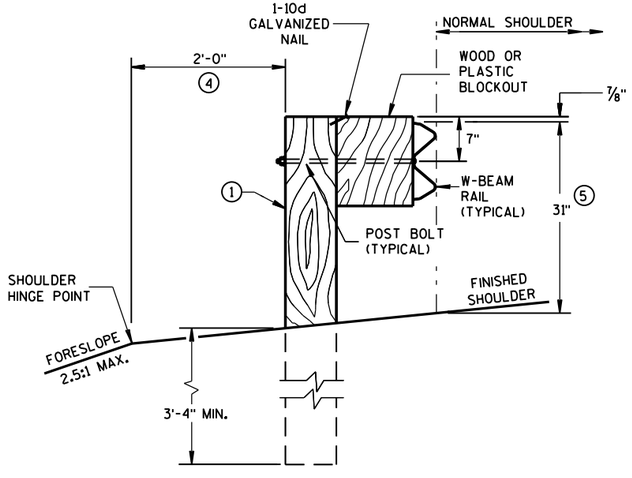
3. IF ROCK IS ENCOUNTERED DURING EXCAVATION, PROVIDE A HOLE 12 INCHES IN DIAMETER EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE APPROXIMATELY 2½ INCHES OF GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE. CUT THE POSTS THE TO LENGTH AMD INSTALL. BACKFILL WITH EXCAVATED MATERIAL AND COMPACT. BACKFILL IS TO BE FREE OF LARGE ROCKS.

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

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

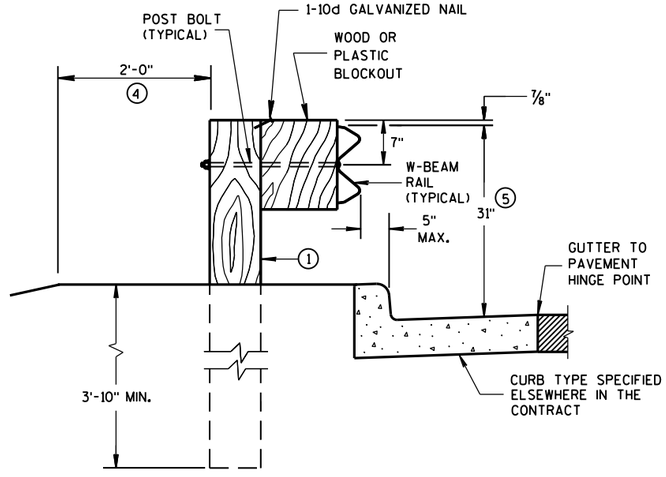


END VIEW
SETTING STEEL OR WOOD POST IN ROCK ③



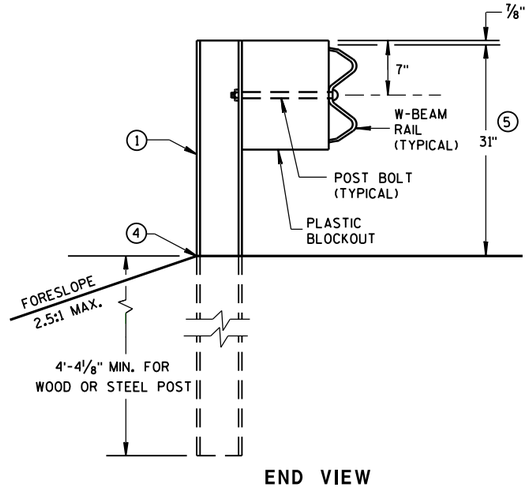
END VIEW

LOCATED ALONG A ROADWAY SHOULDER
STANDARD INSTALLATION



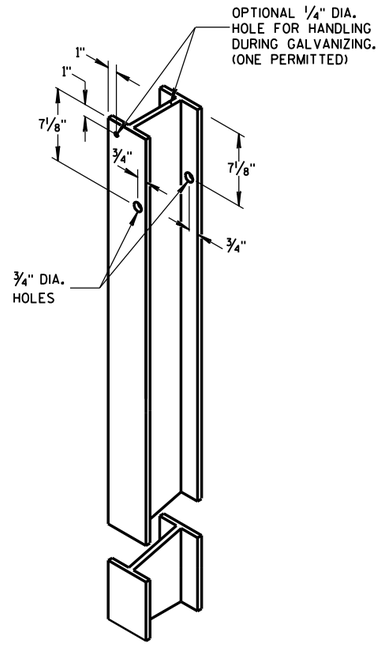
END VIEW

LOCATED ALONG A CURBED ROADWAY

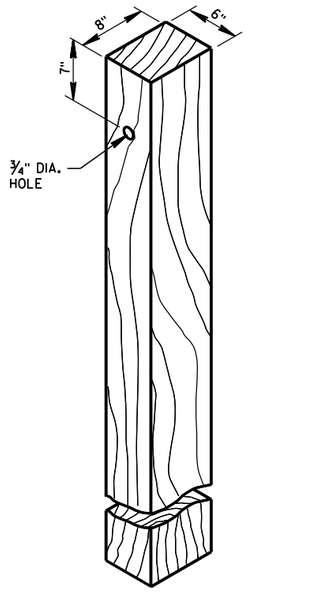


END VIEW

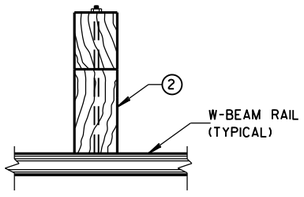
MGS LONGER POST AT HALFPOST SPACING W BEAM (K)



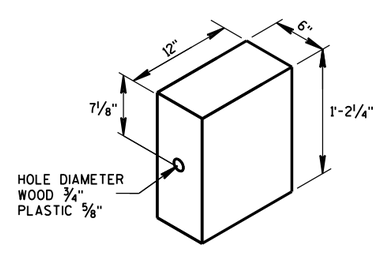
STEEL POST &
HOLE PUNCHING DETAIL
(w6X9) ①



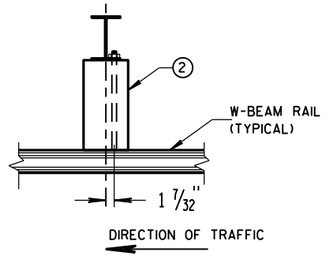
WOOD POST
(6" X 8") NOMINAL ①



PLAN VIEW
WOOD POST,
BLOCKOUT & BEAM



WOOD OR
PLASTIC BLOCKOUT ②

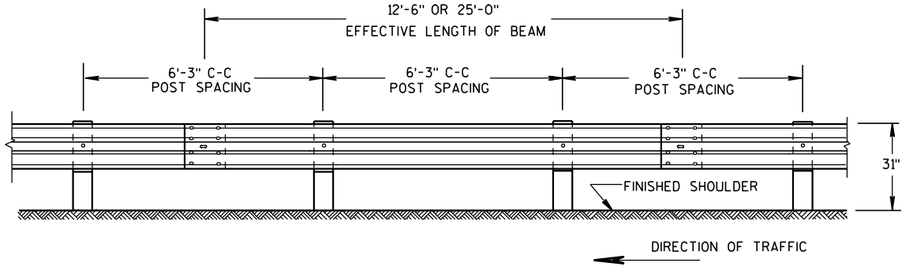


PLAN VIEW
STEEL POST,
PLASTIC BLOCKOUT & BEAM

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

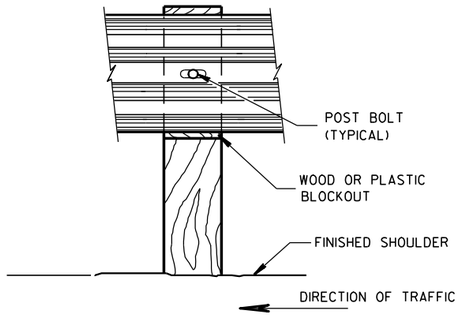
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DEPARTMENT OF TRANSPOI

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



FRONT VIEW

POST SPACING STANDARD INSTALLATION



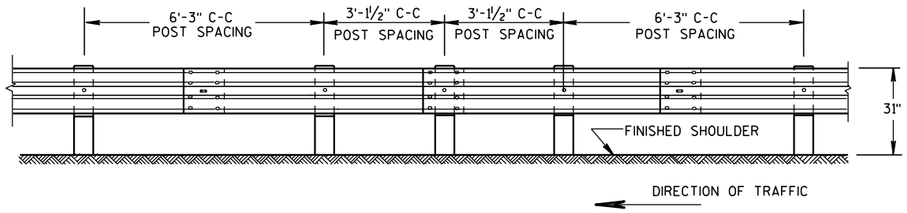
FRONT VIEW AT WOOD POST

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.

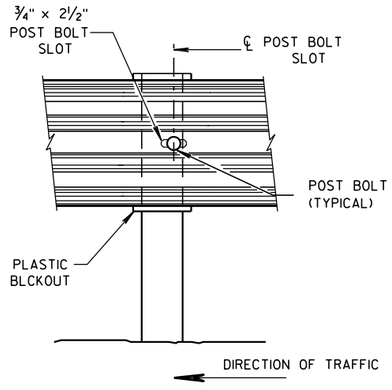
POST BOLTS ARE A 5/8" DIAMETER ASTM A307 GUARDRAIL BOLT. A POST BOLT REQUIRES 5/8" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT AND 5/8" DIAMETER F844 FLAT WASHER. POST BOLTS MAY BE LONGER IF MULTIPLE BLOCKOUTS ARE BEING USED.

GUARD RAIL SPLICE BOLTS ARE A 5/8" DIAMETER ASTM A307 GUARDRAIL HEAD BOLT. A GUARDRAIL SPLICE BOLT REQUIRES 5/8" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT.

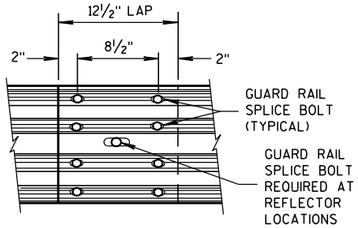


FRONT VIEW

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

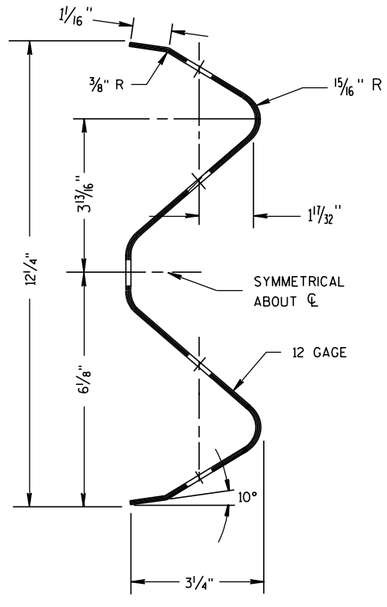


FRONT VIEW AT STEEL POST

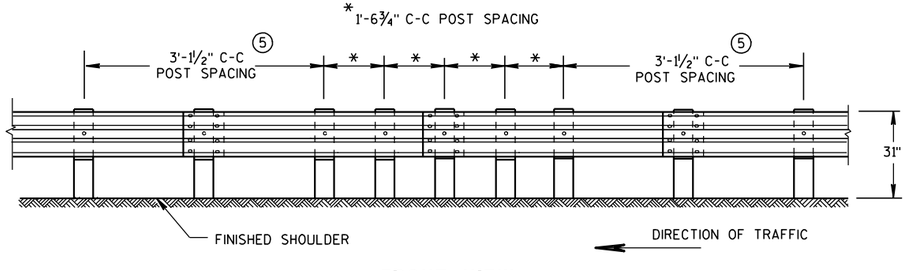


FRONT VIEW

MID-SPAN BEAM SPLICE

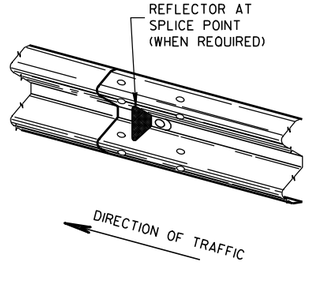


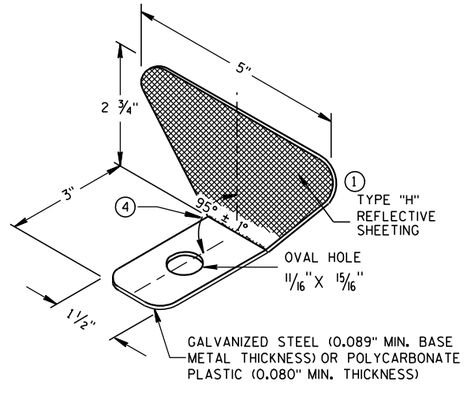
SECTION THRU W-BEAM RAIL



FRONT VIEW

QUARTER POST SPACING (QS)





ONE SIDED REFLECTOR DETAIL AND TYPICAL INSTALLATION ①

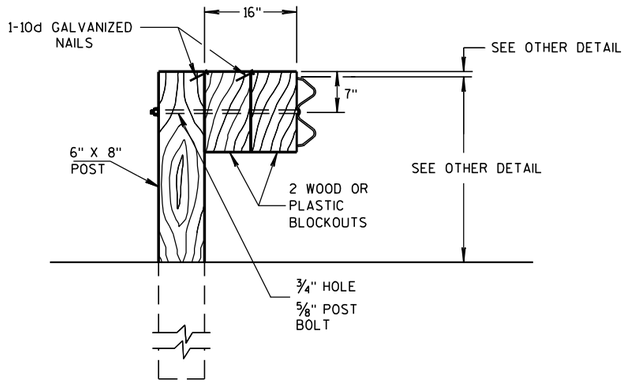
REFLECTOR SPACING ②

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

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

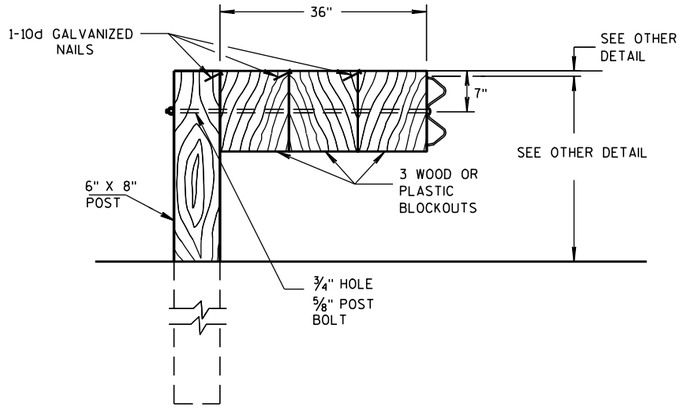
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6
S.D.D. 14 B 42-2b



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.

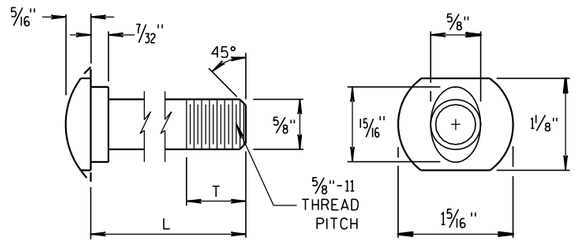


DETAIL FOR 36" BLOCKOUT DEPTH

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.

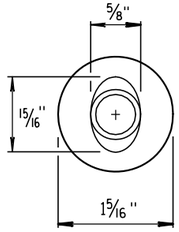
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.

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.

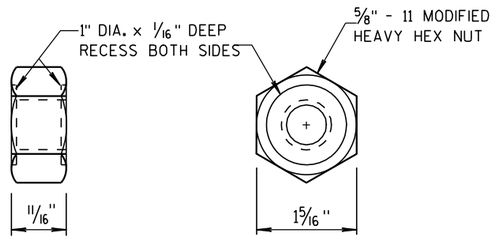


POST BOLT TABLE

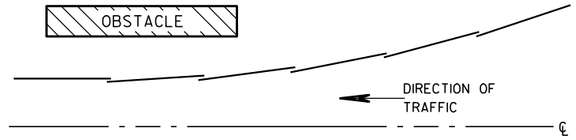
L	T (MIN.)
1 1/4"	1 1/8"
2"	1 3/4"
10"	4"
14"	4 1/16"
18"	4"
21"	4 1/16"
25"	4"



ALTERNATE BOLT HEAD

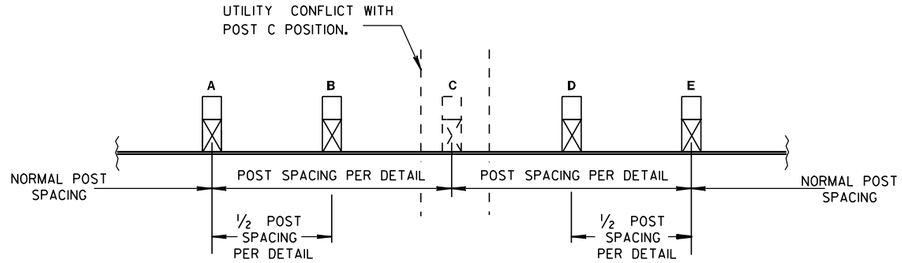


POST BOLT AND RECESS NUT

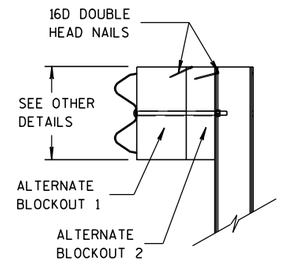


PLAN VIEW

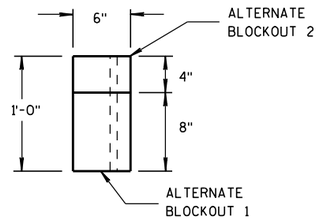
BEAM LAPPING DETAIL



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.

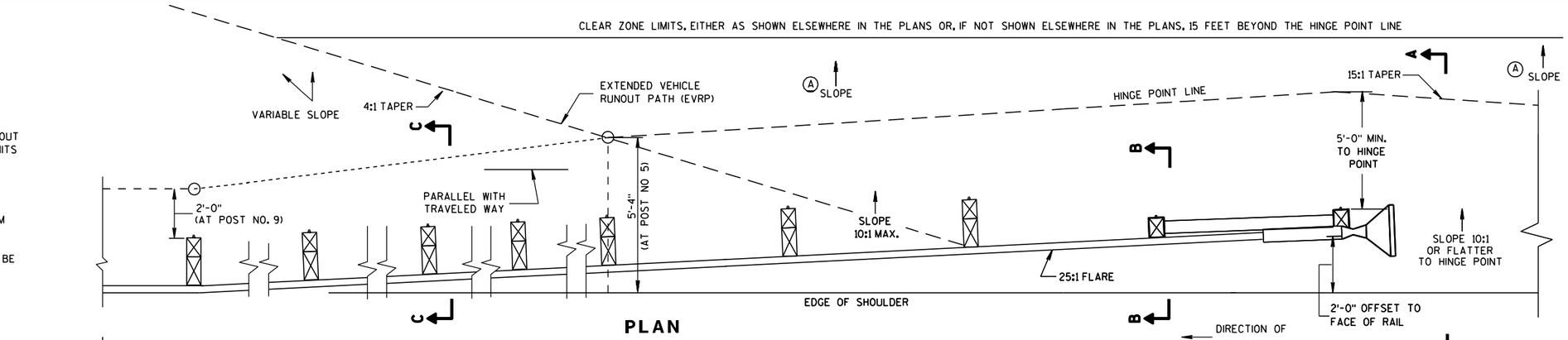
* DO NOT ATTACH BLOCKOUTS TO POSTS 1 AND 2.

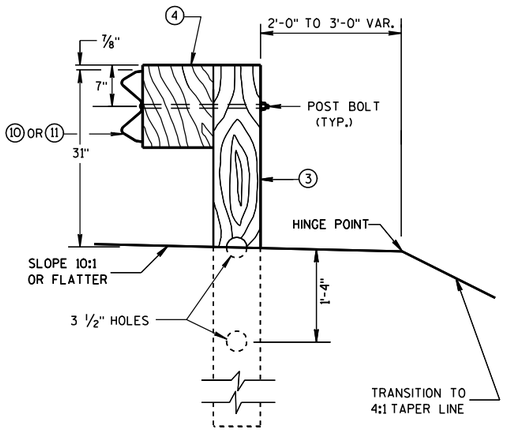
DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

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.

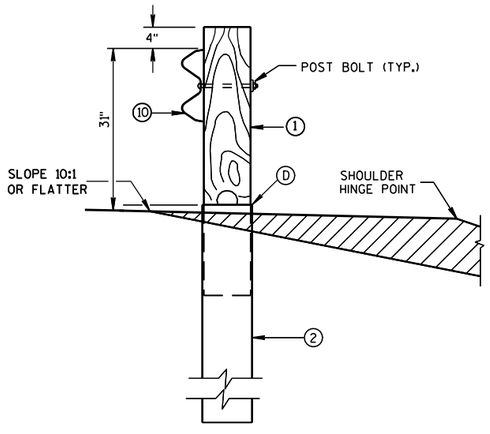
PATTERN AND COLORS ON REFLECTIVE SHEETING TYPE H ARE TO CONFORM TO OM3-L OR OM3-R OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

THE CENTER OF THE UPPER 3½" DIAMETER HOLE ON POST NUMBER 3 THROUGH POST 9 IS TO BE FLUSH WITH THE GROUND LINE (± ¾")

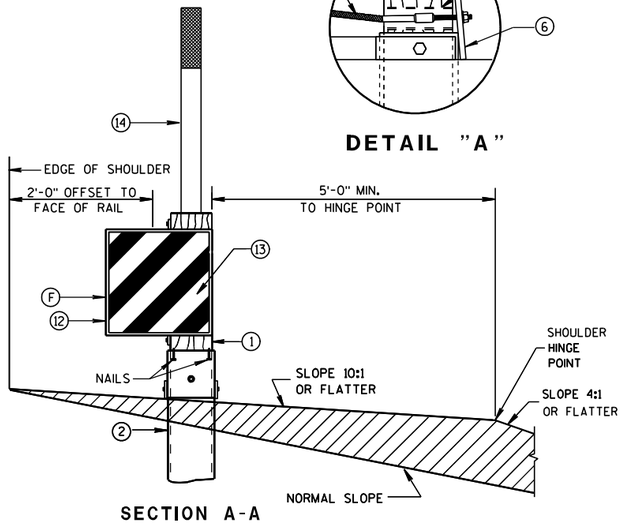




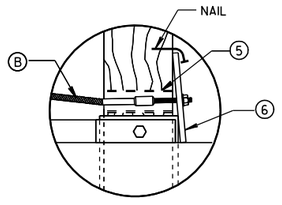
SECTION C-C
TYPICAL AT POST NOS. 3-9



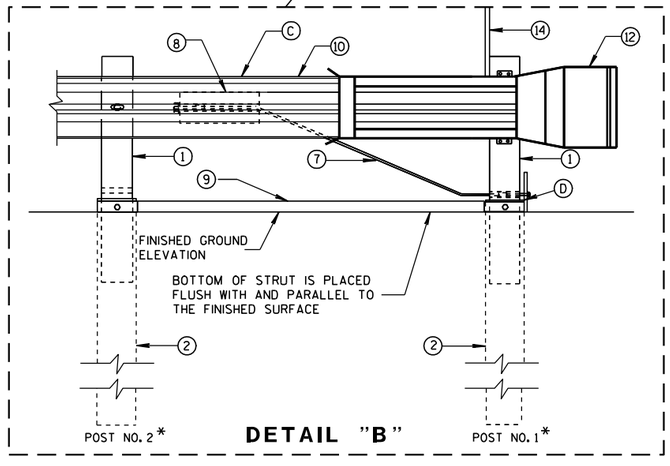
SECTION B-B
TYPICAL AT POST NO. 2*



SECTION A-A
TYPICAL AT POST NO. 1*



DETAIL "A"



DETAIL "B"

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL (MGS)

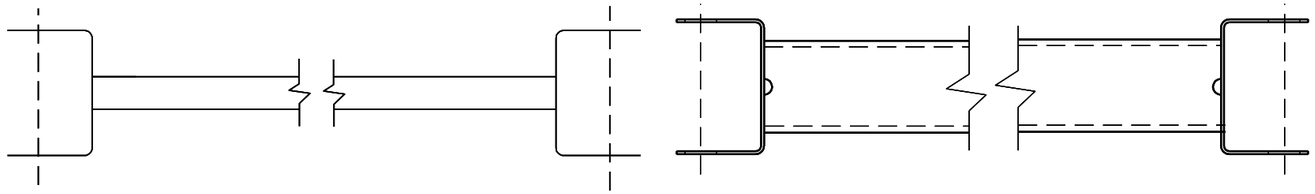
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

S.D.D. 14 B 44-1a

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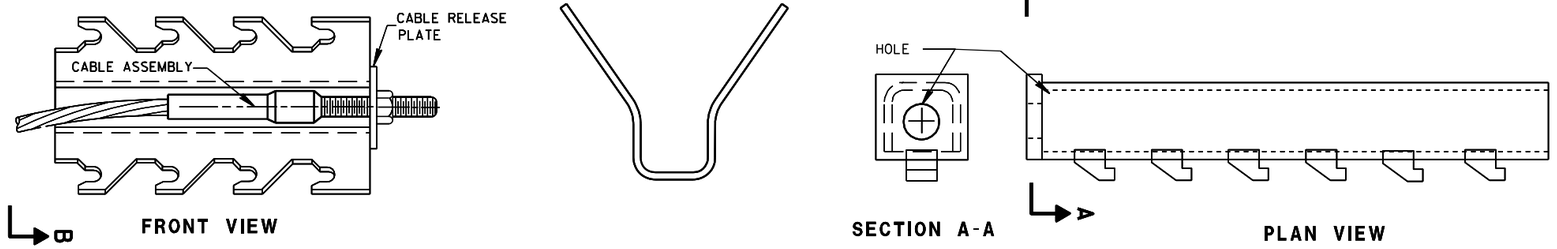
S.D.D. 14 B 44-1a



GENERIC GROUND STRUT (9) (H)

BILL OF MATERIALS

PART NO.	DESCRIPTION MATERIALS PROVIDED BY MGS EAT MANUFACTURER. SEE MANUFACTURER'S DETAILS FOR MORE INFORMATION.
(1)	WOOD BREAKAWAY POST
(2)	6" X 8" X 0.188", 6'-0" LONG FOUNDATION TUBE AT POSTS 1 AND 2
(3)	WOOD CRT
(4)	WOOD BLOCKOUT
(5)	PIPE SLEEVE
(6)	BEARING PLATE
(7)	BCT CABLE ASSEMBLY
(8)	ANCHOR CABLE BOX
(9)	GROUND STRUT
(10)	PERFORATED W-BEAM RAIL END PANEL, 12'-6" LONG.
(11)	STANDARD W-BEAM RAIL. MULTIPLE SECTIONS REQUIRED. SECTIONS VARY IN LENGTH.
(12)	END SECTION EAT
(13)	0.040" ALUMINUM SHEET WITH REFLECTIVE SHEETING TYPE H (ONLY THE SHEETING IS SUPPLIED BY THE MANUFACTURER)
(14)	EAT MARKER POST - YELLOW (SEE APPROVED PRODUCTS LIST)



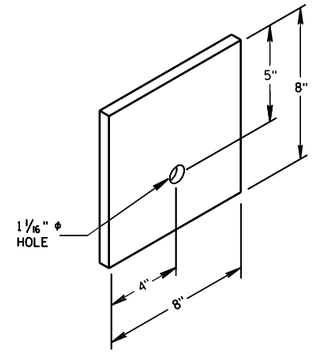
FRONT VIEW

SECTION B-B

SECTION A-A

PLAN VIEW

GENERIC ANCHOR CABLE BOX (8) (H)



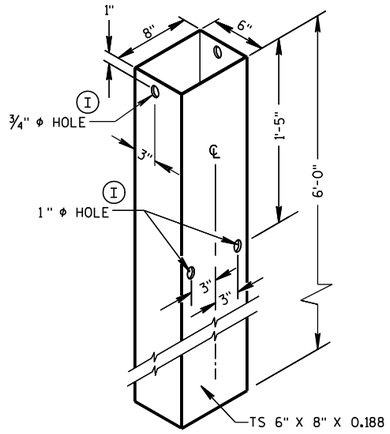
BEARING PLATE (6)

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

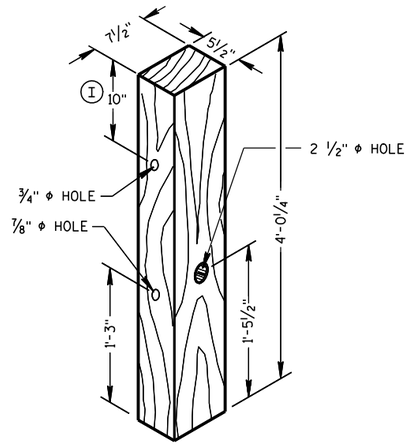
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

S.D.D. 14 B 44-1b

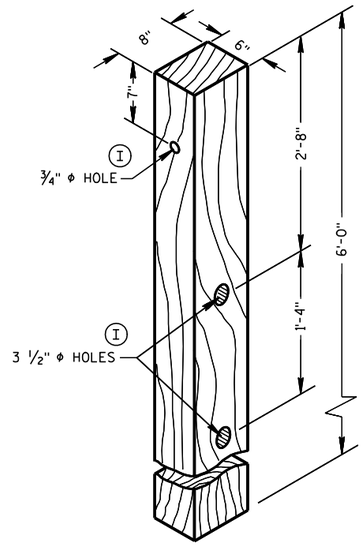


FOUNDATION TUBE (2)



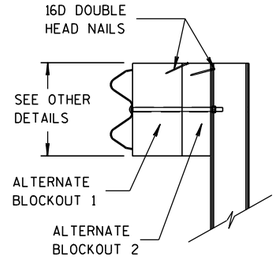
POSTS NUMBER 1 AND 2

WOOD BREAKAWAY POST (1)

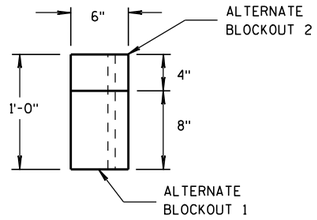


POSTS NUMBER 3-9

WOOD CRT POST (3)

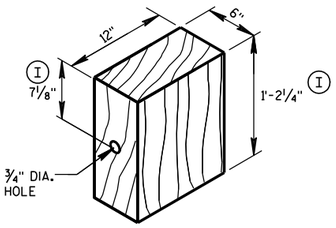


SIDE VIEW



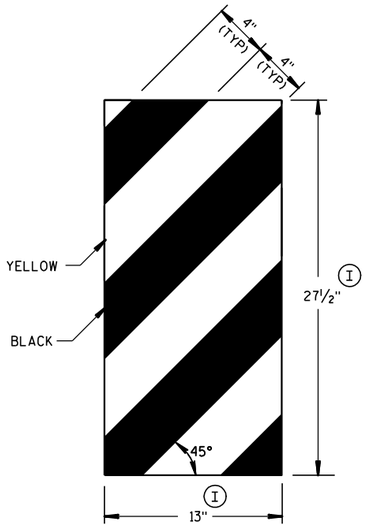
TOP VIEW

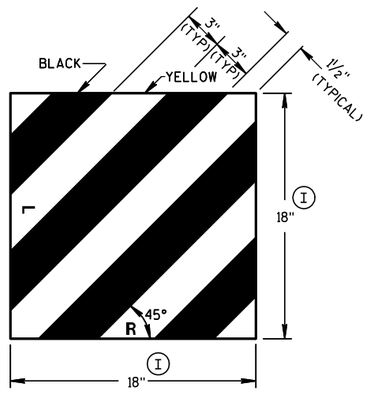
ALTERNATE WOOD BLOCKOUT DETAIL



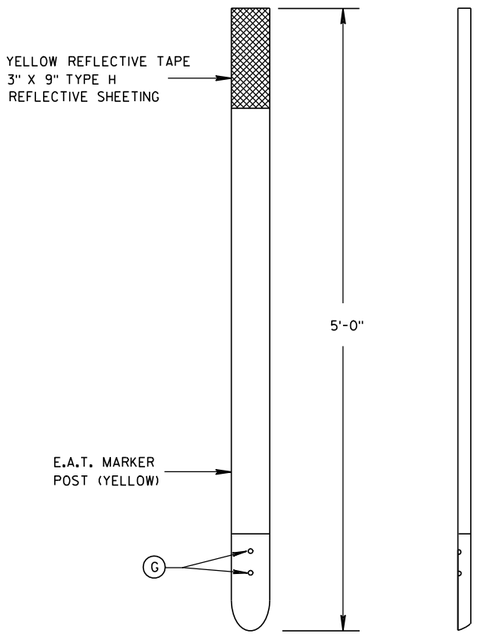
WOOD BLOCKOUT (4)

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





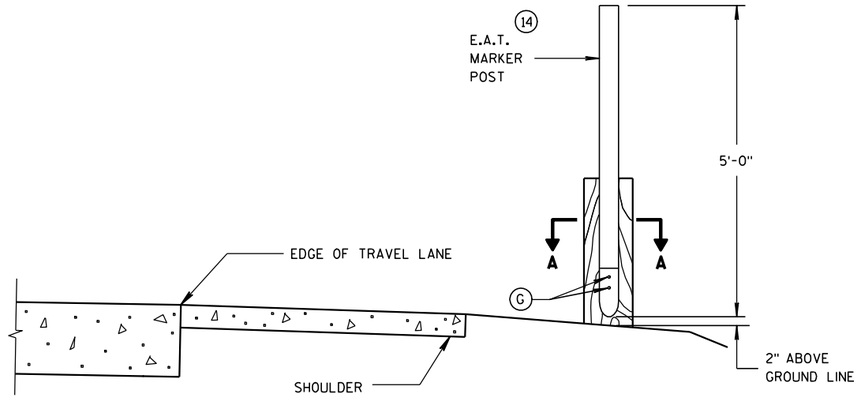
GENERIC REFLECTIVE SHEETING (13) (H)



FRONT VIEW

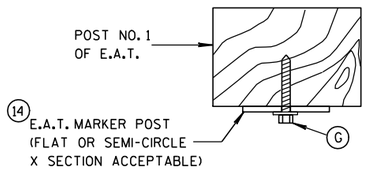
SIDE VIEW

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

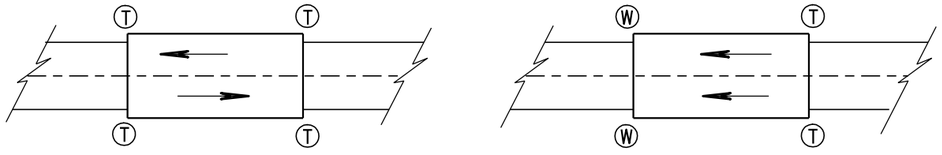
MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
5/23/2011
DATE
/S/ Jerry H. [illegible]
ROADWAY STANDARDS 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

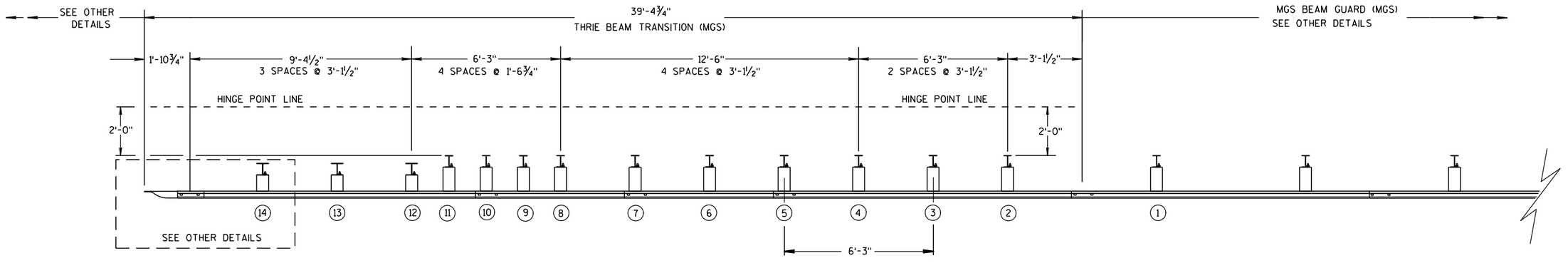
BOLT THE THRIE BEAM TO ALL POSTS AND BLOCKOUTS. DRILL OR PUNCH BOLT HOLES IN THE BEAM IF THE POST SPACING IS LESS THAN 6'-3.

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

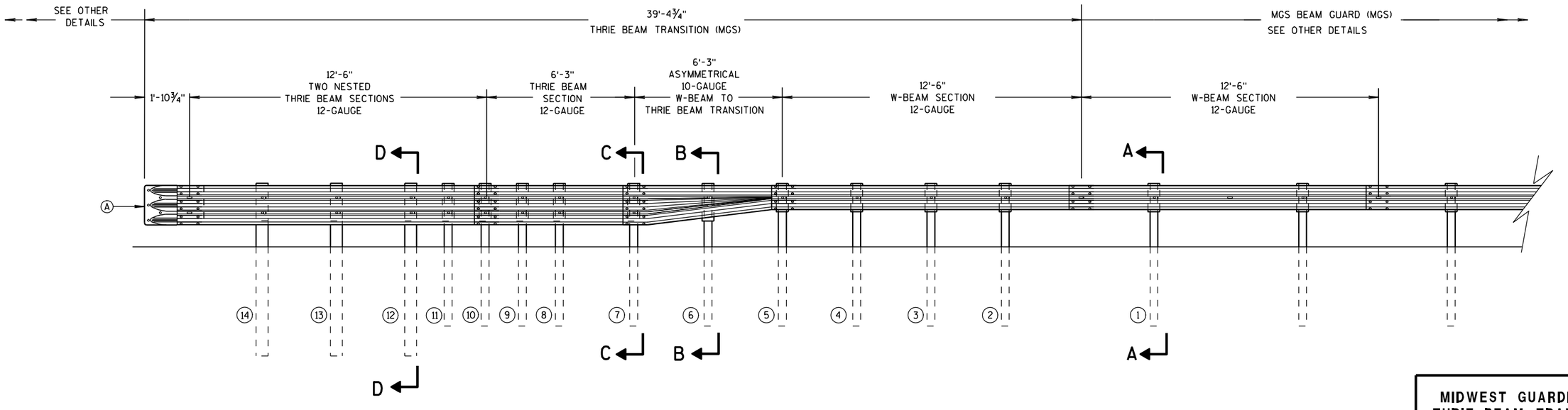
TRANSITION USES STEEL POSTS ONLY.

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

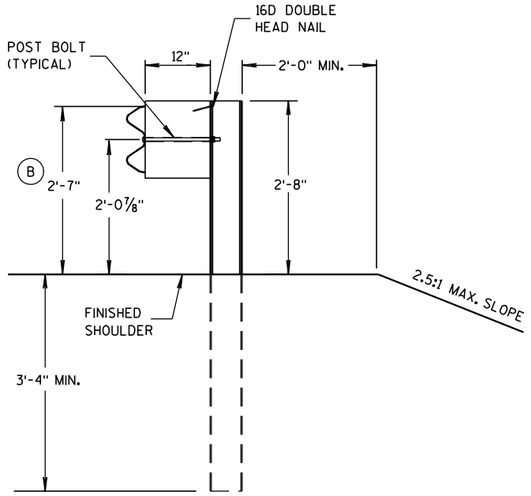
MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
S.D.D. 14 B 45-3a

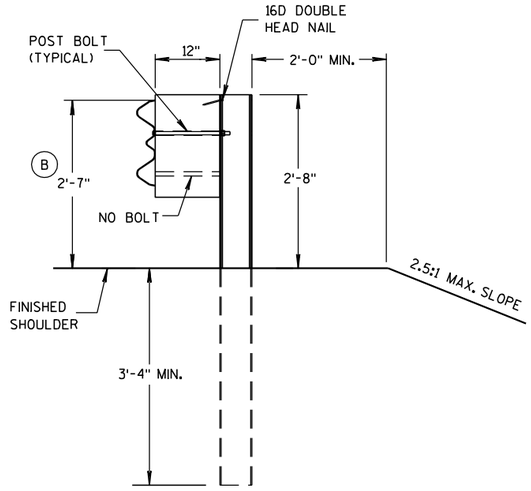
GENERAL NOTES

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



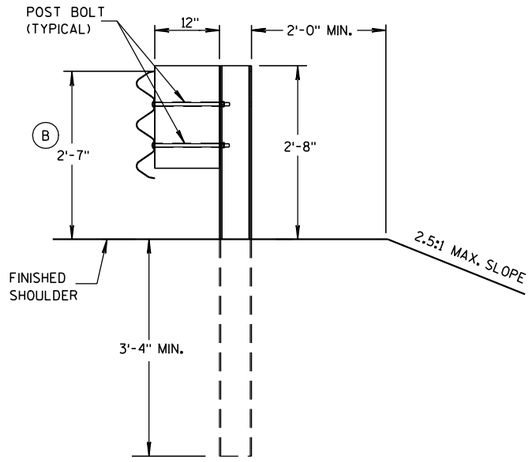
SECTION A-A

POSTS 1-5



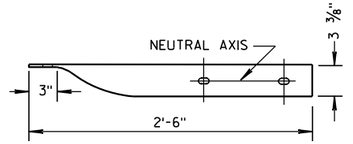
SECTION B-B

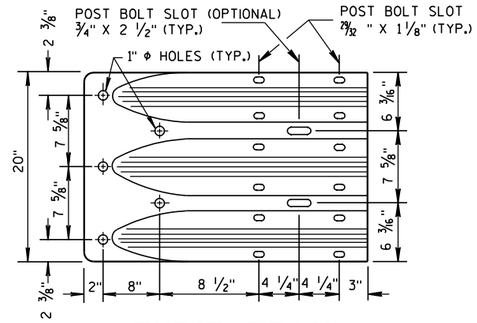
POST 6



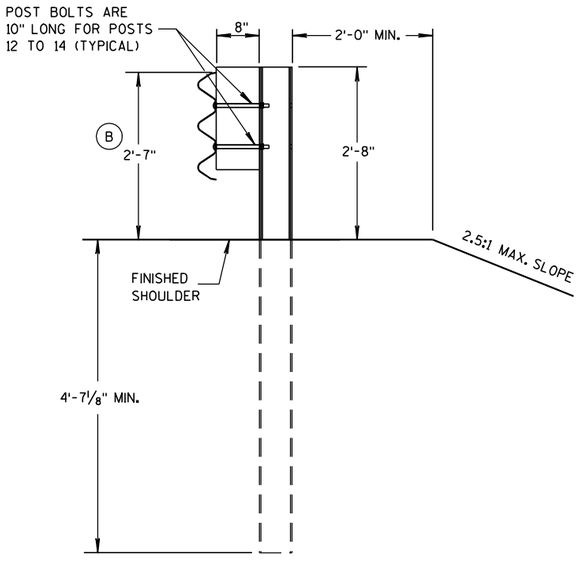
SECTION C-C

POSTS 7-11



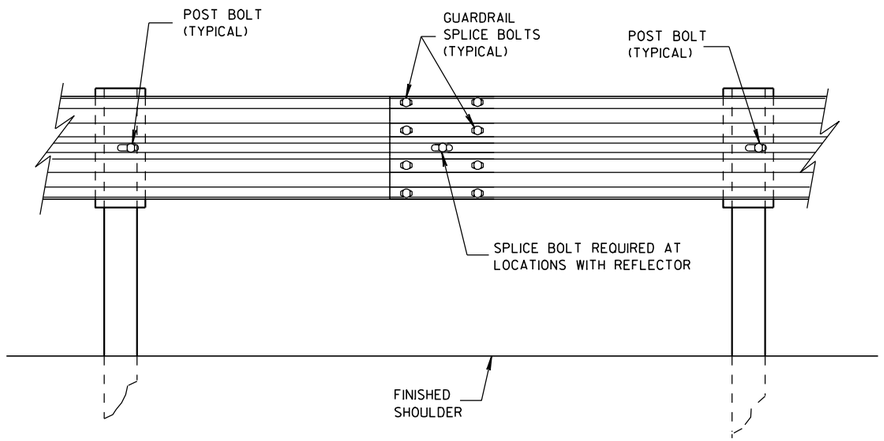


THRIE BEAM TERMINAL CONNECTOR



SECTION D-D

POSTS 12-14



SPLICE DETAIL

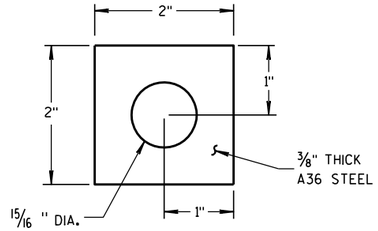
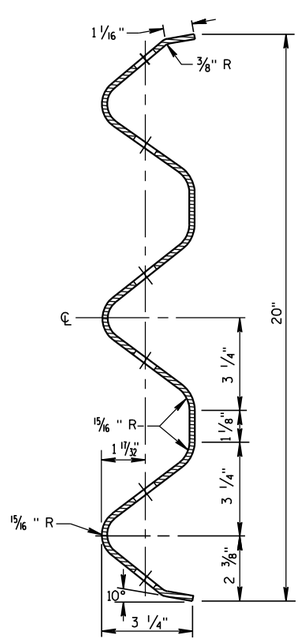


PLATE WASHER DETAIL



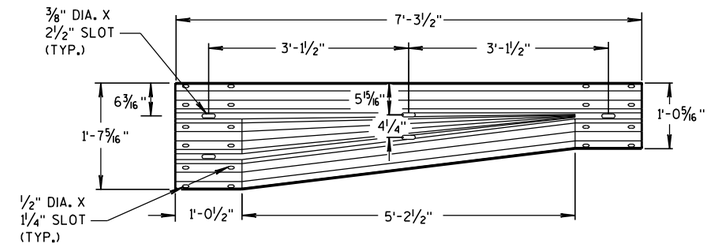
SECTION THRU THRIE BEAM RAIL ELEMENT

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

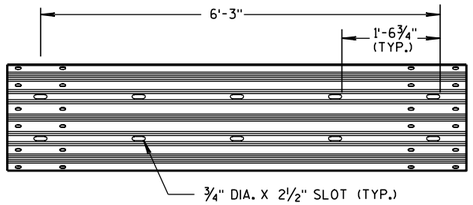
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

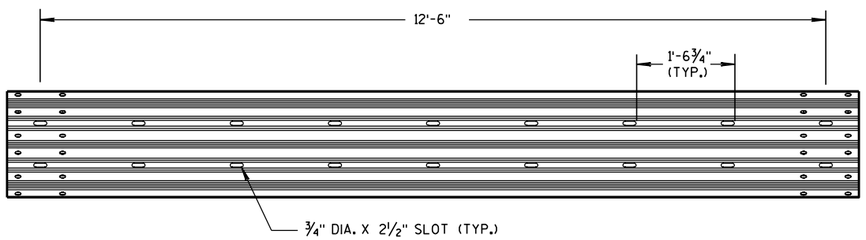
S.D.D. 14 B 45-3b



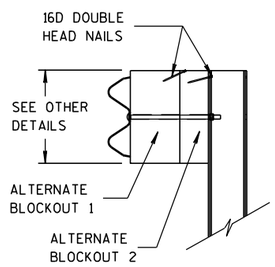
W-BEAM TO THRIE BEAM TRANSITION SECTION



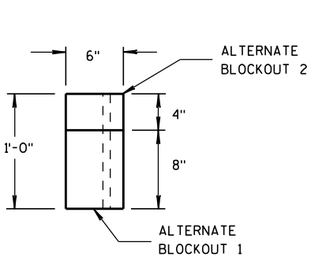
6'-3" THRIE BEAM SECTION



12'-6" THRIE BEAM SECTION

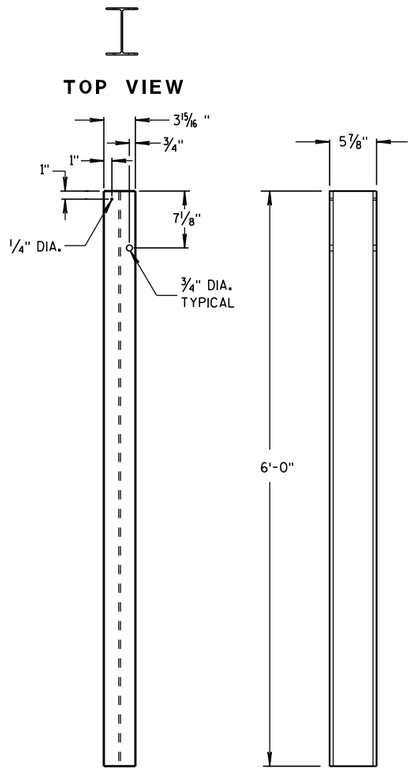


SIDE VIEW

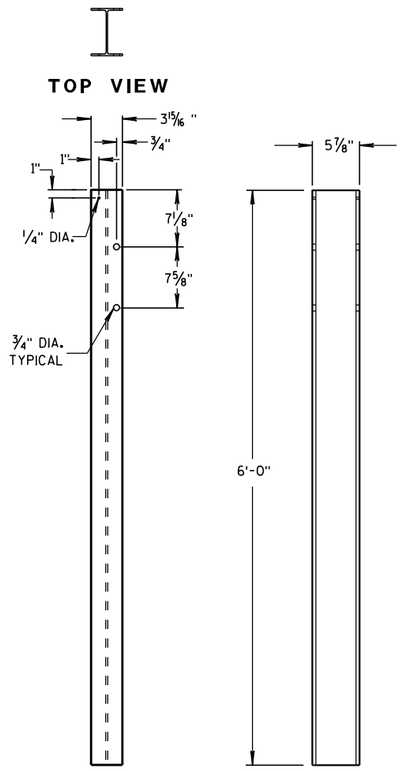


TOP VIEW

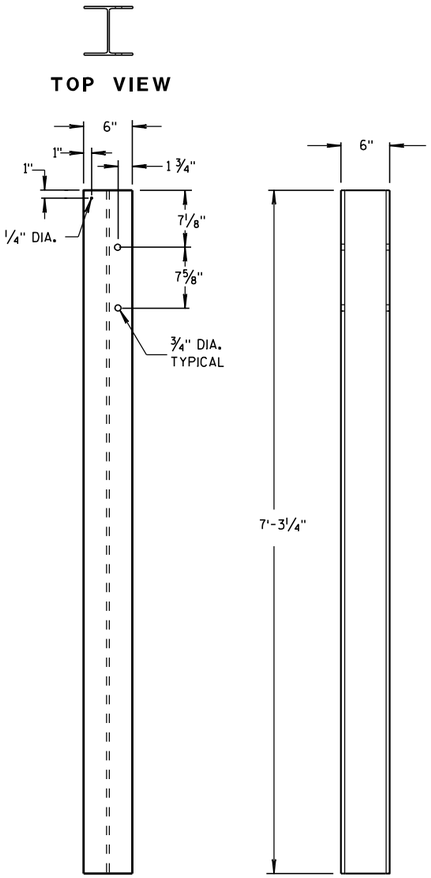
ALTERNATE WOOD BLOCKOUT DETAIL



STEEL POSTS 1-5

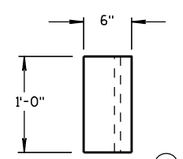


STEEL POSTS 6-11

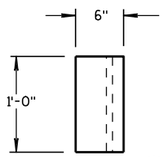


STEEL POSTS 12-14

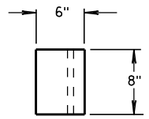
1 WOOD BLOCKS MAY BE CONSTRUCTED OUT OF 2 WOOD BLOCKS. SEE ALTERNATE WOOD BLOCK DETAIL.



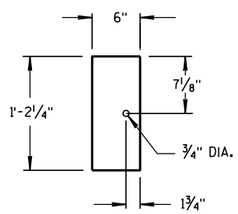
TOP VIEW (1)



TOP VIEW (1)

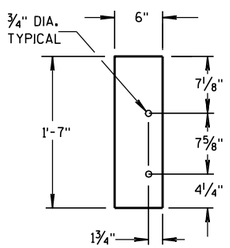


TOP VIEW



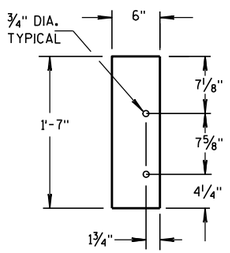
FRONT VIEW

BLOCKOUT POSTS 1-5



FRONT VIEW

BLOCKOUT POSTS 6-11



FRONT VIEW

BLOCKOUT POSTS 12-14

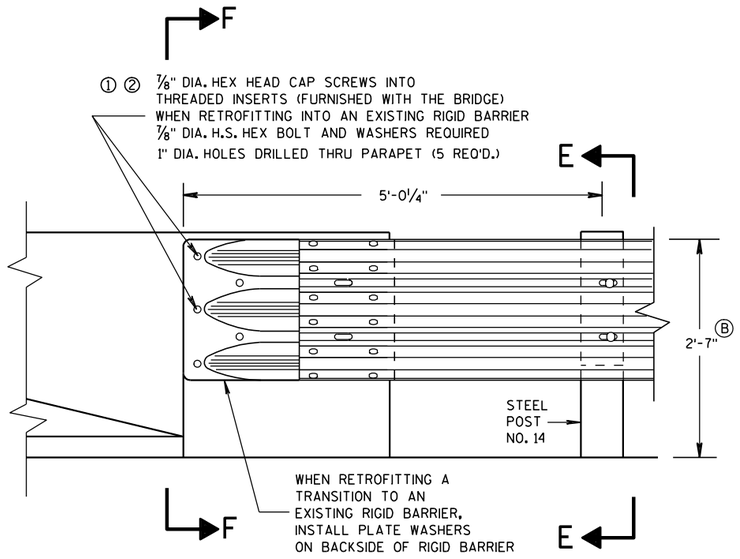
STEEL POST SIZES

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"

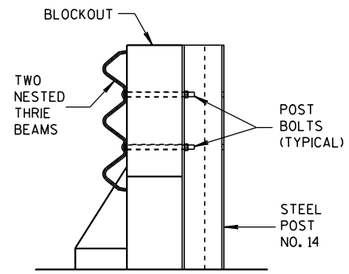
MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

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.

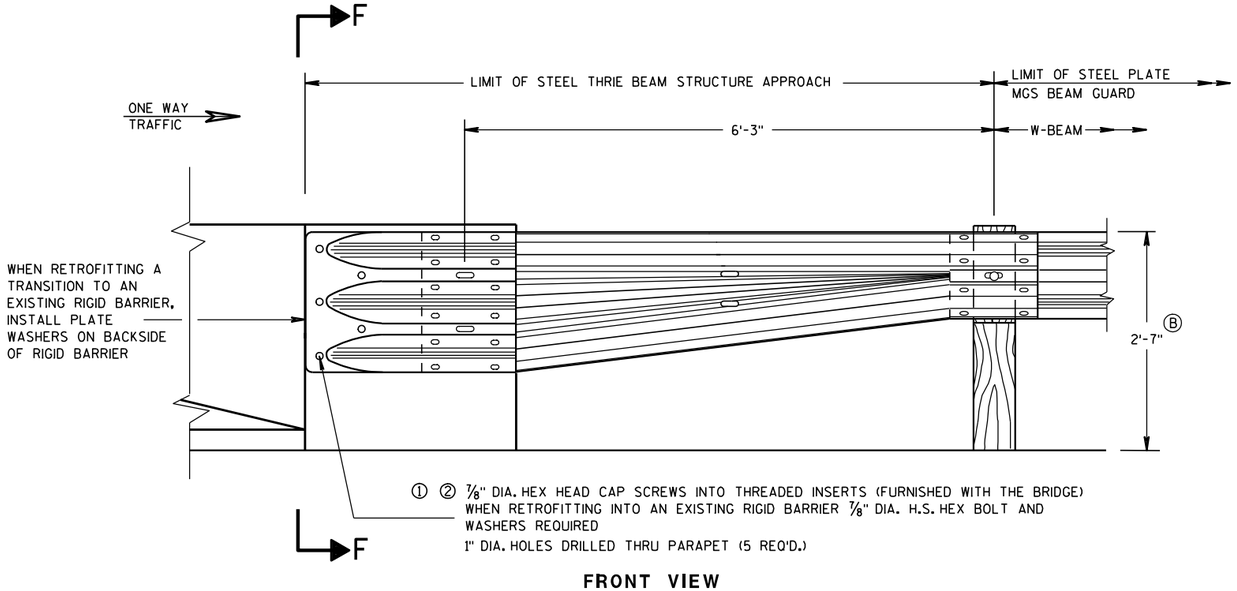
① DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

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.

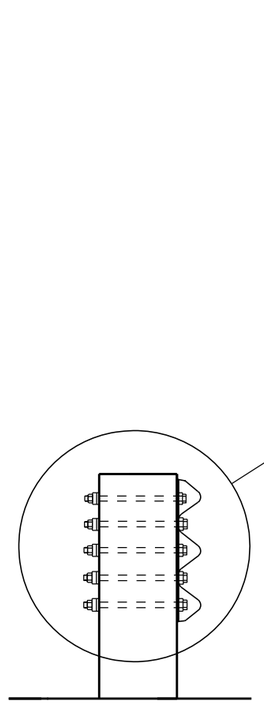
③ THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3 1/2".

Ⓑ TOLERANCE FOR TOP OF BEAM IS ± 1".

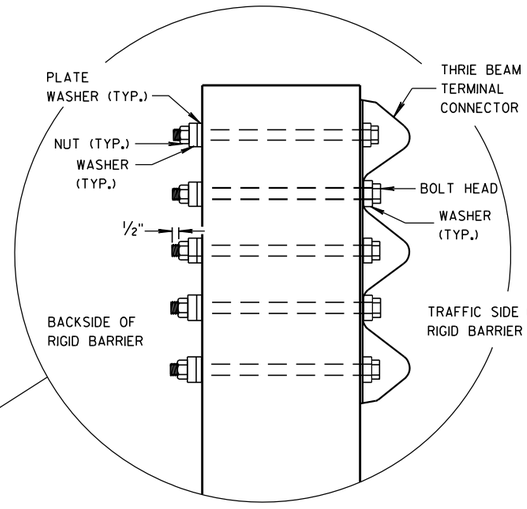
THRIE BEAM CONNECTION TO BRIDGE PARAPET WITH SQUARE ENDS



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 [illegible] ENGINEER
FHWA

6
S.D.D. 14 B 45-3d

GENERAL NOTES

THESE ARE TYPICAL CONNECTION DETAILS. ADJUST THE POSTION OF CONNECTIONS TO EXISTING BRIDGES TO FIT THE ACTUAL BRIDGE AND SITE DIMENSIONS.

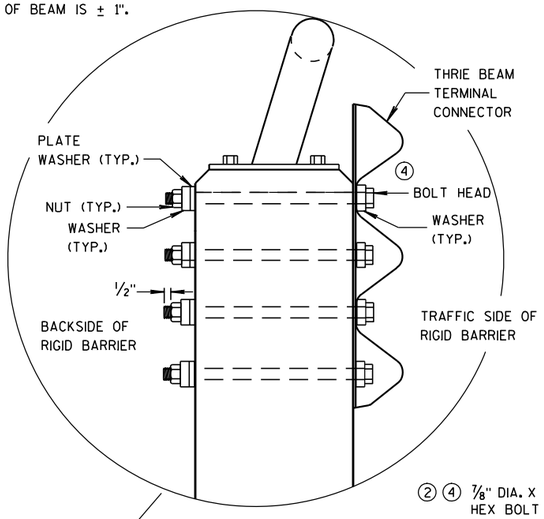
① DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

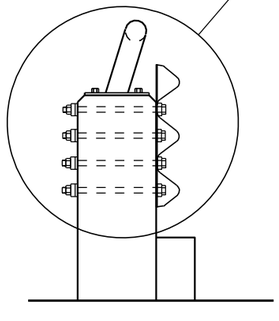
② BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. 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". BLOCK IS INCIDENTAL TO THE CONTRACT.

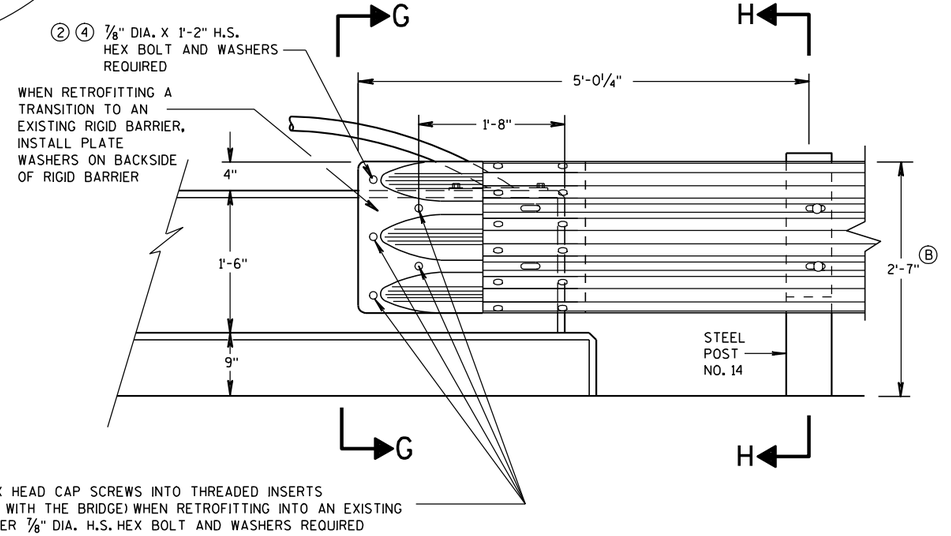
④ BOLT, NUT AND WASHERS NOT REQUIRED FOR THIS LOCATION WHEN RETROFITTING AN EXISTING PAPAPET AND THE HOLE IS EITHER ABOVE PARAPET OR WITHIN 4 INCHES OF THE EDGE OF PARAPET.

Ⓑ TOLERANCE FOR TOP OF BEAM IS ± 1".

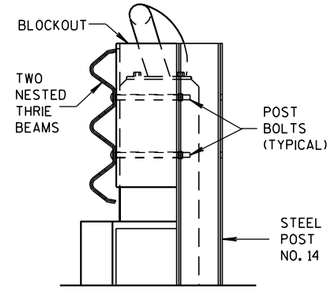




SECTION G-G

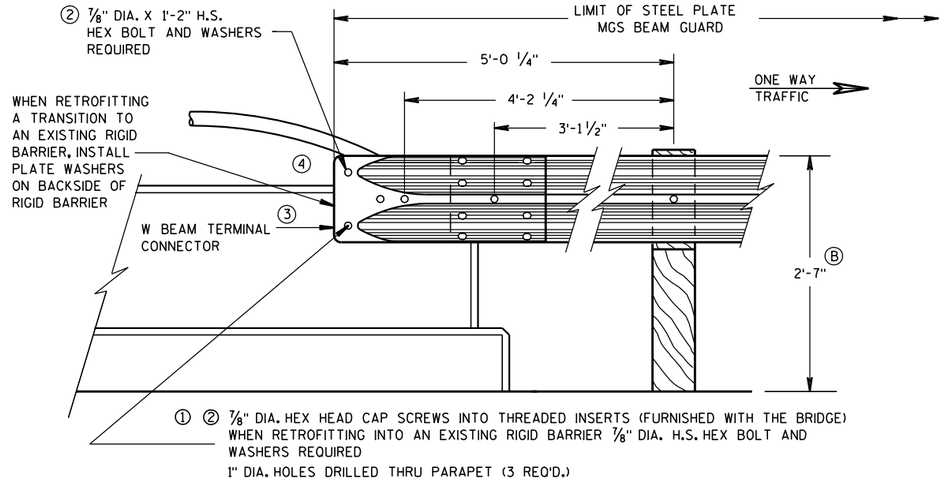


FRONT VIEW



SECTION H-H

THRIE BEAM CONNECTION TO VERTICAL FACED PARAPETS



FRONT VIEW

W BEAM CONNECTION TO VERTICAL FACE PARAPET

(USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8-31-2012
DATE

/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER

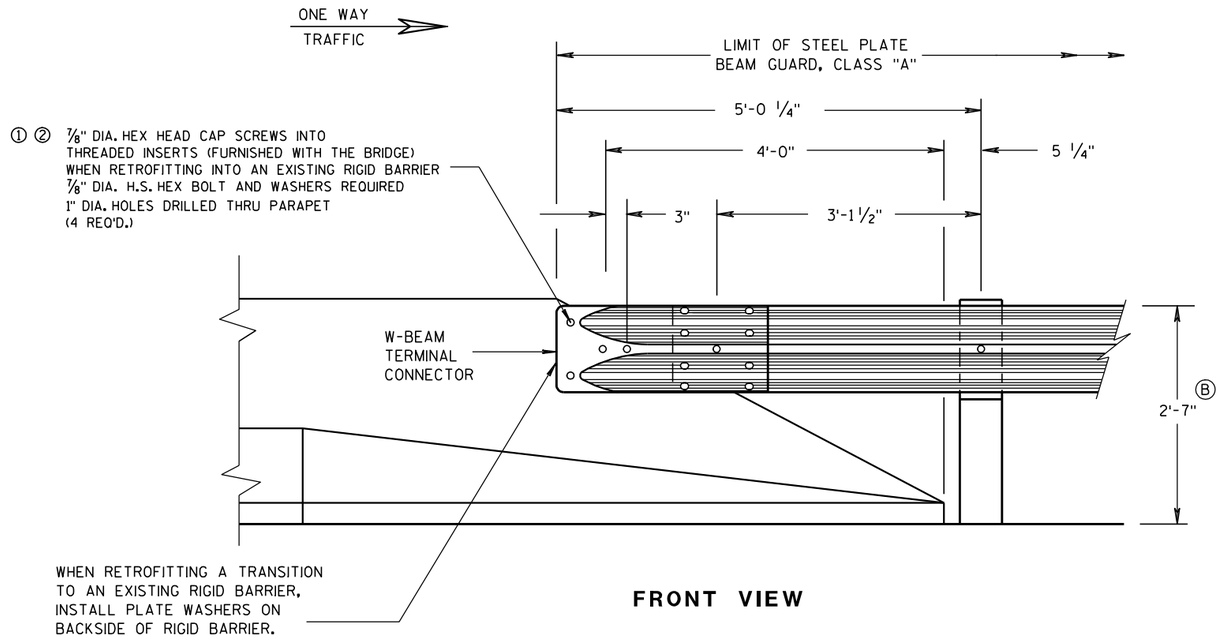
FHWA

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S.D.D. 14 B 45-3e

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S.D.D. 14 B 45-3e



FRONT VIEW

W BEAM CONNECTION TO PARAPETS WITH SLOPED ENDS

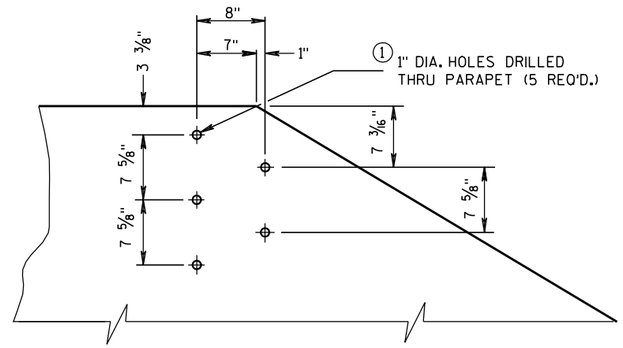
(USE ONLY AT TRAFFIC EXIT END OF ONE WAY BRIDGE)

GENERAL NOTES

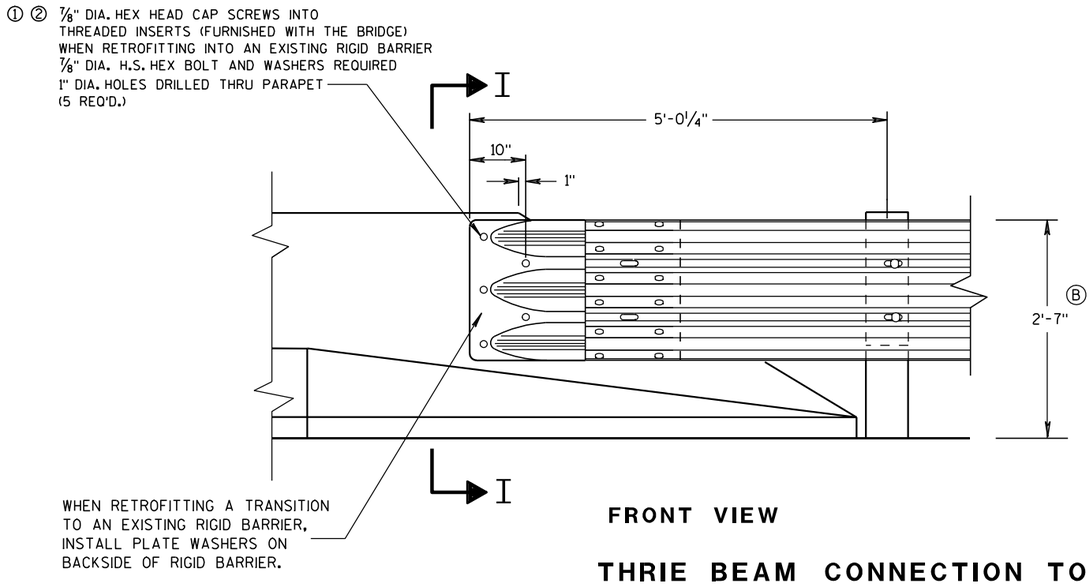
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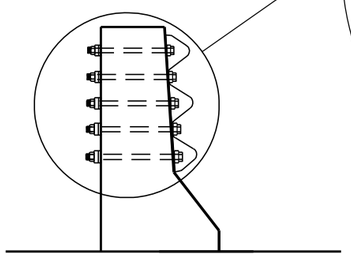
Ⓑ TOLERANCE FOR TOP OF BEAM IS ± 1".



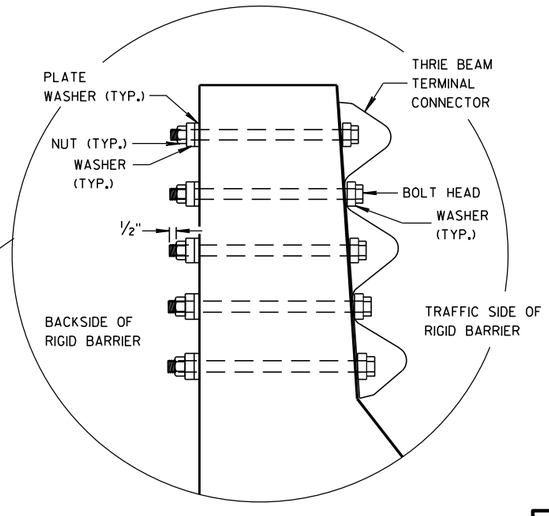
DRILL HOLE LOCATION AND PATTERN FOR THRIE BEAM CONNECTION



FRONT VIEW



SECTION I-I



THRIE BEAM CONNECTION TO BRIDGE PARAPETS WITH SLOPED ENDS

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8/31/2012 DATE

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

294

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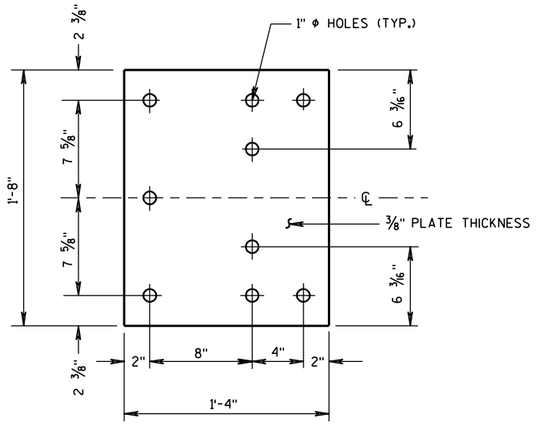
FHWA

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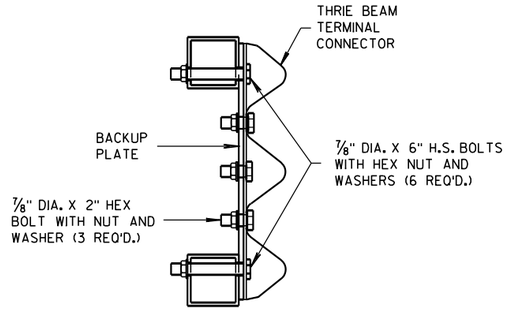
S.D.D. 14 B 45-3f

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S.D.D. 14 B 45-3f



BACK-UP PLATE DETAIL

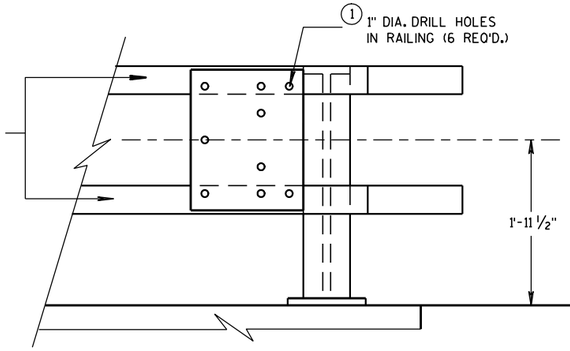


SECTION J-J

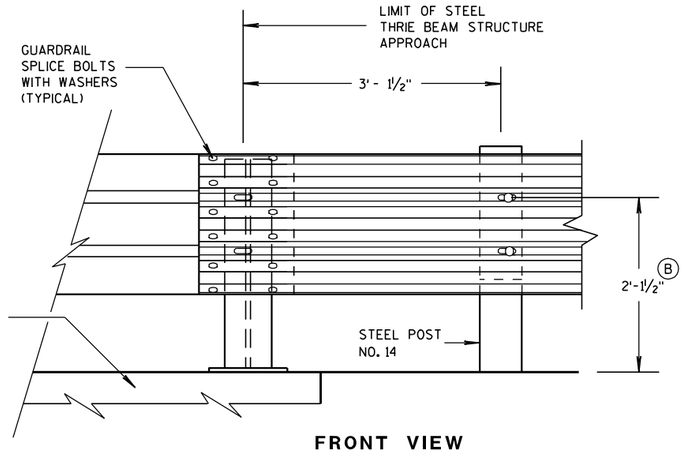
GENERAL NOTES

(1) DRILLING HOLES THROUGH THE PAPRPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

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

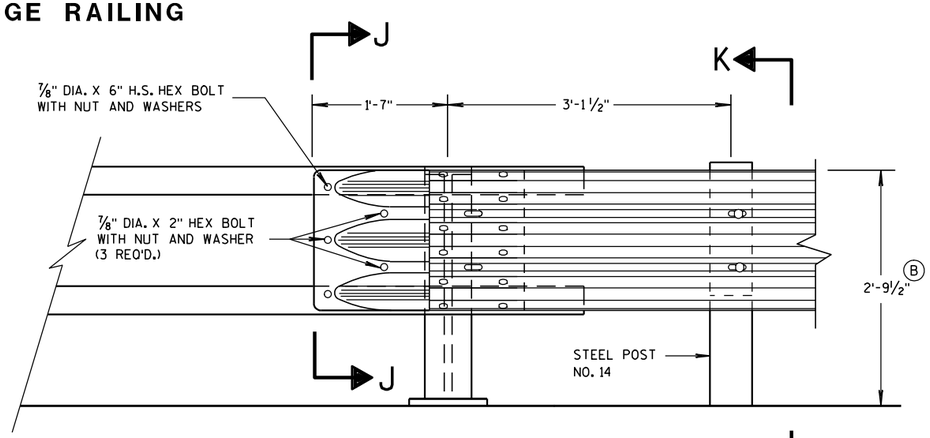


BACK-UP PLATE MOUNTING ONTO BRIDGE RAILING

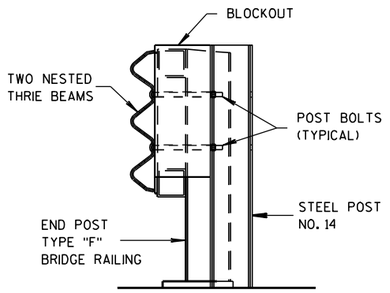


FRONT VIEW

THRIE BEAM CONNECTION TO STEEL RAILING TYPE "W"



FRONT VIEW



SECTION K-K

THRIE BEAM CONNECTION TO TUBULAR RAILING TYPE "F"

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

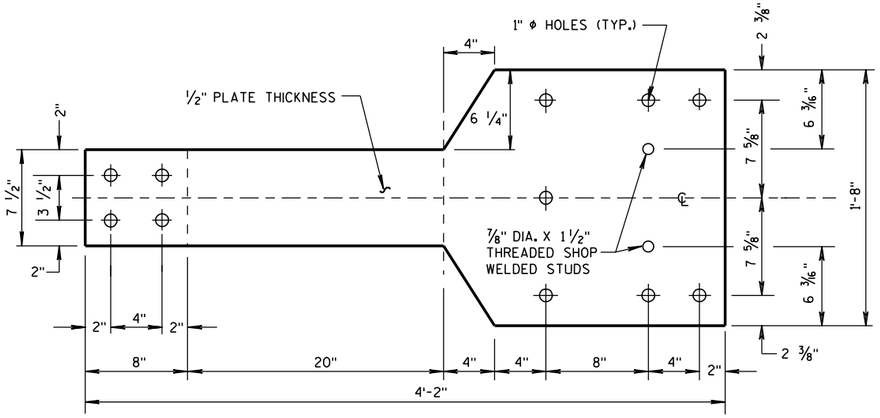
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ROADWAY STANDARDS DEVELOPMENT ENGINEER
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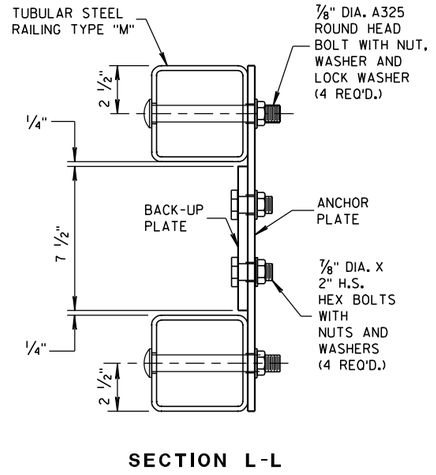
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S.D.D. 14 B 45-3g

GENERAL NOTES

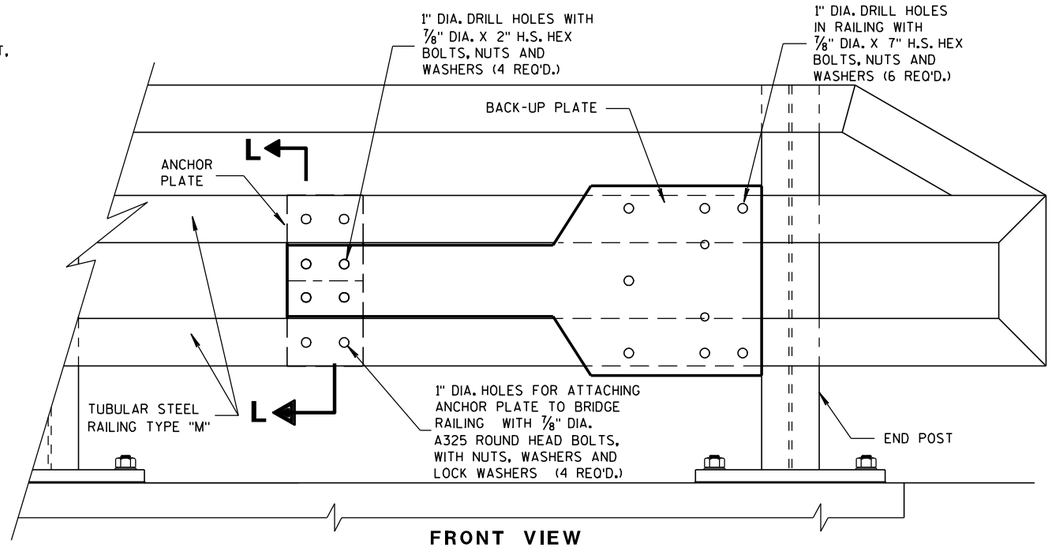
(B) TOLERANCE FOR TOP OF W-BEAM RAIL IS ± 1".



FRONT VIEW

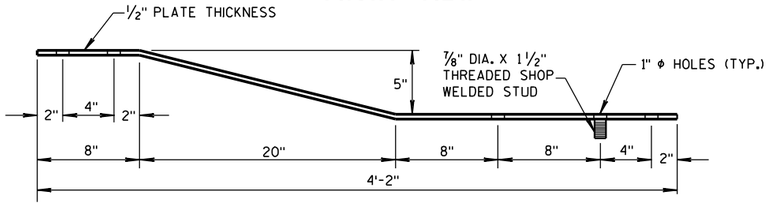


SECTION L-L



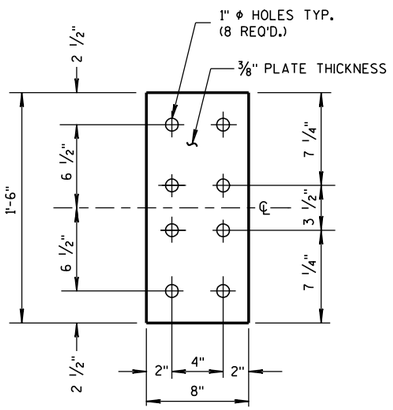
FRONT VIEW

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



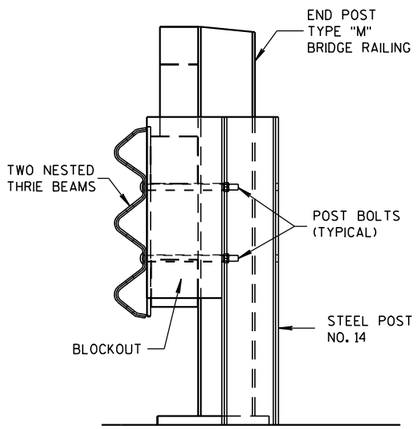
PLAN VIEW

BACK-UP PLATE DETAIL, TYPE "M"

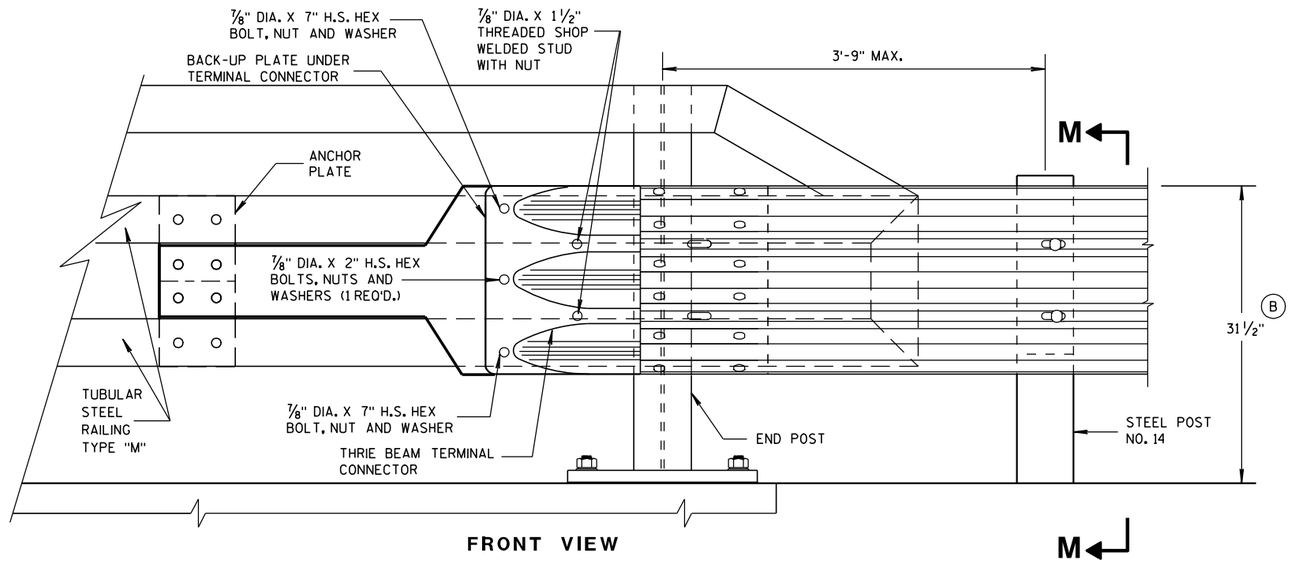


FRONT VIEW

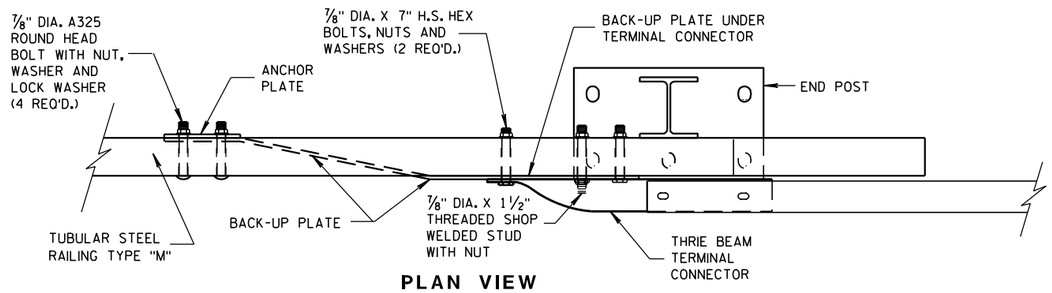
ANCHOR PLATE DETAIL, TYPE "M"



SECTION M-M



FRONT VIEW



PLAN VIEW

THRIE BEAM CONNECTION TO TUBULAR RAILING, TYPE "M"

MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8-31-2012
DATE

/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER

296

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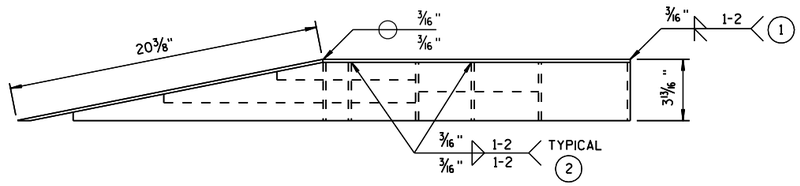
FHWA

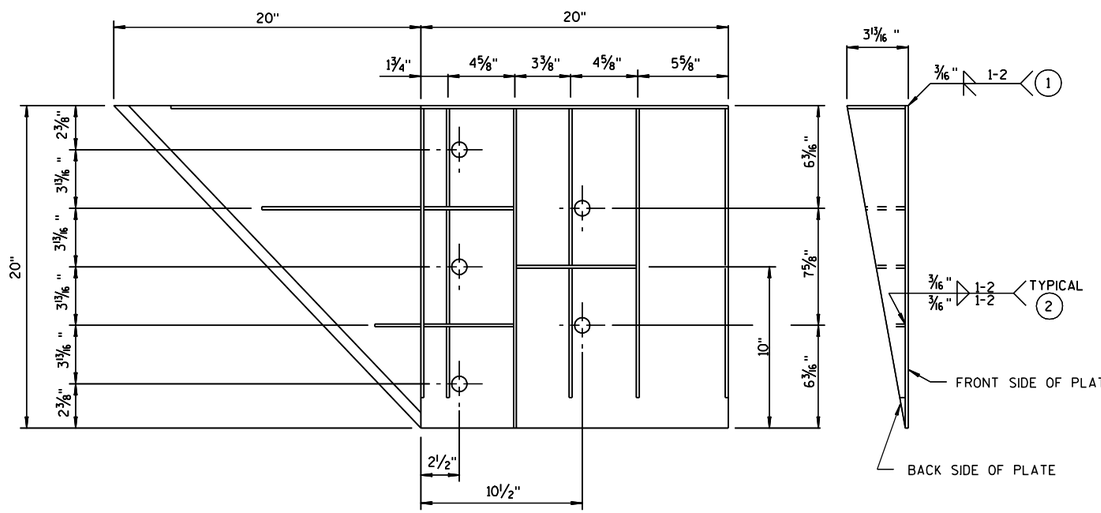
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S.D. 14 B 45-3h

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S.D. 14 B 45-3h





WELDING INSTRUCTION

(VIEWED FROM BACK SIDE OF PLATE)

GENERAL NOTES

COVER PLATE PANELS ARE 3/16" THICK.

ALL STIFFENERS ARE 1/4" THICK.

CONNECTOR PLATE SHALL BE FABRICATED FROM ASTM GRADE A36 STEEL AND GALVANIZED.

FOR GALVANIZED REQUIREMENTS, SEE SECTION 614 OF THE STANDARD SPECIFICATIONS.

ALL HOLE DIAMETERS SHALL BE 1".

FOR OPPOSITE SIDE INSTALLATION MIRROR DRAWINGS.

(1) STIFFENERS LOCATED AT THE OUTSIDE EDGES OF THE COVER PLATES SHALL BE WELDED AS FOLLOWS:
SINGLE BEVEL GROOVE WELD ON EXTERNAL SIDES AND 3/16" FILLET WELD BY 1" LONG SPACED AT 2" ON INTERNAL SIDES.

(2) STIFFENERS LOCATED ON THE INSIDE OF THE COVER PLATE SHALL BE WELDED AS FOLLOWS:
3/16" FILLET WELD BY 1" LONG SPACED AT 2".

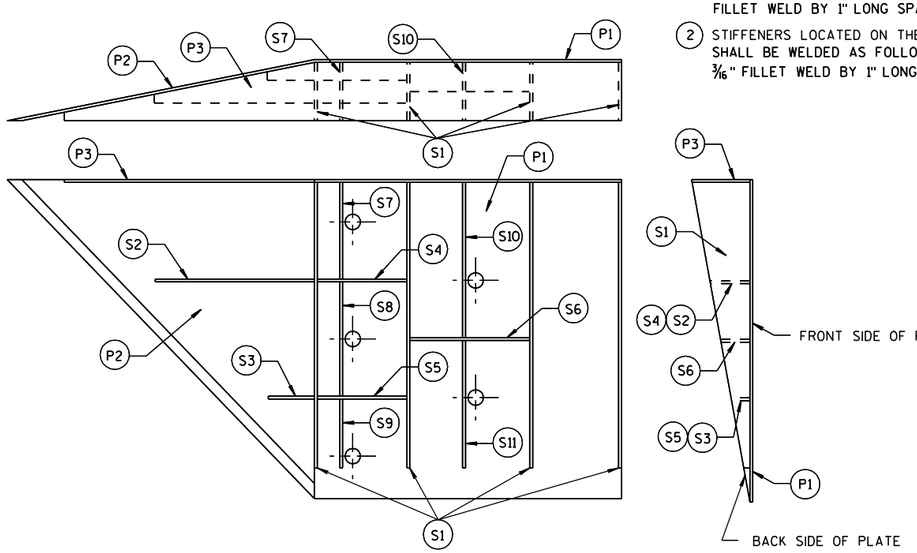


PLATE AND STIFFENER IDENTIFICATION

(VIEWED FROM BACK SIDE OF PLATE)

CONNECTOR PLATE DIMENSION (PER ASSEMBLY)

PLATE	QUANTITY	SHAPE	SIZE (A x B x C x D)	THICKNESS
P1	1		20" x 20"	3/16"
P2	1		20" x 20" x 28 9/16"	3/16"
P3	1		39" x 3 5/8" x 20" x 19 5/16"	3/16"
S1	4		18 7/16" x 3 5/8" x 18 3/4"	1/4"
S2	1		10 1/4" x 2 7/16" x 10 3/8" x 1/2"	1/4"
S3	1		3" x 1 1/16" x 3 1/8" x 1/2"	1/4"
S4	1		6 1/8" x 2 7/16"	1/4"
S5	1		6 1/8" x 1 1/16"	1/4"
S6	1		7 3/4" x 1 3/4"	1/4"
S7	1		2 9/16" x 6" x 3 5/8" x 5 7/8"	1/4"
S8	1		1 5/32" x 7 1/2" x 2 1/2" x 7 3/8"	1/4"
S9	1		6 1/16" x 6 3/16" x 1 3/32"	1/4"
S10	1		1 7/8" x 9 7/8" x 3 5/8" x 9 11/16"	1/4"
S11	1		8 1/2" x 8 3/4" x 1 13/16"	1/4"

SINGLE SLOPE CONNECTION PLATE

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

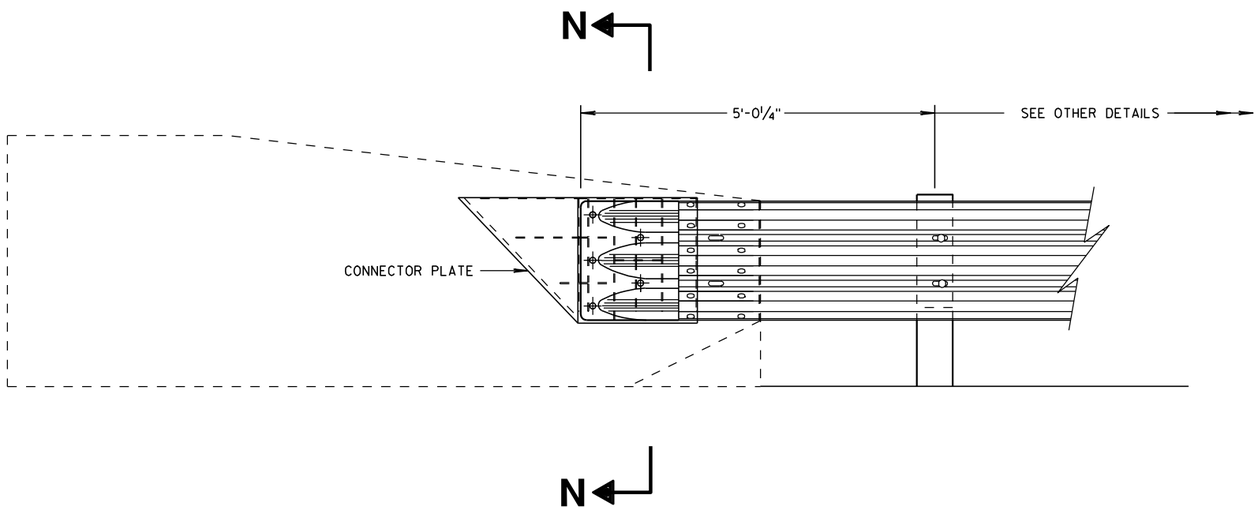
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8/31/2012
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/S/ Jerry H ----
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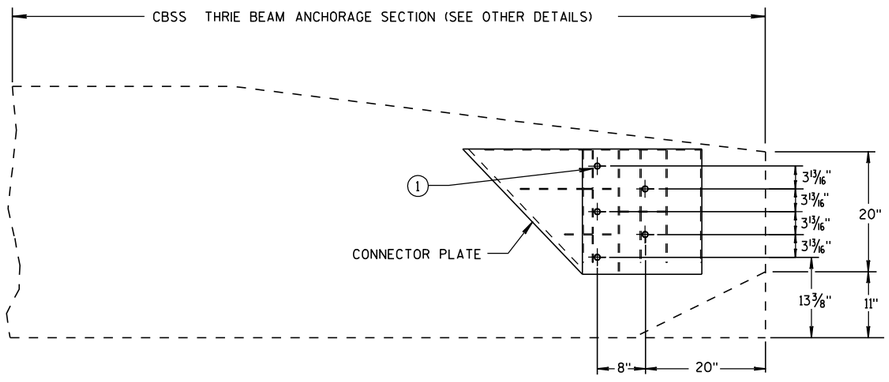
S.D.D. 14 B 45-3i

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S.D.D. 14 B 45-3i



THRIE BEAM CONNECTION TO SINGLE SLOPE BARRIER

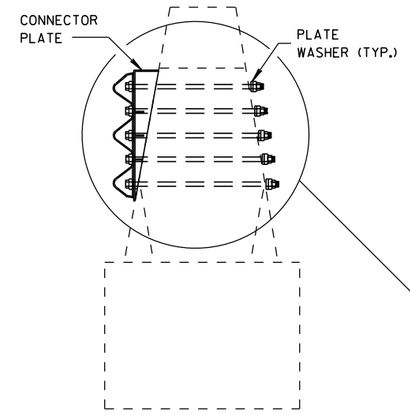


SINGLE SLOPE CONNECTION PLATE PLACEMENT

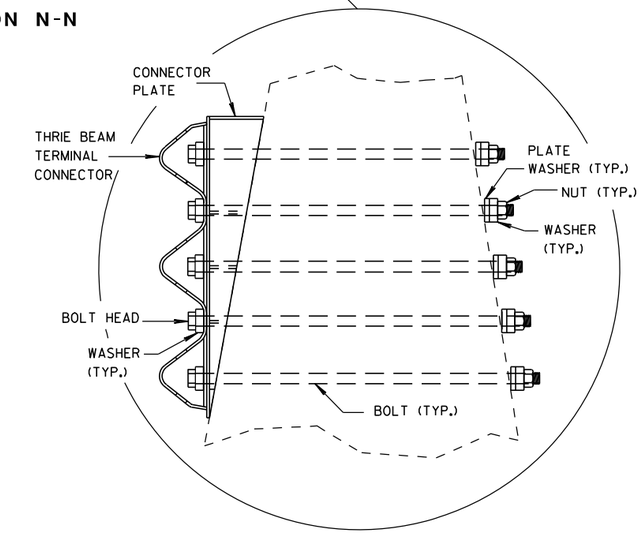
GENERAL NOTES

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

(1) BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X ⅝" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.



SECTION N-N



MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8/31/2012 — DATE

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

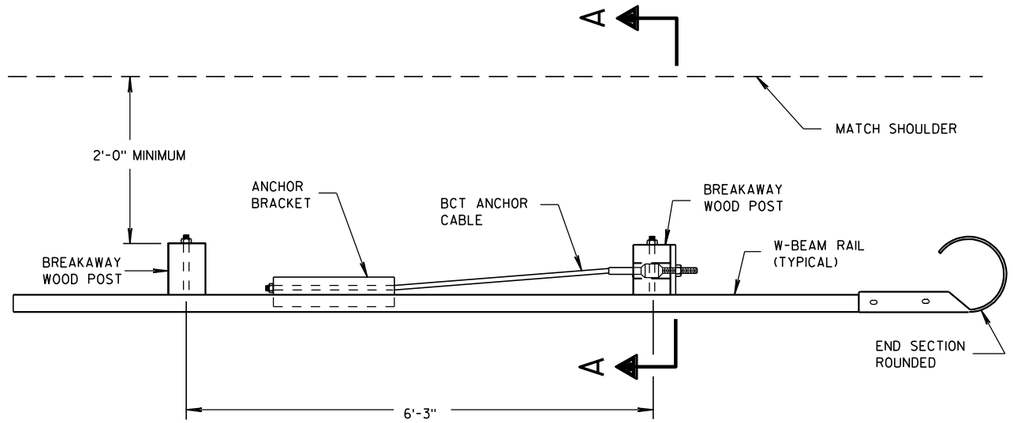
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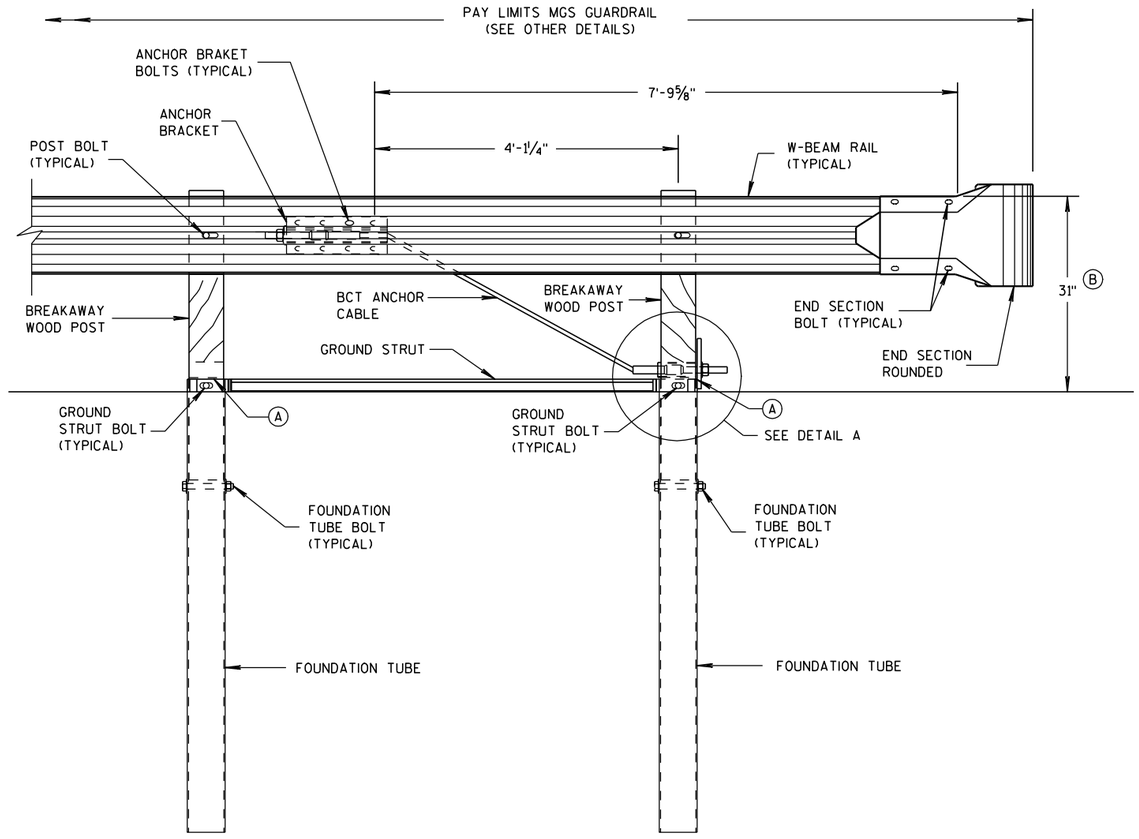
S.D.D. 14 B 45-3j

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S.D.D. 14 B 45-3j

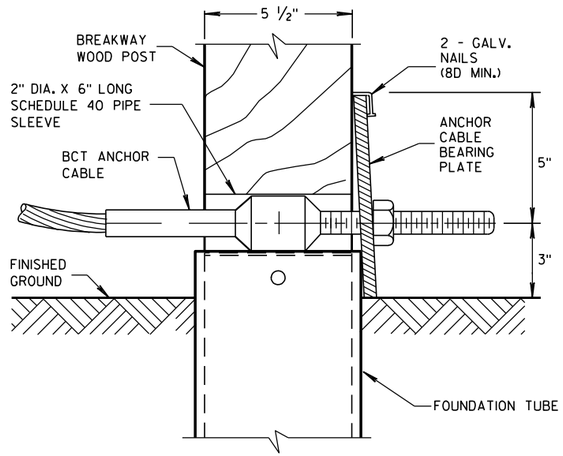


PLAN VIEW



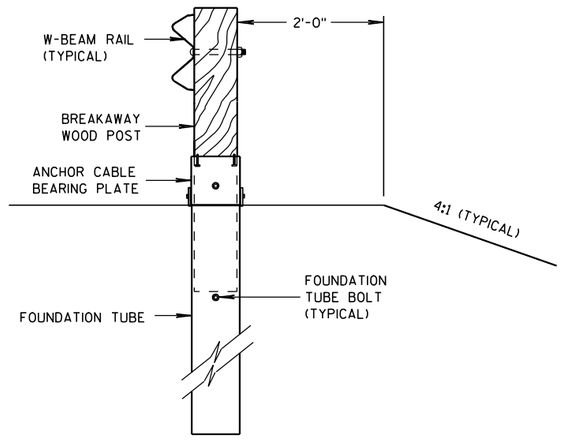
FRONT VIEW

END RAIL DETAIL



DETAIL A

POST NO. 1
GROUNG STRUT NOT SHOWN FOR CLARITY.



SECTION A-A

GENERAL NOTES

SEE SDD 14 B 42 FOR MORE INFORMATION.

POST BOLTS ARE A ⅝" DIAMETER X 10" LONG GUARDRAIL BOLT. A POST BOLT REQUIRES A ⅝" DIAMETER DH MODIFIED (RECESSED) HEAVY HEX NUT AND ⅝" DIAMETER FLAT WASHER.

FOUNDATION TUBE BOLTS ARE A ⅞" DIAMETER X 7½" LONG HEAVY HEX HEAD BOLT. A FOUNDATION TUBE BOLT REQUIRES A ⅞" DIAMETER DH HEAVY HEX NUT AND A ⅝" DIAMETER FLAT WASHER.

GROUND STRUT BOLTS ARE A ⅝" DIAMETER X 10" LONG HEAVY HEX HEAD BOLT. A GROUND STRUT BOLT REQUIRES A ⅝" DIAMETER DH HEAVY HEX NUT AND A ⅝" DIAMETER FLAT WASHER.

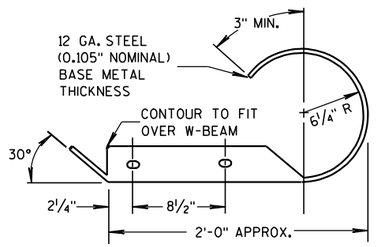
ANCHOR BRAKET BOLTS ARE A ⅝" DIAMETER X 1½" LONG HEAVY HEX HEAD BOLT. AN ANCHOR BRAKET BOLT REQUIRES A ⅝" DIAMETER DH HEAVY HEX NUT AND A FLAT WASHER.

END SECTION BOLTS ARE A ⅝" DIAMETER X 1½" HEAVY HEX HEAD BOLT. AN END SECTION BOLT REQUIRES ⅝" DIAMETER DH HEAVY HEX NUT AND A ⅝" DIAMETER FLAT WASHER.

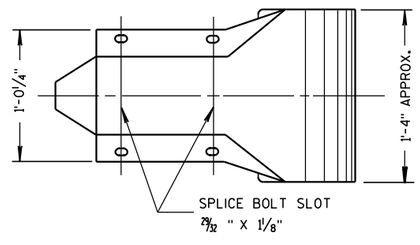
W-BEAM END SECTION ROUNDED HAS THE SAME MATERIAL PROPERTIES AS STANDARD STEEL RAIL.

(A) TOP OF FOUNDATION TUBE SHALL BE NO MORE THAN 3" ABOVE FINISHED GROUND.

(B) FOR NEW CONSTRUCTION TOP OF RAIL IS 31" ± 1".
FOR EXISTING INSTALLATIONS TOP OF RAIL IS BETWEEN 27¾" TO 32" ± 1".



PLAN VIEW



FRONT VIEW

W BEAM END SECTION ROUNDED

MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL

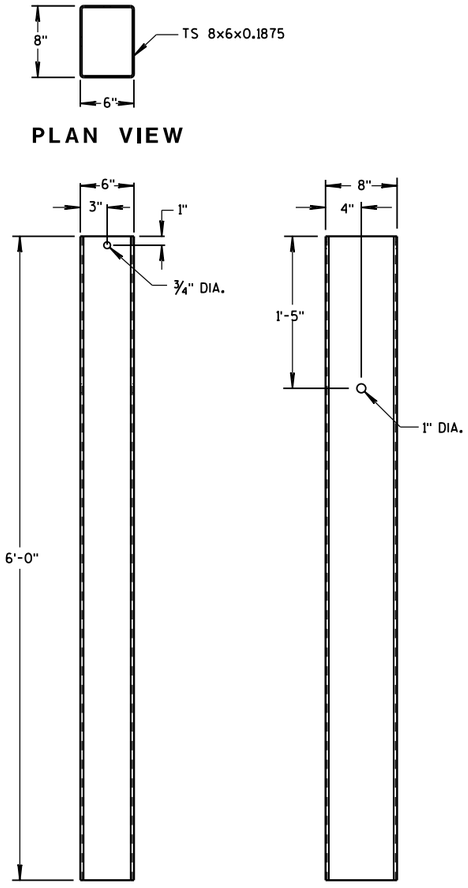
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

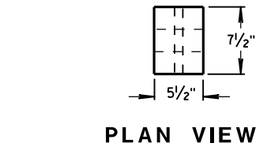
S.D.D. 14 B 47-1a

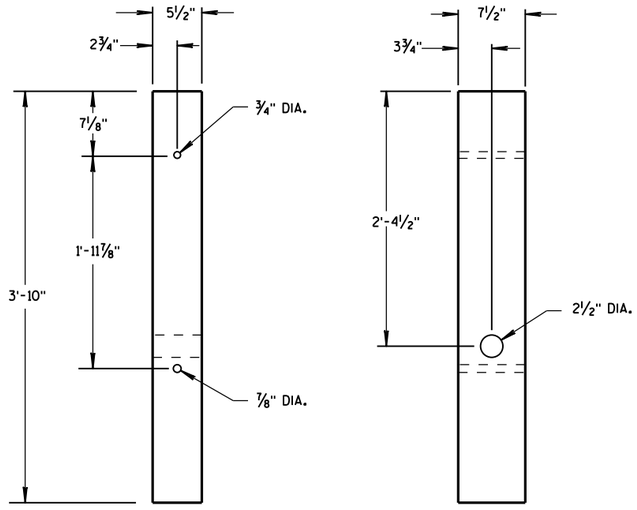
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S.D.D. 14 B 47-1a



FOUNDATION TUBE

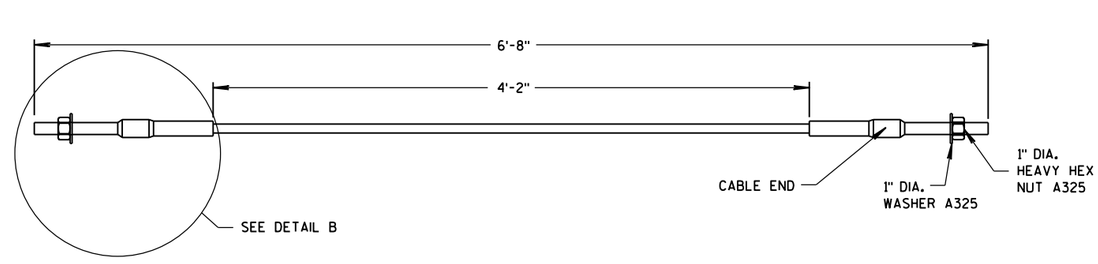




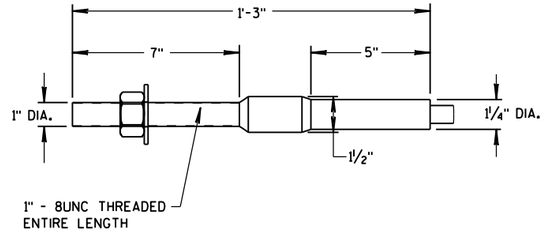
BREAKAWAY WOOD POST

GENERAL NOTES

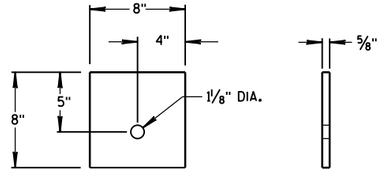
BCT ANCHOR CABLE IS A ⅜" DIAMETER 6X19 IWRC IPS GALVANIZED WIRE ROPE. THE SWAGED FITTINGS AND STUD ARE REQUIRED. THE END FITTING SHALL BE MACHINED FROM HOT-ROLLED CARBON STEEL CONFORMING TO ASTM A576 GRADE 1035 AND GALVANIZED ACCORDING TO ASTM A123. THE TREADED STUD SHOULD CONFORM TO ASTM A325 OR SAE GRADE 5. MINIMUM BREAKING STRENGTH OF WIRE ROPE IS 43,000 LB. WIRE ROPE IS TO BE TAUT.



BCT ANCHOR CABLE



DETAIL B



ANCHOR CABLE
BEARING PLATE

MIDWEST GUARDRAIL
SYSTEM (MGS) TYPE 2 TERMINAL

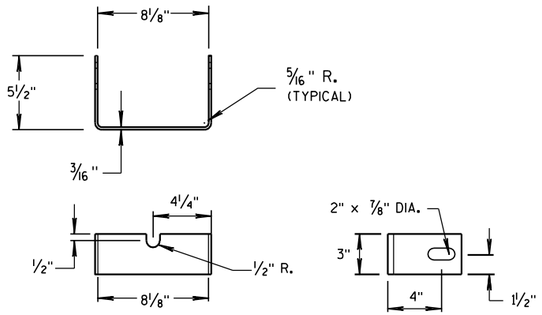
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI 300

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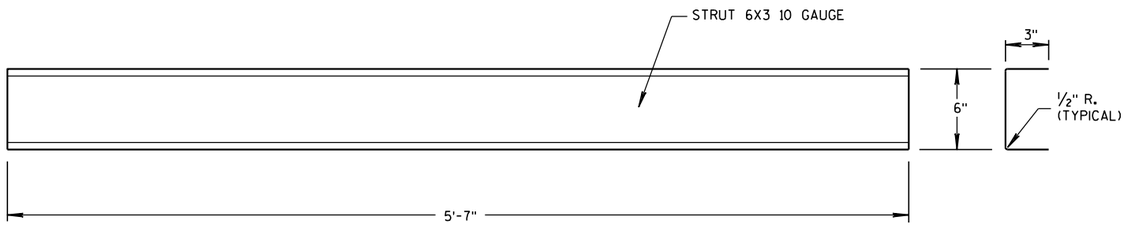
S.D.D. 14 B 47-1b

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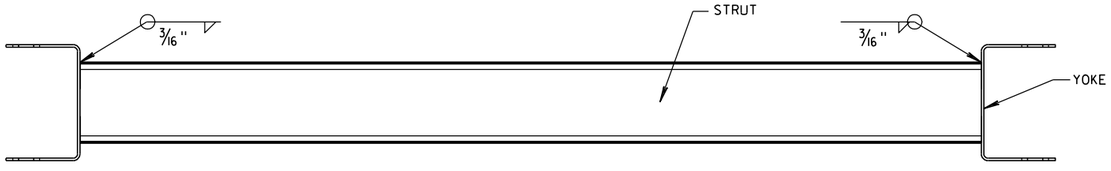
S.D.D. 14 B 47-1b



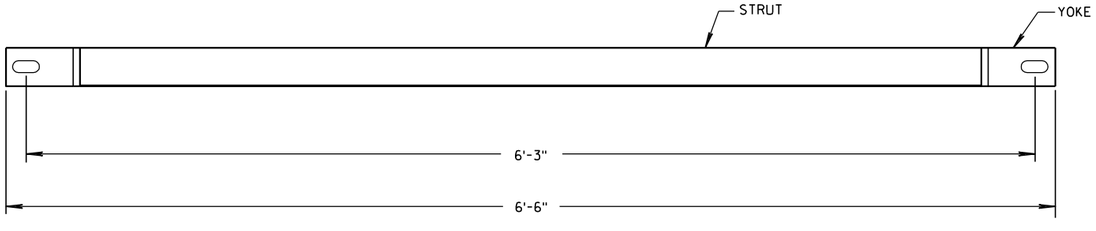
YOKE DETAIL



STRUT DETAIL

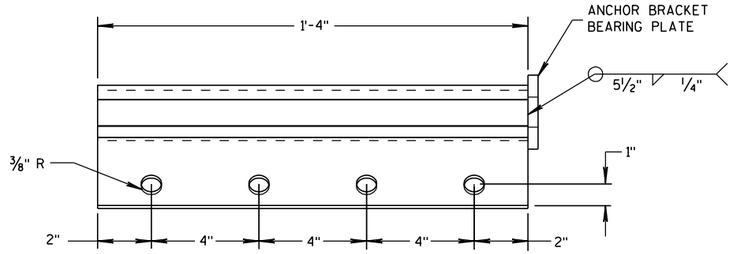


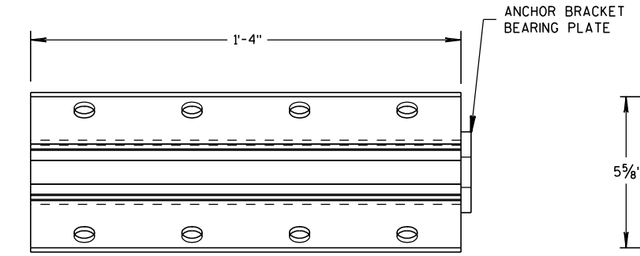
PLAN VIEW

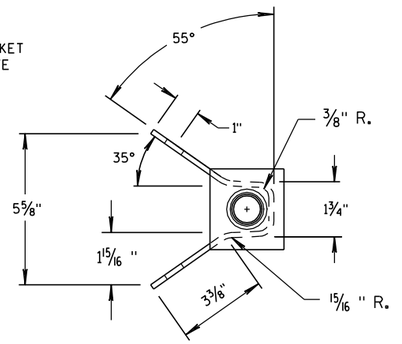


FRONT VIEW

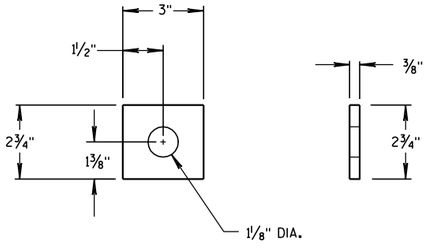
GROUND STRUT DETAIL







ANCHOR BRACKET



ANCHOR BRACKET BEARING PLATE

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S.D.D. 14 B 47-1c

S.D.D. 14 B 47-1c

MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL

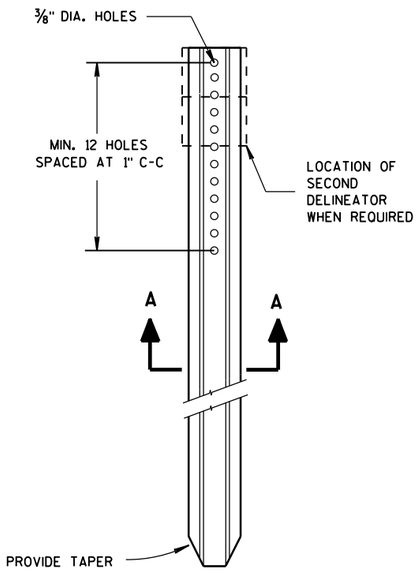
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

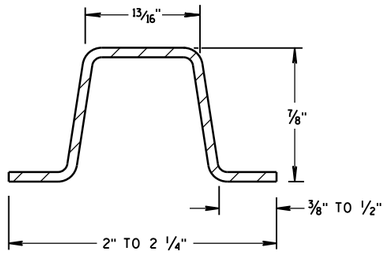
5/23/2011
DATE

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

FHWA

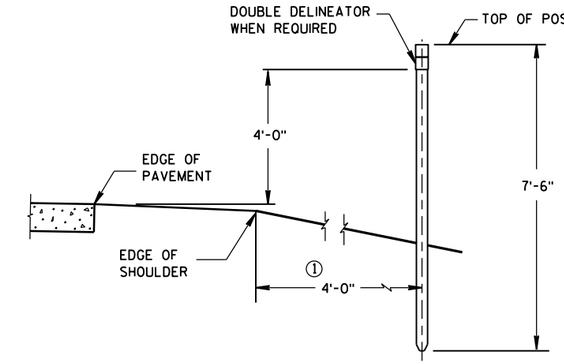


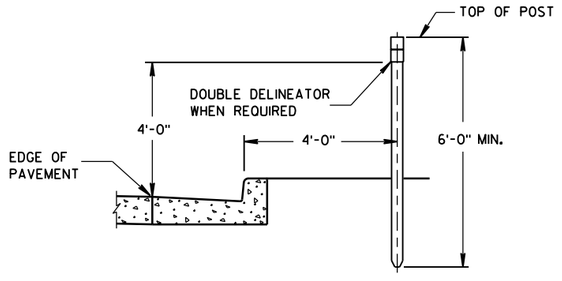
DELINEATOR POST



SECTION A-A

WEIGHT 1.12 LBS PER FT. ± 0.1 LB.



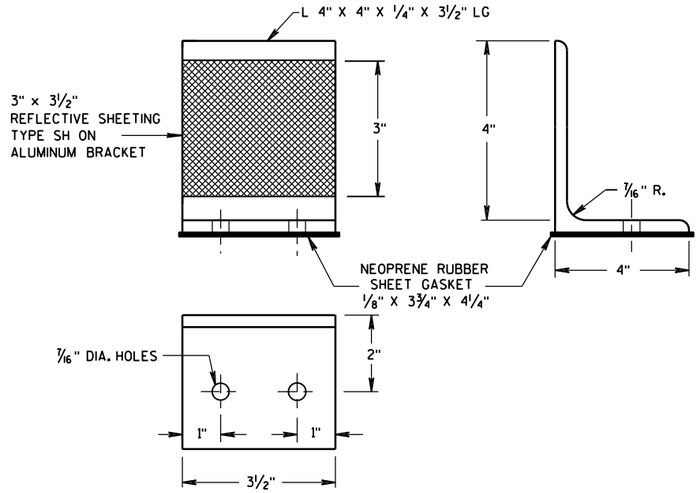


TYPICAL INSTALLATIONS OF DELINEATOR POSTS

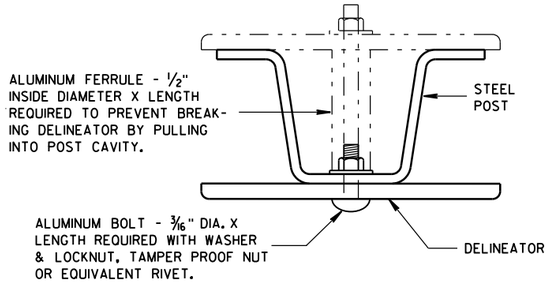
GENERAL NOTES

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

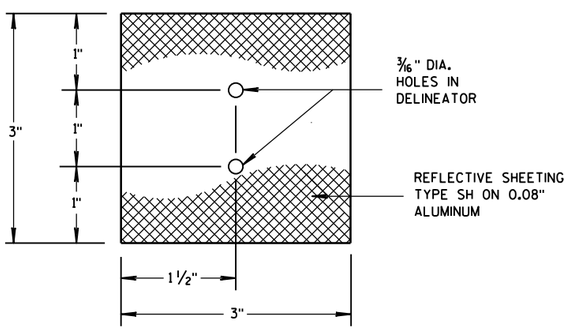
① DELINEATORS SHALL BE PLACED AT A CONSTANT DISTANCE FROM THE EDGE OF THE SHOULDER FOR THE LENGTH OF THE INSTALLATION.



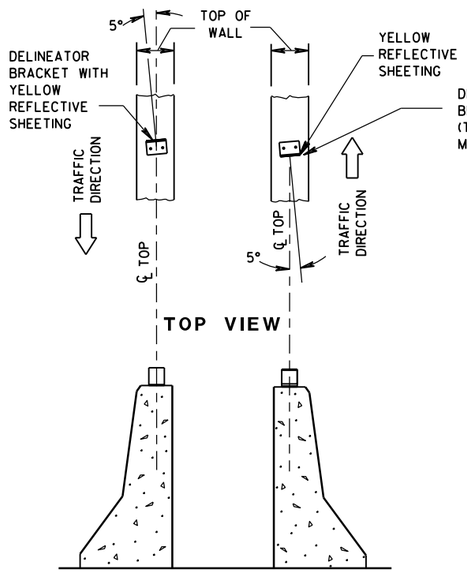
DELINEATOR BRACKET



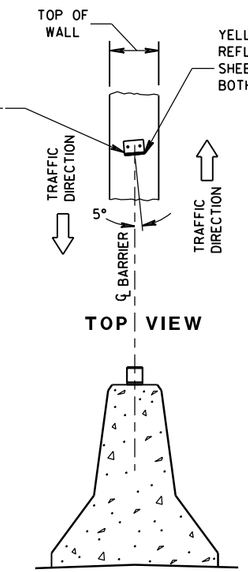
MOUNTING DETAIL FOR DELINEATOR



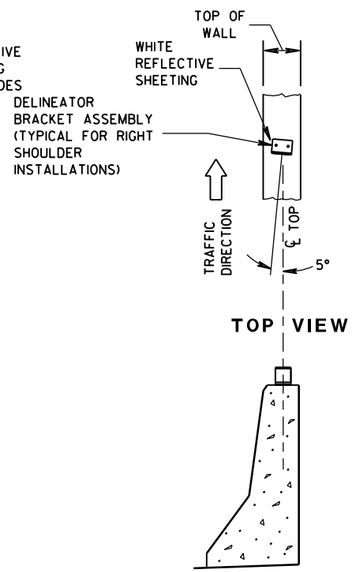
3"x 3" DELINEATOR



DOUBLE BARRIERS IN MEDIAN

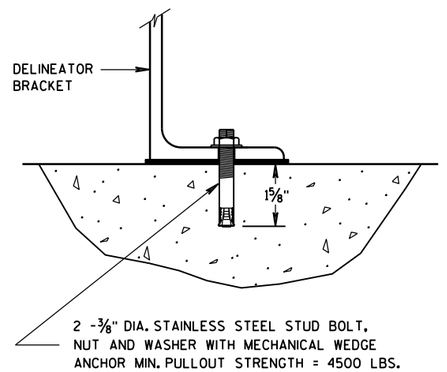


MEDIAN BARRIER



BARRIER LOCATED TO RT. OF TRAFFIC FLOW

LOCATION AND AIMING DETAILS FOR DELINEATOR BRACKETS MOUNTED ON CONCRETE BARRIERS



DELINEATOR BRACKET MOUNTING DETAIL

DELINEATOR POST, DELINEATOR, AND DELINEATOR BRACKET WITH REFLECTIVE SHEETING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

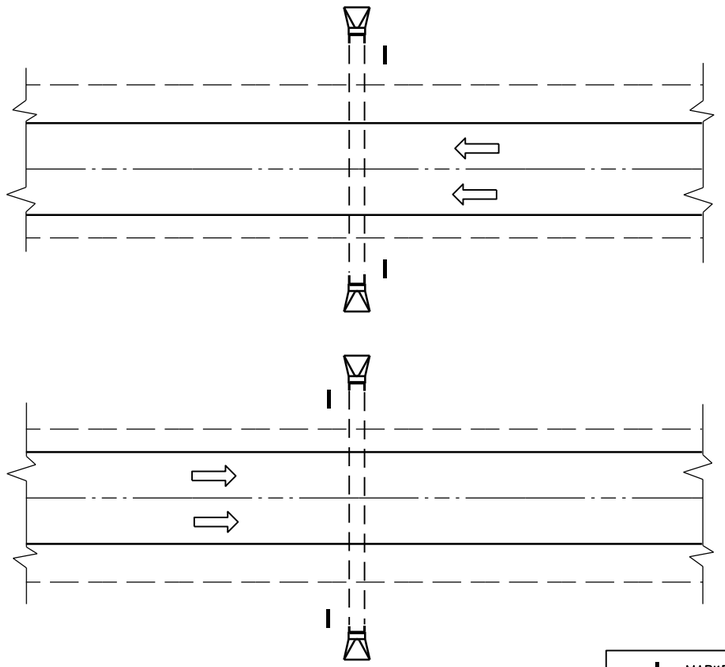
APPROVED
7/2013 — DATE
/S/ Travis Feltes — STATE TRAFFIC E
FHWA

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S.D.D. 15 A 2-8

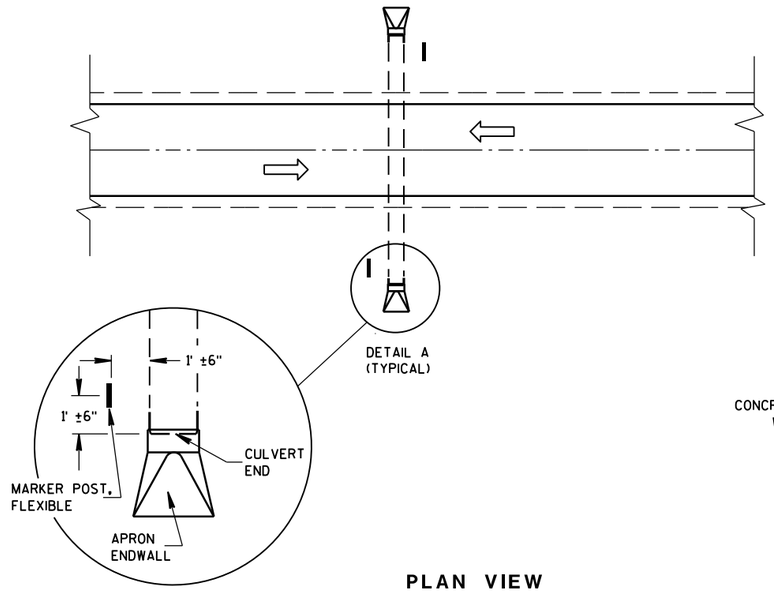
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S.D.D. 15 A 2-8



PLAN VIEW

DIVIDED HIGHWAY



DETAIL A
(TYPICAL)

PLAN VIEW

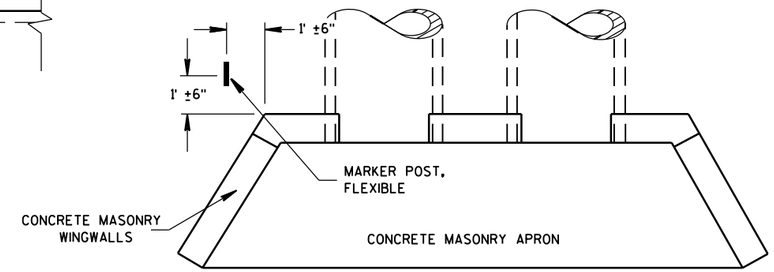
UNDIVIDED HIGHWAY

MARKER POST, FLEXIBLE

DIRECTION OF TRAFFIC FLOW

GENERAL NOTES

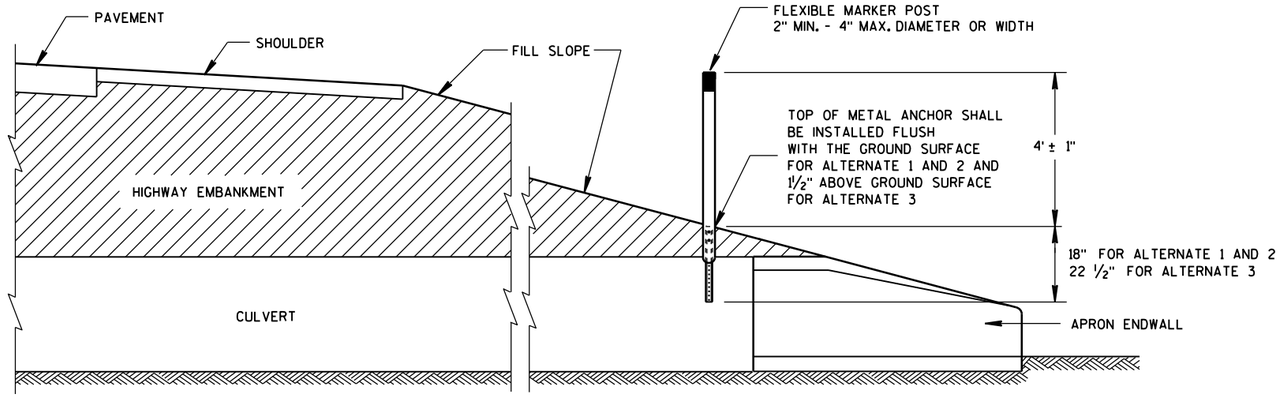
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.



PLAN VIEW

CONCRETE MASONRY ENDWALLS FOR CULVERT PIPE AND PIPE ARCH

FLEXIBLE MARKER POST LOCATION



CROSS SECTION

FLEXIBLE MARKER POST

FLEXIBLE MARKER POST
FOR CULVERT END

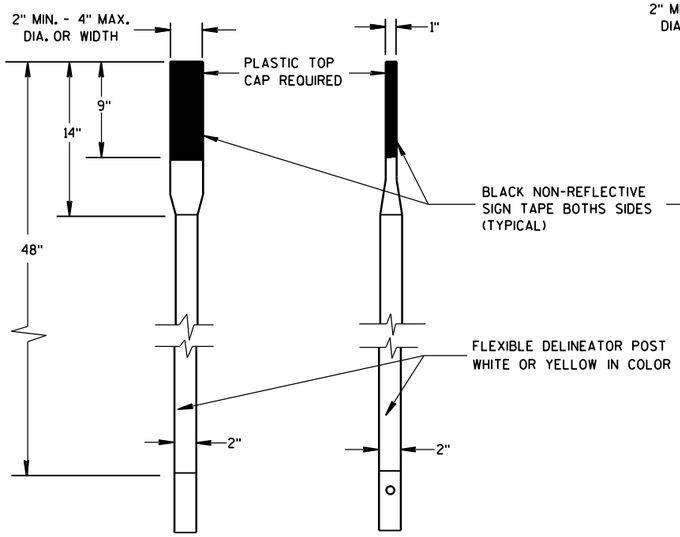
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

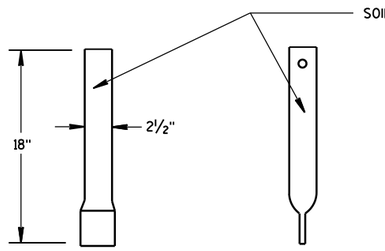
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S.D.D. 15 A 3-2a

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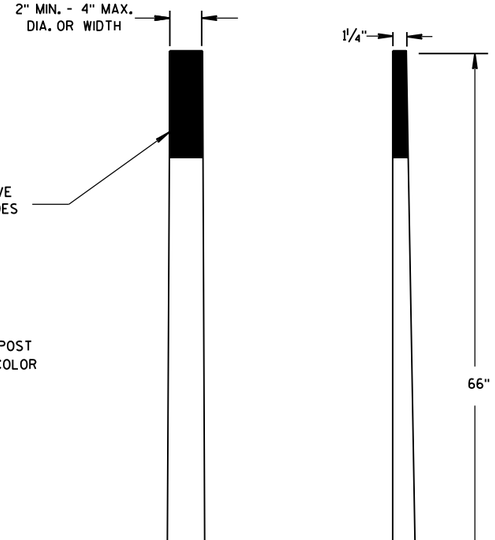
S.D.D. 15 A 3-2a





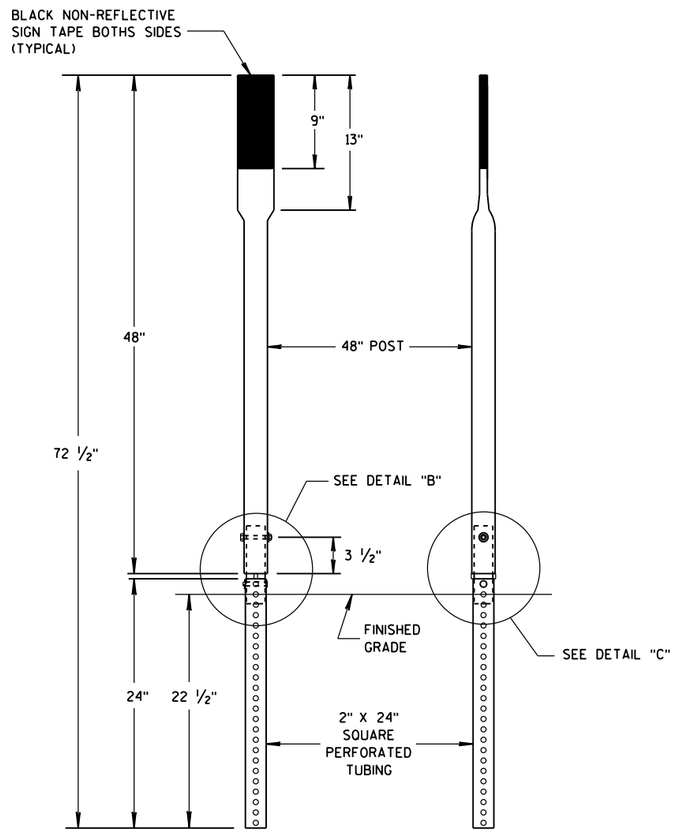
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

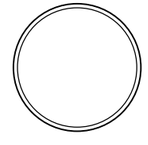
ALTERNATE 2



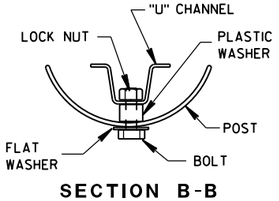
FRONT VIEW SIDE VIEW

ALTERNATE 3

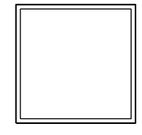
FLEXIBLE MARKER POSTS



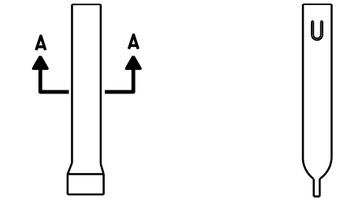
SECTION A-A



SECTION B-B

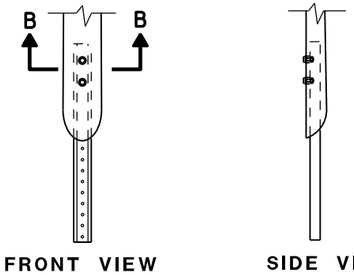


SECTION C-C



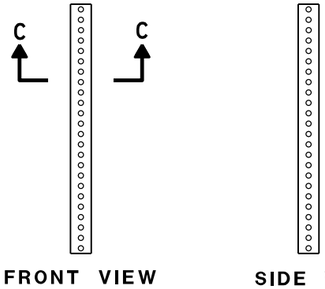
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

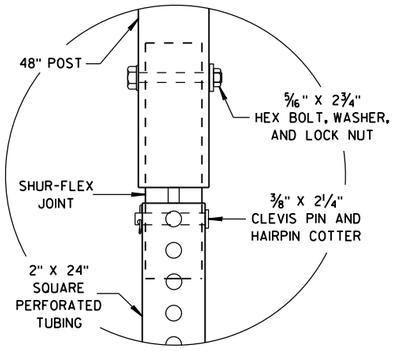
ALTERNATE 2



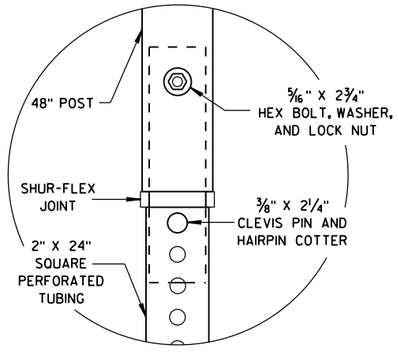
FRONT VIEW SIDE VIEW

ALTERNATE 3

FLEXIBLE MARKER POST ANCHORS



DETAIL B



DETAIL C

FLEXIBLE MARKER POST
FOR CULVERT END

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
10/1/2012
DATE
/S/ Travis Feltes
STATE TRAFFIC ENGINEER
FHWA

6

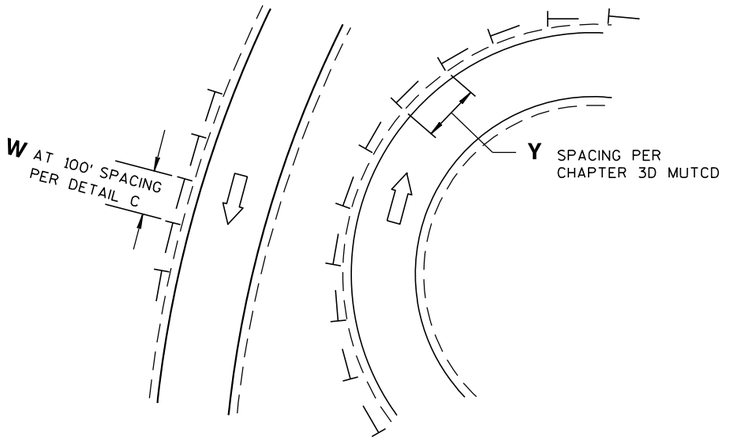
S.D.D. 15 A 3-2b

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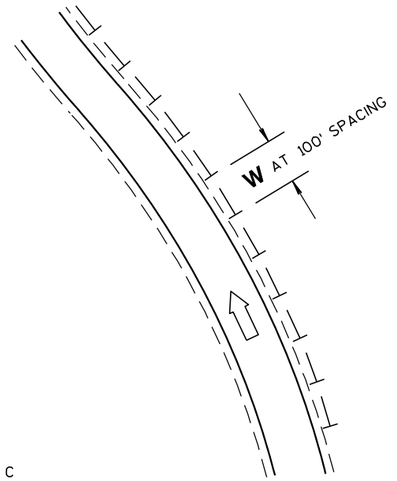
S.D.D. 15 A 3-2b

GENERAL NOTES

* USE DOUBLE DELINEATOR ALONG ACCELERATION-DECELERATION LANES AND TAPERS. USE SINGLE DELINEATOR WHEN RAMP PAVEMENT IS FULL WIDTH.



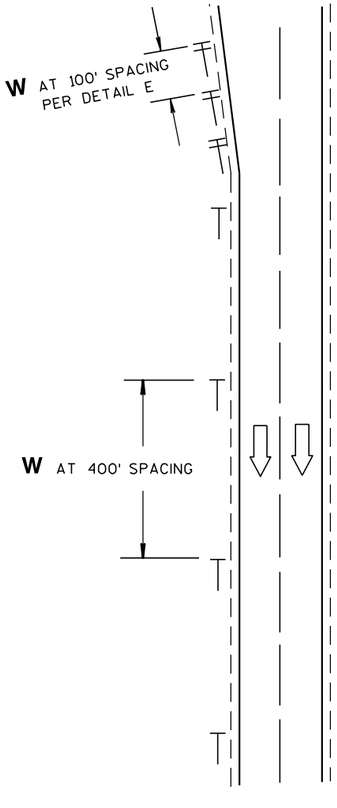
DETAIL A
DELINEATOR LAYOUT AT CURVED RAMP



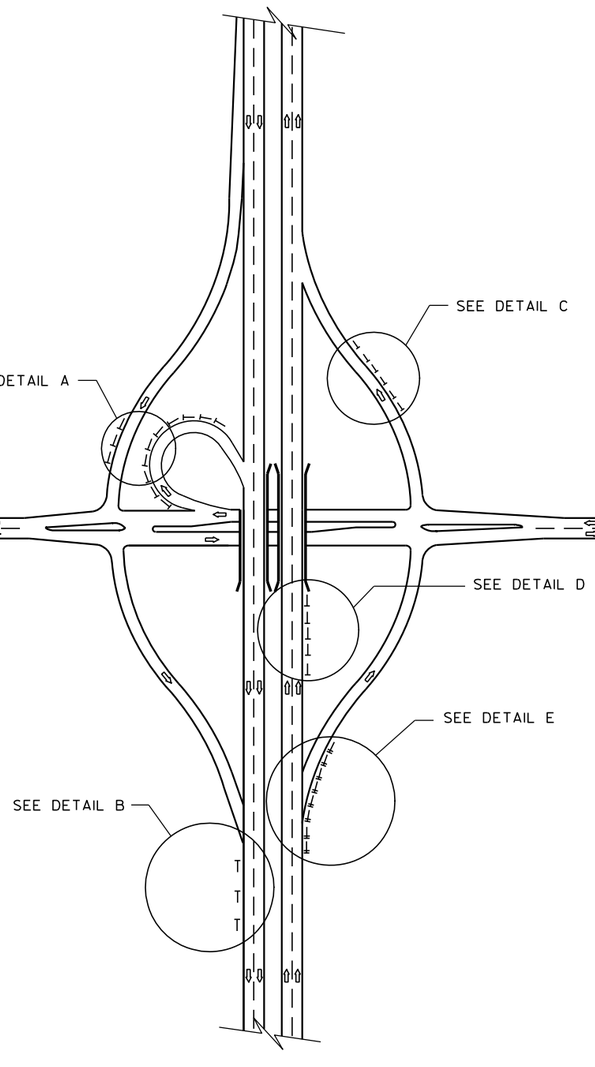
DETAIL C
DELINEATOR LAYOUT ALONG RAMP

LEGEND

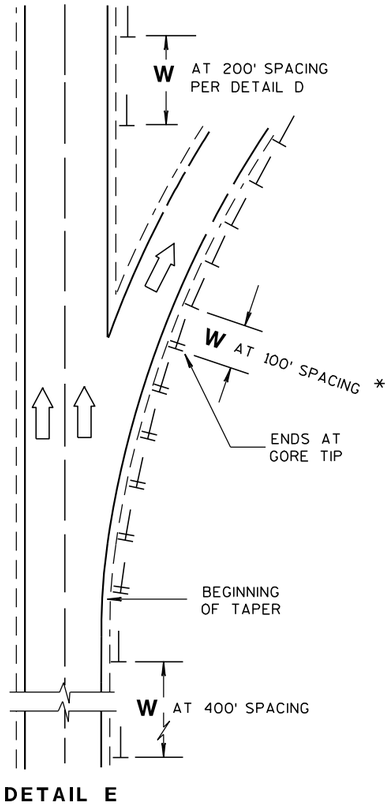
- DIRECTION OF TRAFFIC FLOW
- SINGLE DELINEATOR
- DOUBLE DELINEATOR
- W — WHITE
- Y — YELLOW



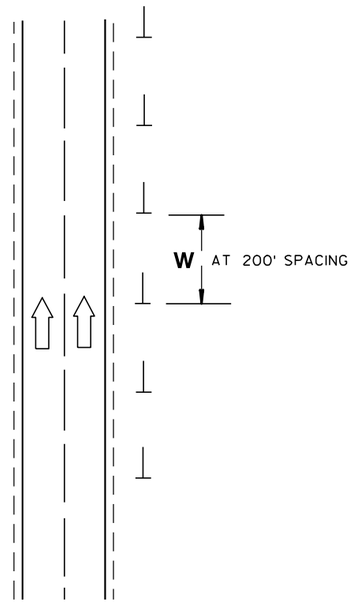
DETAIL B
DELINEATOR LAYOUT ALONG MAINLINE



DELINEATOR LAYOUT



DETAIL E
DELINEATOR LAYOUT FOR ACCELERATION - DECELERATION LANES AND TAPERS AT RAMPS



DETAIL D
DELINEATOR LAYOUT BETWEEN INTERCHANGE RAMPS

DELINEATOR LAYOUT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

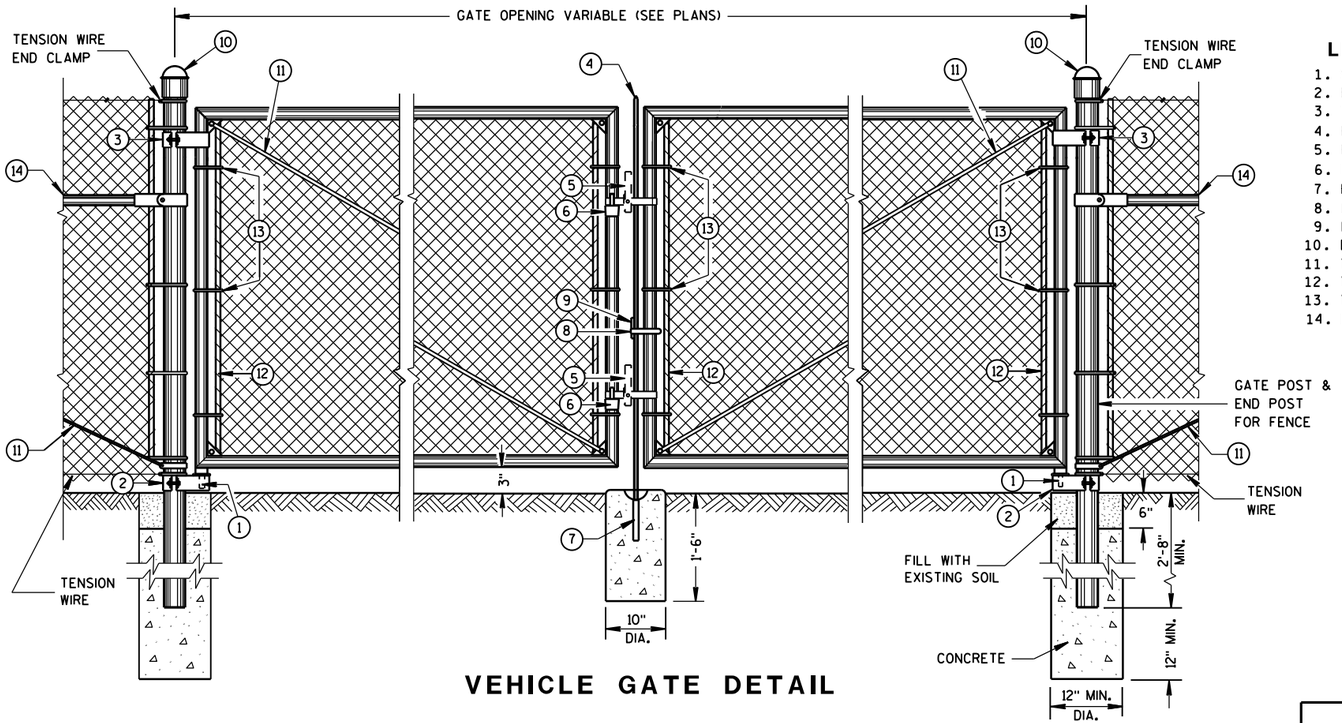
APPROVED
2/5/09 DATE
/S/ Thomas N. Nothdurft STATE TRAFFIC ENGINEER
FHWA

6

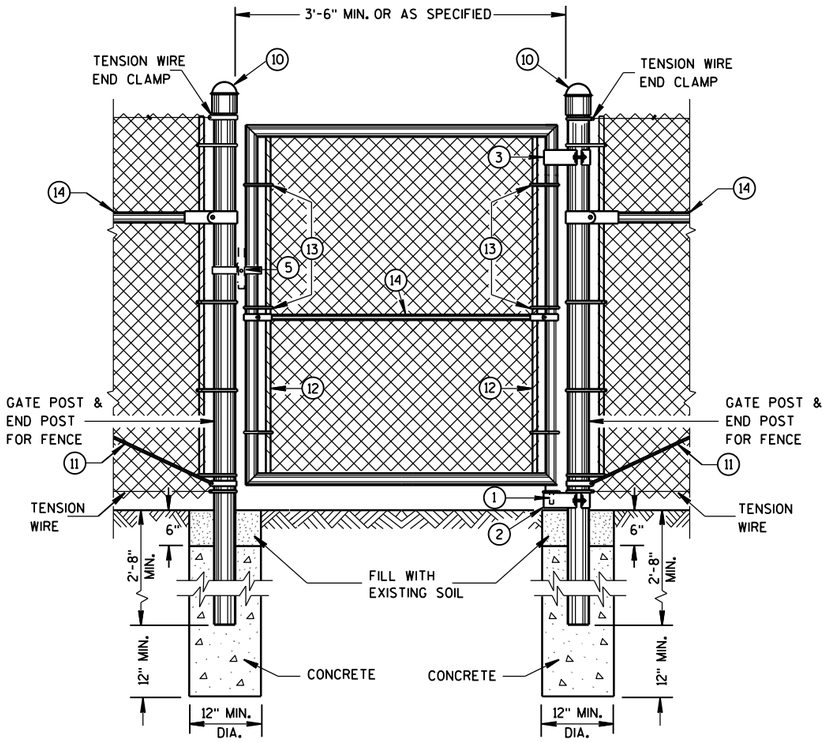
S.D.D. 15 A 6-2

6

S.D.D. 15 A 6-2



VEHICLE GATE DETAIL



PEDESTRIAN GATE DETAIL

LEGEND

1. STRAIGHT PLUG
2. BOTTOM HINGE
3. TOP HINGE
4. PLUNGER ROD
5. FULCRUM LATCH
6. FORK CATCH *
7. PLUNGER ROD CATCH
8. LOCK KEEPER GUIDE
9. LOCK KEEPER
10. DOME TOPS
11. TRUSS RODS
12. TENSION BAR
13. TENSION BANDS
14. BRACE RAIL

*NOT REQUIRED ON SINGLE SWING PEDESTRIAN GATE

GENERAL NOTES

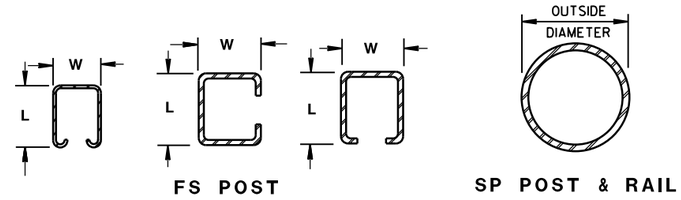
FENCE POSTS INSTALLED ON CONCRETE WALLS SHALL BE ANCHORED INTO EMBEDDED METAL SLEEVES OR CORED HOLE BY FILLING THE ANNULAR SPACE WITH PEA GRAVEL FOLLOWED BY AN EPOXY RESIN ADHESIVE. THE EPOXY RESIN ADHESIVE SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M 235, CLASS A, B OR C.

USE FENCE FABRIC KNUCKLED AT BOTH SELVAGES.

FOR LEAF GATES GREATER THAN 8 FEET WIDE, INSTALL INTERIOR VERTICAL BRACE RAIL AT 8 FOOT INTERVALS.

FOR FABRIC HEIGHTS GREATER THAN 8 FEET, INSTALL INTERIOR HORIZONTAL BRACE RAILS TO LEAF GATE.

MAXIMUM SAG FOR OUTER GATE MEMBER SHALL NOT EXCEED THE GREATER OF 1% OF THE LEAF GATE WIDTH OR 2 INCHES.



FS POST

SP POST & RAIL

CROSS SECTIONS OF POSTS AND RAILS

REQUIRED FENCE POST SIZES

USE	FABRIC HEIGHTS FEET	POST TYPE
TERMINAL POSTS **	LESS THAN OR EQUAL TO 6 FT.	SP3
	GREATER THAN OR EQUAL TO 6 FT.	SP4
LINE POSTS	LESS THAN OR EQUAL TO 6 FT.	SP2
	LESS THAN OR EQUAL TO 8 FT.	SP3
	GREATER THAN OR EQUAL TO 8 FT.	SP4
	LESS THAN OR EQUAL TO 8 FT.	FS2 OR FS2†
	GREATER THAN OR EQUAL TO 8 FT.	FS3

BRACE RAIL TYPES

USE		TYPE
BRACE RAIL		SP1 OR FS1

** INCLUDES END, CORNER, ANGLE, INTERSECTION AND INTERMEDIATE BRACED POSTS

SHAPE, SIZE AND WEIGHT REQUIREMENTS FOR FORMED STEEL FENCE POST

POST TYPE	LENGTH (L) INCH	WIDTH (W) INCH	WEIGHT LBS/FT
FS1	1.625	1.25	1.35
FS2†	1.875	1.625	1.850
FS2	1.875	1.625	2.400
FS3	2.250	1.700	2.780

REQUIRED POST SIZE FOR GATES

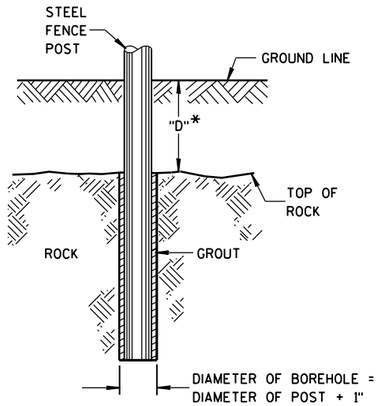
USE	LEAF WIDTHS FEET	POST TYPE
GATES	LESS THAN OR EQUAL TO 6 FT.	SP4
	LESS THAN OR EQUAL TO 13 FT.	SP5
	LESS THAN OR EQUAL TO 18 FT.	SP6
	LESS THAN OR EQUAL TO 23 FT.	SP7

SHAPE, SIZE AND WEIGHT REQUIREMENTS FOR ROUND STEEL FENCE POST

POST TYPE	OUTSIDE DIMENSION INCH	WALL THICKNESS INCH	WEIGHT LBS/FT
SP1	1.660	0.140	2.270
SP2	1.900	0.145	2.720
SP3	2.375	0.154	3.650
SP4	2.875	0.203	5.800
SP5	4.000	0.226	9.120
SP6	6.625	0.280	18.990
SP7	8.625	0.322	28.580

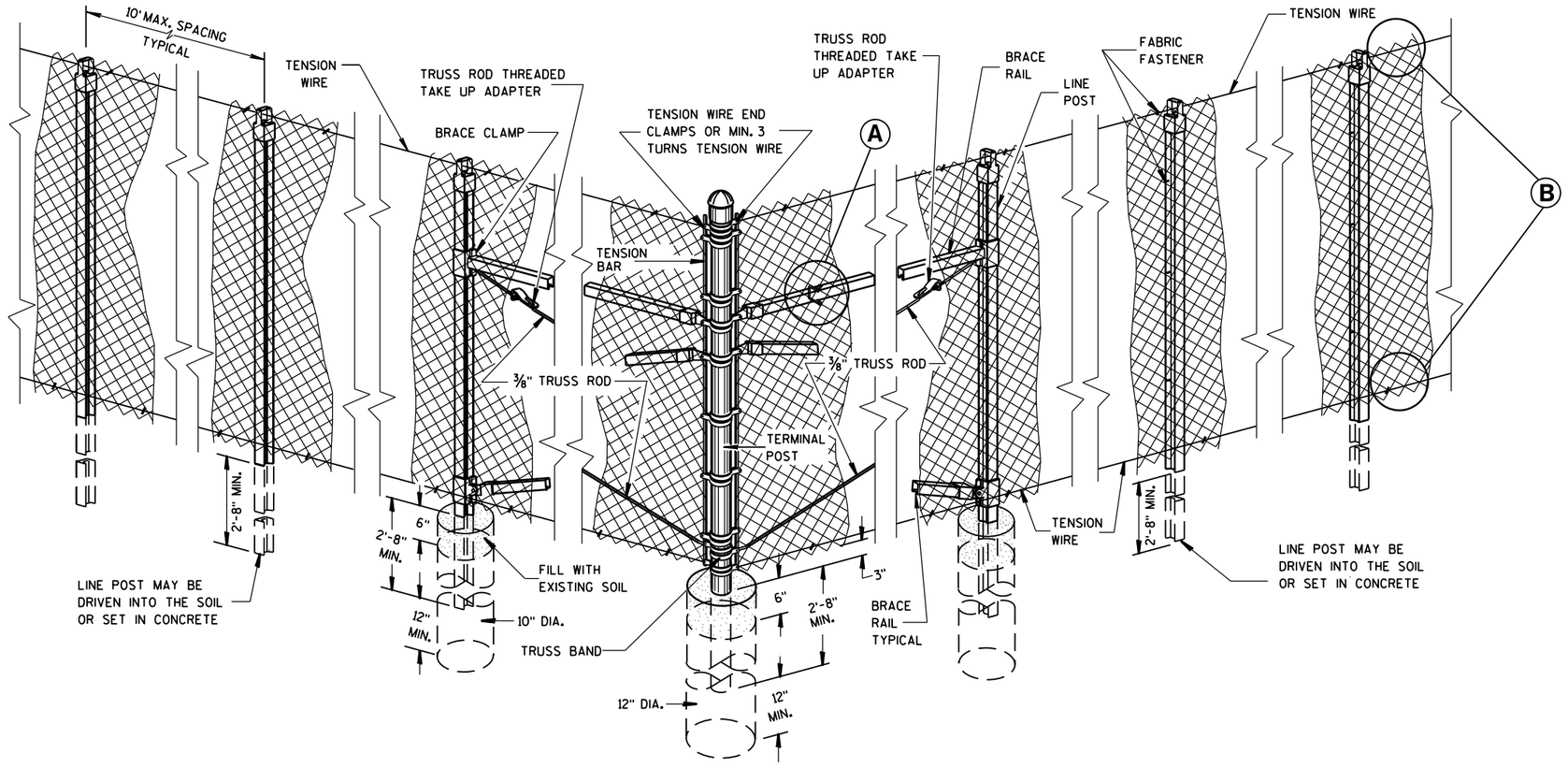
FENCE CHAIN LINK

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

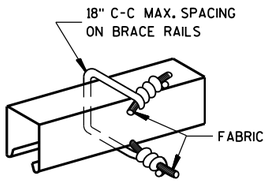


*IF "D" IS LESS THAN 2'-6", DRILL ROCK AND INSTALL GROUT

ROCK INSTALLATION OF LINE POST



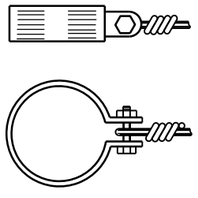
END, CORNER, ANGLE INTERSECTION & INTERMEDIATE BRACED POSTS



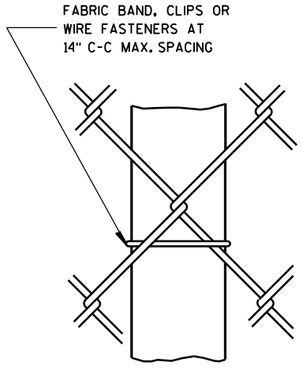
BRACE RAIL

FABRIC FASTENER

Ⓐ



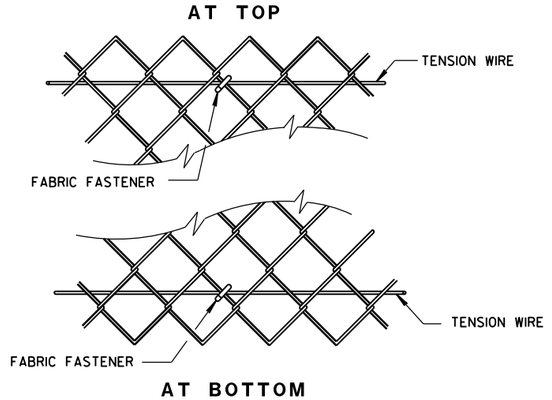
TENSION WIRE END CLAMP



LINE POST

FABRIC FASTENER

AT TOP



AT BOTTOM

SELVAGES

Ⓑ

FENCE CHAIN LINK

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

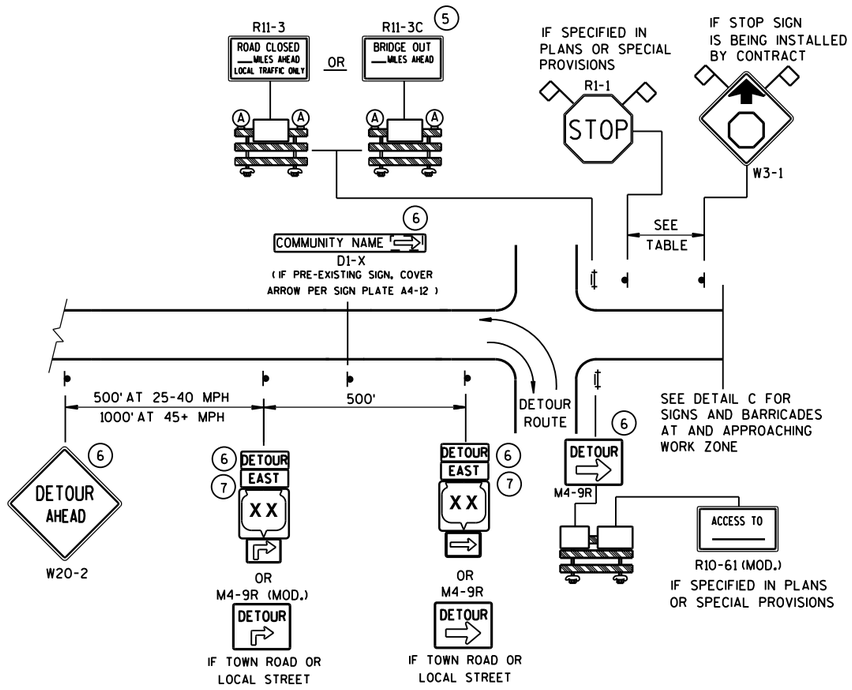
APPROVED
7/16/2013
DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

6

S.D.D. 15 B 3-13b

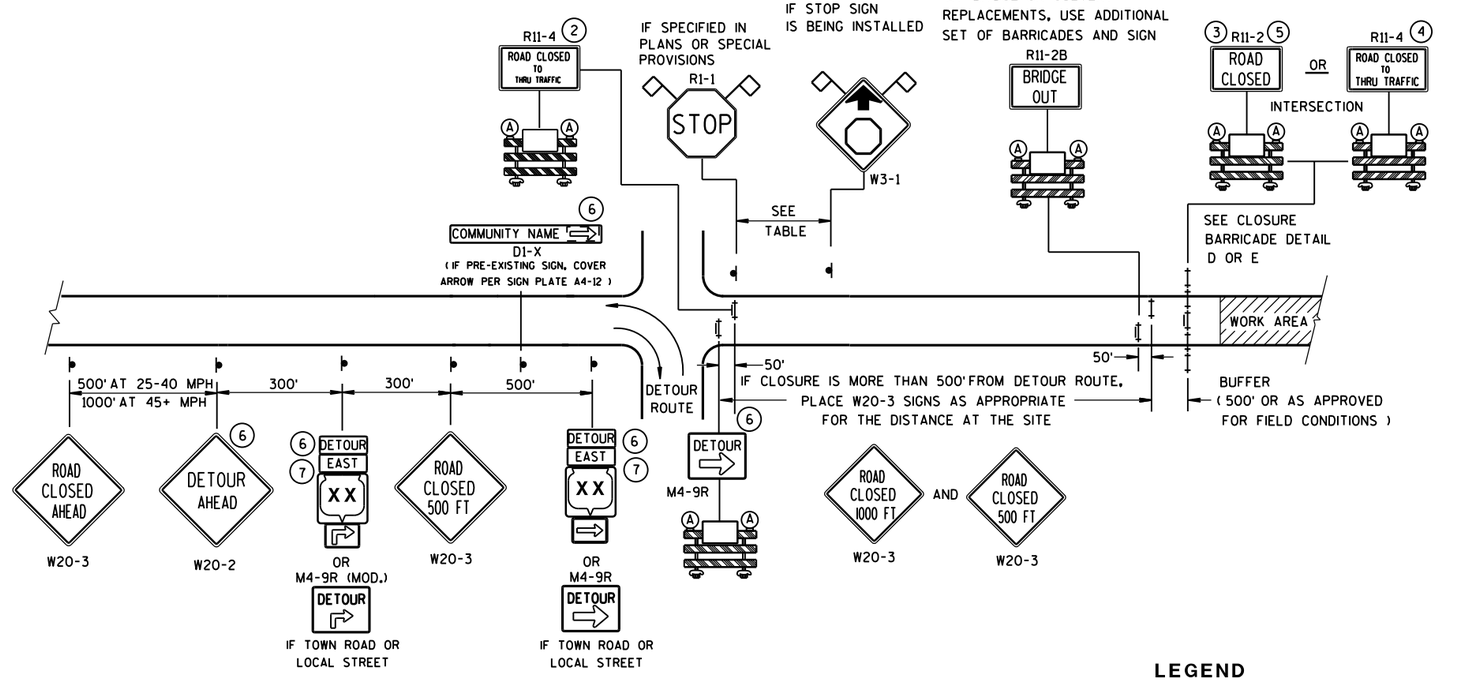
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S.D.D. 15 B 3-13b



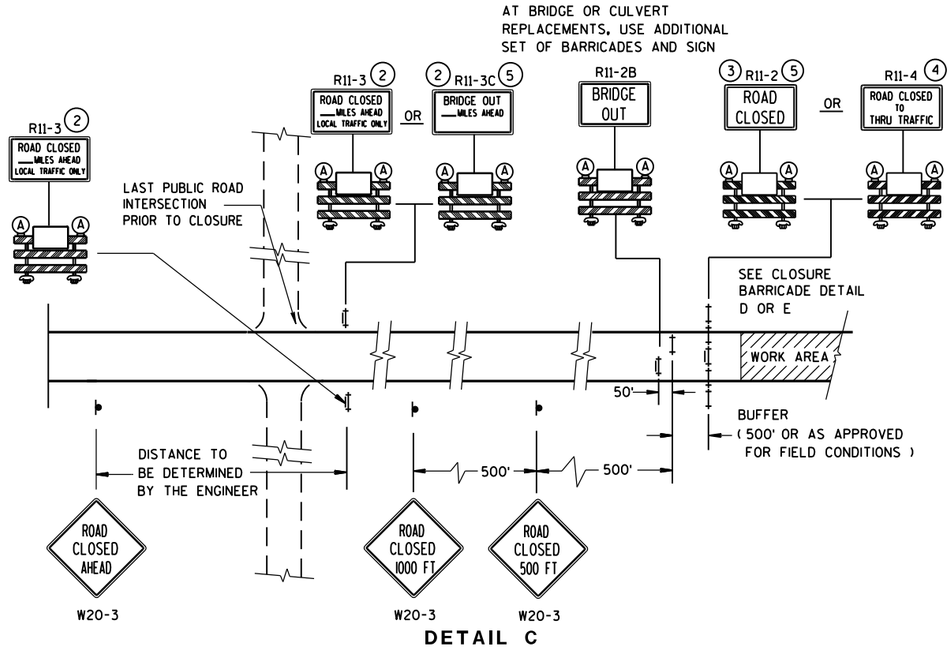
DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR

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

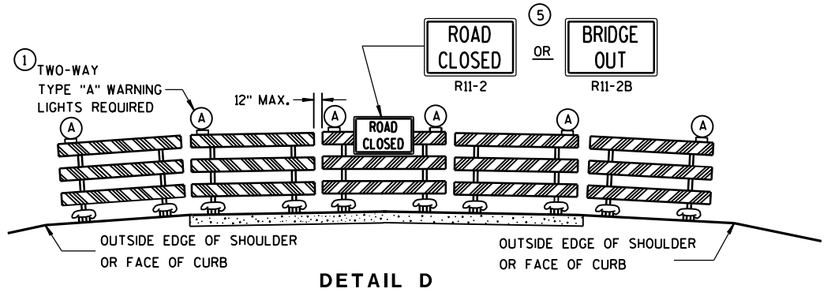
8/2013 DATE

/S/ Travis Feltes
STATE TRAFFIC ENGINEER

FHWA

6

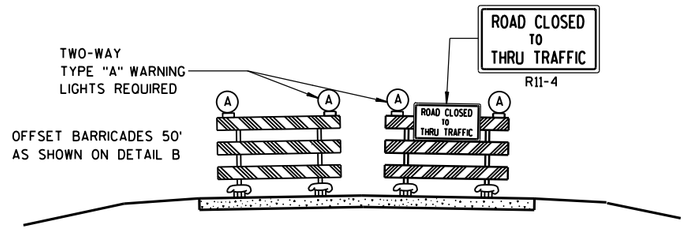
S.D.D. 15 C 2-5a



DETAIL D

ROAD CLOSURE BARRICADE DETAIL

APPROACH VIEW



DETAIL E

LANE CLOSURE BARRICADE DETAIL

APPROACH VIEW

SEE SDD 15C2-SHEET "**a**" FOR LEGEND

GENERAL NOTES

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

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

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

BARRICADES THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY RE-ESTABLISHED UPON COMPLETION OF THE OPERATION OR, FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

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

ALL TYPE III BARRICADES SHALL HAVE RAILS REFLECTORIZED ON BOTH FACES. STRIPES SHALL BE PROPERLY SLOPED DOWN TOWARD THE TRAFFIC SIDE OR AS SHOWN IN THE ROAD CLOSURE BARRICADE DETAIL D FOR FULL ROAD CLOSURES.

TYPE "A" LOW-INTENSITY FLASHING WARNING LIGHTS SHALL BE VISIBLE ON BOTH SIDES OF THE BARRICADE.

THE R11-2, R11-3, M4-9, R11-4 AND R10-61 SIGNS PLACED ON BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE OR BOTTOM RAILS.

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

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:
- R11-2 SHALL BE 48" X 30".
- R11-3, R11-4 AND R10-61 SHALL BE 60" X 30".
- M4-9 SHALL BE 30" X 24".
- M3-X SHALL BE 24" X 12". (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS.)
- M4-8 SHALL BE 24" X 12". (30" X 15" IF NEEDED TO MATCH EXISTING SIGNS.)
- M1-4, M1-5A, AND M1-6 SHALL BE 24" X 24". (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS.)
- M05-1 AND M06-1 SHALL BE 21" X 21". (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS.)
- D1-X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.
- R1-1 SHALL BE 36" X 36".

(1) TWO WARNING LIGHTS SHALL BE PROVIDED ON THE CENTER BARRICADE AND A MINIMUM OF ONE WARNING LIGHT SHALL BE PROVIDED ON EACH OF THE OTHER BARRICADES WITHIN THE ROADWAY LIMITS. SPACING OF THE WARNING LIGHTS SHALL BE UNIFORM TO THE EDGE OF ROADWAY AS SHOWN (APPROX. 8-FOOT LIGHT SPACING).

(2) THESE SIGNS AND BARRICADES ARE NOT REQUIRED IF ROAD CLOSURE BEGINS AT INTERSECTION.

(3) FOR ROAD CLOSURE WITHOUT LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL D.

(4) FOR ROAD CLOSURE WITH LOCAL ACCESS TO PROJECT, SEE LANE CLOSURE BARRICADE DETAIL E.

(5) FOR BRIDGE OR CULVERT REPLACEMENTS, SUBSTITUTE "BRIDGE OUT" INSTEAD OF "ROAD CLOSED" ON R11-2 AND R11-3 SIGNS.

(6) INSTALL DETOUR AND COMMUNITY GUIDE SIGNS AND ARROWS ONLY IF SPECIFIED IN THE CONTRACT. IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. MODIFY EXISTING SIGNS WHERE POSSIBLE. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. IF DETOUR SIGNS ARE BEING INSTALLED BY OTHERS, PLACE THE CONTRACTED TRAFFIC CONTROL SIGNS TO ALLOW FOR PLACEMENT OF ALL WARNING, DETOUR AND GUIDE SIGNS AS SHOWN.

(7) "EAST" CARDINAL DIRECTION MARKERS AND RIGHT TURN ARROWS ARE SHOWN. USE OTHER CARDINAL DIRECTIONS AND ARROWS AS APPROPRIATE.

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

8/2013 DATE

/S/ Travis Feltes
STATE TRAFFIC ENGINEER

FHWA

6

S.D.D. 15 C 2-5b

THIS DRAWING PROVIDES GENERAL GUIDANCE ON TYPICAL DETOUR SIGN LAYOUT AND SPACING. SEE PROJECT DETOUR SIGNING SHEETS FOR SPECIFIC DETAILS FOR EACH PROJECT.

GENERAL NOTES

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

IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. MODIFY EXISTING SIGNS WHERE POSSIBLE.

THE SPACING BETWEEN TRAFFIC CONTROL AND DETOUR SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

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

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

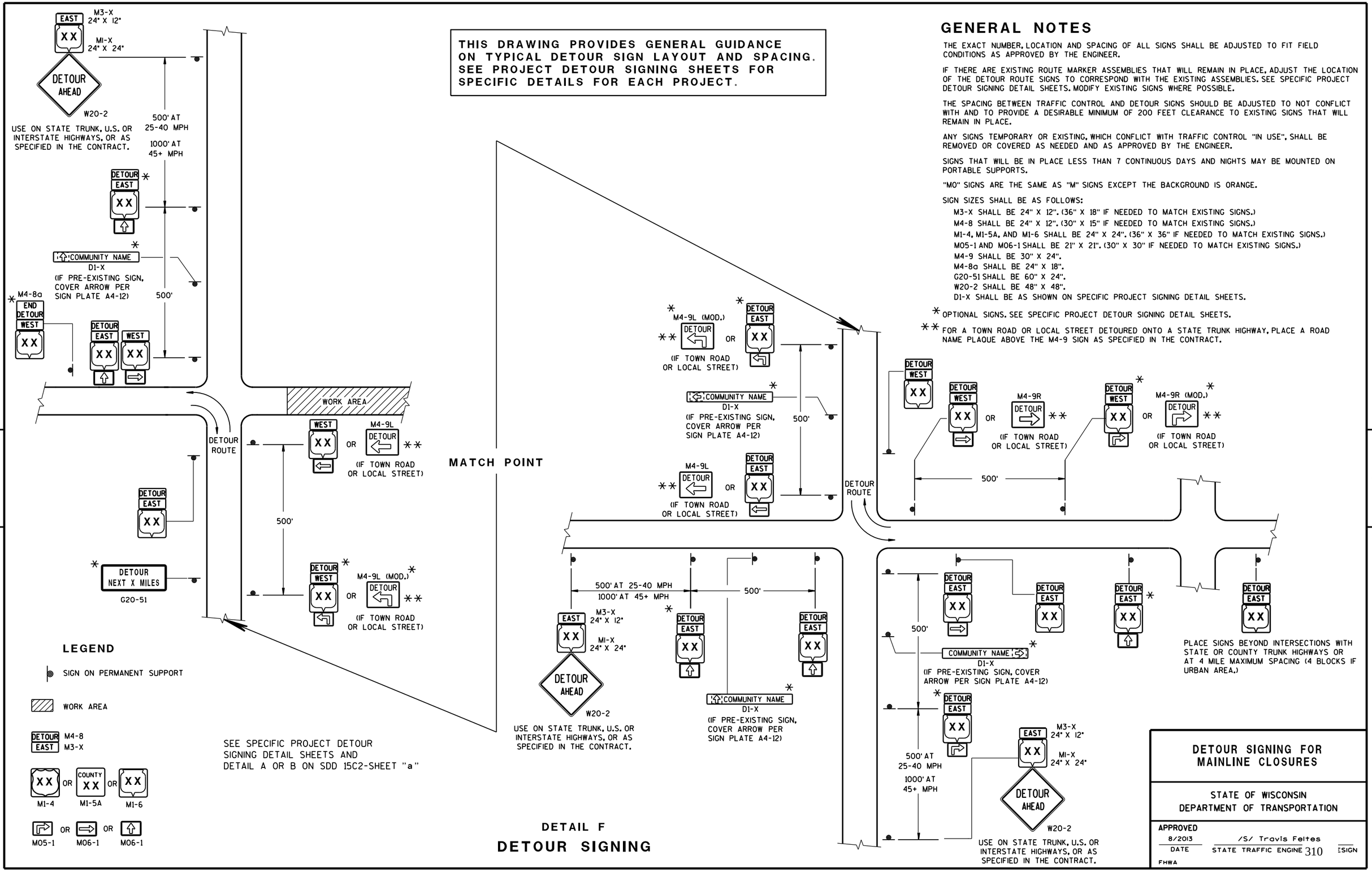
"MO" SIGNS ARE THE SAME AS "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

SIGN SIZES SHALL BE AS FOLLOWS:

- M3-X SHALL BE 24" X 12". (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS.)
- M4-8 SHALL BE 24" X 12". (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.)
- M4-9 SHALL BE 30" X 24".
- M4-8a SHALL BE 24" X 18".
- G20-51 SHALL BE 60" X 24".
- W20-2 SHALL BE 48" X 48".
- D1-X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.

* OPTIONAL SIGNS. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS.

** FOR A TOWN ROAD OR LOCAL STREET DETOURED ONTO A STATE TRUNK HIGHWAY, PLACE A ROAD NAME PLAQUE ABOVE THE M4-9 SIGN AS SPECIFIED IN THE CONTRACT.



LEGEND

- SIGN ON PERMANENT SUPPORT
- WORK AREA
- DETOUR EAST — M4-8 / M3-X
- XX OR COUNTY XX OR XX — M1-4 / M1-5A / M1-6
- MO5-1 OR MO6-1 OR MO6-1

SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS AND DETAIL A OR B ON SDD 15C2-SHEET "a"

DETAIL F

DETOUR SIGNING

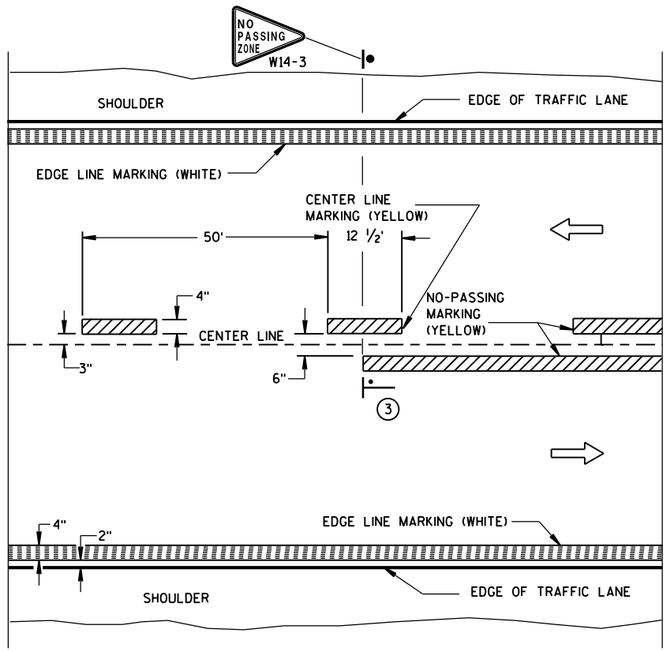
DETOUR SIGNING FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

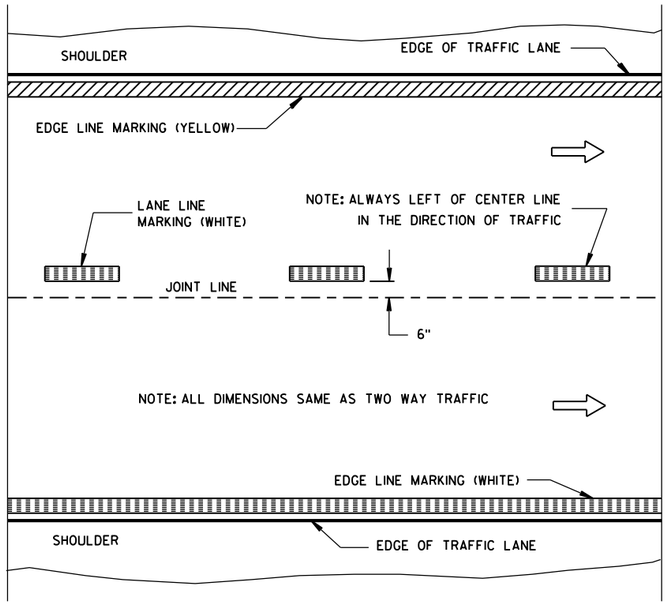
APPROVED
8/2013 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER

FHWA

S.D.D. 15 C 2-5c

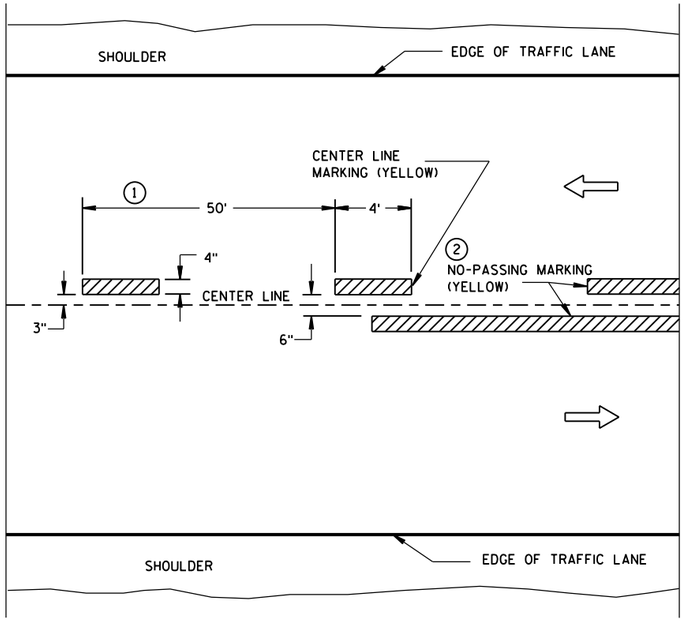


TWO WAY TRAFFIC

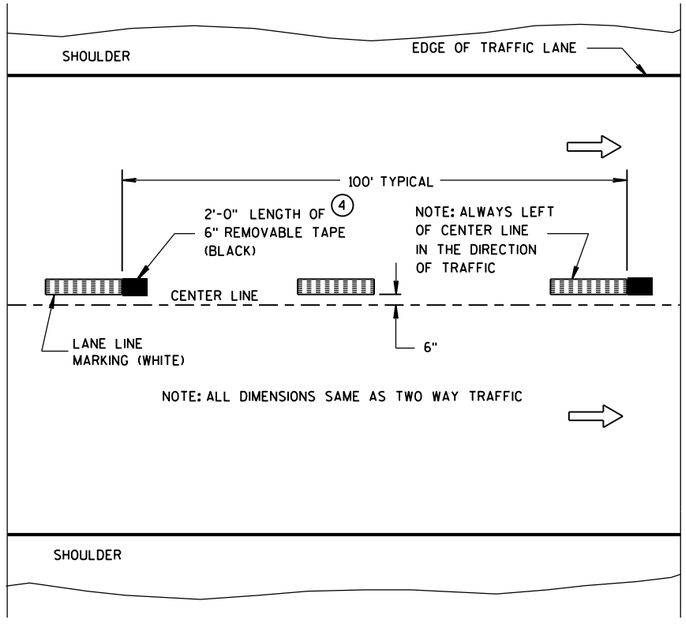


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY (INTERMEDIATE) PAVEMENT MARKING

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

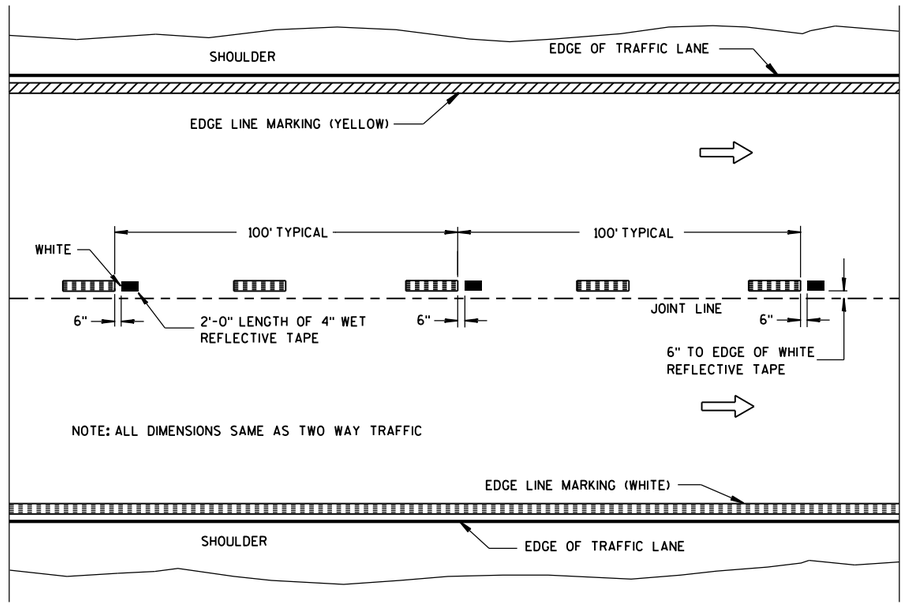
GENERAL NOTES

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

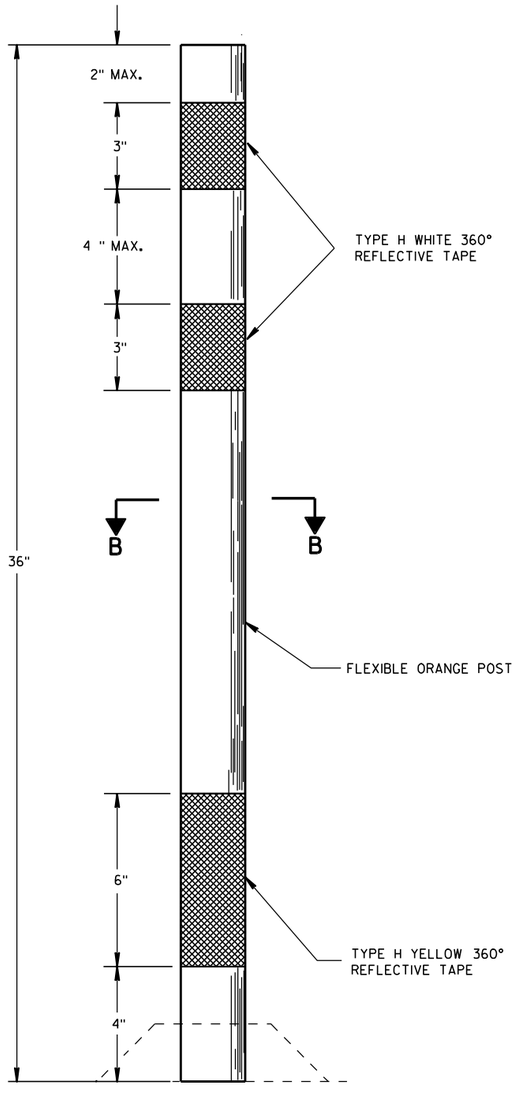
FHWA

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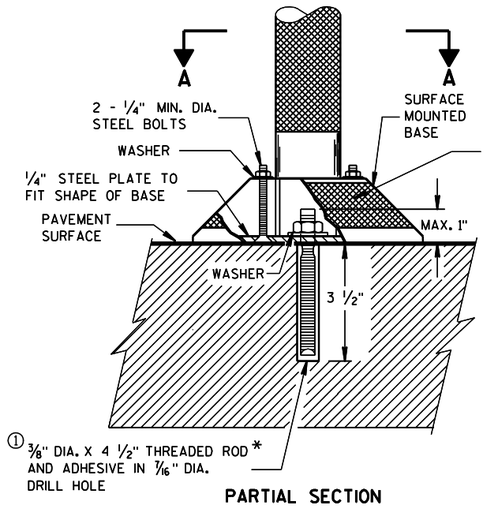
S.D.D. 15 C 8-16a

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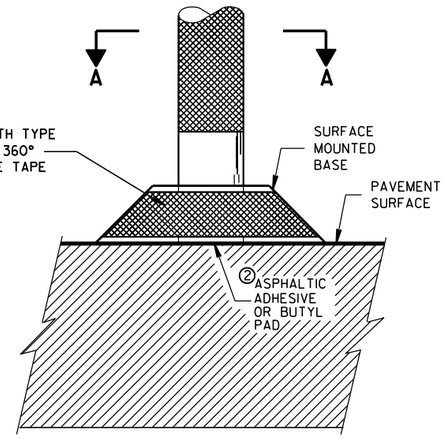
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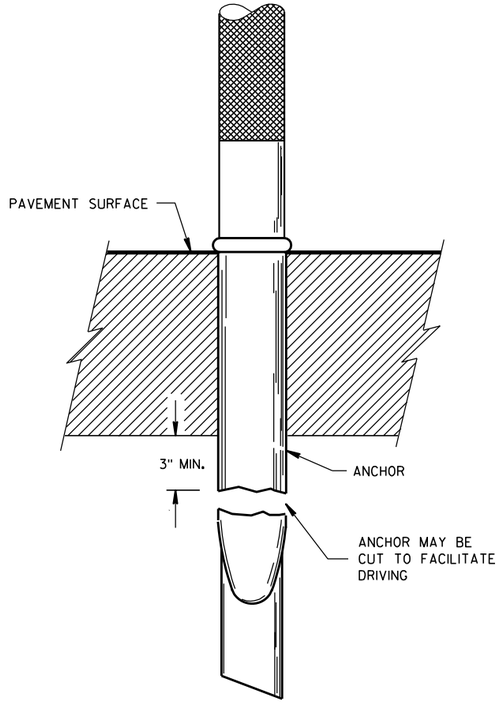
FLEXIBLE TUBULAR MARKER POST

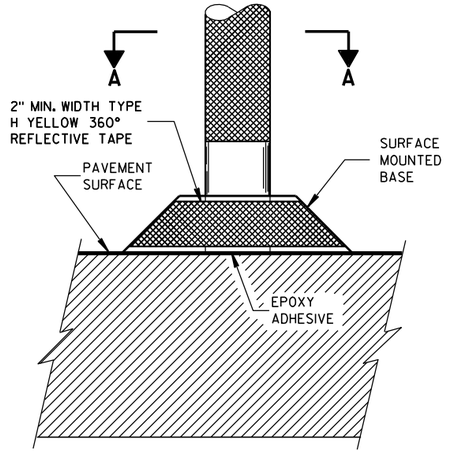


PARTIAL SECTION TO SHOW BOLTS



POST BASES ON NEW OR EXISTING PAVEMENT





POST ANCHOR AND BASE ON PAVEMENT WHICH WILL BE REMOVED

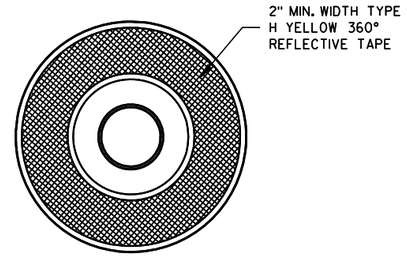
GENERAL NOTES

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

SURFACE MOUNTED BASES SHALL BE FURNISHED IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS TO BE COMPATIBLE WITH FLEXIBLE TUBULAR MARKER POSTS TO A SIZE AND SHAPE THAT WILL PROVIDE A STABLE POST FOUNDATION WHEN SECURED TO THE PAVEMENT.

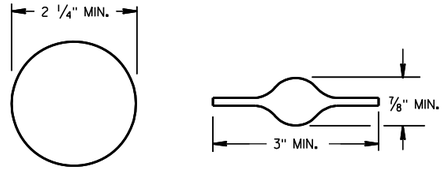
① THREADED ROD SHALL BE MACHINED DOWN TO 0.280 INCH DIA. 1 1/4 INCHES FROM THE TOP.

② THE ASPHALTIC ADHESIVE OR BUTYL PAD FURNISHED SHALL BE IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS.



SECTION A-A

SURFACE MOUNTED BASE



SECTION B-B

ALTERNATIVE SHAPES

FLEXIBLE TUBULAR MARKER POST, ANCHOR & BASES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

2/17/94 DATE

/S/ Chester J. [illegible] DIRECTOR, OFFICE O

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S.D.D. 15 C 11-5

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S.D.D. 15 C 11-5

LEGEND

SIGN ON PORTABLE OR PERMANENT SUPPORT

DIRECTION OF TRAFFIC

WORK AREA

FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF

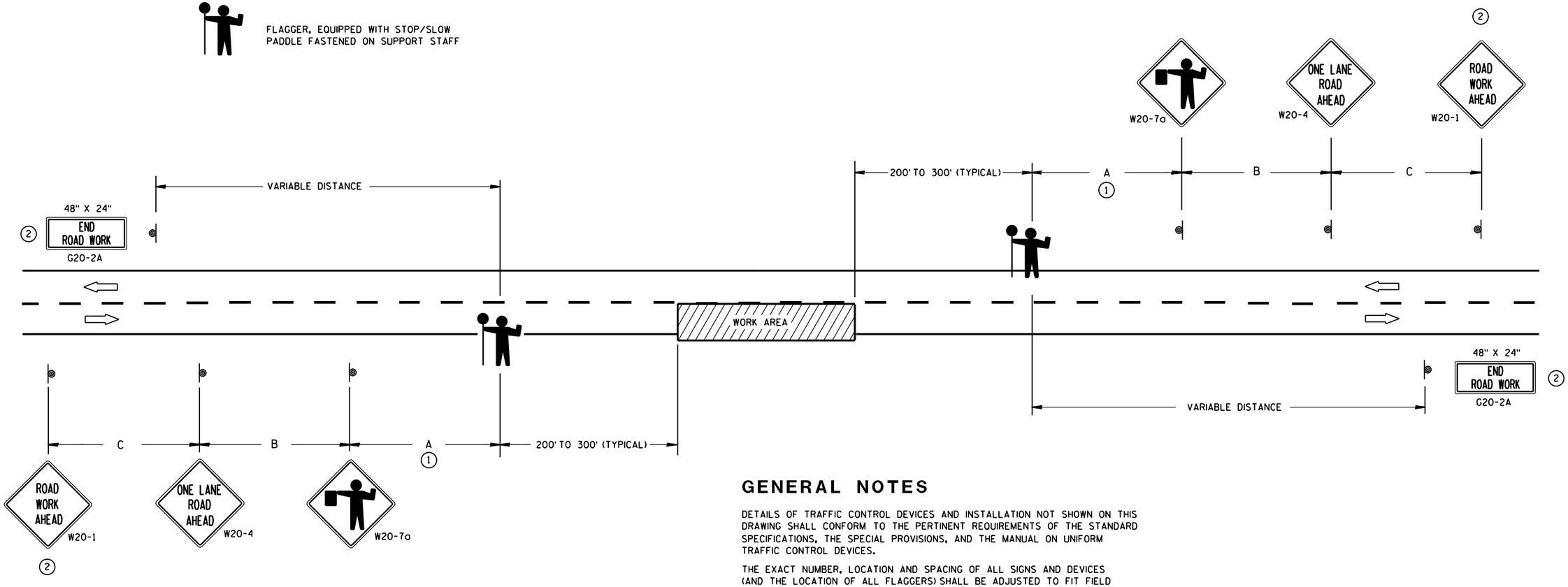
SIGN SPACING TABLE

SPEED LIMIT	SIGN SPACING A,B,C
25-35 MPH	200'
35-40 MPH	350'
45-55 MPH	500'



W3-4

USE OF THE "BE PREPARED TO STOP" SIGN IS OPTIONAL. WHEN USED, THIS SIGN SHALL BE LOCATED BETWEEN THE W20-7a AND W20-4 SIGNS. A 500' TYPICAL SPACING SHALL BE PROVIDED BETWEEN THE SIGNS.



(1) FOR A MOVING WORK OPERATION,
SIGNING FOR BOTH DIRECTIONS SHALL BE REESTABLISHED (AS SIMULTANEOUSLY AS PRACTICAL) AT APPROXIMATELY 3500 FOOT INTERVALS IN THE MOVING WORK OPERATION OR AS APPROVED BY THE ENGINEER.

(2) SIGN NOT REQUIRED IF FLAGGING OPERATION OCCURS WITHIN A SIGNED ROAD WORK ZONE AREA.

GENERAL NOTES

DETAILS OF TRAFFIC CONTROL DEVICES AND INSTALLATION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

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

THE FIRST ADVANCE WARNING SIGN SHOULD TYPICALLY BE LOCATED IN ADVANCE OF THE ANTICIPATED TRAFFIC BACKUP OR QUEUE.

WHEN A SIDE ROAD OR RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, ADDITIONAL TRAFFIC CONTROLS SHALL BE PROVIDED AS SPECIFIED IN THE PLANS AND/OR THE SPECIAL PROVISIONS OR AS APPROVED BY THE ENGINEER.

FLAGGERS SHALL BE IN SIGHT OF EACH OTHER OR IN DIRECT COMMUNICATION AT ALL TIMES. THEY SHALL BE EQUIPPED WITH STOP/SLOW PADDLES FASTENED ON SUPPORT STAFFS. WHEN THE FLAGGING OPERATION IS NOT IN EFFECT, COVER OR REMOVE ALL TEMPORARY TRAFFIC CONTROL SIGNS.

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

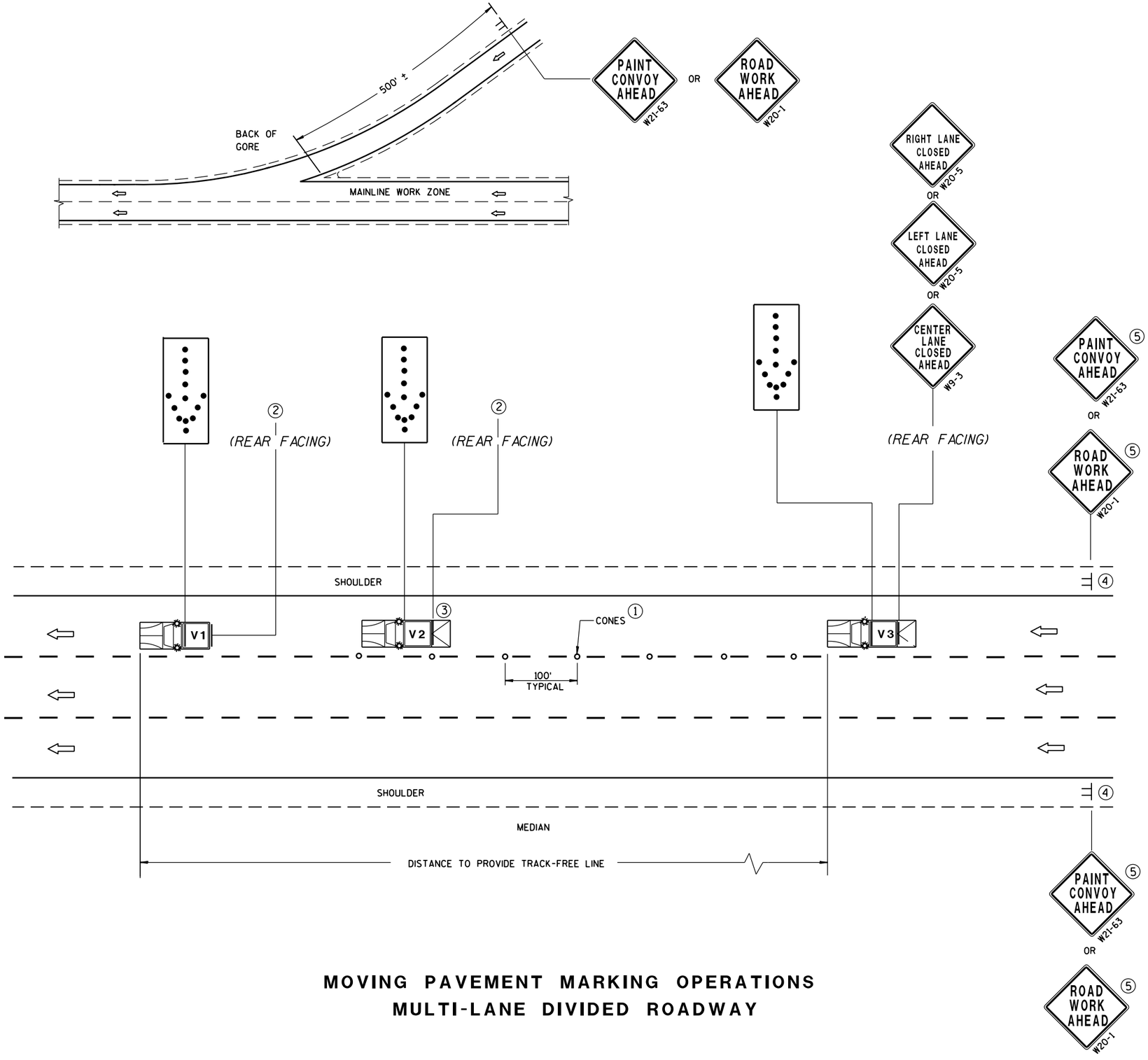
TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
8/2013 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
FHWA

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S.D.D. 15 C 12-4



MOVING PAVEMENT MARKING OPERATIONS
MULTI-LANE DIVIDED ROADWAY

GENERAL NOTES

ALL VEHICLES SHALL BE EQUIPPED WITH TWO 360 DEGREE HIGH INTENSITY YELLOW FLASHING LIGHTS OR STROBE LIGHTS AND OPERATED WITH HEADLIGHTS TURNED ON.

ALL VEHICLES SHALL BE EQUIPPED WITH REAR FACING TYPE B OR C FLASHING ARROW PANEL. SIGNS PLACED ON VEHICLES MUST NOT OBSCURE THE ARROW PANEL.

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

IF SPEED LIMIT IS 40 MPH OR LESS STATIONARY SIGNS MAY BE OMITTED IF CONES ARE USED.

ALTERNATE SIGN MESSAGES, SUCH AS "PAINT CREW AHEAD" OR "ROAD PAINTING AHEAD" MAY BE USED.

DISTANCE BETWEEN VEHICLES MAY VARY ACCORDING TO TERRAIN, SIGHT DISTANCE, PAINT DRYING TIME, AND OTHER FACTORS. WHENEVER ADEQUATE STOPPING SIGHT DISTANCE EXISTS TO THE REAR, SHADOW VEHICLES SHOULD MAINTAIN THE MINIMUM DISTANCE FROM THE WORK VEHICLE AND PROCEED AT THE SAME SPEED AS THE WORK VEHICLE. SHADOW VEHICLES SHOULD SLOW DOWN IN ADVANCE OF VERTICAL OR HORIZONTAL CURVES THAT RESTRICT SIGHT DISTANCE.

WHEN WORK ACTIVITY BLOCKS THE LEFT LANE, REVERSE TRAFFIC CONTROL.

WHEN A RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, PROVIDE ADDITIONAL TRAFFIC CONTROLS AS SPECIFIED IN THE CONTRACT OR AS APPROVED BY THE ENGINEER.

USE AN ATTENUATOR ON THE REARMOST VEHICLE THAT BLOCKS ALL OR PART OF THE TRAFFIC LANE.

FOR EDGELINE MARKING OR IF CONES ARE NOT USED, POSITION THE REARMOST SHADOW VEHICLE ON THE SHOULDER AS SHOWN IN THE MUTCD IF THE SHOULDER HAS ADEQUATE WIDTH. USE DOUBLE ARROWS WHEN CONVOY IS IN CENTER LANE ONLY.

WHEN NO WORK ACTIVITY IS TAKING PLACE, REMOVE OR TURN THE STATIONARY WARNING SIGNS AWAY FROM TRAFFIC.

THIS DRAWING SHALL BE USED FOR EDGELINE OR LANELINE MARKING FOR MULTILANE DIVIDED ROADWAYS.

① CONES MAY BE OMITTED ON PAINTED LINE IF APPROVED BY THE ENGINEER. CONSIDER PAVEMENT MARKING DRY OR CURE TIMES AND TRAFFIC VOLUME.

② USE STANDARD SIGN W21-64 WITH APPROPRIATE ARROW.

WET PAINT W21-64 OR WET PAINT W21-64

③ OPTIONAL TRUCK-MOUNTED ATTENUATOR.

④ SIGNS SHALL BE REPEATED AFTER EVERY ON RAMP OR EVERY THREE MILES.

⑤ IF CONSTRUCTION WORK ZONE SIGNS ARE IN PLACE, W20-1 OR W21-63 ARE NOT REQUIRED.

LEGEND

V1	LEAD VEHICLE
V2	SHADOW VEHICLE
V3	TRAIL VEHICLE WITH TMA
TMA	TRUCK-MOUNTED ATTENUATOR
	SIGN ON TEMPORARY SUPPORT
	DIRECTION OF TRAFFIC
	CONES
	FLASHING ARROW PANEL (MERGE)

MOVING PAVEMENT MARKING OPERATION MULTI-LANE DIVIDED ROADWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

5/3/2013 DATE

/S/ Travis Feltes STATE TRAFFIC EN

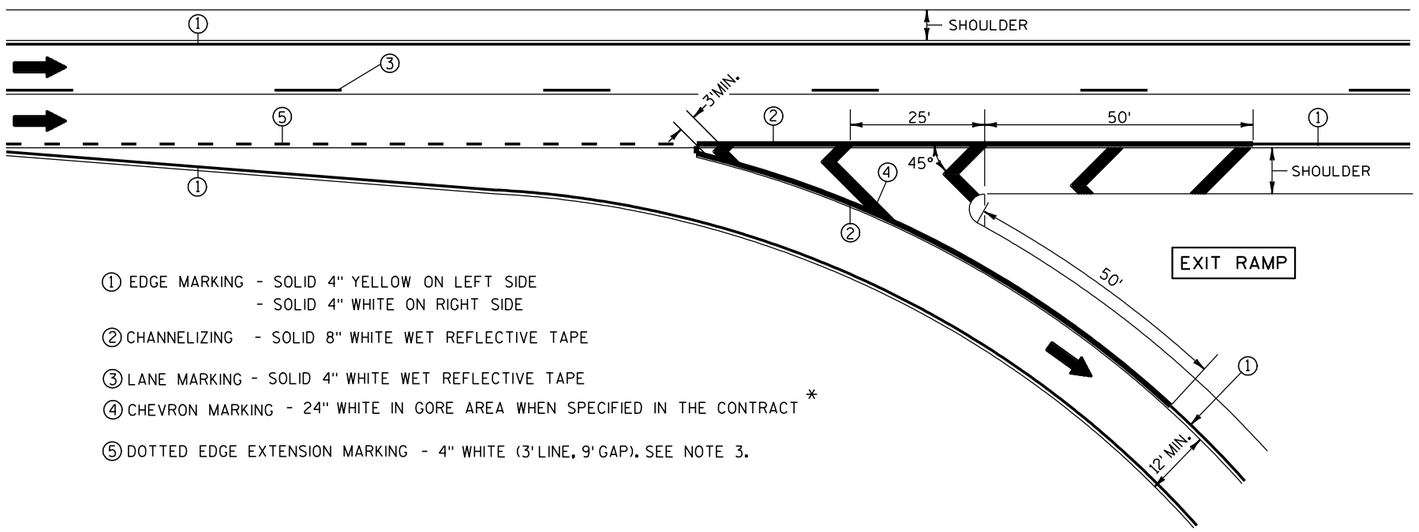
FHWA

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S.D.D. 15 C 19-2c

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S.D.D. 15 C 19-2c



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:

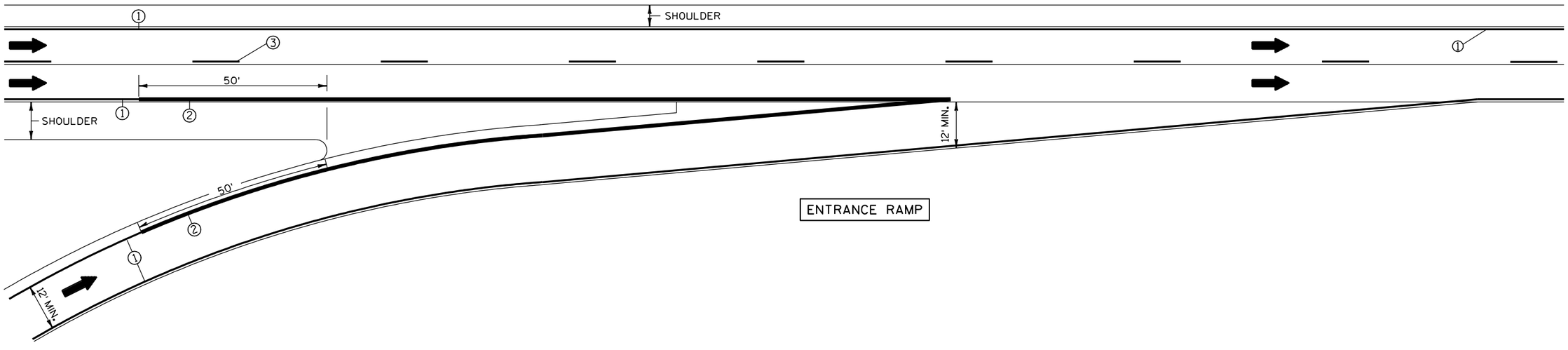
1. ARROWS SHOWN ON THIS MARKING PLAN DESIGNATE TRAFFIC FLOW, AND SHALL NOT BE TAKEN AS PROPOSED PAVEMENT MARKINGS.

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

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

PAVEMENT MARKING
(RAMPS AND GORES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

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

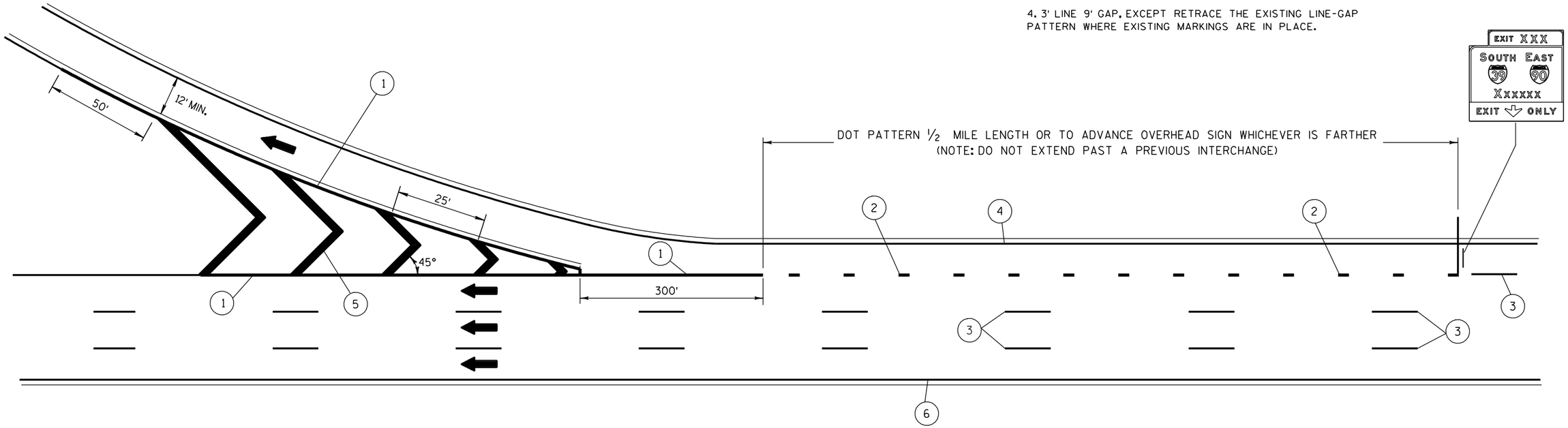
NOTES:

1. SEE STANDARD DETAIL DRAWING 15 C 10 FOR SPRAYED OR NON WET REFLECTIVE LINE SEGMENTS.

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

3. PLACE WHITE EDGE OF TAPE 6" LEFT FROM JOINT.

4. 3' LINE 9' GAP, EXCEPT RETRACE THE EXISTING LINE-GAP PATTERN WHERE EXISTING MARKINGS ARE IN PLACE.



1. CHANNELIZING - SOLID 8" WHITE WET RELECTIVE TAPE
2. 3' LINE, 9' GAP SOLID 8" WHITE WET REFLECTIVE TAPE. SEE NOTE 4.
3. SOLID 4" WHITE WET REFLECTIVE TAPE
4. 4" WHITE EDGELINE
5. CHEVRON MARKING - 24" WHITE WHEN SPECIFIED IN THE CONTRACT
6. 4" YELLOW EDGELINE

LANE DROP
PAVEMENT MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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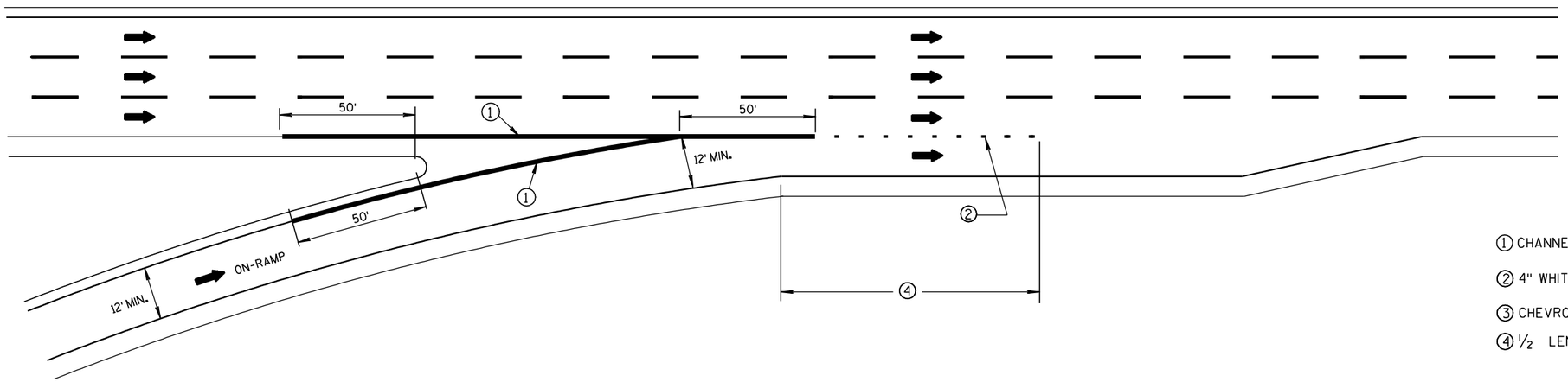
S.D.D. 15 C 31-1b

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

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.



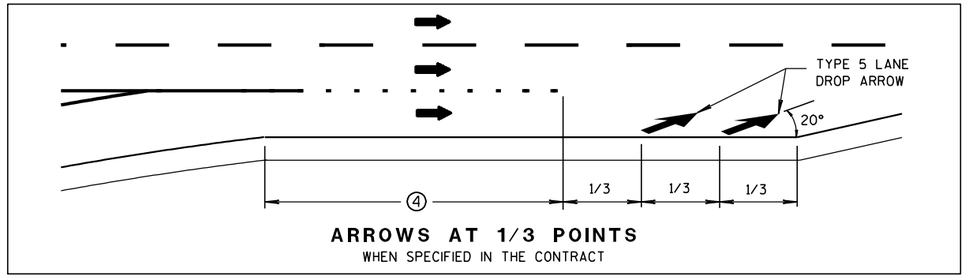
① CHANNELIZING - SOLID 8" WHITE WET REFLECTIVE TAPE IN GORE AREA.

② 4" WHITE (3' LINE, 9' GAP).

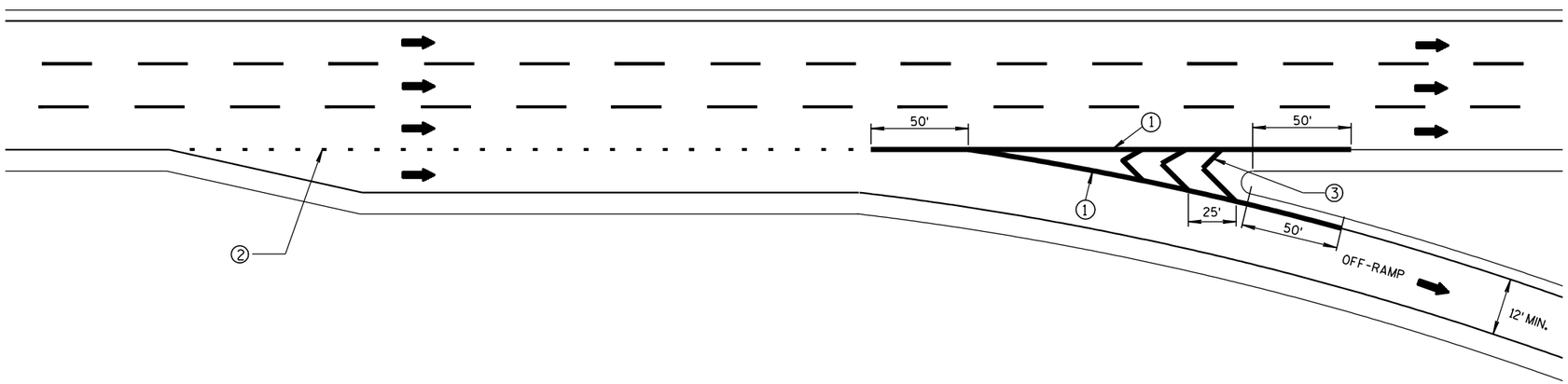
③ CHEVRON MARKING - 24" WHITE WHEN SPECIFIED IN THE CONTRACT.

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

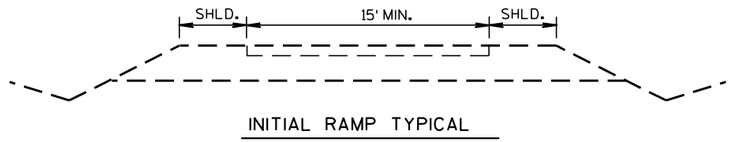
APPROVED

6/23/2011 DATE

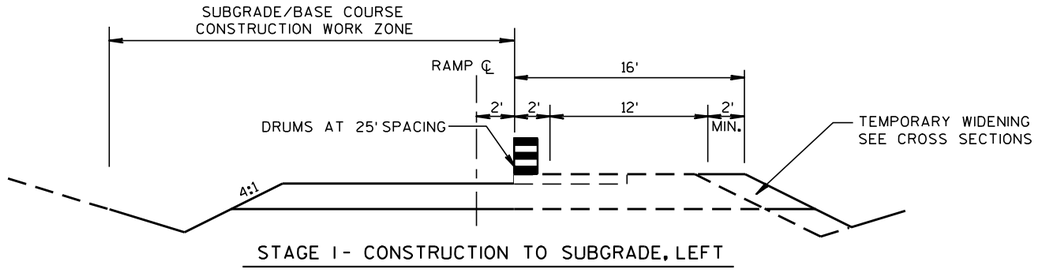
/S/ Thomas N. Nothem
STATE TRAFFIC ENGINE 317 SIGN

FHWA

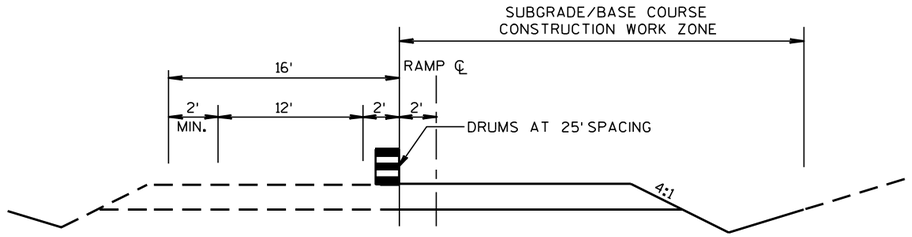
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S.D.D. 15 C 31-1d



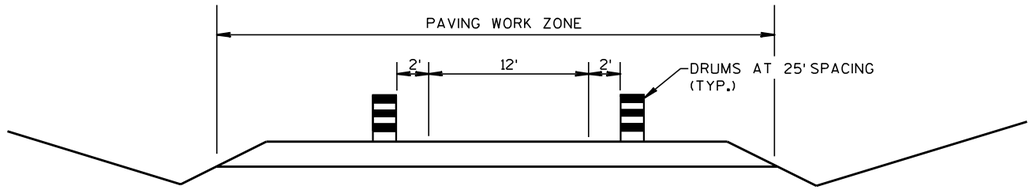
INITIAL RAMP TYPICAL



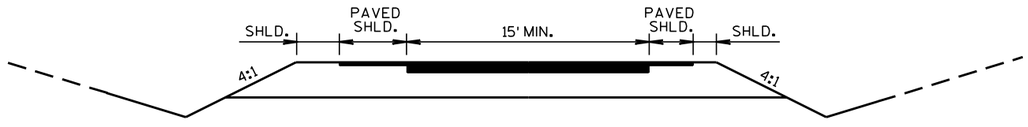
STAGE I - CONSTRUCTION TO SUBGRADE, LEFT



STAGE II - CONSTRUCTION TO SUBGRADE, RIGHT



STAGE III - TRAFFIC ON BASE COURSE



STAGE IV - PAVING

GENERAL NOTES :

WORK SHALL BE SCHEDULED FOR ALL STAGES TO MINIMIZE INCONVENIENCE TO THE TRAFFIC USING THE RAMP WHILE IT IS ONLY BASE COURSE.

IN STAGE III, A MINIMUM 12' LANE WIDTH SHALL BE DELINEATED WITH DRUMS ALONG BOTH EDGES AT ALL TIMES UNTIL PAVED AND PAVEMENT MARKINGS ARE PLACED.

TRAFFIC CONTROL, RAMP CONSTRUCTION STAGING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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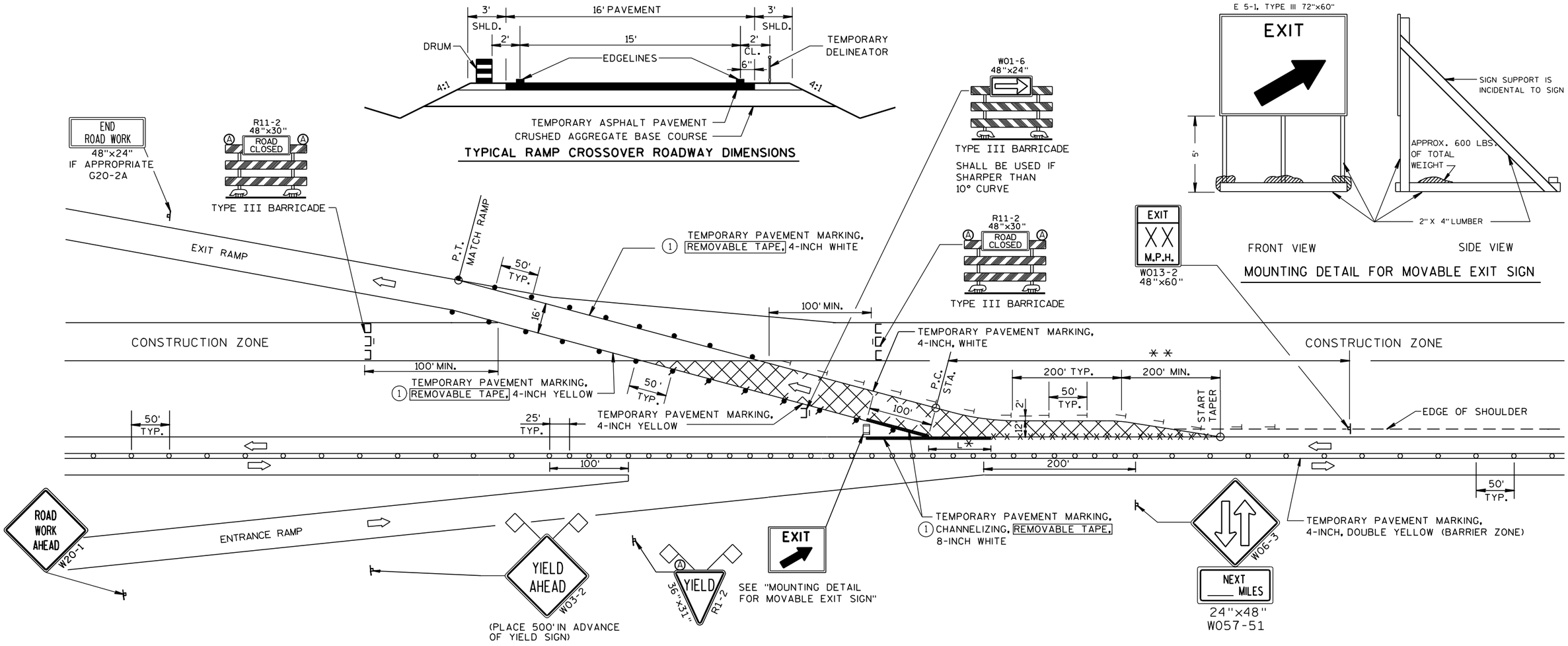
7-14-94
DATE

/S/ Chester J. [illegible]
DIRECTOR, OFFICE OF [illegible]

FHWA

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S.D.D. 15 D 4-1



LEGEND

- 8' TYPE III BARRICADE WITHOUT/WITH ATTACHED SIGN
- POST WITH ATTACHED SIGN
- DRUM WITH WARNING LIGHT (TYPE C)
- DRUM
- TEMPORARY DELINEATOR - WHITE (STEEL POST W/SINGLE DELINEATOR)
- (A) WARNING LIGHT, TYPE A
- TEMPORARY CROSSOVER ASPHALTIC PAVEMENT
- REMOVING PAVEMENT MARKINGS
- FLEXIBLE TUBULAR MARKER POST AND BASE
- FLAGS, 12" X 12", RED
- DIRECTION OF TRAFFIC

GENERAL NOTES :

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

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

(1) TEMPORARY PAVEMENT MARKING REMOVABLE TAPE SHALL BE USED WHEN CROSSING PERMANENT ROADWAY SURFACES THAT WILL REMAIN AFTER USE OF CROSSOVER. OTHERWISE TEMPORARY PAVEMENT MARKING MAY BE USED.

TRAFFIC CONTROL FOR RAMP CROSSOVERS ARE TYPICAL FOR ALL CONSTRUCTION PHASES.

* LENGTH L SHALL BE REQUIRED WHEN TANGENT LENGTH OF EXIT RAMP PARALLEL TO MAINLINE EXCEEDS 300'. LENGTH SHALL BE EQUAL TO THE EXIT RAMP TANGENT LENGTH MINUS 300' OR AS APPROVED BY THE ENGINEER AND SHALL CHANGE TO ACCOMODATE PAVING GAPS.

** ADJUST EXIT RAMP SPEED AS NEEDED IN THE FIELD. DISTANCE TO SIGN LOCATION SHALL ALSO BE PLACED ACCORDING TO TABLE.

WORK ALONG EDGES OF RAMP SHALL MAINTAIN A 10 FOOT AREA CLEAR OF PHYSICAL OBSTRUCTIONS SUCH AS DROP OFFS FROM PAVEMENT REMOVAL OR BROKEN CONCRETE CHUNKS DURING PAVEMENT REMOVAL. THESE AREAS SHALL BE LEVELED WITH TEMPORARY FILL TO PROTECT THE TRAVELING PUBLIC WHEN THE CONTRACTOR IS NOT WORKING ADJACENT TO THE CROSSOVER.

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

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

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

** TABLE FOR ADVANCE WARNING SIGN PLACEMENT DISTANCE

POSTED SPEED MPH	DESIRED SPEED AT CONDITION (MPH)				
	10	20	30	40	50
45	350	300	250		
50	425	400	325	225	
55	500	475	400	300	
60	575	550	500	400	300
65	650	625	575	500	375

TRAFFIC CONTROL, TEMPORARY EXIT RAMP CROSSOVER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

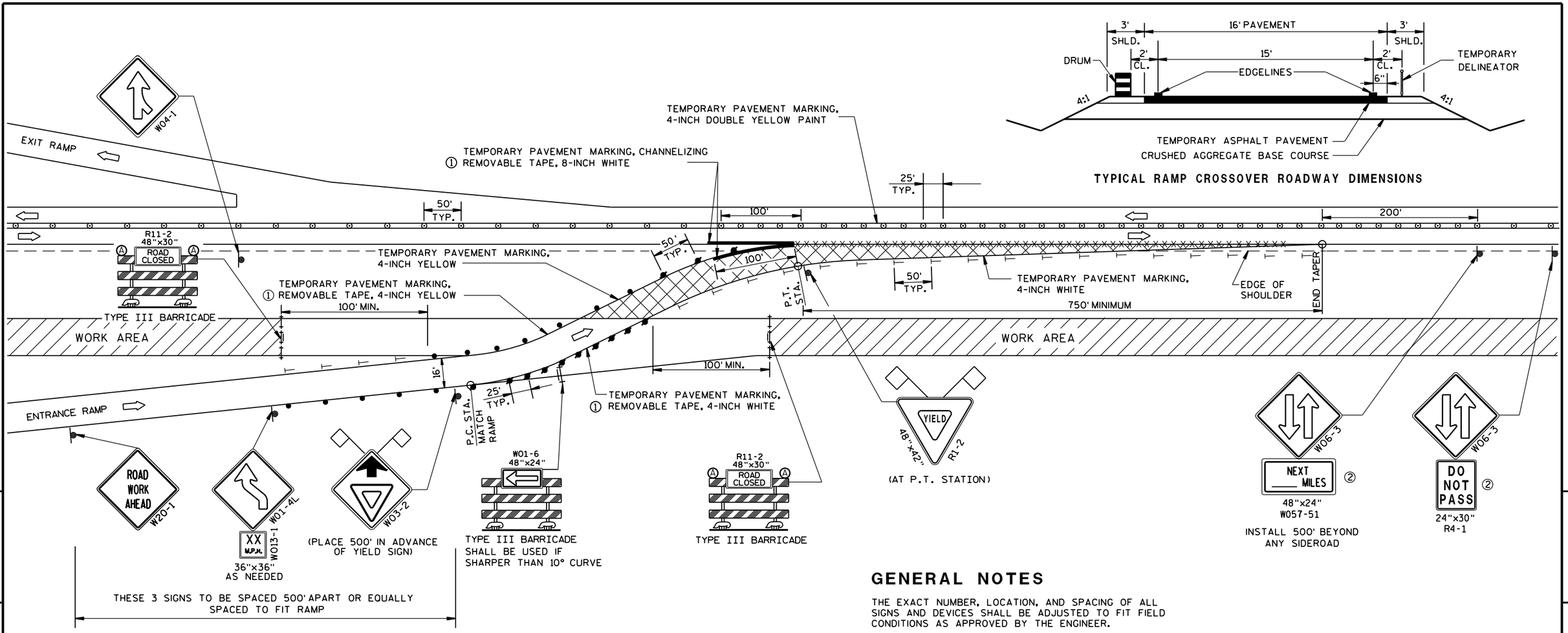
APPROVED
12-4-95 DATE
/S/ Chester J. [illegible]
DIRECTOR, OFFICE O 319 C
FHWA

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S.D.D. 15 D 7-3

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S.D.D. 15 D 7-3



TYPICAL RAMP CROSSOVER ROADWAY DIMENSIONS

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL DRUM
- TEMPORARY DELINEATOR - WHITE (STEEL POST W/SINGLE DELINEATOR) COLOR OF DELINEATOR SHALL MATCH THE COLOR OF THE RESPECTIVE EDGELINE MARKING
- Ⓐ TYPE "A" WARNING LIGHT (FLASHING)
- TEMPORARY CROSSOVER ASPHALTIC PAVEMENT
- ~~~~ REMOVING PAVEMENT MARKINGS
- ⊙ DELINEATOR FLEXIBLE/TUBULAR MARKER
- FLAGS, 16" X 16" MIN., (ORANGE)
- DIRECTION OF TRAFFIC
- WORK AREA

GENERAL NOTES

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

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

① TEMPORARY PAVEMENT MARKING REMOVABLE TAPE SHALL BE USED WHEN CROSSING PERMANENT ROADWAY SURFACES THAT WILL REMAIN AFTER USE OF CROSSOVER.

② INSTALL THE W06-3 SIGN WITH THE R4-1 SIGN 1000 FEET BEYOND THE W06-3 SIGN WITH THE W057-51 SIGN AND ALTERNATE THE SEQUENCE OF THESE SIGNS EVERY 1 MILE.

TRAFFIC CONTROL FOR RAMP CROSSOVERS ARE TYPICAL FOR ALL CONSTRUCTION PHASES.

WORK ALONG EDGES OF RAMP SHALL MAINTAIN A 10-FOOT AREA CLEAR OF PHYSICAL OBSTRUCTIONS SUCH AS DROP OFFS FROM PAVEMENT REMOVAL OR BROKEN CONCRETE CHUNKS DURING PAVEMENT REMOVAL. THESE AREAS SHALL BE LEVELED WITH TEMPORARY FILL TO PROTECT THE TRAVELING PUBLIC WHEN THE CONTRACTOR IS NOT WORKING ADJACENT TO THE CROSSOVER.

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

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

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

TRAFFIC CONTROL, TEMPORARY ENTRANCE RAMP CROSSOVER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8/2013 DATE — /S/ Travis Feltes STATE TRAFFIC ENGINEER — SIGN

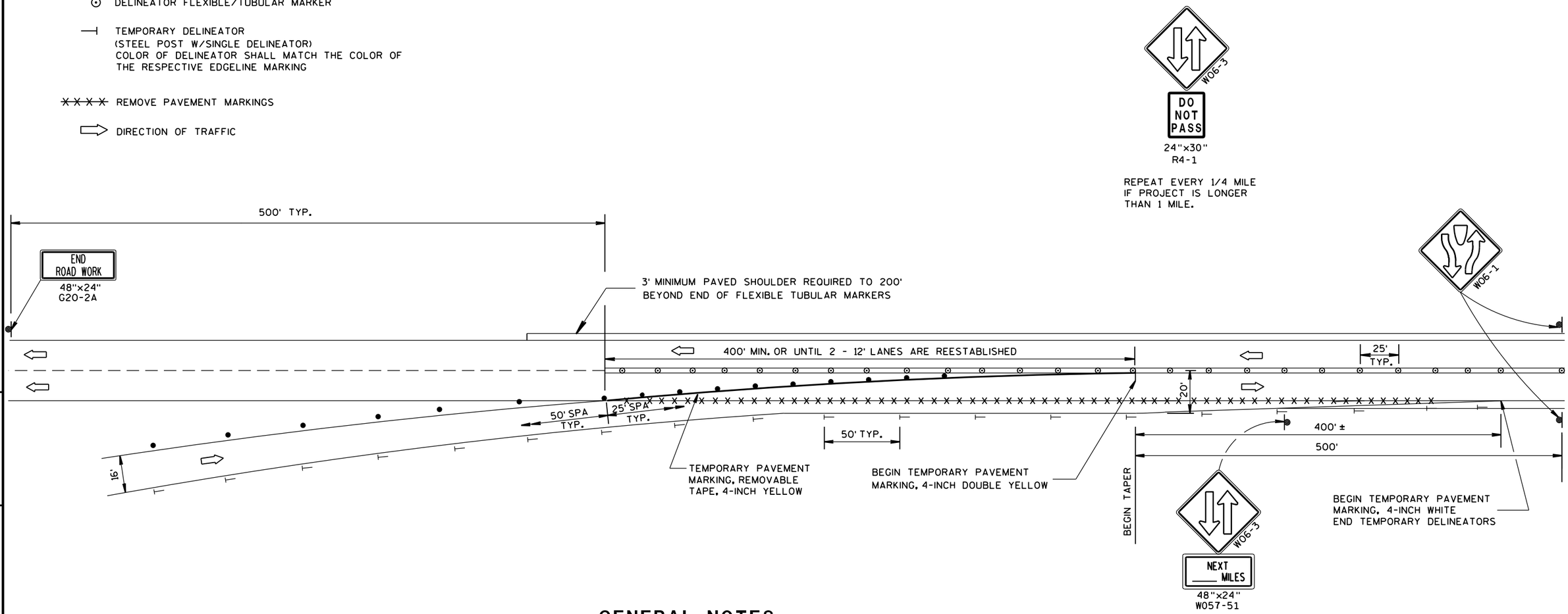
FHWA

S.D.D. 15 D 8-4

S.D.D. 15 D 8-4

LEGEND

- SIGN ON PERMANEMT SUPPORT
- TRAFFIC CONTROL DRUM
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- TEMPORARY DELINEATOR (STEEL POST W/SINGLE DELINEATOR) COLOR OF DELINEATOR SHALL MATCH THE COLOR OF THE RESPECTIVE EDGELINE MARKING
- REMOVE PAVEMENT MARKINGS
- DIRECTION OF TRAFFIC



REPEAT EVERY 1/4 MILE IF PROJECT IS LONGER THAN 1 MILE.

GENERAL NOTES

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

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

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

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

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

TEMPORARY PAVEMENT MARKING REMOVABLE TAPE SHALL BE USED WHEN CROSSING PERMANENT ROADWAY SURFACES THAT WILL REMAIN AFTER USE OF CROSSOVER.

TRAFFIC CONTROL, SINGLE LANE CROSSOVER EXIT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8/2013 DATE

/S/ Travis Feltes
STATE TRAFFIC ENGINEER

SIGN

FHWA

6

S.D.D. 15 D 9-3

6

S.D.D. 15 D 9-3

LEGEND

- TYPE III BARRICADE WITH ATTACHED SIGN
- SIGN ON PERMENENT SUPPORT
- POST WITH ATTACHED SIGN IN DRUM
- 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.

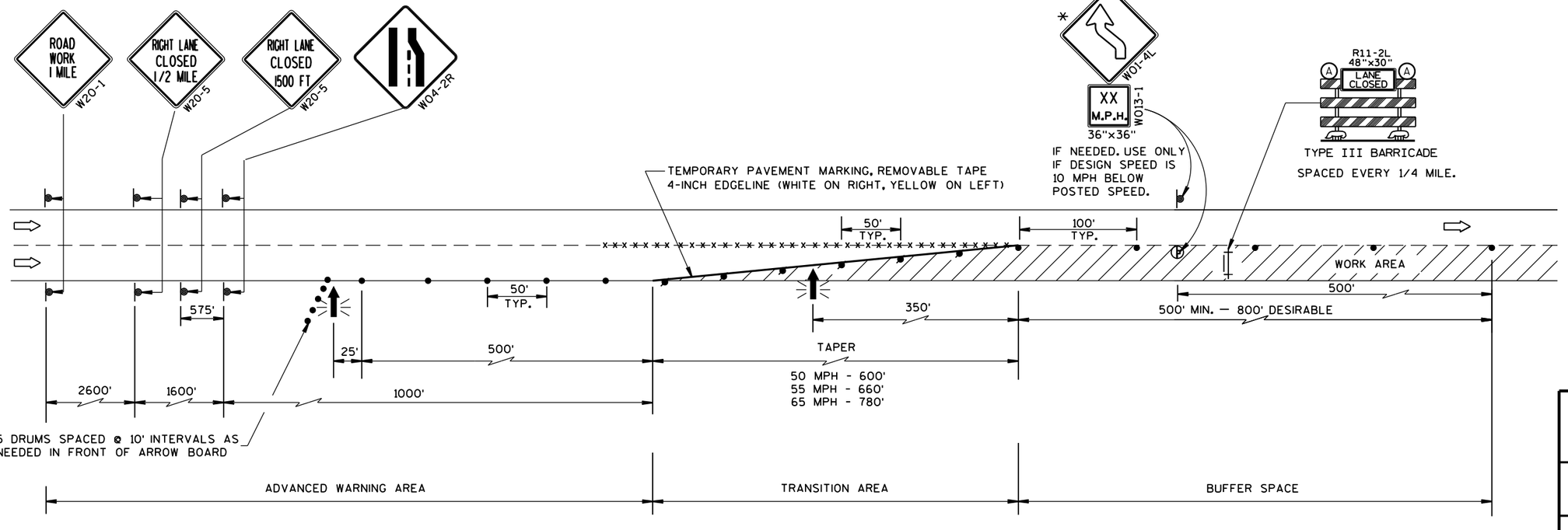


LOCATED 500 FEET IN ADVANCE OF R2-1 SIGN AND 500 FEET BEYOND THE "ROAD WORK 1 MILE" SIGN.



R2-1
48"×60"
(BLACK AND WHITE)

IF THE REGULATORY SPEED HAS BEEN REDUCED, A SPEED LIMIT SIGN SHALL BE LOCATED 1500 FEET BEYOND THE END OF THE ACCELERATION LANE OF EACH ENTRANCE RAMP. THERE SHOULD BE A SPEED LIMIT SIGN INCORPORATED A MINIMUM OF EVERY 2 OR 3 MILES.



TRAFFIC CONTROL, LANE CLOSURE, SPEEDS GREATER THAN 40 M.P.H.

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

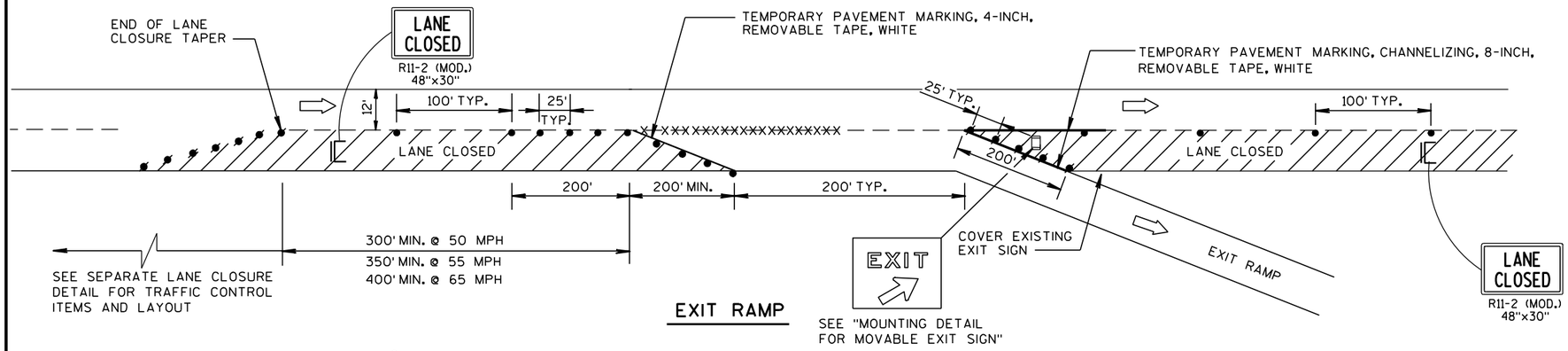
APPROVED
8/2013 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
FHWA

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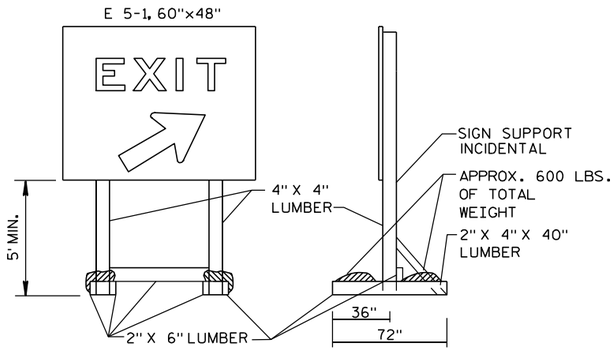
S.D.D. 15 D 12-3

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S.D.D. 15 D 12-3

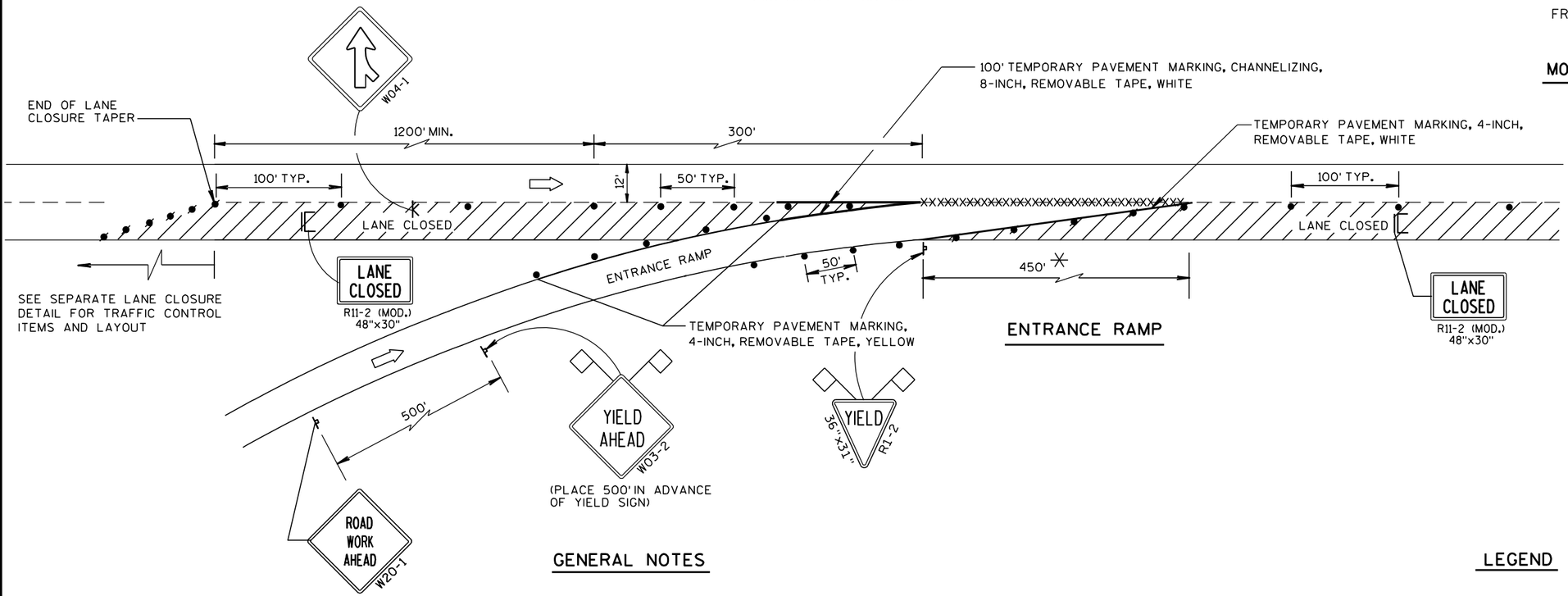


EXIT RAMP



NOTE: ALL LUMBER DIMENSIONS ARE NOMINAL

MOUNTING DETAIL FOR MOVABLE EXIT SIGN



ENTRANCE RAMP

GENERAL NOTES

THE INSTALLATIONS SHOWN ON THIS SHEET ARE TYPICAL EXAMPLES AND ARE NOT INTENDED TO REPRESENT ANY PARTICULAR RAMP. AT SPECIFIC FIELD LOCATIONS, SIMILAR INSTALLATIONS SHALL BE USED AND ADJUSTED TO THE GEOMETRICS OF THE RAMP AS COORDINATED WITH THE ENGINEER.

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

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A MINIMUM OF 200 FEET, (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

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

SEE SEPARATE LANE CLOSURE DETAIL FOR TYPICAL SPACING OF TYPE III BARRICADES AND R11-2 (MOD.) "LANE CLOSED" SIGNS.

YIELD SIGN AND WARNING SIGNS ON ENTRANCE RAMP ARE ALSO APPROPRIATE FOR CLOSURE OF THE MAINLINE LEFT LANE. OMIT THE YIELD SIGN IF MORE THAN ONE LANE REMAINS OPEN ON THE MAINLINE AND THE RAMP TAPER IS AT LEAST AS LONG AS THE NORMAL ENTRANCE RAMP TAPER AT THE SITE.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, OR THAT WILL BE PLACED IN A CLOSED LANE, MAY BE MOUNTED ON PORTABLE SUPPORTS.

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

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

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

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

✳ LENGTH OF OPENING MAY BE REDUCED TO 150 FEET DURING STAGING OF WORK IN IMMEDIATE AREA OF RAMP TAPER.

LEGEND

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

TRAFFIC CONTROL, EXIT AND ENTRANCE RAMP WITHIN LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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S.D.D. 15 D 15-1

LEGEND

TYPE III BARRICADE

TYPE III BARRICADE WITH ATTACHED SIGN

TRAFFIC CONTROL DRUM

SIGN ON PERMANENT SUPPORT

TYPE "A" WARNING LIGHT (FLASHING)

DIRECTION OF TRAFFIC

GENERAL NOTES

THIS RAMP CLOSURE DETAIL IS TYPICAL FOR CLOSING A RIGHT SIDE EXIT RAMP. FOR A LEFT SIDE EXIT RAMP, REVERSE THE TRAFFIC CONTROL.

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

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

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

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

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

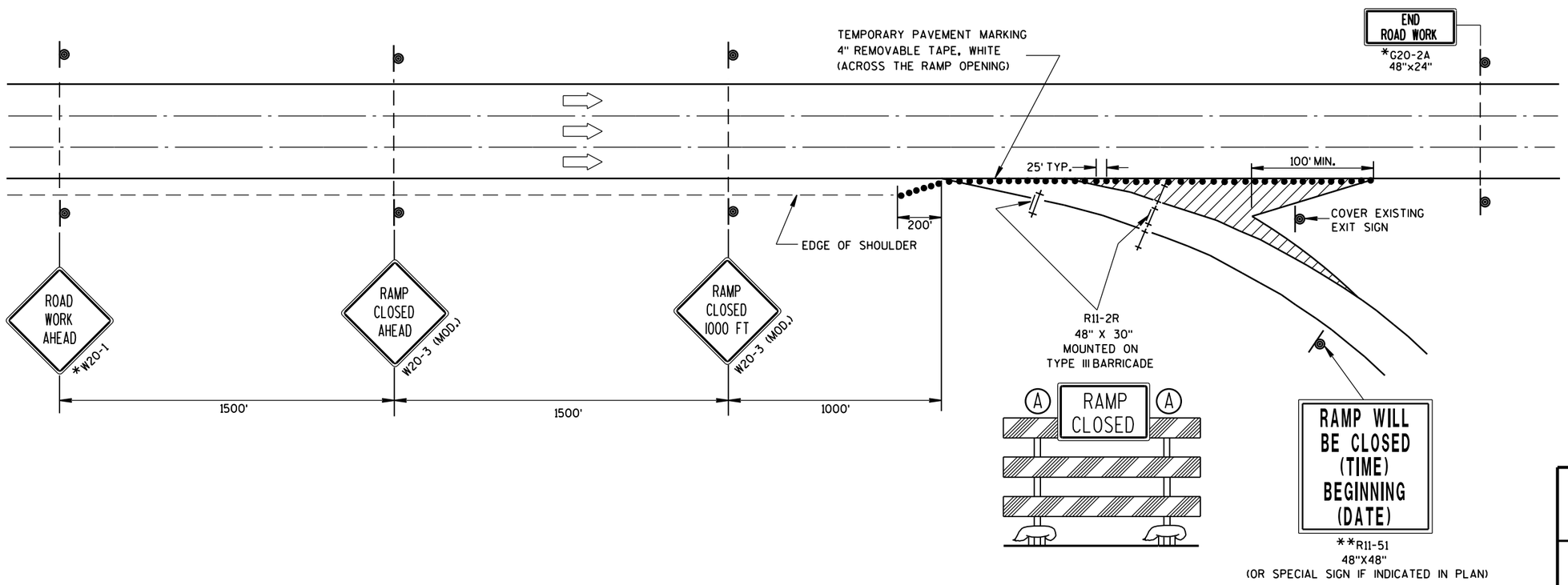
PLACE TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE IF RAMP CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

WORK AREAS WITH A DROPOFF ALONG THE EDGE OF AN OPEN TRAVEL LANE SHALL BE LEVELED WITH TEMPORARY FILL WHEN THE CONTRACTOR IS NOT WORKING ADJACENT TO THE TRAVEL LANE. DRUMS SHALL BE PLACED ENTIRELY OUTSIDE THE TRAVEL LANE, ALLOWING THE FULL UNOBSTRUCTED LANE WIDTH, WHEN THE WORK IS NOT IN PROGRESS.

WHERE MEDIAN BARRIER IS IN PLACE, SIGNS SHOWN ON LEFT SIDE OF ROADWAY MAY BE OMITTED FOR RIGHT SIDE RAMP CLOSURES OF LESS THAN 12-HOUR DURATION.

*W20-1 AND G20-2A SIGNS ARE NOT REQUIRED IF THE RAMP CLOSURE IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT.

** PLACE "RAMP WILL BE CLOSED" SIGN 10 CALENDAR DAYS PRIOR TO CLOSURE OR AS DIRECTED BY THE ENGINEER. SEE WISCONSIN STANDARD SIGN PLATES FOR SIGN LAYOUT.



TRAFFIC CONTROL,
EXIT RAMP CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
8/2013
DATE

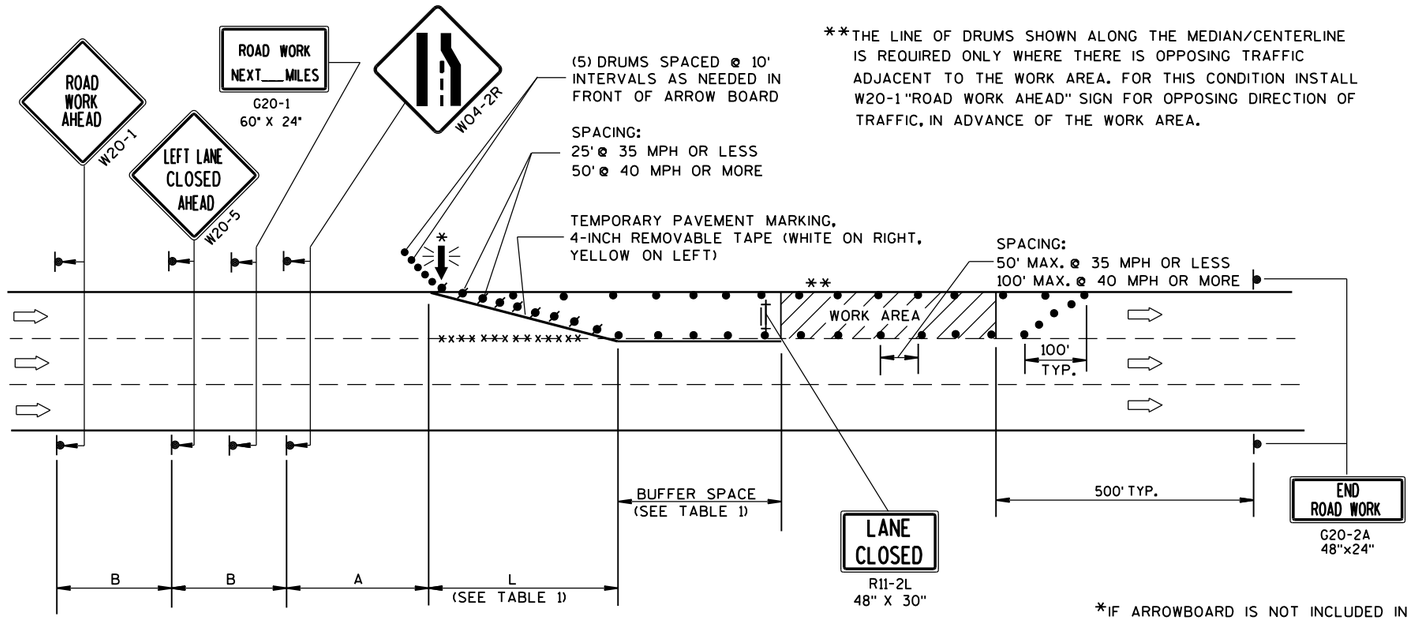
/S/ Travis Feltes
STATE TRAFFIC ENGINEER

DESIGN

FHWA

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S.D.D. 15 D 16-2



**THE LINE OF DRUMS SHOWN ALONG THE MEDIAN/CENTERLINE IS REQUIRED ONLY WHERE THERE IS OPPOSING TRAFFIC ADJACENT TO THE WORK AREA. FOR THIS CONDITION INSTALL W20-1 "ROAD WORK AHEAD" SIGN FOR OPPOSING DIRECTION OF TRAFFIC, IN ADVANCE OF THE WORK AREA.

B=400' AT 25-30 MPH
700' AT 35-40 MPH
1000' AT 45-55 MPH

A=200' AT 25-30 MPH
350' AT 35-40 MPH
500' AT 45-55 MPH

(PLACE BARRICADE AND SIGN APPROX. EVERY 1000' ACROSS THE CLOSED LANE)

*IF ARROWBOARD IS NOT INCLUDED IN MISCELLANEOUS QUANTITIES, SUBSTITUTE A TYPE III BARRICADE WITH W01-6 SIGN IN THE LANE CLOSURE TAPER.

W01-6
48"x24"

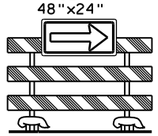


TABLE 1
TAPER AND BUFFER SPACE FOR 12' LANE WIDTH

S	L	BUFFER SPACE
25	125'	55'
30	180'	85'
35	245'	120'
40	320'	170'
45	540'	220'
50	600'	280'
55	660'	335'

FOR LANE WIDTH OTHER THAN 12':

L = WS AT 45 MPH OR GREATER

$L = \frac{WS^2}{60}$ AT 40 MPH OR LESS

L = TAPER LENGTH IN FEET

S = NON-CONSTRUCTION SPEED LIMIT (MPH)

W = WIDTH OF LANE CLOSURE

LEGEND

- TYPE III BARRICADE WITH ATTACHED SIGN
- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL DRUM
- FLASHING ARROW BOARD
- DIRECTION OF TRAFFIC
- REMOVING PAVEMENT MARKING (SEE GENERAL NOTES)
- WORK AREA

GENERAL NOTES

THIS LANE CLOSURE DETAIL IS TYPICAL FOR CLOSING THE LEFT LANE. FOR A RIGHT LANE CLOSURE, REVERSE THE TRAFFIC CONTROL.

THIS DETAIL MAY BE USED FOR ROADWAYS WITH EITHER TWO OR THREE LANES IN EACH DIRECTION.

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

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36" X 36" SIGNS MAY BE USED IF APPROVED BY DISTRICT TRAFFIC UNIT.

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

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, OR THAT WILL BE PLACED IN A CLOSED LANE, MAY BE MOUNTED ON PORTABLE SUPPORTS.

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

REMOVE PAVEMENT MARKINGS AND PLACE TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE IF LANE CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

ON UNDIVIDED ROADWAYS, OMIT THE SIGNS SHOWN ON LEFT SIDE OF ROAD.

W20-1, G20-1 AND G20-2A SIGNS ARE NOT REQUIRED IF THE LANE CLOSURE IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT.

OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS.

CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROWBOARDS SO THE APPROACHING DRIVER HAS A CLEAR VIEW OF THE ARROWBOARDS AND LANE CLOSURE DRUMS.

PLACE THE ARROWBOARD AS CLOSE AS POSSIBLE TO THE BEGINNING OF THE LANE CLOSURE TAPER, PREFERABLY ON THE SHOULDER OR TERRACE.

CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

BARRICADES IN A CLOSED LANE THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY RE-ESTABLISHED UPON COMPLETION OF THE OPERATION OR, FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

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

TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

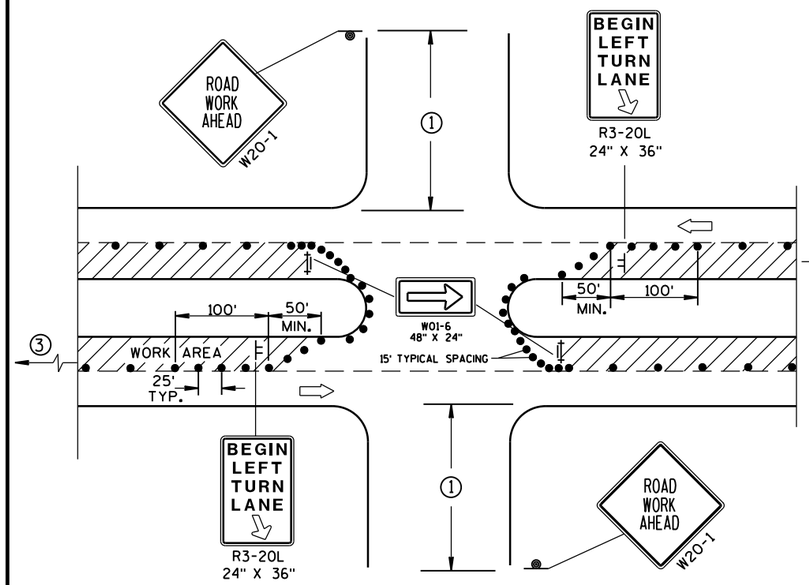
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8/2013 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
FHWA

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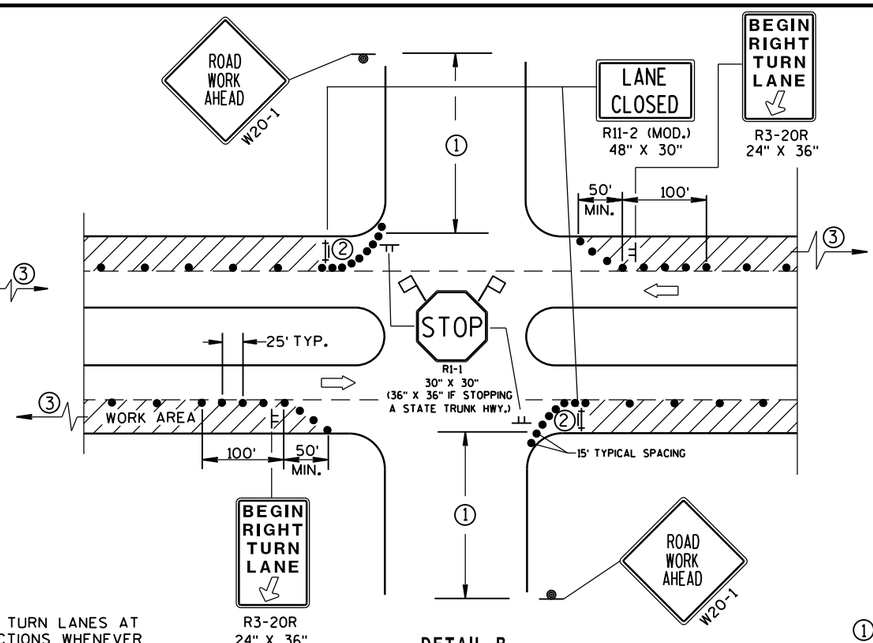
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DETAIL A

FOR LEFT LANE CLOSURE AT INTERSECTION OR MEDIAN OPENING

PROVIDE TURN LANES AT INTERSECTIONS WHENEVER STAGING OF WORK ALLOWS. TAPER AND TURN LANE LENGTHS BASED ON FIELD CONDITIONS AS APPROVED BY THE ENGINEER.



DETAIL B

FOR RIGHT LANE CLOSURE AT INTERSECTION

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 SHOULD PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36" X 36" SIGNS MAY BE USED IF APPROVED BY DISTRICT TRAFFIC UNIT.

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

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, OR THAT WILL BE PLACED IN A CLOSED LANE, 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.

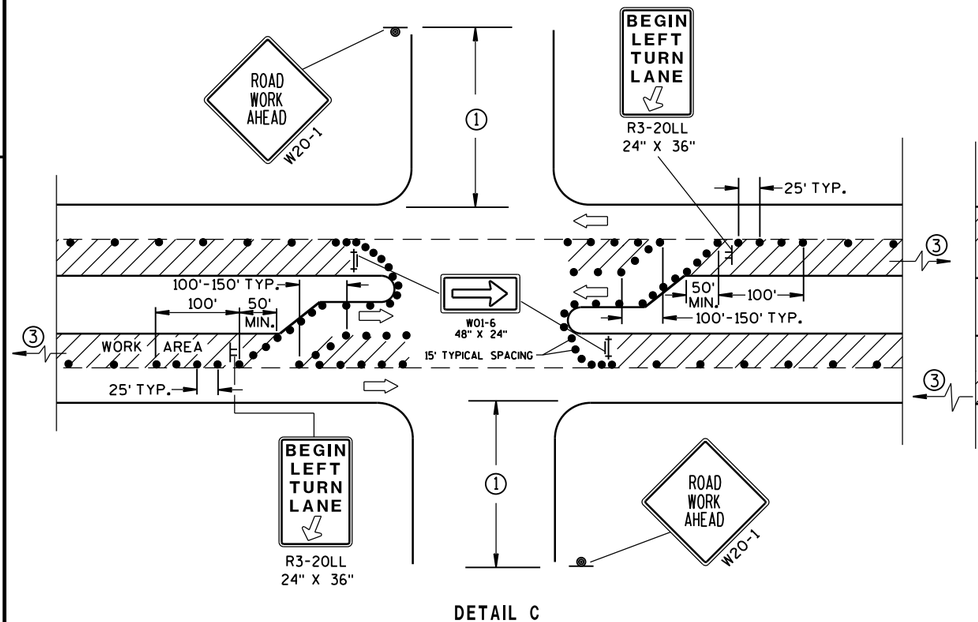
CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

BARRICADES IN A CLOSED LANE THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY RE-ESTABLISHED UPON COMPLETION OF THE OPERATION OR, FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

① 500' TYPICAL OR AT LAST INTERSECTION, WHICHEVER IS CLOSER.
350' IF 35-40 MPH.
200' IF 25-30 MPH.

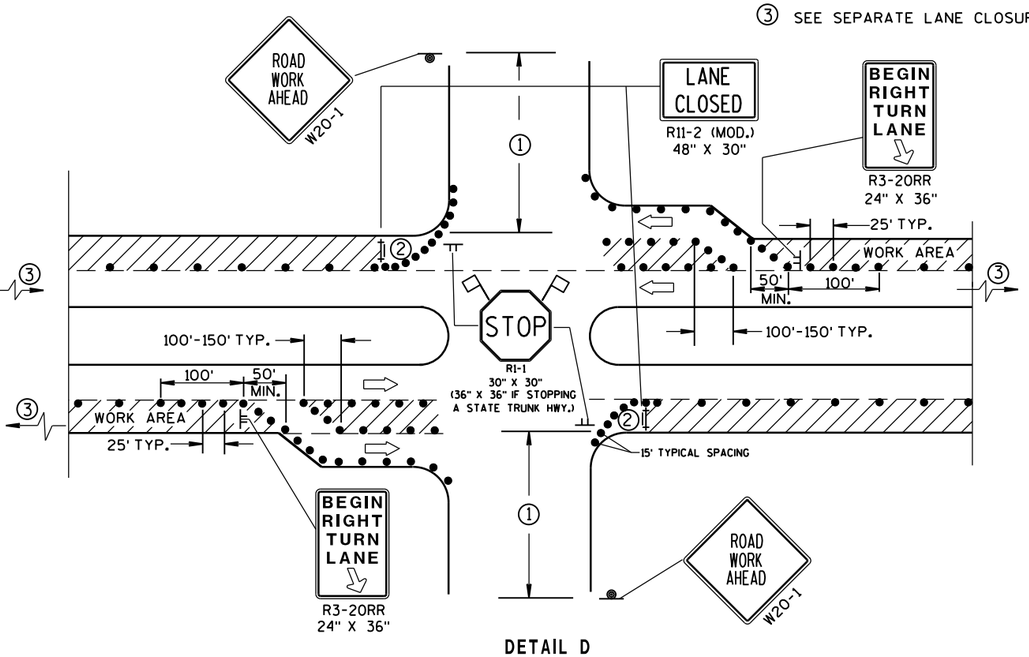
② ALSO USE BARRICADE AND 15-FOOT TYPICAL DRUM SPACING AT COMMERCIAL DRIVEWAYS.

③ SEE SEPARATE LANE CLOSURE DETAIL FOR ADDITIONAL TRAFFIC CONTROL.



DETAIL C

FOR LEFT LANE CLOSURE AT INTERSECTION OR MEDIAN OPENING (WITH LEFT TURN BAY OPEN)



DETAIL D

FOR RIGHT LANE CLOSURE AT INTERSECTION (WITH RIGHT TURN BAY OPEN)

LEGEND

- TRAFFIC CONTROL DRUM
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT (5' MIN. MOUNTING HEIGHT)
- TYPE III BARRICADE WITH ATTACHED SIGN AND TYPE "A" WARNING LIGHT (FLASHING)
- DIRECTION OF TRAFFIC
- FLAGS, 16" X 16" MIN., (ORANGE)
- WORK AREA

TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE

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 21-2

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.

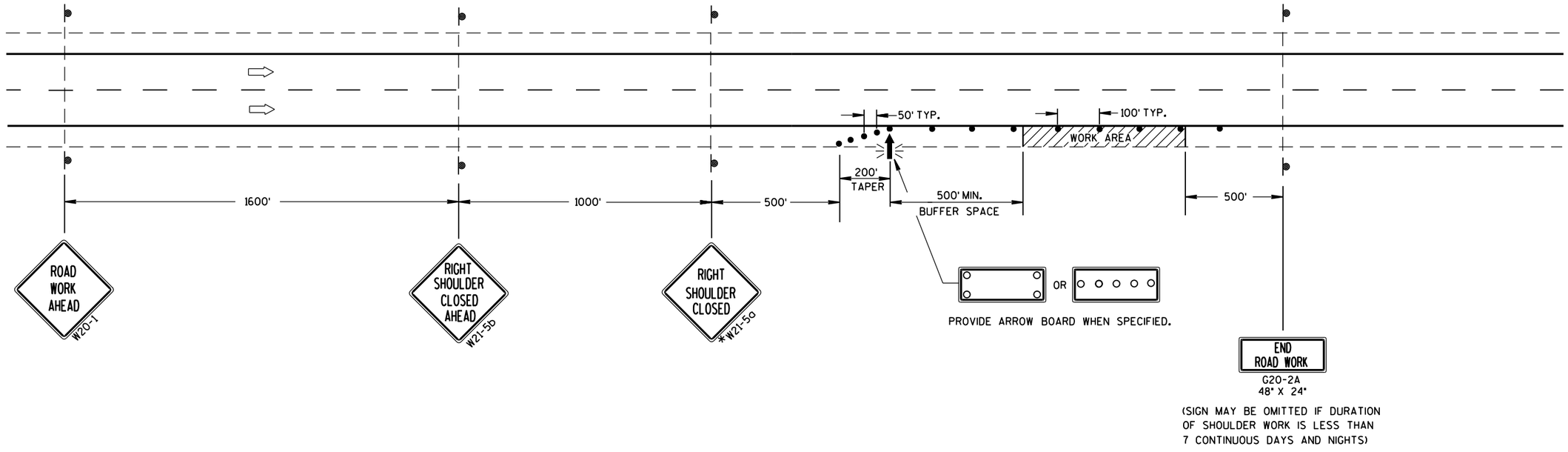
SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

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

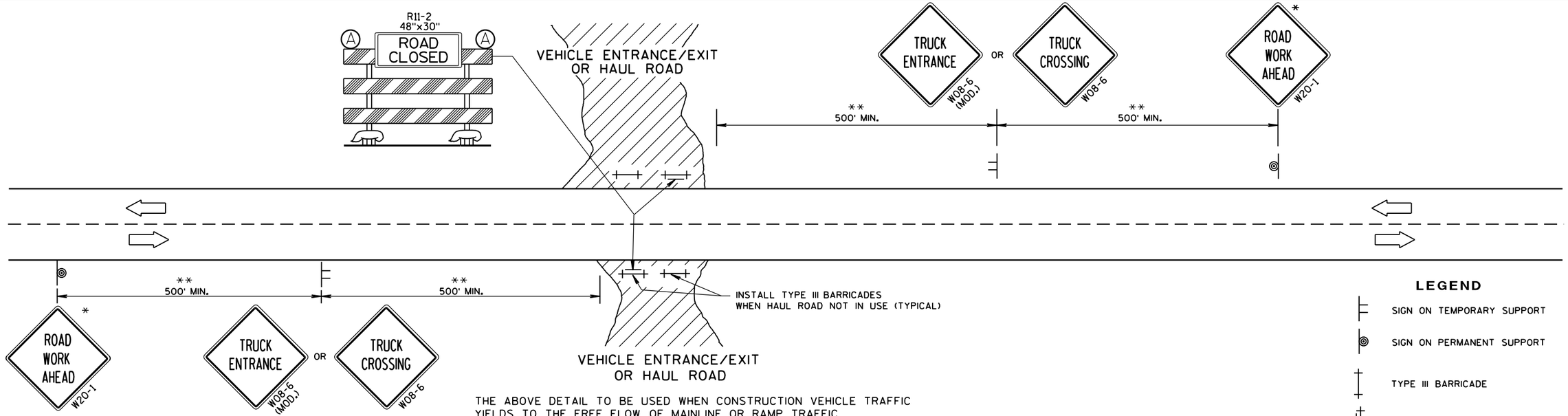
8/2013 — DATE

/S/ Travis Feltes — STATE TRAFFIC ENGINEER

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S.D.D. 15 D 27-2



THE ABOVE DETAIL TO BE USED WHEN CONSTRUCTION VEHICLE TRAFFIC YIELDS TO THE FREE FLOW OF MAINLINE OR RAMP TRAFFIC

LEGEND

- SIGN ON TEMPORARY SUPPORT
- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF
- (A) TYPE "A" WARNING LIGHT (FLASHING)
- DIRECTION OF TRAFFIC

GENERAL NOTES

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

WHEN ACTIVITY REFLECTED BY THE SIGN IS NOT CURRENTLY TAKING PLACE, THE HIGHWAY SHALL BE RESTORED TO NORMAL CONDITION AND THE SIGNS SHALL BE REMOVED, COVERED OR TURNED AWAY FROM TRAFFIC.

WHEN A SIDE ROAD OR RAMP INTERSECTS WITHIN THE ADVANCE SIGNING AREA, ADDITIONAL TRAFFIC CONTROLS SHALL BE PROVIDED AS SPECIFIED IN THE PLANS AND/OR THE SPECIAL PROVISIONS OR AS APPROVED BY THE ENGINEER.

* THESE SIGNS ARE TO BE USED ONLY WHEN VEHICLE ENTRANCE/EXIT CONDITIONS ARE SEPARATED BY MORE THAN 2 MILES FROM PREVIOUS WORK AREA OR SIGNING OR AS DIRECTED BY THE ENGINEER.

** 500 FEET SHOWN IS FOR ROADWAYS WITH A NON-CONSTRUCTION REGULATORY SPEED LIMIT OF 45 MPH OR MORE. FOR 35-40 MPH, USE 350 FEET. FOR 25-30 MPH, USE 200 FEET. USE 1000 FEET/1500 FEET FOR EXPRESSWAY/FREEWAY.

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

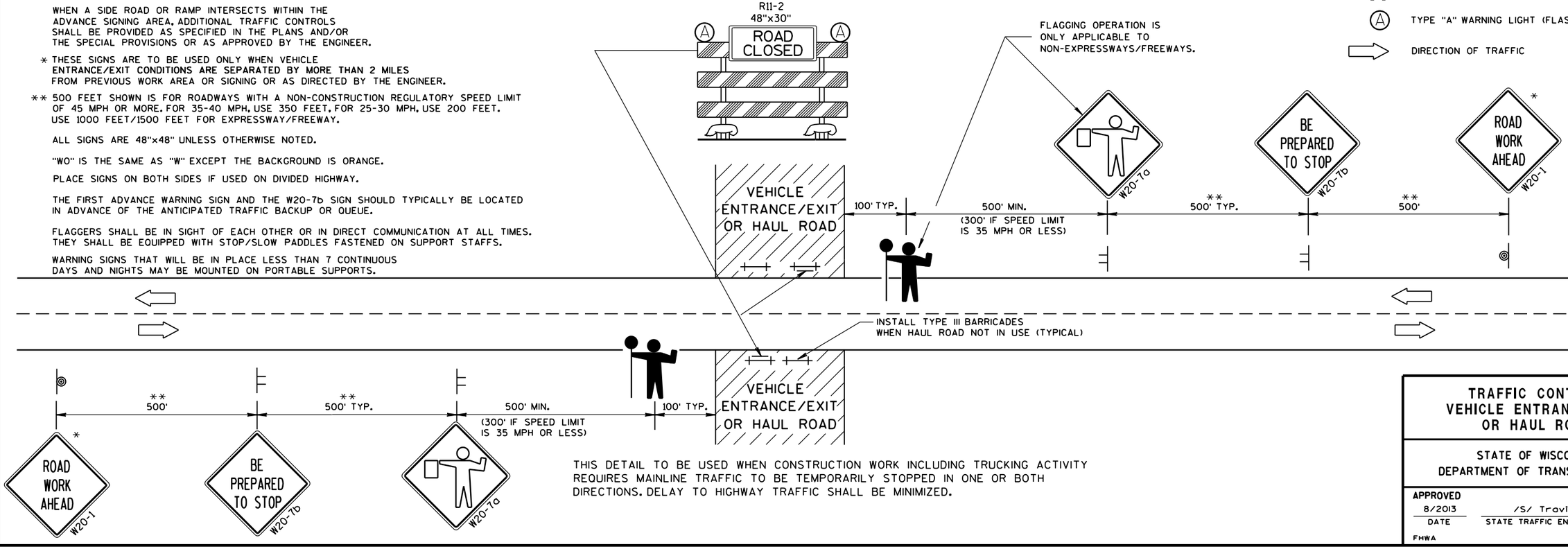
"WO" IS THE SAME AS "W" EXCEPT THE BACKGROUND IS ORANGE.

PLACE SIGNS ON BOTH SIDES IF USED ON DIVIDED HIGHWAY.

THE FIRST ADVANCE WARNING SIGN AND THE W20-7b SIGN SHOULD TYPICALLY BE LOCATED IN ADVANCE OF THE ANTICIPATED TRAFFIC BACKUP OR QUEUE.

FLAGGERS SHALL BE IN SIGHT OF EACH OTHER OR IN DIRECT COMMUNICATION AT ALL TIMES. THEY SHALL BE EQUIPPED WITH STOP/SLOW PADDLES FASTENED ON SUPPORT STAFFS.

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



THIS DETAIL TO BE USED WHEN CONSTRUCTION WORK INCLUDING TRUCKING ACTIVITY REQUIRES MAINLINE TRAFFIC TO BE TEMPORARILY STOPPED IN ONE OR BOTH DIRECTIONS. DELAY TO HIGHWAY TRAFFIC SHALL BE MINIMIZED.

TRAFFIC CONTROL, VEHICLE ENTRANCE/EXIT OR HAUL ROAD

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

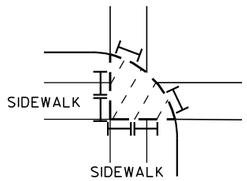
8/2013	/S/ Travis Feltes	
DATE	STATE TRAFFIC ENGINEER	IGN

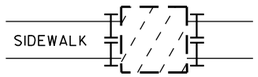
FHWA

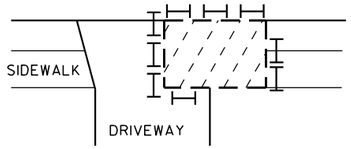
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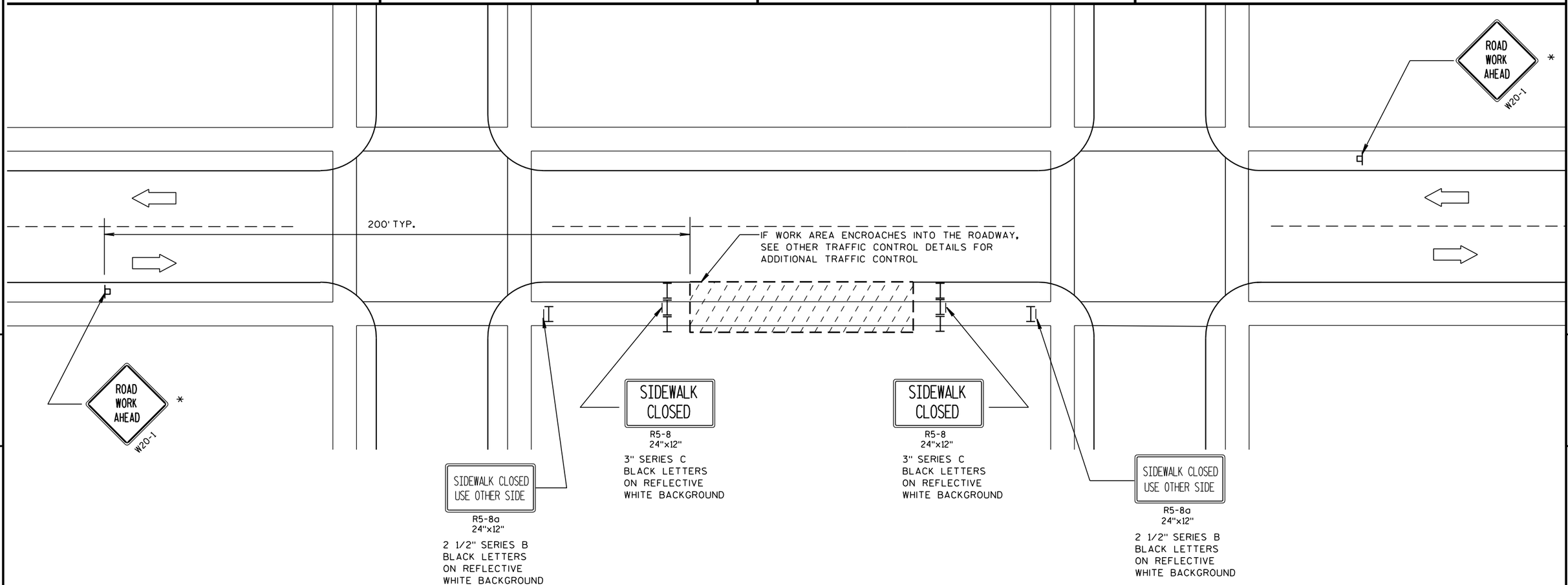
S.D.D. 15 D 29-3

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

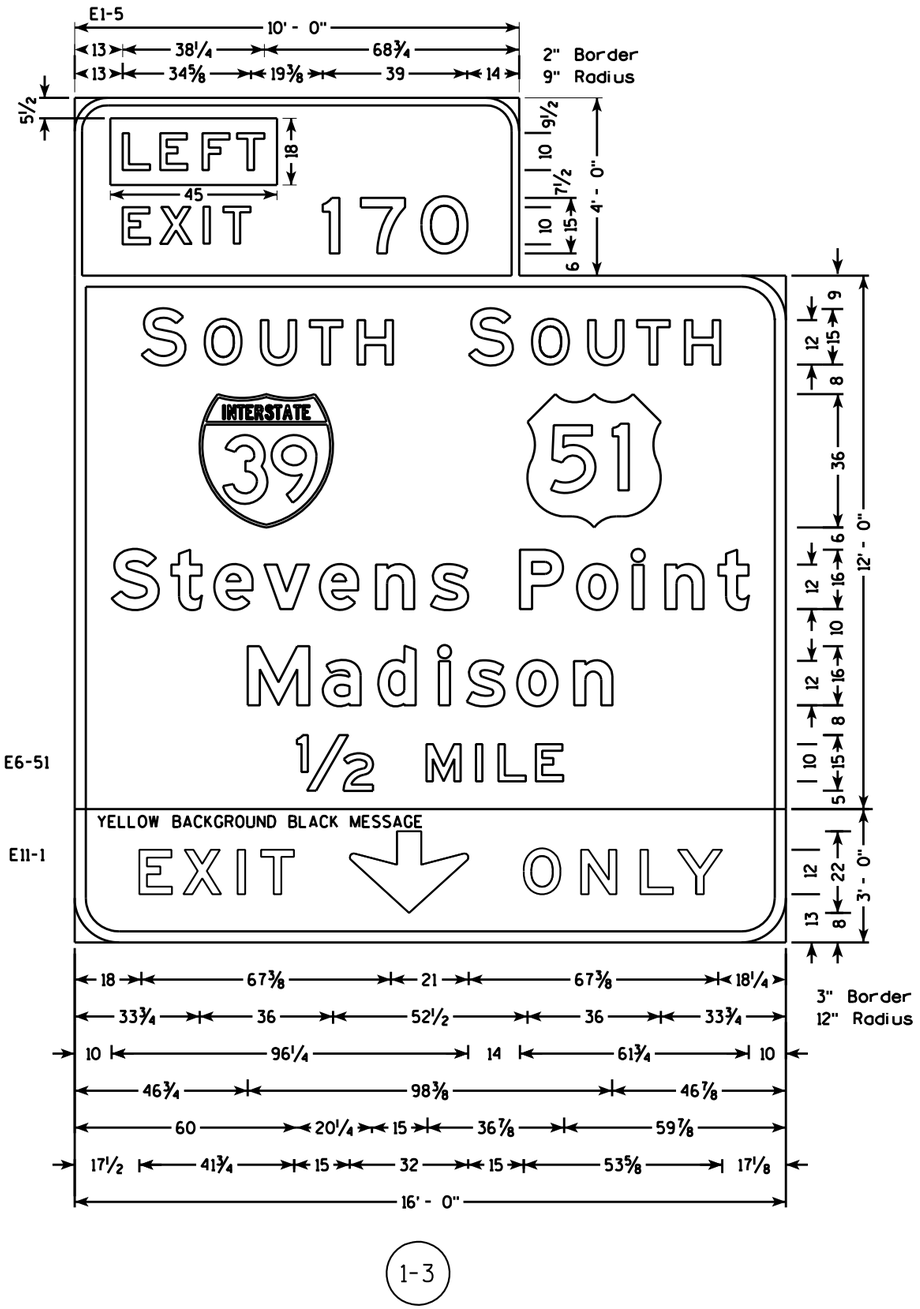
TRAFFIC CONTROL, SIDEWALK CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
5/23/2000 DATE
/S/ Chester J. [illegible]
CHIEF SIGNS AND MARK[illegible] ENGINEER
FHWA

6

S.D.D. 15 D 30-1



1-3

NOTES

1. Sign is Type I - Type SH Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Green except LEFT in E1-5 and E11-1 shall be Yellow
   Message - White except LEFT in E1-5 and E11-1 shall be Black
3. Message Series - E Modified except all cap WORDS are Series E

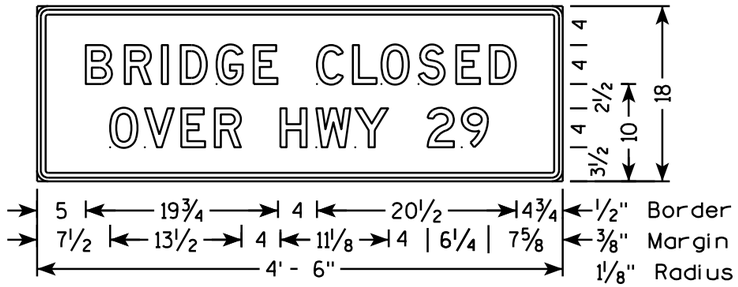
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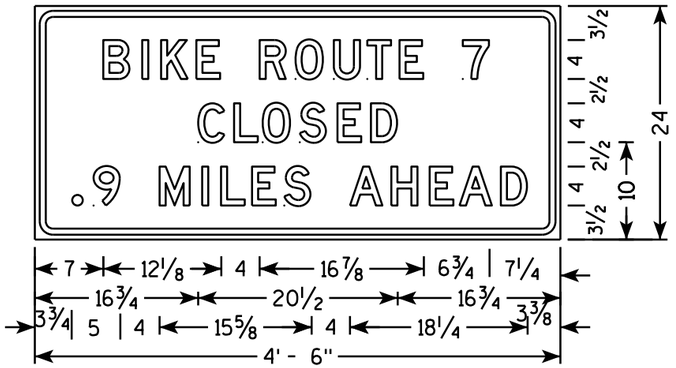
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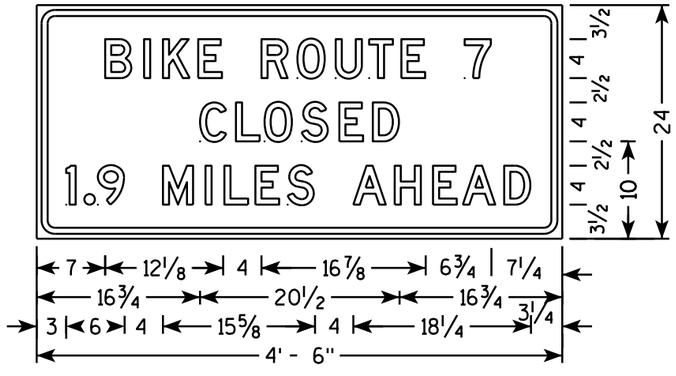
PROJECT NO: 1053-02-74	HWY: STH 29	COUNTY: MARATHON	SIGN DETAIL	SHEET 330	E

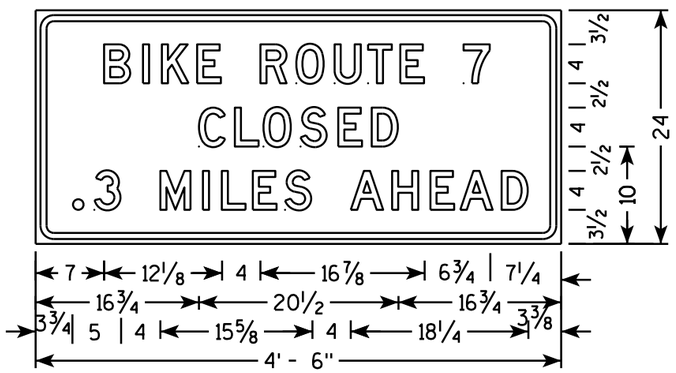
NOTES

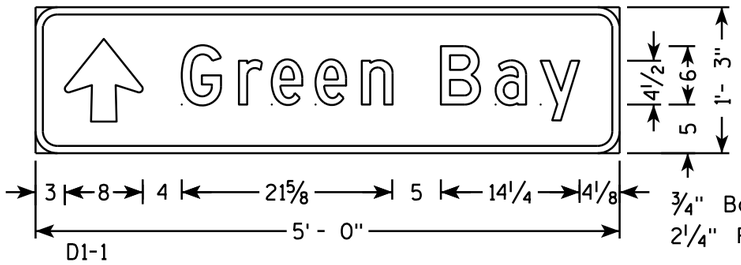
1. All Signs Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - ORANGE
   Message - BLACK
3. Message Series - D

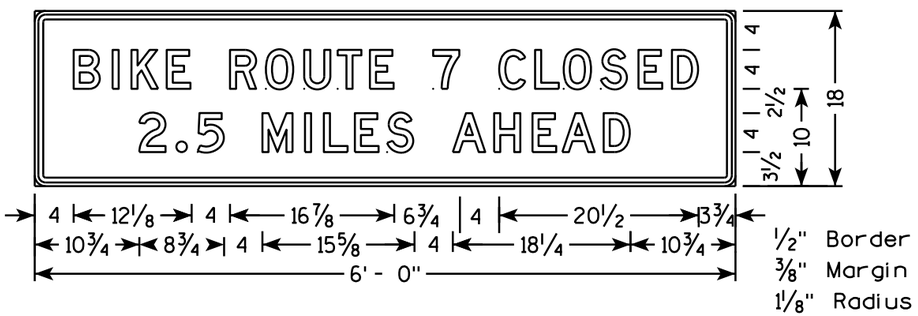










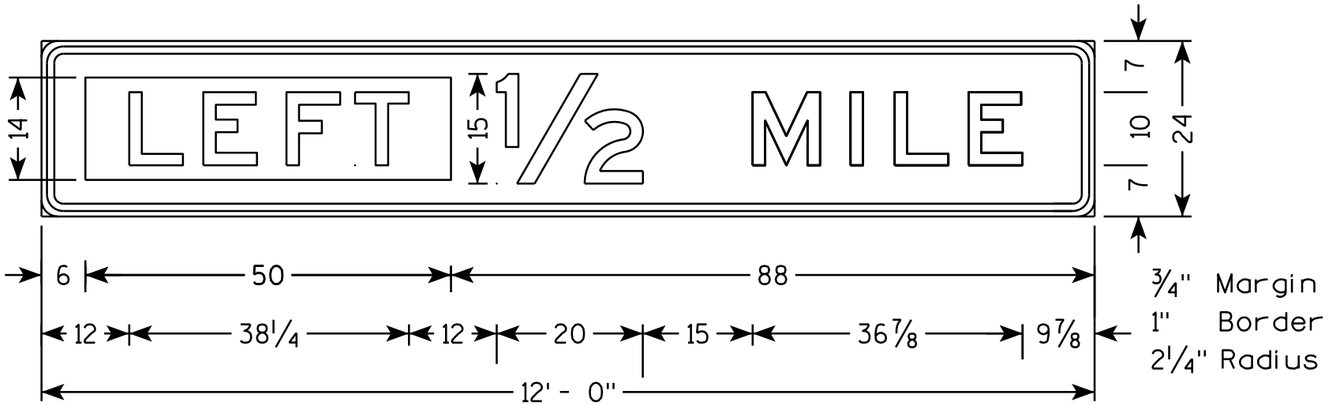


7

7

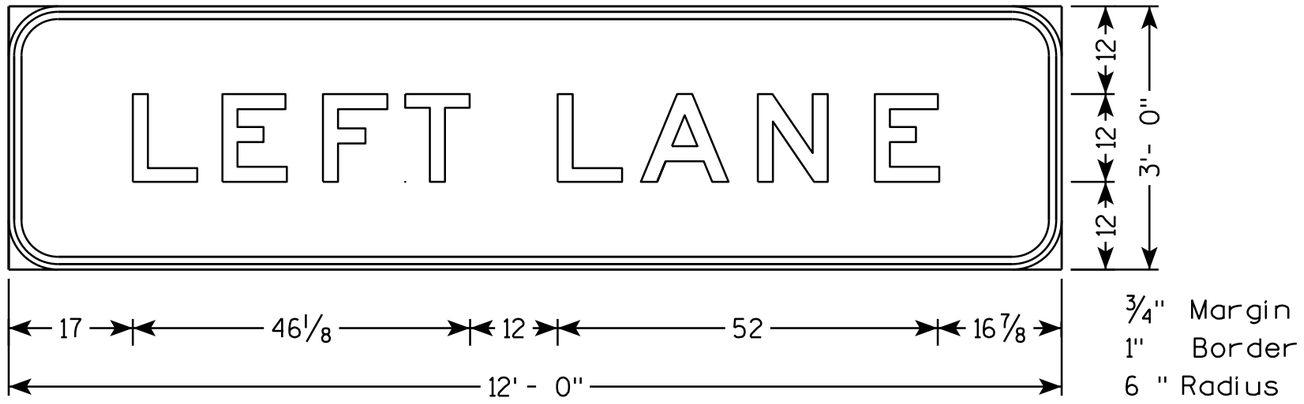
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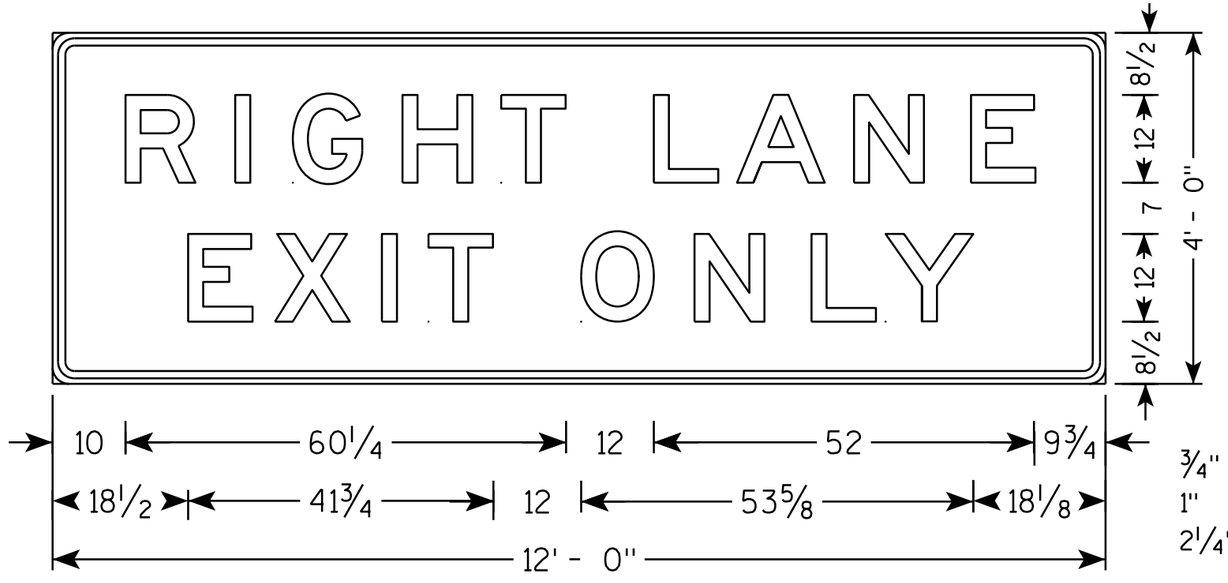
FILE NAME : C:\CAEFiles\Projects\tr_d4\4375A013.dgn PLOT DATE : 23-OCT-2013 15:48 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 15.566735:1.000000
WISDOT/CADDS SHEET 42



NOTES

1. All Signs 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 - E



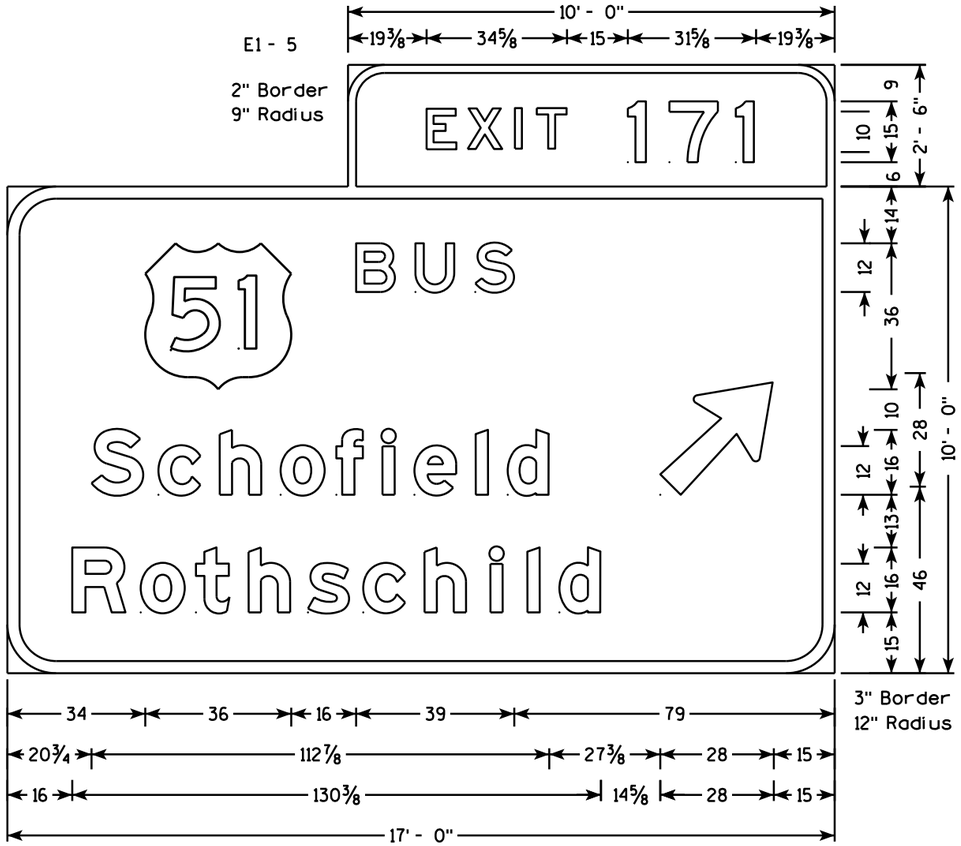


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7

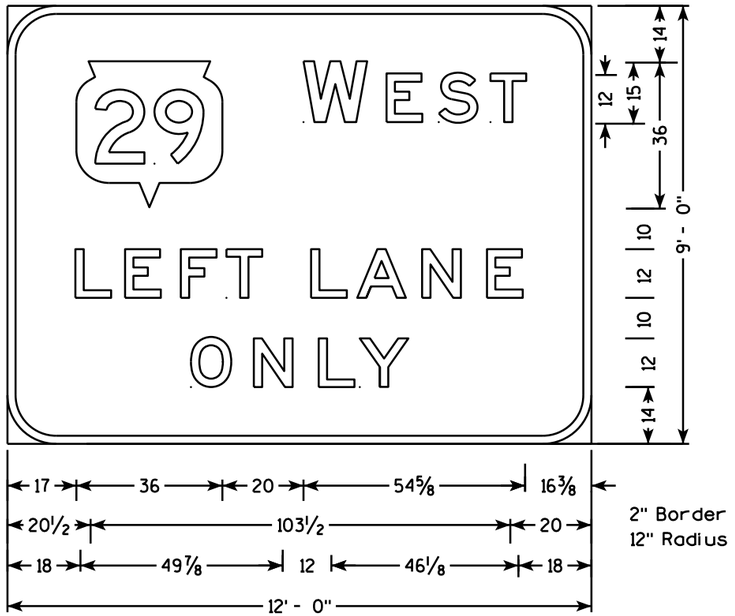
PROJECT NO: 1053-02-74	HWY: STH 29	COUNTY: MARATHON	TEMPORARY SIGNING	SHEET NO:	E

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NOTES

1. All Signs are Type I - Type SH Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Green
   Message - White
3. Message Series - E Modified except all cap Words are Series E



7

7

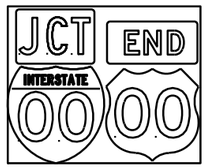
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WISDOT/CADDS SHEET 42

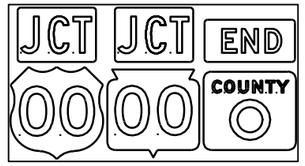
TYPICAL ASSEMBLIES



J1-1



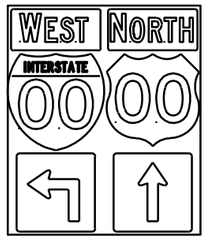
J1-2



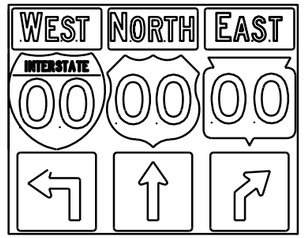
J1-3



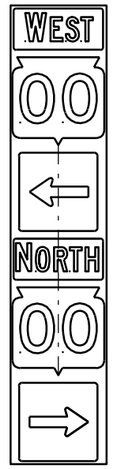
J2-1



J2-2

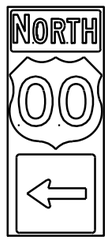


J2-3

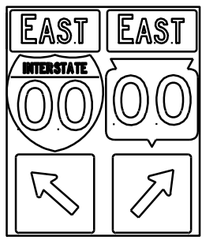


JV

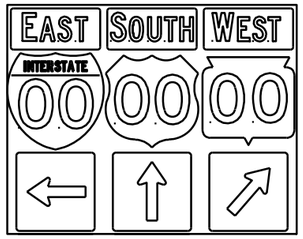
(Typical Vertical J-Assembly
See Note 10 and 11)



J3-1



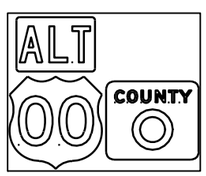
J3-2



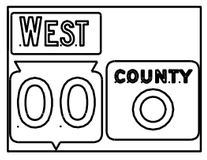
J3-3



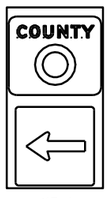
J4-1



J4-2



J4-2



J13-1



J12-1



J32-1



J33-1

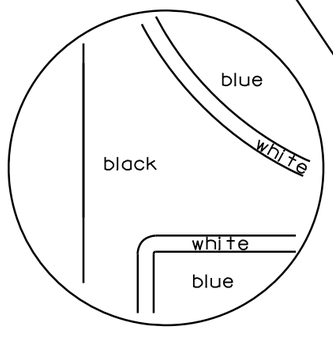


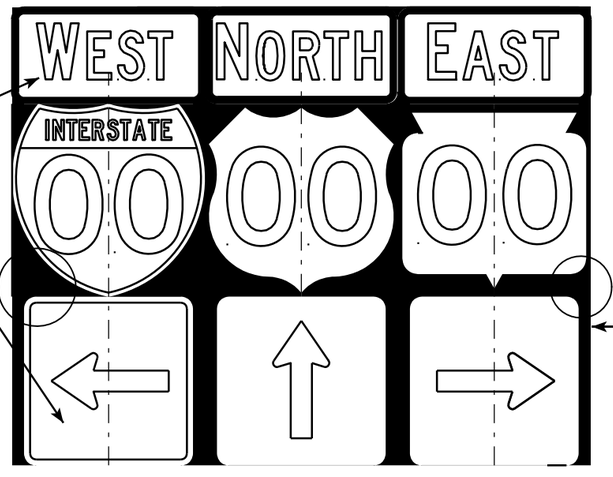
J23-1

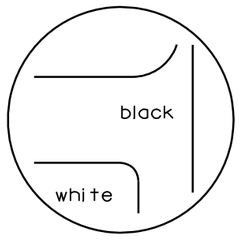


J22-1

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 3/25/13 PLATE NO. A2-1S.7

7

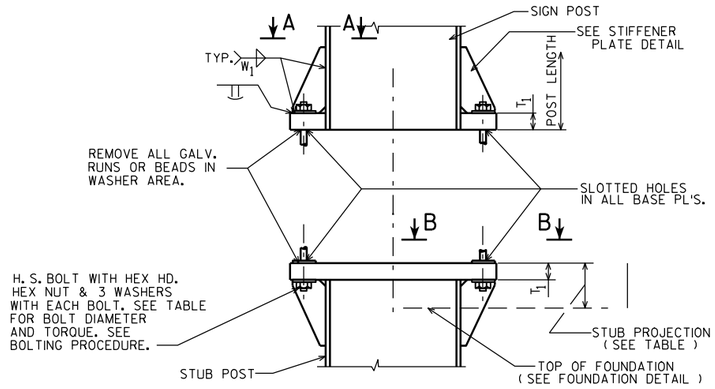
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PROJECT NO:

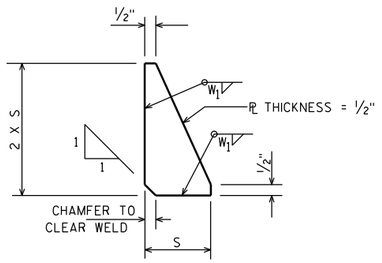
SHEET NO: 334 E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A21S.DGN PLOT DATE : 25-MAR-2013 11:33 PLOT BY : mscsja PLOT NAME :

WISDOT/CADDS SHEET 42

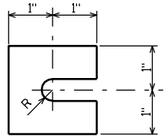


SIGN POST AND STUB POST ELEVATION



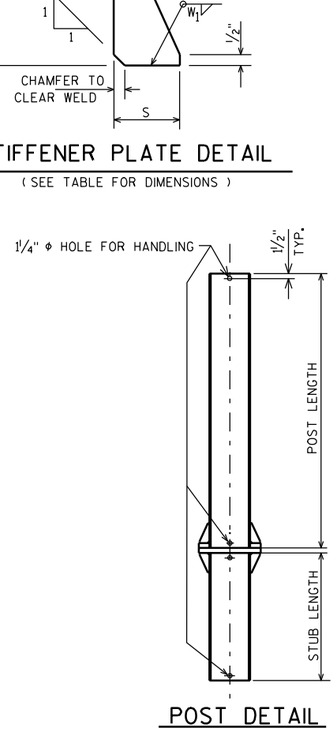
STIFFENER PLATE DETAIL

(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



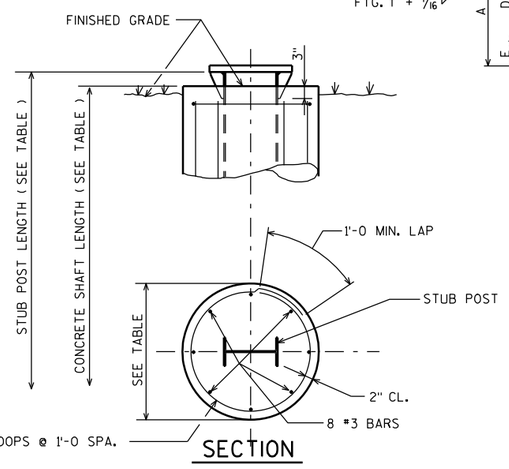
POST DETAIL

	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
E	1.0	62

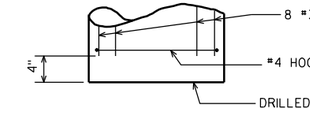
⑦

REINF.	TYPE	#3	#4
	A	8 @ 4'-5	5 @ 6'-3
	B	8 @ 6'-5	7 @ 6'-3
	C	8 @ 6'-11	7 @ 6'-3
	D	8 @ 7'-5	8 @ 6'-3
	E	8 @ 7'-11	9 @ 6'-3

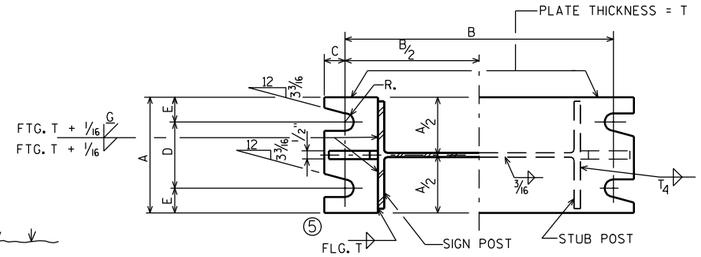
⑦



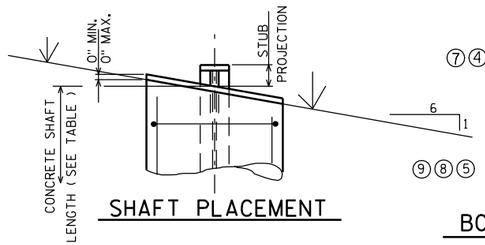
SECTION



FOUNDATION DETAIL



SECTION A-A SECTION B-B



SHAFT PLACEMENT

DESIGN DATA

WIND PRESSURE = 75 M.P.H.
WIND COMPONENTS - NORMAL = 1.0 TRANSVERSE = 0.0
ICE LOAD = 3 P.S.F.

GROUP LOADS	PERCENT OF ALLOWABLE STRESS
1. DEAD	100
2. DEAD & WIND	140
3. DEAD, ICE & 1/2 WIND△	140 △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.

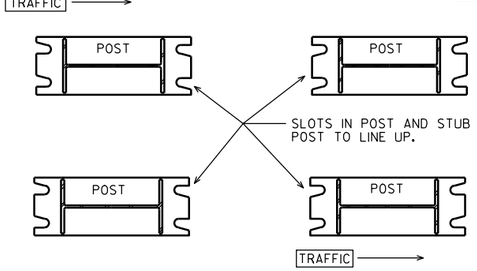
GENERAL NOTES

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. 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)
4. BURR THREADS AT JUNCTION WITH NUT USING A CENTER PUNCH TO PREVENT NUT LOOSENING.

NOTE:
TIGHTEN THE HIGH STRENGTH BOLTS TO THE TORQUE SHOWN. DO NOT OVERTIGHTEN.



POST SLOT ORIENTATION ⑦

		BASE CONNECTION DATA TABLE											FOUNDATION DATA				②
	TYPE	DIMENSION / POST SIZE	BOLT SIZE & TORQUE	A	B	C	D	E	T_1	T_4	W_1	R	S	STUB LENGTH	STUB PROJECTION	SHAFT DIAMETER	SHAFT LENGTH	K
④	A	W10"X12.0 #/FT.	3/4" Φ @ 75#-FT.	5 1/4"	1'-0 3/8	7/8"	3 1/2"	7/8"	1"	3/16"	5/16"	13/32 "	2 1/8"	3'-6	3"	2'-0 Φ	5'-0	76.0# ④
④	B	W12"X16.0 #/FT.	7/8" Φ @ 85#-FT.	5 1/2"	1'-4 1/4	1"	3 1/2"	1"	1 1/4"	1/4"	5/16"	15/32 "	3"	5'-6	3"	2'-0 Φ	7'-0	146.5# ④
	C	W12"X19.0 #/FT.	7/8" Φ @ 85#-FT.	5 1/2"	1'-4 1/4	1"	3 1/2"	1"	1 1/2"	5/16"	5/16"	15/32 "	3"	6'-0	3"	2'-0 Φ	7'-6	182.1#
	D	W12"X22.0 #/FT.	7/8" Φ @ 85#-FT.	5 1/2"	1'-4 1/4	1"	3 1/2"	1"	1 1/2"	3/8"	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'-4 1/4	1 1/4"	4"	1 1/2"	1 1/2"	3/8"	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 4/26/11 PLATE NO. A3-1.13

NO.	DATE	REVISION
⑨	4-26-11	REMOVE NON-GALVANIZED
⑧	10-30-96	NOT GALVANIZED/GALVANIZED
⑦	10-30-92	QUANT., A588 EXCEPT., ADD SLOT VIEW
⑥	8-24-87	BASE CONN. WELD
⑤	10-13-81	BASE CONN. WELD & FUSE PL WASHERS
④	10-19-79	POST A & B, A572 GR. 50, & K
②	11-28-78	"K" ③ 4-23-79 TYPE "E"
①	5-4-78	T_1 , T_2 & W_1

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

TYPE A, B, C, D, & E

CONST. SPEC. 2011 | DRAWN BY JPH | PLANS CK'D.

FTG. & SIGN SUPPORT DETAILS GROUND MOUNT BREAK-AWAY SIGNS | SHEET

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 335 | E

VERITCAL DIMENSION ⇨

HORIZONTAL DIMENSION ⇩

⇩ \ ⇨	2.5 ft.	3 ft.	3.5 ft.	4 ft.	4.5 ft.	5 ft.	5.5 ft.	6 ft.	6.5 ft.	7 ft.	7.5 ft.	8 ft.	8.5 ft.	9 ft.	9.5 ft.	10 ft.	10.5 ft.	11 ft.	11.5 ft.	12 ft.	12.5 ft.	13 ft.	13.5 ft.	14 ft.	14.5 ft.	15 ft.	15.5 ft.	16 ft.
10 ft.	25 Sq. Ft	30 Sq. Ft	35 Sq. Ft	40 Sq. Ft	45 Sq. Ft	50 Sq. Ft	55 Sq. Ft	60 Sq. Ft	65 Sq. Ft	70 Sq. Ft	75 Sq. Ft	80 Sq. Ft	85 Sq. Ft	90 Sq. Ft	95 Sq. Ft	100 Sq. Ft	105 Sq. Ft	110 Sq. Ft	115 Sq. Ft	120 Sq. Ft	125 Sq. Ft	130 Sq. Ft	135 Sq. Ft	140 Sq. Ft	145 Sq. Ft	150 Sq. Ft	155 Sq. Ft	160 Sq. Ft
11 ft.	27.5 Sq. Ft	33 Sq. Ft	38.5 Sq. Ft	44 Sq. Ft	49.5 Sq. Ft	55 Sq. Ft	60.5 Sq. Ft	66 Sq. Ft	71.5 Sq. Ft	77 Sq. Ft	82.5 Sq. Ft	88 Sq. Ft	93.5 Sq. Ft	99 Sq. Ft	104.5 Sq. Ft	110 Sq. Ft	115.5 Sq. Ft	121 Sq. Ft	126.5 Sq. Ft	132 Sq. Ft	137.5 Sq. Ft	143 Sq. Ft	148.5 Sq. Ft	154 Sq. Ft	159.5 Sq. Ft	165 Sq. Ft	170.5 Sq. Ft	176 Sq. Ft
12 ft.	30 Sq. Ft	36 Sq. Ft	42 Sq. Ft	48 Sq. Ft	54 Sq. Ft	60 Sq. Ft	66 Sq. Ft	72 Sq. Ft	78 Sq. Ft	84 Sq. Ft	90 Sq. Ft	96 Sq. Ft	102 Sq. Ft	108 Sq. Ft	114 Sq. Ft	120 Sq. Ft	126 Sq. Ft	132 Sq. Ft	138 Sq. Ft	144 Sq. Ft	150 Sq. Ft	156 Sq. Ft	162 Sq. Ft	168 Sq. Ft	174 Sq. Ft	180 Sq. Ft	186 Sq. Ft	192 Sq. Ft
13 ft.	32.5 Sq. Ft	39 Sq. Ft	45.5 Sq. Ft	52 Sq. Ft	58.5 Sq. Ft	65 Sq. Ft	71.5 Sq. Ft	78 Sq. Ft	84.5 Sq. Ft	91 Sq. Ft	97.5 Sq. Ft	104 Sq. Ft	110.5 Sq. Ft	117 Sq. Ft	123.5 Sq. Ft	130 Sq. Ft	136.5 Sq. Ft	143 Sq. Ft	149.5 Sq. Ft	156 Sq. Ft	162.5 Sq. Ft	169 Sq. Ft	175.5 Sq. Ft	182 Sq. Ft	188.5 Sq. Ft	195 Sq. Ft	201.5 Sq. Ft	208 Sq. Ft
14 ft.	35 Sq. Ft	42 Sq. Ft	49 Sq. Ft	56 Sq. Ft	63 Sq. Ft	70 Sq. Ft	77 Sq. Ft	84 Sq. Ft	91 Sq. Ft	98 Sq. Ft	105 Sq. Ft	112 Sq. Ft	119 Sq. Ft	126 Sq. Ft	133 Sq. Ft	140 Sq. Ft	147 Sq. Ft	154 Sq. Ft	161 Sq. Ft	168 Sq. Ft	175 Sq. Ft	182 Sq. Ft	189 Sq. Ft	196 Sq. Ft	203 Sq. Ft	210 Sq. Ft	217 Sq. Ft	224 Sq. Ft
15 ft.	37.5 Sq. Ft	45 Sq. Ft	52.5 Sq. Ft	60 Sq. Ft	67.5 Sq. Ft	75 Sq. Ft	82.5 Sq. Ft	90 Sq. Ft	97.5 Sq. Ft	105 Sq. Ft	112.5 Sq. Ft	120 Sq. Ft	127.5 Sq. Ft	135 Sq. Ft	142.5 Sq. Ft	150 Sq. Ft	157.5 Sq. Ft	165 Sq. Ft	172.5 Sq. Ft	180 Sq. Ft	187.5 Sq. Ft	195 Sq. Ft	202.5 Sq. Ft	210 Sq. Ft	217.5 Sq. Ft	225 Sq. Ft	232.5 Sq. Ft	240 Sq. Ft
16 ft.	40 Sq. Ft	48 Sq. Ft	56 Sq. Ft	64 Sq. Ft	72 Sq. Ft	80 Sq. Ft	88 Sq. Ft	96 Sq. Ft	104 Sq. Ft	112 Sq. Ft	120 Sq. Ft	128 Sq. Ft	136 Sq. Ft	144 Sq. Ft	152 Sq. Ft	160 Sq. Ft	168 Sq. Ft	176 Sq. Ft	184 Sq. Ft	192 Sq. Ft	200 Sq. Ft	208 Sq. Ft	216 Sq. Ft	224 Sq. Ft	232 Sq. Ft	240 Sq. Ft	248 Sq. Ft	256 Sq. Ft
17 ft.	42.5 Sq. Ft	51 Sq. Ft	59.5 Sq. Ft	68 Sq. Ft	76.5 Sq. Ft	85 Sq. Ft	93.5 Sq. Ft	102 Sq. Ft	110.5 Sq. Ft	119 Sq. Ft	127.5 Sq. Ft	136 Sq. Ft	144.5 Sq. Ft	153 Sq. Ft	161.5 Sq. Ft	170 Sq. Ft	178.5 Sq. Ft	187 Sq. Ft	195.5 Sq. Ft	204 Sq. Ft	212.5 Sq. Ft	221 Sq. Ft	229.5 Sq. Ft	238 Sq. Ft	246.5 Sq. Ft	255 Sq. Ft	263.5 Sq. Ft	272 Sq. Ft
18 ft.	45 Sq. Ft	54 Sq. Ft	63 Sq. Ft	72 Sq. Ft	81 Sq. Ft	90 Sq. Ft	99 Sq. Ft	108 Sq. Ft	117 Sq. Ft	126 Sq. Ft	135 Sq. Ft	144 Sq. Ft	153 Sq. Ft	162 Sq. Ft	171 Sq. Ft	180 Sq. Ft	189 Sq. Ft	198 Sq. Ft	207 Sq. Ft	216 Sq. Ft	225 Sq. Ft	234 Sq. Ft	243 Sq. Ft	252 Sq. Ft	261 Sq. Ft	270 Sq. Ft	279 Sq. Ft	288 Sq. Ft
19 ft.	47.5 Sq. Ft	57 Sq. Ft	66.5 Sq. Ft	76 Sq. Ft	85.5 Sq. Ft	95 Sq. Ft	104.5 Sq. Ft	114 Sq. Ft	123.5 Sq. Ft	133 Sq. Ft	142.5 Sq. Ft	152 Sq. Ft	161.5 Sq. Ft	171 Sq. Ft	180.5 Sq. Ft	190 Sq. Ft	199.5 Sq. Ft	209 Sq. Ft	218.5 Sq. Ft	228 Sq. Ft	237.5 Sq. Ft	247 Sq. Ft	256.5 Sq. Ft	266 Sq. Ft	275.5 Sq. Ft	285 Sq. Ft	294.5 Sq. Ft	304 Sq. Ft
20 ft.	50 Sq. Ft	60 Sq. Ft	70 Sq. Ft	80 Sq. Ft	90 Sq. Ft	100 Sq. Ft	110 Sq. Ft	120 Sq. Ft	130 Sq. Ft	140 Sq. Ft	150 Sq. Ft	160 Sq. Ft	170 Sq. Ft	180 Sq. Ft	190 Sq. Ft	200 Sq. Ft	210 Sq. Ft	220 Sq. Ft	230 Sq. Ft	240 Sq. Ft	250 Sq. Ft	260 Sq. Ft	270 Sq. Ft	280 Sq. Ft	290 Sq. Ft	300 Sq. Ft	310 Sq. Ft	320 Sq. Ft
21 ft.	52.5 Sq. Ft	63 Sq. Ft	73.5 Sq. Ft	84 Sq. Ft	94.5 Sq. Ft	105 Sq. Ft	115.5 Sq. Ft	126 Sq. Ft	136.5 Sq. Ft	147 Sq. Ft	157.5 Sq. Ft	168 Sq. Ft	178.5 Sq. Ft	189 Sq. Ft	199.5 Sq. Ft	210 Sq. Ft	220.5 Sq. Ft	231 Sq. Ft	241.5 Sq. Ft	252 Sq. Ft	262.5 Sq. Ft	273 Sq. Ft	283.5 Sq. Ft	294 Sq. Ft	304.5 Sq. Ft	315 Sq. Ft	325.5 Sq. Ft	336 Sq. Ft

Type "A" (2 Posts)
1.2 CY Conc.
68 LBs Bar Steel

Type "B" (2 Posts)
1.6 CY Conc.
98 LBs Bar Steel

Type "C" (2 Posts)
1.8 CY Conc.
100 LBs Bar Steel

Type "D" (2 Posts)
1.8 CY Conc.
112 LBs Bar Steel

Type "C" (3 Posts)
2.7 CY Conc.
150 LBs Bar Steel

STEEL POST SIZE

"A" - W10" x 12"
"B" - W12" x 16"
"C" - W12" x 19"
"D" - W12 x 22"

7

7

DETERMINATION OF HIGH STRENGTH STRUCTURAL STEEL SIGN SUPPORT TYPE

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/03/10 PLATE NO. A3-2.2

PROJECT NO: | SHEET NO: E

FILE NAME : C:\users\PROJECTS\tr_stdplate\A32.DGN PLOT DATE : 05-MAR-2010 10:10 PLOT BY : ditjph

WISDOT/CADDS SHEET 42

VERTICAL DIMENSION ⇨

HORIZONTAL DIMENSION ⇩

Type "A" (2 Posts) 1.2 CY Conc. 68 LBs Bar Steel

⇩ \ ⇨	2.5 ft.	3 ft.	3.5 ft.	4 ft.	4.5 ft.	5 ft.	5.5 ft.	6 ft.	6.5 ft.	7 ft.	7.5 ft.	8 ft.	8.5 ft.	9 ft.	9.5 ft.	10 ft.	10.5 ft.	11 ft.	11.5 ft.	12 ft.	12.5 ft.	13 ft.	13.5 ft.	14 ft.	14.5 ft.	15 ft.	15.5 ft.	16 ft.
22 ft.	55 Sq. Ft	66 Sq. Ft	77 Sq. Ft	88 Sq. Ft	99 Sq. Ft	110 Sq. Ft	121 Sq. Ft	132 Sq. Ft	143 Sq. Ft	154 Sq. Ft	165 Sq. Ft	176 Sq. Ft	187 Sq. Ft	198 Sq. Ft	209 Sq. Ft	220 Sq. Ft	231 Sq. Ft	242 Sq. Ft	253 Sq. Ft	264 Sq. Ft	275 Sq. Ft	286 Sq. Ft	297 Sq. Ft	308 Sq. Ft	319 Sq. Ft	330 Sq. Ft	341 Sq. Ft	352 Sq. Ft
23 ft.	57.5 Sq. Ft	69 Sq. Ft	80.5 Sq. Ft	92 Sq. Ft	103.5 Sq. Ft	115 Sq. Ft	126.5 Sq. Ft	138 Sq. Ft	149.5 Sq. Ft	161 Sq. Ft	172.5 Sq. Ft	184 Sq. Ft	195.5 Sq. Ft	207 Sq. Ft	218.5 Sq. Ft	230 Sq. Ft	241.5 Sq. Ft	253 Sq. Ft	264.5 Sq. Ft	276 Sq. Ft	287.5 Sq. Ft	299 Sq. Ft	310.5 Sq. Ft	322 Sq. Ft	333.5 Sq. Ft	345 Sq. Ft	356.5 Sq. Ft	368 Sq. Ft
24 ft.	60 Sq. Ft	72 Sq. Ft	84 Sq. Ft	96 Sq. Ft	108 Sq. Ft	120 Sq. Ft	132 Sq. Ft	144 Sq. Ft	156 Sq. Ft	168 Sq. Ft	180 Sq. Ft	192 Sq. Ft	204 Sq. Ft	216 Sq. Ft	228 Sq. Ft	240 Sq. Ft	252 Sq. Ft	264 Sq. Ft	276 Sq. Ft	288 Sq. Ft	300 Sq. Ft	312 Sq. Ft	324 Sq. Ft	336 Sq. Ft	348 Sq. Ft	360 Sq. Ft	372 Sq. Ft	384 Sq. Ft
25 ft.	62.5 Sq. Ft	75 Sq. Ft	87.5 Sq. Ft	100 Sq. Ft	112.5 Sq. Ft	125 Sq. Ft	137.5 Sq. Ft	150 Sq. Ft	162.5 Sq. Ft	175 Sq. Ft	187.5 Sq. Ft	200 Sq. Ft	212.5 Sq. Ft	225 Sq. Ft	237.5 Sq. Ft	250 Sq. Ft	262.5 Sq. Ft	275 Sq. Ft	287.5 Sq. Ft	300 Sq. Ft	312.5 Sq. Ft	325 Sq. Ft	337.5 Sq. Ft	350 Sq. Ft	362.5 Sq. Ft	375 Sq. Ft	387.5 Sq. Ft	400 Sq. Ft
26 ft.	65 Sq. Ft	78 Sq. Ft	91 Sq. Ft	104 Sq. Ft	117 Sq. Ft	130 Sq. Ft	143 Sq. Ft	156 Sq. Ft	169 Sq. Ft	182 Sq. Ft	195 Sq. Ft	208 Sq. Ft	221 Sq. Ft	234 Sq. Ft	247 Sq. Ft	260 Sq. Ft	273 Sq. Ft	286 Sq. Ft	299 Sq. Ft	312 Sq. Ft	325 Sq. Ft	338 Sq. Ft	351 Sq. Ft	364 Sq. Ft	377 Sq. Ft	390 Sq. Ft	403 Sq. Ft	416 Sq. Ft
27 ft.	67.5 Sq. Ft	81 Sq. Ft	94.5 Sq. Ft	108 Sq. Ft	121.5 Sq. Ft	135 Sq. Ft	148.5 Sq. Ft	162 Sq. Ft	175.5 Sq. Ft	189 Sq. Ft	202.5 Sq. Ft	216 Sq. Ft	229.5 Sq. Ft	243 Sq. Ft	256.5 Sq. Ft	270 Sq. Ft	283.5 Sq. Ft	297 Sq. Ft	310.5 Sq. Ft	324 Sq. Ft	337.5 Sq. Ft	351 Sq. Ft	364.5 Sq. Ft	378 Sq. Ft	391.5 Sq. Ft	405 Sq. Ft	418.5 Sq. Ft	432 Sq. Ft
28 ft.	70 Sq. Ft	84 Sq. Ft	98 Sq. Ft	112 Sq. Ft	126 Sq. Ft	140 Sq. Ft	154 Sq. Ft	168 Sq. Ft	182 Sq. Ft	196 Sq. Ft	210 Sq. Ft	224 Sq. Ft	238 Sq. Ft	252 Sq. Ft	266 Sq. Ft	280 Sq. Ft	294 Sq. Ft	308 Sq. Ft	322 Sq. Ft	336 Sq. Ft	350 Sq. Ft	364 Sq. Ft	378 Sq. Ft	392 Sq. Ft	406 Sq. Ft	420 Sq. Ft	434 Sq. Ft	448 Sq. Ft
29 ft.	72.5 Sq. Ft	87 Sq. Ft	101.5 Sq. Ft	116 Sq. Ft	130.5 Sq. Ft	145 Sq. Ft	159.5 Sq. Ft	174 Sq. Ft	188.5 Sq. Ft	203 Sq. Ft	217.5 Sq. Ft	232 Sq. Ft	246.5 Sq. Ft	261 Sq. Ft	275.5 Sq. Ft	290 Sq. Ft	304.5 Sq. Ft	319 Sq. Ft	333.5 Sq. Ft	348 Sq. Ft	362.5 Sq. Ft	377 Sq. Ft	391.5 Sq. Ft	406 Sq. Ft	420.5 Sq. Ft	435 Sq. Ft	449.5 Sq. Ft	464 Sq. Ft
30 ft.	75 Sq. Ft	90 Sq. Ft	105 Sq. Ft	120 Sq. Ft	135 Sq. Ft	150 Sq. Ft	165 Sq. Ft	180 Sq. Ft	195 Sq. Ft	210 Sq. Ft	225 Sq. Ft	240 Sq. Ft	255 Sq. Ft	270 Sq. Ft	285 Sq. Ft	300 Sq. Ft	315 Sq. Ft	330 Sq. Ft	345 Sq. Ft	360 Sq. Ft	375 Sq. Ft	390 Sq. Ft	405 Sq. Ft	420 Sq. Ft	435 Sq. Ft	450 Sq. Ft	465 Sq. Ft	480 Sq. Ft
31 ft.	77.5 Sq. Ft	93 Sq. Ft	108.5 Sq. Ft	124 Sq. Ft	139.5 Sq. Ft	155 Sq. Ft	170.5 Sq. Ft	186 Sq. Ft	201.5 Sq. Ft	217 Sq. Ft	232.5 Sq. Ft	248 Sq. Ft	263.5 Sq. Ft	279 Sq. Ft	294.5 Sq. Ft	310 Sq. Ft	325.5 Sq. Ft	341 Sq. Ft	356.5 Sq. Ft	372 Sq. Ft	387.5 Sq. Ft	403 Sq. Ft	418.5 Sq. Ft	434 Sq. Ft	449.5 Sq. Ft	465 Sq. Ft	480.5 Sq. Ft	496 Sq. Ft
32 ft.	80 Sq. Ft	96 Sq. Ft	112 Sq. Ft	128 Sq. Ft	144 Sq. Ft	160 Sq. Ft	176 Sq. Ft	192 Sq. Ft	208 Sq. Ft	224 Sq. Ft	240 Sq. Ft	256 Sq. Ft	272 Sq. Ft	288 Sq. Ft	304 Sq. Ft	320 Sq. Ft	336 Sq. Ft	352 Sq. Ft	368 Sq. Ft	384 Sq. Ft	400 Sq. Ft	416 Sq. Ft	432 Sq. Ft	448 Sq. Ft	464 Sq. Ft	480 Sq. Ft	496 Sq. Ft	512 Sq. Ft
33 ft.	82.5 Sq. Ft	99 Sq. Ft	115.5 Sq. Ft	132 Sq. Ft	148.5 Sq. Ft	165 Sq. Ft	181.5 Sq. Ft	198 Sq. Ft	214.5 Sq. Ft	231 Sq. Ft	247.5 Sq. Ft	264 Sq. Ft	280.5 Sq. Ft	297 Sq. Ft	313.5 Sq. Ft	330 Sq. Ft	346.5 Sq. Ft	363 Sq. Ft	379.5 Sq. Ft	396 Sq. Ft	412.5 Sq. Ft	429 Sq. Ft	445.5 Sq. Ft	462 Sq. Ft	478.5 Sq. Ft	495 Sq. Ft	511.5 Sq. Ft	528 Sq. Ft
34 ft.	85 Sq. Ft	102 Sq. Ft	119 Sq. Ft	136 Sq. Ft	153 Sq. Ft	170 Sq. Ft	187 Sq. Ft	204 Sq. Ft	221 Sq. Ft	238 Sq. Ft	255 Sq. Ft	272 Sq. Ft	289 Sq. Ft	306 Sq. Ft	323 Sq. Ft	340 Sq. Ft	357 Sq. Ft	374 Sq. Ft	391 Sq. Ft	408 Sq. Ft	425 Sq. Ft	442 Sq. Ft	459 Sq. Ft	476 Sq. Ft	493 Sq. Ft	510 Sq. Ft	527 Sq. Ft	544 Sq. Ft
35 ft.	87.5 Sq. Ft	105 Sq. Ft	122.5 Sq. Ft	140 Sq. Ft	157.5 Sq. Ft	175 Sq. Ft	192.5 Sq. Ft	210 Sq. Ft	227.5 Sq. Ft	245 Sq. Ft	262.5 Sq. Ft	280 Sq. Ft	297.5 Sq. Ft	315 Sq. Ft	332.5 Sq. Ft	350 Sq. Ft	367.5 Sq. Ft	385 Sq. Ft	402.5 Sq. Ft	420 Sq. Ft	437.5 Sq. Ft	455 Sq. Ft	472.5 Sq. Ft	490 Sq. Ft	507.5 Sq. Ft	525 Sq. Ft	542.5 Sq. Ft	560 Sq. Ft
36 ft.	90 Sq. Ft	108 Sq. Ft	126 Sq. Ft	144 Sq. Ft	162 Sq. Ft	180 Sq. Ft	198 Sq. Ft	216 Sq. Ft	234 Sq. Ft	252 Sq. Ft	270 Sq. Ft	288 Sq. Ft	306 Sq. Ft	324 Sq. Ft	342 Sq. Ft	360 Sq. Ft	378 Sq. Ft	396 Sq. Ft	414 Sq. Ft	432 Sq. Ft	450 Sq. Ft	468 Sq. Ft	486 Sq. Ft	504 Sq. Ft	522 Sq. Ft	540 Sq. Ft	558 Sq. Ft	576 Sq. Ft

Type "B" (2 Posts)
1.6 CY Conc.
98 LBs Bar Steel

Type "C" (2 Posts)
1.8 CY Conc.
100 LBs Bar Steel

Type "D" (2 Posts)
1.8 CY Conc.
112 LBs Bar Steel

Type "C" (3 Posts)
2.7 CY Conc.
150 LBs Bar Steel

Type "D" (3 Posts)
2.7 CY Conc.
168 LBs Bar Steel

STEEL POST SIZE

"A" - W10" x 12"
"B" - W12" x 16"
"C" - W12" x 19"
"D" - W12 x 22"

DETERMINATION OF HIGH STRENGTH STRUCTURAL STEEL SIGN SUPPORT TYPE

WISCONSIN DEPT OF TRANSPORTATION

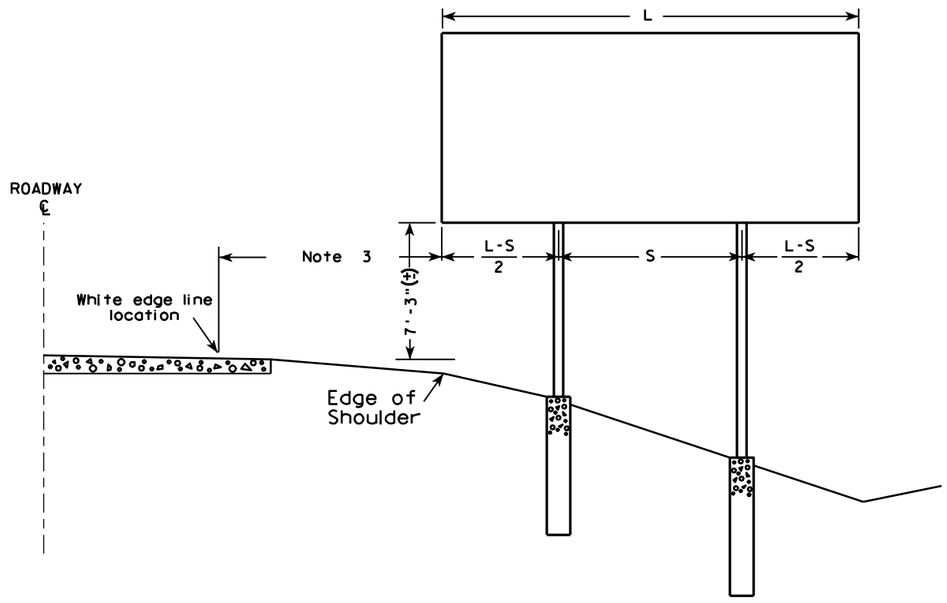
APPROVED Matthew R Rauch
for State Traffic Engineer

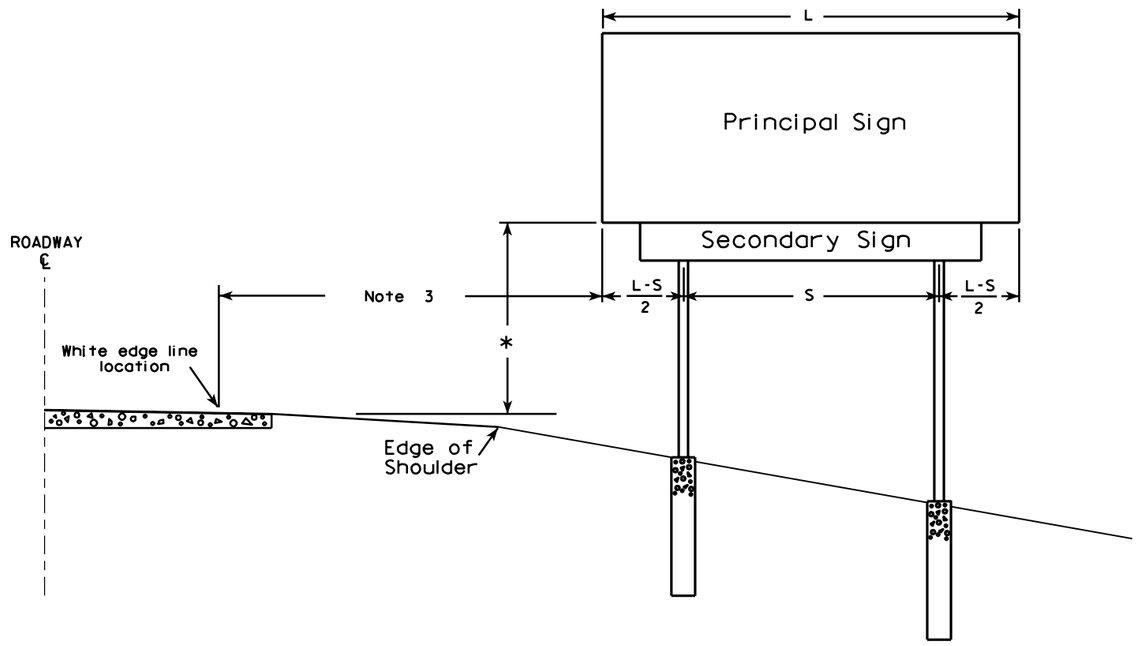
DATE 3/5/10 PLATE NO. A3-3.2

PROJECT NO: | SHEET NO: E

FILE NAME : C:\users\PROJECTS\tr_stdplate\A33.DGN PLOT DATE : 05-MAR-2010 10:07 PLOT BY : ditjph

WISDOT/CADDS SHEET 42





GENERAL NOTES

1. For a 2 post installation, S equals 3L/5, but shall not be less than 9 ft.
2. For a 3 post installation, S equals 5L/7, but shall not be less than 18 ft., and the space between any two posts shall not be less than 9 ft.
3. Unless noted in the plan, the sign offset distance shall be a minimum of 17'-6", desirable 30'-0".
4. The (±) tolerance shown on this sheet is 3 in.
5. The vertical sign height clearance detailed is measured from the bottom of the sign to the near edge of pavement.
6. Post lengths shown in the miscellaneous quantities are estimated lengths. The contractor shall verify post lengths at the time of final grading.
7. Refer to the Traffic Guidelines Manual for further guidance on minimum vertical clearance requirements.

* Clearance is 8'-3"(±) when the secondary sign is 3 ft. or less in height. For secondary signs larger than 3 ft., the clearance to the bottom of the secondary sign shall be 5'-3"(±).

7

7

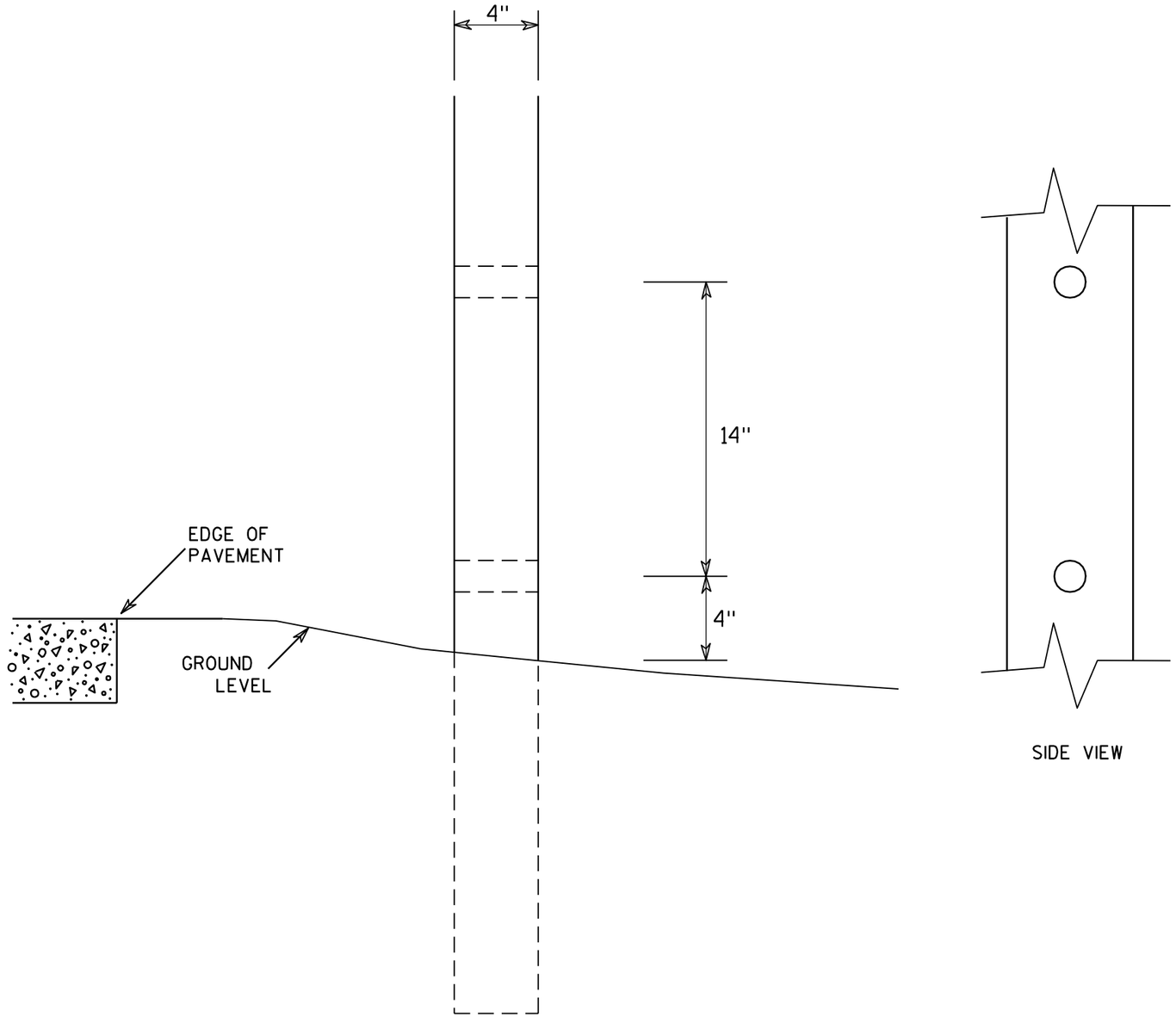
TYPICAL INSTALLATION
OF TYPE I SIGNS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/02/08 PLATE NO. A4-1.9

PROJECT NO:				SHEET NO: 338	E



SIDE VIEW

GENERAL NOTES

1. All 4 x 6 Wood Posts shall be modified by having two 1½" diameter holes drilled perpendicular to the roadway centerline.

7

7

4 X 6 WOOD POST MODIFICATIONS

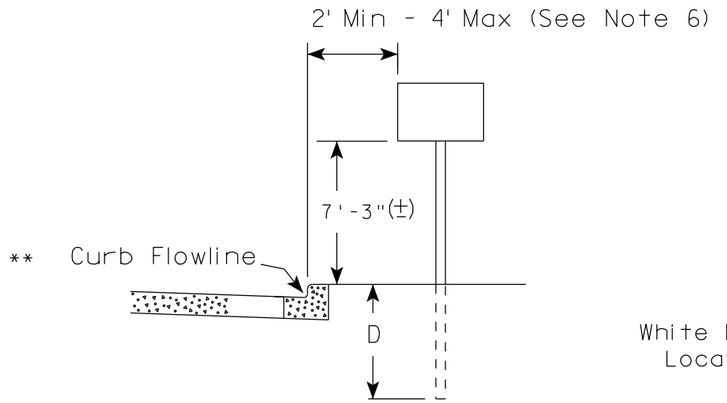
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spang
for State Traffic Engineer

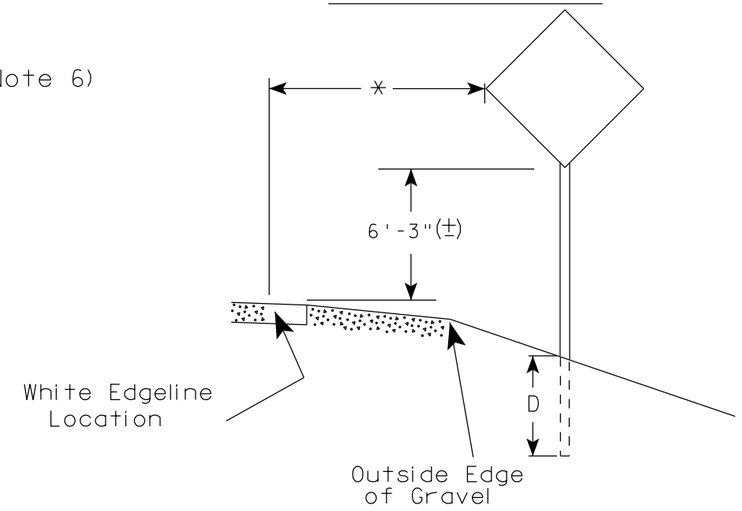
DATE 3/27/97 PLATE NO. A4-11.2

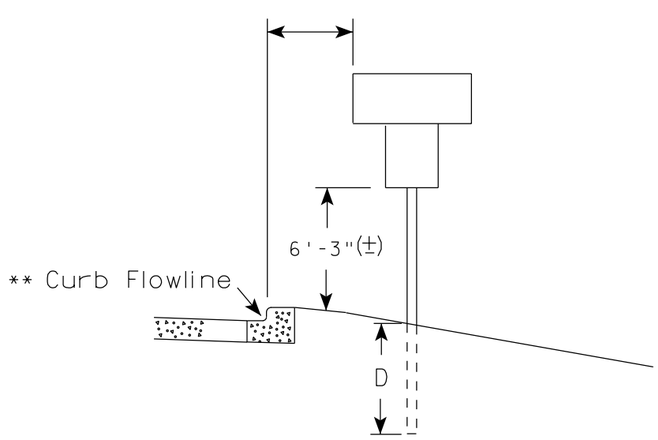
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 339	E

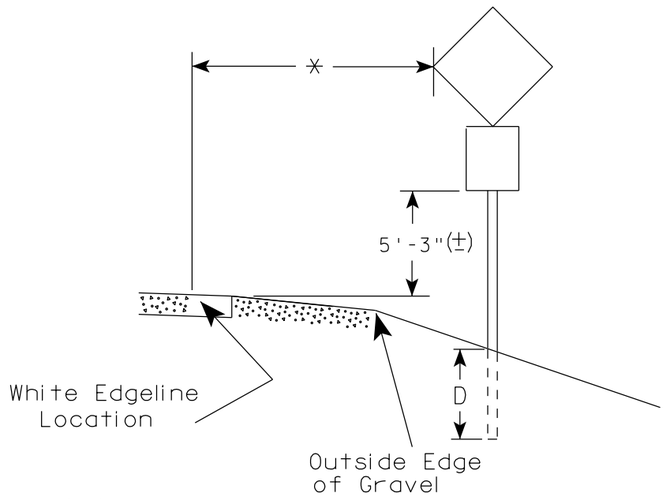
URBAN AREA



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

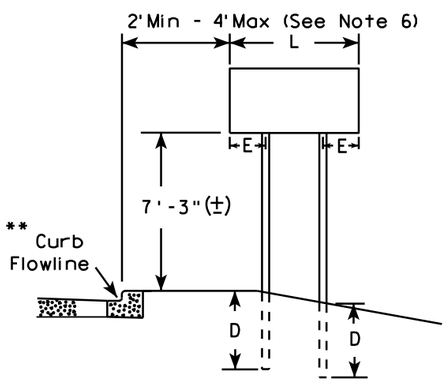
APPROVED Matthew R Rauch
for State Traffic Engineer

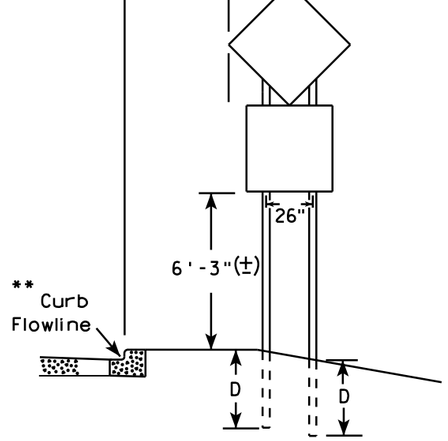
DATE 9/30/13 PLATE NO. A4-3.18

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\A43.DGN PLOT DATE : 30-SEP-2013 13:25 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 99.237937:1.000000 WISDOT/CADDS SHEET 42

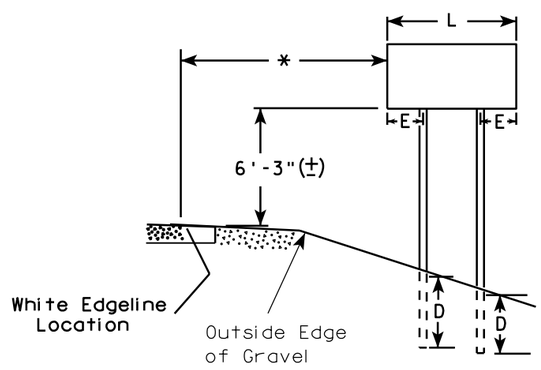
URBAN AREA

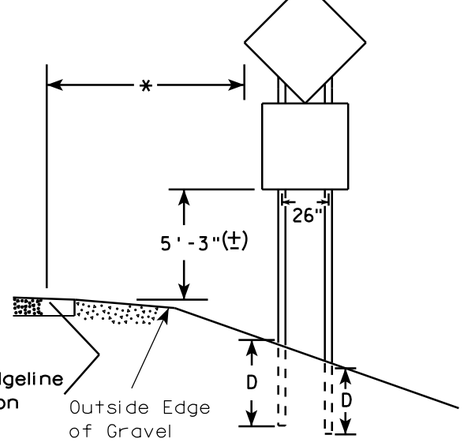




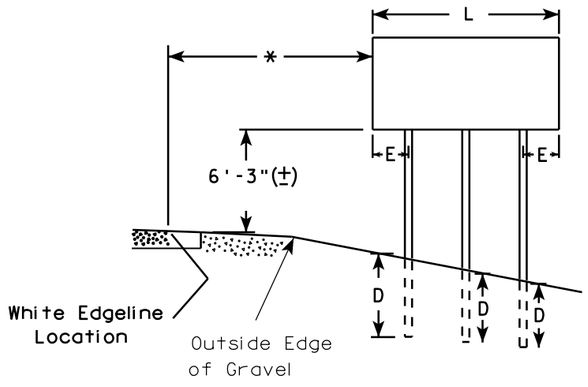
48" DIAMOND WARNING SIGN

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 20 S.F. or less 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

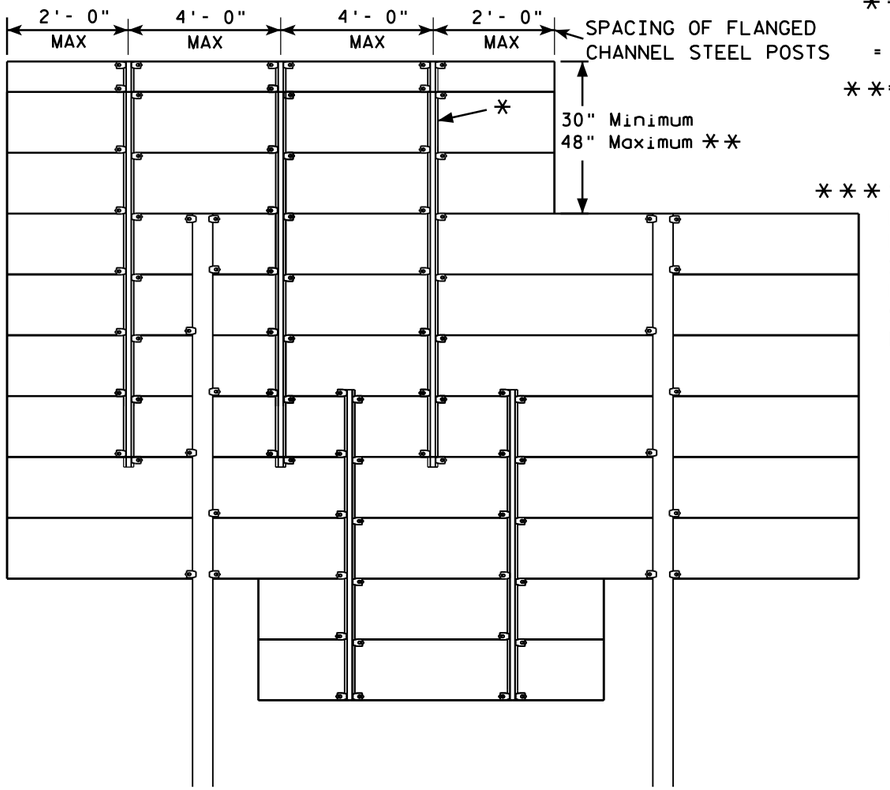
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 9/30/13 PLATE NO. A4-4 12

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\A44.DGN PLOT DATE : 30-SEP-2013 13:27 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 107.021305:1.000000 WISDOT/CADDS SHEET 42

GROUND MOUNTED SIGN

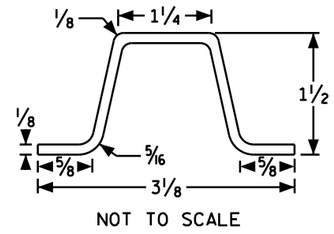


*=2.00 lb/ft FLANGED CHANNEL, MIN. YIELD STRENGTH = 60,000 PSI (GRADE 60) GALVANIZED

**=FOR 48" HEIGHT PANELS ON OVERHEAD STRUCTURES, ENTIRE SIGN SHALL BE CENTERED VERTICALLY ABOUT THE DEPTH OF THE TRUSS.

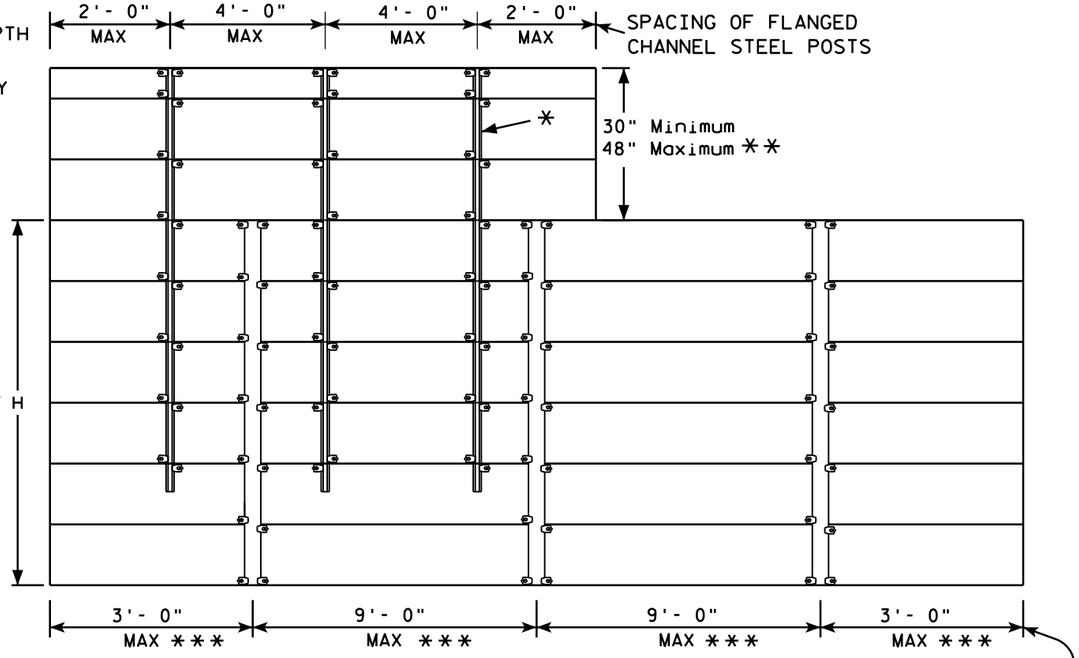
*** THESE SPACING DISTANCES SHALL ONLY BE USED WHEN THE MAIN SIGN HAS A MAXIMUM HEIGHT (DIMENSION H) OF 16 FT OR LESS. FOR SIGNS WITH A HEIGHT OF GREATER THAN 16 FT, STRUCTURAL CALCULATIONS SHALL BE PERFORMED.

FLANGE CHANNEL DETAIL



NOT TO SCALE

SIGN BRIDGE MOUNTED SIGN



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

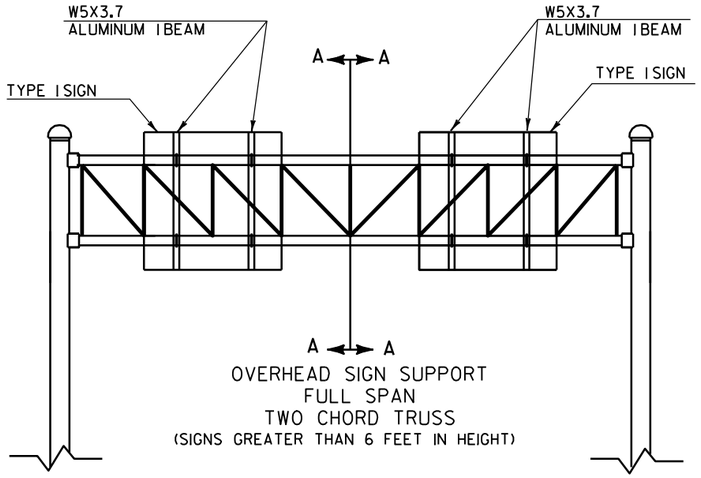
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/05/13 PLAT 342 A4-6.12

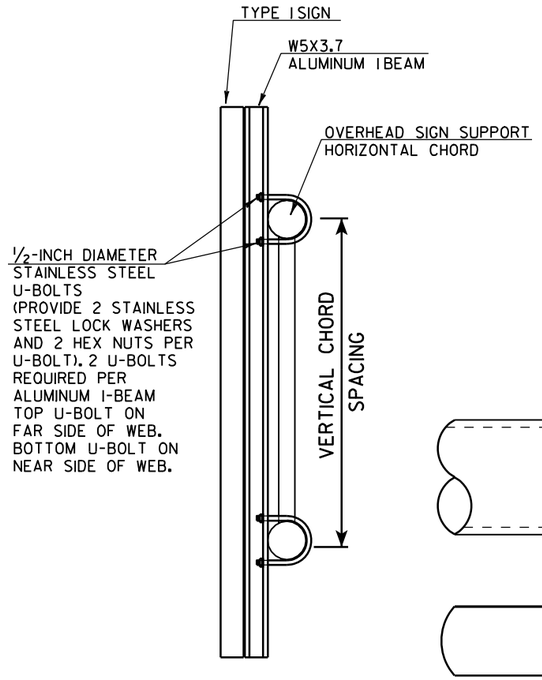
PROJECT NO:				SHEET NO:	E

GENERAL NOTES

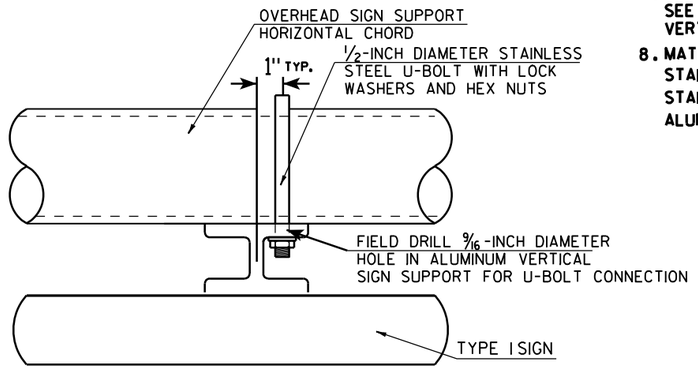
1. USE STAINLESS STEEL U-BOLTS, WASHERS, AND NUTS.
2. USE CLIPS ON EVERY EXTRUDED PANEL JOINT PER SIGN PLATE A4-6.
3. USE ALUMINUM VERTICAL SIGN SUPPORT BEAMS HAVING A 5 INCH BEAM DEPTH AND WEIGHT OF 3.7 LBS PER FOOT.
4. U-BOLTS SHALL BE STAINLESS STEEL AND MANUFACTURED TO THE PROPER SIZE TO FIT THE CHORDS OF THE OVERHEAD SIGN STRUCTURE.
5. DIAMETER OF U-BOLTS SHALL BE AS SHOWN.
6. THE LENGTH OF THE ALUMINUM VERTICAL SIGN SUPPORT BEAMS SHALL BE THE SAME AS THE HEIGHT OF THE SIGN THEY ARE SUPPORTING. BEAM LENGTHS MAY BE LONGER FOR PROPER ATTACHMENT TO CHORDS.
7. MINIMUM NUMBER OF BRACKETS PER SIGN IS TWO. SEE DETAIL BELOW FOR SPACING OF ALUMINUM VERTICAL SIGN SUPPORTS
8. MATERIAL NOTES:
   STAINLESS STEEL U-BOLTS AND LOCKWASHERS ASTM 304.
   STAINLESS STEEL HEX NUTS ASTM A276.
   ALUMINUM I-BEAMS ARE 6061-T6.



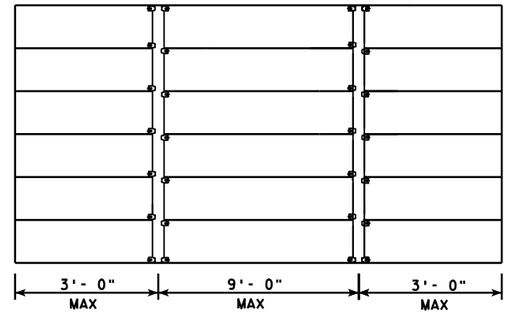
OVERHEAD SIGN SUPPORT
FULL SPAN
TWO CHORD TRUSS
(SIGNS GREATER THAN 6 FEET IN HEIGHT)



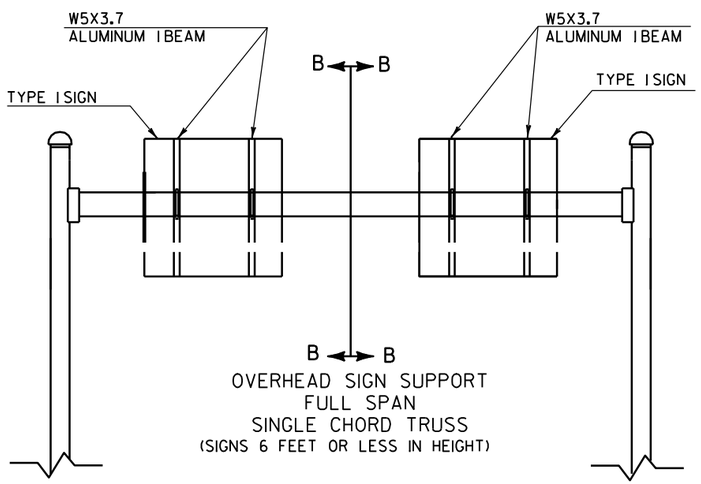
CUT SECTION A-A



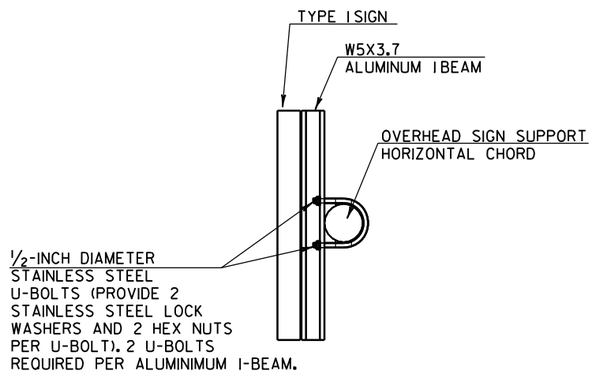
TYPICAL SIGN CONNECTION FOR
TWO CHORD TRUSS
PLAN VIEW



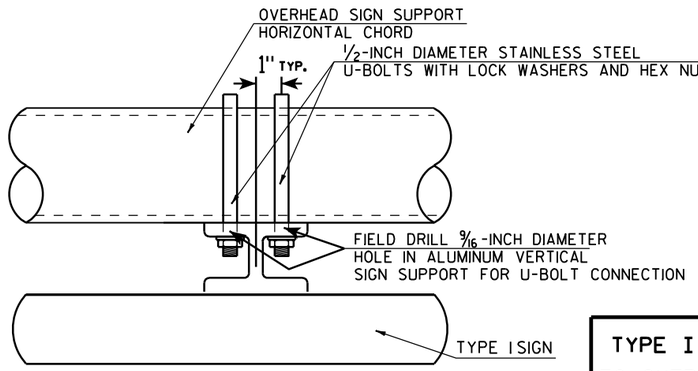
SPACING OF W5X3.7 ALUMINUM
VERTICAL SIGN SUPPORT



OVERHEAD SIGN SUPPORT
FULL SPAN
SINGLE CHORD TRUSS
(SIGNS 6 FEET OR LESS IN HEIGHT)



CUT SECTION B-B



TYPICAL SIGN CONNECTION FOR
SINGLE CHORD TRUSS
PLAN VIEW

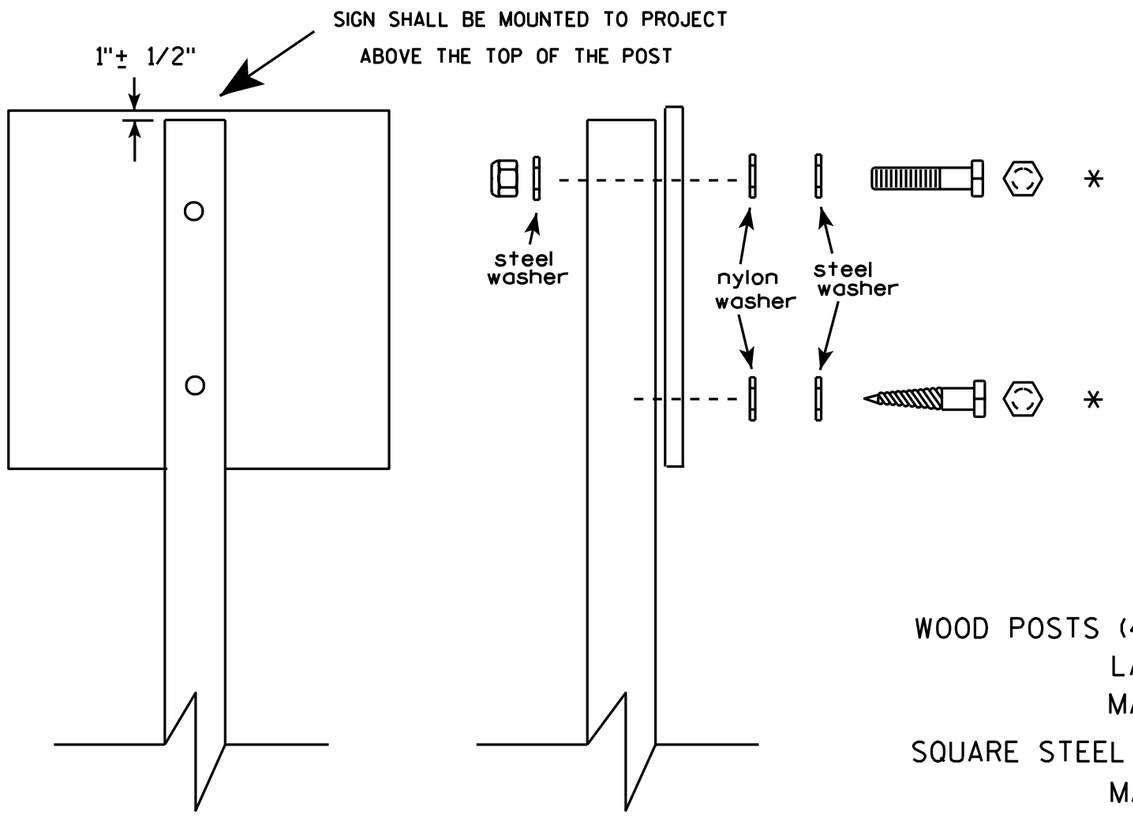
TYPE I SIGN CONNECTION TO OVERHEAD SIGN SUPPORT

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

DATE 11/12/12 PLATE NO. A4-7.3

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 343	E



Nuts, bolts and lags used for mounting signs shall have hexagonal heads and shall be either :

a. Hot dip galvanized in accordance with ASTM Designation: A 153, Class D, or SC 3

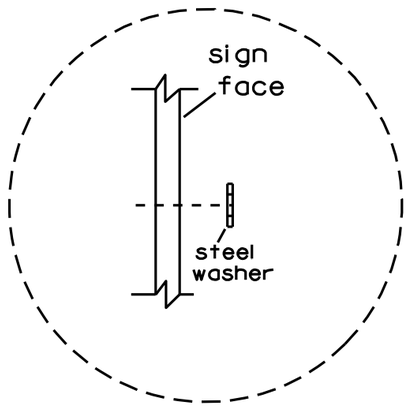
b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.

Threads on bolts and nuts shall be manufactured with sufficient allowance for the cadmium plate or galvanized coating to permit the nuts to run freely on the bolts.

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

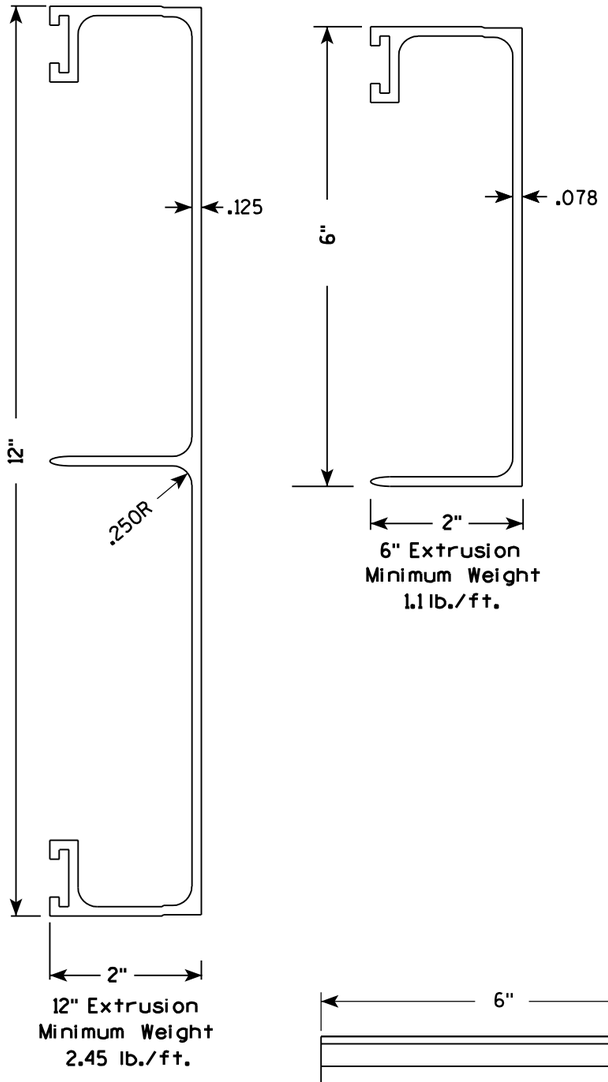
DATE 3/23/10 PLATE NO. A4-8.7

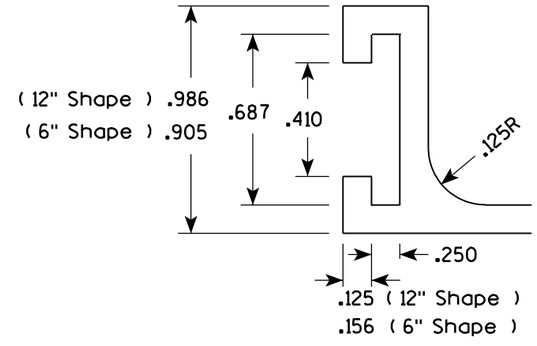
PROJECT NO:

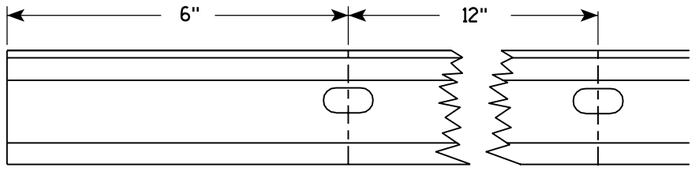
SHEET NO: 344 E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\A48.DGN PLOT DATE : 23-MAR-2010 10:15 PLOT BY : ditjph
WISDOT/CADDS SHEET 42

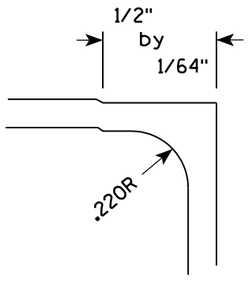
Extruded Shape







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.

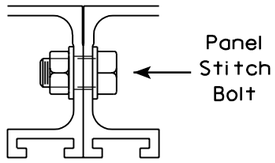


Hardware

STITCH BOLT, WASHER & NUT

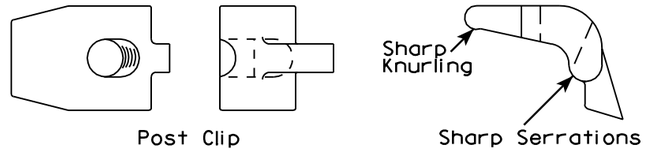
The hardware includes:

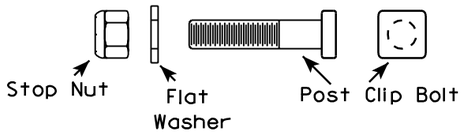
3/8 " - 16 X 3/4 " Economy Bolt 2024-T4 alloy
3/8 " - Stainless steel stop nut
3/8" X .064 Flat Washers, Alclad 2024-T4 alloy



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

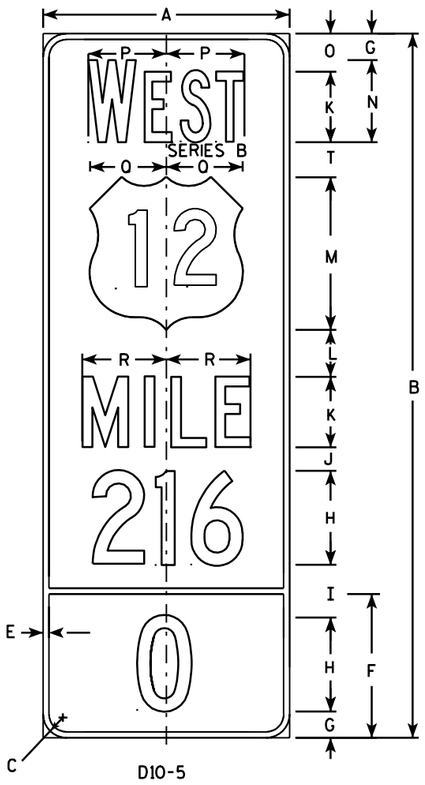
1. The contractor may select any brand of extrusion that conforms to the illustrations or meets with the approval of the engineer, but all extrusions used on this contract shall be of the same brand.
2. Panel Stitch Bolts shall be used to assemble adjacent panels. Maximum stitch bolt spacing shall be 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

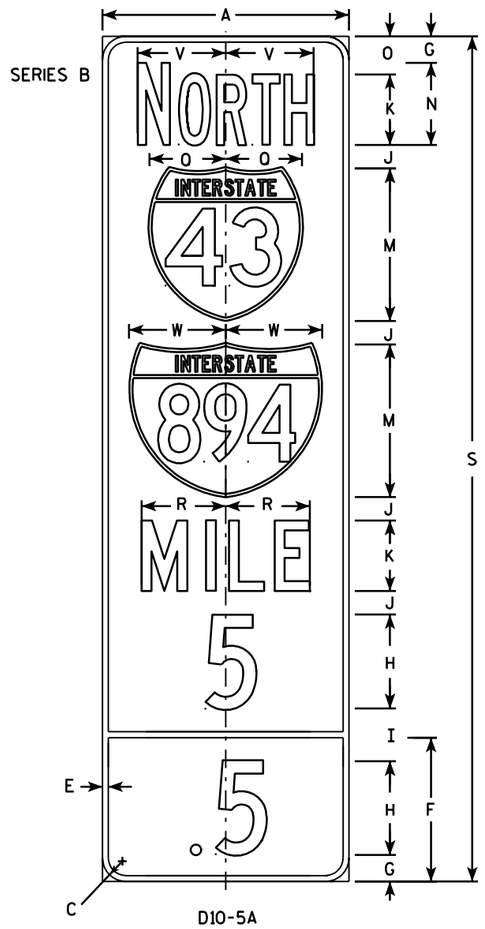
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spang
for State Traffic Engineer

DATE 11/18/99 PLATE NO. A5-2.9



D10-5



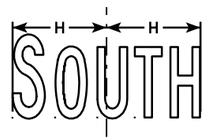
D10-5A

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - BLUE
   Message - WHITE
3. Interstate Shield Color
   Background - Top Red
   - Bottom Blue
   Message - White
4. Message Series - C or as noted on the Sign.
5. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
6. The decimal point is required for all digits except "0".
7. Optically adjust mileage numbers about the centerline of the sign to achieve proper balance.



SERIES B



SERIES B

Metric equivalent for this sign is:		Metric equivalent for this sign is:	
SIZE	D10-5	SIZE	D10-5A
1		1	
2		2	
3		3	
4	525 mm X 1500 mm	4	525 mm X 1950 mm
5	525 mm X 1500 mm	5	525 mm X 1950 mm

																										D10-5		D10-5A	
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	O	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area m2	Area sq. ft.	Area m2
1																														
2																														
3																														
4	21	60	1 ½		½	12 ¼	2 ¼	8	4 ½	2	6	4	13	7	3 ¼	6 ⅝	6 ½	7 ⅛	72	3		7 ½	8 ¼				8.75	0.79	10.5	1.03
5	21	60	1 ½		½	12 ¼	2 ¼	8	4 ½	2	6	4	13	7	3 ¼	6 ⅝	6 ½	7 ⅛	72	3		7 ½	8 ¼				8.75	0.79	10.5	1.03

STANDARD SIGN
D10-5

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/09/05 PLATE NO. D10-5.1

PROJECT NO:

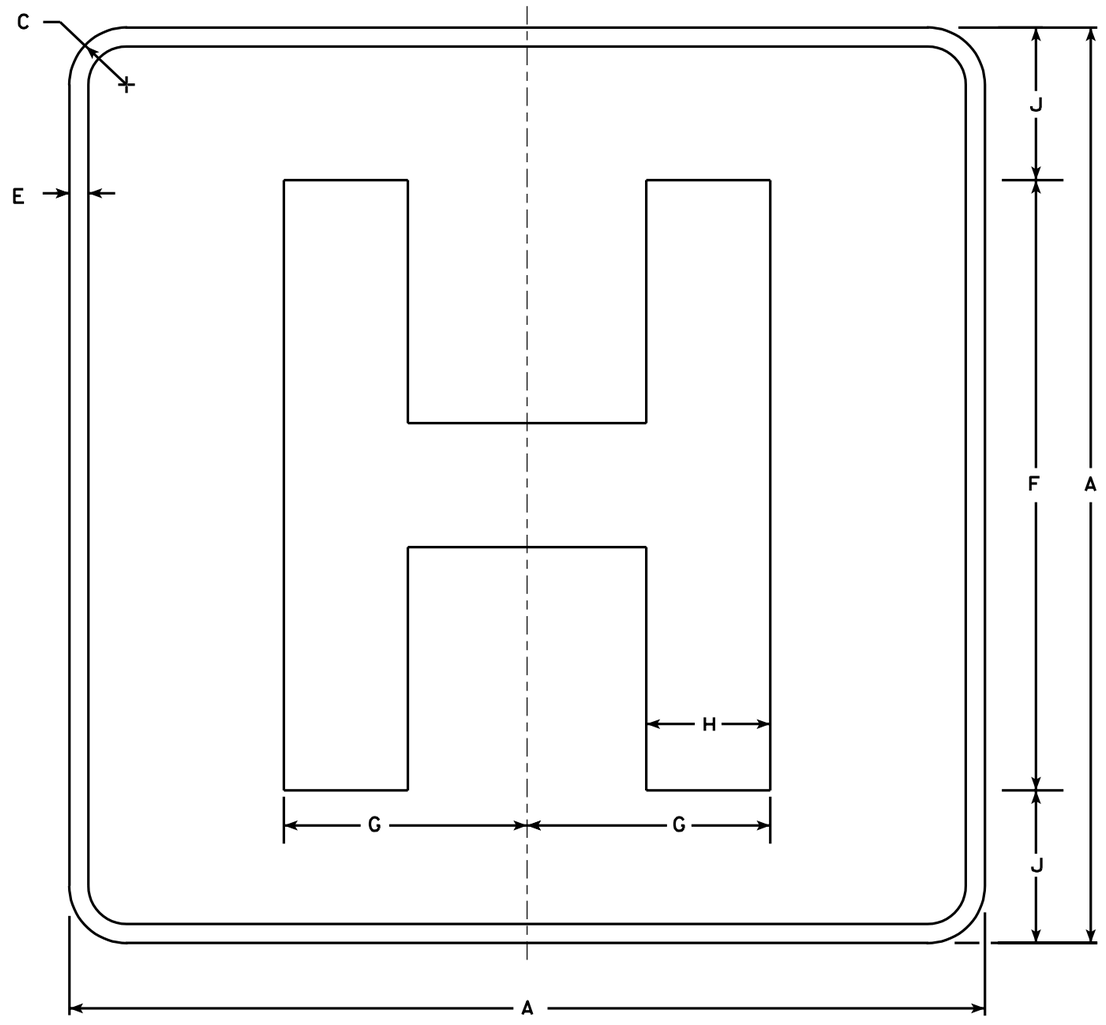
SHEET NO: 346 E

FILE NAME : C:\Users\Projects\tr_stdplate\D105.DGN PLOT DATE : 09-MAR-2005 08:35 PLOT BY : DOTSJA

WISDOT/CADDS SHEET 42

7

7



D9-2

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Blue
   Message - White - Type H Reflective
3. Message Series - E Modified
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	450 mmX 450 mm
2	600 mmX 600 mm
3	900 mmX 900 mm
4	X
5	X

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	18		1 1/8		1/2	12	4 3/4	2 3/8		3																	4.0
2	24		1 1/2		1/2	16	6 3/8	3 1/4		4																	4.0
3	36		2 1/4		3/4	24	9 1/2	4 7/8		6																	9.0
4																											
5																											

STANDARD SIGN
D9-2

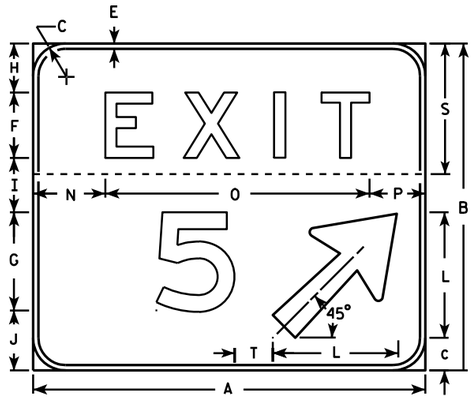
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spong
for State Traffic Engineer

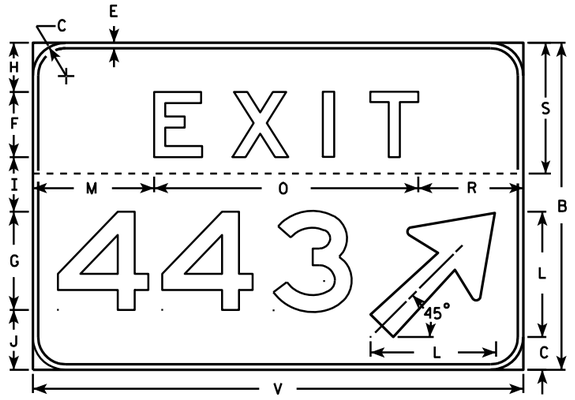
DATE 1/15/02 PLATE NO. D9-2.4

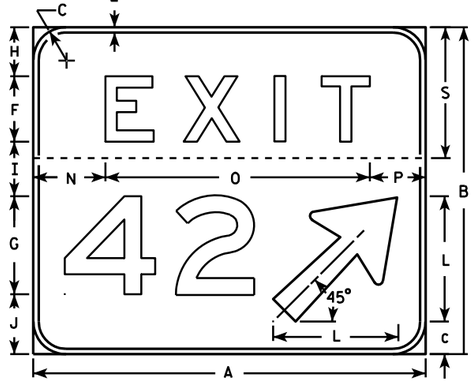
PROJECT NO:

SHEET NO: 347 E

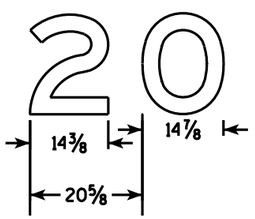


NOTE: T diminision shall be measured from the back of the number to the front of the arrow





EXAMPLE FOR USING SPACING CHART



NOTES

1. Sign is Type II - Type H reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Green
   Message - White (Type H reflective)
3. Message Series - E
4. Corners may be square or rounded but the border shall be rounded as shown.
5. Base material for this sign shall be plywood and shall be split into two seperate pieces as shown on each detail by the dashed line (----------).
6. Arrow is Type "A" from sign plate A1-1.
7. Substitute appropriate message, space per the table and adjust placement on sign to achieve proper balance.
8. As per the Standard Spec's, these signs shall not have a vertical joint.

SPACING CHART FOR 18" NUMERALS

NUMBERS	WIDTH	0	1	2	3	4	5	6	7	8	9	A	B	C
0	14 7/8	21 5/8	21 5/8	21 1/4	20 3/8	21 1/4	21 1/4	21 5/8	19 7/8	22 1/8	21 5/8			
1	5 7/8	14	14	14	13 1/8	12 1/8	14	14	12 1/4	14	14			
2	14 3/8	20 5/8	21 1/8	20 5/8	19 3/4	20 1/4	20 5/8	20 5/8	18 7/8	21 1/8	20 5/8			
3	14 3/8	20 3/4	21 1/8	20 3/4	20 1/4	19 3/4	20 3/4	20 3/4	19 3/8	21 1/8	20 3/4			
4	16 5/8	22 7/8	22	22 1/2	21 5/8	21 5/8	22 7/8	22 7/8	20 5/8	23 3/8	22 7/8			
5	14 1/4	20 5/8	20 5/8	20 1/8	18 3/4	18 3/4	20 5/8	20 5/8	18 3/8	20 5/8	20 5/8			
6	14 1/2	21 1/4	20 3/4	20 3/4	19 7/8	19 1/2	20 3/8	20 3/4	19	20 3/4	20 3/8			
7	14 3/8	19 3/4	19 3/4	20 1/4	19 3/4	17	19 3/4	20 5/8	18 7/8	20 5/8	19 3/4			
8	14 1/4	21 1/2	21 1/2	20 5/8	19 1/4	19 3/4	20 5/8	21 1/2	19 5/8	21 1/2	20 5/8			
9	14 1/2	21 1/4	21 1/4	20 7/8	20	20 7/8	20 7/8	21 1/4	19 1/2	21 3/4	21 1/4			
A	18	19 3/4	19 3/4	20 1/4	19 3/4	17	19 3/4	20 5/8	18 7/8	20 5/8	19 3/4	21 5/8	23 7/8	23
B	14 1/4	21 1/2	21 1/2	20 5/8	19 1/4	19 3/4	20 5/8	21 1/2	19 5/8	21 1/2	20 5/8	19 1/2	22 3/8	21 1/2
C	14 1/4	21 1/4	21 1/4	20 7/8	20	20 7/8	20 7/8	21 1/4	19 1/2	21 3/4	21 1/4	18 3/8	21	19 3/4

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
2																										
3																										
4																										
5	72	60	6		1	12	18	9	10	11	8 7/8	23	22 1/4	13 1/4	48 1/2	10 1/4		19 1/4	24	7		90		96	7 1/2	

1-2 Digit Bid Area	3 Digit Bid Area
Sq. Ft.	
30	37.5

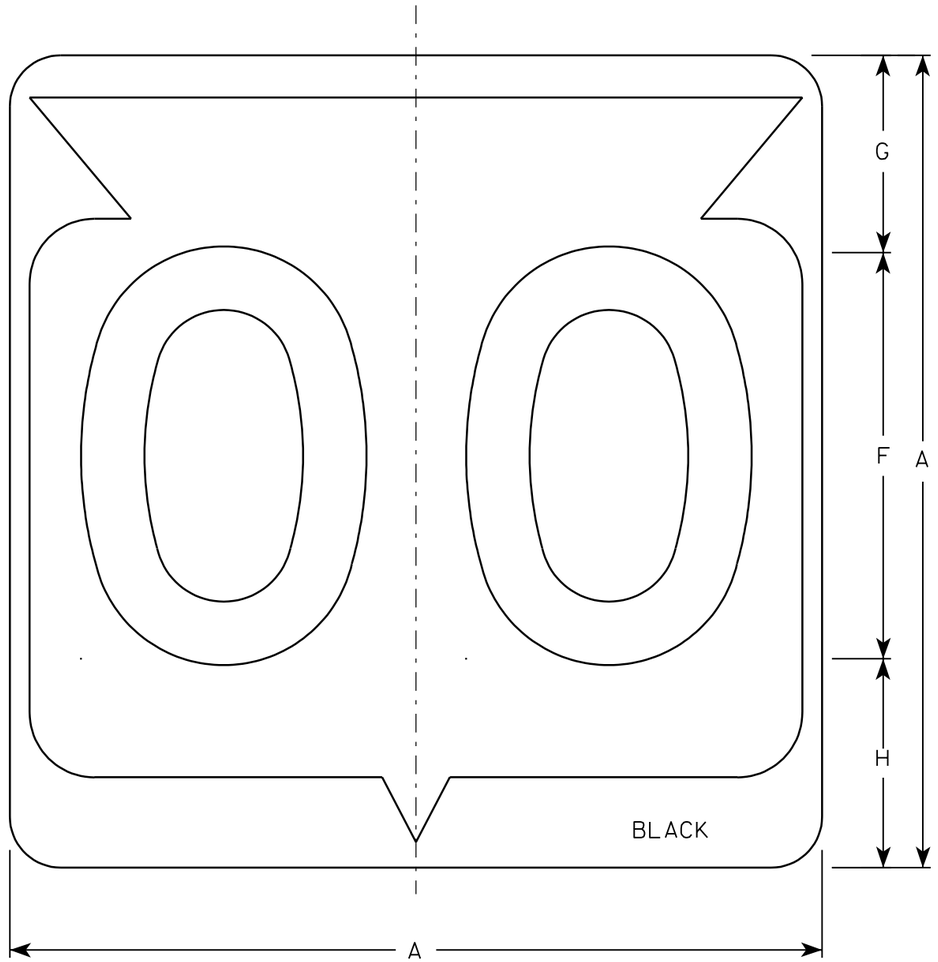
STANDARD SIGN
E5-1A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/11/10 PLATE NO. E5-1A.12

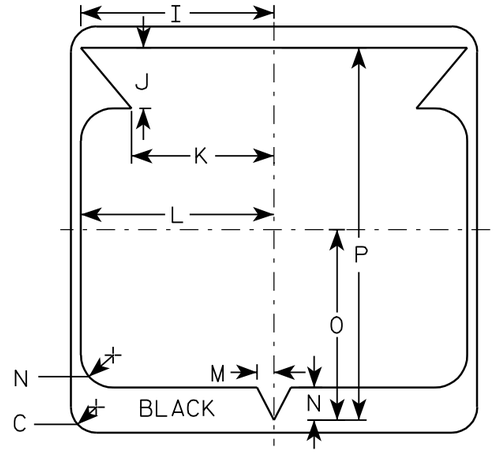
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 348 | E



M1-6

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 Series numerals and adjust spacing as per plate A10-1.
6. Permanent Signs
   Background - Type H Reflective
   Detour or temporary Signs
   Background - Reflective



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		1 1/2			12	5 1/2	6 1/2	10 1/4	2 1/2	8 7/8	11 1/2	1	1 7/8	11 1/4	21 7/8											4.0	.36
3	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0	.81
4	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0	.81
5	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0	.81

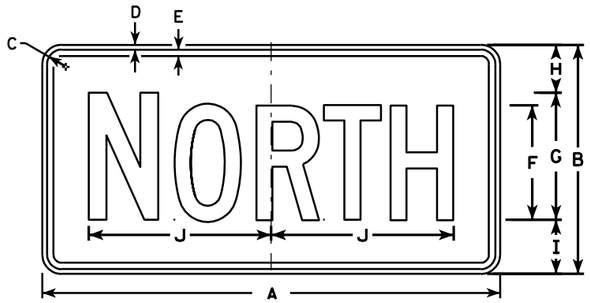
STATE ROUTE MARKER M1-6 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

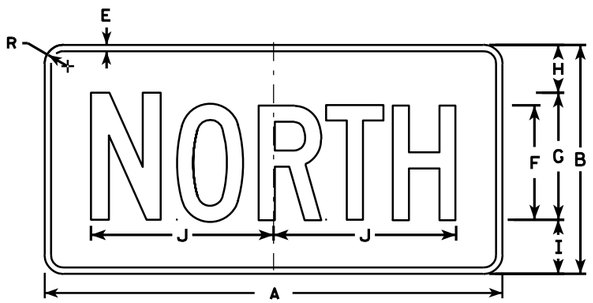
APPROVED Chester J Spang for State Traffic Engineer

DATE 3/20/02 PLATE NO. M1-6.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 349	E



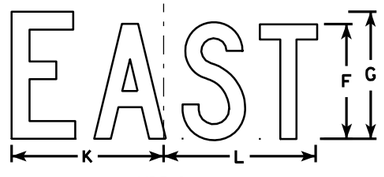
M3-1
MK3-1
MO3-1



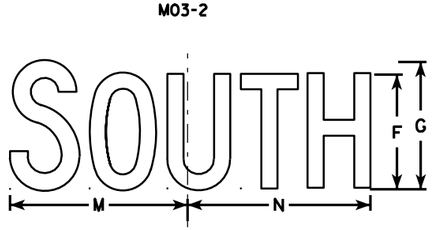
MB3-1
MG3-1
MM3-1
MN3-1



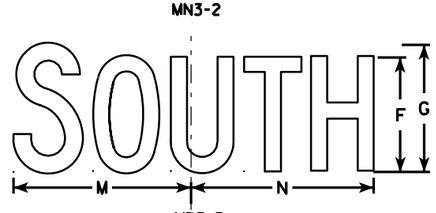
M3-2
MK3-2
MO3-2



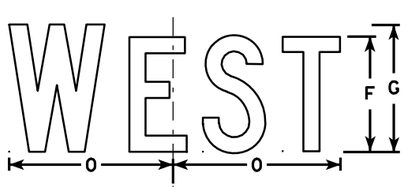
MB3-2
MG3-2
MM3-2
MN3-2



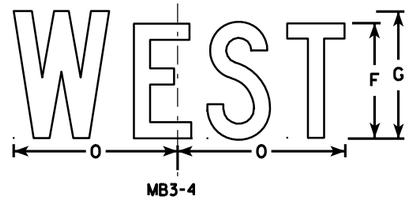
M3-3
MK3-3
MO3-3



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

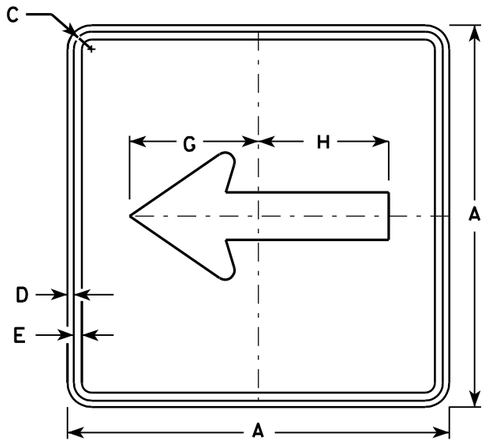
STANDARD SIGNS
M3-1 thur M3-4
SERIES

WISCONSIN DEPT OF TRANSPORTATION

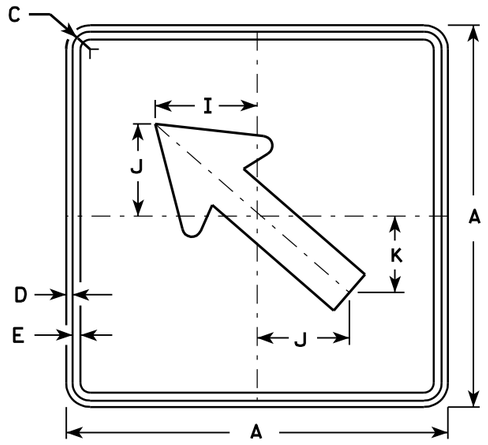
APPROVED Matthew R Rauch for State Traffic Engineer

DATE 11/10/10 PLATE NO. M3-1.12

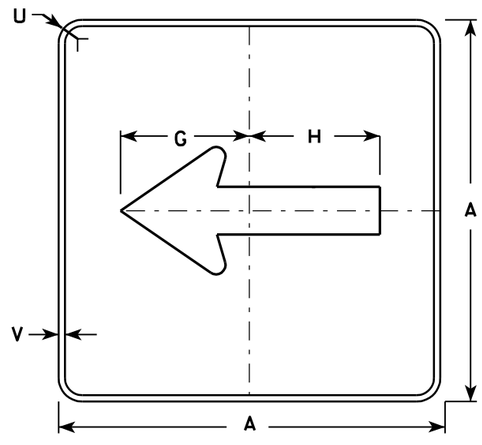
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 350	E



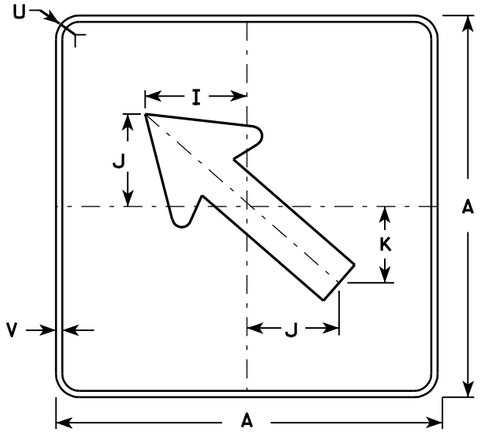
M6-1
MK6-1
MM6-1
MO6-1
MP6-1
MR6-1



M6-2
MK6-2
MM6-2
MO6-2
MP6-2
MR6-2



MB6-1
MG6-1
MN6-1



MB6-2
MG6-2
MN6-2

NOTES

1. Signs are Type II - See Note 4 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - See note 4
   Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. M6-1 and M6-2 Background - White - Type H Reflective
   Message - Black

   MB6-1 and MB6-2 Background - Blue
   Message - White - Type H Reflective

   MG6-1 and MG6-2 Background - Green
   Message - White - Type H Reflective

   MK6-1 and MK6-2 Background - Green
   Message - White - Type H Reflective

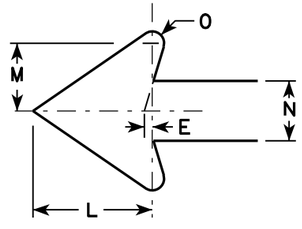
   MM6-1 and MM6-2 Background - White - Type H Reflective
   Message - Green

   MN6-1 and MN6-2 Background - Brown
   Message - White - Type H Reflective

   MO6-1 and MO6-2 Background - Orange - Type F Reflective
   Message - Black

   MP6-1 and MP6-2 Background - White - Type H Reflective
   Message - Blue

   MR6-1 and MR6-2 Background - Brown
   Message - White - Type H 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	21		1 1/8	3/8	3/8		7 1/2	7 1/8	5 5/8	5	4 1/4	5 1/4	3	2 5/8	1/2						1 1/2	1/2						3.06
3	30		1 3/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2						6.25
4	30		1 3/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2						6.25
5	30		1 3/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2						6.25

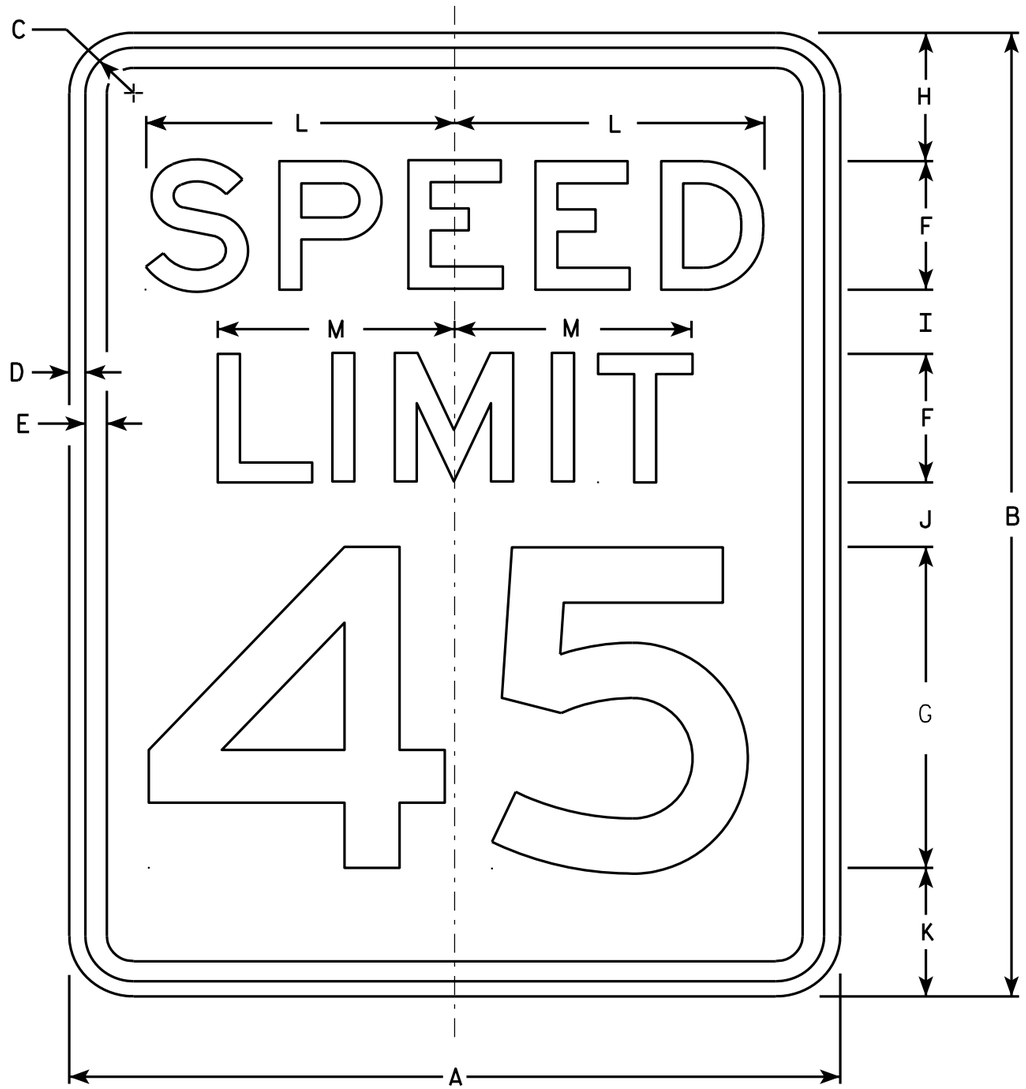
STANDARD SIGN M6-1 & M6-2 SERIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 7/29/13 PLATE NO. M6-1.13

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 351	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

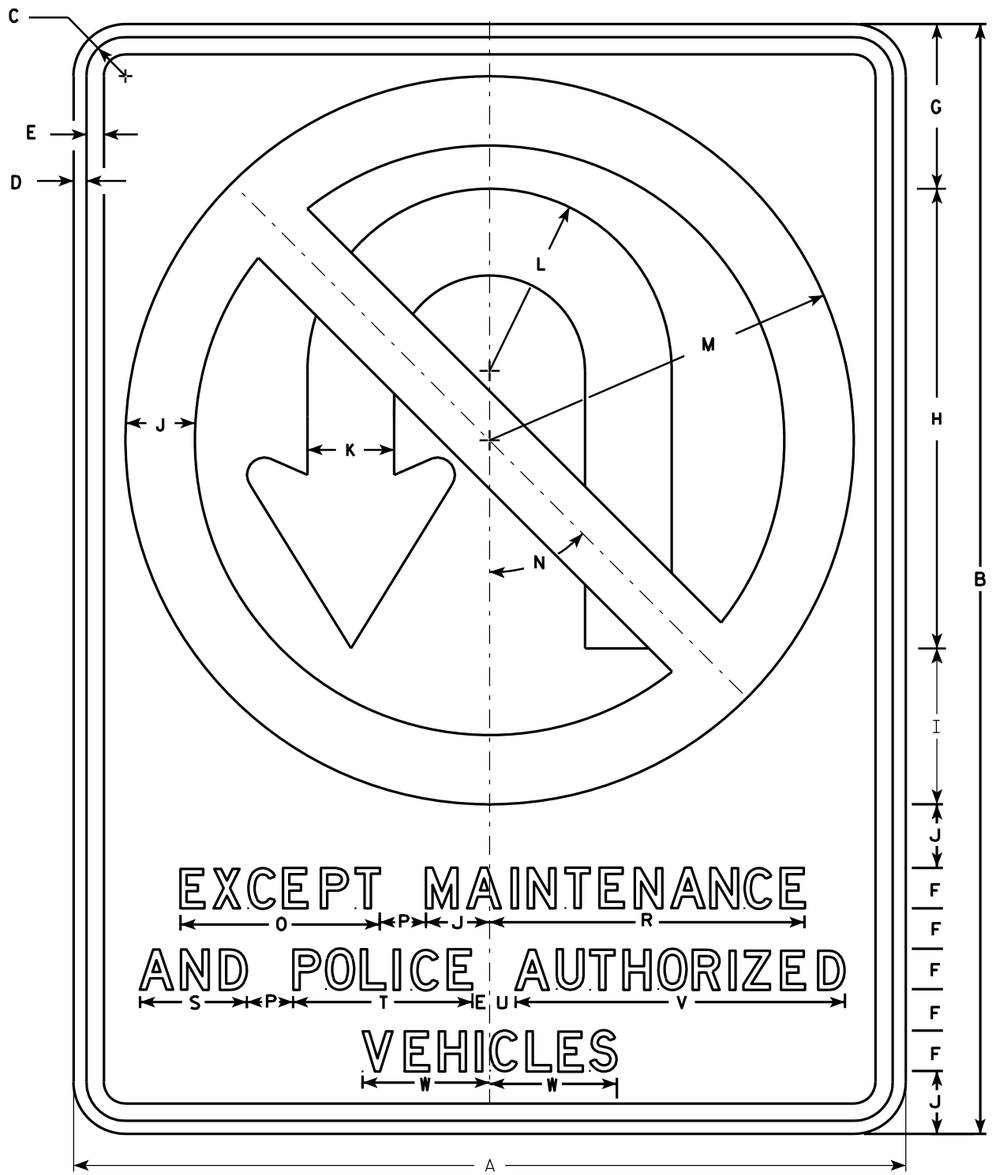
STANDARD SIGN
R2-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/26/10 PLATE NO. R2-1.13

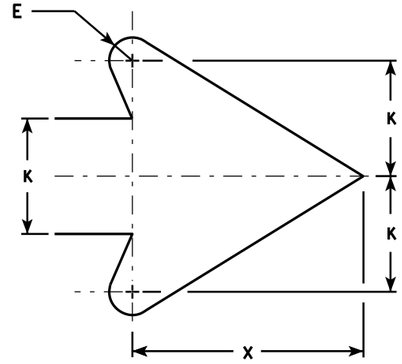
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 352	E



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

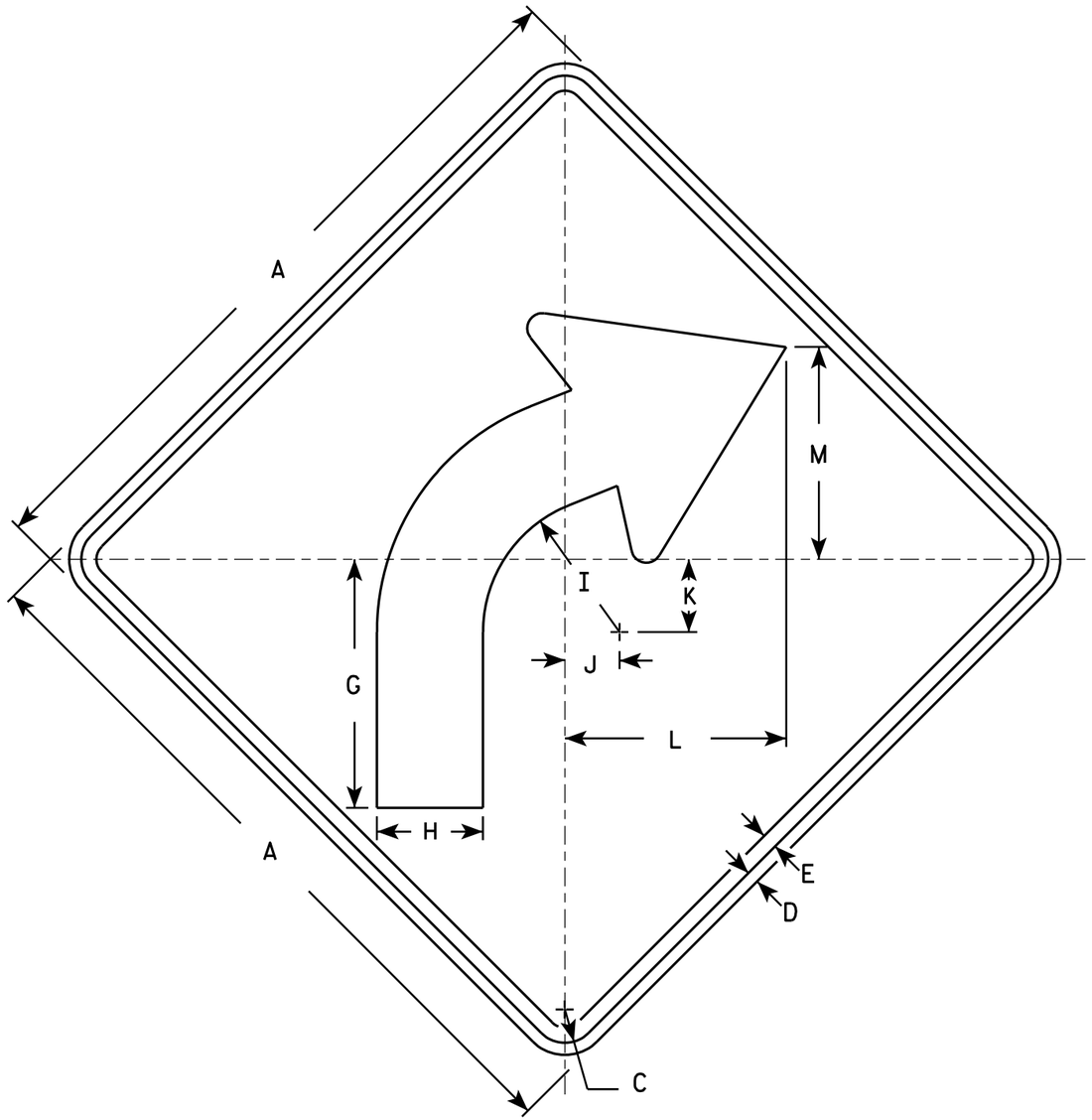
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/17/2011 PLATE NO. R3-4B.2

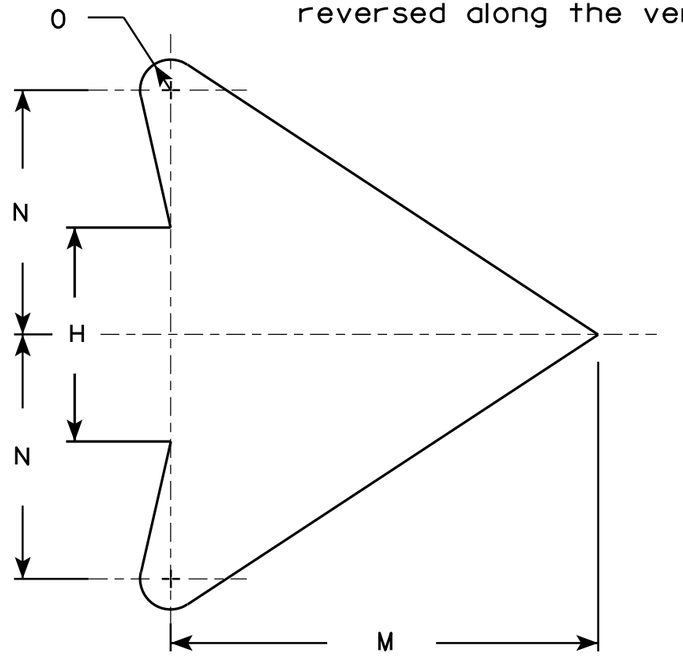
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 353	E

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. W1-2L is the same as W1-2R except the arrow is reversed along the vertical centerline.



W1-2R



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/8	3/8	1/2		8 1/4	3 1/2	4 1/2	1 3/4	2 3/8	7 1/4	7	4	1/2												4.0
2S	30		1 3/8	1/2	5/8		10 1/4	4 3/8	5 5/8	2 1/4	3	9 1/8	8 3/4	5	5/8												6.25
2M	36		1 5/8	5/8	3/4		12 3/8	5 1/4	6 3/4	2 5/8	3 1/2	10 7/8	10 1/2	6	3/4												9.0
3	36		1 5/8	5/8	3/4		12 3/8	5 1/4	6 3/4	2 5/8	3 1/2	10 7/8	10 1/2	6	3/4												9.0
4	36		1 5/8	5/8	3/4		12 3/8	5 1/4	6 3/4	2 5/8	3 1/2	10 7/8	10 1/2	6	3/4												9.0
5	48		2 1/4	3/4	1		16 1/2	7	9	3 1/2	4 5/8	14 1/2	14	8	1												16.0

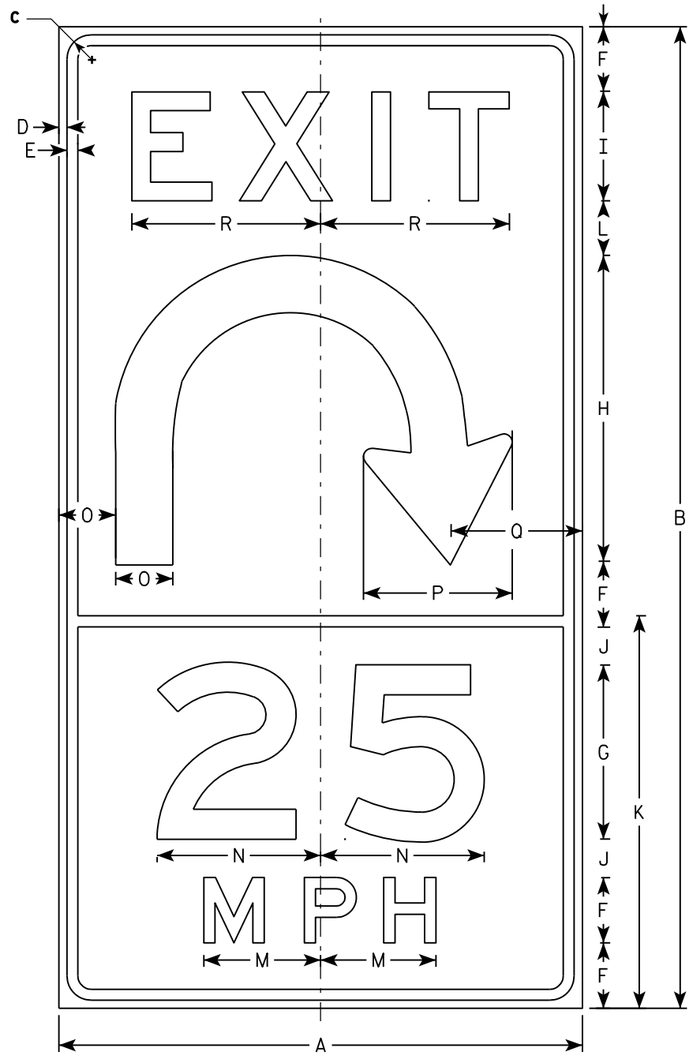
STANDARD SIGN
W1-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

DATE 5/15/12 PLATE NO. W1-2.10

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 354	E



W13-2A

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   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.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	O	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	90	2 1/4	3/4	1	6	16	28	10	3 1/2	36	5	10 3/4	15	5 1/4	13 5/8	12	17 3/8									30
2M	48	90	2 1/4	3/4	1	6	16	28	10	3 1/2	36	5	10 3/4	15	5 1/4	13 5/8	12	17 3/8									30
3																											
4																											
5																											

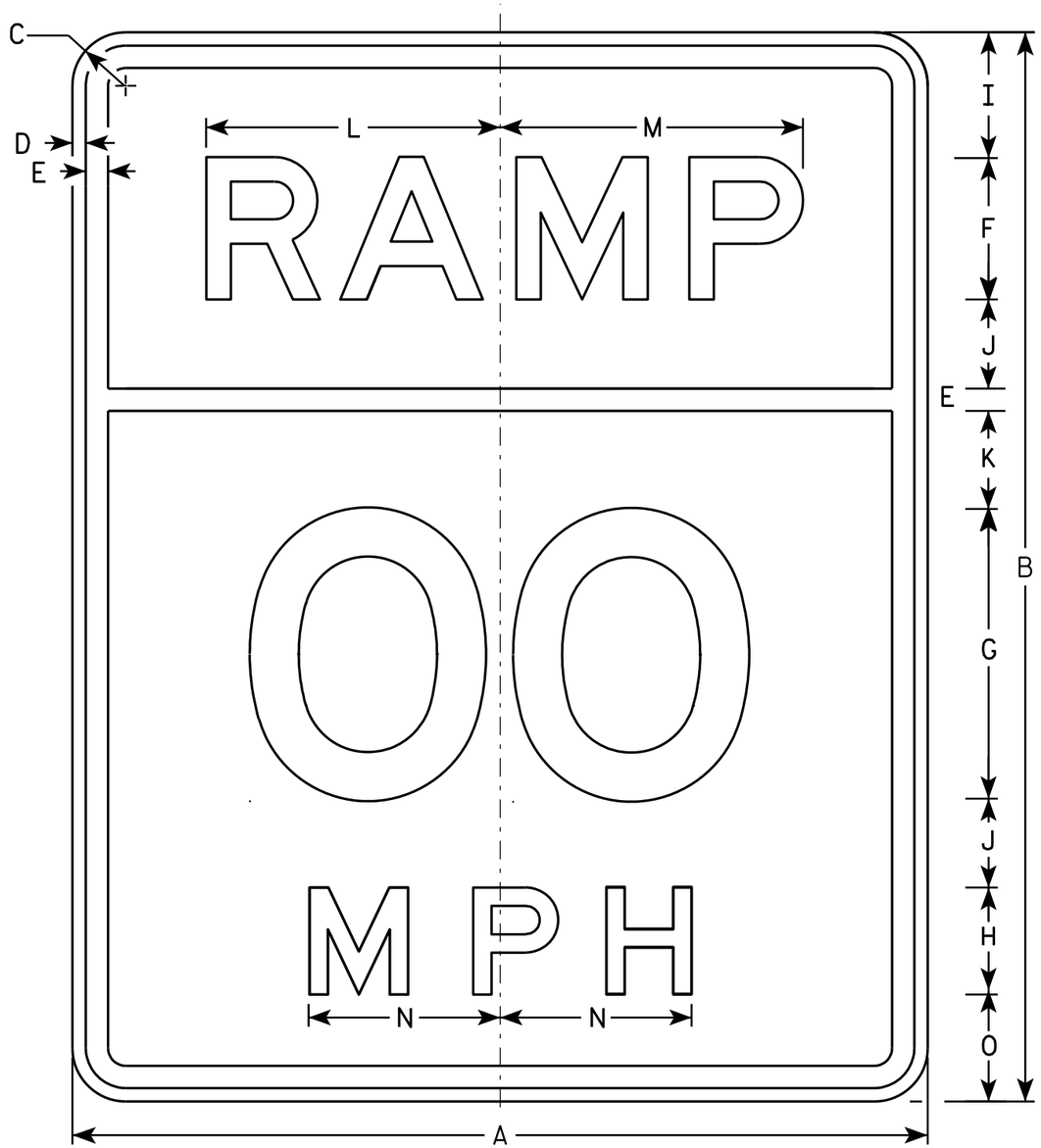
STANDARD SIGN
W13-2A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/31/12 PLATE NO. W13-2A.3

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 355	E



W13-3

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. Message Series - E
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate numerals and optically space about centerline to achieve proper balance.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24	30	1 1/8	3/8	5/8	4	8	3	3 1/2	2 1/2	2 7/8	8 1/4	8 1/2	5 3/8	3												5.0
2S	24	30	1 1/8	3/8	5/8	4	8	3	3 1/2	2 1/2	2 7/8	8 1/4	8 1/2	5 3/8	3												5.0
2M	24	30	1 1/8	3/8	5/8	4	8	3	3 1/2	2 1/2	2 7/8	8 1/4	8 1/2	5 3/8	3												5.0
3																											
4	36	48	1 5/8	5/8	7/8	6	12	4	6	4 1/8	5 1/8	13 1/2	13 5/8	7 1/8	6												12.0
5	48	60	2 1/4	3/4	1 1/4	8	16	6	7	5	5 3/4	16 1/2	17	10 5/8	6												20.0

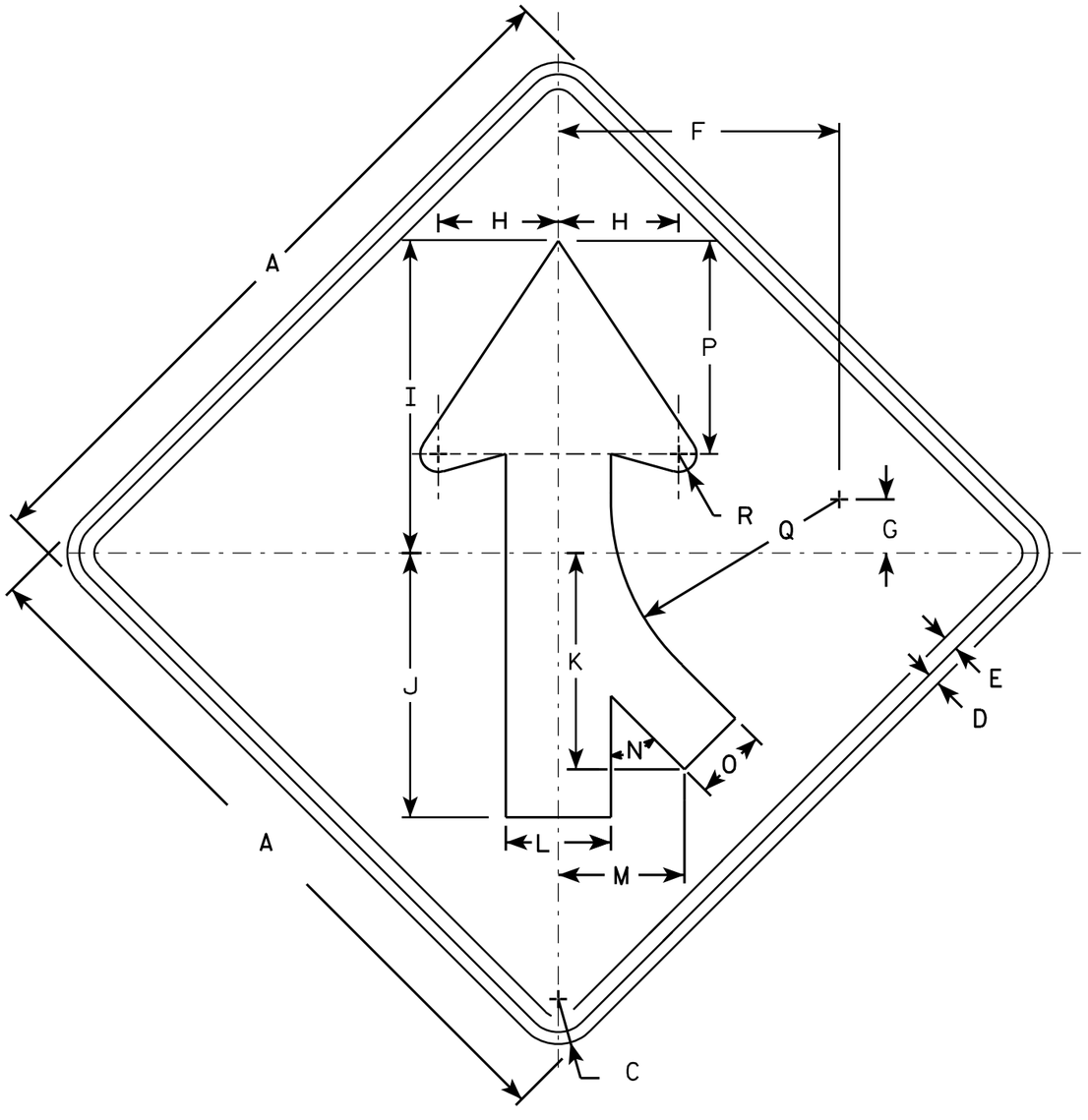
STANDARD SIGN
W13-3

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 6/13/13 PLATE NO. W13-3.9

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 356 | 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

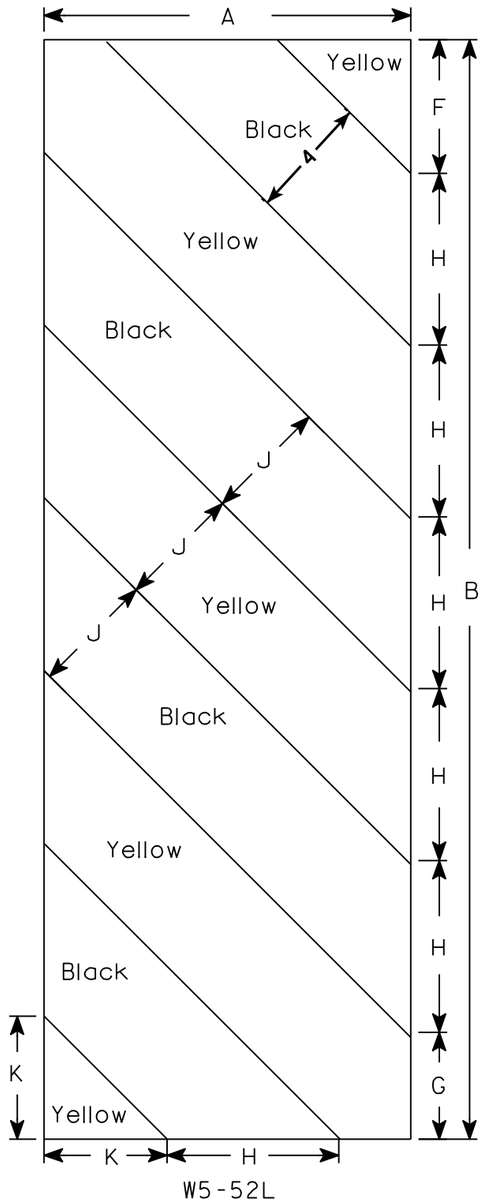
STANDARD SIGN
W4-1

WISCONSIN DEPT OF TRANSPORTATION

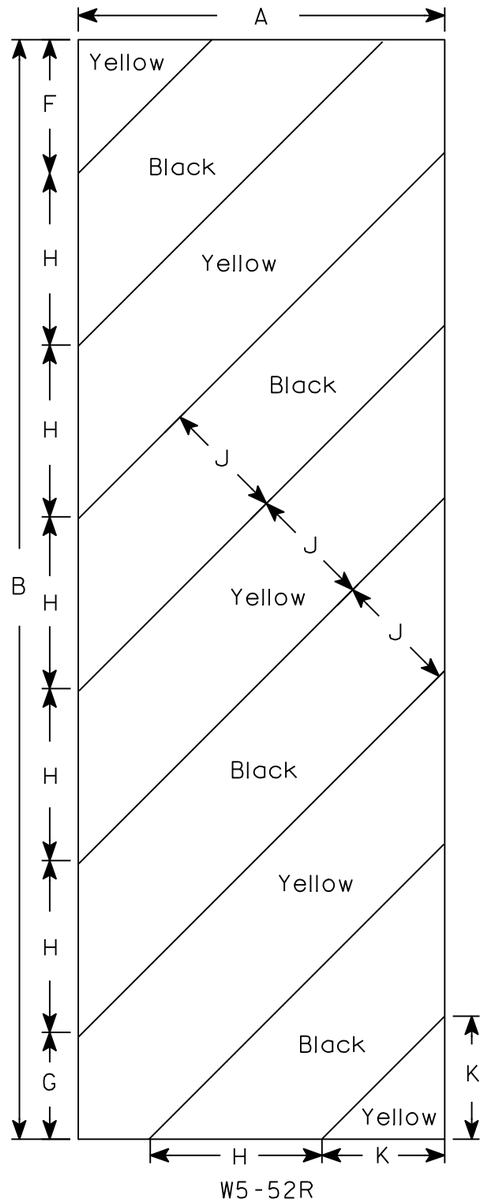
APPROVED Matthew R Rausch for State Traffic Engineer

DATE 03/12/13 PLATE NO. W4-1.14

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 357	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

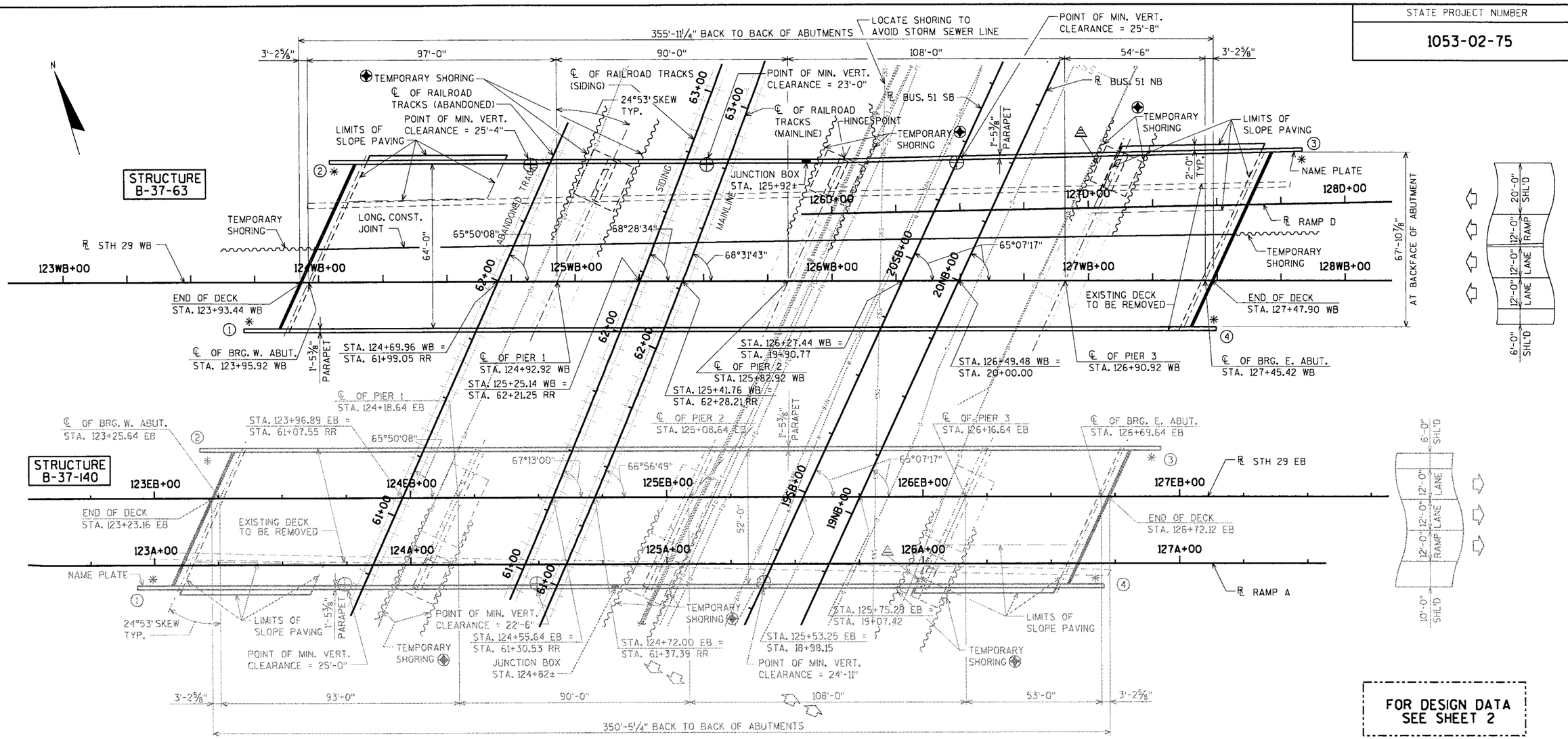
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/29/12 PLATE NO. W5-52.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 358	E

STATE PROJECT NUMBER

1053-02-75



FOR DESIGN DATA SEE SHEET 2

PLAN

4-SPAN 54" PRESTRESSED CONCRETE GIRDER BRIDGE
WIDENING AND DECK REPLACEMENT

LIST OF DRAWINGS

1. GENERAL PLAN
2. ELEVATION & DESIGN DATA
3. TYPICAL SECTION
4. QUANTITIES AND NOTES
5. CONSTRUCTION STAGE 3
6. CONSTRUCTION STAGE 4
7. SUBSURFACE EXPLORATION
8. WEST ABUTMENT
9. WEST ABUTMENT WING 1 DETAILS
10. WEST ABUTMENT WING 2 DETAILS
11. WEST ABUTMENT DETAILS
12. EAST ABUTMENT
13. EAST ABUTMENT WING 3 DETAILS
14. EAST ABUTMENT WING 4 DETAILS
15. EAST ABUTMENT DETAILS
16. PIER 1
17. PIER 1 DETAILS
18. PIER 2
19. PIER 2 DETAILS
20. PIER 3
21. PIER 3 DETAILS
22. BEARING DETAILS AT 54W GIRDER
23. BEARING DETAILS AT EXISTING 54" GIRDER
24. PRECAST CONCRETE BEARING BLOCK DETAILS
25. STEEL INTER. DIAPHRAGM DETAILS
26. STEEL INTER. DIAPHRAGM DETAILS
27. 54W" PRESTRESSED GIRDER DETAILS
28. 54W" PRESTRESSED GIRDER DETAILS
29. SUPERSTRUCTURE GIRDER LAYOUT
30. DECK ELEVATIONS AND DEFLECTIONS
31. SUPERSTRUCTURE
32. TRANSVERSE SLAB STEEL LAYOUT
33. LONGITUDINAL BOTTOM SLAB STEEL LAYOUT
34. LONGITUDINAL TOP SLAB STEEL LAYOUT
35. SUPERSTRUCTURE DETAILS
36. SUPERSTRUCTURE DETAILS
37. COUPLER DETAILS
38. SUPERSTRUCTURE BILL OF BARS
39. EXPANSION DEVICE
40. EXPANSION DEVICE
41. SINGLE SLOPE PARAPET 32SS MODIFIED
42. SLOPE PAVING
43. ARCHITECTURAL SURFACE TREATMENT

△ EXISTING 2'± TALL CONCRETE WALL TO BE REMOVED AT TOE OF PROPOSED SLOPE PAVING. CONSIDER INCIDENTAL TO "REMOVING OLD STRUCTURE".

✳ ANCHOR ASSEMBLY FOR THRIE BEAM TYPE GUARDRAIL.

◯ DENOTES WING NUMBER.

◈ TEMPORARY SHORING TO BE INSTALLED PARTIALLY UNDER EXISTING BRIDGE.



BRIDGE OFFICE CONTACT:
WILLIAM DREHER
(608)-266-8489

CONSULTANT CONTACT:
DAN SYDOW
(715)-834-3161

NO.	DATE	REVISION	BY

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher KAR 11/26/13
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-37-63

STH 29 WB OVER BUS. 51 & RAILROAD

COUNTY	TOWN/CITY/VILLAGE
MARATHON	ROTHSCHILD

DESIGN SPEC. REHABILITATION N/A

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
CJM	JCK	CLS	DNS

GENERAL PLAN

SHEET 1 OF 43
359

8

8

$PRFNAME$
U:\41-0637.00 - STH 29 over WI River\B-37-63\BRIDGE\B-37-63 rehabDP .dgn

DATE:
DATE:
DATE:

CHECKED BY:
BACK CHECKED BY:
CORRECTED BY:

10/31/2013

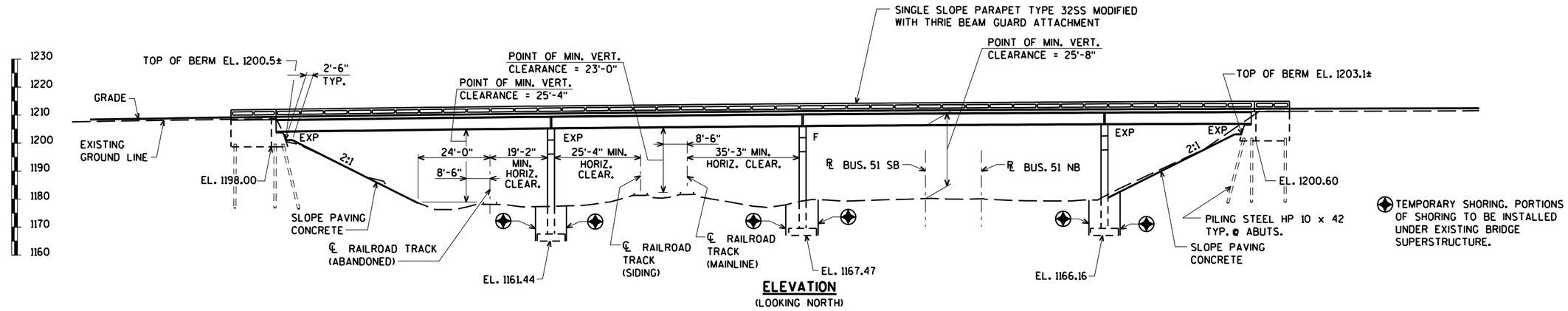
PENTABLE:BReau_shd_util.tbl

I.D.

DATE:

STATE PROJECT NUMBER

1053-02-75



ELEVATION
(LOOKING NORTH)

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HL-93
INVENTORY RATING: HS-31
OPERATING RATING: HS-41
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV) = 250 KIPS

STRUCTURE IS DESIGNED FOR A FUTURE WEARING SURFACE OF 20 #/S.F.

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)		f'y = 60,000 p.s.i.
PRESTRESSED GIRDER		
CONCRETE MASONRY		f'c = 6,000 p.s.i.
STRANDS - 0.6" DIA. WITH ULTIMATE TENSILE STRENGTH OF		270,000 p.s.i.

FOUNDATION DATA:

WEST ABUTMENT TO BE SUPPORTED ON HP 10 x 42 STEEL PILING (WITH PILE POINTS) DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 150 TONS ǂ PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED LENGTH 45'-0".

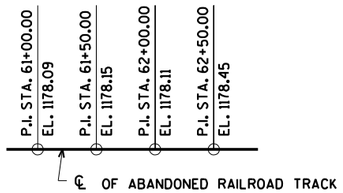
PIERS WITH SPREAD FOOTINGS TO BE SUPPORTED ON SOUND MATERIAL WITH A REQUIRED FACTORED BEARING RESISTANCE OF 20,000 PSF. A GEOTECHNICAL ENGINEER WILL DETERMINE THE FACTORED BEARING RESISTANCE BY VISUAL INSPECTION PRIOR TO CONSTRUCTION OF THE PIER FOOTING.

EAST ABUTMENT TO BE SUPPORTED ON HP 10 x 42 STEEL PILING (WITH PILE POINTS) DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 165 TONS ǂ PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED LENGTH 35'-0".

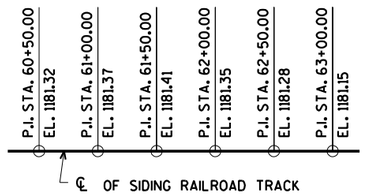
ǂ THE FACTORED AXIAL RESISTANCE OF PILES IN COMPRESSION USED FOR DESIGN IS THE REQUIRED DRIVING RESISTANCE MULTIPLIED BY A RESISTANCE FACTOR OF 0.5 USING MODIFIED GATES TO DETERMINE DRIVEN PILE CAPACITY.

TRAFFIC DATA:

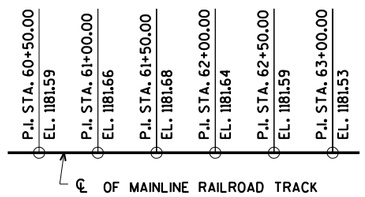
STH 29:	BUS. 51:
A.D.T. = 37,800 (2016)	A.D.T. = 20,900 (2016)
A.D.T. = 46,300 (2036)	A.D.T. = 24,800 (2036)
R.D.S. = 70 M.P.H.	R.D.S. = 50 M.P.H.



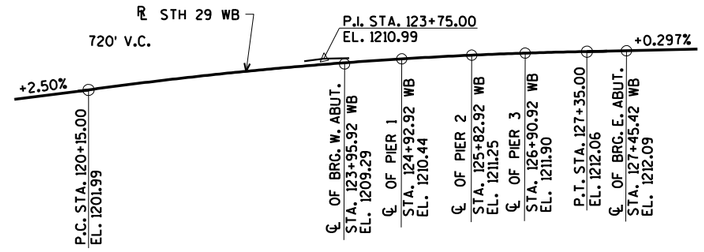
PROFILE GRADE LINE
(ABANDONED RAILROAD TRACK)



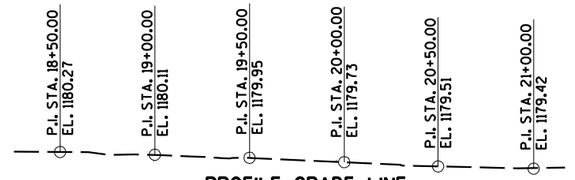
PROFILE GRADE LINE
(SIDING RAILROAD TRACK)



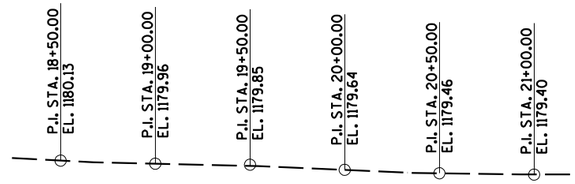
PROFILE GRADE LINE
(MAINLINE RAILROAD TRACK)



PROFILE GRADE LINE
(STH 29 WB)



PROFILE GRADE LINE
(BUS 51 SB)



PROFILE GRADE LINE
(BUS 51 NB)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-63

DRAWN BY CLS | PLANS CK'D. DNS

ELEVATION & DESIGN DATA

SHEET 2 OF 43
360

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

$PRFNAME$
U:\41-0637.00 - STH 29 over WI River\B-37-63\BRIDGE\B-37-63 rehabGP .dgn

8

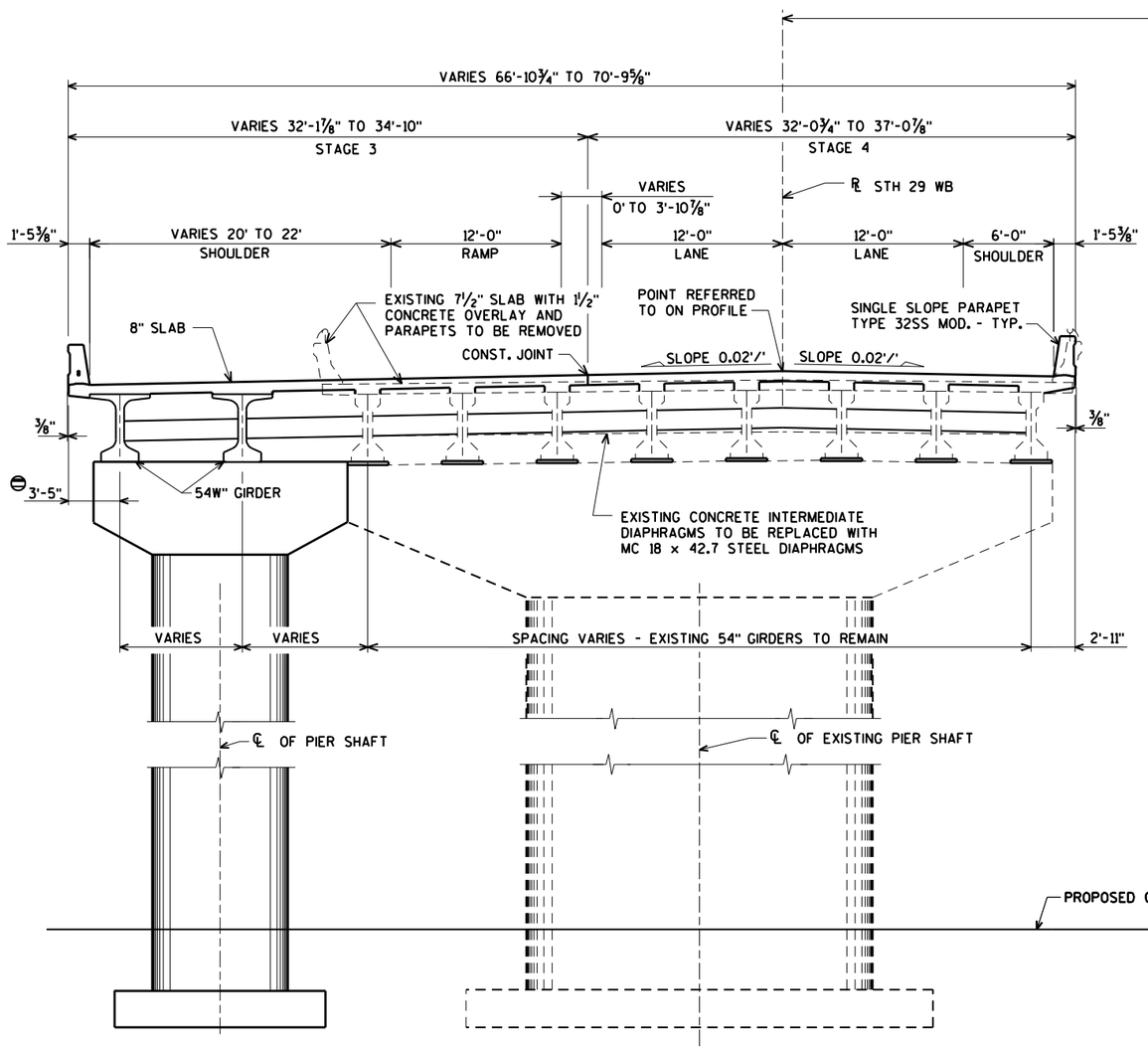
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10/31/2013

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STATE PROJECT NUMBER

1053-02-75



TYPICAL SECTION THRU BRIDGE

(LOOKING EAST)

ecpdf.plt
B-37-63 ty.dgn

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-63

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TYPICAL SECTION

SHEET 3 OF 43
361

10/31/2013

black.tbl

STATE PROJECT NUMBER

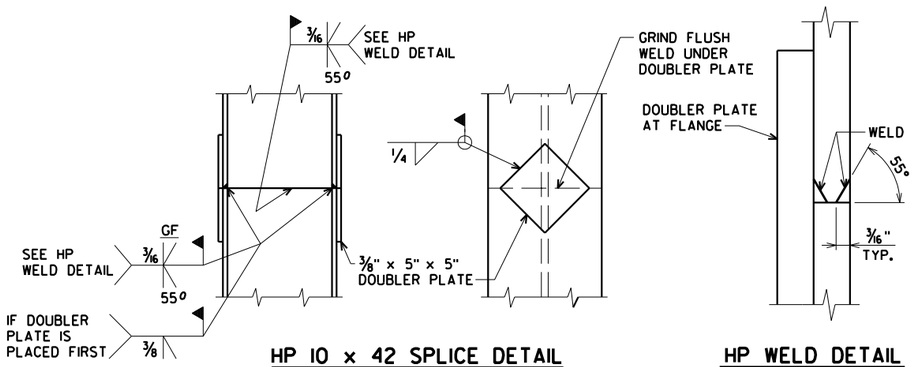
1053-02-75

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	W. ABUT.	PIER 1	PIER 2	PIER 3	E. ABUT.	SUPER.	TOTAL
203.0200.01	REMOVING OLD STRUCTURE STATION 125+82.92 WB	LS	-----	-----	-----	-----	-----	-----	1
203.0225.S.01	DEBRIS CONTAINMENT STRUCTURE B-37-63	LS	-----	-----	-----	-----	-----	-----	1
206.1000.01	EXCAVATION FOR STRUCTURES BRIDGES B-37-63	LS	-----	-----	-----	-----	-----	-----	1
206.6000.S	TEMPORARY SHORING	SF	125	1,730	1,110	1,220	125	-----	4,310
210.0100	BACKFILL STRUCTURE	CY	135	-----	-----	-----	125	-----	260
502.0100	CONCRETE MASONRY BRIDGES	CY	46	81	70	67	43	880	1,187
502.3100.01	EXPANSION DEVICE B-37-63	LS	-----	-----	-----	-----	-----	-----	1
502.3200	PROTECTIVE SURFACE TREATMENT	SY	10	-----	-----	-----	10	295	315
502.5005	MASONRY ANCHOR TYPE L NO. 5 BARS	EACH	239	-----	16	6	267	-----	528
502.5010	MASONRY ANCHOR TYPE L NO. 6 BARS	EACH	9	10	10	10	9	-----	48
502.5020	MASONRY ANCHOR TYPE L NO. 8 BARS	EACH	5	-----	-----	-----	5	-----	10
503.0155	PRESTRESSED GIRDER TYPE I 54W-INCH	LF	-----	-----	-----	-----	-----	704	704
505.0405	BAR STEEL REINFORCEMENT HS BRIDGES	LB	1,330	3,080	2,060	1,810	1,250	-----	9,530
505.0605	BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB	3,680	11,830	10,780	11,120	3,720	205,610	246,740
506.2605	BEARING PADS ELASTOMERIC NON-LAMINATED	EACH	-----	-----	20	-----	-----	-----	20
506.2610	BEARING PADS ELASTOMERIC LAMINATED	EACH	10	20	-----	20	10	-----	60
506.4000.01	STEEL DIAPHRAGMS B-37-63	EACH	-----		-----	-----	-----	63	63
506.7050.S.01	REMOVING BEARINGS B-37-63	EACH	8	16	16	16	8	-----	64
◐ 509.1500	CONCRETE SURFACE REPAIR	SF	-----	-----	-----	-----	-----	-----	50
509.5100.S	POLYMER OVERLAY	SY	-----	-----	-----	-----	-----	2,670	2,670
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	18	-----	-----	-----	20	-----	38
517.1010.S.01	CONCRETE STAINING B-37-63	SF	180	2,645	2,525	2,640	180	9,550	17,720
550.0500	PILE POINTS	EACH	7	-----	-----	-----	5	-----	12
550.1100	PILING STEEL HP 10-INCH x 42 LB	LF	315	-----	-----	-----	175	-----	490
604.0400	SLOPE PAVING CONCRETE	SY	155	-----	-----	-----	200	-----	355
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	65	-----	-----	-----	65	-----	130
614.0150	ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	2	-----	-----	-----	2	-----	4
652.0125	CONDUIT RIGID METALLIC 2-INCH	LF	40	-----	-----	-----	40	12	92
652.0225	CONDUIT RIGID NONMETALLIC 2-INCH	LF	-----	-----	-----	-----	-----	695	695
653.0222	JUNCTION BOXES 18x12x6-INCH	EACH	-----	-----	-----	-----	-----	1	1
⊗ SPV.0035.01	CONCRETE MASONRY DECK PATCHING	CY	-----	-----	-----	-----	-----	15	15
SPV.0060.01	PRECAST CONCRETE BEARING BLOCK	EACH	-----	-----	8	3	-----	-----	11
	NON-BID ITEMS								
	FILLER	SIZE	-----	-----	-----	-----	-----	-----	1/2" & 3/4"

◐ UNDISTRIBUTED QUANTITY FOR GIRDERS, ABUTMENTS, AND PIERS AS DIRECTED BY THE ENGINEER. GIRDER SURFACE REPAIRS NEEDED AT ABUTMENTS.

⊗ UNDISTRIBUTED QUANTITY FOR MAINTAINING EXISTING BRIDGE DECK UNTIL DECK REMOVAL AS DIRECTED BY THE ENGINEER.



HP 10 x 42 SPLICE DETAIL

HP WELD DETAIL

FLANGE SHOWN, WEB SIMILAR

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

THE FIRST DIGIT OF A THREE DIGIT BAR NO. AND THE FIRST TWO DIGITS OF A FOUR DIGIT BAR NO. SIGNIFIES THE BAR SIZE.

THE SLOPE OF THE FILL IN FRONT OF THE NEW ABUTMENTS SHALL BE COVERED WITH SLOPE PAVING CONCRETE TO THE EXTENT SHOWN ON THE GENERAL PLAN SHEET AND IN THE SLOPE PAVING DETAILS.

THE EXISTING GROUNDLINE SHALL BE THE UPPER LIMIT FOR EXCAVATION FOR STRUCTURES.

ELASTOMERIC BEARING PADS NEED NOT BE INDIVIDUALLY MOLDED PROVIDED THE CUT EDGES ARE SMOOTH AND TRUE.

PROTECTIVE SURFACE TREATMENT IS TO BE APPLIED TO THE TOP AND INSIDE FACES OF PARAPETS.

UTILIZE EXISTING BAR STEEL REINFORCEMENT WHERE SHOWN AND EXTEND 24 BAR DIAMETERS INTO NEW WORK, UNLESS SPECIFIED OTHERWISE.

DIMENSIONS SHOWN ARE BASED ON ORIGINAL STRUCTURE PLANS.

ALL CONCRETE REMOVAL SHALL BE DEFINED BY A 1" DEEP SAW CUT.

VARIATIONS TO THE NEW GRADE LINE OVER 1/4" MUST BE SUBMITTED BY THE FIELD ENGINEER TO THE STRUCTURES DESIGN SECTION FOR REVIEW.

JOINT FILLER SHALL CONFORM TO THE REQUIREMENTS OF A.A.S.H.T.O. DESIGNATION M 153, TYPE I, II OR III OR A.A.S.H.T.O. DESIGNATION M 213.

THE EXISTING STRUCTURE B-37-63 IS A FOUR SPAN 54-INCH PRESTRESSED CONCRETE GIRDER BRIDGE, 355.9 FEET LONG AND HAS AN AVERAGE CLEAR ROADWAY WIDTH OF 54.5 FEET.

THE HAUNCH CONCRETE QUANTITY IS BASED ON AN AVERAGE HAUNCH DEPTH SHOWN ON THE PRESTRESSED GIRDER DETAILS SHEETS.

AT THE BACK FACE OF ABUTMENT, ALL VOLUME WHICH CANNOT BE PLACED BEFORE ABUTMENT CONSTRUCTION AND IS NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH STRUCTURE BACKFILL.

THE CONTRACTOR SHALL SUPPLY A NEW NAME PLATE IN ACCORDANCE WITH SECTION 502.3.11 OF THE STANDARD SPECIFICATIONS AND THE STANDARD DETAIL DRAWINGS. NAME PLATE TO SHOW ORIGINAL CONSTRUCTION YEAR OF 1971.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-63

DRAWN BY CLS | PLANS CK'D. DNS

QUANTITIES AND NOTES

SHEET 4 OF 43
362

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

$PRFNAME$
U:±41-0637.00 - STH 29 over WIRiver±B-37-63±BRIDGE±B-37-63 ON.dgn

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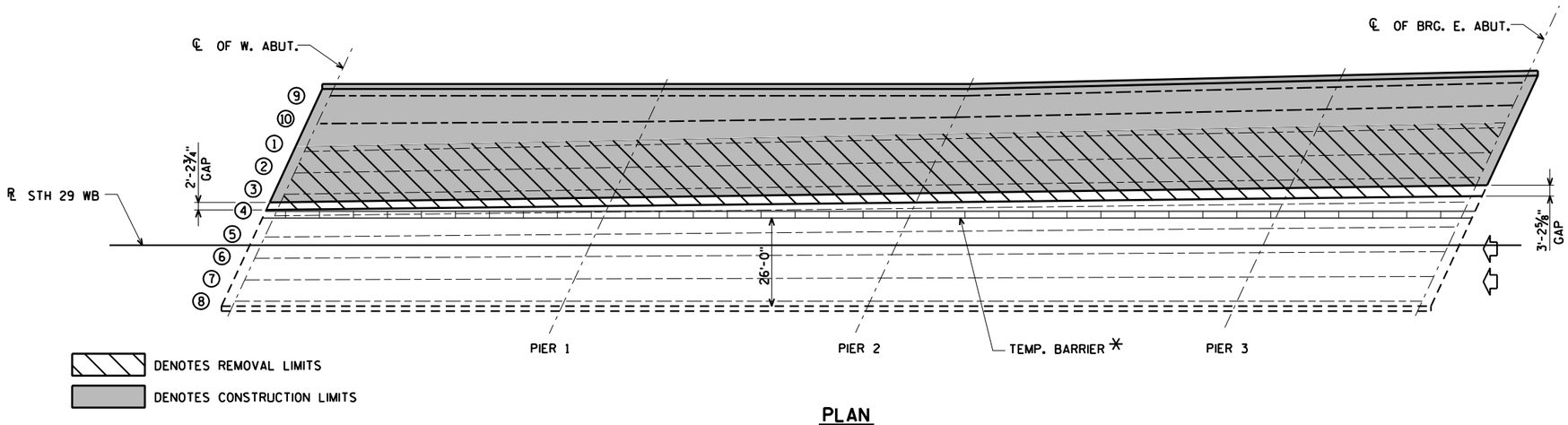
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10/31/2013

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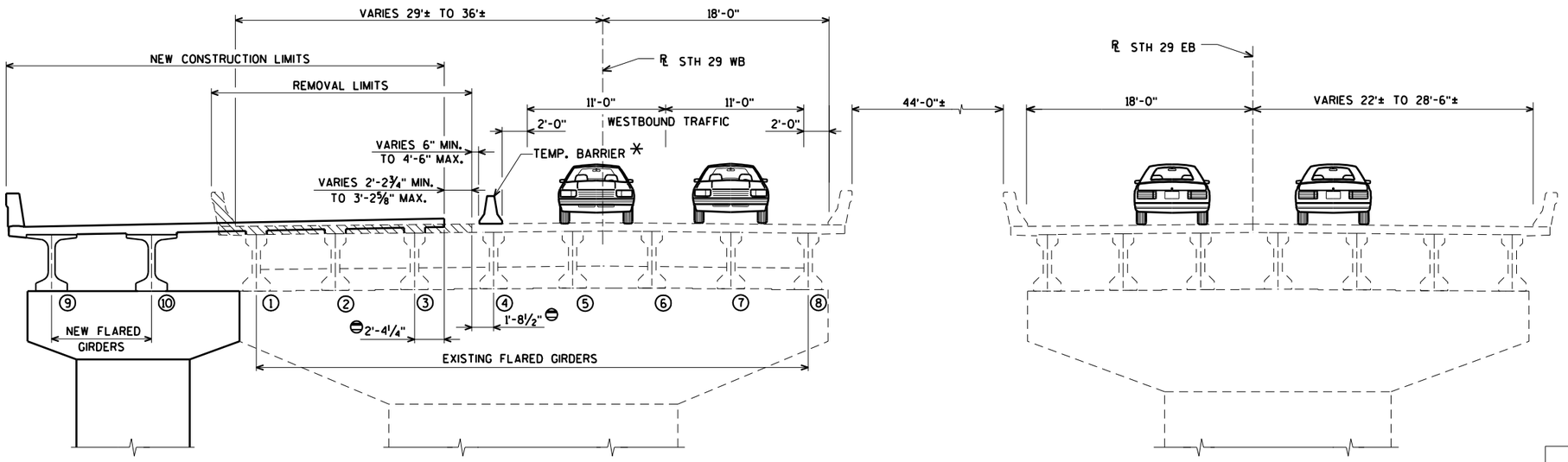
1053-02-75



PLAN

N

STRUCTURE B-37-63



✳ ANCHOR TEMP. BARRIER TO EXISTING DECK

SECTION
(LOOKING EAST)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-63

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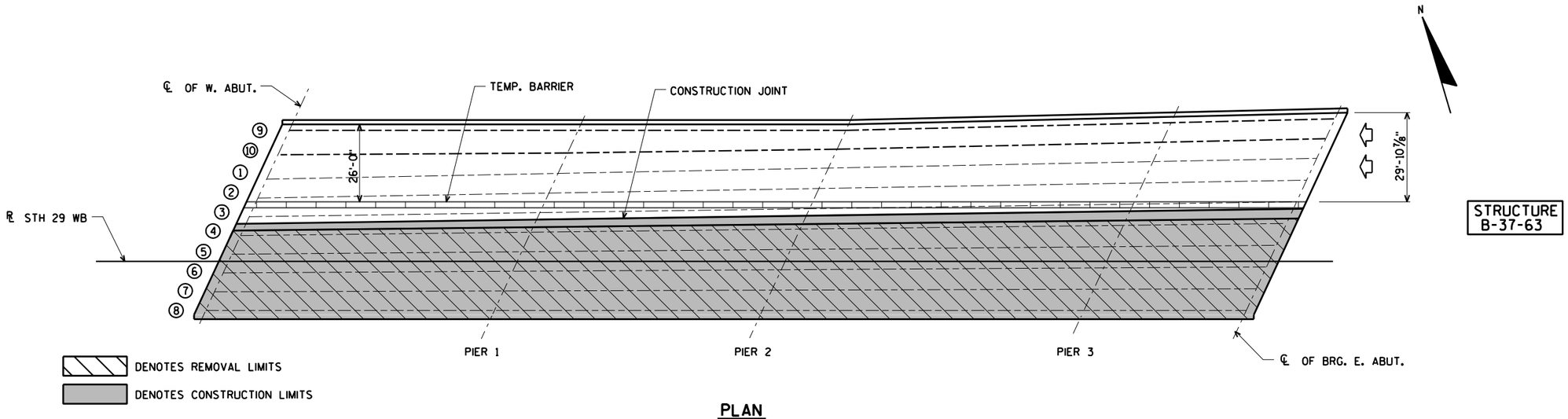
CONSTRUCTION STAGE 3

SHEET 5 OF 43
363

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

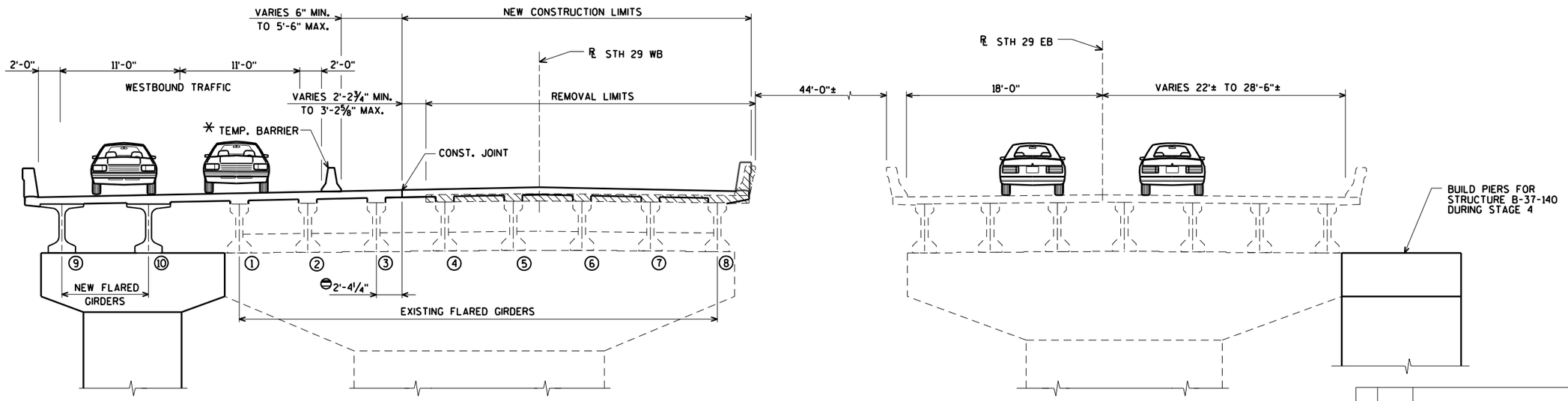
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STATE PROJECT NUMBER
1053-02-75



PLAN

STRUCTURE B-37-63



MEASURED NORMAL TO ℄ OF GIRDER

ANCHOR TEMP. BARRIER TO DECK

SECTION
(LOOKING EAST)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-63

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CONSTRUCTION STAGE 4

SHEET 6 OF 43
364

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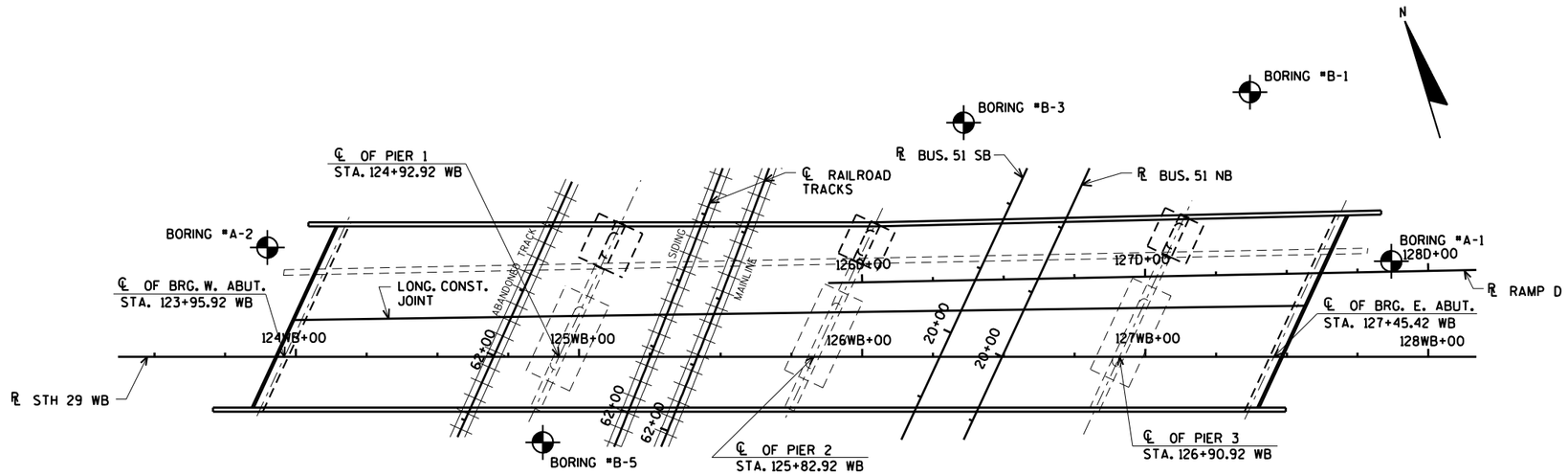
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9/30/2013

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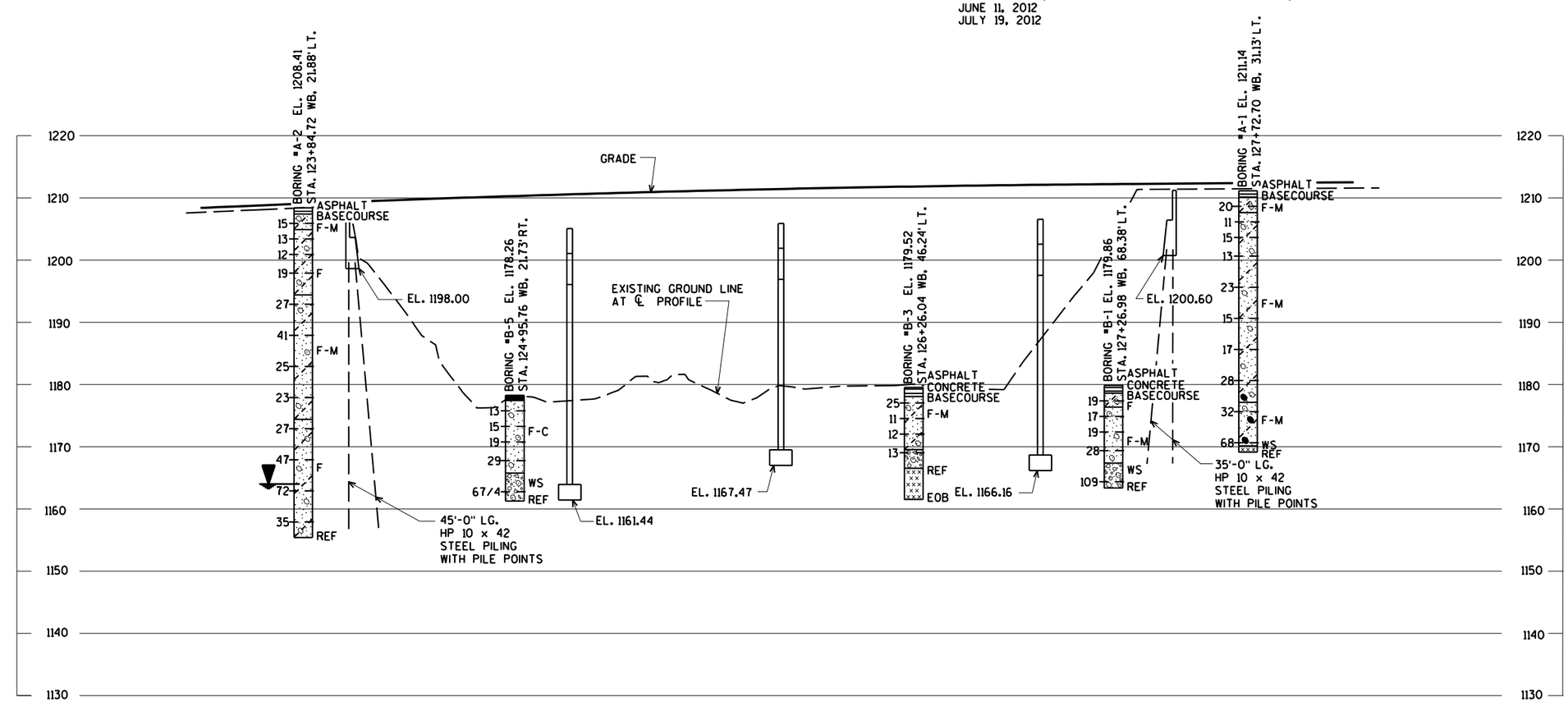
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8



BORINGS TAKEN BY:
NUMMELIN TESTING SERVICES, INC.
STEVENS POINT/WAUNAKEE, WI
MAY 20 & 30, 2012
JUNE 11, 2012
JULY 19, 2012

GEOTECHNICAL REPORT BY:
NUMMELIN TESTING SERVICES, INC.
STEVENS POINT/WAUNAKEE, WI
SEPTEMBER 25, 2012



STATE PROJECT NUMBER

1053-02-75

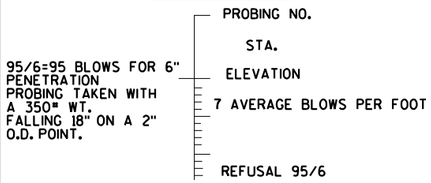
ABBREVIATIONS

F — FINE M — MEDIUM C — COARSE
WS — WEATHERED SO — SOUND

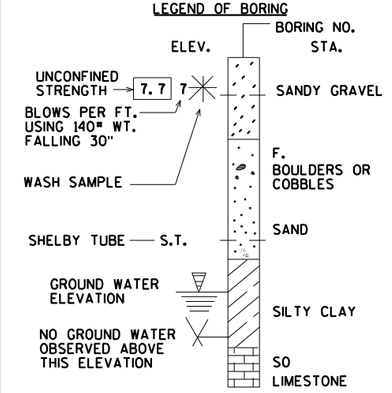
MATERIAL SYMBOLS

TOPSOIL, SILT, SANDSTONE
SAND, PEAT, LIMESTONE
GRAVEL, CLAY, IGNEOUS ROCK

LEGEND OF PROBING



LEGEND OF BORING



UNLESS OTHERWISE SPECIFIED, THE BLOWS PER FOOT AT THE LOCATIONS INDICATED ARE BASED ON DRIVING A 2" O.D. X 1.4" I.D. SPLIT SPOON SAMPLER WITH A 140# HAMMER HAVING A FREE FALL OF 30". THE BLOW COUNT IS TAKEN IN UNDISTURBED SOIL IMMEDIATELY BELOW A CASED OR OPEN HOLE ELIMINATING SIDE FRICTION ON THE DRIVE PIPE.

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

TO OBTAIN RELATIVE DATA CONCERNING THE CHARACTER OF MATERIAL IN AND UPON WHICH THE FOUNDATION MIGHT BE BUILT, BORINGS AND/OR SOUNDINGS WERE MADE AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING. THE DATA PRESENTED HEREIN REPRESENTS THE FINDINGS OF THE SUBSURFACE EXPLORATIONS MADE. HOWEVER, BECAUSE THE DEPTHS INVESTIGATED ARE LIMITED AND THE AREA OF THE BORINGS AND/OR SOUNDINGS IS VERY SMALL IN RELATION TO THE ENTIRE AREA, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT CONDITIONS BELOW THE DEPTHS INVESTIGATED OR THAT THE CLASSIFICATION OF MATERIAL ENCOUNTERED IN THESE INVESTIGATIONS IS NECESSARILY TYPICAL OF THE ENTIRE SITE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-63

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SUBSURFACE EXPLORATION

SHEET 7 OF 43
365

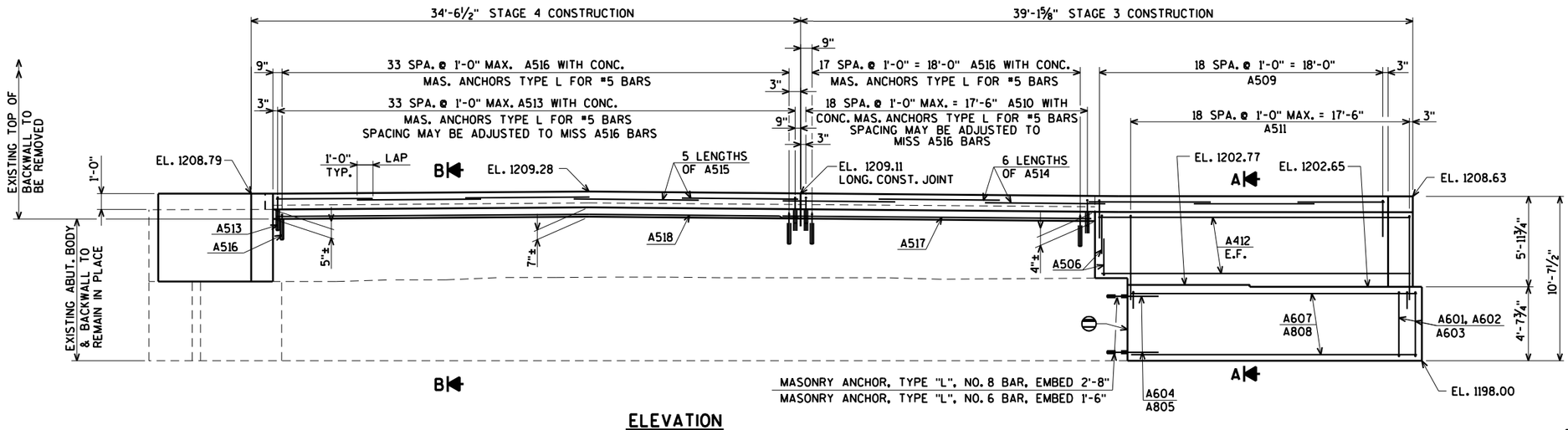
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$PRFNAME$
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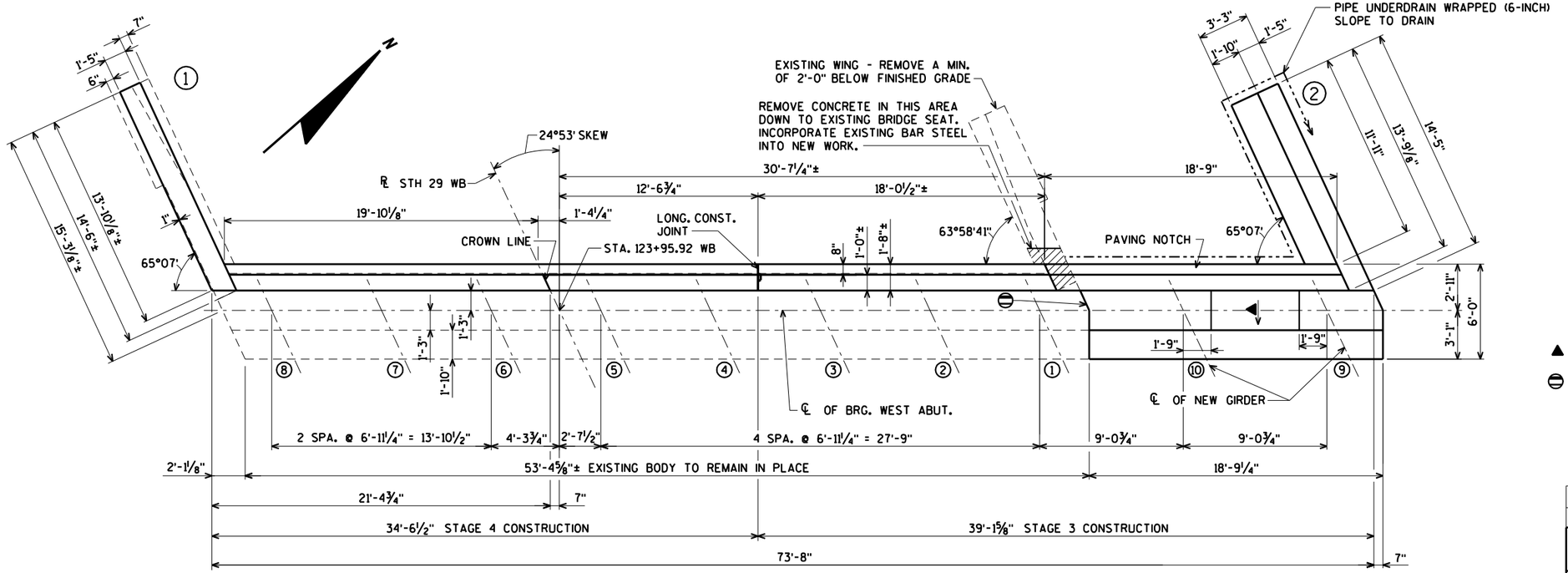
9/30/2013

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ELEVATION
(LOOKING WEST)

FOR SECTIONS "A" & "B" SEE SHEET 11



PLAN

▲ SLOPE 1" BETWEEN SEATS

⊖ ROUGHEN SURFACE OF CONCRETE ¼" DEEP MIN. ALL AREAS OF NEW TO EXISTING CONCRETE CONTACT.

E.F. DENOTES EACH FACE

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-63

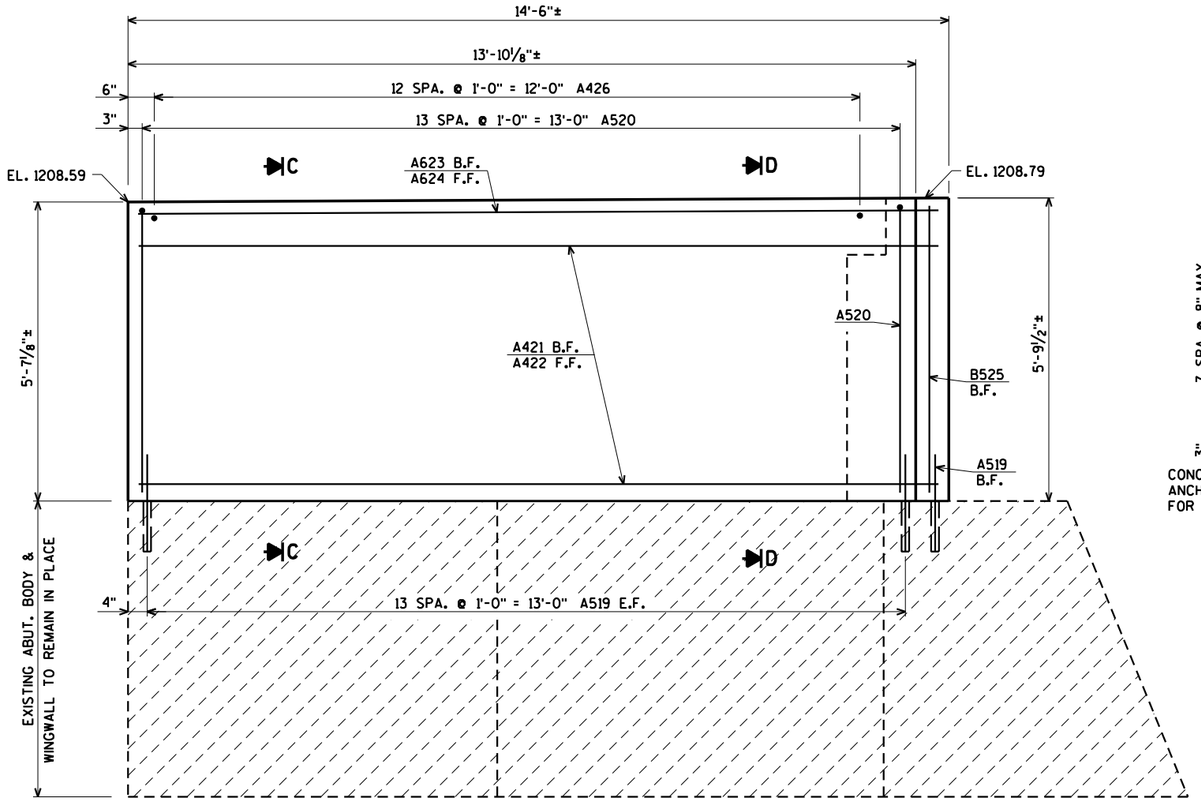
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WEST ABUTMENT

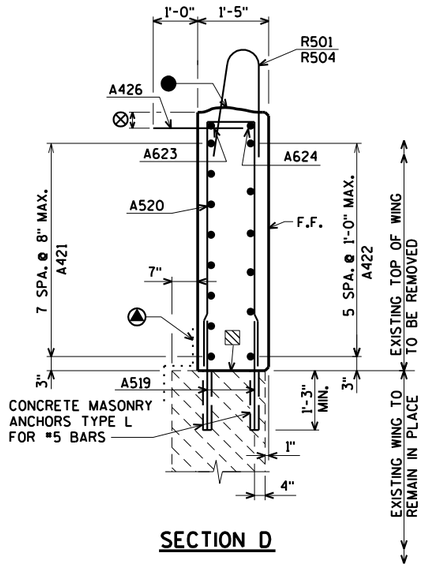
SHEET 8 OF 43
366

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

$PRFNAME$
U:±41-0637.00 - STH 29 over WIRiver±B-37-63±BRIDGE±B-37-63 wa.dgn
10/31/2013
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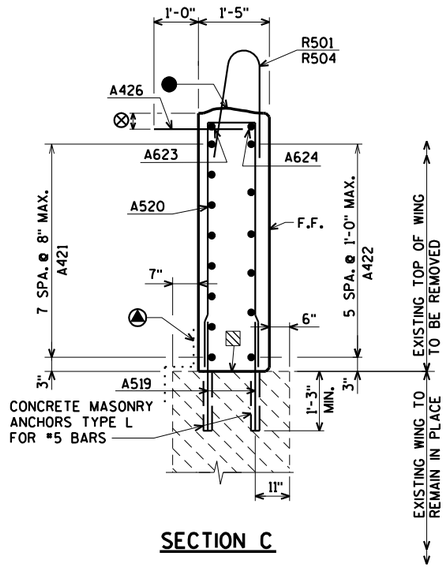


ELEVATION WING 1

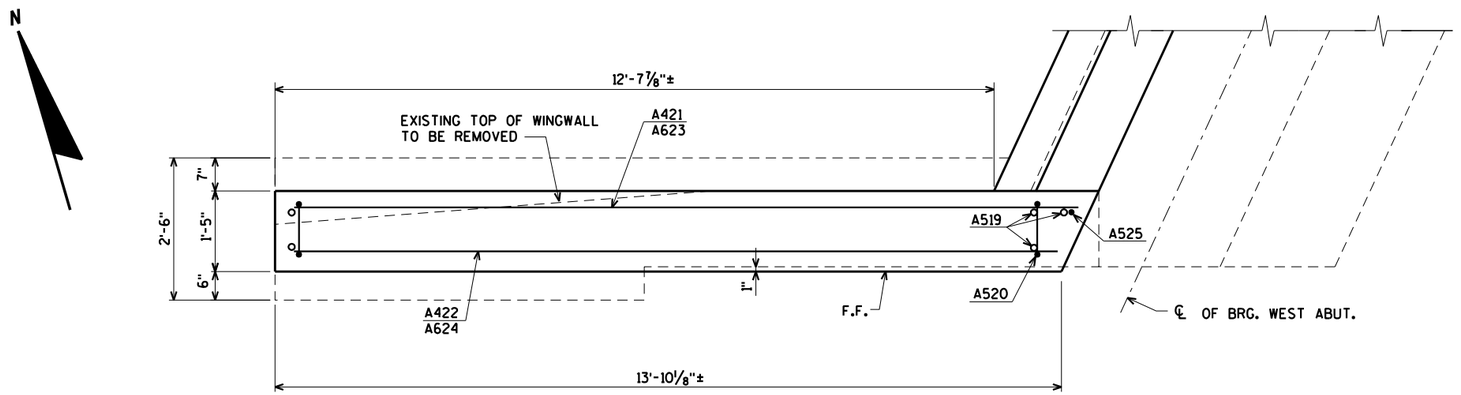


SECTION D

SINGLE SLOPE PARAPET 32SS MODIFIED NOT SHOWN. FOR DETAILS SEE SHEET 41



SECTION C



PLAN WING 1

▨ EXISTING CONST. JOINT

⊗ 3" MIN. TO 6" MAX. SEE CONCRETE SURFACE DRAIN S.D.D.

▲ 18" RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACK FACE OF ABUTMENT.

● STRIKE OFF AS SHOWN AND LEAVE ROUGH.

F.F. DENOTES FRONT FACE

B.F. DENOTES BACK FACE

E.F. DENOTES EACH FACE

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-63

DRAWN BY CLS | PLANS CK'D. DNS

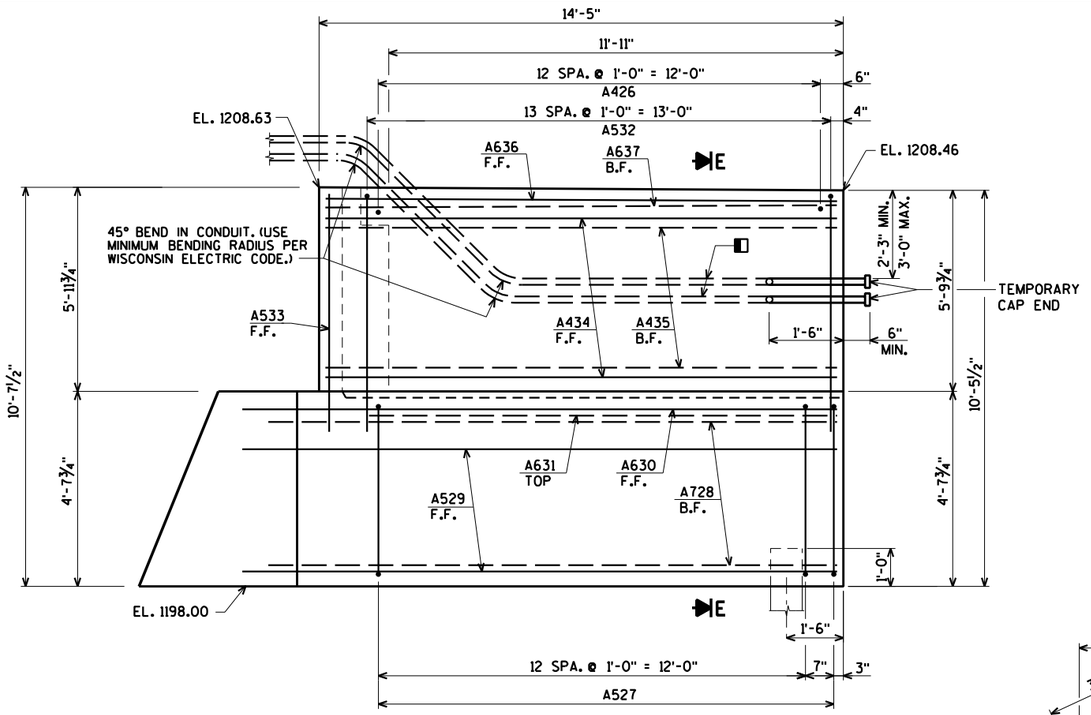
WEST ABUTMENT WING 1 DETAILS

SHEET 9 OF 43
367

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

$PRFNAME$
U:\41-0637.00 - STH 29 over WIRiver\B-37-63\BRIDGE\B-37-63 wa.dgn

$PRFNAME$
U:\41-0637.00 - STH 29 over WIRiver\B-37-63\BRIDGE\B-37-63 wa.dgn



ELEVATION - WING 2

⊗ 3" MIN. TO 6" MAX. SEE CONCRETE SURFACE DRAIN S.D.D.

⊖ ROUGHEN SURFACE OF CONCRETE ¼" DEEP MIN. ALL AREAS OF NEW TO EXISTING CONCRETE CONTACT

◭ 18" RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACK FACE OF ABUTMENT.

● STRIKE OFF AS SHOWN AND LEAVE ROUGH.

⊞ OPT. KEYED CONST. JOINT - FORMED BY A SURFACED BEVELED 2" x 6" WITH RUBBERIZED MEMBRANE WATERPROOFING ON B.F.

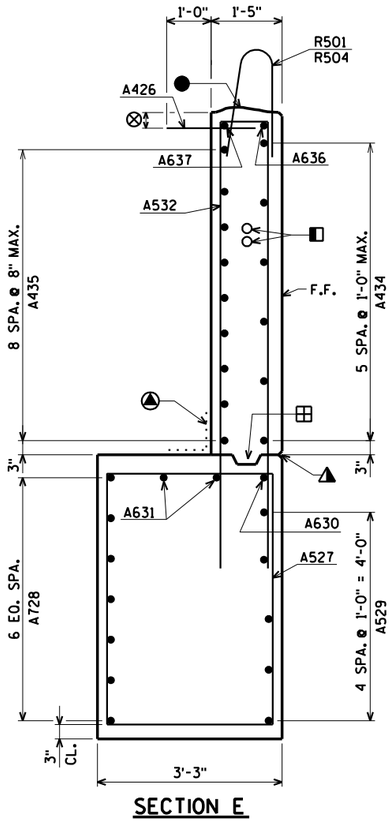
▲ ¾" 'V' GROOVE ON F.F. OF WINGWALL. OMIT IF CONST. JOINT NOT USED.

◧ 2" DIA. RIGID NONMETALLIC CONDUIT EXCEPT AT EXPANSION FITTING. AT EXPANSION FITTING USE RIGID METALLIC CONDUIT 3'-0" INTO PARAPET ON DECK SIDE AND THRU PARAPET AND WINGWALL TO A MINIMUM OF 6" BEYOND END OF WINGWALL. (FOR GROUNDING PURPOSES.)

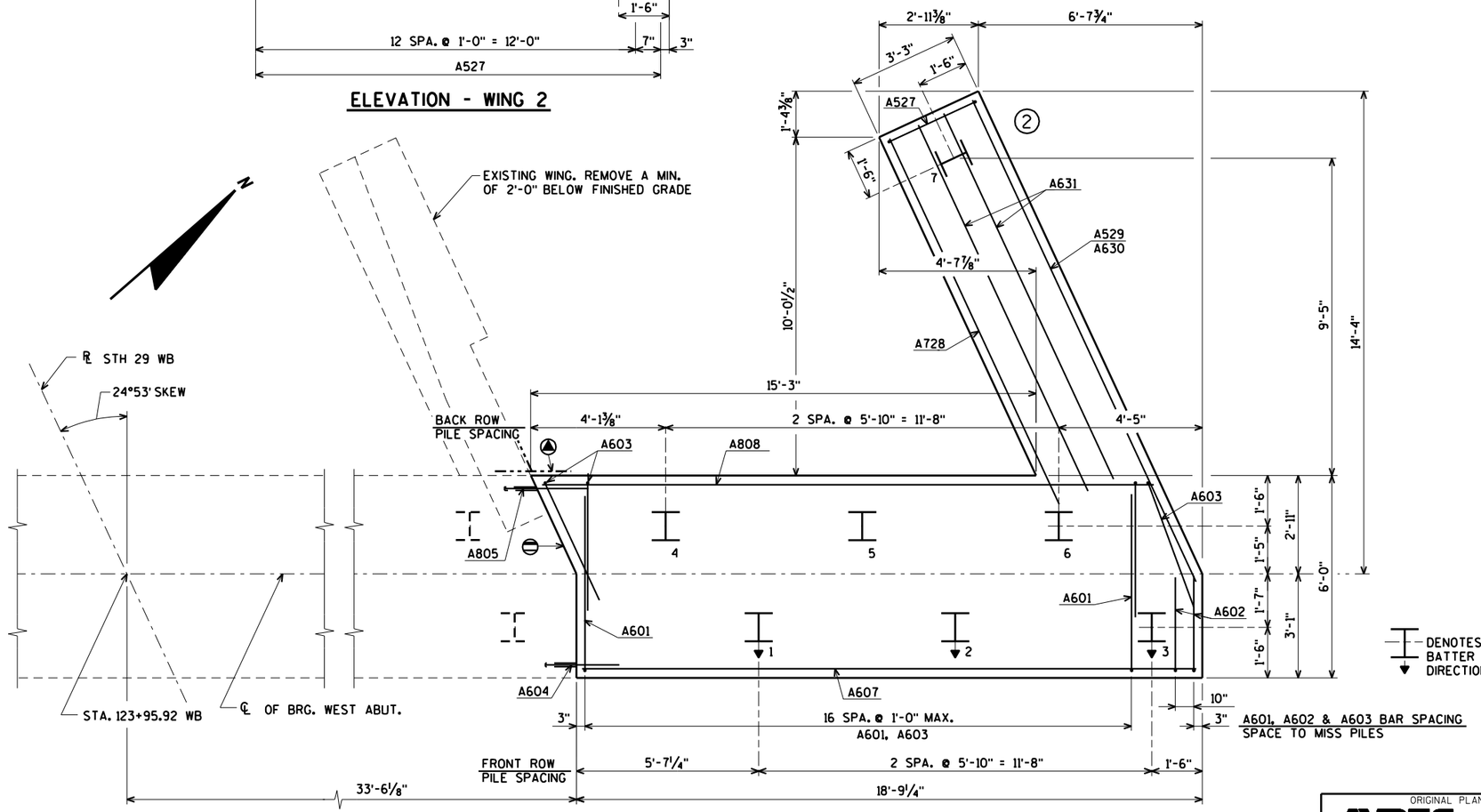
F.F. DENOTES FRONT FACE

B.F. DENOTES BACK FACE

SINGLE SLOPE PARAPET 32SS MODIFIED NOT SHOWN. FOR DETAILS SEE SHEET 41



SECTION E



PILE LAYOUT

▼ DENOTES BATTERED PILES. BATTER 3"/FOOT IN DIRECTION SHOWN.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-63

DRAWN BY CLS | PLANS CK'D. DNS

WEST ABUTMENT WING 2 DETAILS

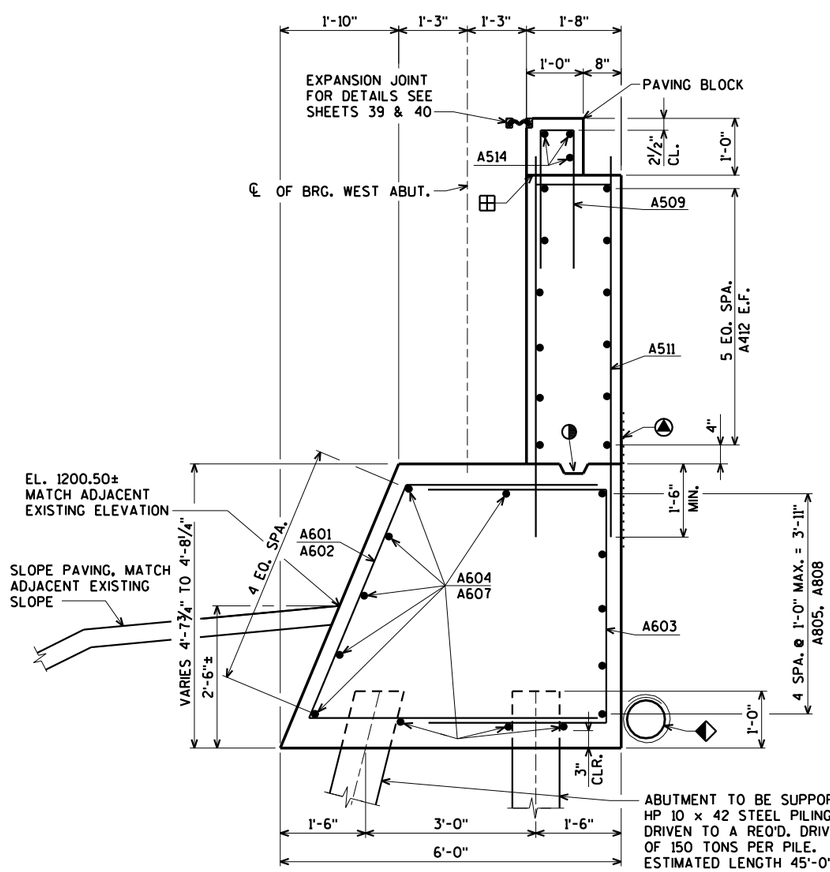
SHEET 10 OF 43
368

ORIGINAL PLANS PREPARED BY
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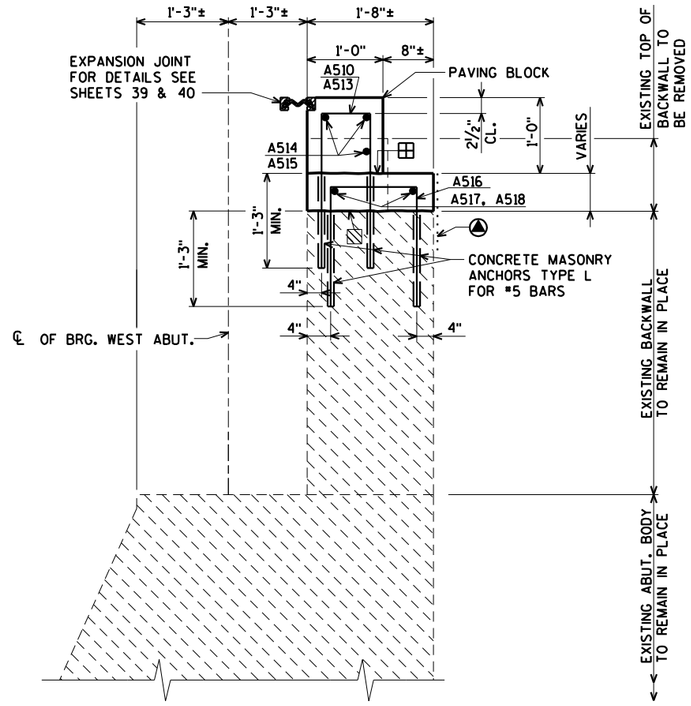
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$PRFNAME$
U:\41-0637.00 - STH 29 over WIRiver\B-37-63\BRIDGE\B-37-63 wa.dgn



SECTION A



SECTION B

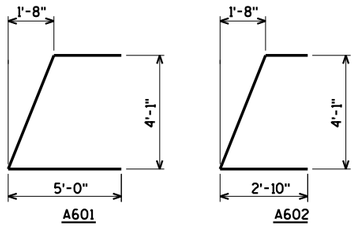
FOR LOCATION OF SECTIONS "A" & "B" SEE SHEET 8

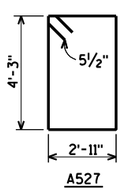
BILL OF BARS

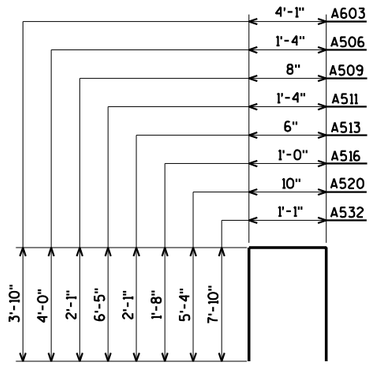
WEIGHTS INCLUDE PARAPET STEEL SHOWN ON SHEET 41

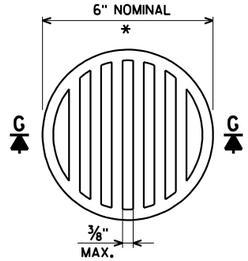
BAR. NO.	COATED BAR	NO. REQ'D. STAGE 3	NO. REQ'D. STAGE 4	LENGTH	BENT BAR	BUNDLED BAR	SERIES	3,680# COATED 1,330# UNCOATED LOCATION
A601		17	0	12-5	X			BODY VERT. F.F.
A602		2	0	8-1	X			BODY VERT. F.F.
A603		19	0	11-5	X			BODY VERT. B.F.
A604		9	0	4-7				BODY DOWELS
A805		5	0	7-11				BODY DOWELS
A506	X	2	0	9-1	X			BACKWALL VERT.
A607		9	0	18-5				BODY HORIZ.
A808		5	0	18-5				BODY HORIZ.
A509	X	19	0	4-7	X			BACKWALL @ PAVING BLOCK VERT.
A510	X	19	0	4-5	X			BACKWALL @ PAVING BLOCK VERT.
A511	X	19	0	13-11	X			BACKWALL VERT.
A412	X	12	0	19-8				BACKWALL HORIZ. E.F.
A513	X	0	34	4-5	X			BACKWALL @ PAVING BLOCK VERT
A514	X	18	0	8-0				BACKWALL @ PAVING BLOCK HORIZ. STAGE 3
A515	X	0	15	8-0				BACKWALL @ PAVING BLOCK HORIZ. STAGE 4
A516	X	18	34	4-1	X			BACKWALL VERT.
A517	X	2	0	19-5				BACKWALL HORIZ. STAGE 3
A518	X	0	2	32-11				BACKWALL HORIZ. STAGE 4
A519	X	0	29	4-0				WING 1 DOWELS E.F.
A520	X	0	14	11-3	X			WING 1 VERT.
A421	X	0	8	14-0				WING 1 HORIZ. B.F.
A422	X	0	6	13-6				WING 1 HORIZ. F.F.
A623	X	0	1	14-0				WING 1 HORIZ. B.F.
A624	X	0	1	13-6				WING 1 HORIZ. F.F.
A525	X	0	1	5-5				WING 1 VERT.
A426	X	13	13	2-0				WING 1 & 2 DOWELS
A527	X	14	0	14-10	X			WING 2 VERT.
A728	X	7	0	13-8				WING 2 HORIZ. B.F.
A529	X	5	0	15-8				WING 2 HORIZ. F.F.
A630	X	1	0	15-8				WING 2 HORIZ. F.F.
A631	X	2	0	14-0				WING 2 HORIZ. TOP
A532	X	14	0	16-6	X			WING 2 VERT.
A533	X	1	0	7-10				WING 2 VERT. F.F.
A434	X	6	0	14-0				WING 2 HORIZ. F.F.
A435	X	9	0	13-6				WING 2 HORIZ. B.F.
A636	X	1	0	14-0				WING 2 HORIZ. F.F.
A637	X	1	0	13-6				WING 2 HORIZ. B.F.

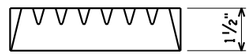
BENDING DIMENSIONS ARE OUT TO OUT OF BARS.











SECTION G-G

* DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING. ORIENT SO SLOTS ARE VERTICAL.

THE RODENT SHIELD, PIPE COUPLING AND SCREWS SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".

THE RODENT SHIELD SHALL BE PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALLY AVAILABLE AS A FLOOR STRAINER. A PIPE COUPLING IS REQUIRED FOR THE ATTACHMENT OF THIS SHIELD TO THE EXPOSED END OF THE PIPE UNDERDRAIN. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 x 1-INCH SHEET METAL SCREWS.

RODENT SHIELD DETAIL

▨ EXISTING CONST. JOINT

◆ PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN. RODENT SHIELD TO BE INCLUDED IN BID PRICE OF "PIPE UNDERDRAIN WRAPPED 6-INCH".

▲ 18" RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACK FACE OF ABUTMENT.

◑ OPT. KEYED CONST. JOINT - FORMED BY A SURFACED BEVELED 2" x 6" WITH RUBBERIZED MEMBRANE WATERPROOFING ON B.F.

⊞ CONST. JOINT - POUR CONCRETE ABOVE THIS JOINT AFTER SUPERSTRUCTURE IS IN PLACE. STRIKE OFF AND LEAVE ROUGH.

F.F. DENOTES FRONT FACE

B.F. DENOTES BACK FACE

E.F. DENOTES EACH FACE

FOR PILE SPLICE DETAIL SEE SHEET 4

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-63

DRAWN BY CLS | PLANS CK'D. DNS

WEST ABUTMENT DETAILS

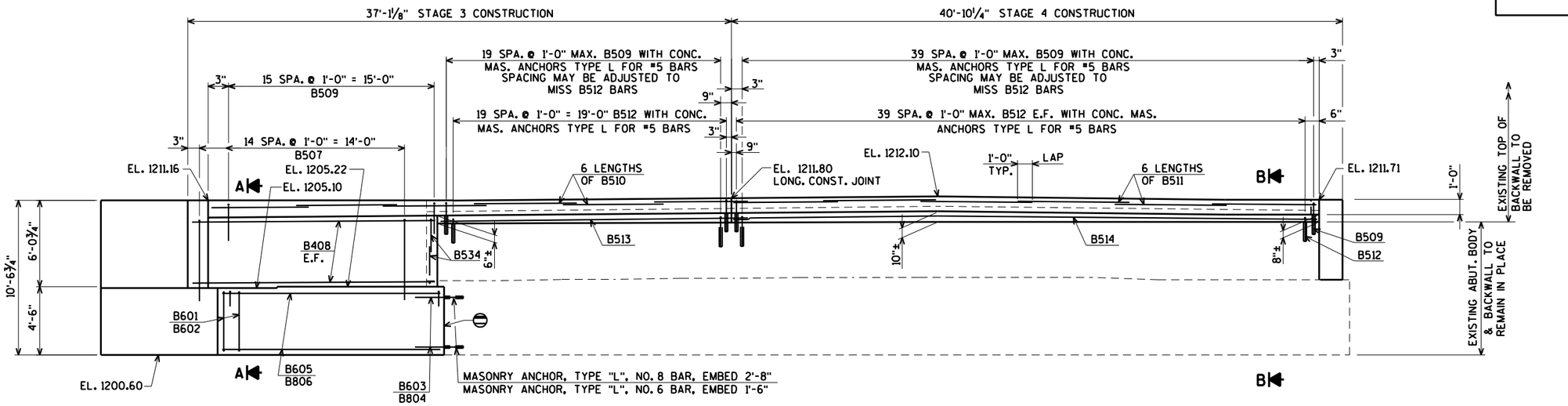
SHEET 11 OF 43
369

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
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STATE PROJECT NUMBER
1053-02-75

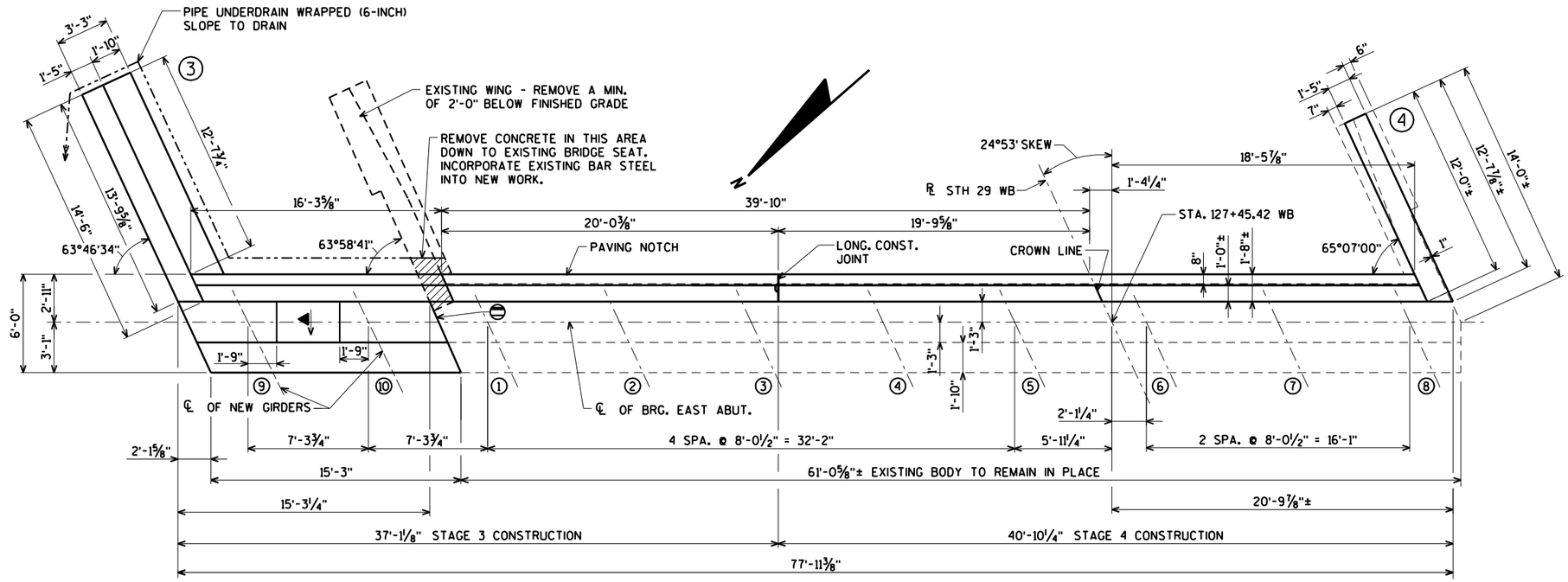
8

8



ELEVATION
(LOOKING EAST)

FOR SECTIONS "A" & "B" SEE SHEET 15



PLAN

▲ SLOPE 1" BETWEEN SEATS

ROUGHEN SURFACE OF CONCRETE ¼" DEEP MIN. ALL AREAS OF NEW TO EXISTING CONCRETE CONTACT.

E.F. DENOTES EACH FACE

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-63

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EAST ABUTMENT

SHEET 12 OF 43
370

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10/31/2013
PENTABLE:BReau_shd_util.tbl

⊗ 3" MIN. TO 6" MAX. SEE CONCRETE SURFACE DRAIN S.D.D.

⊖ ROUGHEN SURFACE OF CONCRETE 1/4" DEEP MIN. ALL AREAS OF NEW TO EXISTING CONCRETE CONTACT

◭ 18" RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACK FACE OF ABUTMENT.

● STRIKE OFF AS SHOWN AND LEAVE ROUGH.

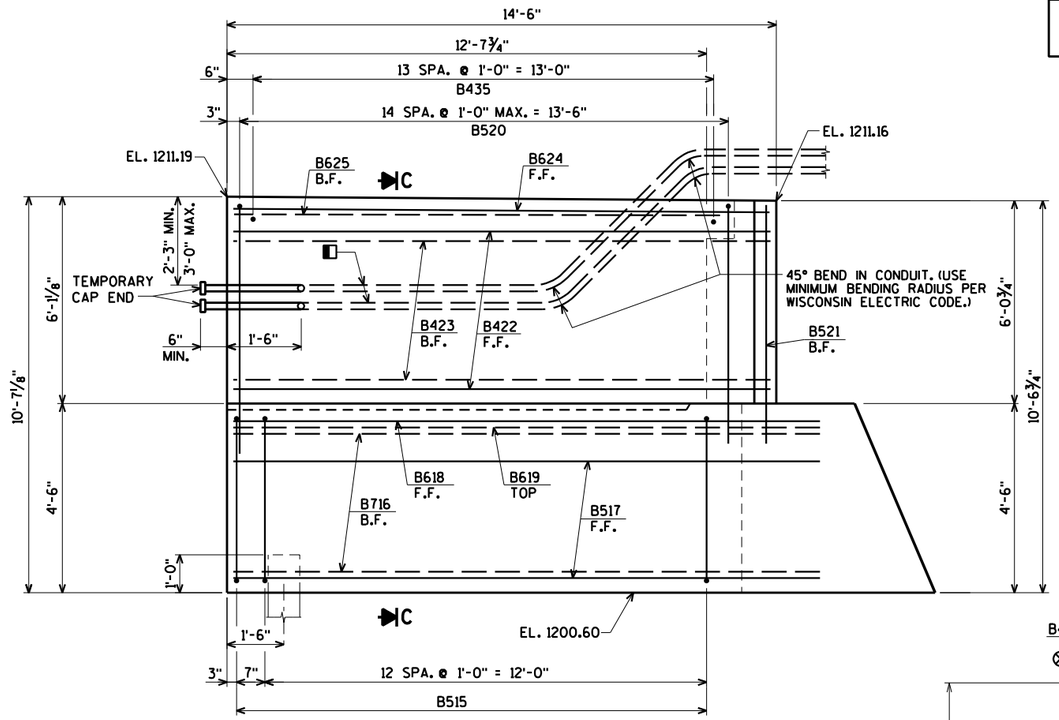
⊞ OPT. KEYED CONST. JOINT - FORMED BY A SURFACED BEVELED 2" x 6" WITH RUBBERIZED MEMBRANE WATERPROOFING ON B.F.

▲ 3/4" 'V' GROOVE ON F.F. OF WINGWALL. OMIT IF CONST. JOINT NOT USED.

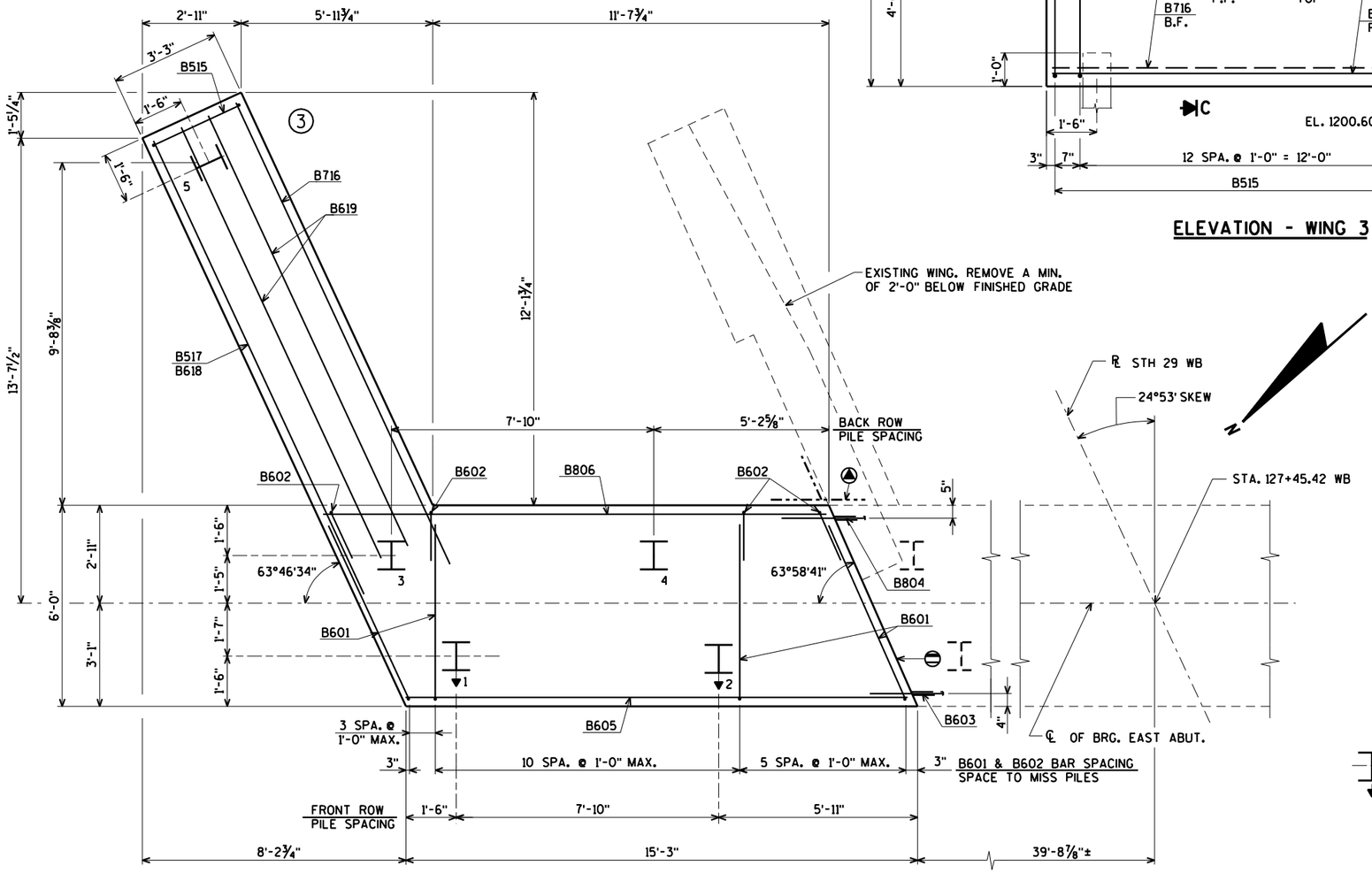
◧ 2" DIA. RIGID NONMETALLIC CONDUIT EXCEPT AT EXPANSION FITTING. AT EXPANSION FITTING USE RIGID METALLIC CONDUIT 3'-0" INTO PARAPET ON DECK SIDE AND THRU PARAPET AND WINGWALL TO A MINIMUM OF 6" BEYOND END OF WINGWALL. (FOR GROUNDING PURPOSES.)

F.F. DENOTES FRONT FACE

B.F. DENOTES BACK FACE



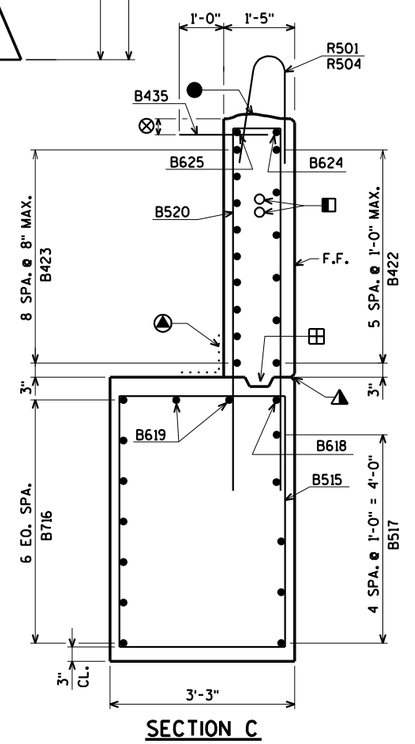
ELEVATION - WING 3



PILE LAYOUT

—|— DENOTES BATTERED PILES.
—|— BATTER 3"/FOOT IN
▼ DIRECTION SHOWN.

SINGLE SLOPE PARAPET 32SS MODIFIED NOT SHOWN. FOR DETAILS SEE SHEET 41



SECTION C

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-63

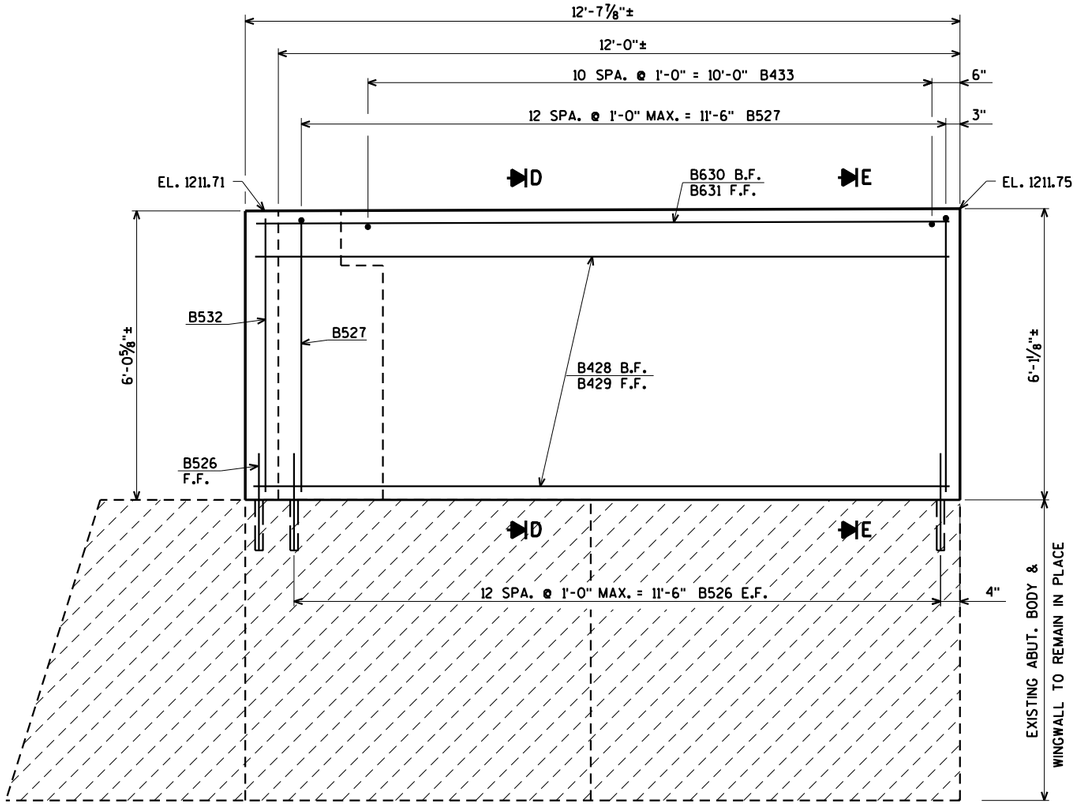
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EAST ABUTMENT WING 3 DETAILS

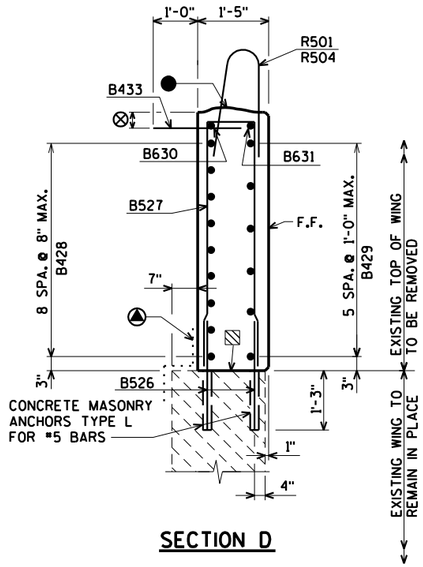
SHEET 13 OF 43
371

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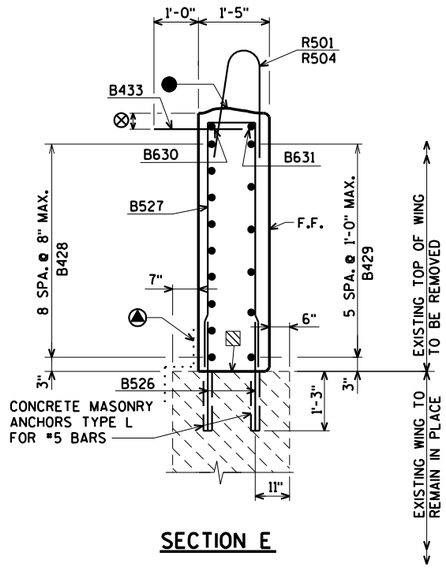


ELEVATION WING 4

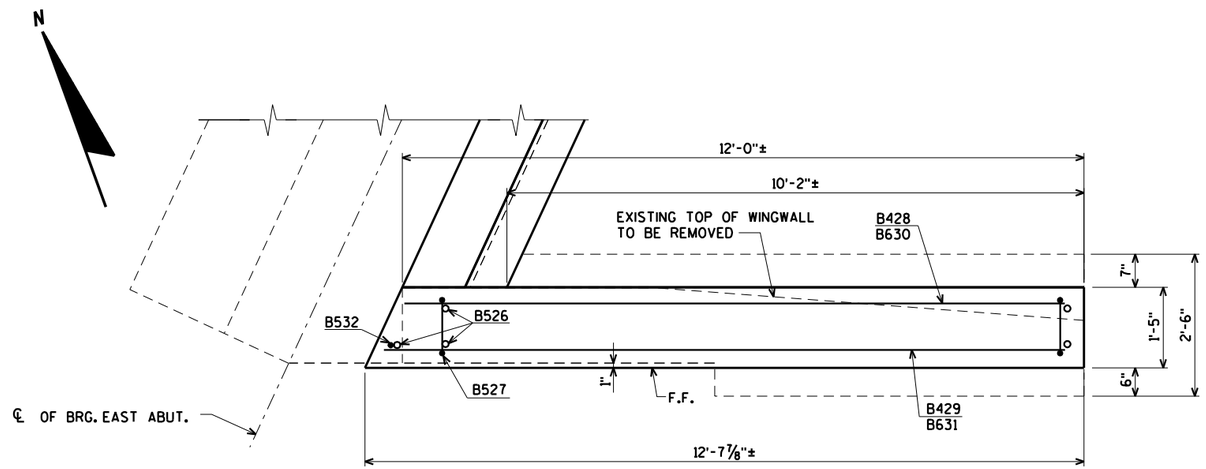


SECTION D

SINGLE SLOPE PARAPET 32SS MODIFIED NOT SHOWN. FOR DETAILS SEE SHEET 41



SECTION E



PLAN - WING 4

- ▨ EXISTING CONST. JOINT
- ⊗ 3" MIN. TO 6" MAX. SEE CONCRETE SURFACE DRAIN S.D.D.
- ▲ 18" RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACK FACE OF ABUTMENT.
- ● STRIKE OFF AS SHOWN AND LEAVE ROUGH.

F.F. DENOTES FRONT FACE

B.F. DENOTES BACK FACE

E.F. DENOTES EACH FACE

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-63

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EAST ABUTMENT WING 4 DETAILS

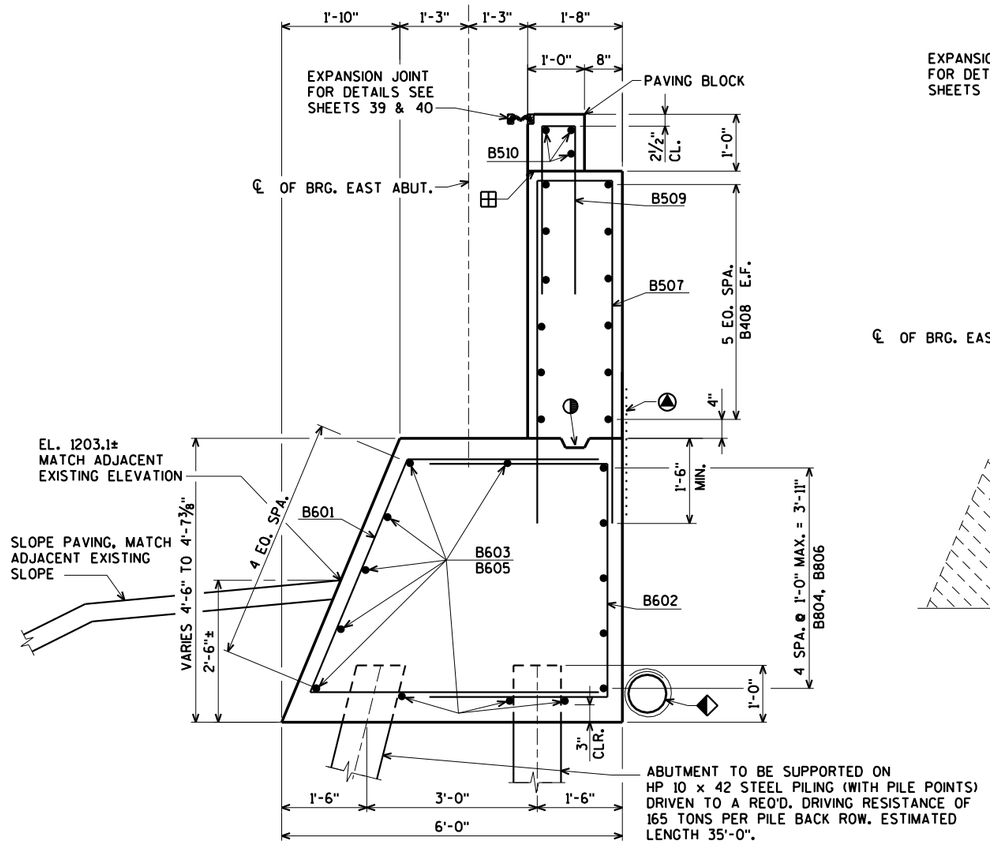
SHEET 14 OF 43
372

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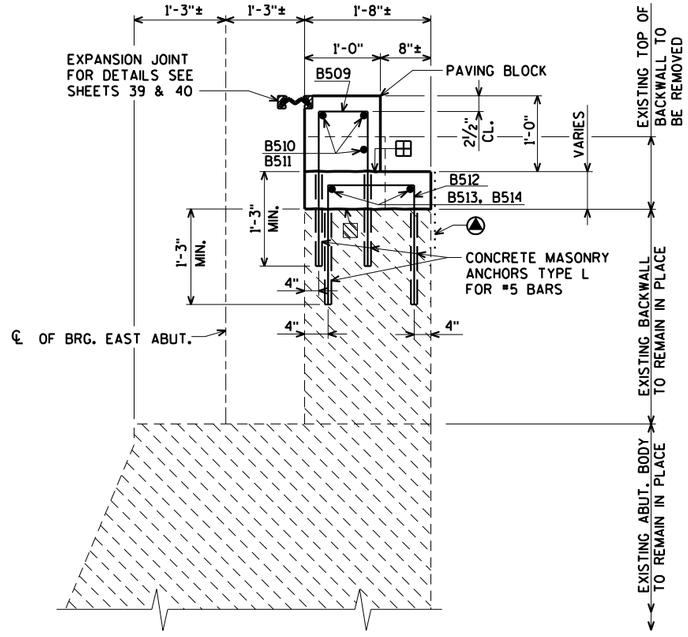
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$PRFNAME$
U:\41-0637.00 - STH 29 over WIRiver\B-37-63\BRIDGE\B-37-63 ea.dgn



SECTION A



SECTION B

FOR LOCATION OF SECTIONS "A" & "B" SEE SHEET 12

STATE PROJECT NUMBER

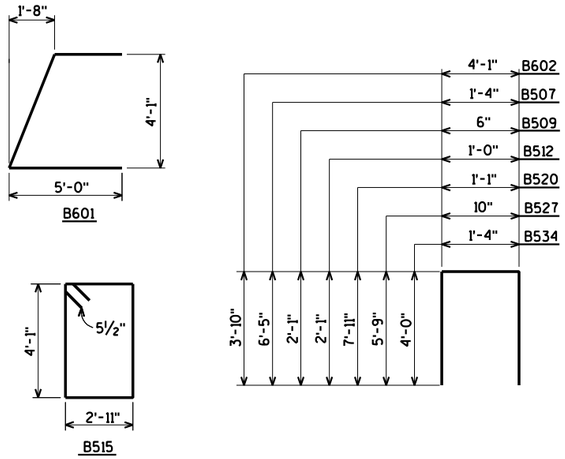
1053-02-75

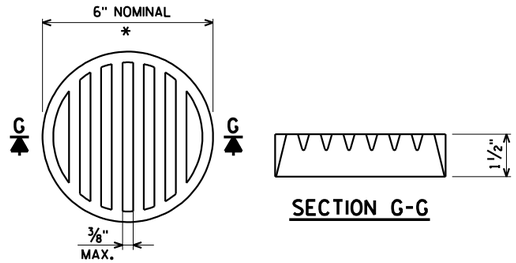
BILL OF BARS

WEIGHTS INCLUDE PARAPET STEEL SHOWN ON SHEET 41

BAR. NO.	COATED BAR	NO. REQ'D. STAGE 3	NO. REQ'D. STAGE 4	LENGTH	BENT BAR	BUNDLED BAR	SERIES 3,720# COATED 1,250# UNCOATED LOCATION
B601		19	0	12-5	X		BODY VERT. F.F.
B602		19	0	11-5	X		BODY VERT. B.F.
B603		9	0	4-7			BODY DOWELS
B804		5	0	7-11			BODY DOWELS
B605		9	0	14-11			BODY HORIZ.
B806		5	0	14-11			BODY HORIZ.
B507	X	15	0	13-11	X		BACKWALL VERT.
B408	X	12	0	14-11			BACKWALL HORIZ. E.F.
B509	X	36	40	4-5	X		BACKWALL @ PAVING BLOCK VERT.
B510	X	18	0	8-0			BACKWALL@ PAVING BLOCK HORIZ. STAGE 3
B511	X	0	18	8-0			BACKWALL@ PAVING BLOCK HORIZ. STAGE 4
B512	X	20	40	4-11	X		BACKWALL VERT.
B513	X	2	0	20-8			BACKWALL HORIZ. STAGE 3
B514	X	0	2	39-3			BACKWALL HORIZ. STAGE 4
B515	X	14	0	14-6	X		WING 3 VERT.
B716	X	7	0	16-2			WING 3 HORIZ. B.F.
B517	X	5	0	16-2			WING 3 HORIZ. F.F.
B618	X	1	0	16-2			WING 3 HORIZ. F.F.
B619	X	2	0	16-2			WING 3 HORIZ. TOP
B520	X	15	0	16-8	X		WING 3 VERT.
B521	X	1	0	7-11			WING 3 VERT. B.F.
B422	X	6	0	14-0			WING 3 HORIZ. F.F.
B423	X	9	0	13-6			WING 3 HORIZ. B.F.
B624	X	1	0	14-0			WING 3 HORIZ. F.F.
B625	X	1	0	13-6			WING 3 HORIZ. B.F.
B526	X	0	27	4-0			WING 4 DOWELS E.F.
B527	X	0	13	12-1	X		WING 4 VERT.
B428	X	0	9	11-8			WING 4 HORIZ. B.F.
B429	X	0	6	12-2			WING 4 HORIZ. F.F.
B630	X	0	1	11-8			WING 4 HORIZ. B.F.
B631	X	0	1	12-2			WING 4 HORIZ. F.F.
B532	X	0	1	5-9			WING 4 VERT.
B433	X	0	11	2-0			WING 4 DOWELS
B534	X	2	0	9-1	X		BACKWALL VERT.
B435	X	14	0	2-0			WING 3 DOWELS

BENDING DIMENSIONS ARE OUT TO OUT OF BARS.





SECTION G-G

* DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING. ORIENT SO SLOTS ARE VERTICAL.

THE RODENT SHIELD, PIPE COUPLING AND SCREWS SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".

THE RODENT SHIELD SHALL BE PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALLY AVAILABLE AS A FLOOR STRAINER. A PIPE COUPLING IS REQUIRED FOR THE ATTACHMENT OF THIS SHIELD TO THE EXPOSED END OF THE PIPE UNDERDRAIN. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 x 1-INCH SHEET METAL SCREWS.

RODENT SHIELD DETAIL

▨ EXISTING CONST. JOINT

◆ PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN. RODENT SHIELD TO BE INCLUDED IN BID PRICE OF "PIPE UNDERDRAIN WRAPPED 6-INCH".

◭ 18" RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACK FACE OF ABUTMENT.

◑ OPT. KEYED CONST. JOINT - FORMED BY A SURFACED BEVELED 2" x 6" WITH RUBBERIZED MEMBRANE WATERPROOFING ON B.F.

⊞ CONST. JOINT - POUR CONCRETE ABOVE THIS JOINT AFTER SUPERSTRUCTURE IS IN PLACE. STRIKE OFF AND LEAVE ROUGH.

F.F. DENOTES FRONT FACE

B.F. DENOTES BACK FACE

E.F. DENOTES EACH FACE

FOR PILE SPLICE DETAIL SEE SHEET 4

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-63

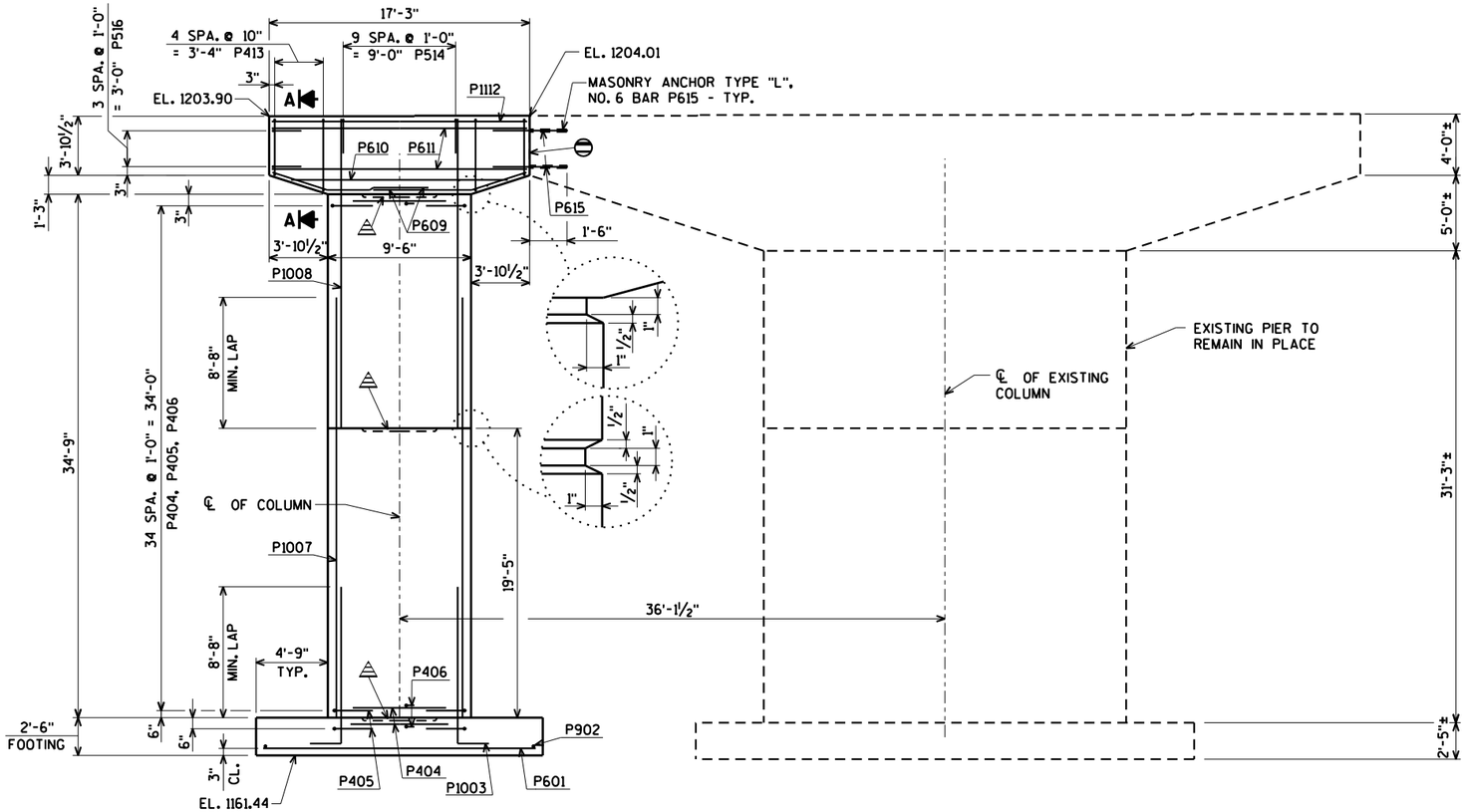
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EAST ABUTMENT DETAILS

SHEET 15 OF 43
373

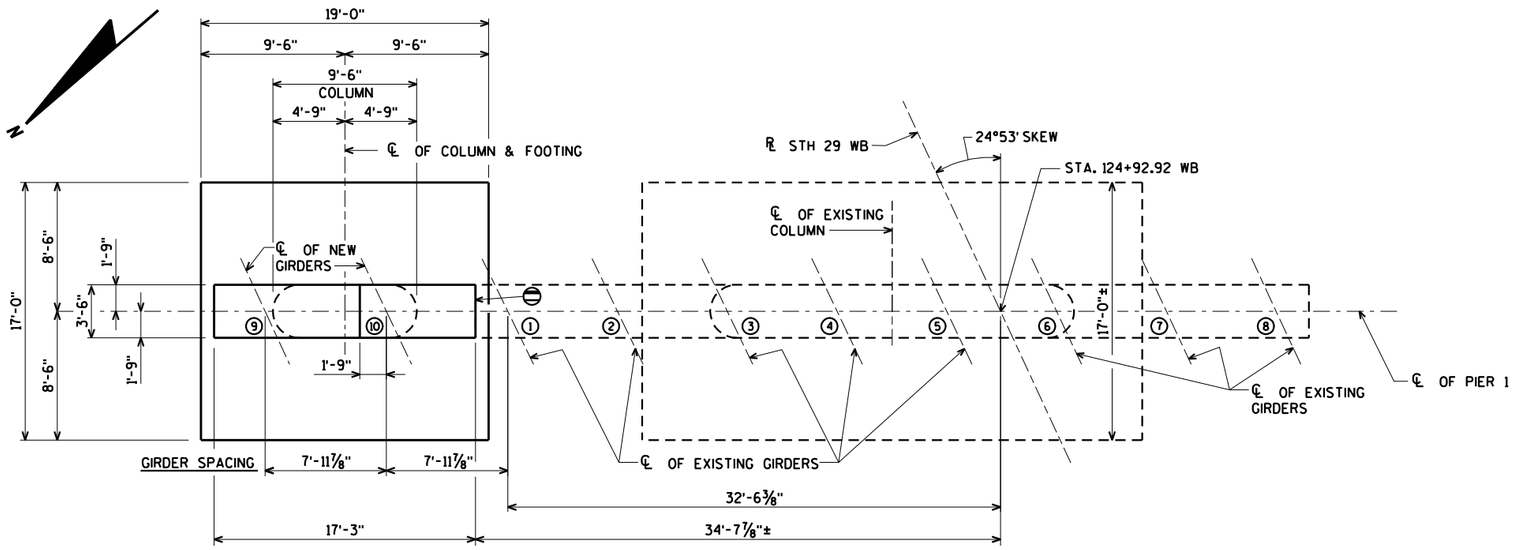
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ELEVATION
(LOOKING EAST)

FOR SECTION "A"
SEE SHEET 17



PLAN

ROUGHEN SURFACE OF CONCRETE ¼" DEEP MIN. ALL AREAS OF NEW TO EXISTING CONCRETE CONTACT.

△ 1'-2" x 5'-6" x 4" CONST. JOINT FORMED BY A BEVELED KEYWAY. TYPICAL COLUMN AND FOOTING.

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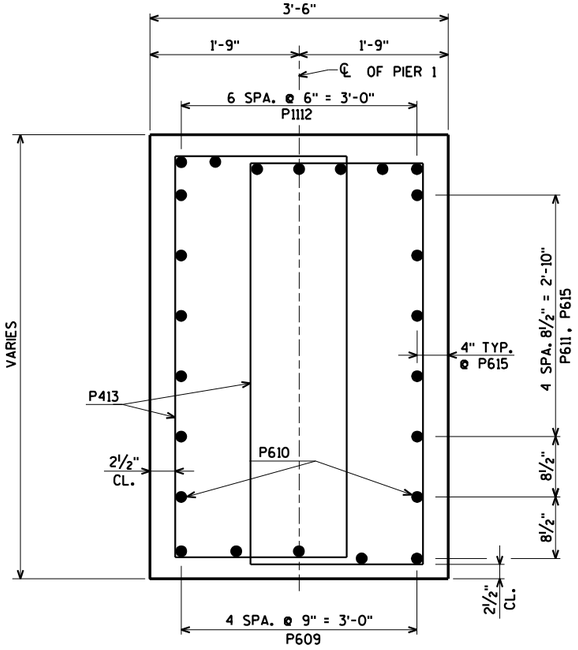
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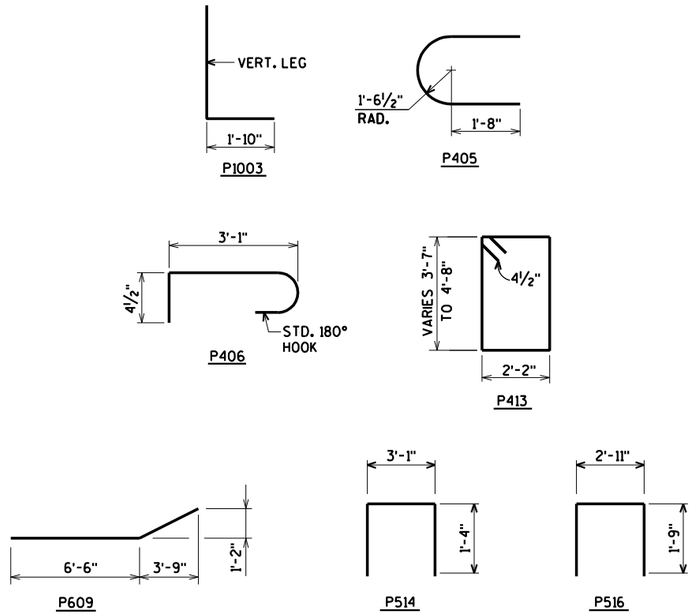
PIER 1

SHEET 16 OF 43
374

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SECTION A



BILL OF BARS

BAR. NO.	COATED BAR	NO. REQ'D.	LENGTH	BENT BAR	BUNDLED BAR SERIES	11.830# COATED 3,080# UNCOATED LOCATION
P601		34	18-6			FOOTING BOTTOM
P902		38	16-6			FOOTING BOTTOM
P1003	X	36	12-4	X		FOOTING DOWELS
P404	X	72	6-0			FOOTING & COLUMN HORIZ.
P405	X	72	8-2	X		FOOTING & COLUMN HORIZ.
P406	X	144	3-10	X		FOOTING & COLUMN TIES
P1007	X	36	28-1			COLUMN VERT.
P1008	X	36	20-1			COLUMN VERT.
P609	X	10	10-5	X		CAP HORIZ. BOT.
P610	X	2	14-4			CAP HORIZ.
P611	X	10	16-10			CAP HORIZ. SIDES
P1112	X	7	16-10			CAP HORIZ. TOP
P413	X	20	13-1	X	⊗	CAP VERT.
P514	X	10	5-6	X		CAP VERT.
P615	X	10	5-0			CAP DOWELS
P516	X	4	6-2	X		CAP HORIZ. AT END

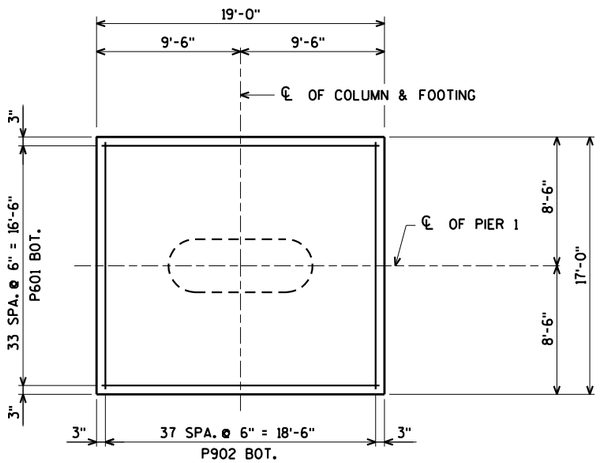
BENDING DIMENSIONS ARE OUT TO OUT OF BARS.

⊗ LENGTH SHOWN FOR BAR IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.

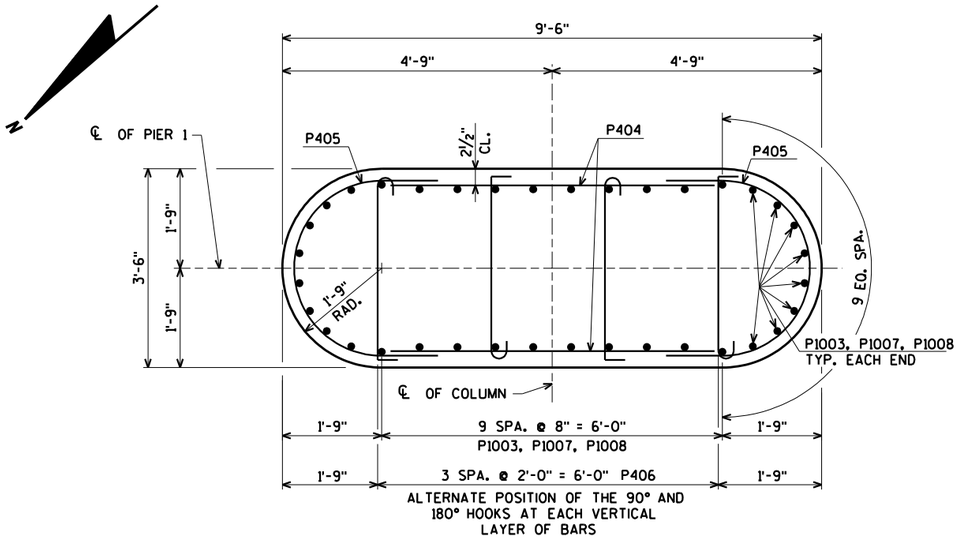
BAR SERIES TABLE

BAR MARK	NO REQ'D.	LENGTH
P413	4 SERIES OF 5	12'-0" TO 14'-2"

BUNDLE AND TAG EACH SERIES SEPARATELY.



FOOTING PLAN



ALTERNATE POSITION OF THE 90° AND 180° HOOKS AT EACH VERTICAL LAYER OF BARS

TYPICAL SECTION THRU COLUMN

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-63

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PIER 1 DETAILS

SHEET 17 OF 43
375

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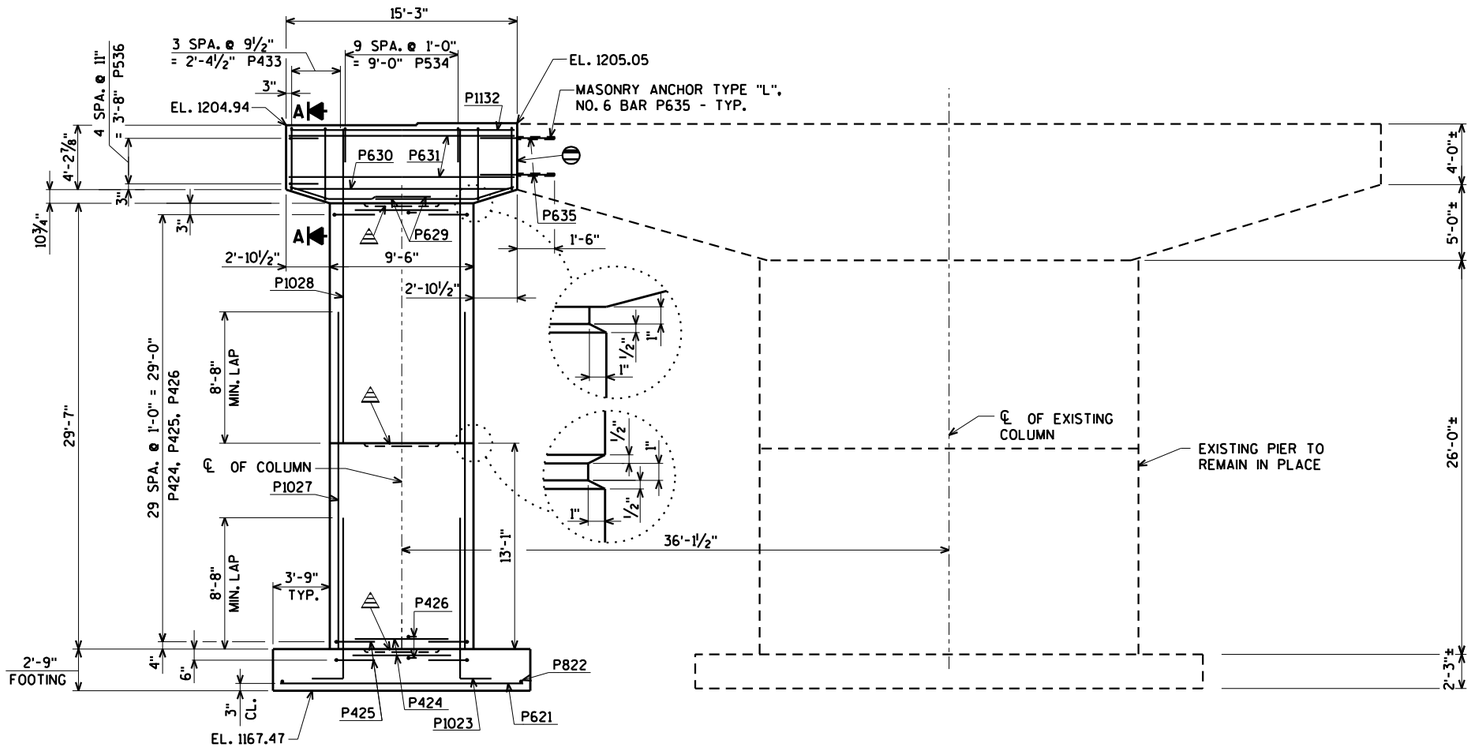
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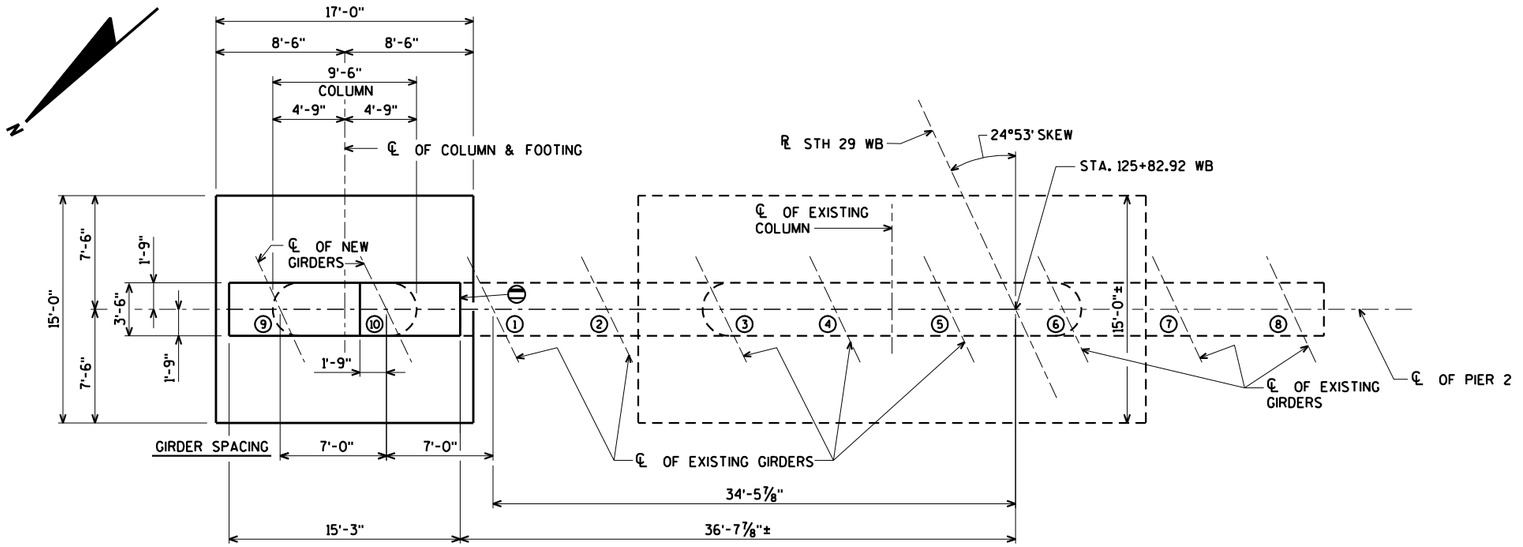
STATE PROJECT NUMBER

1053-02-75



ELEVATION
(LOOKING EAST)

FOR SECTION "A"
SEE SHEET 19



PLAN

ROUGHEN SURFACE OF CONCRETE ¼" DEEP MIN. ALL AREAS OF NEW TO EXISTING CONCRETE CONTACT.

△ 1'-2" x 5'-6" x 4" CONST. JOINT FORMED BY A BEVELED KEYWAY. TYPICAL COLUMN AND FOOTING.

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STRUCTURE B-37-63

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PIER 2

SHEET 18 OF 43
376

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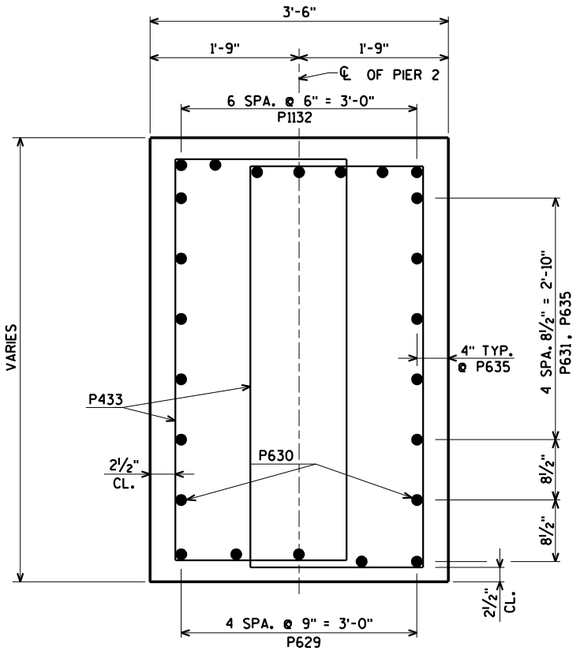
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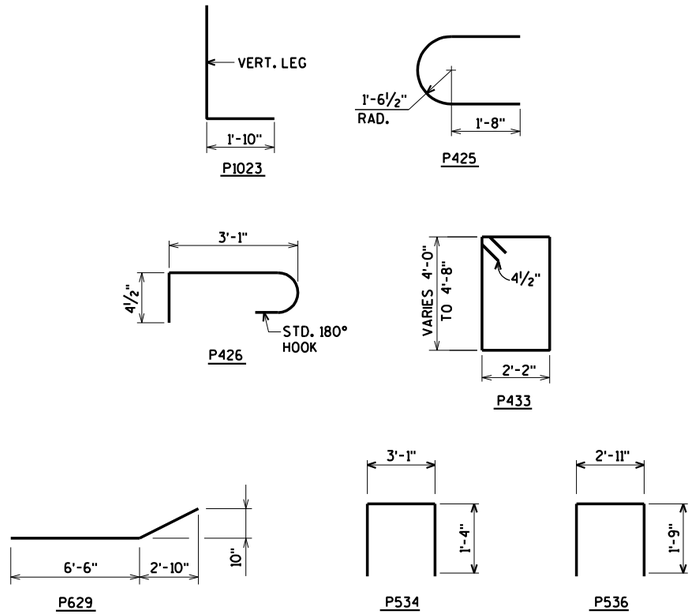
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SECTION A



STATE PROJECT NUMBER

1053-02-75

BILL OF BARS

BAR. NO.	COATED BAR	NO. REQ'D.	LENGTH	BENT BAR	BUNDLED BAR SERIES	10,780# COATED 2,060# UNCOATED LOCATION
P621		30	16-6			FOOTING BOTTOM
P822		34	14-6			FOOTING BOTTOM
P1023	X	36	12-7	X		FOOTING DOWELS
P424	X	62	6-0			FOOTING & COLUMN HORIZ.
P425	X	62	8-2	X		FOOTING & COLUMN HORIZ.
P426	X	124	3-10	X		FOOTING & COLUMN TIES
P1027	X	36	21-9			COLUMN VERT.
P1028	X	36	21-3			COLUMN VERT.
P629	X	10	9-6	X		CAP HORIZ. BOT.
P630	X	2	14-3			CAP HORIZ.
P631	X	10	14-10			CAP HORIZ. SIDES
P1132	X	7	14-10			CAP HORIZ. TOP
P433	X	16	13-6	X	⊗	CAP VERT.
P534	X	10	5-6	X		CAP VERT.
P635	X	10	5-0			CAP DOWELS
P536	X	5	6-2	X		CAP HORIZ. AT END

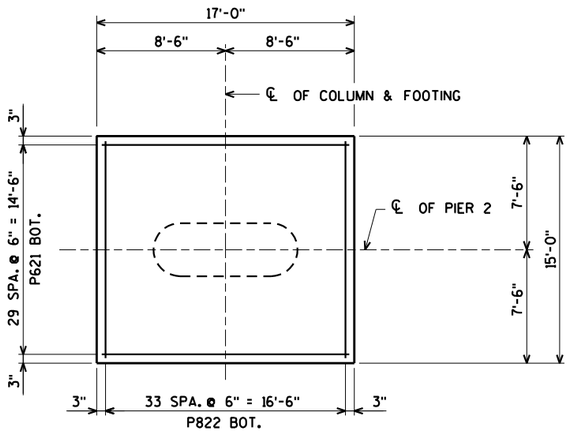
BENDING DIMENSIONS ARE OUT TO OUT OF BARS.

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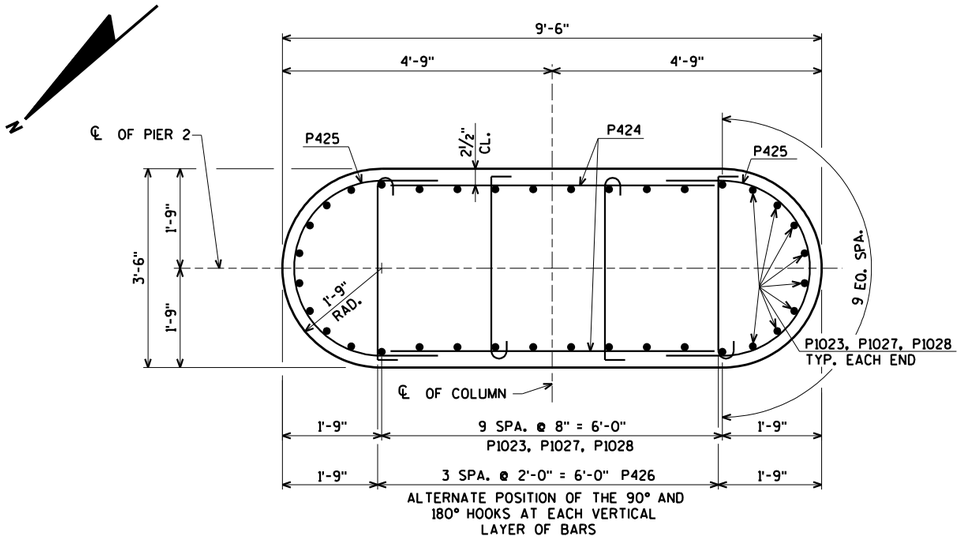
BAR SERIES TABLE

BAR MARK	NO REQ'D.	LENGTH
P433	4 SERIES OF 4	12'-10" TO 14'-2"

BUNDLE AND TAG EACH SERIES SEPARATELY.



FOOTING PLAN



ALTERNATE POSITION OF THE 90° AND 180° HOOKS AT EACH VERTICAL LAYER OF BARS

TYPICAL SECTION THRU COLUMN

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-63

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PIER 2 DETAILS

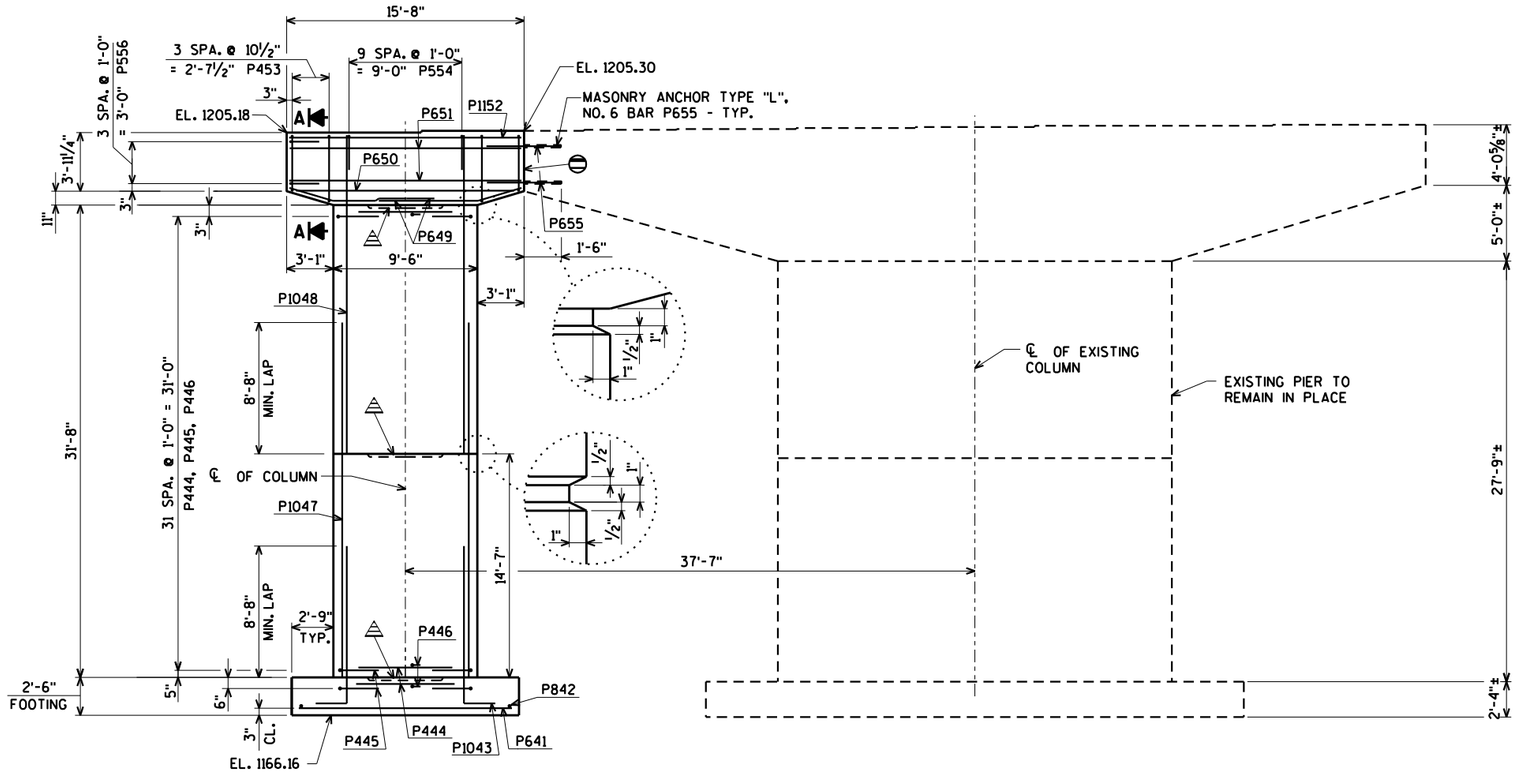
SHEET 19 OF 43
377

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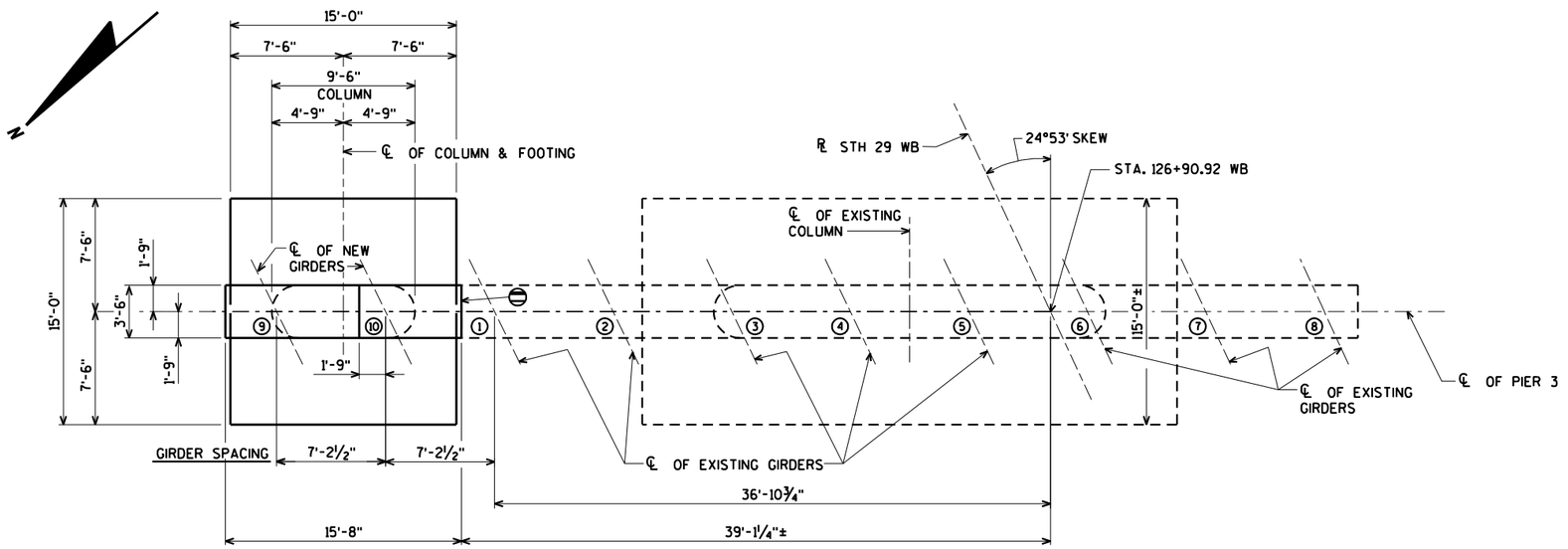
STATE PROJECT NUMBER

1053-02-75



ELEVATION
(LOOKING EAST)

FOR SECTION "A"
SEE SHEET 21



PLAN

ROUGHEN SURFACE OF CONCRETE ¼" DEEP MIN. ALL AREAS OF NEW TO EXISTING CONCRETE CONTACT.

△ 1'-2" x 5'-6" x 4" CONST. JOINT FORMED BY A BEVELED KEYWAY. TYPICAL COLUMN AND FOOTING.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
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STRUCTURE B-37-63

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PIER 3

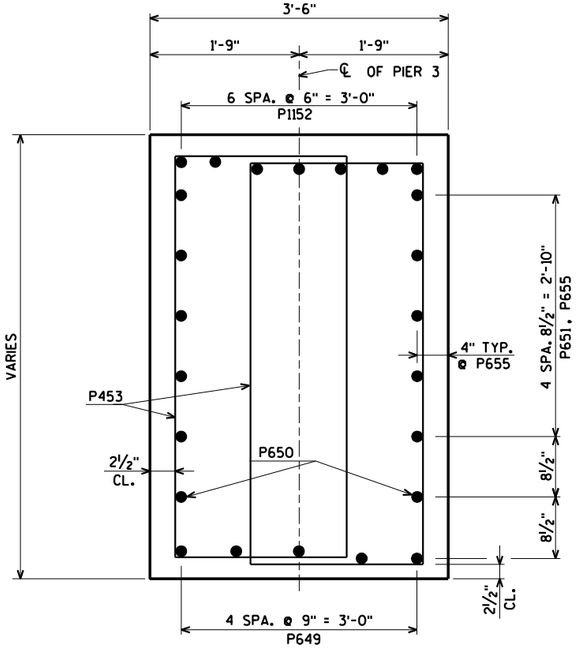
SHEET 20 OF 43
378

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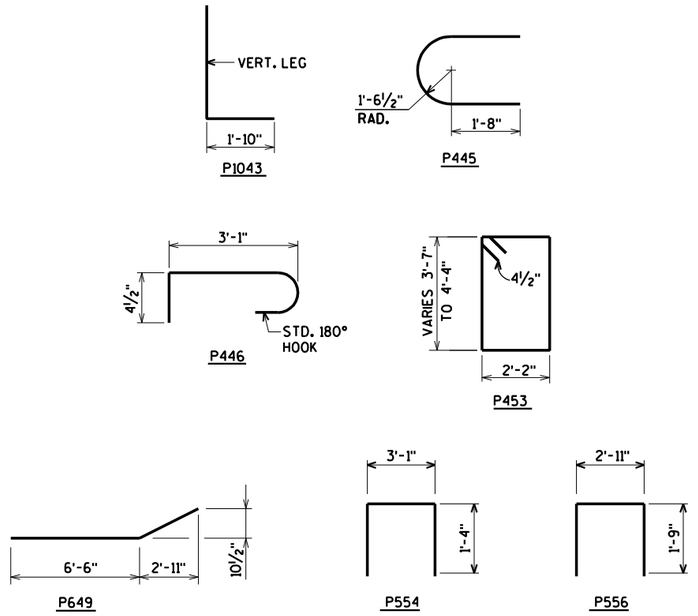
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8



SECTION A



BILL OF BARS

BAR. NO.	COATED BAR	NO. REQ'D.	LENGTH	BENT BAR	BUNDLED BAR SERIES	11.120# COATED 1,810# UNCOATED LOCATION
P641		30	14-6			FOOTING BOTTOM
P842		30	14-6			FOOTING BOTTOM
P1043	X	36	12-4	X		FOOTING DOWELS
P444	X	66	6-0			FOOTING & COLUMN HORIZ.
P445	X	66	8-2	X		FOOTING & COLUMN HORIZ.
P446	X	132	3-10	X		FOOTING & COLUMN TIES
P1047	X	36	23-5			COLUMN VERT.
P1048	X	36	21-7			COLUMN VERT.
P649	X	10	9-7	X		CAP HORIZ. BOT.
P650	X	2	14-6			CAP HORIZ.
P651	X	10	15-3			CAP HORIZ. SIDES
P1152	X	7	15-3			CAP HORIZ. TOP
P453	X	16	12-9	X	⊗	CAP VERT.
P554	X	10	5-6	X		CAP VERT.
P655	X	10	5-0			CAP DOWELS
P556	X	4	6-2	X		CAP HORIZ. AT END

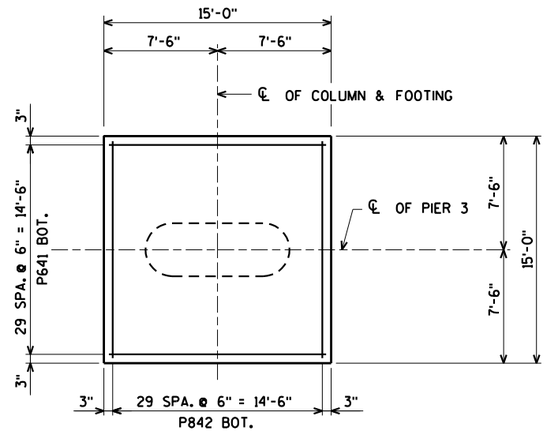
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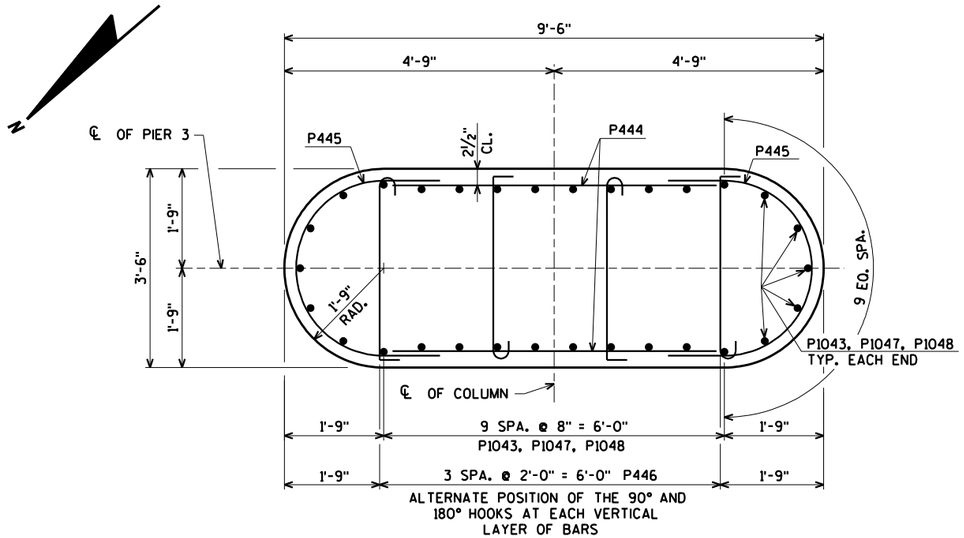
BAR SERIES TABLE

BAR MARK	NO REQ'D.	LENGTH
P453	4 SERIES OF 4	12'-0" TO 13'-6"

BUNDLE AND TAG EACH SERIES SEPARATELY.



FOOTING PLAN



ALTERNATE POSITION OF THE 90° AND 180° HOOKS AT EACH VERTICAL LAYER OF BARS

TYPICAL SECTION THRU COLUMN

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
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STRUCTURE B-37-63

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PIER 3 DETAILS

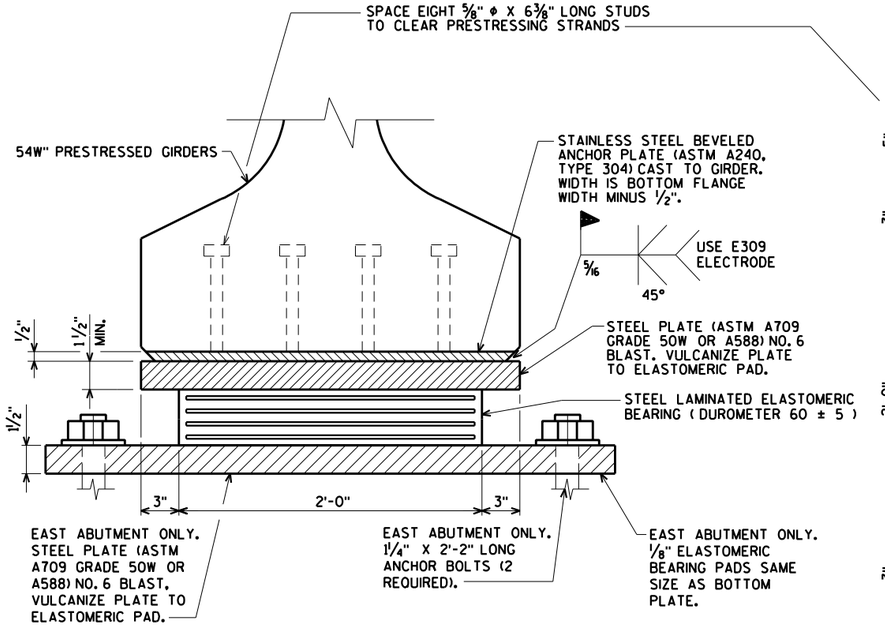
SHEET 21 OF 43
379

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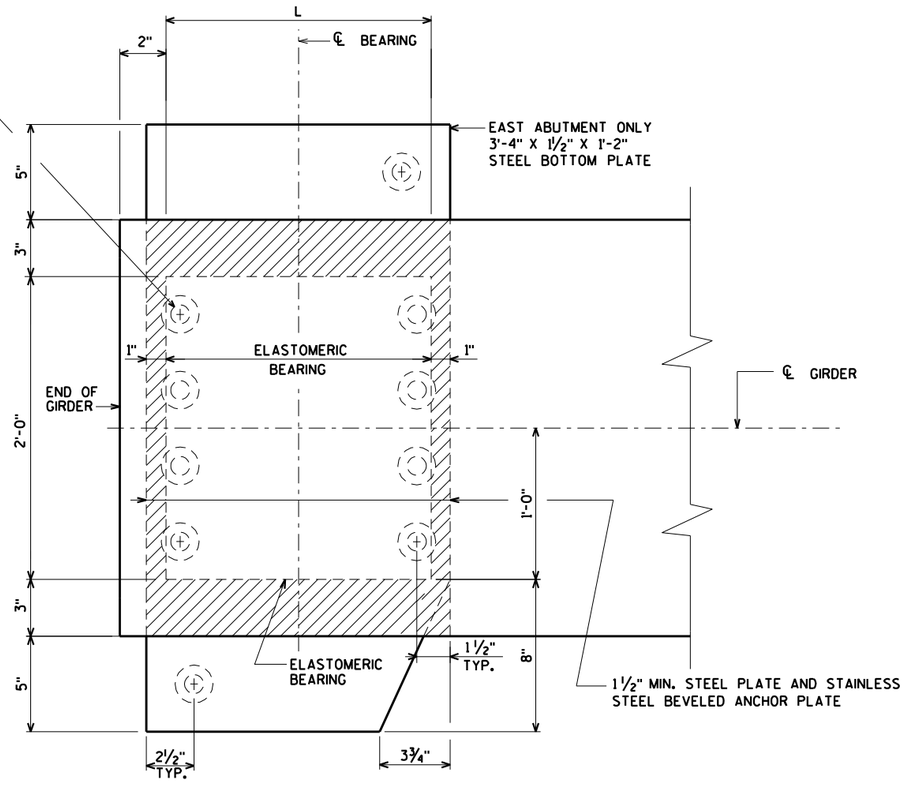
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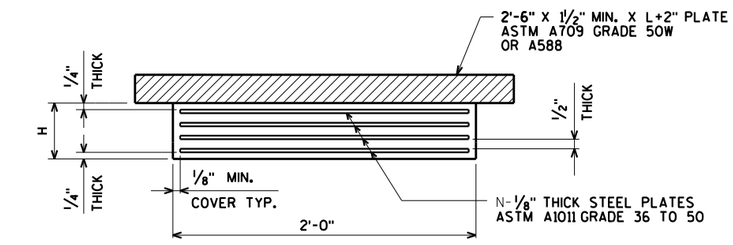
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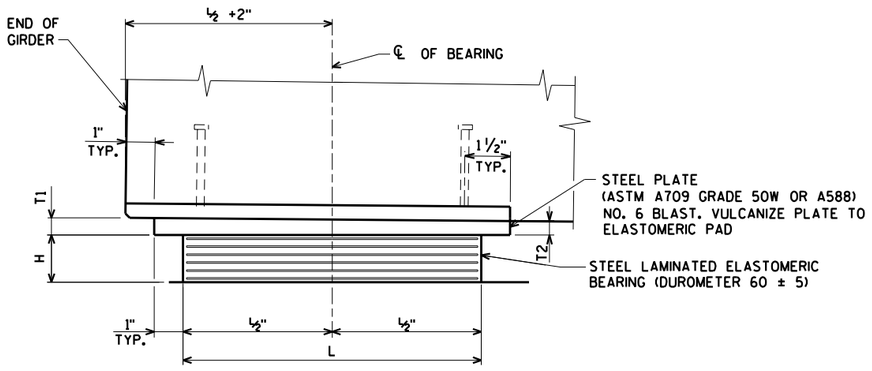
END VIEW



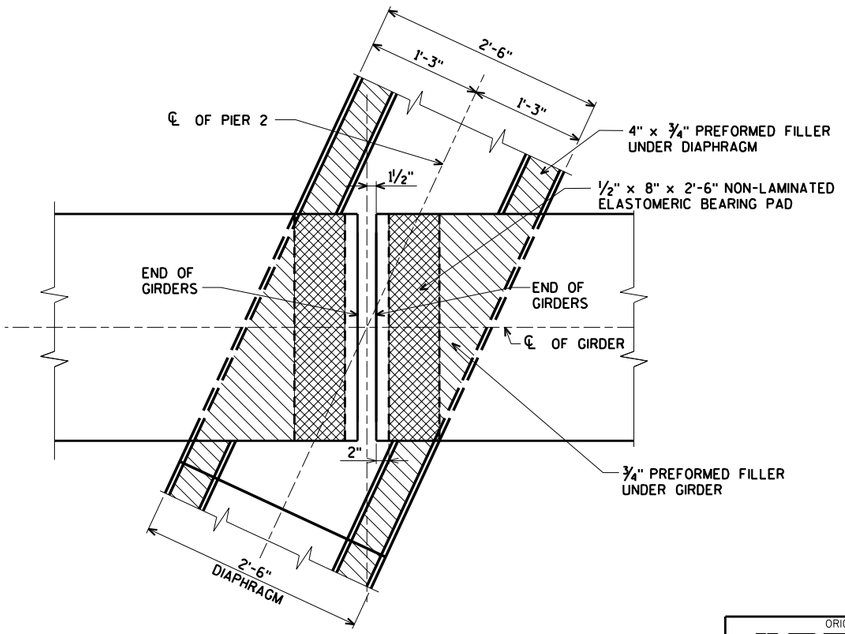
PLAN VIEW



SECTION THRU ELASTOMERIC BEARING



SIDE VIEW



BEARING PAD DETAIL AT PIER 2

ELASTOMERIC LAMINATED BEARING PAD TABLE

LOCATION	L	H	N	T1	T2
W. ABUT	1'-2"	4 3/8"	7"	1 1/2"	1 3/4"
PIER 1 SPAN 1	10"	2 1/2"	4"	1 5/8"	1 1/2"
PIER 1 SPAN 2	10"	2 1/2"	4"	1 1/2"	1 5/8"
PIER 3 SPAN 3	10"	2 1/2"	4"	1 1/2"	1 1/2"
PIER 3 SPAN 4	10"	2 1/2"	4"	1 1/2"	1 1/2"
E. ABUT.	1'-0"	3 3/4"	6"	1 1/2"	1 1/2"

BEARING NOTES

BEARING PADS ELASTOMERIC LAMINATED SHALL NOT BE PLACED AT A TEMPERATURE GREATER THAN 85° F.

ALL MATERIAL USED FOR BEARINGS SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "BEARING PADS ELASTOMERIC LAMINATED", EACH.

ALL STRUCTURAL STEEL BEARING PLATES SHALL BE FLAT ROLLED WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL.

ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUTS.

ANCHOR BOLTS SHALL BE THREADED 3". PROVIDE ONE STANDARD WROUGHT WASHER AND ONE HEX NUT PER BOLT. PROJECT ANCHOR BOLTS 2 1/4" ABOVE TOP OF ANCHOR PLATE.

CHAMFER ANCHOR BOLTS PRIOR TO THREADING.

ANCHOR BOLTS, NUTS AND WASHERS SHALL CONFORM TO ASTM A709 GRADE 36, OR MATERIAL OF EQULIVALENT YIELD STRENGTH AND ELONGATION.

ANCHOR BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153, CLASS C. ALL PLATES SHALL BE SHOP PAINTED AFTER BEARING FABRICATION.

‡ DRILLED HOLES FOR ANCHOR BOLTS IN BOTTOM PLATE SHALL HAVE A DIAMETER 3/8" LARGER THAN ANCHOR BOLT.

NO.	DATE	REVISION	BY

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STRUCTURE B-37-63

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BEARING DETAILS AT 54W" GIRDER

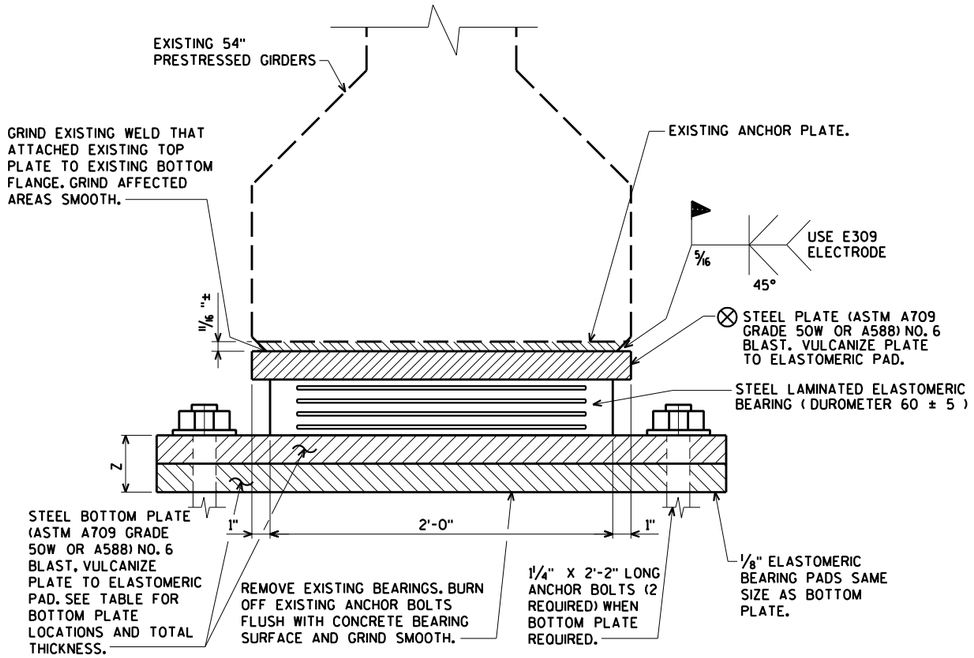
SHEET 22 OF 43
380

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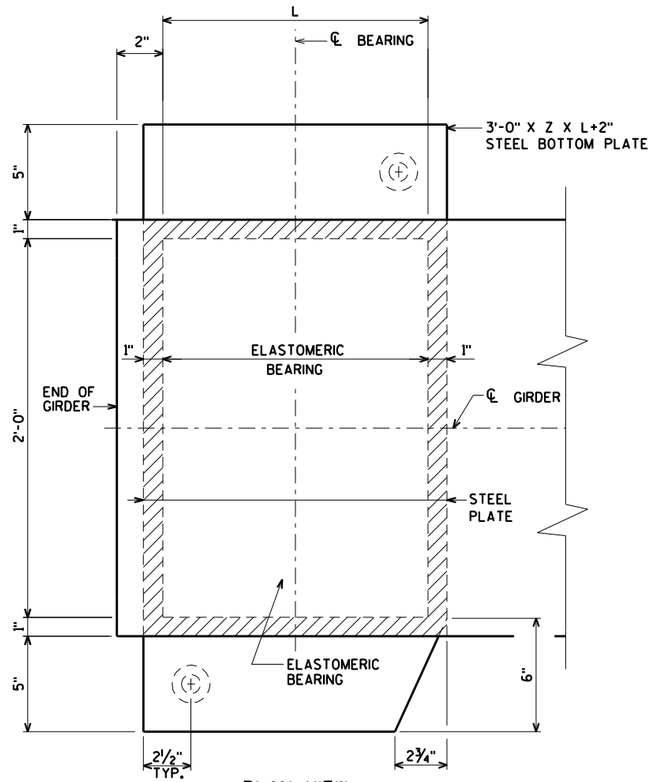
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STATE PROJECT NUMBER

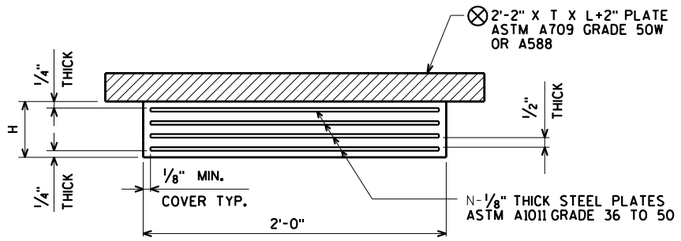
1053-02-75



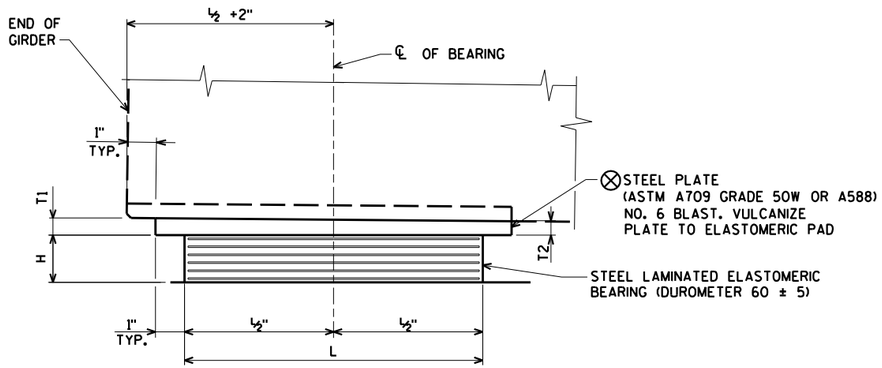
END VIEW



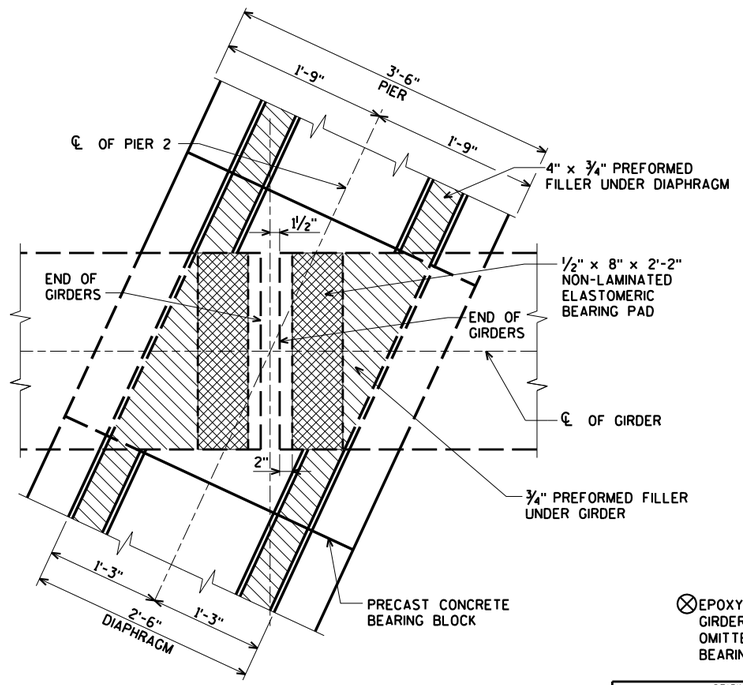
PLAN VIEW



SECTION THRU ELASTOMERIC BEARING



SIDE VIEW



BEARING PAD DETAIL AT PIER 2

ELASTOMERIC LAMINATED BEARING PAD TABLE

LOCATION	L	H	N	T1	T2
W. ABUT. GIRDERS 4-7	1'-2"	4⅜"	7"	½"	¾"
⊗ W. ABUT. GIRDERS 1-3, 8	1'-2"	4⅜"	7"	0"	0"
PIER 1 SPAN 1	10"	2½"	4"	1⅝"	1½"
PIER 1 SPAN 2	10"	2½"	4"	1½"	1⅝"
PIER 3 SPAN 3	10"	2½"	4"	1½"	1½"
PIER 3 SPAN 4	10"	2½"	4"	1½"	1½"
⊗ E. ABUT. GIRDERS 1-2	1'-0"	3¾"	6"	0"	0"
E. ABUT. GIRDERS 3-8	1'-0"	3¾"	6"	1"	1"

BOTTOM PLATE TABLE

LOCATION	GIRDER	Z	NO. OF PLATES
PIER 1	2, 8	1"	1
PIER 1	3, 4, 7	2"	2
PIER 1	5, 6	2½"	2
PIER 3	1	2"	2
PIER 3	2	2½"	2
PIER 3	3	3½"	2 OR 3
PIER 3	4, 8	4"	2 OR 3
EAST ABUT.	2, 3, 7, 8	1"	1
EAST ABUT.	4, 5, 6	1½"	1

BEARING NOTES

BEARING PADS ELASTOMERIC LAMINATED SHALL NOT BE PLACED AT A TEMPERATURE GREATER THAN 85° F.

ALL MATERIAL USED FOR BEARINGS SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "BEARING PADS ELASTOMERIC LAMINATED", EACH.

ALL STRUCTURAL STEEL BEARING PLATES SHALL BE FLAT ROLLED WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL.

ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUTS.

ANCHOR BOLTS SHALL BE THREADED 3". PROVIDE ONE STANDARD WROUGHT WASHER AND ONE HEX NUT PER BOLT. PROJECT ANCHOR BOLTS 2¼" ABOVE TOP OF ANCHOR PLATE.

CHAMFER ANCHOR BOLTS PRIOR TO THREADING.

ANCHOR BOLTS, NUTS AND WASHERS SHALL CONFORM TO ASTM A709 GRADE 36, OR MATERIAL OF EQUIVALENT YIELD STRENGTH AND ELONGATION.

ANCHOR BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153, CLASS C. ALL PLATES SHALL BE SHOP PAINTED AFTER BEARING FABRICATION.

‡ DRILLED HOLES FOR ANCHOR BOLTS IN BOTTOM PLATE SHALL HAVE A DIAMETER ⅜" LARGER THAN ANCHOR BOLT.

WELDING PROCEDURES SHALL BE ESTABLISHED BY THE CONTRACTOR TO RESTRICT THE MAXIMUM TEMPERATURE REACHED BY THE SURFACES IN CONTACT WITH ELASTOMER TO 200°F (93°C). TEMPERATURES SHALL BE CONTROLLED BY TEMPERATURE INDICATING WAX PENCILS OR OTHER SUITABLE MEANS APPROVED BY THE ENGINEER.

⊗EPOXY ELASTOMER TO GIRDER WHERE TOP PLATE IS OMITTED. EPOXY TO BE SUPPLIED BY BEARING MANUFACTURER.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-63

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BEARING DETAILS AT EXISTING 54" GIRDER

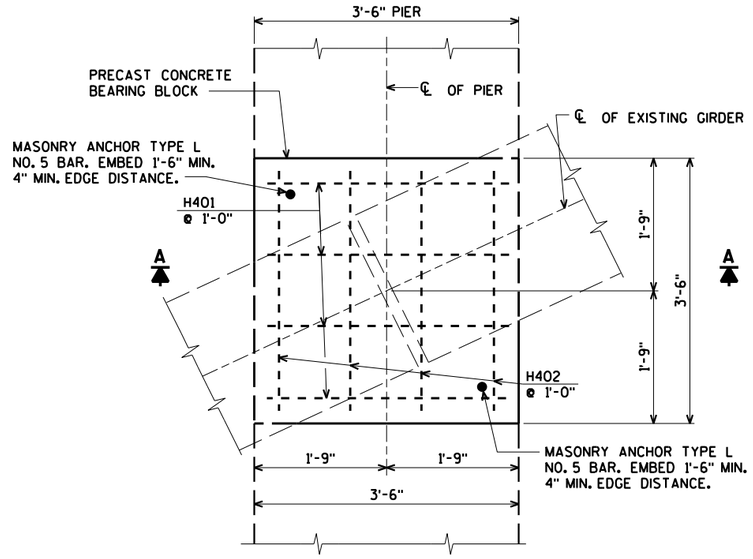
SHEET 23 OF 43
381

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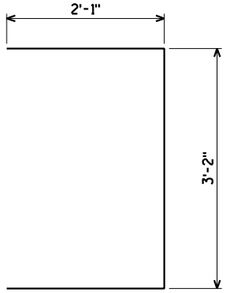
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8

$PRFNAME$
U:\41-0637.00 - STH 29 over WIRiver\B-37-63\BRIDGE\B-37-63 BRG.dgn



BEARING BLOCK PLAN AT PIERS



H403

BILL OF BARS

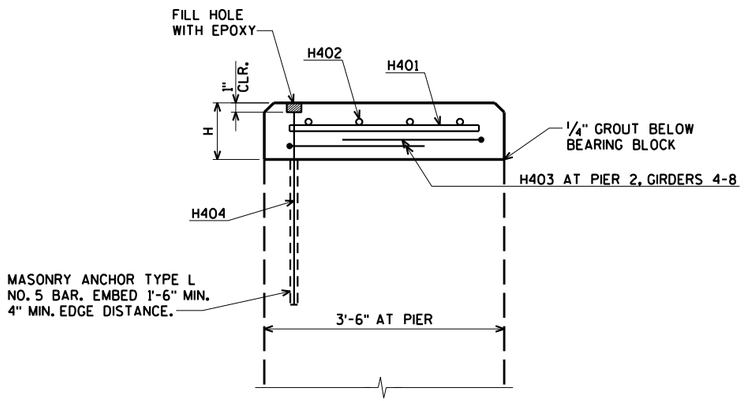
BAR. NO.	COATED BAR	NO. REQ'D.	LENGTH	BENT BAR	BUNDLED	BAR SERIES	270° COATED * LOCATION
H401	X	44	3-2				PIER BLOCK
H402	X	44	3-2				PIER BLOCK
H403	X	10	7-2	X			PIER BLOCK
H404	X	22	2-2				ANCHORS

* BAR STEEL TO BE INCLUDED IN THE BID PRICE FOR PRECAST CONCRETE BEARING BLOCKS.

BENDING DIMENSIONS ARE OUT TO OUT OF BARS.

BEARING BLOCK HEIGHT TABLE

LOCATION	GIRDERS	HEIGHT, H
PIER 2	1, 2	5½"
	3	6½"
	4, 8	7"
	5, 7	8"
	6	8½"
PIER 3	5, 7	5"
	6	5½"



SECTION A

NOTES:

BURN EXISTING ANCHOR BOLTS OFF FLUSH WITH BEAM SEAT.

CONTRACTOR MAY PROPOSE A CAST-IN-PLACE ALTERNATE SUBJECT TO REVIEW AND APPROVAL BY THE BUREAU OF STRUCTURES.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-63

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PRECAST CONCRETE BEARING BLOCK DETAILS

SHEET 24 OF 43
382

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8

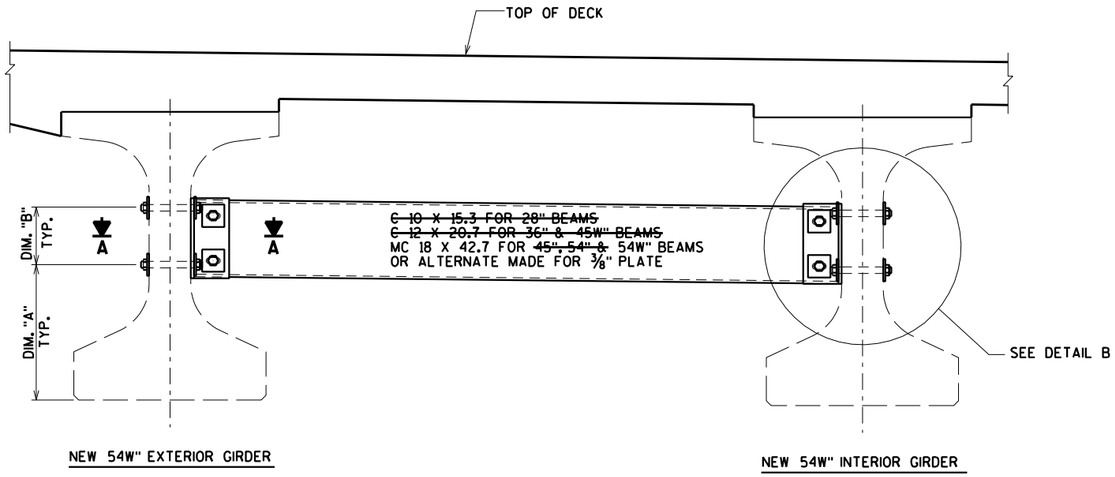
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STATE PROJECT NUMBER

1053-02-75

TABLE

GIRDER HEIGHT	DIM. "A"	DIM. "B"	DIM. "L"	*DIM. "X"
54W"	1'-9⅛"	1'-5⅞"	1'-9½"	4¼"



NEW 54W" EXTERIOR GIRDER

NEW 54W" INTERIOR GIRDER

NOTES

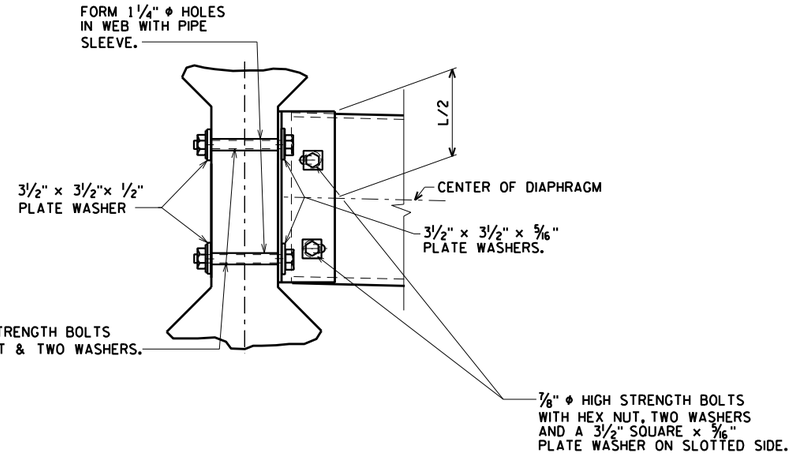
ALL DIAPHRAGM MATERIAL NOT EMBEDDED IN THE CONCRETE GIRDER SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "STEEL DIAPHRAGMS B-37-63", EACH.

EACH DIAPHRAGM BETWEEN GIRDERS SHALL CONSTITUTE ONE UNIT.

ALL DIAPHRAGM STRUCTURAL STEEL SHALL BE ASTM A709 GRADE 36. ALL BOLTS, NUTS AND WASHERS SHALL BE ASTM A325 TYPE 1.

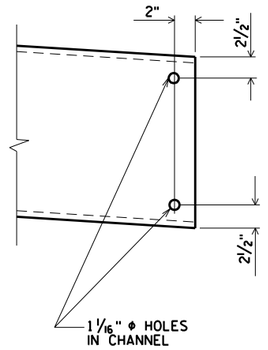
ALL DIAPHRAGM STRUCTURAL STEEL SHOWN SHALL BE HOT-DIPPED GALVANIZED. ALL BOLTS, NUTS AND WASHERS SHALL BE HOT-DIPPED GALVANIZED IN ACCORDANCE WITH ASTM A153 CLASS C. GALVANIZED NUTS SHALL BE TAPPED OVERSIZE IN ACCORDANCE WITH THE REQUIREMENTS OF ASTM A563 AND SHALL MEET THE REQUIREMENTS OF SUPPLEMENTARY REQUIREMENT S1 OF ASTM A563, LUBRICANT AND TEST FOR COATED NUTS.

PART TRANSVERSE SECTION AT DIAPHRAGM

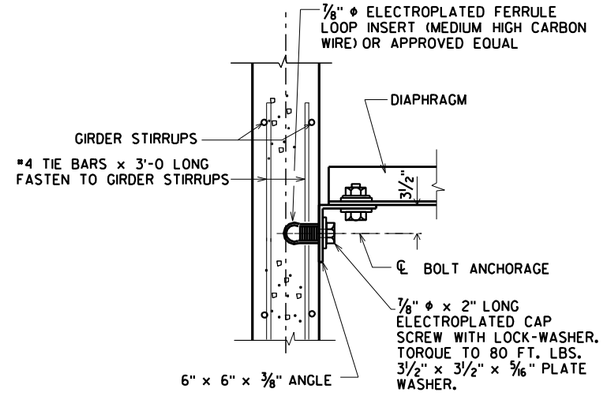


(FOR STAGGERED DIAPHRAGM)

DETAIL B

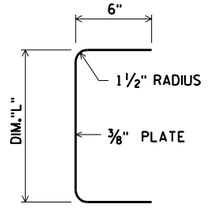


DIAPHRAGM END DETAIL



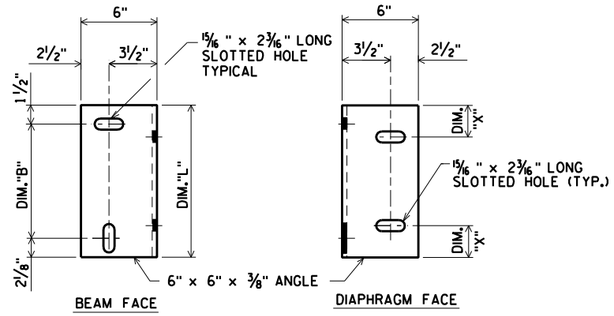
SECT. A-A

(FOR EXTERIOR ATTACHMENT)



SECTION THRU ALTERNATE DIAPHRAGM

*DIM. "X" = 2½" FOR ALTERNATE PLATE DIAPHRAGM



DIAPHRAGM SUPPORT

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-63

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STEEL INTER. DIAPHRAGM DETAILS

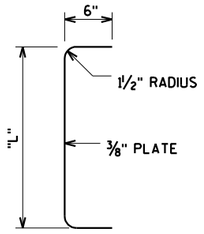
SHEET 25 OF 43
383

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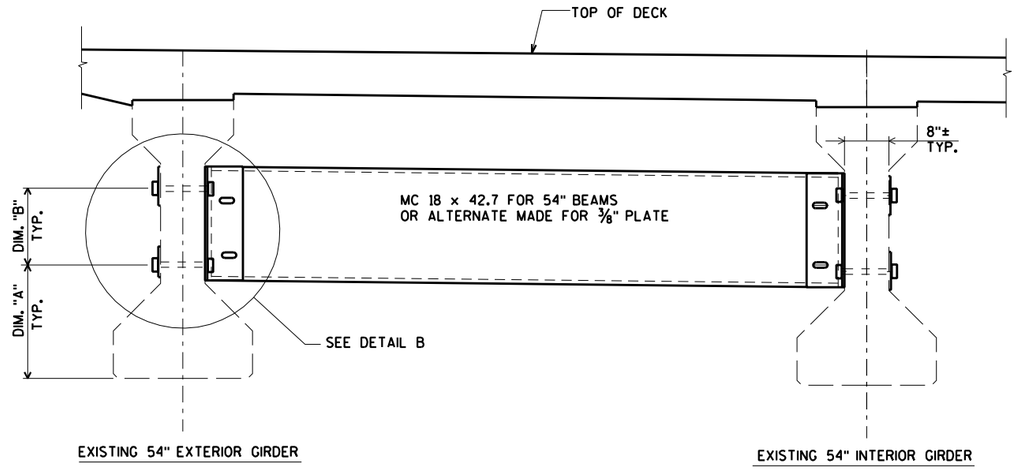
TABLE

GIRDER HEIGHT	DIM. "A"	DIM. "B"	DIM. "L"	* DIM. "X"
54"	1'-7⅞"	1'-5⅞"	1'-9½"	4¼"



SECTION THRU ALTERNATE DIAPHRAGM

*DIM "X" = 2½" FOR ALTERNATE PLATE DIAPHRAGM



PART TRANSVERSE SECTION AT DIAPHRAGM

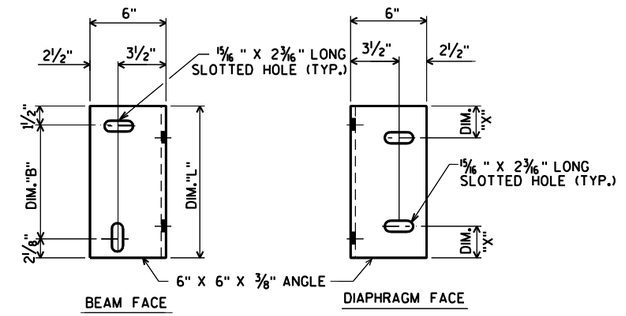
NOTES

ALL DIAPHRAGM MATERIAL AND CORED HOLES SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "STEEL DIAPHRAGMS B-37-63", EACH.

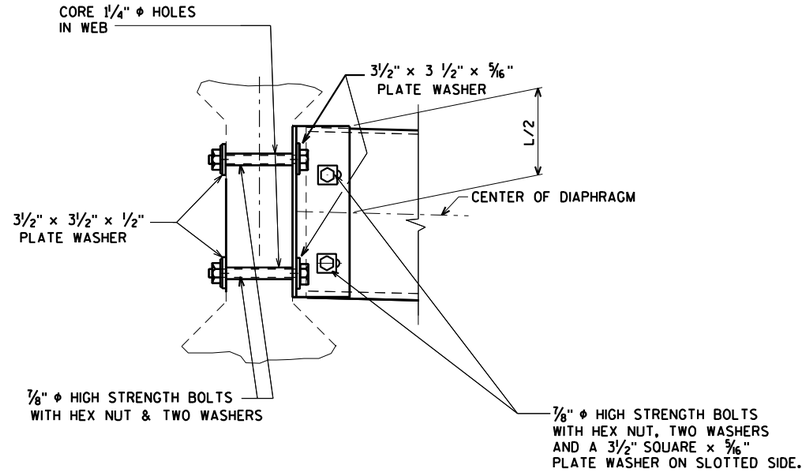
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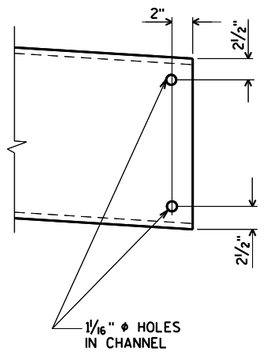
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DIAPHRAGM SUPPORT



DETAIL B



DIAPHRAGM END DETAIL

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-63

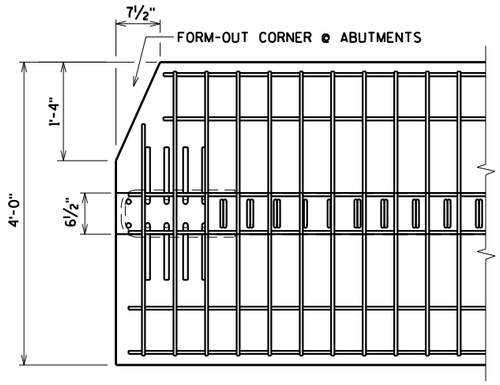
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STEEL INTER. DIAPHRAGM DETAILS

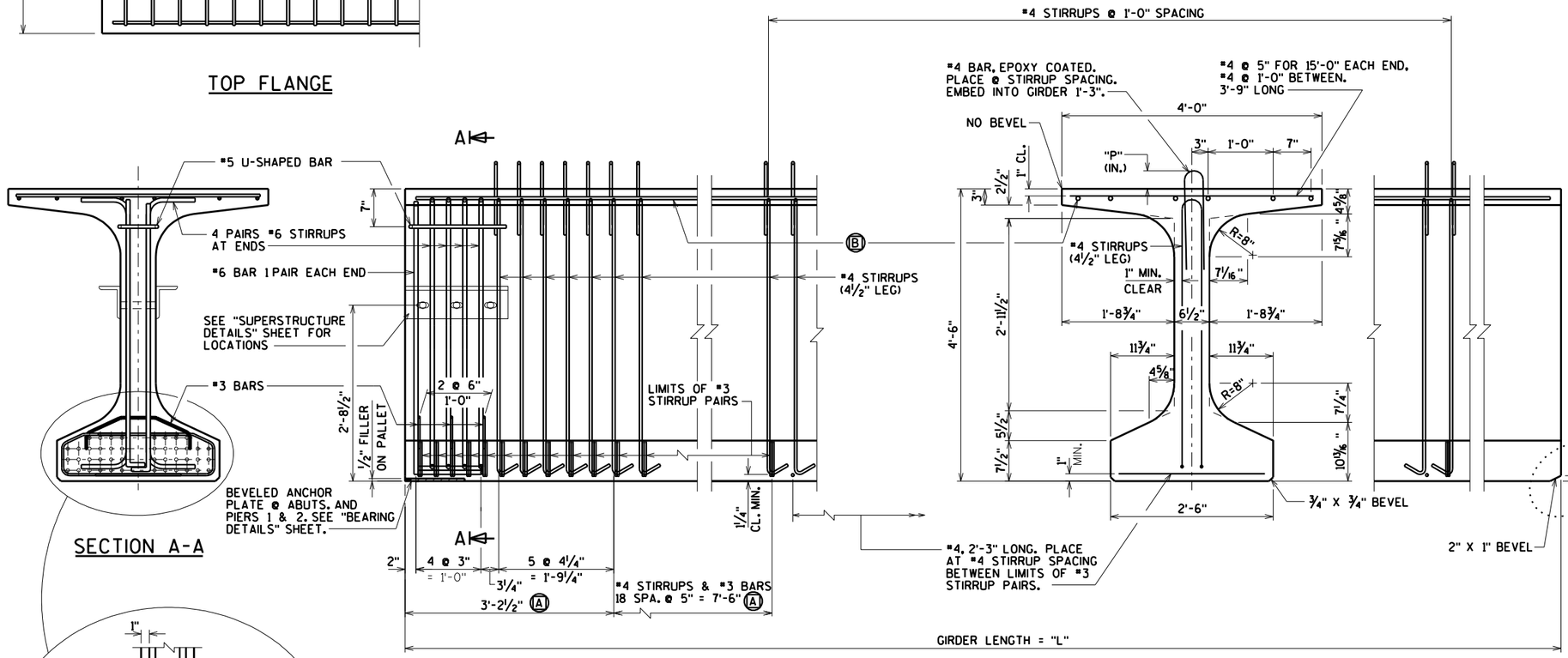
SHEET 26 OF 43
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TOP FLANGE



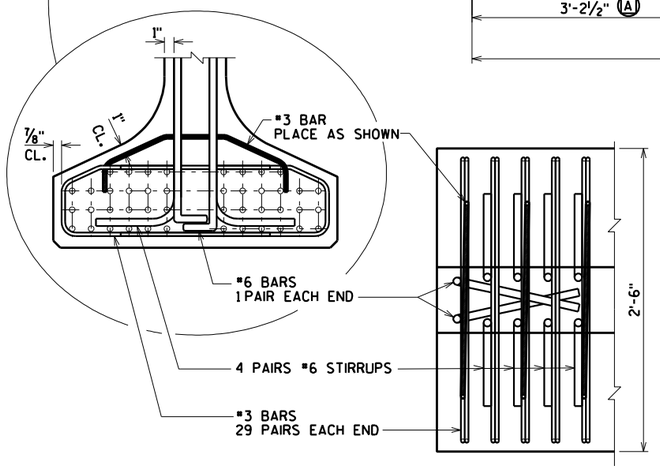
SECTION A-A

SIDE VIEW & TYP. SECTION IN SPAN

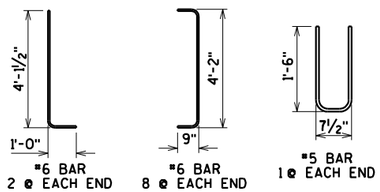
Ⓐ DETAIL TYP. AT EACH END

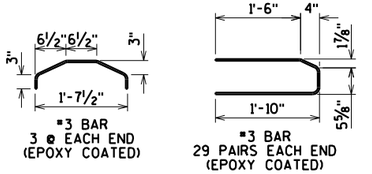
Ⓑ 6 #4 BARS, FULL LENGTH, MIN. LAP = 1'-11"

* MINIMUM CYLINDER STRENGTH OF CONCRETE @ TIME OF TRANSFER OF PRESTRESS FORCE.



BOTTOM FLANGE





GIRDER DATA

SPAN	GIRDER	GIRDER LENGTH "L"	DEAD LOAD DEFL. (IN.)									CONC. STRGTH. f'c (p.s.i.)	"P" IST 1/3 OF GIRDER	"P" MID 1/3 OF GIRDER	"P" END 1/3 OF GIRDER	DIA. OF STRAND (IN.)	DRAPED PATTERN						UNDRAPED PATTERN	
			1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10						TOTAL NO. OF STRANDS	f'ci (P.S.I.) *	(IN.) "A"	"B" MIN.	"B" MAX.	"C"	TOTAL NO. OF STRANDS	f'ci (P.S.I.) *
1	9	97'-4½"	0.3	0.6	0.8	0.9	1.0	0.9	0.8	0.6	0.3	6,000	9"	8"	9"	0.6	30	4,800	50	15.5	18.5	4		
1	10	97'-10"	0.3	0.6	0.8	0.9	1.0	0.9	0.8	0.6	0.3	6,000	9"	8"	9"	0.6	30	4,800	50	15.5	18.5	4		
2	9	89'-9"	0.2	0.4	0.5	0.6	0.6	0.6	0.5	0.4	0.2	6,000	9"	8"	9"	0.6	22	4,800	50	15.5	18.5	4		
2	10	90'-2"	0.2	0.4	0.5	0.6	0.6	0.6	0.5	0.4	0.2	6,000	9"	8"	9"	0.6	22	4,800	50	15.5	18.5	4		
3	9	108'-11⅝"	0.4	0.8	1.1	1.3	1.3	1.3	1.1	0.8	0.4	6,000	9"	7"	9"	0.6	32	4,800	50	15.5	18.5	4		
3	10	108'-10½"	0.4	0.8	1.1	1.3	1.3	1.3	1.1	0.8	0.4	6,000	9"	7"	9"	0.6	32	4,800	50	15.5	18.5	4		
4	9	55'-5¾"	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	6,000	9"	8"	9"	0.6	16	4,800	27	9	12	3		
4	10	55'-5¼"	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	6,000	9"	8"	9"	0.6	16	4,800	27	9	12	3		

NOTES

TOP OF GIRDER TO BE ROUGH FLOATED AND BROOMED TRANSVERSELY, EXCEPT THE OUTSIDE 15" OF GIRDER, WHICH SHALL RECEIVE A SMOOTH FINISH. AN APPROVED CONCRETE SEALER SHALL BE APPLIED TO ALL SMOOTH SURFACES INCLUDING THE OUTSIDE 15" OF THE TOP FLANGE.

DO NOT APPLY CONCRETE SEALER TO SURFACES RECEIVING APPLICATION OF CONCRETE STAINING.

THE GIRDERS SHALL BE PROVIDED WITH A SUITABLE LIFTING DEVICE FOR HANDLING AND ERECTING THE GIRDERS.

STRANDS SHALL BE FLUSH WITH THE END OF GIRDER. FOR GIRDER ENDS EMBEDDED COMPLETELY IN CONCRETE, ENDS OF STRANDS SHALL BE COATED WITH NON-BITUMINOUS JOINT SEALER. FOR GIRDER ENDS THAT ARE FINALLY EXPOSED, COAT THE GIRDER ENDS, EXPOSED STRAND ENDS AND ALL NON-BONDING SURFACES WITHIN 2 FEET OF THE GIRDER ENDS WITH A NON-PIGMENTED EPOXY CONFORMING TO AASHTO M-235 TYPE III, CLASS B OR C. THE EPOXY SHALL BE APPLIED AT LEAST 3 DAYS AFTER MOIST CURING HAS CEASED AND PRIOR TO APPLICATION OF THE SEALER.

ALL GIRDERS SHALL BE CAST FULL LENGTH AS SHOWN.

SPACING SHOWN FOR #4 STIRRUPS IS FOR GRADE 60 REINFORCEMENT.

AN ALTERNATE EQUIVALENT OF WELDED WIRE FABRIC (WWF) ASTM A497 MAY BE SUBSTITUTED FOR THE STIRRUP REINFORCEMENT SHOWN, UPON APPROVAL OF THE STRUCTURES DEVELOPMENT SECTION.

PRESTRESSING STRANDS SHALL BE 0.6" DIA.-7 WIRE LOW-RELAXATION STRANDS WITH AN ULTIMATE STRENGTH OF 270,000 psi.

FOR DIAPHRAGM INSERT & CONNECTION DETAILS SEE "STEEL DIAPHRAGM" SHEET.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-63

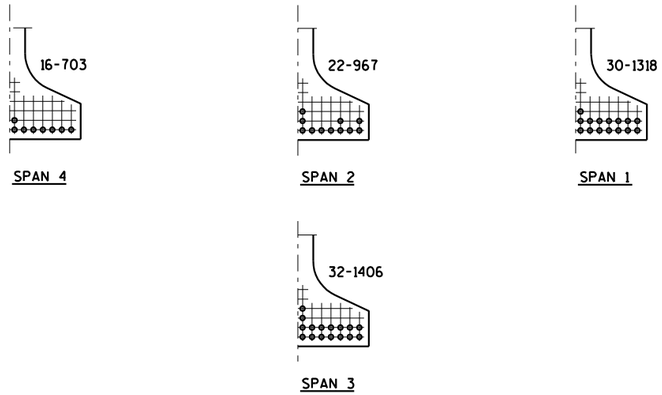
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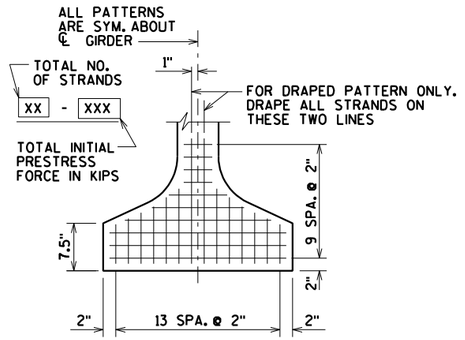
54W" PRESTRESSED GIRDER DETAILS

SHEET 27 OF 43
385

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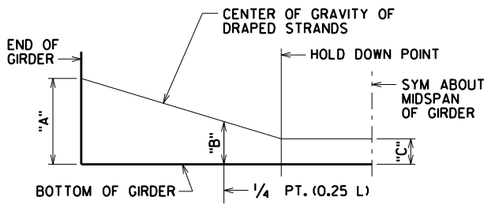




TYP. STRAND PATTERN

ARRANGEMENT AT ℄ SPAN - FOR GIRDERS WITH DRAPED STRANDS

0.6"Φ STRANDS



DRAPED STRAND PROFILE

*THE THEORETICAL INITIAL CAMBER VALUE AT THE TIME OF STRAND RELEASE AT MIDSPAN MULTIPLIED BY A FACTOR OF 1.4 TO ACCOUNT FOR CAMBER GROWTH FROM THE TIME OF STRAND RELEASE TO JOBSITE PLACEMENT.

SPAN	CAMBER (IN.) *
1	3.3
2	2.0
3	4.0
4	0.7

THESE VALUES ARE NOT TO BE USED IN DETERMINING 'T', USE ACTUAL GIRDER SHOTS.

THESE VALUES ARE FOR INFORMATIONAL PURPOSES ONLY.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-63

DRAWN BY CLS | PLANS CK'D. DNS

54W" PRESTRESSED GIRDER DETAILS

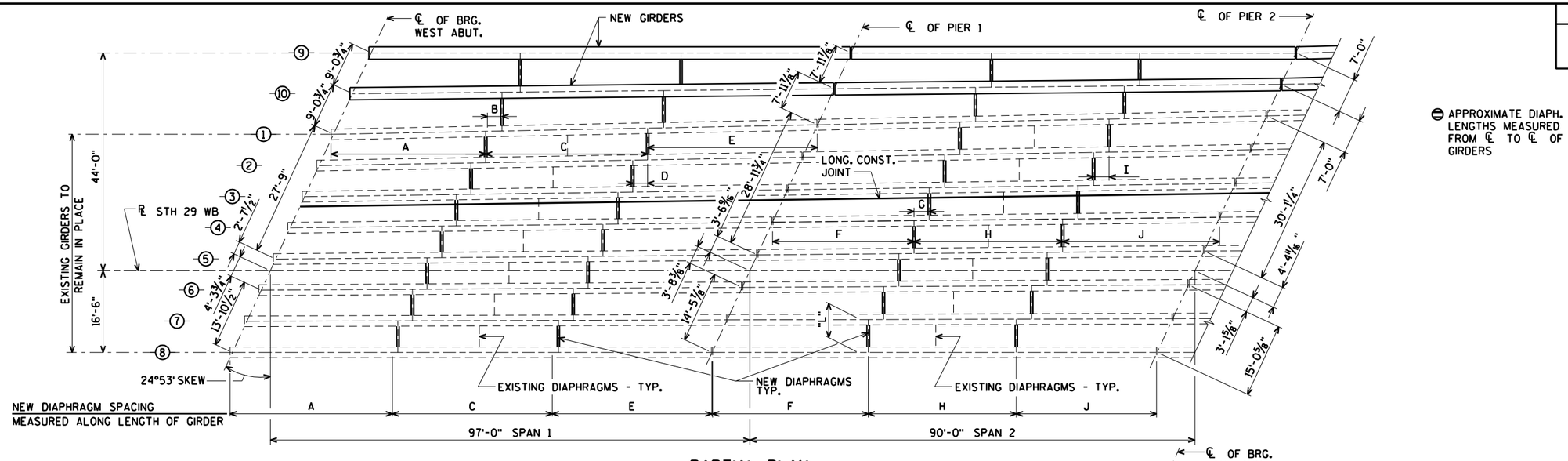
SHEET 28 OF 43
386

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

$PRFNAME$
U:\41-0637.00 - STH 29 over WI River\B-37-63\BRIDGE\B-37-63 gdr 54W.dgn

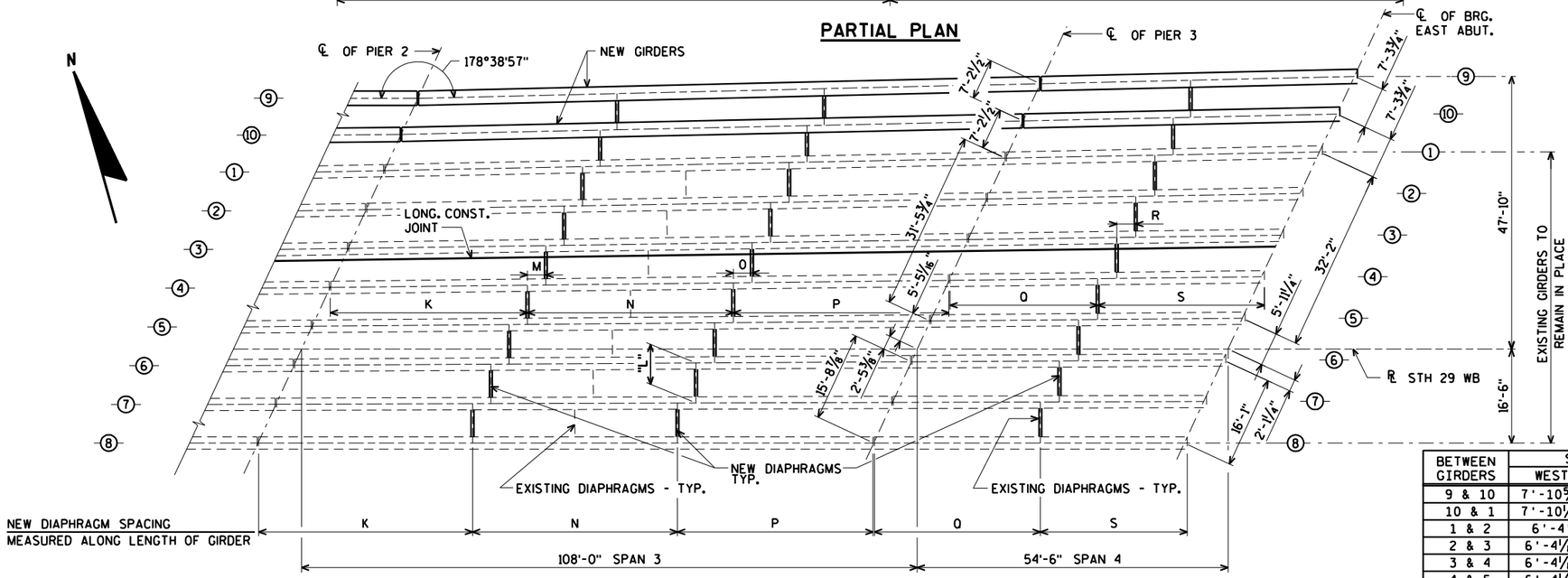
8

8



Ⓔ APPROXIMATE DIAPH. LENGTHS MEASURED FROM ℄ TO ℄ OF GIRDERS

PARTIAL PLAN



PARTIAL PLAN

DIAPHRAGM LENGTH "L"

BETWEEN GIRDERS	SPAN 1		SPAN 2		SPAN 3		SPAN 4
	WEST	EAST	WEST	EAST	WEST	EAST	
9 & 10	7'-10⅝"	7'-6⅝"	6'-11¼"	6'-7⅝"	6'-4⅛"	6'-4⅞"	6'-6¼"
10 & 1	7'-10⅛"	7'-6¼"	6'-10¾"	6'-7¼"	6'-4¼"	6'-5"	6'-6¼"
1 & 2	6'-4"	6'-5⅛"	6'-7¼"	6'-8¼"	6'-10½"	6'-11¾"	7'-1⅛"
2 & 3	6'-4⅛"	6'-5⅛"	6'-7⅜"	6'-8⅜"	6'-10⅝"	6'-11¾"	7'-2"
3 & 4	6'-4⅛"	6'-5¼"	6'-7⅜"	6'-8⅜"	6'-10⅝"	6'-11⅞"	7'-2⅛"
4 & 5	6'-4¼"	6'-5⅜"	6'-7½"	6'-8½"	6'-10¾"	7'-0"	7'-2¼"
5 & 6	6'-4⅜"	6'-5½"	6'-7⅝"	6'-8⅝"	6'-10⅞"	7'-0⅛"	7'-2⅜"
6 & 7	6'-4½"	6'-5⅝"	6'-7¾"	6'-8¾"	6'-11"	7'-0¼"	7'-2½"
7 & 8	6'-4⅝"	6'-5¾"	6'-7⅞"	6'-8⅞"	6'-11⅛"	7'-0⅜"	7'-2½"

GIRDER AND DIAPHRAGM DIMENSIONS

GIRDER	DIM. "A"	DIM. "B"	DIM. "C"	DIM. "D"	DIM. "E"	DIM. "F"	DIM. "G"	DIM. "H"	DIM. "I"	DIM. "J"	DIM. "K"	DIM. "M"	DIM. "N"	DIM. "O"	DIM. "P"	DIM. "Q"	DIM. "R"	DIM. "S"
9	30'-7½"	-----	32'-6⅜"	-----	34'-2⅝"	28'-3⅝"	-----	29'-11⅞"	-----	31'-5½"	34'-10"	-----	36'-3¾"	-----	37'-9⅞"	26'-2⅝"	-----	29'-3¼"
10	30'-9⅜"	3'-8"	32'-8¼"	3'-6⅛"	34'-4⅜"	28'-5⅜"	3'-2⅝"	30'-1½"	3'-1"	31'-7⅛"	34'-9⅝"	2'-11¾"	36'-3⅜"	3'-0"	37'-9⅝"	26'-2¼"	3'-0⅝"	29'-3"
1	31'-3⅜"	3'-3¾"	32'-9"	3'-3⅛"	34'-3¼"	28'-7⅛"	3'-1⅞"	30'-2⅛"	3'-1¼"	31'-9⅛"	34'-7⅛"	3'-1⅛"	36'-2⅞"	3'-1⅝"	37'-10¾"	26'-0¼"	3'-2½"	29'-4½"
2	31'-2⅞"	2'-11½"	32'-8⅜"	3'-0⅛"	34'-2¼"	28'-7⅜"	3'-1"	30'-1⅞"	3'-1½"	31'-8⅜"	34'-7¼"	3'-2⅝"	36'-2¼"	3'-3⅛"	37'-10⅛"	25'-11⅞"	3'-4⅛"	29'-4"
3	31'-2⅜"	2'-11½"	32'-7⅞"	3'-0⅛"	34'-2⅛"	28'-6⅞"	3'-1"	30'-1⅛"	3'-1½"	31'-8⅛"	34'-6⅝"	3'-2⅝"	36'-2¼"	3'-3¼"	37'-9½"	25'-11⅜"	3'-4⅛"	29'-3½"
4	31'-1⅞"	2'-11½"	32'-7⅜"	3'-0⅛"	34'-1⅝"	28'-6⅜"	3'-1"	30'-0⅝"	3'-1½"	31'-7⅝"	34'-6"	3'-2⅝"	36'-1"	3'-3¼"	37'-8⅞"	25'-10⅞"	3'-4⅛"	29'-3⅜"
5	31'-1¼"	2'-11½"	32'-6¾"	3'-0⅛"	34'-1⅛"	28'-5⅞"	3'-1"	30'-0¼"	3'-1½"	31'-7¼"	34'-5½"	3'-2⅝"	36'-0½"	3'-3¼"	37'-8⅜"	25'-10½"	3'-4⅛"	29'-2⅝"
6	31'-0¾"	2'-11½"	32'-6¼"	3'-0⅛"	34'-0⅝"	28'-5⅜"	3'-1"	29'-11¾"	3'-1½"	31'-6¾"	34'-4⅞"	3'-2⅝"	35'-11⅞"	3'-3⅛"	37'-7¾"	25'-10"	3'-4⅛"	29'-2¼"
7	31'-0¼"	2'-11½"	32'-5¾"	3'-0⅛"	34'-0"	28'-5"	3'-1"	29'-11¼"	3'-1½"	31'-6¼"	34'-4¼"	3'-2⅝"	35'-11¼"	3'-3⅛"	37'-7⅛"	25'-9⅝"	3'-4⅛"	29'-1¾"
8	33'-11¼"	-----	32'-5¾"	-----	30'-11½"	31'-5½"	-----	29'-11¼"	-----	31'-4¼"	37'-6¼"	-----	35'-11¼"	-----	34'-3⅜"	29'-1⅜"	-----	25'-9⅛"

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-63

DRAWN BY CLS | PLANS CK'D. DNS

SUPERSTRUCTURE GIRDER LAYOUT

SHEET 29 OF 43
387

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
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$PRFNAME$
U:\41-0637.00 - STH 29 over WIRiver\B-37-63\BRIDGE\B-37-63 sup.dgn

STATE PROJECT NUMBER

1053-02-75

TOP OF DECK ELEVATIONS

	℄ BEARING	SPAN 1										SPAN 2									
	W. ABUT.	0.1 PT.	0.2 PT.	0.3 PT.	0.4 PT.	0.5 PT.	0.6 PT.	0.7 PT.	0.8 PT.	0.9 PT.	PIER 1	0.1 PT.	0.2 PT.	0.3 PT.	0.4 PT.	0.5 PT.	0.6 PT.	0.7 PT.	0.8 PT.	0.9 PT.	PIER 2
NORTH EDGE OF DECK	1208.63	1208.75	1208.87	1208.99	1209.10	1209.21	1209.32	1209.42	1209.52	1209.62	1209.72	1209.80	1209.89	1209.97	1210.05	1210.12	1210.20	1210.27	1210.34	1210.40	1210.47
NEW GIRDER 9	1208.68	1208.80	1208.92	1209.04	1209.15	1209.26	1209.37	1209.47	1209.57	1209.67	1209.77	1209.86	1209.94	1210.02	1210.10	1210.18	1210.25	1210.32	1210.39	1210.46	1210.52
NEW GIRDER 10	1208.79	1208.92	1209.04	1209.15	1209.26	1209.37	1209.48	1209.59	1209.69	1209.79	1209.88	1209.97	1210.05	1210.13	1210.21	1210.29	1210.36	1210.43	1210.50	1210.57	1210.63
EXISTING GIRDER 1	1208.91	1209.03	1209.15	1209.27	1209.38	1209.49	1209.59	1209.70	1209.80	1209.90	1209.99	1210.08	1210.16	1210.24	1210.32	1210.40	1210.47	1210.54	1210.61	1210.67	1210.74
EXISTING GIRDER 2	1209.00	1209.12	1209.24	1209.36	1209.47	1209.58	1209.69	1209.80	1209.90	1210.00	1210.09	1210.18	1210.26	1210.35	1210.43	1210.50	1210.58	1210.65	1210.72	1210.78	1210.85
EXISTING GIRDER 3	1209.09	1209.21	1209.33	1209.45	1209.56	1209.68	1209.79	1209.89	1210.00	1210.10	1210.19	1210.28	1210.37	1210.45	1210.53	1210.61	1210.69	1210.76	1210.83	1210.90	1210.96
CONSTRUCTION JOINT	1209.12	1209.24	1209.36	1209.48	1209.60	1209.71	1209.82	1209.93	1210.03	1210.13	1210.23	1210.32	1210.40	1210.49	1210.57	1210.65	1210.72	1210.80	1210.87	1210.94	1211.00
EXISTING GIRDER 4	1209.17	1209.30	1209.42	1209.54	1209.66	1209.77	1209.88	1209.99	1210.09	1210.20	1210.29	1210.38	1210.47	1210.56	1210.64	1210.72	1210.79	1210.87	1210.94	1211.01	1211.08
EXISTING GIRDER 5	1209.26	1209.39	1209.51	1209.63	1209.75	1209.86	1209.98	1210.08	1210.19	1210.29	1210.39	1210.49	1210.57	1210.66	1210.74	1210.82	1210.90	1210.98	1211.05	1211.12	1211.19
REF. LINE STH 29 WB	1209.29	1209.42	1209.55	1209.67	1209.79	1209.90	1210.02	1210.13	1210.24	1210.34	1210.44	1210.54	1210.63	1210.71	1210.80	1210.88	1210.96	1211.04	1211.11	1211.18	1211.25
EXISTING GIRDER 6	1209.19	1209.32	1209.45	1209.57	1209.69	1209.81	1209.93	1210.04	1210.15	1210.26	1210.36	1210.45	1210.55	1210.63	1210.72	1210.80	1210.89	1210.96	1211.04	1211.12	1211.19
EXISTING GIRDER 7	1209.03	1209.16	1209.28	1209.41	1209.53	1209.65	1209.76	1209.88	1209.99	1210.09	1210.20	1210.29	1210.38	1210.47	1210.56	1210.64	1210.72	1210.80	1210.88	1210.95	1211.03
EXISTING GIRDER 8	1208.86	1208.99	1209.12	1209.24	1209.36	1209.48	1209.60	1209.71	1209.82	1209.93	1210.03	1210.13	1210.22	1210.31	1210.40	1210.48	1210.56	1210.64	1210.72	1210.79	1210.86
SOUTH EDGE OF DECK	1208.78	1208.91	1209.04	1209.17	1209.29	1209.41	1209.52	1209.64	1209.75	1209.86	1209.96	1210.06	1210.15	1210.24	1210.32	1210.41	1210.49	1210.57	1210.65	1210.72	1210.80

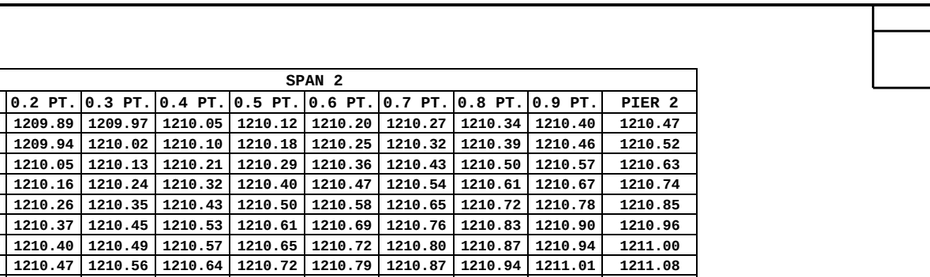
	SPAN 3											SPAN 4									℄ BEARING
	PIER 2	0.1 PT.	0.2 PT.	0.3 PT.	0.4 PT.	0.5 PT.	0.6 PT.	0.7 PT.	0.8 PT.	0.9 PT.	PIER 3	0.1 PT.	0.2 PT.	0.3 PT.	0.4 PT.	0.5 PT.	0.6 PT.	0.7 PT.	0.8 PT.	0.9 PT.	E. ABUT.
NORTH EDGE OF DECK	1210.47	1210.53	1210.60	1210.66	1210.72	1210.77	1210.82	1210.87	1210.91	1210.95	1210.99	1211.01	1211.02	1211.04	1211.05	1211.07	1211.08	1211.09	1211.11	1211.12	1211.14
NEW GIRDER 9	1210.52	1210.59	1210.66	1210.72	1210.78	1210.83	1210.88	1210.93	1210.98	1211.02	1211.05	1211.07	1211.09	1211.10	1211.11	1211.13	1211.14	1211.16	1211.17	1211.19	1211.20
NEW GIRDER 10	1210.63	1210.70	1210.77	1210.83	1210.89	1210.95	1211.00	1211.05	1211.09	1211.13	1211.17	1211.19	1211.21	1211.22	1211.24	1211.25	1211.27	1211.28	1211.30	1211.31	1211.32
EXISTING GIRDER 1	1210.74	1210.81	1210.88	1210.94	1211.00	1211.06	1211.11	1211.16	1211.21	1211.25	1211.29	1211.31	1211.33	1211.35	1211.36	1211.38	1211.39	1211.41	1211.42	1211.43	1211.45
EXISTING GIRDER 2	1210.85	1210.92	1210.99	1211.06	1211.12	1211.18	1211.24	1211.29	1211.34	1211.38	1211.42	1211.44	1211.46	1211.48	1211.49	1211.51	1211.53	1211.54	1211.55	1211.57	1211.58
EXISTING GIRDER 3	1210.96	1211.04	1211.11	1211.18	1211.24	1211.30	1211.36	1211.41	1211.46	1211.51	1211.55	1211.57	1211.59	1211.61	1211.63	1211.64	1211.66	1211.67	1211.69	1211.70	1211.72
CONSTRUCTION JOINT	1211.00	1211.08	1211.15	1211.22	1211.28	1211.34	1211.40	1211.45	1211.50	1211.55	1211.59	1211.61	1211.63	1211.65	1211.67	1211.69	1211.70	1211.72	1211.73	1211.75	1211.76
EXISTING GIRDER 4	1211.08	1211.15	1211.23	1211.29	1211.36	1211.42	1211.48	1211.54	1211.59	1211.64	1211.68	1211.70	1211.72	1211.74	1211.76	1211.78	1211.79	1211.81	1211.82	1211.84	1211.86
EXISTING GIRDER 5	1211.19	1211.27	1211.34	1211.41	1211.48	1211.54	1211.60	1211.66	1211.71	1211.76	1211.81	1211.83	1211.85	1211.87	1211.89	1211.91	1211.93	1211.94	1211.96	1211.98	1211.99
REF. LINE STH 29 WB	1211.25	1211.33	1211.41	1211.48	1211.55	1211.62	1211.68	1211.74	1211.80	1211.85	1211.90	1211.92	1211.94	1211.97	1211.99	1212.00	1212.02	1212.04	1212.06	1212.07	1212.09
EXISTING GIRDER 6	1211.19	1211.27	1211.35	1211.42	1211.49	1211.56	1211.63	1211.69	1211.75	1211.80	1211.85	1211.87	1211.90	1211.92	1211.94	1211.96	1211.98	1212.00	1212.02	1212.03	1212.05
EXISTING GIRDER 7	1211.03	1211.11	1211.19	1211.26	1211.34	1211.40	1211.47	1211.53	1211.59	1211.64	1211.69	1211.72	1211.74	1211.76	1211.78	1211.80	1211.82	1211.84	1211.86	1211.88	1211.89
EXISTING GIRDER 8	1210.86	1210.95	1211.03	1211.10	1211.18	1211.24	1211.31	1211.37	1211.43	1211.48	1211.53	1211.56	1211.58	1211.60	1211.63	1211.65	1211.67	1211.69	1211.70	1211.72	1211.74
SOUTH EDGE OF DECK	1210.80	1210.88	1210.96	1211.04	1211.11	1211.18	1211.24	1211.31	1211.36	1211.42	1211.47	1211.49	1211.52	1211.54	1211.56	1211.58	1211.60	1211.62	1211.64	1211.66	1211.68

DEAD LOAD DEFLECTIONS NEW 54W" GIRDERS

UNITS ARE INCHES	0.1 PT.	0.2 PT.	0.3 PT.	0.4 PT.	0.5 PT.	0.6 PT.	0.7 PT.	0.8 PT.	0.9 PT.
SPAN 1	0.3	0.6	0.8	0.9	1.0	0.9	0.8	0.6	0.3
SPAN 2	0.2	0.4	0.5	0.6	0.6	0.6	0.5	0.4	0.2
SPAN 3	0.4	0.8	1.1	1.3	1.3	1.3	1.1	0.8	0.4
SPAN 4	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0

DEAD LOAD DEFLECTIONS 54" EXISTING GIRDERS

UNITS ARE INCHES	0.1 PT.	0.2 PT.	0.3 PT.	0.4 PT.	0.5 PT.	0.6 PT.	0.7 PT.	0.8 PT.	0.9 PT.
SPAN 1	0.3	0.6	0.8	1.0	1.0	1.0	0.8	0.6	0.3
SPAN 2	0.2	0.4	0.6	0.7	0.7	0.7	0.6	0.4	0.2
SPAN 3	0.5	0.9	1.3	1.5	1.6	1.5	1.3	0.9	0.5
SPAN 4	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0



SLAB HAUNCH DETAIL AT 54W GIRDERS

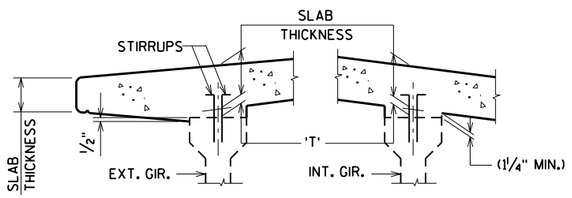
IF 1¼" MINIMUM HAUNCH HEIGHT AT EDGE OF GIRDER CANNOT BE MAINTAINED, THE GRADE LINE MAY BE REVISED BY THE ENGINEER AT THE OPTION OF THE CONTRACTOR, THE PLAN SLAB THICKNESS SHALL BE HELD. NOTIFY THE STRUCTURES SECTION IF THE GRADE LINE IS RAISED FROM THE PLAN PROFILE BY MORE THAN ½" OR,

** IF 3" MINIMUM DECK EMBEDMENT OF TIE BAR CANNOT BE OBTAINED.

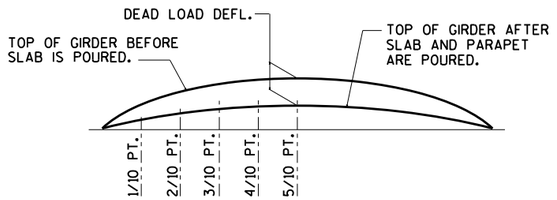
TO DETERMINE 'T', ELEV. OF TOP OF GIR'S. AT ℄ OF SUBSTRUCTURE UNITS & AT 1/10 POINTS OF EACH SPAN SHALL BE TAKEN. THEN FOLLOW THIS PROCESS:

TOP OF DECK ELEV. AT FINAL GRADE
\- TOP OF GIRDER ELEVATION
\+ DEAD LOAD DEFLECTION
\- SLAB THICKNESS
= HAUNCH HEIGHT 'T'

NOTE: AN AVERAGE HAUNCH ('T') OF 4" WAS USED IN THE QUANTITY "CONCRETE MASONRY BRIDGES".



SLAB HAUNCH DETAIL AT EXISTING 54" GIRDERS



DEAD LOAD DEFLECTION DIAGRAM

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-63

DRAWN BY CJM | PLANS CK'D. DNS

DECK ELEVATIONS AND DEFLECTIONS

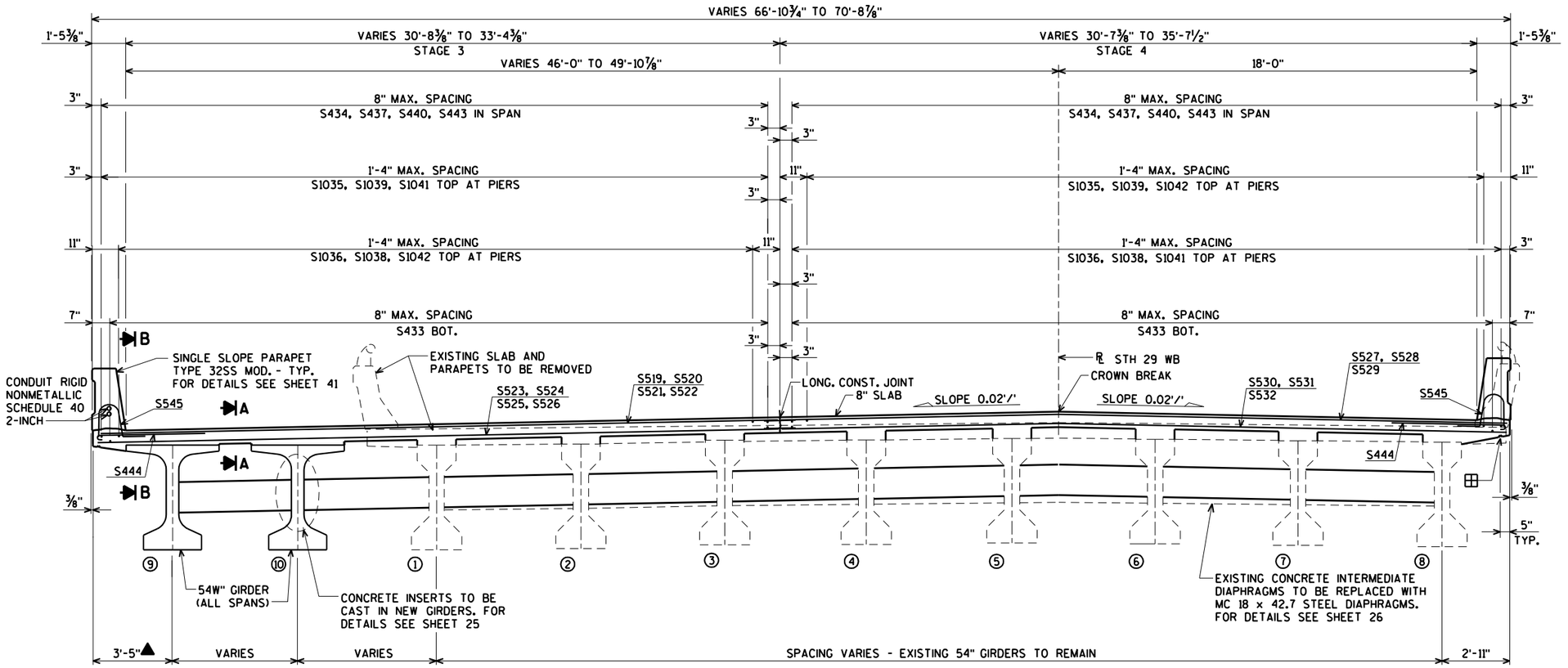
SHEET 30 OF 43
388

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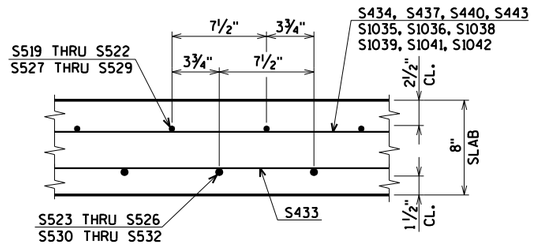


⊞ ¾" CONT. DRIP GROOVE TERMINATE 2'-0" FROM ABUTMENTS - TYP.

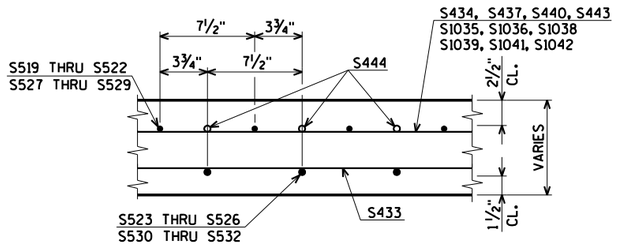
▲ MEASURE NORMAL TO ℄ OF GIRDER

CROSS SECTION THRU DECK

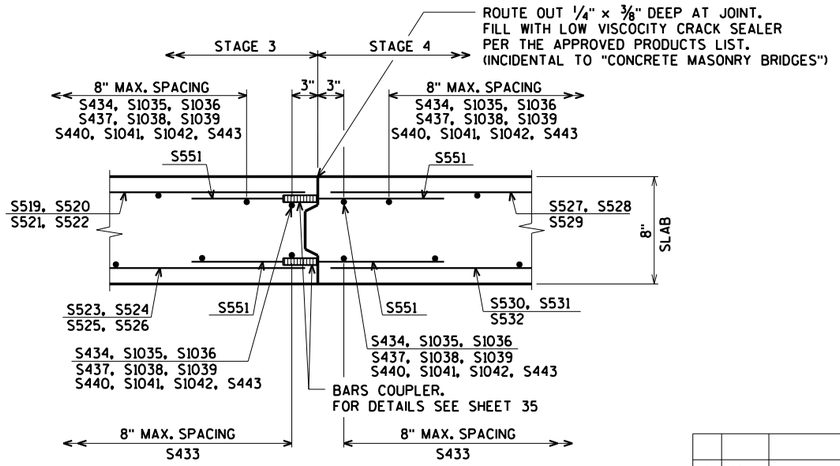
(LOOKING EAST)



SECTION A



SECTION B



LONGITUDINAL CONST. JOINT DETAIL

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STRUCTURE B-37-63

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SUPERSTRUCTURE

SHEET 31 OF 43
389

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8

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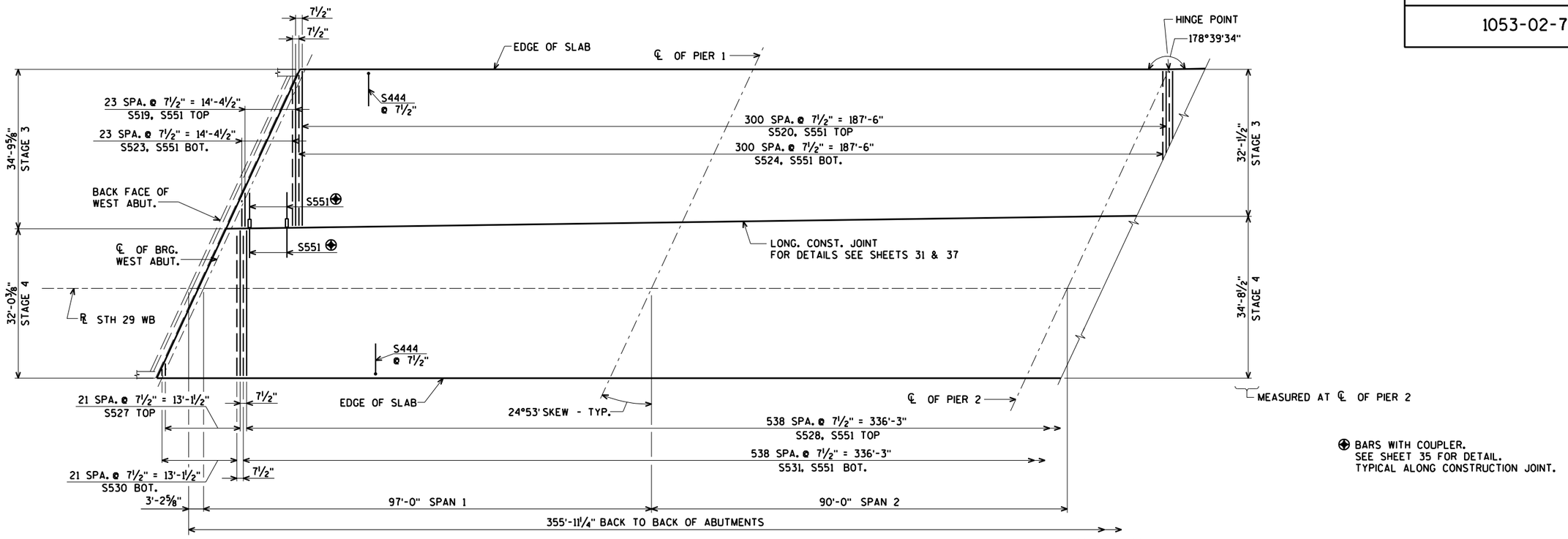
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10/31/2013

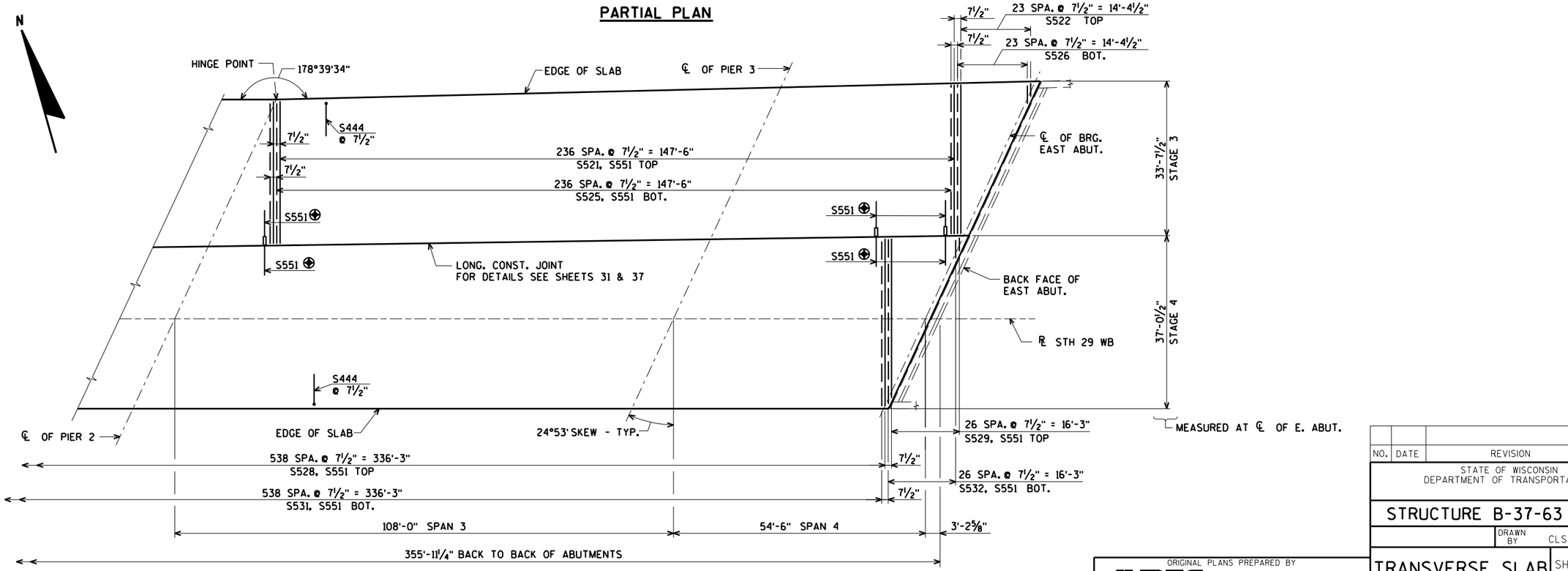
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PARTIAL PLAN



PARTIAL PLAN

NO.	DATE	REVISION	BY

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STRUCTURE B-37-63

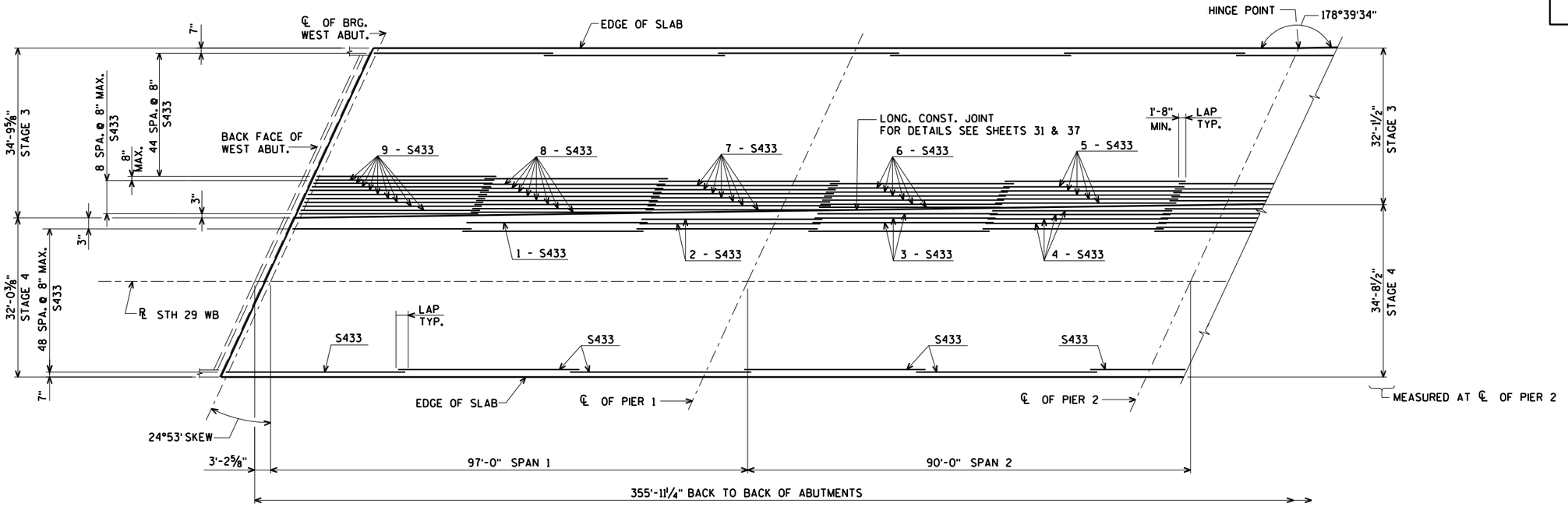
DRAWN BY CLS | PLANS CK'D. DNS

TRANSVERSE SLAB STEEL LAYOUT

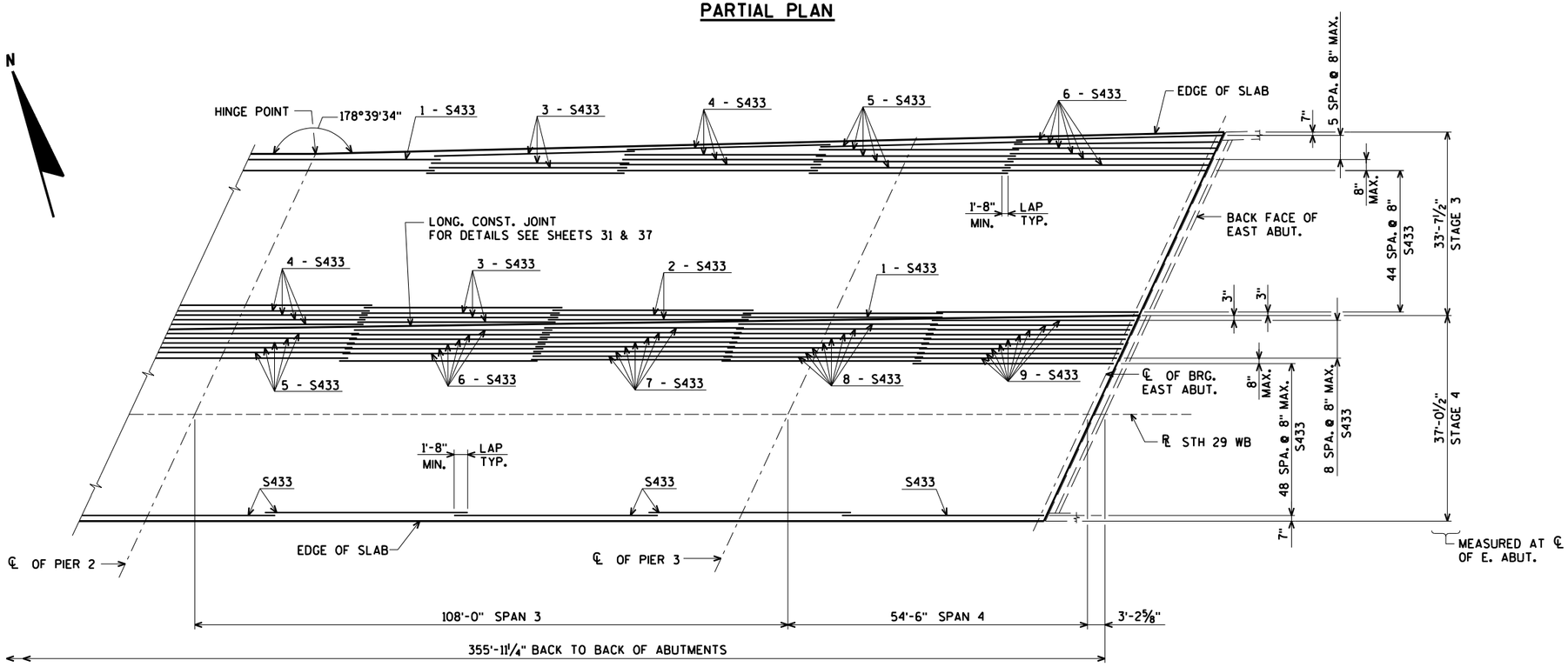
SHEET 32 OF 43
390

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PARTIAL PLAN



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LONGITUDINAL BOTTOM SLAB STEEL LAYOUT

SHEET 33 OF 43
391

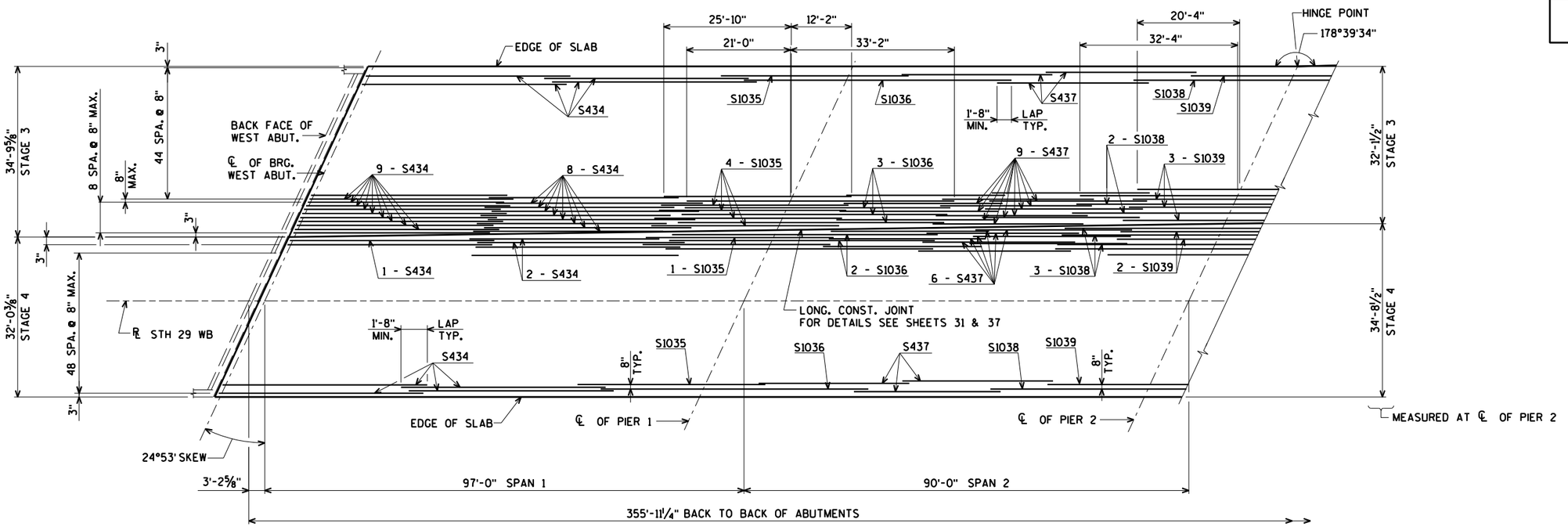
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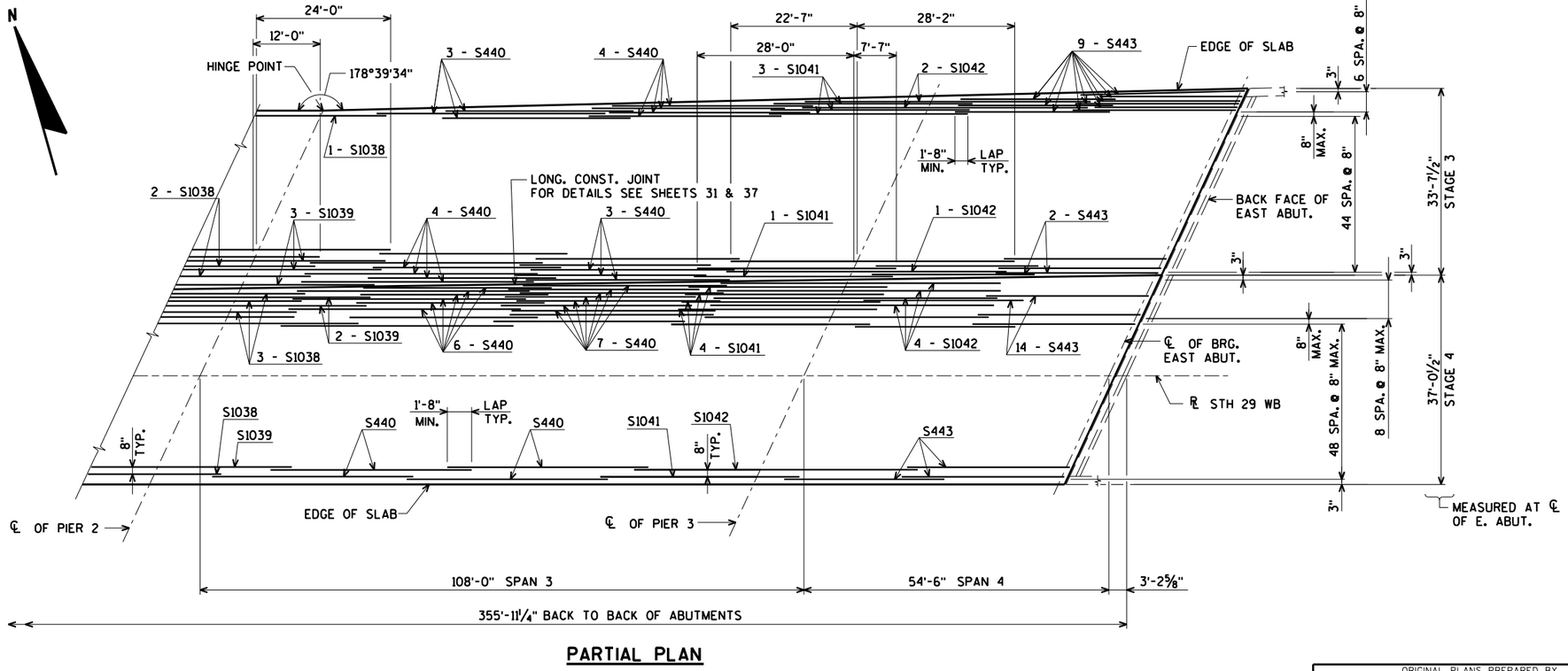
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PARTIAL PLAN



PARTIAL PLAN

NO.	DATE	REVISION	BY

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DEPARTMENT OF TRANSPORTATION

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LONGITUDINAL TOP SLAB STEEL LAYOUT

SHEET 34 OF 43
392

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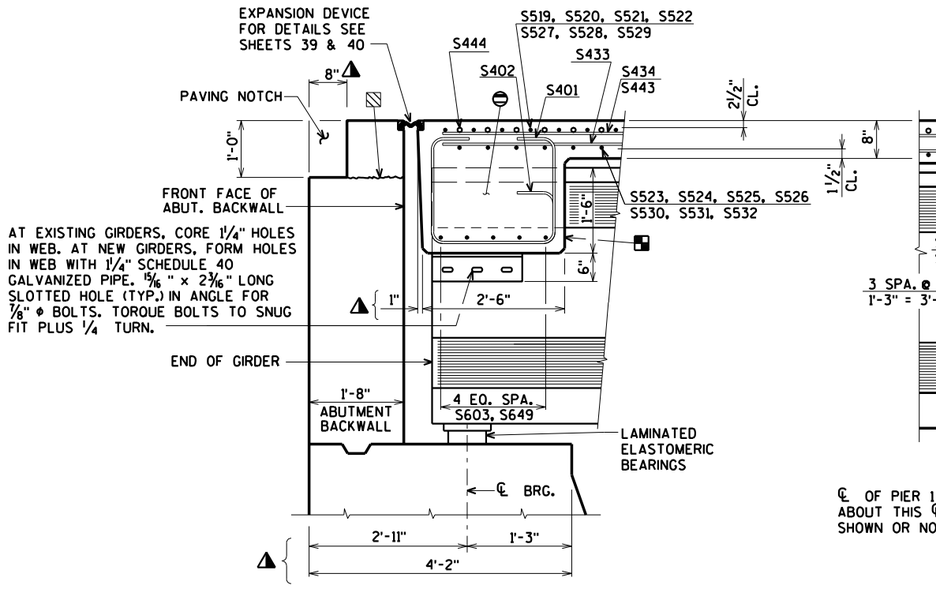
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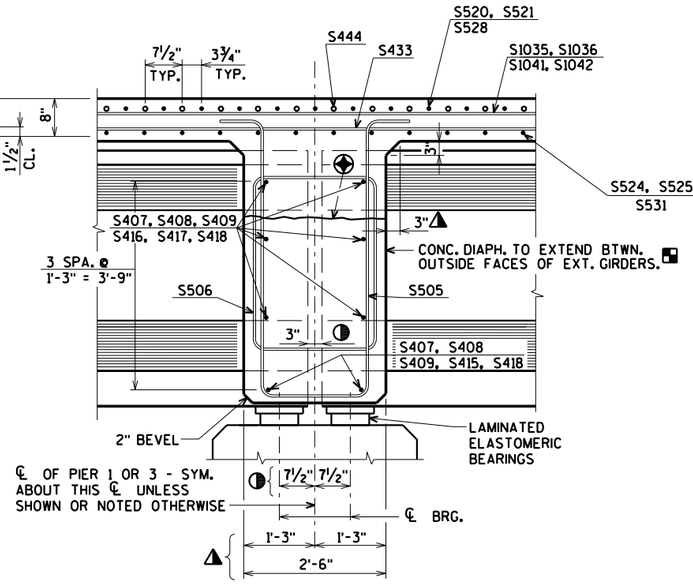
10/31/2013

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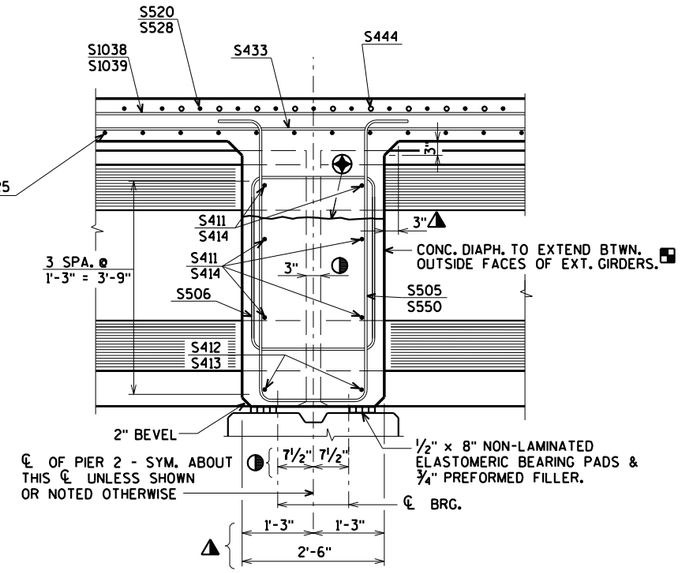
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ABUTMENTS

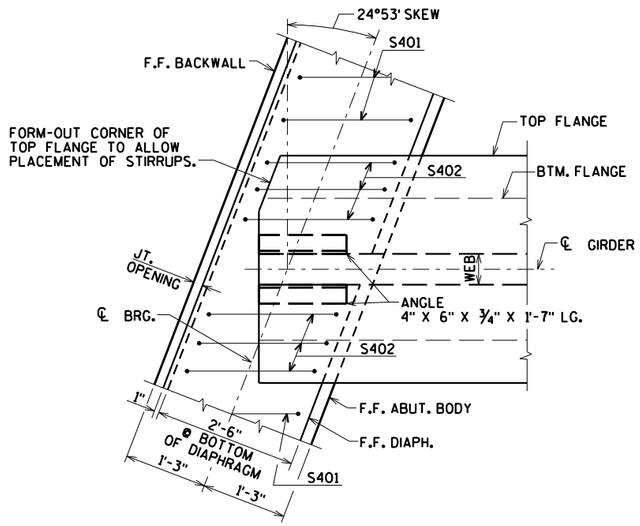


PIERS 1 & 3 DIAPHRAGM

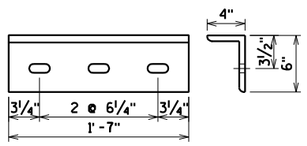


PIER 2 DIAPHRAGM

PART LONGITUDINAL SECTION



TOP VIEW OF ABUTMENT DIAPHRAGM



ANGLE

6" x 4" x ¾" x 1'-7"

NOTES:

PROVIDE 3½" x 3½" x 5/16" PLATE WASHERS AT ALL LOCATIONS EXCEPT AT EXTERIOR FACES OF EXTERIOR GIRDERS WHERE 3½" x 3½" x ½" PLATE WASHERS SHALL BE PROVIDED.

DIAPHRAGM SUPPORT ANGLES SHALL BE ASTM A709 GRADE 36. ALL BOLTS, NUT AND WASHERS SHALL BE ASTM A325 TYPE 1.

ALL SUPPORT ANGLES SHALL BE HOT-DIPPED GALVANIZED. ALL BOLTS, NUTS AND WASHERS SHALL BE HOT-DIPPED GALVANIZED IN ACCORDANCE WITH ASTM A153 CLASS C. GALVANIZED NUTS SHALL BE TAPPED OVERSIZED IN ACCORDANCE WITH THE REQUIREMENTS OF ASTM A563 AND SHALL MEET THE REQUIREMENTS OF SUPPLEMENTARY REQUIREMENT S1 OF ASTM A563. LUBRICANT AND TEST FOR COATED NUTS.

ALL DIAPHRAGM SUPPORT HARDWARE SHALL BE INCIDENTAL TO "CONCRETE MASONRY BRIDGES".

■ EXISTING CONCRETE DIAPHRAGMS TO BE REMOVED AND REPLACED.

▨ CONST. JOINT. STRIKE OFF & LEAVE ROUGH

⊖ CONC. DIAPH. TO EXTEND BETWEEN INSIDE FACES OF EXTERIOR GIRDERS. NO OPTIONAL CONSTRUCTION JOINT ALLOWED. PLACE DIAPHRAGM CONCRETE WITH DECK SLAB.

△ DIMENSIONS MEASURED NORMAL TO ℄ OF SUBSTRUCTURE UNIT.

◑ DIMENSIONS MEASURED ALONG ℄ OF GIRDER.

◈ OPTIONAL CONSTRUCTION JOINT 1'-2" BELOW TOP OF GIRDER. IF USED, DECK POUR MUST BE WITHIN 2 WEEKS FROM THE TIME OF THE DIAPHRAGM POUR.

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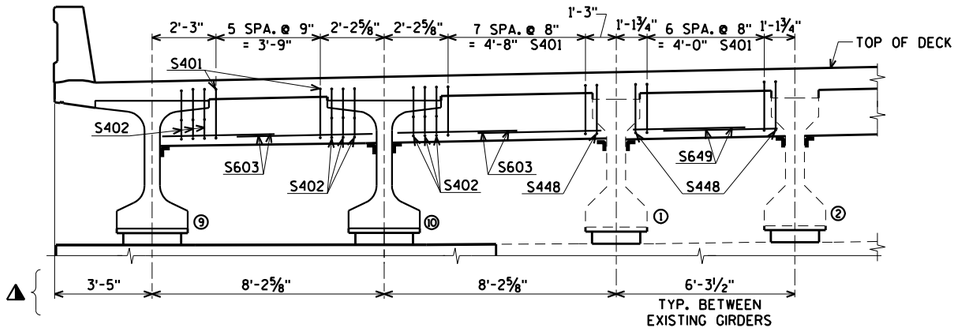
SUPERSTRUCTURE DETAILS

SHEET 35 OF 43
393

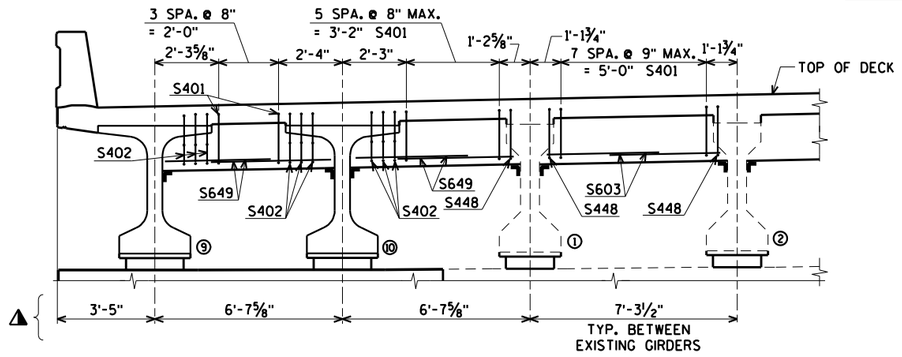
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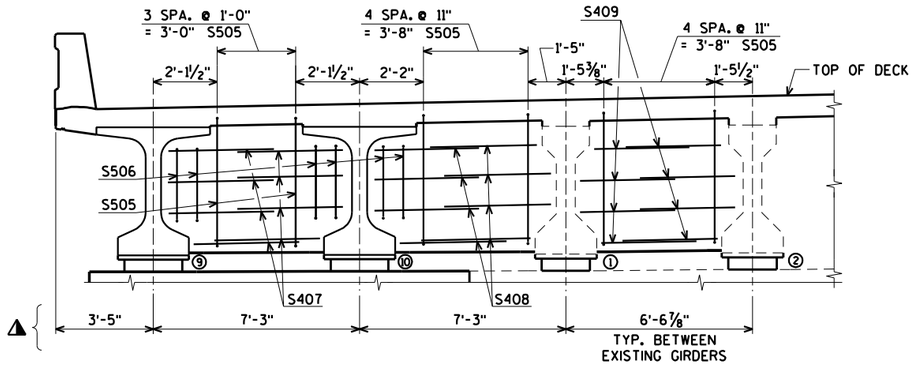
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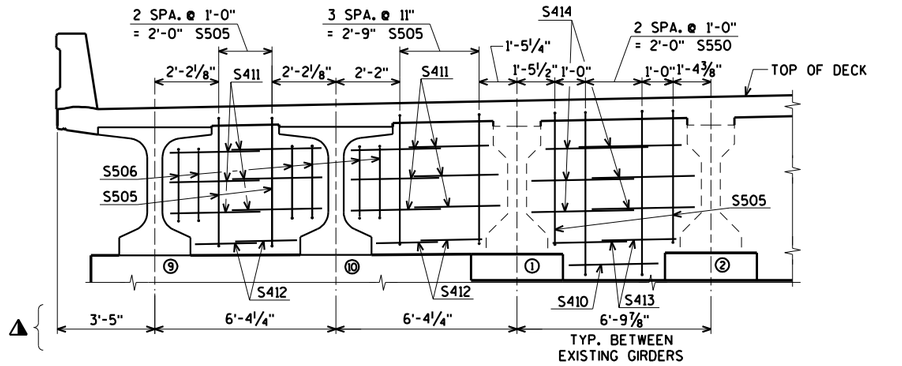
DIAPHRAGM DETAIL AT WEST ABUTMENT



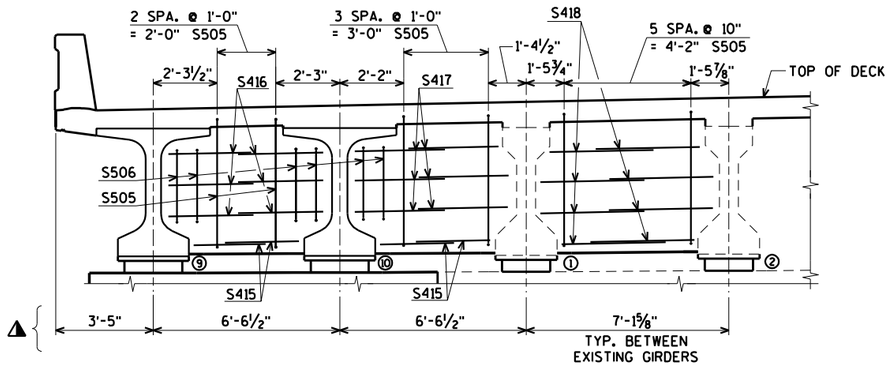
DIAPHRAGM DETAIL AT EAST ABUTMENT



DIAPHRAGM DETAIL AT PIER 1



DIAPHRAGM DETAIL AT PIER 2



DIAPHRAGM DETAIL AT PIER 3

△ DIMENSIONS MEASURED NORMAL TO STH 29 WB ℄

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SUPERSTRUCTURE DETAILS

SHEET 36 OF 43
394

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NOTES

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.

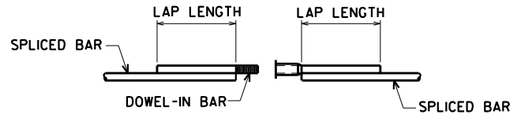
FOR DOWEL BAR SPLICERS, ALL REINFORCEMENT BARS SHALL BE LAPPED AND TIED TO THE SPLICER BARS.

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:

① MINIMUM CAPACITY = 1.25 X fy X AREA OF SPLICED REINFORCEMENT BAR.

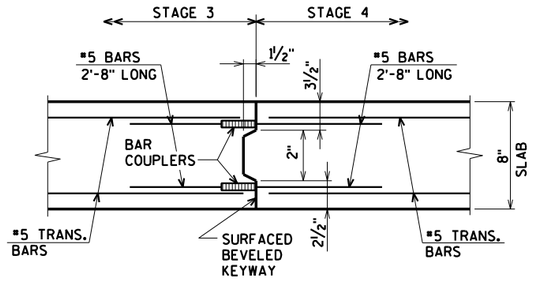
WHERE fy = YIELD STRENGTH OF SPLICED REINFORCEMENT BARS



DOWEL BAR SPLICER

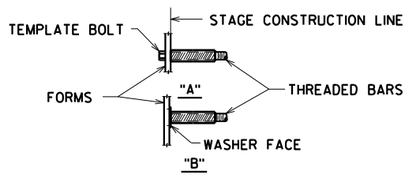
ONE PIECE THREADED SPLICER

SPLICER ALTERNATIVES



LONGITUDINAL CONST. JOINT AND BAR COUPLER DETAIL

FOR BAR NUMBERS AND SPACING SEE SHEET 31



INSTALLATION AND SETTING METHODS

"A" SET SPLICER BY MEANS OF A TEMPLATE BOLT
"B" SET SPLICER BY NAILING TO WOOD FORMS OR CEMENTING TO STEEL FORMS.

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"

BAR LENGTH COMPUTED TO ℄ LONGIT. JOINT AND SHALL BE MODIFIED IF REQ'D. TO BAR COUPLER MANUFACTURER RECOMMENDATIONS. PAY BASED ON BARS AS DETAILED.

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COUPLER DETAILS

SHEET 37 OF 43
395

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BILL OF BARS

BAR. NO.	COATED BAR	NO. REQ'D. STAGE 3	NO. REQ'D. STAGE 4	LENGTH	BENT BAR	BUNDLED	BAR SERIES	205.610* COATED LOCATION
S401	X	54	75	7-0	X			DIAPH. @ ABUT. VERT.
S402	X	9	0	5-11	X			DIAPH. @ ABUT. VERT.
S603	X	40	50	5-8				DIAPH. @ ABUT. HORIZ.
S404	X	16	20	6-10				EXP. JOINT @ ABUT. HORIZ.
S505	X	49	65	13-6	X			DIAPH. @ PIERS VERT.
S506	X	18	0	10-9	X			DIAPH. @ PIERS VERT.
S407	X	16	0	4-3				DIAPH. @ PIER 1 HORIZ.
S408	X	16	0	4-3				DIAPH. @ PIER 1 HORIZ.
S409	X	32	80	3-9				DIAPH. @ PIER 1 HORIZ.
S410	X	4	10	3-8				DIAPH. @ PIER 2 HORIZ.
S411	X	24	0	3-9				DIAPH. @ PIER 2 HORIZ.
S412	X	8	0	2-9				DIAPH. @ PIER 2 HORIZ.
S413	X	8	20	3-2				DIAPH. @ PIER 2 HORIZ.
S414	X	24	60	4-0				DIAPH. @ PIER 2 HORIZ.
S415	X	8	0	2-10				DIAPH. @ PIER 3 HORIZ.
S416	X	12	0	3-11				DIAPH. @ PIER 3 HORIZ.
S417	X	12	0	3-10				DIAPH. @ PIER 3 HORIZ.
S418	X	32	80	4-2				DIAPH. @ PIER 3 HORIZ.
S519	X	24	0	18-0			⊗	SLAB TRANS. TOP SPAN 1 STAGE 3
S520	X	301	0	32-10			⊗	SLAB TRANS. TOP SPANS 1 & 2 STAGE 3
S521	X	237	0	32-2			⊗	SLAB TRANS. TOP SPANS 3 & 4 STAGE 3
S522	X	24	0	17-0			⊗	SLAB TRANS. TOP SPAN 4 STAGE 3
S523	X	24	0	17-4			⊗	SLAB TRANS. BOT. SPAN 1 STAGE 3
S524	X	301	0	32-10			⊗	SLAB TRANS. BOT. SPANS 1 & 2 STAGE 3
S525	X	237	0	32-2			⊗	SLAB TRANS. BOT. SPANS 3 & 4 STAGE 3
S526	X	24	0	17-7			⊗	SLAB TRANS. BOT. SPAN 4 STAGE 3
S527	X	0	22	16-10			⊗	SLAB TRANS. TOP SPAN 1 STAGE 4
S528	X	0	539	34-1			⊗	SLAB TRANS. TOP STAGE 4
S529	X	0	27	18-8			⊗	SLAB TRANS. TOP SPAN 4 STAGE 4
S530	X	0	22	16-1			⊗	SLAB TRANS. BOT. SPAN 1 STAGE 4
S531	X	0	539	34-1			⊗	SLAB TRANS. BOT. STAGE 4
S532	X	0	27	19-1			⊗	SLAB TRANS. BOT. SPAN 4 STAGE 4
S433	X	514	535	36-10				SLAB LONG. BOT.
S434	X	107	101	40-2				SLAB LONG. TOP SPAN 1
S1035	X	27	25	38-0				SLAB LONG. TOP PIER 1
S1036	X	25	27	54-2				SLAB LONG. TOP PIER 1
S437	X	77	80	31-3				SLAB LONG. TOP SPAN 2
S1038	X	25	26	44-4				SLAB LONG. TOP PIER 2
S1039	X	28	26	44-4				SLAB LONG. TOP PIER 2
S440	X	104	111	36-6				SLAB LONG. TOP SPAN 3
S1041	X	27	29	35-7				SLAB LONG. TOP PIER 3
S1042	X	26	28	50-9				SLAB LONG. TOP PIER 3
S443	X	79	88	29-2				SLAB LONG. TOP SPAN 4
S444	X	562	562	4-9	X			SLAB TRANS. TOP @ PARAPET
S545	X	529	529	4-5	X			PARAPETS VERT.
S546	X	529	529	5-0	X			PARAPETS VERT.
S547	X	42	42	51-9				PARAPETS HORIZ.
S448	X	10	20	4-6	X			DIAPH. @ ABUT. VERT.
S649	X	40	50	4-9				DIAPH. @ ABUT. HORIZ.
S550	X	6	15	14-6	X			DIAPH. @ PIER 2 VERT.
S551	X	1132	1132	2-8				SLAB COUPLERS ALONG LONG. CONST. JOINT

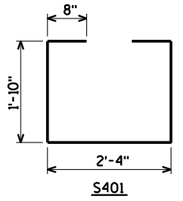
BENDING DIMENSIONS ARE OUT TO OUT OF BARS.

⊗ LENGTH SHOWN FOR BAR IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.

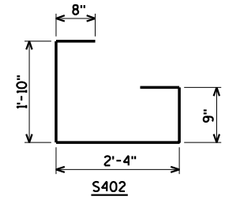
BAR SERIES TABLE

BAR MARK	NO REQ'D.	LENGTH
S519	1 SERIES OF 24	2'-7" TO 33'-5"
S520	1 SERIES OF 301	31'-6" TO 34'-2"
S521	1 SERIES OF 237	31'-6" TO 32'-10"
S522	1 SERIES OF 24	1'-8" TO 32'-4"
S523	1 SERIES OF 24	1'-11" TO 32'-9"
S524	1 SERIES OF 301	31'-6" TO 34'-2"
S525	1 SERIES OF 237	31'-6" TO 32'-10"
S526	1 SERIES OF 24	2'-4" TO 32'-10"
S527	1 SERIES OF 22	2'-8" TO 31'-0"
S528	1 SERIES OF 539	31'-8" TO 36'-6"
S529	1 SERIES OF 27	1'-2" TO 36'-2"
S530	1 SERIES OF 22	1'-11" TO 30'-3"
S531	1 SERIES OF 539	31'-8" TO 36'-6"
S532	1 SERIES OF 27	1'-8" TO 36'-6"

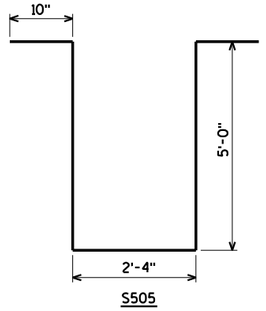
BUNDLE AND TAG EACH SERIES SEPARATELY.



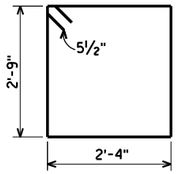
S401



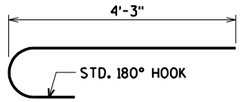
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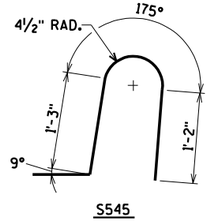
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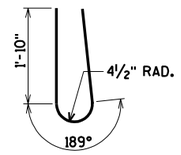
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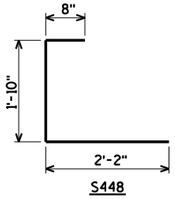
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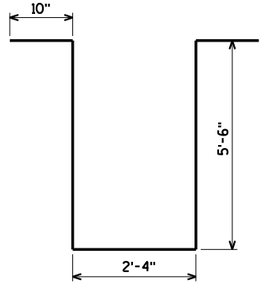
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S546



S448



S552

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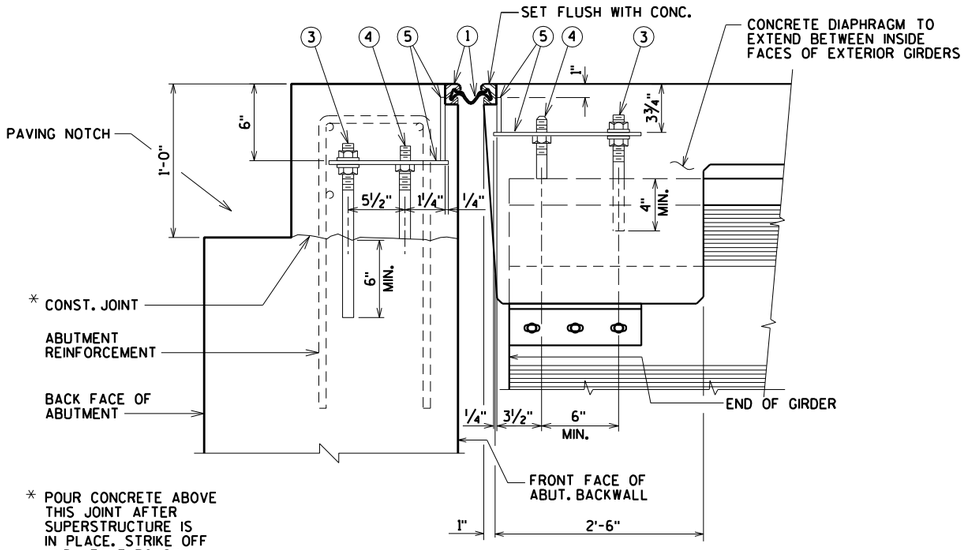
STRUCTURE B-37-63

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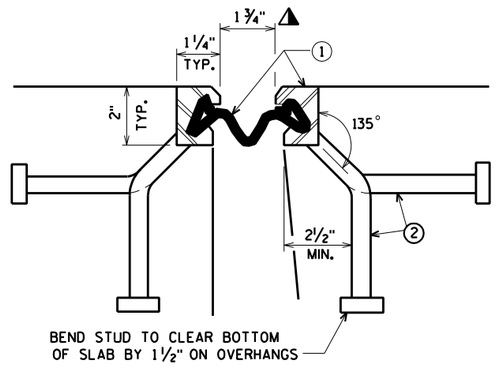
SUPERSTRUCTURE BILL OF BARS

SHEET 38 OF 43
396

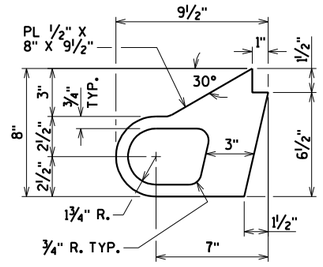
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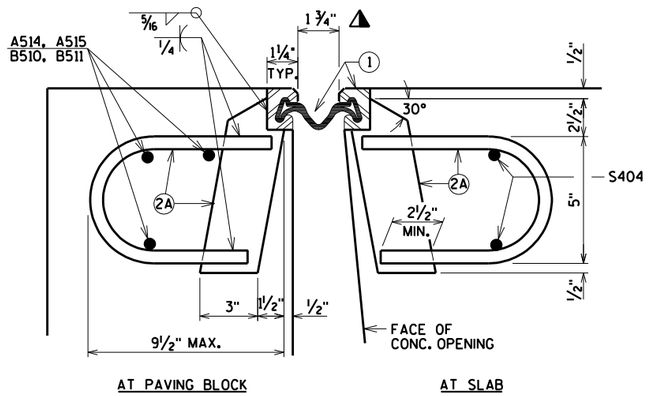
SECTION THRU JOINT AT ABUTMENT
NORMAL TO ℄ SUBSTRUCTURE



SECTION THRU JOINT
EXTERIOR GIRDER TO EDGE OF SLAB



ALTERNATE STRIP SEAL ANCHOR



SECTION THRU JOINT
ROADWAY TRAFFIC AREA BETWEEN EXTERIOR GIRDERS.

LEGEND

1. NEOPRENE STRIP SEAL (4 - INCH) & STEEL EXTRUSIONS.
2. STUDS ⅝"ϕ X 6⅜" LONG AT 6" ALTERNATE CENTERS. WELD TO EXTRUSIONS & BEND AS SHOWN AFTER WELDING.
2A. ½" THICK ANCHOR PLATE WITH ⅝"ϕ ROD (OR ALTERNATE STRIP SEAL ANCHOR). WELD ROD TO ANCHOR PLATE. WELD ANCHOR PLATE TO NO. 1 AT 1'-6" CENTERS BETWEEN GIRDERS.
3. ¾" ϕ THREADED ROD WITH 2 NUTS AND PLATE WASHERS. GROUT THREADED ROD INTO FIELD DRILLED HOLES ON ℄ OF GIRDER AND ABUTMENT BACKWALL AS SHOWN.
4. ¾"ϕ THREADED ROD WITH NUT. TACK WELD NUT TO NO. 5.
5. FABRICATE SUPPORT FROM 3" X ½" BAR AS SHOWN OR EQUIVALENT, ONE PER GIRDER PER SIDE. FIELD OR SHOP WELD TO NO. 1. IF FIELD WELDED, COVER WELDED AREAS WITH EPOXY-COATING MATERIAL. PROVIDE 1½" ϕ HOLE FOR NO. 3 & 1" ϕ HOLE FOR NO. 4.
6. GALVANIZED PLATE ⅜" x 10" x 2'-2" LONG WITH HOLES FOR #7.
7. ¾" ϕ x 1½" STAINLESS STEEL SOCKET FLAT HEAD SCREWS WITH ANTI-SEIZE LUBRICANT. PLACE IN COUNTERSUNK HOLES. RECESS 1/16" BELOW PLATE SURFACE.
8. ¾" ϕ x 4" GALV. HEX HEAD BOLT. BEND 45°.
9. ¾" ϕ x 2 ¼" GALV. THREADED COUPLING.
10. 1" x 5" SLOTTED CSK. HOLE FOR #7. PLACE SLOT PARALLEL TO DIRECTION OF MOVEMENT.

NOTES

ONE FIELD SPLICE PERMITTED IN STEEL EXTRUSIONS. IF USED, DETAILS SHALL BE SUBMITTED FOR APPROVAL. NO SPLICING PERMITTED IN NEOPRENE STRIP SEAL.

AFTER FABRICATION, BUT BEFORE SHIPMENT, STRAIGHTEN STEEL EXTRUSIONS SUCH THAT THEY SHALL BE FREE FROM WARP, TWIST & SWEEP.

FABRICATOR SHALL PROVIDE MEANS OF KEEPING GALVANIZED EXTRUSIONS CLEAN & SMOOTH DURING SHIPMENT AND PRIOR TO APPLYING LUBRICANT ADHESIVE FOR NEOPRENE GLAND INSTALLATION.

SANDBLAST PLATES, SUPPORTS, & EXTRUSIONS AFTER FABRICATION IN ACCORDANCE WITH SSPC SP. #6 "COMMERCIAL BLAST CLEANING". AFTER BLAST CLEANING THE PLATES, SUPPORTS, & EXTRUSIONS SHALL BE HOT DIPPED GALVANIZED.

STRIP SEAL EXPANSION JOINT ASSEMBLY, INCLUDING ANCHOR STUDS & HARDWARE WILL BE PAID FOR AT THE LUMP SUM PRICE BID FOR "EXPANSION DEVICE B-37-63".

ANCHOR SYSTEM #8 & #9 SHALL CONFORM TO ASTM A307 & SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153 CLASS C & D.

▲ DIMENSION MEASURED NORMAL TO JOINT.

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STRUCTURE B-37-63

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EXPANSION DEVICE

SHEET 39 OF 43
397

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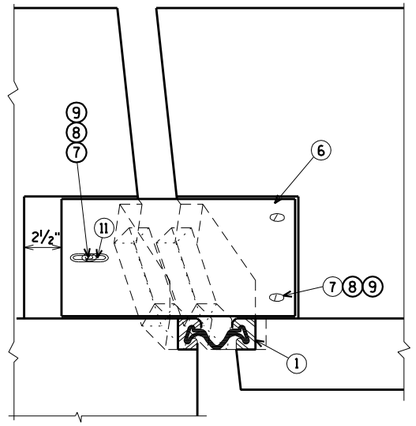
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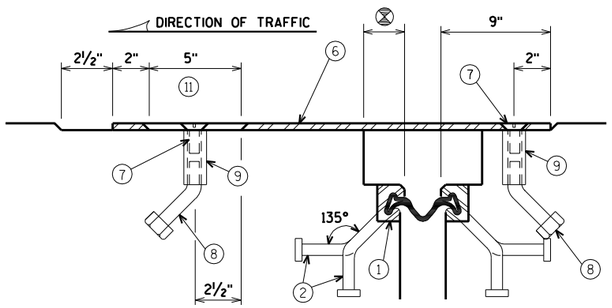
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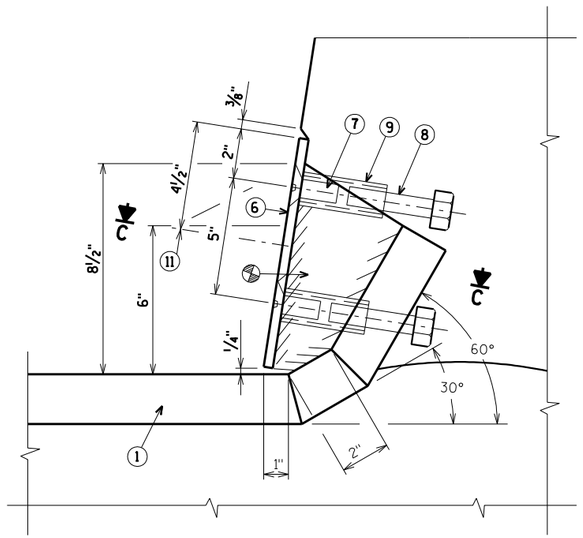
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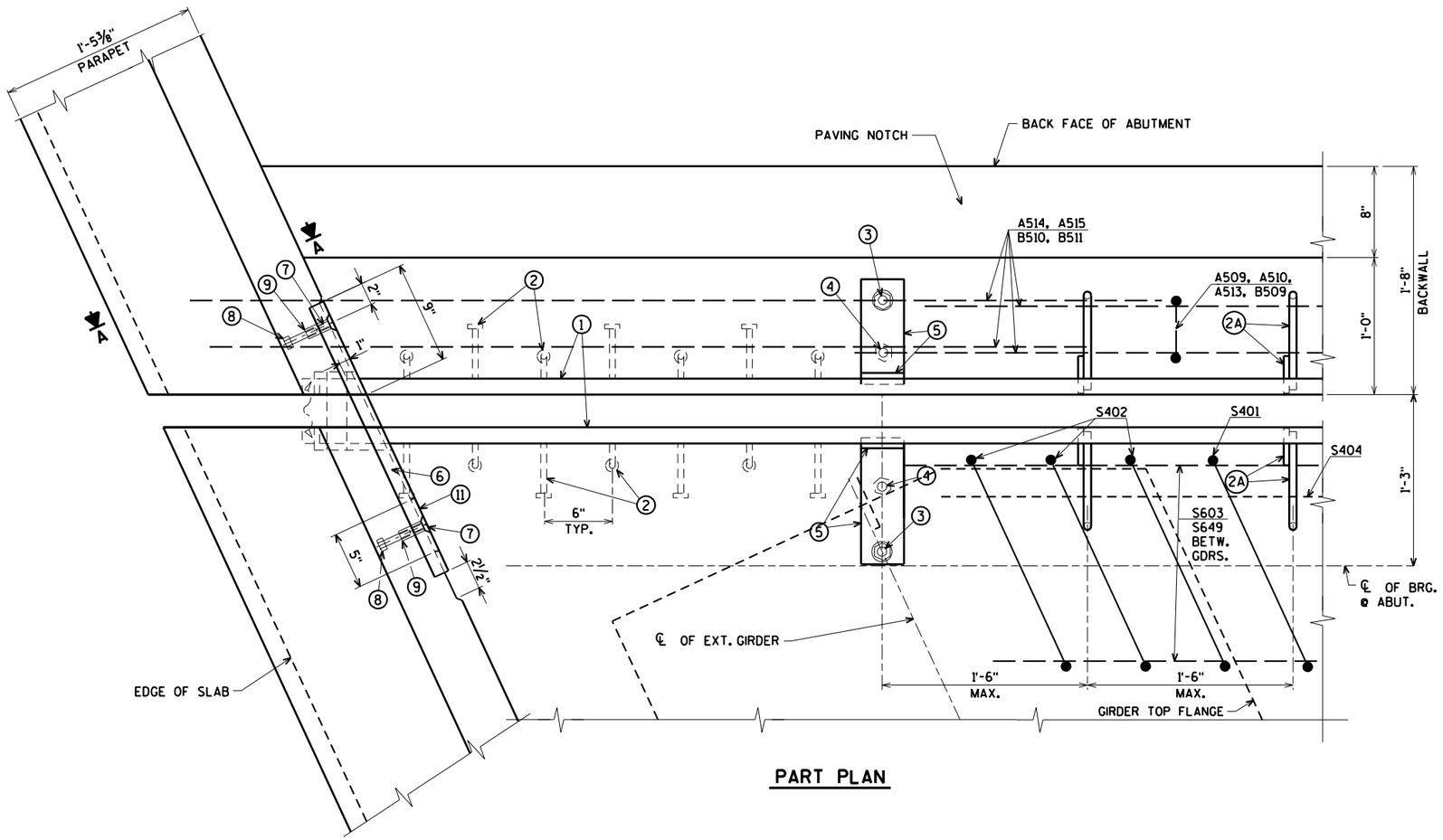
VIEW OF PARAPET PLATES FROM ROADWAY



SECTION C



SECTION A



PART PLAN

⊗ BLOCK OUT CONCRETE 2" EACH SIDE OF JOINT OPENING

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STRUCTURE B-37-63

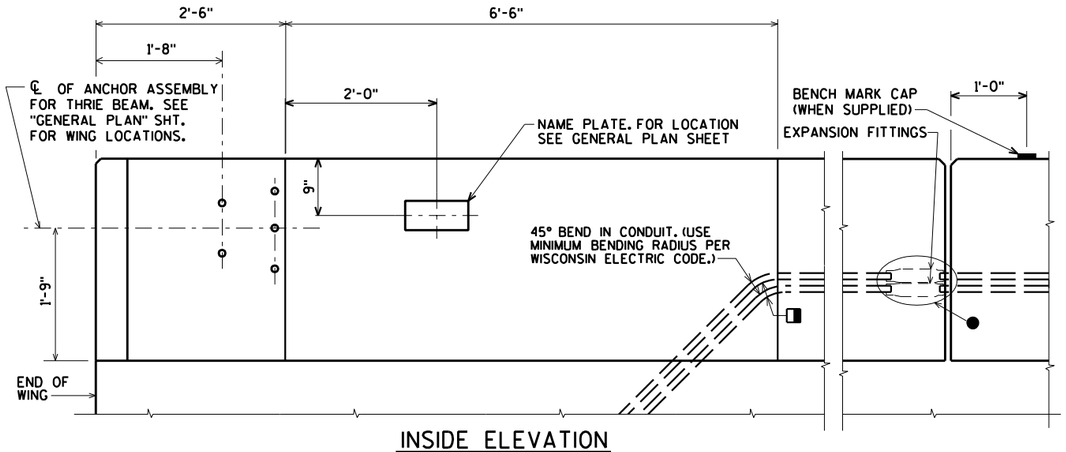
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EXPANSION DEVICE

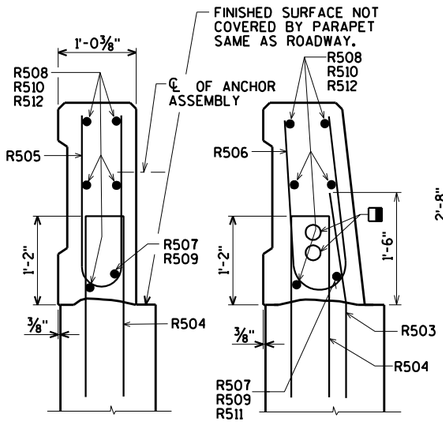
SHEET 40 OF 43
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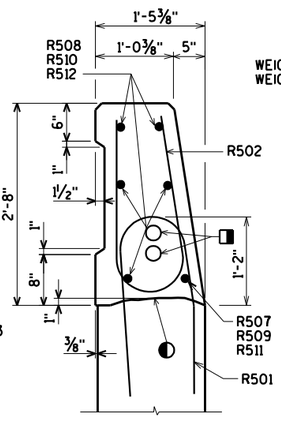


INSIDE ELEVATION



SECTION A

SECTION B

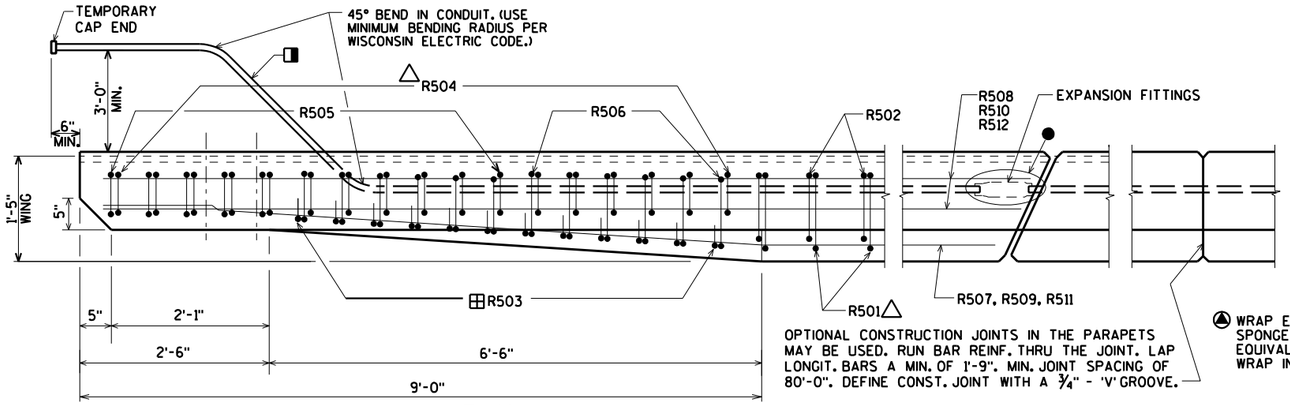


SECTION C

WEIGHTS INCLUDED IN ABUTMENT
WEIGHTS SHOWN ON SHEETS 11 & 15

BILL OF BARS

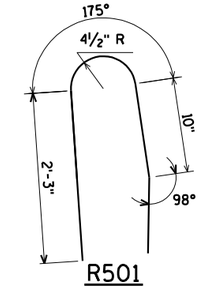
BAR MARK	COAT	WEST ABUT.	EAST ABUT.	LENGTH	BENT	BAR SERIES	800* WEST ABUTMENT 760* EAST ABUTMENT LOCATION
R501	X	16	14	5-10	X		PARAPET VERT.
R502	X	16	14	5-0	X		PARAPET VERT.
R503	X	24	24	3-0	X		PARAPET-VERT.
R504	X	34	34	5-7	X		PARAPET-VERT.
R505	X	22	22	4-9	X		PARAPET-VERT.
R506	X	12	12	4-10	X		PARAPET-VERT.
R507	X	1	1	13-7	X		PARAPET-HORIZ. - WING 1 & 3
R508	X	5	5	13-10			PARAPET-HORIZ. - WING 1 & 3
R509	X	1	0	13-6	X		PARAPET-HORIZ. - WING 2
R510	X	5	0	13-9			PARAPET-HORIZ. - WING 2
R511	X	0	1	11-9	X		PARAPET-HORIZ. - WING 4
R512	X	0	5	12-0			PARAPET-HORIZ. - WING 4



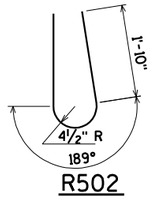
PLAN

WINGS 2 & 4 SHOWN (WINGS 1 & 3 SIMILAR)

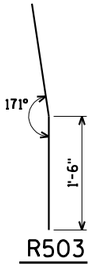
OPTIONAL CONSTRUCTION JOINTS IN THE PARAPETS MAY BE USED. RUN BAR REINF. THRU THE JOINT. LAP LONGIT. BARS A MIN. OF 1'-9". MIN. JOINT SPACING OF 80'-0". DEFINE CONST. JOINT WITH A ¾" - 'V' GROOVE.



R501



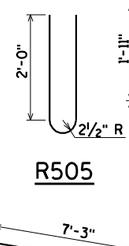
R502



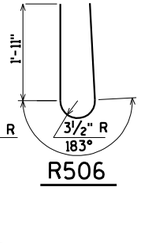
R503



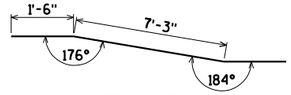
R504



R505

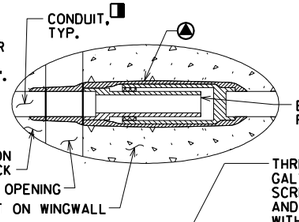


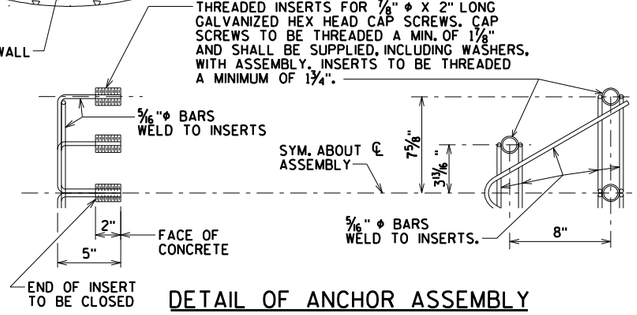
R506



R507, R509, R511

Ⓐ WRAP EXPANSION FITTING WITH SPONGE RUBBER. SPONGE RUBBER WRAP TO BE AASHTO M153 TYPE 1 OR EQUIVALENT. ¼" MINIMUM THICKNESS. SPONGE RUBBER WRAP INCIDENTAL TO "CONDUIT RIGID METALLIC 2-INCH".

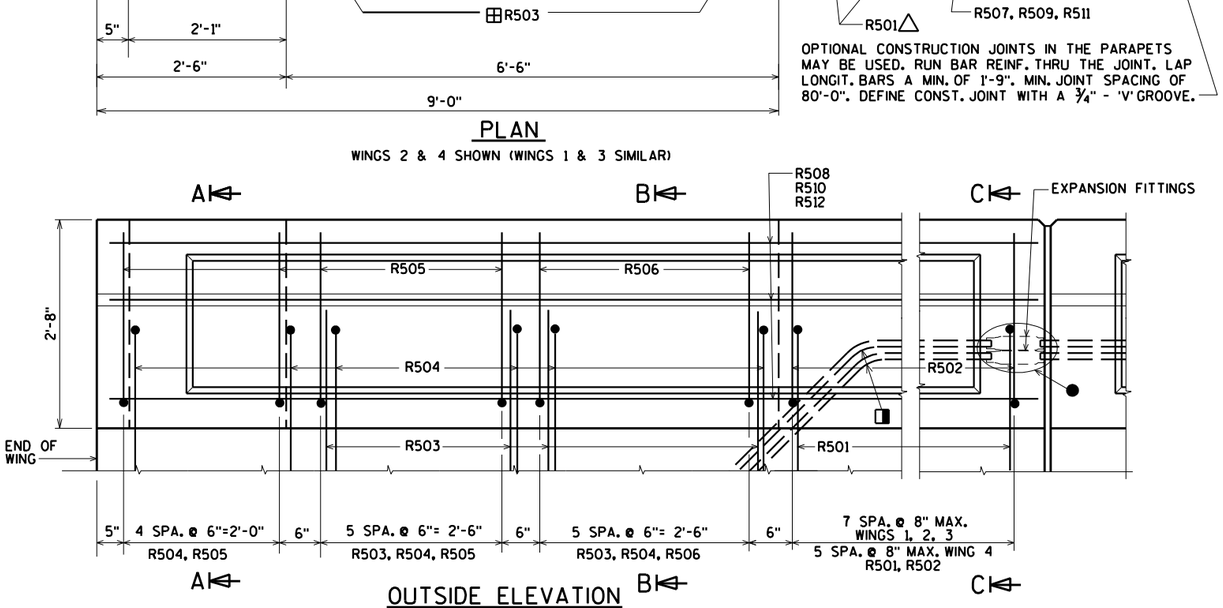




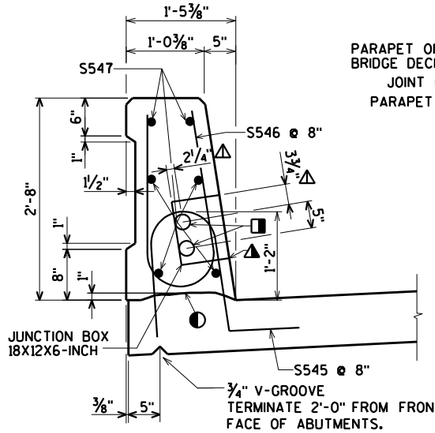
DETAIL OF ANCHOR ASSEMBLY

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

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



OUTSIDE ELEVATION



SECTION THRU PARAPET ON BRIDGE

NOTES

EXPANSION FITTINGS, ANGLES AND ADAPTER FITTINGS TO BE INCIDENTAL TO "CONDUIT RIGID METALLIC 2-INCH".

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

APPROVED MANUFACTURERS - JUNCTION BOXES:
SEE APPROVED MATERIAL LIST.

APPROVED MANUFACTURER OR EQUIVALENT - EXPANSION FITTING:
O-Z/GEDNEY TYPE AX-200 AND BONDING JUMPER (4" TOTAL CONDUIT MOVEMENT).

● POSITION MOVEABLE END OF CONDUIT INSIDE EXPANSION FITTING, SUCH THAT IT WILL HAVE THE SAME ALLOWANCE FOR MOVEMENT (EXPANSION/CONTRACTION) AS THE EXPANSION DEVICE SET IN PLACE IN THE DECK BELOW IT. TAKE CARE TO INSTALL EXPANSION FITTING AND CONDUIT EXACTLY PARALLEL TO BRIDGE MOVEMENT.

⚠ LOCATION OF CONDUIT IS MEASURED FROM OUTSIDE EDGE OF JUNCTION BOX.

◨ NORTH SIDE PARAPET USE 2" DIA. RIGID NONMETALLIC CONDUIT EXCEPT AT EXPANSION FITTING. AT EXPANSION FITTING USE RIGID METALLIC CONDUIT 3'-0" INTO PARAPET ON DECK SIDE AND THRU PARAPET AND WINGWALL TO A MINIMUM OF 6" BEYOND END OF WINGWALL. (FOR GROUNDING PURPOSES.)

▲ CUT OUT ± 1" OF GASKET AT BOTTOM OF JUNCTION BOX COVER TO ALLOW FOR DRAINAGE.

⊞ R503 BARS MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. USE CARE TO PLACE R503 BARS CORRECTLY ALONG TRANSITION OF PARAPET.

◐ CONST. JOINT - STRIKE OFF AS SHOWN.

△ R501 AND R504 TO BE TIED TO WING STEEL BEFORE WING IS POURED.

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STRUCTURE B-37-63

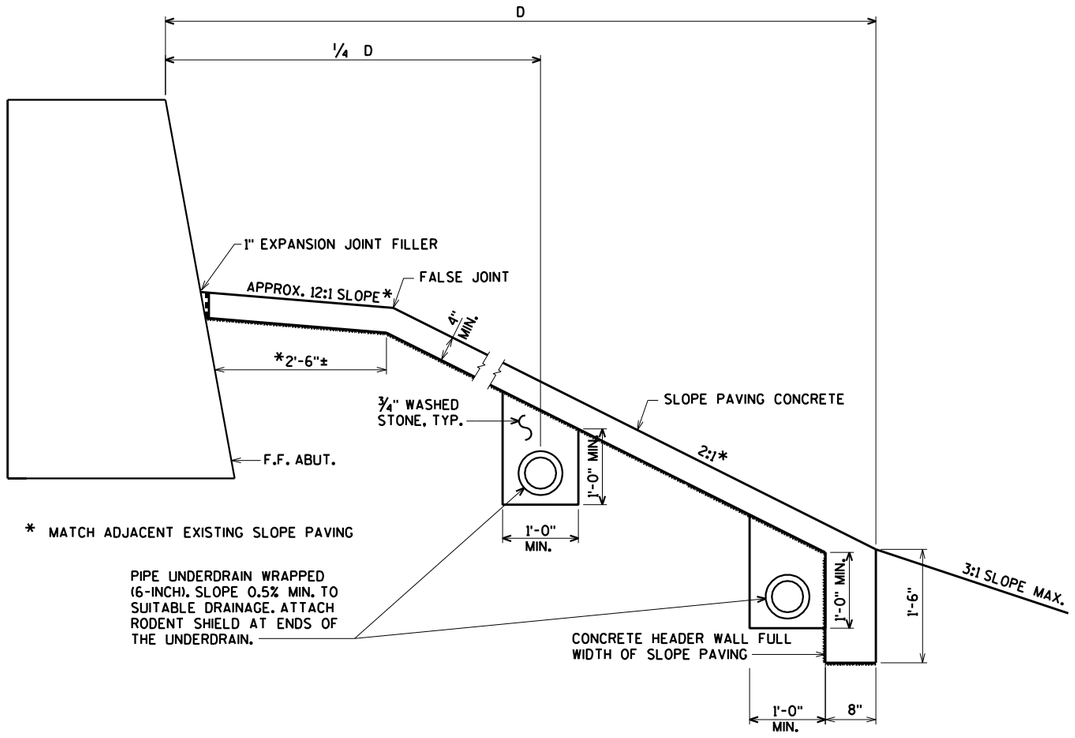
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SINGLE SLOPE PARAPET 32SS MODIFIED

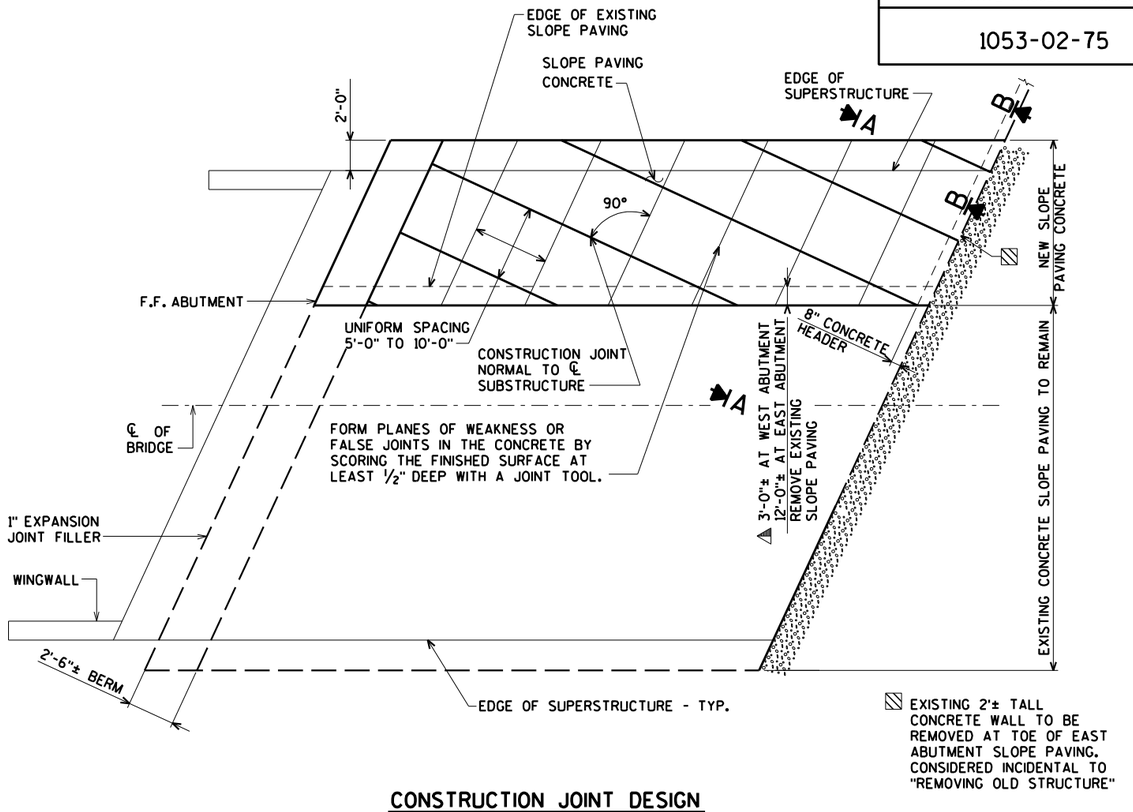
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10/31/2013

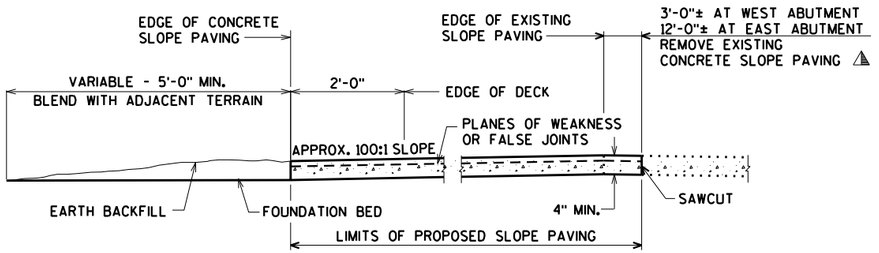
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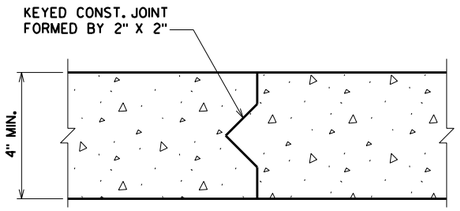
TYPICAL SECTION



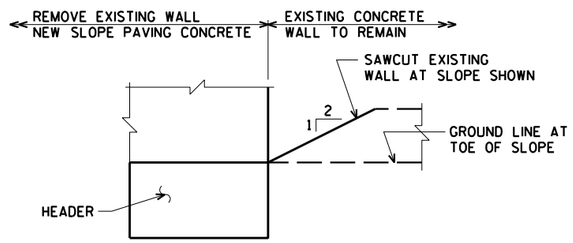
CONSTRUCTION JOINT DESIGN



SECTION A



CONSTRUCTION JOINT DETAIL



SECTION B
(EAST ABUTMENT ONLY)

GENERAL NOTES

DETAILS OF CONSTRUCTION NOT SHOWN HEREON SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS.

⚠ REMOVING A PORTION OF THE EXISTING SLOPE PAVING INCLUDED IN THE "REMOVING OLD STRUCTURE" ITEM.

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SLOPE PAVING

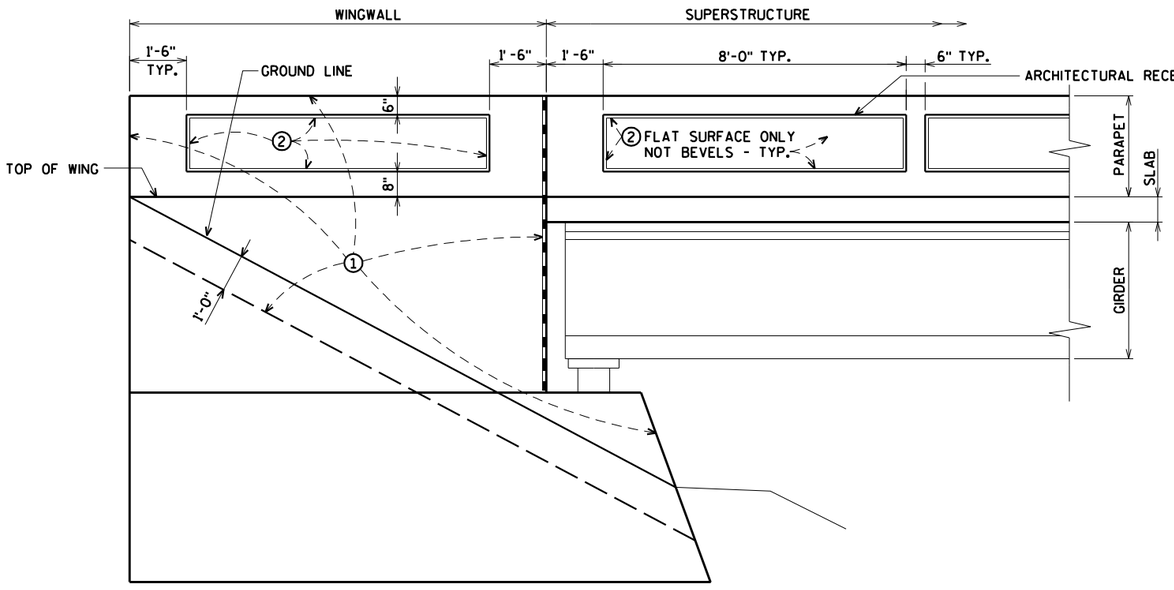
SHEET 42 OF 43
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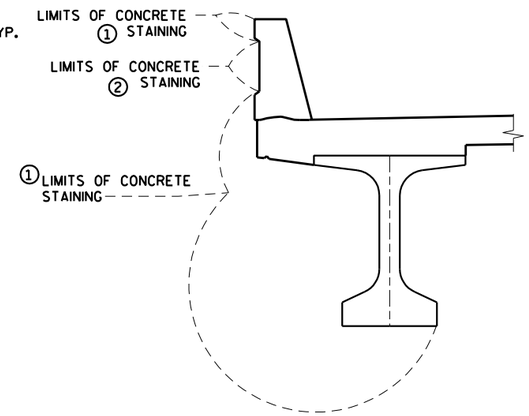
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STATE PROJECT NUMBER

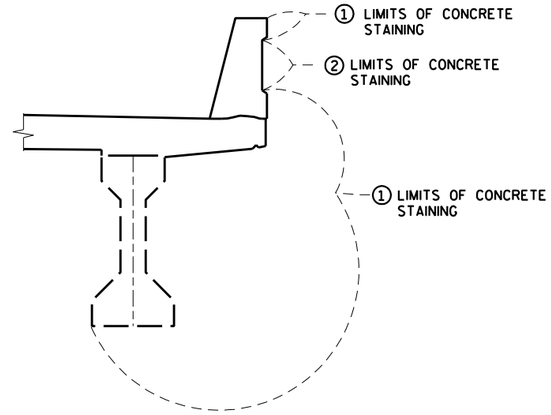
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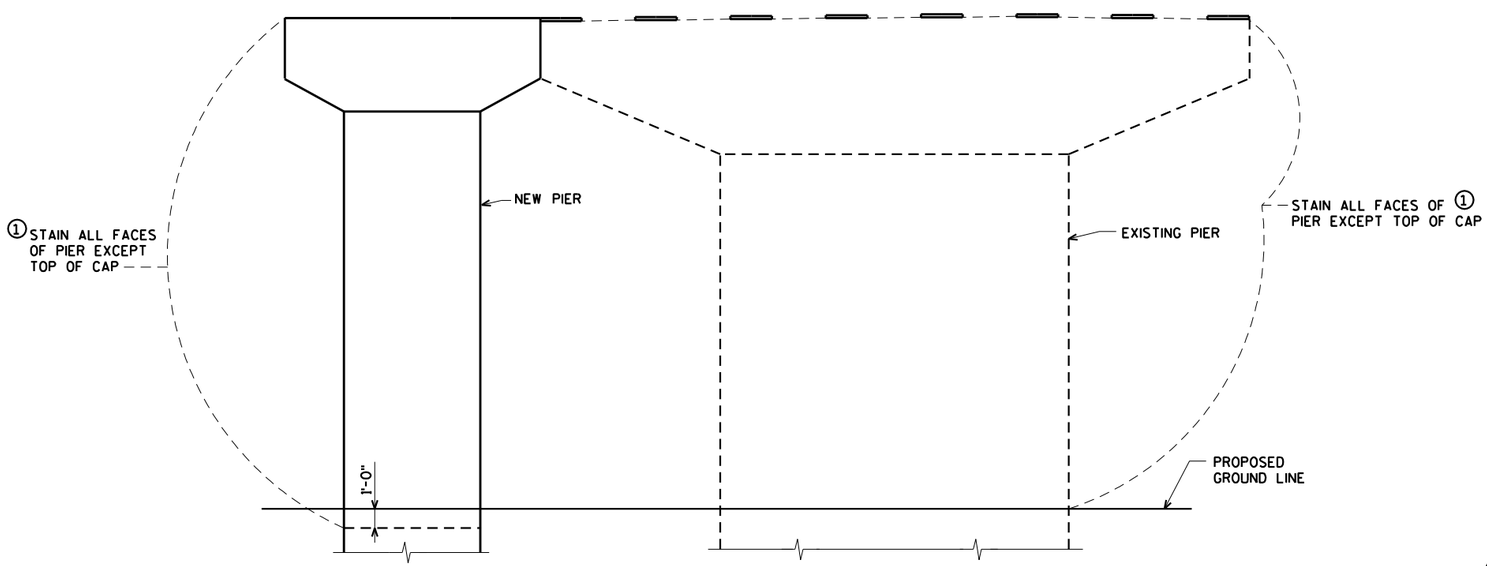
ABUTMENT WINGWALLS



SUPERSTRUCTURE
(NORTH SIDE)



SUPERSTRUCTURE
(SOUTH SIDE)



PIERS

1 FEDERAL STANDARD COLOR NUMBER 36424 (MEDIUM GRAY).

2 FEDERAL STANDARD COLOR NUMBER 30372 (SAND).
NOTE: APPLY TO FLAT SURFACE ONLY (NOT BEVELS).

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-63

DRAWN BY CJM | PLANS CK'D. DNS

ARCHITECTURAL TREATMENT DETAILS

SHEET 43 OF 43
401

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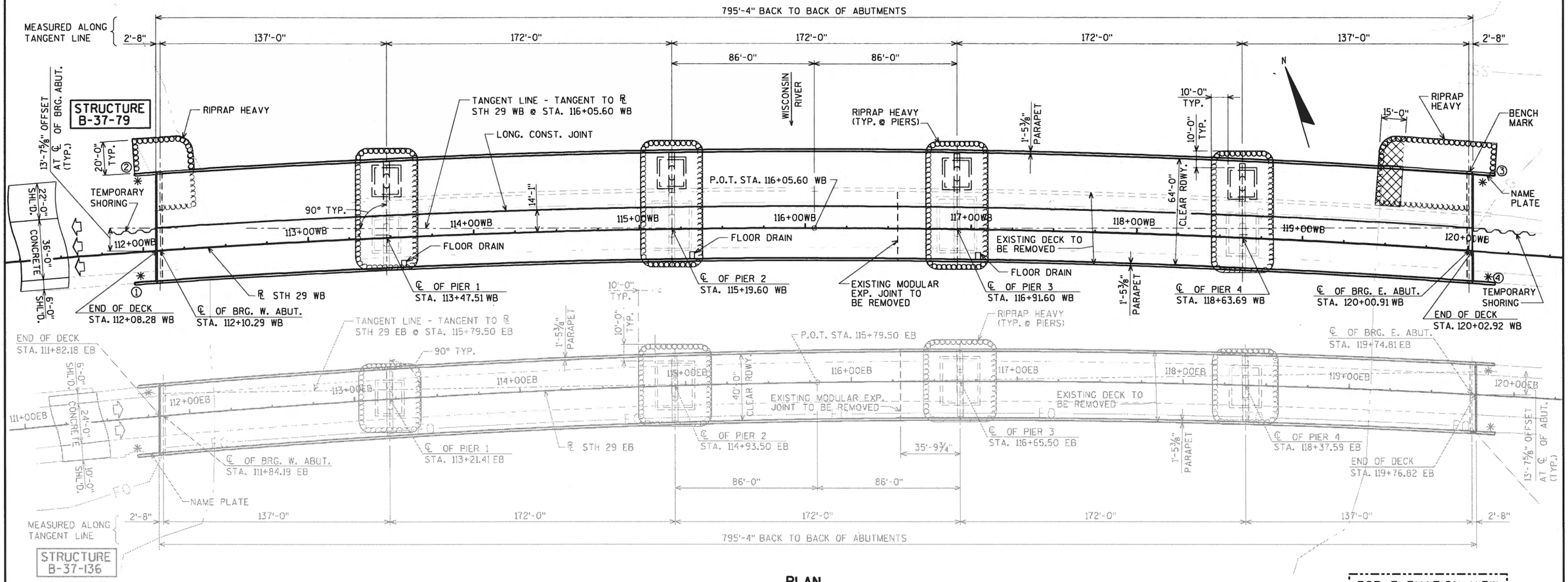
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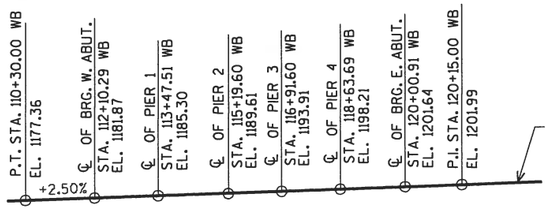
STATE PROJECT NUMBER

1053-02-75

○ DENOTES WING NUMBER
✱ ANCHOR ASSEMBLY FOR THRIE BEAM TYPE GUARDRAIL.

FILL VOIDS IN RIPRAP WITH WALLEYE SPAWNING SURFACE MATERIAL





PROFILE GRADE LINE

(℞ STH 29 WB)

BENCHMARK:
BM DISK B-37-79-71
STA. 120+10 WB, 46' LT.
EL. 1204.69

PLAN

5 SPAN CONTINUOUS STEEL PLATE GIRDER BRIDGE

CURVE DATA

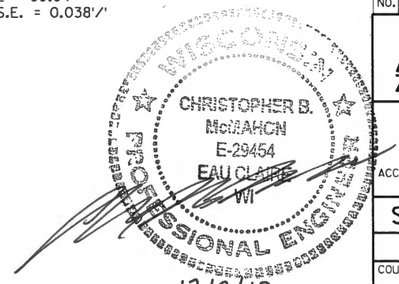
(STH 29 WB)

P.I. STA. 110+87.63 WB
△ = 20°09'40"
D = 1°00'00"
R = 5,729.58'
T = 1,018.59'
L = 2,016.12'
E = 89.84'
S.E. = 0.038'/'

FOR ELEVATION VIEW & DESIGN DATA SEE SHEET 2
FOR TYPICAL SECTION SEE SHEET 3

LIST OF DRAWINGS

1. GENERAL PLAN
2. ELEVATION & DESIGN DATA
3. TYPICAL SECTION
4. QUANTITIES AND NOTES
5. CONSTRUCTION STAGING
6. SUBSURFACE EXPLORATION
7. WEST ABUTMENT
8. WEST ABUTMENT WING 1 DETAILS
9. WEST ABUTMENT WING 2 DETAILS
10. WEST ABUTMENT DETAILS
11. EAST ABUTMENT
12. EAST ABUTMENT WING 3 DETAILS
13. EAST ABUTMENT WING 4 DETAILS
14. EAST ABUTMENT DETAILS
15. PIER 1
16. PIER 1 DETAILS
17. PIER 2
18. PIER 2 DETAILS
19. PIER 3
20. PIER 3 DETAILS
21. PIER 4
22. PIER 4 DETAILS
23. BEARING DETAILS
24. BEARING BLOCK AND SHIM DETAILS
25. FRAMING PLAN SPANS 1 & 2
26. FRAMING PLAN SPANS 3 & 4
27. FRAMING PLAN SPAN 5
28. EXISTING PIN AND HANGER RETROFIT
29. NEW GIRDER ELEVATION
30. NEW GIRDER ELEVATION
31. NEW GIRDER ELEVATION
32. FIELD SPLICE DETAILS
33. NEW GIRDER DETAILS
34. TYPICAL CROSS FRAME DETAILS
35. CROSS FRAME CF2 & ABUT. DIAPH. DETAILS
36. BLOCKING AND CAMBER DIAGRAM
37. TABLE OF DEFLECTIONS
38. DECK ELEVATIONS
39. SUPERSTRUCTURE
40. SUPERSTRUCTURE PLAN
41. SUPERSTRUCTURE PLAN
42. SUPERSTRUCTURE BILL OF BARS
43. SUPERSTRUCTURE SLAB OFFSETS
44. SUPERSTRUCTURE POURING DIAGRAM
45. MODULAR EXPANSION JOINT DETAILS
46. COVER PLATES FOR SINGLE SLOPE PARAPET
47. MODULAR EXPANSION JOINT DETAILS
48. FLOOR DRAIN TYPE 'GC'
49. SINGLE SLOPE PARAPET 32SS MODIFIED
50. SINGLE SLOPE PARAPET 42SS MODIFIED



BRIDGE OFFICE CONTACT:
WILLIAM DREHER
(608)-266-8489

CONSULTANT CONTACT:
CHRIS MCMAHON
(715)-834-3161

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ORIGINAL PLANS PREPARED BY
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Eau Claire, WI 54701
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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher KAR 12/04/13
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE B-37-79

STH 29 WB OVER WISCONSIN RIVER

COUNTY	~~TOWN/CITY~~ VILLAGE
MARATHON	ROTHSCHILD

DESIGN SPEC. REHABILITATION N/A

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
JAG	SML	KAZ	CBM

GENERAL PLAN

SHEET 1 OF 50
402

DATE:
DATE:
DATE:

CHECKED BY:
BACK CHECKED BY:
CORRECTED BY:

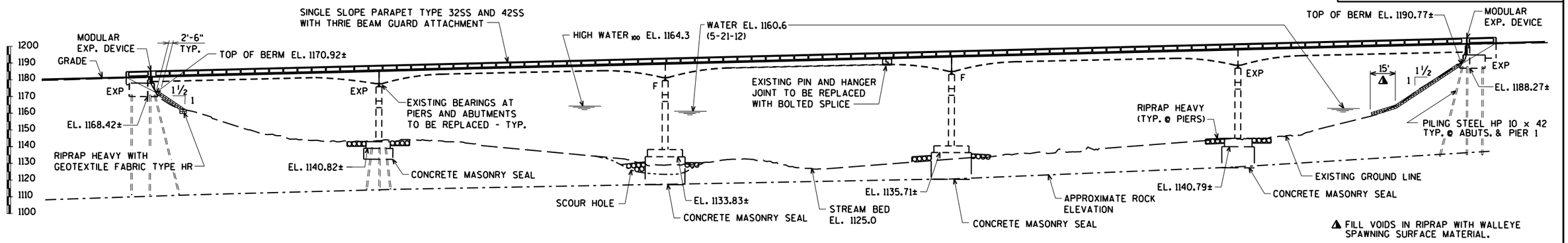
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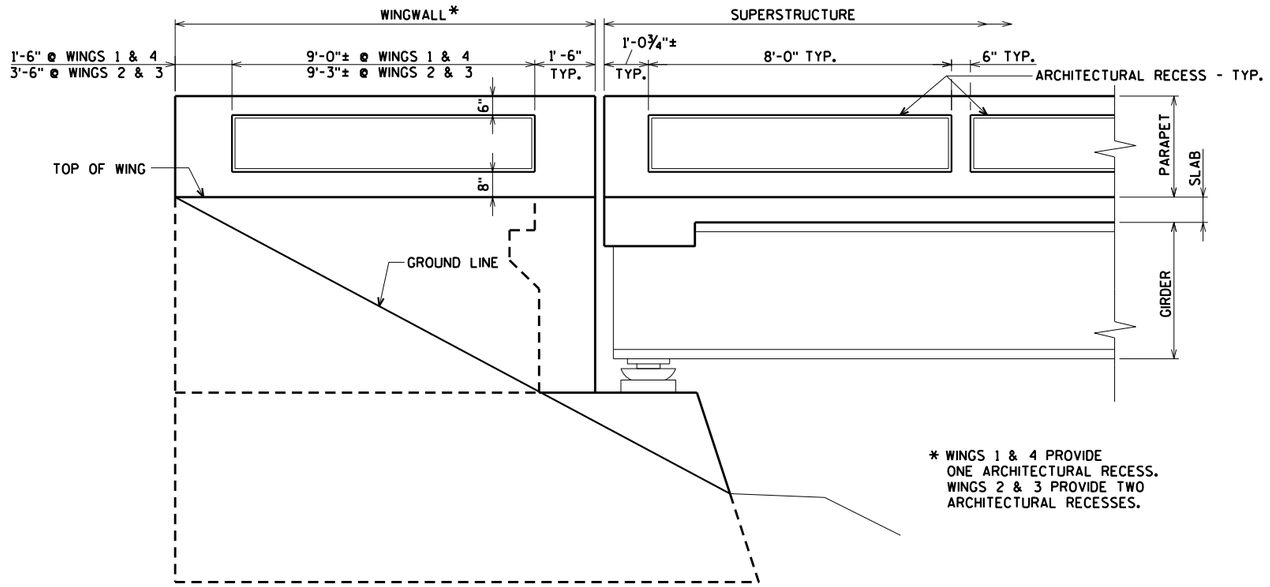
STATE PROJECT NUMBER

1053-02-75



⚠ FILL VOIDS IN RIPRAP WITH WALLEYE SPAWNING SURFACE MATERIAL.

ELEVATION
(LOOKING NORTH)



* WINGS 1 & 4 PROVIDE ONE ARCHITECTURAL RECESS. WINGS 2 & 3 PROVIDE TWO ARCHITECTURAL RECESSES.

ABUTMENT WINGWALLS

ARCHITECTURAL RECESS DETAIL

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HL-93/HS-20
INVENTORY RATING: HS-21
OPERATING RATING: HS-35
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV) = 250 KIPS

STRUCTURE IS DESIGNED FOR A FUTURE WEARING SURFACE OF 20 #/S.F.

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) — f'_y = 60,000 p.s.i.
HIGH STRENGTH STRUCTURAL STEEL (ASTM A709, GRADE 50) — f_y = 50,000 p.s.i.

HYDRAULIC DATA:

100 YEAR FLOOD

DRAINAGE AREA = 4,000 sq. mi.
WATERWAY AREA = 16,757 sq. ft.
V = 3.8 f.p.s.
Q_{100} = 64,000 c.f.s.
HIGH WATER100 EL. 1164.3
HIGH WATER2 EL. 1160.6
RDWY. OVERFLOW = N/A
SCOUR CRITICAL CODE = 5
NGVD 29 DATUM

FOUNDATION DATA:

WEST ABUTMENT TO BE SUPPORTED ON HP 10 x 42 STEEL PILING (WITH PILE POINTS) DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 180 TONS ǂ PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED LENGTH 65'-0".

PIER 1 TO BE SUPPORTED ON HP 10 x 42 STEEL PILING (WITH PILE POINTS) DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 180 TONS ǂ PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED LENGTH 30'-0".

PIERS 2, 3, & 4 TO BE SUPPORTED ON SOUND ROCK WITH A REQUIRED FACTORED BEARING RESISTANCE OF 20,000 psf.*** A GEOTECHNICAL ENGINEER WILL DETERMINE THE FACTORED BEARING RESISTANCE BY UNDERWATER INSPECTION PRIOR TO CONSTRUCTION OF THE PIER FOOTINGS AND SEALS.

EAST ABUTMENT TO BE SUPPORTED ON HP 10 x 42 STEEL PILING (WITH PILE POINTS) DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 180 TONS ǂ PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED LENGTH 55'-0".

ǂ 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.

*** THE FACTORED BEARING RESISTANCE IS THE VALUE USED FOR DESIGN.

TRAFFIC DATA:

STH 29

A.D.T. = 37,800 (2016)
A.D.T. = 46,300 (2036)
R.D.S. = 70 M.P.H.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-79

DRAWN BY KAZ | PLANS CK'D. CBM

ELEVATION & DESIGN DATA

SHEET 2 OF 50
403

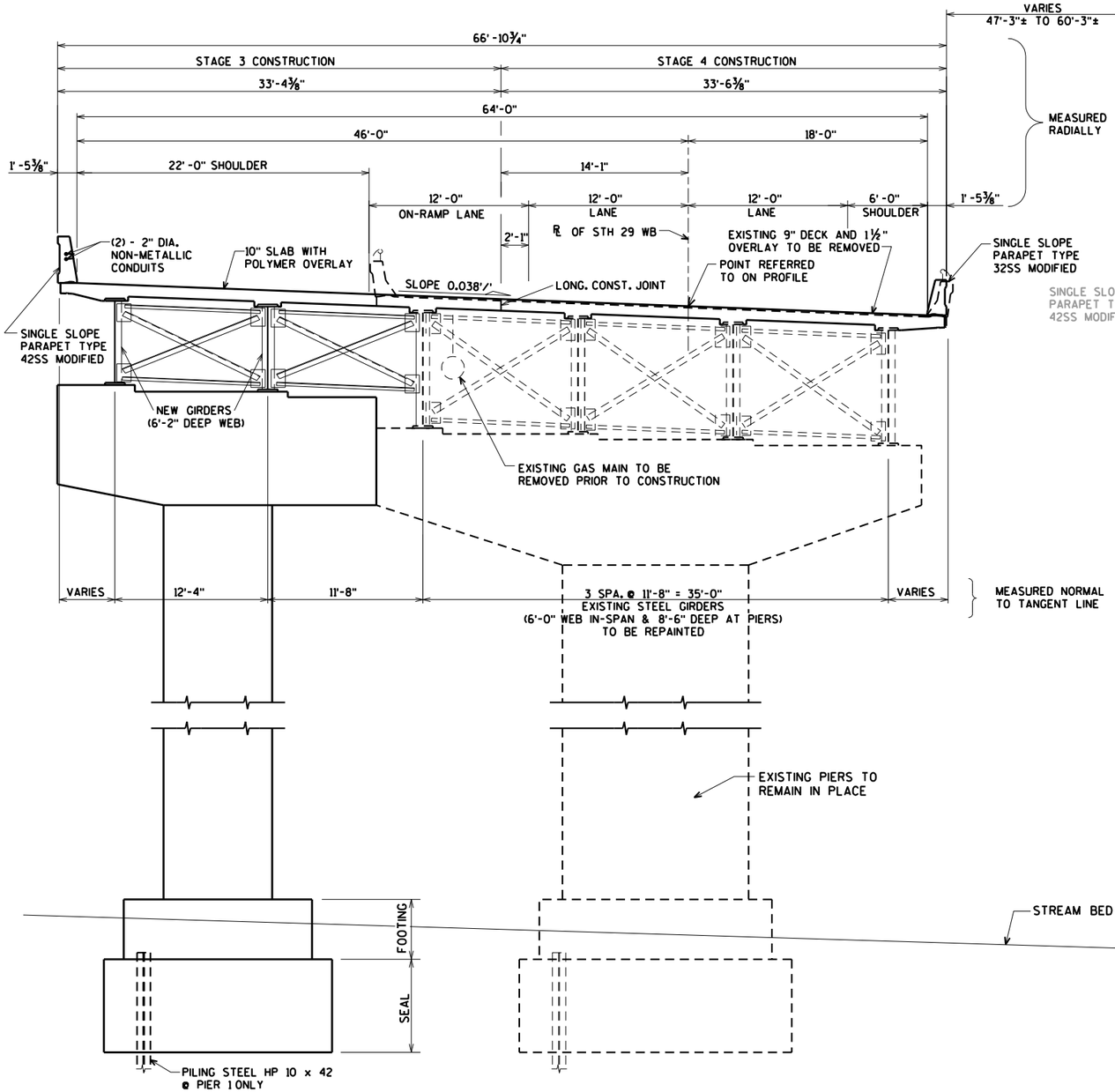
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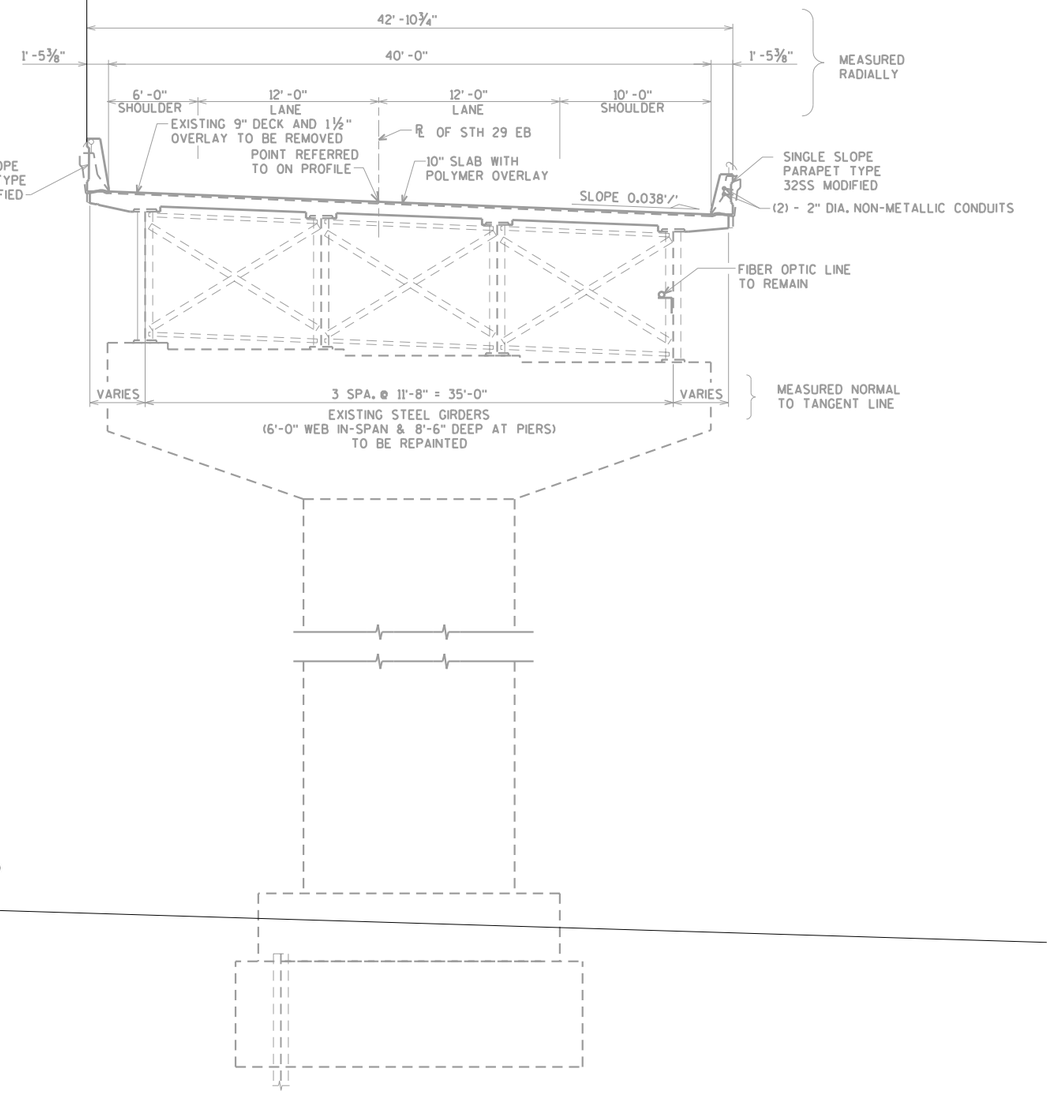
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STATE PROJECT NUMBER

1053-02-75



STRUCTURE B-37-79



STRUCTURE B-37-136

NOTE: THE PIER WIDENING WILL BE CONSTRUCTED DURING STAGE 2.

TYPICAL SECTION THRU BRIDGES

(LOOKING EAST)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-79

DRAWN BY KAZ | PLANS CK'D. CBM

TYPICAL SECTION

SHEET 3 OF 50
404

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$PRFNAME$
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STATE PROJECT NUMBER

1053-02-75

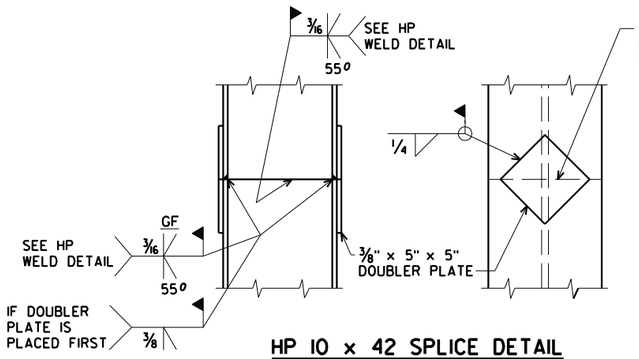
TOTAL ESTIMATED QUANTITIES

	BID ITEM NUMBER	BID ITEMS	UNIT	W. ABUT.	PIER 1	PIER 2	PIER 3	PIER 4	E. ABUT.	SUPER.	TOTAL
	203.0600.S.01	REMOVING OLD STRUCTURE OVER WATERWAY WITH MINIMAL DEBRIS STA. 116+05.60 WB	LS	-----	-----	-----	-----	-----	-----	-----	1
	206.1000.02	EXCAVATION FOR STRUCTURES BRIDGES B-37-79	LS	-----	-----	-----	-----	-----	-----	-----	1
	206.1050.S.01	UNDERWATER FOUNDATION INSPECTION B-37-79	EACH	-----	-----	1	1	1	-----	-----	3
	206.5000.01	COFFERDAMS B-37-79	LS	-----	-----	-----	-----	-----	-----	-----	1
	206.6000.S	TEMPORARY SHORING	SF	525	-----	-----	-----	-----	525	-----	1,050
	210.0100	BACKFILL STRUCTURE	CY	300	-----	-----	-----	-----	300	-----	600
	502.0100	CONCRETE MASONRY BRIDGES	CY	95	90	124	126	114	95	1,940	2,584
	502.1100	CONCRETE MASONRY SEAL	CY	-----	69	315	280	190	-----	-----	854
	502.3110.S.01	EXPANSION DEVICE MODULAR B-37-79	LS	-----	-----	-----	-----	-----	-----	-----	1
	502.3200	PROTECTIVE SURFACE TREATMENT	SY	20	-----	-----	-----	-----	20	720	760
	502.5005	MASONRY ANCHOR TYPE L NO. 5 BARS	EACH	119	-----	16	16	-----	119	-----	270
	502.5010	MASONRY ANCHOR TYPE L NO. 6 BARS	EACH	11	-----	-----	-----	-----	11	-----	22
	502.5020	MASONRY ANCHOR TYPE L NO. 8 BARS	EACH	-----	7	7	7	7	-----	-----	28
	502.5030	MASONRY ANCHOR TYPE L NO. 10 BARS	EACH	10	-----	-----	-----	-----	10	-----	20
	502.6105	MASONRY ANCHOR TYPE S 5/8-INCH	EACH	136	-----	-----	-----	-----	136	-----	272
	502.6110	MASONRY ANCHOR TYPE S 3/4-INCH	EACH	-----	-----	-----	-----	-----	6	-----	6
	505.0405	BAR STEEL REINFORCEMENT HS BRIDGES	LB	3,170	16,430	24,510	25,070	23,740	3,160	-----	96,080
	505.0605	BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB	7,180	-----	-----	-----	-----	7,200	441,560	455,940
	506.0605	STRUCTURAL STEEL HS	LB	-----	-----	-----	-----	-----	-----	547,000	547,000
	506.3025	WELDED STUD SHEAR CONNECTORS 7/8 x 8-INCH	EACH	-----	-----	-----	-----	-----	-----	2,946	2,946
	506.5000.01	BEARING ASSEMBLIES FIXED B-37-79	EACH	-----	-----	6	6	-----	-----	-----	12
	506.6000.01	BEARING ASSEMBLIES EXPANSION B-37-79	EACH	6	6	-----	-----	6	6	-----	24
	506.7050.S.02	REMOVING BEARINGS B-37-79	EACH	4	4	4	4	4	4	-----	24
①	509.1500	CONCRETE SURFACE REPAIR	SF	30	10	10	10	10	30	-----	100
	509.5100.S	POLYMER OVERLAY	SY	-----	-----	-----	-----	-----	-----	5,655	5,655
	514.0445	FLOOR DRAINS TYPE GC	EACH	-----	-----	-----	-----	-----	-----	3	3
	514.2625	DOWNSPOUT 6-INCH	LF	-----	-----	-----	-----	-----	-----	30	30
	516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	18	-----	-----	-----	-----	18	-----	36
②	517.0600.01	PAINTING EPOXY SYSTEM B-37-79	LS	-----	-----	-----	-----	-----	-----	-----	1
	517.0900.S.01	PREPARATION AND COATING OF TOP FLANGES B-37-79	LS	-----	-----	-----	-----	-----	-----	-----	1
②	517.1800.S.01	STRUCTURE REPAINTING RECYCLED ABRASIVE B-37-79	LS	-----	-----	-----	-----	-----	-----	-----	1
	517.4000.S.01	CONTAINMENT AND COLLECTION OF WASTE MATERIALS B-37-79	LS	-----	-----	-----	-----	-----	-----	-----	1
	517.4500.S.01	NEGATIVE PRESSURE CONTAINMENT AND COLLECTION OF WASTE MATERIALS B-37-79	LS	-----	-----	-----	-----	-----	-----	-----	1
	517.6001.S	PORTABLE DECONTAMINATION FACILITY	EACH	-----	-----	-----	-----	-----	-----	-----	1
	550.0500	PILE POINTS	EACH	9	25	-----	-----	-----	9	-----	43
	550.1100	PILING STEEL HP 10-INCH x 42 LB	LF	585	750	-----	-----	-----	495	-----	1,830
	606.0300	RIPRAP HEAVY	CY	170	175	210	205	190	250	-----	1,200
	612.0406	PIPE UNDERDRAIN WRAPPED (6-INCH)	LF	65	-----	-----	-----	-----	65	-----	130
	614.0150	ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	2	-----	-----	-----	-----	2	-----	4
	645.0120	GEOTEXTILE FABRIC TYPE HR	SY	315	-----	-----	-----	-----	425	-----	740
	652.0125	CONDUIT RIGID METALLIC 2-INCH	LF	70	-----	-----	-----	-----	70	-----	140
	652.0225	CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH	LF	-----	-----	-----	-----	-----	-----	1,570	1,570
	653.0222	JUNCTION BOXES 18X12X6-INCH	EACH	-----	-----	-----	-----	-----	-----	4	4
③	SPV.0035.01	CONCRETE MASONRY DECK PATCHING	CY	-----	-----	-----	-----	-----	-----	25	25
	SPV.0035.01	REUSE OF LOW-LEVEL CONTAMINATED MATERIAL	CY	-----	-----	-----	-----	255	-----	-----	255
	SPV.0060.01	PRECAST CONCRETE BEARING BLOCK	EACH	-----	-----	4	4	-----	-----	-----	8
	SPV.0060.02	PREPARATION AND COATING OF EXISTING STIFFENERS, HINGES AND WEBS	EACH	-----	-----	-----	-----	-----	-----	40	40
	SPV.0060.15	EXISTING PIN AND HANGER RETROFIT	EACH	-----	-----	-----	-----	-----	-----	4	4
	SPV.0105.01	TEMPORARY RIVER ACCESS	LS	-----	-----	-----	-----	-----	-----	-----	1
	SPV.0195.01	WALLEYE SPAWNING SURFACE MATERIAL	TON	-----	-----	-----	-----	-----	20	-----	20
		NON-BID ITEMS									
		FILLER	SIZE	-----	-----	-----	-----	-----	-----	-----	1/2" & 3/4"
		BRIDGE SEAT PROTECTION									

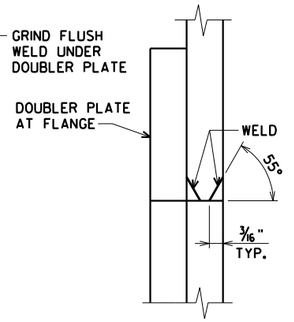
① UNDISTRIBUTED QUANTITY FOR REPAIRS AS DIRECTED BY THE ENGINEER, IF NECESSARY.

② ALL STRUCTURAL STEEL SHALL BE PAINTED. PAINT COLOR SHALL BE GRAY = 26293 PER FEDERAL COLOR STD. 595B.

③ UNDISTRIBUTED QUANTITY FOR MAINTAINING EXISTING BRIDGE DECK UNTIL FULL DECK REMOVAL, AS DIRECTED BY THE ENGINEER



HP 10 x 42 SPLICE DETAIL



HP WELD DETAIL

FLANGE SHOWN, WEB SIMILAR

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

THE FIRST DIGIT OF A THREE DIGIT BAR NO. AND THE FIRST TWO DIGITS OF A FOUR DIGIT BAR NO. SIGNIFIES THE BAR SIZE.

THE SLOPE OF THE FILL IN FRONT OF THE NEW ABUTMENTS SHALL BE COVERED WITH RIPRAP HEAVY AND GEOTEXTILE FABRIC TYPE HR TO THE EXTENT SHOWN ON THE GENERAL PLAN SHEET AND IN THE ABUTMENT DETAILS.

THE EXISTING GROUNDLINE SHALL BE THE UPPER LIMIT FOR EXCAVATION FOR STRUCTURES.

AT ABUTMENTS ALL SPACES EXCAVATED AND NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH BACKFILL STRUCTURE.

PROTECTIVE SURFACE TREATMENT IS TO BE APPLIED TO THE TOP, INSIDE FACES AND ENDS OF PARAPETS.

POLYMER OVERLAY IS TO BE APPLIED TO THE TOP OF DECK.

UTILIZE EXISTING BAR STEEL REINFORCEMENT WHERE SHOWN AND EXTEND 24 BAR DIAMETERS INTO NEW WORK, UNLESS SPECIFIED OTHERWISE.

DIMENSIONS SHOWN ARE BASED ON ORIGINAL STRUCTURE PLANS.

ALL CONCRETE REMOVAL SHALL BE DEFINED BY A 1" DEEP SAW CUT.

ALL FIELD CONNECTIONS SHALL BE MADE WITH 3/4" DIAMETER FRICTION TYPE HIGH-TENSILE STRENGTH BOLTS UNLESS SHOWN OR NOTED OTHERWISE.

VARIATIONS TO THE NEW GRADE LINE OVER 1/4" MUST BE SUBMITTED BY THE FIELD ENGINEER TO THE STRUCTURES DESIGN SECTION FOR REVIEW.

JOINT FILLER SHALL CONFORM TO THE REQUIREMENTS OF A.A.S.H.T.O. DESIGNATION M 153, TYPE I, II OR III OR A.A.S.H.T.O. DESIGNATION M 213.

THE EXISTING STRUCTURE B-37-79 IS A FIVE SPAN STEEL PLATE GIRDER BRIDGE, 795'-4" LONG x 43'-10" WIDE. THE DECK AND PARAPETS SHALL BE REPLACED.

EXISTING ABUTMENTS AND PIERS TO REMAIN IN PLACE AS SHOWN AND INCORPORATED INTO NEW CONSTRUCTION.

THE MINIMUM CONCRETE HAUNCH SHALL BE 1 1/4" FOR DESIGN CALCULATIONS AND THE HAUNCH CONCRETE QUANTITY IS BASED ON AN AVERAGE DEPTH OF 2 1/2". THE AVERAGE HAUNCH DEPTHS ARE THE MAXIMUM QUANTITY FOR WHICH THE CONTRACTOR WILL BE PAID.

AT EXISTING GIRDERS, CONTRACTOR IS TO CORE DECK AT 0.3, 0.5, & 0.7 POINTS, BEFORE REMOVING DECK, TO OBTAIN EXISTING TOP OF STEEL ELEVATIONS. EXISTING TOP OF STEEL ELEVATIONS SHALL BE TAKEN AGAIN AFTER DECK REMOVAL. DATA TO BE USED TO DETERMINE GIRDER DEFLECTIONS ASSOCIATED WITH REMOVAL OF EXISTING DECK FOR COMPARISON TO THE THEORETICAL DEFLECTIONS. COST TO BE CONSIDERED INCIDENTAL TO "REMOVING OLD STRUCTURE".

THE CONTRACTOR SHALL SUPPLY A NEW NAME PLATE IN ACCORDANCE WITH SECTION 502.3.11 OF THE STANDARD SPECIFICATIONS AND THE STANDARD DETAIL DRAWINGS. NAME PLATE TO SHOW ORIGINAL CONSTRUCTION YEAR OF 1972.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-79

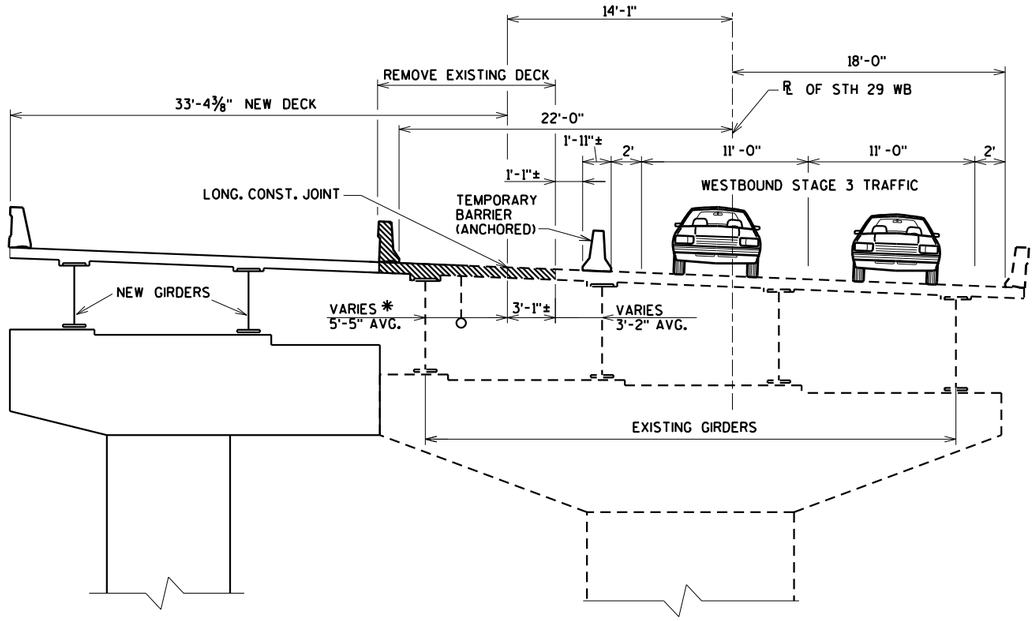
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QUANTITIES AND NOTES

SHEET 4 OF 50
405

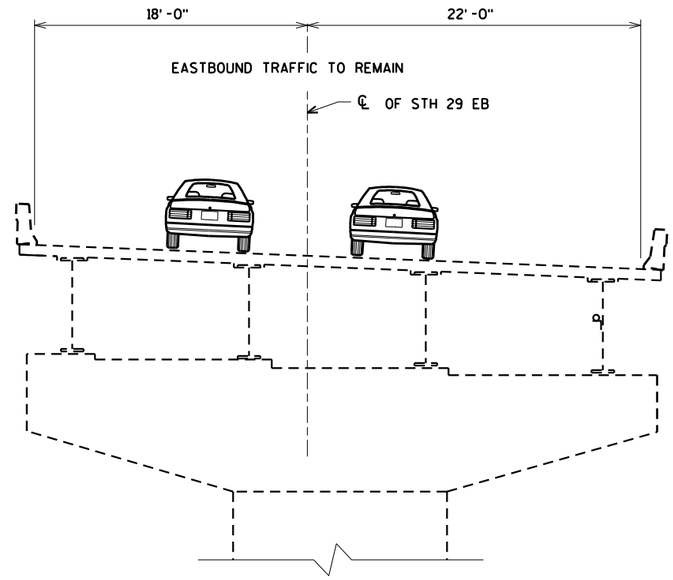
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STRUCTURE B-37-79

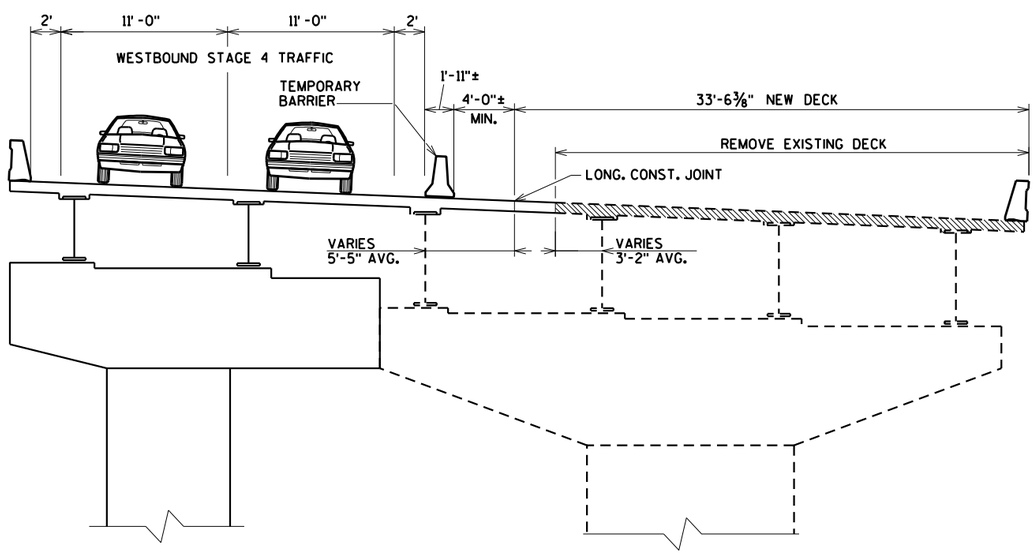
NOTE: THE PIER WIDENING WILL BE CONSTRUCTED DURING STAGE 2.



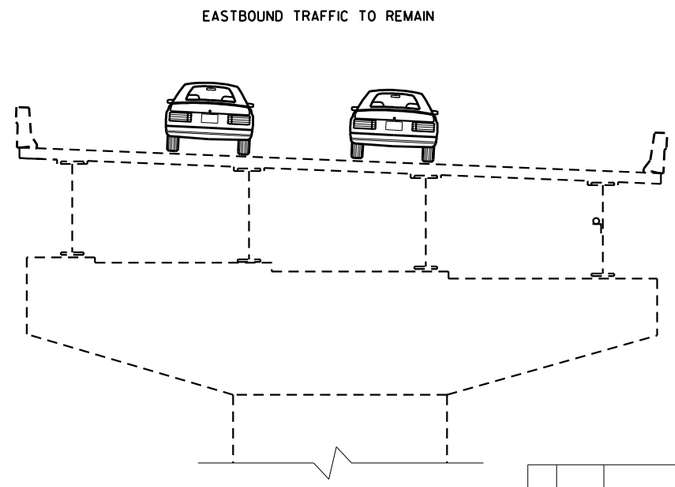
STRUCTURE B-37-136

STAGE 3: WIDEN BRIDGE B-37-79 (STH 29 WB)

(LOOKING EAST)



STRUCTURE B-37-79



STRUCTURE B-37-136

STAGE 4: REPLACE DECK ON REMAINING PORTION OF BRIDGE B-37-79 (STH 29 WB)

(LOOKING EAST)

* TEMPORARILY BRACE LOWER FLANGE OF THE EXISTING GIRDERS PER STANDARD SPECIFICATIONS SECTION 502.3.2.3 UNTIL THE DECK IS CONSTRUCTED. (SEE SHEET 44 ALSO.)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-79

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CONSTRUCTION STAGING

SHEET 5 OF 50
406

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8

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U:\41-0637.00 - STH 29 over WI River\B-37-79\BRIDGE\05_B-37-79 staging.dgn

U:\41-0637.00 - STH 29 over WI River\B-37-79\BRIDGE\06_B-37-79 SOILS.dgn
$PRFNAME$

STATE PROJECT NUMBER

1053-02-75

ABBREVIATIONS

F — FINE M — MEDIUM C — COARSE
WS — WEATHERED SO — SOUND

MATERIAL SYMBOLS

TOPSOIL SILT SANDSTONE
SAND PEAT LIMESTONE
GRAVEL CLAY IGNEOUS ROCK

LEGEND OF PROBING

PROBING NO.
STA.
ELEVATION
7 AVERAGE BLOWS PER FOOT
REFUSAL 95/6

95/6=95 BLOWS FOR 6" PENETRATION
PROBING TAKEN WITH A 350# WT. FALLING 18" ON A 2" O.D. POINT.

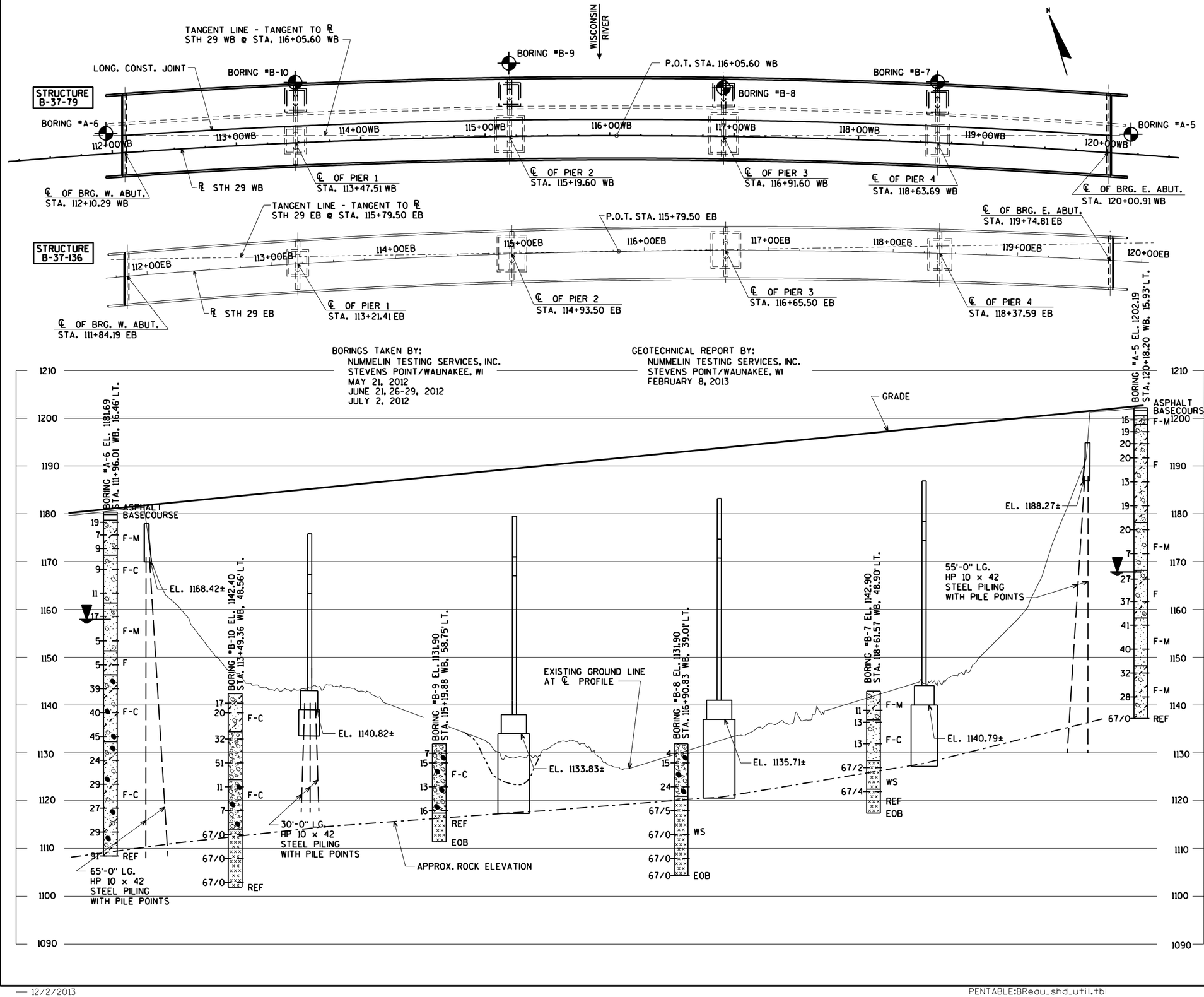
LEGEND OF BORING

BORING NO.
ELEV.
STA.
UNCONFINED STRENGTH → 7.7 7
BLOWS PER FT. USING 140# WT. FALLING 30"
WASH SAMPLE
SHELBY TUBE — S.T.
GROUND WATER ELEVATION
NO GROUND WATER OBSERVED ABOVE THIS ELEVATION
SANDY GRAVEL
F. BOULDERS OR COBBLES
SAND
SILTY CLAY
SO LIMESTONE

UNLESS OTHERWISE SPECIFIED, THE BLOWS PER FOOT AT THE LOCATIONS INDICATED ARE BASED ON DRIVING A 2" O.D. X 1.4" I.D. SPLIT SPOON SAMPLER WITH A 140# HAMMER HAVING A FREE FALL OF 30". THE BLOW COUNT IS TAKEN IN UNDISTURBED SOIL IMMEDIATELY BELOW A CASED OR OPEN HOLE ELIMINATING SIDE FRICTION ON THE DRIVE PIPE.

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

TO OBTAIN RELATIVE DATA CONCERNING THE CHARACTER OF MATERIAL IN AND UPON WHICH THE FOUNDATION MIGHT BE BUILT, BORINGS AND/OR SOUNDINGS WERE MADE AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING. THE DATA PRESENTED HEREIN REPRESENTS THE FINDINGS OF THE SUBSURFACE EXPLORATIONS MADE. HOWEVER, BECAUSE THE DEPTHS INVESTIGATED ARE LIMITED AND THE AREA OF THE BORINGS AND/OR SOUNDINGS IS VERY SMALL IN RELATION TO THE ENTIRE AREA, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT CONDITIONS BELOW THE DEPTHS INVESTIGATED OR THAT THE CLASSIFICATION OF MATERIAL ENCOUNTERED IN THESE INVESTIGATIONS IS NECESSARILY TYPICAL OF THE ENTIRE SITE.



NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-79

DRAWN BY CJM/CLS PLANS CK'D. CBM

SUBSURFACE EXPLORATION

SHEET 6 OF 50
407

8

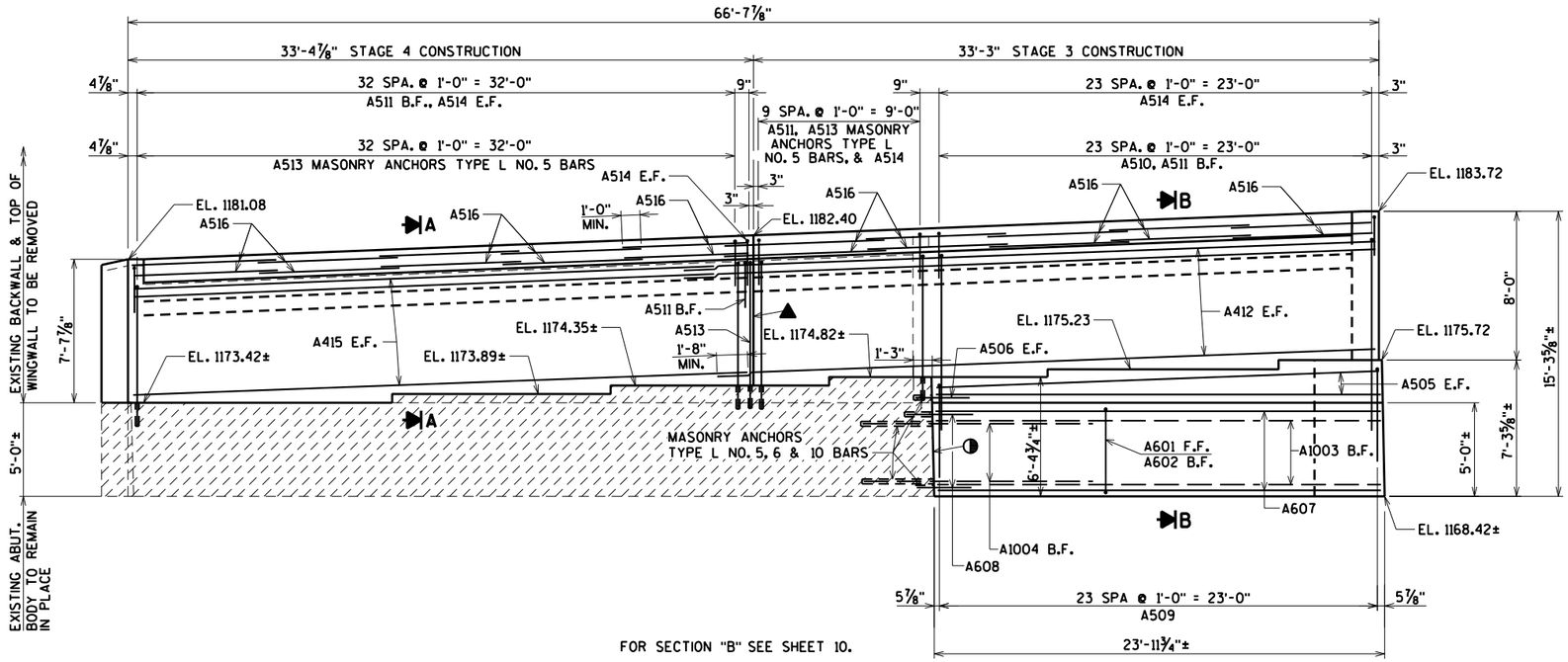
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12/2/2013

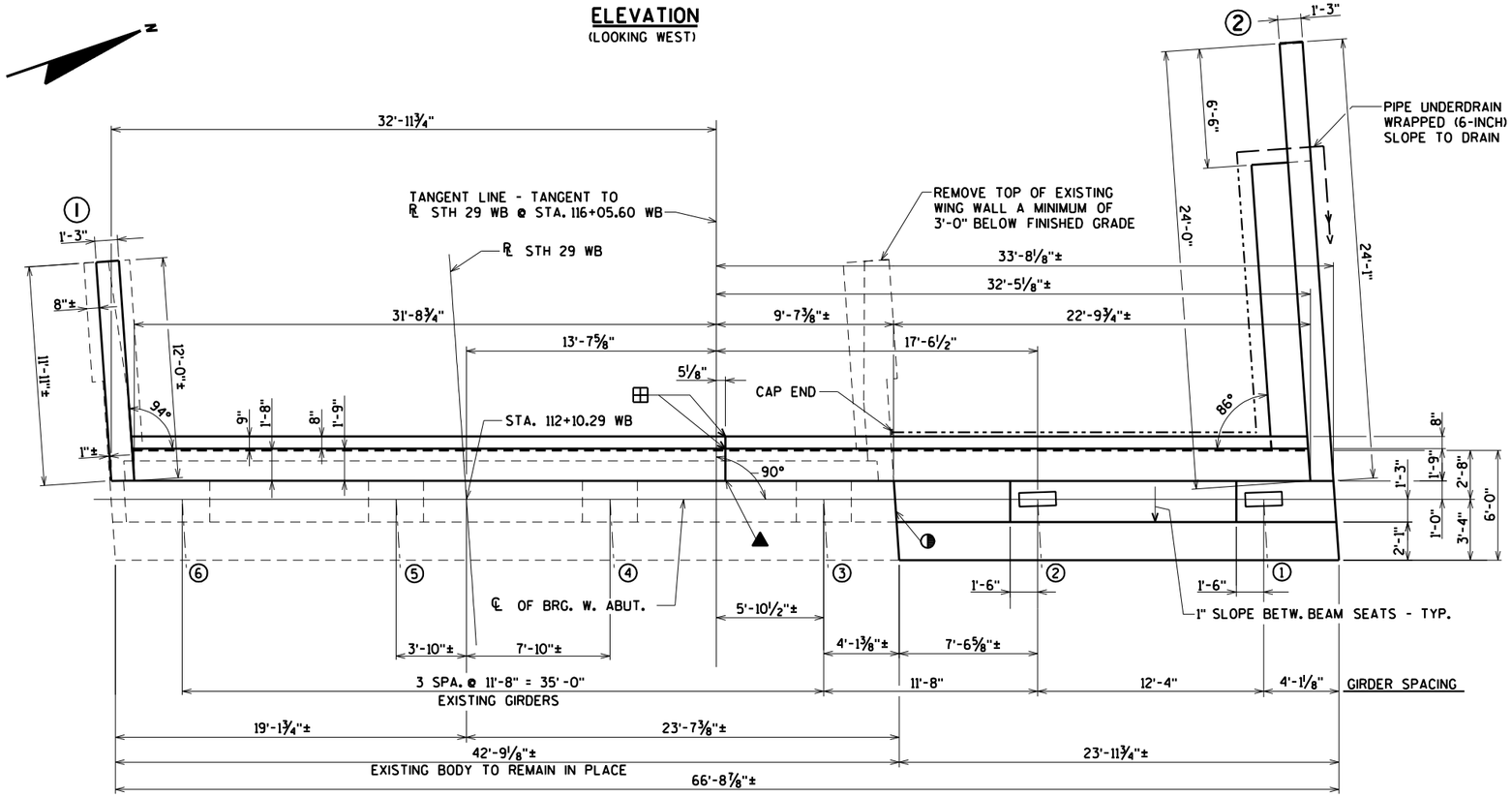
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STATE PROJECT NUMBER

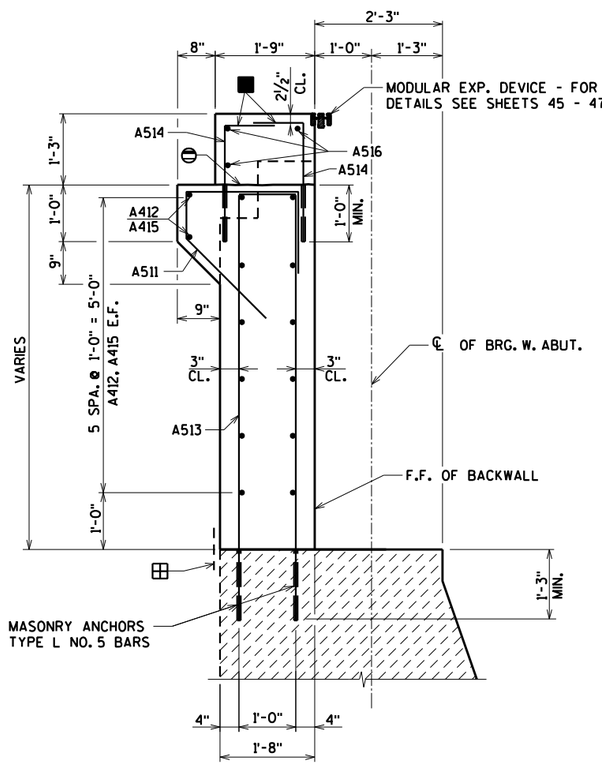
1053-02-75



ELEVATION
(LOOKING WEST)



PLAN



SECTION A

■ ANCHOR INTO PLACE W/ EPOXY RESIN AFTER MODULAR JOINT IS IN POSITION. FOLLOW STD. SPEC. FOR MASONRY ANCHOR TYPE S WITH A MIN. PULLOUT CAPACITY OF 20 KIPS.

◑ ROUGHEN SURFACE OF CONCRETE ¼" DEEP MIN. ALL AREAS OF NEW TO EXISTING CONCRETE CONTACT.

▲ VERT. CONST. JOINT KEYWAY FORMED BY A BEVELED 2" x 8" WITH A ¾" 'V' GROOVE ON FRONT FACE.

⊖ CONST. JOINT - POUR CONCRETE ABOVE THIS JOINT AFTER SUPERSTRUCTURE IS IN PLACE. STRIKE OFF AND LEAVE ROUGH.

⊞ 18" RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACK FACE OF ABUTMENT AND WINGS.

F.F. DENOTES FRONT FACE
B.F. DENOTES BACK FACE
E.F. DENOTES EACH FACE

WORK THIS SHEET WITH SHEETS 8 - 10

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-79

DRAWN BY KAZ | PLANS CK'D. CBM

WEST ABUTMENT

SHEET 7 OF 50
408

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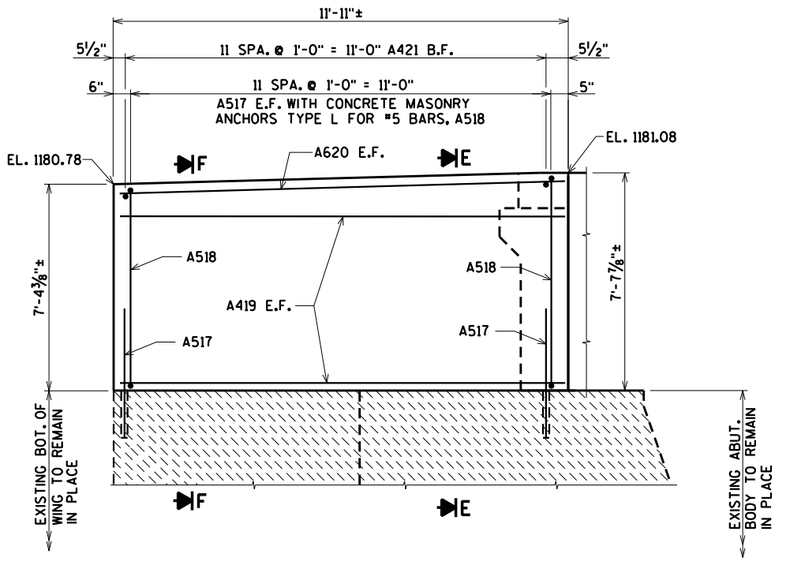
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8

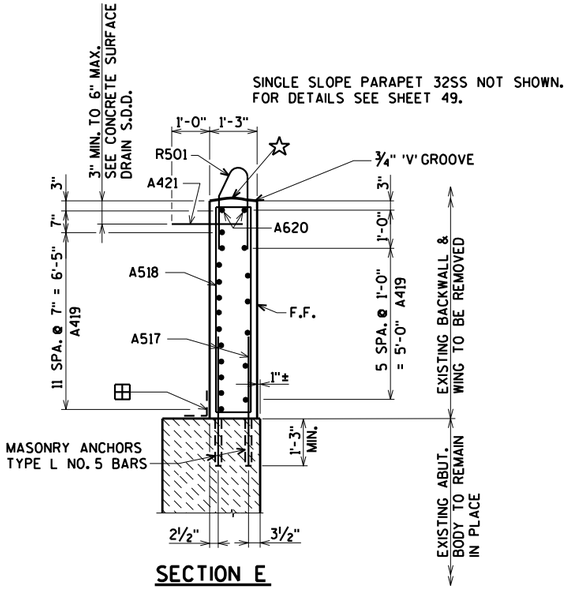
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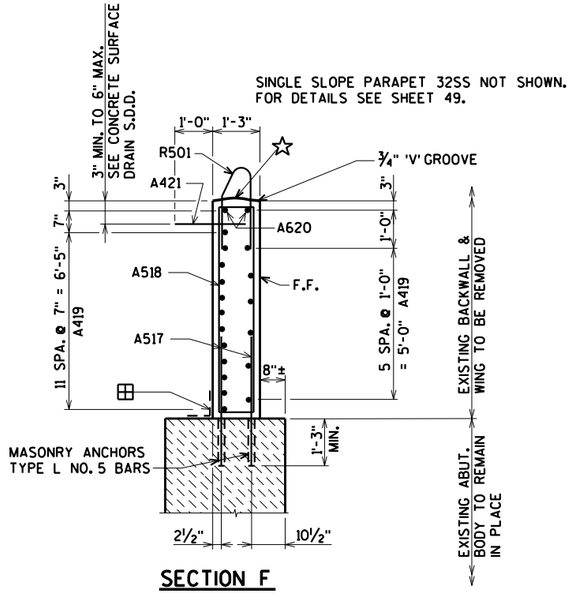
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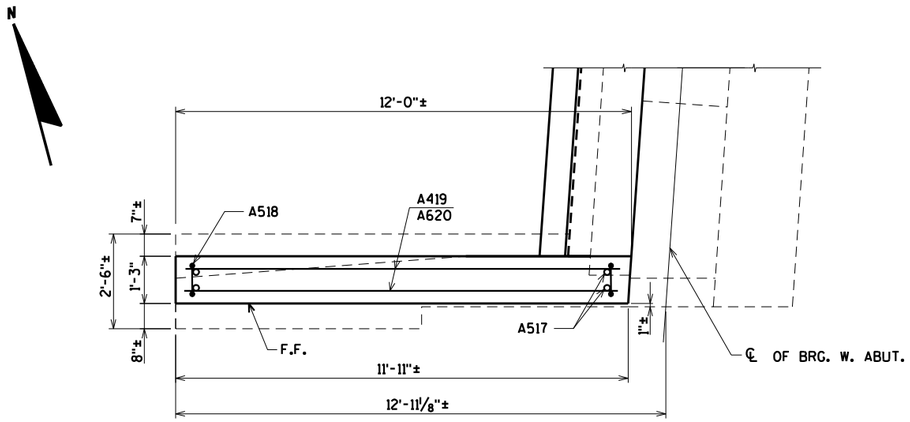
ELEVATION - WING 1



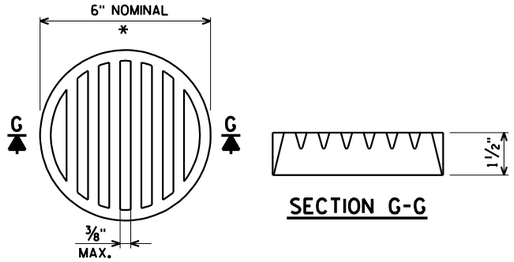
SECTION E



SECTION F



PLAN - WING 1



SECTION G-G

* DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING. ORIENT SO SLOTS ARE VERTICAL.

THE RODENT SHIELD, PIPE COUPLING AND SCREWS SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".

THE RODENT SHIELD SHALL BE PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALLY AVAILABLE AS A FLOOR STRAINER. A PIPE COUPLING IS REQUIRED FOR THE ATTACHMENT OF THIS SHIELD TO THE EXPOSED END OF THE PIPE UNDERDRAIN. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 x 1-INCH SHEET METAL SCREWS.

RODENT SHIELD DETAIL

☆ STRIKE OFF AS SHOWN AND LEAVE ROUGH.

⊞ 18" RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE OF ABUTMENT.

F.F. DENOTES FRONT FACE

B.F. DENOTES BACK FACE

E.F. DENOTES EACH FACE

WORK THIS SHEET WITH SHEETS 7 & 9 - 10

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
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STRUCTURE B-37-79

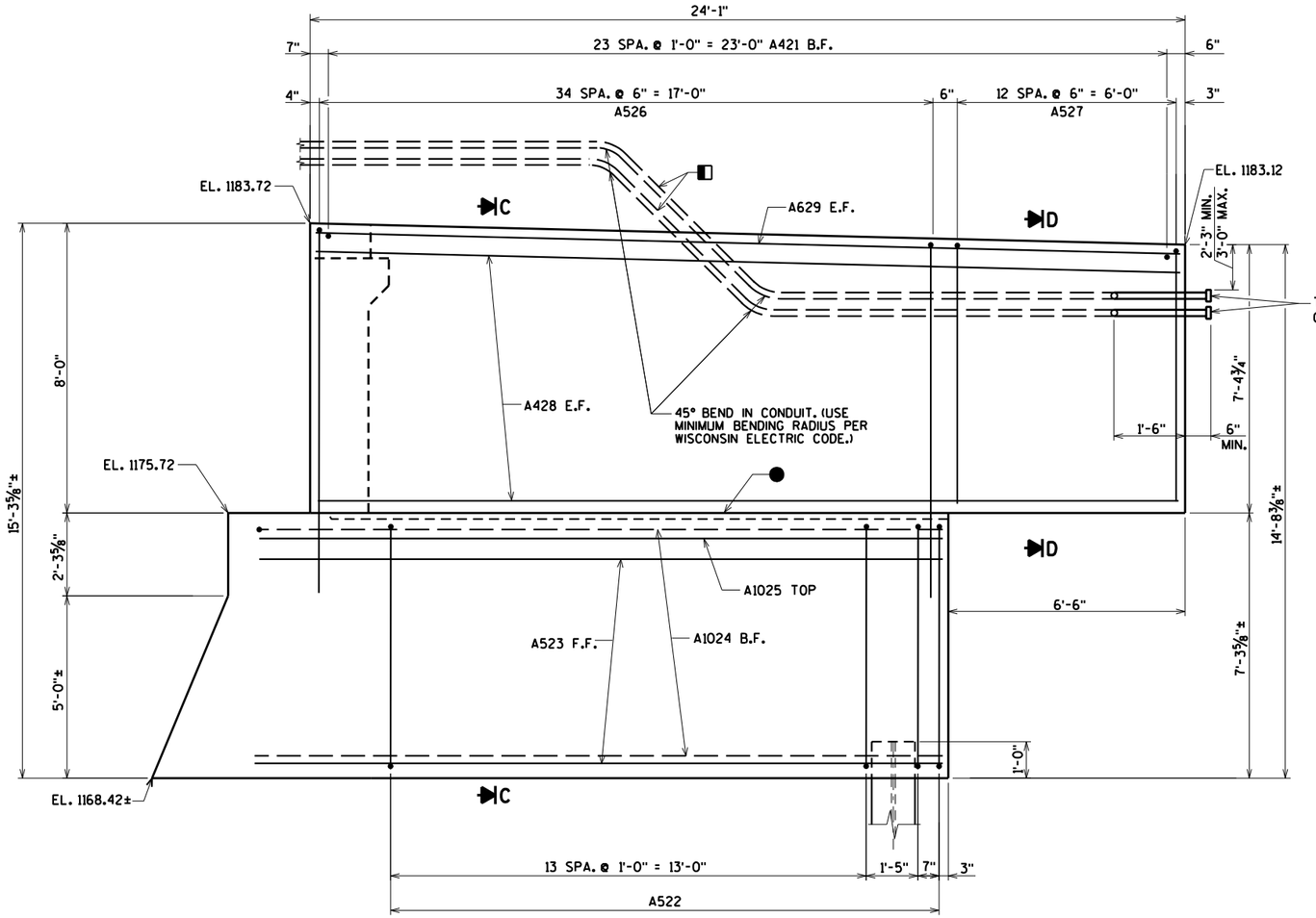
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WEST ABUTMENT
WING 1 DETAILS

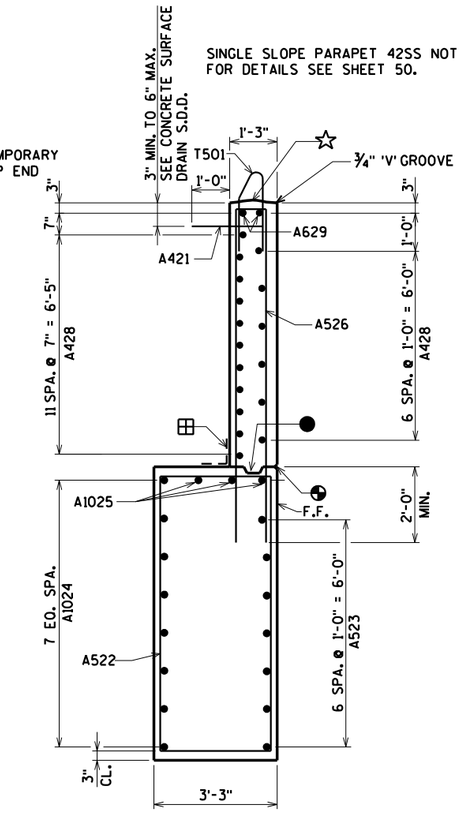
SHEET 8 OF 50
409

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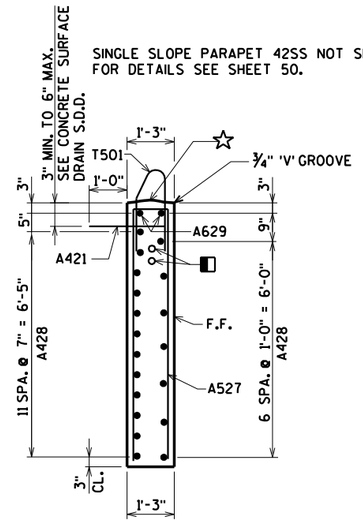
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ELEVATION - WING 2



SECTION C



SECTION D

☆ STRIKE OFF AS SHOWN AND LEAVE ROUGH.

● OPT. KEYED CONST. JOINT - FORMED BY A SURFACED BEVELED 2" x 6".

◒ ¾" 'V' GROOVE ON F.F. OF WINGWALL.

⊞ 18" RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE OF ABUTMENT.

F.F. DENOTES FRONT FACE

B.F. DENOTES BACK FACE

E.F. DENOTES EACH FACE

◧ USE 2" DIA. RIGID NONMETALLIC CONDUIT EXCEPT AT EXPANSION FITTING. AT EXPANSION FITTING USE RIGID METALLIC CONDUIT 3'-0" INTO PARAPET ON DECK AND WING SIDES OF THE JOINT OPENING.

WORK THIS SHEET WITH SHEETS 7 - 8 & 10

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-79

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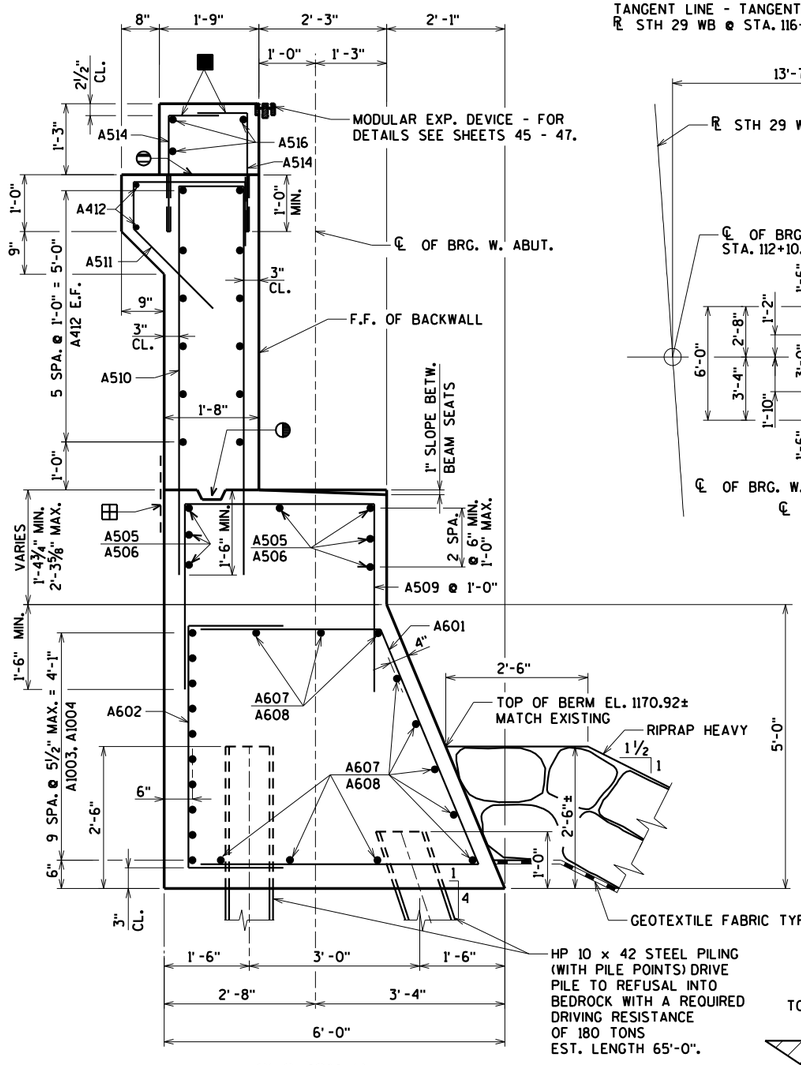
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WEST ABUTMENT WING 2 DETAILS

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STATE PROJECT NUMBER

1053-02-75



SECTION B

FOR LOCATION OF SECTION B SEE SHEET 7

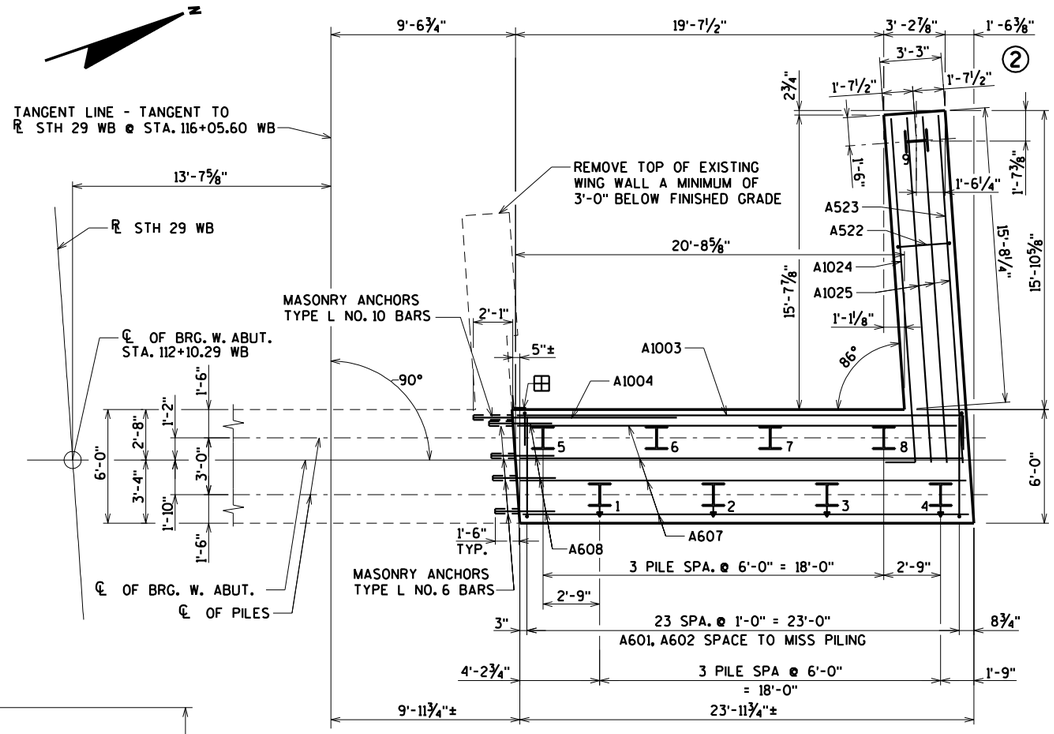
■ ANCHOR INTO PLACE W/ EPOXY RESIN AFTER MODULAR JOINT IS IN POSITION. FOLLOW STD. SPEC. FOR MASONRY ANCHOR TYPE S WITH A MIN. PULLOUT CAPACITY OF 20 KIPS.

⊖ CONST. JOINT - POUR CONCRETE ABOVE THIS JOINT AFTER SUPERSTRUCTURE IS IN PLACE. STRIKE OFF AND LEAVE ROUGH.

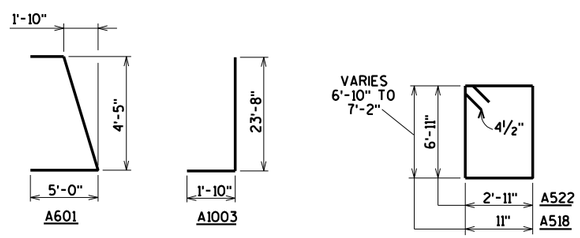
◑ KEYED CONST. JOINT - FORMED BY A SURFACED BEVELED 2" x 6".

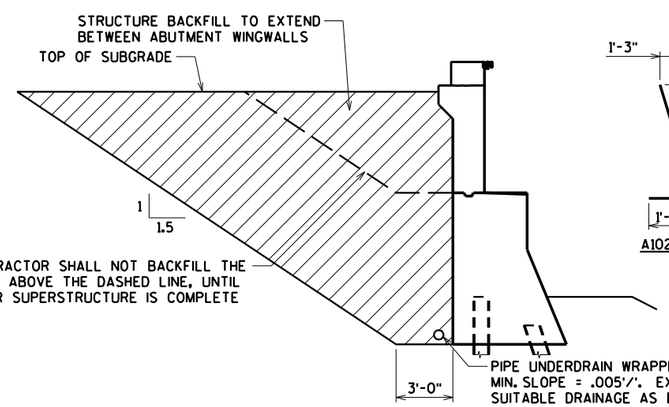
⊞ 18" RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE OF ABUTMENT.

F.F. DENOTES FRONT FACE
B.F. DENOTES BACK FACE
E.F. DENOTES EACH FACE

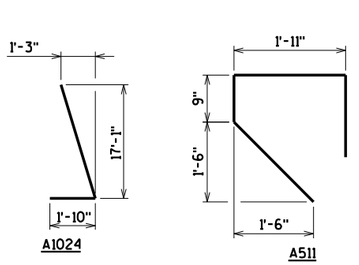


PILE LAYOUT





PIPE UNDERDRAIN DETAIL



BAR NO.	DIM. "A"	DIM. "B"
A602	4'-5"	2'-1"
A509	3'-4"	3'-11"
A510	1'-2"	8'-3"
A513	1'-3"	7'-9"
A526	11"	9'-10"
A527	11"	6'-11"

BILL OF BARS

WEIGHTS INCLUDE PARAPET STEEL SHOWN ON SHEETS 49 & 50.

	BAR NO.	COATED BAR	NO. REQUIRED STAGE 3	NO. REQUIRED STAGE 4	LENGTH	BENT BAR	BUNDLED BAR SERIES	7,180# COATED 3,170# UNCOATED LOCATION
	A601		24	--	12-10	X		BODY VERT. F.F.
	A602		24	--	8-3	X		BODY VERT. B.F.
	A1003		10	--	25-3	X		BODY HORIZ. B.F.
●	A1004		10	--	9-4			BODY HORIZ. B.F. DOWELS
	A505		7	--	23-9			BODY HORIZ.
●	A506		7	--	3-0			BODY HORIZ. DOWELS
	A607		11	--	23-9			BODY HORIZ.
●	A608		11	--	3-7			BODY HORIZ. DOWELS
	A509		24	--	11-0	X		BODY VERT.
	A510	X	24	--	17-8	X		BACKWALL VERT.
	A511	X	34	34	6-0	X		BACKWALL VERT.
	A412	X	14	--	34-8			BACKWALL HORIZ. E.F.
●	A513	X	10	34	16-6	X		BACKWALL VERT.
▲	A514	X	68	68	2-11	X		BACKWALL VERT. DOWELS
	A415	X	--	14	32-11			BACKWALL HORIZ. E.F.
	A516	X	15	15	8-0			BACKWALL HORIZ. E.F.
●	A517	X	--	24	3-10			WING 1 DOWELS E.F.
	A518	X	--	12	16-4	X	⊗	WING 1 VERT.
	A419	X	--	18	11-7			WING 1 HORIZ. E.F.
	A620	X	--	2	11-7			WING 1 HORIZ. E.F. TOP
	A421	X	24	12	2-0			WING 1 & 2 DOWELS B.F.
	A522	X	16	--	20-2	X		WING 2 VERT.
	A523	X	7	--	17-5			WING 2 HORIZ. F.F.
	A1024	X	8	--	18-8	X		WING 2 HORIZ. B.F.
	A1025	X	3	--	17-5			WING 2 HORIZ.
	A526	X	35	--	20-4	X		WING 2 VERT.
	A527	X	13	--	14-7	X		WING 2 VERT.
	A428	X	19	--	23-6			WING 2 HORIZ. E.F.
	A629	X	2	--	23-6			WING 2 HORIZ. E.F. TOP

BENDING DIMENSIONS ARE OUT TO OUT OF BARS.

⊗ LENGTH SHOWN FOR BAR IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.

● MASONRY ANCHORS TYPE L

▲ MASONRY ANCHORS TYPE S 5/8-INCH

BAR SERIES TABLE

BAR MARK	NO REQ'D.	LENGTH
A518	1 SERIES OF 12	16'-0" TO 16'-8"

BUNDLE AND TAG EACH SERIES SEPARATELY.

DENOTES BATTERED PILE
BATTER 3"/FT. IN DIRECTION SHOWN

FOR PILE SPLICE DETAIL SEE SHEET 4

WORK THIS SHEET WITH SHEETS 7 - 9

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-79

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WEST ABUTMENT DETAILS

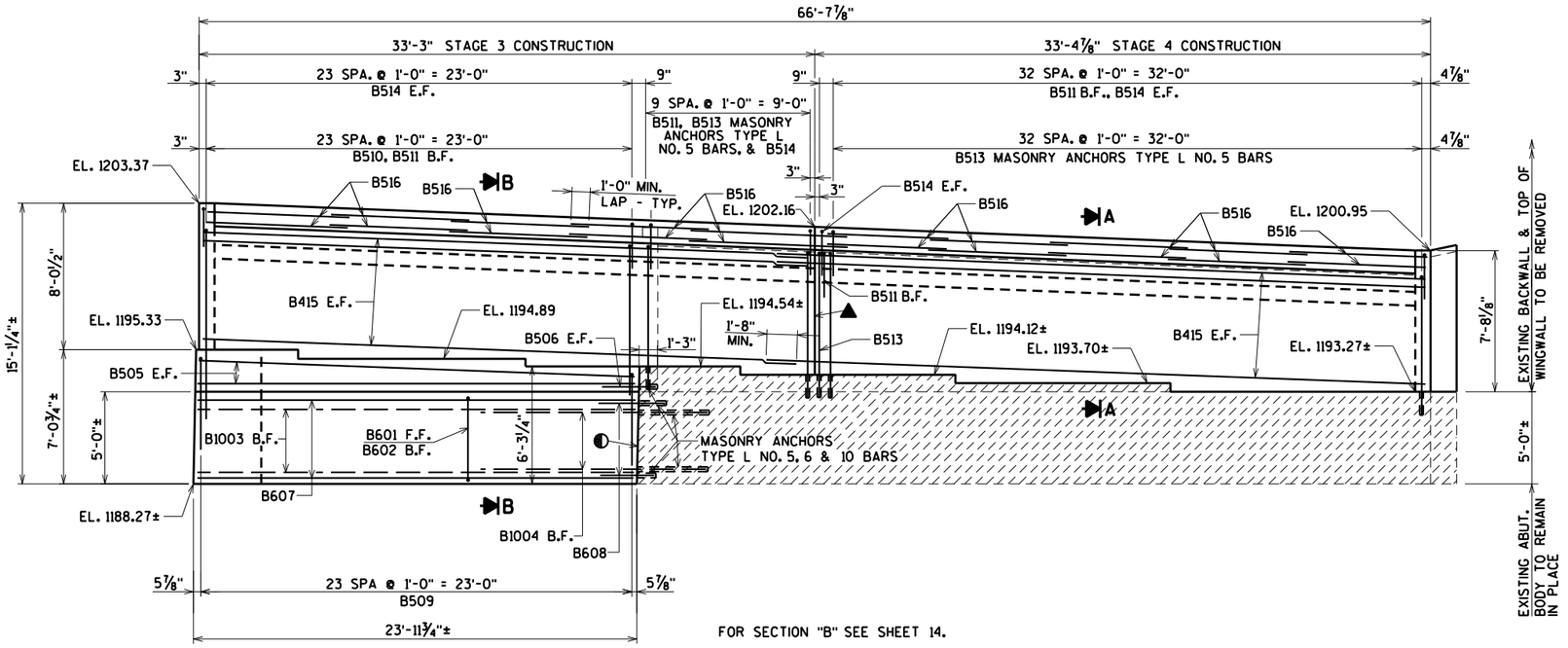
SHEET 10 OF 50
411

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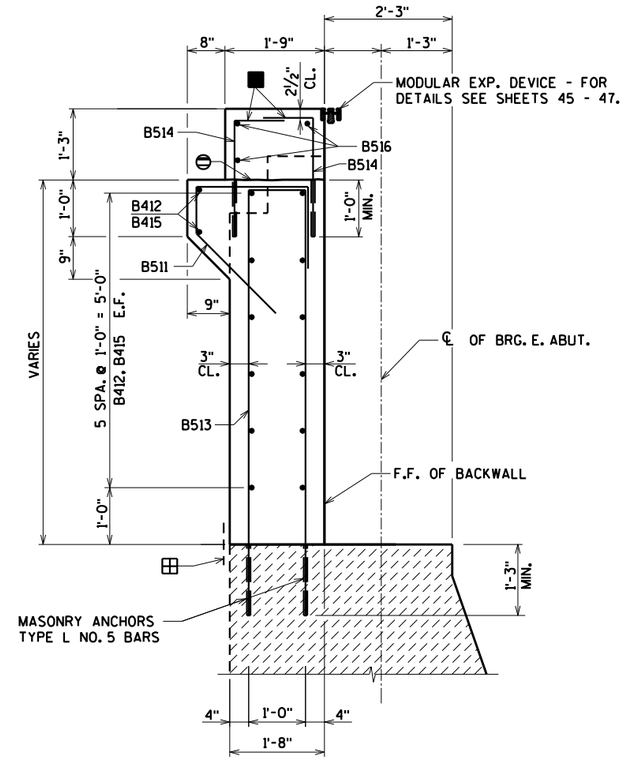
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STATE PROJECT NUMBER

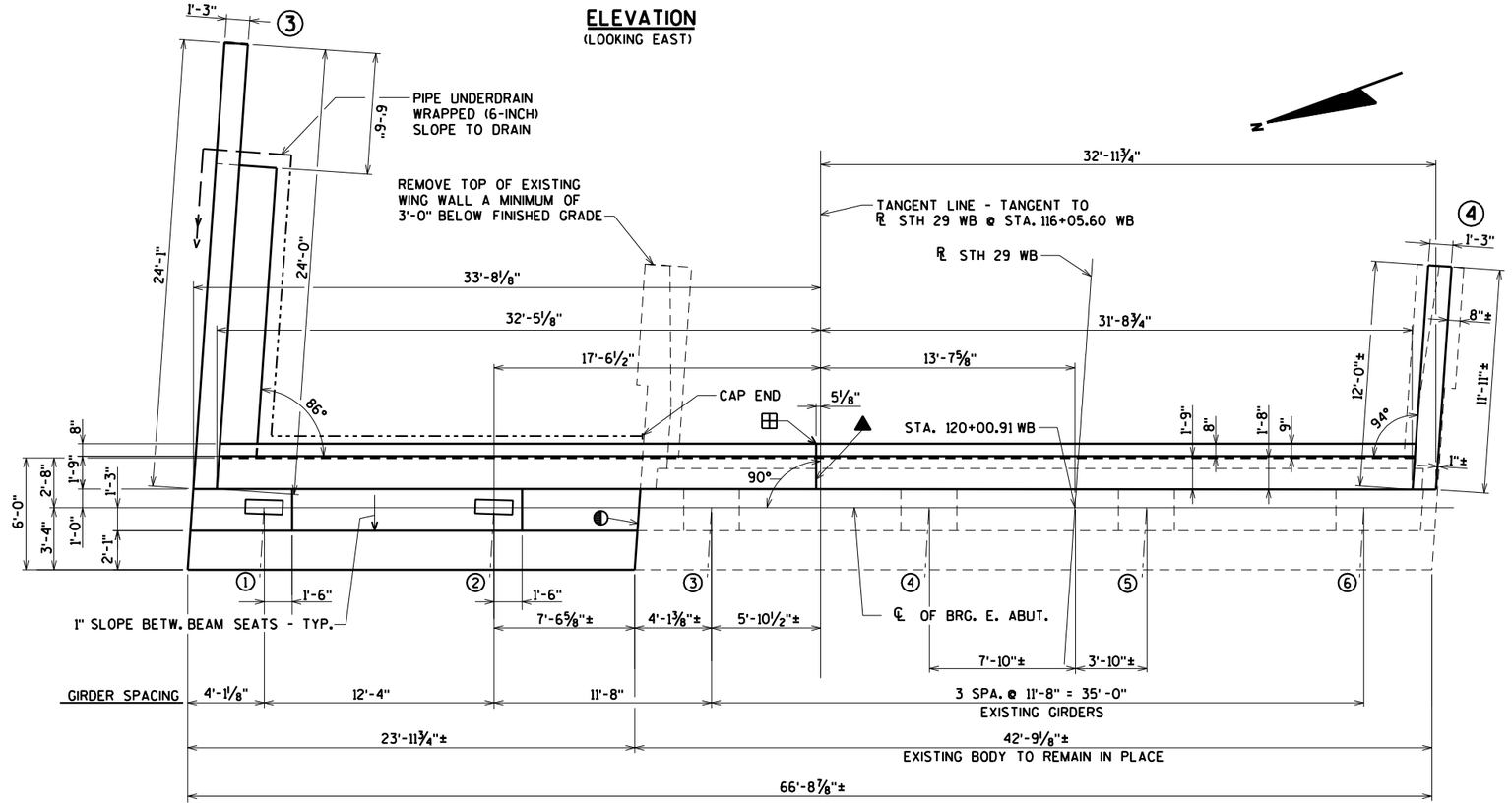
1053-02-75



FOR SECTION "B" SEE SHEET 14.



SECTION A



ELEVATION
(LOOKING EAST)

PLAN

■ ANCHOR INTO PLACE W/ EPOXY RESIN AFTER MODULAR JOINT IS IN POSITION. FOLLOW STD. SPEC. FOR MASONRY ANCHOR TYPE S WITH A MIN. PULLOUT CAPACITY OF 20 KIPS.

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F.F. DENOTES FRONT FACE
B.F. DENOTES BACK FACE
E.F. DENOTES EACH FACE

WORK THIS SHEET WITH SHEETS 12 - 14.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-79

DRAWN BY KAZ | PLANS CK'D. CBM

EAST ABUTMENT

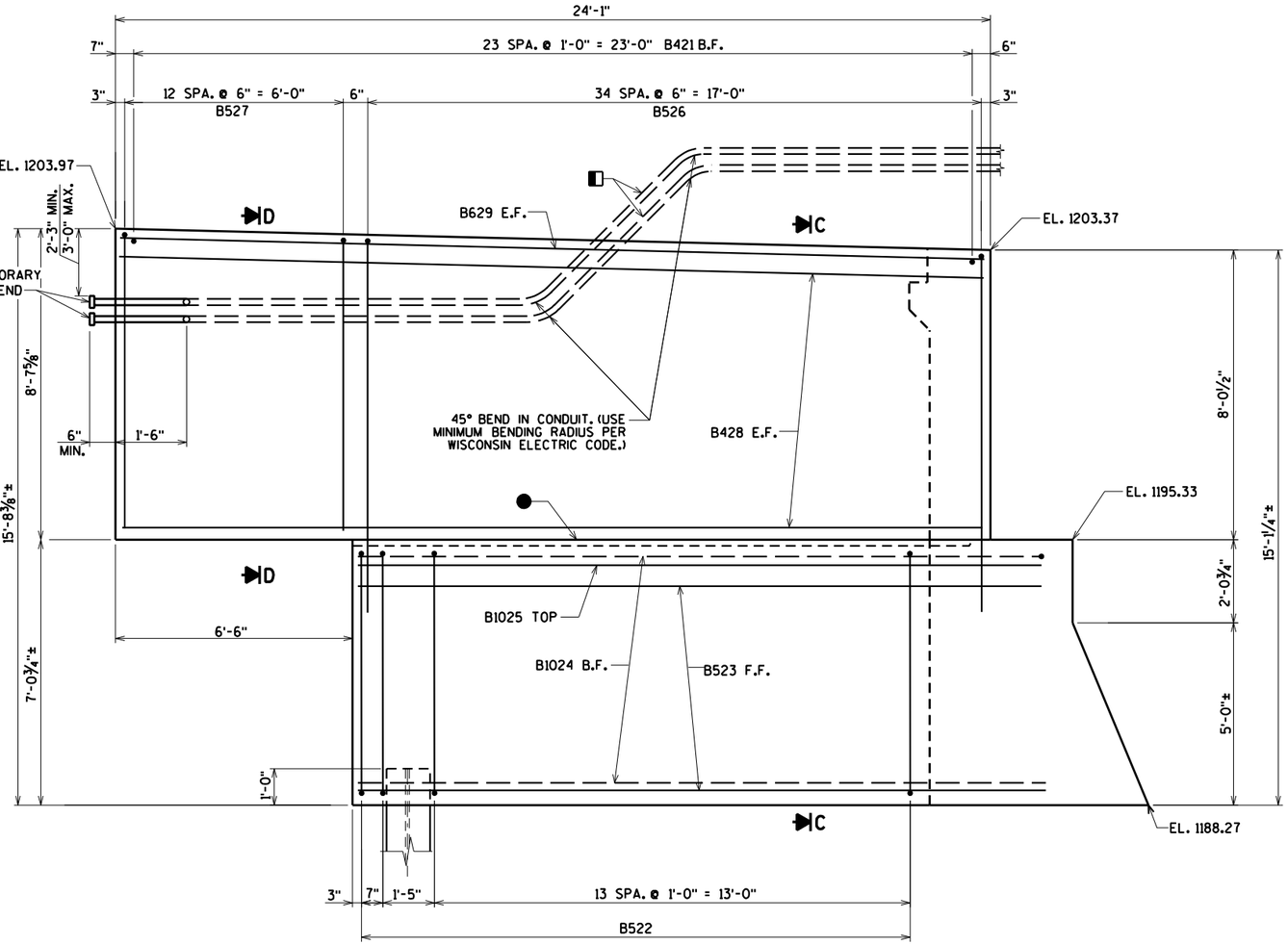
SHEET 11 OF 50
412

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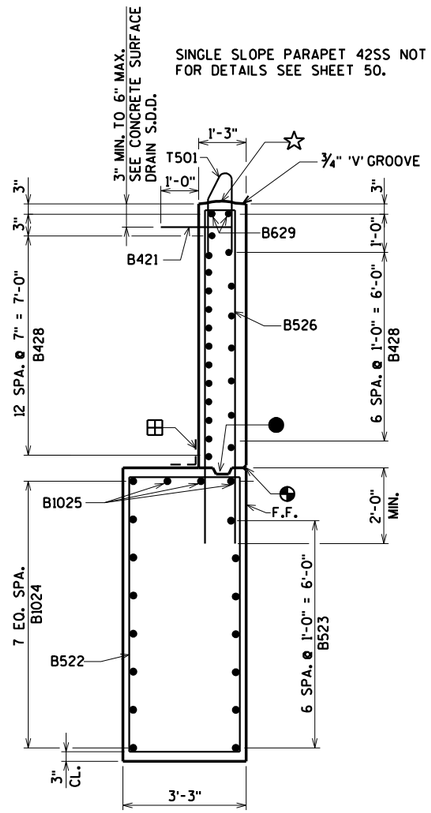
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STATE PROJECT NUMBER

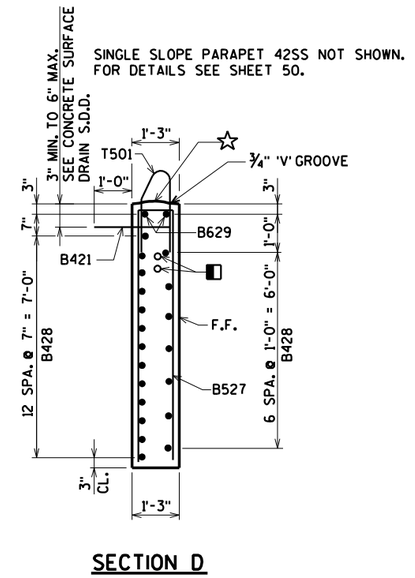
1053-02-75



ELEVATION - WING 3



SECTION C



SECTION D

☆ STRIKE OFF AS SHOWN AND LEAVE ROUGH.

● OPT. KEYED CONST. JOINT - FORMED BY A SURFACED BEVELED 2" x 6".

◒ ¾" 'V' GROOVE ON F.F. OF WINGWALL.

⊞ 18" RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE OF ABUTMENT.

F.F. DENOTES FRONT FACE

B.F. DENOTES BACK FACE

E.F. DENOTES EACH FACE

◧ USE 2" DIA. RIGID NONMETALLIC CONDUIT EXCEPT AT EXPANSION FITTING. AT EXPANSION FITTING USE RIGID METALLIC CONDUIT 3'-0" INTO PARAPET ON DECK AND WING SIDES OF THE JOINT OPENING.

WORK THIS SHEET WITH SHEETS 11 & 13 - 14.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-79

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EAST ABUTMENT WING 3 DETAILS

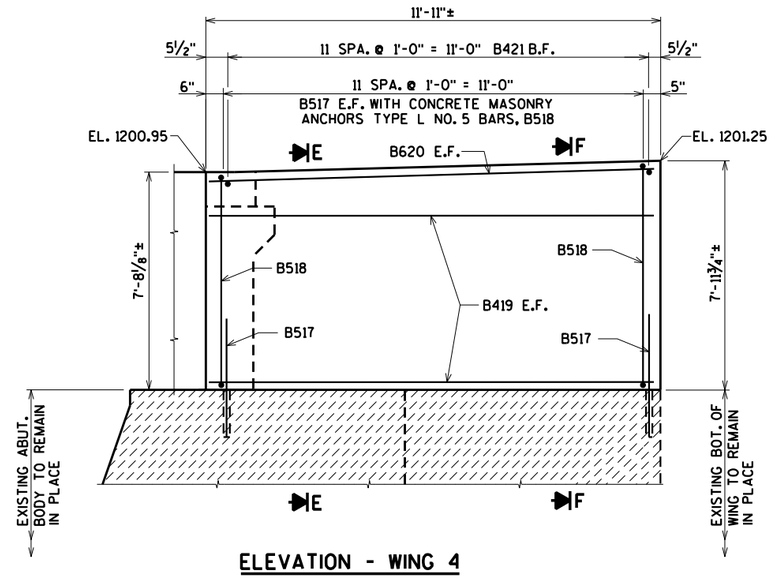
SHEET 12 OF 50
413

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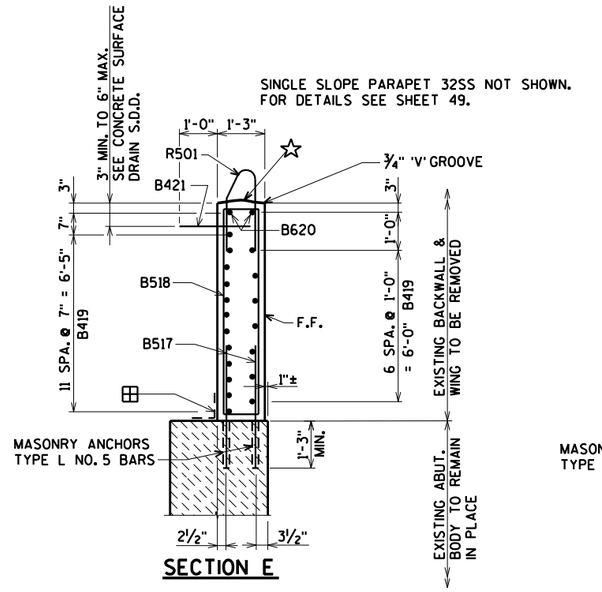
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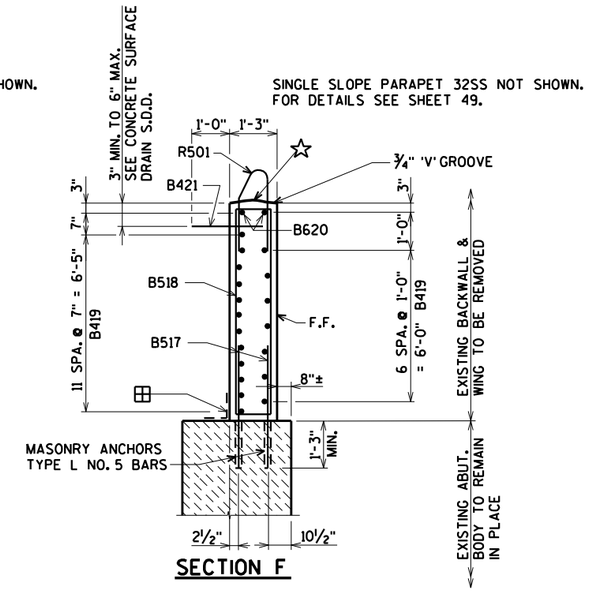
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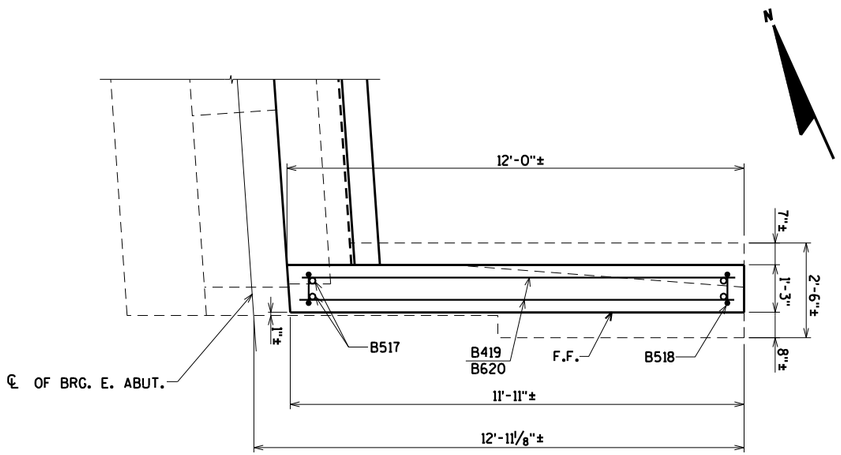
ELEVATION - WING 4



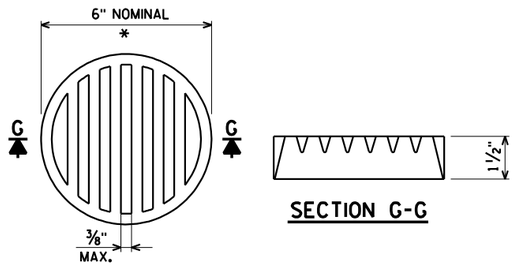
SECTION E



SECTION F



PLAN - WING 4



SECTION G-G

* DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING. ORIENT SO SLOTS ARE VERTICAL.

THE RODENT SHIELD, PIPE COUPLING AND SCREWS SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".

THE RODENT SHIELD SHALL BE PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALLY AVAILABLE AS A FLOOR STRAINER. A PIPE COUPLING IS REQUIRED FOR THE ATTACHMENT OF THIS SHIELD TO THE EXPOSED END OF THE PIPE UNDERDRAIN. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 x 1-INCH SHEET METAL SCREWS.

RODENT SHIELD DETAIL

☆ STRIKE OFF AS SHOWN AND LEAVE ROUGH.

⊞ 18" RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE OF ABUTMENT.

F.F. DENOTES FRONT FACE

B.F. DENOTES BACK FACE

E.F. DENOTES EACH FACE

WORK THIS SHEET WITH SHEETS 11 - 12 & 14.

NO.	DATE	REVISION	BY

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STRUCTURE B-37-79

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EAST ABUTMENT WING 4 DETAILS

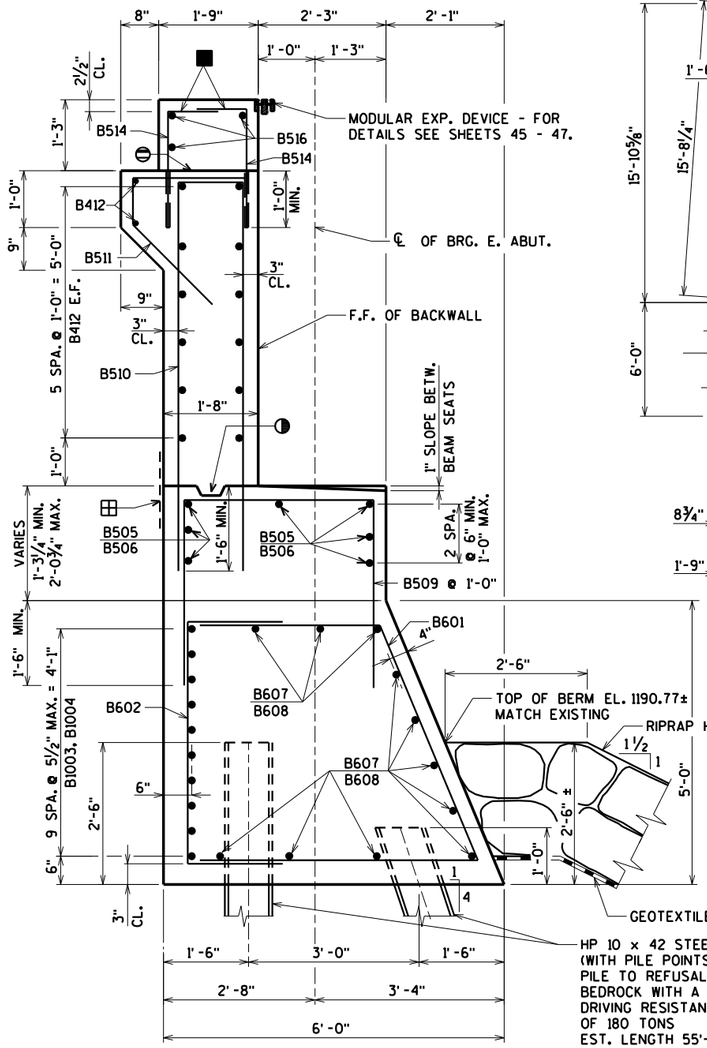
SHEET 13 OF 50
414

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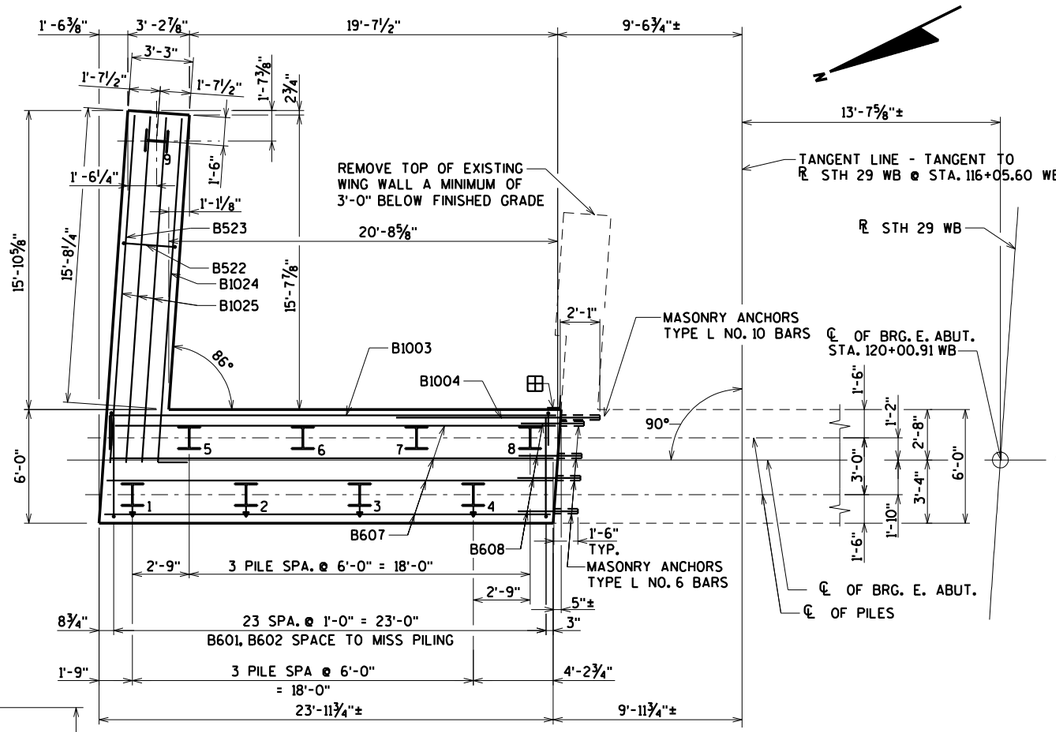
STATE PROJECT NUMBER

1053-02-75

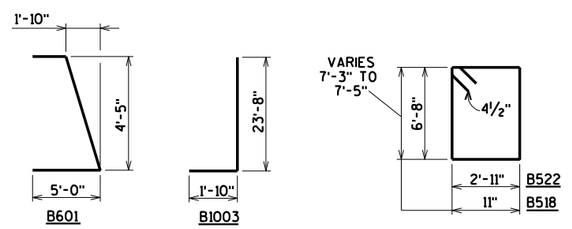


SECTION B

FOR LOCATION OF SECTION B SEE SHEET 11.



PILE LAYOUT



BILL OF BARS

WEIGHTS INCLUDE PARAPET STEEL SHOWN ON SHEETS 49 & 50.

	BAR NO.	COATED BAR	NO. REQUIRED STAGE 3	NO. REQUIRED STAGE 4	LENGTH	BENT BAR	BUNDLED BAR SERIES	7,200# COATED 3,160# UNCOATED LOCATION
	B601		24	--	12-10	X		BODY VERT. F.F.
	B602		24	--	8-3	X		BODY VERT. B.F.
	B1003		10	--	25-3	X		BODY HORIZ. B.F.
●	B1004		10	--	9-4			BODY HORIZ. B.F. DOWELS
	B505		7	--	23-9			BODY HORIZ.
●	B506		7	--	3-0			BODY HORIZ. DOWELS
	B607		11	--	23-9			BODY HORIZ.
●	B608		11	--	3-7			BODY HORIZ. DOWELS
	B509		24	--	10-8	X		BODY VERT.
	B510	X	24	--	17-6	X		BACKWALL VERT.
	B511	X	34	34	6-0	X		BACKWALL VERT.
	B412	X	14	--	34-8			BACKWALL HORIZ. E.F.
●	B513	X	10	34	16-4	X		BACKWALL VERT.
▲	B514	X	68	68	2-11	X		BACKWALL VERT. DOWELS
	B415	X	--	14	32-11			BACKWALL HORIZ. E.F.
	B516	X	15	15	8-0			BACKWALL HORIZ. E.F.
●	B517	X	--	24	3-10			WING 4 DOWELS E.F.
	B518	X	--	12	17-0	X	⊗	WING 4 VERT.
	B419	X	--	19	11-7			WING 4 HORIZ. E.F.
	B620	X	--	2	11-7			WING 4 HORIZ. E.F. TOP
	B421	X	24	12	2-0			WING 3 & 4 DOWELS B.F.
	B522	X	16	--	19-8	X		WING 3 VERT.
	B523	X	7	--	17-5			WING 3 HORIZ. F.F.
	B1024	X	8	--	18-8	X		WING 3 HORIZ. B.F.
	B1025	X	3	--	17-5			WING 3 HORIZ.
	B526	X	35	--	20-3	X		WING 3 VERT.
	B527	X	13	--	16-9	X		WING 3 VERT.
	B428	X	19	--	23-6			WING 3 HORIZ. E.F.
	B629	X	2	--	23-6			WING 3 HORIZ. E.F. TOP

BENDING DIMENSIONS ARE OUT TO OUT OF BARS.

⊗ LENGTH SHOWN FOR BAR IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.

● MASONRY ANCHORS TYPE L

▲ MASONRY ANCHORS TYPE S 5/8-INCH

BAR SERIES TABLE

BAR MARK	NO REQ'D.	LENGTH
B518	1 SERIES OF 12	16'-10" TO 17'-2"

BUNDLE AND TAG EACH SERIES SEPARATELY.

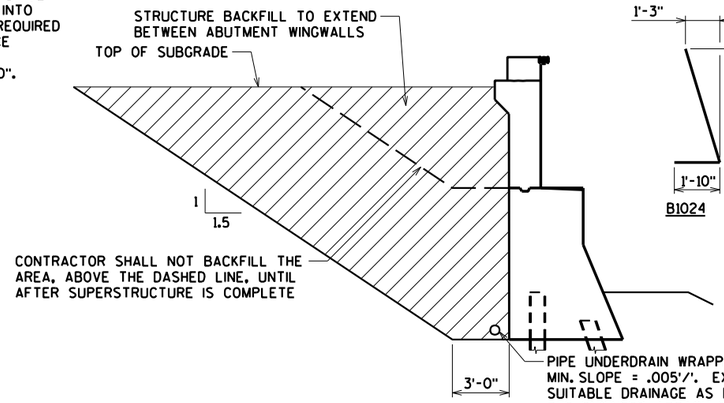
■ ANCHOR INTO PLACE W/ EPOXY RESIN AFTER MODULAR JOINT IS IN POSITION. FOLLOW STD. SPEC. FOR MASONRY ANCHOR TYPE S WITH A MIN. PULLOUT CAPACITY OF 20 KIPS.

⊖ CONST. JOINT - POUR CONCRETE ABOVE THIS JOINT AFTER SUPERSTRUCTURE IS IN PLACE. STRIKE OFF AND LEAVE ROUGH.

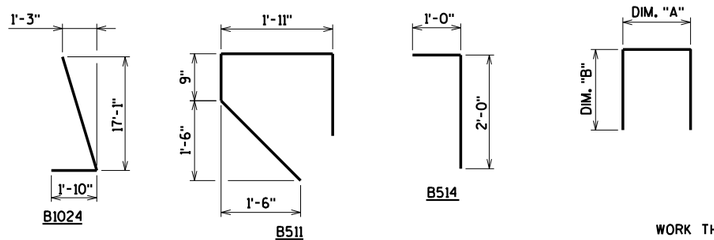
◑ KEYED CONST. JOINT - FORMED BY A SURFACED BEVELED 2" x 6".

⊞ 18" RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE OF ABUTMENT.

F.F. DENOTES FRONT FACE
B.F. DENOTES BACK FACE
E.F. DENOTES EACH FACE



PIPE UNDERDRAIN DETAIL



BAR NO.	DIM. "A"	DIM. "B"
B602	4'-5"	2'-1"
B509	3'-4"	3'-9"
B510	1'-2"	8'-2"
B513	1'-2"	7'-8"
B526	11"	9'-9"
B527	11"	8'-0"

▼ DENOTES BATTERED PILE BATTER 3"/FT. IN DIRECTION SHOWN

FOR PILE SPLICE DETAIL SEE SHEET 4

WORK THIS SHEET WITH SHEETS 11 - 13.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-79

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EAST ABUTMENT DETAILS

SHEET 14 OF 50
415

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12/2/2013

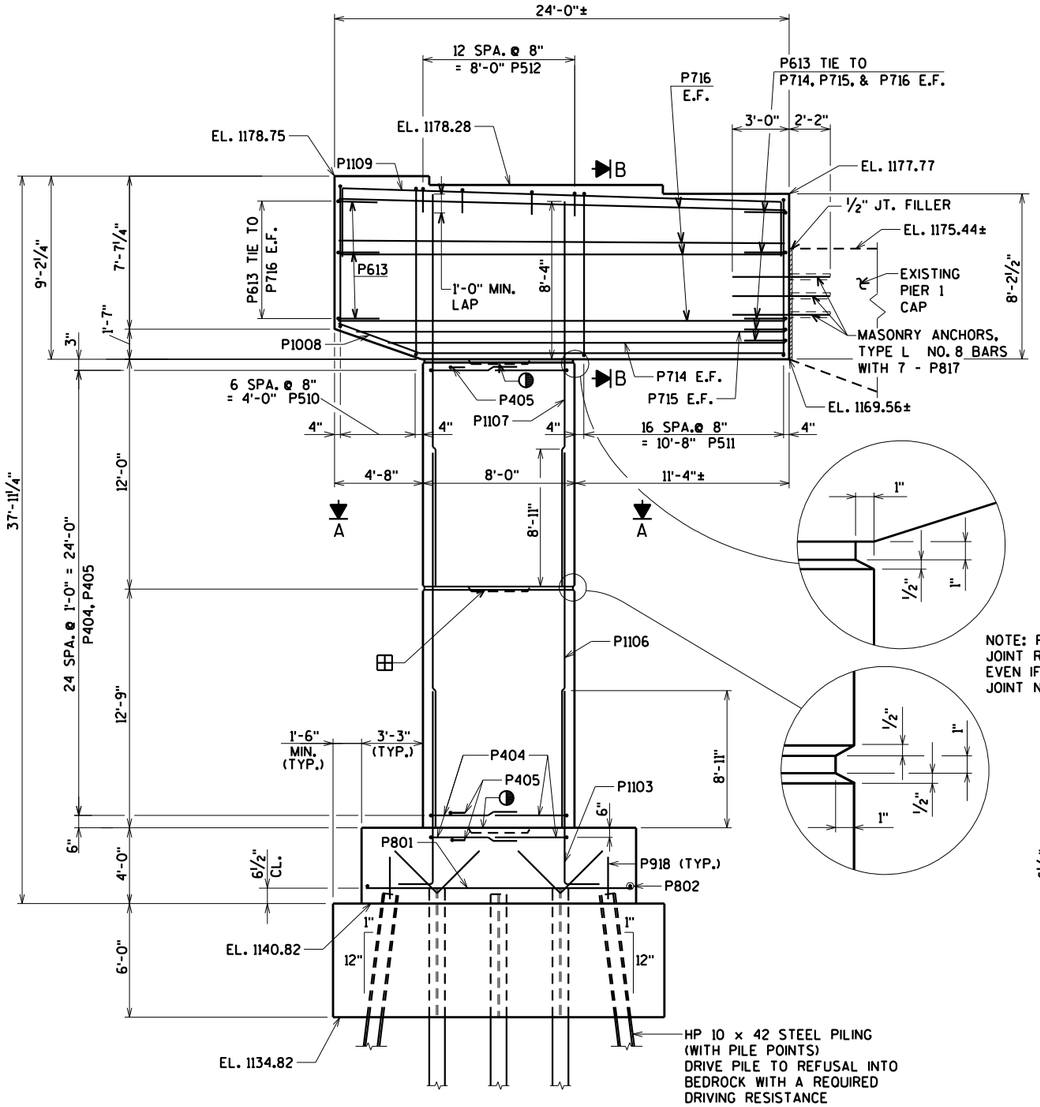
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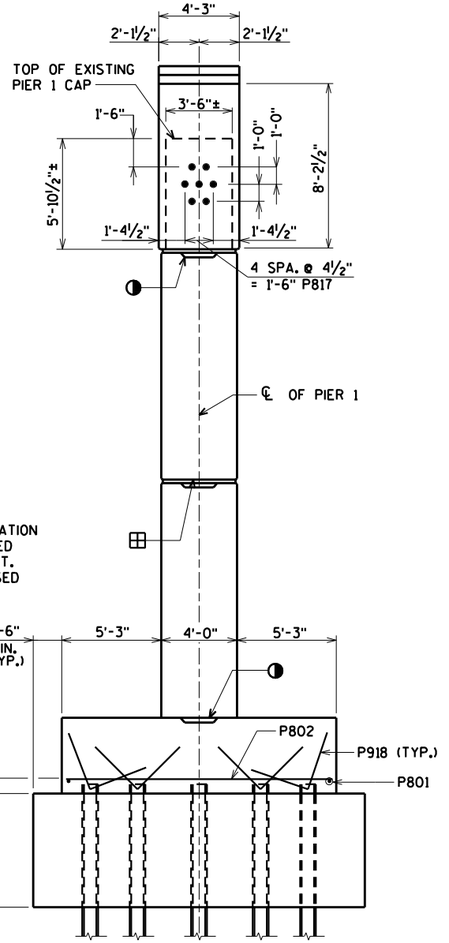
STATE PROJECT NUMBER

1053-02-75

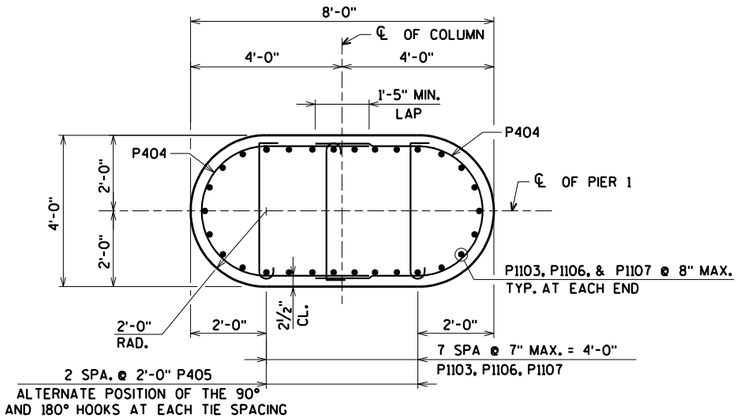


ELEVATION
(LOOKING EAST)

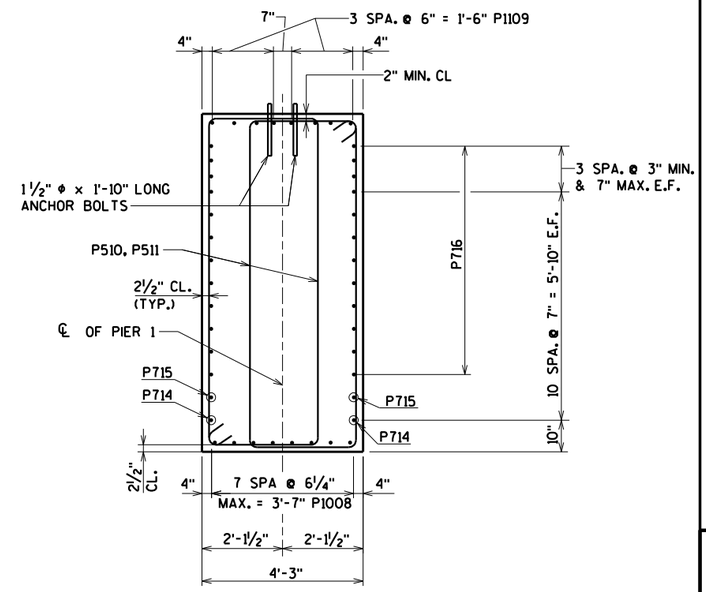
NOTE: RUSTICATION JOINT REQUIRED EVEN IF CONST. JOINT NOT USED



END VIEW
(LOOKING NORTH)



SECTION A



SECTION B

⊞ OPTIONAL KEYED CONST. JT. FORMED BY A SURFACED BEVELED KEYWAY 4" DEEP x 1'-6" WIDE x 4'-0" LONG

◑ KEYED CONST. JT. FORMED BY A SURFACED BEVELED KEYWAY 4" DEEP x 1'-6" WIDE x 4'-0" LONG

E.F. DENOTES EACH FACE

FOR PILE SPLICE DETAIL SEE SHEET 4

WORK THIS SHEET WITH SHEET 16

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-79

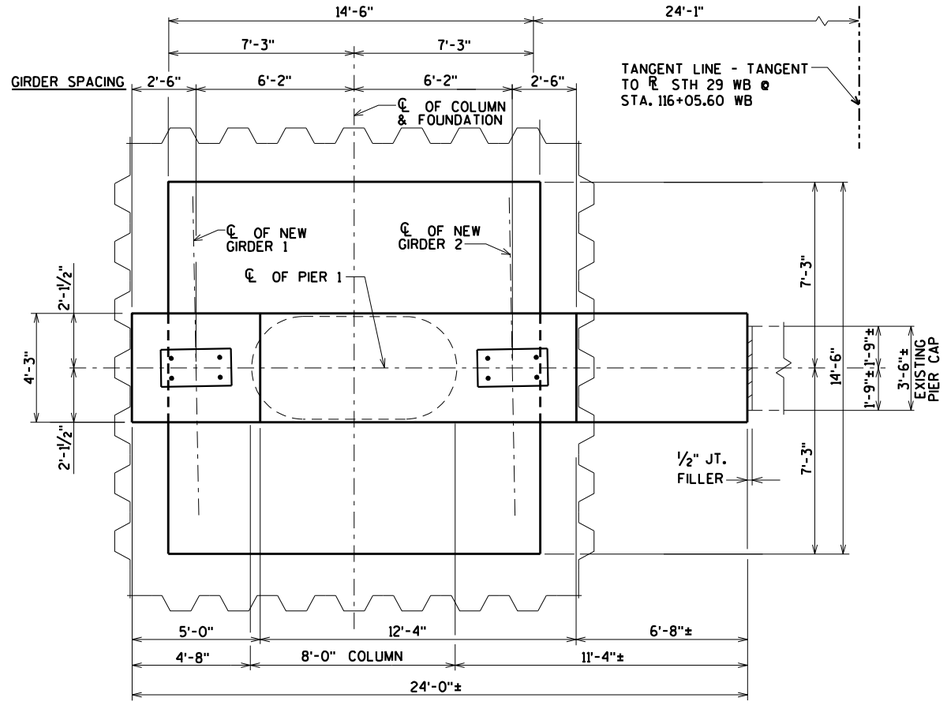
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PIER 1

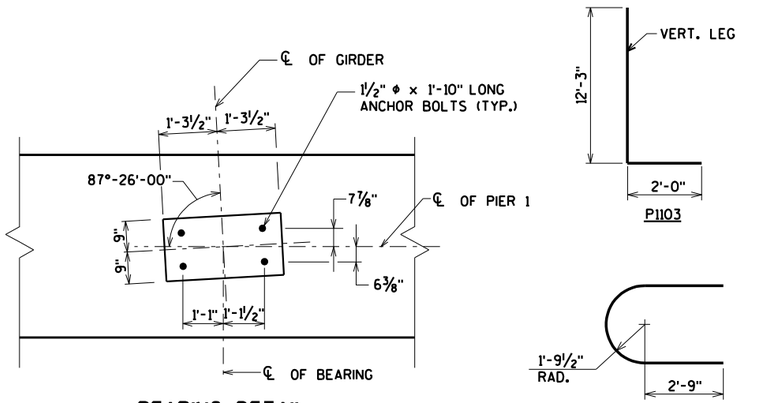
SHEET 15 OF 50
416

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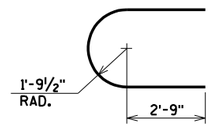


PLAN

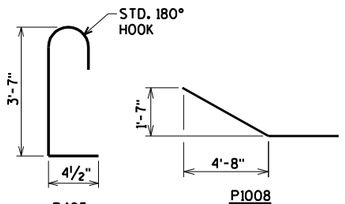


BEARING DETAIL

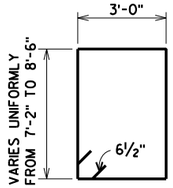
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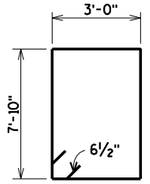
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P405 P1008



P510



P511

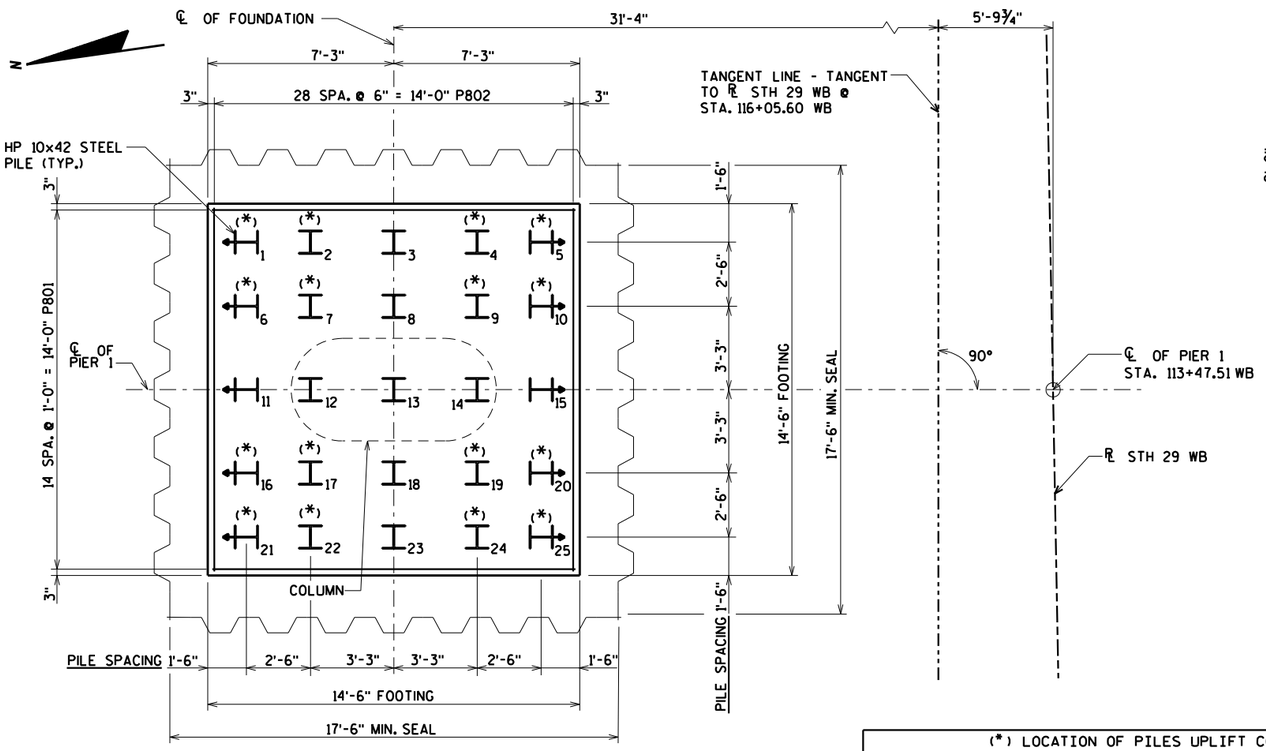
BILL OF BARS

BAR. NO.	COATED BAR	NO. REQ'D.	LENGTH	BENT BAR	BUNDLED BAR	SERIES	16,430# UNCOATED LOCATION
P801		15	14-2				FOOTING BOTTOM
P802		29	14-2				FOOTING BOTTOM
P1103		30	13-11	X			FOOTING DOWELS
P404		52	11-0	X			FOOTING & COLUMN HORIZ.
P405		78	4-6	X			FOOTING & COLUMN TIES
P1106		30	21-8				COLUMN VERT.
P1107		30	20-4				COLUMN VERT.
P1008		8	23-10	X			CAP BOT.
P1109		8	27-4	X			CAP TOP
P510		14	22-6	X		⊗	CAP VERT.
P511		34	22-6	X			CAP VERT.
P512		13	6-4	X			CAP TOP
P613		26	7-6	X			CAP ENDS
P714		2	18-2				CAP SIDES
P715		2	22-11				CAP SIDES
P716		24	23-7				CAP SIDES
● P817		7	5-2				CAP HORIZ. DOWELS
P918		16	6-1	X			FOOTING, PILES

BENDING DIMENSIONS ARE OUT TO OUT OF BARS.

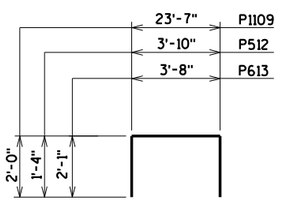
⊗ LENGTH SHOWN FOR BAR IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.

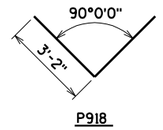
● MASONRY ANCHOR TYPE L NO. 8 BARS



FOOTING LAYOUT

DENOTES BATTERED PILE



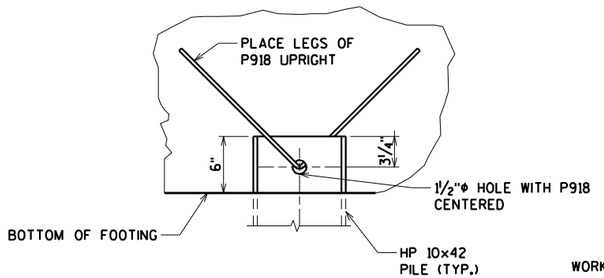


P918

BAR SERIES TABLE

BAR MARK	NO REQ'D.	LENGTH
P510	2 SET SERIES OF 7	21'-2" TO 23'-10"

BUNDLE AND TAG EACH SERIES SEPARATELY.



(*) PILE UPLIFT CONNECTION DETAIL

(NON-BATTERED PILE SHOWN, BATTERED PILES SIMILAR)

(*) LOCATION OF PILES UPLIFT CONNECTION	
PIER 1	1, 2, 4, 5, 6, 7, 9, 10, 16, 17, 19, 20, 21, 22, 24, & 25

FOR PILE SPLICE DETAIL SEE SHEET 4

WORK THIS SHEET WITH SHEET 15

NO.	DATE	REVISION	BY

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DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-79

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PIER 1 DETAILS

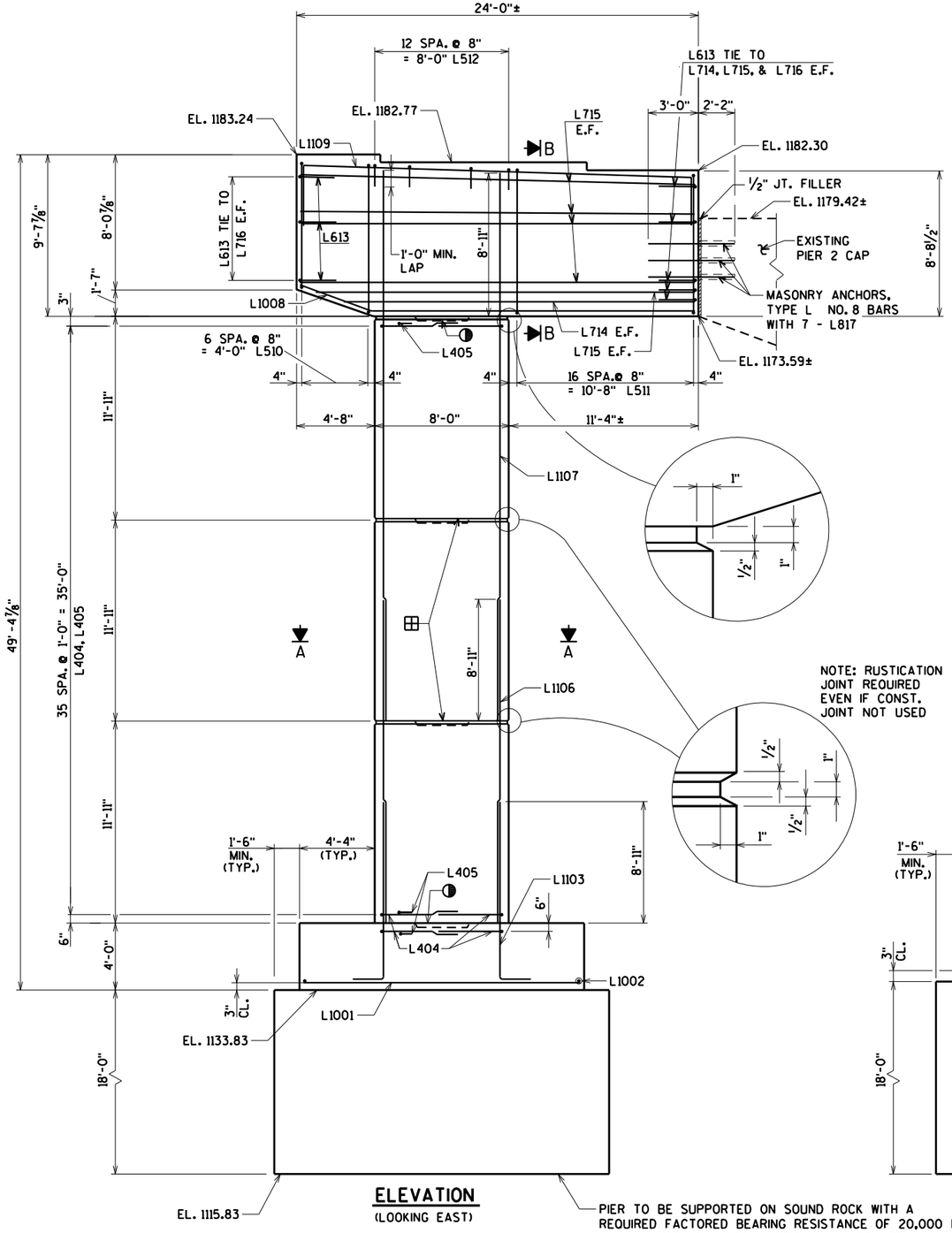
SHEET 16 OF 50
417

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12/2/2013
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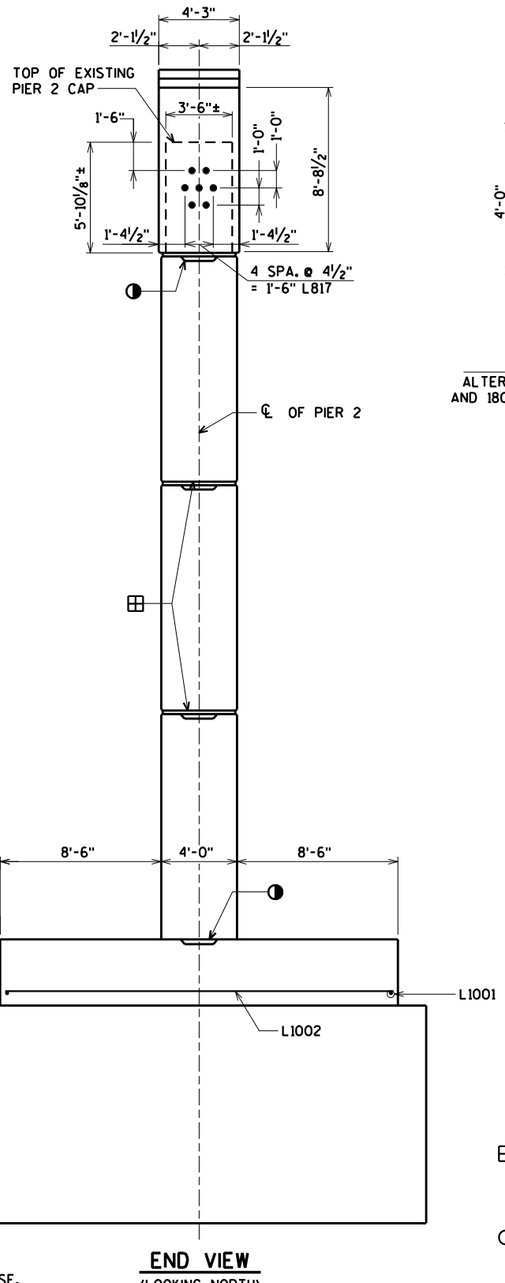
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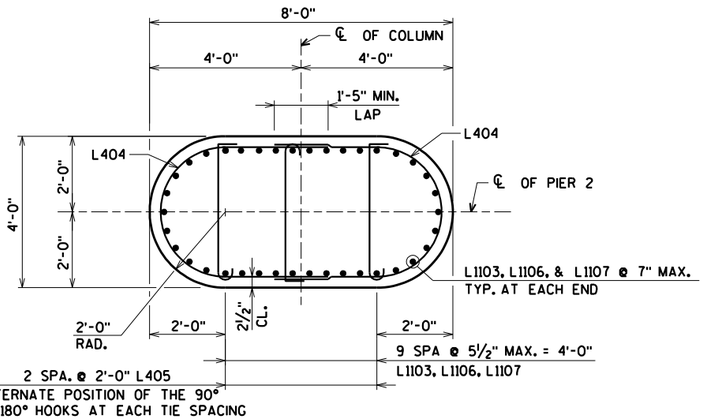


ELEVATION
(LOOKING EAST)

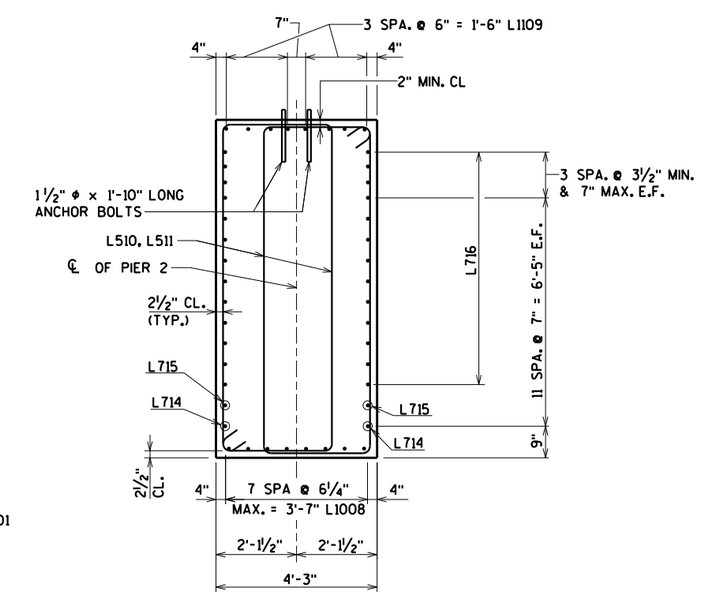
PIER TO BE SUPPORTED ON SOUND ROCK WITH A REQUIRED FACTORED BEARING RESISTANCE OF 20,000 PSF. A GEOTECHNICAL ENGINEER WILL DETERMINE THE FACTORED BEARING RESISTANCE BY UNDERWATER INSPECTION PRIOR TO CONSTRUCTION OF THE PIER FOOTING AND SEAL.



END VIEW
(LOOKING NORTH)



SECTION A



SECTION B

⊞ OPTIONAL KEYED CONST. JT. FORMED BY A SURFACED BEVELED KEYWAY 4" DEEP × 1'-6" WIDE × 4'-0" LONG

◑ KEYED CONST. JT. FORMED BY A SURFACED BEVELED KEYWAY 4" DEEP × 1'-6" WIDE × 4'-0" LONG

E.F. DENOTES EACH FACE

WORK THIS SHEET WITH SHEET 18

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-79

DRAWN BY KAZ | PLANS CK'D. CBM

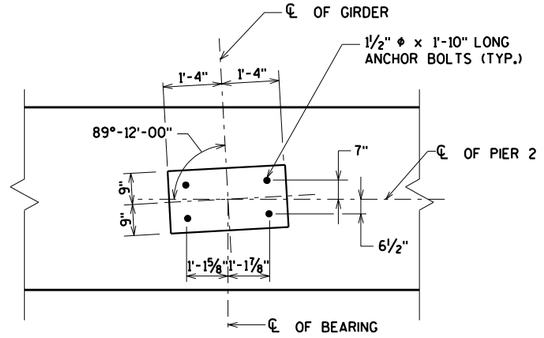
PIER 2

SHEET 17 OF 50
418

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

$PRFNAME$
U:\41-0637.00 - STH 29 over WI River\B-37-79\BRIDGE\15_16 B-37-79 Pier 2.dgn

PLAN



BEARING DETAIL

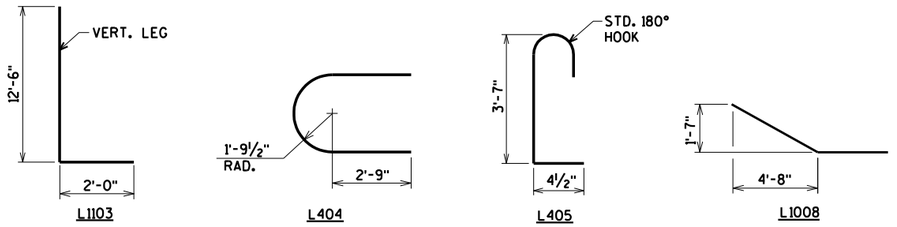
BILL OF BARS

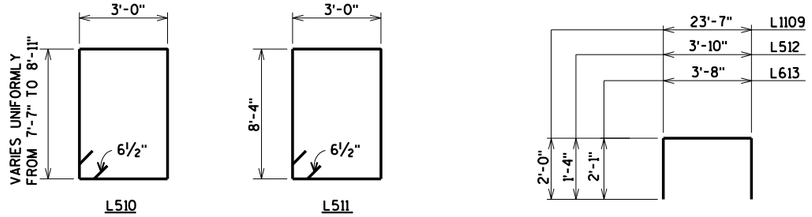
BAR. NO.	COATED BAR	NO. REQ'D.	LENGTH	BENT BAR	BUNDLED BAR	SERIES	24,510# UNCOATED LOCATION
L1001		28	16-3				FOOTING BOTTOM
L1002		33	20-7				FOOTING BOTTOM
L1103		38	14-2	X			FOOTING DOWELS
L404		74	11-0	X			FOOTING & COLUMN HORIZ.
L405		111	4-6	X			FOOTING & COLUMN TIES
L1106		38	20-10				COLUMN VERT.
L1107		38	32-9				COLUMN VERT.
L1008		8	23-10	X			CAP BOT.
L1109		8	27-4	X			CAP TOP
L510		14	23-4	X		⊗	CAP VERT.
L511		34	23-6	X			CAP VERT.
L512		13	6-4	X			CAP TOP
L613		28	7-6	X			CAP ENDS
L714		2	18-2				CAP SIDES
L715		2	22-11				CAP SIDES
L716		26	23-7				CAP SIDES
● L817		7	5-2				CAP HORIZ. DOWELS

BENDING DIMENSIONS ARE OUT TO OUT OF BARS.

⊗ LENGTH SHOWN FOR BAR IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.

● MASONRY ANCHOR TYPE L NO. 8 BARS

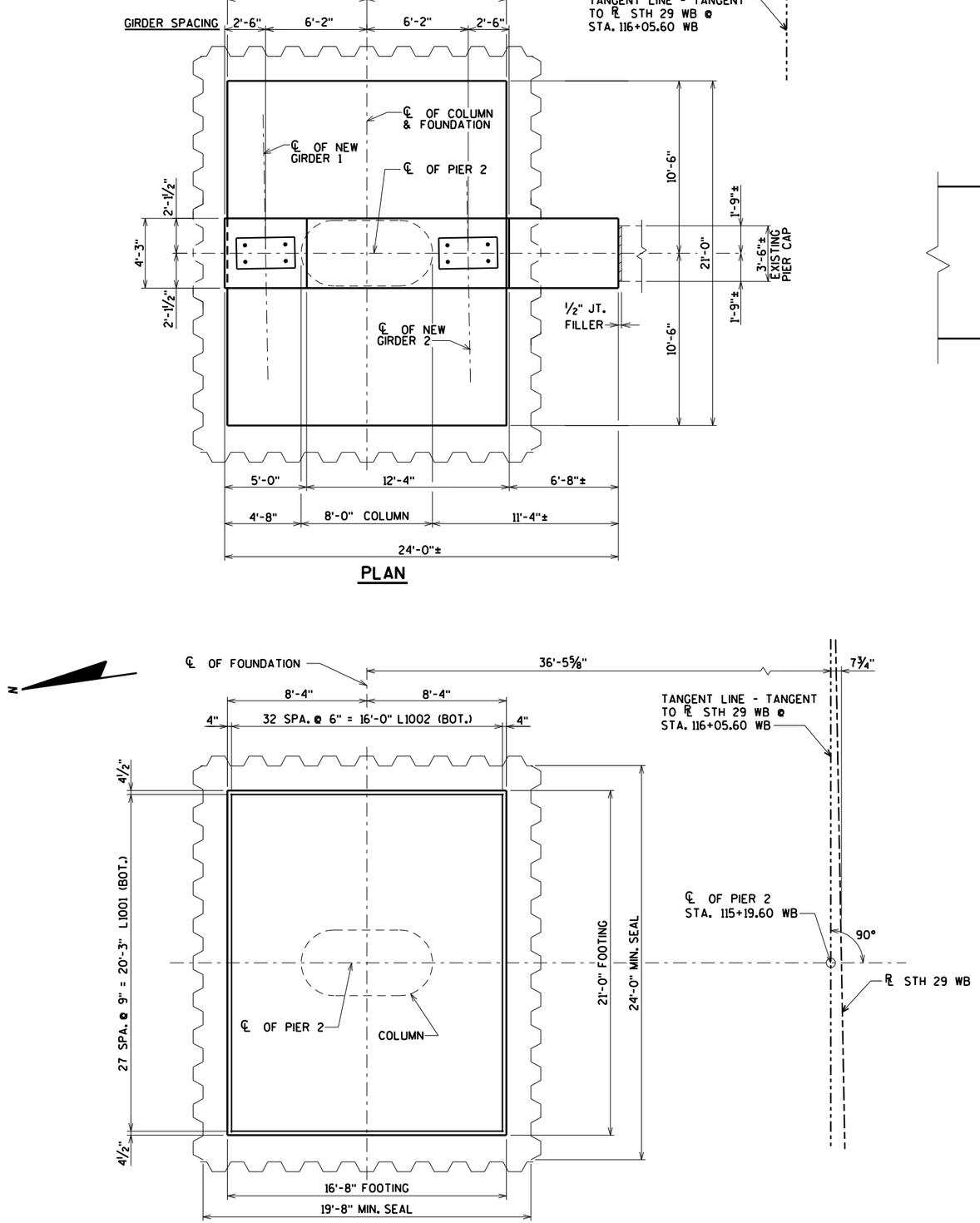




BAR SERIES TABLE

BAR MARK	NO REQ'D.	LENGTH
L510	2 SET SERIES OF 7	22'-0" TO 24'-8"

BUNDLE AND TAG EACH SERIES SEPARATELY.



FOOTING LAYOUT

WORK THIS SHEET WITH SHEET 17

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-79

DRAWN BY KAZ | PLANS CK'D. CBM

PIER 2 DETAILS

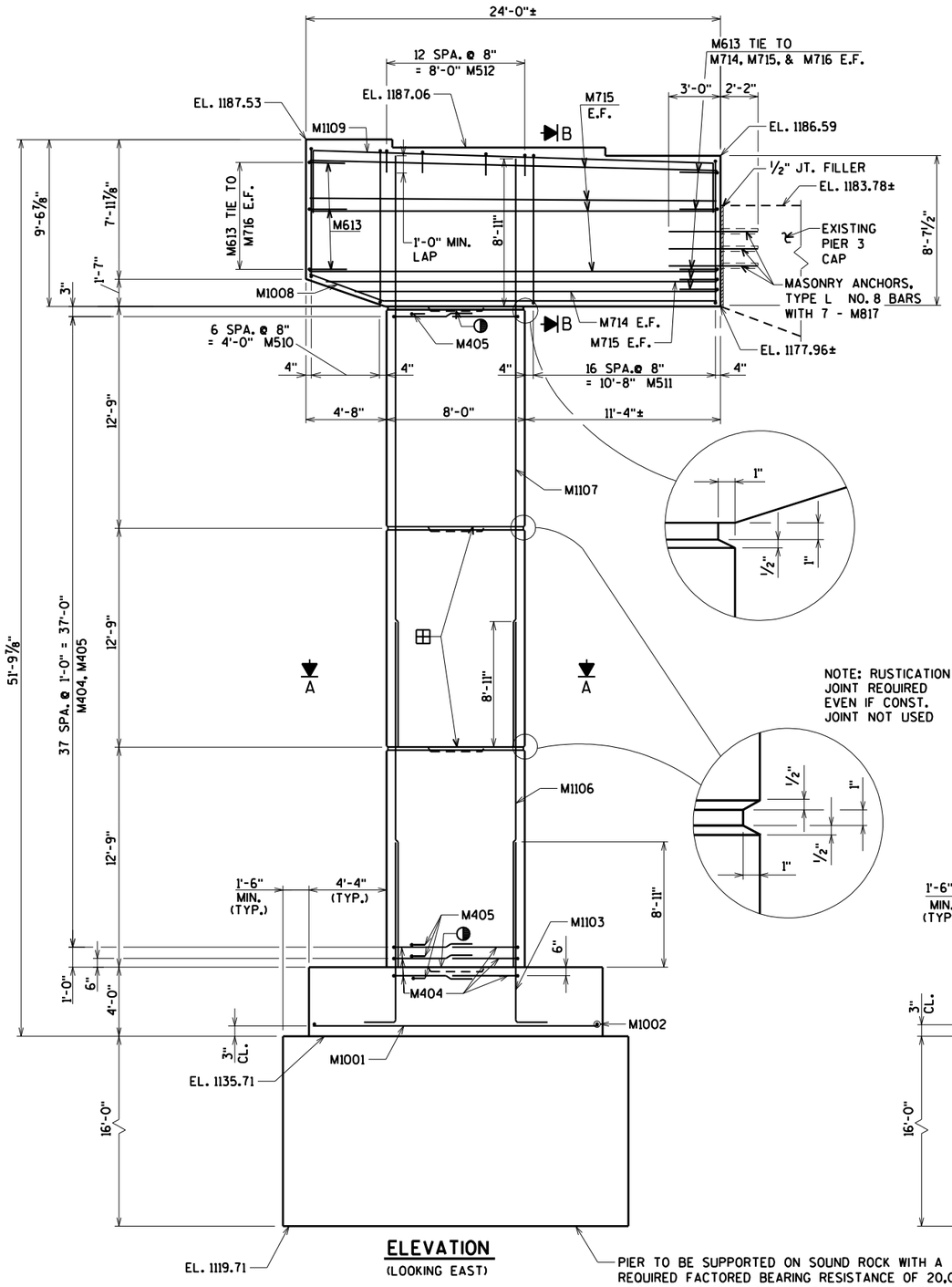
SHEET 18 OF 50
419

ORIGINAL PLANS PREPARED BY
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12/2/2013
PENTABLE:BReau_shd_util.tbl

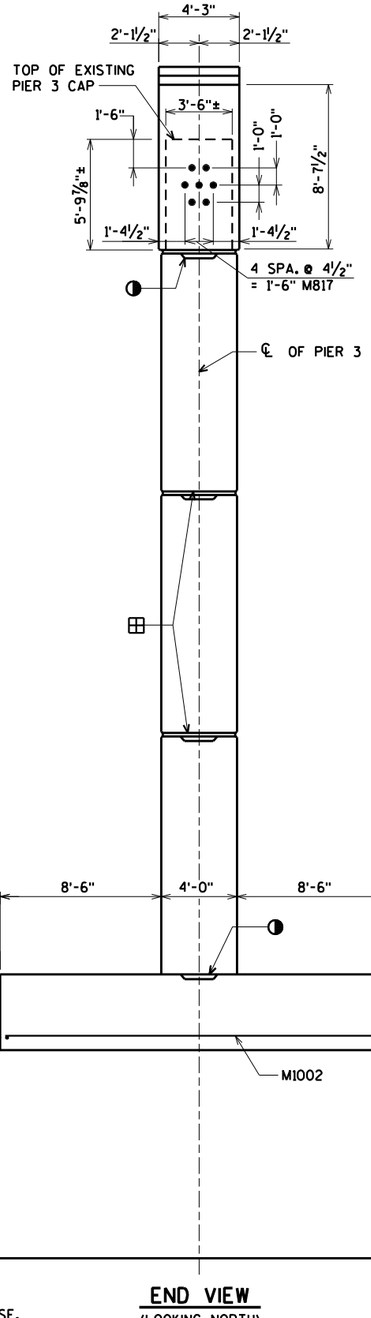
STATE PROJECT NUMBER

1053-02-75

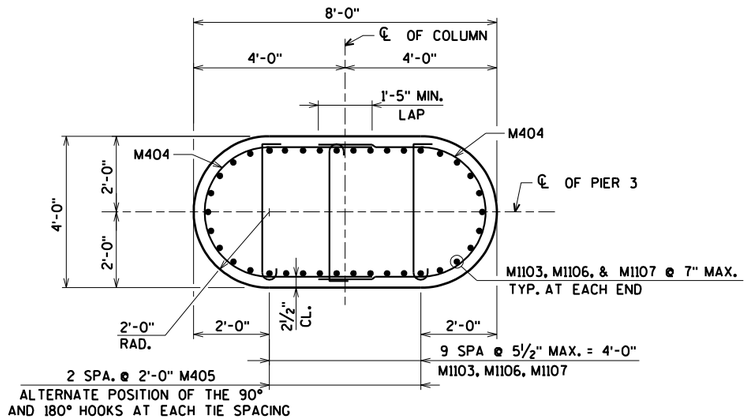


ELEVATION
(LOOKING EAST)

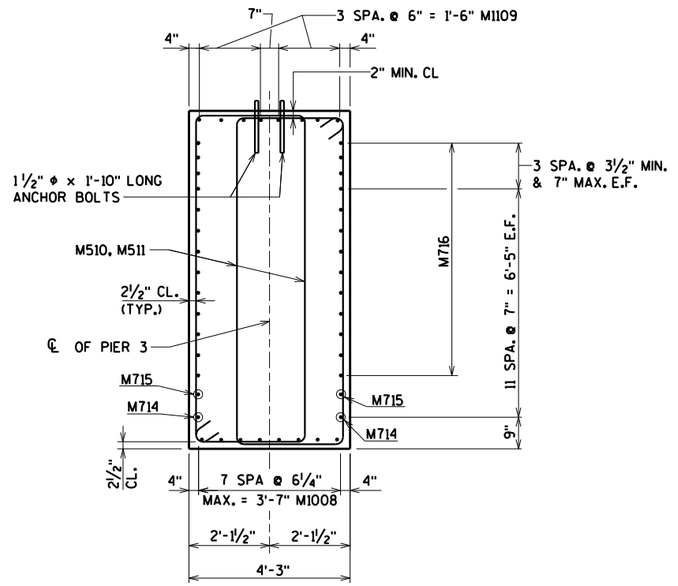
PIER TO BE SUPPORTED ON SOUND ROCK WITH A REQUIRED FACTORED BEARING RESISTANCE OF 20,000 PSF. A GEOTECHNICAL ENGINEER WILL DETERMINE THE FACTORED BEARING RESISTANCE BY UNDERWATER INSPECTION PRIOR TO CONSTRUCTION OF THE PIER FOOTING AND SEAL.



END VIEW
(LOOKING NORTH)



SECTION A



SECTION B

⊞ OPTIONAL KEYED CONST. JT. FORMED BY A SURFACED BEVELED KEYWAY 4" DEEP × 1'-6" WIDE × 4'-0" LONG

◑ KEYED CONST. JT. FORMED BY A SURFACED BEVELED KEYWAY 4" DEEP × 1'-6" WIDE × 4'-0" LONG

E.F. DENOTES EACH FACE

WORK THIS SHEET WITH SHEET 20

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-79

DRAWN BY KAZ | PLANS CK'D. CBM

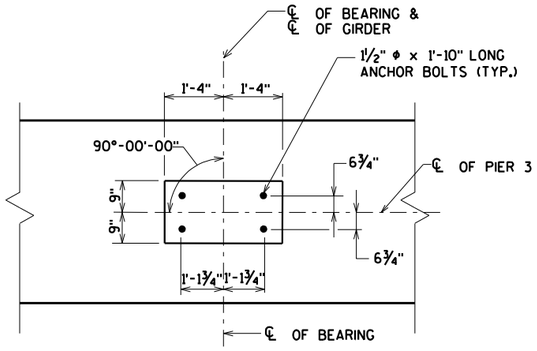
PIER 3

SHEET 19 OF 50
420

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Eau Claire, WI 54701
www.AyresAssociates.com

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PLAN



BEARING DETAIL

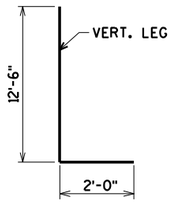
BILL OF BARS

BAR. NO.	COATED BAR	NO. REQ'D.	LENGTH	BENT BAR	BUNDLED BAR SERIES	25,070# UNCOATED LOCATION
M1001		28	16-3			FOOTING BOTTOM
M1002		33	20-7			FOOTING BOTTOM
M1103		38	14-2	X		FOOTING DOWELS
M404		80	11-0	X		FOOTING & COLUMN HORIZ.
M405		120	4-6	X		FOOTING & COLUMN TIES
M1106		38	21-8			COLUMN VERT.
M1107		38	34-5			COLUMN VERT.
M1008		8	23-10	X		CAP BOT.
M1109		8	27-4	X		CAP TOP
M510		14	23-2	X	⊗	CAP VERT.
M511		34	23-2	X		CAP VERT.
M512		13	6-4	X		CAP TOP
M613		28	7-6	X		CAP ENDS
M714		2	18-2			CAP SIDES
M715		2	22-11			CAP SIDES
M716		26	23-7			CAP SIDES
● M817		7	5-2			CAP HORIZ. DOWELS

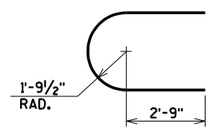
BENDING DIMENSIONS ARE OUT TO OUT OF BARS.

⊗ LENGTH SHOWN FOR BAR IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.

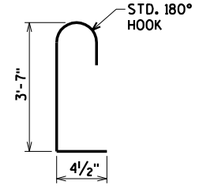
● MASONRY ANCHOR TYPE L NO. 8 BARS



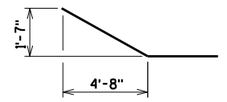
M1103



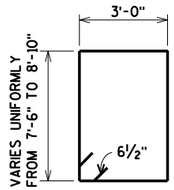
M404



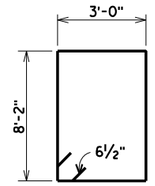
M405



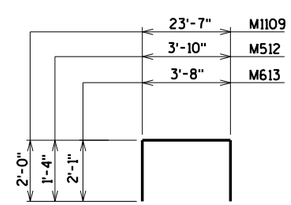
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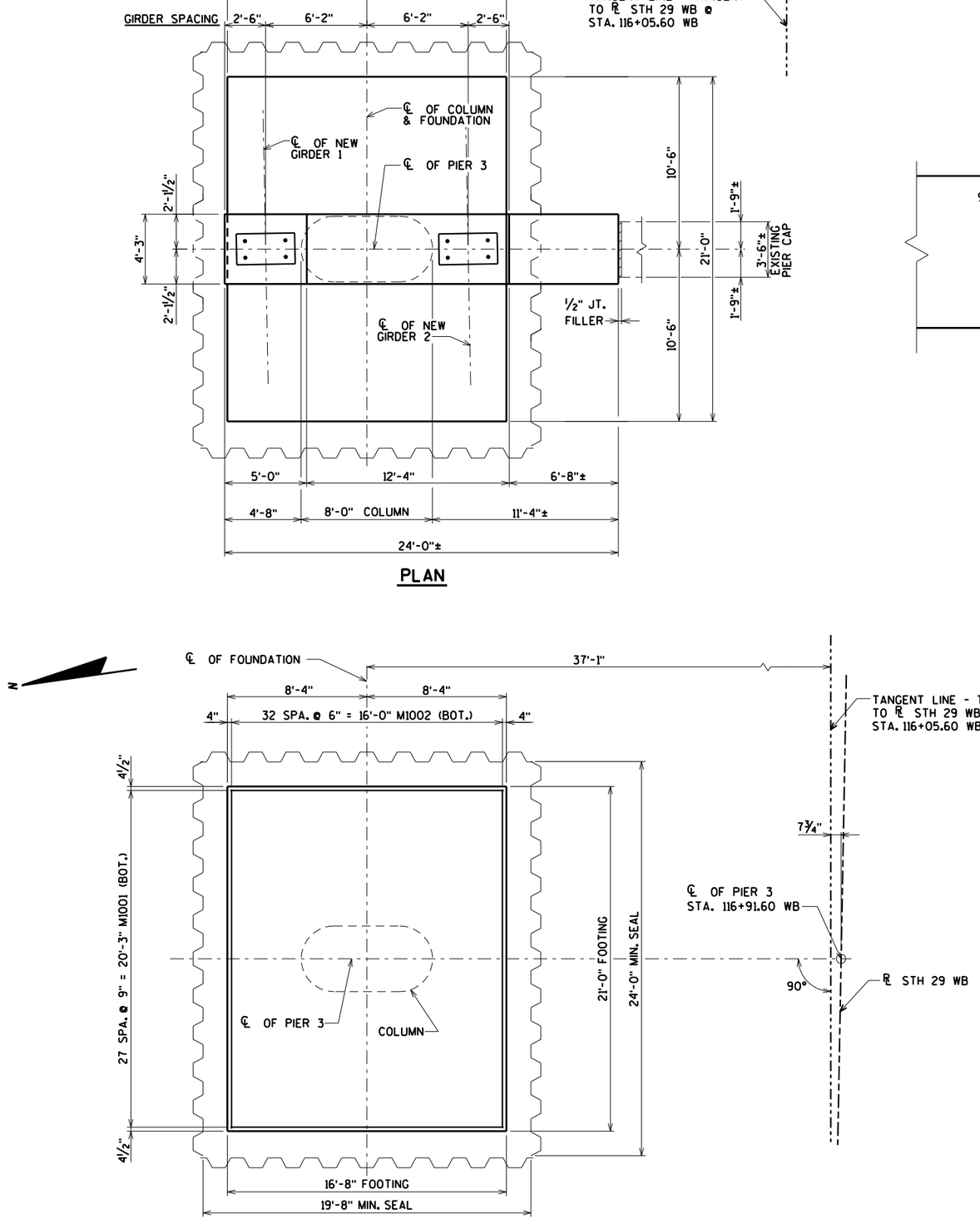


M510



M511





FOOTING LAYOUT

BAR SERIES TABLE

BAR MARK	NO REQ'D.	LENGTH
M510	2 SET SERIES OF 7	21'-10" TO 24'-6"

BUNDLE AND TAG EACH SERIES SEPARATELY.

WORK THIS SHEET WITH SHEET 19

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-79

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PIER 3 DETAILS

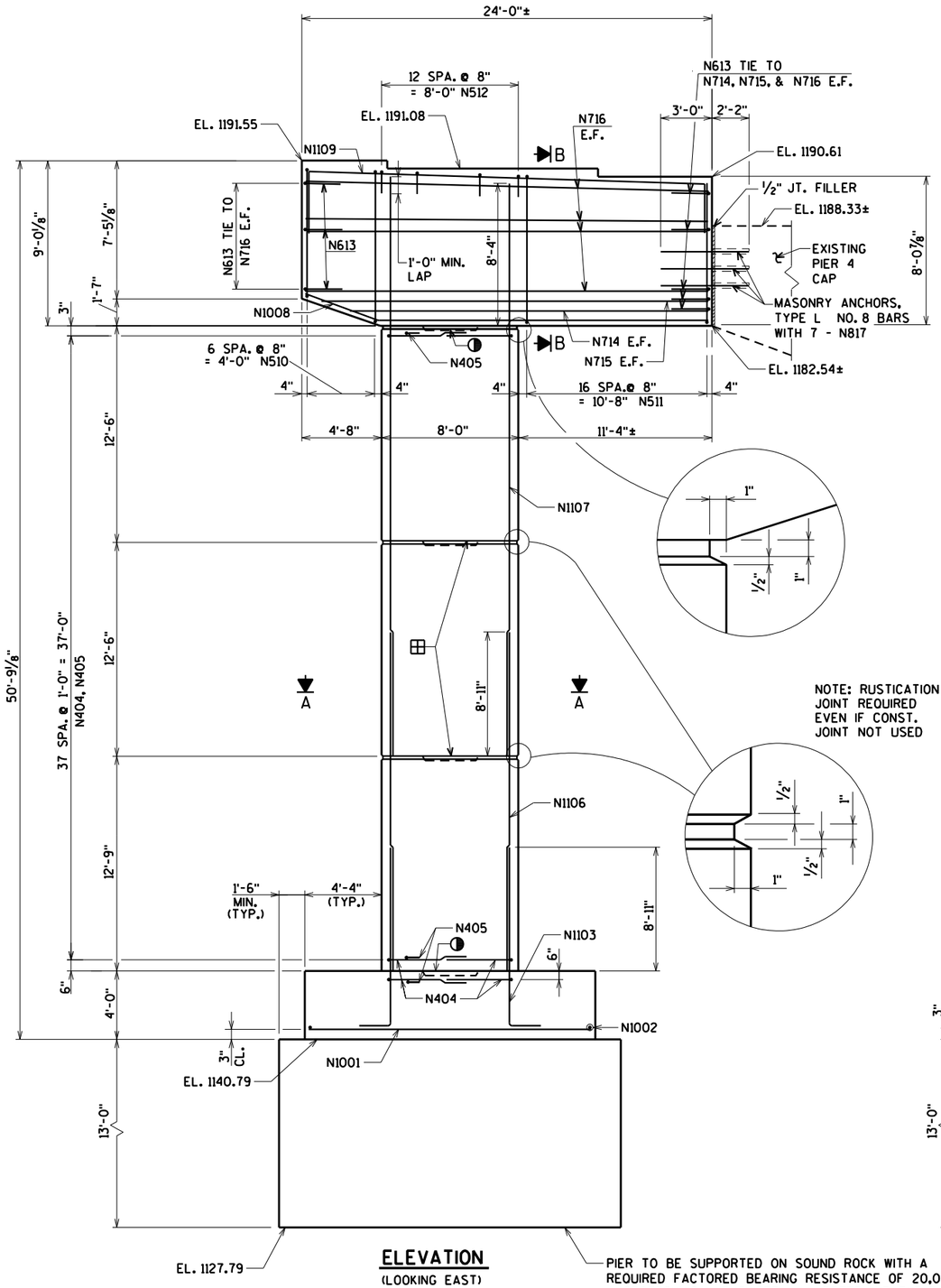
SHEET 20 OF 50
421

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
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Eau Claire, WI 54701
www.AyresAssociates.com

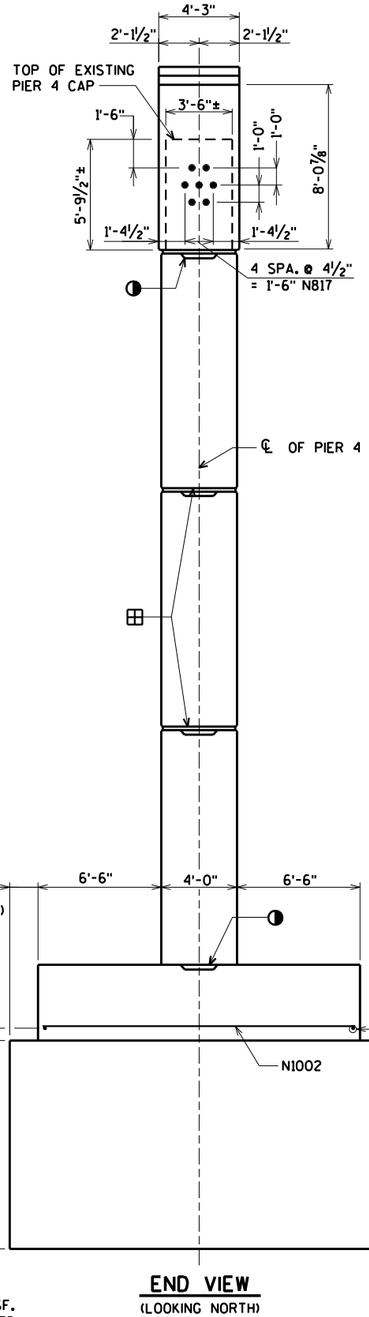
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U:\41-0637.00 - STH 29 over WI River\B-37-79\BRIDGE\17_18 B-37-79 Pier 3.dgn

STATE PROJECT NUMBER

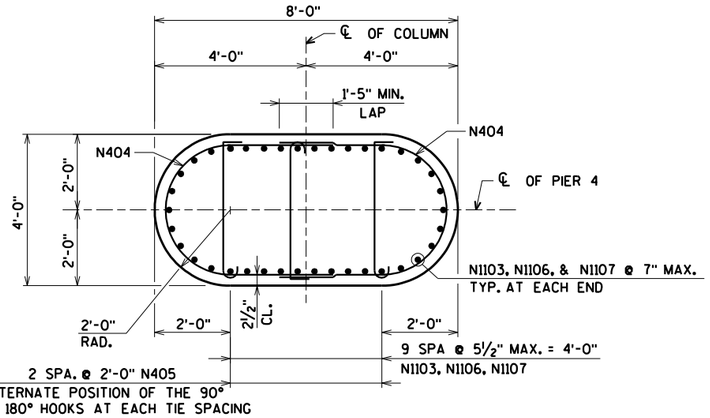
1053-02-75



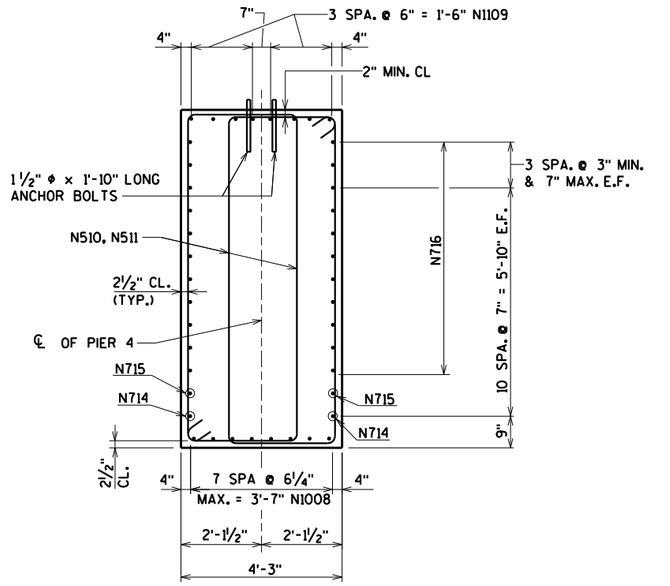
ELEVATION
(LOOKING EAST)



END VIEW
(LOOKING NORTH)



SECTION A



SECTION B

PIER TO BE SUPPORTED ON SOUND ROCK WITH A REQUIRED FACTORED BEARING RESISTANCE OF 20,000 PSF. A GEOTECHNICAL ENGINEER WILL DETERMINE THE FACTORED BEARING RESISTANCE BY UNDERWATER INSPECTION PRIOR TO CONSTRUCTION OF THE PIER FOOTING AND SEAL.

⊞ OPTIONAL KEYED CONST. JT. FORMED BY A SURFACED BEVELED KEYWAY 4" DEEP × 1'-6" WIDE × 4'-0" LONG

◑ KEYED CONST. JT. FORMED BY A SURFACED BEVELED KEYWAY 4" DEEP × 1'-6" WIDE × 4'-0" LONG

E.F. DENOTES EACH FACE.

WORK THIS SHEET WITH SHEET 22

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-79

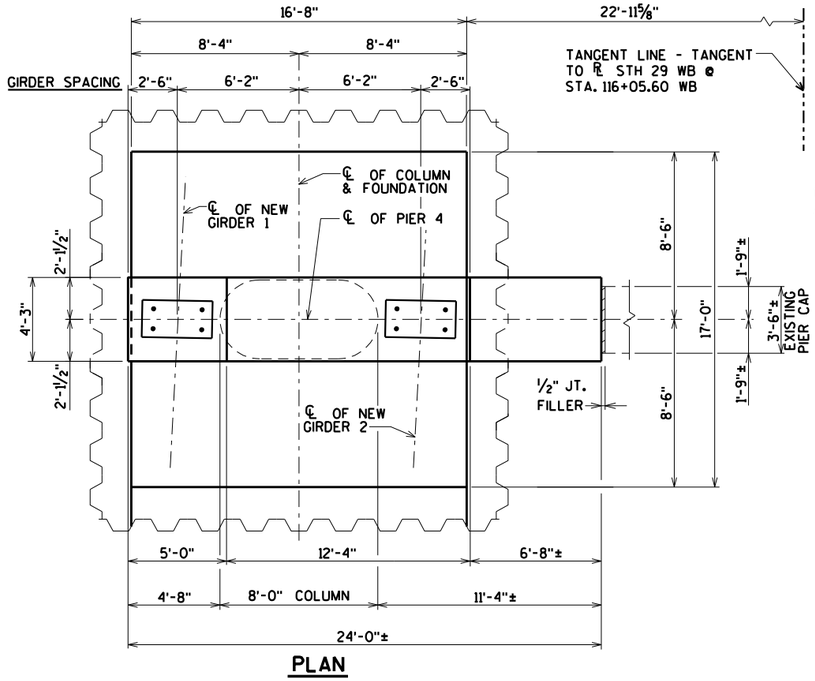
DRAWN BY KAZ | PLANS CK'D. CBM

PIER 4

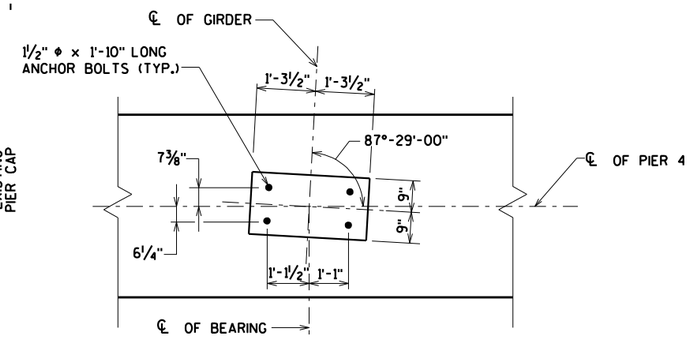
SHEET 21 OF 50
422

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

$PRFNAME$
U:±41-0637.00 - STH 29 over WI River±B-37-79±BRIDGE±19.20 B-37-79 Pier 4.dgn
12/2/2013
PENTABLE:BReau_shd_util.tbl



PLAN



BEARING DETAIL

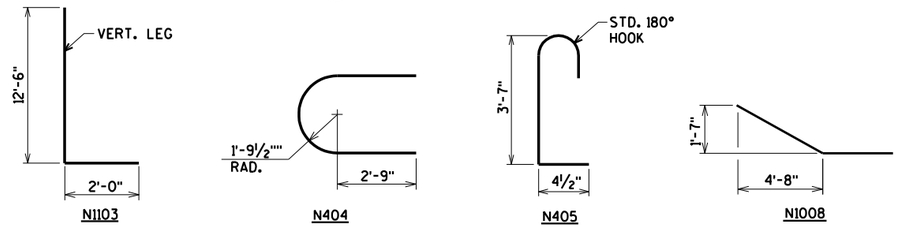
BILL OF BARS

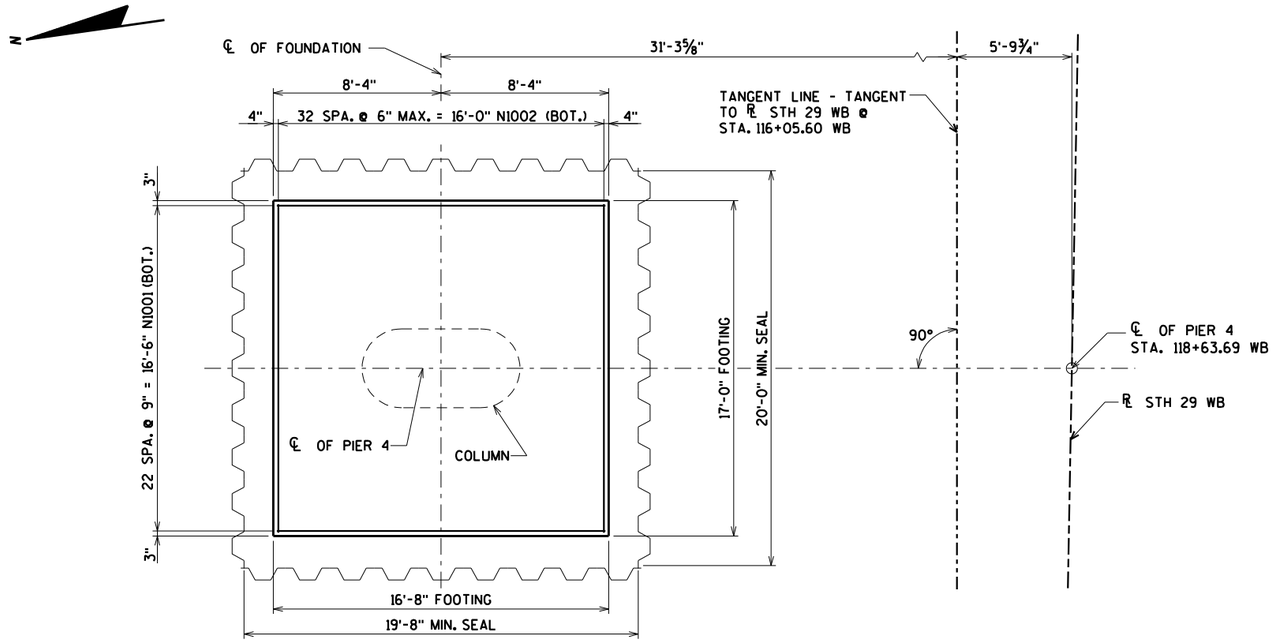
BAR. NO.	COATED BAR	NO. REQ'D.	LENGTH	BENT BAR	BUNDLED BAR	SERIES	23,740# UNCOATED LOCATION
N1001		23	16-3				FOOTING BOTTOM
N1002		33	16-7				FOOTING BOTTOM
N1103		38	14-2	X			FOOTING DOWELS
N404		78	11-0	X			FOOTING & COLUMN HORIZ.
N405		117	4-6	X			FOOTING & COLUMN TIES
N1106		38	21-8				COLUMN VERT.
N1107		38	33-4				COLUMN VERT.
N1008		8	23-10	X			CAP BOT.
N1109		8	27-4	X			CAP TOP
N510		14	22-2	X		⊗	CAP VERT.
N511		34	22-0	X			CAP VERT.
N512		13	6-4	X			CAP TOP
N613		26	7-6	X			CAP ENDS
N714		2	18-2				CAP SIDES
N715		2	22-11				CAP SIDES
N716		24	23-7				CAP SIDES
● N817		7	5-2				CAP HORIZ. DOWELS

BENDING DIMENSIONS ARE OUT TO OUT OF BARS.

⊗ LENGTH SHOWN FOR BAR IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.

● MASONRY ANCHOR TYPE L NO. 8 BARS





FOOTING LAYOUT

BAR SERIES TABLE

BAR MARK	NO REQ'D.	LENGTH
N510	2 SET SERIES OF 7	20'-10"TO 23'-6"

BUNDLE AND TAG EACH SERIES SEPARATELY.

WORK THIS SHEET WITH SHEET 21

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-79

DRAWN BY KAZ | PLANS CK'D. CBM

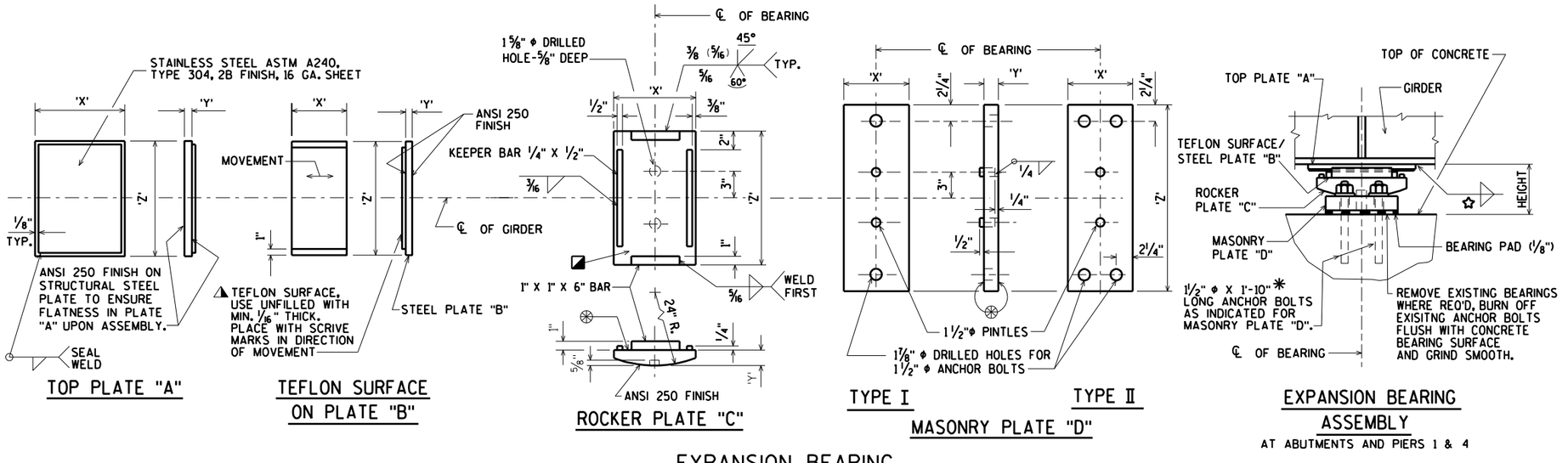
PIER 4 DETAILS

SHEET 22 OF 50
423

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
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Eau Claire, WI 54701
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U:\41-0637.00 - STH 29 over WI River\B-37-79\BRIDGE\19_20 B-37-79 Pier 4.dgn
12/2/2013
PENTABLE:BRequ_shd_util.tbl

$PRFNAME$
U:\41-0637.00 - STH 29 over WIRiver\B-37-79\BRIDGE\21_B-37-79_BRG.dgn



TOP PLATE "A" | TEFLON SURFACE ON PLATE "B" | ROCKER PLATE "C" | TYPE I | TYPE II MASONRY PLATE "D" | EXPANSION BEARING ASSEMBLY AT ABUTMENTS AND PIERS 1 & 4

EXPANSION BEARING

✱ UNLESS NOTED OTHERWISE.

	PLATE "A"			PLATE "B"			PLATE "C"			PLATE "D"			PLATE "D" TYPE	ANCHOR BOLT SIZE	ANCHOR BOLT LENGTH	NO. OF BRG'S REQ'D.	LOCATION	HEIGHT FEET	
	'X'	'Y'	'Z'	'X'	'Y'	'Z'	'X'	'Y'	'Z'	'X'	'Y'	'Z'							
EXPANSION BEARING	11"	5/8"	1'-6"	7"	1/2"	1'-6"	9"	1 15/16 "	1'-8 1/4"	9"	2"	2'-4"	I	1 1/2" ϕ	1'-10"	4	AT ABUTMENTS (GIRDERS 1 & 2)	0.443'	
	1'-7"	5/8"	1'-8"	1'-3"	1/2"	1'-8"	1'-5"	3 7/8"	1'-10 1/4"	1'-6"	3 7/8"	2'-7"	II	1 1/2" ϕ	1'-10"	4	AT PIERS 1 & 4 (GIRDERS 1 & 2)	0.760'	
	11"	5/8"	1'-4"	7"	1/2"	1'-4"	9"	1 15/16 "	1'-6 1/4"	8"	1 1/2"	2'-2"	I	1 1/2" ϕ	2'-1 1/2"	8	AT ABUTMENTS (GIRDERS 3-6)	0.401'	●
	1'-11"	5/8"	1'-6"	1'-7"	1/2"	1'-6"	1'-9"	4 7/8"	1'-8 1/4"	1'-10"	3 7/8"	2'-5"	II	1 1/2" ϕ	1'-10"	8	AT PIERS 1 & 4 (GIRDERS 3-6)	0.844'	
FIXED BEARING							5"	2 3/8"	1'-10"	1'-6"	3 7/8"	2'-8"	II	1 1/2" ϕ	1'-10"	4	AT PIERS 2 & 3 (GIRDERS 1 & 2)	0.531'	
							5"	2 3/8"	1'-8"	1'-6"	3 7/8"	2'-6"	II	1 1/2" ϕ	2'-5 1/2"	8	AT PIERS 2 & 3 (GIRDERS 3-6)	0.531'	▨

● SHIM PLATES REQUIRED. SEE SHEET 24 FOR DETAILS.

▨ PRECAST CONCRETE BEARING BLOCK REQUIRED. SEE SHEET 24 FOR DETAILS.

NOTE: IN STAGE 3, ALL OF THE EXISTING CROSS FRAMES AND BOTTOM BRACING BETWEEN GIRDERS ③ AND ④ NEED TO BE UNBOLTED SO THAT GIRDER ③ CAN BE RAISED IN ORDER TO INSTALL THE NEW BEARINGS. IN STAGE 4, AFTER THE NEW BEARINGS HAVE BEEN INSTALLED FOR GIRDERS ④, ⑤, AND ⑥, ALL OF THE EXISTING CROSS FRAMES AND BOTTOM BRACING BETWEEN GIRDERS ③ AND ④ SHALL BE RECONNECTED USING NEW BOLTS. THE COST FOR DISCONNECTING AND RECONNECTING ALL OF THE CROSS BRACING AND BOTTOM BRACING SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "REMOVING OLD BRIDGE OVER WATERWAY WITH MINIMAL DEBRIS STA. 116+05.60 WB".

BEARING NOTES

ALL BEARINGS ARE SYMMETRICAL ABOUT ℄ OF GIRDER AND ℄ OF BEARING.

ALL STRUCTURAL STEEL BEARING PLATES SHALL BE FLAT ROLLED STEEL PLATES WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL.

ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUTS.

ALL FINISHED SURFACES SHALL BE MACHINE FINISHED BY AN AUTOMATIC PROCESS.

CHAMFER ANCHOR BOLTS PRIOR TO THREADING.

ANCHOR BOLTS SHALL BE THREADED 3". PROVIDE ONE STANDARD WROUGHT WASHER AND ONE HEX NUT PER BOLT. BOLT LENGTH TO BE AS SHOWN FOR 1 1/2" ϕ BOLTS. PROJECT ANCHOR BOLTS, MASONRY PLATE "D" THICKNESS + SHIM PLATE OR BEARING BLOCK IF APPLICABLE + 2 1/4", ABOVE TOP OF CONCRETE.

CHAMFER TOP OF PINTLES 1/8". DRILL HOLES FOR ALL PINTLES IN MASONRY PLATE "D" FOR A DRIVING FIT.

ALL MATERIAL IN BEARINGS, INCLUDING SHIM PLATES, BUT EXCLUDING ANCHOR BOLTS, STAINLESS STEEL SHEET, TEFLON SURFACE, PINTLES, NUTS AND WASHERS SHALL CONFORM TO ASTM A709 GRADE 50W.

STEEL PINTLES SHALL CONFORM TO ASTM A449 OR MATERIAL OF EQUIVALENT YIELD STRENGTH AND ELONGATION.

ANCHOR BOLTS, NUTS AND WASHERS SHALL CONFORM TO ASTM A709 GRADE 36, OR MATERIAL OF EQUIVALENT YIELD STRENGTH AND ELONGATION.

PROVIDE 1/8" THICK BEARING PAD THE SAME SIZE AS MASONRY PLATE "D" FOR EACH BEARING.

ALL MATERIAL IN BEARINGS, INCLUDING SHIM PLATES AND BEARING PADS, SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "BEARING ASSEMBLIES EXPANSION B-37-79" OR "BEARING ASSEMBLIES FIXED B-37-79", EACH.

ANCHOR BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153, CLASS C.

PLACE SHIM PLATES BETWEEN BEARING PAD AND MASONRY PLATE "D". PLATES SHALL HAVE "X" AND "Z" DIMENSIONS THAT MATCH MASONRY PLATE "D".

IN LIEU OF USING SHIM PLATES, FABRICATOR MAY INCREASE THICKNESS OF TOP PLATE "A" OR MASONRY PLATE "D" BY THE SHIM PLATE THICKNESS.

FIXED BEARINGS:
ROCKER PLATE "C" SHALL BE SHOP PAINTED WITH A WELDABLE PRIMER.
MASONRY PLATE "D" SHALL BE GALVANIZED.

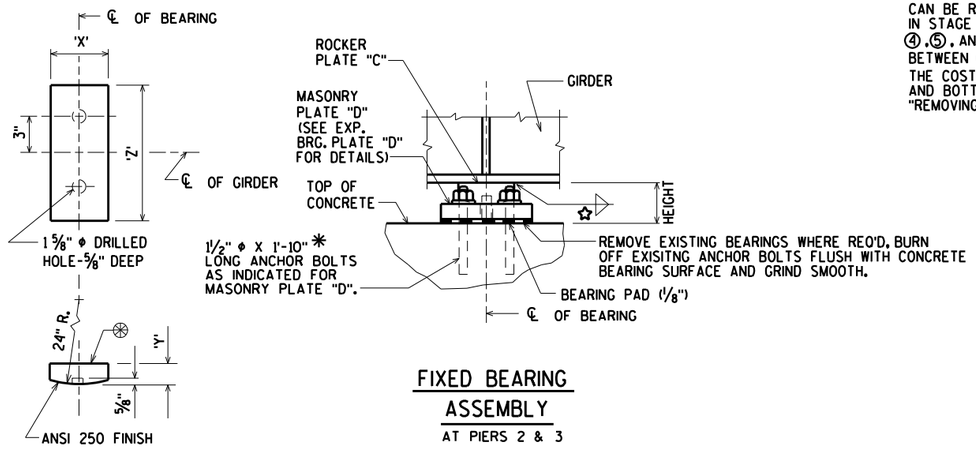
EXPANSION BEARINGS:
TOP PLATE "A" AND STEEL PLATE "B" SHALL BE SHOP PAINTED. USE A WELDABLE PRIMER ON TOP PLATE "A". ROCKER PLATE "C", MASONRY PLATE "D", AND SHIM PLATE "E" WHERE REQUIRED SHALL BE GALVANIZED. DO NOT PAINT STAINLESS STEEL OR TEFLON SURFACES.

✲ FINISH THESE SURFACES TO ANSI 250 IF 'Y' DIMENSION IS GREATER THAN 2".

◪ PROVIDE A METHOD FOR HANDLING ROCKER PLATE "C" DURING GALVANIZING.

⚠ BOND STEEL PLATE "B" AND TEFLON WITH ADHESIVE MATERIAL MEETING FEDERAL SPECIFICATION MMM-A-134, FEP FILM OR EQUAL.

AT INSTALLATION, ENSURE STAINLESS STEEL SLIDING FACE OF THE UPPER ELEMENT AND THE TFE SLIDING FACE OF THE LOWER ELEMENT HAVE THE SURFACE FINISH SPECIFIED AND ARE CLEAN AND FREE OF ALL DUST, MOISTURE, AND OTHER FOREIGN MATTER.



ROCKER PLATE "C" | FIXED BEARING ASSEMBLY AT PIERS 2 & 3

✱ UNLESS NOTED OTHERWISE.

FIXED BEARING

✩ TABLE OF FILLET WELD SIZES

MATERIAL THICKNESS OF THICKER PART JOINED.	∔ MIN. SIZE OF FILLET WELD
TO 1/2" INCLUSIVE	3/16"
OVER 1/2" TO 3/4"	1/4"
OVER 3/4" TO 1 1/2"	△ 5/16"
OVER 1 1/2"	△ 3/8"

∔ EXCEPT THAT THE WELD SIZE SHALL NOT EXCEED THE THICKNESS OF THE THINNER PART JOINED.

△ MIN. PASS SIZE IS 5/16"

WORK THIS SHEET WITH SHEET 24

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STRUCTURE B-37-79

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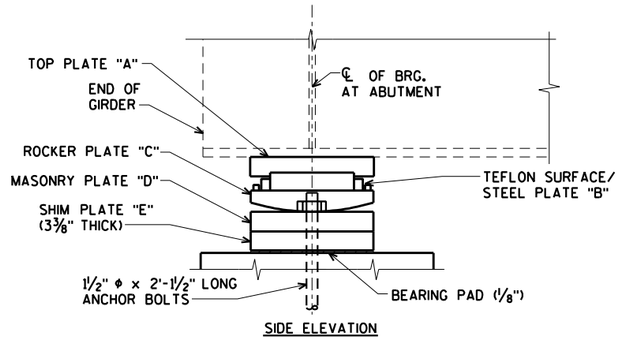
BEARING DETAILS

SHEET 23 OF 50
424

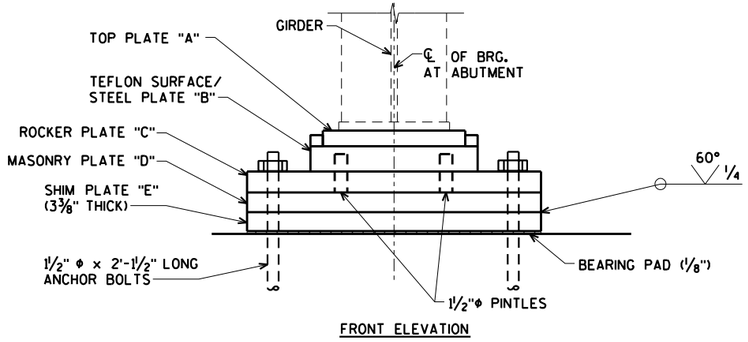
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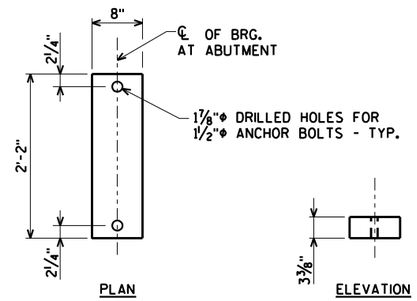


SIDE ELEVATION



FRONT ELEVATION

BEARING SHIM PLATES AT ABUTMENTS

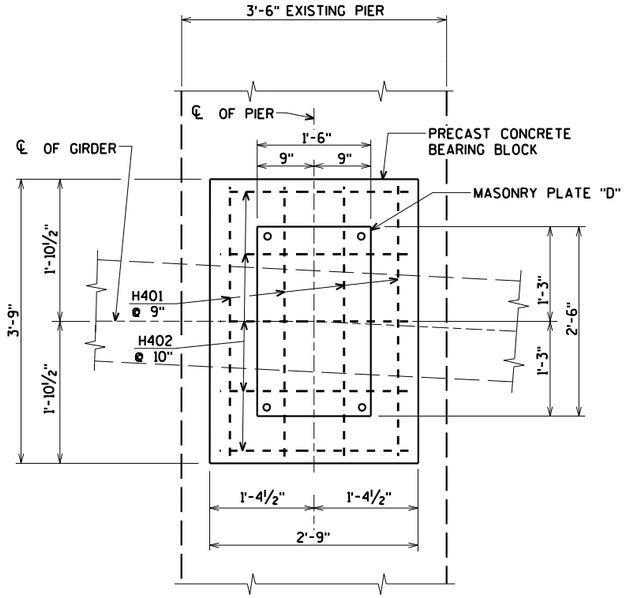


PLAN ELEVATION

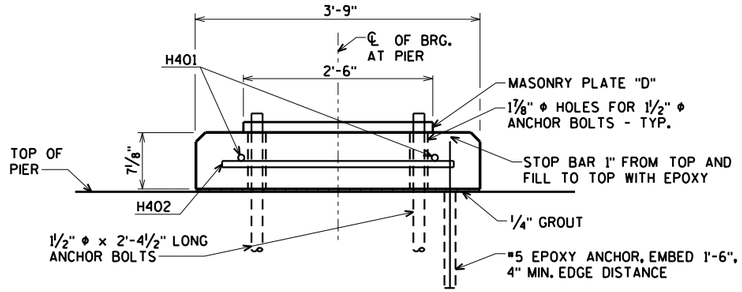
SHIM PLATE "E" DETAILS

NOTE:

REMOVE EXISTING EXPANSION BEARINGS AND EXISTING ANCHOR BOLTS FLUSH WITH CONCRETE BEARING SURFACE AND GRIND SMOOTH.



PRECAST CONCRETE BEARING BLOCK PLAN AT PIERS 2 & 3



PRECAST CONCRETE BEARING BLOCK DETAIL AT PIERS 2 & 3

NOTES:

REMOVE EXISTING ANCHOR BOLTS FLUSH WITH CONCRETE BEARING SURFACE AND GRIND SMOOTH.

CONTRACTOR MAY PROPOSE A CAST-IN-PLACE ALTERNATE SUBJECT TO REVIEW AND APPROVAL BY THE BUREAU OF STRUCTURES.

ANCHOR IN AT LEAST 4 LOCATIONS (ANCHORS INCLUDE EPOXY ANCHORS, ANCHOR BOLTS, OR COMBINATION).

GROUT ¼" BENEATH PRECAST ELEMENT.

BILL OF BARS

BAR. NO.	COATED BAR	NO. REQ'D.	LENGTH	BENT BAR	BUNDLED	BAR SERIES	140# COATED * LOCATION
H401	X	32	3-5				PIER SHIM TRANS.
H402	X	40	2-5				PIER SHIM LONG.

* BAR STEEL TO BE INCLUDED IN THE BID PRICE FOR "PRECAST CONCRETE BEARING BLOCK".

WORK THIS SHEET WITH SHEET 23

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BEARING BLOCK AND SHIM DETAILS

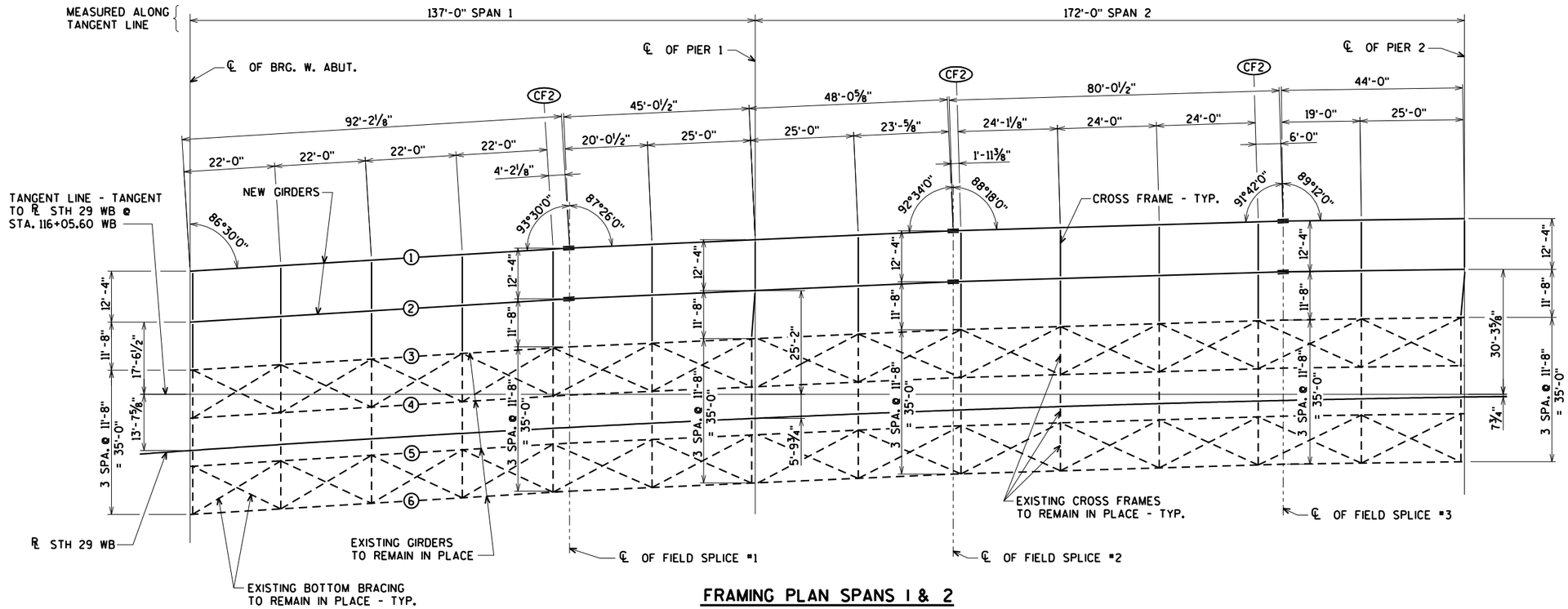
SHEET 24 OF 50
425

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STATE PROJECT NUMBER

1053-02-75



FRAMING PLAN SPANS 1 & 2

NOTES

1. THE CONTRACTOR SHALL MAINTAIN STABILITY OF THE GIRDERS UNTIL THE CROSS FRAMES AND DECK HAVE BEEN CONSTRUCTED.
2. DIMENSIONS GIVEN ARE HORIZONTAL DIMENSIONS ALONG ℄ OF GIRDER.
3. ALL CROSS FRAME BOLTS MUST BE FULLY TIGHTENED PRIOR TO CONRETE DECK PLACEMENT.
4. CROSS FRAMES SHALL BE DETAILED AND FABRICATED FOR THE ERECTED POSITION.
5. FOR GIRDER ① PLACE CROSS FRAME CONNECTION PLATES ON THE INSIDE OF THE WEB ONLY.
6. ALL ENDS OF GIRDERS, BEARING STIFFENERS AND JACKING STIFFENERS SHALL BE VERTICAL AFTER FULL DEAD LOAD IS APPLIED. ALL CONNECTION PLATES, CROSS FRAMES, AND FIELD SPLICES MAY BE NORMAL TO FINAL GRADE.
7. ALL GIRDERS SHALL BE FABRICATED AND ERECTED SUCH THAT THE WEBS ARE PLUMB IN THE FULL DEAD LOAD CONDITION. IN DOING SO, THE CONTRACTOR SHALL TAKE INTO ACCOUNT THE SIGNIFICANT DIFFERENTIAL DEFLECTIONS BETWEEN ADJACENT GIRDERS.
8. IN STAGE 3, ALL OF THE EXISTING CROSS FRAMES AND BOTTOM BRACING BETWEEN GIRDERS ③ AND ④ NEED TO BE UNBOLTED SO THAT GIRDER ③ CAN BE RAISED IN ORDER TO INSTALL THE NEW BEARINGS. IN STAGE 4, AFTER THE NEW BEARINGS HAVE BEEN INSTALLED FOR GIRDERS ④, ⑤, AND ⑥, ALL OF THE EXISTING CROSS FRAMES AND BOTTOM BRACING BETWEEN GIRDERS ③ AND ④ SHALL BE RECONNECTED USING NEW BOLTS. THE COST FOR DISCONNECTING AND RECONNECTING ALL OF THE CROSS BRACING AND BOTTOM BRACING SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "REMOVING OLD BRIDGE OVER WATERWAY WITH MINIMAL DEBRIS STA. 116+05.60 WB".

(CF2) DENOTES CROSS FRAME CF2 - FOR DETAILS SEE SHEET 35

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STRUCTURE B-37-79

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FRAMING PLAN SPANS 1 & 2

SHEET 25 OF 50
426

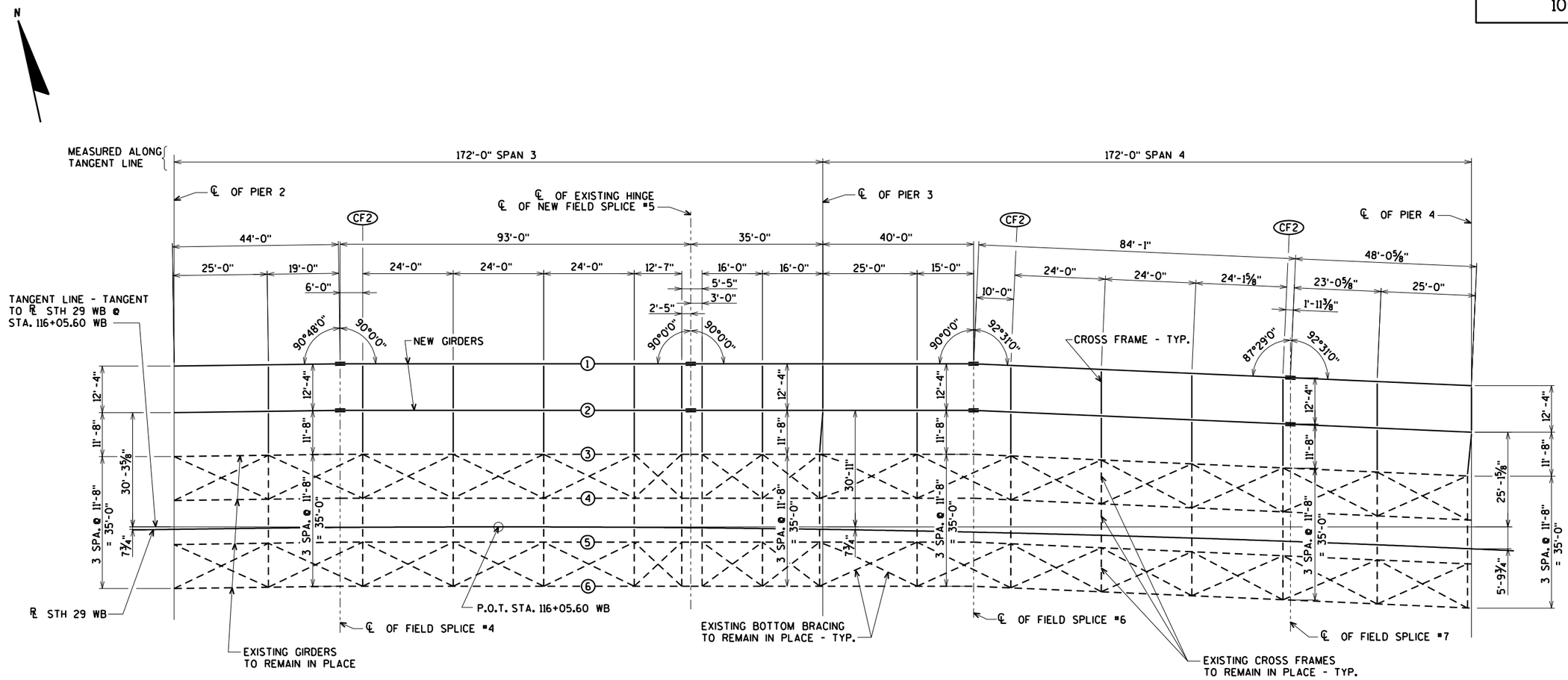
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STATE PROJECT NUMBER
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FRAMING PLAN SPANS 3 & 4

NOTES

1. THE CONTRACTOR SHALL MAINTAIN STABILITY OF THE GIRDERS UNTIL THE CROSS FRAMES AND DECK HAVE BEEN CONSTRUCTED.
2. DIMENSIONS GIVEN ARE HORIZONTAL DIMENSIONS ALONG ℄ OF GIRDER.
3. ALL CROSS FRAME BOLTS MUST BE FULLY TIGHTENED PRIOR TO CONRETE DECK PLACEMENT.
4. CROSS FRAMES SHALL BE DETAILED AND FABRICATED FOR THE ERECTED POSITION.
5. FOR GIRDER ① PLACE CROSS FRAME CONNECTION PLATES ON THE INSIDE OF THE WEB ONLY.
6. ALL ENDS OF GIRDERS, BEARING STIFFENERS AND JACKING STIFFENERS SHALL BE VERTICAL AFTER FULL DEAD LOAD IS APPLIED. ALL CONNECTION PLATES, CROSS FRAMES, AND FIELD SPLICES MAY BE NORMAL TO FINAL GRADE.
7. ALL GIRDERS SHALL BE FABRICATED AND ERECTED SUCH THAT THE WEBS ARE PLUMB IN THE FULL DEAD LOAD CONDITION. IN DOING SO, THE CONTRACTOR SHALL TAKE INTO ACCOUNT THE SIGNIFICANT DIFFERENTIAL DEFLECTIONS BETWEEN ADJACENT GIRDERS.
8. IN STAGE 3, ALL OF THE EXISTING CROSS FRAMES AND BOTTOM BRACING BETWEEN GIRDERS ③ AND ④ NEED TO BE UNBOLTED SO THAT GIRDER ③ CAN BE RAISED IN ORDER TO INSTALL THE NEW BEARINGS.
   IN STAGE 4, AFTER THE NEW BEARINGS HAVE BEEN INSTALLED FOR GIRDERS ④, ⑤, AND ⑥, ALL OF THE EXISTING CROSS FRAMES AND BOTTOM BRACING BETWEEN GIRDERS ③ AND ④ SHALL BE RECONNECTED USING NEW BOLTS.
   THE COST FOR DISCONNECTING AND RECONNECTING ALL OF THE CROSS BRACING AND BOTTOM BRACING SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "REMOVING OLD BRIDGE OVER WATERWAY WITH MINIMAL DEBRIS STA. 116+05.60 WB".

CF2 DENOTES CROSS FRAME CF2 - FOR DETAILS SEE SHEET 35

NO.	DATE	REVISION	BY

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STRUCTURE B-37-79

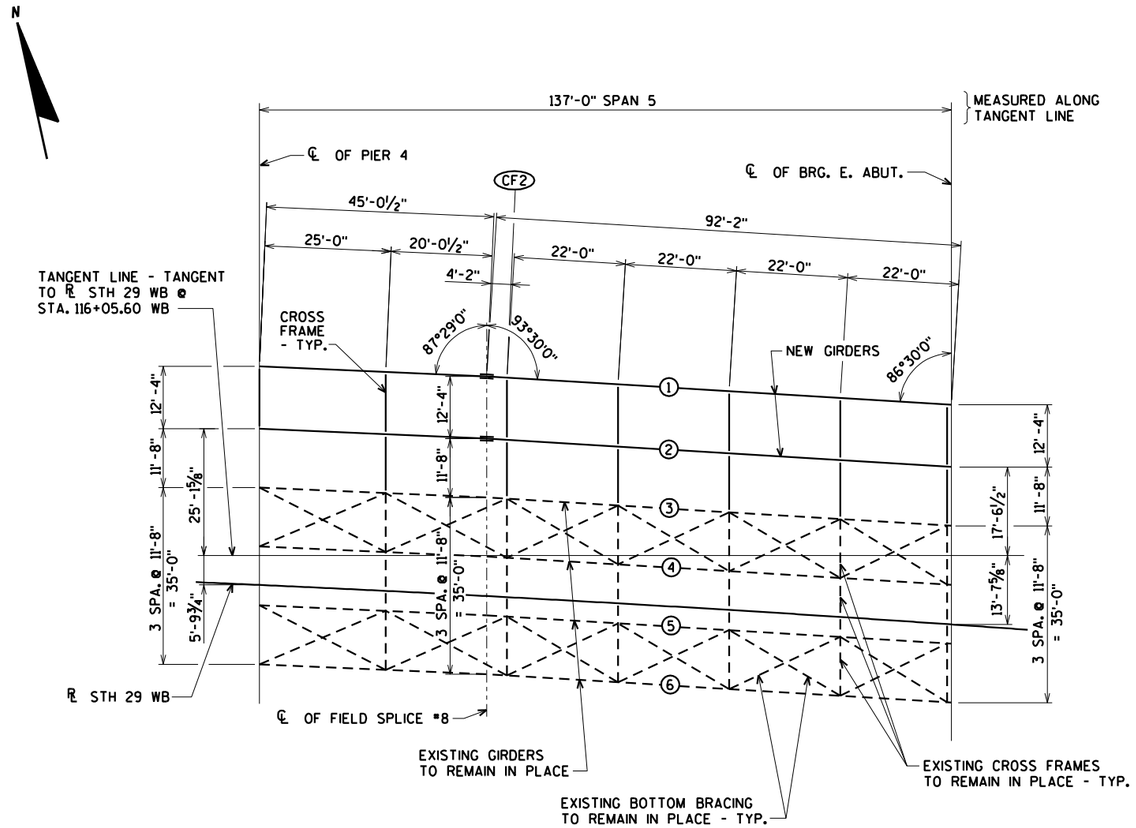
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FRAMING PLAN SPANS 3 & 4

SHEET 26 OF 50
427

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FRAMING PLAN SPAN 5

NOTES

1. THE CONTRACTOR SHALL MAINTAIN STABILITY OF THE GIRDERS UNTIL THE CROSS FRAMES AND DECK HAVE BEEN CONSTRUCTED.
2. DIMENSIONS GIVEN ARE HORIZONTAL DIMENSIONS ALONG ℄ OF GIRDER.
3. ALL CROSS FRAME BOLTS MUST BE FULLY TIGHTENED PRIOR TO CONRETE DECK PLACEMENT.
4. CROSS FRAMES SHALL BE DETAILED AND FABRICATED FOR THE ERECTED POSITION.
5. FOR GIRDER ① PLACE CROSS FRAME CONNECTION PLATES ON THE INSIDE OF THE WEB ONLY.
6. ALL ENDS OF GIRDERS, BEARING STIFFENERS AND JACKING STIFFENERS SHALL BE VERTICAL AFTER FULL DEAD LOAD IS APPLIED. ALL CONNECTION PLATES, CROSS FRAMES, AND FIELD SPLICES MAY BE NORMAL TO FINAL GRADE.
7. ALL GIRDERS SHALL BE FABRICATED AND ERECTED SUCH THAT THE WEBS ARE PLUMB IN THE FULL DEAD LOAD CONDITION. IN DOING SO, THE CONTRACTOR SHALL TAKE INTO ACCOUNT THE SIGNIFICANT DIFFERENTIAL DEFLECTIONS BETWEEN ADJACENT GIRDERS.
8. IN STAGE 3, ALL OF THE EXISTING CROSS FRAMES AND BOTTOM BRACING BETWEEN GIRDERS ③ AND ④ NEED TO BE UNBOLTED SO THAT GIRDER ③ CAN BE RAISED IN ORDER TO INSTALL THE NEW BEARINGS. IN STAGE 4, AFTER THE NEW BEARINGS HAVE BEEN INSTALLED FOR GIRDERS ④, ⑤, AND ⑥, ALL OF THE EXISTING CROSS FRAMES AND BOTTOM BRACING BETWEEN GIRDERS ③ AND ④ SHALL BE RECONNECTED USING NEW BOLTS. THE COST FOR DISCONNECTING AND RECONNECTING ALL OF THE CROSS BRACING AND BOTTOM BRACING SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "REMOVING OLD BRIDGE OVER WATERWAY WITH MINIMAL DEBRIS STA. 116+05.60 WB".

(CF2) DENOTES CROSS FRAME CF2 - FOR DETAILS SEE SHEET 35

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STRUCTURE B-37-79

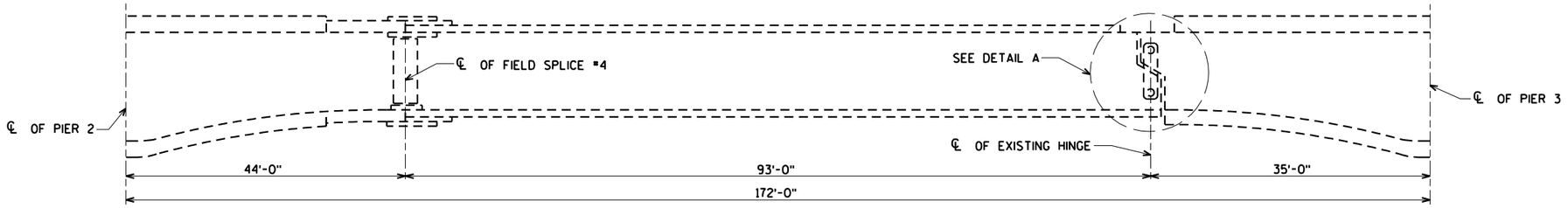
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FRAMING PLAN SPAN 5

SHEET 27 OF 50
428

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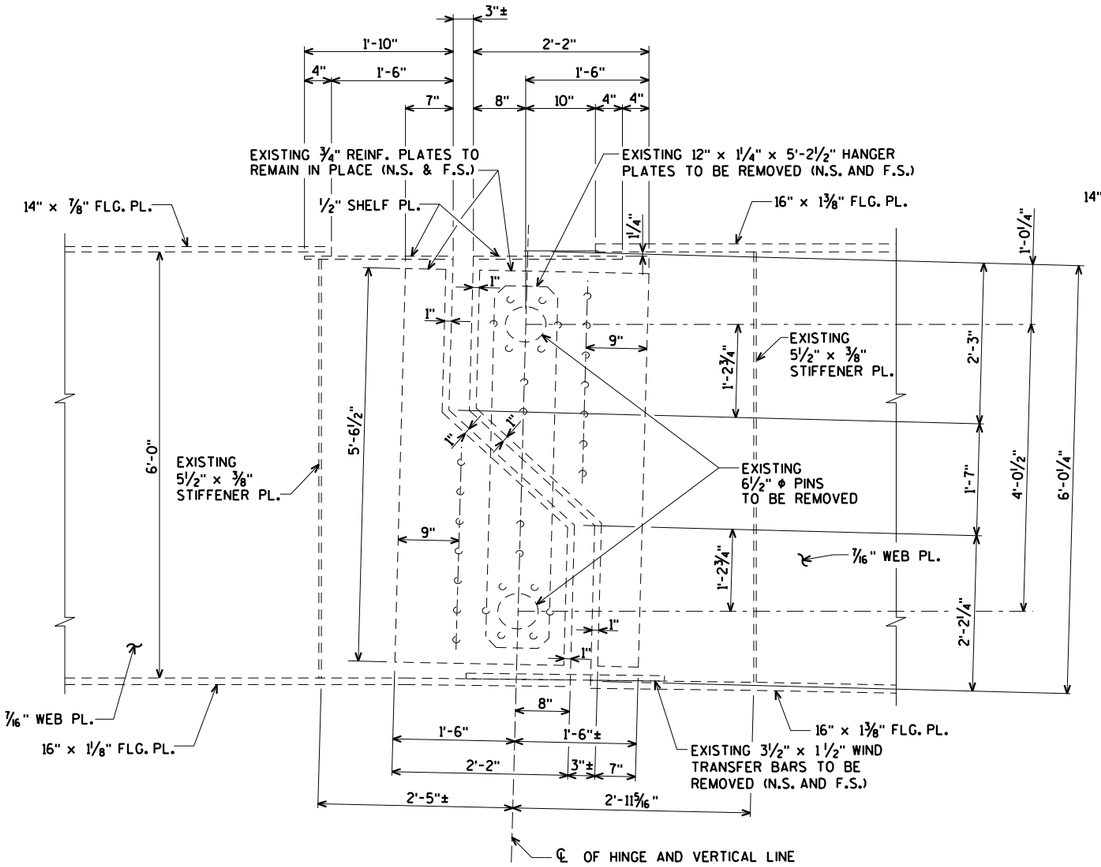
EXISTING GIRDER ELEVATION SPAN 3

NOTES

REMOVE EXISTING HANGER PLATES, PINS, AND WIND TRANSFER PLATES.

BID ITEM SHALL BE "EXISTING PIN AND HANGER RETROFIT", EACH. ALL MATERIAL AND WORK INVOLVED SHALL BE PAID FOR UNDER "EXISTING PIN AND HANGER RETROFIT."

ALL FIELD DRILLED HOLES SHALL HAVE PAINT REMOVED FOR AN AREA 3"± IN DIAMETER AROUND THE HOLE IN ORDER TO ACCOMPLISH A FRICTION CONNECTION.



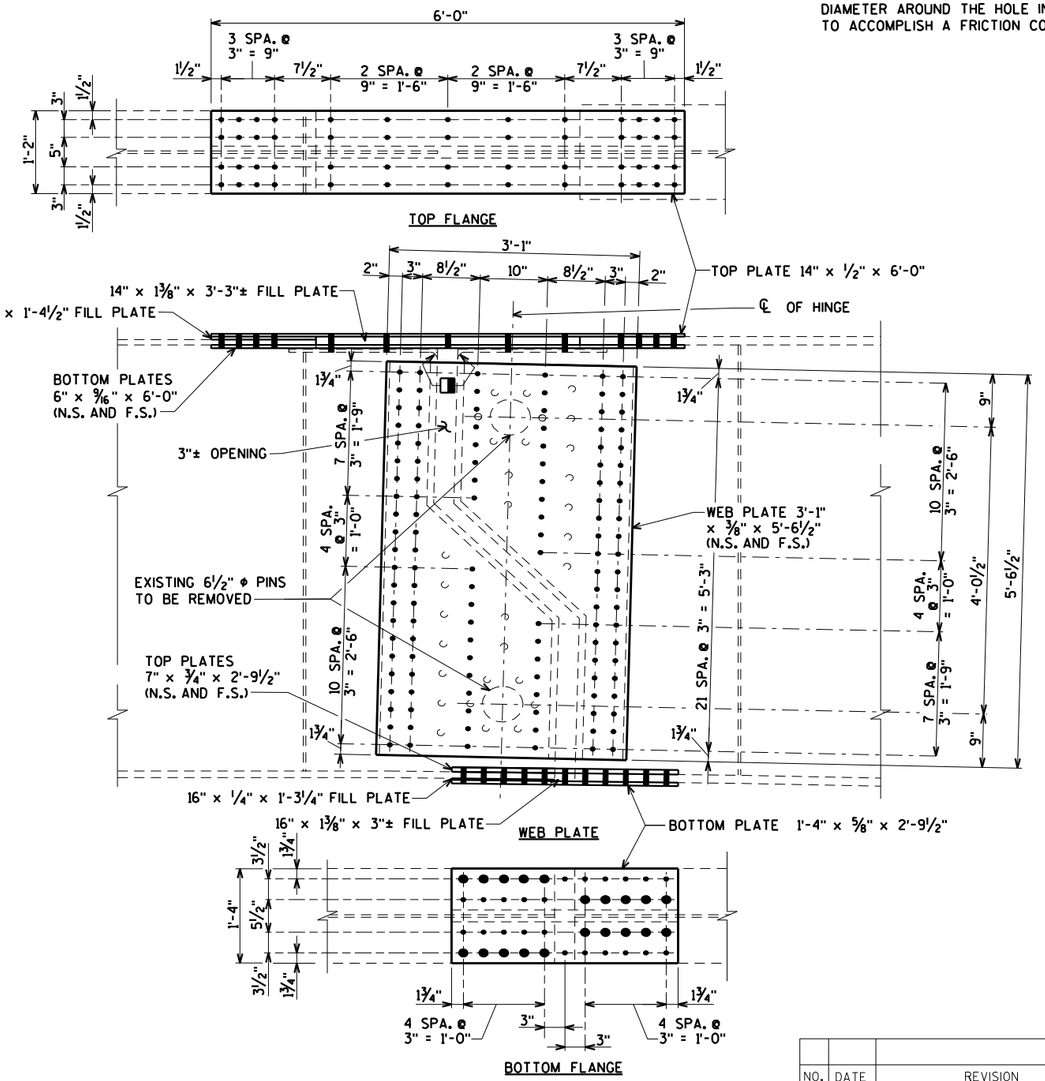
DETAIL A
EXISTING HINGE

NOTE: ALL BOLTS IN PIN AND HANGER RETRO-FIT SPLICE TO BE ⅞"ϕ A325 H.S.

N.S. DENOTES NEAR SIDE
F.S. DENOTES FAR SIDE

◨ GRIND EXISTING SHELF PLATE AND WEB IN FIELD SO THAT A ¾"± RADIUS IS PROVIDED.

● EXISTING BOLT HOLES FOR EXISTING ¾"ϕ BOLTS TO BE ENLARGED FOR NEW ⅞"ϕ A325 H.S. BOLTS.



PIN AND HANGER RETRO-FIT SPLICE DETAIL
(CONTRACTOR TO SUPPORT GIRDERS DURING RETROFIT)
(FOUR LOCATIONS)

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EXISTING PIN AND HANGER RETROFIT

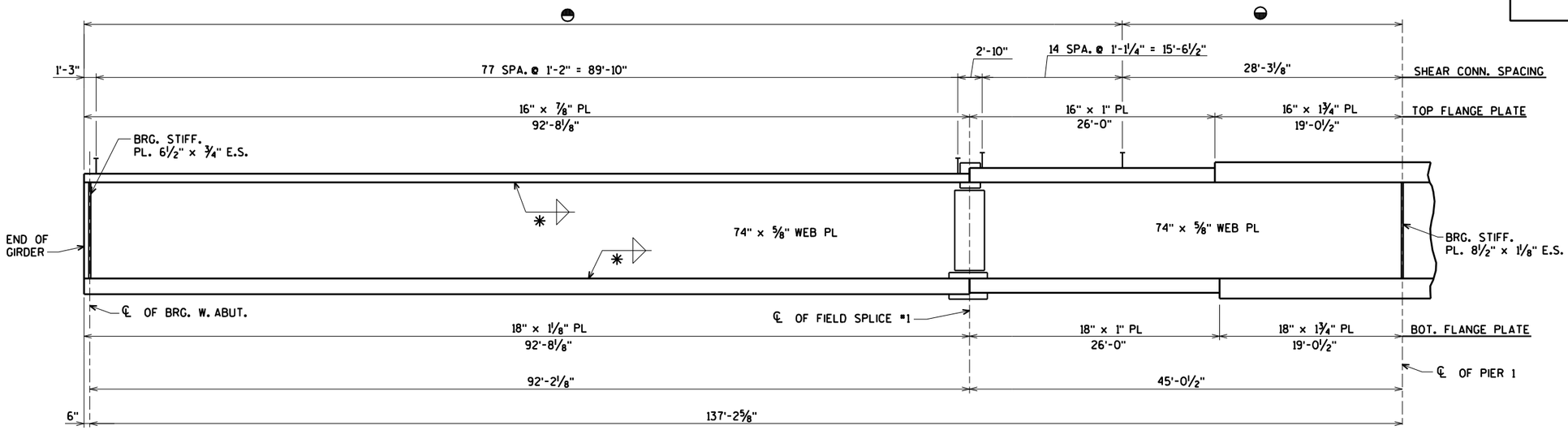
SHEET 28 OF 50
429

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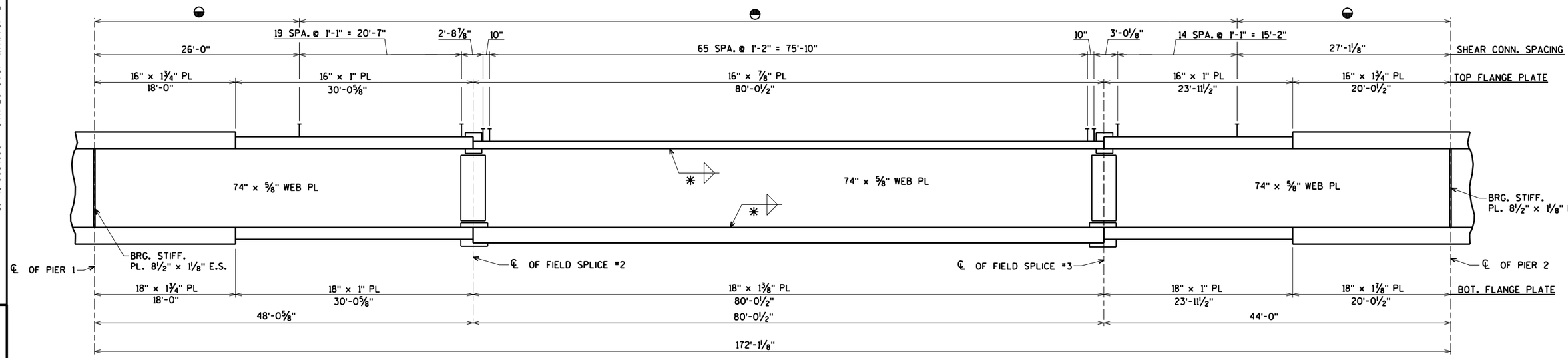
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GIRDER ELEVATION SPAN 1



GIRDER ELEVATION SPAN 2

WORK THIS SHEET WITH SHEETS 30 - 31

✱ FOR GIRDER NOTES, SHEAR CONNECTOR DETAILS, AND TABLE OF FILLET WELDS, SEE SHEET 31.

E.S. DENOTES EACH SIDE

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STRUCTURE B-37-79

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NEW GIRDER ELEVATION

SHEET 29 OF 50
430

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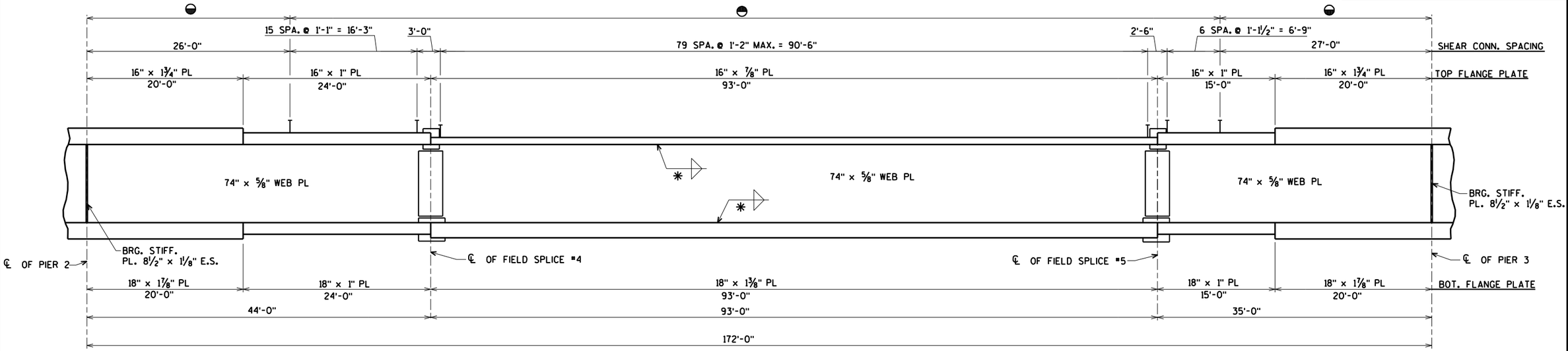
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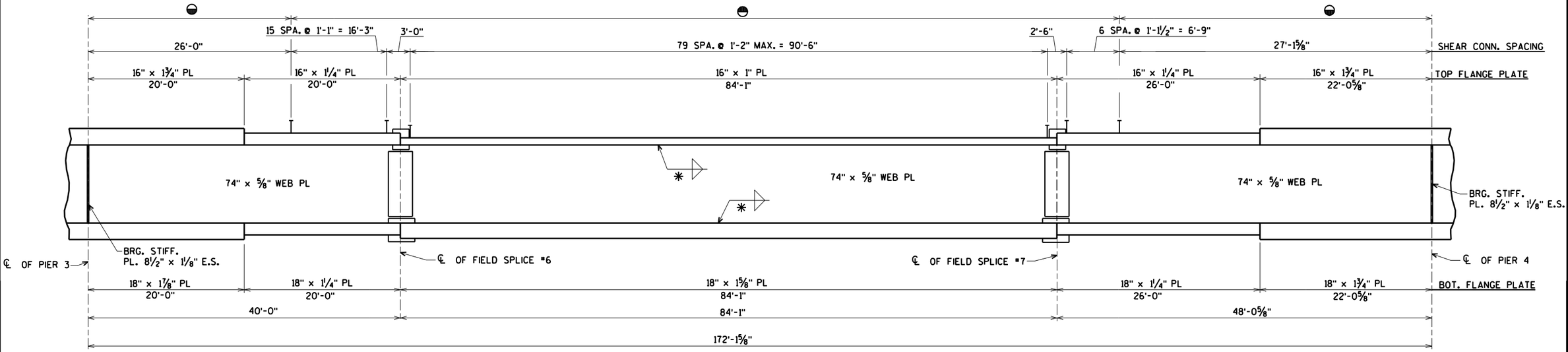
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GIRDER ELEVATION SPAN 3



GIRDER ELEVATION SPAN 4

WORK THIS SHEET WITH SHEETS 29 & 31

✱ FOR GIRDER NOTES, SHEAR CONNECTOR DETAILS, AND TABLE OF FILLET WELDS, SEE SHEET 31.

E.S. DENOTES EACH SIDE

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
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STRUCTURE B-37-79

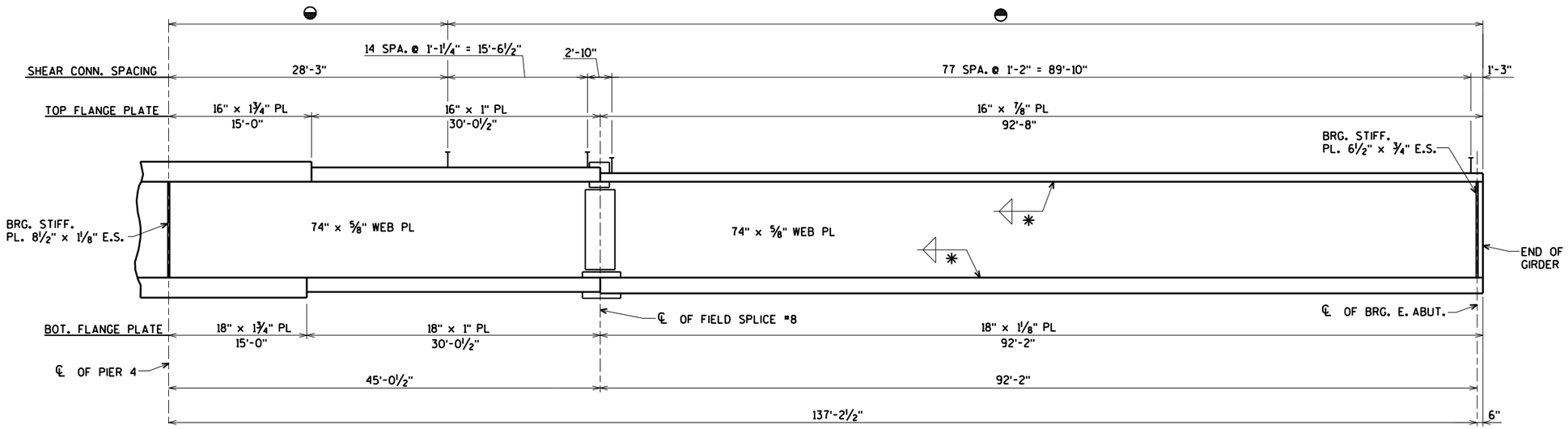
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NEW GIRDER ELEVATION

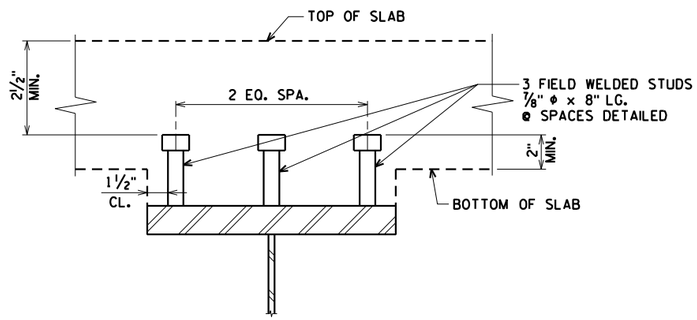
SHEET 30 OF 50
431

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GIRDER ELEVATION SPAN 5



SHEAR CONNECTOR DETAIL

* TABLE OF FILLET WELD SIZES

MATERIAL THICKNESS OF THICKER PART JOINED	+ MIN. SIZE OF FILLET WELD
TO ½" INCLUSIVE	3/16"
OVER ½" TO ¾"	¼"
OVER ¾" TO 1½"	△ 5/16"
OVER 1½" TO 2¼"	△ ⅜"
OVER 2¼" TO 6"	△ ½"

+ EXCEPT THAT THE WELD SIZE SHALL NOT EXCEED THE THICKNESS OF THE THINNER PART JOINED.

△ MIN. PASS SIZE 5/16".

NEW GIRDER NOTES

ALL STRUCTURAL STEEL TO CONFORM TO ASTM 709 GRADE 50, UNLESS OTHERWISE SHOWN OR NOTED.

◓ NO FIELD WELDING TO BOTTOM FLANGE PERMITTED IN THIS AREA.

◒ NO FIELD WELDING TO TOP FLANGE PERMITTED IN THIS AREA.

DIMENSIONS GIVEN ARE HORIZONTAL DIMENSIONS ALONG ℄ OF GIRDER.

CROSS FRAME CONNECTION PLATES ARE NOT SHOWN FOR CLARITY. SEE FRAMING PLAN SHEETS FOR LOCATIONS.

OPTIONAL WELDED SHOP SPLICES MAY BE USED FOR ALL FLANGE AND WEB PLATES OVER 60'-0" LONG. IF USED, THE LOCATION OF THE SPLICE SHALL BE SHOWN ON SHOP DRAWINGS AND WILL BE SUBJECT TO THE APPROVAL OF THE STRUCTURES DESIGN SECTION.

PRIOR TO STEEL BLAST, ALL FLAME CUT EDGES OF PLATES THAT ARE TO BE PAINTED SHALL BE GROUND OR PLANED TO REMOVE THE HARDENED SURFACE CAUSED BY THE FLAME.

E.S. DENOTES EACH SIDE

WORK THIS SHEET WITH SHEETS 29 - 30

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-79

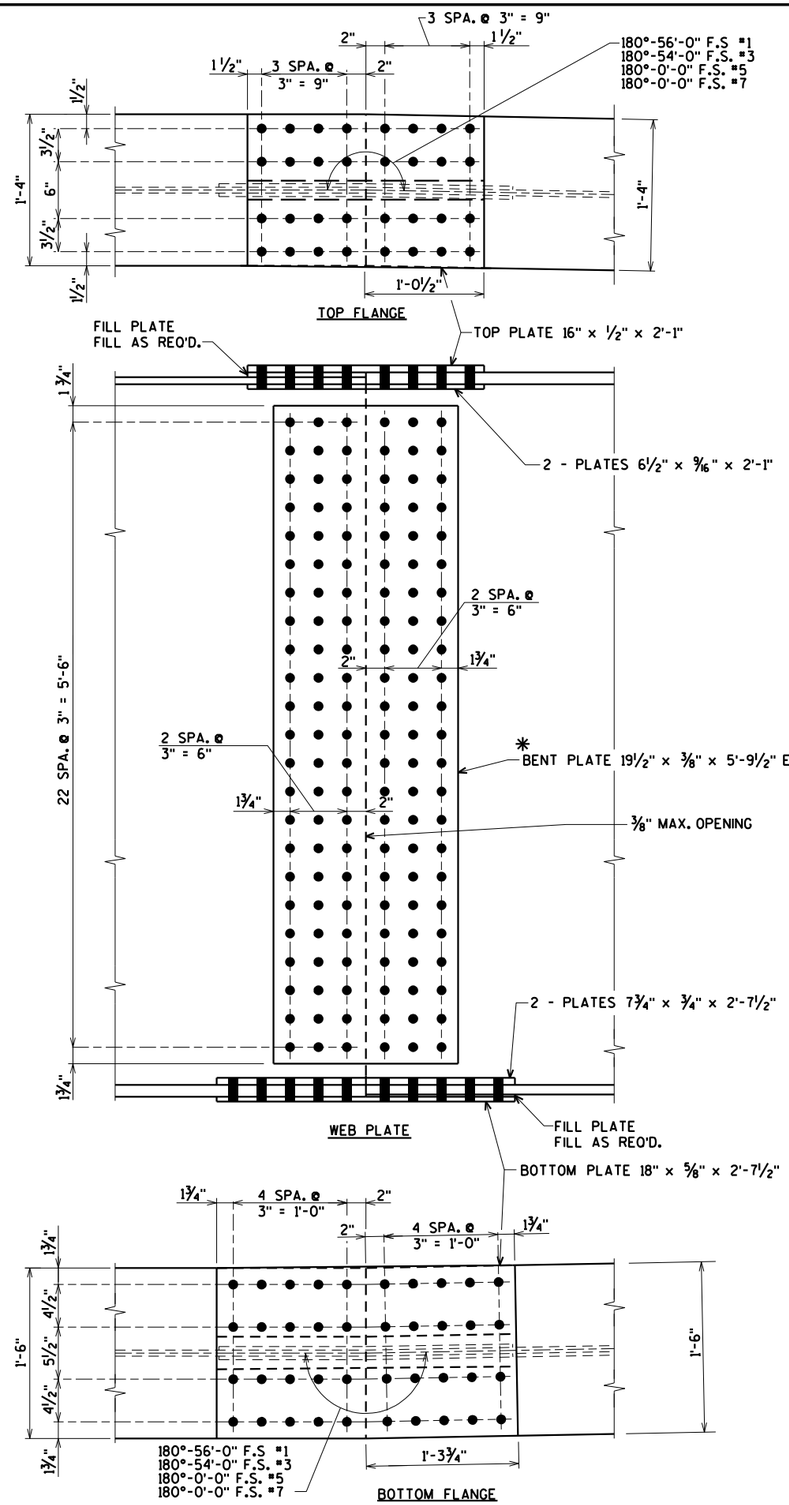
DRAWN BY KAZ | PLANS CK'D. CBM

NEW GIRDER ELEVATION

SHEET 31 OF 50
432

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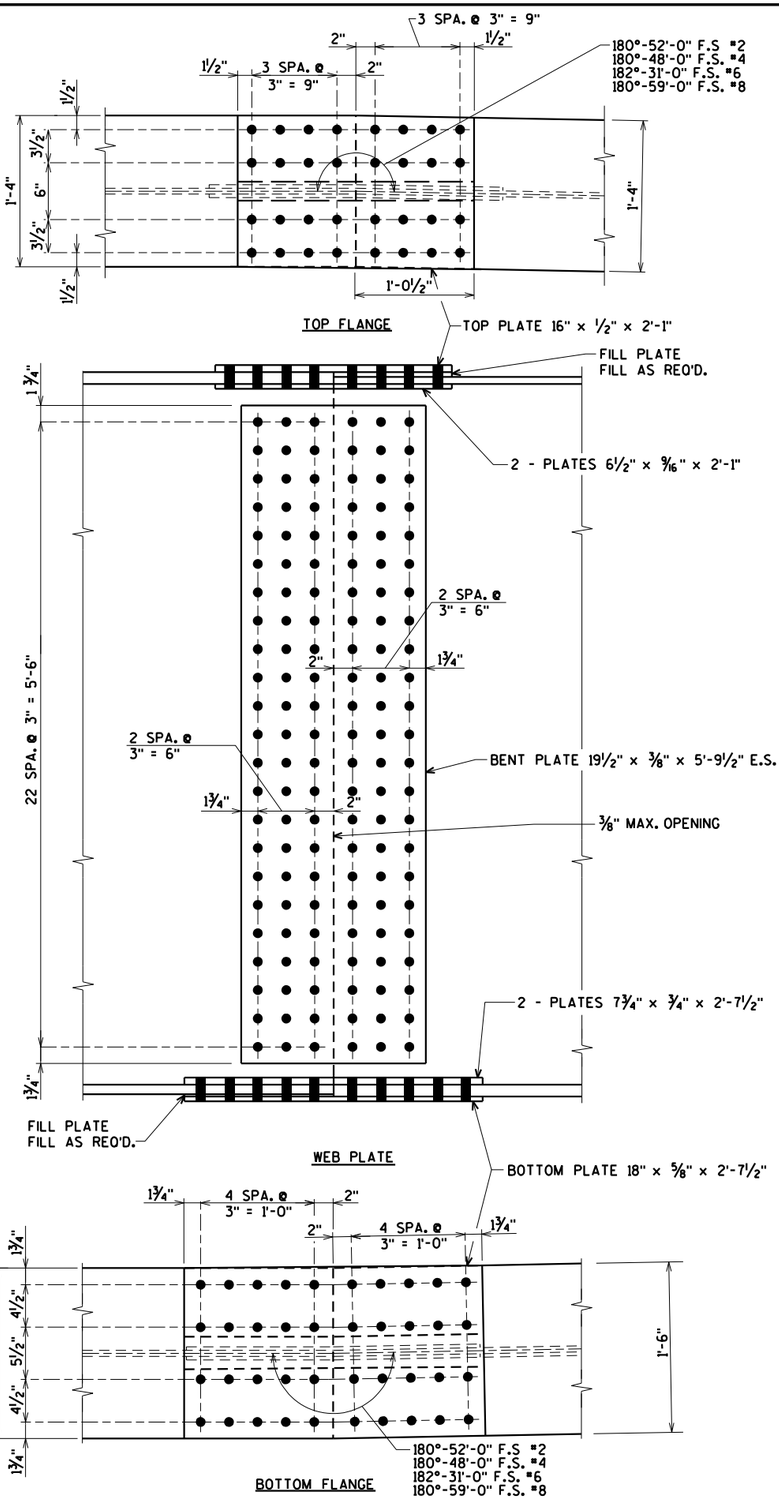
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FIELD SPLICE *1, *3, *5 & *7 DETAIL

NOTE: ALL BOLTS IN FIELD SPLICE TO BE ⅞" ϕ A325 H.S.

*EXCEPT FOR F.S. *5



FIELD SPLICE *2, *4, *6, & *8 DETAIL

NOTE: ALL BOLTS IN FIELD SPLICE TO BE ⅞" ϕ A325 H.S.

E.S. DENOTES EACH SIDE

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
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STRUCTURE B-37-79

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FIELD SPLICE DETAILS

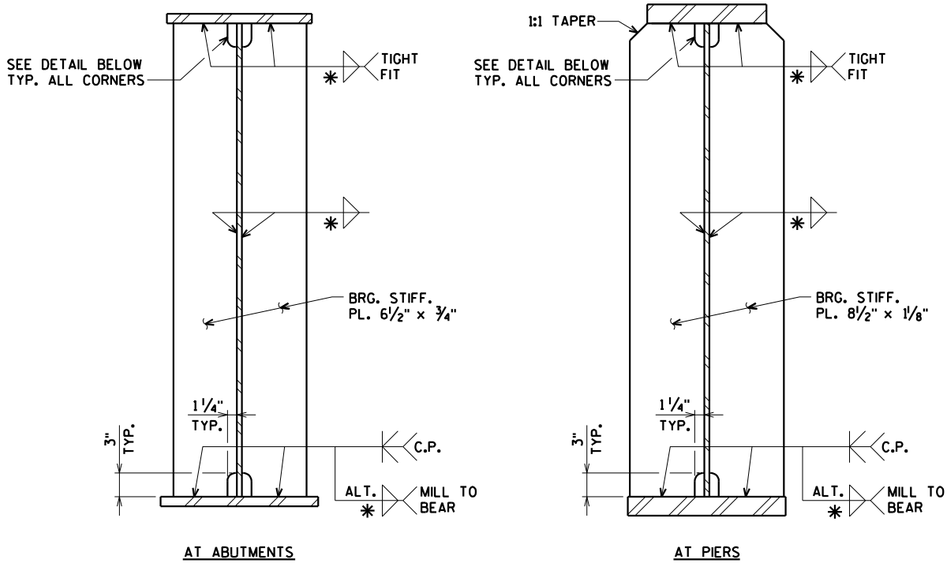
SHEET 32 OF 50
433

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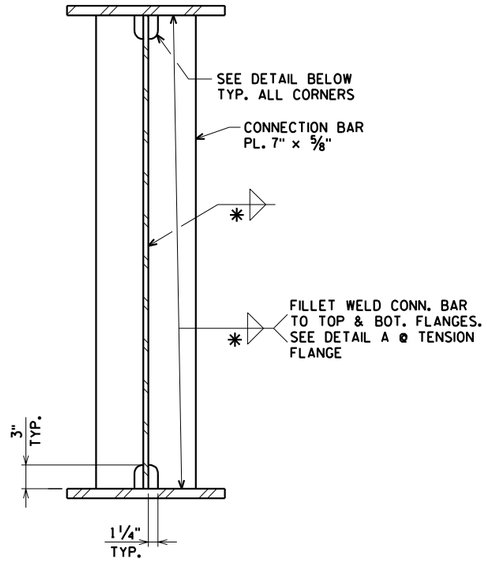
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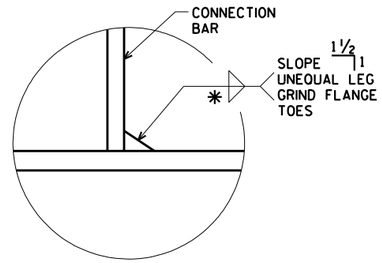
1053-02-75



BRG. STIFF. DETAILS

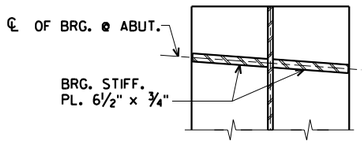


CONNECTION BAR DETAIL



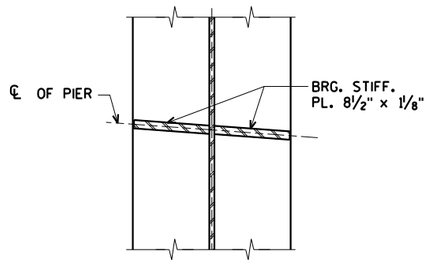
DETAIL A

CONNECTION BAR DETAIL @ TENSION FLANGE



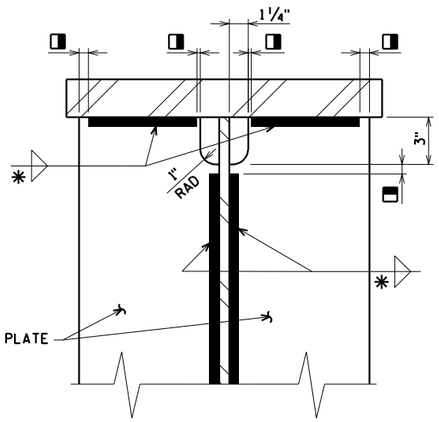
BEARING STIFFENER PLAN

AT ABUTMENTS



BEARING STIFFENER PLAN

AT PIERS



CONNECTION BAR & BEARING STIFF. PLATE TO WEB/FLANGE CONNECTION WELDS

◨ ¼" MIN., ½" MAX. TYP.

* TABLE OF FILLET WELD SIZES

MATERIAL THICKNESS OF THICKER PART JOINED	† MIN. SIZE OF FILLET WELD
TO ½" INCLUSIVE	3/16"
OVER ½" TO ¾"	¼"
OVER ¾" TO 1½"	△ 5/16"
OVER 1½" TO 2¼"	△ ⅜"
OVER 2¼" TO 6"	△ ½"

† EXCEPT THAT THE WELD SIZE SHALL NOT EXCEED THE THICKNESS OF THE THINNER PART JOINED.

△ MIN. PASS SIZE 5/16".

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STRUCTURE B-37-79

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NEW GIRDER DETAILS

SHEET 33 OF 50
434

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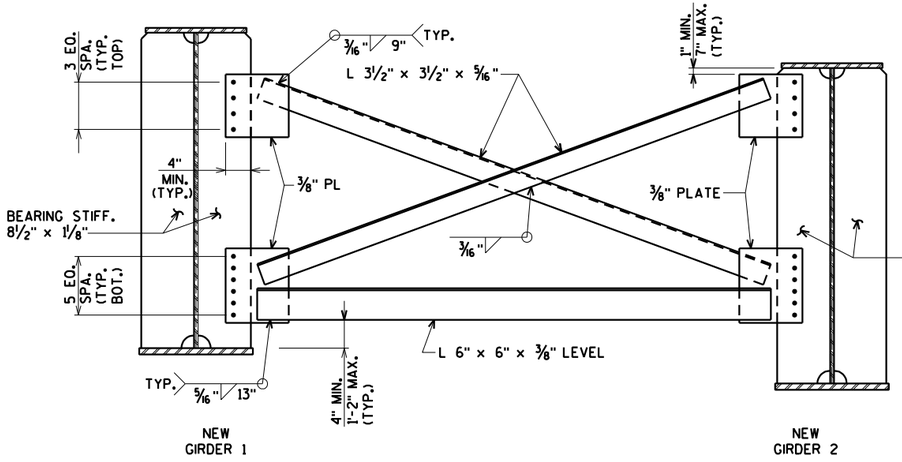
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12/2/2013

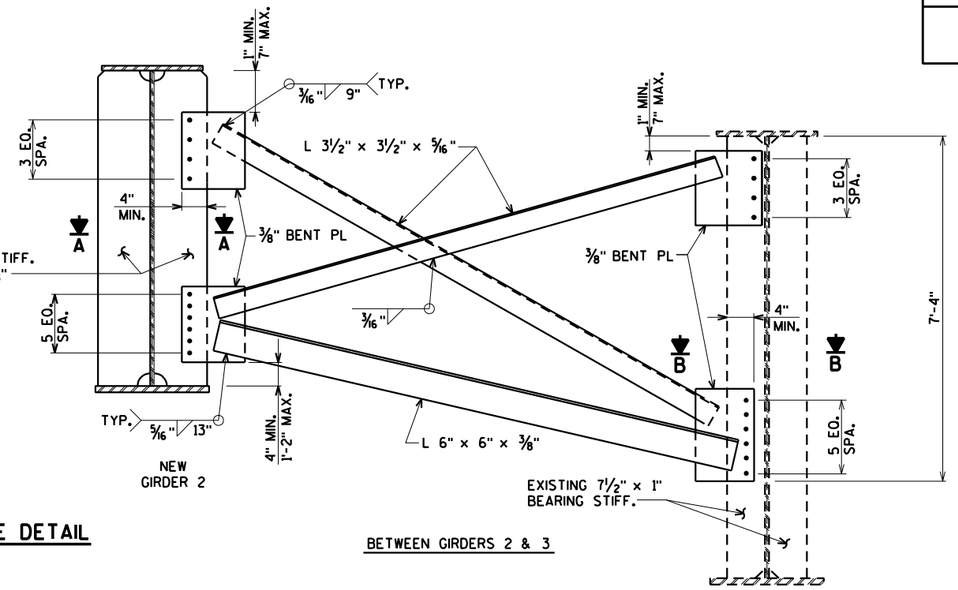
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STATE PROJECT NUMBER

1053-02-75

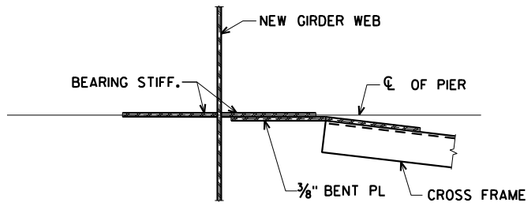


BETWEEN GIRDERS 1 & 2

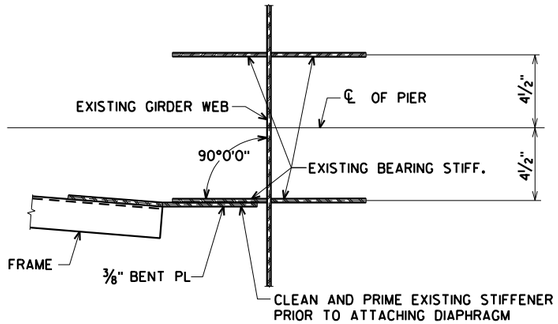


BETWEEN GIRDERS 2 & 3

PIER CROSS FRAME DETAIL

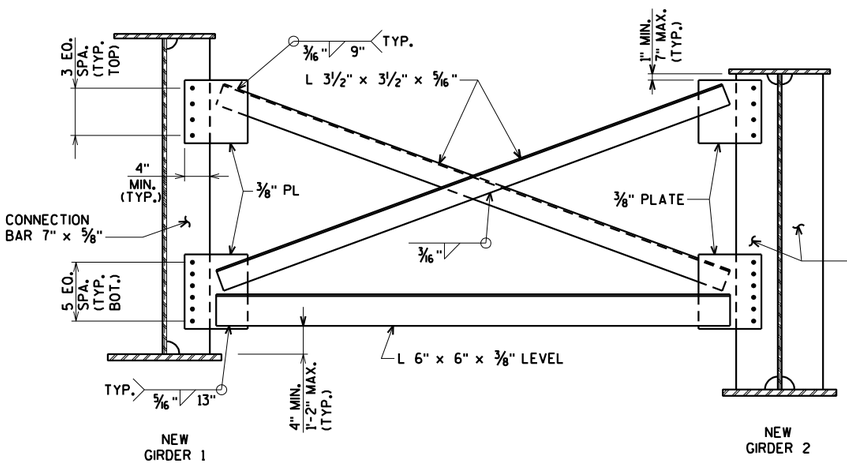


SECTION A

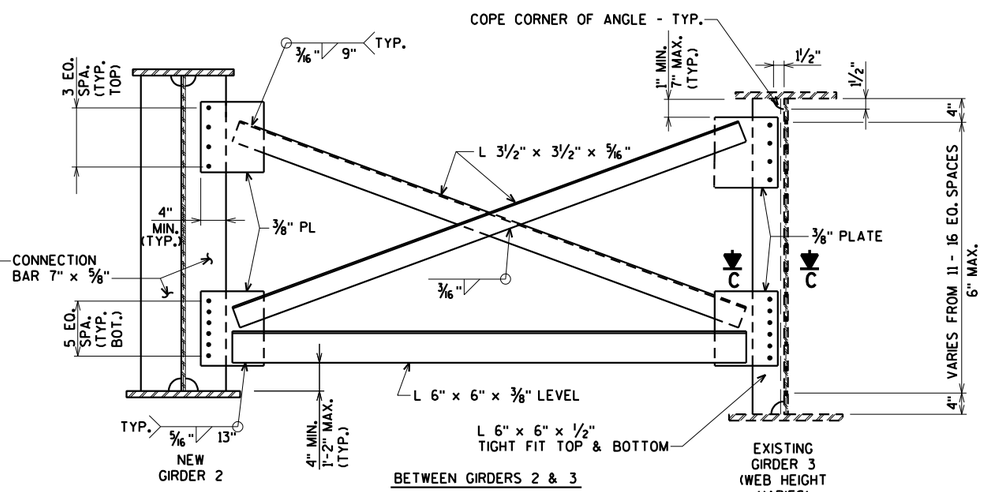


SECTION B

SECTION C



BETWEEN GIRDERS 1 & 2



BETWEEN GIRDERS 2 & 3

INTERMEDIATE CROSS FRAME DETAIL

TYPICAL IN SPAN CROSS FRAMES EXCEPT AS SHOWN FOR CROSS FRAME CF2 ON SHEET 35.

NOTES

ALL BOLTED CONNECTIONS SHALL BE FRICTION TYPE USING 3/4" ϕ HIGH STRENGTH BOLTS (ASTM A325) WITH DOUBLE WASHERS.

HOLES IN CROSS FRAME CONNECTIONS MAY BE OVERSIZED ϕ 15/16 " ϕ IN 1 PLY.

ALL CROSS FRAMING MEMBERS, GUSSET PLATES AND CONN. BARS TO BE ASTM A709, GRADE 50.

FIELD DRILLING BOLT HOLES SHALL BE CONSIDERED INCIDENTAL TO "STRUCTURAL STEEL HS".

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DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-79

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TYPICAL CROSS FRAME DETAILS

SHEET 34 OF 50
435

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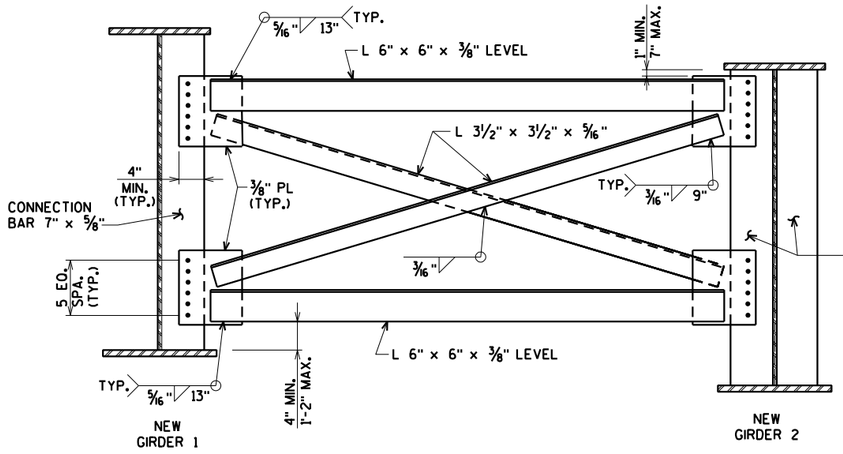
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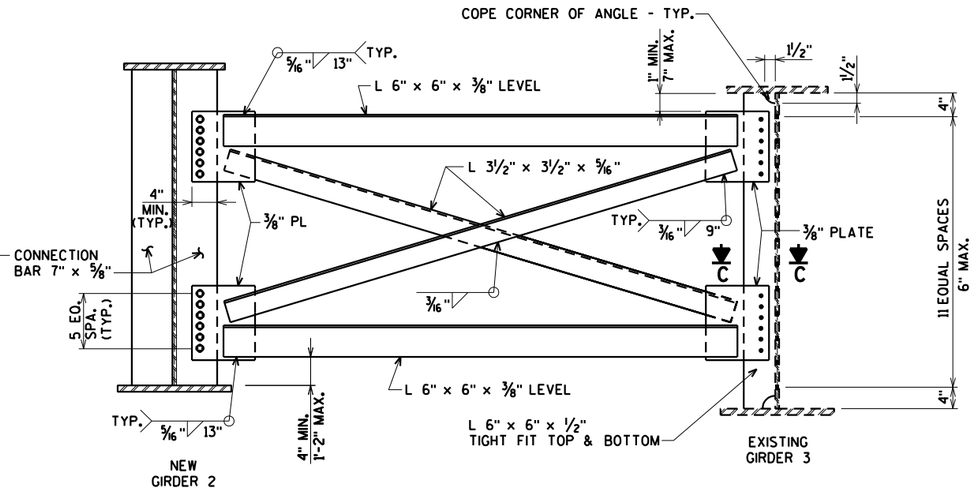
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12/2/2013

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BETWEEN GIRDERS 1 & 2

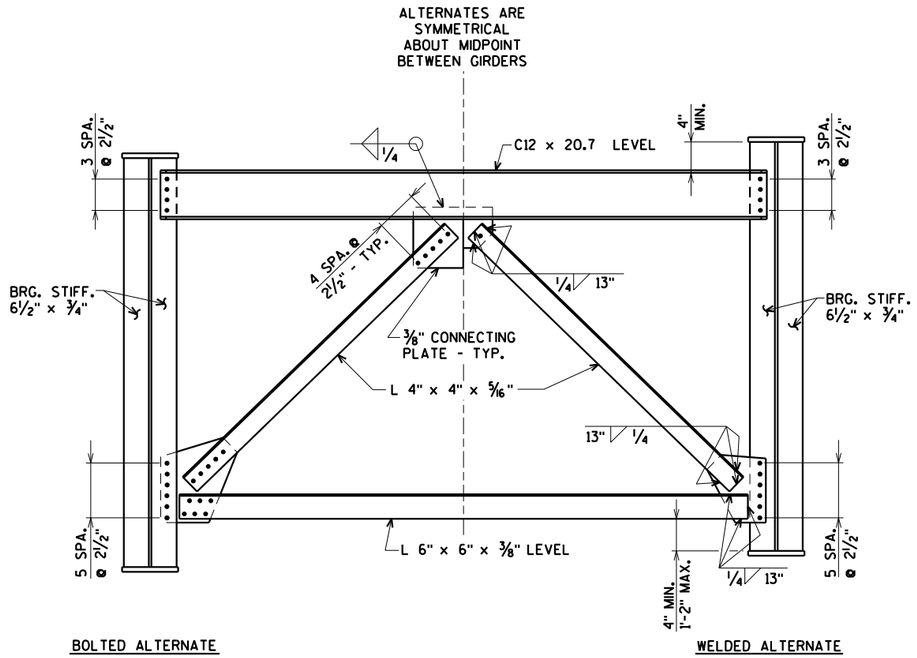


BETWEEN GIRDERS 2 & 3

FOR SECTION C
SEE SHEET 34.

CROSS FRAME CF2 DETAIL

CROSS FRAMES LOCATED AT FIELD SPLICES
SEE FRAMING PLANS FOR LOCATION



BOLTED ALTERNATE

WELDED ALTERNATE

DIAPHRAGM AT ABUTMENTS

NOTES

ALL BOLTED CONNECTIONS SHALL BE FRICTION TYPE USING 3/4" ϕ HIGH STRENGTH BOLTS (ASTM A325) WITH DOUBLE WASHERS.

HOLES IN CROSS FRAME CONNECTIONS MAY BE OVERSIZED @ 15/16 " ϕ IN 1 PLY.

ALL CROSS FRAMING MEMBERS, GUSSET PLATES AND CONN. BARS TO BE ASTM A709, GRADE 50.

FIELD DRILLING BOLT HOLES SHALL BE CONSIDERED INCIDENTAL TO "STRUCTURAL STEEL HS".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
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STRUCTURE B-37-79

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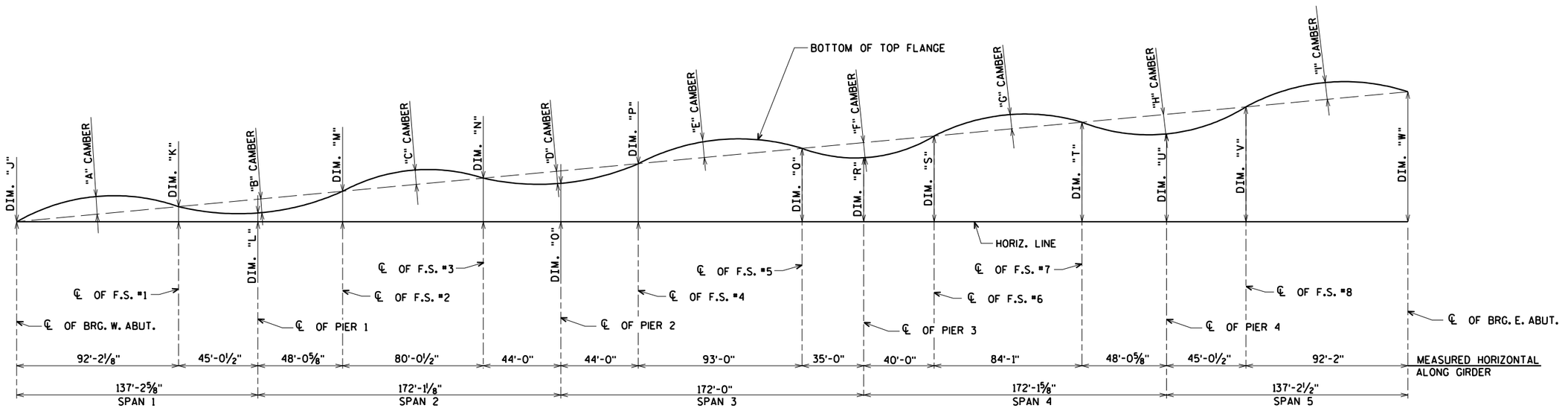
CROSS FRAME CF2 & ABUT. DIAPH. DETAILS

SHEET 35 OF 50
436

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STATE PROJECT NUMBER
1053-02-75



BLOCKING AND CAMBER DIAGRAM

TABLE OF CAMBER DIMENSIONS

GIRDER	DIM. "A"	DIM. "B"	DIM. "C"	DIM. "D"	DIM. "E"	DIM. "F"	DIM. "G"	DIM. "H"	DIM. "I"
1	1⅝"	1⅝"	1⅛"	1½"	1⅜"	1⅛"	1⅛"	1⅝"	1⅝"
2	1⅛"	1⅞"	1¼"	1⅝"	1⅝"	1⅜"	1¼"	1⅞"	1⅞"

TABLE OF BLOCKING DIMENSIONS

GIRDER	DIM. "J"	DIM. "K"	DIM. "L"	DIM. "M"	DIM. "N"	DIM. "O"	DIM. "P"	DIM. "Q"	DIM. "R"	DIM. "S"	DIM. "T"	DIM. "U"	DIM. "V"	DIM. "W"
1	0"	2'-3⅜"	3'-3¼"	4'-7⅛"	6'-7"	7'-6⅝"	8'-9⅛"	11'-0¾"	11'-10⅛"	12'-11⅛"	15'-0⅛"	16'-0⅞"	17'-3⅞"	19'-7¼"
2	0"	2'-1⅝"	3'-1⅛"	4'-5⅜"	6'-5¼"	7'-4⅜"	8'-7⅜"	10'-11⅛"	11'-8⅜"	12'-9⅛"	14'-10⅜"	15'-10⅞"	17'-2⅛"	19'-5½"

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-79

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BLOCKING AND CAMBER DIAGRAM

SHEET 36 OF 50
437

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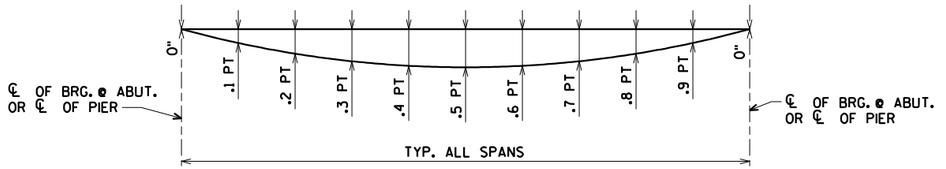
GIRDER DEFLECTION TABLE (IN INCHES)

		SPAN 1												SPAN 2										
GIRDER		CL BRG. W. ABUT.	0.1 PT	0.2 PT	0.3 PT	0.4 PT	0.5 PT	0.6 PT	CL F.S #1	0.7 PT	0.8 PT	0.9 PT	CL OF PIER 1	0.1 PT	0.2 PT	CL F.S #2	0.3 PT	0.4 PT	0.5 PT	0.6 PT	0.7 PT	CL F.S #3	0.8 PT	0.9 PT	CL OF PIER 2
1	TOTAL DELF.	0.0	1.0	1.8	2.3	2.5	2.4	1.9	1.5	1.3	0.7	0.2	0.0	0.3	1.0	1.7	1.8	2.4	2.7	2.4	1.8	1.5	1.0	0.3	0.0
	CONC. ONLY	0.0	0.8	1.5	1.9	2.1	2.0	1.6	1.3	1.1	0.6	0.2	0.0	0.3	0.8	1.4	1.5	2.0	2.2	2.0	1.5	1.2	0.8	0.3	0.0
2	TOTAL DELF.	0.0	1.1	2.0	2.6	2.8	2.7	2.2	1.7	1.5	0.8	0.2	0.0	0.4	1.2	1.9	2.1	2.8	3.0	2.8	2.1	1.7	1.2	0.3	0.0
	CONC. ONLY	0.0	0.9	1.7	2.2	2.4	2.3	1.9	1.5	1.3	0.7	0.2	0.0	0.3	1.0	1.6	1.7	2.3	2.5	2.3	1.7	1.4	1.0	0.3	0.0
3	TOTAL DELF.	0.0	1.2	2.2	2.8	3.0	2.8	2.3	1.7	1.5	0.7	0.2	0.0	0.2	0.9	1.6	1.8	2.6	2.9	2.6	1.8	1.4	0.9	0.2	0.0
	CONC. ONLY	0.0	1.0	1.9	2.4	2.6	2.4	2.0	1.5	1.3	0.6	0.2	0.0	0.2	0.8	1.5	1.6	2.3	2.5	2.3	1.6	1.2	0.8	0.2	0.0
4	TOTAL DELF.	0.0	1.2	2.2	2.8	3.0	2.8	2.3	1.7	1.5	0.7	0.2	0.0	0.2	0.9	1.6	1.8	2.6	2.9	2.6	1.8	1.4	0.9	0.2	0.0
	CONC. ONLY	0.0	1.0	1.9	2.4	2.6	2.4	2.0	1.5	1.3	0.6	0.2	0.0	0.2	0.8	1.5	1.6	2.3	2.5	2.3	1.6	1.2	0.8	0.2	0.0
5	TOTAL DELF.	0.0	1.2	2.2	2.8	3.0	2.8	2.3	1.7	1.5	0.7	0.2	0.0	0.2	0.9	1.6	1.8	2.6	2.9	2.6	1.8	1.4	0.9	0.2	0.0
	CONC. ONLY	0.0	1.0	1.9	2.4	2.6	2.4	2.0	1.5	1.3	0.6	0.2	0.0	0.2	0.8	1.5	1.6	2.3	2.5	2.3	1.6	1.2	0.8	0.2	0.0
6	TOTAL DELF.	0.0	1.0	1.9	2.5	2.7	2.5	2.0	1.5	1.3	0.6	0.2	0.0	0.2	0.8	1.4	1.6	2.2	2.5	2.3	1.6	1.2	0.8	0.2	0.0
	CONC. ONLY	0.0	0.9	1.6	2.1	2.2	2.1	1.7	1.3	1.1	0.5	0.1	0.0	0.2	0.7	1.2	1.4	2.0	2.2	2.0	1.4	1.1	0.7	0.2	0.0

		SPAN 3												SPAN 4										
GIRDER		CL OF PIER 2	0.1 PT	0.2 PT	CL F.S #4	0.3 PT	0.4 PT	0.5 PT	0.6 PT	0.7 PT	CL F.S #5 & EXISTING HINGE	0.8 PT	0.9 PT	CL OF PIER 3	0.1 PT	0.2 PT	CL F.S #6	0.3 PT	0.4 PT	0.5 PT	0.6 PT	0.7 PT	CL F.S #7	0.8 PT	0.9 PT	CL OF PIER 4
1	TOTAL DELF.	0.0	0.3	1.0	1.4	1.8	2.4	2.6	2.4	1.8	1.0	1.0	0.3	0.0	0.3	1.0	1.3	1.8	2.3	2.6	2.4	1.8	1.6	1.0	0.3	0.0
	CONC. ONLY	0.0	0.3	0.8	1.2	1.5	2.0	2.2	2.0	1.5	0.9	0.9	0.3	0.0	0.2	0.8	1.0	1.4	1.8	2.0	1.9	1.4	1.3	0.8	0.2	0.0
2	TOTAL DELF.	0.0	0.3	1.1	1.6	2.0	2.7	3.0	2.7	2.0	1.2	1.2	0.3	0.0	0.4	1.1	1.4	2.0	2.7	2.9	2.7	2.0	1.9	1.2	0.4	0.0
	CONC. ONLY	0.0	0.3	1.0	1.4	1.7	2.3	2.5	2.3	1.7	1.0	1.0	0.3	0.0	0.3	0.9	1.1	1.6	2.1	2.3	2.1	1.6	1.5	0.9	0.3	0.0
3	TOTAL DELF.	0.0	0.3	1.1	1.6	2.1	2.8	3.1	2.9	2.1	1.2	1.2	0.3	0.0	0.2	0.9	1.1	1.6	2.2	2.4	2.1	1.5	1.3	0.7	0.1	0.0
	CONC. ONLY	0.0	0.3	1.0	1.4	1.8	2.5	2.7	2.5	1.9	1.1	1.1	0.3	0.0	0.2	0.7	0.9	1.3	1.8	2.0	1.7	1.2	1.0	0.5	0.1	0.0
4	TOTAL DELF.	0.0	0.3	1.1	1.6	2.1	2.8	3.1	2.9	2.1	1.2	1.2	0.3	0.0	0.2	0.9	1.1	1.6	2.2	2.4	2.1	1.5	1.3	0.7	0.1	0.0
	CONC. ONLY	0.0	0.3	1.0	1.4	1.8	2.5	2.7	2.5	1.9	1.1	1.1	0.3	0.0	0.2	0.7	0.9	1.3	1.8	2.0	1.7	1.2	1.0	0.5	0.1	0.0
5	TOTAL DELF.	0.0	0.3	1.1	1.6	2.1	2.8	3.1	2.9	2.1	1.2	1.2	0.3	0.0	0.2	0.9	1.1	1.6	2.2	2.4	2.1	1.5	1.3	0.7	0.1	0.0
	CONC. ONLY	0.0	0.3	1.0	1.4	1.8	2.5	2.7	2.5	1.9	1.1	1.1	0.3	0.0	0.2	0.7	0.9	1.3	1.8	2.0	1.7	1.2	1.0	0.5	0.1	0.0
6	TOTAL DELF.	0.0	0.3	0.9	1.4	1.8	2.5	2.7	2.5	1.8	1.0	1.0	0.3	0.0	0.2	0.8	1.0	1.4	1.9	2.1	1.9	1.3	1.1	0.6	0.1	0.0
	CONC. ONLY	0.0	0.3	0.8	1.2	1.5	2.1	2.4	2.2	1.6	0.9	0.9	0.3	0.0	0.2	0.6	0.8	1.1	1.5	1.7	1.5	1.0	0.9	0.4	0.1	0.0

		SPAN 5											
GIRDER		CL OF PIER 4	0.1 PT	0.2 PT	0.3 PT	CL F.S #8	0.4 PT	0.5 PT	0.6 PT	0.7 PT	0.8 PT	0.9 PT	CL BRG. E. ABUT.
1	TOTAL DELF.	0.0	0.2	0.7	1.3	1.5	1.9	2.4	2.5	2.3	1.8	1.0	0.0
	CONC. ONLY	0.0	0.2	0.6	1.1	1.3	1.6	2.0	2.1	1.9	1.5	0.8	0.0
2	TOTAL DELF.	0.0	0.2	0.8	1.5	1.7	2.2	2.7	2.8	2.6	2.0	1.1	0.0
	CONC. ONLY	0.0	0.2	0.7	1.3	1.5	1.9	2.3	2.4	2.2	1.7	0.9	0.0
3	TOTAL DELF.	0.0	0.3	0.9	1.7	1.9	2.4	3.0	3.2	3.0	2.3	1.3	0.0
	CONC. ONLY	0.0	0.3	0.8	1.5	1.7	2.2	2.7	2.8	2.6	2.0	1.1	0.0
4	TOTAL DELF.	0.0	0.3	0.9	1.7	1.9	2.4	3.0	3.2	3.0	2.3	1.3	0.0
	CONC. ONLY	0.0	0.3	0.8	1.5	1.7	2.2	2.7	2.8	2.6	2.0	1.1	0.0
5	TOTAL DELF.	0.0	0.3	0.9	1.7	1.9	2.4	3.0	3.2	3.0	2.3	1.3	0.0
	CONC. ONLY	0.0	0.3	0.8	1.5	1.7	2.2	2.7	2.8	2.6	2.0	1.1	0.0
6	TOTAL DELF.	0.0	0.3	0.7	1.4	1.6	2.1	2.6	2.8	2.6	2.0	1.1	0.0
	CONC. ONLY	0.0	0.2	0.7	1.3	1.4	1.9	2.3	2.4	2.2	1.7	0.9	0.0

NOTE: DEFLECTIONS ARE THEORETICAL AND MAY VARY IN THE FIELD.
TOTAL DEFLECTION = CONCRETE ONLY DEFLECTION + STEEL DEAD LOAD DEFLECTION.
CONCRETE ONLY = CONCRETE DECK DEFLECTION + COMPOSITE DEAD LOAD DEFLECTION



DEFLECTION DIAGRAM

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-79

DRAWN BY KAZ | PLANS CK'D. CBM

TABLE OF DEFLECTIONS

SHEET 37 OF 50
438

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
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U:\41-0637.00 - STH 29 over WI River\B-37-79\BRIDGE\33_B-37-79 deflection.dgn

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12/2/2013

PENTABLE:BReau_shd_util.tbl

STATE PROJECT NUMBER

1053-02-75

TOP OF DECK ELEVATIONS

LOCATION	CL BRG. W. ABUT.	0.1 PT	0.2 PT	0.3 PT	0.4 PT	0.5 PT	0.6 PT	CL F.S #1	0.7 PT	0.8 PT	0.9 PT	CL OF PIER 1
LT EDGE SLAB	1183.74	1184.08	1184.42	1184.76	1185.11	1185.45	1185.79	1186.03	1186.13	1186.47	1186.81	1187.15
GIRDER 1	1183.59	1183.93	1184.27	1184.61	1184.95	1185.29	1185.63	1185.88	1185.98	1186.31	1186.65	1186.99
GIRDER 2	1183.10	1183.44	1183.78	1184.12	1184.46	1184.80	1185.15	1185.40	1185.49	1185.83	1186.17	1186.51
GIRDER 3	1182.64	1182.98	1183.32	1183.66	1184.00	1184.34	1184.69	1184.94	1185.03	1185.37	1185.71	1186.05
Const. Joint	1182.43	1182.77	1183.11	1183.45	1183.80	1184.14	1184.48	1184.73	1184.82	1185.16	1185.51	1185.85
GIRDER 4	1182.18	1182.52	1182.86	1183.20	1183.54	1183.89	1184.23	1184.48	1184.58	1184.91	1185.26	1185.60
GIRDER 5	1181.71	1182.05	1182.40	1182.74	1183.08	1183.43	1183.77	1184.02	1184.12	1184.46	1184.80	1185.14
GIRDER 6	1181.25	1181.59	1181.93	1182.28	1182.62	1182.97	1183.31	1183.56	1183.66	1184.00	1184.34	1184.68
RT EDGE SLAB	1181.10	1181.45	1181.79	1182.14	1182.48	1182.82	1183.17	1183.41	1183.51	1183.86	1184.20	1184.54

LOCATION	CL OF PIER 1	0.1 PT	0.2 PT	CL F.S #2	0.3 PT	0.4 PT	0.5 PT	0.6 PT	0.7 PT	CL F.S #3	0.8 PT	0.9 PT	CL OF PIER 2
LT EDGE SLAB	1187.15	1187.57	1188.00	1188.34	1188.43	1188.85	1189.28	1189.71	1190.13	1190.32	1190.56	1190.99	1191.41
GIRDER 1	1186.99	1187.42	1187.85	1188.19	1188.28	1188.70	1189.13	1189.56	1189.99	1190.18	1190.41	1190.83	1191.26
GIRDER 2	1186.51	1186.94	1187.37	1187.71	1187.80	1188.22	1188.65	1189.08	1189.51	1189.70	1189.94	1190.36	1190.79
GIRDER 3	1186.05	1186.48	1186.91	1187.26	1187.35	1187.77	1188.20	1188.63	1189.06	1189.25	1189.49	1189.91	1190.34
Const. Joint	1185.85	1186.28	1186.71	1187.05	1187.14	1187.57	1187.99	1188.42	1188.85	1189.04	1189.28	1189.71	1190.14
GIRDER 4	1185.60	1186.03	1186.46	1186.80	1186.89	1187.32	1187.75	1188.18	1188.61	1188.80	1189.04	1189.46	1189.89
GIRDER 5	1185.14	1185.57	1186.01	1186.35	1186.44	1186.87	1187.29	1187.73	1188.16	1188.35	1188.59	1189.02	1189.44
GIRDER 6	1184.68	1185.12	1185.55	1185.90	1185.98	1186.41	1186.84	1187.27	1187.71	1187.90	1188.14	1188.57	1189.00
RT EDGE SLAB	1184.54	1184.98	1185.41	1185.75	1185.84	1186.27	1186.70	1187.13	1187.57	1187.76	1188.00	1188.43	1188.86

LOCATION	CL OF PIER 2	0.1 PT	0.2 PT	CL F.S #4	0.3 PT	0.4 PT	0.5 PT	0.6 PT	0.7 PT	CL F.S #5 & EXISTING HINGE	0.8 PT	0.9 PT	CL OF PIER 3
LT EDGE SLAB	1191.41	1191.84	1192.27	1192.50	1192.69	1193.12	1193.55	1193.97	1194.40	1194.81	1194.82	1195.25	1195.68
GIRDER 1	1191.26	1191.69	1192.12	1192.36	1192.54	1192.97	1193.39	1193.82	1194.25	1194.67	1194.68	1195.12	1195.55
GIRDER 2	1190.79	1191.21	1191.64	1191.89	1192.07	1192.50	1192.92	1193.35	1193.78	1194.20	1194.22	1194.65	1195.09
GIRDER 3	1190.34	1190.77	1191.20	1191.44	1191.63	1192.05	1192.48	1192.91	1193.34	1193.76	1193.78	1194.21	1194.65
C.J.	1190.14	1190.57	1191.00	1191.24	1191.43	1191.86	1192.29	1192.71	1193.14	1193.56	1193.57	1194.00	1194.43
GIRDER 4	1189.89	1190.32	1190.75	1190.99	1191.18	1191.61	1192.04	1192.47	1192.90	1193.32	1193.33	1193.77	1194.21
GIRDER 5	1189.44	1189.87	1190.31	1190.55	1190.74	1191.16	1191.59	1192.03	1192.46	1192.88	1192.89	1193.33	1193.77
GIRDER 6	1189.00	1189.43	1189.86	1190.10	1190.29	1190.72	1191.15	1191.58	1192.02	1192.44	1192.45	1192.89	1193.33
RT EDGE SLAB	1188.86	1189.29	1189.72	1189.96	1190.16	1190.59	1191.02	1191.45	1191.88	1192.30	1192.31	1192.74	1193.18

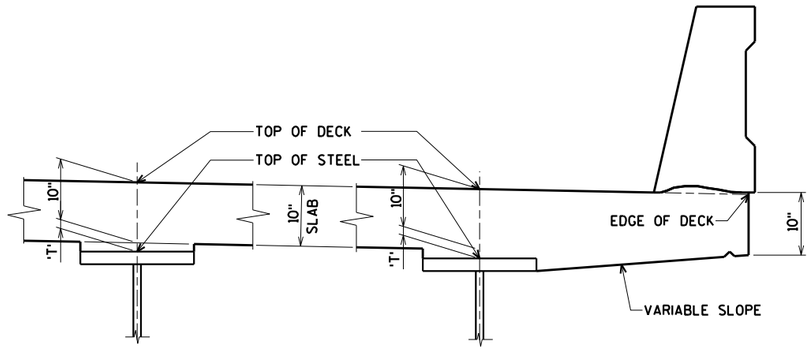
LOCATION	CL OF PIER 3	0.1 PT	0.2 PT	CL F.S #6	0.3 PT	0.4 PT	0.5 PT	0.6 PT	0.7 PT	CL F.S #7	0.8 PT	0.9 PT	CL OF PIER 4
LT EDGE SLAB	1195.68	1196.10	1196.53	1196.67	1196.96	1197.38	1197.81	1198.24	1198.66	1198.75	1199.09	1199.52	1199.94
GIRDER 1	1195.55	1195.99	1196.43	1196.57	1196.85	1197.26	1197.68	1198.10	1198.52	1198.61	1198.94	1199.37	1199.80
GIRDER 2	1195.09	1195.53	1195.97	1196.11	1196.39	1196.80	1197.22	1197.64	1198.06	1198.15	1198.49	1198.91	1199.34
GIRDER 3	1194.65	1195.09	1195.53	1195.67	1195.95	1196.37	1196.79	1197.21	1197.63	1197.72	1198.06	1198.48	1198.91
Const. Joint	1194.43	1194.86	1195.29	1195.43	1195.72	1196.15	1196.58	1197.00	1197.43	1197.52	1197.86	1198.29	1198.72
GIRDER 4	1194.21	1194.65	1195.09	1195.24	1195.52	1195.93	1196.35	1196.77	1197.20	1197.29	1197.62	1198.05	1198.48
GIRDER 5	1193.77	1194.21	1194.65	1194.80	1195.08	1195.50	1195.92	1196.34	1196.77	1196.86	1197.19	1197.62	1198.05
GIRDER 6	1193.33	1193.77	1194.22	1194.36	1194.64	1195.06	1195.48	1195.91	1196.33	1196.42	1196.76	1197.19	1197.62
RT EDGE SLAB	1193.18	1193.61	1194.04	1194.18	1194.47	1194.90	1195.33	1195.77	1196.20	1196.29	1196.63	1197.06	1197.49

LOCATION	CL OF PIER 4	0.1 PT	0.2 PT	0.3 PT	CL F.S #8	0.4 PT	0.5 PT	0.6 PT	0.7 PT	0.8 PT	0.9 PT	CL BRG. E. ABUT.
LT EDGE SLAB	1199.94	1200.28	1200.62	1200.97	1201.06	1201.31	1201.65	1201.99	1202.33	1202.67	1203.01	1203.35
GIRDER 1	1199.80	1200.14	1200.48	1200.82	1200.92	1201.16	1201.50	1201.84	1202.18	1202.52	1202.86	1203.21
GIRDER 2	1199.34	1199.68	1200.03	1200.37	1200.47	1200.71	1201.05	1201.39	1201.73	1202.07	1202.42	1202.76
GIRDER 3	1198.91	1199.25	1199.60	1199.94	1200.04	1200.28	1200.62	1200.96	1201.31	1201.65	1201.99	1202.34
Const. Joint	1198.72	1199.06	1199.41	1199.75	1199.85	1200.09	1200.43	1200.77	1201.12	1201.46	1201.80	1202.14
GIRDER 4	1198.48	1198.83	1199.17	1199.52	1199.61	1199.86	1200.20	1200.54	1200.88	1201.22	1201.57	1201.92
GIRDER 5	1198.05	1198.40	1198.74	1199.09	1199.19	1199.43	1199.77	1200.11	1200.46	1200.80	1201.15	1201.49
GIRDER 6	1197.62	1197.97	1198.31	1198.66	1198.76	1199.00	1199.35	1199.69	1200.03	1200.38	1200.72	1201.07
RT EDGE SLAB	1197.49	1197.84	1198.18	1198.52	1198.62	1198.87	1199.21	1199.56	1199.90	1200.25	1200.59	1200.93

TOP OF STEEL ELEVATIONS

GIRDER	℄ BRG. W. ABUT.	℄ F.S. #1	℄ OF PIER 1	℄ F.S. #2	℄ F.S. #3	℄ OF PIER 2	℄ F.S. #4	℄ F.S. #5	℄ OF PIER 3	℄ F.S. #6	℄ F.S. #7	℄ OF PIER 4	℄ F.S. #8	℄ BRG. E. ABUT.
1	1182.49	1184.83	1185.97	1187.14	1189.13	1190.23	1191.31	1193.62	1194.53	1195.55	1197.58	1198.77	1199.88	1202.11
2	1182.00	1184.35	1185.48	1186.66	1188.65	1189.76	1190.84	1193.15	1194.06	1195.08	1197.13	1198.32	1199.42	1201.66

NOTE: THESE ELEVATIONS ARE TO TOP OF STEEL (SPLICE PLATES THICKNESS, IF APPLICABLE, ARE ACCOUNTED FOR) AND THEY ARE FOR THE MATERIAL AS ERECTED. THE ELEVATION OF THE TOP STEEL AT THE FIELD SPLICE POINTS SHALL BE CHECKED, AND CORRECTED, IF POSSIBLE, AFTER ERECTION AND BEFORE PERMANENTLY BOLTING THE DIAPHRAGMS IN PLACE.



INTERIOR GIRDER EXTERIOR GIRDER

CONCRETE HAUNCH DETAIL

TO DETERMINE 'T': AFTER ALL STRUCTURAL STEEL HAS BEEN ERECTED. ELEVATIONS OF THE TOP FLANGES OR TOP OF SPLICE PLATES, WHICHEVER APPLIES, SHALL BE TAKEN AT CENTERLINE OF BEARINGS, CENTERLINE OF FIELD SPLICES, AND AT TENTH POINTS OF EACH SPAN.

TOP OF DECK ELEVATION AT FINAL GRADE
- TOP OF STEEL ELEVATION AFTER PLACEMENT
+ CONCRETE ONLY DEFLECTION: DOWNWARD DEFLECTION IS ADDED, UPWARD DEFLECTION IS SUBTRACTED
- SLAB THICKNESS (10")

= HAUNCH THICKNESS 'T' AT CENTERLINE OF GIRDER

AVERAGE 'T' USED FOR ESTIMATING CONCRETE QUANTITIES IS 2½".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-79

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DECK ELEVATIONS

SHEET 38 OF 50
439

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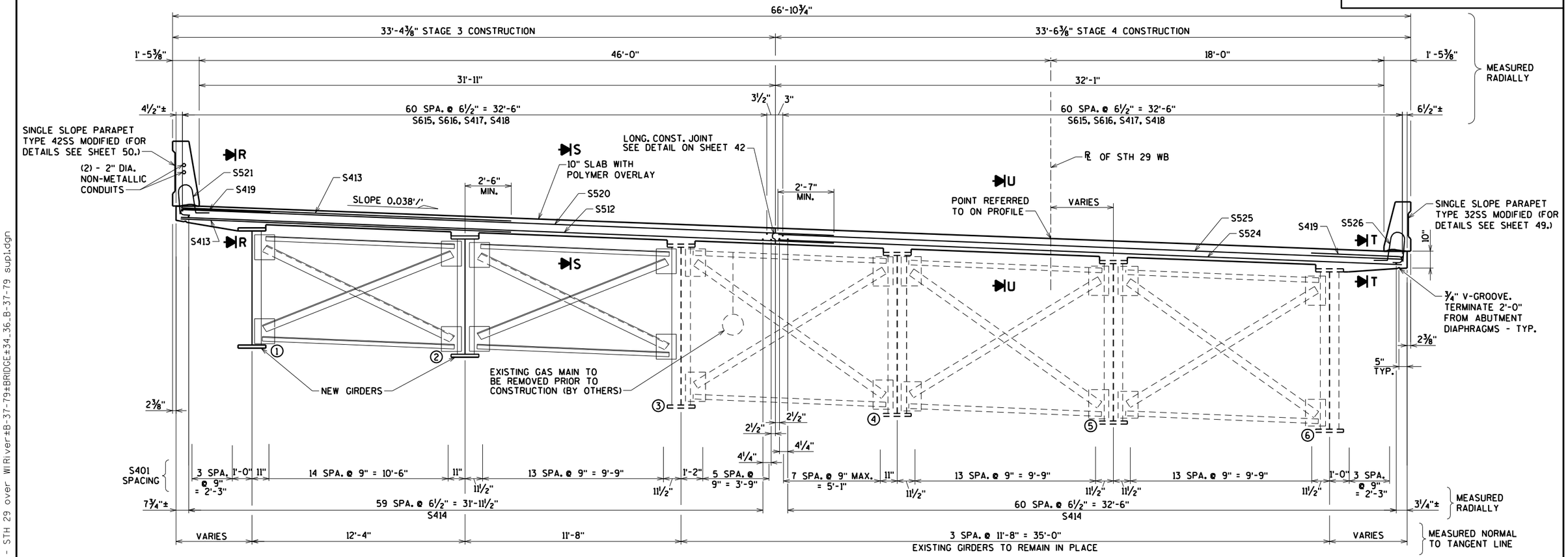
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12/2/2013

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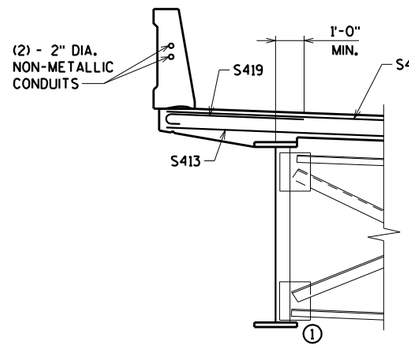
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1053-02-75

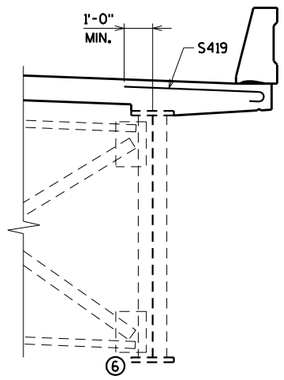


CROSS SECTION THRU DECK

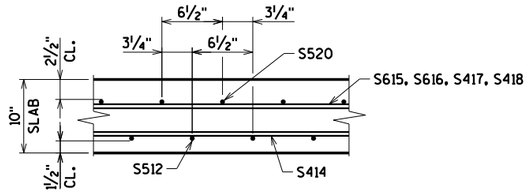
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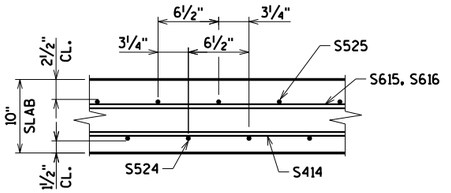
LEFT OVERHANG REINFORCING DETAIL



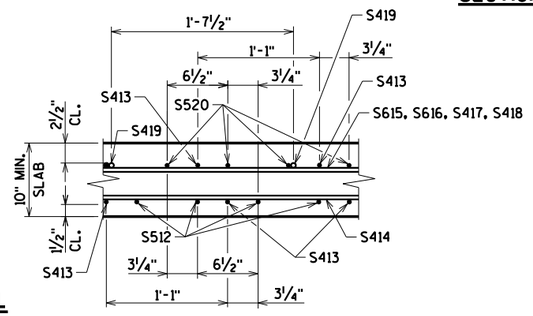
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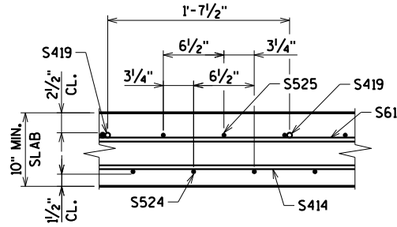
SECTION S



SECTION U



SECTION R



SECTION T

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-79

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SUPERSTRUCTURE

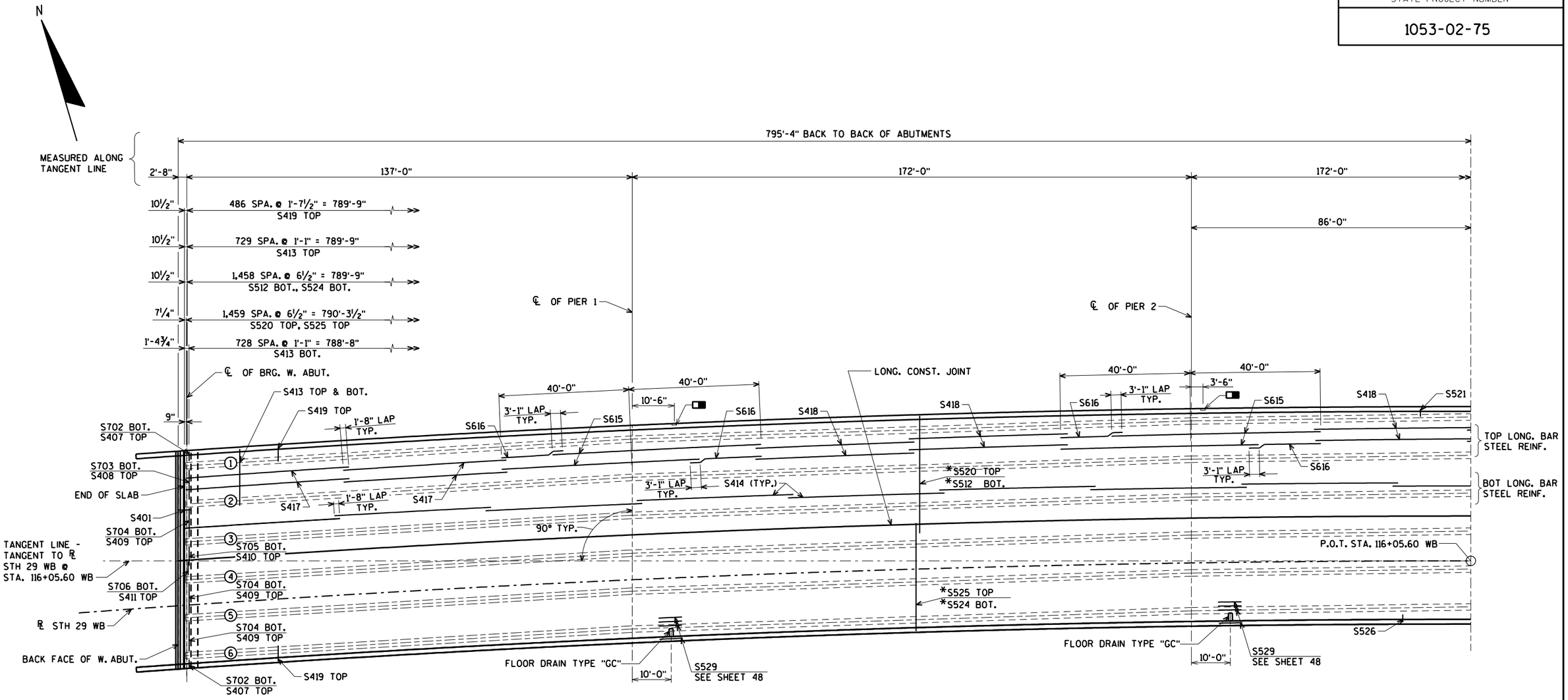
SHEET 39 OF 50
440

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AYRES ASSOCIATES
3433 Oakwood Hills Parkway
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STATE PROJECT NUMBER

1053-02-75



PART PLAN

*PLACE BARS NORMAL TO TANGENT LINE

JUNCTION BOX 18x12x6-INCH IN PARAPET

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-79

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SUPERSTRUCTURE PLAN

SHEET 40 OF 50
441

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12/2/2013

PENTABLE:BReau_shd_util.tbl

STATE PROJECT NUMBER

1053-02-75

N

795'-4" BACK TO BACK OF ABUTMENTS

MEASURED ALONG TANGENT LINE

172'-0" | 172'-0" | 137'-0" | 2'-8"

86'-0"

℄ OF PIER 3

℄ OF PIER 4

℄ OF BRG. E. ABUT.

486 SPA. @ 1'-7½" = 789'-9" S419 TOP — 10½"

729 SPA. @ 1'-1" = 789'-9" S413 TOP — 10½"

1,458 SPA. @ 6½" = 789'-9" S512 BOT., S524 BOT. — 10½"

1,459 SPA. @ 6½" = 790'-3½" S520 TOP, S525 TOP — 7¼"

728 SPA. @ 1'-1" = 788'-8" S413 BOT. — 1'-4¾"

40'-0" | 40'-0" | 40'-0" | 40'-0"

3'-6" | 10'-6"

LONG. CONST. JOINT

S521 | S418 | S616 | S615 | 3'-1" LAP TYP.

TOP LONG. BAR STEEL REINF.

BOT LONG. BAR STEEL REINF.

*S520 TOP
*S512 BOT.

*S525 TOP
*S524 BOT.

1'-8" LAP TYP.

90° TYP.

S414 (TYP.)

S413 TOP & BOT.
S419 TOP
S702 BOT.
S407 TOP
9"

① END OF SLAB
② S703 BOT. S408 TOP
③ S704 BOT. S409 TOP
④ S401
⑤ S705 BOT. S410 TOP
⑥ S704 BOT. S409 TOP
S706 BOT. S411 TOP
S704 BOT. S409 TOP
S704 BOT. S409 TOP
S419 TOP
S702 BOT. S407 TOP

S417 | S526

TANGENT LINE - TANGENT TO ℄ STH 29 WB @ STA. 116+05.60 WB

℄ STH 29 WB

BACK FACE OF E. ABUT.

P.O.T. STA. 116+05.60 WB

FLOOR DRAIN TYPE "GC"

10'-0"

S529
SEE SHEET 48

PART PLAN

*PLACE BARS NORMAL TO TANGENT LINE

JUNCTION BOX 18x12x6-INCH IN PARAPET

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-79

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SUPERSTRUCTURE PLAN

SHEET 41 OF 50
442

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

$PRFNAME$
U:\41-0637.00 - STH 29 over WI River\B-37-79\BRIDGE\34_36_B-37-79 sup1.dgn

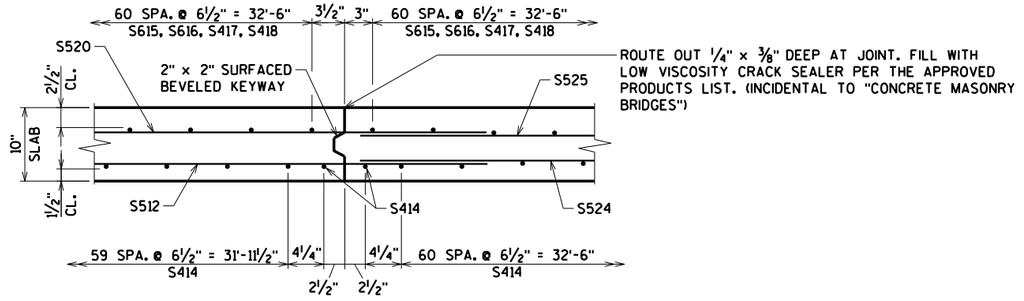
STATE PROJECT NUMBER

1053-02-75

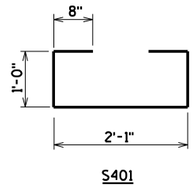
BILL OF BARS

BAR. NO.	COATED BAR	NO. REQUIRED STAGE 3	NO. REQUIRED STAGE 4	LENGTH	BENT BAR	BUNDLED	BAR SERIES	441,560# COATED LOCATION
S401	X	78	80	5-1	X			ABUT. DIAPH. VERT.
S702	X	10	10	2-7				ABUT. DIAPH. BOT. HORIZ. EXT.
S703	X	10	--	10-8				ABUT. DIAPH. BOT. HORIZ. INT.
S704	X	10	20	9-11				ABUT. DIAPH. BOT. HORIZ. INT.
S705	X	10	--	7-5				ABUT. DIAPH. BOT. HORIZ. @ LONG. JT.
S706	X	--	10	5-3				ABUT. DIAPH. BOT. HORIZ. @ LONG. JT.
S407	X	4	4	2-7				ABUT. DIAPH. TOP HORIZ. EXT.
S408	X	4	--	10-8				ABUT. DIAPH. TOP HORIZ. INT.
S409	X	4	8	9-11				ABUT. DIAPH. TOP HORIZ. INT.
S410	X	4	--	5-8				ABUT. DIAPH. TOP HORIZ. @ LONG. JT.
S411	X	--	4	5-3				ABUT. DIAPH. TOP HORIZ. @ LONG JT.
S512	X	1459	--	34-3				SLAB TRANS. BOT.
S413	X	730	--	18-4				SLAB TRANS. TOP & BOT. BTWN GRDRS 1 & 2
S414	X	1037	1054	48-2				SLAB LONG. BOT.
S615	X	244	244	60-0				SLAB LONG. TOP @ PIERS
S616	X	244	244	23-1				SLAB LONG. TOP @ PIERS
S417	X	488	488	50-4				SLAB LONG. TOP IN SPANS 1 & 5
S418	X	366	366	48-6				SLAB LONG. TOP IN SPANS 2, 3 & 4
S419	X	487	487	5-8	X			SLAB OVERHANG
S520	X	1460	--	34-3				SLAB TRANS. TOP
S521	X	1187	--	4-5	X			SLAB @ PARAPET 42SS
S522	X	1187	--	6-8	X			PARAPET 42SS VERT.
S523	X	136	--	49-0				PARAPET 42SS HORIZ.
S524	X	--	1459	33-0				SLAB TRANS. BOT.
S525	X	--	1460	33-0				SLAB TRANS. TOP
S526	X	--	1187	4-5	X			SLAB @ PARAPET 32SS
S527	X	--	1187	5-0	X			PARAPET 32SS VERT.
S528	X	--	102	49-0				PARAPET 32SS HORIZ.
S529	X	--	12	5-0				SLAB LONG. TOP @ FLOOR DRAINS

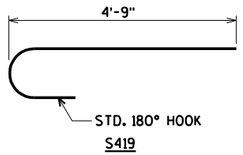
BENDING DIMENSIONS ARE OUT TO OUT OF BARS.



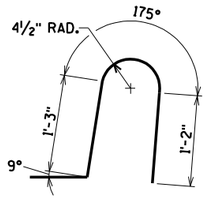
LONGITUDINAL CONST. JOINT
(LOOKING EAST)



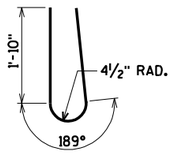
S401



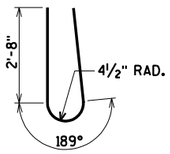
S419



S521, S526



S527



S522

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-79

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SUPERSTRUCTURE BILL OF BARS

SHEET 42 OF 50
443

ORIGINAL PLANS PREPARED BY
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$PRFNAME$
U:\41-0637.00 - STH 29 over WI River\B-37-79\BRIDGE\34_36_B-37-79 sup1.dgn

12/2/2013

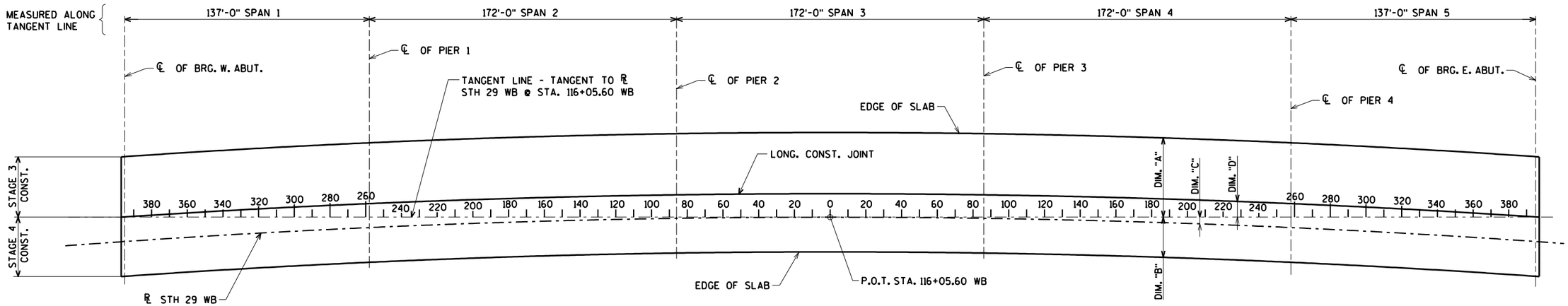
PENTABLE:BReau_shd_util.tbl

8

8

STATE PROJECT NUMBER

1053-02-75



PLAN

TANGENT OFFSETS

DISTANCE FROM P.O.T.	DIM. "A"	DIM. "B"	DIM. "C"	DIM. "D"
0'	47'-3"	19'-3"	0"	14'-1"
10'	47'-2⅞"	19'-3⅛"	⅛"	14'-0⅞"
20'	47'-2½"	19'-3⅜"	⅜"	14'-0⅝"
30'	47'-2"	19'-4"	1"	14'-0"
40'	47'-1⅜"	19'-4⅝"	1⅝"	13'-11⅜"
50'	47'-0⅜"	19'-5⅝"	2⅝"	13'-10⅜"
60'	46'-11¼"	19'-6¾"	3¾"	13'-9¼"
70'	46'-10"	19'-8⅛"	5⅛"	13'-7⅞"
80'	46'-8⅜"	19'-9¾"	6¾"	13'-6⅜"
90'	46'-6⅝"	19'-11½"	8½"	13'-4½"
100'	46'-4⅝"	20'-1½"	10½"	13'-2½"
110'	46'-2½"	20'-3¾"	1'-0⅝"	13'-0⅜"
120'	46'-0"	20'-6⅛"	1'-3¼"	12'-10"
130'	45'-9½"	20'-8¾"	1'-5¾"	12'-7⅜"
140'	45'-6⅝"	20'-11⅝"	1'-8½"	12'-4½"
150'	45'-3⅝"	21'-2⅝"	1'-11½"	12'-1½"
160'	45'-0⅜"	21'-5⅞"	2'-2⅞"	11'-10¼"
170'	44'-9"	21'-9⅜"	2'-6¼"	11'-6¾"
180'	44'-5⅜"	22'-1"	2'-10"	11'-3⅛"
190'	44'-1½"	22'-5"	3'-1¾"	10'-11¼"
200'	43'-9½"	22'-9"	3'-5⅞"	10'-7¼"
210'	43'-5⅛"	23'-1⅜"	3'-10⅛"	10'-2⅞"
220'	43'-0¾"	23'-5⅞"	4'-2⅝"	9'-10⅜"
230'	42'-8"	23'-10⅝"	4'-7⅜"	9'-5¾"
240'	42'-3⅛"	24'-3½"	5'-0⅜"	9'-0¾"
250'	41'-10"	24'-8⅝"	5'-5½"	8'-7⅝"
260'	41'-4¾"	25'-2"	5'-10¾"	8'-2⅜"
270'	40'-11¼"	25'-7⅜"	6'-4⅛"	7'-8¾"
280'	40'-5½"	26'-1½"	6'-10⅛"	7'-3"
290'	39'-11⅝"	26'-7½"	7'-4⅛"	6'-9⅛"
300'	39'-5½"	27'-1⅝"	7'-10¼"	6'-2⅞"
310'	38'-11⅛"	27'-8"	8'-4¾"	5'-8½"
320'	38'-4½"	28'-2⅝"	8'-11¼"	5'-2"
330'	37'-9¾"	28'-9½"	9'-6⅛"	4'-7⅛"
340'	37'-2⅞"	29'-4½"	10'-1⅛"	4'-0⅛"
350'	36'-7⅝"	29'-11⅞"	10'-8⅜"	3'-4⅞"
360'	36'-0¼"	30'-7¼"	11'-3⅞"	2'-9½"
370'	35'-4⅝"	31'-3"	11'-11½"	2'-1⅞"
380'	34'-8⅞"	31'-10⅞"	12'-7⅜"	1'-6"
390'	34'-0⅛"	32'-7"	13'-3½"	9⅞"

CURVE DATA

(STH 29 WB)

P.I. STA. 110+87.63 WB
△ = 20°09'40"
D = 1°00'00"
R = 5,729.58'
T = 1,018.59'
L = 2,016.12'
E = 89.84'
S.E. = 0.038'/'

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-79

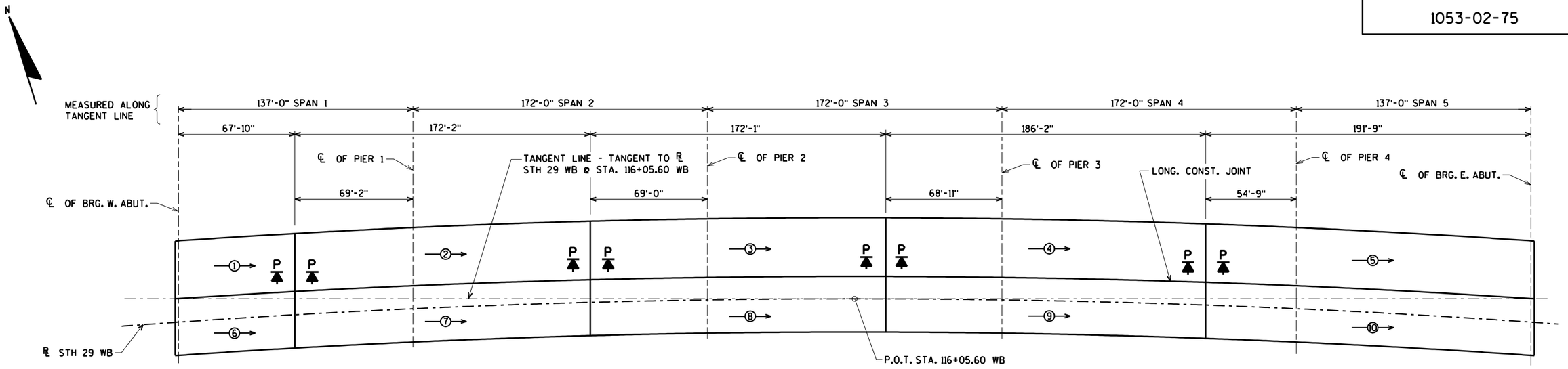
DRAWN BY KAZ | PLANS CK'D. CBM

SUPERSTRUCTURE SLAB OFFSETS

SHEET 43 OF 50
444

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12/2/2013
PENTABLE:BReau_shd_util.tbl



SLAB POURING DIAGRAM

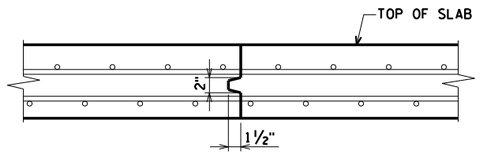
←○— INDICATES POUR NUMBER AND DIRECTION OF POUR

NOTES FOR POURING DIAGRAM

THE RATE OF PLACING CONCRETE SHALL EQUAL OR EXCEED ½ SPAN LENGTH PER HOUR BUT NEED NOT EXCEED 100 CU. YDS. PER HOUR.

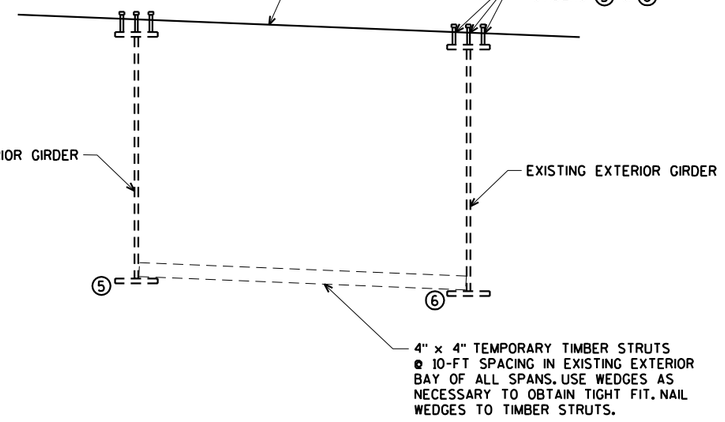
TWO OR MORE ALTERNATE POURS MAY BE PLACED ON THE SAME DAY.

THE CONTRACTOR MAY SUBMIT AN ALTERNATE POURING SEQUENCE SUBJECT TO THE APPROVAL OF THE STRUCTURES DESIGN SECTION.



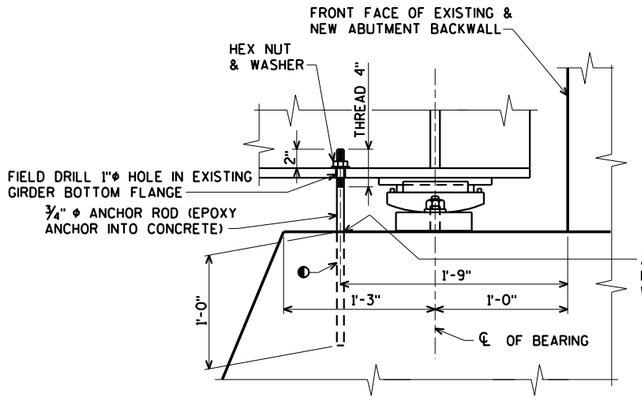
SECTION P

TRANSVERSE BOTTOM SLAB REINFORCEMENT FIELD WELDED AT 10'-0"± SPACING IN ALL SPANS. IN LIEU OF USING TRANSVERSE BOTTOM REINFORCING BARS, ADDITIONAL EPOXY-COATED BARS MAY BE FURNISHED.

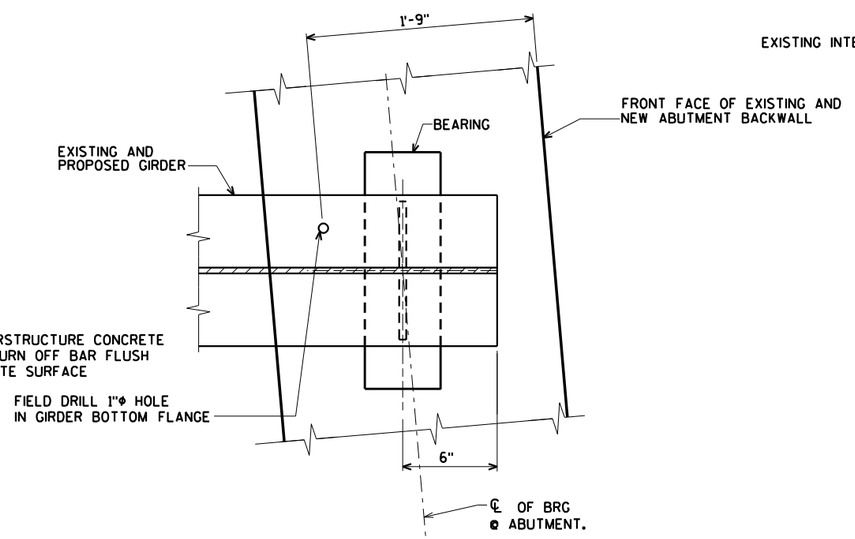


INTERMEDIATE BRACING DETAILS

EXTERIOR BAY OF EXISTING BEAMS



SECTION THRU EAST ABUTMENT



PLAN

TEMPORARY HOLD DOWN DEVICE DETAIL

◑ PLACE ONE ANCHOR ROD PER GIRDER AT ABUTMENT WHERE SLAB POUR TERMINATES. LOCATE 4" (NORMAL) OFF ℄ OF GIRDER. ANCHOR ROD, NUT, WASHER & DRILLED HOLE IN GIRDER FLANGE SHALL BE PAID FOR AS "MASONRY ANCHORS TYPE S ¾-INCH". MINIMUM PULLOUT CAPACITY OF 27 KIPS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-79

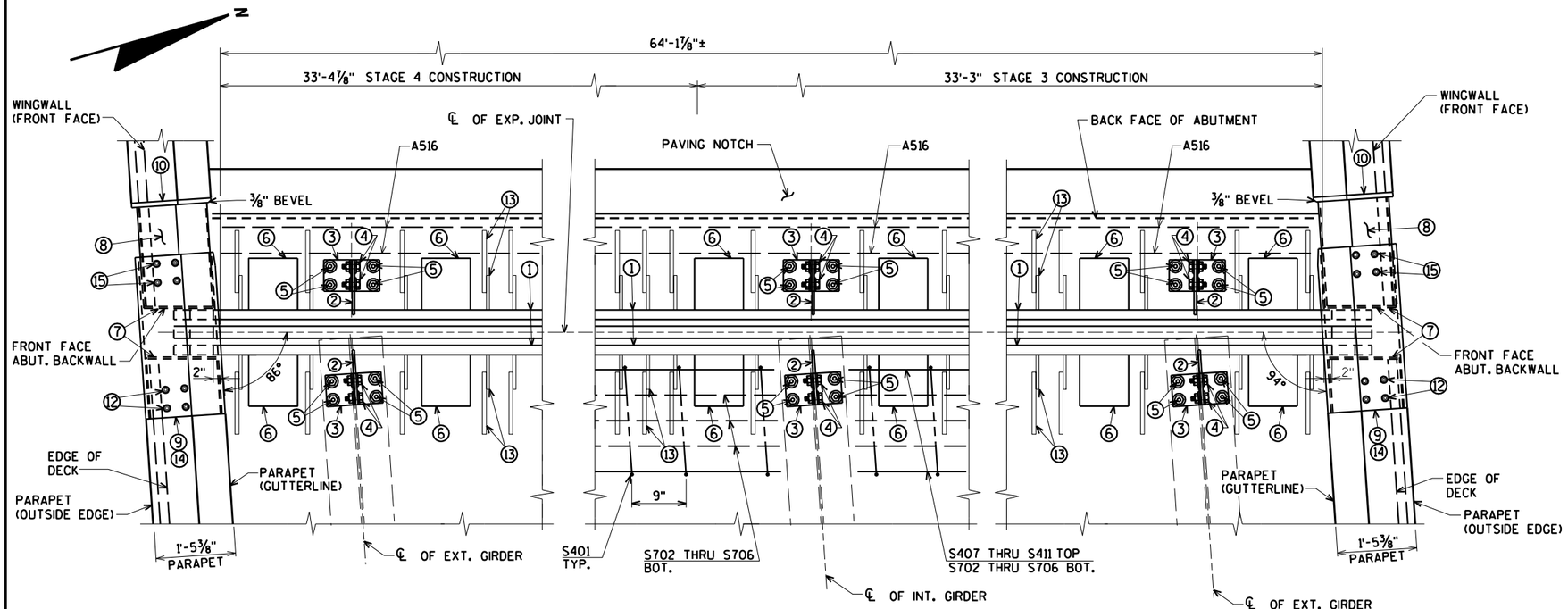
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SUPERSTRUCTURE POURING DIAGRAM

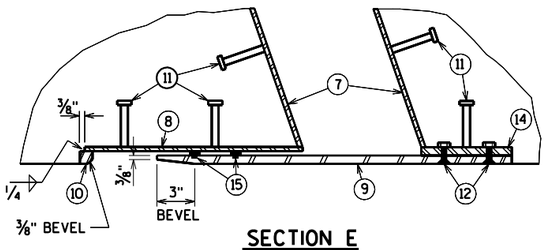
SHEET 44 OF 50
445

ORIGINAL PLANS PREPARED BY
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U:\41-0637.00 - STH 29 over WI River\B-37-79\BRIDGE\36_36_B-37-79 sup3.dgn
12/2/2013
PENTABLE:BReau_shd_util.tbl

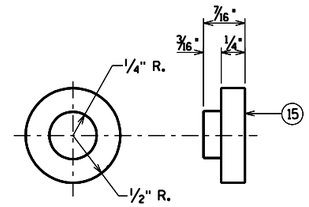


PART PLAN WEST ABUTMENT

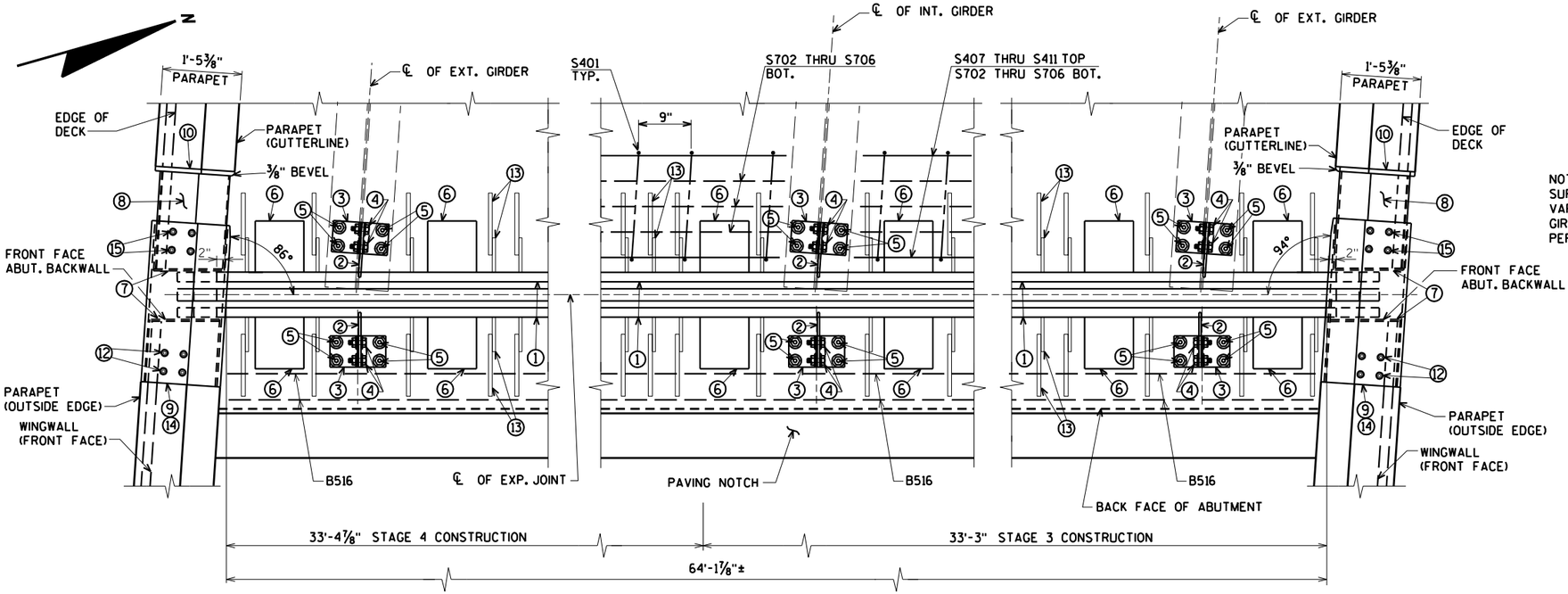


SECTION E

FOR LOCATIONS OF SECTION E, SEE SHEET 46.



ADIPRENE BUTTON DETAIL



PART PLAN EAST ABUTMENT

NOTE:
SUPPORT BOXES ARE SHOWN FOR GENERAL INFORMATION AND LOCATION MAY VARY ACCORDING TO FABRICATOR DESIGN. SPACE SUPPORT BOXES TO MISS GIRDER TOP FLANGES WHEN POSSIBLE, BUT NOT TO EXCEED MAXIMUM SPACING PER SPECIAL PROVISIONS.

WORK THIS SHEET WITH SHEETS 46 - 47

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-79

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MODULAR EXPANSION JOINT DETAILS

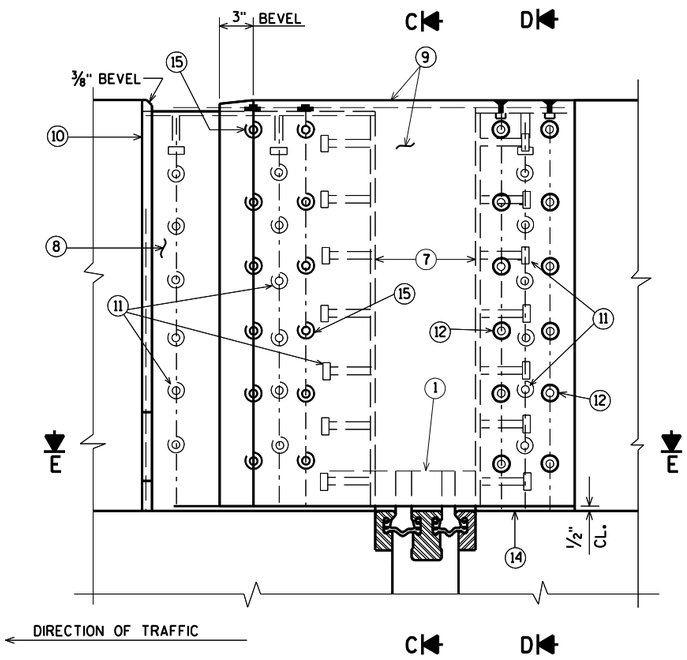
SHEET 45 OF 50
446

ORIGINAL PLANS PREPARED BY
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$PRFNAME$
U:\41-0637.00 - STH 29 over WIRiver\B-37-79\BRIDGE\39 B-37-79 EXP Joint.dgn

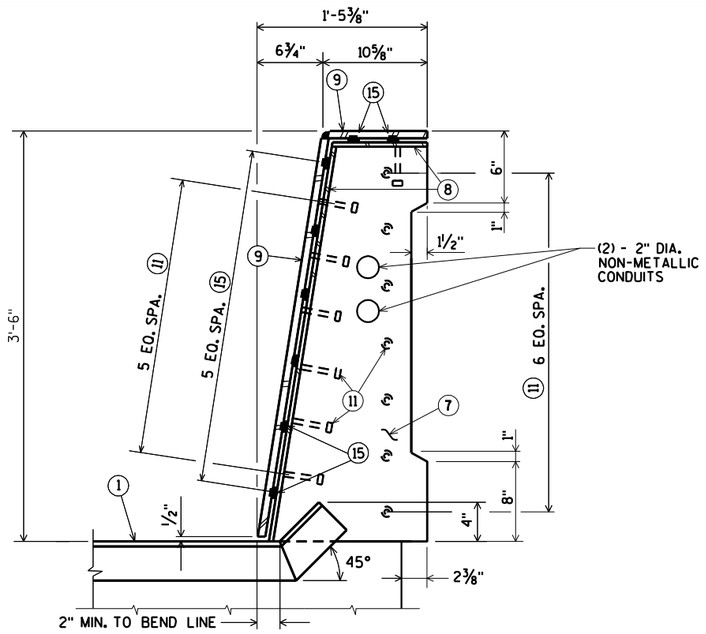
STATE PROJECT NUMBER

1053-02-75

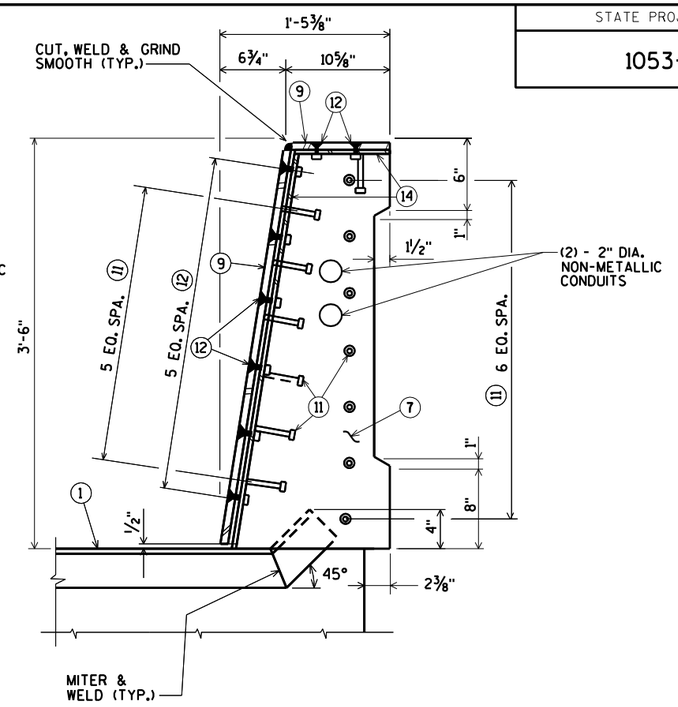


ELEVATION OF SINGLE SLOPE PARAPET 42SS

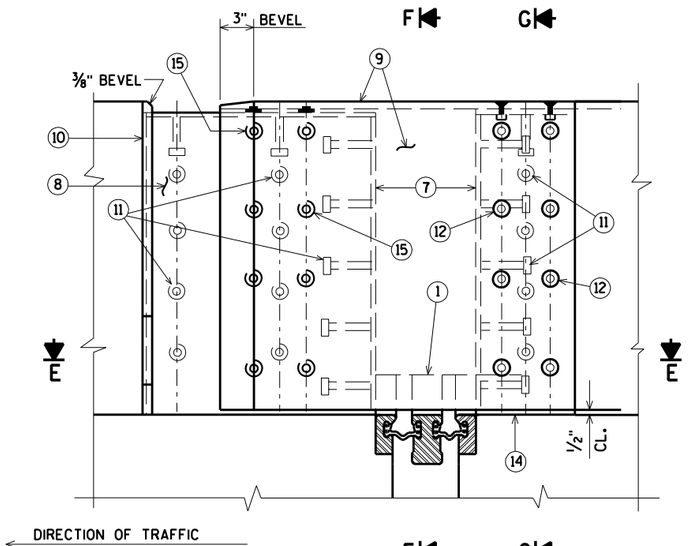
SEE SHEET 45 FOR SECTION E.



SECTION C

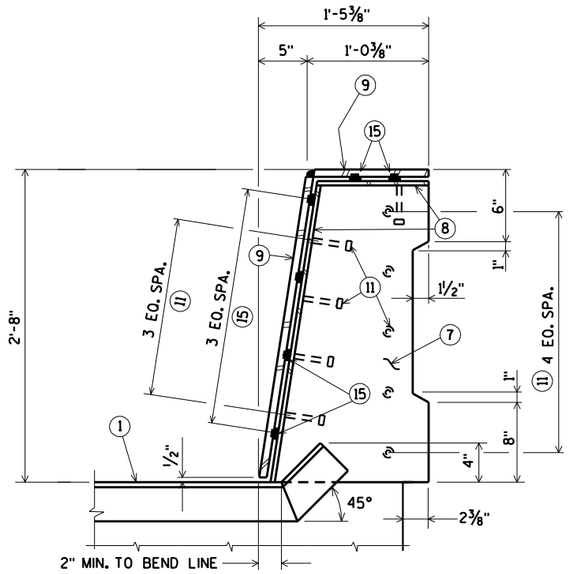


SECTION D

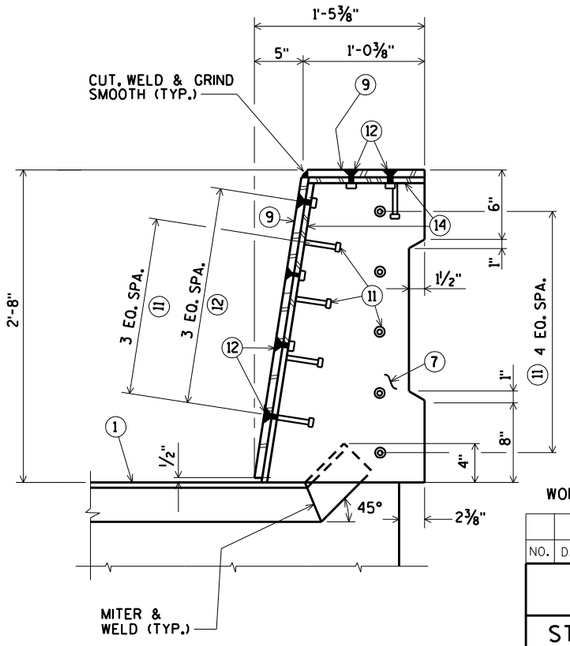


ELEVATION OF SINGLE SLOPE PARAPET 32SS

SEE SHEET 45 FOR SECTION E.



SECTION F



SECTION G

8

8

WORK THIS SHEET WITH SHEETS 45 & 47

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

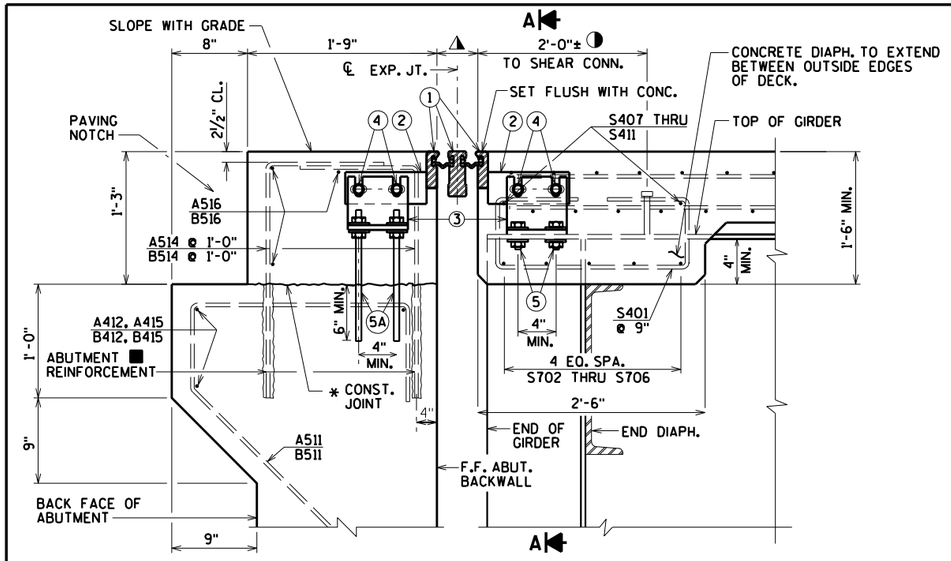
STRUCTURE B-37-79

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COVER PLATES FOR SINGLE SLOPE PARAPET

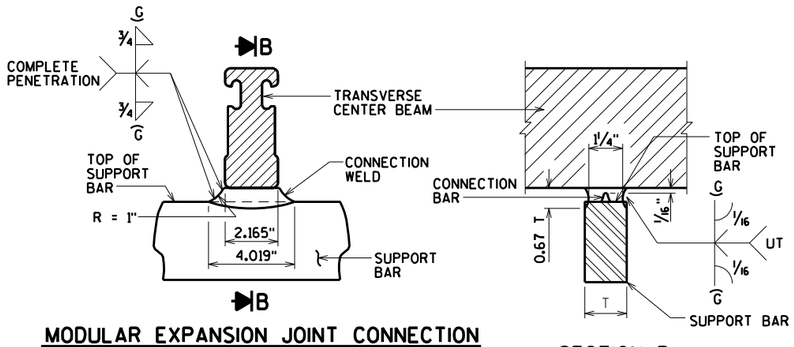
SHEET 46 OF 50

447



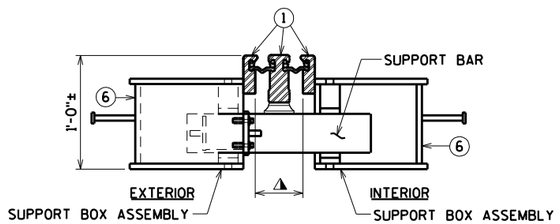
SECTION THRU JOING AT ABUTMENT

NORMAL TO ℄ SUBSTRUCTURE



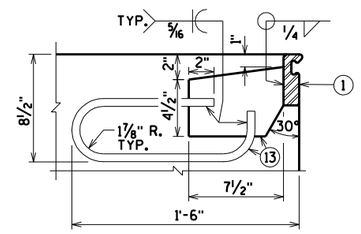
MODULAR EXPANSION JOINT CONNECTION DETAIL AND WELD SPECIFICATION

SECTION B



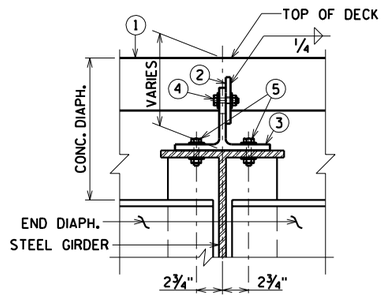
JOINT DETAIL

AT SUPPORT BAR & SUPPORT BOX ASSEMBLY



ANCHORAGE DETAIL

PLACE ADJACENT TO SUPPORT BOXES IN PAVING BLOCK @ ABUT. & IN DECK @ CONC. DIAPH.



SECTION A

NOTE:
MODULAR EXPANSION DEVICE DESIGN AND DETAILS ARE SPECIFIC TO THE MANUFACTURER SELECTED FROM THOSE LISTED IN THE SPECIAL PROVISIONS. FABRICATION DRAWING IS SUBJECT TO THE APPROVAL OF THE BUREAU OF STRUCTURES.

LEGEND

1. MODULAR EXPANSION JOINT DEVICE, 2 CELLS.
2. ½" PLATE, ONE PER GIRDER MIN. PROVIDE 2 - 1" X 2" MIN. SLOTTED HOLES PLACED HORIZONTALLY FOR NO. 4.
3. WT 6 X 29 (OR EQUIVALENT BUILT UP T-SECTION). ONE PER GIRDER. PROVIDE 2 - 1" X 3" MIN. SLOTTED HOLES PLACED VERTICALLY IN WEB OF WT FOR BOLTS NO. 4.
4. ¾" ϕ HIGH STRENGTH BOLTS WITH NUTS & WASHERS. (A325 GALV.)
5. ¾" ϕ HIGH STRENGTH BOLTS WITH NUTS & WASHERS. FIELD DRILL HOLES IN GIRDER TOP FLANGE. (A325 GALV.)
5A. ¾" ϕ THREADED ROD WITH 2 NUTS & WASHERS. GROUT THREADED ROD INTO FIELD DRILLED HOLES. (GALV.)
6. SUPPORT BOX ASSEMBLY FOR SUPPORT BAR (SPA. PER MANUFACTURER). FABRICATE BOX FROM ½" PLATES.
7. ⅜" BULKHEAD PLATE. WELD TO NO. 1, NO. 8 AND NO. 14. WHEN CONDUIT IS PRESENT IN PARAPET, ACCOMODATE FOR BY PROVIDING OPENING IN NO. 7.
8. INSIDE PLATE. FABRICATE FROM ⅜" PLATE.
9. OUTSIDE PLATE. FABRICATE FROM ⅝" PLATE.
10. ⅞" SQUARE BAR. WELD TO NO. 8 AS SHOWN.
11. ¾" ϕ X 4" LONG STUDS. WELD TO NO. 7 , NO. 8 & NO. 14 AS SHOWN.
12. ¾" ϕ X 2" STAINLESS STEEL FLAT CTSK. SLOTTED HEAD CAP SCREWS WITH ANTI-SEIZE LUBRICANT. RECESS 1/16" BELOW PLATE SURFACE.
13. ½" PLATE WITH ⅝" ϕ LOOP ANCHOR FABRICATED AS SHOWN. SPACED AT MANUFACTURER'S SPEC.
14. INSIDE PLATE. FABRICATE FROM ⅝" PLATE.
15. ADIPRENE BUTTON. SEE DETAIL. SET IN OUTSIDE PLATE.

* POUR CONC. ABOVE THIS JOINT AFTER SUPERSTRUCTURE CONC. IS IN PLACE. STRIKE OFF & LEAVE ROUGH.

△ MANUFACTURER'S RECOMMENDED JOINT OPENING BASED ON THE TEMPERATURE ON THE DAY OF PLACEMENT PER TEMPERATURE TABLE. THE MODULAR EXPANSION DEVICE SHALL HAVE THE NUMBER OF CELLS AS INDICATED IN (1).

◑ DIMENSION IS PARALLEL TO ℄ GIRDER.

■ (2) L-SHAPED #5 BARS @ 1'-0" SPA. (COATED) ANCHOR INTO PLACE W/ EPOXY RESIN AFTER MODULAR JOINT IS IN POSITION. FOLLOW STD. SPEC. FOR MASONRY ANCHOR TYPE S WITH A MIN. EMBEDMENT OF 1'-0".

GENERAL NOTES

ONE FIELD SPLICE PERMITTED IN STEEL EXTRUSIONS. DETAILS SHALL BE SUBMITTED FOR APPROVAL. NO SPLICING PREMITTED IN NEOPRENE GLAND.

AFTER FABRICATION, BUT BEFORE SHIPMENT, STRAIGHTEN STEEL EXTRUSIONS SUCH THAT THEY SHALL BE FREE FROM WARP, TWIST AND SWEEP.

NO EXPANSION JOINT PROTRUSIONS PERMITTED ABOVE ROADWAY SURFACE OR ON PARAPET ROADWAY FACE.

THE EXPANSION JOINT SEALS SHALL BE PLACED, BONDED AND SEALED AS RECOMMENDED BY THE MANUFACTURER. FORM WORK SHALL BE PLACED BETWEEN THE SUPPORT BOXES TO PREVENT CONCRETE INTRUSION INTO THE SUPPORT BOX. A TECHNICAL REPRESENTATIVE OF THE MANUFACTURER SHALL BE PRESENT DURING INSTALLATION. PRIOR TO SETTING THE JOINT ASSEMBLY INTO POSITION, THE PROJECT ENGINEER SHALL DETERMINE THE PROPER JOINT OPENING.

EXPANSION JOINT EXTRUSIONS SHALL BE FABRICATED TO CONFORM TO ROADWAY CROWN & GRADE. FABRICATOR SHALL PROVIDE MEANS OF KEEPING GALVANIZED EXTRUSIONS CLEAN & SMOOTH DURING SHIPMENT AND PRIOR TO APPLYING LUBRICANT ADHESIVE FOR NEOPRENE GLAND INSTALLATION.

SANDBLAST BARS, PLATES, WT-SECTION, ANCHORAGE LOOP AND EXTRUSIONS AFTER FABRICATION IN ACCORDANCE WITH SSPC SP. #6 "COMMERCIAL BLAST CLEANING". AFTER BLAST CLEANING, THIS ASSEMBLY SHALL BE HOT DIPPED GALVANIZED.

COST OF FURNISHING & PLACING OF THE EXPANSION JOINTS COMPLETE WITH PARAPET PLATES SHALL BE PAID FOR UNDER THE PRICE BID FOR "EXPANSION DEVICE MODULAR B-37-79".

BAR STEEL REINF. IN DECK AND CONC. DIAPHRAGM SHALL BE RESPACED AS NECESSARY TO ALLOW REPLACEMENT OF JOINT ASSEMBLY. TOP TRANSVERSE BARS, ADJACENT TO MOD. JT. TO BE CUT AND PLACED BETWEEN JT. SUPPORT SYSTEM.

TEMP. TABLE

TEMPERATURE TABLE FOR SETTING JOINT OPENINGS TO BE DETERMINED BY JOINT MANUFACTURER WITH THE FOLLOWING DESIGN DATA:

1. ⅜ IN. OF MOVEMENT PER 10° F
2. MEDIAN TEMPERATURE OF 45° F
3. TEMP. RANGE IN TABLE FROM (-5)°F) TO (+95°F).

A TABLE OF JOINT OPENINGS BASED ON ABOVE DATA SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

WORK THIS SHEET WITH SHEETS 45 - 46

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-79

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MODULAR EXPANSION JOINT DETAILS

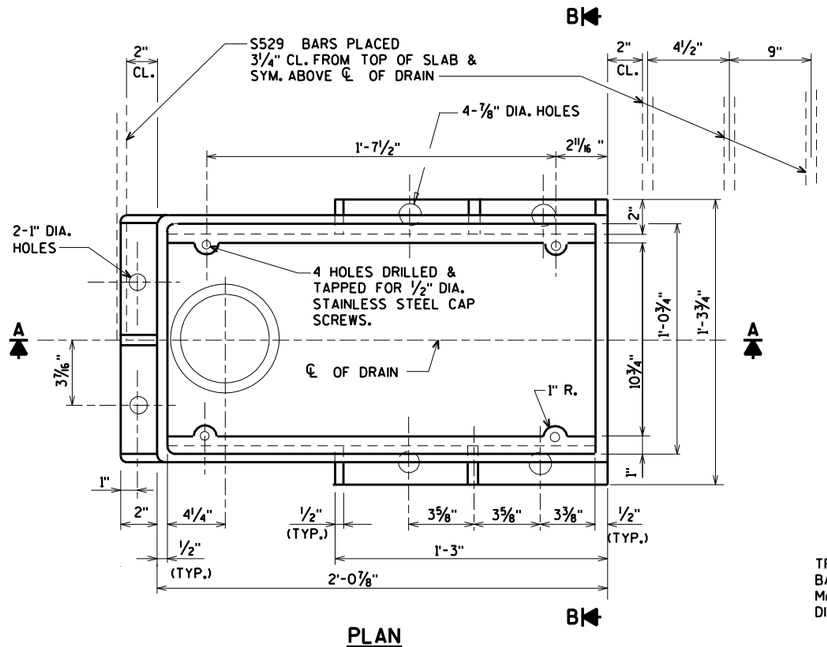
SHEET 47 OF 50
448

STATE PROJECT NUMBER
1053-02-75

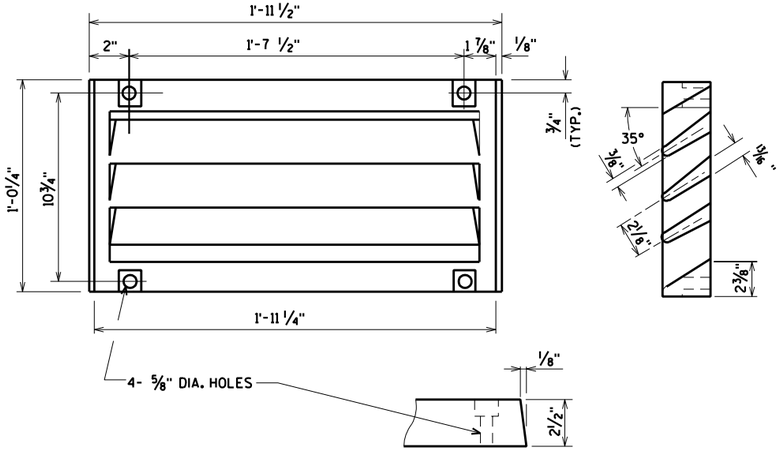
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8

$PRFNAME$
U:\41-0637.00 - STH 29 over WI River\B-37-79\BRIDGE\41_B-37-79 FLOOR DRAIN TYPE 'GC'.dgn



PLAN



GRATE CASTING DETAIL

ATTACH GRATE TO FRAME FOR SHIPMENT

GENERAL NOTES

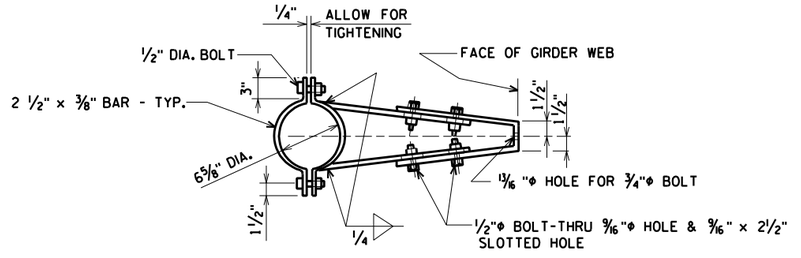
ALL MATERIAL FOR TYPE "GC" CASTING, EXCLUDING GRATE HOLD DOWN SCREWS, SHALL BE GRAY IRON CONFORMING TO A.S.T.M. A48, CLASS 30. (APPROX. WEIGHT = 225#)

MATERIAL FOR BRACKETS SHALL CONFORM TO A.S.T.M. A36.

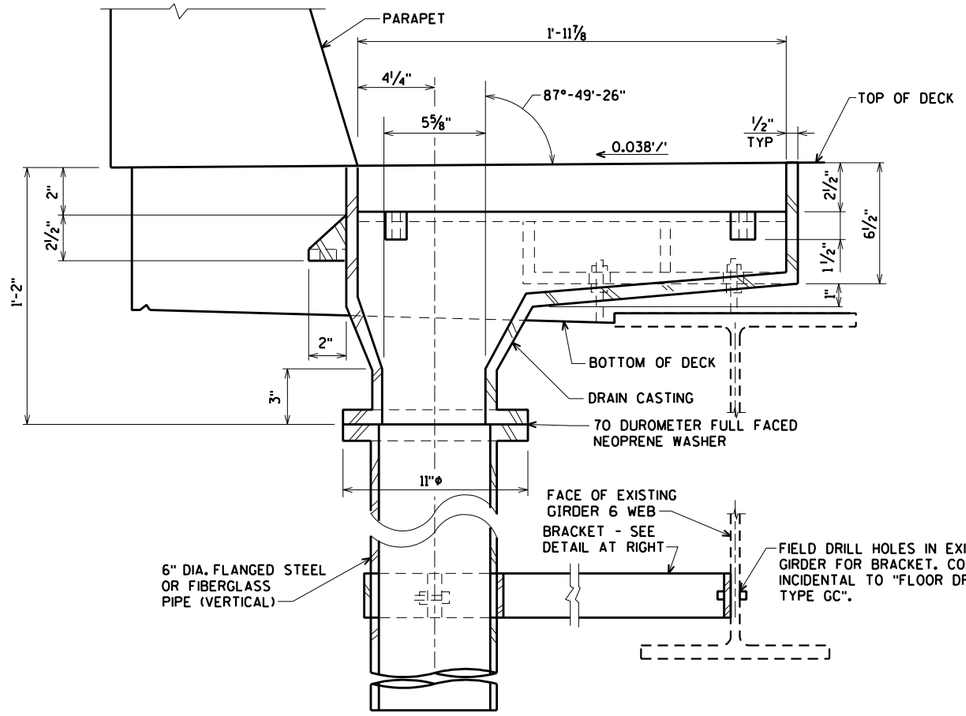
THE CONTRACTOR MAY PROPOSE AN ALTERNATE TYPE OF BRACKET. THE PROPOSED ALTERNATE DETAILS SHALL BE SUBMITTED AND SUBJECT TO THE APPROVAL OF THE ENGINEER.

FLANGED 6" DIA. DOWNSPOUTS SHALL BE EITHER STEEL OR REINFORCED THERMOSETTING RESIN PIPE CONFORMING TO SECTION 514 OF THE STANDARD SPECIFICATIONS.

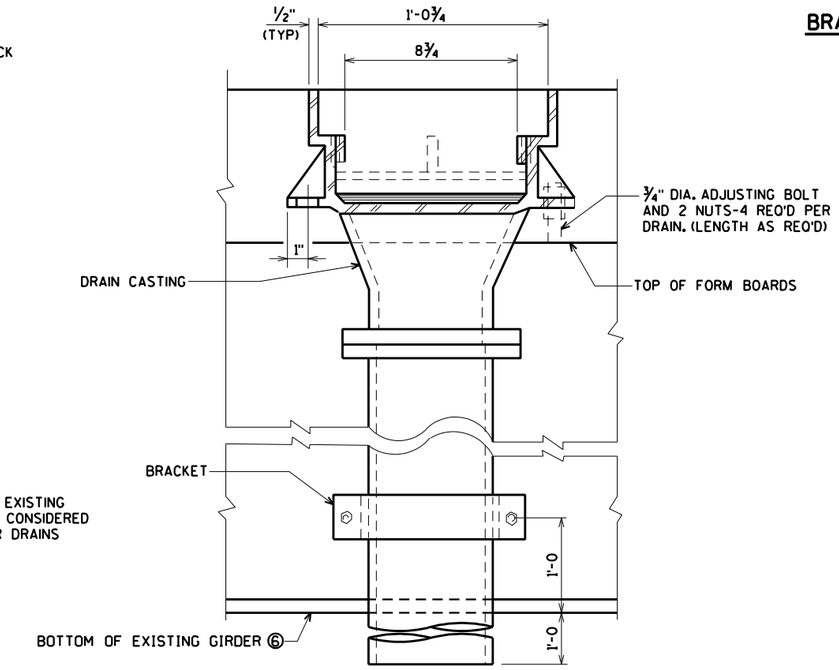
TRANS. AND LONGIT. SLAB BAR REINF. TO BE CUT A MAX. 1" CL. FROM DRAIN FRAME. DISPLACE BARS WHERE POSSIBLE



BRACKET DETAIL



SECTION A



SECTION B

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-79

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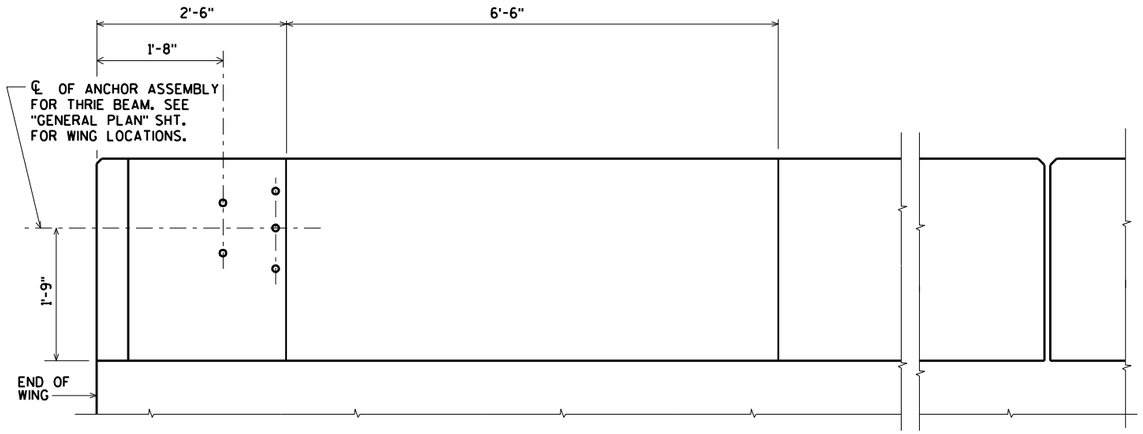
FLOOR DRAIN TYPE 'GC'

SHEET 48 OF 50
449

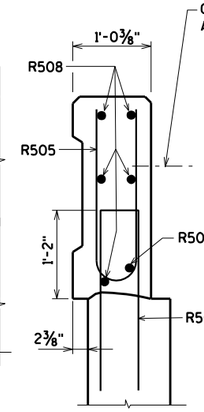
ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

STATE PROJECT NUMBER

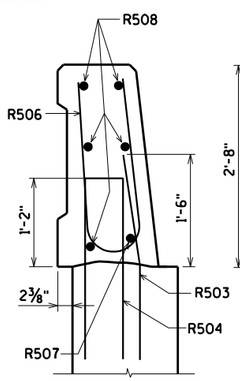
1053-02-75



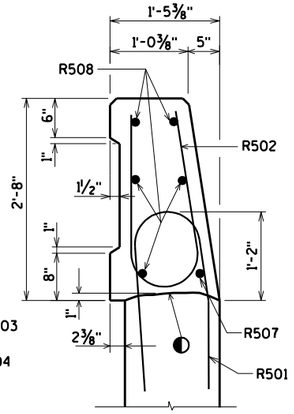
INSIDE ELEVATION



SECTION A



SECTION B

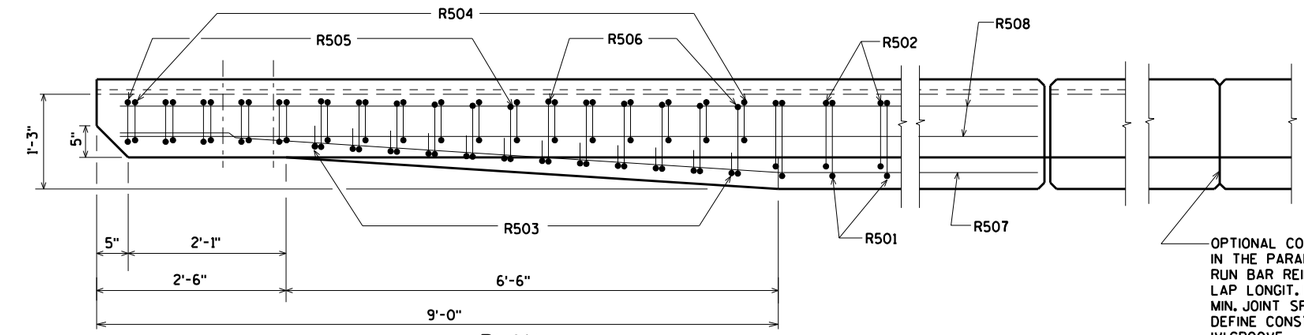


SECTION C

BILL OF BARS

WEIGHTS INCLUDED IN ABUTMENT
WEIGHTS SHOWN ON SHEETS 4, 10, & 14.

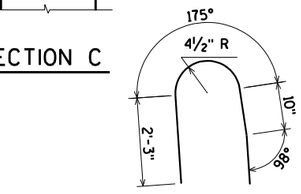
BAR MARK	COAT	NO. REQ'D. WEST ABUT.	NO. REQ'D. EAST ABUT.	350# WEST ABUT. 350# EAST ABUT. LENGTH	BENT	LOCATION
R501	X	5	5	5-10	X	PARAPET VERT.
R502	X	5	5	5-0	X	PARAPET VERT.
R503	X	12	12	3-0	X	PARAPET-VERT.
R504	X	17	17	5-7	X	PARAPET-VERT.
R505	X	11	11	4-9	X	PARAPET-VERT.
R506	X	6	6	4-10	X	PARAPET-VERT.
R507	X	1	1	11-5	X	PARAPET-HORIZ.
R508	X	5	5	11-5		PARAPET HORIZ.



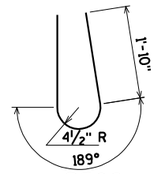
PLAN

WING 4 SHOWN (WING 1 SIMILAR)

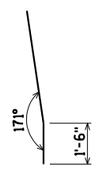
OPTIONAL CONSTRUCTION JOINTS IN THE PARAPETS MAY BE USED. RUN BAR REINF. THRU THE JOINT. LAP LONGIT. BARS A MIN. OF 1'-9". MIN. JOINT SPACING OF 80'-0". DEFINE CONST. JOINT WITH A ¾" - 'V' GROOVE.



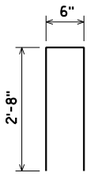
R501



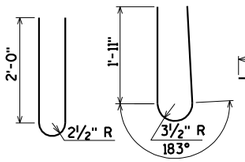
R502



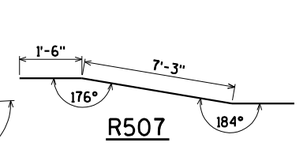
R503



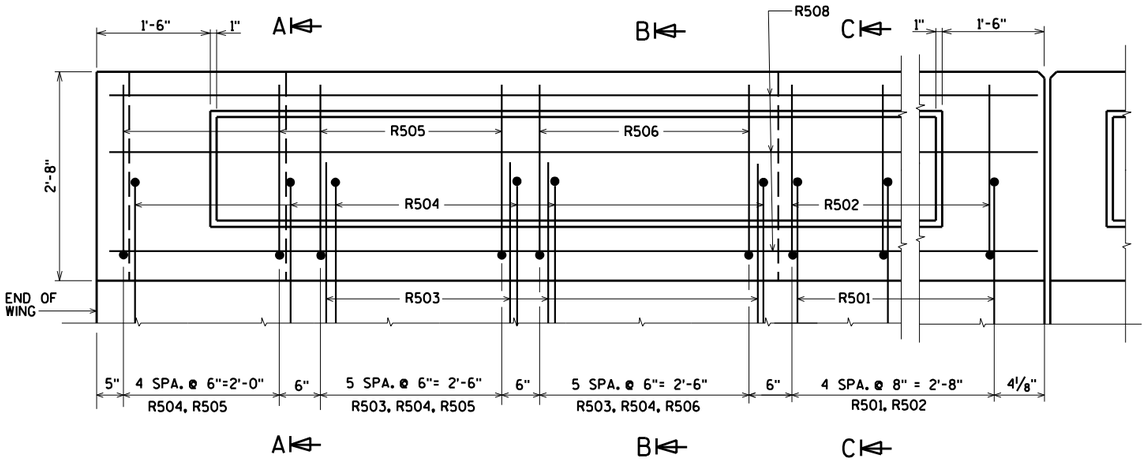
R504



R505 R506

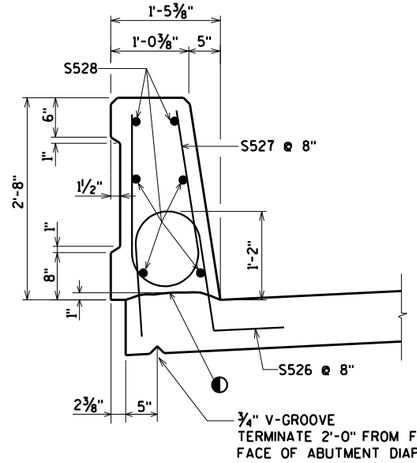


R507

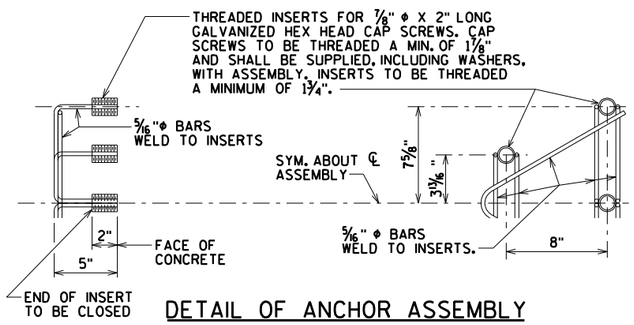


OUTSIDE ELEVATION

WING 1 SHOWN (WING 4 SIMILAR)



SECTION THRU PARAPET ON BRIDGE



DETAIL OF ANCHOR ASSEMBLY

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

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

◐ CONST. JOINT - STRIKE OFF AS SHOWN.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-79

DRAWN BY KAZ | PLANS CK'D. CBM

SINGLE SLOPE PARAPET 32SS MODIFIED

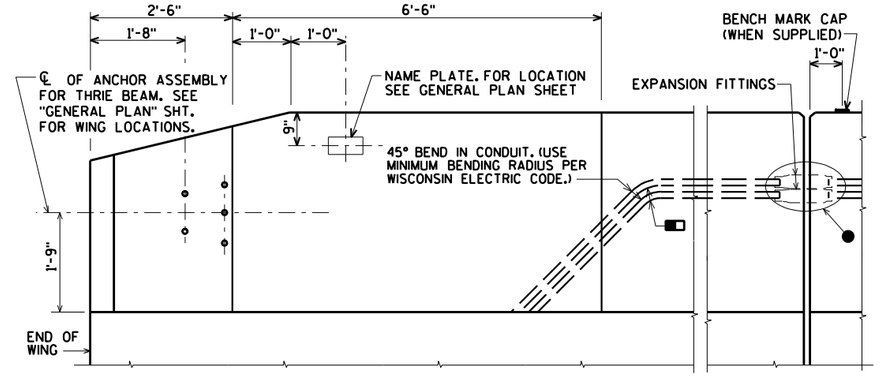
SHEET 49 OF 50
450

8

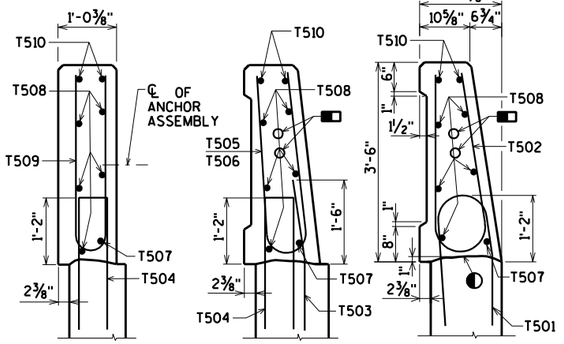
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STATE PROJECT NUMBER

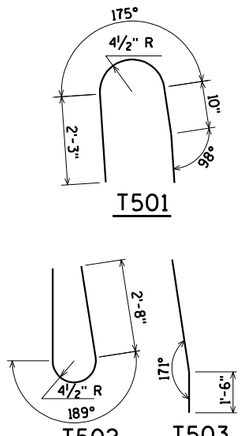
1053-02-75



INSIDE ELEVATION



SECTION A SECTION B SECTION C



BILL OF BARS

WEIGHTS INCLUDED IN ABUTMENT WEIGHTS SHOWN ON SHEETS 4, 10, & 14.

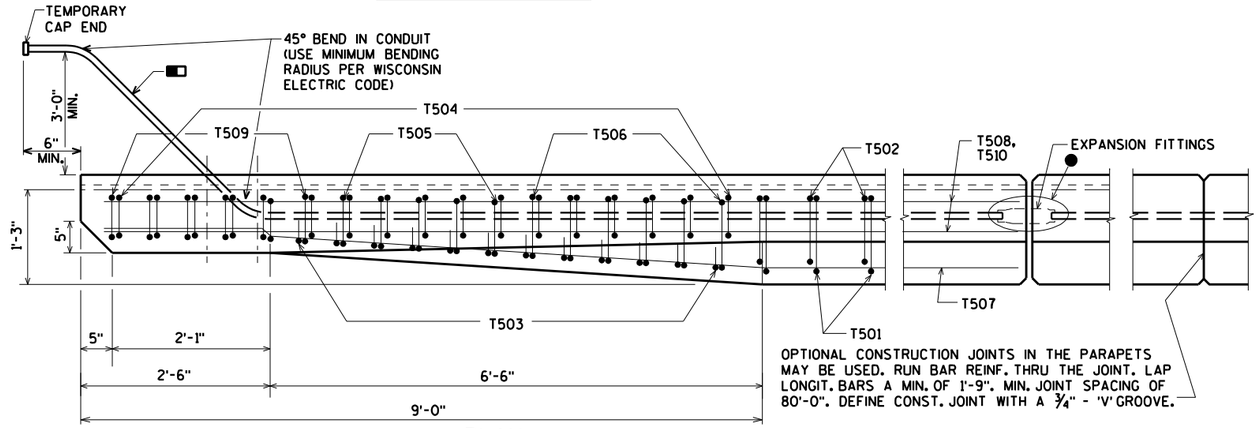
BAR MARK	COAT	NO. REQ'D. WEST ABUT.	NO. REQ'D. EAST ABUT.	740* WEST ABUT. 740* EAST ABUT. LENGTH	BENT	BAR SERIES	LOCATION
T501	X	23	23	5-10	X		PARAPET VERT.
T502	X	23	23	6-8	X		PARAPET VERT.
T503	X	11	11	3-0	X		PARAPET-VERT.
T504	X	17	17	5-7	X		PARAPET-VERT.
T505	X	5	5	6-5	X		PARAPET-VERT.
T506	X	6	6	6-6	X		PARAPET-VERT.
T507	X	1	1	23-5	X		PARAPET-HORIZ.
T508	X	5	5	23-5			PARAPET HORIZ.
T509	X	6	6	5-5	X	⚠	PARAPET-VERT.
T510	X	2	2	23-5	X		PARAPET-HORIZ.

⚠ LENGTH SHOWN FOR BAR IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.

BAR SERIES TABLE

MARK	NO. REQ'D.	LENGTH
T509	4 SERIES OF 6	4'-9" TO 6'-1"

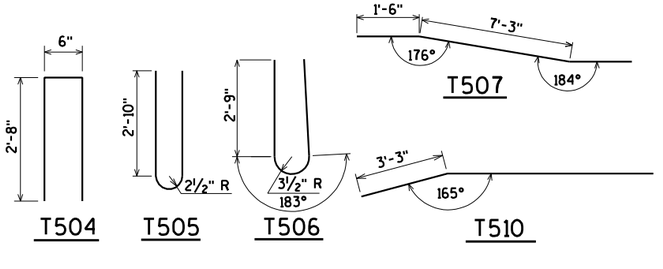
BUNDLE AND TAG EACH SERIES SEPARATELY.

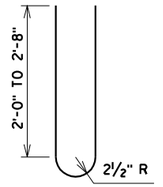


OPTIONAL CONSTRUCTION JOINTS IN THE PARAPETS MAY BE USED. RUN BAR REINF. THRU THE JOINT. LAP LONGIT. BARS A MIN. OF 1'-9". MIN. JOINT SPACING OF 80'-0". DEFINE CONST. JOINT WITH A ¾" - 'V' GROOVE.

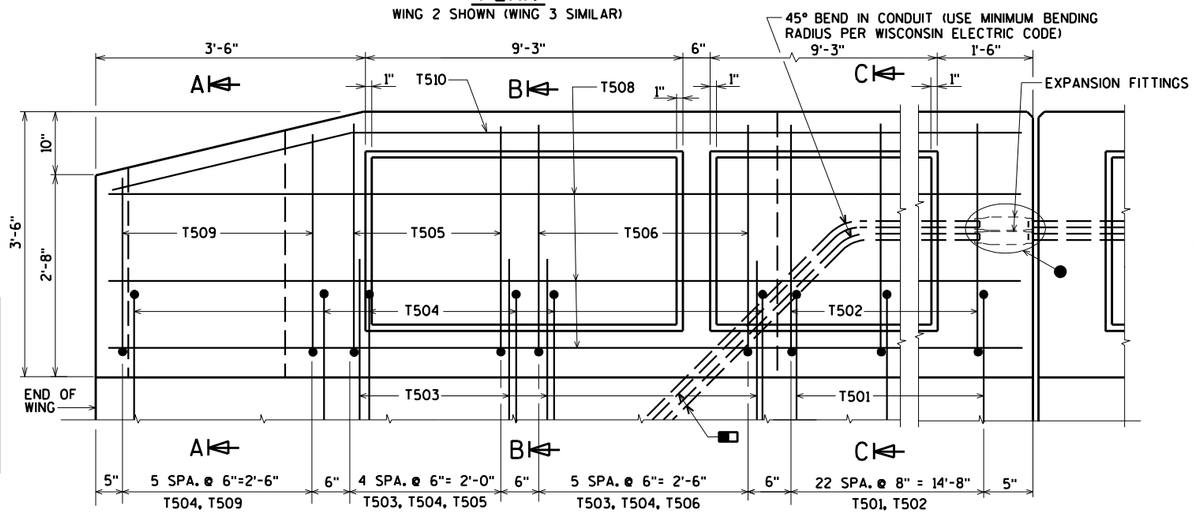
PLAN

WING 2 SHOWN (WING 3 SIMILAR)



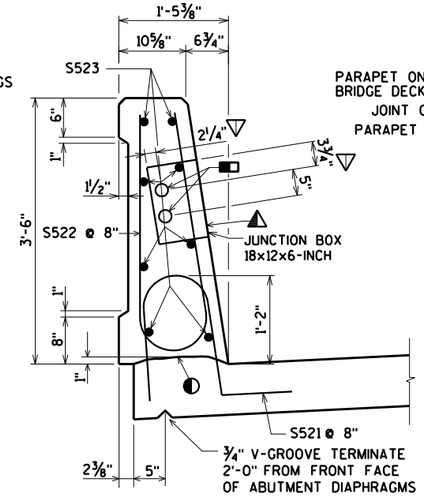


T509

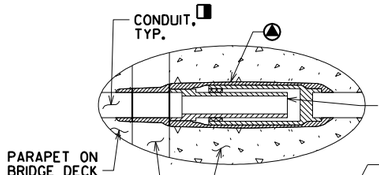


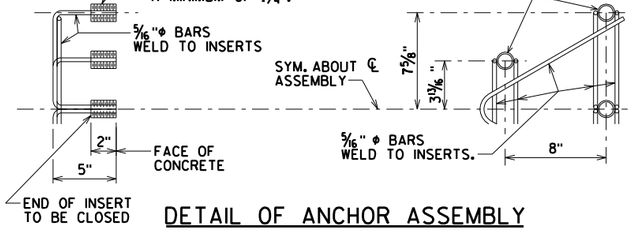
OUTSIDE ELEVATION

WING 3 SHOWN (WING 2 SIMILAR)



SECTION THRU PARAPET ON BRIDGE





DETAIL OF ANCHOR ASSEMBLY

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

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

NOTES

EXPANSION FITTINGS, ANGLES AND ADAPTER FITTINGS TO BE INCIDENTAL TO "CONDUIT RIGID METALLIC 2-INCH".

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

APPROVED MANUFACTURERS - JUNCTION BOXES: SEE APPROVED MATERIAL LIST.

APPROVED MANUFACTURER OR EQUIVALENT - EXPANSION FITTIING: O-Z/GEDNEY TYPE AX-8-200 AND BONDING JUMPER (8" TOTAL CONDUIT MOVEMENT).

● POSITION MOVEABLE END OF CONDUIT INSIDE EXPANSION FITTING, SUCH THAT IT WILL HAVE THE SAME ALLOWANCE FOR MOVEMENT (EXPANSION/CONTRACTION) AS THE EXPANSION DEVICE SET IN PLACE IN THE DECK BELOW IT. TAKE CARE TO INSTALL EXPANSION FITTING AND CONDUIT EXACTLY PARALLEL TO BRIDGE MOVEMENT.

▬ USE 2" DIA. RIGID NONMETALLIC CONDUIT EXCEPT AT EXPANSION FITTING. AT EXPANSION FITTING USE RIGID METALLIC CONDUIT 3'-0" INTO PARAPET ON DECK AND WING SIDES OF THE JOINT OPENING.

◐ CONST. JOINT - STRIKE OFF AS SHOWN.

▽ LOCATION OF CONDUIT IS MEASURED FROM OUTSIDE EDGE OF JUNCTION BOX.

⚠ CUT OUT 1"± OF GASKET AT BOTTOM OF JUNCTION BOX COVER TO ALLOW FOR DRAINAGE.

◬ WRAP EXPANSION FITTING WITH SPONGE RUBBER. SPONGE RUBBER WRAP TO BE AASHTO M153 TYPE 1 OR EQUIVALENT. ¼" MINIMUM THICKNESS. SPONGE RUBBER WRAP INCIDENTAL TO "CONDUIT RIGID METALLIC 2-INCH".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-79

DRAWN BY KAZ | PLANS CK'D. CBM

SINGLE SLOPE PARAPET 42SS MODIFIED

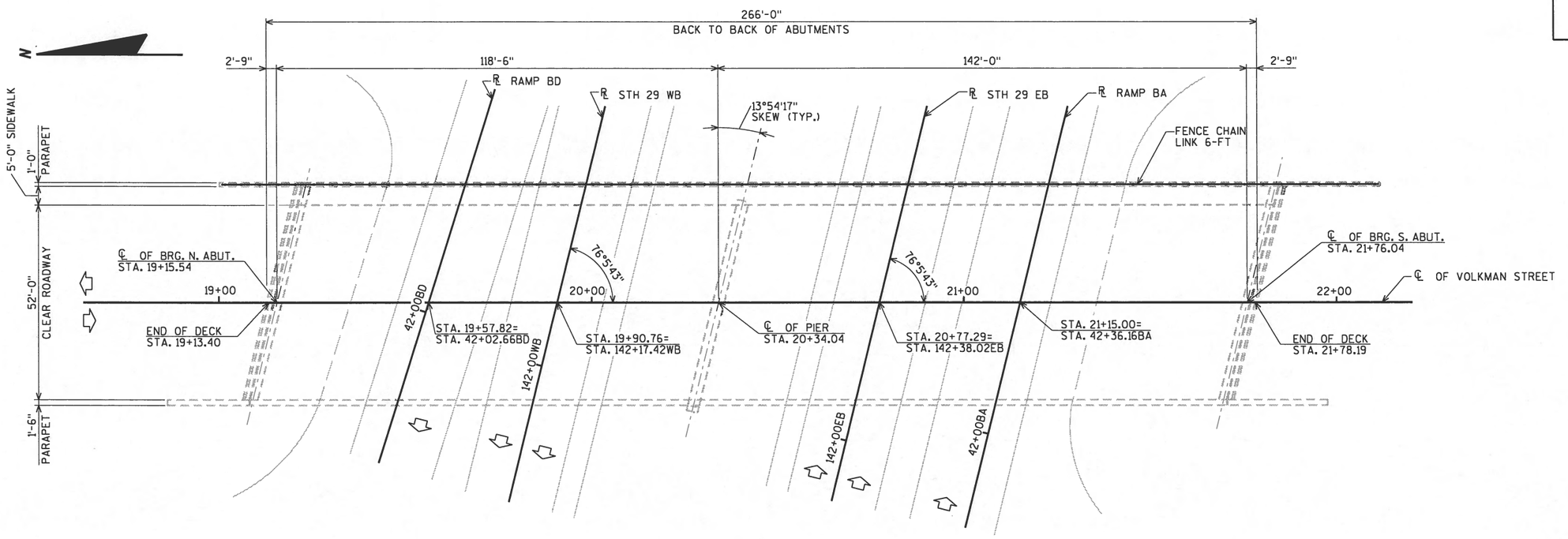
SHEET 50 OF 50

451

8

8

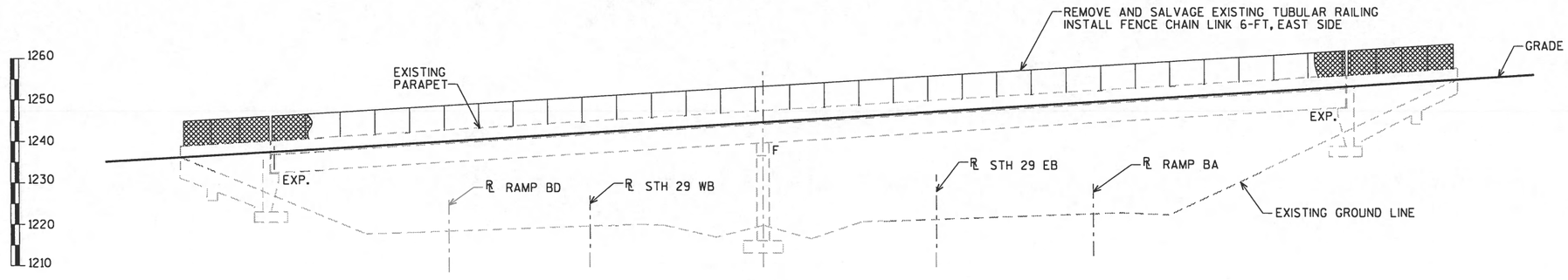
STATE PROJECT NUMBER
1053-02-75



PLAN

TWO-SPAN CONTINUOUS STEEL PLATE GIRDER BRIDGE
(RAILING REPLACEMENT)

RATINGS: (FROM HSI 8/16/13)
DESIGN LOADING: HS-20
INVENTORY RATING: HS-25
OPERATING RATING: HS-45
MAXIMUM STANDARD PERMIT VEHICLE LOAD = 190 KIPS



ELEVATION

NORMAL TO STH 29

LIST OF DRAWINGS

1. GENERAL PLAN
2. QUANTITIES AND NOTES
3. CHAIN LINK FENCE LAYOUT
4. CHAIN LINK FENCE DETAILS

BRIDGE OFFICE CONTACT:
WILLIAM DREHER
(608)-266-8489

CONSULTANT CONTACT:
DAN SYDOW
(715)-834-3161

WISCONSIN
DANIEL N. SYDOW
E-38363
WI
PROFESSIONAL ENGINEER
10/31/2013

NO.	DATE	REVISION	BY

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher KAR 11/26/13
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-37-81

VOLKMAN STREET OVER STH 29

COUNTY	TOWN/~~CITY/VILLAGE~~
MARATHON	WESTON

DESIGN SPEC. REHABILITATION N/A

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
DNS	KLW	KAZ	DNS

GENERAL PLAN

SHEET 1 OF 4
452

I.D. DATE:

8

8

$PRFNAME$
U:±41-0637.00 - STH 29 over WI River±B-37-81 Volkman±Bridge±B-37-81 GP_final.DGN

DATE: 8-16-13
DATE: 8-16-13
DATE: 8-16-13

CHECKED BY: KLW
BACK CHECKED BY:
CORRECTED BY: KAH

10/28/2013 PENTABLE:BReau_shd_util.tbl

STATE PROJECT NUMBER
1053-02-75

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	TOTAL
● 203.0200.03	REMOVING OLD STRUCTURE STATION 20+34.04	LS	1
502.6102	MASONRY ANCHORS TYPE S ½-INCH	EACH	86
616.0206	FENCE CHAIN LINK 6-FT	LF	310

● BID ITEM INCLUDES REMOVAL AND SALVAGING OF THE EXISTING TUBULAR RAILING.

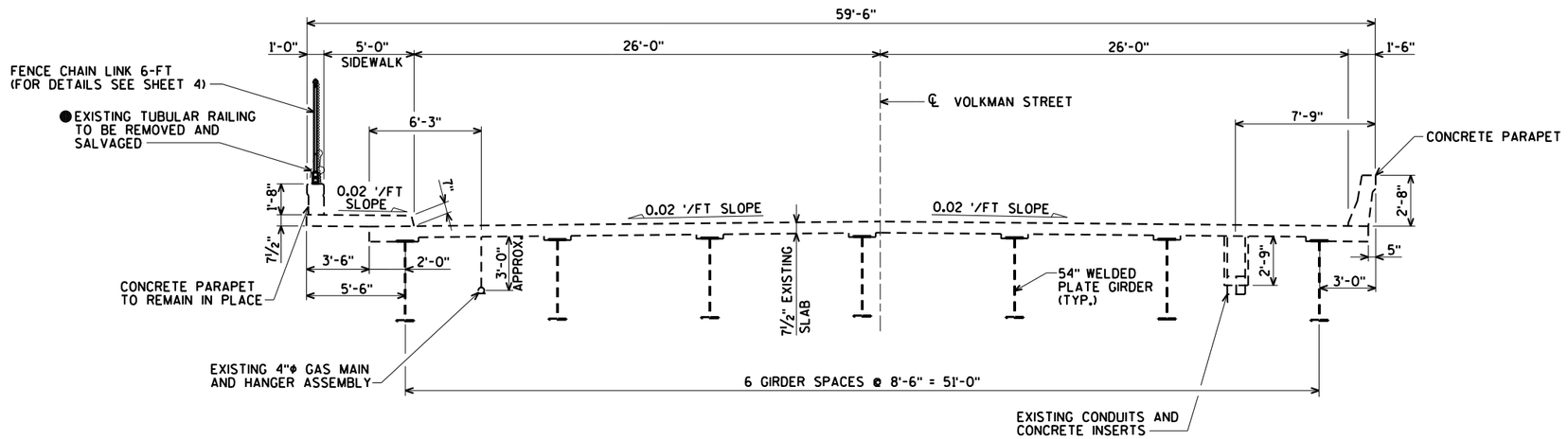
GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

DIMENSIONS SHOWN ARE BASED ON ORIGINAL STRUCTURE PLANS.

EXISTING TUBULAR RAILING TO BE REMOVED AND SALVAGED TO THE , DEPARTMENT, WORK INCIDENTAL TO BID ITEM, "REMOVING OLD STRUCTURE".

REMOVE EXISTING TUBULAR RAILING ANCHOR BOLTS FLUSH WITH CONCRETE SURFACE AND GRIND SMOOTH.



CROSS SECTION THRU BRIDGE

(LOOKING SOUTH)

$PRFNAME$
U:\41-0637.00 - STH 29 over WIRiver\B-37-81 Volkman\Bridge\B-37-81GP_final.DGN

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8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-81

DRAWN BY KAZ | PLANS CK'D. KLW

QUANTITIES AND NOTES

SHEET 2 OF 4
453

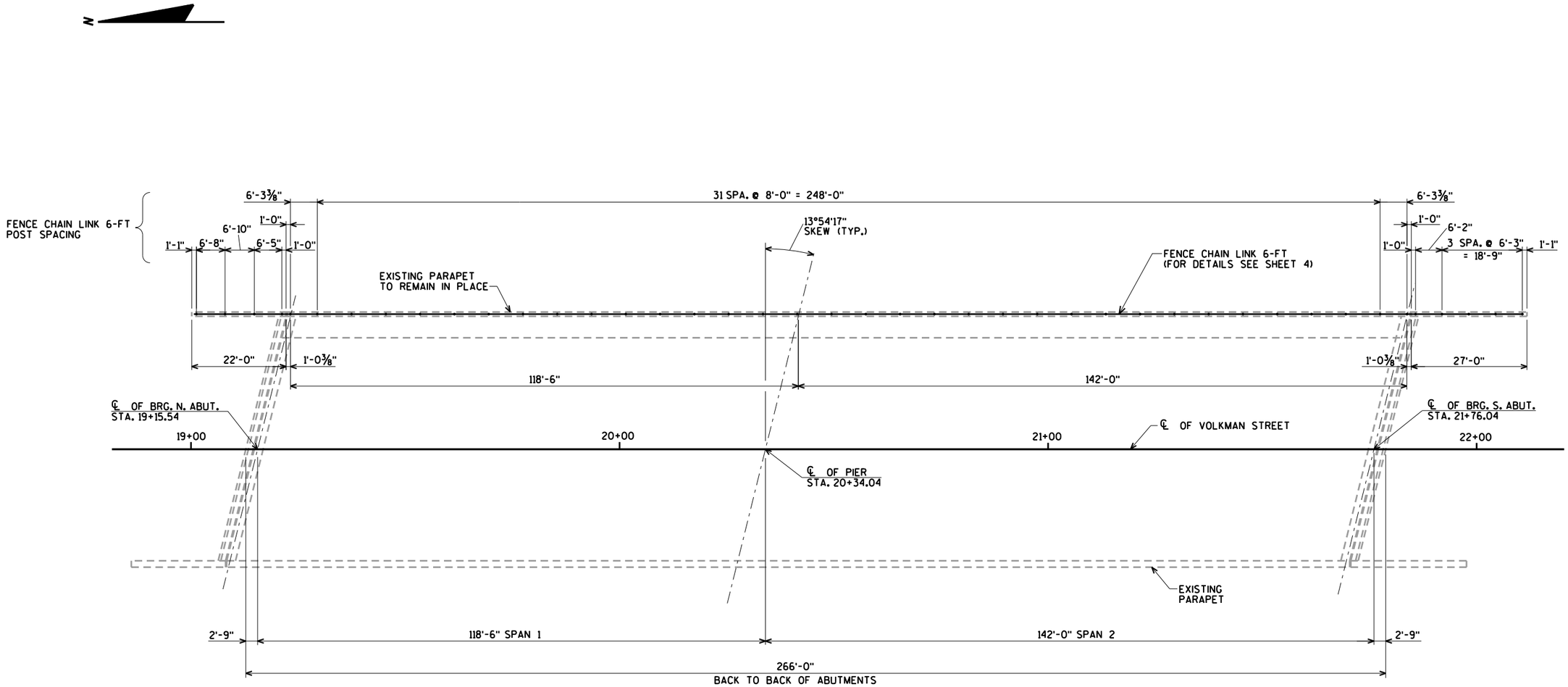
ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

10/31/2013

PENTABLE:BReau_shd_util.tbl

STATE PROJECT NUMBER

1053-02-75



PLAN

FENCE CHAIN LINK POST SPACING

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-81

DRAWN BY KAZ | PLANS CK'D. KLW

CHAIN LINK FENCE LAYOUT

SHEET 3 OF 4
454

ORIGINAL PLANS PREPARED BY
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$PRFNAME$
U:\41-0637.00 - STH 29 over WIRiver\B-37-81 Volkman\Bridge\B-37-81 SUP .DGN

10/28/2013

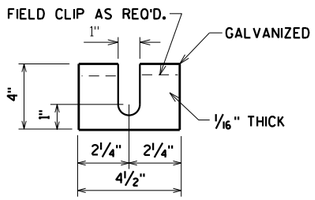
PENTABLE:BReau_shd_util.tbl

STATE PROJECT NUMBER

1053-02-75

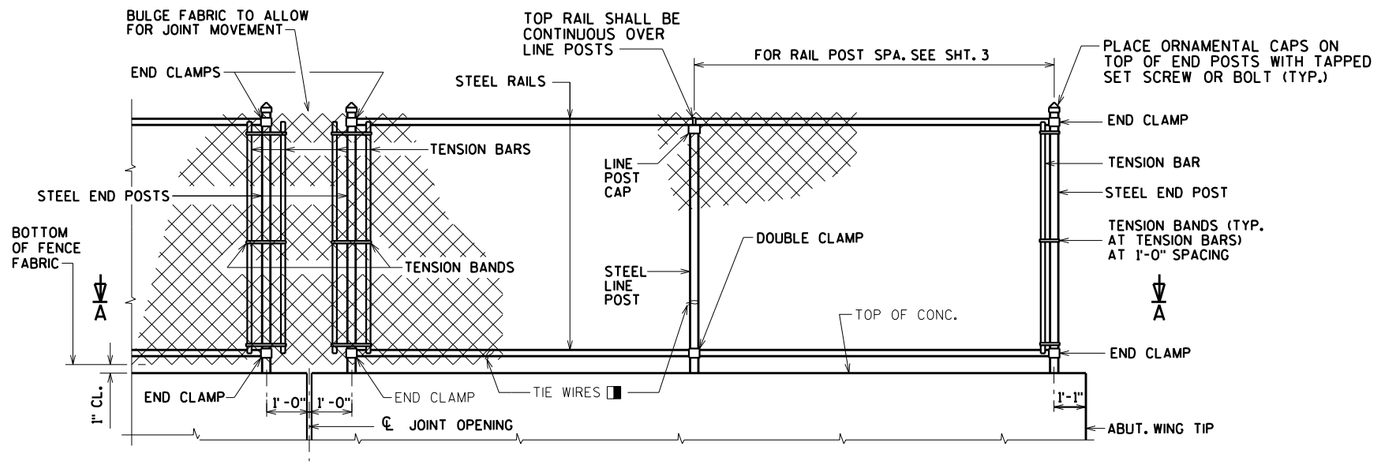
FENCE MEMBER SIZE & WEIGHT

STEEL FENCE MEMBER	OUTSIDE DIAMETER (INCHES)	WEIGHT (LB/FT)
RAILS	1.660	2.27
END POST	2.875	5.80
OVERHANG POST	2.875	5.80
LINE POST	2.375	3.65
POST SLEEVE	4.000	9.12



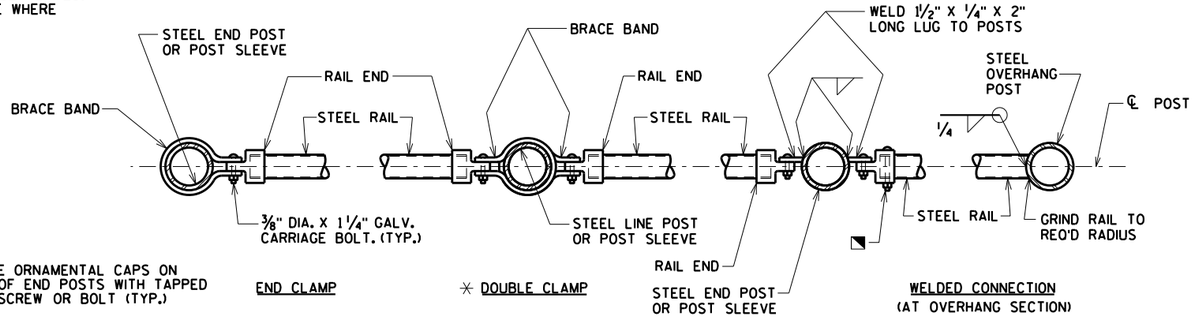
POST SHIM DETAILS

SHIMS REQUIRED ONLY WHEN END POSTS AND LINE POSTS ARE WELDED TO BASE PLATES. PROVIDE 4 SHIMS PER POST. USE WHERE REQUIRED FOR ALIGNMENT.



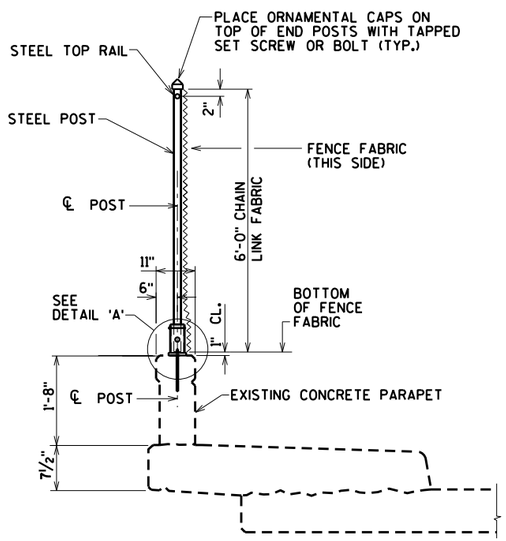
FENCE PART ELEVATION

VIEWING FABRIC SIDE

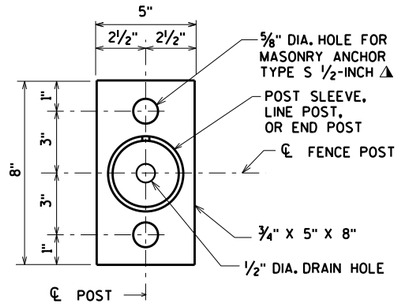


SECTION A-A

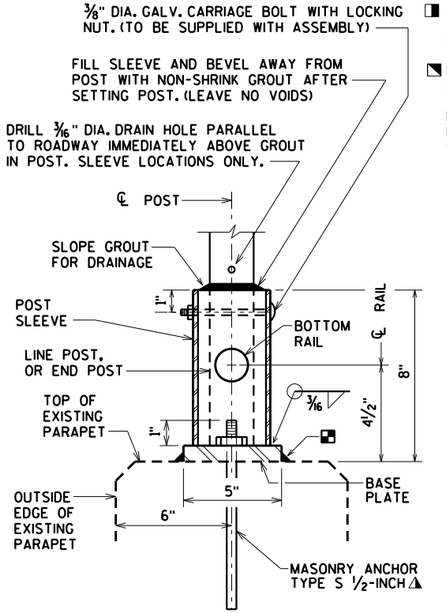
NOTE: PLACE ALL BOLT HEADS ON SIDE OF FENCE ADJACENT TO PEDESTRIANS



SECTION THRU FENCE



BASE PLATE



DETAIL 'A'

UNIT SHALL BE GALVANIZED AFTER FABRICATION

NOTE: IN LIEU OF USING THE POST SLEEVE, THE FENCE POST MAY BE WELDED TO THE BASE PLATE.

GENERAL NOTES

POSTS ARE TO BE SET VERTICAL.

ALL FENCE COMPONENTS SHALL BE GALVANIZED STEEL, EXCEPT THE FENCE FABRIC WHICH MAY BE ALUMINUM-COATED STEEL OR GALVANIZED STEEL.

FABRIC SHALL CONFORM TO ASTM A491 OR A392, CLASS 2. STEEL RAILS, POSTS AND POST SLEEVES SHALL CONFORM TO ASTM F1083, STANDARD WEIGHT PIPE (SCHEDULE 40). FITTINGS SHALL CONFORM TO ASTM F626.

THE BID ITEM SHALL BE "FENCE CHAIN LINK 6- FT.", LF.

COMPLETE ANY REQUIRED WELDING OF COMPONENTS BEFORE GALVANIZING.

POST BASE PLATES SHALL BE FLAT WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL. ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUT.

BASE PLATES AND SHIMS SHALL BE ASTM A709, GRADE 36.

ALL POST SPACINGS ARE MEASURED HORIZONTALLY ALONG THE C/L OF THE POST.

◩ CAULK AROUND PERIMETER OF BASE PLATE AND FILL PORTION OF SLOTTED HOLE AROUND ANCHOR BOLT IN SHIM WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER.

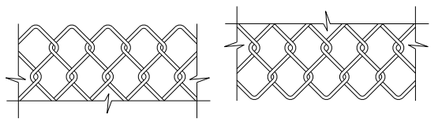
✳ ALTERNATE TO DOUBLE CLAMP: USE LINE RAIL CLAMP (BOULEVARD) OR 180° BRACE BAND, WHICH MAY BE USED WHEN THE POSTS ARE EITHER BOLTED TO THE POST SLEEVES OR DIRECTLY WELDED TO THE BASE PLATE.

◭ ½" DIA. CONCRETE MASONRY ANCHOR, TYPE "S", 6" MIN. EMBEDMENT (EPOXY ANCHORED) INTO CONCRETE AND MINIMUM PULLOUT CAPACITY OF 10 KIPS. ANCHOR, WASHER AND NUT SHALL BE GALVANIZED.

◨ ATTACH FABRIC TO RAILS, AND TO POSTS WITHOUT TENSION BANDS, WITH TIE WIRES (ROUND, 9-GAGE) SPACED AT 1'-0".

◹ BOLT RAIL TO RAIL END TO SECURE OVERHANG SECTION. ALTERNATE IS TO WELD RAIL DIRECTLY TO END POST.

MINIMUM LENGTH OF TOP RAIL BETWEEN SPLICES SHALL BE 20'-0". LOCATE SPLICES NEAR ¼ POINT OF POST SPACING.



TOP DETAIL BOTTOM DETAIL

FENCE FABRIC

FENCE FABRIC WOVEN OF 9-GAGE WIRE IN 2" DIAMOND PATTERN MESH WITH BOTH THE TOP AND BOTTOM SELVAGES KNUCKLED.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-81

DRAWN BY KAZ PLANS CK'D. KLW

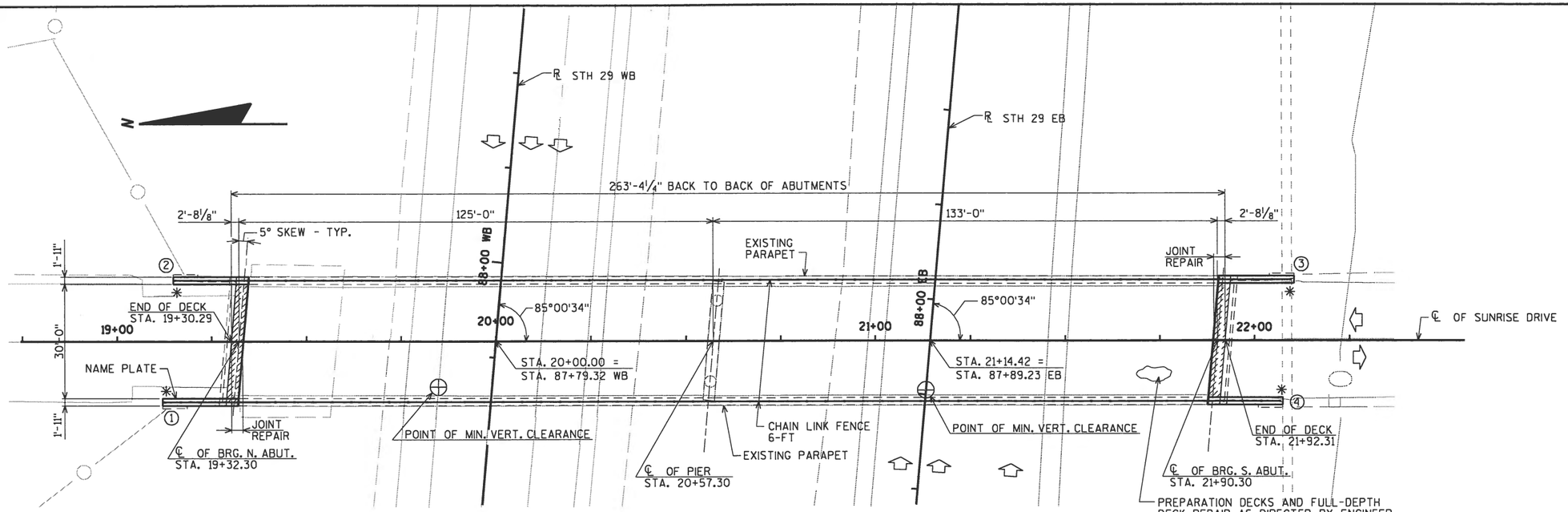
CHAIN LINK FENCE DETAILS

SHEET 4 OF 4
455

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

$PRFNAME$
U:\41-0637.00 - STH 29 over WI River\B-37-81 Volkman\Bridge\B-37-81 FENCE.dgn
10/28/2013
PENTABLE:BReau_shd_util.tbl

STATE PROJECT NUMBER
1053-05-60

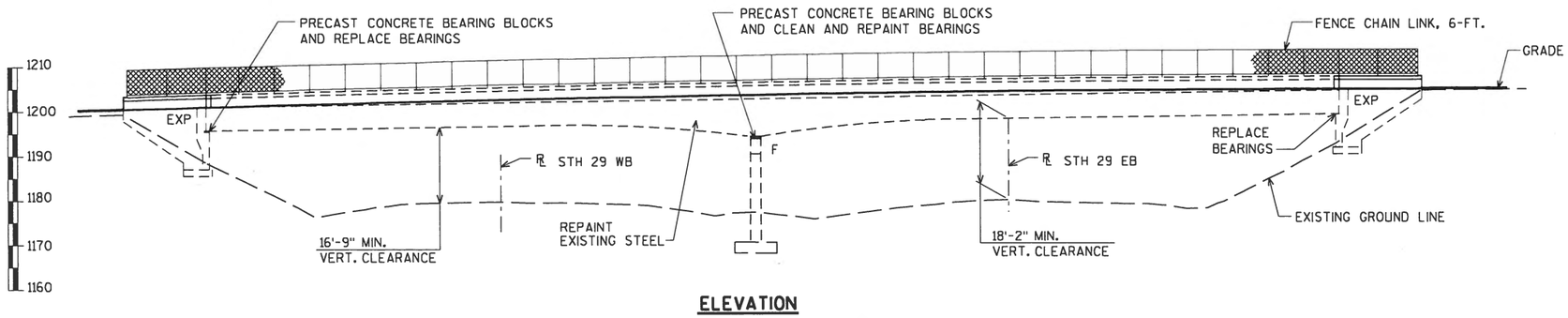


✱ANCHOR ASSEMBLY FOR THRIE BEAM TYPE GUARDRAIL

◯DENOTES WING NUMBER

PLAN

TWO-SPAN CONTINUOUS STEEL PLATE GIRDER BRIDGE
(RAISE, OVERLAY, AND RE-PAINT)



ELEVATION

(NORMAL TO STH 29)

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HS-20
INVENTORY RATING: HS-17
OPERATING RATING: HS-28
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV) = 170 KIPS

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)		f_y =	60,000 p.s.i.

TRAFFIC DATA:

STH 29	SUNRISE DRIVE
A.D.T. = 37,800 (2016)	A.D.T. = 730 (2016)
A.D.T. = 46,300 (2036)	A.D.T. = 805 (2036)
R.D.S. = 70 M.P.H.	R.D.S. = 35 M.P.H.

LIST OF DRAWINGS

1. GENERAL PLAN
2. QUANTITIES AND NOTES
3. NORTH ABUTMENT
4. NORTH ABUTMENT WING 1 DETAILS
5. NORTH ABUTMENT WING 2 DETAILS
6. SOUTH ABUTMENT
7. SOUTH ABUTMENT WING 3 DETAILS
8. SOUTH ABUTMENT WING 4 DETAILS
9. EXPANSION JOINT DETAILS AT ABUTMENTS
10. EXPANSION JOINT DETAILS AT ABUTMENTS
11. BEARING DETAILS AT ABUTMENTS
12. PRECAST CONCRETE BEARING BLOCK DETAILS
13. CHAIN LINK FENCE LAYOUT
14. PARAPET DETAILS
15. CHAIN LINK FENCE DETAILS

WISCONSIN
DANIEL N. SYDOW
E-38363
WI
PROFESSIONAL ENGINEER
10/31/2013

BRIDGE OFFICE CONTACT:
WILLIAM DREHER
(608)-266-8489

CONSULTANT CONTACT:
DAN SYDOW
(715)-834-3161

NO.	DATE	REVISION	BY

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher KAR 11/27/13
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE B-37-113

SUNRISE DRIVE OVER STH 29

COUNTY	TOWN/~~CITY/VILLAGE~~
MARATHON	RIB MOUNTIAN

DESIGN SPEC. REHABILITATION N/A

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
JCK	CJM	CJM/CLS	DNS

GENERAL PLAN

SHEET 1 OF 15
456

8

$PRFNAME$
U:\41-0637.00 - STH 29 over WI River\B-37-113\BRIDGE\B-37-113 GP.DGN
DATE: 10-26-12
DATE:
DATE:
CHECKED BY: DNS
BACK CHECKED BY:
CORRECTED BY:

STATE PROJECT NUMBER

1053-05-60

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	N. ABUT.	PIER	S. ABUT.	SUPER.	TOTAL
203.0200.04	REMOVING OLD STRUCTURE STATION 20+57.30	LS	-----	-----	-----	-----	1
203.0210.S.01	ABATEMENT OF ASBESTOS CONTAINING MATERIAL B-37-113	LS	-----	-----	-----	-----	1
203.0225.S.03	DEBRIS CONTAINMENT STRUCTURE B-37-113	LS	-----	-----	-----	-----	1
206.1000.03	EXCAVATION FOR STRUCTURES BRIDGES B-37-113	LS	-----	-----	-----	-----	1
210.0100	BACKFILL STRUCTURE	CY	25	-----	-----	-----	25
502.0100	CONCRETE MASONRY BRIDGES	CY	12	-----	9	1	22
502.3100.02	EXPANSION DEVICE B-37-113	LS	-----	-----	-----	-----	1
502.3200	PROTECTIVE SURFACE TREATMENT	SY	-----	-----	-----	1,280	1,280
502.5005	MASONRY ANCHOR TYPE L NO. 5 BARS	EACH	160	16	142	-----	318
502.6102	MASONRY ANCHOR TYPE S 1/2-INCH	EACH	-----	-----	-----	128	128
505.0605	BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB	2,090	-----	1,550	1,600	5,240
506.2610	BEARING PADS ELASTOMERIC LAMINATED	EACH	4	-----	4	-----	8
506.7050.S.03	REMOVING BEARINGS B-37-113	EACH	4	-----	4	-----	8
506.7060.S.01	BRIDGE JACKING STRUCTURE B-37-113	LS	-----	-----	-----	-----	1
509.0301	PREPARATION DECKS TYPE 1	SY	-----	-----	-----	260	260
509.0302	PREPARATION DECKS TYPE 2	SY	-----	-----	-----	105	105
509.0500	CLEANING DECKS	SY	-----	-----	-----	870	870
509.1000	JOINT REPAIR	SY	15	-----	15	-----	30
509.1500	CONCRETE SURFACE REPAIR	SF	50	-----	50	-----	100
509.2000	FULL-DEPTH DECK REPAIR	SY	-----	-----	-----	45	45
509.2500	CONCRETE MASONRY OVERLAY DECKS	CY	-----	-----	-----	64	64
509.9050.S	CLEANING PARAPETS	LF	-----	-----	-----	570	570
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	12	-----	7	-----	19
517.1800.S.02	STRUCTURE REPAINTING RECYCLED ABRASIVE STRUCTURE B-37-113	LS	-----	-----	-----	-----	1
517.4500.S.02	NEGATIVE PRESSURE CONTAINMENT AND COLLECTION OF WASTE MATERIALS B-37-113	LS	-----	-----	-----	-----	1
517.6001.S	PORTABLE DECONTAMINATION FACILITY	EACH	-----	-----	-----	-----	1
614.0150	ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	2	-----	2	-----	4
616.0206	FENCE CHAIN LINK 6-FT	LF	-----	-----	-----	600	600
SPV.0060.01	PRECAST CONCRETE BEARING BLOCK	EACH	4	4	-----	-----	8
SPV.0060.02	CLEANING AND PAINTING BEARINGS	EACH	-----	4	-----	-----	4
	NON-BID ITEMS						
	FILLER	SIZE	-----	-----	-----	-----	1/2" & 3/4"

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

THE FIRST DIGIT OF A THREE DIGIT BAR NO. AND THE FIRST TWO DIGITS OF A FOUR DIGIT BAR NO. SIGNIFIES THE BAR SIZE.

THE EXISTING GROUNDLINE SHALL BE THE UPPER LIMIT FOR EXCAVATION FOR STRUCTURES.

AT ABUTMENTS ALL SPACES EXCAVATED AND NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH BACKFILL STRUCTURE.

PROTECTIVE SURFACE TREATMENT IS TO BE APPLIED TO THE OVERLAY AND INSIDE FACES AND TOP OF PARAPETS.

UTILIZE EXISTING BAR STEEL REINFORCEMENT WHERE SHOWN AND EXTEND 24 BAR DIAMETERS INTO NEW WORK, UNLESS SPECIFIED OTHERWISE.

DIMENSIONS SHOWN ARE BASED ON ORIGINAL STRUCTURE PLANS.

ALL CONCRETE REMOVAL NOT COVERED WITH A CONCRETE OVERLAY SHALL BE DEFINED BY A 1" DEEP SAW CUT.

JOINT FILLER SHALL CONFORM TO THE REQUIREMENTS OF A.A.S.H.T.O. DESIGNATION M 153, TYPE I, II OR III OR A.A.S.H.T.O. DESIGNATION M 213.

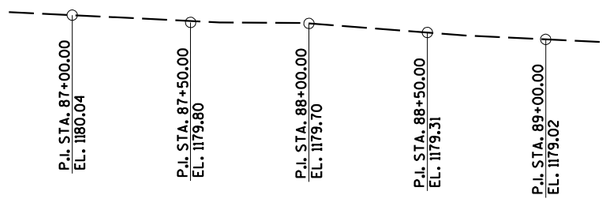
THE CONTRACTOR SHALL SUPPLY A NEW NAME PLATE IN ACCORDANCE WITH SECTION 502.3.11 OF THE STANDARD SPECIFICATIONS AND THE STANDARD DETAIL DRAWINGS. NAME PLATE TO SHOW ORIGINAL CONSTRUCTION YEAR OF 1972.

PREPARATION DECKS, FULL-DEPTH DECK REPAIR, AND CONCRETE SURFACE REPAIR QUANTITIES ARE APPROXIMATE. CONTRACTOR SHALL COORDINATE THE FIELD IDENTIFICATION AND DETERMINATION OF ALL REPAIR LOCATIONS WITH THE ENGINEER.

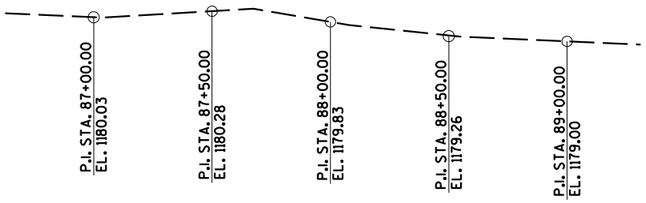
VARIATIONS OF THE NEW GRADE OVER 1/4" MUST BE SUBMITTED BY THE FIELD ENGINEER TO THE STRUCTURES DESIGN SECTION FOR REVIEW.

EXISTING TUBULAR RAILING TO BE REMOVED AND SALVAGED TO THE DEPARTMENT. WORK INCIDENTAL TO THE BID ITEM, "REMOVING OLD STRUCTURE".

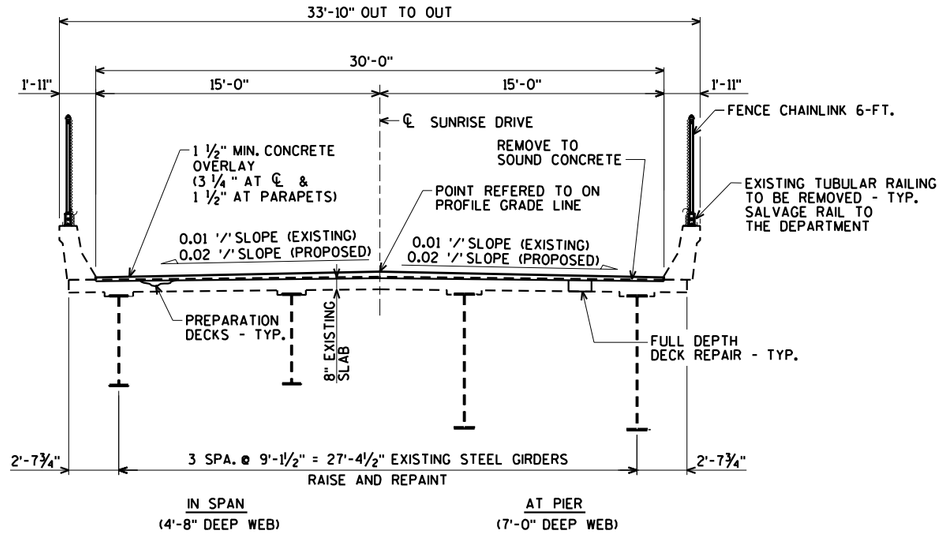
REMOVE EXISTING TUBULAR RAILING ANCHOR BOLTS FLUSH WITH CONCRETE SURFACE AND GRIND SMOOTH.



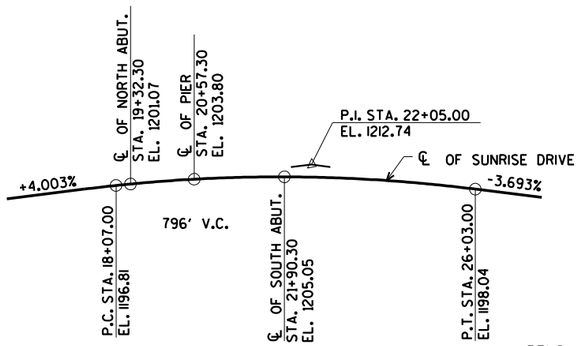
PROFILE GRADE LINE
(STH 29 WB)



PROFILE GRADE LINE
(STH 29 EB)



CROSS SECTION THRU BRIDGE



PROFILE GRADE LINE
(SUNRISE DRIVE)

BENCH MARK:
BM 802, DISK ON PARAPET AT NW WINGWALL
EL. 1201.98

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-113

DRAWN BY CLS | PLANS CK'D. AEB

QUANTITIES AND NOTES

SHEET 2 OF 15
457

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

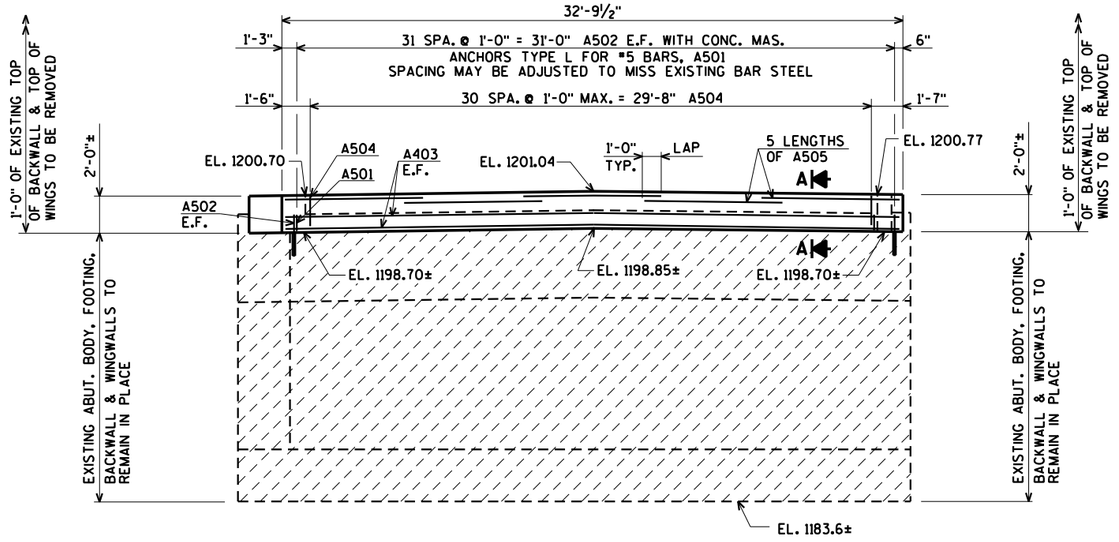
$PRFNAME$
U:\41-0637.00 - STH 29 over WI River\B-37-113\BRIDGE\B-37-113 GP.DGN

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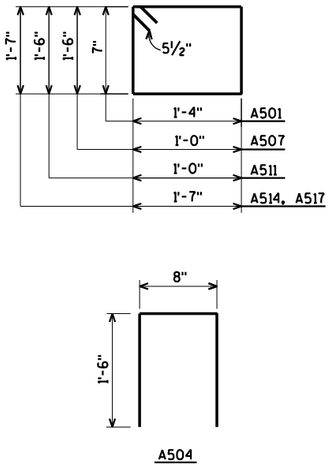
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10/29/2013

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ELEVATION
(LOOKING NORTH)



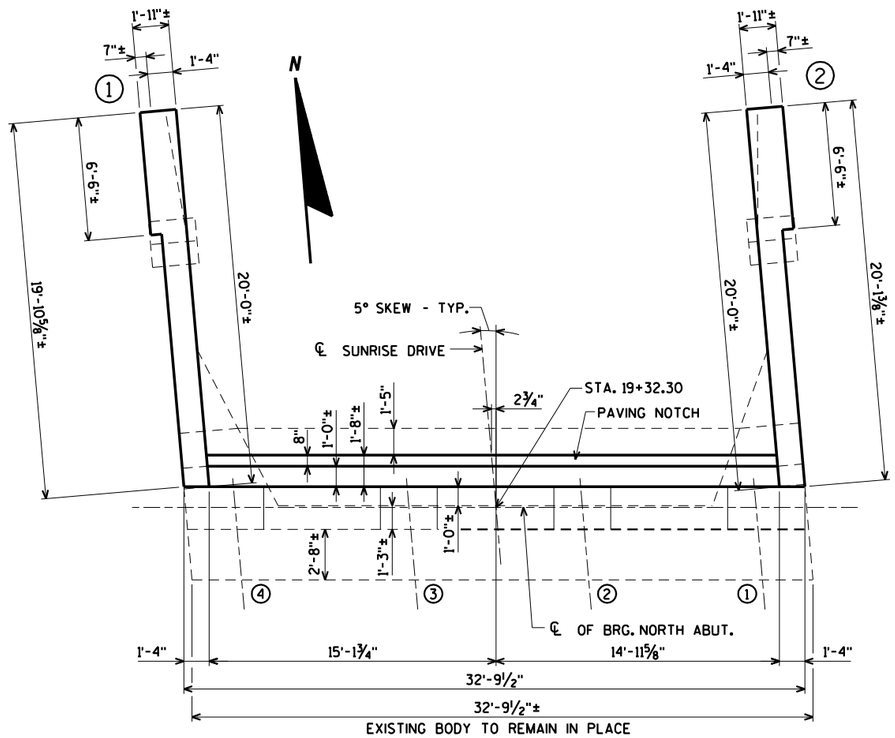
A504

BILL OF BARS

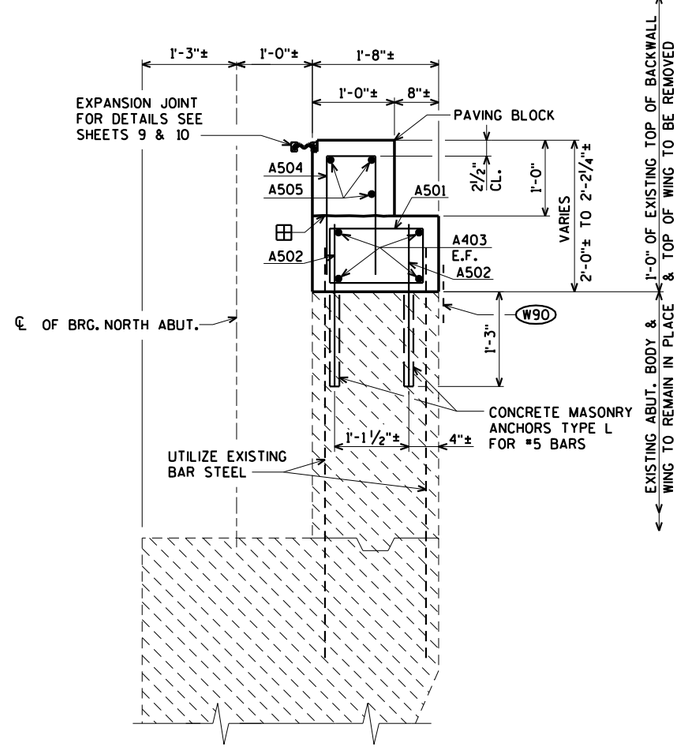
WEIGHT INCLUDES PARAPET STEEL SHOWN ON SHEET 14

BAR. NO.	COATED BAR	NO. REQ'D.	LENGTH	BENT BAR	BUNDLED BAR	SERIES	2,090* COATED LOCATION
A501	X	32	4-6	X			BACKWALL VERT.
A502	X	64	2-0				BACKWALL VERT. DOWELS E.F.
A403	X	4	32-5				BACKWALL HORIZ.
A504	X	31	3-5	X			BACKWALL @ PAVING BLOCK VERT.
A505	X	15	7-4				PAVING BLOCK HORIZ.
A506	X	41	3-0				WING 1 VERT. DOWELS E.F.
A507	X	13	5-6	X			WING 1 VERT.
A408	X	4	19-6				WING 1 HORIZ. E.F.
A609	X	2	19-6				WING 1 HORIZ. E.F.
A510	X	41	3-0				WING 2 VERT. DOWELS E.F.
A511	X	20	5-6	X			WING 2 VERT.
A412	X	4	19-8				WING 2 HORIZ. E.F.
A613	X	2	19-8				WING 2 HORIZ. E.F.
A514	X	7	7-0	X			WING 1 VERT.
A415	X	3	6-0				WING 1 HORIZ. F.F.
A416	X	19	2-0				WING 1 DOWELS
A517	X	7	7-0	X			WING 2 VERT.
A418	X	3	6-0				WING 2 HORIZ. F.F.
A419	X	19	2-0				WING 2 DOWELS

BENDING DIMENSIONS ARE OUT TO OUT OF BARS



PLAN



SECTION A

W90 18" RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACK FACE OF ABUTMENT.

⊞ CONST. JOINT - POUR CONCRETE ABOVE THIS JOINT AFTER SUPERSTRUCTURE IS IN PLACE. STRIKE OFF AND LEAVE ROUGH.

F.F. DENOTES FRONT FACE

B.F. DENOTES BACK FACE

E.F. DENOTES EACH FACE

WORK THIS SHEET WITH SHEETS 4 & 5

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-113

DRAWN BY CLS | PLANS CK'D. AEB

NORTH ABUTMENT

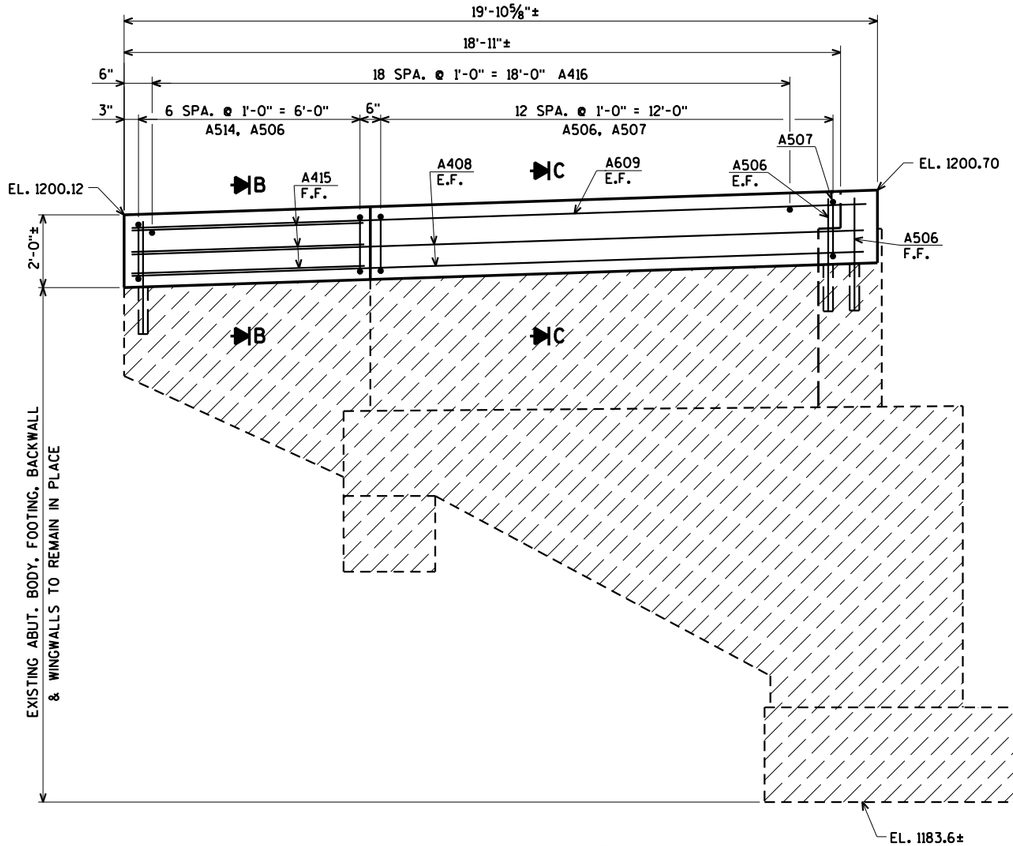
SHEET 3 OF 15
458

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

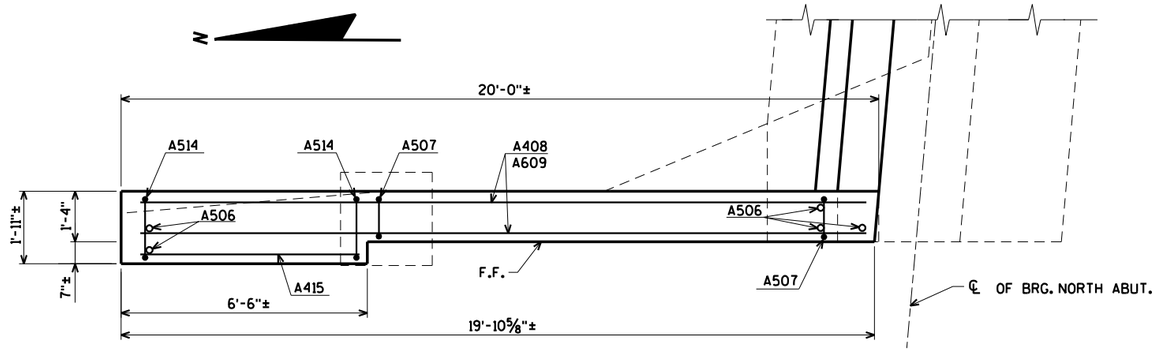
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STATE PROJECT NUMBER

1053-05-60

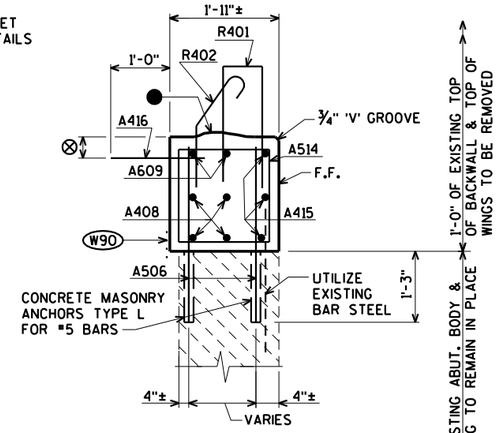


ELEVATION WING 1

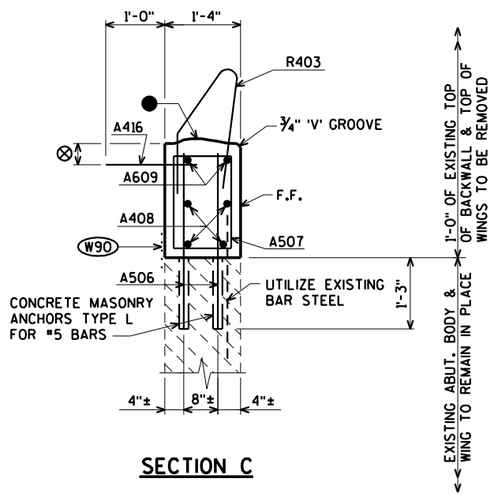


PLAN - WING 1

SLOPED FACE PARAPET
NOT SHOWN FOR DETAILS
SEE SHEET 14



SECTION B



SECTION C

⊗ 3" MIN. TO 6" MAX. SEE CONCRETE SURFACE DRAIN S.D.D.

W90 18" RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACK FACE OF ABUTMENT.

● STRIKE OFF AS SHOWN AND LEAVE ROUGH.

F.F. DENOTES FRONT FACE

B.F. DENOTES BACK FACE

E.F. DENOTES EACH FACE

WORK THIS SHEET WITH SHEETS 3 & 5

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-113

DRAWN BY	CLS	PLANS CK'D.	AEB

ORIGINAL PLANS PREPARED BY

AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

NORTH ABUTMENT
WING 1 DETAILS

SHEET 4 OF 15
459

8

8

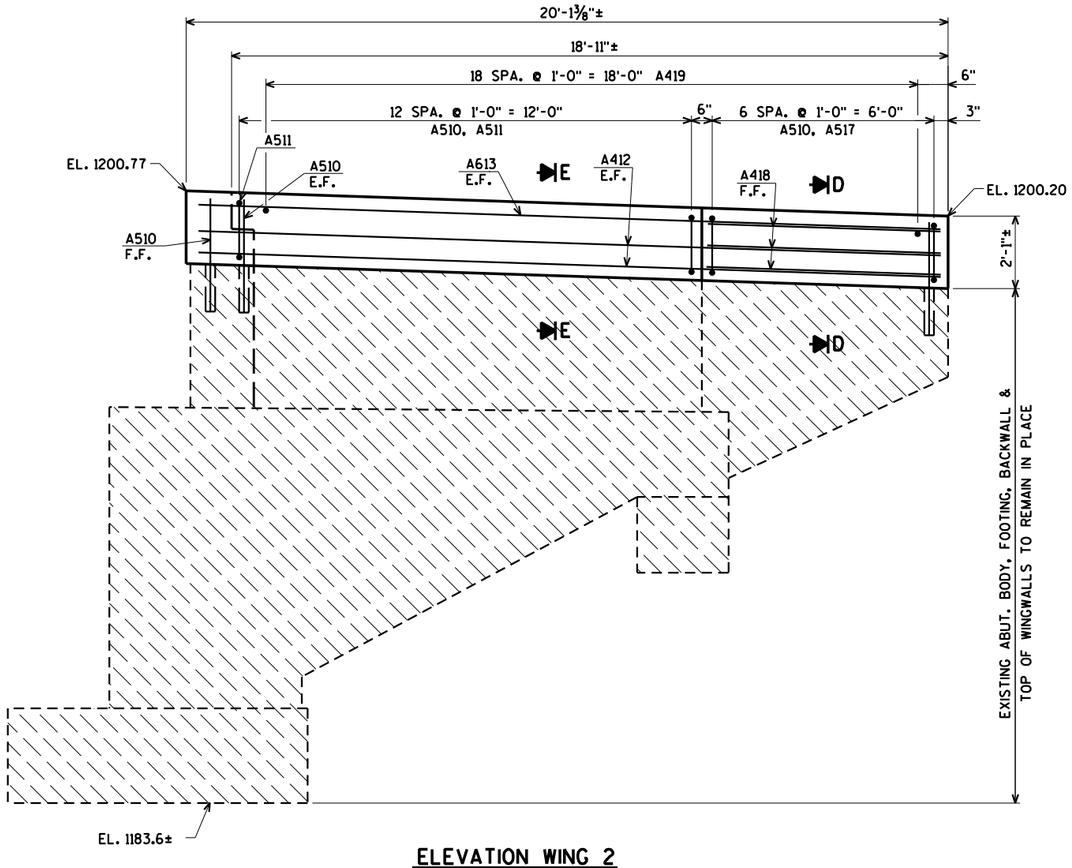
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8/29/2013

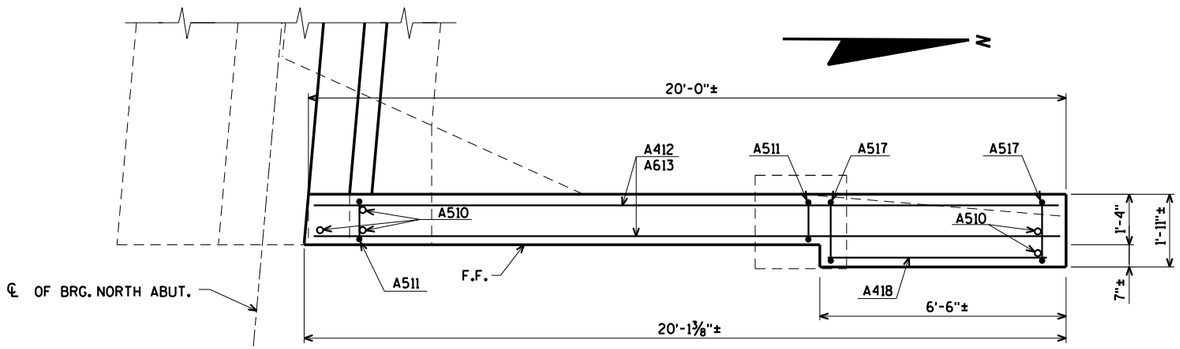
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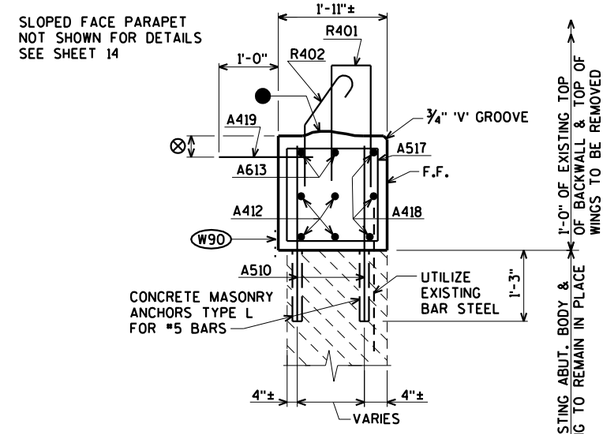
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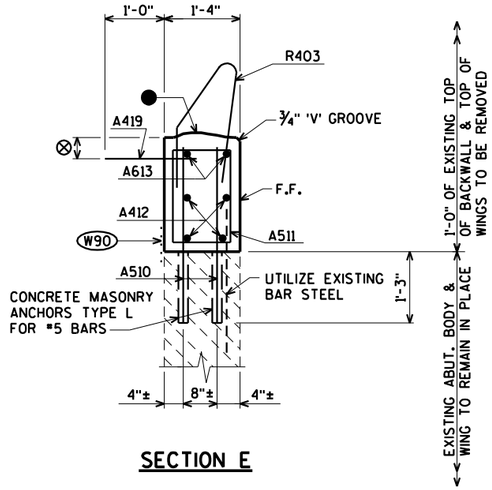
ELEVATION WING 2



PLAN - WING 2



SECTION D



SECTION E

⊗ 3" MIN. TO 6" MAX. SEE CONCRETE SURFACE DRAIN S.D.D.

W90 18" RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACK FACE OF ABUTMENT.

● STRIKE OFF AS SHOWN AND LEAVE ROUGH.

F.F. DENOTES FRONT FACE

B.F. DENOTES BACK FACE

E.F. DENOTES EACH FACE

WORK THIS SHEET WITH SHEETS 3 & 4

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-113

DRAWN BY CLS | PLANS CK'D. AEB

NORTH ABUTMENT
WING 2 DETAILS

SHEET 5 OF 15
460

ORIGINAL PLANS PREPARED BY
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Eau Claire, WI 54701
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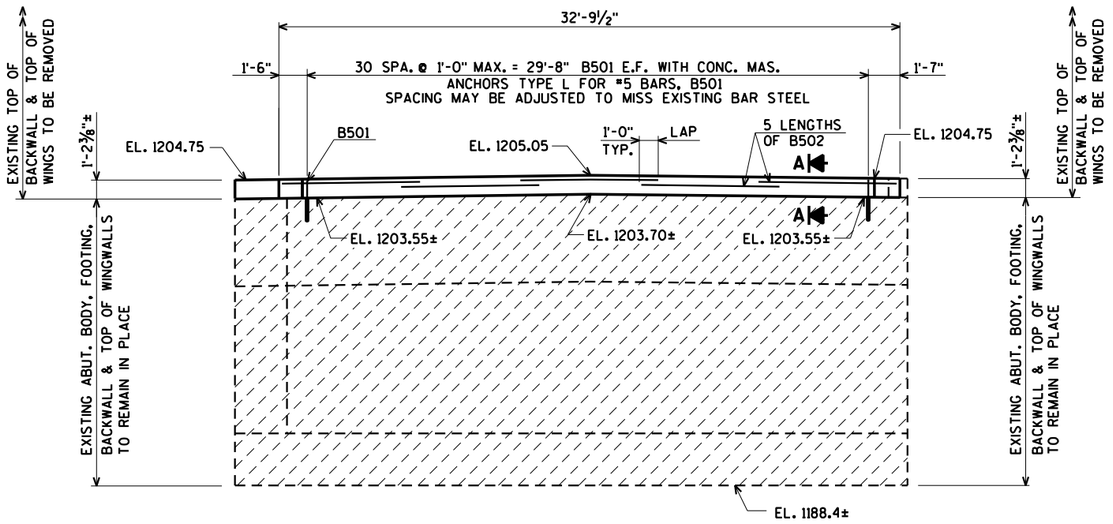
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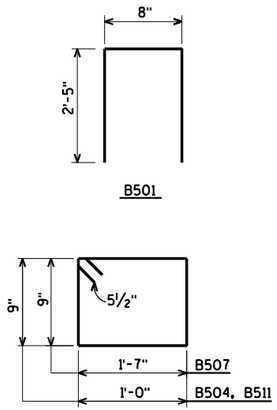
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8/29/2013

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ELEVATION
(LOOKING SOUTH)

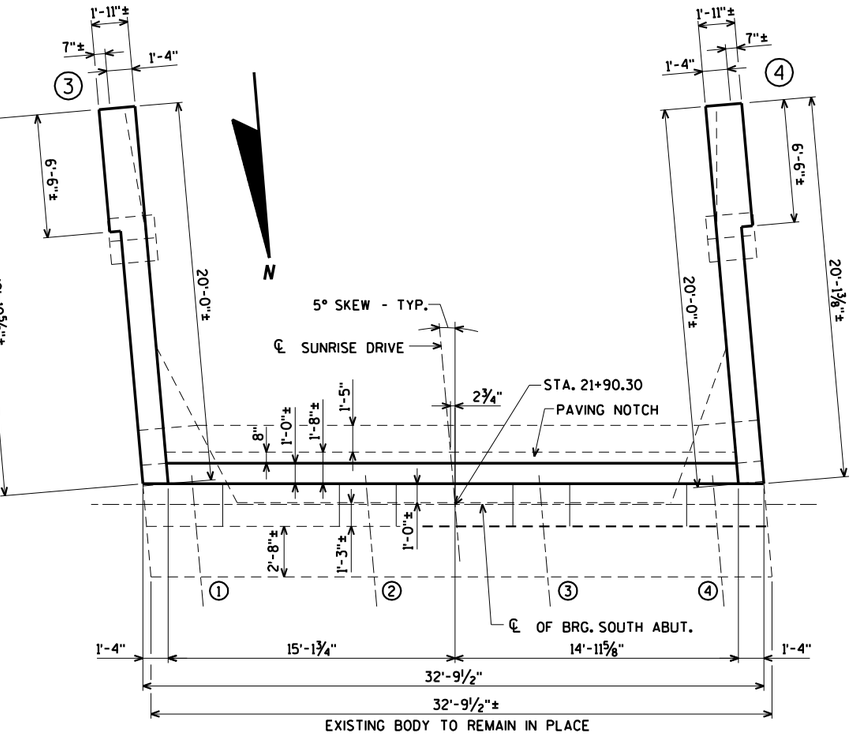


BILL OF BARS

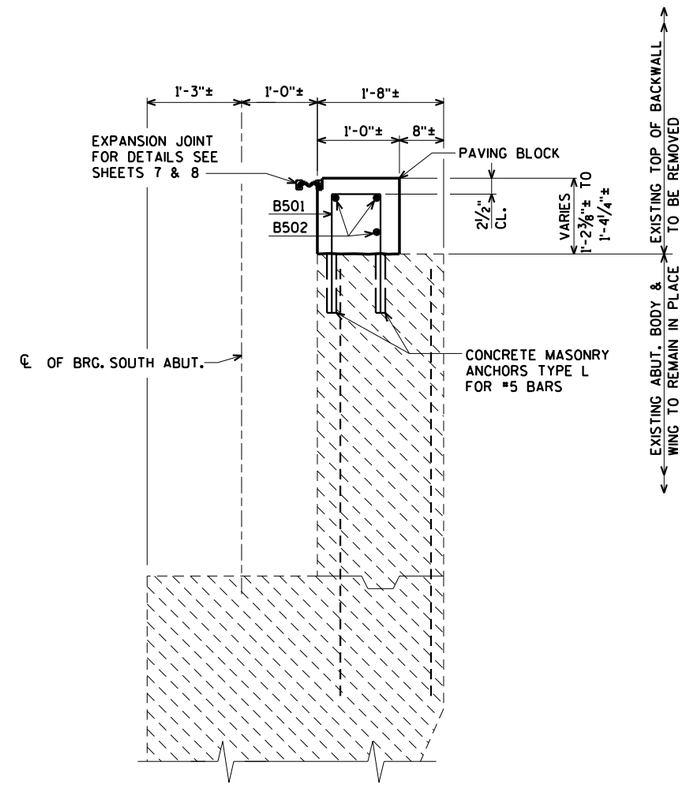
WEIGHT INCLUDES PARAPET STEEL SHOWN ON SHEET 14

BAR. NO.	COATED BAR	NO. REQ'D.	LENGTH	BENT BAR	BUNDLED BAR SERIES	1,550# COATED LOCATION
B501	X	31	5-3	X		BACKWALL @ PAVING BLOCK VERT.
B502	X	15	7-4			PAVING BLOCK HORIZ.
B503	X	41	2-3			WING 3 VERT. DOWELS E.F.
B504	X	13	4-1	X		WING 3 VERT.
B405	X	2	19-6			WING 3 HORIZ. E.F.
B606	X	2	19-6			WING 3 HORIZ. E.F.
B507	X	7	5-3	X		WING 3 VERT.
B408	X	2	6-0			WING 3 HORIZ. F.F.
B409	X	19	2-0			WING 3 DOWELS
B510	X	41	2-3			WING 4 VERT. DOWELS E.F.
B511	X	13	4-1	X		WING 4 VERT.
B412	X	2	19-8			WING 4 HORIZ. E.F.
B613	X	2	19-8			WING 4 HORIZ. E.F.
B514	X	7	5-3	X		WING 4 VERT.
B415	X	2	6-0			WING 4 HORIZ. F.F.
B416	X	19	2-3			WING 4 DOWELS

BENDING DIMENSIONS ARE OUT TO OUT OF BARS



PLAN



SECTION A

F.F. DENOTES FRONT FACE

B.F. DENOTES BACK FACE

E.F. DENOTES EACH FACE

WORK THIS SHEET WITH SHEETS 7 & 8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-113

DRAWN BY CLS | PLANS CK'D. AEB

SOUTH ABUTMENT

SHEET 6 OF 15
461

ORIGINAL PLANS PREPARED BY
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3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

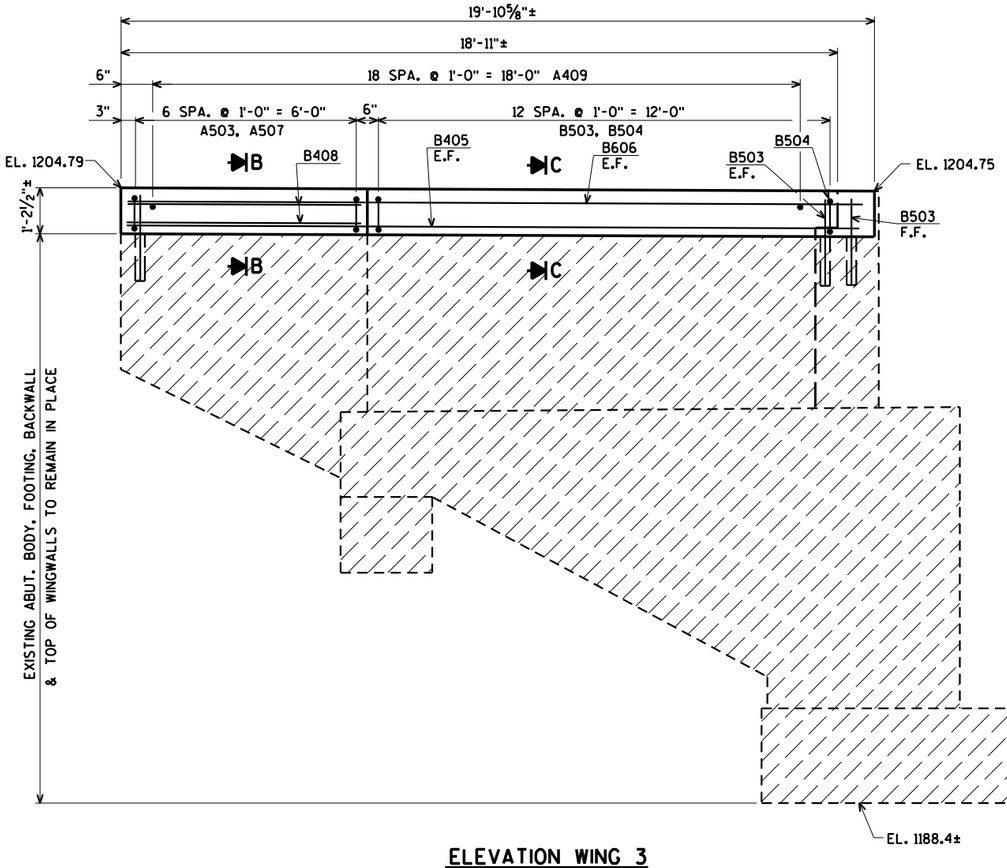
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U:±41-0637.00 - STH 29 over WI River±B-37-113±BRIDGE±B-37-113 sa.dgn

8/29/2013

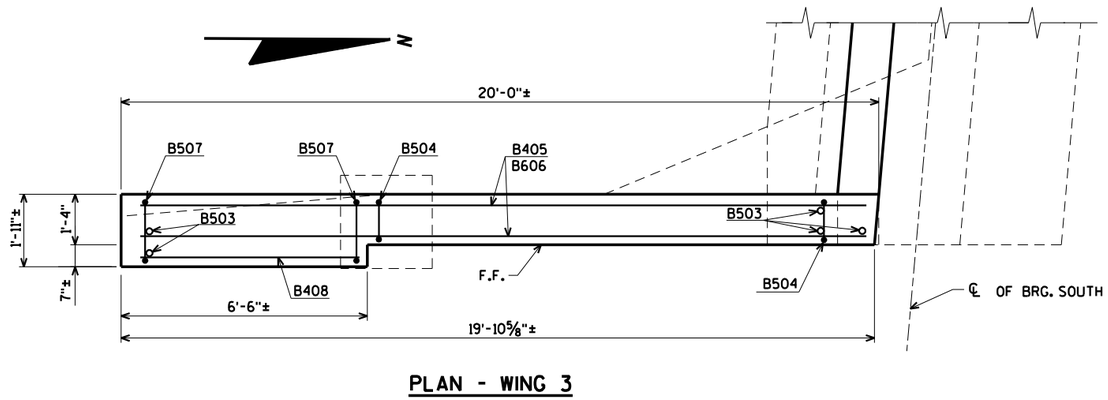
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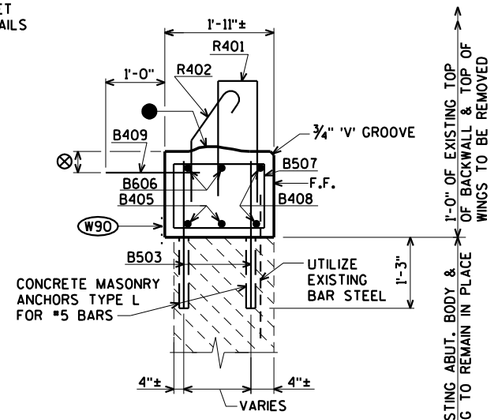


ELEVATION WING 3

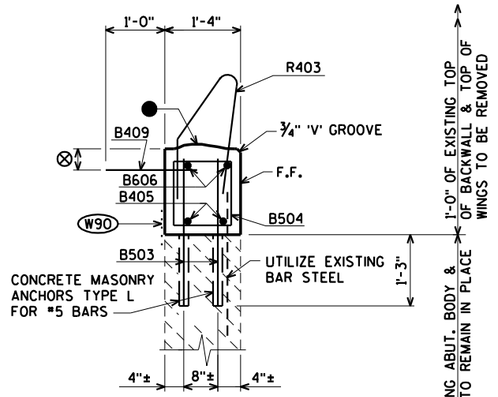


PLAN - WING 3

SLOPED FACE PARAPET
NOT SHOWN FOR DETAILS
SEE SHEET 14



SECTION B



SECTION C

⊗ 3" MIN. TO 6" MAX. SEE CONCRETE SURFACE DRAIN S.D.D.

W90 18" RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACK FACE OF ABUTMENT.

● STRIKE OFF AS SHOWN AND LEAVE ROUGH.

F.F. DENOTES FRONT FACE

B.F. DENOTES BACK FACE

E.F. DENOTES EACH FACE

WORK THIS SHEET WITH SHEETS 6 & 8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-113

DRAWN BY CLS | PLANS CK'D. AEB

SOUTH ABUTMENT
WING 3 DETAILS

SHEET 7 OF 15
462

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

8

8

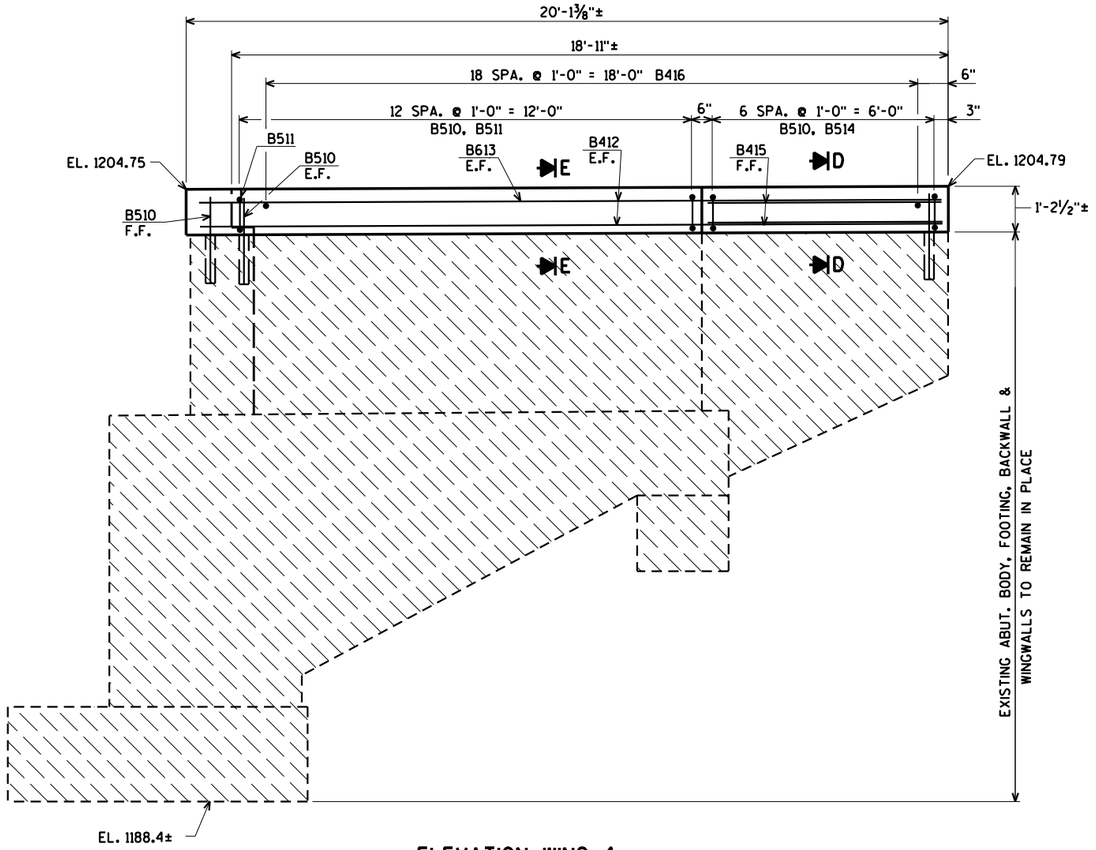
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8/29/2013

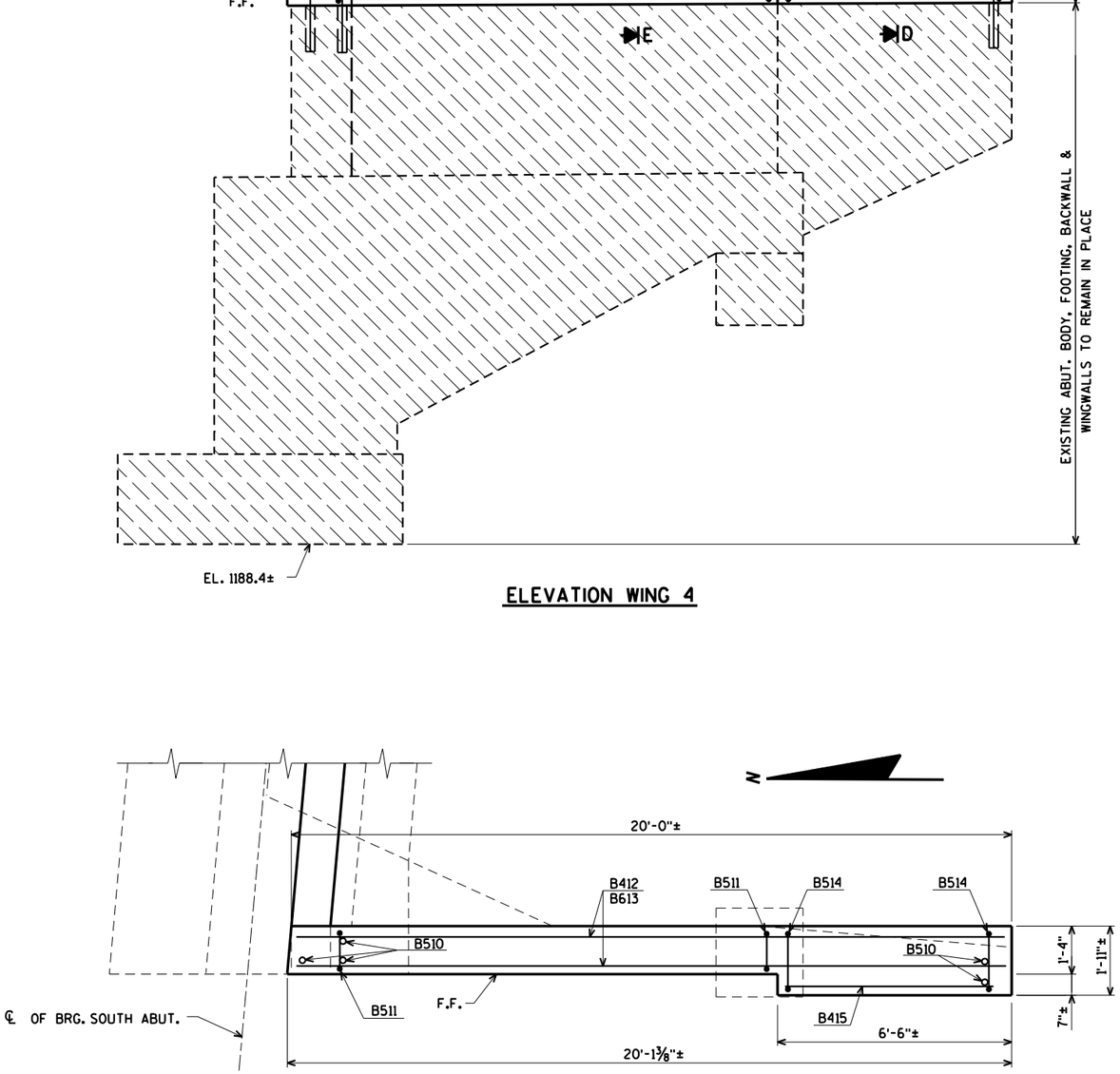
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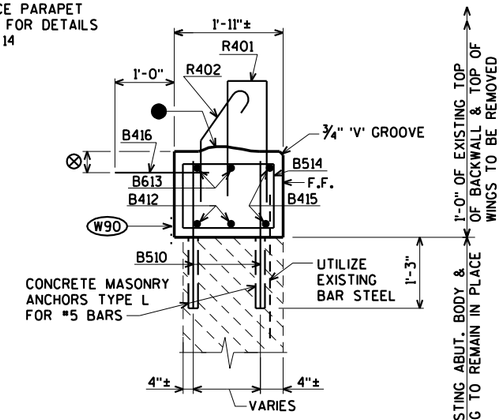


ELEVATION WING 4

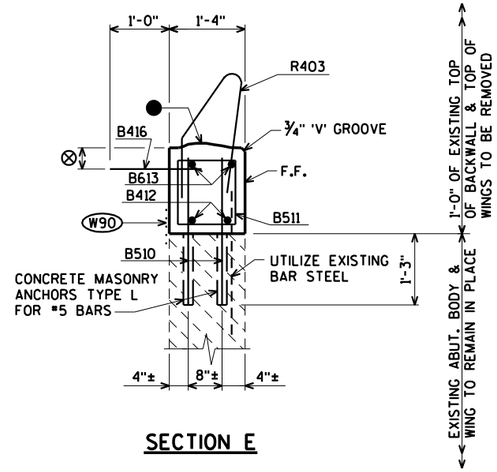


PLAN - WING 4

SLOPED FACE PARAPET
NOT SHOWN FOR DETAILS
SEE SHEET 14



SECTION D



SECTION E

⊗ 3" MIN. TO 6" MAX. SEE CONCRETE SURFACE DRAIN S.D.D.

W90 18" RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACK FACE OF ABUTMENT.

● STRIKE OFF AS SHOWN AND LEAVE ROUGH.

F.F. DENOTES FRONT FACE

B.F. DENOTES BACK FACE

E.F. DENOTES EACH FACE

WORK THIS SHEET WITH SHEETS 6 & 7

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-113

DRAWN BY CLS | PLANS CK'D. AEB

SOUTH ABUTMENT WING 4 DETAILS

SHEET 8 OF 15
463

ORIGINAL PLANS PREPARED BY
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Eau Claire, WI 54701
www.AyresAssociates.com

8

8

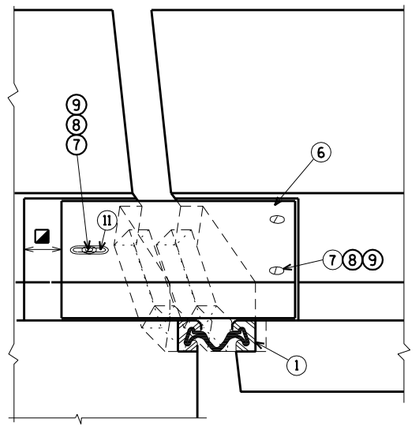
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8/29/2013

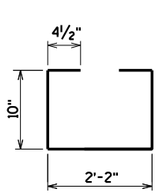
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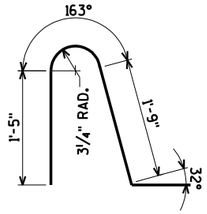
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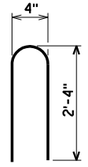
VIEW OF PARAPET PLATES FROM ROADWAY



S401



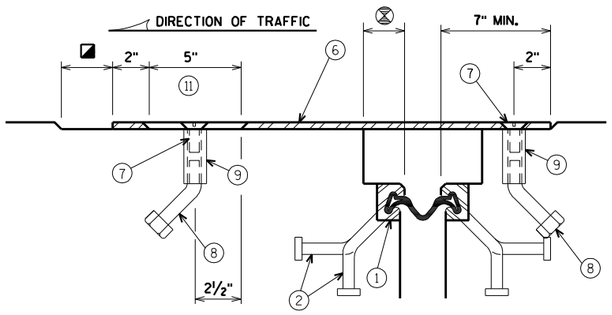
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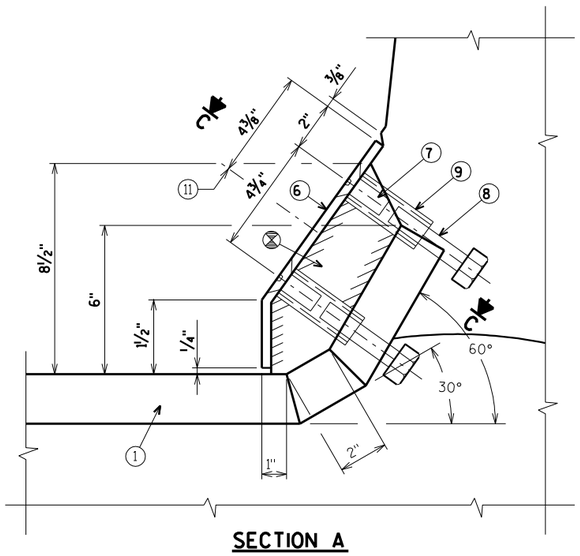
S506

BILL OF BARS

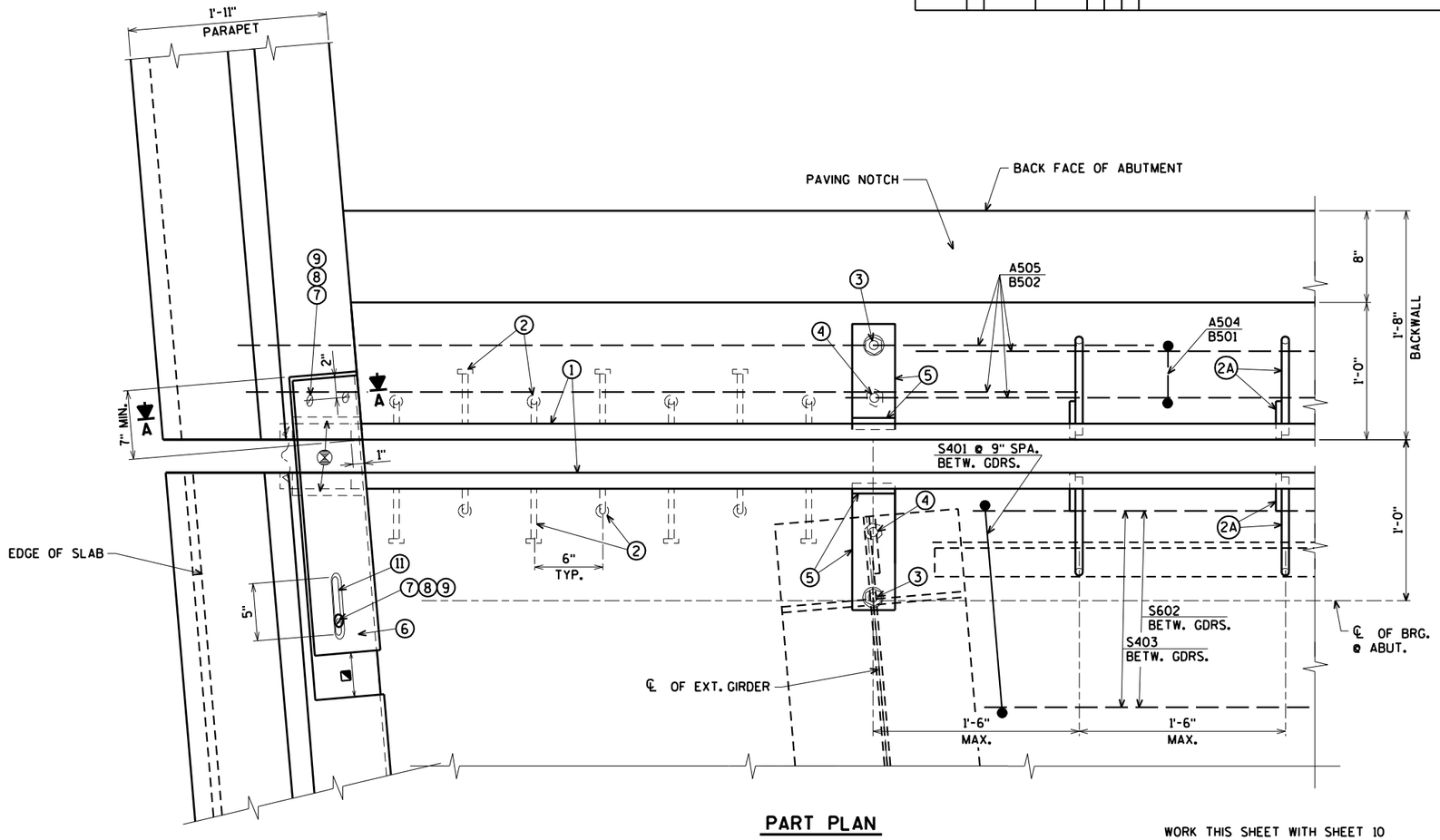
BAR. NO.	COATED BAR	NO. REQ'D.	LENGTH	BENT BAR	BUNDLED BAR SERIES	1.600" COATED LOCATION
S401	X	66	3-9	X		SLAB DIAPH. @ JOINT
S602	X	30	7-7			SLAB DIAPH. @ ABUT.
S403	X	12	7-7			SLAB DIAPH. @ ABUT.
S604	X	18	32-4			SLAB TRANS.
S505	X	16	4-9	X		PARAPET VERT.
S506	X	16	4-10	X		PARAPET VERT.



SECTION C



SECTION A



PART PLAN

WORK THIS SHEET WITH SHEET 10

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-113

DRAWN BY CLS | PLANS CK'D. AEB

EXPANSION JOINT DETAILS AT ABUTMENTS

SHEET 9 OF 15
464

⊗ BLOCK OUT CONCRETE 2" EACH SIDE OF JOINT OPENING.

◪ JOINT OPENING DIM. ALONG SKEW PLUS ½".

ORIGINAL PLANS PREPARED BY
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Eau Claire, WI 54701
www.AyresAssociates.com

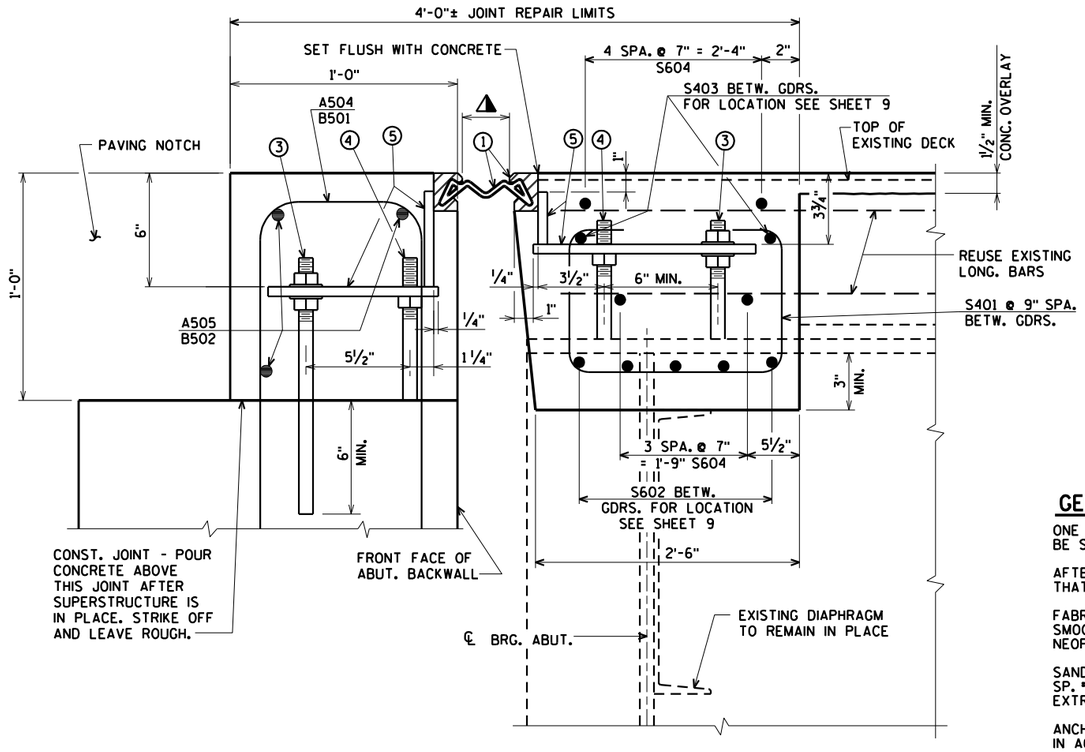
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U:±41-0637.00 - STH 29 over WIRiver±B-37-113±BRIDGE±B-37-113 exp.DGN

8

8

10/29/2013

PENTABLE:BReau_shd_util.tbl



TYPICAL SECTION THRU JOINT
NORMAL TO ℄ SUBSTRUCTURE

GENERAL NOTES

ONE FIELD SPLICE PERMITTED IN STEEL EXTRUSIONS. IF USED, DETAILS SHALL BE SUBMITTED FOR APPROVAL. NO SPLICING PERMITTED IN NEOPRENE STRIP SEAL.

AFTER FABRICATION, BUT BEFORE SHIPMENT, STRAIGHTEN STEEL EXTRUSIONS SUCH THAT THEY SHALL BE FREE FROM WARP, TWIST & SWEEP.

FABRICATOR SHALL PROVIDE MEANS OF KEEPING GALVANIZED EXTRUSIONS CLEAN & SMOOTH DURING SHIPMENT AND PRIOR TO APPLYING LUBRICANT ADHESIVE FOR NEOPRENE GLAND INSTALLATION.

SANDBLAST PLATES & EXTRUSIONS AFTER FABRICATION IN ACCORDANCE WITH SSPC SP. #6 "COMERCIAL BLAST CLEANING". AFTER BLAST CLEANING THE PLATES & EXTRUSIONS SHALL BE HOT DIPPED GALVANIZED.

ANCHOR SYSTEM #8 & #9 SHALL CONFORM TO ASTM A307 & SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153 CLASS C & D.

STRIP SEAL EXPANSION JOINT ASSEMBLY, INCLUDING ANCHOR STUDS & HARDWARE WILL BE PAID FOR AT THE LUMP SUM PRICE BID FOR "EXPANSION DEVICE B-37-113".

LEGEND

△1. NEOPRENE STRIP SEAL (4 - INCH) & STEEL EXTRUSIONS. SET JOINT OPENING AT 1¾".

2. STUDS ⅝" ϕ X 6⅜" LONG AT 6" ALTERNATE CENTERS. WELD TO EXTRUSIONS & BEND AS SHOWN AFTER WELDING.

2A. ½" THICK ANCHOR PLATE WITH ⅝"ϕ ROD (OR ALTERNATE STRIP SEAL ANCHOR). WELD ROD TO ANCHOR PLATE, WELD ANCHOR PLATE TO #1 AT 1'-6" CTRS. BETWEEN GIRDERS.

3. ¾" ϕ THREADED ROD WITH 2 NUTS AND PLATE WASHERS. WELD THREADED ROD TO TOP FLANGE OR ATTACH BY BOLTING THRU FLANGE. ON ABUTMENT SIDE GROUT THREADED ROD INTO FIELD DRILLED HOLES IN ABUTMENT BACKWALL AS SHOWN.

4. ¾"ϕ THREADED ROD WITH NUT. TACK WELD NUT TO NO. 5.

5. FABRICATE SUPPORT FROM 3" X ½" BAR AS SHOWN OR EQUIVALENT, ONE PER GIRDER PER SIDE. FIELD OR SHOP WELD TO NO. 1. IF FIELD WELDED, COVER WELDED AREAS WITH EPOXY-COATING MATERIAL. PROVIDE 1½" ϕ HOLE FOR NO. 3 & 1" ϕ HOLE FOR NO. 4.

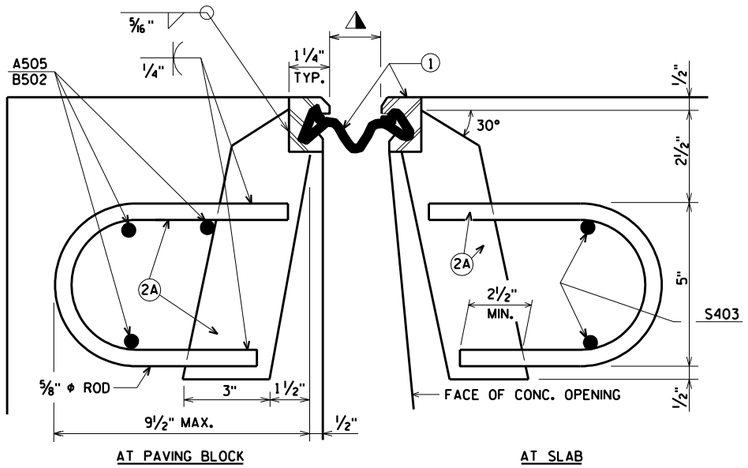
6. GALVANIZED PLATE ⅜" x 9" x 2'-0" LONG WITH HOLES FOR #7. BEND AS SHOWN.

7. ¾" ϕ x 1½" STAINLESS STEEL SOCKET FLAT HEAD SCREWS WITH ANTI-SEIZE LUBRICANT. PLACE IN COUNTERSUNK HOLES. RECESS 1/16" BELOW PLATE SURFACE.

8. ¾" ϕ x 4" GALV. HEX HEAD BOLT. BEND 45°.

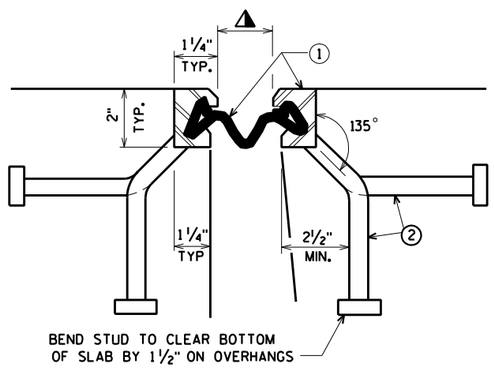
9. ¾" ϕ x 2 ¼" GALV. THREADED COUPLING.

11. 1" x 5" SLOTTED CSK. HOLE FOR #7. PLACE SLOT PARALLEL TO DIRECTION OF MOVEMENT.

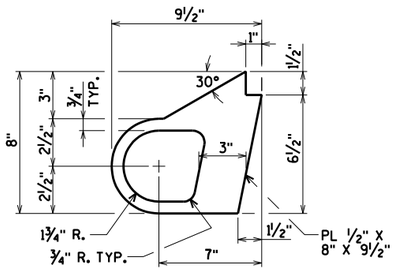


SECTION THRU JOINT
ROADWAY TRAFFIC AREA BETWEEN EXTERIOR GIRDERS.

SYM. ABOUT ℄ JOINT UNLESS OTHERWISE SHOWN OR NOTED.



SECTION THRU JOINT
EXTERIOR GIRDER TO EDGE OF SLAB & AT PARAPETS.



ALTERNATE STRIP SEAL ANCHOR

WORK THIS SHEET WITH SHEET 9

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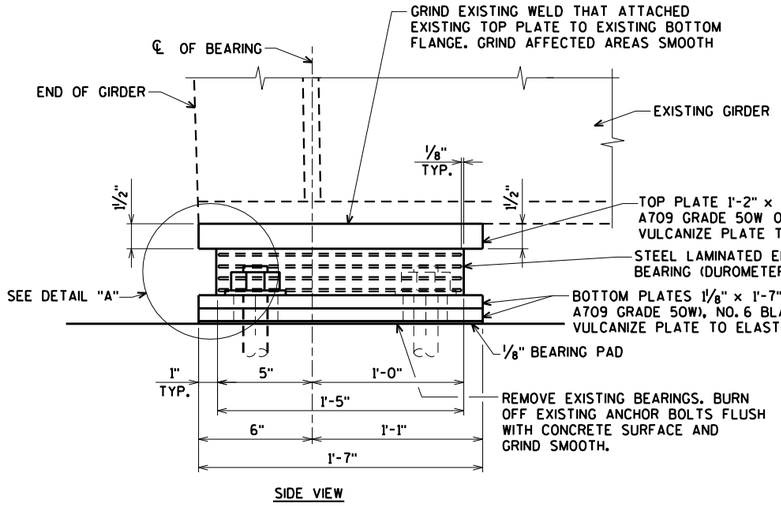
STRUCTURE B-37-113

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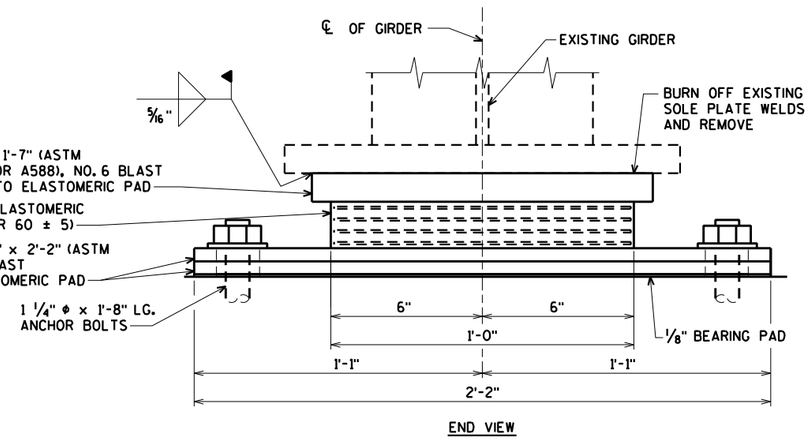
EXPANSION JOINT DETAILS AT ABUTMENTS

SHEET 10 OF 15
465

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SIDE VIEW



END VIEW

EXPANSION BEARING DETAIL AT SOUTH ABUTMENT

NOTES:

EXISTING ANCHOR BOLTS SHALL BE CUT OFF FLUSH WITH CONCRETE AND GROUND SMOOTH.

REMOVAL OF EXISTING EXPANSION BEARING ASSEMBLY SHALL BE PAID AT THE UNIT PRICE BID FOR "REMOVING BEARINGS B-37-113".

BEARING NOTES - EXPANSION BEARING

BEARINGS ARE SYMMETRICAL ABOUT ℄ OF GIRDER.

ALL MATERIAL USED FOR EXPANSION BEARINGS SHALL BE PAID AT THE UNIT PRICE BID FOR "BEARING PADS ELASTOMERIC LAMINATED".

ALL PLATES, DRILLING ANCHOR BOLTS, ANCHOR BOLTS, NUTS AND WASHERS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR "BEARING PADS ELASTOMERIC LAMINATED".

ALL STRUCTURAL STEEL BEARING PLATES SHALL BE FLAT ROLLED STEEL PLATES WITH ALL SURFACES SMOOTH & FREE FROM WARP & ALL EDGES SMOOTH, STRAIGHT & VERTICAL.

ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUTS.

ANCHOR BOLTS SHALL BE 1 1/4" ϕ x 1'-8" LG. PROVIDE ONE ST'D. WROUGHT WASHER & ONE HEX. NUT PER BOLT. THREAD 3". PROJECT ANCHOR BOLT 2 1/4" ABOVE TOP OF PLATE.

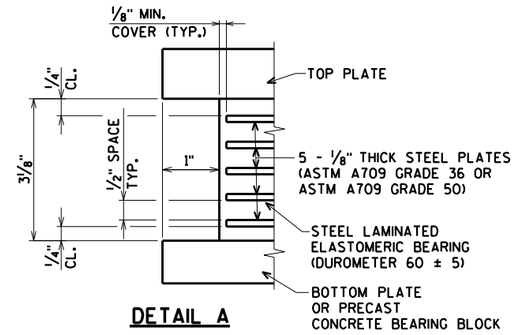
CHAMFER ANCHOR BOLTS PRIOR TO THREADING.

ALL ANCHOR BOLTS NUTS AND WASHERS SHALL CONFORM TO ASTM A709 GRADE 36 OR MATERIAL OF EQUIVALENT YIELD STRENGTH & ELONGATION.

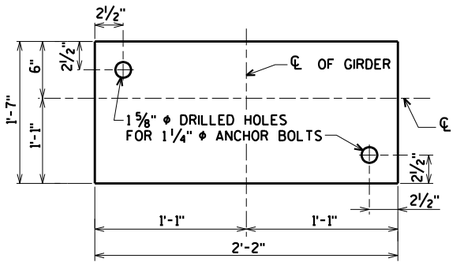
ALL ANCHOR BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED AS REQUIRED BY ASTM DESIGNATION A153, CLASS "C", ALL PLATES SHALL BE SHOP PAINTED AFTER BEARING FABRICATION.

PROVIDE 1/8" THICK BEARING PAD SAME SIZE AS BOTTOM PLATE FOR EACH BEARING AT THE SOUTH ABUTMENT.

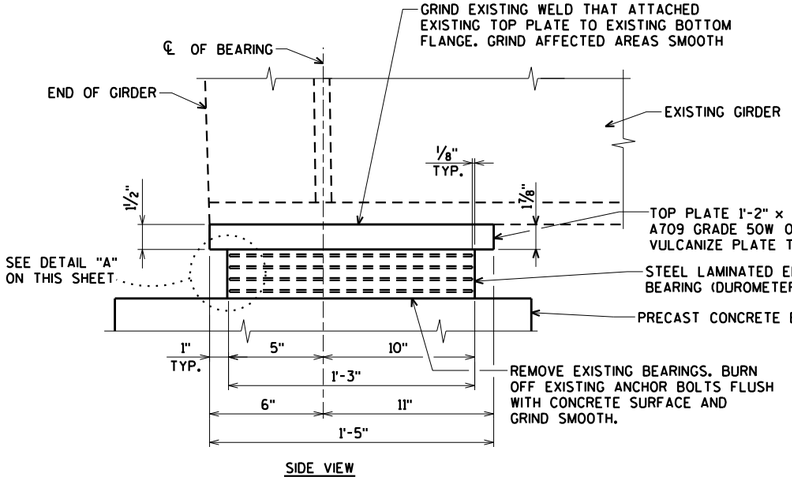
BEARING PADS ELASTOMERIC LAMINATED SHALL NOT BE PLACED AT A TEMPERATURE GREATER THAN 85° F.



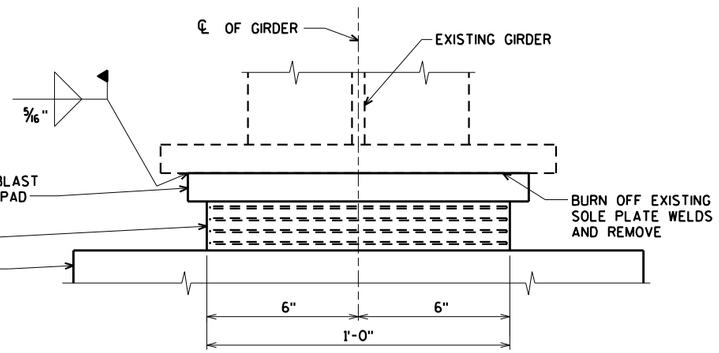
DETAIL A



PLAN OF BOTTOM PLATES
(SOUTH ABUTMENT)



SIDE VIEW



END VIEW

EXPANSION BEARING DETAIL AT NORTH ABUTMENT

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STRUCTURE B-37-113

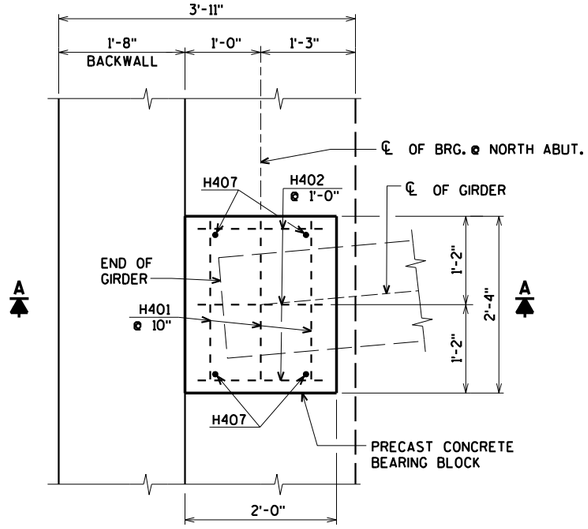
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BEARING DETAILS AT ABUTMENTS

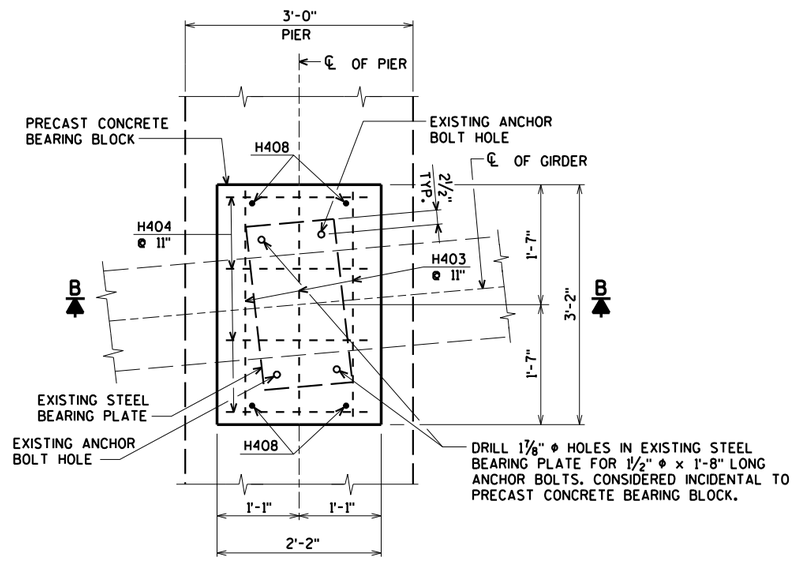
SHEET 11 OF 15
466

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BEARING BLOCK PLAN @ NORTH ABUTMENT

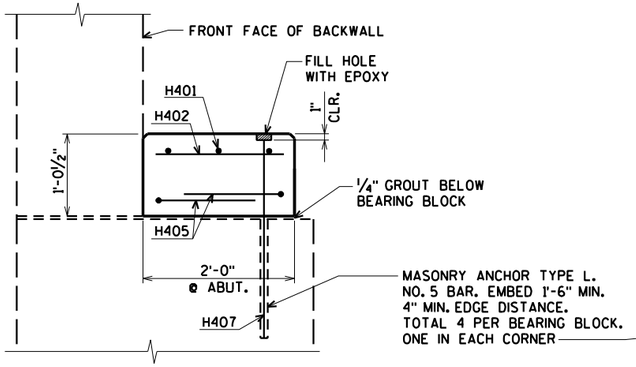


BEARING BLOCK PLAN @ PIER

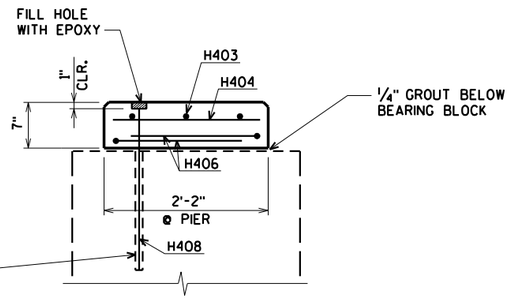
BILL OF BARS

BAR. NO.	COATED BAR	NO. REQ'D.	LENGTH	BENT BAR	BUNDLED BAR SERIES	190# COATED * LOCATION
H401	X	12	2-0			ABUTMENT BLOCK
H402	X	12	1-8			ABUTMENT BLOCK
H403	X	12	2-10			PIER BLOCK
H404	X	16	1-10			PIER BLOCK
H405	X	8	4-10	X		ABUTMENT BLOCK
H406	X	8	6-0	X		PIER BLOCK
H407	X	16	2-6			ABUTMENT BLOCK
H408	X	16	2-1			PIER BLOCK

* BAR STEEL TO BE INCLUDED IN THE BID PRICE FOR PRECAST CONCRETE BEARING BLOCKS.



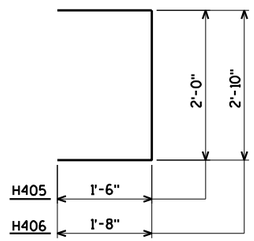
SECTION A



SECTION B

NOTES:
BURN EXISTING ANCHOR BOLTS OFF FLUSH WITH BEAM SEAT.

CONTRACTOR MAY PROPOSE A CAST-IN-PLACE ALTERNATE SUBJECT TO REVIEW AND APPROVAL BY THE BUREAU OF STRUCTURES.



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STRUCTURE B-37-113

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PRECAST CONCRETE BEARING BLOCK DETAILS

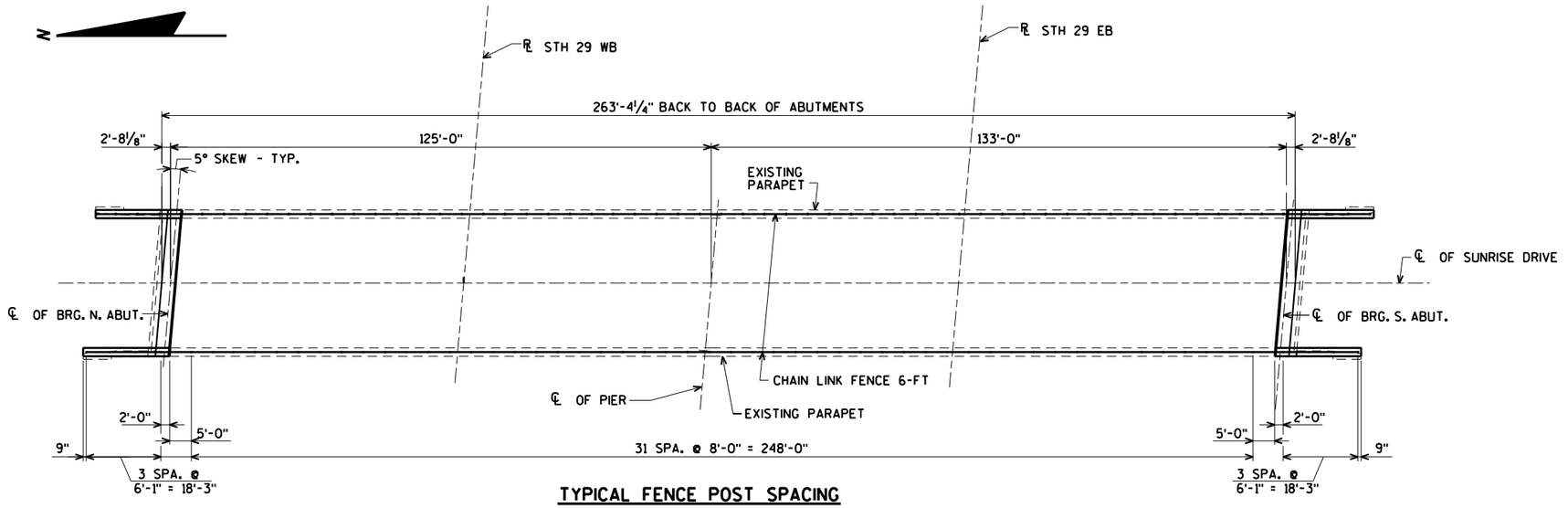
SHEET 12 OF 15
467

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10/31/2013
PENTABLE:BReau_shd_util.tbl

STATE PROJECT NUMBER

1053-05-60



TYPICAL FENCE POST SPACING

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U:\41-0637.00 - STH 29 over WI River\B-37-113\BRIDGE\B-37-113 plan.dgn

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8

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STRUCTURE B-37-113

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CHAIN LINK FENCE LAYOUT

SHEET 13 OF 15
468

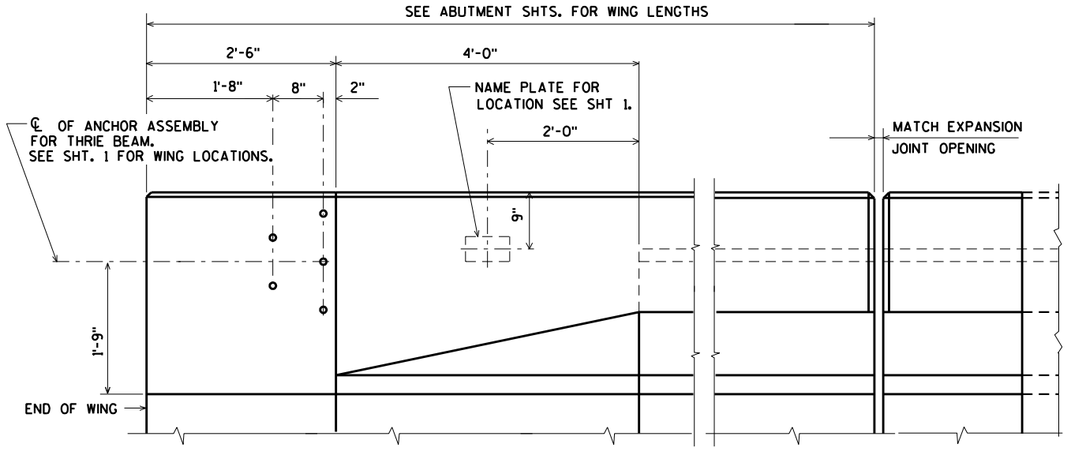
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10/29/2013

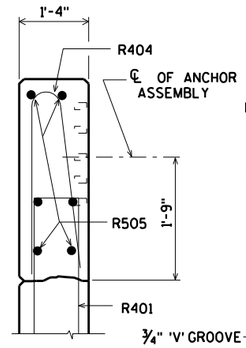
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STATE PROJECT NUMBER

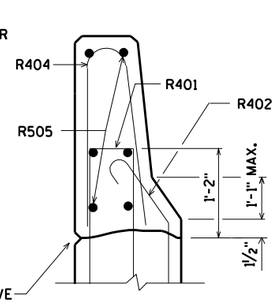
1053-05-60



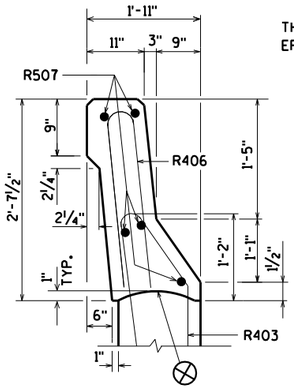
INSIDE ELEVATION



SECTION A



SECTION B



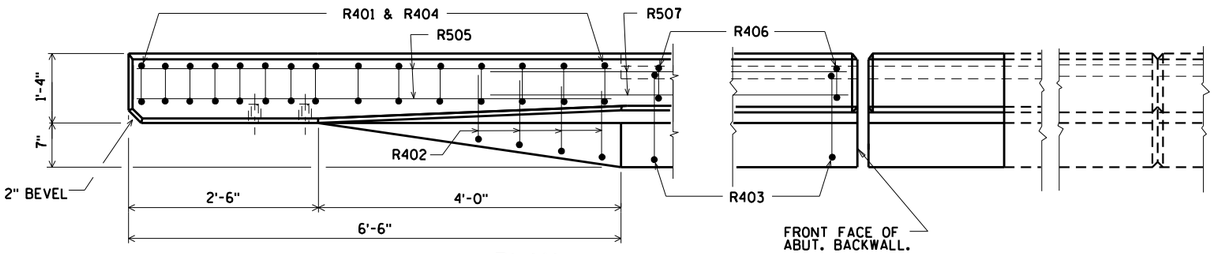
SECTION C

BILL OF BARS

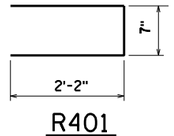
FOR ABUTMENT PARAPETS

THE FIRST DIGIT OF THE BAR MARK SIGNIFIES THE BAR SIZE.
EPOXY COAT ALL PARAPET REINF.

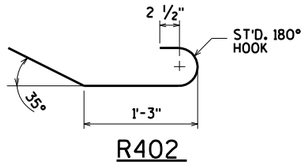
BAR MARK	NO. REO'D. NORTH ABUT.	NO. REO'D. SOUTH ABUT.	LENGTH	BENT	LOCATION
R401	30	30	4-9	X	WINGS STIRRUPS
R402	8	8	3-1	X	WINGS
R403	34	34	4-9	X	WINGS STIRRUPS
R404	30	30	4-9	X	WINGS
R505	12	12	6-2		WINGS
R406	34	34	4-10	X	WINGS
R507	10	10	14-5		WINGS



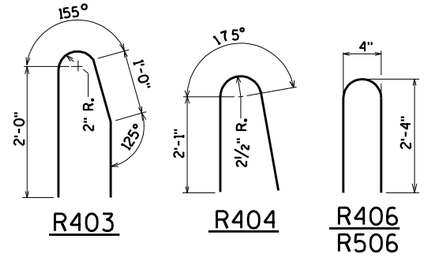
PLAN



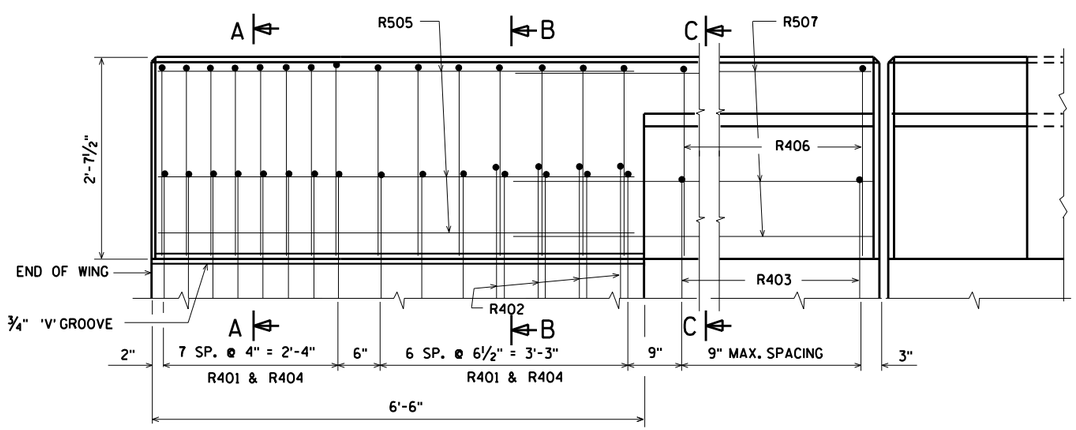
R401



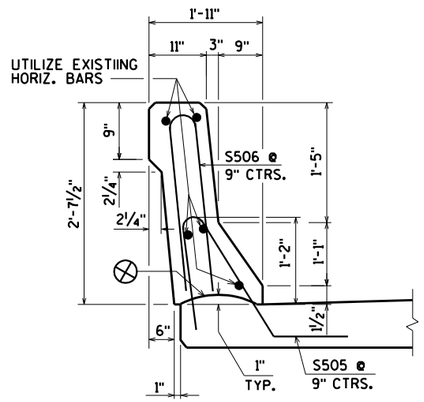
R402



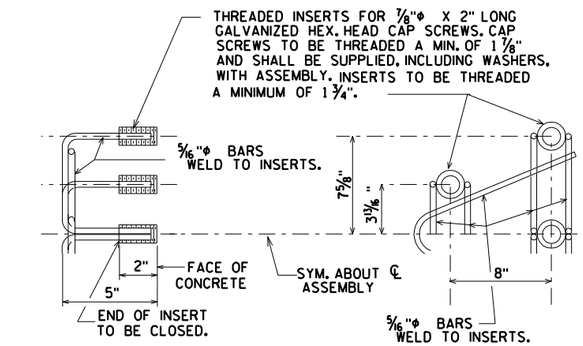
R403 R404 R406 R506



OUTSIDE ELEVATION



SECTION THRU PARAPET ON BRIDGE
(AT JOINT REPAIR)



DETAIL OF ANCHOR ASSEMBLY

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

⊗ CONST. JOINT - STRIKE OFF AS SHOWN.

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STRUCTURE B-37-113

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PARAPET DETAILS

SHEET 14 OF 15
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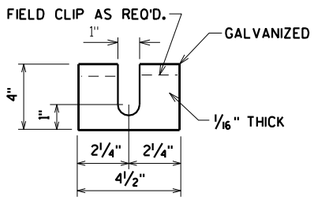
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STATE PROJECT NUMBER

1053-05-60

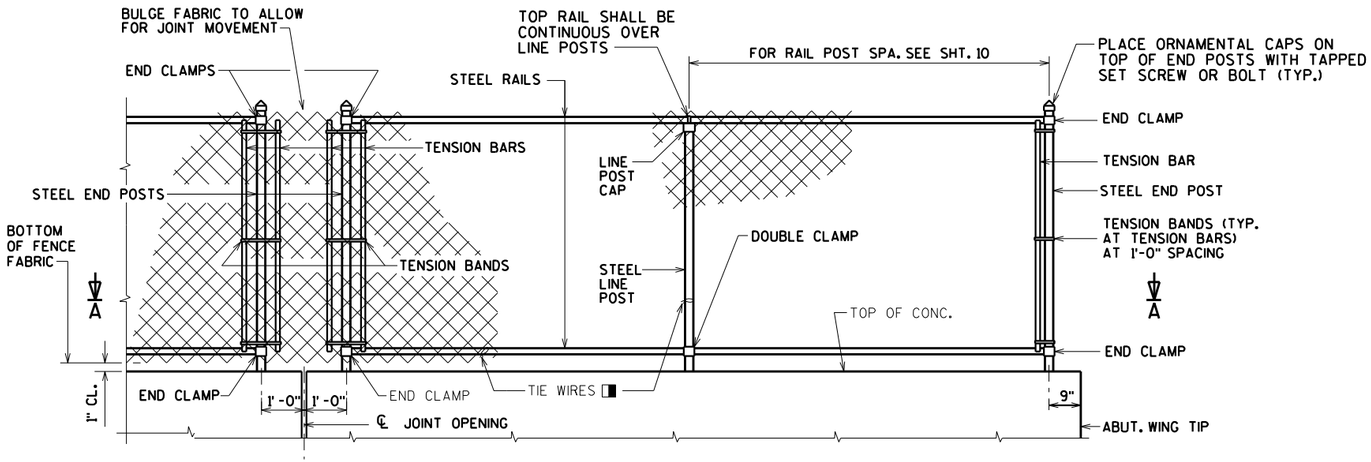
FENCE MEMBER SIZE & WEIGHT

STEEL FENCE MEMBER	OUTSIDE DIAMETER (INCHES)	WEIGHT (LB/FT)
RAILS	1.660	2.27
END POST	2.875	5.80
OVERHANG POST	2.875	5.80
LINE POST	2.375	3.65
POST SLEEVE	4.000	9.12



POST SHIM DETAILS

SHIMS REQUIRED ONLY WHEN END POSTS AND LINE POSTS ARE WELDED TO BASE PLATES. PROVIDE 4 SHIMS PER POST. USE WHERE REQUIRED FOR ALIGNMENT.



FENCE PART ELEVATION

VIEWING FABRIC SIDE

GENERAL NOTES

POSTS ARE TO BE SET VERTICAL.

ALL FENCE COMPONENTS SHALL BE GALVANIZED STEEL, EXCEPT THE FENCE FABRIC WHICH MAY BE ALUMINUM-COATED STEEL OR GALVANIZED STEEL.

FABRIC SHALL CONFORM TO ASTM A491 OR A392, CLASS 2. STEEL RAILS, POSTS AND POST SLEEVES SHALL CONFORM TO ASTM F1083, STANDARD WEIGHT PIPE (SCHEDULE 40). FITTINGS SHALL CONFORM TO ASTM F626. SEE THE "BRIDGE SPECIAL PROVISIONS" FOR ADDITIONAL DETAILS.

THE BID ITEM SHALL BE "FENCE CHAIN LINK 6-FT.", LF.

COMPLETE ANY REQUIRED WELDING OF COMPONENTS BEFORE GALVANIZING.

POST BASE PLATES SHALL BE FLAT WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL. ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUT.

BASE PLATES, ANCHOR PLATES AND SHIMS SHALL BE ASTM A709, GRADE 36.

ALL POST SPACINGS ARE MEASURED HORIZONTALLY ALONG THE C/L OF THE POST.

■ CAULK AROUND PERIMETER OF BASE PLATE AND FILL PORTION OF SLOTTED HOLE AROUND ANCHOR BOLT IN SHIM WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER.

✳ ALTERNATE TO DOUBLE CLAMP: USE LINE RAIL CLAMP (BOULEVARD) OR 180° BRACE BAND, WHICH MAY BE USED WHEN THE POSTS ARE EITHER BOLTED TO THE POST SLEEVES OR DIRECTLY WELDED TO THE BASE PLATE.

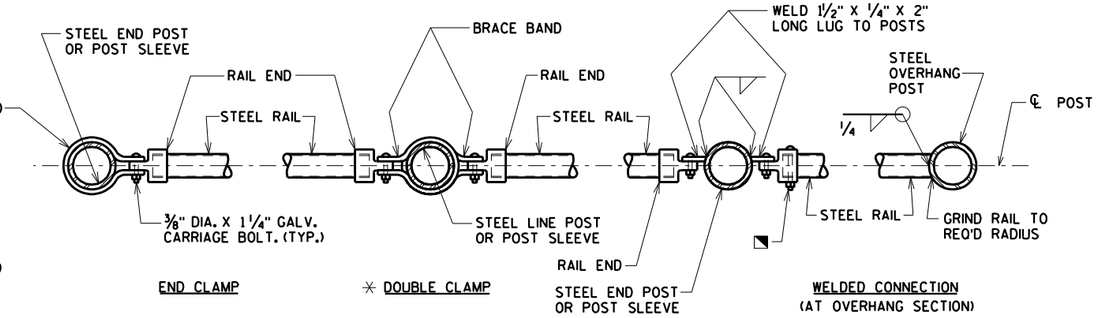
◭ ½" DIA. X 6⅞" LONG GALVANIZED HEX BOLT WITH NUT & WASHER AT WINGWALLS. TYPE "S", ½" DIA. CONCRETE MASONRY ANCHORS FOR USE ON EXISTING PARAPETS. ANCHOR PLATE NOT REQUIRED WHEN TYPE "S" ANCHORS ARE USED. SEE ☆

☆ ½" DIA. CONCRETE MASONRY ANCHOR, TYPE "S", 6" MIN. EMBEDMENT (EPOXY ANCHORED) INTO CONCRETE AND MINIMUM PULLOUT CAPACITY OF 10 KIPS. ANCHOR, WASHER AND NUT SHALL BE GALVANIZED.

◨ ATTACH FABRIC TO RAILS, AND TO POSTS WITHOUT TENSION BANDS, WITH TIE WIRES (ROUND, 9-GAGE) SPACED AT 1'-0".

◹ BOLT RAIL TO RAIL END TO SECURE OVERHANG SECTION. ALTERNATE IS TO WELD RAIL DIRECTLY TO END POST.

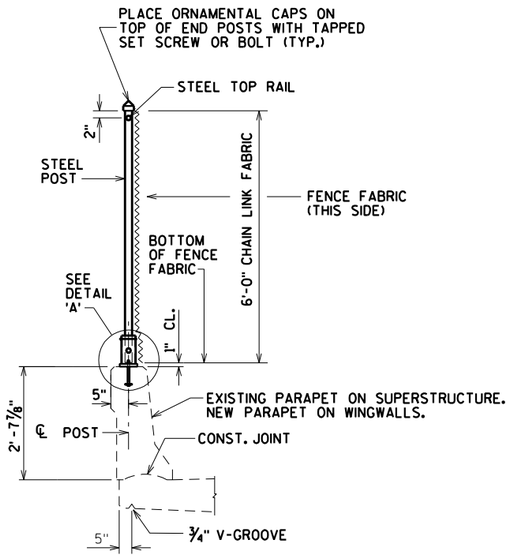
MINIMUM LENGTH OF TOP RAIL BETWEEN SPLICES SHALL BE 20'-0". LOCATE SPLICES NEAR ¼ POINT OF POST SPACING.



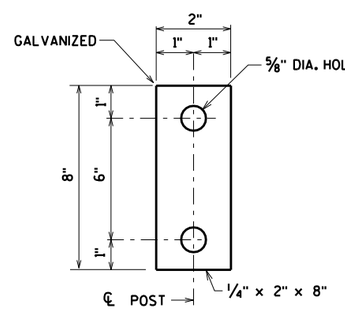
END CLAMP ✳ DOUBLE CLAMP WELDED CONNECTION (AT OVERHANG SECTION)

SECTION A-A

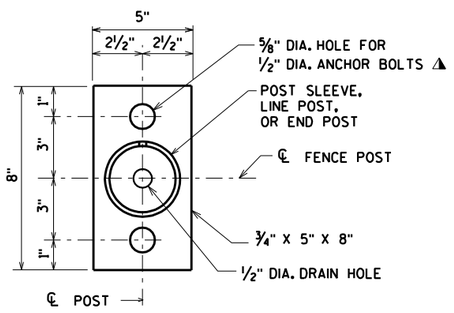
NOTE: PLACE ALL BOLT HEADS ON SIDE OF FENCE ADJACENT TO PEDESTRIANS



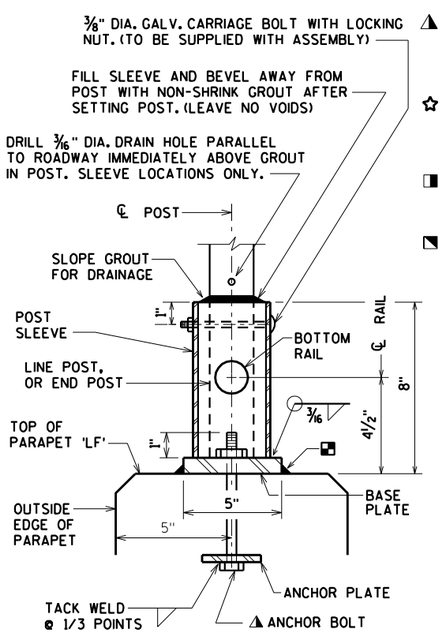
SECTION THRU FENCE



ANCHOR PLATE



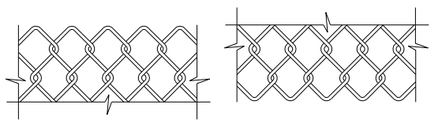
BASE PLATE



DETAIL 'A'

UNIT SHALL BE GALVANIZED AFTER FABRICATION

NOTE: IN LIEU OF USING THE POST SLEEVE, THE FENCE POST MAY BE WELDED TO THE BASE PLATE.



FENCE FABRIC

FENCE FABRIC WOVEN OF 9-GAGE WIRE IN 2" DIAMOND PATTERN MESH WITH BOTH THE TOP AND BOTTOM SELVAGES KNUCKLED.

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STRUCTURE B-37-113

DRAWN BY CLS | PLANS CK'D. AEB

CHAIN LINK FENCE DETAILS

SHEET 15 OF 15
470

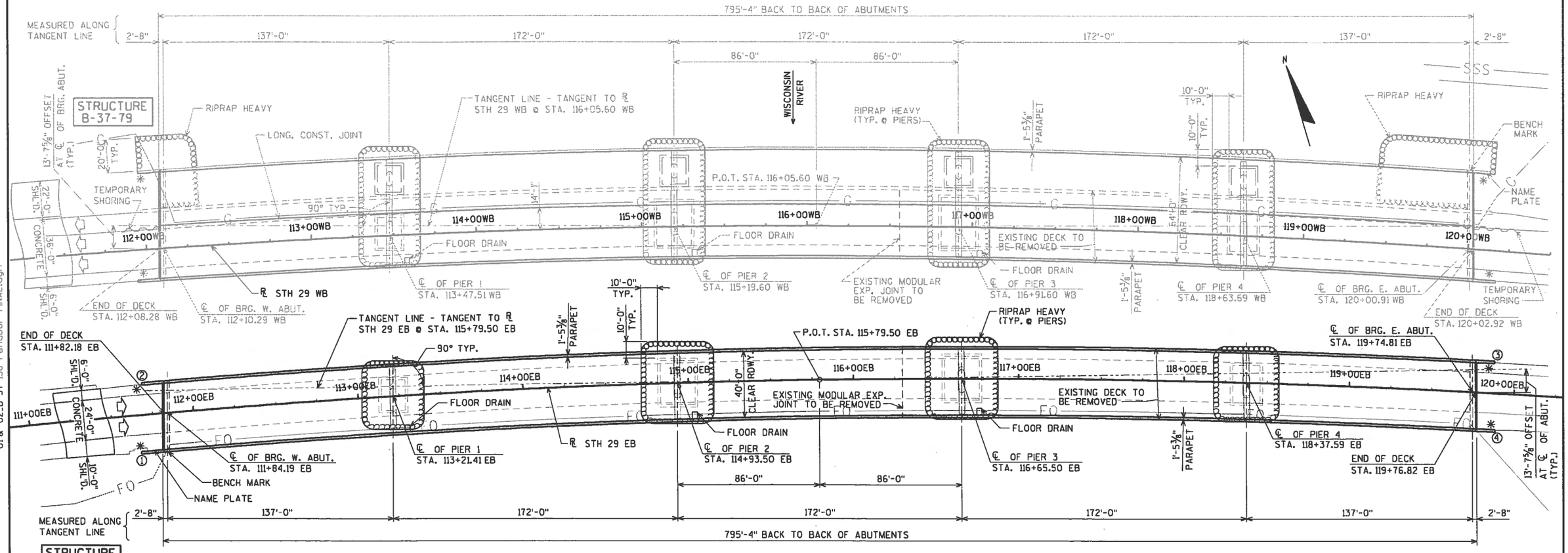
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10/29/2013
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○ DENOTES WING NUMBER

✱ANCHOR ASSEMBLY FOR THRIE BEAM TYPE GUARDRAIL.

STATE PROJECT NUMBER
1053-02-75



PLAN

5 SPAN CONTINUOUS HAUNCHED STEEL PLATE GIRDER BRIDGE

CURVE DATA

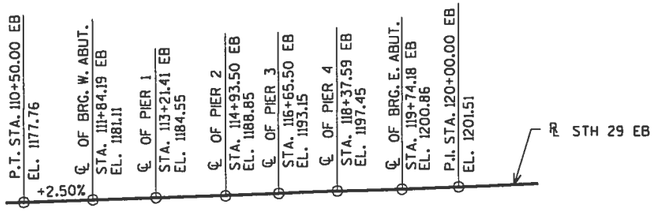
(STH 29 EB)

P.I. STA. 111+54.37 EB
Δ = 20°09'40"
D = 1°00'00"
R = 5,729.58'
T = 1,018.59'
L = 2,016.12'
E = 89.84'
S.E. = 0.038'/'

FOR ELEVATION VIEW & DESIGN DATA SEE SHEET 2
FOR TYPICAL SECTION SEE SHEET 3

LIST OF DRAWINGS

1. GENERAL PLAN
2. ELEVATION & DESIGN DATA
3. TYPICAL SECTION
4. QUANTITIES AND NOTES
5. WEST ABUTMENT
6. WEST ABUTMENT WING DETAILS
7. EAST ABUTMENT
8. EAST ABUTMENT WING DETAILS
9. BEARING DETAILS
10. BEARING BLOCK AND SHIM DETAILS
11. EXISTING PIN AND HANGER RETROFIT
12. TABLE OF DEFLECTIONS
13. DECK ELEVATIONS
14. SUPERSTRUCTURE
15. SUPERSTRUCTURE PLAN
16. SUPERSTRUCTURE PLAN
17. SUPERSTRUCTURE BILL OF BARS
18. SUPERSTRUCTURE SLAB OFFSETS
19. SUPERSTRUCTURE POURING DIAGRAM
20. MODULAR EXPANSION JOINT DETAILS
21. MODULAR EXPANSION JOINT DETAILS
22. COVER PLATES FOR SINGLE SLOPE PARAPET
23. FLOOR DRAIN TYPE 'GC'
24. SINGLE SLOPE PARAPET 32SS MODIFIED
25. SINGLE SLOPE PARAPET 42SS MODIFIED



PROFILE GRADE LINE

(℞ STH 29 EB)

BENCHMARK:
BM DISK B-37-136-71
STA. 111+82 EB, 23' RT.
EL. 1182.45

CHRISTOPHER B. McMAHON E-29154 EAU CLAIRE WI
PROFESSIONAL ENGINEER
1/6/14

BRIDGE OFFICE CONTACT:
WILLIAM DREHER
(608)-266-8489

CONSULTANT CONTACT:
CHRIS MCMAHON
(715)-834-3161

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STATE OF WISCONSIN
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ACCEPTED William C. Dreher KAR 01/07/14
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE B-37-136

STH 29 EB OVER WISCONSIN RIVER

COUNTY MARATHON | ~~TOWN/CITY/~~VILLAGE ROTHSCHILD

DESIGN SPEC. REHABILITATION N/A

DESIGNED BY	IAG	DESIGN CK'D.	SML	DRAWN BY	KAZ	PLANS CK'D.	CBM

GENERAL PLAN

SHEET 1 OF 25
471

I.D. DATE:

DATE:
DATE:
DATE:

CHECKED BY:
BACK CHECKED BY:
CORRECTED BY:

11X17-5200.plt
01 & 02_B-37-136 rehabGP FINAL.dgn

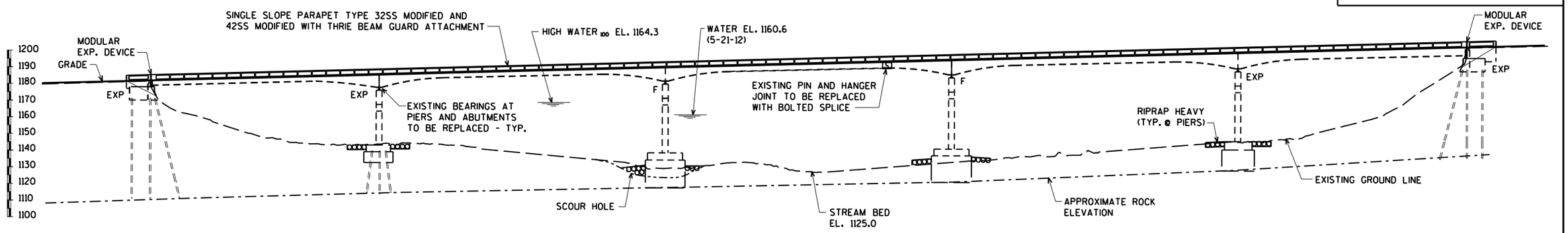
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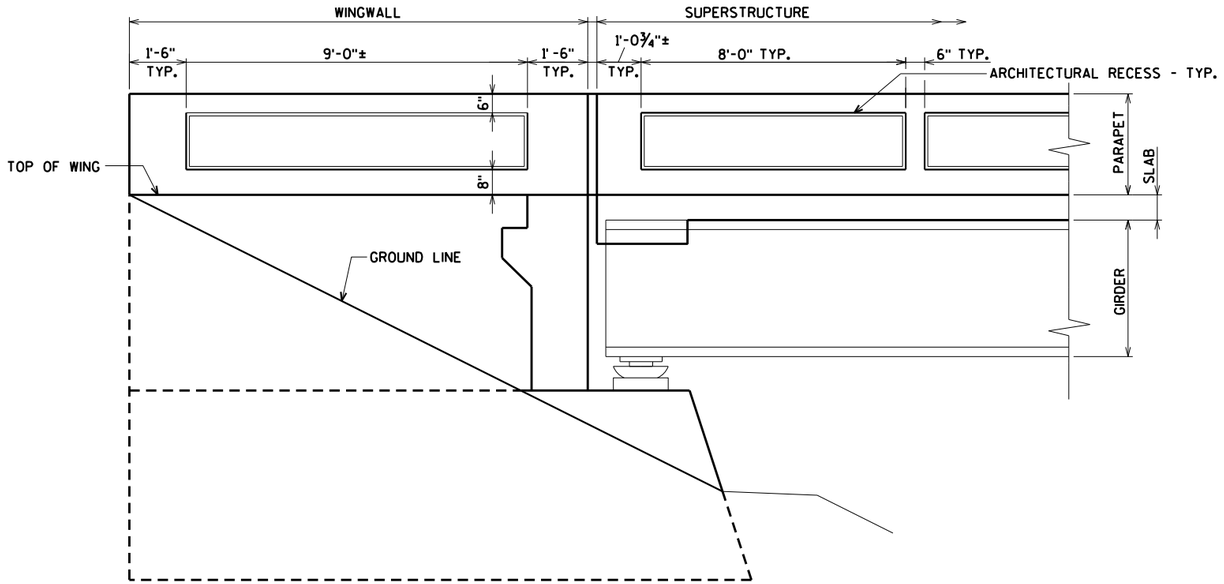
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STATE PROJECT NUMBER

1053-02-75



ELEVATION
(LOOKING NORTH)



ABUTMENT WINGWALLS

ARCHITECTURAL RECESS DETAIL

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HL-93/HS-20
INVENTORY RATING: HS-21
OPERATING RATING: HS-35
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV) = 250 KIPS

STRUCTURE IS DESIGNED FOR A FUTURE WEARING
SURFACE OF 20 #/S.F.

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) — f_y = 60,000 p.s.i.
HIGH STRENGTH STRUCTURAL STEEL (ASTM A709, GRADE 50) — f_y = 50,000 p.s.i.

TRAFFIC DATA:

STH 29

A.D.T. = 37,800 (2016)
A.D.T. = 46,300 (2036)
R.D.S. = 70 M.P.H.

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STRUCTURE B-37-136

DRAWN BY KAZ | PLANS CK'D. AEB

ELEVATION & DESIGN DATA

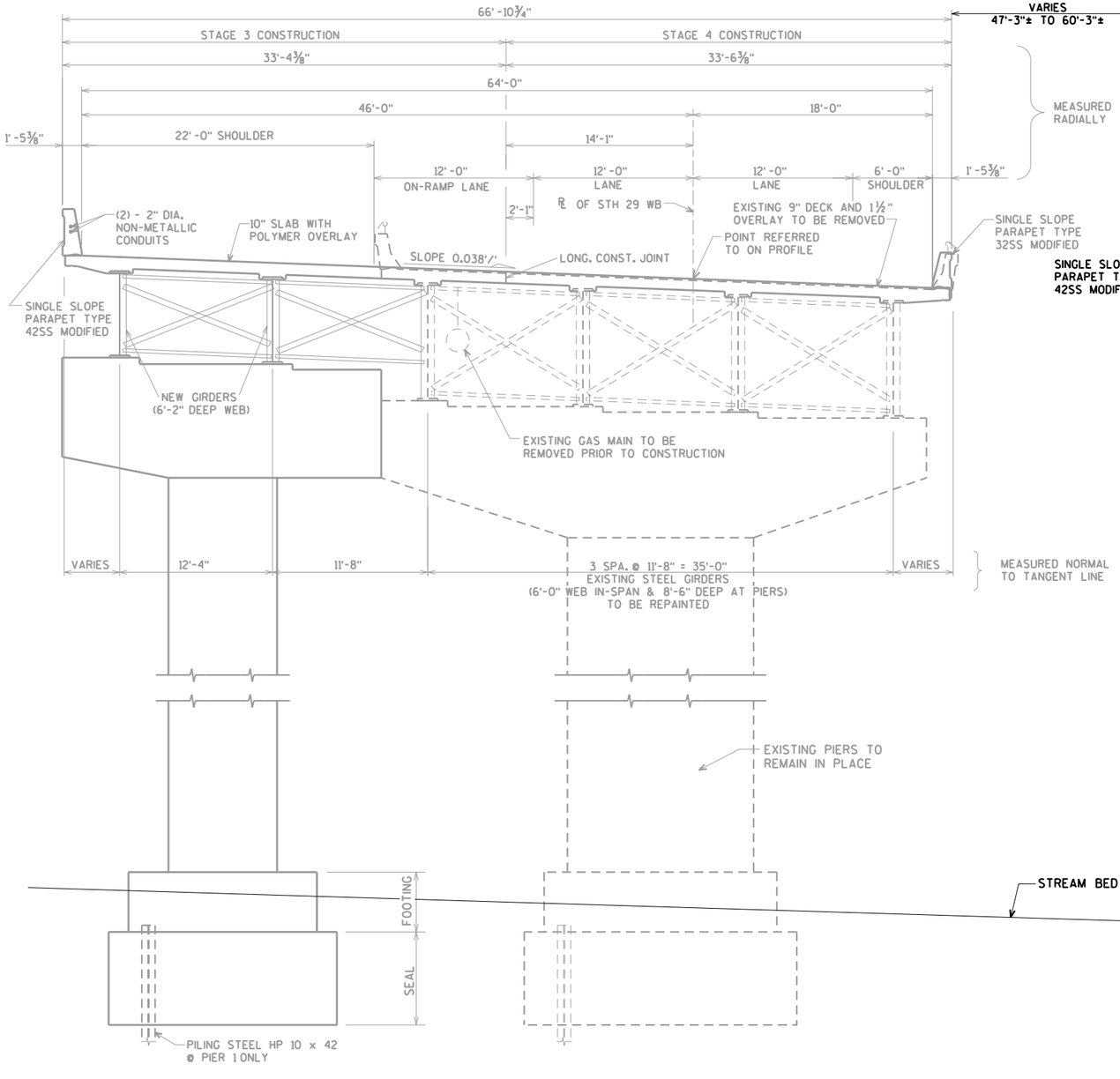
SHEET 2 OF 25
472

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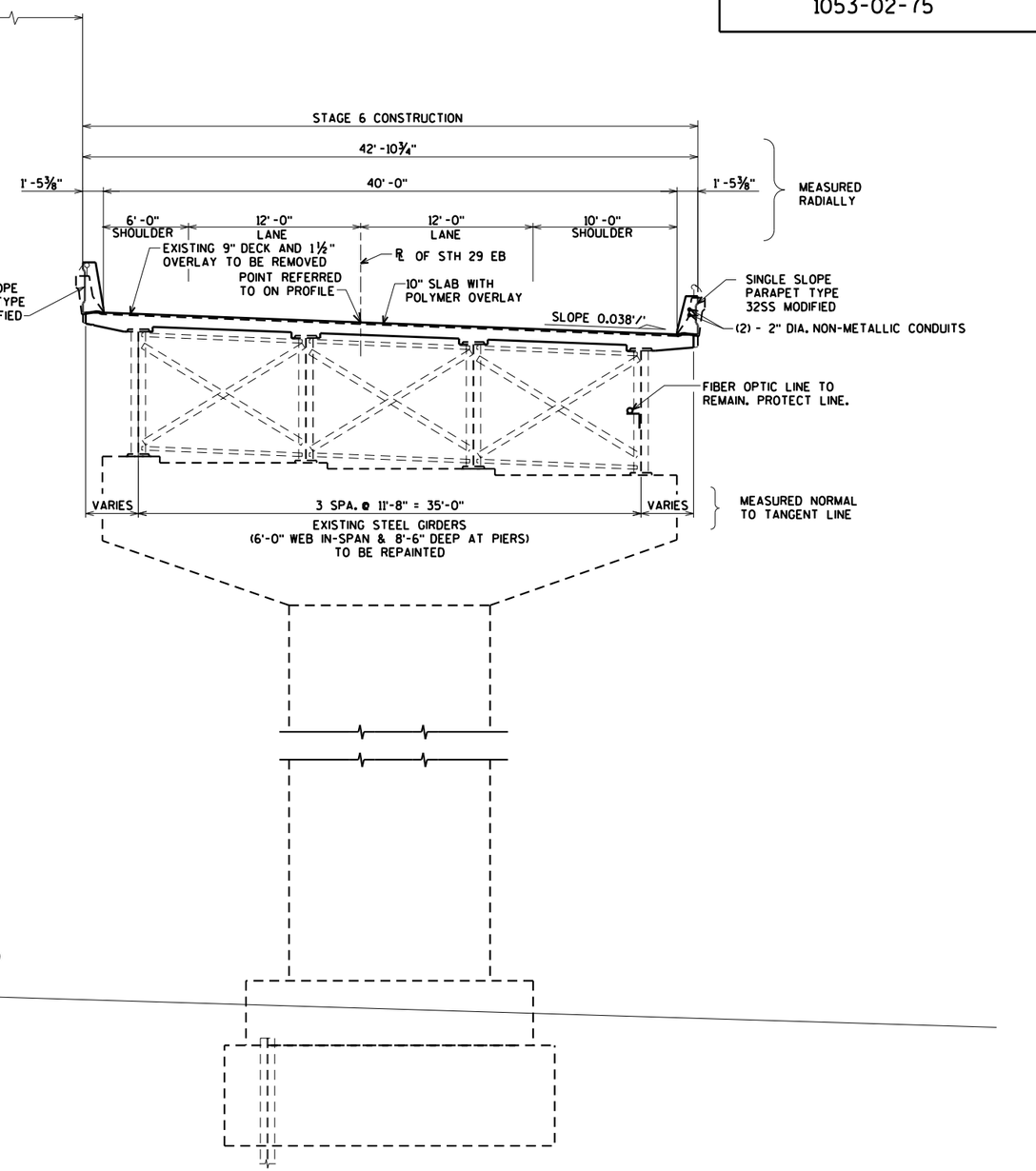
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STATE PROJECT NUMBER

1053-02-75



STRUCTURE B-37-79



STRUCTURE B-37-136

NOTE: THE PIER WIDENING WILL BE CONSTRUCTED DURING STAGE 2.

TYPICAL SECTION THRU BRIDGES

(LOOKING EAST)

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STRUCTURE B-37-136

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TYPICAL SECTION

SHEET 3 OF 25
473

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8

8

STATE PROJECT NUMBER

1053-02-75

TOTAL ESTIMATED QUANTITIES

	BID ITEM NUMBER	BID ITEMS	UNIT	W. ABUT.	PIER 1	PIER 2	PIER 3	PIER 4	E. ABUT.	SUPER.	TOTAL
	203.0210.S.02	ABATEMENT OF ASBESTOS CONTAINING MATERIAL B-37-136	LS	-----	-----	-----	-----	-----	-----	-----	1
	203.0600.S.02	REMOVING OLD STRUCTURE OVER WATERWAY WITH MINIMAL DEBRIS STA. 115+79.50 EB	LS	-----	-----	-----	-----	-----	-----	-----	1
	206.1000.04	EXCAVATION FOR STRUCTURES BRIDGES B-37-136	LS	-----	-----	-----	-----	-----	-----	-----	1
	210.0100	BACKFILL STRUCTURE	CY	20	-----	-----	-----	-----	20	-----	40
	502.0100	CONCRETE MASONRY BRIDGES	CY	17	-----	-----	-----	-----	17	1,326	1,360
	502.3110.S.02	EXPANSION DEVICE MODULAR B-37-136	LS	-----	-----	-----	-----	-----	-----	-----	1
	502.3200	PROTECTIVE SURFACE TREATMENT	SY	10	-----	-----	-----	-----	10	720	740
	502.5005	MASONRY ANCHOR TYPE L NO. 5 BARS	EACH	132	-----	16	16	-----	132	-----	296
	502.6105	MASONRY ANCHOR TYPE S 5/8-INCH	EACH	78	-----	-----	-----	-----	78	-----	156
	502.6110	MASONRY ANCHOR TYPE S 3/4-INCH	EACH	-----	-----	-----	-----	-----	4	-----	4
	505.0605	BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB	2,410	-----	-----	-----	-----	2,410	277,540	282,360
	506.5000.02	BEARING ASSEMBLIES FIXED B-37-136	EACH	-----	-----	4	4	-----	-----	-----	8
	506.6000.02	BEARING ASSEMBLIES EXPANSION B-37-136	EACH	4	4	-----	-----	4	4	-----	16
	506.7050.S.04	REMOVING BEARINGS B-37-136	EACH	4	4	4	4	4	4	-----	24
(1)	509.1500	CONCRETE SURFACE REPAIR	SF	30	10	10	10	10	30	-----	100
	509.5100.S	POLYMER OVERLAY	SY	-----	-----	-----	-----	-----	-----	3,535	3,535
	514.0445	FLOOR DRAINS TYPE GC	EACH	-----	-----	-----	-----	-----	-----	3	3
	514.2625	DOWNSPOUT 6-INCH	LF	-----	-----	-----	-----	-----	-----	30	30
	516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	11	-----	-----	-----	-----	11	-----	22
(2)	517.0600.02	PAINTING EPOXY SYSTEM B-37-136	LS	-----	-----	-----	-----	-----	-----	-----	1
	517.0900.S.02	PREPARATION AND COATING OF TOP FLANGES	LS	-----	-----	-----	-----	-----	-----	-----	1
(4)	517.1800.S.03	STRUCTURE REPAINTING RECYCLED ABRASIVE B-37-136	LS	-----	-----	-----	-----	-----	-----	-----	1
	517.4000.S.02	CONTAINMENT AND COLLECTION OF WASTE MATERIALS B-37-136	LS	-----	-----	-----	-----	-----	-----	-----	1
	517.4500.S.03	NEGATIVE PRESSURE CONTAINMENT AND COLLECTION OF WASTE MATERIALS B-37-136	LS	-----	-----	-----	-----	-----	-----	-----	1
	517.6001.S	PORTABLE DECONTAMINATION FACILITY	EACH	-----	-----	-----	-----	-----	-----	-----	1
	606.0300	RIPRAP HEAVY	CY	-----	80	110	115	90	-----	-----	395
	614.0150	ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	2	-----	-----	-----	-----	2	-----	4
	652.0125	CONDUIT RIGID METALLIC 2-INCH	LF	40	-----	-----	-----	-----	40	-----	80
	652.0225	CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH	LF	-----	-----	-----	-----	-----	-----	1,570	1,570
	653.0222	JUNCTION BOXES 18X12X6-INCH	EACH	-----	-----	-----	-----	-----	-----	4	4
(3)	SPV.0035.01	CONCRETE MASONRY DECK PATCHING	CY	-----	-----	-----	-----	-----	-----	25	25
	SPV.0060.01	PRECAST CONCRETE BEARING BLOCK	EACH	-----	-----	4	4	-----	-----	-----	8
	SPV.0060.02	PREPARATION AND COATING OF EXISTING STIFFENERS, HINGES, AND WEBS	EACH	-----	-----	-----	-----	-----	-----	4	4
	SPV.0060.15	EXISTING PIN AND HANGER RETROFIT	EACH	-----	-----	-----	-----	-----	-----	4	4
(5)	SPV.0105.06	PROTECTING FIBER OPTIC LINE REMOVING OLD STRUCTURE & CONCRETE MASONRY	LS	-----	-----	-----	-----	-----	-----	-----	1
(5)	SPV.0105.07	PROTECTING FIBER OPTIC LINE STRUCTURE REPAINTING	LS	-----	-----	-----	-----	-----	-----	-----	1
		NON-BID ITEMS									
		FILLER	SIZE	-----	-----	-----	-----	-----	-----	-----	1/2" & 3/4"

(1) UNDISTRIBUTED QUANTITY FOR REPAIRS AS DIRECTED BY THE ENGINEER

(2) PAINTING FOR STEEL PLATES AT BOLTED SPLICE OVER EXISTING HINGES. PAINT COLOR SHALL BE GRAY = 26293 PER FEDERAL COLOR STD. 595B.

(3) UNDISTRIBUTED QUANTITY FOR MAINTAINING EXISTING BRIDGE DECK UNTIL FULL DECK REMOVAL, AS DIRECTED BY THE ENGINEER

(4) ALL STRUCTURAL STEEL SHALL BE PAINTED. PAINT COLOR SHALL BE GRAY = 26293 PER FEDERAL COLOR STD. 595B.

(5) CATEGORY 0090.

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

THE FIRST DIGIT OF A THREE DIGIT BAR NO. AND THE FIRST TWO DIGITS OF A FOUR DIGIT BAR NO. SIGNIFIES THE BAR SIZE.

THE EXISTING GROUNDLINE SHALL BE THE UPPER LIMIT FOR EXCAVATION FOR STRUCTURES.

AT ABUTMENTS ALL SPACES EXCAVATED AND NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH BACKFILL STRUCTURE.

PROTECTIVE SURFACE TREATMENT IS TO BE APPLIED TO THE TOP AND INSIDE FACES OF PARAPETS.

POLYMER OVERLAY IS TO BE APPLIED TO THE TOP OF DECK.

UTILIZE EXISTING BAR STEEL REINFORCEMENT WHERE SHOWN AND EXTEND 24 BAR DIAMETERS INTO NEW WORK, UNLESS SPECIFIED OTHERWISE.

DIMENSIONS SHOWN ARE BASED ON ORIGINAL STRUCTURE PLANS.

ALL CONCRETE REMOVAL SHALL BE DEFINED BY A 1" DEEP SAW CUT.

ALL FIELD CONNECTIONS SHALL BE MADE WITH 3/4" DIAMETER FRICTION TYPE HIGH-TENSILE STRENGTH BOLTS UNLESS SHOWN OR NOTED OTHERWISE.

VARIATIONS TO THE NEW GRADE LINE OVER 1/4" MUST BE SUBMITTED BY THE FIELD ENGINEER TO THE STRUCTURES DESIGN SECTION FOR REVIEW.

JOINT FILLER SHALL CONFORM TO THE REQUIREMENTS OF A.A.S.H.T.O. DESIGNATION M 153, TYPE I, II OR III OR A.A.S.H.T.O. DESIGNATION M 213.

THE EXISTING STRUCTURE B-37-136 IS A FIVE SPAN STEEL PLATE GIRDER BRIDGE, 795'-4" LONG x 43'-10" WIDE. THE DECK AND PARAPETS SHALL BE REPLACED.

EXISTING ABUTMENTS AND PIERS TO REMAIN IN PLACE AS SHOWN AND INCORPORATED INTO NEW CONSTRUCTION.

THE MINIMUM CONCRETE HAUNCH SHALL BE 1 1/4" FOR DESIGN CALCULATIONS AND THE HAUNCH CONCRETE QUANTITY IS BASED ON AN AVERAGE DEPTH OF 2 1/2". THE AVERAGE HAUNCH DEPTHS ARE THE MAXIMUM QUANTITY FOR WHICH THE CONTRACTOR WILL BE PAID.

THE CONTRACTOR SHALL SUPPLY A NEW NAME PLATE IN ACCORDANCE WITH SECTION 502.3.11 OF THE STANDARD SPECIFICATIONS AND THE STANDARD DETAIL DRAWINGS. NAME PLATE TO SHOW ORIGINAL CONSTRUCTION YEAR OF 1972.

AT EXISTING GIRDERS, CONTRACTOR IS TO CORE DECK AT 0.3, 0.5, & 0.7 POINTS, BEFORE REMOVING DECK, TO OBTAIN EXISTING TOP OF STEEL ELEVATIONS. EXISTING TOP OF STEEL ELEVATIONS SHALL BE TAKEN AGAIN AFTER DECK REMOVAL. DATA TO BE USED TO DETERMINE GIRDER DEFLECTIONS ASSOCIATED WITH REMOVAL OF EXISTING DECK FOR COMPARISON TO THE THEORETICAL DEFLECTIONS. COST TO BE CONSIDERED INCIDENTAL TO "REMOVING OLD STRUCTURE".

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NO.	DATE	REVISION	BY

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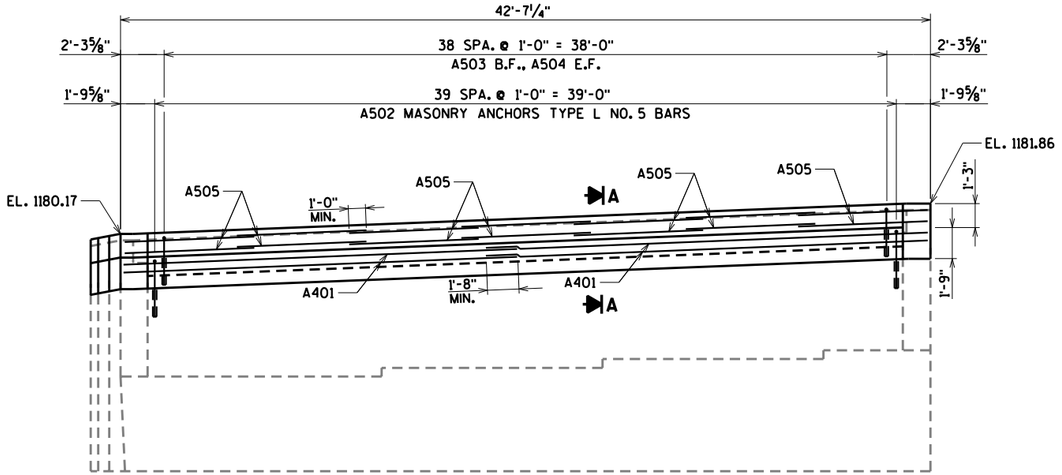
STRUCTURE B-37-136

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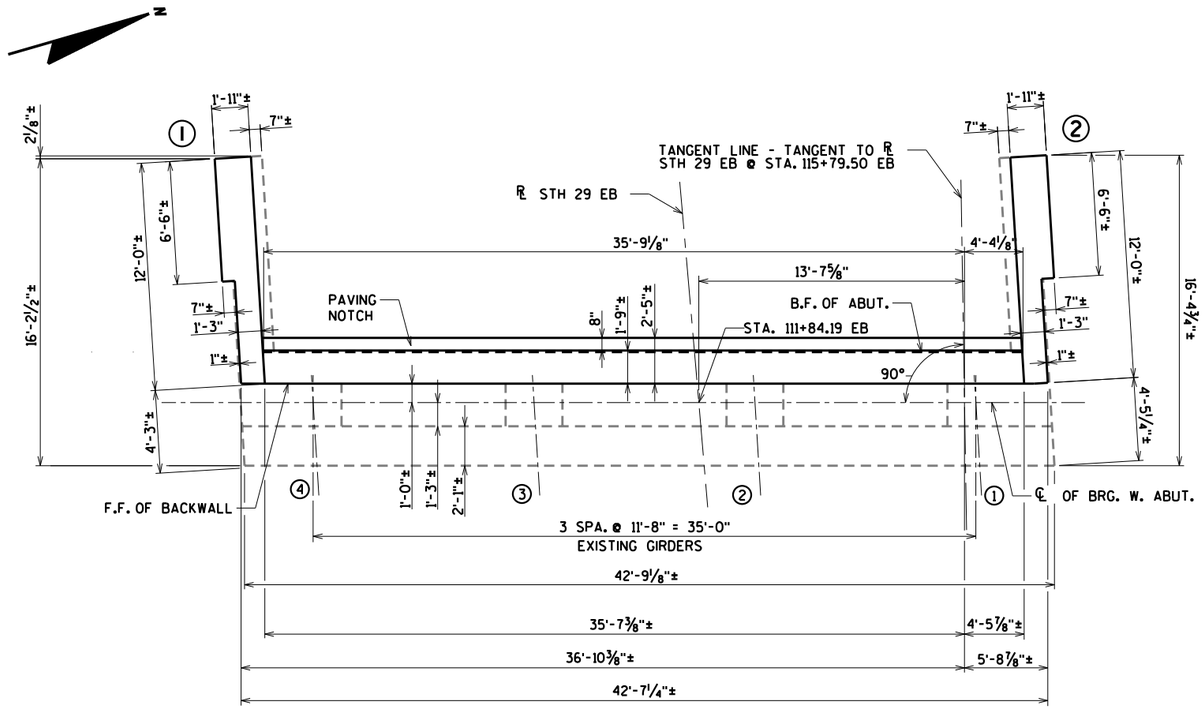
QUANTITIES AND NOTES

SHEET 4 OF 25
474

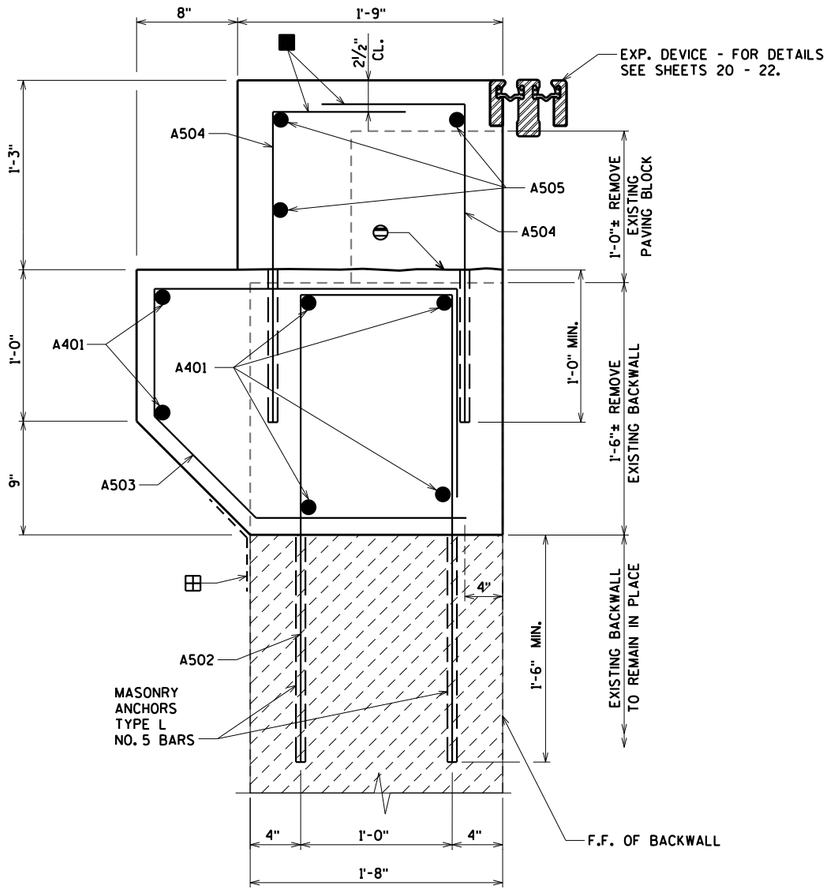
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ELEVATION
(LOOKING WEST)



PLAN



SECTION A

B.F. DENOTES BACK FACE
E.F. DENOTES FRONT FACE

⊖ CONST. JOINT - POUR CONCRETE ABOVE THIS JOINT AFTER SUPERSTRUCTURE IS IN PLACE. STRIKE OFF AND LEAVE ROUGH.

⊞ 18" RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACK FACE OF ABUTMENT AND WINGS.

■ ANCHOR INTO PLACE W/ EPOXY RESIN AFTER MODULAR JOINT IS IN POSITION. FOLLOW STD. SPEC. FOR MASONRY ANCHOR TYPE S WITH A MIN. PULLOUT CAPACITY OF 20 KIPS.

WORK THIS SHEET WITH SHEET 6

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STRUCTURE B-37-136

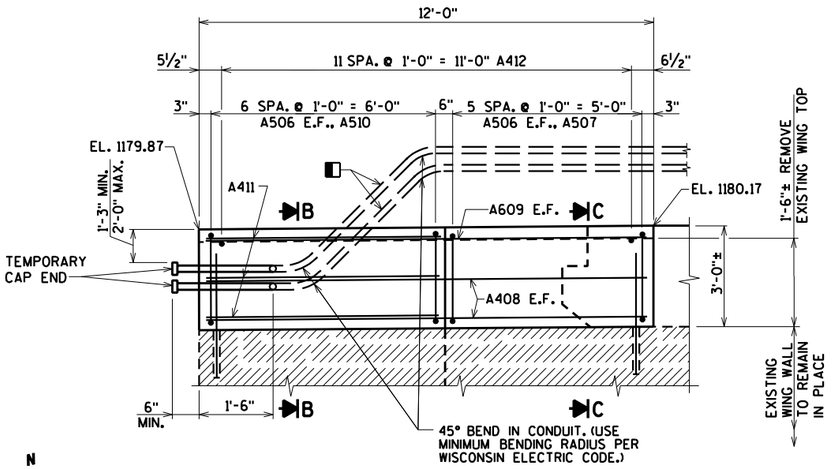
DRAWN BY	KAZ	PLANS CK'D.	AEB

WEST ABUTMENT

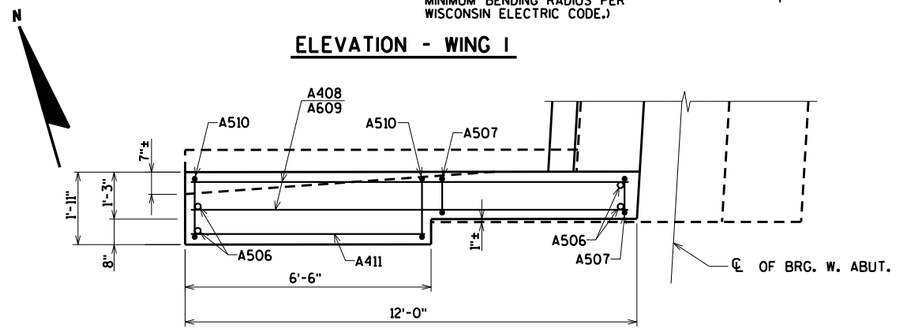
SHEET 5 OF 25
475

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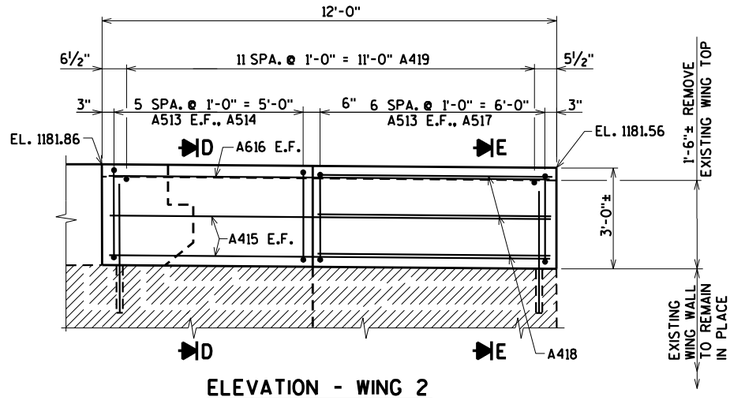
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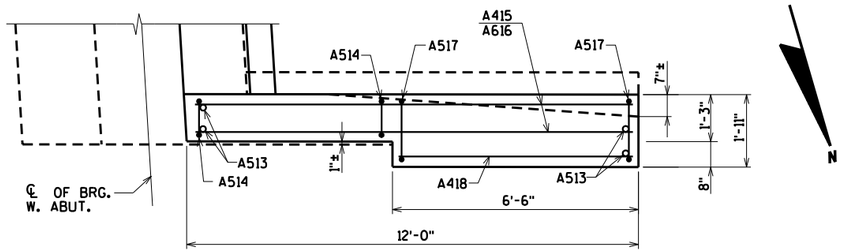
ELEVATION - WING 1



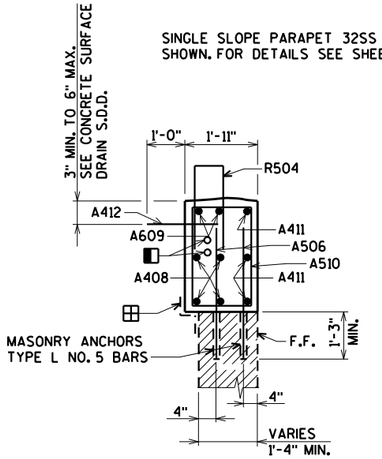
PLAN - WING 1



ELEVATION - WING 2

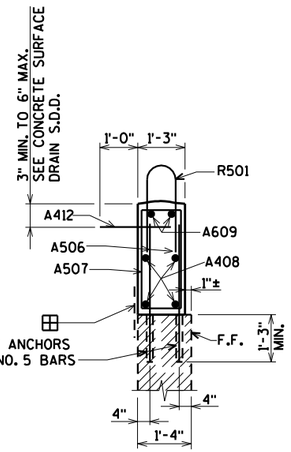


PLAN - WING 2



SECTION B

SINGLE SLOPE PARAPET 32SS MODIFIED NOT SHOWN. FOR DETAILS SEE SHEET 24.



SECTION C

USE 2" DIA. RIGID NONMETALLIC CONDUIT EXCEPT AT EXPANSION FITTING. AT EXPANSION FITTING USE RIGID METALLIC CONDUIT 3'-0" INTO PARAPET ON DECK AND WING SIDES OF THE JOINT OPENING.

BILL OF BARS

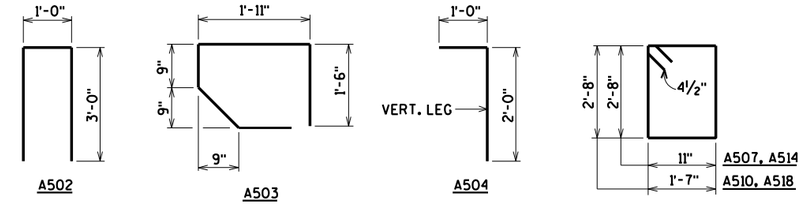
WEIGHTS INCLUDE PARAPET STEEL SHOWN ON SHEETS 24 & 25.

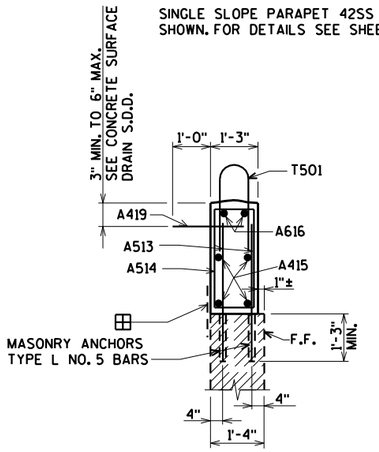
BAR. NO.	COATED BAR	NO. REQ'D.	LENGTH	BENT BAR	BUNDLED BAR	SERIES	2.410" COATED LOCATION
A401	X	12	21-11				BACKWALL HORIZ. E.F.
● A502	X	40	6-9	X			BACKWALL VERT. DOWELS
A503	X	39	6-0	X			BACKWALL VERT. B.F.
▲ A504	X	78	2-11	X			BACKWALL VERT. DOWELS E.F.
A505	X	21	8-0				BACKWALL HORIZ. E.F.
● A506	X	26	2-6				WING 1 VERT. DOWELS E.F.
A507	X	6	7-5	X			WING 1 VERT.
A408	X	4	11-8				WING 1 HORIZ. E.F.
A609	X	2	11-8				WING 1 HORIZ. E.F.
A510	X	7	8-9	X			WING 1 VERT.
A411	X	3	6-2				WING 1 HORIZ. F.F.
A412	X	12	2-0				WING 1 DOWELS
● A513	X	26	2-6				WING 2 VERT. DOWELS E.F.
A514	X	6	7-5	X			WING 2 VERT.
A415	X	4	11-8				WING 2 HORIZ. E.F.
A616	X	2	11-8				WING 2 HORIZ. E.F.
A517	X	7	8-9	X			WING 2 VERT.
A418	X	3	6-2				WING 2 HORIZ. F.F.
A419	X	12	2-0				WING 2 DOWELS

BENDING DIMENSIONS ARE OUT TO OUT OF BARS.

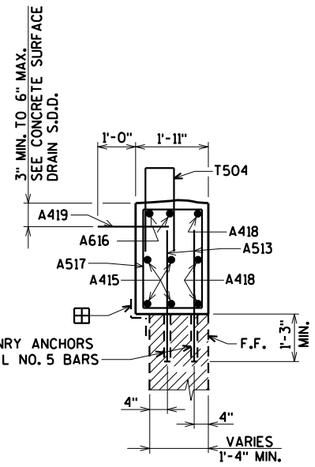
● MASONRY ANCHORS TYPE L NO. 5 BARS

▲ MASONRY ANCHORS TYPE S ⅝-INCH





SECTION D



SECTION E

⊞ 18" RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE OF ABUTMENT.

F.F. DENOTES FRONT FACE

B.F. DENOTES BACK FACE

E.F. DENOTES EACH FACE

WORK THIS SHEET WITH SHEET 5

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-136

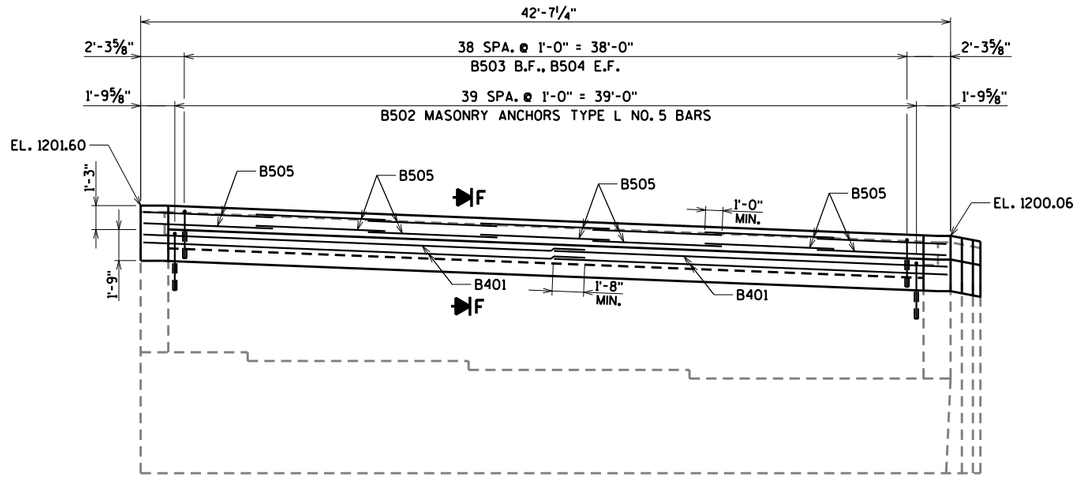
DRAWN BY KAZ | PLANS CK'D. AEB

WEST ABUTMENT WING DETAILS

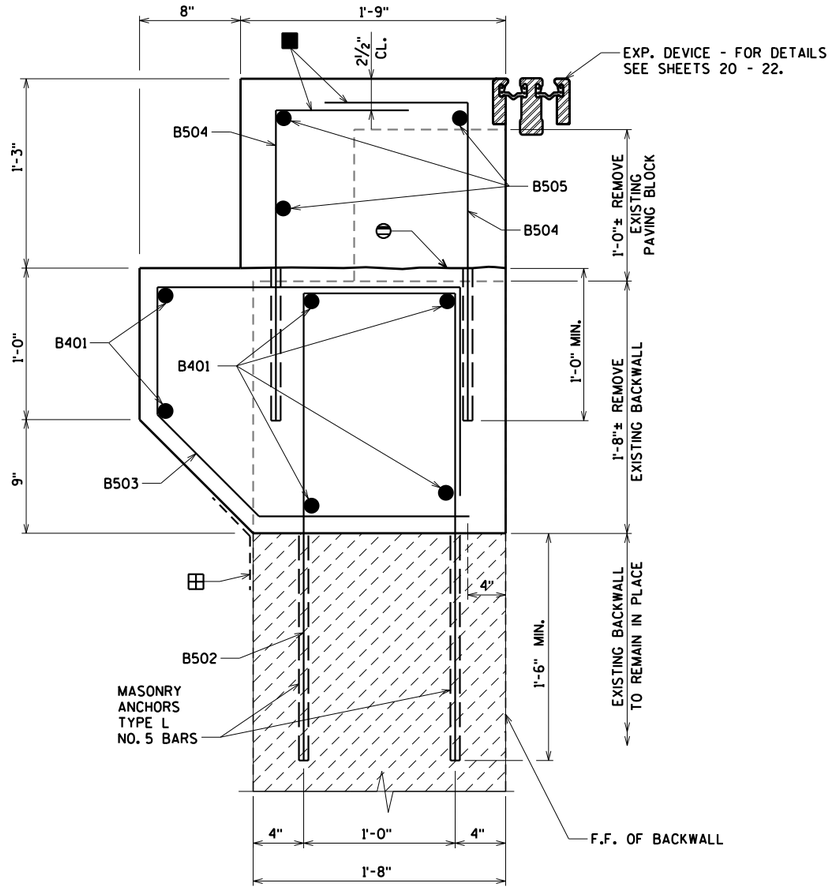
SHEET 6 OF 25
476

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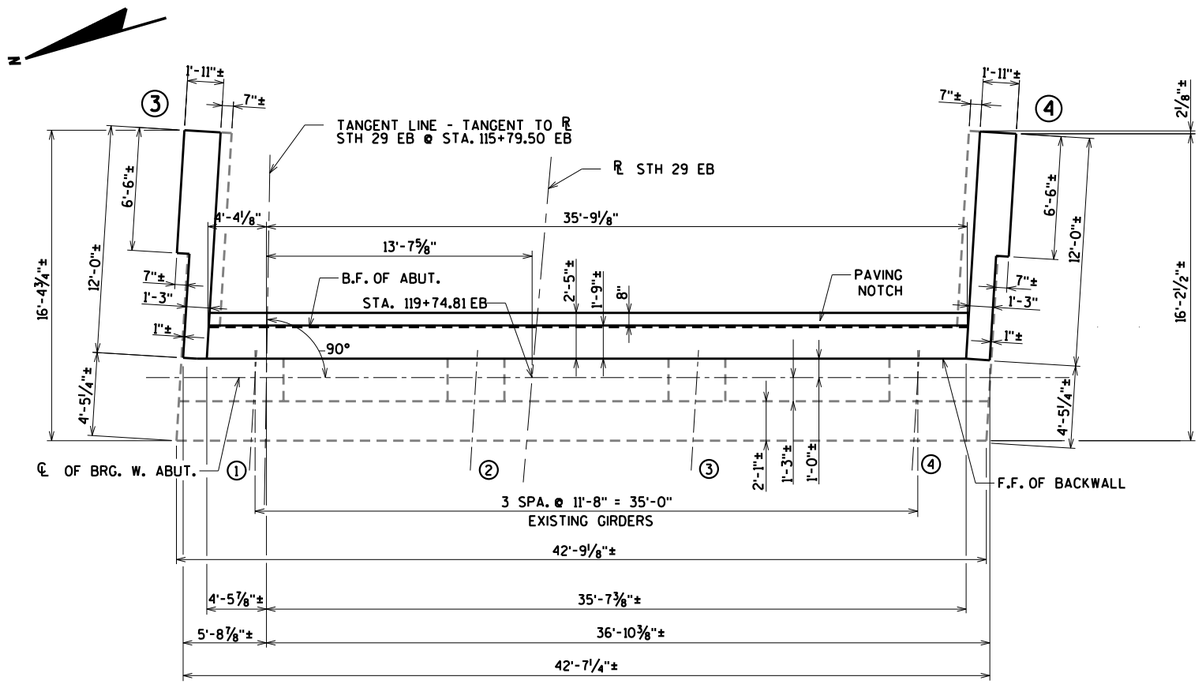
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12/3/2013
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ELEVATION
(LOOKING EAST)



SECTION F



PLAN

B.F. DENOTES BACK FACE
E.F. DENOTES FRONT FACE

⊖ CONST. JOINT - POUR CONCRETE ABOVE THIS JOINT AFTER SUPERSTRUCTURE IS IN PLACE. STRIKE OFF AND LEAVE ROUGH.

⊞ 18" RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACK FACE OF ABUTMENT AND WINGS.

■ ANCHOR INTO PLACE W/ EPOXY RESIN AFTER MODULAR JOINT IS IN POSITION. FOLLOW STD. SPEC. FOR MASONRY ANCHOR TYPE S WITH A MIN. PULLOUT CAPACITY OF 20 KIPS.

WORK THIS SHEET WITH SHEET 8

NO.	DATE	REVISION	BY

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DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-136

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EAST ABUTMENT

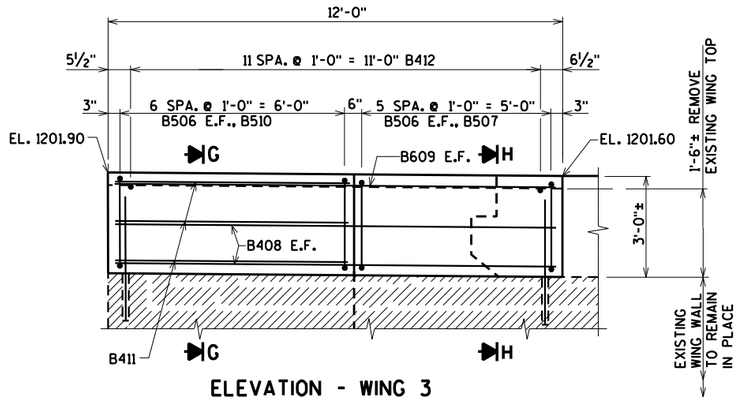
SHEET 7 OF 25
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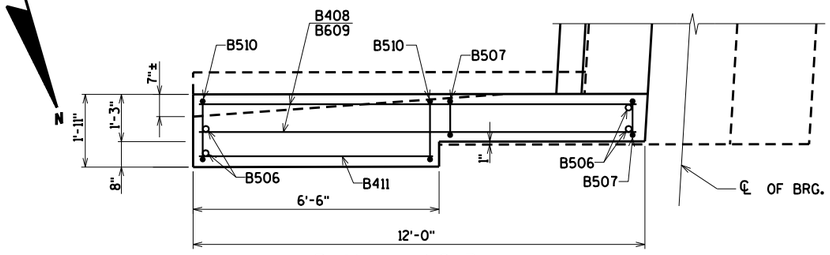
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STATE PROJECT NUMBER

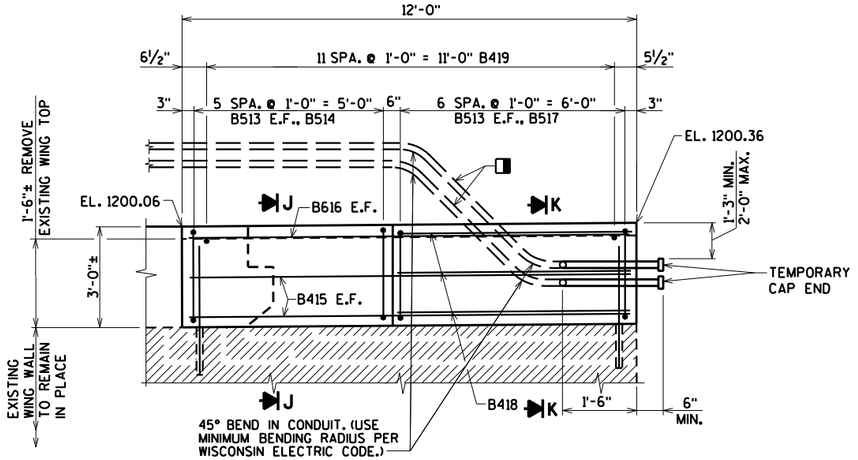
1053-02-75



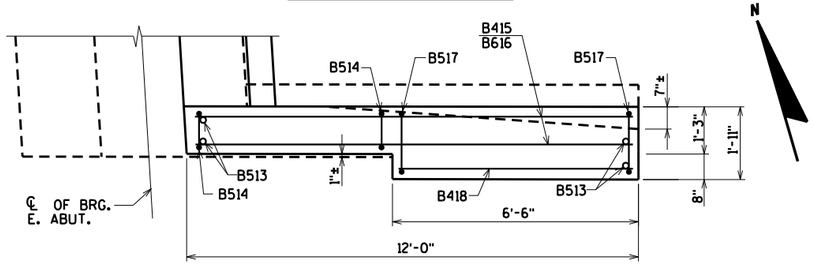
ELEVATION - WING 3



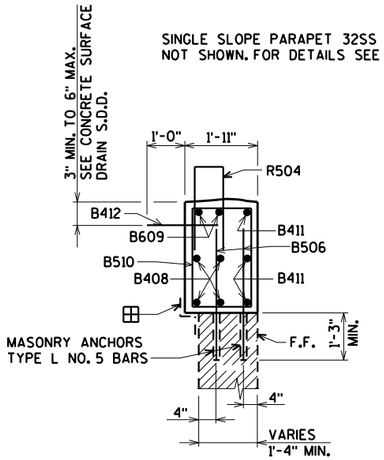
PLAN - WING 3



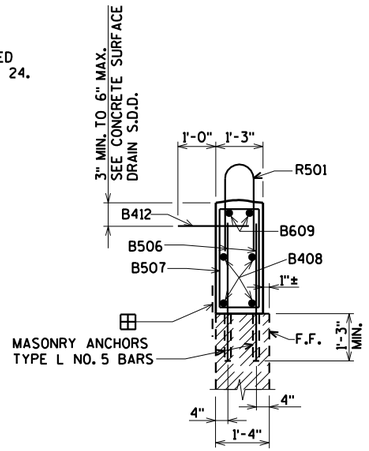
ELEVATION - WING 4



PLAN - WING 4



SECTION G



SECTION H

BILL OF BARS

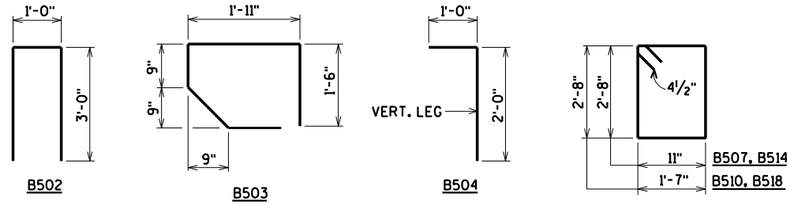
WEIGHTS INCLUDE PARAPET STEEL SHOWN ON SHEETS 24 & 25.

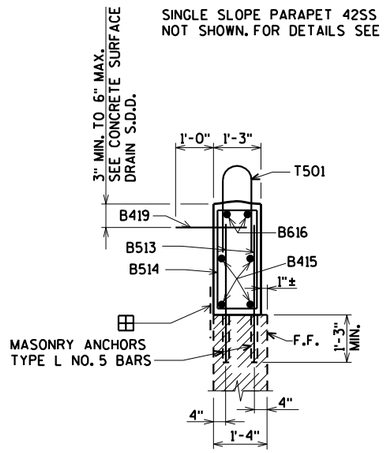
	BAR. NO.	COATED BAR	NO. REQ'D.	LENGTH	BENT BAR	BUNDLED BAR	SERIES	2,410# COATED LOCATION
	B401	X	12	21-11				BACKWALL HORIZ. E.F.
●	B502	X	40	6-9	X			BACKWALL VERT. DOWELS
	B503	X	39	6-0	X			BACKWALL VERT. B.F.
▲	B504	X	78	2-11	X			BACKWALL VERT. DOWELS E.F.
	B505	X	21	8-0				BACKWALL HORIZ. E.F.
●	B506	X	26	2-6				WING 1 VERT. DOWELS E.F.
	B507	X	6	7-5	X			WING 1 VERT.
	B408	X	4	11-8				WING 1 HORIZ. E.F.
	B609	X	2	11-8				WING 1 HORIZ. E.F.
	B510	X	7	8-9	X			WING 1 VERT.
	B411	X	3	6-2				WING 1 HORIZ. F.F.
	B412	X	12	2-0				WING 1 DOWELS
●	B513	X	26	2-6				WING 2 VERT. DOWELS E.F.
	B514	X	6	7-5	X			WING 2 VERT.
	B415	X	4	11-8				WING 2 HORIZ. E.F.
	B616	X	2	11-8				WING 2 HORIZ. E.F.
	B517	X	7	8-9	X			WING 2 VERT.
	B418	X	3	6-2				WING 2 HORIZ. F.F.
	B419	X	12	2-0				WING 2 DOWELS

BENDING DIMENSIONS ARE OUT TO OUT OF BARS.

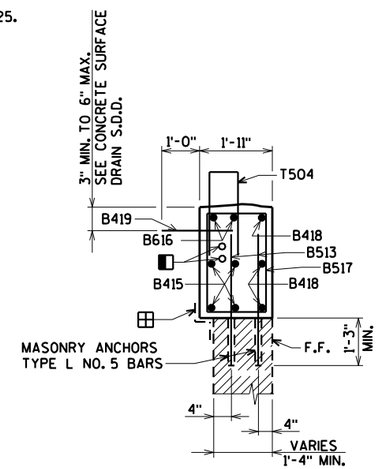
● MASONRY ANCHORS TYPE L NO. 5 BARS

▲ MASONRY ANCHORS TYPE S ⅝-INCH





SECTION J



SECTION K

USE 2" DIA. RIGID NONMETALLIC CONDUIT EXCEPT AT EXPANSION FITTING. AT EXPANSION FITTING USE RIGID METALLIC CONDUIT 3'-0" INTO PARAPET ON DECK AND WING SIDES OF THE JOINT OPENING.

⊞ 18" RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE OF ABUTMENT.

F.F. DENOTES FRONT FACE

B.F. DENOTES BACK FACE

E.F. DENOTES EACH FACE

WORK THIS SHEET WITH SHEET 7

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-136

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EAST ABUTMENT WING DETAILS

SHEET 8 OF 25
478

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U:±41-0637.00 - STH 29 over WIRiver±B-37-136±BRIDGE±04C_B-37-136 EA.dgn

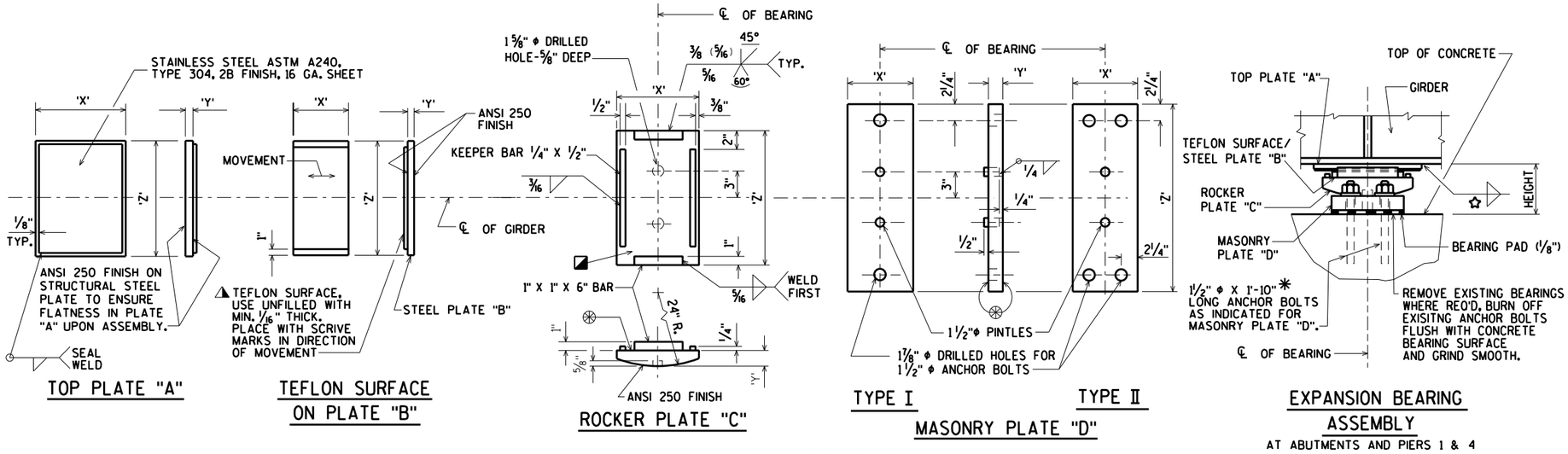
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12/3/2013

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STATE PROJECT NUMBER

1053-02-75



EXPANSION BEARING

EXPANSION BEARING ASSEMBLY

AT ABUTMENTS AND PIERS 1 & 4

✱UNLESS NOTED OTHERWISE.

	PLATE "A"			PLATE "B"			PLATE "C"			PLATE "D"			PLATE "D" TYPE	ANCHOR BOLT SIZE	ANCHOR BOLT LENGTH	NO. OF BRG'S REQ'D.	LOCATION	HEIGHT FEET	
	'X'	'Y'	'Z'	'X'	'Y'	'Z'	'X'	'Y'	'Z'	'X'	'Y'	'Z'							
EXPANSION BEARING	11"	5/8"	1'-4"	7"	1/2"	1'-4"	9"	1 15/16 "	1'-6 1/4"	8"	1 1/2"	2'-2"	I	1 1/2" ϕ	2'-1"	8	AT ABUTMENTS	0.401'	●
	1'-7"	5/8"	1'-8"	1'-3"	1/2"	1'-8"	1'-5"	3 7/8"	1'-10 1/4"	1'-6"	3 7/8"	2'-7"	II	1 1/2" ϕ	1'-10"	8	AT PIERS 1 & 4	0.760'	
FIXED BEARING							5"	2 3/8"	1'-8"	1'-6"	3 7/8"	2'-6"	II	1 1/2" ϕ	2'-4 1/2"	8	AT PIERS 2 & 3	0.531'	▨

● SHIM PLATES REQUIRED. SEE SHEET 10 FOR DETAILS.

▨ PRECAST CONCRETE BEARING BLOCK REQUIRED. SEE SHEET 10 FOR DETAILS.

BEARING NOTES

ALL BEARINGS ARE SYMMETRICAL ABOUT ℄ OF GIRDER AND ℄ OF BEARING.

ALL STRUCTURAL STEEL BEARING PLATES SHALL BE FLAT ROLLED STEEL PLATES WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL.

ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUTS.

ALL FINISHED SURFACES SHALL BE MACHINE FINISHED BY AN AUTOMATIC PROCESS.

CHAMFER ANCHOR BOLTS PRIOR TO THREADING.

ANCHOR BOLTS SHALL BE THREADED 3". PROVIDE ONE STANDARD WROUGHT WASHER AND ONE HEX NUT PER BOLT. BOLT LENGTH TO BE AS SHOWN FOR 1 1/2" ϕ BOLTS. PROJECT ANCHOR BOLTS, MASONRY PLATE "D" THICKNESS + SHIM PLATE OR BEARING BLOCK IF APPLICABLE + 2 1/4", ABOVE TOP OF CONCRETE.

CHAMFER TOP OF PINTLES 1/8". DRILL HOLES FOR ALL PINTLES IN MASONRY PLATE "D" FOR A DRIVING FIT.

ALL MATERIAL IN BEARINGS, INCLUDING SHIM PLATES, BUT EXCLUDING ANCHOR BOLTS, STAINLESS STEEL SHEET, TEFLON SURFACE, PINTLES, NUTS AND WASHERS SHALL CONFORM TO ASTM A709 GRADE 50W.

STEEL PINTLES SHALL CONFORM TO ASTM A449 OR MATERIAL OF EQUIVALENT YIELD STRENGTH AND ELONGATION.

ANCHOR BOLTS, NUTS AND WASHERS SHALL CONFORM TO ASTM A709 GRADE 36, OR MATERIAL OF EQUIVALENT YIELD STRENGTH AND ELONGATION.

PROVIDE 1/8" THICK BEARING PAD THE SAME SIZE AS MASONRY PLATE "D" FOR EACH BEARING.

ALL MATERIAL IN BEARINGS, INCLUDING SHIM PLATES, AND BEARING PADS, SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "BEARING ASSEMBLIES EXPANSION B-37-136" OR "BEARING ASSEMBLIES FIXED B-37-136", EACH.

ANCHOR BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153, CLASS C.

PLACE SHIM PLATES BETWEEN BEARING PAD AND MASONRY PLATE "D". PLATES SHALL HAVE "X" AND "Z" DIMENSIONS THAT MATCH MASONRY PLATE "D".

IN LIEU OF USING SHIM PLATES, FABRICATOR MAY INCREASE THICKNESS OF TOP PLATE "A" OR MASONRY PLATE "D" BY THE SHIM PLATE THICKNESS.

FIXED BEARINGS:
ROCKER PLATE "C" SHALL BE SHOP PAINTED WITH A WELDABLE PRIMER.
MASONRY PLATE "D" SHALL BE GALVANIZED.

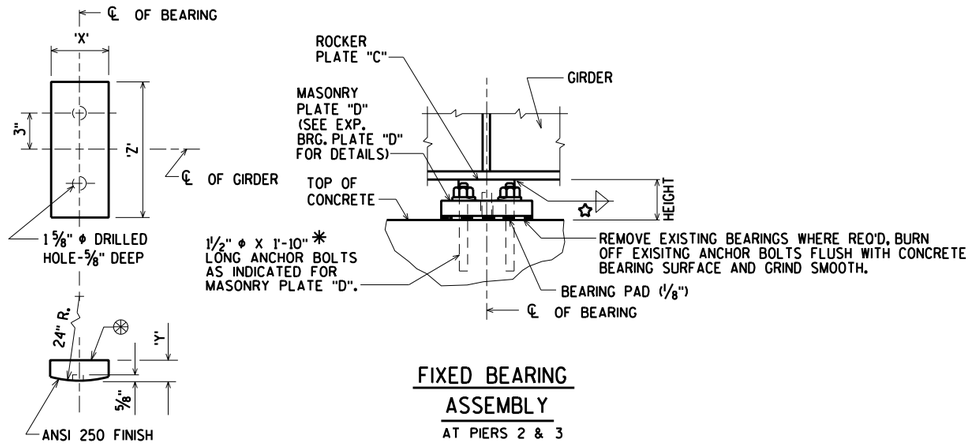
EXPANSION BEARINGS:
TOP PLATE "A" AND STEEL PLATE "B" SHALL BE SHOP PAINTED. USE A WELDABLE PRIMER ON TOP PLATE "A".
ROCKER PLATE "C", MASONRY PLATE "D", AND SHIM PLATE "E" WHERE REQUIRED SHALL BE GALVANIZED. DO NOT PAINT STAINLESS STEEL OR TEFLON SURFACES.

✱ FINISH THESE SURFACES TO ANSI 250 IF 'Y' DIMENSION IS GREATER THAN 2".

◪ PROVIDE A METHOD FOR HANDLING ROCKER PLATE "C" DURING GALVANIZING.

⚠ BOND STEEL PLATE "B" AND TEFLON WITH ADHESIVE MATERIAL MEETING FEDERAL SPECIFICATION MMM-A-134, FEP FILM OR EQUAL.

AT INSTALLATION, ENSURE STAINLESS STEEL SLIDING FACE OF THE UPPER ELEMENT AND THE TFE SLIDING FACE OF THE LOWER ELEMENT HAVE THE SURFACE FINISH SPECIFIED AND ARE CLEAN AND FREE OF ALL DUST, MOISTURE, AND OTHER FOREIGN MATTER.



ROCKER PLATE "C"

FIXED BEARING ASSEMBLY

AT PIERS 2 & 3

✱UNLESS NOTED OTHERWISE.

FIXED BEARING

✩ TABLE OF FILLET WELD SIZES

MATERIAL THICKNESS OF THICKER PART JOINED.	✣ MIN. SIZE OF FILLET WELD
TO 1/2" INCLUSIVE	3/16"
OVER 1/2" TO 3/4"	1/4"
OVER 3/4" TO 1 1/2"	△ 5/16"
OVER 1 1/2"	△ 3/8"

✣ EXCEPT THAT THE WELD SIZE SHALL NOT EXCEED THE THICKNESS OF THE THINNER PART JOINED.

△ MIN. PASS SIZE IS 5/16"

WORK THIS SHEET WITH SHEET 10.

NO.	DATE	REVISION	BY

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STRUCTURE B-37-136

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BEARING DETAILS

SHEET 9 OF 25
479

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8

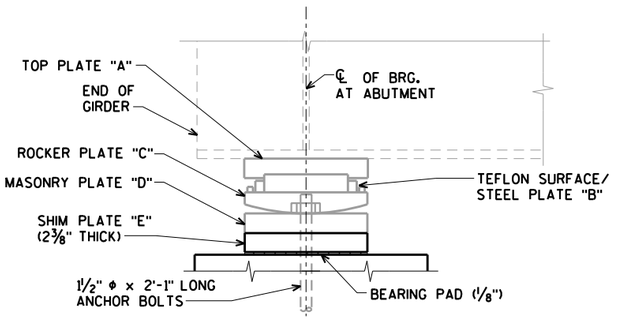
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10/31/2013

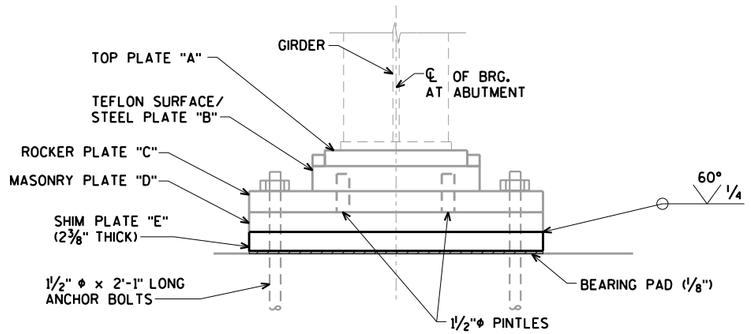
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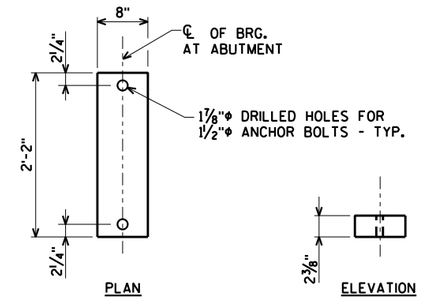


SIDE ELEVATION



FRONT ELEVATION

BEARING SHIM PLATES AT ABUTMENTS

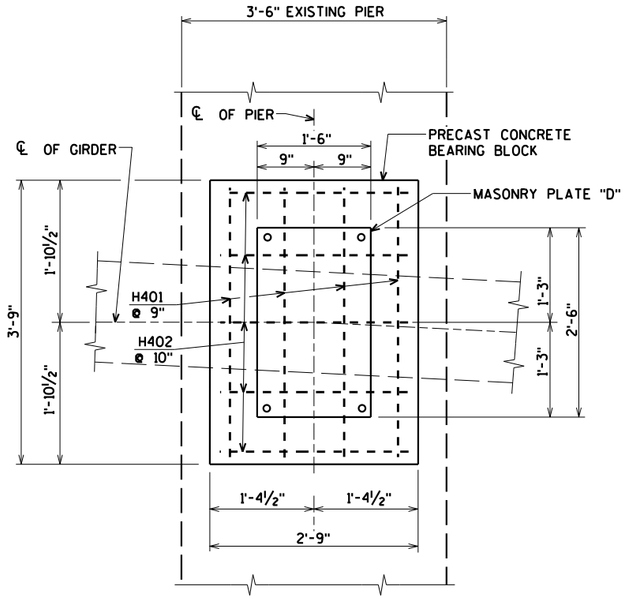


PLAN ELEVATION

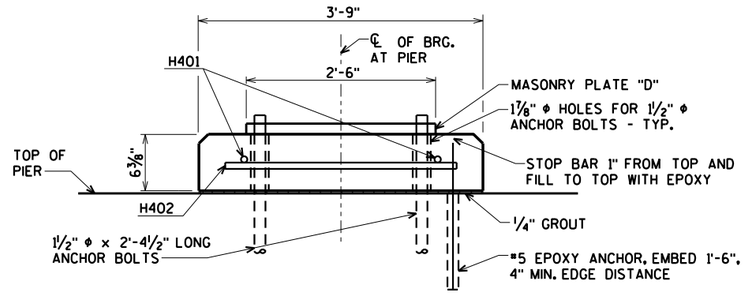
SHIM PLATE "E" DETAILS

NOTE:

REMOVE EXISTING EXPANSION BEARINGS AND EXISTING ANCHOR BOLTS FLUSH WITH CONCRETE BEARING SURFACE AND GRIND SMOOTH.



PRECAST CONCRETE BEARING BLOCK PLAN AT PIERS 2 & 3



PRECAST CONCRETE BEARING BLOCK DETAIL AT PIERS 2 & 3

NOTES:

REMOVE EXISTING ANCHOR BOLTS FLUSH WITH CONCRETE BEARING SURFACE AND GRIND SMOOTH.

CONTRACTOR MAY PROPOSE A CAST-IN-PLACE ALTERNATE SUBJECT TO REVIEW AND APPROVAL BY THE BUREAU OF STRUCTURES.

ANCHOR IN AT LEAST 4 LOCATIONS (ANCHORS INCLUDE EPOXY ANCHORS, ANCHOR BOLTS, OR COMBINATION).

GROUT ¼" BENEATH PRECAST ELEMENT.

BILL OF BARS

BAR. NO.	COATED BAR	NO. REQ'D.	LENGTH	BENT BAR	BUNDLED	BAR SERIES	140# COATED ✳ LOCATION
H401	X	32	3-5				PIER SHIM TRANS.
H402	X	40	2-5				PIER SHIM LONG.

✳ BAR STEEL TO BE INCLUDED IN THE BID PRICE FOR "PRECAST CONCRETE BEARING BLOCK".

WORK THIS SHEET WITH SHEET 9.

NO.	DATE	REVISION	BY

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DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-136

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BEARING BLOCK AND SHIM DETAILS

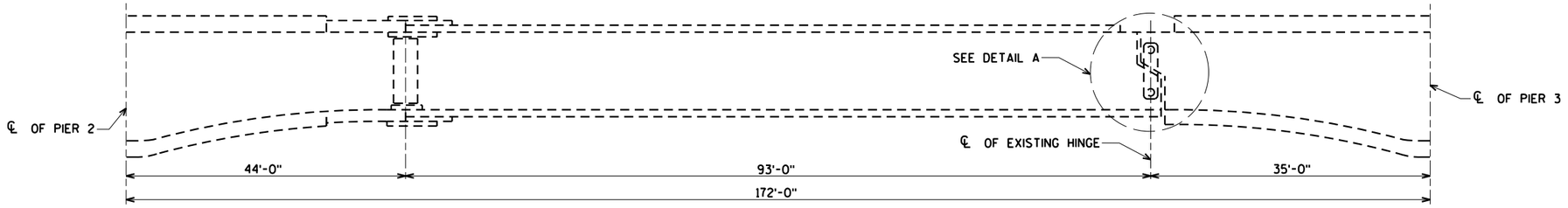
SHEET 10 OF 25
480

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STATE PROJECT NUMBER

1053-02-75



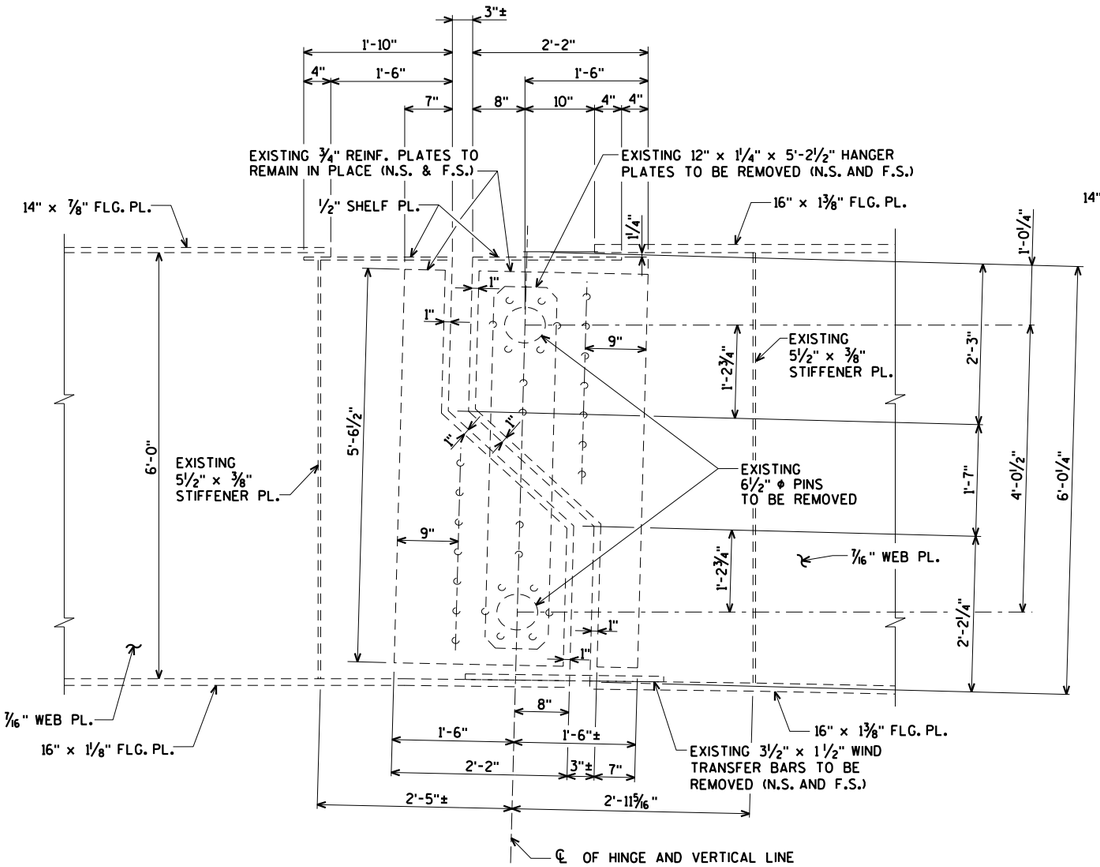
EXISTING GIRDER ELEVATION SPAN 3

NOTES

REMOVE EXISTING HANGER PLATES, PINS, AND WIND TRANSFER PLATES.

BID ITEM SHALL BE "EXISTING PIN AND HANGER RETROFIT", EACH. ALL MATERIAL AND WORK INVOLVED SHALL BE PAID FOR UNDER "EXISTING PIN AND HANGER RETROFIT."

ALL FIELD DRILLED HOLES SHALL HAVE PAINT REMOVED FOR AN AREA 3"± IN DIAMETER AROUND THE HOLE IN ORDER TO ACCOMPLISH A FRICTION CONNECTION.



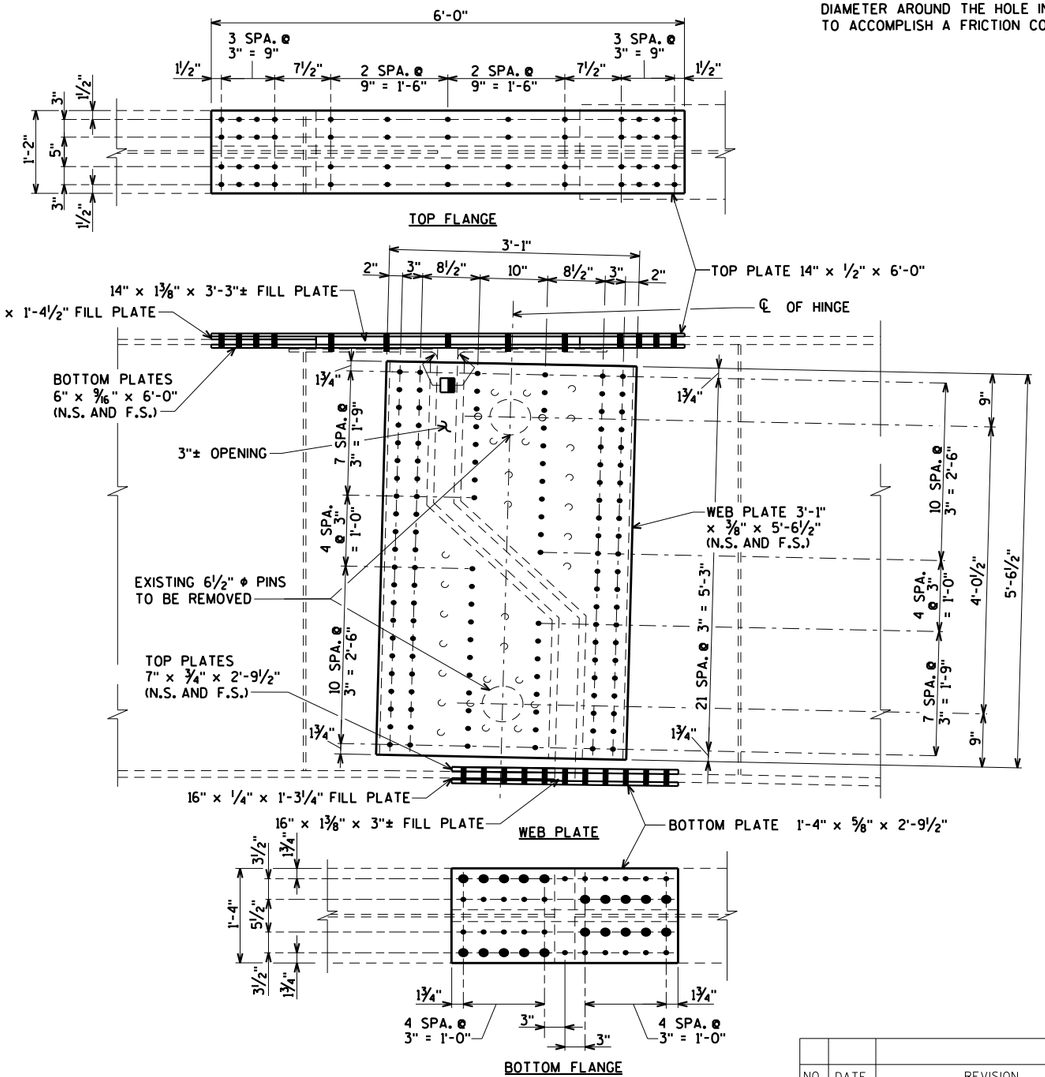
DETAIL A
EXISTING HINGE

NOTE: ALL BOLTS IN PIN AND HANGER RETRO-FIT SPLICE TO BE ⅞"ϕ A325 H.S.

N.S. DENOTES NEAR SIDE
F.S. DENOTES FAR SIDE

◨ GRIND EXISTING SHELF PLATE AND WEB IN FIELD SO THAT A ¾"± RADIUS IS PROVIDED.

● EXISTING BOLT HOLES FOR EXISTING ¾"ϕ BOLTS TO BE ENLARGED FOR NEW ⅞"ϕ A325 H.S. BOLTS.



PIN AND HANGER RETRO-FIT SPLICE DETAIL
(CONTRACTOR TO SUPPORT GIRDERS DURING RETROFIT)
(FOUR LOCATIONS)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-136

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EXISTING PIN AND HANGER RETROFIT

SHEET 11 OF 25
481

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
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10/31/2013

PENTABLE:BReau_shd_util.tbl

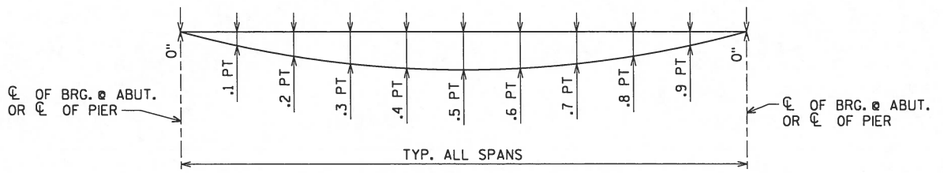
GIRDER DEFLECTION TABLE (IN INCHES)

		SPAN 1												SPAN 2										
GIRDER		CL BRG. W. ABUT.	0.1 PT	0.2 PT	0.3 PT	0.4 PT	0.5 PT	0.6 PT	CL F.S #1	0.7 PT	0.8 PT	0.9 PT	CL OF PIER 1	0.1 PT	0.2 PT	CL F.S #2	0.3 PT	0.4 PT	0.5 PT	0.6 PT	0.7 PT	CL F.S #3	0.8 PT	0.9 PT	CL OF PIER 2
1	TOTAL DELF.	0.0	1.0	1.9	2.5	2.7	2.5	2.0	1.5	1.3	0.6	0.2	0.0	0.2	0.8	1.4	1.6	2.2	2.5	2.3	1.6	1.2	0.8	0.2	0.0
	CONC. ONLY	0.0	0.9	1.6	2.1	2.2	2.1	1.7	1.3	1.1	0.5	0.1	0.0	0.2	0.7	1.2	1.4	2.0	2.2	2.0	1.4	1.1	0.7	0.2	0.0
2	TOTAL DELF.	0.0	1.2	2.2	2.8	3.0	2.8	2.3	1.7	1.5	0.7	0.2	0.0	0.2	0.9	1.6	1.8	2.6	2.9	2.6	1.8	1.4	0.9	0.2	0.0
	CONC. ONLY	0.0	1.0	1.9	2.4	2.6	2.4	2.0	1.5	1.3	0.6	0.2	0.0	0.2	0.8	1.5	1.6	2.3	2.5	2.3	1.6	1.2	0.8	0.2	0.0
3	TOTAL DELF.	0.0	1.2	2.2	2.8	3.0	2.8	2.3	1.7	1.5	0.7	0.2	0.0	0.2	0.9	1.6	1.8	2.6	2.9	2.6	1.8	1.4	0.9	0.2	0.0
	CONC. ONLY	0.0	1.0	1.9	2.4	2.6	2.4	2.0	1.5	1.3	0.6	0.2	0.0	0.2	0.8	1.5	1.6	2.3	2.5	2.3	1.6	1.2	0.8	0.2	0.0
4	TOTAL DELF.	0.0	1.0	1.9	2.5	2.7	2.5	2.0	1.5	1.3	0.6	0.2	0.0	0.2	0.8	1.4	1.6	2.2	2.5	2.3	1.6	1.2	0.8	0.2	0.0
	CONC. ONLY	0.0	0.9	1.6	2.1	2.2	2.1	1.7	1.3	1.1	0.5	0.1	0.0	0.2	0.7	1.2	1.4	2.0	2.2	2.0	1.4	1.1	0.7	0.2	0.0

		SPAN 3												SPAN 4										
GIRDER		CL OF PIER 2	0.1 PT	0.2 PT	CL F.S #4	0.3 PT	0.4 PT	0.5 PT	0.6 PT	0.7 PT	CL F.S #5 & EXISTING HINGE	0.8 PT	0.9 PT	CL OF PIER 3	0.1 PT	0.2 PT	CL F.S #6	0.3 PT	0.4 PT	0.5 PT	0.6 PT	0.7 PT	CL F.S #7	0.8 PT	0.9 PT	CL OF PIER 4
1	TOTAL DELF.	0.0	0.3	0.9	1.4	1.8	2.5	2.7	2.5	1.8	1.0	1.0	0.3	0.0	0.2	0.8	1.0	1.4	1.9	2.1	1.9	1.3	1.1	0.6	0.1	0.0
	CONC. ONLY	0.0	0.3	0.8	1.2	1.5	2.1	2.4	2.2	1.6	0.9	0.9	0.3	0.0	0.2	0.6	0.8	1.1	1.5	1.7	1.5	1.0	0.9	0.4	0.1	0.0
2	TOTAL DELF.	0.0	0.3	1.1	1.6	2.1	2.8	3.1	2.9	2.1	1.2	1.2	0.3	0.0	0.2	0.9	1.1	1.6	2.2	2.4	2.1	1.5	1.3	0.7	0.1	0.0
	CONC. ONLY	0.0	0.3	1.0	1.4	1.8	2.5	2.7	2.5	1.9	1.1	1.1	0.3	0.0	0.2	0.7	0.9	1.3	1.8	2.0	1.7	1.2	1.0	0.5	0.1	0.0
3	TOTAL DELF.	0.0	0.3	1.1	1.6	2.1	2.8	3.1	2.9	2.1	1.2	1.2	0.3	0.0	0.2	0.9	1.1	1.6	2.2	2.4	2.1	1.5	1.3	0.7	0.1	0.0
	CONC. ONLY	0.0	0.3	1.0	1.4	1.8	2.5	2.7	2.5	1.9	1.1	1.1	0.3	0.0	0.2	0.7	0.9	1.3	1.8	2.0	1.7	1.2	1.0	0.5	0.1	0.0
4	TOTAL DELF.	0.0	0.3	0.9	1.4	1.8	2.5	2.7	2.5	1.8	1.0	1.0	0.3	0.0	0.2	0.8	1.0	1.4	1.9	2.1	1.9	1.3	1.1	0.6	0.1	0.0
	CONC. ONLY	0.0	0.3	0.8	1.2	1.5	2.1	2.4	2.2	1.6	0.9	0.9	0.3	0.0	0.2	0.6	0.8	1.1	1.5	1.7	1.5	1.0	0.9	0.4	0.1	0.0

		SPAN 5											
GIRDER		CL OF PIER 4	0.1 PT	0.2 PT	0.3 PT	CL F.S #8	0.4 PT	0.5 PT	0.6 PT	0.7 PT	0.8 PT	0.9 PT	CL BRG. E. ABUT.
1	TOTAL DELF.	0.0	0.3	0.7	1.4	1.6	2.1	2.6	2.8	2.6	2.0	1.1	0.0
	CONC. ONLY	0.0	0.2	0.7	1.3	1.4	1.9	2.3	2.4	2.2	1.7	0.9	0.0
2	TOTAL DELF.	0.0	0.3	0.9	1.7	1.9	2.4	3.0	3.2	3.0	2.3	1.3	0.0
	CONC. ONLY	0.0	0.3	0.8	1.5	1.7	2.2	2.7	2.8	2.6	2.0	1.1	0.0
3	TOTAL DELF.	0.0	0.3	0.9	1.7	1.9	2.4	3.0	3.2	3.0	2.3	1.3	0.0
	CONC. ONLY	0.0	0.3	0.8	1.5	1.7	2.2	2.7	2.8	2.6	2.0	1.1	0.0
4	TOTAL DELF.	0.0	0.3	0.7	1.4	1.6	2.1	2.6	2.8	2.6	2.0	1.1	0.0
	CONC. ONLY	0.0	0.2	0.7	1.3	1.4	1.9	2.3	2.4	2.2	1.7	0.9	0.0

NOTE: DEFLECTIONS ARE THEORETICAL AND MAY VARY IN THE FIELD.
TOTAL DEFLECTION = CONCRETE ONLY DEFLECTION + STEEL DEAD LOAD DEFLECTION.
CONCRETE ONLY = CONCRETE DECK DEFLECTION + COMPOSITE DEAD LOAD DEFLECTION



DEFLECTION DIAGRAM

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-136

DRAWN BY KAZ | PLANS CK'D. AEB

TABLE OF DEFLECTIONS

SHEET 12 OF 25
482

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

$PRFNAME$
U:\41-0637.00 - STH 29 over WIRiver\B-37-136\BRIDGE\12__B-37-136 deflection.dgn

STATE PROJECT NUMBER

1053-02-75

TOP OF DECK ELEVATIONS

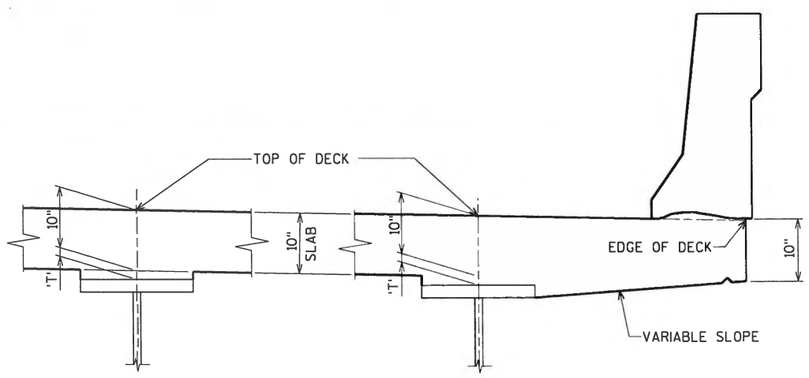
LOCATION	CL BRG. W. ABUT.	0.1 PT	0.2 PT	0.3 PT	0.4 PT	0.5 PT	0.6 PT	CL F.S #1	0.7 PT	0.8 PT	0.9 PT	CL OF PIER 1
LT EDGE SLAB	1181.88	1182.22	1182.56	1182.91	1183.25	1183.59	1183.93	1184.18	1184.27	1184.61	1184.96	1185.30
GIRDER 1	1181.73	1182.07	1182.41	1182.75	1183.09	1183.43	1183.78	1184.03	1184.12	1184.46	1184.80	1185.14
GIRDER 2	1181.27	1181.60	1181.95	1182.29	1182.63	1182.98	1183.32	1183.57	1183.67	1184.00	1184.35	1184.69
GIRDER 3	1180.80	1181.14	1181.48	1181.83	1182.17	1182.52	1182.86	1183.11	1183.21	1183.55	1183.89	1184.23
GIRDER 4	1180.34	1180.68	1181.02	1181.37	1181.71	1182.06	1182.40	1182.65	1182.75	1183.09	1183.43	1183.78
RT EDGE SLAB	1180.19	1180.54	1180.88	1181.22	1181.57	1181.91	1182.26	1182.50	1182.60	1182.95	1183.29	1183.64

LOCATION	CL OF PIER 1	0.1 PT	0.2 PT	CL F.S #2	0.3 PT	0.4 PT	0.5 PT	0.6 PT	0.7 PT	CL F.S #3	0.8 PT	0.9 PT	CL OF PIER 2
LT EDGE SLAB	1185.30	1185.73	1186.16	1186.50	1186.59	1187.01	1187.44	1187.87	1188.30	1188.49	1188.73	1189.16	1189.59
GIRDER 1	1185.14	1185.57	1186.01	1186.35	1186.44	1186.86	1187.29	1187.72	1188.15	1188.34	1188.58	1189.01	1189.43
GIRDER 2	1184.69	1185.12	1185.55	1185.89	1185.98	1186.41	1186.84	1187.27	1187.70	1187.89	1188.13	1188.56	1188.99
GIRDER 3	1184.23	1184.66	1185.10	1185.44	1185.53	1185.96	1186.39	1186.82	1187.25	1187.44	1187.68	1188.11	1188.54
GIRDER 4	1183.78	1184.21	1184.64	1184.99	1185.08	1185.50	1185.94	1186.37	1186.80	1186.99	1187.23	1187.66	1188.09
RT EDGE SLAB	1183.64	1184.07	1184.50	1184.84	1184.93	1185.36	1185.80	1186.23	1186.66	1186.85	1187.09	1187.52	1187.96

LOCATION	CL OF PIER 2	0.1 PT	0.2 PT	CL F.S #4	0.3 PT	0.4 PT	0.5 PT	0.6 PT	0.7 PT	CL F.S #5	0.8 PT	0.9 PT	CL OF PIER 3
LT EDGE SLAB	1189.59	1190.01	1190.44	1190.68	1190.87	1191.30	1191.73	1192.16	1192.59	1193.00	1193.01	1193.44	1193.87
GIRDER 1	1189.43	1189.86	1190.29	1190.53	1190.72	1191.15	1191.58	1192.01	1192.44	1192.86	1192.87	1193.31	1193.75
GIRDER 2	1188.99	1189.42	1189.85	1190.09	1190.28	1190.70	1191.13	1191.56	1192.00	1192.42	1192.43	1192.87	1193.31
GIRDER 3	1188.54	1188.97	1189.40	1189.64	1189.83	1190.26	1190.69	1191.12	1191.55	1191.98	1191.99	1192.43	1192.87
GIRDER 4	1188.09	1188.52	1188.96	1189.20	1189.39	1189.82	1190.25	1190.68	1191.11	1191.53	1191.55	1191.99	1192.43
RT EDGE SLAB	1187.96	1188.39	1188.82	1189.06	1189.25	1189.68	1190.11	1190.55	1190.98	1191.39	1191.41	1191.84	1192.27

LOCATION	CL OF PIER 3	0.1 PT	0.2 PT	CL F.S #6	0.3 PT	0.4 PT	0.5 PT	0.6 PT	0.7 PT	CL F.S #7	0.8 PT	0.9 PT	CL OF PIER 4
LT EDGE SLAB	1193.87	1194.30	1194.73	1194.87	1195.16	1195.59	1196.02	1196.44	1196.87	1196.96	1197.30	1197.73	1198.16
GIRDER 1	1193.75	1194.18	1194.63	1194.77	1195.05	1195.47	1195.89	1196.31	1196.73	1196.82	1197.16	1197.58	1198.01
GIRDER 2	1193.31	1193.75	1194.19	1194.33	1194.61	1195.03	1195.45	1195.87	1196.30	1196.39	1196.72	1197.15	1197.58
GIRDER 3	1192.87	1193.31	1193.75	1193.90	1194.18	1194.60	1195.02	1195.44	1195.87	1195.95	1196.29	1196.72	1197.15
GIRDER 4	1192.43	1192.87	1193.31	1193.46	1193.74	1194.16	1194.58	1195.01	1195.43	1195.52	1195.86	1196.29	1196.72
RT EDGE SLAB	1192.27	1192.70	1193.14	1193.28	1193.57	1194.00	1194.43	1194.86	1195.30	1195.39	1195.73	1196.16	1196.59

LOCATION	CL OF PIER 4	0.1 PT	0.2 PT	0.3 PT	CL F.S #8	0.4 PT	0.5 PT	0.6 PT	0.7 PT	0.8 PT	0.9 PT	CL BRG. E. ABUT.
LT EDGE SLAB	1198.16	1198.50	1198.84	1199.18	1199.28	1199.53	1199.87	1200.21	1200.55	1200.89	1201.24	1201.58
GIRDER 1	1198.01	1198.36	1198.70	1199.04	1199.14	1199.39	1199.72	1200.07	1200.41	1200.75	1201.10	1201.44
GIRDER 2	1197.58	1197.93	1198.27	1198.62	1198.72	1198.96	1199.30	1199.64	1199.98	1200.33	1200.67	1201.02
GIRDER 3	1197.15	1197.50	1197.84	1198.19	1198.29	1198.53	1198.87	1199.22	1199.56	1199.90	1200.25	1200.60
GIRDER 4	1196.72	1197.07	1197.41	1197.76	1197.86	1198.11	1198.45	1198.79	1199.13	1199.48	1199.83	1200.17
RT EDGE SLAB	1196.59	1196.94	1197.28	1197.63	1197.72	1197.97	1198.31	1198.66	1199.00	1199.35	1199.69	1200.04



INTERIOR GIRDER EXTERIOR GIRDER

CONCRETE HAUNCH DETAIL

TO DETERMINE 'T': AFTER ALL STRUCTURAL STEEL HAS BEEN ERECTED. ELEVATIONS OF THE TOP FLANGES OR TOP OF SPLICE PLATES, WHICHEVER APPLIES, SHALL BE TAKEN AT CENTERLINE OF BEARINGS, CENTERLINE OF FIELD SPLICES, AND AT TENTH POINTS OF EACH SPAN.

TOP OF DECK ELEVATION AT FINAL GRADE
- TOP OF STEEL ELEVATION AFTER PLACEMENT
+ CONCRETE ONLY DEFLECTION: DOWNWARD DEFLECTION IS ADDED, UPWARD DEFLECTION IS SUBTRACTED
- SLAB THICKNESS (10")

= HAUNCH THICKNESS 'T' AT CENTERLINE OF GIRDER

AVERAGE 'T' USED FOR ESTIMATING CONCRETE QUANTITIES IS 2½".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-136

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DECK ELEVATIONS

SHEET 13 OF 25

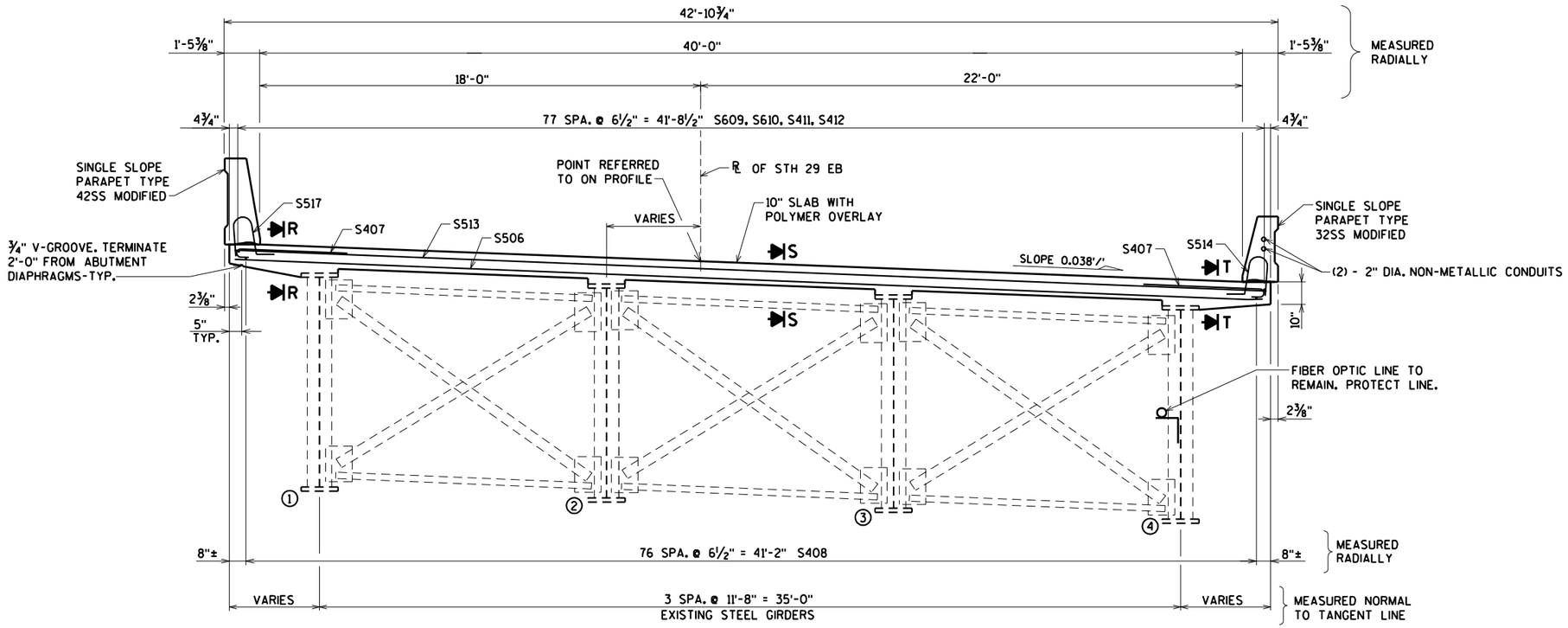
483

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
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10/29/2013
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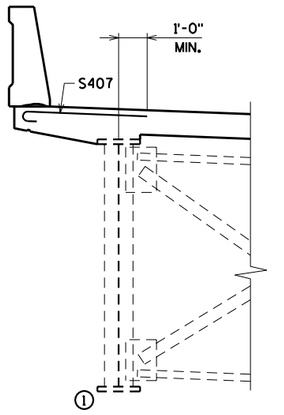
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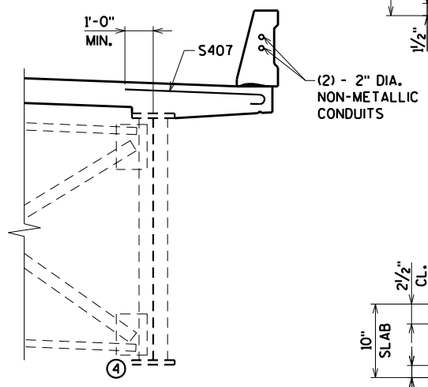


CROSS SECTION THRU DECK

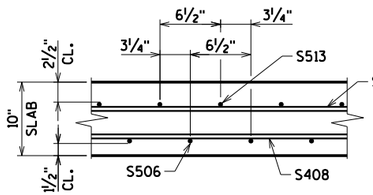
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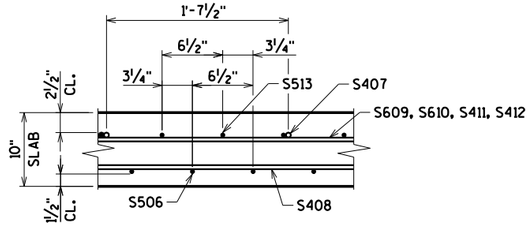
LEFT OVERHANG REINFORCING DETAIL



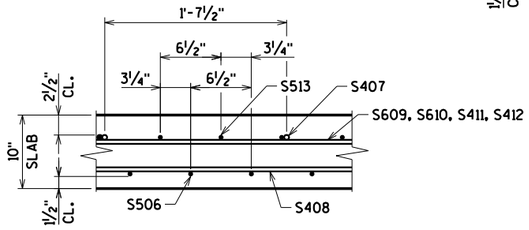
RIGHT OVERHANG REINFORCING DETAIL



SECTION S



SECTION T



SECTION R

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-136

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SUPERSTRUCTURE

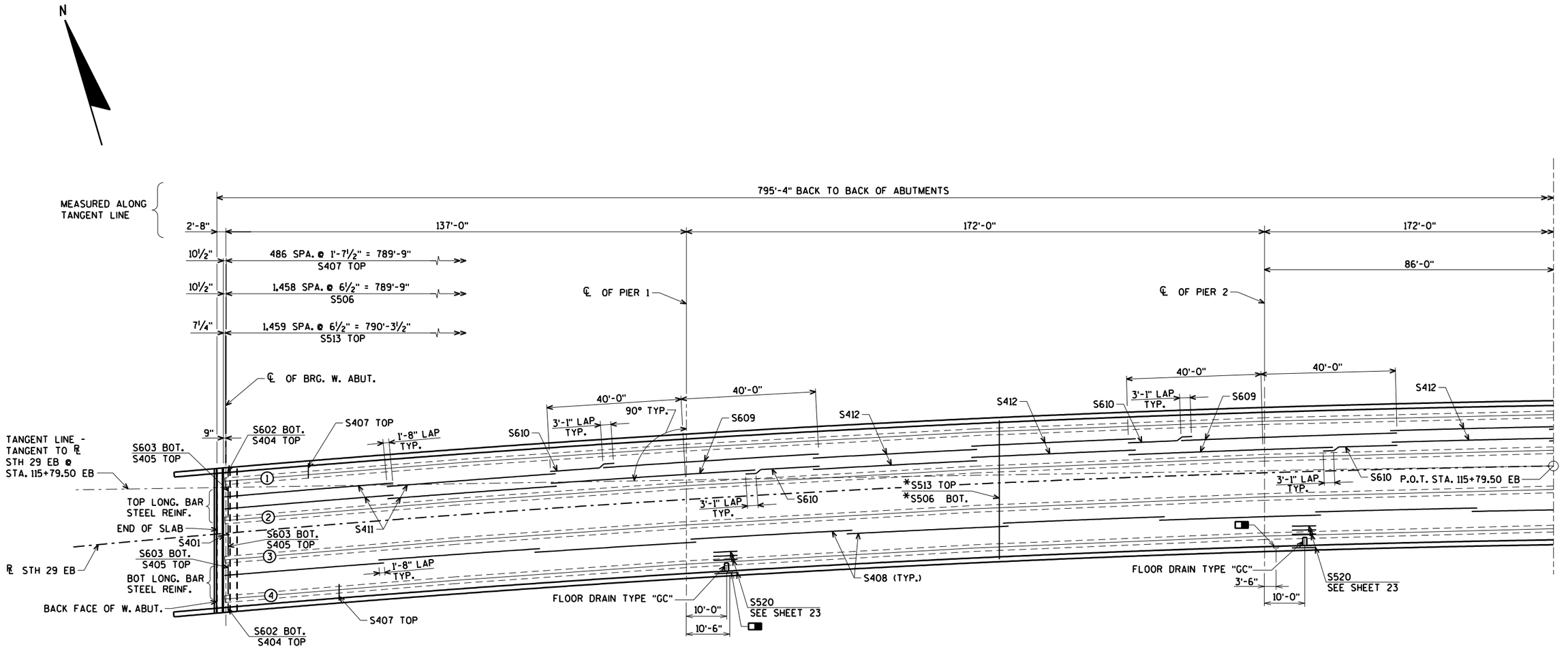
SHEET 14 OF 25
484

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
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12/3/2013
PENTABLE:BReau_shd_util.tbl

STATE PROJECT NUMBER

1053-02-75



PART PLAN

JUNCTION BOX 18x12x6-INCH IN PARAPET

*PLACE BARS NORMAL TO TANGENT LINE

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-136

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SUPERSTRUCTURE PLAN

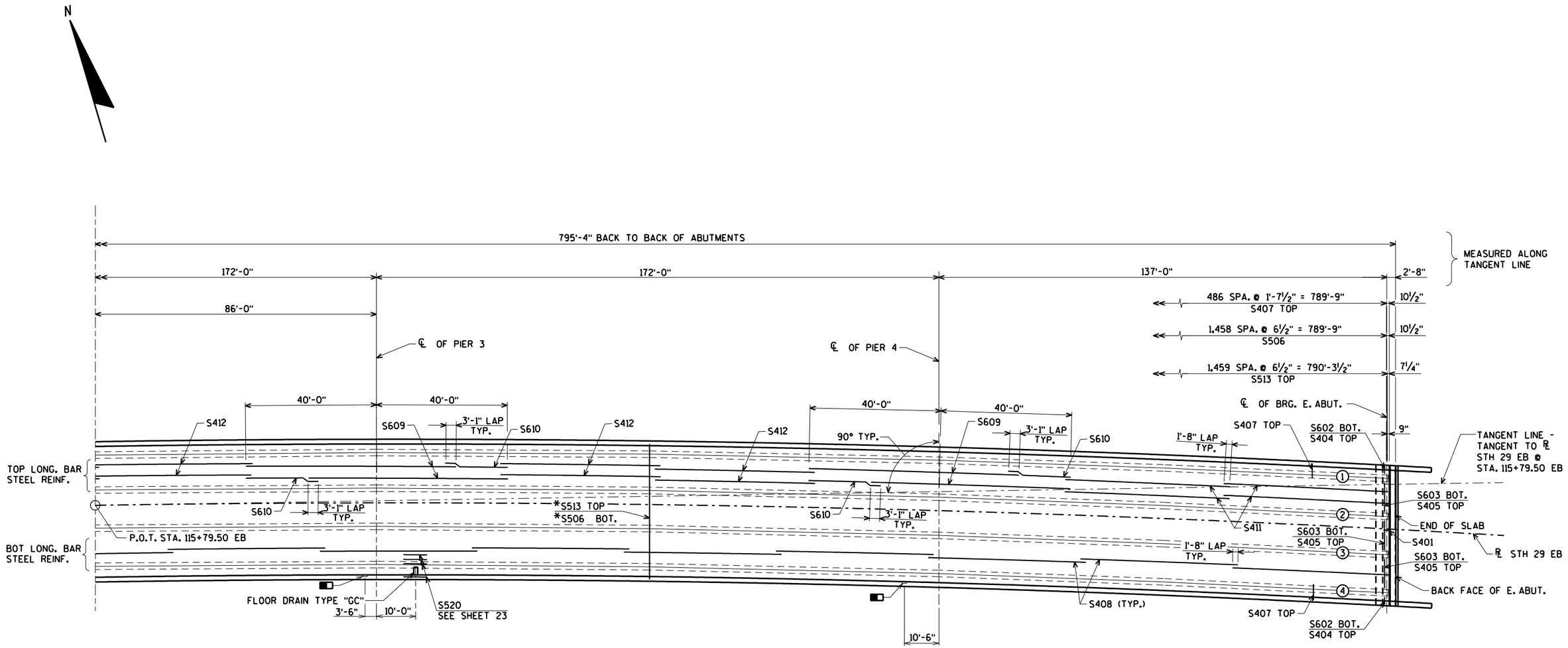
SHEET 15 OF 25
485

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STATE PROJECT NUMBER

1053-02-75



PART PLAN

JUNCTION BOX 18x12x6-INCH IN PARAPET

*PLACE BARS NORMAL TO TANGENT LINE

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-136

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SUPERSTRUCTURE PLAN

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486

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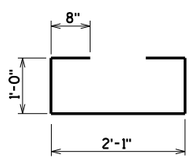
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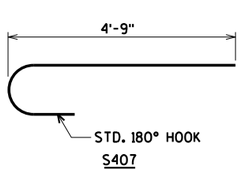
BILL OF BARS

BAR. NO.	COATED BAR	NO. REQ'D.	LENGTH	BENT BAR	BUNDLED	BAR SERIES	277,540# COATED LOCATION
S401	X	110	5-1	X			ABUT. DIAPH. VERT.
S602	X	20	2-7				ABUT. DIAPH. BOT. HORIZ. EXT.
S603	X	30	10-0				ABUT. DIAPH. BOT. HORIZ. INT.
S404	X	8	2-7				ABUT. DIAPH. TOP HORIZ. EXT.
S405	X	12	10-0				ABUT. DIAPH. TOP HORIZ. INT.
S506	X	1462	42-1				SLAB TRANS. BOT.
S407	X	976	5-8	X			SLAB OVERHANG
S408	X	1463	43-3				SLAB LONG. BOT.
S609	X	312	60-0				SLAB LONG. TOP @ PIERS
S610	X	312	23-1				SLAB LONG. TOP @ PIERS
S411	X	312	50-4				SLAB LONG. TOP IN SPANS 1 & 5
S412	X	468	48-6				SLAB LONG. TOP IN SPANS 2, 3 & 4
S513	X	1463	42-1				SLAB TRANS. TOP
S514	X	1187	4-5	X			SLAB @ PARAPET 32SS
S515	X	1187	5-0	X			PARAPET 32SS VERT.
S516	X	102	49-0				PARAPET 32SS HORIZ.
S517	X	1187	4-5	X			SLAB @ PARAPET 42SS
S518	X	1187	6-8	X			PARAPET 42SS VERT.
S519	X	136	49-0				PARAPET 42SS HORIZ.
S520	X	12	5-0				SLAB @ FLOOR DRAINS

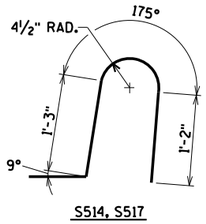
BENDING DIMENSIONS ARE OUT TO OUT OF BARS.



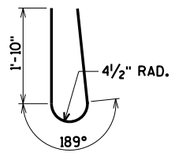
S401



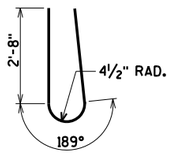
S407



S514, S517



S515



S518

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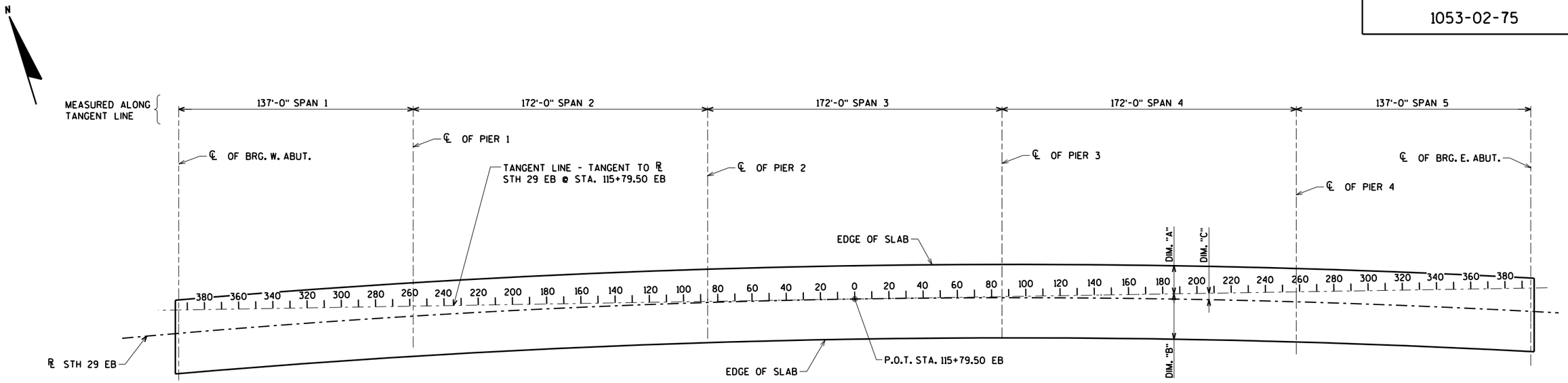
STRUCTURE B-37-136

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SUPERSTRUCTURE
BILL OF BARS

SHEET 17 OF 25
487

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PLAN

TANGENT OFFSETS

DISTANCE FROM P.O.T.	DIM. "A"	DIM. "B"	DIM. "C"
0	19'-3"	23'-3"	0"
10	19'-2⅞"	23'-3⅛"	⅛"
20	19'-2⅝"	23'-3⅜"	⅜"
30	19'-2"	23'-4"	1"
40	19'-1⅜"	23'-4⅝"	1⅝"
50	19'-0⅝"	23'-5⅝"	2⅝"
60	18'-11¼"	23'-6¾"	3¾"
70	18'-9⅞"	23'-8⅛"	5⅛"
80	18'-8⅜"	23'-9¾"	6¾"
90	18'-6½"	23'-11½"	8½"
100	18'-4½"	24'-1½"	10½"
110	18'-2⅜"	24'-3¾"	1'-0⅝"
120	18'-0"	24'-6⅛"	1'-3⅛"
130	17'-9⅜"	24'-8¾"	1'-5¾"
140	17'-6½"	24'-11⅝"	1'-8½"
150	17'-3½"	25'-2⅝"	1'-11⅝"
160	17'-0¼"	25'-5⅞"	2'-2⅞"
170	16'-8⅞"	25'-9⅜"	2'-6¼"
180	16'-5⅛"	26'-1⅛"	2'-10"
190	16'-1¼"	26'-5"	3'-1⅞"
200	15'-9¼"	26'-9⅛"	3'-5⅞"
210	15'-4½"	27'-1⅜"	3'-10¼"
220	15'-0½"	27'-5⅞"	4'-2¾"
230	14'-7¾"	27'-10⅝"	4'-7⅜"
240	14'-2⅞"	28'-3⅜"	5'-0⅜"
250	13'-9¾"	28'-8¾"	5'-5½"
260	13'-4⅜"	29'-2⅛"	5'-10⅞"
270	12'-10⅞"	29'-7¾"	6'-4⅜"
280	12'-5⅛"	30'-1½"	6'-10⅛"
290	11'-11⅛"	30'-7½"	7'-4⅛"
300	11'-5"	31'-1¾"	7'-10¼"
310	10'-10⅝"	31'-8⅛"	8'-4¾"
320	10'-4"	32'-2¾"	8'-11⅜"
330	9'-9¼"	32'-9⅝"	9'-6⅛"
340	9'-2¼"	33'-4⅝"	10'-1⅛"
350	8'-7"	33'-11⅞"	10'-8⅜"
360	7'-11⅝"	34'-7⅜"	11'-3⅞"
370	7'-4"	35'-3⅛"	11'-11½"
380	6'-8⅛"	35'-11"	12'-7⅜"
390	6'-0⅛"	36'-7⅛"	13'-3½"

CURVE DATA

(STH 29 EB)

P.I. STA. 111+54.37 EB
△ = 20°09'40"
D = 1°00'00"
R = 5,729.58'
T = 1,018.59'
L = 2,016.12'
E = 89.84'
S.E. = 0.038'/'

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-136

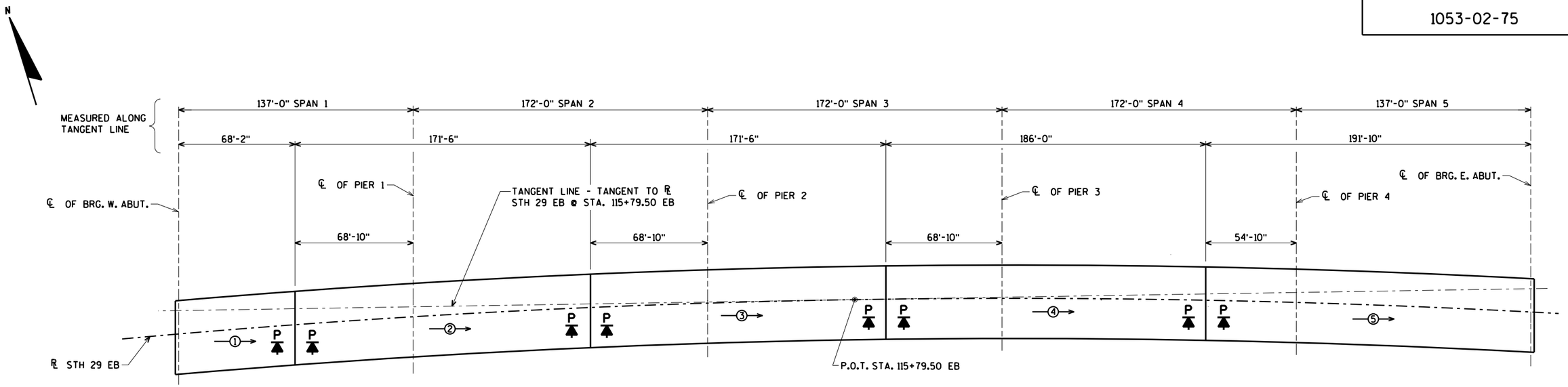
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SUPERSTRUCTURE SLAB OFFSETS

SHEET 18 OF 25
488

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SLAB POURING DIAGRAM

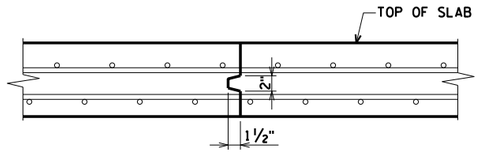
←○— INDICATES POUR NUMBER AND DIRECTION OF POUR

NOTES FOR POURING DIAGRAM

THE RATE OF PLACING CONCRETE SHALL EQUAL OR EXCEED ½ SPAN LENGTH PER HOUR BUT NEED NOT EXCEED 100 CU. YDS. PER HOUR.

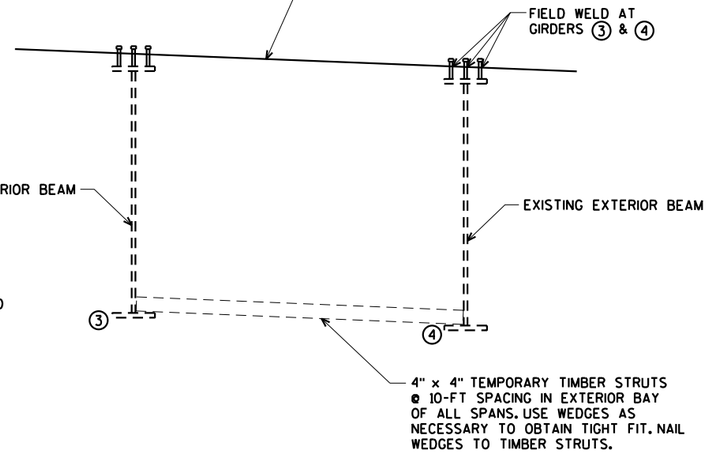
TWO OR MORE ALTERNATE POURS MAY BE PLACED ON THE SAME DAY.

THE CONTRACTOR MAY SUBMIT AN ALTERNATE POURING SEQUENCE SUBJECT TO THE APPROVAL OF THE STRUCTURES DESIGN SECTION.



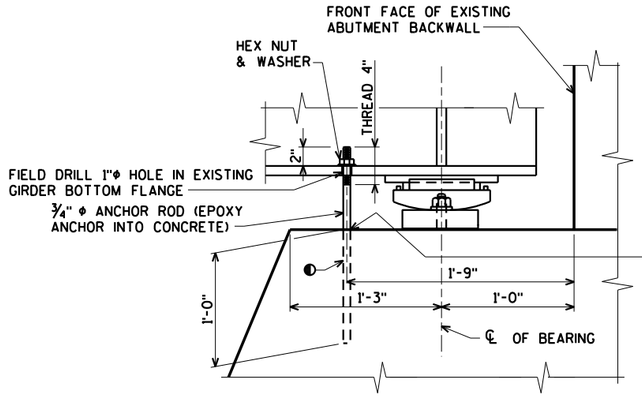
SECTION P

TRANSVERSE BOTTOM SLAB REINFORCEMENT FIELD WELDED AT 10'-0"± SPACING IN ALL SPANS. IN LIEU OF USING TRANSVERSE BOTTOM REINFORCING BARS, ADDITIONAL EPOXY-COATED BARS MAY BE FURNISHED.

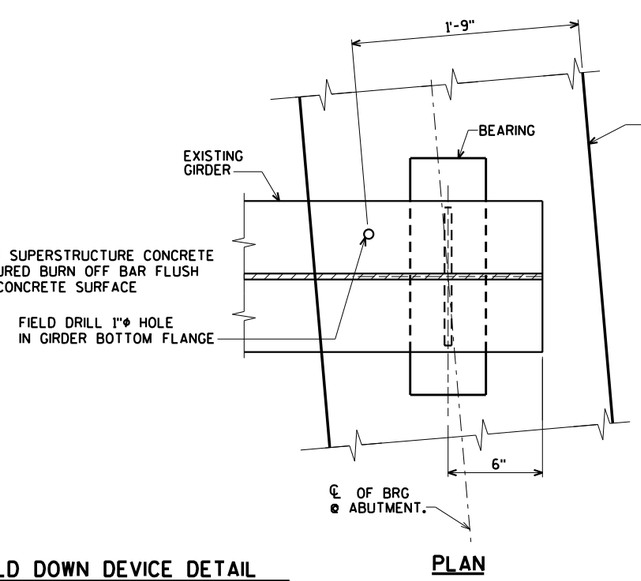


INTERMEDIATE BRACING DETAILS

EXTERIOR BAY ③-④ SHOWN
EXTERIOR BAY ①-② SIMILAR



SECTION THRU EAST ABUTMENT



PLAN

TEMPORARY HOLD DOWN DEVICE DETAIL

◑ PLACE ONE ANCHOR ROD PER GIRDER AT ABUTMENT WHERE SLAB POUR TERMINATES. LOCATE 4" (NORMAL) OFF ℄ OF GIRDER. ANCHOR ROD, NUT, WASHER & DRILLED HOLE IN GIRDER FLANGE SHALL BE PAID FOR AS "MASONRY ANCHORS TYPE S ¾-INCH". MINIMUM PULLOUT CAPACITY OF 27 KIPS.

NO.	DATE	REVISION	BY

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STRUCTURE B-37-136

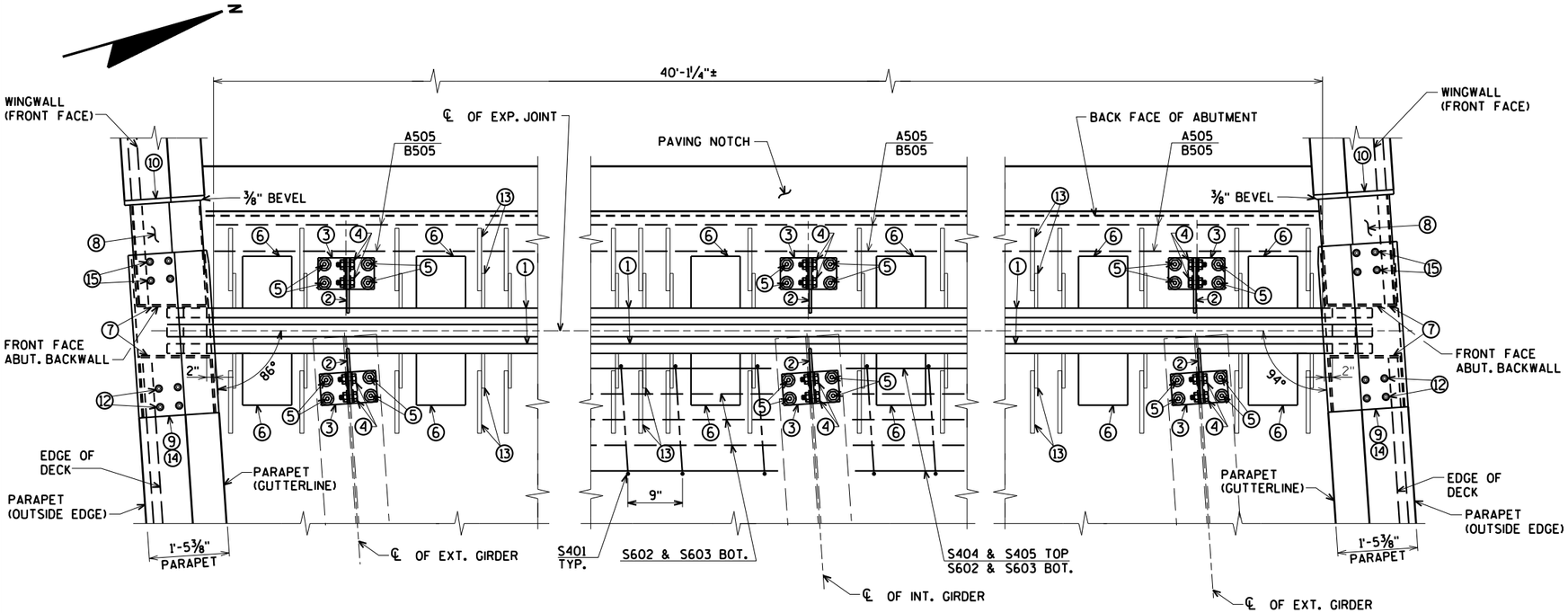
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SUPERSTRUCTURE POURING DIAGRAM

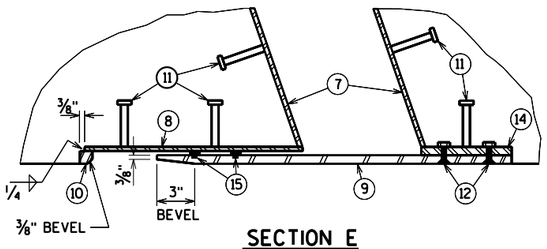
SHEET 19 OF 25
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10/31/2013
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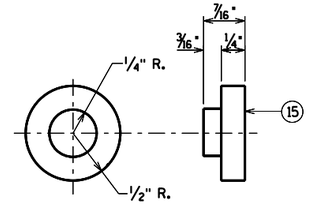


PART PLAN WEST ABUTMENT

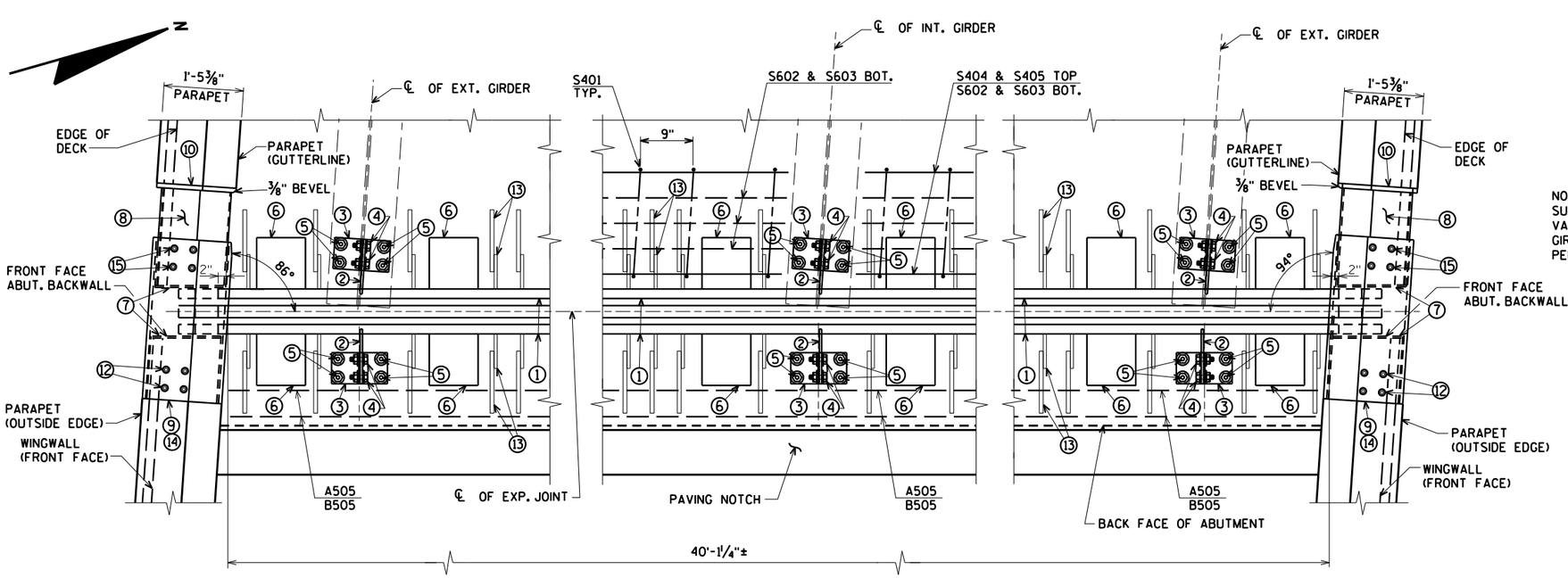


SECTION E

FOR LOCATIONS OF SECTION E, SEE SHEET 22.



ADIPRENE BUTTON DETAIL



PART PLAN EAST ABUTMENT

NOTE:
SUPPORT BOXES ARE SHOWN FOR GENERAL INFORMATION AND LOCATION MAY VARY ACCORDING TO FABRICATOR DESIGN. SPACE SUPPORT BOXES TO MISS GIRDER TOP FLANGES WHEN POSSIBLE, BUT NOT TO EXCEED MAXIMUM SPACING PER SPECIAL PROVISIONS.

WORK THIS SHEET WITH SHEETS 21 & 22.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-136

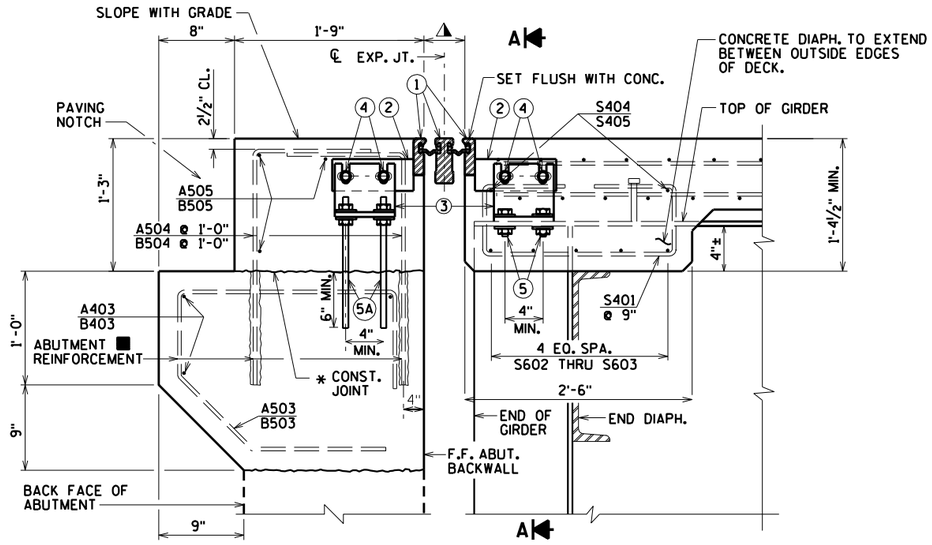
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MODULAR EXPANSION JOINT DETAILS

SHEET 20 OF 25
490

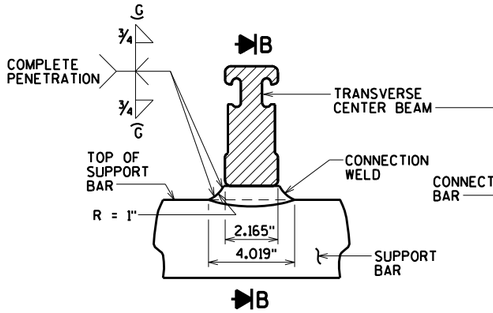
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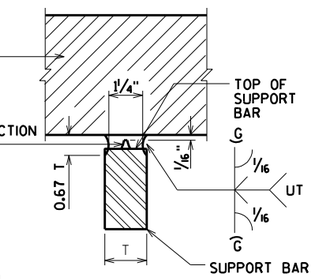


SECTION THRU JOING AT ABUTMENT

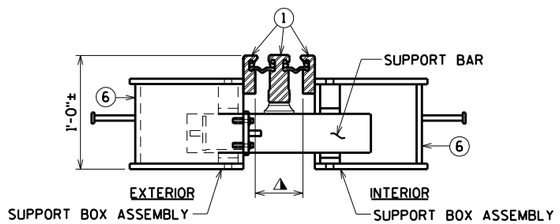
NORMAL TO ℄ SUBSTRUCTURE



MODULAR EXPANSION JOINT CONNECTION DETAIL AND WELD SPECIFICATION

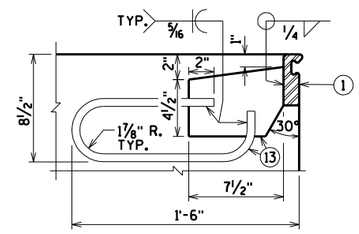


SECTION B



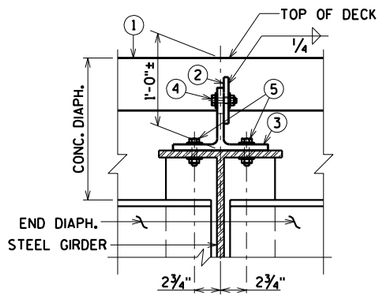
JOINT DETAIL

AT SUPPORT BAR & SUPPORT BOX ASSEMBLY



ANCHORAGE DETAIL

PLACE ADJACENT TO SUPPORT BOXES IN PAVING BLOCK @ ABUT. & IN DECK @ CONC. DIAPH.



SECTION A

NOTE:
MODULAR EXPANSION DEVICE DESIGN AND DETAILS ARE SPECIFIC TO THE MANUFACTURER SELECTED FROM THOSE LISTED IN THE SPECIAL PROVISIONS. FABRICATION DRAWING IS SUBJECT TO THE APPROVAL OF THE BUREAU OF STRUCTURES.

LEGEND

1. MODULAR EXPANSION JOINT DEVICE, 2 CELLS.
2. ½" PLATE, ONE PER GIRDER MIN. PROVIDE 2 - 1" X 2" MIN. SLOTTED HOLES PLACED HORIZONTALLY FOR NO. 4.
3. WT 6 X 29 (OR EQUIVALENT BUILT UP T-SECTION). ONE PER GIRDER. PROVIDE 2 - 1" X 3" MIN. SLOTTED HOLES PLACED VERTICALLY IN WEB OF WT FOR BOLTS NO. 4.
4. ¾" ϕ HIGH STRENGTH BOLTS WITH NUTS & WASHERS. (A325 GALV.)
5. ¾" ϕ HIGH STRENGTH BOLTS WITH NUTS & WASHERS. FIELD DRILL HOLES IN GIRDER TOP FLANGE. (A325 GALV.)
5A. ¾" ϕ THREADED ROD WITH 2 NUTS & WASHERS. GROUT THREADED ROD INTO FIELD DRILLED HOLES. (GALV.)
6. SUPPORT BOX ASSEMBLY FOR SUPPORT BAR (SPA. PER MANUFACTURER). FABRICATE BOX FROM ½" PLATES.
7. ⅜" BULKHEAD PLATE. WELD TO NO. 1, NO. 8 AND NO. 14. WHEN CONDUIT IS PRESENT IN PARAPET, ACCOMODATE FOR BY PROVIDING OPENING IN NO. 7.
8. INSIDE PLATE. FABRICATE FROM ⅜" PLATE.
9. OUTSIDE PLATE. FABRICATE FROM ⅝" PLATE.
10. ⅞" SQUARE BAR. WELD TO NO. 8 AS SHOWN.
11. ¾" ϕ X 4" LONG STUDS. WELD TO NO. 7 , NO. 8 & NO. 14 AS SHOWN.
12. ¾" ϕ X 2" STAINLESS STEEL FLAT CTSK. SLOTTED HEAD CAP SCREWS WITH ANTI-SEIZE LUBRICANT. RECESS 1/16" BELOW PLATE SURFACE.
13. ½" PLATE WITH ⅝" ϕ LOOP ANCHOR FABRICATED AS SHOWN. SPACED AT MANUFACTURER'S SPEC.
14. INSIDE PLATE. FABRICATE FROM ⅝" PLATE.
15. ADIPRENE BUTTON. SEE DETAIL. SET IN OUTSIDE PLATE.

* POUR CONC. ABOVE THIS JOINT AFTER SUPERSTRUCTURE CONC. IS IN PLACE. STRIKE OFF & LEAVE ROUGH.

⚠ MANUFACTURER'S RECOMMENDED JOINT OPENING BASED ON THE TEMPERATURE ON THE DAY OF PLACEMENT PER TEMPERATURE TABLE. THE MODULAR EXPANSION DEVICE SHALL HAVE THE NUMBER OF CELLS AS INDICATED IN (1).

■ (2) L-SHAPED #5 BARS @ 1'-0" SPA. (COATED) ANCHOR INTO PLACE W/ EPOXY RESIN AFTER MODULAR JOINT IS IN POSITION. FOLLOW STD. SPEC. FOR MASONRY ANCHOR TYPE S WITH A MIN. EMBEDMENT OF 1'-0".

GENERAL NOTES

ONE FIELD SPLICE PERMITTED IN STEEL EXTRUSIONS. DETAILS SHALL BE SUBMITTED FOR APPROVAL. NO SPLICING PREMITTED IN NEOPRENE GLAND.

AFTER FABRICATION, BUT BEFORE SHIPMENT, STRAIGHTEN STEEL EXTRUSIONS SUCH THAT THEY SHALL BE FREE FROM WARP, TWIST AND SWEEP.

NO EXPANSION JOINT PROTRUSIONS PERMITTED ABOVE ROADWAY SURFACE OR ON PARAPET ROADWAY FACE.

THE EXPANSION JOINT SEALS SHALL BE PLACED, BONDED AND SEALED AS RECOMMENDED BY THE MANUFACTURER. FORM WORK SHALL BE PLACED BETWEEN THE SUPPORT BOXES TO PREVENT CONCRETE INTRUSION INTO THE SUPPORT BOX. A TECHNICAL REPRESENTATIVE OF THE MANUFACTURER SHALL BE PRESENT DURING INSTALLATION. PRIOR TO SETTING THE JOINT ASSEMBLY INTO POSITION, THE PROJECT ENGINEER SHALL DETERMINE THE PROPER JOINT OPENING.

EXPANSION JOINT EXTRUSIONS SHALL BE FABRICATED TO CONFORM TO ROADWAY CROWN & GRADE. FABRICATOR SHALL PROVIDE MEANS OF KEEPING GALVANIZED EXTRUSIONS CLEAN & SMOOTH DURING SHIPMENT AND PRIOR TO APPLYING LUBRICANT ADHESIVE FOR NEOPRENE GLAND INSTALLATION.

SANDBLAST BARS, PLATES, WT-SECTION, ANCHORAGE LOOP AND EXTRUSIONS AFTER FABRICATION IN ACCORDANCE WITH SSPC SP. #6 "COMMERCIAL BLAST CLEANING". AFTER BLAST CLEANING, THIS ASSEMBLY SHALL BE HOT DIPPED GALVANIZED.

COST OF FURNISHING & PLACING OF THE EXPANSION JOINTS COMPLETE WITH PARAPET PLATES SHALL BE PAID FOR UNDER THE PRICE BID FOR "EXPANSION DEVICE MODULAR B-37-136".

BAR STEEL REINF. IN DECK AND CONC. DIAPHRAGM SHALL BE RESPACED AS NECESSARY TO ALLOW REPLACEMENT OF JOINT ASSEMBLY. TOP TRANSVERSE BARS, ADJACENT TO MOD. JT. TO BE CUT AND PLACED BETWEEN JT. SUPPORT SYSTEM.

TEMP. TABLE

TEMPERATURE TABLE FOR SETTING JOINT OPENINGS TO BE DETERMINED BY JOINT MANUFACTURER WITH THE FOLLOWING DESIGN DATA:

1. ⅜ IN. OF MOVEMENT PER 10° F
2. MEDIAN TEMPERATURE OF 45° F
3. TEMP. RANGE IN TABLE FROM (-5)°F) TO (+95°F).

A TABLE OF JOINT OPENINGS BASED ON ABOVE DATA SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

WORK THIS SHEET WITH SHEETS 20 & 22.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-136

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MODULAR EXPANSION JOINT DETAILS

SHEET 21 OF 25
491

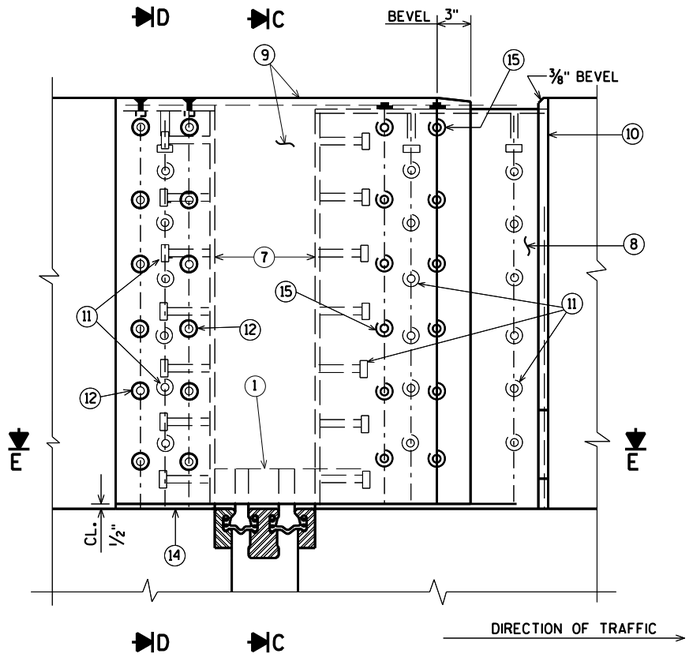
STATE PROJECT NUMBER
1053-02-75

8

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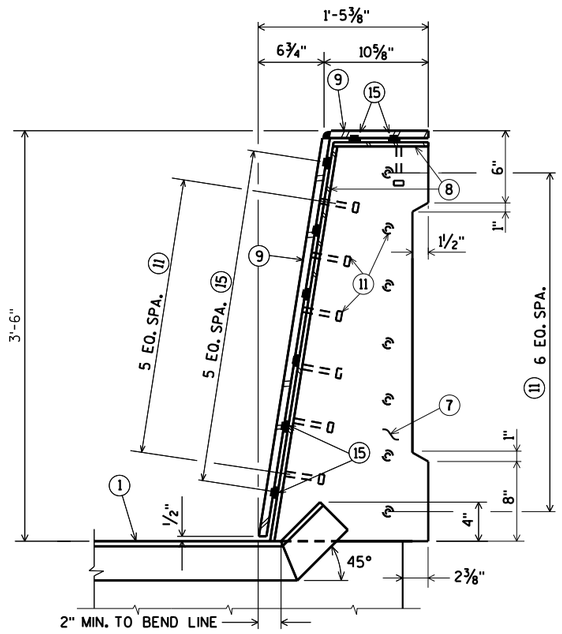
STATE PROJECT NUMBER

1053-02-75

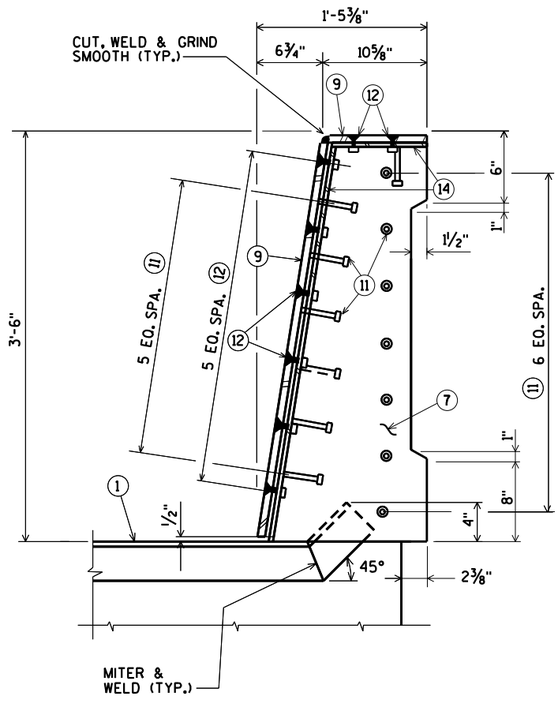


ELEVATION OF SINGLE SLOPE PARAPET 42SS

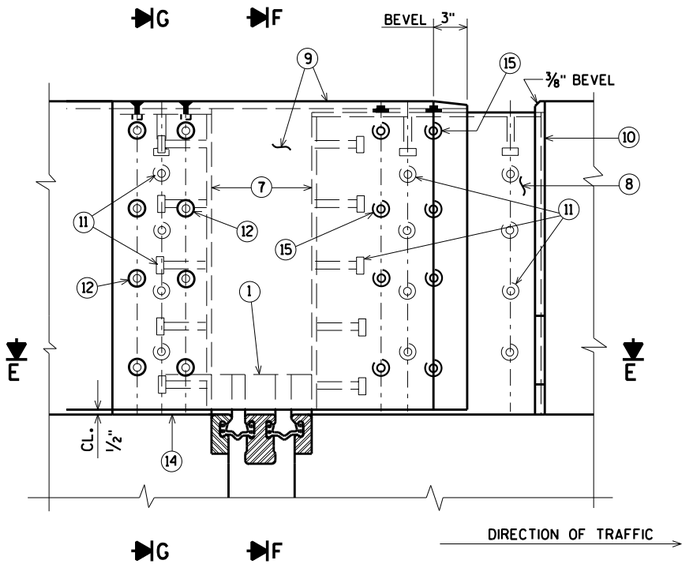
SEE SHEET 20 FOR SECTION E.



SECTION C

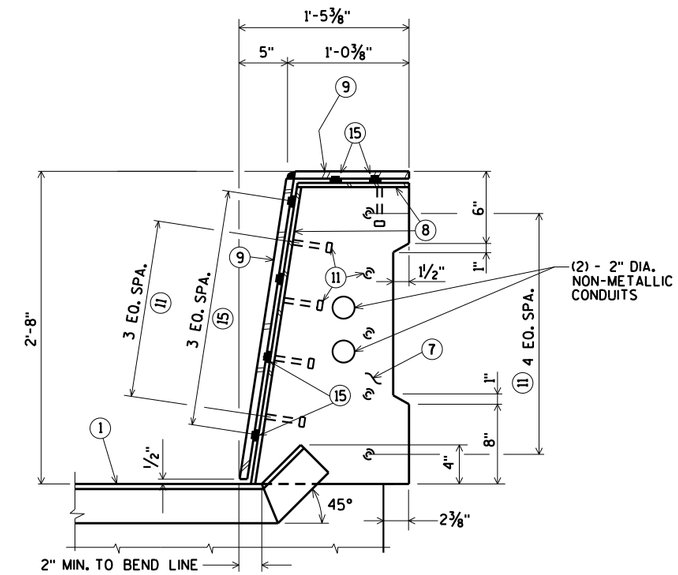


SECTION D

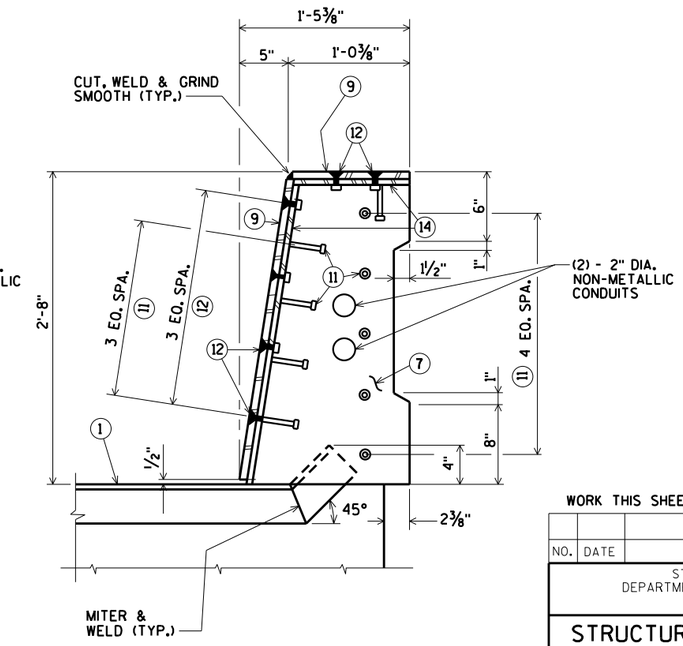


ELEVATION OF SINGLE SLOPE PARAPET 32SS

SEE SHEET 20 FOR SECTION E.



SECTION F



SECTION G

WORK THIS SHEET WITH SHEETS 20 & 21.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

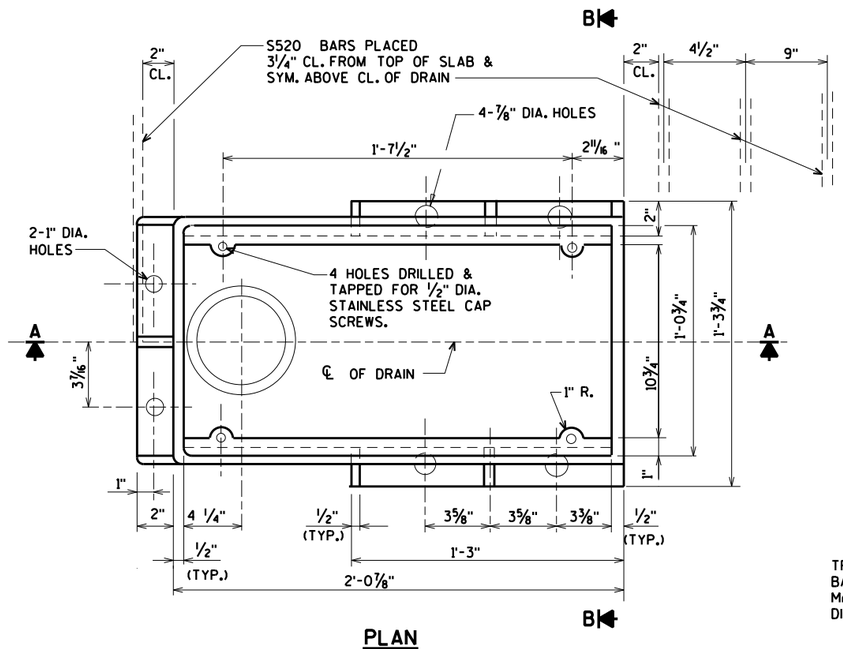
STRUCTURE B-37-136

DRAWN BY KAZ | PLANS CK'D. AEB

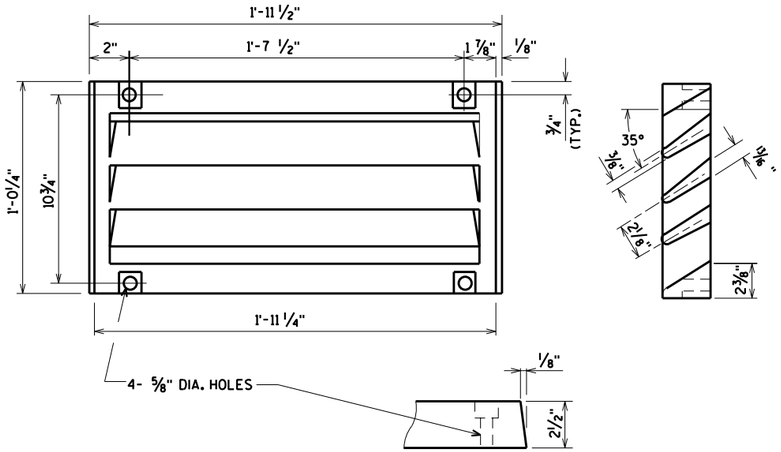
COVER PLATES FOR SINGLE SLOPE PARAPET

8

8



PLAN



GRATE CASTING DETAIL

ATTACH GRATE TO FRAME FOR SHIPMENT

TRANS. AND LONGIT. SLAB BAR REINF. TO BE CUT A MAX. 1" CL. FROM DRAIN FRAME. DISPLACE BARS WHERE POSSIBLE

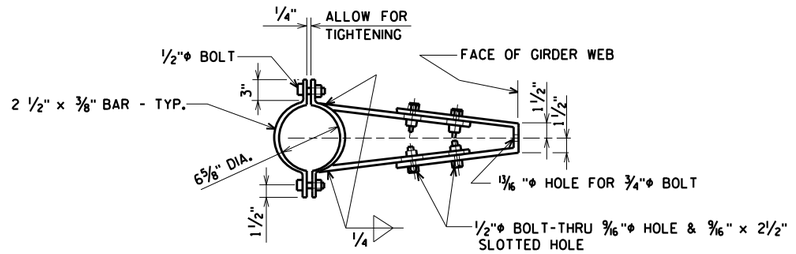
GENERAL NOTES

ALL MATERIAL FOR TYPE "GC" CASTING, EXCLUDING GRATE HOLD DOWN SCREWS, SHALL BE GRAY IRON CONFORMING TO A.S.T.M. A48, CLASS 30. (APPROX. WEIGHT = 225#)

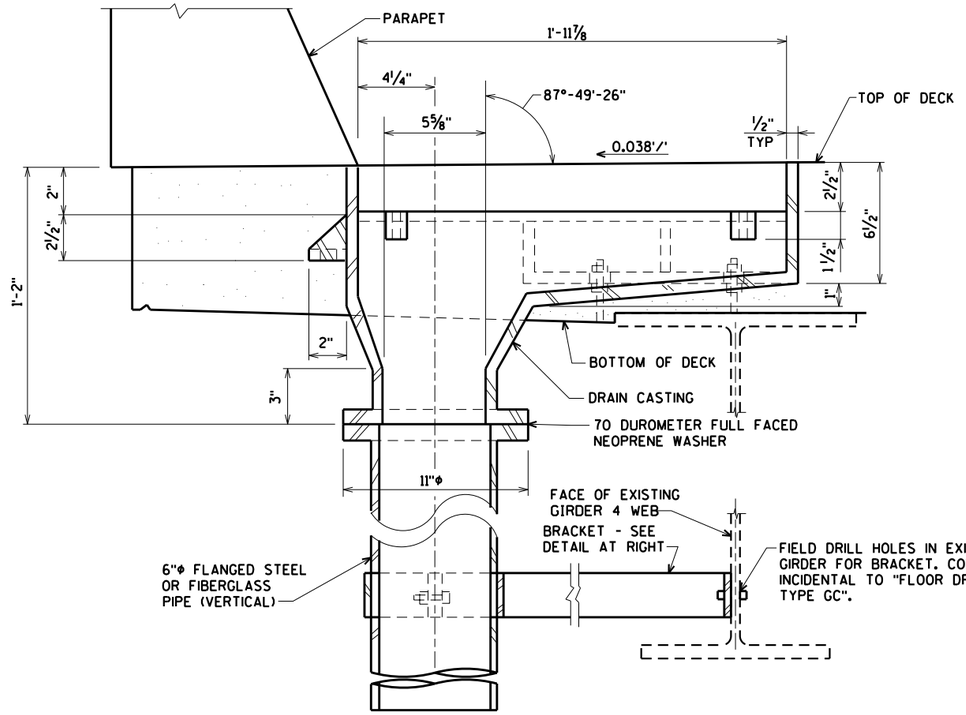
MATERIAL FOR BRACKETS SHALL CONFORM TO A.S.T.M. A36.

THE CONTRACTOR MAY PROPOSE AN ALTERNATE TYPE OF BRACKET. THE PROPOSED ALTERNATE DETAILS SHALL BE SUBMITTED AND SUBJECT TO THE APPROVAL OF THE ENGINEER.

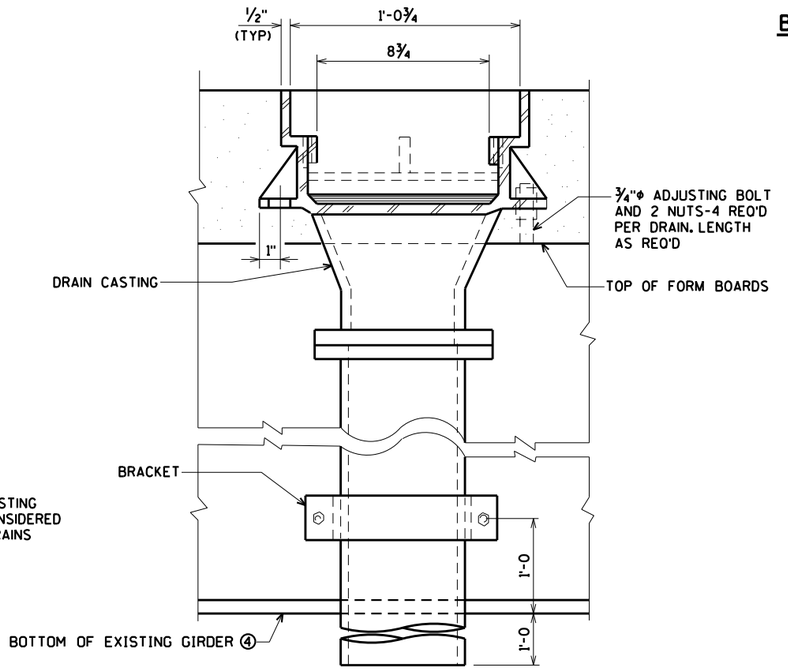
FLANGED 6" DIA. DOWNSPOUTS SHALL BE EITHER STEEL OR REINFORCED THERMOSETTING RESIN PIPE CONFORMING TO SECTION 514 OF THE STANDARD SPECIFICATIONS.



BRACKET DETAIL



SECTION A



SECTION B

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-136

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FLOOR DRAIN TYPE 'GC'

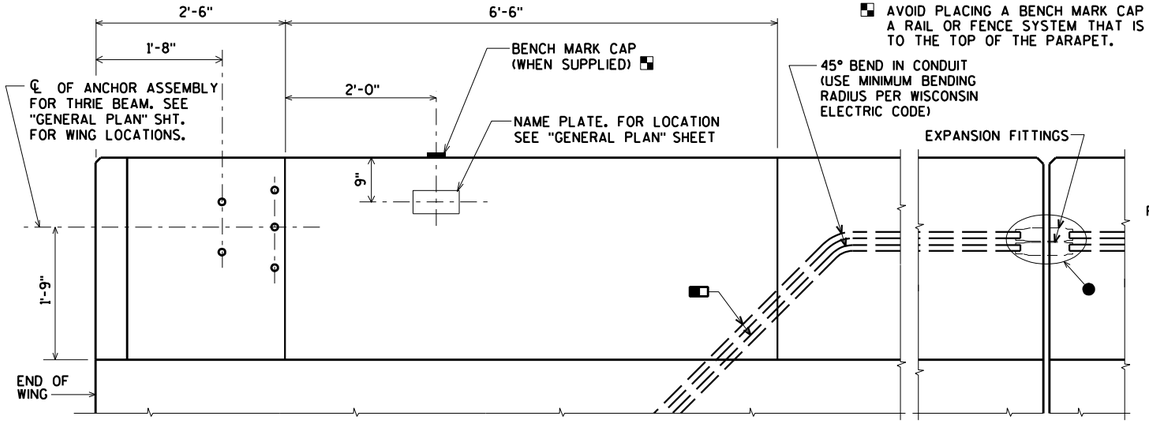
SHEET 23 OF 25
493

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

$PRFNAME$
U:\41-0637.00 - STH 29 over WI River\B-37-136\BRIDGE\16_B-37-136 FLOOR DRAIN TYPE 'GC'.dgn

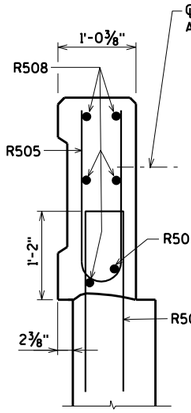
STATE PROJECT NUMBER

1053-02-75

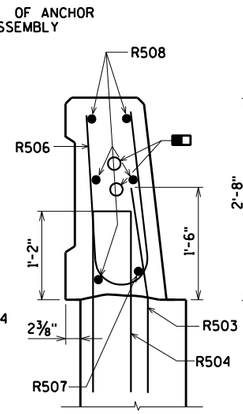


AVOID PLACING A BENCH MARK CAP BELOW A RAIL OR FENCE SYSTEM THAT IS ATTACHED TO THE TOP OF THE PARAPET.

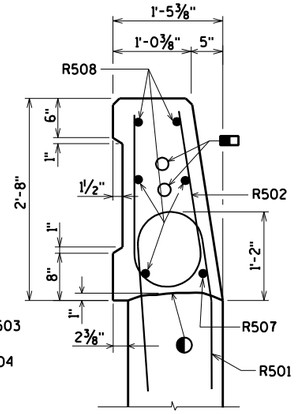
INSIDE ELEVATION



SECTION A



SECTION B

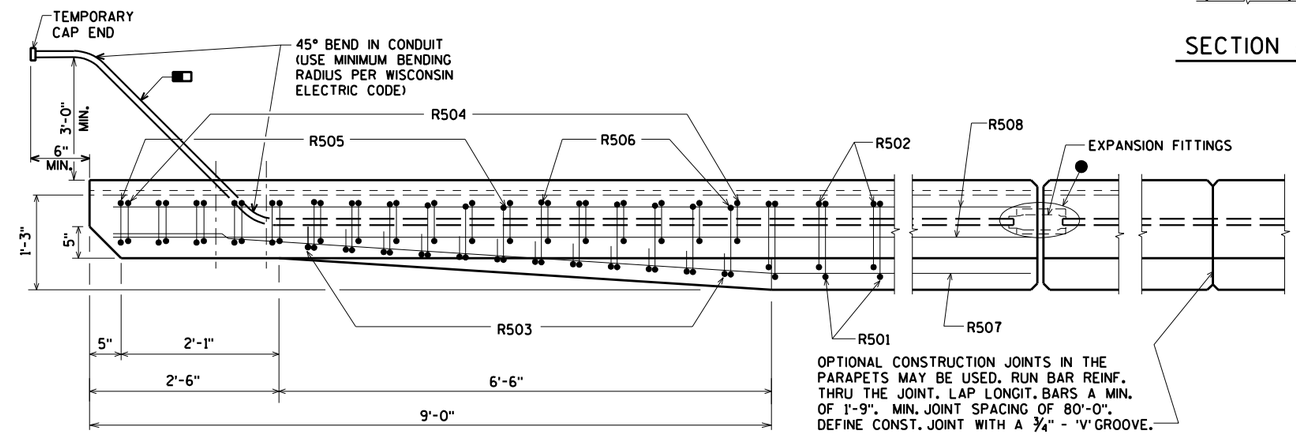


SECTION C

BILL OF BARS

WEIGHTS INCLUDED IN ABUTMENT WEIGHTS SHOWN ON SHEETS 6 & 8.

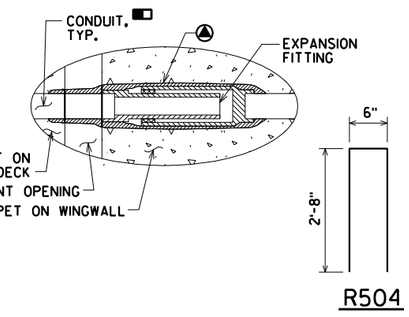
BAR MARK	COAT	NO. REQ'D. 350* WEST ABUT.	NO. REQ'D. 350* EAST ABUT.	LENGTH	BENT	BAR SERIES	LOCATION
R501	X	5	5	5-10	X		PARAPET VERT.
R502	X	84	84	5-0	X		PARAPET VERT.
R503	X	34	34	3-0	X		PARAPET-VERT.
R504	X	22	22	5-7	X		PARAPET-VERT.
R505	X	18	18	4-9	X		PARAPET-VERT.
R506	X	8	8	4-10	X		PARAPET-VERT.
R507	X	10	10	11-8	X		PARAPET-HORIZ.
R508	X	5	5	11-8			PARAPET HORIZ.



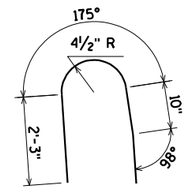
OPTIONAL CONSTRUCTION JOINTS IN THE PARAPETS MAY BE USED. RUN BAR REINF. THRU THE JOINT. LAP LONGIT. BARS A MIN. OF 1'-9". MIN. JOINT SPACING OF 80'-0". DEFINE CONST. JOINT WITH A ¾" - 'V' GROOVE.

PLAN

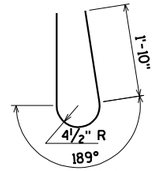
WINGS 1 SHOWN (WING 4 SIMILAR)



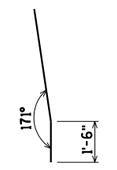
R504



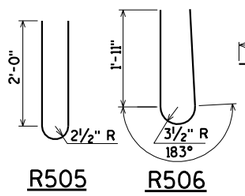
R501



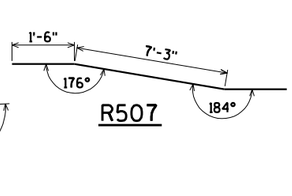
R502



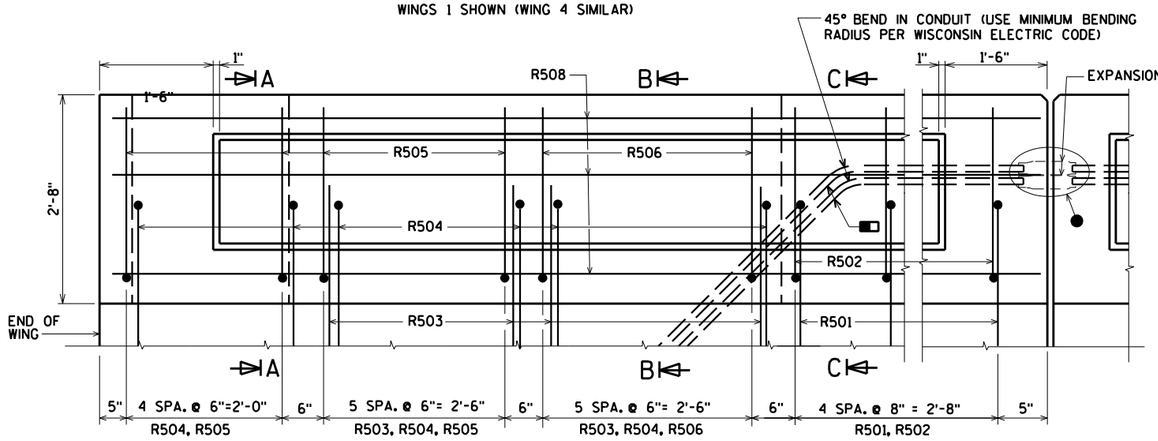
R503



R505 R506

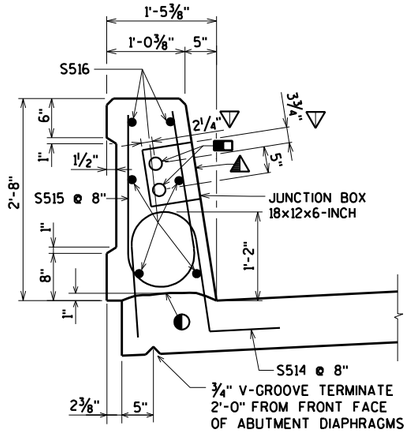


R507

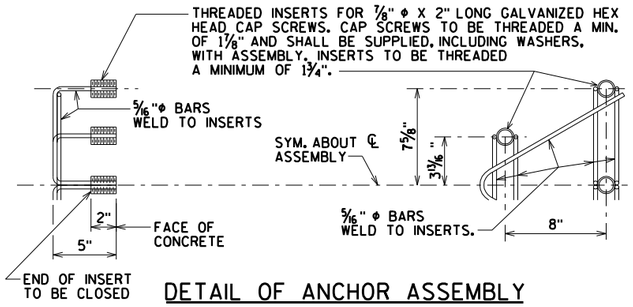


OUTSIDE ELEVATION

WING 1 SHOWN (WING 4 SIMILAR)



SECTION THRU PARAPET ON BRIDGE



DETAIL OF ANCHOR ASSEMBLY

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

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

NOTES

EXPANSION FITTINGS, ANGLES AND ADAPTER FITTINGS TO BE INCIDENTAL TO "CONDUIT RIGID METALLIC 2-INCH".

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

APPROVED MANUFACTURERS - JUNCTION BOXES: SEE APPROVED MATERIAL LIST.

APPROVED MANUFACTURER OR EQUIVALENT - EXPANSION FITTIING: O-Z/GEDNEY TYPE AX-8-200 AND BONDING JUMPER (8" TOTAL CONDUIT MOVEMENT).

● POSITION MOVEABLE END OF CONDUIT INSIDE EXPANSION FITTING, SUCH THAT IT WILL HAVE THE SAME ALLOWANCE FOR MOVEMENT (EXPANSION/CONTRACTION) AS THE EXPANSION DEVICE SET IN PLACE IN THE DECK BELOW IT. TAKE CARE TO INSTALL EXPANSION FITTING AND CONDUIT EXACTLY PARALLEL TO BRIDGE MOVEMENT.

■ USE 2" DIA. RIGID NONMETALLIC CONDUIT EXCEPT AT EXPANSION FITTING. AT EXPANSION FITTING USE RIGID METALLIC CONDUIT 3'-0" INTO PARAPET ON DECK AND WING SIDES OF THE JOINT OPENING.

◐ CONST. JOINT - STRIKE OFF AS SHOWN.

▽ LOCATION OF CONDUIT IS MEASURED FROM OUTSIDE EDGE OF JUNCTION BOX.

◭ CUT OUT 1"± OF GASKET AT BOTTOM OF JUNCTION BOX COVER TO ALLOW FOR DRAINAGE.

◮ WRAP EXPANSION FITTING WITH SPONGE RUBBER. SPONGE RUBBER WRAP TO BE AASHTO M153 TYPE 1 OR EQUIVALENT. ¼" MINIMUM THICKNESS. SPONGE RUBBER WRAP INCIDENTAL TO "CONDUIT RIGID METALLIC 2-INCH".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-136

DRAWN BY KAZ | PLANS CK'D. AEB

SINGLE SLOPE PARAPET 32SS MODIFIED

SHEET 24 OF 25

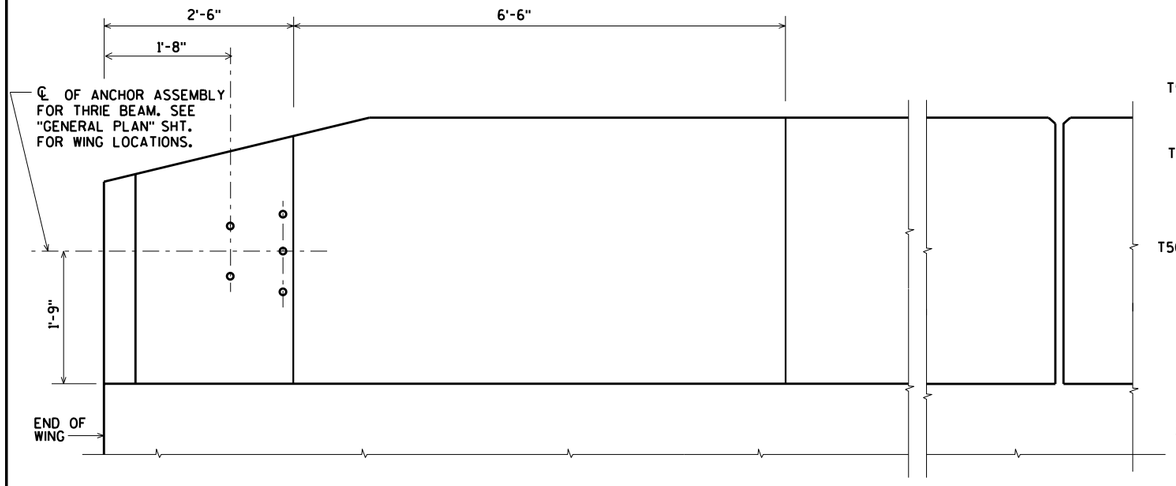
494

8

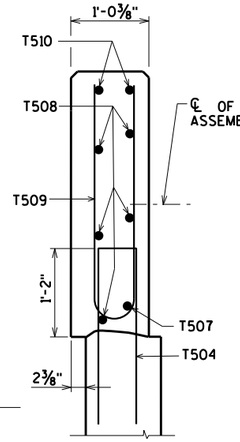
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STATE PROJECT NUMBER

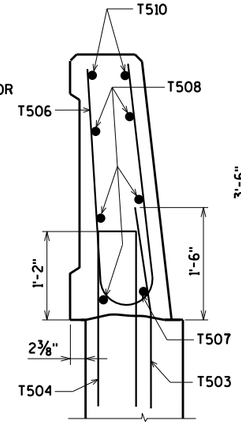
1053-02-75



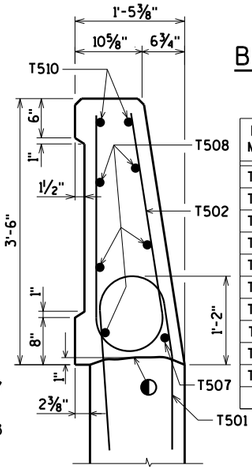
INSIDE ELEVATION



SECTION A



SECTION B



SECTION C

BILL OF BARS

WEIGHTS INCLUDED IN ABUTMENT WEIGHTS SHOWN ON SHEETS 6 & 8.

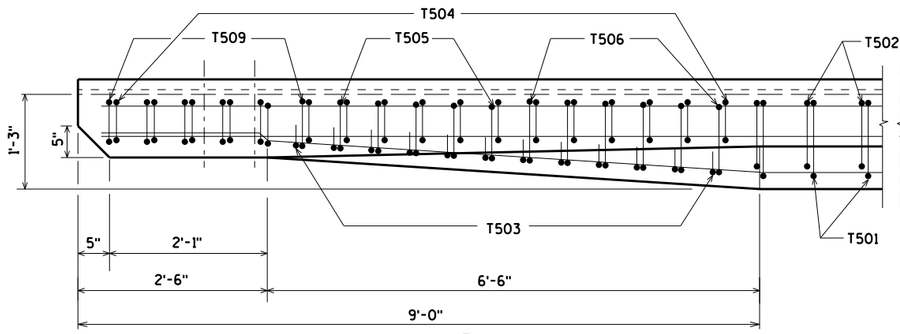
BAR MARK	COAT	NO. REQ'D. WEST ABUT.	NO. REQ'D. EAST ABUT.	400# WEST ABUT. 400# EAST ABUT. LENGTH	BENT	BAR SERIES	LOCATION
T501	X	5	5	5-0	X		PARAPET-VERT.
T502	X	5	5	6-8	X		PARAPET-VERT.
T503	X	11	11	3-0	X		PARAPET-VERT.
T504	X	17	17	5-7	X		PARAPET-VERT.
T505	X	5	5	6-5	X		PARAPET-VERT.
T506	X	6	6	6-6	X		PARAPET-VERT.
T507	X	1	1	11-8	X		PARAPET-HORIZ.
T508	X	5	5	11-8			PARAPET-HORIZ.
T509	X	6	6	5-5	X	⚠	PARAPET-VERT.
T510	X	2	2	11-8	X		PARAPET-HORIZ.

⚠ LENGTH SHOWN FOR BAR IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.

BAR SERIES TABLE

MARK	NO. REQD.	LENGTH
T509	4 SERIES OF 6	4'-9" TO 6'-1"

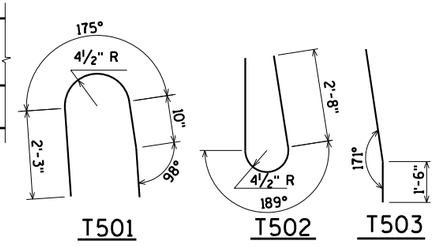
BUNDLE AND TAG EACH SERIES SEPARATELY.

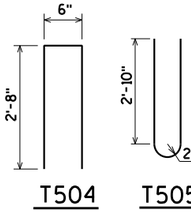


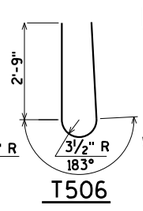
PLAN

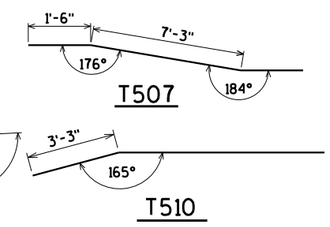
WING 2 SHOWN (WING 3 SIMILAR)

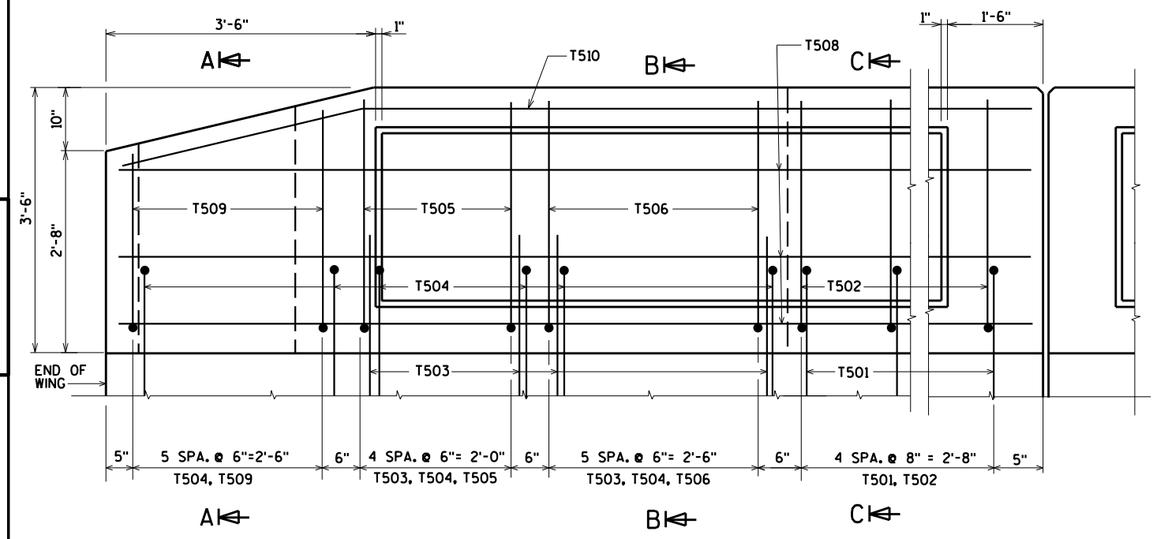
OPTIONAL CONSTRUCTION JOINTS IN THE PARAPETS MAY BE USED. RUN BAR REINF. THRU THE JOINT. LAP LONGIT. BARS A MIN. OF 1'-9". MIN. JOINT SPACING OF 80'-0". DEFINE CONST. JOINT WITH A ¾" - 'V' GROOVE.





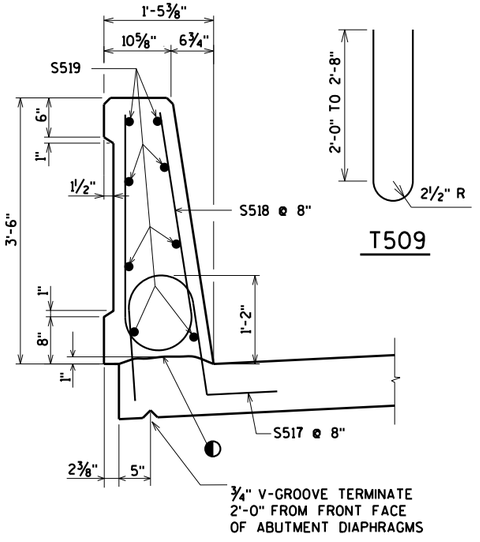




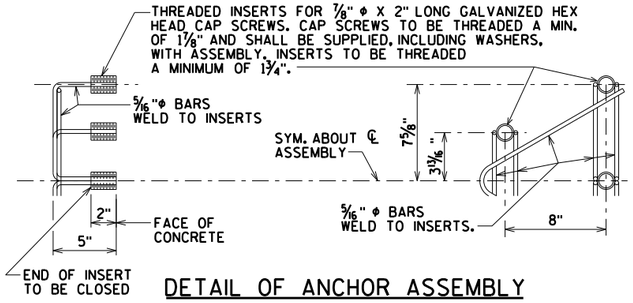


OUTSIDE ELEVATION

WING 3 SHOWN (WING 2 SIMILAR)



SECTION THRU PARAPET ON BRIDGE



DETAIL OF ANCHOR ASSEMBLY

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

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

◐ CONST. JOINT - STRIKE OFF AS SHOWN.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-136

DRAWN BY KAZ | PLANS CK'D. AEB

SINGLE SLOPE PARAPET 42SS MODIFIED

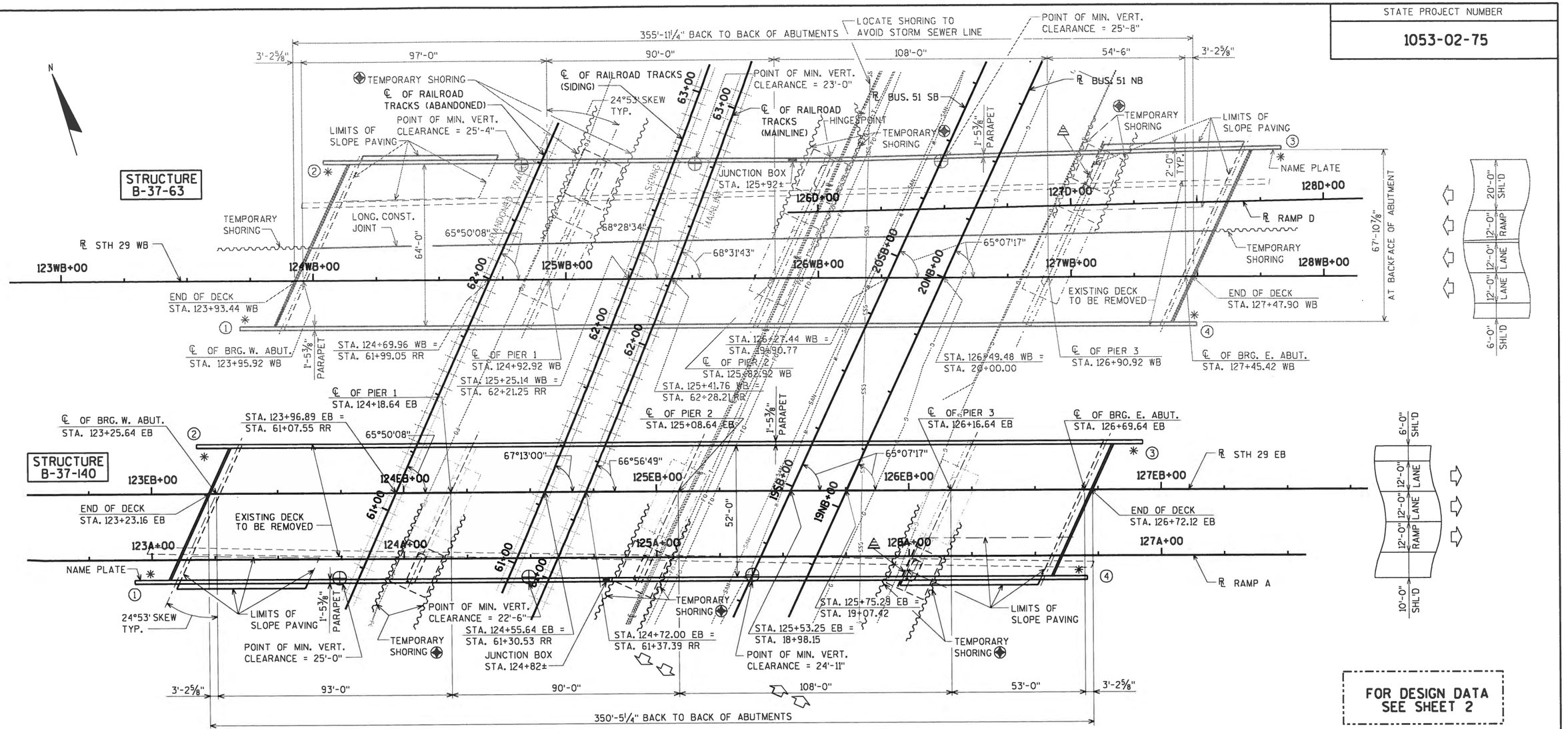
SHEET 25 OF 25

495

8

8

STATE PROJECT NUMBER
1053-02-75



FOR DESIGN DATA SEE SHEET 2

PLAN

4-SPAN 54" PRESTRESSED CONCRETE GIRDER BRIDGE
WIDENING AND DECK REPLACEMENT

LIST OF DRAWINGS

1. GENERAL PLAN
2. ELEVATION & DESIGN DATA
3. TYPICAL SECTION
4. QUANTITIES AND NOTES
5. SUBSURFACE EXPLORATION
6. WEST ABUTMENT
7. WEST ABUTMENT WING 1 DETAILS
8. WEST ABUTMENT WING 2 DETAILS
9. WEST ABUTMENT DETAILS
10. EAST ABUTMENT
11. EAST ABUTMENT WING 3 DETAILS
12. EAST ABUTMENT WING 4 DETAILS
13. EAST ABUTMENT DETAILS
14. PIER 1
15. PIER 1 DETAILS
16. PIER 2
17. PIER 2 DETAILS
18. PIER 3
19. PIER 3 DETAILS
20. BEARING DETAILS AT 54W GIRDERS
21. BEARING DETAILS AT EXISTING 54" GIRDERS
22. PRECAST CONCRETE BEARING BLOCK DETAILS
23. STEEL INTER. DIAPHRAGM DETAILS
24. STEEL INTER. DIAPHRAGM DETAILS
25. 54W" PRESTRESSED GIRDER DETAILS
26. 54W" PRESTRESSED GIRDER DETAILS
27. SUPERSTRUCTURE GIRDER LAYOUT
28. DECK ELEVATIONS AND DEFLECTIONS
29. SUPERSTRUCTURE
30. TRANSVERSE SLAB STEEL LAYOUT
31. LONGITUDINAL SLAB STEEL LAYOUT
32. SUPERSTRUCTURE DETAILS
33. SUPERSTRUCTURE DETAILS
34. SUPERSTRUCTURE DETAILS
35. SUPERSTRUCTURE BILL OF BARS
36. EXPANSION DEVICE
37. EXPANSION DEVICE
38. SINGLE SLOPE PARAPET 32SS MODIFIED
39. SLOPE PAVING
40. ARCHITECTURAL TREATMENT DETAILS

△ EXISTING 2' TALL CONCRETE WALL TO BE REMOVED AT TOE OF PROPOSED SLOPE PAVING. CONSIDER INCIDENTAL TO "REMOVING OLD STRUCTURE".

✱ ANCHOR ASSEMBLY FOR THRIE BEAM TYPE GUARDRAIL.

◯ DENOTES WING NUMBER.

◈ TEMPORARY SHORING TO BE INSTALLED PARTIALLY UNDER EXISTING BRIDGE.

WISCONSIN PROFESSIONAL ENGINEER
DANIEL N. SYDOW
E-38363
WI
10/31/2013

BRIDGE OFFICE CONTACT:
WILLIAM DREHER
(608)-266-8489

CONSULTANT CONTACT:
DAN SYDOW
(715)-834-3161

NO.	DATE	REVISION	BY

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher KAR 11/27/13
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE B-37-140

STH 29 EB OVER BUS. 51 & RAILROAD

COUNTY	TOWN/CITY/VILLAGE
MARATHON	ROTHSCHILD

DESIGN SPEC.			
REHABILITATION	N/A		
DESIGNED BY CJM	DESIGN CK'D. AEB	DRAWN BY CLS	PLANS CK'D. DNS

GENERAL PLAN

SHEET 1 OF 40
496

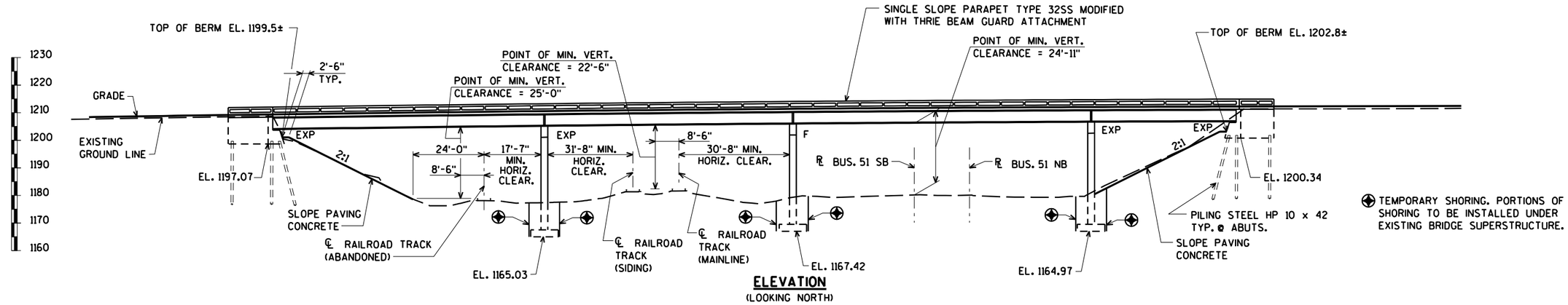
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$PRFNAME$
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DATE: DATE: DATE:
CHECKED BY: BACK CHECKED BY: CORRECTED BY:
10/31/2013
PENTABLE:BReau_shd_util.tbl
I.D.
DATE:

STATE PROJECT NUMBER

1053-02-75



ELEVATION
(LOOKING NORTH)

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HL-93
INVENTORY RATING: HS-34
OPERATING RATING: HS-50
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV) = 250 KIPS

STRUCTURE IS DESIGNED FOR A FUTURE WEARING SURFACE OF 20 #/S.F.

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) f'y = 60,000 p.s.i.
PRESTRESSED GIRDER
CONCRETE MASONRY f'c = 6,000 p.s.i.
STRANDS - 0.6" DIA. WITH ULTIMATE TENSILE STRENGTH OF 270,000 p.s.i.

FOUNDATION DATA:

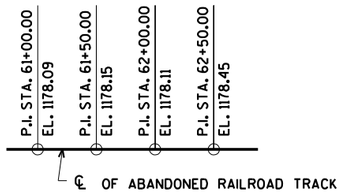
ABUTMENTS TO BE SUPPORTED ON HP 10 x 42 STEEL PILING (WITH PILE POINTS) DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 180 TONS ǂ PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED LENGTH 40'-0".

PIERS WITH SPREAD FOOTINGS TO BE SUPPORTED ON SOUND MATERIAL WITH A REQUIRED FACTORED BEARING RESISTANCE OF 20,000 PSF. A GEOTECHNICAL ENGINEER WILL DETERMINE THE FACTORED BEARING RESISTANCE BY VISUAL INSPECTION PRIOR TO CONSTRUCTION OF THE PIER FOOTING.

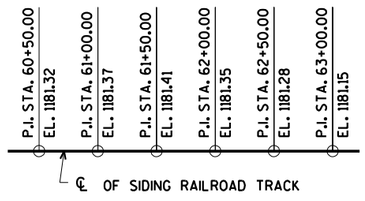
ǂ THE FACTORED AXIAL RESISTANCE OF PILES IN COMPRESSION USED FOR DESIGN IS THE REQUIRED DRIVING RESISTANCE MULTIPLIED BY A RESISTANCE FACTOR OF 0.5 USING MODIFIED GATES TO DETERMINE DRIVEN PILE CAPACITY.

TRAFFIC DATA:

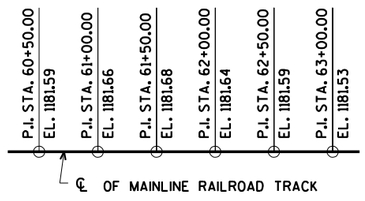
STH 29:	BUS. 51:
A.D.T. = 37,800 (2016)	A.D.T. = 20,900 (2016)
A.D.T. = 46,300 (2036)	A.D.T. = 24,800 (2036)
R.D.S. = 70 M.P.H.	R.D.S. = 50 M.P.H.



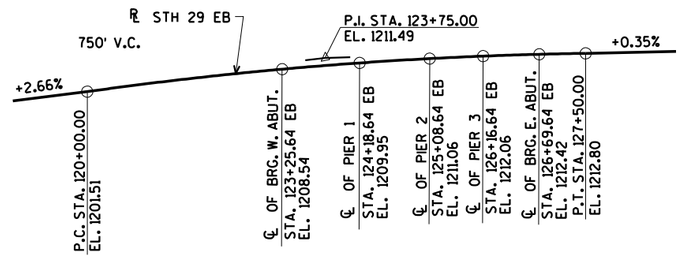
PROFILE GRADE LINE
(ABANDONED RAILROAD TRACK)



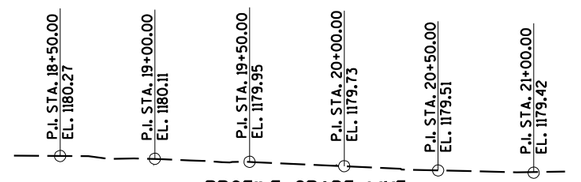
PROFILE GRADE LINE
(SIDING RAILROAD TRACK)



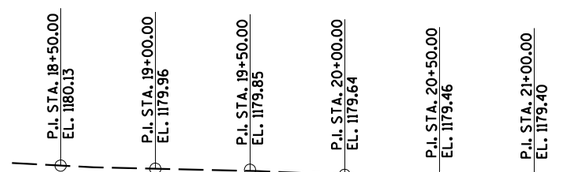
PROFILE GRADE LINE
(MAINLINE RAILROAD TRACK)



PROFILE GRADE LINE
(STH 29 EB)



PROFILE GRADE LINE
(BUS 51 SB)



PROFILE GRADE LINE
(BUS 51 NB)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-140

DRAWN BY CLS | PLANS CK'D. DNS

ELEVATION & DESIGN DATA

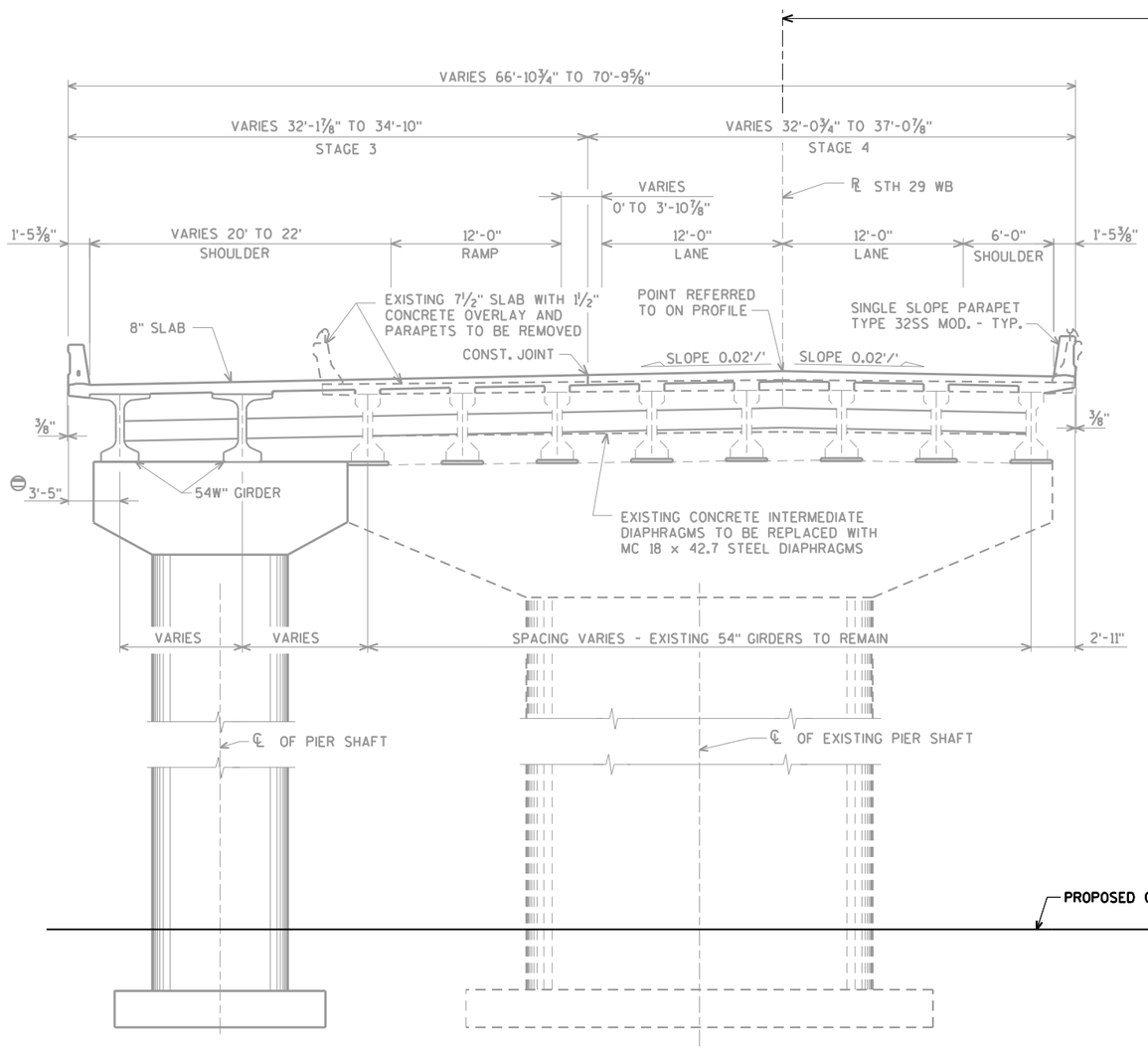
SHEET 2 OF 40
497

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Eau Claire, WI 54701
www.AyresAssociates.com

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STATE PROJECT NUMBER

1053-02-75



TYPICAL SECTION THRU BRIDGE

(LOOKING EAST)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-140

DRAWN BY CLS | PLANS CK'D. DNS

TYPICAL SECTION

SHEET 3 OF 40
498

ORIGINAL PLANS PREPARED BY
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3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

ecpdf.plt
B-37-140 ty.dgn

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10/31/2013

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STATE PROJECT NUMBER

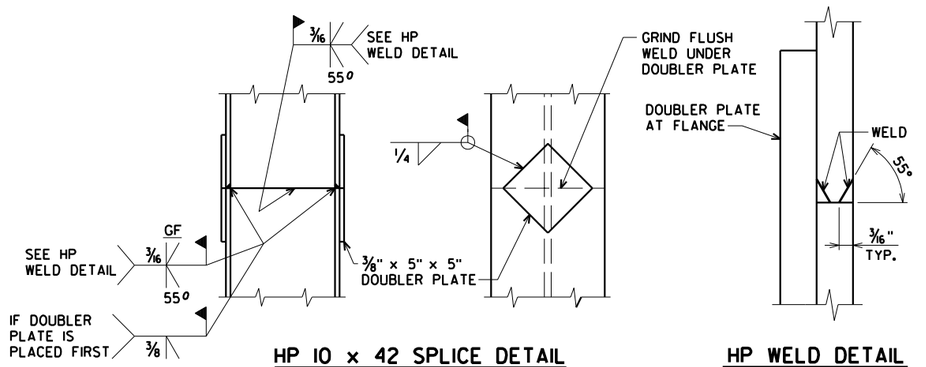
1053-02-75

TOTAL ESTIMATED QUANTITIES

	BID ITEM NUMBER	BID ITEMS	UNIT	W. ABUT.	PIER 1	PIER 2	PIER 3	E. ABUT.	SUPER.	TOTAL
	203.0200.02	REMOVING OLD STRUCTURE STATION 125+08.64 EB	LS	-----	-----	-----	-----	-----	-----	1
	203.0210.S.03	ABATEMENT OF ASBESTOS CONTAINING MATERIAL B-37-140	LS	-----	-----	-----	-----	-----	-----	1
	203.0225.S.02	DEBRIS CONTAINMENT STRUCTURE B-37-140	LS	-----	-----	-----	-----	-----	-----	1
	206.1000.05	EXCAVATION FOR STRUCTURES BRIDGES B-37-140	LS	-----	-----	-----	-----	-----	-----	1
	206.6000.S	TEMPORARY SHORING	SF	-----	1,190	1,190	1,460	-----	-----	3,840
	210.0100	BACKFILL STRUCTURE	CY	115	-----	-----	-----	100	-----	215
	502.0100	CONCRETE MASONRY BRIDGES	CY	37	81	70	65	34	718	1,005
	502.3100.03	EXPANSION DEVICE B-37-140	LS	-----	-----	-----	-----	-----	-----	1
	502.3200	PROTECTIVE SURFACE TREATMENT	SY	15	-----	-----	-----	15	290	320
	502.5005	MASONRY ANCHOR TYPE L NO. 5 BARS	EACH	205	16	22	22	249	-----	514
	502.5010	MASONRY ANCHOR TYPE L NO. 6 BARS	EACH	9	-----	-----	-----	11	-----	20
	502.5020	MASONRY ANCHOR TYPE L NO. 8 BARS	EACH	5	-----	-----	-----	5	-----	10
	503.0155	PRESTRESSED GIRDER TYPE I 54W-INCH	LF	-----	-----	-----	-----	-----	527	527
	505.0405	BAR STEEL REINFORCEMENT HS BRIDGES	LB	1,120	2,260	1,870	1,920	620	-----	7,790
	505.0605	BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB	3,340	13,680	11,870	10,320	3,480	151,820	194,510
	506.2605	BEARING PADS ELASTOMERIC NON-LAMINATED	EACH	-----	-----	17	-----	-----	-----	17
	506.2610	BEARING PADS ELASTOMERIC LAMINATED	EACH	9	18	-----	16	8	-----	51
	506.4000.02	STEEL DIAPHRAGMS B-37-140	EACH	-----	-----	-----	-----	-----	53	53
	506.7050.S.05	REMOVING BEARINGS B-37-140	EACH	7	14	14	14	7	-----	56
◐	509.1500	CONCRETE SURFACE REPAIR	SF	-----	-----	-----	-----	-----	-----	50
	509.5100.S	POLYMER OVERLAY	SY	-----	-----	-----	-----	-----	2,020	2,020
	516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	16	-----	-----	-----	16	-----	32
	517.1010.S.02	CONCRETE STAINING B-37-140	SF	160	2,520	2,175	2,175	180	9,400	16,610
	550.0500	PILE POINTS	EACH	5	-----	-----	-----	3	-----	8
	550.1100	PILING STEEL HP 10-INCH x 42 LB	LF	200	-----	-----	-----	120	-----	320
	604.0400	SLOPE PAVING CONCRETE	SY	105	-----	-----	-----	125	-----	230
	612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	60	-----	-----	-----	50	-----	110
	614.0150	ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	2	-----	-----	-----	2	-----	4
	652.0125	CONDUIT RIGID METALLIC 2-INCH	LF	40	-----	-----	-----	40	12	92
	652.0225	CONDUIT RIGID NONMETALLIC 2-INCH	LF	-----	-----	-----	-----	-----	685	685
	653.0222	JUNCTION BOXES 18x12x6-INCH	EACH	-----	-----	-----	-----	-----	1	1
⊗	SPV.0035.01	CONCRETE MASONRY DECK PATCHING	CY	-----	-----	-----	-----	-----	15	15
	SPV.0060.01	PRECAST CONCRETE BEARING BLOCK	EACH	-----	4	7	7	7	-----	25
		NON-BID ITEMS								
		FILLER	SIZE	-----	-----	-----	-----	-----	-----	1/2" & 3/4"

◐ UNDISTRIBUTED QUANTITY FOR GIRDERS, ABUTMENTS, AND PIERS AS DIRECTED BY THE ENGINEER. GIRDER SURFACE REPAIRS NEEDED AT ABUTMENTS.

⊗ UNDISTRIBUTED QUANTITY FOR MAINTAINING EXISTING BRIDGE DECK UNTIL DECK REMOVAL AS DIRECTED BY THE ENGINEER.



HP 10 x 42 SPLICE DETAIL

HP WELD DETAIL

FLANGE SHOWN, WEB SIMILAR

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

THE FIRST DIGIT OF A THREE DIGIT BAR NO. AND THE FIRST TWO DIGITS OF A FOUR DIGIT BAR NO. SIGNIFIES THE BAR SIZE.

THE SLOPE OF THE FILL IN FRONT OF THE NEW ABUTMENTS SHALL BE COVERED WITH SLOPE PAVING CONCRETE TO THE EXTENT SHOWN ON THE GENERAL PLAN SHEET AND IN THE SLOPE PAVING DETAILS.

THE EXISTING GROUNDLINE SHALL BE THE UPPER LIMIT FOR EXCAVATION FOR STRUCTURES.

ELASTOMERIC BEARING PADS NEED NOT BE INDIVIDUALLY MOLDED PROVIDED THE CUT EDGES ARE SMOOTH AND TRUE.

PROTECTIVE SURFACE TREATMENT IS TO BE APPLIED TO THE TOP AND INSIDE FACES OF PARAPETS.

UTILIZE EXISTING BAR STEEL REINFORCEMENT WHERE SHOWN AND EXTEND 24 BAR DIAMETERS INTO NEW WORK, UNLESS SPECIFIED OTHERWISE.

DIMENSIONS SHOWN ARE BASED ON ORIGINAL STRUCTURE PLANS.

ALL CONCRETE REMOVAL SHALL BE DEFINED BY A 1" DEEP SAW CUT.

VARIATIONS TO THE NEW GRADE LINE OVER 1/4" MUST BE SUBMITTED BY THE FIELD ENGINEER TO THE STRUCTURES DESIGN SECTION FOR REVIEW.

JOINT FILLER SHALL CONFORM TO THE REQUIREMENTS OF A.A.S.H.T.O. DESIGNATION M 153, TYPE I, II OR III OR A.A.S.H.T.O. DESIGNATION M 213.

THE EXISTING STRUCTURE B-37-140 IS A FOUR SPAN 54-INCH PRESTRESSED CONCRETE GIRDER BRIDGE, 350.4 FEET LONG AND HAS AN AVERAGE CLEAR ROADWAY WIDTH OF 47 FEET.

THE HAUNCH CONCRETE QUANTITY IS BASED ON AN AVERAGE HAUNCH DEPTH SHOWN ON THE PRESTRESSED GIRDER DETAILS SHEETS.

AT THE BACK FACE OF ABUTMENT, ALL VOLUME WHICH CANNOT BE PLACED BEFORE ABUTMENT CONSTRUCTION AND IS NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH STRUCTURE BACKFILL.

THE CONTRACTOR SHALL SUPPLY A NEW NAME PLATE IN ACCORDANCE WITH SECTION 502.3.11 OF THE STANDARD SPECIFICATIONS AND THE STANDARD DETAIL DRAWINGS. NAME PLATE TO SHOW ORIGINAL CONSTRUCTION YEAR OF 1971.

$PRFNAME$
U:±41-0637.00 - STH 29 over WI River±B-37-140±BR

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8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-140

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QUANTITIES AND NOTES

SHEET 4 OF 40
499

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
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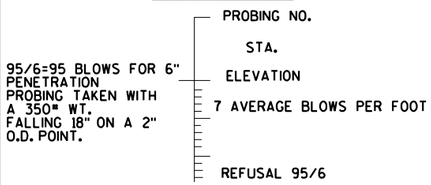
ABBREVIATIONS

F — FINE M — MEDIUM C — COARSE
WS — WEATHERED SO — SOUND

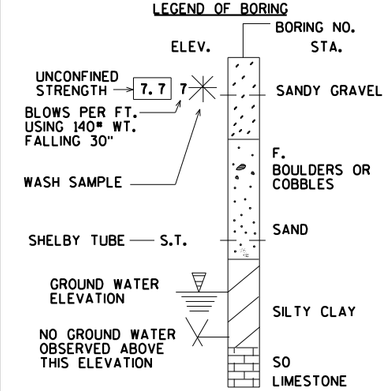
MATERIAL SYMBOLS

TOPSOIL SILT SANDSTONE
SAND PEAT LIMESTONE
GRAVEL CLAY IGNEOUS ROCK

LEGEND OF PROBING



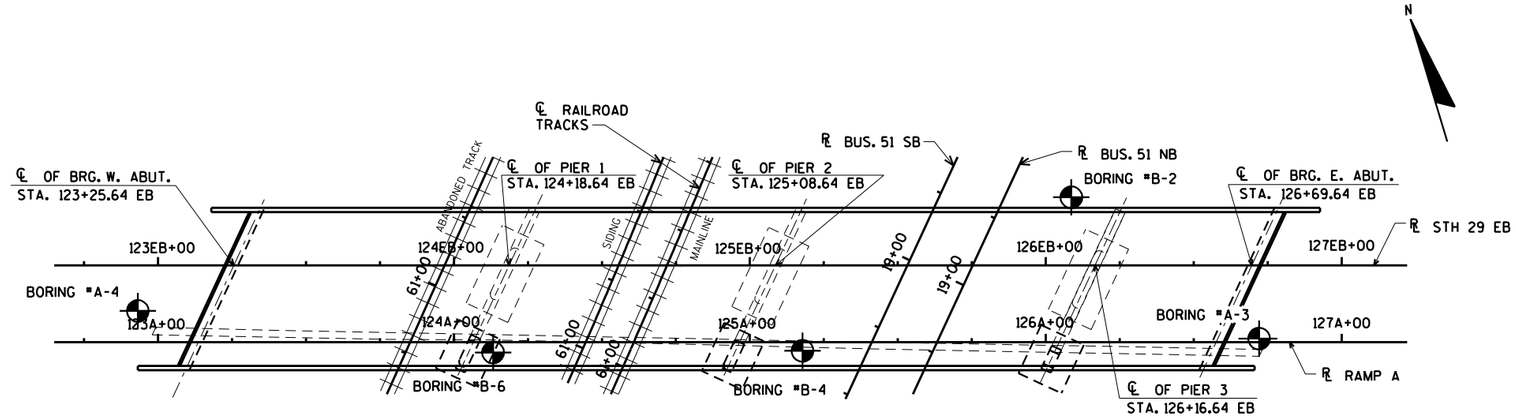
LEGEND OF BORING



UNLESS OTHERWISE SPECIFIED, THE BLOWS PER FOOT AT THE LOCATIONS INDICATED ARE BASED ON DRIVING A 2" O.D. X 1.4" I.D. SPLIT SPOON SAMPLER WITH A 140# HAMMER HAVING A FREE FALL OF 30". THE BLOW COUNT IS TAKEN IN UNDISTURBED SOIL IMMEDIATELY BELOW A CASED OR OPEN HOLE ELIMINATING SIDE FRICTION ON THE DRIVE PIPE.

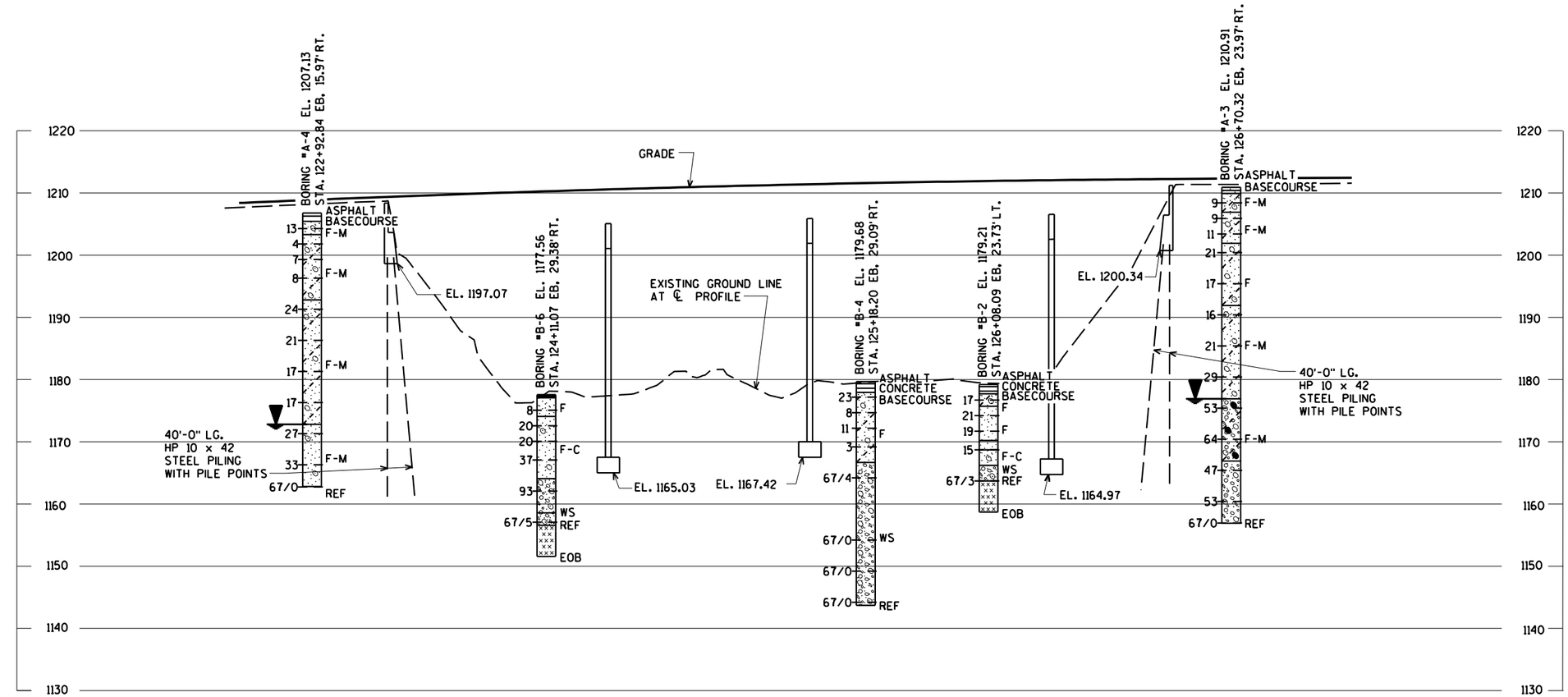
SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

TO OBTAIN RELATIVE DATA CONCERNING THE CHARACTER OF MATERIAL IN AND UPON WHICH THE FOUNDATION MIGHT BE BUILT, BORINGS AND/OR SOUNDINGS WERE MADE AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING. THE DATA PRESENTED HEREIN REPRESENTS THE FINDINGS OF THE SUBSURFACE EXPLORATIONS MADE. HOWEVER, BECAUSE THE DEPTHS INVESTIGATED ARE LIMITED AND THE AREA OF THE BORINGS AND/OR SOUNDINGS IS VERY SMALL IN RELATION TO THE ENTIRE AREA, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT CONDITIONS BELOW THE DEPTHS INVESTIGATED OR THAT THE CLASSIFICATION OF MATERIAL ENCOUNTERED IN THESE INVESTIGATIONS IS NECESSARILY TYPICAL OF THE ENTIRE SITE.



BORINGS TAKEN BY:
NUMMELIN TESTING SERVICES, INC.
STEVENS POINT/WAUNAKEE, WI
MAY 23 & 30, 2012
JUNE 11, 2012
JULY 19, 2012

GEOTECHNICAL REPORT BY:
NUMMELIN TESTING SERVICES, INC.
STEVENS POINT/WAUNAKEE, WI
SEPTEMBER 25, 2012



NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-140

DRAWN BY CJM | PLANS CK'D. DNS

SUBSURFACE EXPLORATION

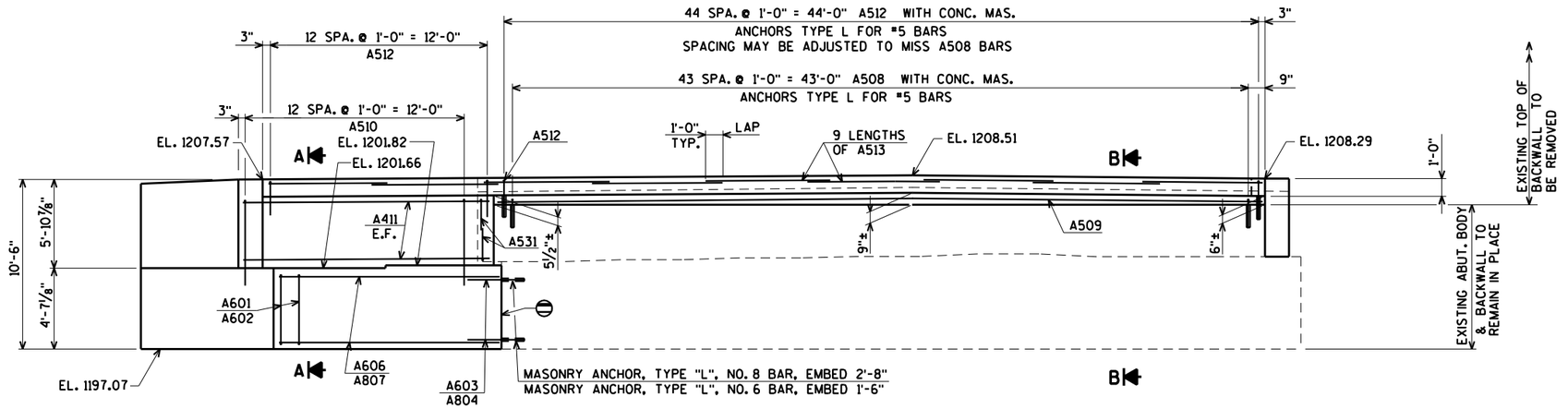
SHEET 5 OF 40
500

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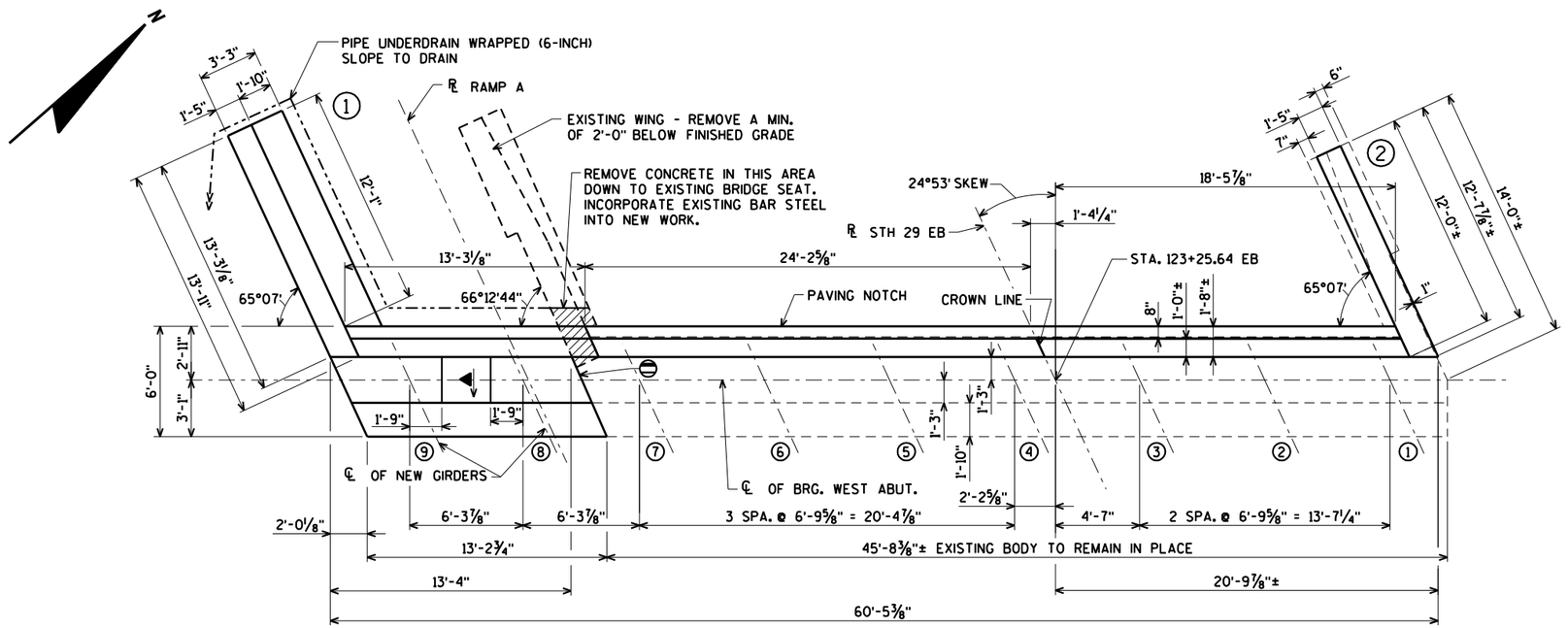
— 9/30/2013

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ELEVATION
(LOOKING WEST)

FOR SECTIONS "A" & "B" SEE SHEET 9



PLAN

▲ SLOPE 1" BETWEEN SEATS

⊖ ROUGHEN SURFACE OF CONCRETE ¼" DEEP MIN. ALL AREAS OF NEW TO EXISTING CONCRETE CONTACT.

E.F. DENOTES EACH FACE

NO.	DATE	REVISION	BY

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STRUCTURE B-37-140

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WEST ABUTMENT

SHEET 6 OF 40
501

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⊗ 3" MIN. TO 6" MAX. SEE CONCRETE SURFACE DRAIN S.D.D.

⊖ ROUGHEN SURFACE OF CONCRETE 1/4" DEEP MIN. ALL AREAS OF NEW TO EXISTING CONCRETE CONTACT

◬ 18" RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACK FACE OF ABUTMENT.

● STRIKE OFF AS SHOWN AND LEAVE ROUGH.

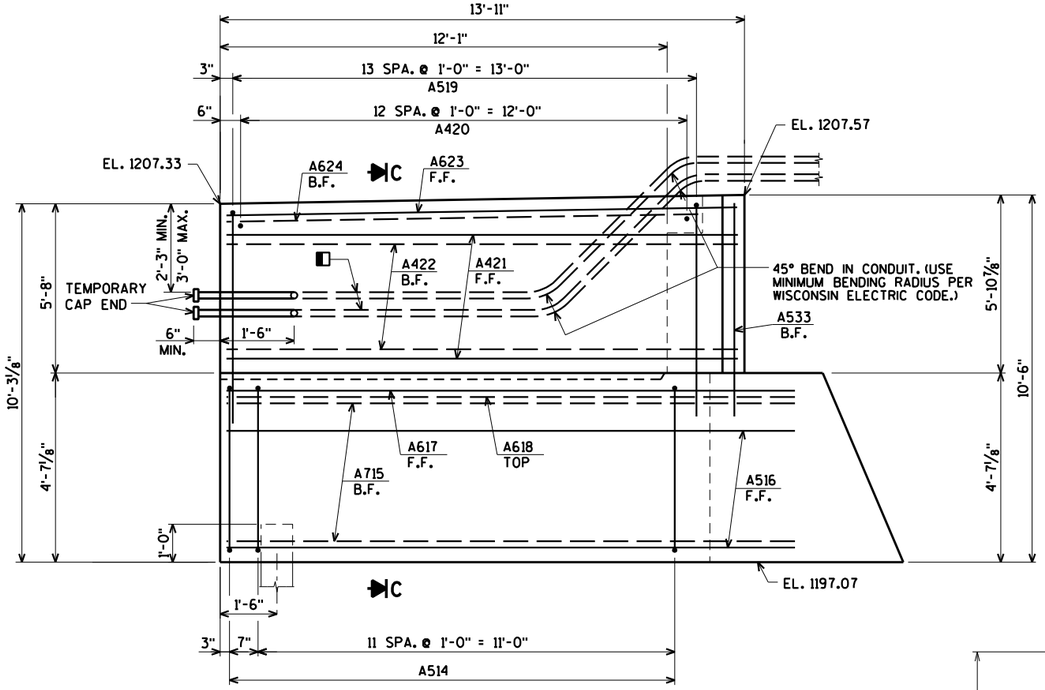
⊞ OPT. KEYED CONST. JOINT - FORMED BY A SURFACED BEVELED 2" x 6" WITH RUBBERIZED MEMBRANE WATERPROOFING ON B.F.

▲ 3/4" 'V' GROOVE ON F.F. OF WINGWALL. OMIT IF CONST. JOINT NOT USED.

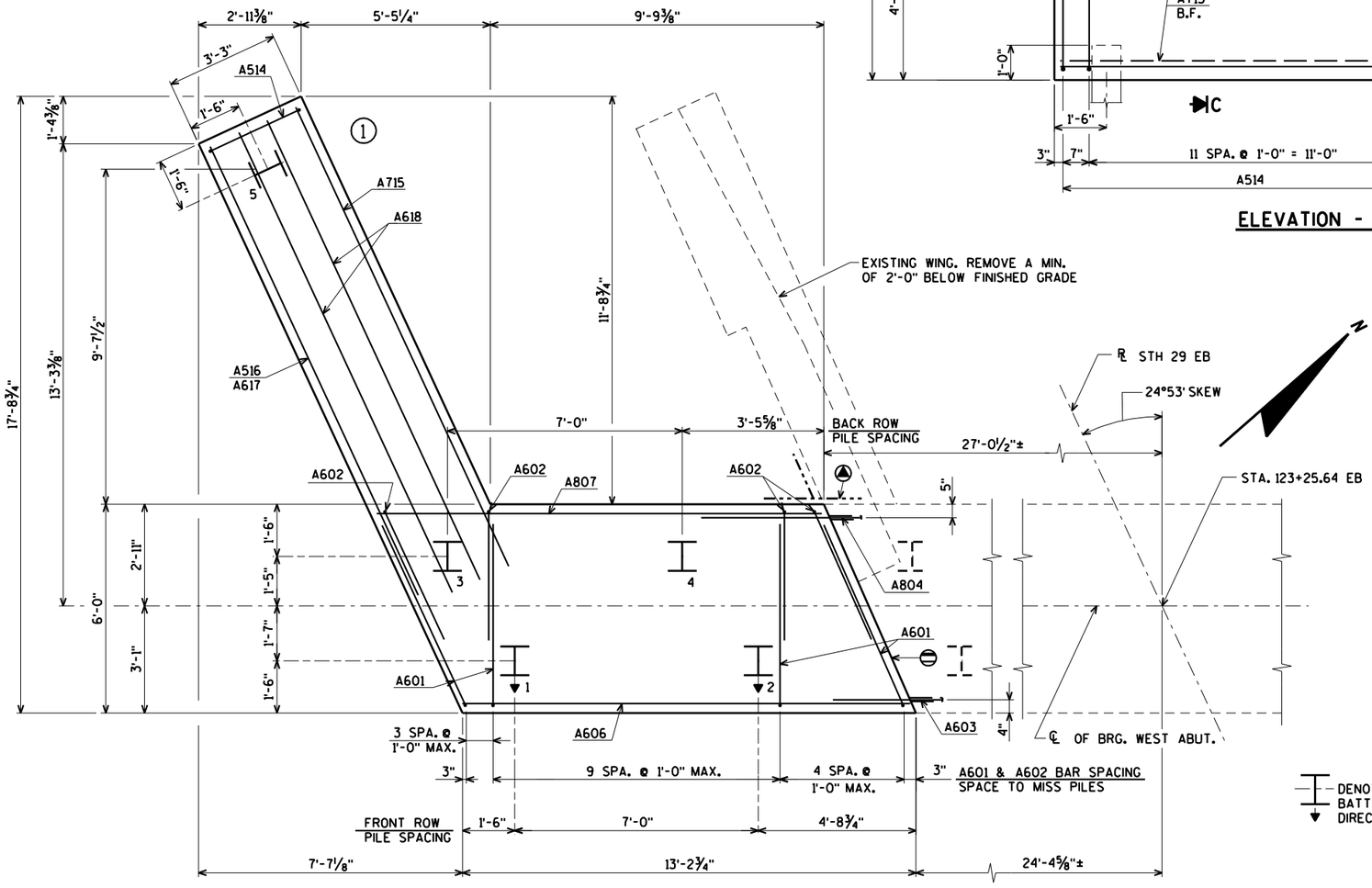
◧ 2" DIA. RIGID NONMETALLIC CONDUIT EXCEPT AT EXPANSION FITTING. AT EXPANSION FITTING USE RIGID METALLIC CONDUIT 3'-0" INTO PARAPET ON DECK SIDE AND THRU PARAPET AND WINGWALL TO A MINIMUM OF 6" BEYOND END OF WINGWALL. (FOR GROUNDING PURPOSES.)

F.F. DENOTES FRONT FACE

B.F. DENOTES BACK FACE



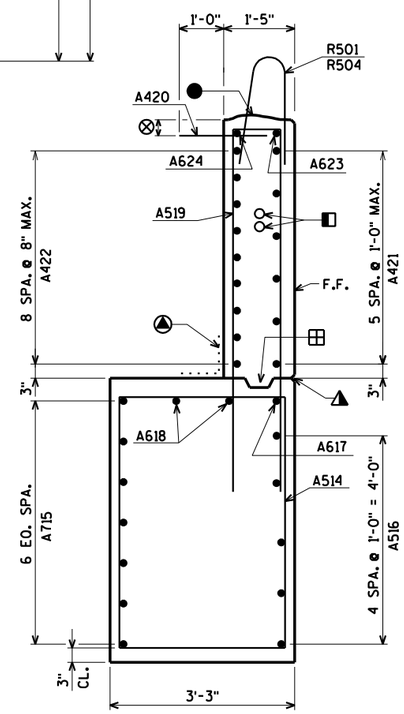
ELEVATION - WING 1



PILE LAYOUT

DENOTES BATTERED PILES.
BATTER 3"/FOOT IN
DIRECTION SHOWN.

SINGLE SLOPE PARAPET 32SS MODIFIED NOT SHOWN. FOR DETAILS SEE SHEET 38



SECTION C

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-140

DRAWN BY CLS | PLANS CK'D. DNS

WEST ABUTMENT
WING 1 DETAILS

SHEET 7 OF 40
502

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

8

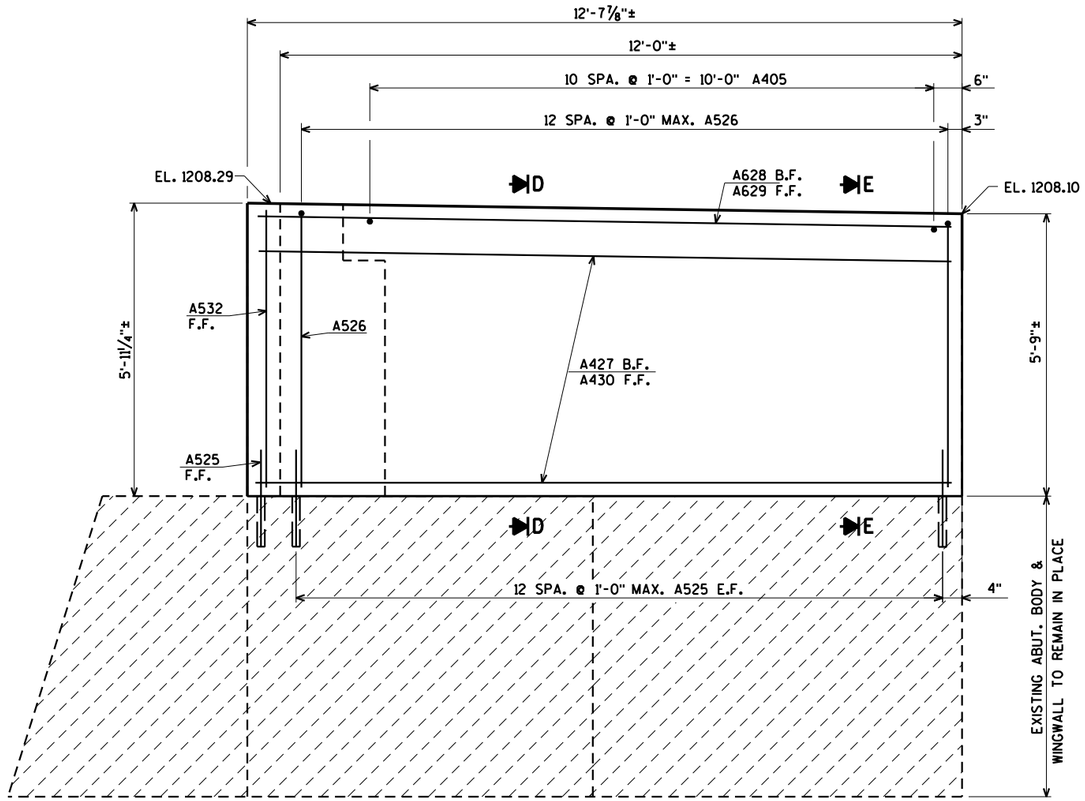
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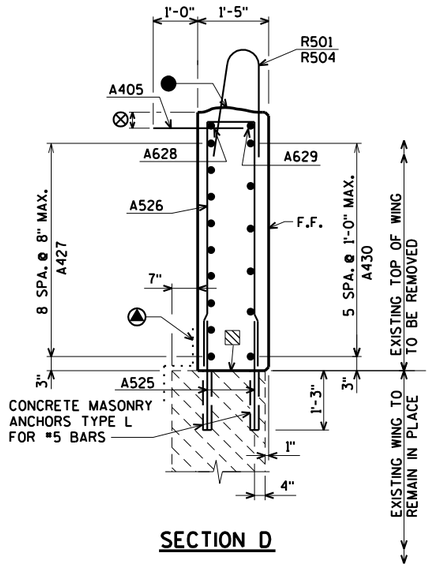
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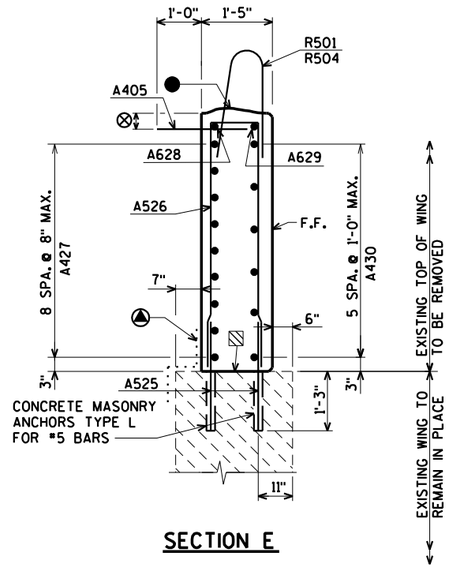


ELEVATION WING 2

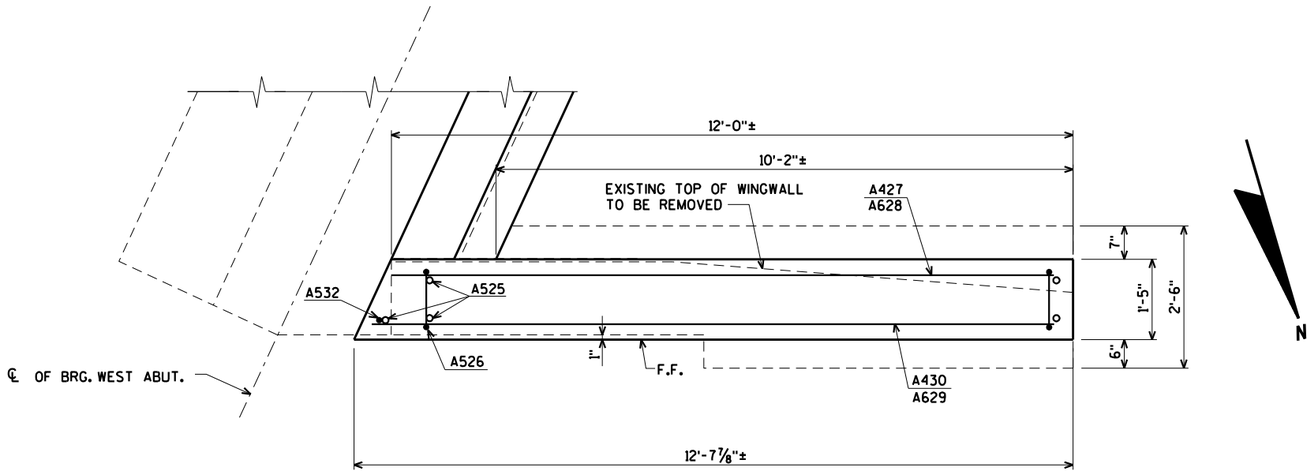


SECTION D

SINGLE SLOPE PARAPET 32SS
MODIFIED NOT SHOWN. FOR
DETAILS SEE SHEET 38



SECTION E



PLAN - WING 2

▨ EXISTING CONST. JOINT

⊗ 3" MIN. TO 6" MAX. SEE CONCRETE SURFACE DRAIN S.D.D.

▲ 18" RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACK FACE OF ABUTMENT.

● STRIKE OFF AS SHOWN AND LEAVE ROUGH.

F.F. DENOTES FRONT FACE

B.F. DENOTES BACK FACE

E.F. DENOTES EACH FACE

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-140

DRAWN BY CLS | PLANS CK'D. DNS

WEST ABUTMENT
WING 2 DETAILS

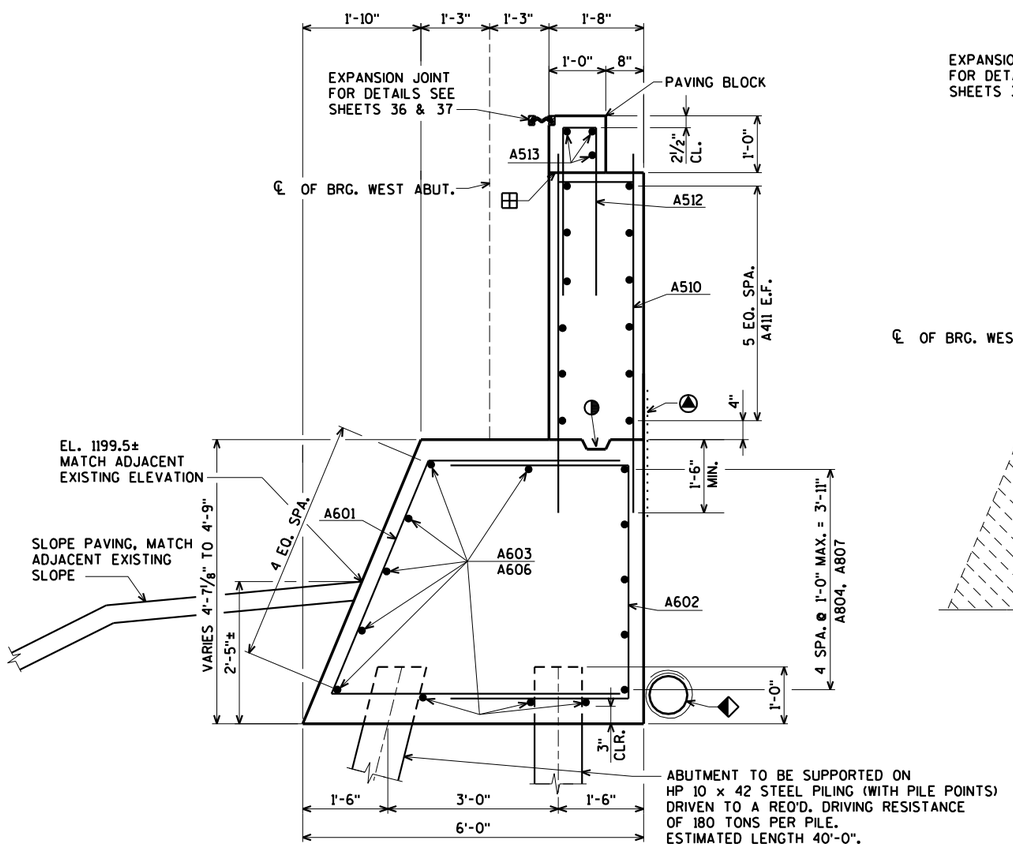
SHEET 8 OF 40
503

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
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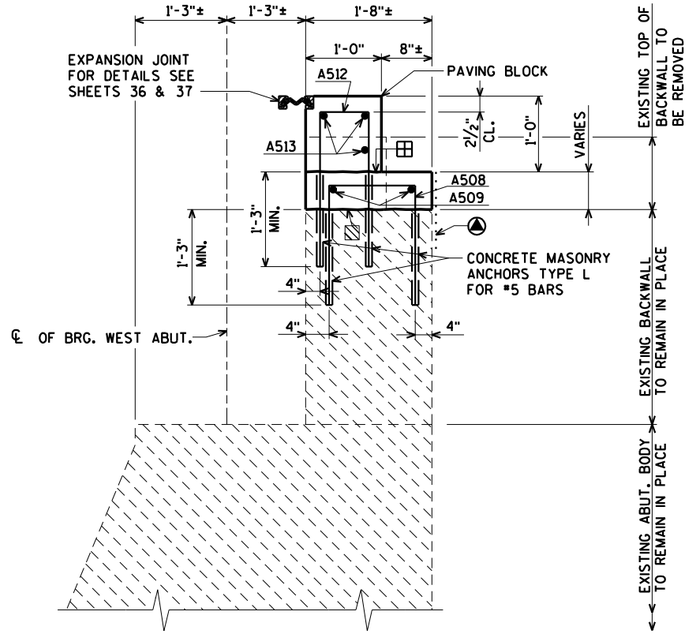
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U:\41-0637.00 - STH 29 over WiRiver\B-37-140\BRIDGE\B-37-140 wa.dgn



SECTION A



SECTION B

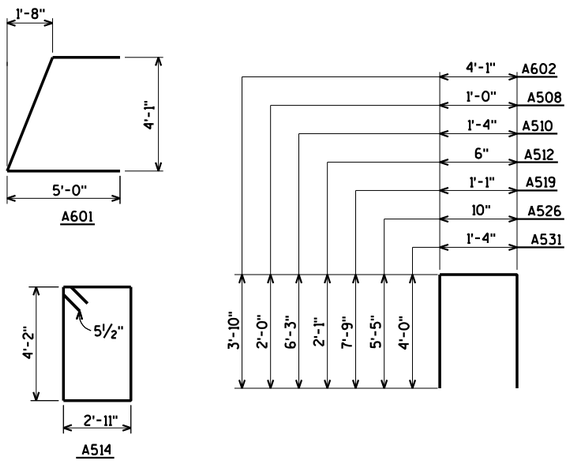
FOR LOCATION OF SECTIONS "A" & "B" SEE SHEET 6

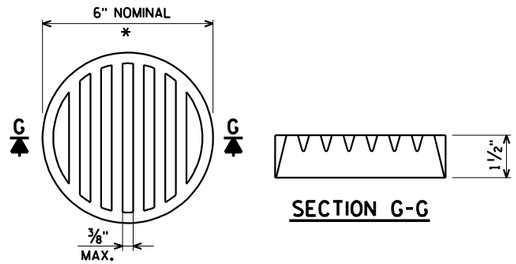
BILL OF BARS

WEIGHTS INCLUDE PARAPET STEEL SHOWN ON SHEET 38

BAR. NO.	COATED BAR	NO. REQ'D.	LENGTH	BENT BAR	BUNDLED BAR SERIES	3,340# COATED 1,120# UNCOATED LOCATION
A601		17	12-5	X		BODY VERT. F.F.
A602		17	11-5	X		BODY VERT. B.F.
A603		9	4-7			BODY DOWELS
A804		5	7-11			BODY DOWELS
A405	X	11	2-0			WING 2 DOWELS
A606		9	12-10			BODY HORIZ.
A807		5	12-10			BODY HORIZ.
A508	X	44	4-9	X		BACKWALL VERT.
A509	X	2	46-0			BACKWALL HORIZ.
A510	X	13	13-7	X		BACKWALL VERT.
A411	X	12	14-3			BACKWALL HORIZ. E.F.
A512	X	58	4-5	X		BACKWALL @ PAVING BLOCK VERT.
A513	X	27	8-0			BACKWALL@ PAVING BLOCK HORIZ.
A514	X	13	14-9	X		WING 1 VERT.
A715	X	7	15-6			WING 1 HORIZ. B.F.
A516	X	5	15-6			WING 1 HORIZ. F.F.
A617	X	1	15-6			WING 1 HORIZ. F.F.
A618	X	2	15-6			WING 1 HORIZ. TOP
A519	X	14	16-4	X		WING 1 VERT.
A420	X	13	2-0			WING 1 DOWELS
A421	X	6	12-11			WING 1 HORIZ. F.F.
A422	X	9	13-6			WING 1 HORIZ. B.F.
A623	X	1	12-11			WING 1 HORIZ. F.F.
A624	X	1	13-6			WING 1 HORIZ. B.F.
A525	X	27	4-0			WING 2 DOWELS E.F.
A526	X	13	11-5	X		WING 2 VERT.
A427	X	9	11-8			WING 2 HORIZ. B.F.
A628	X	1	11-8			WING 2 HORIZ. B.F.
A629	X	1	12-3			WING 2 HORIZ. F.F.
A430	X	6	12-3			WING 2 HORIZ. F.F.
A531	X	2	9-1	X		BACKWALL VERT.
A532	X	1	5-7			WING 2 VERT. F.F.
A533	X	1	7-9			WING 1 VERT. B.F.

BENDING DIMENSIONS ARE OUT TO OUT OF BARS.





SECTION G-G

* DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING. ORIENT SO SLOTS ARE VERTICAL.

THE RODENT SHIELD, PIPE COUPLING AND SCREWS SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".

THE RODENT SHIELD SHALL BE PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALLY AVAILABLE AS A FLOOR STRAINER. A PIPE COUPLING IS REQUIRED FOR THE ATTACHMENT OF THIS SHIELD TO THE EXPOSED END OF THE PIPE UNDERDRAIN. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 x 1-INCH SHEET METAL SCREWS.

RODENT SHIELD DETAIL

▨ EXISTING CONST. JOINT

◆ PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN. RODENT SHIELD TO BE INCLUDED IN BID PRICE OF "PIPE UNDERDRAIN WRAPPED 6-INCH".

◭ 18" RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACK FACE OF ABUTMENT.

◑ OPT. KEYED CONST. JOINT - FORMED BY A SURFACED BEVELED 2" x 6" WITH RUBBERIZED MEMBRANE WATERPROOFING ON B.F.

⊞ CONST. JOINT - POUR CONCRETE ABOVE THIS JOINT AFTER SUPERSTRUCTURE IS IN PLACE. STRIKE OFF AND LEAVE ROUGH.

F.F. DENOTES FRONT FACE

B.F. DENOTES BACK FACE

E.F. DENOTES EACH FACE

FOR PILE SPLICE DETAIL SEE SHEET 4

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-140

DRAWN BY CLS | PLANS CK'D. DNS

WEST ABUTMENT DETAILS

SHEET 9 OF 40
504

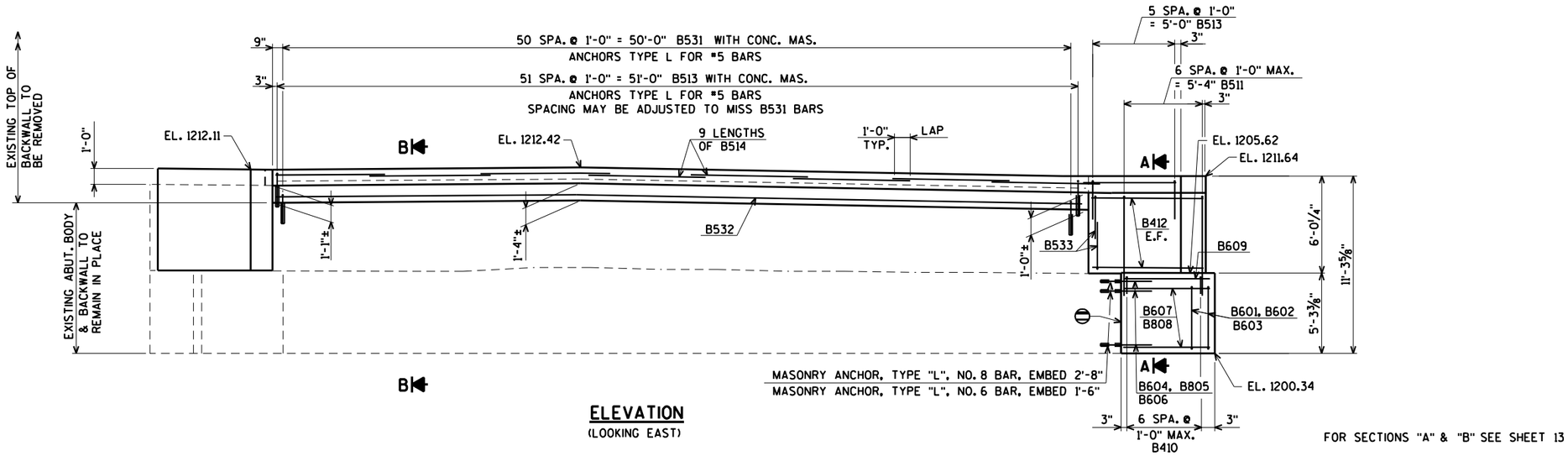
ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

8

8

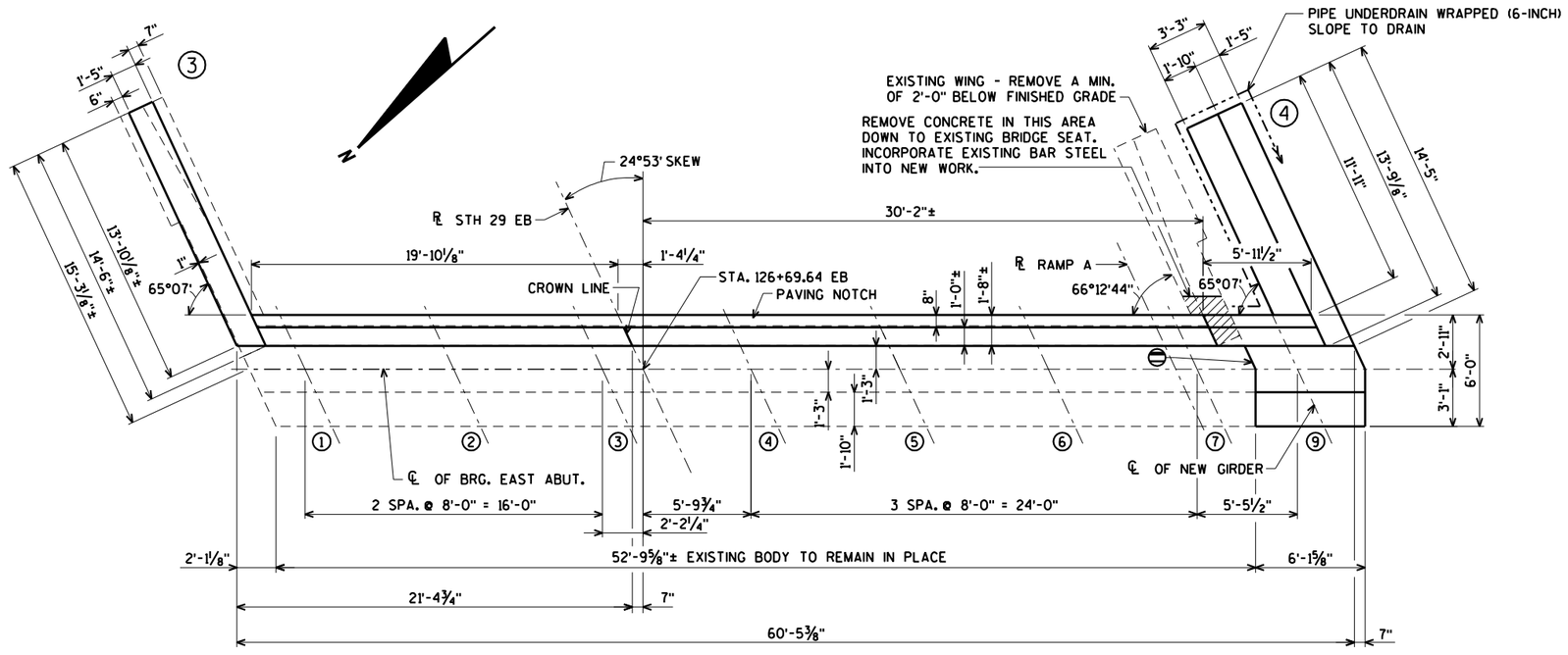
STATE PROJECT NUMBER

1053-02-75



ELEVATION
(LOOKING EAST)

FOR SECTIONS "A" & "B" SEE SHEET 13



PLAN

ROUGHEN SURFACE OF CONCRETE ¼" DEEP MIN. ALL AREAS OF NEW TO EXISTING CONCRETE CONTACT.

E.F. DENOTES EACH FACE

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-140

DRAWN BY CLS | PLANS CK'D. DNS

EAST ABUTMENT

SHEET 10 OF 40
505

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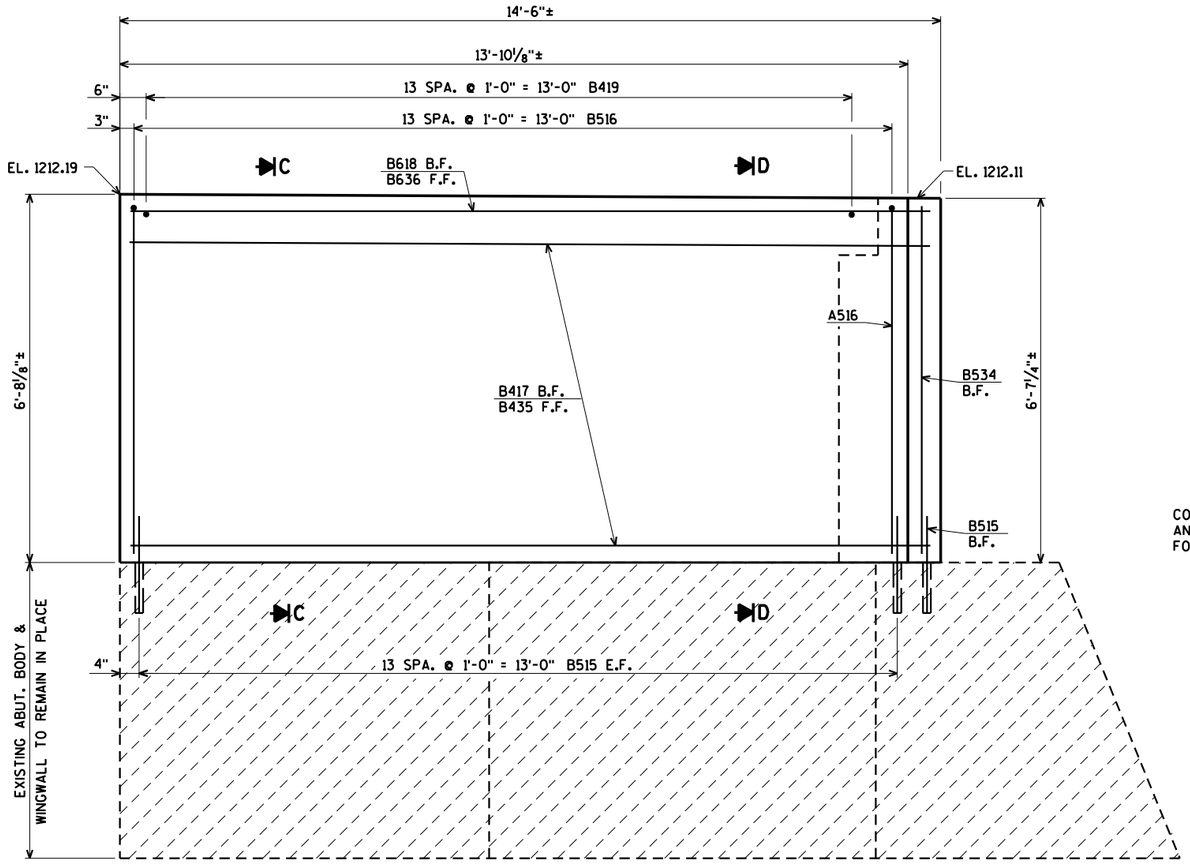
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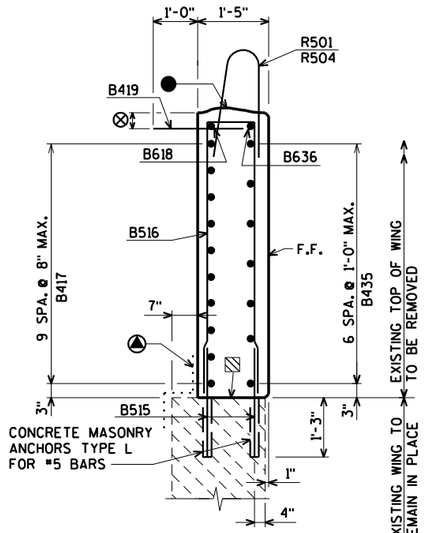
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U:±41-0637.00 - STH 29 over WIRiver±B-37-140±BRIDGE±B-37-140 ea.dgn

10/31/2013

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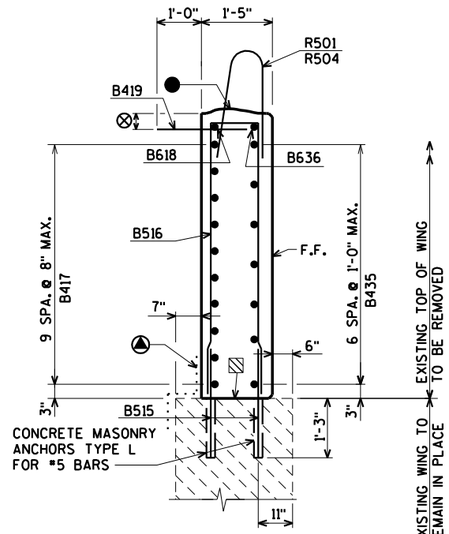


ELEVATION WING 3

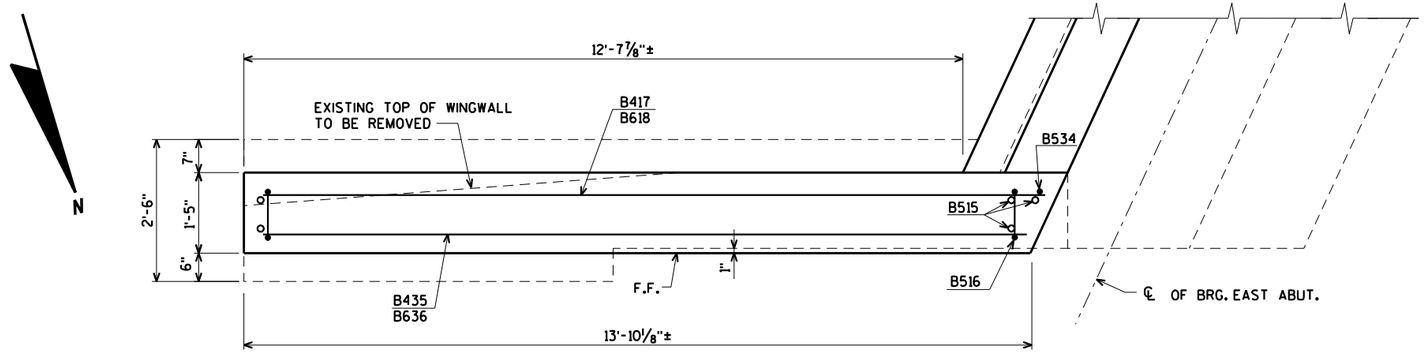


SECTION D

SINGLE SLOPE PARAPET 32SS MODIFIED NOT SHOWN. FOR DETAILS SEE SHEET 38



SECTION E



ELEVATION WING 3

▨ EXISTING CONST. JOINT

⊗ 3" MIN. TO 6" MAX. SEE CONCRETE SURFACE DRAIN S.D.D.

▲ 18" RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACK FACE OF ABUTMENT.

● STRIKE OFF AS SHOWN AND LEAVE ROUGH.

F.F. DENOTES FRONT FACE

B.F. DENOTES BACK FACE

E.F. DENOTES EACH FACE

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-140

DRAWN BY CLS | PLANS CK'D. DNS

EAST ABUTMENT WING 3 DETAIL

SHEET 11 OF 40
506

ORIGINAL PLANS PREPARED BY
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Eau Claire, WI 54701
www.AyresAssociates.com

$PRFNAME$
U:±41-0637.00 - STH 29 over WIRiver±B-37-140±BRIDGE±B-37-140 ea.dgn
9/30/2013
PENTABLE:BReau_shd_util.tbl

⊗ 3" MIN. TO 6" MAX. SEE CONCRETE SURFACE DRAIN S.D.D.

⊖ ROUGHEN SURFACE OF CONCRETE 1/4" DEEP MIN. ALL AREAS OF NEW TO EXISTING CONCRETE CONTACT

◬ 18" RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACK FACE OF ABUTMENT.

● STRIKE OFF AS SHOWN AND LEAVE ROUGH.

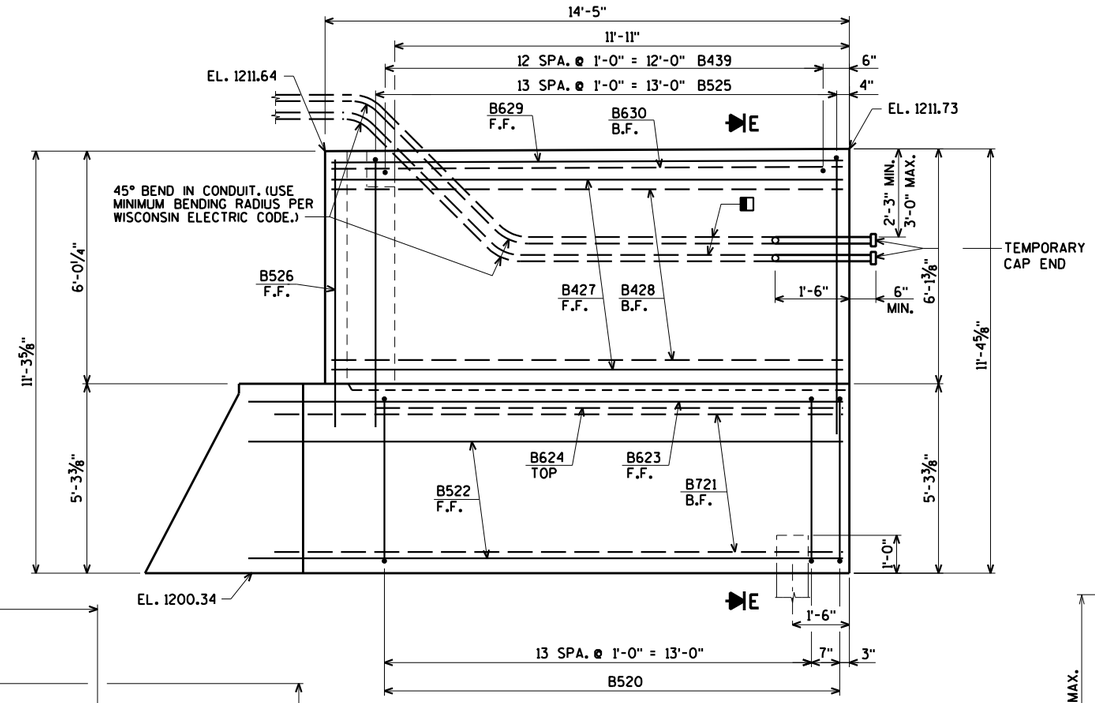
⊞ OPT. KEYED CONST. JOINT - FORMED BY A SURFACED BEVELED 2" x 6" WITH RUBBERIZED MEMBRANE WATERPROOFING ON B.F.

▲ 3/4" 'V' GROOVE ON F.F. OF WINGWALL. OMIT IF CONST. JOINT NOT USED.

◧ 2" DIA. RIGID NONMETALLIC CONDUIT EXCEPT AT EXPANSION FITTING. AT EXPANSION FITTING USE RIGID METALLIC CONDUIT 3'-0" INTO PARAPET ON DECK SIDE AND THRU PARAPET AND WINGWALL TO A MINIMUM OF 6" BEYOND END OF WINGWALL. (FOR GROUNDING PURPOSES.)

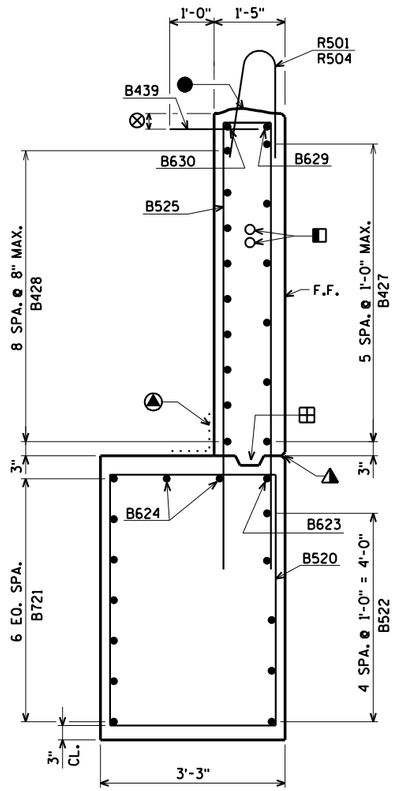
F.F. DENOTES FRONT FACE

B.F. DENOTES BACK FACE

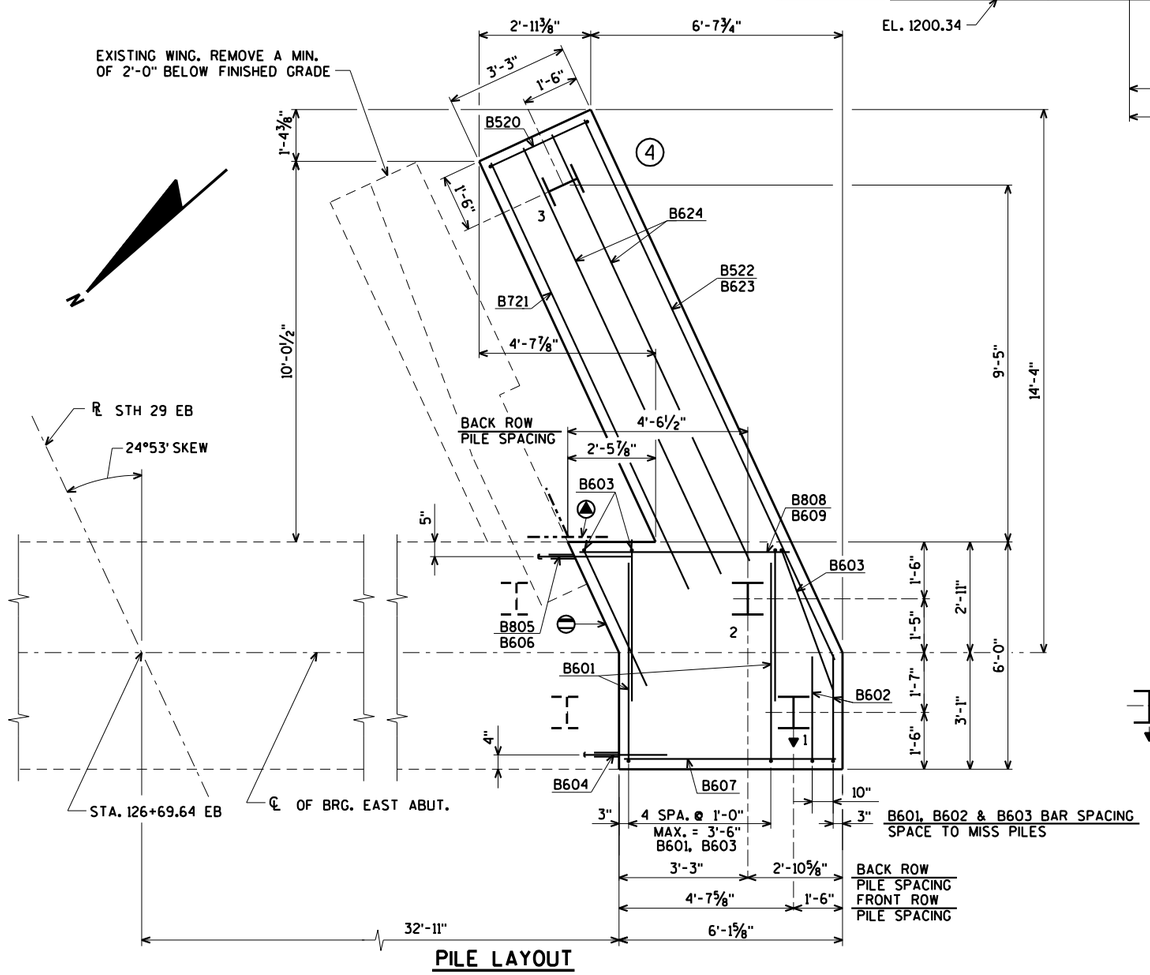


ELEVATION - WING 4

SINGLE SLOPE PARAPET 32SS MODIFIED NOT SHOWN. FOR DETAILS SEE SHEET 38



SECTION E



PILE LAYOUT

DENOTES BATTERED PILES. BATTER 3"/FOOT IN DIRECTION SHOWN.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-140

DRAWN BY CLS | PLANS CK'D. DNS

EAST ABUTMENT WING 4 DETAIL

SHEET 12 OF 40
507

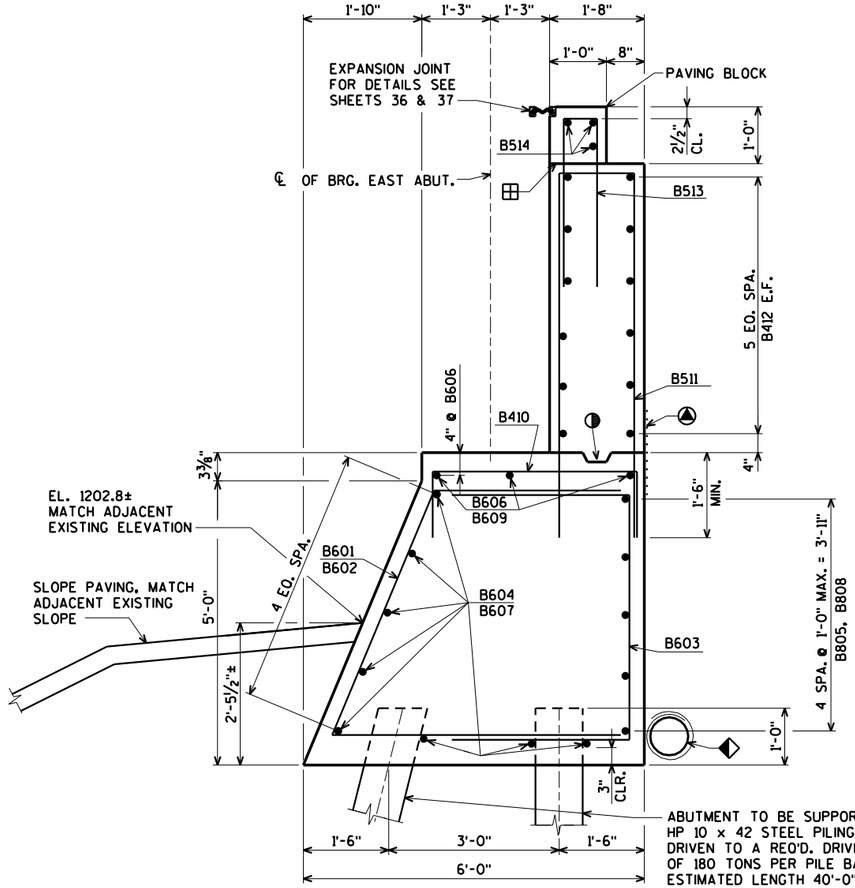
ORIGINAL PLANS PREPARED BY
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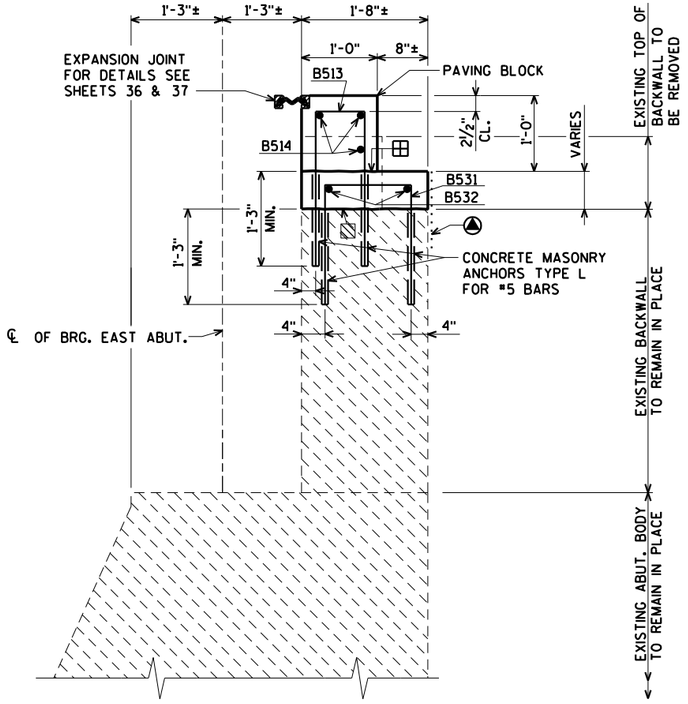
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$PRFNAME$
U:\41-0637.00 - STH 29 over WiRiver\B-37-140\BRIDGE\B-37-140 ea.dgn



SECTION A



SECTION B

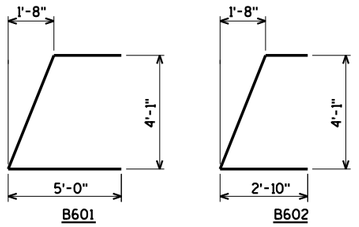
FOR LOCATION OF SECTIONS "A" & "B" SEE SHEET 10

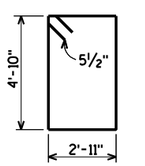
BILL OF BARS

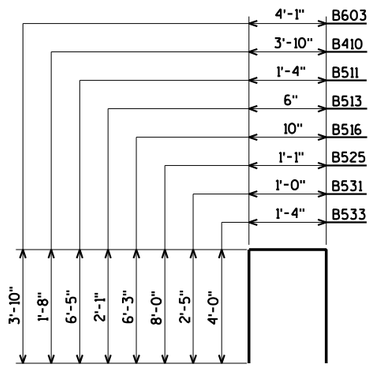
WEIGHTS INCLUDE PARAPET STEEL SHOWN ON SHEET 38

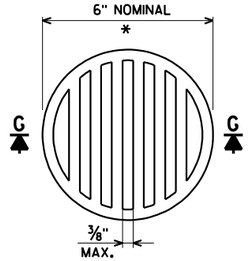
BAR. NO.	COATED BAR	NO. REQ'D.	LENGTH	BENT BAR	BUNDLED BAR SERIES	3,480# COATED 620# UNCOATED LOCATION
B601		5	12-5	X		BODY VERT. F.F.
B602		2	8-1	X		BODY VERT. F.F.
B603		7	11-5	X		BODY VERT. B.F.
B604		8	4-7			BODY DOWELS
B805		5	7-11			BODY DOWELS
B606		3	4-7			BODY DOWELS
B607		8	5-9			BODY HORIZ.
B808		5	5-9			BODY HORIZ.
B609		3	5-9			BODY HORIZ.
B410		7	7-0	X		BODY VERT.
B511	X	7	13-11	X		BACKWALL VERT.
B412	X	12	7-2			BACKWALL HORIZ. E.F.
B513	X	58	4-5	X		BACKWALL @ PAVING BLOCK VERT
B514	X	27	8-0			BACKWALL @ PAVING BLOCK HORIZ.
B515	X	29	4-0			WING 3 DOWELS E.F.
B516	X	14	13-1	X		WING 3 VERT.
B417	X	10	14-0			WING 3 HORIZ. B.F.
B618	X	1	14-0			WING 3 HORIZ. B.F.
B419	X	14	2-0			WING 3 DOWELS
B520	X	15	16-0	X		WING 4 VERT.
B721	X	7	13-8			WING 4 HORIZ. B.F.
B522	X	5	15-8			WING 4 HORIZ. F.F.
B623	X	1	15-8			WING 4 HORIZ. F.F.
B624	X	2	14-0			WING 4 HORIZ. TOP
B525	X	14	16-10	X		WING 4 VERT.
B526	X	1	7-10			WING 4 VERT. F.F.
B427	X	6	14-0			WING 4 HORIZ. F.F.
B428	X	9	13-6			WING 4 HORIZ. B.F.
B629	X	1	14-0			WING 4 HORIZ. F.F.
B630	X	1	13-6			WING 4 HORIZ. B.F.
B531	X	51	5-7	X		BACKWALL VERT.
B532	X	2	53-0			BACKWALL HORIZ.
B533	X	2	9-1	X		BACKWALL VERT.
B534	X	1	6-3			WING 3 VERT.
B435	X	7	13-6			WING 3 HORIZ. F.F.
B636	X	1	13-6			WING 3 HORIZ. F.F.
B439	X	13	2-0			WING 4 DOWELS

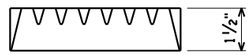
BENDING DIMENSIONS ARE OUT TO OUT OF BARS.











SECTION G-G

* DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING. ORIENT SO SLOTS ARE VERTICAL.

THE RODENT SHIELD, PIPE COUPLING AND SCREWS SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".

THE RODENT SHIELD SHALL BE PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALLY AVAILABLE AS A FLOOR STRAINER. A PIPE COUPLING IS REQUIRED FOR THE ATTACHMENT OF THIS SHIELD TO THE EXPOSED END OF THE PIPE UNDERDRAIN. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 x 1-INCH SHEET METAL SCREWS.

RODENT SHIELD DETAIL

▨ EXISTING CONST. JOINT

◆ PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN. RODENT SHIELD TO BE INCLUDED IN BID PRICE OF "PIPE UNDERDRAIN WRAPPED 6-INCH".

◭ 18" RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACK FACE OF ABUTMENT.

◑ OPT. KEYED CONST. JOINT - FORMED BY A SURFACED BEVELED 2" x 6" WITH RUBBERIZED MEMBRANE WATERPROOFING ON B.F.

⊞ CONST. JOINT - POUR CONCRETE ABOVE THIS JOINT AFTER SUPERSTRUCTURE IS IN PLACE. STRIKE OFF AND LEAVE ROUGH.

F.F. DENOTES FRONT FACE

B.F. DENOTES BACK FACE

E.F. DENOTES EACH FACE

FOR PILE SPLICE DETAIL SEE SHEET 4

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-140

DRAWN BY CLS | PLANS CK'D. DNS

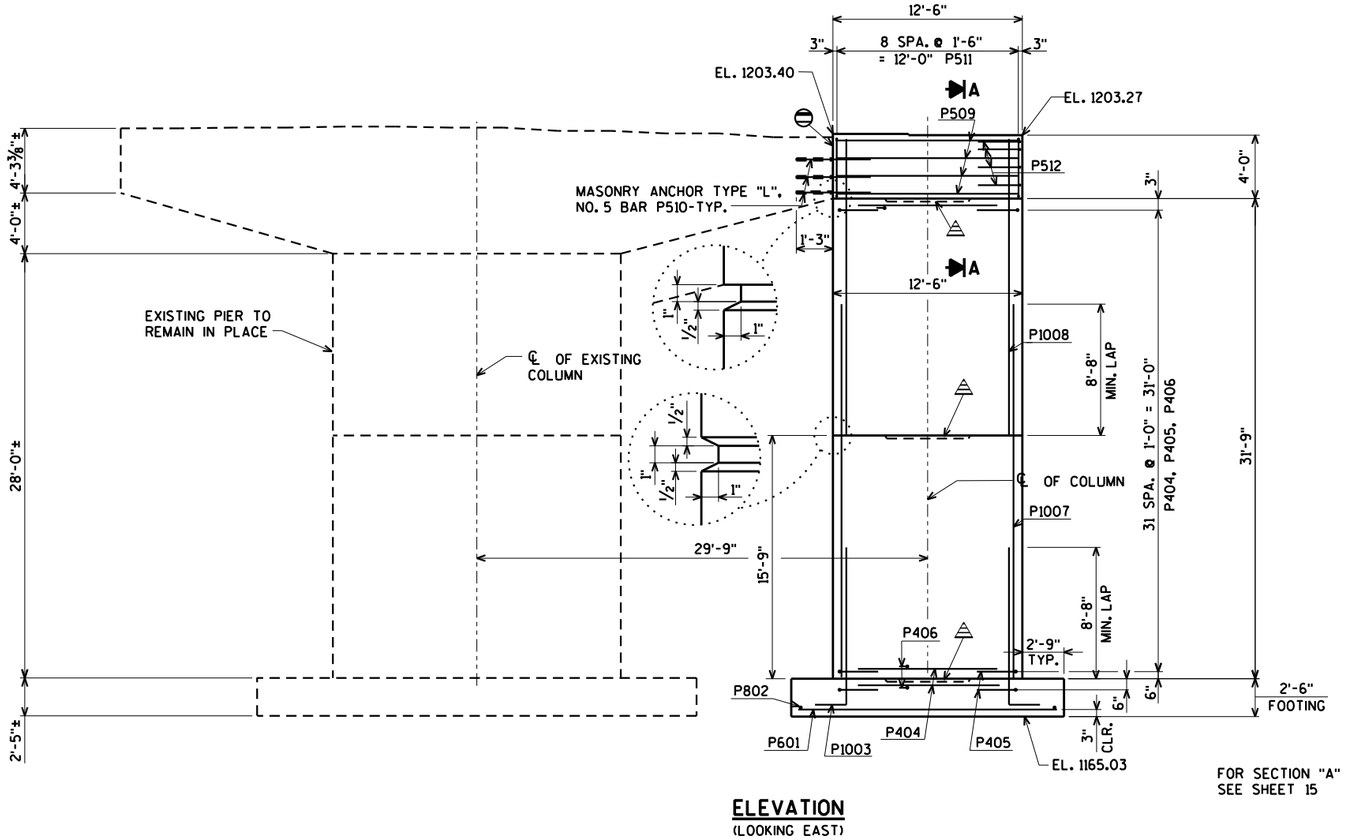
EAST ABUTMENT DETAILS

SHEET 13 OF 40
508

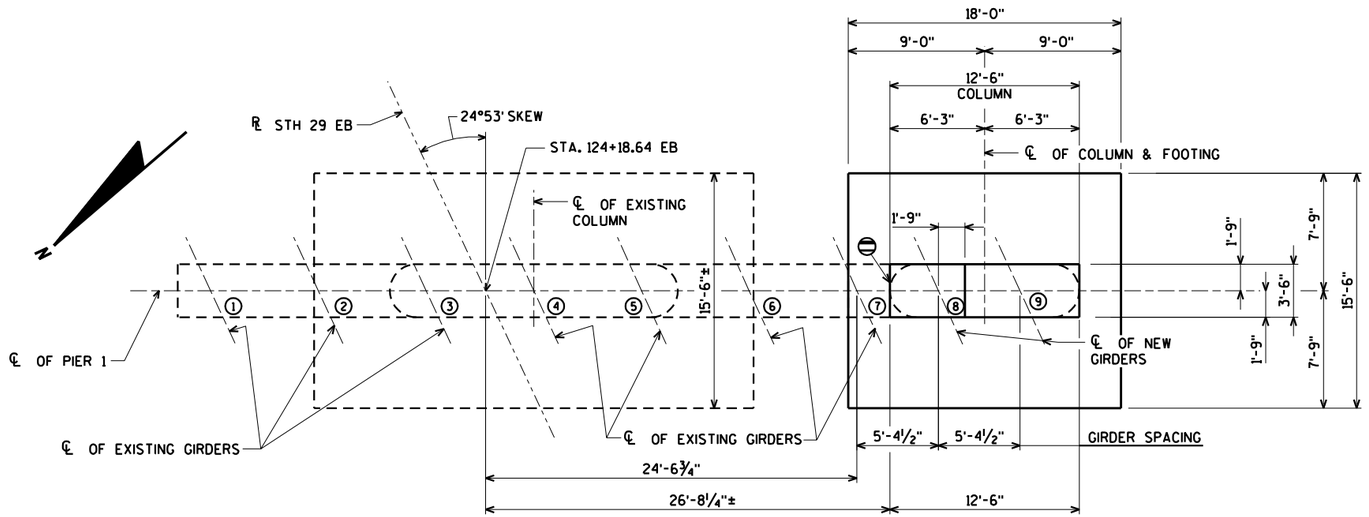
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Eau Claire, WI 54701
www.AyresAssociates.com

STATE PROJECT NUMBER

1053-02-75



ELEVATION
(LOOKING EAST)



PLAN

ROUGHEN SURFACE OF CONCRETE ¼" DEEP MIN. ALL AREAS OF NEW TO EXISTING CONCRETE CONTACT.

1'-2" x 8'-6" x 4" CONST. JOINT FORMED BY A BEVELED KEYWAY. TYPICAL COLUMN AND FOOTING.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
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STRUCTURE B-37-140

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PIER 1

SHEET 14 OF 40
509

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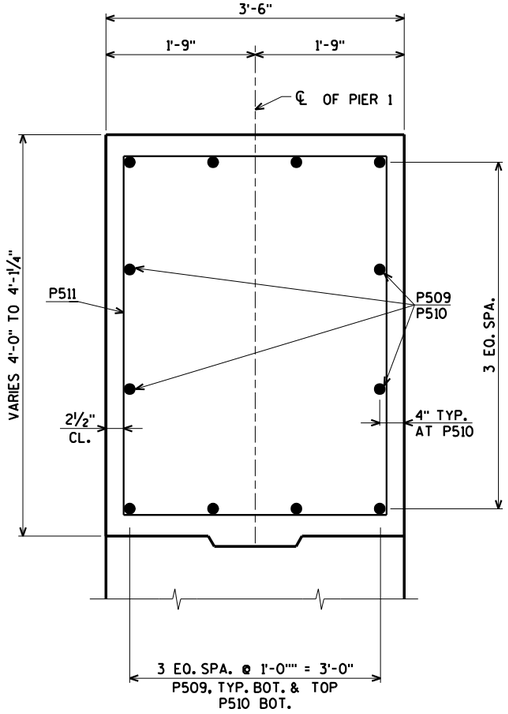
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9/30/2013

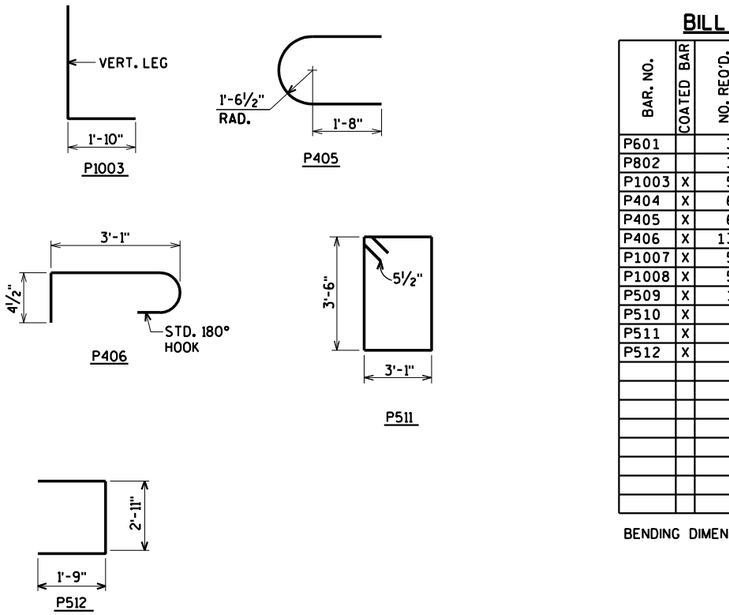
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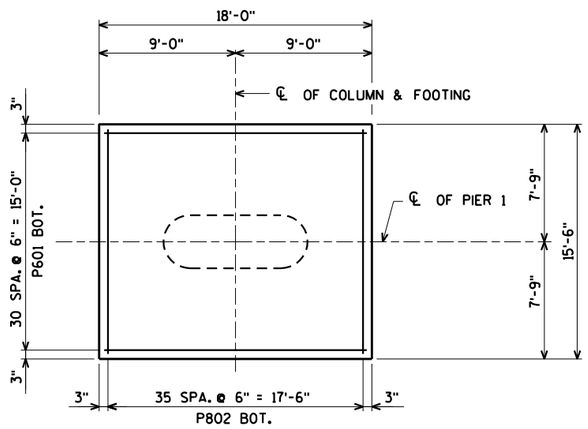
SECTION A



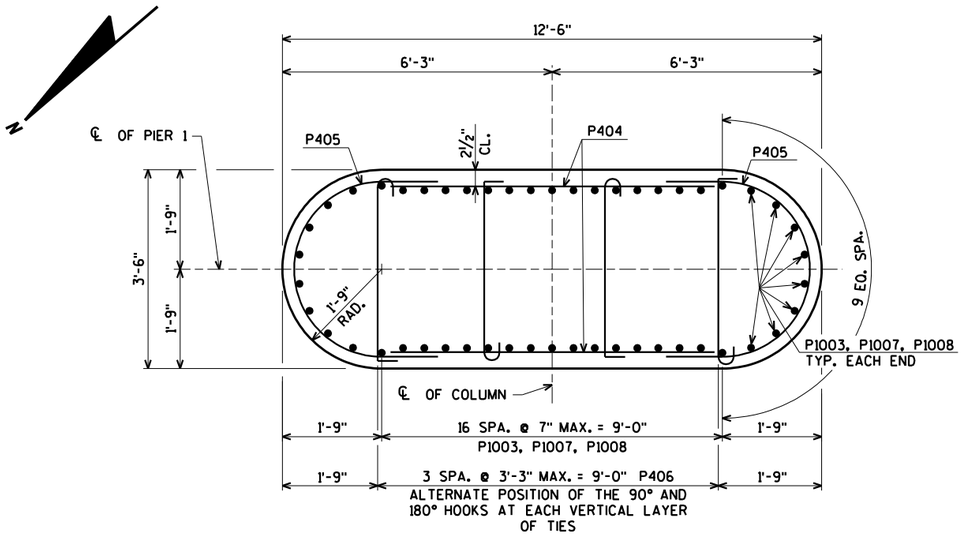
BILL OF BARS

BAR. NO.	COATED BAR	NO. REQ'D.	LENGTH	BENT BAR	BUNDLED BAR SERIES	13,680# COATED 2,260# UNCOATED LOCATION
P601		31	17-6			FOOTING BOTTOM
P802		36	15-0			FOOTING BOTTOM
P1003	X	50	12-10	X		FOOTING DOWELS
P404	X	66	9-0			FOOTING & COLUMN HORIZ.
P405	X	66	8-2	X		FOOTING & COLUMN HORIZ.
P406	X	132	3-10	X		FOOTING & COLUMN TIES
P1007	X	50	24-5			COLUMN VERT.
P1008	X	50	19-8			COLUMN VERT.
P509	X	12	12-1			CAP HORIZ.
P510	X	8	4-2			CAP DOWELS
P511	X	9	13-8	X		CAP VERT.
P512	X	4	6-2	X		CAP HORIZ. AT END

BENDING DIMENSIONS ARE OUT TO OUT OF BARS.



FOOTING PLAN



TYPICAL SECTION THRU COLUMN

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-140

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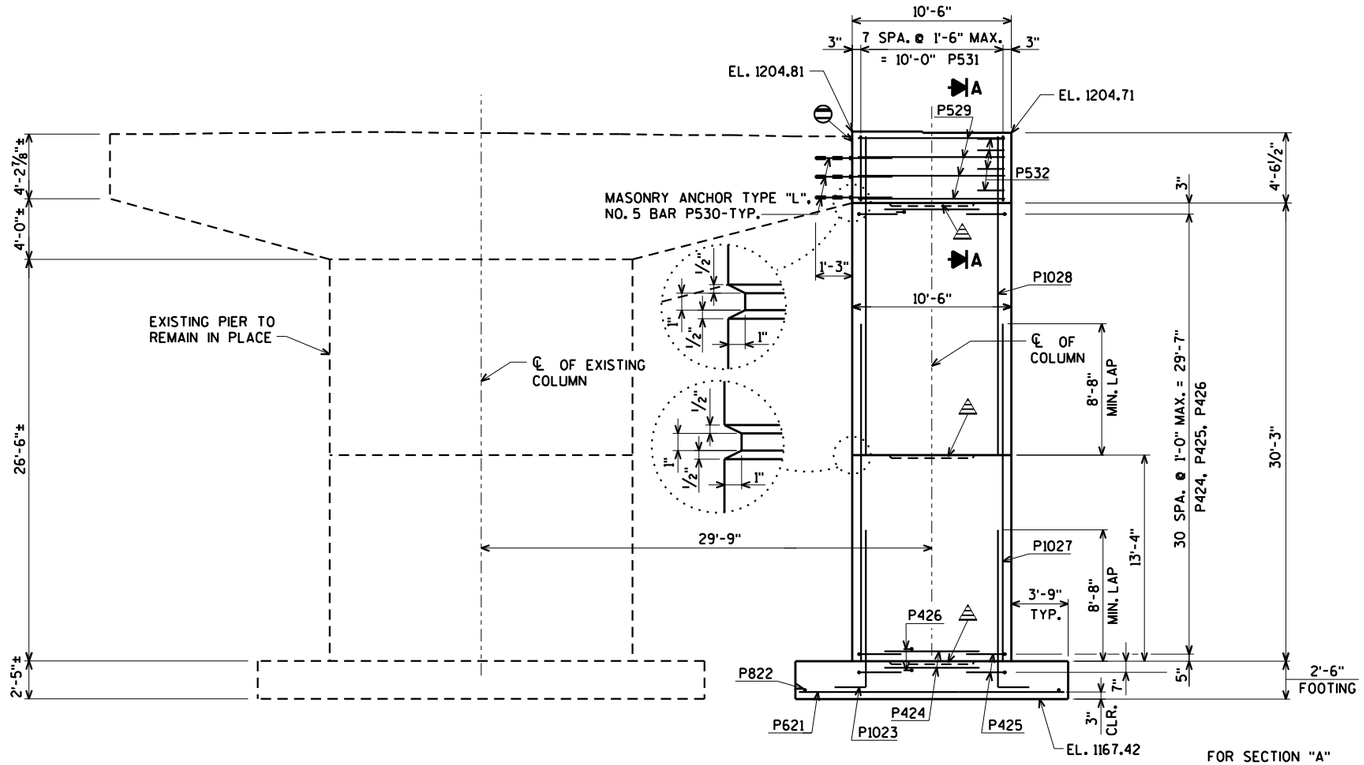
PIER 1 DETAILS

SHEET 15 OF 40
510

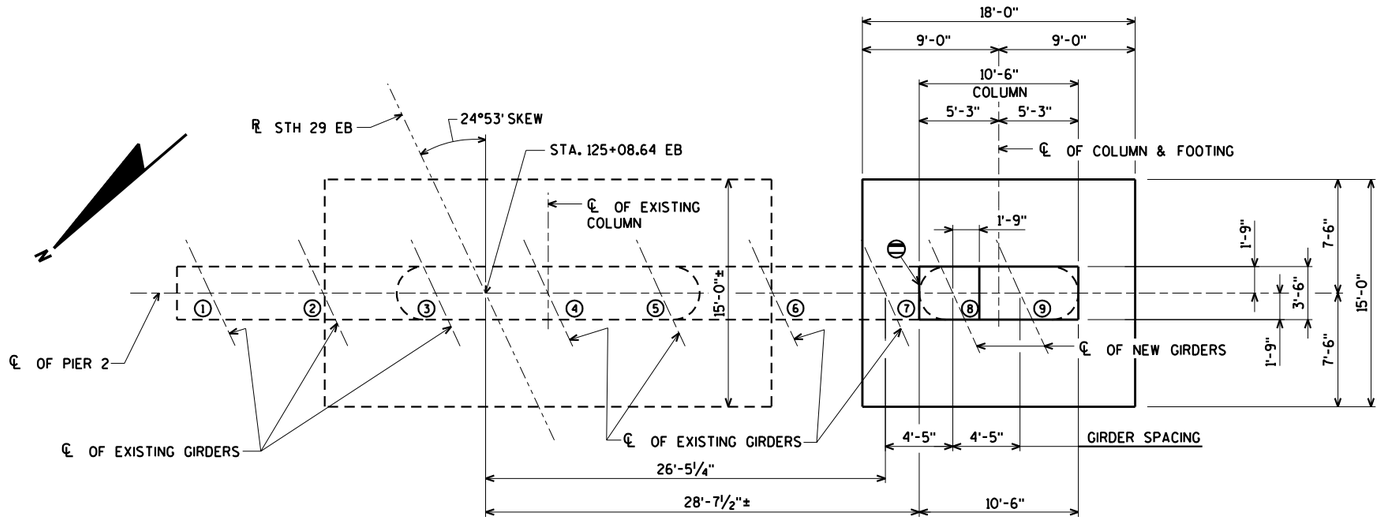
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9/30/2013
PENTABLE:BReau_shd_util.tbl

8
8



ELEVATION
(LOOKING EAST)



PLAN

ROUGHEN SURFACE OF CONCRETE ¼" DEEP MIN. ALL AREAS OF NEW TO EXISTING CONCRETE CONTACT.

1'-2" x 6'-6" x 4" CONST. JOINT FORMED BY A BEVELED KEYWAY. TYPICAL COLUMN AND FOOTING.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-140

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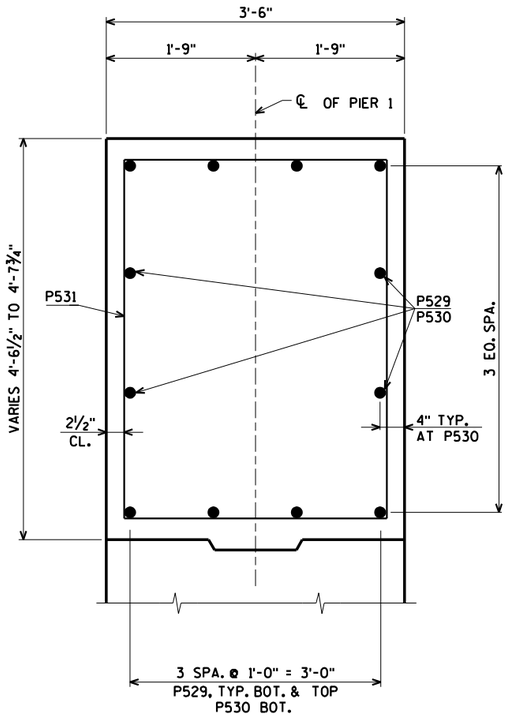
PIER 2

SHEET 16 OF 40
511

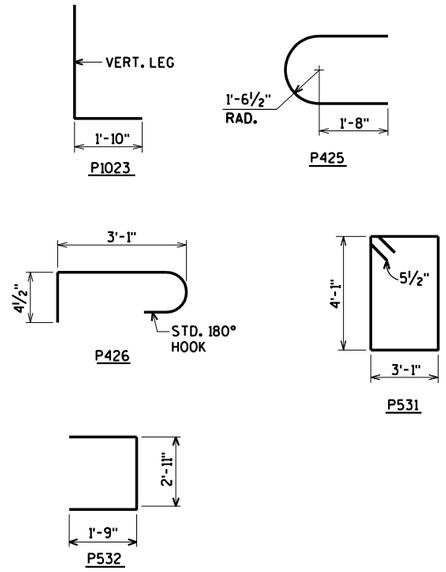
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$PRFNAME$
U:\41-0637.00 - STH 29 over WIRiver\B-37-140\BRIDGE\B-37-140 pier 2.dgn



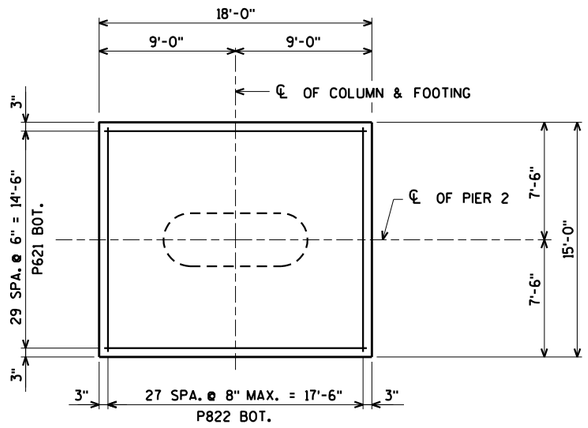
SECTION A



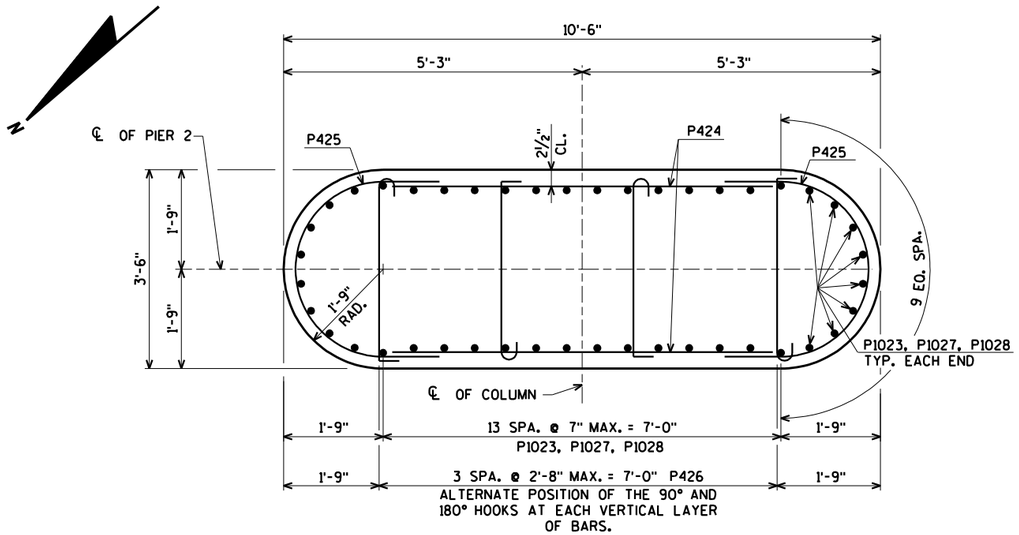
BILL OF BARS

BAR. NO.	COATED BAR	NO. REQ'D.	LENGTH	BENT BAR	BUNDLED BAR SERIES	11.870" COATED 1.870" UNCOATED LOCATION
P621		30	17-6			FOOTING BOTTOM
P822		28	14-6			FOOTING BOTTOM
P1023	X	44	12-10	X		FOOTING DOWELS
P424	X	64	7-0			FOOTING & COLUMN HORIZ.
P425	X	64	8-2	X		FOOTING & COLUMN HORIZ.
P426	X	128	3-10	X		FOOTING & COLUMN TIES
P1027	X	44	22-0			COLUMN VERT.
P1028	X	44	21-1			COLUMN VERT.
P529	X	12	10-1			CAP HORIZ.
P530	X	8	4-2			CAP DOWELS
P531	X	8	14-10	X		CAP VERT.
P532	X	4	6-2	X		CAP HORIZ. AT END

BENDING DIMENSIONS ARE OUT TO OUT OF BARS.



FOOTING PLAN



TYPICAL SECTION THRU COLUMN

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

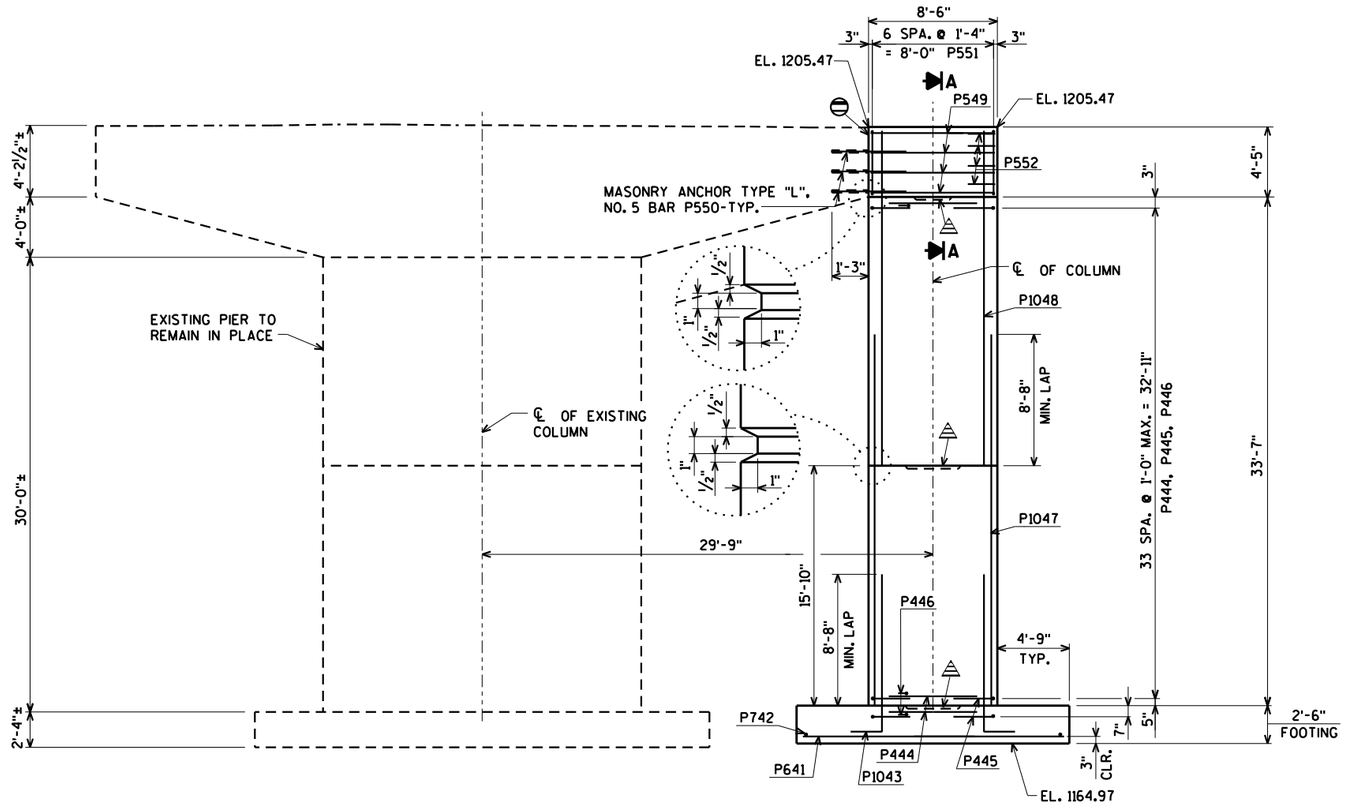
STRUCTURE B-37-140

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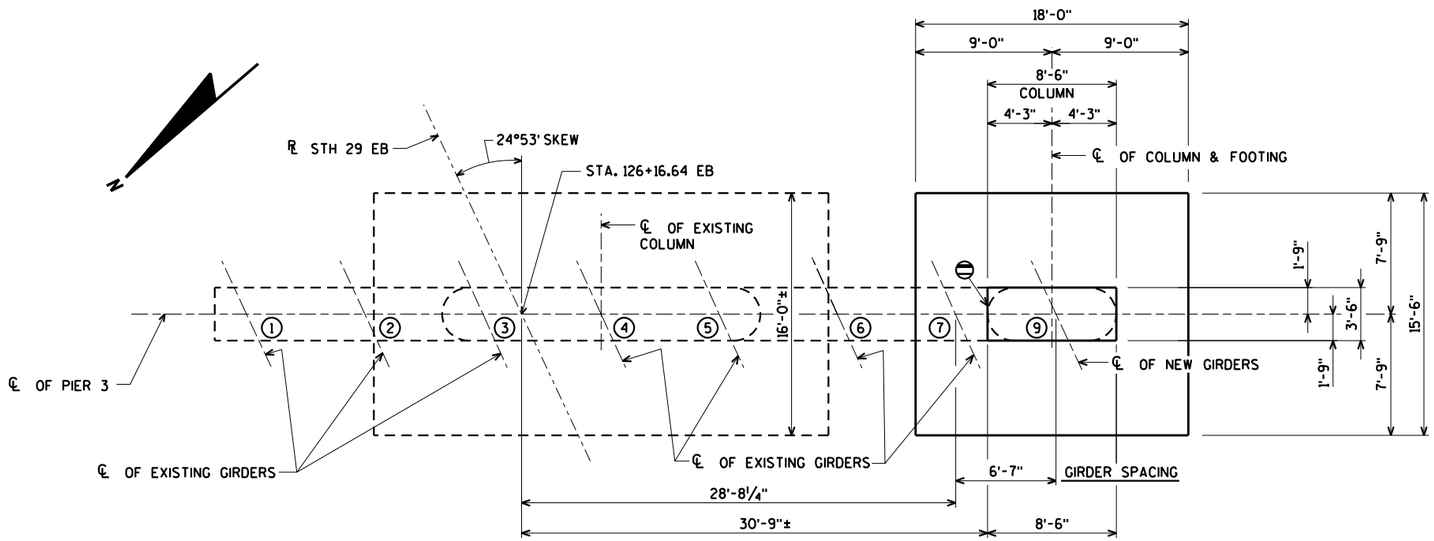
PIER 2 DETAILS

SHEET 17 OF 40
512

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ELEVATION
(LOOKING EAST)



PLAN

ROUGHEN SURFACE OF CONCRETE ¼" DEEP MIN. ALL AREAS OF NEW TO EXISTING CONCRETE CONTACT.

1'-2" x 4'-6" x 4" CONST. JOINT FORMED BY A BEVELED KEYWAY. TYPICAL COLUMN AND FOOTING.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-140

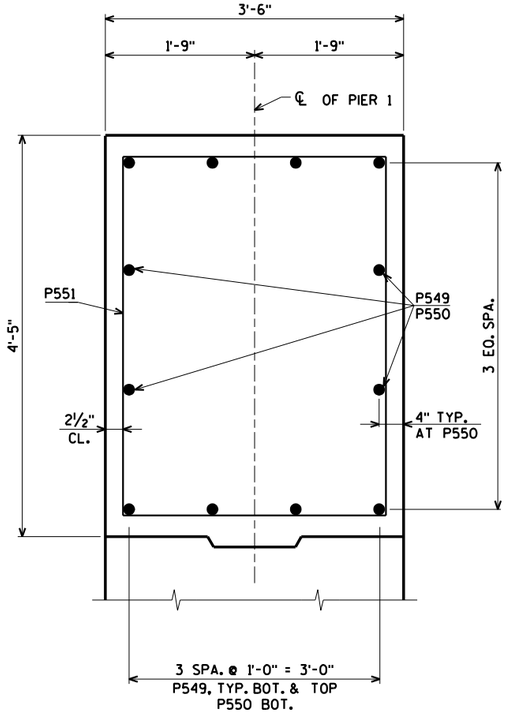
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PIER 3

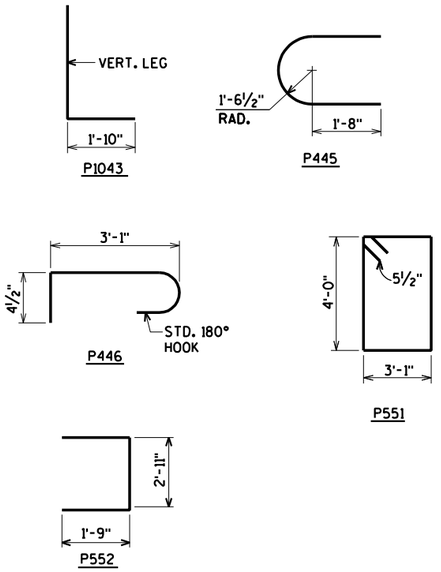
SHEET 18 OF 40
513

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PENTABLE:BReau_shd_util.tbl



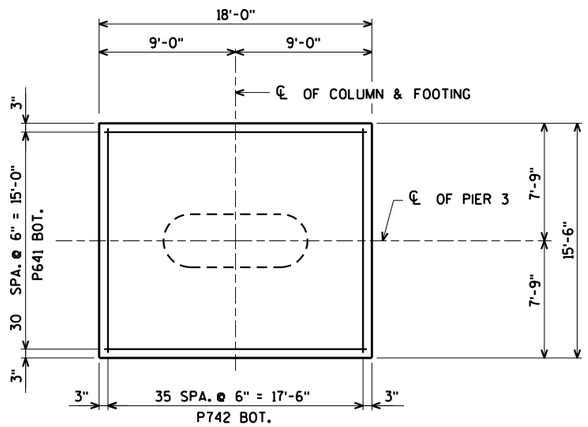
SECTION A



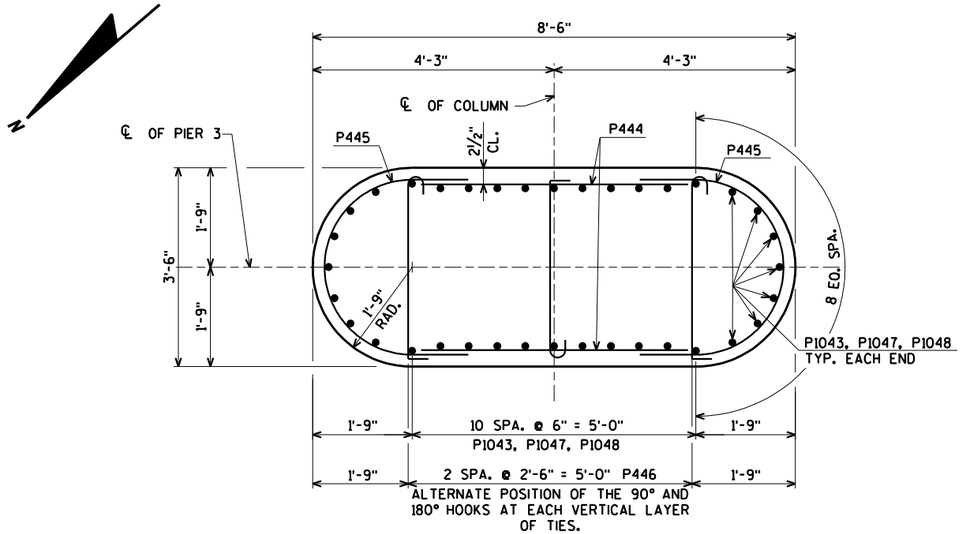
BILL OF BARS

BAR. NO.	COATED BAR	NO. REQ'D.	LENGTH	BENT BAR	BUNDLED BAR SERIES	10,320# COATED 1,920# UNCOATED LOCATION
P641		31	17-6			FOOTING BOTTOM
P742		36	15-0			FOOTING BOTTOM
P1043	X	36	12-10	X		FOOTING DOWELS
P444	X	70	5-0			FOOTING & COLUMN HORIZ.
P445	X	70	8-2	X		FOOTING & COLUMN TIES
P446	X	105	3-10	X		FOOTING & COLUMN TIES
P1047	X	36	24-6			COLUMN VERT.
P1048	X	36	21-10			COLUMN VERT.
P549	X	12	8-1			CAP HORIZ.
P550	X	8	4-2			CAP DOWELS
P551	X	7	14-8	X		CAP VERT.
P552	X	4	6-2	X		CAP HORIZ. AT END

BENDING DIMENSIONS ARE OUT TO OUT OF BARS.



FOOTING PLAN



TYPICAL SECTION THRU COLUMN

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-140

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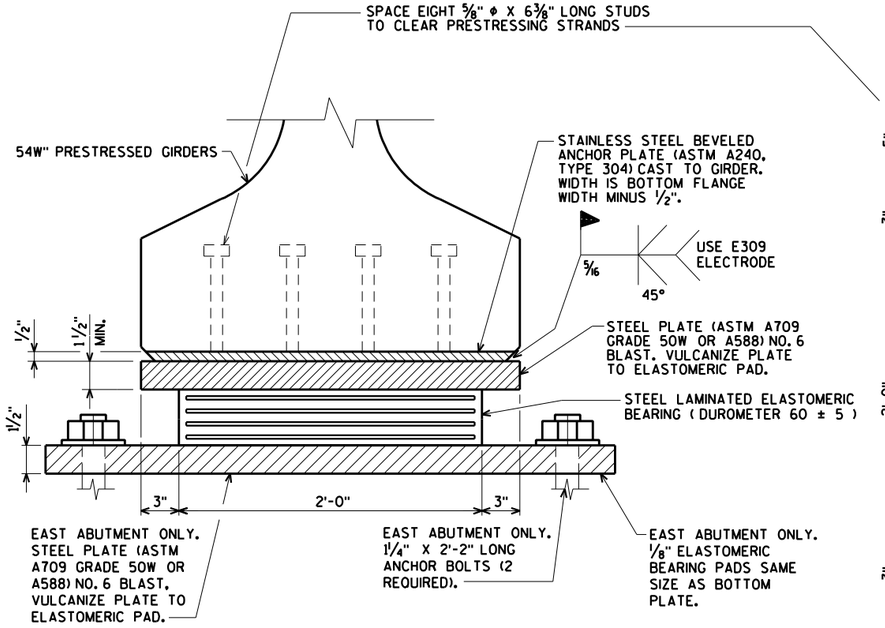
PIER 3
DETAILS

SHEET 19 OF 40
514

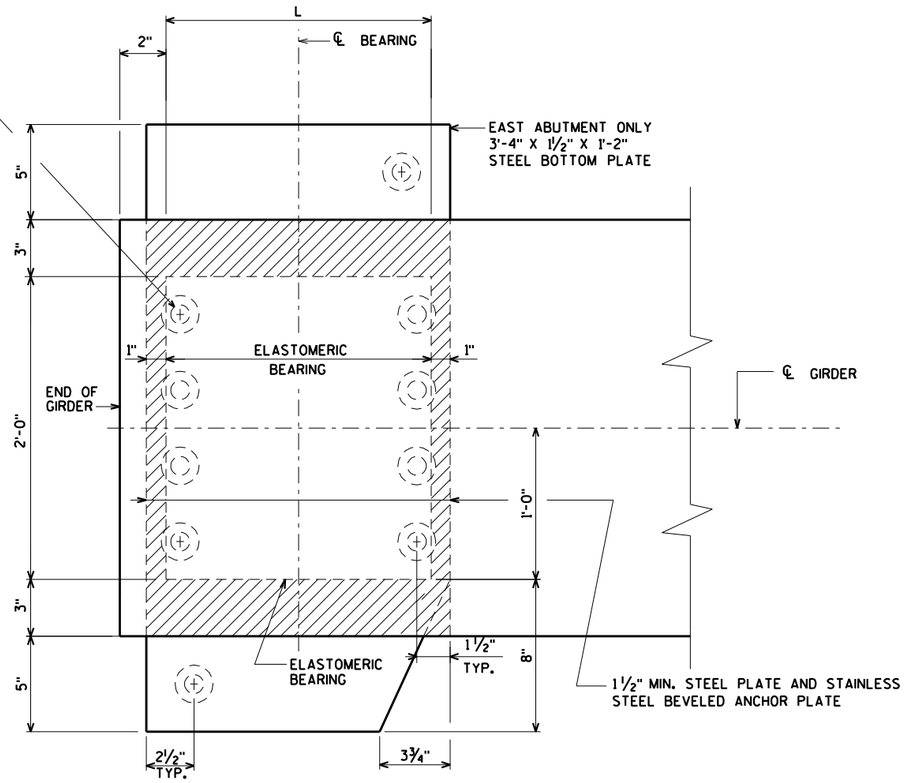
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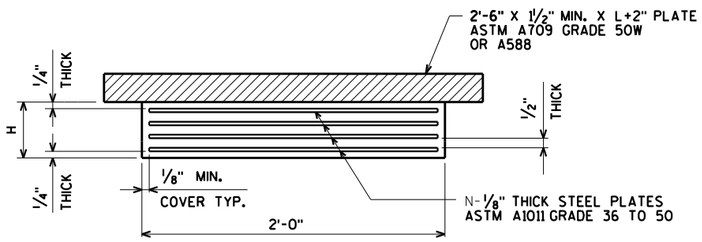
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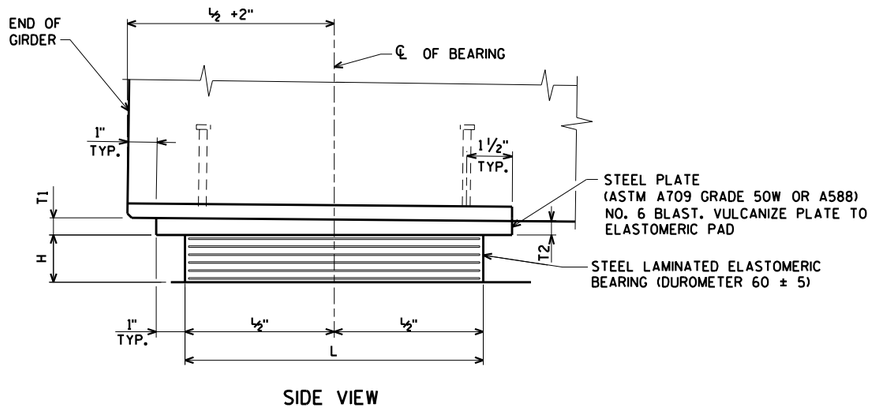
END VIEW



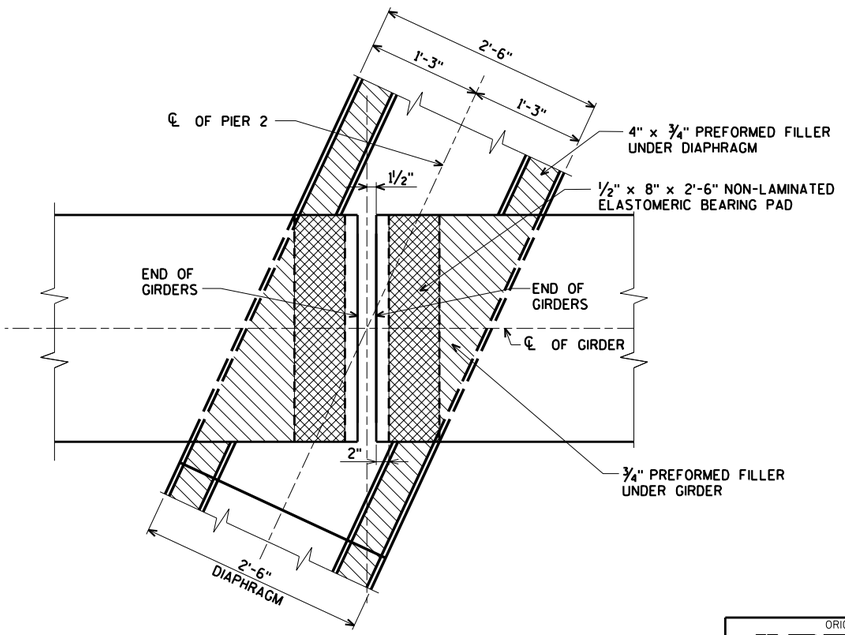
PLAN VIEW



SECTION THRU ELASTOMERIC BEARING



SIDE VIEW



BEARING PAD DETAIL AT PIER 2

ELASTOMERIC LAMINATED BEARING PAD TABLE

LOCATION	L	H	N	T1	T2
W. ABUT	1'-2"	4 3/8"	7"	1 1/2"	1 3/4"
PIER 1 SPAN 1	10"	2 1/2"	4"	1 3/4"	1 1/2"
PIER 1 SPAN 2	10"	2 1/2"	4"	1 1/2"	1 5/8"
PIER 3 SPAN 3	10"	2 1/2"	4"	1 1/2"	1 1/2"
PIER 3 SPAN 4	10"	2 1/2"	4"	1 1/2"	1 1/2"
E. ABUT.	1'-0"	3 3/4"	6"	1 1/2"	1 1/2"

BEARING NOTES

BEARING PADS ELASTOMERIC LAMINATED SHALL NOT BE PLACED AT A TEMPERATURE GREATER THAN 85° F.

ALL MATERIAL USED FOR BEARINGS SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "BEARING PADS ELASTOMERIC LAMINATED", EACH.

ALL STRUCTURAL STEEL BEARING PLATES SHALL BE FLAT ROLLED WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL.

ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUTS.

ANCHOR BOLTS SHALL BE THREADED 3". PROVIDE ONE STANDARD WROUGHT WASHER AND ONE HEX NUT PER BOLT. PROJECT ANCHOR BOLTS 2 1/4" ABOVE TOP OF ANCHOR PLATE.

CHAMFER ANCHOR BOLTS PRIOR TO THREADING.

ANCHOR BOLTS, NUTS AND WASHERS SHALL CONFORM TO ASTM A709 GRADE 36, OR MATERIAL OF EQULIVALENT YIELD STRENGTH AND ELONGATION.

ANCHOR BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153, CLASS C. ALL PLATES SHALL BE SHOP PAINTED AFTER BEARING FABRICATION.

‡ DRILLED HOLES FOR ANCHOR BOLTS IN BOTTOM PLATE SHALL HAVE A DIAMETER 3/8" LARGER THAN ANCHOR BOLT.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-140

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BEARING DETAILS AT 54W" GIRDER

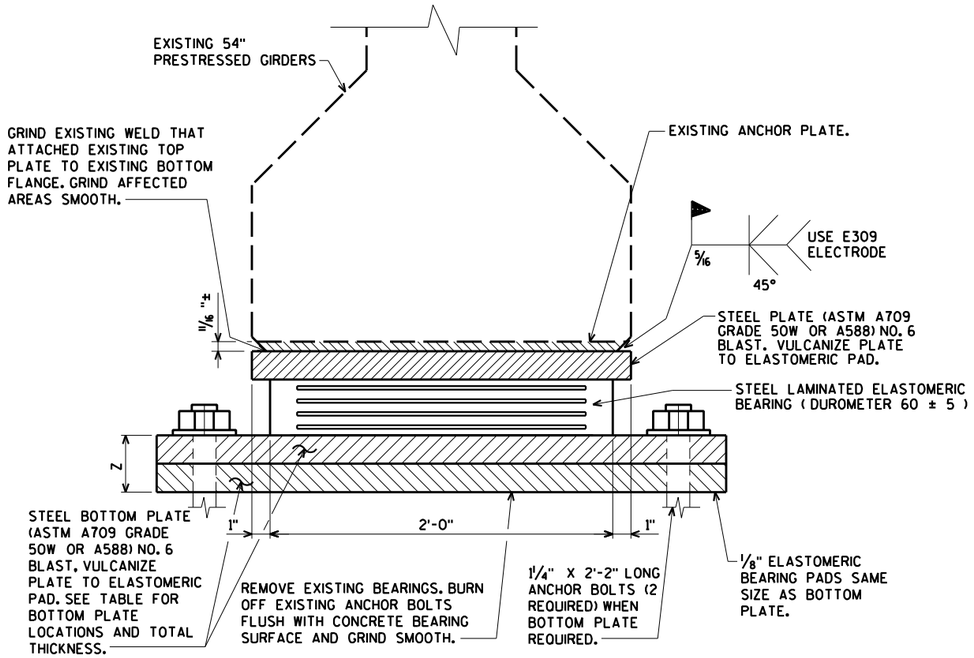
SHEET 20 OF 40
515

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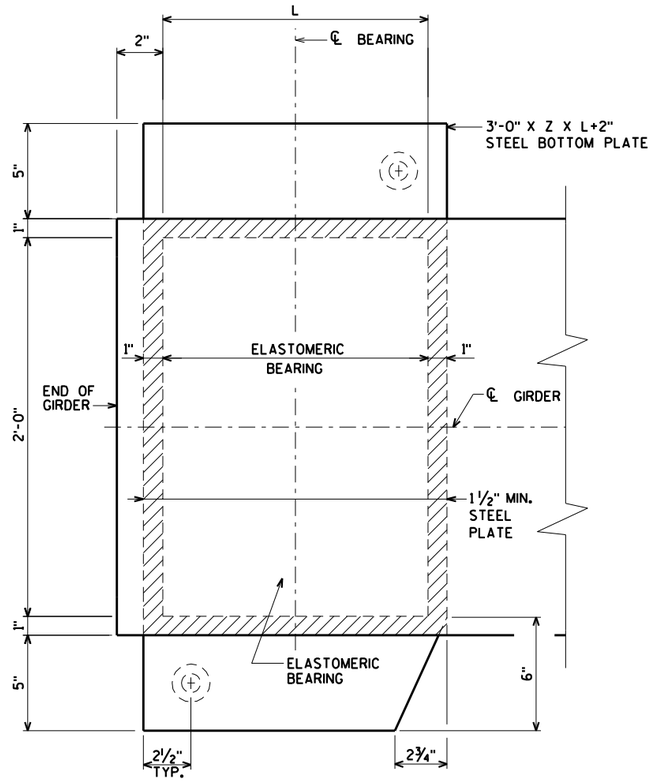
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STATE PROJECT NUMBER

1053-02-75



END VIEW



PLAN VIEW

ELASTOMERIC LAMINATED BEARING PAD TABLE

LOCATION	L	H	N	T1	T2
W. ABUT. GIRDERS 1-6	1'-2"	4⅜"	7"	1½"	1¾"
W. ABUT. GIRDERS 7	1'-2"	4⅜"	7"	½"	¾"
PIER 1 SPAN 1	10"	2½"	4"	1¾"	1½"
PIER 1 SPAN 2	10"	2½"	4"	1½"	1⅝"
PIER 3 SPAN 3	10"	2½"	4"	1½"	1½"
PIER 3 SPAN 4	10"	2½"	4"	1½"	1½"
E. ABUT.	1'-0"	3¾"	6"	1½"	1½"

BOTTOM PLATE TABLE

LOCATION	GIRDER	Z	NO. OF PLATES
PIER 1	2, 6	4"	2 OR 3
PIER 1	7	3"	2
EAST ABUT.	1 THRU 7	1½"	1

BEARING NOTES

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ALL MATERIAL USED FOR BEARINGS SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "BEARING PADS ELASTOMERIC LAMINATED", EACH.

ALL STRUCTURAL STEEL BEARING PLATES SHALL BE FLAT ROLLED WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL.

ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUTS.

ANCHOR BOLTS SHALL BE THREADED 3". PROVIDE ONE STANDARD WROUGHT WASHER AND ONE HEX NUT PER BOLT. PROJECT ANCHOR BOLTS 2¼" ABOVE TOP OF ANCHOR PLATE.

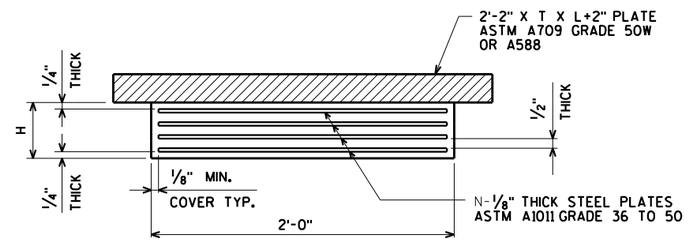
CHAMFER ANCHOR BOLTS PRIOR TO THREADING.

ANCHOR BOLTS, NUTS AND WASHERS SHALL CONFORM TO ASTM A709 GRADE 36, OR MATERIAL OF EQULIVALENT YIELD STRENGTH AND ELONGATION.

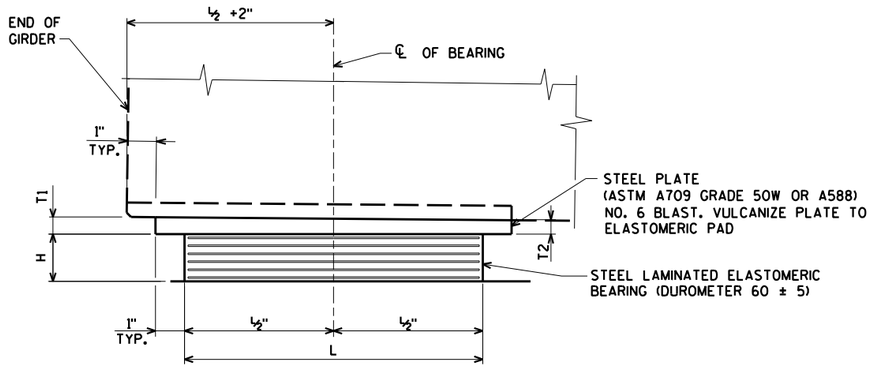
ANCHOR BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153, CLASS C. ALL PLATES SHALL BE SHOP PAINTED AFTER BEARING FABRICATION.

‡ DRILLED HOLES FOR ANCHOR BOLTS IN BOTTOM PLATE SHALL HAVE A DIAMETER ⅜" LARGER THAN ANCHOR BOLT.

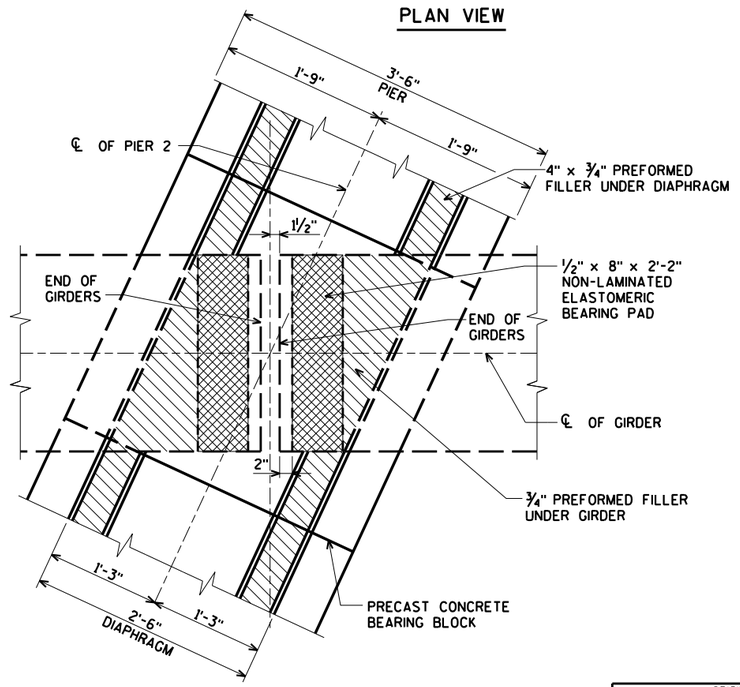
WELDING PROCEDURES SHALL BE ESTABLISHED BY THE CONTRACTOR TO RESTRICT THE MAXIMUM TEMPERATURE REACHED BY THE SURFACES IN CONTACT WITH ELASTOMER TO 200°F (93°C). TEMPERATURES SHALL BE CONTROLLED BY TEMPERATURE INDICATING WAX PENCILS OR OTHER SUITABLE MEANS APPROVED BY THE ENGINEER.



SECTION THRU ELASTOMERIC BEARING



SIDE VIEW



BEARING PAD DETAIL AT PIER 2

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-140

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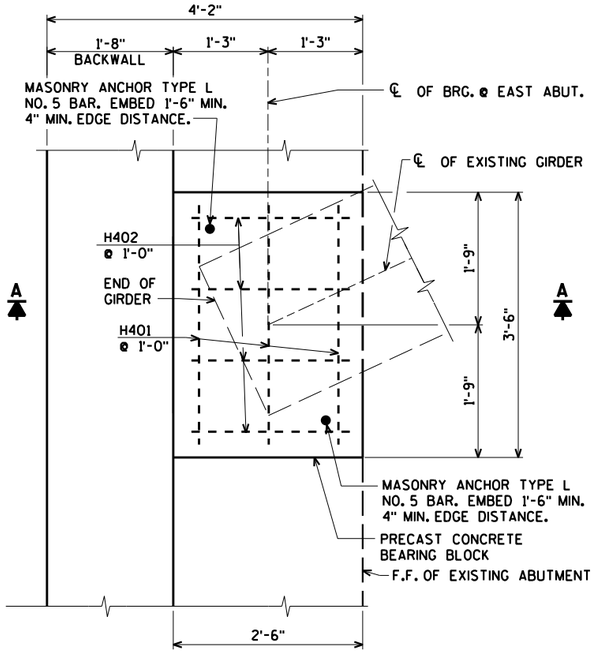
BEARING DETAILS AT EXISTING 54" GIRDER

SHEET 21 OF 40
516

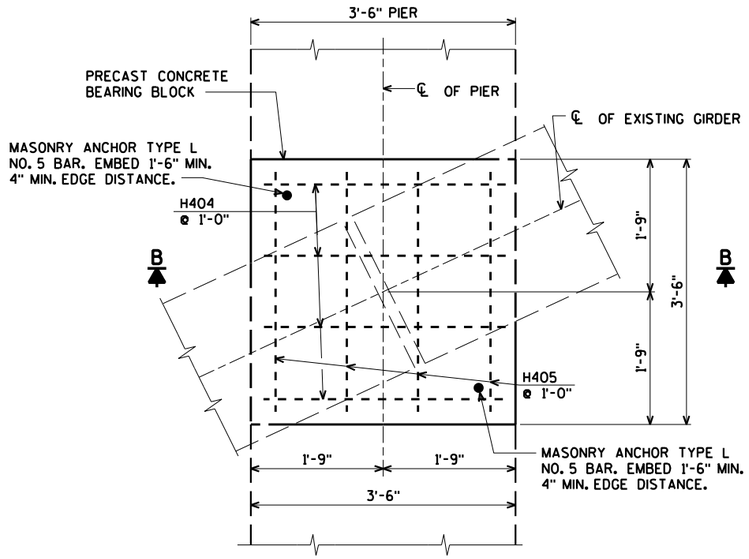
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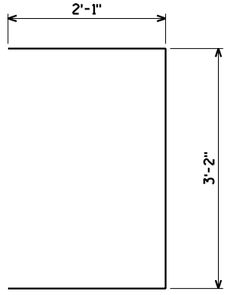
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BEARING BLOCK PLAN AT EAST ABUTMENT



BEARING BLOCK PLAN AT PIERS



H403, H406

BILL OF BARS

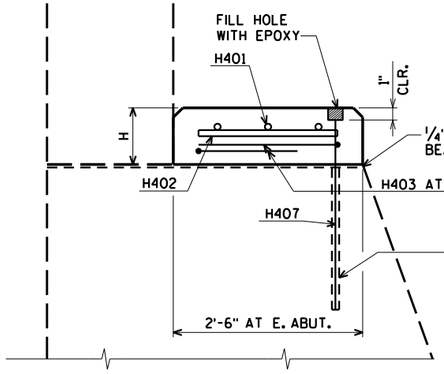
BAR. NO.	COATED BAR	NO. REQ'D.	LENGTH	BENT BAR	BUNDLED BAR	SERIES	630" COATED * LOCATION
H401	X	21	3-2				ABUTMENT BLOCK
H402	X	28	2-2				ABUTMENT BLOCK
H403	X	6	7-2	X			ABUTMENT BLOCK
H404	X	72	3-2				PIER BLOCK
H405	X	72	3-2				PIER BLOCK
H406	X	28	7-2	X			PIER BLOCK
H407	X	22	2-1				ANCHORS AT ABUTMENT AND PIER 1
H408	X	28	2-5				ANCHORS AT PIERS 2 & 3

* BAR STEEL TO BE INCLUDED IN THE BID PRICE FOR PRECAST CONCRETE BEARING BLOCKS.

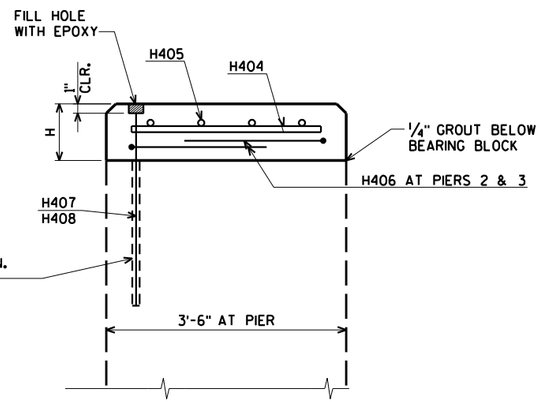
BENDING DIMENSIONS ARE OUT TO OUT OF BARS.

BEARING BLOCK HEIGHT TABLE

LOCATION	GIRDERS	HEIGHT, H
PIER 1	2, 3, 5	5"
	4	5½"
PIER 2	1	10"
	2,5	10½"
	3, 4	11½"
	6	9½"
	7	8½"
PIER 3	1, 5	8"
	2, 4	9"
	3	9½"
	6	7½"
	7	6½"
EAST ABUT.	1, 5	6½"
	2	7"
	3, 4	7½"
	6	5½"
	7	5"



SECTION A



SECTION B

NOTES:

BURN EXISTING ANCHOR BOLTS OFF FLUSH WITH BEAM SEAT.

CONTRACTOR MAY PROPOSE A CAST-IN-PLACE ALTERNATE SUBJECT TO REVIEW AND APPROVAL BY THE BUREAU OF STRUCTURES.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-140

DRAWN BY CLS | PLANS CK'D. DNS

PRECAST CONCRETE BEARING BLOCK DETAILS

SHEET 22 OF 40
517

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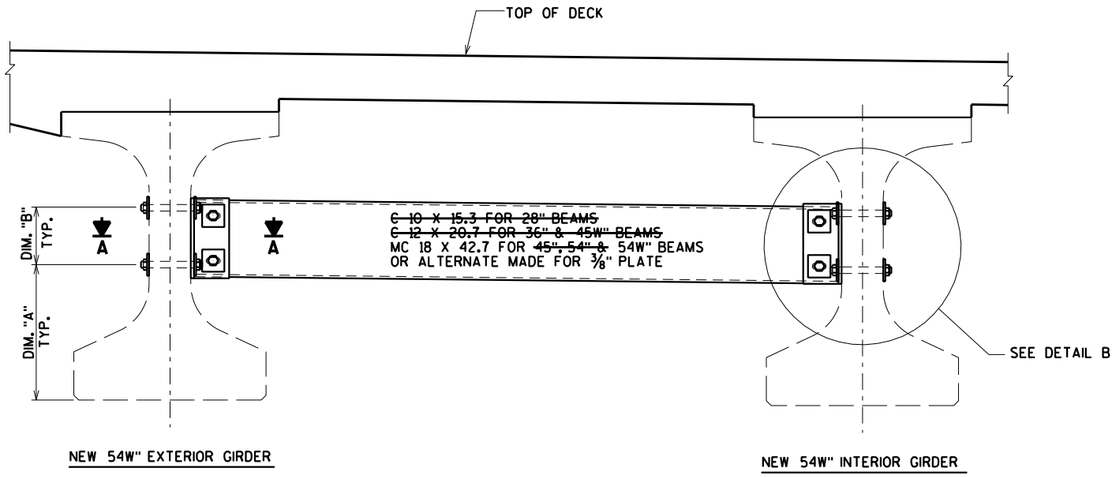
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10/31/2013
PENTABLE:BReau_shd_util.tbl

STATE PROJECT NUMBER

1053-02-75

TABLE

GIRDER HEIGHT	DIM. "A"	DIM. "B"	DIM. "L"	*DIM. "X"
54W"	1'-9⅛"	1'-5⅞"	1'-9½"	4¼"



NEW 54W" EXTERIOR GIRDER

NEW 54W" INTERIOR GIRDER

NOTES

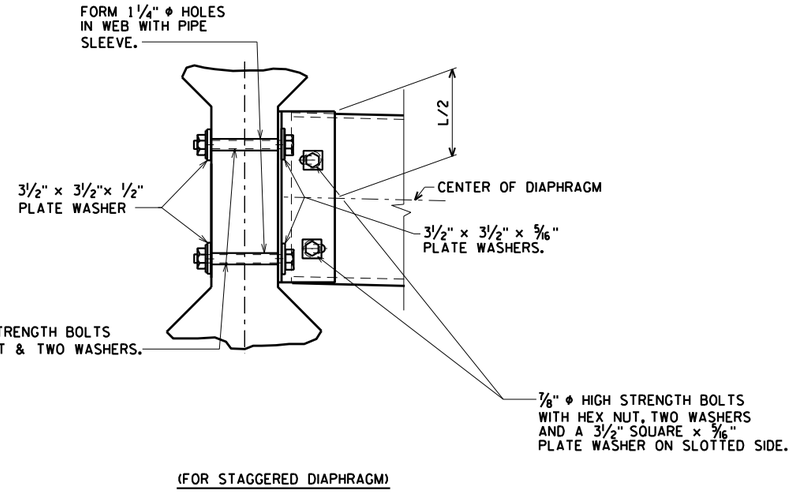
ALL DIAPHRAGM MATERIAL NOT EMBEDDED IN THE CONCRETE GIRDER SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "STEEL DIAPHRAGMS B-37-140", EACH.

EACH DIAPHRAGM BETWEEN GIRDERS SHALL CONSTITUTE ONE UNIT.

ALL DIAPHRAGM STRUCTURAL STEEL SHALL BE ASTM A709 GRADE 36. ALL BOLTS, NUTS AND WASHERS SHALL BE ASTM A325 TYPE 1.

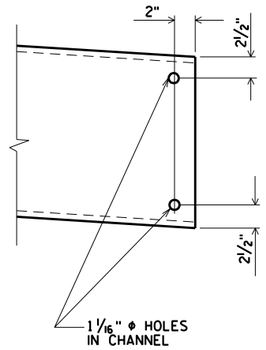
ALL DIAPHRAGM STRUCTURAL STEEL SHOWN SHALL BE HOT-DIPPED GALVANIZED. ALL BOLTS, NUTS AND WASHERS SHALL BE HOT-DIPPED GALVANIZED IN ACCORDANCE WITH ASTM A153 CLASS C. GALVANIZED NUTS SHALL BE TAPPED OVERSIZE IN ACCORDANCE WITH THE REQUIREMENTS OF ASTM A563 AND SHALL MEET THE REQUIREMENTS OF SUPPLEMENTARY REQUIREMENT S1 OF ASTM A563, LUBRICANT AND TEST FOR COATED NUTS.

PART TRANSVERSE SECTION AT DIAPHRAGM

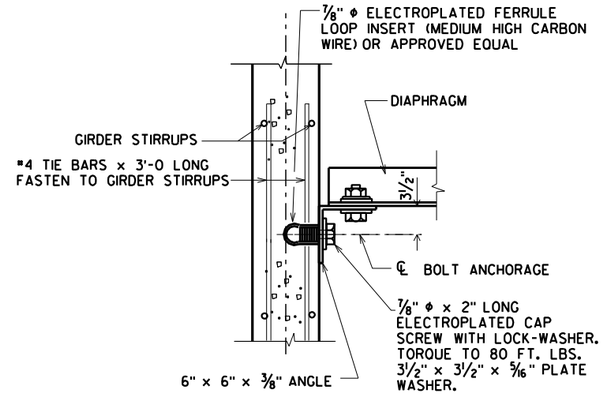


(FOR STAGGERED DIAPHRAGM)

DETAIL B

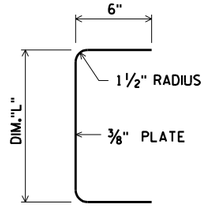


DIAPHRAGM END DETAIL



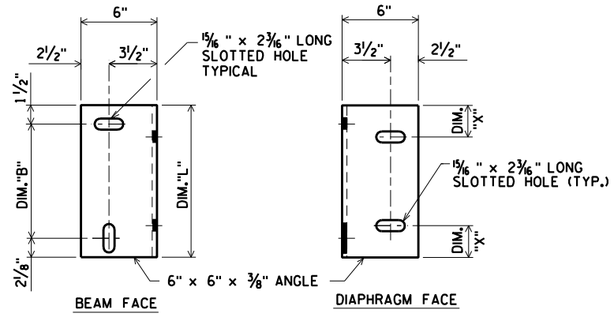
SECT. A-A

(FOR EXTERIOR ATTACHMENT)



SECTION THRU ALTERNATE DIAPHRAGM

*DIM. "X" = 2½" FOR ALTERNATE PLATE DIAPHRAGM



DIAPHRAGM SUPPORT

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-140

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STEEL INTER. DIAPHRAGM DETAILS

SHEET 23 OF 40
518

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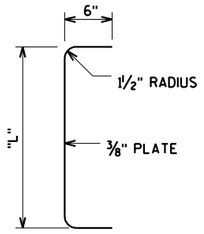
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U:±41-0637.00 - STH 29 over WIRiver±B-37-140±BRIDGE±B-37-140dia.dgn

9/30/2013

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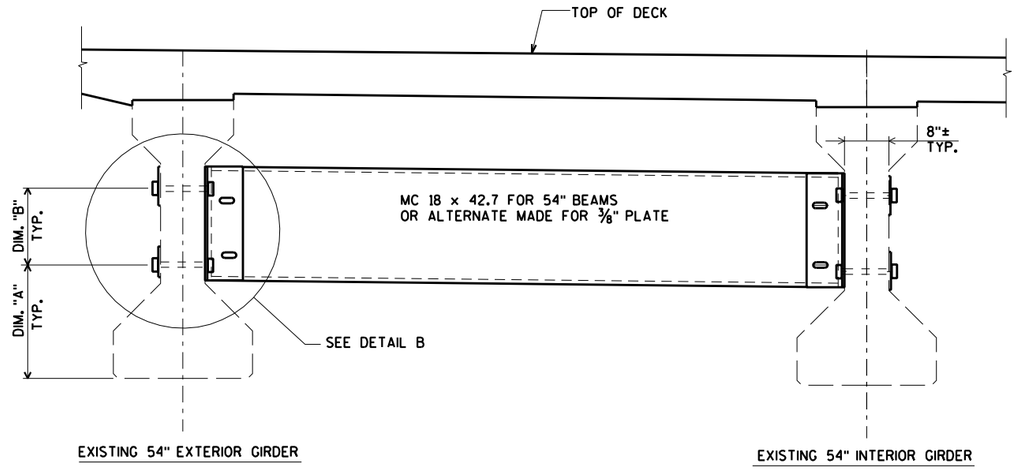
TABLE

GIRDER HEIGHT	DIM. "A"	DIM. "B"	DIM. "L"	* DIM. "X"
54"	1'-7⅞"	1'-5⅞"	1'-9½"	4¼"



SECTION THRU ALTERNATE DIAPHRAGM

*DIM "X" = 2½" FOR ALTERNATE PLATE DIAPHRAGM



PART TRANSVERSE SECTION AT DIAPHRAGM

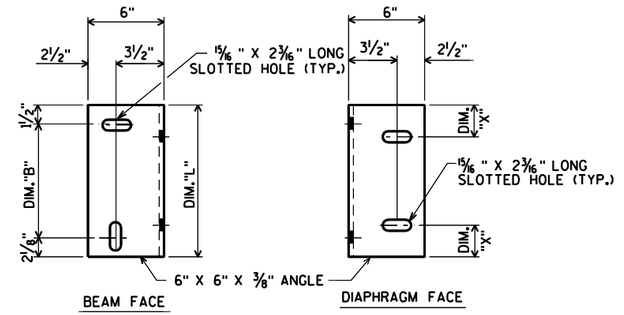
NOTES

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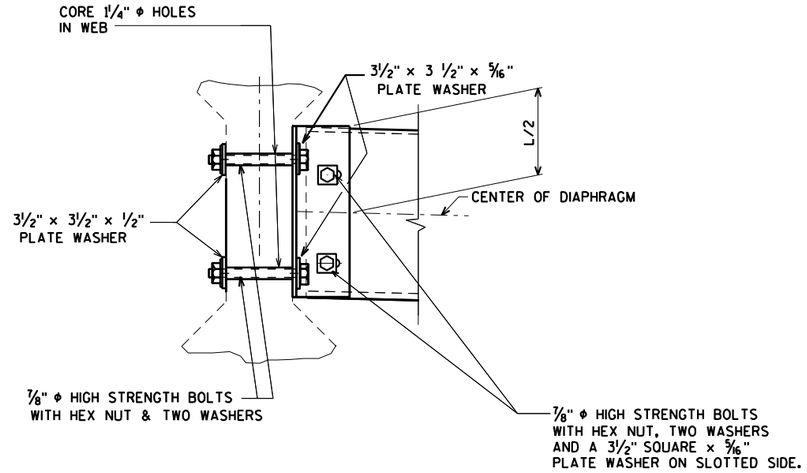
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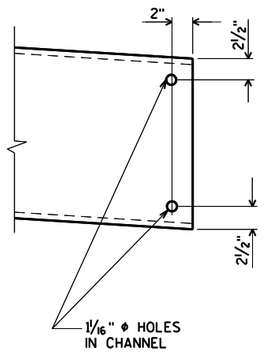
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DIAPHRAGM SUPPORT



DETAIL B



DIAPHRAGM END DETAIL

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-140

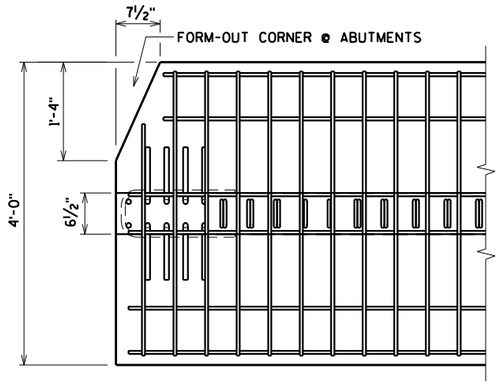
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STEEL INTER. DIAPHRAGM DETAILS

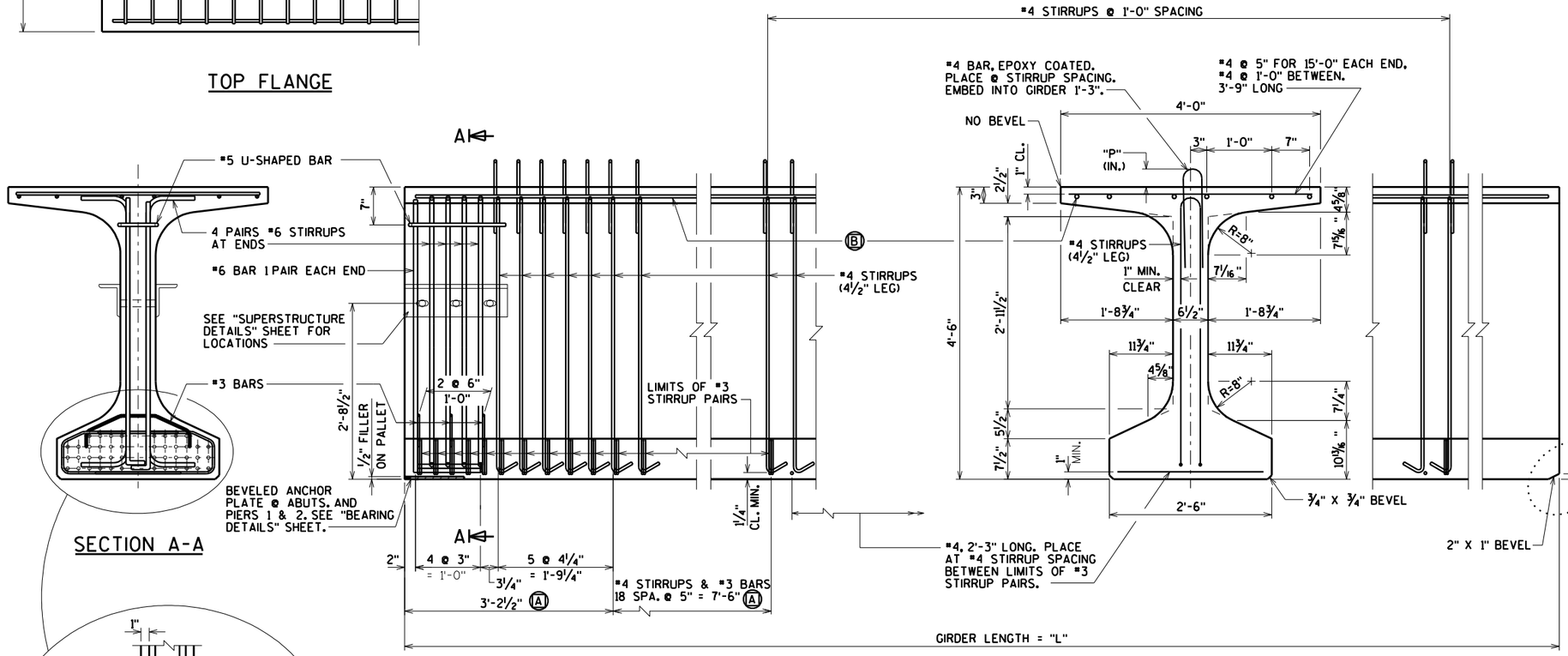
SHEET 24 OF 40
519

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TOP FLANGE

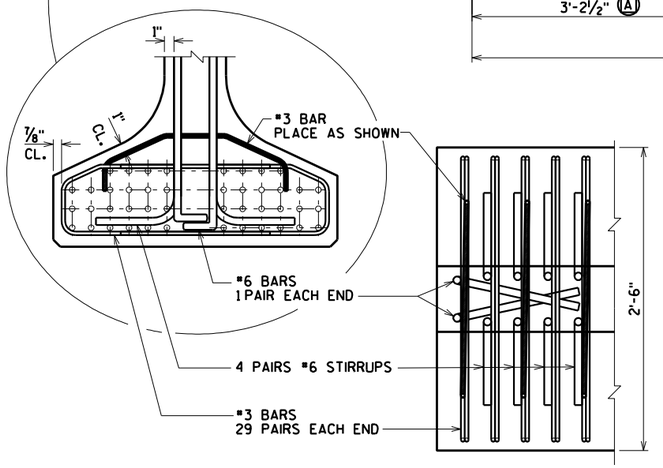


SECTION A-A

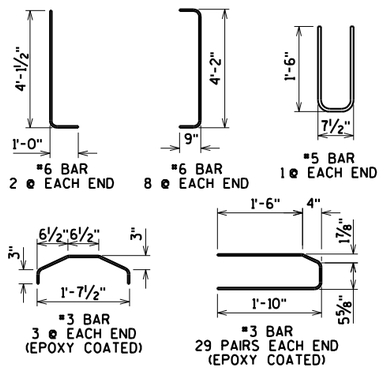
SIDE VIEW & TYP. SECTION IN SPAN

(A) DETAIL TYP. AT EACH END

(B) 6 #4 BARS, FULL LENGTH, MIN. LAP = 1'-11"



BOTTOM FLANGE



* MINIMUM CYLINDER STRENGTH OF CONCRETE @ TIME OF TRANSFER OF PRESTRESS FORCE.

GIRDER DATA

SPAN	GIRDER	GIRDER LENGTH "L"	DEAD LOAD DEFL. (IN.)									CONC. STRGTH. f'c (p.s.i.)	"P" IST ⅓ OF GIRDER	"P" MID ⅓ OF GIRDER	"P" END ⅓ OF GIRDER	DIA. OF STRAND (IN.)	DRAPED PATTERN						UNDRAPED PATTERN	
			1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10						TOTAL NO. OF STRANDS	f'ci (P.S.I.) *	(IN.) "A"	"B" MIN.	"B" MAX.	"C"	TOTAL NO. OF STRANDS	f'ci (P.S.I.) *
1	8	92'-11⅝"	0.2	0.4	0.5	0.6	0.6	0.6	0.5	0.4	0.2	6,000	9"	8"	9"	0.6	24	4,800	50	15.5	18.5	4		
1	9	93'-4½"	0.2	0.4	0.5	0.6	0.6	0.6	0.5	0.4	0.2	6,000	9"	8"	9"	0.6	24	4,800	50	15.5	18.5	4		
2	8	89'-4¼"	0.1	0.3	0.4	0.4	0.4	0.4	0.4	0.3	0.1	6,000	9"	8"	9"	0.6	20	4,800	50	15.5	18.5	4		
2	9	89'-9"	0.1	0.3	0.4	0.4	0.4	0.4	0.4	0.3	0.1	6,000	9"	8"	9"	0.6	20	4,800	50	15.5	18.5	4		
3	9	107'-9"	0.4	0.8	1.1	1.3	1.3	1.3	1.1	0.8	0.4	6,000	9"	7"	9"	0.6	32	4,800	49	16	19	5		
4	9	53'-4½"	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0	6,000	9"	8"	9"	0.6	16	4,800	25	8.5	11.5	3		

NOTES

TOP OF GIRDER TO BE ROUGH FLOATED AND BROOMED TRANSVERSELY, EXCEPT THE OUTSIDE 15" OF GIRDER, WHICH SHALL RECEIVE A SMOOTH FINISH. AN APPROVED CONCRETE SEALER SHALL BE APPLIED TO ALL SMOOTH SURFACES INCLUDING THE OUTSIDE 15" OF THE TOP FLANGE.

DO NOT APPLY CONCRETE SEALER TO SURFACES RECEIVING APPLICATION OF CONCRETE STAINING.

THE GIRDERS SHALL BE PROVIDED WITH A SUITABLE LIFTING DEVICE FOR HANDLING AND ERECTING THE GIRDERS.

STRANDS SHALL BE FLUSH WITH THE END OF GIRDER. FOR GIRDER ENDS EMBEDDED COMPLETELY IN CONCRETE, ENDS OF STRANDS SHALL BE COATED WITH NON-BITUMINOUS JOINT SEALER. FOR GIRDER ENDS THAT ARE FINALLY EXPOSED, COAT THE GIRDER ENDS, EXPOSED STRAND ENDS AND ALL NON-BONDING SURFACES WITHIN 2 FEET OF THE GIRDER ENDS WITH A NON-PIGMENTED EPOXY CONFORMING TO AASHTO M-235 TYPE III, CLASS B OR C. THE EPOXY SHALL BE APPLIED AT LEAST 3 DAYS AFTER MOIST CURING HAS CEASED AND PRIOR TO APPLICATION OF THE SEALER.

ALL GIRDERS SHALL BE CAST FULL LENGTH AS SHOWN.

SPACING SHOWN FOR #4 STIRRUPS IS FOR GRADE 60 REINFORCEMENT.

AN ALTERNATE EQUIVALENT OF WELDED WIRE FABRIC (WWF) ASTM A497 MAY BE SUBSTITUTED FOR THE STIRRUP REINFORCEMENT SHOWN, UPON APPROVAL OF THE STRUCTURES DEVELOPMENT SECTION.

PRESTRESSING STRANDS SHALL BE 0.6" DIA.-7 WIRE LOW-RELAXATION STRANDS WITH AN ULTIMATE STRENGTH OF 270,000 psi.

FOR DIAPHRAGM INSERT & CONNECTION DETAILS SEE "STEEL DIAPHRAGM" SHEET.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-140

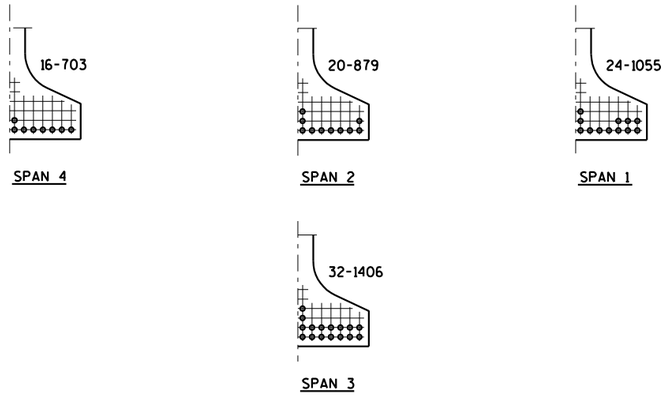
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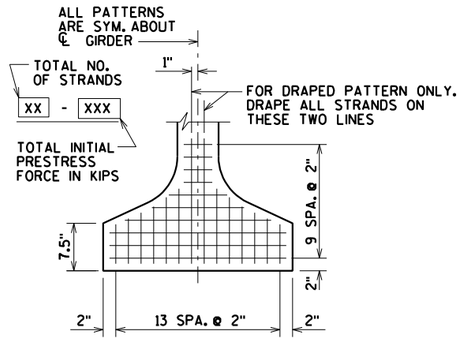
54W" PRESTRESSED GIRDER DETAILS

SHEET 25 OF 40
520

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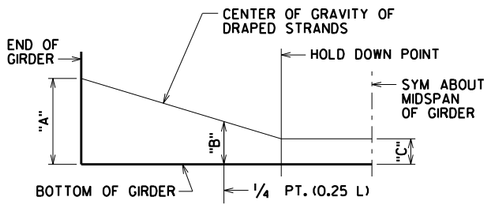




TYP. STRAND PATTERN

ARRANGEMENT AT ℄ SPAN - FOR GIRDERS WITH DRAPED STRANDS

0.6"Φ STRANDS



DRAPED STRAND PROFILE

*THE THEORETICAL INITIAL CAMBER VALUE AT THE TIME OF STRAND RELEASE AT MIDSPAN MULTIPLIED BY A FACTOR OF 1.4 TO ACCOUNT FOR CAMBER GROWTH FROM THE TIME OF STRAND RELEASE TO JOBSITE PLACEMENT.

SPAN	CAMBER (IN.) *
1	2.2
2	1.6
3	3.8
4	0.6

THESE VALUES ARE NOT TO BE USED IN DETERMINING 'T', USE ACTUAL GIRDER SHOTS.

THESE VALUES ARE FOR INFORMATIONAL PURPOSES ONLY.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-140

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54W" PRESTRESSED GIRDER DETAILS

SHEET 26 OF 40
521

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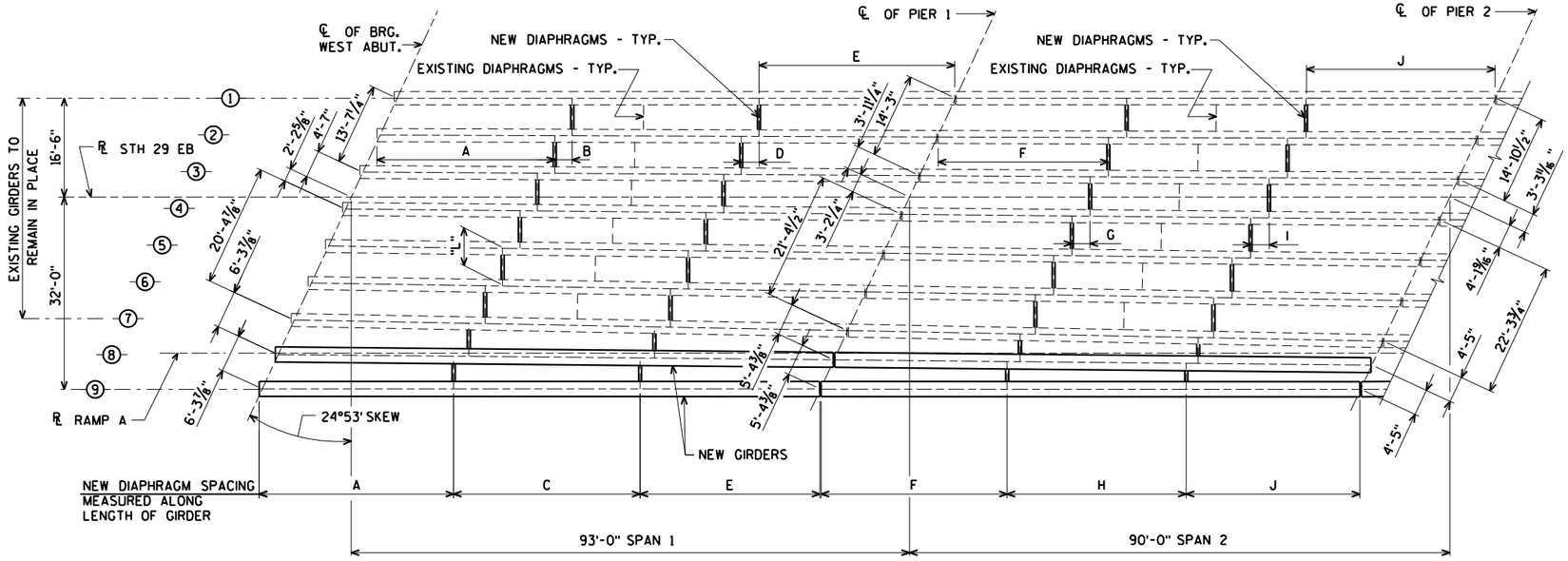
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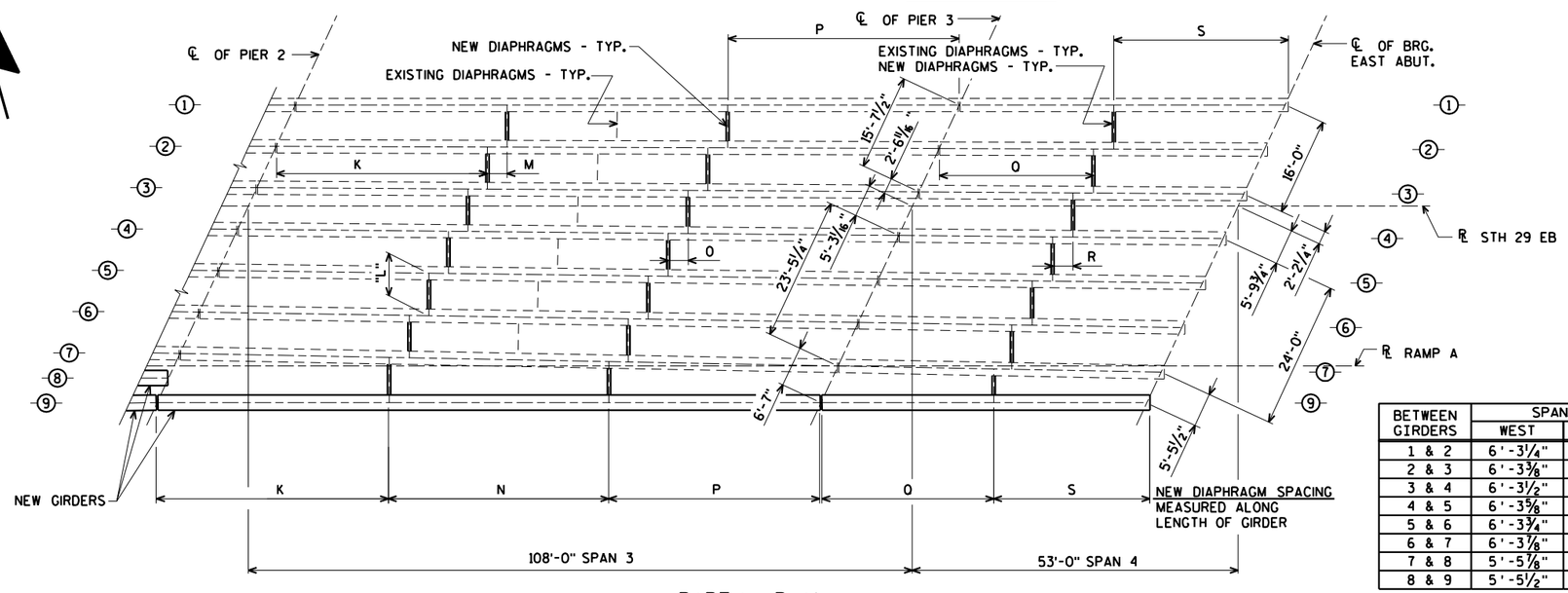
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STATE PROJECT NUMBER

1053-02-75



PARTIAL PLAN



PARTIAL PLAN

DIAPHRAGM LENGTH "L"

BETWEEN GIRDERS	SPAN 1		SPAN 2		SPAN 3		SPAN 4
	WEST	EAST	WEST	EAST	WEST	EAST	
1 & 2	6'-3¼"	6'-4⅜"	6'-6¾"	6'-7⅞"	6'-10⅜"	6'-11¾"	7'-2⅛"
2 & 3	6'-3⅜"	6'-4½"	6'-6⅞"	6'-8"	6'-10½"	6'-11⅞"	7'-2¼"
3 & 4	6'-3½"	6'-4⅝"	6'-7"	6'-8⅛"	6'-10⅝"	7'-0"	7'-2⅜"
4 & 5	6'-3⅝"	6'-4¾"	6'-7⅛"	6'-8¼"	6'-10¾"	7'-0⅛"	7'-2½"
5 & 6	6'-3¾"	6'-4⅞"	6'-7¼"	6'-8⅜"	6'-10⅞"	7'-0¼"	7'-2⅝"
6 & 7	6'-3⅞"	6'-5"	6'-7⅜"	6'-8½"	6'-11"	7'-0⅜"	7'-2¾"
7 & 8	5'-5⅞"	5'-2⅜"	4'-7¼"	4'-3⅞"			
8 & 9	5'-5½"	5'-2"	4'-7"	4'-3⅝"	7'-4⅜"	6'-8¼"	5'-5¾"

GIRDER AND DIAPHRAGM DIMENSIONS

GIRDER	DIM. "A"	DIM. "B"	DIM. "C"	DIM. "D"	DIM. "E"	DIM. "F"	DIM. "G"	DIM. "H"	DIM. "I"	DIM. "J"	DIM. "K"	DIM. "M"	DIM. "N"	DIM. "O"	DIM. "P"	DIM. "O"	DIM. "R"	DIM. "S"
1	29'-8"	-----	31'-1¼"	-----	32'-7¼"	28'-4¾"	-----	29'-10¾"	-----	31'-5½"	34'-3⅞"	-----	35'-10⅝"	-----	37'-6⅜"	25'-0¼"	-----	28'-4¼"
2	29'-7½"	2'-10⅞"	31'-0¾"	2'-11⅜"	32'-6⅝"	28'-4¼"	3'-0½"	29'-10¼"	3'-1"	31'-5"	34'-3¼"	3'-2⅛"	35'-10"	3'-2⅞"	37'-5¾"	24'-11⅞"	3'-3⅛"	28'-3¾"
3	29'-7"	2'-10⅞"	31'-0⅛"	2'-11⅜"	32'-6⅛"	28'-3¾"	3'-0½"	29'-9⅝"	3'-1"	31'-4½"	34'-2⅝"	3'-2⅛"	35'-9⅜"	3'-2⅞"	37'-5⅛"	24'-11⅜"	3'-3⅛"	28'-3¼"
4	29'-6½"	2'-10⅞"	30'-11⅝"	2'-11½"	32'-5⅝"	28'-3⅛"	3'-0½"	29'-9⅛"	3'-1"	31'-4"	34'-2"	3'-2⅛"	35'-8¾"	3'-2⅞"	37'-4½"	24'-10⅞"	3'-3⅞"	28'-2⅞"
5	29'-6"	2'-10⅞"	30'-11⅛"	2'-11½"	32'-5⅛"	28'-2⅝"	3'-0½"	29'-8⅝"	3'-1"	31'-3⅜"	34'-1⅜"	3'-2¼"	35'-8¼"	3'-2⅞"	37'-3⅞"	24'-10⅜"	3'-3⅞"	28'-2⅜"
6	29'-5½"	2'-10⅞"	30'-10½"	2'-11½"	32'-4½"	28'-2⅛"	3'-0½"	29'-8⅛"	3'-1"	31'-2⅞"	34'-0¾"	3'-2¼"	35'-7⅝"	3'-2⅞"	37'-3¼"	24'-10"	3'-3⅞"	28'-1⅞"
7	29'-7⅛"	2'-8⅝"	30'-11⅝"	2'-8⅛"	32'-0⅝"	28'-7⅛"	2'-7"	29'-8¾"	2'-6½"	30'-7⅞"	33'-10⅞"	3'-3½"	35'-9⅛"	3'-1⅞"	37'-1¾"	25'-2¼"	2'-11⅛"	28'-6¼"
8	29'-8¾"	2'-6¼"	31'-0¾"	2'-4⅝"	32'-2¼"	28'-8¾"	2'-1½"	29'-10¼"	1'-11⅞"	30'-9⅜"	-----	-----	-----	-----	-----	-----	-----	-----
9	32'-4⅝"	-----	31'-0⅝"	-----	29'-11⅛"	30'-11¾"	-----	29'-10¼"	-----	28'-11"	37'-7⅜"	-----	35'-9⅛"	-----	34'-4½"	27'-11½"	-----	25'-5⅛"

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-140

DRAWN BY CLS | PLANS CK'D. DNS

SUPERSTRUCTURE GIRDER LAYOUT

SHEET 27 OF 40
522

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

10/31/2013

PENTABLE:BReau_shd_util.tbl

STATE PROJECT NUMBER

1053-02-75

TOP OF DECK ELEVATIONS

	℄ BEARING	SPAN 1										SPAN 2									
	W. ABUT.	0.1 PT.	0.2 PT.	0.3 PT.	0.4 PT.	0.5 PT.	0.6 PT.	0.7 PT.	0.8 PT.	0.9 PT.	PIER 1	0.1 PT.	0.2 PT.	0.3 PT.	0.4 PT.	0.5 PT.	0.6 PT.	0.7 PT.	0.8 PT.	0.9 PT.	PIER 2
NORTH EDGE OF DECK	1208.30	1208.45	1208.60	1208.74	1208.88	1209.02	1209.16	1209.29	1209.43	1209.55	1209.68	1209.80	1209.92	1210.03	1210.14	1210.25	1210.36	1210.47	1210.57	1210.67	1210.76
EXISTING GIRDER 1	1208.34	1208.49	1208.63	1208.78	1208.92	1209.06	1209.20	1209.33	1209.47	1209.59	1209.72	1209.84	1209.96	1210.07	1210.19	1210.30	1210.40	1210.51	1210.61	1210.71	1210.81
EXISTING GIRDER 2	1208.41	1208.56	1208.71	1208.86	1209.00	1209.14	1209.28	1209.42	1209.55	1209.68	1209.81	1209.93	1210.05	1210.17	1210.28	1210.39	1210.50	1210.61	1210.71	1210.81	1210.91
EXISTING GIRDER 3	1208.49	1208.64	1208.79	1208.94	1209.08	1209.23	1209.37	1209.50	1209.64	1209.77	1209.90	1210.02	1210.14	1210.26	1210.37	1210.49	1210.60	1210.70	1210.81	1210.91	1211.01
REF. LINE STH 29 EB	1208.54	1208.69	1208.84	1208.99	1209.13	1209.28	1209.42	1209.55	1209.69	1209.82	1209.95	1210.07	1210.19	1210.31	1210.42	1210.53	1210.64	1210.75	1210.85	1210.96	1211.06
EXISTING GIRDER 4	1208.48	1208.63	1208.78	1208.93	1209.07	1209.21	1209.35	1209.48	1209.61	1209.74	1209.87	1209.99	1210.11	1210.22	1210.34	1210.45	1210.55	1210.66	1210.76	1210.86	1210.96
EXISTING GIRDER 5	1208.31	1208.46	1208.61	1208.76	1208.90	1209.04	1209.18	1209.31	1209.44	1209.57	1209.70	1209.82	1209.94	1210.05	1210.17	1210.28	1210.38	1210.49	1210.59	1210.69	1210.79
EXISTING GIRDER 6	1208.14	1208.29	1208.44	1208.58	1208.73	1208.87	1209.00	1209.14	1209.27	1209.40	1209.53	1209.65	1209.77	1209.88	1210.00	1210.11	1210.21	1210.32	1210.42	1210.52	1210.62
EXISTING GIRDER 7	1207.97	1208.12	1208.27	1208.41	1208.56	1208.70	1208.83	1208.97	1209.10	1209.23	1209.36	1209.48	1209.60	1209.71	1209.82	1209.94	1210.04	1210.15	1210.25	1210.35	1210.45
NEW GIRDER 8	1207.81	1207.96	1208.11	1208.26	1208.41	1208.55	1208.69	1208.83	1208.97	1209.10	1209.23	1209.35	1209.47	1209.59	1209.71	1209.82	1209.93	1210.04	1210.15	1210.25	1210.35
NEW GIRDER 9	1207.65	1207.81	1207.96	1208.11	1208.26	1208.41	1208.55	1208.69	1208.83	1208.97	1209.10	1209.23	1209.35	1209.47	1209.59	1209.71	1209.82	1209.93	1210.04	1210.15	1210.25
SOUTH EDGE OF DECK	1207.55	1207.71	1207.87	1208.02	1208.17	1208.31	1208.46	1208.60	1208.74	1208.88	1209.01	1209.14	1209.26	1209.38	1209.50	1209.62	1209.73	1209.84	1209.95	1210.06	1210.16

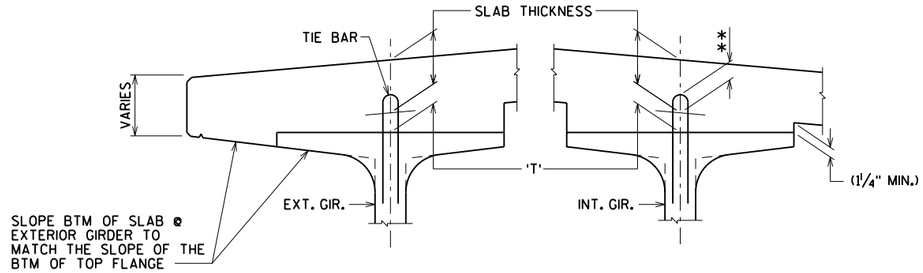
		SPAN 3										SPAN 4									℄ BEARING
	PIER 2	0.1 PT.	0.2 PT.	0.3 PT.	0.4 PT.	0.5 PT.	0.6 PT.	0.7 PT.	0.8 PT.	0.9 PT.	PIER 3	0.1 PT.	0.2 PT.	0.3 PT.	0.4 PT.	0.5 PT.	0.6 PT.	0.7 PT.	0.8 PT.	0.9 PT.	E. ABUT.
NORTH EDGE OF DECK	1210.76	1210.88	1210.99	1211.09	1211.20	1211.30	1211.39	1211.48	1211.57	1211.66	1211.74	1211.77	1211.81	1211.85	1211.88	1211.92	1211.95	1211.99	1212.02	1212.05	1212.08
EXISTING GIRDER 1	1210.81	1210.92	1211.03	1211.14	1211.24	1211.34	1211.44	1211.53	1211.62	1211.70	1211.78	1211.82	1211.86	1211.90	1211.93	1211.97	1212.00	1212.04	1212.07	1212.10	1212.13
EXISTING GIRDER 2	1210.91	1211.03	1211.14	1211.25	1211.35	1211.45	1211.55	1211.64	1211.73	1211.82	1211.90	1211.94	1211.98	1212.02	1212.05	1212.09	1212.13	1212.16	1212.19	1212.23	1212.26
EXISTING GIRDER 3	1211.01	1211.13	1211.24	1211.35	1211.46	1211.56	1211.66	1211.75	1211.85	1211.93	1212.02	1212.06	1212.10	1212.14	1212.17	1212.21	1212.25	1212.28	1212.32	1212.35	1212.38
REF. LINE STH 29 EB	1211.06	1211.17	1211.28	1211.39	1211.50	1211.60	1211.70	1211.79	1211.89	1211.97	1212.06	1212.10	1212.14	1212.17	1212.21	1212.25	1212.28	1212.32	1212.35	1212.38	1212.42
EXISTING GIRDER 4	1210.96	1211.08	1211.19	1211.29	1211.40	1211.50	1211.59	1211.69	1211.78	1211.86	1211.94	1211.98	1212.02	1212.06	1212.10	1212.13	1212.17	1212.20	1212.23	1212.26	1212.30
EXISTING GIRDER 5	1210.79	1210.91	1211.02	1211.12	1211.23	1211.33	1211.43	1211.52	1211.61	1211.69	1211.78	1211.82	1211.85	1211.89	1211.93	1211.96	1212.00	1212.03	1212.07	1212.10	1212.13
EXISTING GIRDER 6	1210.62	1210.74	1210.85	1210.96	1211.06	1211.16	1211.26	1211.35	1211.44	1211.53	1211.61	1211.65	1211.69	1211.73	1211.76	1211.80	1211.83	1211.87	1211.90	1211.93	1211.96
EXISTING GIRDER 7	1210.45	1210.57	1210.68	1210.79	1210.89	1210.99	1211.09	1211.18	1211.27	1211.36	1211.44	1211.48	1211.52	1211.56	1211.59	1211.63	1211.67	1211.70	1211.73	1211.77	1211.80
NEW GIRDER 9	1210.25	1210.37	1210.49	1210.60	1210.71	1210.82	1210.92	1211.02	1211.12	1211.21	1211.30	1211.34	1211.38	1211.42	1211.46	1211.50	1211.54	1211.58	1211.61	1211.65	1211.68
SOUTH EDGE OF DECK	1210.16	1210.29	1210.40	1210.52	1210.63	1210.74	1210.84	1210.94	1211.04	1211.13	1211.22	1211.26	1211.30	1211.34	1211.38	1211.42	1211.46	1211.50	1211.54	1211.57	1211.61

DEAD LOAD DEFLECTIONS NEW 54W" GIRDERS

UNITS ARE INCHES	0.1 PT.	0.2 PT.	0.3 PT.	0.4 PT.	0.5 PT.	0.6 PT.	0.7 PT.	0.8 PT.	0.9 PT.
SPAN 1	0.2	0.4	0.5	0.6	0.6	0.6	0.5	0.4	0.2
SPAN 2	0.1	0.3	0.4	0.4	0.4	0.4	0.4	0.3	0.1
SPAN 3	0.4	0.8	1.1	1.3	1.3	1.3	1.1	0.8	0.4
SPAN 4	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0

DEAD LOAD DEFLECTIONS 54" EXISTING GIRDERS

UNITS ARE INCHES	0.1 PT.	0.2 PT.	0.3 PT.	0.4 PT.	0.5 PT.	0.6 PT.	0.7 PT.	0.8 PT.	0.9 PT.
SPAN 1	0.3	0.5	0.7	0.8	0.8	0.8	0.7	0.5	0.3
SPAN 2	0.2	0.4	0.6	0.7	0.7	0.7	0.6	0.4	0.2
SPAN 3	0.5	0.9	1.3	1.5	1.5	1.5	1.3	0.9	0.5
SPAN 4	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0



SLAB HAUNCH DETAIL AT 54W GIRDERS

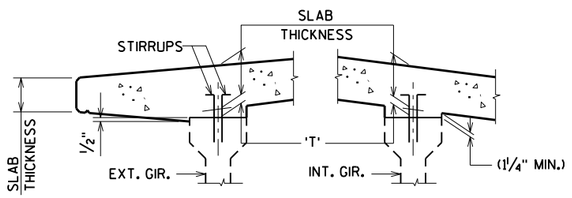
IF 1¼" MINIMUM HAUNCH HEIGHT AT EDGE OF GIRDER CANNOT BE MAINTAINED, THE GRADE LINE MAY BE REVISED BY THE ENGINEER AT THE OPTION OF THE CONTRACTOR. THE PLAN SLAB THICKNESS SHALL BE HELD. NOTIFY THE STRUCTURES SECTION IF THE GRADE LINE IS RAISED FROM THE PLAN PROFILE BY MORE THAN ½" OR,

** IF 3" MINIMUM DECK EMBEDMENT OF TIE BAR CANNOT BE OBTAINED.

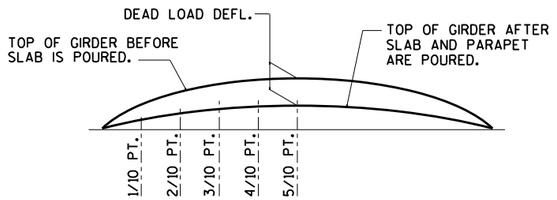
TO DETERMINE 'T', ELEV. OF TOP OF GIR'S. AT ℄ OF SUBSTRUCTURE UNITS & AT 1/10 POINTS OF EACH SPAN SHALL BE TAKEN. THEN FOLLOW THIS PROCESS:

TOP OF DECK ELEV. AT FINAL GRADE
\- TOP OF GIRDER ELEVATION
\+ DEAD LOAD DEFLECTION
\- SLAB THICKNESS
= HAUNCH HEIGHT 'T'

NOTE: AN AVERAGE HAUNCH ('T') OF 4" WAS USED IN THE QUANTITY "CONCRETE MASONRY BRIDGES".



SLAB HAUNCH DETAIL AT EXISTING 54" GIRDERS



DEAD LOAD DEFLECTION DIAGRAM

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-140

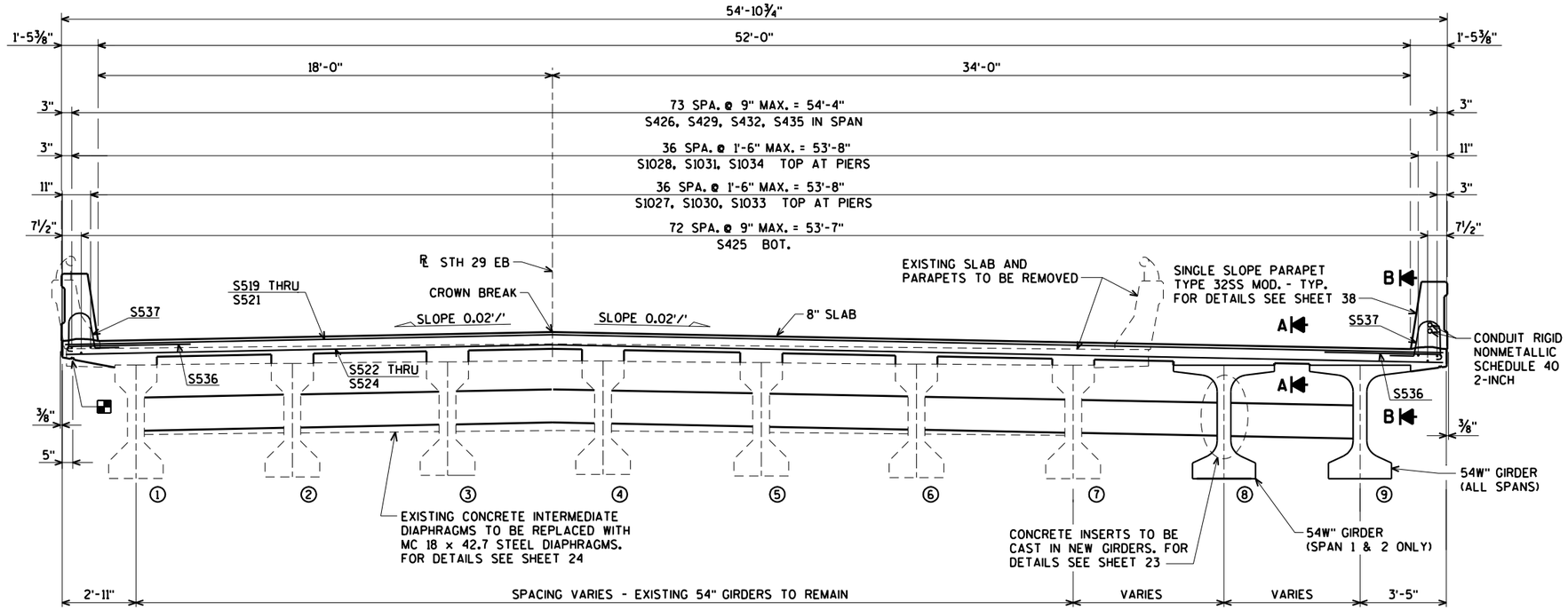
DRAWN BY CJM | PLANS CK'D. DNS

DECK ELEVATIONS AND DEFLECTIONS

SHEET 28 OF 40
523

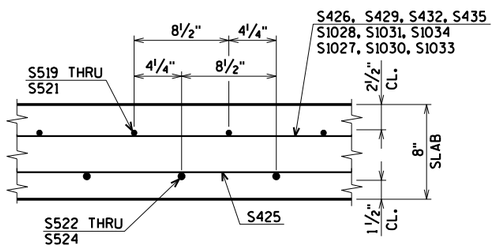
ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

$PRFNAME$
U:\41-0637.00 - STH 29 over WI River\B-37-140\BRIDGE\B-37-140 el.DGN

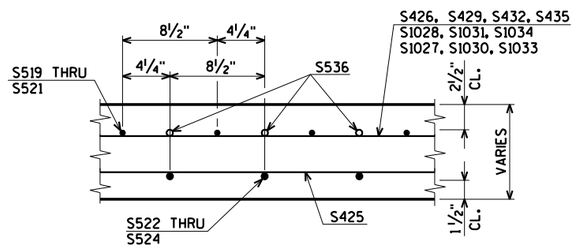


■ ¾" CONT. DRIP GROOVE TERMINATE 2'-0" FROM ABUTMENTS - TYP.

TYPICAL CROSS SECTION THRU DECK
(LOOKING EAST)



SECTION A



SECTION B

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-140

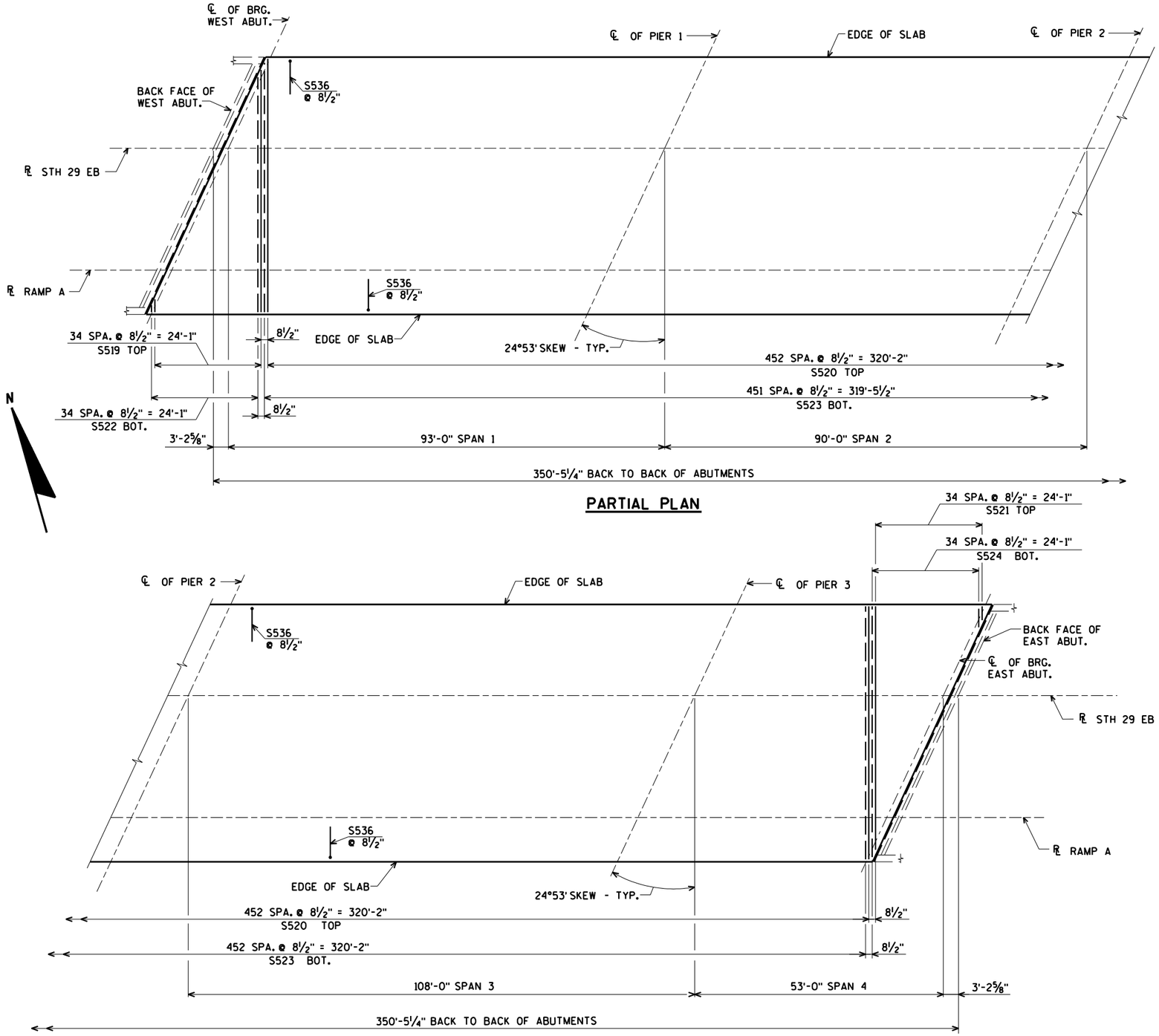
DRAWN BY CLS | PLANS CK'D. DNS

SUPERSTRUCTURE

SHEET 29 OF 40
524

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PARTIAL PLAN

PARTIAL PLAN

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-140

DRAWN BY CLS | PLANS CK'D. DNS

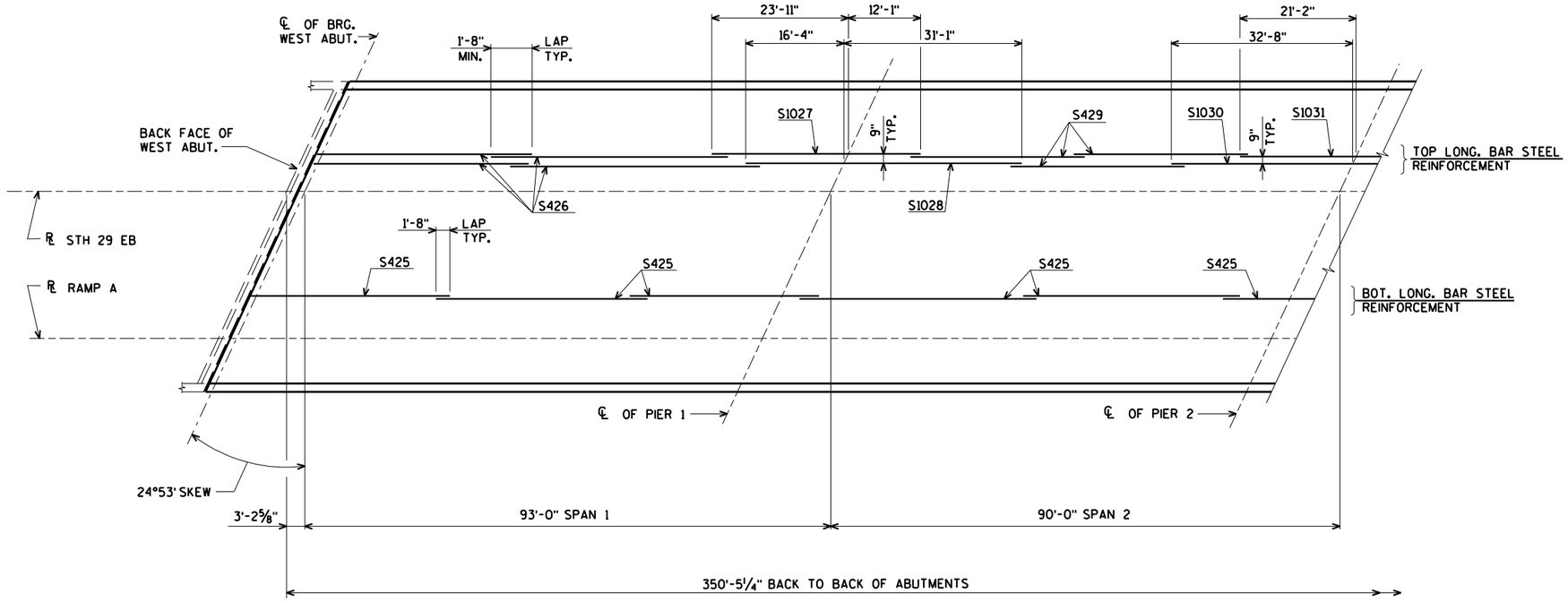
TRANSVERSE SLAB STEEL LAYOUT

SHEET 30 OF 40
525

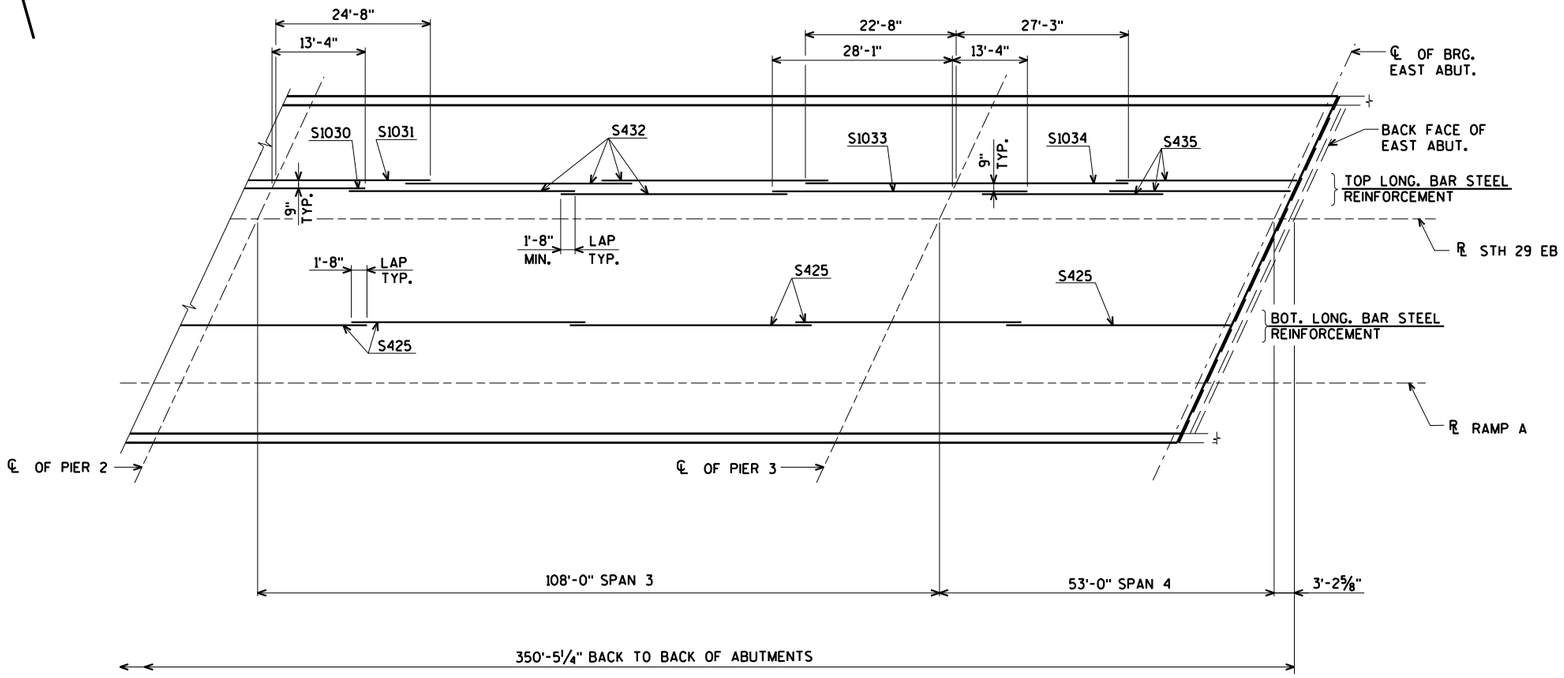
ORIGINAL PLANS PREPARED BY
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3433 Oakwood Hills Parkway
Eau Claire, WI 54701
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$PRFNAME$
U:\41-0637.00 - STH 29 over WIRiver\B-37-140\BRIDGE\B-37-140 sup.dgn

$PRFNAME$
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PARTIAL PLAN



PARTIAL PLAN

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-140

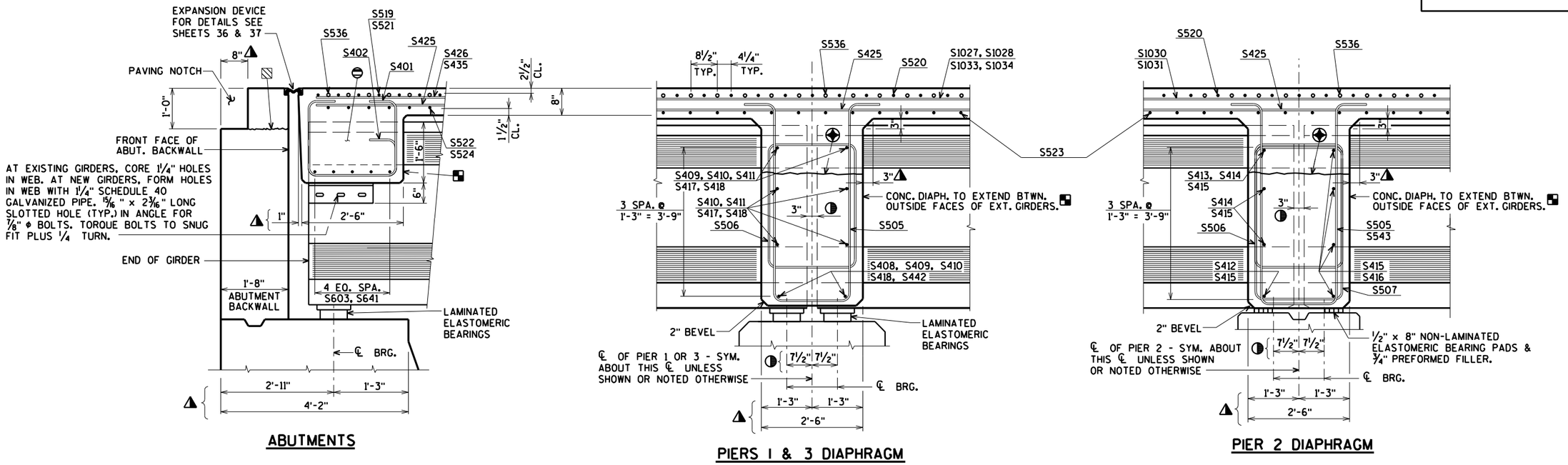
DRAWN BY CLS | PLANS CK'D. DNS

LONGITUDINAL SLAB STEEL LAYOUT

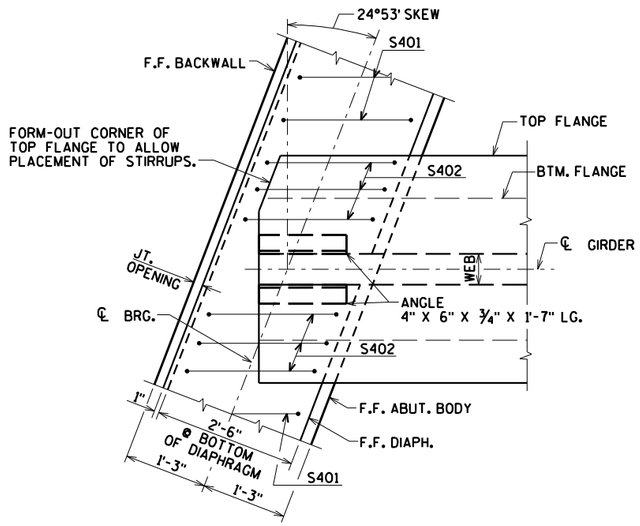
SHEET 31 OF 40
526

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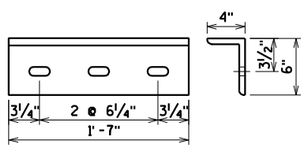
$PRFNAME$
U:\41-0637.00 - STH 29 over WIRiver\B-37-140\BRIDGE\B-37-140 sup.dgn



PART LONGITUDINAL SECTION



TOP VIEW OF ABUTMENT DIAPHRAGM



ANGLE

6" x 4" x ¾" x 1'-7"

NOTES:

PROVIDE 3½" x 3½" x 5/16" PLATE WASHERS AT ALL LOCATIONS EXCEPT AT EXTERIOR FACES OF EXTERIOR GIRDERS WHERE 3½" x 3½" x ½" PLATE WASHERS SHALL BE PROVIDED.

DIAPHRAGM SUPPORT ANGLES SHALL BE ASTM A709 GRADE 36. ALL BOLTS, NUT AND WASHERS SHALL BE ASTM A325 TYPE 1.

ALL SUPPORT ANGLES SHALL BE HOT-DIPPED GALVANIZED. ALL BOLTS, NUTS AND WASHERS SHALL BE HOT-DIPPED GALVANIZED IN ACCORDANCE WITH ASTM A153 CLASS C. GALVANIZED NUTS SHALL BE TAPPED OVERSIZED IN ACCORDANCE WITH THE REQUIREMENTS OF ASTM A563 AND SHALL MEET THE REQUIREMENTS OF SUPPLEMENTARY REQUIREMENT S1 OF ASTM A563. LUBRICANT AND TEST FOR COATED NUTS.

ALL DIAPHRAGM SUPPORT HARDWARE SHALL BE INCIDENTAL TO "CONCRETE MASONRY BRIDGES".

EXISTING CONCRETE DIAPHRAGMS TO BE REMOVED AND REPLACED.

CONST. JOINT. STRIKE OFF & LEAVE ROUGH

CONC. DIAPH. TO EXTEND BETWEEN INSIDE FACES OF EXTERIOR GIRDERS. NO OPTIONAL CONSTRUCTION JOINT ALLOWED. PLACE DIAPHRAGM CONCRETE WITH DECK SLAB.

DIMENSIONS MEASURED NORMAL TO ℄ OF SUBSTRUCTURE UNIT.

DIMENSIONS MEASURED ALONG ℄ OF GIRDER.

OPTIONAL CONSTRUCTION JOINT 1'-2" BELOW TOP OF GIRDER. IF USED, DECK POUR MUST BE WITHIN 2 WEEKS FROM THE TIME OF THE DIAPHRAGM POUR.

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STRUCTURE B-37-140

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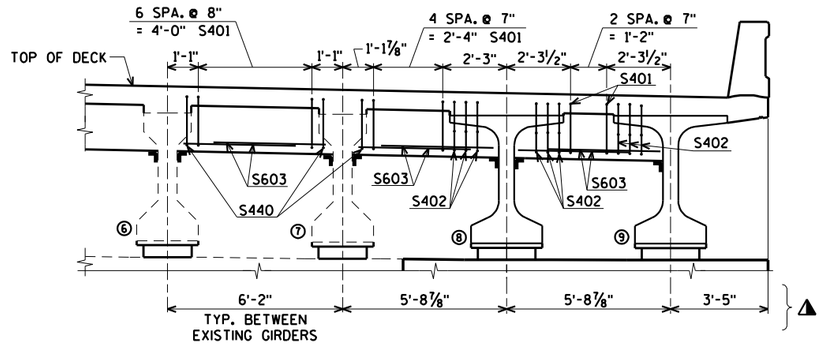
SUPERSTRUCTURE DETAILS

SHEET 32 OF 40
527

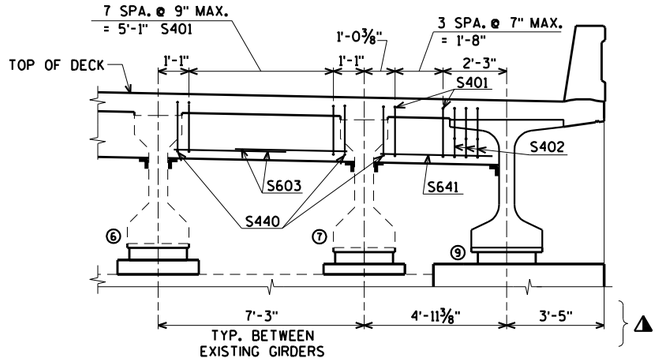
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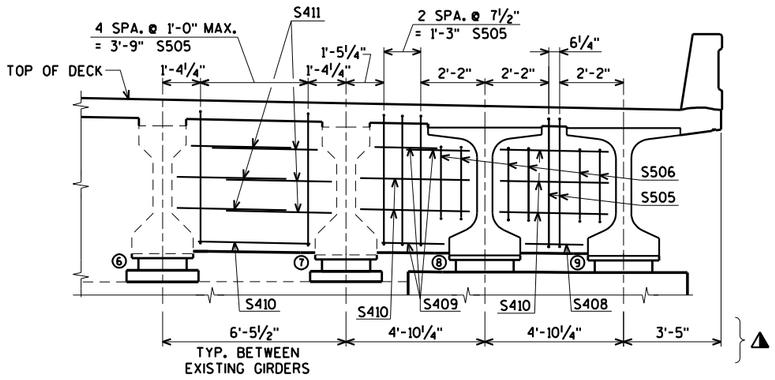
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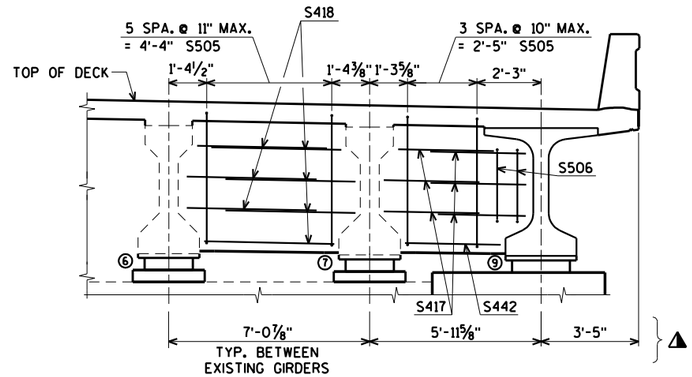
DIAPHRAGM DETAIL AT WEST ABUTMENT



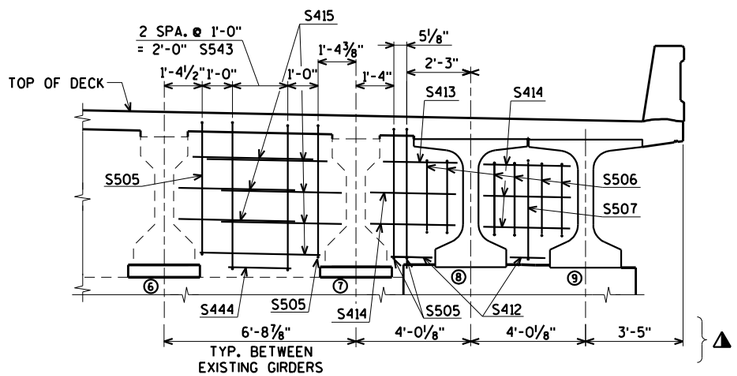
DIAPHRAGM DETAIL AT EAST ABUTMENT



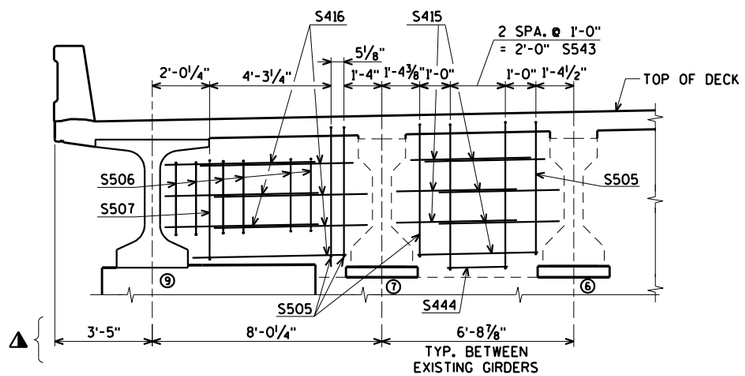
DIAPHRAGM DETAIL AT PIER 1



DIAPHRAGM DETAIL AT PIER 3



DIAPHRAGM DETAIL AT PIER 2
(LOOKING EAST)



DIAPHRAGM DETAIL AT PIER 2
(LOOKING WEST)

⚠ DIMENSIONS MEASURED NORMAL TO STH 29 EB ℄

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STRUCTURE B-37-140

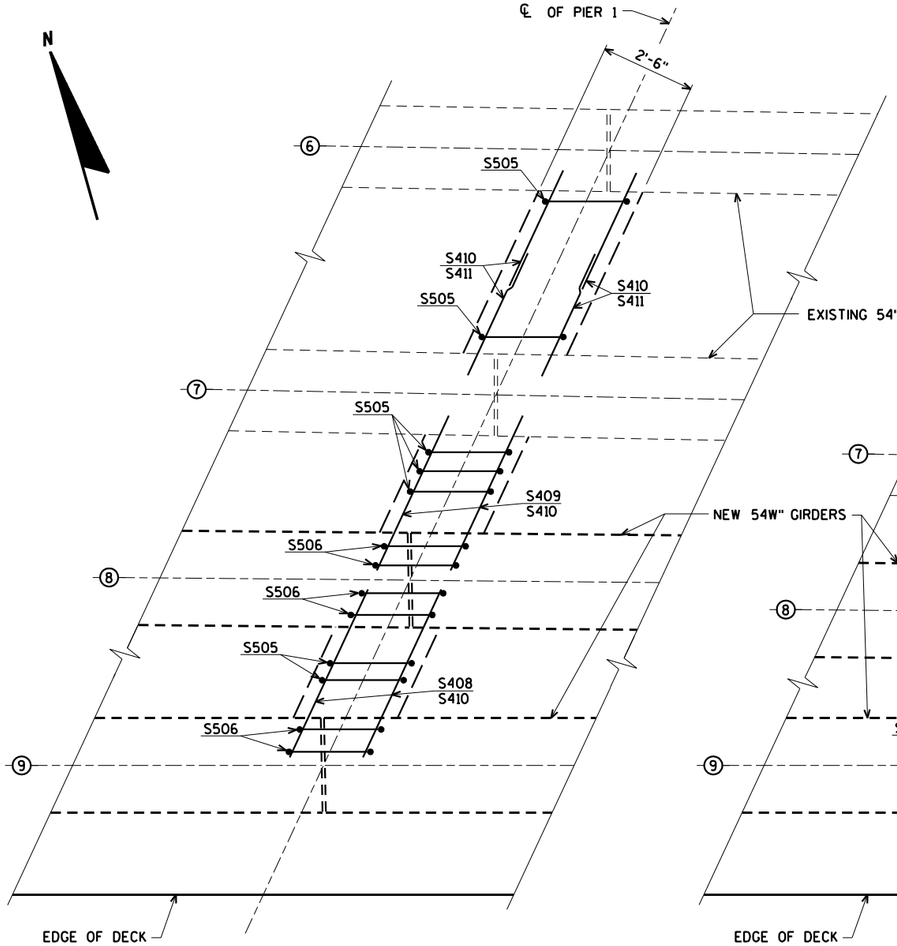
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SUPERSTRUCTURE DETAILS

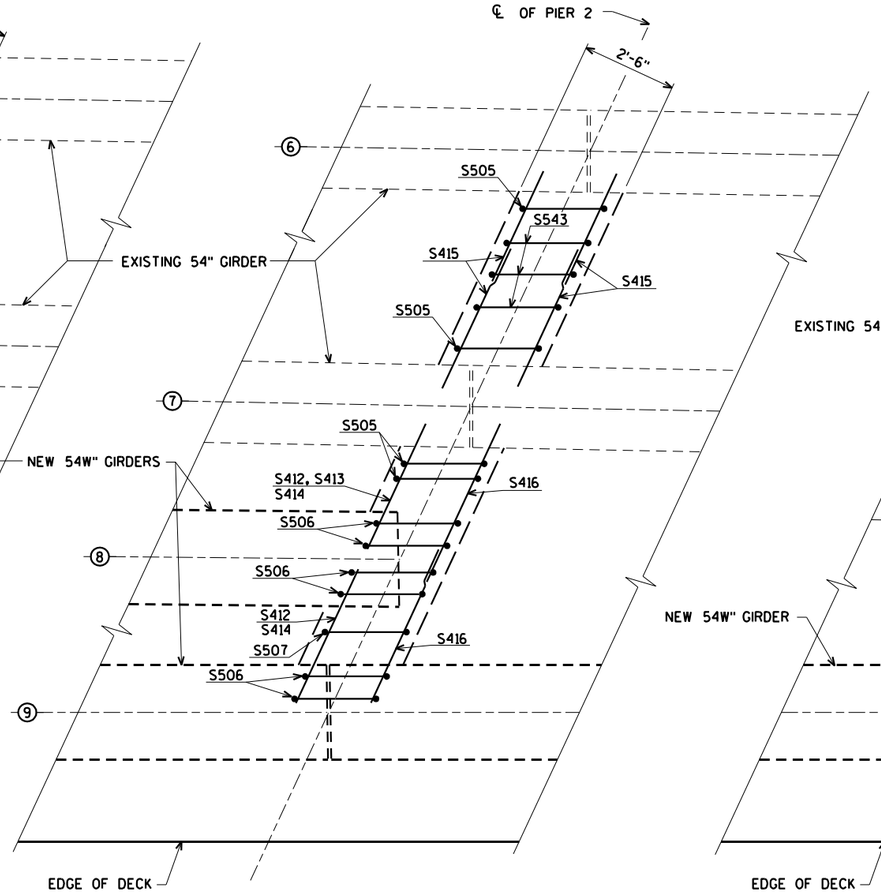
SHEET 33 OF 40
528

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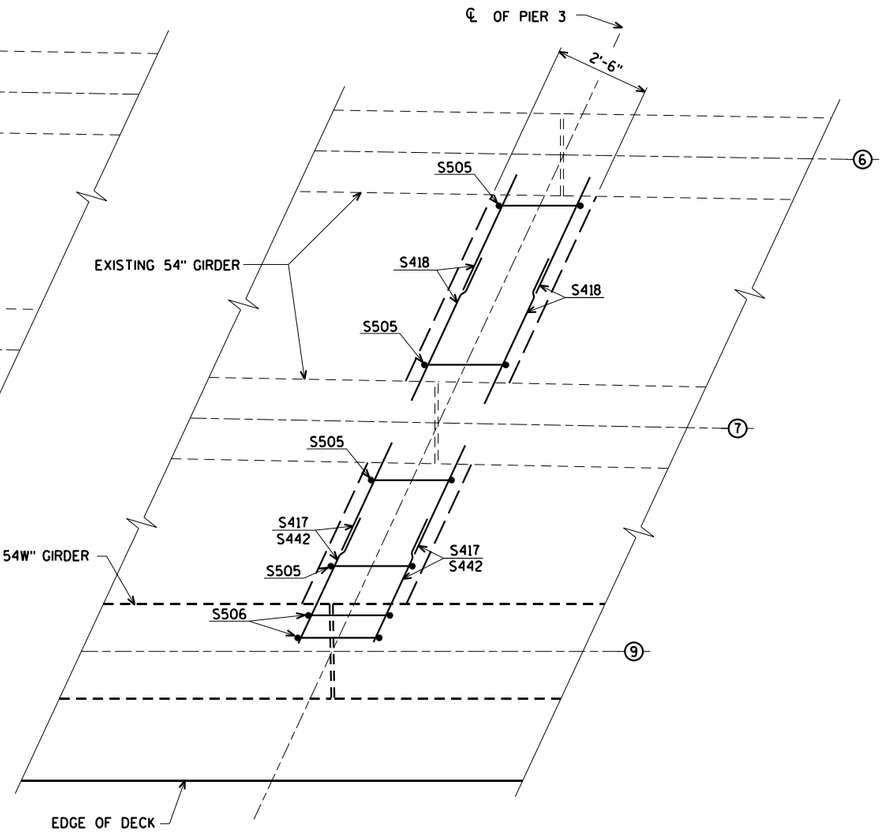
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DIAPHRAGM PLAN VIEW AT PIER 1



DIAPHRAGM PLAN VIEW AT PIER 2



DIAPHRAGM PLAN VIEW AT PIER 3

8

8

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SUPERSTRUCTURE DETAILS

SHEET 34 OF 40
529

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9/30/2013
PENTABLE:BReau_shd_util.tbl

STATE PROJECT NUMBER

1053-02-75

BILL OF BARS

BAR. NO.	COATED BAR	NO. REQ'D.	LENGTH	BENT BAR	BUNDLED BAR SERIES	151,820# COATED LOCATION
S401	X	102	7-0	X		DIAPH. @ ABUT. VERT.
S402	X	12	5-11	X		DIAPH. @ ABUT. VERT.
S603	X	140	4-8			DIAPH. @ ABUT. HORIZ.
S404	X	30	6-4			EXP. JOINT @ ABUT. HORIZ.
S505	X	89	13-6	X		DIAPH. @ PIERS VERT.
S506	X	14	10-9	X		DIAPH. @ PIERS VERT.
S507	X	1	12-1	X		DIAPH. @ PIER 2 VERT.
S408	X	2	2-2			DIAPH. @ PIER 1 HORIZ.
S409	X	6	2-4			DIAPH. @ PIER 1 HORIZ.
S410	X	22	4-4			DIAPH. @ PIER 1 HORIZ.
S411	X	36	4-9			DIAPH. @ PIER 1 HORIZ.
S412	X	2	1-4			DIAPH. @ PIER 2 HORIZ.
S413	X	1	2-10			DIAPH. @ PIER 2 HORIZ.
S414	X	5	3-4			DIAPH. @ PIER 2 HORIZ.
S415	X	84	4-9			DIAPH. @ PIER 2 HORIZ.
S416	X	7	5-8			DIAPH. @ PIER 2 HORIZ.
S417	X	12	4-6			DIAPH. @ PIER 3 HORIZ.
S418	X	84	5-1			DIAPH. @ PIER 3 HORIZ.
S519	X	35	27-9		⊗	SLAB TRANS. TOP SPAN 1
S520	X	452	54-6			SLAB TRANS. TOP
S521	X	35	27-0		⊗	SLAB TRANS. TOP SPAN 4
S522	X	35	28-6		⊗	SLAB TRANS. BOT. SPAN 1
S523	X	452	54-6			SLAB TRANS. BOT.
S524	X	35	27-9		⊗	SLAB TRANS. BOT. SPAN 4
S425	X	730	36-2			SLAB LONG. BOT.
S426	X	148	40-0			SLAB LONG. TOP SPAN 1
S1027	X	37	36-0			SLAB LONG. TOP PIER 1
S1028	X	37	47-5			SLAB LONG. TOP PIER 1
S429	X	111	30-10			SLAB LONG. TOP SPAN 2
S1030	X	37	46-0			SLAB LONG. TOP PIER 2
S1031	X	37	45-10			SLAB LONG. TOP PIER 2
S432	X	148	35-10			SLAB LONG. TOP SPAN 3
S1033	X	37	41-5			SLAB LONG. TOP PIER 3
S1034	X	37	49-11			SLAB LONG. TOP PIER 3
S435	X	111	28-9			SLAB LONG. TOP SPAN 4
S536	X	976	5-4	X		SLAB TRANS. TOP @ PARAPET
S537	X	1040	4-5	X		PARAPETS VERT.
S538	X	1040	5-0	X		PARAPETS VERT.
S539	X	72	59-2			PARAPETS HORIZ.
S440	X	26	4-6	X		DIAPH. @ ABUT. VERT.
S641	X	5	3-9			DIAPH. @ E. ABUT. HORIZ.
S442	X	2	3-7			DIAPH. @ PIER 3 HORIZ.
S543	X	18	15-0	X		DIAPH. @ PIER 2 VERT.
S444	X	12	3-6			DIAPH. @ PIER 2 HORIZ.

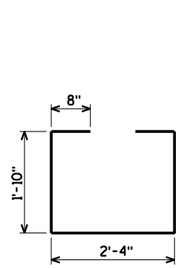
BENDING DIMENSIONS ARE OUT TO OUT OF BARS.

⊗ LENGTH SHOWN FOR BAR IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.

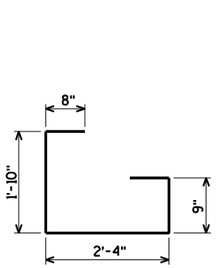
BAR SERIES TABLE

BAR MARK	NO REQ'D.	LENGTH
S519	1 SERIES OF 35	1'-10" TO 53'-8"
S521	1 SERIES OF 35	1'-1" TO 52'-11"
S522	1 SERIES OF 35	2'-7" TO 54'-5"
S524	1 SERIES OF 35	1'-10" TO 53'-8"

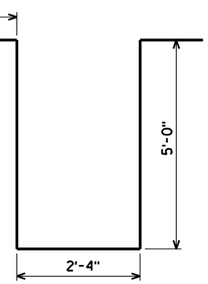
BUNDLE AND TAG EACH SERIES SEPARATELY.



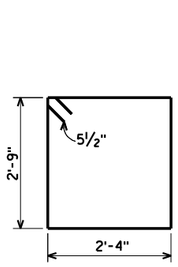
S401



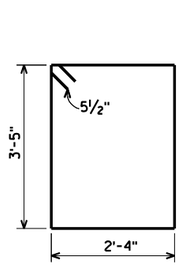
S402



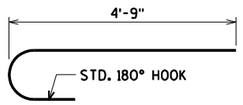
S505



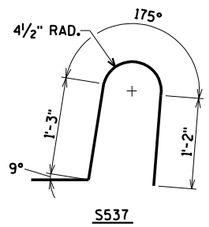
S506



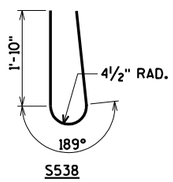
S507



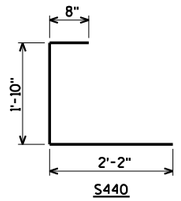
S536



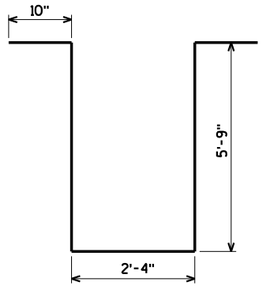
S537



S538



S440



S543

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STRUCTURE B-37-140

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SUPERSTRUCTURE BILL OF BARS

SHEET 35 OF 40
530

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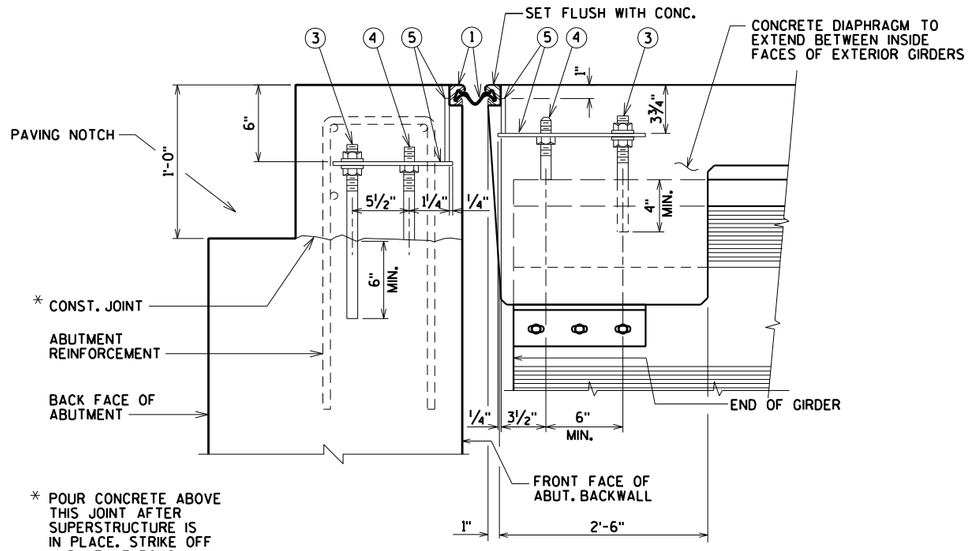
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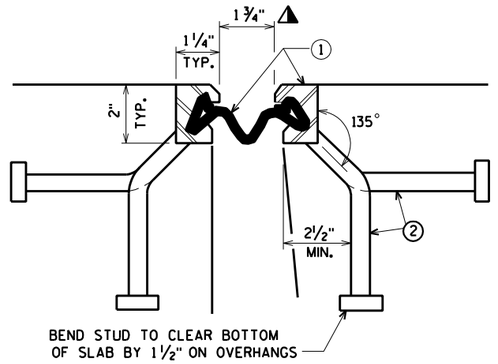
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10/1/2013

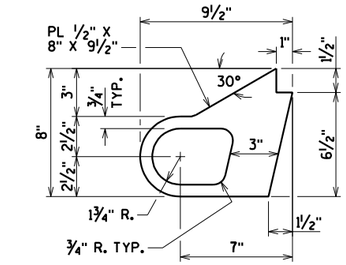
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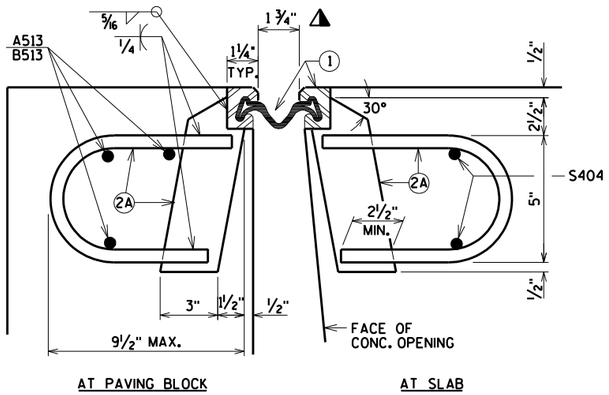
SECTION THRU JOINT AT ABUTMENT
NORMAL TO ℄ SUBSTRUCTURE



SECTION THRU JOINT
EXTERIOR GIRDER TO EDGE OF SLAB



ALTERNATE STRIP SEAL ANCHOR



SECTION THRU JOINT
ROADWAY TRAFFIC AREA BETWEEN EXTERIOR GIRDERS.

LEGEND

1. NEOPRENE STRIP SEAL (4 - INCH) & STEEL EXTRUSIONS.
2. STUDS ⅝"Φ X 6⅜" LONG AT 6" ALTERNATE CENTERS. WELD TO EXTRUSIONS & BEND AS SHOWN AFTER WELDING.
2A. ½" THICK ANCHOR PLATE WITH ⅝"Φ ROD (OR ALTERNATE STRIP SEAL ANCHOR). WELD ROD TO ANCHOR PLATE. WELD ANCHOR PLATE TO NO. 1 AT 1'-6" CENTERS BETWEEN GIRDERS.
3. ¾" Φ THREADED ROD WITH 2 NUTS AND PLATE WASHERS. GROUT THREADED ROD INTO FIELD DRILLED HOLES ON ℄ OF GIRDER AND ABUTMENT BACKWALL AS SHOWN.
4. ¾"Φ THREADED ROD WITH NUT. TACK WELD NUT TO NO. 5.
5. FABRICATE SUPPORT FROM 3" X ½" BAR AS SHOWN OR EQUIVALENT, ONE PER GIRDER PER SIDE. FIELD OR SHOP WELD TO NO. 1. IF FIELD WELDED, COVER WELDED AREAS WITH EPOXY-COATING MATERIAL. PROVIDE 1½" Φ HOLE FOR NO. 3 & 1" Φ HOLE FOR NO. 4.
6. GALVANIZED PLATE ⅜" x 10" x 2'-2" LONG WITH HOLES FOR #7.
7. ¾" Φ x 1½" STAINLESS STEEL SOCKET FLAT HEAD SCREWS WITH ANTI-SEIZE LUBRICANT. PLACE IN COUNTERSUNK HOLES. RECESS 1/16" BELOW PLATE SURFACE.
8. ¾" Φ x 4" GALV. HEX HEAD BOLT. BEND 45°.
9. ¾" Φ x 2 ¼" GALV. THREADED COUPLING.
10. 1" x 5" SLOTTED CSK. HOLE FOR #7. PLACE SLOT PARALLEL TO DIRECTION OF MOVEMENT.

NOTES

ONE FIELD SPLICE PERMITTED IN STEEL EXTRUSIONS. IF USED, DETAILS SHALL BE SUBMITTED FOR APPROVAL. NO SPLICING PERMITTED IN NEOPRENE STRIP SEAL.

AFTER FABRICATION, BUT BEFORE SHIPMENT, STRAIGHTEN STEEL EXTRUSIONS SUCH THAT THEY SHALL BE FREE FROM WARP, TWIST & SWEEP.

FABRICATOR SHALL PROVIDE MEANS OF KEEPING GALVANIZED EXTRUSIONS CLEAN & SMOOTH DURING SHIPMENT AND PRIOR TO APPLYING LUBRICANT ADHESIVE FOR NEOPRENE GLAND INSTALLATION.

SANDBLAST PLATES, SUPPORTS, & EXTRUSIONS AFTER FABRICATION IN ACCORDANCE WITH SSPC SP. #6 "COMMERCIAL BLAST CLEANING". AFTER BLAST CLEANING THE PLATES, SUPPORTS, & EXTRUSIONS SHALL BE HOT DIPPED GALVANIZED.

STRIP SEAL EXPANSION JOINT ASSEMBLY, INCLUDING ANCHOR STUDS & HARDWARE WILL BE PAID FOR AT THE LUMP SUM PRICE BID FOR "EXPANSION DEVICE B-37-140".

ANCHOR SYSTEM #8 & #9 SHALL CONFORM TO ASTM A307 & SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153 CLASS C & D.

▲ DIMENSION MEASURED NORMAL TO JOINT.

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STRUCTURE B-37-140

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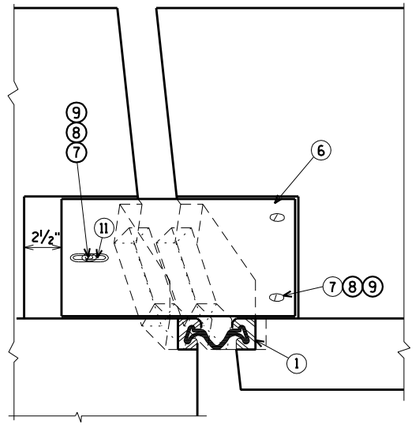
EXPANSION DEVICE

SHEET 36 OF 40
531

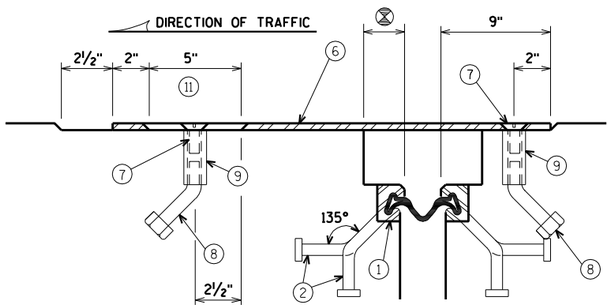
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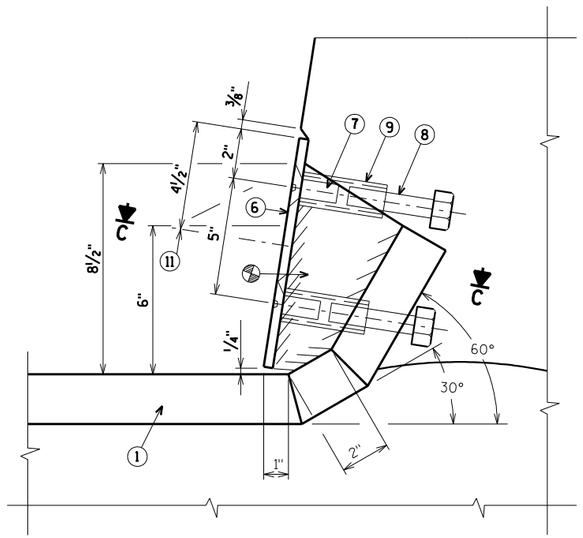
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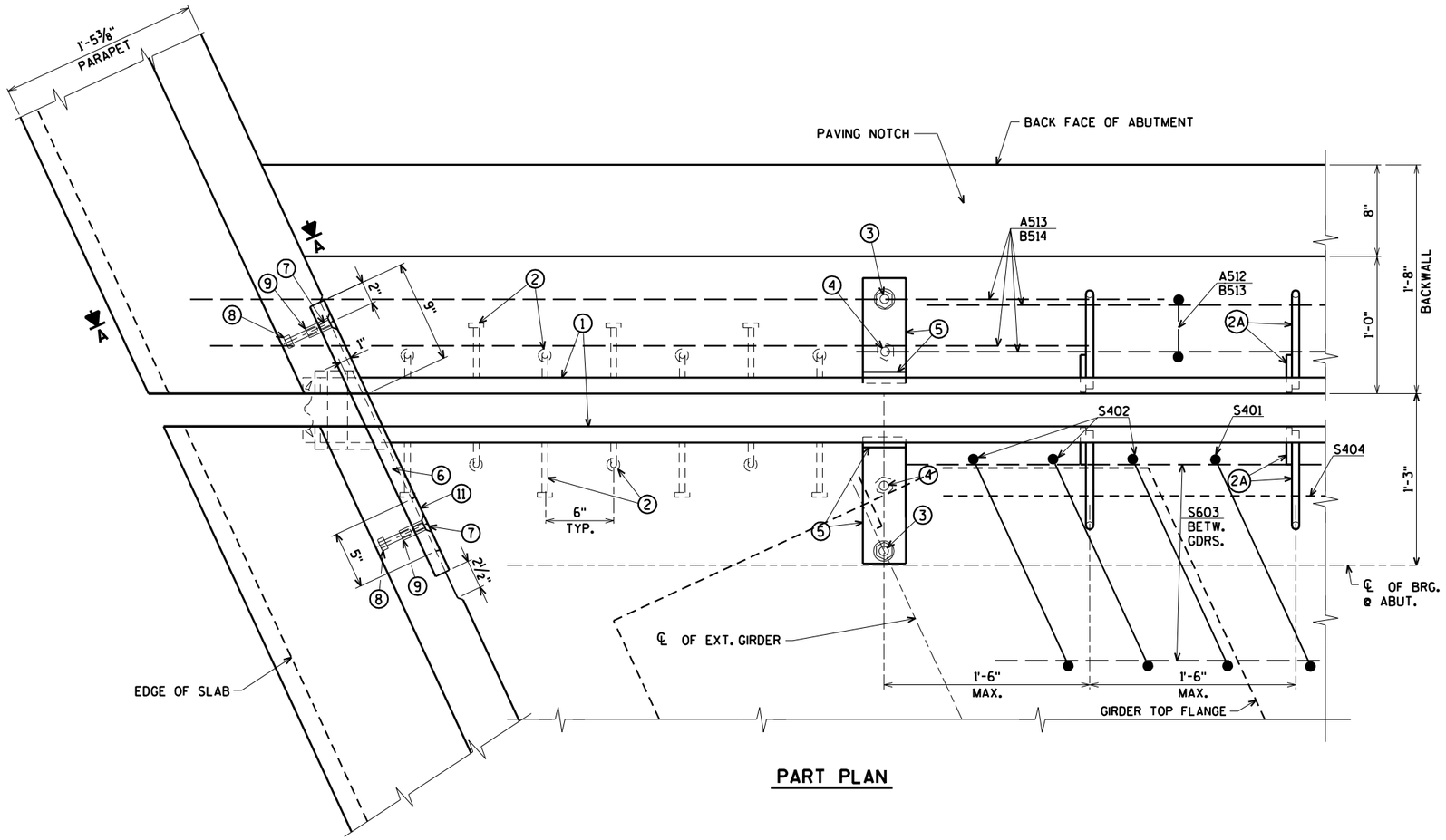
VIEW OF PARAPET PLATES FROM ROADWAY



SECTION C



SECTION A



PART PLAN

⊠ BLOCK OUT CONCRETE 2" EACH SIDE OF JOINT OPENING

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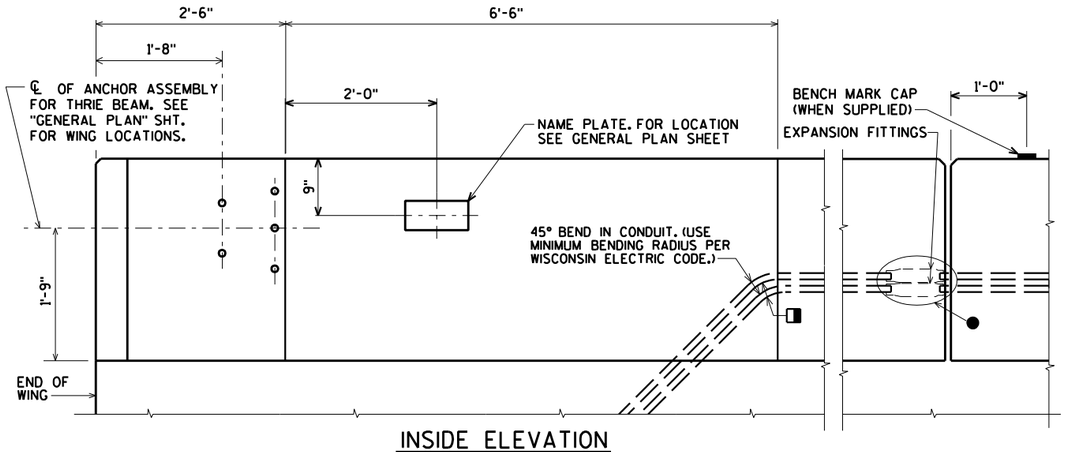
STRUCTURE B-37-140

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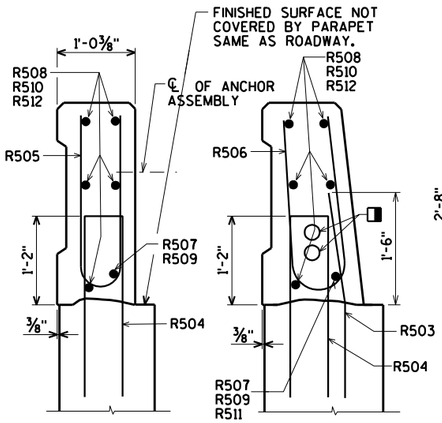
EXPANSION DEVICE

SHEET 37 OF 40
532

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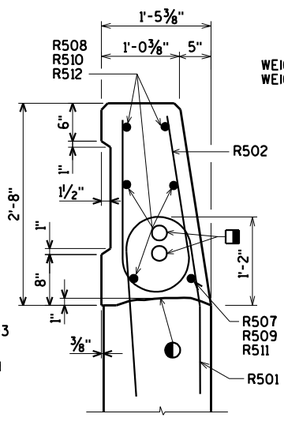


INSIDE ELEVATION



SECTION A

SECTION B



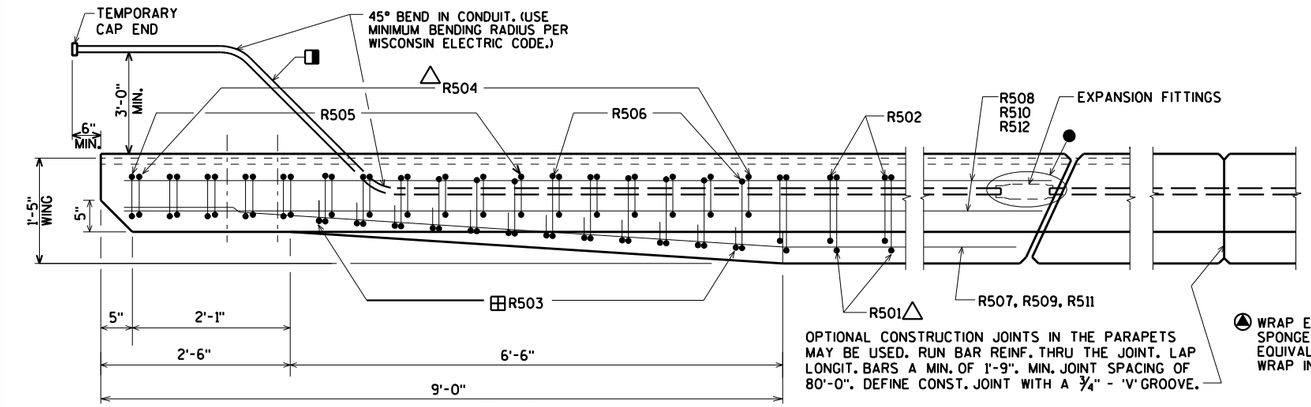
SECTION C

WEIGHTS INCLUDED IN ABUTMENT
WEIGHTS SHOWN ON SHEETS 9 & 13

BILL OF BARS

760* WEST ABUTMENT
820* EAST ABUTMENT

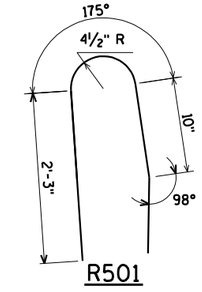
BAR MARK	COAT	WEST ABUT.	EAST ABUT.	LENGTH	BENT	BAR SERIES	LOCATION
R501	X	14	18	5-10	X		PARAPET VERT.
R502	X	14	18	5-0	X		PARAPET VERT.
R503	X	24	24	3-0	X		PARAPET-VERT.
R504	X	34	34	5-7	X		PARAPET-VERT.
R505	X	22	22	4-9	X		PARAPET-VERT.
R506	X	12	12	4-10	X		PARAPET-VERT.
R507	X	1	1	13-7	X		PARAPET-HORIZ. - WING 1& 4
R508	X	5	0	13-0			PARAPET-HORIZ. - WING 1
R509	X	1	0	11-8	X		PARAPET-HORIZ. - WING 2
R510	X	5	0	11-11			PARAPET-HORIZ. - WING 2
R511	X	0	1	14-1	X		PARAPET-HORIZ. - WING 3
R512	X	0	10	13-6			PARAPET-HORIZ. - WING 3 & 4



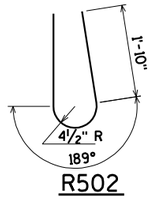
PLAN

WINGS 2 & 4 SHOWN (WINGS 1 & 3 SIMILAR)

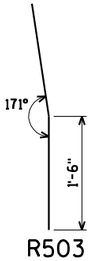
OPTIONAL CONSTRUCTION JOINTS IN THE PARAPETS MAY BE USED. RUN BAR REINF. THRU THE JOINT. LAP LONGIT. BARS A MIN. OF 1'-9". MIN. JOINT SPACING OF 80'-0". DEFINE CONST. JOINT WITH A ¾" - 'V' GROOVE.



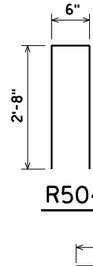
R501



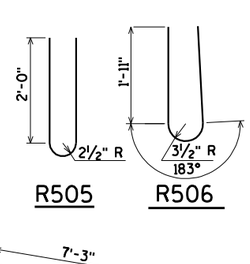
R502



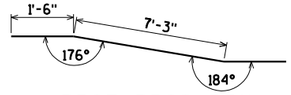
R503



R504

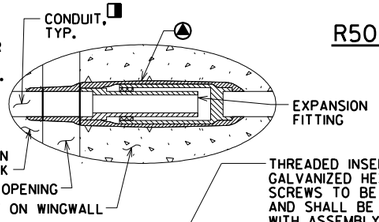


R505 R506



R507, R509, R511

WRAP EXPANSION FITTING WITH SPONGE RUBBER. SPONGE RUBBER WRAP TO BE AASHTO M153 TYPE 1 OR EQUIVALENT. ¼" MINIMUM THICKNESS. SPONGE RUBBER WRAP INCIDENTAL TO "CONDUIT RIGID METALLIC 2-INCH".

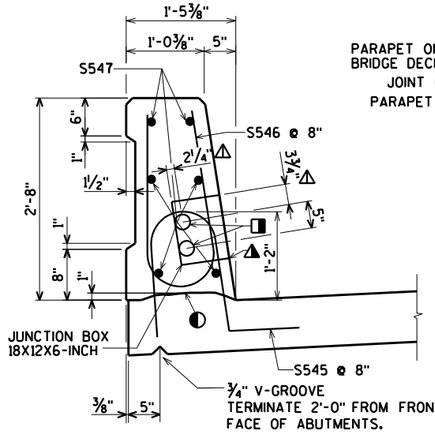


DETAIL OF ANCHOR ASSEMBLY

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

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

OUTSIDE ELEVATION



SECTION THRU PARAPET ON BRIDGE

NOTES

EXPANSION FITTINGS, ANGLES AND ADAPTER FITTINGS TO BE INCIDENTAL TO "CONDUIT RIGID METALLIC 2-INCH".

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

APPROVED MANUFACTURERS - JUNCTION BOXES:
SEE APPROVED MATERIAL LIST.

APPROVED MANUFACTURER OR EQUIVALENT - EXPANSION FITTING:
O-Z/GEDNEY TYPE AX-200 AND BONDING JUMPER (4" TOTAL CONDUIT MOVEMENT).

● POSITION MOVEABLE END OF CONDUIT INSIDE EXPANSION FITTING, SUCH THAT IT WILL HAVE THE SAME ALLOWANCE FOR MOVEMENT (EXPANSION/CONTRACTION) AS THE EXPANSION DEVICE SET IN PLACE IN THE DECK BELOW IT. TAKE CARE TO INSTALL EXPANSION FITTING AND CONDUIT EXACTLY PARALLEL TO BRIDGE MOVEMENT.

⚠ LOCATION OF CONDUIT IS MEASURED FROM OUTSIDE EDGE OF JUNCTION BOX.

◨ SOUTH SIDE PARAPET USE 2" DIA. RIGID NONMETALLIC CONDUIT EXCEPT AT EXPANSION FITTING. AT EXPANSION FITTING USE RIGID METALLIC CONDUIT 3'-0" INTO PARAPET ON DECK SIDE AND THRU PARAPET AND WINGWALL TO A MINIMUM OF 6" BEYOND END OF WINGWALL. (FOR GROUNDING PURPOSES.)

▲ CUT OUT ± 1" OF GASKET AT BOTTOM OF JUNCTION BOX COVER TO ALLOW FOR DRAINAGE.

⊞ R503 BARS MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. USE CARE TO PLACE R503 BARS CORRECTLY ALONG TRANSITION OF PARAPET.

◐ CONST. JOINT - STRIKE OFF AS SHOWN.

△ R501 AND R504 TO BE TIED TO WING STEEL BEFORE WING IS POURED.

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

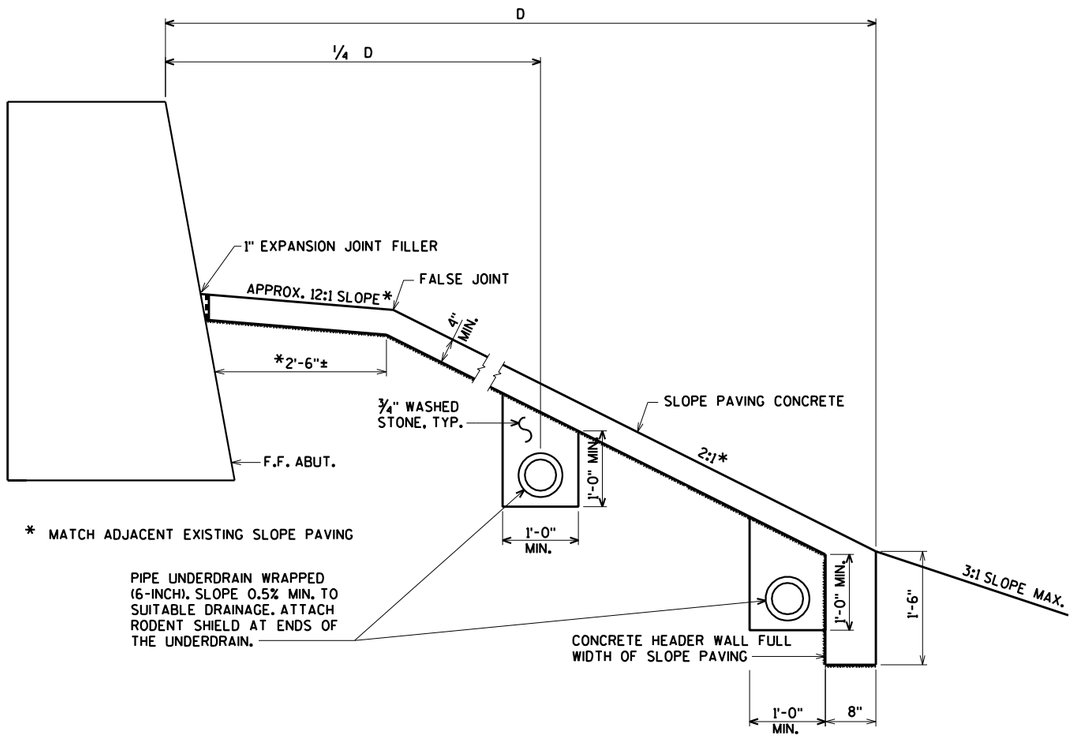
STRUCTURE B-37-140

DRAWN BY CLS | PLANS CK'D. DNS

SINGLE SLOPE PARAPET 32SS MODIFIED

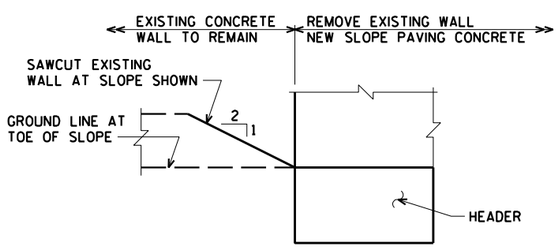
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$PRFNAME$
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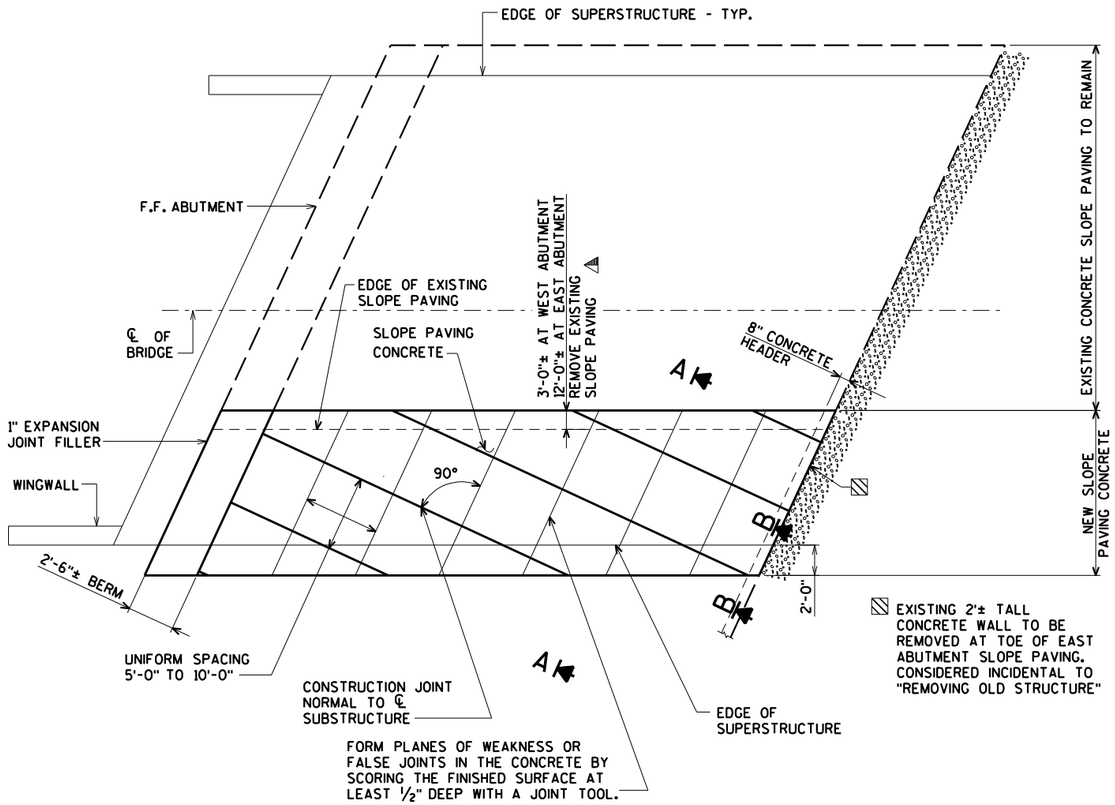


TYPICAL SECTION

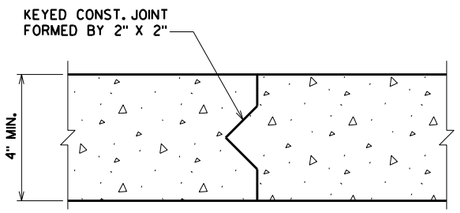
SECTION A



SECTION B
(EAST ABUTMENT ONLY)



CONSTRUCTION JOINT DESIGN



CONSTRUCTION JOINT DETAIL

GENERAL NOTES

DETAILS OF CONSTRUCTION NOT SHOWN HEREON SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS.

⚠ REMOVING A PORTION OF THE EXISTING SLOPE PAVING INCLUDED IN THE "REMOVING OLD STRUCTURE" ITEM.

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STRUCTURE B-37-140

DRAWN BY CLS | PLANS CK'D. DNS

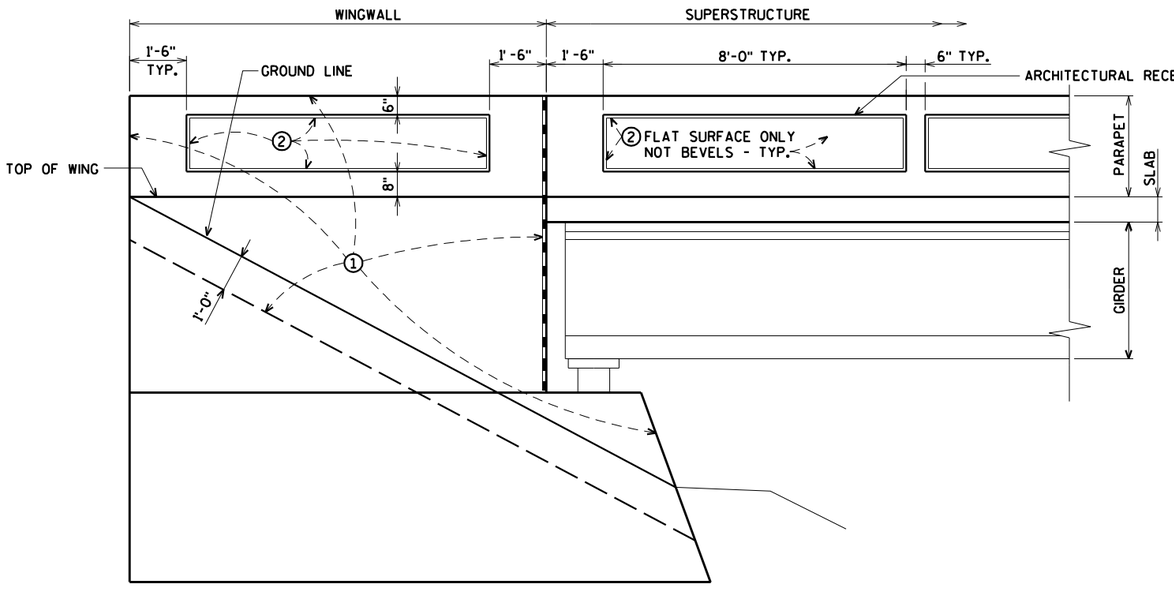
SLOPE PAVING

SHEET 39 OF 40
534

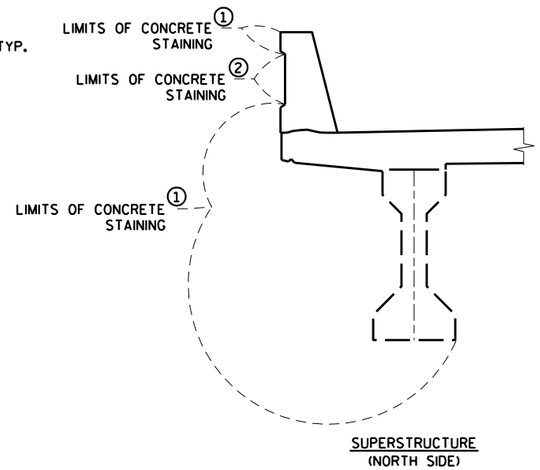
ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
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STATE PROJECT NUMBER

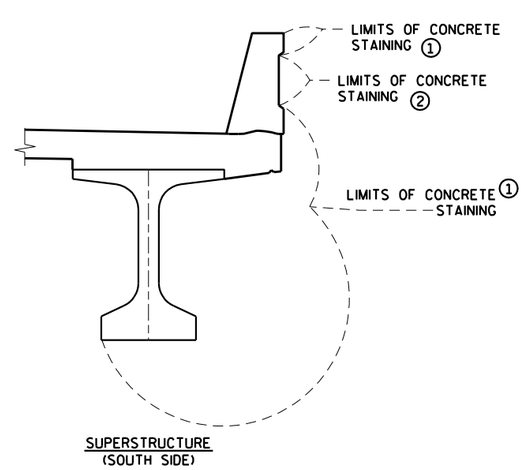
1053-02-75



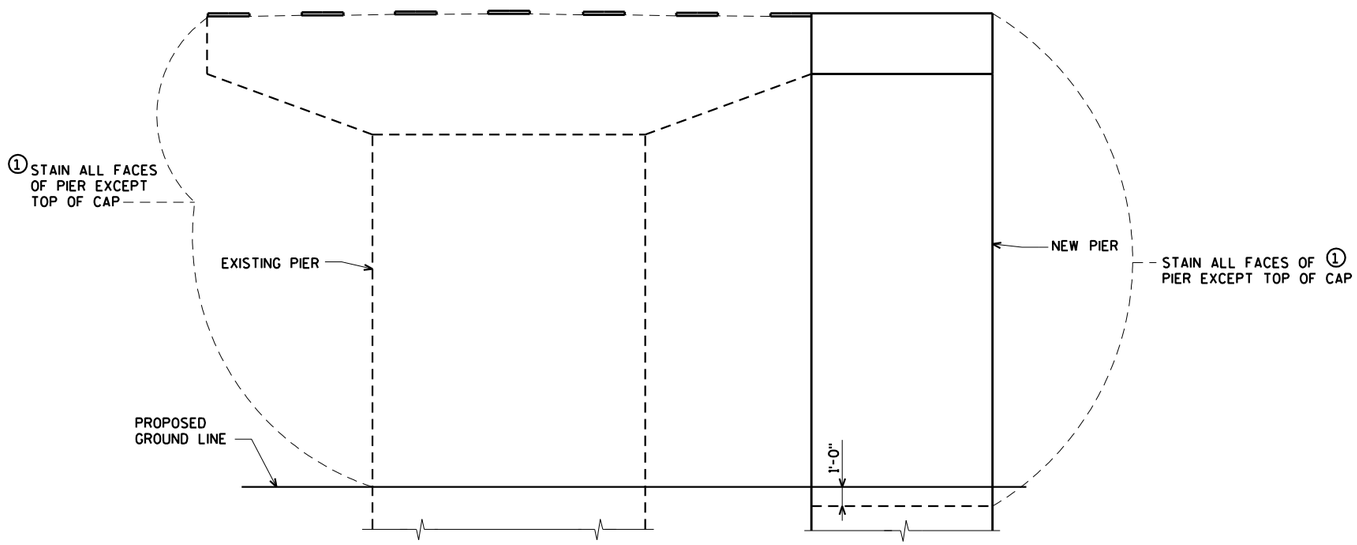
ABUTMENT WINGWALLS



SUPERSTRUCTURE
(NORTH SIDE)



SUPERSTRUCTURE
(SOUTH SIDE)



PIERS

1 FEDERAL STANDARD COLOR NUMBER 36424 (MEDIUM GRAY).

2 FEDERAL STANDARD COLOR NUMBER 30372 (SAND).
NOTE: APPLY TO FLAT SURFACE ONLY (NOT BEVELS).

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STRUCTURE B-37-140

DRAWN BY CJM | PLANS CK'D. DNS

ARCHITECTURAL TREATMENT DETAILS

SHEET 40 OF 40

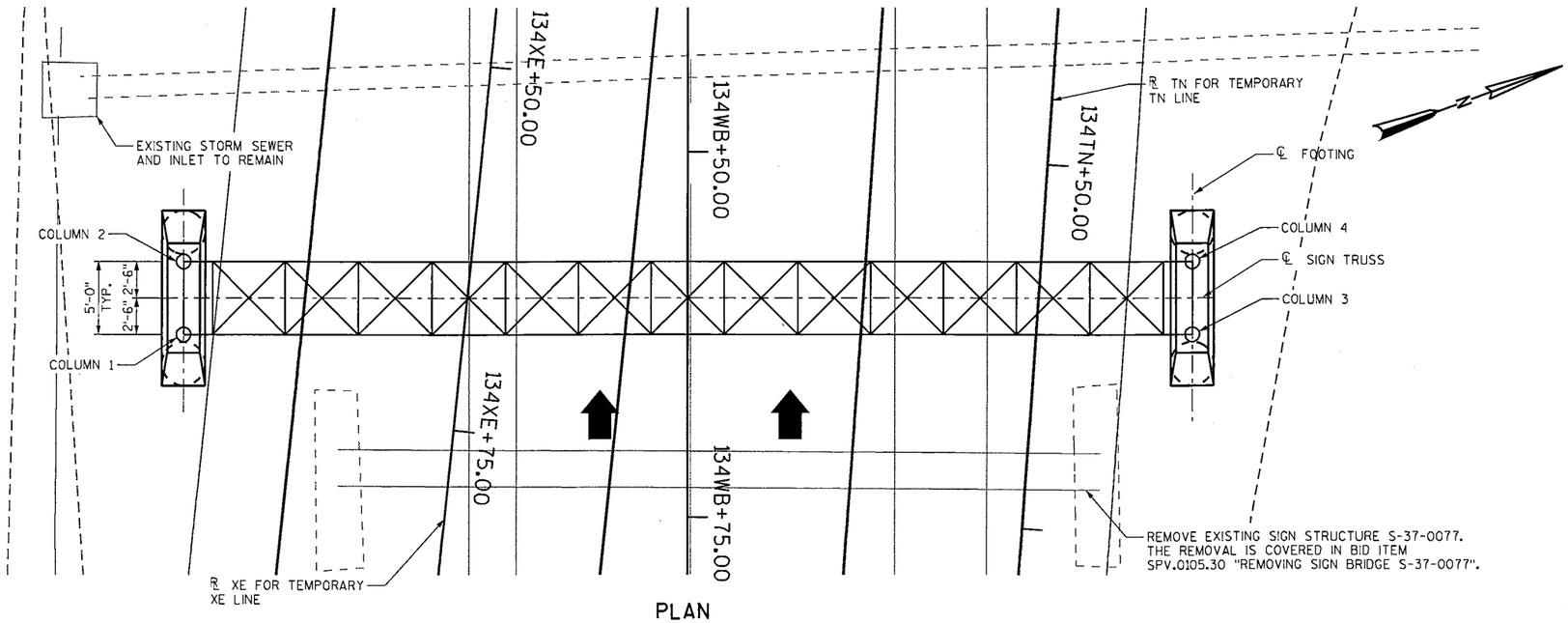
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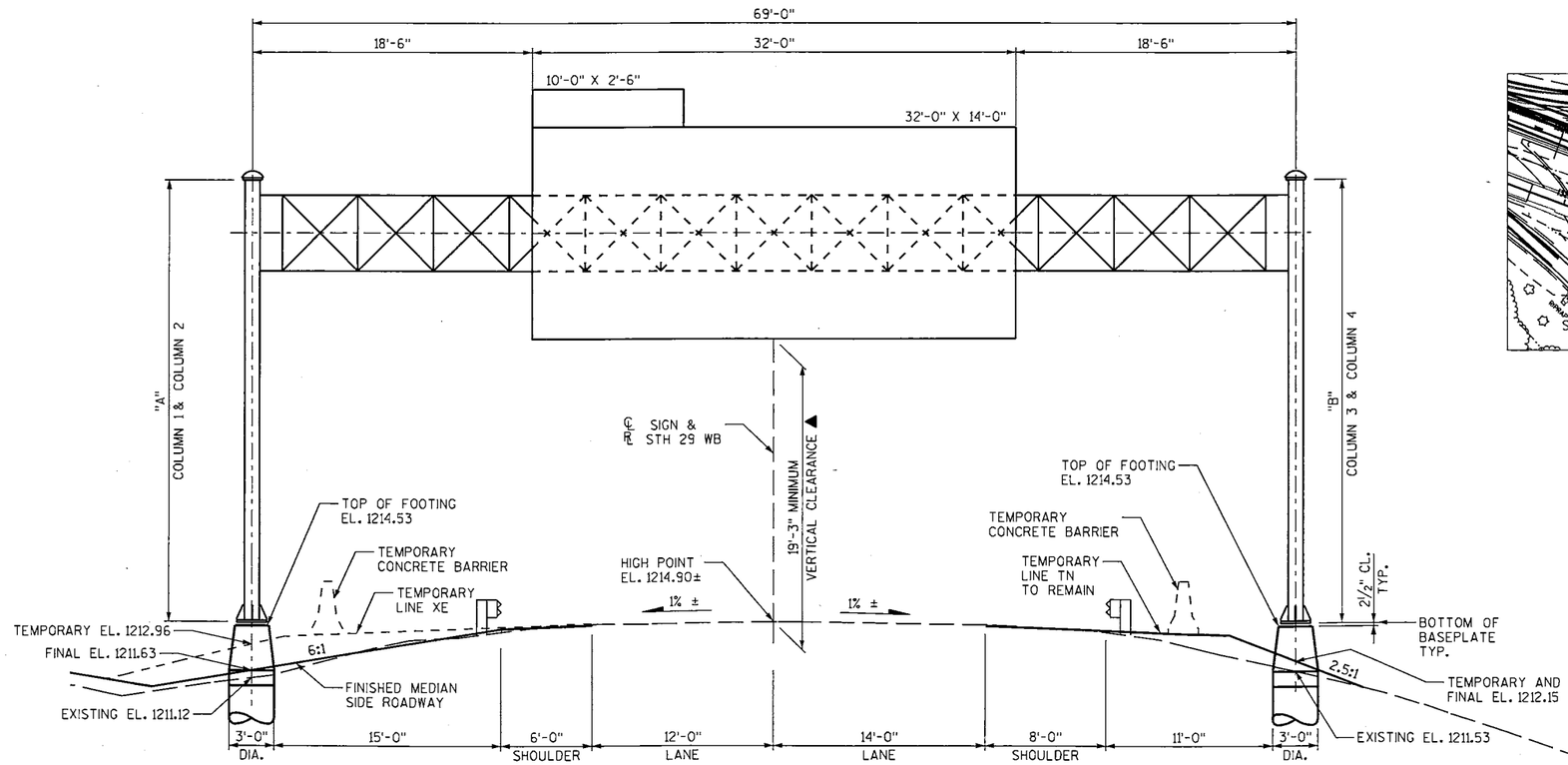
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10/31/2013 PENTABLE:BReau_shd_util.tbl



PLAN

SIGN STRUCTURE S-37-117



ELEVATION

(LOOKING WEST AT FRONT FACE OF SIGNS)
STA. 134WB+60.00

▲ VERTICAL CLEARANCE PROVIDED TO ACCOMODATE FUTURE GRADE RAISE OF STH 29.

STATE PROJECT NUMBER

1053-02-74

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

CENTER SIGNS VERTICALLY ON TRUSS.

ELEVATIONS ARE IN FEET UNLESS OTHERWISE SHOWN OR NOTED.

ALTERNATE DESIGNS ARE NOT ALLOWED.

HANDHOLES ARE NOT REQUIRED.

EXACT LOCATION OF SIGN BRIDGE SHALL BE DETERMINED BY THE REGION TRAFFIC ENGINEER.

DESIGN DATA

DESIGN SIGN AREA = 780 SF
MAX. SIGN DEPTH = 14'-0" (TYPE I SIGN)

DEAD LOAD - WT. OF SIGN AND SUPPORTING STRUCTURE.
ICE LOAD - 3 PSF TO 1 FACE OF SIGN & AROUND SURFACE OF MEMBERS.
WIND VELOCITY - 90 MPH (3-SECOND GUST SPEED) TO SIGN AREA & EXPOSED MEMBERS.

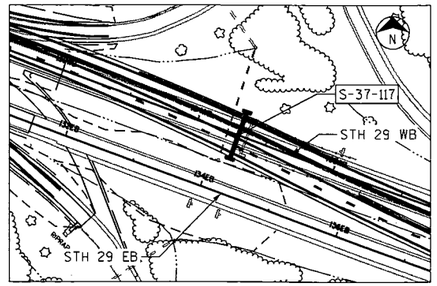
WIND COMPONENTS	NORMAL	TRANSVERSE
COMBINATION 1	1.0	0.2
COMBINATION 2	0.6	0.3

GROUP LOADS	% OF ALLOWABLE STRESS
1. DEAD	100
2. DEAD + WIND	133
3. DEAD + ICE + ½ (WIND*)	133

* MIN. VALUE OF 25 PSF FOR GROUP 3.

TOTAL ESTIMATED QUANTITIES

ITEM NO.	BID ITEMS	UNIT	TOTAL
636.0100	SIGN SUPPORTS CONCRETE MASONRY	CY	26
636.1000	SIGN SUPPORTS STEEL REINFORCEMENT HS	LB	3,240
641.6600	SIGN BRIDGE S-37-117	LS	1
SPV.0105.30	REMOVING SIGN BRIDGE S-37-0077	LS	1



LOCATION MAP

LIST OF DRAWINGS

1. GENERAL PLAN AND ELEVATION
2. 4-CHORD GALVANIZED STEEL SIGN BRIDGE
3. 4-CHORD SIGN BRIDGE DETAILS
4. SIGN BRIDGE TRUSS FOOTING
5. SUBSURFACE EXPLORATION

WISCONSIN
YOON-MOON CHUN
E-39076
WHITEFISH BAY
WIS.
PROFESSIONAL ENGINEER
11-4-2013

STRUCTURES DESIGN CONTACTS

BRIDGE OFFICE:
BILL DREHER, P.E. (608) 266-8489
CONSULTANT:
YOONMOON CHUN, P.E. (262) 821-1171

NO.	DATE	REVISION	BY

KSA K. Singh & Associates, Inc.
Engineers, Scientists and Environmental Consultants

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher KAR 11/05/13
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE S-37-117

STH 29 WB

COUNTY MARATHON
~~TOWN/CITY~~/VILLAGE ROTHSCHILD

DESIGN SPEC. AASHTO STANDARD SPECIFICATIONS

DESIGNED BY	NA	DESIGN CK'D.	YC	DRAWN BY	NA	PLANS CK'D.	YC

GENERAL PLAN AND ELEVATION

SHEET 1 OF 5
536

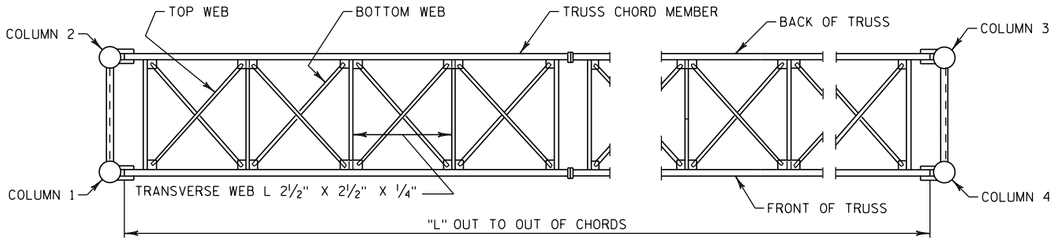
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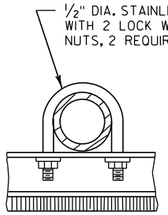
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STATE PROJECT NUMBER

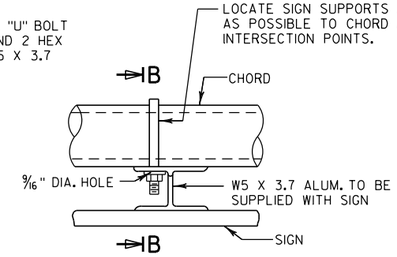
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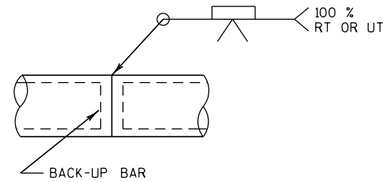
PLAN



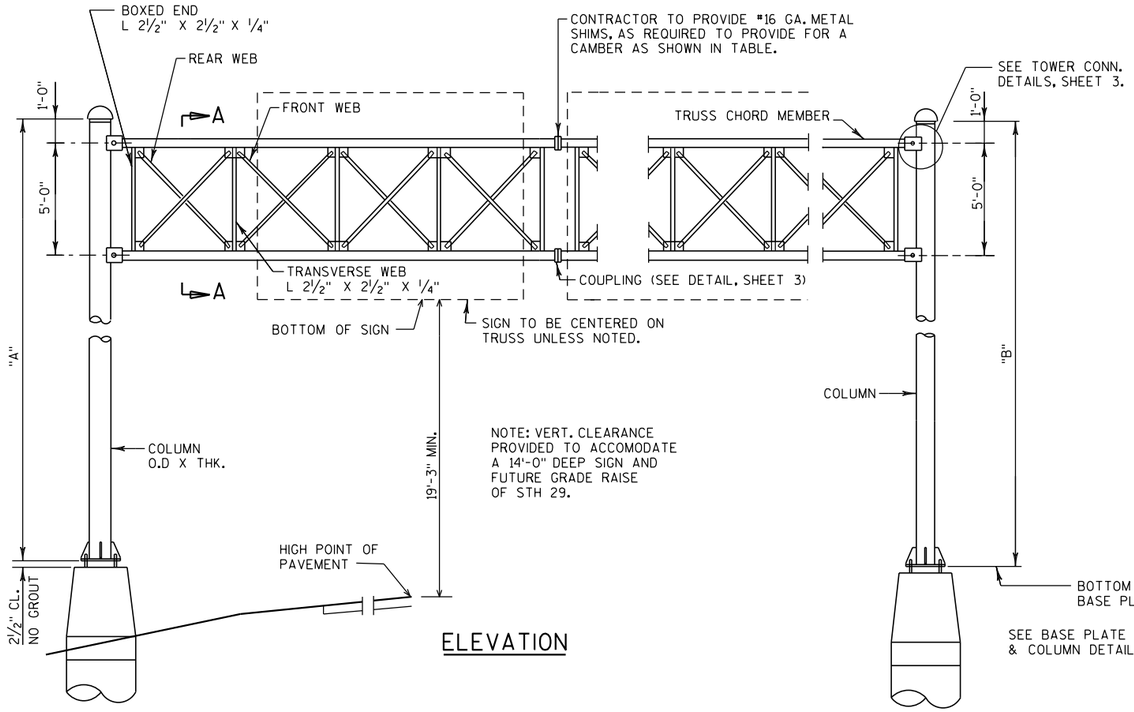
SECTION B



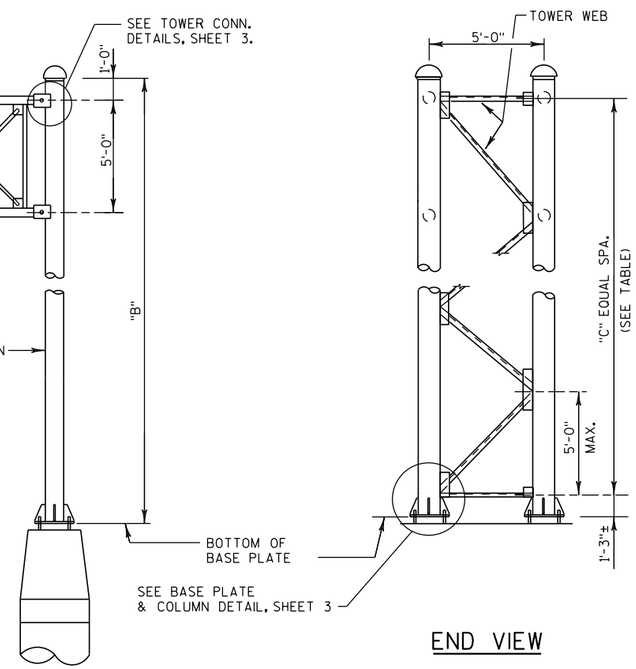
TYPICAL SIGN CONNECTION



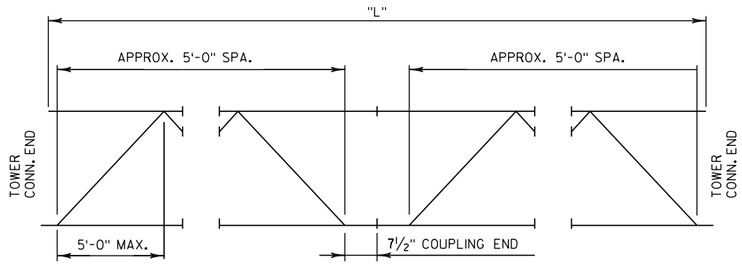
CHORD SPLICE



ELEVATION

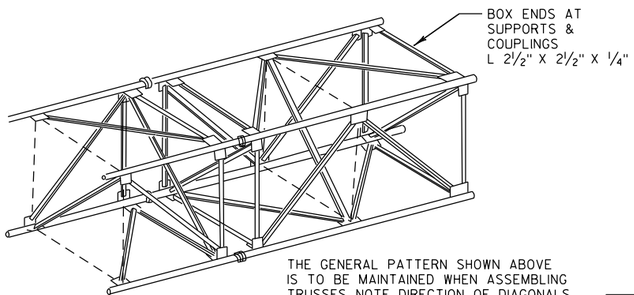


END VIEW



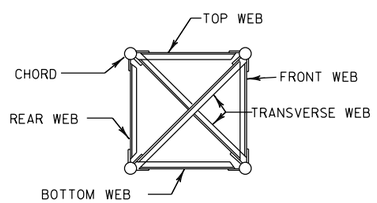
TRUSS ARRANGEMENT

FABRICATOR MAY MAKE TRUSSES ANY LENGTH KEEPING A SECTION A MINIMUM OF 20'-0" & A MULTPLE OF 5'-0". CHORD FIELD SPLICES SHALL BE MADE WITH COUPLINGS. CHORD SHOP SPLICE SHALL BE THE WELDED SPLICE SHOWN ABOVE.



THE GENERAL PATTERN SHOWN ABOVE IS TO BE MAINTAINED WHEN ASSEMBLING TRUSSES. NOTE DIRECTION OF DIAGONALS AT JOINTS.

TYPICAL TRUSS SECTION



SECTION A

STRUCTURE	A	B	C	CHORD O.D. X THK.	TOP & BOTTOM WEB	FRONT & REAR WEB	COUPLING PLATE "D1" & "T"	BOLT CIRCLE DIA. "D2"	NO. OF BOLTS IN COUPLING	CAMBER	COLUMN O.D. X THK.	TOWER WEBS	"L"
S-37-117	29'-11"	29'-11"	6	4.50"X0.237"	L3"X3"X¼"	L3"X3"X¼"	9½" & 1"	7"	6	1⅛"	10.75"X0.365"	L4"X4"X⅜"	67'-10¼"

NOTES

DRAWINGS SHALL NOT BE SCALED.

STEEL COLUMN PIPE SHALL BE API SPEC. 5L GRADE X42 Fy = 42,000 PSI.
ALL STEEL PIPE MEMBERS OF TRUSS SHALL BE API SPEC. 5L GRADE X42 Fy = 42,000 PSI.
PLATES, BARS, STRUCTURAL ANGLES SHALL BE ASTM A709 GRADE 36 Fy = 36,000 PSI.
ALL STRUCTURAL STEEL MEMBERS SHALL BE GALVANIZED.

ALL BOLTED CONNECTIONS SHALL BE MADE WITH ¾" DIA. A325 BOLTS, GALVANIZED ASTM A153, CLASS C.

WELDED CONNECTIONS CAN BE USED IN LIEU OF BOLTED CONNECTIONS, IF UNIT CAN BE GALVANIZED IN ONE PIECE.

STEEL ANCHOR BOLTS SHALL BE AASHTO M314-90 GRADE 55. Fy = 55,000 PSI.

SIGNS OR BLANKS SHALL BE INSTALLED ON TRUSS AT TIME OF ERECTION. BLANKS SHALL BE ¼ THE LENGTH OF THE BRIDGE, 2'-0" DEEPER THAN C TO C OF CHORDS & SHALL BE CENTERED ON THE BRIDGE. SIGNS SHALL BE AS DESIGNATED IN PLANS.

THE UPPER 12" ANCHOR BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED IN ACCORDANCE WITH THE AASHTO SPECIFICATION AS STATED IN SECTION 641. OF THE WISDOT STANDARD SPECIFICATIONS.

WELD TEST AS PER AWS D1.1.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE S-37-117

DRAWN BY NA | PLANS CK'D. YC

4-CHORD GALVANIZED STEEL SIGN BRIDGE

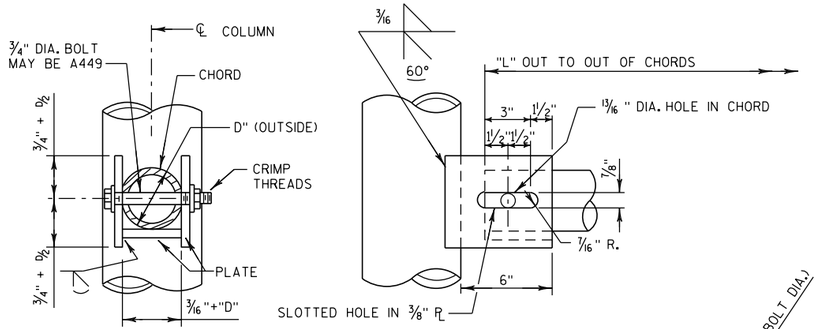
SHEET 2 OF 5
537

8

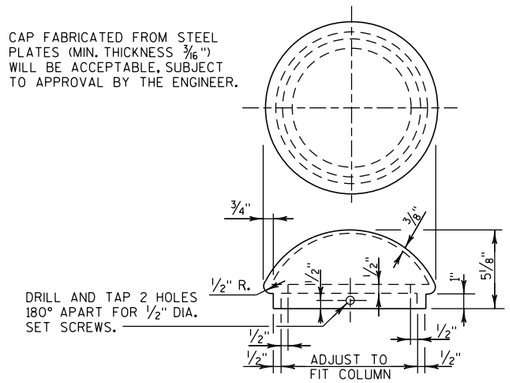
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STATE PROJECT NUMBER

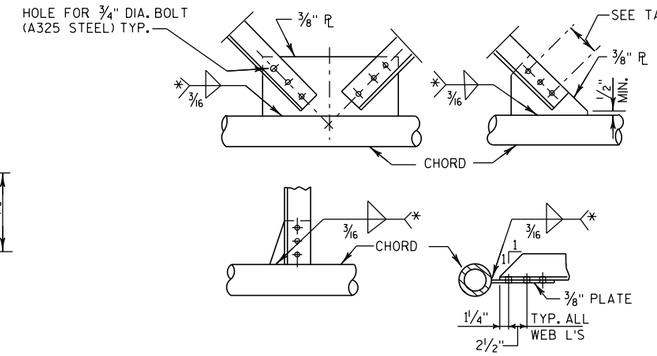
1053-02-74



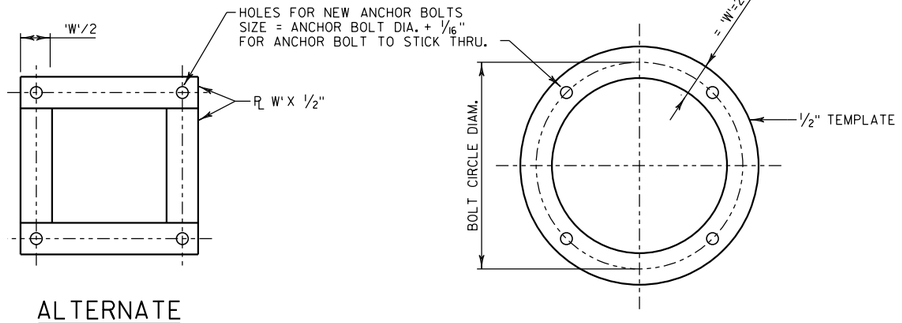
TOWER CONNECTION DETAIL



TOWER CAP DETAIL

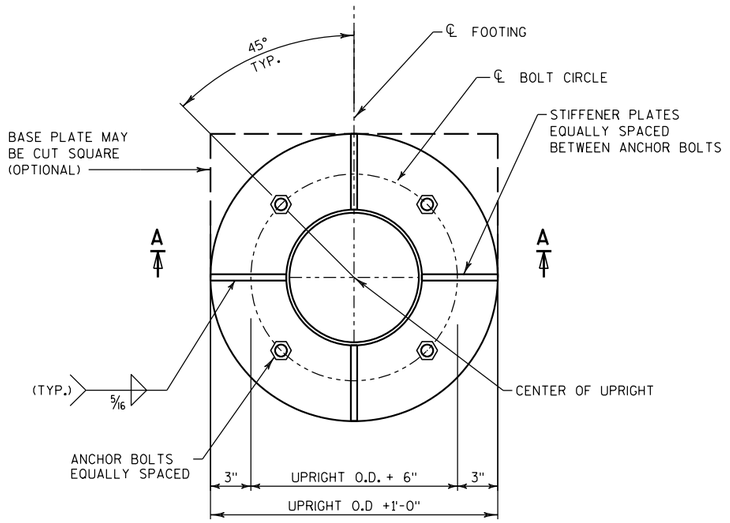


TYPICAL TRUSS CONNECTION DETAILS



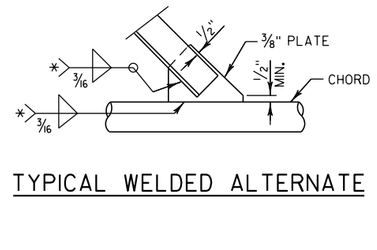
ALTERNATE TEMPLATE PLAN

TEMPLATE PLAN



PLAN VIEW

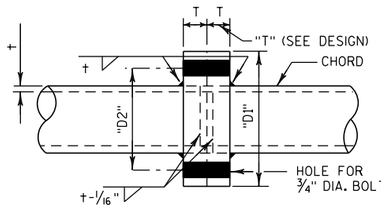
(BASE PLATE)



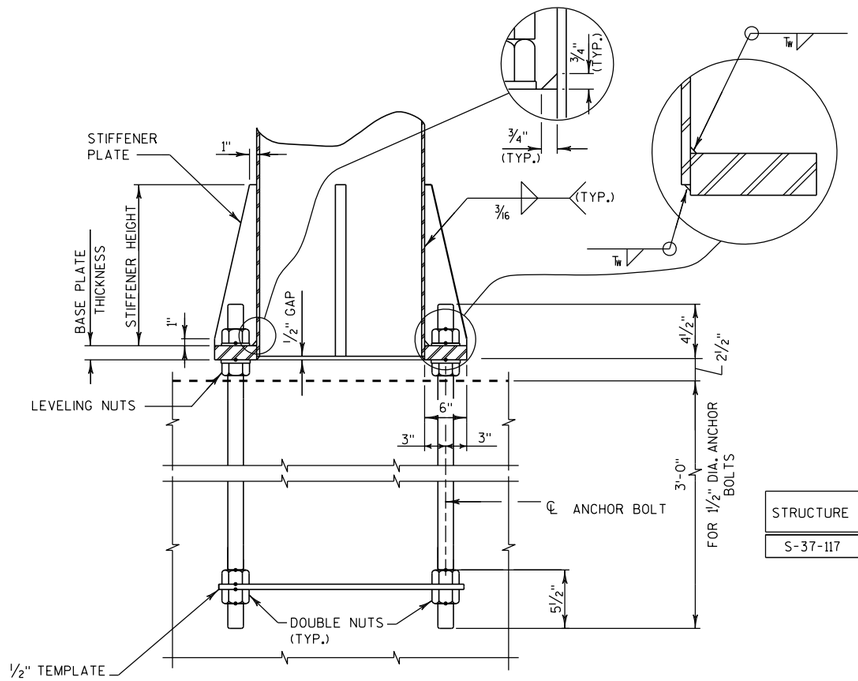
TYPICAL WELDED ALTERNATE

*ANGLE	WELD LENGTH	NO. OF BOLTS
● 2½"x2½"x¼"	11"	3
3"x3"x3/16"	10"	3
3"x3"x¼"	13"	4
3"x3"x5/16"	16½"	5
3"x3"x⅜"	19½"	6
4"x4"x¼"	18"	5
4"x4"x5/16"	22"	6
4"x4"x⅜"	26"	8
4"x4"x7/16"	30"	9
4"x4"x½"	34"	10

● ONLY USED FOR BOXED END AND TRANSVERSE BRACING.



COUPLING DETAIL



SECTION A-A

STRUCTURE	COLUMN O.D. X THK.	ANCHOR BOLTS DIAMETER	BASE PLATE THICKNESS (IN.)	STIFFENER PLATE THICKNESS (IN.)	STIFFENER PLATE HEIGHT (IN.)	TW (IN.)
S-37-117	10.75"X0.365"	1½"	1½"	½"	10"	5/16"

NOTE:

PRIOR TO INSTALLATION, ANCHOR BOLTS SHALL BE RIGIDLY HELD IN POSITION DURING CONCRETE PLACEMENT USING STEEL ANCHOR PLATE AND TOP TEMPLATE. REMOVE TOP TEMPLATE (NOT SHOWN AFTER CONCRETE SETS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE S-37-117

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4-CHORD SIGN BRIDGE DETAILS

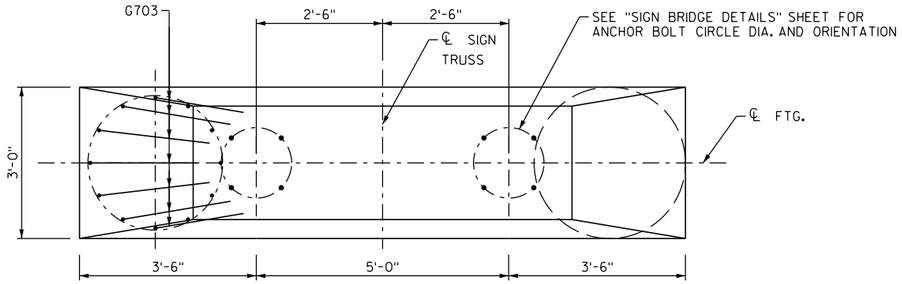
SHEET 3 OF 5
538

8

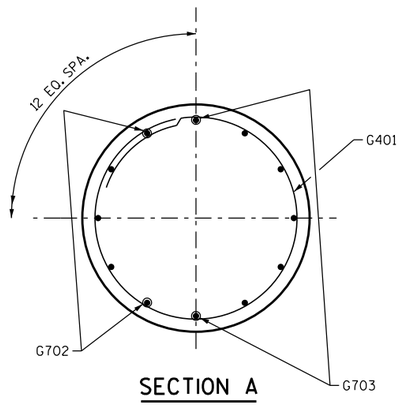
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STATE PROJECT NUMBER

1053-02-74



PLAN



SECTION A

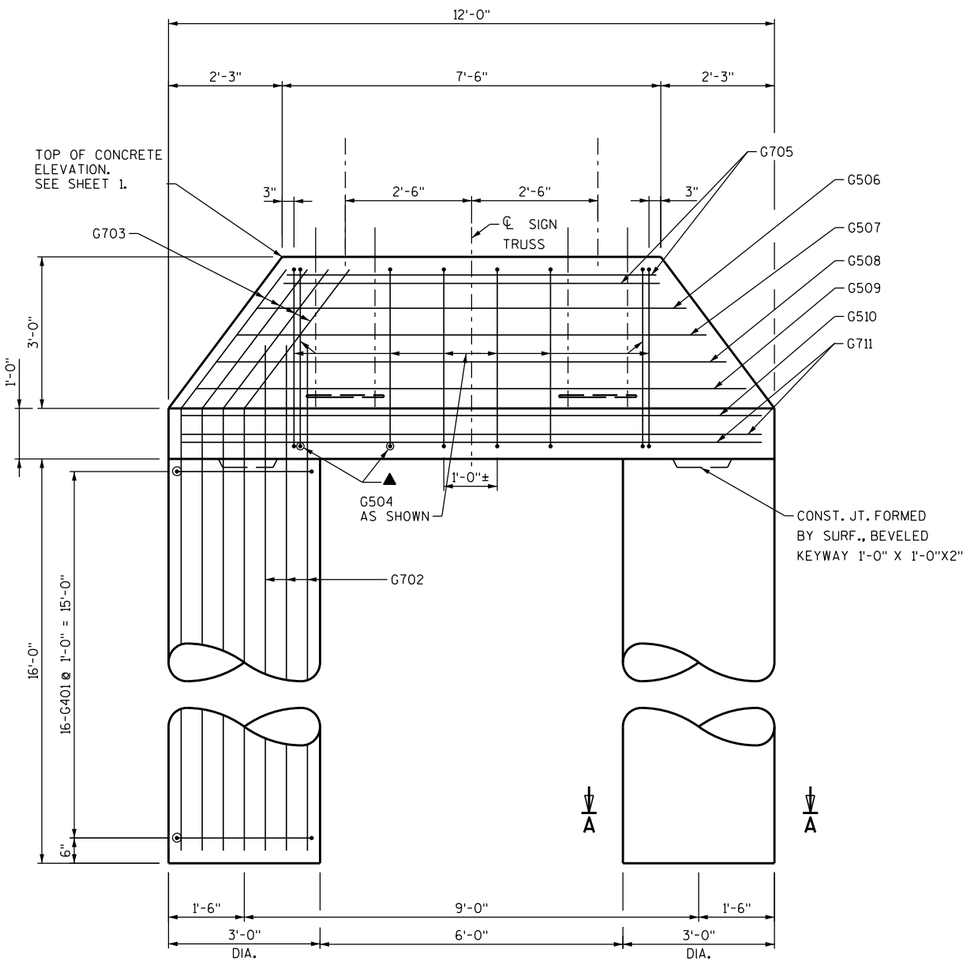
BILL OF BARS

THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.
BAR DIMENSIONS ARE OUT TO OUT OF BAR.

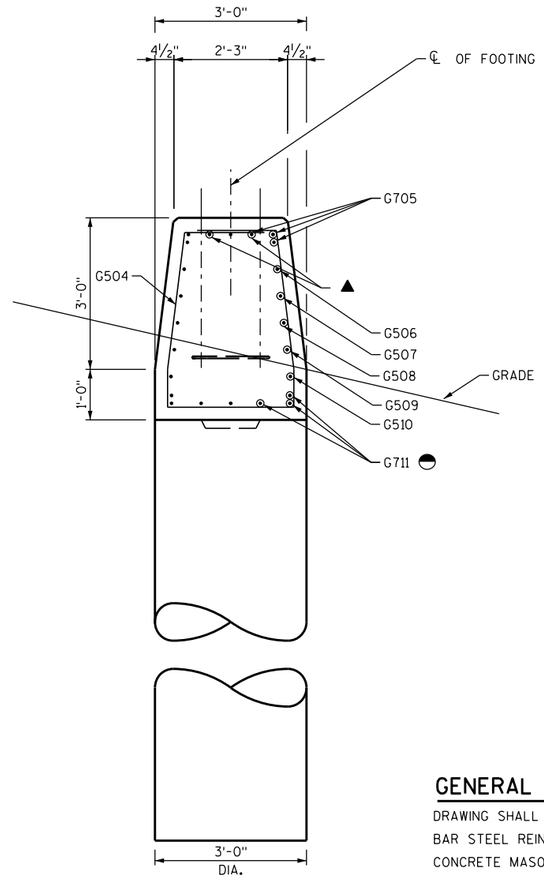
BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
G401		32	8'- 11"	X		FOOTING-HOOPS
G702		10	18'- 0"			FOOTING-VERTICAL
G703		14	20'- 2"	X		FOOTING-VERTICAL
G504		8	12'- 5"	X		FOOTING-STIRRUPS
G705		7	7'- 4"			FOOTING-HORIZONTAL
G506		2	8'- 4"			FOOTING-HORIZONTAL
G507		2	9'- 2"			FOOTING-HORIZONTAL
G508		2	9'- 11"			FOOTING-HORIZONTAL
G509		2	10'- 9"			FOOTING-HORIZONTAL
G510		2	11'- 6"			FOOTING -HORIZONTAL
G711		7	11'- 6"			FOOTING -HORIZONTAL

* LENGTH SHOWN FOR BAR IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.

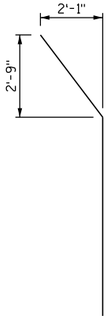
QUANTITY OF BARS IN TABLE IS FOR ONE FOOTING.



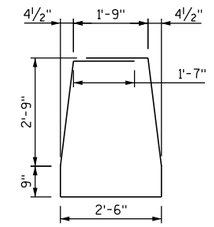
ELEVATION
(ONE FTG.)



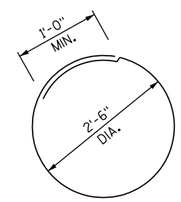
END VIEW



G703



G504



G401

SOIL DESIGN PARAMETERS

FRICTION ANGLE = 32°
SOIL UNIT WEIGHT = 130

FOUNDATION DATA

ALLOWABLE SOIL BEARING PRESSURE = 16,000 PSF
ALLOWABLE SKIN FRICTION (COMPRESSION) = 384 PSF
ALLOWABLE SKIN FRICTION (UPLIFT) = 257 PSF

ESTIMATED QUANTITIES (1 FTG)

SIGN SUPPORT CONCRETE MASONRY---------- 13 CY
SIGN SUPPORT STEEL REINFORCEMENT HS ----------1620 LB

GENERAL NOTES

DRAWING SHALL NOT BE SCALED.
BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 3" CL.
CONCRETE MASONRY---------- fc'= 3,500 PSI
BAR STEEL REINF. -----GRADE 60 fy = 60,000 PSI

◓ SPACE TO MISS VERT. SHAFT REINF.
▲ SPACE TO MISS ANCHOR BOLTS. TIE IN PLACE AFTER ANCHOR BOLT ASSEMBLY IS LOCATED.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE S-37-117

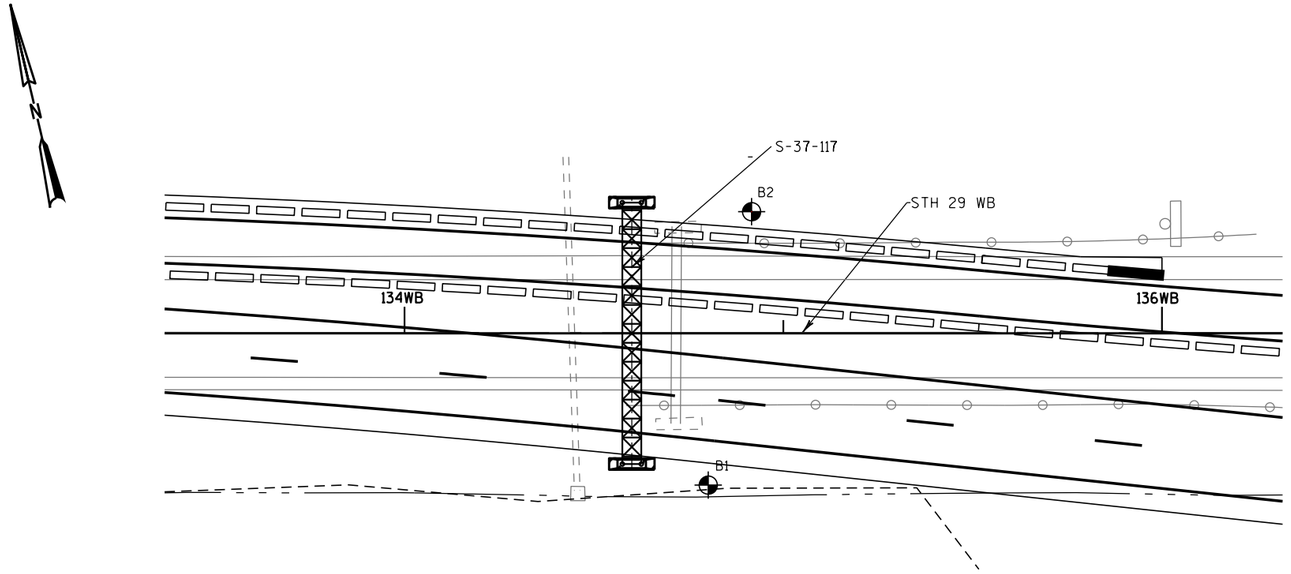
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SIGN BRIDGE TRUSS FOOTING

SHEET 4 OF 5
539

8

8



NOTE:

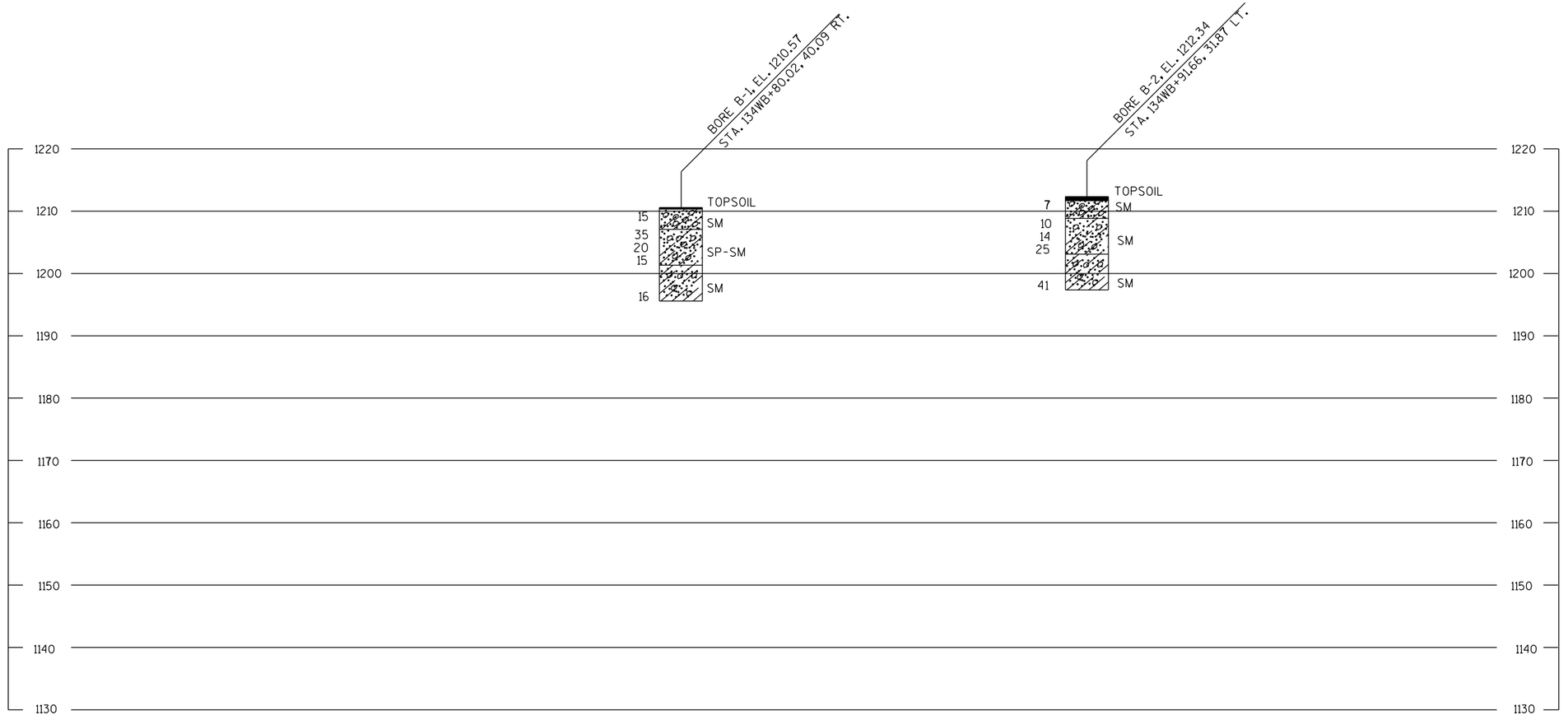
THE SUBSURFACE INFORMATION PRESENTED HEREIN IS AN ABBREVIATED VERSION OF THE INFORMATION PRESENTED IN THE GEOTECHNICAL ENGINEERING REPORT. REVIEW THE APPROPRIATE GEOTECHNICAL REPORT AND SOIL BORING LOGS FOR ADDITIONAL SUBSURFACE INFORMATION.

BORING STATIONS AND OFFSETS ARE BASED ON STH 29 WB ℄.

⊕ DENOTES SOIL BORING LOCATION

SOIL BORINGS COMPLETED BY:
NUMMELIN TESTING SERVICES, INC.
STEVENS POINT, WISCONSIN

SOIL BORING TAKEN:
JULY 23, 2013 - BORING B1
JULY 23, 2013 - BORING B2



STATE PROJECT NUMBER

1053-02-74

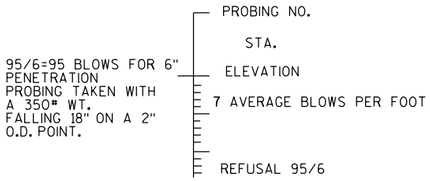
ABBREVIATIONS

F — FINE M — MEDIUM C — COARSE
WS — WEATHERED SO — SOUND

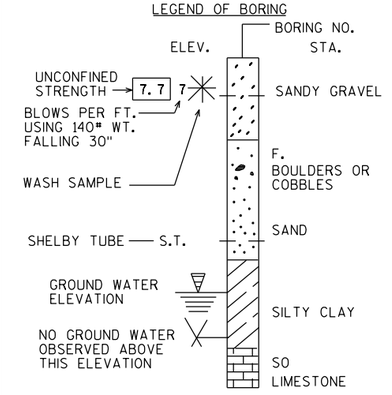
MATERIAL SYMBOLS

TOPSOIL, SILT, SANDSTONE
SAND, PEAT, LIMESTONE
GRAVEL, CLAY, IGNEOUS ROCK

LEGEND OF PROBING



LEGEND OF BORING



UNLESS OTHERWISE SPECIFIED, THE BLOWS PER FOOT AT THE LOCATIONS INDICATED ARE BASED ON DRIVING A 2" O.D. X 1.4" I.D. SPLIT SPOON SAMPLER WITH A 140# HAMMER HAVING A FREE FALL OF 30". THE BLOW COUNT IS TAKEN IN UNDISTURBED SOIL IMMEDIATELY BELOW A CASED OR OPEN HOLE ELIMINATING SIDE FRICTION ON THE DRIVE PIPE.

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

TO OBTAIN RELATIVE DATA CONCERNING THE CHARACTER OF MATERIAL IN AND UPON WHICH THE FOUNDATION MIGHT BE BUILT, BORINGS AND/OR SOUNDINGS WERE MADE AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING. THE DATA PRESENTED HEREIN REPRESENTS THE FINDINGS OF THE SUBSURFACE EXPLORATIONS MADE. HOWEVER, BECAUSE THE DEPTHS INVESTIGATED ARE LIMITED AND THE AREA OF THE BORINGS AND/OR SOUNDINGS IS VERY SMALL IN RELATION TO THE ENTIRE AREA, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT CONDITIONS BELOW THE DEPTHS INVESTIGATED OR THAT THE CLASSIFICATION OF MATERIAL ENCOUNTERED IN THESE INVESTIGATIONS IS NECESSARILY TYPICAL OF THE ENTIRE SITE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE S-37-117

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SUBSURFACE EXPLORATION

SHEET 5 OF 5
540

8

8

EARTHWORK DATA - STH 29 EASTBOUND

STATION	COMMON SF	FILL SF	COMMON CY	FILL CY	MASS HAUL
108+50.00	82.33	0.00	0.00	0.00	0.00
109+00.00	77.99	0.00	148.44	0.00	148.44
109+50.00	74.70	2.83	141.38	3.28	286.55
110+00.00	66.70	6.16	130.93	10.41	407.07
110+50.00	53.09	10.53	110.92	19.32	498.67
111+00.00	42.02	15.06	88.06	29.62	557.12
111+50.00	47.14	12.33	82.56	31.70	607.97
112+00.00	0.00	0.00	43.65	14.27	637.35

EARTHWORK DATA - STH 29 EASTBOUND

STATION	COMMON SF	FILL SF	COMMON CY	FILL CY	MASS HAUL
119+50.00	0.00	0.00	0.00	0.00	0.00
120+00.00	56.72	85.45	52.52	98.90	-46.38
120+50.00	49.05	64.60	97.94	173.67	-122.12
121+00.00	47.39	54.44	89.30	137.78	-170.60
121+50.00	41.22	74.62	82.05	149.38	-237.93
122+00.00	39.34	99.41	74.59	201.42	-364.76
122+50.00	40.09	119.07	73.55	252.87	-544.08
123+00.00	34.86	26.92	69.40	168.97	-643.65
123+50.00	0.00	0.00	32.28	31.16	-642.53

EARTHWORK DATA - A RAMP

STATION	COMMON SF	FILL SF	COMMON CY	FILL CY	MASS HAUL
129+50.00	13.27	202.51	0.00	0.00	0.00
130+00.00	23.89	139.29	34.41	395.60	-361.19
130+50.00	40.30	0.00	59.44	161.22	-462.97
131+00.00	63.56	0.00	96.17	0.00	-366.81
131+50.00	63.27	0.00	117.44	0.00	-249.37
132+00.00	72.70	0.36	125.90	0.42	-123.89
132+50.00	64.15	0.00	126.71	0.42	2.41
133+00.00	0.00	0.00	59.40	0.00	61.80

EARTHWORK DATA - STH 29 EASTBOUND

STATION	COMMON SF	FILL SF	COMMON CY	FILL CY	MASS HAUL
126+50.00	0.00	0.00	0.00	0.00	0.00
127+00.00	11.73	422.19	10.86	488.65	-477.78
127+50.00	10.05	463.28	20.17	1024.85	-1482.47
128+00.00	11.82	455.33	20.25	1063.21	-2525.42
128+50.00	13.76	398.54	23.69	988.28	-3490.01
129+00.00	21.31	296.06	32.47	803.94	-4261.48
129+50.00	15.17	11.17	33.78	355.59	-4583.29
130+00.00	17.28	6.35	30.05	20.28	-4573.52
130+50.00	19.30	5.62	33.87	13.85	-4553.50
131+00.00	22.45	4.69	38.66	11.93	-4526.78
131+50.00	40.91	1.04	58.67	6.63	-4474.75
132+00.00	44.82	0.00	79.38	1.20	-4396.57
132+50.00	42.50	0.00	80.85	0.00	-4315.72
133+00.00	44.70	43.34	80.74	50.16	-4285.14
133+50.00	50.33	90.01	87.99	154.34	-4351.49
134+00.00	51.63	91.77	94.41	210.39	-4467.47
134+50.00	57.77	42.87	101.30	155.83	-4522.01
135+00.00	66.01	23.91	114.61	77.29	-4484.69
135+50.00	0.00	0.00	61.12	27.67	-4451.25

EARTHWORK DATA - D RAMP

STATION	COMMON SF	FILL SF	COMMON CY	FILL CY	MASS HAUL
129+00.00	45.70	171.93	0.00	0.00	0.00
129+50.00	48.75	225.69	87.45	460.21	-372.75
130+00.00	47.16	383.89	88.81	705.53	-989.48
130+50.00	52.53	374.06	92.31	877.26	-1774.43
131+00.00	60.06	340.48	104.25	827.01	-2497.20
131+50.00	73.72	261.18	123.87	696.37	-3069.69
132+00.00	66.91	2.69	130.21	305.41	-3244.88
132+50.00	63.18	0.00	120.45	3.11	-3127.54
133+00.00	0.00	0.00	58.50	0.00	-3069.04

EARTHWORK DATA - STH 29 WESTBOUND (STAGES 3/4) (TS/TN)

STATION	COMMON SF	FILL SF	COMMON CY	FILL CY	MASS HAUL
108+00.00	86.39	43.21	0.00	0.00	0.00
108+50.00	79.43	51.58	153.54	109.71	43.83
109+00.00	71.98	63.72	140.19	133.45	50.57
109+50.00	65.29	75.82	127.10	161.50	16.17
110+00.00	57.08	100.95	113.31	204.59	-75.12
110+50.00	48.62	113.58	97.87	248.30	-225.55
111+00.00	41.73	134.11	83.66	286.68	-428.57
111+50.00	43.28	163.25	78.71	344.17	-694.02
112+00.00	41.41	126.15	78.42	334.95	-950.56

EARTHWORK DATA - STH 29 WESTBOUND (STAGES 3/4) (TS/TN)

STATION	COMMON SF	FILL SF	COMMON CY	FILL CY	MASS HAUL
120+00.00	0.00	0.00	0.00	0.00	0.00
120+50.00	48.58	478.68	44.98	554.03	-509.05
121+00.00	50.74	416.56	91.96	1036.16	-1453.24
121+50.00	53.92	341.53	96.91	877.42	-2233.75
122+00.00	53.92	315.90	99.85	760.91	-2894.81
122+50.00	52.56	269.85	98.59	677.95	-3474.17
123+00.00	55.72	268.09	100.26	622.62	-3996.53
123+50.00	56.26	273.68	103.69	627.05	-4519.89
124+00.00	22.77	0.06	73.18	316.83	-4763.55

EARTHWORK DATA - STH 29 WESTBOUND (STAGES 3/4) (TS/TN)

STATION	COMMON SF	FILL SF	COMMON CY	FILL CY	MASS HAUL
127+50.00	21.56	0.00	0.00	0.00	0.00
128+00.00	54.05	201.24	70.01	232.92	-162.91
128+50.00	61.97	137.62	107.43	392.20	-447.68
129+00.00	36.08	12.44	90.79	173.68	-530.57
129+50.00	41.21	9.47	71.56	25.36	-484.37
130+00.00	45.02	4.16	79.84	15.78	-420.30
130+50.00	46.38	2.12	84.63	7.27	-342.94
131+00.00	49.39	1.84	88.68	4.58	-258.85
131+50.00	52.82	0.10	94.64	2.25	-166.45
132+00.00	57.97	0.00	102.58	0.12	-63.99

EARTHWORK DATA - SUNRISE DRIVE

STATION	COMMON SF	FILL SF	COMMON CY	FILL CY	MASS HAUL
15+00.00	0.00	0.00	0.00	0.00	0.00
15+50.00	3.89	61.36	3.60	71.02	-67.42
16+00.00	2.80	145.21	6.19	239.09	-300.31
16+50.00	2.78	223.05	5.17	426.23	-721.37
17+00.00	28.40	338.73	28.87	650.21	-1342.71
17+50.00	21.56	147.21	46.26	562.43	-1858.88
18+00.00	10.59	222.95	29.77	428.43	-2257.53
18+50.00	0.57	203.89	10.33	494.03	-2741.23
19+00.00	0.00	211.55	0.53	480.83	-3221.53
19+50.00	0.00	0.01	0.00	244.86	-3466.40

EARTHWORK DATA - SUNRISE DRIVE

STATION	COMMON SF	FILL SF	COMMON CY	FILL CY	MASS HAUL
21+50.00	0.00	0.01	0.00	0.00	0.00
22+00.00	14.45	0.00	13.38	0.01	13.37
22+50.00	30.79	93.40	41.89	108.10	-52.84
23+00.00	11.09	229.46	38.78	373.68	-387.75
23+50.00	10.27	261.13	19.78	567.81	-935.78
24+00.00	10.55	232.04	19.28	570.80	-1487.30
24+50.00	10.38	179.57	19.38	476.40	-1944.32
25+00.00	11.23	160.36	20.01	393.44	-2317.75
25+50.00	13.11	145.44	22.54	353.94	-2649.15
26+00.00	11.95	141.77	23.20	332.42	-2958.37
26+50.00	11.62	129.39	21.82	313.84	-3250.38
27+00.00	10.43	114.40	20.42	282.16	-3512.13
27+50.00	10.01	93.94	18.93	241.13	-3734.34
28+00.00	10.00	164.83	18.53	299.50	-4015.31
28+50.00	5.41	91.72	14.27	296.93	-4297.98
29+00.00	6.02	64.63	10.58	180.96	-4468.36
29+50.00	6.90	19.41	11.96	97.27	-4553.66

EARTHWORK DATA - SHARED-USE PATH

STATION	COMMON SF	FILL SF	COMMON CY	FILL CY	MASS HAUL
15+25.00	6.53	1.33	0.00	0.00	0.00
15+50.00	8.89	1.26	7.14	1.50	5.64
15+75.00	9.77	0.00	8.64	0.73	13.55
16+00.00	9.25	0.00	8.81	0.00	22.36
16+25.00	11.04	0.00	9.39	0.00	31.75
16+50.00	10.55	0.00	10.00	0.00	41.74
16+75.00	11.06	0.00	10.00	0.00	51.75
17+00.00	10.60	0.00	10.03	0.00	61.78
17+25.00	10.64	0.00	9.83	0.00	71.61
17+50.00	10.84	0.00	9.94	0.00	81.55
17+75.00	10.33	0.00	9.80	0.00	91.36
18+00.00	10.34	0.00	9.57	0.00	100.92
18+25.00	10.77	0.00	9.77	0.00	110.70
18+50.00	7.29	0.00	8.36	0.00	119.06
18+75.00	7.51	0.00	6.85	0.00	125.91
19+00.00	10.00	0.00	8.11	0.00	134.02
19+25.00	10.10	0.00	9.31	0.00	143.32
19+50.00	10.14	0.15	9.37	0.09	152.61
19+75.00	8.93	0.00	8.83	0.09	161.35
20+00.00	10.76	2.91	9.12	1.68	168.78
20+25.00	10.80	3.50	9.98	3.71	175.05
20+50.00	10.30	4.96	9.77	4.90	179.92
20+75.00	8.68	7.86	8.79	7.42	181.29
21+00.00	10.08	16.08	8.69	13.85	176.12
21+25.00	9.84	3.52	9.22	11.34	174.00
21+50.00	9.19	0.99	8.81	2.61	180.20
21+75.00	9.07	2.81	8.45	2.20	186.46
22+00.00	8.92	4.09	8.33	3.99	190.79
22+25.00	7.95	4.08	7.81	4.73	193.88
22+50.00	8.35	0.93	7.55	2.90	198.52
22+75.00	10.45	0.00	8.70	0.54	206.69
23+00.00	10.72	0.00	9.80	0.00	216.49
23+25.00	10.89	0.00	10.00	0.00	226.49
23+50.00	10.15	0.00	9.74	0.00	236.23
23+75.00	10.18	0.00	9.41	0.00	245.65
24+00.00	10.04	0.00	9.36	0.00	255.01
24+25.00	10.64	0.00	9.57	0.00	264.58
24+50.00	10.72	0.00	9.89	0.00	274.47
24+75.00	10.11	0.00	9.64	0.00	284.11

EARTHWORK DATA - SHARED-USE PATH

STATION	COMMON SF	FILL SF	COMMON CY	FILL CY	MASS HAUL
25+00.00	10.72	0.00	9.64	0.00	293.76
25+25.00	10.82	0.00	9.97	0.00	303.73
25+50.00	10.82	0.00	10.02	0.00	313.75
25+75.00	9.16	0.00	9.25	0.00	323.00
26+00.00	9.06	0.00	8.44	0.00	331.43
26+25.00	8.92	0.00	8.32	0.00	339.76
26+50.00	5.76	0.00	6.80	0.00	346.55
26+75.00	0.00	0.00	2.67	0.00	349.22
27+00.00	0.00	0.00	0.00	0.00	349.22

EARTHWORK DATA
STH 29 WB TEMP WIDENING - WEST END (STAGES 1/3) (WN/TN)

STATION	COMMON SF	FILL SF	COMMON CY	FILL CY	MASS HAUL
82+50.00	8.62	0.00	0.00	0.00	0.00
83+00.00	5.88	0.34	13.43	0.39	13.03
83+50.00	6.10	1.94	11.09	2.64	21.49
84+00.00	7.25	0.27	12.36	2.56	31.29
84+50.00	7.34	1.49	13.51	2.04	42.76
85+00.00	7.35	2.66	13.60	4.80	51.56
85+50.00	7.91	4.57	14.13	8.37	57.32
86+00.00	9.34	4.33	15.97	10.30	62.99
86+50.00	8.72	13.75	16.72	20.93	58.79
87+00.00	9.51	10.70	16.88	28.30	47.37
87+50.00	9.24	4.90	17.36	18.06	46.68
88+00.00	9.82	4.90	17.65	11.34	52.98
88+50.00	8.71	27.52	17.16	37.52	32.62
89+00.00	8.51	31.39	15.94	68.18	-19.62
89+50.00	8.09	37.34	15.37	79.55	-83.80
90+00.00	7.35	37.63	14.30	86.77	-156.28
90+50.00	6.39	39.69	12.72	89.49	-233.04
91+00.00	6.17	32.04	11.63	83.02	-304.44
91+50.00	6.47	24.51	11.70	65.45	-358.18
92+00.00	6.98	17.61	12.45	48.75	-394.48
92+50.00	6.41	8.75	12.40	30.51	-412.59
93+00.00	16.80	0.09	21.49	10.23	-401.33
93+50.00	17.04	0.00	31.33	0.10	-370.10
94+00.00	17.55	0.00	32.03	0.00	-338.07
94+50.00	17.18	0.00	32.16	0.00	-305.92
95+00.00	16.57	0.00	31.25	0.00	-274.67
95+50.00	17.29	0.00	31.35	0.00	-243.31
96+00.00	16.39	0.00	31.19	0.00	-212.13
96+50.00	16.80	0.00	30.73	0.00	-181.40
97+00.00	17.66	0.00	31.91	0.00	-149.49
97+50.00	17.77	0.00	32.81	0.00	-116.69
98+00.00	19.00	0.00	34.05	0.00	-82.64
98+50.00	22.98	0.00	38.87	0.00	-43.77
99+00.00	18.97	0.00	38.84	0.00	-4.93
99+50.00	19.85	0.00	35.94	0.00	31.02
100+00.00	21.49	0.00	38.28	0.00	69.30
100+50.00	19.47	0.99	37.93	1.15	106.08
101+00.00	18.38	3.39	35.05	5.07	136.05
101+50.00	19.41	4.43	34.99	9.05	161.99

EARTHWORK DATA
STH 29 WB TEMP WIDENING - WEST END (STAGES 1/3) (WN/TN)

STATION	COMMON SF	FILL SF	COMMON CY	FILL CY	MASS HAUL
102+00.00	18.44	7.21	35.05	13.47	183.57
102+50.00	18.03	11.33	33.77	21.46	195.88
103+00.00	18.84	17.23	34.14	33.06	196.96
103+50.00	19.20	18.00	35.22	40.78	191.41
104+00.00	22.44	19.57	38.56	43.48	186.48
104+50.00	21.08	24.33	40.30	50.81	175.97
105+00.00	21.46	26.58	39.39	58.92	156.43
105+50.00	21.45	28.25	39.73	63.46	132.70
106+00.00	21.51	26.51	39.78	63.38	109.10
106+50.00	19.80	29.28	38.25	64.57	82.78
107+00.00	19.61	34.44	36.49	73.75	45.52
107+50.00	19.92	37.32	36.60	83.06	-0.94

EARTHWORK DATA - STH 29 TEMP WIDENING EAST END (STAGE 3) (TN)

STATION	COMMON SF	FILL SF	COMMON CY	FILL CY	MASS HAUL
131+00.00	0.00	0.00	0.00	0.00	0.00
131+50.00	20.48	0.00	18.96	0.00	18.96
132+00.00	31.36	0.00	48.00	0.00	66.96
132+50.00	20.85	0.00	48.34	0.00	115.31
133+00.00	19.30	10.28	37.18	11.90	140.58
133+50.00	16.42	29.84	33.07	46.44	127.22
134+00.00	16.25	21.96	30.25	59.95	97.52
134+50.00	16.39	6.06	30.22	32.43	95.31
134+60.00	17.44	2.85	6.26	2.06	99.51
135+00.00	18.32	1.18	26.49	3.73	122.27
135+50.00	18.11	0.00	33.73	1.37	154.64
136+00.00	17.07	0.00	32.57	0.00	187.21
136+50.00	0.00	0.00	15.81	0.00	203.02

EARTHWORK DATA - STH 29 MEDIAN SHLDR WIDENING (STAGE 1B) (TS)

STATION	COMMON SF	FILL SF	COMMON CY	FILL CY	MASS HAUL
110+00.00	16.02	0.00	0.00	0.00	0.00
110+50.00	19.14	0.00	32.56	0.00	32.56
111+00.00	18.02	0.00	34.41	0.00	66.96
111+50.00	23.17	0.00	38.14	0.00	105.10

EARTHWORK DATA - STH 29 MEDIAN SHLDR WIDENING (STAGE 1B) (TS)

STATION	COMMON SF	FILL SF	COMMON CY	FILL CY	MASS HAUL
120+50.00	20.31	0.00	0.00	0.00	0.00
121+00.00	22.97	0.00	40.07	0.00	40.07
121+50.00	23.88	0.00	43.38	0.00	83.45
122+00.00	25.58	0.00	45.80	0.00	129.25
122+50.00	21.51	0.00	43.60	0.00	172.85
123+00.00	18.86	0.00	37.38	0.00	210.23
123+50.00	18.13	0.00	34.25	0.00	244.48

EARTHWORK DATA - STH 29 MEDIAN SHLDR WIDENING (STAGE 1B) (TS)

STATION	COMMON SF	FILL SF	COMMON CY	FILL CY	MASS HAUL
128+00.00	18.60	6.74	0.00	0.00	0.00
128+50.00	18.59	4.97	34.44	13.55	20.88
129+00.00	20.10	2.44	35.82	8.58	48.13
129+50.00	21.54	1.31	38.56	4.34	82.34
130+00.00	22.09	0.00	40.40	1.52	121.23
130+50.00	19.58	0.00	38.58	0.00	159.81
131+00.00	18.44	0.00	35.20	0.00	195.01
131+50.00	18.35	0.00	34.06	0.00	229.08
132+00.00	21.57	0.00	36.96	0.00	266.04
132+50.00	18.00	0.79	36.64	0.91	301.77

EARTHWORK DATA - XE WEST CROSSOVER (STAGE 1)

STATION	COMMON SF	FILL SF	COMMON CY	FILL CY	MASS HAUL
81+00.00	0.00	0.00	0.00	0.00	0.00
81+50.00	8.79	0.00	8.14	0.00	8.14
82+00.00	7.69	0.00	15.26	0.00	23.40
82+50.00	6.50	0.00	13.14	0.00	36.54
83+00.00	6.32	5.72	11.87	6.62	41.79
83+50.00	7.73	8.14	13.01	16.04	38.75
84+00.00	8.14	15.27	14.69	27.09	26.35
84+50.00	7.77	32.28	14.73	55.03	-13.95
85+00.00	7.78	28.54	14.40	70.39	-69.94
85+50.00	8.23	29.41	14.82	67.07	-122.19
86+00.00	9.18	22.56	16.12	60.15	-166.22
86+50.00	10.26	15.66	18.00	44.24	-192.46
87+00.00	12.21	6.88	20.81	26.09	-197.74
87+50.00	11.71	10.37	22.15	19.97	-195.56
88+00.00	12.48	6.36	22.40	19.36	-192.52
88+50.00	12.48	13.12	23.11	22.55	-191.96
89+00.00	19.14	12.99	29.28	30.22	-192.90
89+50.00	21.09	11.72	37.25	28.60	-184.25
90+00.00	21.32	9.33	39.27	24.36	-169.34
90+50.00	21.18	5.50	39.35	17.16	-147.16
91+00.00	20.23	4.14	38.34	11.16	-119.97
91+50.00	19.57	7.31	36.85	13.25	-96.37
92+00.00	20.84	6.68	37.42	16.19	-75.15
92+50.00	19.44	7.78	37.30	16.74	-54.59
93+00.00	19.89	19.20	36.42	31.23	-49.40
93+50.00	18.17	32.22	35.24	59.51	-73.67
94+00.00	11.29	42.98	27.28	87.04	-133.43
94+50.00	16.99	54.13	26.19	112.40	-219.64
95+00.00	3.10	58.71	18.60	130.60	-331.64
95+50.00	3.83	54.13	6.42	130.60	-455.83
96+00.00	13.81	38.08	16.33	106.72	-546.22
96+50.00	15.04	24.81	26.71	72.79	-592.29
97+00.00	17.50	14.59	30.13	45.60	-607.77
97+50.00	19.08	11.79	33.87	30.53	-604.43
98+00.00	18.64	10.32	34.93	25.59	-595.09
98+50.00	18.31	10.80	34.21	24.44	-585.32
99+00.00	18.87	7.21	34.43	20.84	-571.74
99+50.00	21.01	5.81	36.93	15.07	-549.89
100+00.00	25.43	1.31	43.00	8.24	-515.13
100+50.00	36.11	0.00	56.98	1.52	-459.66
101+00.00	16.40	3.35	48.62	3.88	-414.92
101+50.00	0.00	0.00	15.19	3.88	-403.61

EARTHWORK DATA - 'AT' RAMP (STAGE 4)

STATION	COMMON SF	FILL SF	COMMON CY	FILL CY	MASS HAUL
130+00.00	20.86	0.00	0.00	0.00	0.00
130+50.00	20.19	0.00	38.01	0.00	38.01
131+00.00	8.90	3.71	26.94	4.29	60.65
131+50.00	1.30	26.63	9.44	35.12	34.98
132+00.00	6.84	36.27	7.54	72.80	-30.28
132+25.00	14.92	4.13	10.07	23.38	-43.59
132+50.00	0.00	0.00	6.91	2.39	-39.07
133+00.00	0.34	12.83	0.31	14.85	-53.61
133+50.00	7.97	97.71	7.69	127.94	-173.85
134+00.00	16.22	19.21	22.40	135.32	-286.78
134+50.00	0.00	0.00	15.02	22.23	-293.99
135+00.00	0.00	0.00	0.00	0.00	-293.99

EARTHWORK DATA - 'AU' RAMP (STAGES 4/6)

STATION	COMMON SF	FILL SF	COMMON CY	FILL CY	MASS HAUL
128+00.00	9.78	0.41	0.00	0.00	0.00
128+50.00	5.46	5.79	14.11	7.18	6.94
129+00.00	7.00	22.36	11.54	32.58	-14.11
129+50.00	0.00	55.66	6.48	90.30	-97.93
130+00.00	1.51	28.45	1.40	97.35	-193.88

EARTHWORK DATA - 'DU' RAMP (STAGE 3)

STATION	COMMON SF	FILL SF	COMMON CY	FILL CY	MASS HAUL
131+50.00	0.00	0.00	0.00	0.00	0.00
132+00.00	0.00	0.00	0.00	0.00	0.00
132+50.00	6.21	11.10	5.75	12.85	-7.10
133+00.00	10.97	47.99	15.91	68.39	-59.58
133+50.00	17.10	35.52	25.99	96.66	-130.25
134+00.00	0.00	0.00	15.83	41.11	-155.52

EARTHWORK DATA - XE EAST CROSSOVER (STAGE 4)

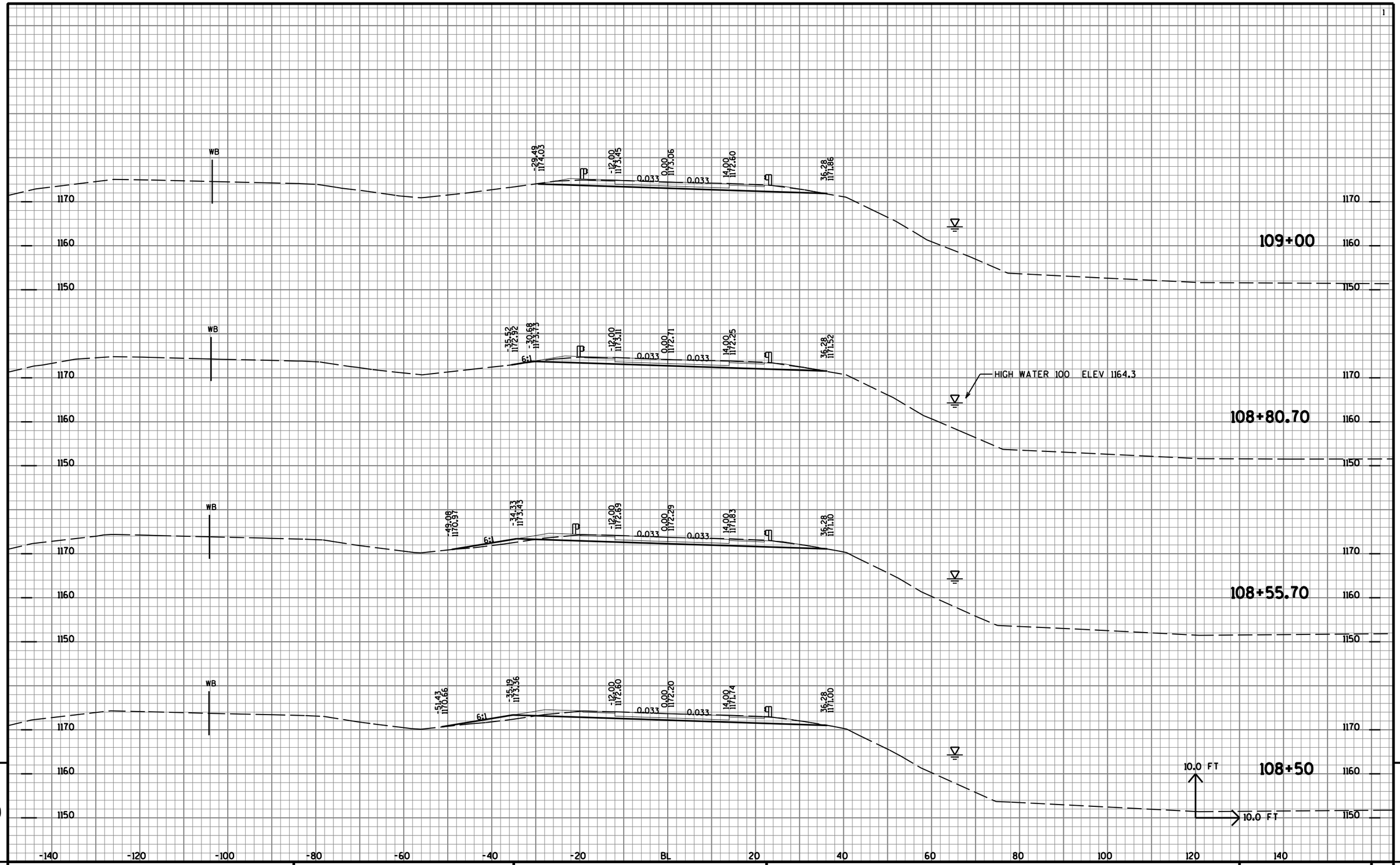
STATION	COMMON SF	FILL SF	COMMON CY	FILL CY	MASS HAUL
132+00.00	0.00	0.00	0.00	0.00	0.00
132+50.00	19.16	0.00	17.74	0.00	17.74
133+00.00	17.17	0.00	33.64	0.00	51.38
133+50.00	15.79	0.33	30.52	0.38	81.52
134+00.00	14.11	10.09	27.69	12.06	97.14
134+50.00	12.55	11.22	24.69	24.66	97.16
134+67.72	15.77	10.40	9.29	8.87	97.59
135+00.00	15.88	18.29	18.92	21.44	95.07
135+50.00	15.06	21.99	28.65	46.62	77.10
136+00.00	15.97	51.27	28.73	84.79	21.04
136+50.00	14.82	36.34	28.51	101.40	-51.85
137+00.00	1.48	42.27	15.09	90.98	-127.75
137+50.00	2.91	51.78	4.06	108.85	-232.54
138+00.00	15.62	72.36	17.16	143.68	-359.06
138+50.00	16.47	62.04	29.71	155.56	-484.90
139+00.00	17.54	25.67	31.49	101.52	-554.93
139+50.00	20.85	27.19	35.55	61.18	-580.56
140+00.00	18.19	26.89	36.15	62.59	-607.01
140+50.00	21.84	4.25	37.06	36.04	-605.98
141+00.00	59.54	0.00	75.35	4.92	-535.55
141+50.00	22.84	0.00	76.28	0.00	-459.27
142+00.00	24.21	0.00	43.56	0.00	-415.71
142+50.00	21.24	0.00	42.08	0.00	-373.62
143+00.00	19.44	0.19	37.67	0.22	-336.18
143+50.00	18.67	0.91	35.29	1.27	-302.16
144+00.00	17.54	1.68	33.53	3.00	-271.63
144+50.00	17.65	0.47	32.58	2.49	-241.54
145+00.00	16.77	3.86	31.87	5.01	-214.68
145+50.00	16.92	6.95	31.19	12.51	-196.00
146+00.00	17.41	5.27	31.79	14.14	-178.35
146+50.00	17.16	6.88	32.01	14.06	-160.41
147+00.00	17.01	2.89	31.64	11.31	-140.07
147+50.00	16.46	2.02	30.99	5.68	-114.77
148+00.00	15.94	0.00	30.00	2.34	-87.10
148+50.00	15.19	0.00	28.82	0.00	-58.28
149+00.00	0.00	0.00	14.06	0.00	-44.22
149+50.00	0.00	0.00	0.00	0.00	-44.22

EARTHWORK DATA - STH 29 MEDIAN (STAGE 7) (EB)

STATION	COMMON SF	FILL SF	COMMON CY	FILL CY	MASS HAUL
81+00.00	0.00	0.00	0.00	0.00	0.00
82+00.00	0.00	0.00	0.00	0.00	0.00
83+00.00	0.00	0.00	0.00	0.00	0.00
84+00.00	12.16	6.18	22.52	14.31	8.21
85+00.00	38.73	2.74	94.24	20.65	81.81
86+00.00	43.87	0.42	152.96	7.31	227.45
86+46.00	20.12	2.19	54.51	2.78	279.18
87+00.00	13.10	0.00	33.22	2.74	309.67
87+06.00	13.17	0.02	2.92	0.00	312.58
87+22.00	13.10	0.15	7.78	0.06	320.30
87+84.00	10.67	0.62	27.29	1.11	346.49
88+00.00	9.41	0.54	5.95	0.43	352.01
88+46.00	10.82	3.16	17.23	3.94	365.30
88+62.00	11.06	4.60	6.48	2.87	368.91
89+00.00	12.98	3.57	16.92	7.19	378.64
89+22.00	13.15	3.08	10.65	3.39	385.90
90+00.00	36.50	0.00	71.72	5.56	452.06
91+00.00	32.24	0.00	127.30	0.00	579.35
92+00.00	41.54	0.00	136.63	0.00	715.98
93+00.00	47.67	0.00	165.20	0.00	881.19
94+00.00	53.65	0.00	187.63	0.00	1068.82
95+00.00	82.77	0.00	252.63	0.00	1321.45
96+00.00	57.64	0.00	260.02	0.00	1581.46
97+00.00	44.23	0.00	188.65	0.00	1770.11
98+00.00	30.88	0.00	139.09	0.00	1909.21
99+00.00	22.11	0.00	98.13	0.00	2007.34
100+00.00	32.73	0.00	101.56	0.00	2108.89
101+00.00	0.00	0.00	60.61	0.00	2169.50

EARTHWORK DATA - STH 29 MEDIAN (STAGE 7) (EB)

STATION	COMMON SF	FILL SF	COMMON CY	FILL CY	MASS HAUL
127+20.00	2.03	0.00	0.00	0.00	0.00
128+00.00	0.00	10.20	3.01	18.89	-15.88
129+00.00	0.29	0.00	0.54	23.61	-38.96
130+00.00	0.82	0.00	2.06	0.00	-36.90
131+00.00	20.06	0.00	38.67	0.00	1.77
132+00.00	7.72	0.00	51.44	0.00	53.21
133+00.00	2.82	0.00	19.52	0.00	72.73
134+00.00	4.10	10.93	12.81	25.30	60.24
134+10.35	4.81	10.59	1.71	5.16	56.80
134+24.77	7.56	0.00	3.30	3.53	56.56
135+00.00	18.05	0.00	35.68	0.00	92.24
136+00.00	28.53	0.00	86.26	0.00	178.50
136+08.90	27.16	0.00	9.18	0.00	187.68
136+33.90	19.76	0.00	21.72	0.00	209.40
136+58.90	20.63	0.00	18.70	0.00	228.10
136+71.40	23.05	0.00	10.11	0.00	238.21
136+96.40	29.93	0.00	24.53	0.00	262.74
137+00.00	29.88	0.00	3.99	0.00	266.73
137+21.40	35.11	0.00	25.76	0.00	292.48
137+78.90	29.10	0.00	68.37	0.00	360.85
138+00.00	24.02	0.00	20.76	0.00	381.61
139+00.00	24.13	0.00	89.17	0.00	470.78
140+00.00	10.83	4.33	64.74	10.02	525.50
141+00.00	38.05	0.00	90.52	10.02	605.99
142+00.00	1.17	0.00	72.63	0.00	678.62
143+00.00	0.95	0.00	3.93	0.00	682.55
144+00.00	0.98	0.00	3.57	0.00	686.12
145+00.00	6.55	0.00	13.94	0.00	700.06
146+00.00	3.71	0.00	19.00	0.00	719.06
147+00.00	1.18	0.00	9.06	0.00	728.12
148+00.00	1.30	0.00	4.59	0.00	732.71
149+00.00	0.00	0.00	2.41	0.00	735.12

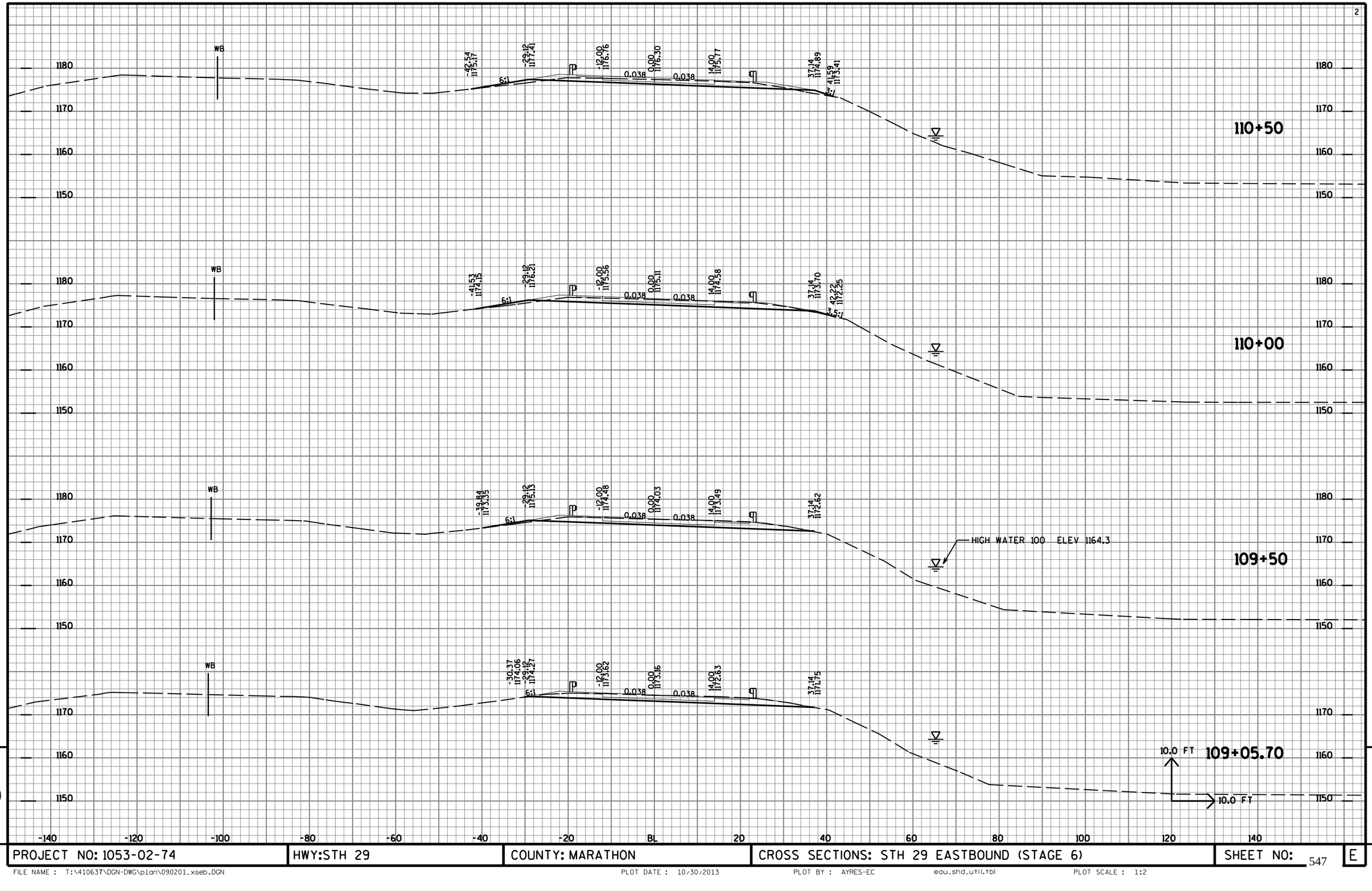


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PROJECT NO: 1053-02-74	HWY:STH 29	COUNTY: MARATHON	CROSS SECTIONS: STH 29 EASTBOUND (STAGE 6)	SHEET NO: 546	E

FILE NAME : T:\410637\DGN-DWG\plan\090201_xseb.DGN PLOT DATE : 10/30/2013 PLOT BY : AYRES-EC edu_shd_util.tbl PLOT SCALE : 1:2



9

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PROJECT NO: 1053-02-74	HWY:STH 29	COUNTY: MARATHON	CROSS SECTIONS: STH 29 EASTBOUND (STAGE 6)	SHEET NO: 547	E

FILE NAME : T:\410637\DGN-DWG\plan\090201_xseb.DGN PLOT DATE : 10/30/2013 PLOT BY : AYRES-EC edu_shd_util.tbl PLOT SCALE : 1:2

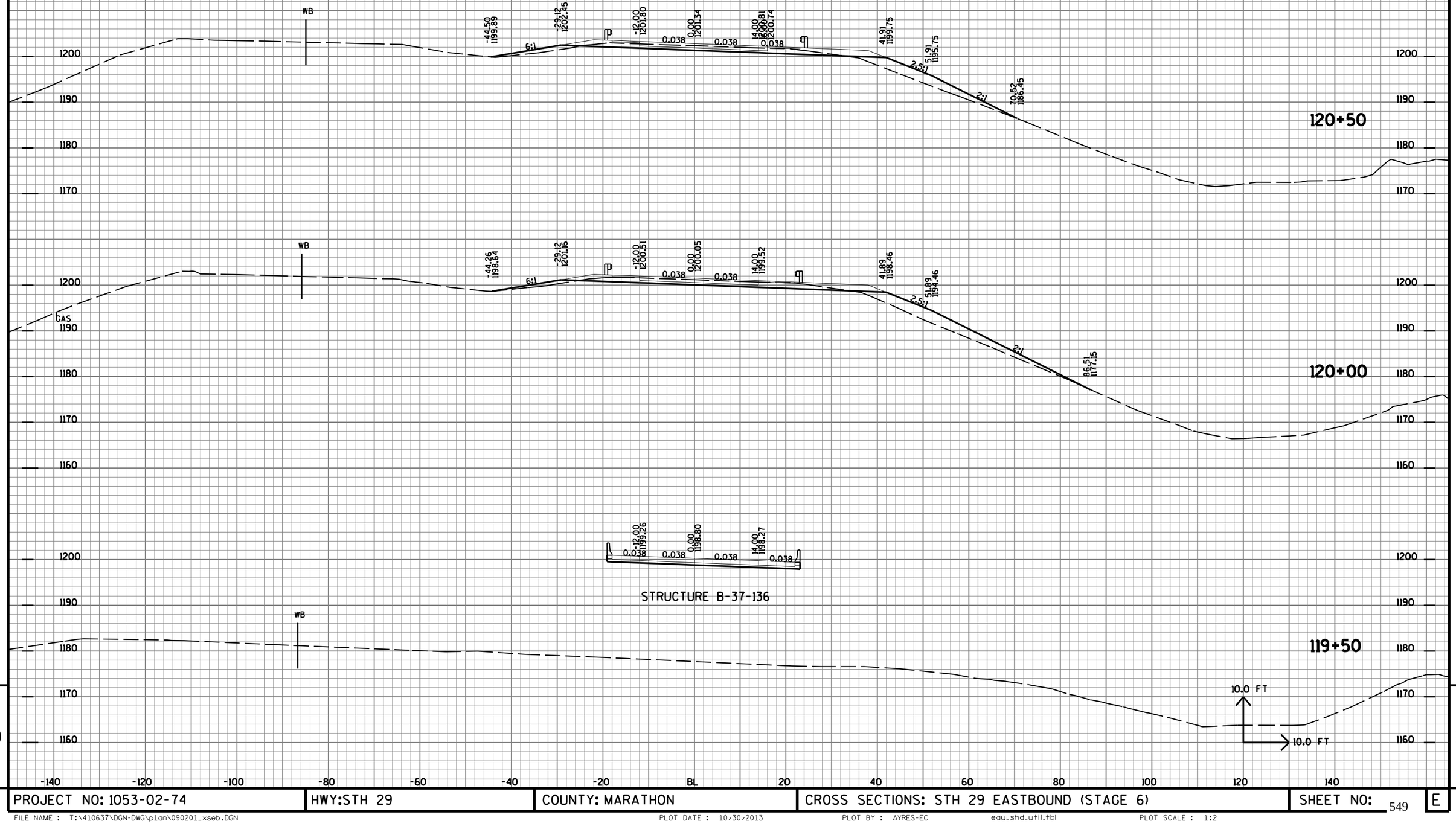


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PROJECT NO: 1053-02-74	HWY:STH 29	COUNTY: MARATHON	CROSS SECTIONS: STH 29 EASTBOUND (STAGE 6)	SHEET NO: 548	E

FILE NAME : T:\410637\DGN-DWG\plan\090201_xseb.DGN PLOT DATE : 10/30/2013 PLOT BY : AYRES-EC edu_shd_util.tbl PLOT SCALE : 1:2

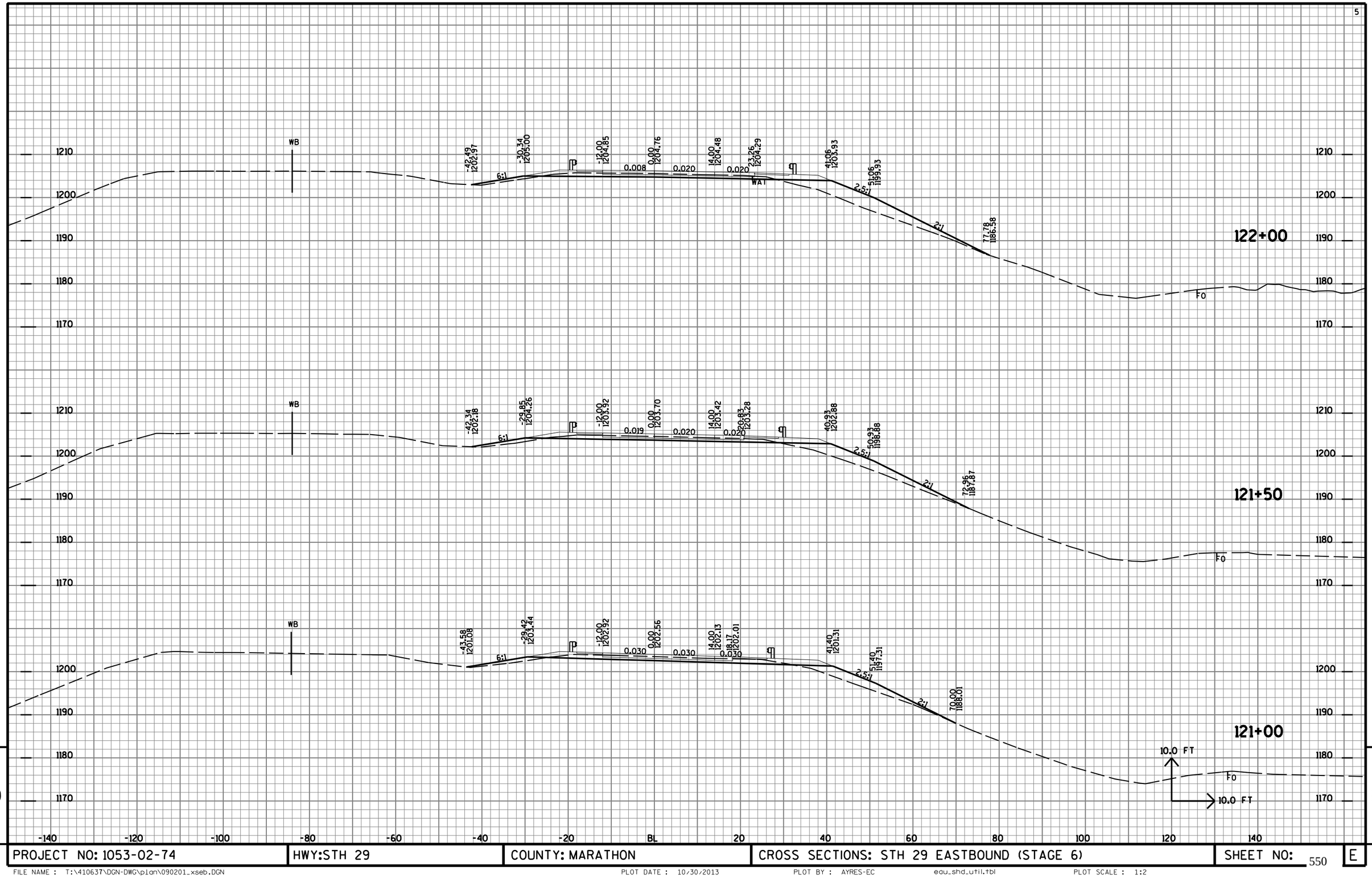


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PROJECT NO: 1053-02-74	HWY: STH 29	COUNTY: MARATHON	CROSS SECTIONS: STH 29 EASTBOUND (STAGE 6)	SHEET NO: 549	E

FILE NAME : T:\410637\DGN-DWG\plan\090201_xseb.DGN PLOT DATE : 10/30/2013 PLOT BY : AYRES-EC edu_shd_util.tbl PLOT SCALE : 1:2



PROJECT NO: 1053-02-74	HWY:STH 29	COUNTY: MARATHON	CROSS SECTIONS: STH 29 EASTBOUND (STAGE 6)	SHEET NO: 550	E

FILE NAME : T:\410637\DGN-DWG\plan\090201_xseb.DGN PLOT DATE : 10/30/2013 PLOT BY : AYRES-EC edu_shd_util.tbl PLOT SCALE : 1:2

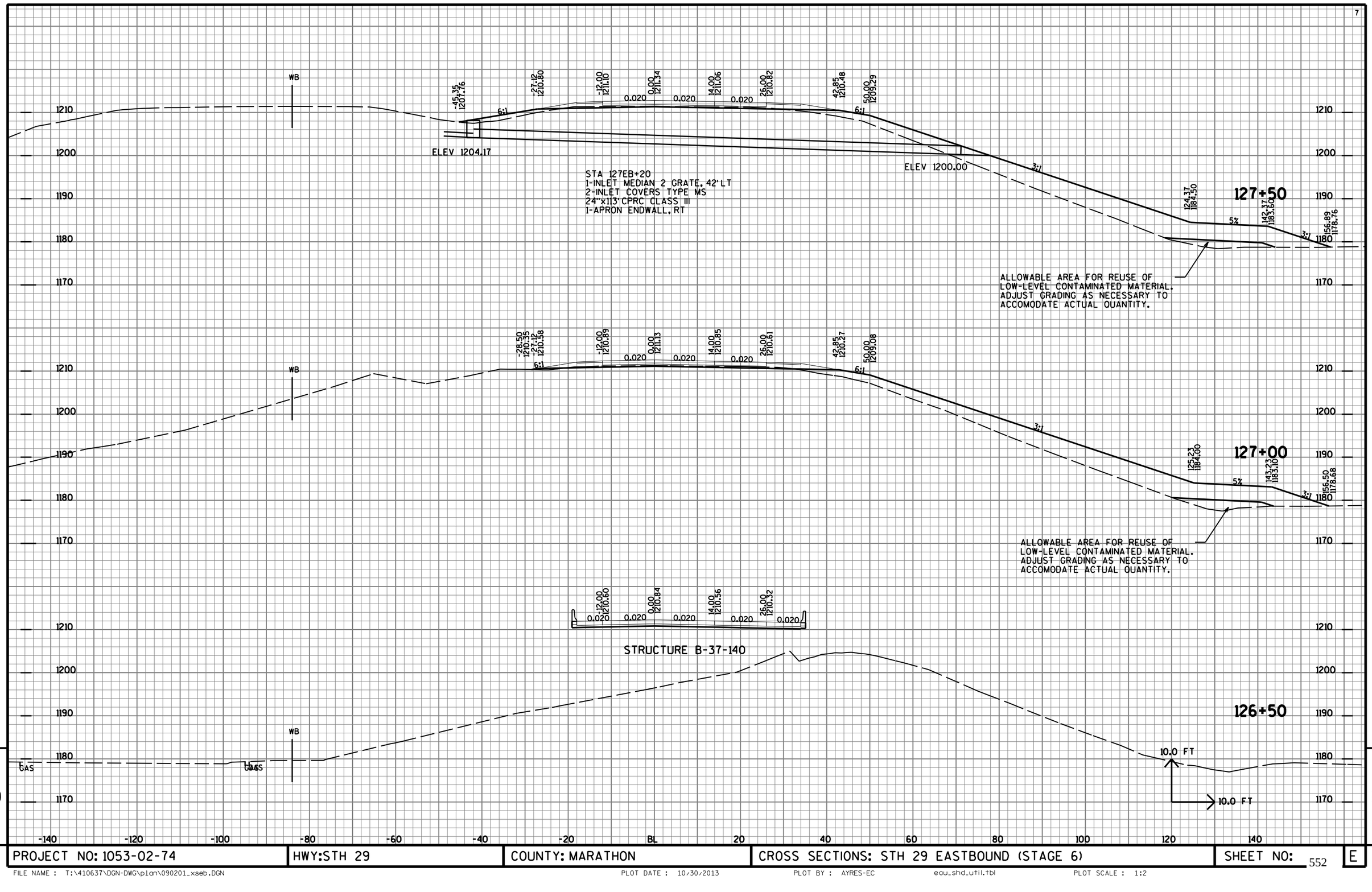


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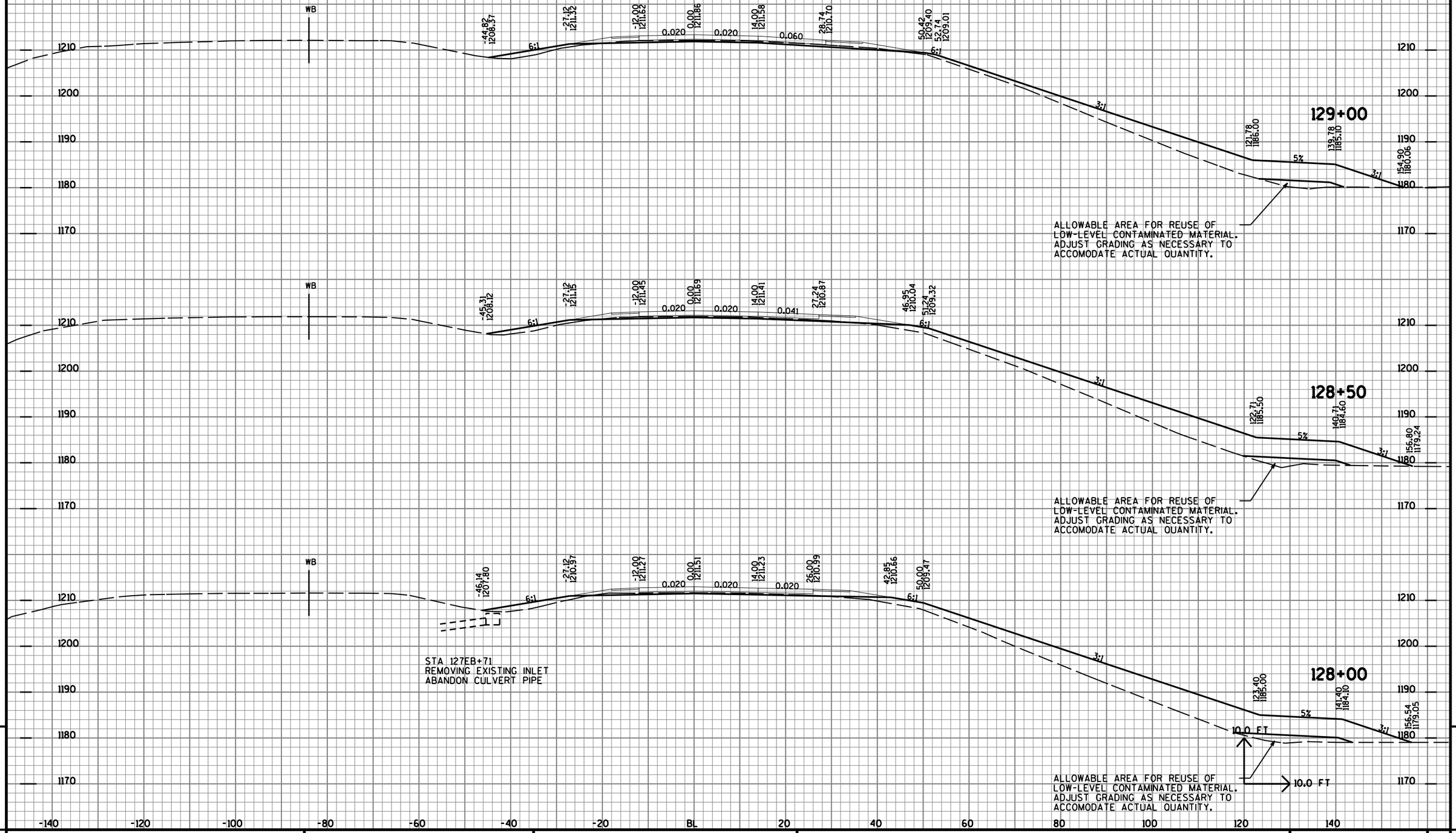
PROJECT NO: 1053-02-74	HWY:STH 29	COUNTY: MARATHON	CROSS SECTIONS: STH 29 EASTBOUND (STAGE 6)	SHEET NO: 551	E

FILE NAME : T:\410637\DGN-DWG\plan\090201_xseb.DGN PLOT DATE : 10/30/2013 PLOT BY : AYRES-EC egu_shd_util.tbl PLOT SCALE : 1:2



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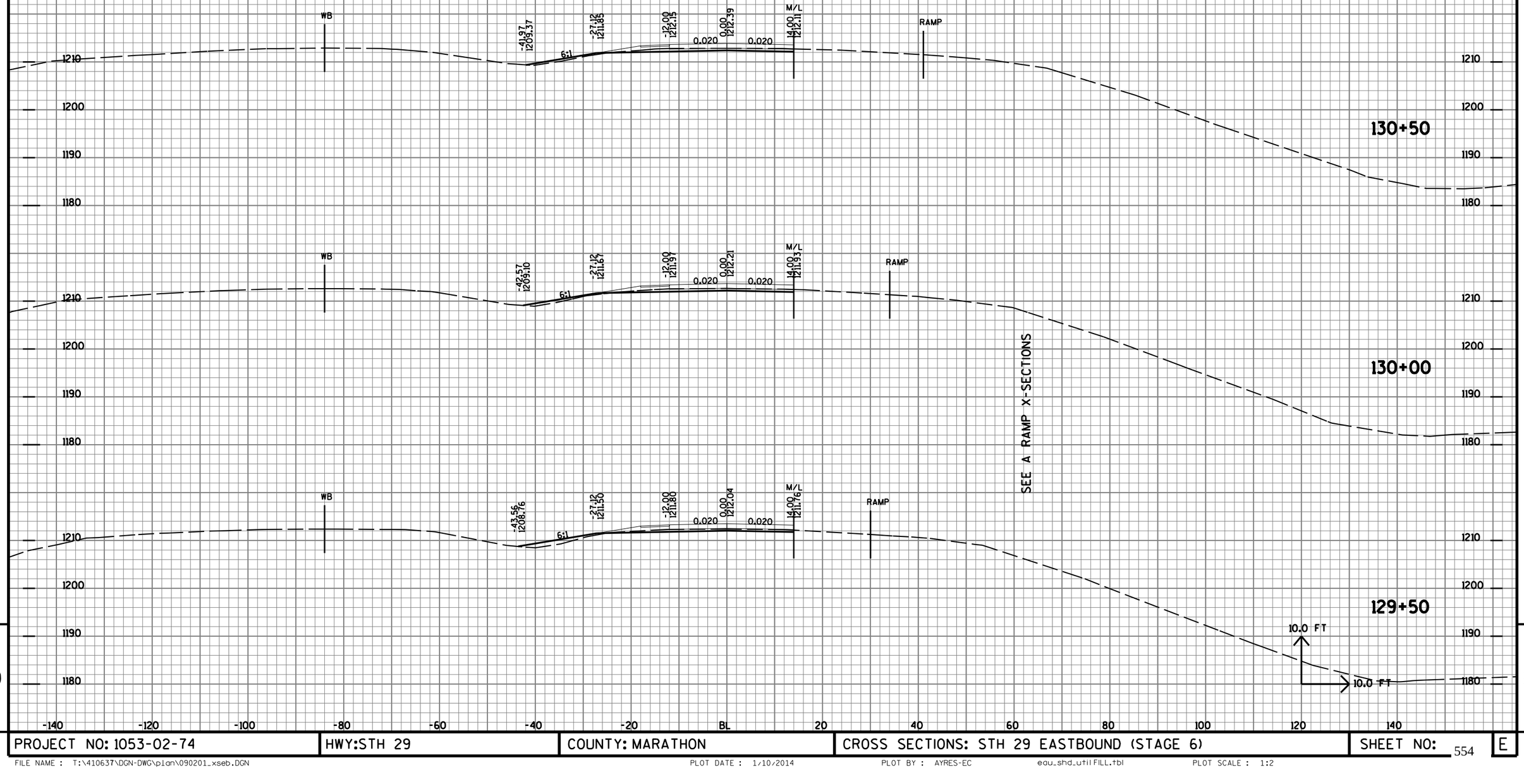
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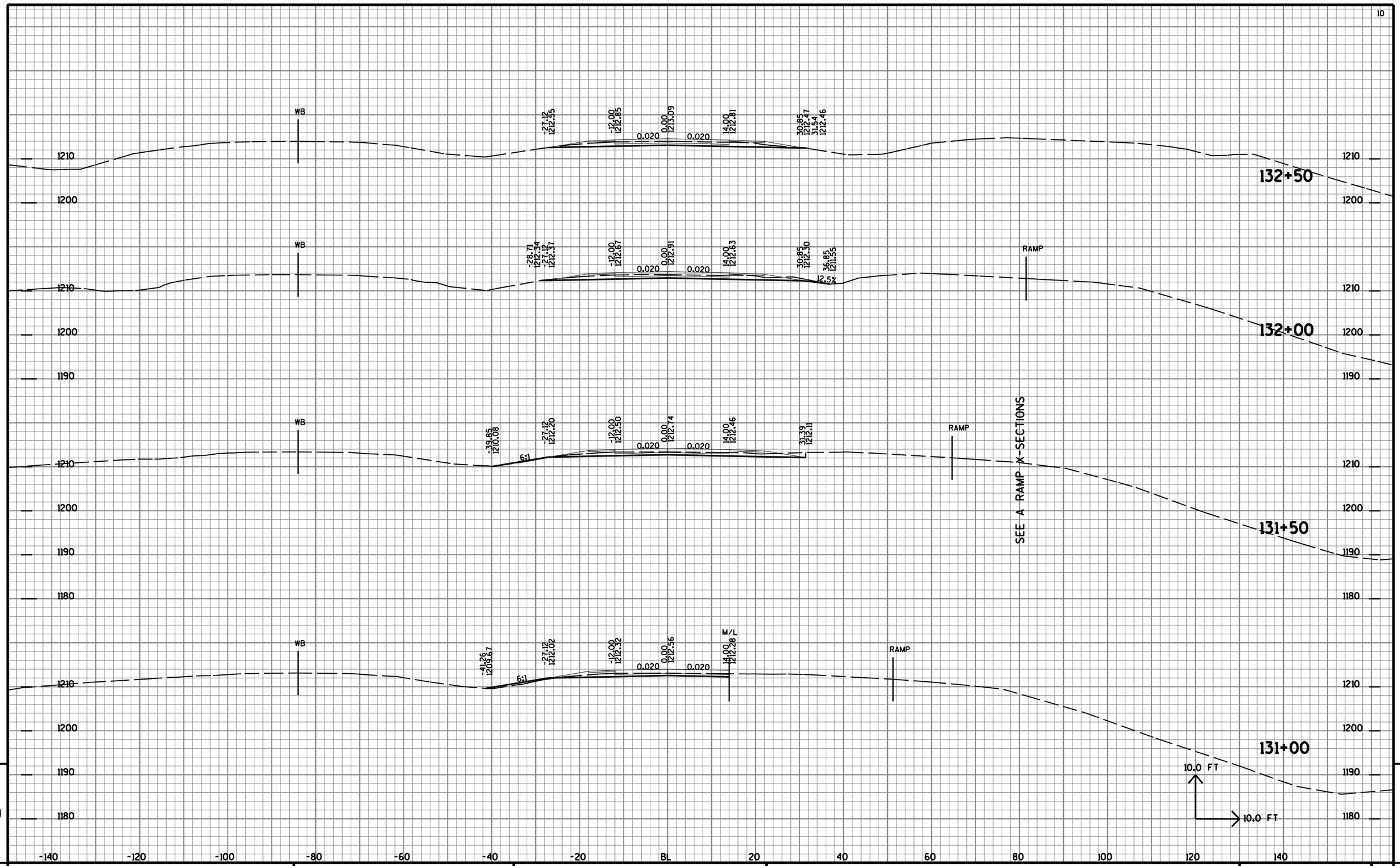
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PROJECT NO: 1053-02-74	HWY:STH 29	COUNTY: MARATHON	CROSS SECTIONS: STH 29 EASTBOUND (STAGE 6)	SHEET NO: 553	E



PROJECT NO: 1053-02-74	HWY:STH 29	COUNTY: MARATHON	CROSS SECTIONS: STH 29 EASTBOUND (STAGE 6)	SHEET NO: 554 E

FILE NAME : T:\410637\DGN-DWG\plan\090201_xseb.DGN PLOT DATE : 1/10/2014 PLOT BY : AYRES-EC edu_shd_utilFILL.tbl PLOT SCALE : 1:2



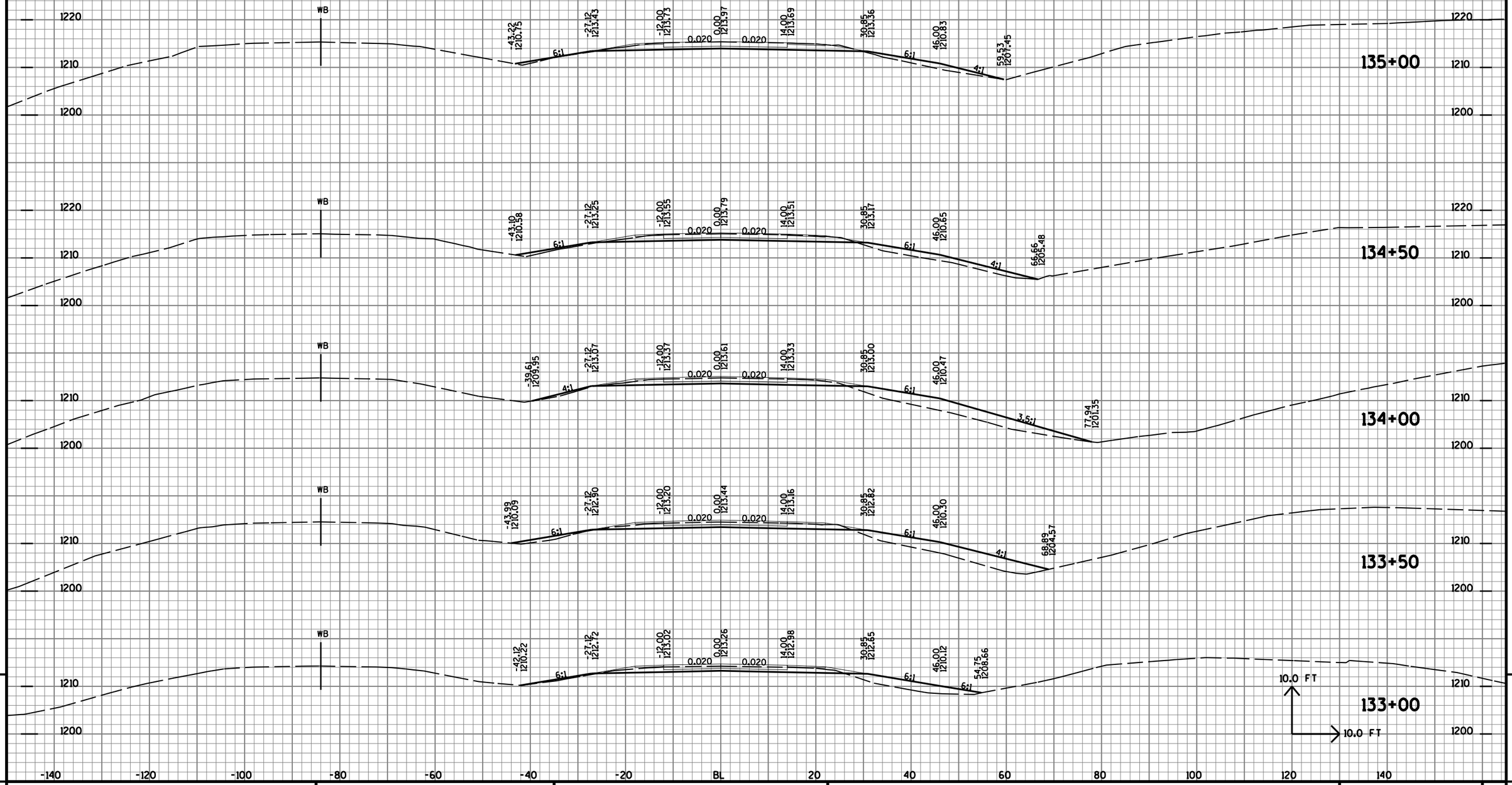
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PROJECT NO: 1053-02-74	HWY:STH 29	COUNTY: MARATHON	CROSS SECTIONS: STH 29 EASTBOUND (STAGE 6)	SHEET NO: 555	E

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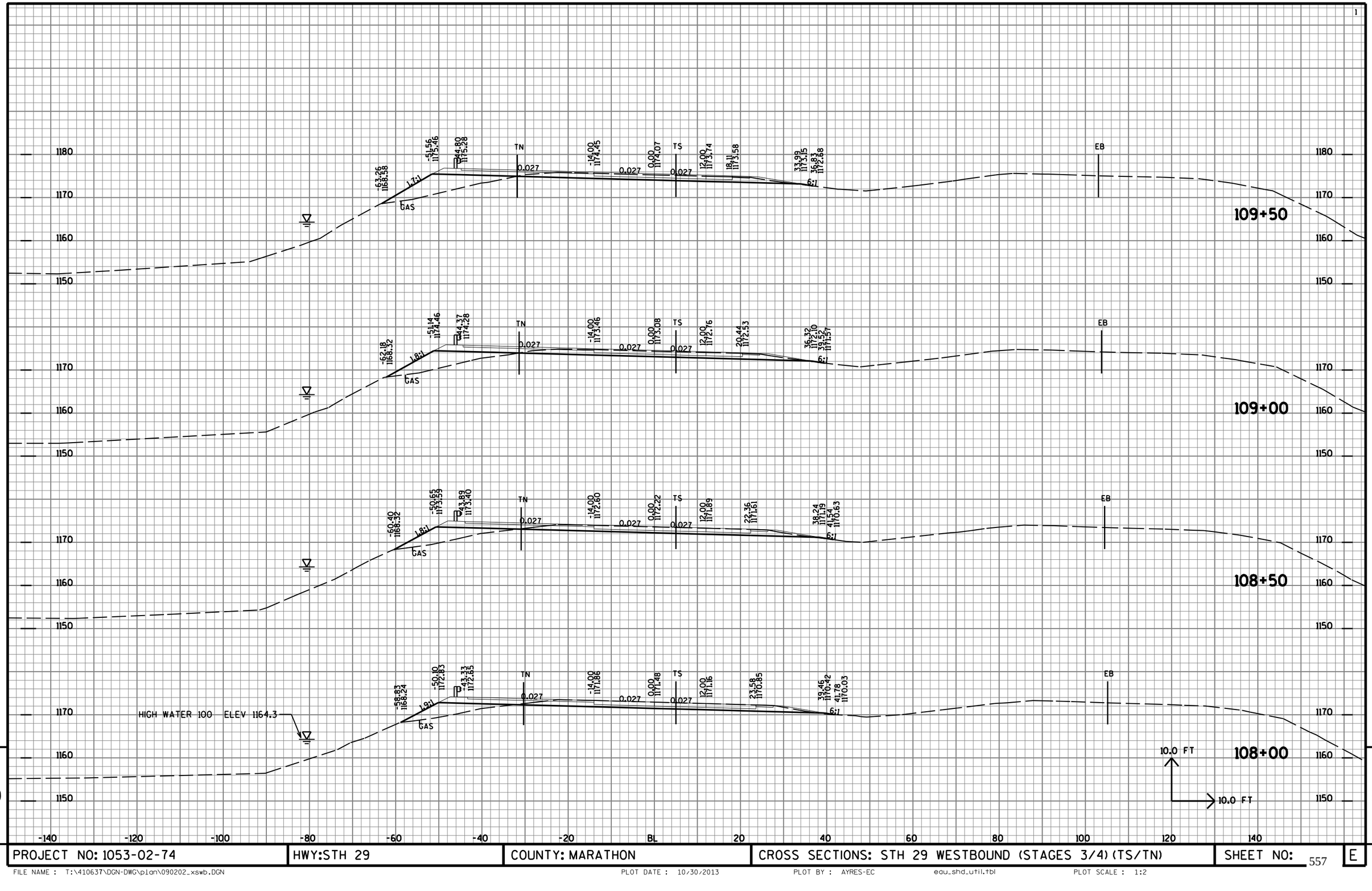
STA 135EB+19.25
MATCH EXISTING



9

PROJECT NO: 1053-02-74	HWY:STH 29	COUNTY: MARATHON	CROSS SECTIONS: STH 29 EASTBOUND (STAGE 6)	SHEET NO: 556	E

FILE NAME : T:\410637\DGN-DWG\plan\090201_xseb.DGN PLOT DATE : 10/30/2013 PLOT BY : AYRES-EC edu_shd_util.tbl PLOT SCALE : 1:2

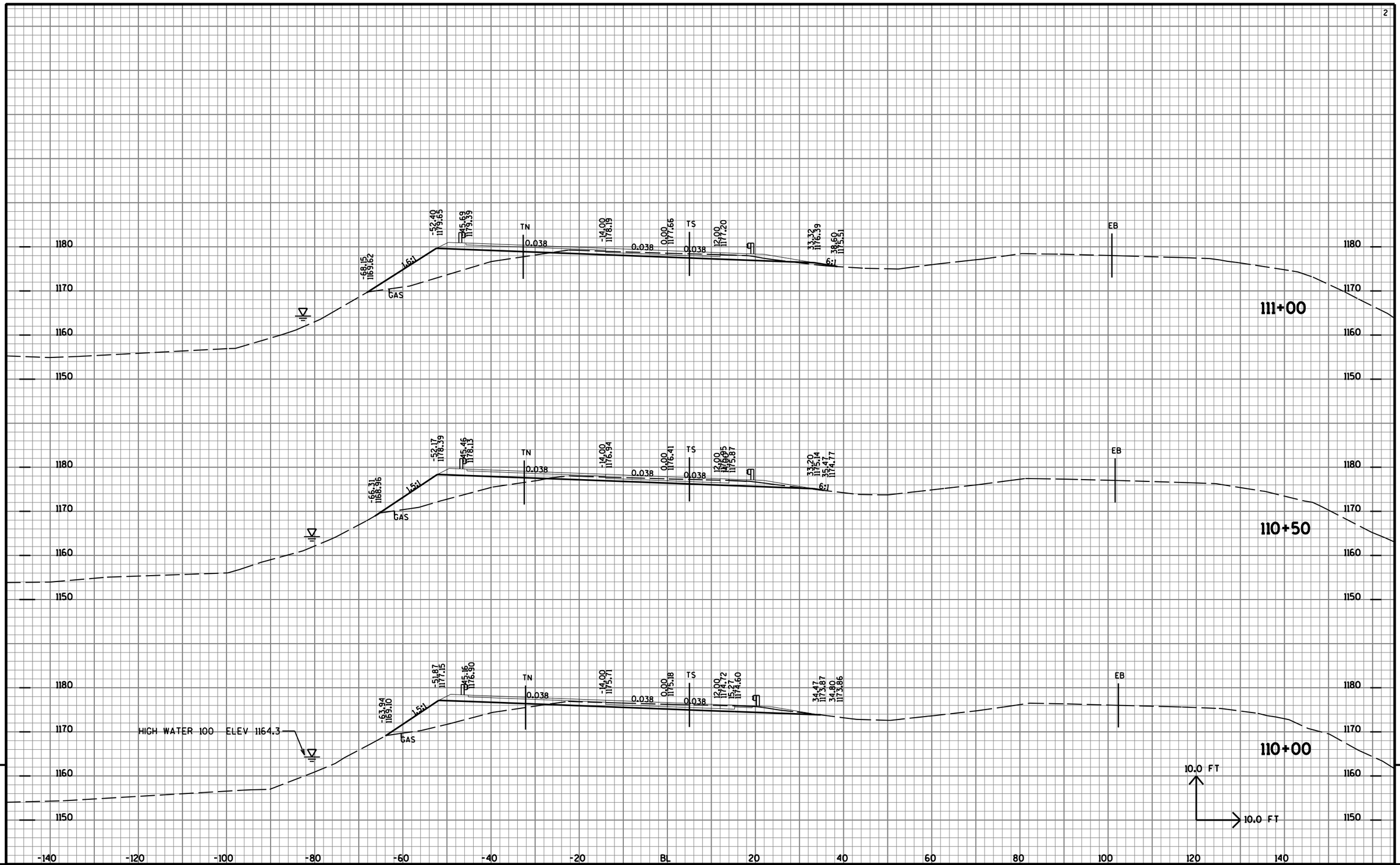


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PROJECT NO: 1053-02-74	HWY:STH 29	COUNTY: MARATHON	CROSS SECTIONS: STH 29 WESTBOUND (STAGES 3/4)(TS/TN)	SHEET NO: 557	E

FILE NAME : T:\410637\DGN-DWG\plan\090202_xswb.DGN PLOT DATE : 10/30/2013 PLOT BY : AYRES-EC edu_shd_util.tbl PLOT SCALE : 1:2

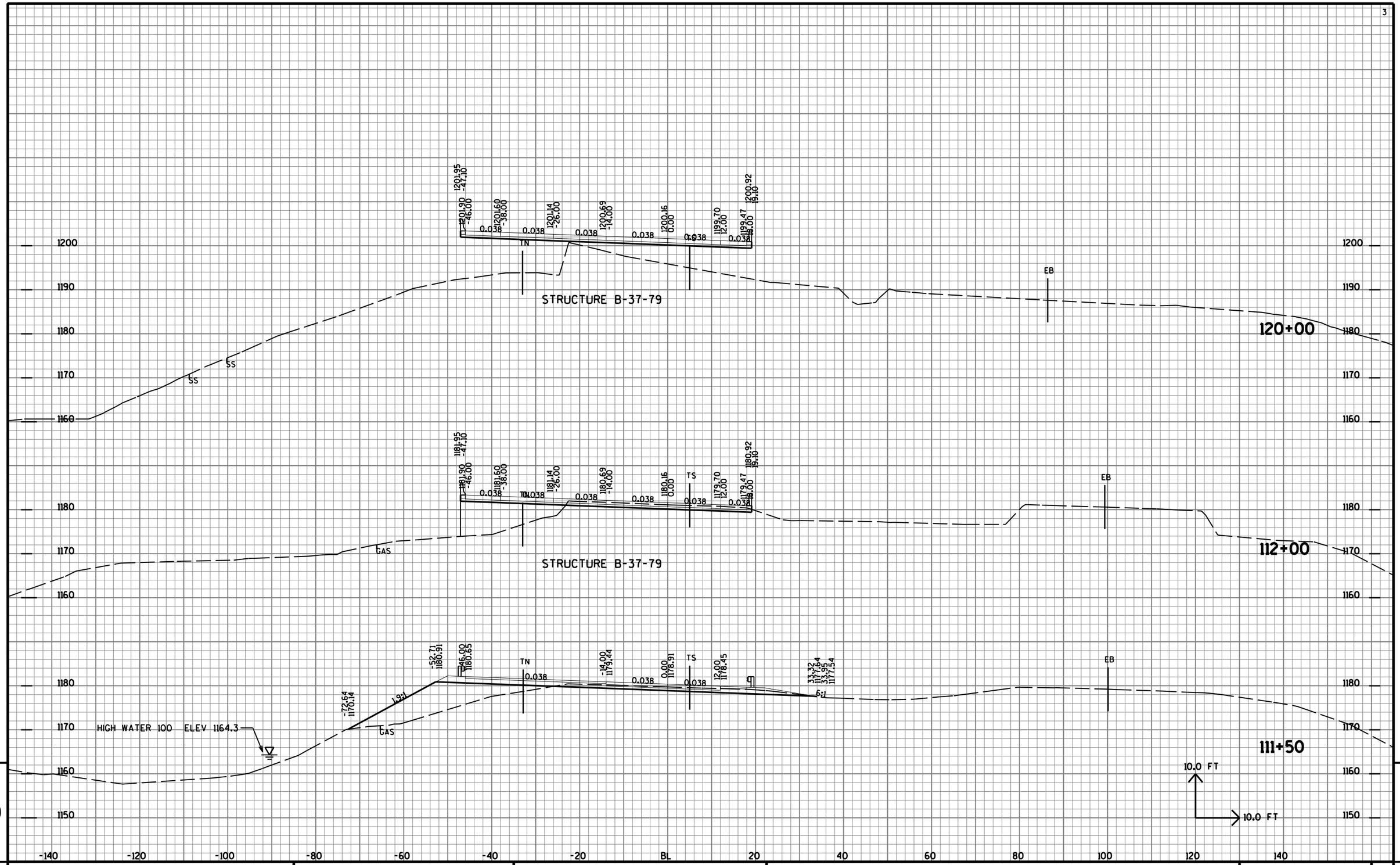


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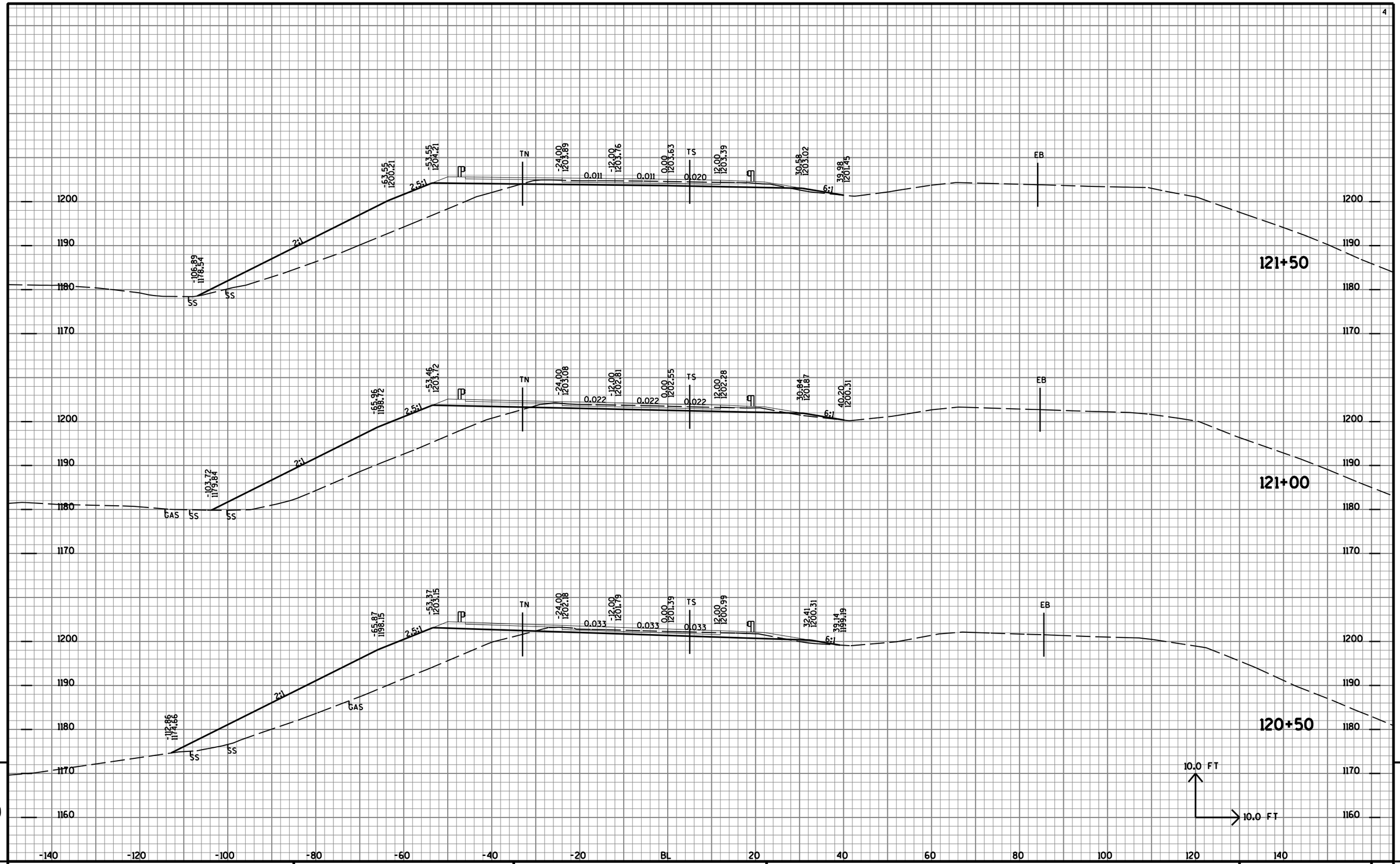
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PROJECT NO: 1053-02-74	HWY:STH 29	COUNTY: MARATHON	CROSS SECTIONS: STH 29 WESTBOUND (STAGES 3/4)(TS/TN)	SHEET NO: 558	E

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PROJECT NO: 1053-02-74	HWY:STH 29	COUNTY: MARATHON	CROSS SECTIONS: STH 29 WESTBOUND (STAGES 3/4)(TS/TN)	SHEET NO: 559	E

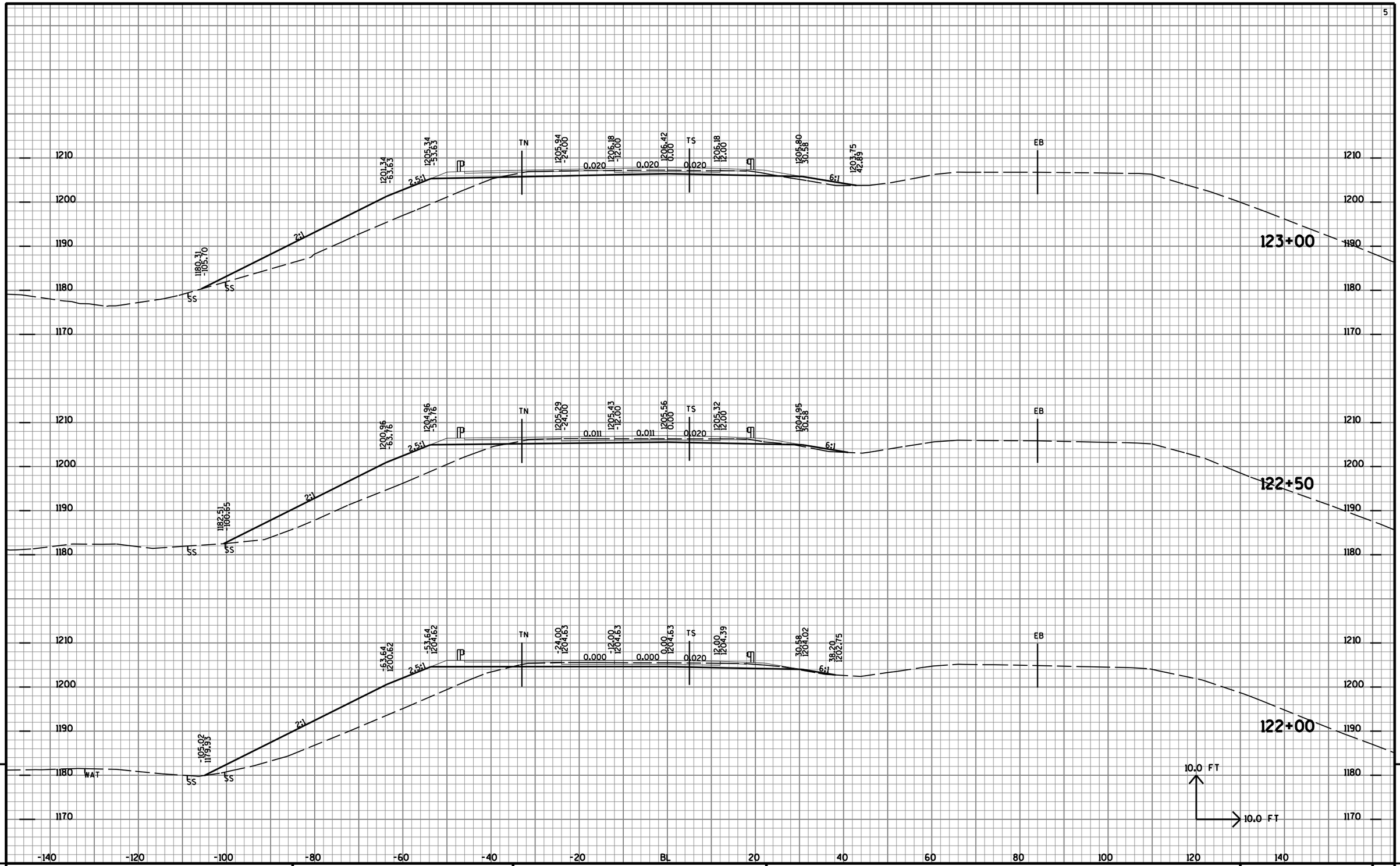


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PROJECT NO: 1053-02-74	HWY: STH 29	COUNTY: MARATHON	CROSS SECTIONS: STH 29 WESTBOUND (STAGES 3/4) (TS/TN)	SHEET NO: 560	E

9

FILE NAME : T:\410637\DGN-DWG\plan\090202_xswb.DGN PLOT DATE : 10/30/2013 PLOT BY : AYRES-EC edu_shd_util.tbl PLOT SCALE : 1:2

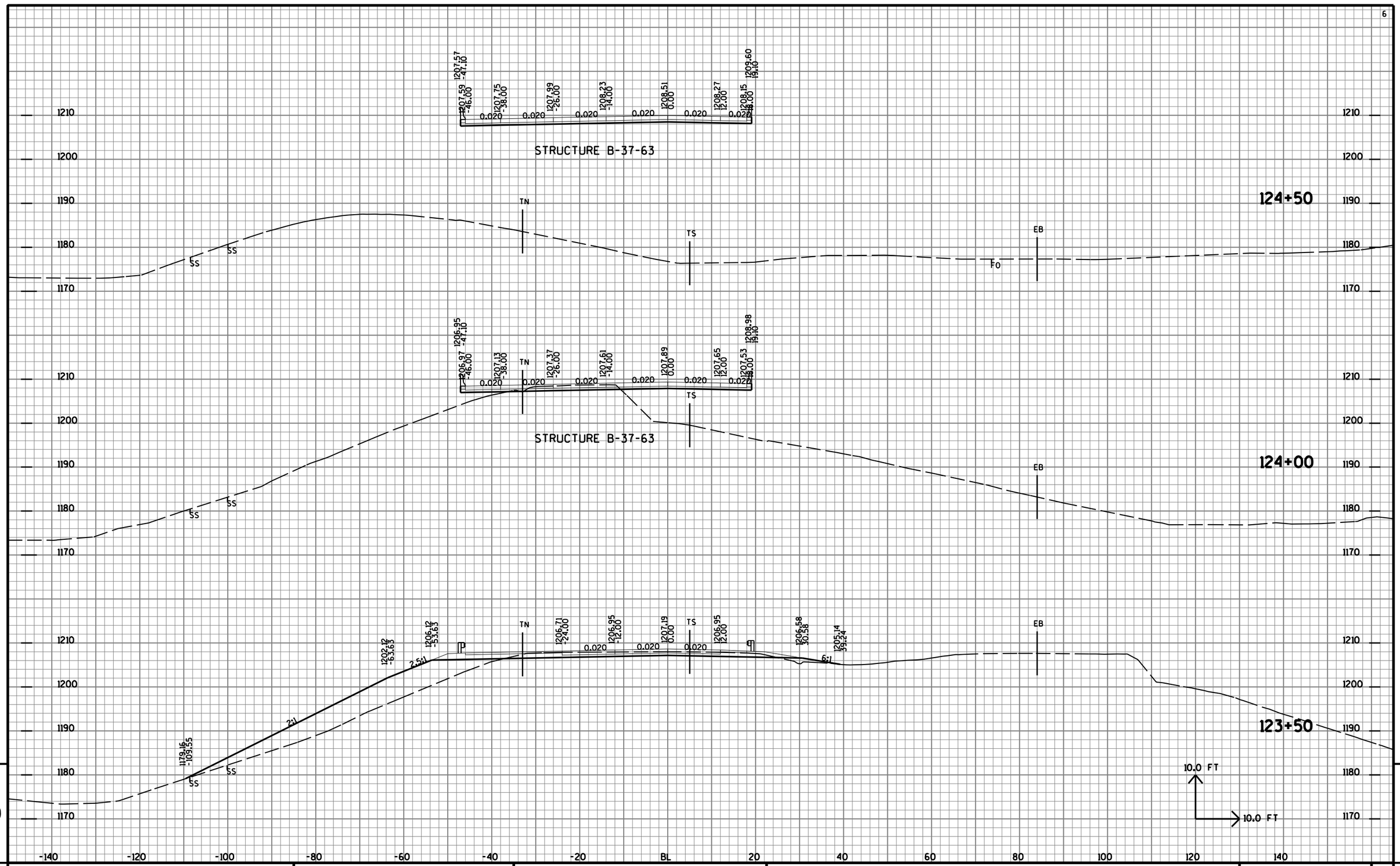


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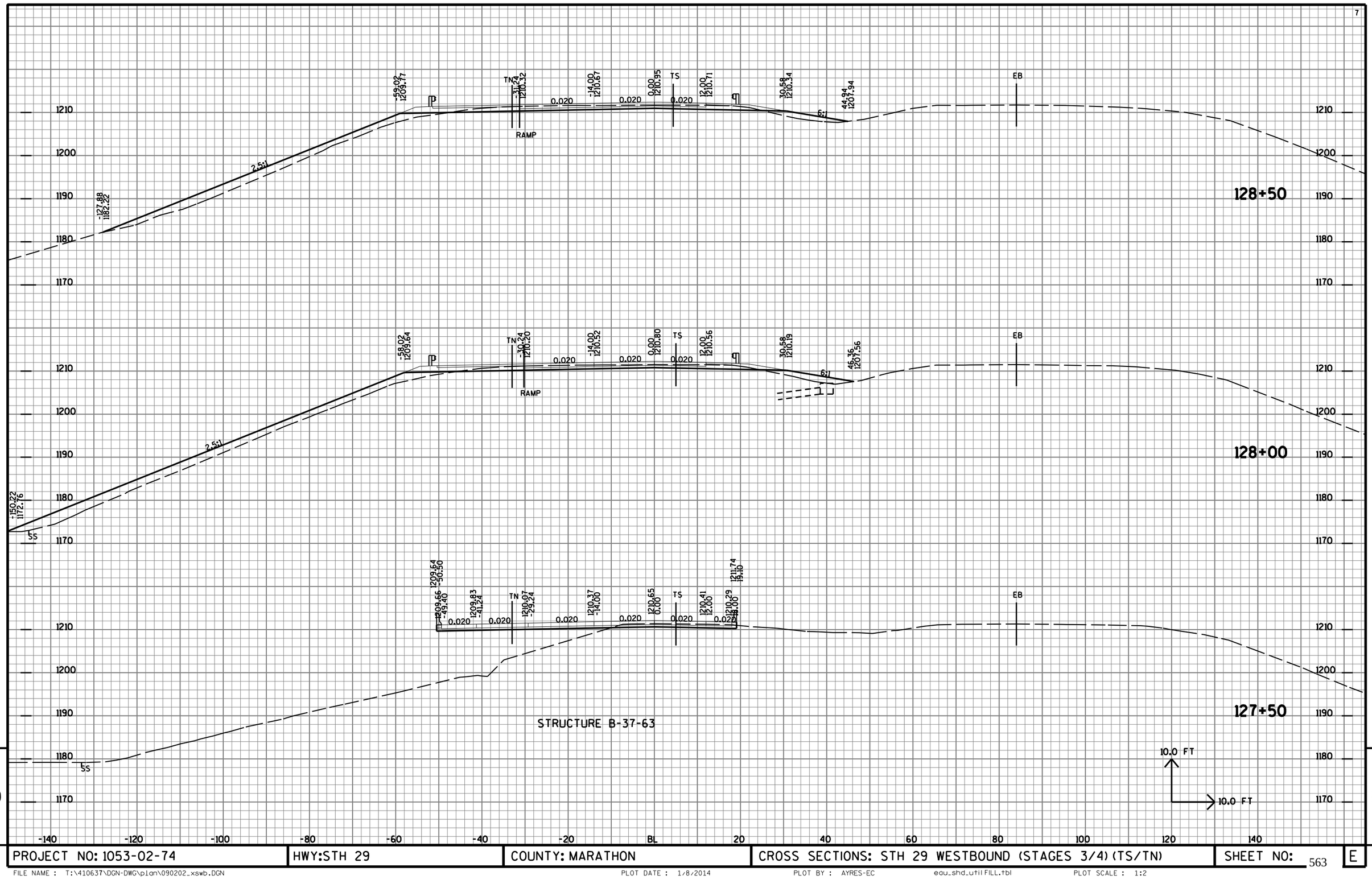
PROJECT NO: 1053-02-74	HWY: STH 29	COUNTY: MARATHON	CROSS SECTIONS: STH 29 WESTBOUND (STAGES 3/4) (TS/TN)	SHEET NO: 561	E

FILE NAME : T:\410637\DGN-DWG\plan\090202_xswb.DGN PLOT DATE : 10/30/2013 PLOT BY : AYRES-EC edu_shd_util.tbl PLOT SCALE : 1:2



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PROJECT NO: 1053-02-74	HWY:STH 29	COUNTY: MARATHON	CROSS SECTIONS: STH 29 WESTBOUND (STAGES 3/4)(TS/TN)	SHEET NO: 562	E

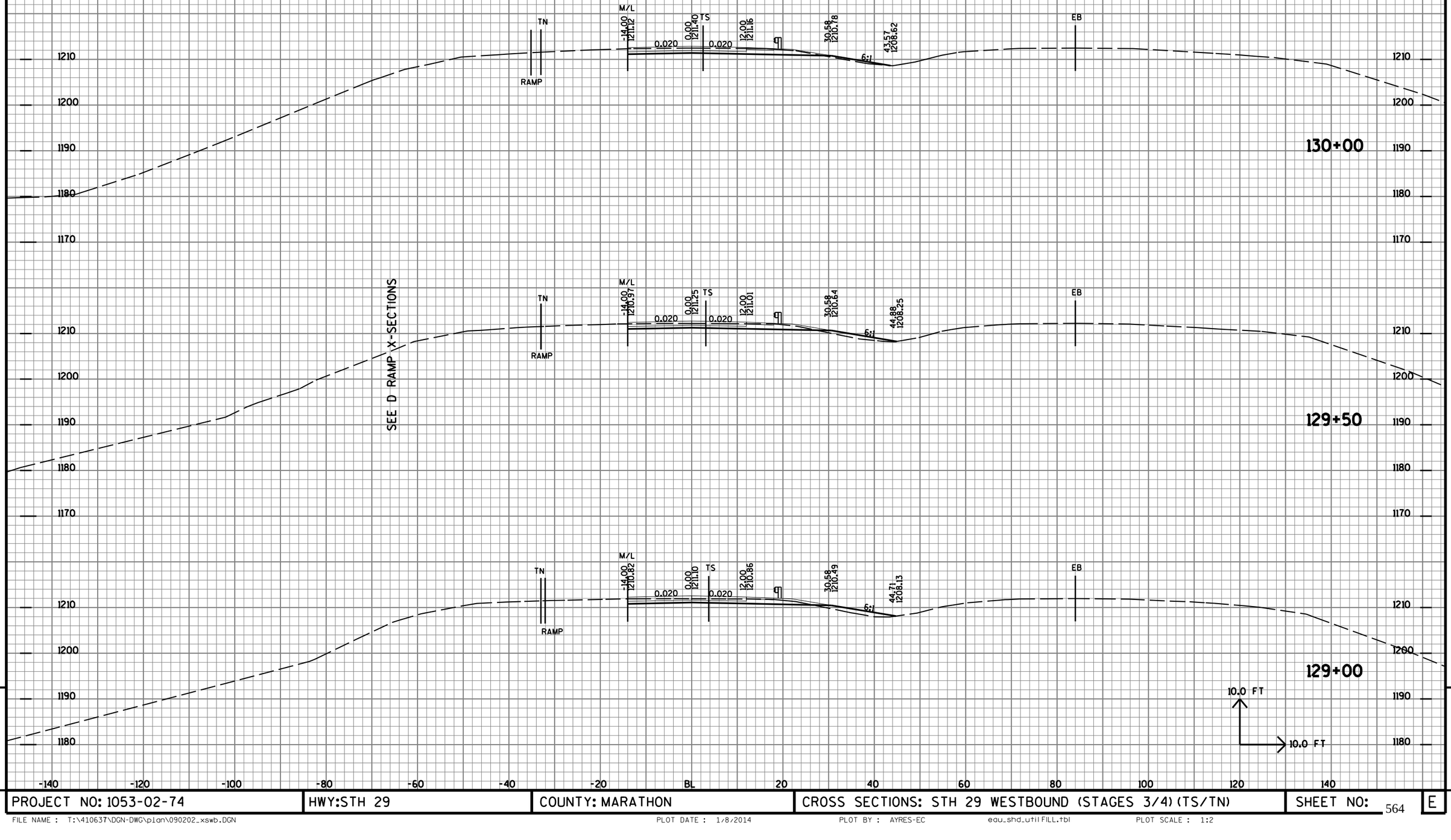


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PROJECT NO: 1053-02-74	HWY: STH 29	COUNTY: MARATHON	CROSS SECTIONS: STH 29 WESTBOUND (STAGES 3/4) (TS/TN)	SHEET NO:	E

FILE NAME : T:\410637\DGN-DWG\plan\090202_xswb.DGN PLOT DATE : 1/8/2014 PLOT BY : AYRES-EC edu_shd_utilFILL.tbl PLOT SCALE : 1:2

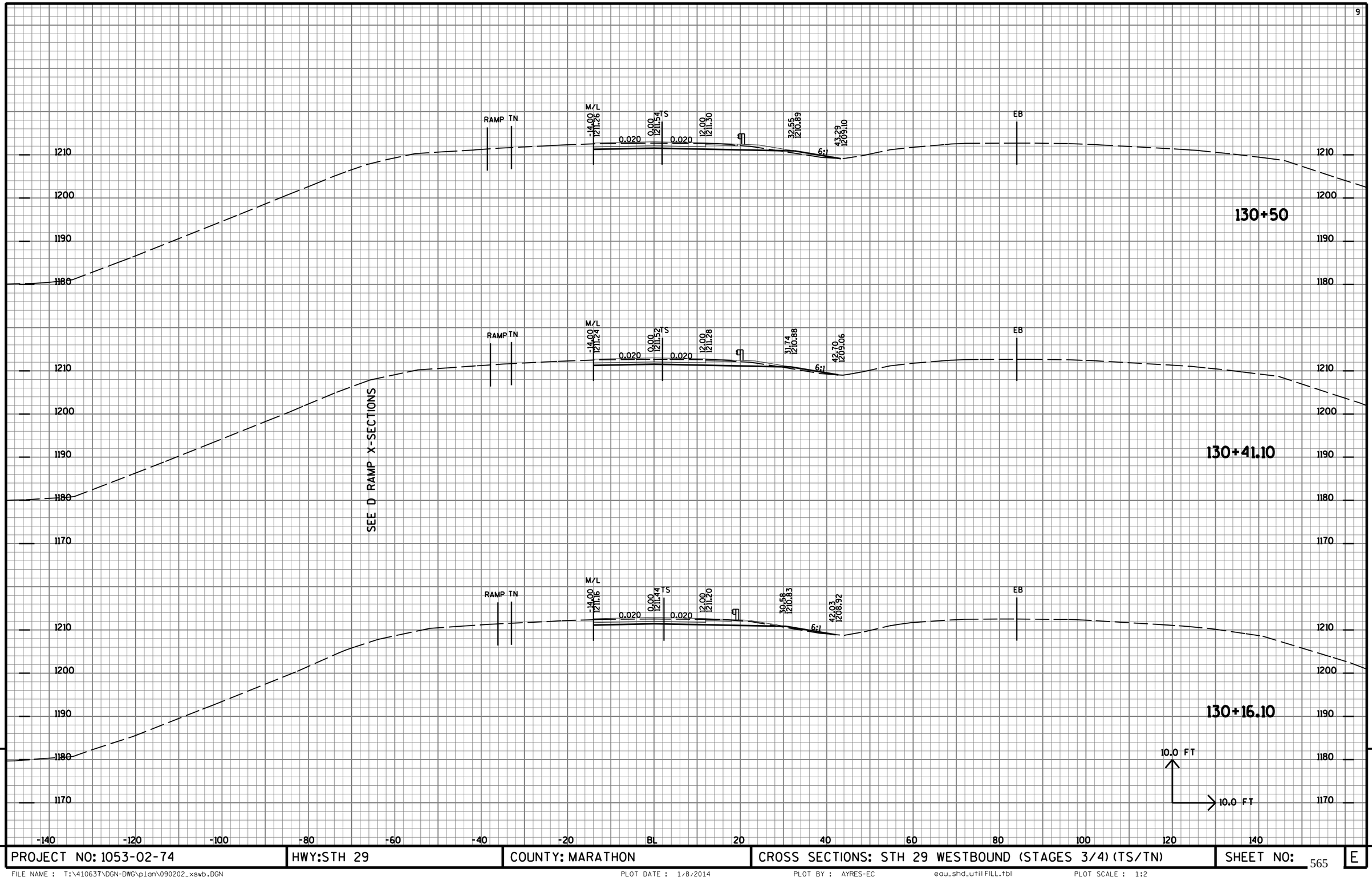


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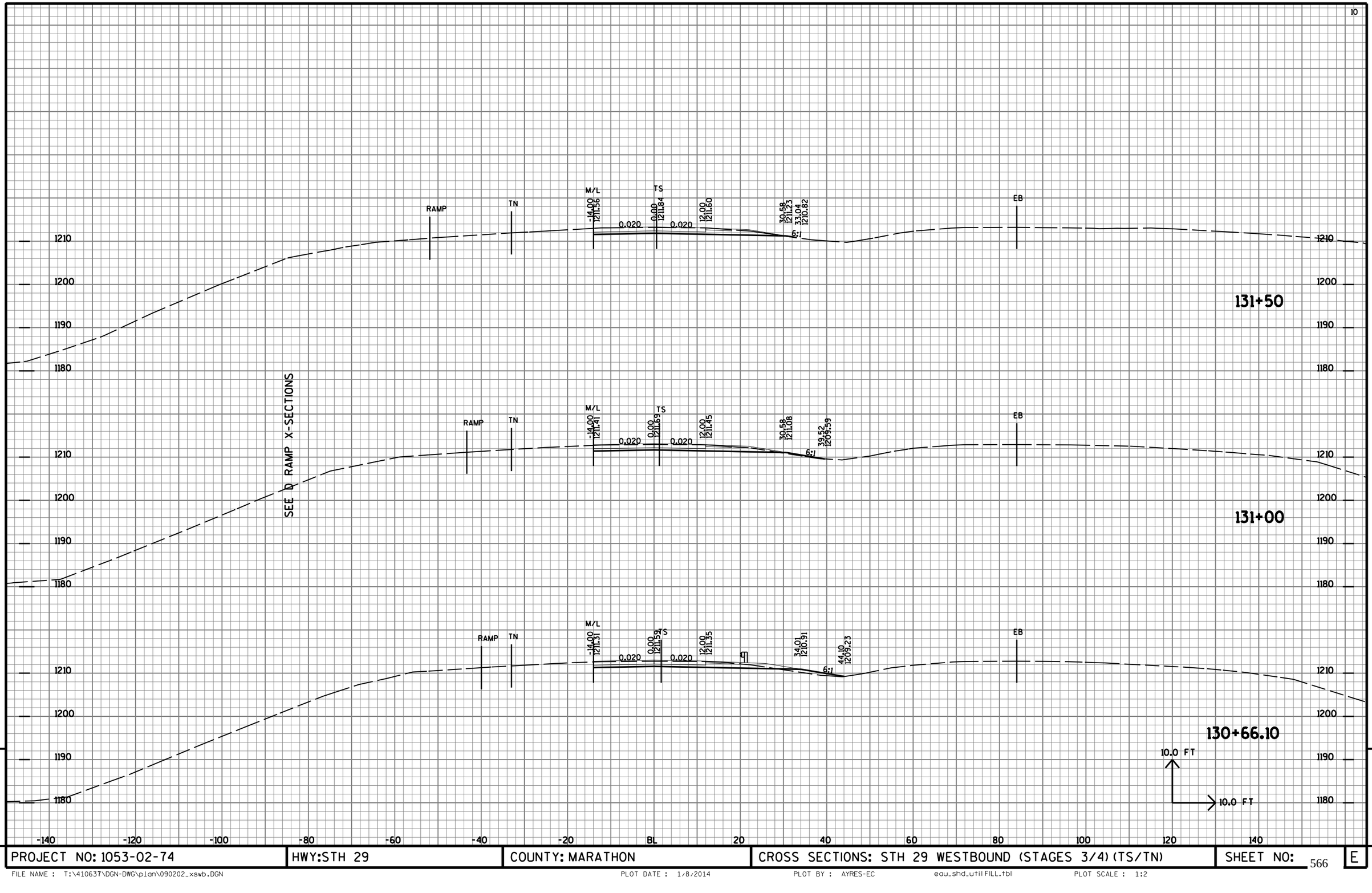
PROJECT NO: 1053-02-74	HWY: STH 29	COUNTY: MARATHON	CROSS SECTIONS: STH 29 WESTBOUND (STAGES 3/4) (TS/TN)	SHEET NO: 564	E

FILE NAME : T:\410637\DGN-DWG\plan\090202_xswb.DGN PLOT DATE : 1/8/2014 PLOT BY : AYRES-EC edu_shd_utilFILL.tbl PLOT SCALE : 1:2



PROJECT NO: 1053-02-74	HWY: STH 29	COUNTY: MARATHON	CROSS SECTIONS: STH 29 WESTBOUND (STAGES 3/4) (TS/TN)	SHEET NO: 565	E

FILE NAME : T:\410637\DGN-DWG\plan\090202_xswb.DGN PLOT DATE : 1/8/2014 PLOT BY : AYRES-EC edu_shd_utilFILL.tbl PLOT SCALE : 1:2



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PROJECT NO: 1053-02-74	HWY:STH 29	COUNTY: MARATHON	CROSS SECTIONS: STH 29 WESTBOUND (STAGES 3/4)(TS/TN)	SHEET NO: 566	E

133+00

132+50

132+00

131+86.10

SEE D RAMP X-SECTIONS

RAMP

TN

TS

EB

-14.00
1211.93

0.00
1212.01

12.00
1211.77

30.58
1211.40

32.35
1211.37

0.020

0.020

-14.00
1211.68

0.00
1211.96

12.00
1211.72

30.58
1211.34

30.87
1211.34

10.0 FT

10.0 FT

1210
1200
1190
1180

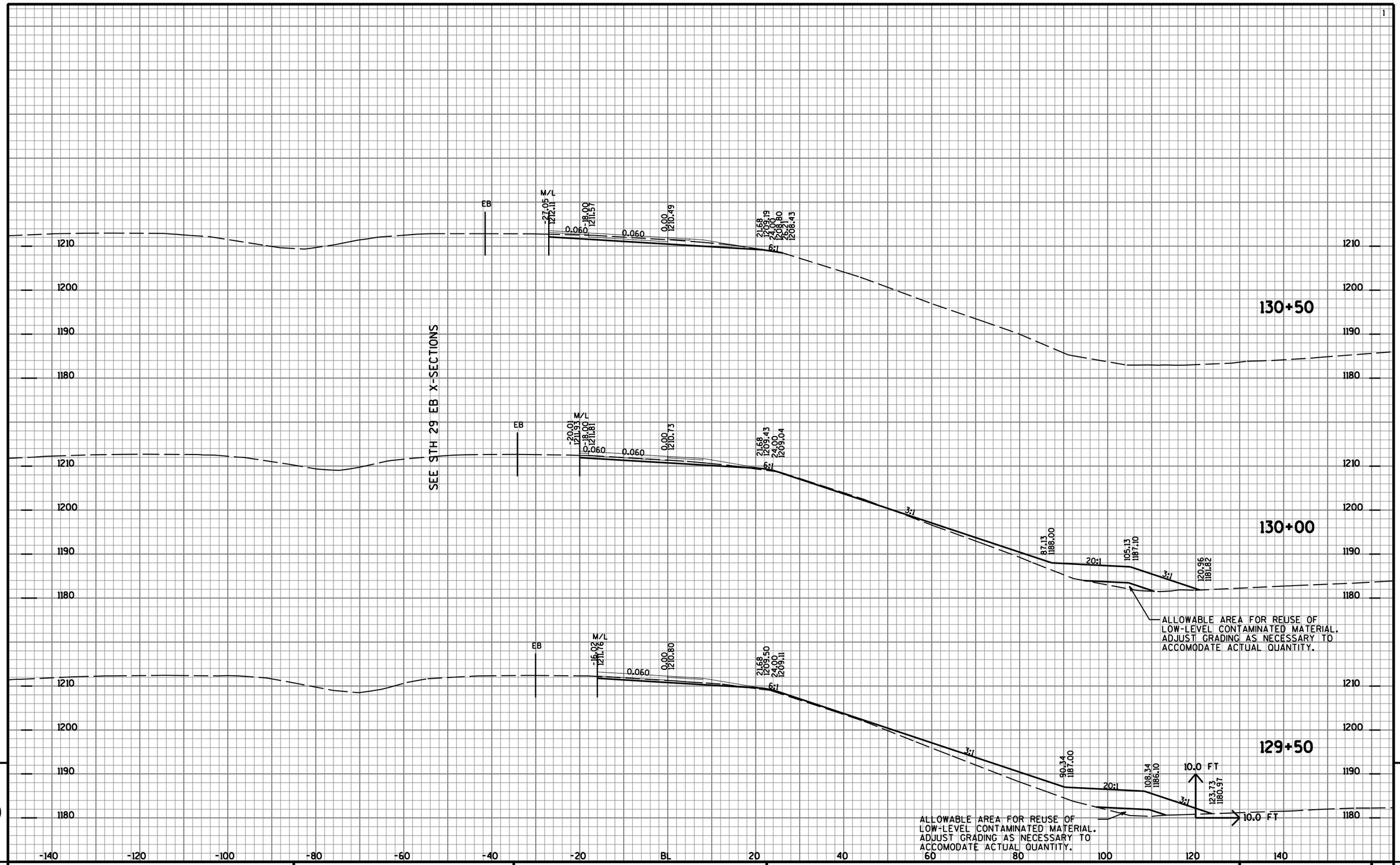
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9

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PROJECT NO: 1053-02-74	HWY: STH 29	COUNTY: MARATHON	CROSS SECTIONS: STH 29 WESTBOUND (STAGES 3/4) (TS/TN)	SHEET NO: 567	E

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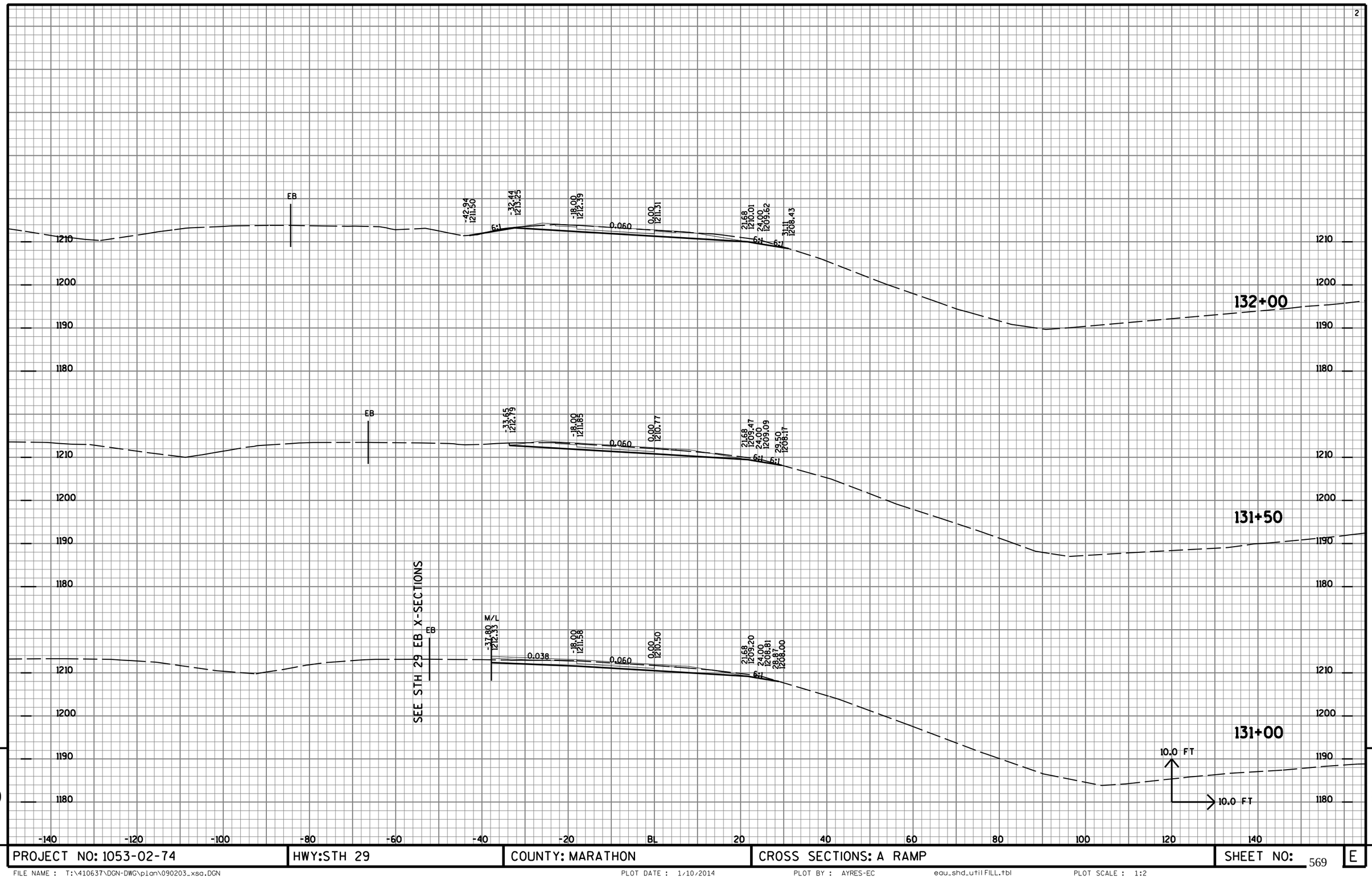


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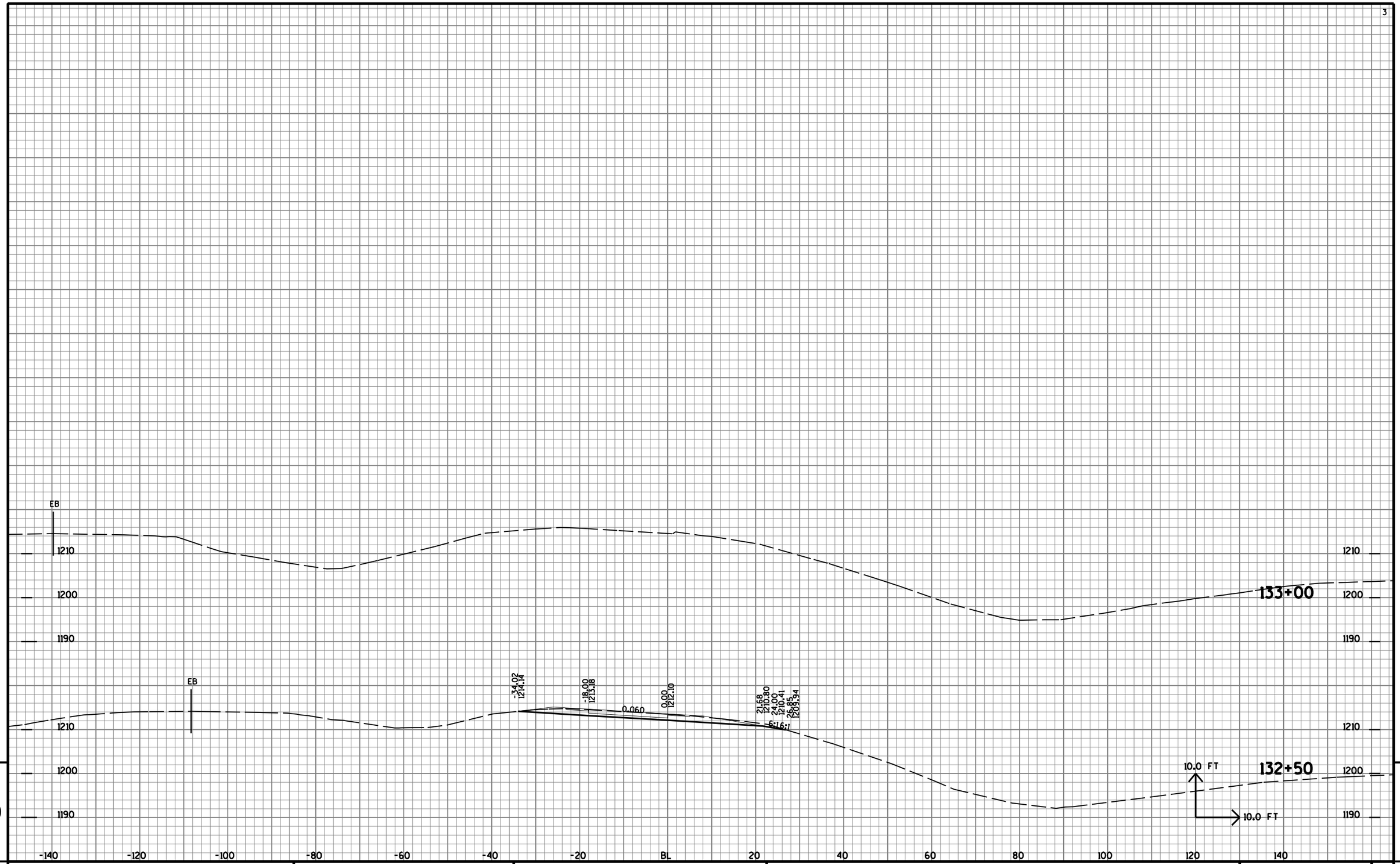
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FILE NAME : T:\410637\DGN-DWG\plan\090203_xsa.DGN PLOT DATE : 1/10/2014 PLOT BY : AYRES-EC edu_shd_utilFILL.tbl PLOT SCALE : 1:2



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PROJECT NO: 1053-02-74	HWY:STH 29	COUNTY: MARATHON	CROSS SECTIONS: A RAMP	SHEET NO: 569	E

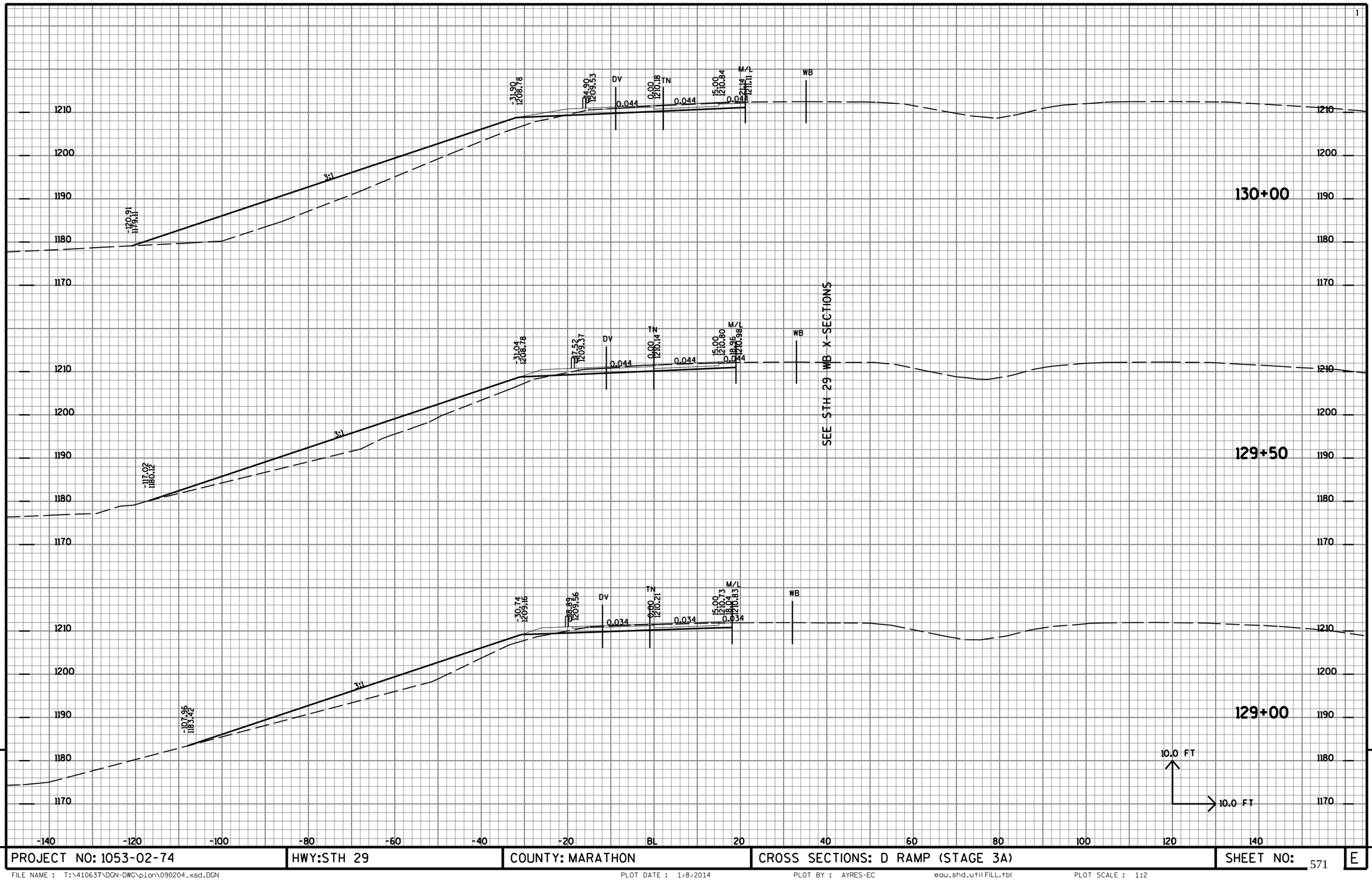


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PROJECT NO: 1053-02-74	HWY:STH 29	COUNTY: MARATHON	CROSS SECTIONS: A RAMP	SHEET NO: 570	E

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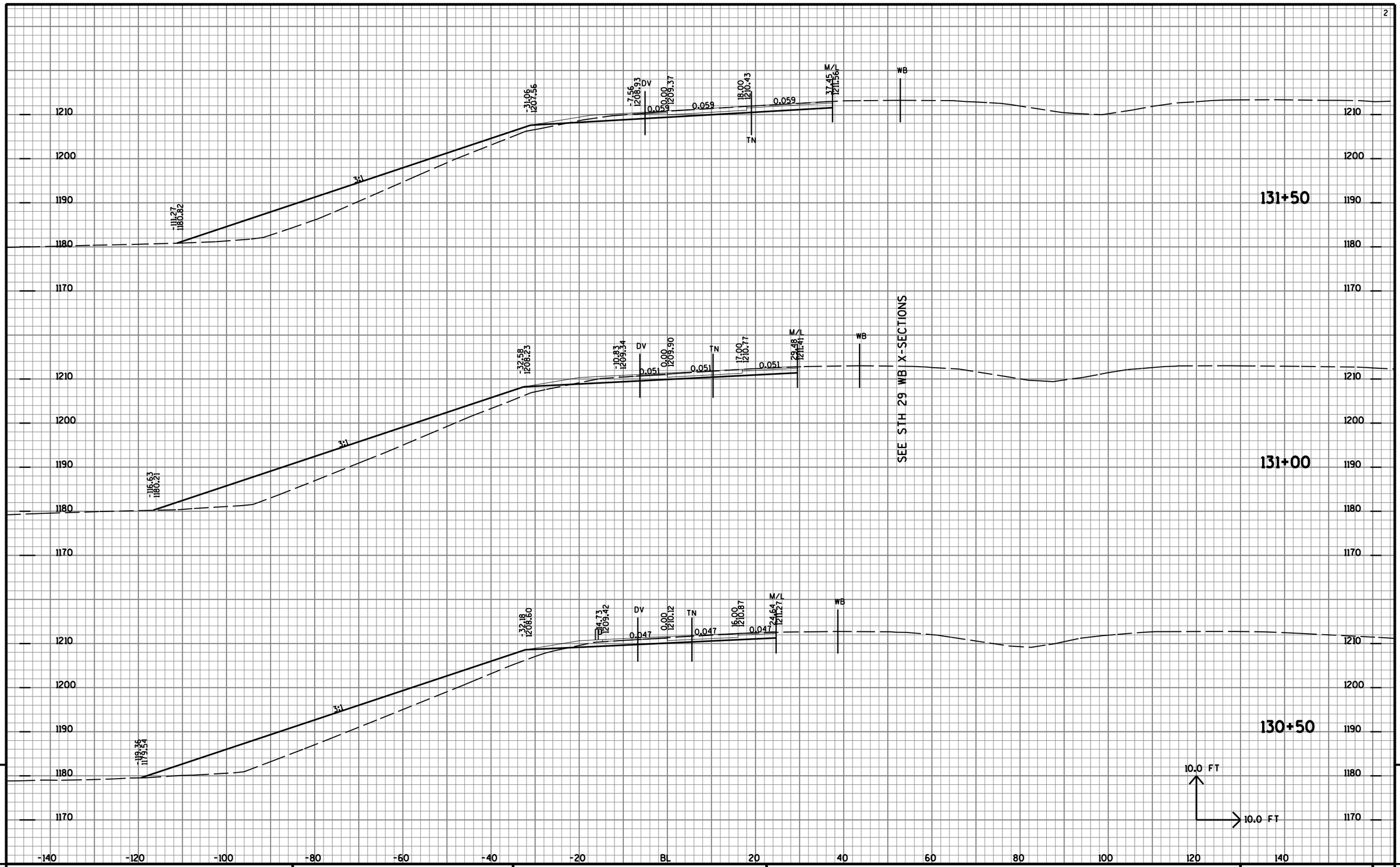


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PROJECT NO: 1053-02-74	HWY:STH 29	COUNTY: MARATHON	CROSS SECTIONS: D RAMP (STAGE 3A)	SHEET NO: 571	E

FILE NAME : T:\410637\DGN-DWG\plan\090204_xsd.DGN PLOT DATE : 1/8/2014 PLOT BY : AYRES-EC equ_shd_utilFILL.tbl PLOT SCALE : 1:2

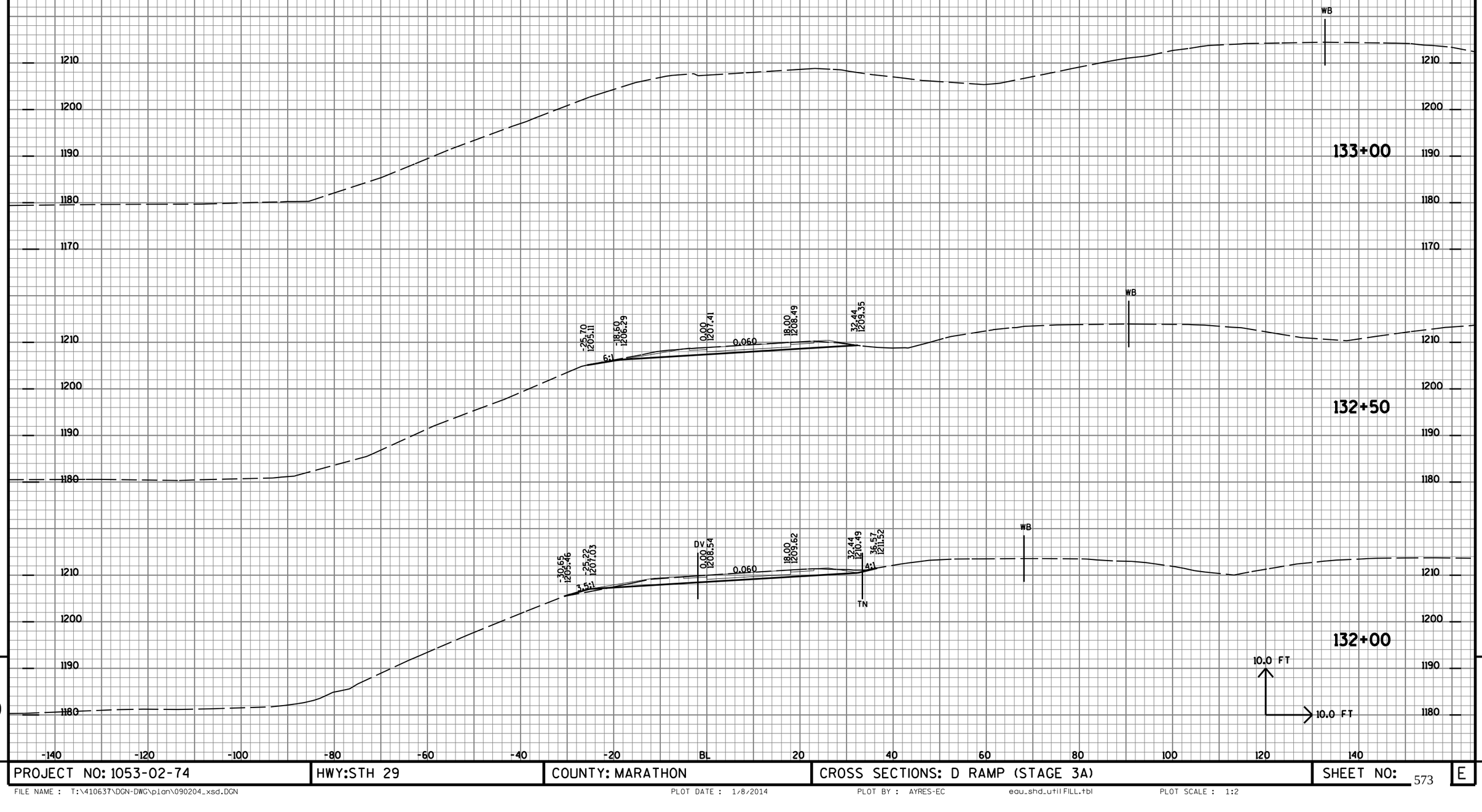


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PROJECT NO: 1053-02-74	HWY:STH 29	COUNTY: MARATHON	CROSS SECTIONS: D RAMP (STAGE 3A)	SHEET NO: 572	E

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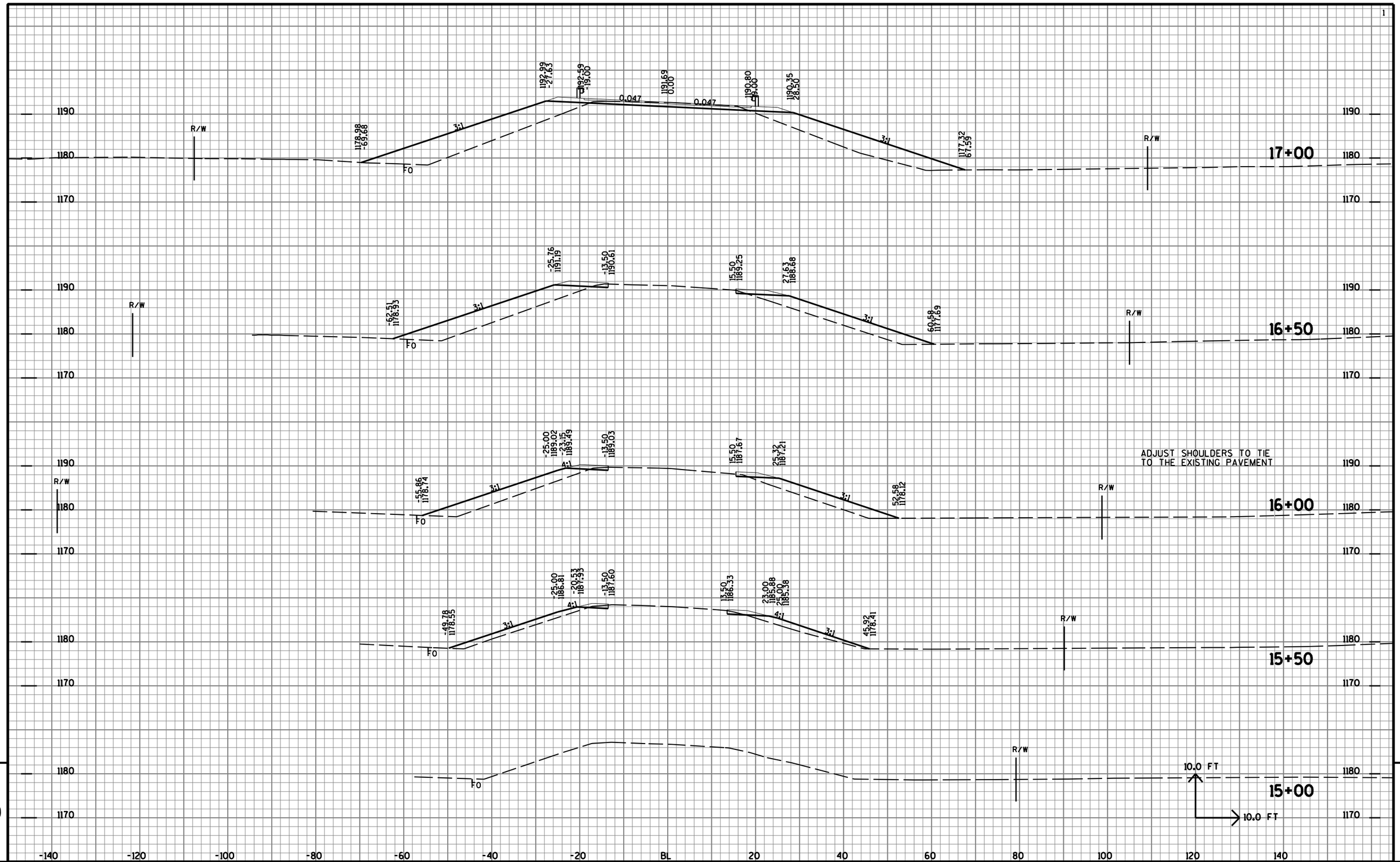


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PROJECT NO: 1053-02-74	HWY:STH 29	COUNTY: MARATHON	CROSS SECTIONS: D RAMP (STAGE 3A)	SHEET NO: 573	E

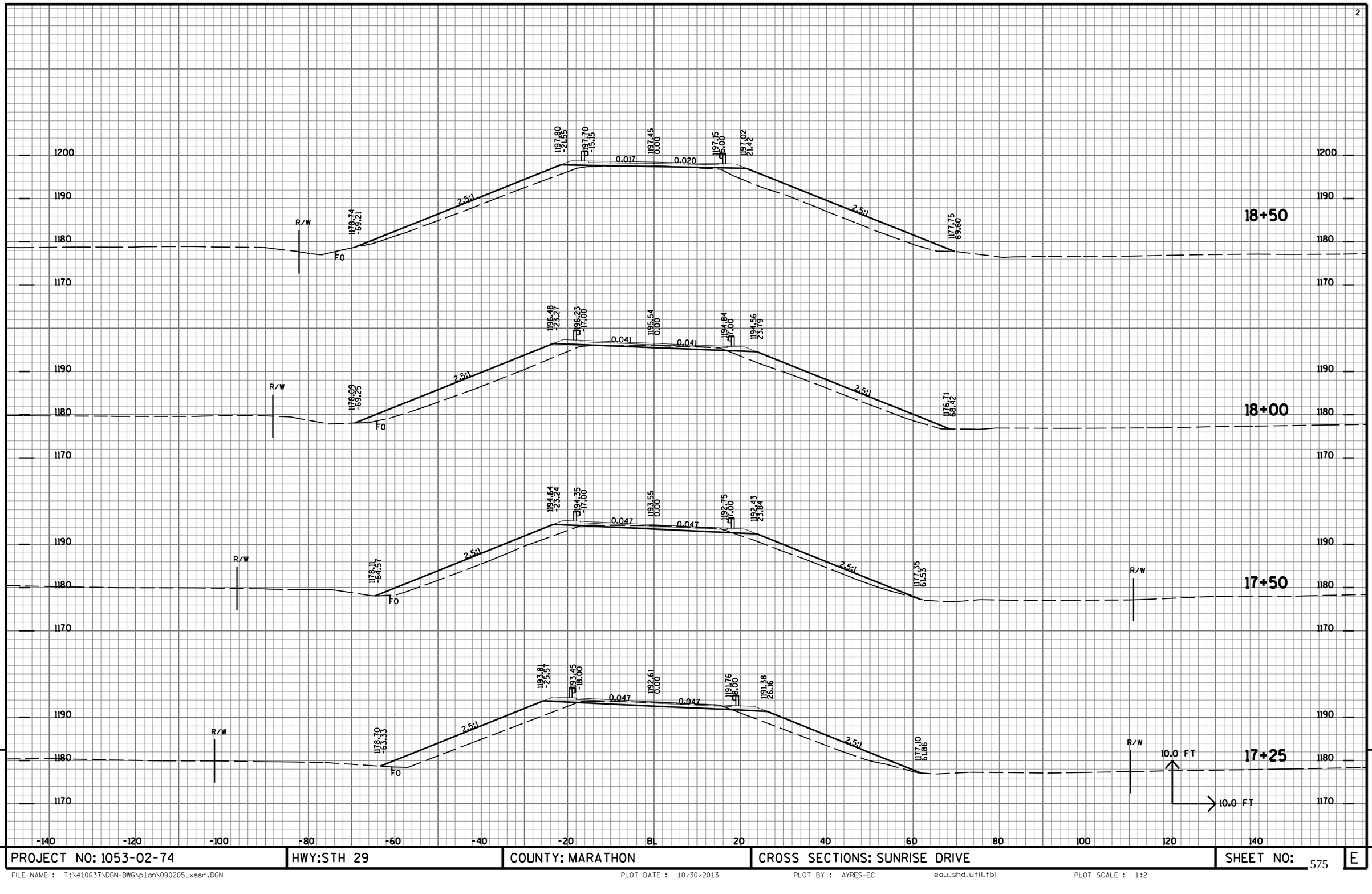
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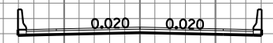
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FILE NAME : T:\410637\DGN-DWG\plan\090205_xssr.DGN PLOT DATE : 10/30/2013 PLOT BY : AYRES-EC edu_shd_util.tbl PLOT SCALE : 1:2



PROJECT NO: 1053-02-74	HWY:STH 29	COUNTY: MARATHON	CROSS SECTIONS: SUNRISE DRIVE	SHEET NO: 575 E

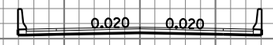
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STRUCTURE B-37-113

21+50

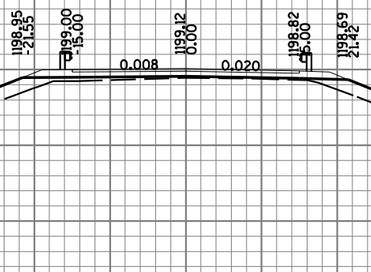
1200
1190
1180
1170
GAS



STRUCTURE B-37-113

19+50

1200
1190
1180
1170
GAS



19+00

1200
1190
1180
1170
GAS

10.0 FT
10.0 FT

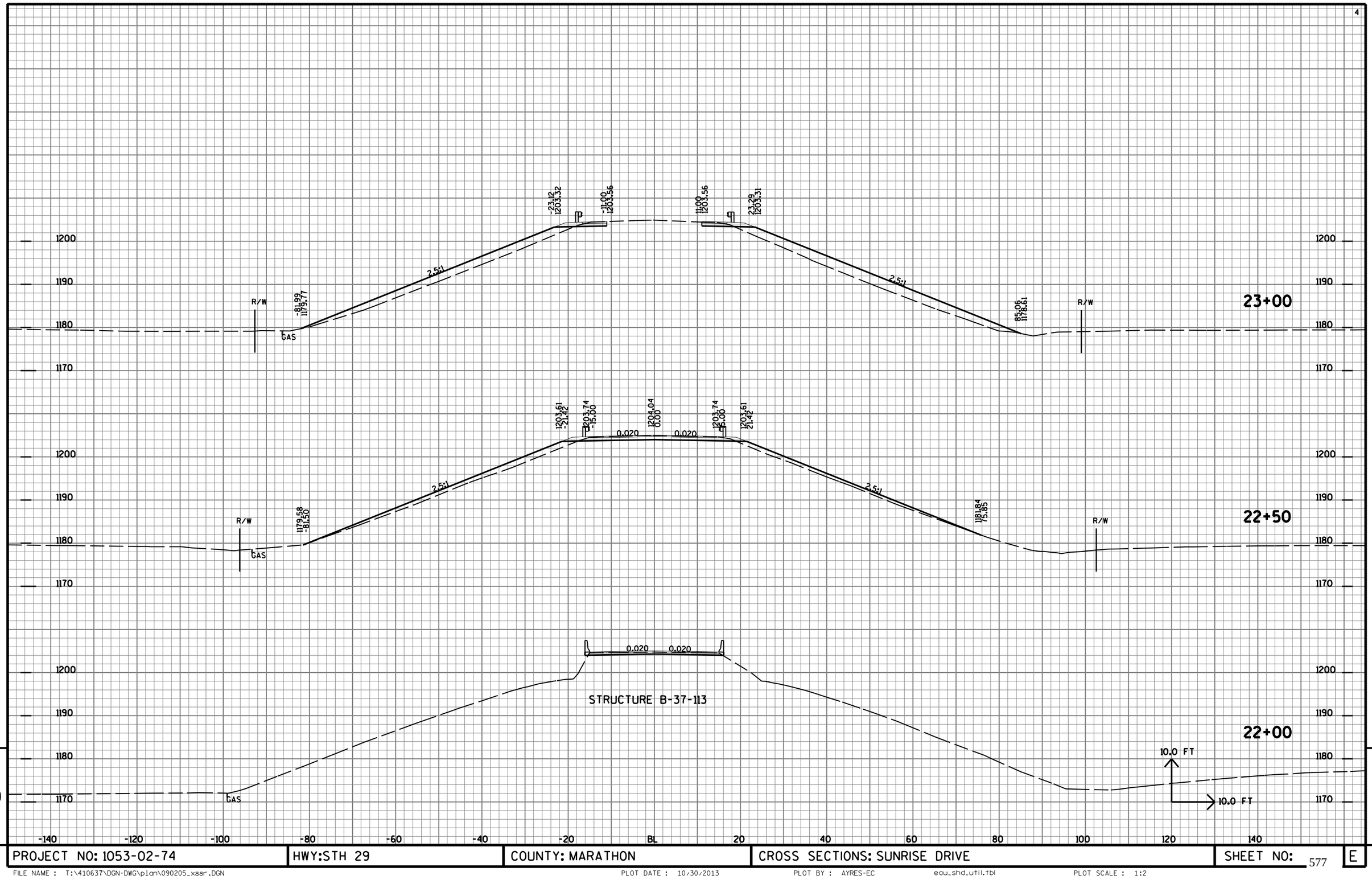
-140 -120 -100 -80 -60 -40 -20 BL 20 40 60 80 100 120 140

9

9

PROJECT NO: 1053-02-74	HWY:STH 29	COUNTY: MARATHON	CROSS SECTIONS: SUNRISE DRIVE	SHEET NO: 576	E

FILE NAME : T:\410637\DGN-DWG\plan\090205_xssr.DGN PLOT DATE : 10/30/2013 PLOT BY : AYRES-EC edu_shd_util.tbl PLOT SCALE : 1:2

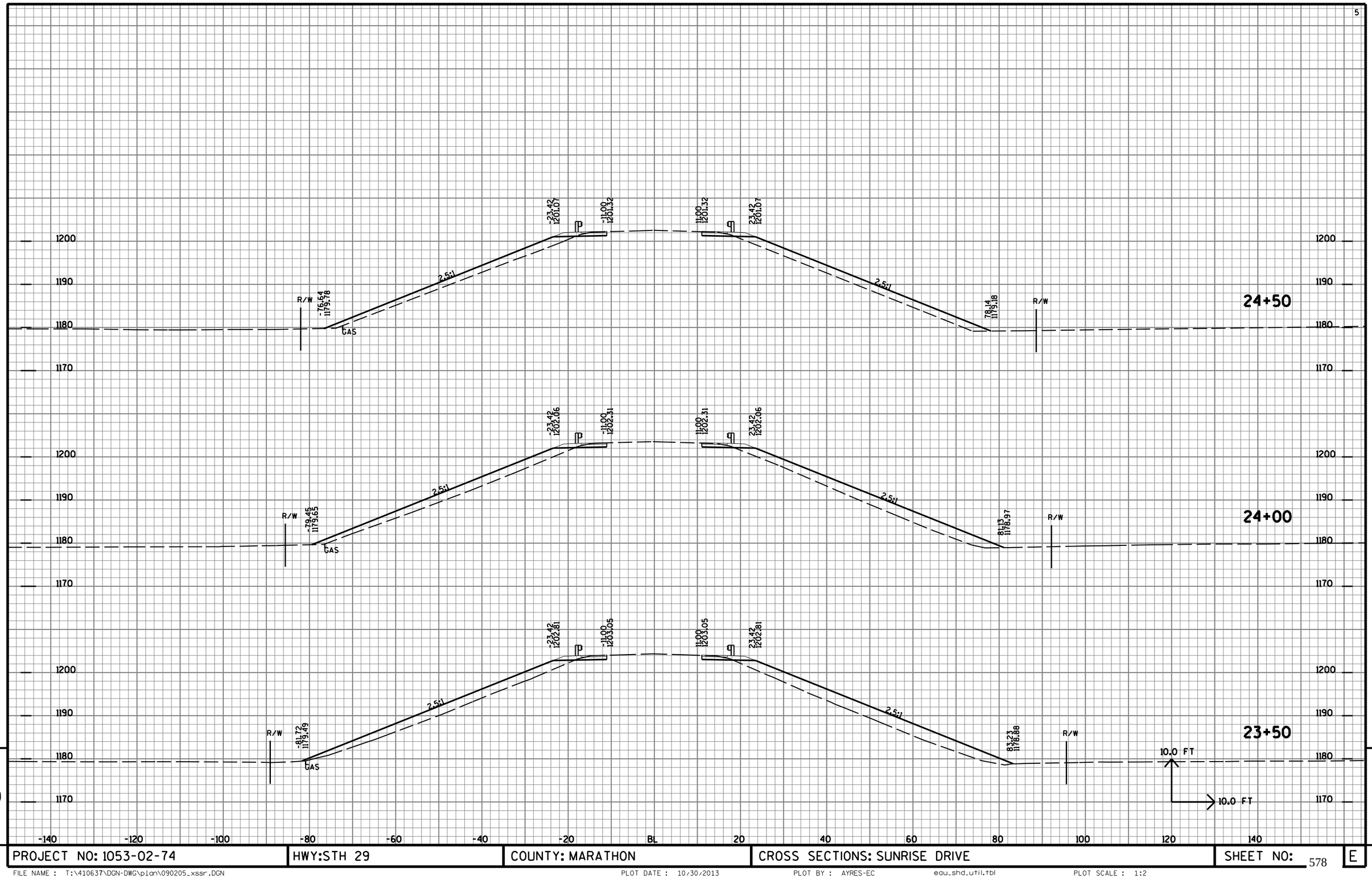


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PROJECT NO: 1053-02-74	HWY:STH 29	COUNTY: MARATHON	CROSS SECTIONS: SUNRISE DRIVE	SHEET NO: 577	E

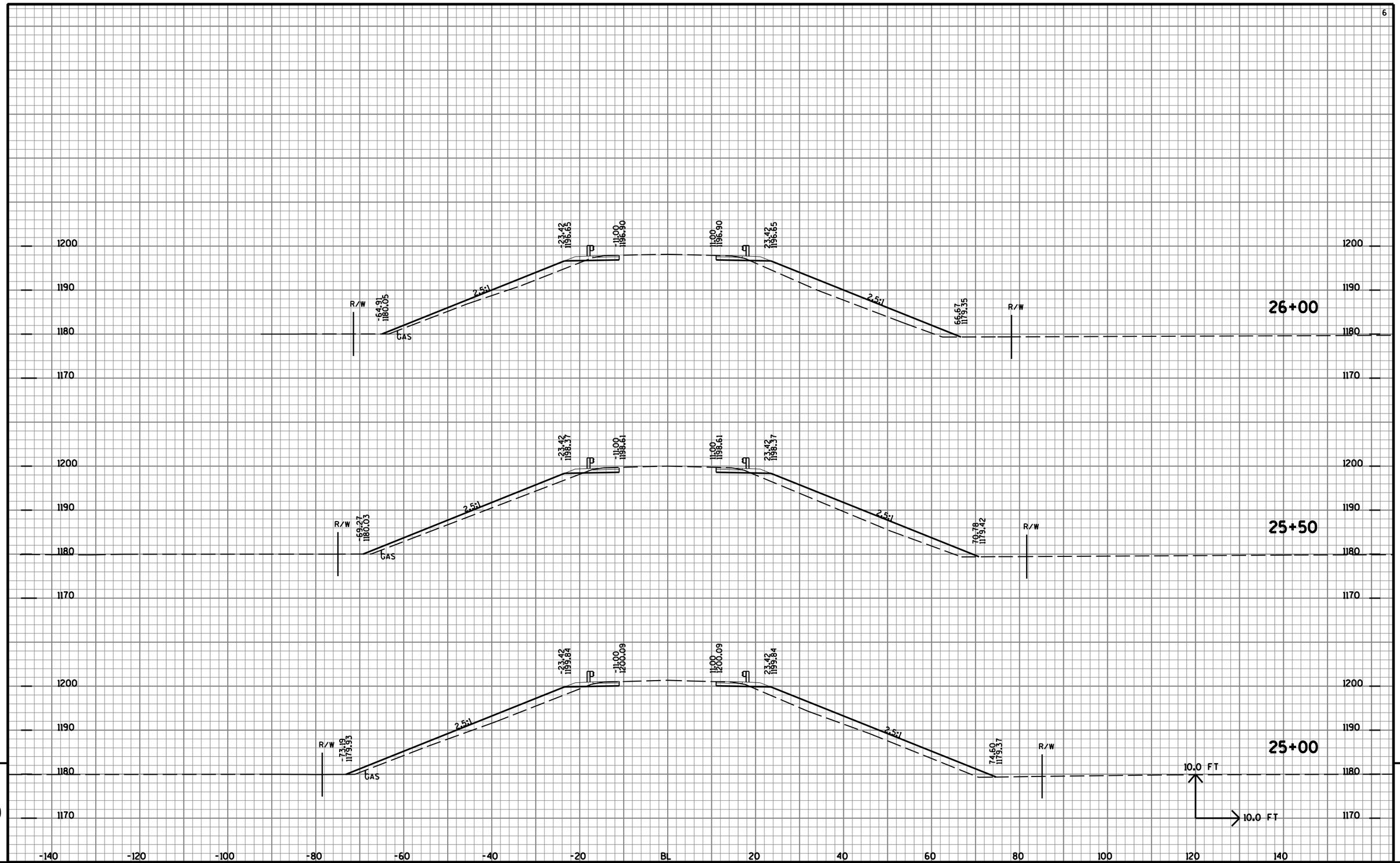
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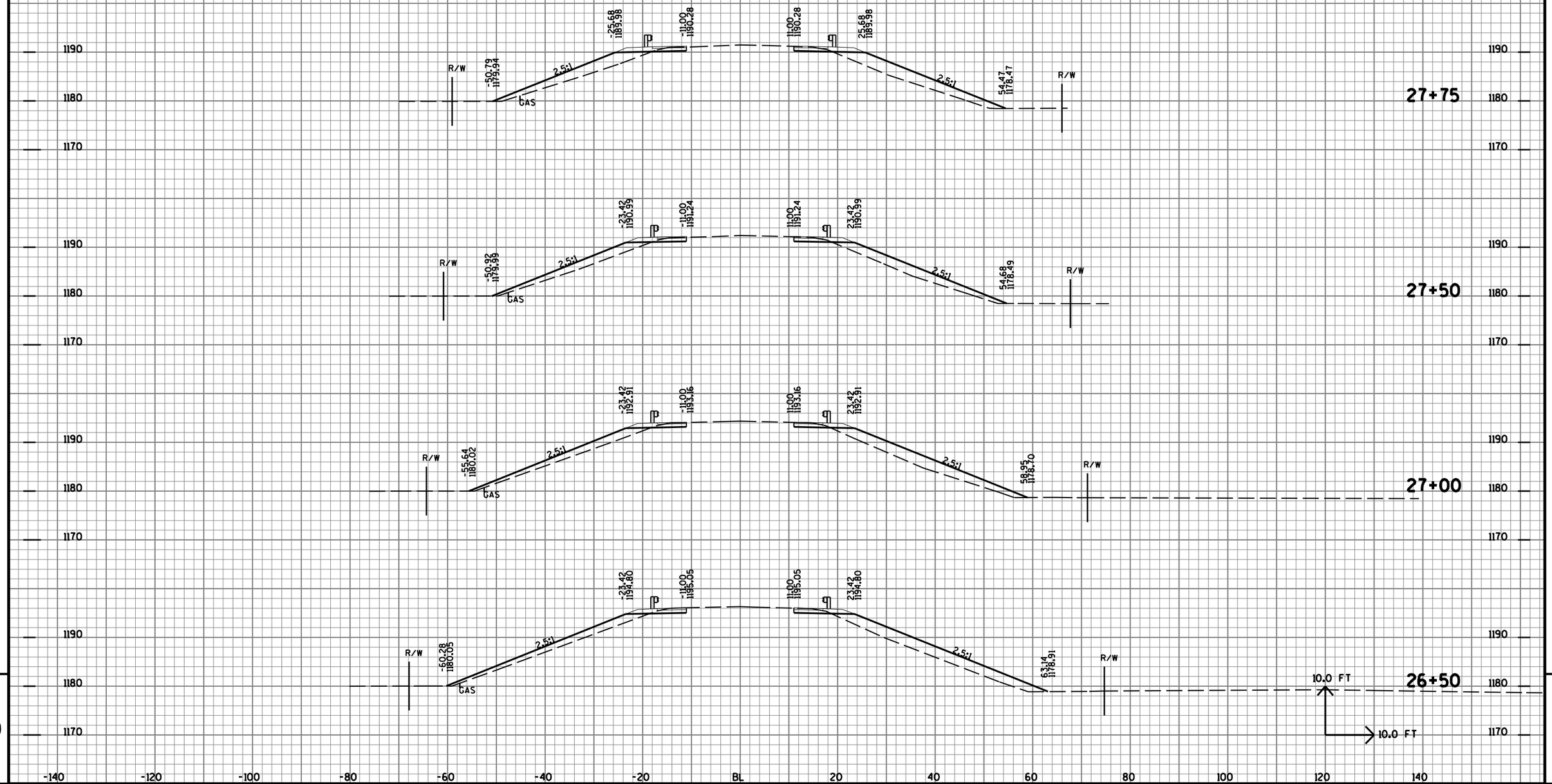
PROJECT NO: 1053-02-74	HWY:STH 29	COUNTY: MARATHON	CROSS SECTIONS: SUNRISE DRIVE	SHEET NO: 578	E

FILE NAME : T:\410637\DGN-DWG\plan\090205_xssr.DGN PLOT DATE : 10/30/2013 PLOT BY : AYRES-EC edu_shd_util.tbl PLOT SCALE : 1:2



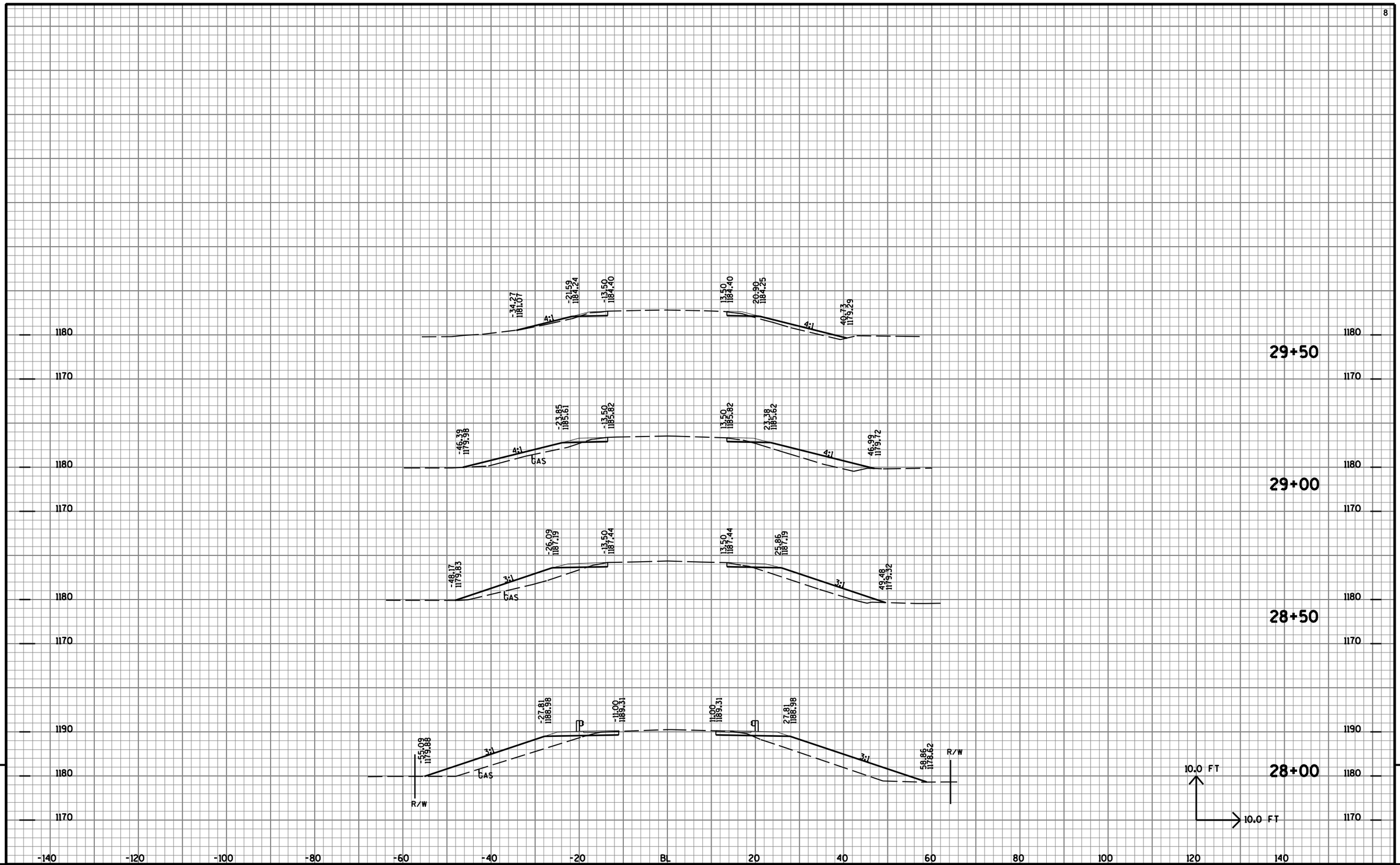
PROJECT NO: 1053-02-74	HWY:STH 29	COUNTY: MARATHON	CROSS SECTIONS: SUNRISE DRIVE	SHEET NO: 579 E

FILE NAME : T:\410637\DGN-DWG\plan\090205_xssr.DGN PLOT DATE : 10/30/2013 PLOT BY : AYRES-EC edu_shd_util.tbl PLOT SCALE : 1:2



PROJECT NO: 1053-02-74	HWY:STH 29	COUNTY: MARATHON	CROSS SECTIONS: SUNRISE DRIVE	SHEET NO: 580	E

FILE NAME : T:\410637\DGN-DWG\plan\090205_xssr.DGN PLOT DATE : 10/30/2013 PLOT BY : AYRES-EC edu_shd_util.tbl PLOT SCALE : 1:2

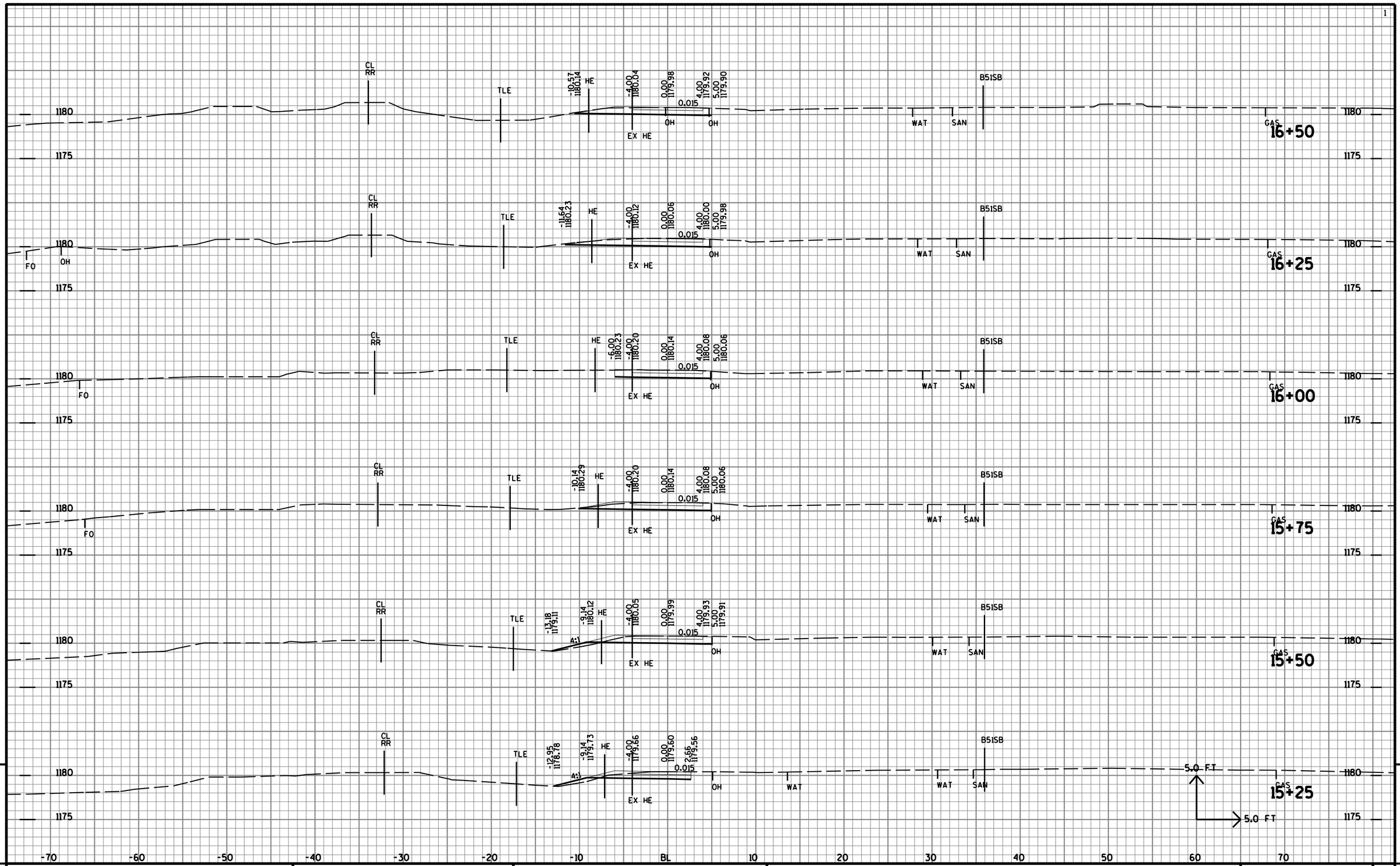


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PROJECT NO: 1053-02-74	HWY:STH 29	COUNTY: MARATHON	CROSS SECTIONS: SUNRISE DRIVE	SHEET NO: 581	E

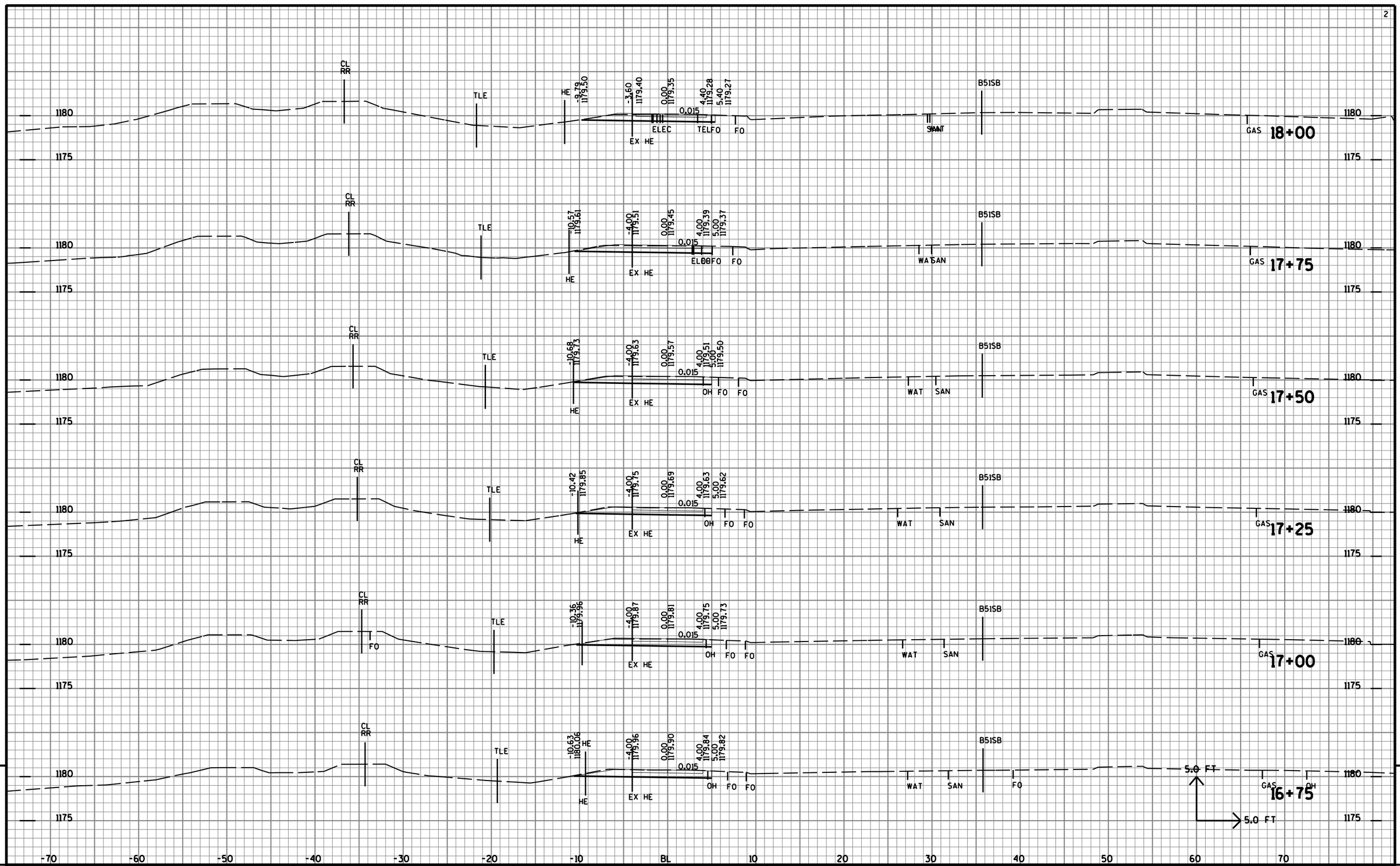
FILE NAME : T:\410637\DGN-DWG\plan\090205_xssr.DGN PLOT DATE : 10/30/2013 PLOT BY : AYRES-EC edu_shd_util.tbl PLOT SCALE : 1:2



9

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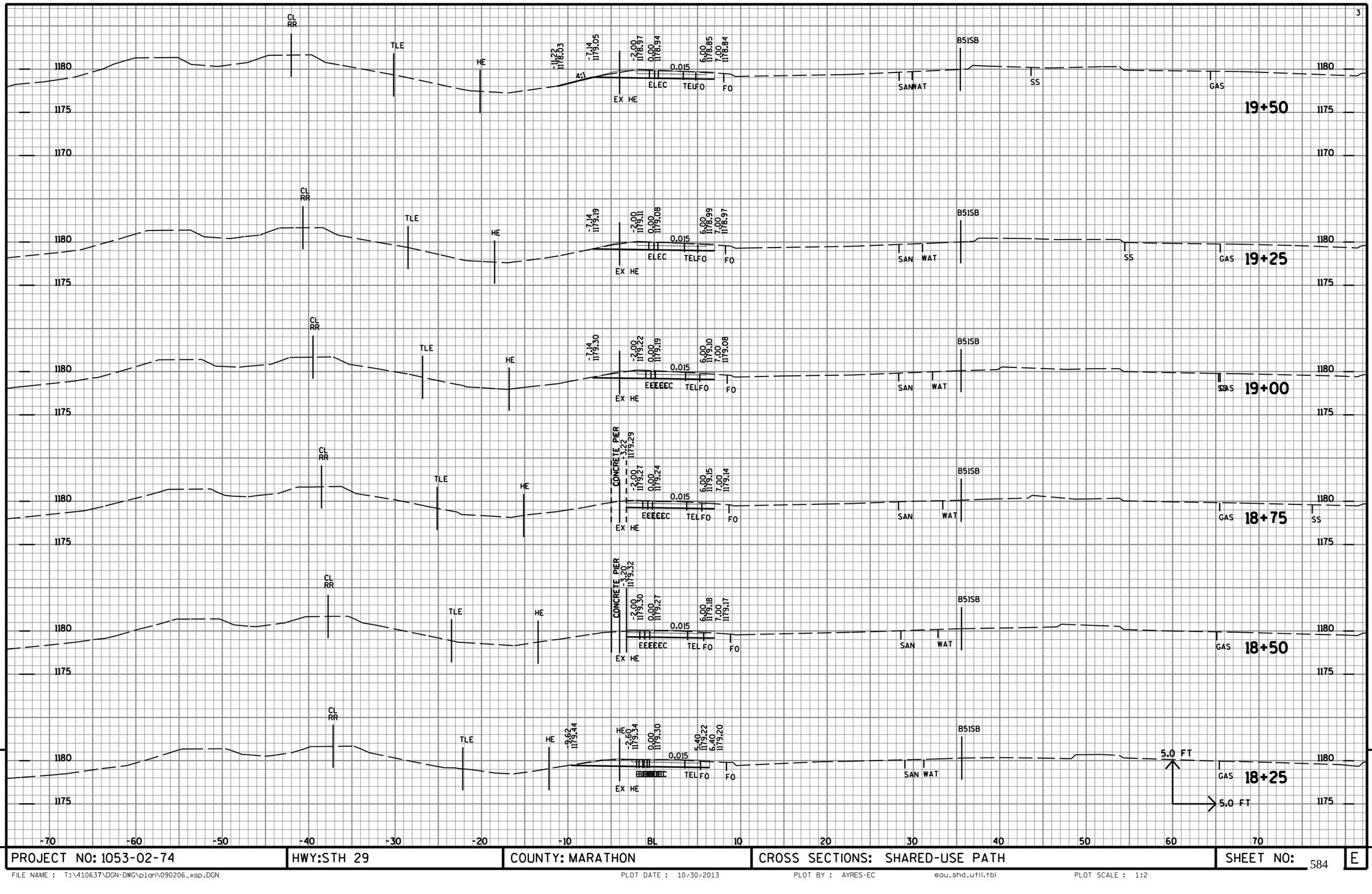
PROJECT NO: 1053-02-74	HWY:STH 29	COUNTY: MARATHON	CROSS SECTIONS: SHARED-USE PATH	SHEET NO: 582	E



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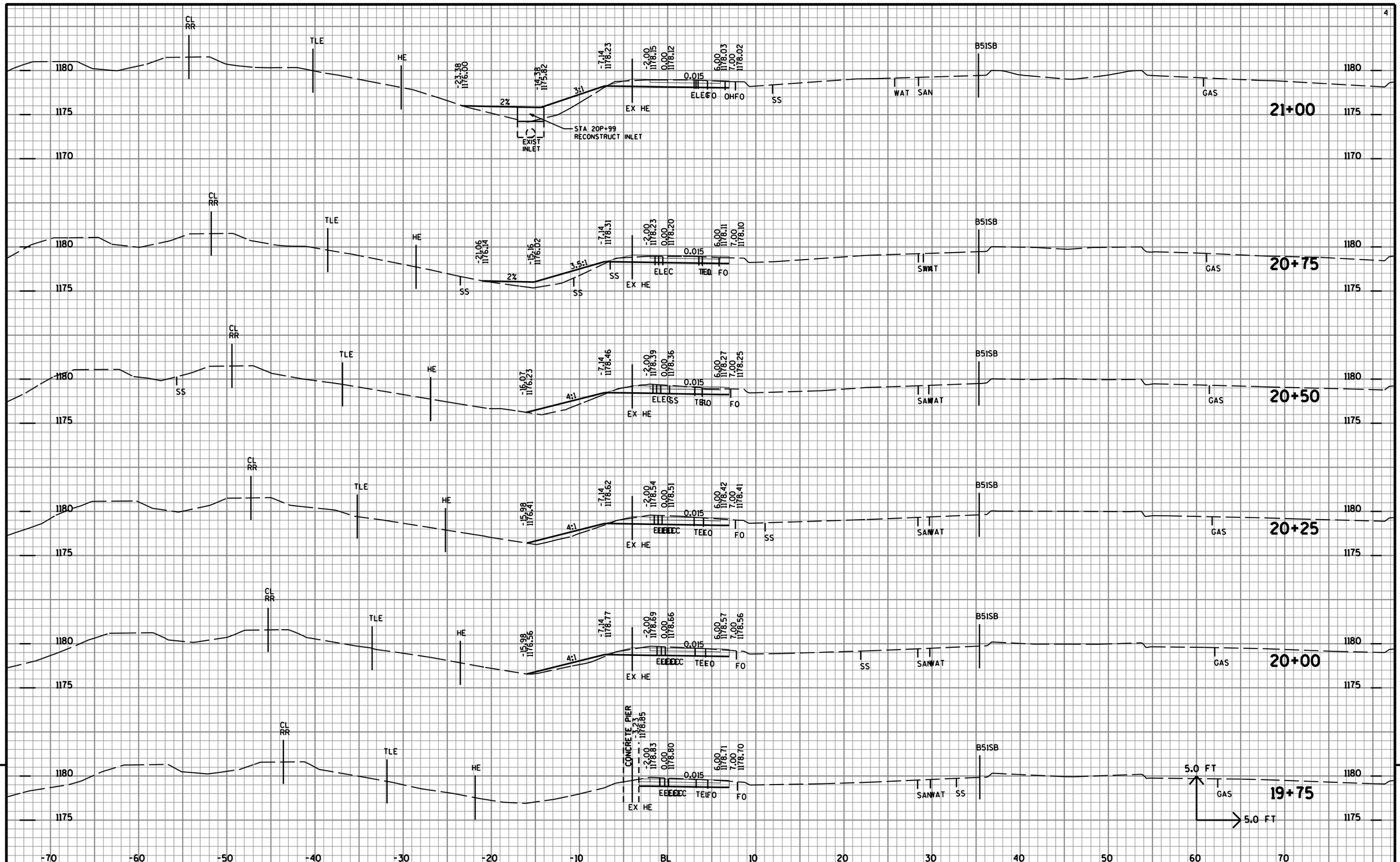
PROJECT NO: 1053-02-74	HWY:STH 29	COUNTY: MARATHON	CROSS SECTIONS: SHARED-USE PATH	SHEET NO: 583	E



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PROJECT NO: 1053-02-74	HWY:STH 29	COUNTY: MARATHON	CROSS SECTIONS: SHARED-USE PATH	SHEET NO: 584 E

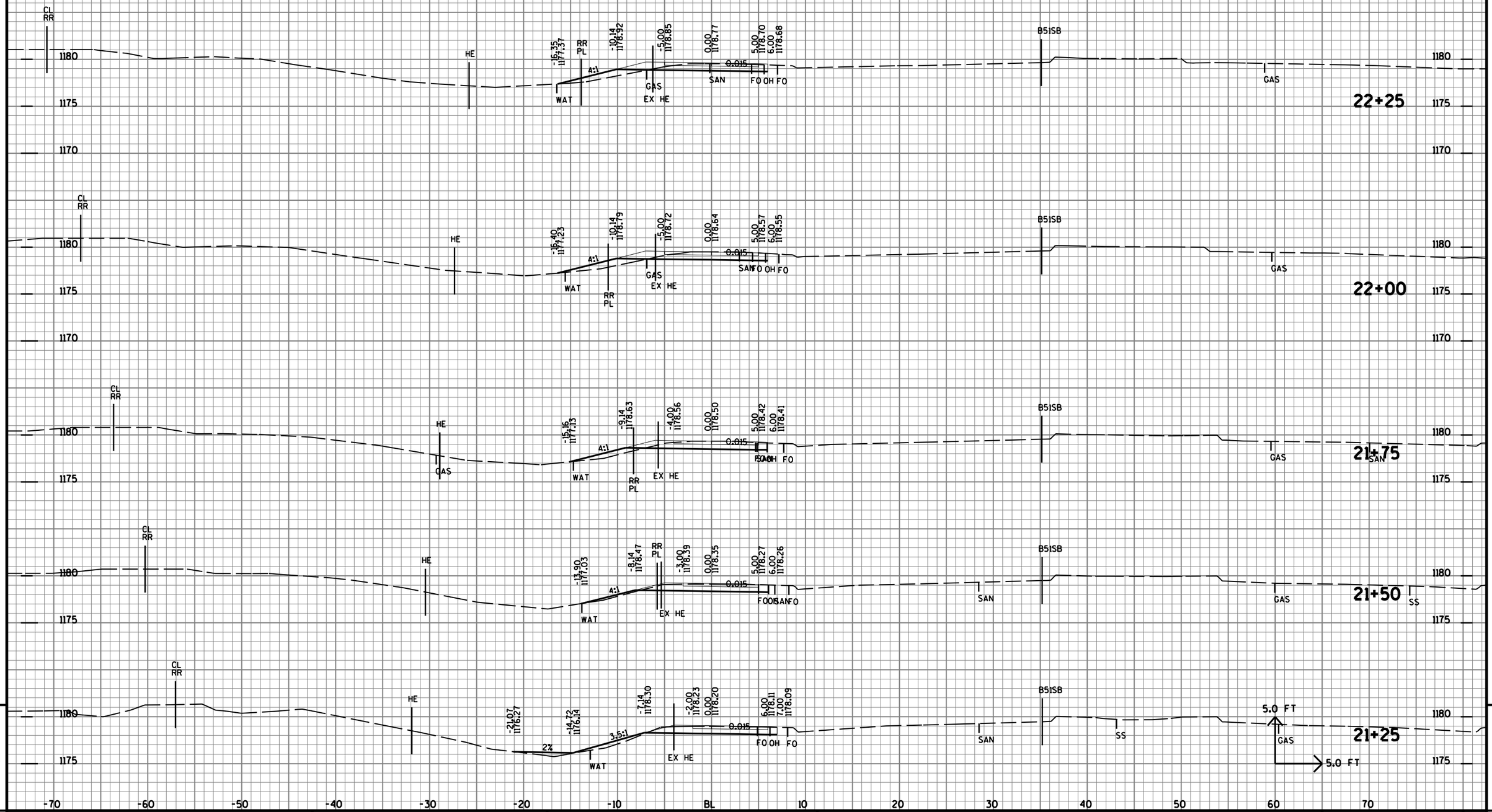


9

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PROJECT NO: 1053-02-74	HWY: STH 29	COUNTY: MARATHON	CROSS SECTIONS: SHARED-USE PATH	SHEET NO: 585	E

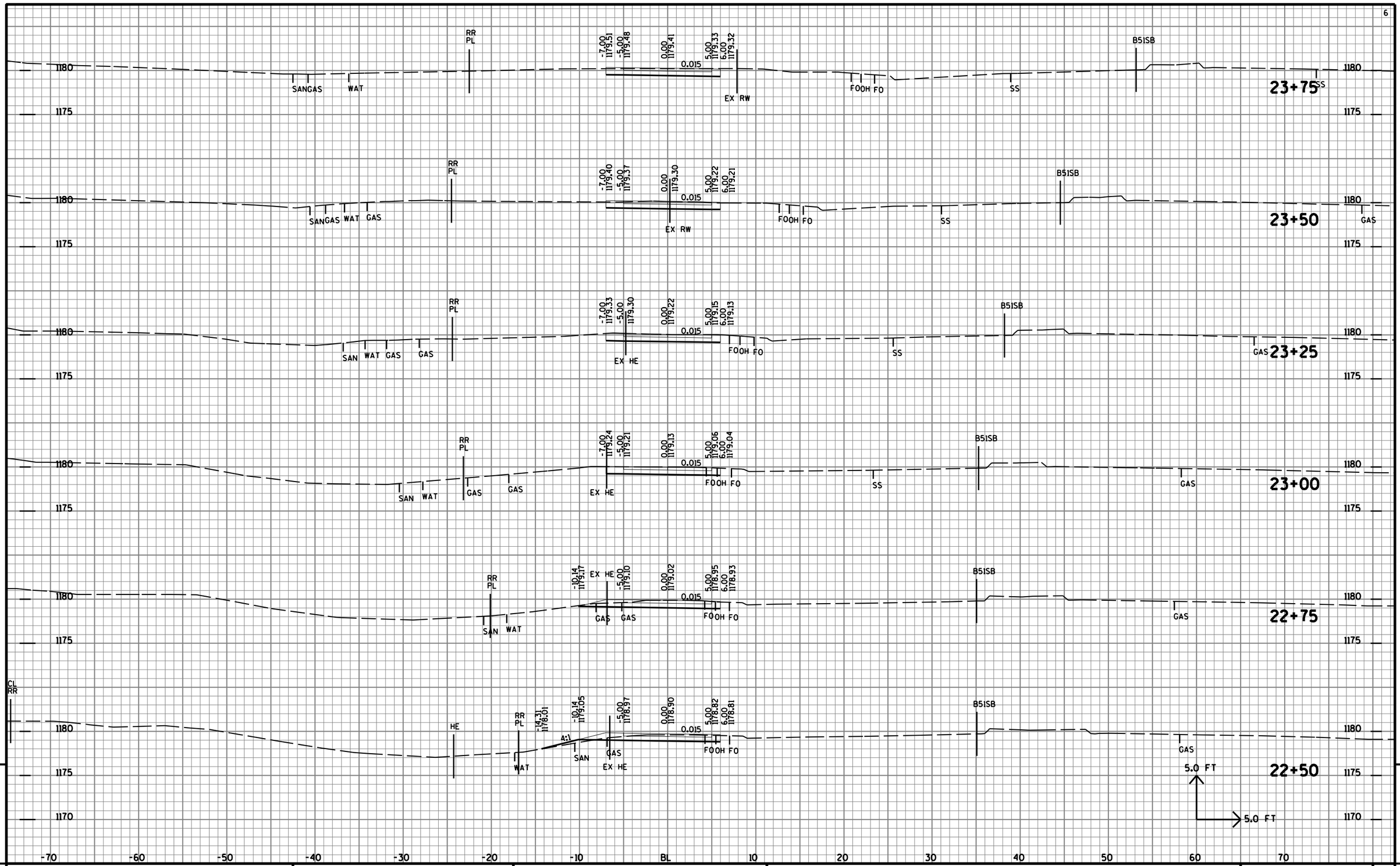
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9

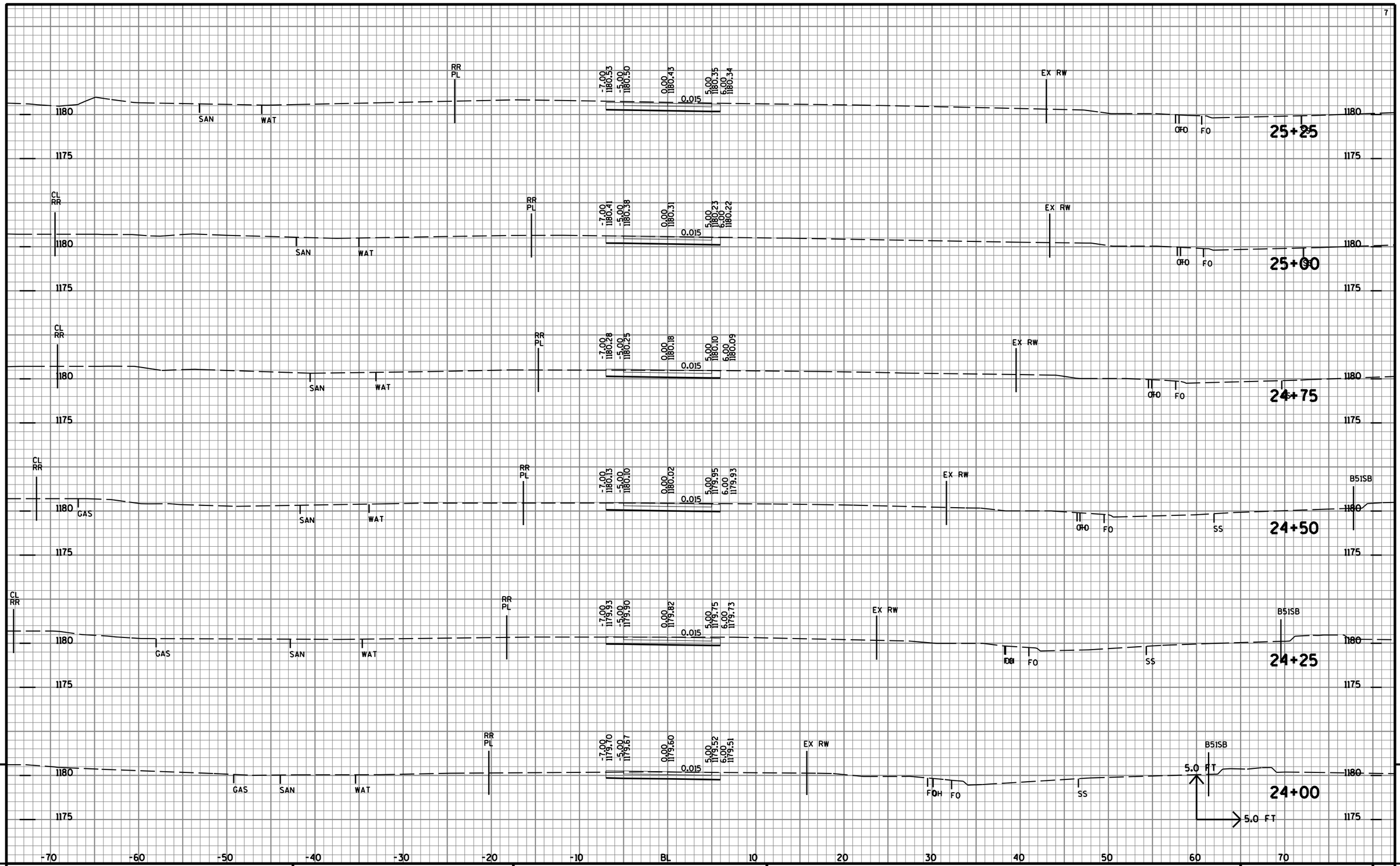
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PROJECT NO: 1053-02-74	HWY: STH 29	COUNTY: MARATHON	CROSS SECTIONS: SHARED-USE PATH	SHEET NO: 586	E



PROJECT NO: 1053-02-74	HWY:STH 29	COUNTY: MARATHON	CROSS SECTIONS: SHARED-USE PATH	SHEET NO: 587 E

FILE NAME : T:\410637\DGN-DWG\plan\090206_xsp.DGN PLOT DATE : 10/30/2013 PLOT BY : AYRES-EC eau_shd_util.tbl PLOT SCALE : 1:2



9

9

PROJECT NO: 1053-02-74	HWY:STH 29	COUNTY: MARATHON	CROSS SECTIONS: SHARED-USE PATH	SHEET NO: 588	E

27+00

26+75

26+50

26+25

26+00

25+75

25+50

1180
1175

RR PL
EX RW
SAN
WAT
ELEC
OHO
FO
SS
BSISB

-3.75 1180.23
-1.35 1180.20
0.00 1180.18
3.69 1180.13
0.015

-4.94 1180.22
-2.94 1180.19
0.00 1180.14
5.00 1180.07
6.00 1180.05
0.015

-6.47 1180.33
-4.47 1180.30
0.00 1180.23
5.00 1180.15
6.00 1180.14
0.015

-7.00 1180.45
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0.00 1180.34
5.00 1180.27
6.00 1180.25
0.015

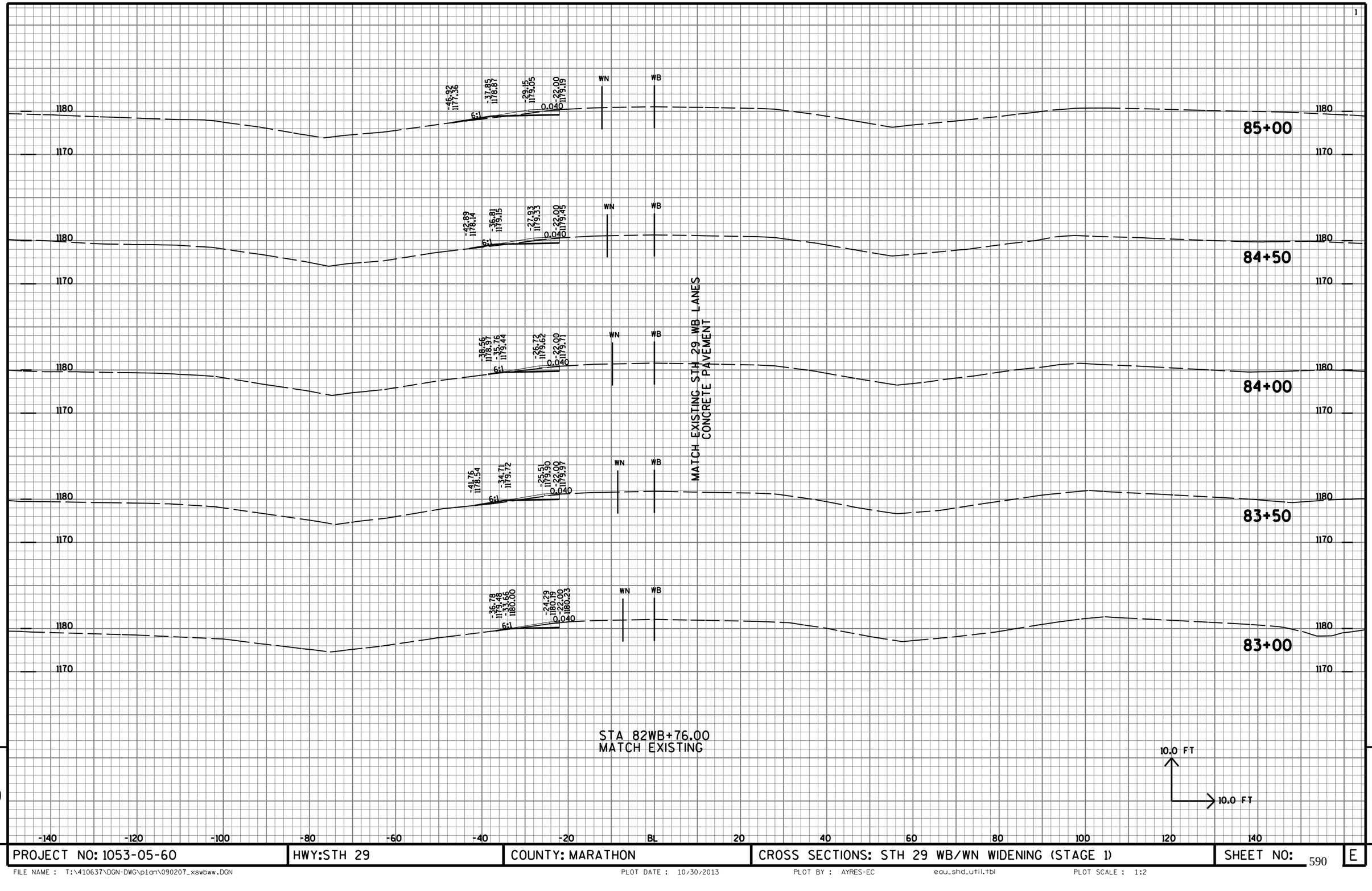
-7.00 1180.55
-5.00 1180.52
0.00 1180.44
5.00 1180.37
6.00 1180.35
0.015

5.0 FT
5.0 FT

-70 -60 -50 -40 -30 -20 -10 BL 10 20 30 40 50 60 70

9 9

PROJECT NO: 1053-02-74	HWY:STH 29	COUNTY: MARATHON	CROSS SECTIONS: SHARED-USE PATH	SHEET NO: 589	E

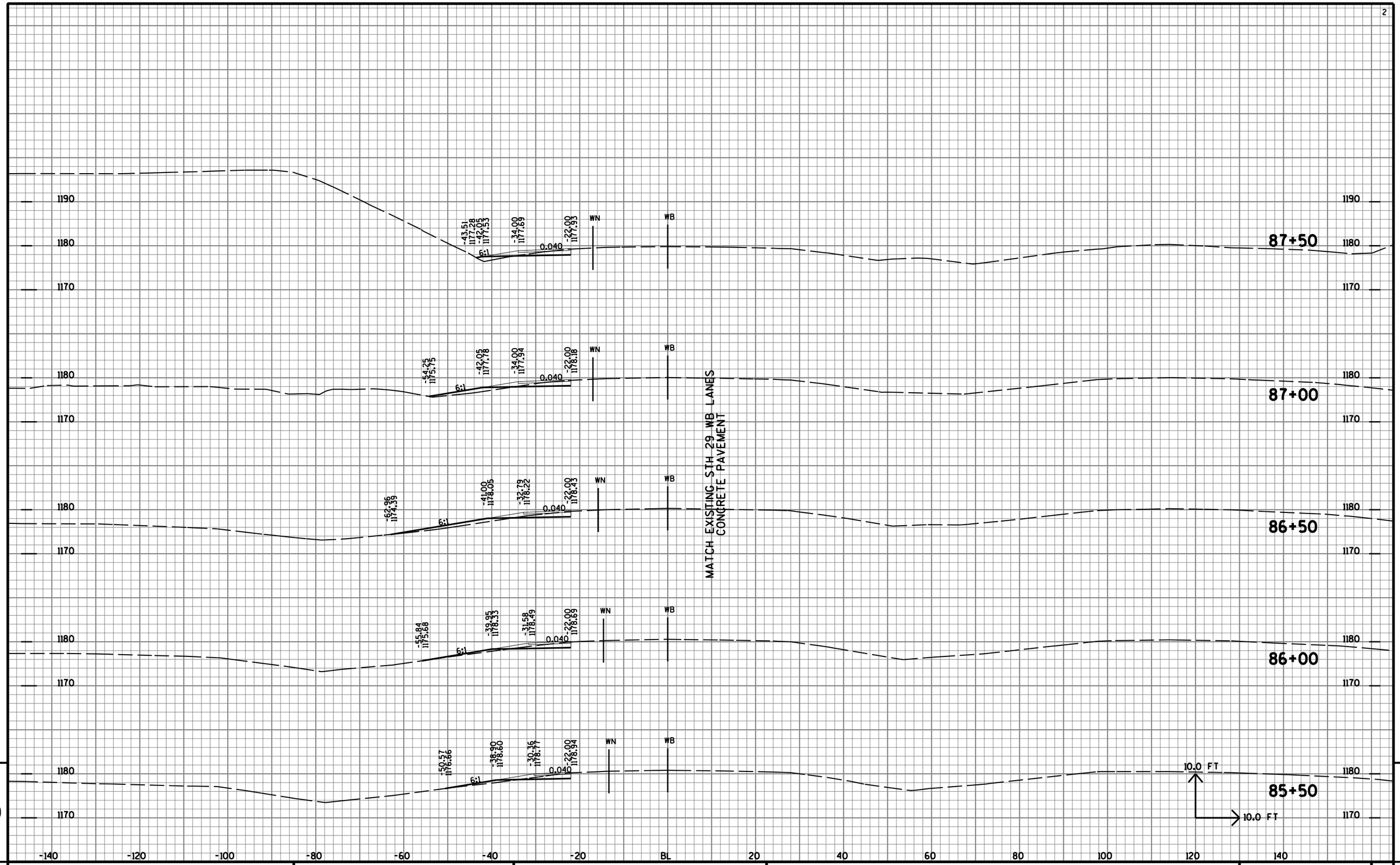


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9

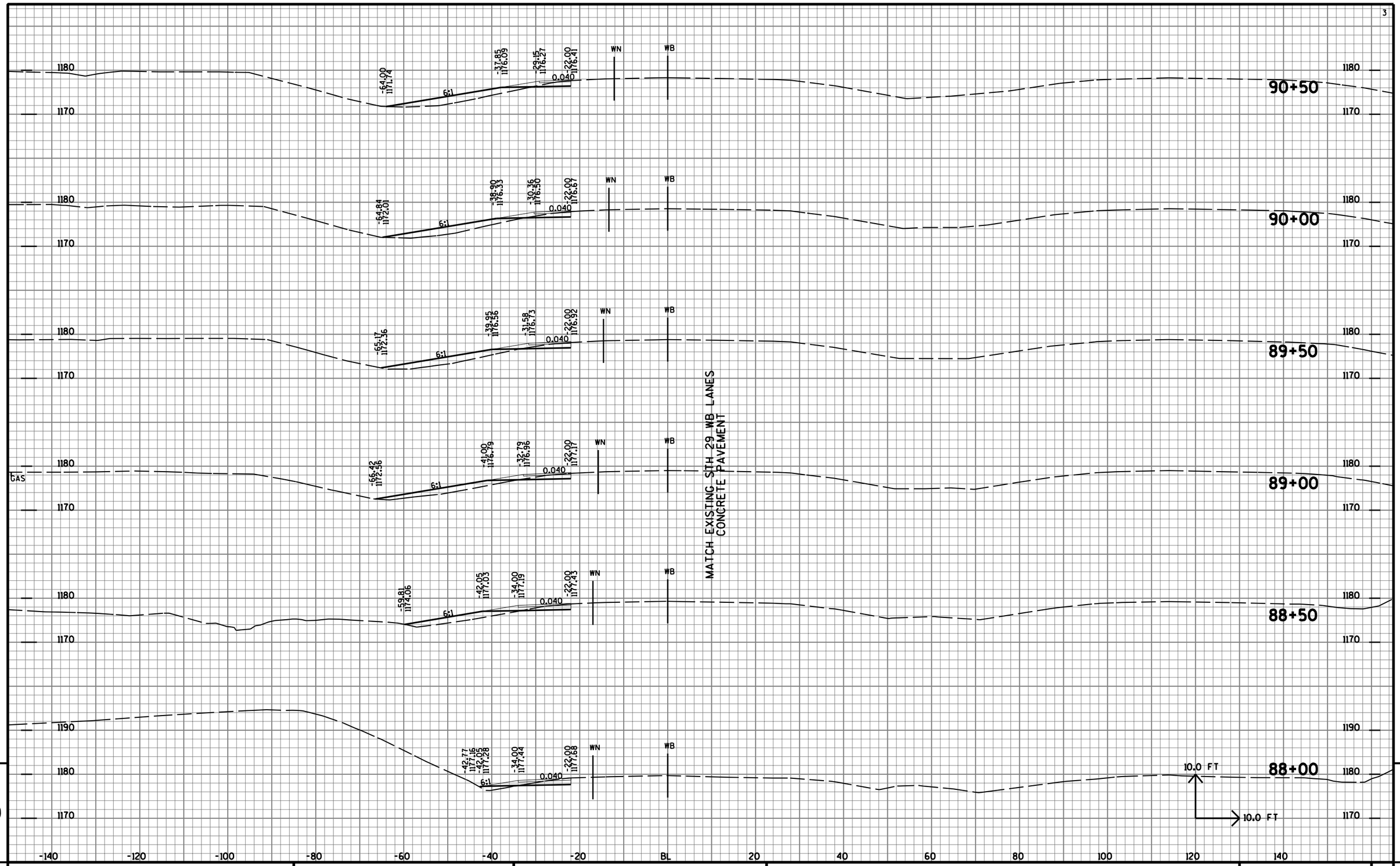
PROJECT NO: 1053-05-60	HWY: STH 29	COUNTY: MARATHON	CROSS SECTIONS: STH 29 WB/WN WIDENING (STAGE 1)	SHEET NO: 590	E

FILE NAME : T:\410637\DGN-DWG\plan\090207_xswbww.DGN PLOT DATE : 10/30/2013 PLOT BY : AYRES-EC edu_shd_util.tbl PLOT SCALE : 1:2



PROJECT NO: 1053-05-60	HWY: STH 29	COUNTY: MARATHON	CROSS SECTIONS: STH 29 WB/WN WIDENING (STAGE 1)	SHEET NO: 591 E

FILE NAME : T:\410637\DGN-DWG\plan\090207_xswbww.DGN PLOT DATE : 10/30/2013 PLOT BY : AYRES-EC edu_shd_util.tbl PLOT SCALE : 1:2

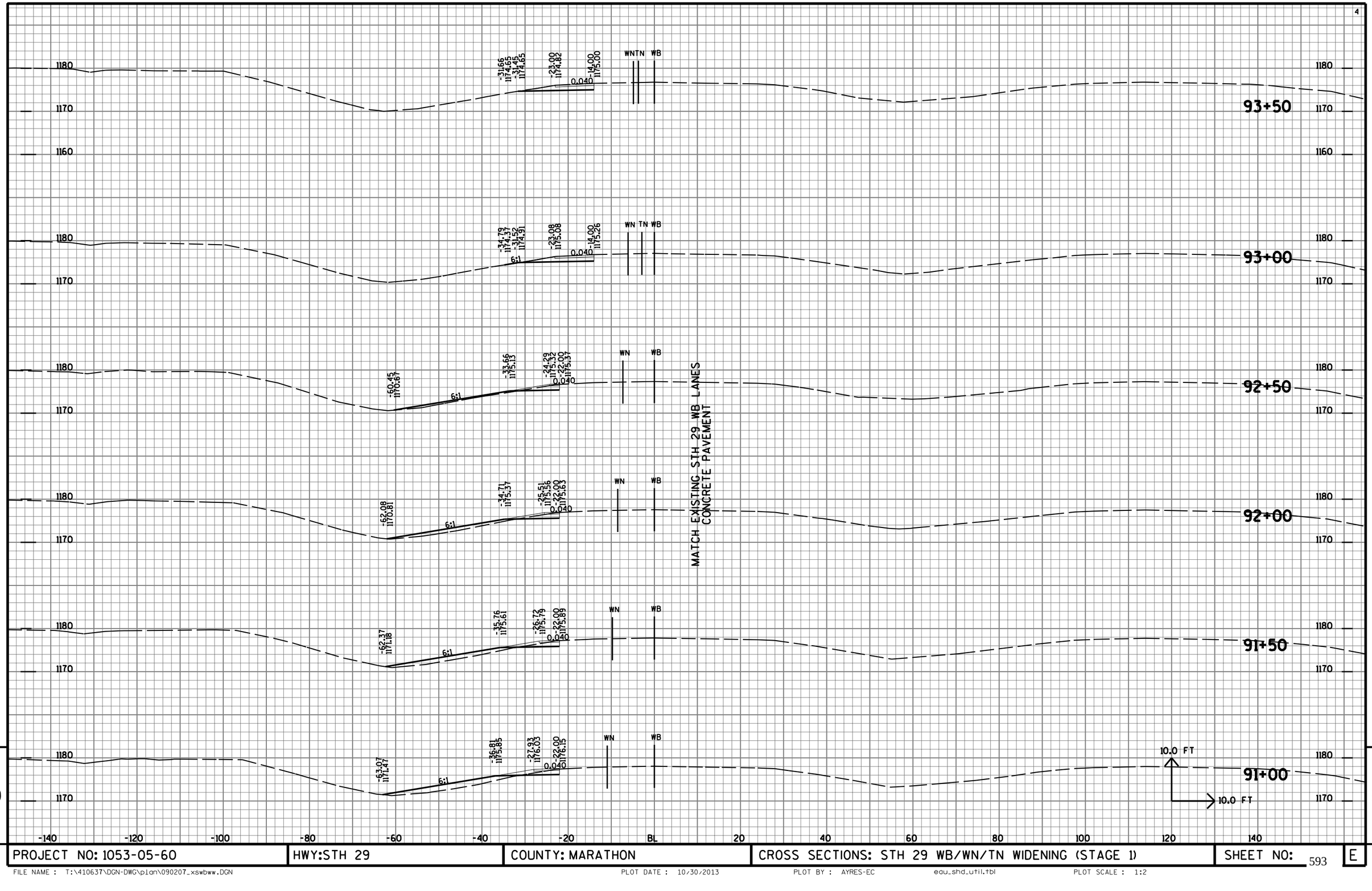


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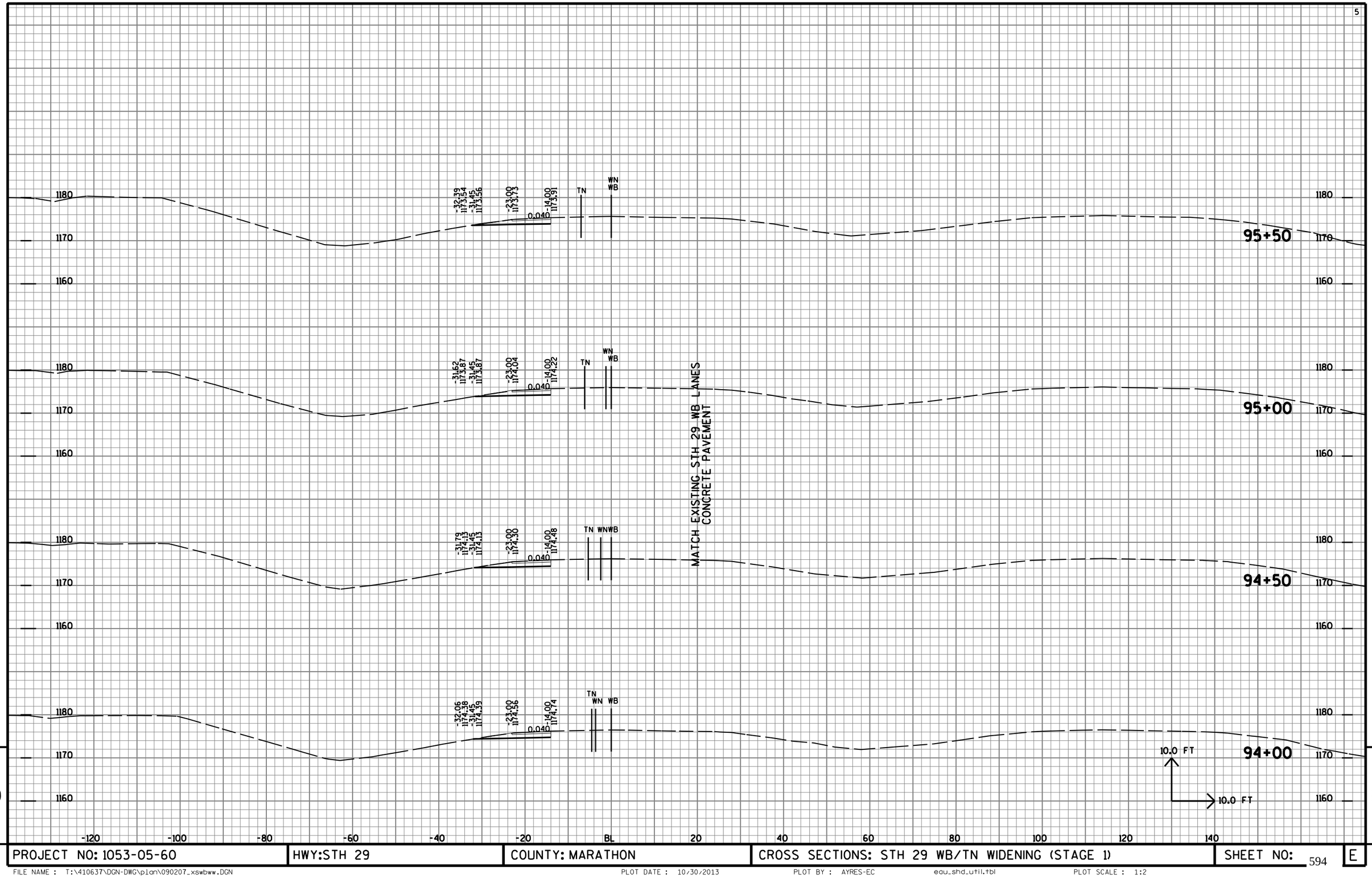
PROJECT NO: 1053-05-60	HWY:STH 29	COUNTY: MARATHON	CROSS SECTIONS: STH 29 WB/WN WIDENING (STAGE 1)	SHEET NO: 592	E

FILE NAME : T:\410637\DGN-DWG\plan\090207_xswbww.DGN PLOT DATE : 10/30/2013 PLOT BY : AYRES-EC edu_shd_util.tbl PLOT SCALE : 1:2



PROJECT NO: 1053-05-60	HWY:STH 29	COUNTY: MARATHON	CROSS SECTIONS: STH 29 WB/WN/TN WIDENING (STAGE 1)	SHEET NO: 593	E

FILE NAME : T:\410637\DGN-DWG\plan\090207_xswbww.DGN PLOT DATE : 10/30/2013 PLOT BY : AYRES-EC edu_shd_util.tbl PLOT SCALE : 1:2

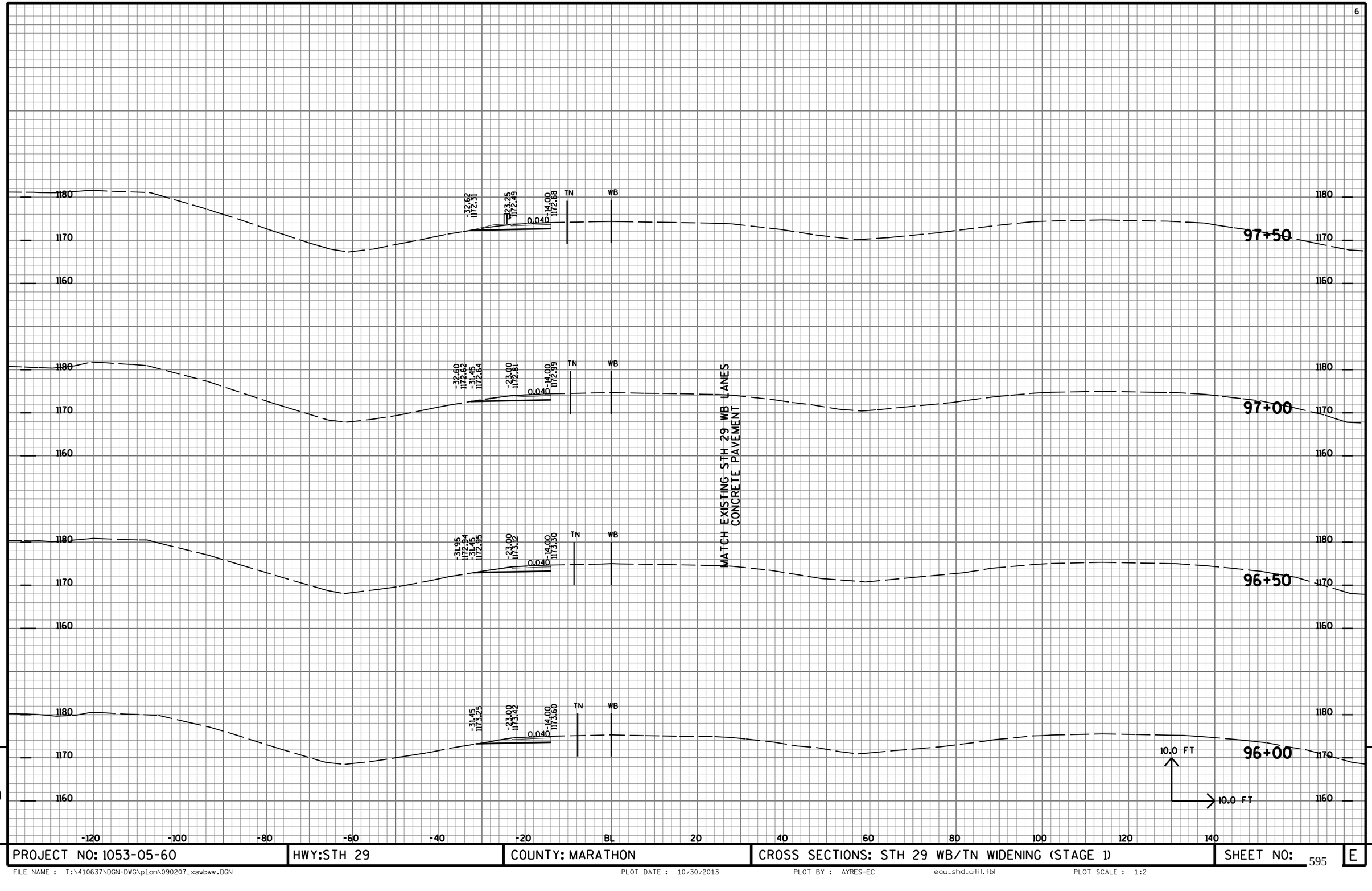


9

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PROJECT NO: 1053-05-60	HWY: STH 29	COUNTY: MARATHON	CROSS SECTIONS: STH 29 WB/TN WIDENING (STAGE 1)	SHEET NO: 594	E

FILE NAME : T:\410637\DGN-DWG\plan\090207_xswbww.DGN PLOT DATE : 10/30/2013 PLOT BY : AYRES-EC edu_shd_util.tbl PLOT SCALE : 1:2

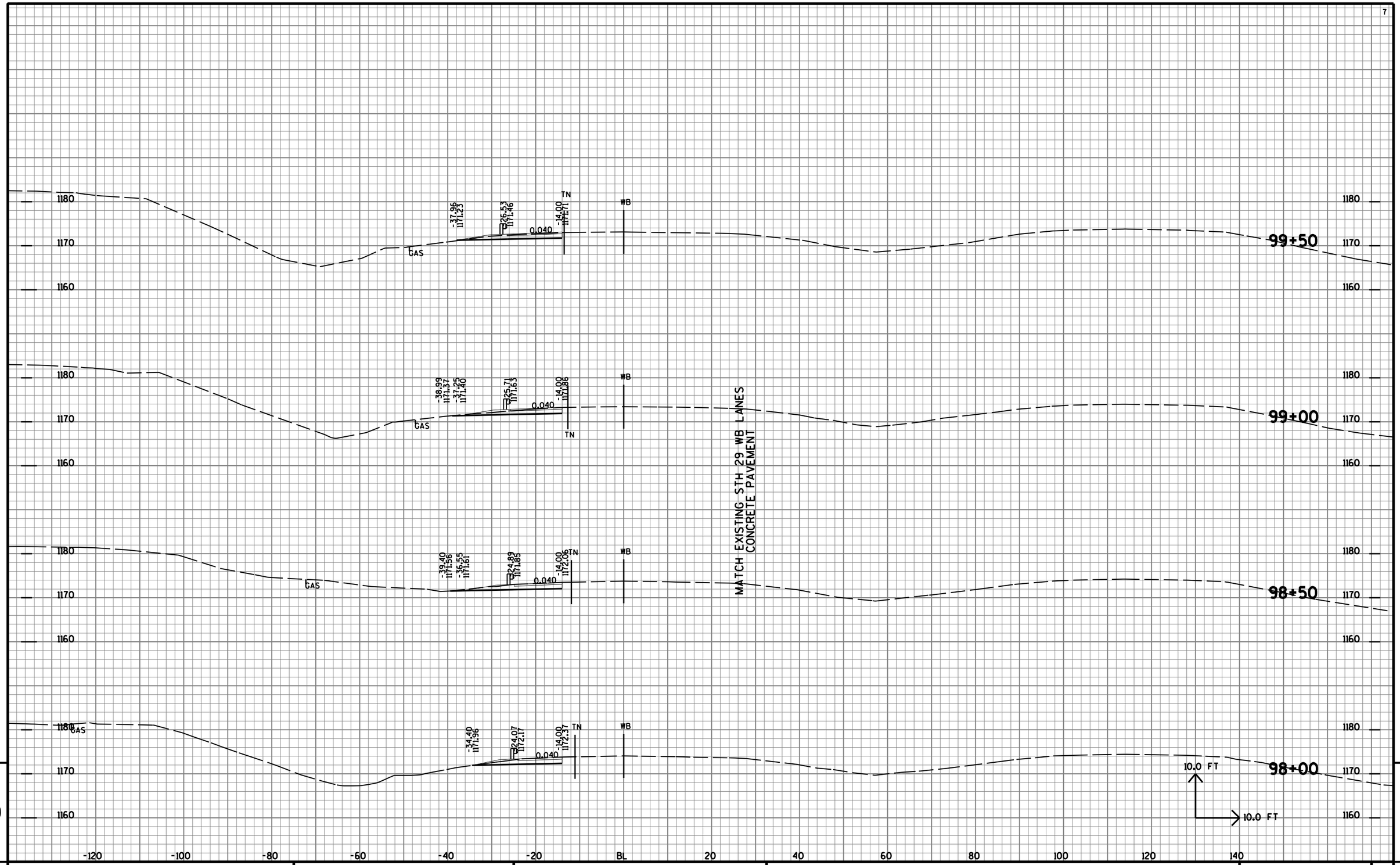


9

9

PROJECT NO: 1053-05-60	HWY: STH 29	COUNTY: MARATHON	CROSS SECTIONS: STH 29 WB/TN WIDENING (STAGE 1)	SHEET NO: 595	E

FILE NAME : T:\410637\DGN-DWG\plan\090207_xswbww.DGN PLOT DATE : 10/30/2013 PLOT BY : AYRES-EC edu_shd_util.tbl PLOT SCALE : 1:2

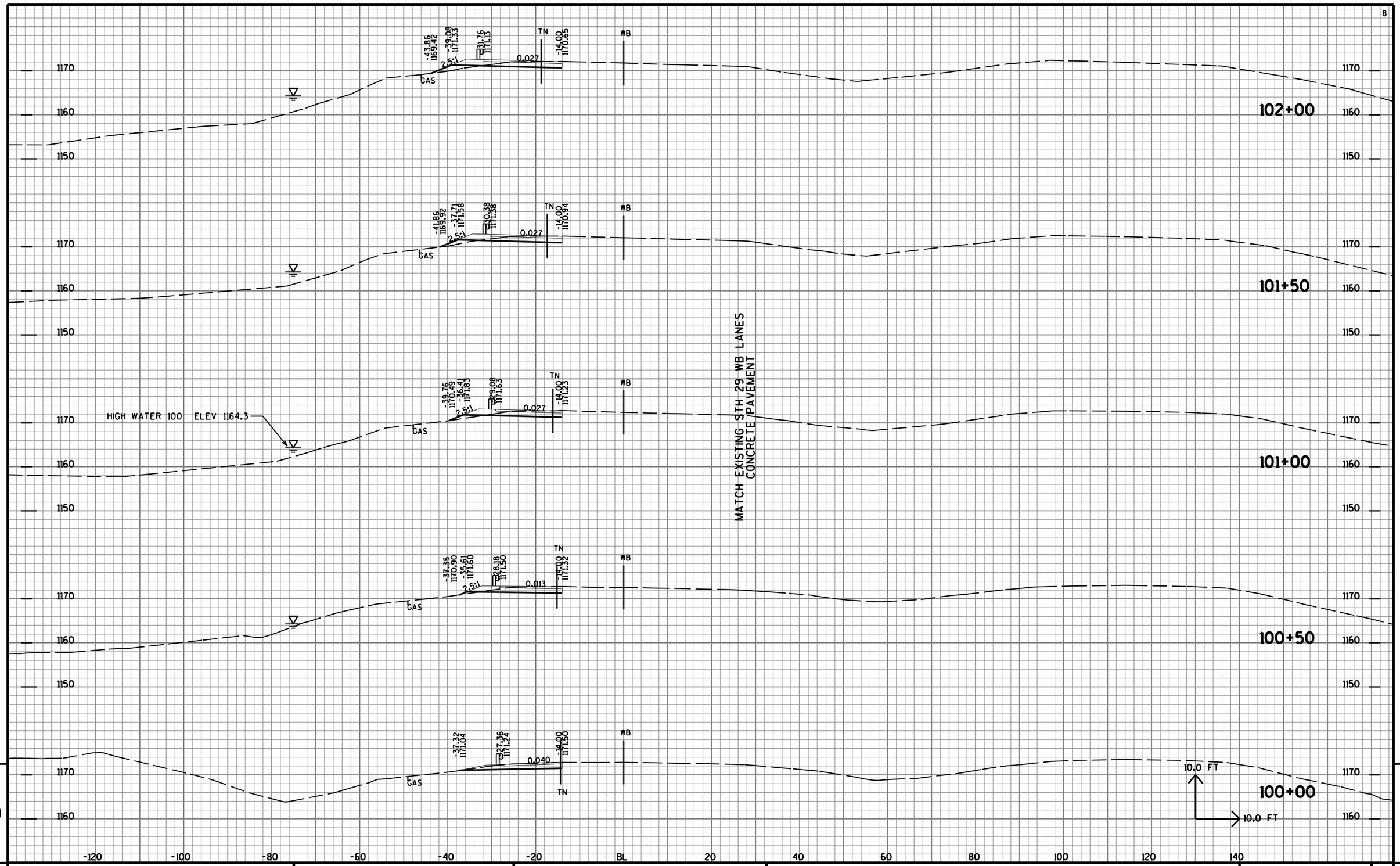


9

9

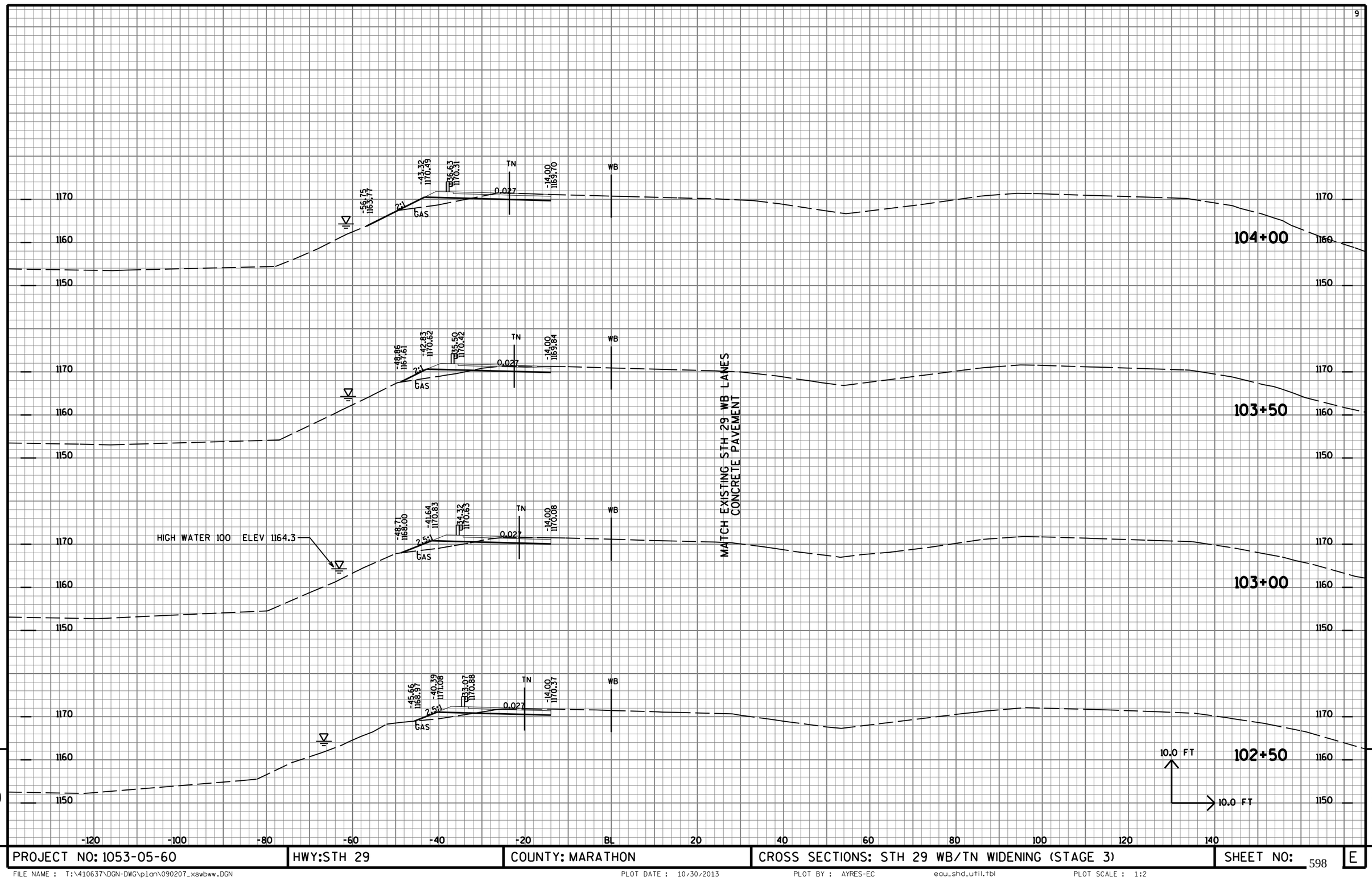
PROJECT NO: 1053-05-60	HWY: STH 29	COUNTY: MARATHON	CROSS SECTIONS: STH 29 WB/TN WIDENING (STAGE 3)	SHEET NO: 596	E

FILE NAME : T:\410637\DGN-DWG\plan\090207_xswbww.DGN PLOT DATE : 10/30/2013 PLOT BY : AYRES-EC edu_shd_util.tbl PLOT SCALE : 1:2



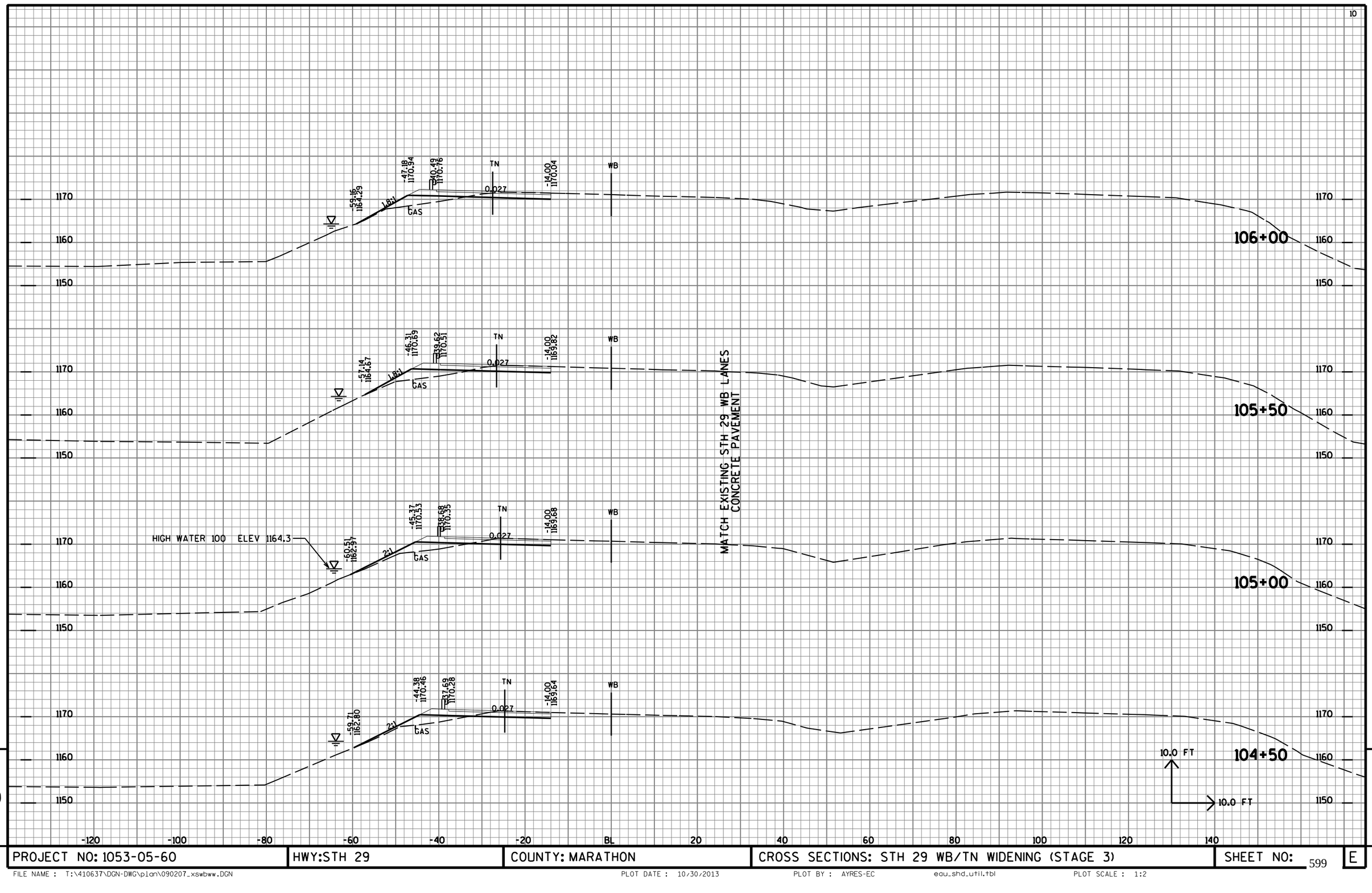
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PROJECT NO: 1053-05-60	HWY: STH 29	COUNTY: MARATHON	CROSS SECTIONS: STH 29 WB/TN WIDENING (STAGE 3)	SHEET NO: 597	E



PROJECT NO: 1053-05-60	HWY:STH 29	COUNTY: MARATHON	CROSS SECTIONS: STH 29 WB/TN WIDENING (STAGE 3)	SHEET NO: 598 E

FILE NAME : T:\410637\DGN-DWG\plan\090207_xswbww.DGN PLOT DATE : 10/30/2013 PLOT BY : AYRES-EC edu_shd_util.tbl PLOT SCALE : 1:2

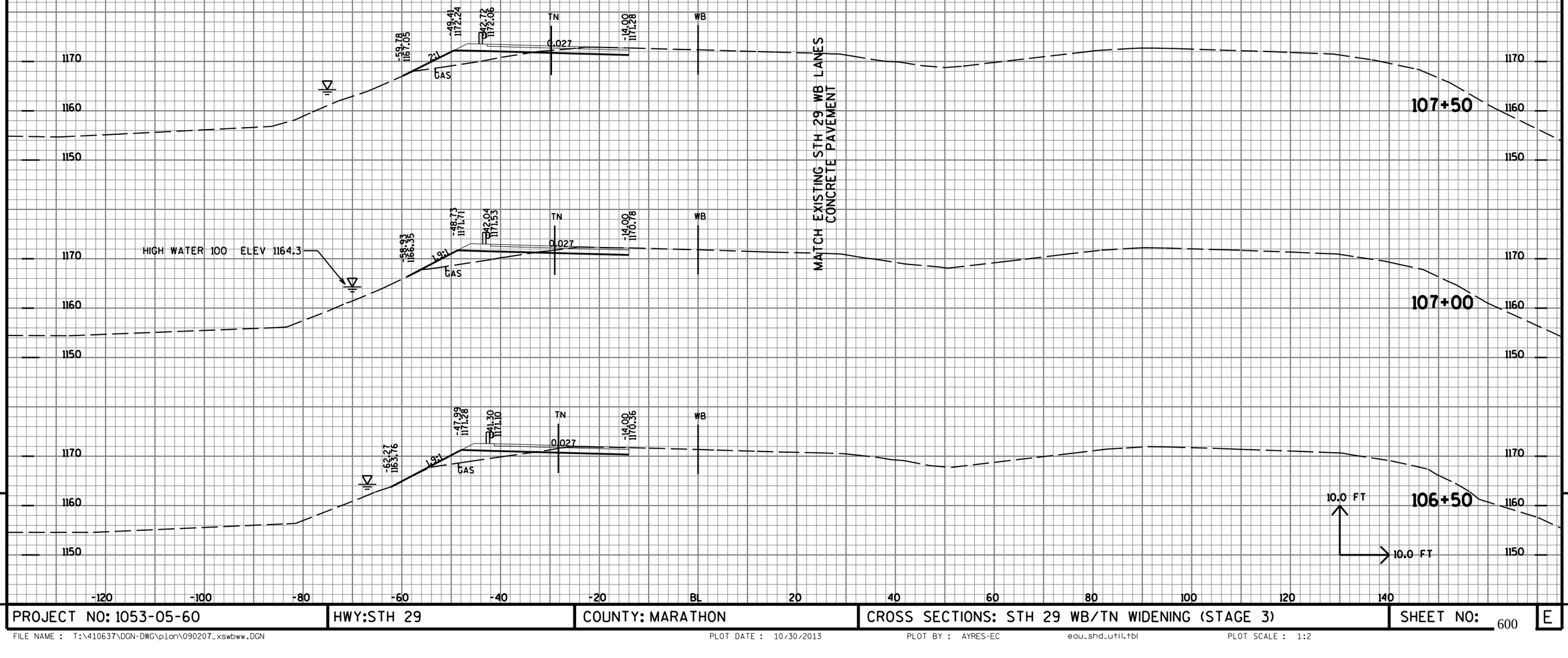


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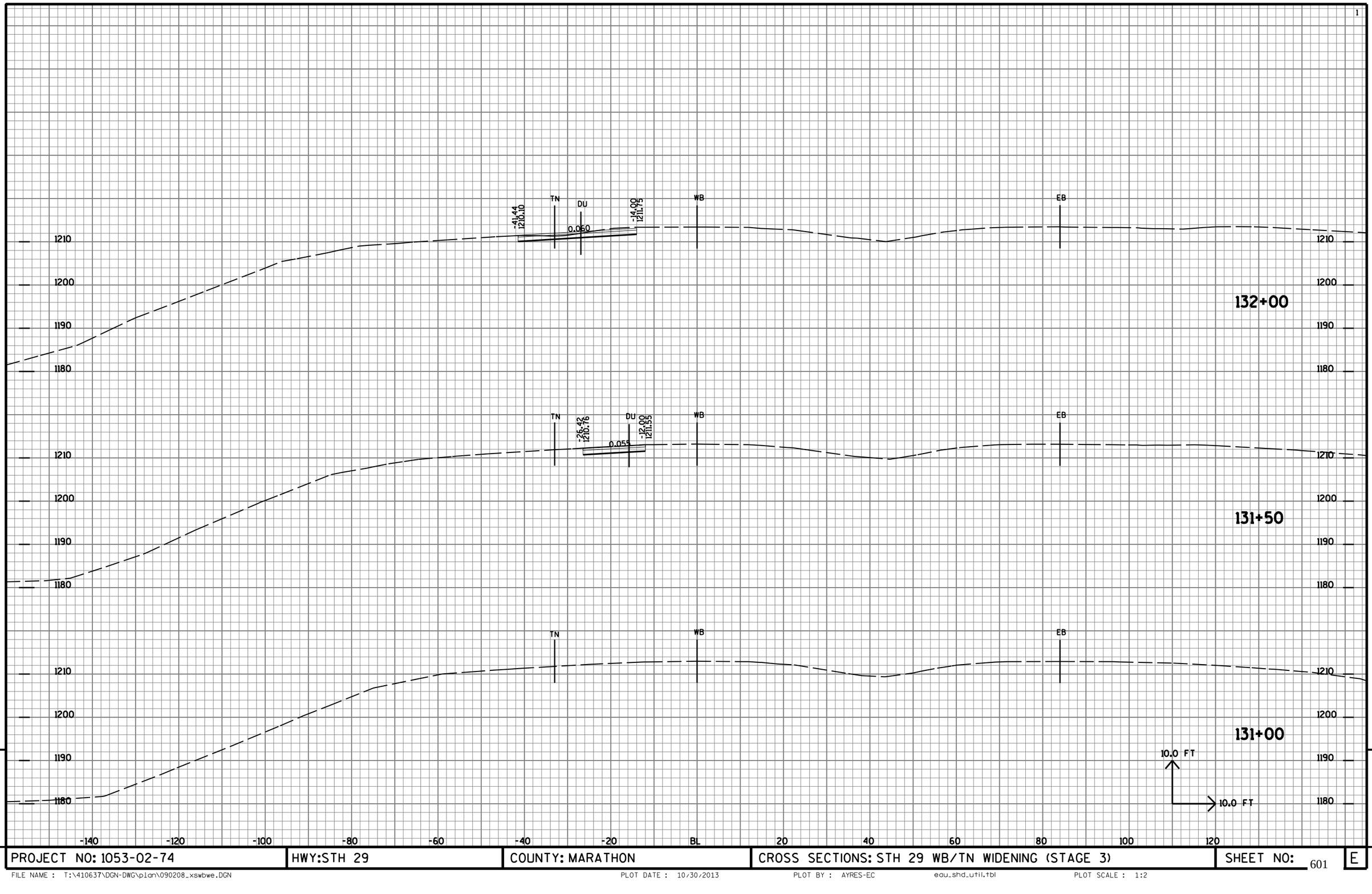
PROJECT NO: 1053-05-60	HWY: STH 29	COUNTY: MARATHON	CROSS SECTIONS: STH 29 WB/TN WIDENING (STAGE 3)	SHEET NO: 599	E

SEE 29 WESTBOUND SECTIONS



PROJECT NO: 1053-05-60	HWY: STH 29	COUNTY: MARATHON	CROSS SECTIONS: STH 29 WB/TN WIDENING (STAGE 3)	SHEET NO: 600	E

FILE NAME : T:\410637\DGN-DWG\plan\090207_xswbww.DGN PLOT DATE : 10/30/2013 PLOT BY : AYRES-EC edu_shd_util.tbl PLOT SCALE : 1:2

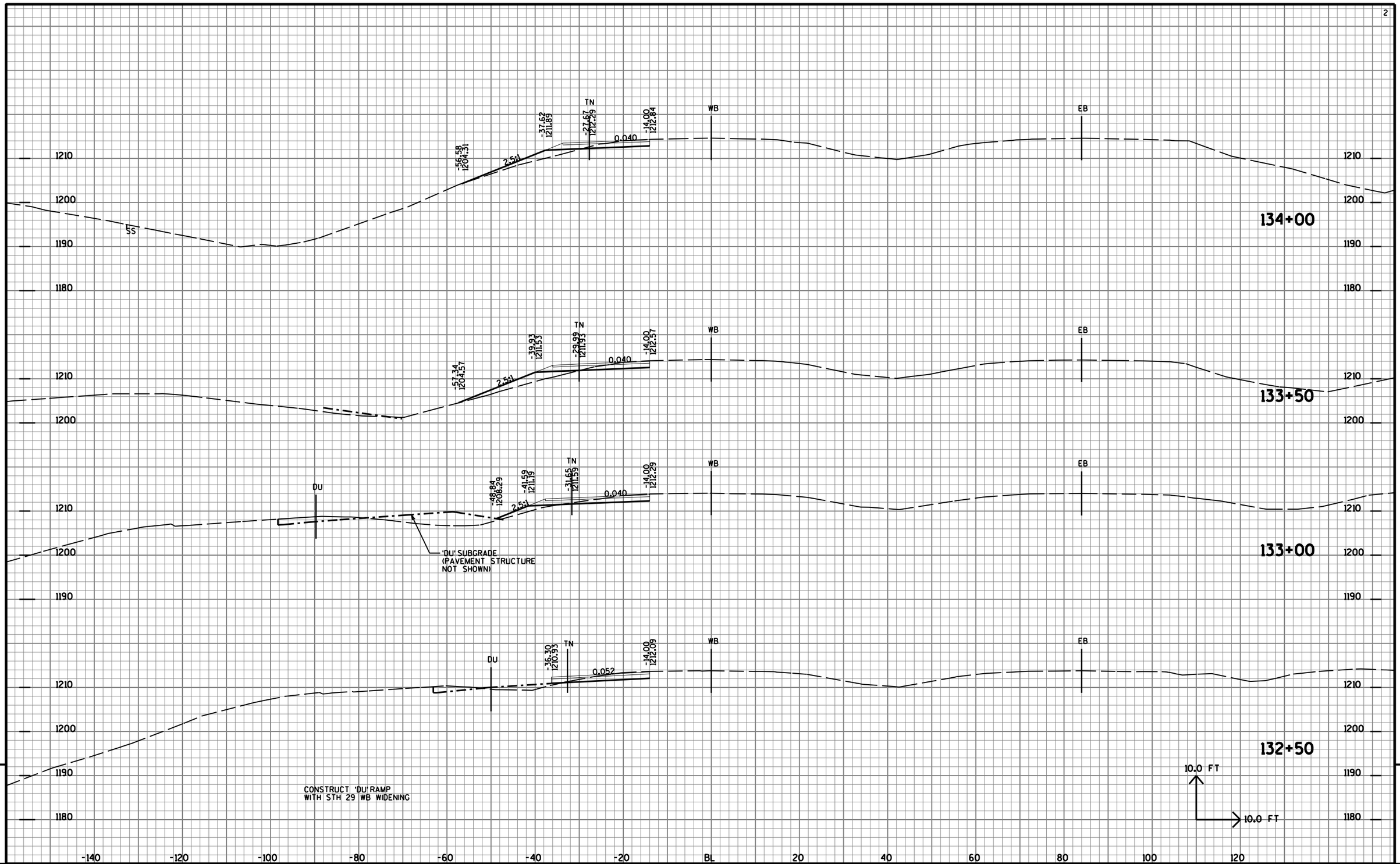


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PROJECT NO: 1053-02-74	HWY:STH 29	COUNTY: MARATHON	CROSS SECTIONS: STH 29 WB/TN WIDENING (STAGE 3)	SHEET NO: 601	E

FILE NAME : T:\410637\DGN-DWG\plan\090208_xswbwe.DGN PLOT DATE : 10/30/2013 PLOT BY : AYRES-EC edu_shd_util.tbl PLOT SCALE : 1:2

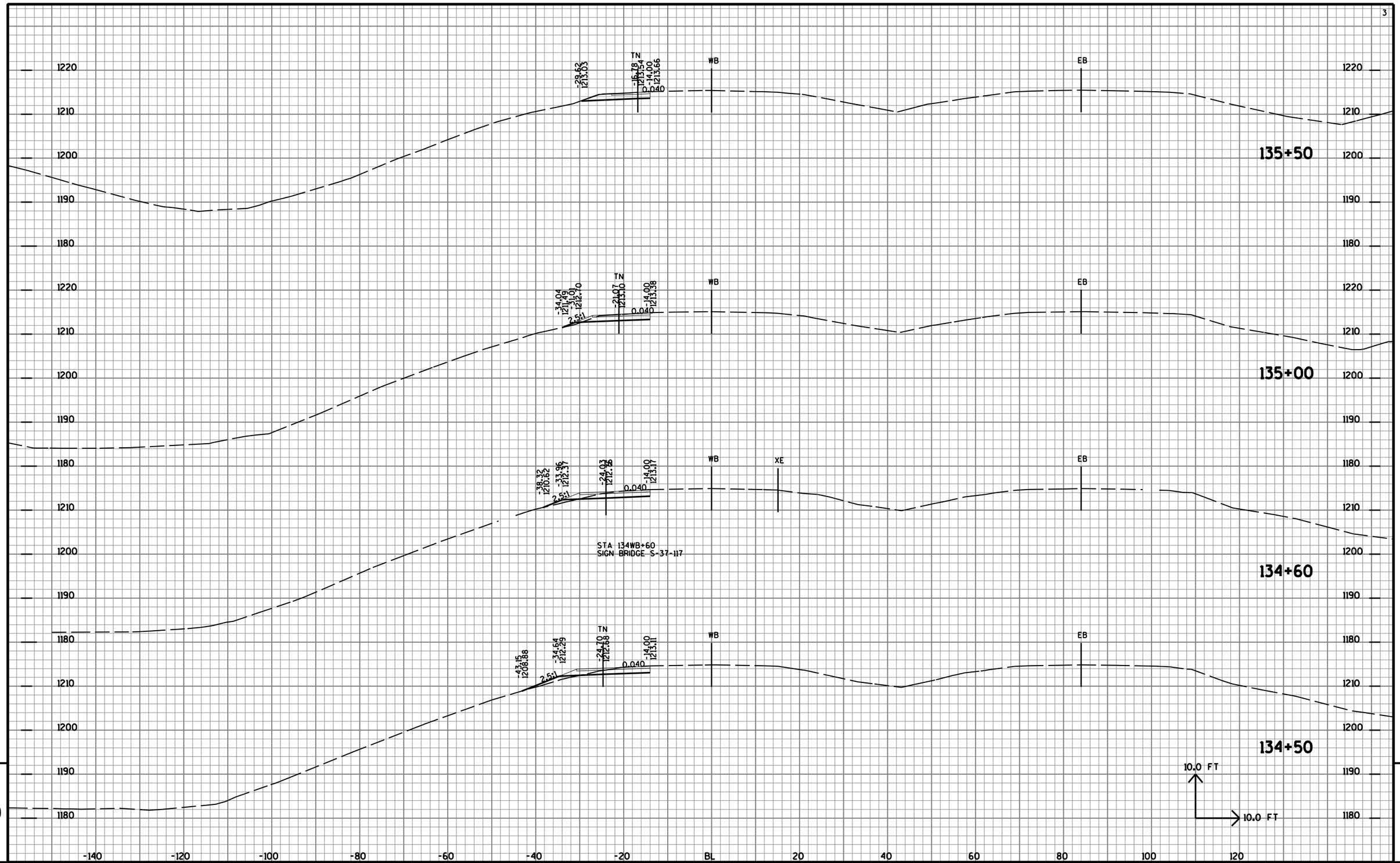


9

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PROJECT NO: 1053-02-74	HWY:STH 29	COUNTY: MARATHON	CROSS SECTIONS: STH 29 WB/TN WIDENING (STAGE 3)	SHEET NO: 602	E

FILE NAME : T:\410637\DGN-DWG\plan\090208_xswbwe.DGN PLOT DATE : 1/8/2014 PLOT BY : AYRES-EC edu_shd_utilFILL.tbl PLOT SCALE : 1:2

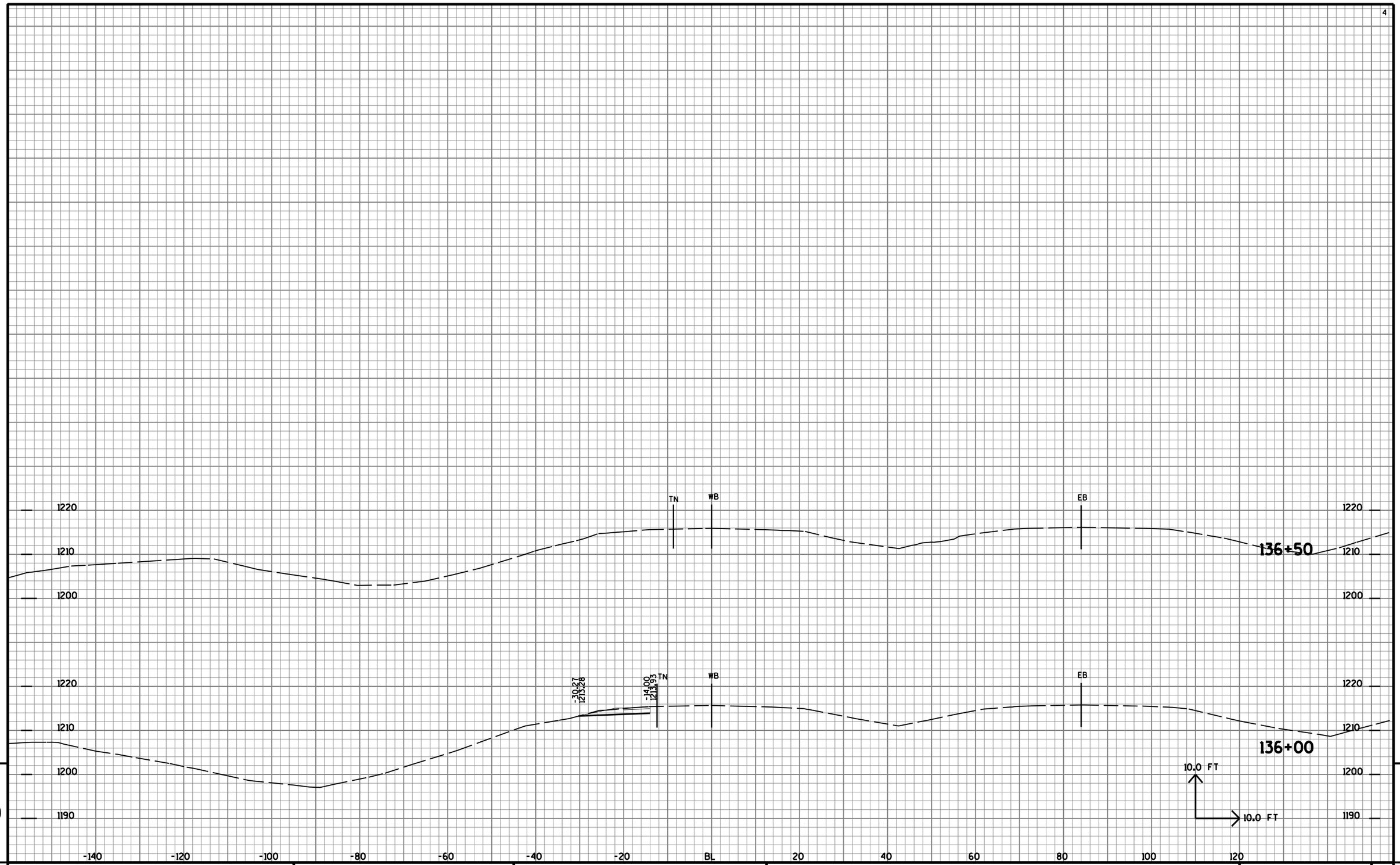


9

9

PROJECT NO: 1053-02-74	HWY:STH 29	COUNTY: MARATHON	CROSS SECTIONS: STH 29 WB/TN WIDENING (STAGE 3)	SHEET NO: 603 E

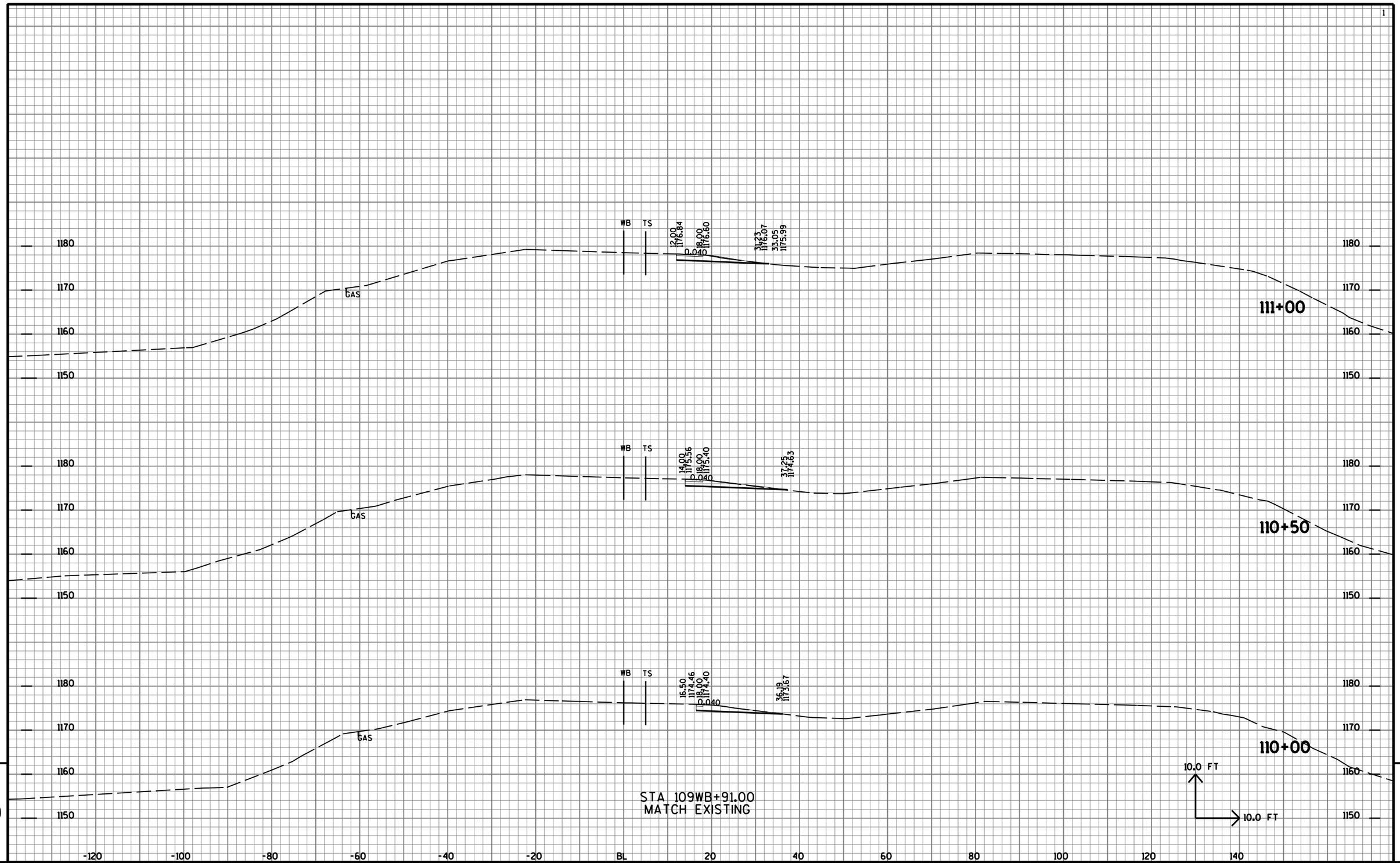
FILE NAME : T:\410637\DGN-DWG\plan\090208_xswbwe.DGN PLOT DATE : 1/8/2014 PLOT BY : AYRES-EC edu_shd_utilFILL.tbl PLOT SCALE : 1:2



9

9

PROJECT NO: 1053-02-74	HWY:STH 29	COUNTY: MARATHON	CROSS SECTIONS: STH 29 WB/TN WIDENING (STAGE 3)	SHEET NO: 604	E



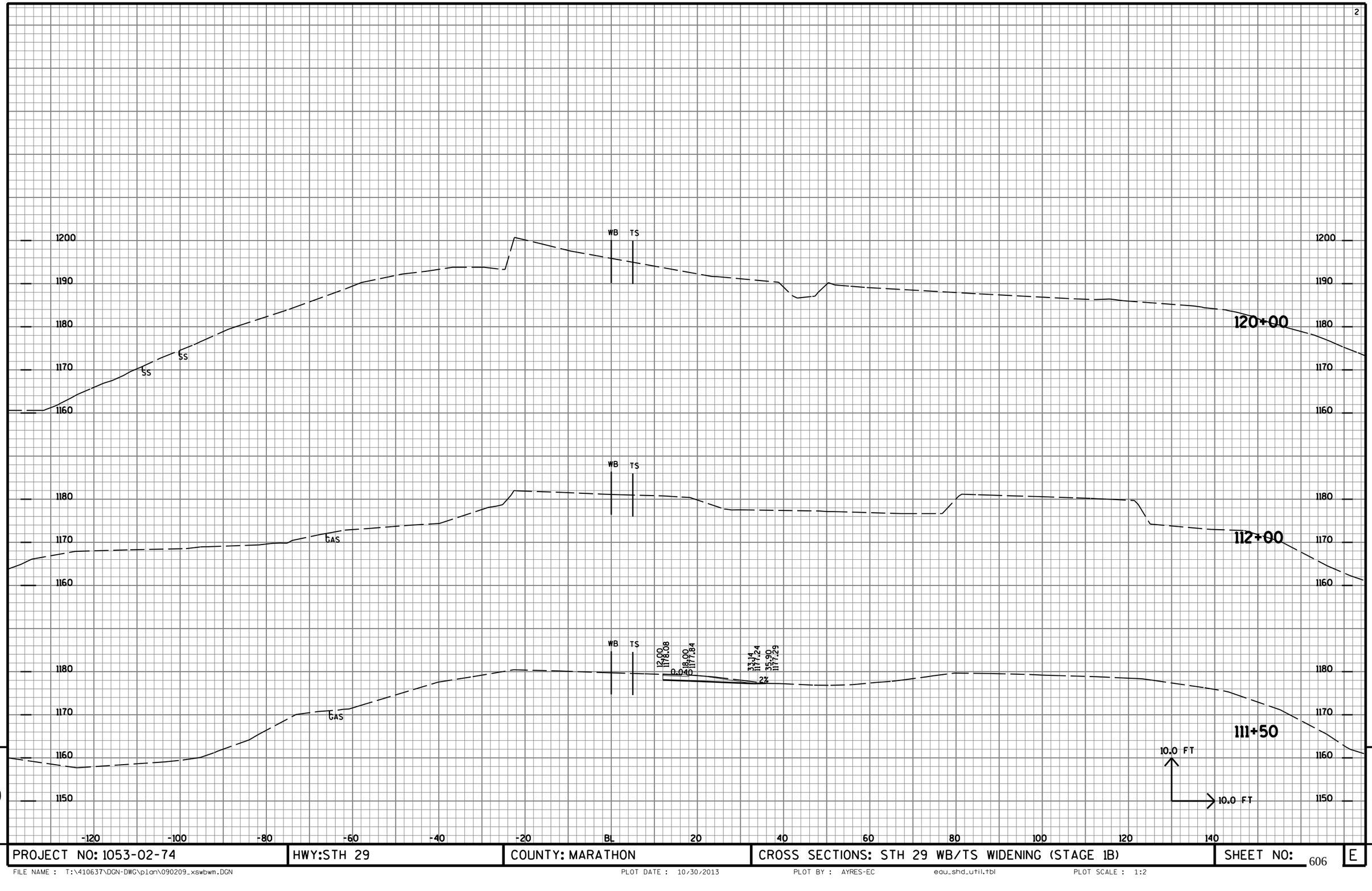
STA 109WB+91.00
MATCH EXISTING

9

9

PROJECT NO: 1053-02-74	HWY:STH 29	COUNTY: MARATHON	CROSS SECTIONS: STH 29 WB/TS WIDENING (STAGE 1B)	SHEET NO: 605	E

FILE NAME : T:\410637\DGN-DWG\plan\090209_xswbwm.DGN PLOT DATE : 10/30/2013 PLOT BY : AYRES-EC edu_shd_util.tbl PLOT SCALE : 1:2

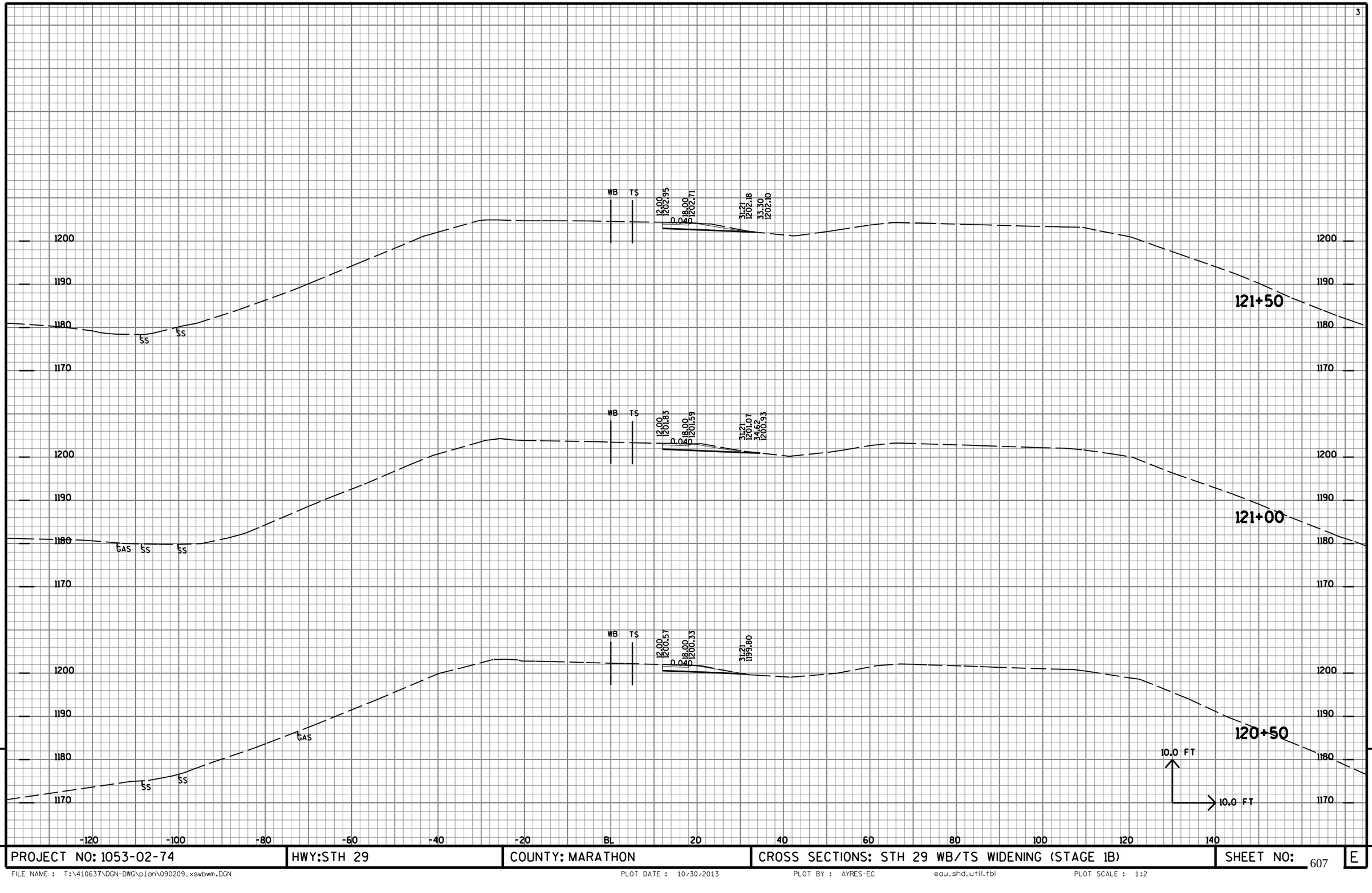


9

9

PROJECT NO: 1053-02-74	HWY:STH 29	COUNTY: MARATHON	CROSS SECTIONS: STH 29 WB/TS WIDENING (STAGE 1B)	SHEET NO: 606	E

FILE NAME : T:\410637\DGN-DWG\plan\090209_xswbwm.DGN PLOT DATE : 10/30/2013 PLOT BY : AYRES-EC edu_shd_util.tbl PLOT SCALE : 1:2

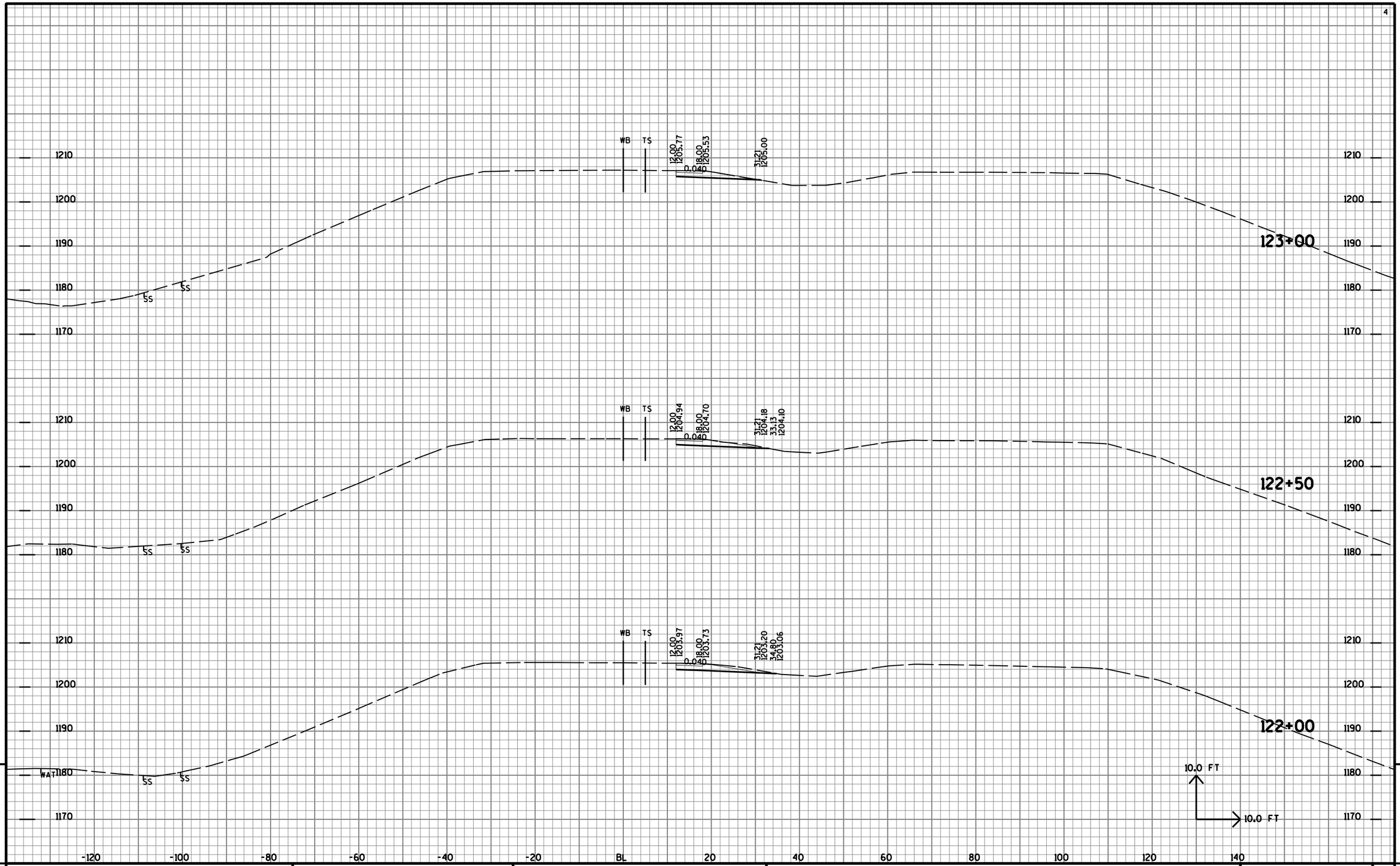


9

9

PROJECT NO: 1053-02-74	HWY:STH 29	COUNTY: MARATHON	CROSS SECTIONS: STH 29 WB/TS WIDENING (STAGE 1B)	SHEET NO: 607	E

FILE NAME : T:\410637\DGN-DWG\plan\090209_xswbwm.DGN PLOT DATE : 10/30/2013 PLOT BY : AYRES-EC edu_shd_util.tbl PLOT SCALE : 1:2



9

9

PROJECT NO: 1053-02-74	HWY: STH 29	COUNTY: MARATHON	CROSS SECTIONS: STH 29 WB/TS WIDENING (STAGE 1B)	SHEET NO: 608	E

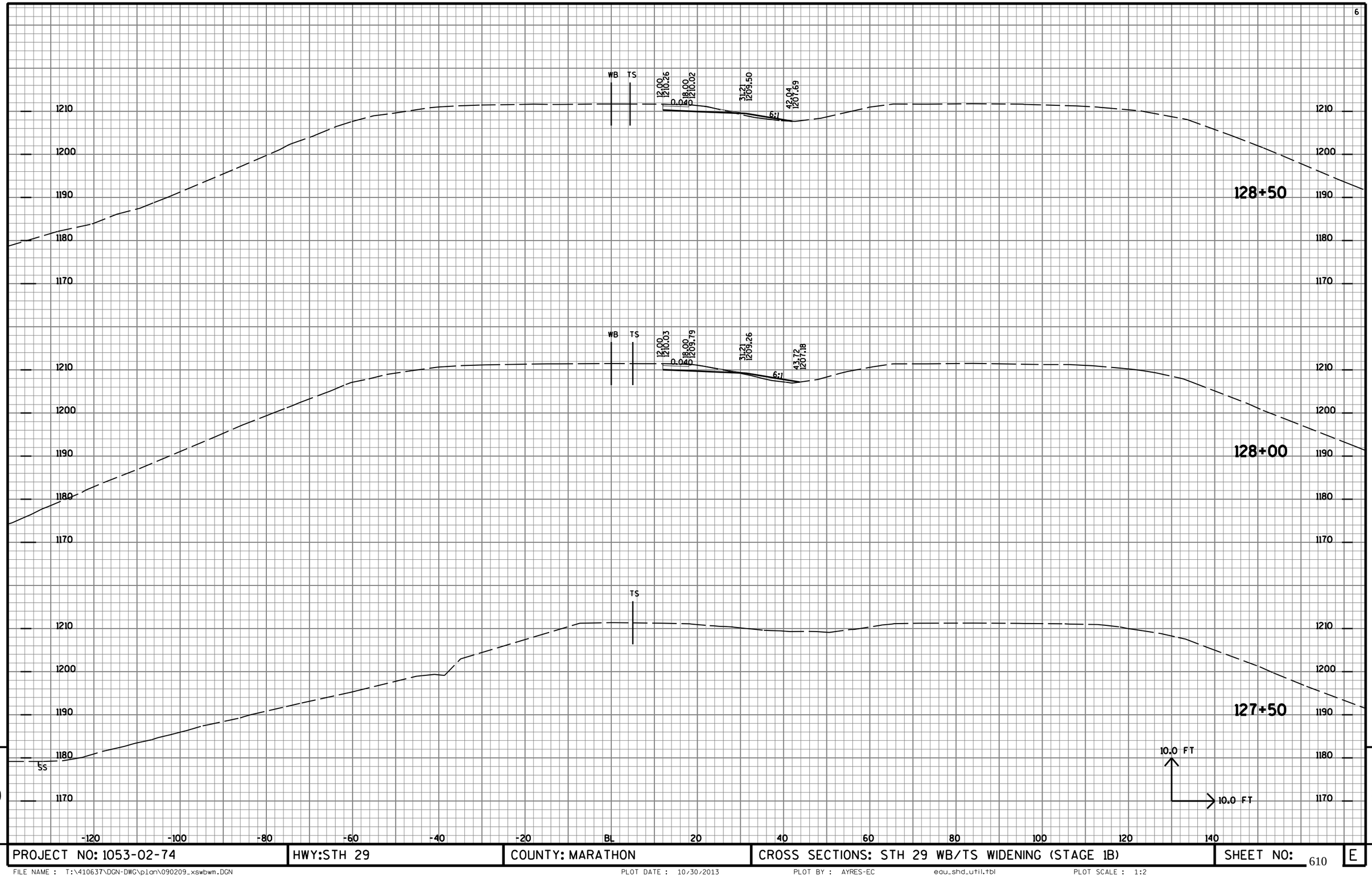


9

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PROJECT NO: 1053-02-74	HWY:STH 29	COUNTY: MARATHON	CROSS SECTIONS: STH 29 WB/TS WIDENING (STAGE 1B)	SHEET NO: 609	E

FILE NAME : T:\410637\DGN-DWG\plan\090209_xswbwm.DGN PLOT DATE : 10/30/2013 PLOT BY : AYRES-EC edu_shd_util.tbl PLOT SCALE : 1:2

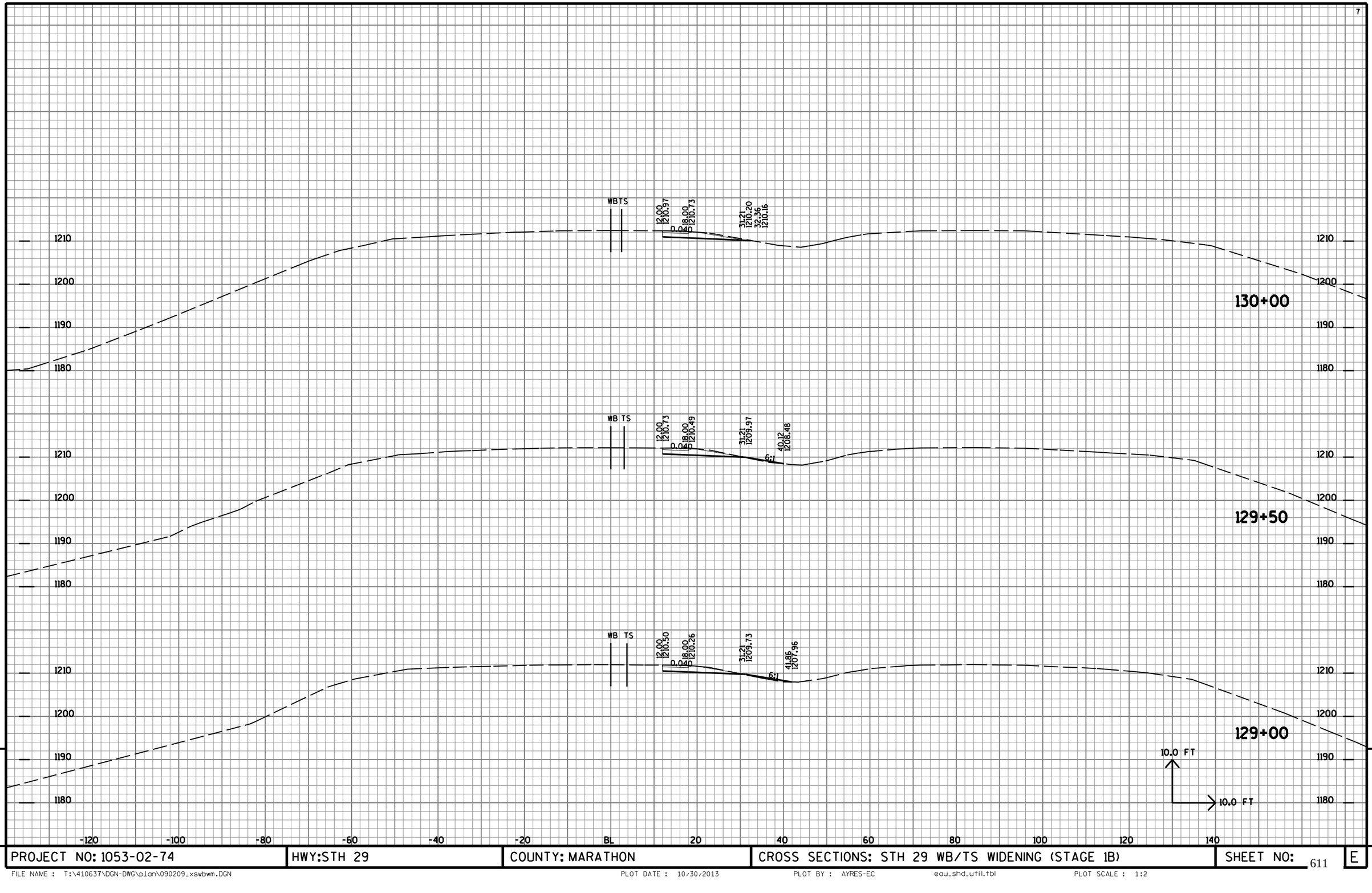


9

PROJECT NO: 1053-02-74	HWY: STH 29	COUNTY: MARATHON	CROSS SECTIONS: STH 29 WB/TS WIDENING (STAGE 1B)	SHEET NO: 610	E

9

FILE NAME : T:\410637\DGN-DWG\plan\090209_xswbwm.DGN PLOT DATE : 10/30/2013 PLOT BY : AYRES-EC edu_shd_util.tbl PLOT SCALE : 1:2

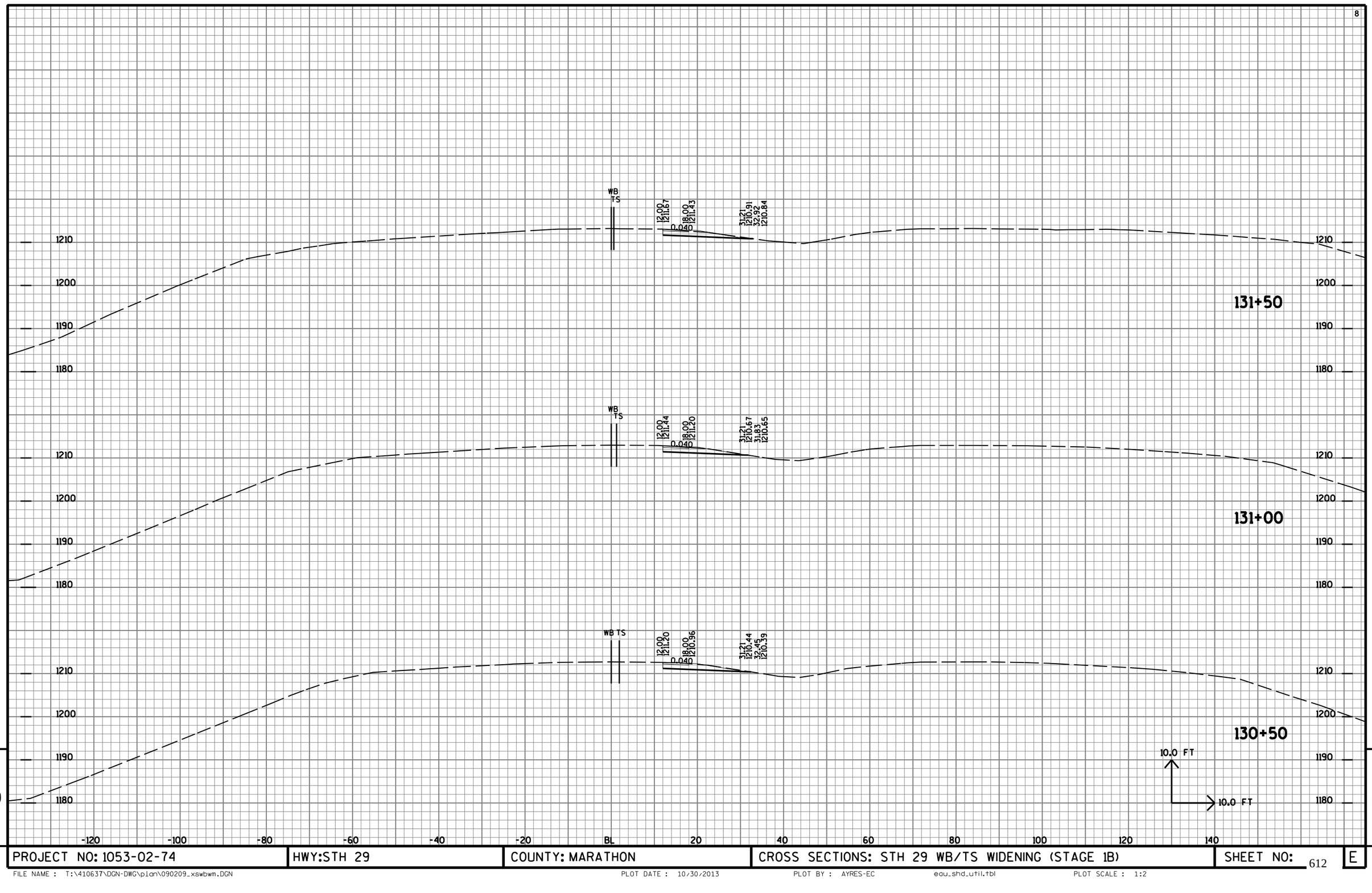


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9

PROJECT NO: 1053-02-74	HWY:STH 29	COUNTY: MARATHON	CROSS SECTIONS: STH 29 WB/TS WIDENING (STAGE 1B)	SHEET NO: 611	E

FILE NAME : T:\410637\DGN-DWG\plan\090209_xswbwm.DGN PLOT DATE : 10/30/2013 PLOT BY : AYRES-EC edu_shd_util.tbl PLOT SCALE : 1:2



9

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PROJECT NO: 1053-02-74	HWY:STH 29	COUNTY: MARATHON	CROSS SECTIONS: STH 29 WB/TS WIDENING (STAGE 1B)	SHEET NO: 612	E

133+50

STA 132WB+50.00
MATCH EXISTING

133+00

132+50

132+00

TS WB
12.00 1212.18
18.00 1211.94
0.04
31.21 1211.41
36.33 1210.56

TS WB
12.00 1211.91
18.00 1211.67
0.04
31.21 1211.14
35.13 1210.98

10.0 FT
10.0 FT

1210 1200 1190 1180

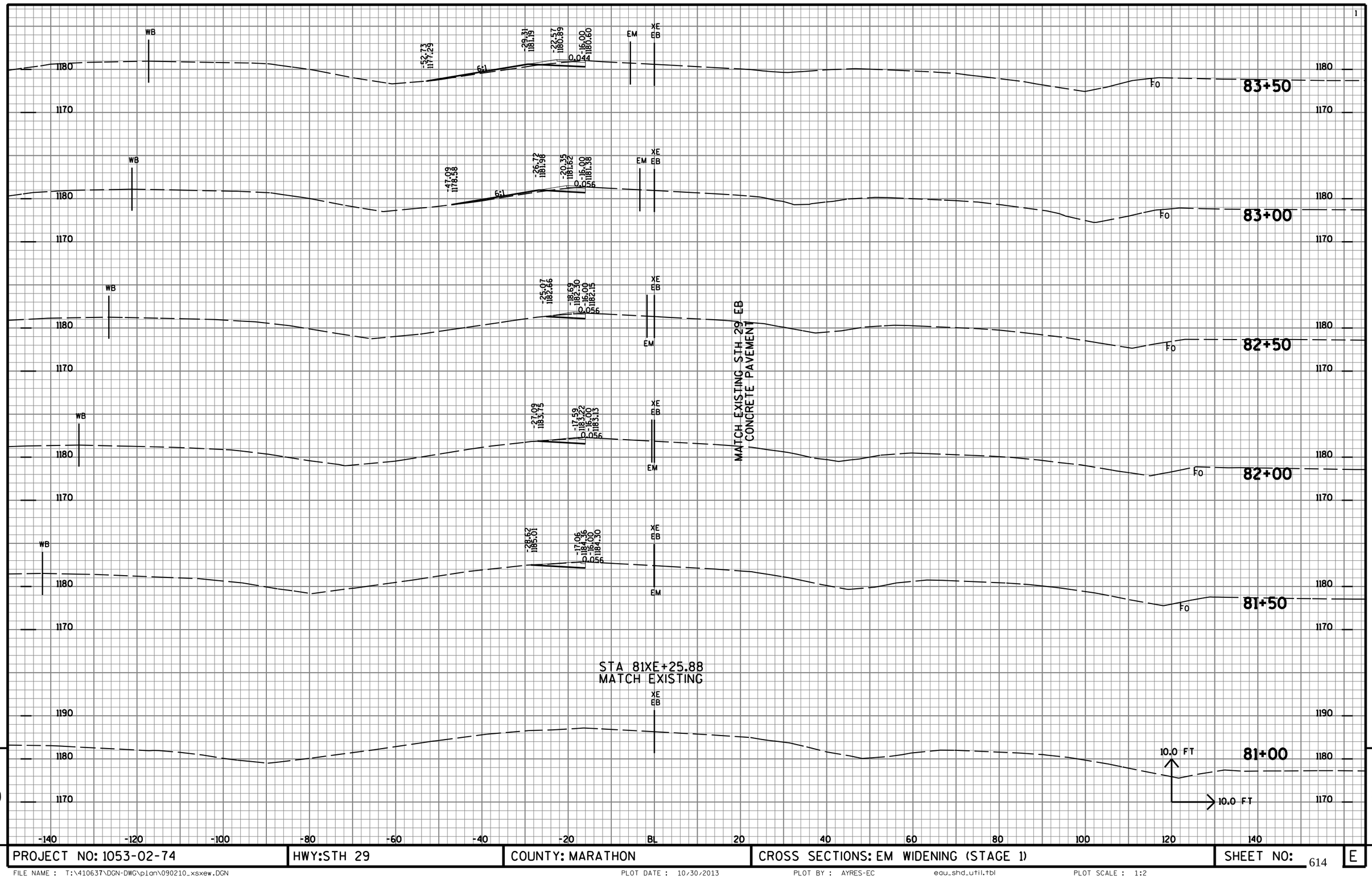
-120 -100 -80 -60 -40 -20 BL 20 40 60 80 100 120 140

9

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PROJECT NO: 1053-02-74	HWY:STH 29	COUNTY: MARATHON	CROSS SECTIONS: STH 29 WB/TS WIDENING (STAGE 1B)	SHEET NO: 613	E

FILE NAME : T:\410637\DGN-DWG\plan\090209_xswbwm.DGN PLOT DATE : 10/30/2013 PLOT BY : AYRES-EC edu_shd_util.tbl PLOT SCALE : 1:2

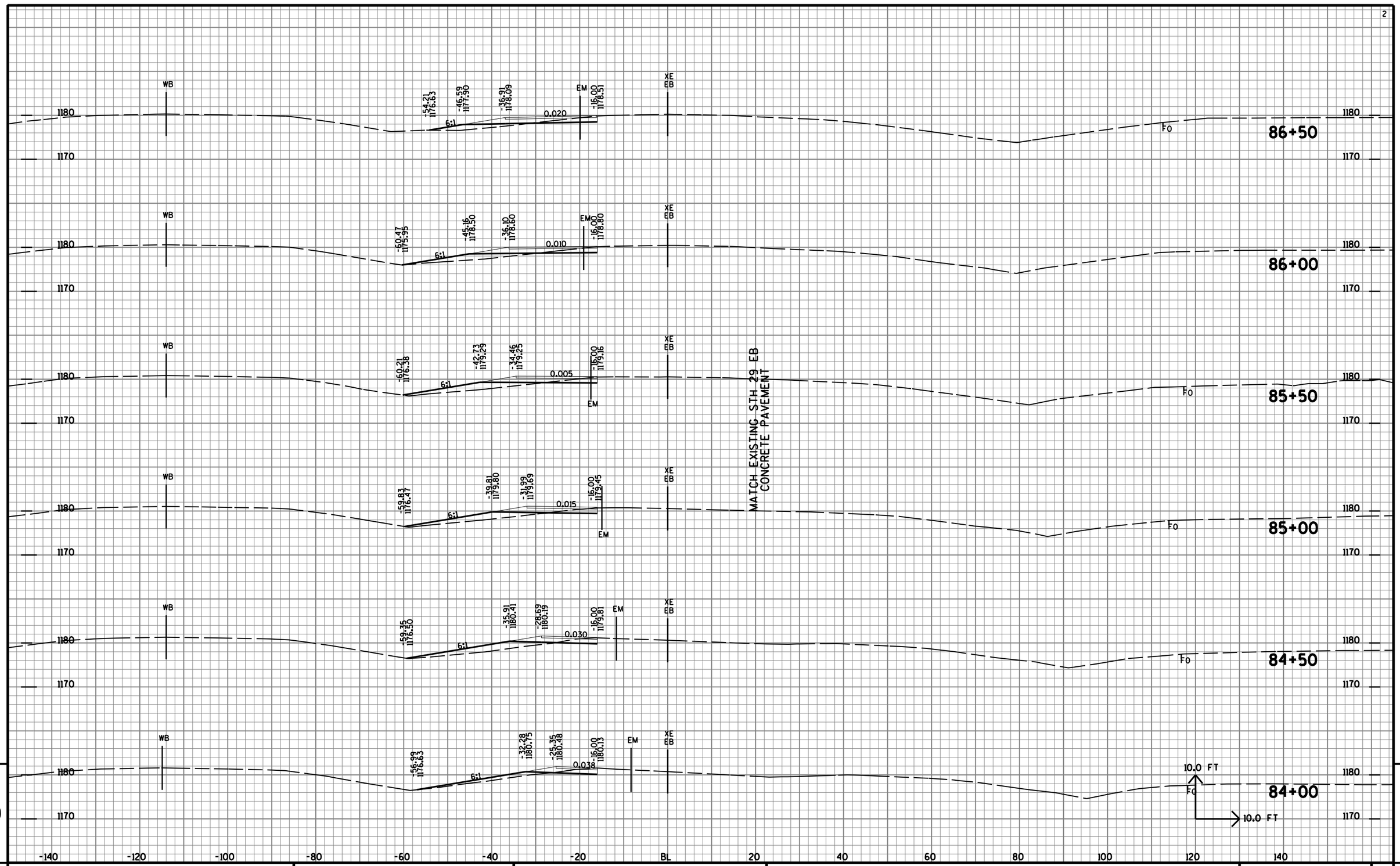


9

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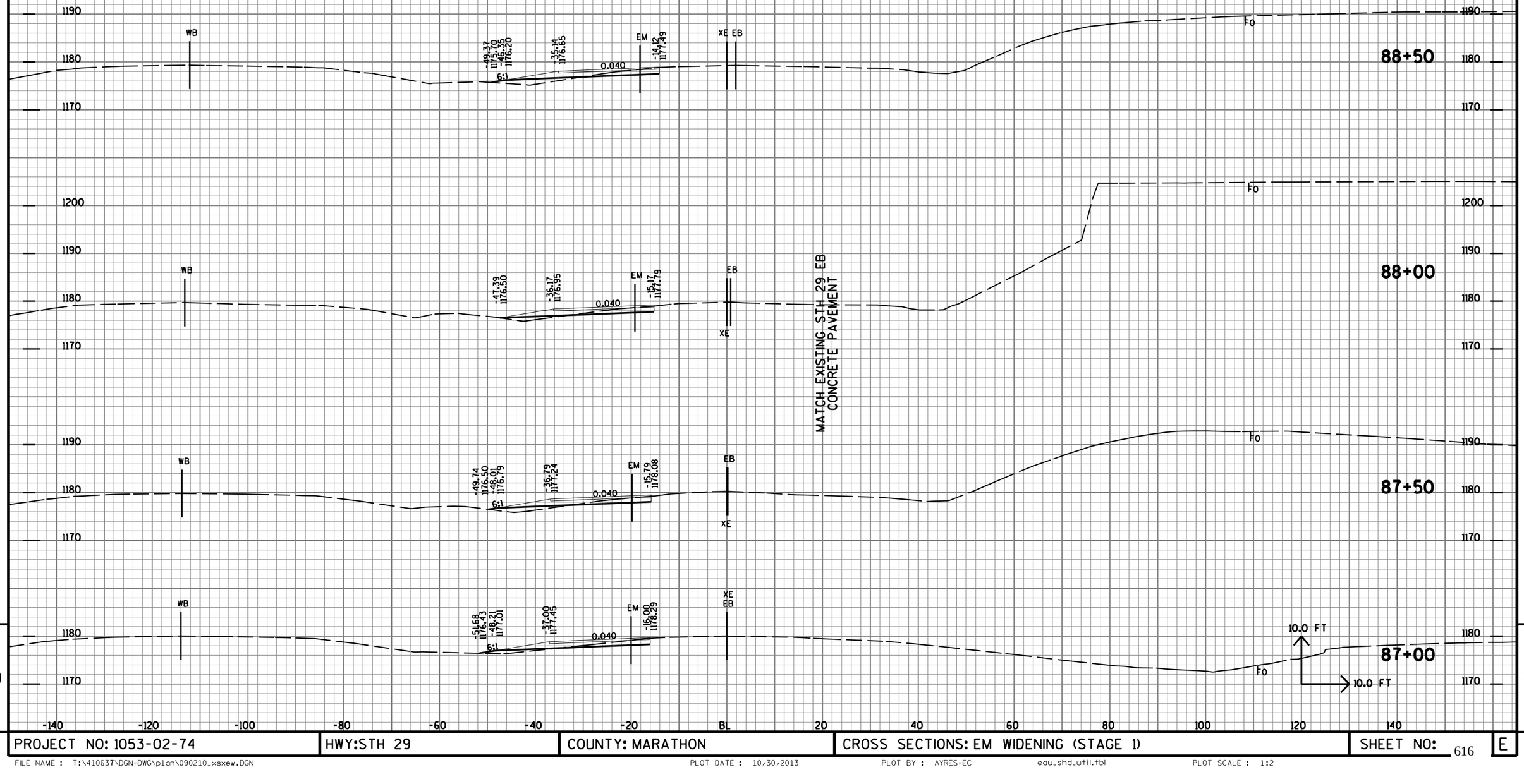
PROJECT NO: 1053-02-74	HWY:STH 29	COUNTY: MARATHON	CROSS SECTIONS: EM WIDENING (STAGE 1)	SHEET NO: 614	E

FILE NAME : T:\410637\DGN-DWG\plan\090210_xsxew.DGN PLOT DATE : 10/30/2013 PLOT BY : AYRES-EC edu_shd_util.tbl PLOT SCALE : 1:2



PROJECT NO: 1053-02-74	HWY: STH 29	COUNTY: MARATHON	CROSS SECTIONS: EM WIDENING (STAGE 1)	SHEET NO: 615	E

FILE NAME : T:\410637\DGN-DWG\plan\090210_xsxew.DGN PLOT DATE : 10/30/2013 PLOT BY : AYRES-EC edu_shd_util.tbl PLOT SCALE : 1:2

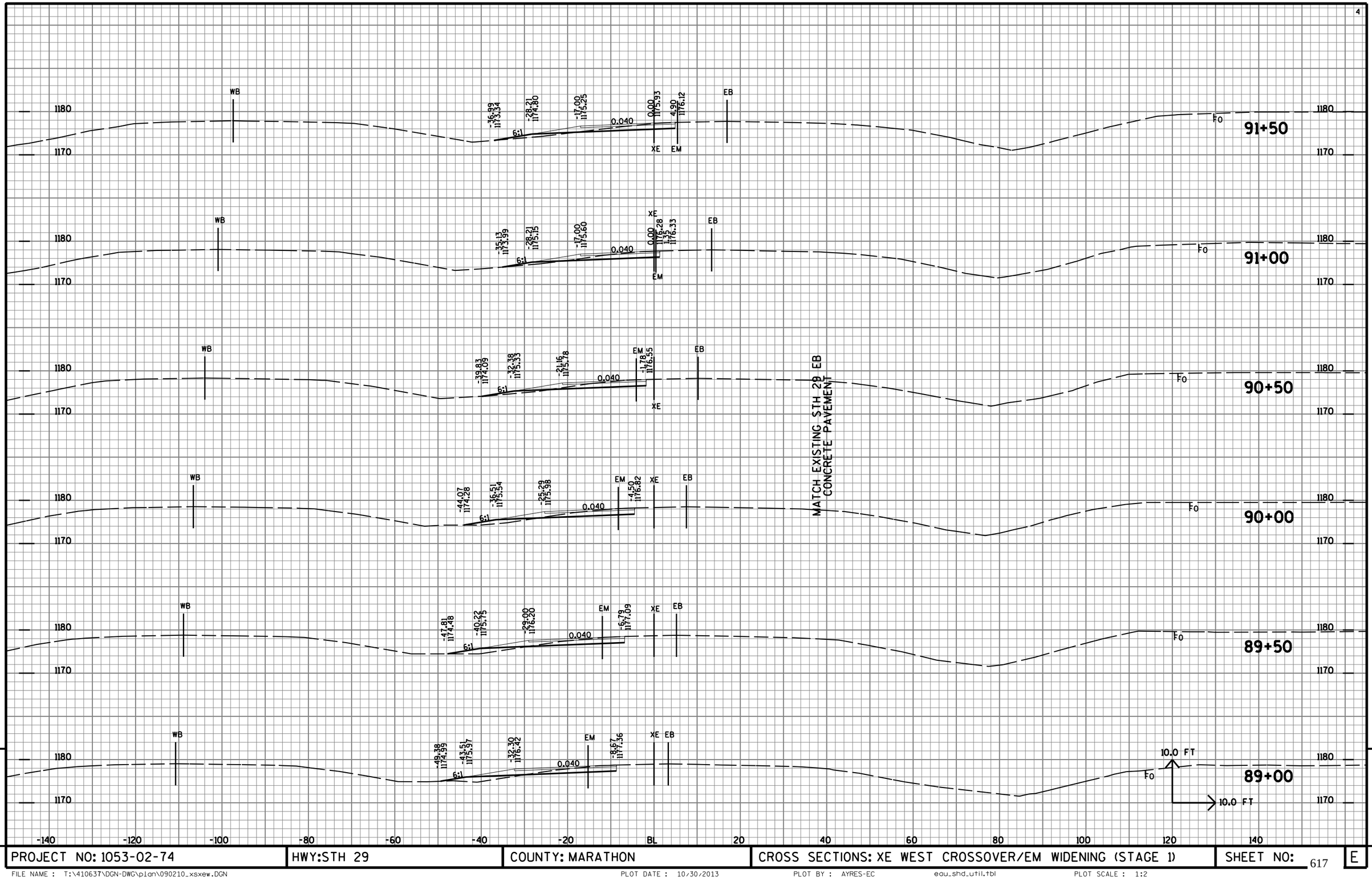


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PROJECT NO: 1053-02-74	HWY: STH 29	COUNTY: MARATHON	CROSS SECTIONS: EM WIDENING (STAGE 1)	SHEET NO: 616	E

FILE NAME : T:\410637\DGN-DWG\plan\090210_xsxew.DGN PLOT DATE : 10/30/2013 PLOT BY : AYRES-EC edu_shd_util.tbl PLOT SCALE : 1:2

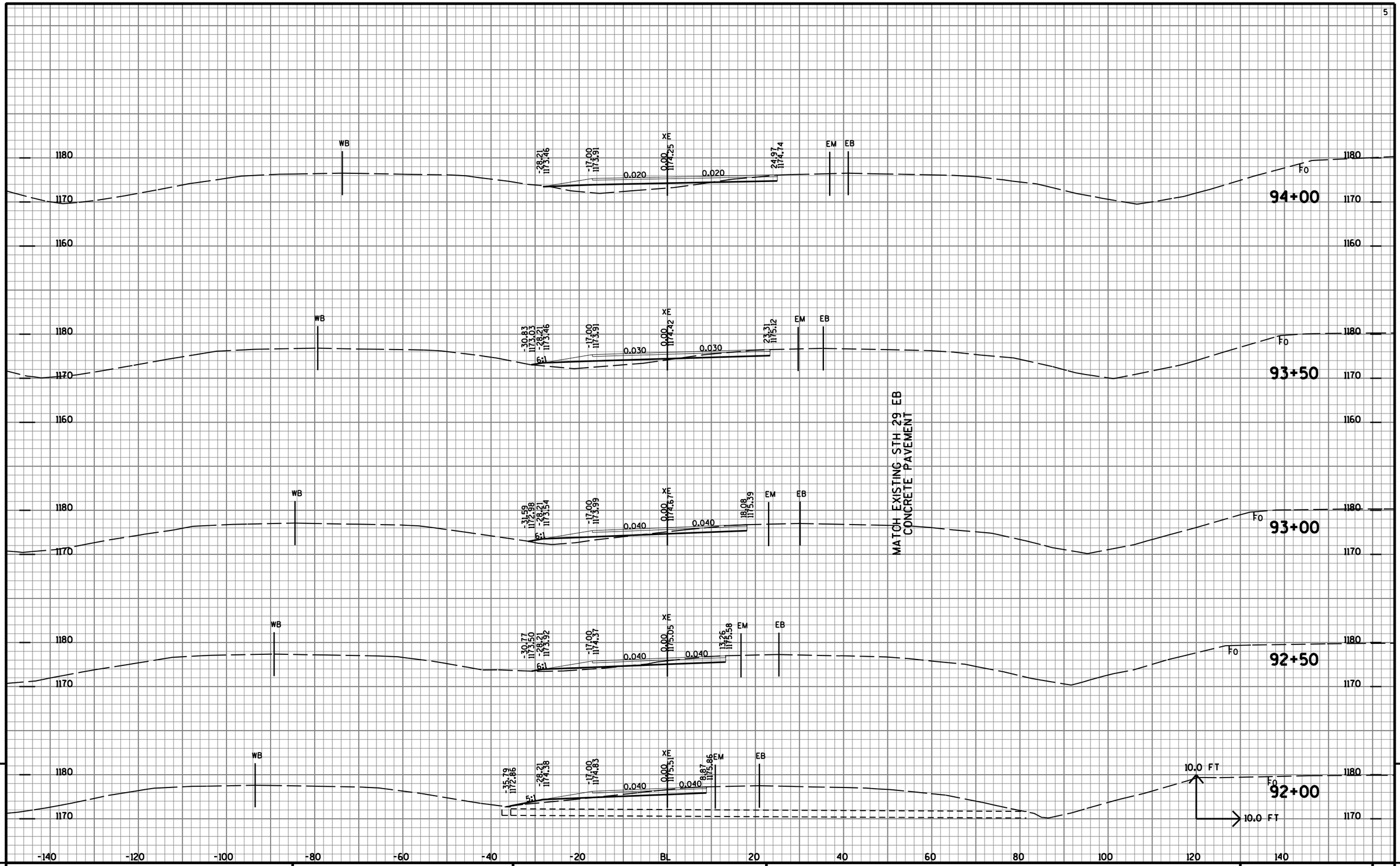


9

9

PROJECT NO: 1053-02-74	HWY: STH 29	COUNTY: MARATHON	CROSS SECTIONS: XE WEST CROSSOVER/EM WIDENING (STAGE 1)	SHEET NO: 617	E

FILE NAME : T:\410637\DGN-DWG\plan\090210_xsxew.DGN PLOT DATE : 10/30/2013 PLOT BY : AYRES-EC edu_shd_util.tbl PLOT SCALE : 1:2

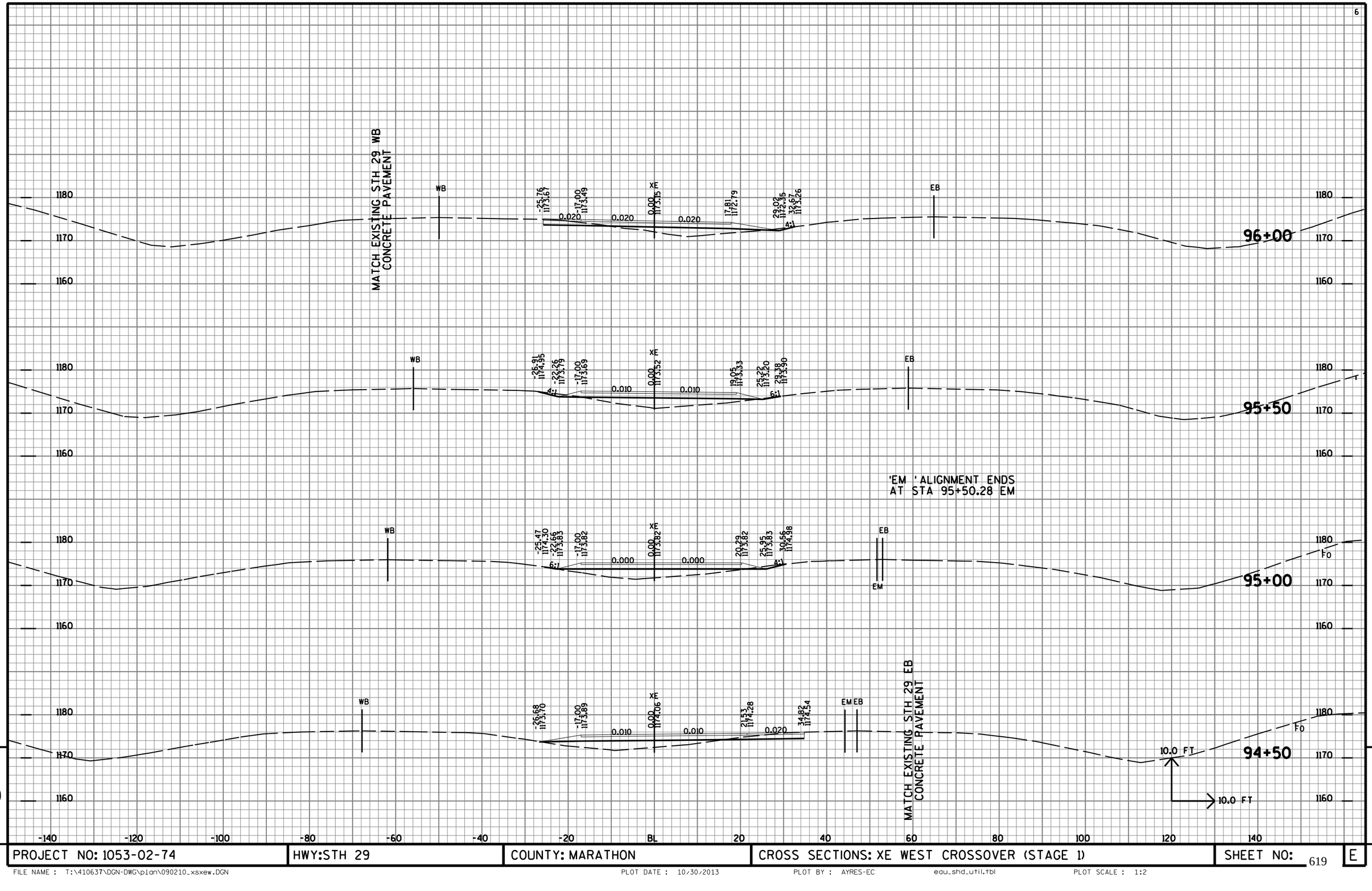


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PROJECT NO: 1053-02-74	HWY:STH 29	COUNTY: MARATHON	CROSS SECTIONS: XE WEST CROSSOVER/EM WIDENING (STAGE 1)	SHEET NO: 618	E

FILE NAME : T:\410637\DGN-DWG\plan\090210_xsxew.DGN PLOT DATE : 10/30/2013 PLOT BY : AYRES-EC edu_shd_util.tbl PLOT SCALE : 1:2

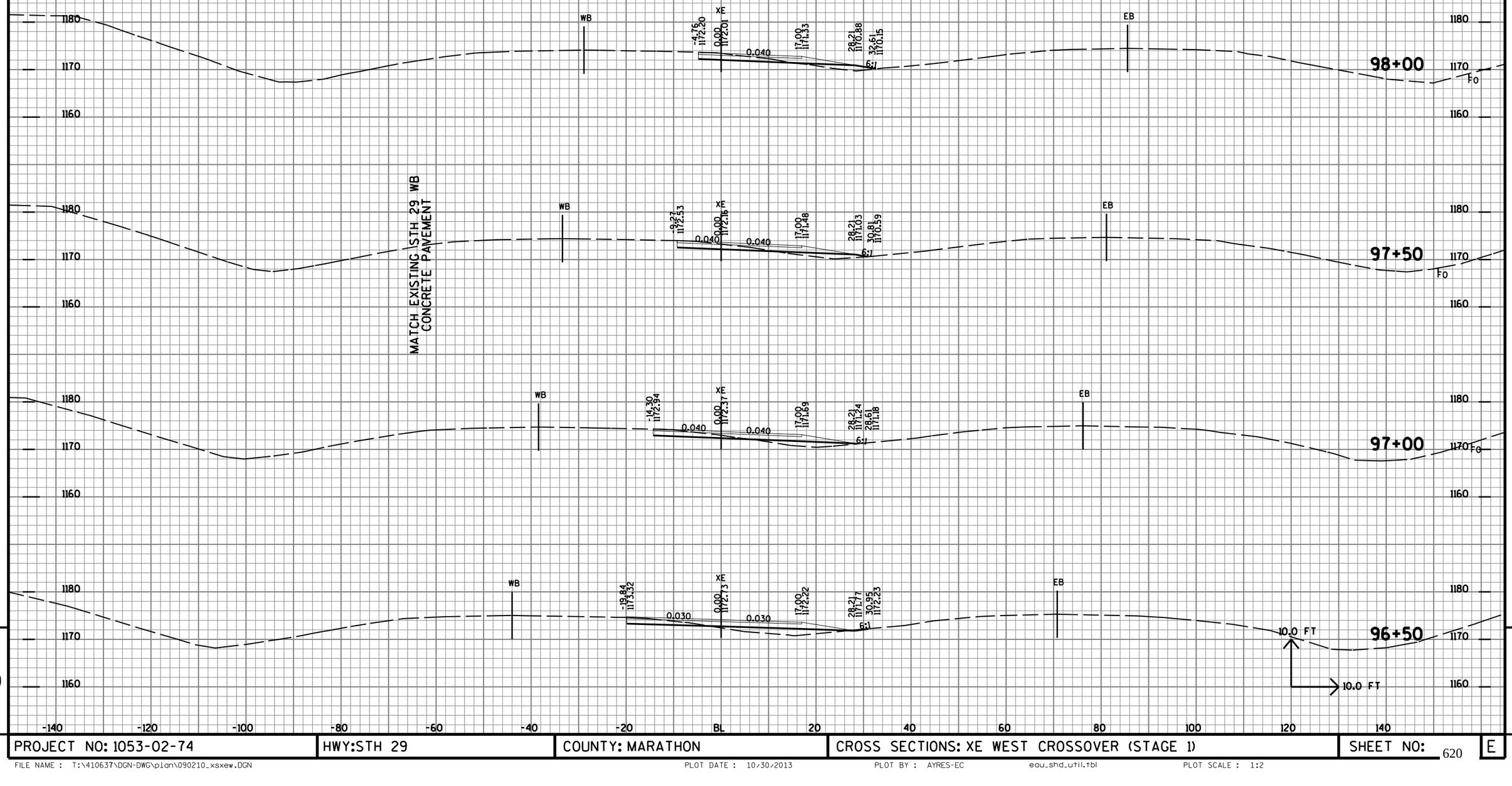


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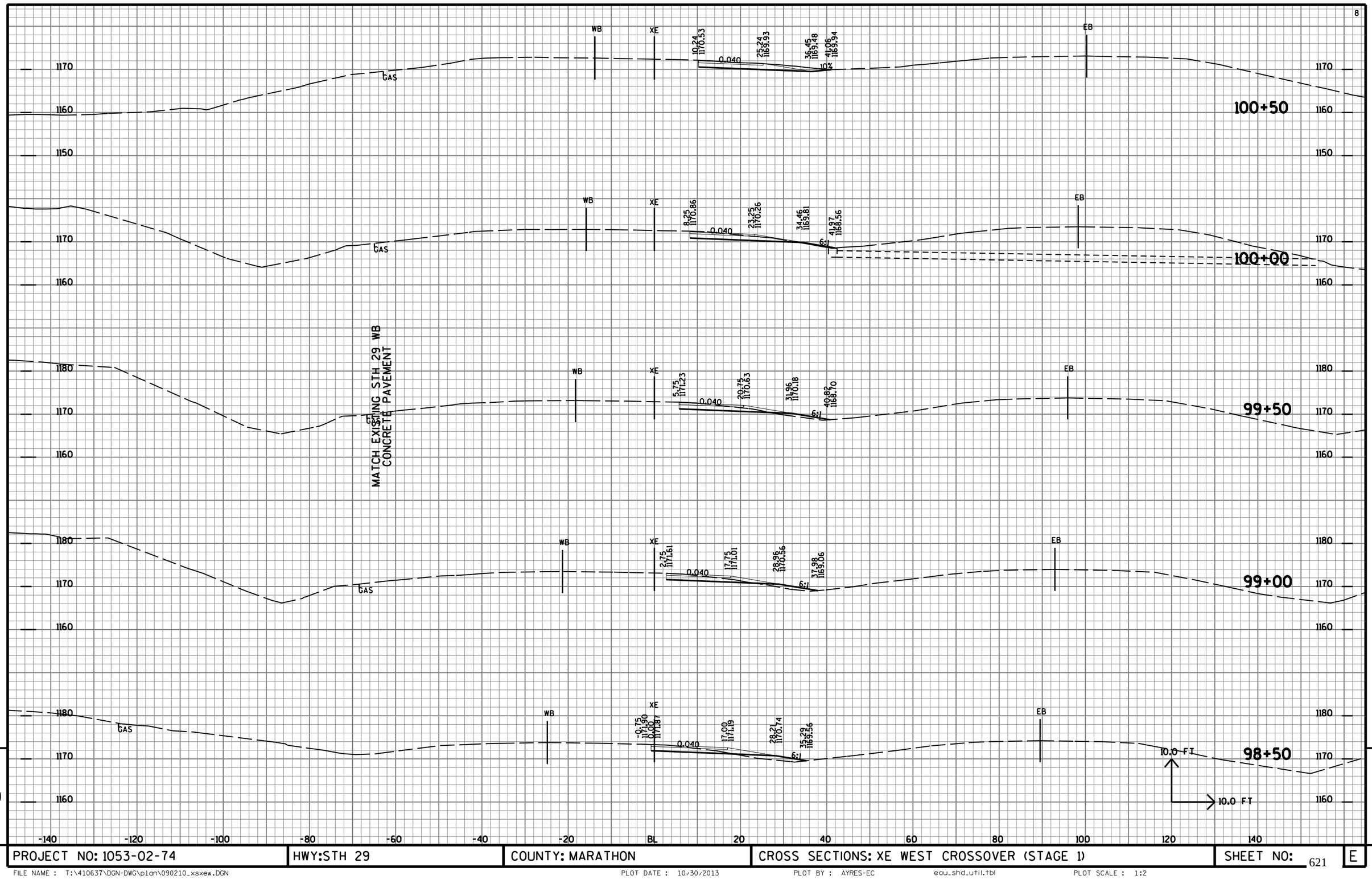
PROJECT NO: 1053-02-74	HWY:STH 29	COUNTY: MARATHON	CROSS SECTIONS: XE WEST CROSSOVER (STAGE 1)	SHEET NO: 619	E

FILE NAME : T:\410637\DGN-DWG\plan\090210_xsxew.DGN PLOT DATE : 10/30/2013 PLOT BY : AYRES-EC edu_shd_util.tbl PLOT SCALE : 1:2

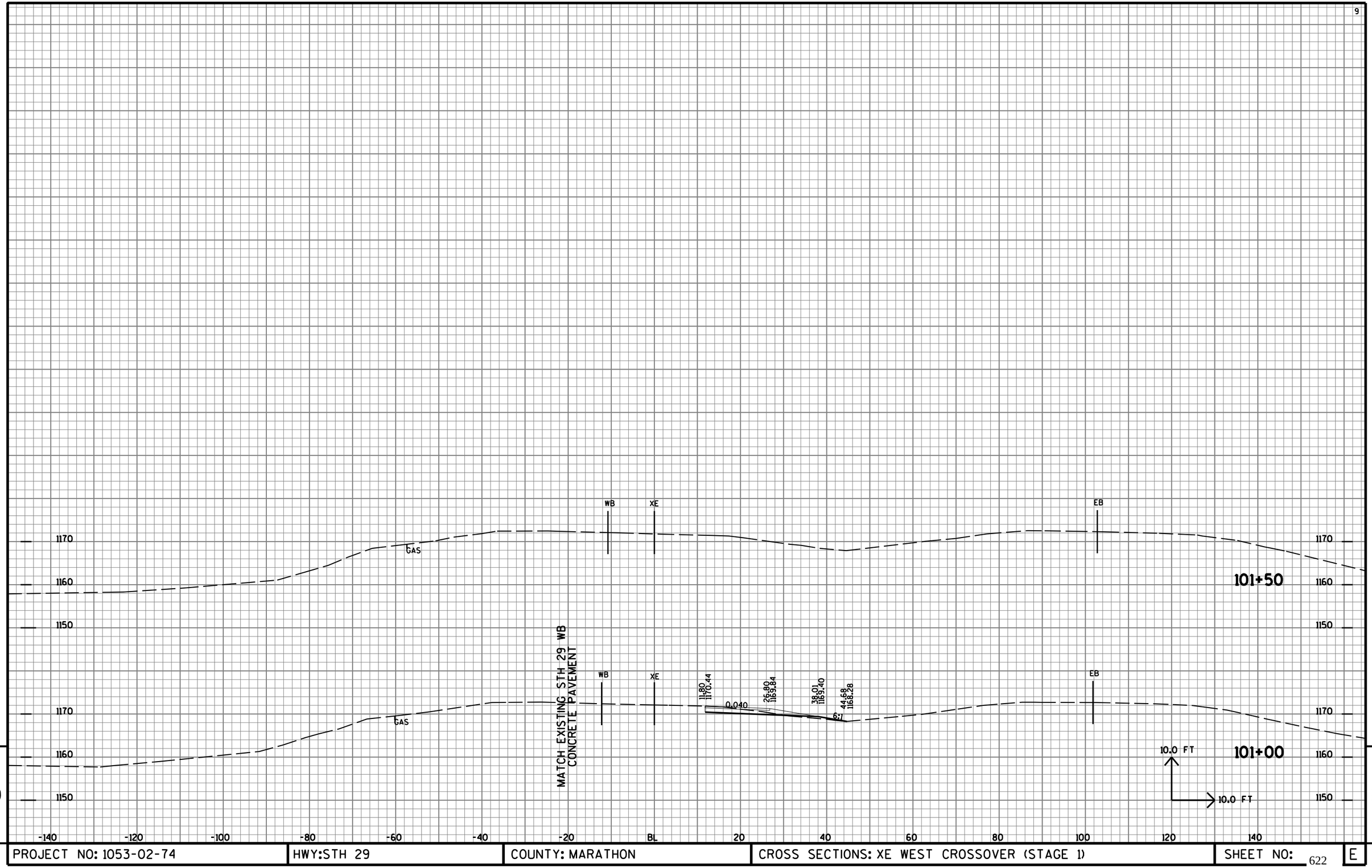


PROJECT NO: 1053-02-74	HWY:STH 29	COUNTY: MARATHON	CROSS SECTIONS: XE WEST CROSSOVER (STAGE 1)	SHEET NO: 620	E

FILE NAME : T:\410637\DGN-DWG\plan\090210_xsxew.DGN PLOT DATE : 10/30/2013 PLOT BY : AYRES-EC edu_shd_util.tbl PLOT SCALE : 1:2

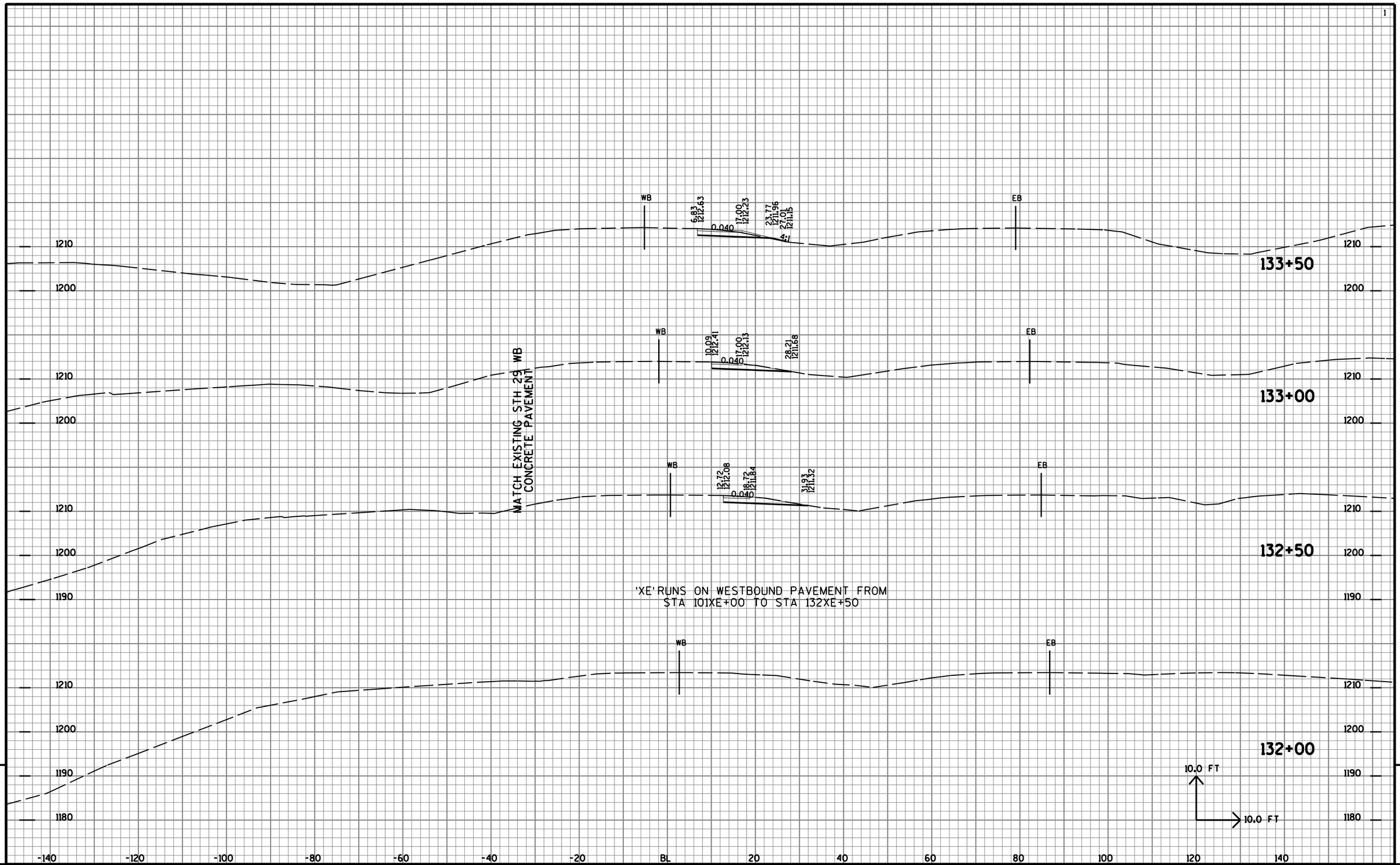


PROJECT NO: 1053-02-74	HWY: STH 29	COUNTY: MARATHON	CROSS SECTIONS: XE WEST CROSSOVER (STAGE 1)	SHEET NO: 621 E



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PROJECT NO: 1053-02-74	HWY:STH 29	COUNTY: MARATHON	CROSS SECTIONS: XE WEST CROSSOVER (STAGE 1)	SHEET NO: 622	E

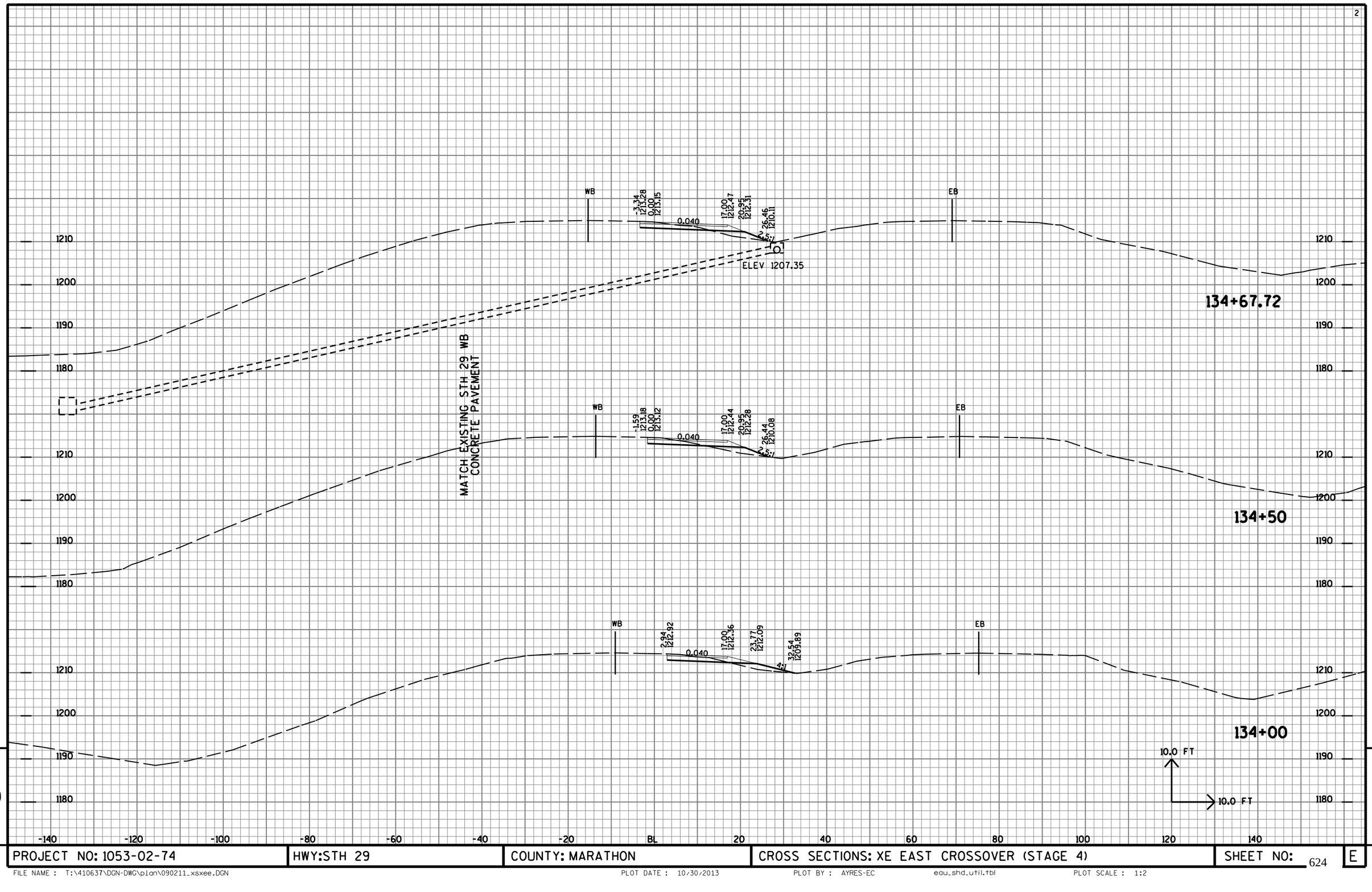


9

9

PROJECT NO: 1053-02-74	HWY:STH 29	COUNTY: MARATHON	CROSS SECTIONS: XE EAST CROSSOVER (STAGE 4)	SHEET NO: 623	E

FILE NAME : T:\410637\DGN-DWG\plan\090211_xsxee.DGN PLOT DATE : 10/30/2013 PLOT BY : AYRES-EC edu_shd_util.tbl PLOT SCALE : 1:2

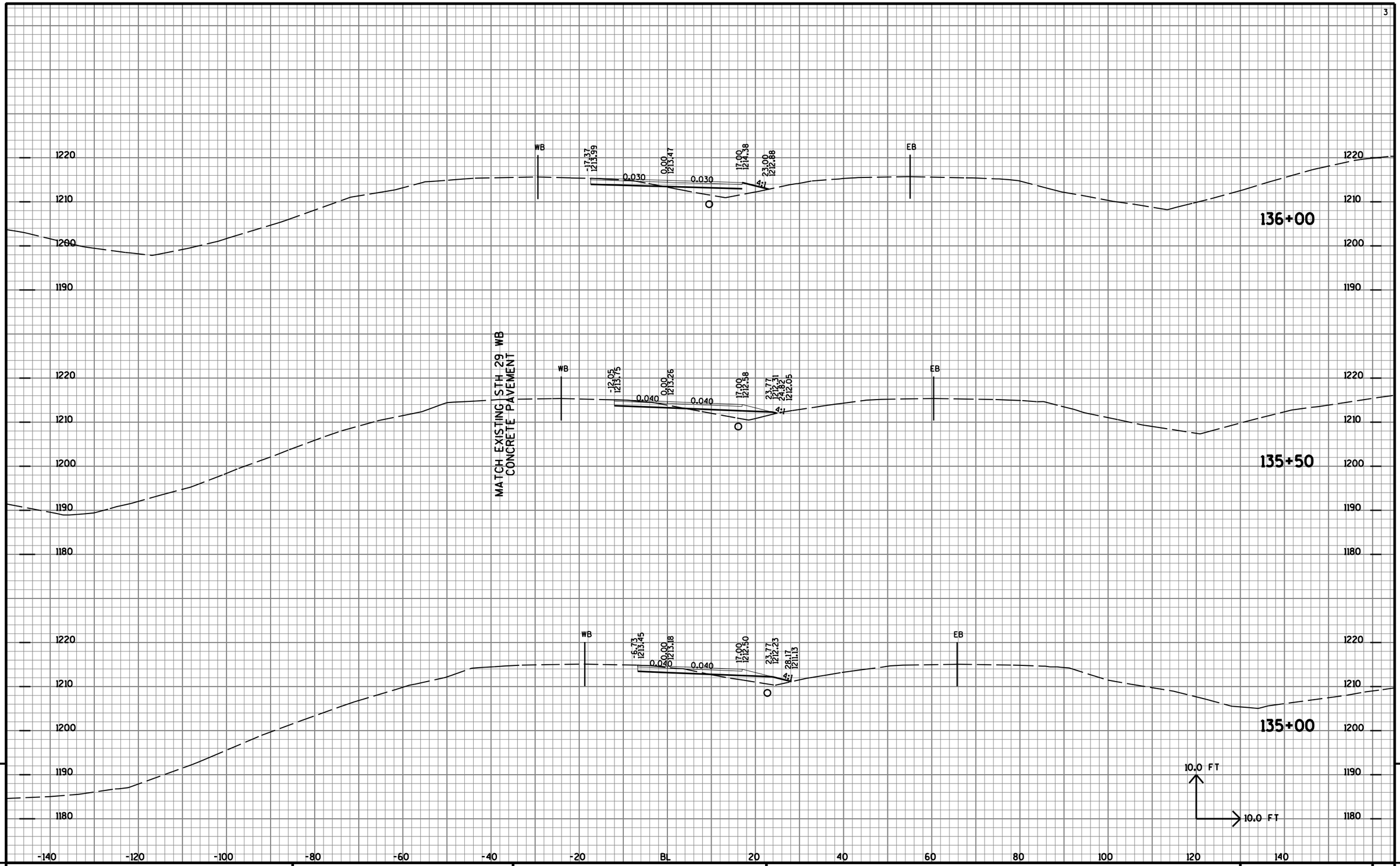


9

9

PROJECT NO: 1053-02-74	HWY: STH 29	COUNTY: MARATHON	CROSS SECTIONS: XE EAST CROSSOVER (STAGE 4)	SHEET NO: 624	E

FILE NAME : T:\410637\DGN-DWG\plan\090211_xsxee.DGN PLOT DATE : 10/30/2013 PLOT BY : AYRES-EC edu_shd_util.tbl PLOT SCALE : 1:2

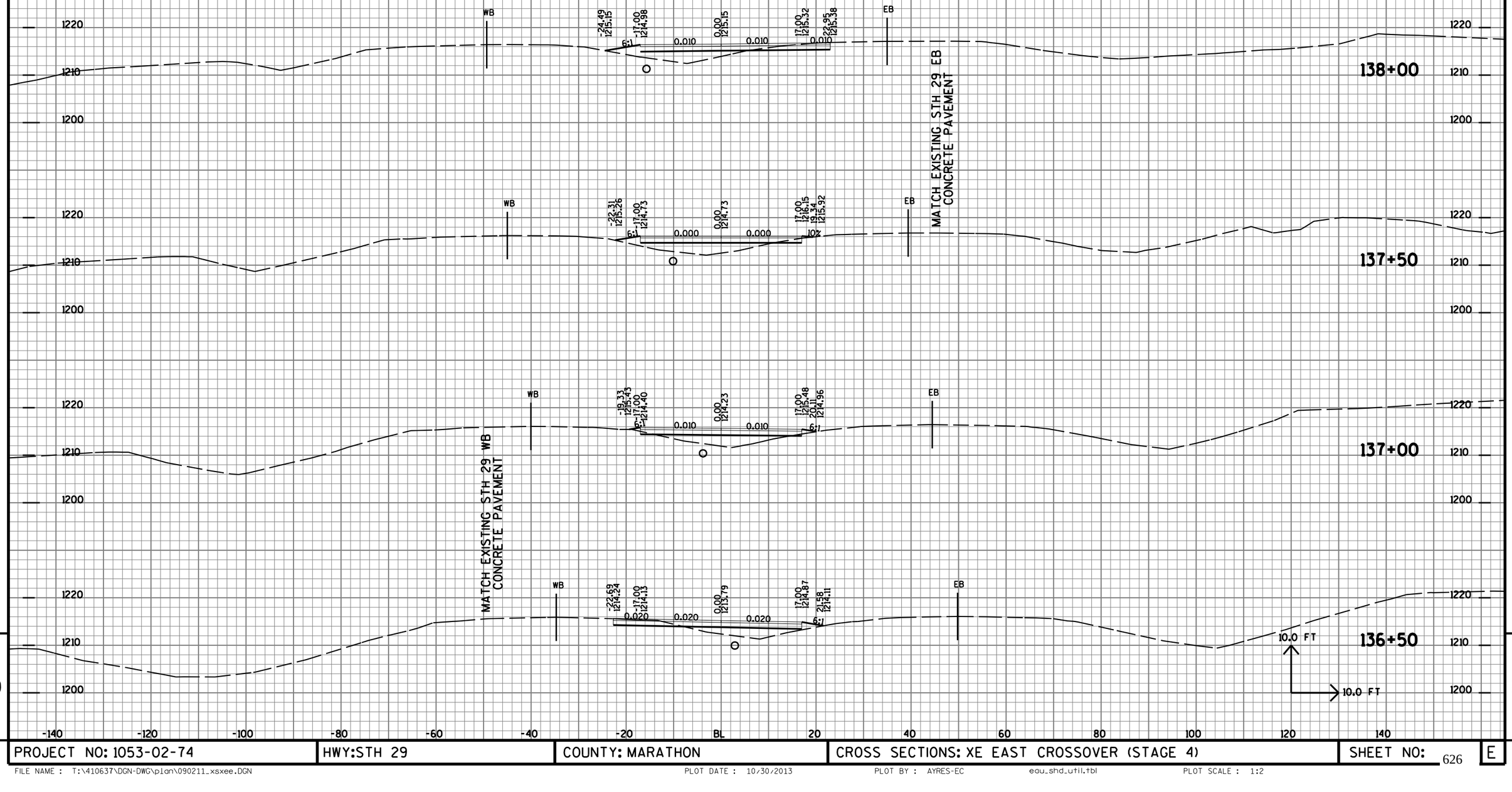


9

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PROJECT NO: 1053-02-74	HWY: STH 29	COUNTY: MARATHON	CROSS SECTIONS: XE EAST CROSSOVER (STAGE 4)	SHEET NO: 625	E

FILE NAME : T:\410637\DGN-DWG\plan\090211_xsxee.DGN PLOT DATE : 10/30/2013 PLOT BY : AYRES-EC edu_shd_util.tbl PLOT SCALE : 1:2

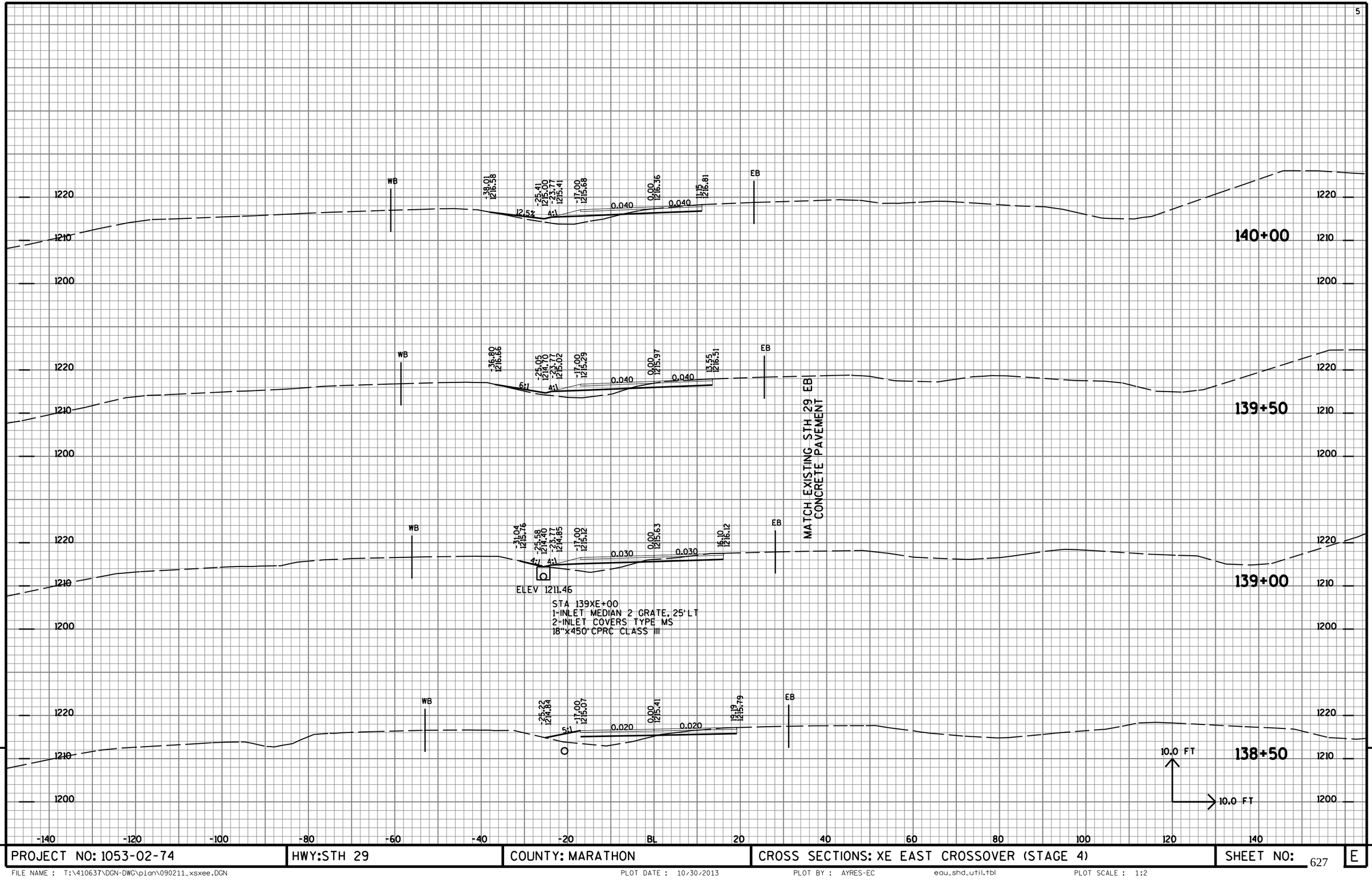


9

9

PROJECT NO: 1053-02-74	HWY:STH 29	COUNTY: MARATHON	CROSS SECTIONS: XE EAST CROSSOVER (STAGE 4)	SHEET NO: 626	E

FILE NAME : T:\410637\DGN-DWG\plan\090211_xsxee.DGN PLOT DATE : 10/30/2013 PLOT BY : AYRES-EC edu_shd_util.tbl PLOT SCALE : 1:2

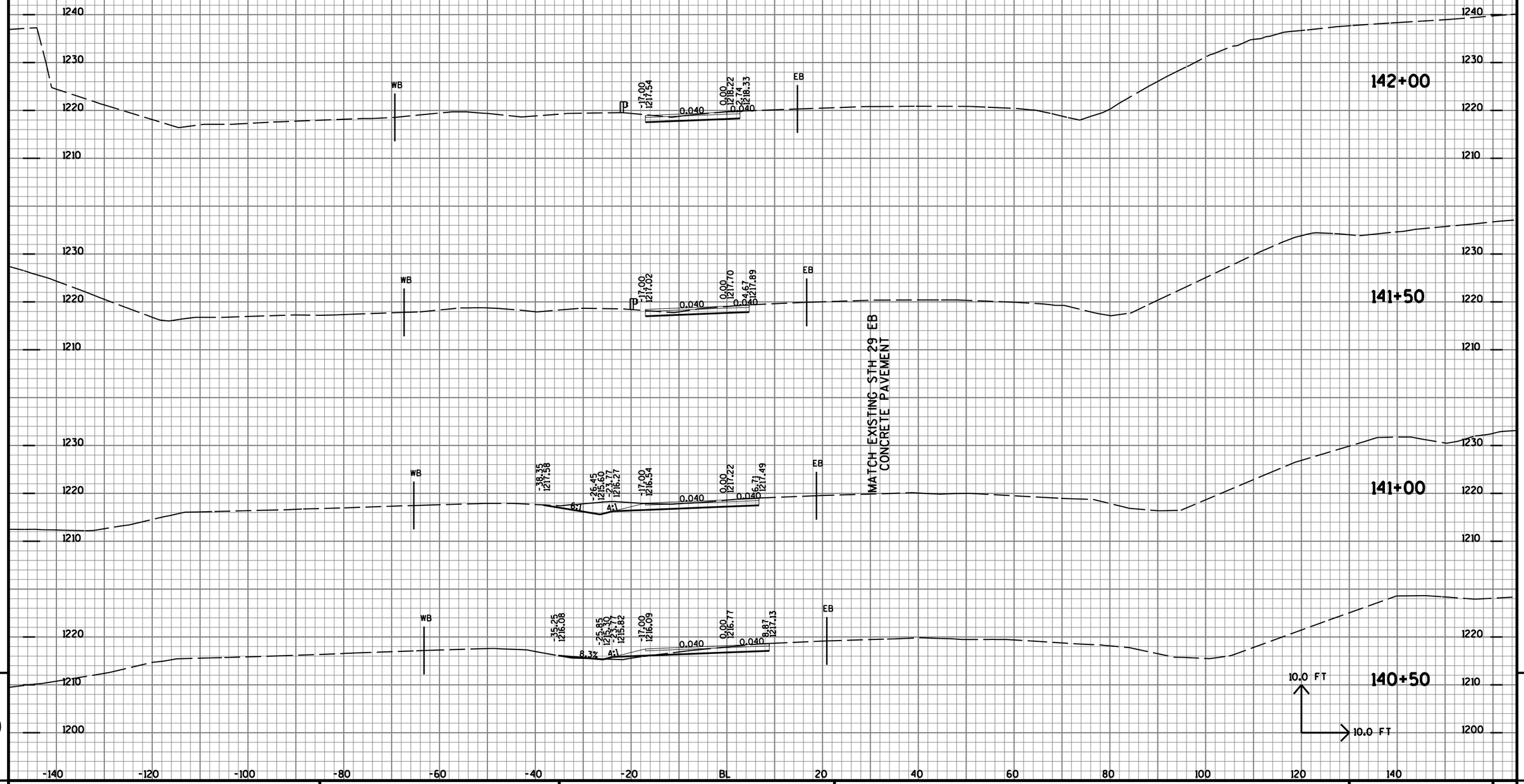


9

9

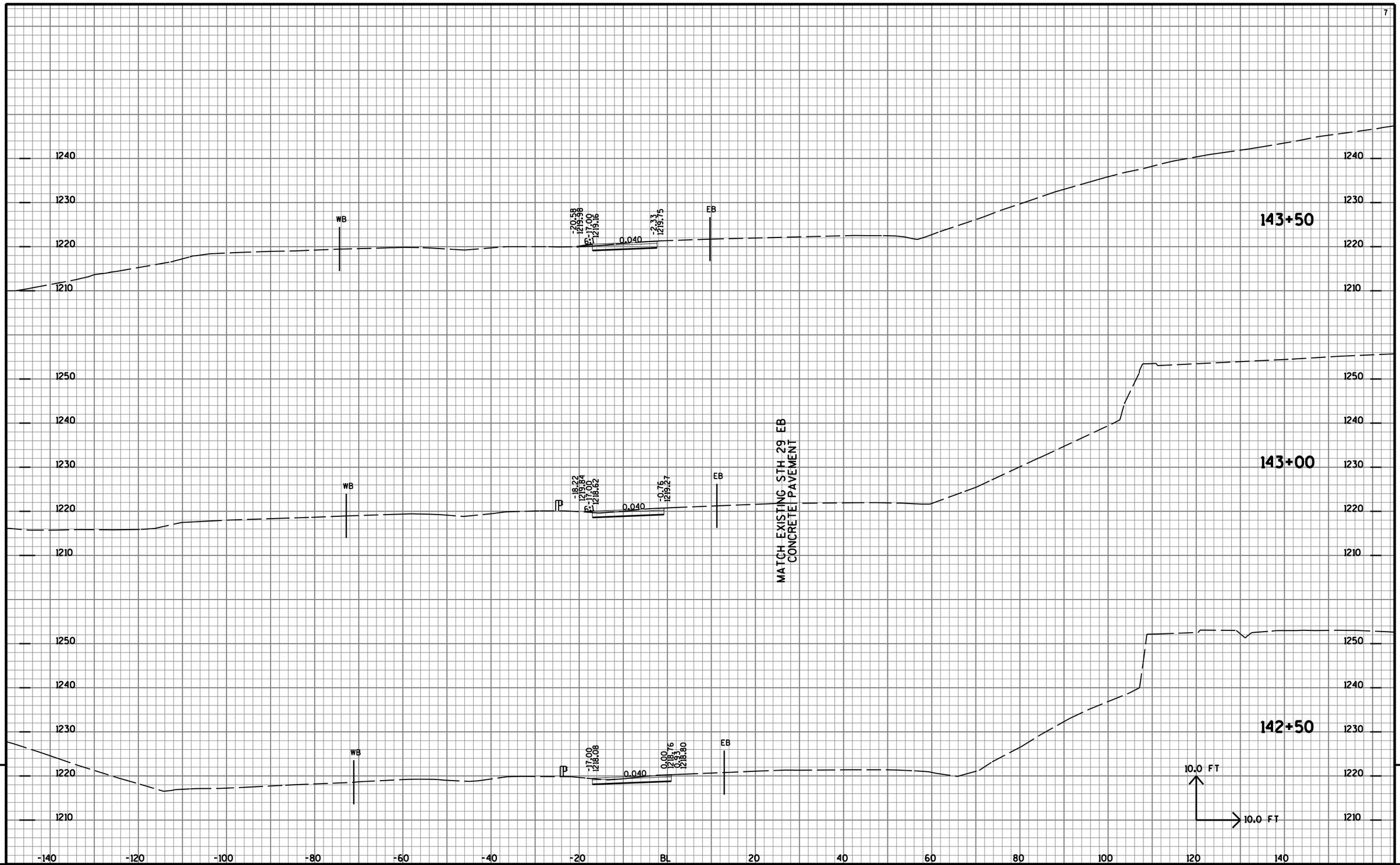
PROJECT NO: 1053-02-74	HWY: STH 29	COUNTY: MARATHON	CROSS SECTIONS: XE EAST CROSSOVER (STAGE 4)	SHEET NO: 627	E

FILE NAME : T:\410637\DGN-DWG\plan\090211_xsxee.DGN PLOT DATE : 10/30/2013 PLOT BY : AYRES-EC edu_shd_util.tbl PLOT SCALE : 1:2



PROJECT NO: 1053-02-74	HWY:STH 29	COUNTY: MARATHON	CROSS SECTIONS: XE EAST CROSSOVER (STAGE 4)	SHEET NO: 628 E

FILE NAME : T:\410637\DGN-DWG\plan\090211_xsxee.DGN PLOT DATE : 10/30/2013 PLOT BY : AYRES-EC edu_shd_util.tbl PLOT SCALE : 1:2

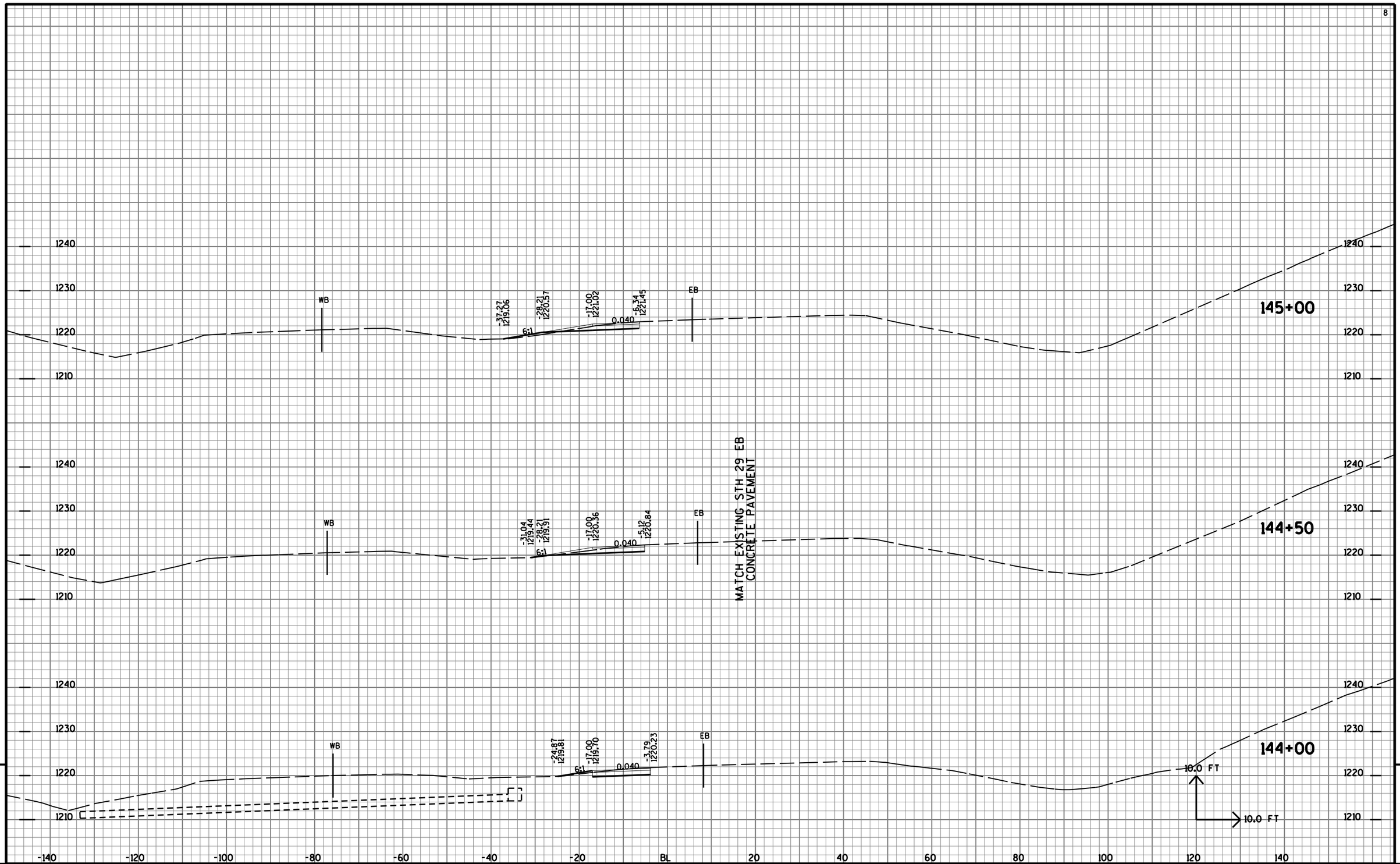


9

9

PROJECT NO: 1053-02-74	HWY:STH 29	COUNTY: MARATHON	CROSS SECTIONS: XE EAST CROSSOVER (STAGE 4)	SHEET NO: 629	E

FILE NAME : T:\410637\DGN-DWG\plan\090211_xsxee.DGN PLOT DATE : 10/30/2013 PLOT BY : AYRES-EC edu_shd_util.tbl PLOT SCALE : 1:2

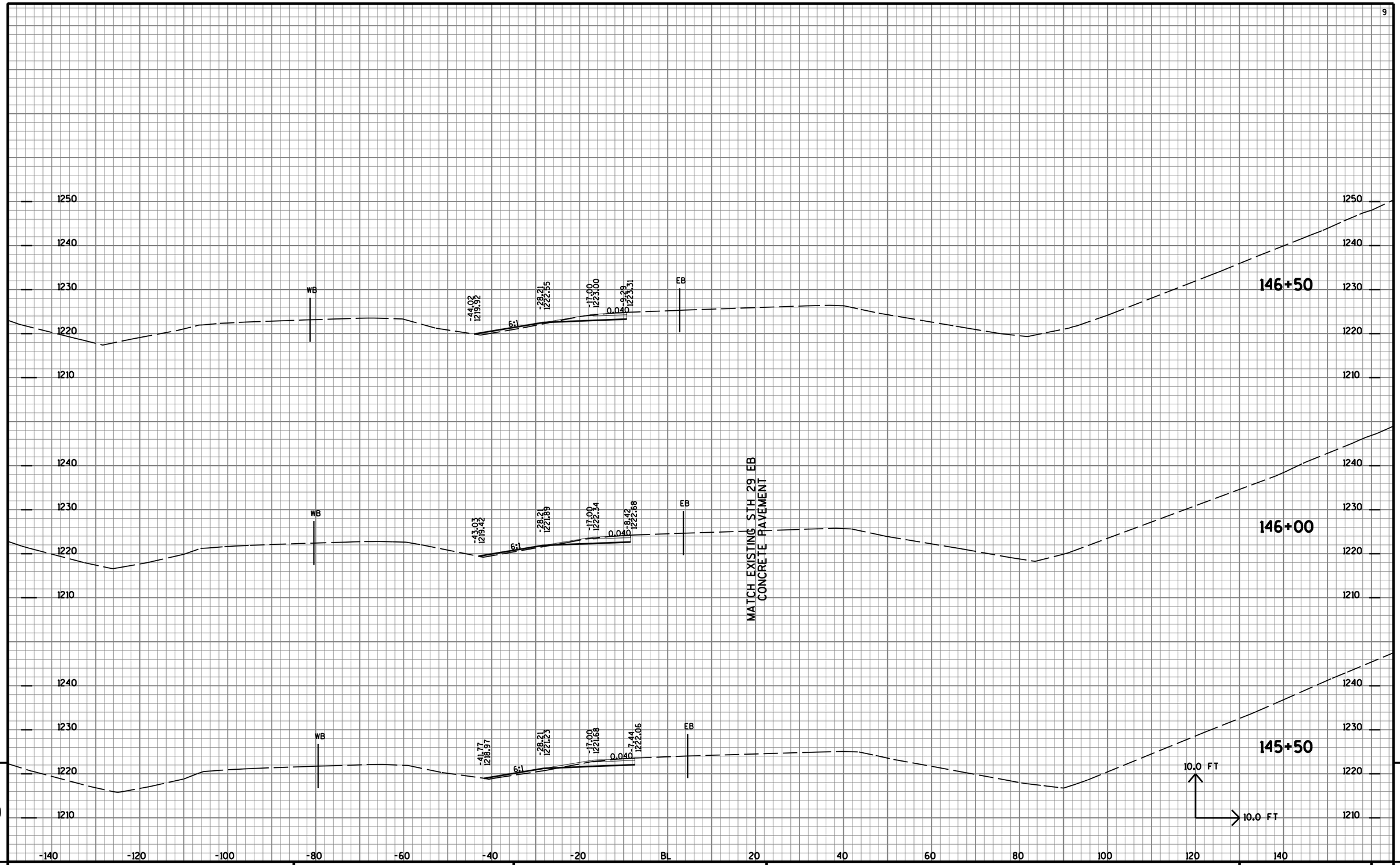


9

9

PROJECT NO: 1053-02-74	HWY:STH 29	COUNTY: MARATHON	CROSS SECTIONS: XE EAST CROSSOVER (STAGE 4)	SHEET NO: 630	E

FILE NAME : T:\410637\DGN-DWG\plan\090211_xsxee.DGN PLOT DATE : 10/30/2013 PLOT BY : AYRES-EC edu_shd_util.tbl PLOT SCALE : 1:2



9

9

PROJECT NO: 1053-02-74	HWY:STH 29	COUNTY: MARATHON	CROSS SECTIONS: XE EAST CROSSOVER (STAGE 4)	SHEET NO: 631	E

FILE NAME : T:\410637\DGN-DWG\plan\090211_xsxee.DGN PLOT DATE : 10/30/2013 PLOT BY : AYRES-EC edu_shd_util.tbl PLOT SCALE : 1:2

148+00

WB
-28.21
1224.74
-17.00
1225.19
0.04
-11.16
1225.42
EB

147+50

WB
-42.52
1221.63
6:1
-28.21
1224.01
-17.00
1224.46
0.04
-10.65
1224.71
EB

MATCH EXISTING STH 29 CONCRETE PAVEMENT

147+00

WB
-43.36
1220.78
6:1
-28.21
1223.28
-17.00
1223.73
0.04
-10.03
1224.01
EB

10.0 FT
10.0 FT

1250
1240
1230
1220
1210

-140 -120 -100 -80 -60 -40 -20 BL 20 40 60 80 100 120 140

9

PROJECT NO: 1053-02-74	HWY:STH 29	COUNTY: MARATHON	CROSS SECTIONS: XE EAST CROSSOVER (STAGE 4)	SHEET NO: 632 E

FILE NAME : T:\410637\DGN-DWG\plan\090211_xsxee.DGN PLOT DATE : 10/30/2013 PLOT BY : AYRES-EC edu_shd_util.tbl PLOT SCALE : 1:2

149+50

149+00

148+50

1250
1240
1230
1220

WB

EB

-28.21
1225.47

-17.00
1225.92

0.00
1155
1426.14

MATCH EXISTING STH 29 EB
CONCRETE PAVEMENT

10.0 FT

10.0 FT

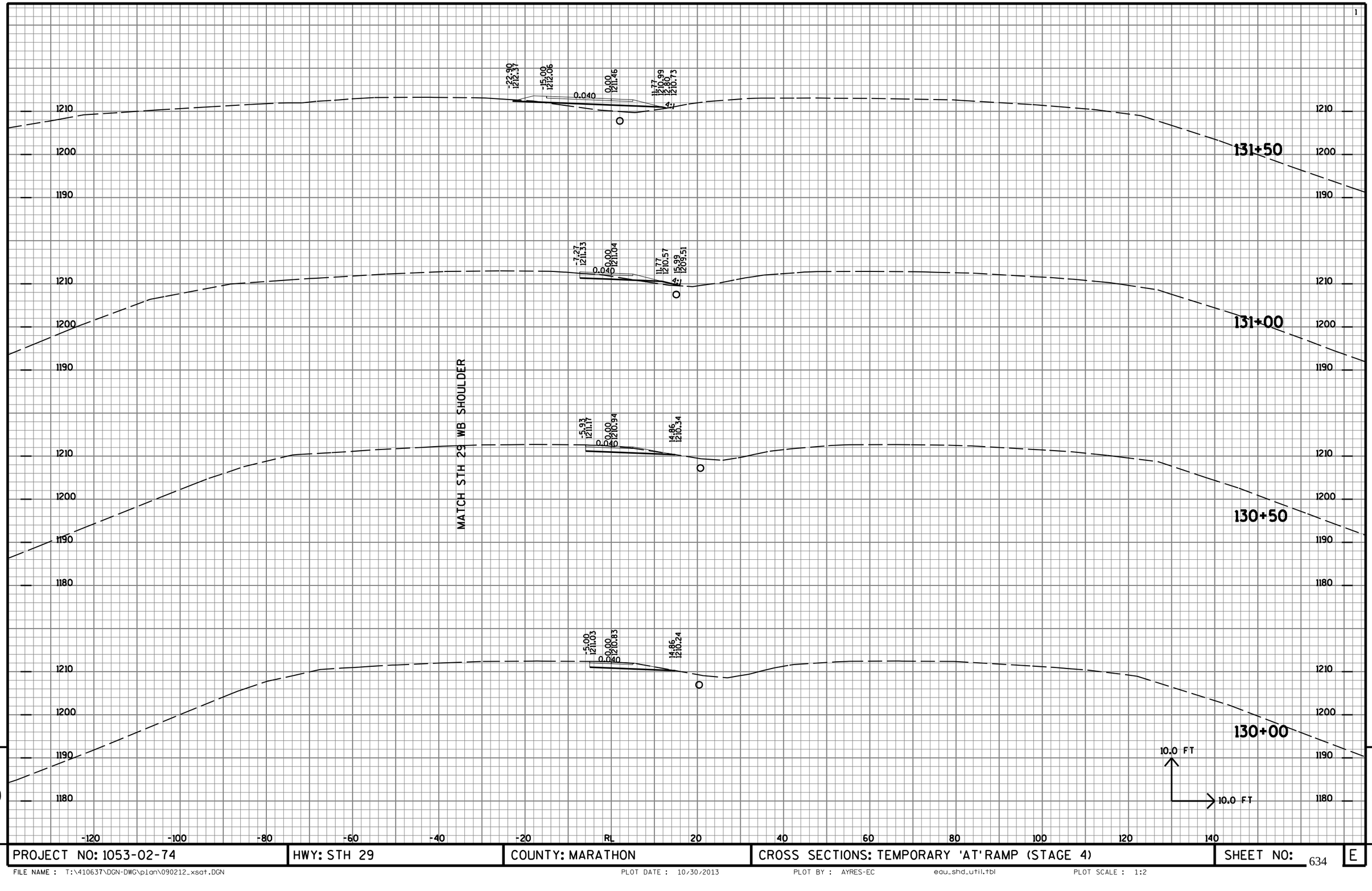
-140 -120 -100 -80 -60 -40 -20 BL 20 40 60 80 100 120 140

9

9

PROJECT NO: 1053-02-74	HWY:STH 29	COUNTY: MARATHON	CROSS SECTIONS: XE EAST CROSSOVER (STAGE 4)	SHEET NO: 633	E

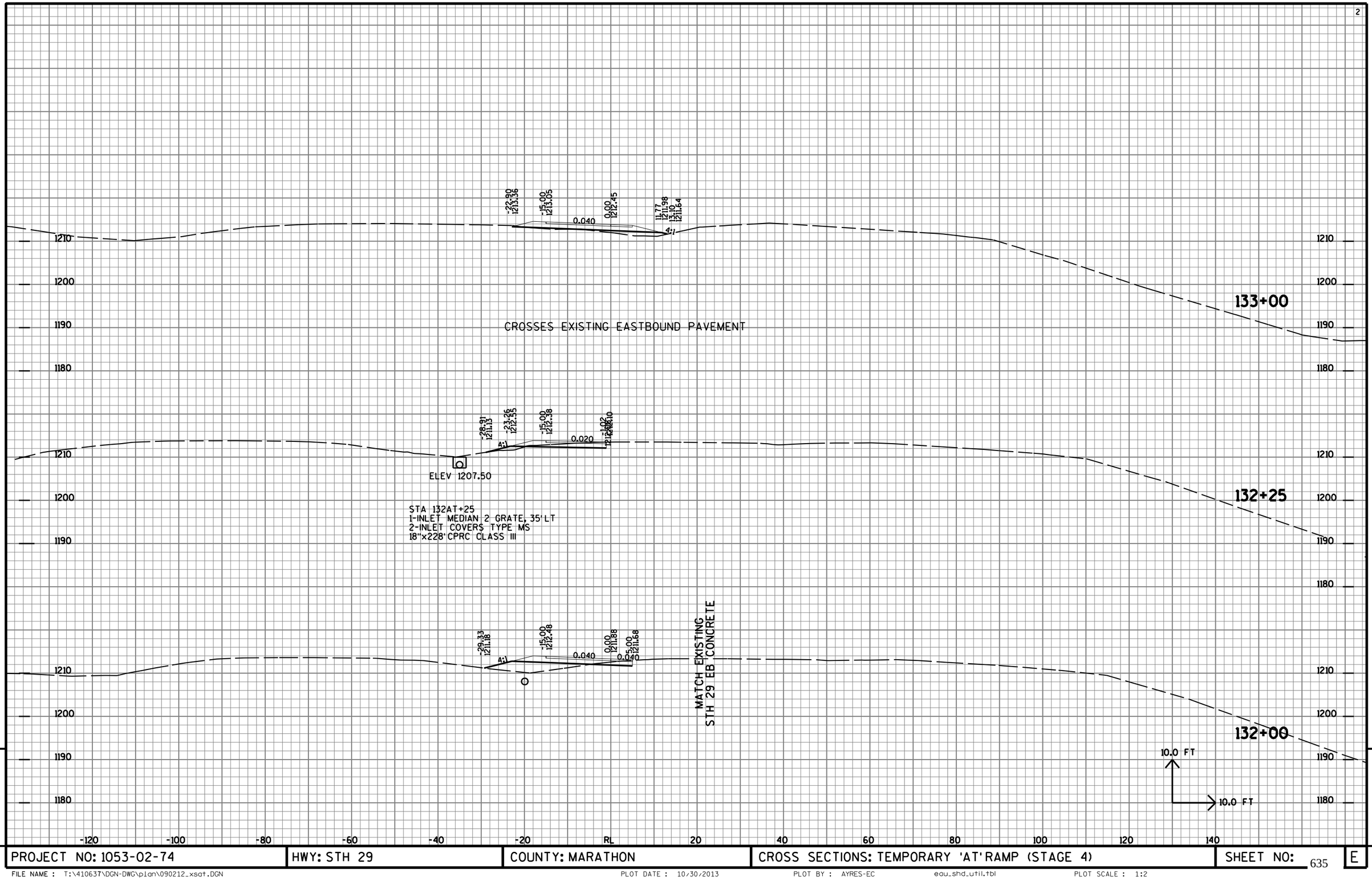
FILE NAME : T:\410637\DGN-DWG\plan\090211_xsxee.DGN PLOT DATE : 10/30/2013 PLOT BY : AYRES-EC edu_shd_util.tbl PLOT SCALE : 1:2



9

PROJECT NO: 1053-02-74	HWY: STH 29	COUNTY: MARATHON	CROSS SECTIONS: TEMPORARY 'AT' RAMP (STAGE 4)	SHEET NO: 634	E

FILE NAME : T:\410637\DGN-DWG\plan\090212_xsat.DGN PLOT DATE : 10/30/2013 PLOT BY : AYRES-EC edu_shd_util.tbl PLOT SCALE : 1:2



9

9

PROJECT NO: 1053-02-74	HWY: STH 29	COUNTY: MARATHON	CROSS SECTIONS: TEMPORARY 'AT' RAMP (STAGE 4)	SHEET NO: 635	E

FILE NAME : T:\410637\DGN-DWG\plan\090212_xsat.DGN PLOT DATE : 10/30/2013 PLOT BY : AYRES-EC edu_shd_util.tbl PLOT SCALE : 1:2

135+00

134+50

134+00

133+50

MATCH EXISTING
A' RAMP CONCRETE

-53.54
1207.00

-39.00
1211.88

4:1

3:1

-22.58
1215.95

-15.00
1215.50

0.060

0.00
1214.60

-45.91
1208.69

4:1

-22.90
1214.44

-15.00
1214.13

0.040

0.00
1213.53

-5.00
1213.33

10.0 FT

10.0 FT

1210
1200
1190
1180

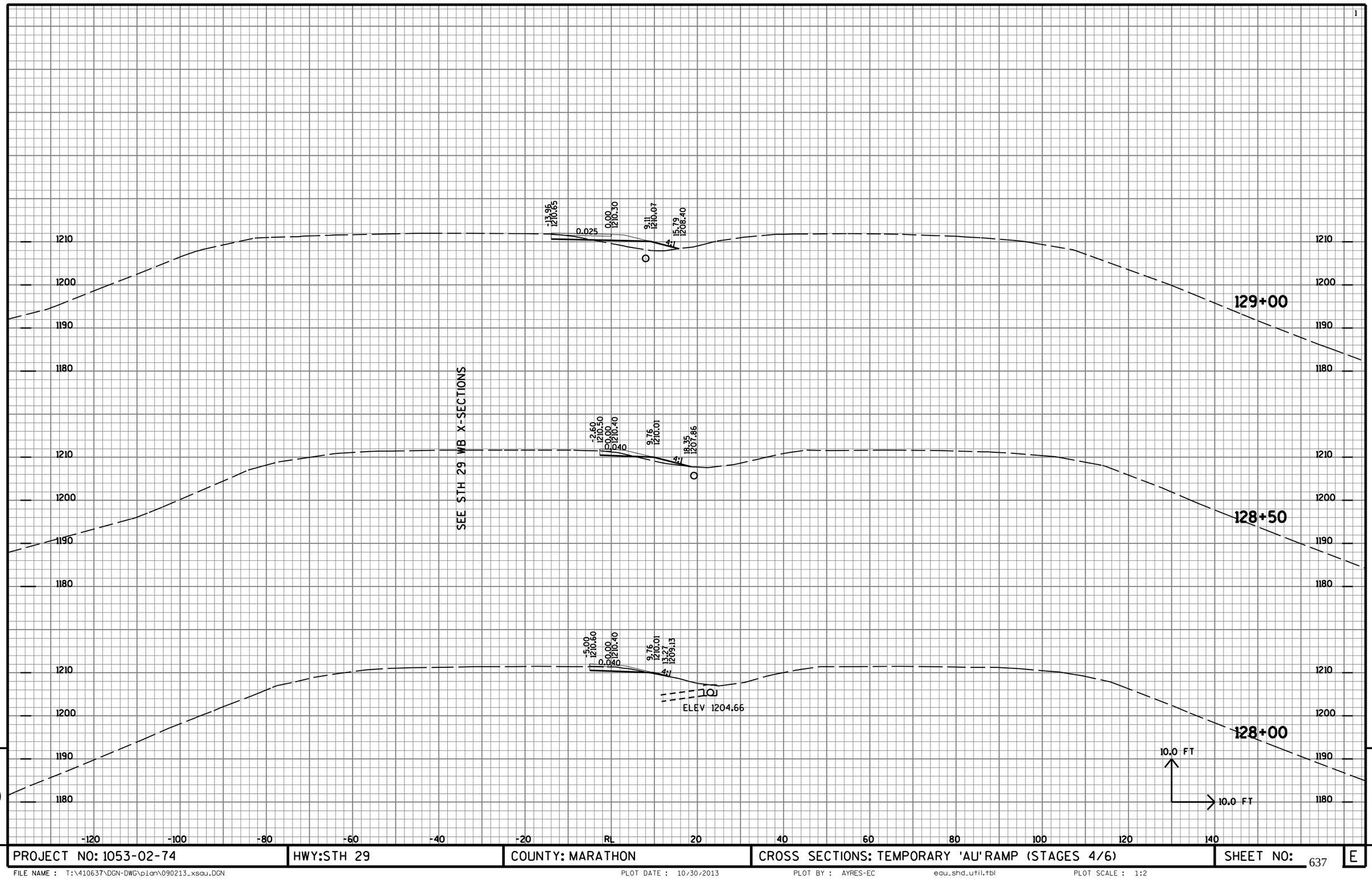
-120 -100 -80 -60 -40 -20 RL 20 40 60 80 100 120 140

9

9

PROJECT NO: 1053-02-74	HWY: STH 29	COUNTY: MARATHON	CROSS SECTIONS: TEMPORARY 'AT' RAMP (STAGE 4)	SHEET NO: 636	E

FILE NAME : T:\410637\DGN-DWG\plan\090212_xsat.DGN PLOT DATE : 10/30/2013 PLOT BY : AYRES-EC edu_shd_util.tbl PLOT SCALE : 1:2

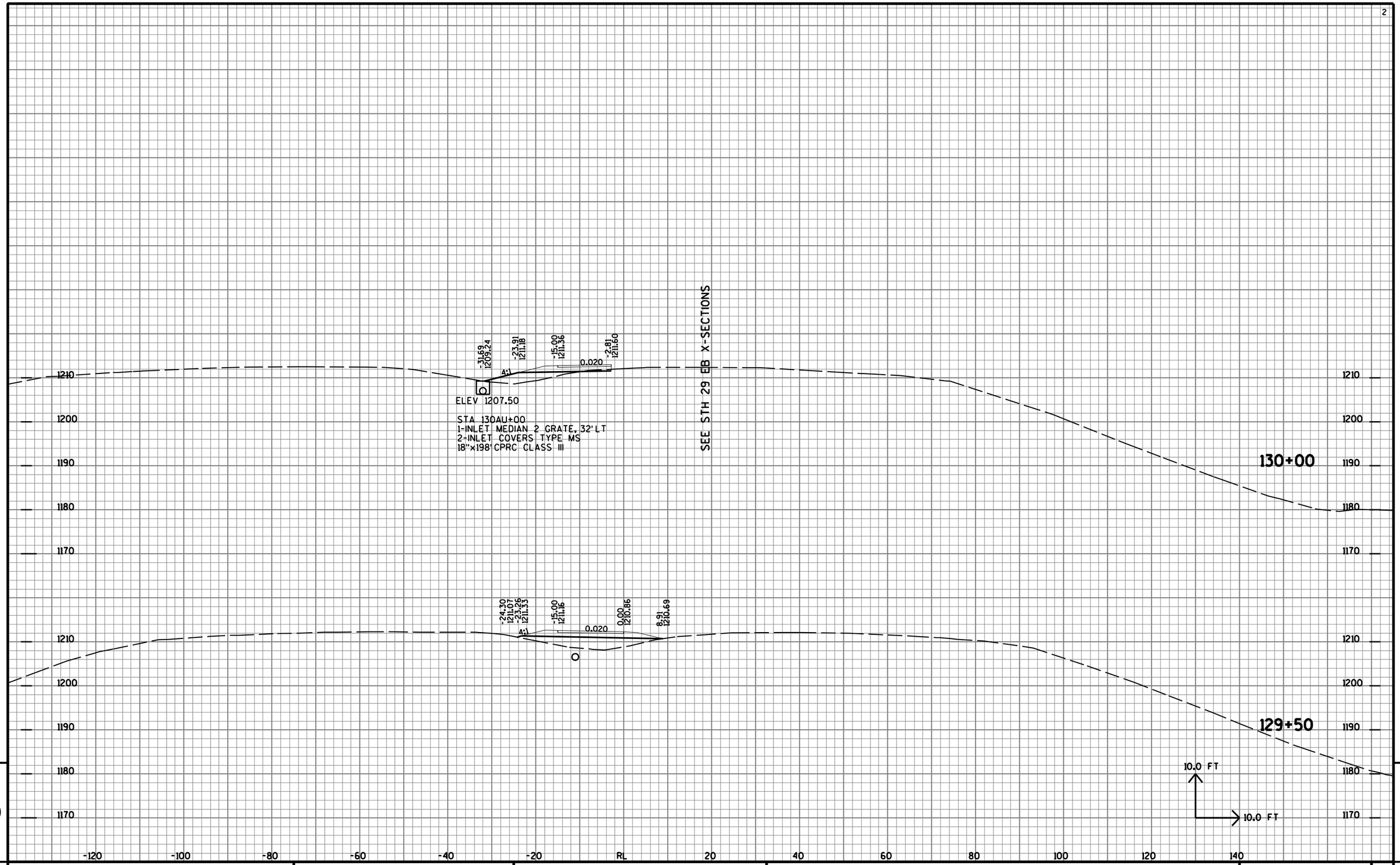


9

PROJECT NO: 1053-02-74	HWY:STH 29	COUNTY: MARATHON	CROSS SECTIONS: TEMPORARY 'AU' RAMP (STAGES 4/6)	SHEET NO: 637	E

9

FILE NAME : T:\410637\DGN-DWG\plan\090213_xsau.DGN PLOT DATE : 10/30/2013 PLOT BY : AYRES-EC edu_shd_util.tbl PLOT SCALE : 1:2



PROJECT NO: 1053-02-74	HWY: STH 29	COUNTY: MARATHON	CROSS SECTIONS: TEMPORARY 'AU' RAMP (STAGES 4/6)	SHEET NO: 638	E

FILE NAME : T:\410637\DGN-DWG\plan\090213_xsau.DGN PLOT DATE : 10/30/2013 PLOT BY : AYRES-EC edu_shd_util.tbl PLOT SCALE : 1:2

MATCH EXISTING D RAMP CONCRETE

SEE STH 29 WB WIDENING X-SECTIONS

-10.17
1209.19

0.100

0.00
1210.21

0.060

15.00
1211.11

132+50

132+00

131+50

10.0 FT

10.0 FT

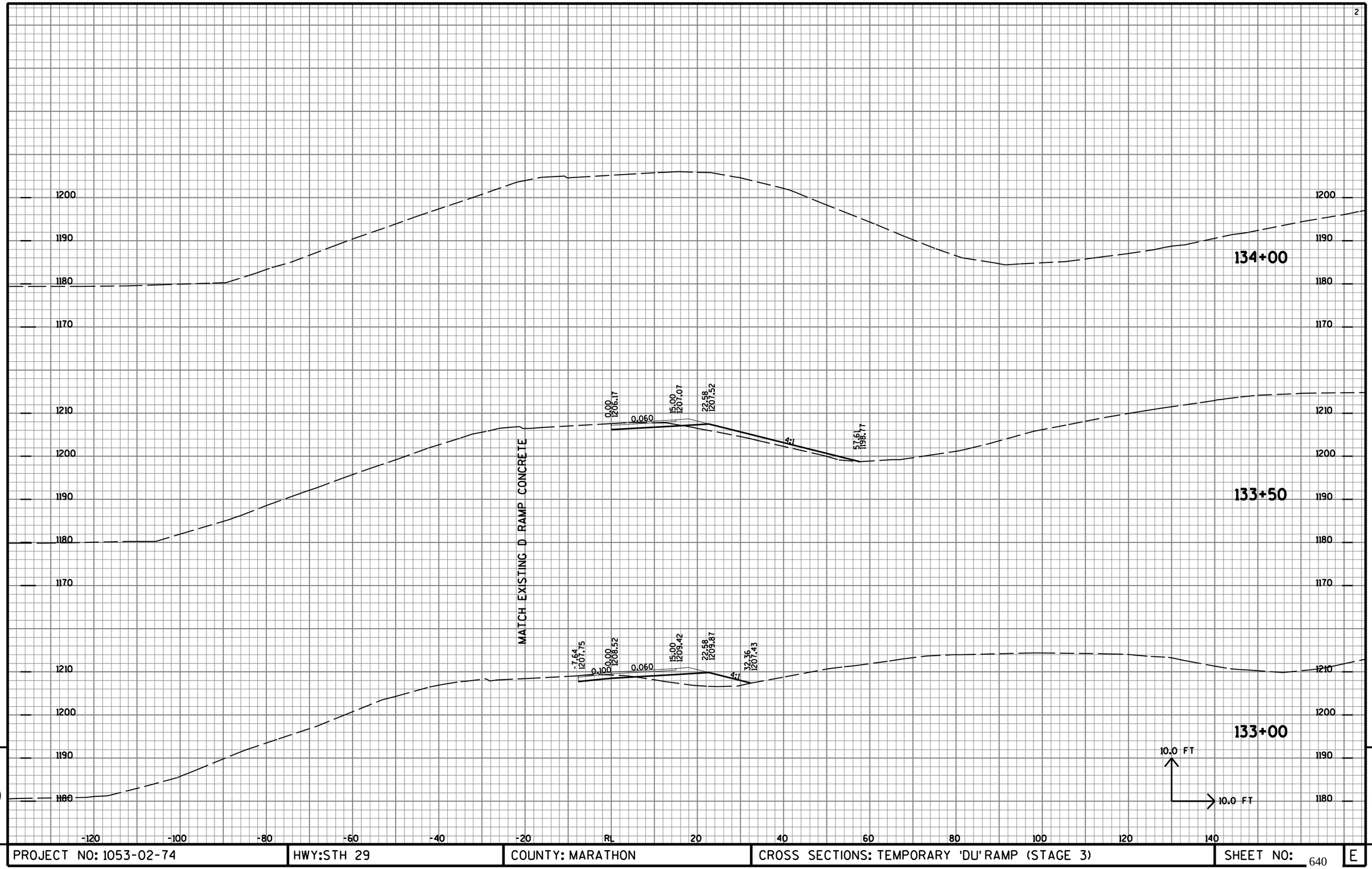
1210
1200
1190
1180

-120 -100 -80 -60 -40 -20 RL 20 40 60 80 100 120 140

9

PROJECT NO: 1053-02-74	HWY:STH 29	COUNTY: MARATHON	CROSS SECTIONS: TEMPORARY 'DU' RAMP (STAGE 3)	SHEET NO: 639	E

FILE NAME : T:\410637\DGN-DWG\plan\090214_xsdu.DGN PLOT DATE : 10/30/2013 PLOT BY : AYRES-EC edu_shd_util.tbl PLOT SCALE : 1:2

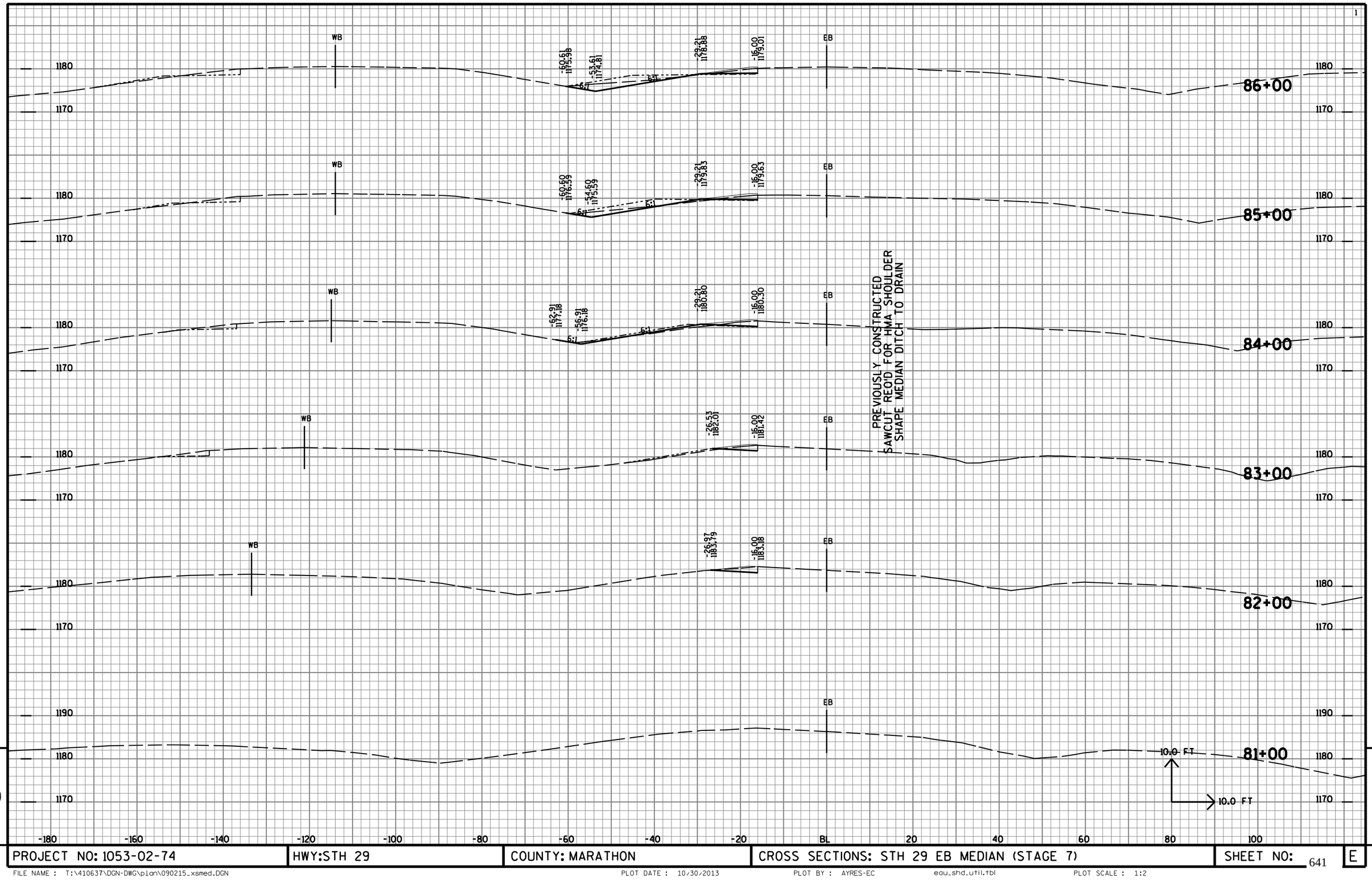


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PROJECT NO: 1053-02-74	HWY:STH 29	COUNTY: MARATHON	CROSS SECTIONS: TEMPORARY 'DU' RAMP (STAGE 3)	SHEET NO: 640	E

FILE NAME : T:\410637\DGN-DWG\plan\090214_xsdu.DGN PLOT DATE : 10/30/2013 PLOT BY : AYRES-EC edu_shd_util.tbl PLOT SCALE : 1:2

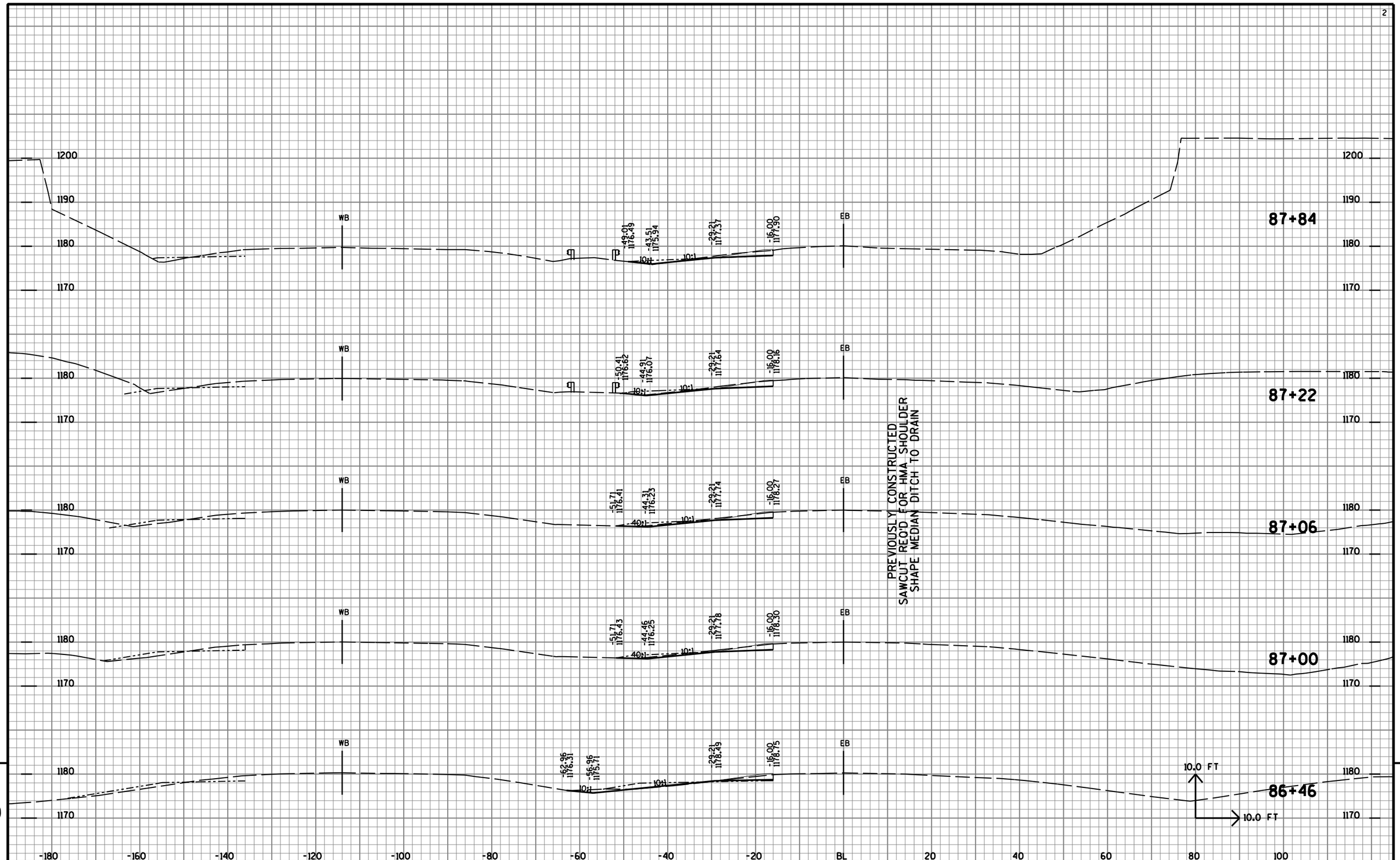


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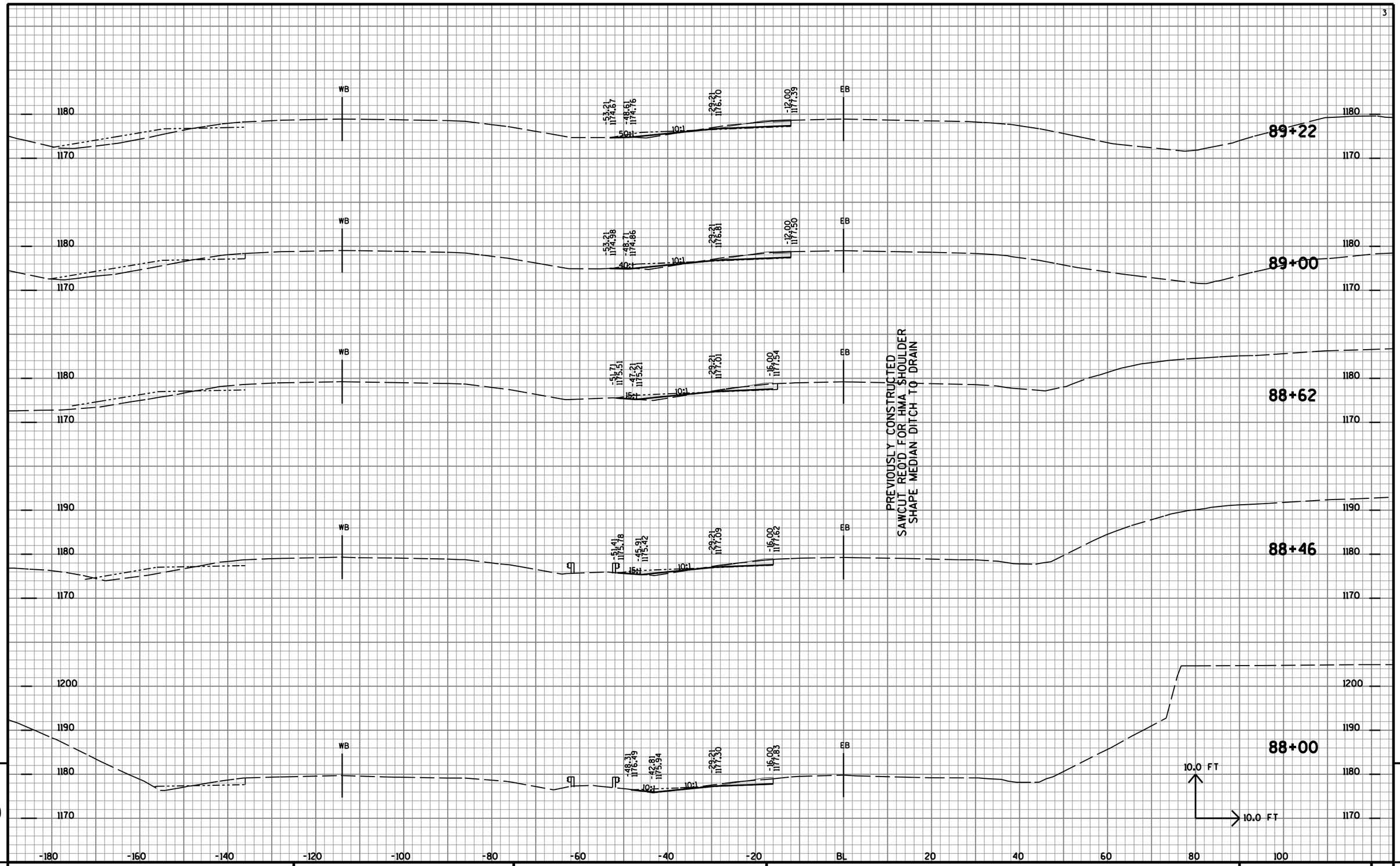
PROJECT NO: 1053-02-74	HWY: STH 29	COUNTY: MARATHON	CROSS SECTIONS: STH 29 EB MEDIAN (STAGE 7)	SHEET NO: 641	E

FILE NAME : T:\410637\DGN-DWG\plan\090215_xsmed.DGN PLOT DATE : 10/30/2013 PLOT BY : AYRES-EC edu_shd_util.tbl PLOT SCALE : 1:2



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PROJECT NO: 1053-02-74	HWY:STH 29	COUNTY: MARATHON	CROSS SECTIONS: STH 29 EB MEDIAN (STAGE 7)	SHEET NO: 642	E

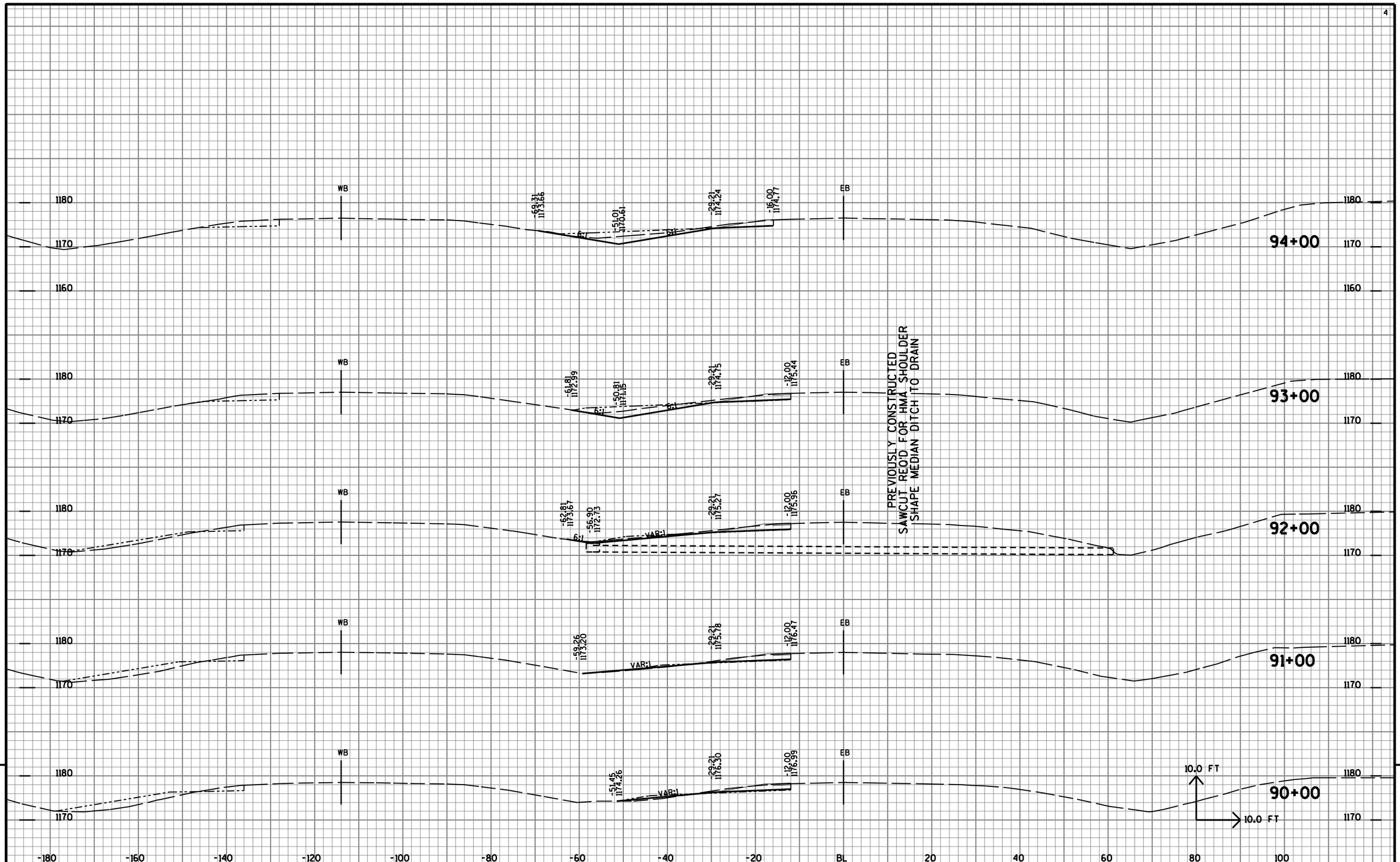


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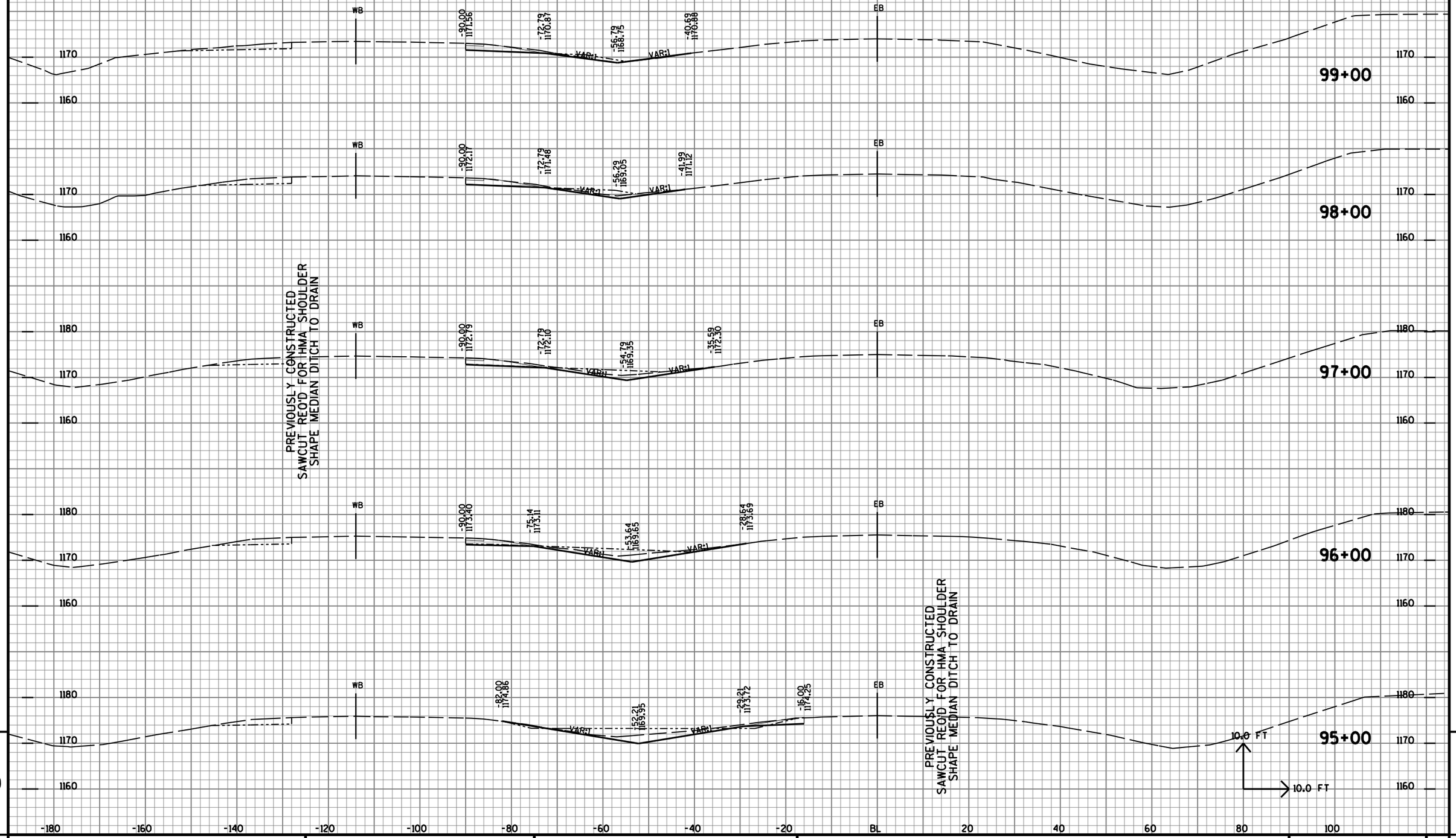
PROJECT NO: 1053-02-74	HWY:STH 29	COUNTY: MARATHON	CROSS SECTIONS: STH 29 EB MEDIAN (STAGE 7)	SHEET NO: 643	E

FILE NAME : T:\410637\DGN-DWG\plan\090215_xsmed.DGN PLOT DATE : 10/30/2013 PLOT BY : AYRES-EC eau_shd_util.tbl PLOT SCALE : 1:2



9 9

PROJECT NO: 1053-02-74	HWY:STH 29	COUNTY: MARATHON	CROSS SECTIONS: STH 29 EB MEDIAN (STAGE 7)	SHEET NO: 644	E

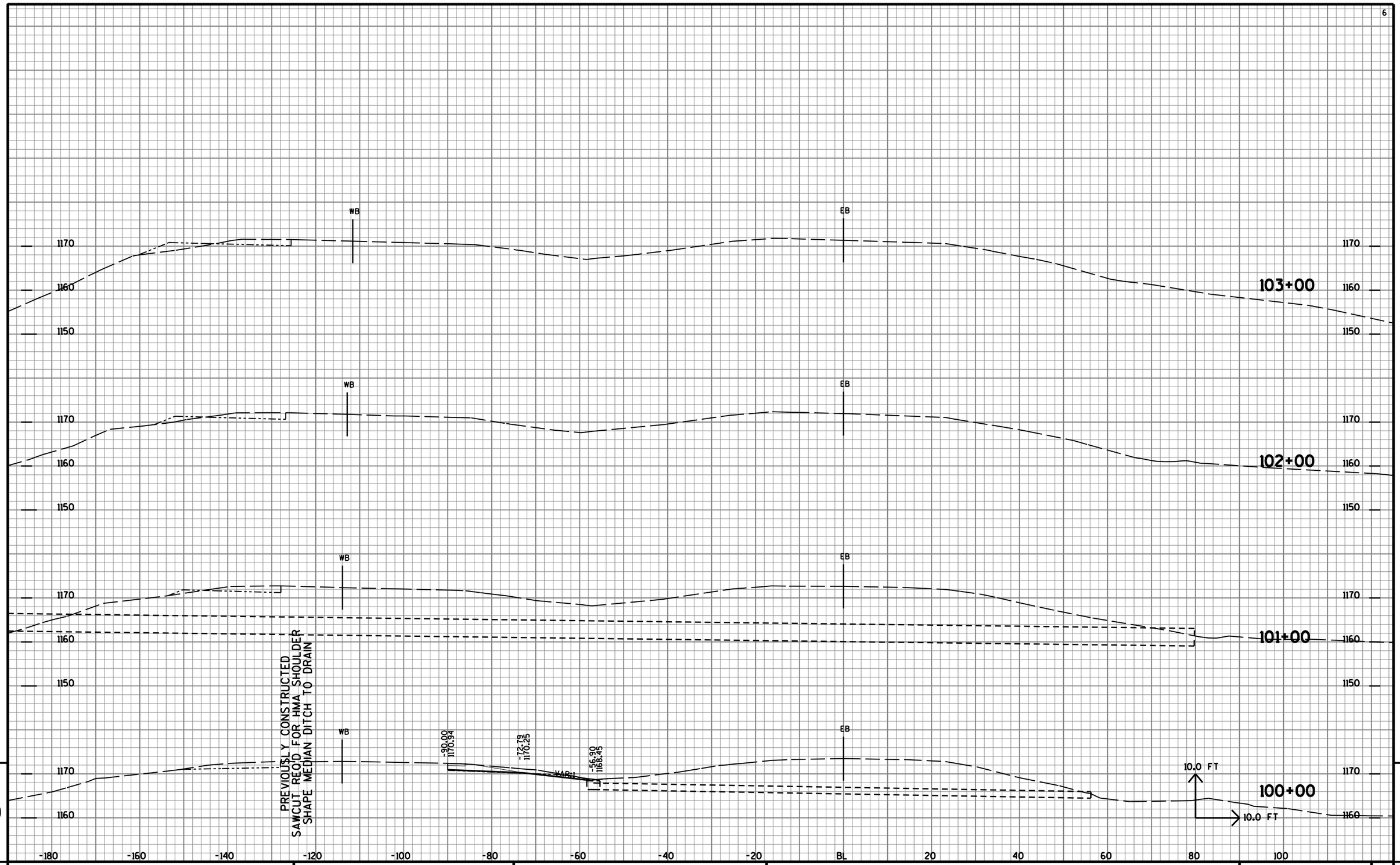


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PROJECT NO: 1053-02-74	HWY:STH 29	COUNTY: MARATHON	CROSS SECTIONS: STH 29 EB MEDIAN (STAGE 7)	SHEET NO: 645	E

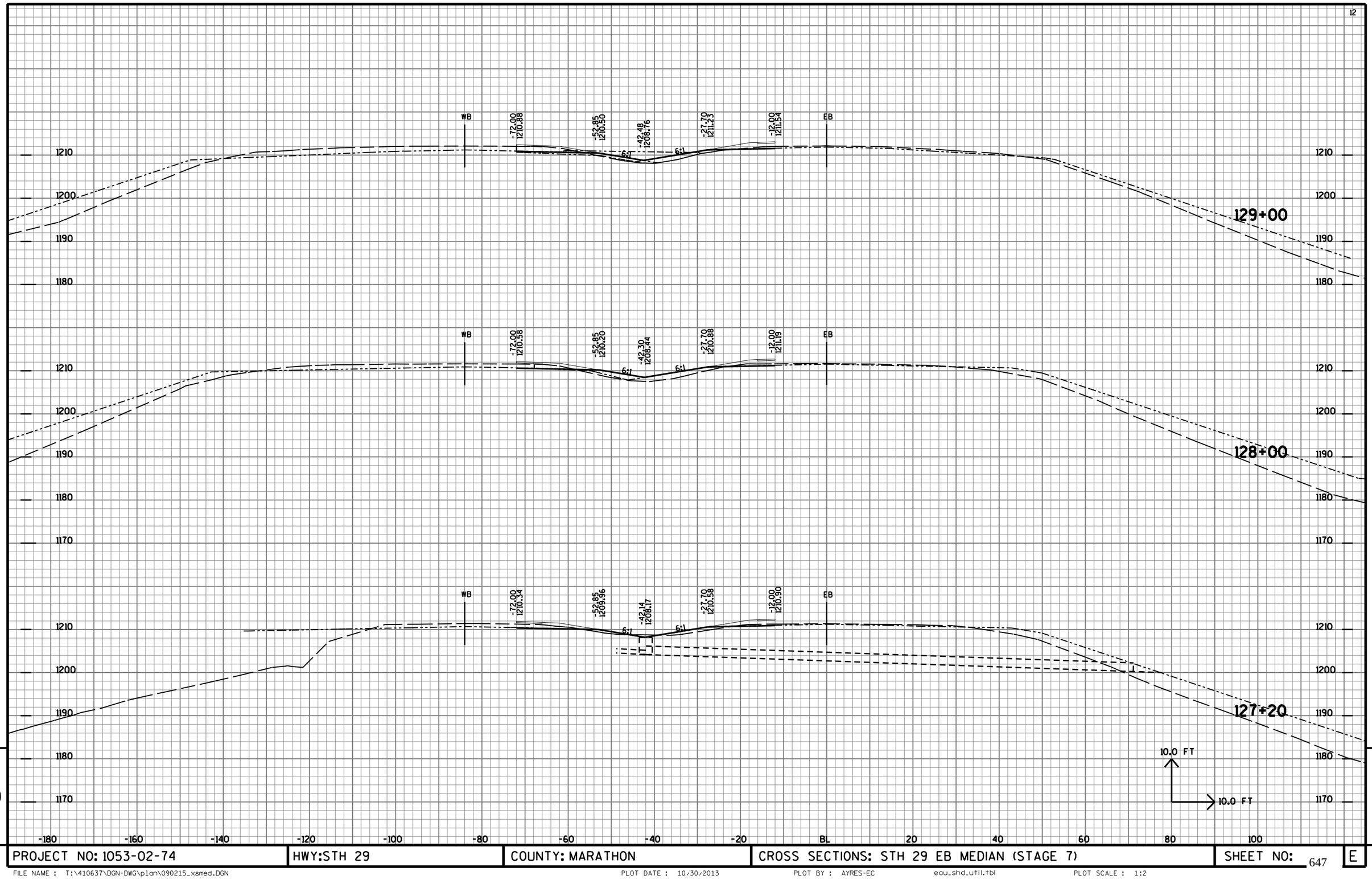
FILE NAME : T:\410637\DGN-DWG\plan\090215_xsmed.DGN PLOT DATE : 10/30/2013 PLOT BY : AYRES-EC egu_shd_util.tbl PLOT SCALE : 1:2



9 9

PROJECT NO: 1053-02-74	HWY:STH 29	COUNTY: MARATHON	CROSS SECTIONS: STH 29 EB MEDIAN (STAGE 7)	SHEET NO: 646 E

FILE NAME : T:\410637\DGN-DWG\plan\090215_xsmed.DGN PLOT DATE : 10/30/2013 PLOT BY : AYRES-EC equ_shd_util.tbl PLOT SCALE : 1:2

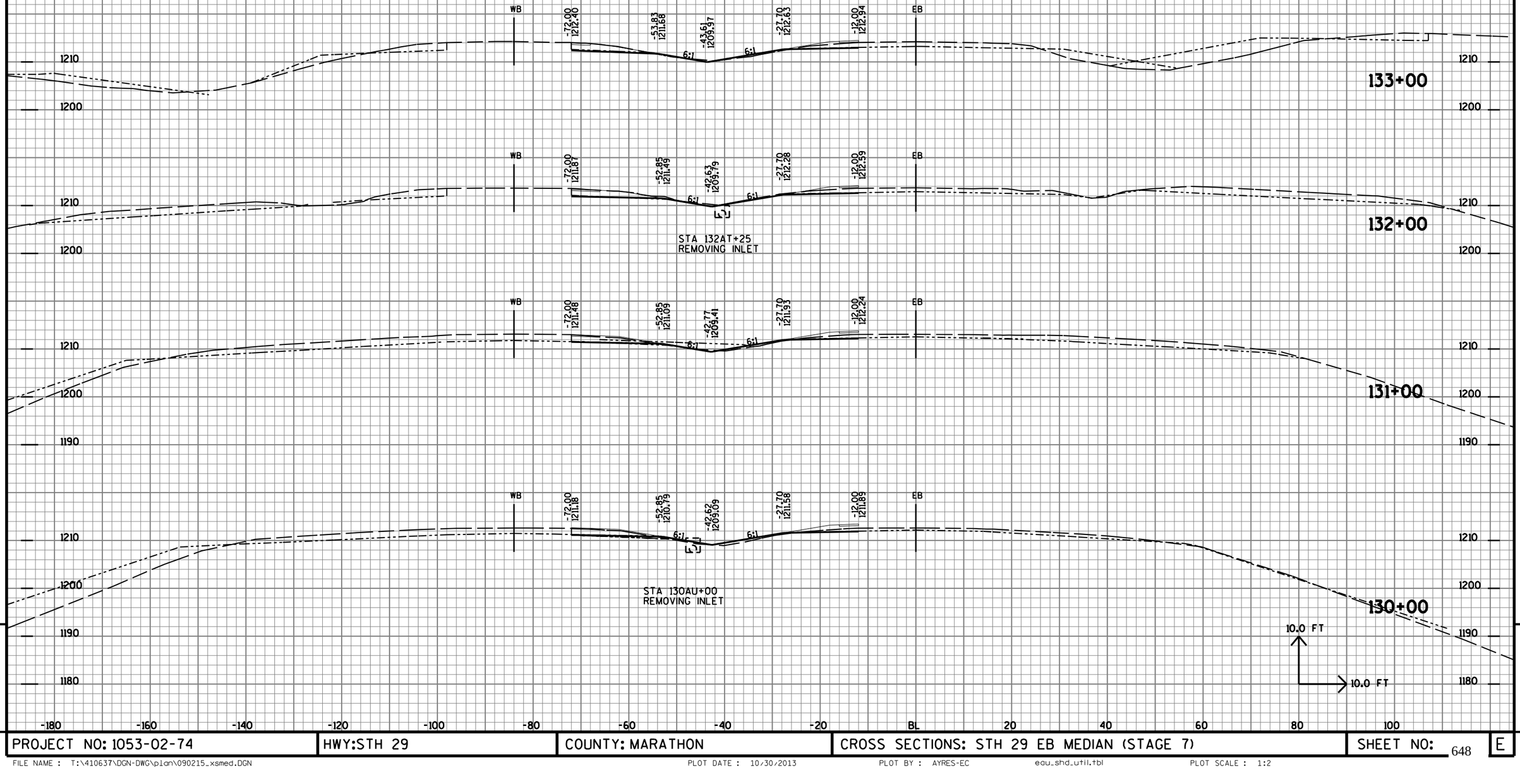


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PROJECT NO: 1053-02-74	HWY: STH 29	COUNTY: MARATHON	CROSS SECTIONS: STH 29 EB MEDIAN (STAGE 7)	SHEET NO: 647	E

FILE NAME : T:\410637\DGN-DWG\plan\090215_xsmed.DGN PLOT DATE : 10/30/2013 PLOT BY : AYRES-EC eau_shd_util.tbl PLOT SCALE : 1:2

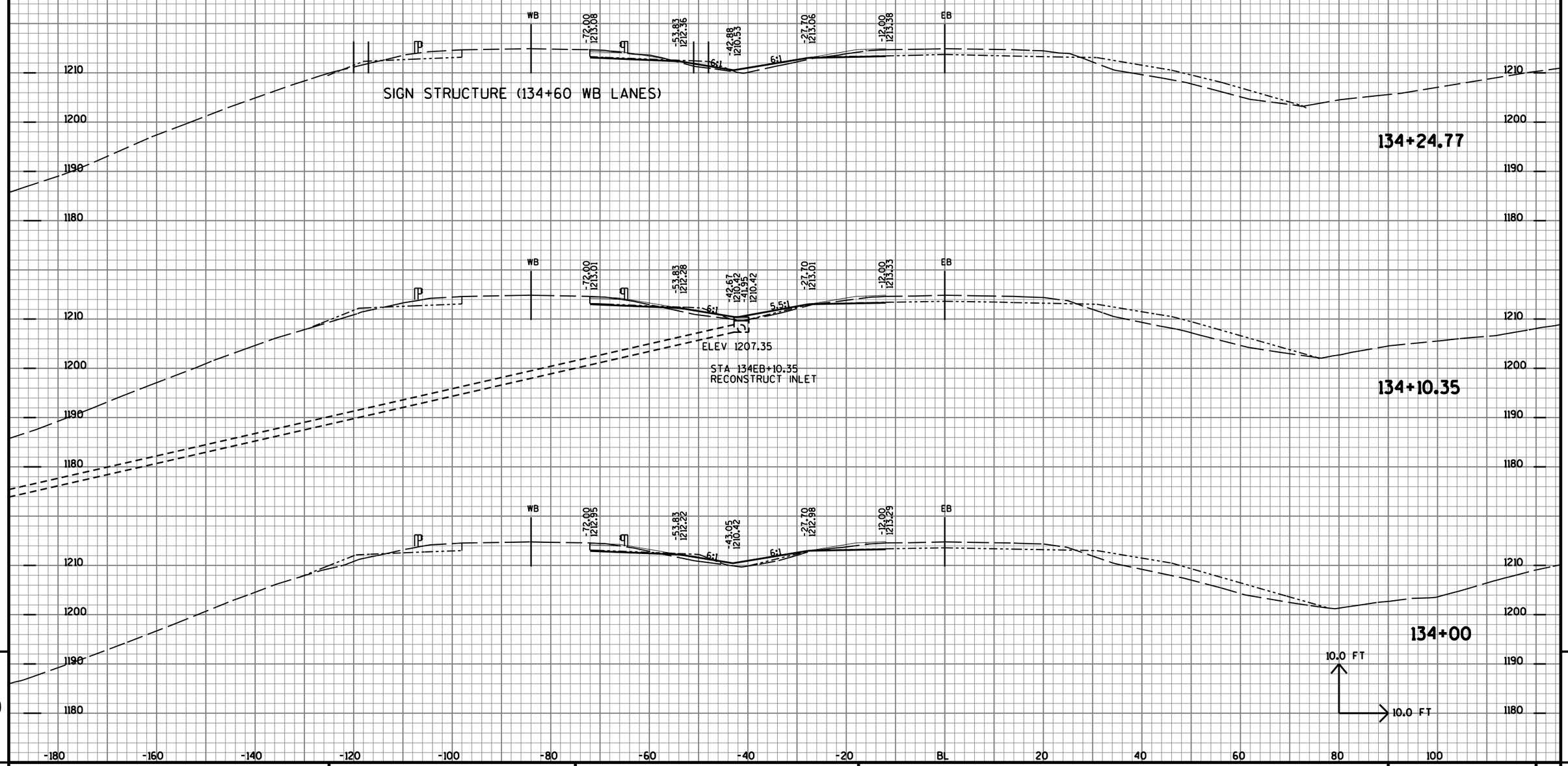


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PROJECT NO: 1053-02-74	HWY:STH 29	COUNTY: MARATHON	CROSS SECTIONS: STH 29 EB MEDIAN (STAGE 7)	SHEET NO: 648	E

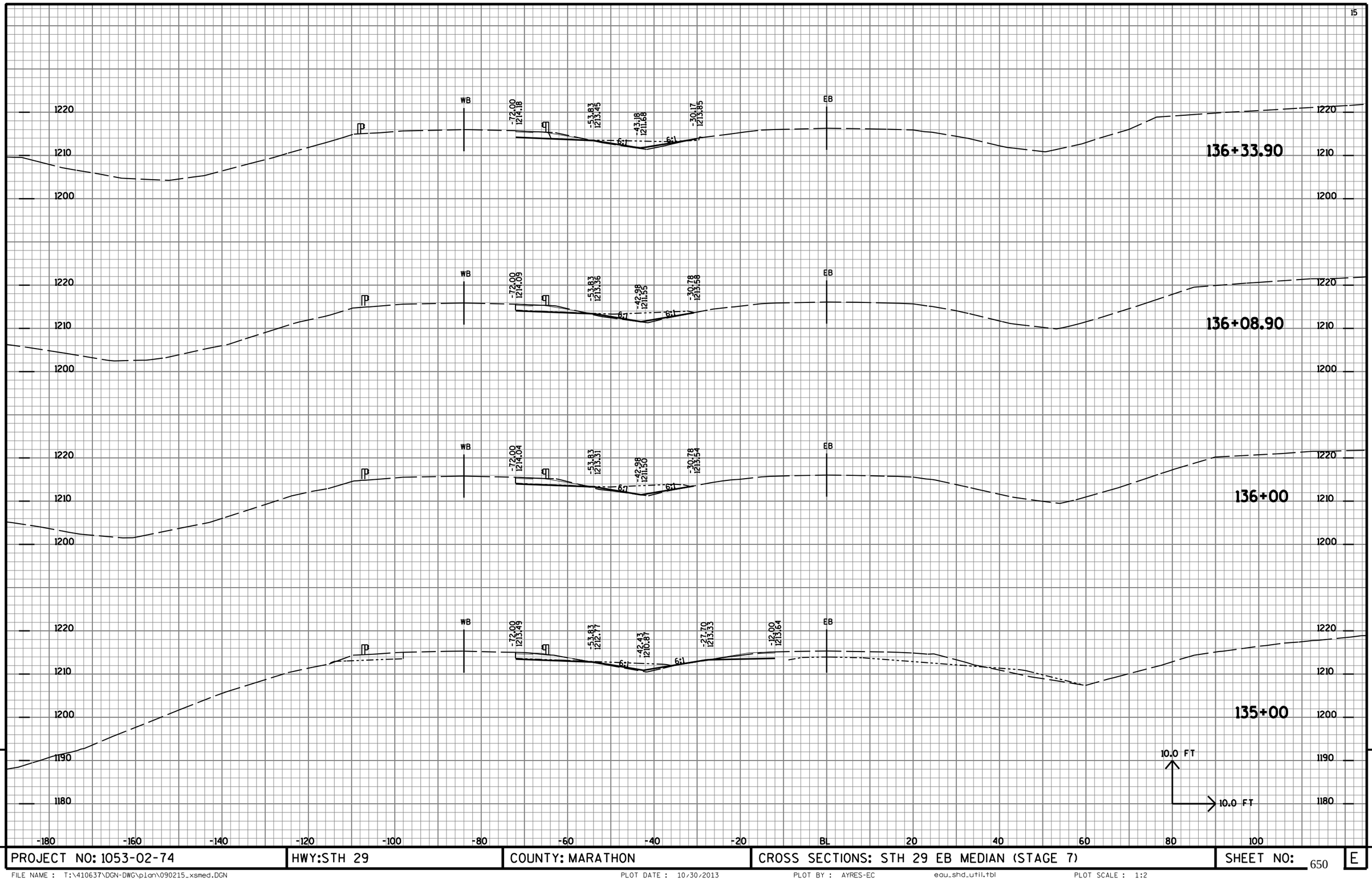
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PROJECT NO: 1053-02-74	HWY:STH 29	COUNTY: MARATHON	CROSS SECTIONS: STH 29 EB MEDIAN (STAGE 7)	SHEET NO: 649	E

FILE NAME : T:\410637\DGN-DWG\plan\090215_xsmed.DGN PLOT DATE : 10/30/2013 PLOT BY : AYRES-EC eau_shd_util.tbl PLOT SCALE : 1:2



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PROJECT NO: 1053-02-74	HWY:STH 29	COUNTY: MARATHON	CROSS SECTIONS: STH 29 EB MEDIAN (STAGE 7)	SHEET NO: 650	E

FILE NAME : T:\410637\DGN-DWG\plan\090215_xsmed.DGN PLOT DATE : 10/30/2013 PLOT BY : AYRES-EC eau_shd_util.tbl PLOT SCALE : 1:2

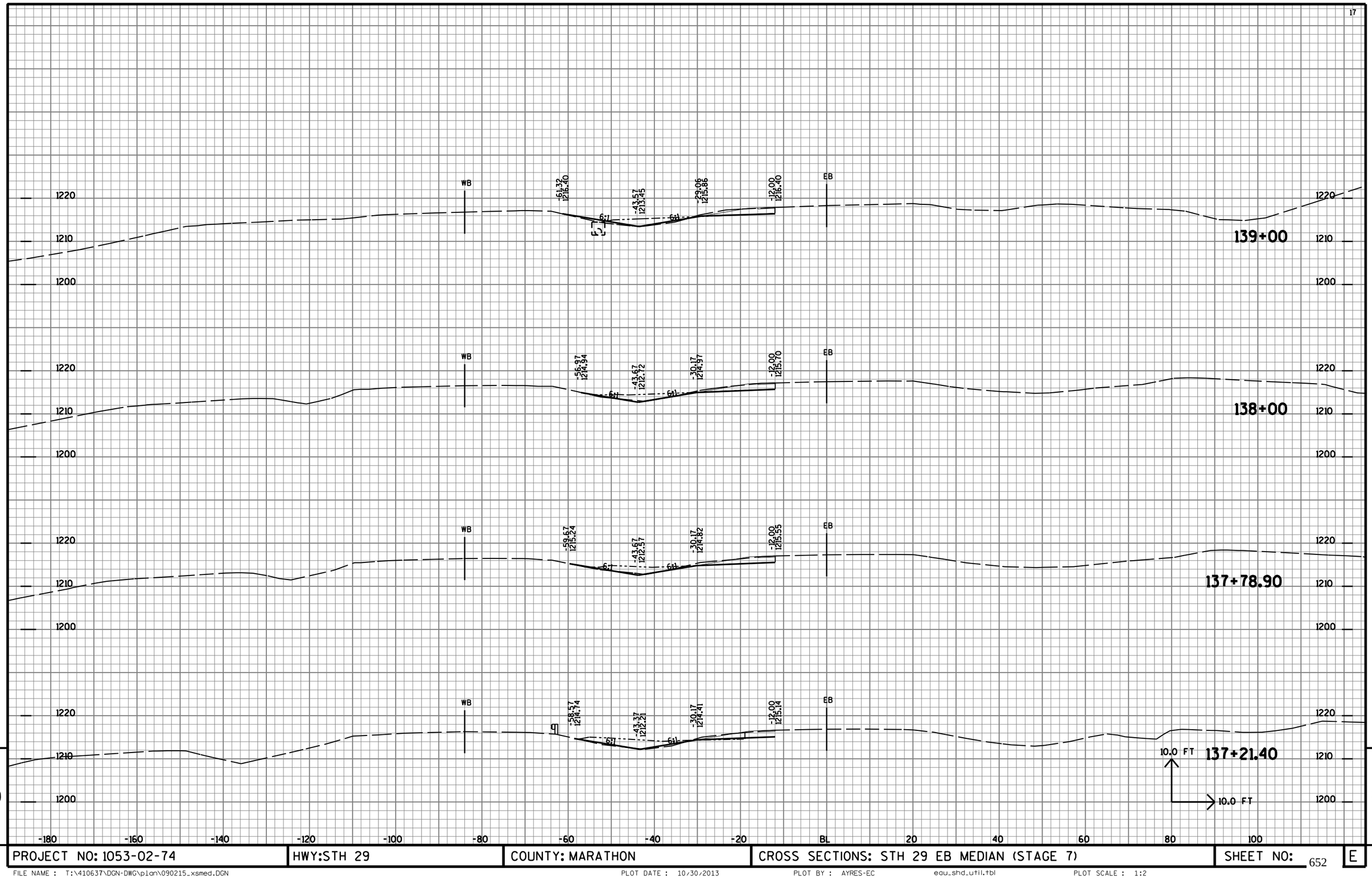


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PROJECT NO: 1053-02-74	HWY: STH 29	COUNTY: MARATHON	CROSS SECTIONS: STH 29 EB MEDIAN (STAGE 7)	SHEET NO: 651	E

FILE NAME : T:\410637\DGN-DWG\plan\090215_xsmed.DGN PLOT DATE : 10/30/2013 PLOT BY : AYRES-EC eau_shd_util.tbl PLOT SCALE : 1:2

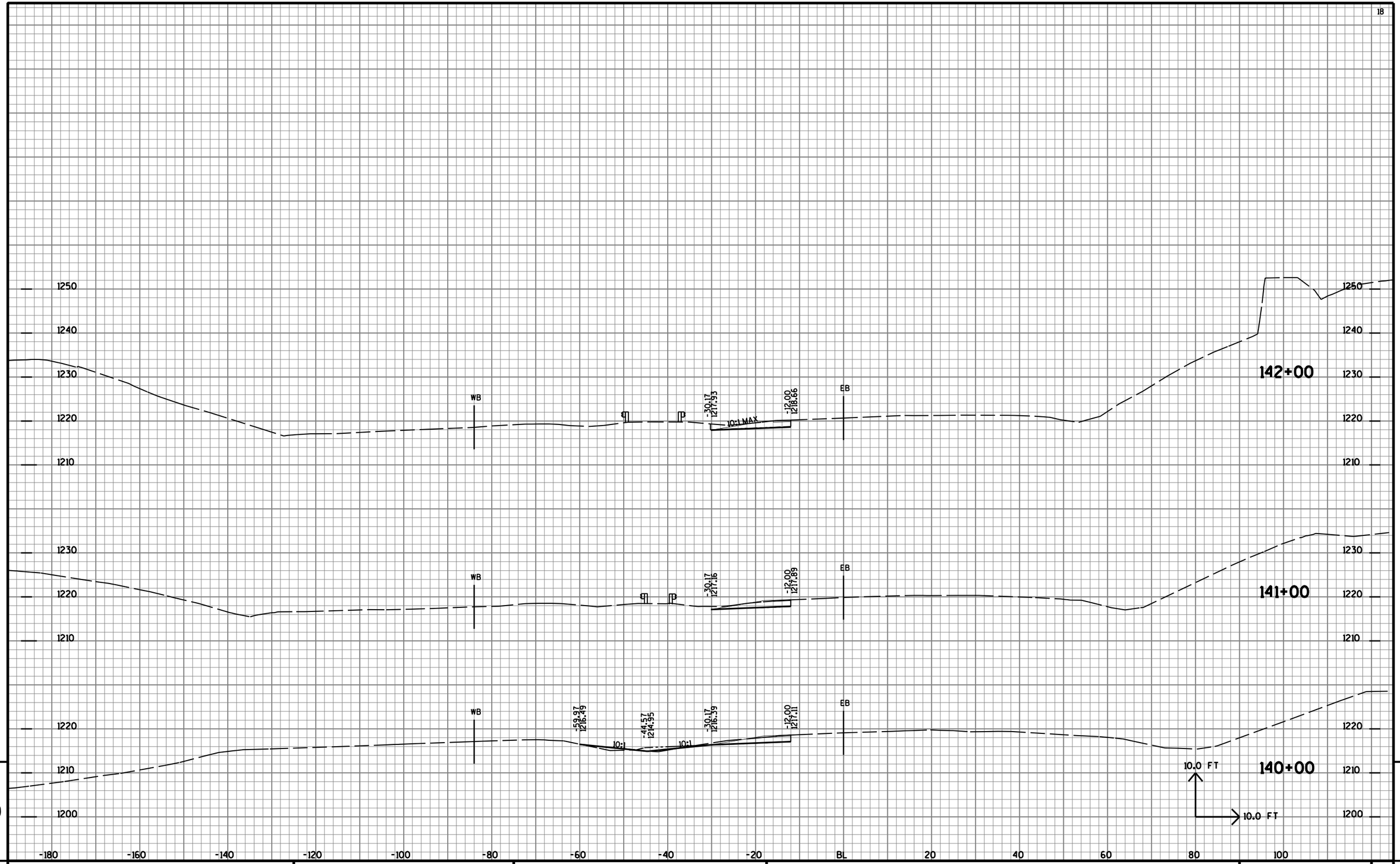


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PROJECT NO: 1053-02-74	HWY:STH 29	COUNTY: MARATHON	CROSS SECTIONS: STH 29 EB MEDIAN (STAGE 7)	SHEET NO: 652	E

FILE NAME : T:\410637\DGN-DWG\plan\090215_xsmed.DGN PLOT DATE : 10/30/2013 PLOT BY : AYRES-EC eau_shd_util.tbl PLOT SCALE : 1:2

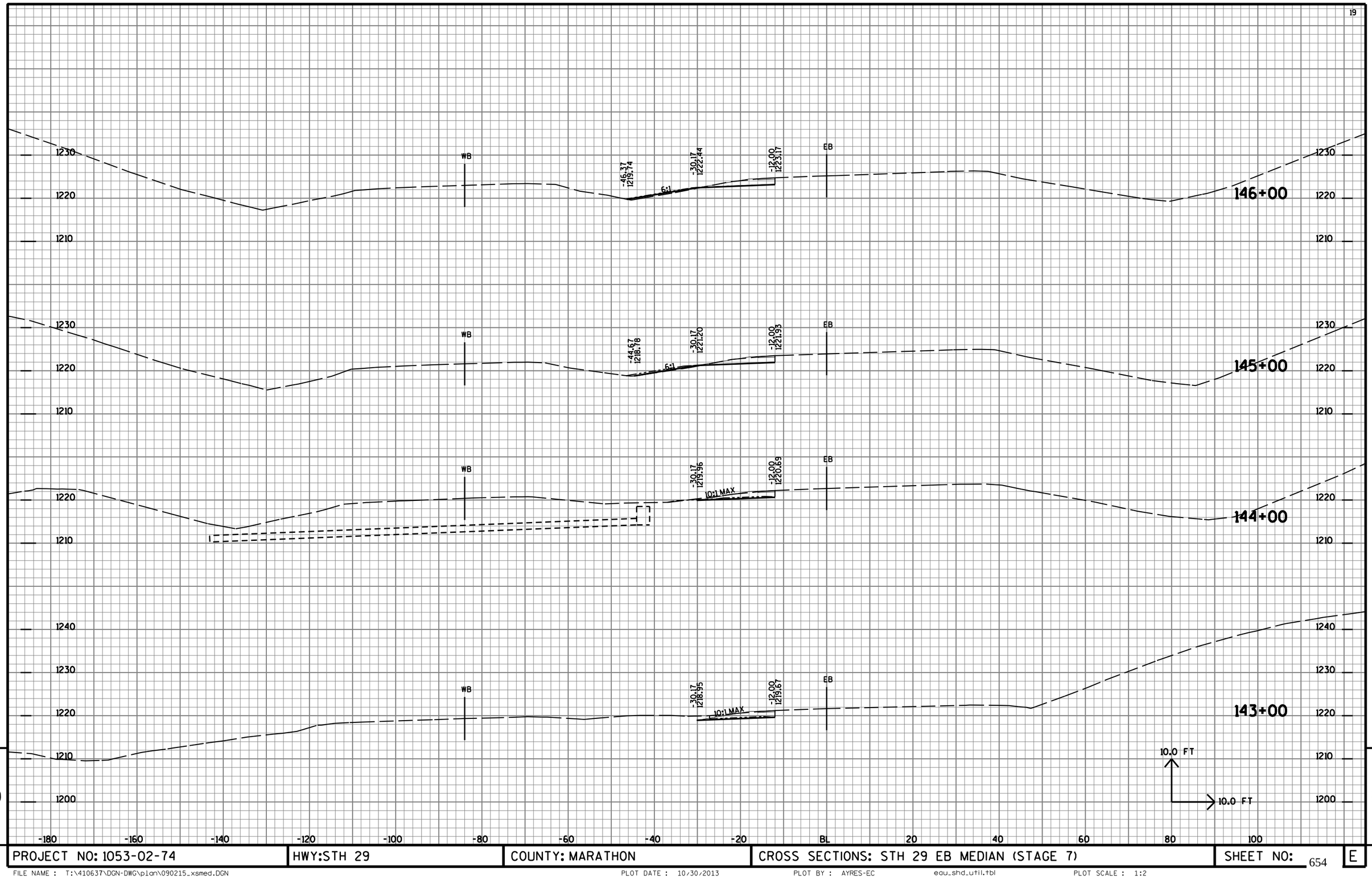


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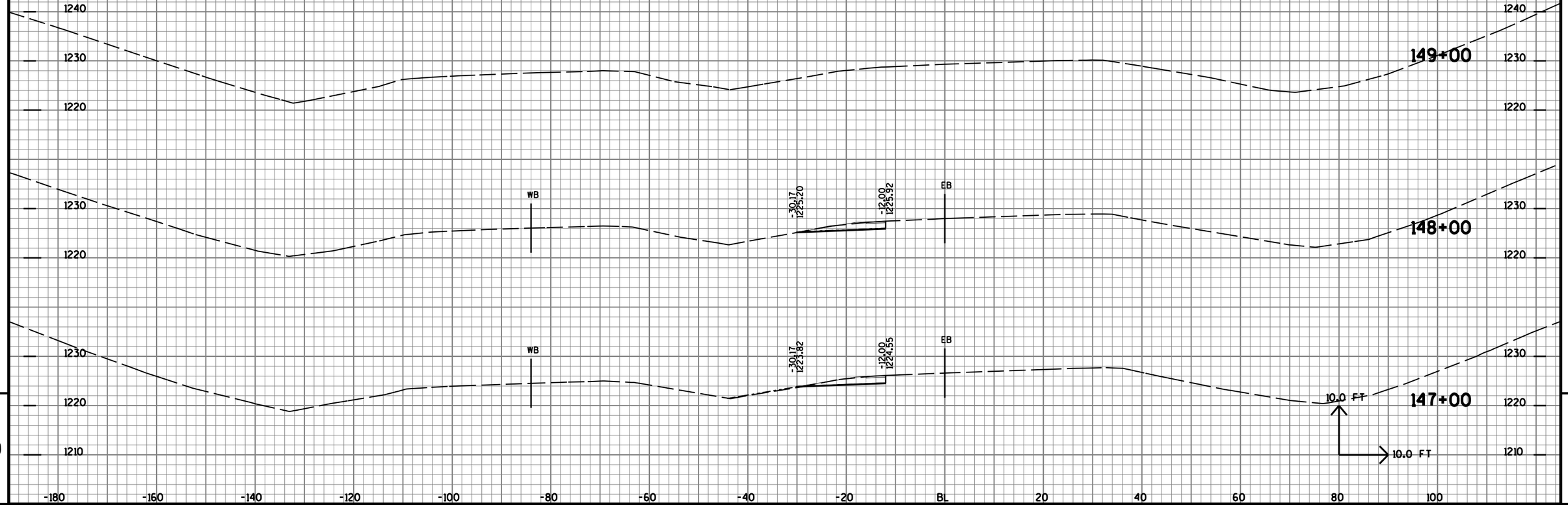
PROJECT NO: 1053-02-74	HWY: STH 29	COUNTY: MARATHON	CROSS SECTIONS: STH 29 EB MEDIAN (STAGE 7)	SHEET NO: 653	E

FILE NAME : T:\410637\DGN-DWG\plan\090215_xsmed.DGN PLOT DATE : 10/30/2013 PLOT BY : AYRES-EC edu_shd_util.tbl PLOT SCALE : 1:2



PROJECT NO: 1053-02-74	HWY:STH 29	COUNTY: MARATHON	CROSS SECTIONS: STH 29 EB MEDIAN (STAGE 7)	SHEET NO: 654	E

FILE NAME : T:\410637\DGN-DWG\plan\090215_xsmed.DGN PLOT DATE : 10/30/2013 PLOT BY : AYRES-EC edu_shd_util.tbl PLOT SCALE : 1:2



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PROJECT NO: 1053-02-74	HWY: STH 29	COUNTY: MARATHON	CROSS SECTIONS: STH 29 EB MEDIAN (STAGE 7)	SHEET NO: 655	E

Wisconsin Department of Transportation

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