WKE

JULY 24 2018

PROJECT ID: 1035-01-82
WITH: 1030-20-84/87, 1035-01-72/74/79

COUNTY: RACINE

ORDER OF SHEETS

Section No.	1	Title
Section No.	2	Typical Sections and Details (Includes Erosion Control)
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 = 438



01

N

DESIGN DESIGNATION

		IH 94
A.A.D.T. 2018	=	101,027
A.A.D.T. 2038	=	117,609
D.H.V.	=	10,114
D.D.	=	.52SB/.48NB
T.	=	16.9%
DESIGN SPEED	=	70 MPH
ESALS	=	36,383,200

CONVENTIONAL SYMBOLS

PLAN

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

PROFILE

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

UTILITIES

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

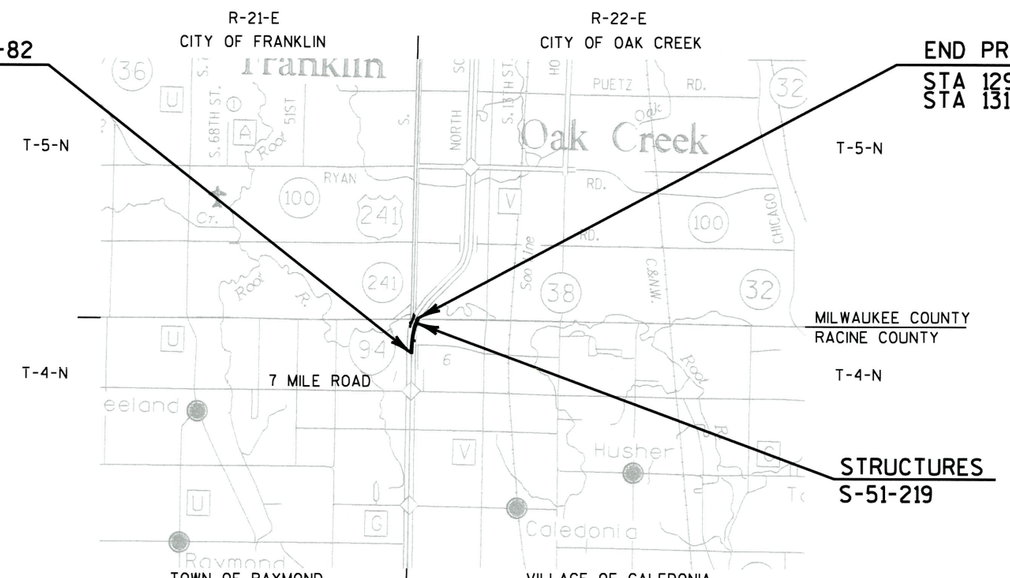
PLAN OF PROPOSED IMPROVEMENT

N-S FREEWAY 7 MILE ROAD TO MILWAUKEE CO. LINE

MAINLINE
IH 94
RACINE COUNTY

STATE PROJECT NUMBER
1035-01-82

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
1035-01-82	WISC 2018385	1



LAYOUT
SCALE 0 1.0 MI.

TOTAL NET LENGTH OF CENTERLINE = 0.473 MI.

COORDINATES ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), RACINE COUNTY, NAD 1983(97)

ELEVATIONS SHOWN ON THIS PLAN ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988(91) (NAVD 88(91)).

ORIGINAL PLANS PREPARED BY

SEDW
SOUTHEAST DESIGN WORKS

WISCONSIN
BRIAN J. WILSON
E-34330-6
MILWAUKEE
WI
PROFESSIONAL ENGINEER

6/1/2018 (Date) Brian J Wilson (Signature)

WISCONSIN
JOSHUA H. MOUNT
35706-6
WAUWATOSA, WI
PROFESSIONAL ENGINEER

6/1/2018 (Date) (Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	WISDOT
Designer	SE DESIGNWORKS
Project Manager	JASON DAHLGREN
District Examiner	
District Supervisor	MANOJOY NAG
C.O. Examiner	

APPROVED FOR THE DEPARTMENT

DATE: 6/1/2018 (Signature)

E

FILE NAME : Z:\Racine\CADDS\22\22M\CDS\010101_ti.dgn

PLOT DATE : 5/21/2018 PLOT BY : kld PLOT NAME : PLOT SCALE : 1:10560

WISDOT/CADDS SHEET 10

UTILITY CONTACTS

AMERICAN TRANSMISSION COMPANY

CHRIS DAILEY
P.O. BOX 47
WAUKESHA, WI 53187
PHONE: (262) 506-6884
cdailey@atcllc.com

AT&T CORPORATION

C/O KEN NINE
JMC ENGINEERS & ASSOCIATES, INC.
110 NORTH MAIN STREET
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AT&T WISCONSIN

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CALEDONIA UTILITY DISTRICT

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PHONE: (262) 681-3900
blui@caledoniawiutility.com

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MILWAUKEE, WI 53212
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pete.kruzela@charter.com
wis.engineering@charter.com

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BRAHIM GADDOUR
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relo@level3.com

WE ENERGIES - ELECTRIC

SEND ALL CORRESPONDENCE TO:
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333 W. EVERETT STREET - A299
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PHONE: (414) 221-5617
Nicole.Smullen@we-energies.com

CONSTRUCTION FIELD CONTACT:
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500 S. 116TH STREET
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CELL: (414) 254-8459
dan.toomey@we-energies.com

WE ENERGIES - GAS

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STATE AGENCIES

WISCONSIN DEPARTMENT OF TRANSPORTATION

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6922 NICHOLSON ROAD
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RACINE COUNTY - DPW

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14200 WASHINGTON AVENUE
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LINDA TERRY
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SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

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PHONE: (414) 225-9817
joshua.mount@daarcorp.com

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

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

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

ORDER OF SECTION 2 DETAIL SHEETS

GENERAL NOTES
PROJECT OVERVIEW
TYPICAL SECTIONS
CONSTRUCTION DETAILS
REMOVAL PLAN
PLAN DETAILS
PAVING GRADES
FTMS PLANS
EROSION CONTROL
STORM SEWER
EXISTING AND PERMANENT SIGNING
PAVEMENT MARKING
TRAFFIC CONTROL
FENCING PLAN
ALIGNMENT LAYOUT

2

GENERAL NOTES

NO TREES OR SHRUBS SHALL BE REMOVED WITHOUT APPROVAL OF THE ENGINEER.

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

THE CONTRACTOR SHALL NOTIFY DIGGERS HOTLINE AND AFFECTED UTILITIES PRIOR TO THE START OF WORK. ANY LOCAL MUNICIPAL UTILITY WHICH IS NOT A MEMBER OF THE DIGGERS HOTLINE MUST BE CONTACTED SEPARATELY.

ALL HOLES OR OPENINGS BELOW SUBGRADE RESULTING FROM ABANDONMENT OR REMOVAL OF EXISTING STRUCTURES SHALL BE FILLED WITH GRANULAR BACKFILL AS DIRECTED BY THE ENGINEER.

WHEN THE QUANTITY OF HMA PAVEMENT IS MEASURED FOR PAYMENT BY THE TON, THE DEPTH OR THICKNESS OF THE LAYER SHOWN ON THE PLAN IS APPROXIMATE AND THE ACTUAL THICKNESS WILL DEPEND ON THE DISTRIBUTION OF THE MATERIAL AS DIRECTED BY THE ENGINEER.

PRIOR TO ORDERING DRAINAGE PIPES AND STRUCTURES, THE CONTRACTOR SHALL VERIFY RELATED DRAINAGE INFORMATION IN THE PLANS AND PROVIDE DOCUMENTATION TO THE ENGINEER IN ACCORDANCE WITH THE SPECIFICATIONS.

TACK COAT HAS BEEN ESTIMATED AT AN APPLICATION RATE OF 0.07 GALLON PER SQUARE YARD AND SHALL BE APPLIED BETWEEN ALL LAYERS OF ASPHALTIC PAVEMENT.

INLET AND DISCHARGE ELEVATIONS FOR DRAINAGE STRUCTURES SHOWN ON THE PLAN MAY BE ADJUSTED BY THE ENGINEER TO FIT FIELD CONDITIONS.

THE QUANTITY OF SALVAGED TOPSOIL IS COMPUTED FROM MEASUREMENTS BETWEEN THE SUBGRADE SHOULDER POINTS AND THE SLOPE INTERCEPTS AS SHOWN ON THE CROSS SECTIONS PLUS 5 FEET FOR ROUNDING.

BROKEN CONCRETE CONTAINING RE-BAR SHALL NOT BE USED AS RIPRAP.

CROSS SECTIONS SHOWN INCLUDE THE THICKNESS OF SALVAGED TOPSOIL WHERE REQUIRED. TOPSOIL SHALL BE REPLACED WITH 4-INCH TYPICAL DEPTH.

TRAFFIC CONTROL DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.

REMOVAL OF EROSION CONTROL DEVICES IS INCLUDED IN THE COST OF THEIR RESPECTIVE BID ITEMS.

THE EROSION CONTROL FEATURES AS SHOWN IN THE PLANS ARE AT SUGGESTED LOCATIONS. EXACT LOCATIONS WILL BE DETERMINED BY THE ENGINEER IN THE FIELD.

DISTURBED AREAS WITHIN THE RIGHT OF WAY, EXCEPT THE AREAS WITHIN THE FINISHED SHOULDER POINTS, SHALL BE TOPSOILED FERTILIZED AND SEEDED AS DIRECTED BY THE ENGINEER. QUANTITIES FOR FINISHING ITEMS INCLUDE RESTORATION EXTENDING 5 FEET BEYOND THE SLOPE INTERCEPT FOR ROUNDING.

LOCATIONS OF DRAINTILE ON THE PLAN ARE BASED ON AS-BUILT INFORMATION OR PROPERTY OWNER INTERVIEWS. DRAINTILE EXPLORATION ITEM IS TO BE USED TO VERIFY THE EXACT SIZE AND LOCATION.

RE-TOPSOIL OF GRADED AREAS, AS DESIGNATED BY THE ENGINEER, IMMEDIATELY AFTER GRADING IS COMPLETED WITHIN THOSE AREAS. SEED, FERTILIZE, AND MULCH/EROSION MAT TOP-SOILED AREAS, AS DESIGNATED BY THE ENGINEER, WITHIN FIVE (5) CALENDAR DAYS AFTER PLACEMENT OF TOPSOIL. IF GRADED AREAS ARE LEFT EXPOSED FOR MORE THAN (14) CALENDAR DAYS, SEED THOSE AREAS WITH TEMPORARY SEED AND MULCH.

STOCKPILE EXCESS MATERIAL OR SPOILS ON UPLAND AREAS AWAY FROM WETLANDS, FLOODPLAINS AND WATERWAYS. STOCKPILED SOIL SHALL BE PROTECTED AGAINST EROSION. IF STOCKPILED MATERIAL IS LEFT FOR MORE THAN FOURTEEN (14) CALENDAR DAYS, SEED THE STOCKPILE WITH TEMPORARY SEED AND MULCH.

A SAWED JOINT IS REQUIRED WHERE NEW HMA PAVEMENT MEETS EXISTING ASPHALTIC CONCRETE SURFACE.

INLET PROTECTION REQUIRED AT ALL INLETS AS PER EROSION CONTROL PLANS OR AS DIRECTED BY THE ENGINEER.

FERTILIZER SHALL NOT BE USED WITHIN 20 FEET OF NAVIGABLE WATERWAYS OR WETLANDS.

HMA PAVEMENT AND CONCRETE PAVEMENT SHALL BE SAWCUT AT THE MATCHLINE AS SHOWN ON THE PLAN DETAILS OR AS DIRECTED BY THE ENGINEER.

STATIONING, DISTANCES AND OFFSETS FOR SIGNS SHOWN ON THE PLANS ARE APPROXIMATE AND THE LOCATIONS OF SIGNS ARE TO BE DETERMINED IN THE FIELD BY THE ENGINEER.

USE CLASS I URBAN TYPE B EROSION MAT ADJACENT TO DISTURBED WETLANDS. DO NOT INSTALL CLASS I URBAN TYPE B EROSION MAT IN WATER.

REQUEST APPROVAL FROM THE ENGINEER TO FILL AGAINST EXISTING CONCRETE BARRIER. IF APPROVED BY THE ENGINEER, FILL MAY NOT EXCEED A HEIGHT OF 1.75' WITH A SLOPE OF 2:1 OR A HEIGHT OF 1.25' WITH A SLOPE OF 1.5:1. FILLING AGAINST THE EXISTING BARRIER WITH LESS THAN A 1.5:1 SLOPE WILL NOT BE PERMITTED.

A CONVERSION FACTOR OF 115 LB/SY/IN IS USED TO ESTIMATE QUANTITIES FOR HMA PAVEMENT.

FOR SECTION CORNER REPLACEMENT CONTACT JOHN WASHBURN WITH SEWRPC AT 414-218-2866 OR JWASHBURN@SEWRPC.ORG. CONTACT SHALL BE MADE A MINIMUM OF TWO WEEKS BEFORE STARTING CONSTRUCTION OPERATIONS.

ALL TYPES OF HMA PAVEMENT SHALL BE CONSTRUCTED WITH THE FOLLOWING LAYERS AND GRADATIONS:

	PAVEMENT TYPE	TOTAL LAYER PAVEMENT THICKNESS	LAYERS	NORMAL MAXIMUM SIZE GRADATION
(A)	4HT 58-28 H 3HT 58-28 S 3HT 58-28 S	7.5"	2" UPPER LAYER 2¾" UPPER LOWER 2¾" LOWER LOWER	12.5 MM 19.0 MM 19.0 MM
(B)	4 LT 58-28 S 3 LT 58-28 S	5.5"	2¼" UPPER LAYER 3¼" LOWER LAYER	12.5 MM 19.0 MM

STANDARD ABBREVIATIONS

AEW	APRON END WALL
AGG	AGGREGATE
BAD	BASE AGGREGATE DENSE
BM	BENCH MARK
C&G	CURB AND GUTTER
C/L	OR CENTER OR CONSTRUCTION LINE
CONC	CONCRETE
CP	CULVERT PIPE
CPCM	CULVERT PIPE CORRUGATED METAL
CPRC	CULVERT PIPE REINFORCED CONCRETE
CSD	CONCRETE SURFACE DRAIN
CY	CUBIC-YARD
D	DEGREE OF CURVE
Δ	DELTA
DISCH	DISCHARGE
EL	ELEVATION
FE	FIELD ENTRANCE
HMA	HOT MIX ASPHALT
INV	INVERT
L	LENGTH OF CURVE
LHF	LEFT HAND FORWARD
LT	LEFT
MIN	MINIMUM
M/L	MATCHLINE
NB	NORTHBOUND
NOR	NORMAL
NC	NORMAL CROWN
PAVT	PAVEMENT
PC	POINT-OF CURVE
PCC	POINT OF COMPOUND CURVE
PE	PRIVATE ENTRANCE
PGL	PROFILE GRADE LINE
PI	POINT OF INTERSECTION
PLE	PERMANENT LIMITED EASEMENT
PT	POINT OF TANGENT
R	RADIUS OF CURVE
R/L	REFERENCE LINE
R/W	RIGHT OF WAY
RC	REVERSE CROWN
RCAEW	APRON ENDWALL FOR CULVERT PIPE REINFORCE CONCRETE
REQD	REQUIRED
RHF	RIGHT HAND FORWARD
RO	RUN OFF LENGTH
RT	RIGHT
SALV	SALVAGED
SB	SOUTHBOUND
SDD	STANDARD DETAIL DRAWING
SE	SUPER ELEVATION
SF	SQUARE FOOT
STA	STATION
SY	SQUARE YARD
T	TANGENT LENGTH
TLE	TEMPORARY LIMITED EASEMENT
TYP	TYPICAL
VCL	VERTICAL CURVE LENGTH
VPC	POINT OF VERTICAL CURVE
VPI	POINT OF VERTICAL INTERSECTION
VPT	POINT OF VERTICAL TANGENT

2

N

WEST FRONTAGE ROAD
PREVIOUSLY CONSTRUCTED UNDER
PROJECT 1035-01-81

TOWN OF RAYMOND

CITY OF FRANKLIN

S-51-219

BEGIN CONSTRUCTION 1035-01-82
STA 4288+00.00 WEST FRONTAGE ROAD

BEGIN PROJECT 1035-01-82
END PROJECT 1035-01-74
STA 1268+00.00

6½MILE RD

W. COUNTY LINE RD.

ROOT RIVER

WEST FRONTAGE ROAD

IH 94

S. 27TH STREET

EAST FRONTAGE ROAD

SECTION LINE

7 MILE ROAD

7½ MILE ROAD

END CONSTRUCTION 1035-01-82
STA 4297+10.00 WEST FRONTAGE ROAD

EAST FRONTAGE ROAD
PREVIOUSLY CONSTRUCTED UNDER
PROJECT 1035-01-80

CITY OF OAK CREEK

VILLAGE OF CALEDONIA

RACINE COUNTY

MILWAUKEE COUNTY

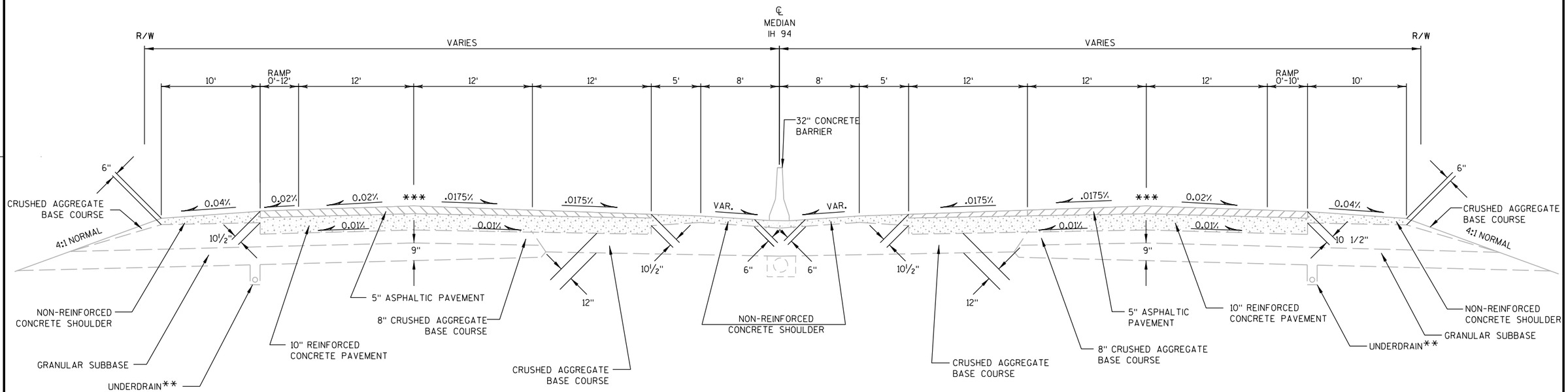
END PROJECT 1035-01-82
BEGIN PROJECT 1030-20-87
STA 1293+00.00 BK=
STA 131+34.26 AH

SECTION LINE

OAKWOOD ROAD

PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	PROJECT OVERVIEW	SHEET 4	E

FILE NAME : Z:\Racine\CADDS\22\22M\CDS\020201_po.dgn PLOT DATE : 6/1/2018 PLOT BY : plr PLOT NAME : $FILE$ PLOT SCALE : 1:1000



***CROWN POINT LOCATION VARIES

NB IH 94
36'RT AT STA. 1268+00 TO
12'RT AT STA. 1272+00

SB IH 94
36'LT AT STA. 1268+00 TO
17'LT AT STA. 1272+50

TYPICAL EXISTING SECTION

IH 94

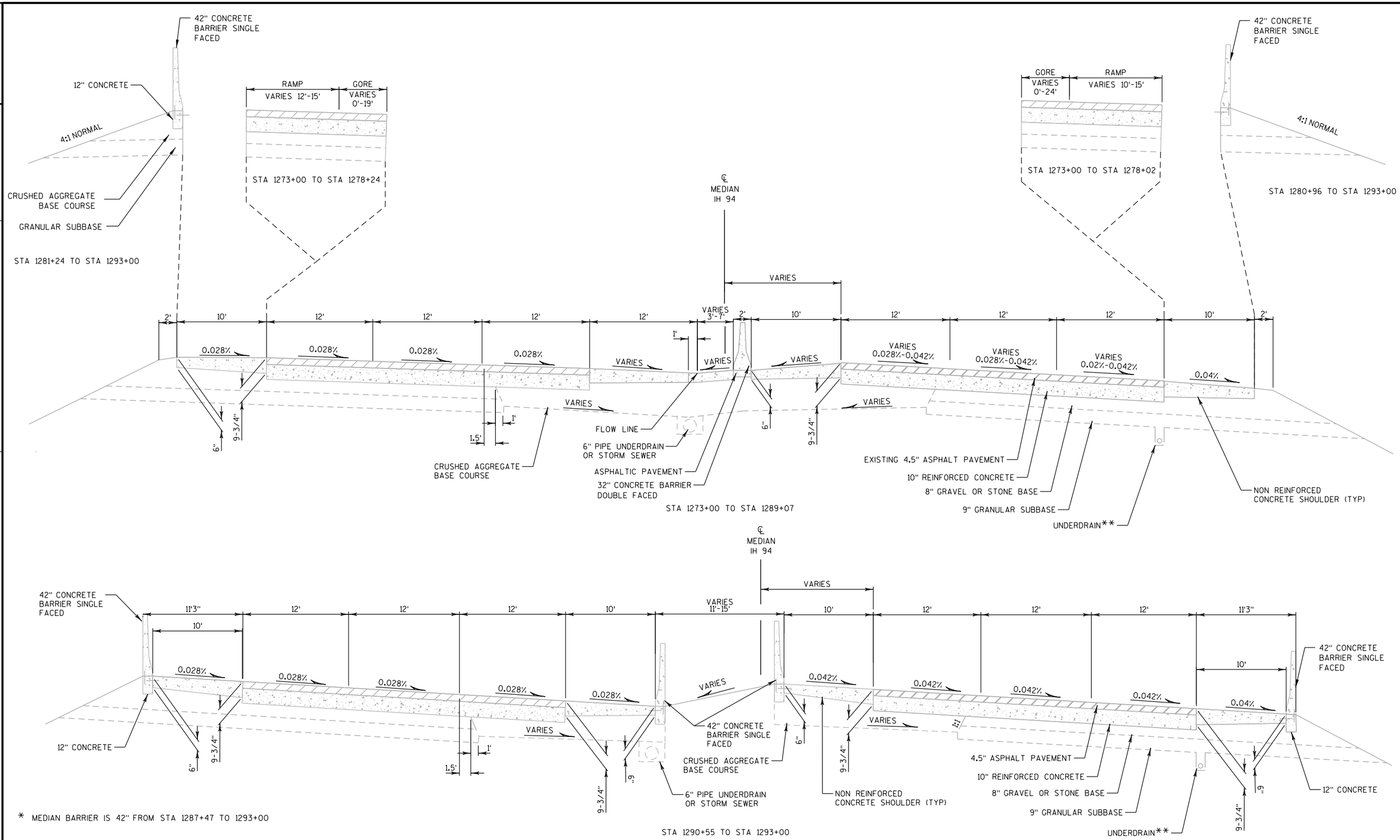
STA 1268+00 TO STA 1273+00

** UNDERDRAIN LOCATIONS:

SB IH 94:
STA. 1208+00 - STA. 1271+53
STA. 1279+00 - STA. 1284+00
STA. 1278+10 - STA. 1290+00

NB IH 94:
STA. 1268+00 - STA. 1271+53
STA. 1277+47 - STA. 1283+57
STA. 1283+72 - STA. 1287+97

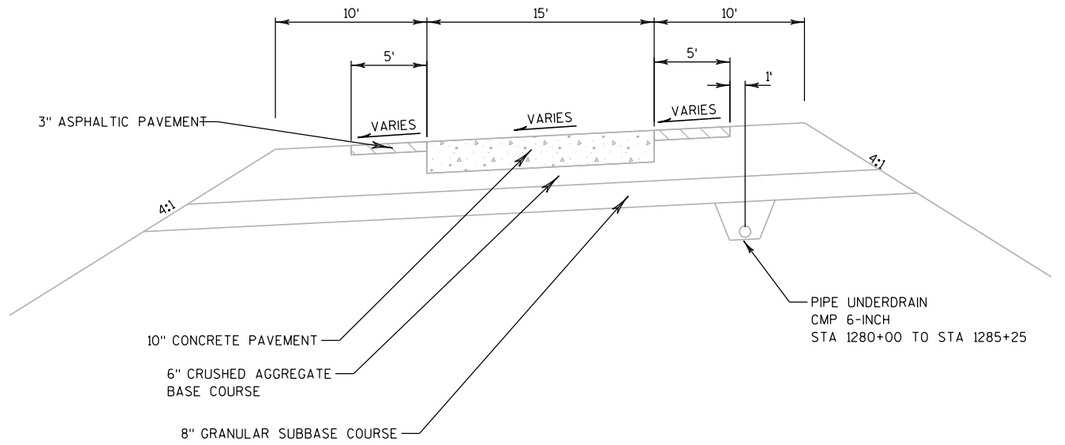
PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	TYPICAL SECTIONS	SHEET 5	E



* MEDIAN BARRIER IS 42" FROM STA 1287+47 TO 1293+00

TYPICAL EXISTING SECTION
IH 94

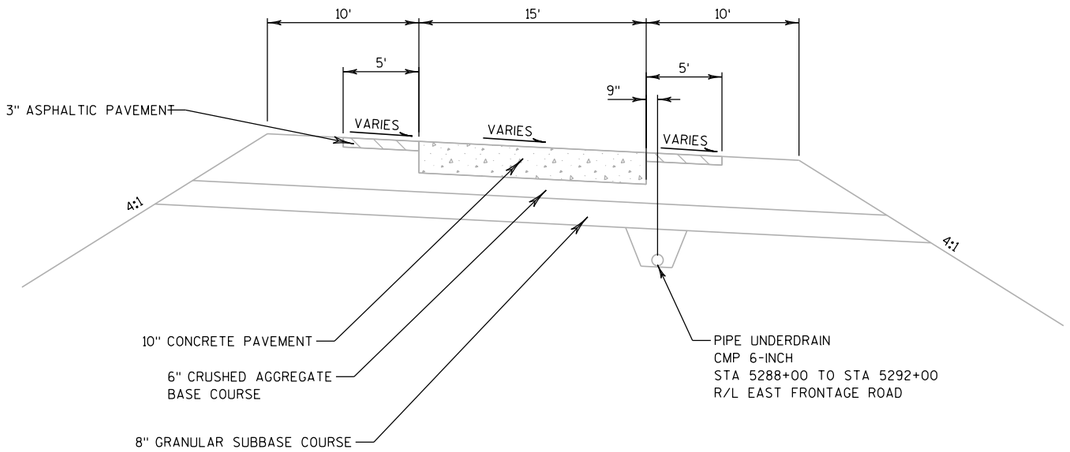
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TYPICAL EXISTING SECTION

SB ON RAMP

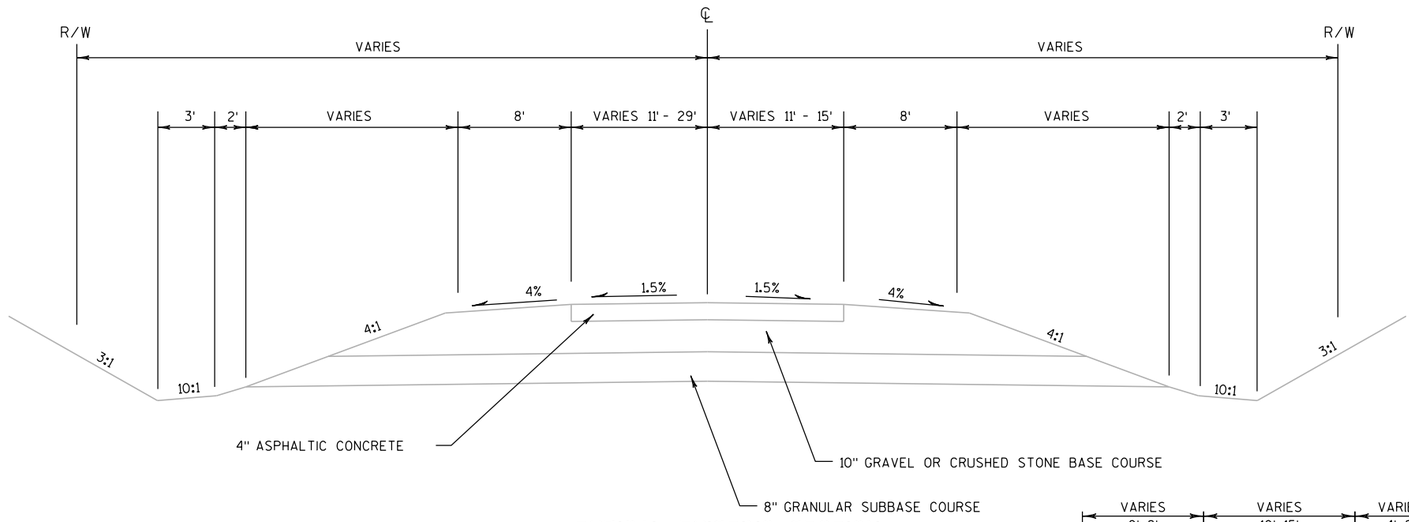
STA 1275+25 TO STA 1291+00



TYPICAL EXISTING SECTION

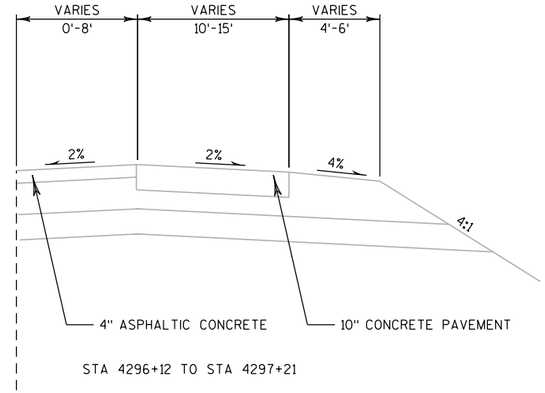
NB OFF RAMP

STA 1275+00 TO STA 1295+00

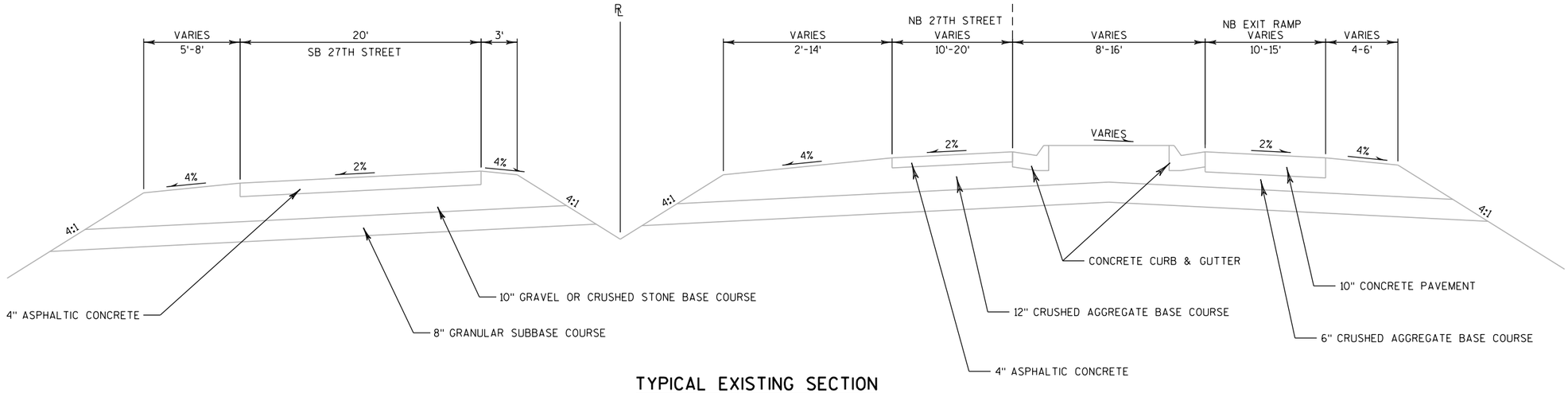


TYPICAL EXISTING SECTION
WEST FRONTAGE ROAD

STA 4288+00 TO STA 4294+33



STA 4296+12 TO STA 4297+21

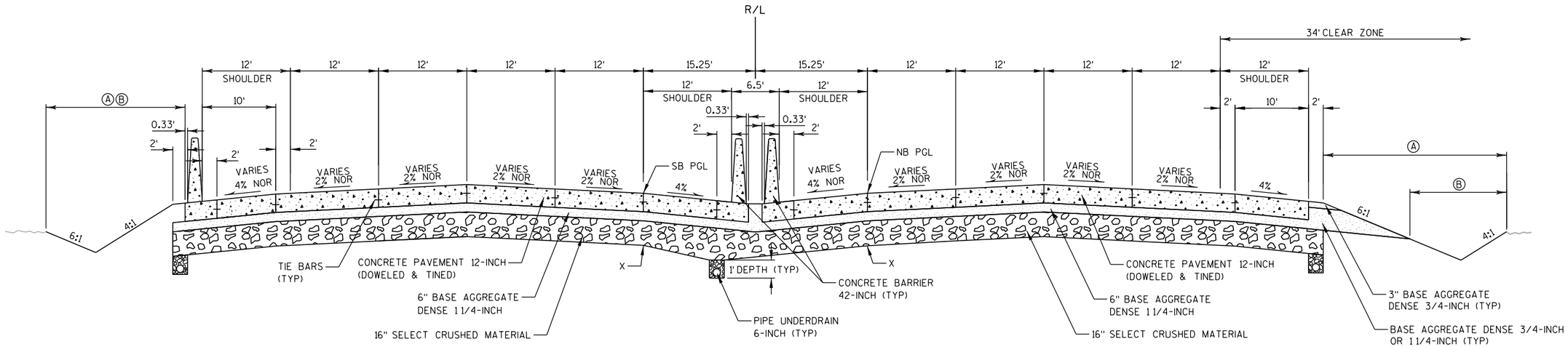


TYPICAL EXISTING SECTION
27TH STREET

STA 4294+33 TO STA 4297+10

PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	TYPICAL SECTIONS	SHEET 8	E

2



TYPICAL FINISHED SECTION

IH 94

STA 1268+00 TO STA 1273+50

LEGEND:

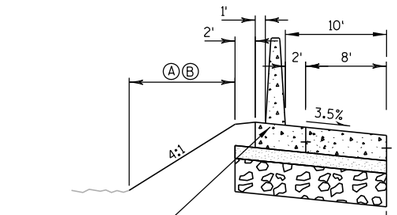
(A) SEEDING MIXTURE NO. 30 SPECIAL AND FERTILIZER TYPE B

(B) 4" SALVAGED TOPSOIL AND MULCHING OR EROSION MAT

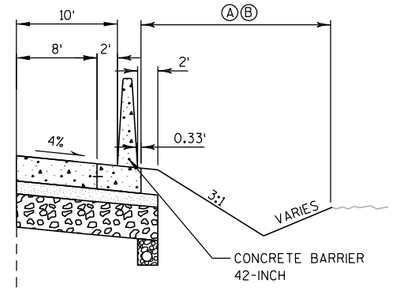
NOTE:

PGL = POINT REFERRED TO ON PROFILE
X = POINT REFERRED TO ON CROSS SECTION
SEE SUPERELEVATION TABLE FOR SLOPE TRANSITIONS

PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	TYPICAL SECTIONS	SHEET 9	E



STA 1273+50 TO STA 1275+00



STA 1287+20 TO STA 1293+00

LEGEND:

(A) SEEDING MIXTURE NO. 30 SPECIAL AND FERTILIZER TYPE B

(B) 4" SALVAGED TOPSOIL AND MULCHING OR EROSION MAT

TYPICAL FINISHED SECTION

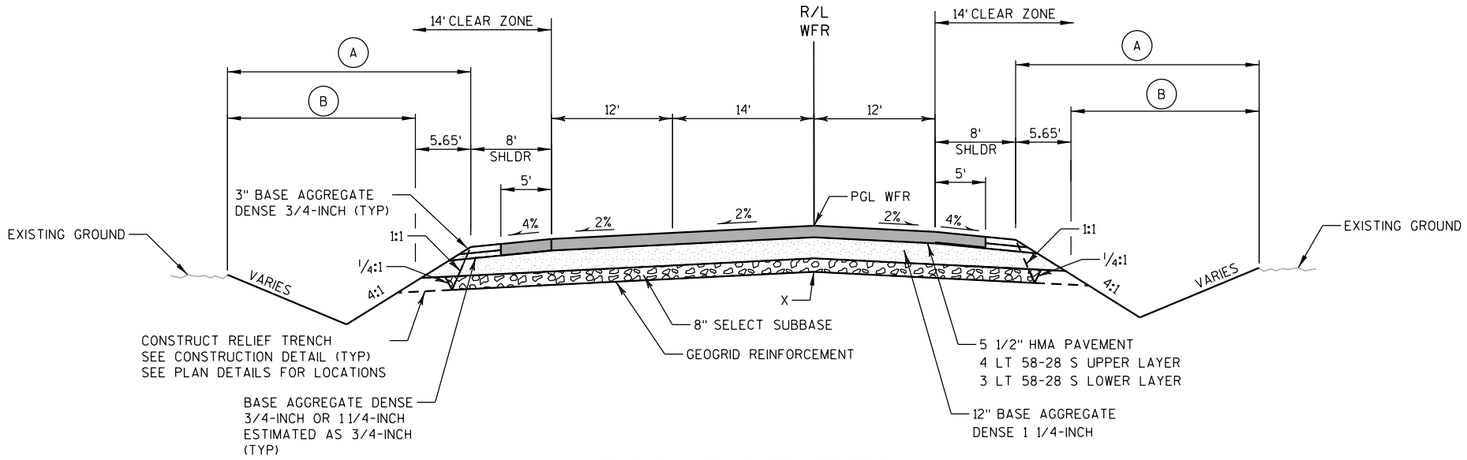
IH 94

STA 1273+50 TO STA 1293+00

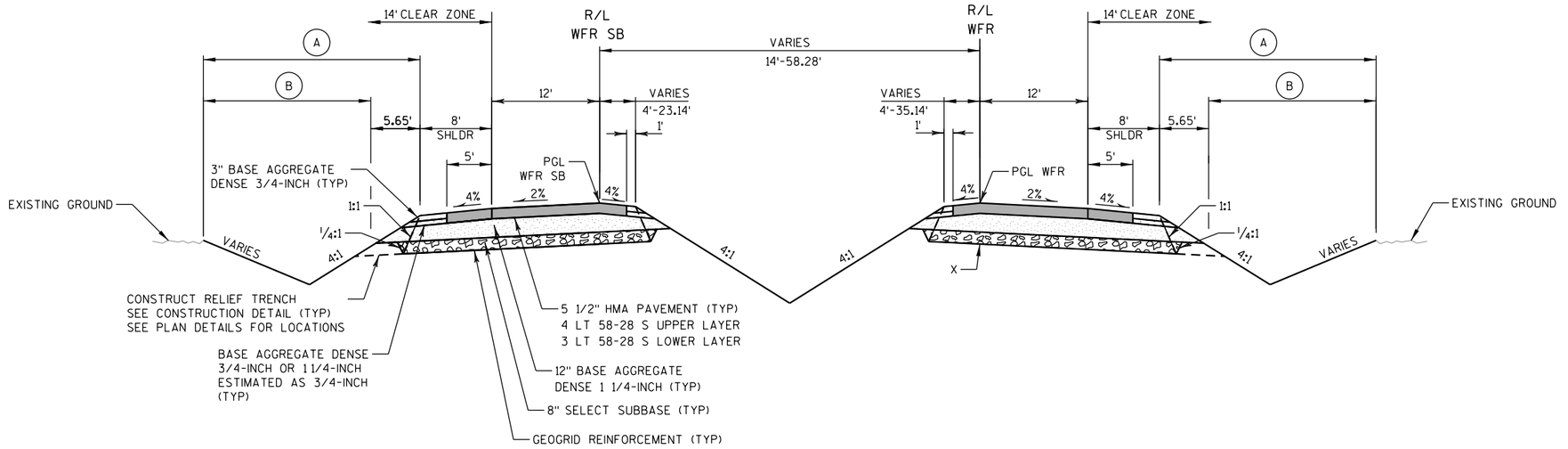
NOTE:

PGL = POINT REFERRED TO ON PROFILE
X = POINT REFERRED TO ON CROSS SECTION
* SLOPE VARIES FROM 2% AWAY FROM R/L TO 3.5% TOWARDS R/L
SEE SUPERELEVATION TABLE FOR SLOPE TRANSITIONS

PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	TYPICAL SECTIONS	SHEET 10	E



TYPICAL FINISHED SECTION
WEST FRONTAGE ROAD
STA 4288+00 TO STA 4291+10



TYPICAL FINISHED SECTION
WEST FRONTAGE ROAD
STA 4291+10 TO STA 4297+10

LEGEND:

(A) SEEDING MIXTURE NO. 30 SPECIAL AND FERTILIZER TYPE B

(B) 4" SALVAGED TOPSOIL AND MULCHING OR EROSION MAT

NOTE:

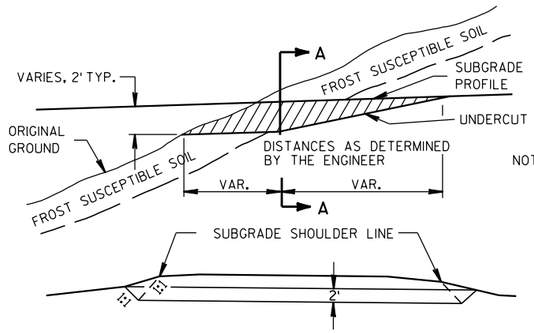
PGL = POINT REFERRED TO ON PROFILE
X = POINT REFERRED TO ON CROSS SECTION

PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	TYPICAL SECTIONS	SHEET 11	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 = 43.17 ACRES FOR 7 MIRD TO MILW CO LINE SEGMENT
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 14.88 ACRES FOR ID 1035-01-82



SECTION A-A
CROSS SECTION SHOWING UNDERCUT

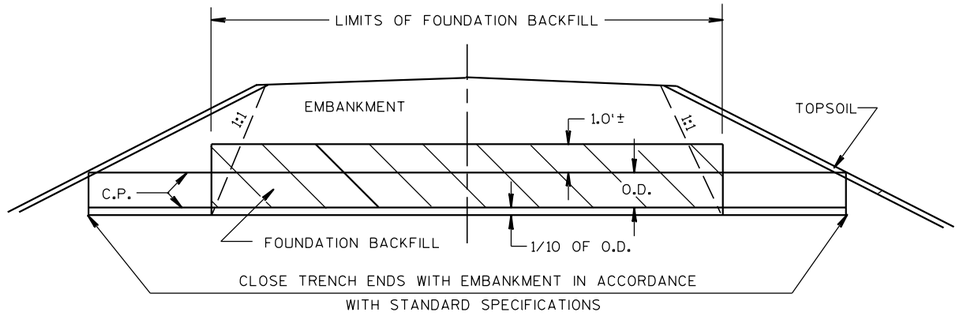
NOTE: EXACT LOCATIONS AND EXTENT OF E.B.S. SECTIONS SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.

E.B.S. AREA TO BE BACKFILLED WITH MATERIAL ACCEPTABLE TO THE ENGINEER.

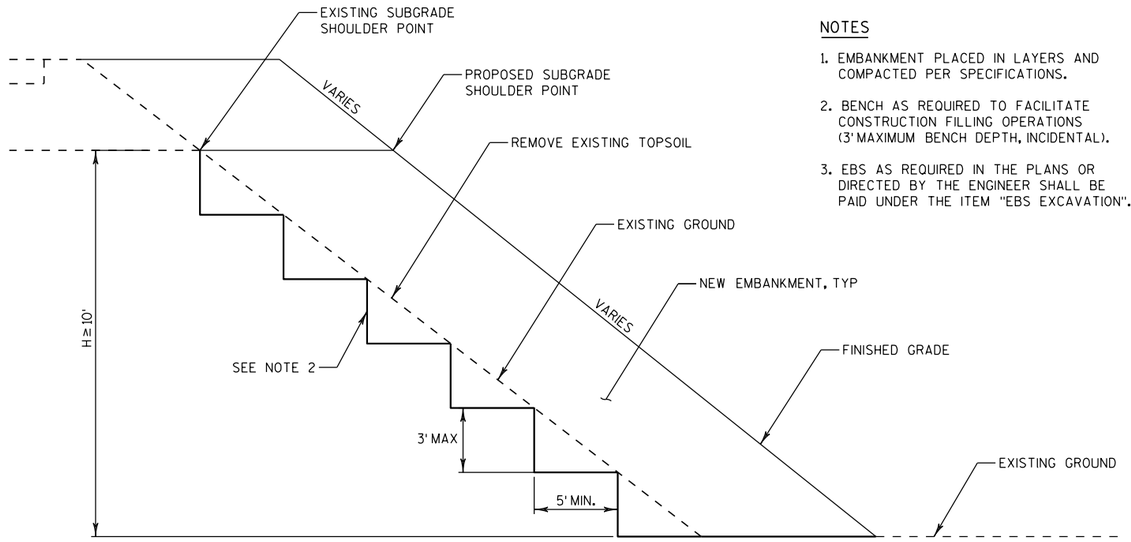
BACKFILL MUST BE HOMOGENEOUS WITH ADJOINING FILL MATERIAL

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

DETAIL FOR EXCAVATION BELOW SUBGRADE AT CUTS



CULVERT BACKFILL DETAIL

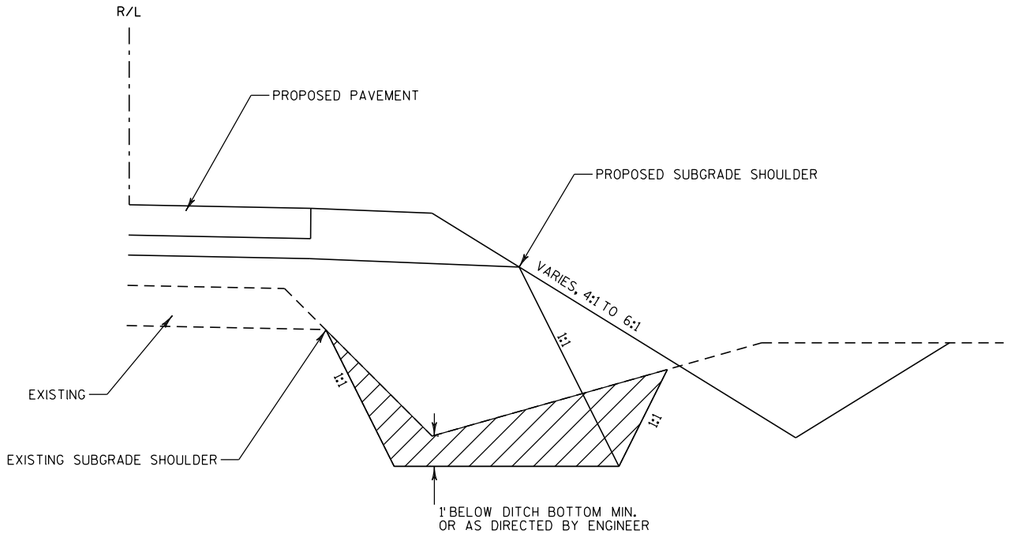


NOTES

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

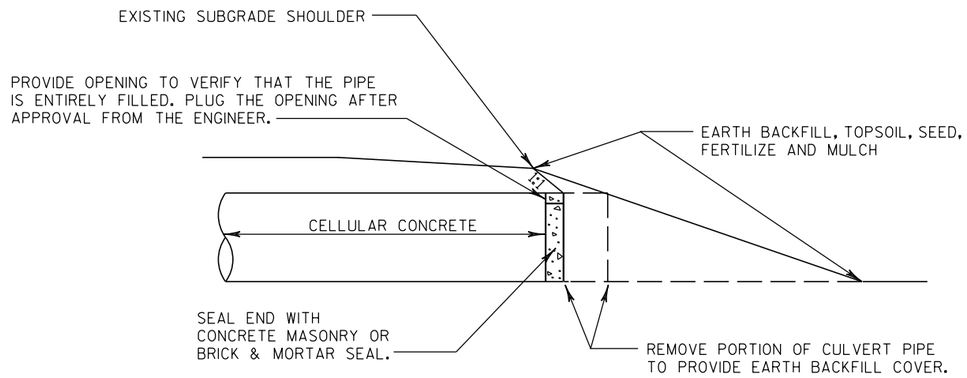
STEPPED EMBANKMENT

100915



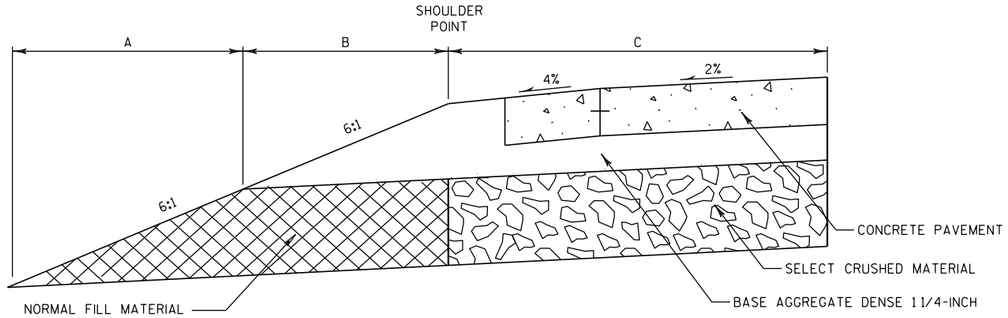
EBS AT DITCH FILLS

1. UTILIZE DETAIL FOR ALL AREAS WHERE FILL IS TO BE PLACED OVER AN EXISTING DITCH.
2. EXCAVATE AREA TO A MINIMUM OF 1-FOOT BELOW EXISTING DITCH BOTTOM OR AS DIRECTED BY ENGINEER IN THE FIELD.
3. EBS AREA TO BE BACKFILLED WITH EBS BACKFILL.
4. EXACT LOCATIONS AND EXTENTS OF EBS SECTIONS SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.

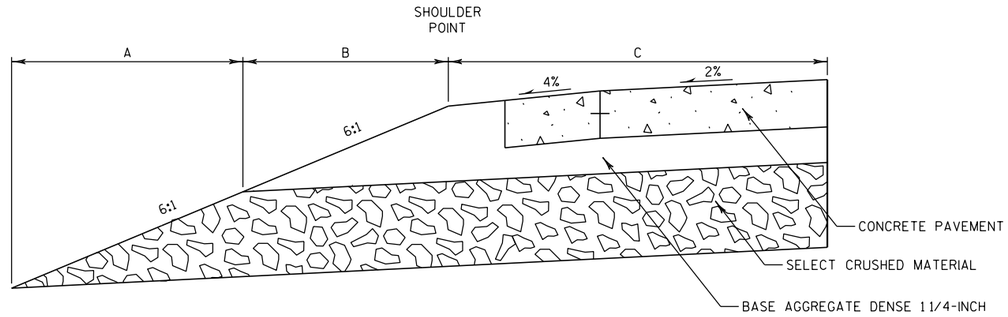


ABANDONING SEWER DETAIL

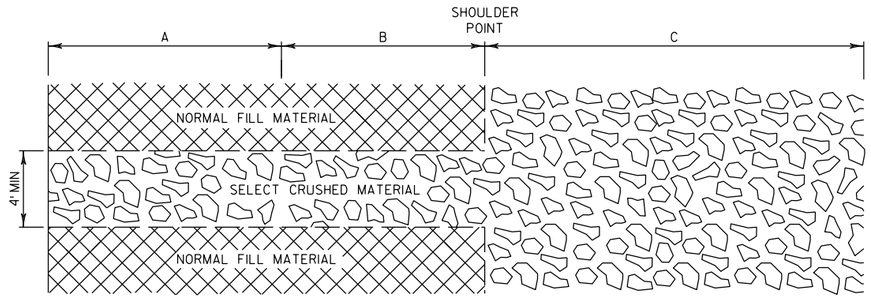
110210



TYPICAL HALF SECTION WITHOUT RELIEF TRENCH



TYPICAL HALF SECTION WITH RELIEF TRENCH

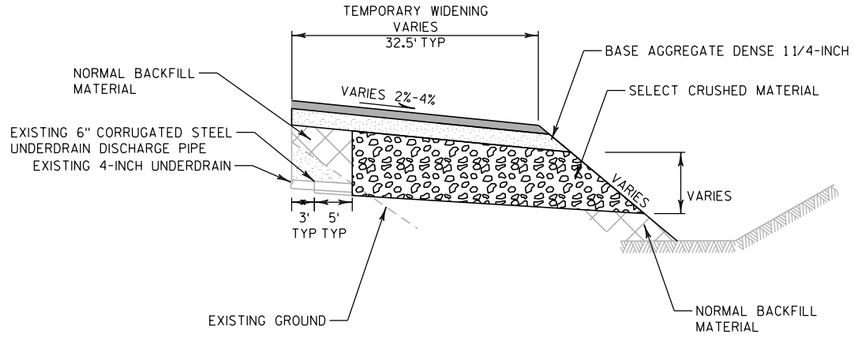


RELIEF TRENCH PLAN VIEW

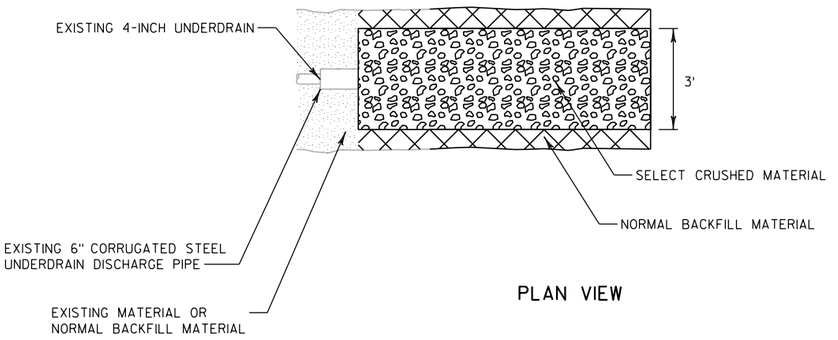
*CONSTRUCT RELIEF TRENCH AT:

IH 94 NB:
STA. 1279+00, RT
STA. 1281+50, RT
STA. 1284+00, RT
STA. 1286+50, RT

RELIEF TRENCH IH 94



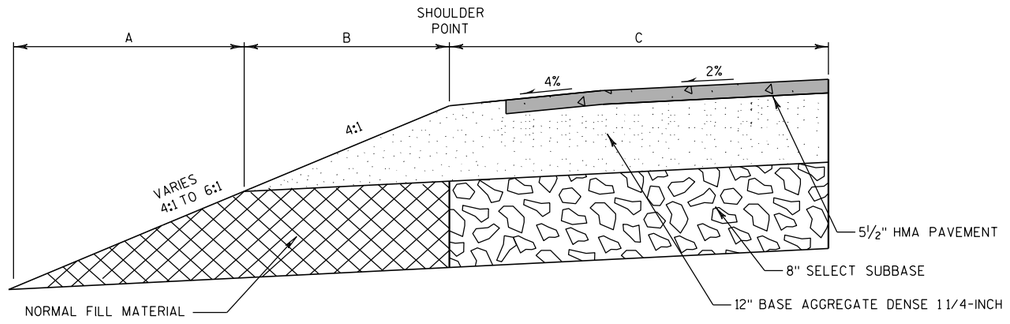
SIDE VIEW



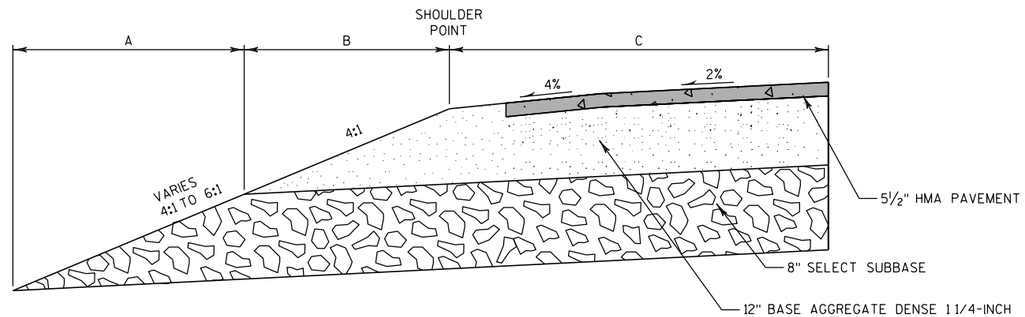
PLAN VIEW

TEMPORARY WIDENING RELIEF TRENCH

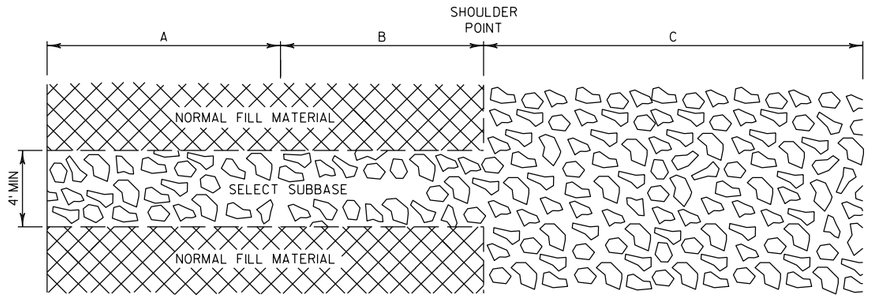
STA 1271+35
STA 1273+50
STA 1274+37
STA 1283+47
STA 1287+77



TYPICAL HALF SECTION WITHOUT RELIEF TRENCH



TYPICAL HALF SECTION WITH RELIEF TRENCH



RELIEF TRENCH PLAN VIEW

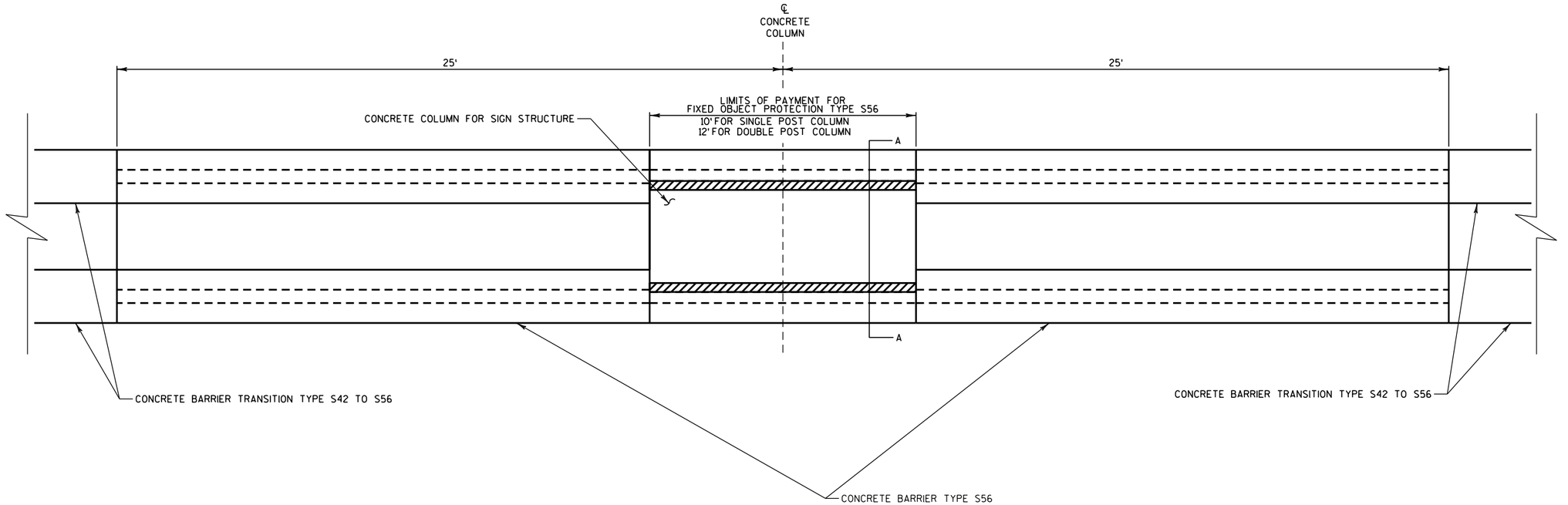
*CONSTRUCT RELIEF TRENCH AT:

WFR SB:	WFR NB:
STA. 4290+00, LT	STA. 4290+00, RT
STA. 4293+50, LT	STA. 4294+00, RT
STA. 4295+10, LT	STA. 4296+00, RT
STA. 4297+10, LT	STA. 4297+10, RT

RELIEF TRENCH WEST FRONTAGE ROAD

NOTE: EXCAVATION FOR RELIEF TRENCHES TO BE PAID UNDER THE ITEM EXCAVATION COMMON

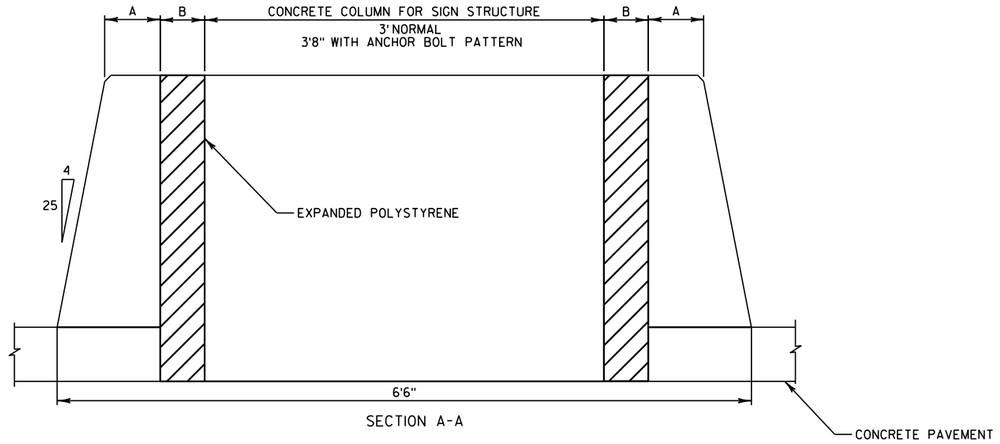
110210(MOD)



NOTES

DIMENSION A = 4" FOR 3'8" WIDE COLUMN
8" FOR 3' WIDE COLUMN

DIMENSION B = 1" FOR 3'8" WIDE COLUMN
4" FOR 3' WIDE COLUMN



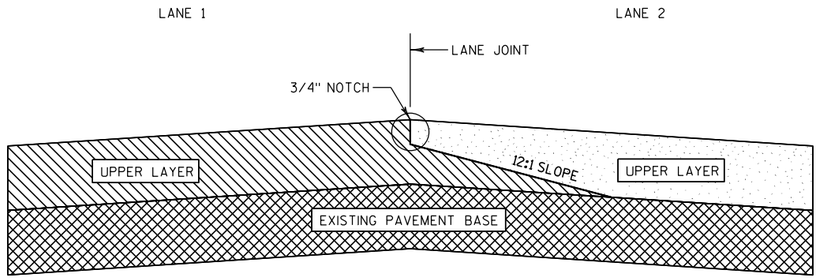
CONCRETE BARRIER FIXED OBJECT PROTECTION

FOR USE AT MEDIAN SIGN STRUCTURE COLUMNS
SUPPLEMENT TO S.D.D. 14B32

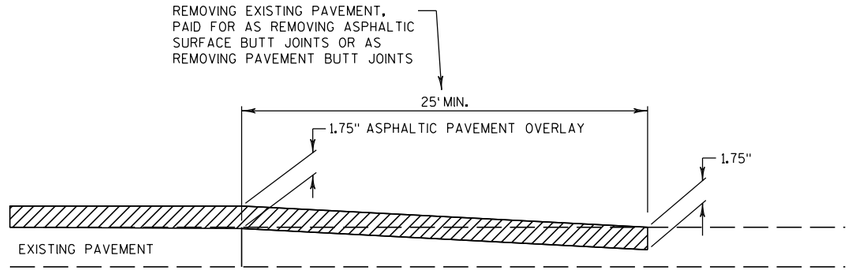
PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	CONSTRUCTION DETAILS	SHEET 16	E

FILE NAME : Z:\Racine\CADDS\22\22M\CDS\021001_cd.dgn PLOT DATE : 6/7/2018 PLOT BY : kld PLOT NAME : $FILE$ PLOT SCALE : 1:200

WISDOT/CADDS SHEET 42



TYPICAL PAVEMENT CROSS SECTIONS OF
TAPERED AND NOTCHED LONGITUDINAL JOINTS

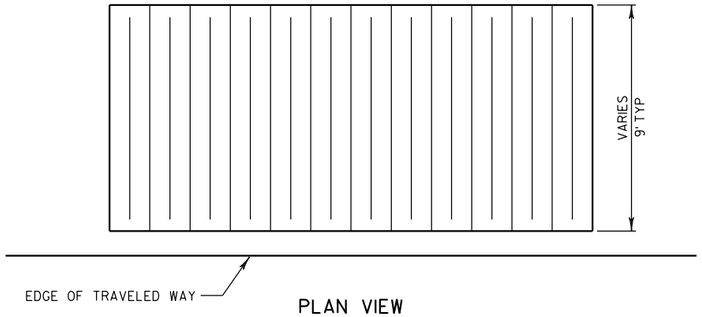


BUTT JOINT DETAIL

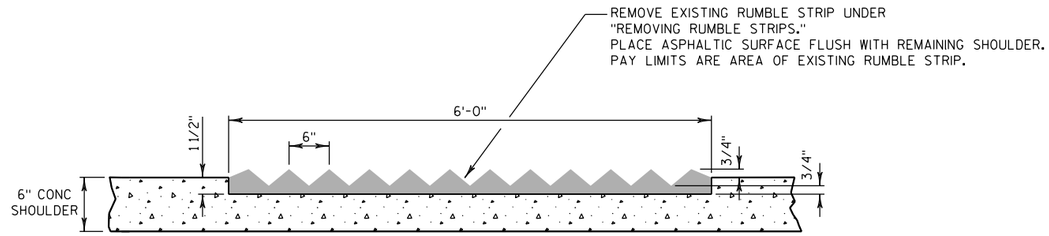
STA 1288+82 - STA 1289+07
STA 1290+55 - STA 1290+80

2

PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	CONSTRUCTION DETAILS: MAINLINE	SHEET 17	E



PLAN VIEW

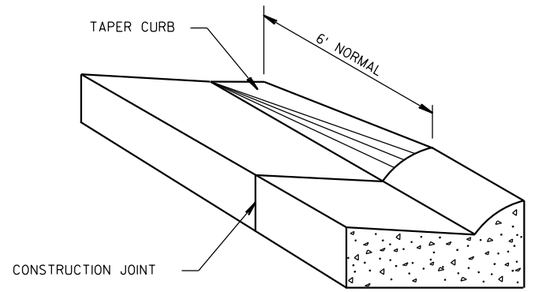


PROFILE VIEW

NOTE

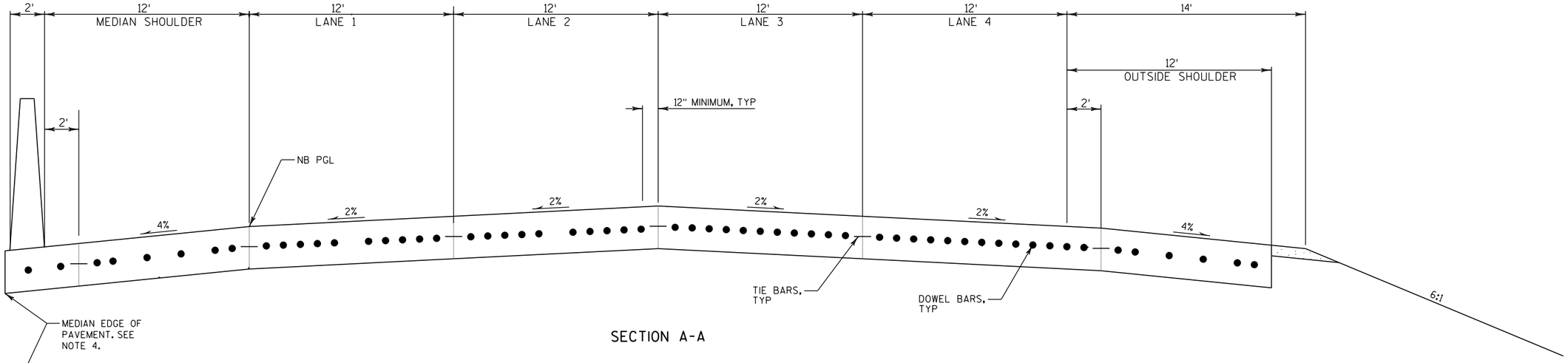
1. RUMBLE STRIPS ARE LONGITUDINALLY SPACED 60' CENTER TO CENTER
2. IF THE RUMBLE STRIP ENDS AT OR NEAR A CONCRETE JOINT, MILL OUT AN ADDITIONAL 1' OF CONCRETE PAST THE JOINT BEFORE FILLING WITH ASPHALT.

REMOVING RUMBLE STRIPS

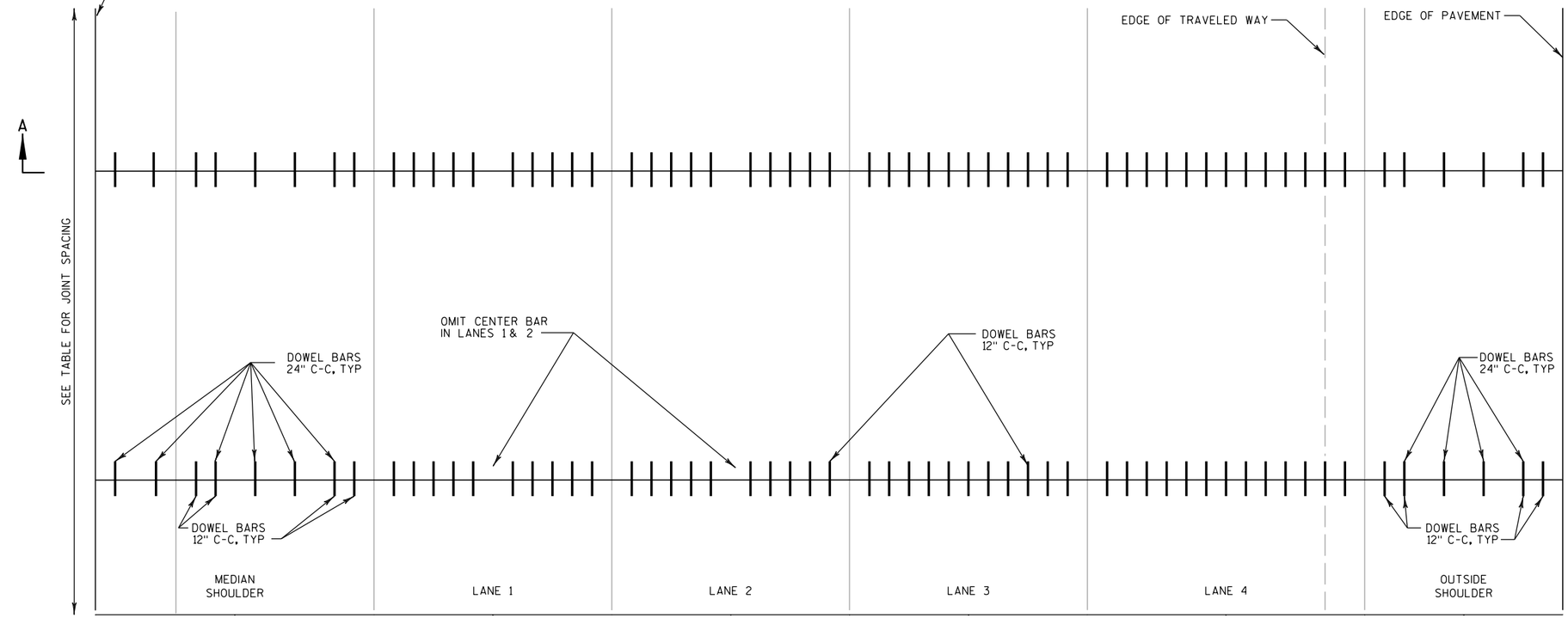


DETAIL OF CURB & GUTTER TERMINI

NOTE: USE 6 FT TRANSITION FOR
CONCRETE AND ASPHALTIC CURB



SECTION A-A



PLAN

HPC PAVEMENT JOINT DETAIL

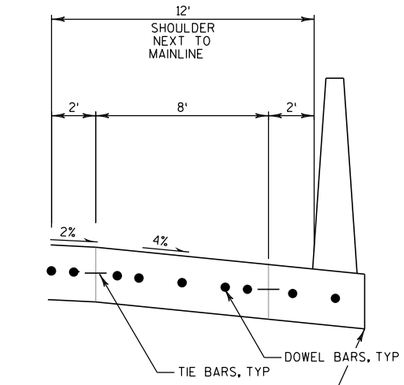
PAVEMENT DEPTH, DOWEL BAR SIZE AND JOINT SPACING TABLE

PAVEMENT DEPTH (D)	DOWEL BAR DIAMETER	CONTRACTION JOINT SPACING
10" & ABOVE	1 1/2"	15'

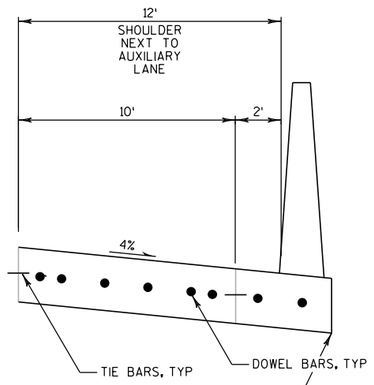
NOTES

1. DETAILS NOT SHOWN SHALL CONFORM TO STANDARD DETAIL DRAWINGS.
2. LOCATE OUTERMOST DOWEL BAR SO THAT THE CENTER OF THE BAR IS 12 INCHES FROM THE EDGE OF PAVEMENT OR LONGITUDINAL JOINT.
3. TREAT SAWED SURFACES OF TRANSVERSE AND LONGITUDINAL JOINTS WITH SILANE SEALANT.
4. FOR OUTER SHOULDERS AND DOUBLE RUN IN MEDIAN, CONCRETE PAD SHALL EXTEND 4" BEYOND THE OUTER FACE OF THE WALL FOR TANGENT SECTIONS AND ALONG INSIDE OF CURVES. EXTEND PAD 12" ALONG OUTSIDE OF CURVES.

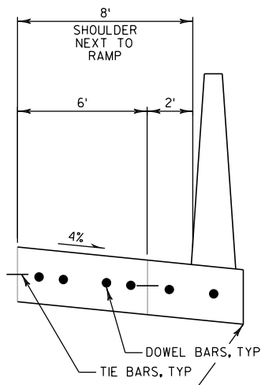
100813



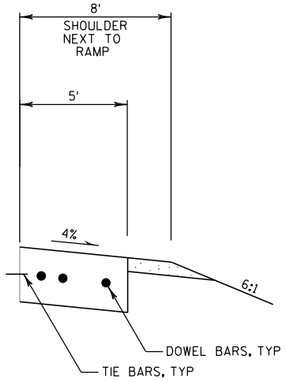
SECTION A-A



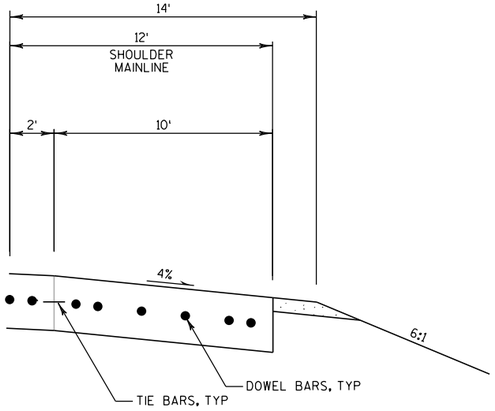
SECTION B-B



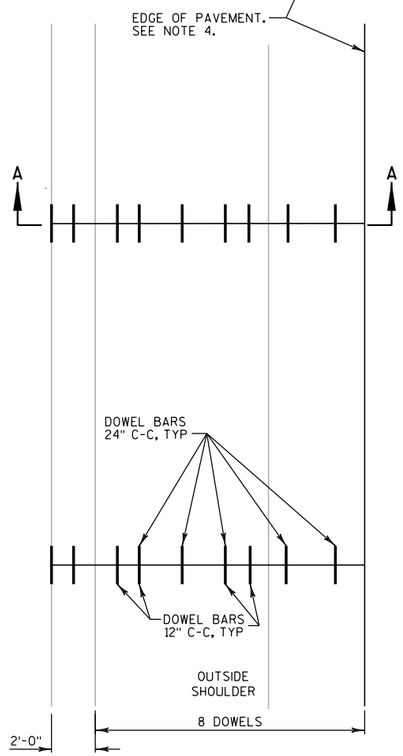
SECTION C-C



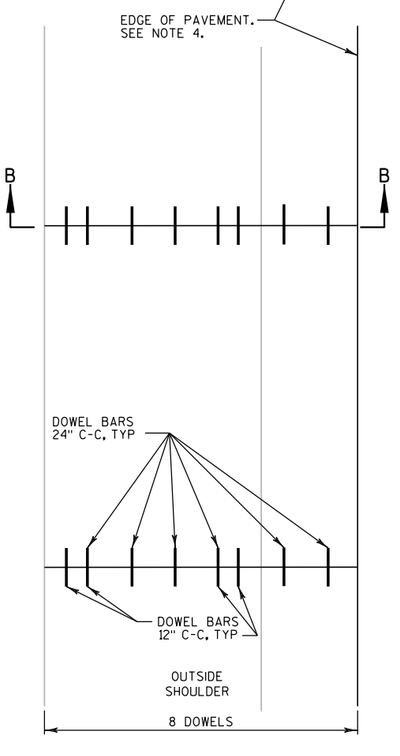
SECTION D-D



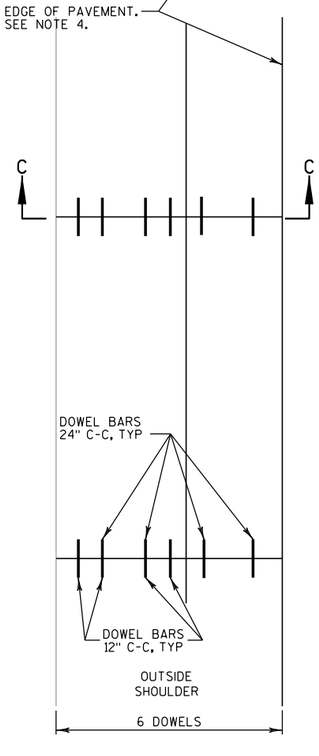
SECTION E-E



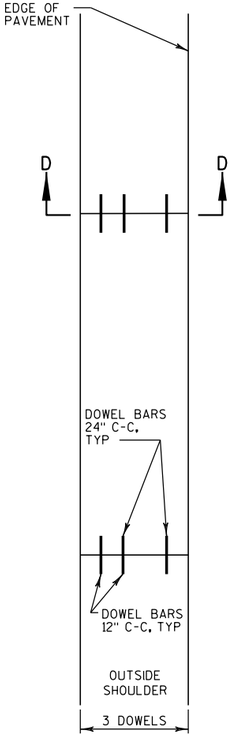
PLAN



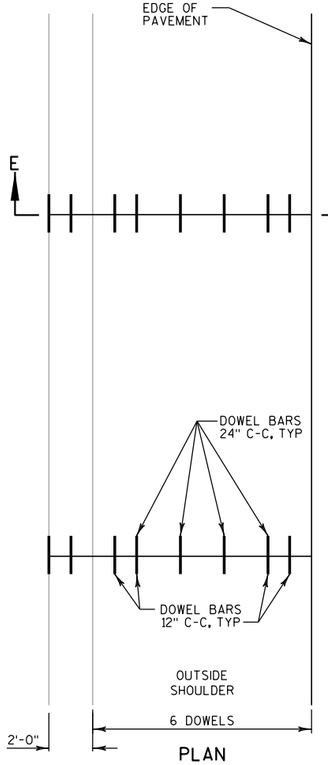
PLAN



PLAN



PLAN



PLAN

HPC PAVEMENT JOINT DETAIL - SHOULDERS

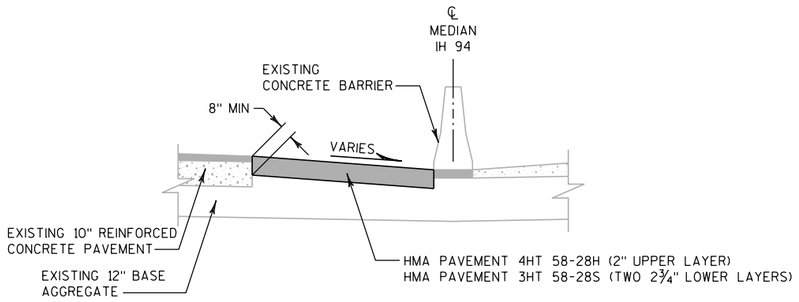
PAVEMENT DEPTH, DOWEL BAR SIZE AND JOINT SPACING TABLE

PAVEMENT DEPTH (D)	DOWEL BAR DIAMETER	CONTRACTION JOINT SPACING
10" & ABOVE	1 1/2"	15'

NOTES

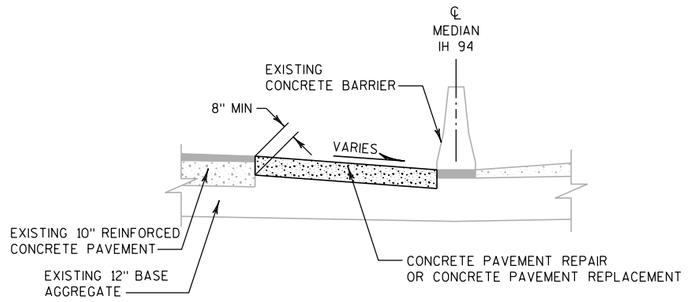
1. DETAILS NOT SHOWN SHALL CONFORM TO STANDARD DETAIL DRAWINGS.
2. LOCATE OUTERMOST DOWEL BAR SO THAT THE CENTER OF THE BAR IS 12 INCHES FROM THE EDGE OF PAVEMENT OR LONGITUDINAL JOINT.
3. TREAT SAWED SURFACES OF TRANSVERSE AND LONGITUDINAL JOINTS WITH SILANE SEALANT.
4. AT LOCATIONS OF BARRIER ALONG TANGENT ALIGNMENT, EDGE OF PAVEMENT IS 4 INCHES BEHIND BACK OF BARRIER. AT LOCATIONS OF BARRIER ALONG THE OUTSIDE OF CURVES, EDGE OF PAVEMENT IS 12" BEHIND BACK OF BARRIER. DIMENSIONS AND GRADES SHOWN IN PLANS ARE TO BACK OF BARRIER.

100813



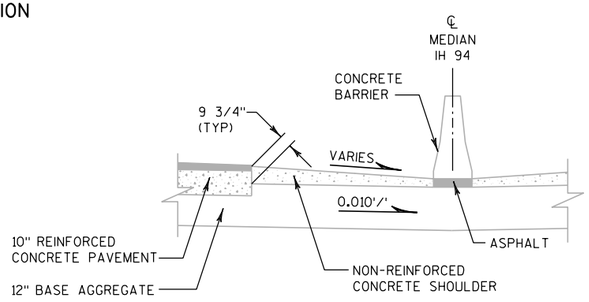
TYPICAL PROPOSED SECTION - ASPHALT OPTION

(DRAINAGE STRUCTURES NOT SHOWN)



TYPICAL PROPOSED SECTION - CONCRETE OPTION

(DRAINAGE STRUCTURES NOT SHOWN)

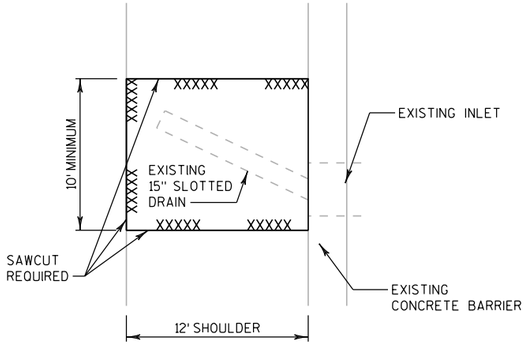


TYPICAL EXISTING SECTION

(DRAINAGE STRUCTURES NOT SHOWN)

NOTES

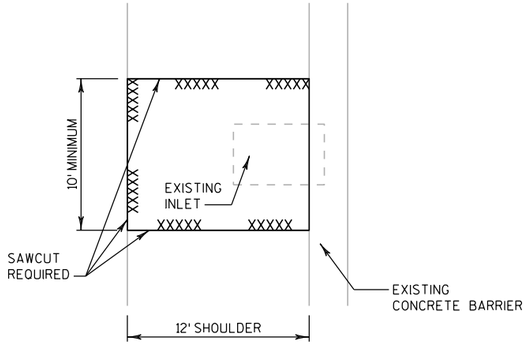
1. SAWCUT LIMITS TO BE DETERMINED BY THE ENGINEER.
2. IF VOIDS EXIST UNDER AREAS TO BE REPAIRED, AND AT THE DIRECTION OF THE ENGINEER, BACKFILL WITH BASE AGGREGATE DENSE AND/OR BACKFILL CONTROLLED LOW STRENGTH.
3. USE HMA PAVEMENT IF EXISTING PAVEMENT IS ASPHALT. USE CONCRETE PAVEMENT REAPIR IF EXISTING PAVEMENT IS CONCRETE.



PLAN VIEW

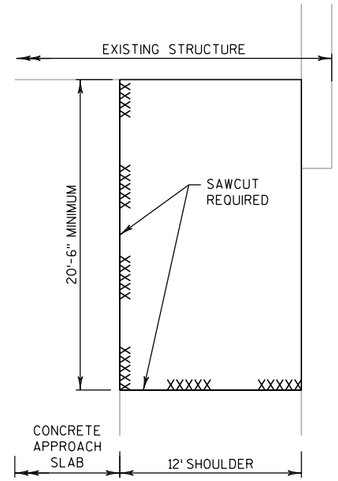
REPAIR AT SLOTTED DRAIN

SEE "REMOVING SLOTTED VANE DRAIN" DETAIL
FOR MORE INFORMATION



PLAN VIEW

REPAIR AT INLET

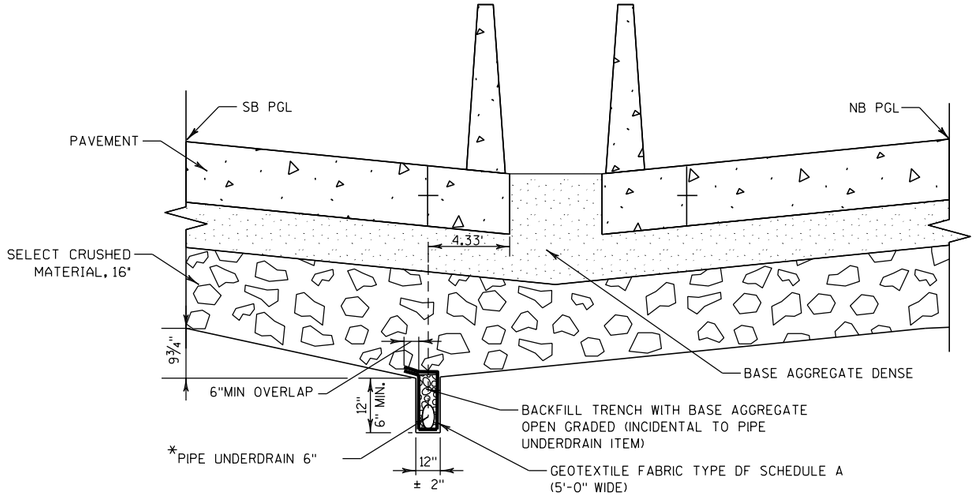


PLAN VIEW

REPAIR AT BRIDGE APPROACH SLAB

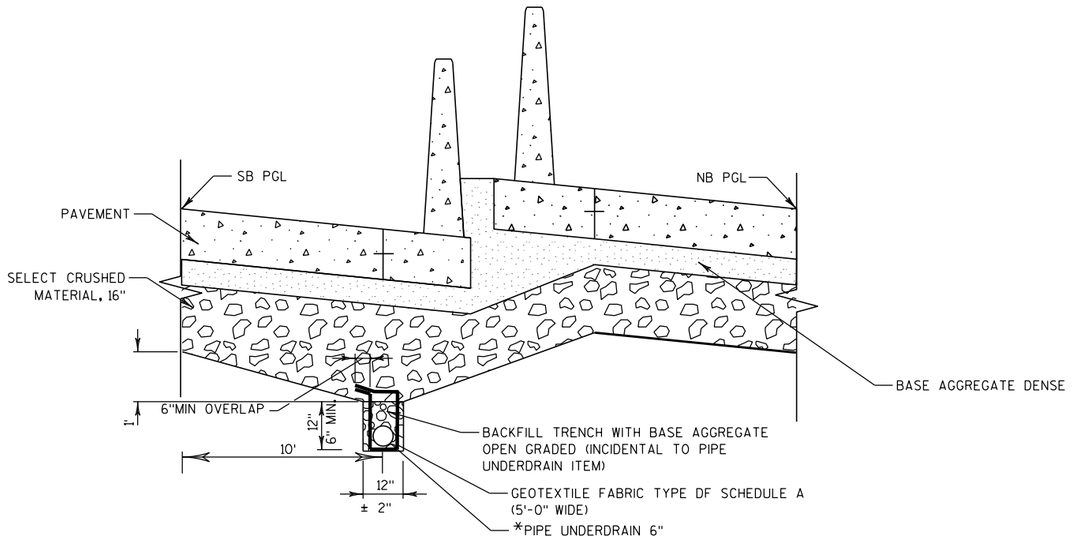
SHOULDER REPAIR

PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	CONSTRUCTION DETAILS	SHEET 21	E



MEDIAN UNDERDRAIN TRENCH DETAIL

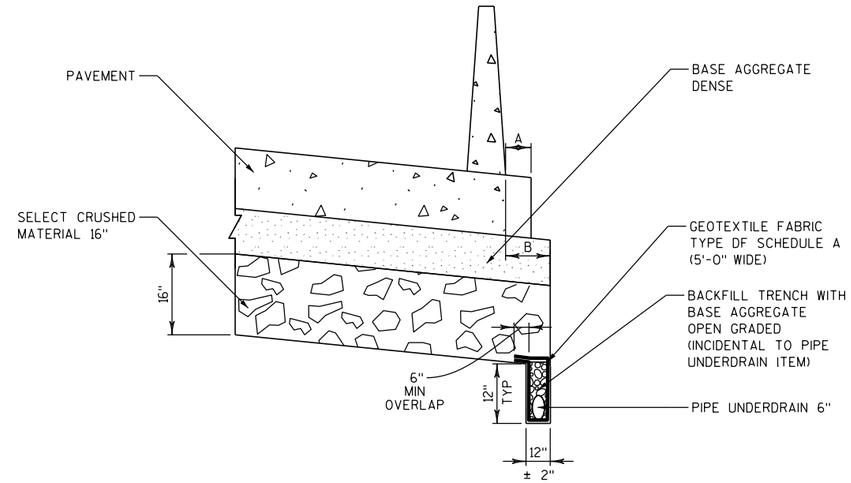
*NOTE: WHEN PROJECT IS SPLIT INTO STAGES INSTALL PIPE UNDERDRAIN IN EARLY STAGE.



MEDIAN UNDERDRAIN TRENCH DETAIL SUPERELEVATED SECTION

*NOTE: WHEN PROJECT IS SPLIT INTO STAGES INSTALL PIPE UNDERDRAIN IN EARLY STAGE.

2



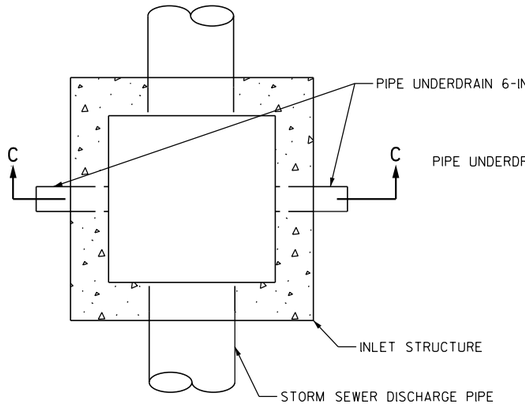
DIMENSION A	DIMENSION B	SHOULDER LOCATION
4-INCHES	2-FEET	TANGENT SECTION
4-INCHES	2-FEET	INSIDE OF A CURVE
1-FEET	3-FEET	OUTSIDE OF A CURVE

OUTSIDE SHOULDER UNDERDRAIN TRENCH DETAIL

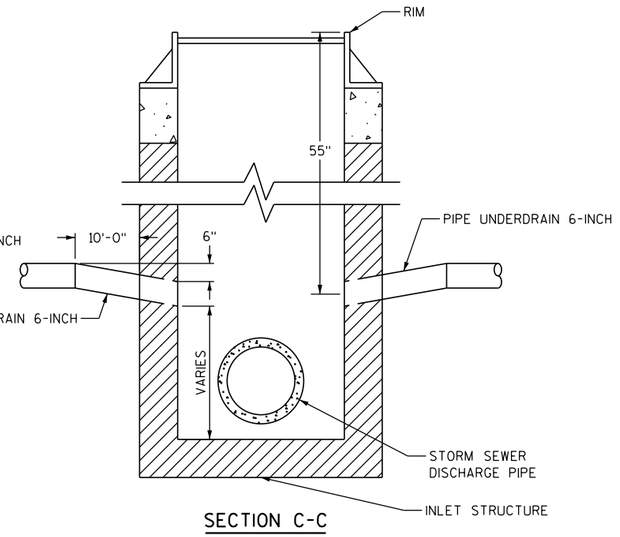
2

NOTES

1. CONNECTIONS TO INLETS OR MANHOLES IN MEDIAN SHALL USE PIPE UNDERDRAIN, 6-INCH.
2. PROVIDE TWO 6" DIA. OPENINGS FOR UNDERDRAIN PIPE A MINIMUM OF 55" BELOW THE RIM ELEVATION.
3. SEE TYPICAL SECTIONS, STORM SEWER, AND UNDERDRAIN PLANS FOR PIPE UNDERDRAIN LOCATIONS.



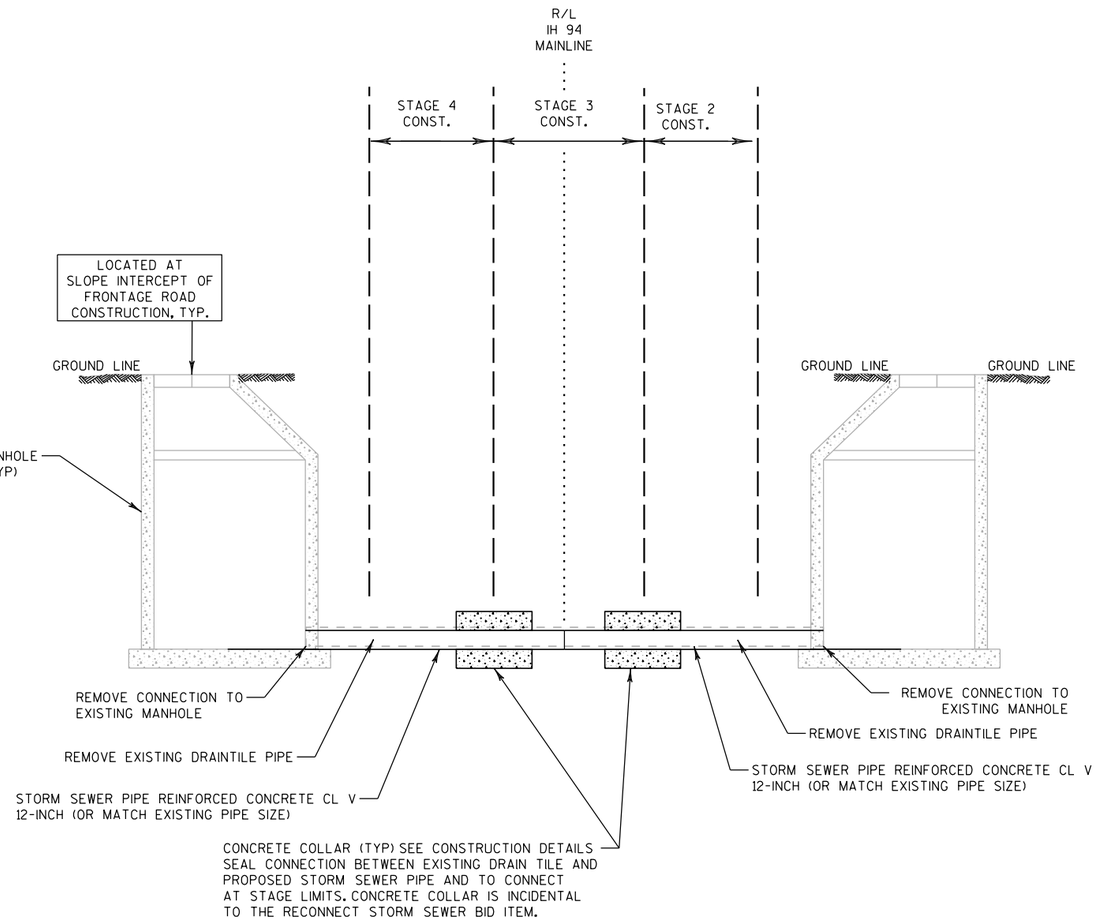
PLAN VIEW



SECTION C-C

UNDERDRAIN OUTFALL AT INLET

100514



DRAINTILE CONFIGURATION

(FOR MAINLINE CROSSINGS)

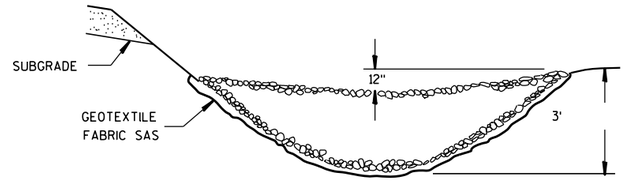
STAGING NOTES

1. REFER TO STAGING PLANS TO DETERMINE APPROPRIATE SIDE TO CONSTRUCT FIRST.
2. LOCATE EXISTING MANHOLE AND REMOVE EXISTING DRAIN TILE FROM MANHOLE TO R/L OF IH 94. INSTALL NEW STORM SEWER PIPE REINFORCED CONCRETE CL V AND CONSTRUCT CONCRETE COLLARS AS SHOWN AT EXISTING TILE/NEW SSPRC CONNECTIONS.
3. REMOVE REMAINING EXISTING DRAINTILE. REMOVE CONCRETE COLLAR PLACED IN PREVIOUS STAGE. INSTALL REMAINING STORM SEWER PIPE REINFORCED CONCRETE CL V FROM EXISTING MANHOLE TO EXISTING SSPRC PLACED IN PREVIOUS MAINLINE STAGE. CONSTRUCT CONCRETE COLLARS AS SHOWN AT EXISTING SSPRC/NEW SSPRC CONNECTIONS.

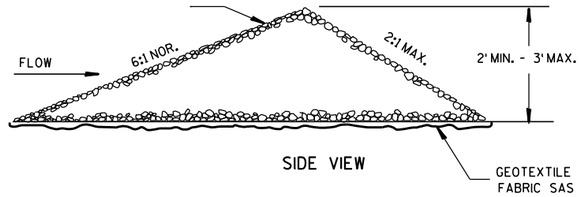
NOTES

1. IF EXISTING DRAIN TILE IS LARGER THAN 12", MATCH THE EXISTING SIZE IN THE FIELD.
2. GRADING AT MANHOLES WITHIN THE CLEAR ZONE OF THE FRONTAGE ROADS AND MAINLINE IS TO BE FLUSH WITH TOP OF THE MANHOLE.

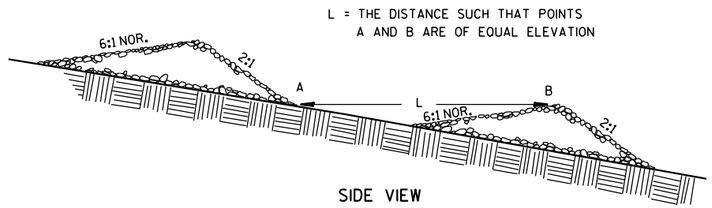
2



CROSS SECTIONAL VIEW

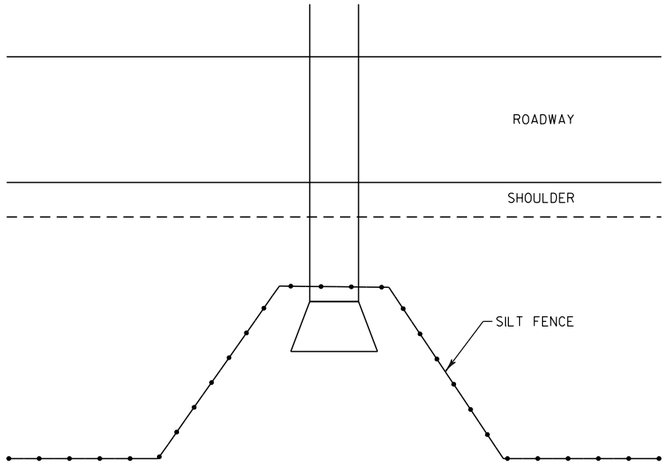


SIDE VIEW



SIDE VIEW

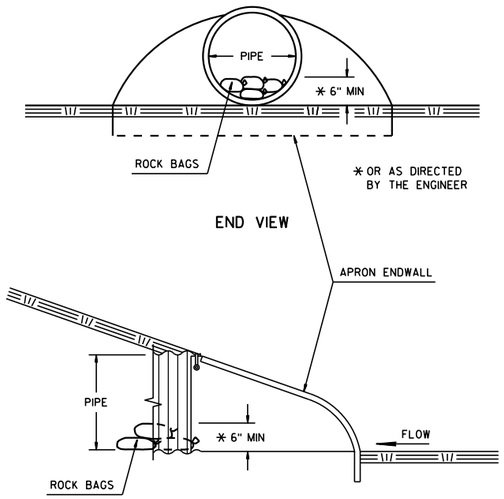
STONE OR ROCK DITCH CHECKS



NOTE
SEE SILT FENCE SDD FOR ADDITIONAL INFORMATION.

100902

TYPICAL SILT FENCE DETAIL AT PIPE INLET



CULVERT PIPE ENDS

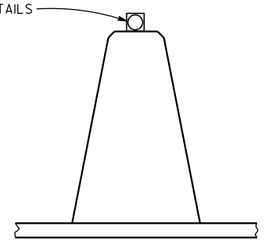
ROCK BAGS

ESTIMATED BAG SIZE = 18" X 12" X 6"	
PIPE SIZE	ESTIMATED NUMBER OF BAGS
12"	1
15"	2
18"	2
24"	3
30"	5
36"	7
42"	7
48"	10
54"	10
60"	13
66"	14
72"	16
13"X17"	2
19"X30"	5
24"X38"	7
29"X45"	10
34"X53"	10
38"X60"	13
48"X76"	18

DELINEATOR SPACING ON HORIZONTAL CURVES

RADIUS OF CURVE	APPROXIMATE SPACING ON CURVE
50 FEET	20 FEET
115 FEET	25 FEET
180 FEET	35 FEET
250 FEET	40 FEET
300 FEET	50 FEET
400 FEET	55 FEET
500 FEET	65 FEET
600 FEET	70 FEET
700 FEET	75 FEET
800 FEET	80 FEET
900 FEET	85 FEET
1000 FEET	90 FEET

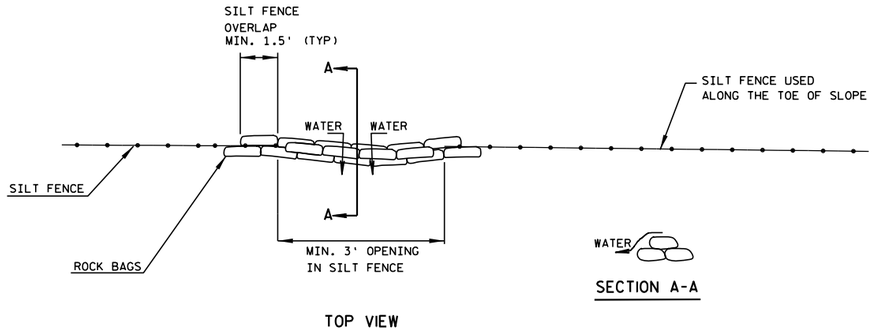
SEE STANDARD DETAIL DRAWING DELINEATOR BRACKET WITH REFLECTIVE SHEETING FOR DELINEATOR DETAILS



DELINEATION

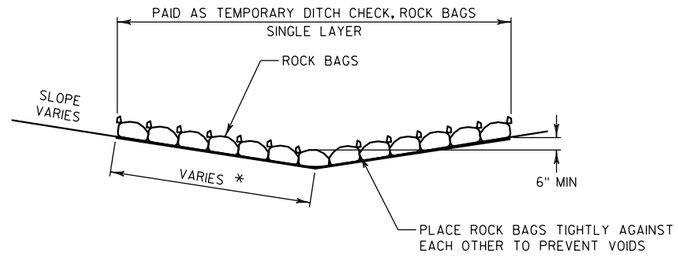
DELINEATOR SPACING ON RADIUS GREATER THAN 1000 FEET OR TANGENT SECTIONS

	LENGTH OF BARRIER	REFLECTOR SPACING	NO. SURFACES REFLECTORIZED	MIN. NO. REFLECTIORS
ONE WAY TRAFFIC	< 200'	50' C-C	1	3
	> 200'	100' C-C	1	
TWO WAY TRAFFIC	< 200'	25' C-C	1	6
	> 200'	50' C-C	1	
TWO WAY TRAFFIC	< 200'	50' C-C	2	3
	> 200'	100' C-C	2	

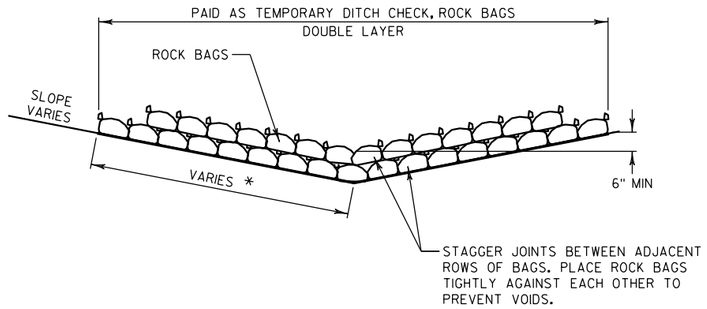


TOP VIEW

ROCK BAGS USED FOR SILT FENCE RELIEF DETAIL



SIDE VIEW (SINGLE LAYER)

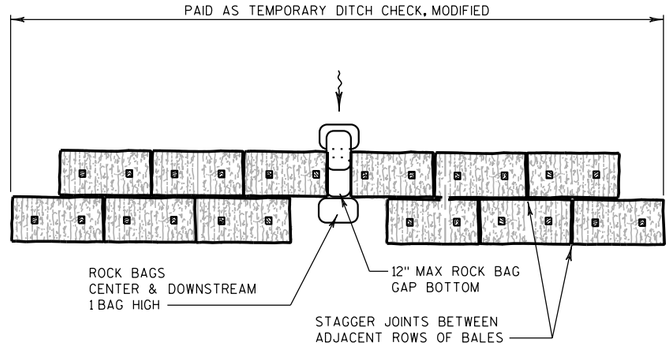


* LENGTH AND NUMBER OF BAGS MAY VARY
DEPENDING ON DESIRED DEPTH OF WATER POOL.

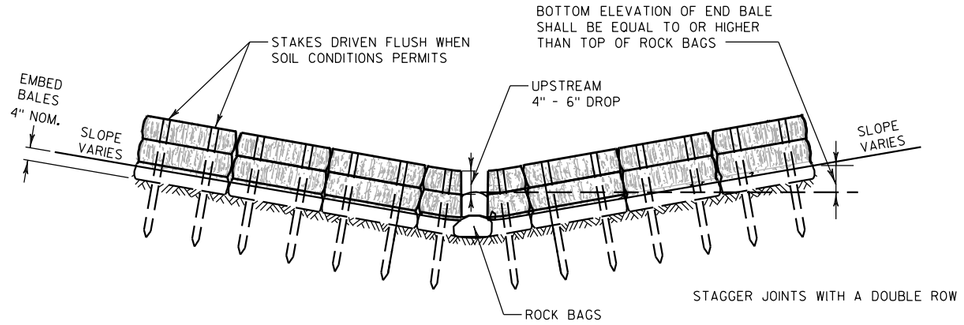
SIDE VIEW (DOUBLE LAYER)

TEMPORARY DITCH CHECK, ROCK BAGS, SINGLE LAYER AND DOUBLE LAYER

2



PLAN VIEW



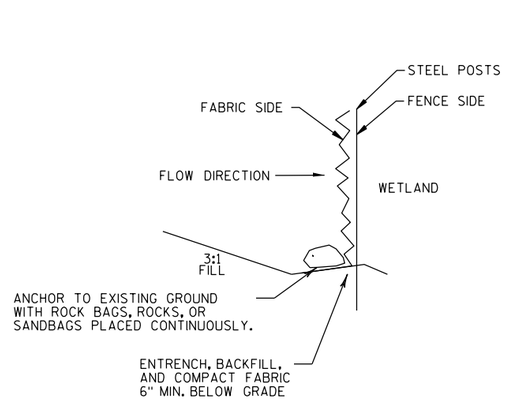
FRONT VIEW

NOTE

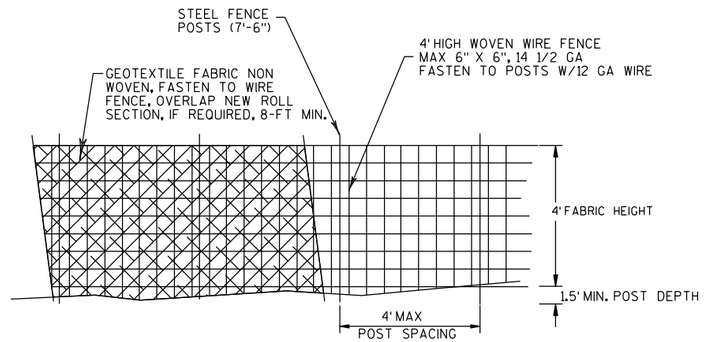
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

091218

TEMPORARY DITCH CHECK, MODIFIED

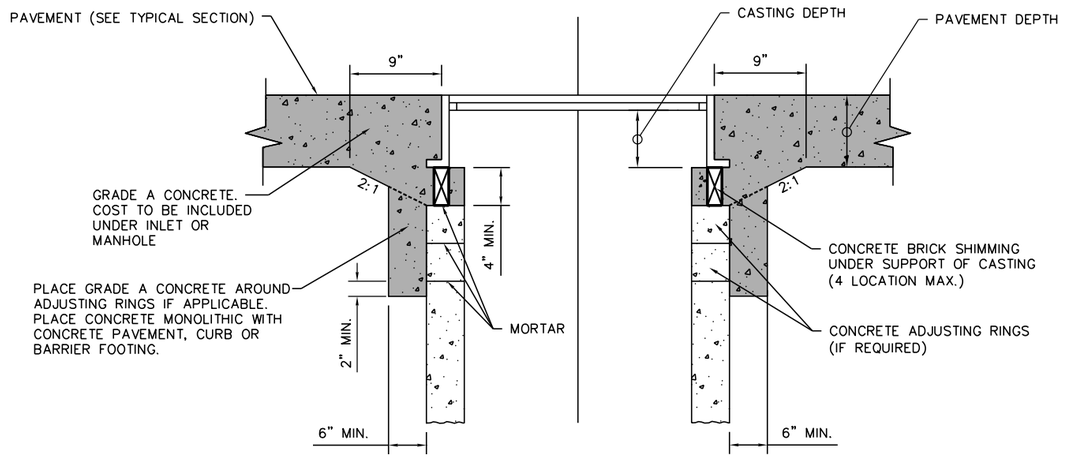


NOTE: ANCHOR MATERIAL INCIDENTAL TO
HEAVY DUTY SILT FENCE ITEM



HEAVY DUTY SILT FENCE

2

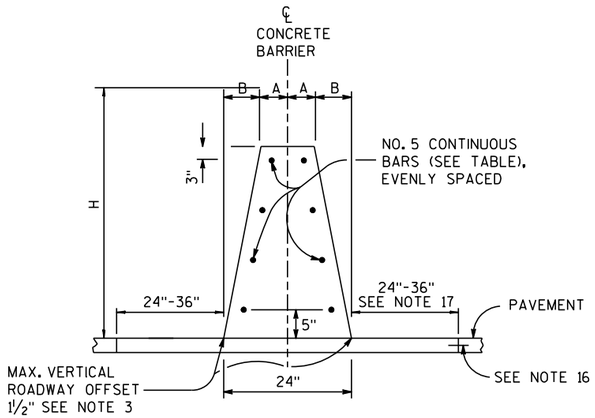


NOTES

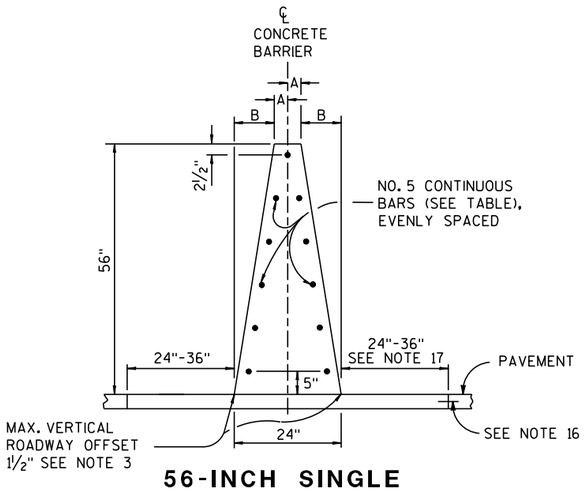
(1) PROVIDE MONOLITHIC CONCRETE SHIMMING FOR FINAL ADJUSTMENT OF DRAINAGE STRUCTURES LOCATED WITHIN THE ROADWAY CONCRETE PAVEMENT AND CONCRETE CURB & GUTTER.

MONOLITHIC CONCRETE

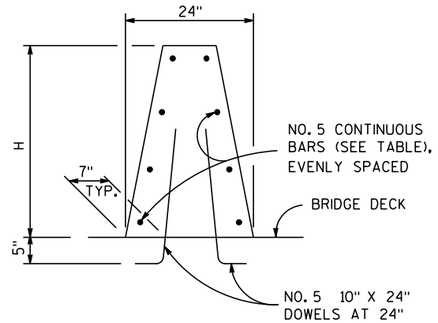
MONOLITHIC CONCRETE SHIMMING DETAIL



32-INCH, 36-INCH OR 42-INCH SINGLE SLOPE CONCRETE BARRIER (TYPE S32, TYPE S36, AND TYPE S42) SINGLE RUN



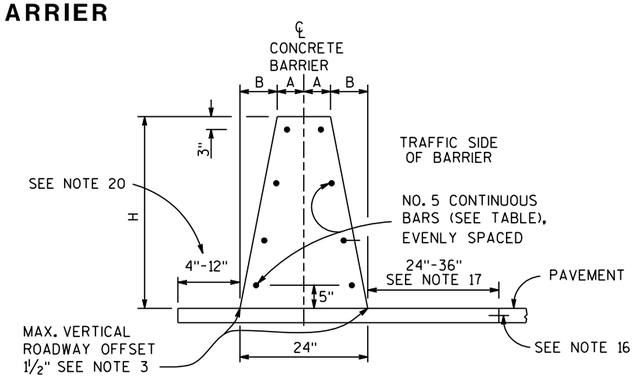
56-INCH SINGLE SLOPE CONCRETE BARRIER (TYPE S56) SINGLE RUN



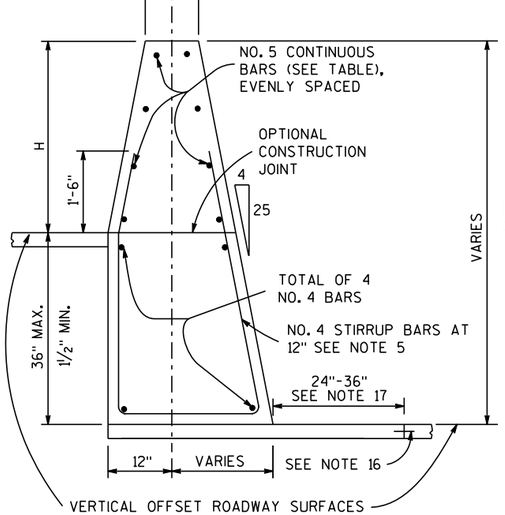
SINGLE SLOPE CONCRETE BARRIER ON BRIDGE

NON OUTER PARAPET APPLICATION

BARRIER HEIGHT H INCHES	A INCHES	B INCHES	NUMBER OF NO. 5 BARS EACH
32	7	5	8
36	6¼	5¾	8
42	5¼	6¾	10
56	3	9	11

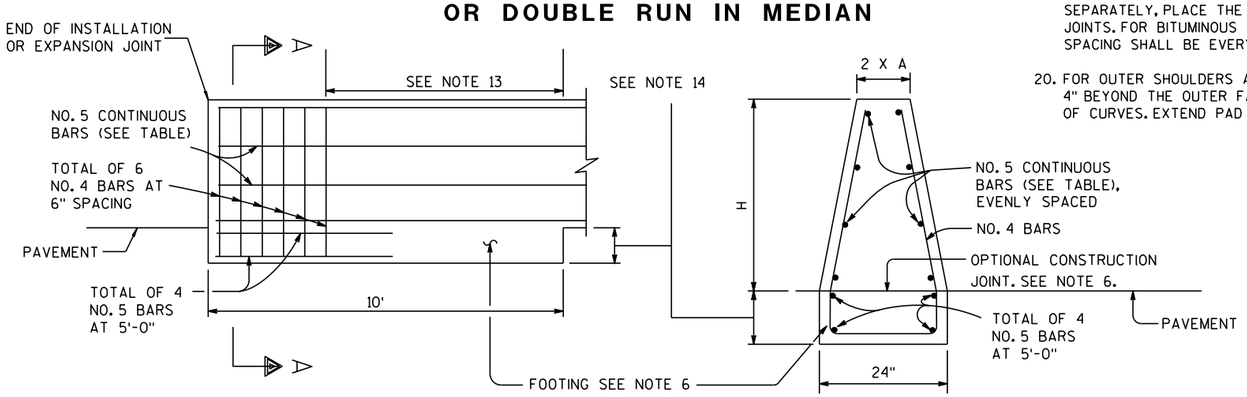


32-INCH, 36-INCH OR 42-INCH SINGLE SLOPE CONCRETE BARRIER (TYPE S32, TYPE S36, AND TYPE S42) ON OUTER SHOULDER OR DOUBLE RUN IN MEDIAN



SINGLE SLOPE CONCRETE BARRIER AND RETAINING WALL (TYPE S32A, TYPE S36A, TYPE S42A, TYPE S56A)

(BETWEEN ADJACENT ROADWAYS)



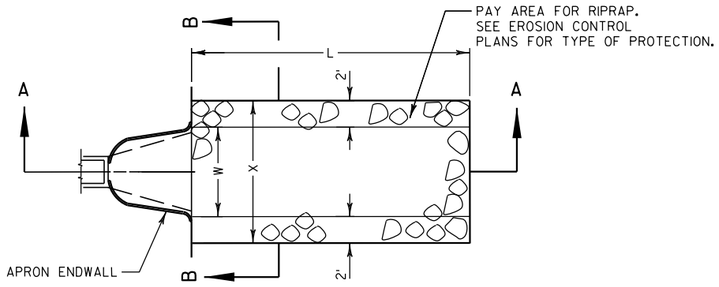
END ANCHOR SINGLE SLOPE CONCRETE BARRIER

AT CONSTRUCTION JOINT

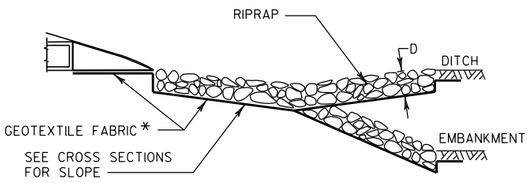
SECTION A-A

GENERAL NOTES

1. WHERE THE CONCRETE BARRIER IS ADDED TO THE FACE OF EXISTING CONCRETE STRUCTURE, MATCH EXISTING WEEP HOLES.
2. EXPANSION JOINTS IN CONCRETE BARRIER SHALL BE LOCATED AT ALL DECK, AND PRINCIPAL WALL JOINTS. EXPANSION JOINT FILLER MATERIAL SHALL BE THE SAME SIZE AS JOINT OR ½" MINIMUM.
3. WHERE VERTICAL ROADWAY OFFSET IS GREATER THAN 1½", USE TYPE A
4. PLACE BARRIER PERPENDICULAR TO SHOULDER GRADE, UNLESS INDICATED IN PLAN.
5. EXCEPT IN ANCHORS, VERTICAL REINFORCING STIRRUP NOT REQUIRED FOR ROADWAY OFFSETS LESS THAN 1'-0".
6. FOR TYPE S32, TYPE S36, TYPE S42, AND S56 MONOLITHIC FOOTING OR DOWELED FOOTING WITH 2-#8 x 8" @ 2'-0".
7. STAGGER LAPPING OF LONGITUDINAL STEEL. MINIMUM OVERLAP OF STEEL 2 FEET. BARS AT LAPS TO BE FIRMLY TIED OR CONNECTED.
8. 4000 PSI CONCRETE AIR ENTRAINMENT PER STANDARD SPECIFICATION 501.
9. WHEN SWITCHING BETWEEN SLIP FORM AND CAST-IN-PLACE OPERATIONS, EXTEND LONGITUDINAL STEEL 3 FEET BEYOND SLIP-FORMING CUT OFF POINT. EXPOSED STEEL INTO NEXT POURS REINFORCEMENT. LAPS TO BE FIRMLY TIED.
10. USE ¾" BEVEL OR 1" RADIUS ON ALL EXPOSED SHARP EDGES UNLESS OTHERWISE NOTED.
11. 2" CLEAR COVER TYPICAL.
12. COLD-JOINTS MAY BE USED BETWEEN ANCHOR INSTALLATIONS. WHEN A COLD JOINT IS NEEDED, 3 FEET OF LAP OF LONGITUDINAL STEEL IS REQUIRED. LAPS TO BE FIRMLY TIED.
13. IN TYPE S32, TYPE S36, TYPE S42 AND TYPE S56 NO ADDITIONAL VERTICAL STEEL NEEDED. IN TYPE S32A, TYPE S36A, TYPE S42A AND TYPE S56A REQUIRES VERTICAL STEEL. SEE OTHER DETAIL.
14. IN TYPE S32, TYPE S36, TYPE S42 AND TYPE S56 DEPTH OF FOOTING 10". IN TYPE S32A, TYPE S36A, TYPE S42A AND TYPE S56A MATCH TOTAL HEIGHT OF SINGLE SLOPE BARRIER RETAINING WALL.
15. FOR ALL BARRIER TYPES SHOWN, ANCHOR IS REQUIRED AT CONCRETE BARRIER ENDS AND AT INTERRUPTIONS IN CONCRETE BARRIER. ANCHOR MAY BE AS SHOWN ON DRAWING OR DETAILS SHOWN ON S.D.D. 14B33.
16. CONSTRUCTION JOINT, SEE S.D.D. 13C1 TIE BAR TABLE. OUTER SHOULDERS AND DOUBLE RUN IN MEDIAN WILL BE TIED TO SHOULDER PANEL. SINGLE RUN MEDIAN CONCRETE BARRIER WILL BE TIED TO ONE OF THE ADJACENT SHOULDER PANELS.
17. LONGITUDINAL FOOTING JOINT SHALL BE PLACED AT AN OFFSET FROM THE WALL THAT ALIGNS WITH THE FRONT FACE OF THE DRAINAGE STRUCTURES (24" - 36"). JOINT MAY BE ELIMINATED FOR SHOULDERS LESS THAN 10' WIDE.
18. CONCRETE PAD UNDER CBSS MAY BE PLACED INTEGRAL WITH BARRIER OR PLACED SEPARATELY. THE DEPTH OF PAD SHOULD BY EQUAL DEPTH OF THE CONCRETE SHOULDER, WITH 6" MINIMUM FOOTING.
19. CBSS SHALL HAVE REGULARLY SPACED CONTRACTION JOINTS THAT ARE 1/4" WIDE BY 1" DEEP. FOR CONCRETE SECTIONS, ADJACENT TO THE BARRIER, THE BARRIER CONTRACTION JOINTS SHALL ALIGN WITH THE JOINTS IN THE CONCRETE SECTION NOT TO EXCEED 15'. IF THE FOOTING IS CONSTRUCTED SEPARATELY, PLACE THE CONTRACTION JOINTS DIRECTLY ABOVE THE FOOTING JOINTS. FOR BITUMINOUS ADJACENT TO THE BARRIER, THE CONTRACTION JOINT SPACING SHALL BE EVERY 15'.
20. FOR OUTER SHOULDERS AND DOUBLE RUN IN MEDIAN, CONCRETE PAD SHALL EXTEND 4" BEYOND THE OUTER FACE OF THE WALL FOR TANGENT SECTIONS AND ALONG INSIDE OF CURVES. EXTEND PAD 12" ALONG OUTSIDE OF CURVES.



PLAN VIEW



SECTION A-A

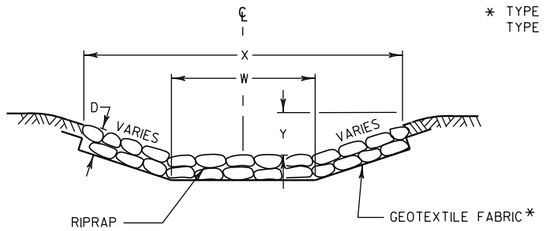
L = 3 x W (NOR) OR 10' MIN
OR AS INDICATED IN THE PLANS
OR AS DIRECTED BY THE ENGINEER

D = 12" FOR RIPRAP LIGHT
18" FOR RIPRAP MEDIUM
24" FOR RIPRAP HEAVY

X = W+4' FOR TYPICAL CULVERT
DISCHARGE INTO DITCH
W+6' FOR CULVERT DISCHARGE
DOWN EMBANKMENT SLOPE

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

* TYPE R (FOR RIPRAP LIGHT ONLY)
TYPE HR (FOR RIPRAP HEAVY AND MEDIUM ONLY)



SECTION B-B

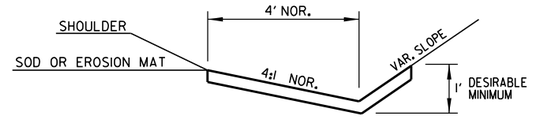
CONSTRUCTION NOTES:

1. GEOTEXTILE FABRIC SHALL EXTEND BENEATH THE ENTIRE LENGTH OF THE APRON ENDWALL SECTION. INSTALL ON PREPAVED FOUNDATION. GRADE PRIOR TO END WALL INSTALLATION.
2. COMPLETE GEOTEXTILE FABRIC AND RIPRAP SECTION INSTALLATION PRIOR TO STORM WATER FLOW.

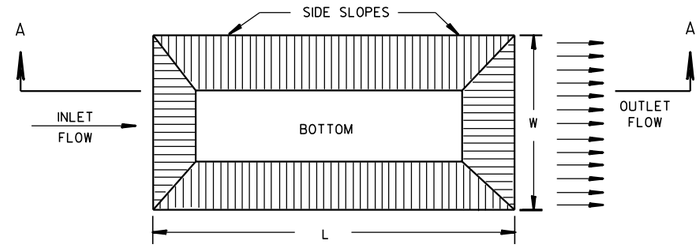
RIPRAP AND GEOTEXTILE FABRIC DETAIL AT APRON ENDWALLS

SEE EROSION CONTROL PLAN FOR LOCATIONS

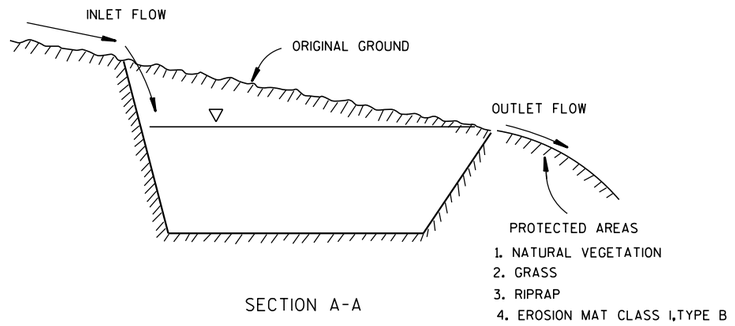
100914



EROSION MAT DETAIL FOR DITCHES

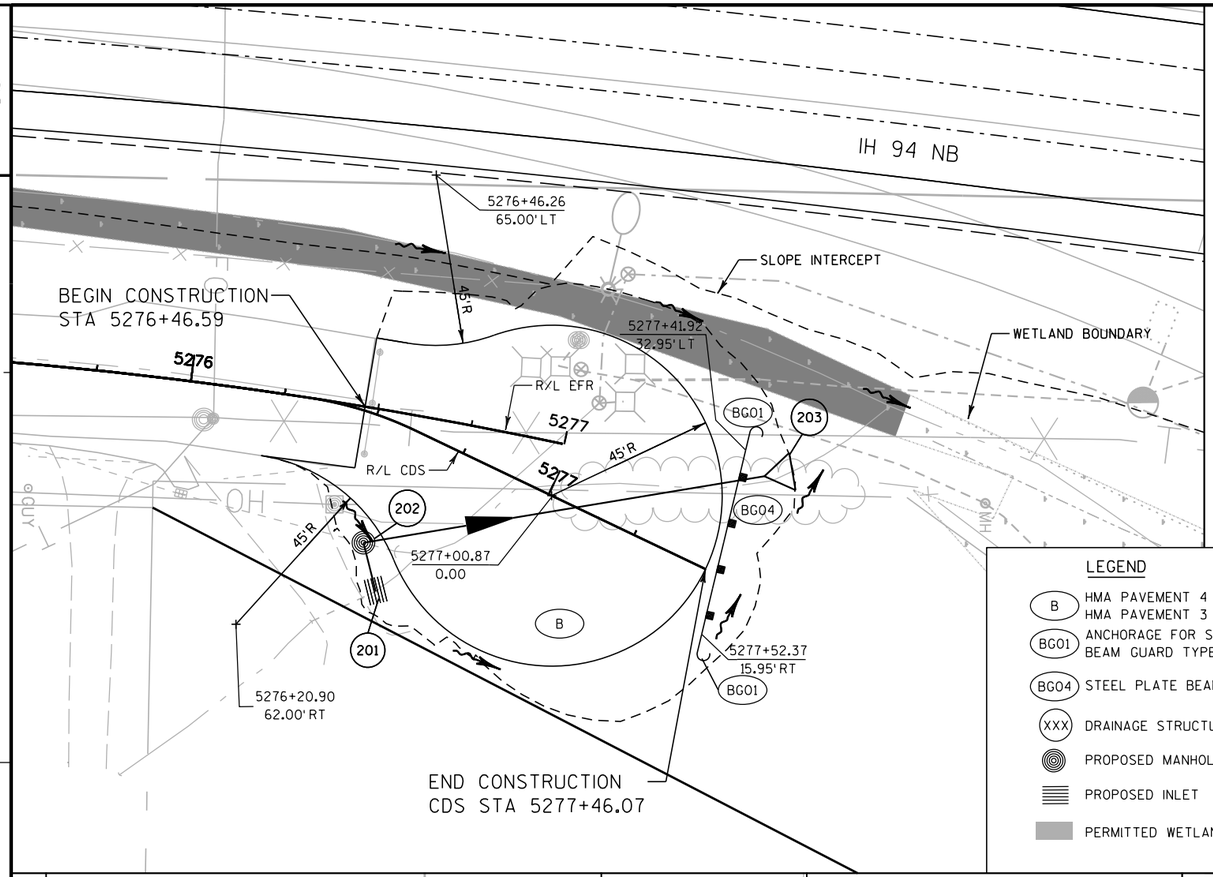


PLAN VIEW



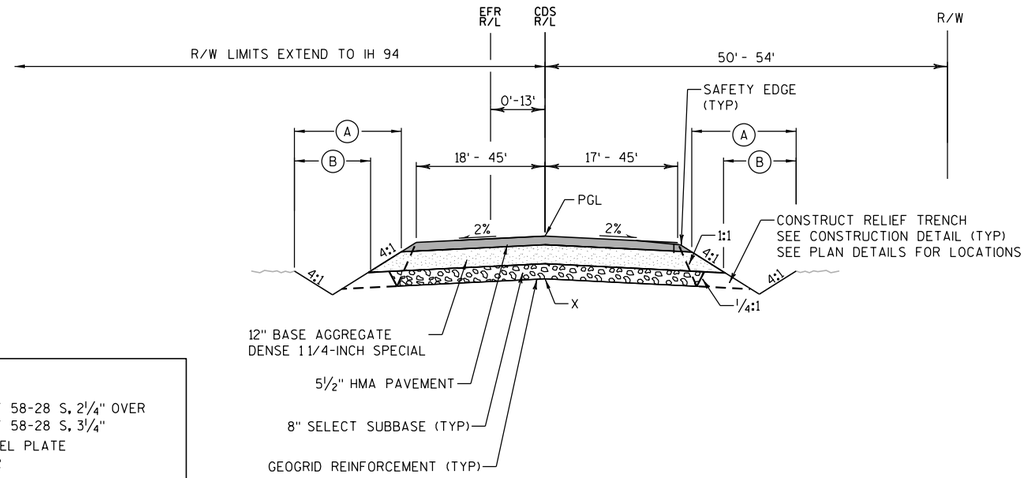
SECTION A-A

TYPICAL EXCAVATED SEDIMENT TRAP



LEGEND

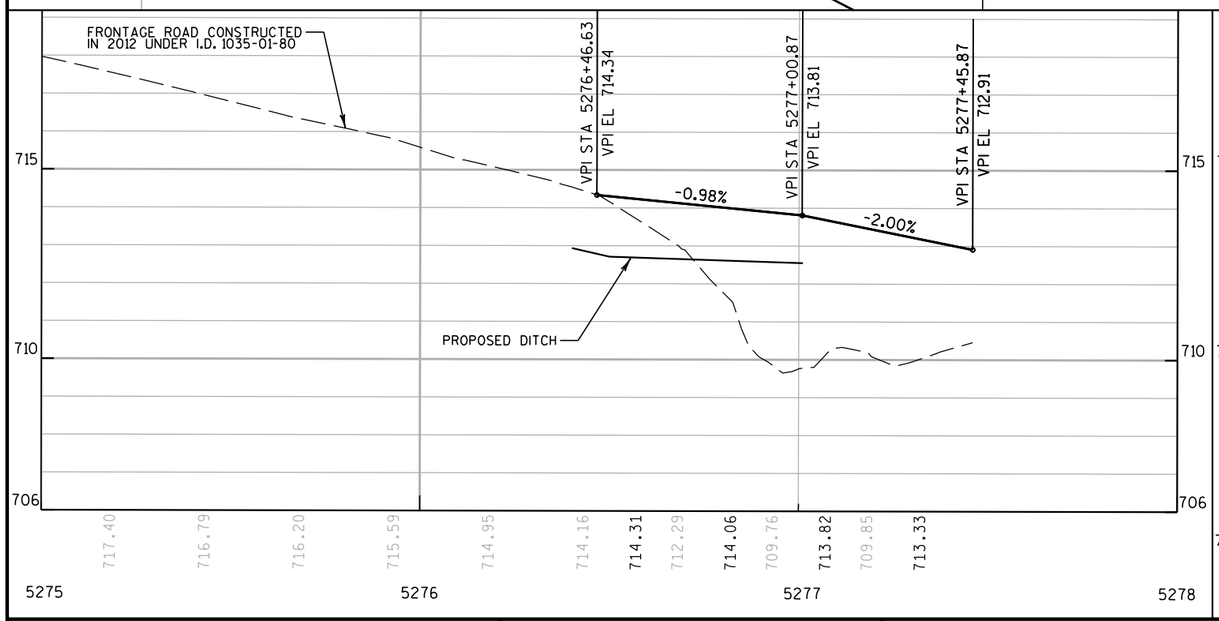
- (B) HMA PAVEMENT 4 LT 58-28 S, 2¼" OVER HMA PAVEMENT 3 LT 58-28 S, 3¼"
- (BG01) ANCHORAGE FOR STEEL PLATE BEAM GUARD TYPE 2
- (BG04) STEEL PLATE BEAM GUARD CLASS A
- (XXX) DRAINAGE STRUCTURE NUMBER
- PROPOSED MANHOLE
- PROPOSED INLET
- PERMITTED WETLAND IMPACTS

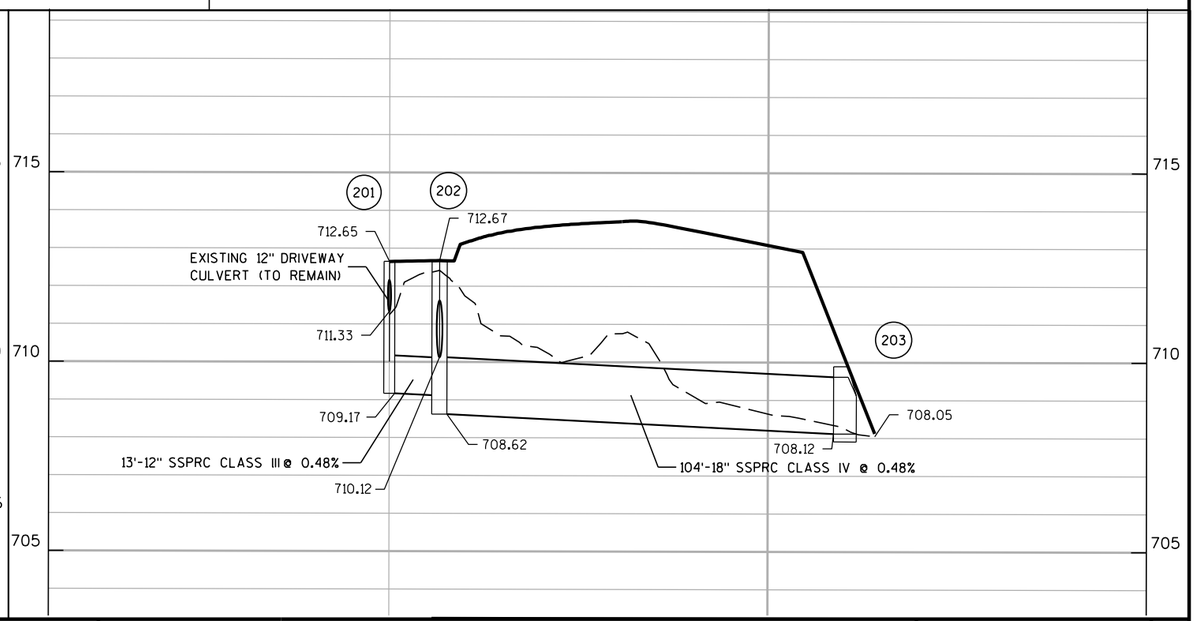


TYPICAL FINISHED SECTION
EFR CUL-DE-SAC (CDS)

(A) SEEDING MIXTURE NO. 20 AND FERTILIZER TYPE B (UNLESS OTHERWISE NOTED ON THE EROSION CONTROL PLANS)

(B) 4" TOPSOIL AND MULCHING





PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	CONSTRUCTION DETAIL - EFR CUL-DE-SAC	SHEET 32	E

2

N

4268 4270 4272 4274 4276 4278 4280 4282

WEST FRONTAGE ROAD

BEGIN PROJECT
1035-01-82
STA 1268+00.00
=MATCH PROJECT
I.D. 1035-01-74

BEGIN REMOVE FENCE
STA 1268+00

TLE

EXIST R/W

IH 94 SB

1266 1268 1270 1272 1274 1276 1278 1280

IH 94 NB

REMOVE S-51-206

MATCHLINE 1281+00

BEGIN REMOVE FENCE
STA 1268+00

END REMOVE FENCE
STA 1276+98

REMOVE
GUARDRAIL

5266 5268 5270 5272 5274 5276

EAST FRONTAGE ROAD

TLE

PROP R/W

EXIST R/W

7 1/2 MILE ROAD

EXIST R/W

PROP R/W

REMOVE
GUARDRAIL

REMOVING LIGHTING
DISTRIBUTION CENTERS
FOR STOCKPILE

REMOVE 18"
SSPRC &
APRON END WALL

REMOVE 10" CULVERT
(PARTIAL PIPE &
APRON END WALL)

PROP R/W

LEGEND

- CLEARING AND GRUBBING (STA.)
- REMOVING PAVEMENT
- REMOVING CURB AND GUTTER
- REMOVING FENCE
- X X X SAWING
- REMOVING GUARDRAIL
- REMOVING INLETS
- SLOPE INTERCEPT
- —RM— REMOVING STORM SEWER, CULVERTS, OR DRAIN TILE

PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	REMOVAL PLAN	SHEET 33	E

FILE NAME : Z:\Racine\CADDS\22\22M\CDS\021101_RM.dgn PLOT DATE : 6/9/2018 PLOT BY : dks PLOT NAME : PLOT SCALE : 1:100

2

LEGEND

- CLEARING AND GRUBBING (STA.)
- REMOVING PAVEMENT
- REMOVING CURB AND GUTTER
- REMOVING FENCE
- X X X SAWING
- REMOVING GUARDRAIL
- REMOVING INLETS
- SLOPE INTERCEPT
- RM — REMOVING STORM SEWER, CULVERTS, OR DRAIN TILE

BEGIN CONSTRUCTION
1035-01-82
STA 4288+00.00
MATCH EXISTING

REMOVE UNDERDRAIN

PROP R/W

TLE

EXIST R/W

WEST FRONTAGE ROAD

REMOVE 1-24" CPCM

OBLITERATE OLD ROAD
STA 4293+00 TO STA 4294+00

END REMOVE FENCE
STA 4293+86

END CONSTRUCTION
1035-01-82
STA 4297+10.26
MATCH EXISTING

ROOT RIVER

REMOVE 1-42" CPRC

REMOVE PAVEMENT
STA 1278+00 TO STA 1288+00

REMOVE FENCE

MATCHLINE 1281+00

REMOVING BARRICADE
RACKS AND BARRICADES

REMOVE INLETS

S 27TH
STREET SB

END REMOVE FENCE
STA 1291+46

REMOVE STRUCTURE B-51-36

BEGIN REMOVE FENCE
STA 1289+76

S 27TH
STREET NB

REMOVE 1-6" PVC

REMOVE CURB
AND GUTTER

REMOVE GUARDRAIL

REMOVE 1-24" CPCM

REMOVE LIGHTS ALONG
EXISTING NB EXIT RAMP

REMOVE LIGHTS ALONG
EXISTING NB EXIT RAMP

ABANDONING
SEWER

EAST FRONTAGE ROAD

REMOVE
STRUCTURE
B-51-37

END PROJECT
1035-01-82
STA 1293+00.00
=MATCH PROJECT
I.D. 1030-20-87

IH 94 SB

IH 94 SB

REMOVE 1-24" CPCM

REMOVE PAVEMENT
NB EXIT RAMP

REMOVE GUARDRAIL

REMOVING UNDERDECK
LIGHTING SYSTEMS

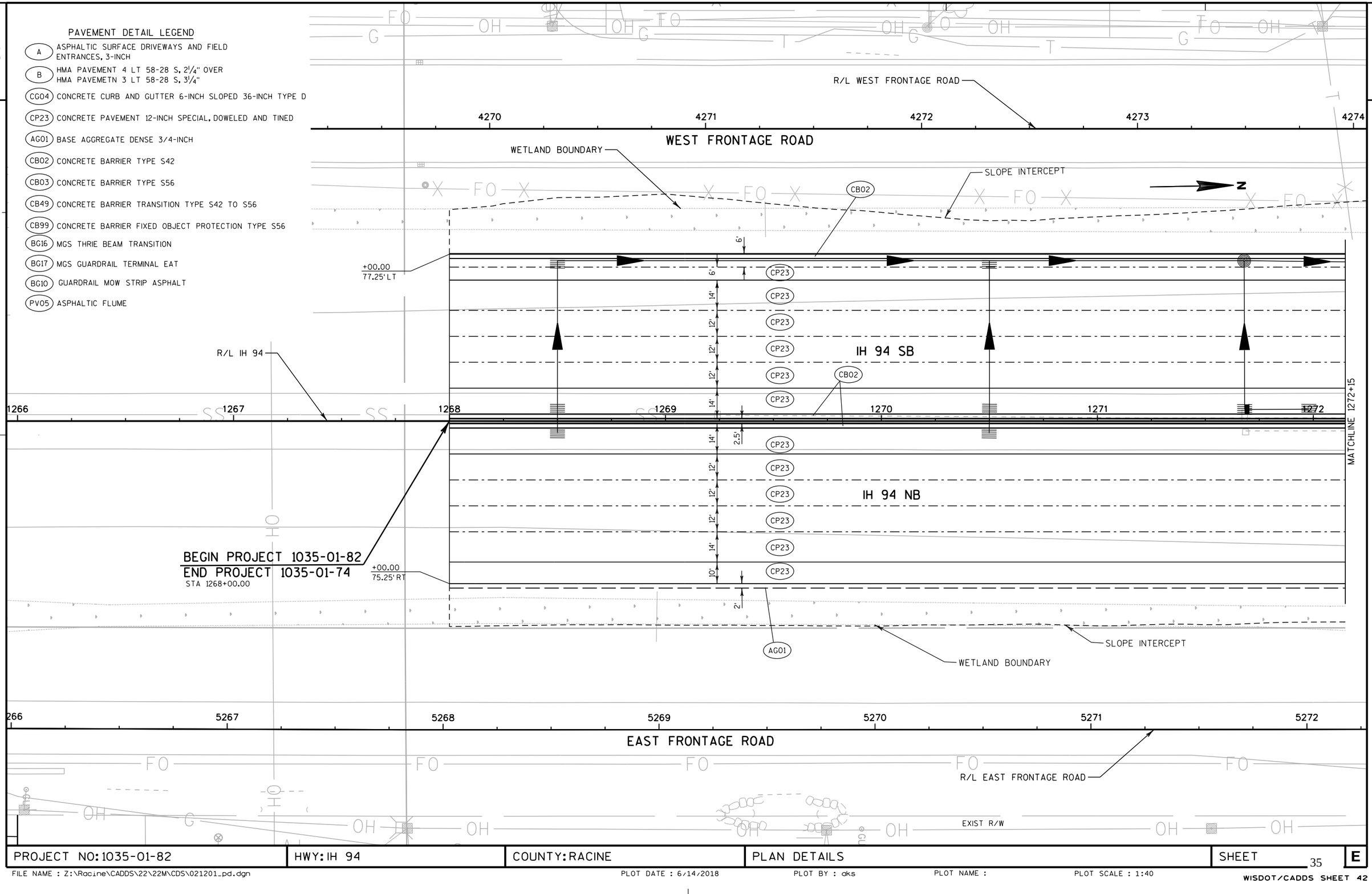
EXIST R/W

PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	REMOVAL PLAN	SHEET 34	E

FILE NAME : Z:\Racine\CADDS\22\22M\CDS\021102_rm.dgn | PLOT DATE : 6/4/2018 | PLOT BY : kld | PLOT NAME : | PLOT SCALE : 1:100

PAVEMENT DETAIL LEGEND

- (A) ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES, 3-INCH
- (B) HMA PAVEMENT 4 LT 58-28 S, 2¼" OVER HMA PAVEMETN 3 LT 58-28 S, 3¼"
- (CG04) CONCRETE CURB AND GUTTER 6-INCH SLOPED 36-INCH TYPE D
- (CP23) CONCRETE PAVEMENT 12-INCH SPECIAL, DOWELED AND TINED
- (AG01) BASE AGGREGATE DENSE 3/4-INCH
- (CB02) CONCRETE BARRIER TYPE S42
- (CB03) CONCRETE BARRIER TYPE S56
- (CB49) CONCRETE BARRIER TRANSITION TYPE S42 TO S56
- (CB99) CONCRETE BARRIER FIXED OBJECT PROTECTION TYPE S56
- (BG16) MGS THRIE BEAM TRANSITION
- (BG17) MGS GUARDRAIL TERMINAL EAT
- (BG10) GUARDRAIL MOW STRIP ASPHALT
- (PV05) ASPHALTIC FLUME



PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	PLAN DETAILS	SHEET 35	E

FILE NAME : Z:\Racine\CADDS\22\22M\CDS\021201_pd.dgn | PLOT DATE : 6/14/2018 | PLOT BY : dks | PLOT NAME : | PLOT SCALE : 1:40

WEST FRONTAGE ROAD

R/L WEST FRONTAGE ROAD

WETLAND BOUNDARY

SLOPE INTERCEPT

+88.76
84.25'LT
+88.76
77.25'LT

+39.47
79.27'LT

+64.13
80.58'LT

+93.76
77.25'LT

15:1 TAPER

+00.00
73.25'LT

IH 94 SB

IH 94 NB

R/L IH 94

S-51-219

MATCHLINE 1272+15

MATCHLINE 1278+00

CB02 CB49 CB03 CB99 BG16 BG10 BG17 AG01 CP23

+50.50 3.25'LT
+75.00 3.25'LT
+95.00 3.25'LT
+05.00 3.25'LT
+25.00 3.25'LT
+49.50 3.25'LT

+50.50 3.25'RT
+75.00 3.25'RT
+95.00 3.25'RT
+05.00 3.25'RT
+25.00 3.25'RT
+49.50 3.25'RT

1273 1274 1275 1276 1277

9" 14' 12' 12' 12' 14' 2.5' 14" 12' 12' 12' 14" 10" 2"

10' 2"

PAVEMENT DETAIL LEGEND

- (A) ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES, 3-INCH
- (B) HMA PAVEMENT 4 LT 58-28 S, 2¼" OVER HMA PAVEMETN 3 LT 58-28 S, 3¼"
- (CG04) CONCRETE CURB AND GUTTER 6-INCH SLOPED 36-INCH TYPE D
- (CP23) CONCRETE PAVEMENT 12-INCH SPECIAL, DOWELED AND TINED
- (AG01) BASE AGGREGATE DENSE 3/4-INCH
- (CB02) CONCRETE BARRIER TYPE S42
- (CB03) CONCRETE BARRIER TYPE S56
- (CB49) CONCRETE BARRIER TRANSITION TYPE S42 TO S56
- (CB99) CONCRETE BARRIER FIXED OBJECT PROTECTION TYPE S56
- (BG16) MGS THRIE BEAM TRANSITION
- (BG17) MGS GUARDRAIL TERMINAL EAT
- (BG10) GUARDRAIL MOW STRIP ASPHALT
- (PV05) ASPHALTIC FLUME

R/L EAST FRONTAGE ROAD

EAST FRONTAGE ROAD

5274 5275 5276 5277

7½MILE ROAD

PROP R/W

EXIST R/W

R/L 7½MILE ROAD

5276+46.26
65.00'LT

5277+00.87
0.00

5276+20.90
62.00'RT

45'R

R/L CUL-DE-SAC

SLOPE INTERCEPT

PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	PLAN DETAILS	SHEET 36	E

FILE NAME : Z:\Racine\CADDS\22\22M\CDS\021202_pd.dgn PLOT DATE : 6/14/2018 PLOT BY : dks PLOT NAME : PLOT SCALE : 1:40

2

2

SB ENTRANCE RAMP

SLOPE INTERCEPT

AGO1

IH 94 SB

CB02

R/L IH 94

MATCHLINE 1278+00

MATCHLINE 1284+00

1279

1280

1281

1282

1283

2'
10'
14'
12'
12'
12'
14'
2.5'
14'
12'
12'
14'
10'
2'

CP23

IH 94 NB

AGO1

SLOPE INTERCEPT

WETLAND BOUNDARY

WETLAND BOUNDARY

N

PAVEMENT DETAIL LEGEND

A	ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES, 3-INCH
B	HMA PAVEMENT 4 LT 58-28 S, 2¼" OVER HMA PAVEMETN 3 LT 58-28 S, 3¼"
CGO4	CONCRETE CURB AND GUTTER 6-INCH SLOPED 36-INCH TYPE D
CP23	CONCRETE PAVEMENT 12-INCH SPECIAL, DOWELED AND TINED
AGO1	BASE AGGREGATE DENSE 3/4-INCH
CB02	CONCRETE BARRIER TYPE S42
CB03	CONCRETE BARRIER TYPE S56
CB49	CONCRETE BARRIER TRANSITION TYPE S42 TO S56
CB99	CONCRETE BARRIER FIXED OBJECT PROTECTION TYPE S56
BG16	MGS THRIE BEAM TRANSITION
BG17	MGS GUARDRAIL TERMINAL EAT
BG10	GUARDRAIL MOW STRIP ASPHALT
PV05	ASPHALTIC FLUME

PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	PLAN DETAILS	SHEET	E

FILE NAME : Z:\Racine\CADDS\22\22M\CDS\021203_pd.dgn PLOT DATE : 6/14/2018 PLOT BY : dks PLOT NAME : PLOT SCALE : 1:40

WISDOT/CADDS SHEET 42

2

SLOPE INTERCEPT

SB ENTRANCE RAMP

IH 94 SB

IH 94 NB

MATCHLINE 1284+00

MATCHLINE 1290+00

1285

1286

1287

1288

1289

R/L IH 94

WETLAND BOUNDARY

N

AG01

CB02

CP23

2'

10'

14'

12'

12'

12'

14'

2.5'

14'

12'

12'

12'

14'

10'

+23.77
77.25' RT

15:1 TAPER

+28.77
77.25' RT

+28.77
84.25' RT

BG17

BG10

+54.10
80.58' RT

+79.43
79.28' RT

BG16

CB02

AG01

PAVEMENT DETAIL LEGEND

- (A) ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES, 3-INCH
- (B) HMA PAVEMENT 4 LT 58-28 S, 2¼" OVER HMA PAVEMETN 3 LT 58-28 S, 3¼"
- (CG04) CONCRETE CURB AND GUTTER 6-INCH SLOPED 36-INCH TYPE D
- (CP23) CONCRETE PAVEMENT 12-INCH SPECIAL, DOWELED AND TINED
- (AG01) BASE AGGREGATE DENSE 3/4-INCH
- (CB02) CONCRETE BARRIER TYPE S42
- (CB03) CONCRETE BARRIER TYPE S56
- (CB49) CONCRETE BARRIER TRANSITION TYPE S42 TO S56
- (CB99) CONCRETE BARRIER FIXED OBJECT PROTECTION TYPE S56
- (BG16) MGS THRIE BEAM TRANSITION
- (BG17) MGS GUARDRAIL TERMINAL EAT
- (BG10) GUARDRAIL MOW STRIP ASPHALT
- (PV05) ASPHALTIC FLUME
- (PV11) CONCRETE SURFACE DRAIN

WETLAND BOUNDARY

WETLAND BOUNDARY

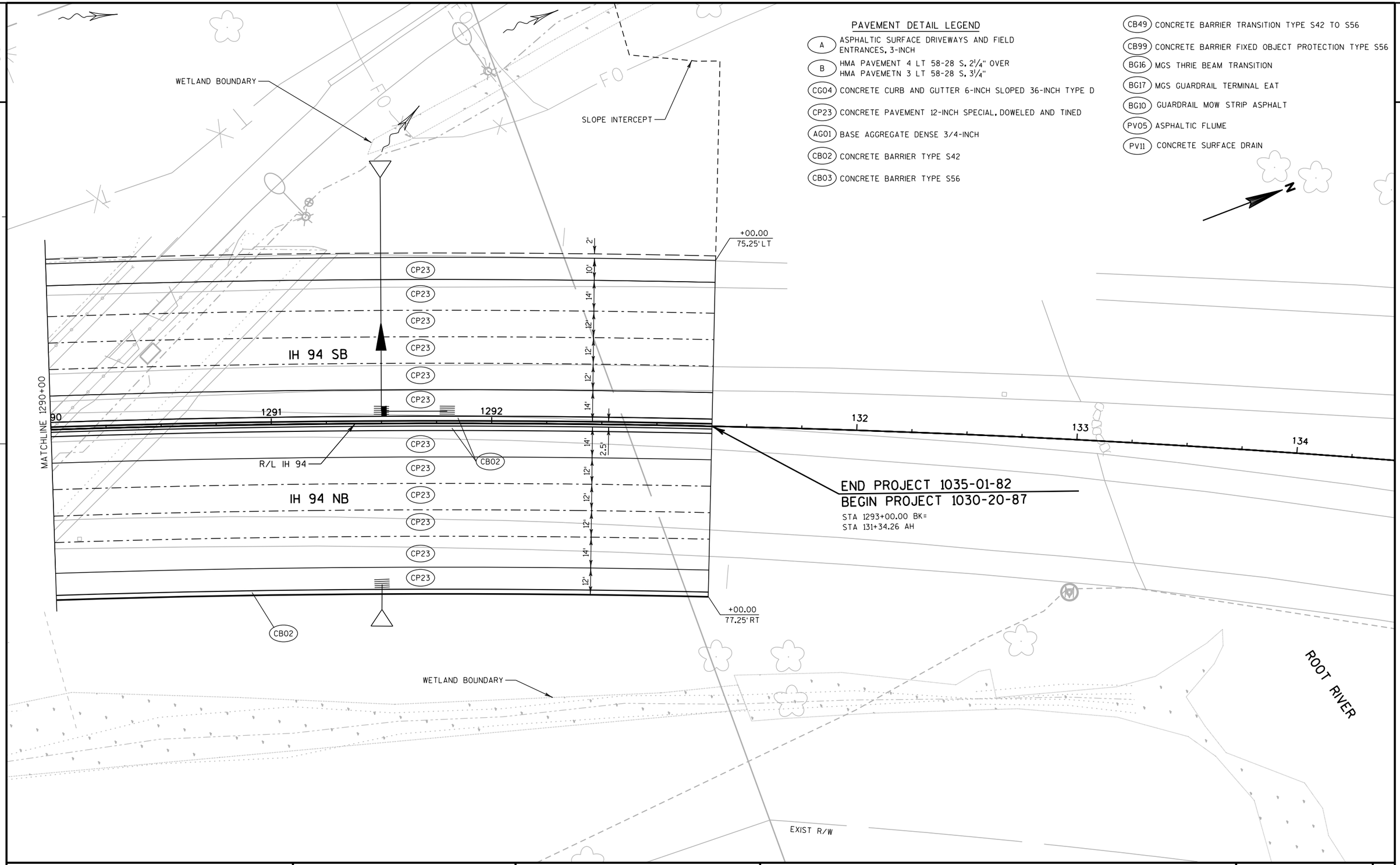
PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	PLAN DETAILS	SHEET 38	E

FILE NAME : Z:\Racine\CADDS\22\22M\CDS\021204_pd.dgn PLOT DATE : 6/11/2018 PLOT BY : plr PLOT NAME : PLOT SCALE : 1:40

2

PAVEMENT DETAIL LEGEND

- (A) ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES, 3-INCH
- (B) HMA PAVEMENT 4 LT 58-28 S, 2¼" OVER HMA PAVEMETN 3 LT 58-28 S, 3¼"
- (CG04) CONCRETE CURB AND GUTTER 6-INCH SLOPED 36-INCH TYPE D
- (CP23) CONCRETE PAVEMENT 12-INCH SPECIAL, DOWELED AND TINED
- (AG01) BASE AGGREGATE DENSE 3/4-INCH
- (CB02) CONCRETE BARRIER TYPE S42
- (CB03) CONCRETE BARRIER TYPE S56
- (CB49) CONCRETE BARRIER TRANSITION TYPE S42 TO S56
- (CB99) CONCRETE BARRIER FIXED OBJECT PROTECTION TYPE S56
- (BG16) MGS THRIE BEAM TRANSITION
- (BG17) MGS GUARDRAIL TERMINAL EAT
- (BG10) GUARDRAIL MOW STRIP ASPHALT
- (PV05) ASPHALTIC FLUME
- (PV11) CONCRETE SURFACE DRAIN



PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	PLAN DETAILS	SHEET 39	E

FILE NAME : Z:\Racine\CADDS\22\22M\CDS\021205_pd.dgn PLOT DATE : 6/11/2018 PLOT BY : plr PLOT NAME : PLOT SCALE : 1:40

WISDOT/CADDS SHEET 42

2

N

BEGIN CONSTRUCTION
1035-01-82
STA 4288+00.00
MATCH EXISTING

PROP R/W

R/L PRIVATE DRIVEWAY

STA 1+20.00
MATCH EXISTING

SLOPE INTERCEPT

CG04 PV05 AG01

+68.00
26.00' LT

+50.00
29.00' LT

+38.04
36.13' LT

TR01

+33.14
31.00' LT

+66.86
31.00' LT

+61.99
36.10' LT

+10.00
12.00' RT

4286 4287 4289 4290 4291

WEST FRONTAGE ROAD

R/L WEST FRONTAGE ROAD

R/L WEST FRONTAGE ROAD SB

WETLAND BOUNDARY

SLOPE INTERCEPT

MATCHLINE 4291+65

15' 14' 15' 3' 2' 10' 3' 12' 14' 12' 3' 5' 5' 12.5' 12.5'

PAVEMENT DETAIL LEGEND

- (A) ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES, 3-INCH
- (B) HMA PAVEMENT 4 LT 58-28 S, 2¼" OVER HMA PAVEMETN 3 LT 58-28 S, 3¼"
- (CG04) CONCRETE CURB AND GUTTER 6-INCH SLOPED 36-INCH TYPE D
- (CP23) CONCRETE PAVEMENT 12-INCH SPECIAL, DOWELED AND TINED
- (AG01) BASE AGGREGATE DENSE 3/4-INCH
- (CB02) CONCRETE BARRIER TYPE S42
- (CB03) CONCRETE BARRIER TYPE S56
- (CB49) CONCRETE BARRIER TRANSITION TYPE S42 TO S56
- (CB99) CONCRETE BARRIER FIXED OBJECT PROTECTION TYPE S56
- (BG16) MGS THRIE BEAM TRANSITION
- (BG17) MGS GUARDRAIL TERMINAL EAT
- (BG10) GUARDRAIL MOW STRIP ASPHALT
- (PV05) ASPHALTIC FLUME
- (PV11) CONCRETE SURFACE DRAIN

PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	PLAN DETAILS	SHEET 40	E

2

MATCHLINE 4291+65

WEST FRONTAGE ROAD

SLOPE INTERCEPT

PROP R/W

WETLAND BOUNDARY

ROOT RIVER

N

R/L WEST FRONTAGE ROAD SB

S. 27TH STREET SB

R/L WEST FRONTAGE ROAD

S. 27TH STREET NB

END CONSTRUCTION
1035-01-82
STA 4297+10.26
MATCH EXISTING

+83.14
17.00' LT

+90.36
3.00' RT

+08.95
3.00' LT

+36.27
22.78' LT

4298+43.94 NB
764.75' LT

+78.78
23.01' LT

+54.16
17.00' RT

+41.68
20.00' RT

+54.16
20.85' RT

+23.95
26.33' RT

+71.67
29.29' RT

+23.95
32.86' RT

+47.65
32.15' RT

+71.78
33.32' RT

10:1 TAPER

15:1 TAPER

823.6' R

6'R

3'R

PAVEMENT DETAIL LEGEND

- (A) ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES, 3-INCH
- (B) HMA PAVEMENT 4 LT 58-28 S, 2¼" OVER HMA PAVEMETN 3 LT 58-28 S, 3¼"
- (CG04) CONCRETE CURB AND GUTTER 6-INCH SLOPED 36-INCH TYPE D
- (CP23) CONCRETE PAVEMENT 12-INCH SPECIAL, DOWELED AND TINED
- (AG01) BASE AGGREGATE DENSE 3/4-INCH
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- (CB03) CONCRETE BARRIER TYPE S56
- (CB49) CONCRETE BARRIER TRANSITION TYPE S42 TO S56
- (CB99) CONCRETE BARRIER FIXED OBJECT PROTECTION TYPE S56
- (BG16) MGS THRIE BEAM TRANSITION
- (BG17) MGS GUARDRAIL TERMINAL EAT
- (BG10) GUARDRAIL MOW STRIP ASPHALT
- (PV05) ASPHALTIC FLUME
- (PV11) CONCRETE SURFACE DRAIN

PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	PLAN DETAILS	SHEET 41 E

2

R/L WEST FRONTAGE ROAD

4268 4269 4270 4271 4272 4273 4274

WEST FRONTAGE ROAD

N

ELEVATION AT EGDE OF PAVEMENT BEHIND BARRIER

724.15 724.02 723.96 723.89 723.83 723.77 723.77 723.77 723.76 723.75 723.73 723.70 723.66 723.62 723.57 723.52 723.45

724.64 724.51 724.39 724.26 724.14 724.01 723.98 723.93 723.89 723.83 723.77 723.70 723.62 723.54 723.45 723.35 723.25

724.92 724.79 724.67 724.54 724.42 724.29 724.21 724.12 724.03 723.92 723.81 723.70 723.57 723.44 723.31 723.16 723.01

725.16 725.03 724.91 724.78 724.66 724.53 724.41 724.28 724.15 724.00 723.85 723.70 723.53 723.36 723.19 723.00 722.81

IH 94 SB

724.92 724.79 724.67 724.54 724.42 724.29 724.17 724.04 723.91 723.76 723.61 723.46 723.29 723.12 722.95 722.76 722.57

SB PGL

724.68 724.55 724.43 724.30 724.18 724.05 723.93 723.80 723.67 723.52 723.37 723.22 723.05 722.88 722.71 722.52 722.33

R/L IH 94

ELEVATION AT EDGE OF PAVEMENT BEHIND BARRIER

724.11 723.98 723.86 723.73 723.61 723.48 723.36 723.23 723.09 722.95 722.80 722.64 722.48 722.31 722.13 721.95 721.76

1266 1267 1268 1269 1270 1271 1272

MATCHLINE 1272+15

724.11 723.98 723.93 723.87 723.82 723.77 723.69 723.61 723.52 723.42 723.32 723.21 723.09 722.97 722.84 722.71 722.57

724.68 724.55 724.43 724.30 724.18 724.05 723.93 723.80 723.67 723.52 723.37 723.22 723.05 722.88 722.71 722.52 722.33

NB PGL

724.92 724.79 724.67 724.54 724.42 724.29 724.13 723.96 723.79 723.60 723.41 723.22 723.01 722.80 722.59 722.36 722.13

IH 94 NB

725.16 725.03 724.91 724.78 724.66 724.53 724.33 724.12 723.91 723.68 723.45 723.22 722.97 722.72 722.47 722.20 721.93

724.92 724.79 724.67 724.54 724.42 724.29 724.09 723.88 723.67 723.44 723.21 722.98 722.73 722.48 722.23 721.96 721.69

724.64 724.51 724.39 724.26 724.14 724.01 723.81 723.60 723.39 723.16 722.93 722.70 722.45 722.20 721.95 721.68 721.41

724.24 724.11 723.99 723.86 723.74 723.61 723.41 723.20 722.99 722.76 722.53 722.30 722.05 721.80 721.55 721.28 721.01

BEGIN PROJECT 1035-01-82

END PROJECT 1035-01-74

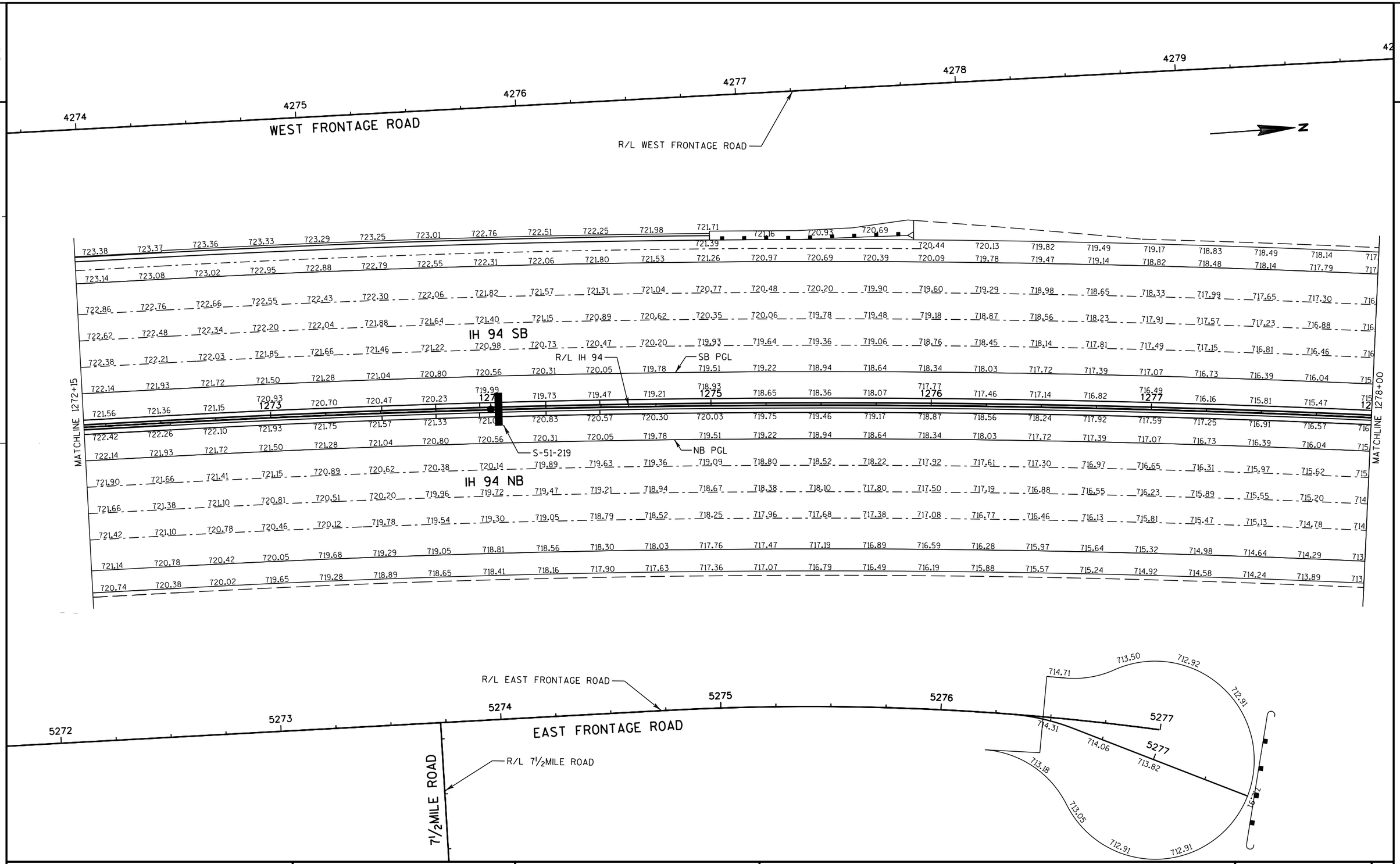
STA 1268+00.00

5266 5267 5268 5269 5270 5271 5272

EAST FRONTAGE ROAD

R/L EAST FRONTAGE ROAD

PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	PAVING GRADES	SHEET 42	E



PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	PAVING GRADES	SHEET 43	E

FILE NAME : Z:\Racine\CADDS\22\22M\CDS\021302_pg.dgn PLOT DATE : 6/13/2018 PLOT BY : dks PLOT NAME : PLOT SCALE : 1:39.9999

2

4280 4281

N

MATCHLINE 1278+00

MATCHLINE 1284+00

IH 94 SB

SB PGL

R/L IH 94

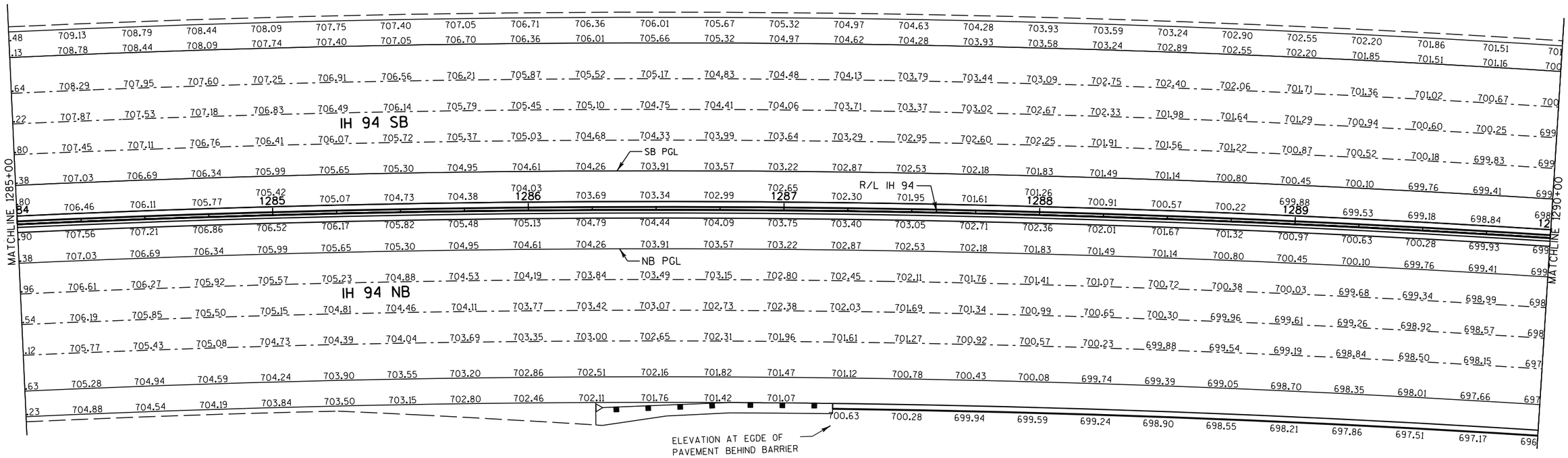
NB PGL

IH 94 NB

79	717.45	717.10	716.75	716.41	716.06	715.71	715.37	715.02	714.68	714.33	713.98	713.64	713.29	712.94	712.60	712.25	711.90	711.56	711.21	710.86	710.52	710.17	709.82	709
44	717.10	716.75	716.40	716.06	715.71	715.36	715.02	714.67	714.33	713.98	713.63	713.29	712.94	712.59	712.25	711.90	711.55	711.21	710.86	710.51	710.17	709.82	709.47	709
95	716.61	716.26	715.91	715.57	715.22	714.87	714.53	714.18	713.84	713.49	713.14	712.80	712.45	712.10	711.76	711.41	711.06	710.72	710.37	710.02	709.68	709.33	708.98	708
53	716.19	715.84	715.49	715.15	714.80	714.45	714.11	713.76	713.42	713.07	712.72	712.38	712.03	711.68	711.34	710.99	710.64	710.30	709.95	709.60	709.26	708.91	708.56	708
11	715.77	715.42	715.07	714.73	714.38	714.03	713.69	713.34	713.00	712.65	712.30	711.96	711.61	711.26	710.92	710.57	710.22	709.88	709.53	709.18	708.84	708.49	708.14	707
69	715.35	715.00	714.65	714.31	713.96	713.61	713.27	712.92	712.58	712.23	711.88	711.54	711.19	710.84	710.50	710.15	709.80	709.46	709.11	708.76	708.42	708.07	707.72	707
12				713.73				712.35				710.96				709.58				708.19				706
78	714.77	714.43	714.08	1279	713.39	713.04	712.69	1280	712.00	711.66	711.31	1281	710.62	710.27	709.92	1282	709.23	708.88	708.54	1283	707.84	707.50	707.15	12
22	715.87	715.53	715.18	714.83	714.49	714.14	713.79	713.45	713.10	712.75	712.41	712.06	711.71	711.37	711.02	710.68	710.33	709.98	709.64	709.29	708.94	708.60	708.25	707
69	715.35	715.00	714.65	714.31	713.96	713.61	713.27	712.92	712.58	712.23	711.88	711.54	711.19	710.84	710.50	710.15	709.80	709.46	709.11	708.76	708.42	708.07	707.72	707
27	714.93	714.58	714.23	713.89	713.54	713.19	712.85	712.50	712.16	711.81	711.46	711.12	710.77	710.42	710.08	709.73	709.38	709.04	708.69	708.34	708.00	707.65	707.30	706
85	714.51	714.16	713.81	713.47	713.12	712.77	712.43	712.08	711.74	711.39	711.04	710.70	710.35	710.00	709.66	709.31	708.96	708.62	708.27	707.92	707.58	707.23	706.88	706
43	714.09	713.74	713.39	713.05	712.70	712.35	712.01	711.66	711.32	710.97	710.62	710.28	709.93	709.58	709.24	708.89	708.54	708.20	707.85	707.50	707.16	706.81	706.46	706
94	713.60	713.25	712.90	712.56	712.21	711.86	711.52	711.17	710.83	710.48	710.13	709.79	709.44	709.09	708.75	708.40	708.05	707.71	707.36	707.01	706.67	706.32	705.97	705
54	713.20	712.85	712.50	712.16	711.81	711.46	711.12	710.77	710.43	710.08	709.73	709.39	709.04	708.69	708.35	708.00	707.65	707.31	706.96	706.61	706.27	705.92	705.57	705

PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	PAVING GRADES	SHEET 44	E

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2

PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	PAVING GRADES	SHEET 45	E

FILE NAME : Z:\Racine\CADDS\22\22M\CDS\021304_pg.dgn PLOT DATE : 6/13/2018 PLOT BY : dks PLOT NAME : PLOT SCALE : 1:39.9999

WISDOT/CADDS SHEET 42

2

N

MATCHLINE 1290+00

.16 700.82 700.47 700.12 699.78 699.43 699.08 698.74 698.39 698.04 697.70 697.35 697.01

.81 700.47 700.12 699.77 699.43 699.08 698.73 698.39 698.04 697.69 697.35 697.00 696.66

.32 699.98 699.63 699.28 698.94 698.59 698.24 697.90 697.55 697.20 696.86 696.51 696.17

.90 699.56 699.21 698.86 698.52 698.17 697.82 697.48 697.13 696.78 696.44 696.09 695.75

IH 94 SB

.48 699.14 698.79 698.44 698.10 697.75 697.40 697.06 696.71 696.36 696.02 695.67 695.33

SB PGL

.06 698.72 698.37 698.02 697.68 697.33 696.98 696.64 696.29 695.94 695.60 695.25 694.91

.49 698.14 697.80 697.45 697.10 1291 696.76 696.41 696.06 695.72 1292 695.37 695.02 694.68 694.33

.59 699.24 698.90 698.55 698.20 697.86 697.51 697.16 696.82 696.47 696.12 695.78 695.44

.06 698.72 698.37 698.02 697.68 697.33 696.98 696.64 696.29 695.94 695.60 695.25 694.91

NB PGL

.64 698.30 697.95 697.60 697.26 696.91 696.56 696.22 695.87 695.52 695.18 694.83 694.49

IH 94 NB

.22 697.88 697.53 697.18 696.84 696.49 696.14 695.80 695.45 695.10 694.76 694.41 694.07

.80 697.46 697.11 696.76 696.42 696.07 695.72 695.38 695.03 694.68 694.34 693.99 693.65

.31 696.97 696.62 696.27 695.93 695.58 695.23 694.89 694.54 694.19 693.85 693.50 693.16

.82 696.47 696.13 695.78 695.43 695.09 694.74 694.39 694.05 693.70 693.35 693.01 692.67

132 133 134

END PROJECT 1035-01-82

BEGIN PROJECT 1030-20-87

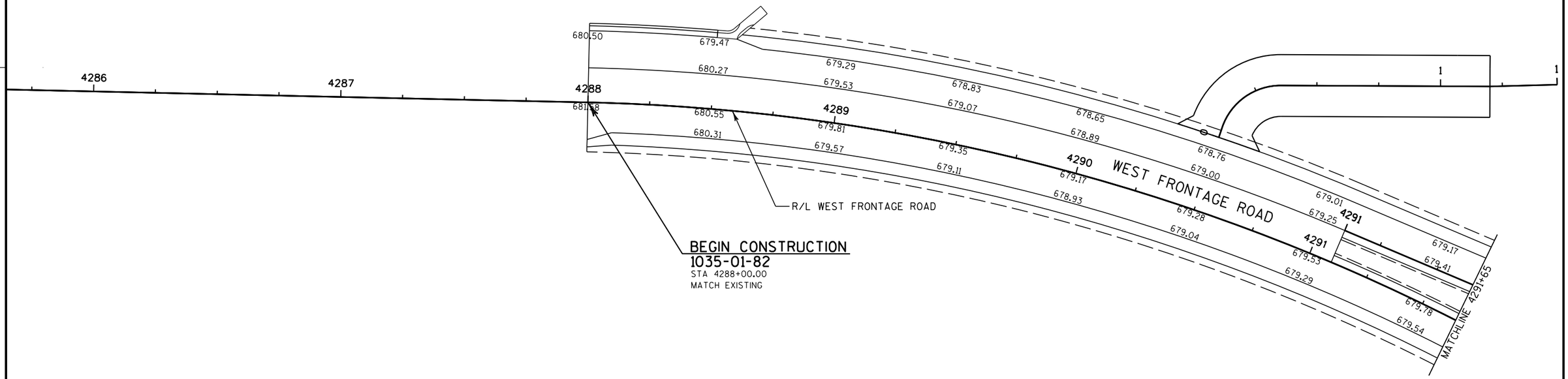
STA 1293+00.00 BK=
STA 131+34.26 AH

PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	PAVING GRADES	SHEET 46	E

FILE NAME : Z:\Racine\CADDS\22\22M\CDS\021305_pg.dgn PLOT DATE : 6/13/2018 PLOT BY : dks PLOT NAME : PLOT SCALE : 1:39.9999

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N



PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	PAVING GRADES	SHEET 47	E

FILE NAME : Z:\Racine\CADDS\22\22M\CDS\021306_pg.dgn PLOT DATE : 6/13/2018 PLOT BY : dks PLOT NAME : PLOT SCALE : 1:39.9999

2

N

MATCHLINE 4291+65

WEST FRONTAGE ROAD

679.07 4292 679.31 678.68 678.92 678.03 4293 678.27 677.09 677.33 676.18 4294 676.42 675.61 675.85 675.36 4295 675.60 675.45 675.69 675.59 4296 675.83 675.53 675.77

679.98 4292 679.74 679.98 679.74 679.77 4293 679.53 679.34 679.10 678.77 4294 678.53 678.18 677.94 677.59 4295 677.35 677.00 676.76 676.45 4296 676.21 676.00 675.76

S. 27TH STREET SB

S. 27TH STREET NB

4297 4298

R/L WEST FRONTAGE ROAD

END CONSTRUCTION
1035-01-82
STA 4297+10.26
MATCH EXISTING

ROOT RIVER

PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	PAVING GRADES	SHEET 48	E

FILE NAME : Z:\Racine\CADDS\22\22M\CDS\021307_pg.dgn PLOT DATE : 6/13/2018 PLOT BY : dks PLOT NAME : PLOT SCALE : 1:39.9999

LEGEND

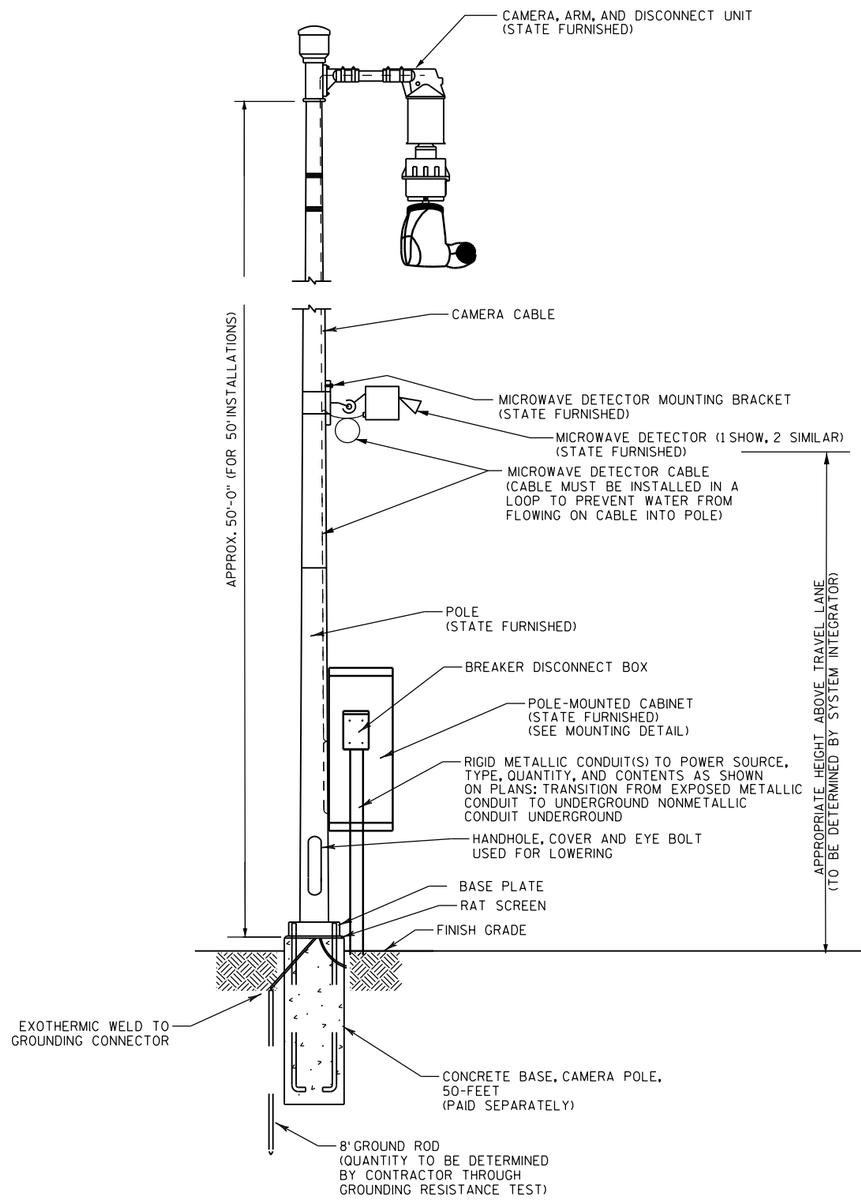
	EXISTING	PROPOSED
FTMS CONVENTIONAL SYMBOLS		
POLE MOUNTED CABINET		
METER BREAKER PEDESTAL		
24X42-INCH CSCP PULL BOX		
FTMS (ITS) CONDUIT		
BREAKER DISCONNECT BOX		
COMMUNICATIONS VAULT, TYPE 1		
TYPE 5 POLE AND MICROWAVE DETECTOR		
MICROWAVE VEHICLE DETECTOR DETECTION ZONE		
CCTV CAMERA AND CAMERA POLE		
GROUND MOUNTED ITS FIELD CABINET		
CSCP PULL BOX		
CONCRETE TYPE 1 MANHOLE		

FTMS STANDARD ABBREVIATIONS

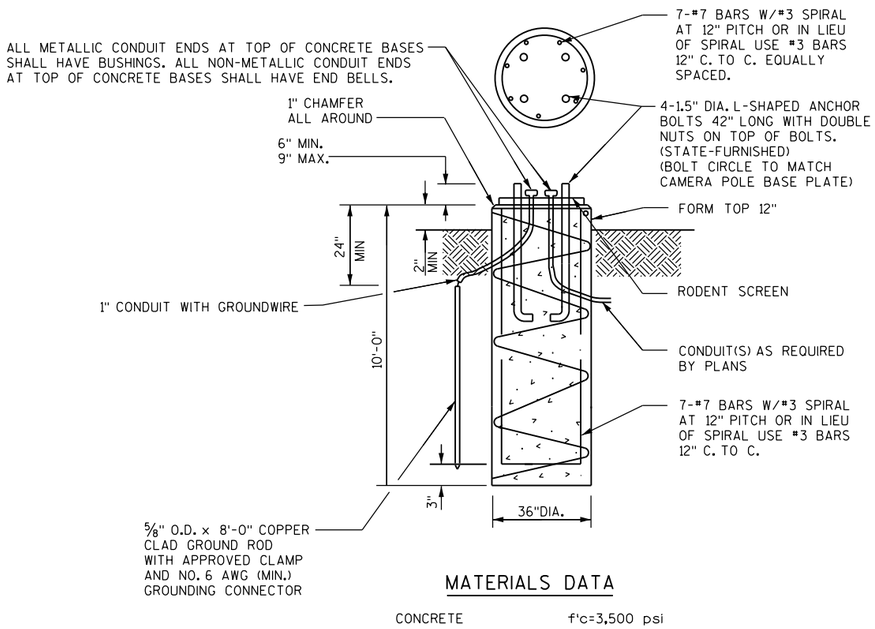
CB	CONTROLLER CABINET
CCTV	CLOSED CIRCUIT TELEVISION SITE
CV	COMMUNICATIONS VAULT
PB	PULL BOX
EX	EXISTING
SDS	SYSTEM DETECTOR STATION
FOC	FIBER OPTIC CABLE
F.O.	FIBER OPTIC
MD	MICROWAVE DETECTOR
S-F	STATE-FURNISHED

FTMS GENERAL NOTES

1. THESE PLANS AND THE ASSOCIATED SPECIAL PROVISIONS REFLECT CONDITIONS KNOWN DURING THE DEVELOPMENT OF THE PLANS AND TECHNICAL SPECIAL PROVISIONS. ALL SCALES, DIMENSIONS AND LOCATIONS SHOWN IN THESE PLANS ARE APPROXIMATE. ACTUAL PHYSICAL FIELD CONDITIONS SHALL PROVIDE THE BASIS FOR THE APPLICATION OF WORK SHOWN IN THE PLANS. THE CONTRACTOR IS FULLY RESPONSIBLE FOR THE APPLICATION OF ALL WORK SHOWN IN THE PLANS TO THE ACTUAL PHYSICAL FIELD CONDITIONS TO PROVIDE A COMPLETE AND ACCEPTED PROJECT. IN THE EVENT THAT ACTUAL PHYSICAL FIELD CONDITIONS AFFECT OR PREVENT THE APPLICATION OR PROGRESSION OF ANY WORK SHOWN IN THE PLANS OR TECHNICAL SPECIAL PROVISIONS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY, AND PRIOR TO ANY FURTHER WORK ACTIVITY. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER OF ANY LOCATION CHANGES OTHER THAN MINOR ADJUSTMENTS.
2. BE AWARE THAT ALL EXISTING UNDERGROUND AND ABOVE GROUND STRUCTURES AND FACILITIES WITHIN THE SCOPE OF THIS PROJECT MAY NOT BE LOCATED IN THE PLANS. THE CONTRACTOR IS FULLY RESPONSIBLE FOR LOCATING AND AVOIDING ALL UNDERGROUND AND ABOVE GROUND STRUCTURES AND FACILITIES.
3. BE AWARE THAT NO TEST BORINGS WERE MADE WHERE CONDUITS, PULLBOXES, POLES, CABINET FOUNDATIONS, OR OTHER EQUIPMENT IS TO BE INSTALLED. THE CONTRACTOR IS FULLY RESPONSIBLE FOR EXAMINING THE JOB SITE CONDITIONS BEFORE SUBMITTING BID PROPOSALS.
4. NO TREES (AND/OR SHRUBS) SHALL BE REMOVED WITHOUT APPROVAL OF THE ENGINEER.
5. AREAS WITHIN THE RIGHT-OF-WAY DISTURBED SPECIFICALLY FOR FTMS CONSTRUCTION SHALL BE RESTORED TO THE ORIGINAL CONDITION WITH TOPSOIL, FERTILIZER, SEED, AND EROSION MAT, AND SHALL BE INCLUDED IN THE COST OF INSTALLING FTMS ITEMS. RESTORATION FOR AREAS DISTURBED FOR OTHER CONSTRUCTION OPERATIONS BUT ALSO CONTAINING FTMS CONSTRUCTION SHALL BE DONE ACCORDING TO REQUIREMENTS AND PAYMENT PROVISIONS FOR THE OTHER CONSTRUCTION OPERATIONS.
6. THE LOCATION OF EXISTING AND PROPOSED UTILITY INSTALLATIONS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN.
7. DUE TO RAMP, LANE, SHOULDER CLOSURE RESTRICTIONS, AND WORK UNDER OTHER CONTRACTS, SOME WORK MAY BE REQUIRED TO BE PERFORMED AT NIGHT.
8. THE CONTRACTOR IS FULLY RESPONSIBLE FOR COORDINATING RAMP, LANE, SHOULDER, AND ROADWAY CLOSURES WITH OTHER CONTRACTS IN THE AREA.
9. THE CONTRACTOR SHALL CONTACT THE WISDOT STATEWIDE TRAFFIC OPERATIONS CENTER AT (414) 227-2166 FIVE (5) WORKING DAYS PRIOR TO ENTERING ANY EXISTING WISDOT FTMS OR ITS CABINET.
10. ALL LOOP DETECTORS ARE STATIONED TO CENTER OF LEADING EDGE AS APPROACHED BY NORMAL VEHICLE PATH.
11. HAND DIG TRENCHES CROSSING EXISTING CONDUIT CONTAINING FIBER OPTIC CABLE.
12. VISUALLY VERIFY DEPTHS OF EXISTING CONDUITS CONTAINING FIBER OPTIC CABLE PRIOR TO CROSSING BY DIRECTIONAL BORE OR SPECIAL METHOD.



CAMERA POLE WITH CAMERA LOWERING HARDWARE

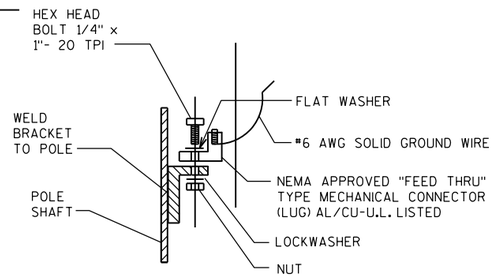


MATERIALS DATA

CONCRETE	f'c=3,500 psi
HIGH STRENGTH BAR STEEL REINFORCEMENT	fy = 60,000 psi

CONCRETE BASE, 50' CAMERA POLE

NOT TO SCALE



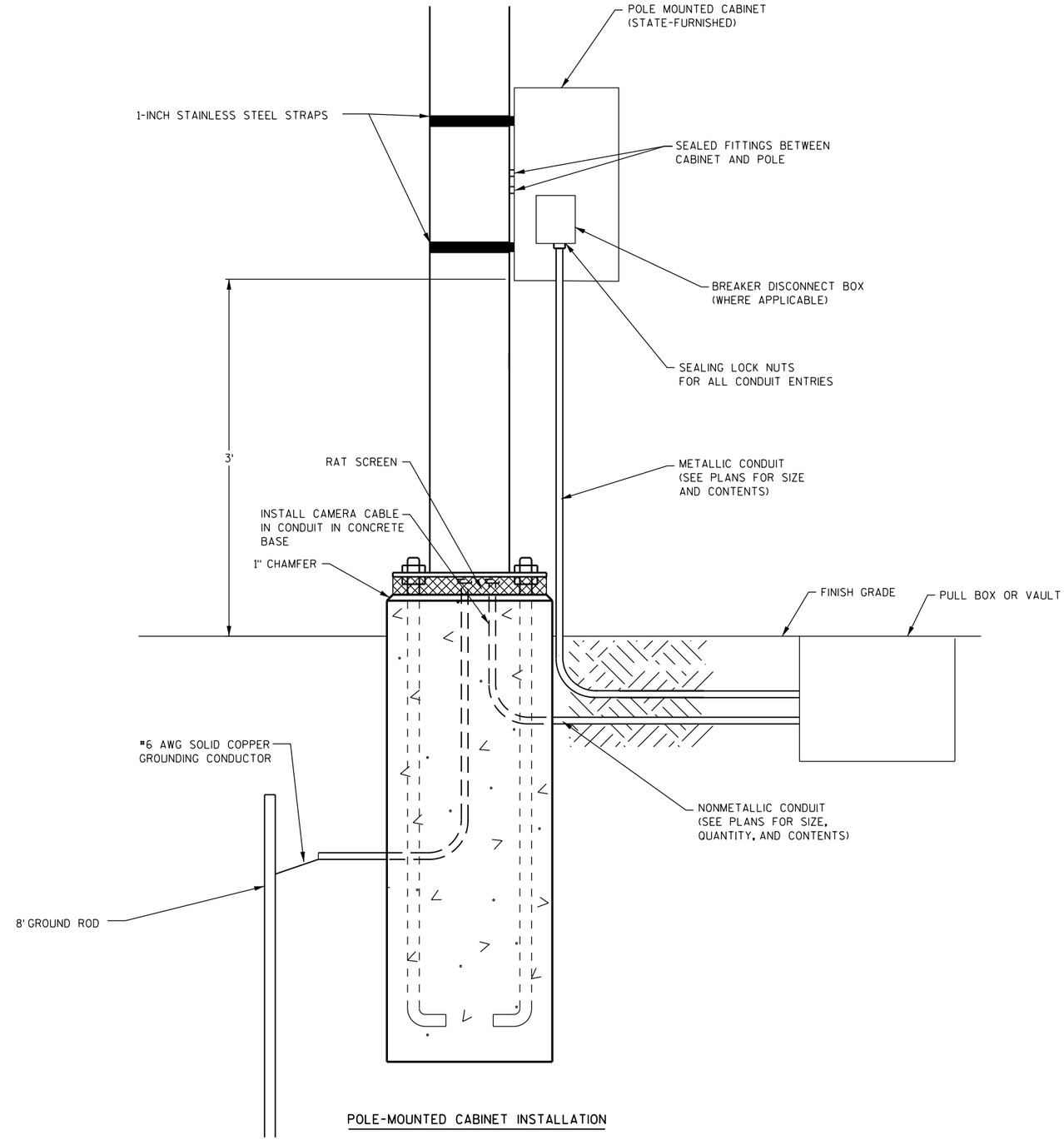
FIELD INSTALLED GROUNDING LUG

NOTES

1) ALL HARDWARE AND FASTENERS SHALL BE STAINLESS STEEL
2) POLE DRAWINGS SHOWN FOR BIDDING INFORMATION PURPOSES ONLY. POLES WILL BE STATE FURNISHED. BASE TO BE CONTRACTOR DESIGNED.
3) CONTRACTOR SHALL CONFIRM BOLT PATTERN OF CAMERA POLE PRIOR TO CONSTRUCTION OF CONCRETE BASE.
4) CONTRACTOR SHALL INSTALL GROUNDING LUG AS SHOWN

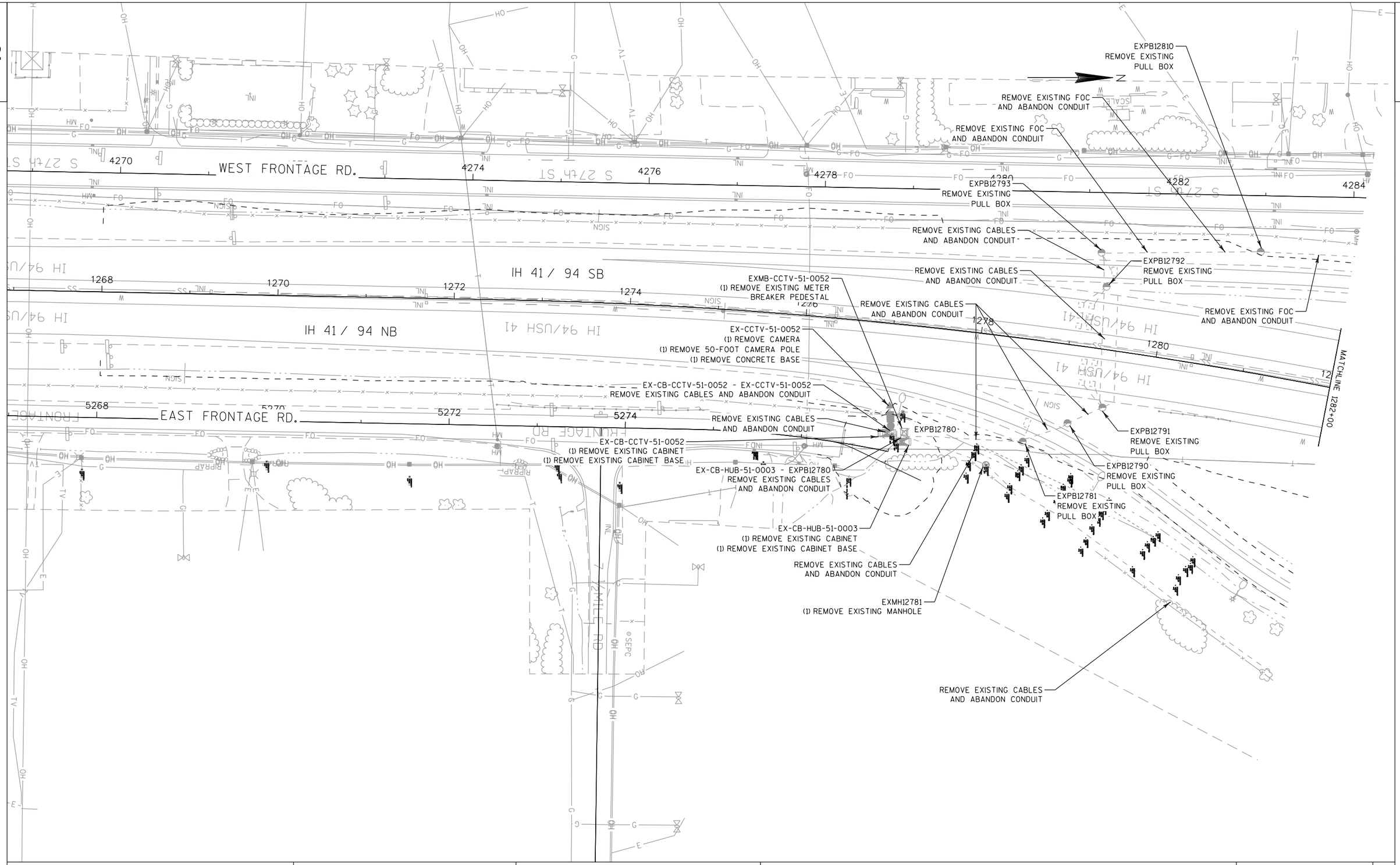
CAMERA POLES & FOUNDATIONS

2



POLE-MOUNTED CABINET INSTALLATION

2



PROJECT NO:1035-01-82	HWY:IH 41 / 94	COUNTY:RACINE	FTMS REMOVAL PLANS	SHEET 52	E

2

2

EXPB12820
REMOVE EXISTING
PULL BOX

EXPB12840
REMOVE EXISTING
PULL BOX

EXCV12880
REMOVE EXISTING FO SPLICES
TO CABLE TO EX-HUB-51-0003
(36) F.O. SPLICES ON EXISTING
36-COUNT FOC TO MAKE CABLE
CONTINUOUS.

REMOVE EXISTING FOC
AND ABANDON CONDUIT

REMOVE EXISTING CABLES
AND ABANDON CONDUIT

EXMH1321
(1) REMOVE EXISTING MANHOLE

WEST FRONTAGE RD.

EAST FRONTAGE RD.

S. 27TH ST.

IH 41 / 94 SB HI

IH 41 / 94 NB

IH 94/USH 41

STH 241/S 27th ST

ROOT RIVER

MATCHLINE 1282+00

4286 4288 4290 4292 4294 4296 4298

1282 1284 1286 1288 1290 1292 134 136

N

PROJECT NO:1035-01-82	HWY:IH 41 / 94	COUNTY:RACINE	FTMS REMOVAL PLANS	SHEET 53	E

FILE NAME : \\mlww400\ingrproj\68580\IH94_N-S-Freeway_Projects\10350182\7mMIL_ml_REM_FM02.dgn PLOT DATE : 6/7/2018 PLOT BY : pkutz PLOT NAME : PLOT SCALE : 100:1

WISDOT/CADDS SHEET 42

2

2

WEST FRONTAGE RD.

IH 41 / 94 SB

IH 41 / 94 NB

EAST FRONTAGE RD.

S 27th ST

7 1/2 MILE RD

CV12681

CV12681, CONDUIT, AND FOC TO SOUTH INSTALLED IN PROJECT ID. 1035-01-72. FOCS TO BE CONTINUOUS FROM 1035-01-72 WITH NO SPLICES.

(3) 2-INCH HDPE DUCTS
(1) WITH (1) 72-COUNT FOC (S-F),
(1) 24-COUNT FOC (S-F), AND
(1) NO. 12 AWG TRAFFIC SIGNAL WIRE

(3) 2-INCH HDPE DUCTS
(1) WITH (1) 72-COUNT FOC (S-F),
(1) 24-COUNT FOC (S-F), AND
(1) NO. 12 AWG TRAFFIC SIGNAL WIRE

MATCHLINE 1282+00

N

SCALE

PROJECT NO: 1035-01-82	HWY: IH 41 / 94	COUNTY: RACINE	FTMS PLANS	SHEET 54	E

FILE NAME : \\mlww400\ingrproj\68580\IH94_N-S-Freeway_Projects\10350182\7mMIL_ml_FM01.dgn PLOT DATE : 6/7/2018 PLOT BY : pkutz PLOT NAME : PLOT SCALE : 100:1

2

WEST FRONTAGE RD.

MATCHLINE I282+00

IH 41 / 94 SB HI

IH 41 / 94 NB

CV12830

CCTV-40-0229
(1) 50-FOOT CAMERA POLE CONCRETE BASE
(1) 50-FOOT CAMERA POLE (S-F)
(1) CCTV CAMERA (S-F)
(2) MICROWAVE VEHICLE DETECTORS (S-F)
(1) POLE-MOUNTED CABINET (S-F)
(1) BREAKER DISCONNECT BOX
(1) 12-COUNT F.O. TERMINATION PANEL (S-F)
(6) F.O. TERMINATIONS
(1) ETHERNET SWITCH (S-F)

(3) 2-INCH HDPE DUCTS
(1) WITH (1) 72-COUNT FOC (S-F),
(1) 24-COUNT FOC (S-F), AND
(1) NO. 12 AWG TRAFFIC SIGNAL WIRE

EAST FRONTAGE RD.

MB-CCTV-40-0229

(1) 2-INCH NONMETALLIC CONDUIT WITH
(3) NO. 6 AWG TRAFFIC SIGNAL WIRES

PB12920

(1) 2-INCH METALLIC CONDUIT WITH
(3) NO. 6 AWG TRAFFIC SIGNAL WIRES

PB12930

(2) 2-INCH NONMETALLIC CONDUITS
(1) WITH (1) 6-COUNT FOC AND
(1) NO. 12 AWG TRAFFIC SIGNAL WIRE

(2) 2-INCH HDPE DUCTS, DIRECTIONAL BORE
(1) WITH (1) 6-COUNT FOC (S-F)
(1) NO. 12 AWG TRAFFIC SIGNAL WIRE

S. 27TH ST.

ROOT RIVER

IN CONDUIT INSTALLED IN BRIDGE
PARAPET UNDER PROJECT ID. 1030-20-87
INSTALL (1) 72-COUNT FOC (S-F),
(1) 24-COUNT FOC (S-F),
(1) 6-COUNT FOC (S-F), AND
(1) NO. 12 AWG TRAFFIC SIGNAL WIRE

IH 94/USH 41

CV1330

CV1370
(26) F.O. SPLICES IN NEW SPLICE ENCLOSURE ON 24-COUNT FOC
(72) F.O. SPLICES IN NEW SPLICE ENCLOSURE ON 72-COUNT FOC

CONDUIT, AND CV1370, INSTALLED IN PROJECT 1030-20-87.
NEW FIBER OPTIC CABLES TO NORTH OF CV1370 INSTALLED
IN PROJECT ID. 1030-20-84.

PROJECT NO: 1035-01-82	HWY: IH 41 / 94	COUNTY: RACINE	FTMS PLANS	SHEET 55	E

FILE NAME : \\mlww400\ingrproj\68580\IH94_N-S-Freeway_Projects\10350182\7mMIL_ml_FM02.dgn PLOT DATE : 6/7/2018 PLOT BY : pkutz PLOT NAME : PLOT SCALE : 100:1

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N

WEST FRONTAGE ROAD

EAST FRONTAGE ROAD

IH 94 SB

IH 94 NB

BEGIN PROJECT
1035-01-82
STA 1268+00

R/L IH 94

SLOPE INTERCEPT

7 1/2 MILE ROAD

MATCHLINE 1281+00

EXIST R/W

PROP R/W

TLE

WETLAND BOUNDARY

1278+23.04
137.71' RT

1278+44.17
128.68' RT

1279+53.98
159.77' RT

1280+13.30
113.47' RT

4268 4270 4272 4274 4276 4278 4280 4282

1266 1268 1270 1272 1274 1276 1278 1280

5266 5268 5270 5272 5274 5276

NOTES:

1) WHEN INLET PROTECTION TYPE A AND TYPE B, C, OR D ARE INDICATED AT THE SAME LOCATION, USE TYPE A PRIOR TO THE PLACEMENT OF CURB AND GUTTER AND USE TYPE B, C OR D AFTER THE INLET CASTINGS ARE IN PLACE.

2) EROSION CONTROL DEVICES USED IN PREVIOUS CONSTRUCTION STAGES THAT REMAIN IN USE ARE NOT SHOWN.

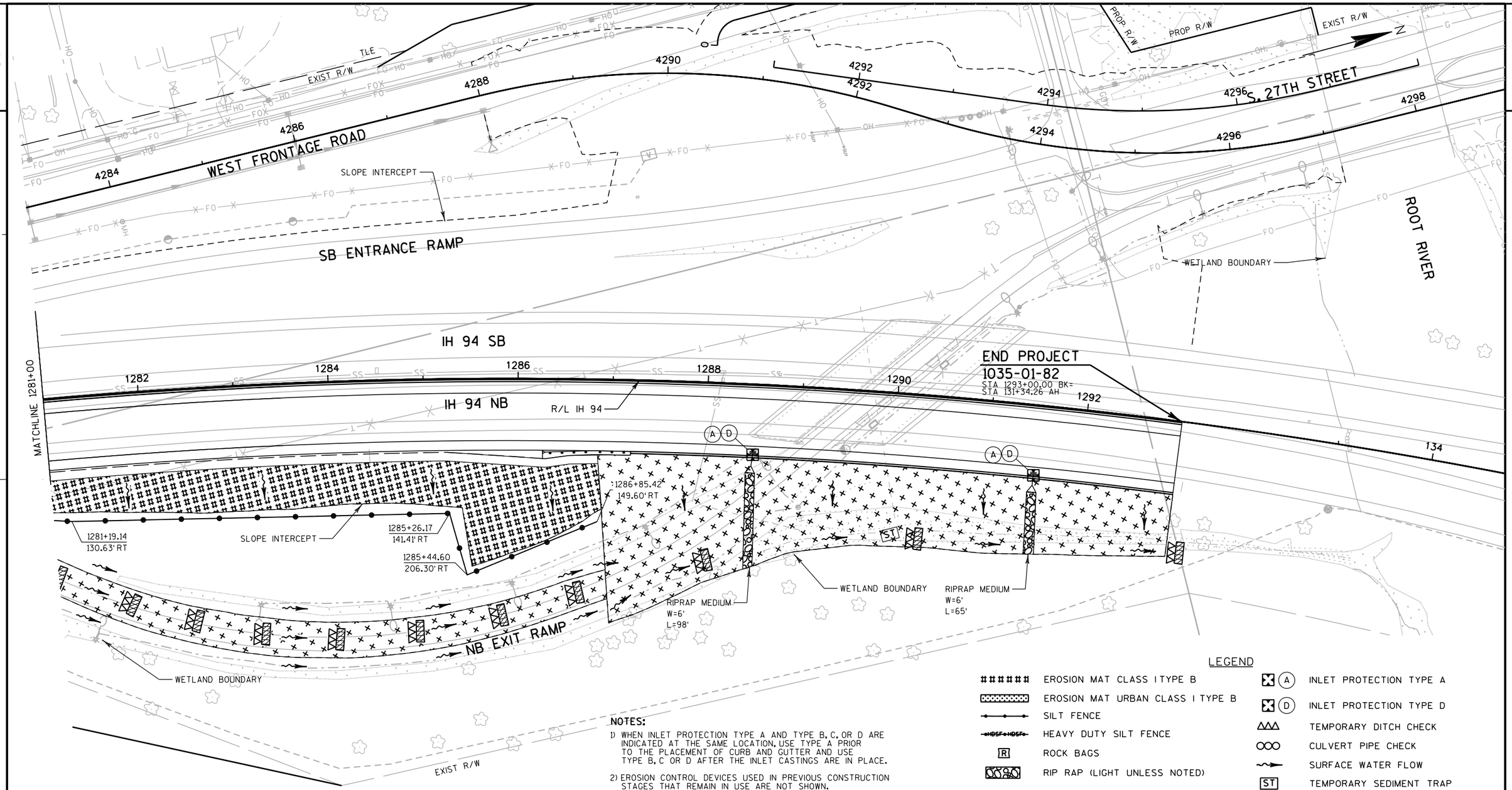
3) IN WETLAND AREAS, INSTALL HEAVY DUTY OR STANDARD SILT FENCE TO THE STATIONS AND OFFSETS INDICATED.

4) RESTORE FENCE REMOVAL LOCATIONS OUTSIDE OF EXCAVATION LIMITS.

LEGEND

- EROSION MAT CLASS I TYPE B
- EROSION MAT URBAN CLASS I TYPE B
- SILT FENCE
- HEAVY DUTY SILT FENCE
- ROCK BAGS
- RIP RAP (LIGHT UNLESS NOTED)
- SLOPE INTERCEPT
- INLET PROTECTION TYPE A
- INLET PROTECTION TYPE D
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECK
- SURFACE WATER FLOW
- TEMPORARY SEDIMENT TRAP
- STONE OR ROCK DITCH CHECKS

PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	EROSION CONTROL - NORTHBOUND	SHEET 56	E



NOTES:

1) WHEN INLET PROTECTION TYPE A AND TYPE B, C, OR D ARE INDICATED AT THE SAME LOCATION, USE TYPE A PRIOR TO THE PLACEMENT OF CURB AND GUTTER AND USE TYPE B, C OR D AFTER THE INLET CASTINGS ARE IN PLACE.

2) EROSION CONTROL DEVICES USED IN PREVIOUS CONSTRUCTION STAGES THAT REMAIN IN USE ARE NOT SHOWN.

3) IN WETLAND AREAS, INSTALL HEAVY DUTY OR STANDARD SILT FENCE TO THE STATIONS AND OFFSETS INDICATED.

4) RESTORE FENCE REMOVAL LOCATIONS OUTSIDE OF EXCAVATION LIMITS.

LEGEND

- EROSION MAT CLASS I TYPE B
- EROSION MAT URBAN CLASS I TYPE B
- SILT FENCE
- HEAVY DUTY SILT FENCE
- ROCK BAGS
- RIP RAP (LIGHT UNLESS NOTED)
- SLOPE INTERCEPT
- INLET PROTECTION TYPE A
- INLET PROTECTION TYPE D
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECK
- SURFACE WATER FLOW
- TEMPORARY SEDIMENT TRAP
- STONE OR ROCK DITCH CHECKS

PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	EROSION CONTROL - NORTHBOUND	SHEET 57	E

FILE NAME : Z:\Racine\CADDS\22\22M\CDS\022004_ec.dgn PLOT DATE : 6/14/2018 PLOT BY : dks PLOT NAME : PLOT SCALE : 1:100

2

N

4268 4270 4272 4274 WEST FRONTAGE ROAD 4276 4278 4280 4282

1268+00.00
102.33' LT

1269+00.67
108.97' LT

1270+57.67
98.78' LT

1272+37.26
107.00' LT

1273+94.55
105.03' LT

1275+13.75
118.17' LT

1277+43.40
132.11' LT

1277+91.81
111.85' LT

1280+33.77
144.63' LT

BEGIN PROJECT
1035-01-82
STA 1268+00

IH 94 SB

IH 94 NB

R/L IH 94

1266 1268 1270 1272 1274 1276 1278 1280

RIPRAP MEDIUM
W=6'
L=14'

OPEN WATER

TLE

EXIST R/W

5266 5268 5270 5272 5274 5276

EAST FRONTAGE ROAD

SLOPE INTERCEPT

MATCHLINE 1281+00

PROP R/W

TLE

PROP R/W

EXIST R/W

7 1/2 MILE ROAD

EXIST R/W

PROP R/W

EXIST R/W

TLE

PROP R/W

WETLAND BOUNDARY

NOTES:

1) WHEN INLET PROTECTION TYPE A AND TYPE B, C, OR D ARE INDICATED AT THE SAME LOCATION, USE TYPE A PRIOR TO THE PLACEMENT OF CURB AND GUTTER AND USE TYPE B, C OR D AFTER THE INLET CASTINGS ARE IN PLACE.

2) EROSION CONTROL DEVICES USED IN PREVIOUS CONSTRUCTION STAGES THAT REMAIN IN USE ARE NOT SHOWN.

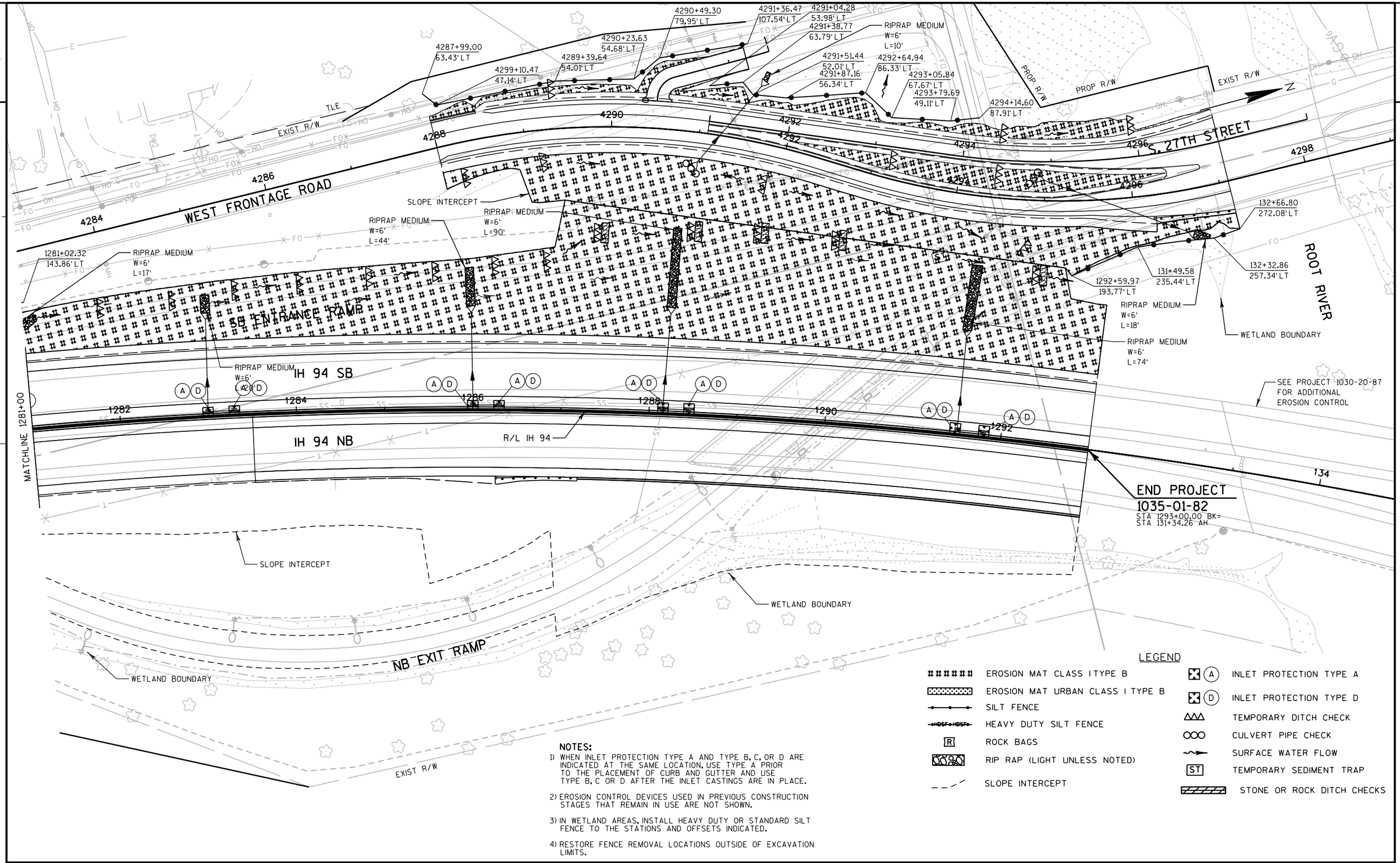
3) IN WETLAND AREAS, INSTALL HEAVY DUTY OR STANDARD SILT FENCE TO THE STATIONS AND OFFSETS INDICATED.

4) RESTORE FENCE REMOVAL LOCATIONS OUTSIDE OF EXCAVATION LIMITS.

LEGEND

- EROSION MAT CLASS I TYPE B
- EROSION MAT URBAN CLASS I TYPE B
- SILT FENCE
- HEAVY DUTY SILT FENCE
- ROCK BAGS
- RIP RAP (LIGHT UNLESS NOTED)
- SLOPE INTERCEPT
- INLET PROTECTION TYPE A
- INLET PROTECTION TYPE D
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECK
- SURFACE WATER FLOW
- TEMPORARY SEDIMENT TRAP
- STONE OR ROCK DITCH CHECKS

PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	EROSION CONTROL - SOUTHBOUND	SHEET 58	E



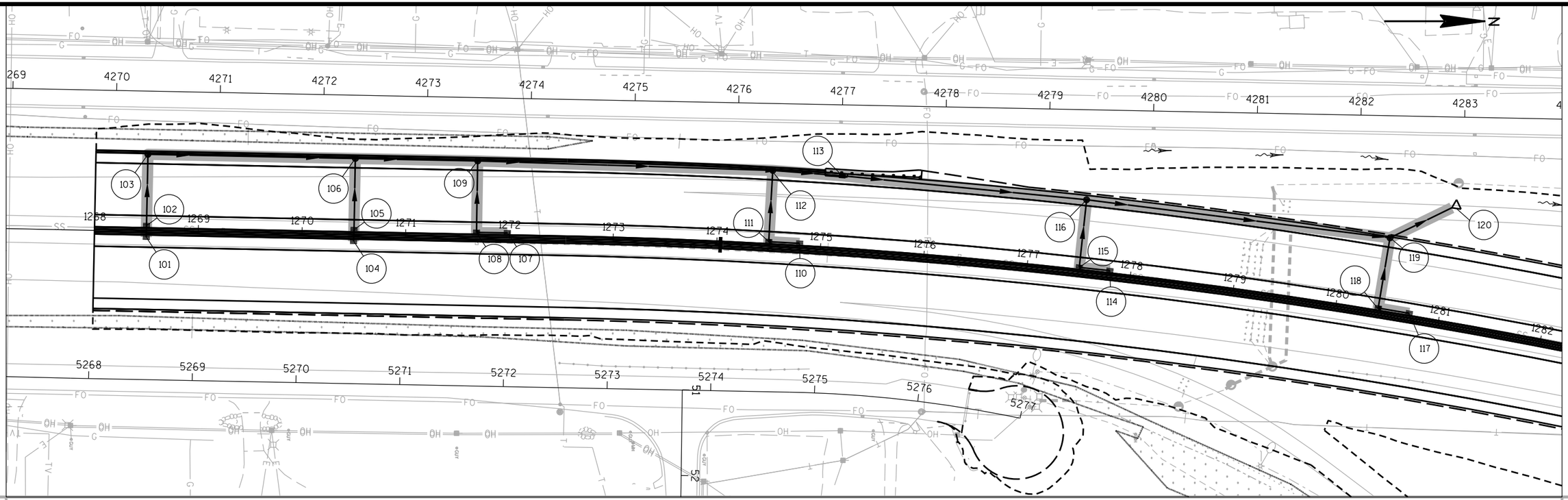
LEGEND

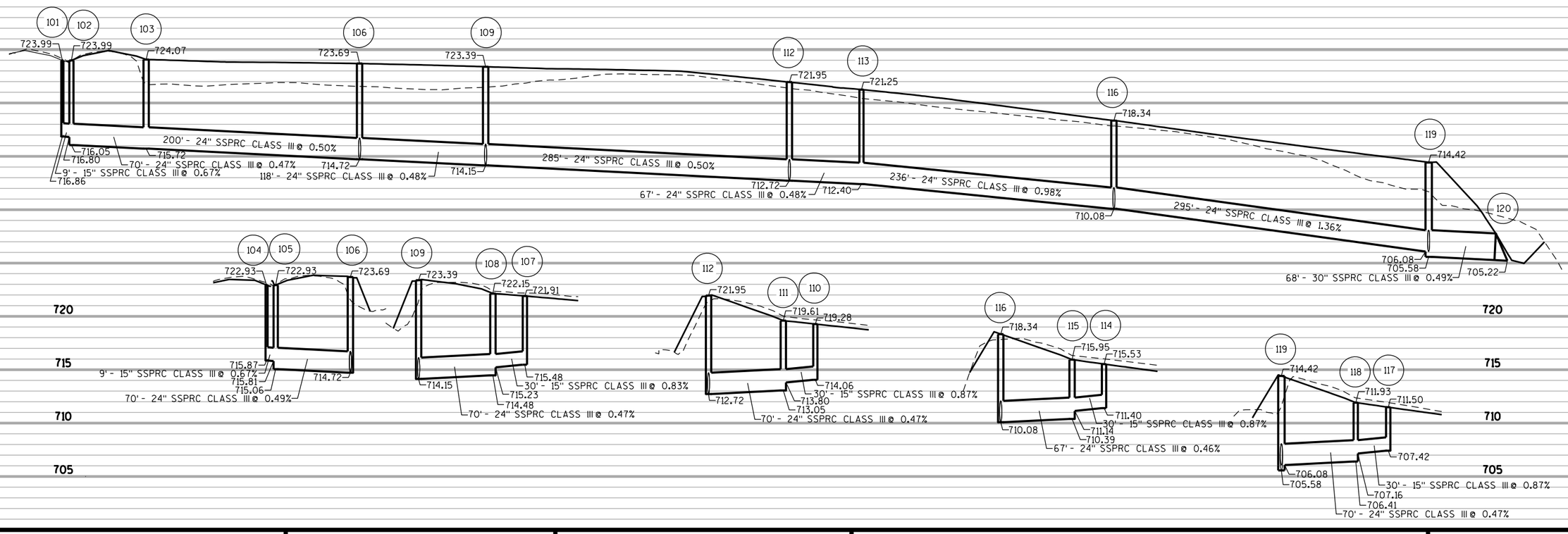
- EROSION MAT CLASS I TYPE B
- EROSION MAT URBAN CLASS I TYPE B
- SILT FENCE
- HEAVY DUTY SILT FENCE
- ROCK BAGS
- RIP RAP (LIGHT UNLESS NOTED)
- SLOPE INTERCEPT
- INLET PROTECTION TYPE A
- INLET PROTECTION TYPE D
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECK
- SURFACE WATER FLOW
- TEMPORARY SEDIMENT TRAP
- STONE OR ROCK DITCH CHECKS

NOTES:

1) WHEN INLET PROTECTION TYPE A AND TYPE B, C, OR D ARE INDICATED AT THE SAME LOCATION, USE TYPE A PRIOR TO THE PLACEMENT OF CURB AND GUTTER AND USE TYPE B, C OR D AFTER THE INLET CASTINGS ARE IN PLACE.
2) EROSION CONTROL DEVICES USED IN PREVIOUS CONSTRUCTION STAGES THAT REMAIN IN USE ARE NOT SHOWN.
3) IN WETLAND AREAS, INSTALL HEAVY DUTY OR STANDARD SILT FENCE TO THE STATIONS AND OFFSETS INDICATED.
4) RESTORE FENCE REMOVAL LOCATIONS OUTSIDE OF EXCAVATION LIMITS.

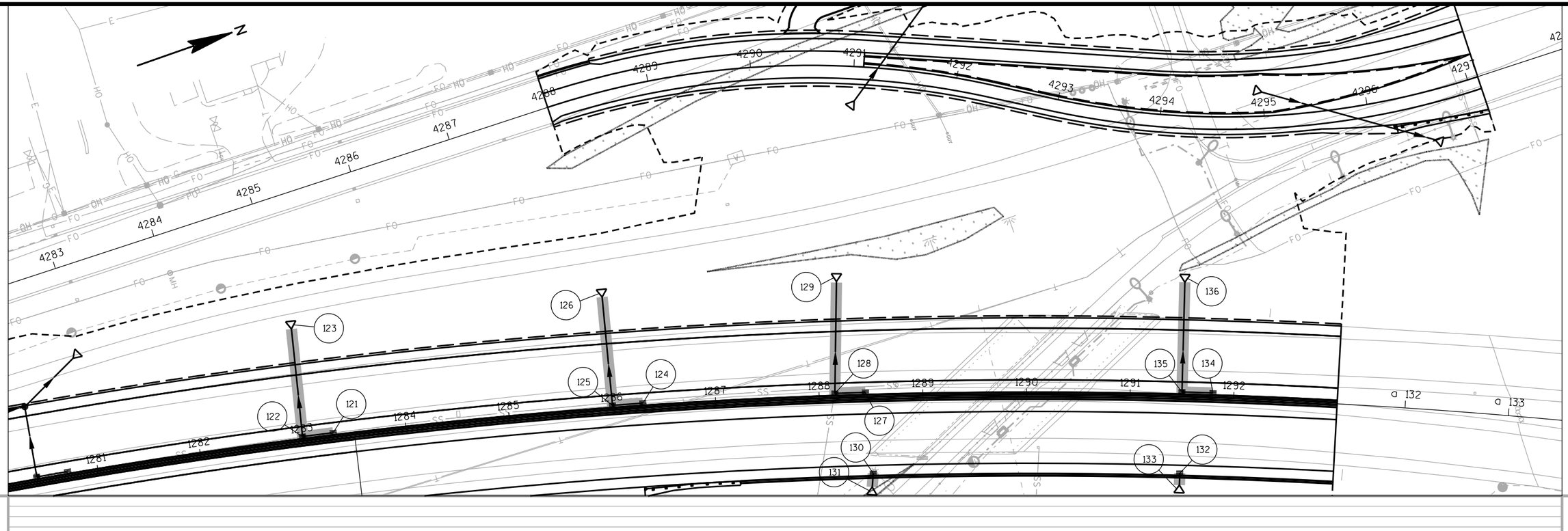
PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	EROSION CONTROL - SOUTHBOUND	SHEET 59	E

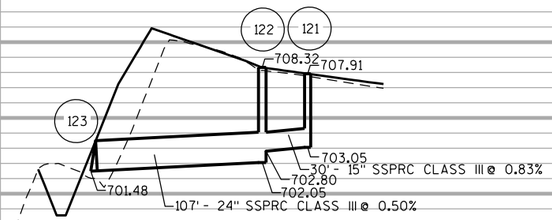


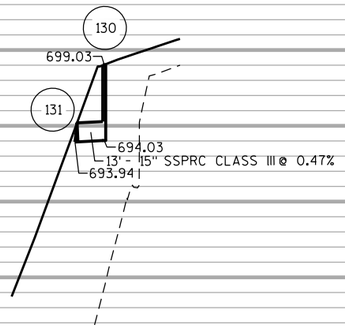


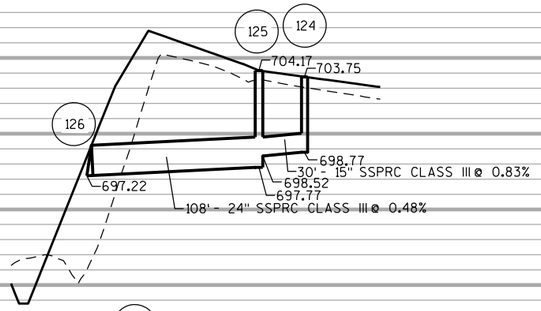
PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	STORM SEWER: CTH G TO MKE CNTY LINE	SHEET 60 E

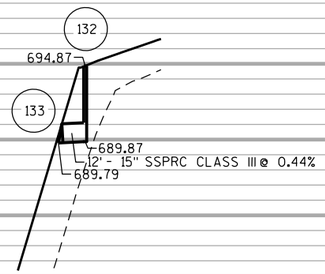
FILE NAME : S:\2017\WisDOT\IH94-CTH G to MKE Cnty\CADD files\CDS\SSE_IH-94_22ML_SS1.dgn PLOT DATE : 6/11/2018 PLOT BY : Harlan PLOT NAME : PLOT SCALE : 1:100

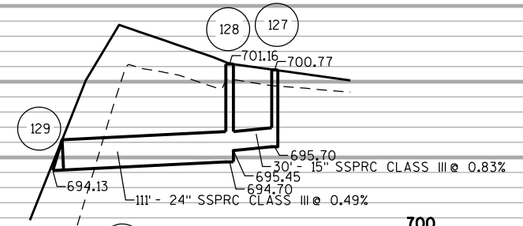


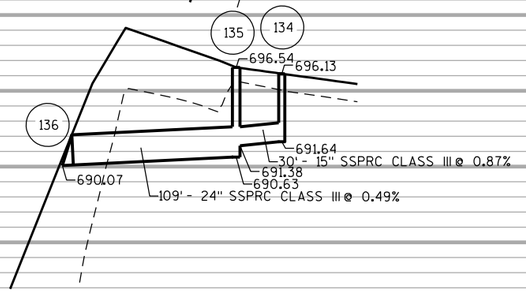












PROJECT NO:1035-01-82	HWY:IH 94	COUNTY:RACINE	STORM SEWER:CTH G TO MKE CNTY LINE	SHEET 61 E

MOVED HERE BY
1035-01-74 TEMPORARILY

GAS	EXIT 326
CAMPING	EXIT 326

MOVED BY WISCONSIN BUSINESS LOGOS
SIS - CONTACT 1-608-579-1570

RIDESHARE INFORMATION
www.rideshare.wi.gov
7 D12-2B(5)

8 **RIDESHARE INFO CALL**
1-800-455-POOL
D12-2A(5)

17 **Caledonia Next 3 Exits**
TYPE I SIGN
ON STEEL SUPPORTS

N

4268 4270 4272 4274 4276 4278 4280 4282

WEST FRONTAGE ROAD

BEGIN PROJECT
I.D. 1035-01-82
STA 1268+00

IH 94 SB

IH 94 NB

1266 1268 1270 1272 1274 1276 1278 1280

1035-01-74

MATCHLINE 1281+00

5266 5268 5270 5272 5274 5276

EAST FRONTAGE ROAD

16 TO 27th St
EXIT 326
TYPE I SIGN
PLACE AT STATION 1178+00
NB NORTH OF CTH G BRIDGE

EXIT 326 15a
TO 241 15
Seven Mile Rd
1 MILE
INSTALL TYPE I SIGN
ONTO NEW POSTS AT
STATION 1170+00
(800' NORTH OF CTH G BRIDGE)

EXIT 326
Seven Mile Rd
1 MILE
REMOVE
194 NB
REMOVE EXISTING
SIGN & SUPPORTS

EAST 94 MILE 325 .4 1
WEST 94 MILE 325 .4 2
D10-5(5)
REMOVE

7 1/2 MILE ROAD

3
Seven Mile Rd 1/4
G 1 3/4
K 3 3/4
E8-1
(SB)
S-51-219 REPLACES
S-51-206

Seven Mile Rd 1/4
G 1 3/4
K 3 3/4
REMOVE
ON SIGN BRIDGE S-51-206

50 51 52
W5-56(2S)
4' MOUNTING
HEIGHT
REMOVE

4 EXIT 325
E5-1A
REMOVE

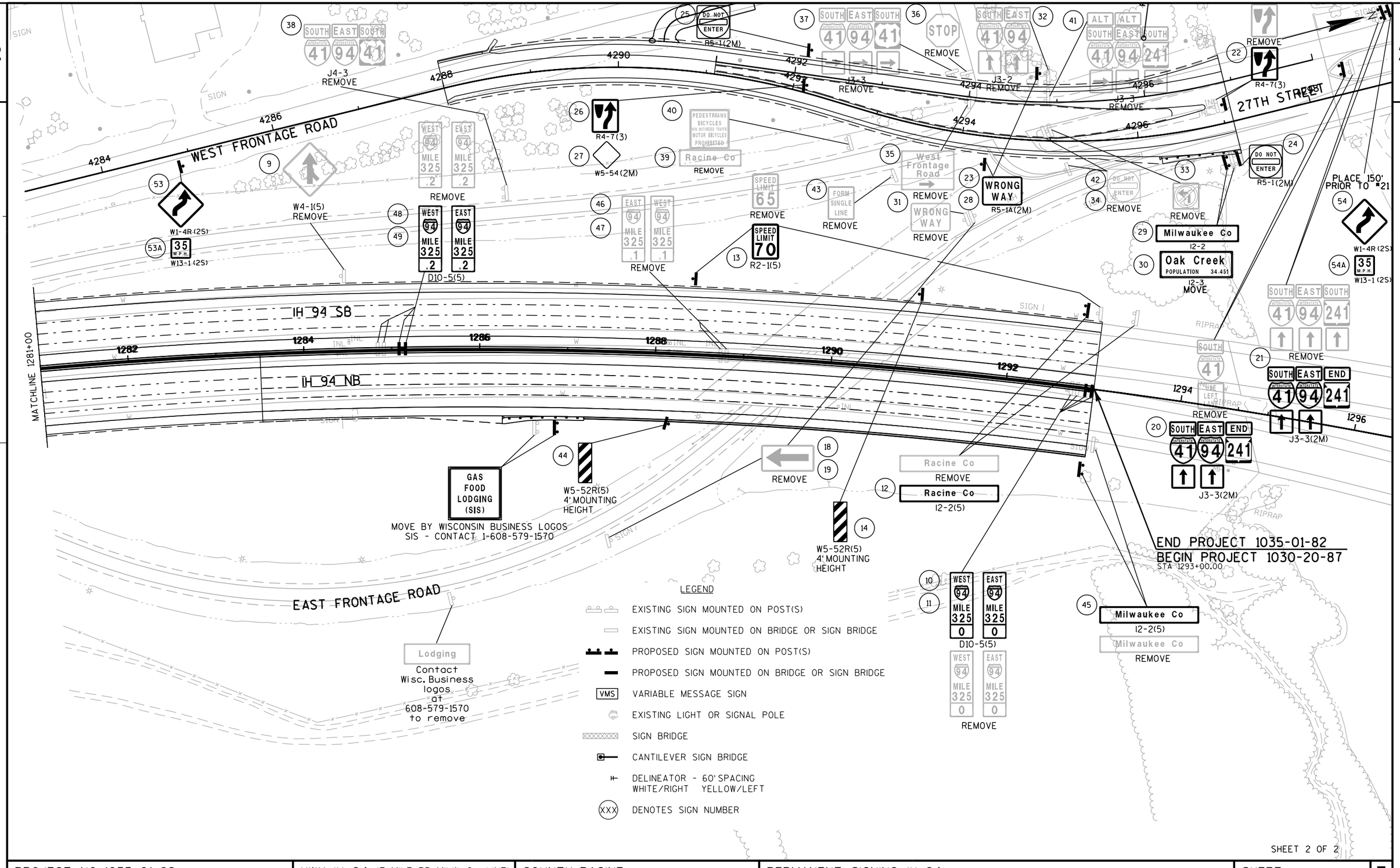
5 WEST 94 MILE 325 .3
6 EAST 94 MILE 325 .3
D10-5(5)
REMOVE

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- VMS — VARIABLE MESSAGE SIGN
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- CANTILEVER SIGN BRIDGE
- DELINEATOR - 60' SPACING
  WHITE/RIGHT YELLOW/LEFT
- (XXX) DENOTES SIGN NUMBER

SHEET 1 OF 2

PROJECT NO: 1035-01-82	HWY: IH 94 (7 MILE RD-MILW Co LINE)	COUNTY: RACINE	PERMANENT SIGNING: IH 94	SHEET E



PROJECT NO: 1035-01-82	HWY: IH 94 (7 MILE RD-MILW Co LINE)	COUNTY: RACINE	PERMANENT SIGNING: IH 94	SHEET	E

FILE NAME : J:\projects\d2_10350194\82\023212_PS.DGN PLOT DATE : 14-JUN-2018 08:20 PLOT BY : dotshw PLOT NAME : PLOT SCALE : 100:1

2

N

R/L WEST FRONTAGE ROAD

4268 4270 4272 4274 4276 4278 4280 4282

BEGIN PROJECT
1035-01-82
STA 1268+00.00
MATCH PROJECT
1035-01-74

WEST FRONTAGE ROAD

184 30 183

R/L IH 94

IH 94 SB

IH 94 NB

1266 1268 1270 1272 1274 1276 1278 1280

MATCHLINE 1281+00

R/L EAST FRONTAGE ROAD

5266 5268 5270 5272 5274 5276

EAST FRONTAGE ROAD

R/L 7 1/2 MILE ROAD

7 1/2 MILE ROAD

LEGEND

1	MARKING LINE EPOXY 4-INCH (YELLOW)
2	MARKING LINE EPOXY 4-INCH (WHITE)
10	MARKING DIAGONAL EPOXY 12-INCH (YELLOW) (25' SPACING)
11	MARKING DIAGONAL EPOXY 12-INCH (WHITE) (25' SPACING)
14	MARKING WORD EPOXY (WHITE)
16	MARKING ARROW EPOXY
30	MARKING LINE GROOVED CONTRAST PERMANENT TAPE 4-INCH (DASHED WHITE) (12.5 FT LINE 37.5 FT SKIP)
183	MARKING LINE GROOVED WET REFLECTIVE EPOXY 4-INCH (WHITE)
184	MARKING LINE GROOVED WET REFLECTIVE EPOXY 4-INCH (YELLOW)
221	MARKING LINE GROOVED CONTRAST WET REFLECTIVE EPOXY 8-INCH (WHITE)
⊥	DELINEATOR, SINGLE

PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	PAVEMENT MARKING	SHEET 64	E

2

N

BEGIN CONSTRUCTION
1035-01-82
STA 4888+00.00
MATCH EXISTING

R/L WEST FRONTAGE ROAD

WEST FRONTAGE ROAD

27TH STREET

MATCHLINE 1281+00

IH 94 NB

R/L IH 94

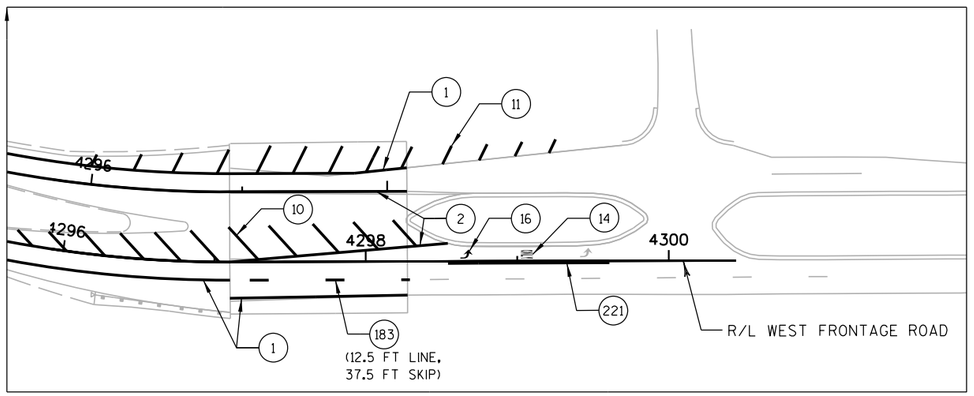
IH 94 SB

ROOT RIVER

END CONSTRUCTION
1035-01-82
STA 4797+10.26
MATCH EXISTING

(12.5 FT LINE,
37.5 FT SKIP)

END PROJECT 1035-01-82
STA 1293+00.00 BK=
STA 131+34.26 AH
MATCH PROJECT 1030-20-87

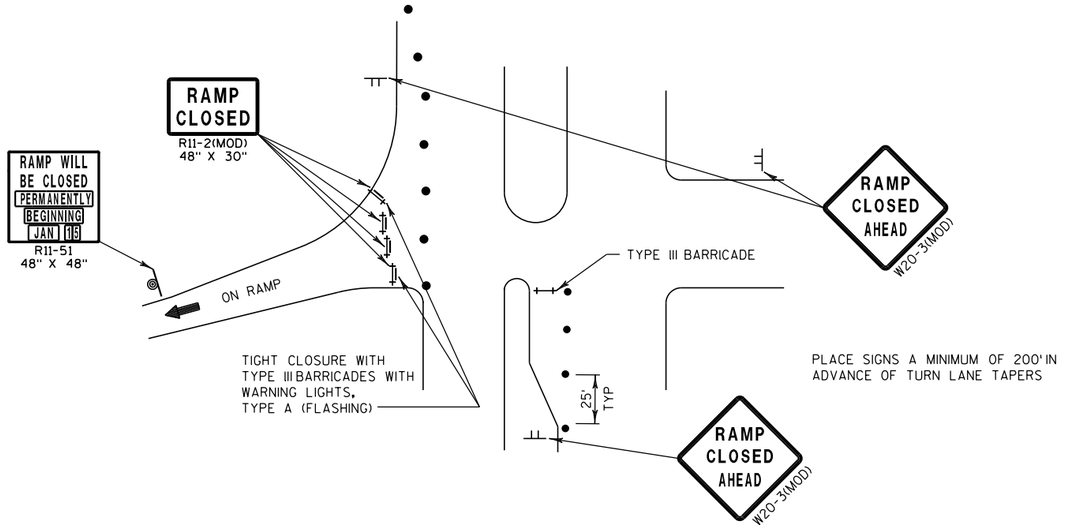


LEGEND

1	MARKING LINE EPOXY 4-INCH (YELLOW)
2	MARKING LINE EPOXY 4-INCH (WHITE)
10	MARKING DIAGONAL EPOXY 12-INCH (YELLOW) (25' SPACING)
11	MARKING DIAGONAL EPOXY 12-INCH (WHITE) (25' SPACING)
14	MARKING WORD EPOXY (WHITE)
16	MARKING ARROW EPOXY
30	MARKING LINE GROOVED CONTRAST PERMANENT TAPE 4-INCH (DASHED WHITE) (12.5 FT LINE 37.5 FT SKIP)
183	MARKING LINE GROOVED WET REFLECTIVE EPOXY 4-INCH (WHITE)
184	MARKING LINE GROOVED WET REFLECTIVE EPOXY 4-INCH (YELLOW)
221	MARKING LINE GROOVED WET REFLECTIVE EPOXY 8-INCH (WHITE)
⊥	DELINEATOR, SINGLE

PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	PAVEMENT MARKING	SHEET 65	E

2



LEGEND

- TRAFFIC CONTROL DRUM
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL III BARRICADE
- TRAFFIC CONTROL III BARRICADE WITH LIGHT TYPE A AND ATTACHED SIGN
- DIRECTION OF TRAFFIC

100813

GENERAL NOTES

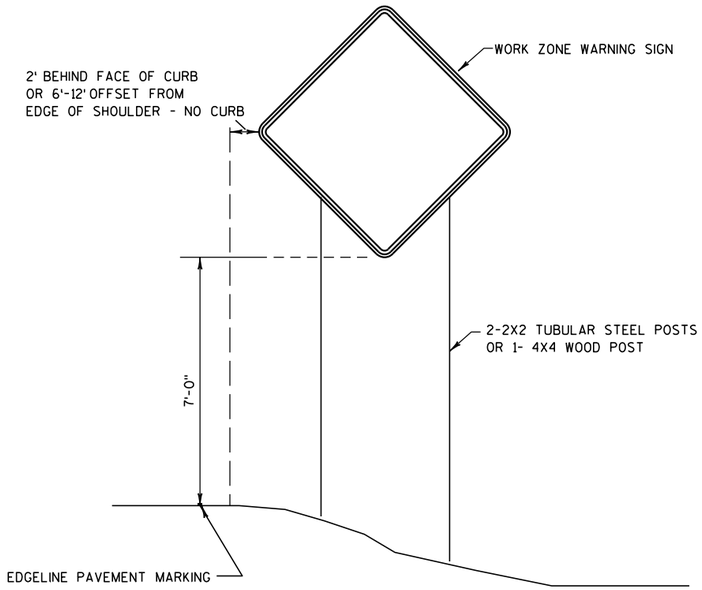
THE EXACT NUMBER, LOCATION AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.

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

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

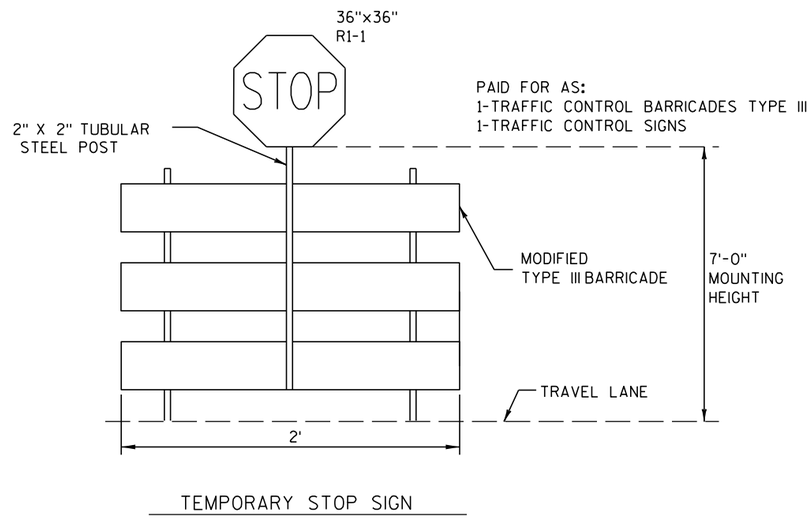
101105

ENTRANCE RAMP CLOSURE



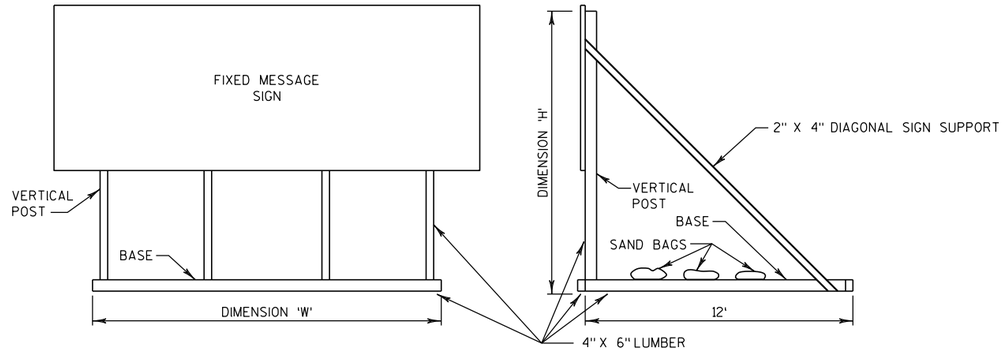
TYPICAL TEMPORARY TRAFFIC CONTROL DETAIL
MOUNTING ON FIXED SUPPORT

LONG TERM
7 DAYS OR MORE



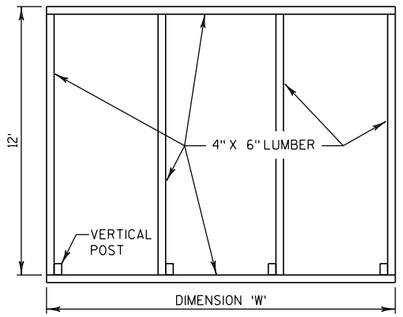
TEMPORARY STOP SIGN

FIXED MESSAGE SIGN PORTABLE SUPPORT SPECIAL



FRONT VIEW

SIDE VIEW

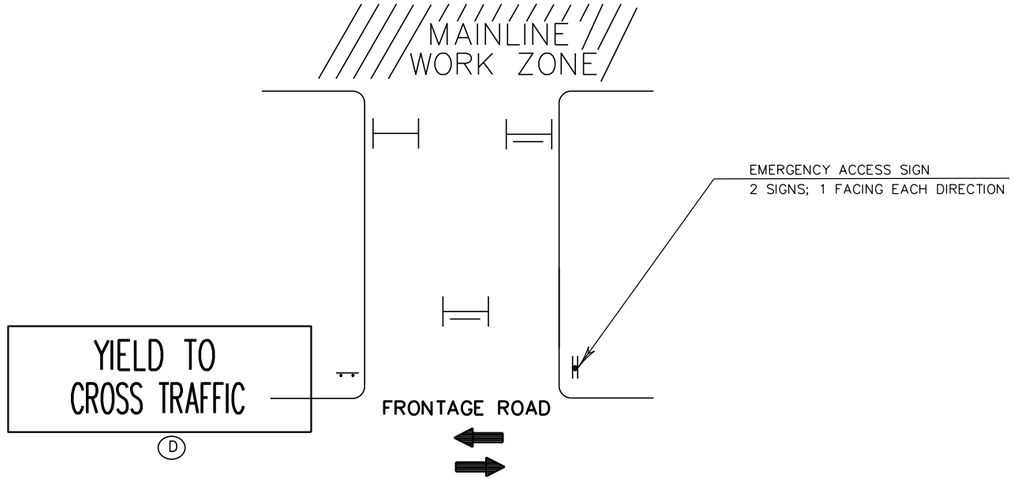


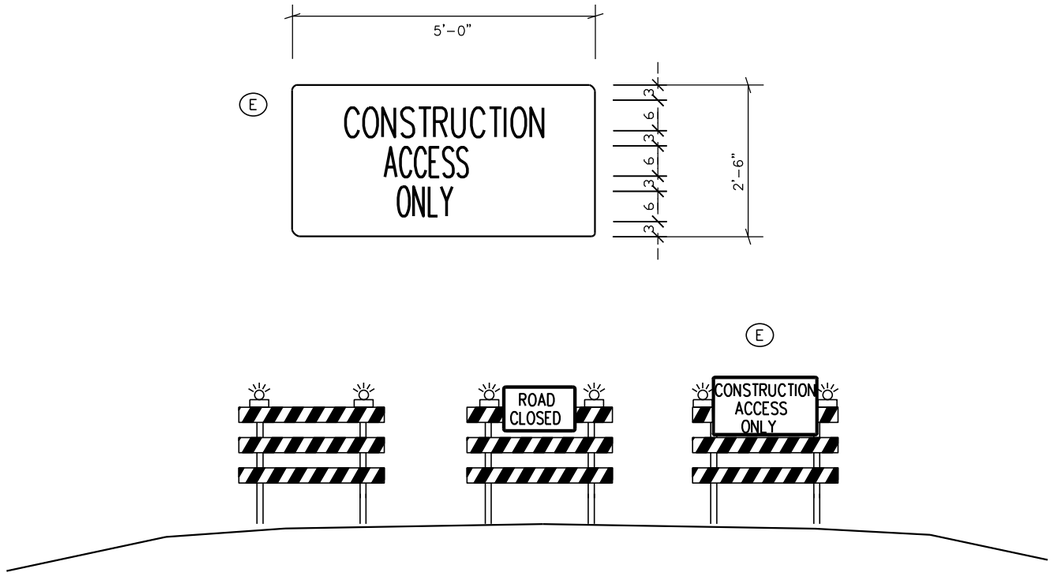
BASE PLAN VIEW

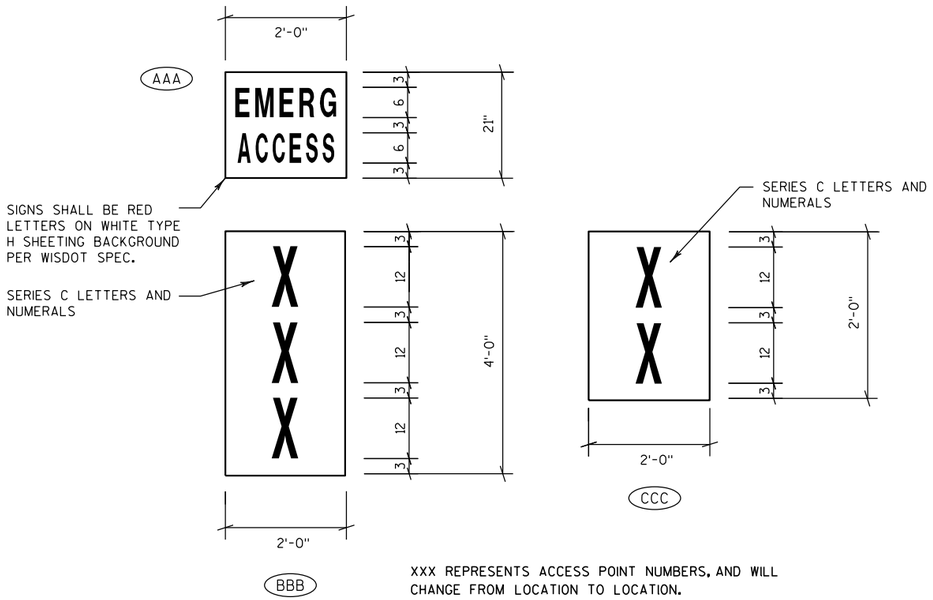
NOTES

1. SEE TRAFFIC CONTROL SHEETS FOR SIGN LOCATIONS.
2. TWO DIAGONAL SUPPORTS SHALL BE INCLUDED AND AFFIXED TO THE OUTSIDE SUPPORTS.
3. DIAGONAL SUPPORTS, VERTICAL POSTS AND BASE LUMBER ARE ALL INCLUDED IN THE "FIXED MESSAGE SIGN PORTABLE SUPPORT" ITEM.
4. PROVIDE AN ADEQUATE NUMBER OF SAND BAGS TO HOLD THE SIGN IN PLACE. SAND BAGS ARE INCLUDED IN THE "FIXED MESSAGE SIGN PORTABLE SUPPORT" ITEM.
5. SEE "TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS" SIGN PLATE FOR ADDITIONAL REQUIREMENTS.

NOTE,
THIS INSTALLATION METHOD ONLY ALLOWED
WHEN BEHIND BARRIER WALL OR GUARDRAIL
WHERE POSTS CANNONT BE INSTALLED INTO GROUND







EMERGENCY ACCESS SIGNS

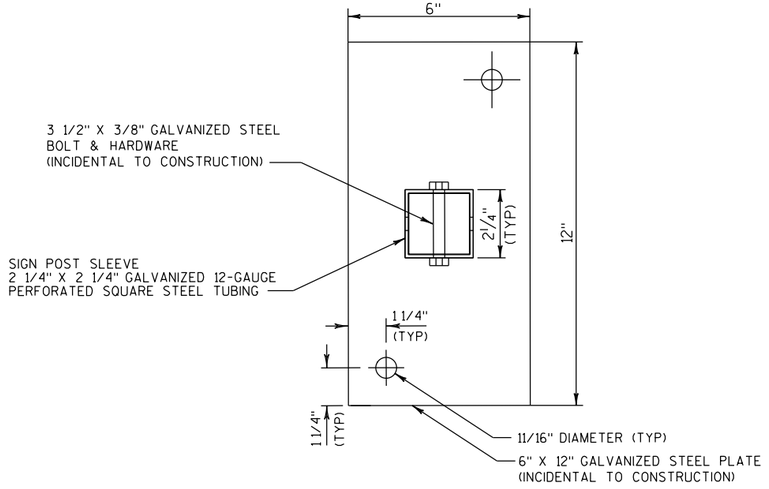
NOTES

1. AFTER SIGNS HAVE BEEN LOCATED IN THE FIELD, BUT BEFORE INSTALLATION, THE SIGNING AND MARKING SUPERVISOR SHALL VERIFY EACH SIGN LOCATION.
2. ALL SIGNS TO BE MOUNTED ON WOODEN POST SUPPORTS (4"x6"). THE NUMBER OF POSTS REQUIRED FOR EACH LAYOUT IS SHOWN. STEEL POSTS (2"X2") MAY BE USED FOR SIGNS ON SURFACE STREETS. SIGNS WHERE NO POSTS ARE SHOWN TO BE MOUNTED ON EXISTING SIGNS. FOR SIGNS MOUNTED ON POSTS, USE POSTS FROM FHWA LIST OF ACCEPTED BREAKAWAY SIGN SUPPORTS.
3. SIGNS ON THIS SHEET TO BE PAID UNDER THE ITEM "TRAFFIC CONTROL SIGNS FIXED MESSAGE".
4. SIGNS SHALL BE BLACK NON-REFLECTIVE MESSAGE ON ORANGE TYPE F REFLECTIVE BACKGROUND UNLESS OTHERWISE NOTED.
5. ALL SIGNS SHALL HAVE CAPITAL LETTERS AND NUMERALS: 12" AND 8" CAPS SHALL BE SERIES "D", 6" CAPS SHALL BE SERIES "C" UNLESS OTHERWISE NOTED.
6. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO ENGINEER FOR REVIEW PRIOR TO MANUFACTURING.
7. SIGN BASE MATERIAL SHALL BE ACCORDING TO SECTION 637.2.1.2..
8. DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED.

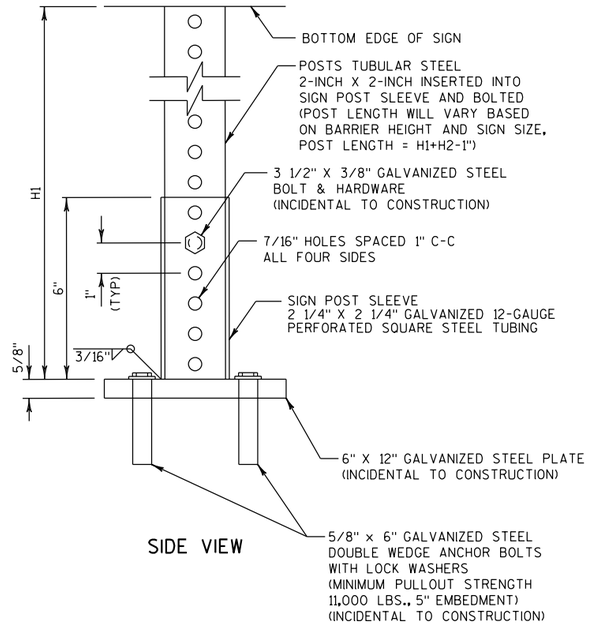
(XXX) = FIXED MESSAGE SIGN NUMBER

WORK ZONE INGRESS/EGRESS
FRONTAGE ROAD

PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	TEMPORARY TRAFFIC CONTROL DETAIL	SHEET 68	E

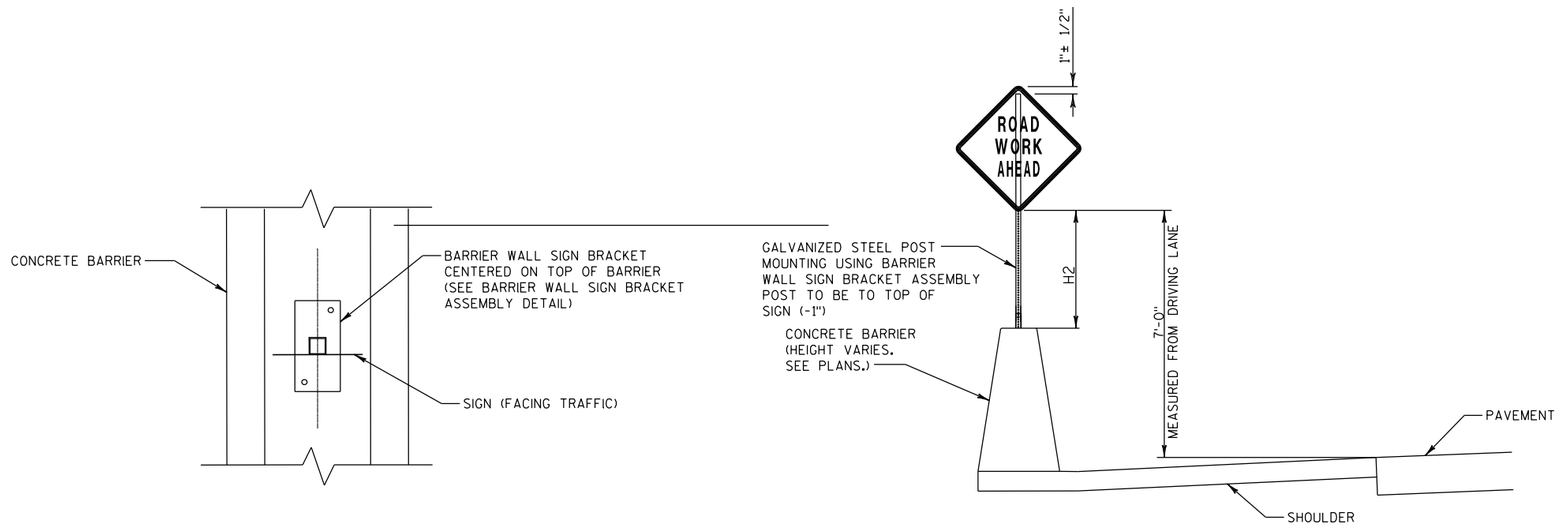


PLAN VIEW



SIDE VIEW

BARRIER WALL SIGN BRACKET ASSEMBLY DETAIL



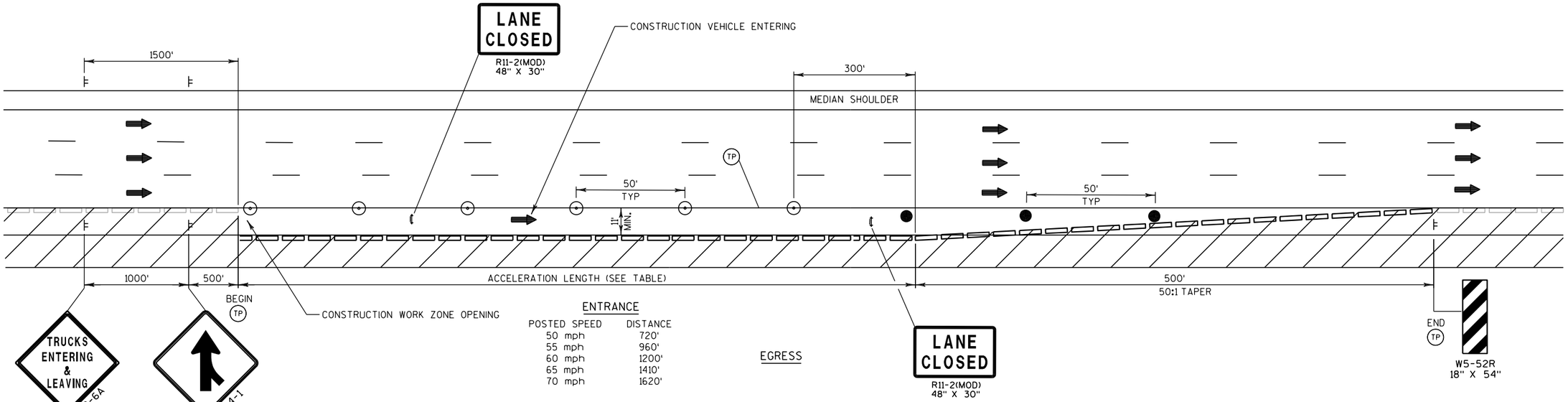
PLAN VIEW

SIDE VIEW

MEDIAN BARRIER MOUNTING DETAIL

MOUNTING SIGNS TO MEDIAN BARRIER

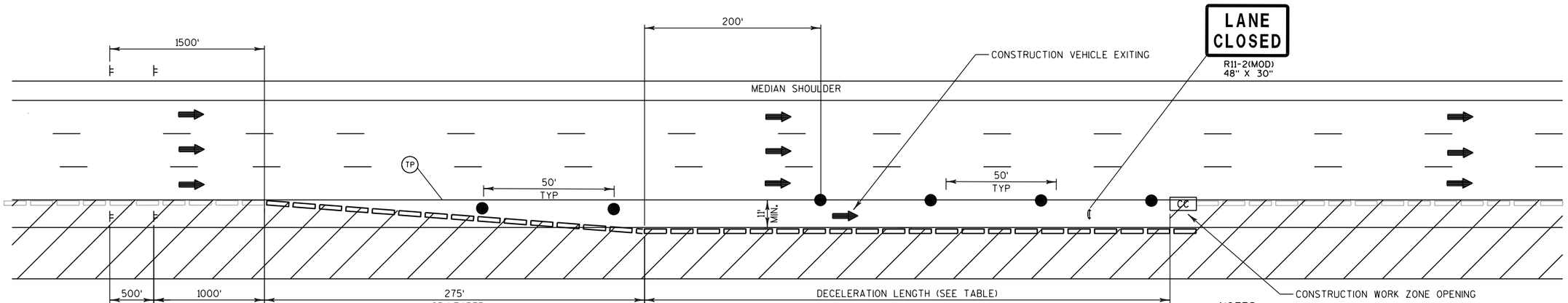
NOT TO SCALE



ENTRANCE

POSTED SPEED	DISTANCE
50 mph	720'
55 mph	960'
60 mph	1200'
65 mph	1410'
70 mph	1620'

EGRESS



INGRESS

EXIT

POSTED SPEED	DISTANCE
50 mph	435'
55 mph	480'
60 mph	530'
65 mph	270'
70 mph	615'

LEGEND

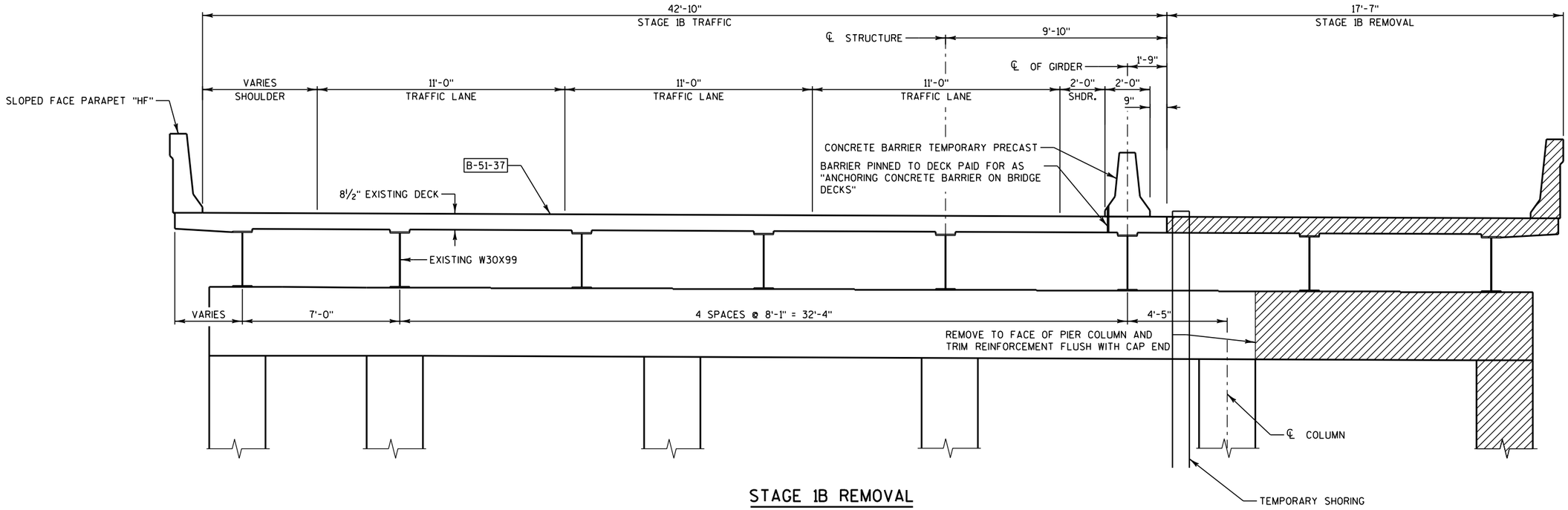
- CONCRETE BARRIER TEMPORARY PRECAST
- EXISTING CONCRETE BARRIER TEMPORARY PRECAST
- DIRECTION OF TRAFFIC
- WORK ZONE
- CC — CRASH CUSHION TEMPORARY
- SIGN ON TEMPORARY SUPPORT
- SIGN MOUNTED ON PERMANENT POST(S)
- TRAFFIC CONTROL BARRICADE TYPE III W/ SIGN (USED WHEN INGRESS/EGRESS NOT IN USE)
- TRAFFIC CONTROL DRUMS (USED WHEN EGRESS/INGRESS NOT IN USE)
- TP — TEMPORARY MARKING LINE EPOXY 4-INCH (WHITE, SOLID) (USE YELLOW, SOLID FOR MEDIAN INGRESS/EGRESS)

NOTES

1. RIGHT LANE ACCESS SHOWN (MEDIAN LANE ACCESS SIMILAR).
2. WORK ZONE INGRESS/EGRESS LOCATIONS SHALL BE APPROVED BY THE ENGINEER. LOCATIONS FOR WORK ZONE ACCESS TO/FROM THE FREEWAY SHALL NOT BE USED FOR INGRESS AND EGRESS AT THE SAME TIME.
3. THE EXACT NUMBER, LOCATION AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.
4. TEMPORARY SUPPORTS MAYBE USED IF PLACED BEHIND TEMPORARY BARRIER WALL.
5. ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.
6. THE "WO" SIGNS ARE THE SAME AS "W" SIGNS.
7. TRUCKS SHALL USE FLASHING YELLOW BEACON WHEN ENTERING AND EXITING LIVE TRAFFIC.
8. FREE FLOW TRAFFIC LANES SHALL BE A MINIMUM WIDTH OF ELEVEN FEET AND ACCOMMODATE A ONE FOOT SHY DISTANCE FROM TRAFFIC CONTROL DEVICES.
9. ITEMS ON THIS SHEET TO BE PAID USING STANDARD BID ITEMS.

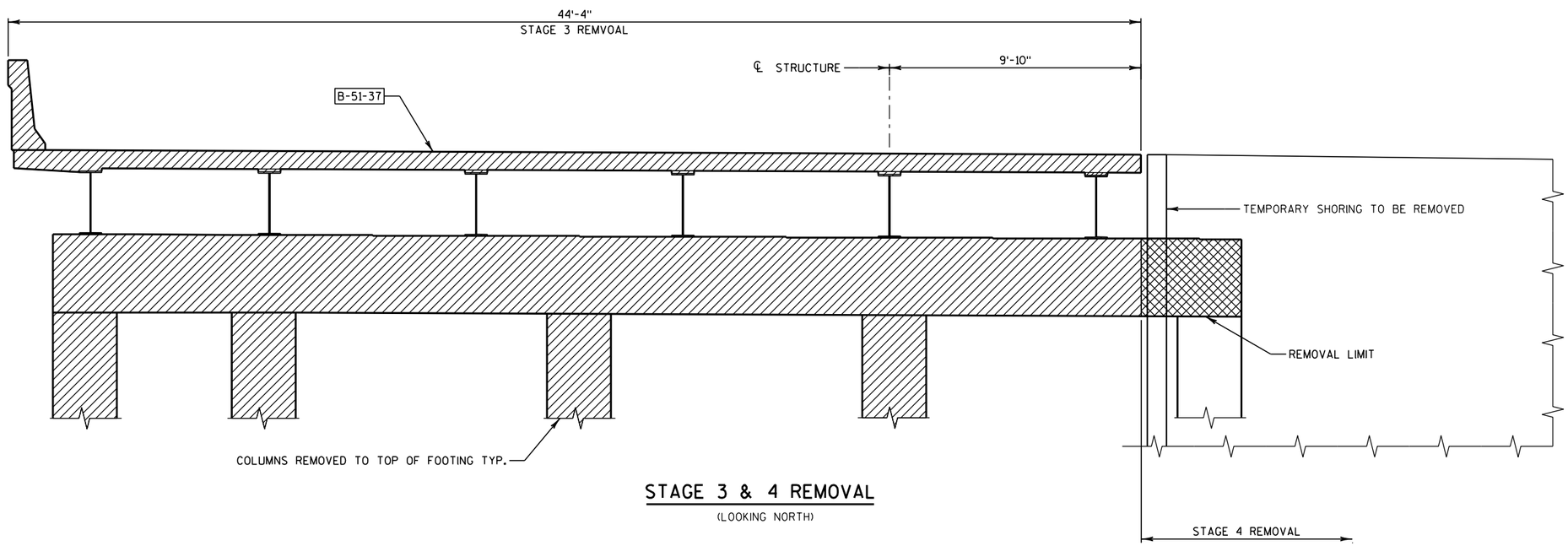
WORK ZONE INGRESS/EGRESS - 6 LANE

PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	TEMPORARY TRAFFIC CONTROL DETAIL	SHEET 70	E



STAGE 1B REMOVAL

(LOOKING NORTH)



STAGE 3 & 4 REMOVAL

(LOOKING NORTH)

PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	TEMPORARY TRAFFIC CONTROL DETAIL	SHEET 71	E

FILE NAME : Z:\Racine\CADDS\22\22M\CDS\021001_cd-TrafficControl.dgn PLOT DATE : 6/11/2018 PLOT BY : dks PLOT NAME : $FILE$ PLOT SCALE : 1:200

WISDOT/CADDS SHEET 42

2

APPLICABLE TO ALL TRAFFIC CONTROL SHEETS IN THIS PLAN SET.

2

GENERAL NOTES FOR CONSTRUCTION STAGING AND TRAFFIC CONTROL

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

2. A FLAGGER MAY BE REQUIRED WHERE CONSTRUCTION VEHICLES ENTER OR LEAVE WORK AREAS OF WARRANTED BY CONDITIONS OR AS DIRECTED BY THE ENGINEER. FLAGGNG IS NOT PERMITTED ON FREEWAY LANES.

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

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

5. TRAFFIC CONTROL DRUMS IN TAPERS, SHALL BE EQUIPPED WITH TRAFFIC CONTROL WARNING LIGHTS, TYPE "C". ONE WAY LIGHTS IN TAPERS ONLY, UNLESS OTHERWISE SHOWN. DRUMS SHALL BE SPACED AT 25-FT OC IN TAPERS AND 50-FT OC ON TANGENTS OR AS OTHERWISE SHOWN.

6. ALL TYPE III BARRICADES SHALL BE 8' WIDE, UNLESS OTHERWISE NOTED, AND EQUIPPED WITH TWO TYPE "A" (LOW INTENSITY FLASHING) LIGHTS.

7. DIMENSIONS TO CONCRETE BARRIER TEMPORARY PRECAST ARE TO THE FACE OF BARRIER ADJACENT TO TRAFFIC STATION CALL-OUTS TO CONCRETE BARRIER TEMPORARY PRECAST ARE TO THE FACE OF BARRIER.

8. WORK AREAS SHOWN MAY NOT ILLUSTRATE ALL REMOVALS. SEE REMOVAL SHEETS FOR ADDITIONAL INFORMATION.

9. ALL TRAFFIC CONTROL SIGNS LOCATED IN MEDIANS SHALL BE MOUNTED ON CONCRETE BARRIER UNLESS OTHERWISE NOTED. SEE TRAFFIC CONTROL DETAILS.

10. WHEN A SEGMENT OF THE PROJECT IS NOT SHOWN ON THE STAGING PLANS, USE THE SAME TRAFFIC CONTROL AS THE PREVIOUS STAGE FOR THAT SEGMENT.

11. ALL EXISTING CONFLICTING PAVEMENT MARKING SHALL BE REMOVED.

12. 16" X 16" ORANGE FLAGS SHALL BE INCIDENTAL TO TRAFFIC CONTROL SIGN BID ITEM.

13. TEMPORARY RAISED PAVEMENT MARKERS WHERE SHOWN SHALL BE PLACED AS WEATHER PERMITS OR AS DIRECTED BY THE ENGINEER.

14. BARRICADE STRIPES ARE TO BE SLOPED DOWNWARD IN THE DIRECTION OF TRAFFIC FLOW.

15. CONCRETE BARRIER TEMPORARY PRECAST SHALL BE ANCHORED DOWN AS SHOWN IN CONSTRUCTION DETAILS.

16. ALL SIGNS, TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE COVERED OR REMOVED AS NEEDED AND/OR AS DIRECTED BY THE ENGINEER. IN LIEU OF COVERING WOOD POST MOUNTED SIGNS, THE CONTRACTOR MAY CHOOSE TO REMOVE AND REINSTALL THEM.

17. CONTRACTOR SHALL INSTALL PERMANENT SIGNS AND PERMANENT PAVEMENT MARKING WHEN APPROPRIATE DURING CONSTRUCTION STAGING AS SHOWN ON PLANS OR AS DIRECTED BY THE ENGINEER.

18. FOR A LANE CLOSURE THAT IS IN PLACE FEWER THAN 7 CONTINUOUS DAYS AND NIGHTS, THE ADVANCED WARNING SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS. SIGNS MUST BE PLACED AT THE HEIGHT SHOWN IN THE MUTCD.

19. ALL SUBSEQUENT MOVING OF FMS SIGNS AFTER INITIAL INSTALLATION, INCLUDING ALL ASSOCIATED LABOR AND MATERIALS, SHALL BE INCLUDED IN THE COST OF THE 643.5000 "TRAFFIC CONTROL" ITEM.

20. CONFORM TO THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR DETAILS OF THE TRAFFIC CONTROL DEVICES AND INSTALLATION NOT SHOWN ON THIS DRAWING.

TRAFFIC CONTROL LEGEND

‡	TYPE III BARRICADE WITH TWO LIGHTS TYPE A		CONCRETE BARRIER TEMPORARY PRECAST (CBTP)
			EXISTING CONCRETE BARRIER TEMPORARY PRECAST (CBTP)
‡	TYPE III BARRICADE WTH ATTACHED SIGN		WORK AREA
●	TRAFFIC CONTROL DRUM		
	TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT		TEMPORARY PAVEMENT
	FLASHING ARROW BOARD	◇ ◇	FLAGS, 16" X 16" MIN., (ORANGE)
	SIGN ON PERMANENT SUPPORT	➡	DIRECTION OF TRAFFIC
	SIGN ON TEMPORARY SUPPORT	PCMS	PORTABLE CHANGEABLE MESSAGE BOARD
	FIXED MESSAGE SIGN GROUND MOUNT	CC	CRASH CUSHION TEMPORARY
⊙	TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER POSTS/BASES	CC	EXISTING CRASH CUSHION TEMPORARY
GS	GLARE SCREEN TEMPORARY	TBC	TEMPORARY THRIE BEAM CONNECTION (INCIDENTAL)

TEMPORARY PAVEMENT MARKING LEGEND

(45) TEMPORARY MARKING REMOVABLE TAPE 4-INCH (YELLOW)

(46) TEMPORARY MARKING REMOVABLE TAPE 4-INCH (WHITE)

(51) TEMPORARY MARKING REMOVABLE TAPE 4-INCH (DASHED WHITE) (12.5 FT LINE 37.5 FT SKIP)

(239) TEMPORARY MARKING LINE EPOXY 4-INCH (YELLOW)

(240) TEMPORARY MARKING LINE EPOXY 4-INCH (WHITE)

(241) TEMPORARY MARKING LINE EPOXY 4-INCH (DASHED WHITE) (12.5 FT LINE 37.5 FT SKIP)

2

N

7 MILE ROAD

W. COUNTY LINE RD.

ROOT RIVER

BEGIN PROJECT
I.D. 1035-01-82
STA 1268+00 = MATCH
PROJECT I.D. 1035-01-74

PERMANENT RAMP CLOSURE

4260 4270 WEST FRONTAGE ROAD 4280 4290

1240 1250 1260 IH 94 SB 1270 1280

IH 94 NB

5260 5270

SB ENTRANCE RAMP

EAST FRONTAGE ROAD

5250

S 27TH STREET 4300

1290

NB EXIT RAMP

END PROJECT
I.D. 1035-01-82
STA 1293+00.00 BK=
STA 131+34.26 AH
MATCH PROJECT
I.D. 1030-20-87

PERMANENT RAMP CLOSURE

09

7 1/2 MILE ROAD

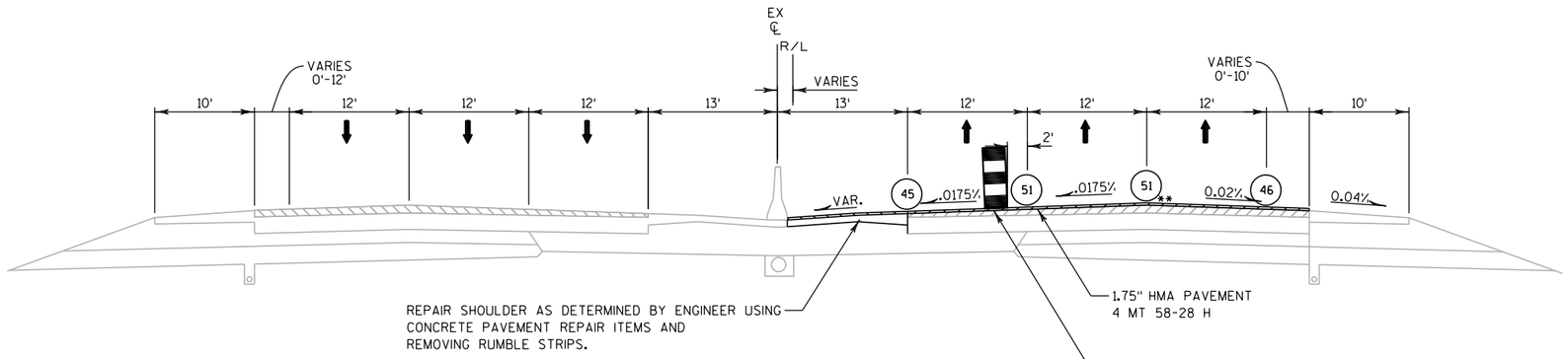
STAGE 1A

CONSTRUCTION
-REMOVE NB MEDIAN SHOULDER RUMBLE STRIPS
-REMOVE PARTIAL MEDIAN BARRIER
-REMOVE STRUCTURE S-51-206
-CONSTRUCT ASPHALT SHOULDER WEDGE
-CONSTRUCT NB MEDIAN SHOULDER REPAIR
-OVERLAY TRAVEL LANES & MEDIAN SHOULDER
-CONSTRUCT WEST FRONTAGE ROAD

TRAFFIC
-IH 94 REMAINS OPEN
(NB AND SB NIGHT TIME LANE CLOSURES)
-SB ENTRANCE RAMP AND NB EXIT RAMP ARE PERMANENTLY CLOSED
-7 1/2 MILE ROAD REMAINS OPEN
-EAST FRONTAE ROAD REMAINS OPEN
-WEST FRONTAGE ROAD CLOSED

WORK ZONE

PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	CONSTRUCTION OVERVIEW- STAGE 1A	SHEET 73	E



**CROWN POINT LOCATION VARIES

NB IH 94
37'RT AT STA. 1268+00 TO
25'RT AT STA. 1272+00

TYPICAL SECTION STAGE 1A

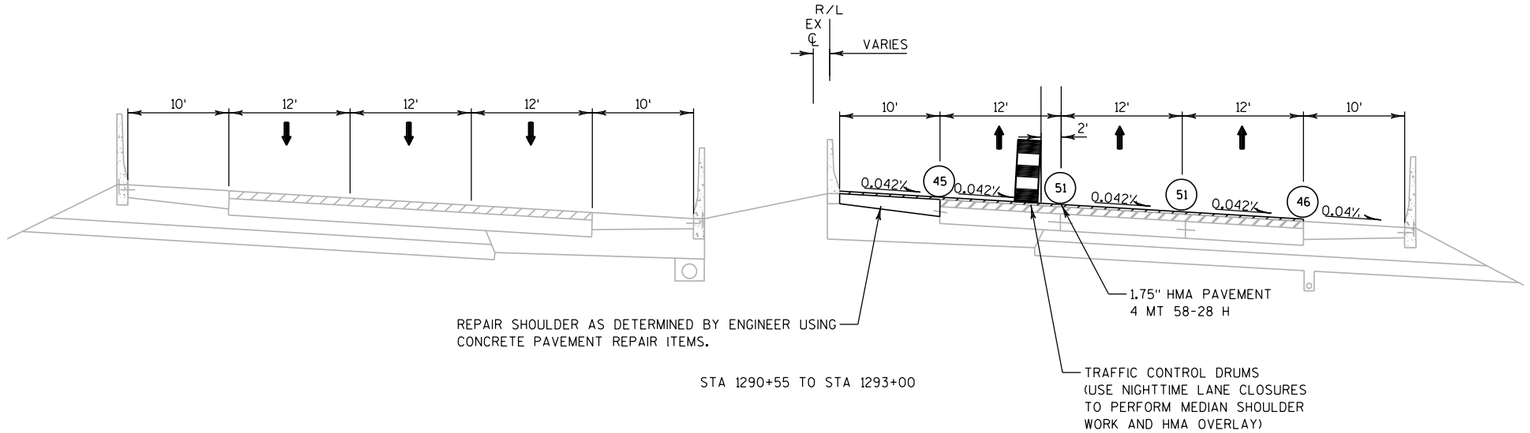
IH 94

STA 1268+00 TO STA 1273+00

*
MOVE MILE MARKER SIGNS FROM MEDIAN BARRIER TO TEMPORARY BARRIER OR OTHER LOCATIONS SHOWN ON STAGING DETAILS (EVEN 2/10 MILE ONLY).

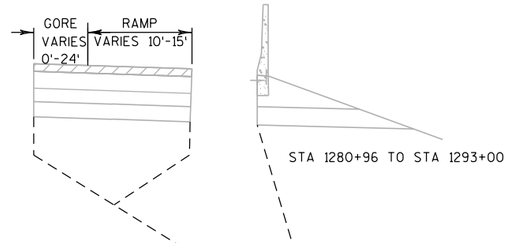
PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	TRAFFIC CONTROL TYPICAL SECTIONS - STAGE 1A	SHEET 74	E

2

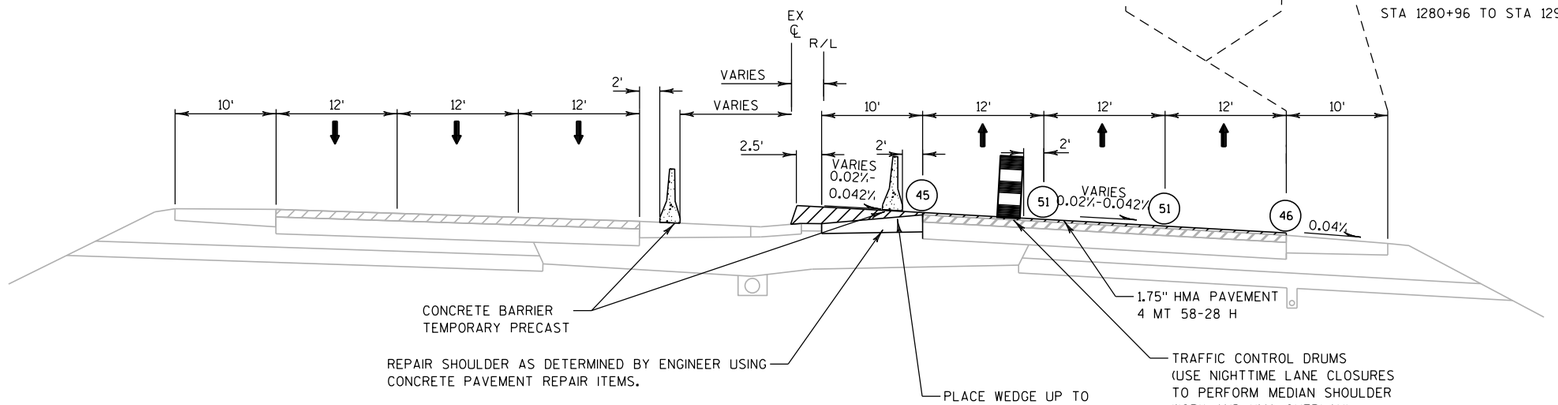


STA 1290+55 TO STA 1293+00

STA 1273+00 TO STA 1278+02



STA 1280+96 TO STA 1293+00



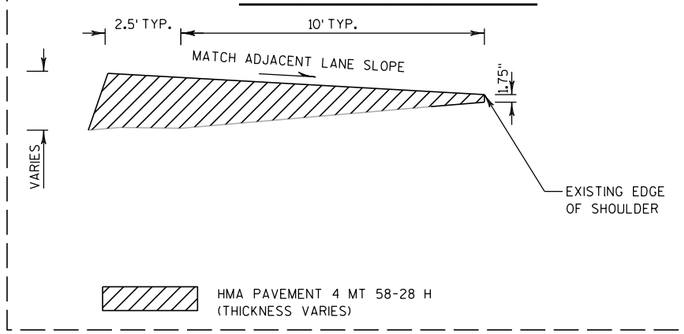
TYPICAL SECTION STAGE 1A

IH 94

STA 1273+00 TO STA 1289+07

*
MOVE MILE MARKER SIGNS FROM MEDIAN BARRIER TO TEMPORARY BARRIER OR OTHER LOCATIONS SHOWN ON STAGING DETAILS (EVEN 2/10 MILE ONLY).

SHOULDER WEDGE DETAILS



PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	TRAFFIC CONTROL TYPICAL SECTIONS - STAGE 1A	SHEET 75	E

FMS ON GROUND MOUNTED SUPPORTS

GAS - CAMPING
EXIT 326
MOBIL
JELLYSTONE

102

FMS ON GROUND MOUNTED SUPPORTS

SEVEN MILE RD 1/4
COUNTY G 1 3/4
COUNTY K 3 3/4

100

N

R/L WEST FRONTAGE ROAD

4268 4270 4272 4274 4276 4278 4280 428

WEST FRONTAGE ROAD

BEGIN PROJECT 1035-01-82
END PROJECT 1035-01-74
STA 1268+00.00

+00
49.00' LT

50' TYP

R/L IH 94

+66.0
49.00' LT

SB ENTRANCE RAMP

IH 94 SB

IH 94 NB

1266 1268 1270 1272 1274 1276 1278

100' TYP

25' TYP

+27.8
49.00' RT

ADJUSTING
INLET COVERS

FASTEN SEWER
ACCESS COVERS

INSTALL CONCRETE BARRIER
TEMPORARY PRECAST

+22.2
49.00' RT

WEDGE
SHOULDER

NB EXIT RAMP

MATCHLINE 1279+50

PLACE AT
STATION
1245+00

RAMP
CLOSED
AHEAD

PLACE AT
STATION 1260+00

RAMP
CLOSED
1000 FT

W20-3(MOD)

5266 5268 5270 5272 5274 5276

EAST FRONTAGE ROAD

R/L EAST
FRONTAGE ROAD

W21-62O
48" X 30"

WORK
ZONE

SPEED
LIMIT
60

FINES
DOUBLE

W21-62R
48" X 30"

R2-1
48" X 60"

LANE
CLOSED

R11-2(MOD)
48" X 30"

EAST
94
MILE
325
.4

D10-5
21" X 60"

WEST
94
MILE
325
.4

D10-5
21" X 60"

R/L 7 1/2 MILE ROAD

7 1/2 MILE ROAD

RAMP
CLOSED

R11-2(MOD)
48" X 30"

INSTALL COVER
PLATES TEMPORARY

SEE PROJECT 1035-01-74
FOR ADDITIONAL TRAFFIC
CONTROL

PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	TRAFFIC CONTROL STAGE 1A	SHEET 76	E

FILE NAME : Z:\Racine\CADDS\22\22M\CDS\025002_tc1A_.dgn PLOT DATE : 6/11/2018 PLOT BY : dks PLOT NAME : PLOT SCALE : 1:100

WISDOT/CADDS SHEET 42

2

N

R/L WEST FRONTAGE ROAD

WEST FRONTAGE ROAD

4282 4284 4286 4288 4290 4292 4294 4296

27TH STREET

SB ENTRANCE RAMP

EAST 94 MILE 325 .2
D10-5 21" X 60"

WEST 94 MILE 325 .2
D10-5 21" X 60"

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

MATCHLINE 1279+50

1280 1282 1284 1286 1288 1290 1292

100' TYP

100' TYP

INSTALL COVER PLATES TEMPORARY

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

WEDGE SHOULDER

INSTALL COVER PLATES TEMPORARY

INSTALL CONCRETE BARRIER TEMPORARY PRECAST

R/L IH 94

INSTALL COVER PLATES TEMPORARY

CC

NB EXIT RAMP

ESTR ESTR ESTR

RACINE CO

EAST 94 MILE 325 0
D10-5 21" X 60"

WEST 94 MILE 325 0
D10-5 21" X 60"

IH 94 SB

IH 94 NB

W21-62O
48" X 30"
WORK ZONE
SPEED LIMIT 60
FINES DOUBLE
W21-62R
48" X 30"

R2-1
48" X 60"

SEE PROJECT 1030-20-87
FOR ADDITIONAL
TRAFFIC CONTROL

END PROJECT
1035-01-82
STA 1293+00.00 BK=
STA 131+34.26 AH

PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	TRAFFIC CONTROL STAGE 1A	SHEET 77	E

PLACE AT
WEST 7 MILE ROAD

ROAD CLOSED
1 MILES AHEAD
LOCAL TRAFFIC ONLY
R11-3
60" X 30"

ROAD CLOSED 1000 FT
W20-3

ROAD CLOSED 500 FT
W20-3

500'

PLACE 500 FT
IN ADVANCE OF
ROAD CLOSED BARRICADES

ROAD CLOSED
R11-2
48" X 30"

4286 WEST FRONTAGE ROAD 4288

R/L WEST FRONTAGE ROAD

SEE SDD "BARRICADES AND SIGNS FOR MAINLINE CLOSURES"

SB ENTRANCE RAMP

4290
4292
4292
4294
4294
4296
4296

1284
1286
1288
1290
1292

R/L IH 94

IH 94 SB
IH 94 NB

134
136

N

ROOT RIVER

W 8 MILE RD

PLACE 500 FT
IN ADVANCE OF
ROAD CLOSED BARRICADES

ROAD CLOSED 500 FT
W20-3C

ROAD CLOSED 1000 FT
W20-3C

500'

PLACE AT
WEST OAKWOOD RD

ROAD CLOSED
9 MILES AHEAD
LOCAL TRAFFIC ONLY
R11-3
60" X 30"

1500'

ROAD CLOSED AHEAD
W20-3

4298
4300

27TH STREET

ROOT RIVER

STOP
R3-1
24" X 24"
PLACE ON
EXISTING POST

ROAD CLOSED
R11-2
48" X 30"

SEE SDD "BARRICADES AND SIGNS FOR MAINLINE CLOSURES"

2

PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	TRAFFIC CONTROL STAGE 1A - WEST FRONTAGE ROAD	SHEET 78	E

2

CONTRACTOR MAY WIDEN STRUCTURE B-51-37 IN STAGE 1B TO ACCOMODATE STAGE 2 TRAFFIC IN LIEU OF PARTIAL BRIDGE REMOVAL, TEMPORARY SHORING AND EMBANKMENT CONSTRUCTION AS SHOWN ON THE PLANS. NO ADDITIONAL COMPENSATION WILL BE CONSIDERED FOR THIS CHANGE IN OPERATIONS. NOTIFY THE ENGINEER PRIOR TO IMPLEMENTING ANY CHANGES TO THE STAGING AS SHOWN ON THE PLANS. PROVIDE STRUCTURE PLANS AND REVISED TRAFFIC CONTROL PLANS TO THE ENGINEER FOR APPROVAL.

N

7 MILE ROAD

W. COUNTY LINE RD.

ROOT RIVER

BEGIN PROJECT
I.D. 1035-01-82
STA 1268+00 = MATCH
PROJECT I.D. 1035-01-74

1240 1250 1260 1270 1280 1290 4300

4260 4270 4280 4290

5260 5270 5250

IH 94 SB

IH 94 NB

WEST FRONTAGE ROAD

EAST FRONTAGE ROAD

S 27TH STREET

7 1/2 MILE ROAD

END PROJECT
I.D. 1035-01-82
STA 1293+00.00 BK=
STA 131+34.26 AH
MATCH PROJECT
I.D. 1030-20-87

ROOT RIVER

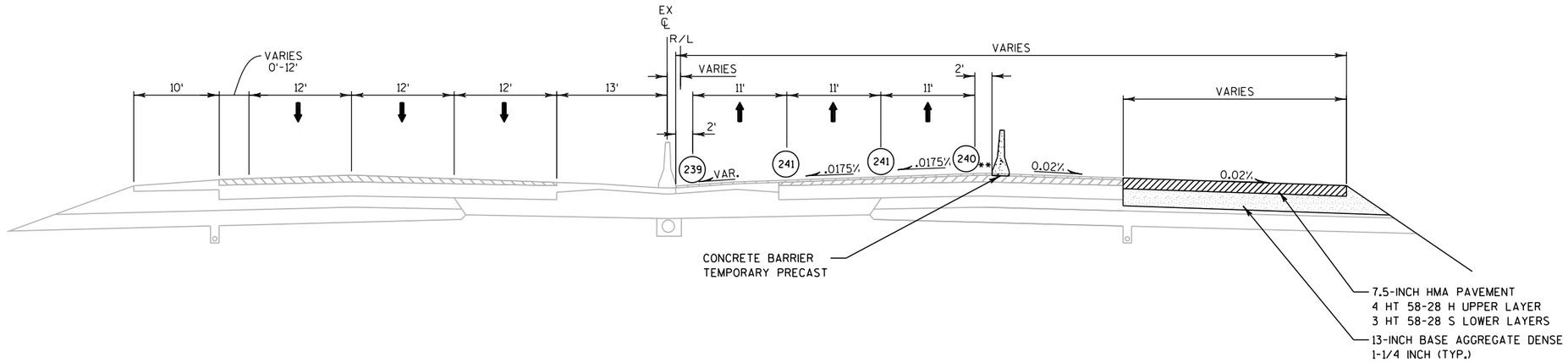
STAGE 1B

CONSTRUCTION
-REMOVE EXISTING NB OUTSIDE SHOULDER
-REMOVE PARTIAL STRUCTURE B-51-37
-CONSTRUCT NB TEMPORARY WIDENING
-CONSTRUCT EAST FRONTAGE ROAD CUL DE SAC

TRAFFIC
-IH 94 REMAINS OPEN
-EAST FRONTAGE ROAD REMAINS OPEN
-SB ENTRANCE RAMP AND NB EXIT RAMP PERMANENTLY CLOSED
-7 1/2 MILE ROAD REMAINS OPEN
-WEST FRONTAGE ROAD/27TH STREET REMAINS OPEN

WORK ZONE

PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	CONSTRUCTION OVERVIEW- STAGE 1B	SHEET 79	E



**CROWN POINT LOCATION VARIES

NB IH 94
37'RT AT STA. 1268+00 TO
25'RT AT STA. 1272+00

TYPICAL SECTION STAGE 1B

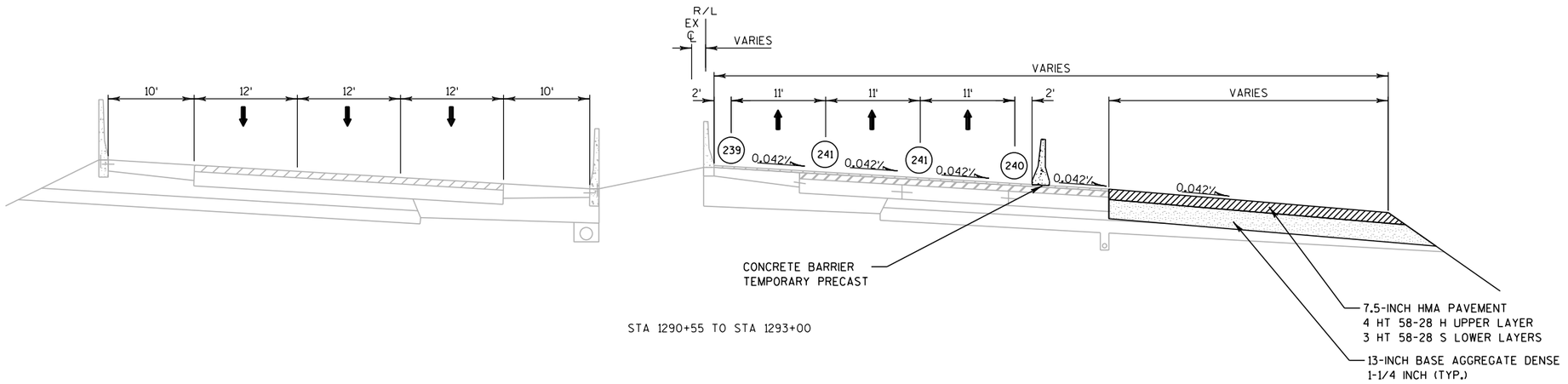
IH 94

STA 1268+00 TO STA 1273+00

*
MOVE MILE MARKER SIGNS FROM MEDIAN BARRIER TO TEMPORARY BARRIER OR OTHER LOCATIONS SHOWN ON STAGING DETAILS (EVEN 2/10 MILE ONLY).

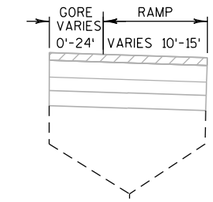
PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	TRAFFIC CONTROL TYPICAL SECTIONS - STAGE 1B	SHEET 80	E

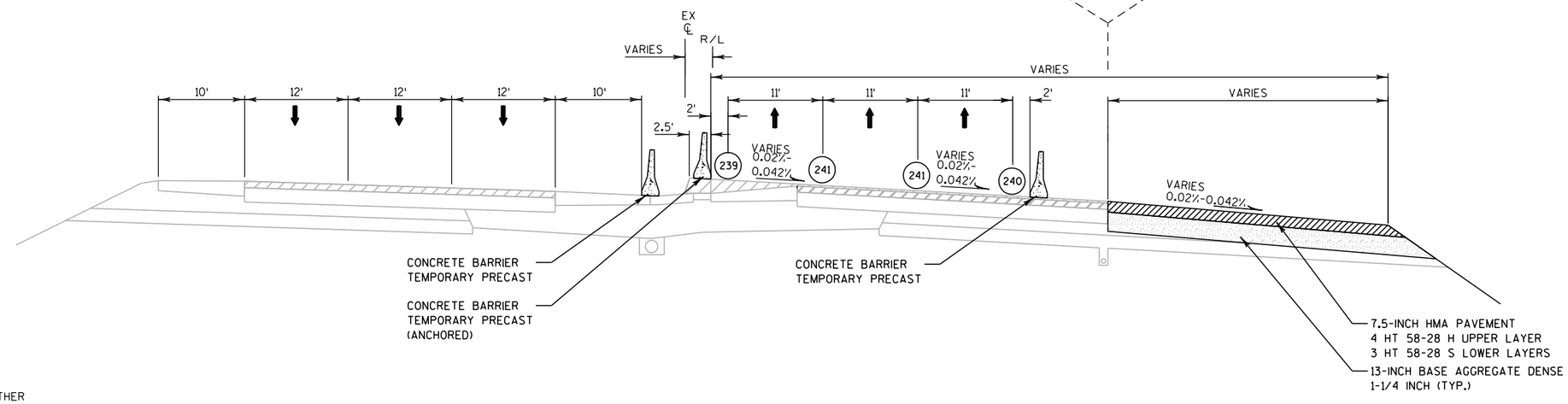
FILE NAME : Z:\Racine\CADDS\22\22M\CDS\025001_tc_s1B.dgn PLOT DATE : 6/11/2018 PLOT BY : dks PLOT NAME : $FILE$ PLOT SCALE : 1:15



STA 1290+55 TO STA 1293+00

STA 1273+00 TO STA 1278+02





*
MOVE MILE MARKER SIGNS FROM MEDIAN BARRIER TO TEMPORARY BARRIER OR OTHER LOCATIONS SHOWN ON STAGING DETAILS (EVEN 2/10 MILE ONLY).

TYPICAL SECTION STAGE 1B

IH 94

STA 1273+00 TO STA 1289+07

PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	TRAFFIC CONTROL TYPICAL SECTIONS - STAGE 1B	SHEET 81	E

FMS ON PORTABLE SUPPORTS

GAS - CAMPING
EXIT 327
MOBIL
JELLYSTONE
103

EXISTING FMS FROM PREVIOUS STAGE

SEVEN MILE RD 1/4
COUNTY G 1 3/4
COUNTY K 3 3/4

N

R/L WEST FRONTAGE ROAD

4268 4270 4272 4274 4276 4278 4280 428

WEST FRONTAGE ROAD

BEGIN PROJECT 1035-01-82
END PROJECT 1035-01-74
STA 1268+00.00

IH 94 SB

IH 94 NB

1266 1268 1270 1272 1274 1276 1278

TBC

MATCHLINE 1279+50

SEE PROJECT 1035-01-74
FOR ADDITIONAL TRAFFIC
CONTROL

+00 82' RT

5266 5268 5270 5272 5274 5276

+00 82' RT

INSTALL CONCRETE
BARRIER PRECAST
TEMPORARY (ANCHORED)

+21 85' RT

R/L IH 94

+50 79.5' RT

EAST FRONTAGE ROAD

R/L EAST FRONTAGE ROAD

INSTALL CONCRETE BARRIER
PRECAST TEMPORARY

W21-62O
48" X 30"
WORK ZONE
SPEED LIMIT 60
FINES DOUBLE
R2-1
48" X 60"
W21-62R
48" X 30"

ROAD CLOSED AHEAD
W20-3

EAST 94 MILE 325 .4
D10-5
21" X 60"
MOVE

WEST 94 MILE 325 .4
D10-5
21" X 60"
MOVE

R/L 7 1/2 MILE ROAD

7 1/2 MILE ROAD

ROAD CLOSED
R11-2
48" X 30"

CONSTRUCT CUL DE SAC
DURING STAGE 1B

NOTE:
SEE STANDARD DETAIL DRAWING
"TRAFFIC CONTROL, LANE CLOSURE, SPEEDS
GREATER THAN 40 MPH WITH BARRIER"
FOR IH 94 NB LANE CLOSURE.

*FIELD VERIFY TEMPORARY WIDENING
WIDTH AND ELEVATIONS TO ACCOMODATE
FUTURE STAGES PRIOR TO PAVING.

PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	TRAFFIC CONTROL STAGE 1B	SHEET 82	E

FILE NAME : Z:\Racine\CADDS\22\22M\CDS\025002_tc1B.dgn PLOT DATE : 6/11/2018 PLOT BY : dks PLOT NAME : PLOT SCALE : 1:100

WISDOT/CADDS SHEET 42

2

2

N

WEST FRONTAGE ROAD

R/L WEST FRONTAGE ROAD

4282 4284 4286 4288 4290 4292 4294 4296

MATCHLINE 1279+50

1280 1282 1284 1286 1288 1290 1292

INSTALL CONCRETE BARRIER
PRECAST TEMPORARY (ANCHORED)

INSTALL CONCRETE BARRIER
PRECAST TEMPORARY

MOVE EAST 94 MILE 325 .2
D10-5 21" X 60"

MOVE WEST 94 MILE 325 .2
D10-5 21" X 60"

TEMPORARY SHORING

27TH STREET

ESTR RACINE CO

ESTR EAST 94 MILE 325 0
D10-5 21" X 60"

ESTR WEST 94 MILE 325 0
D10-5 21" X 60"

CC

TBC

END PROJECT
1035-01-82
STA 1293+00.00 BK=
STA 131+34.26 AH

IH 94 SB

IH 94 NB

R/L IH 94

+73
78' RT

104

GAS-FOOD-EXIT 322
KWIK TRIP
LOVE'S - PILOT
MCDONALDS
PERKINS
WENDY'S

FMS ON PORTABLE SUPPORTS

+00
76' RT

EXTEND EXISTING PIPE TO
MAINTAIN DRAINAGE DURING WIDENING

+48
79' RT

ANCHORING CONCRETE
BARRIER ON BRIDGE DECKS

+55
76' RT

W21-62O
48" X 30"
WORK ZONE
SPEED LIMIT 60
FINES DOUBLE
W21-62R
48" X 30"

R2-1
48" X 60"

+00
80' RT

SEE PROJECT 1030-20-87
FOR ADDITIONAL
TRAFFIC CONTROL

*FIELD VERIFY TEMPORARY WIDENING
WIDTH AND ELEVATIONS TO ACCOMODATE
FUTURE STAGES PRIOR TO PAVING.

PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	TRAFFIC CONTROL STAGE 1B	SHEET 83	E

FILE NAME : Z:\Racine\CADDS\22\22M\CDS\025003_tc1B.dgn PLOT DATE : 6/11/2018 PLOT BY : aks PLOT NAME : PLOT SCALE : 1:100

WISDOT/CADDS SHEET 42

2

N

7 MILE ROAD

BEGIN PROJECT
I.D. 1035-01-82
STA 1268+00 = MATCH
PROJECT I.D. 1035-01-74

1240 1250 1260 1270 1280 1290

4260 4270 4280 4290 4300

5250 5260 5270

IH 94 SB

IH 94 NB

WEST FRONTAGE ROAD

EAST FRONTAGE ROAD

S-51-206

W. COUNTY LINE RD.

ROOT RIVER

S 27TH STREET

7 1/2 MILE ROAD

END PROJECT
I.D. 1035-01-82
STA 1293+00.00 BK=
STA 131+34.26 AH
MATCH PROJECT
I.D. 1030-20-87

ROOT RIVER

STAGE 1C

CONSTRUCTION

-SHIFT NORTHBOUND TRAFFIC TO TEMPORARY WIDENING

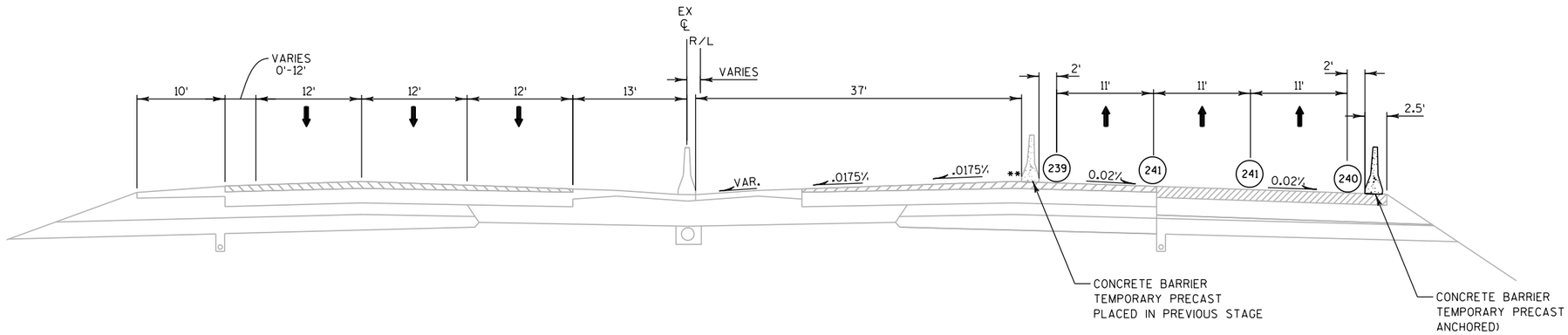
TRAFFIC

-IH 94 REMAINS OPEN
(3 LANES OF NORTHBOUND TRAFFIC ON OUTSIDE LANE AND TEMPORARY WIDENING
-FRONTAGE ROADS REMAIN OPEN
-SB ENTRANCE RAMP AND NB EXIT RAMP PERMANENTLY CLOSED
-7 1/2 MILE ROAD REMAINS OPEN
-27TH STREET REMAINS OPEN

WORK ZONE

PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	CONSTRUCTION OVERVIEW- STAGE 1C	SHEET 84	E

2



**CROWN POINT LOCATION VARIES

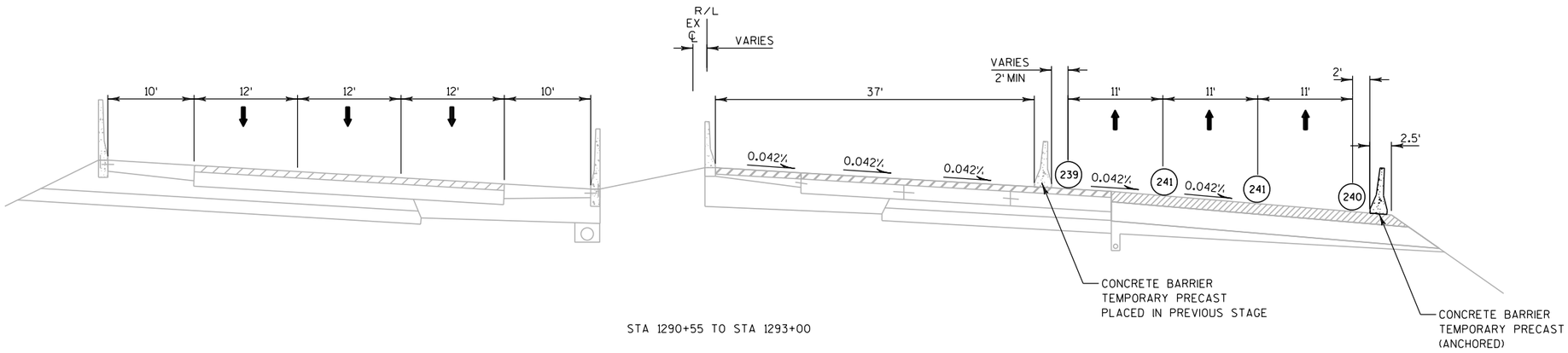
NB IH 94
37'RT AT STA. 1268+00 TO
25'RT AT STA. 1272+00

TYPICAL SECTION STAGE 1C
IH 94

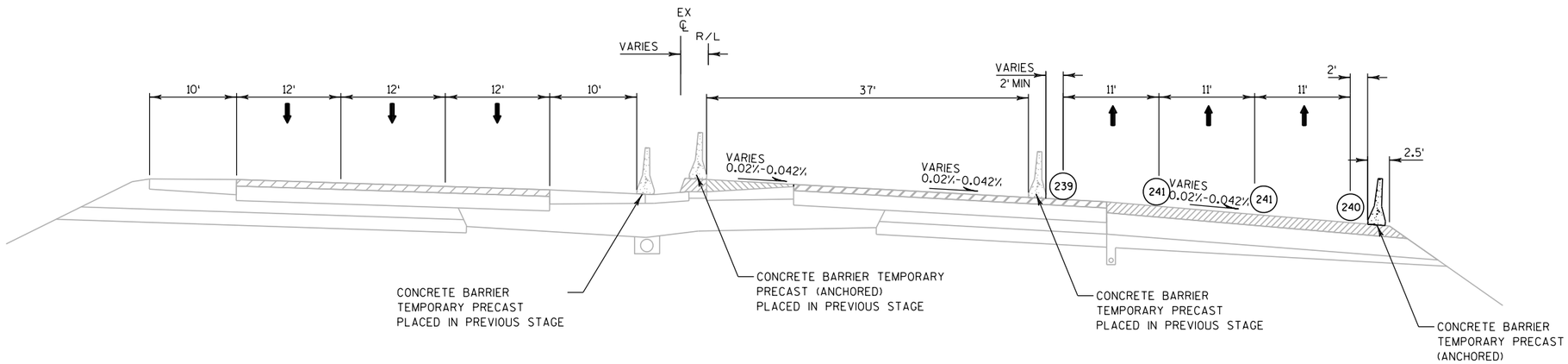
STA 1268+00 TO STA 1273+00

*
MOVE MILE MARKER SIGNS FROM MEDIAN
BARRIER TO TEMPORARY BARRIER OR OTHER
LOCATIONS SHOWN ON STAGING DETAILS
(EVEN 2/10 MILE ONLY).

PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	TRAFFIC CONTROL TYPICAL SECTIONS - STAGE 1C	SHEET 85	E



STA 1290+55 TO STA 1293+00



*
MOVE MILE MARKER SIGNS FROM MEDIAN BARRIER TO TEMPORARY BARRIER OR OTHER LOCATIONS SHOWN ON STAGING DETAILS (EVEN 2/10 MILE ONLY).

STA 1273+00 TO STA 1289+07

TYPICAL SECTION STAGE 1C

IH 94

PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	TRAFFIC CONTROL TYPICAL SECTIONS - STAGE 1C	SHEET 86	E

FMS ON GROUND MOUNTED SUPPORTS

GAS - CAMPING
EXIT 326
MOBIL
JELLYSTONE
102

EXISTING FMS FROM PREVIOUS STAGE

SEVEN MILE RD 1/4
COUNTY G 1 3/4
COUNTY K 3 3/4

N

R/L WEST FRONTAGE ROAD

4268 4270 4272 4274 4276 4278 4280 428

WEST FRONTAGE ROAD

BEGIN PROJECT 1035-01-82
END PROJECT 1035-01-74
STA 1268+00.00

CONCRETE BARRIER TEMPORARY PRECAST TO REMAIN FROM PREVIOUS STAGE

CONCRETE BARRIER TEMPORARY PRECAST (ANCHORED) TO REMAIN FROM PREVIOUS STAGE

IH 94 SB

1266 1268 1270 1272 1274 1276 1278

IH 94 NB

R/L IH 94

MATCHLINE 1279+50

SEE PROJECT 1035-01-74 FOR ADDITIONAL TRAFFIC CONTROL

INSTALL CONCRETE BARRIER TEMPORARY PRECAST (ANCHORED)

5266 5268 5270 5272 5274 5276

EAST FRONTAGE ROAD

R/L EAST FRONTAGE ROAD

W21-620
48" X 30"
WORK ZONE
SPEED LIMIT 60
FINES DOUBLE
W21-62R
48" X 30"

R2-1
48" X 60"

EAST 94 MILE 325 .4
D10-5
21" X 60"
EXISTING SIGN TO REMAIN FROM PREVIOUS STAGE

WEST 94 MILE 325 .4
D10-5
21" X 60"
MOVE

R/L 7 1/2 MILE ROAD

7 1/2 MILE ROAD

PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	TRAFFIC CONTROL STAGE 1C	SHEET 87	E

2

2

N

R/L WEST FRONTAGE ROAD

4282 4284 4286 4288 4290 4292 4294 4296

WEST FRONTAGE ROAD

27TH STREET

EXISTING SIGN TO REMAIN FROM PREVIOUS STAGE

EAST 94 MILE 325 .2 D10-5 21" X 60"

MOVE

WEST 94 MILE 325 .2 D10-5 21" X 60"

CONCRETE BARRIER TEMPORARY PRECAST TO REMAIN FROM PREVIOUS STAGE

MATCHLINE 1279+50

1280 1282 1284 1286 1288 1290 1292

+00.0 77.25' RT R/L IH 94

CONCRETE BARRIER TEMPORARY PRECAST (ANCHORED) TO REMAIN FROM PREVIOUS STAGE

INSTALL CONCRETE BARRIER TEMPORARY PRECAST (ANCHORED)

CONCRETE BARRIER TEMPORARY PRECAST TO REMAIN FROM PREVIOUS STAGE

+00.0 77.25' RT

INSTALL CONCRETE BARRIER TEMPORARY PRECAST (ANCHORED)

EXISTING SIGN TO REMAIN FROM PREVIOUS STAGE

ESTR

RACINE CO

EAST 94 MILE 325 0 D10-5 21" X 60"

END PROJECT 1035-01-82

STA 1293+00.00 BK= STA 131+34.26 AH

IH 94 SB

IH 94 NB

W21-620 48" X 30"

WORK ZONE

SPEED LIMIT 60

FINES DOUBLE

W21-62R 48" X 30"

R2-1 48" X 60"

MOVE

WEST 94 MILE 325 0 D10-5 21" X 60"

GAS-FOOD-EXIT 322
KWIK TRIP
LOVE'S - PILOT
MCDONALDS
PERKINS
WENDY'S

FMS ON GROUND MOUNTED SUPPORTS

SEE PROJECT 1030-20-87 FOR ADDITIONAL TRAFFIC CONTROL

PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	TRAFFIC CONTROL STAGE 1C	SHEET 88	E

FILE NAME : Z:\Racine\CADDS\22\22M\CDS\025003_tc1C.dgn PLOT DATE : 6/11/2018 PLOT BY : dks PLOT NAME : PLOT SCALE : 1:100

WISDOT/CADDS SHEET 42

2

N

7 MILE ROAD

W. COUNTY LINE RD.

ROOT RIVER

BEGIN PROJECT
I.D. 1035-01-82
STA 1268+00 = MATCH
PROJECT I.D. 1035-01-74

1240 1250 1260 4260 4270 4280 4290 4300

WEST FRONTAGE ROAD

IH 94 SB
IH 94 NB

5260 5270

EAST FRONTAGE ROAD

5250

S 27TH STREET

7 1/2 MILE ROAD

END PROJECT
I.D. 1035-01-82
STA 1293+00.00 BK=
STA 131+34.26 AH
MATCH PROJECT
I.D. 1030-20-87

STAGE 2

CONSTRUCTION
-REMOVE STRUCTURE B-51-36
-CONSTRUCT SB LANES 1, 2, 3,
AND 4 AND OUTSIDE SHOULDER
-CONSTRUCT SB OUTSIDE STORM SEWER
TRUNKS AND LATERAL STUBS
-CONSTRUCT SB TEMPORARY WIDENING

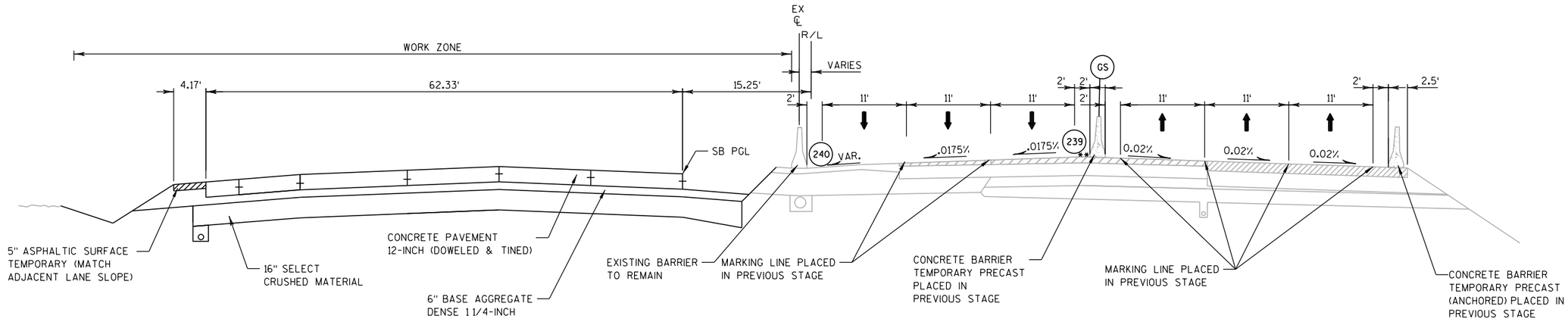
TRAFFIC
-ALL TRAFFIC SHIFTED TO NORTHBOUND LANES,
3 LANES IN EACH DIRECTION
(MEDIAN CROSSOVERS CONSTRUCTED AS
PART OF SEPARATE PROJECTS)
-FRONTAGE ROADS REMAIN OPEN
-7½MILE ROAD REMAINS OPEN
-27TH STREET REMAINS OPEN

WORK ZONE

PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	CONSTRUCTION OVERVIEW- STAGE 2	SHEET 89	E

FILE NAME : Z:\Racine\CADDS\22\22M\CDS\025000_tc2.dgn PLOT DATE : 6/11/2018 PLOT BY : dks PLOT NAME : $FILE$ PLOT SCALE : 1:400

2



TYPICAL SECTION STAGE 2

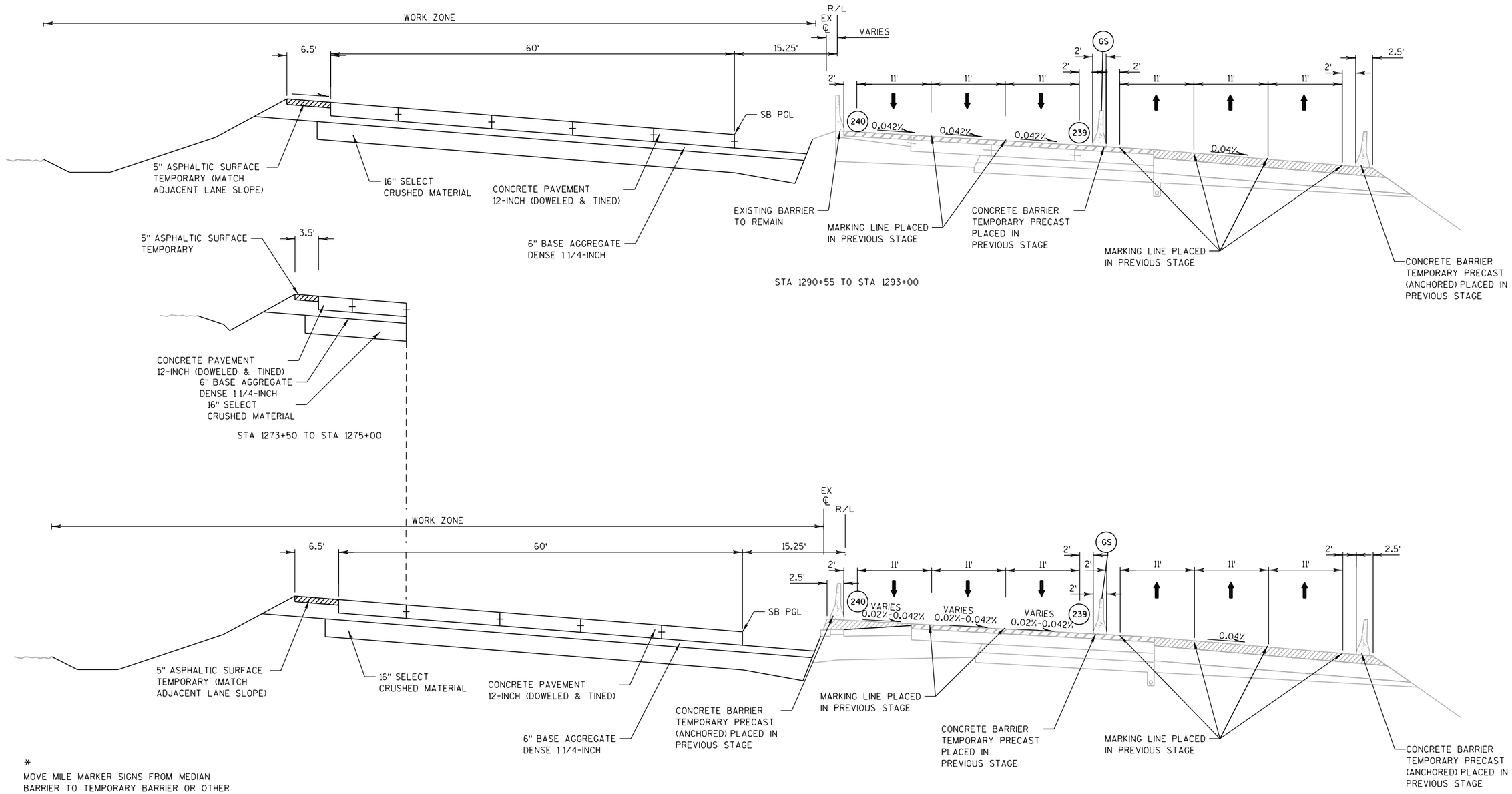
IH 94

STA 1268+00 TO STA 1273+00

**CROWN POINT LOCATION VARIES

NB IH 94
36'RT AT STA. 1268+00 TO
12'RT AT STA. 1272+00

*
MOVE MILE MARKER SIGNS FROM MEDIAN
BARRIER TO TEMPORARY BARRIER OR OTHER
LOCATIONS SHOWN ON STAGING DETAILS
(EVEN 2/10 MILE ONLY).



*
MOVE MILE MARKER SIGNS FROM MEDIAN BARRIER TO TEMPORARY BARRIER OR OTHER LOCATIONS SHOWN ON STAGING DETAILS (EVEN 2/10 MILE ONLY).

TYPICAL SECTION STAGE 2

IH 94

STA 1273+00 TO STA 1289+07

PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	TRAFFIC CONTROL TYPICAL SECTIONS - STAGE 2	SHEET 91	E

2

FMS ON PORTABLE SUPPORTS

GAS - CAMPING
EXIT 327
MOBIL
JELLYSTONE
103

FMS ON PORTABLE SUPPORTS

SEVEN MILE RD 1/4
COUNTY G 1 3/4
COUNTY K 3 3/4

CLOSED 101

N

ROAD WORK AHEAD W20-1

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

R/L WEST FRONTAGE ROAD

BEGIN PROJECT
1035-01-82
STA 1268+00.00

WEST FRONTAGE ROAD

CONCRETE BARRIER TEMPORARY PRECAST REMAINS FROM PREVIOUS STAGE

IH 94 SB

IH 94 NB

1266 1268 1270 1272 1274 1276 1278

MATCHLINE 1279+50

SEE PROJECT 1035-01-74 FOR ADDITIONAL TRAFFIC CONTROL

R/L IH 94

EAST FRONTAGE ROAD

R/L EAST FRONTAGE ROAD

CONCRETE BARRIER TEMPORARY PRECAST REMAINS FROM PREVIOUS STAGE

EAST 94 MILE 325 .4
D10-5 21" X 60" MOVE

WEST 94 MILE 325 .4
D10-5 21" X 60" EXISTING SIGN TO REMAIN FROM PREVIOUS STAGE

W21-62Q 48" X 30"
WORK ZONE
SPEED LIMIT 60
FINES DOUBLE
R2-1 48" X 60"
W21-62R 48" X 30"

7 1/2 MILE ROAD

R/L 7 1/2 MILE ROAD

PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	TRAFFIC CONTROL STAGE 2	SHEET 92	E

2

2

N

WEST FRONTAGE ROAD

R/L WEST FRONTAGE ROAD

EXISTING SIGN TO REMAIN FROM PREVIOUS STAGE

MOVE

EAST 94 MILE 325 .2

D10-5 21" X 60"

WEST 94 MILE 325 .20

D10-5 21" X 60"

CONCRETE BARRIER TEMPORARY PRECAST REMAINS FROM PREVIOUS STAGE

R/L IH 94

BRIDGE OUT

R11-2B 48" X 30"

MATCHLINE 1279+50

1280

1282

1284

1286

1288

1290

1292

27TH STREET

Racine Co

I2-2 90" X 15"

MOVE

END PROJECT 1035-01-82

STA 1293+00.00 BK=
STA 131+34.26 AH

IH 94 SB

IH 94 NB

132

CONCRETE BARRIER TEMPORARY PRECAST REMAINS FROM PREVIOUS STAGE

CONCRETE BARRIER TEMPORARY PRECAST REMAINS FROM PREVIOUS STAGE

GAS-FOOD-EXIT 322
KWIK TRIP
LOVE'S - PILOT
MCDONALDS
PERKINS
WENDY'S

EXISTING SIGN TO REMAIN FROM PREVIOUS STAGE

W21-62Q 48" X 30"

WORK ZONE
SPEED LIMIT 60
FINES DOUBLE

W21-62R 48" X 30"

R2-1 48" X 60"

WEST 94 MILE 325 0

D10-5 21" X 60"

EXISTING SIGN TO REMAIN FROM PREVIOUS STAGE

MOVE

EAST 94 MILE 325 0

D10-5 21" X 60"

SEE PROJECT 1030-20-87 FOR ADDITIONAL TRAFFIC CONTROL

PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	TRAFFIC CONTROL STAGE 2	SHEET 93	E

FILE NAME : Z:\Racine\CADDS\22\22M\CDS\025003_tc2.dgn PLOT DATE : 6/14/2018 PLOT BY : dks PLOT NAME : PLOT SCALE : 1:100

WISDOT/CADDS SHEET 42

2

N

7 MILE ROAD

W. COUNTY LINE RD.

ROOT RIVER

BEGIN PROJECT
I.D. 1035-01-82
STA 1268+00 = MATCH
PROJECT I.D. 1035-01-74

S-51-219

1240 1250 1260 4260 4270 4280 4290 4300

WEST FRONTAGE ROAD

IH 94 SB
IH 94 NB

1270 1280 1290

5260 5270

EAST FRONTAGE ROAD

5250

S 27TH STREET

7 1/2 MILE ROAD

END PROJECT
I.D. 1035-01-82
STA 1293+00.00 BK=
STA 131+34.26 AH
MATCH PROJECT
I.D. 1030-20-87

09

STAGE 3

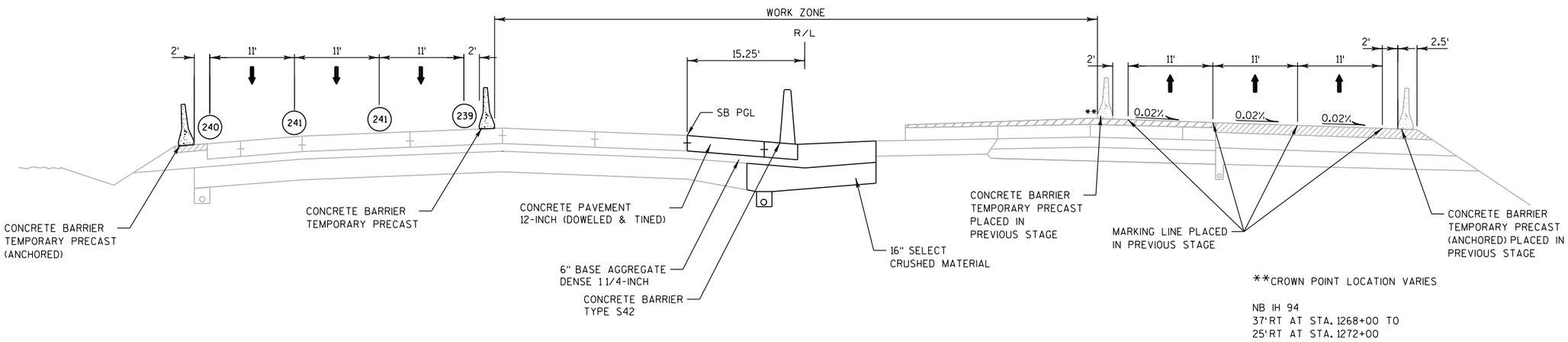
CONSTRUCTION

-REMOVE PARTIAL BRIDGE B-51-37
-CONSTRUCT SB MEDIAN SHOULDER & BARRIER
-CONSTRUCT REMAINING STORM SEWER LATERALS UNDER SB ROADWAYS
-CONSTRUCT S-51-219

TRAFFIC

-IH 94 OPEN TO TRAFFIC, 3 LANES IN EACH DIRECTION
-FRONTAGE ROADS OPEN TO TRAFFIC
-7 1/2 MILE ROAD OPEN TO TRAFFIC
-27TH STREET OPEN TO TRAFFIC

PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	CONSTRUCTION OVERVIEW- STAGE 3	SHEET 94	E



TYPICAL SECTION STAGE 3

IH 94

STA 1268+00 TO STA 1273+50

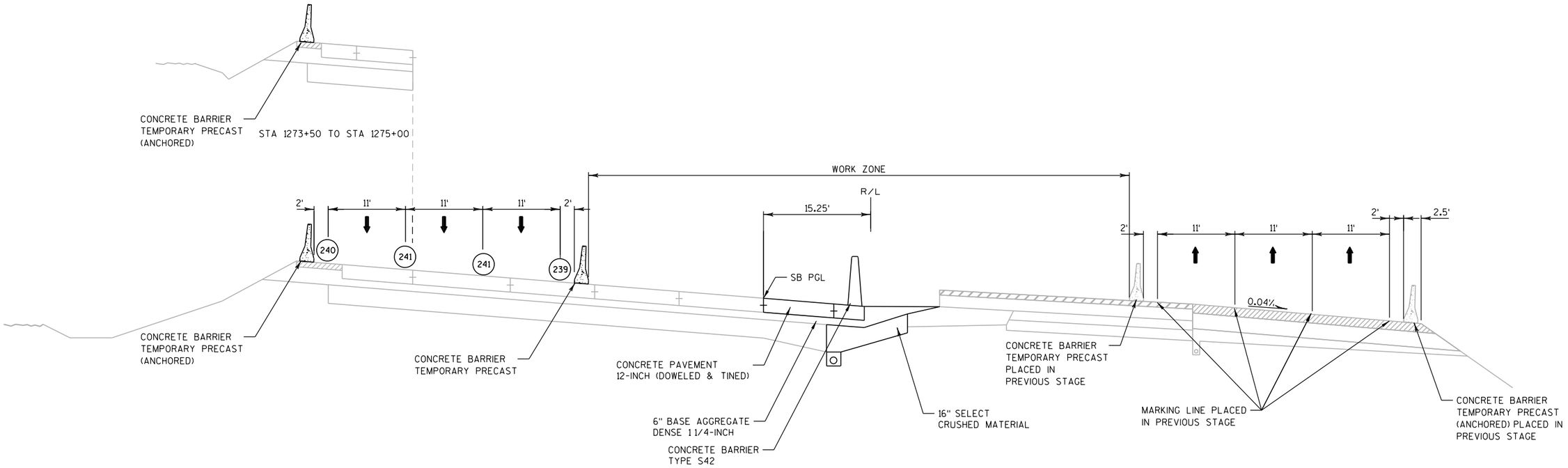
*
MOVE MILE MARKER SIGNS FROM MEDIAN
BARRIER TO TEMPORARY BARRIER OR OTHER
LOCATIONS SHOWN ON STAGING DETAILS
(EVEN 2/10 MILE ONLY).

PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	TRAFFIC CONTROL TYPICAL SECTIONS - STAGE 3	SHEET 95	E

FILE NAME : Z:\Racine\CADDS\22\22M\CDS\025001_tc_s3.dgn PLOT DATE : 6/11/2018 PLOT BY : dks PLOT NAME : $FILE$ PLOT SCALE : 1:15

WISDOT/CADDS SHEET 42

2



TYPICAL SECTION STAGE 3

IH 94

STA 1273+50 TO STA 1293+00

*
MOVE MILE MARKER SIGNS FROM MEDIAN
BARRIER TO TEMPORARY BARRIER OR OTHER
LOCATIONS SHOWN ON STAGING DETAILS
(EVEN 2/10 MILE ONLY).

FMS ON GROUND MOUNTED SUPPORTS

GAS - CAMPING
EXIT 326
MOBIL
JELLYSTONE
102

MOVE FROM PREVIOUS STAGE

SEVEN MILE RD 1/4
COUNTY G 1 3/4
COUNTY K 3 3/4

INSTALL CONCRETE BARRIER TEMPORARY PRECAST (ANCHORED)

INSTALL CONCRETE BARRIER TEMPORARY PRECAST

FASTENING SEWER ACCESS COVERS

FASTENING SEWER ACCESS COVERS

FASTENING SEWER ACCESS COVERS

FASTENING SEWER ACCESS COVERS

WEST FRONTAGE ROAD

R/L WEST FRONTAGE ROAD

BEGIN PROJECT
1035-01-82
STA 1268+00.00

IH 94 SB

IH 94 NB

SEE PROJECT 1035-01-74 FOR ADDITIONAL TRAFFIC CONTROL

R/L EAST FRONTAGE ROAD

R/L IH 94

CONCRETE BARRIER TEMPORARY PRECAST TO REMAIN FROM PREVIOUS STAGE

MATCHLINE 1279+50

EAST FRONTAGE ROAD

W21-620
48" X 30"
WORK ZONE
SPEED LIMIT 60
FINES DOUBLE
W21-62R
48" X 30"

R2-1
48" X 60"

EAST 94 MILE 325 .4
D10-5
21" X 60"
MOVE

WEST 94 MILE 325 .4
D10-5
21" X 60"
EXISTING SIGN TO REMAIN FROM PREVIOUS STAGE

R/L 7 1/2 MILE ROAD

7 1/2 MILE ROAD

PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	TRAFFIC CONTROL - STAGE 3	SHEET 97	E

FILE NAME : Z:\Racine\CADDS\22\22M\CDS\025002_tc3.dgn | PLOT DATE : 6/14/2018 | PLOT BY : dks | PLOT NAME : | PLOT SCALE : 1:100

2

N

R/L WEST FRONTAGE ROAD

WEST FRONTAGE ROAD

4282 4284 4286 4288 4290 4292 4294 4296

FASTENING SEWER ACCESS COVERS

INSTALL CONCRETE BARRIER TEMPORARY PRECAST (ANCHORED)

INSTALL CONCRETE BARRIER TEMPORARY PRECAST

MOVE
EAST 94 MILE 325 .2
D10-5 21" X 60"

EXISTING SIGN TO REMAIN FROM PREVIOUS STAGE
WEST 94 MILE 325 .2
D10-5 21" X 60"

MATCHLINE 1279+50

1280 1282 1284 1286 1288 1290 1292

CONCRETE BARRIER TEMPORARY PRECAST TO REMAIN FROM PREVIOUS STAGE

R/L IH 94

27TH STREET

MOVE
EAST 94 MILE 325 0
D10-5 21" X 60"

Racine Co
I2-2
90" X 15"
MOVE

END PROJECT
1035-01-82 (SB)
STA 1293+00.00 BK=
STA 131+34.26 AH

IH 94 SB

IH 94 NB

GAS-FOOD-EXIT 322
KWIK TRIP
LOVE'S - PILOT
MCDONALDS
PERKINS
WENDY'S

EXISTING SIGN TO REMAIN FROM PREVIOUS STAGE

SEE PROJECT 1030-20-87 FOR ADDITIONAL TRAFFIC CONTROL

W21-620
48" X 30"
WORK ZONE
SPEED LIMIT 60
FINES DOUBLE
W21-62R
48" X 30"

R2-1
48" X 60"

WEST 94 MILE 325 0
D10-5 21" X 60"
EXISTING SIGN TO REMAIN FROM PREVIOUS STAGE

PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	TRAFFIC CONTROL - STAGE 3	SHEET 98	E

2

N

W. COUNTY LINE RD.

ROOT RIVER

7 MILE ROAD

BEGIN PROJECT
I.D. 1035-01-82
STA 1268+00 = MATCH
PROJECT I.D. 1035-01-74

1240 1250 1260 4260 4270 4280 4290 4300

WEST FRONTAGE ROAD

IH 94 SB
IH 94 NB

1270 1280 1290

5260 5270

EAST FRONTAGE ROAD

5250

S. 27TH STREET

7 1/2 MILE ROAD

END PROJECT
I.D. 1035-01-82
STA 1293+00.00 BK=
STA 131+34.26 AH
MATCH PROJECT
I.D. 1030-20-87

STANLEY RD.

STAGE 4

CONSTRUCTION

-REMOVE REMAINING STRUCTURE B-51-37
-CONSTRUCT ENTIRE NB ROADWAY

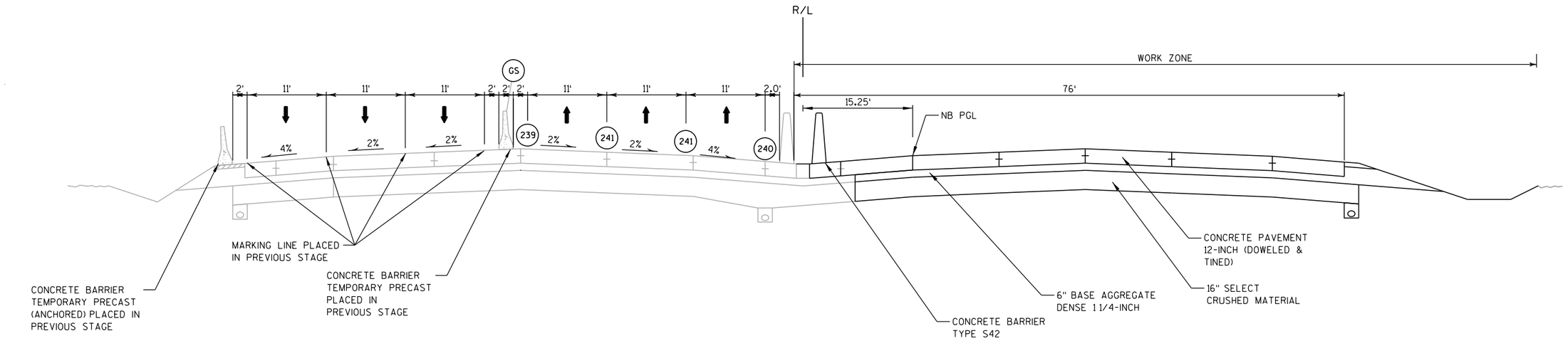
TRAFFIC

-ALL TRAFFIC SHIFTED TO SOUTHBOUND LANES (MEDIAN CROSSOVERS CONSTRUCTED AS PART OF SEPARATE PROJECTS)
-3 LANES IN EACH DIRECTION
-FRONTAGE ROADS REMAIN OPEN
-7 1/2 MILE ROAD REMAINS OPEN
-27TH STREET REMAINS OPEN

WORK ZONE

PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	CONSTRUCTION OVERVIEW- STAGE 4	SHEET 99	E

FILE NAME : Z:\Racine\CADDS\22\22M\CDS\025000_tc4.dgn PLOT DATE : 6/11/2018 PLOT BY : dks PLOT NAME : $FILE$ PLOT SCALE : 1:400

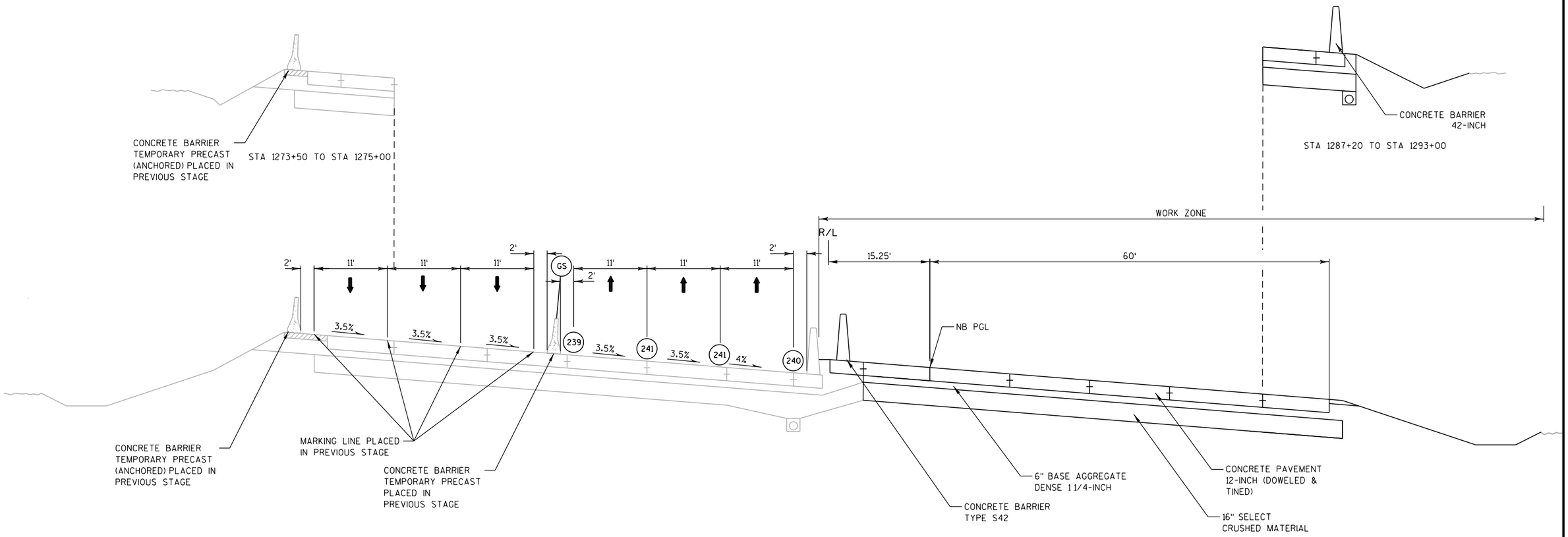


TYPICAL SECTION STAGE 4

IH 94

STA 1268+00 TO STA 1273+50

*
MOVE MILE MARKER SIGNS FROM MEDIAN BARRIER TO TEMPORARY BARRIER OR OTHER LOCATIONS SHOWN ON STAGING DETAILS (EVEN 2/10 MILE ONLY).



TYPICAL SECTION STAGE 4

IH 94

STA 1273+50 TO STA 1293+00

*
MOVE MILE MARKER SIGNS FROM MEDIAN BARRIER TO TEMPORARY BARRIER OR OTHER LOCATIONS SHOWN ON STAGING DETAILS (EVEN 2/10 MILE ONLY).

FMS ON GROUND MOUNTED SUPPORTS

GAS - CAMPING
EXIT 327
MOBIL
JELLYSTONE
103

EXISTING SIGN TO REMAIN FROM PREVIOUS STAGE

SEVEN MILE RD 1/4
COUNTY G 1 3/4
COUNTY K 3 3/4

N

R/L WEST FRONTAGE ROAD

CONCRETE BARRIER TEMPORARY PRECAST (ANCHORED) TO REMAIN FROM PREVIOUS STAGE

FASTENING SEWER ACCESS COVERS

4268 4270 4272 4274 WEST FRONTAGE ROAD 4276 4278 4280 428

BEGIN PROJECT
1035-01-82
STA 1268+00.00

FASTENING SEWER ACCESS COVERS

FASTENING SEWER ACCESS COVERS

CONCRETE BARRIER TEMPORARY PRECAST TO REMAIN FROM PREVIOUS STAGE

FASTENING SEWER ACCESS COVERS

IH 94 SB

IH 94 NB

1266 1268 1270 1272 1274 1276 1278

11' 11' 2'

MATCHLINE 1279+50

SEE PROJECT 1035-01-74 FOR ADDITIONAL TRAFFIC CONTROL

R/L EAST FRONTAGE ROAD

R/L IH 94

5266 5268 5270 5272 5274 5276

EAST FRONTAGE ROAD

W21-620
48" X 30"
WORK ZONE
SPEED LIMIT 60
FINES DOUBLE
W21-62R
48" X 30"

R2-1
48" X 60"

EAST 94 MILE 325 .4
D10-5
21" X 60"
EXISTING SIGN TO REMAIN FROM PREVIOUS STAGE

WEST 94 MILE 325 .4
D10-5
21" X 60"
MOVE

R/L 7 1/2 MILE ROAD

7 1/2 MILE ROAD

PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	TRAFFIC CONTROL - STAGE 4	SHEET 102	E

FILE NAME : Z:\Racine\CADDS\22\22M\CDS\025002_tc4.dgn PLOT DATE : 6/14/2018 PLOT BY : dks PLOT NAME : PLOT SCALE : 1:100

WISDOT/CADDS SHEET 42

2

N

WEST FRONTAGE ROAD

4282 4284 4286 4288 4290 4292 4294 4296

EXISTING SIGN TO REMAIN FROM PREVIOUS STAGE

R/L WEST FRONTAGE ROAD

FASTENING SEWER ACCESS COVERS

EAST 94 MILE 325 .2 D10-5 21" X 60"

MOVE WEST 94 MILE 325 .2 D10-5 21" X 60"

CONCRETE BARRIER TEMPORARY PRECAST TO REMAIN FROM PREVIOUS STAGE

CONCRETE BARRIER TEMPORARY PRECAST (ANCHORED) TO REMAIN FROM PREVIOUS STAGE

MATCHLINE 1279+50

1280 1282 1284 1286 1288 1290 1292

FASTENING SEWER ACCESS COVERS

FASTENING SEWER ACCESS COVERS

BRIDGE OUT R11-2B 48" X 30"

FASTENING SEWER ACCESS COVERS

W21-620 48" X 30" WORK ZONE SPEED LIMIT 60 FINES DOUBLE R2-1 48" X 60"

W21-62R 48" X 30"

27TH STREET

MOVE EAST 94 MILE 325 0 D10-5 21" X 60"

EXISTING SIGN TO REMAIN FROM PREVIOUS STAGE

WEST 94 MILE 325 0 D10-5 21" X 60"

Racine Co I2-2 90" X 15"

EXISTING SIGN TO REMAIN FROM PREVIOUS STAGE

END PROJECT 1035-01-82
STA 1293+00.00 BK=
STA 131+34.26 AH

IH 94 SB

IH 94 SB

R/L IH 94

GAS-FOOD-EXIT 322
KWIK TRIP
LOVE'S - PILOT
MCDONALDS
PERKINS
WENDY'S

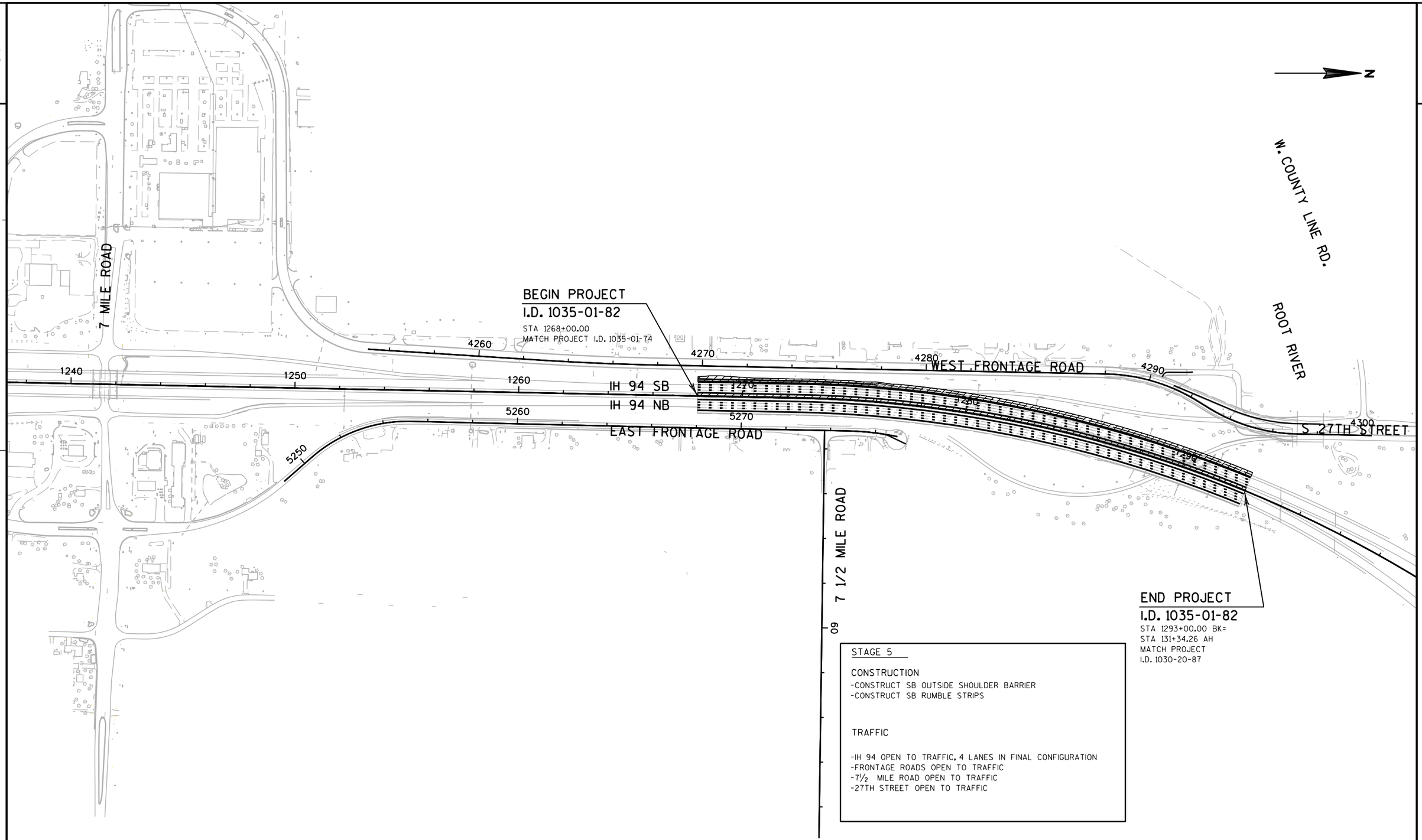
MOVE

SEE PROJECT 1030-20-87 FOR ADDITIONAL TRAFFIC CONTROL

PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	TRAFFIC CONTROL - STAGE 4	SHEET 103	E

FILE NAME : Z:\Racine\CADDS\22\22M\CDS\025003_tc4.dgn PLOT DATE : 6/14/2018 PLOT BY : dks PLOT NAME : PLOT SCALE : 1:100

2



STAGE 5

CONSTRUCTION

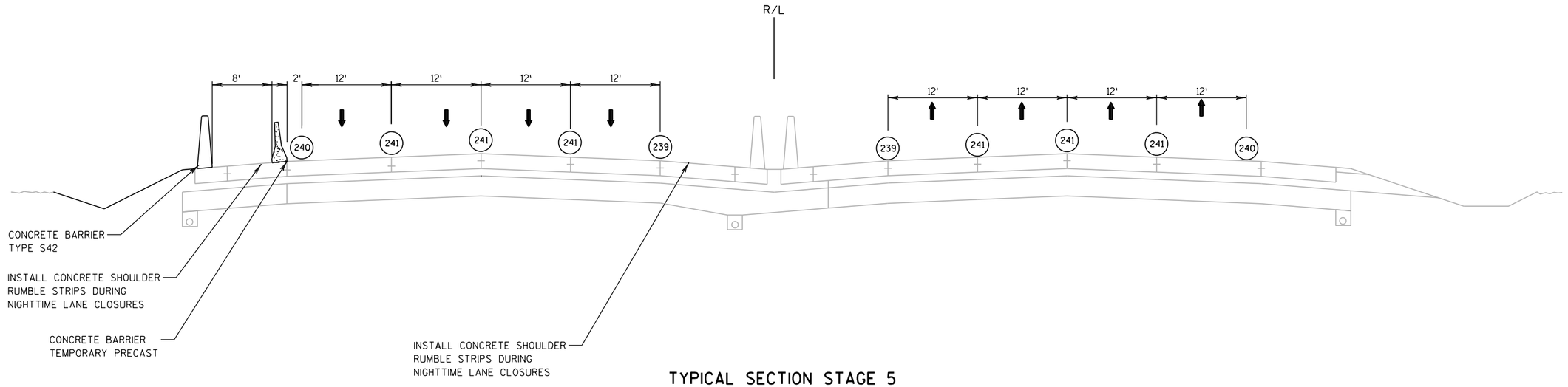
-CONSTRUCT SB OUTSIDE SHOULDER BARRIER
-CONSTRUCT SB RUMBLE STRIPS

TRAFFIC

-IH 94 OPEN TO TRAFFIC, 4 LANES IN FINAL CONFIGURATION
-FRONTAGE ROADS OPEN TO TRAFFIC
-7½ MILE ROAD OPEN TO TRAFFIC
-27TH STREET OPEN TO TRAFFIC

PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	CONSTRUCTION OVERVIEW- STAGE 5	SHEET 104	E

2



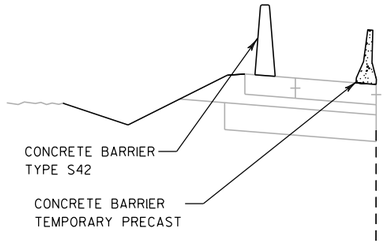
TYPICAL SECTION STAGE 5

IH 94

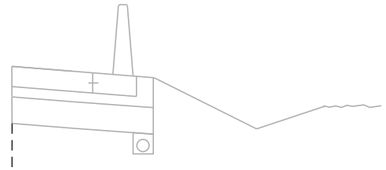
STA 1268+00 TO STA 1273+50

*
MOVE MILE MARKER SIGNS FROM MEDIAN BARRIER TO TEMPORARY BARRIER OR OTHER LOCATIONS SHOWN ON STAGING DETAILS (EVEN 2/10 MILE ONLY).

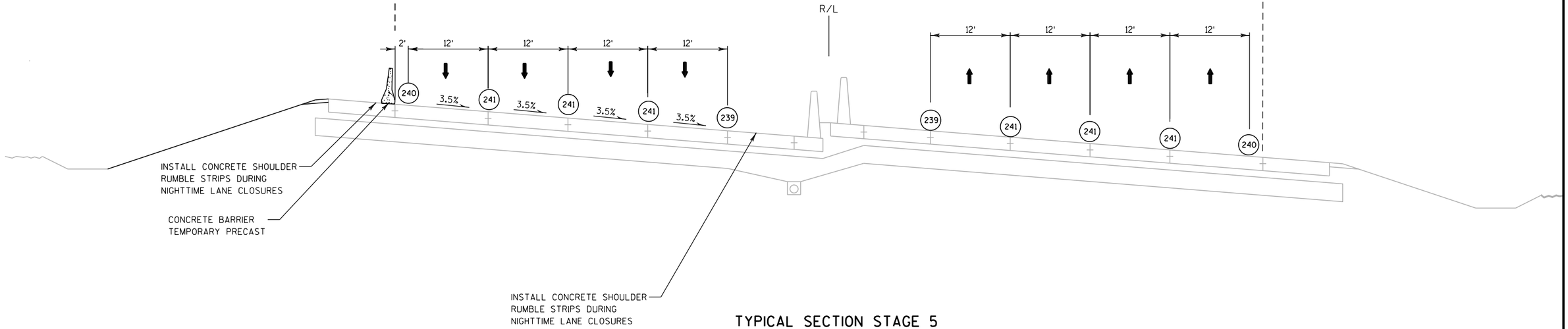
2



STA 1273+50 TO STA 1275+00



STA 1287+20 TO STA 1293+00



TYPICAL SECTION STAGE 5

IH 94

STA 1273+50 TO STA 1293+00

*
MOVE MILE MARKER SIGNS FROM MEDIAN
BARRIER TO TEMPORARY BARRIER OR OTHER
LOCATIONS SHOWN ON STAGING DETAILS
(EVEN 2/10 MILE ONLY).

PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	TRAFFIC CONTROL TYPICAL SECTIONS - STAGE 5	SHEET 106	E

FILE NAME : Z:\Racine\CADDS\22\22M\CDS\025001_tc_s5A.dgn PLOT DATE : 6/11/2018 PLOT BY : dks PLOT NAME : $FILE$ PLOT SCALE : 1:15

FMS ON GROUND MOUNTED SUPPORTS

GAS - CAMPING
EXIT 326
MOBIL
JELLYSTONE
102

SIGN TO BE PLACED IN PERMANENT LOCATION

SEVEN MILE RD 1/4
COUNTY G 1 3/4
COUNTY K 3 3/4

INSTALL CONCRETE BARRIER TEMPORARY PRECAST

INSTALL CONCRETE SHOULDER RUMBLE STRIPS

WEST FRONTAGE ROAD

R/L WEST FRONTAGE ROAD

BEGIN PROJECT
1035-01-82
STA 1268+00.00

IH 94 SB

IH 94 NB

R/L IH 94

SEE PROJECT 1035-01-74 FOR ADDITIONAL TRAFFIC CONTROL

R/L EAST FRONTAGE ROAD

INSTALL CONCRETE SHOULDER RUMBLE STRIPS

MATCHLINE 1279+50

EAST FRONTAGE ROAD

W21-62O
48" X 30"

WORK ZONE
SPEED LIMIT 60
FINES DOUBLE

R2-1
48" X 60"

W21-62R
48" X 30"

EAST 94 MILE 325 .4
D10-5
21" X 60"
EXISTING SIGN TO REMAIN FROM PREVIOUS STAGE

WEST 94 MILE 325 .4
D10-5
21" X 60"
MOVE

R/L 7 1/2 MILE ROAD

7 1/2 MILE ROAD

PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	TRAFFIC CONTROL - STAGE 5	SHEET 107	E

2

N

R/L WEST FRONTAGE ROAD

EXISTING SIGN TO REMAIN FROM PREVIOUS STAGE

WEST FRONTAGE ROAD

4282 4284 4286 4288 4290 4292 4294 4296

EAST 94 MILE 325 .2 D10-5 21" X 60"

MOVE WEST 94 MILE 325 .2 D10-5 21" X 60"

INSTALL CONCRETE BARRIER TEMPORARY PRECAST

MATCHLINE 1279+50

1280 1282 1284 1286 1288 1290 1292

INSTALL CONCRETE SHOULDER RUMBLE STRIPS

12'

R/L IH 94

INSTALL CONCRETE SHOULDER RUMBLE STRIPS

27TH STREET

EXISTING SIGN TO REMAIN FROM PREVIOUS STAGE

EAST 94 MILE 325 0 D10-5 21" X 60"

Racine Co I2-2 90" X 15"

EXISTING SIGN TO REMAIN FROM PREVIOUS STAGE

END PROJECT 1035-01-82 (SB)
STA 1293+00.00 BK=
STA 131+34.26 AH

IH 94 SB

IH 94 NB

GAS-FOOD-EXIT 322
KWIK TRIP
LOVE'S - PILOT
MCDONALDS
PERKINS
WENDY'S

MOVE

W21-62O 48" X 30"
WORK ZONE
SPEED LIMIT 60
FINES DOUBLE
W21-62R 48" X 30"

R2-1 48" X 60"

MOVE WEST 94 MILE 325 0 D10-5 21" X 60"

SEE PROJECT 1030-20-87 FOR ADDITIONAL TRAFFIC CONTROL

PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	TRAFFIC CONTROL - STAGE 5	SHEET	E

FILE NAME : Z:\Racine\CADDS\22\22M\CDS\025003_tc5a.dgn PLOT DATE : 6/14/2018 PLOT BY : dks PLOT NAME : PLOT SCALE : 1:100

WISDOT/CADDS SHEET 42

2

N

R/L WEST FRONTAGE ROAD

WEST FRONTAGE ROAD

FENCE WOVEN
WIRE 4-FOOT

+51.59
102.28' LT
MATCH PROJECT
1035-01-81

+74.15
98.01' LT

SLOPE INTERCEPT

SB ENTRANCE RAMP

R/L IH 94

IH 94 SB

IH 94 NB

BEGIN PROJECT
1035-01-82
STA 1268+00.00

+88.80
100.93' RT

MATCHLINE 1281+00

+00.01
106.73' RT
MATCH PROJECT
1035-01-81

+79.84
108.45' RT

SLOPE INTERCEPT

EAST FRONTAGE ROAD

FENCE WOVEN
WIRE 4-FOOT

R/L EAST FRONTAGE ROAD

7 1/2 MILE ROAD

R/L 7 1/2 MILE ROAD

+79.84
238.18' RT

PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	FENCING PLAN	SHEET 109	E

FILE NAME : Z:\Racine\CADDS\22\22M\CDS\027101_fn.dgn | PLOT DATE : 6/4/2018 | PLOT BY : kld | PLOT NAME : | PLOT SCALE : 1:100

2

2

WEST FRONTAGE ROAD

27TH STREET

ROOT RIVER

IH 94 SB

IH 94 SB

R/L IH 94

MATCHLINE 1281+00

4284 4286 4288 4290 4292 4292 4294 4294 4296 4298

1282 1284 1286 1288 1290 1292 134

+36.28
184.03' LT

SLOPE INTERCEPT

+54.41
218.46' LT

FENCE WOVEN
WIRE 4-FOOT

+78.26
211.23' LT

+69.32
217.16' LT

4297+10.25 WFR
33.05' RT
MATCH ABUTMENT

4297+10.25 WFR
52.37' RT

END PROJECT
1035-01-82
STA 1293+00.00

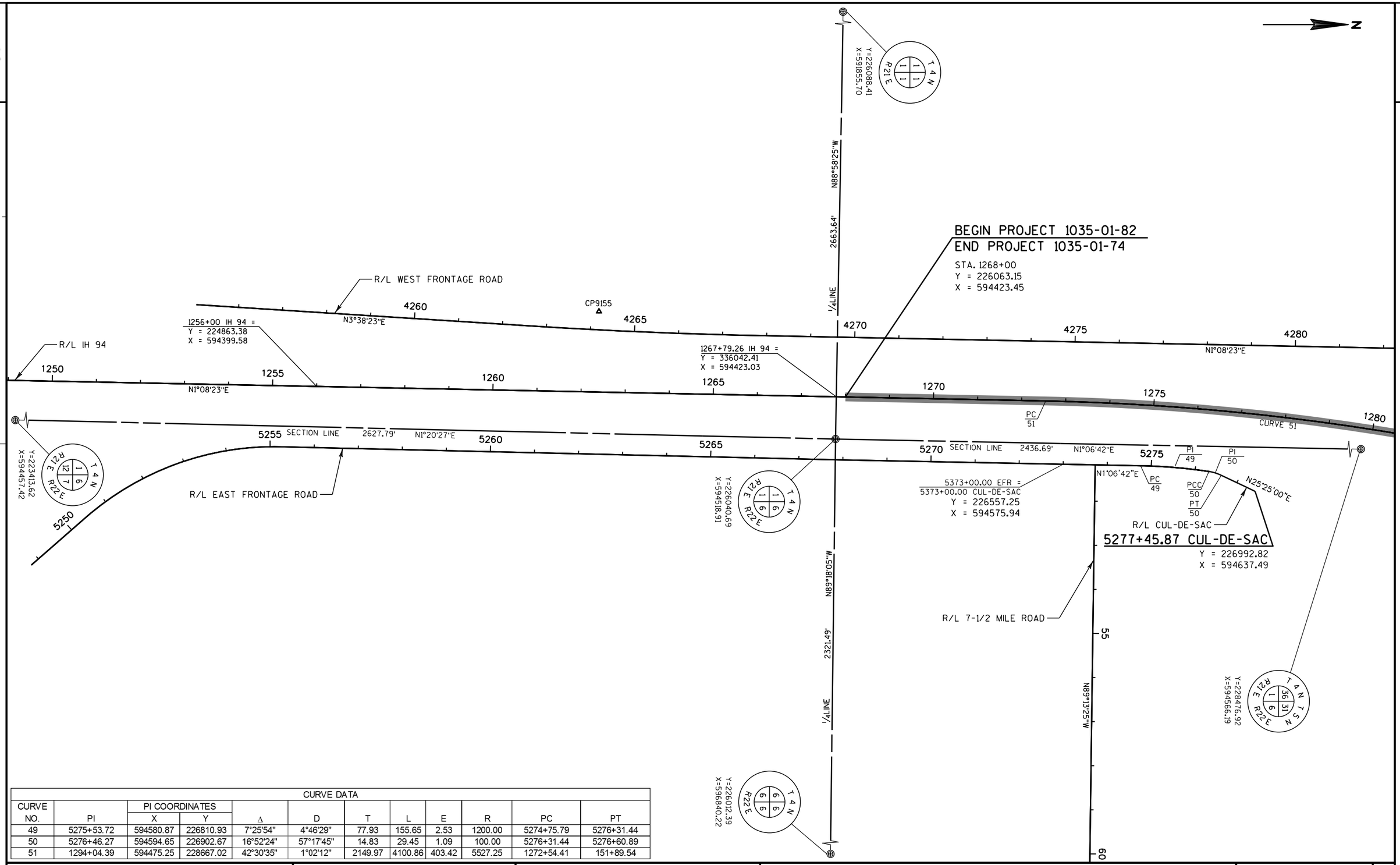
SLOPE INTERCEPT

FENCE WOVEN
WIRE 4-FOOT

99.72
421.81' RT

131+63.61
175.21' RT
MATCH PROJECT
1030-20-87

PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	FENCING PLAN	SHEET 110	E



CURVE DATA											
CURVE NO.	PI	PI COORDINATES X	PI COORDINATES Y	Δ	D	T	L	E	R	PC	PT
49	5275+53.72	594580.87	226810.93	7°25'54"	4°46'29"	77.93	155.65	2.53	1200.00	5274+75.79	5276+31.44
50	5276+46.27	594594.65	226902.67	16°52'24"	57°17'45"	14.83	29.45	1.09	100.00	5276+31.44	5276+60.89
51	1294+04.39	594475.25	228667.02	42°30'35"	1°02'12"	2149.97	4100.86	403.42	5527.25	1272+54.41	151+89.54

PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	ALIGNMENT PLAN	SHEET 111	E

FILE NAME : Z:\Racine\CADDS\22\22M\CDS\027201_ad.dgn PLOT DATE : 5/30/2018 PLOT BY : plr PLOT NAME : PLOT SCALE : 1:200

2

N

CURVE DATA											
CURVE NO.	PI	PI COORDINATES X	PI COORDINATES Y	Δ	D	T	L	E	R	PC	PT
51	1294+04.39	594475.25	228667.02	42°30'35"	1°02'12"	2149.97	4100.86	403.42	5527.25	1272+54.41	1313+55.28
52	4290+22.95	594328.83	228106.97	30°35'56"	7°01'49"	222.95	435.25	29.95	815.00	4288+00.00	4292+35.25
53	4295+06.06	594588.57	228526.89	30°33'14"	7°17'56"	214.41	418.61	28.76	785.00	4292+91.64	4297+10.26
54	4295+41.66	594543.67	228588.53	21°44'55"	7°09'43"	153.68	303.67	14.63	800.00	4293+87.98	4296+91.65
55	0+22.28	594316.87	228146.45	71°26'24"	229°10'59"	17.98	31.17	5.79	25.00	0+04.30	0+35.47

Y=228495.80
X=591963.92

T 4 N R 21 E — 1 1 36 36

N89°51'16"W 42.89'

Y=228495.69
X=591946.81

END CONSTRUCTION
1035-01-82
1+47.17
Y = 228276.12
X = 594316.34

BEGIN CONSTRUCTION
1035-01-82
4288+00.00
Y = 227884.06
X = 594324.40

N 1°40'34" W

PI
1+20.00
Y = 228248.96
X = 594317.13

R/L PRIVATE DRIVEWAY

N 0°08'48" E

PI 55

N 71°17'36" W

R/L WEST FRONTAGE ROAD

4285

N1°08'23"E

4290

PC 52

PI 52

PC 55

PT 55

4294+20.78 WFR SB =
Y = 228477.42
X = 594496.03

SECTION LINE 2619.45' N89°35'22"W

R/L WEST FRONTAGE ROAD SB

N 22°53'32" E

PC 54

4291+09.42 WFR 14.00' LT=
4291+09.42 WFR SB
Y = 228190.33
X = 594375.53

PT 52

PC 53

N 31°44'19" E

1280

1285

SECTION LINE 2436.69' N1°06'42"E

CURVE 51

4294+39.77 WFR =
Y = 228477.10
X = 594541.39

4295

PI 54

PT 54

N 1°08'37" E

PI 51

4298+14.24 WFR 46.35' LT=
4297+95.66 WFR SB
Y = 228846.18
X = 594548.81

4300

N 1°11'05" E

2655.56' N1°01'16"E SECTION LINE

PI 53

PT 53

T 4 N R 21 E — 1 6 1 6

Y=226040.69
X=594518.91

T 4 N R 22 E — 1 6 1 6

Y=228476.92
X=594596.19

T 5 N R 22 E — 36 31 36 31

Y=231132.06
X=594613.51

END CONSTRUCTION
1035-01-82
4797+10.26
Y = 228741.26
X = 594593.00

1290

1292+60.60 IH 94 =
Y = 228472.34
X = 594831.56

N89°00'43"W 2318.33'

R/L IH 94

135

140

CURVE 51

END PROJECT 1035-01-82
1293+00.00 BK=
131+34.26 AH
Y = 228508.84
X = 594846.41

T 4 N R 22 E — 31 6 31 6

Y=228436.94
X=596884.17

SECTION LINE

PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	ALIGNMENT PLAN	SHEET 112	E

FILE NAME : Z:\Racine\CADDS\22\22M\CDS\027202_ad.dgn PLOT DATE : 5/30/2018 PLOT BY : plr PLOT NAME : PLOT SCALE : 1:200

NOTE: POSITIVE VALUES SLOPE TOWARDS THE REFERENCE LINE
NOTE: NEGATIVE VALUES SLOPE AWAY FROM THE REFERENCE LINE

IH 94

SUPERELEVATION & CROSS SLOPE DATA	STATION	RATE			
		LEFT SHOULDER	LEFT	RIGHT	RIGHT SHOULDER
BEGIN SHOULDER TRANSITION	1268+25	-4.00%	-2.00%	-2.00%	-4.00%
BEGIN SUPER TRANSITION	1269+25	-2.00%	-2.00%	-2.00%	-4.00%
END CROWN RUNOFF	1270+75	0.00%	0.00%	-2.00%	-4.00%
REMOVE ADVERSE CROWN	1272+25	2.00%	2.00%	-2.00%	-4.00%
BEGIN FULL SUPER	1273+50	3.50%	3.50%	-3.50%	-4.00%
END PROJECT FULL SUPER	1293+00	3.50%	3.50%	-3.50%	-4.00%

2

N

CP9155
HMOD 9A155
STA. 4264+17.06, 41.70'LT
Y=225503.91
X=594229.45
ELEV.=716.71

4265

WEST FRONTAGE ROAD

1260

IH 94 SB

1265

IH 94 NB

5260

5265

EAST FRONTAGE ROAD

N

2

CP128476
F1000SPK BERNTSEN FENO
MONUMENT WITH ALUM CAP
STA. 4287+19.97, 55.21'LT
Y=227805.16
X=594267.61
ELEV.=688.99

4285

WEST FRONTAGE ROAD

IH 94 SB

1285

IH 94 NB

CP128243
F1000SPK BERNTSEN FENO
MONUMENT WITH ALUM CAP
STA. 1282+43.21, 147.55'RT
Y=227469.92
X=594684.88
ELEV.=698.06

PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	SURVEY CONTROL	SHEET 114	E

1035-01-82

Line	Item	Item Description	Unit	Total	Qty
0002	201.0105	Clearing	STA	11.000	11.000
0008	201.0205	Grubbing	STA	11.000	11.000
0014	203.0100	Removing Small Pipe Culverts	EACH	5.000	5.000
0020	203.0200	Removing Old Structure (station) 0003. 1289+64 LT	LS	1.000	1.000
0022	203.0200	Removing Old Structure (station) 0004. 1289+64 RT	LS	1.000	1.000
0060	204.0100	Removing Pavement **P**	SY	37,353.000	37,353.000
0062	204.0105	Removing Pavement Butt Joints	SY	56.000	56.000
0068	204.0115	Removing Asphaltic Surface Butt Joints	SY	200.000	200.000
0070	204.0120	Removing Asphaltic Surface Milling **P**	SY	134.000	134.000
0074	204.0150	Removing Curb & Gutter **P**	LF	188.000	188.000
0078	204.0157	Removing Concrete Barrier **P**	LF	4,187.000	4,187.000
0080	204.0165	Removing Guardrail **P**	LF	719.000	719.000
0082	204.0170	Removing Fence **P**	LF	3,508.000	3,508.000
0084	204.0180	Removing Delineators and Markers	EACH	39.000	39.000
0086	204.0195	Removing Concrete Bases	EACH	16.000	16.000
0088	204.0210	Removing Manholes	EACH	3.000	3.000
0090	204.0220	Removing Inlets	EACH	16.000	16.000
0092	204.0245	Removing Storm Sewer (size) 0001. 6-Inch	LF	82.000	82.000
0096	204.0245	Removing Storm Sewer (size) 0004. 15-Inch	LF	530.000	530.000
0098	204.0245	Removing Storm Sewer (size) 0006. 18-Inch	LF	969.000	969.000
0102	204.0245	Removing Storm Sewer (size) 0008. 24-Inch	LF	105.000	105.000
0114	204.0291.S	Abandoning Sewer	CY	37.000	37.000
0122	204.9060.S	Removing (item description) 0010. Barricade Racks and Barricades	EACH	1.000	1.000
0126	204.9060.S	Removing (item description) 1002. Lighting Units	EACH	18.000	18.000
0128	204.9060.S	Removing (item description) 1010. Distribution Center	EACH	1.000	1.000
0132	204.9060.S	Removing (item description) 2010. Controller Cabinet	EACH	2.000	2.000
0134	204.9060.S	Removing (item description) 2020. Controller Cabinet Base	EACH	2.000	2.000
0142	204.9060.S	Removing (item description) 2040. Electrical Service Meter Breaker Pedestal	EACH	1.000	1.000
0148	204.9090.S	Removing (item description) 0002. Underdrain	LF	4,717.000	4,717.000
0150	204.9090.S	Removing (item description) 0003. Drain Tile	LF	200.000	200.000
0162	204.9105.S	Removing (item description) 0007. Old Sign Structure S-51-206	LS	1.000	1.000
0168	205.0100	Excavation Common **P**	CY	56,288.000	56,288.000
0200	209.0200.S	Backfill Controlled Low Strength	CY	45.000	45.000
0202	209.2500	Backfill Granular Grade 2	TON	40.000	40.000
0212	213.0100	Finishing Roadway (project) 0006. 1035-01-82	EACH	1.000	1.000
0220	214.0100	Obliterating Old Road	STA	2.000	2.000
0222	305.0115	Base Aggregate Dense 3/4-Inch **P**	CY	1,065.000	1,065.000

1035-01-82

Line	Item	Item Description	Unit	Total	Qty
0224	305.0125	Base Aggregate Dense 1 1/4-Inch **P**	CY	15,283.000	15,283.000
0226	305.0500	Shaping Shoulders	STA	18.000	18.000
0228	312.0115	Select Crushed Material **P**	CY	19,625.000	19,625.000
0230	390.0203	Base Patching Asphaltic	SY	335.000	335.000
0262	415.5110.S	Concrete Pavement Joint Layout 0012. 1035-01-82	LS	1.000	1.000
0266	416.0610	Drilled Tie Bars	EACH	50.000	50.000
0268	416.0620	Drilled Dowel Bars	EACH	110.000	110.000
0272	416.1110	Concrete Shoulder Rumble Strips **P**	LF	10,000.000	10,000.000
0274	416.1710	Concrete Pavement Repair	SY	420.000	420.000
0276	416.1715	Concrete Pavement Repair SHES	SY	170.000	170.000
0278	416.1720	Concrete Pavement Replacement	SY	140.000	140.000
0280	440.4410	Incentive IRI Ride	DOL	7,568.000	7,568.000
0286	455.0605	Tack Coat	GAL	2,845.000	2,845.000
0288	460.2000	Incentive Density HMA Pavement	DOL	1,170.000	1,170.000
0290	460.5223	HMA Pavement 3 LT 58-28 S	TON	1,074.000	1,074.000
0292	460.5224	HMA Pavement 4 LT 58-28 S	TON	744.000	744.000
0298	460.6424	HMA Pavement 4 MT 58-28 H	TON	1,678.000	1,678.000
0300	460.7223	HMA Pavement 3 HT 58-28 S	TON	2,937.000	2,937.000
0302	460.7424	HMA Pavement 4 HT 58-28 H	TON	1,068.000	1,068.000
0306	465.0120	Asphaltic Surface Driveways and Field Entrances	TON	56.000	56.000
0308	465.0125	Asphaltic Surface Temporary	TON	468.000	468.000
0310	465.0315	Asphaltic Flumes	SY	10.000	10.000
0312	495.1000.S	Cold patch	TON	10.000	10.000
0358	511.1300	Temporary Shoring (location) 0002. STA 1288+65 to STA 1290+16	SF	1,510.000	1,510.000
0394	517.1010.S	Concrete Staining (structure) 4206. S-51-219 **P**	SF	212.000	212.000
0436	520.1012	Apron Endwalls for Culvert Pipe 12-Inch	EACH	1.000	1.000
0462	522.1015	Apron Endwalls for Culvert Pipe Reinforced Concrete 15-Inch	EACH	2.000	2.000
0464	522.1018	Apron Endwalls for Culvert Pipe Reinforced Concrete 18-Inch	EACH	1.000	1.000
0466	522.1024	Apron Endwalls for Culvert Pipe Reinforced Concrete 24-Inch	EACH	4.000	4.000
0468	522.1030	Apron Endwalls for Culvert Pipe Reinforced Concrete 30-Inch	EACH	1.000	1.000
0478	522.2319	Culvert Pipe Reinforced Concrete Horizontal Elliptical Class HE-III 19x30-Inch	LF	291.000	291.000
0484	522.2619	Apron Endwalls for Culvert Pipe Reinforced Concrete Horizontal Elliptical 19x30-Inch	EACH	4.000	4.000
0512	601.0557	Concrete Curb & Gutter 6-Inch Sloped 36-Inch Type D	LF	50.000	50.000
0518	603.1142	Concrete Barrier Type S42 **P**	LF	6,075.000	6,075.000

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Line	Item	Item Description	Unit	Total	Qty
0520	603.1156	Concrete Barrier Type S56 **P**	LF	80.000	80.000
0526	603.2156	Concrete Barrier Fixed Object Protection Type S56	LF	20.000	20.000
0530	603.3559	Concrete Barrier Transition Type S42 to S56	EACH	4.000	4.000
0532	603.8000	Concrete Barrier Temporary Precast Delivered	LF	12,735.000	12,735.000
0534	603.8125	Concrete Barrier Temporary Precast Installed	LF	18,753.000	18,753.000
0536	603.8505	Anchoring Concrete Barrier on Bridge Decks	LF	151.000	151.000
0540	606.0200	Riprap Medium	CY	315.000	315.000
0544	608.0312	Storm Sewer Pipe Reinforced Concrete Class III 12-Inch	LF	13.000	13.000
0546	608.0315	Storm Sewer Pipe Reinforced Concrete Class III 15-Inch	LF	283.000	283.000
0550	608.0324	Storm Sewer Pipe Reinforced Concrete Class III 24-Inch	LF	2,053.000	2,053.000
0552	608.0330	Storm Sewer Pipe Reinforced Concrete Class III 30-Inch	LF	68.000	68.000
0562	608.0418	Storm Sewer Pipe Reinforced Concrete Class IV 18-Inch	LF	104.000	104.000
0572	608.0512	Storm Sewer Pipe Reinforced Concrete Class V 12-Inch	LF	200.000	200.000
0590	611.0530	Manhole Covers Type J	EACH	6.000	6.000
0592	611.0535	Manhole Covers Type J-Special	EACH	2.000	2.000
0594	611.0610	Inlet Covers Type BW	EACH	24.000	24.000
0600	611.0642	Inlet Covers Type MS	EACH	1.000	1.000
0606	611.2004	Manholes 4-FT Diameter	EACH	20.000	20.000
0608	611.2005	Manholes 5-FT Diameter	EACH	6.000	6.000
0620	611.3225	Inlets 2x2.5-FT	EACH	4.000	4.000
0626	611.3901	Inlets Median 1 Grate	EACH	1.000	1.000
0634	611.8115	Adjusting Inlet Covers	EACH	1.000	1.000
0636	611.8120.S	Cover Plates Temporary	EACH	4.000	4.000
0638	612.0106	Pipe Underdrain 6-Inch	LF	4,695.000	4,695.000
0640	612.0206	Pipe Underdrain Unperforated 6-Inch	LF	85.000	85.000
0642	612.0212	Pipe Underdrain Unperforated 12-Inch	LF	780.000	780.000
0646	612.0700	Drain Tile Exploration	LF	200.000	200.000
0650	614.0115	Anchorages for Steel Plate Beam Guard Type 2	EACH	2.000	2.000
0654	614.0305	Steel Plate Beam Guard Class A	LF	50.000	50.000
0656	614.0396	Guardrail Mow Strip Asphalt	SY	158.000	158.000
0660	614.0905	Crash Cushions Temporary	EACH	4.000	4.000
0666	614.2500	MGS Thrie Beam Transition	LF	120.000	120.000
0668	614.2610	MGS Guardrail Terminal EAT	EACH	3.000	3.000
0672	616.0100	Fence Woven Wire (height) 0001. 4-FT	LF	5,007.000	5,007.000
0678	616.0700.S	Fence Safety	LF	1,000.000	1,000.000
0684	618.0100	Maintenance And Repair of Haul Roads (project) 0006.	EACH	1.000	1.000

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Line	Item	Item Description	Unit	Total	Qty
		1035-01-82			
0692	619.1000	Mobilization	EACH	0.050	0.050
0696	623.0200	Dust Control Surface Treatment	SY	70,200.000	70,200.000
0698	624.0100	Water	MGAL	549.000	549.000
0700	625.0100	Topsoil	SY	15,192.000	15,192.000
0702	625.0500	Salvaged Topsoil	SY	45,577.000	45,577.000
0708	628.1504	Silt Fence	LF	3,689.000	3,689.000
0710	628.1520	Silt Fence Maintenance	LF	3,689.000	3,689.000
0712	628.1905	Mobilizations Erosion Control	EACH	6.000	6.000
0714	628.1910	Mobilizations Emergency Erosion Control	EACH	6.000	6.000
0718	628.2004	Erosion Mat Class I Type B	SY	34,251.000	34,251.000
0722	628.2008	Erosion Mat Urban Class I Type B	SY	11,326.000	11,326.000
0728	628.6510	Soil Stabilizer Type B	ACRE	5.000	5.000
0730	628.7005	Inlet Protection Type A	EACH	32.000	32.000
0736	628.7020	Inlet Protection Type D	EACH	28.000	28.000
0738	628.7504	Temporary Ditch Checks	LF	663.000	663.000
0740	628.7515.S	Stone or Rock Ditch Checks	CY	367.000	367.000
0742	628.7555	Culvert Pipe Checks	EACH	25.000	25.000
0744	628.7560	Tracking Pads	EACH	5.000	5.000
0746	628.7570	Rock Bags	EACH	120.000	120.000
0750	630.0200	Seeding Temporary	LB	211.000	211.000
0754	633.0100	Delineator Posts Steel	EACH	8.000	8.000
0756	633.0500	Delineator Reflectors	EACH	8.000	8.000
0760	633.5200	Markers Culvert End	EACH	13.000	13.000
0764	634.0618	Posts Wood 4x6-Inch X 18-FT	EACH	30.000	30.000
0772	634.0885	Posts Tubular Steel 2x2-Inch X 8.5-FT	EACH	3.000	3.000
0774	635.0200	Sign Supports Structural Steel HS	LB	2,200.000	2,200.000
0776	636.0100	Sign Supports Concrete Masonry **P**	CY	23.000	23.000
0778	636.0500	Sign Supports Steel Reinforcement **P**	LB	234.000	234.000
0782	636.1500	Sign Supports Steel Coated Reinforcement HS **P**	LB	4,400.000	4,400.000
0784	637.1220	Signs Type I Reflective SH	SF	500.500	500.500
0788	637.2210	Signs Type II Reflective H	SF	289.250	289.250
0792	637.2230	Signs Type II Reflective F	SF	32.750	32.750
0796	638.2102	Moving Signs Type II	EACH	32.000	32.000
0798	638.2601	Removing Signs Type I	EACH	2.000	2.000
0800	638.2602	Removing Signs Type II	EACH	32.000	32.000
0802	638.3000	Removing Small Sign Supports	EACH	36.000	36.000
0804	638.3100	Removing Structural Steel Sign Supports	EACH	2.000	2.000
0820	641.0100	Sign Bridge Single Pole Sign Support One Sign (structure) 0219. S-51-219	LS	1.000	1.000

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Line	Item	Item Description	Unit	Total	Qty
0864	643.0300	Traffic Control Drums	DAY	3,430.000	3,430.000
0866	643.0420	Traffic Control Barricades Type III	DAY	3,470.000	3,470.000
0872	643.0705	Traffic Control Warning Lights Type A	DAY	6,935.000	6,935.000
0878	643.0900	Traffic Control Signs	DAY	4,155.000	4,155.000
0882	643.0920	Traffic Control Covering Signs Type II	EACH	15.000	15.000
0884	643.1000	Traffic Control Signs Fixed Message	SF	283.000	283.000
0886	643.1050	Traffic Control Signs PCMS	DAY	35.000	35.000
0890	643.1055.S	Truck or Trailer Mounted Attenuator	DAY	50.000	50.000
0894	643.4100.S	Traffic Control Interim Lane Closure	EACH	100.000	100.000
0896	643.5000	Traffic Control	EACH	0.050	0.050
0900	645.0111	Geotextile Type DF Schedule A **P**	SY	2,612.000	2,612.000
0902	645.0120	Geotextile Type HR	SY	858.000	858.000
0904	645.0140	Geotextile Type SAS	SY	441.000	441.000
0906	645.0220	Geogrid Type SR	SY	3,000.000	3,000.000
0908	646.1020	Marking Line Epoxy 4-Inch **P**	LF	4,111.000	4,111.000
0910	646.1040	Marking Line Grooved Wet Ref Epoxy 4-Inch **P**	LF	10,035.000	10,035.000
0916	646.1555	Marking Line Grooved Contrast Permanent Tape 4-Inch **P**	LF	3,750.000	3,750.000
0920	646.3040	Marking Line Grooved Wet Ref Epoxy 8-Inch **P**	LF	106.000	106.000
0928	646.5020	Marking Arrow Epoxy	EACH	1.000	1.000
0930	646.5120	Marking Word Epoxy	EACH	1.000	1.000
0938	646.7120	Marking Diagonal Epoxy 12-Inch	LF	472.000	472.000
0950	646.9010	Marking Removal Line Water Blasting 4-Inch	LF	275.000	275.000
0954	646.9110	Marking Removal Line Water Blasting 8-Inch	LF	150.000	150.000
0966	649.0120	Temporary Marking Line Epoxy 4-Inch	LF	44,305.000	44,305.000
0968	649.0150	Temporary Marking Line Removable Tape 4-Inch	LF	6,202.000	6,202.000
0984	652.0125	Conduit Rigid Metallic 2-Inch	LF	15.000	15.000
0986	652.0225	Conduit Rigid Nonmetallic Schedule 40 2-Inch	LF	175.000	175.000
0996	653.0140	Pull Boxes Steel 24x42-Inch	EACH	2.000	2.000
1004	653.0905	Removing Pull Boxes	EACH	12.000	12.000
1014	654.1150	Concrete Bases Camera Pole 50-FT	EACH	1.000	1.000
1018	655.0510	Electrical Wire Traffic Signals 12 AWG	LF	3,250.000	3,250.000
1020	655.0525	Electrical Wire Traffic Signals 6 AWG	LF	480.000	480.000
1042	656.0200	Electrical Service Meter Breaker Pedestal (location) 0007. MB-CCTV-40-0229	LS	1.000	1.000
1062	656.0500	Electrical Service Breaker Disconnect Box (location) 0007. CCTV-40-0229	LS	1.000	1.000
1102	670.0100	Field System Integrator 0003. 1035-01-82	LS	1.000	1.000
1112	670.0200	ITS Documentation 0003. 1035-01-82	LS	1.000	1.000
1118	671.0132	Conduit HDPE 3-Duct 2-Inch	LF	2,580.000	2,580.000

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Line	Item	Item Description	Unit	Total	Qty
1120	671.0222	Conduit HDPE Directional Bore 2-Duct 2-Inch	LF	240.000	240.000
1124	671.0300	Fiber Optic Cable Marker	EACH	4.000	4.000
1126	673.0105	Communication Vault Type 1	EACH	2.000	2.000
1128	673.0200	Tracer Wire Marker Posts	EACH	1.000	1.000
1130	673.0225.S	Install Pole Mounted Cabinet	EACH	1.000	1.000
1134	674.0300	Remove Cable	LF	2,890.000	2,890.000
1136	675.0300	Install Mounted Controller Microwave Detector Assembly	EACH	2.000	2.000
1138	677.0150	Install Camera Pole 50-FT	EACH	1.000	1.000
1140	677.0200	Install Camera Assembly	EACH	1.000	1.000
1142	677.9051.S	Removing 50-FT Camera Pole	EACH	1.000	1.000
1144	677.9200.S	Removing CCTV Camera	EACH	1.000	1.000
1146	678.0006	Install Fiber Optic Cable Outdoor Plant 6-CT	LF	820.000	820.000
1148	678.0024	Install Fiber Optic Cable Outdoor Plant 24-CT	LF	3,245.000	3,245.000
1150	678.0072	Install Fiber Optic Cable Outdoor Plant 72-CT	LF	3,195.000	3,195.000
1152	678.0300	Fiber Optic Splice	EACH	134.000	134.000
1154	678.0400	Fiber Optic Termination	EACH	6.000	6.000
1160	678.0500	Communication System Testing 0003. 1035-01-82	LS	1.000	1.000
1166	678.0600	Install Ethernet Switches	EACH	1.000	1.000
1168	690.0150	Sawing Asphalt	LF	97.000	97.000
1170	690.0250	Sawing Concrete	LF	7,147.000	7,147.000
1172	715.0710	Optimized Aggregate Gradation Incentive	DOL	47,022.000	47,022.000
1174	ASP.1T0A	On-the-Job Training Apprentice at $5.00/HR	HRS	450.000	450.000
1176	ASP.1T0G	On-the-Job Training Graduate at $5.00/HR	HRS	900.000	900.000
1180	SPV.0030	Special 0001. Fertilizer Type B Special	CWT	6.000	6.000
1186	SPV.0035	Special 0005. Backfill Slurry	CY	10.000	10.000
1188	SPV.0035	Special 0006. Roadway Embankment **P**	CY	53,909.000	53,909.000
1192	SPV.0035	Special 0008. EBS Excavation	CY	5,711.000	5,711.000
1194	SPV.0035	Special 0009. EBS Backfill	CY	5,711.000	5,711.000
1202	SPV.0055	Special 0002. Dispute Resolution Board	DOL	1,000.000	1,000.000
1210	SPV.0060	Special 0007. Baseline CPM Progress Schedule	EACH	0.050	0.050
1212	SPV.0060	Special 0008. Monthly CPM Progress Schedule Updates	EACH	22.000	22.000
1216	SPV.0060	Special 0016. Reconnect Storm Sewer	EACH	12.000	12.000
1218	SPV.0060	Special 0020. Fastening Sewer Access Covers	EACH	26.000	26.000
1220	SPV.0060	Special 0026. Fixed Message Sign Portable Support Special	EACH	4.000	4.000
1228	SPV.0060	Special 0034. Mobilizations Emergency Pavement Repair	EACH	3.000	3.000
1244	SPV.0060	Special 0055. Temporary Sediment Traps	EACH	2.000	2.000
1246	SPV.0060	Special 0056. Sand Bags	EACH	20.000	20.000

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Line	Item	Item Description	Unit	Total	Qty
1248	SPV.0060	Special 0060. Section Corner Monuments	EACH	1.000	1.000
1258	SPV.0060	Special 0100. Exposing Existing Infrastructure Unpaved Area	EACH	1.000	1.000
1260	SPV.0060	Special 0101. Exposing Existing Infrastructure Paved Area	EACH	1.000	1.000
1268	SPV.0060	Special 1009. Removing Underdeck Lighting Systems	EACH	2.000	2.000
1290	SPV.0060	Special 2040. Ground Rod	EACH	1.000	1.000
1314	SPV.0075	Special 0016. Pavement Cleanup Project 1035-01-82	HRS	300.000	300.000
1322	SPV.0075	Special 4001. Obstructions Sign Supports Concrete Masonry	HRS	1.000	1.000
1324	SPV.0085	Special 0002. Seeding Mixture No. 30 Special	LB	211.000	211.000
1330	SPV.0090	Special 0010. Temporary Glare Screen	LF	5,024.000	5,024.000
1340	SPV.0090	Special 0070. Heavy Duty Silt Fence	LF	168.000	168.000
1366	SPV.0105	Special 0008. Survey Project 1035-01-82	LS	1.000	1.000
1420	SPV.0170	Special 0002. Removal and Disposal of Invasive Plant Species	STA	4.000	4.000
1422	SPV.0180	Special 0001. Concrete Pavement 12-Inch Special **P**	SY	41,797.000	41,797.000
1424	SPV.0180	Special 0006. Removing Rumble Strips	SY	50.000	50.000
1434	SPV.0180	Special 0106. Asphaltic Material Binder	SY	347.000	347.000
1438	SPV.0195	Special 0002. HMA Transverse Joint Repair	TON	5.000	5.000
1440	SPV.0195	Special 0003. HMA Longitudinal Joint Repair	TON	55.000	55.000
1442	SPV.0195	Special 0004. Select Subbase	TON	3,096.000	3,096.000
1444	SPV.0195	Special 0005. Excavation, Hauling and Disposal of Creosote Contaminated Soil	TON	880.000	880.000
1446	SPV.0195	Special 0010. Soil Drying Treatment	TON	544.000	544.000
1448	SPV.0195	Special 0012. Subgrade Strengthening Treatment	TON	168.000	168.000
1450	SPV.0200	Special 0012. Manholes 4-FT Diameter Special	VF	10.000	10.000

CPM PROGRESS SCHEDULE

CATEGORY	PROJECT	SPV.0060.0007 BASELINE CPM PROGRESS SCHEDULE EACH	SPV.0060.0008 MONTHLY CPM PROGRESS SCHEDULE UPDATES EACH
1000	I.D. 1035-01-82	0.05	22
	TOTAL	0.05	22

OBLITERATING OLD ROAD

CATEGORY	STATION	214.0100 OBLITERATING OLD ROAD STA	NOTES
1000	WEST FRONTAGE ROAD 4293+00 TO 4294+00, LT	2	90-DEGREE CURVE
	TOTAL	2	

REMOVAL AND DISPOSAL OF INVASIVE PLANT SPECIES

CATEGORY	STATION	SPV.0170.0002 REMOVAL AND DISPOSAL OF INVASIVE PLANT SPECIES STA
1000	1268+00-1293+00	4
	TOTAL	4

REMOVING PAVEMENT

CATEGORY	STATION	204.0100 REMOVING PAVEMENT SY
1000	IH 94 SOUTHBOUND	
	1268+00 - 1288+95	14,676
	1290+25 1293+00	1,361
	IH 94 NORTHBOUND	
	1268+00 - 1288+95	13,255
	1290+25 1293+00	1,798
	NB OFF RAMP	3,241
	SB ON RAMP	2,914
	27TH ST	109
	TOTAL	37,353

REMOVING INLETS

CATEGORY	STATION	LOCATION	204.0220* REMOVING INLETS EACH
1000	IH 94 SOUTHBOUND		
	1269+24	LT	1
	1271+68	LT	1
	1276+34	LT	1
	1280+40	LT	1
	1284+51	LT	1
	1288+13	LT	1
	1288+30	LT	1
	1288+74	LT	1
	IH 94 NORTHBOUND		
	1271+68	RT	1
	1276+34	RT	1
	1280+40	RT	1
	1284+51	RT	1
	1288+14	RT	1
	1290+11	RT	1
	WEST FRONTAGE ROAD		
	4296+98	LT	1
	4297+00	LT	1
	TOTAL		16

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

REMOVING CURB & GUTTER

CATEGOR	STATION	LOCATION	204.0150 REMOVING CURB & GUTTER LF
1000	27TH STREET 4294+04 - 4296+10	RT	188
	TOTAL		188

ABANDONING SEWER

CATEGORY	STAGE	STATION	204.0291.S* ABANDONING SEWER CY	COMMENTS
1000	NORTHBOUND IH 94			
		1288+15 RT	30	18" CPRC
		UNDISTRIBUTED	7	
		TOTAL	37	

*ADDITIONAL QUANTITIES LISTED ELSEWYERE

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EXCAVATION, HAULING AND DISPOSAL OF CREOSOTE CONTAMINATED SOIL

CATEGORY	STATION	SPV.0195.0005 EXCAVATION, HAULING AND DISPOSAL OF CREOSOTE CONTIMINATED SOIL TON
1000	IH 94	
	1289+00 - 1289+84	185
	1288+80 - 1290+20	255
	1289+60 - 1290+95	255
	1290+00 - 1291+30	185
	TOTAL (ID 1035-01-82)	880

REMOVING BARRIER

CATEGORY	STAGE	LOCATION	STATION	204.0157 REMOVING CONCRETE BARRIER LF
1000	1A	MEDIAN	1273+00 - 1289+07	1,607
	1B	NORTHBOUND	1280+96 - 1293+00	1,053
	2	SOUTHBOUND	1281+24 - 1293+00	1,027
	3	MEDIAN	1268+00 - 1273+00	500
	TOTAL			4,187

REMOVING BARRICADE RACKS AND BARRICADES

CATEGORY	STATION	204.9060.S.0010 REMOVING BARRICADE RACKS AND BARRICADES EACH
1000	SB ENTRANCE RAMP	
	1290+80	1
	TOTAL	1

REMOVING FENCE

CATEGORY	STATION	LOCATION	204.0170 REMOVING FENCE LF
1000	IH 94 SB		
	STA. 1268+00 - STA. 1281+00	LT	1,321
	IH 94 NB		
	STA. 1268+00 - STA. 1276+98	RT	890
	IH 94 NORTHBOUND EXIT RAMP		
	STA. 1289+76 - 1291+46	LT	232
	WEST FRONTAGE RD		
	STA. 4283+02 - 4293+86	RT	1,065
	TOTAL		3,508

REMOVING DELINEATORS AND MARKERS

CATEGOR	STATION	204.0180 REMOVING DELINEATORS & MARKERS EACH	COMMENTS
1000	IH 94 SOUTHBOUND		
	1268+00 - 1293+00	12	DELINEATORS
	IH 94 NORTHBOUND		
	1268+00 - 1293+00	13	DELINEATORS
	IH 94 NORTHBOUND EXIT RAMP		
	1268+00 - 1283+50	2	DELINEATORS
	IH 94 SOUTHBOUND ENTRANCE RAMP		
	1268+00 - 1283+50	12	DELINEATORS
	TOTAL	39	

CLEARING AND GRUBBING

CATEGOR	STA	TO	STA	LOCATION	201.0105 CLEARING STA	201.0205 GRUBBING STA
	27TH STREET					
	4294+00	-	4298+00	LT	4	4
	4296+00		4297+10	RT	2	2
	SUBTOTAL				6	6
	IH 94 NORTHBOUND EXIT RAMP					
	1277+00	-	1278+00	RT	1	1
	1280+00		1282+00	RT	2	2
	4293+00		4295+00	RT/LT	2	2
	SUBTOTAL				5	5
	TOTAL				11	11

REMOVING STORM SEWER

CATEGOR	STATION	204.0245.0001 REMOVING STORM SEWER 6-INCH LF	204.0245.0004 REMOVING STORM 15-INCH LF	204.0245.0006 REMOVING STORM 18-INCH LF	204.0245.0008 REMOVING STORM SEWER 24-INCH LF
1000	IH 94 MEDIAN				
	1276+34 - 1289+11	–	530	875	--
	IH 94 NB				
	1287+98 - 1288+97	–	–	–	105
	1290+10	–	–	85	--
	EAST FRONTAGE RD				
	5276+50 - 5276+59	–	–	9	--
	27TH STREET				
	4297+00	82	–	–	--
	TOTAL	82	530	969	105

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REMOVING SIGN STRUCTURE

CATEGORY	STATION	LOCATION	204.9105.S.0007 REMOVING SIGN STRUCTURE S-51-206 LS
1000	IH 94		
	1275+10	MEDIAN	1
	TOTAL		1

REMOVING STRUCTURES

CATEGORY	STATION	203.0200.0003 REMOVING OLD STRUCTURE STATION 1289+64 LT LS	203.0200.0004 REMOVING OLD STRUCTURE STATION 1289+64 RT LS
1000	IH 94		
	1289+64 LT	1	–
	1289+64 RT	--	1
	TOTAL	1	1

3

REMOVING SMALL PIPE CULVERT

CATEGORY	STATION	SIZE (INCH)	LENGTH (FEET)	TYPE	203.0100 REMOVING SMALL PIPE EACH
1000	IH 94 NORTHBOUND EXIT RAMP				
	1288+51	24-INCH	105	CPCM	1
	SUBTOTAL				1
	WEST FRONTAGE RD				
	4292+51	24-INCH	77	CPCM	1
	4294+45	42-INCH	87	CPRC	1
	4294+79	24-INCH	85	CPCM	1
	SUBTOTAL				3
	EAST FRONTAGE RD				
	5276+55	10-INCH	2	PCP	1
	TOTAL				5

FINISHING ROADWAY

CATEGORY	LOCATION	213.0100.0006 FINISHING ROADWAY EACH
1000	IH 94 (1035-01-82)	1.00
	TOTAL	1.00

REMOVING GUARDRAIL

CATEGORY	STATION	LOCATION	204.0165 REMOVING GUARDRAIL LF
1000	IH 94		
	1280+15	RT	85
	1288+46	RT	150
	1289+04	RT	135
	1289+62	LT	110
	1290+00	LT	110
	27TH STREET		
	4296+25 - 4297+21	RT	100
	4296+25	RT	--
	EAST FRONTAGE ROAD		
	5276+50		29
	TOTAL		719

REMOVING UNDERDRAIN

CATEGORY	STATION	LOCATION	204.9090.S.0002 REMOVING UNDERDRAIN LF
1000	IH 94 SOUTHBOUND		
	1268+00 - 1271+53	OUTSIDE	370
	1269+00 - 1276+34	MEDIAN	1,175
	1279+00 - 1284+00	OUTSIDE	515
	1284+10 - 1290+00	OUTSIDE	605
	1280+00 - 1285+25	SB ON RAMP	525
	IH 94 NORTHBOUND		
	1268+00 - 1271+53	OUTSIDE	370
	1277+47 - 1283+57	OUTSIDE	605
	1283+72 - 1288+97	RT	480
	WEST FRONTAGE ROAD		
	4288+00 - 4288+50	LT	72
	TOTAL		4,717

3

EARTHWORK

CATEGORY	STAGE	ROADWAY	FROM / TO STATION	205.0100 EXCAVATION COMMON (1) CY	SPV.0035.0008 EBS EXCAVATION (2) (5) CY	SPV.0035.0009 EBS BACKFILL CY	SPV.0035.0006 ROADWAY EMBANKMENT (3) CY	SPV.0195.0010 SOIL DRYING TREATMENT TON	SPV.0195.0012 SUBGRADE STRENGTHENING TREATMENT TON	MASS ORDINATE +/- (4)
1000										
	1	WEST FRONTAGE ROAD TO 27TH ST	4288+00 to 4297+10	9,270	567	567	957	38	0	8,313
		IH 94 NORTHBOUND WIDENING	1268+00 to 1293+00	7,763	467	467	21,485	167	15	-13,721
		EAST FRONTAGE ROAD CUL-DE-SAC	5276+21 to 5277+59	214	59	59	219	6	0	-5
		EBS AT DITCH FILLS	1268+00 to 1293+00	0	1,409	1,409	0	0	47	
		SUBTOTAL STAGE 1B		17,248	2,501	2,501	22,661	210	62	-5,413
	2	IH 94 SOUTHBOUND	1268+00 to 1293+00	17,817	1,482	1,482	27,134	151	49	-9,317
		EBS AT DITCH FILLS	4288+00 to 4297+10	0	346	346	0	0	11	
		SUBTOTAL STAGE 2		17,817	1,828	1,828	27,134	151	60	-9,317
	3	IH 94 NORTHBOUND	1268+00 to 1293+00	1,956	128	128	675	19	4	1,281
		IH 94 SOUTHBOUND	1268+00 to 1293+00	2,126	104	104	474	16	3	1,652
		SUBTOTAL STAGE 3		4,082	233	233	1,149	35	8	2,933
	4	IH 94 NORTHBOUND	1268+00 to 1293+00	16,646	1,149	1,149	2,965	147	38	13,680
		SUBTOTAL STAGE 4		16,646	1,149	1,149	2,965	147	38	13,680
	5	IH 94 SOUTHBOUND	1268+00 to 1293+00	495	0	0	0	0	0	495
		SUBTOTAL STAGE 5		495	0	0	0	0	0	495
		GRAND TOTALS		56,288	5,711	5,711	53,909	544	168	2,378

1) Cut Volume Includes Concrete and Asphaltic Surface Material.

2) EBS Excavation to be backfilled with EBS Backfill. All EBS material is assumed to be wasted offsite.

3) Roadway Embankment = Unexpanded Fill

4) The Mass Ordinate + or - quantity is calculated by Division. A positive quantity indicates an excess of material within the division and a negative number indicates a shortage of material within the division. Mass Ordinate = Cut-Embankment. The mass ordinate is for informational purposes only as Common Excavation and Roadway Embankment are not balanced for quantity purposes and does not guarantee the quality of Common Excavation, and if it can be reused onsite.

5) Geogrid Type SR is to be used in locations of EBS backfill. Quantity is listed elsewhere.

BACKFILL CONTROLLED LOW STRENGTH

CATEGORY	LOCATION	209.0200.S* BACKFILL CONTROLLED LOW STRENGTH CY	**209.2500* BACKFILL GRANULAR GRADE 2 TON	SPV.0035.0005 BACKFILL SLURRY CY
1000	SIGN STRUCTURE S-51-206	10	--	--
	UNDISTRIBUTED	10	20	10
	TOTAL	20	20	10

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

** TO BE USED AT HOLES FROM REMOVALS OR ABANDONMENT OF STRUCTURES AND ANY OTHER LOCATION AT THE DIRECTION OF THE ENGINEER.

ASPHALTIC MATERIAL BINDER

CATEGORY	STAGE	STATION	TO	STATION	LOCATION	SPV.0180.0106 ASPHALTIC MATERIAL BINDER SY
1000	3	1268+00	-	1273+50	MEDIAN	113
		1273+50	-	1289+03	MEDIAN	202
		1290+55	-	1293+00	MEDIAN	32
					TOTAL	347

GEOGRID REINFORCEMENT

CATEGORY	LOCATION	645.0220 GEOGRID TYPE SR SY	COMMENT
1000	IH 94	3,000	12-INCH DEPTH
	TOTAL	3,000	

CURB & GUTTER

CATEGORY	STAGE	LOCATION	STATION	TO	STATION	601.0557 CONCRETE CURB & GUTTER 6-INCH SLOPED 36-INCH TYPE D LF
1000	1	WEST FRONTAGE ROAD	4288+00	--	4288+50	50
		TOTAL				50

BASE AGGREGATE ITEMS

CATEGORY	STAGE	LOCATION	STATION			305.0115 BASE AGGREGATE DENSE 3/4-INCH CY	305.0125 BASE AGGREGATE DENSE 1 1/4-INCH CY	312.0115 SELECT CRUSHED MATERIAL CY	SPV.0195.0004 SELECT SUBBASE TON
1000	1	WEST FRONTAGE ROAD	4288+00	-	4291+10	44	687	--	854
			4291+10	-	4297+10	126	1,498	--	1,862
		EAST FRONTAGE ROAD	5276+21	-	5277+46	--	258	--	329
		RELIEF TRENCHES	4288+00	-	4297+10	--	--	--	51
		PRIVATE ENTRANCE	4290+50			--	53	--	–
	1B	IH 94 NB WIDENING	1268+00		1283+90	--	3,817	17	–
		STAGE 1 SUBTOTAL				170	6,313	17	3,096
	2	IH 94 SB	1268+00	-	1275+00	--	966	2,569	–
			1275+00		1276+94	--	253	724	–
			1276+94	-	1293+00	--	2,156	5,787	–
		IH 94 SB TEMPORARY PAVEMENT	1268+00	-	1293+00	--	754	--	–
		RELIEF TRENCHES	1268+00	-	1293+00	--	--	--	–
		TEMPORARY ACCESS				--	301	--	–
		STAGE 2 SUBTOTAL				--	4,430	9,079	–
	3	IH 94 MEDIAN	1268+00	-	1293+00	--	916	1,601	–
		STAGE 3 SUBTOTAL				--	916	1,601	–
	4	IH 94 NB	1268+00	-	1285+25	687	2,284	6,076	–
			1285+25		1287+20	59	252	722	–
			1287+20		1293+00	--	788	2,097	–
		RELIEF TRENCHES	1268+00	-	1293+00	--	--	17	
		TEMPORARY ACCESS				--	300	--	–
		TEMPORARY RELIEF TRENCHES	1268+00	-	1293+00	--	--	17	–
		STAGE 4 SUBTOTAL				746	3,625	8,928	–
	5	IH 94 SB	1268+00	-	1293+00	148	--	--	–
		TOTAL				1,065	15,283	19,625	3,096

SHAPING SHOULDERS

CATEGORY	STAGE	LOCATION	STATION	TO	STATION	305.0500 SHAPING SHOULDERS STA
1000	5	IH-94 SB OUTSIDE SHOULDER	1275+00	--	1293+00	18
		TOTAL				18

INCENTIVE IRI RIDE

CATEGORY	ROADWAY	LOCATION	440.4410 INCENTIVE IRI RIDE DOL
1000	IH-94	SB LANES	$3,784.00
		NB LANES	$3,784.00
	TOTAL		$7,568.00

JOINT LAYOUT

CATEGORY	LOCATION	415.5110.S.0012 CONCRETE PAVEMENT JOINT LAYOUT LS
1000	IH 94 (1035-01-82)	1.00
	TOTAL	1.00

RUMBLE STRIPS

CATEGORY	STAGE	STATION	LOCATION	416.1110 CONCRETE RUMBLE STRIPS SHOULDER LF
1000	5	IH 94 NORTHBOUND 1268+00 - 1293+00	MEDIAN & OUTSIDE SHOULDER	4,970
	5	IH 94 SOUTHBOUND 1268+00 - 1293+00	MEDIAN & OUTSIDE SHOULDER	5,030
		TOTAL		10,000

PAVEMENT ITEMS

CATEGOR	STAGE	STATION	LOCATION	SPV.0180.0001 CONCRETE PAVEMENT 12-INCH SPECIAL SY	455.0605 TACK COAT GAL	460.5223 HMA PAVEMENT 3 LT 58-28 S TON	460.5224 HMA PAVEMENT 4 LT 58-28 S TON	460.6424 HMA PAVEMENT 4 MT 58-28 H TON	460.7223 HMA PAVEMENT 3 HT 58-28 S TON	460.7424 HMA PAVEMENT 4 HT 58-28 H TON	460.2000 INCENTIVE DENSITY HMA DOL	465.0120 ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES TON	465.0125 ASPHALTIC TEMPORARY TON	465.0305 ASPHALTIC FLUMES SY
1000	1	WEST FRONTAGE ROAD 4288+00 - 4291+10		–	117	312	216	–	–	--	340	--	--	10
		4291+10 - 4297+10		–	231	617	427	–	–	--	670	--	--	--
		PRIVATE ENTRANCE 4290+50		–	–	–	--	–	–	--	--	56	--	--
		EAST FRONTAGE ROAD 5276+21 - 5277+46		–	55	145	101	–	–	--	160	--	--	--
	1A	IH 94 NB 1268+00-1293+00	MAINLINE OVERLAY AND MEDIAN SHOULDER WEDGING	–	1,142	–	--	1,678	–	--	--	--	--	--
	1B	IH 94 NB 1268+00-1293+00	TEMPORARY WIDENING	–	1,300	–	--	–	2,937	1,068	--	--	--	--
		STAGE 1 SUBTOTAL		–	2,845	1,074	744	1,678	2,937	1,068	1,170	56	--	10
	2	IH 94 SB 1268+00 - 1293+00		16,980	–	–	--	–	–	--	--	--	468	--
		STAGE 2 SUBTOTAL		16,980	–	–	--	–	–	--	--	--	468	--
		IH 94 SB 1268+00 - 1293+00	MEDIAN	3,985	–	–	--	–	–	--	--	--	--	--
		STAGE 3 SUBTOTAL		3,985	–	–	--	–	–	--	--	--	--	--
	4	IH 94 NB 1268+00 - 1293+00		20,832	–	–	--	–	–	--	--	--	--	--
		TOTAL		41,797	2,845	1,074	744	1,678	2,937	1,068	1,170	56	468	10

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PAVEMENT REPAIRS

CATEGORY	ROADWAY	209.0200.S* BACKFILL CONTROLLED LOW STRENGTH CY	209.2500* BACKFILL GRANULAR GRADE 2 TON	390.0203 BASE PATCHING ASPHALTIC SY	416.0610 DRILLED TIE BARS EACH	416.0620 DRILLED DOWEL BARS EACH	416.1710 CONCRETE PAVEMENT REPAIR SY	416.1715 CONCRETE PAVEMENT REPAIR SHES SY	416.1720 CONCRETE PAVEMENT REPLACEMENT SY	495.1000.S COLD PATCH TON	690.0250* SAWING CONCRETE LF	SPV.0195.0003 HMA LONGITUDINAL JOINT REPAIR TON	SPV.0195.0002 HMA TRANSVERSE JOINT REPAIR TON	SPV.0060.0034 MOBILIZATIONS EMERGENCY PAVEMENT REPAIR EACH
1000	IH-94 NB/SB													
	UNDISTRIBUTED	25	20	335	50	110	420	170	140	10	4800	55	5	3
	SUBTOTAL	25	20	335	50	110	420	170	140	10	4800	55	5	3
	TOTALS (ID 1035-01-82)	25	20	335	50	110	420	170	140	10	4800	55	5	3

* ADDITIONAL QUANTITIES LISTED ELSEWHERE

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REMOVING RUMBLE STRIPS

CATEGORY	STATION		LOCATION	SPV.0180.0006 REMOVING RUMBLE STRIPS SY
1000	IH 94 NORTHBOUND			
	1268+00 -	1273+00	MEDIAN SHOULDER	50
	TOTAL			50

PAVEMENT MILLING

CATEGORY	STATION			204.0105 REMOVING PAVEMENT BUTT JOINTS SY	204.0115 REMOVING ASPHALTIC SURFACE BUTT JOINTS SY	204.0120 REMOVING ASPHALTIC SURFACE MILLING SY
1000	IH 94 NORTHBOUND					
	1268+00		1273+00	--	--	–
	1273+00	-	1289+07	28	100	134
	1290+55		1293+00	28	100	–
	TOTAL			56	200	134

TEMPORARY COVER PLATES

CATEGORY	STAGE	ROADWAY	611.8120.S COVER PLATES TEMPORARY EACH
1000	1A	IH 94	4
			4

DRAIN TILE

CATEGORY	LOCATION	204.9090.S.0003 REMOVING DRAIN TILE LF	608.0512 STORM SEWER PIPE REINFORCED CONCRETE CLASS V 12-INCH LF	611.0535 MANHOLE COVER TYPE J-SPECIAL EACH	612.0700 DRAIN TILE EXPLORATION LF	SPV.0200.0012 MANHOLES 4-FT DIAMETER SPECIAL VF	* SPV.0060.0016 RECONNECT STORM SEWER EACH
1000	IH 94 SB	100	100	1	100	5	1
1000	IH 94 NB	100	100	1	100	5	1
	TOTALS (ID 1035-01-82)	200	200	2	200	10	2

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

ADJUSTING INLET COVERS

CATEGORY	STATION	STAGE	611.8115 ADJUSTING INLET COVERS EACH
1000	IH 94 MEDIAN 1271+70, RT	1A	1
	TOTAL		1

FASTENING SEWER ACCESS COVERS

CATEGORY	STAGE	ROADWAY	SPV.0060.0020 EACH
1000	1A	IH 94 NB	1
	3	IH 94 SB	7
	4	IH 94 SB	18
	TOTAL (ID 1035-01-82)		26

GUARDRAIL ITEMS

CATEGORY	STATION	LOCATION	614.0115 ANCHORAGES FOR STEEL PLATE BEAM GUARD TYPE 2 EACH	614.0305 STEEL PLATE BEAM GUARD CLASS A LF	614.2500 MGS THRIE BEAM TRANSITION LF	614.2610 MGS GUARDRAIL TERMINAL EAT EACH	614.0396 GUARDRAIL MOW STRIP ASPHALT SY
1000	IH 94						
	1274+97 - 1275+37	LT	--	--	40	--	--
	1275+37 - 1275+91	LT	--	--	--	1	45
	1286+26 - 1286+80	RT	--	--	--	1	--
	1286+80 - 1287+20	RT	--	--	40	--	45
	WEST FRONTAGE ROAD 4296+24 - 4297+10	RT	--	50	40	1	45
	EAST FRONTAGE ROAD 5277+52	RT	2	--			23
	TOTAL		2	50	120	3	158

PIPE UNDERDRAIN ITEMS

CATEGORY	STATION			LOCATION	612.0106 PIPE UNDERDRAIN UNPERFORATED 6-INCH LF	612.0206 PIPE UNDERDRAIN UNPERFORATED 6-INCH LF	612.0212 PIPE UNDERDRAIN UNPERFORATED 12-INCH LF	645.0111 GEOTEXTILE FABRIC TYPE DF SCHEDULE A SY	520.1012 APRON ENDWALLS FOR CULVERT PIPE 12-INCH EACH	633.5200* MARKERS CULVERT END EACH	COMMENTS
1000	1268+00	-	1293+00	SB MEDIAN	2,500	--	--	1,389	--	--	CONNECT UNDERDRAIN TO NORTHBOUND MEDIAN INLETS
	1268+00	-	1275+15	SB OUTSIDE EDGE	715	--	--	397	--	--	CONNECT UNDERDRAIN TO SOUTHBOUND OUTSIDE INLETS
	1268+00	-	1277+00	NB OUTSIDE EDGE	900	20	--	502	--	--	OUTFALL UNDERDRAIN TO DITCH
	1270+50	-	1278+00	NB OUTSIDE EDGE	--	50	780		1	1	
	1287+20	-	1293+00	NB OUTSIDE EDGE	580	15	--	324	--	--	OUTFALL UNDERDRAIN TO DITCH
				TOTALS	4,695	85	780	2,612	1	1	

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FENCING ITEMS

CATEGORY	LOCATION	616.0100 FENCE WOVEN WIRE 4-FOOT LF	616.0700.S FENCE SAFETY
1000	IH 94 NB		
	STA. 1268+00 - STA. 1293+00	2,384	–
	IH 94 SB		
	STA. 1268+00 - STA. 1293+00	2,623	–
	UNDISTRIBUTED	–	1,000
	TOTAL	5,007	1,000

CONCRETE BARRIER

CATEGORY	STAGE	STATION	LOCATION	603.1142 CONCRETE BARRIER TYPE S42 LF	603.1156 CONCRETE BARRIER TYPE S56 LF	603.3559 CONCRETE BARRIER TRANSITION TYPE S42 TO S56 EA	603.2156 CONCRETE BARRIER FIXED OBJECT PROTECTION TYPE S56 LF
1000	3	IH 94 SB					
		1268+00 - 1293+00	MEDIAN	2,400	40	2	10
	4	IH 94 NB					
		1287+28 - 1293+00	SHOULDER	572	0	0	0
		IH 94 NB					
		1268+00 - 1293+00	MEDIAN	2,400	40	2	10
		IH 94 SB					
		1268+00 - 1275+03	SHOULDER	703	--	--	--
		TOTAL		6,075	80	4	20

TEMPORARY SHORING

CATEGORY	STAGE	LOCATION	STATION	511.1300.0002 TEMPORARY SHORING (LOCATION) STA 1288+65 TO 1290+16 SF
1000	1B	IH 94 SB		
			1288+65-1290+16	1,510
		TOTAL (I.D. 1035-01-82)		1,510

SECTION CORNER MONUMENTS

CATEGORY	STATION	DESCRIPTION	SPV.0060.0060 SECTION CORNER MONUMENTS EACH
1000	WEST FRONTAGE ROAD		
	4294+50	SECTION CORNER	1
	TOTAL		1

MOBILIZATION

CATEGORY	STAGE	619.1000 MOBILIZATION EACH
1000	ALL	0.05
	TOTAL	0.05

DUST CONTROL SURFACE TREATMENT

CATEGORY	LOCATION	623.0200 DUST CONTROL SURFACE TREATMENT SY
1000	IH 94	70,200
	TOTAL	70,200

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WATER ITEMS

CATEGORY	LOCATION	624.0100 WATER MGAL
1000	IH 94 NB TEMP WIDENING	135
	WFR	69
	EFR	7
	IH 94 SB	206
	IH 94 NB	132
	TOTAL	549

EROSION CONTROL ITEMS

CATEGORY	STAGE	LOCATION	606.0200 RIPRAP MEDIUM CY	SPV.0090.0070 HEAVY DUTY SILT FENCE LF	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINT LF	628.1905 MOBILIZATIONS EROSION CONTROL EACH	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH	628.2004 EROSION MAT CLASS I TYPE B SY	628.2008 EROSION MAT URBAN CLASS I TYPE B SY	628.7005 INLET PROTECTION TYPE A EACH	628.7020 INLET PROTECTION TYPE D EACH	628.7504 TEMPORARY DITCH CHECK LF	628.7555 CULVERT PIPE CHECKS EACH	628.7570 ROCK BAGS EACH	SPV.0060.0056 SAND BAGS EACH	628.7515.S STONE OR ROCK DITCH CHECKS CY	645.0120 GEOTEXTILE TYPE HR SY	645.0140 GEOTEXTILE TYPE SAS SY	SPV.0060.0055 TEMPORARY SEDIMENT TRAPS EACH
1000	1	IH 94 NORTHBOUND	--	–	--	--	--	–	4,680	7,950	–	1	–	--	--	--	145	--	--	--
		IH94 SOUTHBOUND	--	–	--	--	--	–	--	–	–	–	–	--	--	--	--	--	--	--
		WEST FRONTAGE ROAD	16		711	711			6,930	–			90	20				48		
		UNDISTRIBUTED	4	–	178	178	2	2	1,161	1,988	–	–	23	5	20	--	36	-- 12	--	--
		SUBTOTAL	20	–	889	889	2	2	12,771	9,938	–	1	113	25	20	--	181	-- 60	--	--
	2	IH 94 NORTHBOUND	91	134	717	717	--	–	--	–	–	–	240	--	--	--	--	243	174	1
		IH94 SOUTHBOUND	--	–	--	--	--	–	15,980	–	7	3	–	--	--	--	149	--	--	--
		UNDISTRIBUTED	20	34	179	179	2	2	4,000	–	2	1	60	--	40	10	37	60	44	--
		SUBTOTAL	111	168	896	896	2	2	19,980	–	9	4	300	--	40	10	186	303	218	1
	3	IH 94 SOUTHBOUND	--	–	--	--	--	–	--	–	18	18	–	--	--	--	--	--	--	--
	4	IH 94 NORTHBOUND	--	–	--	--	--	–	480	1,110	4	4	–	--	--	--	--	--	--	--
		IH94 SOUTHBOUND	144	–	1,524	1,524	--	–	--	–	–	–	200	--	20	--	--	395	178	1
		UNDISTRIBUTED	40	–	380	380	2	2	120	278	1	1	50	--	40	10	--	100	45	--
		SUBTOTAL	184	–	1,904	1,904	2	2	600	1,388	5	5	250	--	60	10	--	495	223	1
	5	IH 94 NORTHBOUND	--	–	--	--	--	–	--	–	–	–	–	--	--	--	--	--	--	--
		IH94 SOUTHBOUND	--	–	--	--	--	–	720	–	–	–	–	--	--	--	--	--	--	--
		UNDISTRIBUTED	--	–	--	--	--	–	180		–	–	–	--	--	--	--	--	--	--
		SUBTOTAL	--	–	--	--	--	–	900	–	–	–	–	--	--	--	--	--	--	--
		TOTALS	315	168	3,689	3,689	6	6	34,251	11,326	32	28	663	25	120	20	367	858	441	2

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RESTORATION ITEMS

CATEGORY	STATION	LOCATION	625.0100 TOPSOIL SY	625.0500 SALVAGED TOPSOIL SY	628.6510 SOIL STABILIZER TYPE B ACRE	SPV.0030.0001 FERTILIZER TYPE B SPECIAL CWT	SPV.0085.0002 SEEDING MIXTURE NO. 30 SPECIAL LB	630.0200 SEEDING TEMPORARY LB
1000	IH-94 SOUTHBOUND 1268+00 - 1293+00		5,567	16,700	–	2	77	77
	IH-94 NORTHBOUND 1268+00 - 1293+00		4,740	14,220	3	2	66	66
	WEST FRONTAGE ROAD 4288+00 - 4297+10		2,310	6,930	–	1	32	32
	UNDISTRIBUTED		2,576	7,727	2	1	36	36
	TOTAL		15,192	45,577	5	6	211	211

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FREEWAY LIGHTING REMOVAL

	CATEGORY	1100	1100	1100	1100	1100
SYSTEM		204.0195* REMOVING CONCRETE BASES	653.0905 REMOVING PULL BOXES	204.9060.S.1002 REMOVING LIGHTING UNITS	204.9060.S.1010 REMOVING DISTRIBUTION CENTER	SPV.0060.1009 REMOVING UNDERDECK LIGHTING SYSTEMS
	LOCATION	EACH	EACH	EACH	EACH	EACH
HL-51-RR	EXISTING LIGHT POLE	14	-	14	-	-
	EXISTING UDL	-	-	4	-	-
	DISTRIBUTION CENTER HL-51-RR	1	-	-	1	-
	EXISTING PULLBOX	-	3	-	-	-
	B-51-36	-	-	-	-	1
	B-51-37	-	-	-	-	1
	TOTAL	15	3	18	1	2

*ADDITIONAL QUANTITIES LISTED ELSEWHERE

CONCRETE BARRIER TEMPORARY ITEMS

CATEGORY	STAGE	603.8000 CONCRETE BARRIER TEMPORARY PRECAST DELIVERED LF	603.8125 CONCRETE BARRIER TEMPORARY PRECAST INSTALLED LF		603.8505 ANCHORING CONCRETE BARRIER ON BRIDGE DECKS LF	*** 614.0905 CRASH CUSHION TEMPORARY EACH	SPV.0090.0010 TEMPORARY GLARE SCREEN LF
1000	STAGE 1A	3,237	3,237		--	2	–
	STAGE 1B	2,486	5,728		151	1	–
	STAGE 1C	1,967	2,218		--	1	–
	STAGE 2	--	–		--	--	2,510
	STAGE 3	5,045	5,045		--	--	–
	STAGE 4	--	–		--	--	2,514
	STAGE 5		2,525		--	--	–
	TOTAL	12,735	18,753	--	151	4	5,024

*** TL-3 CRASH TEST CONDITION; 8' WIDTH; OM-3R MARKING PATTERN

TRAFFIC CONTROL ITEMS

CATEGORY	STAGE	STAGE DURATION DAYS	643.0300 TRAFFIC CONTROL DRUMS EACH	643.0300 DAYS	643.0420 TRAFFIC CONTROL BARRICADES TYPE III EACH	643.0420 DAYS	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A EACH	643.0705 DAYS	643.1050 TRAFFIC CONTROL SIGNS PCMS EACH	643.1050 DAYS	643.0900 TRAFFIC CONTROL SIGNS EACH	643.0900 DAYS	638.2102* MOVING SIGNS TYPE II EACH	643.1055.S TRUCK OR TRAILER - MOUNTED ATTENUATOR DAY	643.4100.S TRAFFIC CONTROL INTERIM LANE CLOSURE EACH	643.0920 TRAFFIC CONTROL COVERING SIGNS TYPE II # SIGNS	643.0920 TRAFFIC CONTROL COVERING SIGNS TYPE II # CYCLES	643.0920 TRAFFIC CONTROL COVERING SIGNS TYPE II EACH
1000	STAGE 1A	24	130	3,120	24	576	48	1,152	2	28	26	624	4	–	–	--	--	–
	STAGE 1B	42	--	–	3	126	6	252	–	--	8	336	4	–	–	--	--	–
	STAGE 1C	30	--	–	--	--	--	--	–	--	6	180	3	–	–	--	--	–
	STAGE 2	224	--	–	10	1,120	20	2,240	–	--	12	1,456	4	–	–	--	--	–
	STAGE 3	35	--	–	--	--	--	--	–	--	6	60	4	–	–	--	--	–
	STAGE 4	133	--	–	10	1,330	20	2,660	–	--	8	449	3	–	–	--	--	–
	STAGE 5	112	--	–	--	--	--	--	–	--	6	672	3	–	–	--	--	–
	UNDISTRIBUTED			310		318		631		7		378	5	50	100	5	3	15
	TOTAL			3,430		3,470		6,935		35		4,155	30	50	100			15

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

3

TRAFFIC CONTROL SIGNS FIXED MESSAGE

CATEGORY	STAGE	LOCATION	SIGN NO.	643.1000 TRAFFIC CONTROL SIGNS FIXED MESSAGE SF	SPV.0060.0026 FIXED MESSAGE SIGN PORTABLE SUPPORT EACH	COMMENT
1000	STAGE 1A	1269+30	102	61.75	--	GROUND MOUNTED SUPPORT
		1274+00	100	57.75	--	GROUND MOUNTED SUPPORT
	STAGE 1B	1269+30	103	61.75	--	GROUND MOUNTED SUPPORT
		1274+00	100	--	--	SAME AS STAGE 1A
		1288+00	104	67.50	1	PORTABLE SUPPORT
	STAGE 1C	1269+30	102	--	--	GROUND MOUNTED SUPPORT
		1274+00	100	--	--	SAME AS STAGE 1B
		1288+00	104	--	--	GROUND MOUNTED SUPPORT
	STAGE 2	1269+30	103	--	1	PORTABLE SUPPORT
		1274+00	100	--	1	PORTABLE SUPPORT
		1274+00	101	3.50	--	MOUNTED TO FMS 100
		1288+00	104	--	--	SAME AS STAGE 1C
	STAGE 3	1269+30	102	--	--	GROUND MOUNTED SUPPORT
		1274+00	100	--	--	GROUND MOUNTED SUPPORT
		1288+00	104	--	--	SAME AS STAGE 2
	STAGE 4	1269+30	103	--	--	GROUND MOUNTED SUPPORT
		1274+00	100	--	--	SAME AS STAGE 3
		1288+00	104	--	--	PORTABLE SUPPORT
	STAGE 5	1269+30	102	--	--	GROUND MOUNTED SUPPORT
		1274+00	100	--	--	GROUND MOUNTED SUPPORT
		1288+00	104	--	--	GROUND MOUNTED SUPPORT
	INGRESS/	--	AAA	3.50	--	MOUNTED ON POSTS
	EGRESS	--	BBB	8.00	--	ON SAME POST AS AAA
			CCC	4.00		MOUNTED ON POSTS
	UNDISTRIBUTED			77.00	1	
			TOTAL	283.00	4	

TRAFFIC CONTROL

CATEGORY	LOCATION	643.5000 TRAFFIC CONTROL (1035-01-82) EACH
1000	PROJECT	0.05
	TOTAL	0.05

TRACKING PADS

CATEGORY	STAGE	LOCATION	628.7560 TRACKING PADS EACH
1000	1	IH 94	1
	2	IH 94	1
	3	IH 94	1
	4	IH 94	1
	1	WEST FRONTAGE RD	1
		TOTAL	5

PAVEMENT MARKING

CATEGORY	LOCATION	STATION		STATION	633.0100 DELINEATOR POSTS STEEL EACH	633.0500 DELINEATOR REFLECTORS (WHITE) EACH	646.1040 MARKING LINE GROOVED WET REFLECTIVE EPOXY 4-INCH (YELLOW) LF	646.1040 (WHITE) LF	646.1040 12.5-FT LINE 37.5-FT SKIP (WHITE) LF	646.1020 MARKING LINE EPOXY 4-INCH (YELLOW) LF	646.1020 (WHITE) LF	646.1555 MARKING LINE GROOVED CONTRAST PERMANENT TAPE 4-INCH 12.5-FT LINE 37.5-FT SKIP (WHITE) LF	646.3040 MARKING LINE GROOVED WET REFLECTIVE EPOXY 8-INCH LF	646.5020 MARKING ARROW EPOXY EACH	646.5120 MARKING WORD EPOXY EACH	646.7120 MARKING DIAGONAL EPOXY 12-INCH (YELLOW) LF	646.7120 (WHITE) LF
1000	IH 94 SB	1268+00	-	1293+00	4	4	2,506	2,500	--	--	--	1,886	--	--	--	--	--
	IH 94 NB	1268+00	-	1283+50	4	4	2,523	2,476	--	--	--	1,864	--	--	--	--	--
	WEST FRONTAGE ROA	4288+00	-	4299+61	--	--	--	--	30	2,069	2,042	--	106	1	1	278	194
	TOTAL				8	8	10,035			4,111		3,750	106	1	1	472	

TEMPORARY PAVEMENT MARKING

CATEGORY	LOCATION	649.0120 TEMPORARY MARKING LINE EPOXY 4-INCH YELLOW LF	WHITE LF	12.5' LINE 37.5' SKIP WHITE LF	649.0150 TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH WHITE LF	YELLOW LF	12.5' LINE 37.5' SKIP WHITE LF
1000	STAGE 1A	--	567	--	2,455	2,500	1,247
	STAGE 1B	2,500	2,487	1,247	--	--	--
	STAGE 1C	2,484	2,472	1,239			
	STAGE 2	2,487	2,499	--	--	--	--
	STAGE 3	2,515	2,527	1,262	--	--	--
	STAGE 4	2,514	2,501	1,254	--	--	--
	STAGE 5	5,000	5,000	3,750	--	--	--
	TOTAL		44,305			6,202	

REMOVING PAVEMENT MARKINGS

CATEGORY	LOCATION	646.9010 MARKING REMOVAL LINE WATER BLASTING 4-INCH LF	646.9110 MARKING REMOVAL LINE WATER BLASTING 8-INCH LF
1000	WEST FRONTAGE ROAD	275	150
	TOTAL	275	150

3

CONSTRUCTION STAKING

CATEGORY	STAGE	SPV.0105.0008 SURVEY PROJECT LS
1000	IH 94 (1035-01-82)	1
	TOTAL	1

PAVEMENT CLEANUP

CATEGORY	LOCATION	SPV.0075.0016 PAVEMENT CLEANUP HOUR
1000	PROJECT 1035-01-82	300
TOTAL		300

3

DISPUTE RESOLUTION BOARD

CATEGORY	STAGE	SPV.0055.0002 DISPUTE RESOLUTION BOARD DOL
1000	IH 94 (1035-01-82)	1000
	TOTAL	1000

EXPOSING EXISTING INFRASTRUCTURE

CATEGORY	ROADWAY	LOCATION	SPV.0060.0100 UNPAVED AREA EACH	SPV.0060.0101 PAVED AREA EACH
1000	IH 94	UNDISTRIBUTED	1	1
TOTAL (ID 1035-01-82)			1	1

SAW CUTTING ITEMS

CATEGORY	STATION	STAGE	690.0150 SAWING ASPHALT LF	690.0250* SAWING CONCRETE LF
1000	W FRONTAGE RD	1		
	4288+00		45	--
	4292+50		26	--
	4295+00		26	--
	IH 94	1		
	1268+00 - 1288+44		--	2,044
	1289-97 - 1293+00		--	303
	TOTAL		97	2,347

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

MAINTENANCE AND REPAIR OF HAUL ROADS

CATEGORY	LOCATION	618.0100.0006 MAINTENANCE AND REPAIR OF HAUL ROADS 1035-01-82 EACH
1000	IH 94	1
TOTAL		1

TYPE I&II PERMANENT SIGNING -

I94 1035-01-82

SIGN NO.	SIGN CODE	SIGN MESSAGE	TYPE II SIGN SIZE W [IN.] x H [IN.]	637.2210 SIGNS TYPE II REFLECTIVE H [SF]	637.2230 SIGNS TYPE II RELFECTIVE F SF	638.2602 REMOVING SIGNS TYPE II (EA)	638.3000 REMOVING SMALL SIGN SUP (EA)	634.0618 WOOD POSTS 4"X 6"x18' [EA]	634.0885 POSTS TUBULAR STEEL 2 X 2 INCH X 8.5 FT [EA]	638.2102 MOVING SIGNS TYPE II EA	MOUNT ON SAME POST AS SIGN #	REMARKS	TYPE I SIGN SIZE W [FT.] x H [FT.]	637.1220 SIGNS TYPE I REFLECTIVE SH [SF]	638.2601 REMOVING SIGNS TYPE I [EA]	638.3100 REMOVING STR STEEL SIGN SUP [EA]	STEEL POST TYPE	636.0100 SIGN SUPPORTS CONCRETE MASONRY [CY]	636.0500 SIGN SUPPORTS STEEL REINFORCEMENT [LBS]	635.0200 SIGN SUPPORTS STRUCTURAL STEEL HS [EST.LBS]	INFO ONLY-POST LENGTHS TO BE VERIFIED BY CONTRACTOR: POST NO 1 LENGTH [FT]	POST NO 2 LENGTH [FT]	OFF SET DISTANCE [FT]	DIST BTWN POSTS "S" [FT]
1	D10-5(5)	W(94 SHIELD)	21 x 60	8.750		1	1	--	1		--	--	x		--	--	--	--	--	--	--	--	--	
		325/4	-- x --	--		--	--	--	--		--	--	x		--	--	--	--	--	--	--	--	--	
2	D10-5(5)	E(94 SHIELD)	21 x 60	8.750		1	--	--	--		#1	--	x		--	--	--	--	--	--	--	--	--	
		325/4	-- x --	--		--	--	--	--		--	--	x		--	--	--	--	--	--	--	--	--	
3	E8-1	SEVEN MILE RD 1/4	-- x --	--		--	--	--	--		--	INSTALL ON S-51-219	18 x 7.5	135.00	1	--	--	--	--	--	--	--	--	
		[G] 1 3/4										I BEAMS INCIDENTAL												
		[K] 3 3/4																						
4	E5-1A	EXIT	-- x --	--		1	2	--	--			--	x		--	--	--	--	--	--	--	--	--	
		325 [A]																						
5	D10-5	W(94 SHIELD)	-- x --	--		1	1	--	--		--	--	x		--	--	--	--	--	--	--	--	--	
		325/3	-- x --	--		--	--	--	--		--	--	x		--	--	--	--	--	--	--	--	--	
6	D10-5	E(94 SHIELD)	-- x --	--		1	--	--	--		--	--	x		--	--	--	--	--	--	--	--	--	
		325/3	-- x --	--		--	--	--	--		--	--	x		--	--	--	--	--	--	--	--	--	
7	D12-2B(2)	RIDESHARE	114 x 48	38.000		--	--	3	--			--	x		--	--	--	--	--	--	--	--	--	
		INFORMATION																						
		www.rideshare.wi.gov																						
8	D12-2A(5)	RIDESHARE	78 x 54	29.250		--	--	2	--			--	x		--	--	--	--	--	--	--	--	--	
		INFO CALL																						
		1-800-455-POOL																						
9	W4-1					1	1		--			--	x		--	--	--	--	--	--	--	--	--	
10	D10-5(5)	W(94 SHIELD)	21 x 60	8.750		1	1	--	1		--	--	x		--	--	--	--	--	--	--	--	--	
		325/0	-- x --	--		--	--	--	--		--	--	x		--	--	--	--	--	--	--	--	--	
11	D10-5(5)	E(94 SHIELD)	21 x 60	8.750		1	--	--	--		#10	--	x		--	--	--	--	--	--	--	--	--	
		325/0	-- x --	--		--	--	--	--		--	--	x		--	--	--	--	--	--	--	--	--	
12	I2-2(5)	RACINE CO.	78 x 21	11.375		1	2	2	--			--	x		--	--	--	--	--	--	--	--	--	
13	R2-1(5)	SPEED LIMIT 70	48 x 60	20.000		--	--	2	--			--	x		--	--	--	--	--	--	--	--	--	
14	W5-52R(3)	CLEARANCE	18 x 54		6.750	--	--	1	--			4' MOUNTING HEIGHT	x		--	--	--	--	--	--	--	--	--	
15	E1-1A	TO 241, SEVEN MILE RD, 1 MILE											22 x 10.5	231.00	1	2	B	1.6	98	1000			17.5 TO 30 FEET	
15a	E1-5P	EXIT 326									15		10 x 2.5	25.00										
16	E3-1	TO 27TH ST, EXIT 326											12 x 5	60.00			A	1.2	68	600			17.5 TO 30 FEET	
17	E9-1	CALEDONIA NEXT 3 EXITS											11 x 4.5	49.50			A	1.2	68	600			17.5 TO 30 FEET	
18	W1-6					1	1																	
19	W1-6					1	1																	
20	J3-3(2M)		72 x 57	28.500		1	1	2																
	MB3-2		24 x 12																					
	M1-1	IH 41	24 x 24																					
	MB6-1		21 x 21																					
	MB3-2		24 x 12																					
	M1-1	IH 94																						
	MB6-1		21 x 21																					
	M4-6		24 x 12																					
	M1-6	STH 241	24 x 24																					
21	J3-3(2M)		72 x 57	28.500		1	1	2																
	MB3-2		24 x 12																					
	M1-1	IH 41	24 x 24																					
	MB6-1		21 x 21																					
	MB3-2		24 x 12																					
	M1-1	IH 94																						
	MB6-1		21 x 21																					
	M4-6		24 x 12																					
	M1-6	STH 241	24 x 24																					
22	R4-7(3)		36 x 48	12.000		1	1	1																
23	R5-1A(2M)		42 x 30	8.750				1																
24	R5-1(2M)		36 x 36	9.000				1																
25	R5-1(2M)		36 x 36	9.000				1																
26	R4-7(3)		36 x 48	12.000				1																
27	W5-54(2M)		18 x 18		2.250																			
28	R5-1A(2M)		42 x 30	8.750				1																
29	I2-2	MILWAUKEE CO					2	2		1														

TYPE I&II PERMANENT SIGNING -

SIGN NO.	SIGN CODE	SIGN MESSAGE	TYPE II SIGN SIZE W [IN.] x H [IN.]	637.2210 SIGNS TYPE II REFLECTIVE H [SF]	637.2230 SIGNS TYPE II RELFECTIVE F SF	638.2602 REMOVING SIGNS TYPE II (EA)	638.3000 REMOVING SMALL SIGN SUP (EA)	634.0618 WOOD POSTS 4"X 6"x18' [EA]	634.0885 POSTS TUBULAR STEEL 2 X 2 INCH X 8.5 FT [EA]	638.2102 MOVING SIGNS TYPE II EA	MOUNT ON SAME POST AS SIGN #	REMARKS	TYPE I SIGN SIZE W [FT.] x H [FT.]	637.1220 SIGNS TYPE I REFLECTIVE SH [SF]	638.2601 REMOVING SIGNS TYPE I [EA]	638.3100 REMOVING STR STEEL SIGN SUP [EA]	STEEL POST TYPE	636.0100 SIGN SUPPORTS CONCRETE MASONRY [CY]	636.0500 SIGN SUPPORTS STEEL REINFORCEMENT [LBS]	635.0200 SIGN SUPPORTS STRUCTURAL STEEL HS [EST.LBS]	INFO ONLY-POST LENGTHS TO BE VERIFIED BY CONTRACTOR: POST NO 1 LENGTH [FT]	POST NO 2 LENGTH [FT]	OFF SET DISTANCE [FT]	DIST BTWN POSTS "S" [FT]
30	I2-3	OAK CREEK POPULATION SIGN								1	29													
31	R5-1A					1	1																	
32	J3-2					1	2																	
33	R3-2					1	1																	
34	R5-1					1	1																	
35	NONE	WEST FRONTAGE RD SIGN				1	1																	
36	R1-1					1	1																	
37	J3-3					1	2																	
38	J4-3					1	2																	
39	I2-2	RACINE CO				1	2																	
40	R5-57					1						PART OF SIGN # 39												
41	J3-3					1	2																	
42	R5-1					1	1																	
43	NONE	FORM SINGLE LINE				1	1																	
44	W5-52R(3)		18 X 54		6.750			1				4 FOOT MOUNTING HEIGHT												
45	I2-2(5)	MILWAUKEE CO	102 X 21	14.875		1	2	2																
46	D10-5					1	1																	
47	D10-5					1						PART OF SIGN # 46												
48	D10-5(5)	WEST 94 MILE 325/.2	21 X 60	8.750		1	1		1															
49	D10-5(5)	EAST 94 MILE 325/.2	21 X 60	8.750		1					48													
50	W5-56(2S)		18 x 18	2.250				1				4 FOOT MOUNTING HEIGHT												
51	W5-56(2S)		18 X 18	2.250				1				4 FOOT MOUNTING HEIGHT												
52	W5-56(2S)		18 X 18	2.250				1				4 FOOT MOUNTING HEIGHT												
53	W1-4R (2S)		30 X 30		6.250			1																
53A	W13-1(2S)	35 MPH	18 X 18		2.250						53													
54	W1-4R (2S)		30 X 30		6.250			1																
54A	W13-1(2S)		18 X 18		2.250						54													
	TOTALS			289.250	32.750	32	36	30	3	2	--	--		500.500	2	2	--	4	234	2200	--	--	--	--

FILE NAME : N:\SPO\Operations\Signing\Miscellaneous Quantities\1035-01-82/030501_MQ.pptx PLOT DATE : 6/14/2018 PLOT BY : DOTTAH PLOT NAME : 030501_MQ.pdf PLOT SCALE : 1:1

STORM SEWER ITEMS

CATEGORY	STRUCTURE NUMBER	STATION	OFFSET FT		611.2004 MANHOLES 4-FT Dia EACH	611.2005 MANHOLES 5-FT Dia EACH	611.3225 INLETS 2x2.5-FT EACH	611.3901 INLET MEDIAN 1 GRATE EACH	611.0530 MANHOLE COVERS TYPE J EACH	611.0610 INLET COVERS TYPE BW EACH	611.0642 INLET COVERS TYPE MS EACH	RIM OR FLANGE ELEV	STR DEPTH FT	FROM STR	TO STR	INLET ELEV	DISCH ELEV	SLOPE
1000																		
	101	1268+50	4.25	RT	--	--	1	--	--	1	--	723.99	7.13	101	102	716.86	716.80	0.67%
	102	1268+50	4.25	LT	1	--	--	--	--	1	--	723.99	7.94	102	103	716.05	715.72	0.47%
	103	1268+50	74.25	LT	--	1	--	--	--	1	--	724.07	8.35	103	106	715.72	714.72	0.50%
	104	1270+50	4.25	RT	--	--	1	--	--	1	--	722.93	7.06	104	105	715.87	715.81	0.67%
	105	1270+50	4.25	LT	1	--	--	--	--	1	--	722.93	7.87	105	106	715.06	714.72	0.49%
	106	1270+50	74.25	LT	--	1	--	--	--	1	--	723.69	8.97	106	109	714.72	714.15	0.48%
	107	1271+98	4.25	LT	1	--	--	--	--	1	--	721.91	6.43	107	108	715.48	715.23	0.83%
	108	1271+68	4.25	LT	1	--	--	--	--	1	--	722.15	7.67	108	109	714.48	714.15	0.47%
	109	1271+69	74.25	LT	--	1	--	--	1	--	--	723.39	9.24	109	112	714.15	712.72	0.50%
	110	1274+80	4.25	LT	1	--	--	--	--	1	--	719.28	5.22	110	111	714.06	713.80	0.87%
	111	1274+50	4.25	LT	1	--	--	--	--	1	--	719.61	6.56	111	112	713.05	712.72	0.47%
	112	1274+50	74.25	LT	--	1	--	--	1	--	--	721.95	9.23	112	113	712.72	712.40	0.48%
	113	1275+17	74.25	LT	1	--	--	--	1	--	--	721.25	8.85	113	116	712.40	710.08	0.98%
	114	1277+80	4.25	LT	1	--	--	--	--	1	--	715.53	4.13	114	115	711.40	711.14	0.87%
	115	1277+50	4.25	LT	1	--	--	--	--	1	--	715.95	5.56	115	116	710.39	710.08	0.46%
	116	1277+50	74.25	LT	--	1	--	--	1	--	--	718.34	8.26	116	119	710.08	706.08	1.36%
	117	1280+71	4.25	LT	1	--	--	--	--	1	--	711.50	4.08	117	118	707.42	707.16	0.87%
	118	1280+41	4.25	LT	1	--	--	--	--	1	--	711.93	5.52	118	119	706.41	706.08	0.47%
	119	1280+41	74.25	LT	--	1	--	--	1	--	--	714.42	8.84	119	120	705.58	705.22	0.53%
	120	1281+00	117.00	LT	--	--	--	--	--	--	--	N/A	N/A	120	OUTFALL	705.22	OUTFALL	0.00%
	121	1283+30	4.25	LT	1	--	--	--	--	1	--	707.91	4.86	121	122	703.05	702.80	0.83%
	122	1283+00	4.25	LT	1	--	--	--	--	1	--	708.32	6.27	122	123	702.05	701.48	0.53%
	123	1283+00	117.40	LT	--	--	--	--	--	--	--	N/A	N/A	123	OUTFALL	701.48	OUTFALL	0.00%
	124	1286+30	4.25	LT	1	--	--	--	--	1	--	703.75	4.98	124	125	698.77	698.52	0.83%
	125	1286+00	4.25	LT	1	--	--	--	--	1	--	704.17	6.40	125	126	697.77	697.22	0.51%
	126	1286+00	118.00	LT	--	--	--	--	--	--	--	N/A	N/A	126	OUTFALL	697.22	OUTFALL	0.00%
	127	1288+45	4.25	LT	1	--	--	--	--	1	--	700.77	5.07	127	128	695.70	695.45	0.83%
	128	1288+15	4.25	LT	1	--	--	--	--	1	--	701.16	6.46	128	129	694.70	694.13	0.51%
	129	1288+15	120.90	LT	--	--	--	--	--	--	--	N/A	N/A	129	OUTFALL	694.13	OUTFALL	0.00%
	130	1288+50	74.25	RT	--	--	1	--	--	1	--	699.03	5.00	130	131	694.03	693.94	0.69%
	131	1288+50	93.50	RT	--	--	--	--	--	--	--	N/A	N/A	131	OUTFALL	693.94	OUTFALL	0.00%
	132	1291+50	74.25	RT	--	--	1	--	--	1	--	694.87	5.00	132	133	689.87	689.79	0.67%
	133	1291+50	92.00	RT	--	--	--	--	--	--	--	N/A	N/A	133	OUTFALL	689.79	OUTFALL	0.00%
	134	1291+80	4.25	LT	1	--	--	--	--	1	--	696.13	4.49	134	135	691.64	691.38	0.87%
	135	1291+50	4.25	LT	1	--	--	--	--	1	--	696.54	5.91	135	136	690.63	690.07	0.51%
	136	1291+50	119.00	LT	--	--	--	--	--	--	--	N/A	N/A	136	OUTFALL	690.07	OUTFALL	0.00%
	201	1276+60.8	188.80	RT	--	--	--	1	--	--	1	712.65	3.48	201	202	709.17	709.11	0.48%
	202	1276+56.5	176.40	RT	1	--	--	--	1	--	--	712.67	4.05	202	203	708.62	708.12	0.48%
	203	1277+70.6	145.80	RT	--	--	--	--	--	--	--	N/A	N/A	203	OUTFALL	708.12	OUTFALL	0.00%
TOTALS					20	6	4	1	6	24	1							

STORM SEWER ITEMS

CATEGORY	STRUCTURE NUMBER	STATION	OFFSET FT		608.0312 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 12-INCH LF	608.0315 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 15-INCH LF	608.0324 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 24-INCH LF	608.0330 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 30-INCH LF	608.0418 STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 18-INCH LF	522.1015 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 15-INCH EACH	522.1018 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 18-INCH EACH	522.1024 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 24-INCH EACH	522.1030 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 30-INCH EACH	633.5200* MARKERS CULVERT END EACH	SPV.0060.0016* RECONNECT STORM SEWER EACH	NOTES
1000																
	101	1268+50	4.25	RT	--	9	--	--	--	--	--	--	--	--	--	
	102	1268+50	4.25	LT	--	--	70	--	--	--	--	--	--	--	1	
	103	1268+50	74.25	LT	--	--	200	--	--	--	--	--	--	--	--	
	104	1270+50	4.25	RT	--	9	--	--	--	--	--	--	--	--	--	
	105	1270+50	4.25	LT	--	--	70	--	--	--	--	--	--	--	1	
	106	1270+50	74.25	LT	--	--	118	--	--	--	--	--	--	--	--	
	107	1271+98	4.25	LT	--	30	--	--	--	--	--	--	--	--	--	
	108	1271+68	4.25	LT	--	--	70	--	--	--	--	--	--	--	1	
	109	1271+69	74.25	LT	--	--	285	--	--	--	--	--	--	--	--	
	110	1274+80	4.25	LT	--	30	--	--	--	--	--	--	--	--	--	
	111	1274+50	4.25	LT	--	--	70	--	--	--	--	--	--	--	1	
	112	1274+50	74.25	LT	--	--	67	--	--	--	--	--	--	--	--	
	113	1275+17	74.25	LT	--	--	236	--	--	--	--	--	--	--	--	
	114	1277+80	4.25	LT	--	30	--	--	--	--	--	--	--	--	--	
	115	1277+50	4.25	LT	--	--	67	--	--	--	--	--	--	--	1	
	116	1277+50	74.25	LT	--	--	295	--	--	--	--	--	--	--	--	
	117	1280+71	4.25	LT	--	30	--	--	--	--	--	--	--	--	--	
	118	1280+41	4.25	LT	--	--	70	--	--	--	--	--	--	--	1	
	119	1280+41	74.25	LT	--	--	--	68	--	--	--	--	--	--	--	
	120	1281+00	117.00	LT	--	--	--	--	--	--	--	--	1	1	--	
	121	1283+30	4.25	LT	--	30	--	--	--	--	--	--	--	--	--	
	122	1283+00	4.25	LT	--	--	107	--	--	--	--	--	--	--	1	
	123	1283+00	117.40	LT	--	--	--	--	--	--	--	1	--	1	--	
	124	1286+30	4.25	LT	--	30	--	--	--	--	--	--	--	--	--	
	125	1286+00	4.25	LT	--	--	108	--	--	--	--	--	--	--	1	
	126	1286+00	118.00	LT	--	--	--	--	--	--	--	1	--	1	--	
	127	1288+45	4.25	LT	--	30	--	--	--	--	--	--	--	--	--	
	128	1288+15	4.25	LT	--	--	111	--	--	--	--	--	--	--	1	
	129	1288+15	120.90	LT	--	--	--	--	--	--	--	1	--	1	--	
	130	1288+50	74.25	RT	--	13	--	--	--	--	--	--	--	--	--	
	131	1288+50	93.50	RT	--	--	--	--	--	1	--	--	--	1	--	
	132	1291+50	74.25	RT	--	12	--	--	--	--	--	--	--	--	--	
	133	1291+50	92.00	RT	--	--	--	--	--	1	--	--	--	1	--	
	134	1291+80	4.25	LT	--	30	--	--	--	--	--	--	--	--	--	
	135	1291+50	4.25	LT	--	--	109	--	--	--	--	--	--	--	1	
	136	1291+50	119.00	LT	--	--	--	--	--	--	--	1	--	1	--	
	201	1276+60.8	188.80	RT	13	--	--	--	--	--	--	--	--	--	--	
	202	1276+56.5	176.40	RT	--	--	--	--	104	--	--	--	--	--	--	
	203	1277+70.6	145.80	RT	--	--	--	--	--	--	1	--	--	1	--	
TOTALS					13	283	2053	68	104	2	1	4	1	8	10	

NOTES
1) STATIONS AND OFFSETS ARE TO THE CENTER OF STRUCTURES OR TO THE APRON END OF ENDWALLS
2) PIPE LENGTHS ARE MEASURED TO THE CENTER OF STRUCTURES OR END OF PIPE (NOT THE APRON END OF ENDWALLS)
3) RIM ELEVATIONS ARE GIVEN AT THE FLANGE LINE FOR INLET GRATES OR THE CENTER OF THE MANHOLE COVER FOR MANHOLES
4) STRUCTURE DEPTH = RIM ELEVATION - INVERT
5) INLET STATION OFFSETS ARE MEASURED 1 FT FROM FACE OF BARRIER OR 2.5 FT FROM FACE OF PARAPET
6) REMOVAL OF BULKHEAD IS INCIDENTAL TO PIPE ITEMS

3

CROSS CULVERT ITEMS

CAT	ROADWAY	STATION	INLET END OFFSET	INLET END ELEV	INLET END STATION	DISCHARGE END OFFSET	DISCHARGE END ELEV	DISCHARGE END STATION	SLOPE	522.2319 CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL CLASS HE-III 19X30-INCH LF	522.2619 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL 19X30-INCH EACH	* 633.5200 MARKERS CULVERT END EACH
1000												
	WFR											
		4290+98	39.60 RT	674.10	4290+98	69.60 LT	672.50	4291+62	1.39%	115	2	2
		4294+92	25.60 LT	672.10	4294+92	50.80 RT	671.30	4296+62	0.45%	176	2	2
	TOTALS (I.D. 1035-01-82)									291	4	4

* ADDITIONAL QUANTITIES LISTED ELSEWHERE, "SEE STORM SEWER ITEMS"

NOTES
1) STATION OFFSETS SHOWN ARE TO THE CENTER OF INLET STRUCTURES OR END OF APRON ENDWALLS.
2) GRANULAR BACKFILL IS INCIDENTAL TO THE COST OF THE PIPE
3) PIPE LENGTH IS FROM END OF PIPE TO END OF PIPE AND DOES NOT INCLUDE LENGTH OF APRON ENDWALL.

FTMS REMOVALS

CATEGORY 1300

ROADWAY	LOCATION	LINEAR DISTANCE	* 204.0195 REMOVING CONCRETE BASES EACH	204.0210 REMOVING MANHOLES EACH	653.0905 REMOVING PULL BOXES EACH	674.0300 REMOVE CABLE LF	677.9051.S REMOVING 50-FOOT CAMERA POLE EACH	677.9200.S REMOVING CCTV CAMERA EACH	204.9060.S.2010 REMOVING CONTROLLER CABINET EACH	204.9060.S.2020 REMOVING CONTROLLER CABINET BASE EACH	204.9060.S.2040 REMOVING ELECTRICAL SERVICE METER BREAKER PEDESTAL EACH
IH 41 / 94	EX-CCTV-51-0052	--	1	1	--	--	1	1	--	--	--
	EX-CB-CCTV-51-0052	--	--	--	--	--	--	--	1	1	--
	EX-CCTV-51-0052 - EXPB12780	10	--	--	--	10	--	--	--	--	--
	EXPB12780 - EX-CB-CCTV-51-0052	10	--	--	--	10	--	--	--	--	--
	EXPB12780	--	--	--	1	--	--	--	--	--	--
	EX-CB-HUB-51-0003 - EXPB12780	10	--	--	--	10	--	--	--	--	--
	EX-CB-HUB-51-0003	--	--	--	--	--	--	--	1	1	--
	EXPB12780 - EXPB12781	130	--	--	--	130	--	--	--	--	--
	EXPB12781	--	--	--	1	--	--	--	--	--	--
	EXPB12781 - EXPB12790	50	--	--	--	50	--	--	--	--	--
	EXPB12790	--	--	--	1	--	--	--	--	--	--
	EXPB12790 - EXPB12791	45	--	--	--	45	--	--	--	--	--
	EXPB12791	--	--	--	1	--	--	--	--	--	--
	EXPB12791 - EXPB12792	125	--	--	--	125	--	--	--	--	--
	EXPB12792	--	--	--	1	--	--	--	--	--	--
	EXPB12792 - EXPB12793	40	--	--	--	40	--	--	--	--	--
	EXPB12793	--	--	--	1	--	--	--	--	--	--
	EXPB12793 - EXPB12810	170	--	--	--	--	--	--	--	--	--
	EXPB12810	--	--	--	1	--	--	--	--	--	--
	EXPB12810 - EXPB12820	145	--	--	--	145	--	--	--	--	--
	EXPB12820	--	--	--	1	--	--	--	--	--	--
	EXPB12820 - EXPB12840	125	--	--	--	125	--	--	--	--	--
	EXPB12840	--	--	--	1	--	--	--	--	--	--
	EXPB12840 - EXCV12880	400	--	--	--	400	--	--	--	--	--
	EXPB12780 - EXMH12781	115	--	--	--	115	--	--	--	--	--
	EXMH12781	--	--	1	--	--	--	--	--	--	--
	EXMH12781 - EXMH1321	1685	--	--	--	1685	--	--	--	--	--
	EXMH1321	--	--	1	--	--	--	--	--	--	--
	EXMB-CCTV-51-0052	--	--	--	--	--	--	--	--	--	1
TOTALS			1	3	9	2890	1	1	2	2	1

*ADDITIONAL QUANTITIES LISTED ELSEWHERE

FTMS EACH ITEMS

CATEGORY 1300

ROADWAY	ITEM ID	653.0140 PULL BOXES STEEL 24X42-INCH EACH	654.1150 CONCRETE BASES CAMERA POLE 50-FT EACH	673.0105 COMMUNICATION VAULT TYPE 1 ITEM EACH	673.0225.S INSTALL POLE MOUNTED CABINET EACH	675.0300 INSTALL MOUNTED CONTROLLER MICROWAVE DETECTOR ASSEMBLY EACH	677.0150 INSTALL CAMERA POLE 50-FT EACH	677.0200 INSTALL CAMERA ASSEMBLY EACH	678.0300 FIBER OPTIC SPLICE EACH	678.0400 FIBER OPTIC TERMINATION EACH	678.0600 INSTALL ETHERNET SWITCHES EACH	SPV.0060.2040 GROUND ROD EACH
IH 41 / 94												
	CV12830	--	--	1	--	--	--	--	--	--	--	--
	CV1330	--	--	1	--	--	--	--	--	--	--	--
	CV1370	--	--	--	--	--	--	--	98	--	--	--
	PB12930	1	--	--	--	--	--	--	--	--	--	--
	PB12920	1	--	--	--	--	--	--	--	--	--	--
	CCTV-40-0229	--	1	--	1	2	1	1	--	6	1	1
	EXCV12880	--	--	--	--	--	--	--	36	--	--	--
TOTALS		2	1	2	1	2	1	1	134	6	1	1

FTMS LINEAR FOOT ITEMS

CATEGORY 1300

ROADWAY	ITEM ID	LINEAR DISTANCE	652.0125 CONDUIT RIGID METALLIC 2-INCH LF	652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH LF	655.0510 ELECTRICAL WIRE TRAFFIC SIGNALS 12 AWG LF	655.0525 ELECTRICAL WIRE TRAFFIC SIGNALS 6 AWG LF	671.0132 CONDUIT HDPE 3-DUCT 2-INCH LF	671.0222 CONDUIT HDPE DIRECTIONAL BORE 2-DUCT 2-INCH LF	671.0300 FIBER OPTIC CABLE MARKER EA	673.0200 TRACER WIRE MARKER POSTS EA	678.0006 INSTALL FIBER OPTIC CABLE OUTDOOR PLANT 6-CT LF	678.0024 INSTALL FIBER OPTIC CABLE OUTDOOR PLANT 24-CT LF	678.0072 INSTALL FIBER OPTIC CABLE OUTDOOR PLANT 72-CT LF
IH 41 / 94	CV12681	--	--	--	--	--	--	--	--	--	--	50	50
	CV12681 - CV12830	1530	--	--	1530	--	1530	--	2	--	--	1530	1530
	CV12830	--	--	--	--	--	--	--	--	--	--	50	50
	CV12830 - CV1330	1050	--	--	1050	--	1050	--	2	--	--	1050	1050
	CV1330	--	--	--	--	--	--	--	--	--	50	50	50
	CV1330 - PB12930	240	--	--	240	--	--	240	--	--	240	--	--
	CV1330 - CV1370	415	--	--	415	--	--	--	--	--	415	415	415
	CV1370	--	--	--	--	--	--	--	--	1	100	100	50
	PB12930 - CCTV-40-0229	15	15	30	15	45	--	--	--	--	15	--	--
	PB12920 - PB12930	130	--	130	--	390	--	--	--	--	--	--	--
	MB-CCTV-40-0229 - PB12920	15	--	15	--	45	--	--	--	--	--	--	--
TOTALS		3395	15	175	3250	480	2580	240	4	1	820	3245	3195

FTMS LUMP SUM ITEMS

CATEGORY 1300

ROADWAY	LOCATION	670.0100.0003 FIELD SYSTEM INTEGRATOR (1035-01-82) LS	670.0200.0003 ITS DOCUMENTATION (1035-01-82) LS	678.0500.0003 COMMUNICATION SYSTEM TESTING (1035-01-82) LS
IH 41 / 94	IH 41 / 94	1	--	--
	IH 41 / 94	--	1	--
	IH 41 / 94	--	--	1
TOTALS		1	1	1

FTMS ELECTRICAL ITEMS

CATEGORY 1300

ROADWAY	ITEM ID	656.0200.0007 ELECTRICAL SERVICE METER BREAKER PEDESTAL (MB-CCTV-40-0229) LS	656.0500.0007 ELECTRICAL SERVICE BREAKER DISCONNECT BOX (CCTV-40-0229) LS
IH 41 / 94	MB-CCTV-51-0062	1	--
	CCTV-51-0062	--	1
TOTALS		1	1

TRANSPORTATION PROJECT PLAT NO: 1035-01-22 - 4.01

THAT PART OF THE NW1/4 OF THE SW1/4 OF SECTION 6, TOWNSHIP 04 NORTH, RANGE 22 EAST, VILLAGE OF CALEDONIA, RACINE COUNTY, WISCONSIN.

RELOCATION ORDER I-94 AND FRONTAGE ROADS 7 MILE ROAD TO MILWAUKEE COUNTY SEGMENT RACINE COUNTY

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 HEREBY ORDERS THAT:
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.

SCHEDULE OF LANDS & INTERESTS REQUIRED		OWNERS NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY AND ARE SUBJECT TO CHANGE PRIOR TO THE TRANSFER OF LAND INTEREST TO THE DEPARTMENT.					
PARCEL NUMBER	OWNER	INTEREST REQUIRED	R/W REQUIRED ACRES NEW	EXISTING	TOTAL	T.L.E. TEMP. ACRES	P.L.E. PERM. ACRES
1	SHIRIKIAN REVOCABLE TRUST	Fee AR TLE	0.094	0.664	0.758	0.085	0.000
2	RACINE COUNTY	Fee AR TLE	0.020	1.076	1.096	0.192	0.000
3	AMERICAN TRANSMISSION CO. LLC	HE AR	0.042	0.000	0.042	0.000	0.000

HIGHWAY	BASIS OF EXISTING RIGHT-OF-WAY	WIDTH	YEAR
I-94	1035-01-020	112'	2010
I-94	I 101-1(3)	87'	1956
I-94	D. J. 2277	87'	1934

A Concrete Monument
w/ A Brass Cap
Y 223454.05
X 591802.32

A Concrete Monument
w/ A Brass Cap
Y 226088.41
X 591855.70

A Concrete Monument
w/ An Aluminum Cap
Y 223413.62
X 594457.42

A Concrete Monument
w/ A Brass Cap
Y 226040.69
X 594518.91

A Cast Iron Monument
w/ A Brass Cap
Y 223384.64
X 596793.05

A Concrete Monument
w/ A Brass Cap
Y 226012.39
X 596840.23

TOWN OF RAYMOND

VILLAGE OF CALEDONIA

NE1/4-SE1/4

NW1/4-SW1/4

SHEET LOCATION

RAYMOND
RACINE COUNTY
CALEDONIA

R-21-E T-4-N R-22-E

S89°07'40"E 2655.42'

S89°03'02"E 2567.74'

S88°58'25"E 2219.48'

S89°17'43"E 1313.90'

S89°17'21"E 2335.80'

S89°18'05"E 1267.90'

1/16 LINE

STA 1254+65.26
BEGIN PROJECT

STA 1267+79.26

NO ACCESS, SEE PROJ. I 101-1(3)

EXISTING ℄ I-94 = ℞ I-94

℞ EAST FRONTAGE ROAD

N01°08'23"E 95.89'

N01°20'27"E 1313.90'

N01°20'27"E 319.35'

112.01'

102.01'

650'

440'

180.23'

TLE SLOPES & DRIVE

TLE DRIVE

TLE SLOPES — 1AP —

HIGHWAY EASEMENT

AR SEE TPP 1035-01-20-4.07

30' WIDE ACCESS EASEMENT V. 1273 P. 468 DOC. 959719

1 AP

2AP

164.24'

SEE TPP 1035-01-20-4.04

SEE TPP 1035-01-22-4.02

SEE TPP 1035-01-20-4.07

SEE TPP 1035-01-22-4.02

PRW501 PRW502 PRW503 PRW504 PRW505 PRW506

CONVENTIONAL ABBREVIATIONS

ACCESS POINT	AP	RELEASE OF RIGHTS
ACCESS RIGHTS	AR	REMAINING
ACRES	AC.	RIGHT-OF-WAY
AND OTHERS	ET. AL.	SECTION
CENTERLINE	C/L	STATION
CERTIFIED SURVEY MAP	CSM	TEMPORARY LIMITED EASEMENT
CORNER	COR.	VOLUME
DOCUMENT	DOC.	
EASEMENT	EASE.	
HIGHWAY EASEMENT	H.E.	
LAND CONTRACT	LC	
MONUMENT	MON.	
PAGE	P.	
PERMANENT LIMITED EASEMENT	PLE	
PROPERTY LINE	PL	
RECORDED AS	(100')	
REFERENCE LINE	R/L	

CURVE DATA

LCH	LONG CHORD
LCB	LONG CHORD BEARING
R	RADIUS
D	DEGREE OF CURVE
DELTA	CENTRAL ANGLE OR DELTA
L	LENGTH OF CURVE
TAN	TANGENT

CONVENTIONAL UTILITY SYMBOLS

		NON COMPENSABLE	COMPENSABLE
ROR	WATER	—W—	
REM.	GAS	—G—	
R/W	TELEPHONE	—T—	
SEC.	OVERHEAD	—OH—	
STA.	TRANSMISSION LINES		
TLE	ELECTRIC	—E—	
V.	CABLE TELEVISION	—TV—	
	FIBER OPTIC	—FO—	
	SANITARY SEWER	—SAN—	
	STORM SEWER	—SS—	
	POWER POLE		
	TELEPHONE POLE		
	TELEPHONE PEDESTAL		
	ELECTRIC TOWER		

CONVENTIONAL SYMBOLS

FOUND IRON PIPE/PIN	(1" UNLESS NOTED)	PROPOSED R/W LINE
		EXISTING H.E. LINE
R/W MONUMENT	•(SET)	PROPERTY LINE
R/W STANDARD	▲(SET)	LOT & TIE LINES
SIGN	ISIGN	SLOPE INTERCEPTS
SECTION CORNER MONUMENT		CORPORATE LIMITS
SECTION CORNER SYMBOL		NO ACCESS (BY PREVIOUS ACQUISITION/CONTROL)
FEE (HATCH VARIES)		NO ACCESS (BY ACQUISITION)
TEMPORARY LIMITED EASEMENT		NO ACCESS (BY STATUTORY AUTHORITY)
PERMANENT LIMITED EASEMENT		SECTION LINE
R/W BOUNDARY POINT	RWB20	QUARTER LINE
PARCEL NUMBER	102	SIXTEENTH LINE
UTILITY NUMBER	32	EXISTING CENTERLINE
SIGN NUMBER (OFF PREMISE)	21-1	PROPOSED REFERENCE LINE
BUILDING		PARALLEL OFFSET

NOTES:

COORDINATES AND BEARINGS SHOWN ON THIS PLAT ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM, RACINE COUNTY ZONE, NAD83 (97) ADJUSTMENT AND ARE REFERENCED TO GPS HARN POINTS RAYMOND NORTH, RAYMOND SOUTH, AND CALEDONIA. ALL DISTANCES ARE GROUND LENGTH.

RIGHT-OF-WAY MONUMENTS ARE TYPE 2 (TYPICAL ¾" REBAR) AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT BY WISDOT SE REGION SURVEY UNIT.

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".

FOR THE LATEST ACCESS / DRIVEWAY INFORMATION, CONTACT THE PLANNING UNIT OF THE WISCONSIN DEPARTMENT OF TRANSPORTATION OFFICE IN WAUKESHA.

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 LINES, AND SHOULD NOT BE USED AS A SUBSTITUTE FOR AN ACCURATE FIELD SURVEY.

A TEMPORARY LIMITED EASEMENT (TLE) IS A RIGHT FOR CONSTRUCTION PURPOSES, AS DEFINED HEREIN, INCLUDING THE RIGHT TO OPERATE NECESSARY EQUIPMENT THEREON AND 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 NECESSARY OR DESIRABLE. All TLEs EXPIRE AT THE COMPLETION OF THE CONSTRUCTION PROJECT FOR WHICH THIS INSTRUMENT IS GIVEN

AN EASEMENT FOR HIGHWAY PURPOSES (HE), AS LONG AS SO USED, INCLUDES THE RIGHT TO PRESERVE, PROTECT, REMOVE OR PLANT THEREON ANY VEGETATION THAT THE HIGHWAY AUTHORITIES MAY DEEM NECESSARY OR DESIRABLE.

THIS IS A COPY, THE ORIGINAL DOCUMENT IS AT THE RACINE COUNTY REGISTER OF DEEDS

SCALE, FEET
0 100 200

I HEREBY CERTIFY THAT THIS PLAT MEETS ALL REQUIREMENTS OF SECTION 84.095, WISCONSIN STATUTES. THIS PLAT AND RELOCATION ORDER ARE APPROVED FOR THE WISCONSIN DEPARTMENT OF TRANSPORTATION.

DATE: 1-13-2011 — Name, Title

THIS PLAT WAS PREPARED BY OR UNDER THE DIRECTION OF:

DATE: 1-13-2011 — Name PAUL KRAUSE

RESERVED FOR REGISTER OF DEEDS
PROJECT NUMBER 1035-01-22 - 4.01
AMENDMENT NO:

Vol 1 Pg 157

DOCUMENT # 2276085
RACINE COUNTY REGISTER OF DEEDS
February 03, 2011 9:13 AM

JAMES A LADWIG
RACINE COUNTY
REGISTER OF DEEDS
Fee Amount: $25.00
Pages: 1

FILE NAME : J:\projects\d2_r_10350194\22\040401_rp.dgn PLOT DATE : 13-JAN-2011 13:16 PLOT BY : dotphk PLOT NAME : PLOT SCALE : 100.000000:1.000000

CONST.# 1035-01-80/81/82 I-94 1035-01-22 4.01

TRANSPORTATION PROJECT PLAT NO: 1035-01-22 - 4.02

THAT PART OF THE SE1/4 OF THE NE1/4 AND THE NE1/4 OF THE NE1/4 OF SECTION 1, TOWNSHIP 04 NORTH, RANGE 21 EAST, TOWN OF RAYMOND, AND THAT PART OF THE SW1/4 OF THE NW1/4 AND THE NW1/4 OF THE NW1/4 OF SECTION 6, TOWNSHIP 04 NORTH, RANGE 22 EAST, VILLAGE OF CALEDONIA, RACINE COUNTY, WISCONSIN.

RELOCATION ORDER I-94 AND FRONTAGE ROADS 7 MILE ROAD TO MILWAUKEE COUNTY SEGMENT RACINE COUNTY

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 HEREBY ORDERS THAT:
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.

CONVENTIONAL UTILITY SYMBOLS

WATER	—W—	
GAS	—G—	
TELEPHONE	—T—	
OVERHEAD TRANSMISSION LINES	—OH—	
ELECTRIC	—E—	
CABLE TELEVISION	—TV—	
FIBER OPTIC	—FO—	
SANITARY SEWER	—SAN—	
STORM SEWER	—SS—	
	NON COMPENSABLE	COMPENSABLE
POWER POLE		
TELEPHONE POLE		
TELEPHONE PEDESTAL		
ELECTRIC TOWER		

CONVENTIONAL ABBREVIATIONS

ACCESS POINT	AP	RELEASE OF RIGHTS	ROR
ACCESS RIGHTS	AR	REMAINING	REM.
ACRES	AC.	RIGHT-OF-WAY	R/W
AND OTHERS	ET.AL.	SECTION	SEC.
CENTERLINE	C/L	STATION	STA.
CERTIFIED SURVEY MAP	CSM	TEMPORARY LIMITED EASEMENT	TLE
CORNER	COR.	VOLUME	V.
DOCUMENT	DOC.		
EASEMENT	EASE.		
HIGHWAY EASEMENT	H.E.	LONG CHORD	LCH
LAND CONTRACT	LC	LONG CHORD BEARING	LCB
MONUMENT	MON.	RADIUS	R
PAGE	P.	DEGREE OF CURVE	D
PERMANENT LIMITED EASEMENT	PLE	CENTRAL ANGLE OR DELTA	DELTA
PROPERTY LINE	PL	LENGTH OF CURVE	L
RECORDED AS	(100')	TANGENT	TAN
REFERENCE LINE	R/L		

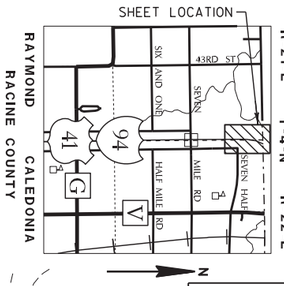
CURVE DATA

FOUND IRON PIPE/PIN	
R/W MONUMENT	
R/W STANDARD	
SIGN	
SECTION CORNER MONUMENT	
SECTION CORNER SYMBOL	
FEE (HATCH VARIES)	
TEMPORARY LIMITED EASEMENT	
PERMANENT LIMITED EASEMENT	
R/W BOUNDARY POINT	
PARCEL NUMBER	
UTILITY NUMBER	
SIGN NUMBER (OFF PREMISE)	
BUILDING	

CONVENTIONAL SYMBOLS

LP (1" UNLESS NOTED)	PROPOSED R/W LINE
○ •(SET)	EXISTING H.E. LINE
△ •(SET)	PROPERTY LINE
	LOT & TIE LINES
SIGN	SLOPE INTERCEPTS
	CORPORATE LIMITS
	NO ACCESS (BY PREVIOUS ACQUISITION/CONTROL)
	NO ACCESS (BY ACQUISITION)
	NO ACCESS (BY STATUTORY AUTHORITY)
	SECTION LINE
RWB20	QUARTER LINE
102	SIXTEENTH LINE
92	EXISTING CENTERLINE
21-1	PROPOSED REFERENCE LINE
	PARALLEL OFFSET

SHEET LOCATION



HIGHWAY	BASIS OF EXISTING RIGHT-OF-WAY	WIDTH	YEAR
I-94	I 101-1(3)	VARIES	1956
I-94	D. J. 2277	VARIES	1934
7½ MILE ROAD	SS 82.31(2)	66'	
OLD COUNTY LINE ROAD	RAYMOND P. 194	49.5'	1907

A Concrete Monument w/ A Brass Cap Y 226088.41 X 591855.70

A Concrete Monument w/ A Brass Cap Y 226040.69 X 594518.91

A Concrete Monument w/ A Brass Cap Y 226012.39 X 596840.23

A Concrete Monument w/ A Brass Cap Y 228495.80 X 591903.92

A Concrete Monument w/ A Brass Cap Y 228495.69 X 591946.81

A Concrete Monument w/ A Brass Cap Y 228476.92 X 594566.19

A Concrete Monument w/ A Brass Cap Y 228436.94 X 596884.17

I-94 RL
PI STA 1294+04.39
Y 228667.02
X 594475.25
PC STA 1272+54.41
PT STA 1313+55.28
DELTA 42°30'36"
D 01°02'12"
L 4100.87'
R 5527.25'
LCH 4007.46'
LCB N 22°23'41" E

SEE TPP 1035-01-20-4.04

SEE TPP 1035-01-22-4.01

NO ACCESS, SEE PROJ. 1035-01-20

TOWN OF SE1/4-NE1/4

NE1/4-NE1/4

RAYMOND

VILLAGE OF SW1/4-NW1/4

NW1/4-NW1/4

CALEDONIA

COUNTY

MILWAUKEE

R WEST FRONTAGE ROAD

R EAST FRONTAGE ROAD

EXISTING ℄ I-94 = R I-94

EXISTING ℄ PROJ. I 101-1(3)

R I-94

7 HALF MILE RD.

OLD COUNTY LINE ROAD

TLE SLOPES & DRIVE

TLE DRIVES

DETAIL NOT TO SCALE

NO ACCESS, SEE PROJ. I 101-1(3)

100 NO RECORDED EASEMENT PCL. 9

STA 1267+79.26

STA 50+70.60

STA 1292+60.60 END PROJECT

SCALE, FEET
0 100 200

GN

THIS IS A COPY, THE ORIGINAL DOCUMENT IS AT THE RACINE COUNTY REGISTER OF DEEDS

SCHEDULE OF LANDS & INTERESTS REQUIRED		OWNERS NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY AND ARE SUBJECT TO CHANGE PRIOR TO THE TRANSFER OF LAND INTEREST TO THE DEPARTMENT.					
PARCEL NUMBER	OWNER	INTEREST REQUIRED	R/W REQUIRED ACRES NEW	EXISTING	TOTAL	T.L.E. TEMP. ACRES	P.L.E. PERM. ACRES
4	ANO, LLC	AR TLE	0.000	0.000	0.000	0.179	0.000
5	VALENTI, LLC	AR TLE	0.000	0.000	0.000	0.047	0.000
6	NINNEMANN PROPERTIES II, LLC	AR TLE	0.000	0.000	0.000	0.151	0.000
7	DANIEL R. & SUZANNE M. BARTEL	AR	0.000	0.000	0.000	0.000	0.000
8	DANIEL R. & SUZANNE M. BARTEL	AR TLE	0.000	0.000	0.000	0.030	0.000
9	CHRISTENSEN REVOCABLE TRUST	Fee AR TLE	0.118	0.000	0.118	0.077	0.000
10	RACINE COUNTY	Fee AR	0.082	0.000	0.082	0.000	0.000
11	MARIE KELEPOURIS, ETAL.	Fee AR TLE	0.377	1.339	1.716	0.091	0.000
12	KIMBERLEE R. RICHARDS	Fee AR	0.004	0.435	0.439	0.000	0.000
13	FREIBURGER-ETAL	Fee AR TLE	0.000	0.135	0.135	0.019	0.000
14	BENKOWSKI BUILDERS INC	Fee AR TLE	0.878	0.260	1.138	0.009	0.000

UTILITY NUMBER	OWNER	INTEREST REQUIRED
100	WE ENERGIES ELECTRIC	ROR

NOTES:

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RIGHT-OF-WAY MONUMENTS ARE TYPE 2 (TYPICAL ¾" REBAR) AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT BY WISDOT SE REGION SURVEY UNIT.

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".

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DATE: 01-13-2011 — O E Andersen — Name Title

THIS PLAT WAS PREPARED BY OR UNDER THE DIRECTION OF:

DATE: 1-13-2011 — Paul Krause — Name PAUL KRAUSE

RESERVED FOR REGISTER OF DEEDS
PROJECT NUMBER 1035-01-22 - 4.02
AMENDMENT NO:

Vol 1 Pg 158

DOCUMENT # 2276086
RACINE COUNTY REGISTER OF DEEDS
February 03, 2011 9:13 AM
JAMES A LADWIG
RACINE COUNTY
REGISTER OF DEEDS
Fee Amount: $25.00
Pages: 1

FILE NAME : J:\projects\d2_r_10350194\22\040402_rp.dgn PLOT DATE : 13-JAN-2011 13:17 PLOT BY : dotphk PLOT NAME : PLOT SCALE : 100.000000:1.000000
CONST.# 1035-01-80/81/82 I-94 1035-01-22 4.02

R/W PROJECT NUMBER	SHEET NUMBER	TOTAL SHEETS
1030-20-22, 1030-20-23		
FEDERAL PROJECT NUMBER	4.01	

PLAT OF RIGHT-OF-WAY REQUIRED FOR

I-94 MILWAUKEE SOUTH
MILWAUKEE COUNTY LINE TO COLLEGE AVE

I-94 — MILWAUKEE CO.

CONSTRUCTION PROJECT NUMBER

1030-20-83	1030-20-84
1030-26-71	1030-20-85
1030-26-72	1030-20-87
1030-20-82	
1030-22-80	

CONVENTIONAL ABBREVIATIONS

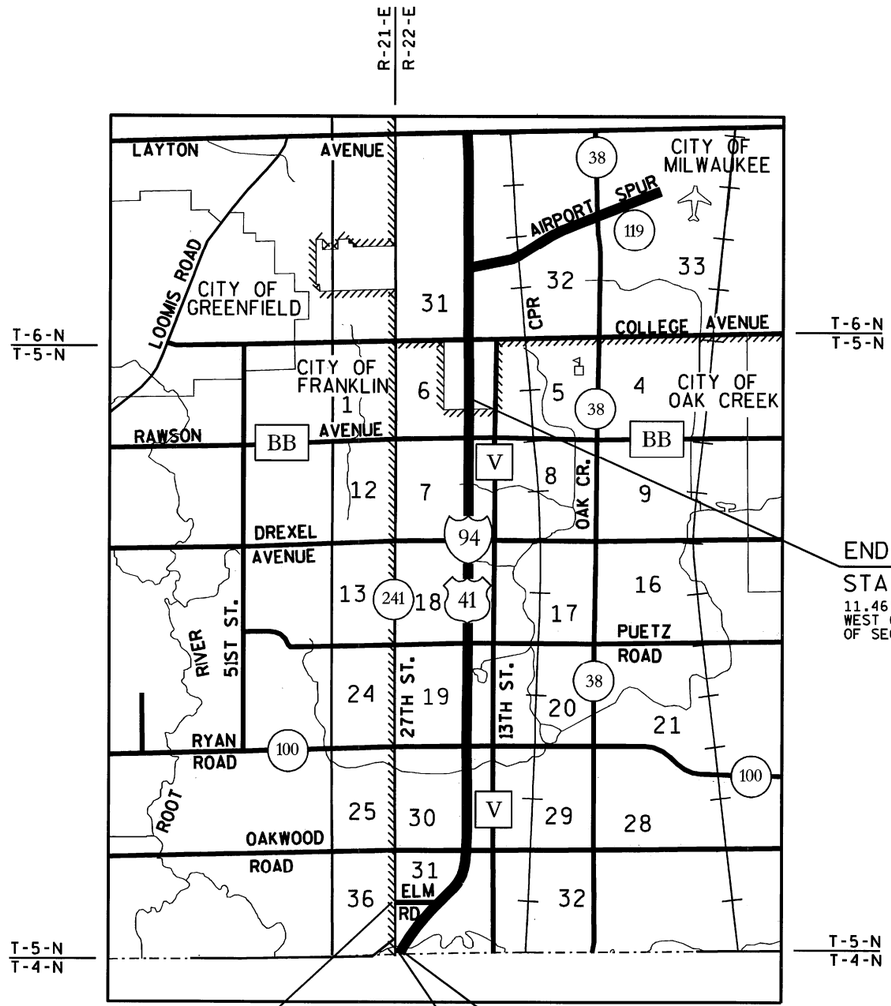
ACCESS POINT	AP	RELEASE OF RIGHTS	ROR
ACCESS RIGHTS	AR	REMAINING	REM.
ACRES	AC.	RIGHT-OF-WAY	R/W
AND OTHERS	ET.AL.	SECTION	SEC.
CENTERLINE	C/L	STATION	STA.
CERTIFIED SURVEY MAP	CSM	TEMPORARY LIMITED EASEMENT	TLE
CORNER	COR.	VOLUME	V.
DOCUMENT	DOC.		
EASEMENT	EASE.	**CURVE DATA**	
HIGHWAY EASEMENT	H.E.	LONG CHORD	LCH
LAND CONTRACT	LC	LONG CHORD BEARING	LCB
MONUMENT	MON.	RADIUS	R
PAGE	P.	DEGREE OF CURVE	D
PERMANENT LIMITED EASEMENT	PLE	CENTRAL ANGLE OR DELTA	DELTA
PROPERTY LINE	PL	LENGTH OF CURVE	L
RECORDED AS	(100')	TANGENT	TAN
REFERENCE LINE	R/L		

CONVENTIONAL SYMBOLS

FOUND IRON PIPE/PIN	LP (1" UNLESS NOTED)	PROPOSED R/W LINE	
		EXISTING H.E. LINE	
R/W MONUMENT	● (SET)	PROPERTY LINE	
R/W STANDARD	▲ (SET)	LOT & TIE LINES	
SIGN	ISIGN	SLOPE INTERCEPTS	
SECTION CORNER MONUMENT	●	CORPORATE LIMITS	
SECTION CORNER SYMBOL		NO ACCESS (BY PREVIOUS ACQUISITION/CONTROL)	
FEE (HATCH VARIES)		NO ACCESS (BY ACQUISITION)	
TEMPORARY LIMITED EASEMENT		NO ACCESS (BY STATUTORY AUTHORITY)	
PERMANENT LIMITED EASEMENT		SECTION LINE	
R/W BOUNDARY POINT	RWB20	QUARTER LINE	
PARCEL NUMBER	102	SIXTEENTH LINE	
SIGN NUMBER (OFF PREMISE)	21-1	EXISTING CENTERLINE	
BUILDING		PROPOSED REFERENCE LINE	
		PARALLEL OFFSET	

CONVENTIONAL UTILITY SYMBOLS

COMMUNICATIONS	C	
WATER	W	
GAS	G	
TELEPHONE	T	
OVERHEAD	OH	
TRANSMISSION LINES		
ELECTRIC	E	
CABLE TELEVISION	TV	
FIBER OPTIC	FO	
SANITARY SEWER	SAN	
STORM SEWER	SS	
	NON COMPENSABLE	COMPENSABLE
POWER POLE		
TELEPHONE POLE		
TELEPHONE PEDESTAL		
ELECTRIC TOWER	⊠	



TOTAL NET LENGTH OF CENTERLINE = 5.75 MI.

NOTES:

COORDINATES AND BEARINGS SHOWN ON THIS PLAT ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM, MILWAUKEE COUNTY ZONE, NAD83 (1997) ADJUSTMENT. THE COORDINATES SHOWN ARE GRID COORDINATES AND ARE TO BE USED AS GRID OR GROUND VALUES ON THIS PLAT.

RIGHT-OF-WAY MONUMENTS ARE TYPE 2 (TYPICAL 3/4 " REBAR) AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT BY WISCONSIN DOT SOUTHEAST REGION SURVEY.
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".

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THE HIGH ACCURACY REFERENCE NETWORK (HARN) POINTS USED ON PROJECT WERE:
1) GREENDALE GPS
2) FRANKLIN S. GPS

ORIGINAL PLAT PREPARED BY:

Milwaukee Transportation Partners LLC

WISCONSIN
BRIAN M. DODGE
S-2848
WAUKESHA, WI
LAND SURVEYOR

DATE: 7/07/2010 (SIGNATURE) Brian M. Dodge

BRIAN M. DODGE
AGENT FOR MILWAUKEE TRANSPORTATION PARTNERS, LLC
R.L.S. NUMBER 2848

REVISION DATE
12-06-2010
2-17-2011

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED FOR THE DEPARTMENT

DATE: 7-7-2010 C E Andersen (Signature)

146

E

SCHEDULE OF LANDS & INTERESTS REQUIRED

AREAS SHOWN IN THE TOTAL ACRES COLUMN MAY BE APPROXIMATE AND DERIVED FROM TAX ROLLS OR OTHER AVAILABLE SOURCES AND MAY NOT INCLUDE LANDS OF THE OWNER WHICH ARE NOT CONTIGUOUS TO THE AREA TO BE ACQUIRED.

* DENOTES AREAS COMPUTED

PROJECT FUNDING I.D.	PARCEL NUMBER	SHEET NUMBER	OWNER	INTEREST REQUIRED	TOTAL ACRES	R/W REQUIRED (ACRES) NEW	EXISTING	TOTAL	TOTAL REMAIN ACRES	T.L.E. ACRES	P.L.E. ACRES	PARCEL NUMBER
1030-20-22	36 (3)	4.20	FRANK JR. & TAMMIE D. VALENTE	PLE, TLE	0.838	--	--	--	0.838	0.106	0.003	36
1030-20-22	37 (3)	4.21	RICHARD H. & JOYCE M. HUNKEL	FEE, PLE, TLE	0.815*	0.033	0.000	0.033	0.782*	0.021	0.079	37
1030-20-23	38 (3)	4.25	LEGACY/TIMBER RIDGE, LLC.	PLE	21.717	--	--	--	21.717	--	0.045	38
1030-20-22	39 (3)	4.21	DREXEL COMMERCIAL LIMITED PARTNERSHIP	FEE, TLE	27.028	3.877	0.000	3.877	23.151	0.260	--	39
1030-20-23	40 (3)	4.22	THE VILLAGE AT MANOR PARK, INC.	TLE	34.110	--	--	--	34.110	0.126	--	40
1030-20-23	41 (3)	4.22	OAK CREEK ASSEMBLY OF GOD, INC.	PLE, TLE	31.149	--	--	--	31.149	0.237	0.051	41
1030-20-23	42 (2)	4.10	H, A & H HOLDINGS, LLC	TLE	1.157	--	--	--	1.157	0.028	--	42
1030-20-23	43 (2)	4.10	S.K.E. DISPOSAL, INC.	FEE, TLE	1.323	0.028	0.000	0.028	1.295	0.027	--	43
1030-20-23	44 (2)	4.10	BRIAN J. & DIANE C. WOJNOWSKI	TLE	0.456	--	--	--	0.456	0.035	--	44
1030-20-23	45 (3)	4.23	B & G REALTY, LLC.	TLE	9.323	--	--	--	9.323	0.022	--	45
1030-20-23	46 (3)	4.24	SOUTHFIELD EXPANSION, LLC.	TLE	8.980	--	--	--	8.980	0.061	--	46
1030-20-23	47 (3)	4.24	ANDERSON BROTHERS	TLE	1.350	--	--	--	1.350	0.016	--	47
1030-20-22	48	4.21	RENAE ELIZABETH WYRWICKI	FEE	1.580	1.580	0.000	1.580	0.000	--	--	48
1030-20-22	49	4.21, 4.22	MILWAUKEE COUNTY	FEE, PLE, TLE	215.460	2.004	0.000	2.004	213.456	0.312	0.165	49
1030-20-23	50 (3)	4.24	LEGACY / RAWSON, LLC.	TLE	6.297	--	--	--	6.297	0.047	--	50
1030-20-23	51 (3)	--	REMOVED	--	--	--	--	--	--	--	--	51
1030-20-23	52 (3)	--	REMOVED	--	--	--	--	--	--	--	--	52
1030-20-23	53 (2)	4.10	APPLE ORCHARD INVESTMENTS PARTNERSHIP	TLE	2.169	--	--	--	2.169	0.036	--	53
1030-20-23	54 (2)	4.09	FOX GLEN CORPORATE CENTRE, LLC	FEE	23.196*	0.278	0.000	0.278	22.918*	--	--	54
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
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--	--	--	--	--	--	--	--	--	--	--	--	--
1030-20-22/23	100 (3)	4.09, 4.13, 4.14, 4.16, 4.17, 4.18, 4.19, 4.20, 4.21, 4.22, 4.24	WE ENERGIES - ELECTRIC	ROR	--	--	--	--	--	--	--	100
1030-20-23	102 (3)	4.19, 4.20	TIME WARNER CABLE	--	--	--	--	--	--	--	--	--
1030-20-22/23	103 (3)	4.09, 4.13, 4.14, 4.16, 4.18, 4.19, 4.20, 4.24	AT&T WISCONSIN	ROR	--	--	--	--	--	--	--	103
1030-20-23	104 (3)	4.25	WEST SHORE PIPELINE COMPANY	ROR	--	--	--	--	--	--	--	104
1030-20-23	105 (3)	4.16	MILWAUKEE METROPOLITAN SEWERAGE DISTRICT	ROR	--	--	--	--	--	--	--	105
1030-20-22/23	106 (3)	4.18, 4.20, 4.21, 4.22, 4.24	OAK CREEK WATER AND SEWER UTILITY	ROR, UTILITY AGREEMENT		--	--	--	--	--	--	106
1030-20-22/23	107 (3)	--	REMOVED	--		--	--	--	--	--	--	107
1030-20-22	UA206 (3)	4.13, 4.18, 4.20, 4.21, 4.22, 4.24	OAK CREEK WATER AND SEWER UTILITY	MUNICIPAL UTILITY AGREEMENT		--	--	--	--	--	--	UA206
1030-20-22	UA207 (3)	--	REMOVED	--		--	--	--	--	--	--	UA207
--	--	--	--	--	--	--	--	--	--	--	--	--

SHEET 4.04 IS REMOVED

REVISION DATE
DECEMBER 06, 2010
FEBRUARY 17, 2011

DATE JULY 07, 2010

SCALE, FEET
0 100 200

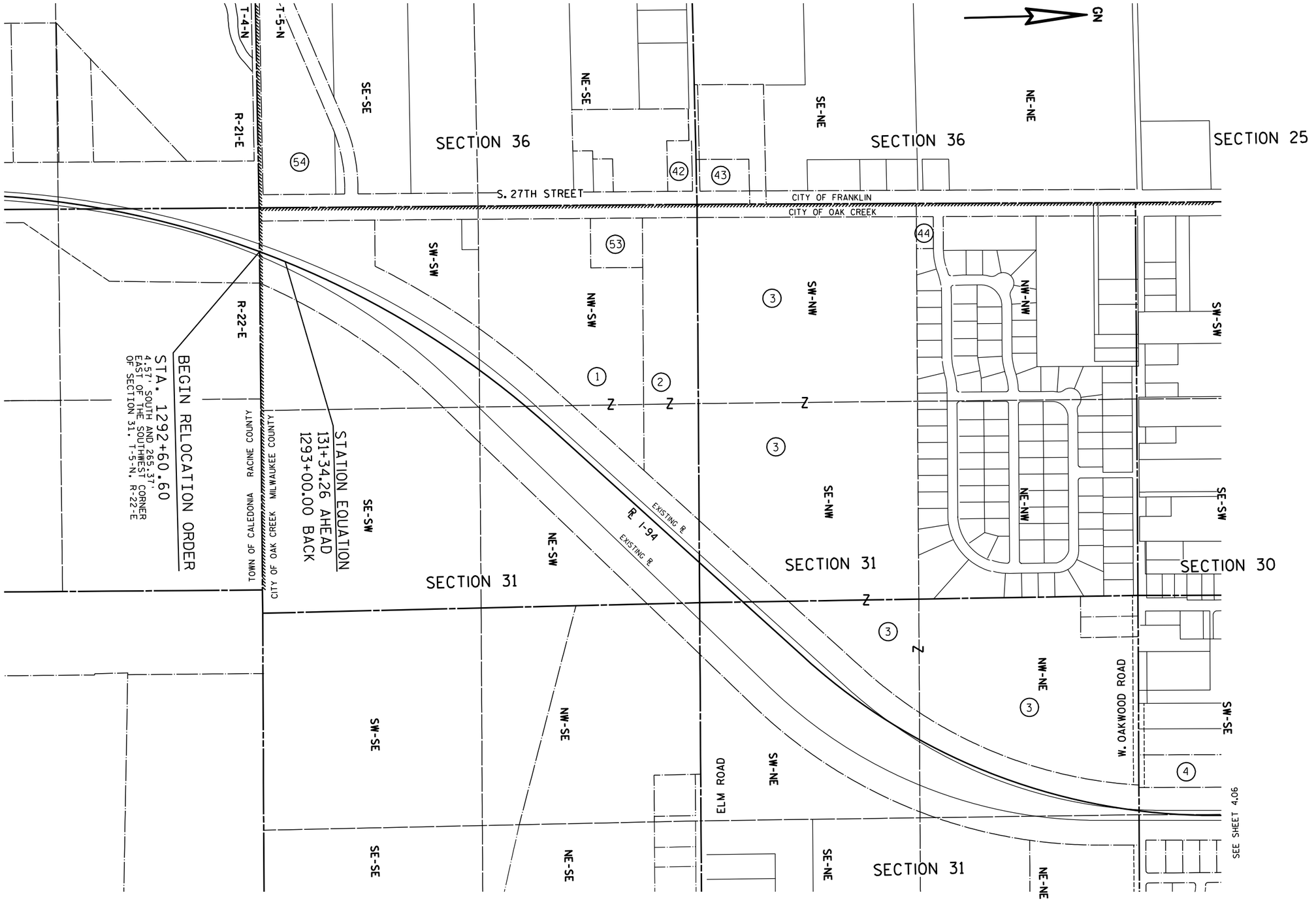
HWY: I-94
COUNTY: MILWAUKEE

STATE R/W PROJECT NUMBER 1030-20-22/23
CONSTRUCTION PROJECT NUMBER

PLAT SHEET 4.03
PS&E SHEET 147

E

FILE NAME : S:\prelimPMwork\15.ProjBase\RW\MIL_South\cds\040403_RS.dgn
PLOT DATE : 18-FEB-2011 07:37
PLOT BY : MSCBXD
PLOT NAME :
PLOT SCALE : 200:1
CONST. I-94 R/W 1030-20-22/23 4.03



SHEET 4.04 IS REMOVED

REVISION DATE DECEMBER 06, 2010 FEBRUARY 17, 2011	DATE JULT 07, 2010	SCALE, FEET 0 300 600	HWY: I-94	STATE R/W PROJECT NUMBER 1030-20-22/23	PLAT SHEET 4.05
			COUNTY: MILWAUKEE	CONSTRUCTION PROJECT NUMBER	PS&E SHEET 148 E

FILE NAME : S:\prelimPMwork\15.ProjBase\RW\MIL_South\cds\040405_RL.dgn PLOT DATE : 18-FEB-2011 07:37 PLOT BY : MSCBXD PLOT NAME : PLOT SCALE : 600:1

GN

4

4

MONUMENT W/ BRASS CAP
Y=231132.06
X=594613.51

T 5 N
36 31
36 31
R22 E R22 E

1327.78'

CURVE E:
L = 951.26
R = 4733.66'
LC = 949.65'
LCB = N33°44'14"E

CURVE G:
L = 1295.11'
R = 4733.66'
LC = 1291.07'
LCB = N35°49'05"E

STA 796+73.71 MATCHLINE SEE SHEET 4.10

S89°43'24"E

1/16TH LINE

1.25" IP

MATCHLINE SEE SHEET 4.11 STA 146+13.93

S88°57'02"E

251.44'

RAMP 224.45'

217.19'

2670.91'

N45°21'42"E

CSM 383 LOT 1

CSM 383 LOT 2

CITY OF OAK CREEK

UNPLATTED LAND

80'

80'

795

CITY OF FRANKLIN

CITY OF OAK CREEK

SECTION LINE

S01°01'16"W

1053.88'

2655.56' (MON. TO MON.)

S01°01'16"W

SE-SE

CITY OF FRANKLIN

UNPLATTED LAND

℄ SOUTH 27TH STREET (STH 241)

ACCESS CONTROL PER PROJECT: I-94-5(3)314

CURVE E

CURVE G

SLOPE INTERCEPTS

RAMP

℄ EXISTING I-94

145

℄ I-94

140

CURVE 1

1" IP

S89°00'43"E

279.29'

1.25" IP

RW102 137.59.48 203.59'

136+38.91 RW101 451.98'

RW207 78+945.94 80.00'

790

W. COUNTY LINE ROAD

80'

UNPLATTED LAND

RW206 78+865.94 80.00'

PRW485 786+19.83 80.00'

N88°58'44"W. 30.00'

PRW484 786+19.83 110.00'

80.00'

PI 132+38.65

195.32'

250.00'

RW159

783+69.83 80.00'

273.90'

700.05'

2655.43' S01°01'16"W

135

℄ EXISTING I-94

L = 1226.01' R = 3659.72'
LCB = 1289.29' CH = N35°14'40"E

UNPLATTED LAND

54

FOX GLEN CORP CENTRE LLC

PRW483 784+24.51 110.00'

PRW482 783+67.73 276.79'

785

1291+99.84 RW100 173.52'

WEST OLD COUNTY LINE ROAD

S89°35'22"E PL

N72°13'17"E 176.18'

196.80'

80.00'

185.41'

S89°00'43"E

190.94'

STATION EQUATION
131+34.26 AHEAD
1293+00.00 BACK

CITY OF FRANKLIN

S89°35'22"E 24.75'

2619.45' (MON. TO MON.)

TOWN OF RAYMOND

STA 783+45.93

1" IP

2459.50'(MON. TO MON.)

RACINE COUNTY

TOWN OF CALEDONIA

2003.15'

131+65.40 RW160 177.89'

BEGIN RELOCATION ORDER
STA 1292+60.60
N = 228472.35
E = 594831.56

CURVE 1
IH-94

P.I.	=	132+38.65
Y	=	228667.02
X	=	594475.25
Δ	=	42°30'35"
D	=	01°02'12"
R	=	5527.25'
T	=	2149.97
L	=	4100.86

1/16TH LINE N00°33'42"E

SW-SW

SE-SW

T 5 N R 21 E
36 36

MONUMENT W/ BRASS CAP
Y=228495.69
X=591946.81

T 5 N R 21 E
3.6 3.1
1 6
T 4 N R 22 E

MONUMENT W/ BRASS CAP
Y=228476.92
X=594566.19

T 5 N R 22 E
3.1 3.1

MONUMENT W/ BRASS CAP
Y=228434.62
X=597025.32

100 WE ENERGIES - ELECTRIC
DOC. 3865990
PARCEL 54

103 AT&T WISCONSIN
DOC. 3865990
PARCEL 54

RIGHT-OF-WAY MONUMENTS ARE TYPE 2 (TYPICAL 3/4" REBAR) AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT BY WISCONSIN DOT SOUTHEAST REGION SURVEY.

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".

COORDINATES AND BEARINGS ON THE PLAT ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM, MILWAUKEE COUNTY, NAD 1983 (1997) ADJUSTMENT. ALL DISTANCES ARE GROUND LENGTH AND ARE REFERENCED TO GPS HARN POINTS GREENDALE GPS AND FRANKLIN S. GPS

I-94 REFERENCE LINE IS CENTERLINE OF MEDIAN.

FOR THE LATEST ACCESS / DRIVEWAY INFORMATION, CONTACT THE PLANNING UNIT OF THE WISCONSIN DEPARTMENT OF TRANSPORTATION OFFICE OF WAUKESHA.

HWY	BASIS OF EXISTING R/W	YEAR	WIDTH
I-94	I-94-5(3) 314	1957	VARIES
S. 27TH ST. (U.S.H. 41)	FED. AID PROJECT NO. 378C DIVISION JOB NO. 2990	--	160'
W. COUNTY LINE ROAD	DOC 5230093, R 1127, I221 - 222	1978	80'
WEST OLD COUNTY LINE ROAD	RAYMOND RECORD PAGE 194	1907	24.75'

REVISION DATE DECEMBER 06, 2010 FEBRUARY 17, 2011	DATE JULY 07, 2010	SCALE. FEET 0 100 200	HWY: I-94	STATE R/W PROJECT NUMBER 1030-20-22/23	PLAT SHEET 4.09	
			COUNTY: MILWAUKEE	CONSTRUCTION PROJECT NUMBER	PS&E SHEET 149	E

FILE NAME : S:\prelimPMwork\15.ProjBase\RW\MIL_South\cds\040409_RP.dgn PLOT DATE : 18-FEB-2011 07:39 PLOT BY : MSCBXD PLOT NAME : PLOT SCALE : 200:1

CONST. I-94 R/W 1030-20-23 4.09

FERGUSON
WISCONSIN SERVICES CORP
ANO, LLC
EXIST R/W
TLE
VALENTI
NINNEMANN PROPERTIES II
BARTEL
EXIST R/W
BARTEL
TLE
N

4268 4270 4272 4274 4276 4278 4280 4282

WEST FRONTAGE ROAD
R/L WEST FRONTAGE ROAD
SLOPE INTERCEPT
WETLAND BOUNDARY
BEGIN PROJECT 1035-01-82
END PROJECT 1035-01-74
STA 1268+00.00
JH 94 SB
SB PGL
R/L IH 94
6.5'
50'
12'
IH 94 NB
NB PGL
S-51-219
MATCHLINE 1281+00

1266 1268 1270 1272 1274 1276 1278 1280

CAUTION

SLOPE INTERCEPT
R/L EAST FRONTAGE ROAD

5266 5268 5270 5272 5274 5276

EAST FRONTAGE ROAD
RACINE CO PROP R/W ATC
PROP R/W
TLE
LEGEND
PERMITTED WETLAND IMPACTS
KELEPOURIS
PROP R/W
7 1/2 MILE ROAD
R/L 7 1/2 MILE ROAD
PROP R/W
EXIST R/W
RICHARDS
EXIST R/W
TLE
FREIBURGER
BENKOWSKI BUILDERS
PROP R/W
WETLAND BOUNDARY

5 5

735 730 725 720 715 710 705 700

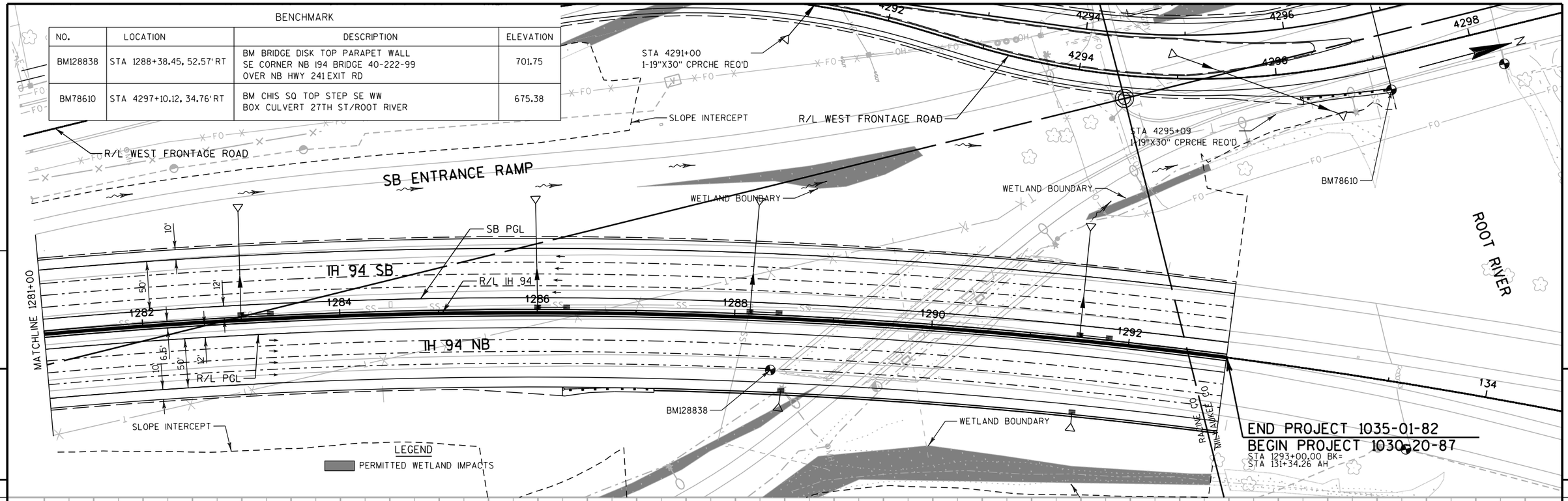
BEGIN PROJECT
1035-01-82
STA 1268+00.00
CONSTRUCTED UNDER PROJECT 1035-01-74
-0.50%
EXISTING PROFILE AT ℄ IH 94
FINISHED PROFILE AT PGL IH 94
VPC STA 1269+50.00
VPC EL 723.93
VPI STA 1273+50.00
VPI EL 721.93
VCL = 800'
K = 903
VPT STA 1277+50.00
VPT EL 716.39
-1.39%

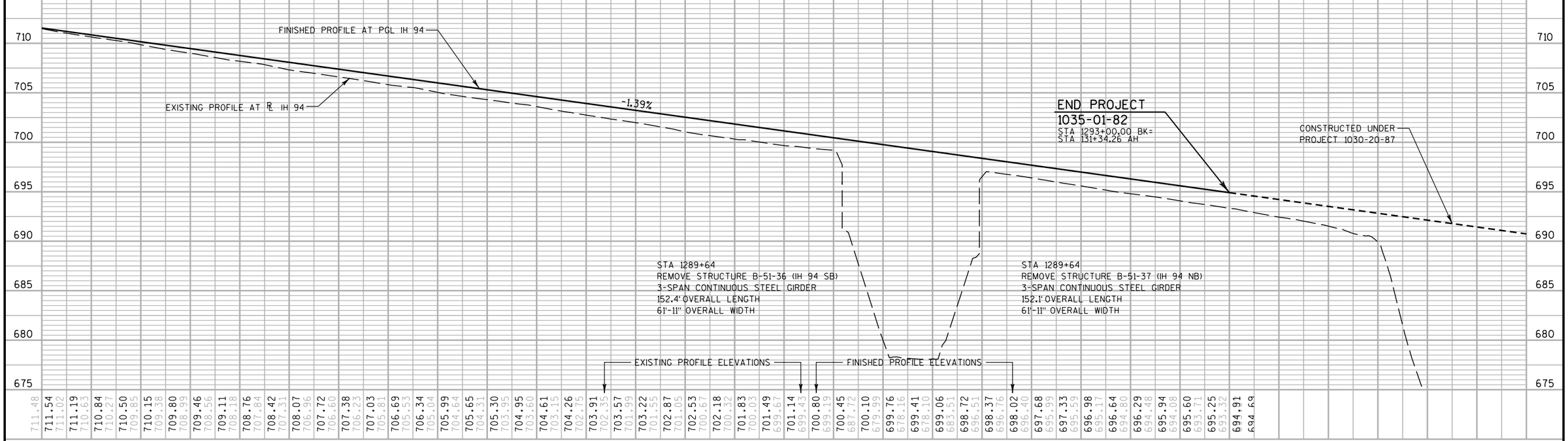
	EXISTING PROFILE ELEVATIONS	FINISHED PROFILE ELEVATIONS
1266	724.09	
1268	724.68	
	724.01	
1270	724.55	
	723.90	
	724.43	
	723.75	
	724.30	
	723.60	
	724.18	
	723.36	
	724.05	
	723.37	
1272	723.93	
	723.28	
	723.80	
	723.18	
	723.67	
	723.07	
	723.52	
	722.98	
	723.37	
	722.84	
	723.22	
	722.69	
	723.05	
	722.52	
	722.89	
	722.28	
	722.71	
	722.16	
	722.52	
1274	722.15	
	722.33	
	722.02	
	722.14	
	721.83	
	721.93	
	721.69	
	721.72	
	721.61	
	721.50	
	721.31	
	721.28	
	721.10	
	721.04	
	720.96	
	720.80	720.80
	720.66	
	720.56	
1276	720.46	
	720.31	
	720.31	
	720.05	
	720.07	
	719.78	
	719.71	
	719.51	
	719.38	
	719.22	
	718.98	
	718.94	
	718.62	
	718.64	718.64
	718.30	
	718.34	
	718.03	
1278	718.03	
	717.89	
	717.72	
	717.78	
	717.39	
	717.68	
	717.07	
	717.19	
	716.73	
	716.79	
	716.39	
	716.46	
	716.04	
	716.07	
	715.69	
	715.72	
	715.35	
1280	715.36	
	715.00	
	714.91	
	714.65	
	714.60	
	714.31	
	714.22	
	713.96	
	713.82	
	713.61	
	713.49	
	713.27	
	713.04	
	712.92	
	712.61	
	712.58	
	712.24	
	712.23	
	711.89	
	711.88	
1281	711.48	
	711.54	

PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	PLAN & PROFILE: IH 94	SHEET 150	E

BENCHMARK

NO.	LOCATION	DESCRIPTION	ELEVATION
BM128838	STA 1288+38.45, 52.57' RT	BM BRIDGE DISK TOP PARAPET WALL SE CORNER NB 194 BRIDGE 40-222-99 OVER NB HWY 241 EXIT RD	701.75
BM78610	STA 4297+10.12, 34.76' RT	BM CHIS SQ TOP STEP SE WW BOX CULVERT 27TH ST/ROOT RIVER	675.38





PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	PLAN & PROFILE: IH 94	SHEET 151 E

FILE NAME : Z:\Racine\CADDS\22\22M\CDS\050102_pp.dgn | PLOT DATE : 6/11/2018 | PLOT BY : kld | PLOT NAME : $FILE$ | PLOT SCALE : 1:100

WISDOT/CADDS SHEET 40

CHRISTENSEN

RACINE COUNTY PUBLIC WORKS

TLE

EXIST R/W

PROP R/W

SLOPE INTERCEPT

STA 1+20.00
CONSTRUCT PE

BEGIN CONSTRUCTION
1035-01-82
STA 4288+00.00
MATCH EXISTING

PREVIOUSLY CONSTRUCTED UNDER PROJECT 1035-01-81

WETLAND BOUNDARY

STA 4291+23
1-19"X30" CPRCHE REQ'D
SKEW 31.44° LHF

R/L WEST FRONTAGE ROAD

FOX GLEN CORP CENTER

ROOT RIVER

END CONSTRUCTION
1035-01-82
STA 4297+10.26
MATCH EXISTING

IH 94 SB

IH 94 NB

S. 27TH STREET SB

S. 27TH STREET NB

PGL SB

PGL NB

BENCHMARK

NO.	LOCATION	DESCRIPTION	ELEVATION
BM128513	STA 4287+58.61 47.67' LT	BM NAIL E FACE PP NO. E 58-16316 W SIDE 27TH ST	686.88
BM78610	STA 4297+10.12, 34.76' RT	BM CHIS SQ TOP STEP SE WW BOX CULVERT 27TH ST/ROOT RIVER	675.38

LEGEND
1-19"X30" CPRCHE REQ'D
SKEW 67.35° RHF
PERMITTED WETLAND IMPACTS

EXISTING PROFILE AT PGL NB
PROPOSED PROFILE AT PGL NB

PRIVATE DRIVEWAY

VPI STA 0+00.00
VPI EL 678.56

VPC STA 0+55.00
VPC EL 676.91

VPI STA 1+20.00
VPI EL 675.51

VPI STA 0+80.00
VPI EL 676.16

VPT STA 1+05.00
VPT EL 675.75

-3.00%
VCL = 50'
K = 36.1
1.62%

EXISTING PROFILE AT PRIVATE DRIVEWAY

PROPOSED PROFILE AT PRIVATE DRIVEWAY

BEGIN CONSTRUCTION
1035-01-82
STA 4288+00.00
MATCH EXISTING

VPC STA 4288+00.00
VPC EL 681.58

VCL = 250'
K = 88

LP STA 4290+05.99
LP EL 679.17

VPI STA 4289+25.00
VPI EL 678.65

VPT STA 4290+50.00
VPT EL 679.28

0.50%

STA 4291+23
1-19"X30" CPRCHE
CLASS III REQ'D

VPC STA 4291+65.00
VPC EL 679.85

HP STA 4292+24.61
HP EL 680.00

VPI STA 4292+65.00
VPI EL 680.35

VCL = 200'
K = 119

VPT STA 4293+65.00
VPT EL 679.18

-1.18%

STA 4295+62
1-19"X30" CPRCHE
CLASS III REQ'D

VPC STA 4295+60.26
VPC EL 676.88

VCL = 150'
K = 221

VPI STA 4296+35.26
VPI EL 676.00

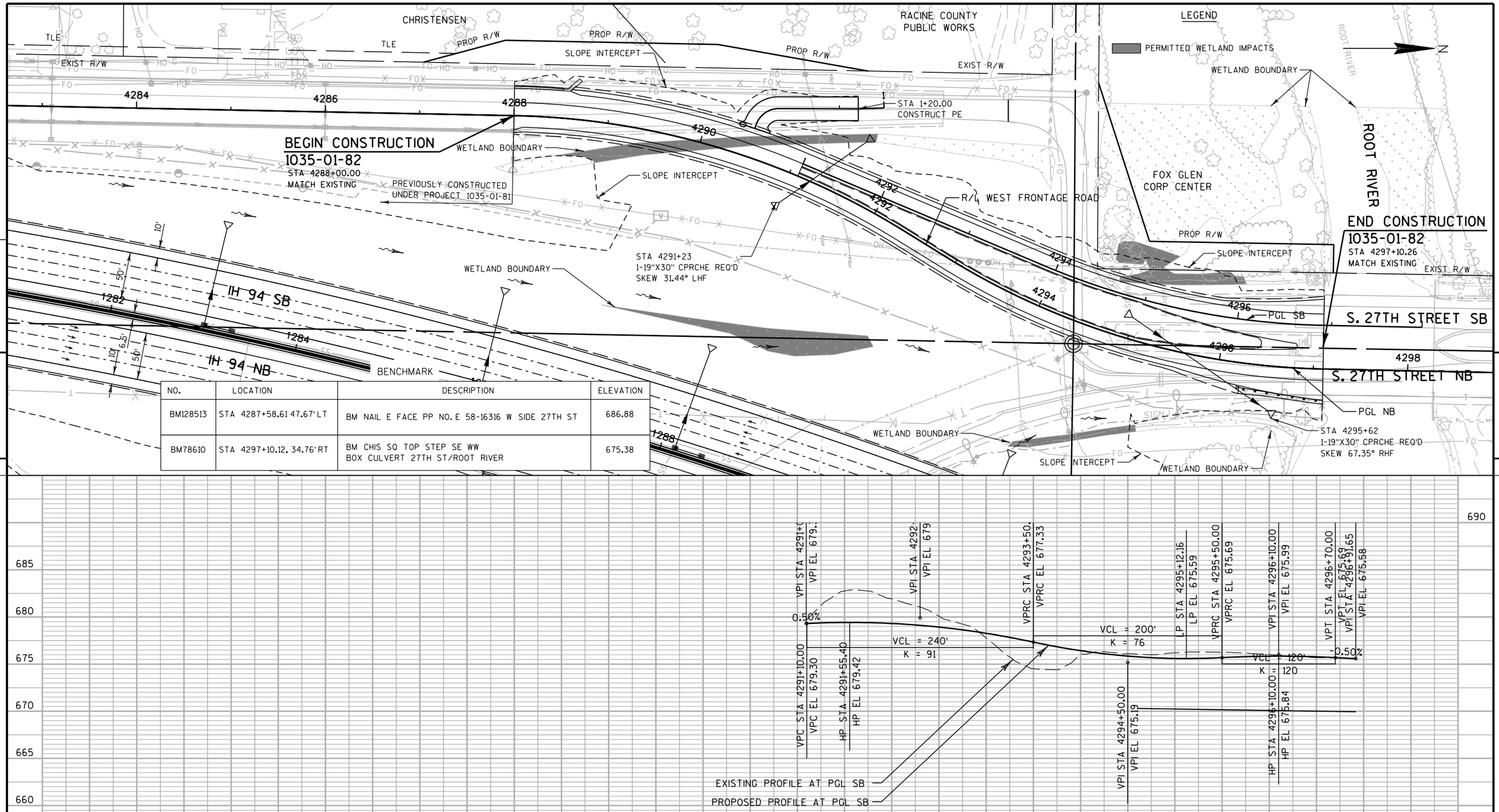
VPT STA 4297+10.26
VPT EL 675.62

END CONSTRUCTION
1035-01-82
STA 4297+10.26
MATCH EXISTING

EXISTING PROFILE ELEVATIONS

FINISHED PROFILE ELEVATIONS

| | | |



NO.	LOCATION	DESCRIPTION	ELEVATION
BM128513	STA 4287+58.61 47.67' LT	BM NAIL E FACE PP NO. E 58-16316 W SIDE 27TH ST	686.88
BM78610	STA 4297+10.12, 34.76' RT	BM CHIS SQ TOP STEP SE WW BOX CULVERT 27TH ST/ROOT RIVER	675.38

PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	PLAN & PROFILE: WEST FRONTAGE ROAD AND 27TH STREET	SHEET 153 E

FILE NAME : Z:\Racine\CADDS\22\22M\CDS\050103a_pp.dgn PLOT DATE : 6/11/2018 PLOT BY : kld PLOT NAME : $FILE$ PLOT SCALE : 1:100

WISDOT/CADDS SHEET 40

Standard Detail Drawing List

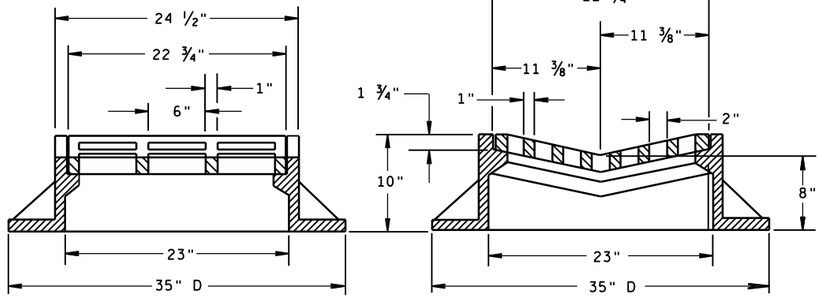
08A05-19B	INLET COVERS TYPE B, B-A, C, MS, MS-A, & WM
08A05-19C	INLET COVERS TYPE F, HM, HM-S, S, T, V, HM-GJ, & HM-GJ-S
08A05-19D	INLET COVER TYPE BW, MANHOLE COVERS, TYPE K, J, J-S, L & M
08B09-02	MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT AND 8-FT DIAMETER
08C06-02	INLETS 3-FT AND 4-FT DIAMETER
08C07-02	INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT
08C08-02	INLETS MEDIAN 1 AND 2 GRATE
08D15-05A	EDGEDRAIN OUTLET AND OUTFALL MARKERS
08D15-05B	EDGEDRAIN AND BASE AGGREGATE OPEN GRADED
08D15-05C	EDGEDRAIN AND BASE AGGREGATE OPEN GRADED
08D21-01	DRIVEWAYS WITHOUT CURB & GUTTER
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
08E14-01	TRACKING PAD
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
08F02-01	APRON ENDWALLS FOR PIPE ARCH AND ELLIPTICAL PIPE
08F04-07	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
08F06-04	REINFORCED CONCRETE APRON ENDWALL FOR PIPE UNDERDRAIN
09B02-10	CONDUIT
09B04-11	PULL BOX
09D01-05	CABINET SERVICE INSTALLATION (METER BREAKER PEDESTAL)
09H03-01	2 CIRCUIT METER BREAKER PEDESTAL
09H09-02	COMMUNICATION VAULT TYPE 1
13A03-06	CONCRETE PAVEMENT SHOULDERS
13C01-19	CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES
13C09-15A	CONCRETE PAVEMENT REPAIR AND REPLACEMENT
13C09-15B	CONCRETE PAVEMENT REPAIR AND REPLACEMENT
13C09-15C	CONCRETE PAVEMENT REPAIR AND REPLACEMENT
13C18-06A	CONCRETE PAVEMENT JOINTING
13C18-06B	CONCRETE PAVEMENT STEEL REINFORCEMENT
13C18-06C	CONCRETE PAVEMENT JOINT TYPES
13C18-06D	CONCRETE PAVEMENT JOINTING AT UTILITY FIXTURES
14B07-15A	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-15B	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-15C	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-15D	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-15E	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-15F	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-15G	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-15H	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-15I	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B08-02A	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-02B	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-02C	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-02D	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-02E	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B15-11A	STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATION & ELEMENTS
14B15-11B	STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATION & ELEMENTS
14B15-11C	STEEL PLATE BEAM GUARD, CLASS "A", INSTALLATION & ELEMENTS
14B16-04A	ANCHORAGE FOR STEEL PLATE BEAM GUARD TYPE 2
14B16-04B	ANCHORAGE FOR STEEL PLATE BEAM GUARD TYPE 2
14B18-06A	STEEL PLATE BEAM GUARD, CLASS "A" (AT BRIDGES, OBSTACLES AND SIDEROADS/DRIVEWAYS)
14B18-06B	STEEL PLATE BEAM GUARD, CLASS "A" AT MEDIAN APPROACH TO BRIDGES
14B28-03	GUARDRAIL MOW STRIP
14B29-01	SAFETY EDGE
14B32-05A	CONCRETE BARRIER SINGLE SLOPE (CBSS)
14B32-05B	CONCRETE BARRIER SINGLE SLOPE (CBSS)
14B32-05C	CONCRETE BARRIER SINGLE SLOPE (CBSS)
14B32-05D	CONCRETE BARRIER SINGLE SLOPE (CBSS)
14B32-05E	CONCRETE BARRIER SINGLE SLOPE (CBSS)
14B33-01G	CONCRETE BARRIER SINGLE SLOPE 42" THRIE BEAM ANCHOR
14B33-01H	CONCRETE BARRIER SINGLE SLOPE 42" THRIE BEAM ANCHOR
14B39-01E	42-INCH SSCB TO 56-INCH SSCB HEIGHT TRANSITION
14B42-05A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-05B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-05C	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

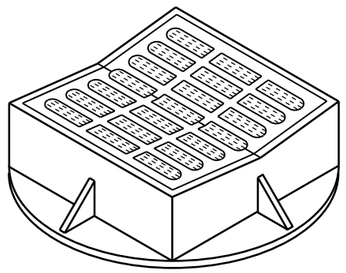
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Standard Detail Drawing List

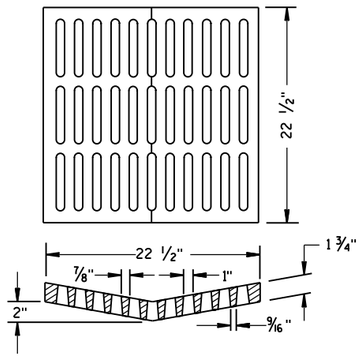
14B44-03A	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-03B	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-03C	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B45-04A	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04B	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04C	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04D	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04E	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04F	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04G	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04H	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04I	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04J	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04K	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04L	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
15A02-09	DELINEATOR POST, DELINEATOR REFLECTOR AND DELINEATOR BRACKET WITH REFLECTIVE SHEETING
15A03-02A	FLEXIBLE MARKER POST FOR CULVERT END
15A03-02B	FLEXIBLE MARKER POST FOR CULVERT END
15A04-04A	FLEXIBLE DELINEATOR POST
15A04-04B	DELINEATOR POST WITH REFLECTIVE SHEETING
15A04-04C	DELINEATOR WITH REFLECTIVE SHEETING
15B01-08A	FENCE WOVEN WIRE
15B01-08B	FENCE WOVEN WIRE
15C02-06A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-06B	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-06C	DETOUR SIGNING FOR MAINLINE CLOSURES
15C05-04	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 M.P.H. OR LESS
15C07-14B	PAVEMENT MARKING WORDS
15C07-14C	PAVEMENT MARKING ARROWS
15C08-18A	LONGITUDINAL MARKING (MAINLINE)
15C11-07A	CHANNELIZING DEVICES FLEXIBLE TUBULAR MARKER POST
15C11-07B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15C19-05B	MOVING PAVEMENT MARKING OPERATION MULTI-LANE UNDIVIDED ROADWAY
15C19-05C	MOVING PAVEMENT MARKING OPERATION MULTI-LANE DIVIDED ROADWAY
15C31-03A	PAVEMENT MARKING (RAMPS AND GORES)
15C31-03B	PAVEMENT MARKING MAJOR SPLIT FREEWAY TO FREEWAY
15C31-03C	PAVEMENT MARKING FOR PARALLEL ON-RAMP AND PARALLEL OFF-RAMP
15D03-04	TRAFFIC CONTROL, LANE CLOSURE, SPEEDS GREATER THAN 40 M.P.H. WITH BARRIER
15D06-03	TRAFFIC CONTROL, TWO LANE TWO WAY OPERATION
15D12-06A	TRAFFIC CONTROL, LANE CLOSURE
15D12-06B	TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION
15D27-03	TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH
15D29-05	TRAFFIC CONTROL, VEHICLE ENTRANCE/EXIT OR HAUL ROAD
15D38-02A	TEMPORARY TRAFFIC CONTROL SIGN MOUNTING
15D38-02B	ATTACHMENT OF SIGNS TO POSTS
16A01-07	LANDMARK REFERENCE MONUMENTS AND COVERS

6



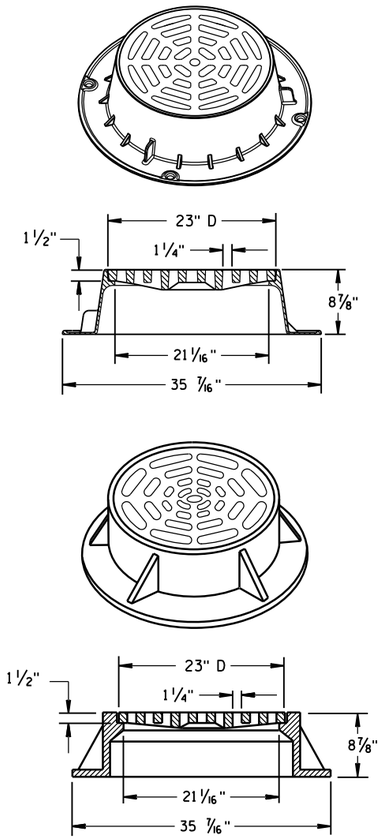


TYPE "B"



ALTERNATIVE GRATE FOR TYPE "B" COVER

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



TYPE "C"

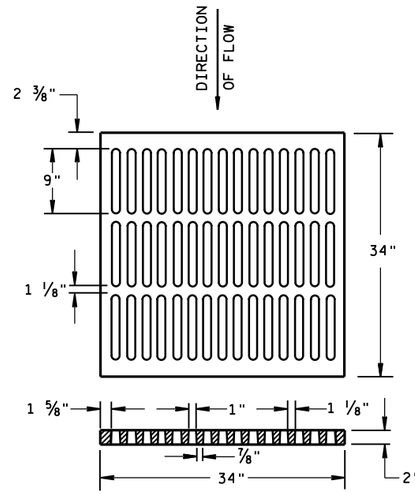
NOTE: EITHER CASTING IS ACCEPTABLE

GENERAL NOTES

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

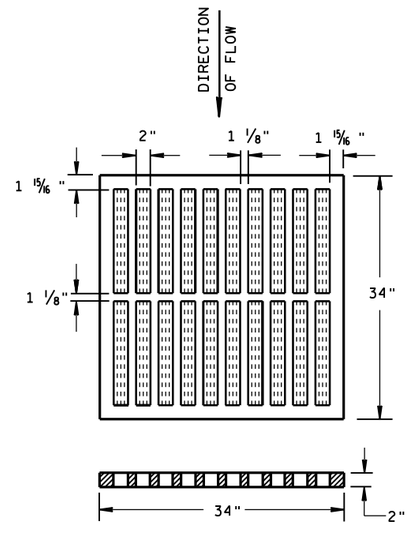
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR CATCH BASIN, MANHOLE AND INLET COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

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



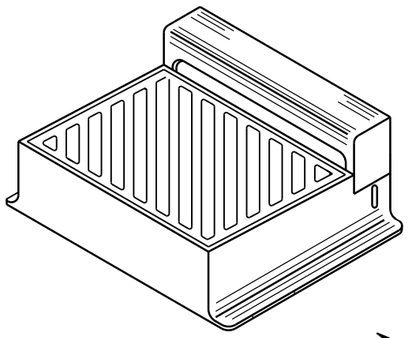
ALTERNATIVE TYPE "MS"

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

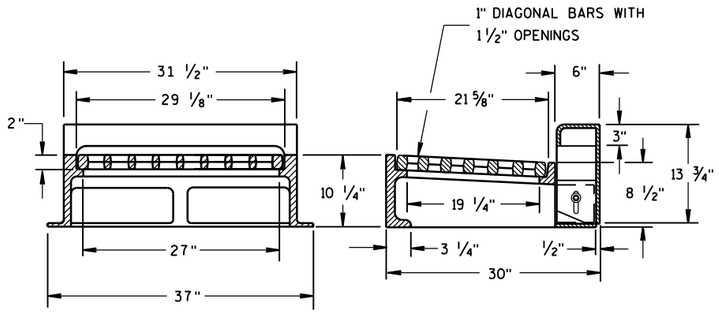


TYPE "MS"

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



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



NOTE: CURB BOX HEIGHT ADJUSTABLE 6" TO 9"

TYPE "WM"

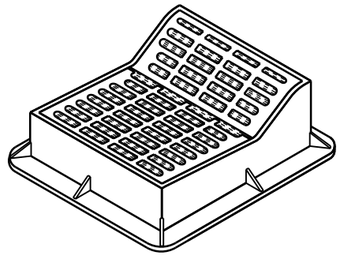
INLET COVERS
TYPE B, B-A, C, MS, MS-A, & WM

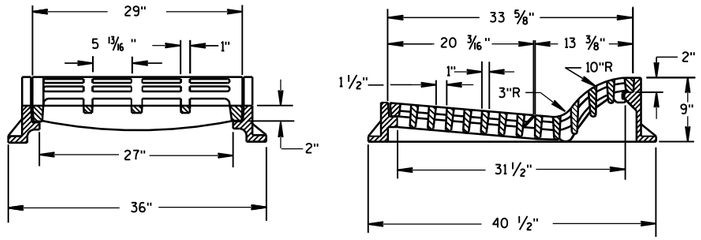
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6

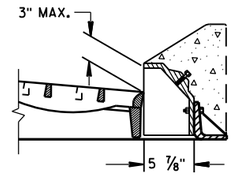
S.D.D. 8 A 5-19b





TYPE "F"

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



ALTERNATIVE CURB BOX FOR TYPE "HM" COVER

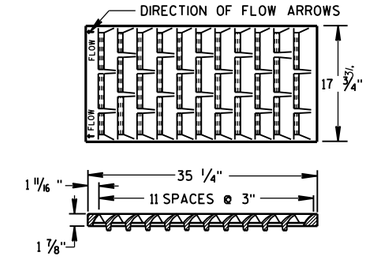
USE WITH TYPES G & J CONCRETE CURB & GUTTER, 30 INCH
NOTED AS TYPE HM-GJ ON DRAINAGE TABLE

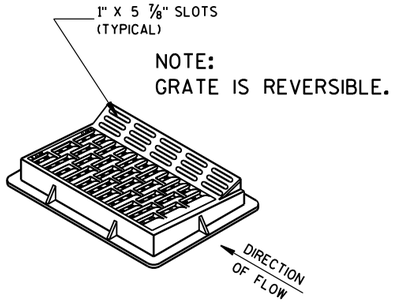
NOTE:
SPECIAL GRATE FOR THE
TYPE "H" COVER MAY ALSO BE
USED FOR THE TYPE "HM-GJ" COVER
NOTED AS TYPE HM-GJ-S ON DRAINAGE TABLE

GENERAL NOTES

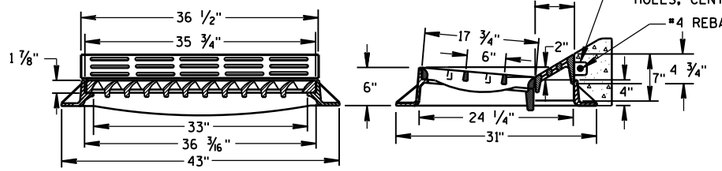
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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





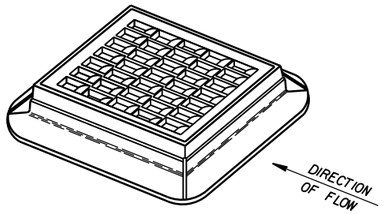
NOTE:
GRATE IS REVERSIBLE.

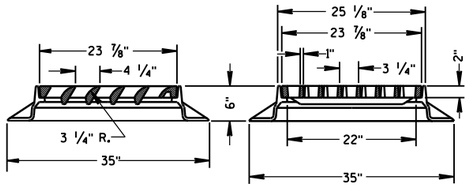


TYPE "HM"

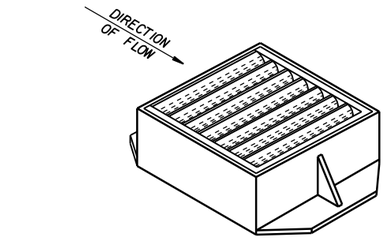
USE WITH TYPES A & D CONCRETE CURB & GUTTER, 36 INCH.

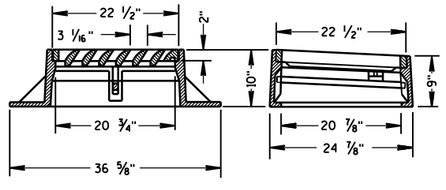
NOTE:
SPECIAL GRATE FOR THE
TYPE "H" COVER MAY ALSO BE
USED FOR THE TYPE "HM" COVER
NOTED AS TYPE HM-S ON DRAINAGE TABLE



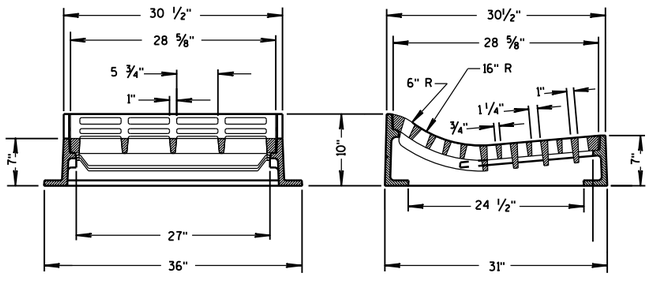


TYPE "S"



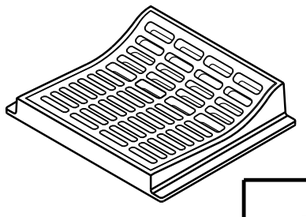


TYPE "V"



TYPE "T"

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



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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11/27/2013
DATE

/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER

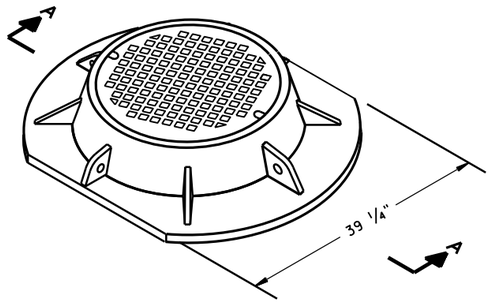
FHWA

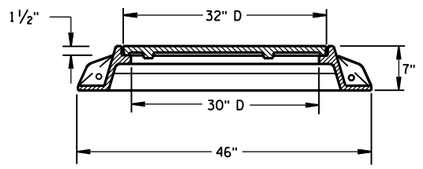
6

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

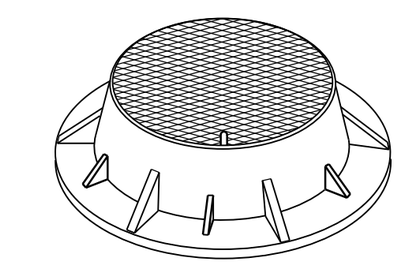
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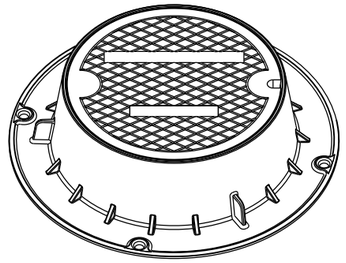
S.D.D. 8 A 5-19c

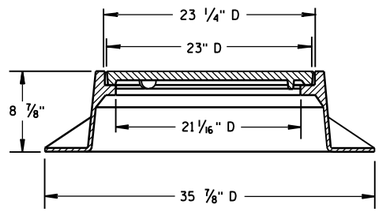


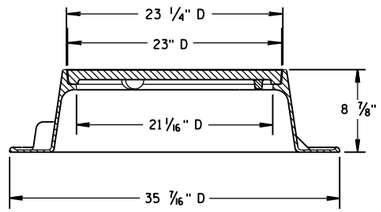


SECTION A-A
TYPE "K"









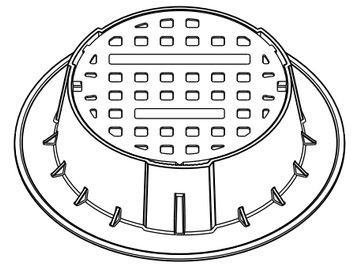
TYPE "J"
NOTE: EITHER CASTING IS ACCEPTABLE

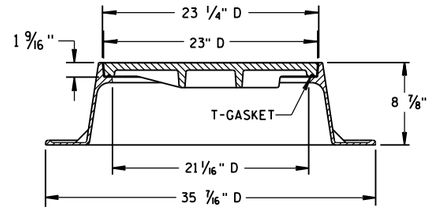
GENERAL NOTES

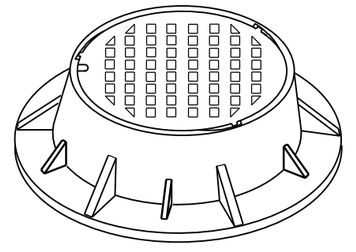
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

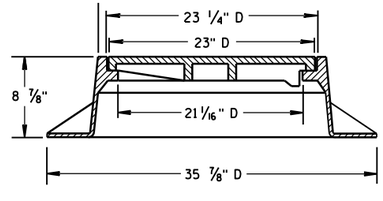
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR MANHOLE COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

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

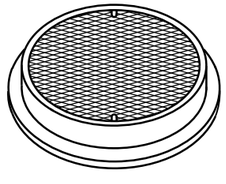


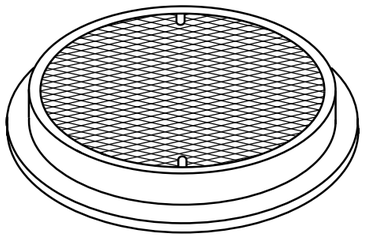


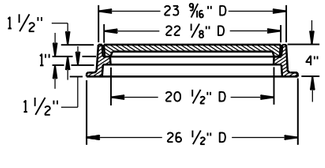




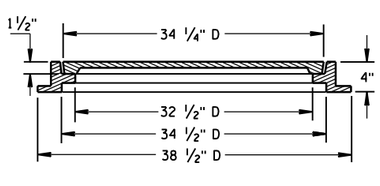
TYPE "J" SPECIAL
TYPE "B" NON-ROCKING SELF-SEAL LID
(NOTED AS TYPE J-S ON THE DRAINAGE TABLE)
NOTE: EITHER CASTING IS ACCEPTABLE



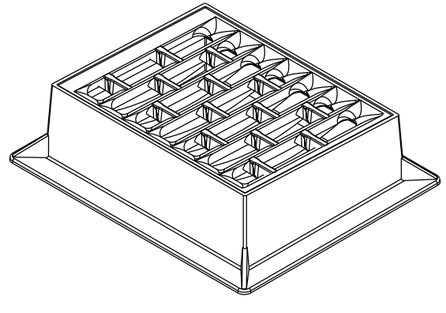


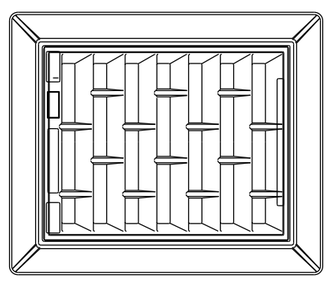


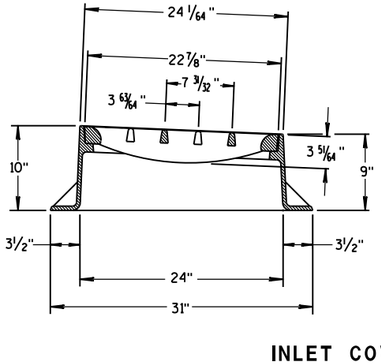
TYPE "L"

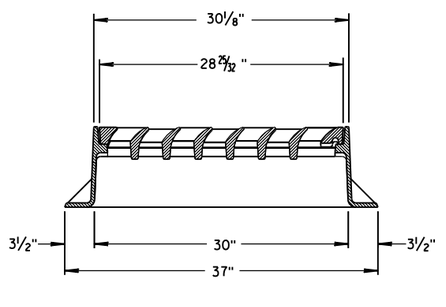


TYPE "M"









INLET COVER TYPE "BW"

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

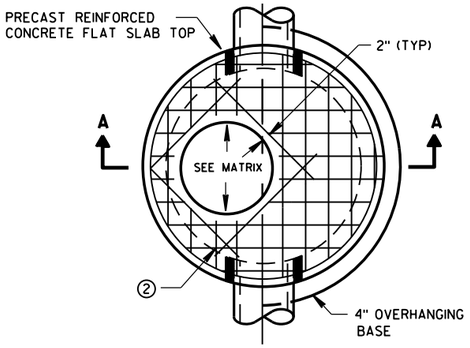
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11/27/2013
DATE
FHWA

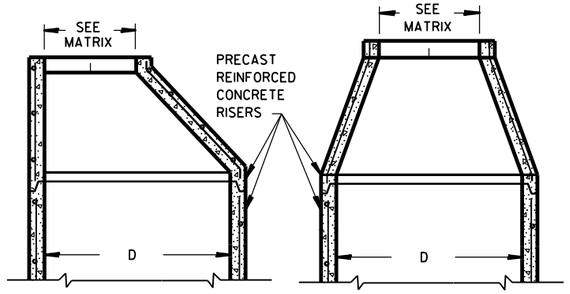
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER

6

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

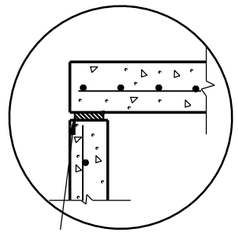


PLAN VIEW CIRCULAR OPENING

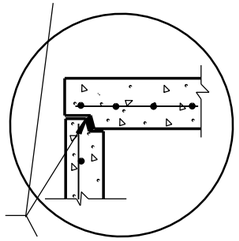


OPTIONAL PRECAST REINFORCED CONCRETE ECCENTRIC TOP

OPTIONAL PRECAST REINFORCED CONCRETE CONCENTRIC TOP

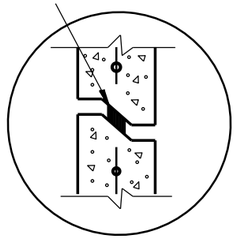


TOP WITH PLAIN END JOINT



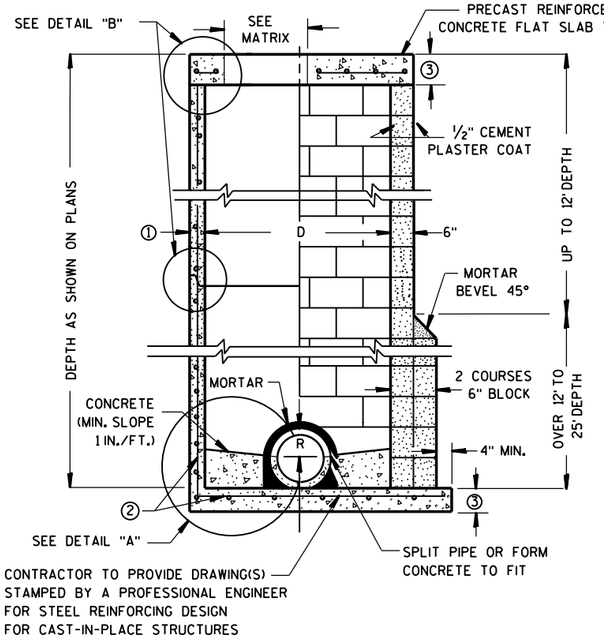
JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C990 (TYP)

TOP WITH TONGUE AND GROOVE JOINT



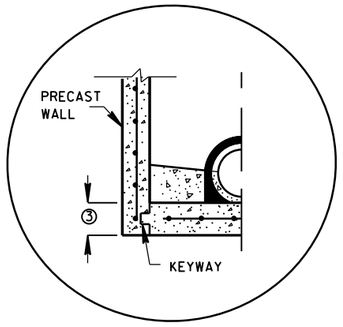
RISER WITH TONGUE AND GROOVE JOINT

DETAIL "B"

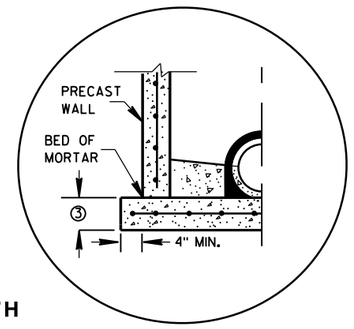


PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

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

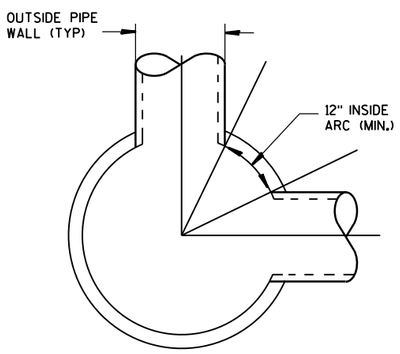


PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

DETAIL "A"



DETAIL "C"

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 MANHOLE UNITS REQUIRED FOR THE PROJECT UNTIL A LIST OF SIZES IS FURNISHED BY THE ENGINEER.

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

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

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

PRECAST REINFORCED CONE TOPS (ECCENTRIC OR CONCENTRIC) OR PRECAST REINFORCED FLAT SLAB TOPS MAY BE USED ON CONCRETE BLOCK STRUCTURES.

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

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

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

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

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

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

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

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

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

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

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

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

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

MANHOLE COVER OPENING MATRIX

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

PIPE MATRIX

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

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

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

STATE OF WISCONSIN
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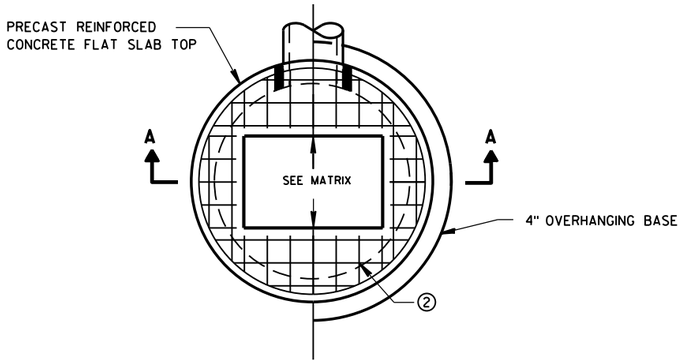
APPROVED

Sept., 2016
DATE

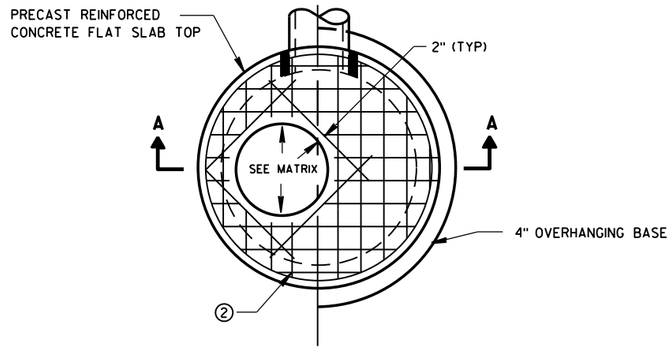
/S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT UNIT SUPERV

FHWA

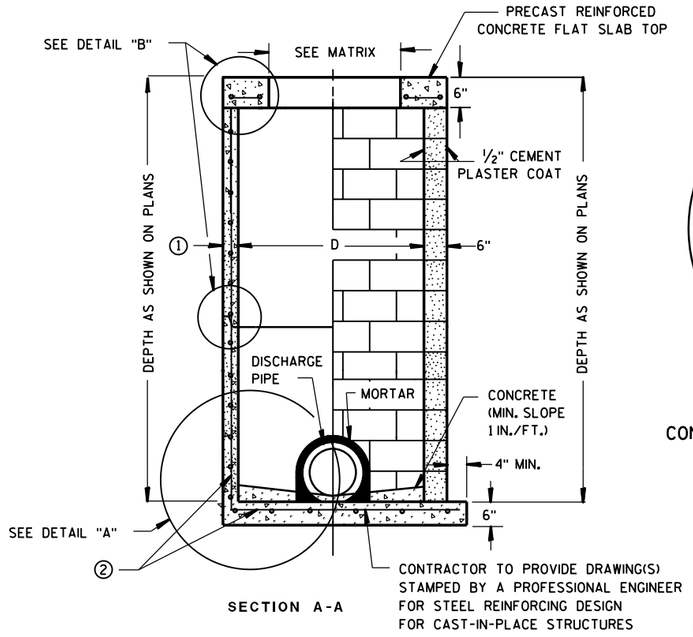
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PLAN VIEW RECTANGULAR OPENING



PLAN VIEW CIRCULAR OPENING

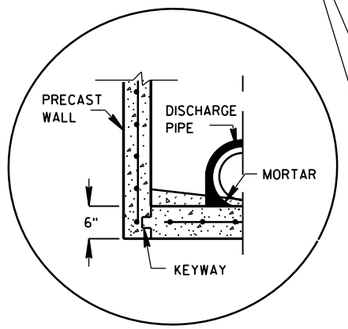


SECTION A-A

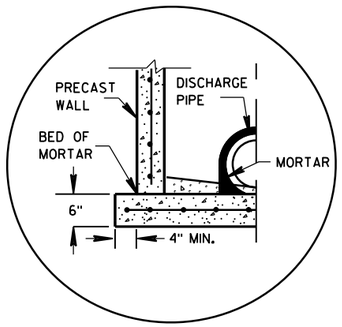
PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

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

CIRCULAR INLETS W/ FLAT TOP

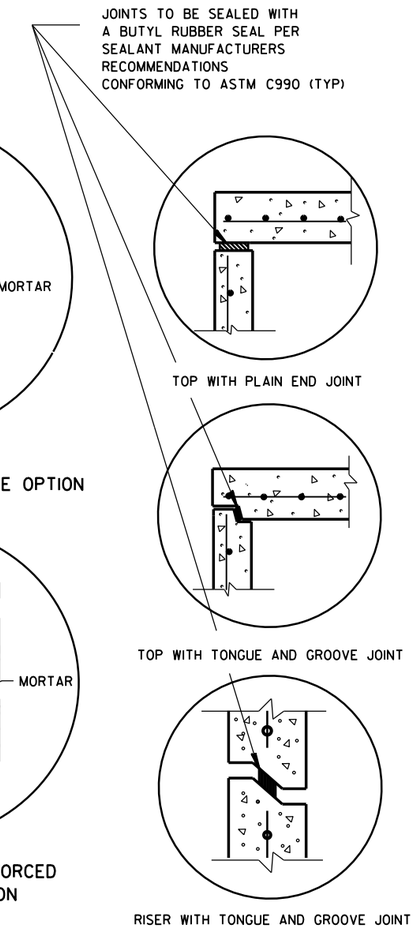


PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

DETAIL "A"



DETAIL "B"

GENERAL NOTES

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

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

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

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

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

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

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

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

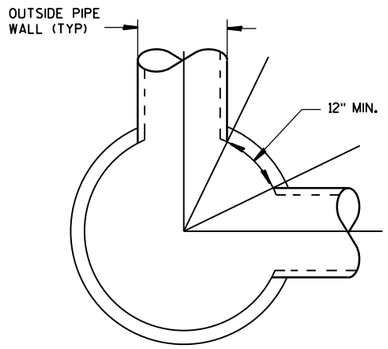
FOR ADDITIONAL CONFIGURATIONS, MAINTAIN A MINIMUM OF 12 INCHES AS MEASURED FROM THE INSIDE OF THE STRUCTURE WALL BETWEEN THE OUTSIDE PIPE WALLS OF ADJACENT PIPES. SEE DETAIL "C".

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

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

INLET COVER OPENING MATRIX

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



DETAIL "C"

PIPE MATRIX

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

INLETS 3-FT AND 4-FT DIAMETER

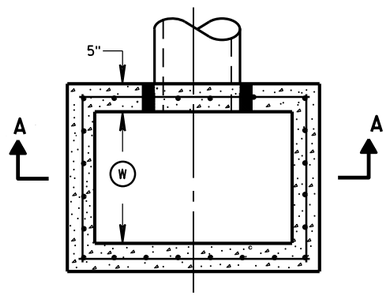
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept.. 2016 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS | UNIT SUPERVI ENT
FHWA

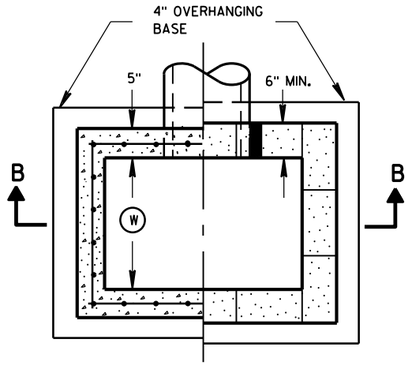
INLETS 3-FT AND 4-FT DIAMETER

6

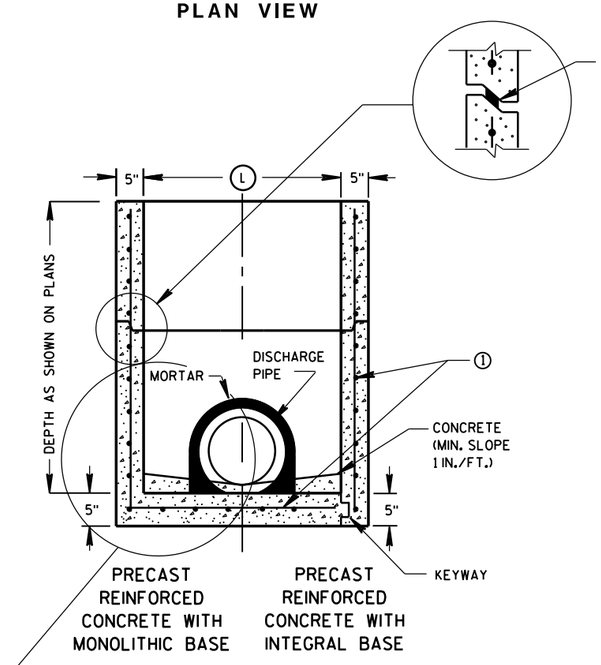
S.D.D. 8 C 6-2



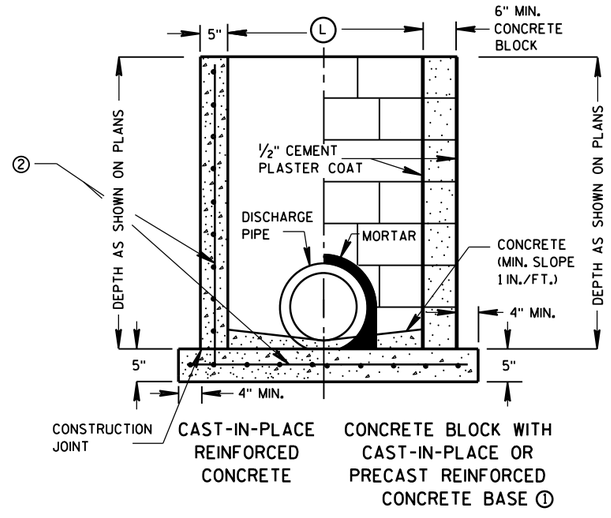
PLAN VIEW



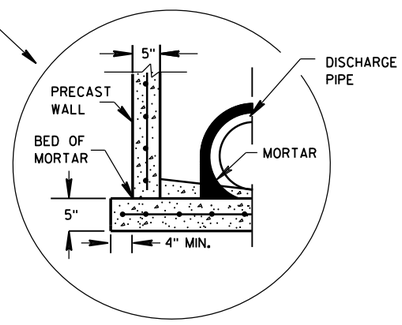
PLAN VIEW



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.

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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 FOUNDATION BACKFILL. THIS BEDDING SHALL BE COMPACTED AND PROVIDE UNIFORM SUPPORT FOR THE ENTIRE AREA OF THE BASE.

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

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

4" OVERHANGING BASES ARE REQUIRED FOR CAST-IN-PLACE REINFORCED CONCRETE AND CONCRETE BLOCK INSTALLATIONS.
4" OVERHANG IS REQUIRED WHEN SEPARATE PRECAST BASE IS PROVIDED.
OVERHANG IS NOT REQUIRED ON PRECAST STRUCTURES WITH AN INTEGRAL OR MONOLITHIC BASE.

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

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

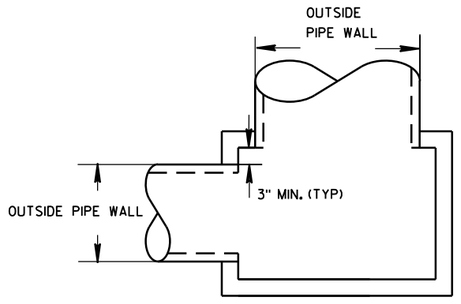
② CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.

INLET COVER MATRIX

INLET SIZE		INLET COVER TYPE	ALL A'S	ALL B'S	BW	F	ALL H'S	S	T	V	WM
	WIDTH (W) (FT)	LENGTH (L) (FT)									
2X2-FT	2	2	X	X				X		X	
2X2.5-FT	2	2.5			X			X	X	X	X
2X3-FT	2	3					X				
2.5X3-FT	2.5	3				X					

PIPE MATRIX

INLET SIZE	MAXIMUM INSIDE PIPE DIAMETER	
	WIDTH (IN)	LENGTH (IN)
2X2-FT	12	12
2X2.5-FT	12	18
2X3-FT	12	24
2.5X3-FT	18	24



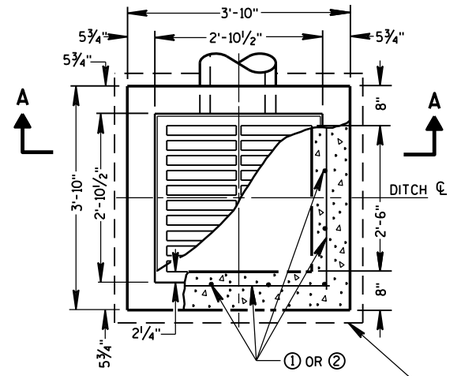
DETAIL "A"

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

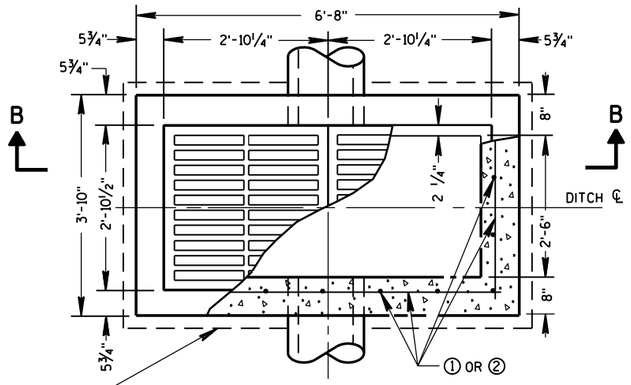
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept., 2016
DATE
/S/ Rodney Taylor
ROADWAY STANDARDS D IT
UNIT SUPERVIS
FHWA

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

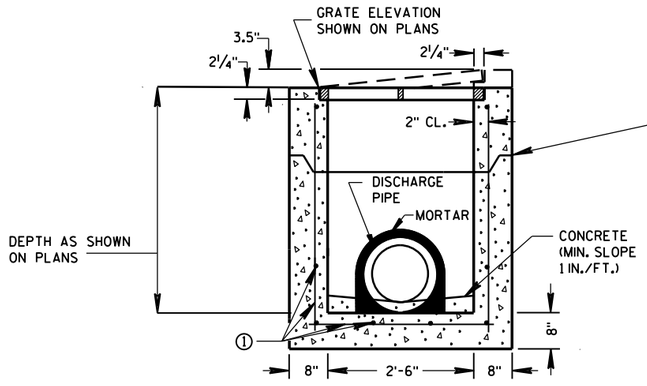


PLAN VIEW

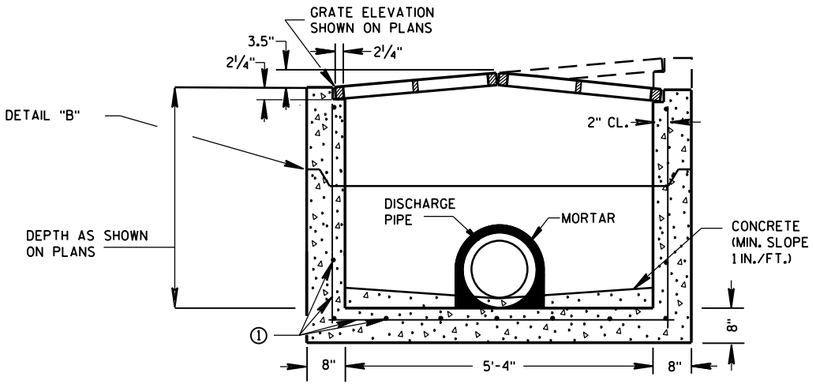


PLAN VIEW

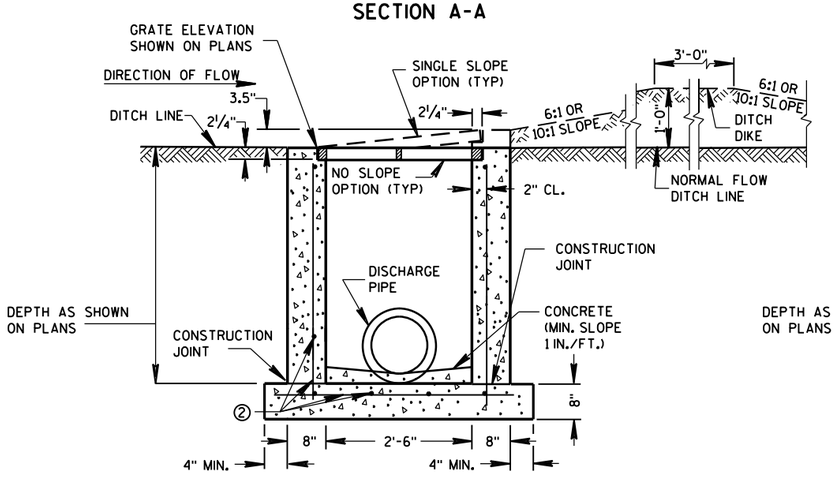
4" OVERHANGING BASE ON REINFORCED CAST-IN-PLACE CONCRETE INLETS



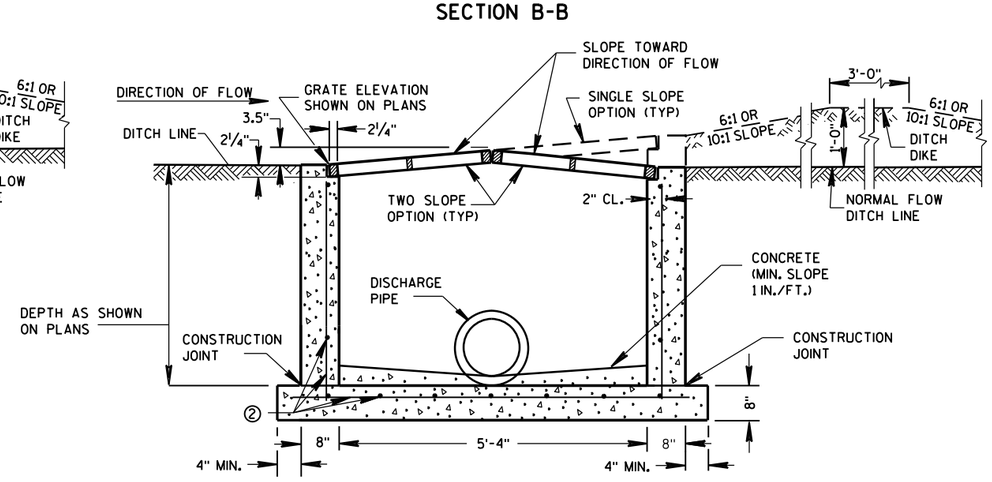
PRECAST REINFORCED CONCRETE SECTION A-A



PRECAST REINFORCED CONCRETE SECTION B-B



REINFORCED CAST-IN-PLACE CONCRETE SECTION A-A



REINFORCED CAST-IN-PLACE CONCRETE SECTION B-B

INLETS MEDIAN 1 GRATE

INLETS MEDIAN 2 GRATE

GENERAL NOTES

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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.

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

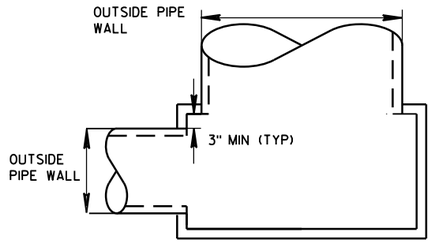
MAXIMUM INSIDE PIPE DIAMETER DETERMINED BY 3" CLEARANCE ON EACH SIDE OF THE OUTSIDE WALL OF THE PIPE. SEE DETAIL "A". ASSUMES PIPE ENTERS PERPENDICULAR TO THE STRUCTURE.

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.

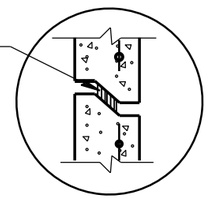
PIPE MATRIX

	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
Sept., 2016 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS UNIT SUPERVI ENT
FHWA

6

S.D.D. 8 C 8-2

6

S.D.D. 8 C 8-2

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) UNPERFORATED PIPE UNDERDRAIN AND FITTINGS FURNISHED FOR OUTFALL PIPE SHALL MEET THE REQUIREMENTS OF ONE OF THE FOLLOWING SPECIFICATIONS:

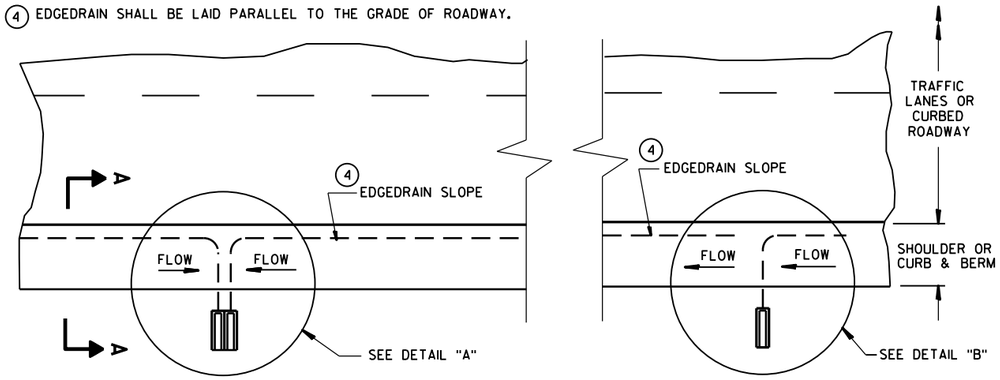
POLYVINYL CHLORIDE (PVC) PLASTIC DRAIN, WASTE, AND VENT PIPE AND FITTINGS, ASTM D 2665, SCHEDULE 40 PVC.

TYPE PSM POLYVINYL CHLORIDE (PVC) SEWER PIPE AND FITTINGS, ASTM D 3034, SDR 23.5 PVC SEWER PIPE.

(2) MAXIMUM SPACING OF EDGEDRAIN OUTLETS SHALL BE 250 FEET UNLESS OTHERWISE SPECIFIED IN THE CONTRACT OR DIRECTED BY THE ENGINEER.

(3) EDGEDRAIN SHALL BE CONNECTED TO INLETS REGARDLESS OF FLOW DIRECTION FOR DRAINAGE AND MAINTENANCE ACCESS.

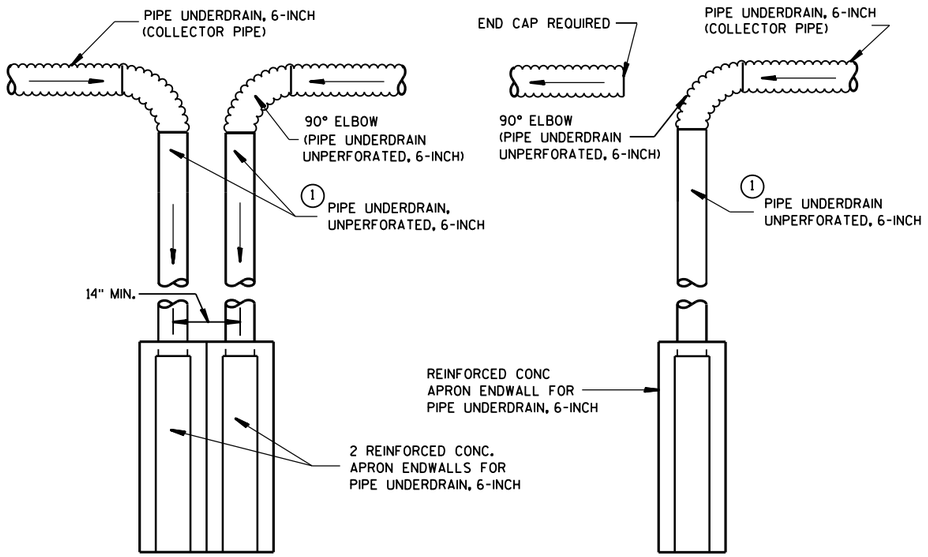
(4) EDGEDRAIN SHALL BE LAID PARALLEL TO THE GRADE OF ROADWAY.



PLAN VIEW

ROADWAY WITH SHOULDERS OR CURBS

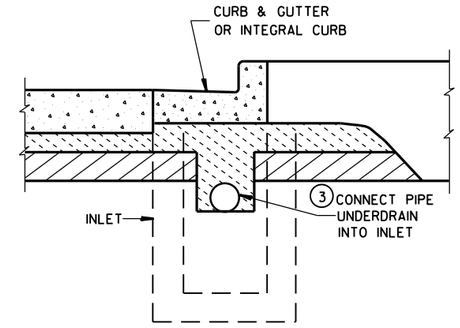
(EDGEDRAIN OUTLETS TO ROADSIDE)(2)



DETAIL "A"
TO BE USED AT LOW POINT LOCATIONS

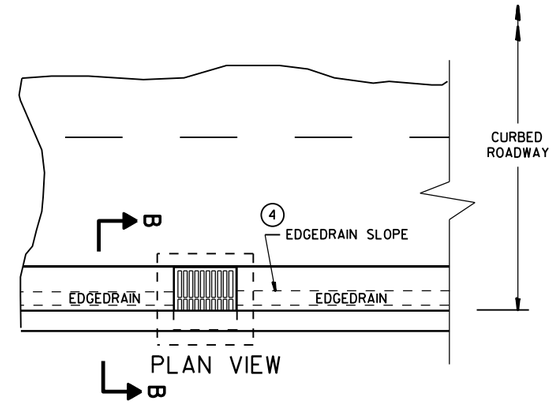
DETAIL "B"
TO BE USED AT INTERMEDIATE LOCATIONS

TYPICAL DRAIN OUT DETAILS



SECTION B-B

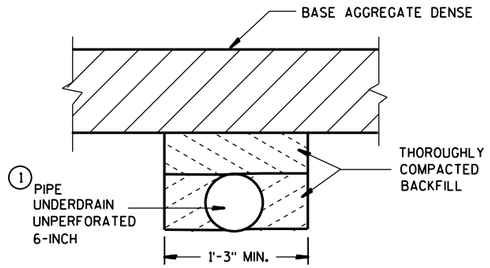
URBAN CROSS SECTION



PLAN VIEW

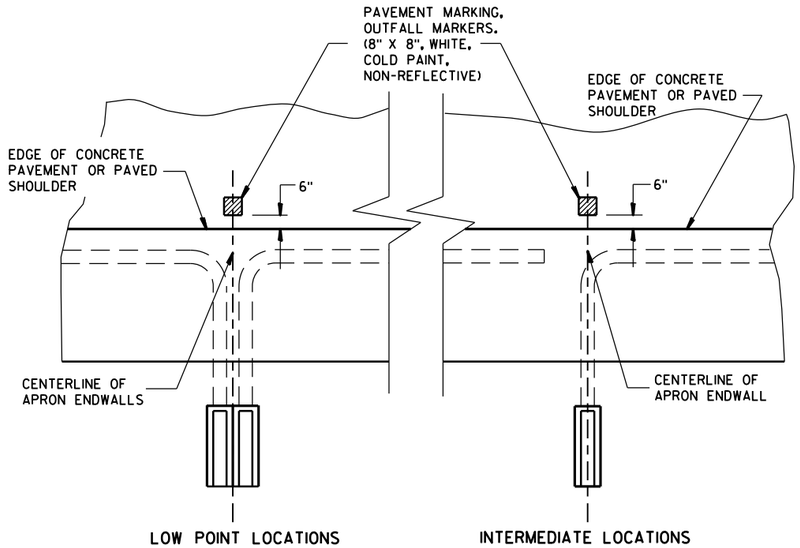
ROADWAY WITH CURBS

(EDGEDRAIN CONNECTS INTO INLET STRUCTURE)



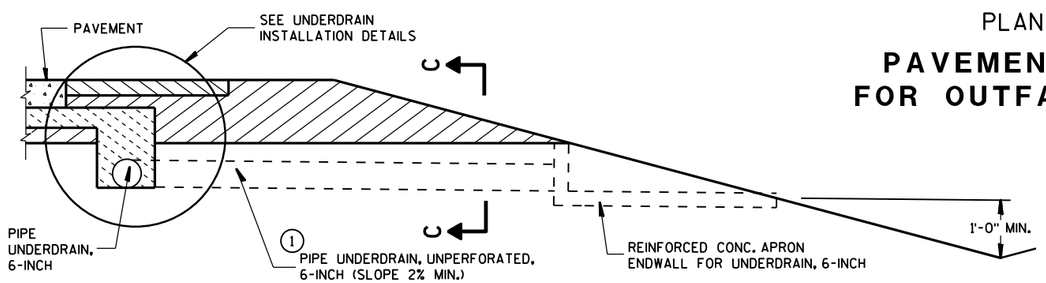
SECTION C-C

(TRENCH FOR OUTFALL PIPE)



PLAN VIEW

PAVEMENT MARKING FOR OUTFALL MARKERS



SECTION A-A

RURAL CROSS SECTION

EDGEDRAIN OUTLET AND OUTFALL MARKERS

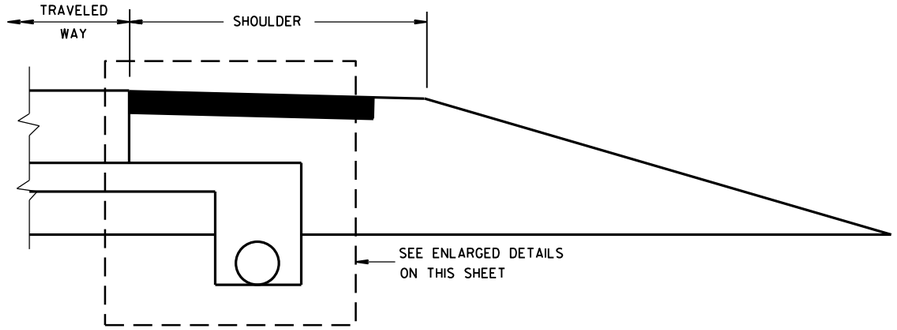
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

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

6

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



RURAL CROSS SECTION

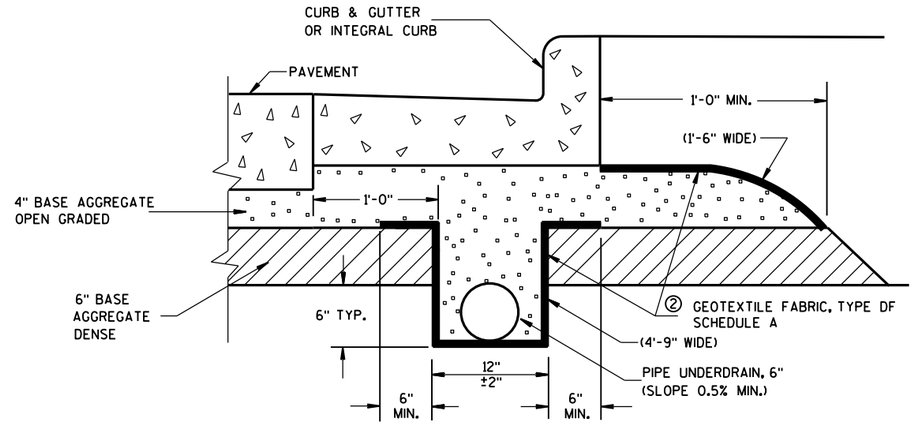
GENERAL NOTES

THE DIMENSIONS SHOWN ON THE TYPICAL CROSS SECTIONS WILL GOVERN IN THE EVENT THERE IS A CONFLICT WITH THE DETAILS SHOWN ON THIS DRAWING.

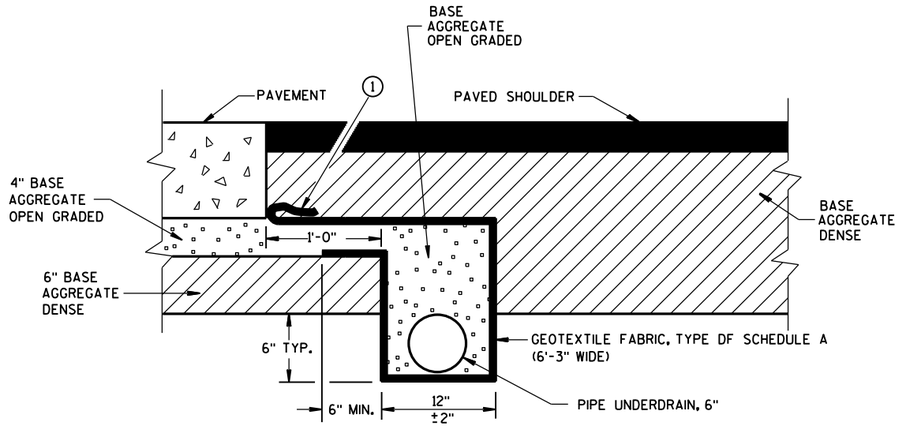
PIPE UNDERDRAIN SHALL BE LAID PARALLEL TO THE GRADE OF THE ROADWAY.

① FOLD OVER EXCESS GEOTEXTILE FABRIC AT THIS LOCATION.

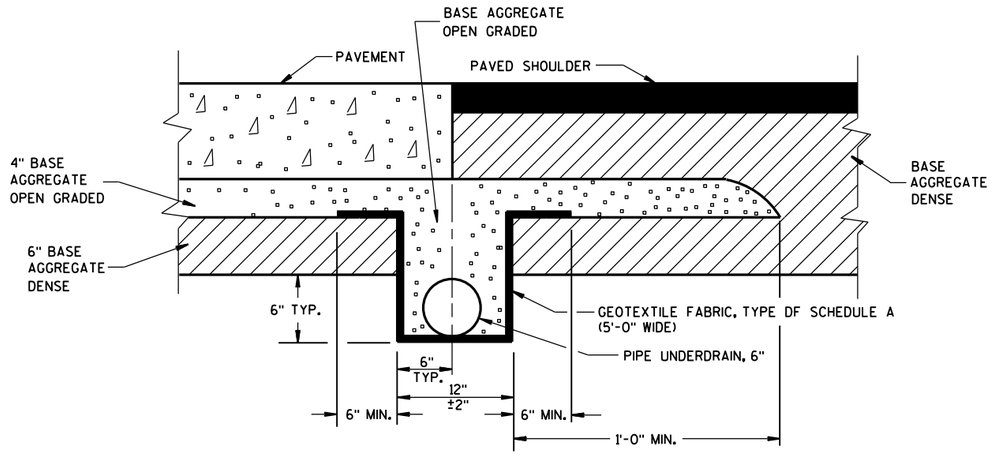
② TOTAL FABRIC WIDTH IS 6'-3" FOR PAYMENT.



EDGEDRAIN IN URBAN ROADWAY



POST PAVING INSTALLATION
(QUANTITIES ARE BASED ON THIS DETAIL)



PRE-PAVING INSTALLATION ALTERNATE

EDGEDRAIN IN RURAL ROADWAY

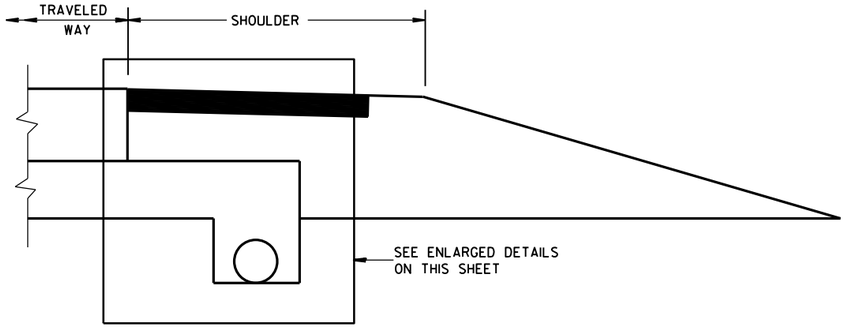
EDGEDRAIN AND BASE AGGREGATE OPEN GRADED

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6

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

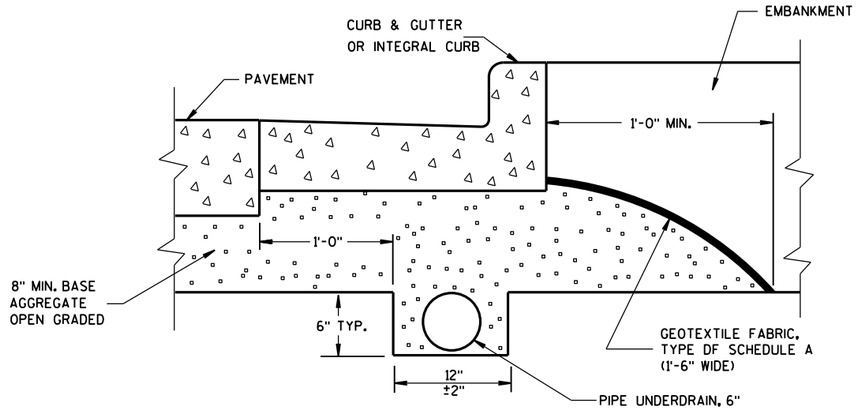


RURAL CROSS SECTION

GENERAL NOTES

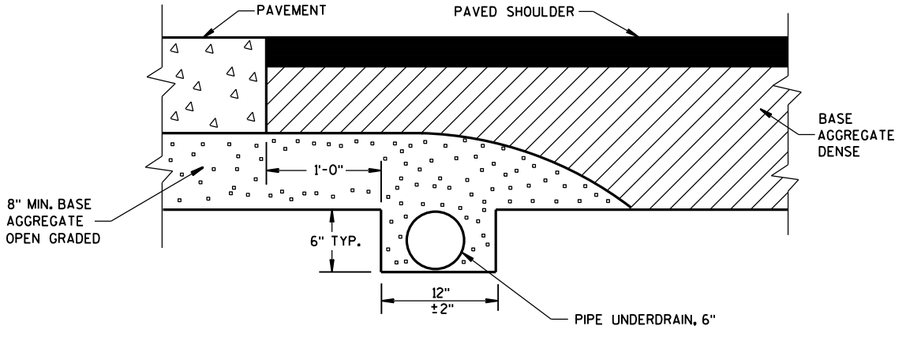
THE DIMENSIONS SHOWN ON THE TYPICAL CROSS SECTIONS WILL GOVERN IN THE EVENT THERE IS A CONFLICT WITH THE DETAILS SHOWN ON THIS DRAWING.

PIPE UNDERDRAIN SHALL BE LAID PARALLEL TO THE GRADE OF THE ROADWAY.

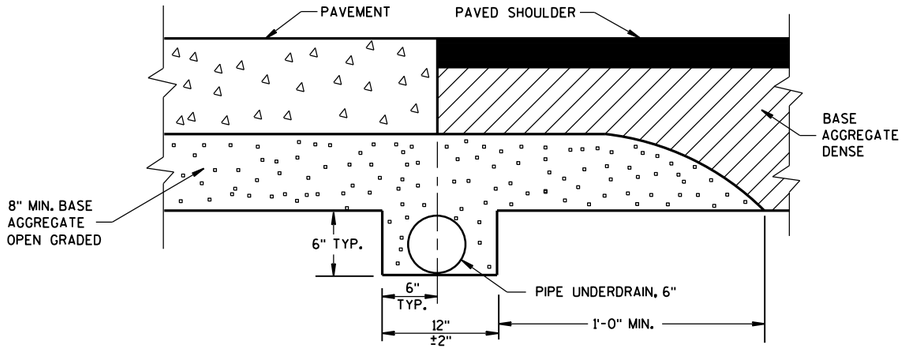


EDGEDRAIN IN URBAN ROADWAY

6



POST PAVING INSTALLATION
(QUANTITIES ARE BASED ON THIS DETAIL)



PRE-PAVING INSTALLATION ALTERNATIVE

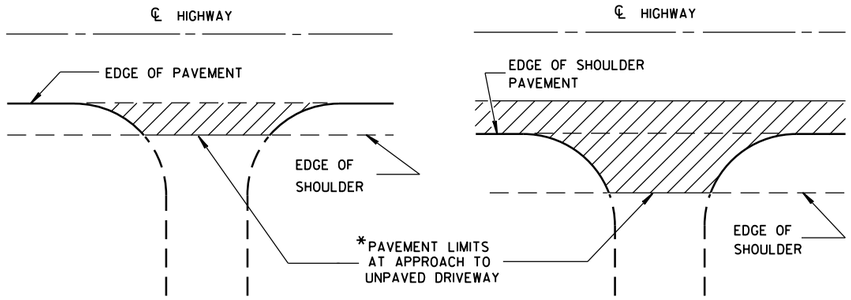
EDGEDRAIN IN RURAL ROADWAY

6

S.D.D. 8 D 15-5c

EDGEDRAIN AND BASE AGGREGATE OPEN GRADED	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED	
Sept. 2015	/S/ Peter Kemp, P.E.
DATE	PAVEMENT SUPE
FHWA	

S.D.D. 8 D 15-5c

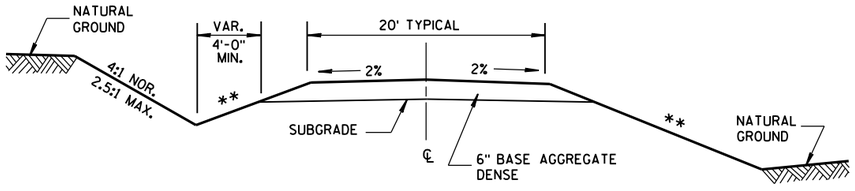


*WHERE DRIVEWAY IS PAVED, APPROACH PAVEMENT SHOULD BE EXTENDED TO MATCH DRIVEWAY PAVEMENT.

PLAN VIEW
(UNPAVED SHOULDER ON HIGHWAY)

PLAN VIEW
(PAVED SHOULDER ON HIGHWAY)

RURAL DRIVEWAY INTERSECTION DETAIL
(NO CURB & GUTTER OR SIDEWALK)

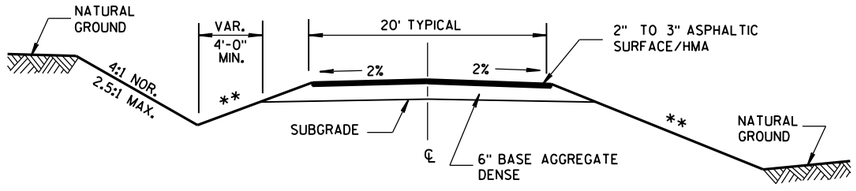


IN CUT **IN FILL**

TYPICAL CROSS SECTION FOR PRIVATE DRIVE OR FIELD ENTRANCE AGGREGATE SURFACE

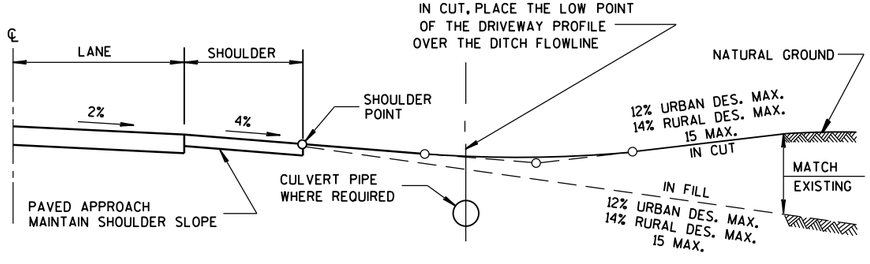
** SLOPE CAN VARY WITH SPEED. SEE 11-45-2.6.2.

POSTED SPEED MPH	MAX. SLOPE
<35	4:1
≥35 TO <60	6:1
≥60	10:1



IN CUT **IN FILL**

TYPICAL CROSS SECTION FOR PRIVATE DRIVE OR FIELD ENTRANCE ASPHALTIC SURFACE



TYPICAL DRIVEWAY PROFILES

DRIVEWAYS WITHOUT CURB & GUTTER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

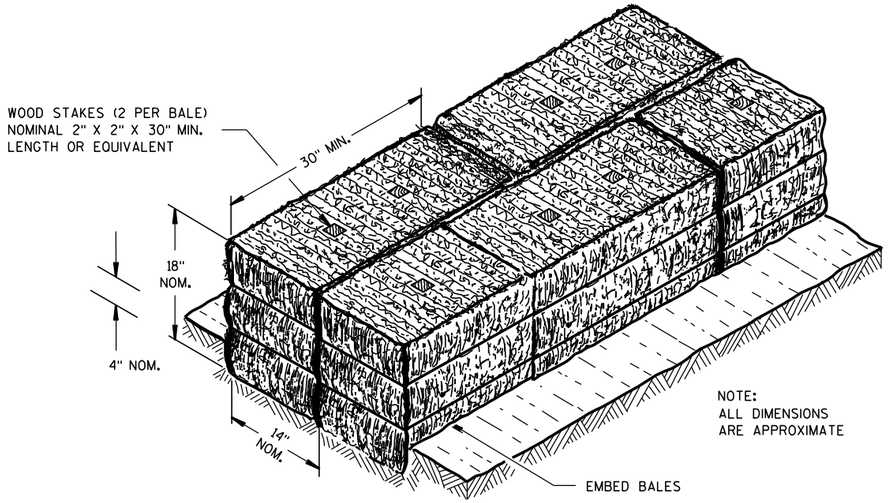
APPROVED
December, 2016 /S/ Rodney Taylor
DATE ROADWAY STANDARDS UNIT SUPERV
FHWA

6

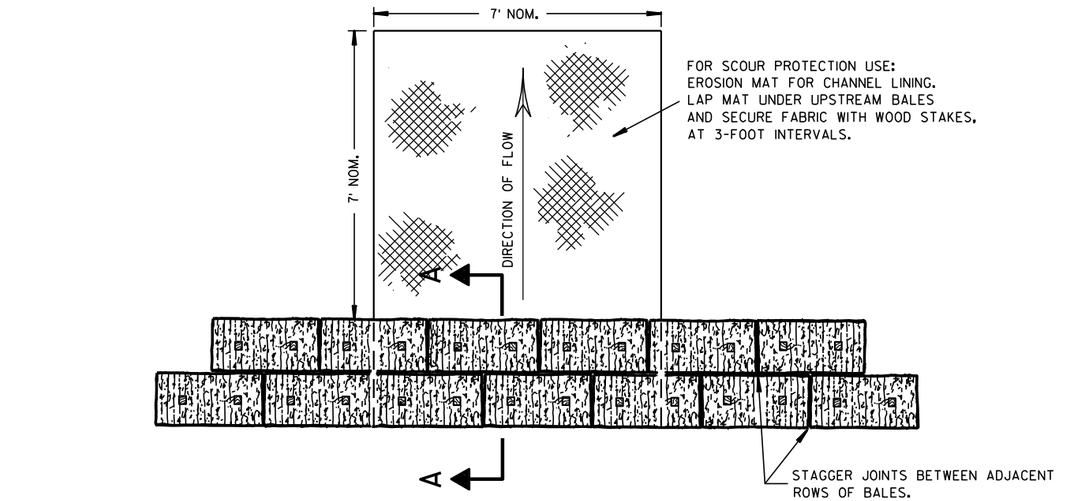
S.D.D. 8 D 21-1

6

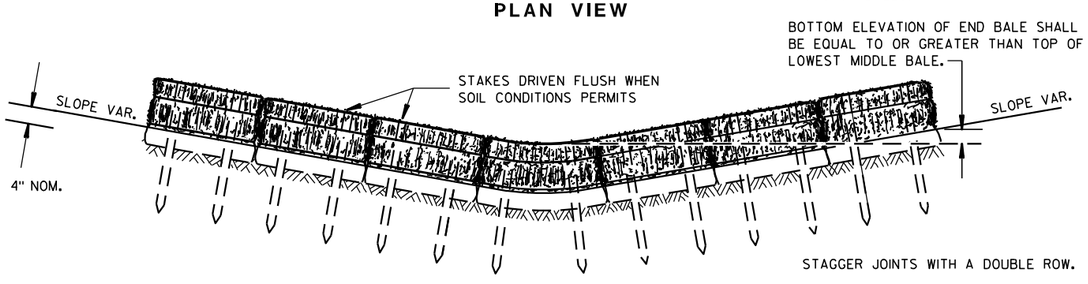
S.D.D. 8 D 21-1



SECTION A-A



PLAN VIEW



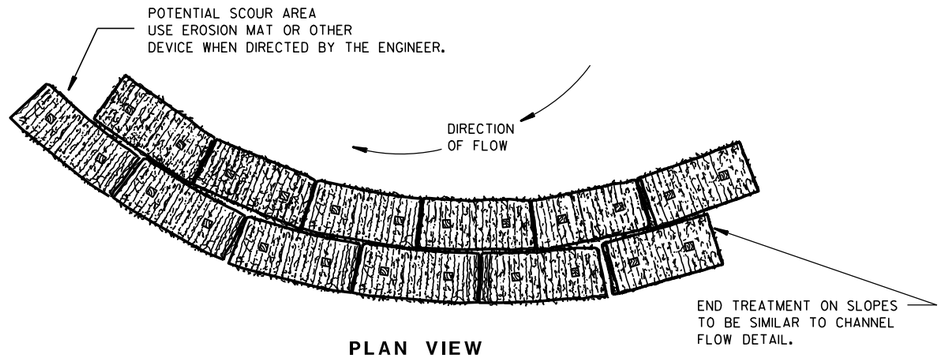
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES (1)

GENERAL NOTES

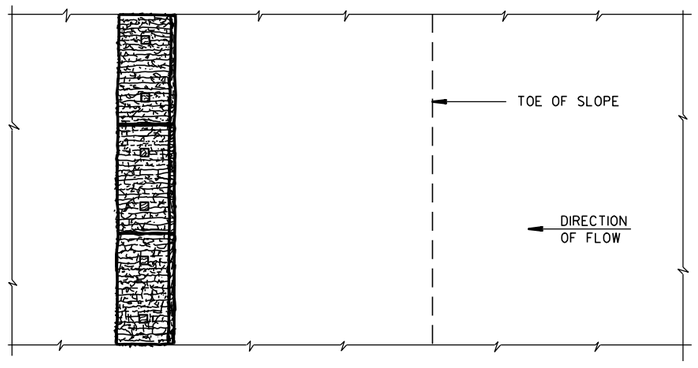
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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

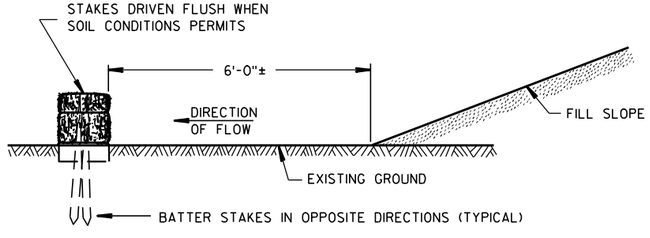


PLAN VIEW

WHEN ALTERING THE DIRECTION OF FLOW



PLAN VIEW



FRONT ELEVATION

WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE

EROSION BALES FOR SHEET FLOW

TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

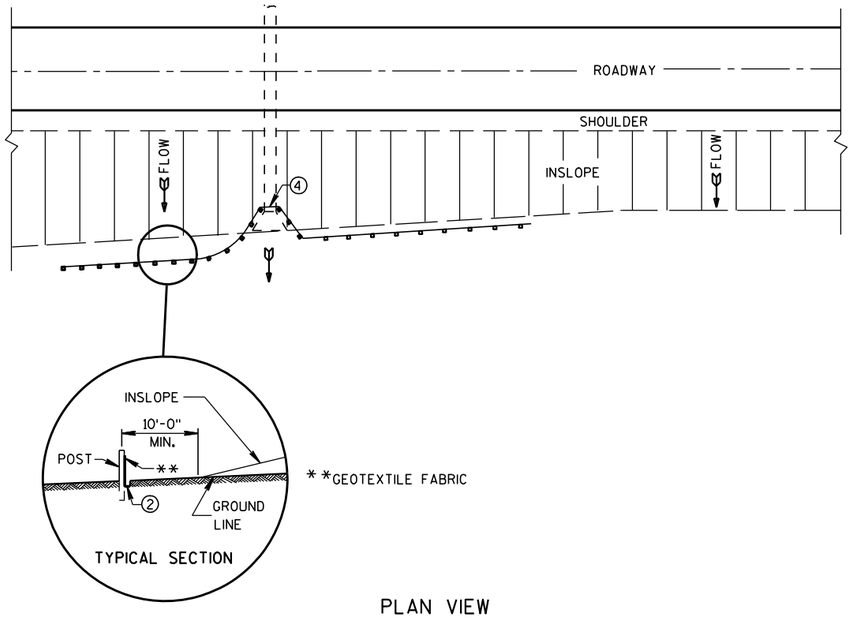
APPROVED
6/04/02 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6

S.D.D. 8 E 8-3

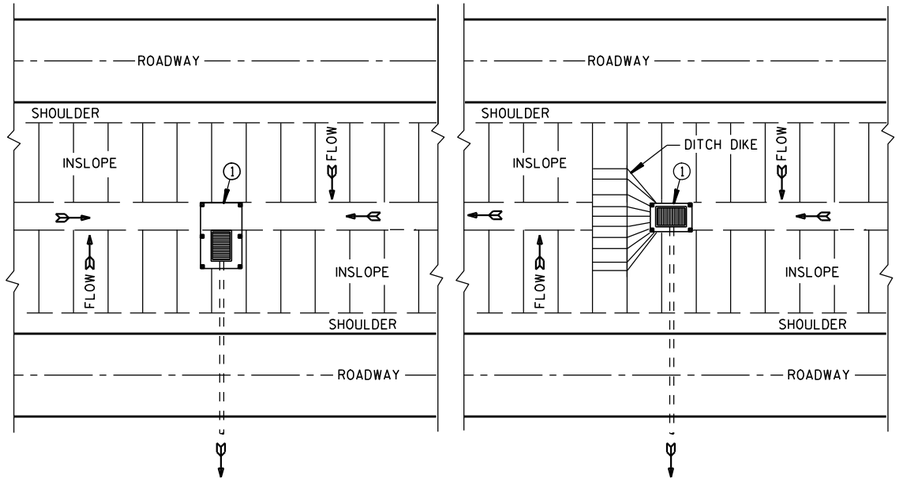
6

S.D.D. 8 E 8-3



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

GENERAL NOTES

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

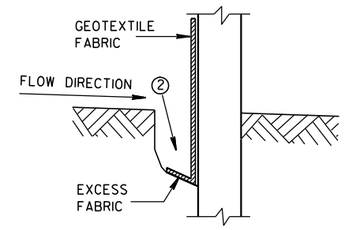
① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.

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

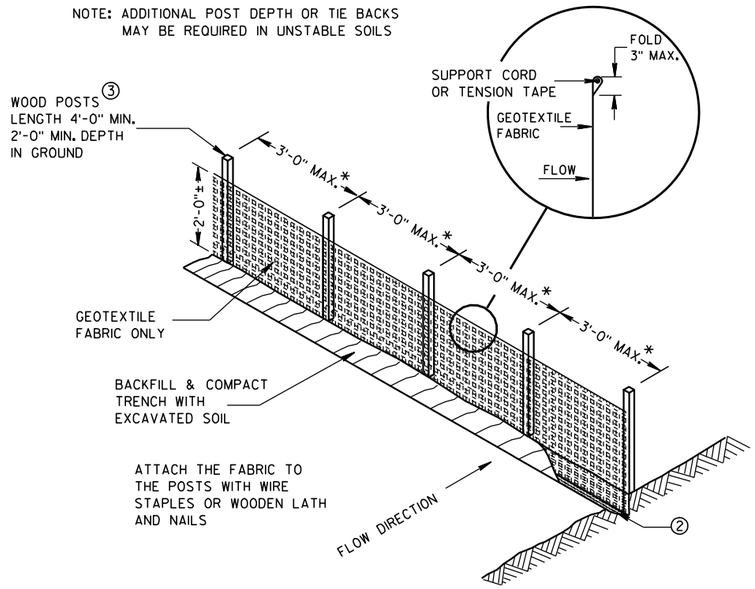
③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1⅛" X 1⅛" OF OAK OR HICKORY.

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

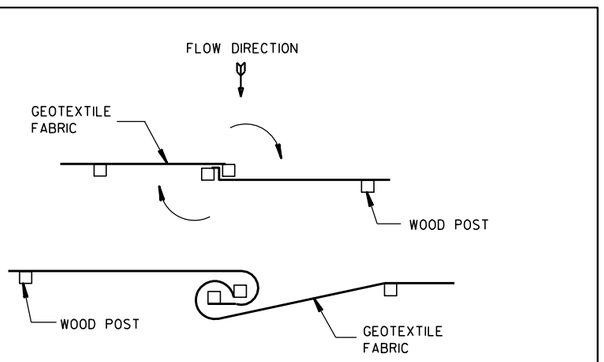
⑤ CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



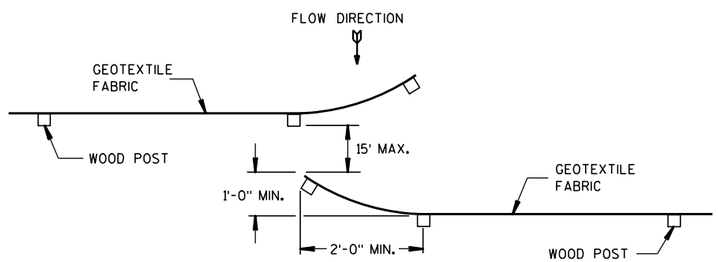
TRENCH DETAIL



SILT FENCE

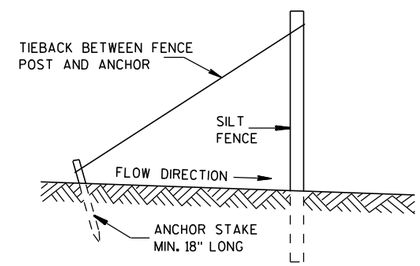


TWIST METHOD



HOOK METHOD

JOINING TWO LENGTHS OF SILT FENCE ⑤



SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

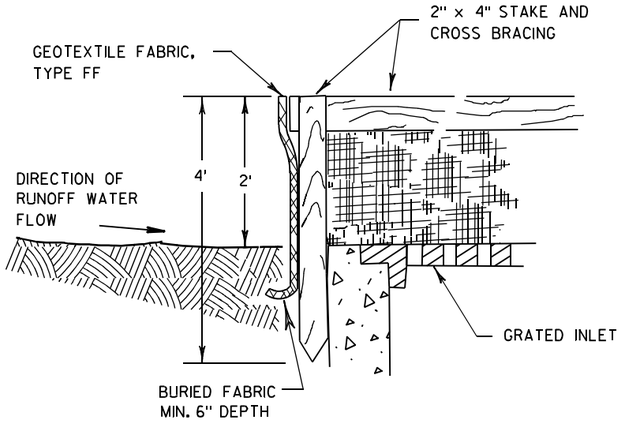
SILT FENCE	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED	
4-29-05 DATE	/S/ Beth Cannestra CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA	

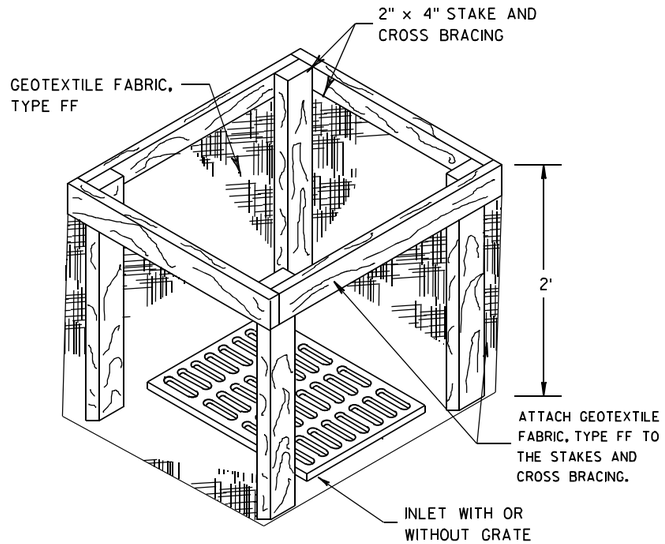
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S.D.D. 8 E 9-6

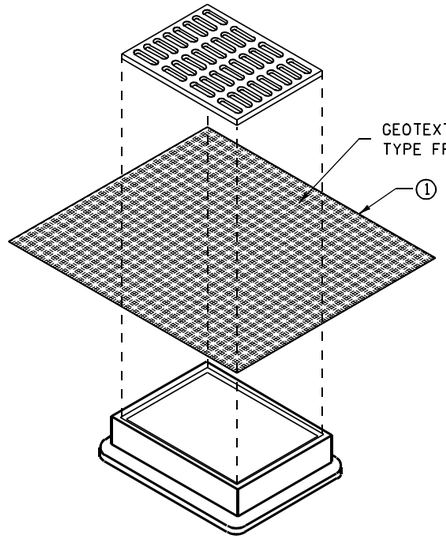
6

S.D.D. 8 E 9-6



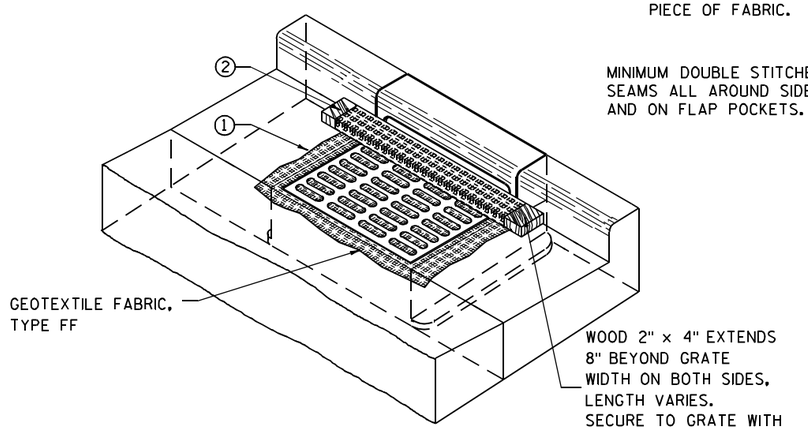


INLET PROTECTION, TYPE A

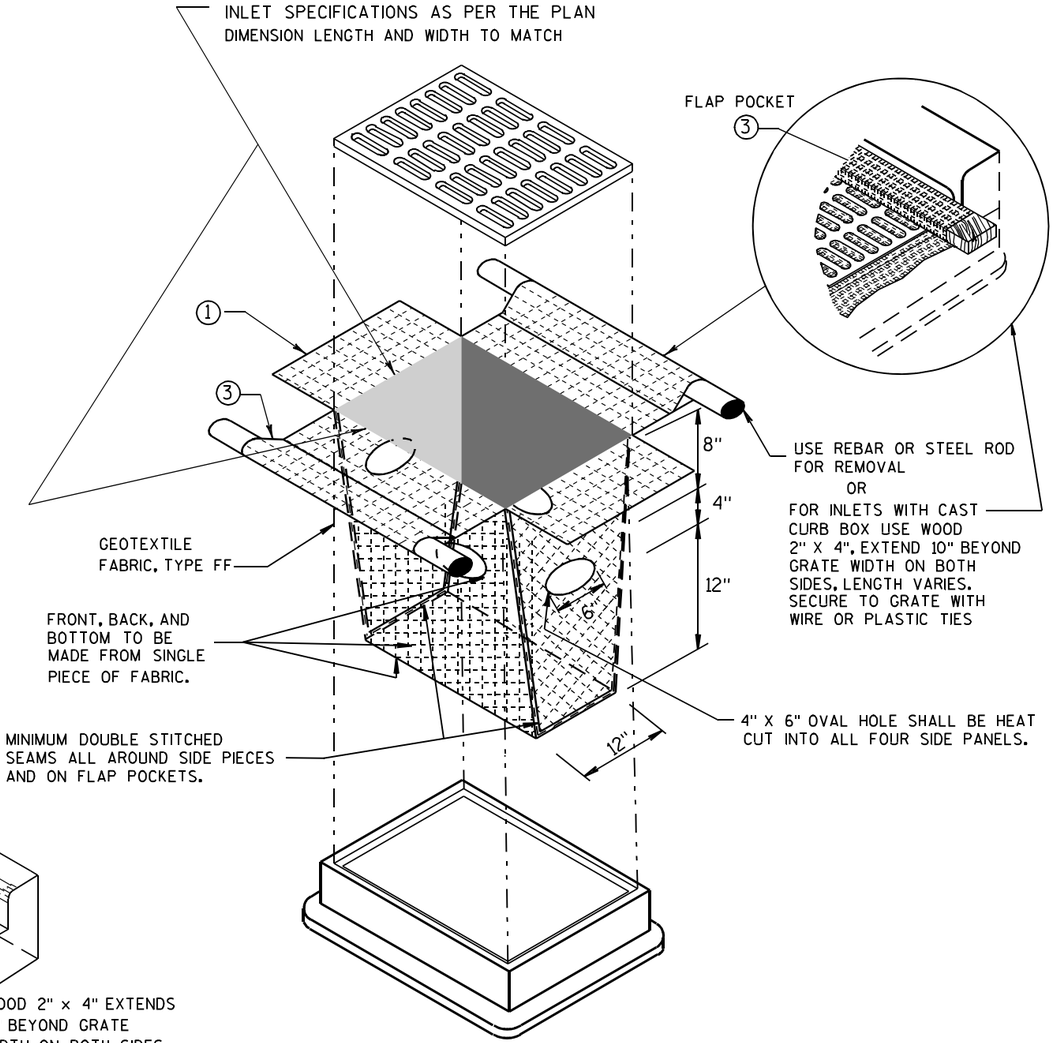


INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)

(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.

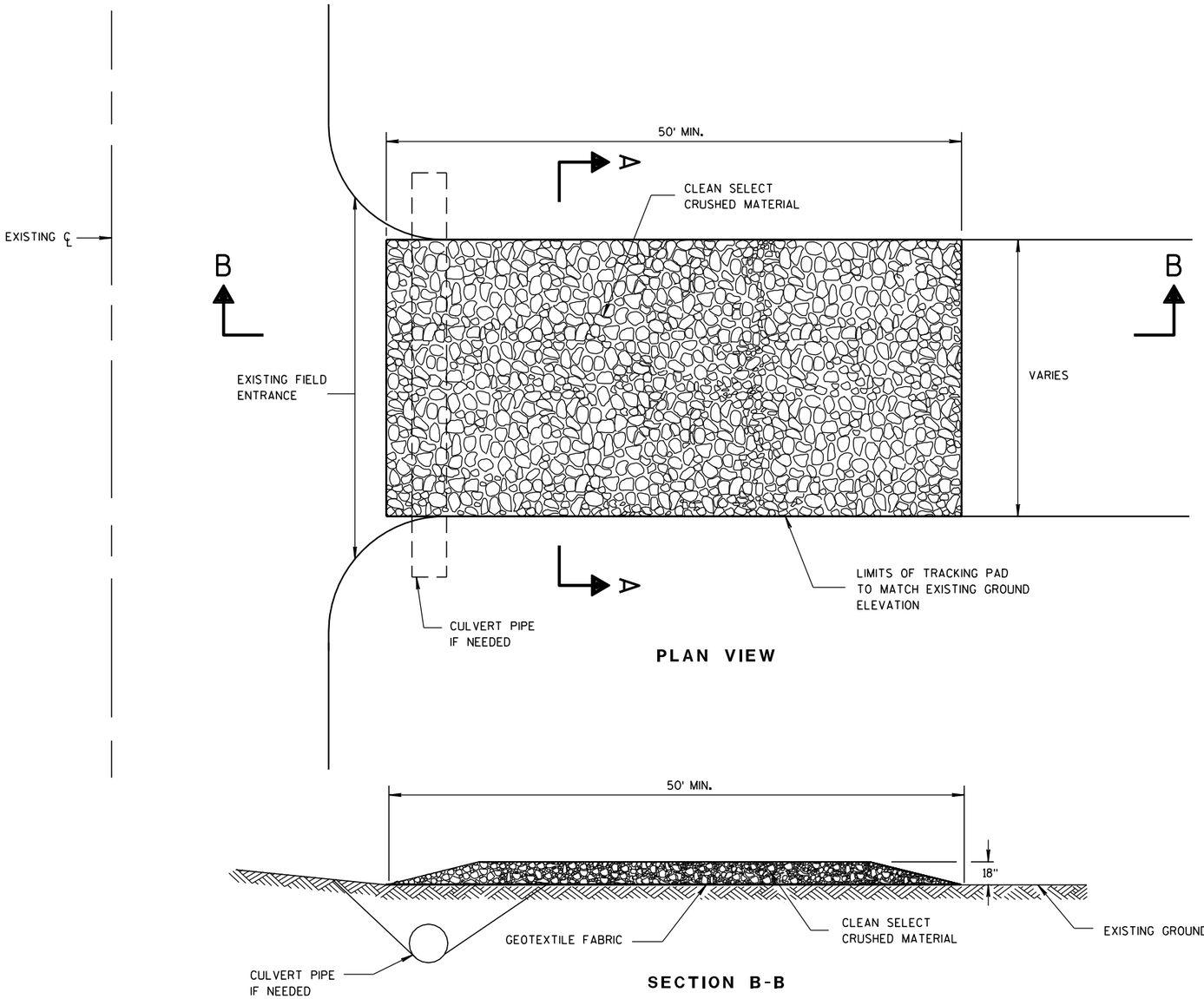
THE INSTALLED BAG SHALL HAVE A MINIMUM SIDE CLEARANCE, BETWEEN THE INLET WALLS AND THE BAG, MEASURED AT THE BOTTOM OF THE OVERFLOW HOLES, OF 3". WHERE NECESSARY THE CONTRACTOR SHALL CINCH THE BAG, USING PLASTIC ZIP TIES, TO ACHIEVE THE 3" CLEARANCE. THE TIES SHALL BE PLACED AT A MAXIMUM OF 4" FROM THE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



PLAN VIEW

SECTION B-B

GENERAL NOTES

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

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

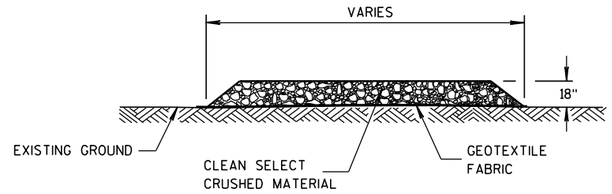
TRACKING PAD TO BE REMOVED AFTER CONSTRUCTION IS COMPLETED.

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

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

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

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



SECTION A-A

TRACKING PAD

6

S.D.D. 8 E 14-1

TRACKING PAD

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
3/24/2011 DATE
/S/ Jerry H. Zoda ROADWAY STANDARDS ENGINEER
FHWA

ENT

6

S.D.D. 8 E 14-1

METAL APRON ENDWALLS

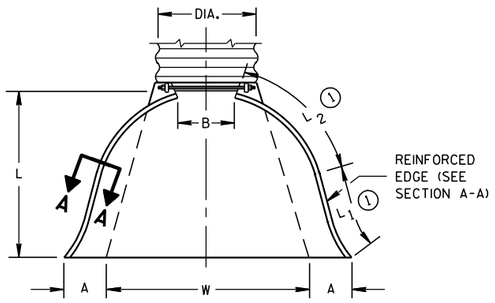
PIPE DIA. (IN.)	MIN. THICK. (Inches) STEEL	MIN. THICK. (Inches) ALUM.	DIMENSIONS (Inches) A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")	APPROX. SLOPE	BODY
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1	1 Pc.
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1	1 Pc.
18	.064	.060	8	10	6	31	15	28 1/4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

× EXCEPT CENTER PANEL SEE GENERAL NOTES

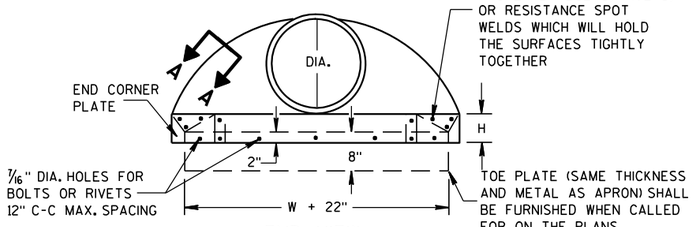
REINFORCED CONCRETE APRON ENDWALLS

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

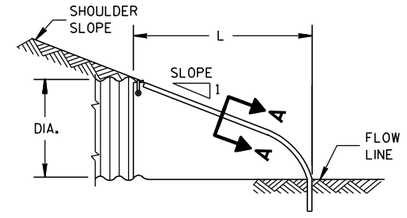
* MINIMUM
** MAXIMUM



PLAN VIEW

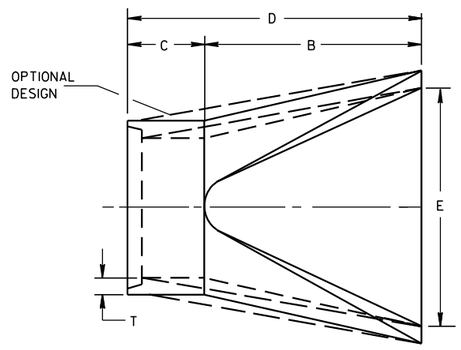


END VIEW

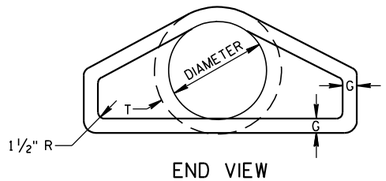


SIDE ELEVATION

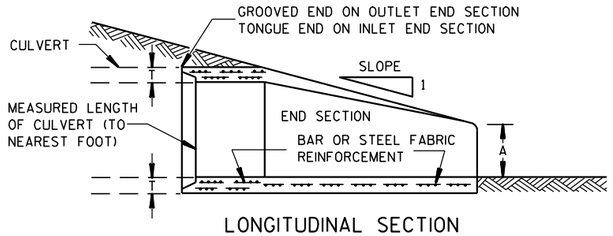
METAL ENDWALLS



PLAN

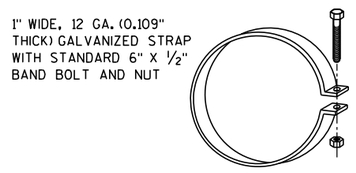


END VIEW



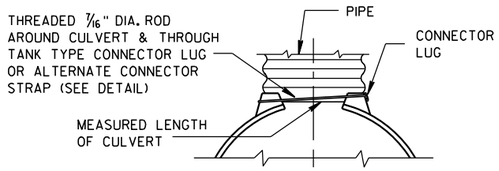
LONGITUDINAL SECTION

CONCRETE ENDWALLS

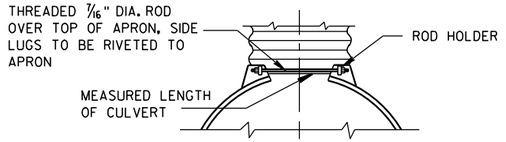


ALTERNATE FOR TYPE 1 CONNECTION

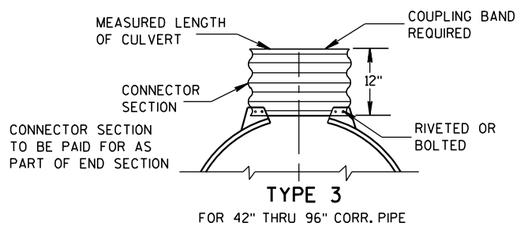
END SECTION CONNECTOR STRAP



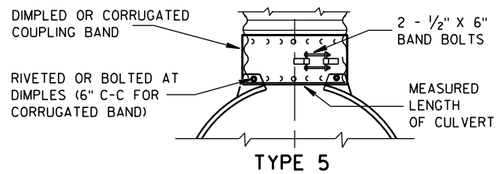
TYPE 1
FOR 12" THRU 24" CORR. PIPE



TYPE 2
FOR 30" THRU 96" CORR. PIPE



TYPE 3
FOR 42" THRU 96" CORR. PIPE



TYPE 5
ALTERNATE FOR:
ALL SIZES CORRUGATED CIRCULAR PIPE

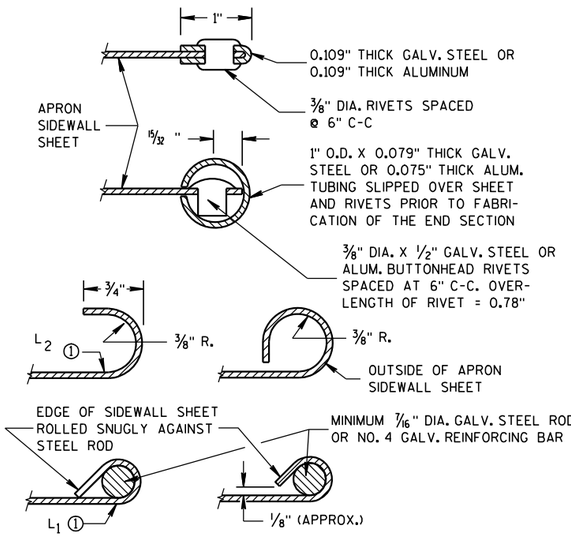
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL. AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

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

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

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

CONNECTION DETAILS



SECTION A-A

GENERAL NOTES

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

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

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

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

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

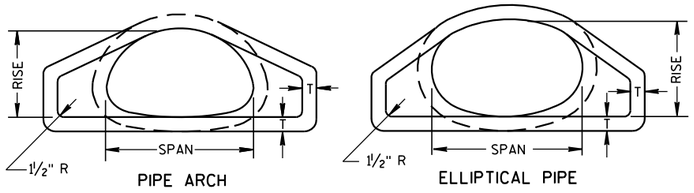
① FOR PIPE SIZES UP TO 60" DIAMETER, A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

APRON ENDWALLS FOR CULVERT PIPE

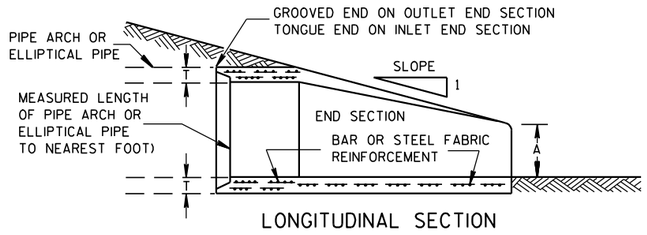
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

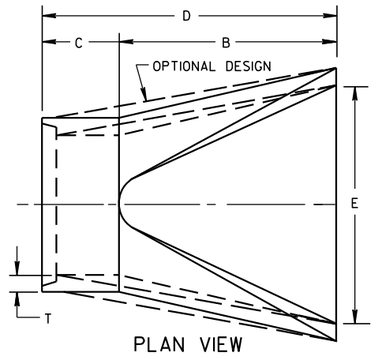
6
S.D.D. 8 F 1-11



END VIEW

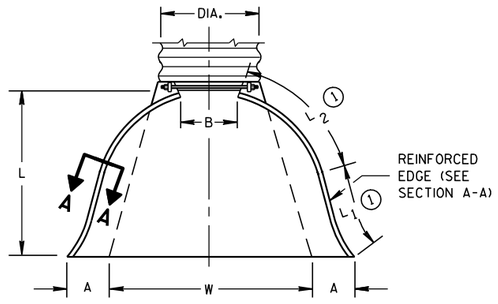


LONGITUDINAL SECTION

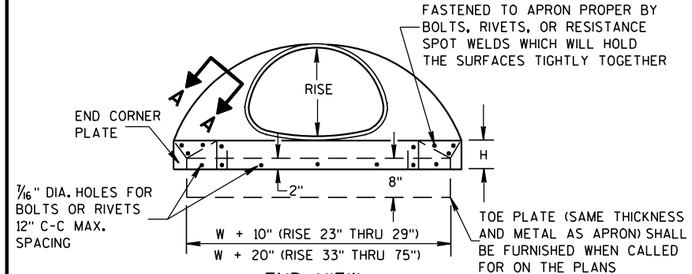


PLAN VIEW

CONCRETE ENDWALLS

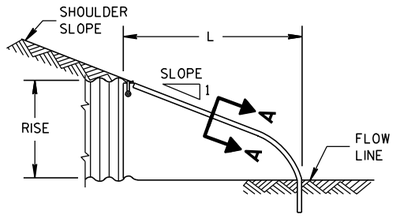


PLAN VIEW



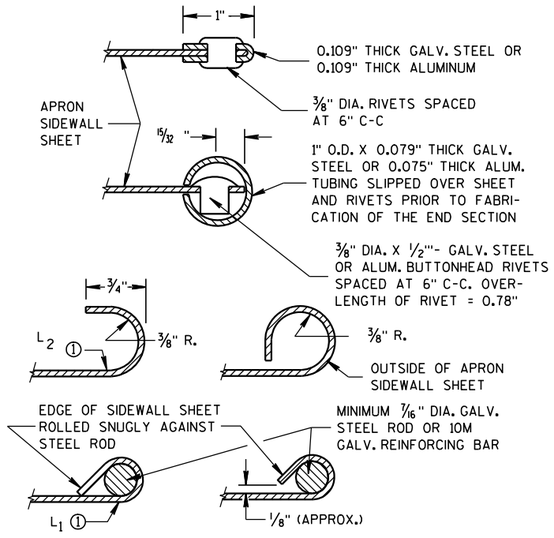
END CORNER PLATES MAY BE FASTENED TO APRON PROPER BY BOLTS, RIVETS, OR RESISTANCE SPOT WELDS WHICH WILL HOLD THE SURFACES TIGHTLY TOGETHER

END VIEW



SIDE ELEVATION

METAL ENDWALLS



SECTION A-A

2- 2/3" X 1/2" CORRUGATIONS

EQUIV. DIA. (Inches)	(Inches) SPAN	(Inches) RISE	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
15	17	13	.064	.060	7	9	6	19	14	16	30	2½ to 1	1 Pc.
18	21	15	.064	.060	7	10	6	23	14	19⅜	36	2½ to 1	1 Pc.
21	24	18	.064	.060	8	12	6	28	18	21¾	42	2½ to 1	1 Pc.
24	28	20	.064	.060	9	14	6	32	18	27½	48	2½ to 1	1 Pc.
30	35	24	.079	.075	10	16	6	39	18	37⅝	60	2½ to 1	1 Pc.
36	42	29	.079	.075	12	18	8	46	24	45⅜	75	2½ to 1	1 Pc.
42	49	33	.109	.105	13	21	9	53	24	54¾	85	2½ to 1	2 Pc.
48	57	38	.109	.105	18	26	12	63	24	68	90	2½ to 1	3 Pc.
54	64	43	.109	.105	18	30	12	70	24	72¾	102	2¼ to 1	3 Pc.
60	71	47	.109*	.105*	18	33	12	77	30	82¼	114	2¼ to 1	3 Pc.
66	77	52	.109*	.105*	18	36	12	77	—	—	126	2 to 1	3 Pc.
72	83	57	.109*	.105*	18	39	12	77	—	—	138	2 to 1	3 Pc.

3" X 1" CORRUGATIONS

EQUIV. DIA. (Inches)	(Inches) SPAN	(Inches) RISE	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
48	53	41	.109	.105	18	26	12	63	24	72¾	90	2½ to 1	2 Pc.
54	60	46	.109	.105	18	30	12	70	30	82¼	102	2 to 1	2 Pc.
60	66	51	.109*	.105*	18	33	12	77	—	—	114	1½ to 1	3 Pc.
66	73	55	.109*	.105*	18	36	12	77	—	—	126	1½ to 1	3 Pc.
72	81	59	.109*	.105*	18	39	12	77	—	—	138	2 to 1	3 Pc.
78	87	63	.109*	.105*	22	38	12	77	—	—	148	1½ to 1	3 Pc.
84	95	67	.109*	.105*	22	34	12	77	—	—	162	1½ to 1	3 Pc.
90	103	71	.109*	.105*	22	38	12	77	—	—	174	1½ to 1	3 Pc.
96	112	75	.109*	.105*	24	40	12	77	—	—	174	1½ to 1	3 Pc.

NOTE: ALL SPLICES TO BE LAP RIVETED OR BOLTED.

* EXCEPT CENTER PANEL SEE GENERAL NOTES

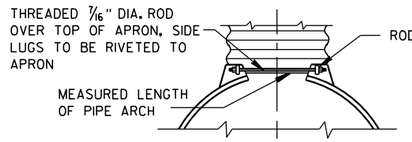
REINFORCED CONCRETE PIPE ARCH

EQUIV. DIA. (Inches)	DIMENSIONS (Inches) ** SPAN	** RISE	T	A	B	C	D	E	APPROX. SLOPE
24	29	18	3	8½	39	33	72	48	3 to 1
30	36	22	3½	9½	50	46	96	60	3 to 1
36	44	27	4	11⅛	60	36	96	72	3 to 1
42	51	31	4½	15 13/16	60	36	96	78	3 to 1
48	58	36	5	21	60	36	96	84	3 to 1
54	65	40	5½	25½	60	36	96	90	3 to 1
60	73	45	6	31	60	36	96	96	3 to 1
72	88	54	7	31	60	39	99	120	2 to 1
84	102	62	8	28½	83	19	102	144	2 to 1

REINFORCED CONCRETE ELLIPTICAL PIPE

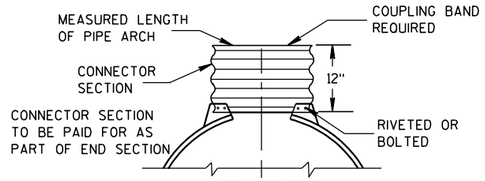
EQUIV. DIA. (Inches)	DIMENSIONS (Inches) ** SPAN	** RISE	T	A	B	C	D	E	APPROX. SLOPE
24	30	19	3¼	8½	39	33	72	48	3 to 1
30	38	24	3¾	9½	54	18	72	60	3 to 1
36	45	29	4½	11⅛	60	24	84	72	2½ to 1
42	53	34	5	15¾	60	36	96	78	2½ to 1
48	60	38	5½	21	60	36	96	84	2½ to 1
54	68	43	6	25½	60	36	96	90	2½ to 1
60	76	48	6½	30	60	36	96	96	2½ to 1

**NOMINAL SIZE



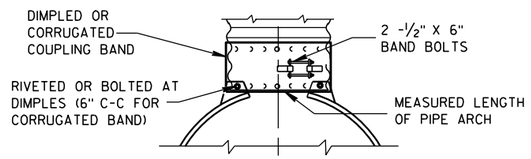
TYPE 2

FOR 17" X 13" THRU 112" X 75" PIPE ARCH



TYPE 3

FOR 64" X 43" THRU 112" X 75" PIPE ARCH



TYPE 5

ALTERNATE FOR:

ALL SIZES CORRUGATED PIPE ARCHES

NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL, AND CORRUGATED BAND FITS INSIDE ENDWALL.

CONNECTION DETAILS

GENERAL NOTES

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

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

ALL THREE PIECE STEEL APRON ENDWALLS FOR 66" X 51" PIPE ARCH AND LARGER SHALL HAVE 0.109" SIDES AND 0.138" CENTER PANELS. ALL THREE PIECE ALUMINUM APRON ENDWALLS FOR 66" X 51" PIPE ARCH 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 ARCH 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 77" X 52" THROUGH 112" X 75" 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 ARCH SIZES UP TO 73" X 55" A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

APRON ENDWALLS FOR PIPE ARCH AND ELLIPTICAL PIPE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

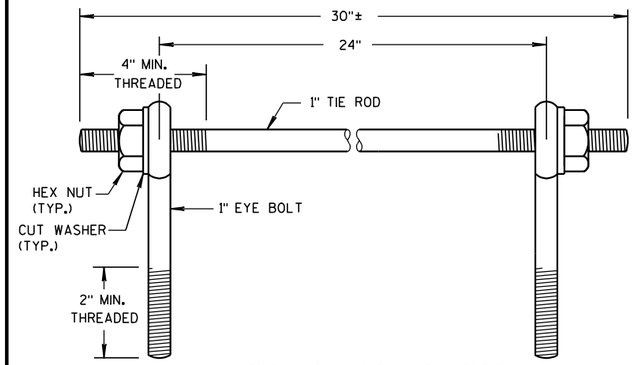
11/30/94 — DATE

/S/ Rory L. Rhinesmith — CHIEF ROADWAY DEVELOPMENT ENGINEER

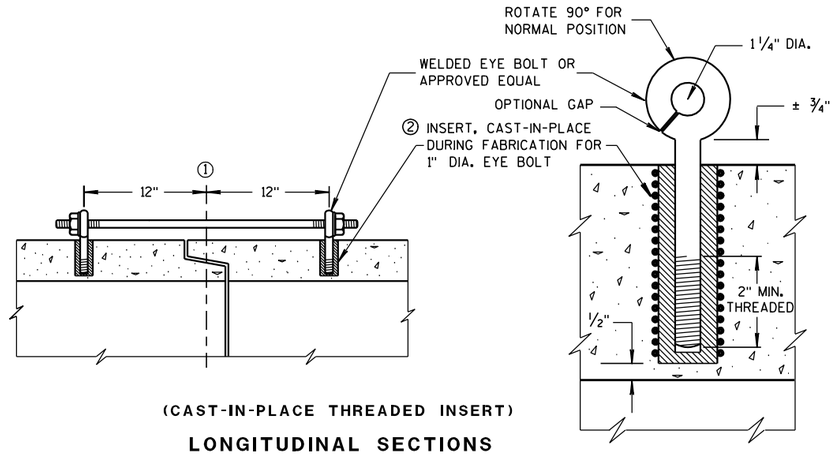
FHWA

6

S.D.D. 8 F 2-1



EYE BOLTS AND TIE ROD



(CAST-IN-PLACE THREADED INSERT)

LONGITUDINAL SECTIONS

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

GENERAL NOTES

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

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

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

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

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

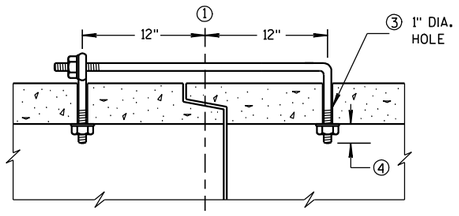
② THE INSIDE OF THE THREADED INSERTS SHALL BE CLEAN TO ALLOW THE INSERTION OF THREADED EYE BOLTS.

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

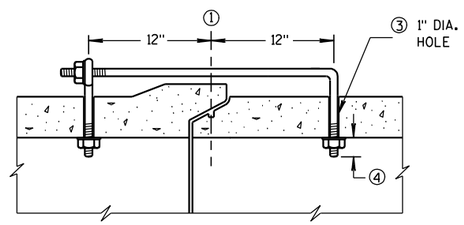
④ BOLT PROJECTION INSIDE OF PIPE SHALL NOT EXCEED 2 INCHES.

⑤ OPENING TO BE ROD DIAMETER PLUS 1 INCH.

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



(TONGUE & GROOVE PIPE)

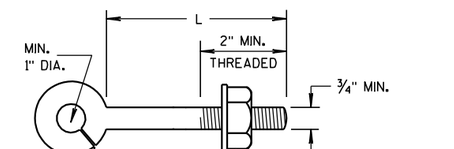


(MODIFIED BELL PIPE)

LONGITUDINAL SECTION

EYE BOLT DIMENSION TABLE

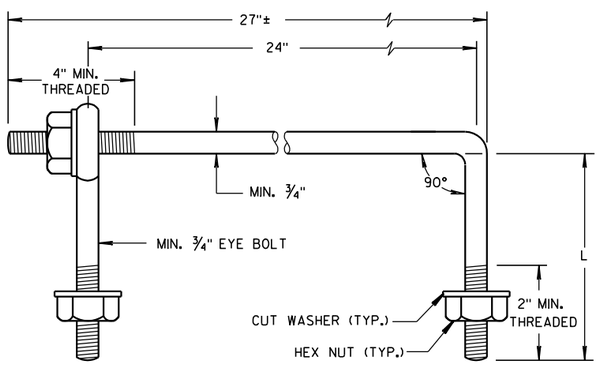
PIPE SIZE	L = LENGTH	
	TONGUE & GROOVE PIPE	MODIFIED BELL PIPE
18" TO 24"	4 1/2"	6 1/4"
30"	5"	7"
36"	5 1/2"	7"
42"	6"	
48"	6 1/2"	
60"	7 1/2"	
66"	8"	



NOTE:

EYE BOLT

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



EYE BOLT AND TIE ROD

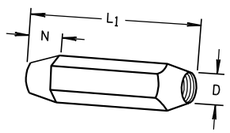
(JOINT TIES FOR 18" TO 66" DIA. CONCRETE PIPE)

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

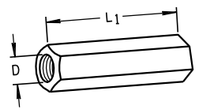
ADJUSTABLE TIE ROD TABLE

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

DIMENSIONS SHOWN ARE IN INCHES



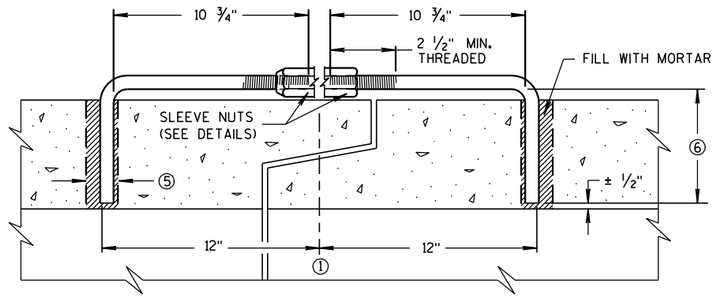
TAPERED



PLAIN

RIGHT AND LEFT THREADS

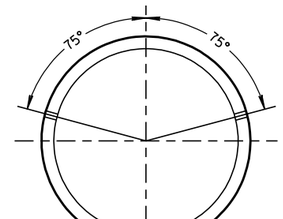
SLEEVE NUTS



LONGITUDINAL SECTION

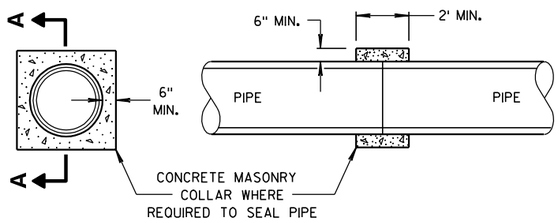
(JOINT TIES FOR 12" TO 108" DIA. CONCRETE PIPE)

ADJUSTABLE TIE ROD (ALTERNATE NO. 3)



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

TRANSVERSE SECTION



SECTION A-A

CONCRETE COLLAR DETAIL

JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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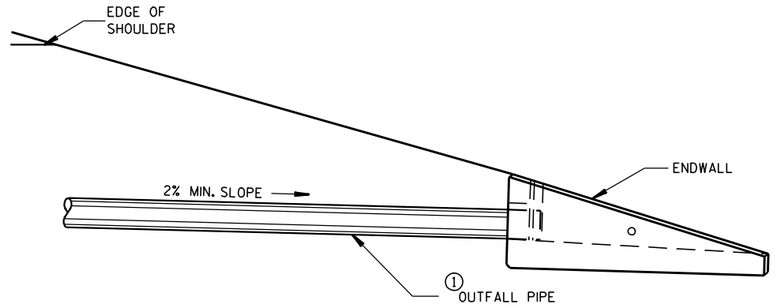
S.D.D. 8 F 4-7

6

S.D.D. 8 F 4-7

DIMENSIONS IN INCHES											
PIPE DIA.	A	B	C	D	E	F	G	H	J	L	Z
**4	6	12	5 1/4	9	8	32	36	11	2 3/8	6 1/2	4
6	8	14	7 1/4	11	10	42	44	13	3 5/8	8 1/2	6

**APRON ENDWALL FOR 6 INCH DIAMETER PIPE MAY BE SUBSTITUTED FOR THIS SIZE PROVIDED THE HOLE IN THE HEADWALL IS SIZED AND LOCATED TO CONFORM TO THE 4 INCH DIAMETER PIPE DIMENSIONS (C & J)



INSTALLATION DETAIL

GENERAL NOTES

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

ALTERNATIVE DESIGNS WHICH PROVIDE EQUIVALENT CAPACITY AND STRENGTH MAY BE USED WHEN APPROVED BY THE ENGINEER. ENDWALL MAY BE EITHER PRECAST OR CAST-IN-PLACE CONCRETE.

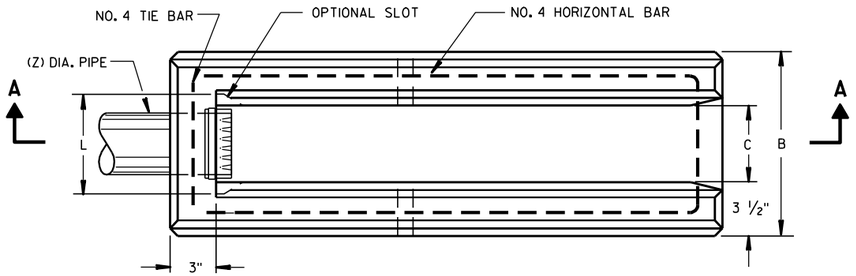
THE UNDERDRAIN PIPE SHALL BE FULLY INSERTED AND SEALED INTO THE ENDWALL WITH CEMENT MORTAR PRIOR TO BACKFILLING AROUND THE STRUCTURE.

THE UPPERMOST POINT OF THE ENDWALL SHALL BE PLACED FLUSH WITH THE ROADWAY SLOPE. ADJACENT EMBANKMENT SLOPES SHALL BE SHAPED TO FIT THE SIDES AND TOE OF THE ENDWALL. EXACT PLACEMENT OF THE OUTFALL PIPE AND ENDWALL SHALL BE DETERMINED BY THE ENGINEER TO MATCH THE ELEVATIONS AND FLOW DIRECTION OF THE ROADSIDE DITCH.

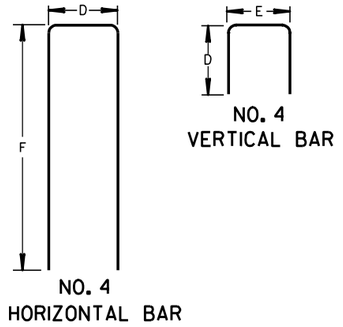
① THE OUTFALL PIPE UNDERDRAIN AND FITTINGS SHALL CONFORM TO THE REQUIREMENTS OF THE SPECIFICATION FOR POLY (VINYL CHORIDE) (PVC) PLASTIC DRAIN, WASTE AND VENT PIPE AND FITTINGS, ASTM DESIGNATION: D 2665, SCHEDULE 40 PVC OR THE STANDARD SPECIFICATION FOR TYPE PSM POLY (VINYL CHORIDE) (PVC) SEWER PIPE AND FITTINGS, ASTM DESIGNATION: D 3034, TYPE PSM SDR 23.5 PVC SEWER PIPE, ALL JOINTS SHALL BE SOLVENT WELDED.

THE OUTFALL PIPE INCLUDING ALL FITTINGS AND THE RODENT SHIELD SHALL BE MEASURED AND PAID FOR AS PIPE UNDERDRAIN UNPERFORATED.

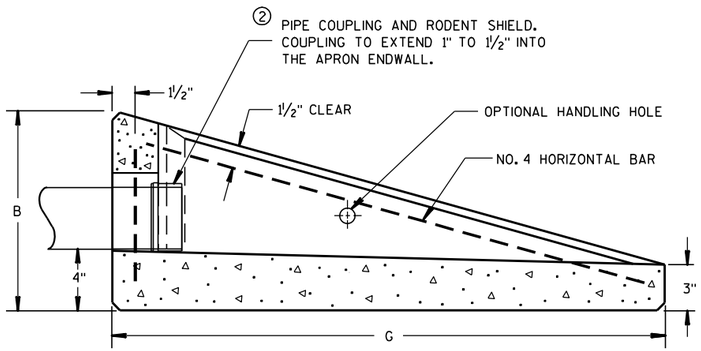
② THE RODENT SHIELD SHALL BE A PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALLY AVAILABLE AS A FLOOR STRAINER. A PIPE COUPLING IS REQUIRED FOR THE ATTACHMENT OF THIS SHIELD TO THE OUTFALL PIPE. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X 1-INCH STAINLESS STEEL SHEET METAL SCREWS.



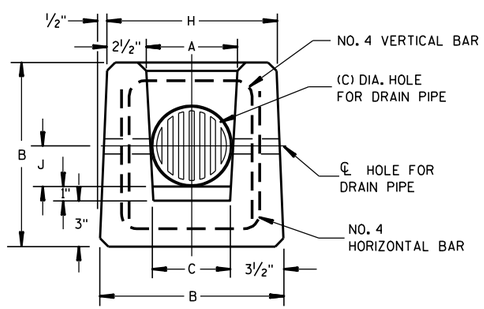
PLAN VIEW



BAR STEEL REINFORCEMENT DETAILS

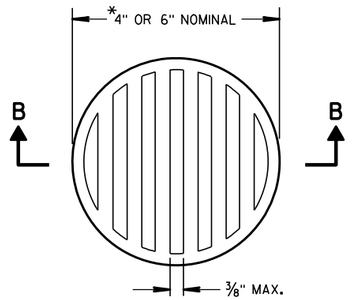


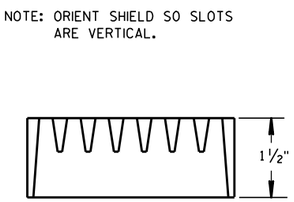
SECTION A-A



END VIEW

CONCRETE APRON ENDWALL FOR UNDERDRAIN





SECTION B-B

② RODENT SHIELD

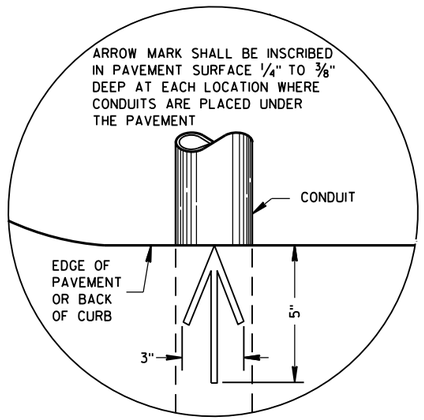
*NOTE: DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING.

REINFORCED CONCRETE APRON ENDWALL FOR PIPE UNDERDRAIN

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

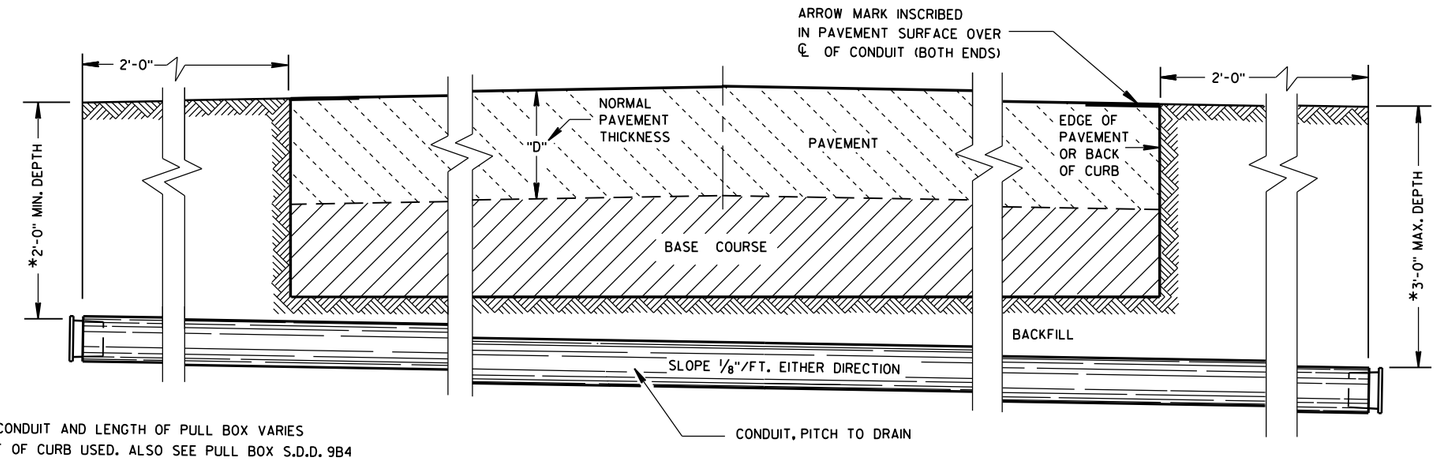
APPROVED
3/10/98 DATE
/S/ Rory L. Rhinesmith
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6
S.D.D. 8 F 6-4



PLAN VIEW

ARROW MARK



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

SIDE ELEVATION

DETAIL FOR CONDUIT UNDER PAVED HIGHWAYS

GENERAL NOTES

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

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

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

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

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

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

ALL METALLIC CONDUIT RACEWAY ENDS SHALL BE REAMED AND THREADED.

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

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

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

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

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

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

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

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

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

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

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

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

CONDUIT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March, 2017 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

6

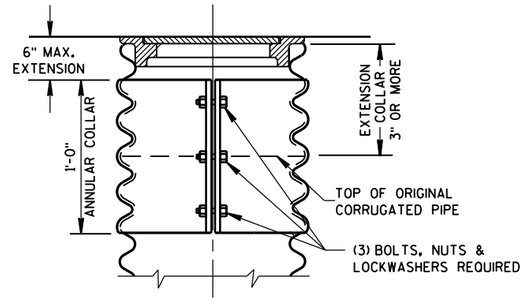
S.D.D. 9 B 2-10

TABLE OF NOMINAL DIMENSIONS AND WEIGHTS

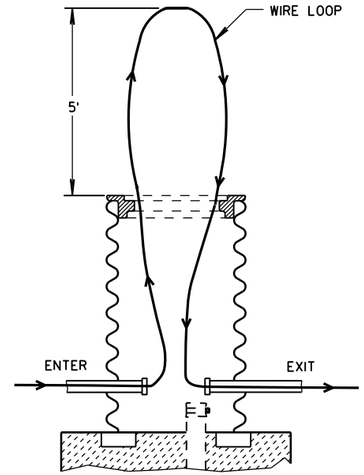
DIMENSION IN INCHES		CORRUGATED STEEL PIPE								
PIPE DIAMETER (INSIDE)	A	12	12	12	18	18	18	24	24	24
PIPE LENGTH **	B	24	30	36	24	30	36	36	42	48
WALL THICKNESS	C	0.064	0.064	0.064	0.064	0.064	0.064	0.064	0.064	0.064
COVER	D	10 1/4	10 1/4	10 1/4	16 1/4	16 1/4	16 1/4	22 1/4	22 1/4	22 1/4
FRAME	E	14 1/2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

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

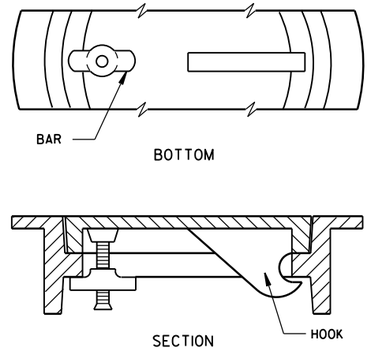
** NORMALLY USED LENGTHS. THE PROJECT ENGINEER SHALL DETERMINE IF PIPE LENGTHS, OTHER THAN THOSE SPECIFIED, SHALL BE USED, TO A MAXIMUM OF 48" (CONTINUOUS LENGTH, NON-SPLICED). THE ADDITIONAL LENGTH SHALL BE INCIDENTAL TO THE PULL BOX BID PRICE.



CORRUGATED PIPE EXTENDER

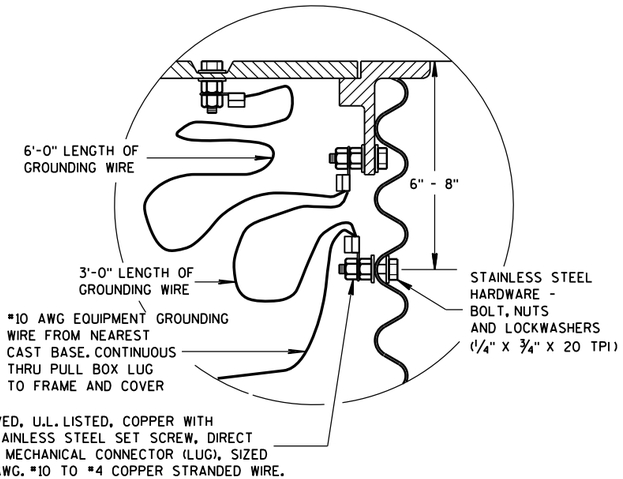


MEASUREMENT DETAIL FOR WIRE/CABLE IN THE PULL BOX

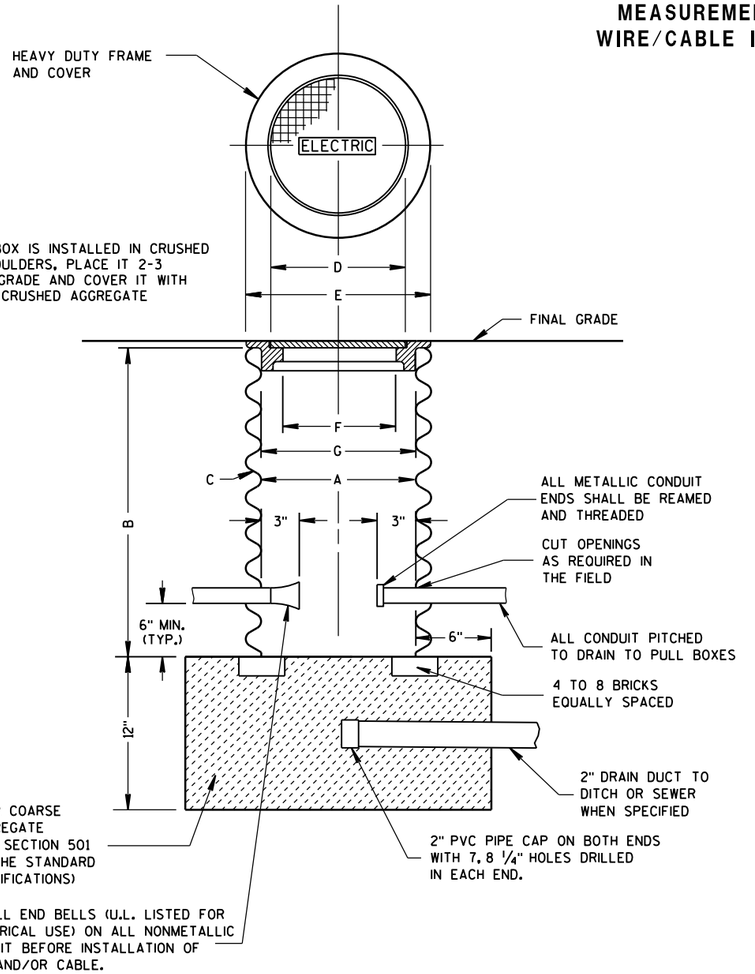


ALTERNATE COVER (LOCKING)

TIGHTENING BAR TYPE



EQUIPMENT GROUNDING LUG AND LOCATION IN STEEL PULL BOXES



PULL BOX

GENERAL NOTES

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

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

PULL BOXES LOCATED IN THE ROADWAYS SHALL HAVE LOCKING COVERS.

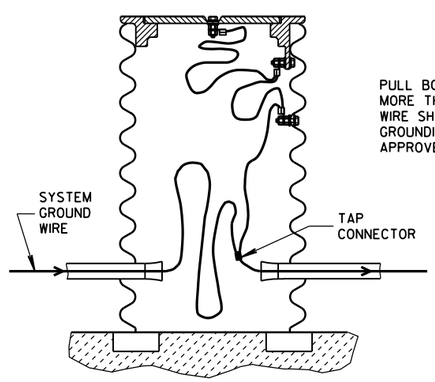
ENTRANCE HOLES INTO PULL BOXES SHALL BE CUT WITH A CIRCULAR HOLE SAW OR HYDRAULIC CONDUIT PUNCH. HOLE SIZE SHALL BE THE OUTSIDE DIAMETER OF THE CONDUIT THAT IS TO FIT IN THE OPENING PLUS NO MORE THAN 1/4".

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

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

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

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



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

EQUIPMENT GROUNDING LUG AND LOCATION IN STEEL PULL BOXES

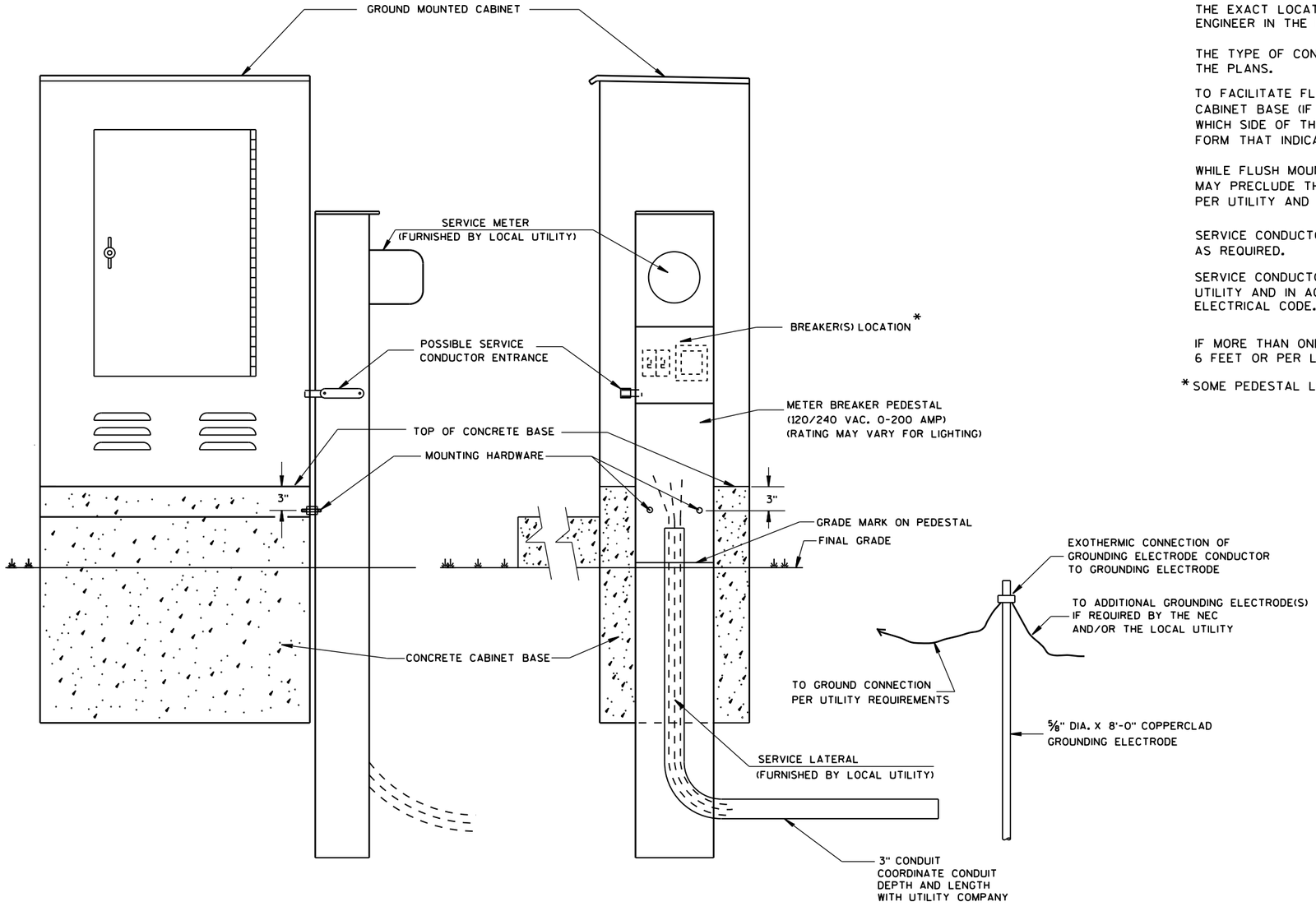
PULL BOX

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6

S.D.D. 9 B 4-11



TYPICAL CABINET SERVICE INSTALLATION

GENERAL NOTES

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

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

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

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

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

SERVICE CONDUCTOR ENTRANCES SHALL BE RIGID METALLIC CONDUIT, NIPPLES AND/OR CONDULETS AS REQUIRED.

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

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

* SOME PEDESTAL LIGHTING PLANS SHOW MAIN LUGS ONLY.

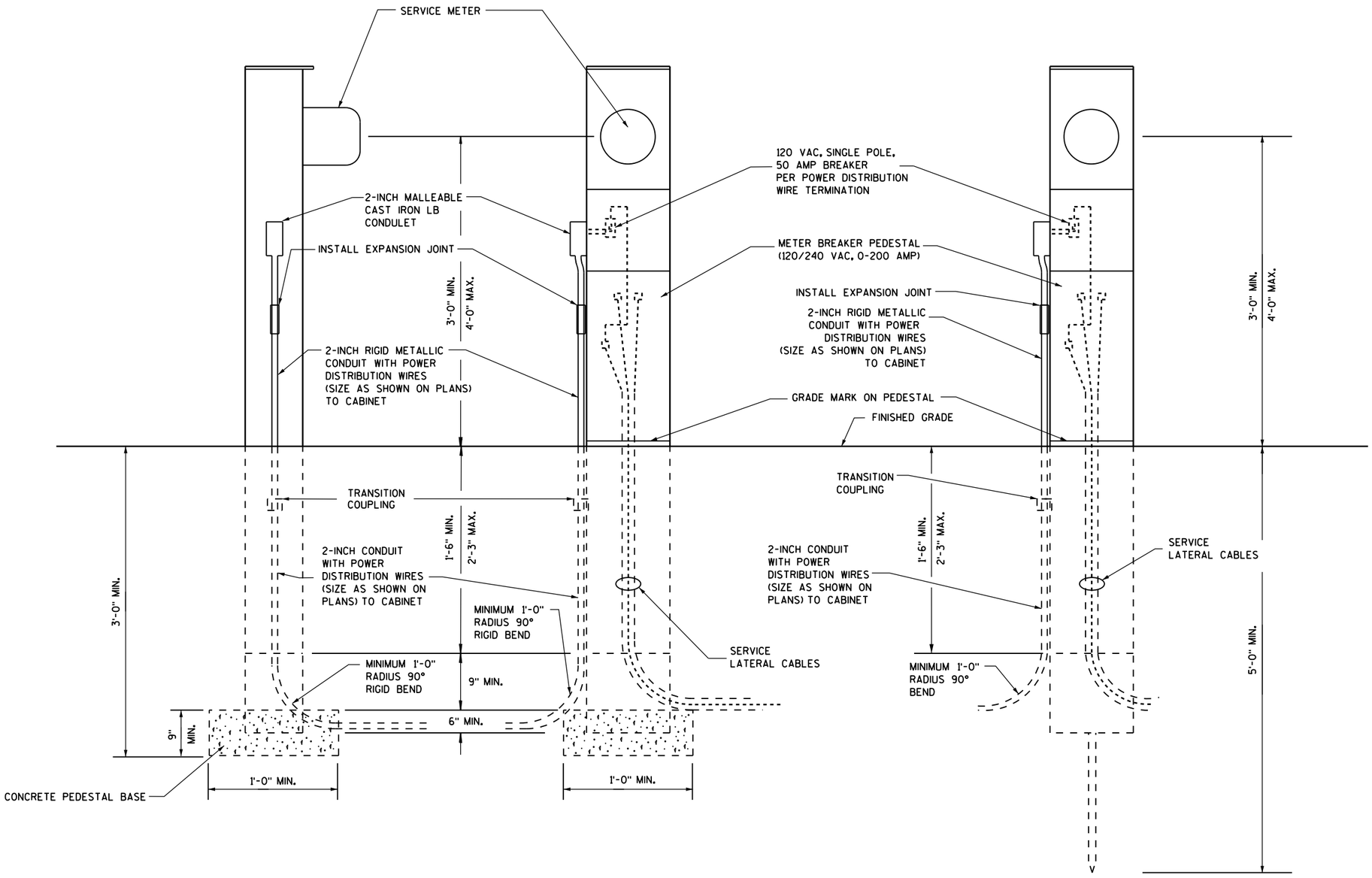
CABINET SERVICE INSTALLATION (METER BREAKER PEDESTAL)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2014 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
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S.D.D. 9 D 1-5



2 CIRCUIT METER BREAKER PEDESTAL

ALTERNATE SUPPORTING STAKE

(IF APPROVED BY UTILITY)

2 CIRCUIT
METER BREAKER PEDESTAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2014
DATE

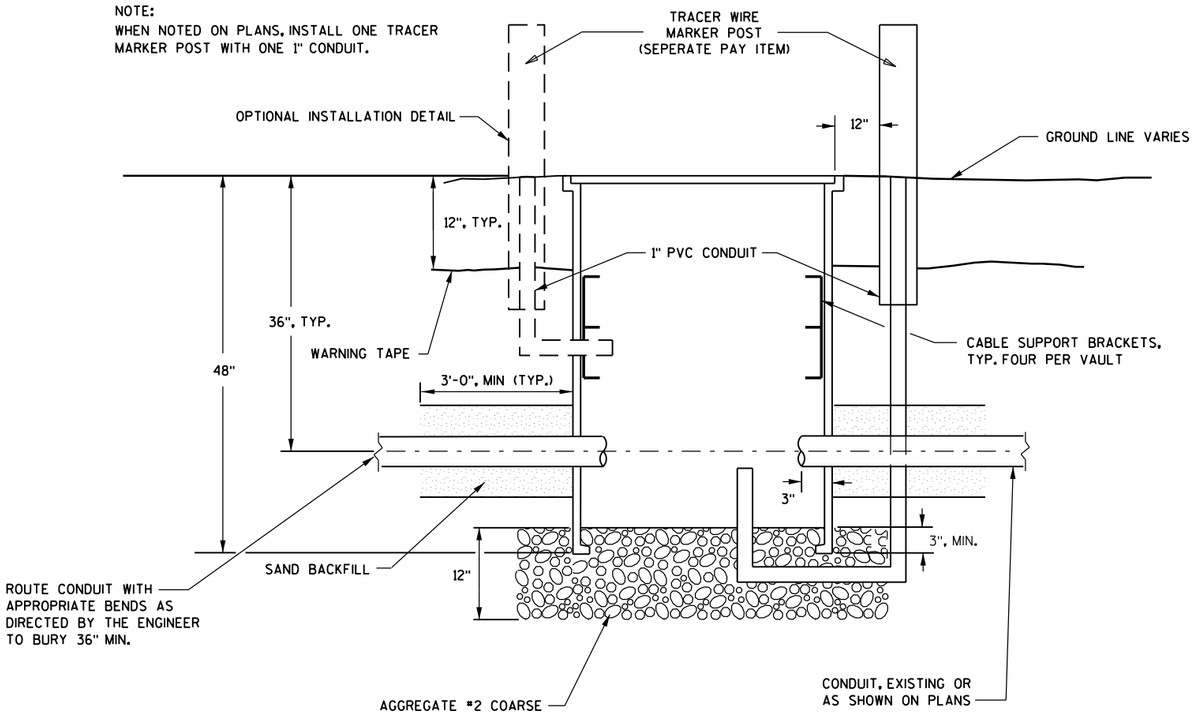
/S/ Ahmet Demirbilek
STATE ELECTRICAL

FHWA

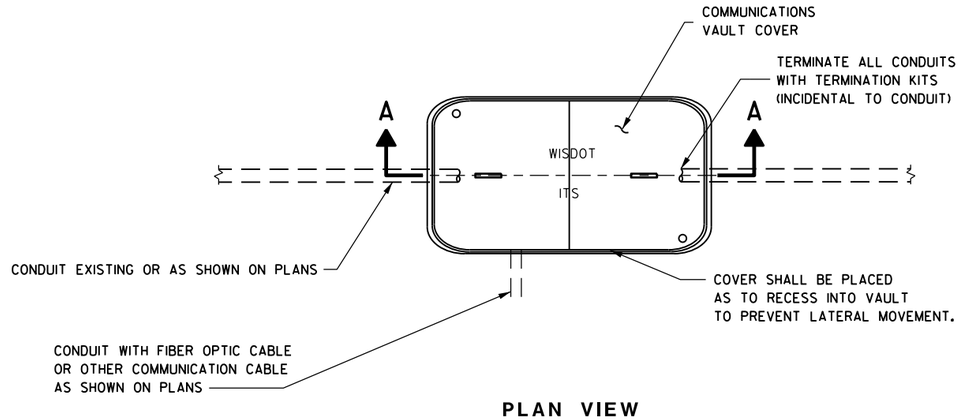
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S.D.D. 9 H 3-1

NOTE:
WHEN NOTED ON PLANS, INSTALL ONE TRACER MARKER POST WITH ONE 1" CONDUIT.



SECTION A-A



PLAN VIEW

GENERAL NOTES

PROVIDE VAULT WITH OPEN BASE.

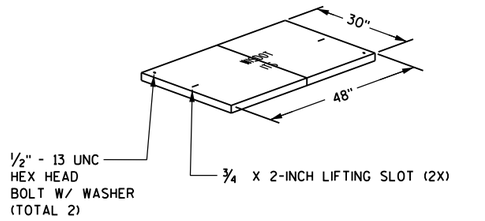
COVER SHALL HAVE A MINIMUM DESIGN LOAD OF 15,000 LBS AND SHALL LOCK.

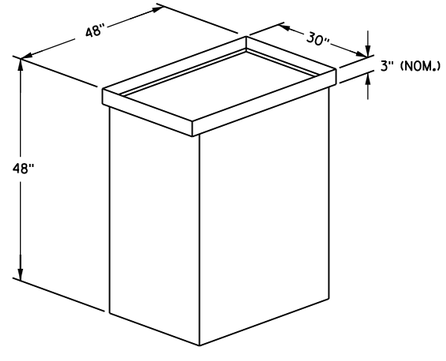
ALL OPENINGS IN STRUCTURE MUST BE MACHINED AT TIME OF FABRICATION, OR PUNCH DRIVEN AT TIME OF PLACEMENT.

VAULTS SHALL BE OF ONE-PIECE CONSTRUCTION. TWO-PIECE/STACKABLE VAULTS WILL NOT BE PERMITTED.

FIELD PLACEMENT OF COMMUNICATIONS VAULTS SHALL BE AS DIRECTED BY THE ENGINEER.

FIBER TRACER MARKER POSTS SHALL BE CONSTRUCTED WITH HIGH-IMPACT PLASTIC MATERIAL WHICH IS FADE RESISTANT AND UV STABLE. ALL HARDWARE SHALL BE STAINLESS STEEL AND CONTAIN A MINIMUM OF FIVE STANDARD TERMINALS.





ISOMETRIC VIEW

COMMUNICATIONS VAULT TYPE 1

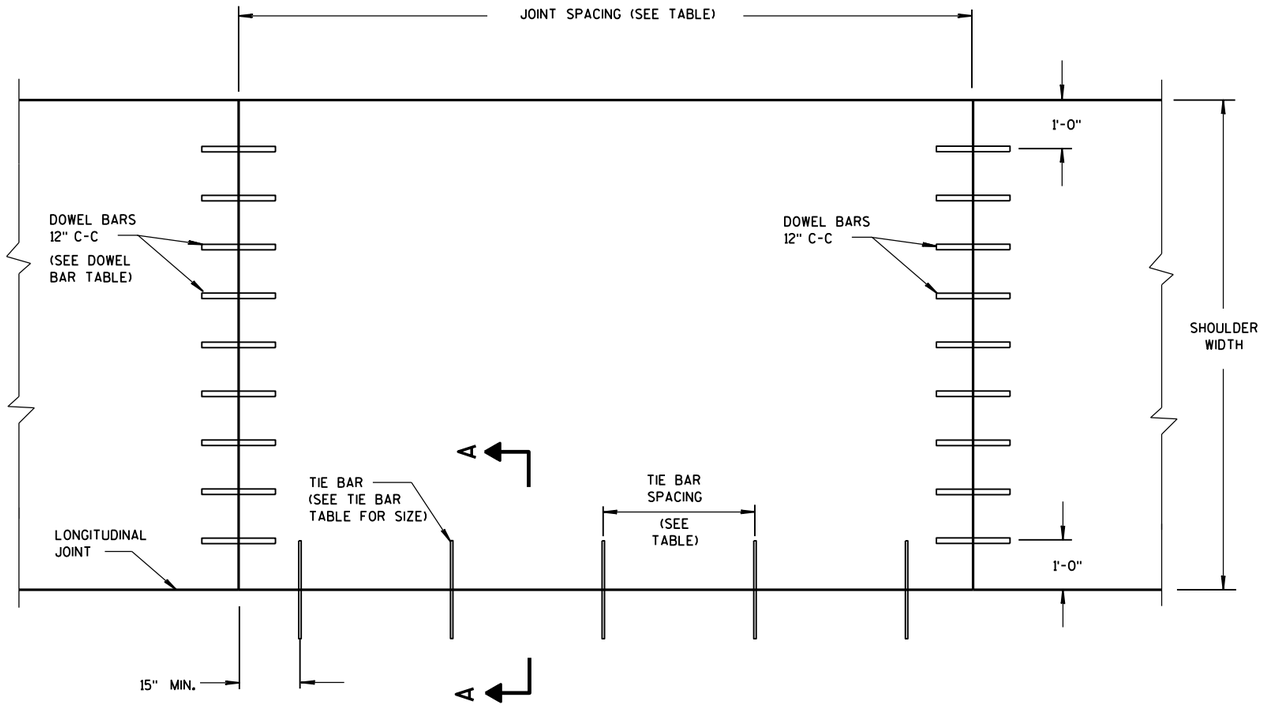
COMMUNICATION VAULT
TYPE 1

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May, 2017 — DATE
/S/Ahmet Demirbilek — STATE ELECTRICAL
FHWA

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S.D.D. 9 H 9-2



PLAN VIEW

CONCRETE PAVEMENT SHOULDER

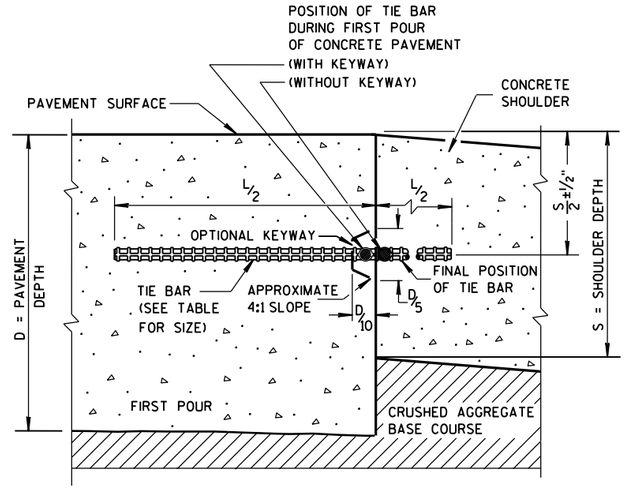
GENERAL NOTES

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

TRANSVERSE JOINT DETAILS ARE SHOWN ELSEWHERE IN THE PLAN.

FINISH THE SHOULDER PAVEMENT CONFORMING TO SUBSECTION 415.3.8 OF THE STANDARD SPECIFICATIONS.

TIE BARS SHALL CONFORM TO SUBSECTION 505.2.4 OF THE STANDARD SPECIFICATIONS.



SECTION A-A

LONGITUDINAL CONSTRUCTION JOINT

TIE BAR TABLE

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

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

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

PAVEMENT DEPTH, DOWEL BAR SIZE AND JOINT SPACING TABLE

PAVEMENT DEPTH (D)	DOWEL BAR DIAMETER***	CONTRACTION JOINT SPACING
5 ½", 6", 6 ½"	NONE	12'
7", 7 ½"	1"	14'
8", 8 ½"	1 ¼"	15'
9", 9 ½"	1 ¼"	15'
10" & ABOVE	1 ½"	15'

*** FOR DOWELED CONCRETE SHOULDERS WITH TRAPEZOIDAL CROSS SECTIONS, CHOSE THE APPROPRIATE DOWEL BAR DIAMETER BASED ON THE SMALLER PAVEMENT DEPTH (LIKELY THE OUTSIDE EDGE OF THE SHOULDER). IF USING BASKETS, USE BASKETS FOR THE AVERAGE THICKNESS OF THE CROSS SECTION.

CONCRETE PAVEMENT SHOULDERS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

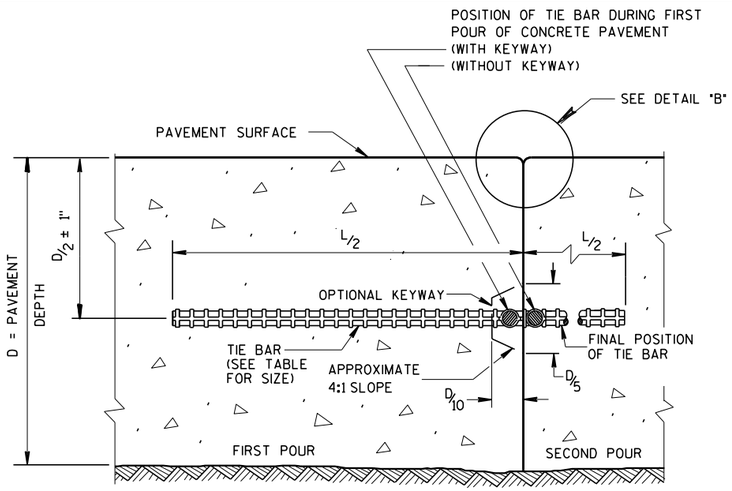
APPROVED
June, 2015 — DATE
/S/ Peter Kemp, P.E. — PAVEMENT SUPEF
FHWA

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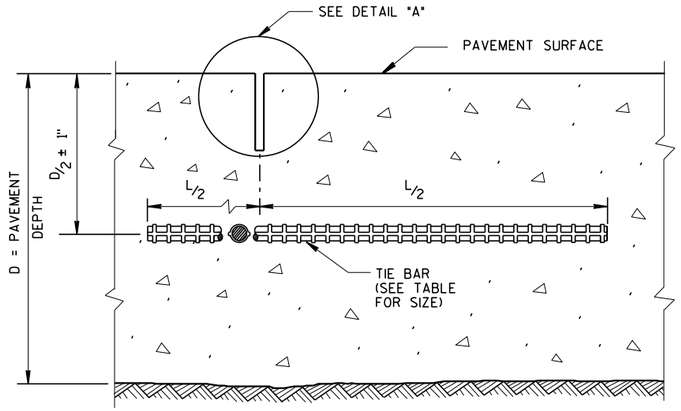
S.D.D. 13 A 3-6

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S.D.D. 13 A 3-6



CONSTRUCTION JOINT



SAWED JOINT

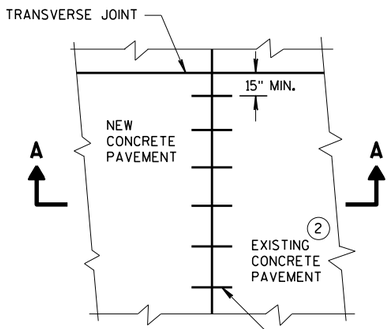
GENERAL NOTES

CREATE A LONGITUDINAL JOINT FOR PAVEMENT WIDTHS GREATER THAN 15 FEET.

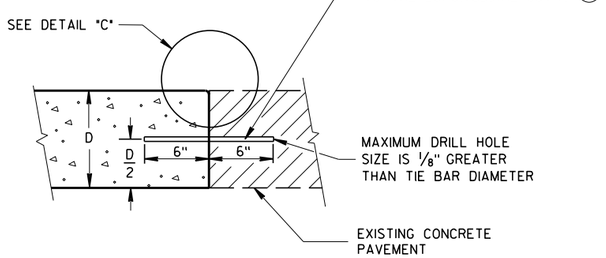
CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.

(1) ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.

(2) PAVEMENT THAT WAS IN PLACE PRIOR TO THE CONTRACT.

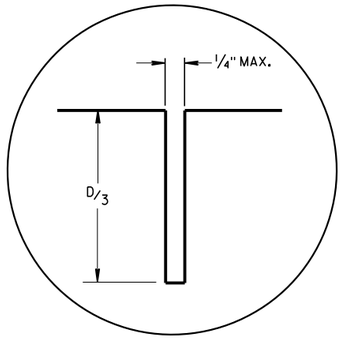


PLAN VIEW

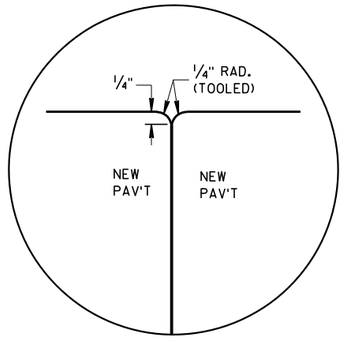


SECTION A-A

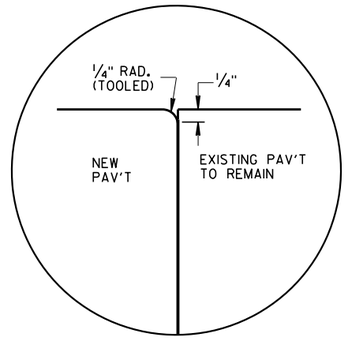
LONGITUDINAL CONSTRUCTION JOINT TIE BARS ANCHORED INTO EXISTING PAVEMENT



DETAIL "A"



DETAIL "B"



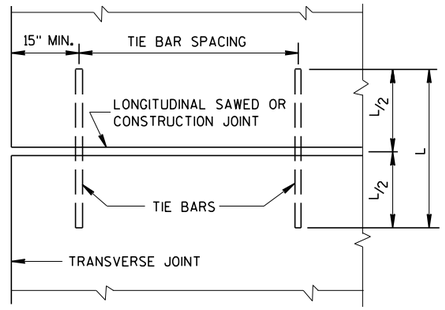
DETAIL "C"

TIE BAR TABLE

PAVEMENT DEPTH (D)	TIE BAR SIZE	TIE BAR LENGTH (L)	MAX. TIE BAR SPACING
< 10 1/2"	NO. 4	30"	36"
≥ 10 1/2"	NO. 5	36"	36"
	NO. 4 *	30"	24" **

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

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



PLAN VIEW
SHOWING LOCATION OF TIE BARS

CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2018 — DATE
/S/ Peter Kemp — PAVEMENT SUPE
FHWA

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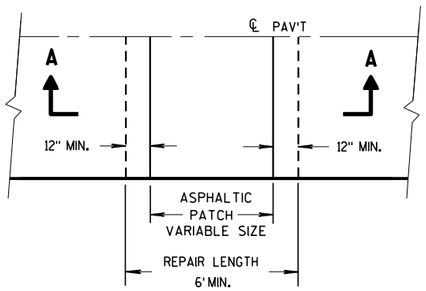
GENERAL NOTES

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

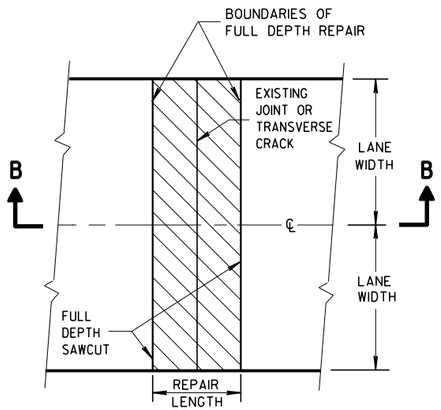
PROVIDE A 6-FOOT MINIMUM DISTANCE FROM BOUNDARIES OF CONCRETE REPAIR AREAS TO ADJACENT TRANSVERSE JOINT OR CRACK IN THE SAME LANE.

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

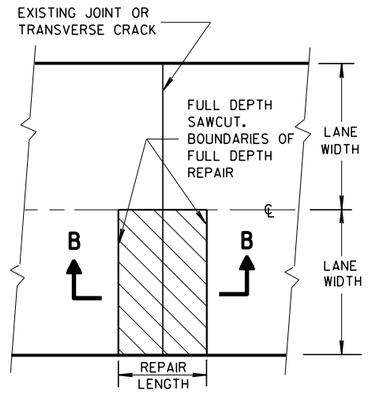
(1) DOWEL BARS MIGHT NOT EXIST.



PLAN VIEW

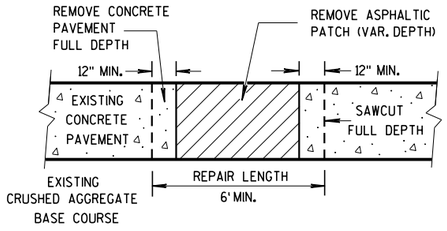


PLAN VIEW
(DOUBLE LANE REPAIR)



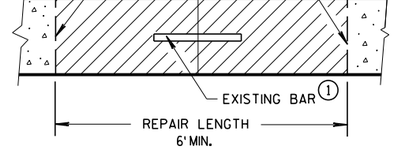
PLAN VIEW
(SINGLE LANE REPAIR)

FULL DEPTH CONCRETE PAVEMENT REMOVAL



SECTION A-A

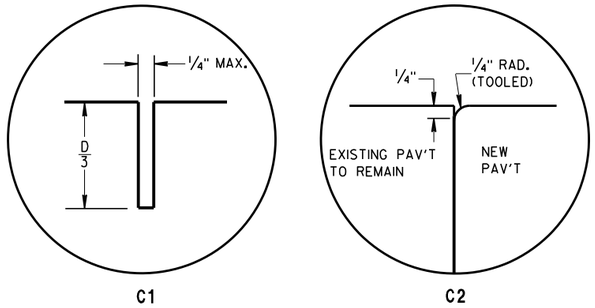
HMA PATCH REMOVAL



SECTION B-B

CONCRETE REMOVAL

CONCRETE PAVEMENT REPAIR AND REPLACEMENT



C1 C2

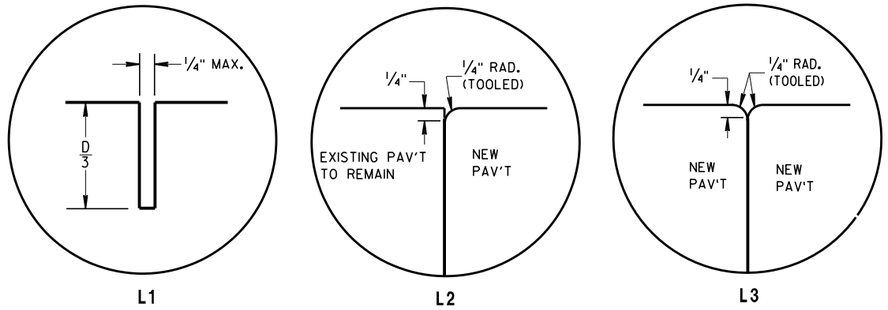
TRANSVERSE JOINTS

TIE BAR TABLE

PAVEMENT DEPTH (D)	TIE BAR SIZE	TIE BAR LENGTH (L)	MAX. TIE BAR SPACING
< 10 1/2"	NO. 4	30"	36"
≥ 10 1/2"	NO. 5	36"	36"
	NO. 4 *	30"	24" **

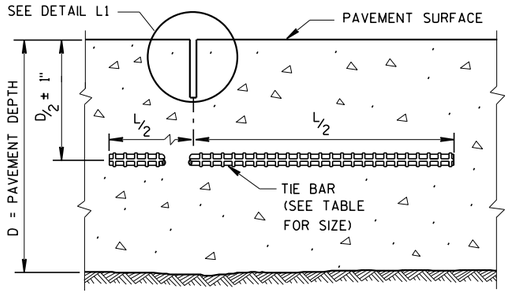
* SUBSTITUTE BENT BARS AT LONGITUDINAL JOINTS WHEN EQUIPMENT LIMITATIONS DURING CONSTRUCTION WARRANT (e.g. AUXILIARY LANES OR TURN LANES)

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



L1 L2 L3

LONGITUDINAL JOINTS



SECTION C-C

SAWED LONGITUDINAL JOINT

GENERAL NOTES

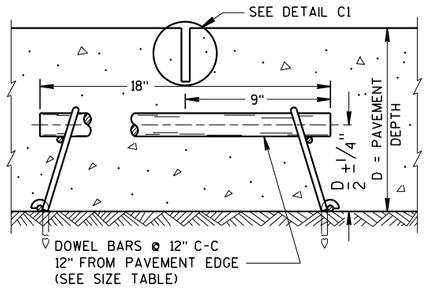
INSTALL DOWEL BARS PARALLEL TO THE PAVEMENT CENTERLINE AND PAVEMENT SURFACE.

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

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

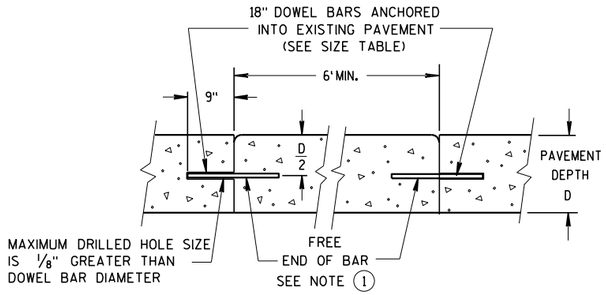
FOR MULTI-LANE CONCRETE PAVEMENT REPLACEMENTS, PROVIDE A MINIMUM DISTANCE OF 15 INCHES FROM ALL TRANSVERSE JOINTS OR EDGES OF REPLACEMENT TO THE CENTER OF THE TIE BAR NEAREST THAT JOINT OR EDGE.

(1) APPLY A THIN UNIFORM COATING OF SURFACE TREATMENT TO THE FREE END OF DOWEL BARS TO PREVENT BONDING.

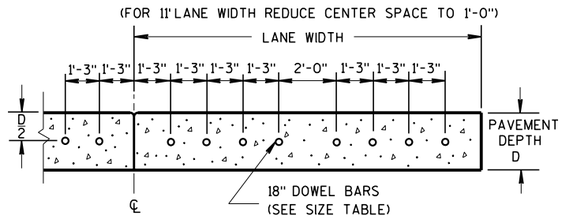


SECTION F-F

CONTRACTION JOINT



SECTION D-D

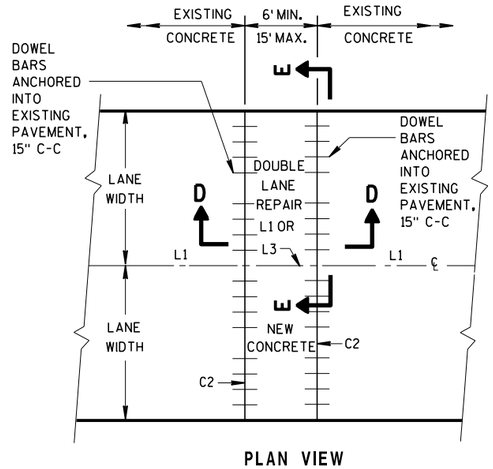


SECTION E-E

DRILLED DOWEL BAR CONSTRUCTION JOINT

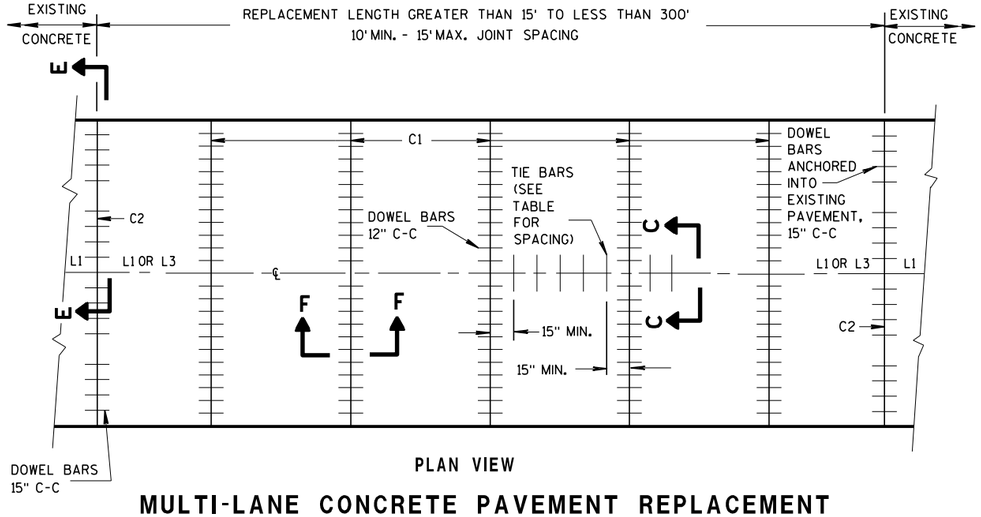
PAVEMENT DEPTH, DOWEL BAR SIZE AND JOINT SPACING TABLE

PAVEMENT DEPTH (D)	DOWEL BAR DIAMETER	DRILLED DOWEL BAR DIAMETER	CONTRACTION JOINT SPACING
5 1/2", 6", 6 1/2"	NONE	NONE	12'
7", 7 1/2"	1"	1"	14'
8", 8 1/2"	1 1/4"	1 1/4"	15'
9", 9 1/2"	1 1/4"	1 1/4"	15'
10" & ABOVE	1 1/2"	1 1/4"	15'



PLAN VIEW

MULTI-LANE CONCRETE PAVEMENT REPAIR

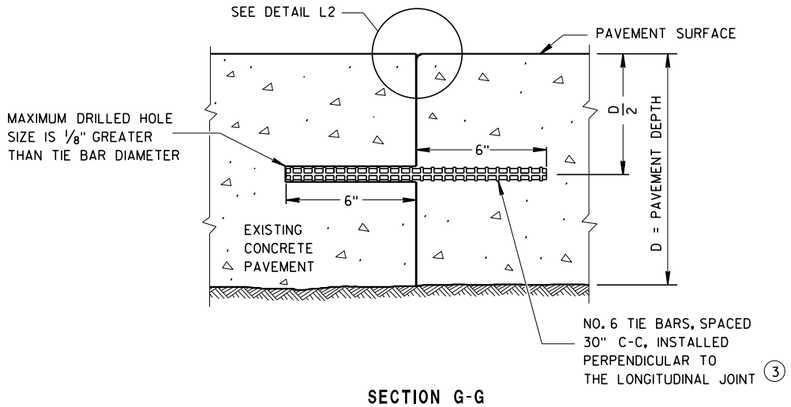


PLAN VIEW

MULTI-LANE CONCRETE PAVEMENT REPLACEMENT

CONCRETE PAVEMENT REPAIR AND REPLACEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



SECTION G-G

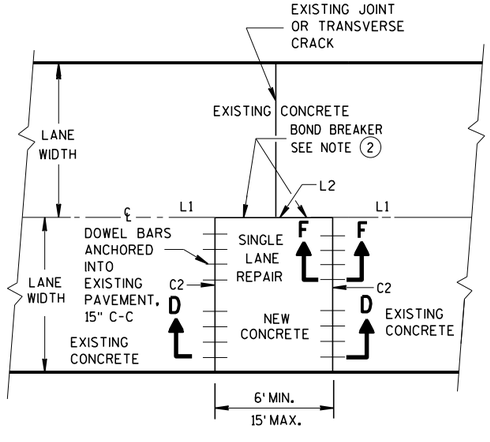
TIE BARS ANCHORED INTO EXISTING PAVEMENT

GENERAL NOTES

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

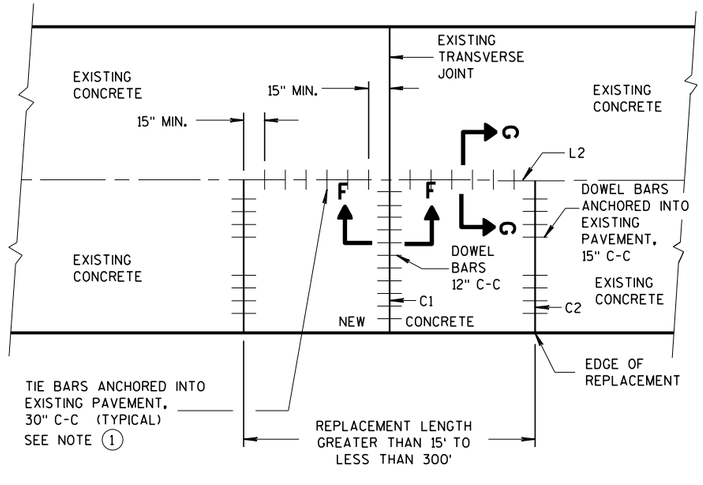
(2) USE AN ENGINEER-APPROVED BOND BREAKER (E.G. RELEASE AGENT, CURING COMPOUND) FOR SINGLE LANE REPAIRS UP TO 15 FEET IN LENGTH.

(3) ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.



PLAN VIEW

SINGLE LANE CONCRETE PAVEMENT REPAIR



PLAN VIEW

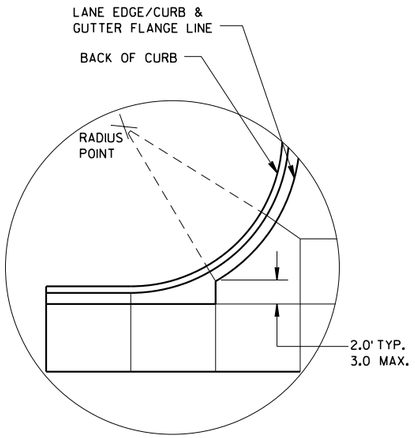
SINGLE LANE CONCRETE PAVEMENT REPLACEMENT

CONCRETE PAVEMENT REPAIR AND REPLACEMENT

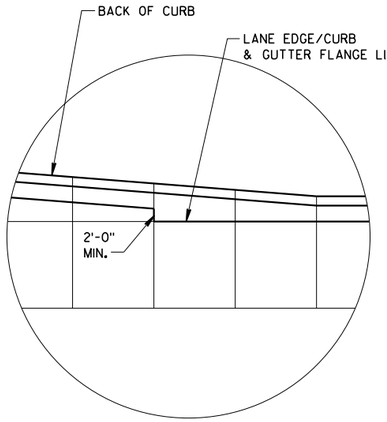
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2018 — DATE
/S/ Peter Ken... — PAVEMENT SUPE...
FHWA

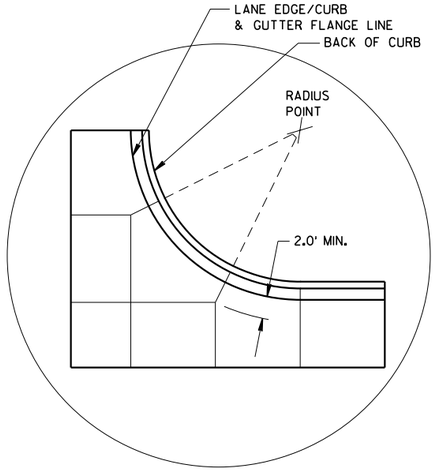
6
S.D.D. 13 C 9-15c



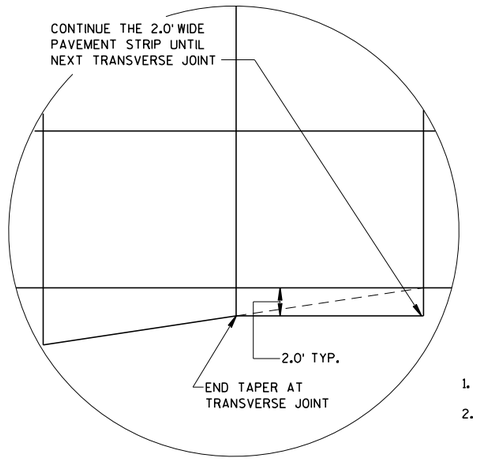
DETAIL "A"



DETAIL "B"



DETAIL "C"



DETAIL "D"

GENERAL NOTES

THE PRIMARY ROADWAY CONTROLS THE TRANSVERSE JOINT PATTERN.

ALIGN NEW JOINTS WITH EXISTING JOINTS OR CRACKS.

CONSTRUCT TRANSVERSE JOINTS PERPENDICULAR TO THE ROADWAY.

ADJUST TRANSVERSE JOINTS TO ALIGN WITH UTILITY FIXTURES (E.G. MANHOLES AND INLETS) IN THE PAVEMENT STRUCTURE WHEN POSSIBLE. WATER VALVES DO NOT REQUIRE JOINT ADJUSTMENT.

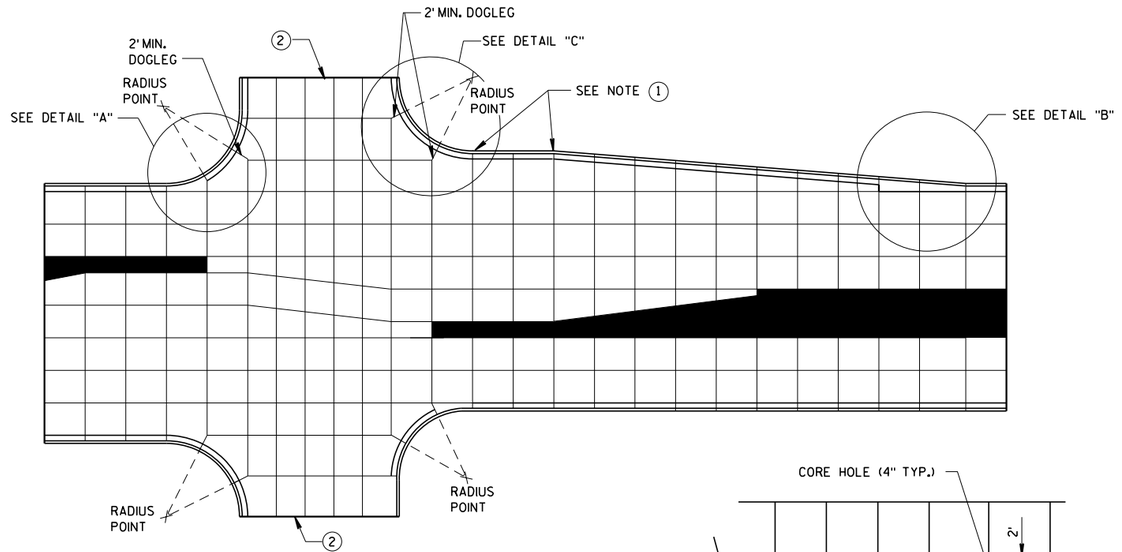
AVOID SLABS LESS THAN 2 FEET WIDE OR GREATER THAN 15 FEET WIDE.

SEE TABLE FOR TRANSVERSE JOINT SPACING. JOINT SPACING SPECIFIED IS MAXIMUM AND ACTUAL SPACING CAN BE ADJUSTED TO ACCOMMODATE INTERSECTIONS.

AVOID ANGLES LESS THAN 60° BY DOGLEGGING JOINTS THROUGH CURVE RADIUS POINTS. USE 90° ANGLES WHEN POSSIBLE.

CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.

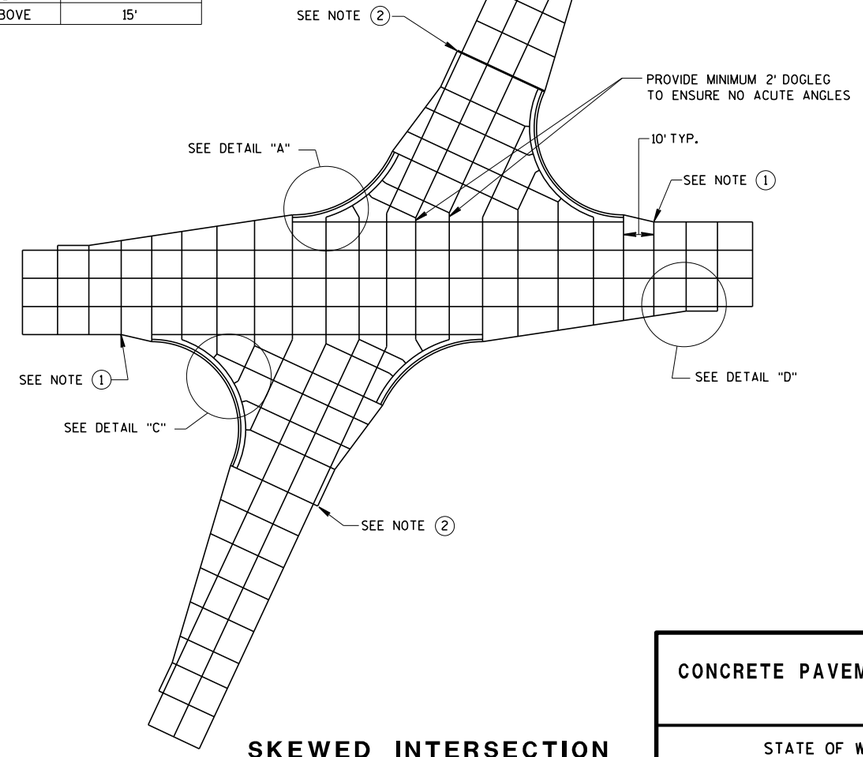
1. PROVIDE TRANSVERSE JOINTS AT ALL PAVEMENT WIDTH CHANGES.
2. CONSTRUCT DOWELED EXPANSION JOINT ON THE SIDE ROAD OF AN INTERSECTION IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH. ALIGN EXPANSION JOINT WITH EDGE OF RADIUS.
3. THE ENGINEER MAY APPROVE SLIGHT VARIATIONS FROM THESE JOINTING DETAILS.



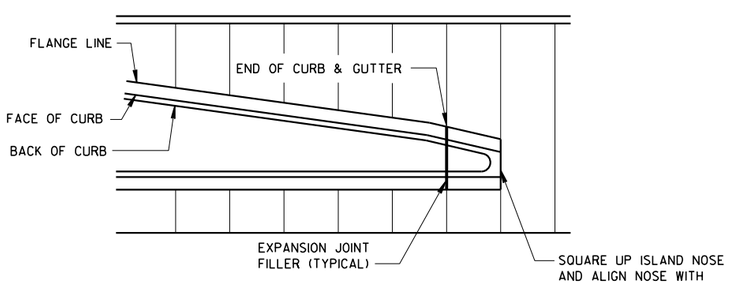
STANDARD INTERSECTION

PAVEMENT DEPTH AND JOINT SPACING TABLE

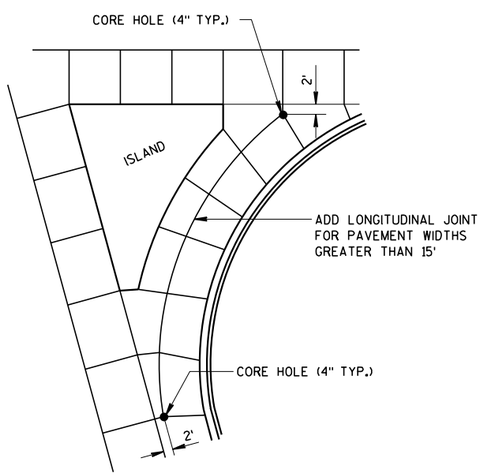
PAVEMENT DEPTH (D)	CONTRACTION JOINT SPACING
6", 6½"	12'
7", 7½"	14'
8" & ABOVE	15'



SKEWED INTERSECTION



APPROACH TO MEDIAN



LARGE RIGHT TURN

CONCRETE PAVEMENT JOINTING

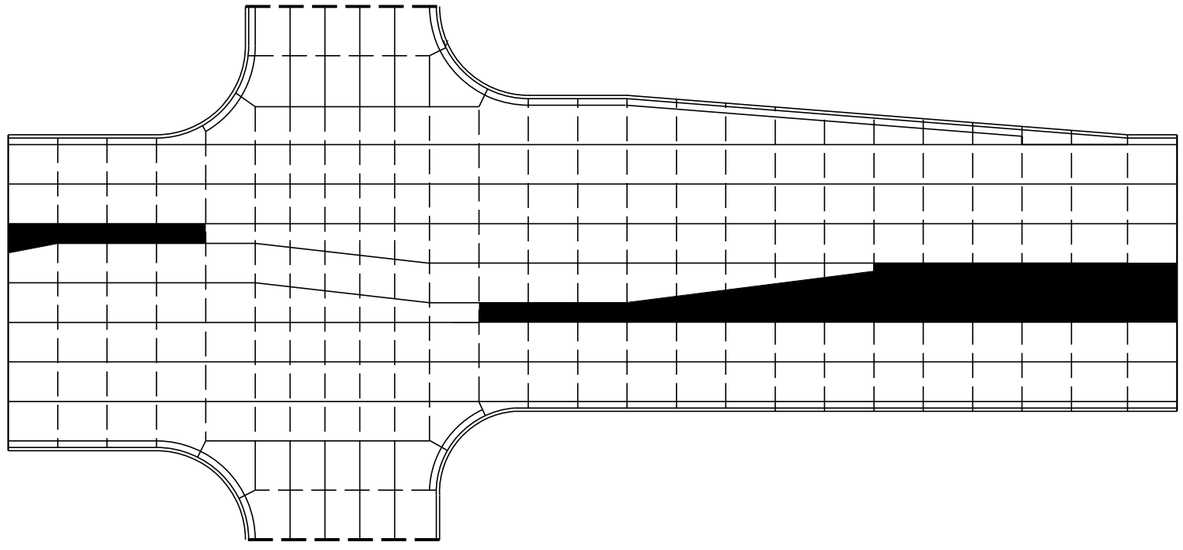
6
S.D.D. 13 C 18-6a

LEGEND

POTENTIAL DOWELED EXPANSION JOINT

DOWELED JOINT

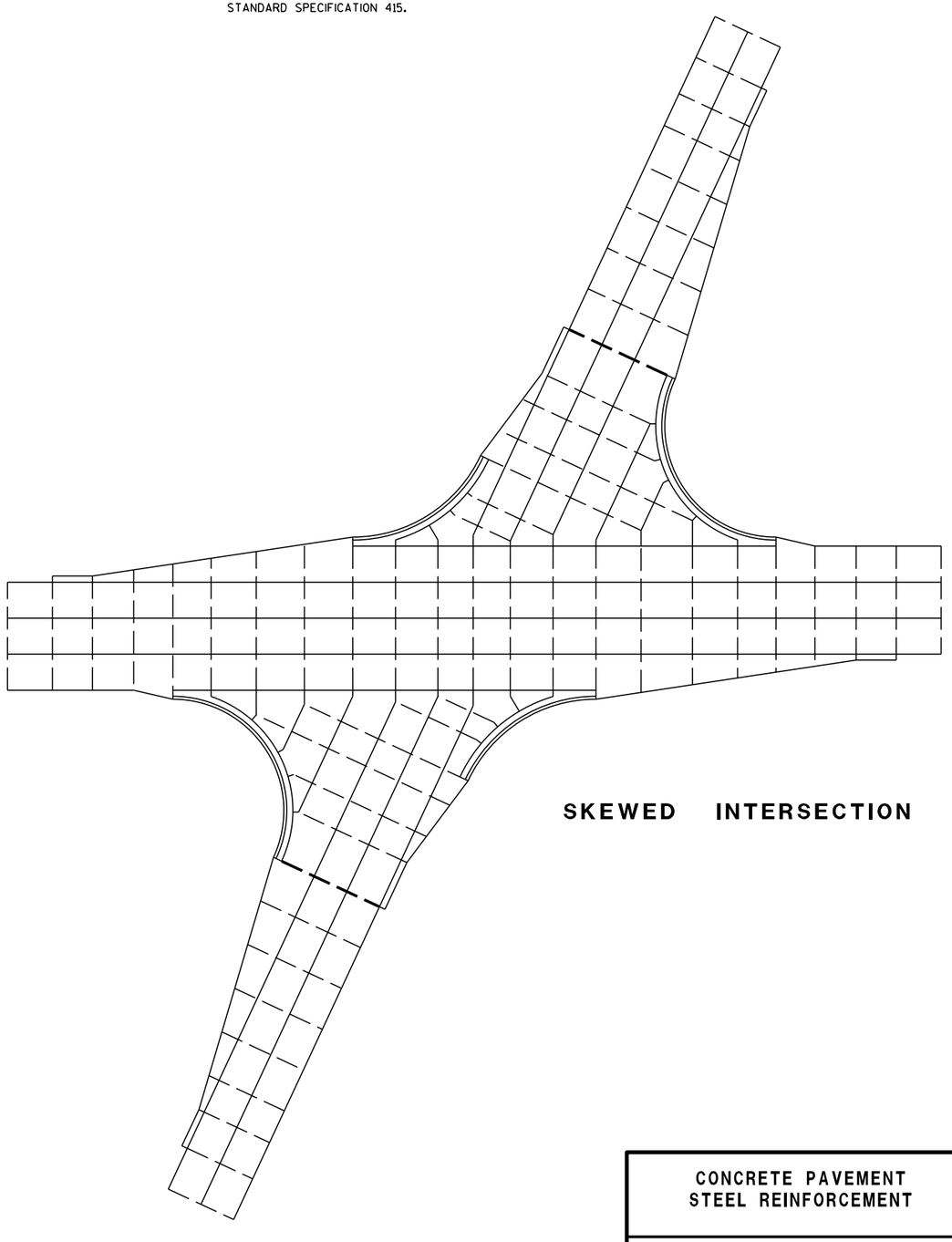
TIED JOINT



STANDARD INTERSECTION

GENERAL NOTES

USE AN EXPANSION JOINT FILLER MEETING THE REQUIREMENTS OF STANDARD SPECIFICATION 415.



SKEWED INTERSECTION

6

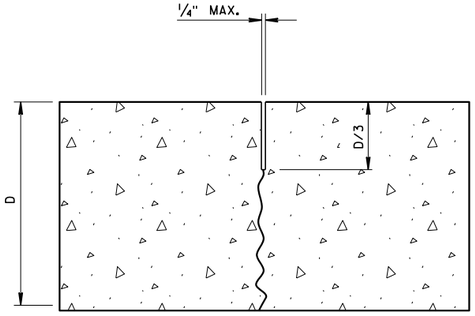
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S.D.D. 13 C 18-6b

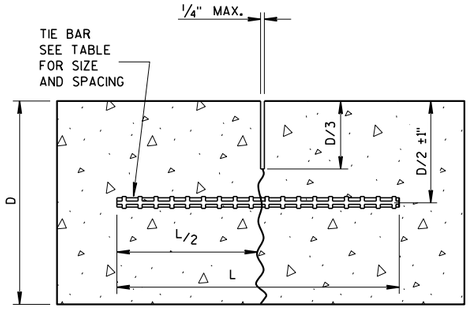
S.D.D. 13 C 18-6b

CONCRETE PAVEMENT
STEEL REINFORCEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



UNDOWELED-TRANSVERSE



TIED LONGITUDINAL

TIE BAR TABLE

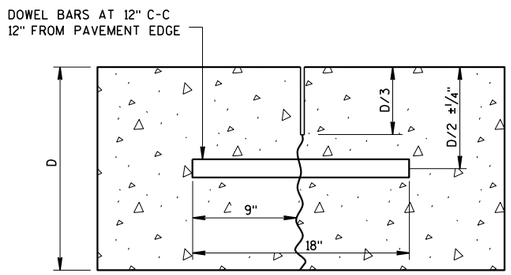
PAVEMENT DEPTH (D)	TIE BAR SIZE	TIE BAR LENGTH (L)	MAX. TIE BAR SPACING
< 10 1/2"	NO. 4	30"	36"
≥ 10 1/2"	NO. 5	36"	36"
	NO. 4 *	30"	24" **

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

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

GENERAL NOTES

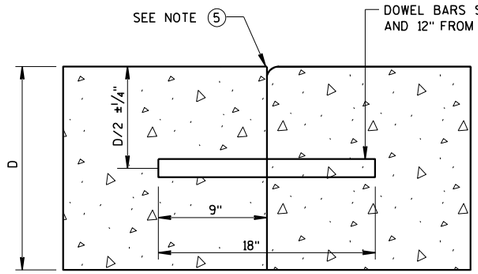
1. USE DOWELED EXPANSION JOINTS ON SIDE ROADS AT INTERSECTIONS (TO ISOLATE THE SIDE ROAD FROM THE THROUGH STREET) IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH.
2. SPACE CONTRACTION JOINTS IN ACCORDANCE WITH 13C4, 13C11 OR 13C13.
3. LOCATE CONSTRUCTION JOINTS A MINIMUM OF 6 FEET FROM THE NEAREST CONTRACTION JOINT AND ALIGN PARALLEL TO CONTRACTION JOINTS.
4. CONSTRUCTION JOINTS CAN BE FORMED OR SAWED.
5. IF JOINT IS FORMED, PROVIDE A 1/4-INCH RADIUS.
6. ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.



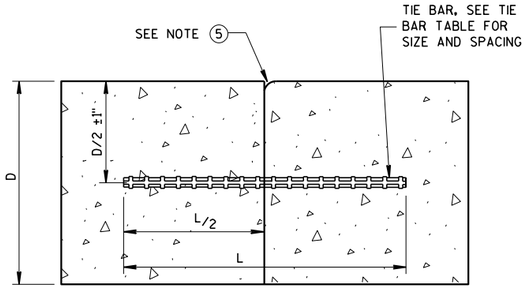
DOWELED-TRANSVERSE

CONTRACTION JOINTS

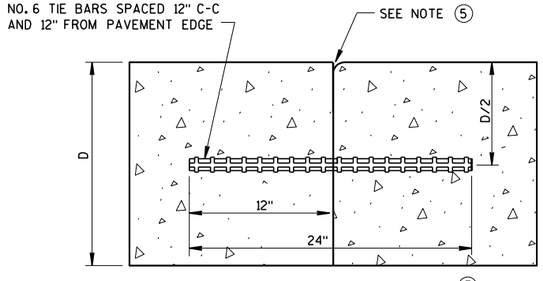
SEE NOTE (2)



DOWELED TRANSVERSE (3)

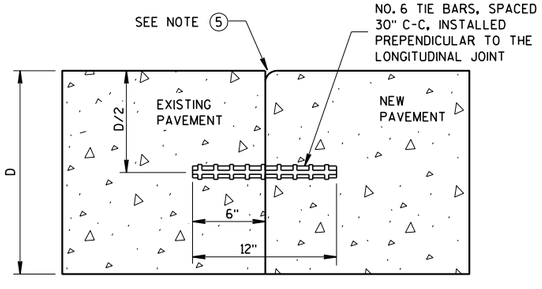


TIED LONGITUDINAL



TIED TRANSVERSE (3)

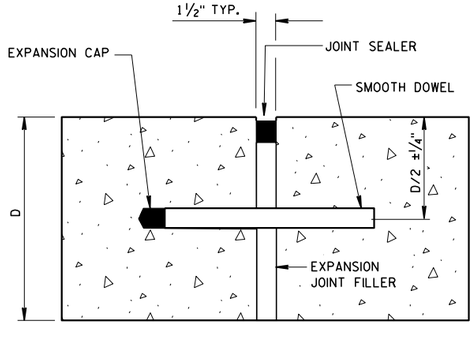
(FOR USE ON NON-DOWELED PAVEMENTS ONLY)



TIED LONGITUDINAL TO EXISTING

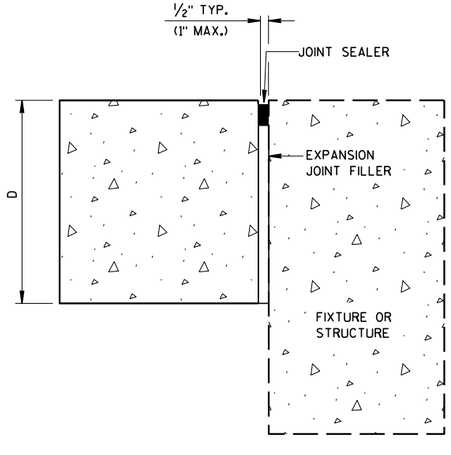
CONSTRUCTION JOINTS

SEE NOTE (4)



DOWELED-TRANSVERSE

SEE NOTE (1)



UNTIED-LONGITUDINAL

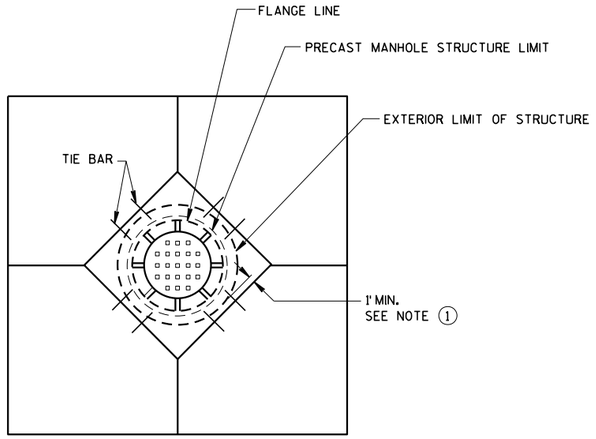
EXPANSION JOINTS

CONCRETE PAVEMENT
JOINT TYPES

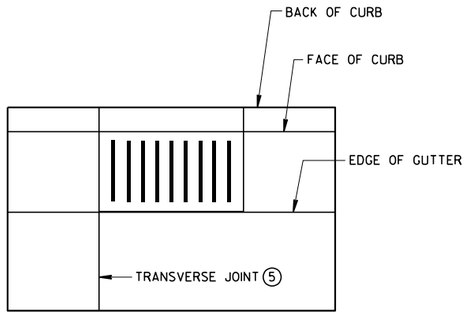
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

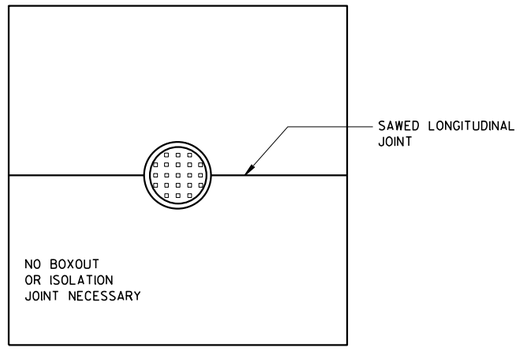
S.D.D. 13 C 18-6c



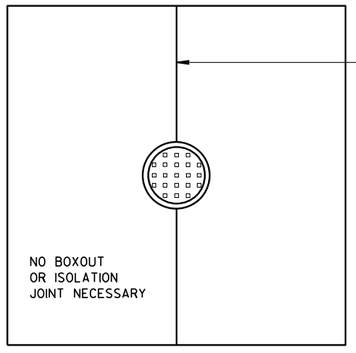
DIAGONAL MANHOLE BOXOUT FOR CONSTRUCTION JOINTS



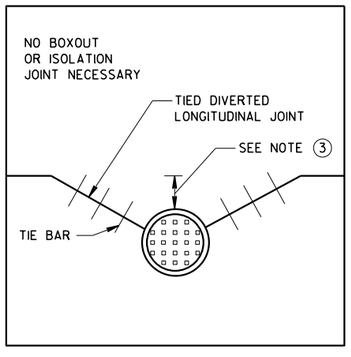
INLET WITH TRANSVERSE JOINT



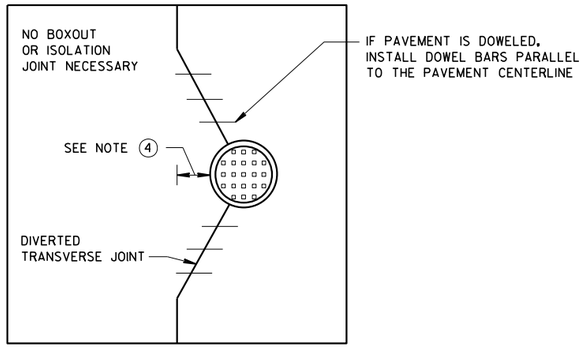
MANHOLE WITH LONGITUDINAL JOINT



MANHOLE WITH TRANSVERSE JOINT



MANHOLE WITH DIVERTED LONGITUDINAL CONTRACTION JOINT



MANHOLE WITH DIVERTED TRANSVERSE CONTRACTION JOINT

GENERAL NOTES

(1) USE BOXOUTS WHEN UTILITY STRUCTURE IS IN THE PATH OF CONSTRUCTION JOINTS. PROVIDE A 1-FOOT MINIMUM CLEARANCE BETWEEN THE EXTERIOR LIMIT OF THE STRUCTURE TO THE DIAMOND BOXOUT.

(2) ADJUST TRANSVERSE JOINT TO INTERSECT MANHOLE IF POSSIBLE.

(3) IF DISTANCE BETWEEN THE LONGITUDINAL JOINT AND THE EDGE OF MANHOLE IS 2 FEET OR LESS, DIVERT THE LONGITUDIAL JOINT AT A 2:1 TAPER RATE TO THE CENTER OF THE MANHOLE. IF THE DISTANCE IS GREATER THAN 2 FEET, DO NOT DIVERT THE JOINT AND SAW AS NORMAL. PLACE REBAR REINFORCEMENT AROUND THE MANHOLE.

(4) IF DISTANCE FROM THE EDGE OF THE MANHOLE TO THE NEAREST TRANSVERSE JOINT IS 4 FEET OR LESS, REDIRECT JOINT TO INTERSECT THE CENTER OF THE MANHOLE. IF DISTANCE IS GREATER THAN 4 FEET, DO NOT DIVERT THE JOINT AND SAW AS NORMAL. PLACE REBAR REINFORCEMENT AROUND THE MANHOLE.

(5) ALIGN TRANSVERSE JOINT WITH ONE EDGE OF INLET WHEN PRACTICAL.

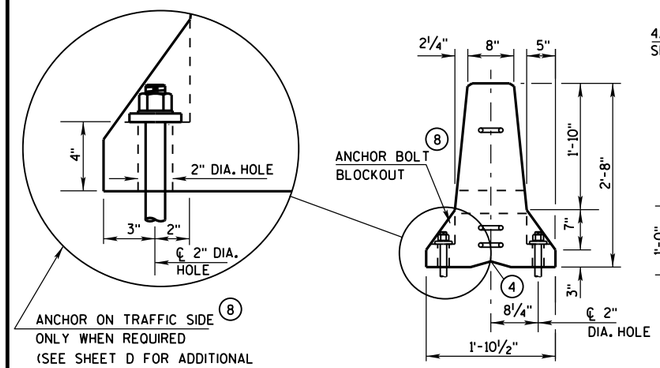
CONCRETE PAVEMENT JOINTING AT UTILITY FIXTURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

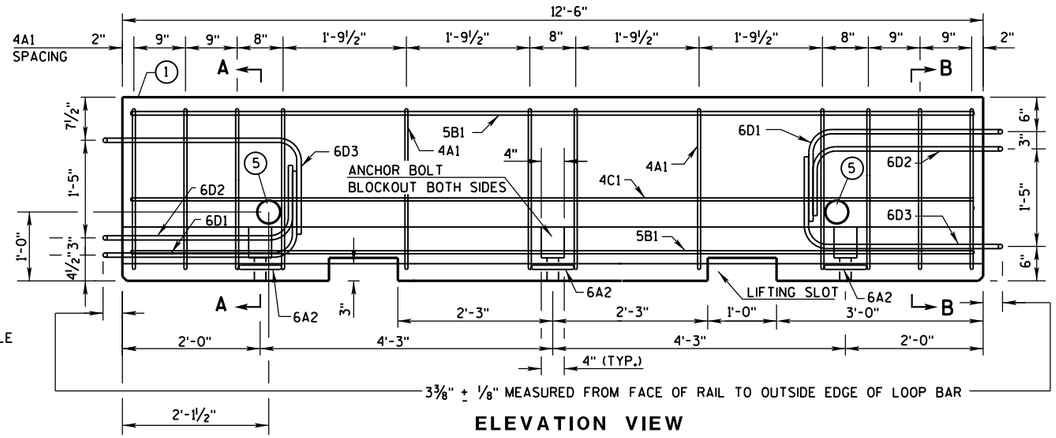
APPROVED
March 2018 — DATE
/S/ Peter K... P.E. — PAVEMENT SUPT
FHWA

6

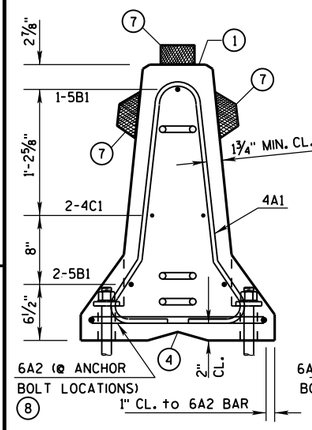
S.D.D. 13 C 18-6d



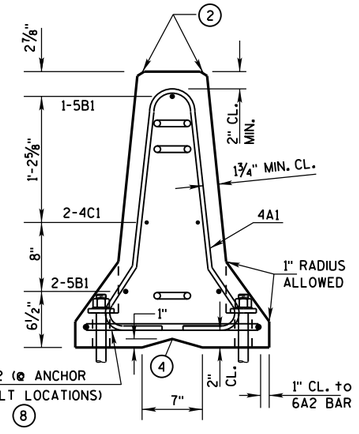
END VIEW



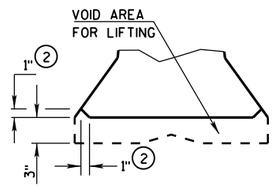
ELEVATION VIEW



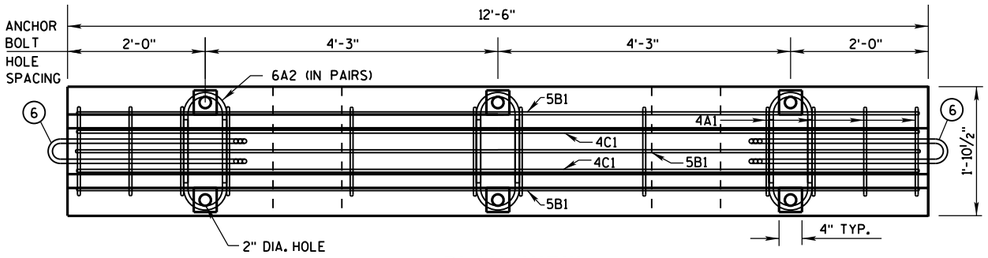
SECTION A-A
(STIRRUP PLACEMENT)



SECTION B-B
(STIRRUP PLACEMENT)

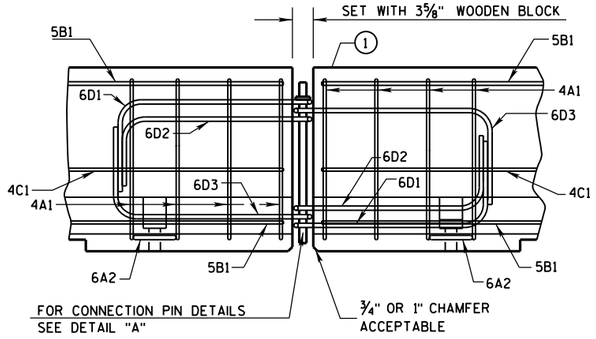


DETAIL "B"
LIFTING SLOT DETAIL

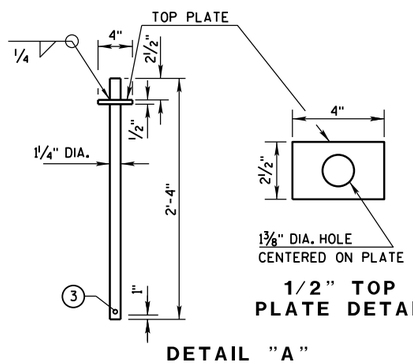


PLAN VIEW

DETAILS OF BARRIER SECTION

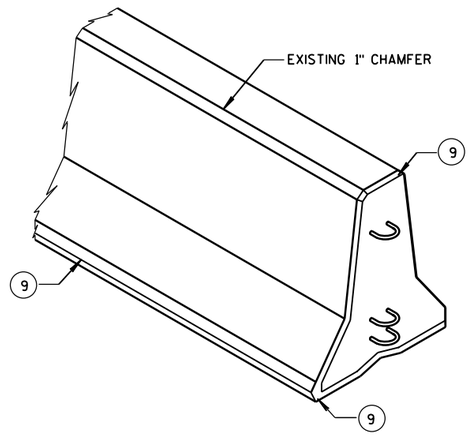


DETAILS OF BARRIER CONNECTION



1/2" TOP PLATE DETAIL

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



GENERAL NOTES

THESE GENERAL NOTES APPLY TO SHEETS 14B7-15(a) THRU 14B7-15(i).

DO NOT INTERMIX CONCRETE BARRIER TEMPORARY PRCAST, 12'-6" (CBTP12.5) WITH OTHER TEMPORARY CONCRETE BARRIERS.

USE ASTM A-615, GRADE 60, DEFORMED STEEL BARS FOR BARS 4A1, 6A2, 5B1 AND 4C1 IN THE BARRIER SECTION AND FOR 4V1, 4V2, 4V3, 4V4, 4V5, 4V6, 4F1, 4F2 AND 5F3 IN THE BARRIER TAPER SECTION.

LOOP BARS 6D1, 6D2 AND 6D3 SHALL BE ¾" SMOOTH STEEL BARS WITH A MINIMUM YIELD STRENGTH OF 60 KSI, A TENSILE STRENGTH OF NOT LESS THAN 1.25 TIMES THE YIELD STRENGTH BUT A MINIMUM OF 80 KSI, A MINIMUM 14% ELONGATION IN 8 INCHES AND PASSING A 180 DEGREE BEND TEST USING A 3-½" PIN BEND DIAMETER FOR BEND TESTS. THE LOOPS SHALL BE INSTALLED WITHIN ⅛" OF THE PLAN DIMENSION.

CONSTRUCT LIFTING SLOTS AS SPECIFIED ON THE PLANS TO FACILITATE THE DRAINAGE OF WATER AFTER INSTALLATION.

PLACE BARRIER ON A PAVED SURFACE. REMOVE ALL LOOSE DIRT AND SAND FROM THE ROADWAY SURFACE PRIOR TO PLACEMENT OF THE BARRIER.

INSTALL MECHANICAL OR ADHESIVE ANCHORS PER MANUFACTURER'S RECOMMENDATIONS. PROVIDE MANUFACTURER'S INFORMATION TO PROJECT ENGINEER.

(1) MARK ONE END OF EACH BARRIER PERMANENTLY BY FORMING INTO THE BARRIER THE FOLLOWING INFORMATION:
- a. TYPE: WI CBTP
- b. MANUFACTURER
- c. DATE MANUFACTURED (MONTH AND YEAR)

(2) 1" CHAMFER TO PREVENT SPALLING.

(3) A ⅜" HOLE IN THE CONNECTION PIN, AT THE LOCATION SHOWN, IS ACCEPTABLE, BUT NOT REQUIRED..

(4) "V" NOTCH IS OPTIONAL.

(5) THE 4" DIAMETER, 11 GAUGE STEEL, ROUND MECHANICAL TUBING SLEEVE FOR LIFTING (OPTIONAL).

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

(7) USE DELINEATORS CONFORMING TO SECTION 633 OF THE STANDARD SPECIFICATIONS. CONTRACTOR MAY USE ALTERNATE SHAPES AND HOUSING. INSTALL DELINEATORS ACCORDING TO MANUFACTURES INSTRUCTION. INSTALL YELLOW REFLECTORS WHEN BARRIER IS LOCATED TO THE LEFT OF TRAFFIC AND WHITE REFLECTORS WHEN BARRIER IS LOCATED TO THE RIGHT OF TRAFFIC. SPACE DELINEATORS A MAXIMUM OF 25 FEET APART. PROVIDE TOP MOUNTED DELINEATORS IN ADDITION TO THE SIDE MOUNTED DELINEATORS ON ALL BARRIER INSTALLATIONS LOCATED ON A CURVED ALIGNMENT LONGER THAN 200 FEET AND ON BARRIERS USED TO SEPARATE OPPOSING TRAFFIC.

(8) SEE SHEET D FOR HOW TO ANCHOR BARRIER. SEE SHEET E FOR WHEN TO ANCHOR BARRIER.

(9) 1" CHAMFER OPTIONAL.

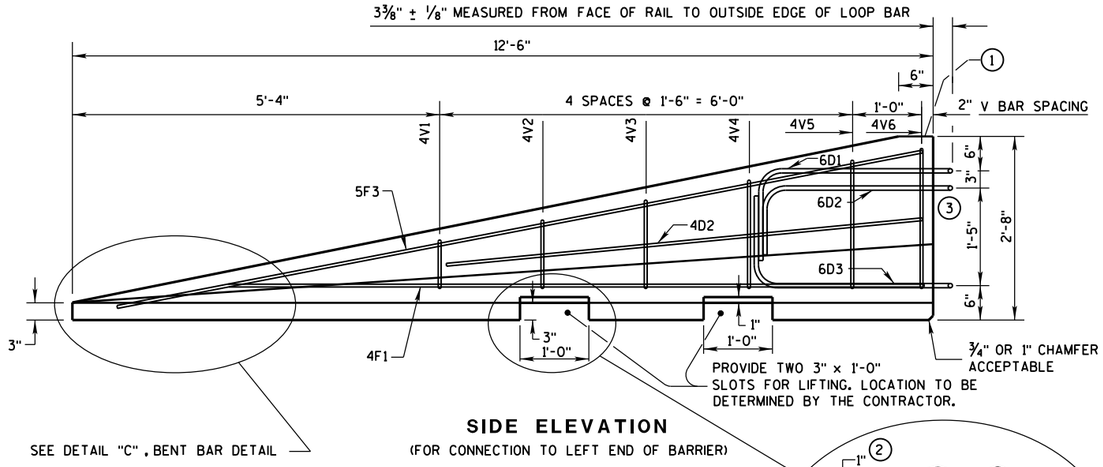
f'c = 4,000 psi

CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"

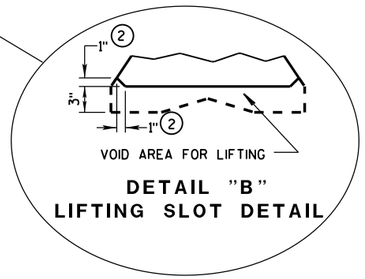
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

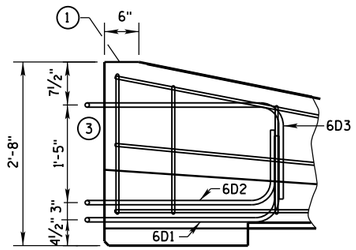
S.D.D. 14 B 7-15a



SIDE ELEVATION
(FOR CONNECTION TO LEFT END OF BARRIER)



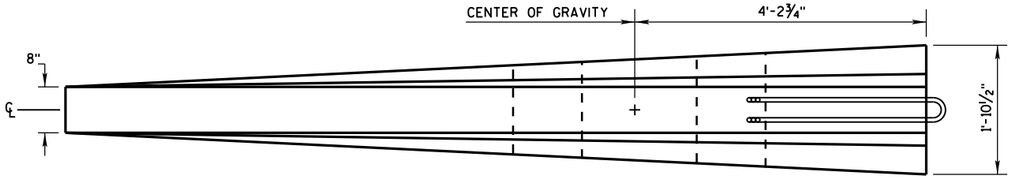
DETAIL "B"
LIFTING SLOT DETAIL



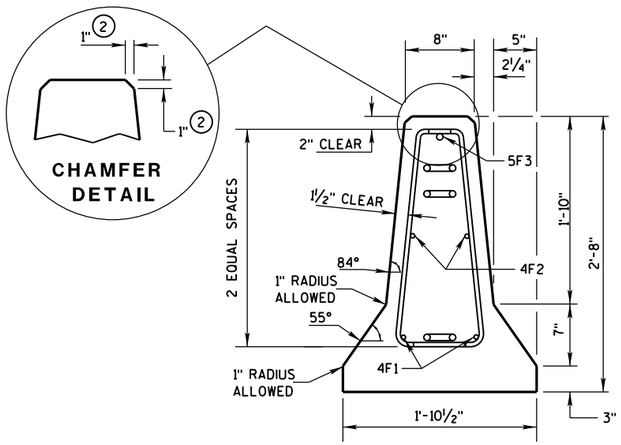
SIDE ELEVATION
LOOP BAR ASSEMBLY INVERTED
FOR OPPOSITE END.
(FOR CONNECTION TO RIGHT END OF BARRIER)

GENERAL NOTES

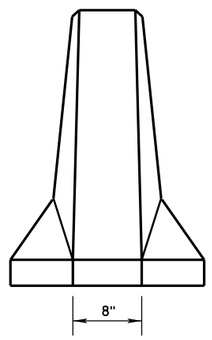
1. MARK ONE END OF EACH BARRIER PERMANENTLY BY FORMING INTO THE BARRIER THE FOLLOWING INFORMATION:
   a. TYPE WICBTP
   b. MANUFACTURER
   c. DATE MANUFACTURED (MONTH AND YEAR)
2. 1" CHAMFER TO PREVENT SPALLING.
3. NEVER USE LOOP BARS (6D1, 6D2 OR 6D3) TO LIFT, MOVE OR REPOSITION THE BARRIER.



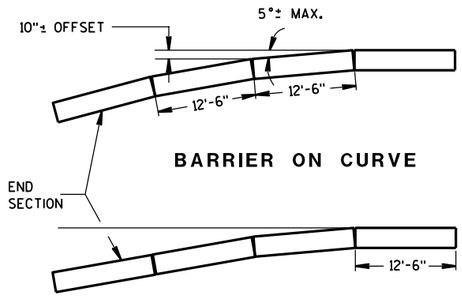
PLAN VIEW



END SECTION



FRONT ELEVATION



BARRIER ON CURVE

FLARE AT BARRIER END

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

DETAILS OF BARRIER TAPER SECTION

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

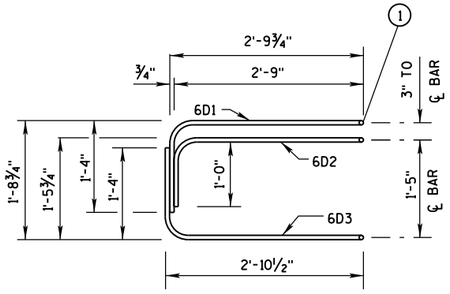
6

S.D.D. 14 B 7-15b

BARRIER TAPER SECTION BILL OF MATERIALS

(PER 12'-6" BARRIER TAPER SECTION)

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



ELEVATION
LOOP BAR ASSEMBLY

DETAIL "C"
BENT BAR DETAIL

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

4V BARS
2 AT EACH SIZE REQUIRED
FOR STIRRUP ASSEMBLY

TAPER BARRIER SECTION

GENERAL NOTES

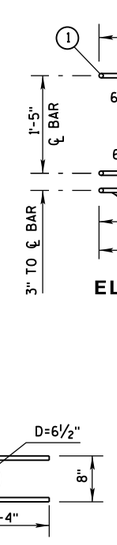
(1) NEVER USE LOOP BARS (6D1, 6D2 OR 6D3) TO LIFT, MOVE OR REPOSITION THE BARRIER.

BARRIER SECTION BILL OF MATERIALS

(PER 12'-6" BARRIER SECTION)

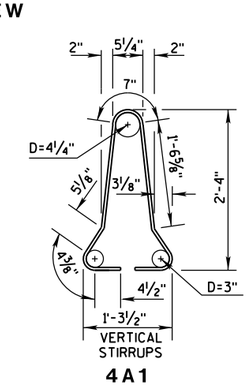
BAR	BAR SIZE	NO. OF BARS	LENGTH FT.
4A1	4	12	6'-0"
6A2	6	6	2'-11"
5B1	5	3	12'-2"
4C1	4	2	12'-2"
LOOP ASSEMBLY			
6D1	6	2	8'-5"
6D2	6	2	7'-7"
6D3	6	2	8'-6"

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



6A2

ELEVATION VIEW



4A1

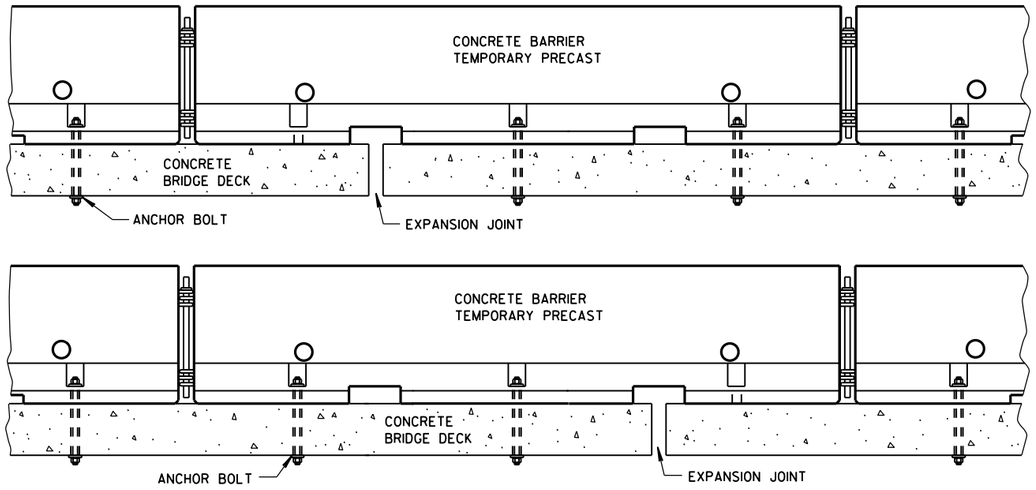
BARRIER SECTION

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
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S.D.D. 14 B 7-15c



TREATMENT AT BRIDGE DECK EXPANSION JOINTS

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

GENERAL NOTES

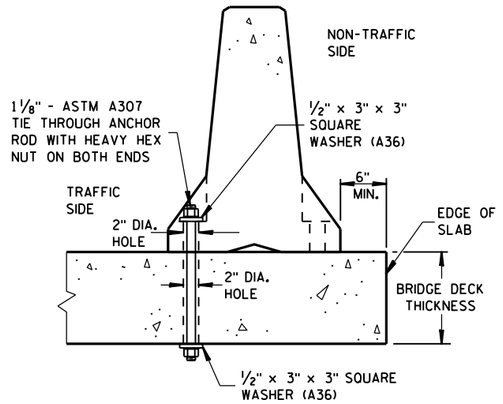
SEE SHEET E FOR WHEN TO ANCHOR. OTHER PARTS OF THE PLAN MAY SHOW ADDITIONAL LOCATIONS REQUIRING ANCHORING.

REMOVE ALL ANCHORS WHEN NO LONGER NEEDED. FILL CONCRETE PAVEMENTS, DECKS AND APPROACH SLABS WITH NON-SHRINK COMMERICAL GROUT FROM THE APPROVED PRODUCT LIST. FILL ASPHALT PAVEMENTS WITH ASTM D6690 TYPE II RUBBERIZED CRACK FILLER.

(1) 1⅛" DIAMENTER A307 THREADED ROD. ½" X 3" X 3" SQUARE PLATE WASHER WITH ASTM A36 STEEL. ASTM A563A HEAVY HEX NUT.

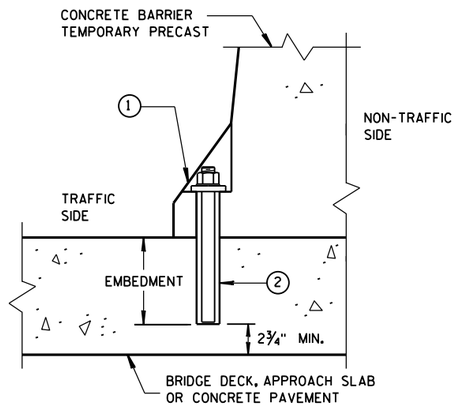
(2) ADHESIVE ANCHORS WITH A MINIMUM BOND STRENGTH OF 1,800 PSI AND 5¼" EMBEDMENT. SEE 603.2 AND 603.3.1.2 OF THE WISCONSIN STANDARD SPECIFICATIONS FOR MORE INFORMATION ON ADHESIVE ANCHORS.

(3) ASPHALT SURFACE SHOWN. CONTRACTOR MAY DRILL THROUGH CONCRETE PAVEMENT AND THAN DRIVE ASPHALT ANCHOR PIN.



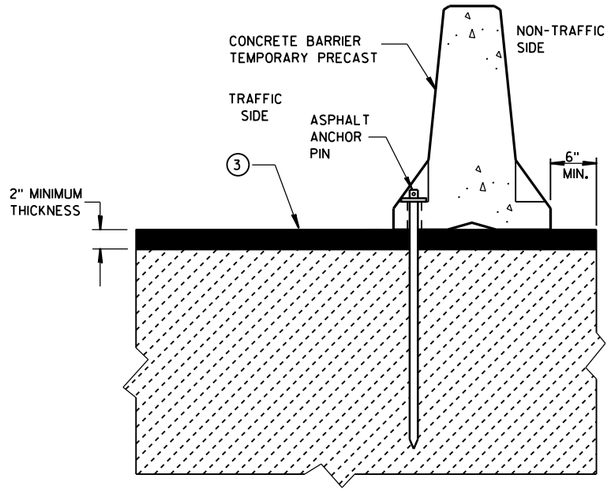
THROUGH BOLTED ANCHOR INSTALLATION ON BRIDGE DECK

(DO NOTUSE ON CONCRETE BRIDGE DECK WITH ASPHALT OVERLAY)

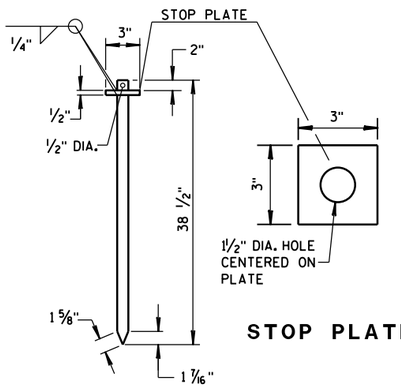


REMOVABLE ADHESIVE ANCHOR INSTALLATION ON CONCRETE BRIDGE DECK, CONCRETE APPROACH SLAB, OR CONCRETE PAVEMENT

(DO NOT USE ON CONCRETE WITH AN ASPHALTIC OVERLAY)



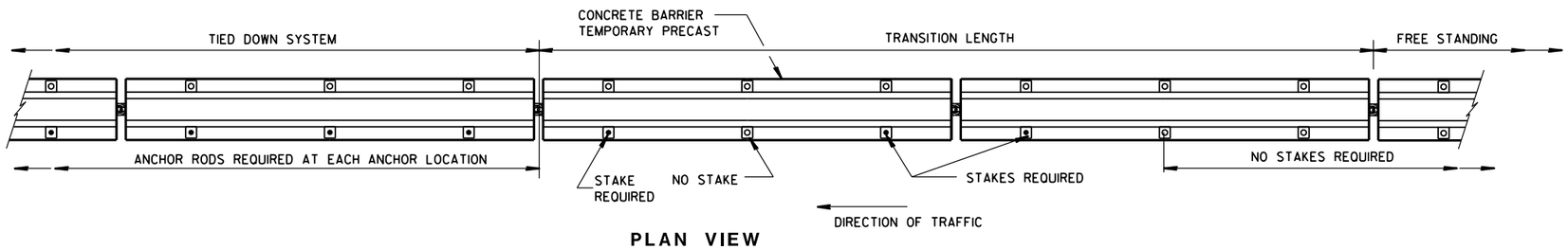
STAKE DOWN INSTALLATION FOR ASPHALTIC SURFACE



STOP PLATE

ASPHALT ANCHOR PIN

(ASTM A36 STEEL)



PLAN VIEW

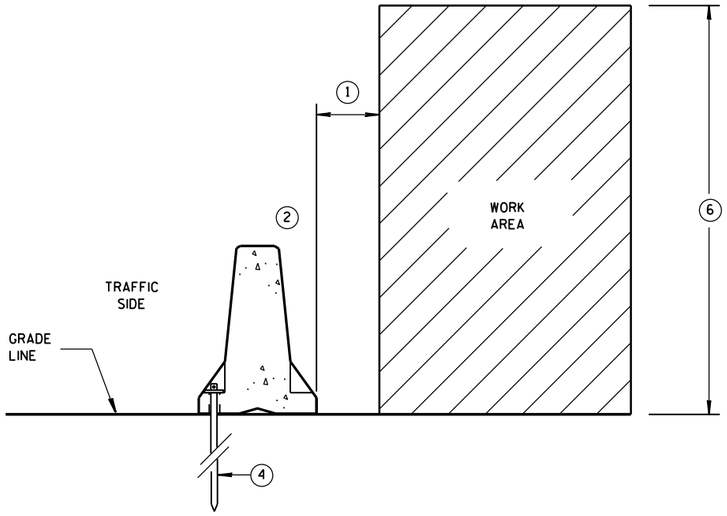
FREE STANDING TRANSITION TO TIED-DOWN SYSTEM

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

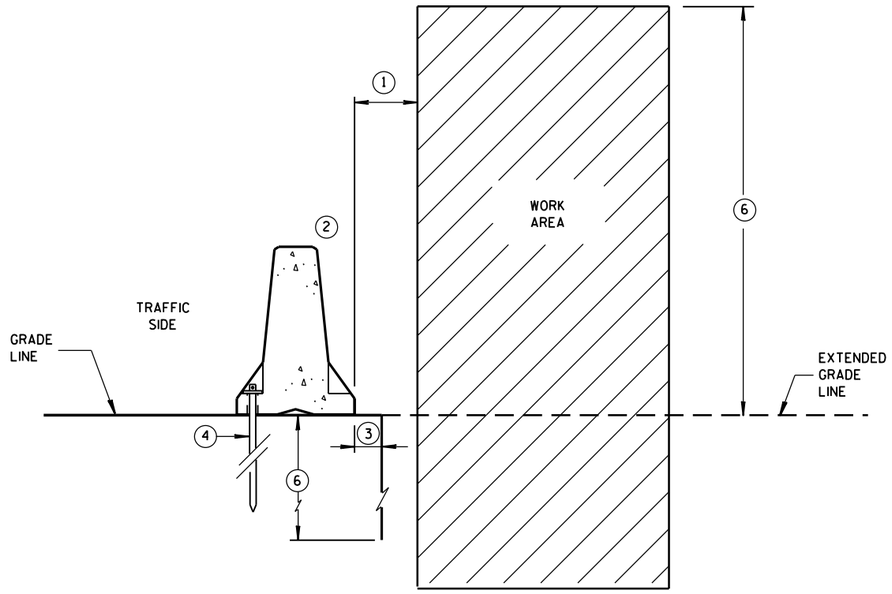
CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
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6
S.D.D. 14 B 7-15d



ANCHORED BARRIER SPACE REQUIREMENTS FOR HAZARDS EXTENDED ABOVE THE GRADE LINE

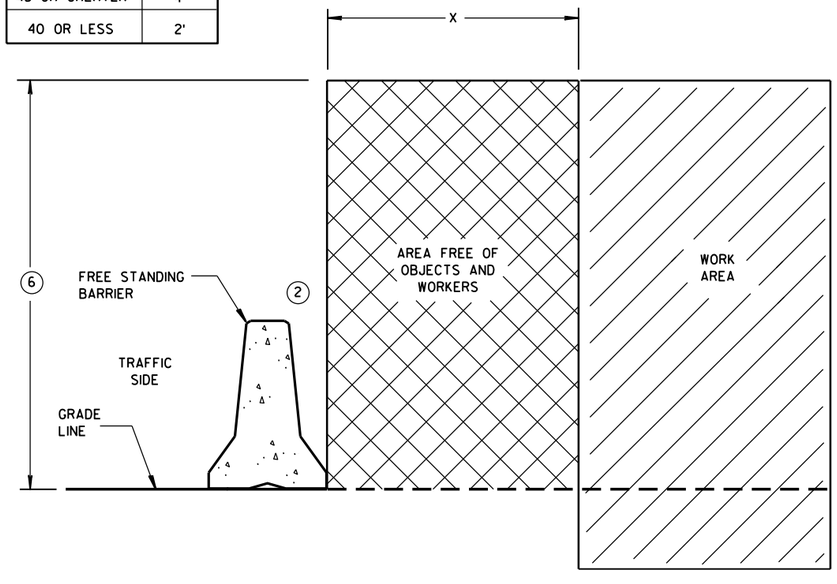


ANCHORED BARRIER SPACE REQUIREMENTS ON VERTICAL DROP OFFS

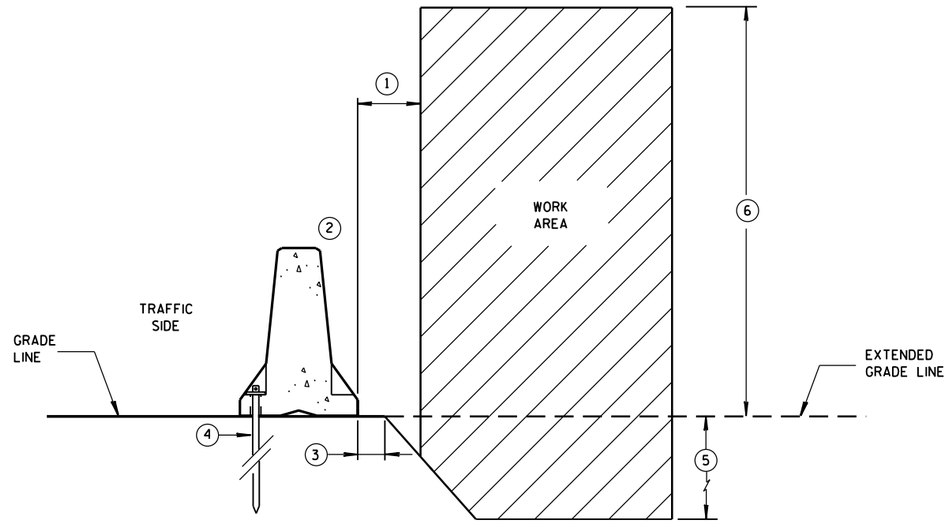
GENERAL NOTES

1. WHEN OBJECTS EXTEND ABOVE THE GRADE, A MINIMUM OF 1 FOOT IS REQUIRED FROM BACK OF BARRIER TO OBJECT. SEE OTHER DETAILS FOR FOR THE MINIMUM OFFSET FROM BACK OF BARRIER TO SLOPES OR VERTICAL DROPS.
2. OBJECTS ARE NOT TO BE PLACED ON, MOUNTED TO, OR LEANED AGAINST THE BARRIER WITHOUT PERMISSION OF THE PROJECT ENGINEER.
3. SEE OTHER DETAIL ON SHEET "D" FOR SPACE REQUIREMENTS.
4. SEE BOLT THROUGH DECK, REMOVABLE ADHESIVE ANCHOR, OR A STAKE DOWN FOR ASPHALTIC SURFACE TREATMENT DETAILS. ASPHALTIC ANCHOR SHOWN.
5. DEPTH OF 3 FEET OR MORE.
6. Y = 6'-6".

POSTED SPEED MPH	X
45 OR GREATER	4'
40 OR LESS	2'



FREE STANDING BARRIER SPACE REQUIREMENTS



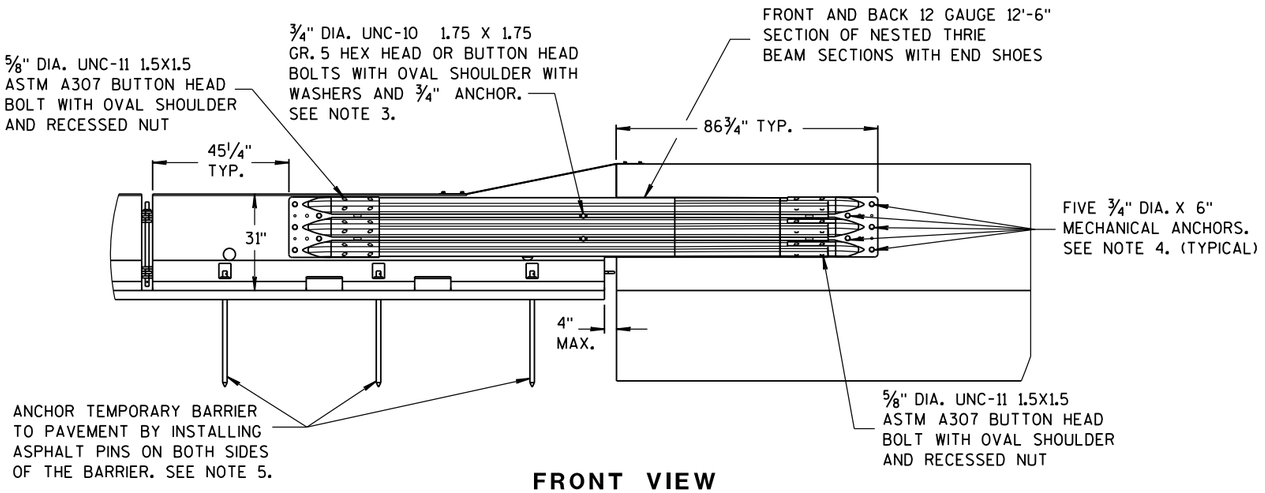
ANCHORED BARRIER SPACE REQUIREMENTS ON SLOPES

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

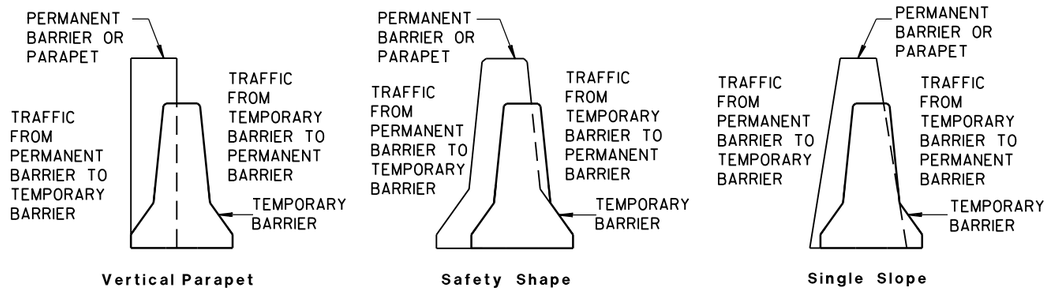
STATE OF WISCONSIN
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S.D.D. 14 B 7-15e



FRONT VIEW

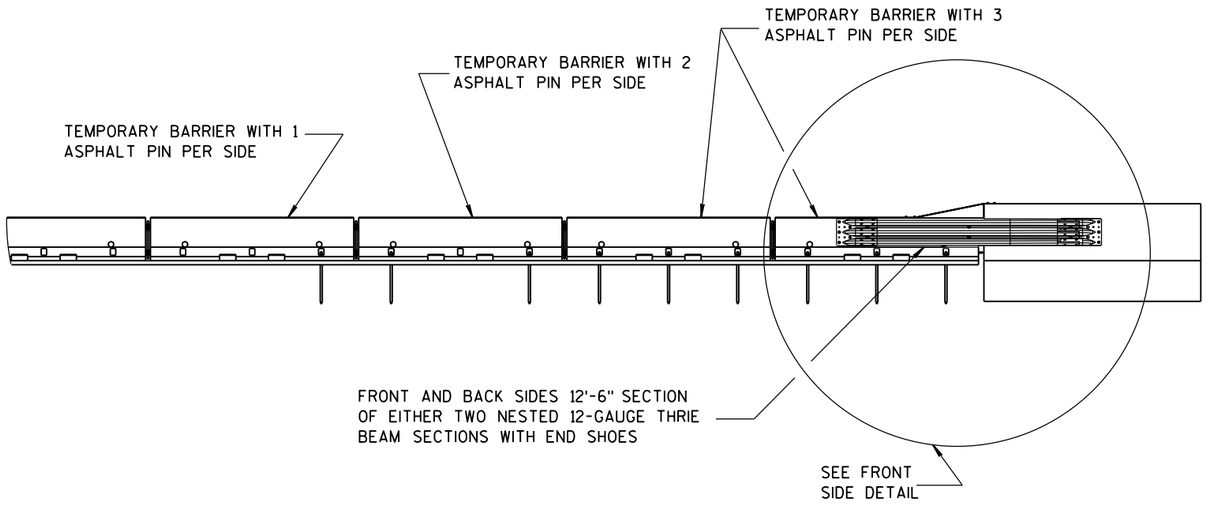


TEMPORARY BARRIER PLACEMENT FOR BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM

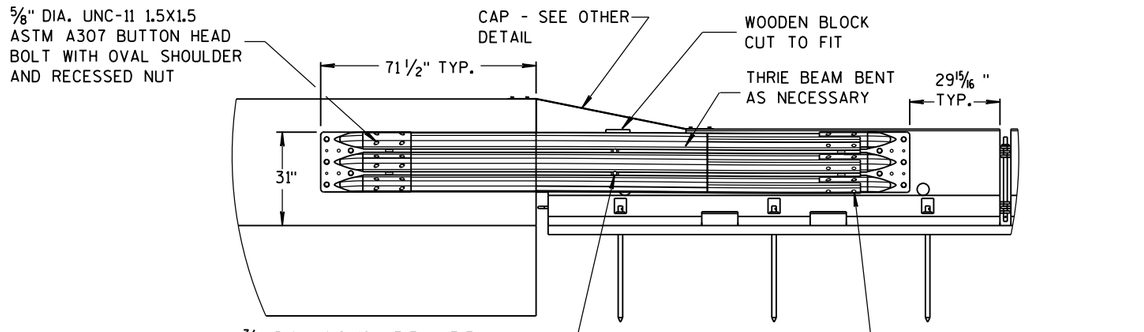
NOTES

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

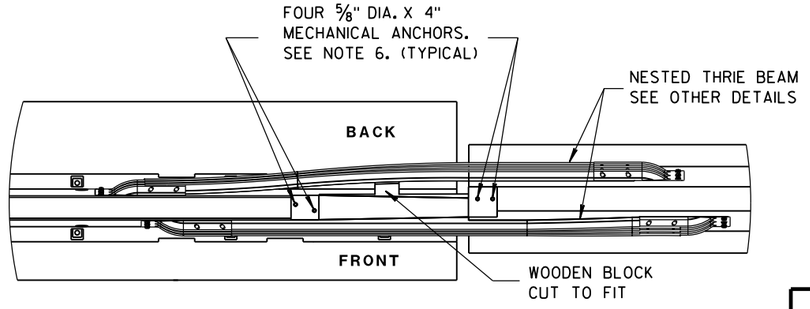
1. CAP END PLATE PLACED FLUSH WITH UPSTREAM END OF PERMANENT BARRIER OR PARAPET.
2. THRIE BEAM PIECES ARE OFFSET 15 1/4" TO PREVENT INTERFERENCE FROM THE ANCHORS ON OPPOSING SIDES.
3. MINIMUM MECHANICAL OR ADHESIVE ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 9.48 KIPS AND ULTIMATE SHEAR LOAD 10.48 KIPS.
4. MINIMUM MECHANICAL OR ADHESIVE ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 17.9 KIPS AND ULTIMATE SHEAR LOAD 21.96 KIPS.
5. MAY BE USED ON CONCRETE OR ASPHALT PAVEMENTS. ASPHALT OPTION SHOWN. FOR CONCRETE OPTION SEE OTHER DETAILS.
6. MINIMUM MECHANICAL OR ADHESIVE ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 12.14 KIPS AND ULTIMATE SHEAR LOAD 17.5 KIPS.



FRONT VIEW



BACK VIEW



PLAN VIEW

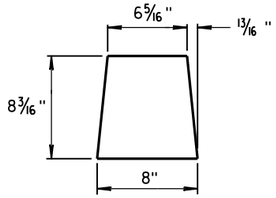
BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

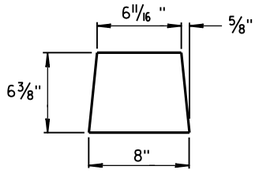
STATE OF WISCONSIN
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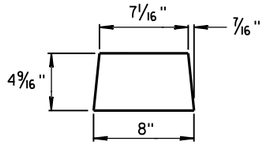
S.D.D. 14 B 7-15f



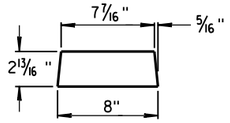
GUSSET 1



GUSSET 2

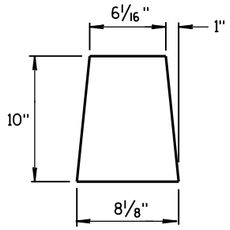


GUSSET 3

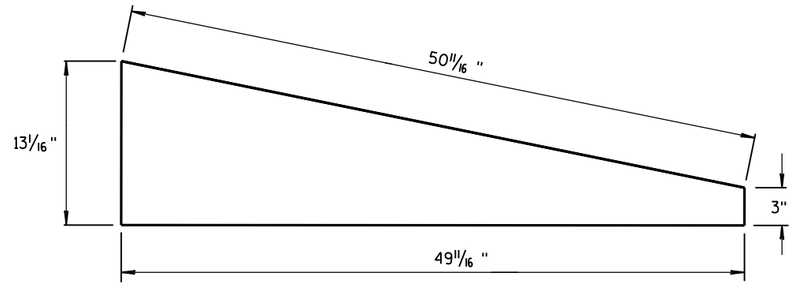


GUSSET 4

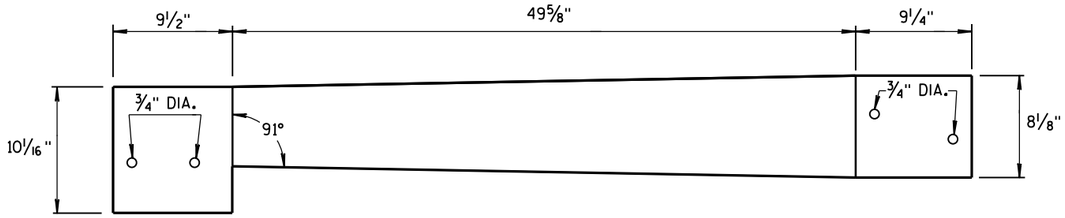
GUSSETS

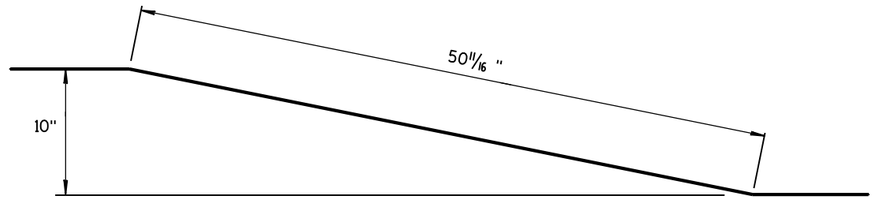


END PLATE



SIDE PLATE

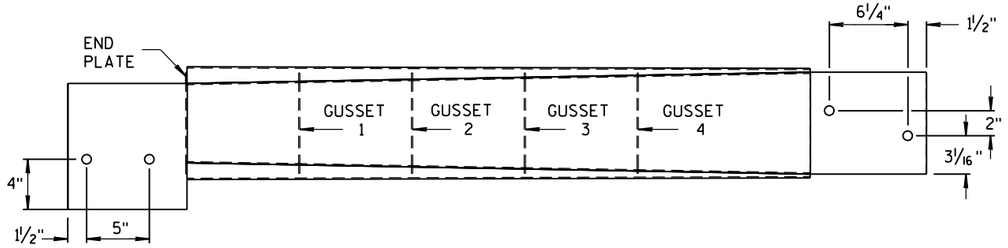


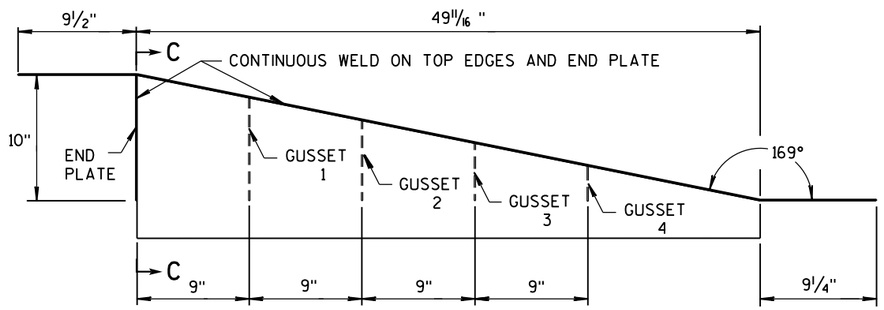


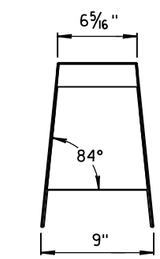
TOP PLATE

SIDE, TOP AND END PLATES FOR CAP FROM TEMPORARY CONCRETE BARRIER TO 42" PERMANENT CONCRETE BARRIER

SIDE PLATES, TOP PLATE, END PLATE AND GUSSETS ARE 12 GAUGE ASTM A36 GALVANIZED STEEL.







SECTION C-C

NOTES

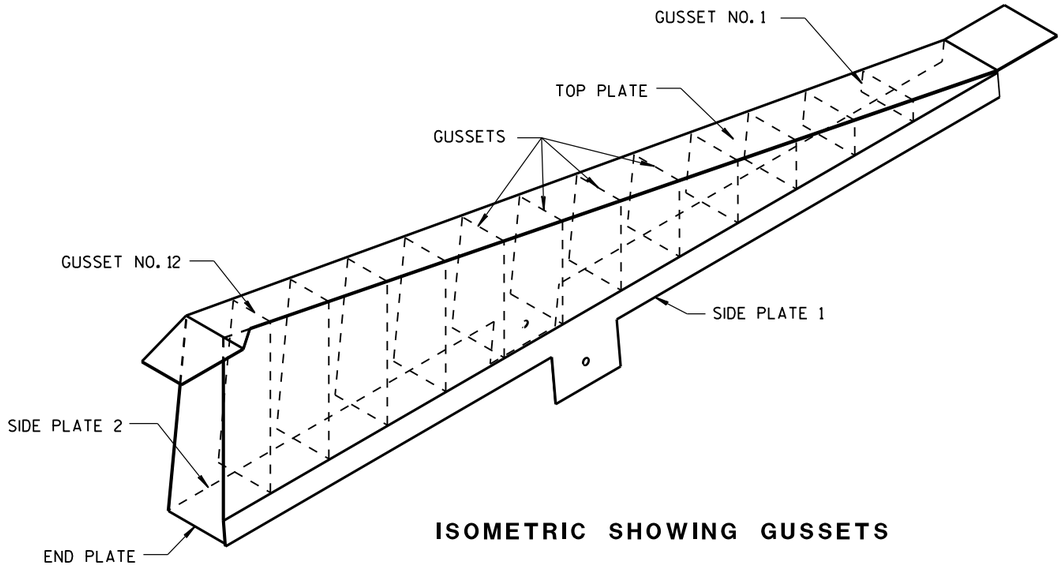
1. FOUR GUSSETS AND END PLATE ARE STITCH WELDED ON THREE SIDES.
2. TWO TRIANGULAR SIDE PLATES ARE STITCH WELDED TO TOP PLATE, END PLATE, AND GUSSETS.

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

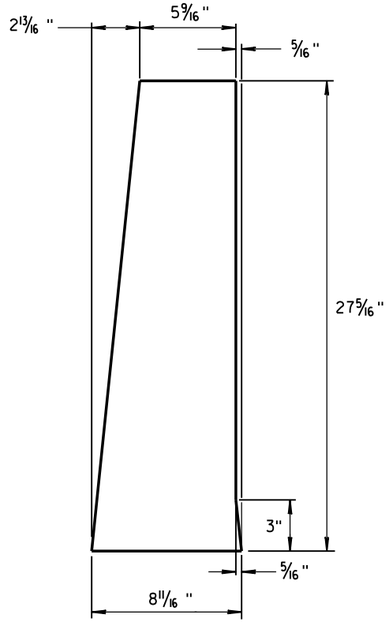
CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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S.D.D. 14 B 7-15g

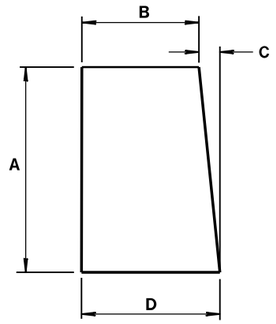


ISOMETRIC SHOWING GUSSETS



END PLATE

1/8" STEEL PLATE



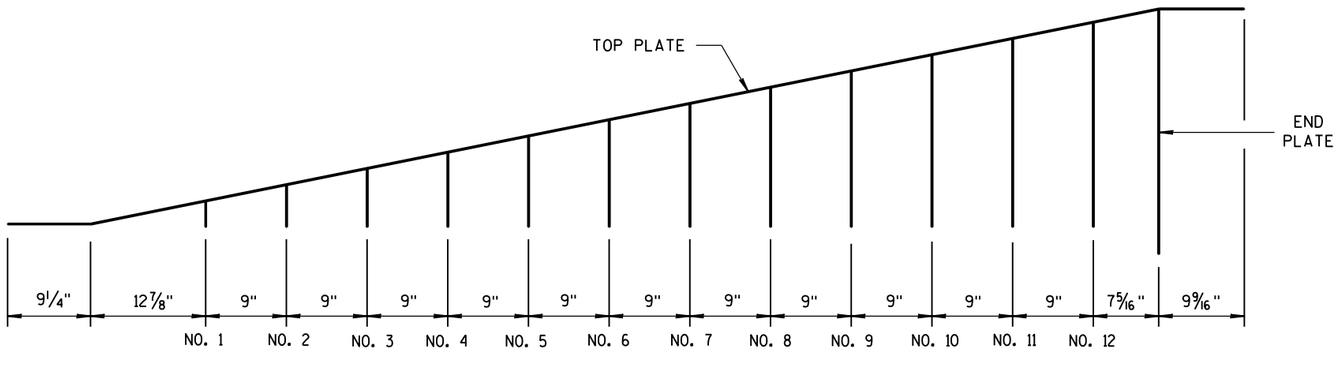
GUSSETS 1 - 12

ALL GUSSETS 1/8" STEEL PLATE

GUSSET DIMENSIONS				
GUSSET NO.	A	B	C	D
1	2 7/8"	7 3/4"	1/4"	8
2	4 11/16 "	7 9/16 "	1/2"	8
3	6 1/2"	7 3/8"	11/16 "	8 1/16 "
4	8 5/16 "	7 3/16 "	7/8"	8 1/16 "
5	10 1/8"	7"	1 1/16 "	8 1/16 "
6	11 15/16 "	6 13/16 "	1 1/4"	8 1/16 "
7	13 3/4"	6 5/8"	1 7/16 "	8 1/16 "
8	15 9/16 "	6 7/16 "	1 9/16 "	8 1/16 "
9	17 3/8"	6 1/4"	1 13/16 "	8 1/16 "
10	19 3/16 "	6 1/16 "	1 15/16 "	8 1/16 "
11	21"	5 7/8"	2 3/16 "	8 1/16 "
12	22 13/16 "	5 11/16 "	2 5/16 "	8 1/16 "

SIDE PLATES, TOP PLATE, END PLATE AND GUSSETS ARE 12 GAUGE ASTM A36 STEEL AND GALVANIZED.

GUSSETS AND END PLATE ARE STITCH WELDED ON 3 SIDES. TWO TRIANGULAR SIDE PLATES ARE STITCH WELDED TO TOP PLATE, END PLATE AND GUSSETS.



GUSSET LOCATION

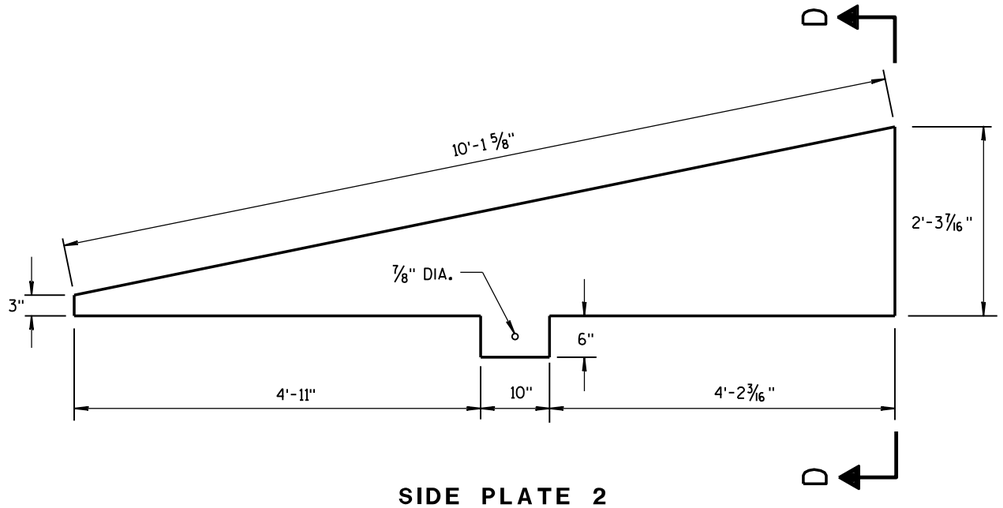
CAP DETAILS FOR TEMPORARY CONCRETE BARRIER TO 56" PERMANENT CONCRETE BARRIER

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

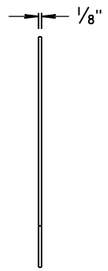
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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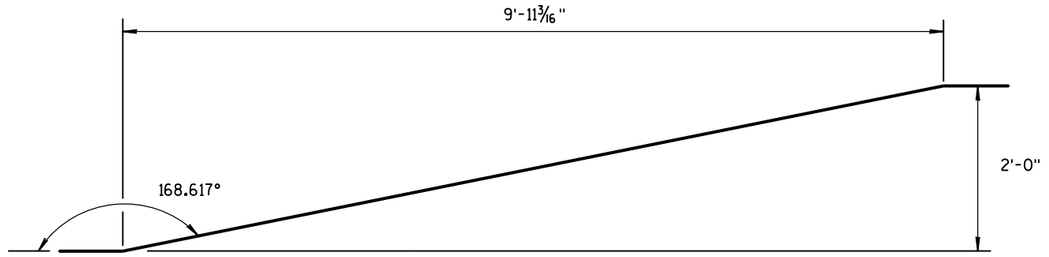
S.D.D. 14 B 7-15h



SIDE PLATE 2

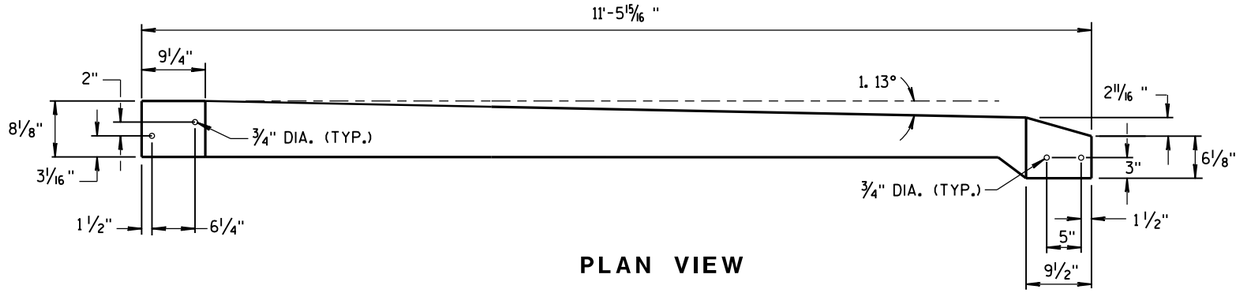


END VIEW



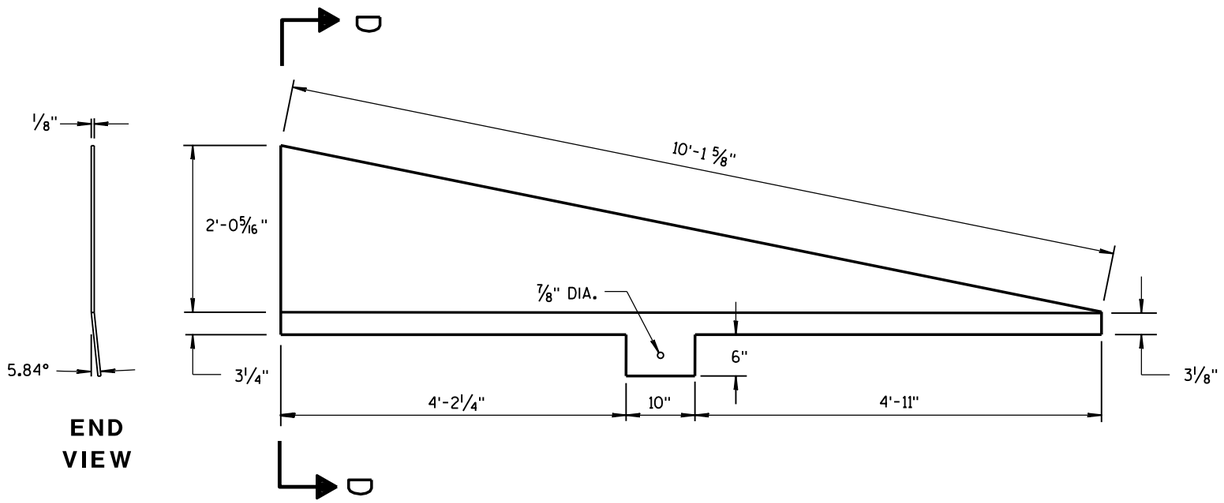
SIDE VIEW

TOP PLATE



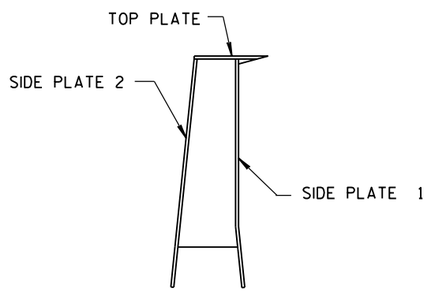
PLAN VIEW

TOP PLATE



END VIEW

SIDE PLATE 1



SECTION D-D

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

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

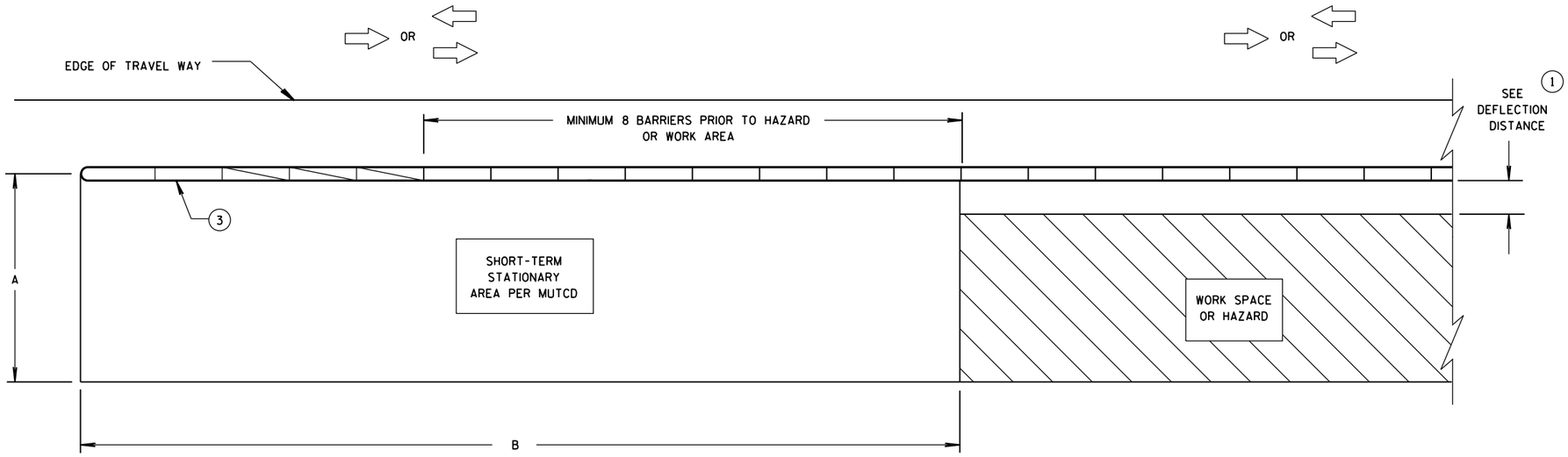
APPROVED
June 2017
DATE
/S/ Rodney Taylor
ROADWAY STANDARDS UNIT SUPERV
FHWA

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S.D.D. 14 B 7-15i

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S.D.D. 14 B 7-15i



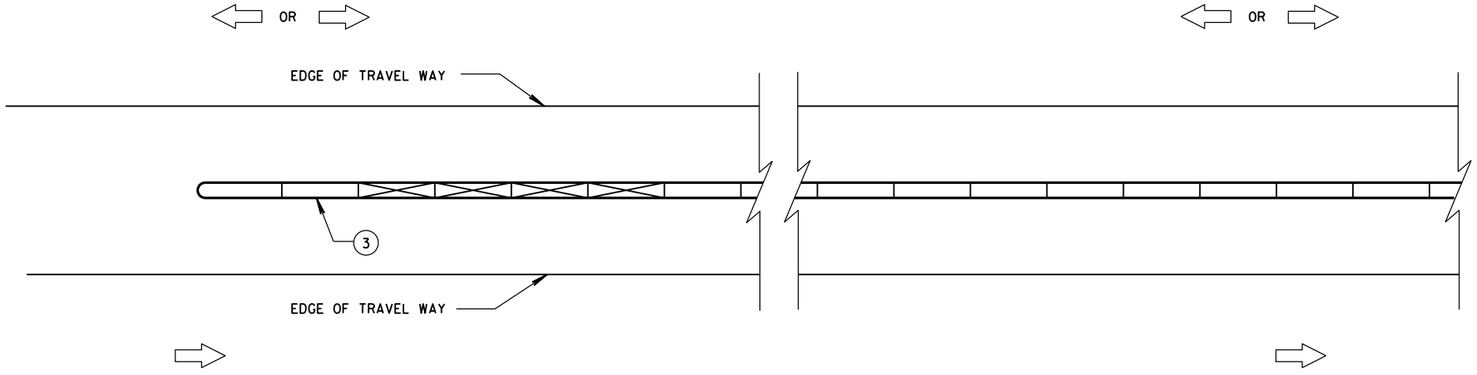
CRASH CUSHION/SAND BARREL ARRAY AND TEMPORARY BARRIER INSTALLATION FOR TRAFFIC ON ONE SIDE OF BARRIER

DIMENSION A TABLE (2)

FACILITY	POSTED SPEED MPH	DIMENSION A	
		MIN. FT	MAX. FT
FREEWAY/EXPRESSWAY	ALL	15	20
NON-FREEWAY/EXPRESSWAY	GREATER THAN OR EQUAL TO 45	10	15
NON-FREEWAY/EXPRESSWAY	LESS THAN 45	8	10
AADT LESS THAN 1,500	ALL	8	10

DIMENSION B TABLE (2)

POSTED SPEEDS MPH	DIMENSION B FT
20	115
25	155
30	200
35	250
40	305
45	360
50	425
55	495
60	570
65	645



CRASH CUSHION/SAND BARREL ARRAY AND TEMPORARY BARRIER INSTALLATION FOR TRAFFIC ON BOTH SIDES OF BARRIER

LEGEND

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

GENERAL NOTES

SEE STANDARD DETAIL DRAWING 14B7 FOR MORE INFORMATION.

DETAILS PROVIDE A GENERAL LAYOUT OF TEMPORARY CONCRETE BARRIER, CRASH CUSHIONS, SAND BARREL ARRAYS AND TIE DOWN TRANSITIONS. DETAILS PROVIDED MAY NOT FIT ALL POSSIBLE SITUATIONS OR SITE CONDITIONS. SEE OTHER SECTIONS OF THE CONTRACT OR PROJECT ENGINEER FOR MORE DETAILS.

ADDITIONAL TEMPORARY BARRIER MAY BE REQUIRED TO PROTECT TRAVELING PUBLIC FROM HAZARDS, CONTRACTOR'S OPERATIONS OR TO CONTROL TRAFFIC.

TEMPORARY BARRIER MAY BE REQUIRED TO BE ANCHORED TO PAVEMENT OR BRIDGE DECK.

FOR DETAILS ON CRASH CUSHION OR SAND BARREL ARRAYS SEE OTHER SECTIONS OF THE PLAN AND MANUFACTURE'S DETAILS.

SLOPES LEADING TO TEMPORARY BARRIER, CRASH CUSHION OR SAND BARREL ARRAY ARE 10:1 OR LESS.

(1) FOR DEFLECTION INFORMATION SEE STANDARD DETAIL DRAWING 14B7.

(2) VALUES PROVIDED MAY NOT FIT ALL POSSIBLE SITUATIONS OR SITE CONDITIONS. SEE OTHER SECTIONS OF THE CONTRACT OR PROJECT ENGINEER FOR MORE DETAILS.

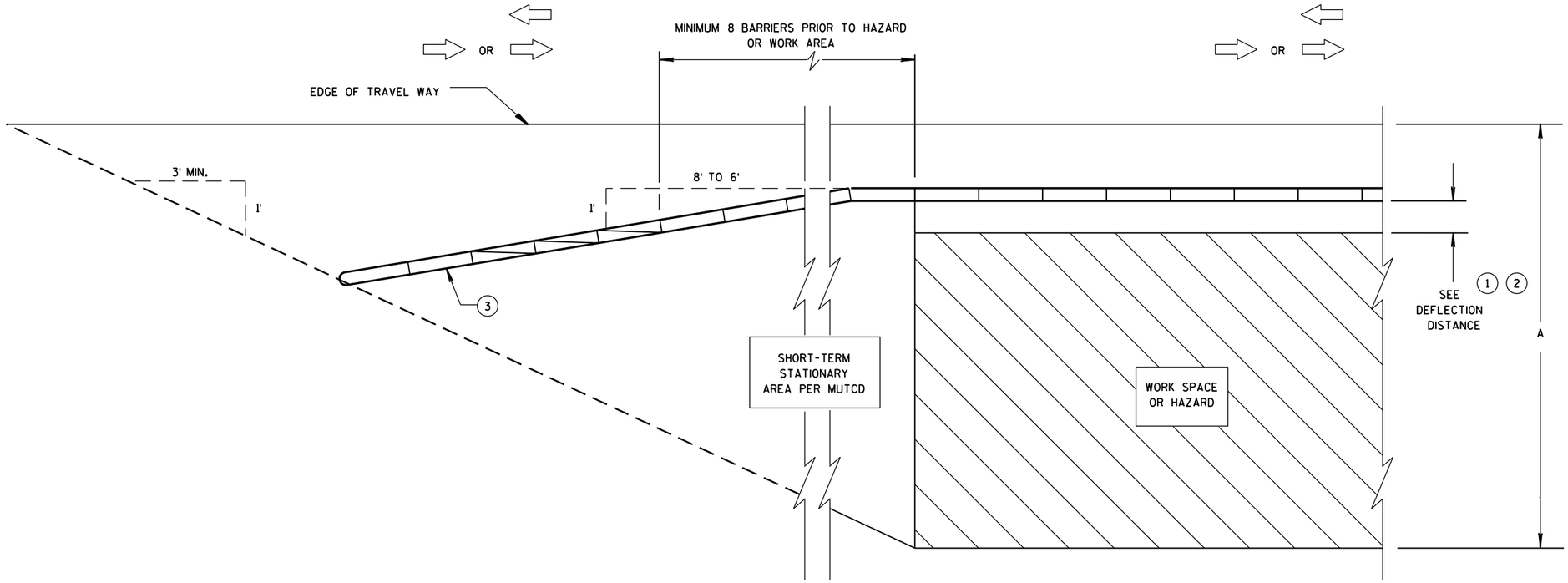
(3) ANCHOR TEMPORARY BARRIER ACCORDING TO CRASH CUSHION OR SAND BARREL MANUFACTURER'S RECOMMENDATIONS. IF MANUFACTURER'S RECOMMENDATIONS ARE NOT PROVIDED, ANCHOR 3 PINS ON TRAFFIC SIDE.

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

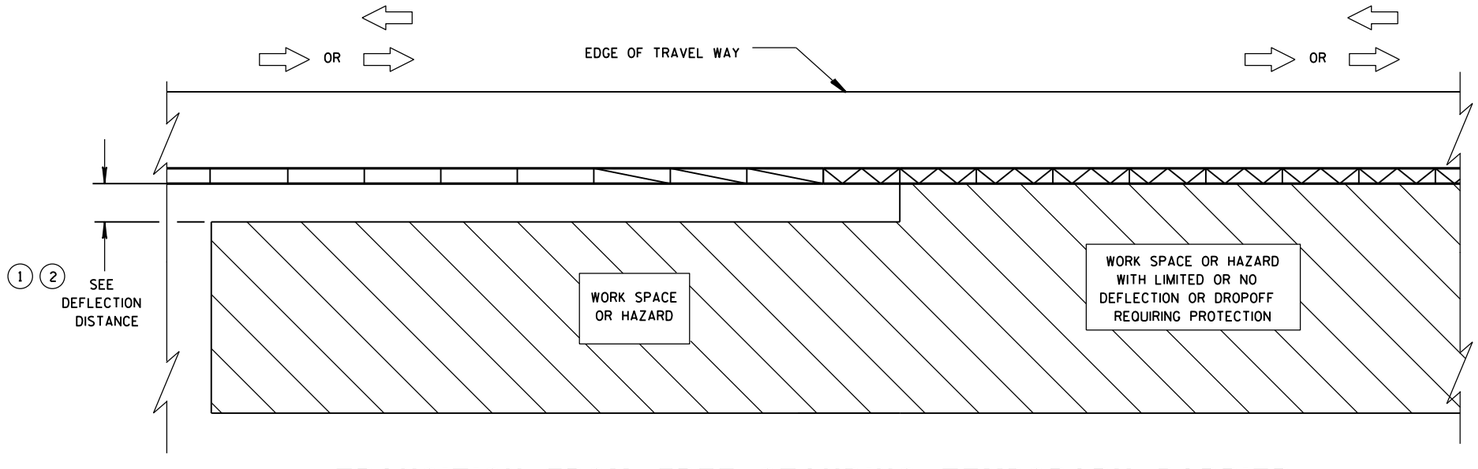
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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S.D.D. 14 B 8-2a



CRASH CUSHION/SAND BARREL ARRAY AND TEMPORARY BARRIER INSTALLATION FOR TRAFFIC ON ONE SIDE - FLARED INSTALLATION



TRANSITION FROM FREE STANDING TEMPORARY BARRIER TO ANCHORED BARRIER

LEGEND

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

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

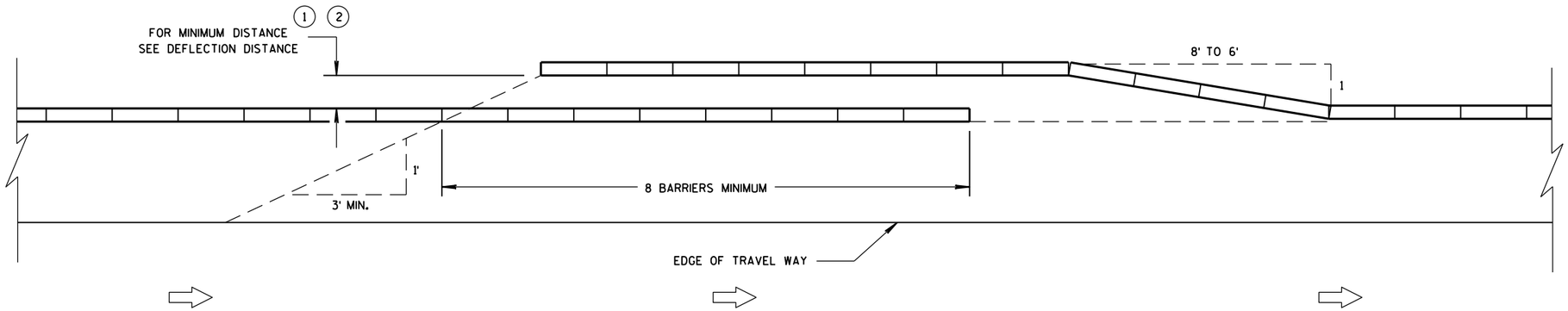
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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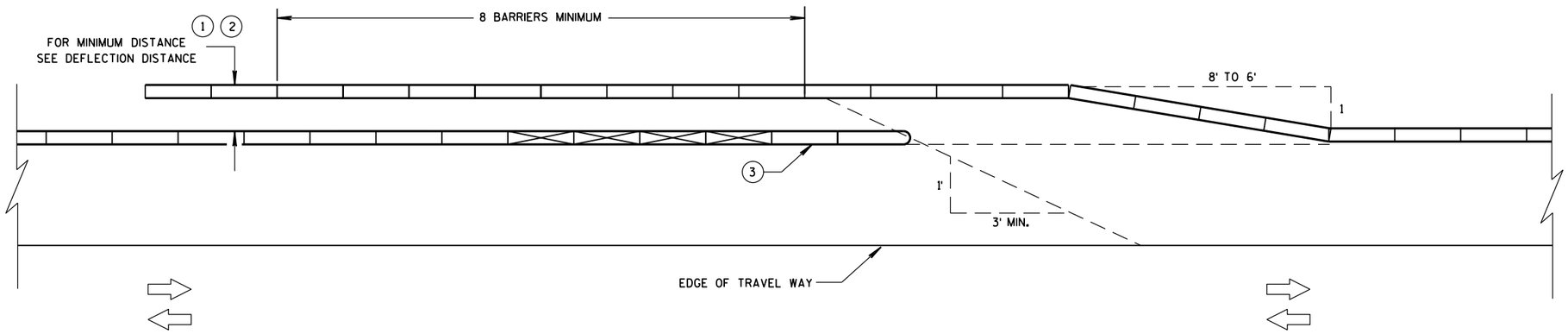
S.D.D. 14 B 8-2b

6

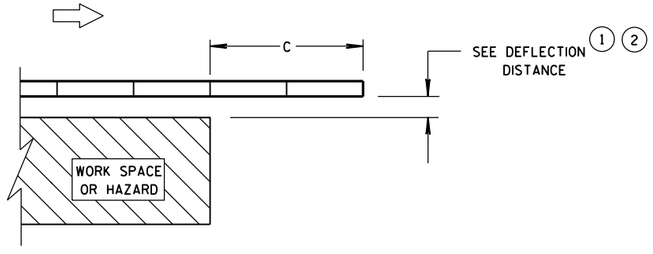
S.D.D. 14 B 8-2b



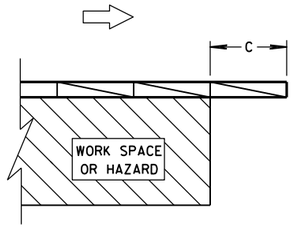
TEMPORARY BARRIER OVERLAP - ONE-WAY TRAFFIC



TEMPORARY BARRIER OVERLAP - TWO-WAY TRAFFIC



ENDING TEMPORARY BARRIER DOWNSTREAM - UNANCHORED



ENDING TEMPORARY BARRIER DOWNSTREAM - ANCHORED

LEGEND

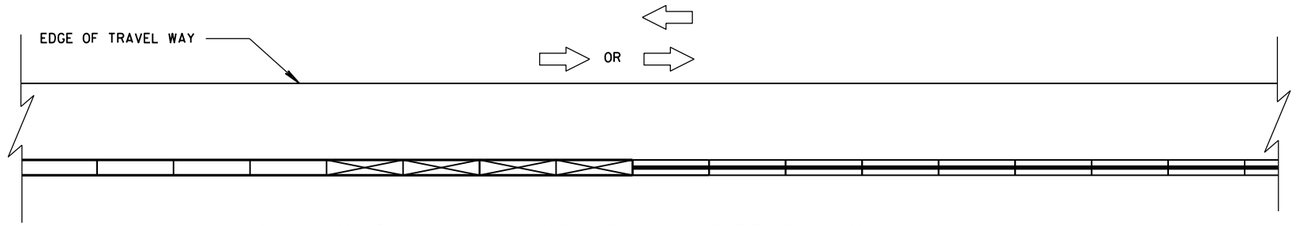
- DIRECTION OF TRAVEL
- CRASH CUSHION OR SAND BARREL ARRAY
- SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS
- SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS
- 3 PINS PLACED ON TRAFFIC SIDE OF BARRIER
- PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET
- FREE STANDING TEMPORARY BARRIER

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

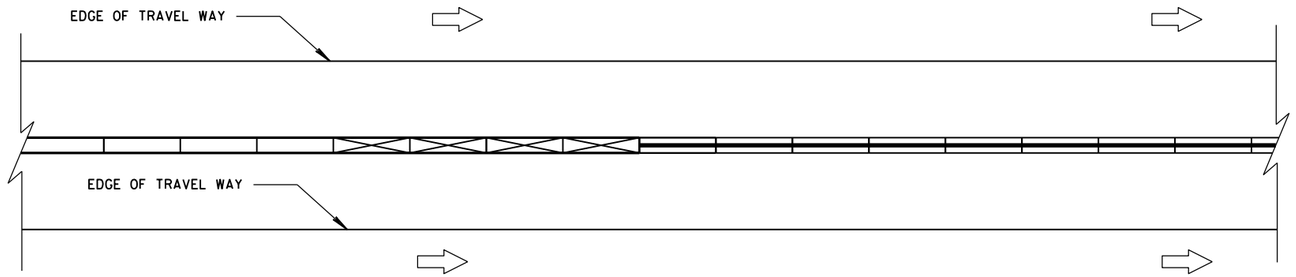
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

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S.D.D. 14 B 8-2c



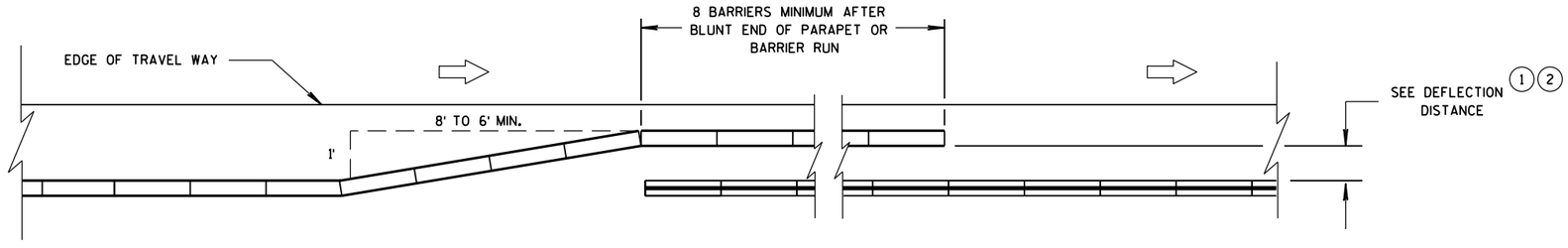
CONNECTING TEMPORARY BARRIER TO PERMANENT
CONCRETE BARRIER-TRAFFIC ON ONE SIDE



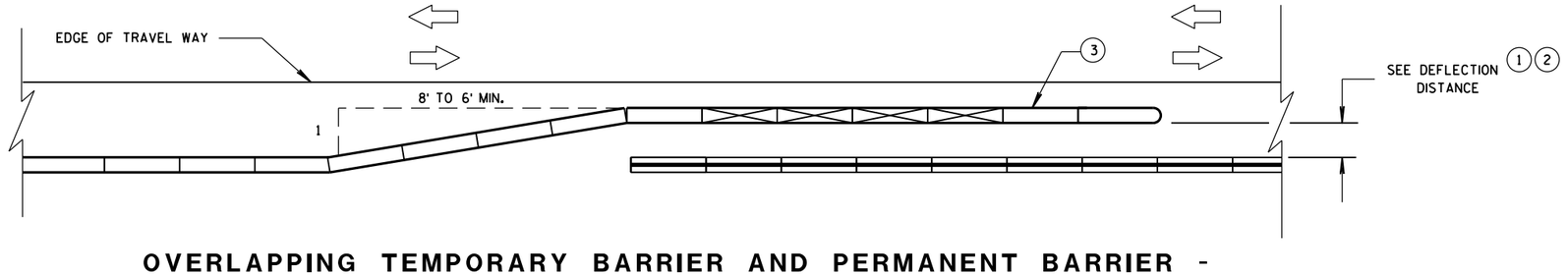
CONNECTING TEMPORARY BARRIER TO PERMANENT
CONCRETE BARRIER-TRAFFIC ON BOTH SIDES

LEGEND

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



OVERLAPPING TEMPORARY BARRIER AND PERMANENT BARRIER -
ONE WAY TRAFFIC



OVERLAPPING TEMPORARY BARRIER AND PERMANENT BARRIER -
TWO WAY TRAFFIC

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

S.D.D. 14 B 8-2d

LEGEND

DIRECTION OF TRAVEL

CRASH CUSHION OR SAND BARREL ARRAY

SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS

SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS

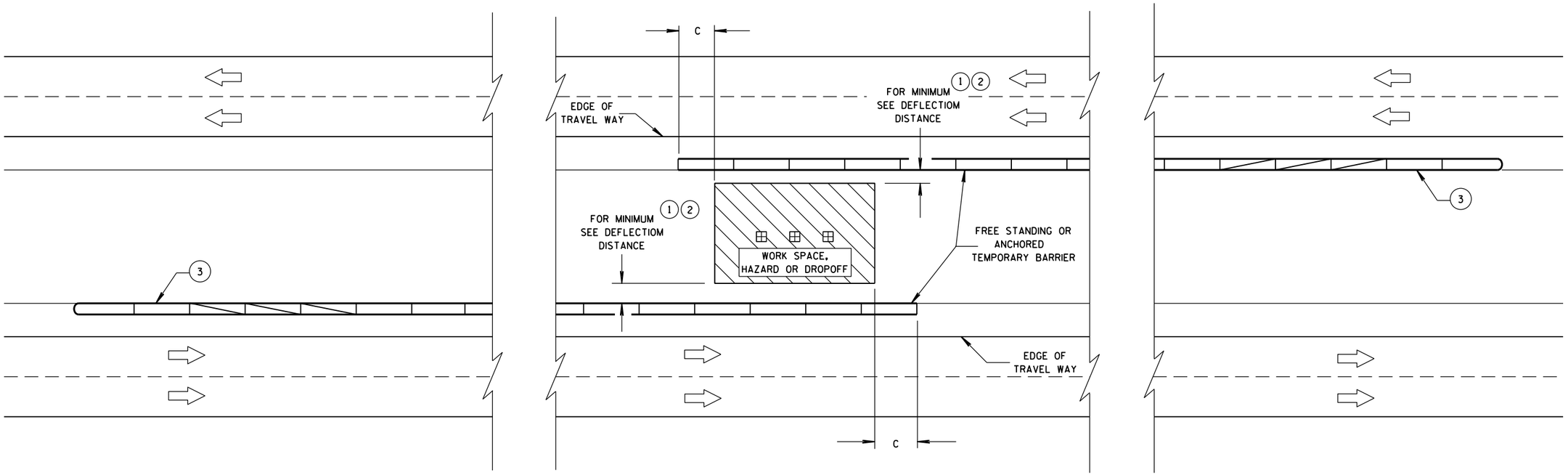
3 PINS PLACED ON TRAFFIC SIDE OF BARRIER

PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET

FREE STANDING TEMPORARY BARRIER

DIMENSION C TABLE (2)

AVAILABLE DEFLECTION DISTANCE	MINIMUM LENGTH OF BARRIER BEYOND HAZARD FT
GREATER THAN 8'	12.5
LESS THAN OR EQUAL TO 8' BUT GREATER THAN 4'	50
LESS THAN OR EQUAL TO 4'	100



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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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S.D.D. 14 B 8-2e

GENERAL NOTES

(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.

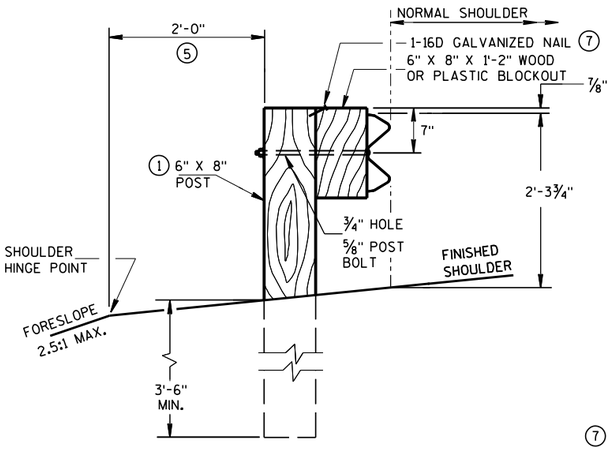
(5) IF THE DISTANCE FROM BACK OF POST TO SHOULDER HINGE POINT IS LESS THAN 2 FEET INSTALL LONGER POST AT HALF POST SPACING, W BEAM (LHW).

(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.

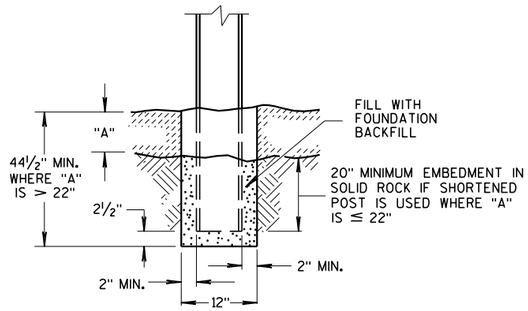
(7) WHEN USING STEEL POSTS AND WOOD BLOCKOUTS INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.

INSTALL BEAM GUARD SECTIONS AND ALL NECESSARY HARDWARE ACCORDING TO THE APPLICABLE PLAN AND CURRENT STANDARD AND SUPPLEMENTAL SPECIFICATIONS.

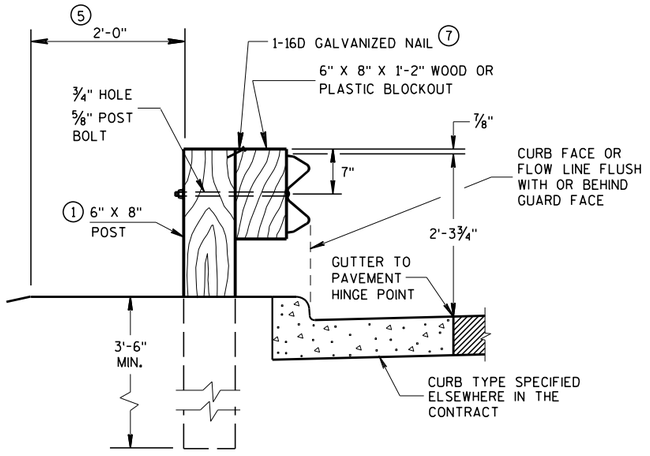
ALL DIMENSIONS ARE SUBJECT TO MANUFACTURER'S TOLERANCES EXCEPT WHERE ALLOWABLE TOLERANCES ARE SHOWN.



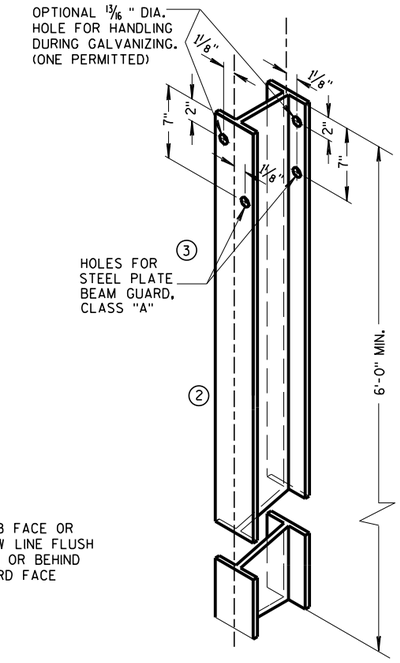
END VIEW
LOCATED ALONG A ROADWAY SHOULDER
STANDARD INSTALLATION



END VIEW
SETTING STEEL OR WOOD POST IN ROCK (6)

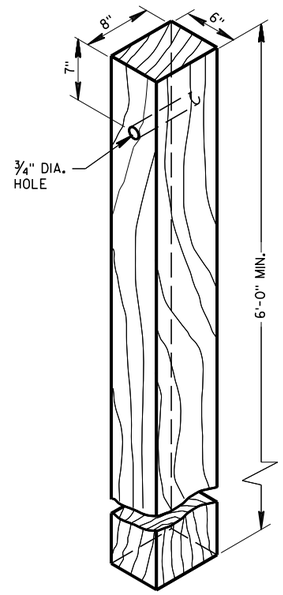


END VIEW
LOCATED ALONG A CURBED ROADWAY

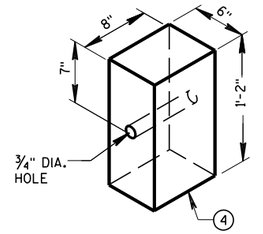


STEEL POST &
HOLE PUNCHING DETAIL
(W6 X 9) (1)

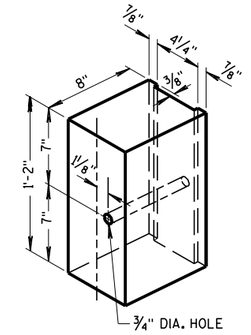
ALL HOLES 13/16" DIAMETER EXCEPT AS NOTED



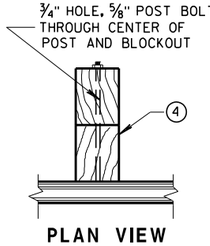
WOOD POST
(6"X8") NOMINAL



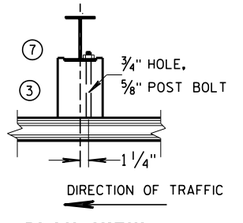
WOOD OR PLASTIC
BLOCKOUT FOR
WOOD POSTS



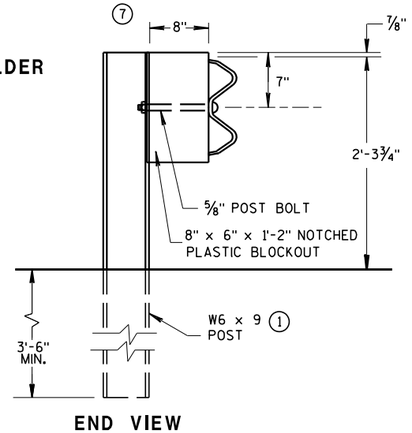
TYPICAL NOTCHED
PLASTIC BLOCKOUT
FOR STEEL POSTS (1)



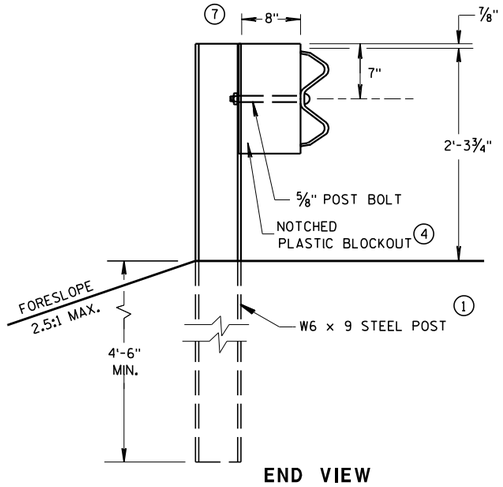
PLAN VIEW
WOOD POST, BLOCKOUT & BEAM



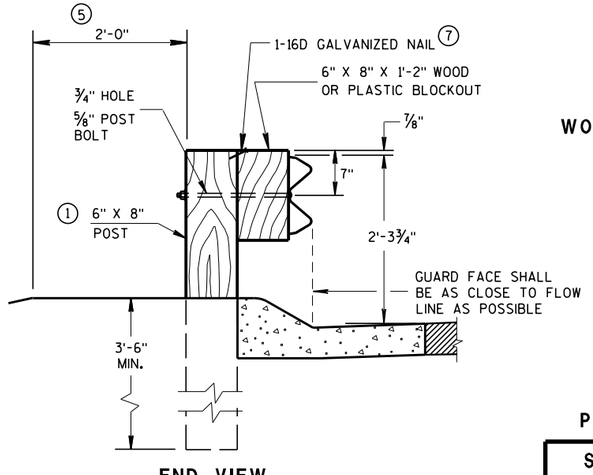
PLAN VIEW
STEEL POST, NOTCHED
PLASTIC BLOCKOUT & BEAM



END VIEW
STEEL POST & NOTCHED
PLASTIC BLOCKOUT ALTERNATIVE
STANDARD INSTALLATION



END VIEW
LONGER POST AT HALF
POST SPACING W BEAM
(LHW)



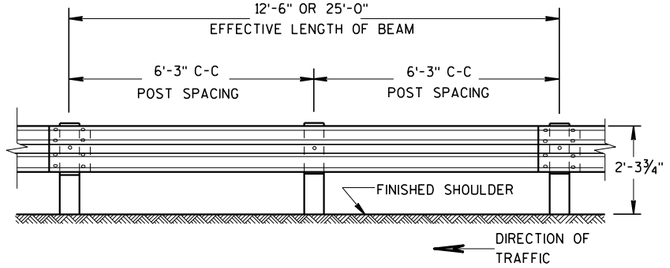
END VIEW
LOCATED ALONG A
MOUNTABLE CURBED ROADWAY

TYPICAL INSTALLATION OF STEEL PLATE BEAM GUARD

STEEL PLATE BEAM GUARD,
CLASS "A"
INSTALLATION & ELEMENTS

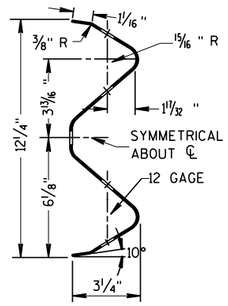
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
S.D.D. 14 B 15-11a

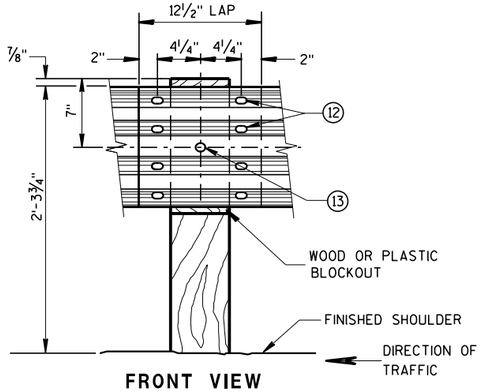


FRONT VIEW

POST SPACING STANDARD INSTALLATION



SECTION THRU W BEAM



FRONT VIEW

BEAM SPLICE AT WOOD POST AND POST MOUNTING DETAIL

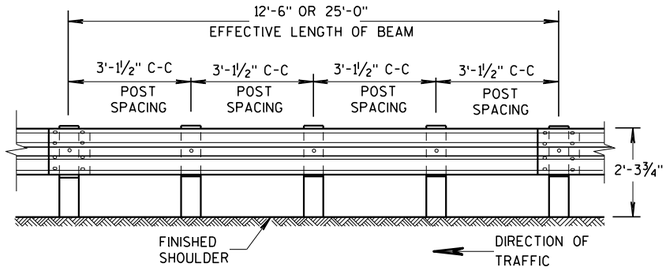
GENERAL NOTES

FURNISH GUARDRAIL DEFLECTORS FROM APPROVED PRODUCTS LIST.

(9) DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINA. START REFLECTORS AT POST #9 AND SPACE EVENLY EVERY 100 FEET (MAX.) TO THE END OF GUARDRAIL RUN, USING A MINIMUM OF 3 REFLECTORS.

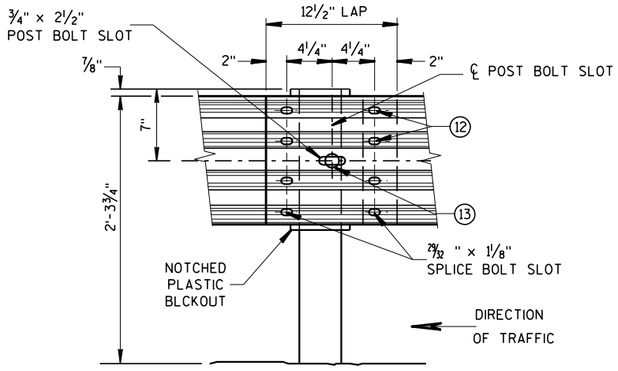
(12) 8 -⅝" ϕ X 2" BUTTON HEAD BOLTS WITH OVAL SHOULDERS & RECESS NUTS.

(13) ⅝" DIA. BUTTON HEAD BOLT AND RECESS NUT WITH ⅝" DIA. F844 FLAT WASHER UNDER NUT.



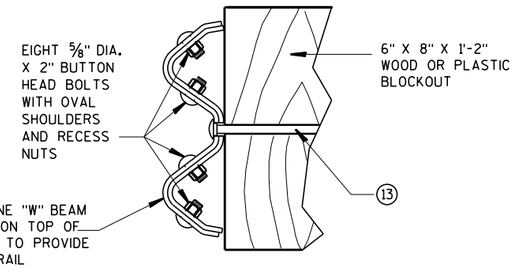
FRONT VIEW

POST SPACING FOR LONGER POST AT HALF POST SPACING W BEAM (LHW)



FRONT VIEW

BEAM SPLICE AT STEEL POST

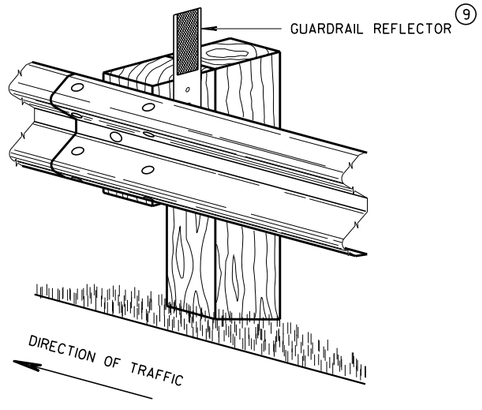


NESTED W BEAM (NW)

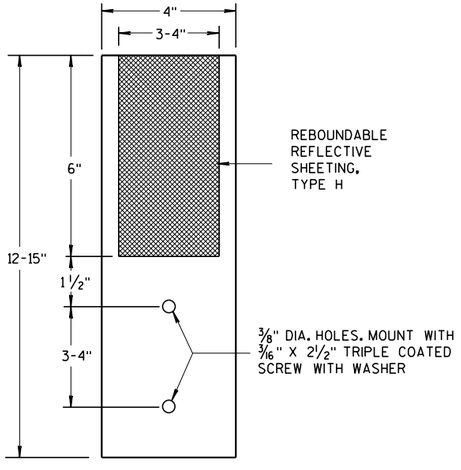
USE ALL OTHER STANDARD BEAM GUARD DETAILS FOR CONSTRUCTING NESTED W BEAM (NW)

TYPICAL SPLICING DETAILS OF STEEL PLATE BEAM GUARD

* USE DOUBLE SIDED WHITE GUADRAIL REFLECTORS ON ROADWAYS WITH BI-DIRECTIONAL TRAFFIC (NO MEDIAN). USE SINGLE SIDED WHITE (RIGHT SIDE) AND SINGLE SIDED YELLOW (LEFT SIDE) ON ROADWAYS WITH MEDIAN SEPARATION.



4" X 12" GUARDRAIL REFLECTOR DETAIL AND TYPICAL INSTALLATION *



4"x 12" GUARDRAIL REFLECTOR

STEEL PLATE BEAM GUARD, CLASS "A", INSTALLATION & ELEMENTS

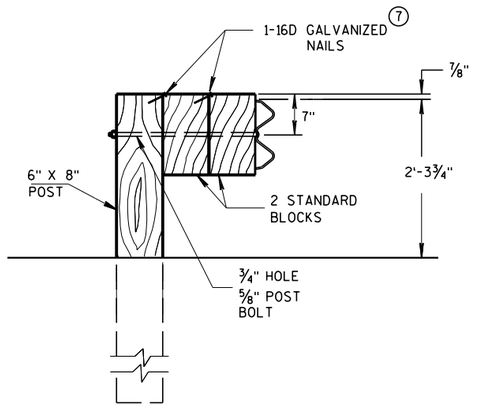
STATE OF WISCO 204
DEPARTMENT OF TRANSPORTATION

6

S.D.D. 14 B 15-11b

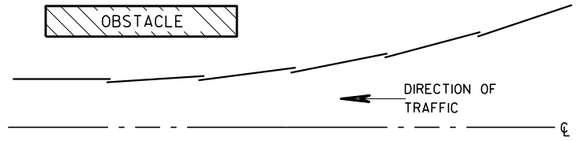
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S.D.D. 14 B 15-11b

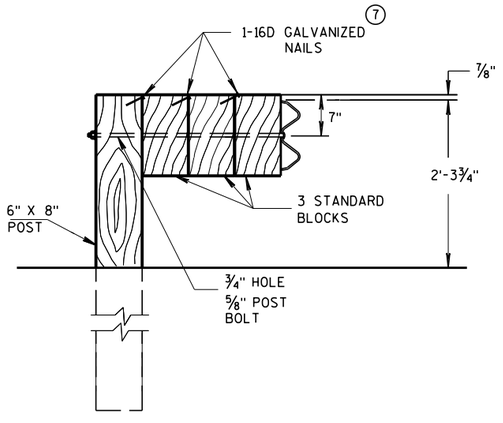


DETAIL FOR DOUBLE BLOCKS

THE NUMBER OF DOUBLE BLOCK POSTS WITHIN A BARRIER RUN IS UNLIMITED

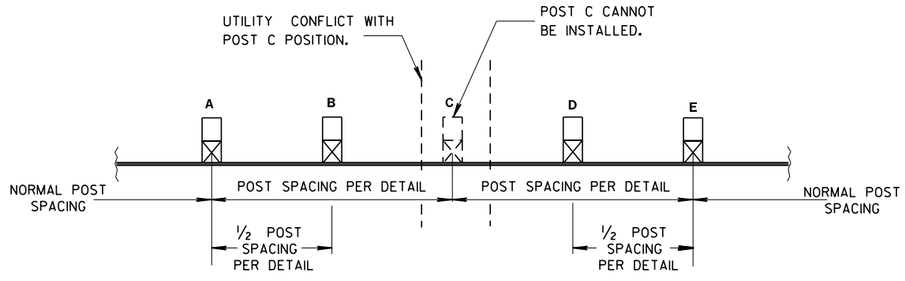


PLAN VIEW
BEAM LAPPING DETAIL



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.

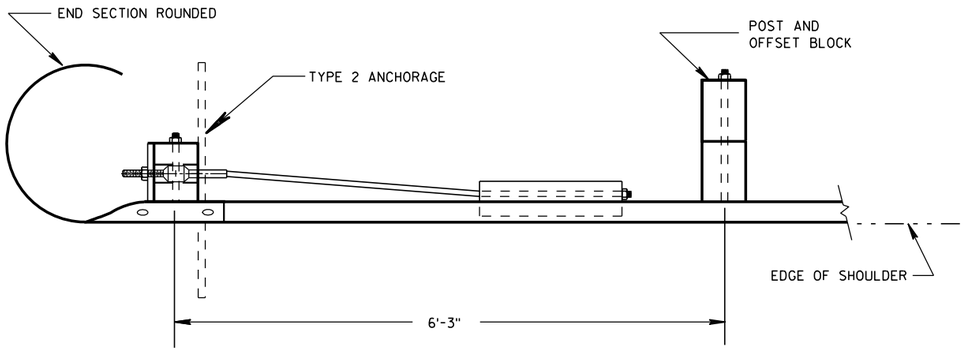
STEEL PLATE BEAM GUARD, CLASS "A", INSTALLATION & ELEMENTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

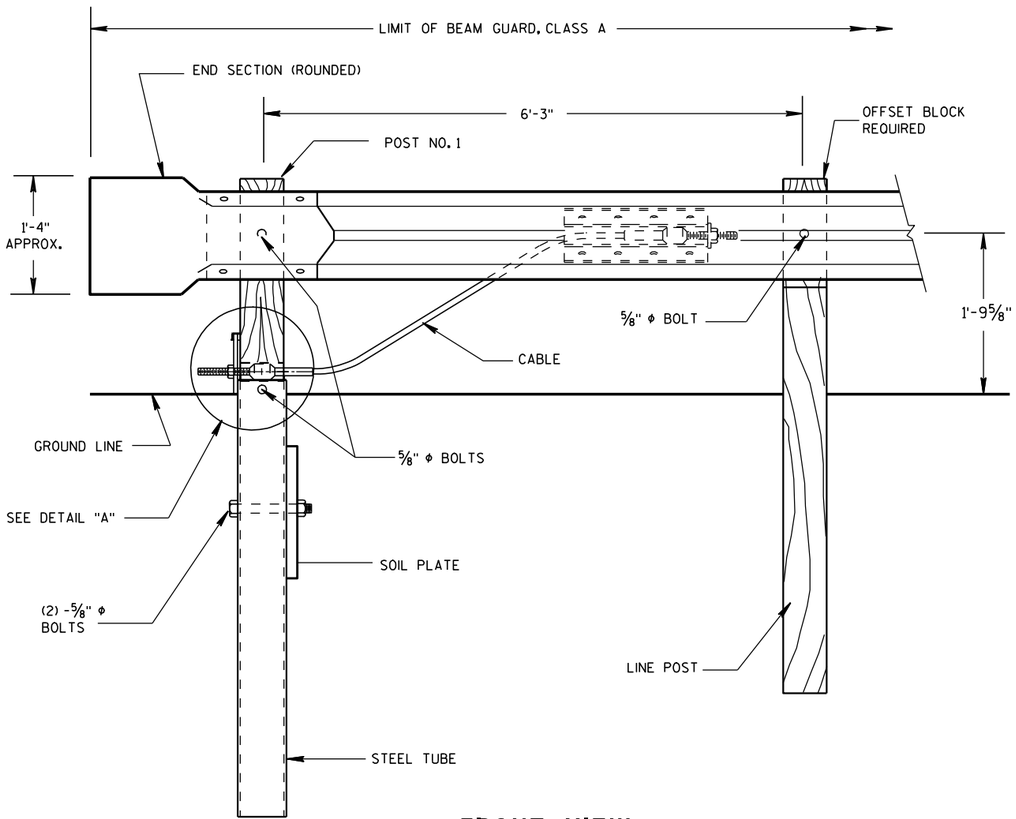
APPROVED
June 2017
DATE
FHWA

/S/ Rodney Taylor
ROADWAY STANDARDS UNIT SUPERVISOR

6
S.D.D. 14 B 15-11c



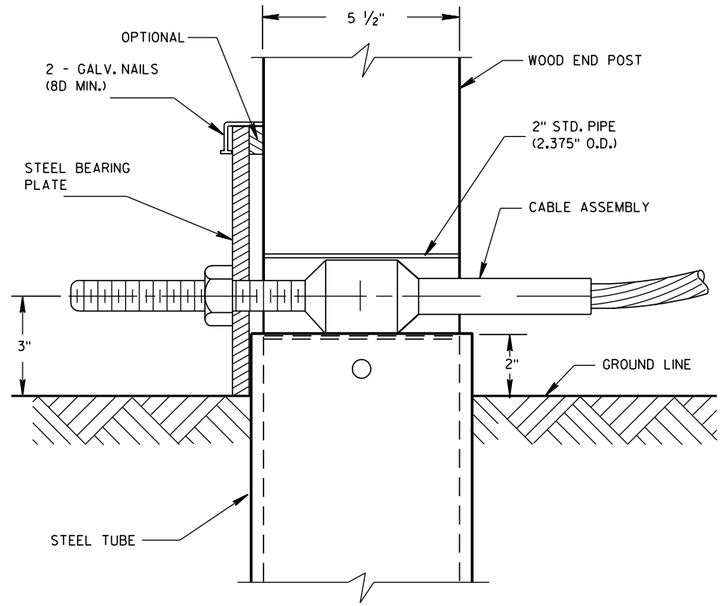
PLAN VIEW



FRONT VIEW

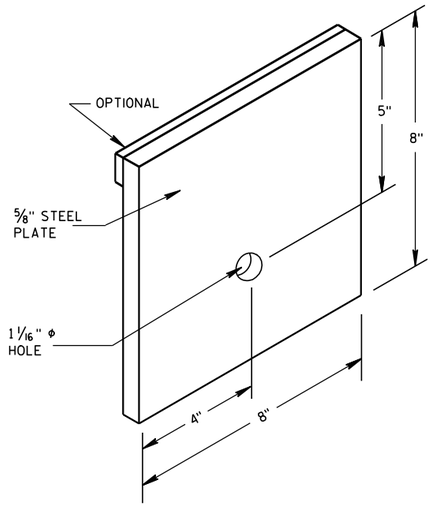
END TREATMENT WITH TYPE 2 ANCHORAGE

(USE ON ONE-WAY ROADWAYS ONLY - DEPARTING END)



DETAIL "A"

POST NO. 1



STEEL BEARING PLATE

ANCHORAGE FOR STEEL
PLATE BEAM GUARD
TYPE 2

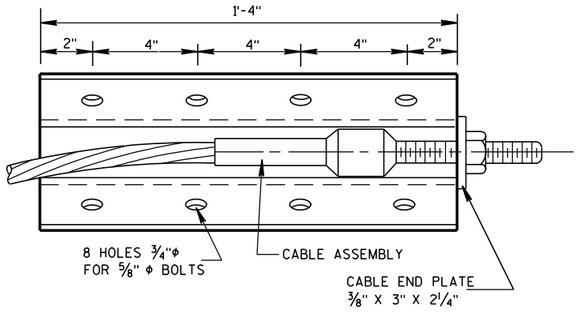
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

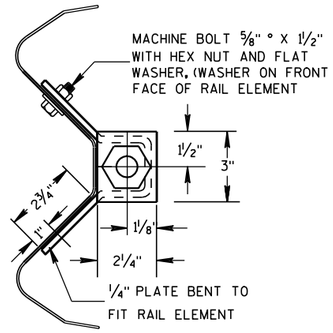
S.D.D. 14 B 16-4a

6

S.D.D. 14 B 16-4a

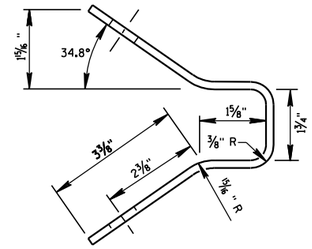


FRONT VIEW

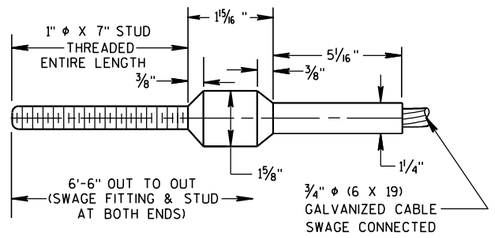


END VIEW

ANCHOR PLATE DETAIL



END VIEW OF BRACKET



CABLE ASSEMBLY

CABLE, SWAGE FITTING, STUD AND NUT SHALL DEVELOP
A MINIMUM BREAKING STRENGTH OF 40,000 LB
(TIGHTEN UNTIL TAUT)

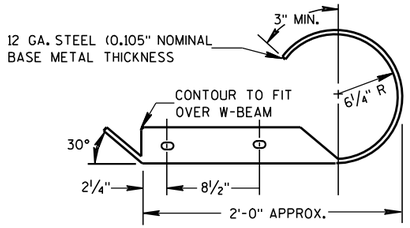
GENERAL NOTES

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

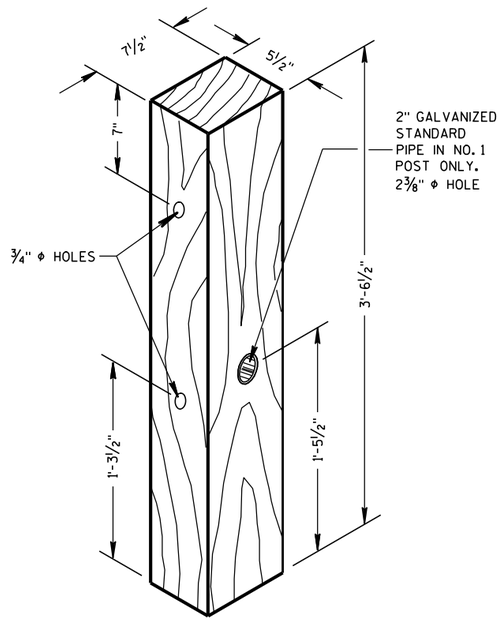
STRUCTURAL TUBING SHALL CONFORM TO THE REQUIREMENTS OF ASTM A-500 GRADE B OR ASTM A-501.

POST NO. 1 SHALL BE WOOD BREAKAWAY POST INSERTED AND BOLTED INTO STEEL TUBE.

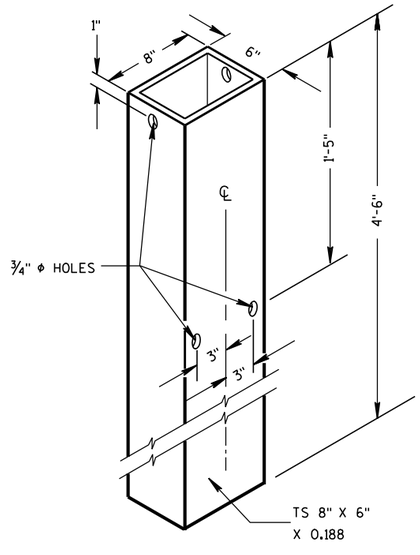
TYPE 2 ANCHORAGE SHALL CONSIST OF A STEEL TUBE, SOIL PLATE WOOD BREAKAWAY POST, BEARING PLATE, ANCHOR PLATE, CABLE ASSEMBLY AND ALL ASSOCIATED HARDWARE, ALL STEEL PARTS SHALL BE GALVANIZED.



PLAN VIEW

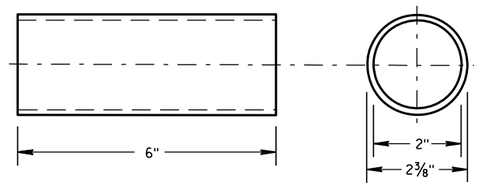


WOOD BREAKAWAY POST



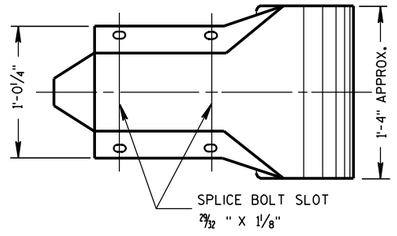
STEEL TUBE

STEEL TUBE SHALL CONFORM TO
REQUIREMENTS OF ASTM A500

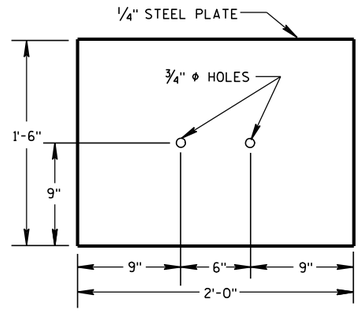


BREAKAWAY TERMINAL POST SLEEVE

GALVANIZED STANDARD STRENGTH STEEL PIPE, ASTM 53 GRADE "B"



FRONT VIEW
W BEAM END SECTION ROUNDED



SOIL PLATE

ANCHORAGE FOR STEEL PLATE BEAM GUARD TYPE 2

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

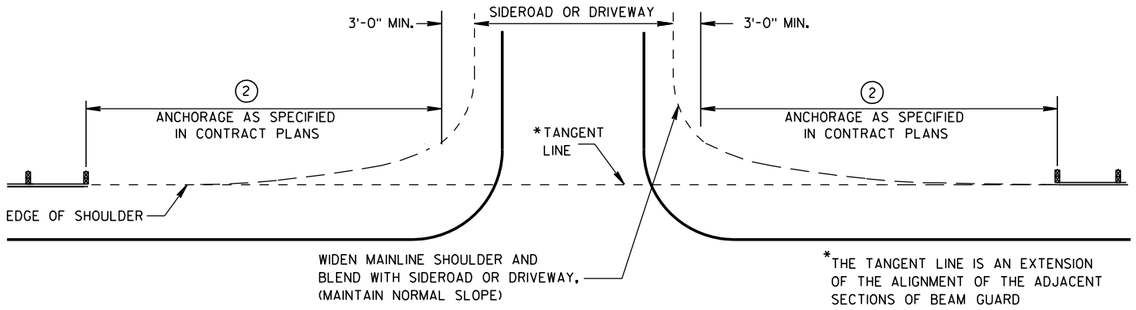
APPROVED
8/21/2007 DATE
/S/ Jerry H. [illegible]
ROADWAY STANDARDS ENGINEER
207
FHWA

6

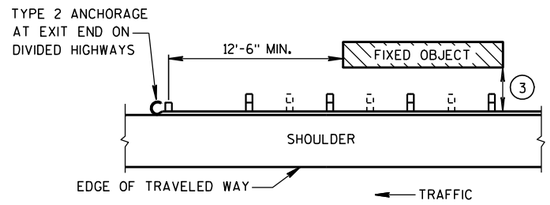
S.D.D. 14 B 16-4b

6

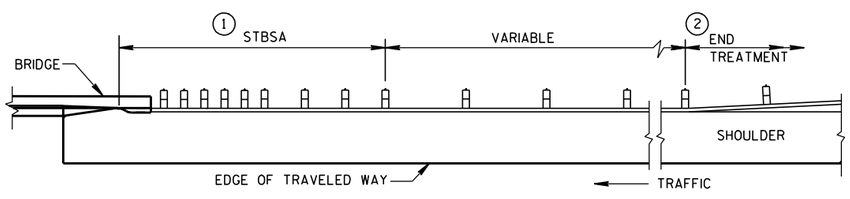
S.D.D. 14 B 16-4b



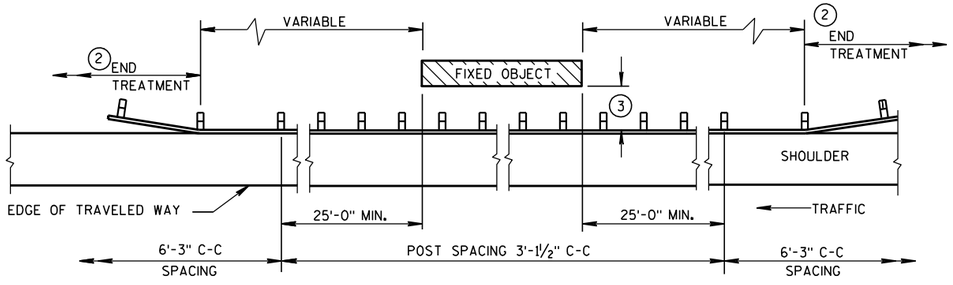
BEAM GUARD AT SIDEROADS OR DRIVEWAYS



BEAM GUARD AT OBSTACLES EXIT END - ONE WAY TRAFFIC

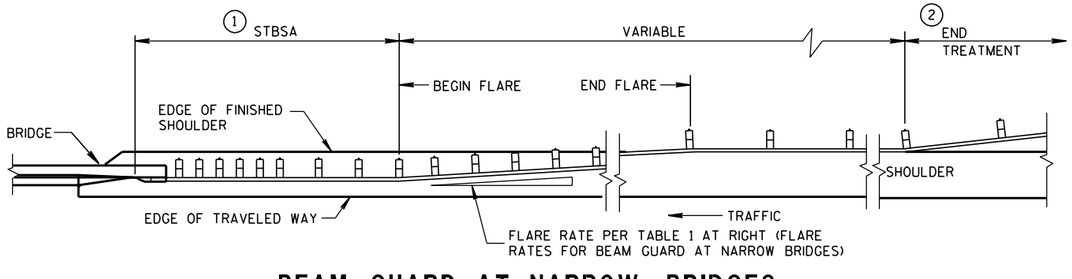


BEAM GUARD AT FULL WIDTH BRIDGES



BEAM GUARD AT OBSTACLES - TWO WAY TRAFFIC

(RAIL TO OBSTACLE CLEARANCE 3'-6" TO 4'-6")



BEAM GUARD AT NARROW BRIDGES

(FLARED TO SHOULDER EDGE, THEN PARALLEL TO ROADWAY)

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

6

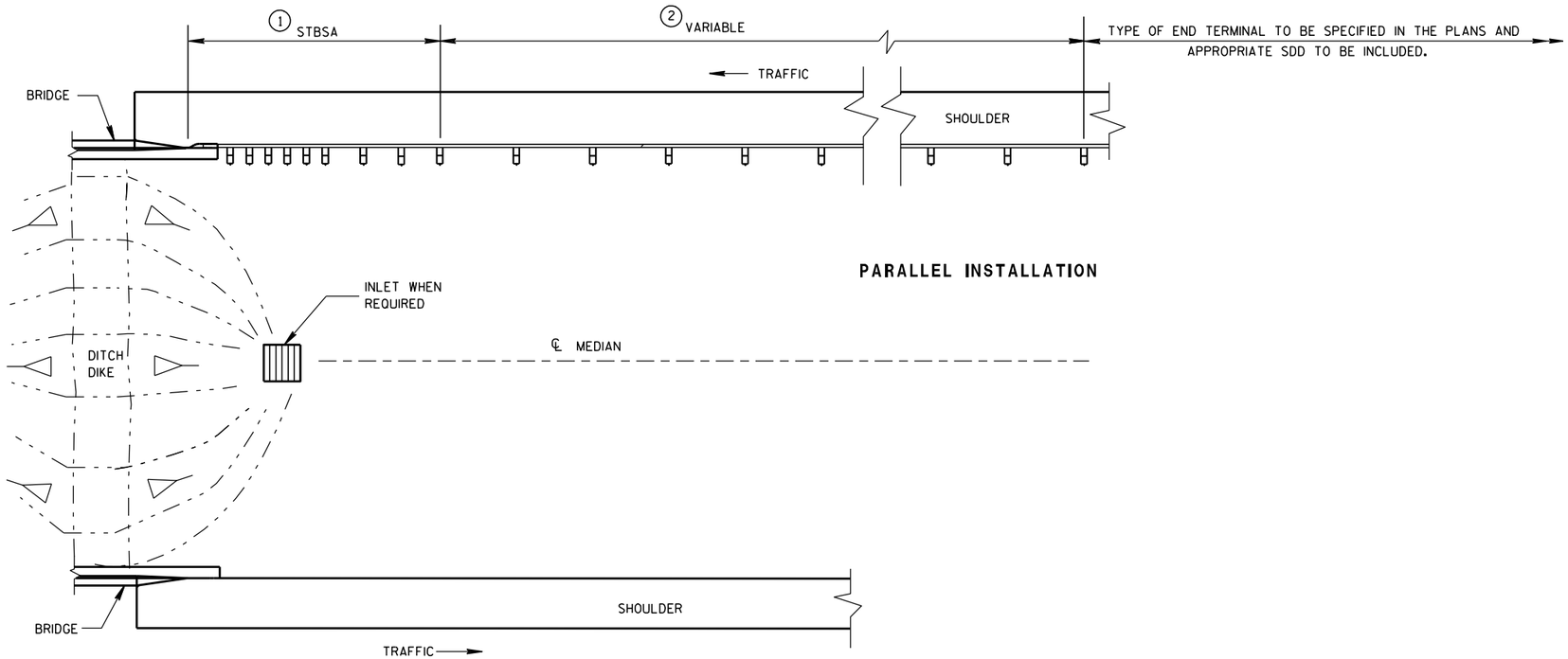
S.D.D. 14 B 18-6a

6

S.D.D. 14 B 18-6a

GENERAL NOTES

1. STEEL THRIE BEAM STRUCTURAL APPROACH (STBSA) - SEE CURRENT SDD 14B20.
2. LOCATIONS AND LENGTHS OF BEAM GUARD ARE SHOWN ELSEWHERE IN THE PLAN.



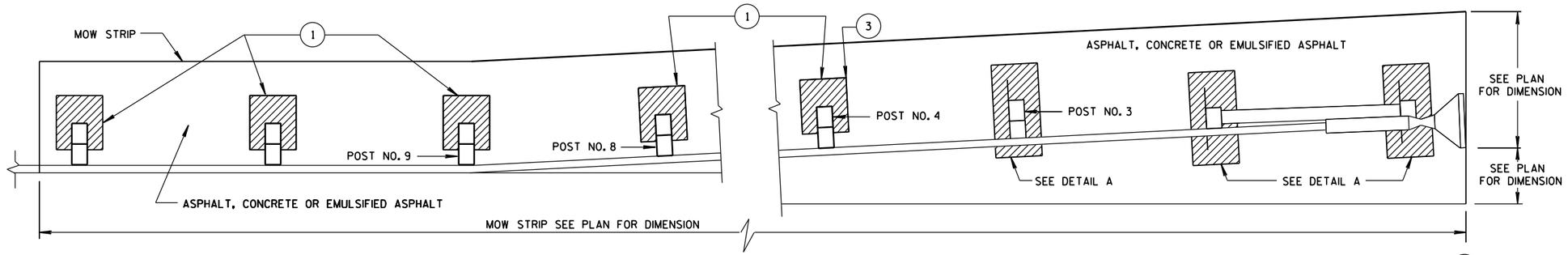
PARALLEL INSTALLATION

BEAM GUARD AT MEDIAN APPROACH TO BRIDGES

STEEL PLATE BEAM GUARD CLASS "A" AT MEDIAN APPROACH TO BRIDGES	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED	
8-21-07 DATE	/S/ Jerry H. Zogg ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA	

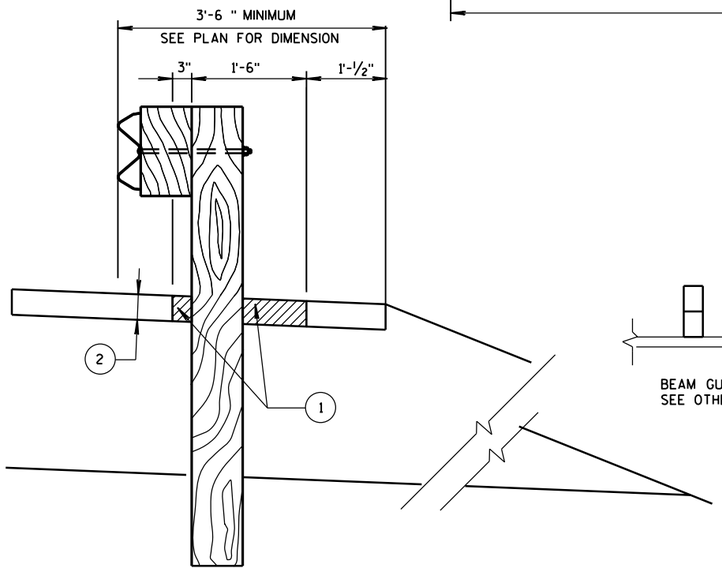
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S.D.D. 14 B 18-6b

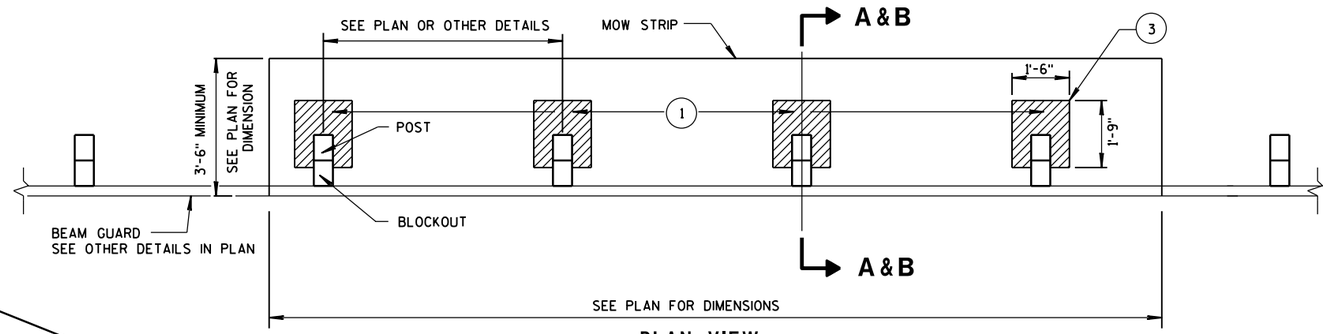


PLAN VIEW

MOW STRIP LAYOUT FOR ENERGY ABORBING TERMINAL

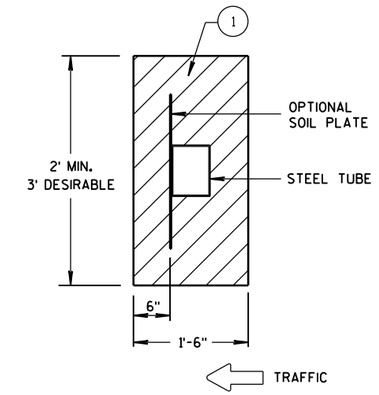


SECTION A-A

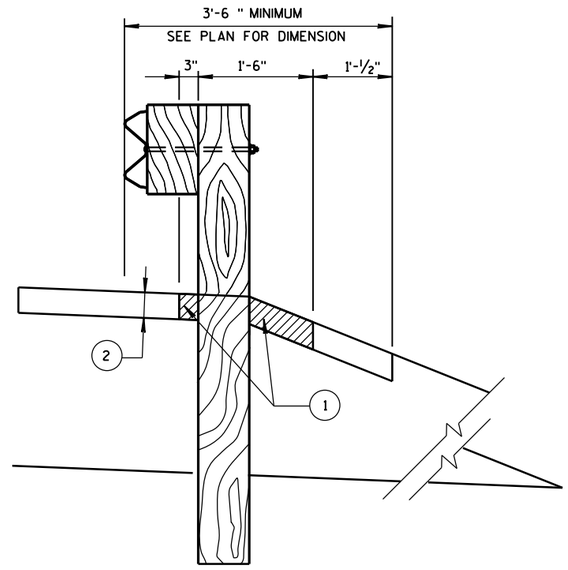


PLAN VIEW

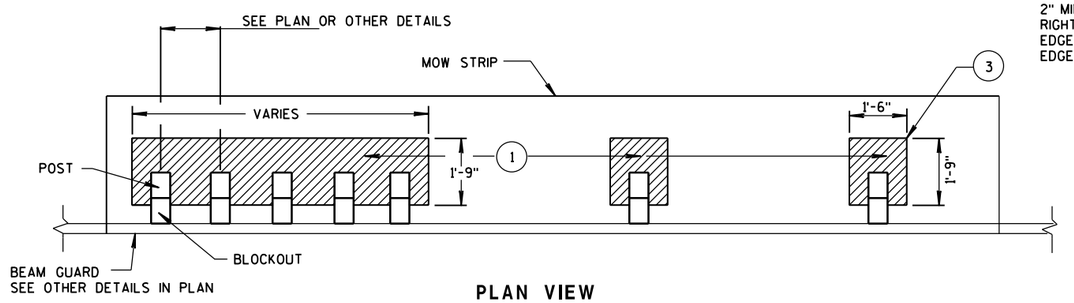
MOW STRIP FOR TYPICAL BLOCKOUT LAYOUT



DETAIL A

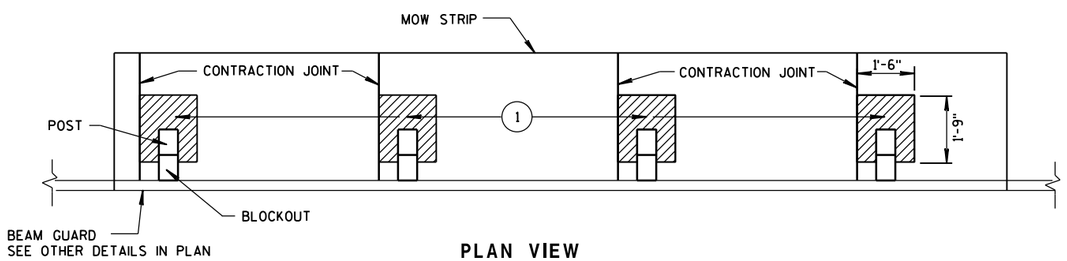


SECTION B-B



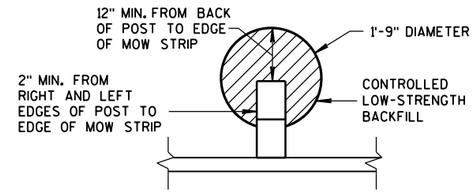
PLAN VIEW

MOW STRIP FOR TIGHT SPACING LAYOUT



PLAN VIEW

JOINT PLACEMENT FOR CONCRETE MOW STRIP



ALTERNATIVE HMA
MOW STRIP DESIGN

(1) CONTROLLED LOW-STRENGTH BACKFILL OR EMULSIFIED ASPHALT.

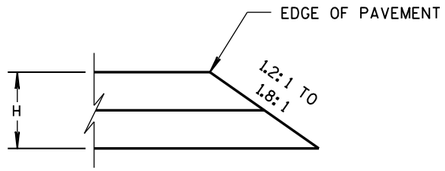
(2) DEPTH OF MOW STRIP:
ASPHALT - 4"
CONCRETE - 4"
EMULSIFIED ASPHALT - 1" OR LESS

(3) FOR EMULSIFIED ASPHALT MOW STRIP LEAVE OUTS NOT REQUIRED. (TYPICAL FOR ALL POSTS.)

GUARDRAIL MOW STRIP

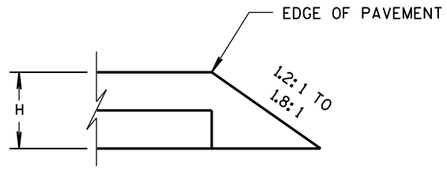
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



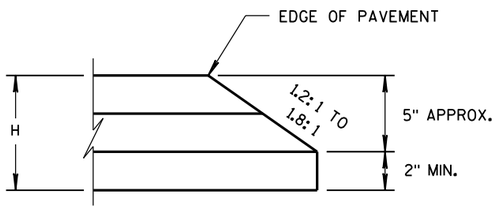
CONSTRUCTED WITH FINAL TWO LAYERS

FOR H 5" OR LESS



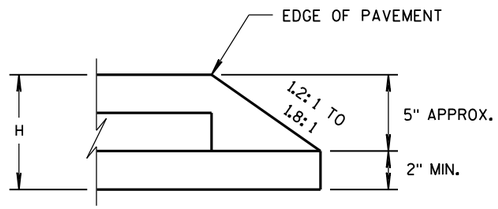
CONSTRUCTED WITH FINAL LAYER

FOR H 5" OR LESS



CONSTRUCTED WITH FINAL TWO LAYERS

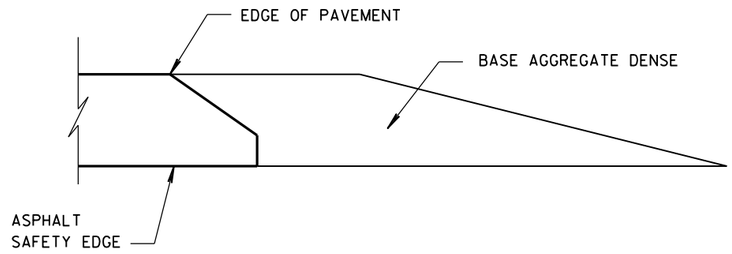
FOR H GREATER THAN 5"



CONSTRUCTED WITH FINAL LAYER

FOR H GREATER THAN 5"

HMA PAVEMENT AND HMA OVERLAYS



FINISHED SHOULDER AGGREGATE PLACEMENT

6

6

S.D.D. 14 B 29-1

S.D.D. 14 B 29-1

SAFETY EDGE SM

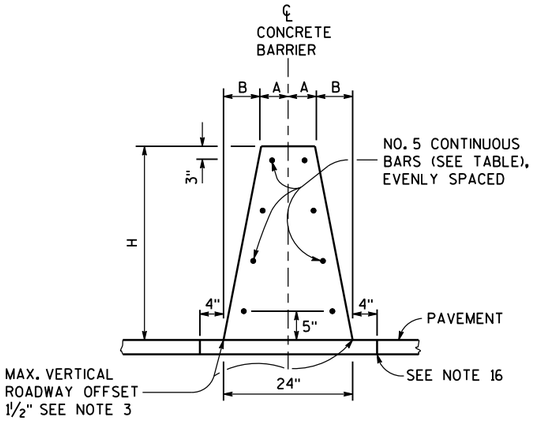
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

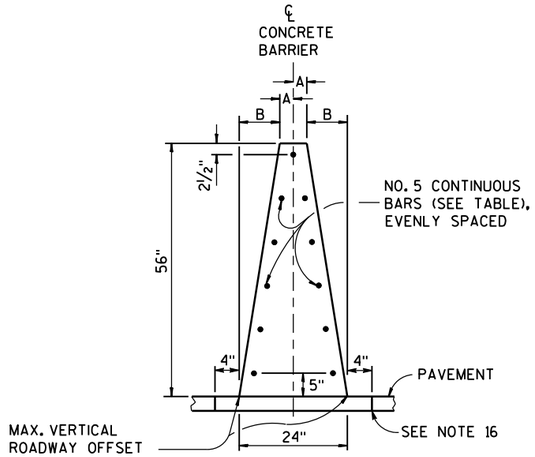
11/30/2012
DATE

/S/ Jerry H. Zoda
ROADWAY STANDARDS DEVELOPMENT ENGINEER

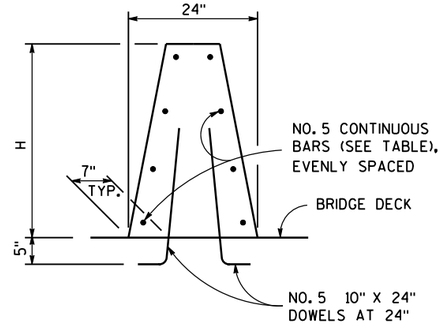
FHWA



32-INCH, 36-INCH OR 42-INCH SINGLE SLOPE CONCRETE BARRIER (TYPE S32, TYPE S36, AND TYPE S42)



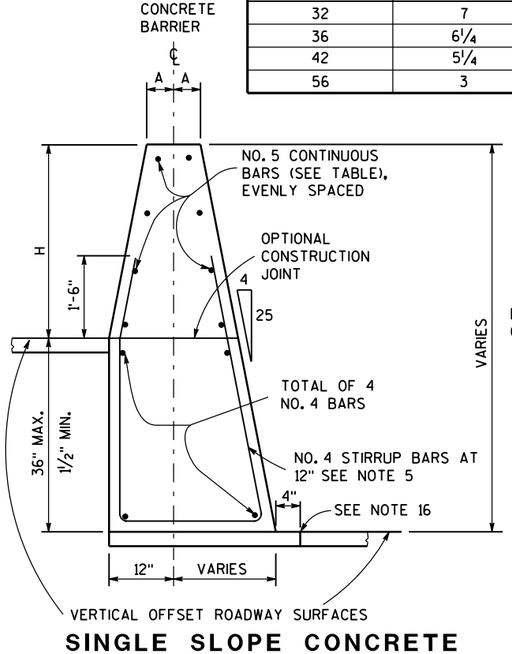
56-INCH SINGLE SLOPE CONCRETE BARRIER (TYPE S56)



SINGLE SLOPE CONCRETE BARRIER ON BRIDGE

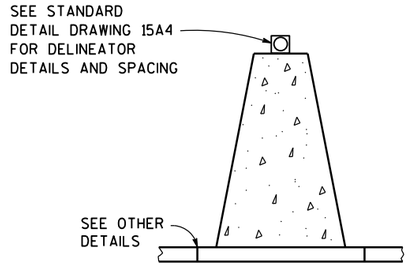
NON OUTER PARAPET APPLICATION

BARRIER HEIGHT H INCHES	A INCHES	B INCHES	NUMBER OF NO. 5 BARS EACH
32	7	5	8
36	6¼	5¾	8
42	5¼	6¾	10
56	3	9	11

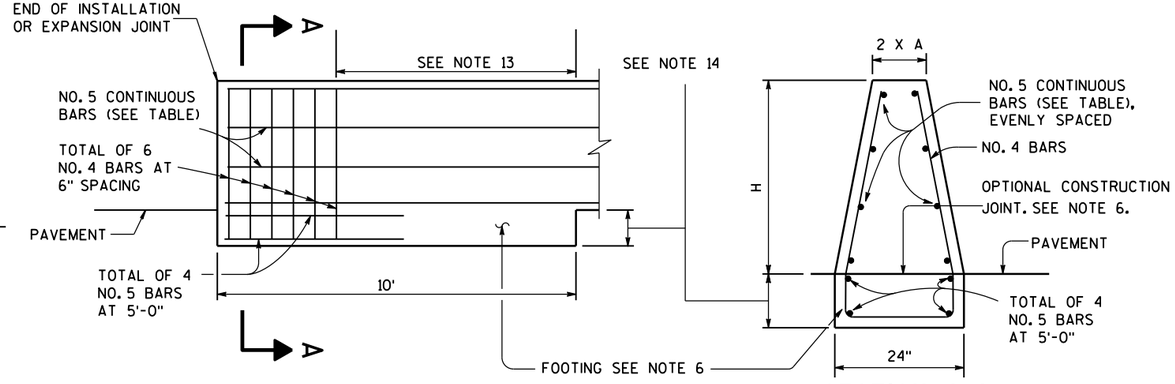


SINGLE SLOPE CONCRETE BARRIER AND RETAINING WALL (TYPE S32A, TYPE S36A, TYPE S42A, TYPE S56A)

(BETWEEN ADJACENT ROADWAYS)



DELINEATION



END ANCHOR SINGLE SLOPE CONCRETE BARRIER

AT CONSTRUCTION JOINT

SECTION A-A

GENERAL NOTES

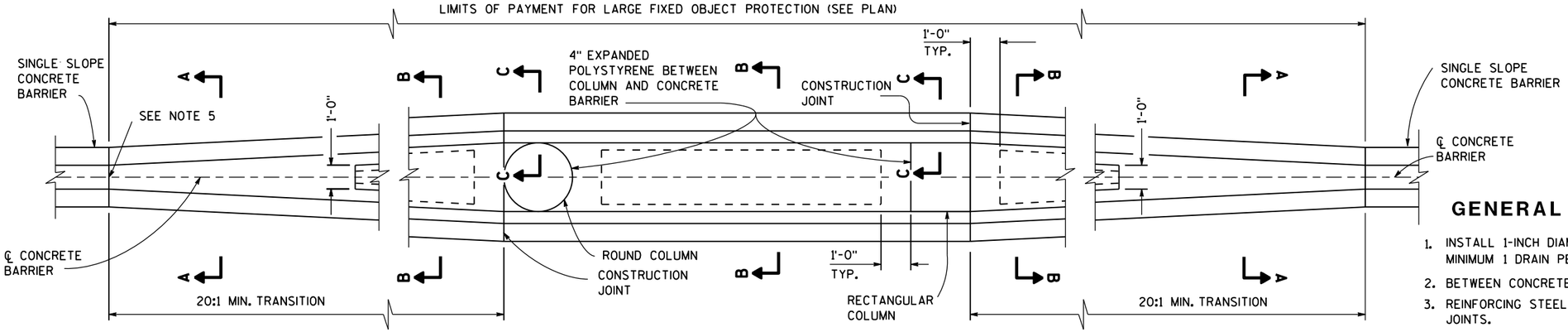
1. WHERE THE CONCRETE BARRIER IS ADDED TO THE FACE OF EXISTING CONCRETE STRUCTURE, MATCH EXISTING WEEP HOLES.
2. EXPANSION JOINTS IN CONCRETE BARRIER SHALL BE LOCATED AT ALL DECK, AND PRINCIPAL WALL JOINTS. EXPANSION JOINT FILLER MATERIAL SHALL BE THE SAME SIZE AS JOINT OR ½" MINIMUM.
3. WHERE VERTICAL ROADWAY OFFSET IS GREATER THAN 1½", USE TYPE A
4. PLACE BARRIER PERPENDICULAR TO SHOULDER GRADE, UNLESS INDICATED IN PLAN.
5. EXCEPT IN ANCHORS, VERTICAL REINFORCING STIRRUP NOT REQUIRED FOR ROADWAY OFFSETS LESS THAN 1'-0".
6. FOR TYPE S32, TYPE S36, TYPE S42, AND S56 MONOLITHIC FOOTING OR DOWELED FOOTING WITH 2-#8 x 8" @ 2'-0".
7. STAGGER LAPPING OF LONGITUDINAL STEEL. MINIMUM OVERLAP OF STEEL 2 FEET. BARS AT LAPS TO BE FIRMLY TIED OR CONNECTED.
8. 4000 PSI CONCRETE AIR ENTRAINMENT PER STANDARD SPECIFICATION 501.
9. WHEN SWITCHING BETWEEN SLIP FORM AND CAST-IN-PLACE OPERATIONS, EXTEND LONGITUDINAL STEEL 3 FEET BEYOND SLIP-FORMING CUT OFF POINT. EXPOSED STEEL INTO NEXT POURS REINFORCEMENT. LAPS TO BE FIRMLY TIED.
10. USE ¾" BEVEL OR 1" RADIUS ON ALL EXPOSED SHARP EDGES UNLESS OTHERWISE NOTED.
11. 2" CLEAR COVER TYPICAL.
12. COLD-JOINTS MAY BE USED BETWEEN ANCHOR INSTALLATIONS. WHEN A COLD JOINT IS NEEDED, 3 FEET OF LAP OF LONGITUDINAL STEEL IS REQUIRED. LAPS TO BE FIRMLY TIED.
13. IN TYPE S32, TYPE S36, TYPE S42 AND TYPE S56 NO ADDITIONAL VERTICAL STEEL NEEDED. IN TYPE S32A, TYPE S36A, TYPE S42A AND TYPE S56A REQUIRES VERTICAL STEEL. SEE OTHER DETAIL.
14. IN TYPE S32, TYPE S36, TYPE S42 AND TYPE S56 DEPTH OF FOOTING 10". IN TYPE S32A, TYPE S36A, TYPE S42A AND TYPE S56A MATCH TOTAL HEIGHT OF SINGLE SLOPE BARRIER RETAINING WALL.
15. FOR ALL BARRIER TYPES SHOWN, ANCHOR IS REQUIRED AT CONCRETE BARRIER ENDS AND AT INTERRUPTIONS IN CONCRETE BARRIER. ANCHOR MAY BE AS SHOWN ON DRAWING OR DETAILS SHOWN ON S.D.D. 14B33. ANCHORS INCIDENTAL TO CBSS.
16. CONCRETE PAD UNDER CBSS MAY BE PLACED INTEGRAL WITH BARRIER, PLACED SEPARATELY OR PLACED WITH CONCRETE SHOULDER AND SAWED FULL DEPTH. CONCRETE PAD MINIMUM DEPTH IS 6 INCHES, OR EQUAL TO THE DEPTH OF THE CONCRETE SHOULDER.

CONCRETE BARRIER SINGLE SLOPE (CBSS)

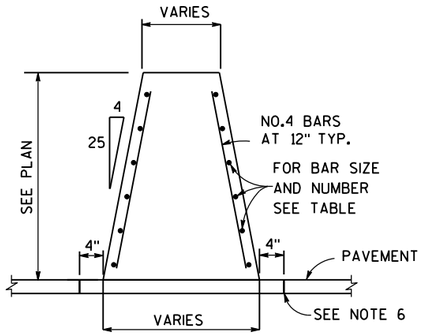
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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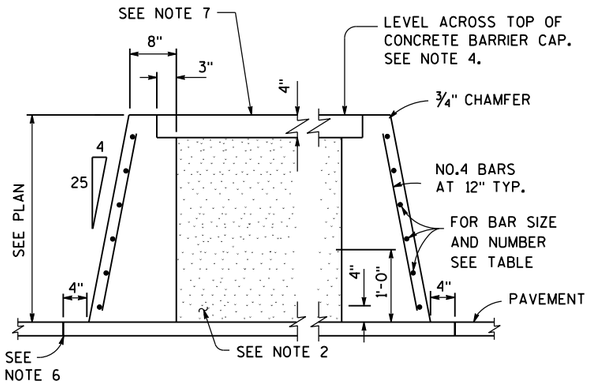
S.D.D. 14 B 32-5a



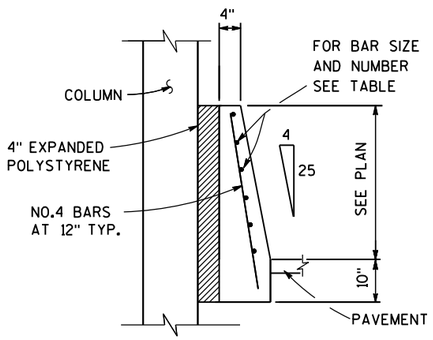
LARGE FIXED OBJECTS PROTECTION
TYPE S32, TYPE S36, TYPE S42, TYPE S56



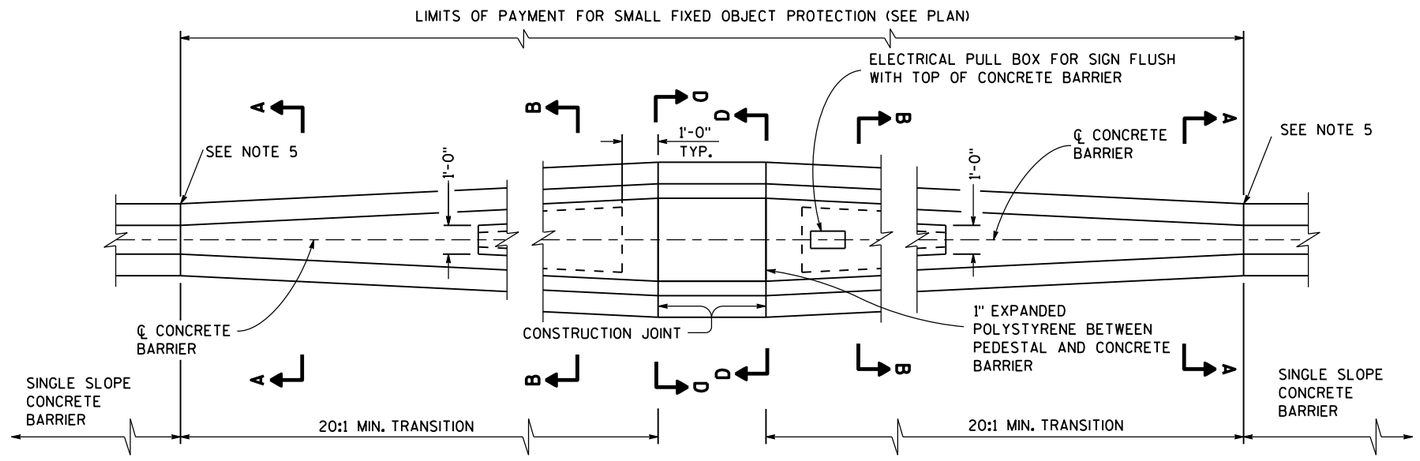
SECTION A-A



SECTION B-B



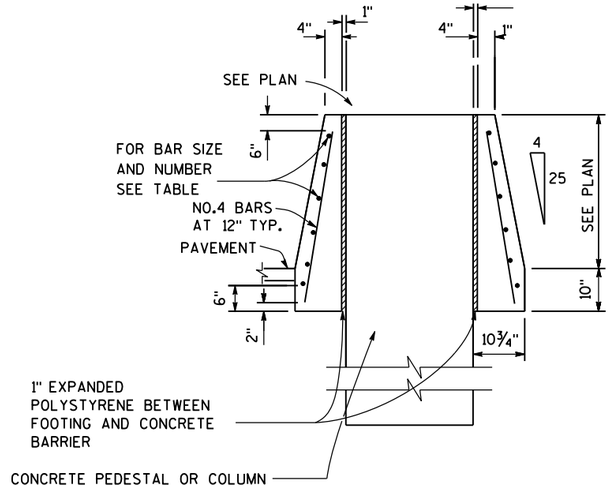
SECTION C-C



SMALL FIXED OBJECTS PROTECTION
TYPE S32, TYPE S36, TYPE S42, TYPE S56

GENERAL NOTES

1. INSTALL 1-INCH DIAMETER DRAIN PIPE EVERY 20 FEET OF CROSS SECTION B-B. MINIMUM 1 DRAIN PER CAVITY.
2. BETWEEN CONCRETE BARRIER WALLS FILL WITH FOUNDATION BACKFILL.
3. REINFORCING STEEL SHALL EXTEND CONTINUOUS THROUGH CONSTRUCTION JOINTS.
4. ADJUST HEIGHT OF CONCRETE BARRIER WALL ON LOW SIDE OF OFFSET OR SUPERELEVATED ROADWAYS TO PROVIDE LEVEL GRADE ACROSS TOP OF CONCRETE CAP.
5. IF FIXED OBJECT PROTECTION IS INSTALLED FIRST, USE COLD JOINTS. IF CBSS PLACED FIRST, USE EXPANSION JOINT.
6. CONCRETE PAD UNDER CBSS MAY BE PLACED INTEGRAL WITH BARRIER, PLACED SEPARATELY OR PLACED WITH CONCRETE SHOULDER AND SAWED FULL DEPTH. SAWING OF CONCRETE SHOULDER IS INCIDENTAL TO CONCRETE BARRIER BID ITEM. CONCRETE PAD MINIMUM DEPTH IS 6 INCHES, OR EQUAL TO THE DEPTH OF THE CONCRETE SHOULDER.
7. USE NO. 3 BAR SPACED 12 INCHES CENTER TO CENTER (PLACED IN EACH DIRECTION) OR EQUIVALENT WIRE MESH.



SECTION D-D

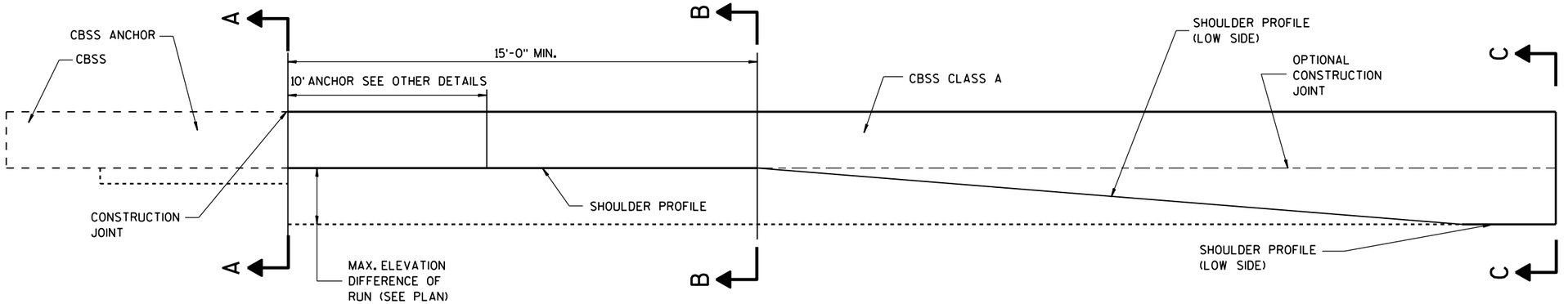
BARRIER HEIGHT H INCHES	BAR SIZE	NUMBER OF BARS EACH
32	4	6
36	4	6
42	5	6
56	5	9

CONCRETE BARRIER SINGLE SLOPE (CBSS)

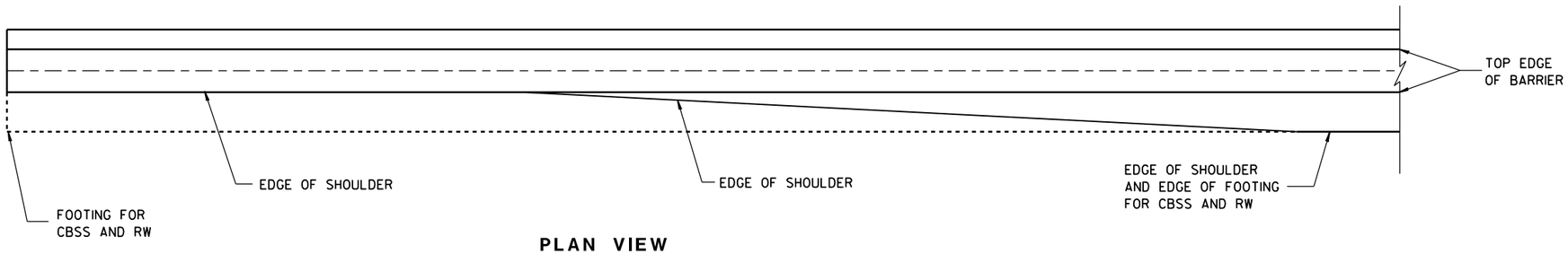
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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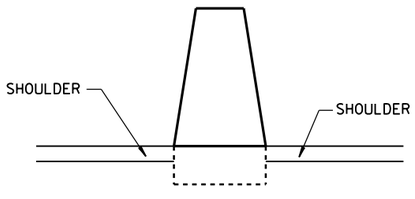
S.D.D. 14 B 32-5b



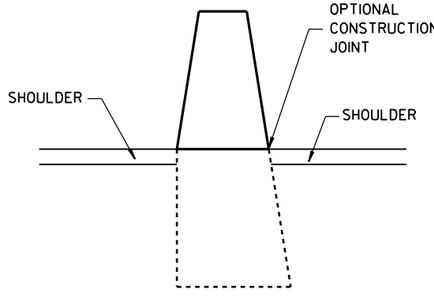
ELEVATION VIEW
TRANSITION TO CBSS CLASS A
(TYPE S32A, TYPE S36A, TYPE S42A, TYPE S56A)



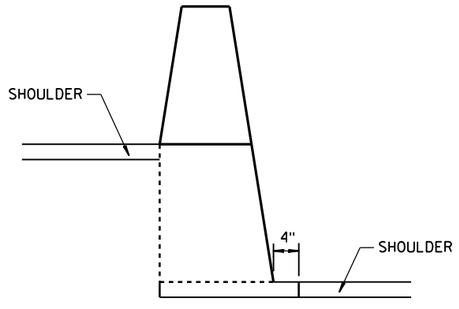
PLAN VIEW
TRANSITION TO CBSS CLASS A
(TYPE S32A, TYPE S36A, TYPE S42A, TYPE S56A)



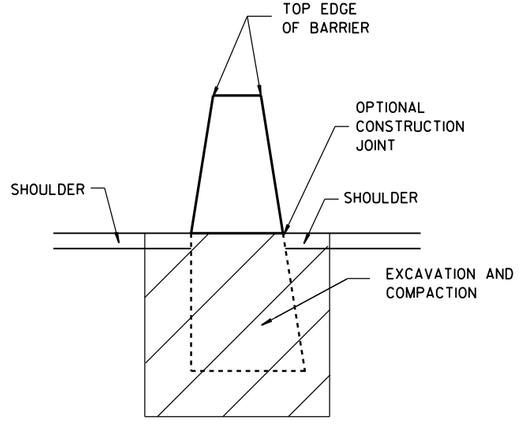
SECTION A-A



SECTION B-B



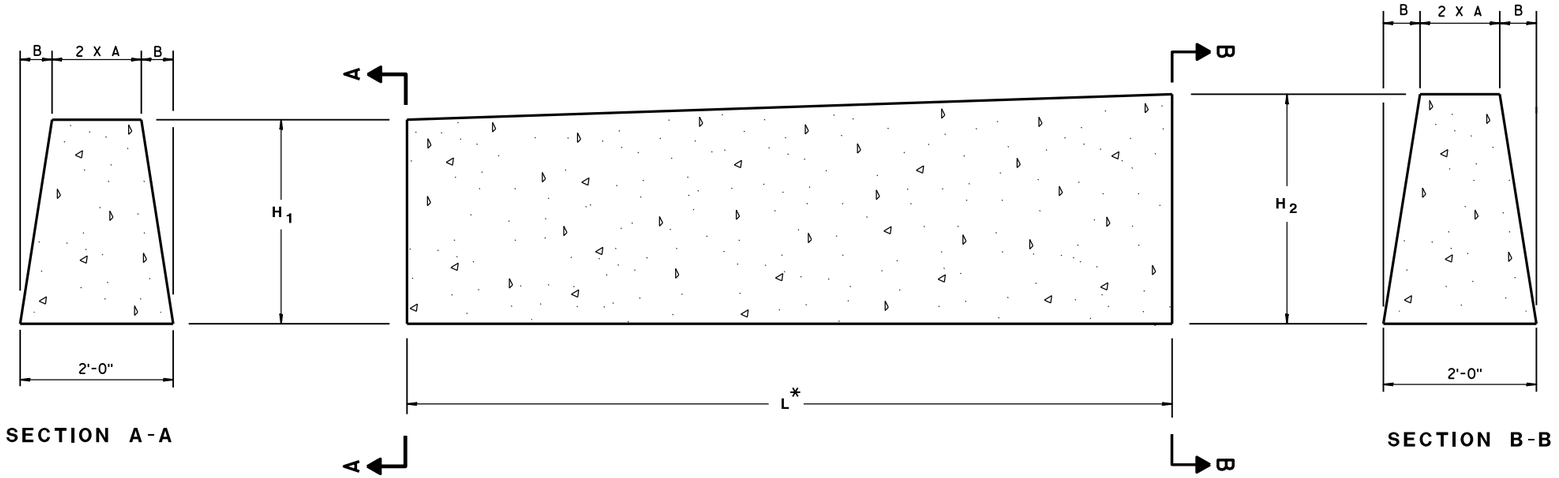
SECTION C-C



CONCRETE BARRIER SINGLE SLOPE (CBSS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6
S.D.D. 14 B 32-5c



SECTION A-A

SECTION B-B

DOUBLE COLD JOINT HEIGHT TRANSITION

BARRIER DIMENSIONS

BARRIER HEIGHT INCHES	A INCHES	B INCHES
32	7	5
36	6 1/4	5 3/4
42	5 1/4	6 3/4
56	3	9

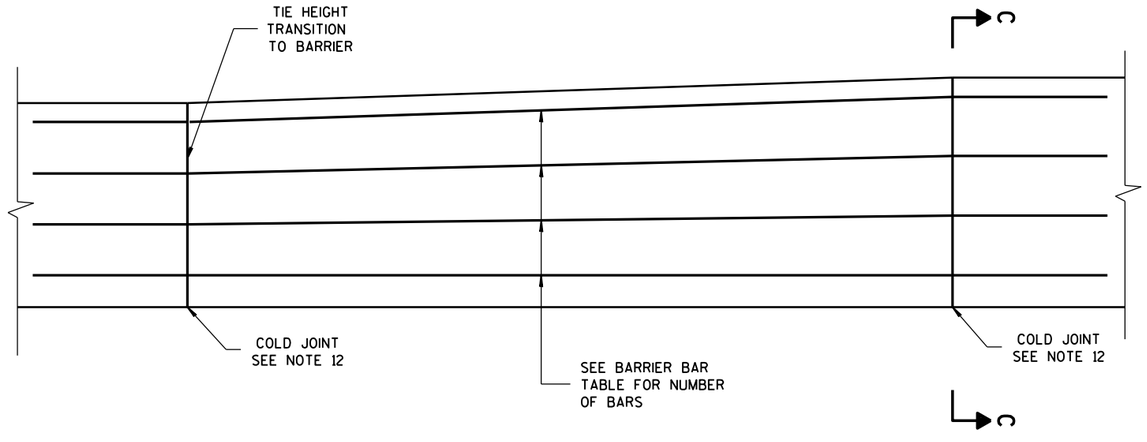
MULTIPLE HEIGHT TRANSITIONS MAY BE USED IN SEQUENCE TO GET TO APPROPRIATE HEIGHT.

USE COLD JOINT TO CONNECT MULTIPLE HEIGHT TRANSITIONS.

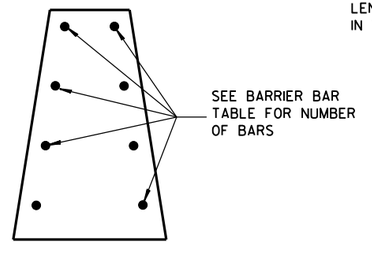
BARRIER BARS

H_1	H_2	L*	NUMBER OF NO. 5 BARS
32"	36"	10'-0"	8
36"	42"	10'-6"	10
42"	56"	24'-6"	11

* LENGTH OF DOUBLE COLD JOINT INCLUDED IN THE TOTAL LENGTH OF CBSS.



STEEL REINFORCEMENT DETAIL



SECTION C-C

CONCRETE BARRIER SINGLE SLOPE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2017
DATE

/S/ Rodney Taylor
ROADWAY STANDARDS D UNIT SUPERVI

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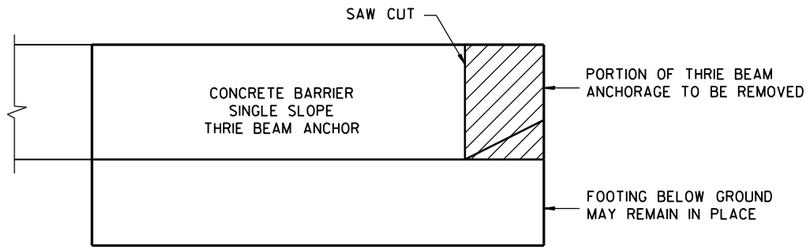
FHWA

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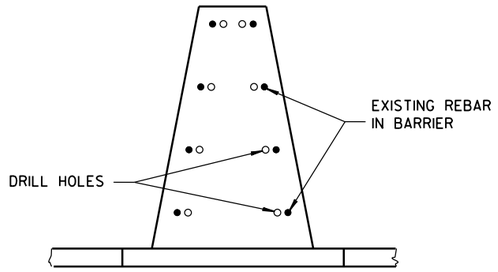
S.D.D. 14 B 32-5d

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S.D.D. 14 B 32-5d



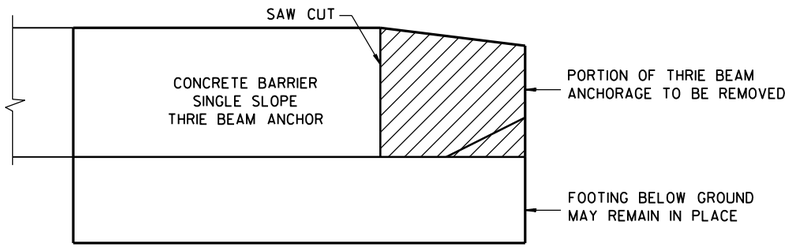
REMOVAL AREA OF
32" CONCRETE THRIE BEAM ANCHORAGE



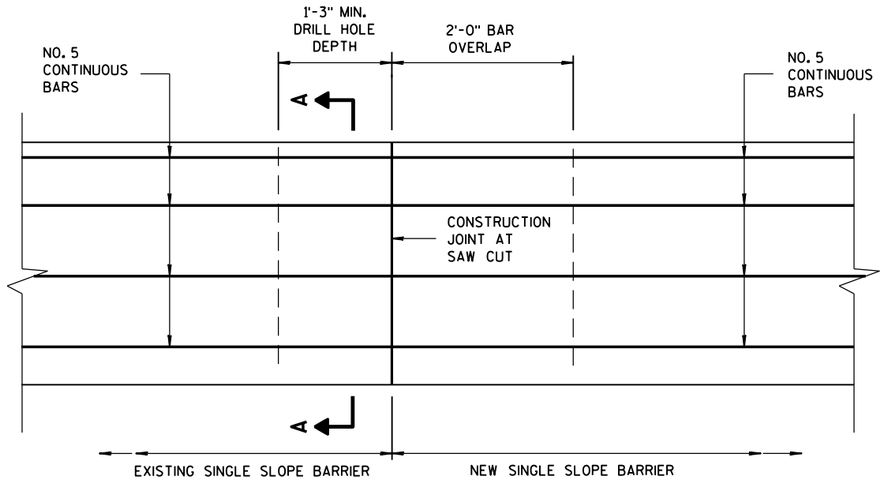
SECTION A-A

GENERAL NOTES

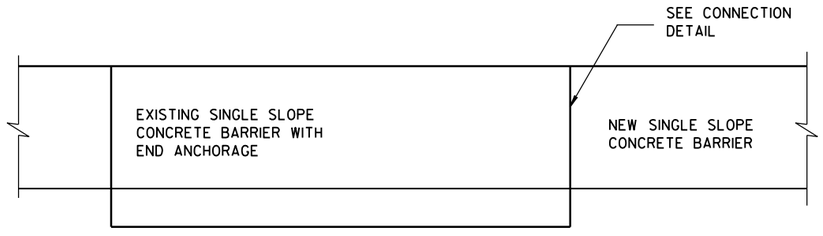
1. THE NUMBER OF DRILL HOLES IS EQUAL TO THE NUMBER OF REBAR IN BARRIER (SEE OTHER DETAILS).
2. MINIMUM DEPTH OF DRILL HOLES IS 1'-3".
3. DRILL HOLES TO BE A MINIMUM OF 4 INCHES FROM THE EDGE OF CONCRETE.
4. INSTALL EPOXY COATED NO. 5 BARS IN DRILL HOLES.
5. END ANCHORAGE MAY OR MAY NOT BE PRESENT ON EXISTING BARRIER.
6. REMOVE THRIE BEAM ANCHORAGE AS SHOWN.



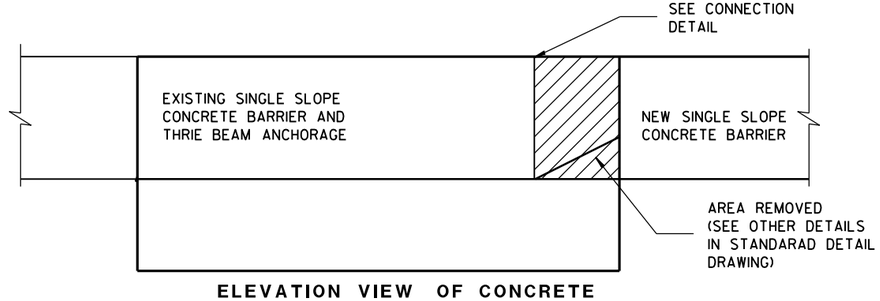
REMOVAL AREA OF CONCRETE THRIE BEAM
ANCHORAGE WITH HEIGHT GREATER THAN 32"



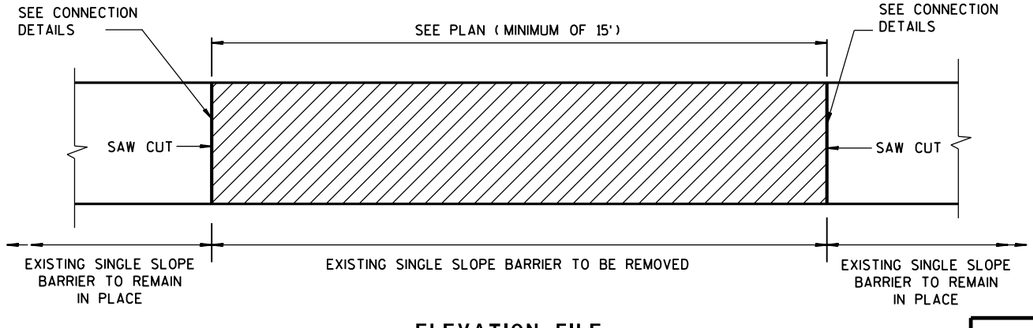
CONNECTION OF EXISTING SINGLE SLOPE CONCRETE BARRIER TO
NEW SINGLE SLOPE CONCRETE BARRIER



ELEVATION VIEW OF CONCRETE
BARRIER EXTENSION NEAR END ANCHORAGE



ELEVATION VIEW OF CONCRETE
BARRIER EXTENSION NEAR THRIE BEAM TERMINAL



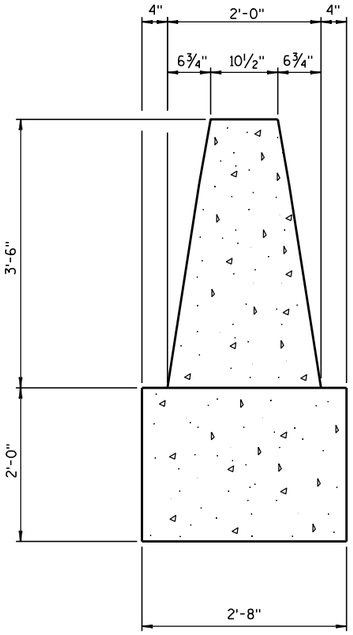
ELEVATION FILE
BARRIER REMOVAL AND REPLACEMENT

CONCRETE BARRIER
SINGLE SLOPE

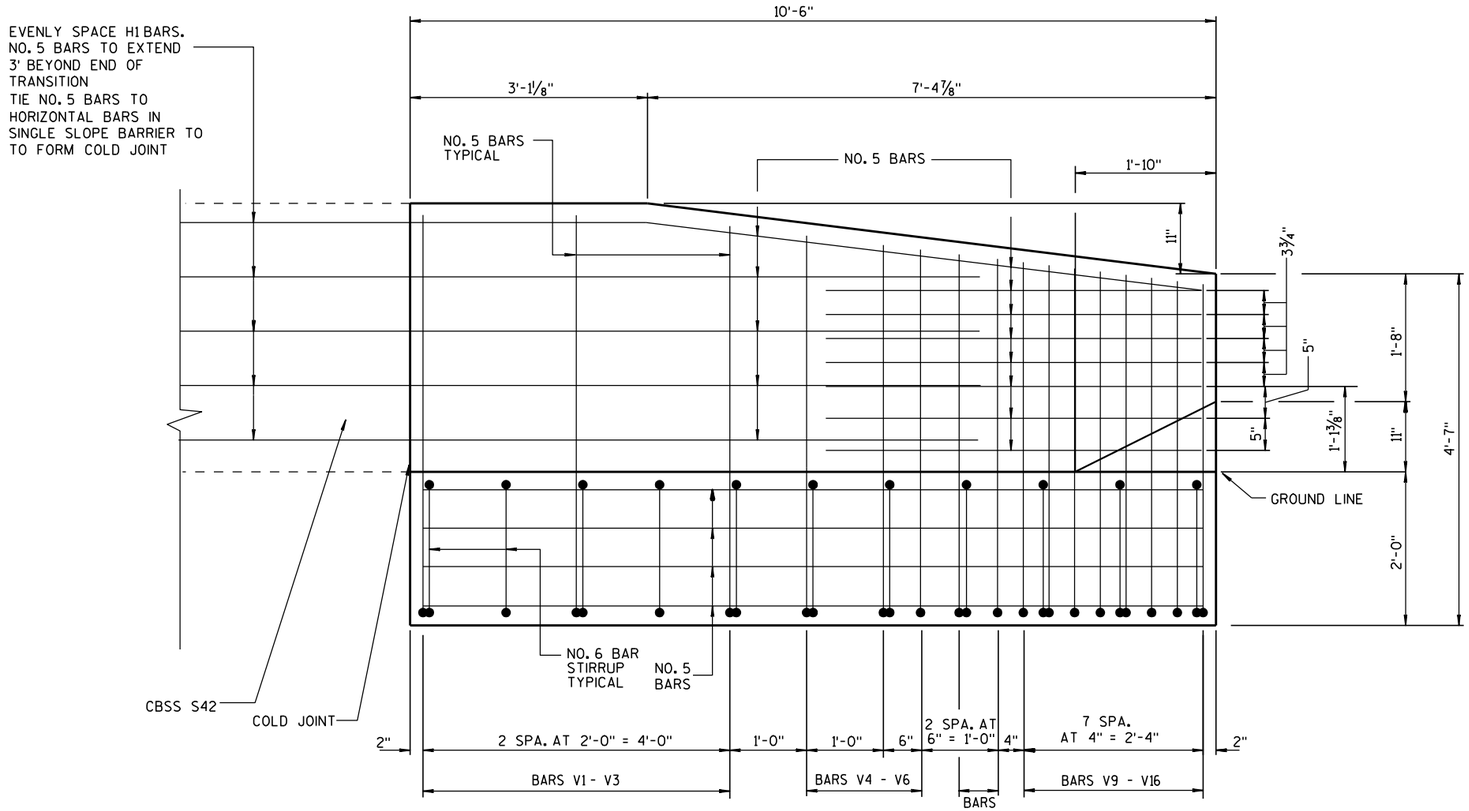
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2017 — DATE
/S/ Rodney Taylor
ROADWAY STANDARDS D[illegible] UNIT SUPERVI[illegible]
FHWA

RETROFIT OR REPAIR SINGLE SLOPE CONCRETE BARRIER

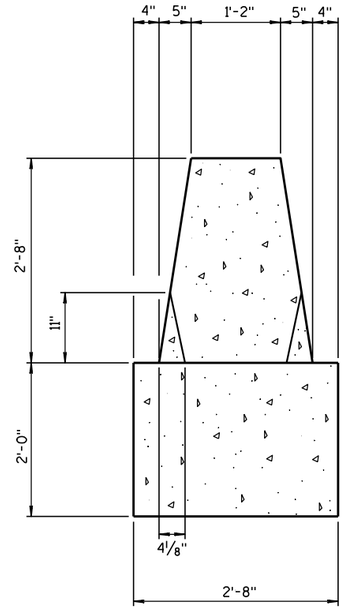


SECTION A-A

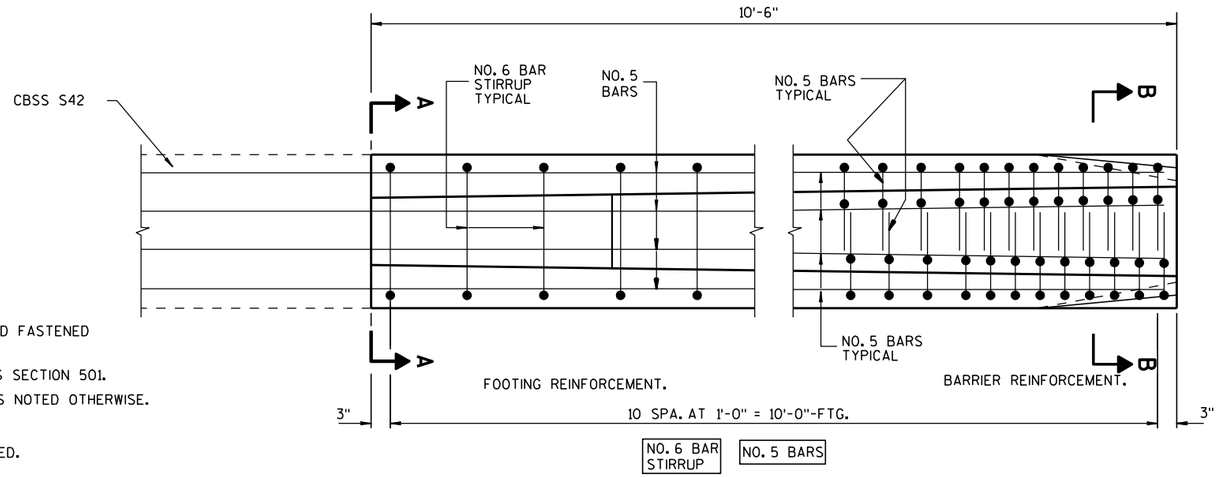


SEE SECTIONS ① THRU ⑯

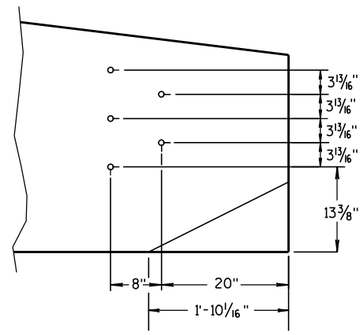
ELEVATION VIEW



SECTION B-B



PLAN VIEW



PVC PIPE LOCATIONS

GENERAL NOTES

CONSTRUCT PER STANDARD SPECIFICATION 603.

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

4000 PSI CONCRETE AIR ENTRAINMENT PER STANDARD SPECIFICATIONS SECTION 501.

USE ¾" BEVEL OR 1" RADIUS ON ALL EXPOSED SHARP EDGES UNLESS NOTED OTHERWISE.

THRIE BEAM ANCHOR INCIDENTAL TO CONCRETE BARRIER ITEM.

INSTALL SCHEDULE 40 PVC PIPE 1" DIAMETER AT LOCATIONS INDICATED.

EXTEND PVC PIPE COMPLETELY THROUGH BARRIER.

CUT ENDS OF PVC PIPE FLUSH WITH FINISHED FACE of BARRIER.

THE NUMBER IN BAR DESIGNATION REPRESENTS THE BARS LOCATION.

2" CLEAR COVER TYPICAL.

CONCRETE BARRIER SINGLE SLOPE 42" THRIE BEAM ANCHOR

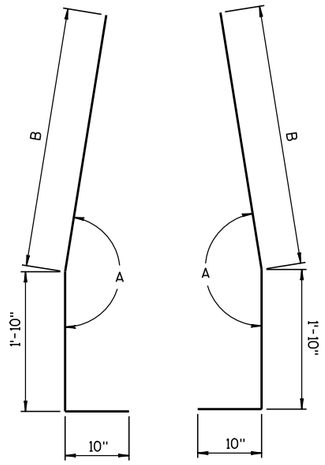
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

S.D.D. 14 B 33-1g

BAR CHART
SECTIONS V1 - V11

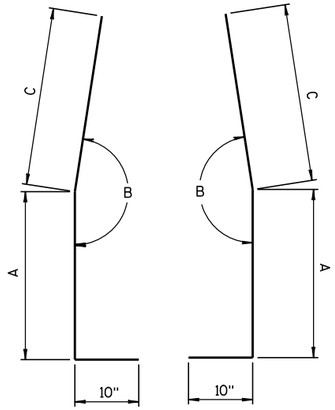
BAR	A	B
V1	170°-50'	3'-4½"
V2	171°-20'	3'-4½"
V3	171°-30'	3'-2½"
V4	171°-25'	3'-1½"
V5	171°-15'	3'-0"
V6	171°-15'	2'-11"
V7	171°-20'	2'-10½"
V8	171°-10'	2'-9½"
V9	171°-10'	2'-9"
V10	171°-05'	2'-8½"
V11	171°-10'	2'-8"



BAR BENDING DETAIL
FOR BARS V1 - V11

BAR CHART
SECTIONS V12 - V13

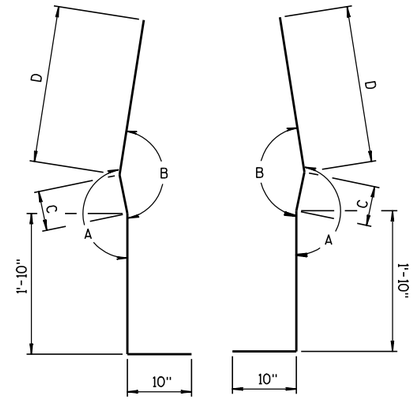
BAR	A	B	C
V12	2'-2"	171°-15'	2'-3½"
V13	2'-7"	171°-05'	1'-10"



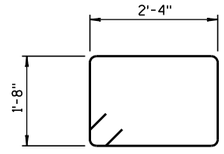
BAR BENDING DETAIL
FOR BARS V12 - V13

BAR CHART
SECTIONS V14 - V16

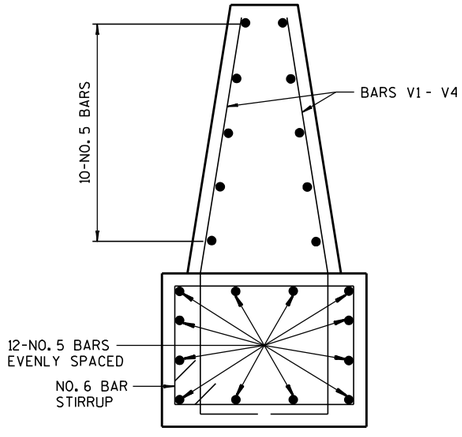
BAR	A	B	C	D
V14	168°-15'	159°-15'	6"	2'-0"
V15	169°-20'	161°-00'	8"	1'-10"
V16	168°-40'	160°-10'	10"	1'-8"



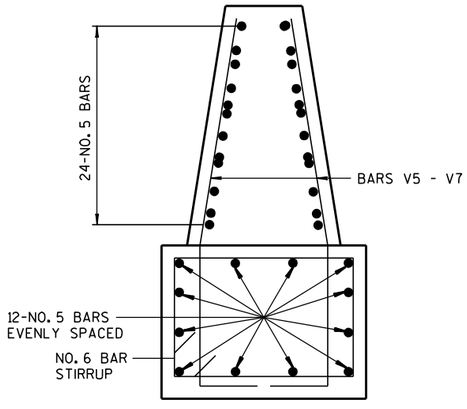
BAR BENDING DETAIL
FOR BARS V14 - V16



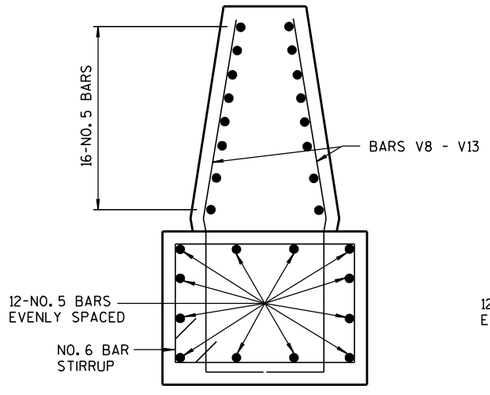
STIRRUP BAR
BENDING DETAIL



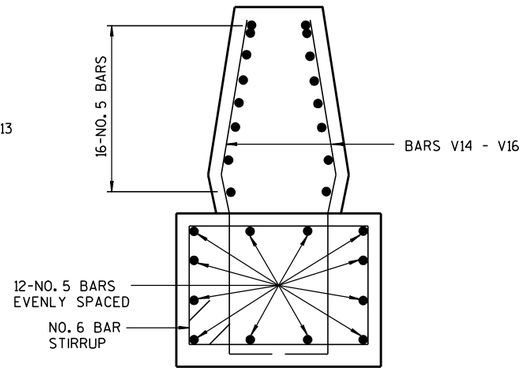
BAR DETAIL
SECTIONS V1 - V4



BAR DETAIL
SECTIONS V5 - V7



BAR DETAIL
SECTIONS V8 - V13



BAR DETAIL
SECTIONS V14 - V16

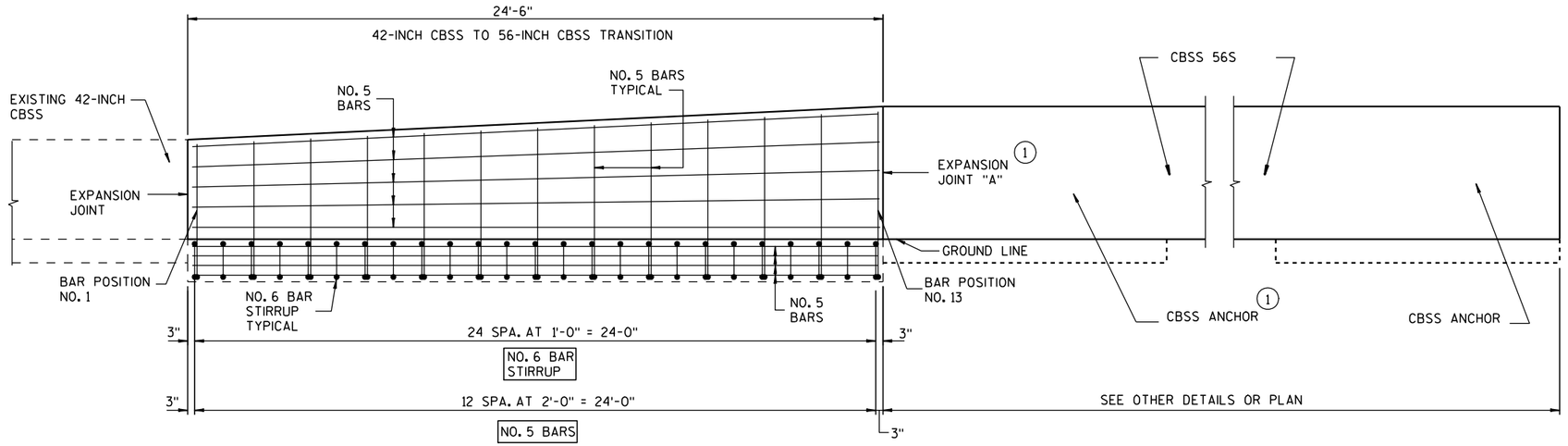
CONCRETE BARRIER
SINGLE SLOPE 42"
THRIE BEAM ANCHOR

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

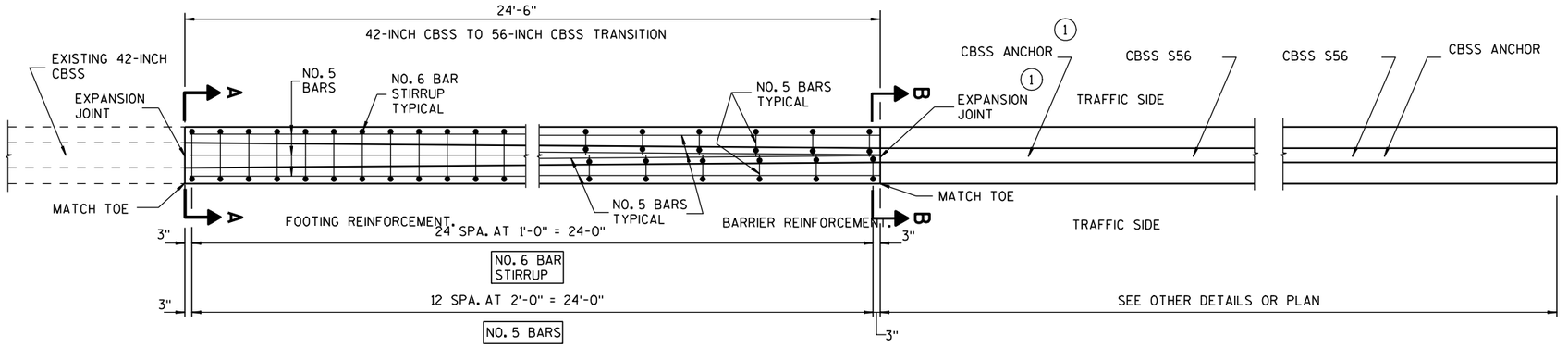
APPROVED
6-3-2010 DATE
/S/ Jerry H. Z---
ROADWAY STANDARDS ENGINEER

FHWA

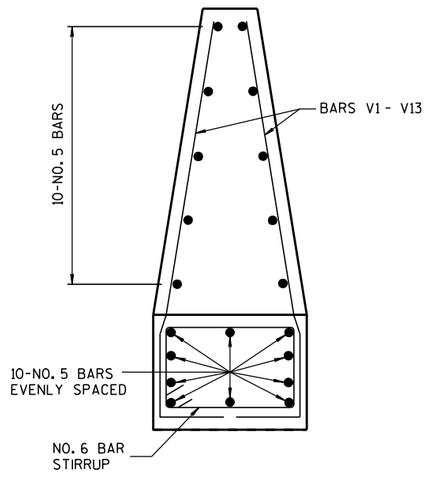
6
S.D.D. 14 B 33-1h



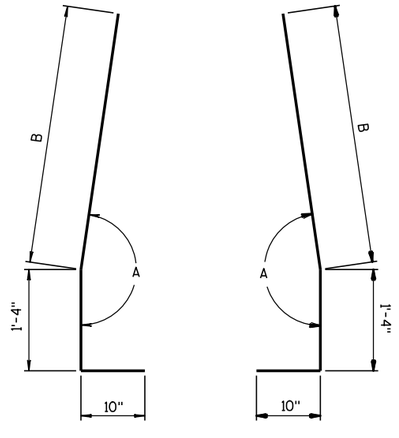
ELEVATION VIEW



PLAN VIEW



BAR DETAIL
BAR POSITION NO. 1 - NO. 13



BAR BENDING DETAIL
FOR BARS V1 - V13

BAR CHART SECTIONS V1 - V13

BAR	A	B
V1	170°-50'	3'-4½"
V2	170°-50'	3'-6"
V3	170°-55'	3'-7"
V4	171°	3'-8"
V5	170°-55'	3'-9½"
V6	170°-50'	3'-10½"
V7	170°-50'	3'-11½"

BAR	A	B
V8	170°-55'	4'-0½"
V9	170°-50'	4'-2"
V10	170°-50'	4'-3"
V11	170°-50'	4'-4½"
V12	170°-55'	4'-5½"
V13	170°-50'	4'-6½"

GENERAL NOTES

CONSTRUCT PER STANDARD SPECIFICATION 603.

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

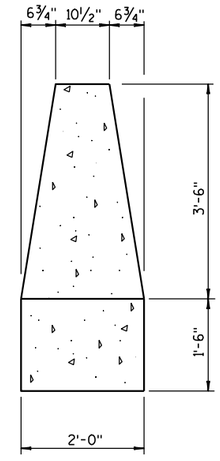
4000 PSI CONCRETE AIR ENTRAINMENT PER STANDARD SPECIFICATIONS 501.

USE ¾" BEVEL OR 1" RADIUS ON ALL EXPOSED SHARP EDGES UNLESS NOTED OTHERWISE.

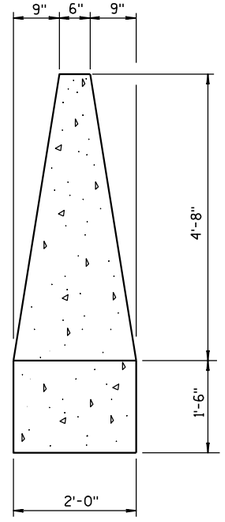
THE NUMBER IN BAR DESIGNATION REPRESENTS THE BARS LOCATION.

2" CLEAR COVER TYPICAL.

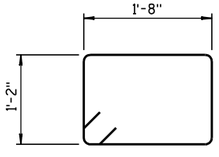
(1) EXPANSION JOINT "A" MAY BE REPLACED WITH A COLD-JOINT PROVIDED THAT 3 FEET OF LAP OF LONGITUDINAL STEEL IS PROVIDED. IF COLD-JOINT IS USED ANCHOR NOT REQUIRED.



SECTION A-A



SECTION B-B



STIRRUP BAR
BENDING DETAIL

42-INCH SINGLE SLOPE CONCRETE BARRIER TO 56-INCH SINGLE SLOPE CONCRETE BARRIER HEIGHT TRANSITION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
6-3-2010 DATE
/S/ Jerry H. [illegible]
ROADWAY STANDARDS ENGINEER
FHWA

6
S.D.D. 14 B 39-1e

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

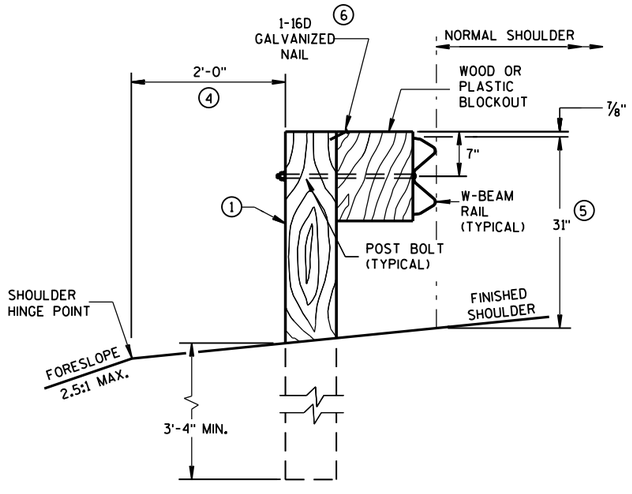
② USE WOOD OR APPROVED PLASTIC BLOCKOUTS. WOOD BLOCKOUTS MAY BE CONSTRUCTED OUT OF TWO OR MORE WOOD BLOCKOUTS. SEE ALTERNATE WOOD BLOCKOUT DETAIL. DIMENSIONS OF APPROVED PLASTIC BLOCKOUTS MAY VARY.

③ IF ROCK IS ENCOUNTERED DURING EXCAVATION, PROVIDE A HOLE 12 INCHES IN DIAMETER EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE APPROXIMATELY 2½ INCHES OF GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE. CUT THE POSTS THE TO LENGTH AMD INSTALL. BACKFILL WITH EXCAVATED MATERIAL AND COMPACT. BACKFILL IS TO BE FREE OF LARGE ROCKS.

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

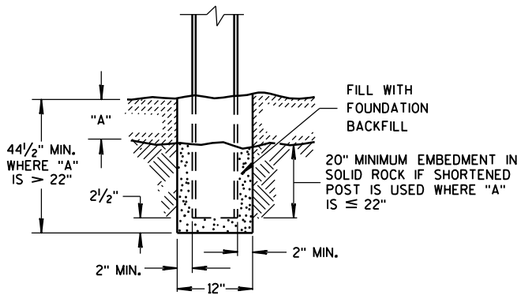
⑤ FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS ± 1". FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27¾" TO 32".

⑥ WHEN USING STEEL POST AND WOOD BLOCKOUTS INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.



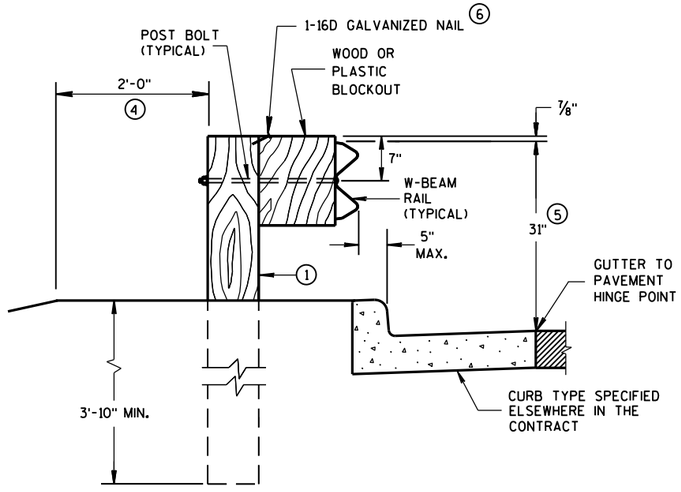
END VIEW

LOCATED ALONG A ROADWAY SHOULDER
STANDARD INSTALLATION



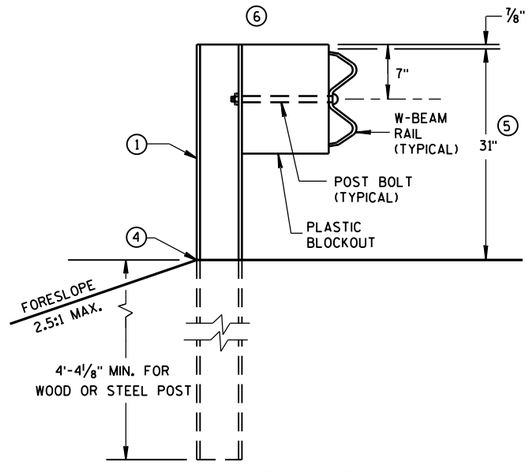
END VIEW

SETTING STEEL OR WOOD POST IN ROCK ③



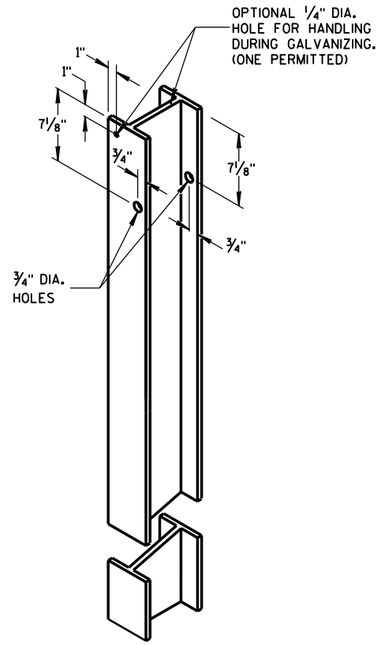
END VIEW

LOCATED ALONG A CURBED ROADWAY

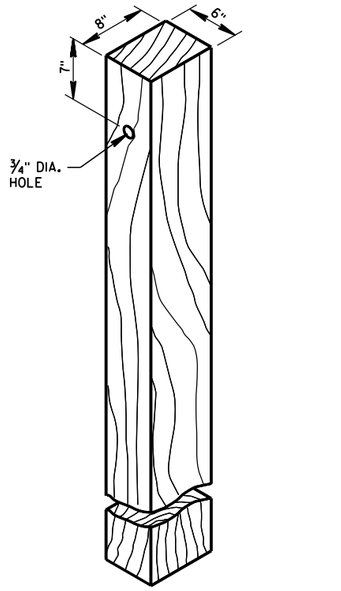


END VIEW

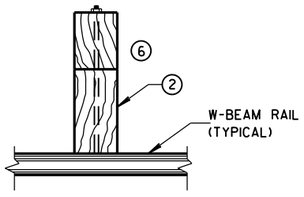
MGS LONGER POST AT HALFPOST SPACING W BEAM (K)



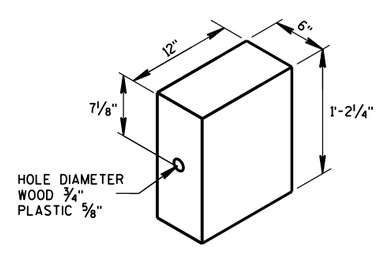
STEEL POST &
HOLE PUNCHING DETAIL
(w6X9) ①



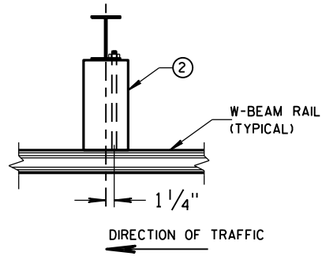
WOOD POST
(6" X 8") NOMINAL ①



PLAN VIEW
WOOD POST,
BLOCKOUT & BEAM



WOOD OR
PLASTIC BLOCKOUT ②



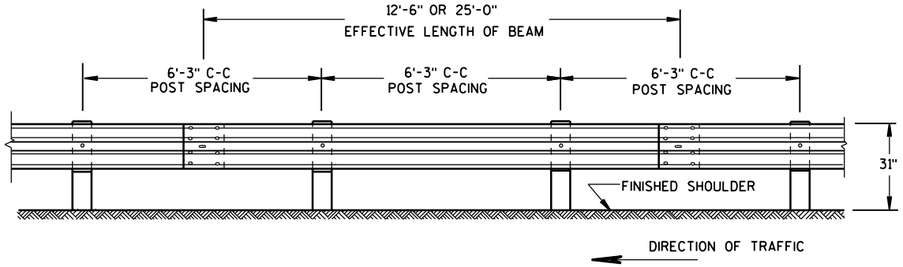
PLAN VIEW
STEEL POST,
PLASTIC BLOCKOUT & BEAM

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

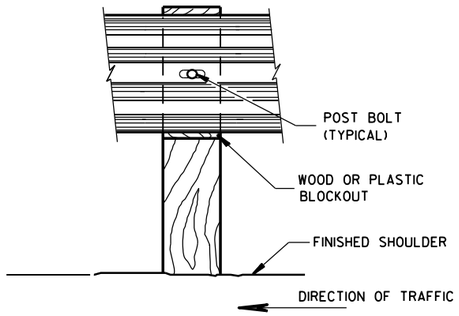
6

S.D.D. 14 B 42-5a



FRONT VIEW

POST SPACING STANDARD INSTALLATION



FRONT VIEW AT WOOD POST

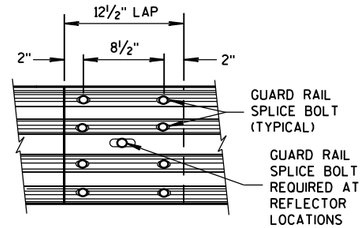
GENERAL NOTES

(8) DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL. RAIL SPLICE LOCATIONS ARE THE ONLY ACCEPTABLE LOCATIONS FOR REFLECTORS.

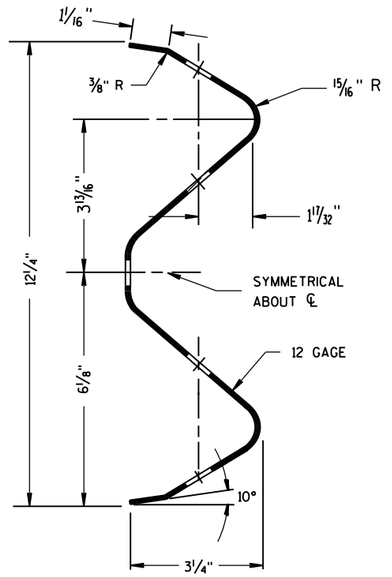
(11) 25 FEET OF HALF POST SPACING IS REQUIRED ON APPROACH AND DEPARTURE ENDS OF QUARTER POST SPACING.

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

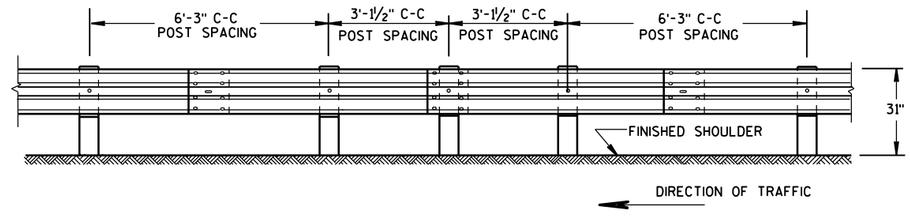
GUARD RAIL SPLICE BOLTS ARE A 5/8" DIAMETER ASTM A307 GUARDRAIL HEAD BOLT. A GUARDRAIL SPLICE BOLT REQUIRES 5/8" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT.



FRONT VIEW
MID-SPAN BEAM SPLICE

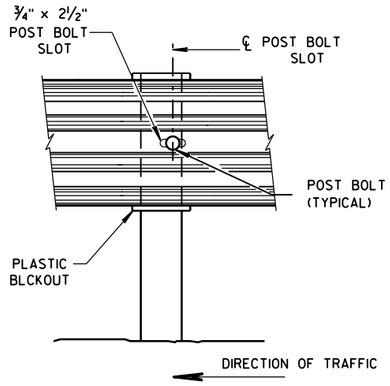


SECTION THRU W-BEAM RAIL

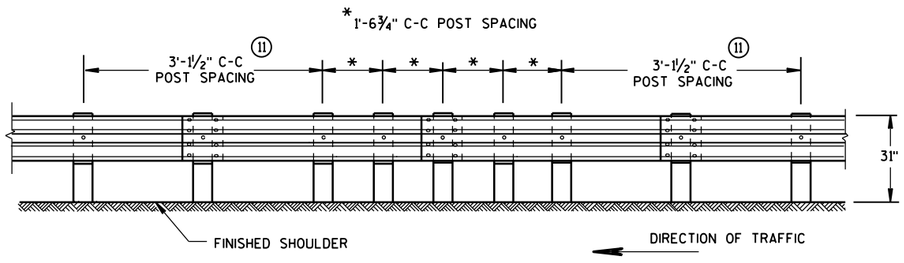


FRONT VIEW

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

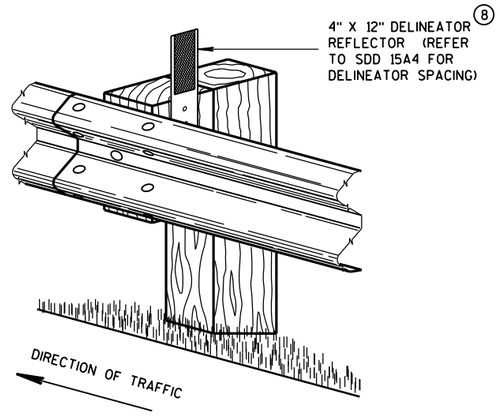


FRONT VIEW AT STEEL POST



FRONT VIEW

QUARTER POST SPACING (QS)



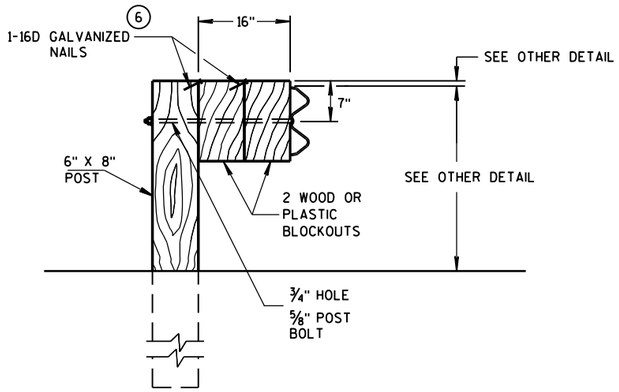
ONE SIDED REFLECTOR DETAIL AND TYPICAL INSTALLATION

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

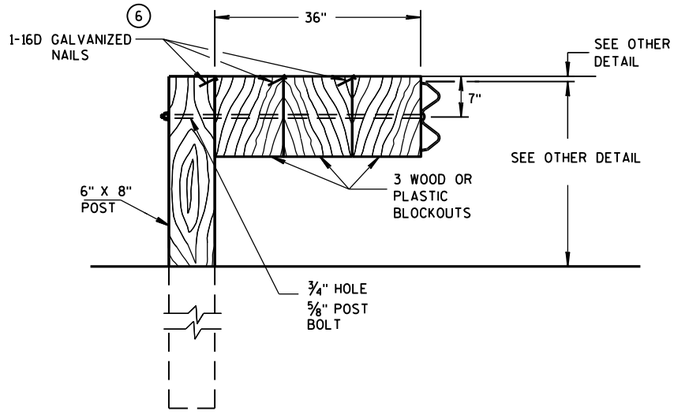
6

S.D.D. 14 B 42-5b



DETAIL FOR 16" BLOCKOUT DEPTH

IT IS ACCEPTABLE TO USE BLOCKOUTS UP TO 16" DEEP TO INCREASE THE POST OFFSET TO AVOID UNDERGROUND OBSTACLES. THERE IS NO LIMIT TO THE NUMBER OF POSTS THAT CAN HAVE ADDITIONAL BLOCKOUTS UP TO 16" DEEP.

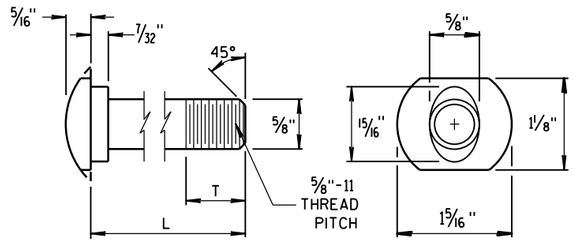


DETAIL FOR 36" BLOCKOUT DEPTH

NOTES: UNDER SPECIAL CIRCUMSTANCES, SUCH AS AVOIDING OBSTACLES THAT ARE NOT RELOCATED, IT IS ACCEPTABLE TO INSTALL ADDITIONAL BLOCKOUTS TO OBTAIN UP TO 36" DEPTH FOR ONE OR TWO POSTS IN A SECTION OF GUARDRAIL.

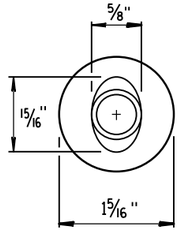
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.

NOTE: 1. ALL FILLETS SHALL HAVE A MINIMUM RADIUS OF 1/16".
2. IF THE BOLT EXTENDS MORE THAN 1/4" FROM THE NUT THE BOLT SHOULD BE TRIMMED BACK.

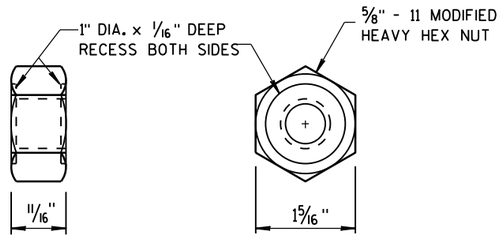


POST BOLT TABLE

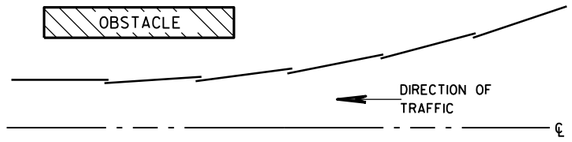
L	T (MIN.)
1¼"	1⅛"
2"	1¾"
10"	4"
14"	4 1/16"
18"	4"
21"	4 1/16"
25"	4"



ALTERNATE BOLT HEAD

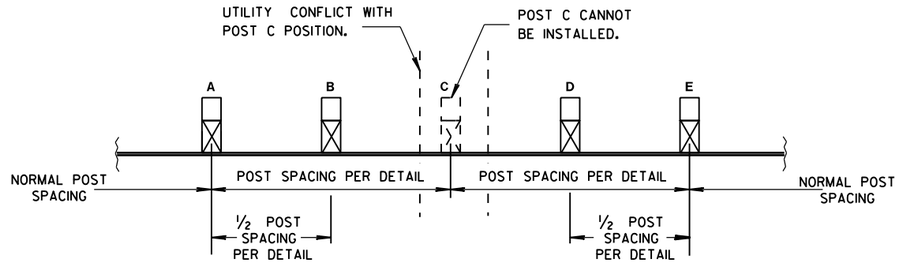


POST BOLT, SPLICE BOLT AND RECESS NUT

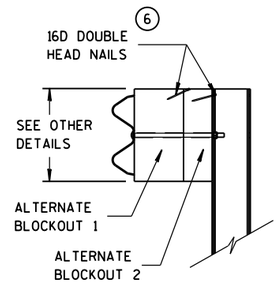


PLAN VIEW

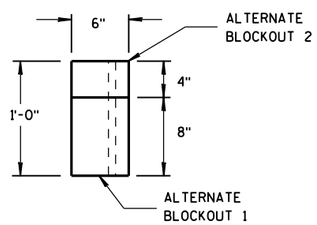
BEAM LAPPING DETAIL



POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION



SIDE VIEW



TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

S.D.D. 14 B 42-5c

GENERAL NOTES

(A) THE SLOPE IN THE AREA BOUNDED BY THE GRADELINE, THE HINGE POINT LINE (HPL), AND THE CLEAR ZONE LIMITS (CZL) SHALL BE 4:1 OR FLATTER.

(B) AFTER FINAL ASSEMBLY, RECHECK CABLE TO BE SURE IT IS TAUT AND HAS NOT RELAXED.

(C) DIFFERENT MANUFACTURES REQUIRE DIFFERENT PERFORATED W-BEAM RAIL END PANELS. SEE MANUFACTURES INFORMATION.

(F) ATTACH ALUMINUM SHEET TO E.A.T. HEAD USING 4 STAINLESS STEEL SELF-TAPPING SCREWS. ONE SCREW PER CORNER.

(H) HARDWARE VARIES BETWEEN DIFFERENT MANUFACTURES. SEE MANUFACTURE'S DRAWING FOR INFORMATION.

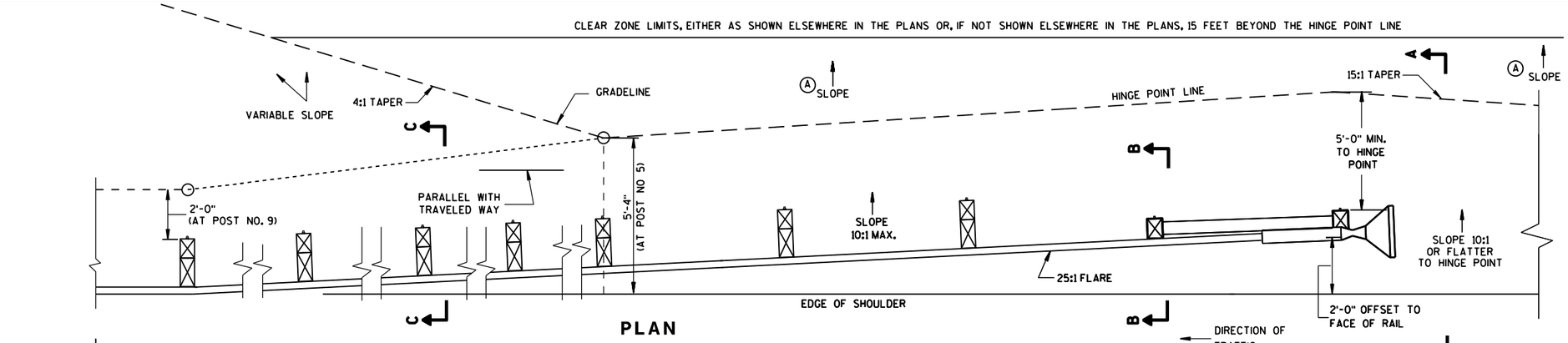
SEE SDD 14B42 FOR MORE INFORMATION.

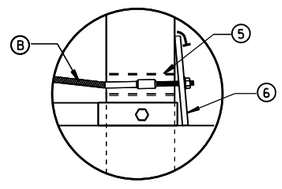
* DO NOT ATTACH BLOCKOUTS TO POSTS 1 AND 2.

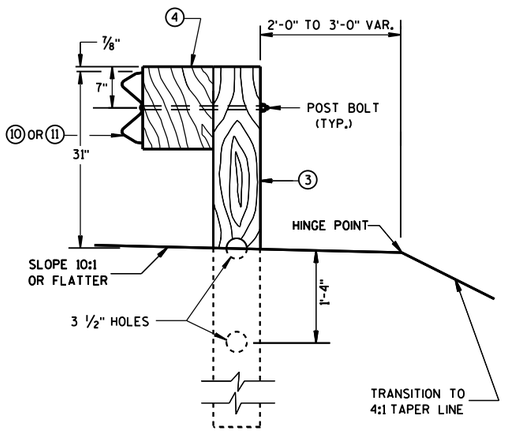
DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

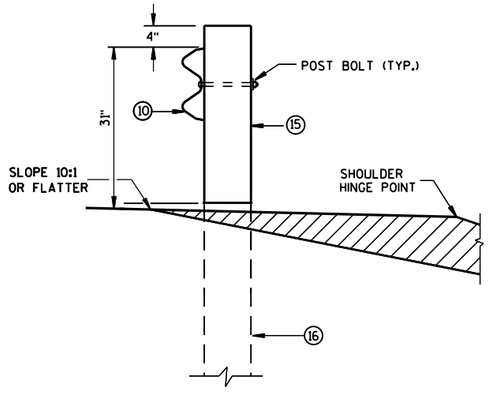
SEE MANUFACTURER'S DRAWING FOR SPLICE LOCATION, HARDWARE DIMENSIONS AND INSTALLATION INSTRUCTIONS.

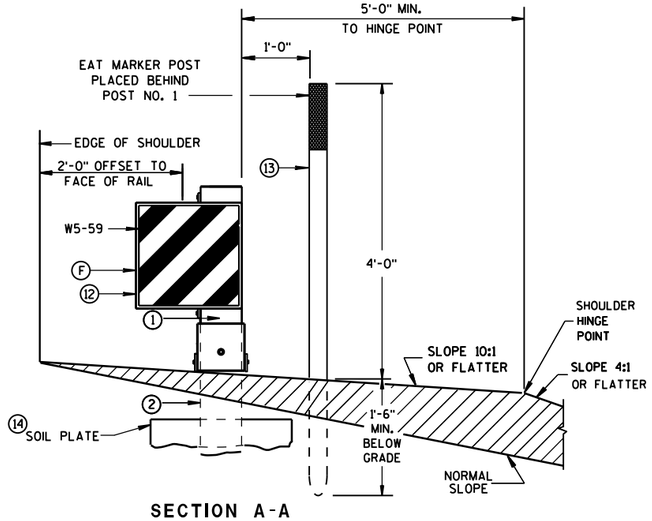
THE CENTER OF THE UPPER 3½" DIAMETER HOLE ON POST NUMBER 3 THROUGH POST 9 IS TO BE FLUSH WITH THE GROUND LINE UP TO A MAXIMUM OF 2" ABOVE GROUND LINE.

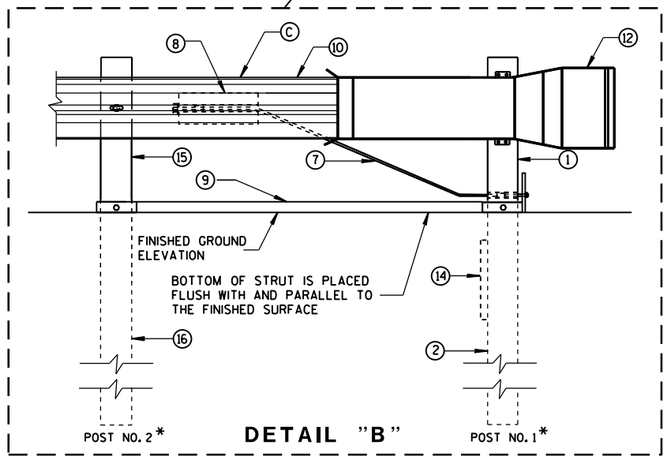








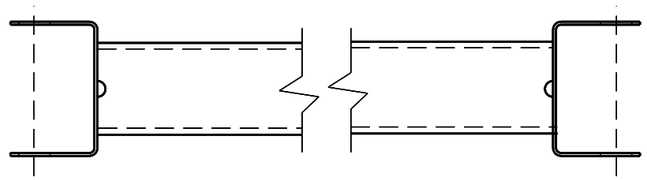




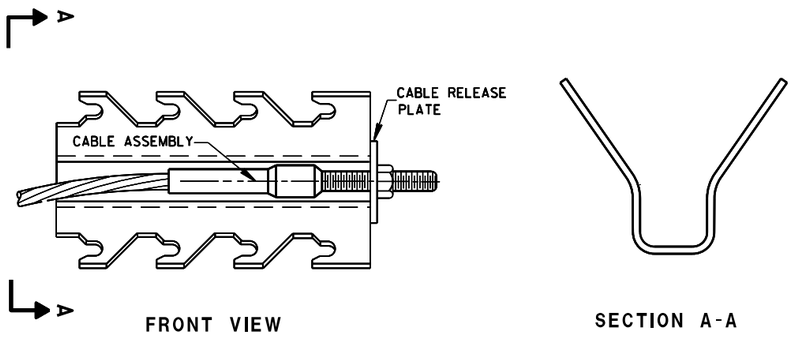
MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

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S.D.D. 14 B 44-3a



GENERIC GROUND STRUT (9) (H)



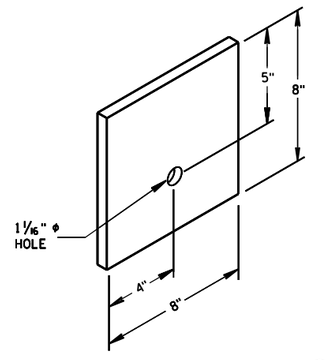
FRONT VIEW

SECTION A-A

GENERIC ANCHOR CABLE BOX (8) (H)

BILL OF MATERIALS

PART NO.	DESCRIPTION MATERIALS PROVIDED BY MGS EAT MANUFACTURER. SEE MANUFACTURER'S DETAILS FOR MORE INFORMATION.
(1)	UPPER POST NO. 1 6" X 6" TUBE
(2)	LOWER POST NO. 1
(3)	WOOD CRT
(4)	WOOD BLOCKOUT
(5)	PIPE SLEEVE
(6)	BEARING PLATE
(7)	BCT CABLE ASSEMBLY
(8)	ANCHOR CABLE BOX
(9)	GROUND STRUT
(10)	PERFORATED W-BEAM RAIL END PANEL, 12'-6" LONG.
(11)	STANDARD W-BEAM RAIL. MULTIPLE SECTIONS REQUIRED. SECTIONS VARY IN LENGTH.
(12)	IMPACT HEAD
(13)	EAT MARKER POST - YELLOW (SEE APPROVED PRODUCTS LIST)
(14)	SOIL PLATE
(15)	UPPER POST NO. 2
(16)	LOWER POST NO. 2



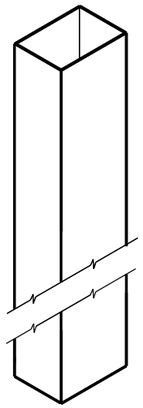
BEARING PLATE (6)

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

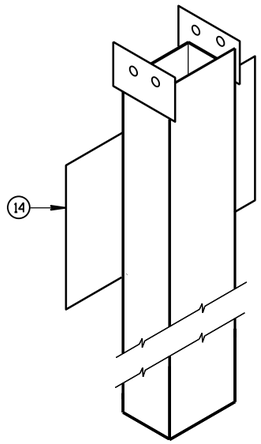
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

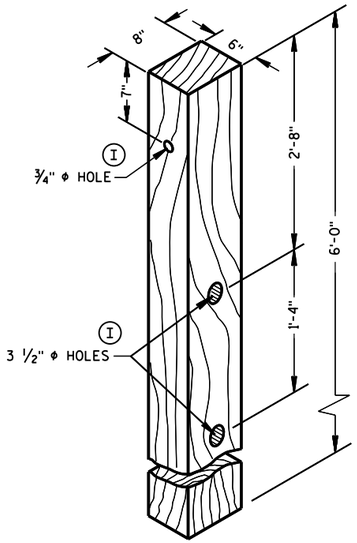
S.D.D. 14 B 44-3b



UPPER POST NO. 1 (1)

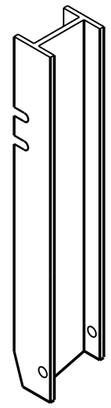


LOWER POST NO. 1 (2)

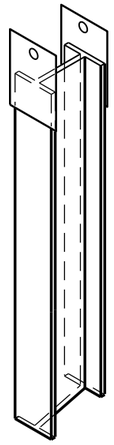


POSTS NUMBER 3-9

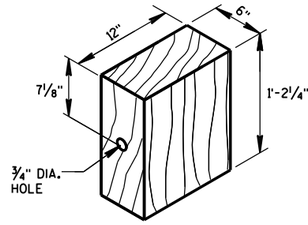
WOOD CRT POST (3)



UPPER POST NO. 2 (15)

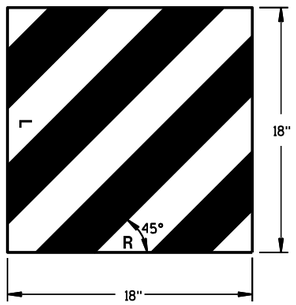


LOWER POST NO. 2 (16)



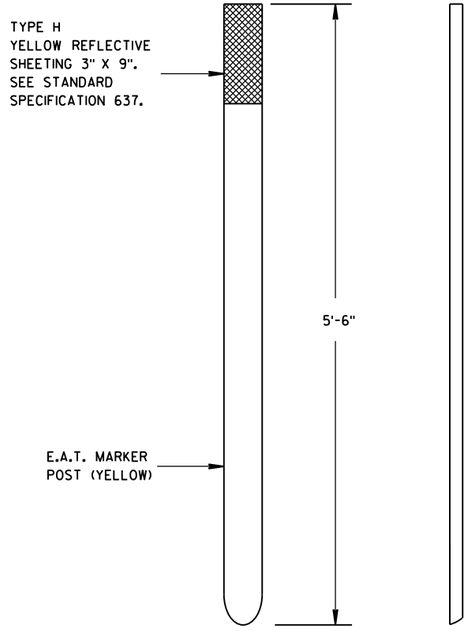
WOOD BLOCKOUT (4)

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



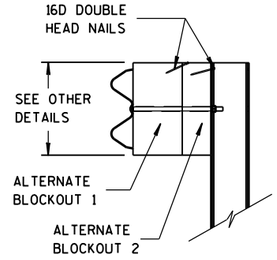
W5-59

REFLECTIVE SHEETING DETAIL (H)

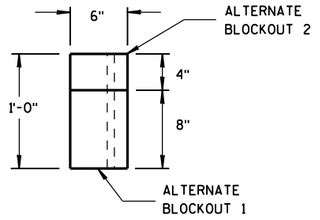


FRONT VIEW SIDE VIEW

E.A.T. MARKER POST (13)



SIDE VIEW



TOP VIEW

ALTERNATE WOOD
BLOCKOUT DETAIL

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

June 2017
DATE

/S/ Rodney Taylor
ROADWAY STANDARDS
UNIT SUPERVISOR

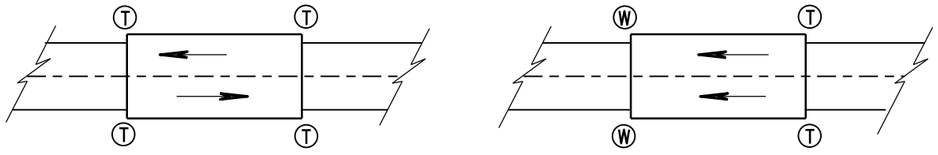
FHWA

6

S.D.D. 14 B 44-3c

6

S.D.D. 14 B 44-3c



TWO WAY TRAFFIC

ONE WAY TRAFFIC

Ⓣ THRIE BEAM CONNECTION

Ⓦ W-BEAM CONNECTION WHEN REQUIRED

TYPICAL LOCATIONS OF THRIE BEAM AND W-BEAM CONNECTIONS TO BRIDGE

GENERAL NOTES

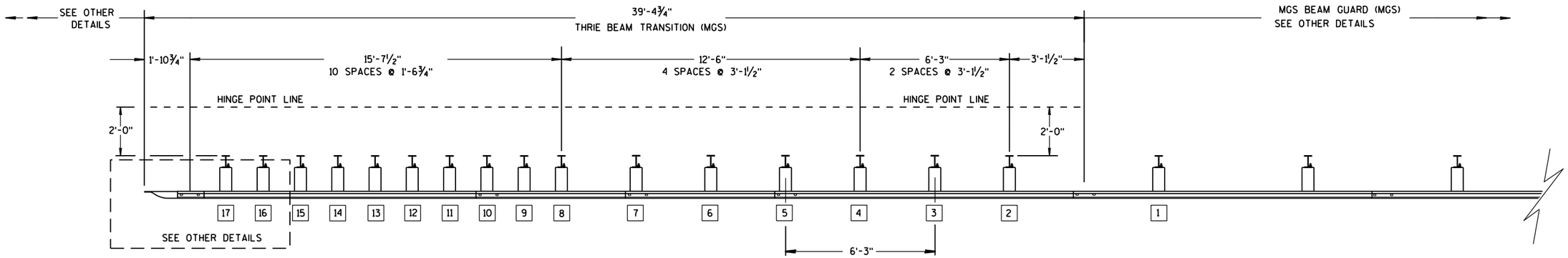
IF ROCK IS ENCOUNTERED, REMOVE ROCK TO FULL DEPTH OF POST PLUS 2½", AND 12" DIAMETER AROUND POST. SEE 14B42 FOR MORE DETAILS.

TRANSITION USES STEEL POSTS ONLY.

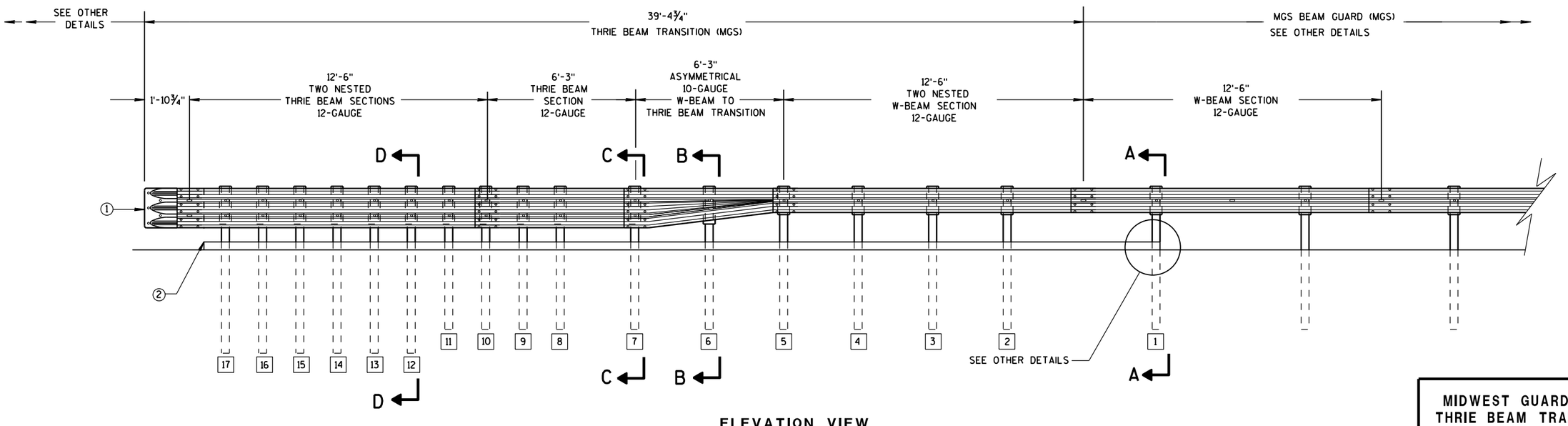
SEE STANDARD DETAIL DRAWING 14 B 42 FOR MORE INFORMATION.

① BRIDGE RAILING TYPE "W" DOES NOT REQUIRE A TERMINAL CONNECTOR.

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



PLAN VIEW



ELEVATION VIEW

MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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

6

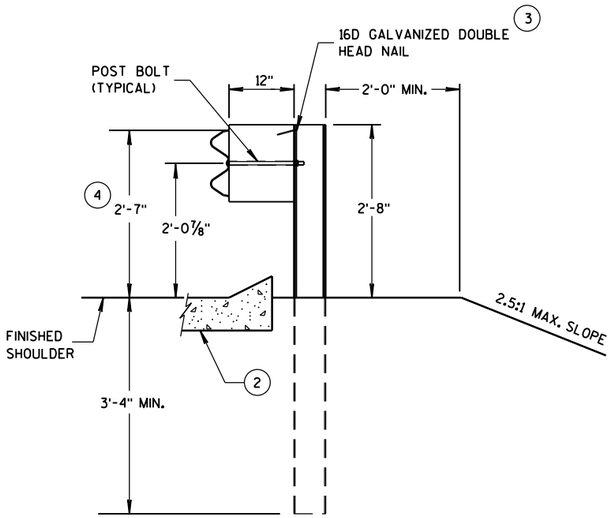
S.D.D. 14 B 45-4a

GENERAL NOTES

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

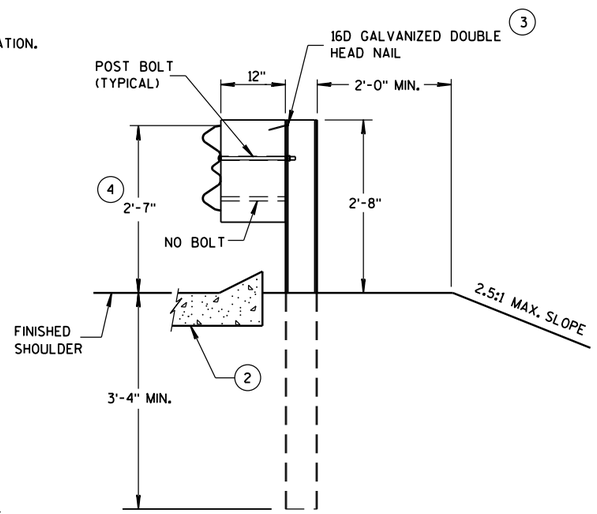
(3) WHEN USING STEEL POSTS AND WOOD BLOCKOUTS INSTALL FOUR 10D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.

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



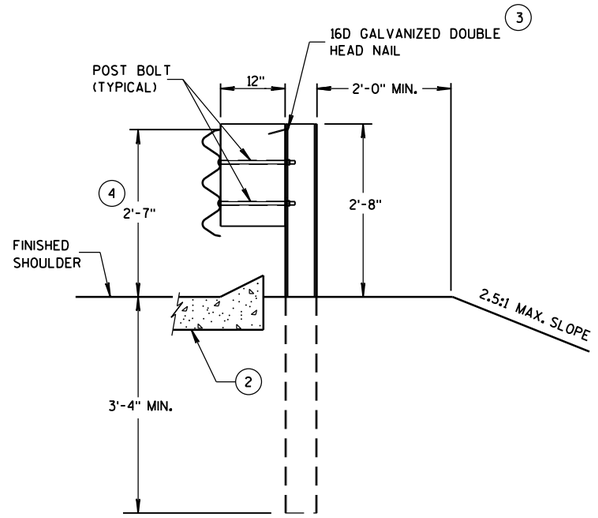
SECTION A-A

POSTS 1-5



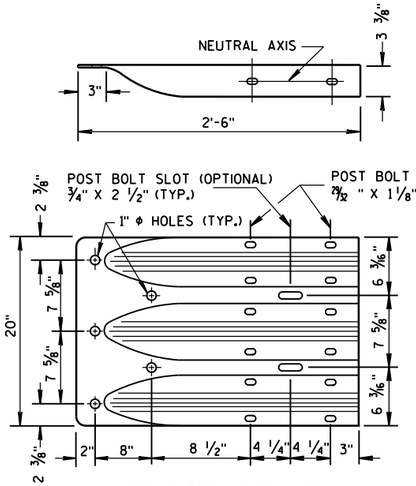
SECTION B-B

POST 6



SECTION C-C

POSTS 7-11



THRIE BEAM TERMINAL CONNECTOR

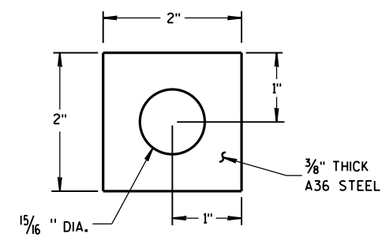
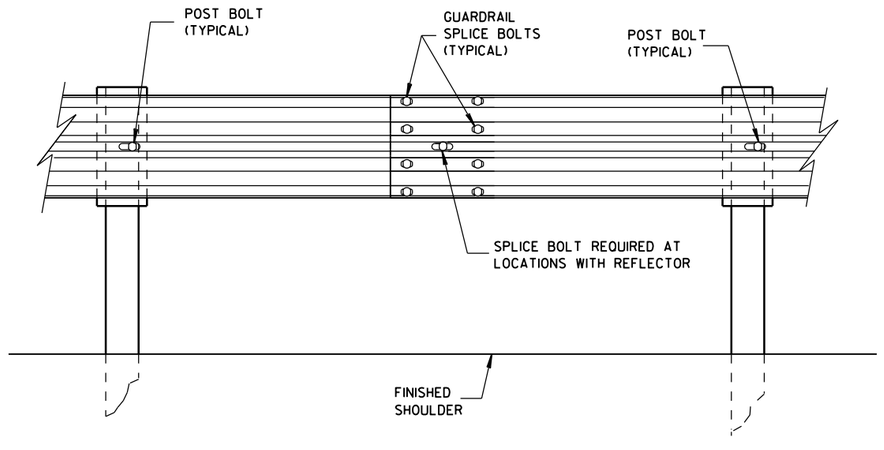
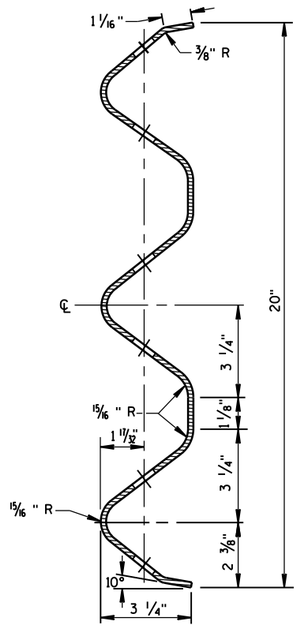


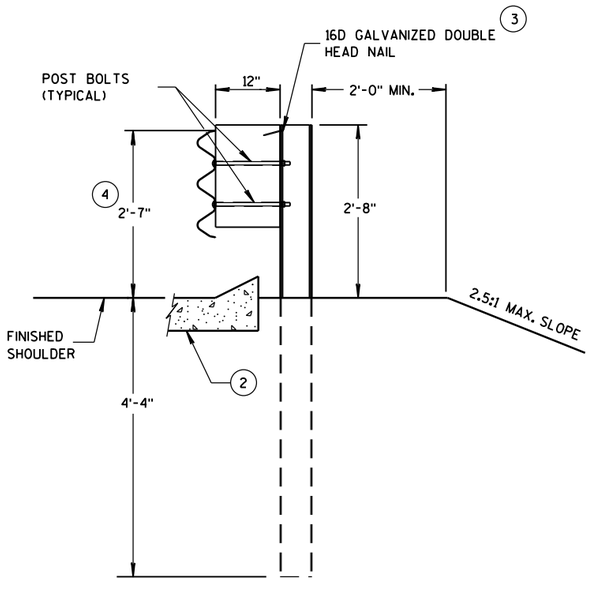
PLATE WASHER DETAIL



SPLICE DETAIL



SECTION THRU THRIE BEAM RAIL ELEMENT



SECTION D-D

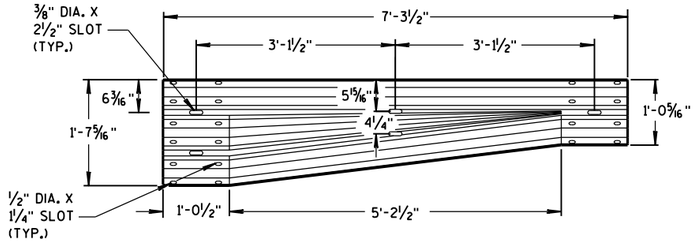
POSTS 12-17

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

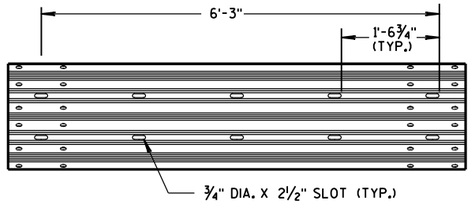
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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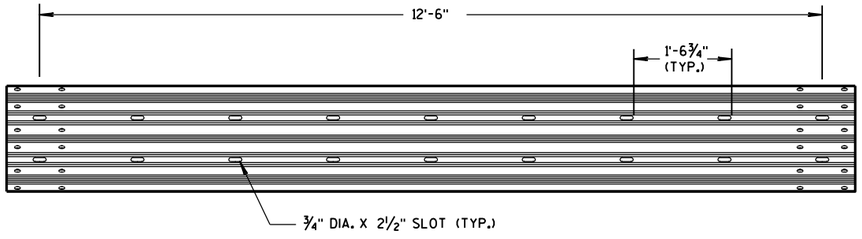
S.D.D. 14 B 45-4b



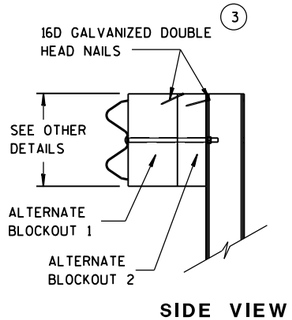
W-BEAM TO THRIE BEAM TRANSITION SECTION



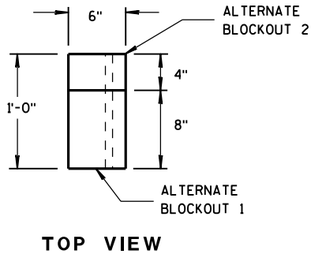
6'-3" THRIE BEAM SECTION



12'-6" THRIE BEAM SECTION

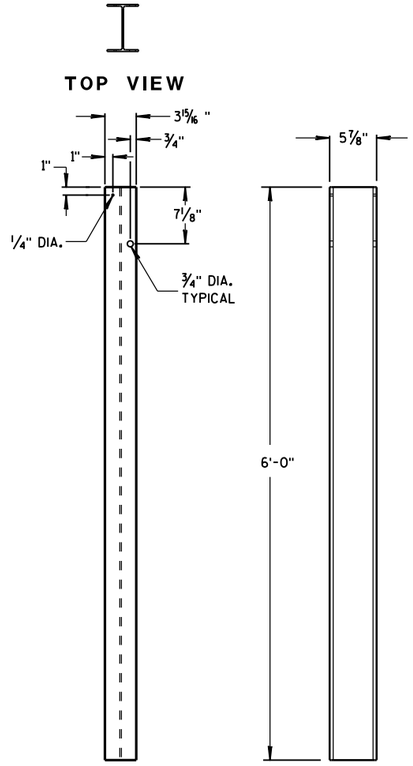


SIDE VIEW

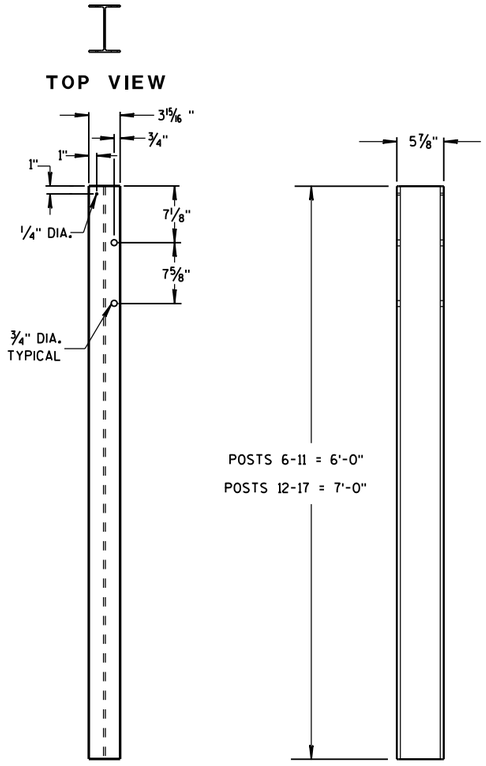


TOP VIEW

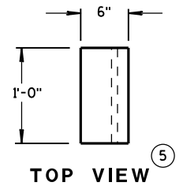
ALTERNATE WOOD BLOCKOUT DETAIL



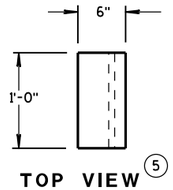
STEEL POSTS 1-5



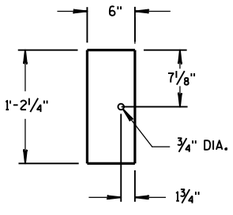
STEEL POSTS 6-17



TOP VIEW (5)

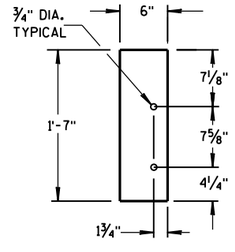


TOP VIEW (5)



FRONT VIEW

BLOCKOUT POSTS 1-5



FRONT VIEW

BLOCKOUT POSTS 6-17

GENERAL NOTES

STEEL POSTS ARE W6X9 OR W6X8.5.

BOLT HOLES FOR POST ARE ON FRONT AND OF SIDE OF POST.

(3) WHEN USING STEEL POSTS AND WOOD BLOCKOUTS INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.

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

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

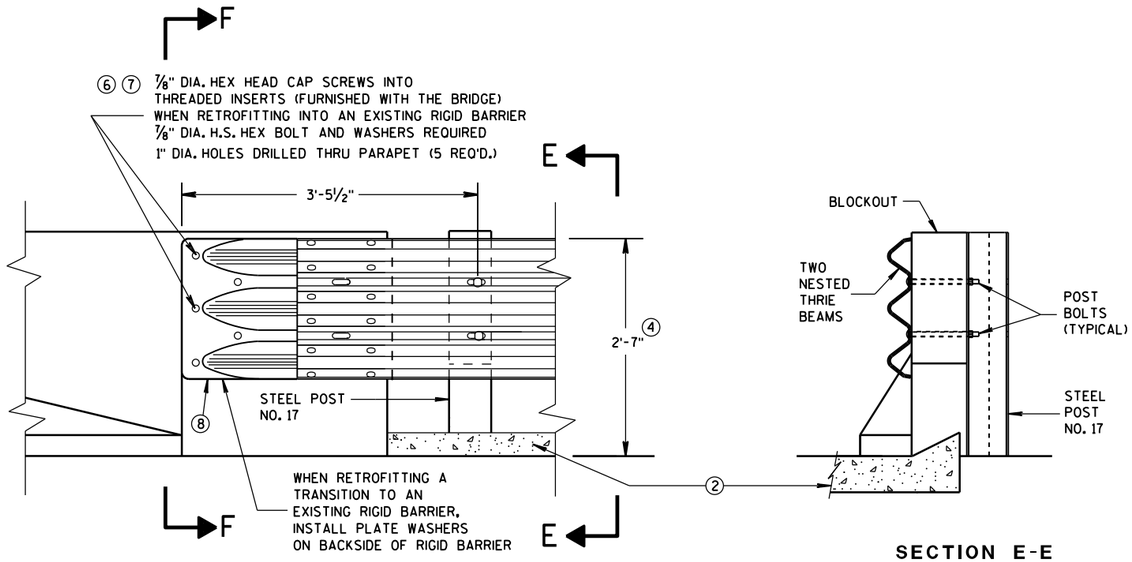
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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



FRONT VIEW

SECTION E-E

THRIE BEAM CONNECTION TO BRIDGE PARAPET WITH SQUARE ENDS

GENERAL NOTES

THESE ARE TYPICAL CONNECTION DETAILS. ADJUST THE POSTION OF CONNECTIONS TO EXISTING BRIDGES TO FIT THE ACTUAL BRIDGE AND SITE DIMENSIONS.

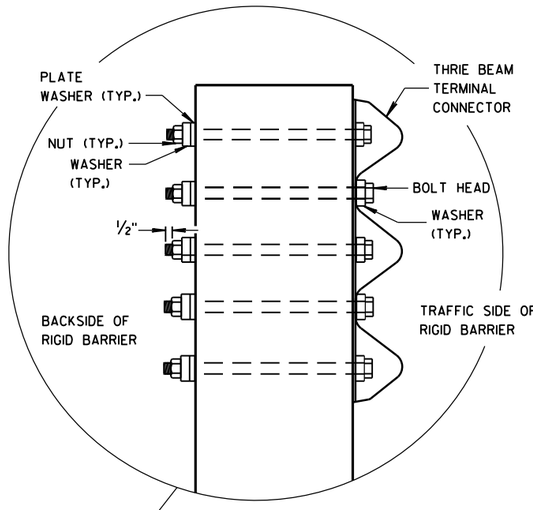
② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.

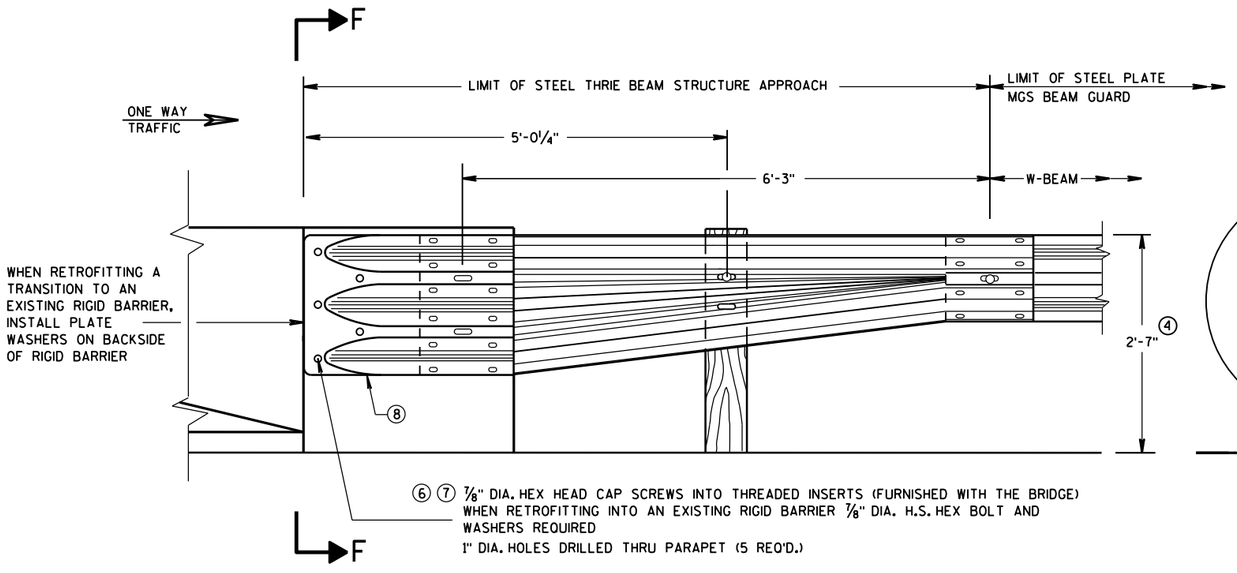
④ TOLERANCE FOR TOP OF BEAM IS ± 1".

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

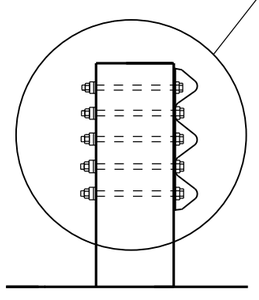
⑦ BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/8" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.

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

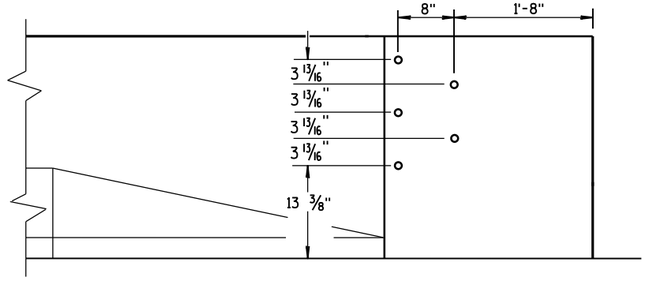




FRONT VIEW



SECTION F-F



DRILL HOLE LOCATION

W BEAM TRANSITION AND CONNECTION TO BRIDGE PARAPETS WITH SQUARE ENDS

(USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

GENERAL NOTES

THESE ARE TYPICAL CONNECTION DETAILS. ADJUST THE POSTION OF CONNECTIONS TO EXISTING BRIDGES TO FIT THE ACTUAL BRIDGE AND SITE DIMENSIONS.

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

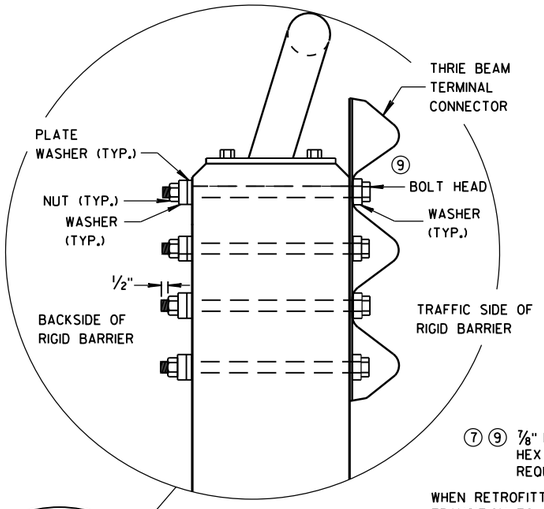
(4) TOLERANCE FOR TOP OF BEAM IS ± 1".

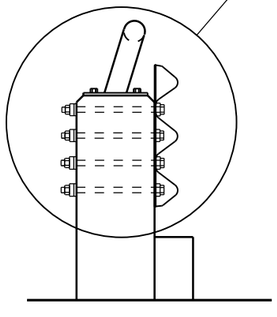
(6) DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

(7) BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/8" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.

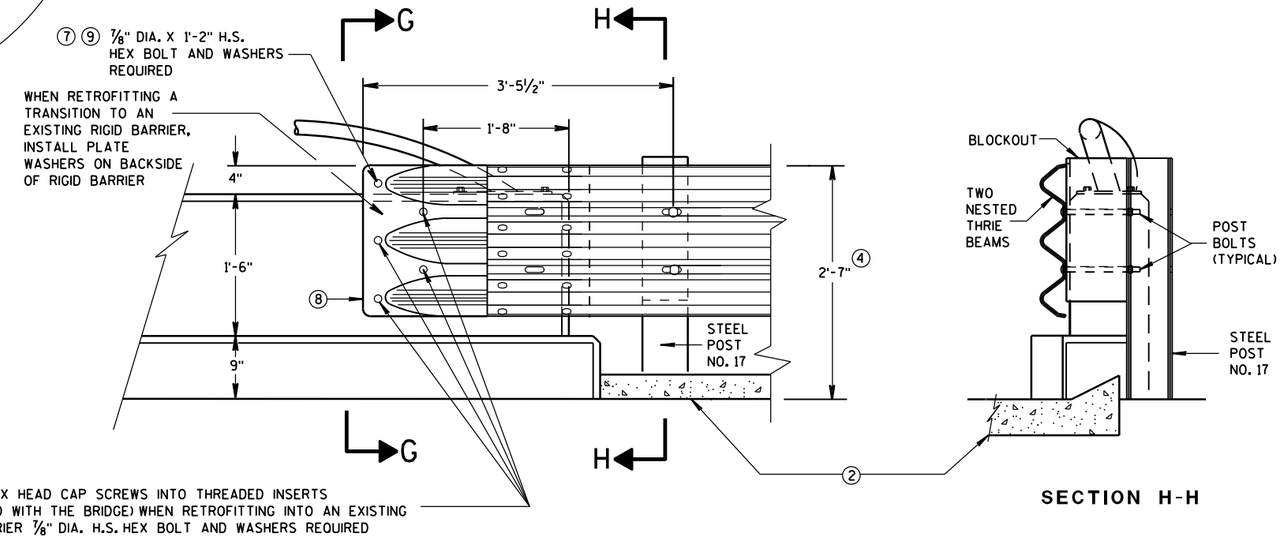
(8) THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3 1/2".

(9) BOLT, NUT AND WASHERS NOT REQUIRED FOR THIS LOCATION WHEN RETROFITTING AN EXISTING PAPAPET AND THE HOLE IS EITHER ABOVE PARAPET OR WITHIN 4 INCHES OF THE EDGE OF PARAPET.





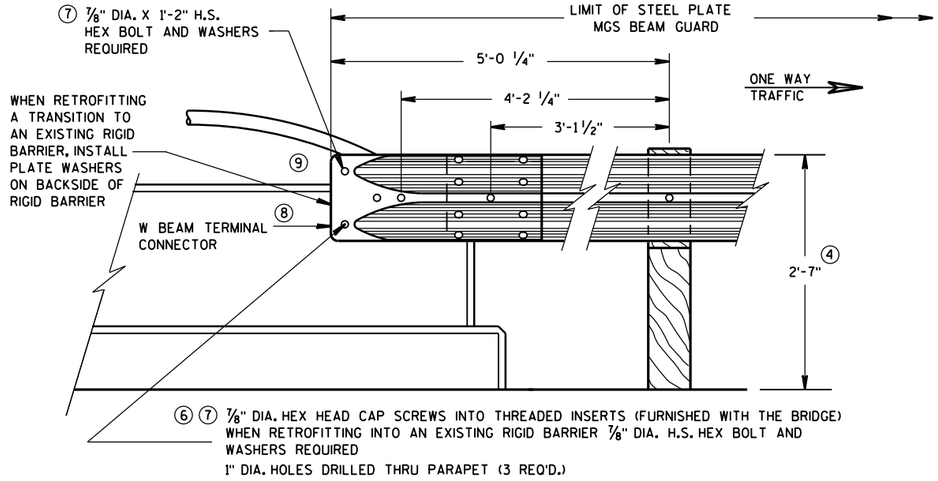
SECTION G-G



FRONT VIEW

SECTION H-H

THRIE BEAM CONNECTION TO VERTICAL FACED PARAPETS



FRONT VIEW

W BEAM CONNECTION TO VERTICAL FACE PARAPET

(USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

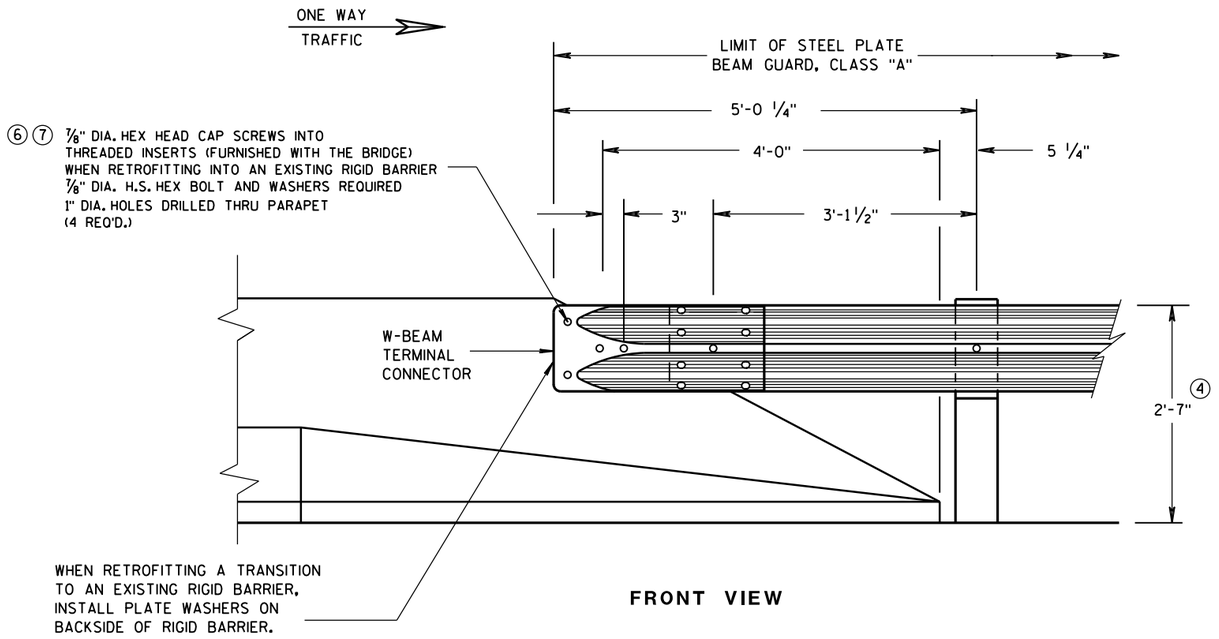
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June, 2015 — DATE
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FRONT VIEW

W BEAM CONNECTION TO PARAPETS WITH SLOPED ENDS

(USE ONLY AT TRAFFIC EXIT END OF ONE WAY BRIDGE)

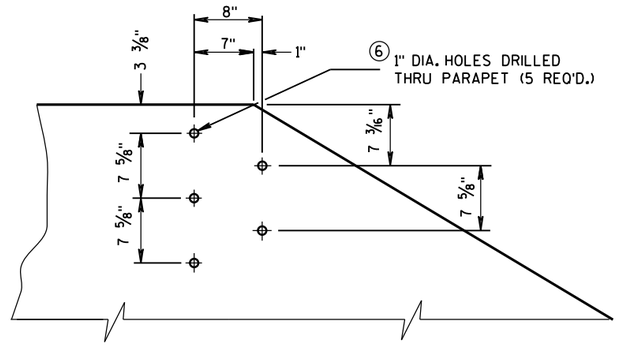
GENERAL NOTES

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

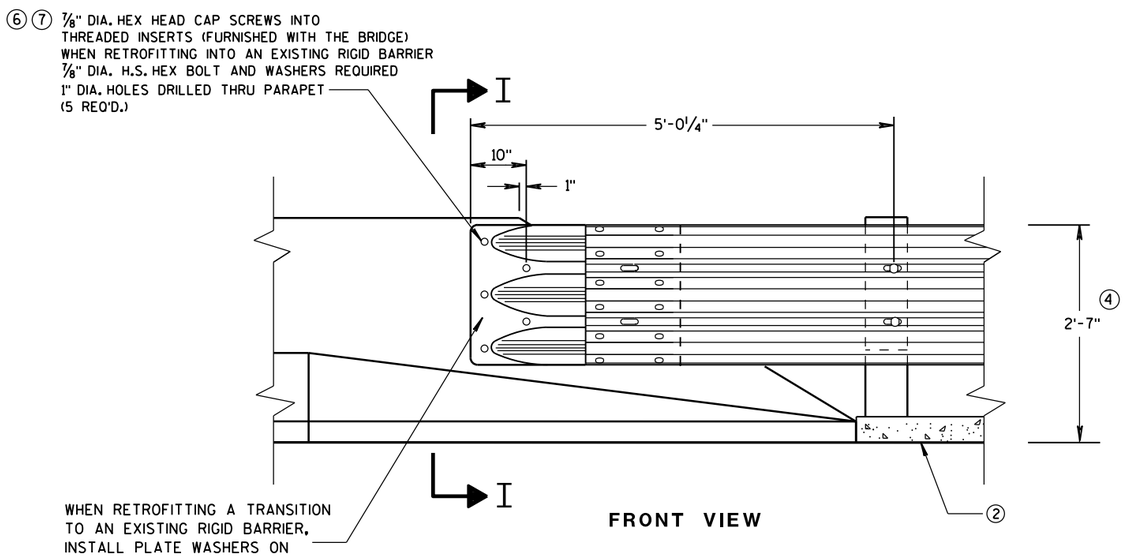
④ TOLERANCE FOR TOP OF BEAM IS ± 1".

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

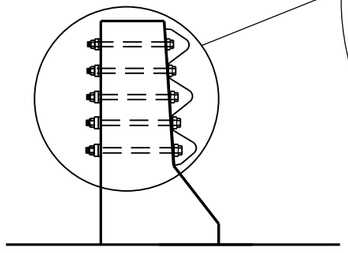
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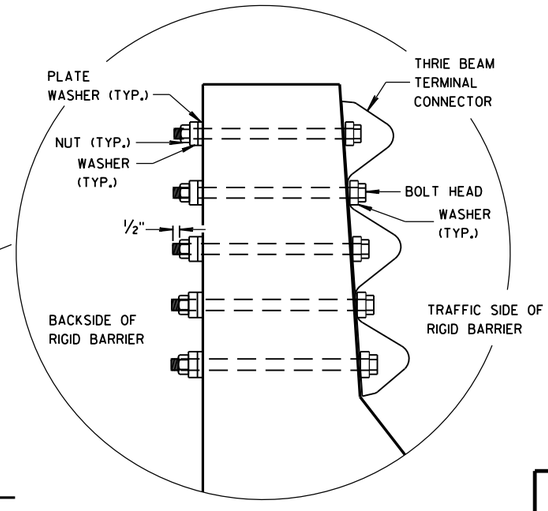
DRILL HOLE LOCATION AND PATTERN
FOR THRIE BEAM CONNECTION



FRONT VIEW



SECTION I-I



THRIE BEAM CONNECTION TO BRIDGE PARAPETS WITH SLOPED ENDS

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

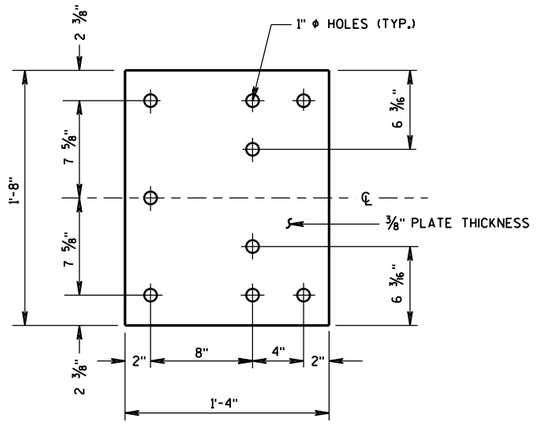
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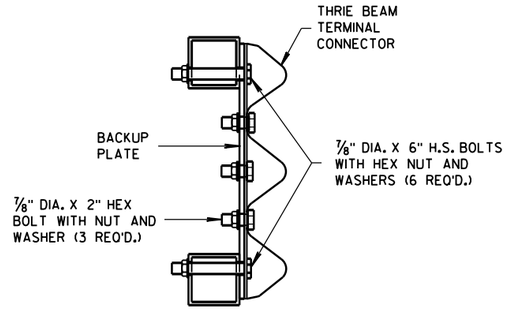
S.D.D. 14 B 45-4f

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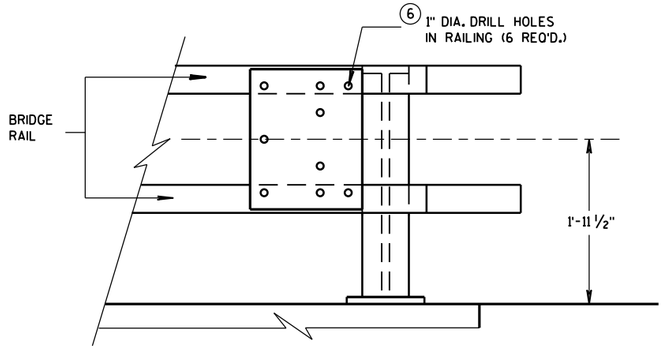
S.D.D. 14 B 45-4f



BACK-UP PLATE DETAIL



SECTION J-J

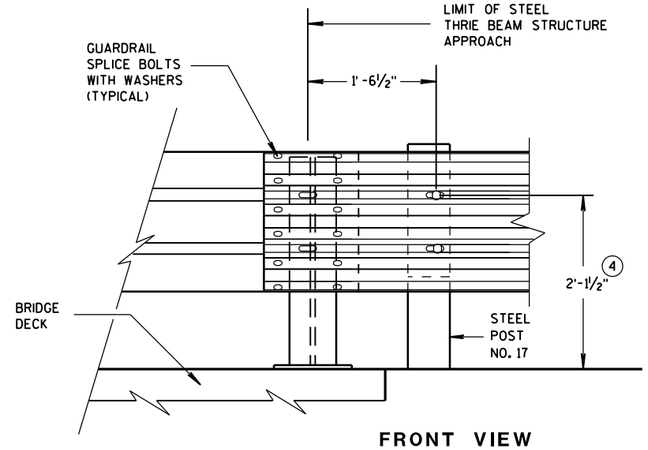


BACK-UP PLATE MOUNTING ONTO BRIDGE RAILING

GENERAL NOTES

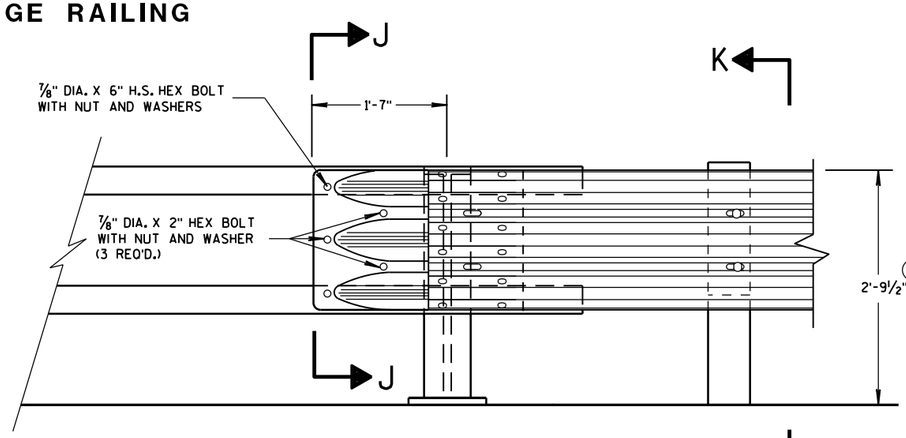
4 TOLERANCE FOR TOP OF BEAM IS ± 1".

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

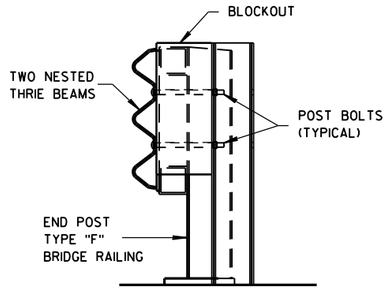


FRONT VIEW

THRIE BEAM CONNECTION TO STEEL RAILING TYPE "W"



FRONT VIEW



SECTION K-K

THRIE BEAM CONNECTION TO TUBULAR RAILING TYPE "F"

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

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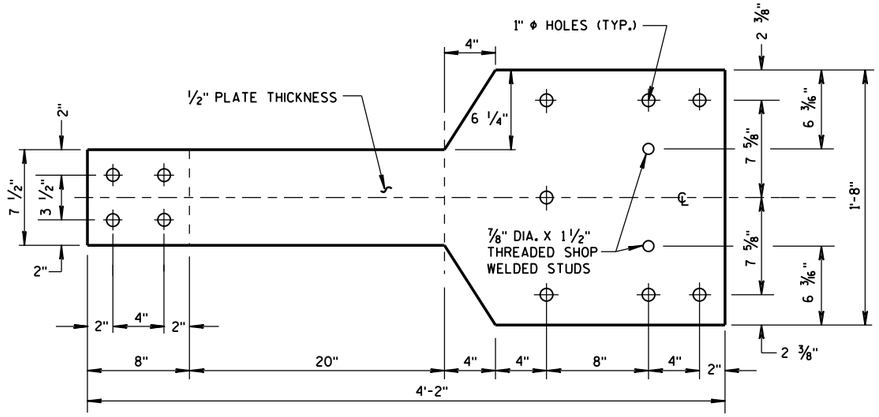
S.D.D. 14 B 45-4g

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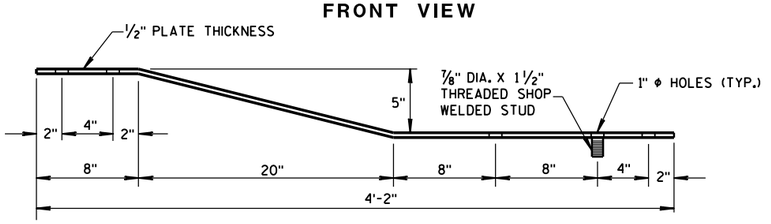
S.D.D. 14 B 45-4g

GENERAL NOTES

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

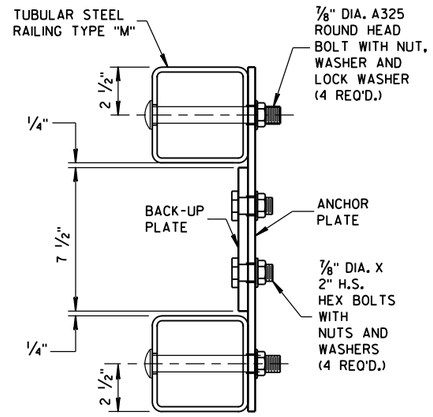


FRONT VIEW

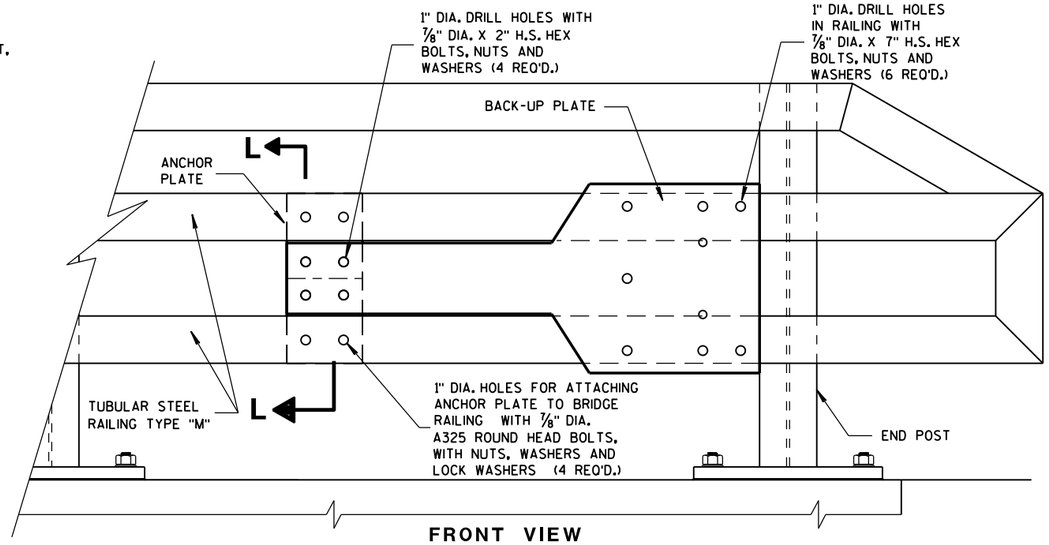


PLAN VIEW

BACK-UP PLATE DETAIL, TYPE "M"

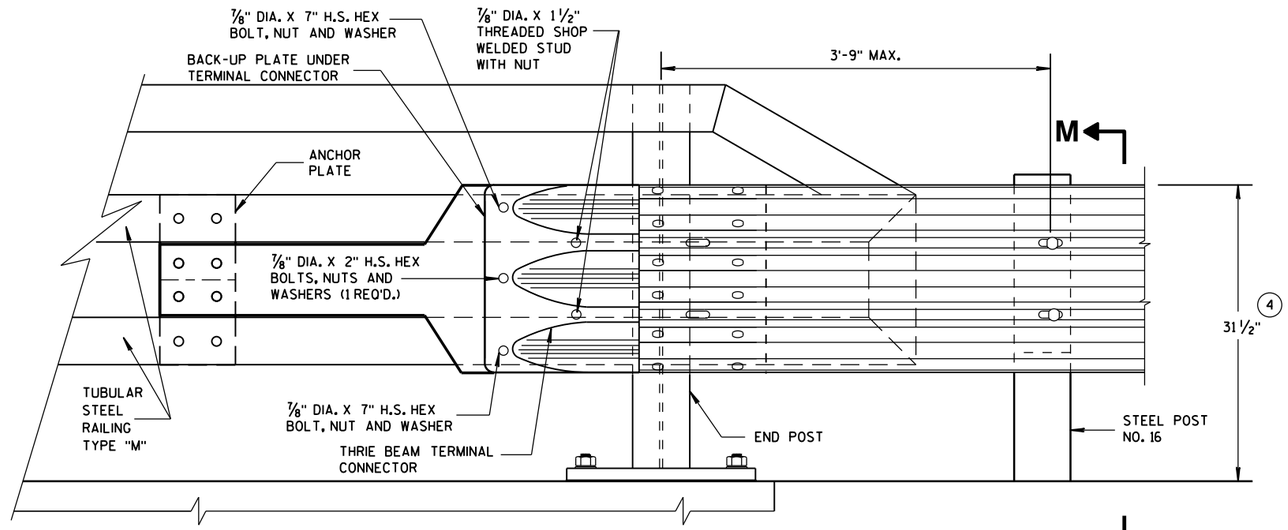


SECTION L-L

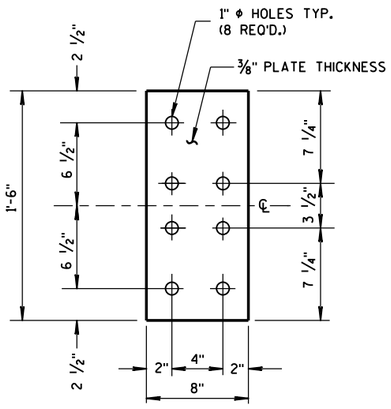


FRONT VIEW

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

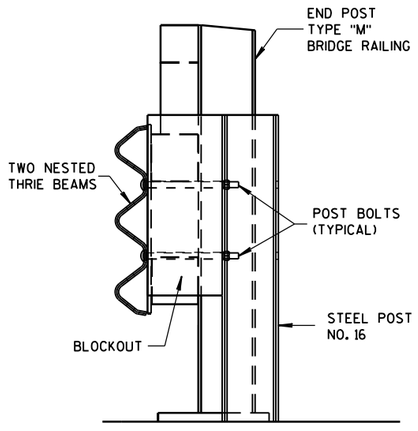


FRONT VIEW

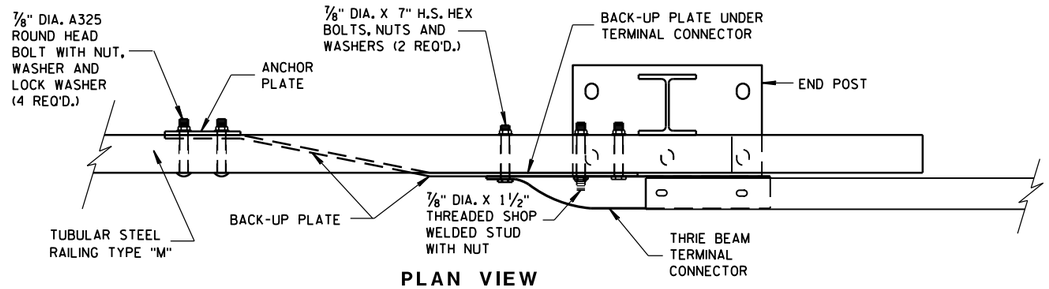


FRONT VIEW

ANCHOR PLATE DETAIL, TYPE "M"



SECTION M-M



PLAN VIEW

THRIE BEAM CONNECTION TO TUBULAR RAILING, TYPE "M"

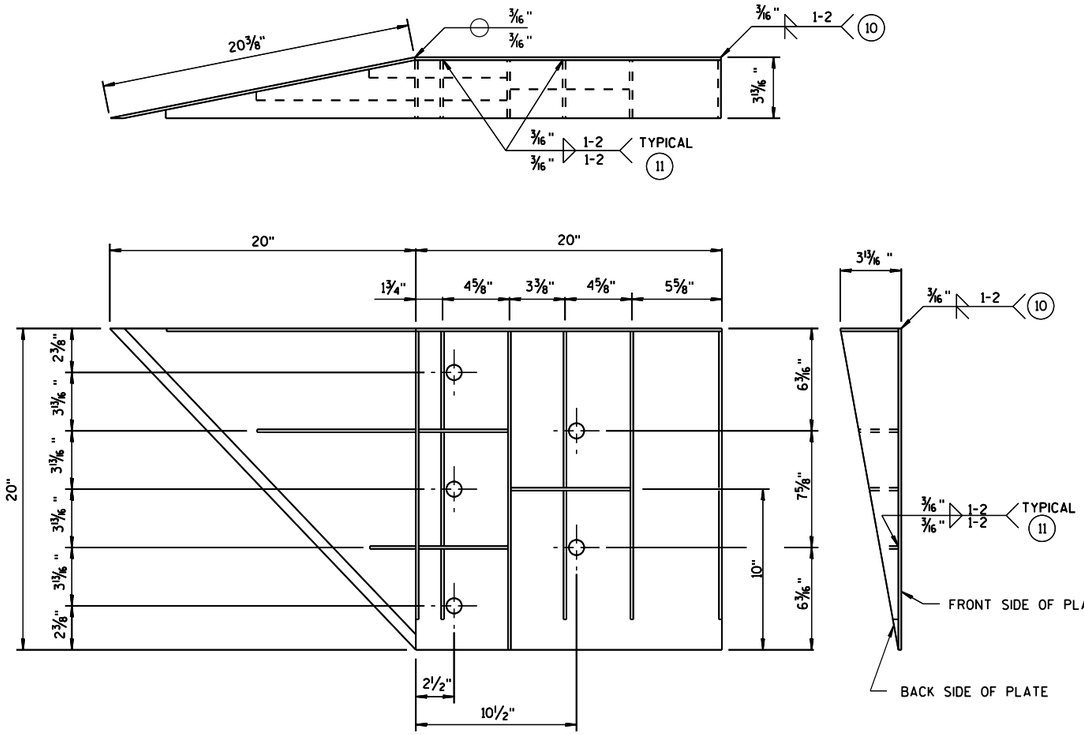
MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED	
June, 2015	/S/ Jerry H. Zogg
DATE	ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA	

6

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

6

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



WELDING INSTRUCTION

(VIEWED FROM BACK SIDE OF PLATE)

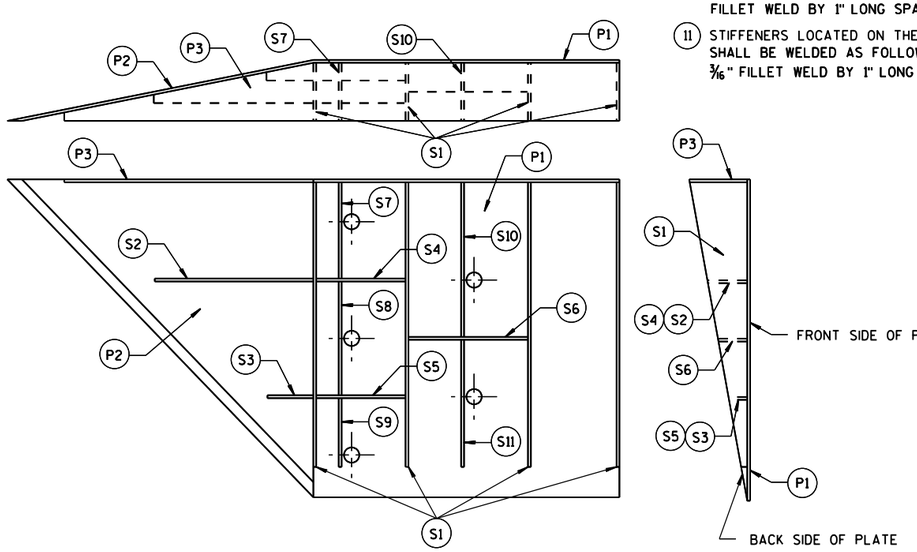


PLATE AND STIFFENER IDENTIFICATION

(VIEWED FROM BACK SIDE OF PLATE)

CONNECTOR PLATE DIMENSION (PER ASSEMBLY)				
PLATE	QUANTITY	SHAPE	SIZE (A x B x C x D)	THICKNESS
P1	1		20" x 20"	⅜"
P2	1		20" x 20" x 28⁹⁄₁₆"	⅜"
P3	1		39" x 3⅝" x 20" x 19⁵⁄₁₆"	⅜"
S1	4		18⁷⁄₁₆" x 3⅜" x 18¾"	¼"
S2	1		10¼" x 2⁷⁄₁₆" x 10⅜" x ½"	¼"
S3	1		3" x 1¹⁄₁₆" x 3⅛" x ½"	¼"
S4	1		6⅛" x 2⁷⁄₁₆"	¼"
S5	1		6⅛" x 1¹⁄₁₆"	¼"
S6	1		7¾" x 1¾"	¼"
S7	1		2⁹⁄₁₆" x 6" x 3⅝" x 5⅞"	¼"
S8	1		1³²⁄₃₂ " x 7½" x 2½" x 7⅜"	¼"
S9	1		6¹⁄₁₆" x 6³⁄₁₆" x 1³²⁄₃₂ "	¼"
S10	1		1⅛" x 9⅞" x 3⅝" x 9¹¹⁄₁₆ "	¼"
S11	1		8½" x 8¾" x 1¹³⁄₁₆ "	¼"

SINGLE SLOPE CONNECTION PLATE

GENERAL NOTES

COVER PLATE PANELS ARE ⅜" THICK.

ALL STIFFENERS ARE ¼" THICK.

CONNECTOR PLATE SHALL BE FABRICATED FROM ASTM GRADE A36 STEEL AND GALVANIZED.

FOR GALVANIZED REQUIREMENTS, SEE SECTION 614 OF THE STANDARD SPECIFICATIONS.

ALL HOLE DIAMETERS SHALL BE 1".

FOR OPPOSITE SIDE INSTALLATION MIRROR DRAWINGS.

(10) STIFFENERS LOCATED AT THE OUTSIDE EDGES OF THE COVER PLATES SHALL BE WELDED AS FOLLOWS:
SINGLE BEVEL GROOVE WELD ON EXTERNAL SIDES AND ⅜" FILLET WELD BY 1" LONG SPACED AT 2" ON INTERNAL SIDES.

(11) STIFFENERS LOCATED ON THE INSIDE OF THE COVER PLATE SHALL BE WELDED AS FOLLOWS:
⅜" FILLET WELD BY 1" LONG SPACED AT 2".

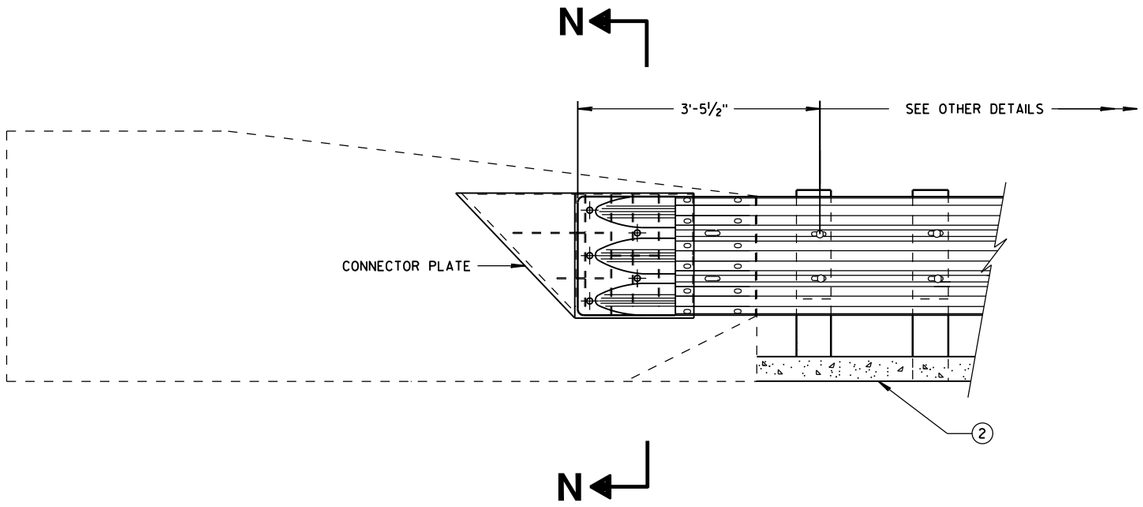
MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

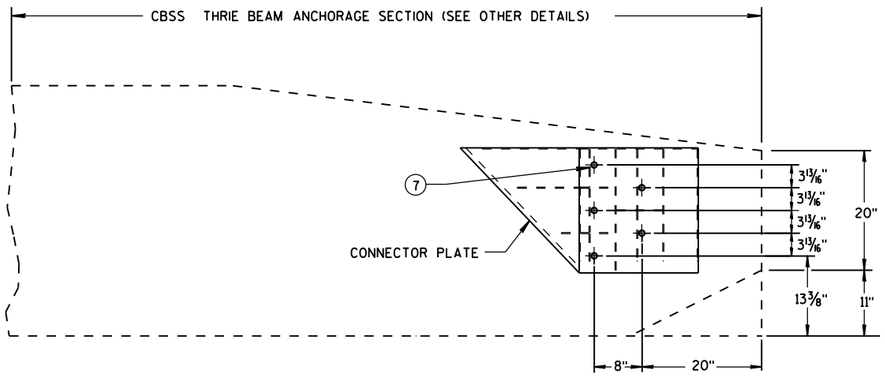
APPROVED
June, 2015 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
FHWA

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



THRIE BEAM CONNECTION TO SINGLE SLOPE BARRIER



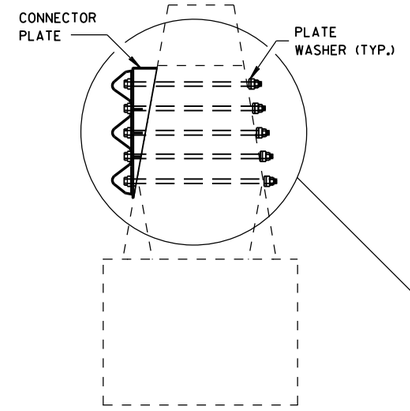
SINGLE SLOPE CONNECTION PLATE PLACEMENT

GENERAL NOTES

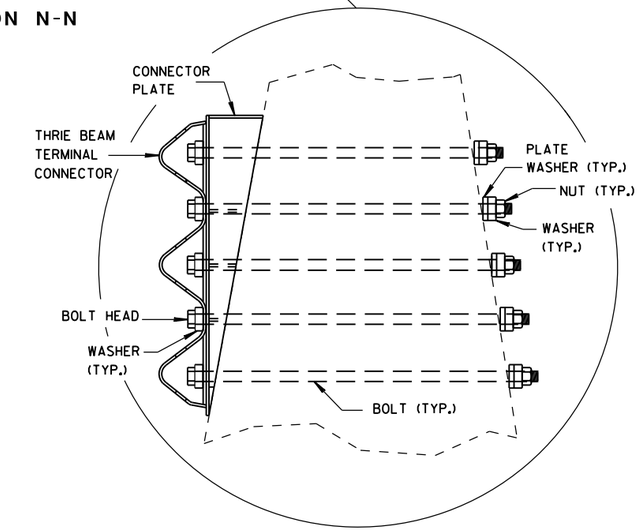
CONNECTOR PLATE, DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

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

(7) BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/8" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.



SECTION N-N



MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

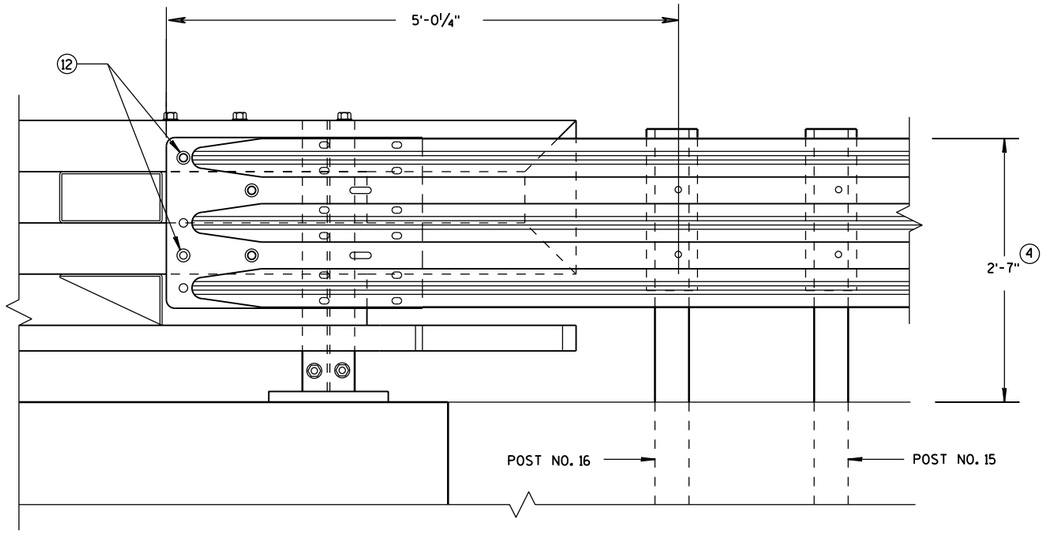
APPROVED
June, 2015 — DATE
/S/ Jerry H. Zoga — ROADWAY STANDARDS DEVELOPMENT ENGINEER
NT
FHWA

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

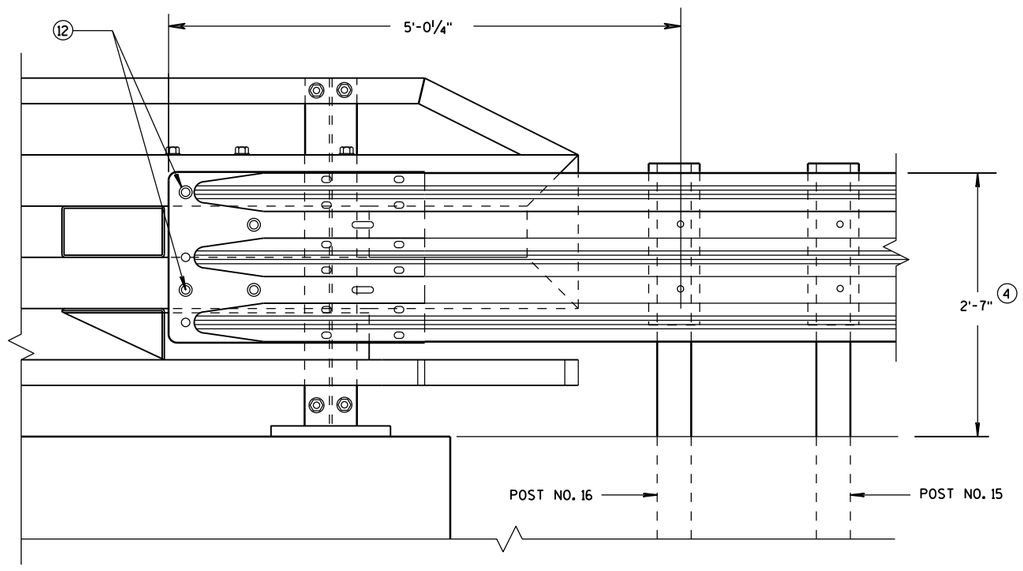
6

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



ELEVATION OF DETAIL AT NY3 END POST

THRIE BEAM RAIL ATTACHMENT



ELEVATION OF DETAIL AT NY4 END POST

THRIE BEAM RAIL ATTACHMENT

GENERAL NOTES

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

(12) BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. ON BACKSIDE OF PARAPET ONE ROUND WASHER, AND NUT REQUIRED. BOLT THREAD IS TO EXTEND ½-INCH BEYOND NUT.

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2015
DATE

/S/ Jerry H. Zogg
ROADWAY STANDARDS D 236 NT
ENGINEER

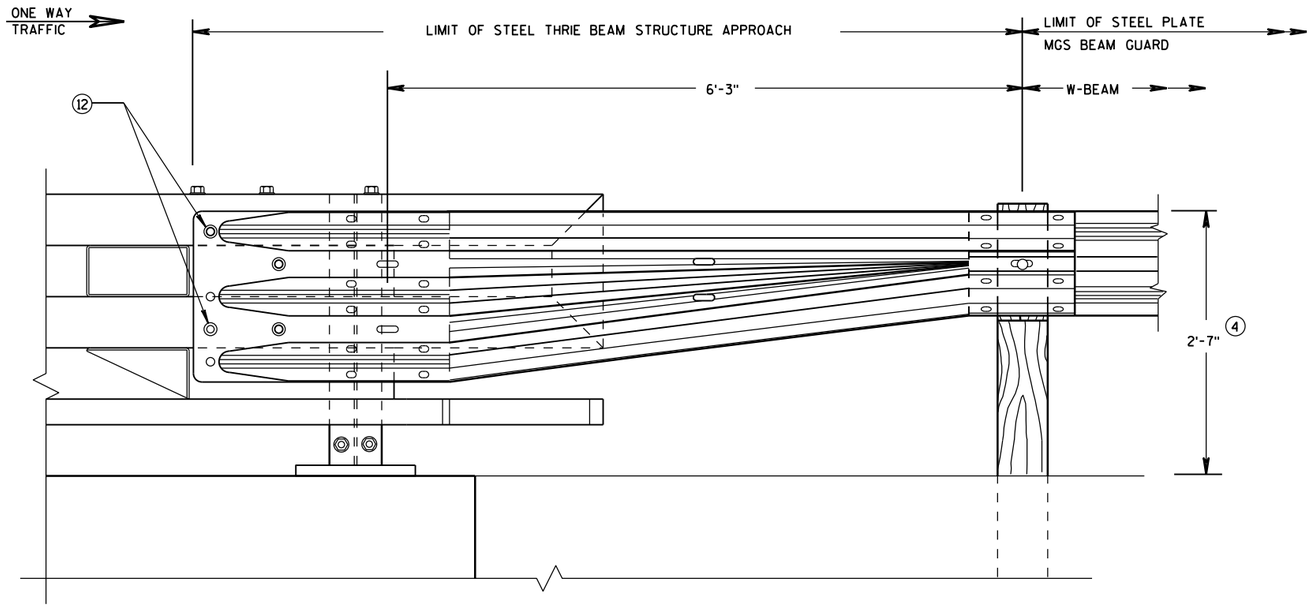
FHWA

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

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



FRONT VIEW

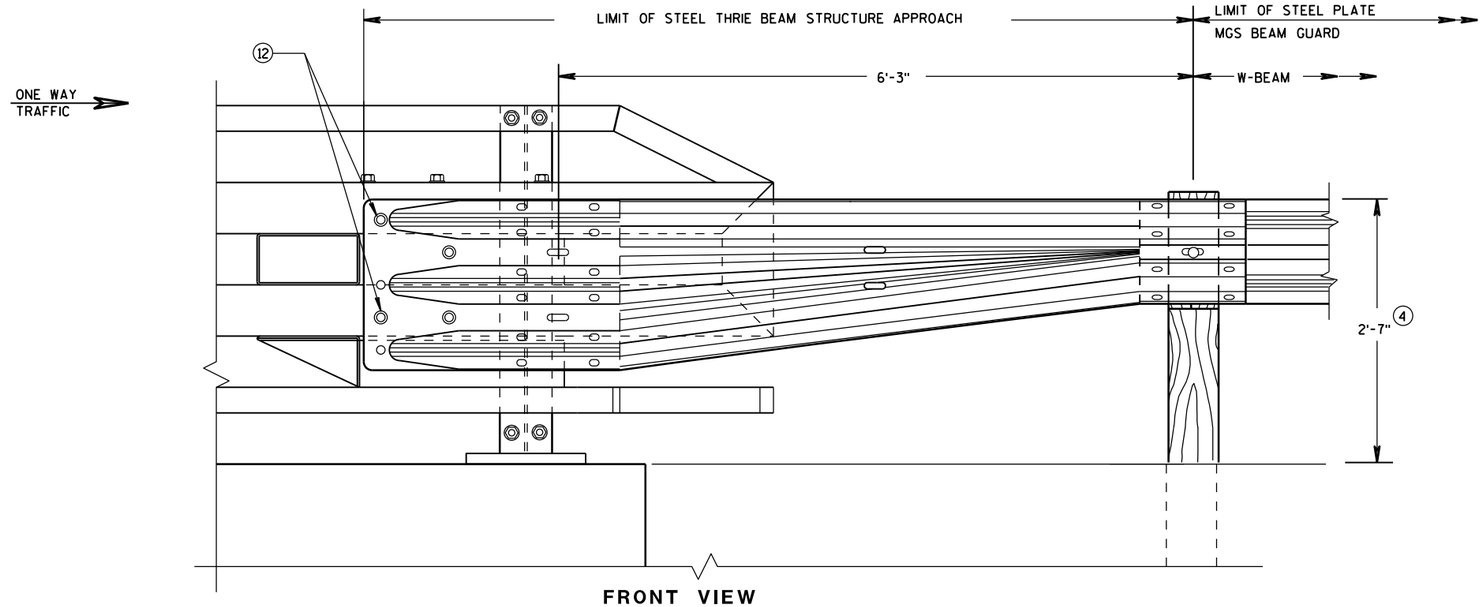
W BEAM TRANSITION AND CONNECTION TO BRIDGE RAILING TYPE "NY3"

(USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)

GENERAL NOTES

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

(12) BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. ON BACKSIDE OF PARAPET ONE ROUND WASHER, AND NUT REQUIRED. BOLT THREAD IS TO EXTEND ½-INCH BEYOND NUT.



FRONT VIEW

W BEAM TRANSITION AND CONNECTION TO BRIDGE RAILING TYPE "NY4"

(USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

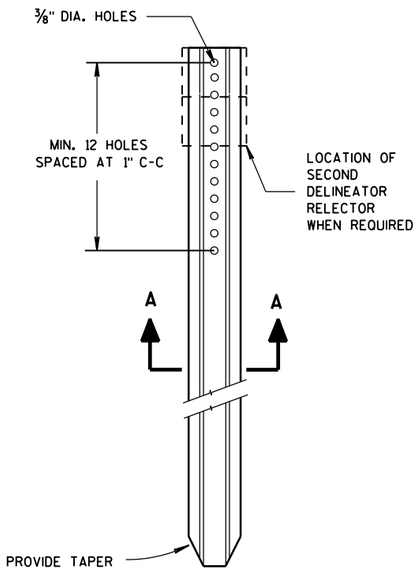
APPROVED
June, 2015 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
D 237 NT
FHWA

6

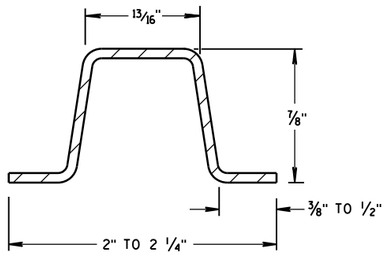
S.D.D. 14 B 45-4L

6

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

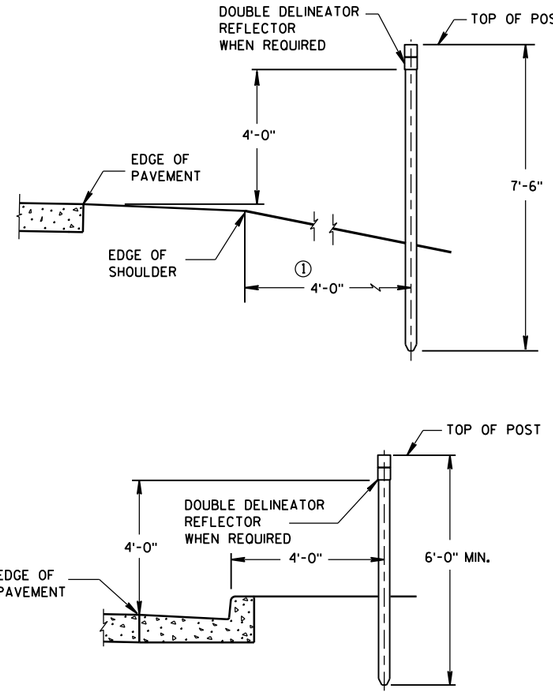


DELINEATOR POST



SECTION A-A

WEIGHT 1.12 LBS PER FT. ± 0.1 LB.

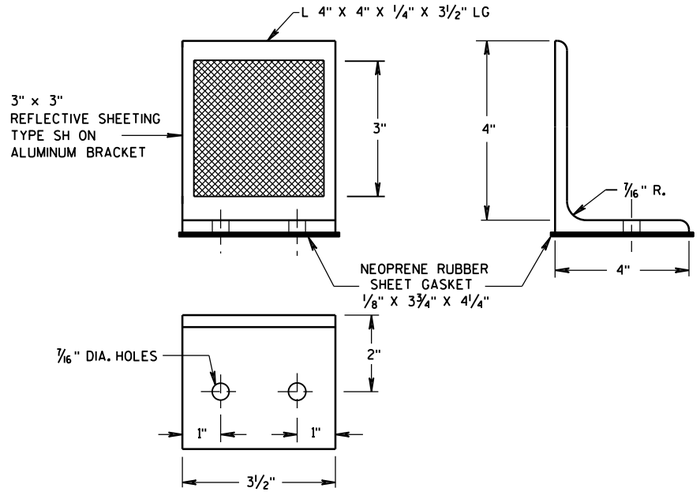


TYPICAL INSTALLATIONS OF DELINEATOR POSTS

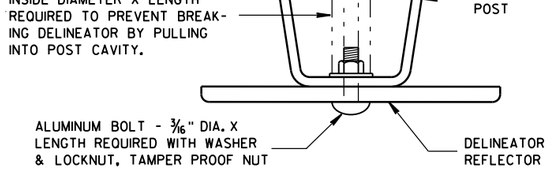
GENERAL NOTES

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

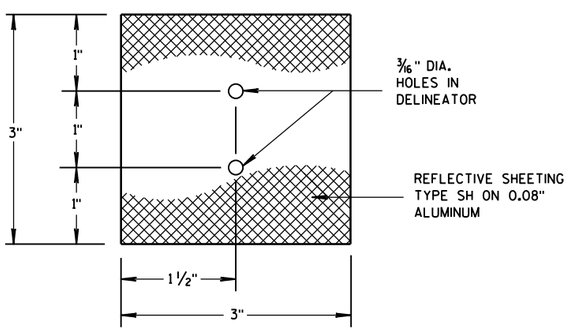
① DELINEATORS SHALL BE PLACED AT A CONSTANT DISTANCE FROM THE EDGE OF THE SHOULDER FOR THE LENGTH OF THE INSTALLATION.



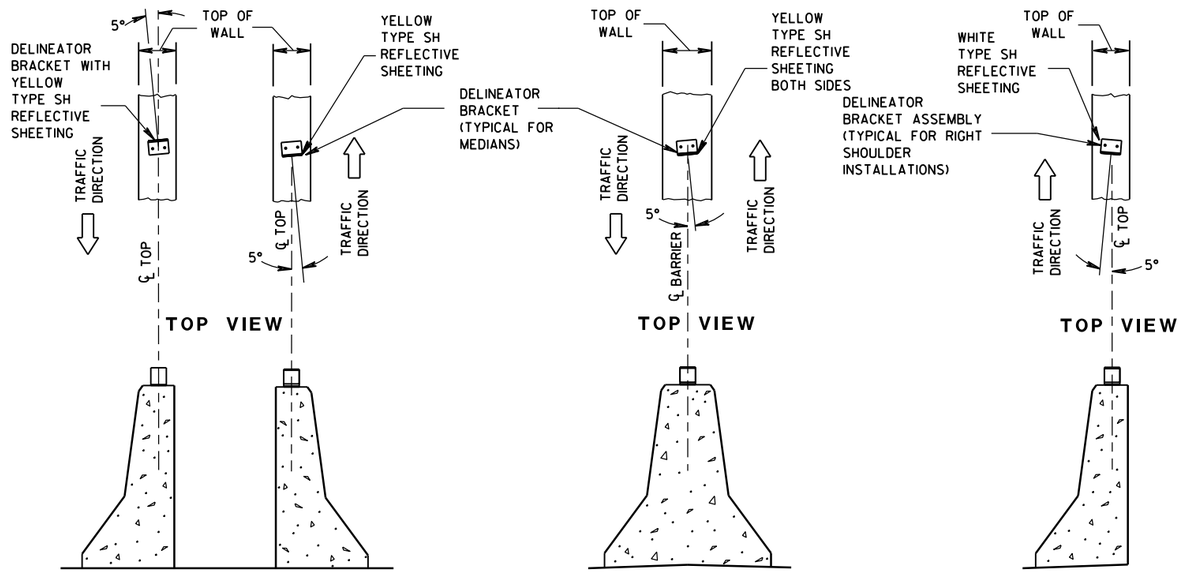
DELINEATOR BRACKET



MOUNTING DETAIL FOR DELINEATOR REFLECTOR

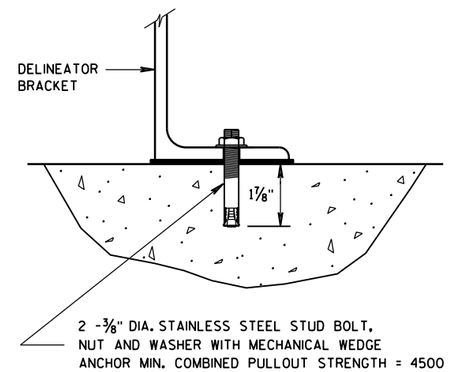


3"x 3" DELINEATOR REFLECTOR



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

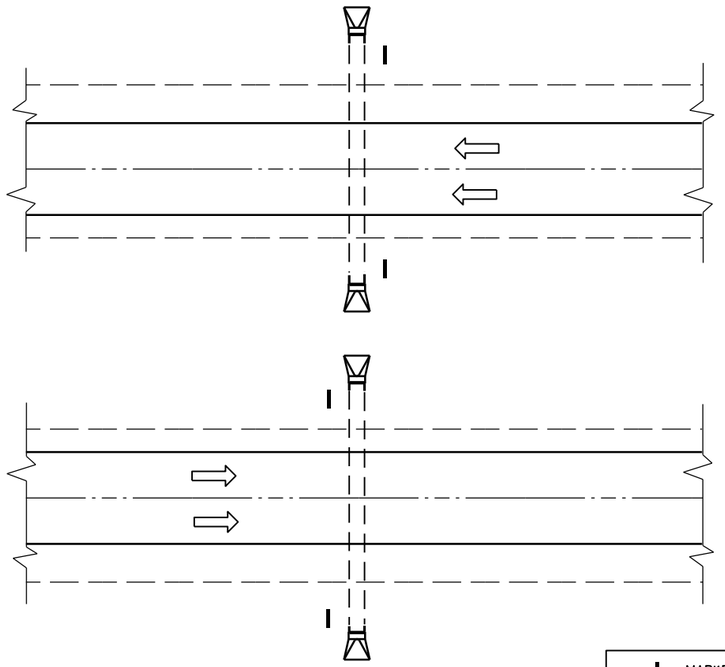
DELINEATOR POST, DELINEATOR REFLECTOR AND DELINEATOR BRACKET WITH REFLECTIVE SHEETING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
4-18-16 DATE
/S/ Matthew R. Rauch
STATE SIGNING AND MAR[illegible] ENGINEER
FHWA

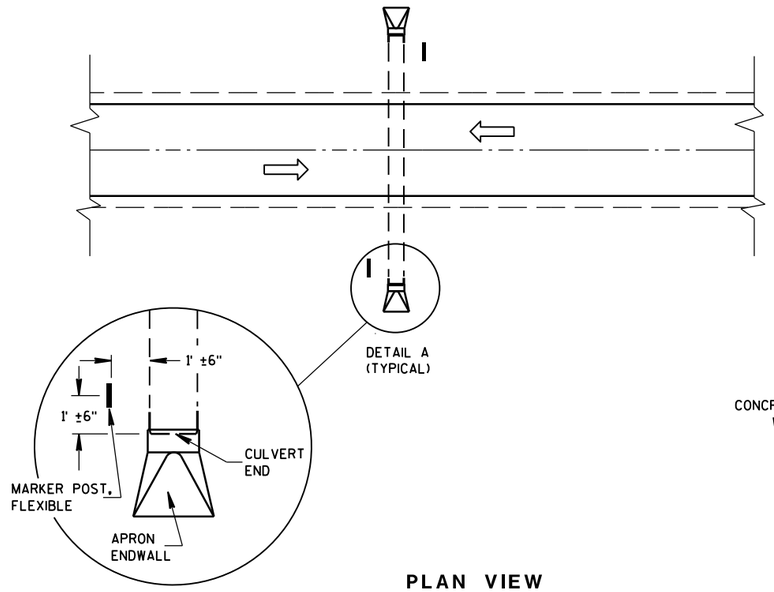
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S.D.D. 15 A 2-9



PLAN VIEW

DIVIDED HIGHWAY



DETAIL A
(TYPICAL)

PLAN VIEW

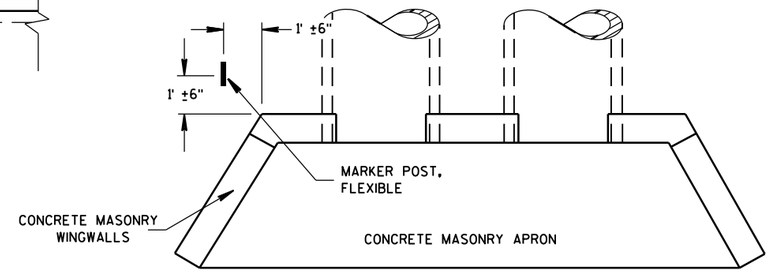
UNDIVIDED HIGHWAY

MARKER POST, FLEXIBLE

DIRECTION OF TRAFFIC FLOW

GENERAL NOTES

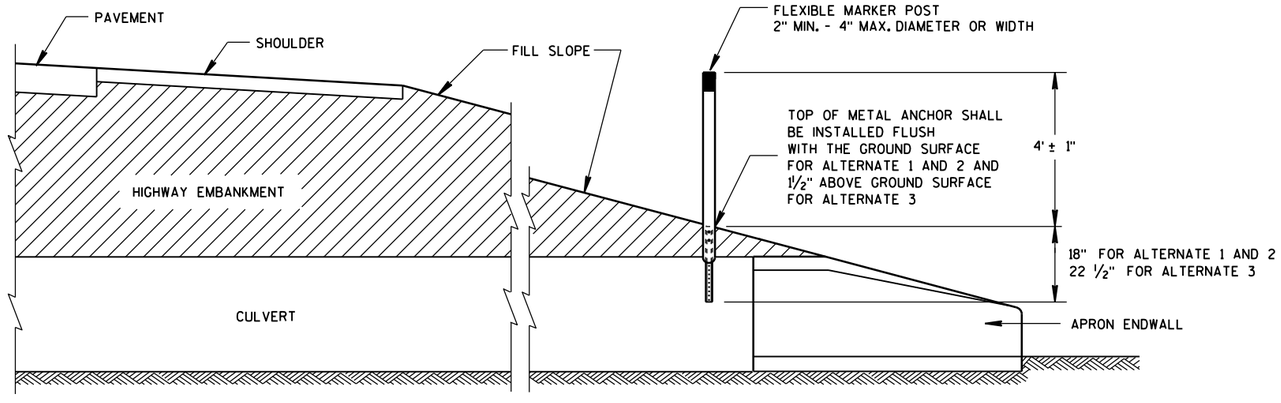
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.



PLAN VIEW

CONCRETE MASONRY ENDWALLS FOR CULVERT PIPE AND PIPE ARCH

FLEXIBLE MARKER POST LOCATION



CROSS SECTION

FLEXIBLE MARKER POST

FLEXIBLE MARKER POST FOR CULVERT END

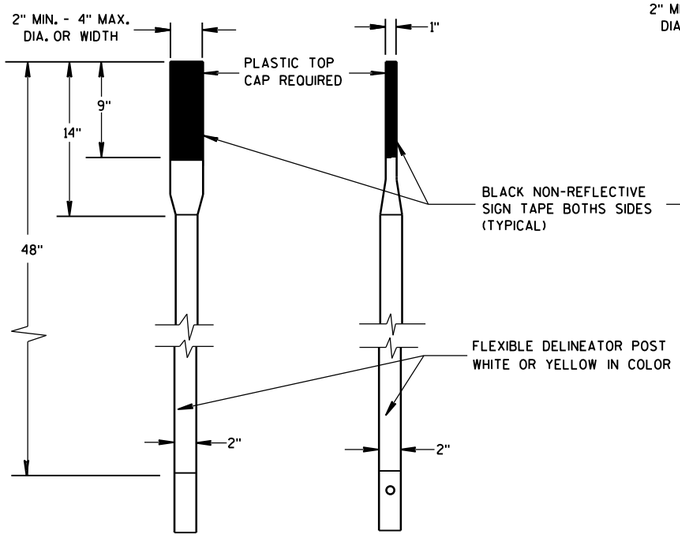
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

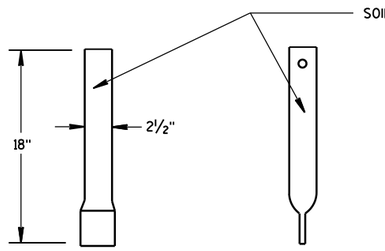
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S.D.D. 15 A 3-2a

6

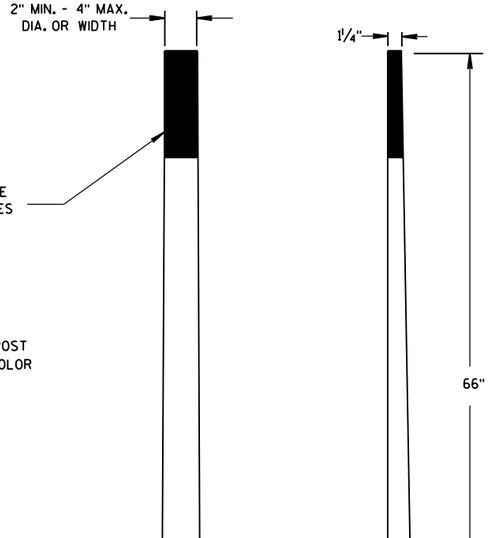
S.D.D. 15 A 3-2a





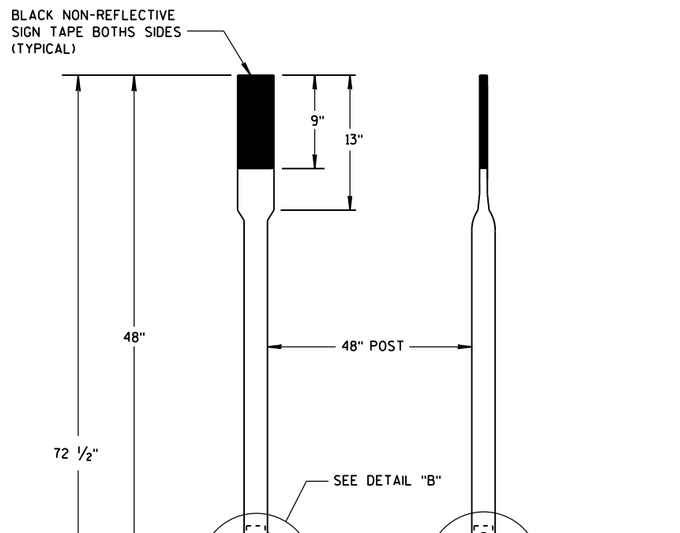
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

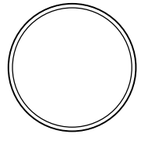
ALTERNATE 2



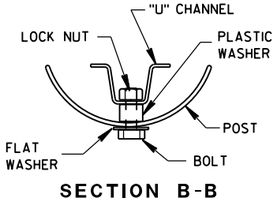
FRONT VIEW SIDE VIEW

ALTERNATE 3

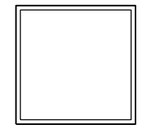
FLEXIBLE MARKER POSTS



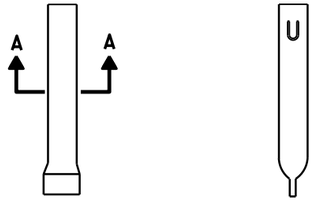
SECTION A-A



SECTION B-B

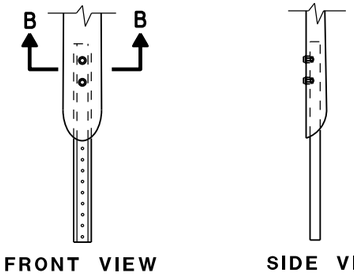


SECTION C-C



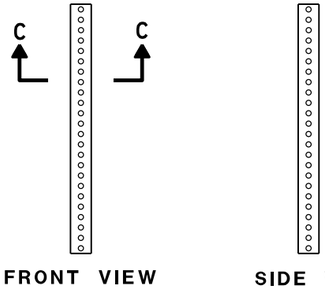
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

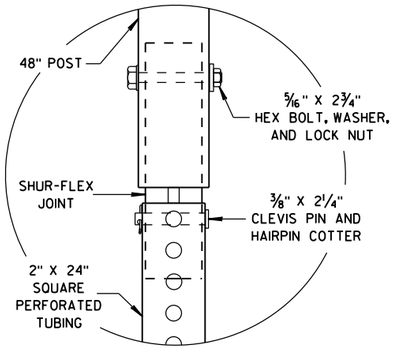
ALTERNATE 2



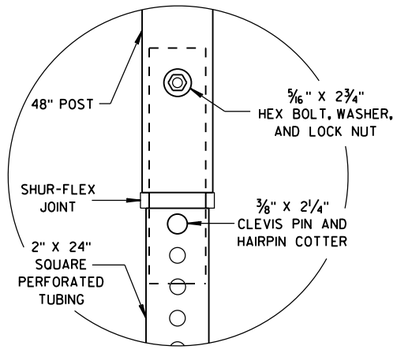
FRONT VIEW SIDE VIEW

ALTERNATE 3

FLEXIBLE MARKER POST ANCHORS



DETAIL B



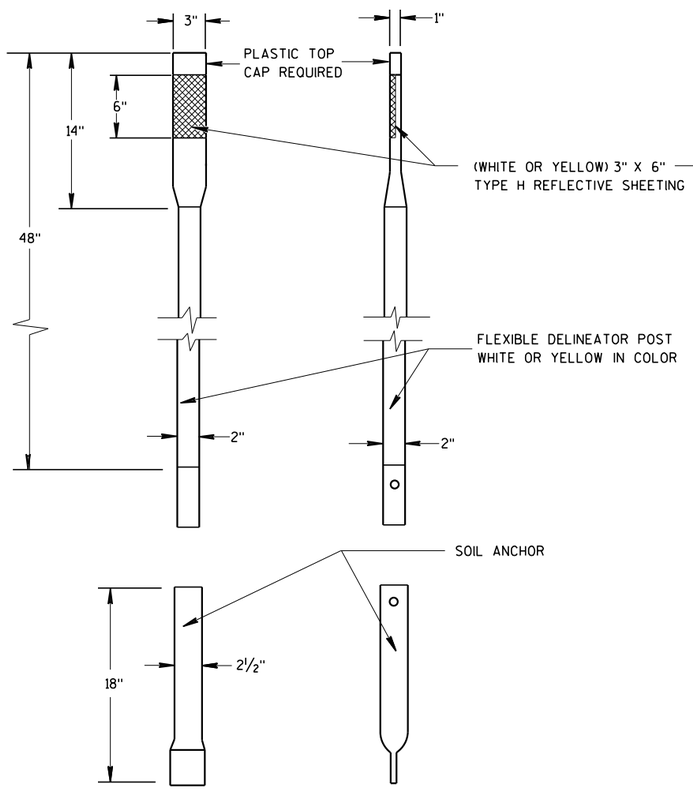
DETAIL C

FLEXIBLE MARKER POST
FOR CULVERT END

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

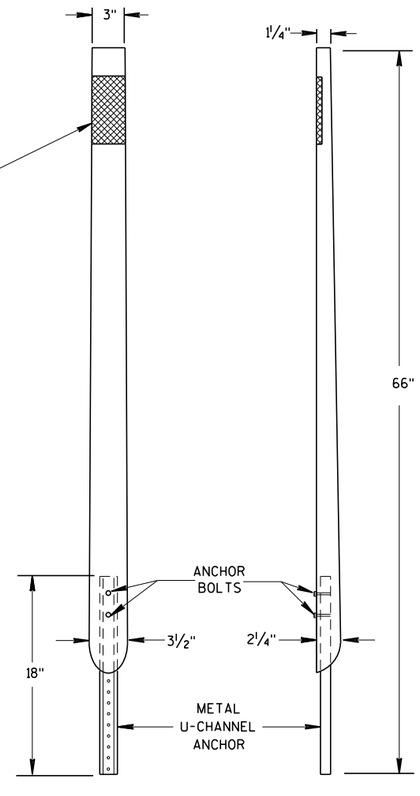
APPROVED
10/1/2012
DATE
/S/ Travis Feltes
STATE TRAFFIC ENGINEER
IGN
FHWA

6
S.D.D. 15 A 3-2b



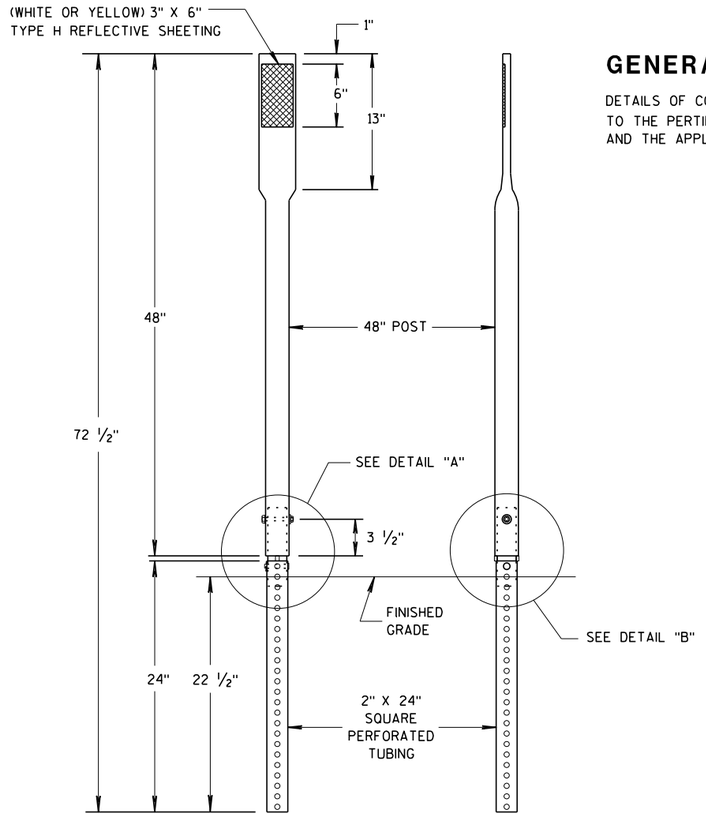
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

ALTERNATE 2
FLEXIBLE DELINEATOR POSTS

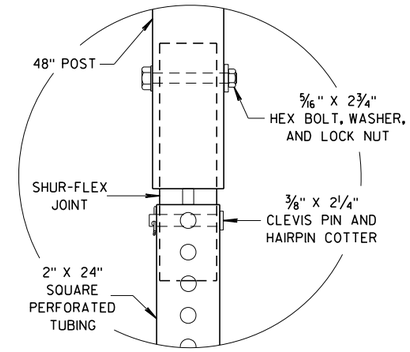


FRONT VIEW SIDE VIEW

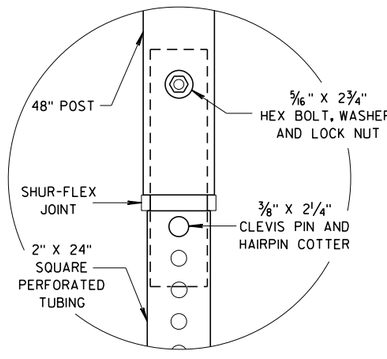
ALTERNATE 3

GENERAL NOTES

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



DETAIL A

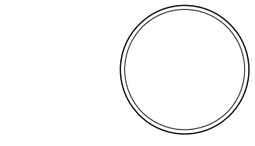


DETAIL B

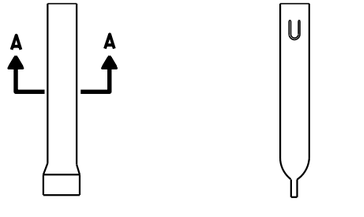
REFLECTOR SPACING TABLE

REFLECTOR SPACING	LOCATION
*100' C-C	RAMPS
400' C-C	MAINLINE

*START AT BEGINNING OF RAMP TAPER AND END AT END OF RAMP TAPER

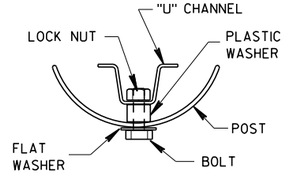


SECTION A-A

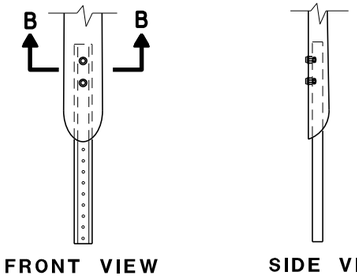


FRONT VIEW SIDE VIEW

ALTERNATE 1

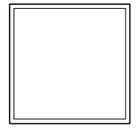


SECTION B-B

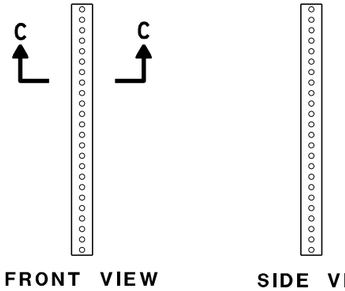


FRONT VIEW SIDE VIEW

ALTERNATE 2
FLEXIBLE MARKER POST ANCHORS



SECTION C-C



FRONT VIEW SIDE VIEW

ALTERNATE 3

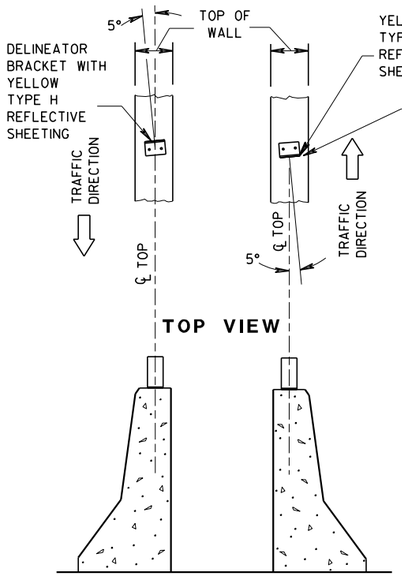
FLEXIBLE DELINEATOR POST

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

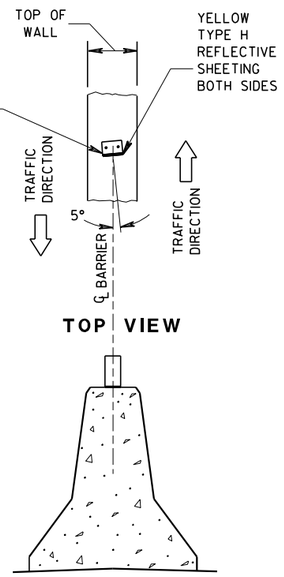
APPROVED
March 2018 — DATE
/S/ Matt Rauch — STATE SIGNING AND MARKING ENGINEER
FHWA

6

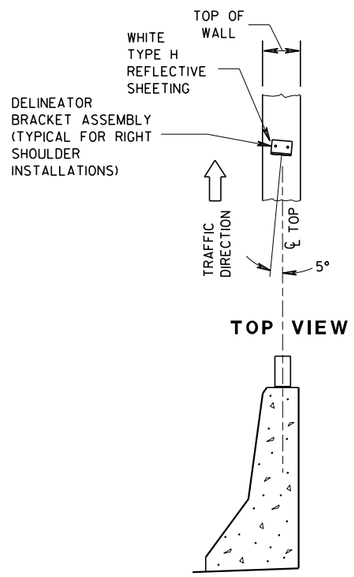
S.D.D. 15 A 4-4a



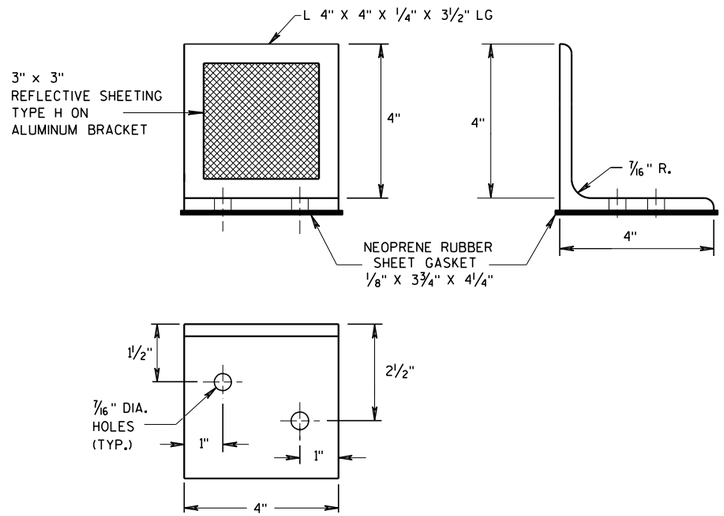
DOUBLE BARRIERS IN MEDIAN



MEDIAN BARRIER

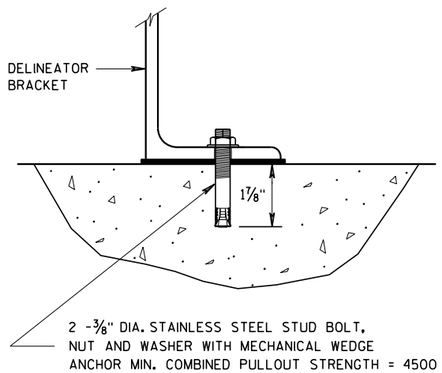


BARRIER LOCATED
TO RT. OF TRAFFIC FLOW



DELINEATOR BRACKET

LOCATION AND AIMING DETAILS FOR DELINEATOR BRACKETS MOUNTED ON CONCRETE BARRIERS



DELINEATOR BRACKET
MOUNTING DETAIL

REFLECTOR SPACING TABLE

REFLECTOR SPACING	MINIMUM NUMBER OF REFLECTORS
100' C-C	3

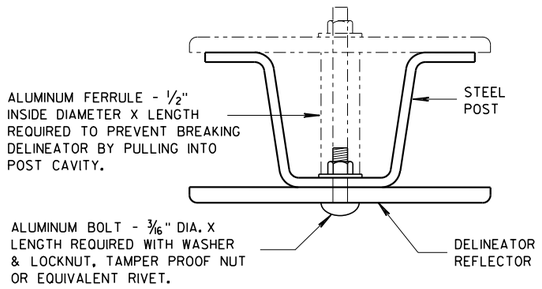
DELINEATOR BRACKET WITH REFLECTIVE SHEETING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

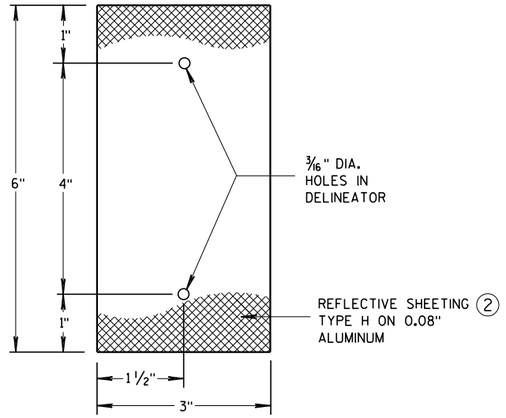
APPROVED
March 2018 — DATE
/S/ Matthew P. Rauch
STATE SIGNING AND MARKING ENGINEER
FHWA

6

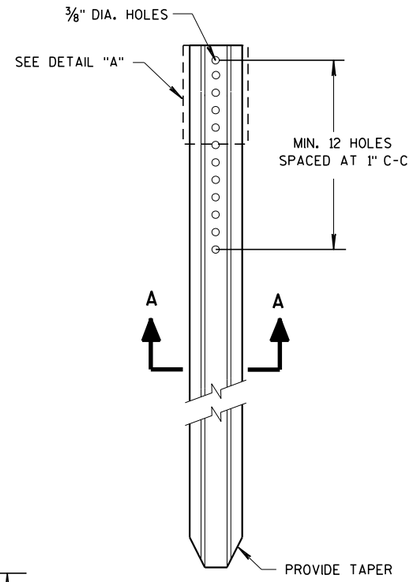
S.D.D. 15 A 4-4b



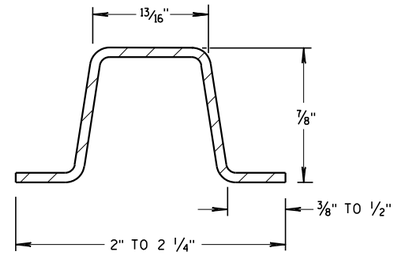
MOUNTING DETAIL
FOR DELINEATOR REFLECTOR



DETAIL "A"
3" X 6" DELINEATOR REFLECTOR



DELINEATOR POST



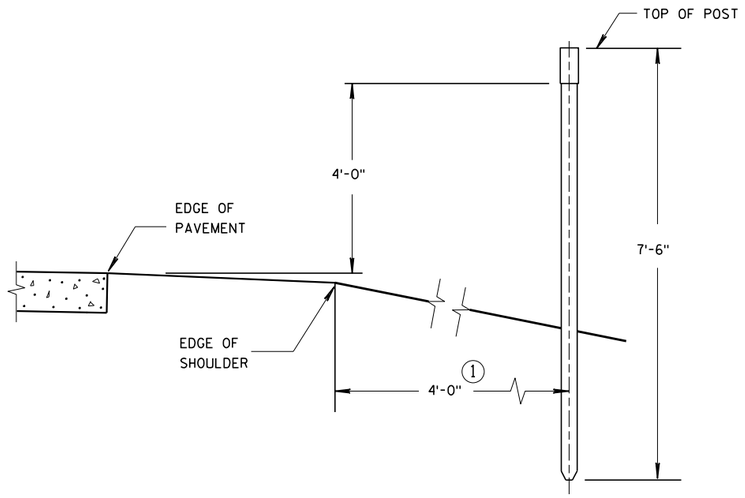
SECTION A-A

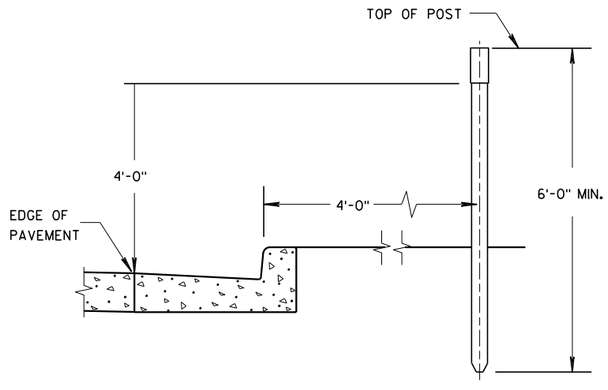
WEIGHT 1.12 LBS PER FT. ± 0.1 LB.

REFLECTOR SPACING TABLE

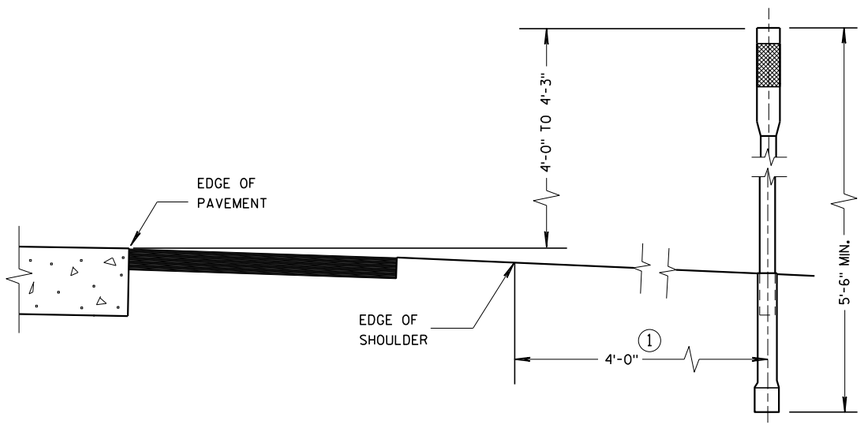
REFLECTOR SPACING	LOCATION
400'	MAINLINE
100'	RAMPS *

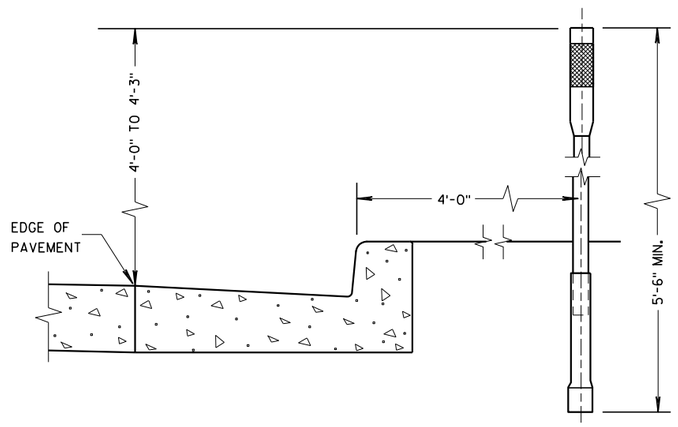
* START AT BEGINNING OF RAMP TAPER AND END AT END OF RAMP TAPER.





TYPICAL INSTALLATIONS OF DELINEATOR POSTS





TYPICAL INSTALLATIONS OF FLEXIBLE DELINEATOR POSTS

GENERAL NOTES

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

(1) DELINEATORS SHALL BE PLACED AT A CONSTANT DISTANCE FROM THE EDGE OF THE SHOULDER FOR THE LENGTH OF THE INSTALLATION.

(2) FURNISH TYPE H SHEETING FROM THE APPROVED PRODUCTS LIST.

DELINEATOR POST
WITH REFLECTIVE SHEETING

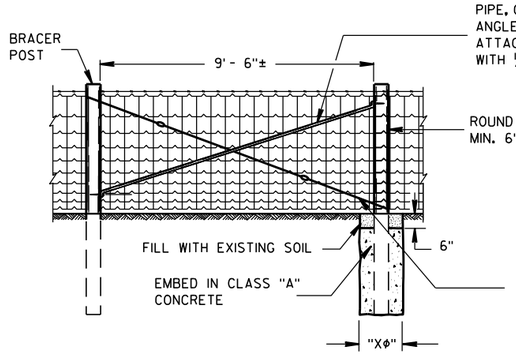
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2018 /S/ Matthew P Rauch
DATE STATE SIGNING AND M[illegible] ENGINEER
FHWA

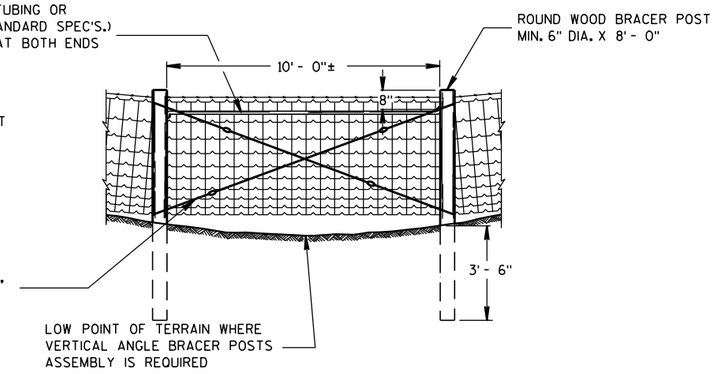
6
S.D.D. 15 A 4-4c

NOTE: PULL OR STRETCHER POST ASSEMBLIES SHALL BE PLACED MIDWAY BETWEEN END POSTS AND CORNER POSTS WHERE A RUN OF FENCE EXCEEDS 660' BUT IS LESS THAN 1,320'. FOR RUNS OF FENCE IN EXCESS OF 1,320' MAXIMUM SPACING OF PULL OR STRETCHER POST ASSEMBLIES SHALL BE 660'± C-C.

ILLUSTRATION SHOWS POSITION OF STANDARD STEEL BRACE, DOUBLE STRAND GALVANIZED WIRE, AND THE POST TO BE EMBEDDED IN CONCRETE WHEN WIRE FENCE IS INSTALLED FROM LEFT TO RIGHT. THE BRACES SHALL BE POSITIONED ON THE OPPOSITE DIAGONALS AND THE OPPOSITE POST SHALL BE EMBEDDED IN CONCRETE WHEN WIRE FENCE IS INSTALLED FROM RIGHT TO LEFT.



PULL OR STRETCHER POSTS ASSEMBLY



VERTICAL ANGLE BRACER POSTS ASSEMBLY

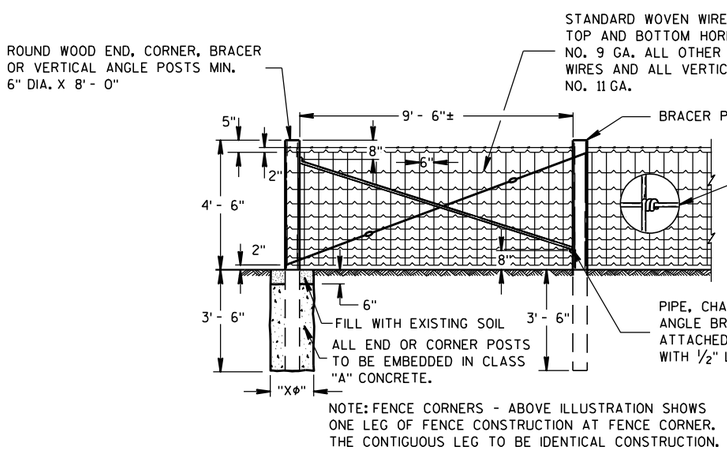
GENERAL NOTES

"XΦ" = DIAMETER OF THE POST PLUS 12".

FENCE STAPLES SHOULD NEVER BE DRIVEN VERTICALLY INTO WOOD POSTS (WITH BOTH LEGS PARALLEL WITH THE WOOD GRAIN). DOING SO CAN SEPARATE THE GRAIN AND SIGNIFICANTLY REDUCE THE HOLDING POWER. ROTATING THE STAPLES SLIGHTLY OFF VERTICAL STRADDLES THE GRAIN AND PROVIDES MORE RESISTANCE TO PULL-OUT.

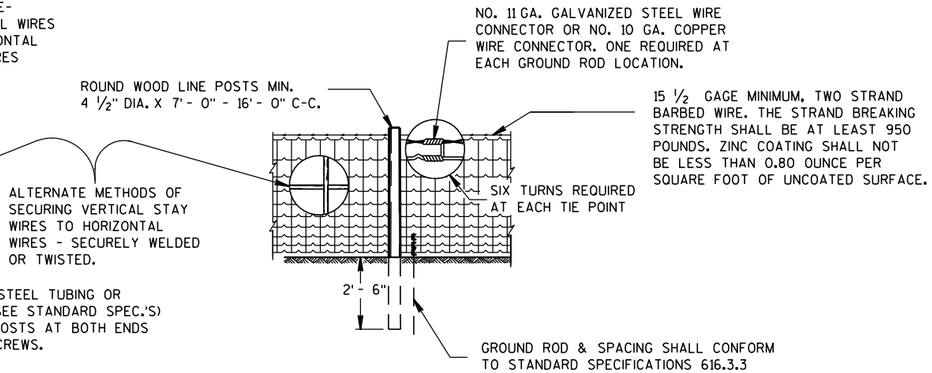
DO NOT STAPLE WIRE TIGHT TO THE LINE POSTS. ALLOW MOVEMENT OF WIRE FOR EXPANSION AND CONTRACTION. STAPLE ARRANGEMENT SHALL BE THE SAME FOR ALL OTHER POSTS EXCEPT THAT THEY SHALL BE DRIVEN TIGHT TO POSTS. ALL STAPLES SHALL BE 2" X 9 GAGE AND SHALL BE MANUFACTURED FROM GALVANIZED WIRE OR HOT DIP GALVANIZED AFTER FORMING. STAPLES SHALL HAVE SLASH-CUT POINTS.

FENCE SHALL BE LOCATED 3'-0" INSIDE THE RIGHT OF WAY LINE UNLESS OTHERWISE INDICATED ON THE PLANS.



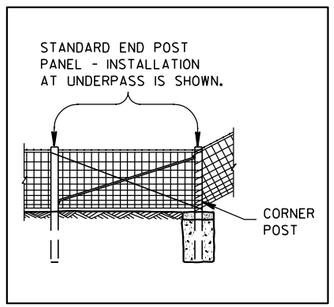
NOTE: FENCE CORNERS - ABOVE ILLUSTRATION SHOWS ONE LEG OF FENCE CONSTRUCTION AT FENCE CORNER. THE CONTIGUOUS LEG TO BE IDENTICAL CONSTRUCTION.

END OR CORNER POSTS ASSEMBLY

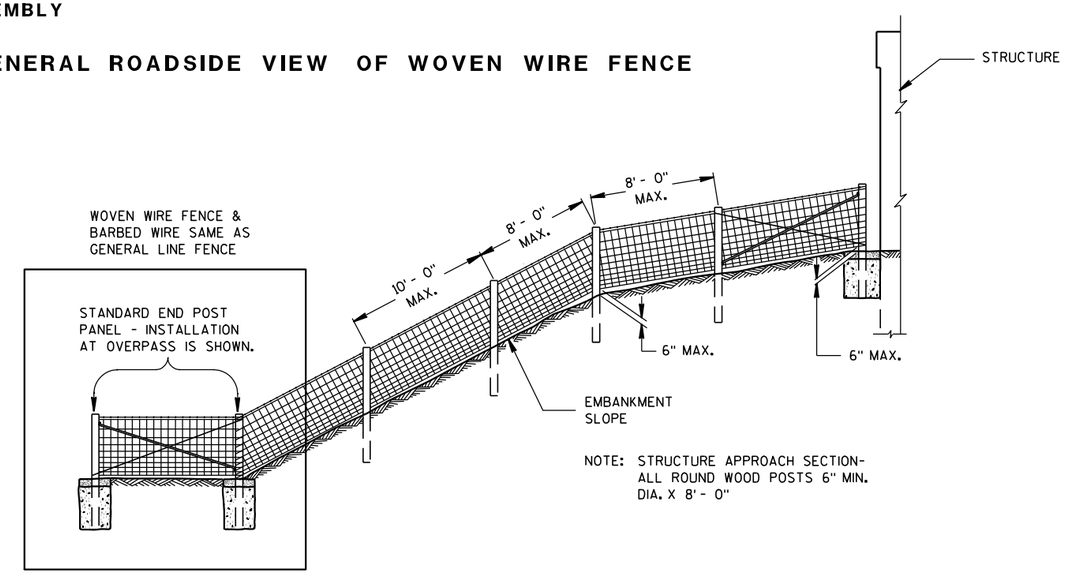


LINE FENCE CONSTRUCTION

GENERAL ROADSIDE VIEW OF WOVEN WIRE FENCE



ALTERNATE FENCE DESIGN AT STRUCTURE



NOTE: STRUCTURE APPROACH SECTION- ALL ROUND WOOD POSTS 6" MIN. DIA. X 8' - 0"

FENCE DESIGN AT STRUCTURE APPROACH

FENCE WOVEN WIRE

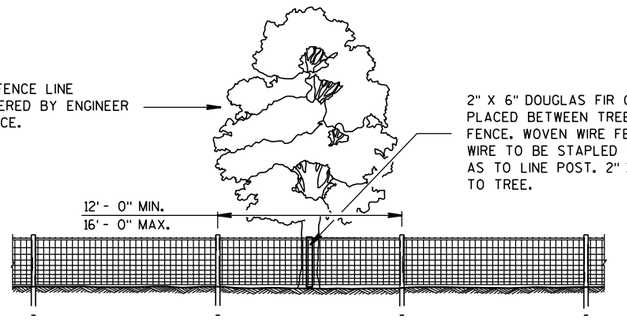
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

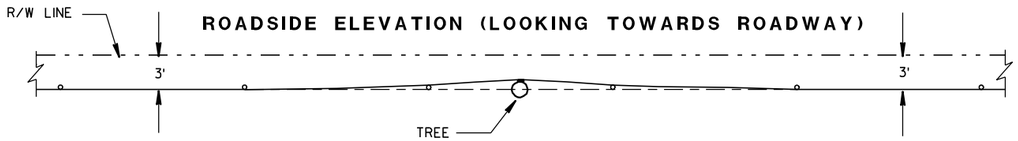
S.D.D. 15 B 1-8a

NOTE: TREE IN NORMAL FENCE LINE SPECIFICALLY ORDERED BY ENGINEER TO REMAIN IN PLACE.

2" X 6" DOUGLAS FIR OR SO. YELLOW PINE PLACED BETWEEN TREE AND WOVEN WIRE FENCE. WOVEN WIRE FENCE AND BARBED WIRE TO BE STAPLED TO 2" X 6" LIKE AS TO LINE POST. 2" X 6" NOT FASTENED TO TREE.

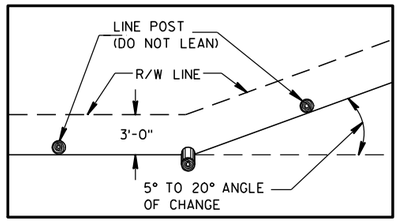


ROADSIDE ELEVATION (LOOKING TOWARDS ROADWAY)

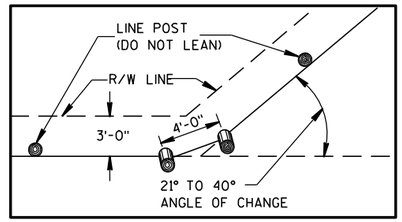


PLAN VIEW

FENCE DESIGN AT TREES REMAINING IN NORMAL FENCE LINE



PLAN VIEW
SINGLE POST CORNER

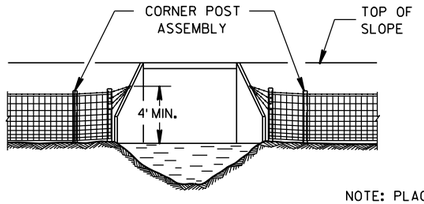


PLAN VIEW
DOUBLE POST CORNER

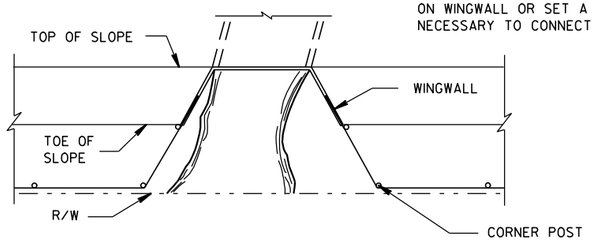
RIGHT OF WAY LINE CHANGE 40° AND LESS

NOTE: SINGLE AND DOUBLE POSTS SHALL BE A MIN. 6" DIA. X 8'-0" WITH A LEAN OF 4" TOWARD THE OUTSIDE OF THE CURVE.

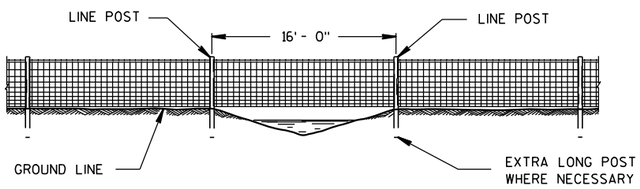
WHEN THE RIGHT OF WAY LINE CHANGE IS MORE THAN 40° USE THE CORNER OR STRETCHER POSTS ASSEMBLY.



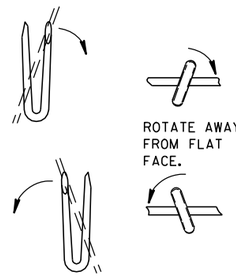
NOTE: PLACE A MINIMUM OF 4 STRANDS OF BARBED WIRE, 6" MAXIMUM CENTERS IN FAN SHAPE CONNECTED TO AN EYE BOLT ON WINGWALL OR SET A LONE POST WHEN NECESSARY TO CONNECT BARBED WIRE.



FENCE INSTALLATION TO WINGWALLS

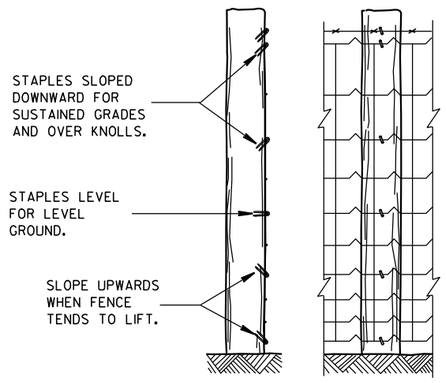


FENCE CONSTRUCTION OVER STREAM COURSES OF 15 FT. OR LESS IN WIDTH



LINE POST

NOTE: WHEN POSTS ARE DRIVEN THE SMALL END SHALL BE DOWN.

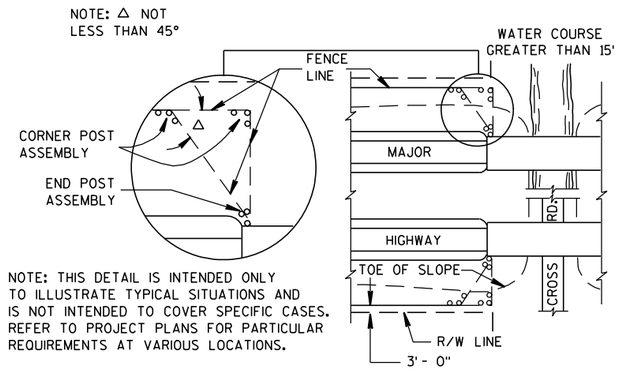


END ELEVATION

FARM SIDE ELEVATION

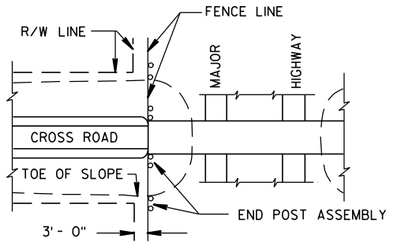
FENCE MOUNTING DETAIL

NOTE: △ NOT LESS THAN 45°



NOTE: THIS DETAIL IS INTENDED ONLY TO ILLUSTRATE TYPICAL SITUATIONS AND IS NOT INTENDED TO COVER SPECIFIC CASES. REFER TO PROJECT PLANS FOR PARTICULAR REQUIREMENTS AT VARIOUS LOCATIONS.

PLAN VIEW
MAJOR HIGHWAY OVERPASS OR STREAM COURSE CROSSING OF GREATER THAN 15 FT. IN WIDTH



PLAN VIEW
MAJOR HIGHWAY UNDERPASS

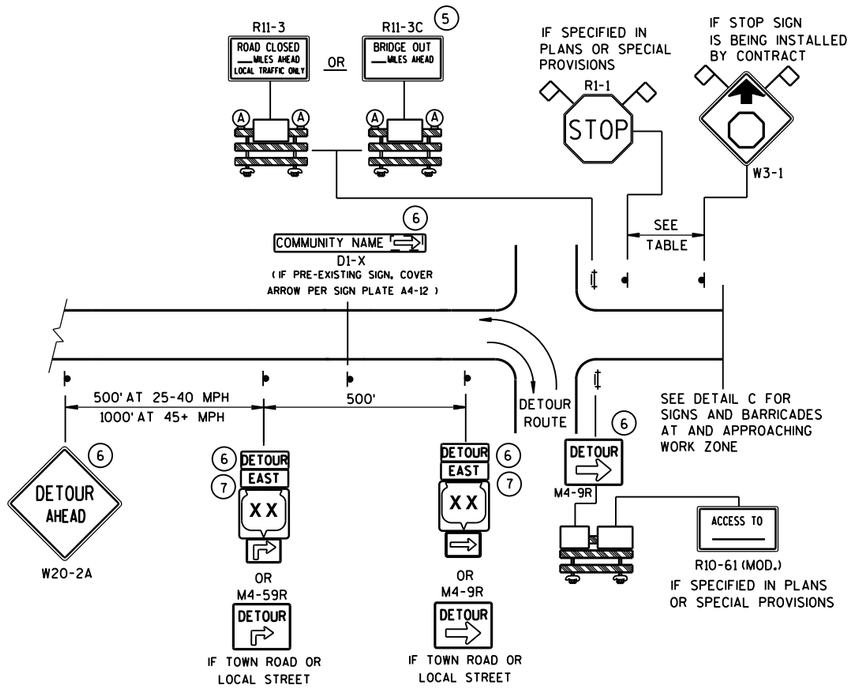
FENCE LOCATION AT STRUCTURES

FENCE WOVEN WIRE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

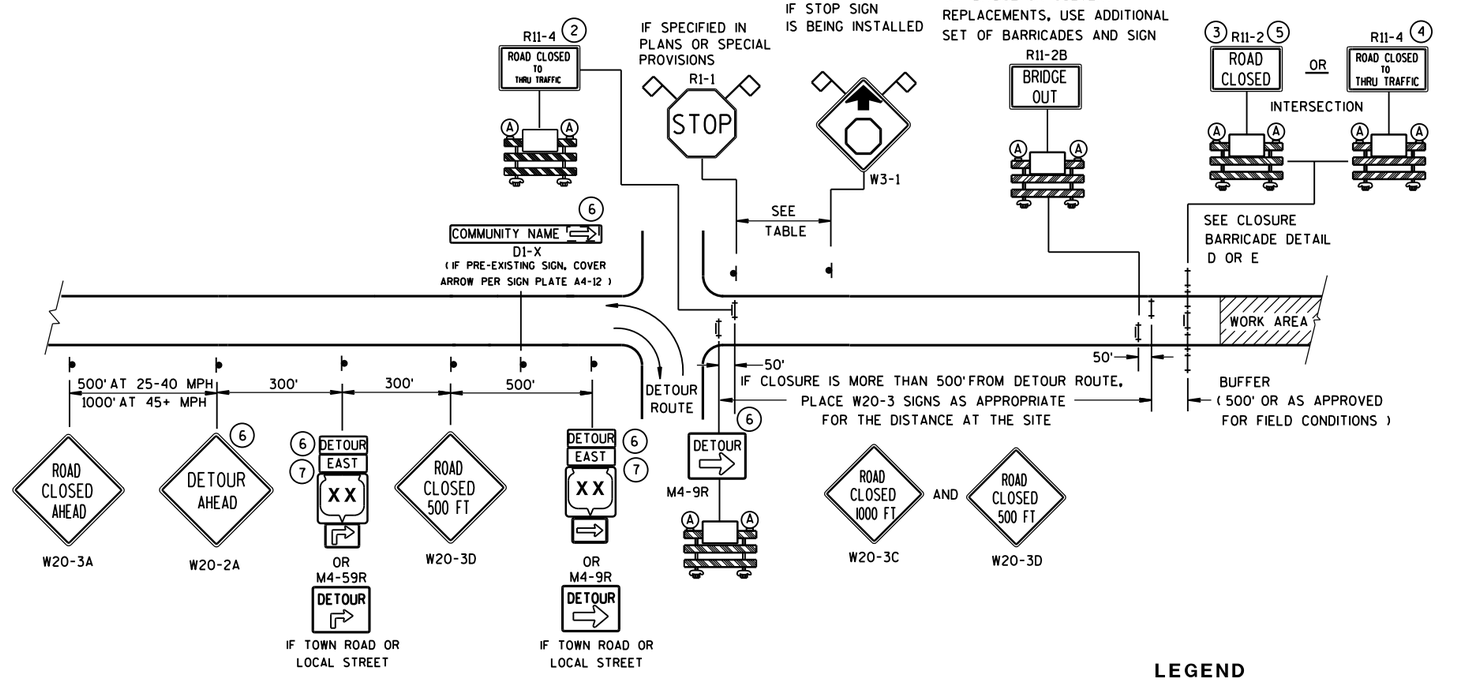
APPROVED
4/4/2008
DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER
FHWA

6
S.D.D. 15 B 1-8b



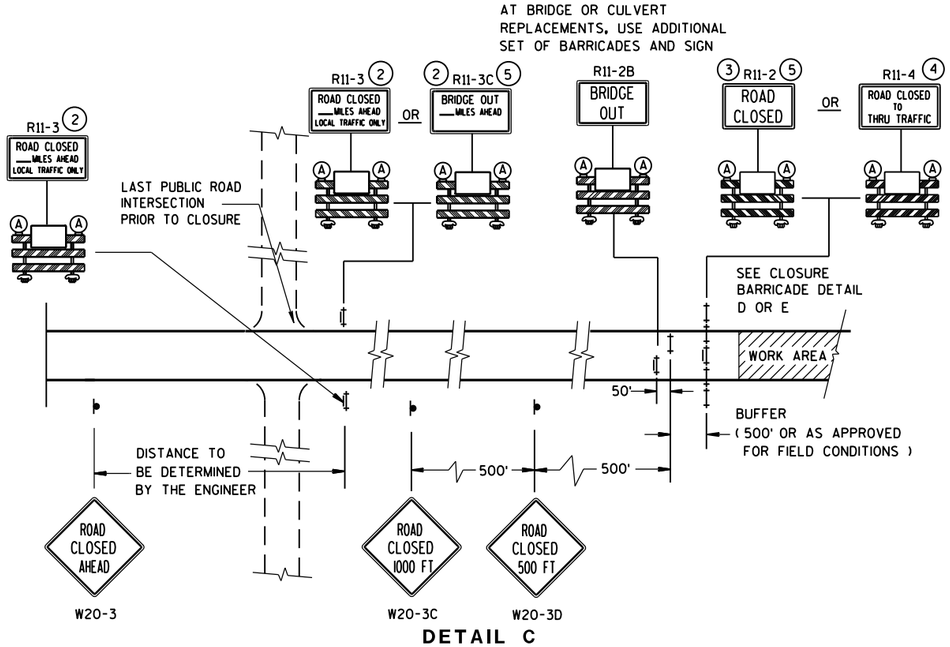
DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR

WORK ZONE GREATER THAN ½ MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)



DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR

WORK ZONE LESS THAN ½ MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)



DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR

SPEED LIMIT (MPH)	"STOP AHEAD" ADVANCE WARNING DISTANCE (FT)
25	200
30	200
35	350
40	350
45	500
50	550
55	750

SEE SDD 15C2-SHEET "**b**"
FOR GENERAL NOTES
AND FOOTNOTES (1) THROUGH (7)

LEGEND

- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- (A) TYPE "A" WARNING LIGHT (FLASHING)
- WORK AREA
- DETOUR / EAST — M4-8 / M3-X
- XX — M1-4; COUNTY XX — M1-5A; XX — M1-6
- M05-1 OR M06-1
- FLAGS, 16" X 16" MIN., (ORANGE)

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

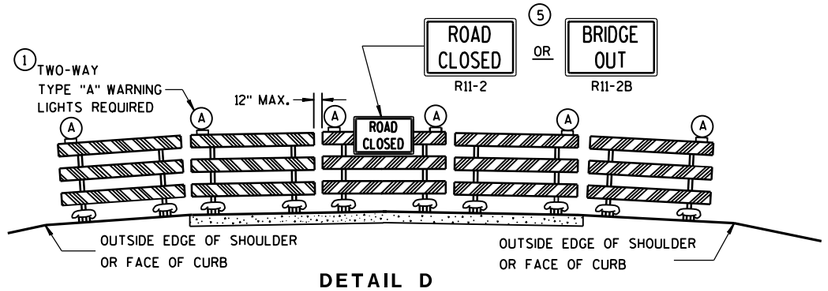
Sept. 2015 — DATE
/S/ Peter Amakobe Atepe
STATEWIDE WORK ZONE TRAFFIC SAFETY ENGINEER
FHWA

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S.D.D. 15 C 2-6a

6

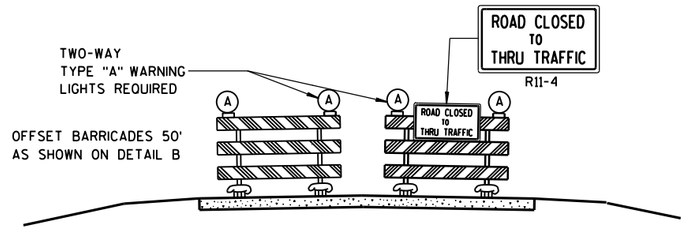
S.D.D. 15 C 2-6a



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

Sept. 2015 — DATE

/S/ Peter Amakobe Atepe
STATEWIDE WORK ZO SAFETY ENGI — FIC

FHWA

6

S.D.D. 15 C 2-6b

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.

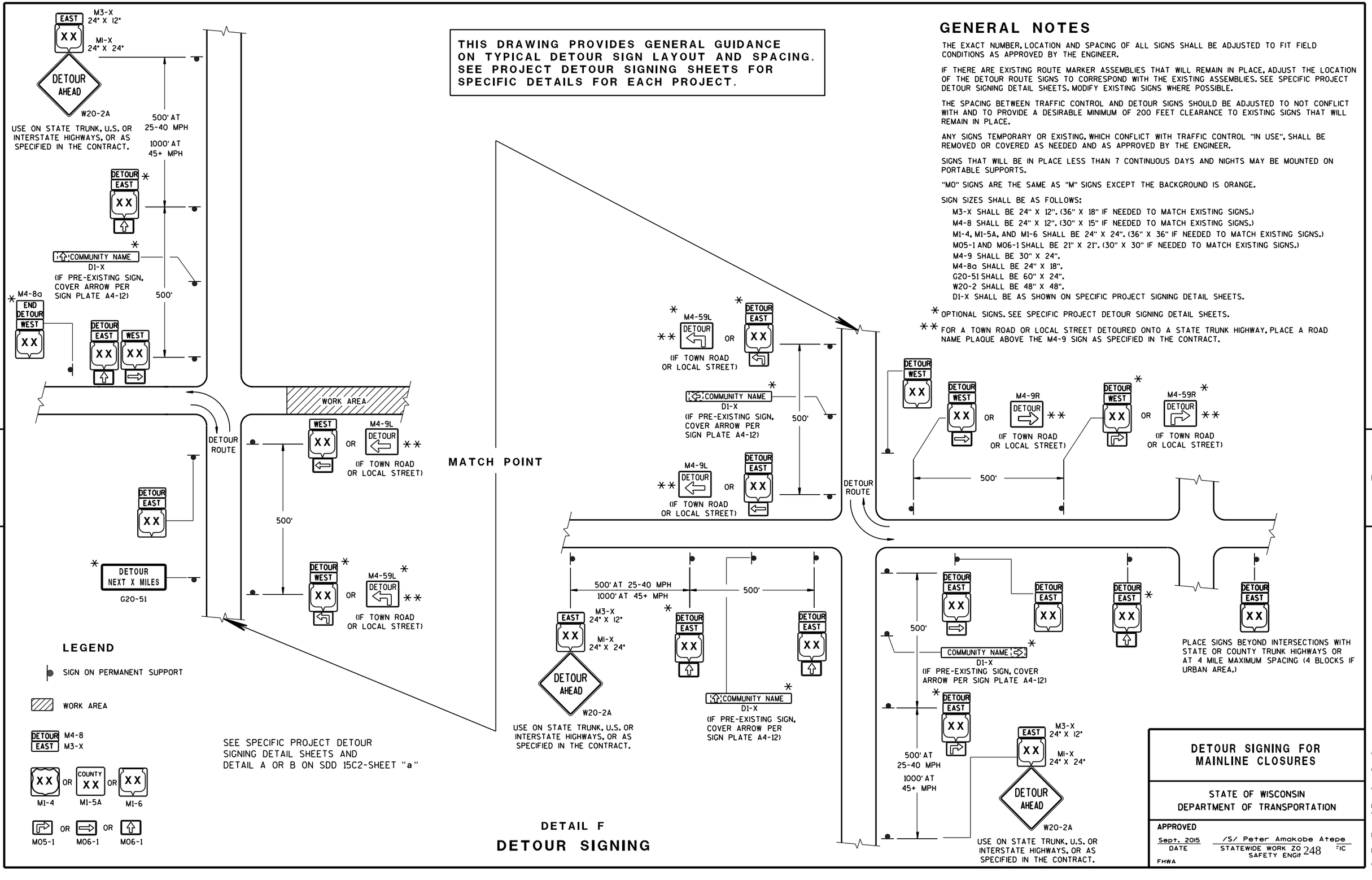
"MO" SIGNS ARE THE SAME AS "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

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.)
- MO5-1 AND MO6-1 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.



DETAIL F

DETOUR SIGNING

DETOUR SIGNING FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

Sept. 2015 — DATE

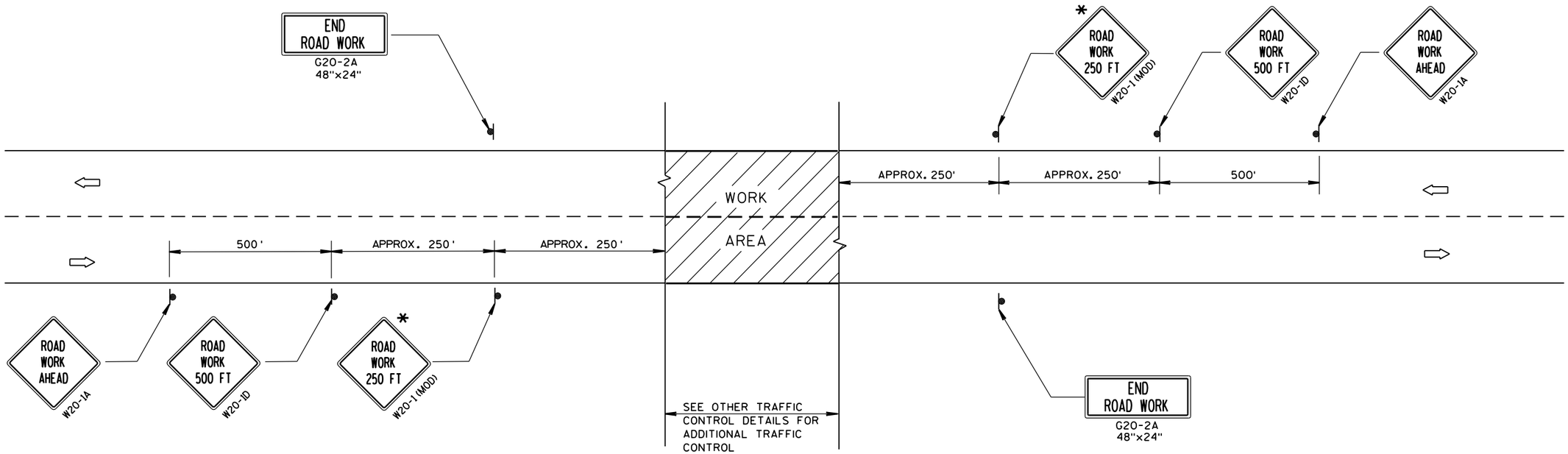
/S/ Peter Amakobe Atepe
STATEWIDE WORK ZO... SAFETY ENGI... FIC

FHWA

S.D.D. 15 C 2-6c

S.D.D. 15 C 2-6c

TYPICAL SIDEROAD APPROACH WARNING SIGN DETAIL



GENERAL NOTES

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

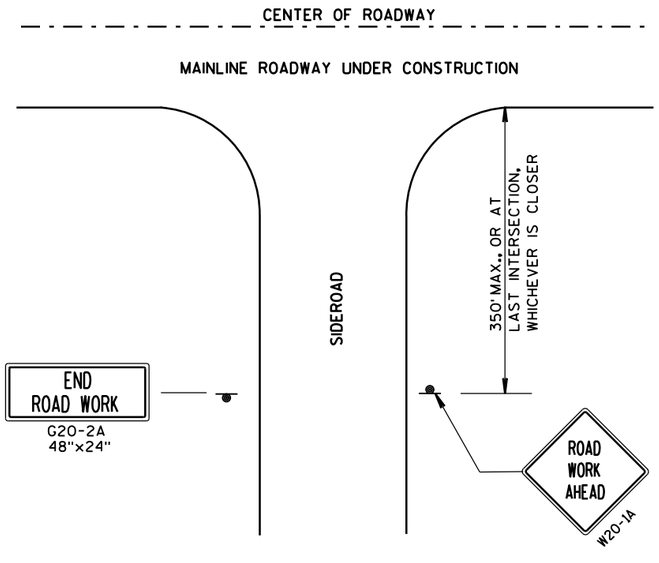
THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS, 36"x36" SIGNS MAY BE USED INSTEAD OF 48"x48" SIGNS.

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

IF A "STOP" SIGN MUST BE REMOVED FOR A WORK OPERATION, A TEMPORARY "STOP" SIGN SHALL BE PLACED PRIOR TO THE SIGN REMOVAL, OR A FLAGGER SHALL BE PROVIDED UNTIL THE SIGN IS RE-ESTABLISHED.

* THE THIRD W20-1 SIGN IS REQUIRED ONLY IF THERE IS AN INTERSECTION BETWEEN THE "ROAD WORK 500 FT" SIGN AND THE WORK ZONE. ADJUST THE PLACEMENT OF THIS SIGN BASED ON INTERSECTION LOCATION AND OTHER FIELD CONDITIONS.



LEGEND

- SIGN ON PERMANENT SUPPORT
- DIRECTION OF TRAFFIC
- WORK AREA

TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 M.P.H. OR LESS TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC

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DEPARTMENT OF TRANSPORTATION

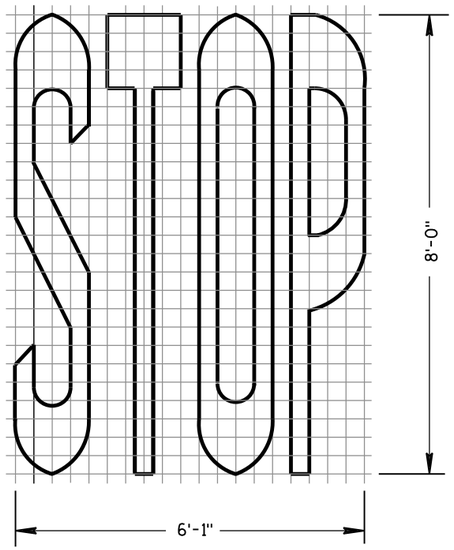
APPROVED
Sept. 2017 — DATE
/S/ Andrew Heldtke — WORK ZONE ENG
FHWA

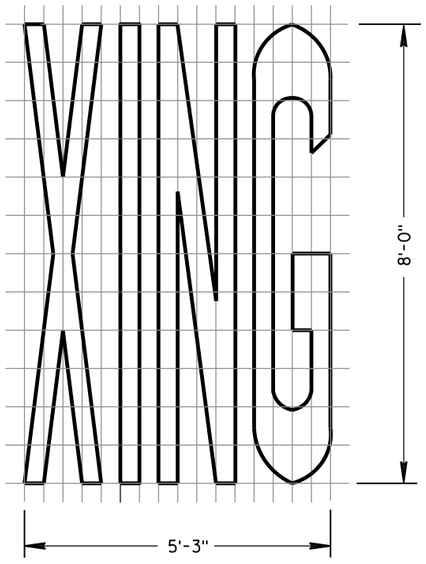
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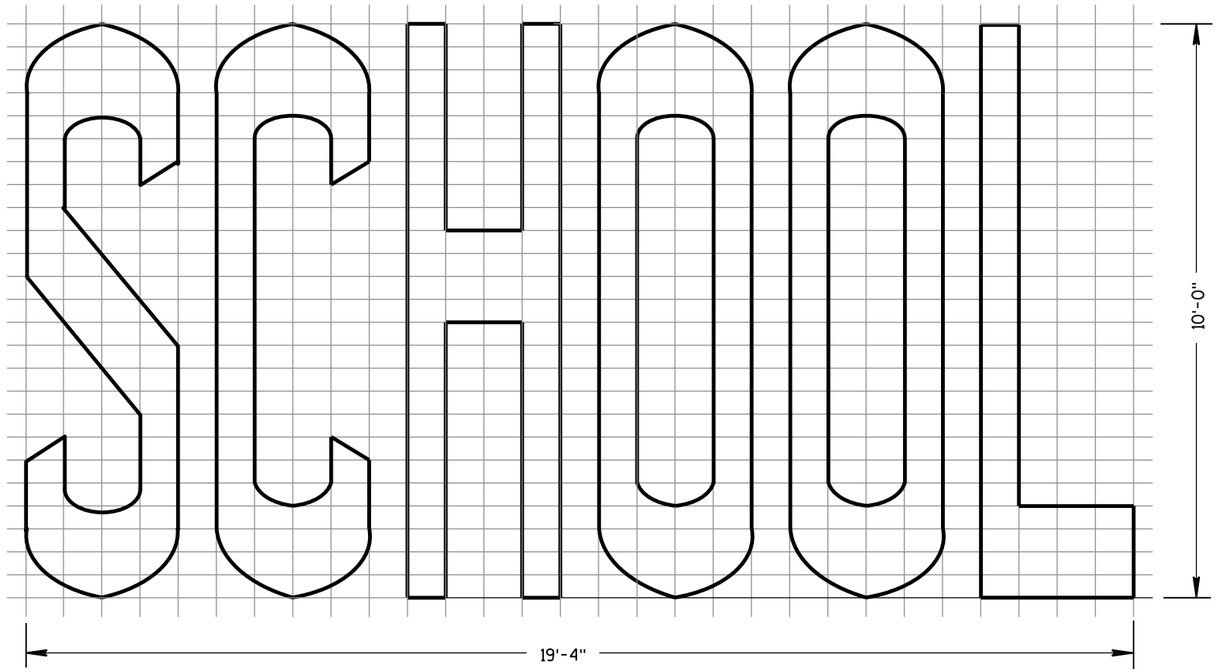
S.D.D. 15 C 5-4

GENERAL NOTES

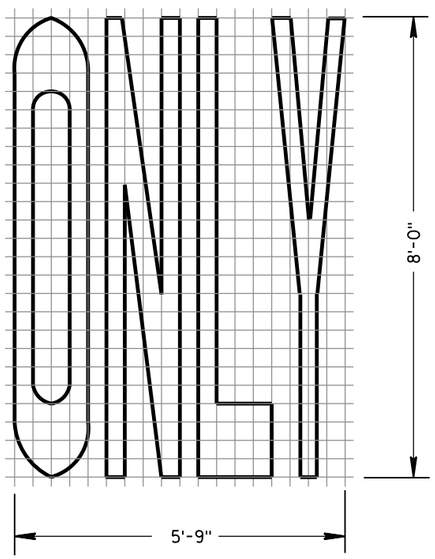
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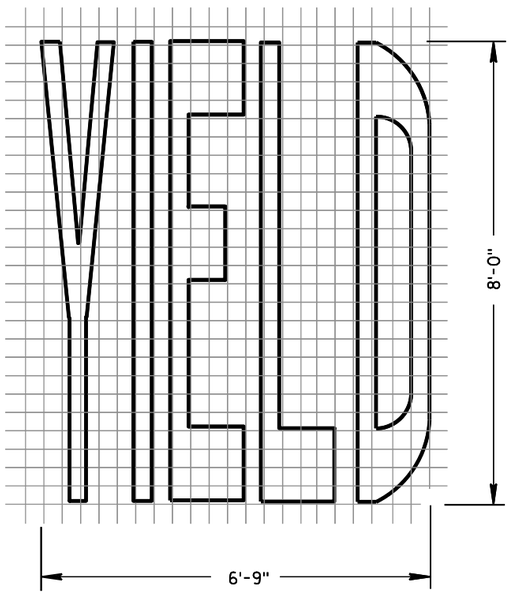


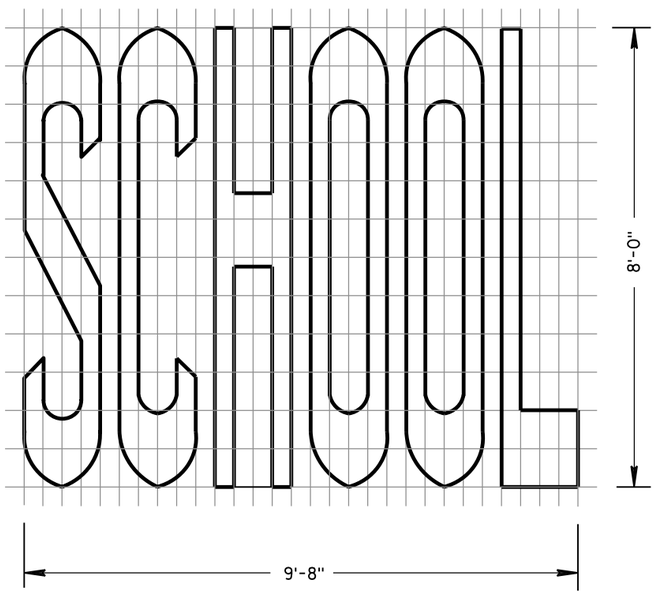




TWO-LANE







SINGLE-LANE

PAVEMENT MARKING WORDS

STATE OF WISCONSIN
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/S/ Matthew R. Rauch — STATE SIGNING AND MARK
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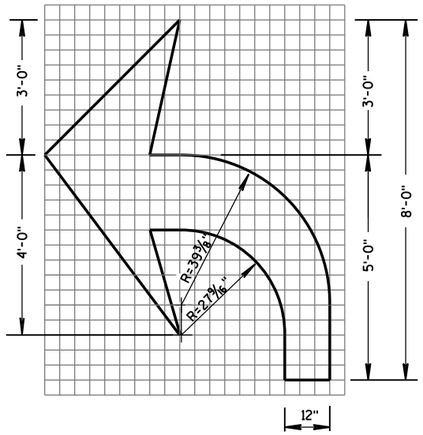
S.D.D. 15 C 7-14b

6

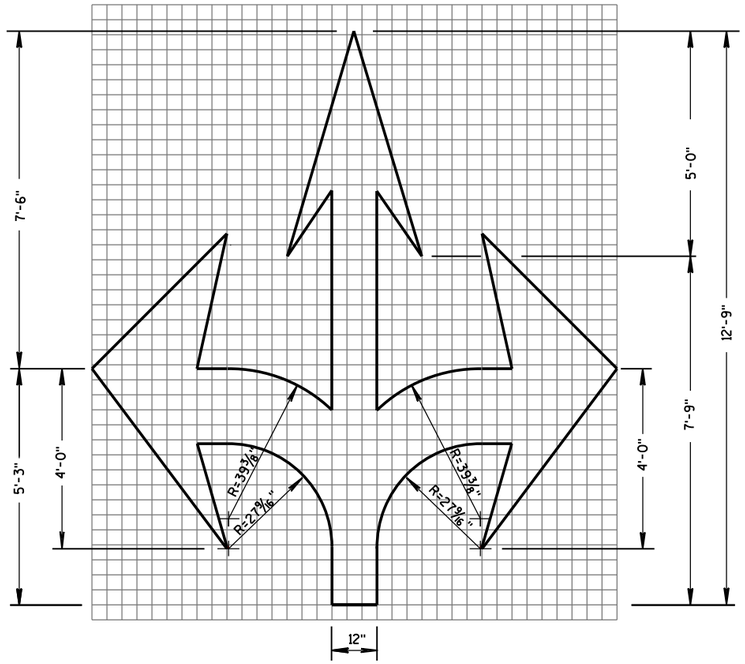
S.D.D. 15 C 7-14b

GENERAL NOTES

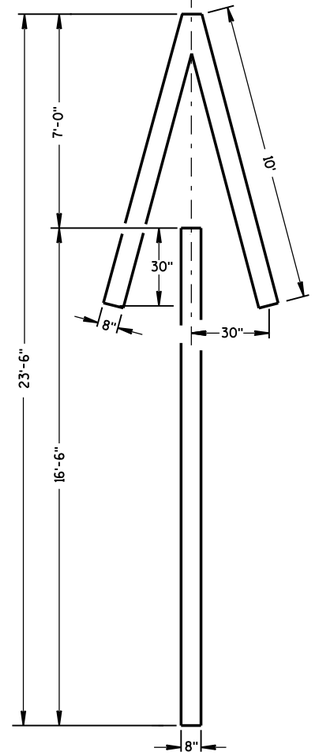
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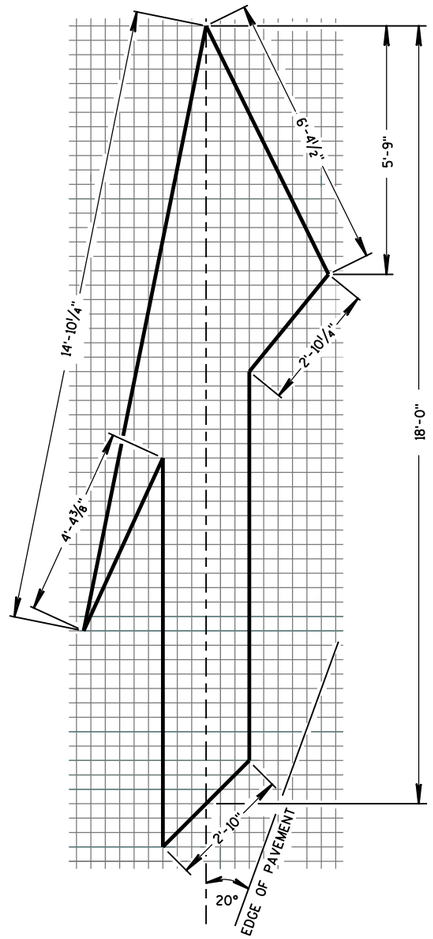
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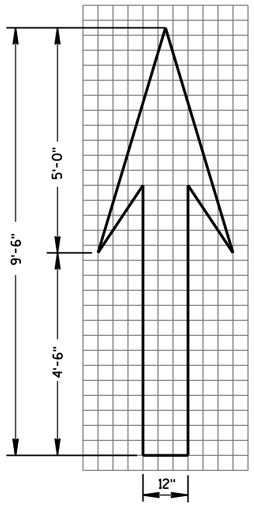
TYPE 6



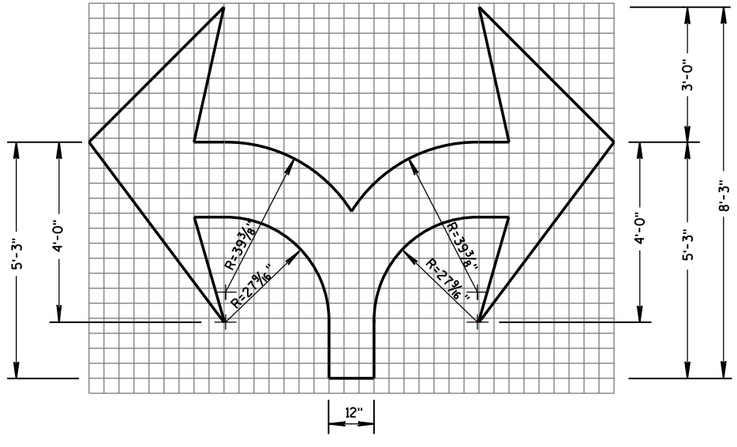
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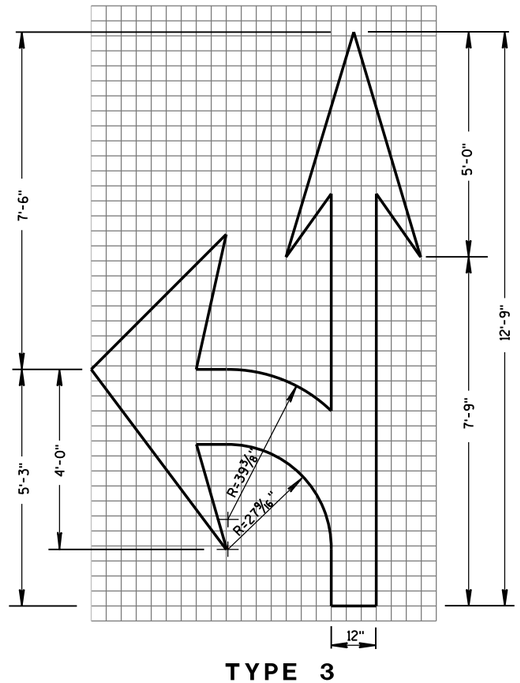
TYPE 5 LANE DROP ARROW



TYPE 1



TYPE 7



TYPE 3

PAVEMENT MARKING ARROWS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

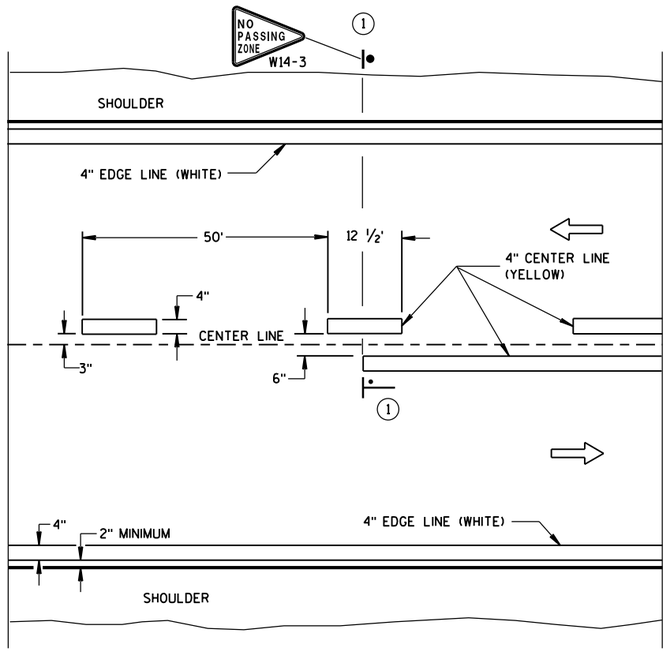
APPROVED
June 2017 — DATE
/S/ Matthew R. Rauch — STATE SIGNING AND MARKING ENGINEER
FHWA

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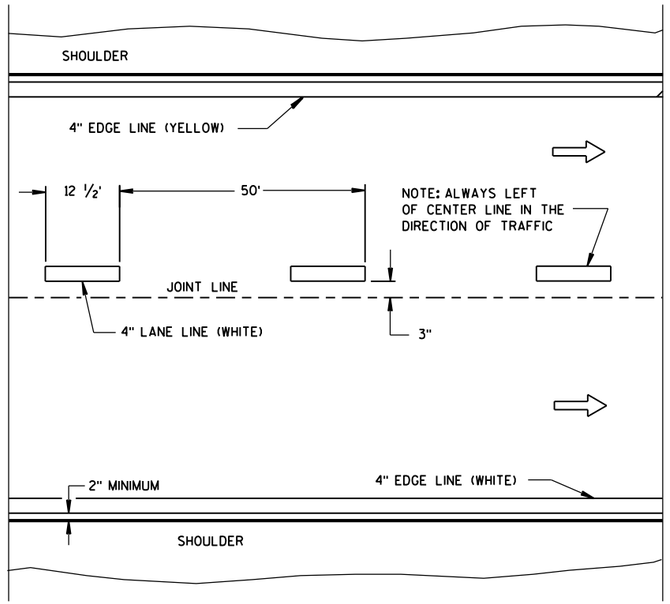
S.D.D. 15 C 7-14c

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S.D.D. 15 C 7-14c



TWO WAY TRAFFIC



ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING

GENERAL NOTES

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

(1) LOCATE THE NO PASSING ZONE W14-3 SIGN WITHIN 50 FEET OF THE "T" MARKING.

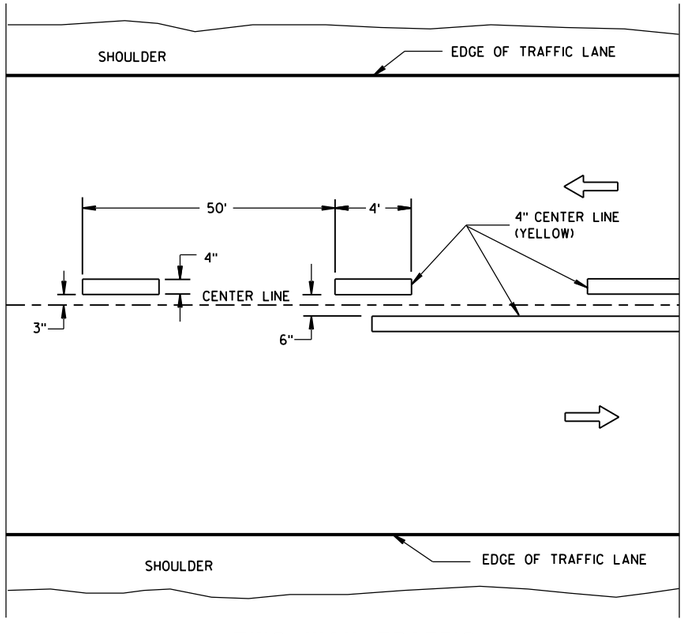
NOTE

ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL

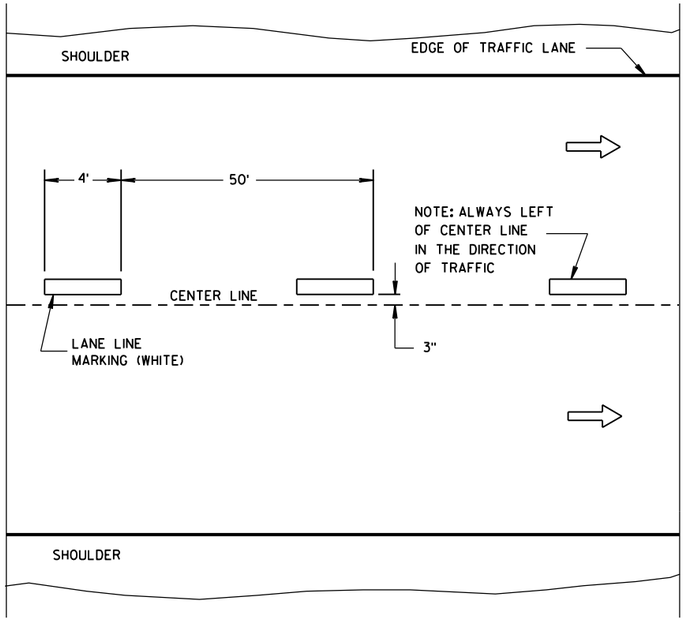
LEGEND

"T" MARKING

POST MOUNTED SIGN



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY PAVEMENT MARKING

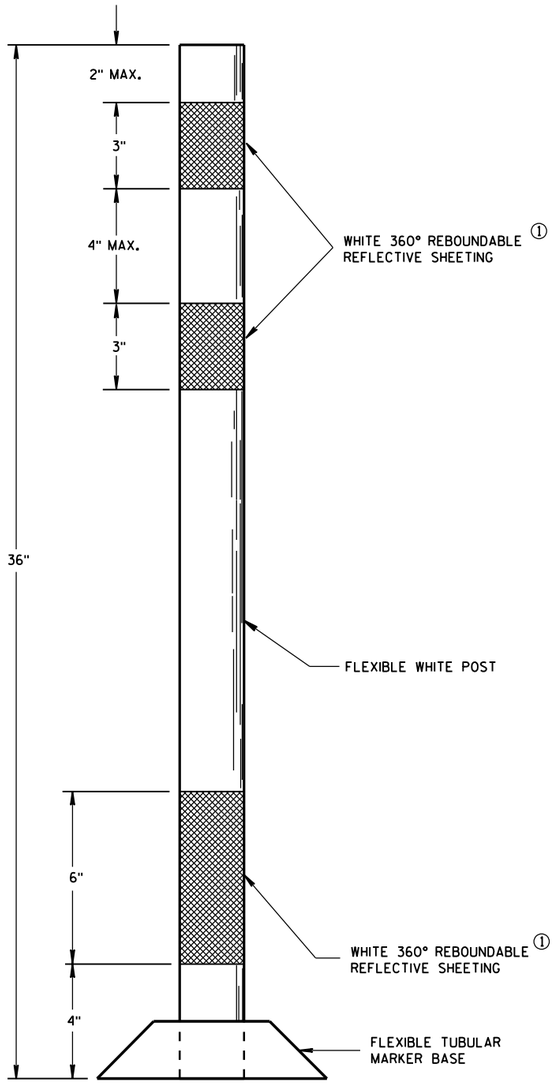
LONGITUDINAL MARKING (MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

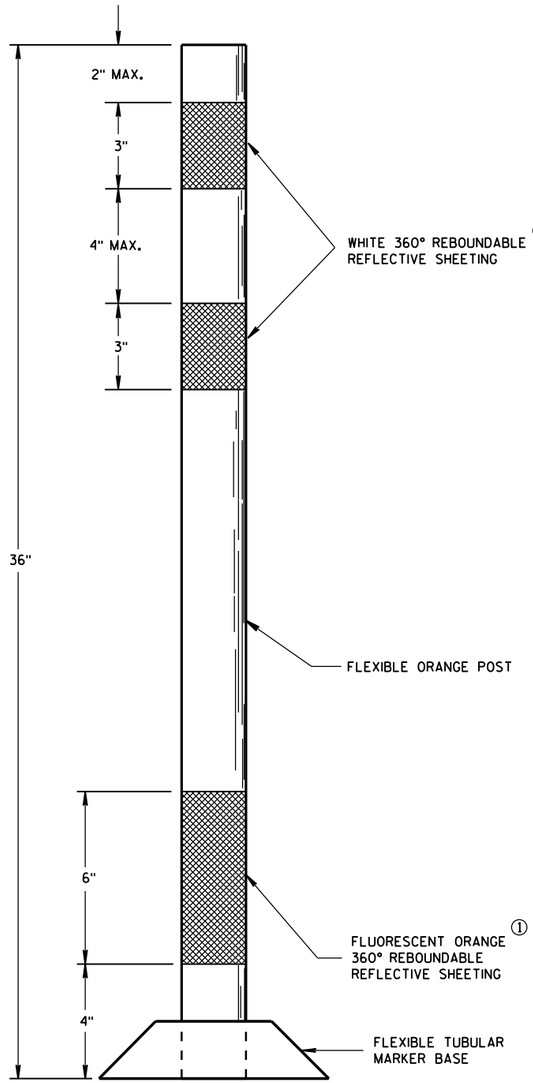
APPROVED
June 2017 — DATE
/S/ Matthew R. Rauch — STATE SIGNING AND MAR[illegible]INEER
FHWA

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S.D.D. 15 C 8-18a



FLEXIBLE
TUBULAR MARKER POST
PERMANENT CROSSOVER



FLEXIBLE
TUBULAR MARKER POST
WORK ZONE

GENERAL NOTES

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

SURFACE MOUNTED BASES SHALL BE FURNISHED IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS TO BE COMPATIBLE WITH FLEXIBLE TUBULAR MARKER POSTS TO A SIZE AND SHAPE THAT WILL PROVIDE A STABLE POST FOUNDATION WHEN SECURED TO THE PAVEMENT.

THE ASPHALTIC ADHESIVE OR BUTYL PAD FURNISHED SHALL BE IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS, UNLESS DIRECTED BY THE ENGINEER TO USE BOLTS.

① REFLECTIVE SHEETING SHALL FOLLOW THE REQUIREMENTS IN THE APPROVED PRODUCTS LISTING FOR SIGN SHEETING.

6

S.D.D. 15 C 11-7a

CHANNELIZING DEVICES
FLEXIBLE TUBULAR MARKER POST

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

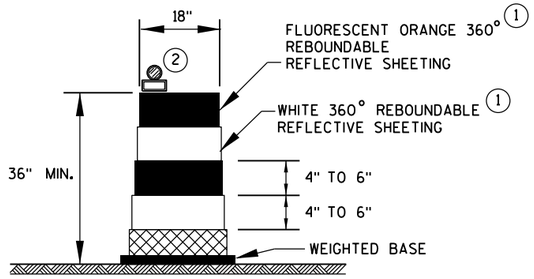
June 2017 — DATE

/S/ Andrew Heldtke — WORK ZONE ENGR

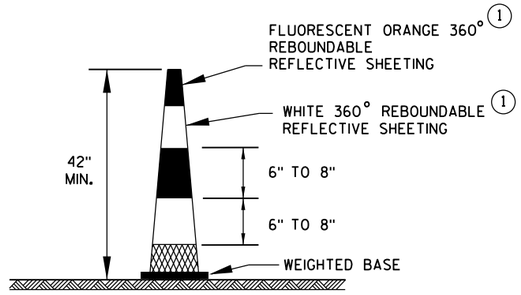
FHWA

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S.D.D. 15 C 11-7a



DRUM

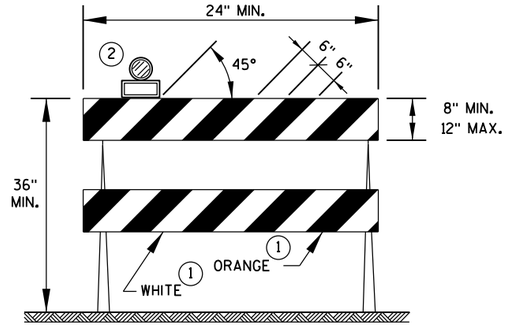


42" CONE

DO NOT USE IN TAPERS
1/2 SPACING OF DRUMS

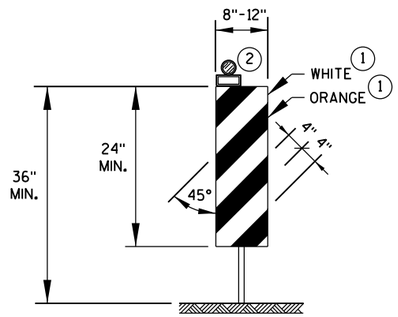
GENERAL NOTES

1. REFLECTIVE SHEETING SHALL FOLLOW THE REQUIREMENTS IN THE APPROVED PRODUCTS LISTING FOR SIGN SHEETING.
2. LOCATION OF WARNING LIGHTS WHEN SHOWN ON THE PLAN.



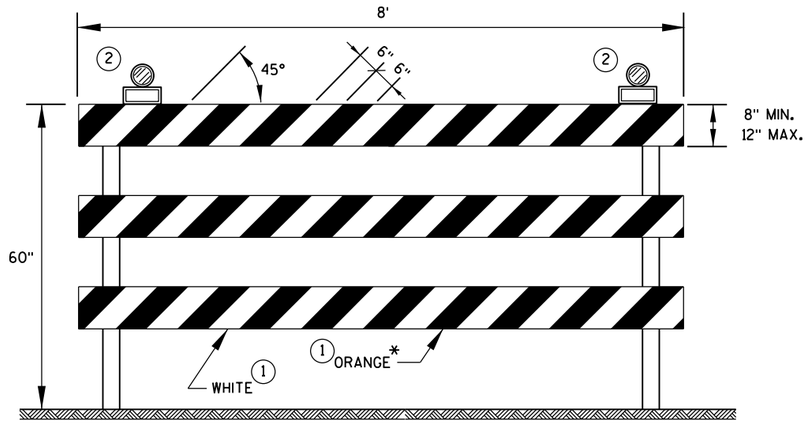
TYPE 2 BARRICADE

FOR RAILS LESS THAN 36" LONG, 4" WIDE STRIPES MAY BE USED. ALL STRIPES SHALL SLOPE DOWNWARD TO THE TRAFFIC SIDE FOR CHANNELIZATION.



VERTICAL PANEL

THE STRIPES SHALL SLOPE DOWNWARD TO THE TRAFFIC SIDE FOR CHANNELIZATION.



TYPE 3 BARRICADE

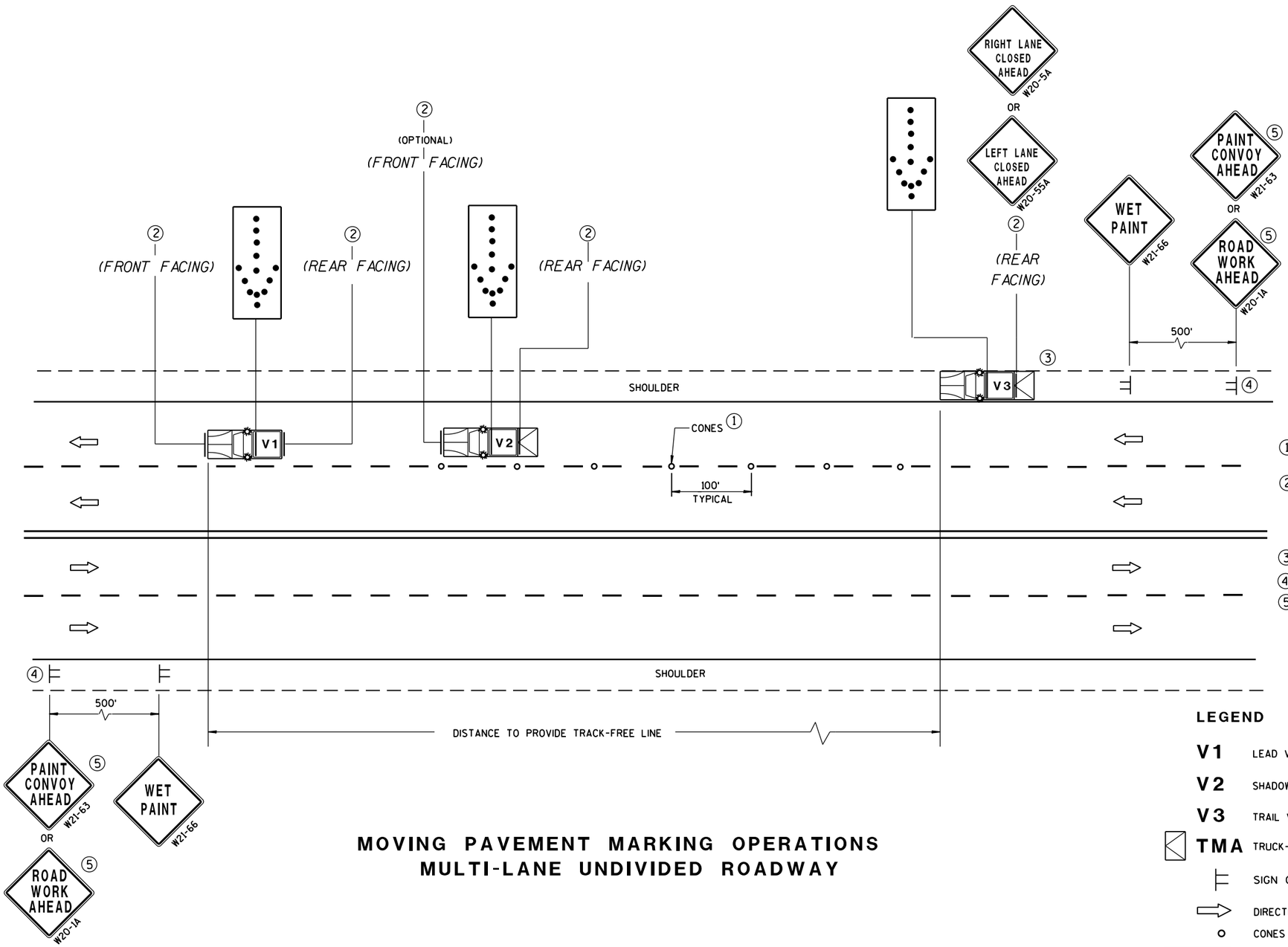
IF SIGN MOUNTED, DO NOT COVER MORE THAN 50% OF THE TOP TWO RAILS OR 33% OF THE TOTAL AREA OF THE THREE RAILS.

* IF USED FOR A PERMANENT APPLICATION, USE RED SHEETING.

CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED	
June 2017 DATE	/S/ Andrew Heidtke WORK ZONE ENG
FHWA	

6

S.D.D. 15 C 11-7b



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.

WHEN NO WORK ACTIVITY IS TAKING PLACE, REMOVE OR TURN THE STATIONARY WARNING SIGNS AWAY FROM TRAFFIC.

THIS DRAWING SHALL BE USED FOR CENTERLINE OR EDGELINE OR LANELINE MARKING FOR MULTILANE UNDIVIDED 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 APPROXIMATELY EVERY THREE MILES.

(5) IF CONSTRUCTION WORK ZONE SIGNS ARE IN PLACE, W20-1 OR W21-63 ARE NOT REQUIRED.

MOVING PAVEMENT MARKING OPERATIONS
MULTI-LANE UNDIVIDED ROADWAY

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)

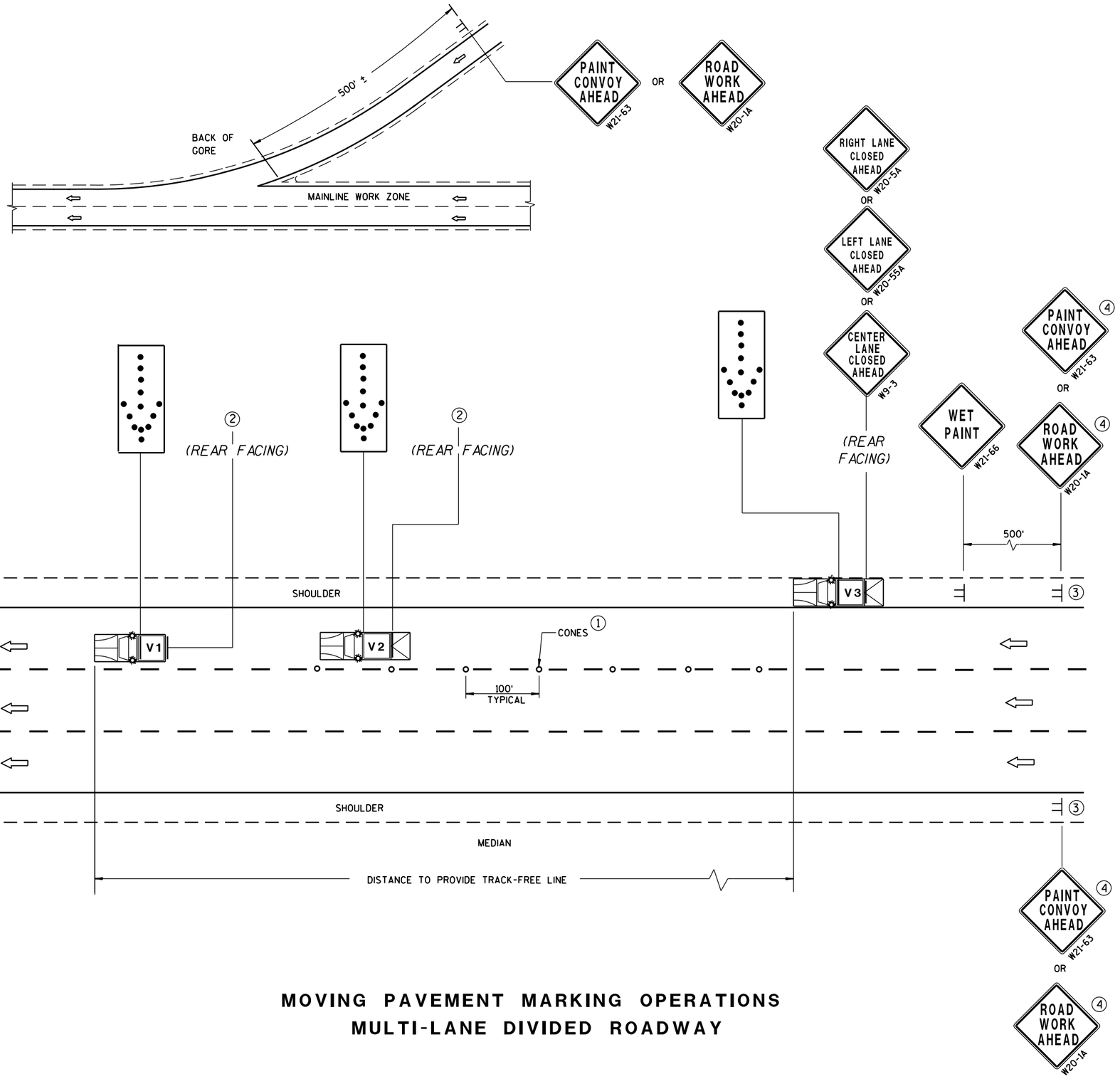
MOVING PAVEMENT MARKING OPERATION
MULTI-LANE UNDIVIDED ROADWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept., 2017 — DATE
/S/ Andrew Heldtke — WORK ZONE ENGIN
FHWA

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S.D.D. 15 C 19-5b



MOVING PAVEMENT MARKING OPERATIONS
MULTI-LANE DIVIDED ROADWAY

GENERAL NOTES

ALL VEHICLES SHALL BE EQUIPPED WITH TWO 360 DEGREE HIGH INTENSITY YELLOW FLASHING LIGHTS OR STROBE LIGHTS AND OPERATED WITH HEADLIGHTS TURNED ON.

ALL VEHICLES SHALL BE EQUIPPED WITH REAR FACING TYPE B OR C FLASHING ARROW PANEL. SIGNS PLACED ON VEHICLES MUST NOT OBSCURE THE ARROW PANEL.

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

IF SPEED LIMIT IS 40 MPH OR LESS STATIONARY SIGNS MAY BE OMITTED IF CONES ARE USED.

ALTERNATE SIGN MESSAGES, SUCH AS "PAINT CREW AHEAD" OR "ROAD PAINTING AHEAD" MAY BE USED.

DISTANCE BETWEEN VEHICLES MAY VARY ACCORDING TO TERRAIN, SIGHT DISTANCE, PAINT DRYING TIME, AND OTHER FACTORS. WHENEVER ADEQUATE STOPPING SIGHT DISTANCE EXISTS TO THE REAR, SHADOW VEHICLES SHOULD MAINTAIN THE MINIMUM DISTANCE FROM THE WORK VEHICLE AND PROCEED AT THE SAME SPEED AS THE WORK VEHICLE. SHADOW VEHICLES SHOULD SLOW DOWN IN ADVANCE OF VERTICAL OR HORIZONTAL CURVES THAT RESTRICT SIGHT DISTANCE.

WHEN WORK ACTIVITY BLOCKS THE LEFT LANE, REVERSE TRAFFIC CONTROL.

WHEN A RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, PROVIDE ADDITIONAL TRAFFIC CONTROLS AS SPECIFIED IN THE CONTRACT OR AS APPROVED BY THE ENGINEER.

USE AN ATTENUATOR ON THE REARMOST VEHICLE THAT BLOCKS ALL OR PART OF THE TRAFFIC LANE.

FOR EDGELINE MARKING OR IF CONES ARE NOT USED, POSITION THE REARMOST SHADOW VEHICLE ON THE SHOULDER AS SHOWN IN THE MUTCD IF THE SHOULDER HAS ADEQUATE WIDTH. USE DOUBLE ARROWS WHEN CONVOY IS IN CENTER LANE ONLY.

WHEN NO WORK ACTIVITY IS TAKING PLACE, REMOVE OR TURN THE STATIONARY WARNING SIGNS AWAY FROM TRAFFIC.

THIS DRAWING SHALL BE USED FOR EDGELINE OR LANELINE MARKING FOR MULTILANE DIVIDED ROADWAYS.

(1) CONES MAY BE OMITTED ON PAINTED LINE IF APPROVED BY THE ENGINEER. CONSIDER PAVEMENT MARKING DRY OR CURE TIMES AND TRAFFIC VOLUME.

(2) USE STANDARD SIGN W21-64 WITH APPROPRIATE ARROW.

WET PAINT W21-64 OR WET PAINT W21-64

(3) SIGNS SHALL BE REPEATED AFTER EVERY ON RAMP OR EVERY THREE MILES.

(4) IF CONSTRUCTION WORK ZONE SIGNS ARE IN PLACE, W20-1 OR W21-63 ARE NOT REQUIRED.

LEGEND

V1	LEAD VEHICLE
V2	SHADOW VEHICLE
V3	TRAIL VEHICLE WITH TMA
TMA	TRUCK-MOUNTED ATTENUATOR
	SIGN ON TEMPORARY SUPPORT
	DIRECTION OF TRAFFIC
	CONES
	FLASHING ARROW PANEL (MERGE)

MOVING PAVEMENT MARKING OPERATION
MULTI-LANE DIVIDED ROADWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

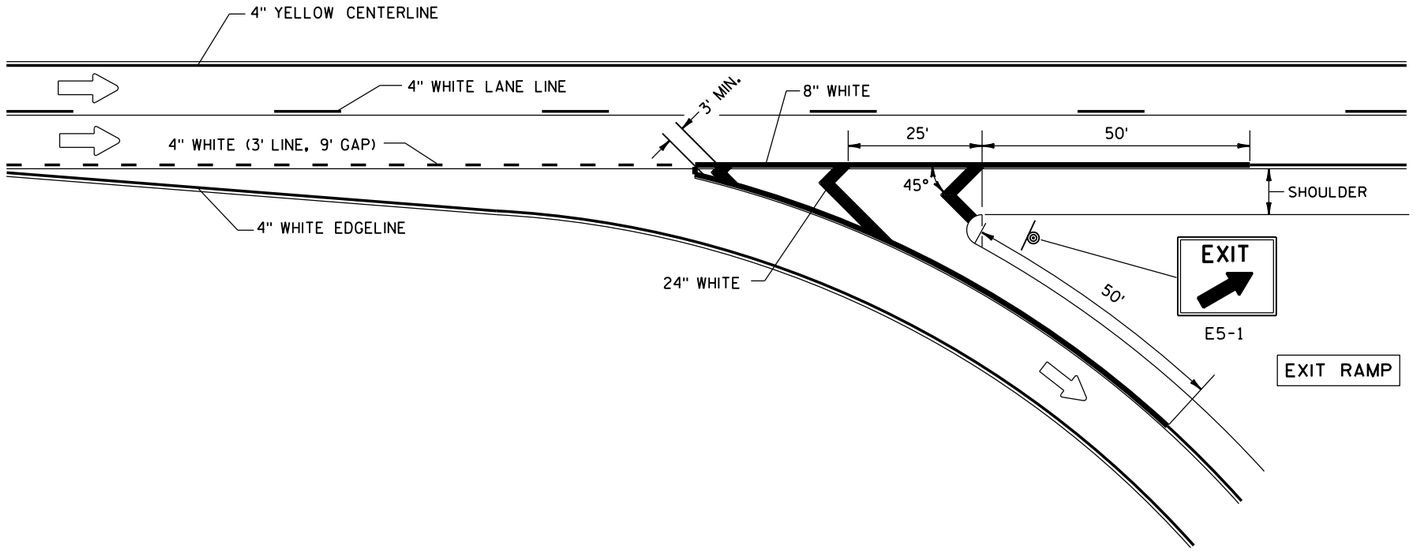
APPROVED
Sept. 2017 DATE
/S/ Andrew Heldtke WORK ZONE ENGR
FHWA

6

S.D.D. 15 C 19-5c

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S.D.D. 15 C 19-5c



PAVEMENT MARKING FOR EXIT RAMP

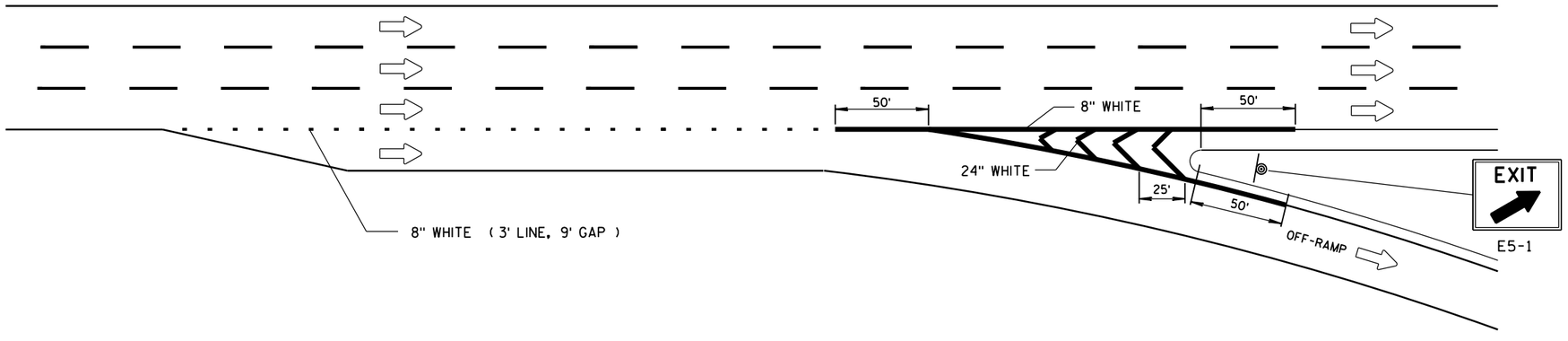
GENERAL NOTES

PLACE GROOVE 3 INCHES LEFT OF JOINT.

LEGEND

DIRECTION OF TRAVEL

SIGN ON PERMANENT SUPPORT



SERVICE INTERCHANGE PAVEMENT MARKING FOR PARALLEL EXIT-RAMP

6

S.D.D. 15 C 31-3a

PAVEMENT MARKING (RAMPS AND GORES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

S.D.D. 15 C 31-3a

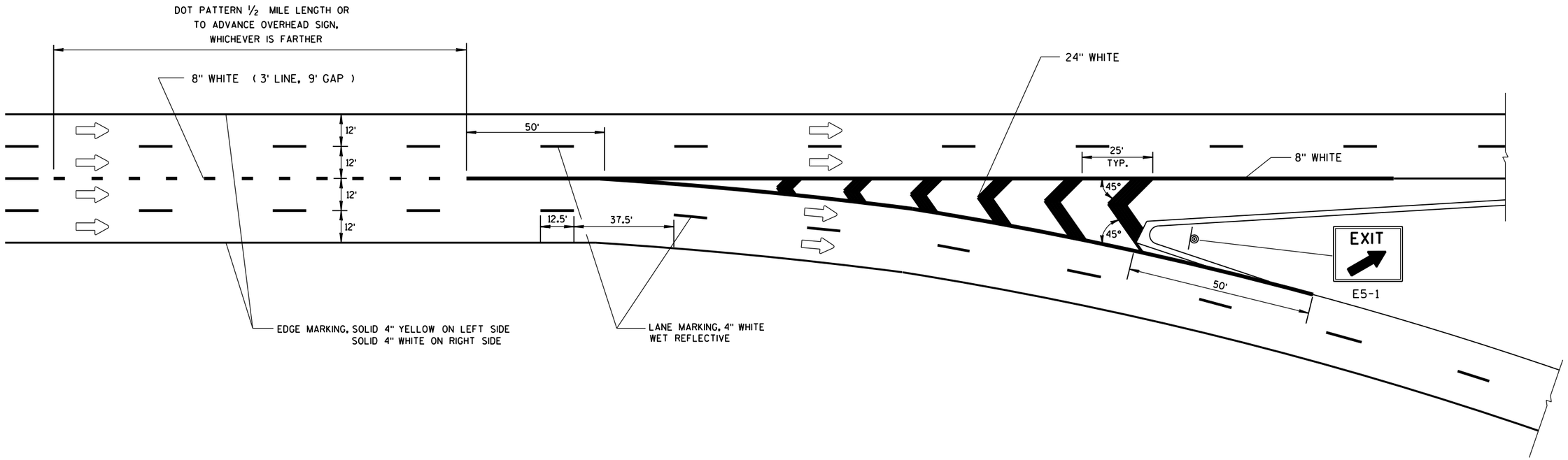
GENERAL NOTES

PLACE GROOVE 3 INCHES LEFT OF JOINT.

LEGEND

DIRECTION OF TRAVEL

SIGN ON PERMANENT SUPPORT



6

S.D.D. 15 C 31-3b

PAVEMENT MARKING
MAJOR SPLIT
FREEWAY TO FREEWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

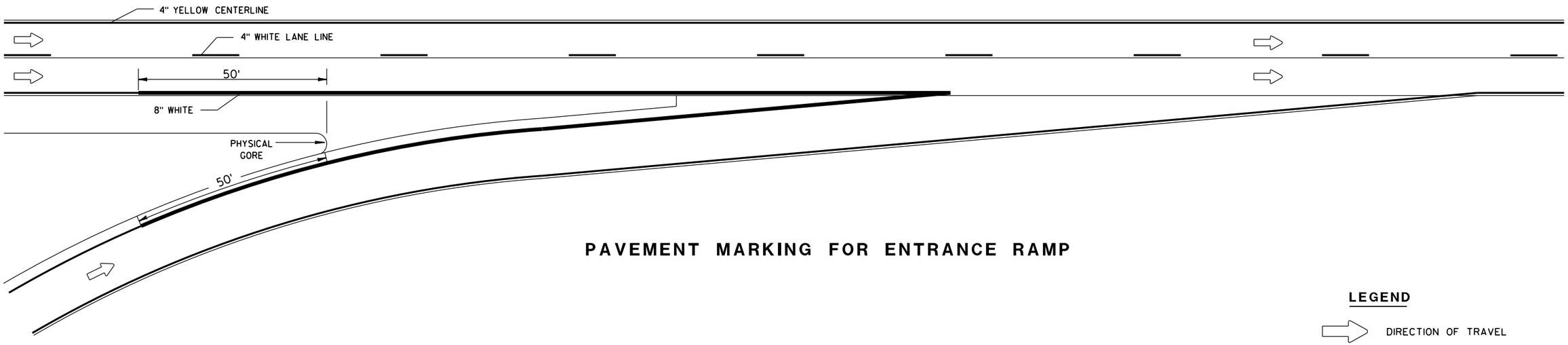
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S.D.D. 15 C 31-3b

GENERAL NOTES

PLACE GROOVE 3 INCHES LEFT OF JOINT.

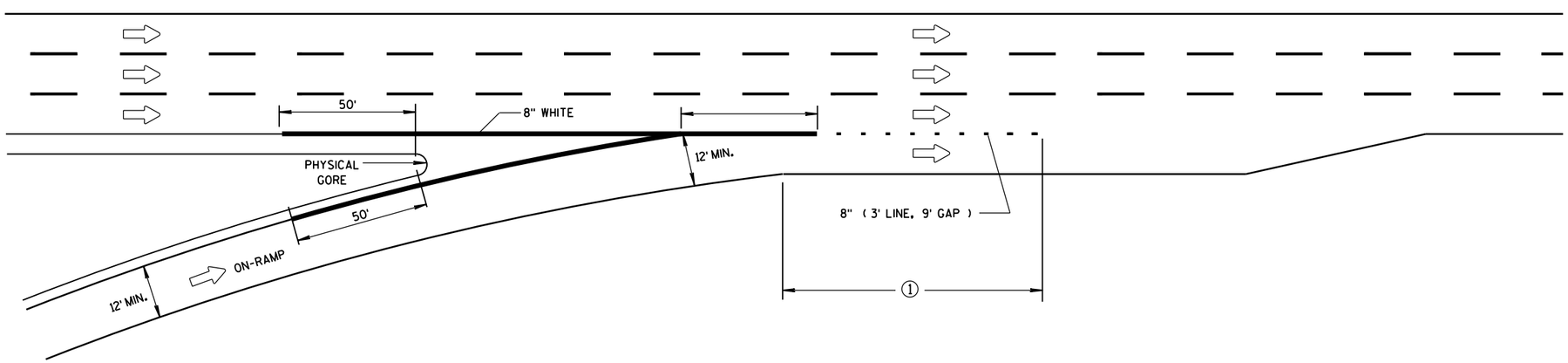
① ½ LENGTH OF FULL WIDTH ACCELERATION LANE.



PAVEMENT MARKING FOR ENTRANCE RAMP

LEGEND

DIRECTION OF TRAVEL



SERVICE INTERCHANGE PAVEMENT MARKING FOR PARALLEL ENTRANCE-RAMP

PAVEMENT MARKING FOR PARALLEL ON-RAMP AND PARALLEL OFF-RAMP

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

Sept., 2017
DATE

/S/ Matthew R. Rauch
STATE SIGNING AND MARKING ENGINEER

FHWA

6

S.D.D. 15 C 31-3c

6

S.D.D. 15 C 31-3c

LEGEND

- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL DRUM
- FLASHING ARROW BOARD
- REMOVING PAVEMENT MARKING
- CONCRETE BARRIER TEMPORARY PRECAST
- DIRECTION OF TRAFFIC
- WORK AREA

L, TAPER LENGTH (MPH)							
SPEED (MPH)	W, LATERAL OFFSET (FT)						
	10	11	12	13	14	15	16
45	450	495	540	585	630	675	720
50	500	550	600	650	700	750	800
55	550	605	660	715	770	825	880
60	600	660	720	780	840	900	960
65	650	715	780	845	910	975	1040
70	700	770	840	910	980	1050	1120



XX MILES AHEAD — W057-52 48"x36"

INSTALL ON EACH APPROACH AT THE CLOSEST INTERSECTION WITH A STATE OR COUNTY TRUNK HIGHWAY, OR AS DIRECTED BY THE ENGINEER. WIDTH ON SIGN TO BE APPROX. 1 FOOT LESS THAN AVAILABLE WIDTH (OMIT IF AVAILABLE WIDTH IS MORE THAN 16 FEET).



OR



LOCATED 2600 FEET IN ADVANCE OF R2-1 SIGN AND 500 FEET BEYOND THE "ROAD WORK 1 MILE" SIGN.



OR



R2-1 48"x60" (BLACK AND WHITE)

LOCATED 500 FEET BEYOND W20-5G SIGN.

IF THE REGULATORY SPEED HAS BEEN REDUCED, A SPEED LIMIT SIGN SHALL BE LOCATED 1500 FEET BEYOND THE END OF THE ACCELERATION LANE OF EACH ENTRANCE RAMP. THERE SHOULD BE A SPEED LIMIT SIGN INCORPORATED A MINIMUM OF EVERY 2 OR 3 MILES.

* INCLUDE RESUME SPEED LIMIT SIGN A MINIMUM OF 200 FEET (500 FEET DESIRABLE) AFTER END ROAD WORK SIGNS.

GENERAL NOTES

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

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

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

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

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

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

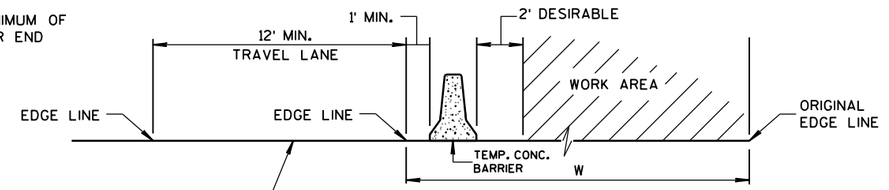
(1) CONSIDER ROADWAY GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARD SO THE DRIVER HAS A CLEAR VIEW OF THE ARROW BOARD AND LANE CLOSURE DRUMS FOR A MINIMUM 1500 FEET IN FRONT OF DRUM TAPER.

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.

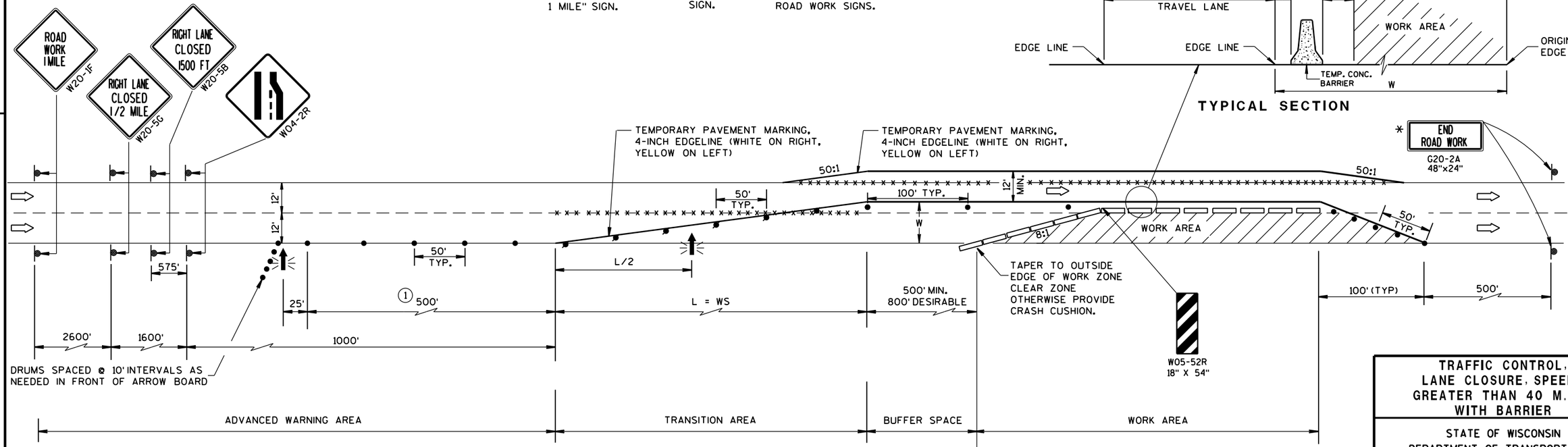
REMOVE PAVEMENT MARKINGS IF LANE CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

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

ADJUSTMENTS IN BUFFER SPACE NEED TO BE INCORPORATED WHEN THE LANE CLOSURE OCCURS NEAR AN INTERCHANGE EXIT OR ENTRANCE RAMP OR INTERSECTION. THE LANE CLOSURE MUST TAKE PLACE FAR ENOUGH IN ADVANCE OF AN EXIT OR ENTRANCE RAMP TO STILL ALLOW FOR ADEQUATE BUFFER SPACE. THE MINIMUM LENGTH OF THE BUFFER SPACE BEFORE AN EXIT RAMP SHOULD BE 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.



TYPICAL SECTION



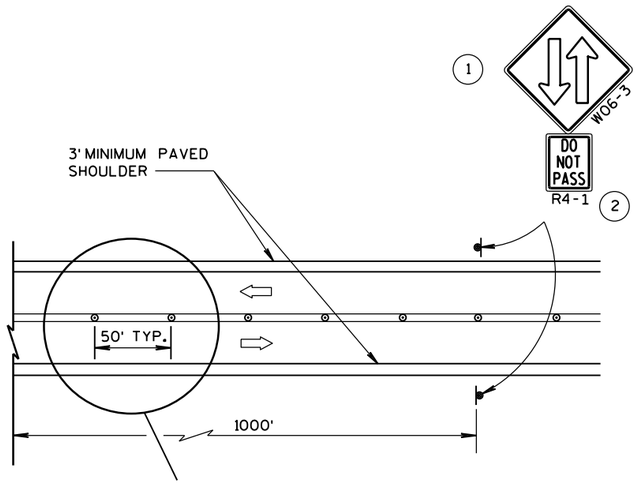
TRAFFIC CONTROL, LANE CLOSURE, SPEEDS GREATER THAN 40 M.P.H. WITH BARRIER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

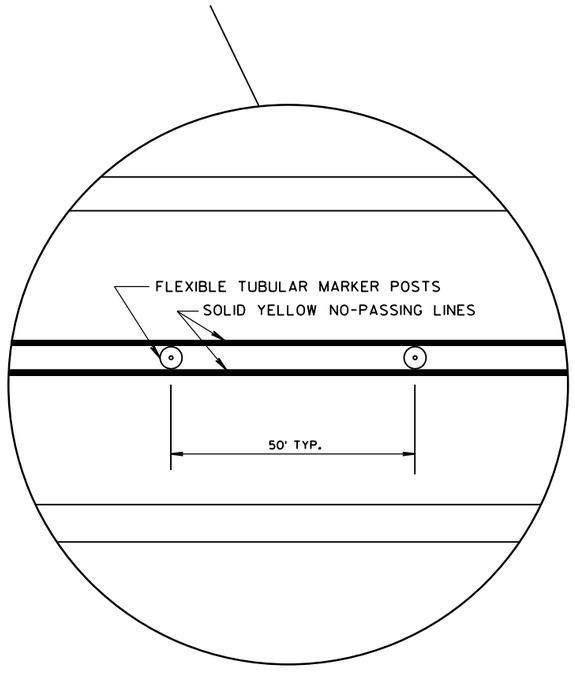
APPROVED
Sept., 2016 — DATE
/S/ Peter Amakobe Atepe
STATEWIDE WORK ZOI SAFETY ENGIN
FHWA

S.D.D. 15 D 3-4

S.D.D. 15 D 3-4



TWO LANE, TWO WAY OPERATION



GENERAL NOTES

ALL SIGNS ARE 48"x48" UNLESS OTHERS NOTED.

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

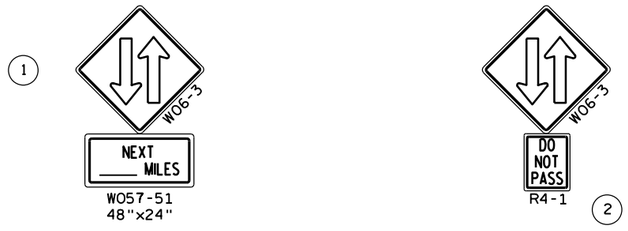
ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON "COVERED" OR "DOWNED" SIGNS.

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.

A SINGLE ROW OF FLEXIBLE TUBULAR MARKERS ON CENTERLINE EXTEND FOR THE ENTIRE LENGTH OF TWO-WAY TRAFFIC AT 50-FOOT SPACING.

COVER EXISTING CENTERLINE STRIPE WITH TEMPORARY PAVEMENT MARKING, 4-INCH DOUBLE YELLOW.



THE W06-3 WITH THE W057-51 SHALL BE LOCATED 200 FEET BEYOND THE END OF THE ACCELERATION LANE OF EACH ENTRANCE RAMP AND/OR 500 FEET BEYOND ANY SIDEROAD. THE W06-3 WITH THE R4-1 SHALL BE LOCATED 1000 FEET BEYOND THE W06-3 AND THE W057-51 AND THE SIGNS SHALL BE ALTERNATED WITH ONE MILE INTERVALS BETWEEN W06-3 SIGNS.

(2) CONVENTIONAL: 24"x30"
FREEWAY AND EXPRESSWAY: 36"x48"

LEGEND

- SIGN ON PERMANENT SUPPORT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- DIRECTION OF TRAFFIC

TRAFFIC CONTROL, TWO LANE TWO WAY OPERATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
8/2013 DATE
/S/ Travis Feltes STATE TRAFFIC ENGINEER
SIGN
FHWA

6

S.D.D. 15 D 6-3

LEGEND

- TYPE III BARRICADE WITH ATTACHED SIGN
- SIGN ON PERMENENT SUPPORT
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL DRUM
- FLASHING ARROW BOARD
- (A) TYPE "A" WARNING LIGHT (FLASHING)
- REMOVING PAVEMENT MARKING
- DIRECTION OF TRAFFIC
- WORK AREA

GENERAL NOTES

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

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

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

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

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

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

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

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

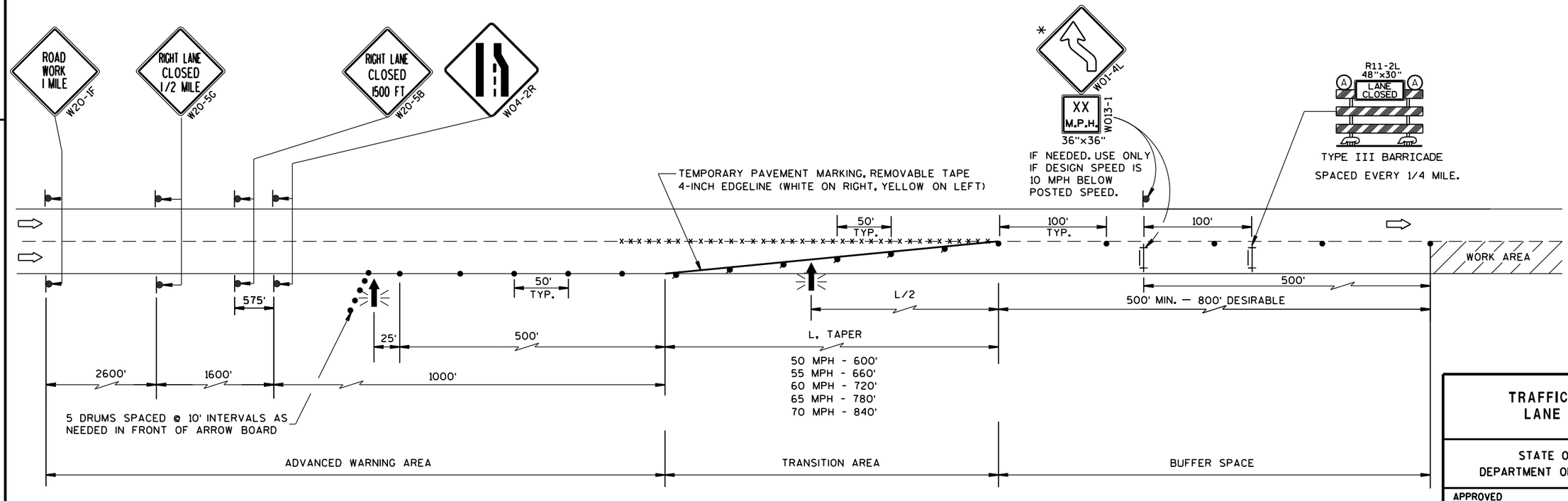
REMOVE PAVEMENT MARKINGS IF LANE CLOSURE IS TO BE IN PLACE FOR LONGER THAN 4 OR MORE DAYS AND NIGHTS.

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

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

ADJUSTMENTS IN BUFFER SPACE NEED TO BE INCORPORATED WHEN THE LANE CLOSURE OCCURS NEAR AN INTERCHANGE EXIT OR ENTRANCE RAMP. THE LANE CLOSURE MUST MUST TAKE PLACE FAR ENOUGH IN ADVANCE OF AN EXIT OR ENTRANCE RAMP TO STILL ALLOW FOR ADEQUATE BUFFER SPACE. THE MINIMUM LENGTH OF THE BUFFER SPACE BEFORE AN EXIT RAMP SHOULD BE 1/2 THE LENGTH OF THE TRANSITION AREA. THE ENTRANCE RAMP SHOULD BE FOLLOWED BY THE ORIGINAL BUFFER SPACE LENGTH OF 800 FEET DESIRABLE PRIOR TO ANOTHER TRAFFIC CONTROL CHANGE SUCH AS A CROSSOVER MANEUVER.

* THE LEFT REVERSE CURVE SIGN (WO1-4L) IS ONLY REQUIRED WHEN THIS DETAIL IS USED IN COMBINATION WITH "SINGLE LANE CROSSOVER" DETAIL.



TRAFFIC CONTROL, LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2016 — DATE
/S/ Peter Amakobe Atepe
STATEWIDE WORK ZONE TRAFFIC SAFETY ENGINEER
FHWA

6

S.D.D. 15 D 12-6a

LEGEND

- TYPE III BARRICADE WITH ATTACHED SIGN
- SIGN ON PERMENENT SUPPORT
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL DRUM
- FLASHING ARROW BOARD
- (A) TYPE "A" WARNING LIGHT (FLASHING)
- REMOVING PAVEMENT MARKING
- DIRECTION OF TRAFFIC
- WORK AREA

GENERAL NOTES

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

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

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

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

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

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

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

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

REMOVE PAVEMENT MARKINGS IF LANE CLOSURE IS TO BE IN PLACE FOR LONGER THAN 4 OR MORE DAYS AND NIGHTS.

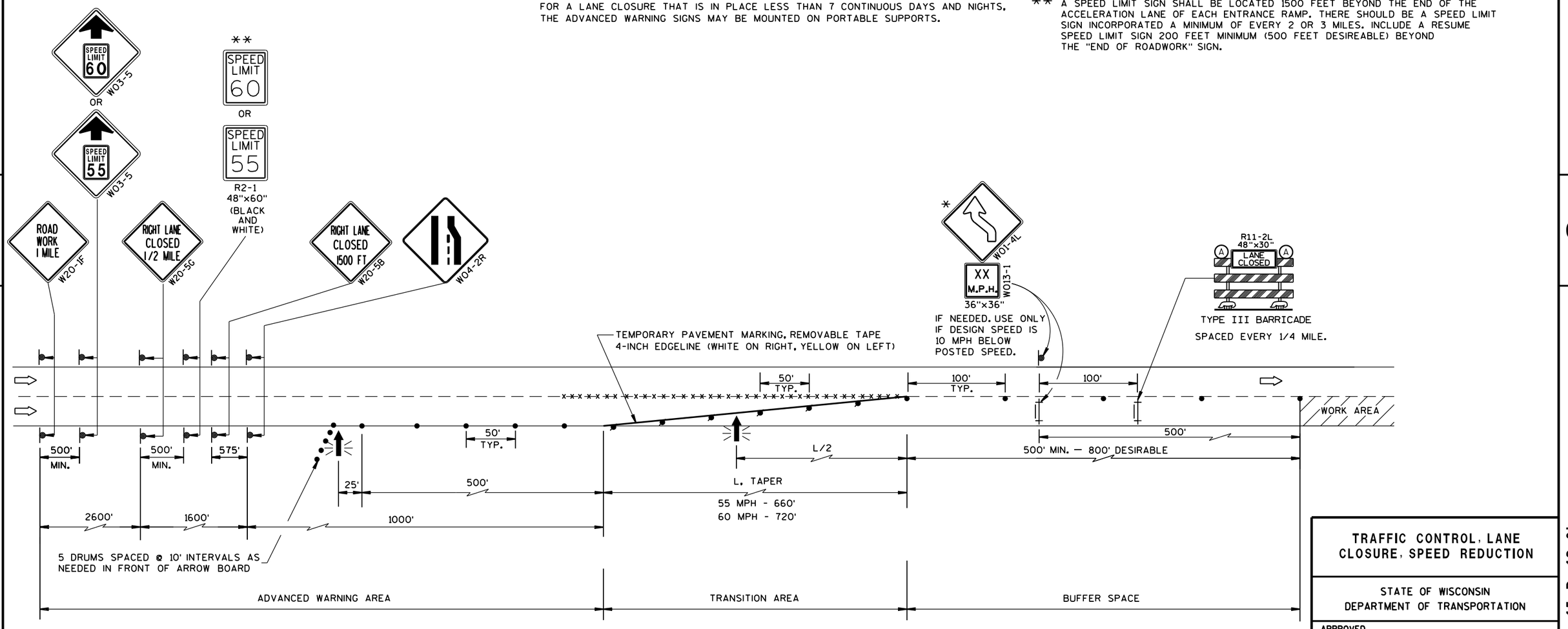
WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

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

ADJUSTMENTS IN BUFFER SPACE NEED TO BE INCORPORATED WHEN THE LANE CLOSURE OCCURS NEAR AN INTERCHANGE EXIT OR ENTRANCE RAMP. THE LANE CLOSURE MUST MUST TAKE PLACE FAR ENOUGH IN ADVANCE OF AN EXIT OR ENTRANCE RAMP TO STILL ALLOW FOR ADEQUATE BUFFER SPACE. THE MINIMUM LENGTH OF THE BUFFER SPACE BEFORE AN EXIT RAMP SHOULD BE 1/2 THE LENGTH OF THE TRANSITION AREA. THE ENTRANCE RAMP SHOULD BE FOLLOWED BY THE ORIGINAL BUFFER SPACE LENGTH OF 800 FEET DESIRABLE PRIOR TO ANOTHER TRAFFIC CONTROL CHANGE SUCH AS A CROSSOVER MANEUVER.

* THE LEFT REVERSE CURVE SIGN (W01-4L) IS ONLY REQUIRED WHEN THIS DETAIL IS USED IN COMBINATION WITH "SINGLE LANE CROSSOVER" DETAIL.

** A SPEED LIMIT SIGN SHALL BE LOCATED 1500 FEET BEYOND THE END OF THE ACCELERATION LANE OF EACH ENTRANCE RAMP. THERE SHOULD BE A SPEED LIMIT SIGN INCORPORATED A MINIMUM OF EVERY 2 OR 3 MILES. INCLUDE A RESUME SPEED LIMIT SIGN 200 FEET MINIMUM (500 FEET DESIREABLE) BEYOND THE "END OF ROADWORK" SIGN.



TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2016 — DATE
/S/ Peter Amakobe Atepe
STATEWIDE WORK ZONE TRAFFIC ENGINEER
FHWA

6

S.D.D. 15 D 12-6b

LEGEND

- TRAFFIC CONTROL DRUM
- SIGN ON PERMANENT SUPPORT
- DIRECTION OF TRAFFIC
- FLASHING ARROW BOARD
- WORK AREA

GENERAL NOTES

THIS DETAIL IS TYPICAL FOR CLOSING THE RIGHT SHOULDER. FOR CLOSING THE LEFT SHOULDER, REVERSE THE TRAFFIC CONTROL.

THIS DETAIL MAY BE USED FOR DIVIDED ROADWAYS WITH ANY NUMBER OF TRAVEL LANES.

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

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

SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FHWA'S MANUAL OF STANDARD HIGHWAY SIGNS OR THE WISCONSIN STANDARD SIGN PLATES.

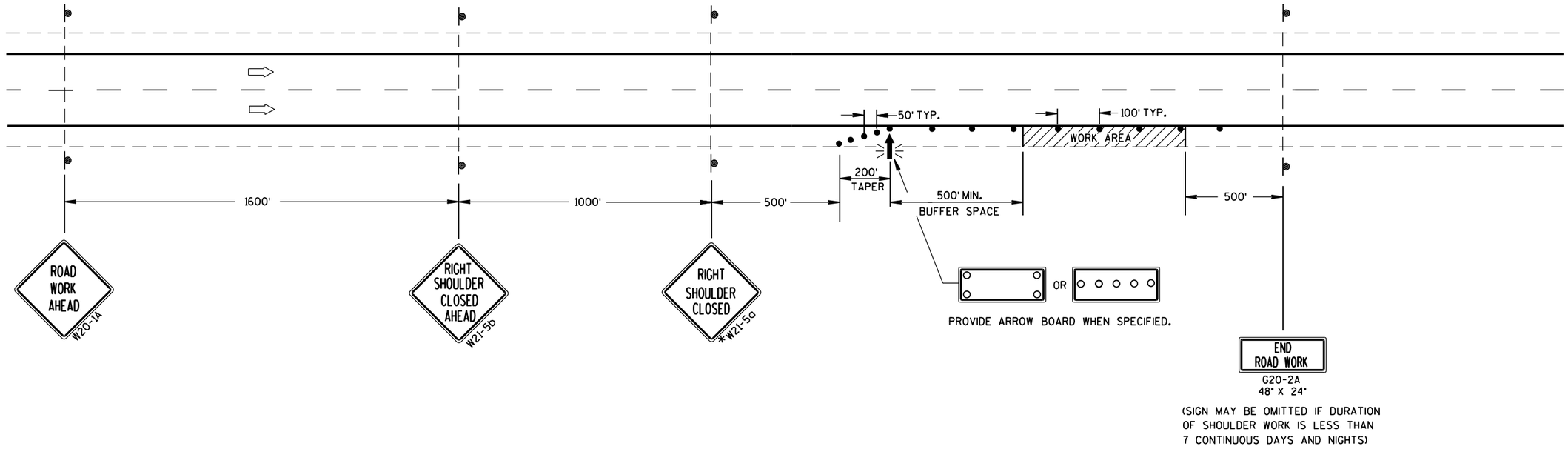
SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

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

CHANNELIZING DEVICES PLACED ADJACENT TO THE WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

WHEN A RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, ADDITIONAL TRAFFIC CONTROLS SHALL BE PROVIDED AS SPECIFIED IN THE PLANS AND/OR THE SPECIAL PROVISIONS OR AS APPROVED BY THE ENGINEER.

*FOR SHORT DURATION SHOULDER WORK OF LESS THAN ONE HOUR, THE W21-5a SIGN MAY BE OMITTED.



TRAFFIC CONTROL SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

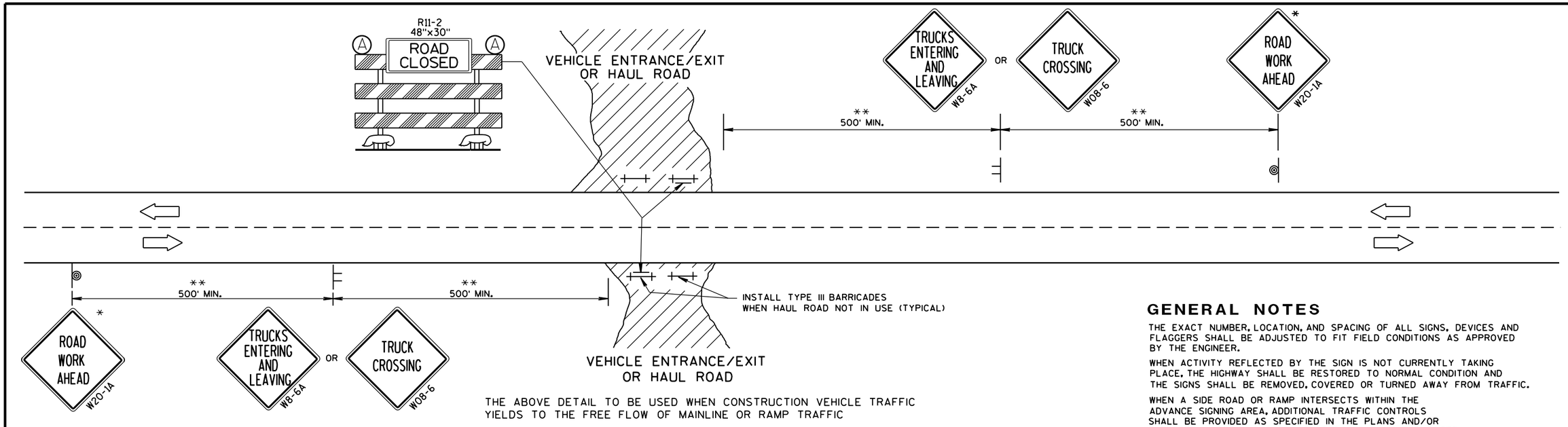
June 2016 — DATE

/S/ Peter Amakobe Atepe
STATEWIDE WORK ZO[illegible] SAFETY ENGI[illegible]

FHWA

6

S.D.D. 15 D 27-3



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
- 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.

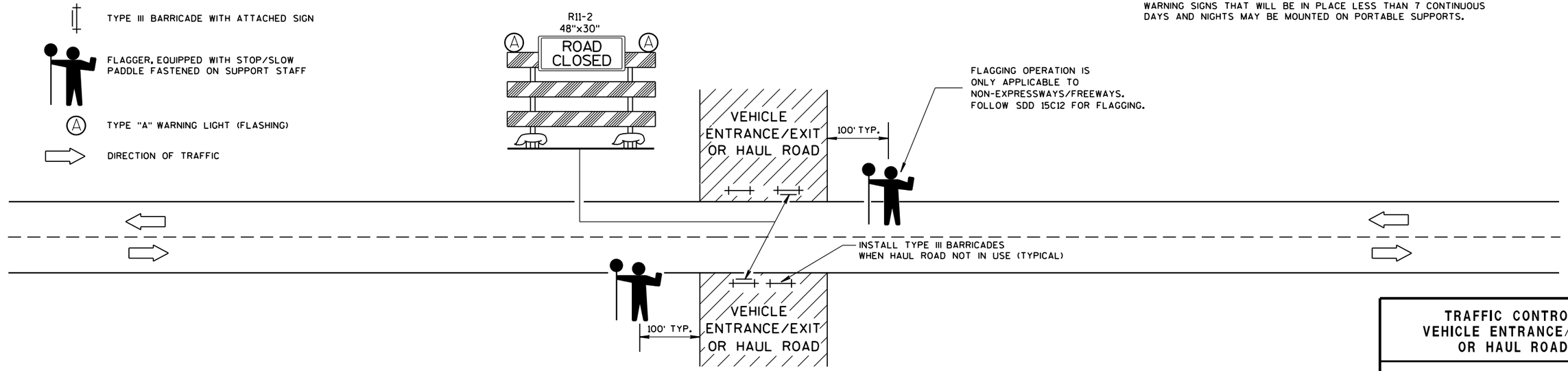
** 500 FEET SHOWN IS FOR ROADWAYS WITH A NON-CONSTRUCTION REGULATORY SPEED LIMIT OF 45 MPH OR MORE. FOR 35-40 MPH, USE 350 FEET. FOR 25-30 MPH, USE 200 FEET. USE 1000 FEET/1500 FEET FOR EXPRESSWAY/FREEWAY.

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.

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

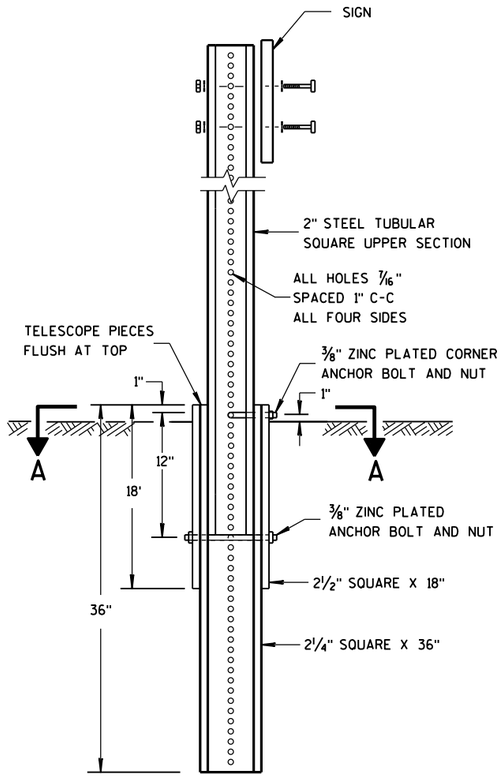
APPROVED
June 2017 — DATE
/S/ Andrew Heldtke — WORK ZONE ENGI
FHWA

6

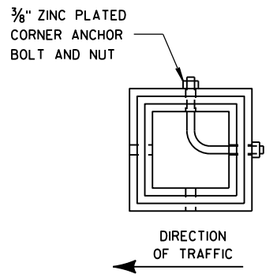
S.D.D. 15 D 29-5

6

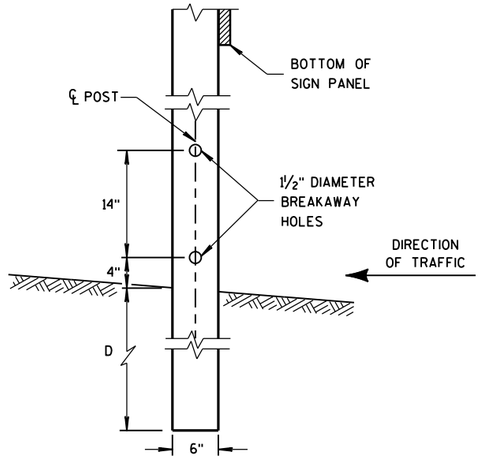
S.D.D. 15 D 29-5



DETAIL OF TUBULAR STEEL SIGN POST



SECTION A-A



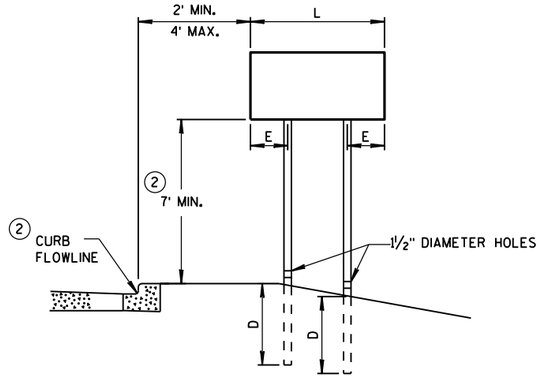
4"x6" WOOD POST MODIFICATION

GENERAL NOTES

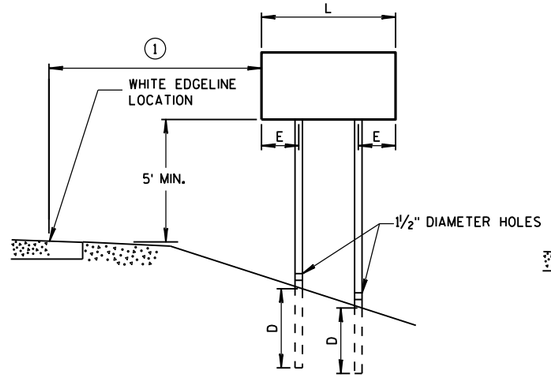
(1) 6 FEET FROM THE EDGE OF PAVEMENT (EDGE LINE LOCATION) UNLESS OTHERWISE DIRECTED BY THE PROJECT ENGINEER. LATERAL OFFSET SHOULD BE ADJUSTED TO AVOID THE DITCH FLOWLINE.

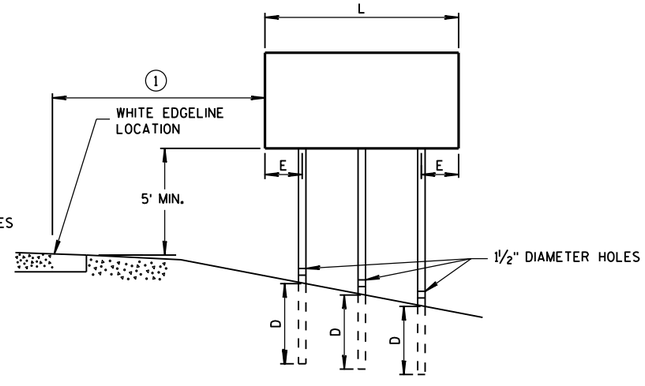
(2) THE EXISTENCE OF CURB AND GUTTER DOES NOT IN ITSELF MANDATE THE VERTICAL CLEARANCE ILLUSTRATED. THAT HEIGHT IS TYPICALLY MEASURED WHERE THERE IS SIDEWALK ADJACENT TO THE ROADWAY OR PARKING IS PERMITTED. IN THE ABSENCE OF SIDEWALK, VERTICAL CLEARANCE IS MEASURED FROM THE TOP OF THE CURB. IF NO SIDEWALK AND NO PARKING, VERTICAL CLEARANCE MAY BE REDUCED TO 5 FOOT MINIMUM. OFFSET OF SIGNS IS MEASURED FROM THE CURB FLOWLINE.

(3) FOR SIGNS REQUIRING 4 POSTS, SPACE INTERMEDIATE POSTS EVENLY.



URBAN AREA





RURAL AREA

POST MOUNTING DETAIL FOR TEMPORARY TRAFFIC CONTROL FIXED MESSAGE SIGNS

TUBULAR STEEL POSTS

AREA OF SIGN INSTALLATION (SQ. FT.)	NUMBER OF REQUIRED TUBULAR STEEL POSTS
9 OR LESS	1
GREATER THAN 9 LESS THAN OR EQUAL TO 18	2
GREATER THAN 18 LESS THAN OR EQUAL TO 27	3

SIGNS WIDER THAN 3 FEET OR LARGER THAN 9 SQ. FT. SHALL BE MOUNTED ON MULTIPLE POSTS (SEE ABOVE TABLE).

SIGNS LARGER THAN 27 SQ. FT. SHALL NOT BE MOUNTED ON TUBULAR STEEL POSTS.

WOOD POST EMBEDMENT DEPTH

AREA OF SIGN INSTALLATION (SQ. FT.)	D (MIN)
20 OR LESS	4'
GREATER THAN 20	5'

4" X 6" WOOD POST

POST SPACING REQUIREMENTS		NUMBER OF WOOD POSTS REQUIRED
L	E	
48" OR LESS AND LESS THAN 20 SQ. FT.	-	1
LESS THAN 60"	12"	2
60" TO 120"	L/5	2
GREATER THAN 120" LESS THAN 168"	12"	3
168" AND GREATER	12"	4

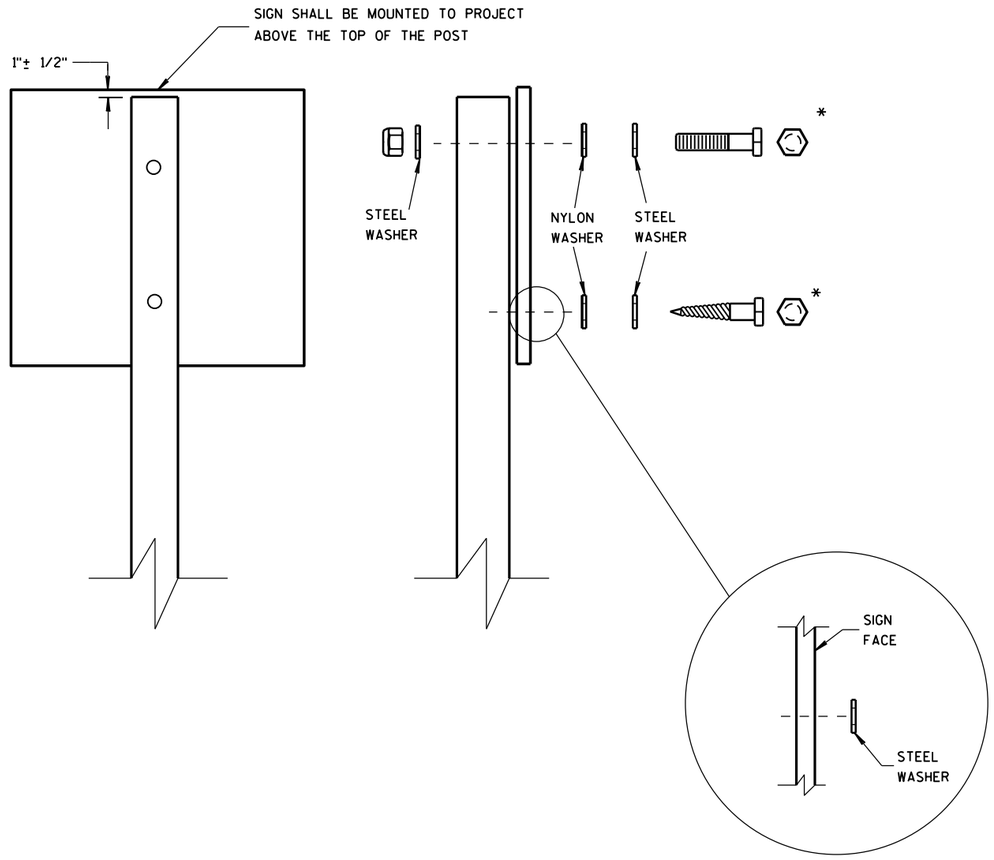
SEE NOTE (3)

TEMPORARY TRAFFIC CONTROL SIGN MOUNTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

S.D.D. 15 D 38-2a



WASHER PLACEMENT WHEN SIGN HAS OTHER THAN TYPE H OR TYPE F FACE

NUTS, BOLTS AND LAGS USED FOR MOUNTING SIGNS SHALL HAVE HEXAGONAL HEADS AND SHALL BE EITHER:

A. HOT DIP GALVANIZED IN ACCORDANCE WITH ASTM DESIGNATION: A 153, CLASS D, OR SC 3

B. ELECTRO-GALVANIZED IN ACCORDANCE WITH ASTM DESIGNATION: B 633, TYPE III, SC 3

THREADS ON BOLTS AND NUTS SHALL BE MANUFACTURED WITH SUFFICIENT ALLOWANCE FOR THE CADMIUM PLATE OR GALVANIZED COATING TO PERMIT THE NUTS TO RUN FREELY ON THE BOLTS.

WOOD POSTS (4" x 4" or 4" x 6")

LAG SCREWS - 3/8" X 3"

MACHINE BOLTS - 5/16" X 6-1/2" OR 7" LENGTH W/ NUTS

SQUARE STEEL POSTS (2" x 2")

MACHINE BOLTS - 3/8" X 3-1/4" LENGTH W/ NUTS

RIVETS - 9/32" (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH

WASHERS (ALL POSTS) -

1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL

1-1/4" O.D. X 3/8" I.D. X .080 NYLON FOR ALL TYPE H SIGNS

* TWO DIFFERENT FASTENING SYSTEMS ARE SHOWN FOR ILLUSTRATION PURPOSES. ON ANY INDIVIDUAL SIGN, EITHER ONE OR THE OTHER SYSTEM SHALL BE USED. ACTUAL NUMBER OF FASTENERS PER SIGN VARIES WITH THE SIGN AREA. FOR A SINGLE POST INSTALLATION, ALL SIGNS GREATER THAN 9 SQ. FT. REQUIRE THE USE OF 3 FASTENERS.

6

6

S.D.D. 15 D 38-2b

S.D.D. 15 D 38-2b

ATTACHMENT OF SIGNS TO POSTS

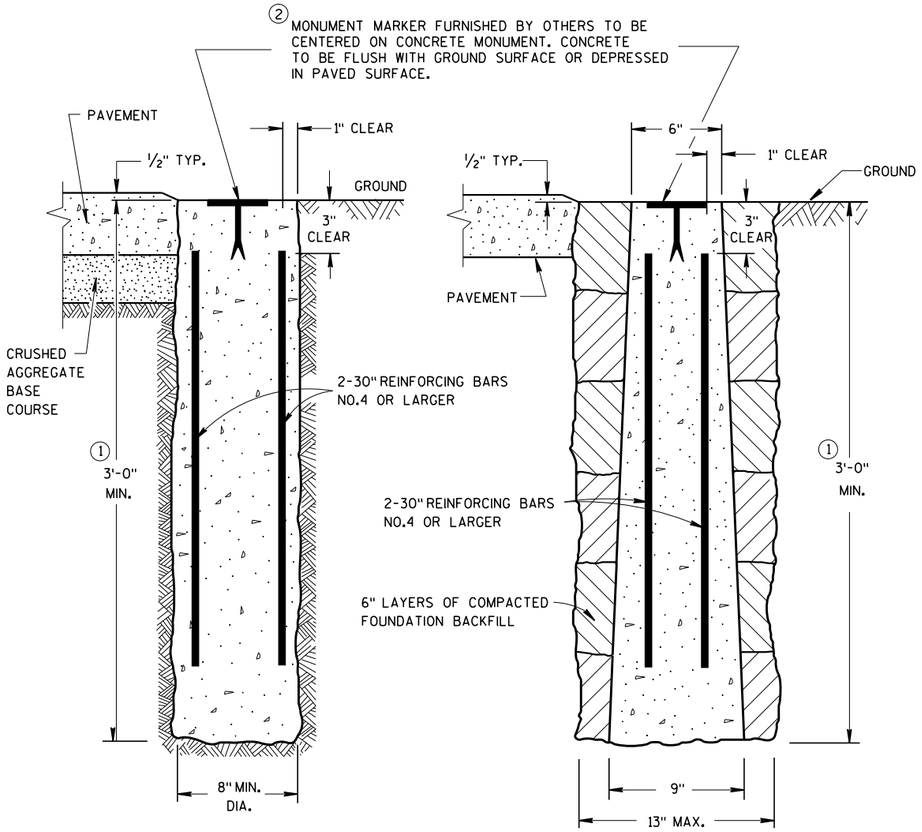
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

June 2017
DATE

/S/ Andrew Heldtke
WORK ZONE ENG

FHWA

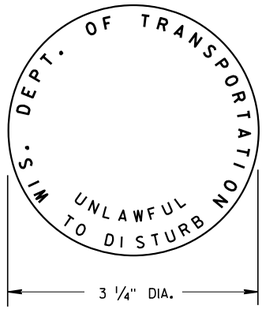


CAST-IN-PLACE

PRECAST

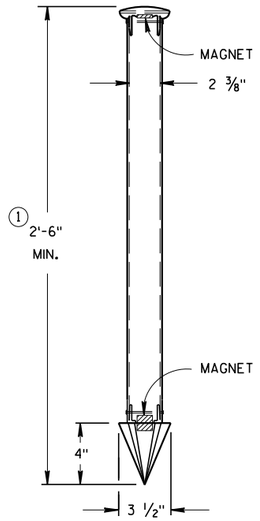
CONCRETE MONUMENTS

TYPE A



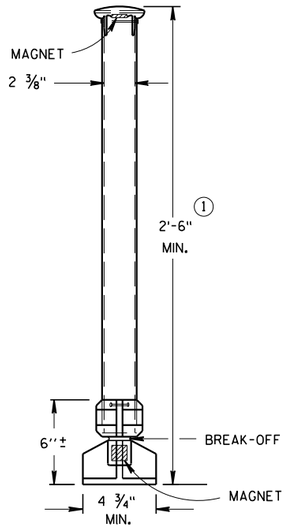
② **WIS DOT MONUMENT MARKER LOGO**

FOR TYPES "A", "C", & "D"



TYPE C

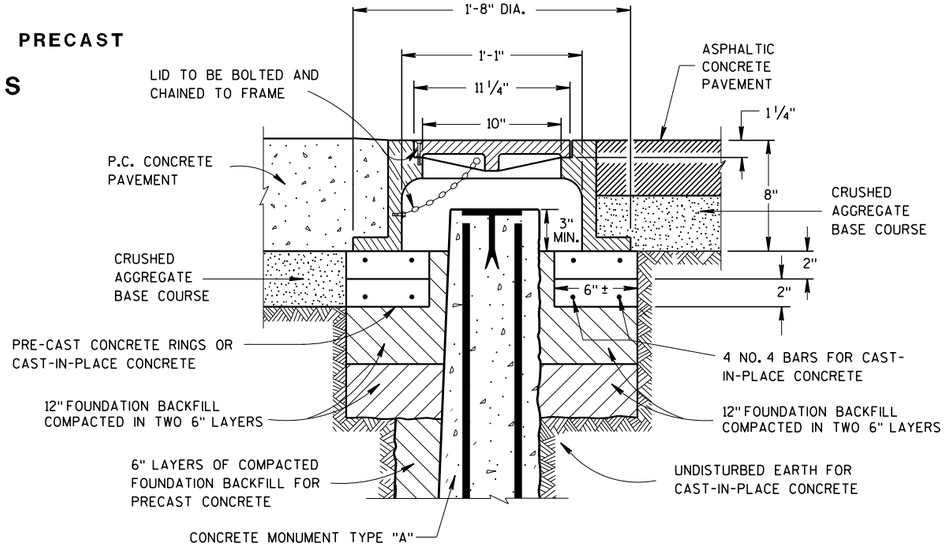
DRIVE-IN MONUMENT



TYPE D
NON-DRIVEN
BREAK-OFF MONUMENT

ALUMINUM MONUMENTS

(INCLUDES MARKER)



CAST IRON MONUMENT COVER

(APPROXIMATE WEIGHT 95 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.

DETAILED DRAWINGS OF PROPOSED ALTERNATE DESIGNS FOR METAL MONUMENTS OR MONUMENT COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

PERMANENT MAGNETS SHALL BE INSERTED NEAR THE TOP AND BOTTOM OF ALL ALUMINUM MONUMENTS SO THE MONUMENT CAN EASILY BE DETECTED BY A METAL DETECTOR.

THE CAST IRON MONUMENT COVER SHALL BE A "NON-ROCKING" TYPE. ADJUSTMENT OF THE COVER TO GRADE MAY BE ACCOMPLISHED BY THE USE OF MORTAR AND BRICK, OR BY EITHER PRECAST OR CAST-IN-PLACE REINFORCED CONCRETE GRADE RINGS.

MONUMENTS SHALL BE LOCATED AND PLACED AT THE DIRECTION OF THE ENGINEER.

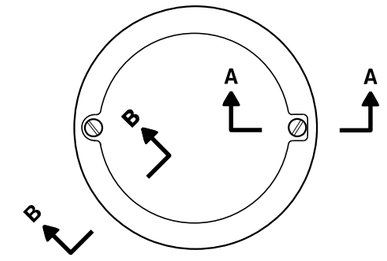
ALUMINUM MONUMENTS AND MONUMENT COVERS SHALL BE MADE FROM AN ALUMINUM AND MAGNESIUM ALLOY AS DETERMINED BY THE MANUFACTURER.

THE MONUMENT COVERS DETAILED ON THIS DRAWING ARE NOT EQUAL ALTERNATES. MONUMENT COVERS SHALL BE CAST IRON UNLESS ALUMINUM IS SPECIFIED ELSEWHERE IN THE CONTRACT.

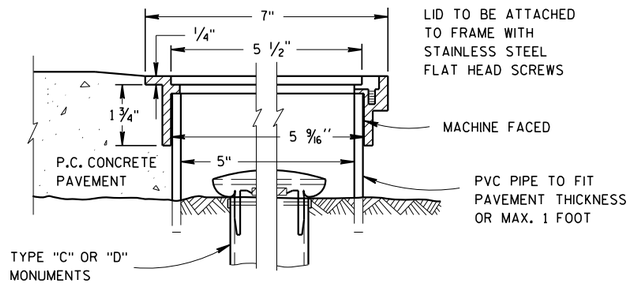
MONUMENT SHALL BE CAST-IN-PLACE CONCRETE UNLESS PRECAST CONCRETE OR ALUMINUM MONUMENTS ARE SPECIFIED IN THE CONTRACT OR PERMITTED BY THE ENGINEER

① MINIMUM LENGTH SHALL BE 4'-0" FOR MONUMENTS INSTALLED IN PAVED AREAS.

② AN OFFICIAL COUNTY MONUMENT MARKER SUPPLIED BY A COUNTY MAY BE REQUIRED FOR SOME SECTION CORNERS AND WITNESS MONUMENTS INSTEAD OF THIS WIS DOT MARKER.



TOP VIEW



SECTION B-B SECTION A-A

ALUMINUM MONUMENT COVER

(APPROXIMATE WEIGHT 2 LBS)
(FOR CONCRETE PAVEMENT ONLY)

LANDMARK REFERENCE MONUMENTS AND COVERS

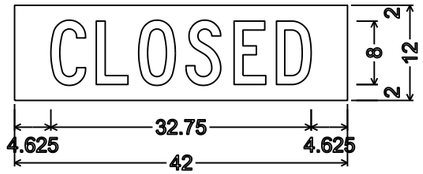
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2018 — DATE
/S/ Raymond A. Kumagai — CHIEF SURVEYING AND MAPPING ENGINEER
FHWA

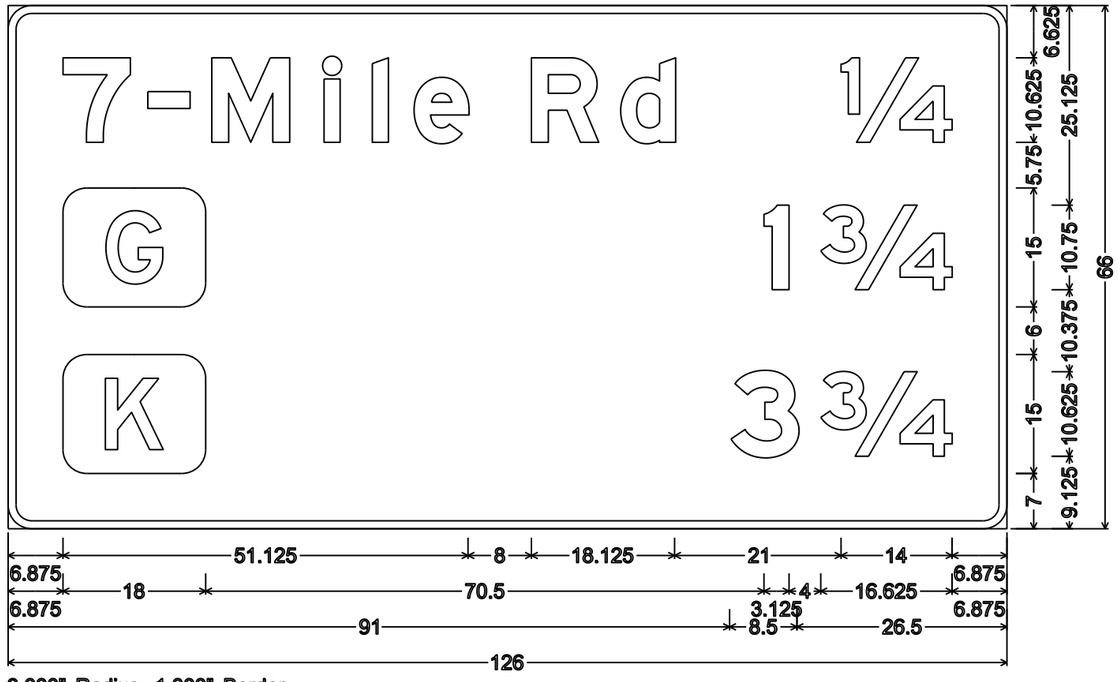
6

NOTES

1. All Signs Type II - Type H Reflective
2. Color:
   Background - Green
   Message - White
3. Message Series - E Modified except all CAP words Series E
4. Closed Plaque is on Type F Orange Reflective Sheeting
   with Black Non-Reflective Message
   Closed Plaque Message Series - C



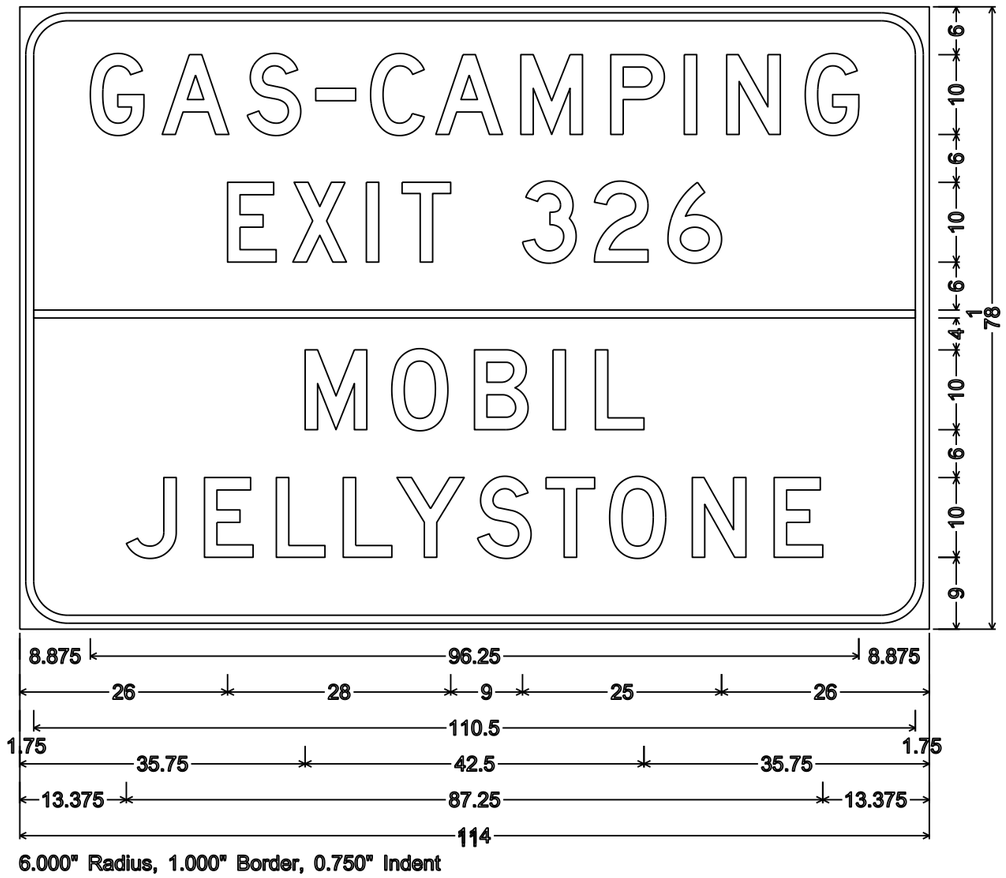
No border
"CLOSED" Black C



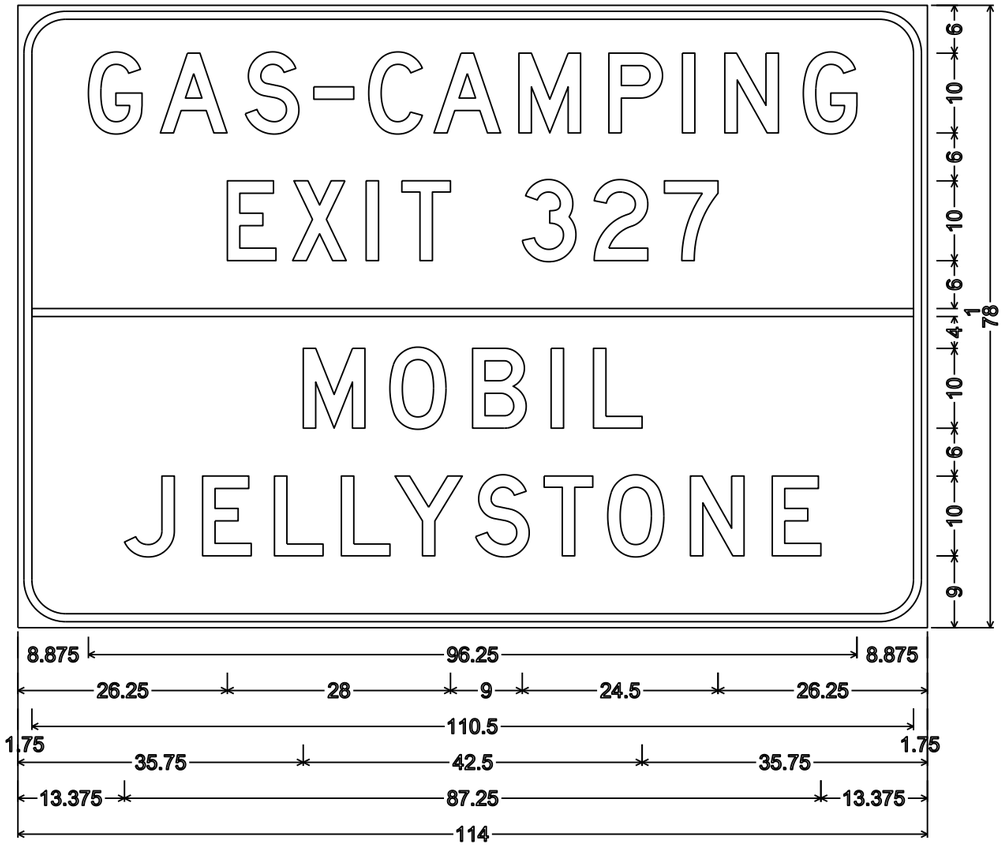
3.000" Radius, 1.000" Border

NOTES

1. All Signs Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - D



6.000" Radius, 1.000" Border, 0.750" Indent



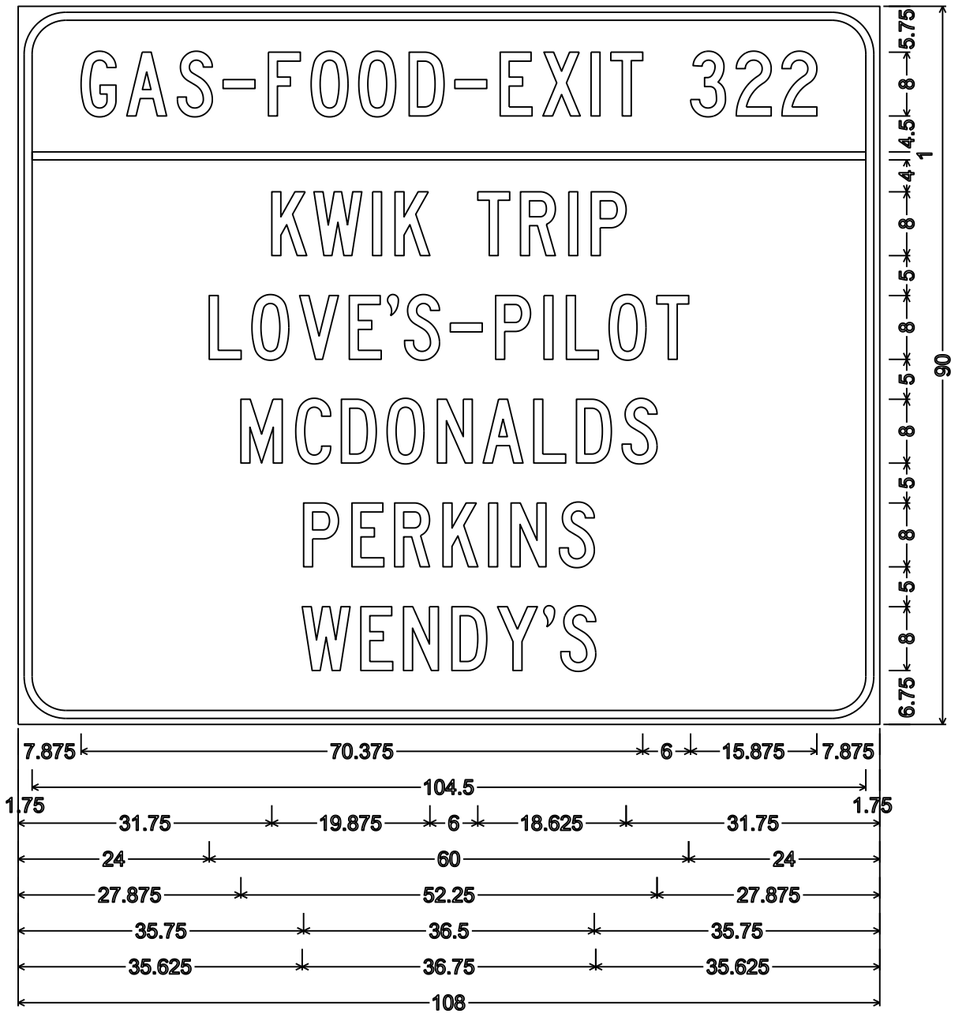
6.000" Radius, 1.000" Border, 0.750" Indent

7

7

NOTES

1. All Signs Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - C



6.000" Radius, 1.000" Border, 0.750" Indent,
"GAS-FOOD-EXIT" C; "322" C; "KWIK" C; "TRIP" C; "LOVE'S-PILOT" C;
"MCDONALDS" C; "PERKINS" C; "WENDY'S" C

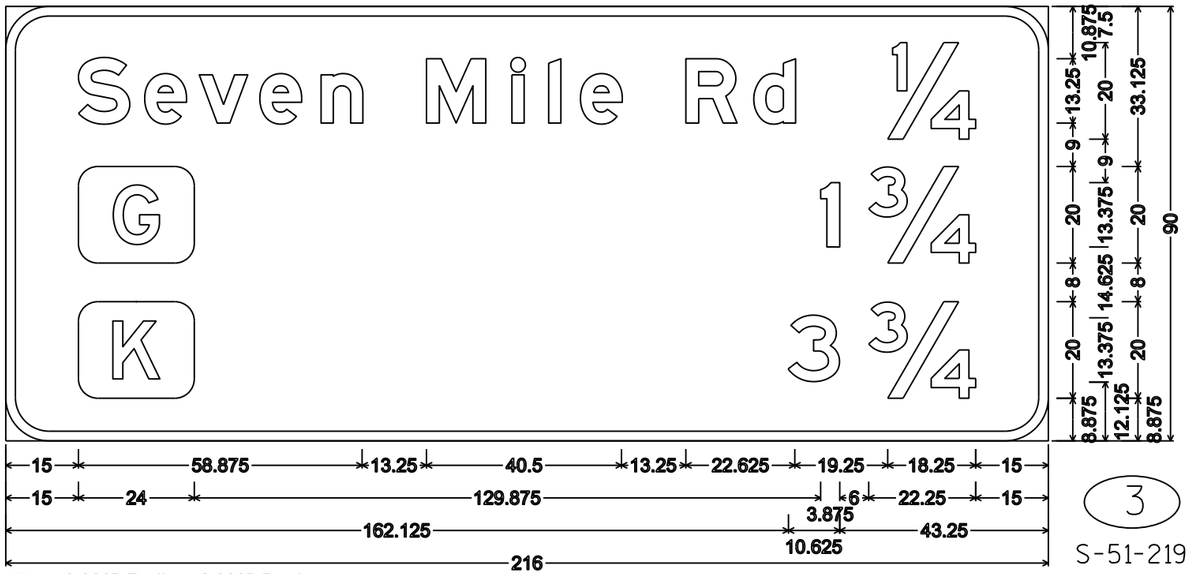
7

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PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	TEMPORARY SIGNING	SHEET NO: 271	E

NOTES

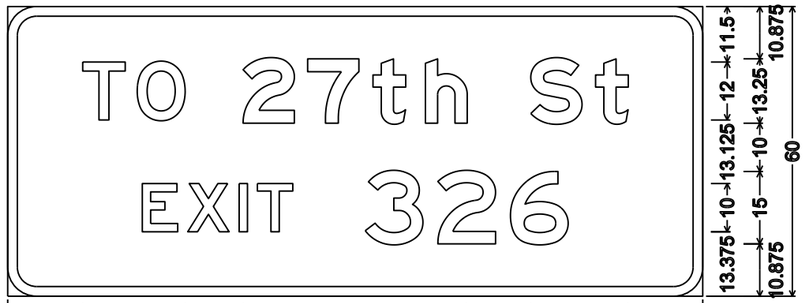
1. All Signs Type I - Type SH Reflective
2. Color:
   Background - Green
   Message - White
3. Message Series - E Modified except all Caps Words Series E or as noted



E8-1; 9.000" Radius, 2.000" Border

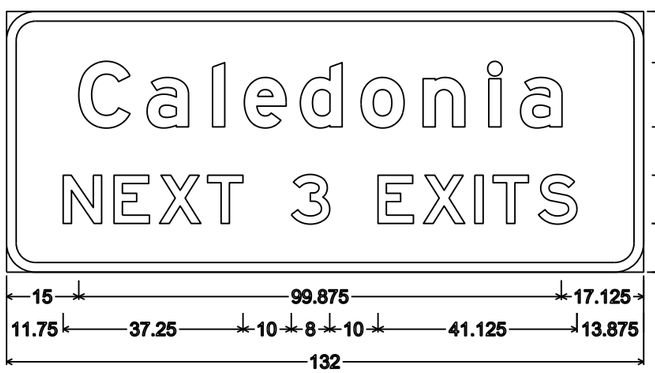
3

S-51-219



16

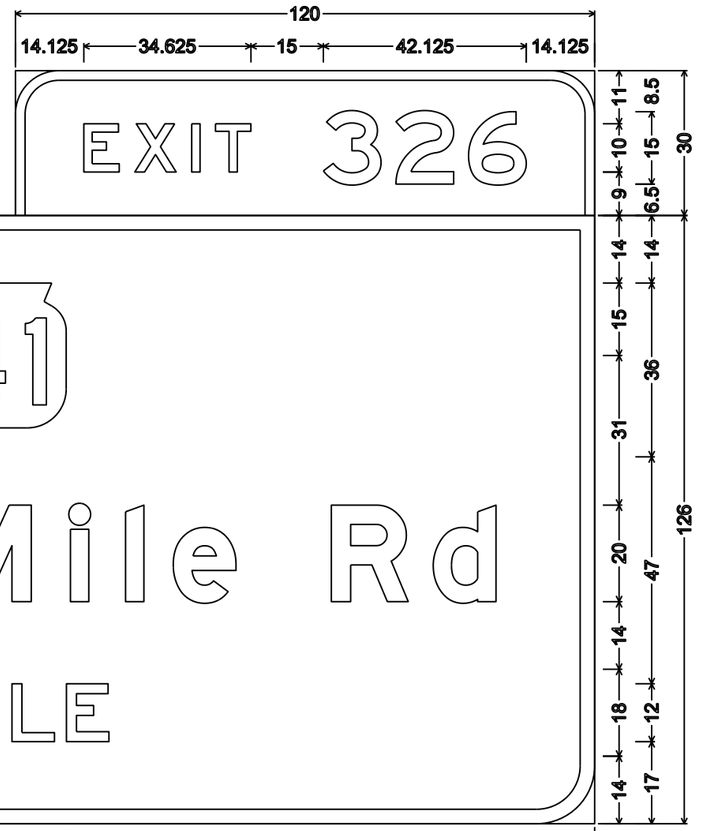
E3-1; 6.000" Radius, 2.000" Border



17

E9-1; 6.000" Radius, 2.000" Border

15A



15

E1-5P; 9.000" Radius, 2.000" Border,
E1-1A; 12.000" Radius, 3.000" Border

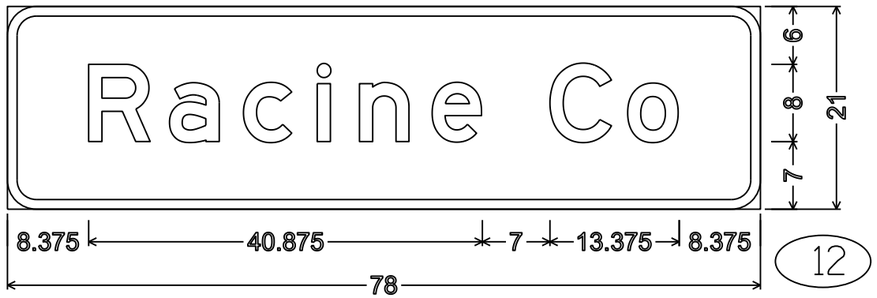
7

7

PROJECT NO: 1035-01-82	HWY: IH 94 / 7 MILE ROAD	COUNTY: RACINE	PERMANENT SIGNING	SHEET NO: 272	E

NOTES

1. All Signs Type II - Type H Reflective
2. Color:
   Background - Green
   Message - White
3. Message Series - E



I2-2; 3.000" Radius, 1.000" Border,

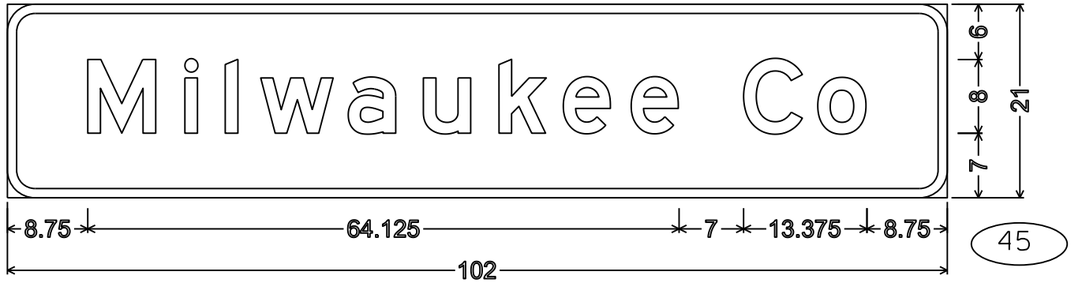
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7

PROJECT NO:1035-01-82	HWY: IH 94 / 7 MILE ROAD	COUNTY:RACINE	PERMANENT SIGNING	SHEET NO: 273	E

NOTES

1. All Signs Type II - Type H Reflective
2. Color:
   Background - Green
   Message - White
3. Message Series - E



I2-2; 3.000" Radius, 1.000" Border

7

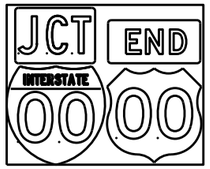
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PROJECT NO: 1035-01-82	HWY: IH 94 / 7 MILE RD	COUNTY: RACINE	PERMANENT SIGNING	SHEET NO: 274	E

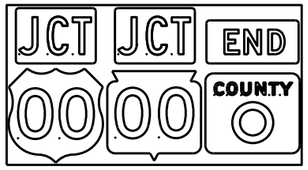
TYPICAL ASSEMBLIES



J1-1



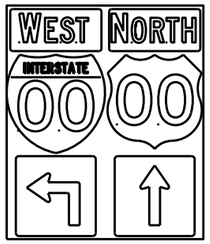
J1-2



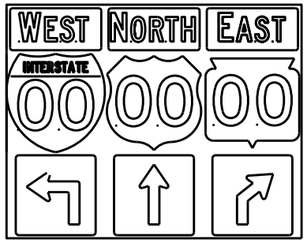
J1-3



J2-1



J2-2

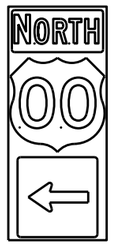


J2-3

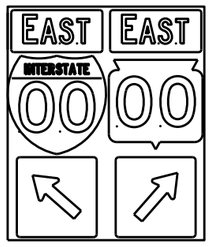


JV

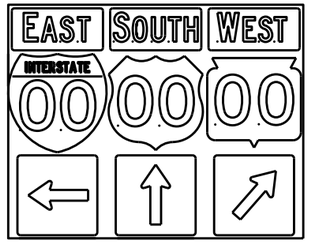
(Typical Vertical J-Assembly
See Note 10 and 11)



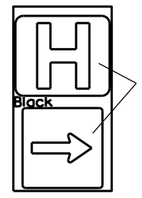
J3-1



J3-2



J3-3

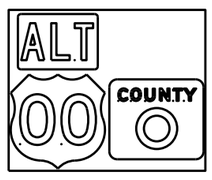


Blue Background

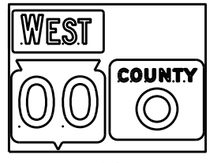
JH-1



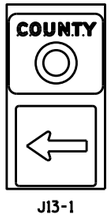
J4-1



J4-2



J4-2



J13-1



J12-1



J32-1



J33-1

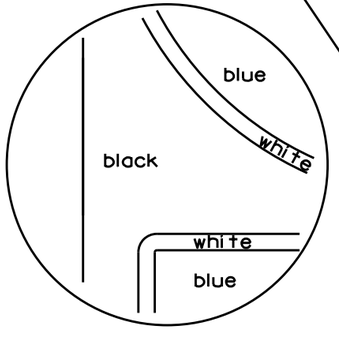


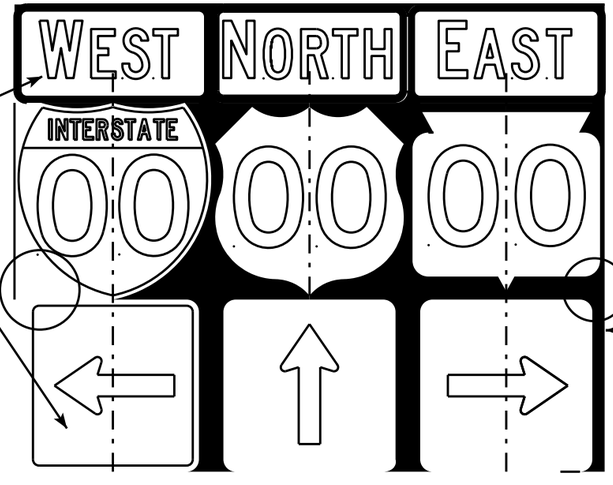
J23-1

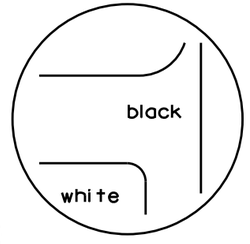


J22-1

[blue background with interstate]







[black background]

NOTES

1. Signs are Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Black Non-reflective
   Message - see Note 5
3. Message Series - See Note 5
4. Corners shall be square or rounded if base material is plywood. If base material is metal the corners shall be rounded.
5. The colors and message spacing on each marker shall be according to the applicable route marker panel specifications.
6. Certain marker heads require the component pieces to be the same color. As an example, all the components used with an M1-1 Interstate marker shall be blue.
7. Single panel j-assemblies shall only be used with route marker shields that are same size. If the route marker shields are different size use multiple piece component.
8. Route assemblies that have 24 inch route shields and have dimensions greater than 48 inches (both vertical and horizontal) shall have one horizontal splice between the arrows and route shields. Vertical splices shall not be used on route assemblies with a horizontal dimension of 144 inches or less. The contractor shall not use more than one vertical joint per sign and the joint shall be between route shields.
9. Route assemblies that have 36 inch shields and have dimensions greater than 48 inchs (both vertical and horizontal) shall have two horizontal splices. One horizontal splice shall be between the cardinal direction and route shields and the other horizontal splice shall be between the arrows and route shields. Vertical splices shall not be used on route assemblies with a horizontal dimension of 144 or less. The contractor shall not use more than one vertical joint per sign and the joint shall be between route shields.
10. All Vertical J Assemblies are given a Sign Code of JV
11. For JV Assemblies that have a mixture of Interstate and non Interstate shields, arrows and cardinals shall be white on blue.

ROUTE MARKERS & COMPONENTS
IN TYPICAL ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

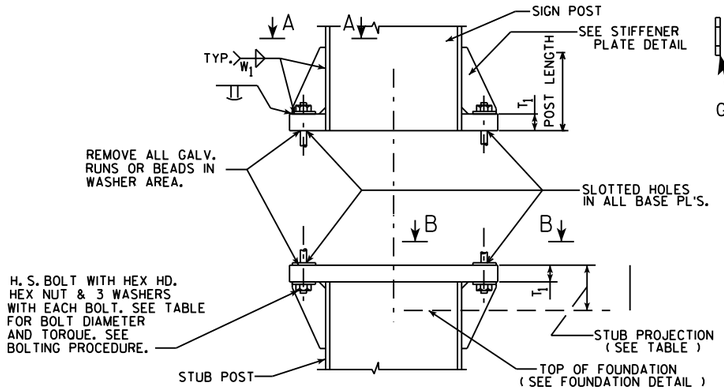
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/06/14 PL... A2-1S.8

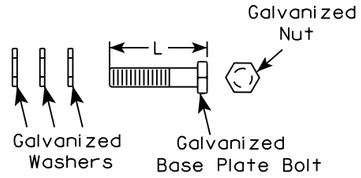
PROJECT NO: SHEET NO: E

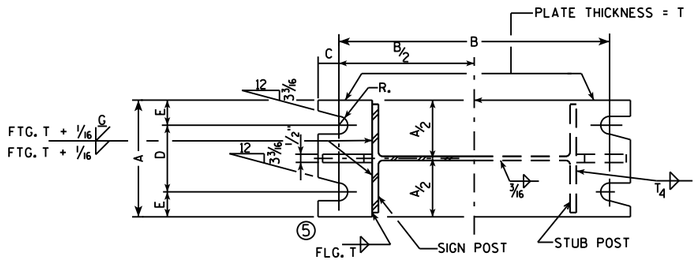
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A21S.DGN PLOT DATE : 06-FEB-2014 14:10 PLOT BY : mscsja PLOT NAME :

WISDOT/CADDS SHEET 42



SIGN POST AND STUB POST ELEVATION





DESIGN DATA

WIND PRESSURE = 75 M.P.H.
WIND COMPONENTS - NORMAL = 1.0 TRANSVERSE = 0.0
ICE LOAD = 3 P.S.F.

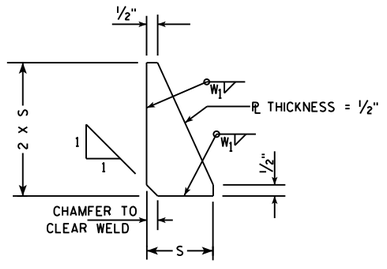
GROUP LOADS	PERCENT OF ALLOWABLE STRESS
1. DEAD	100
2. DEAD & WIND	140
3. DEAD, ICE & 1/2 WIND[4]	140

[4] 25 P.S.F. MIN.

ALLOWABLE SOIL PRESSURE = 1 1/2 T / 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.

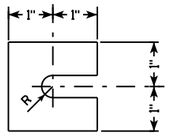
GENERAL NOTES

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, GALVANIZED IN ACCORDANCE WITH ASTM A123.
⑨ THE POST, BASE PLATES, UPPER SIX INCHES OF STUB POST FLANGE SPLICE PLATE AND FUSE PLATE SHALL BE GALVANIZED AFTER FABRICATION.
FURNISH STEEL BOLTS, NUTS, AND WASHERS IN ACCORDANCE WITH SECTION 635 OF THE STANDARD SPECIFICATIONS.



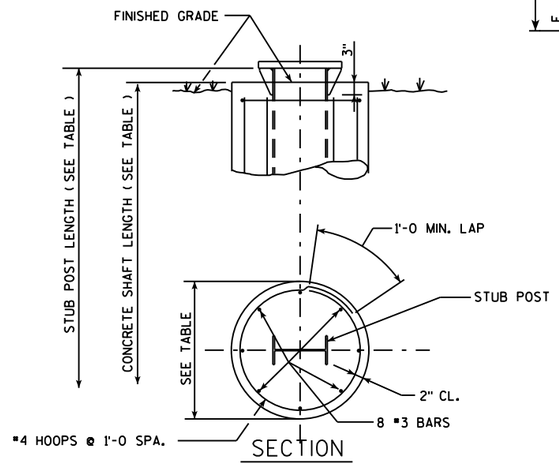
STIFFENER PLATE DETAIL

(SEE TABLE FOR DIMENSIONS)

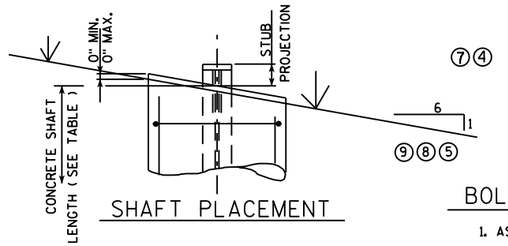


FURNISH 2 @ .012" ± THICK AND 2 @ .032" ± THICK SHIMS PER POST. SHIMS SHALL BE FABRICATED FROM BRASS SHIM STOCK OR STRIP CONFORMING TO A.S.T.M.- B36.

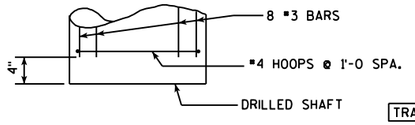
SHIM DETAIL



SECTION



SHAFT PLACEMENT ⑦④ ⑨⑧⑤

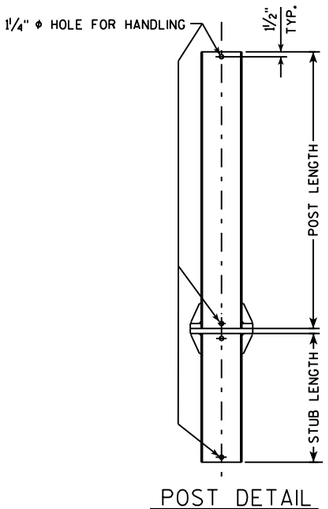


FOUNDATION DETAIL

BOLTING PROCEDURE - BASE CONNECTION

1. ASSEMBLE SIGN POST TO STUB POST WITH BOLTS AND ONE OF THE FLAT WASHERS ON EACH BOLT BETW. PLATES.
2. SHIM AS REQ'D. TO PLUMB POST.
3. PRIOR TO BOLT TIGHTENING LUBRICATE BASE CONNECTION BOLTS WITH BEESWAX OR OTHER HIGH-WAX LUBRICANT.
4. TIGHTEN ALL BOLTS THE MAXIMUM POSSIBLE WITH 12" OR 15" WRENCH TO BED WASHERS & SHIMS AND TO CLEAN BOLT THREADS, THEN LOOSEN EACH BOLT IN TURN AND RETIGHTEN IN A SYSTEMATIC ORDER TO THE PRESCRIBED TORQUE. (SEE TABLE)
5. BURR THREADS AT JUNCTION WITH NUT USING A CENTER PUNCH TO PREVENT NUT LOOSENING.

NOTE:
TIGHTEN THE HIGH STRENGTH BOLTS TO THE TORQUE SHOWN. DO NOT OVERTIGHTEN.



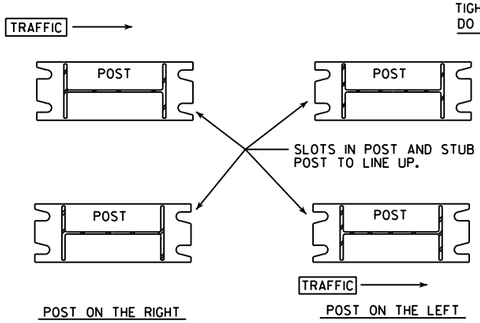
POST DETAIL

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



POST SLOT ORIENTATION ⑦

L	X	TYPE	POST SIZE	WEIGHT PER FT	BASE CONNECTION DATA TABLE: BOLT SIZE & TORQUE	A	B	C	D	E	T_1	T_4	W_1	R	S	FOUNDATION DATA: STUB LENGTH	STUB PROJECTION	SHAFT DIAMETER	SHAFT LENGTH	② K
3 3/4	④	A	W10"X12.0	12.0 LBS	3/4" ø @ 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 ø	5'-0	76.0" ④
4 3/4	④	B	W12"X16.0	16.0 LBS	7/8" ø @ 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 ø	7'-0	146.5" ④
5		C	W12"X19.0	19.0 LBS	7/8" ø @ 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 ø	7'-6	182.1"
5		D	W12"X22.0	22.0 LBS	7/8" ø @ 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 ø	8'-0	210.5"
5	③	E	W12"X26.0	26.0 LBS	1" ø @ 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 ø	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 8/22/17 PLATE NO. A3-1.17

NO.	DATE	REVISION
⑩	1-21-14	LUBRICATION OF BASE BOLTS
⑨	4-26-11	REMOVE NON-GALVANIZED
⑧	10-30-96	NOT GALVANIZED/GALVANIZED
⑦	10-30-92	QUANT., A588 EXCEPT., ADD SLOT VIEW
⑥	8-24-87	BASE CONN. WELD
⑤	10-13-81	BASE CONN. WELD & FUSE & WASHERS
④	10-19-79	POST A & B, A572 GR. 50, & K
②	11-28-78	"K" ③ 4-23-79 TYPE "E"
①	5-4-78	T_1 . T_2 & W_1

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

TYPE A, B, C, D, & E

CONST. SPEC.	DRAWN BY	PLANS CK'D.
2011	JPH	

FTG. & SIGN SUPPORT DETAILS GROUND MOUNT BREAK-AWAY SIGNS

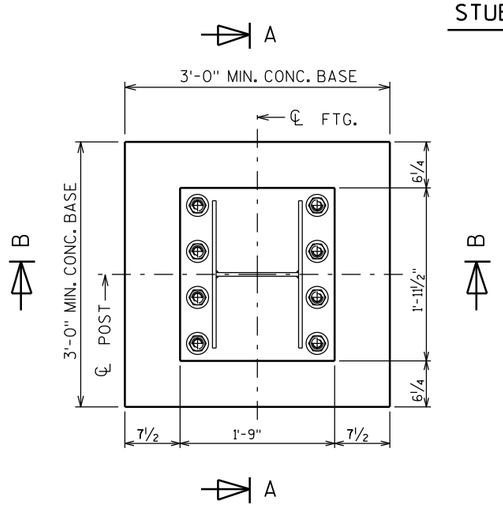
SHEET

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 276 E

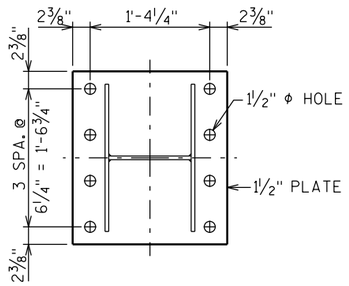
FILE NAME : C:\CAEfiles\Projects\tr_stdplate\A31.DGN PLOT DATE : 22-AUG-2017 09:41 PLOT BY : $$...plotuser...$$ PLOT NAME : PLOT SCALE : 5.415383:1.000000

WISDOT/CADDS SHEET 42

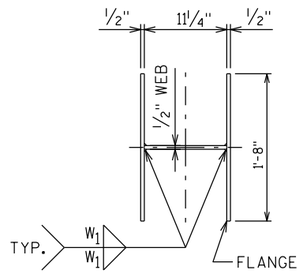
STUB AND MASONRY ANCHOR DETAILS



STUB SECTION



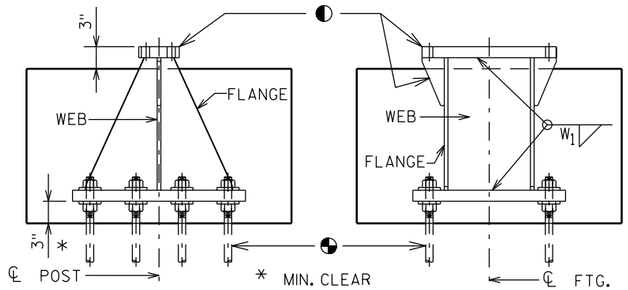
BASE PLATE



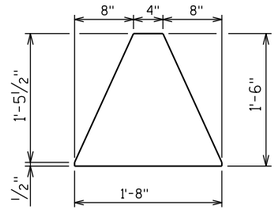
STUB

◐ SEE PLATE NO. A3-1 FOR DETAILS

◒ MASONRY ANCHORS TYPE S 1¼-INCHES (ADHESIVE). ALLOWABLE PULL OUT CAPACITY 14,995 KIPS. EMBED 1'-3" IN ROCK.



SECTION A SECTION B



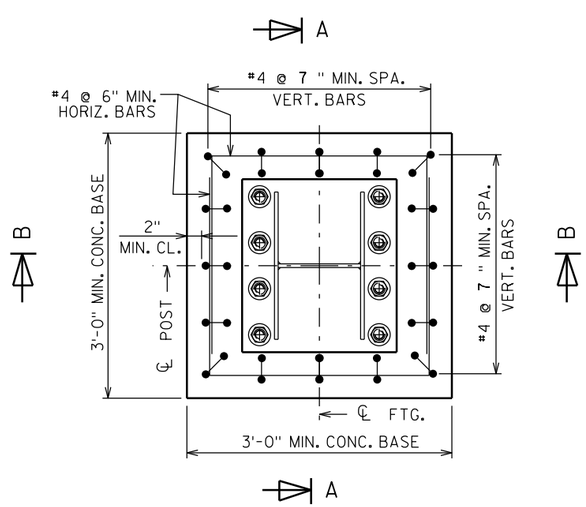
FLANGE

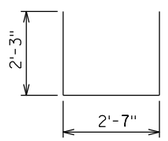
GENERAL NOTES

1. Quantities per Base:
   - REINFORCING BAR STEEL = 62 LBS
   - CONCRETE = 0.6 C.Y.
   - STEEL WEIGHT = 335 LBS
2. All materials, except anchor rod, nuts and washers, are to be A.S.T.M. A709 grade 50. All materials to be galvanized after fabrication.
3. If the contractor encounters rock before reaching the footing depth, per the A3-1 Sign Detail, determine the pull-out capacity of a test adhesive anchor installed in the rock. If the test result equals or exceeds the pull-out capacity of 14,995 KIPS, the contractor may install the breakaway stub for rock, according to this detail.

CONCRETE BASE AND REINFORCING STEEL DETAILS

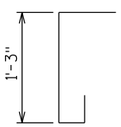
CONCRETE BASE SECTION





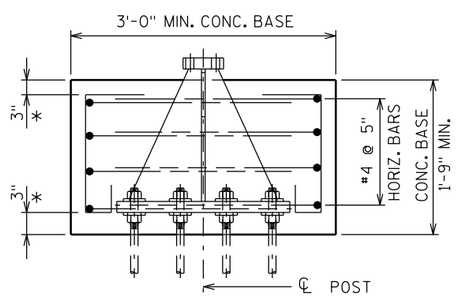
HORIZONTAL BAR

8 BARS @ 6'-11" LENGTH



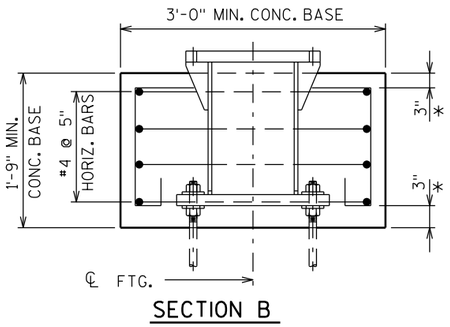
VERTICAL BARS

16 BARS @ 2'-4" LENGTH
MAY BE PLACED IN SKEW
FOR CLEARANCE NEED



SECTION A

* MIN. CLEAR



SECTION B

ALTERNATE BREAK-AWAY BASE ON ROCK
A3-1M

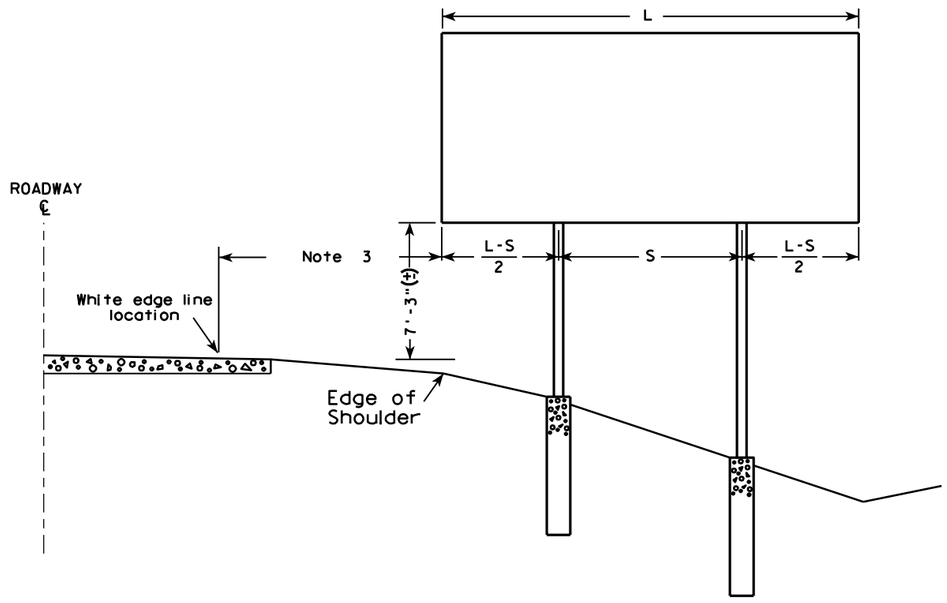
WISCONSIN DEPT OF TRANSPORTATION

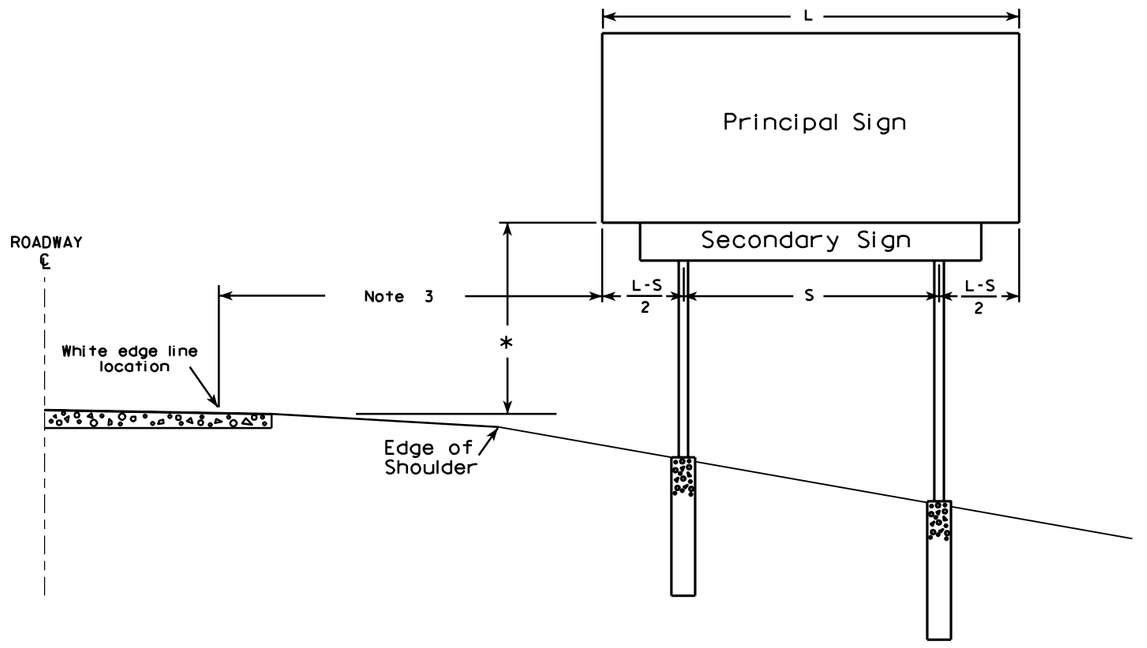
APPROVED Matthew R Rauch for State Traffic Engineer

DATE 2/06/2014 PLATE A3-1M.1

277

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E





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

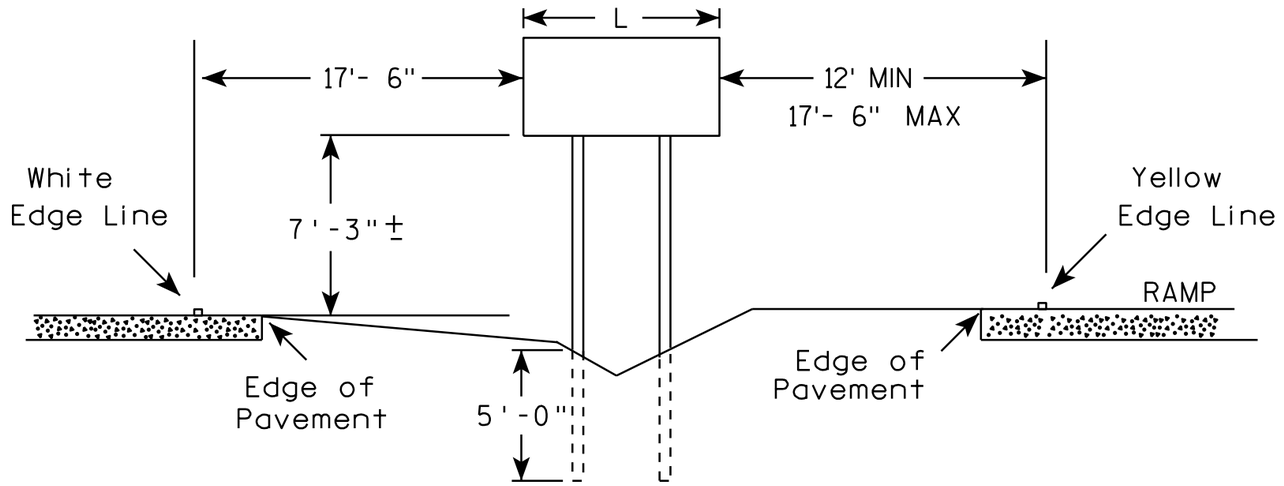
7

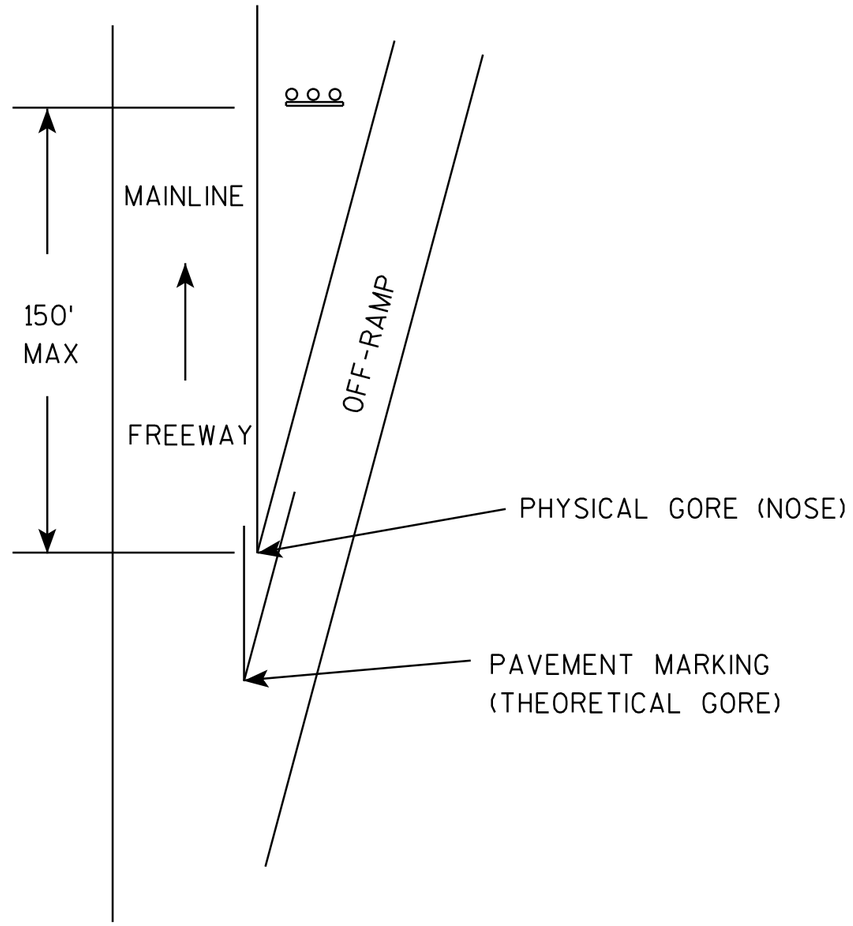
TYPICAL INSTALLATION
OF TYPE I SIGNS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/02/08 PLATE NO. A4-1.9





GENERAL NOTES

1. The 150 foot distance from the physical gore (where pavement ends) will normally provide the offsets as shown.
2. If roadway geometrics permit, the sign may be closer than the 150 foot distance as long as the offsets are maintained.
3. At no time shall the location be greater than 150 feet. If the normal offsets cannot be maintained, they can be reduced to 6 feet from the edge of the paved shoulder (both freeway and ramp).
4. The offset from edge of sign to the yellow edge line on the ramp is shown as a minimum of 12 feet and a maximum of 17 feet, 6 inches. Preference is adhering to the maximum rather than the minimum dimension.
5. When L is equal to or exceeds 10 feet, use 3 posts as per A4-4.
6. The (∓) tolerance for the mounting height is 3 inches.

7

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TYPICAL INSTALLATION
OF TYPE II SIGNS ON
WOOD POSTS IN GORE

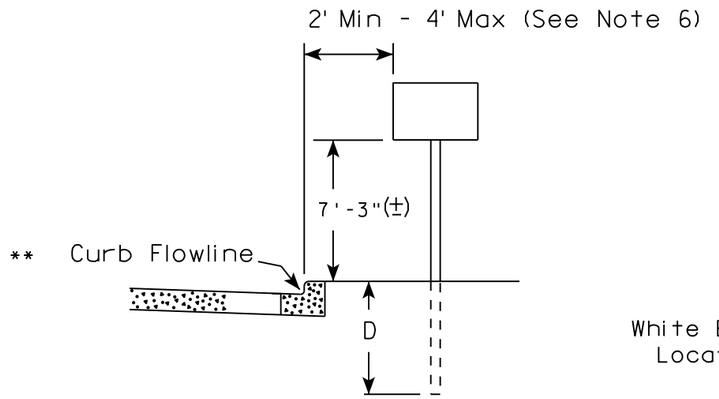
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

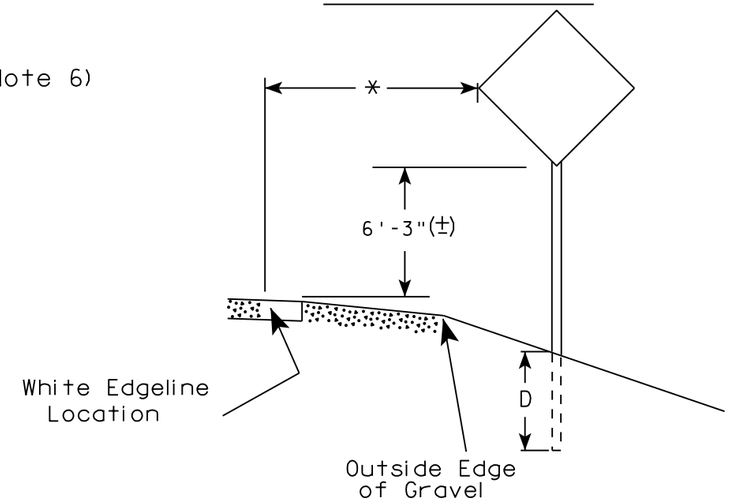
DATE 2/06/14 PLA 279 A4-2.3

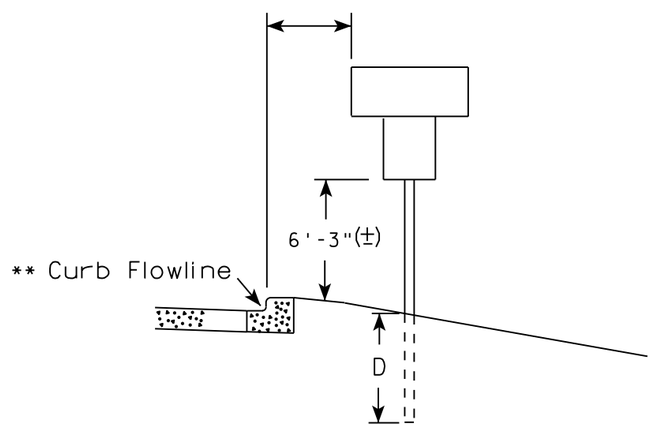
PROJECT NO: | SHEET NO: E

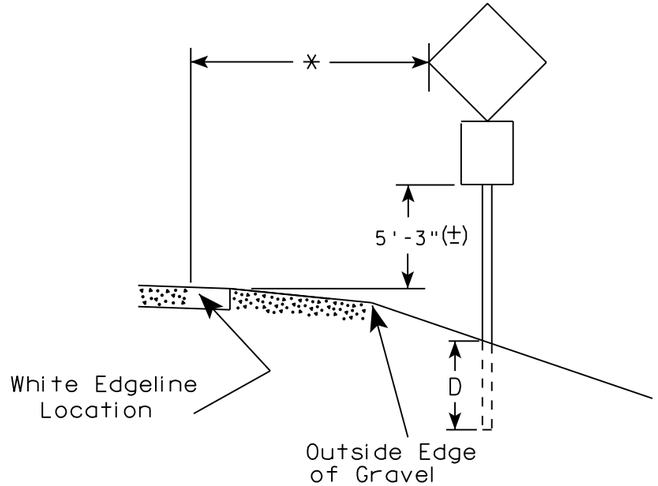
URBAN AREA



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.

POST EMBEDMENT DEPTH

Area of Sign Installation (Sq.Ft.)	D (Min)
20 or Less	4'
Greater than 20	5'

GENERAL NOTES

1. Signs wider than 4 feet or 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.
2. If signs are mounted on barrier wall, see A4-10 sign plate.
3. For expressways and freeways, mounting height is 7'- 3" (±) or 6'-3" (±) depending upon existence of a sub-sign.
4. J-Assemblies are considered to be one sign for mounting height.
5. Minimum mounting height for signs mounted on traffic signal poles is 5'- 3" (±).
6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
7. The (±) tolerance for mounting height is 3 inches.
8. Folding signs shall be mounted at a height of 5'-3" (±) or as directd by the Engineer.
9. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Enhanced Reference Markers, Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4'-3" (±).

TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

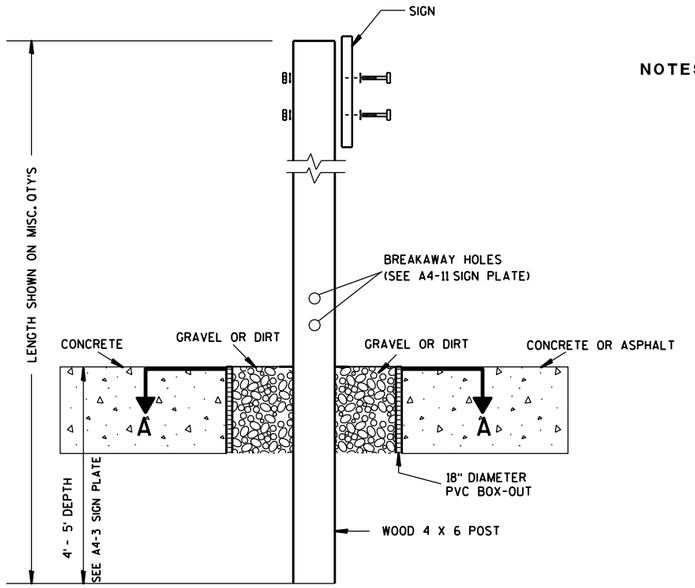
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 8/21/17 PLATE NO. A4-3.21

7

7

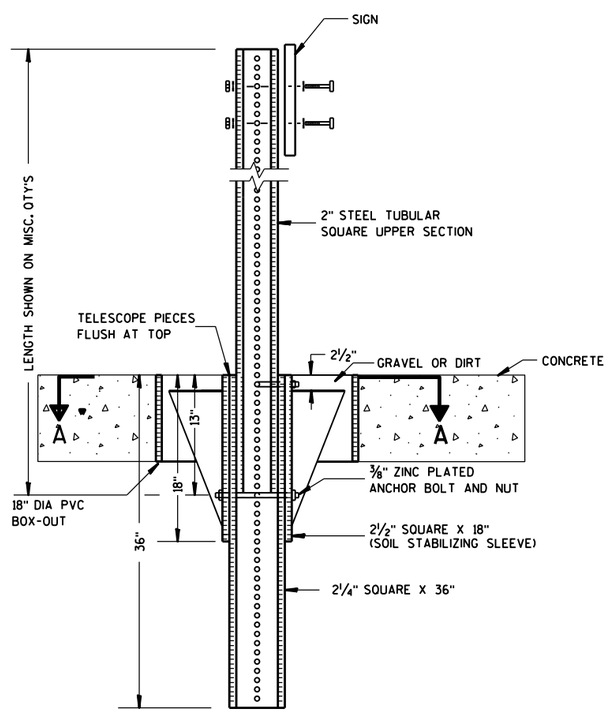
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 280	E



ELEVATION VIEW

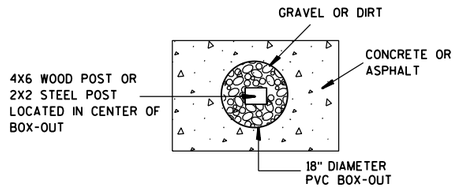
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

NOTES:
1. ALL MATERIAL TO BE APPROVED BY ENGINEER PRIOR TO INSTALLATION
2. SEE SIGN PLATE A4-8 FOR SIGN HARDWARE REQUIREMENTS
3. 18 INCH X 18 INCH SQUARE BOX-OUTS MAY BE USED FOR INSTALLATIONS IN EXISTING CONCRETE OR ASPHALT LOCATIONS.



ELEVATION VIEW

DETAIL OF STEEL 2 X 2 SIGN POST IN BOX-OUT



PLAN VIEW

FOR NEW CONCRETE/ASPHALT INSTALLATIONS

SIGN POST BOX-OUTS A4-3B

WISCONSIN DEPT OF TRANSPORTATION

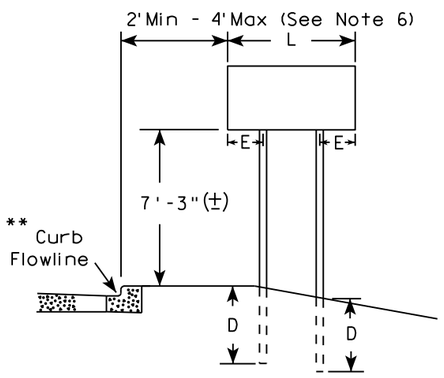
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 1/27/14 PLATE NO. A4-3B.1

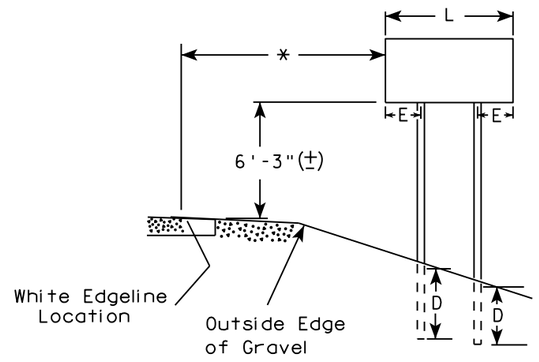
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

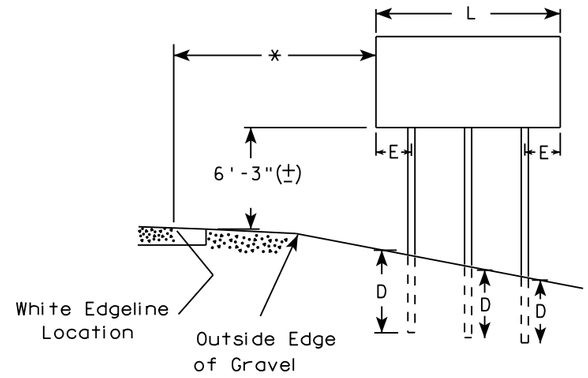
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A43B.DGN PLOT DATE : 27-JAN-2014 09:48 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 13.659812:1.000000 WISDOT/CADDS SHEET 42

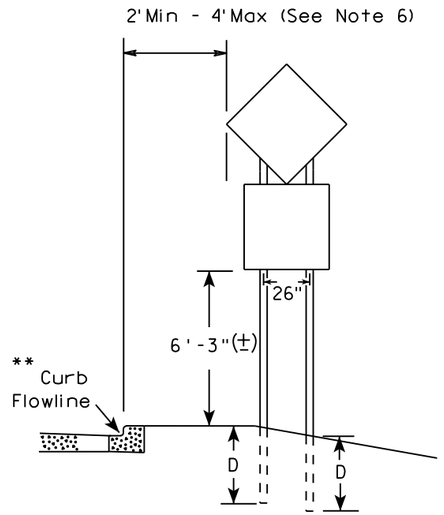
URBAN AREA



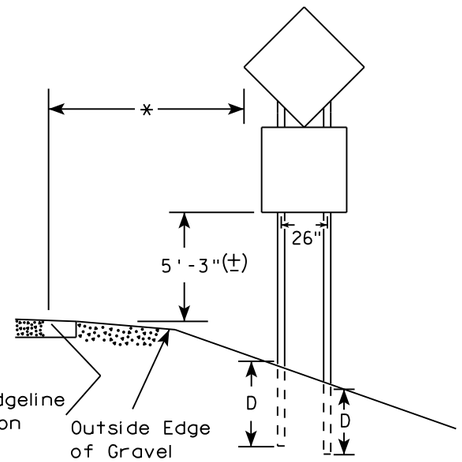
RURAL AREA (See Note 3)







48" DIAMOND WARNING SIGN



48" DIAMOND WARNING SIGN

***	SIGN SHAPE OTHER THAN DIAMOND (TWO POSTS REQUIRED)	
	L	E
	Greater than 48" Less than 60"	12"
	60" to 108"	L/5

SIGN SHAPE OTHER THAN DIAMOND (THREE POSTS REQUIRED)	
L	E
Greater than 108" to 144"	12"

GENERAL NOTES

1. For 3 or 4 post installations, individual post spacing shall be greater than 3'-6".
2. See tables below for required number of posts.
3. For expressways and freeways, mounting height is 7'-3" (±) or 6'-3" (±) depending upon existence of sub-sign.
4. The (±) tolerance for mounting height is 3 inches.
5. J-Assemblies are considered to be one sign for mounting height.
6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
7. Folding signs shall be mounted at a height of 5'-3" (±) or as directed by the engineer.
8. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4"-3" (±).

* 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.

** The existence of curb and gutter does not in itself mandate the vertical clearance illustrated. That height is typically measured where there is sidewalk adjacent to the roadway or parking is permitted. In the absence of sidewalk vertical clearance is measured from the top of the curb. Offset of signs is measured from the flow line.

*** See A4-3 sign plate for signs 4' or less in width and less than 20 S.F. in area.

POST EMBEDMENT DEPTH

Area of Sign Installation (Sq. Ft.)	D (Min)
20 or Less	4'
Greater than 20	5'

TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

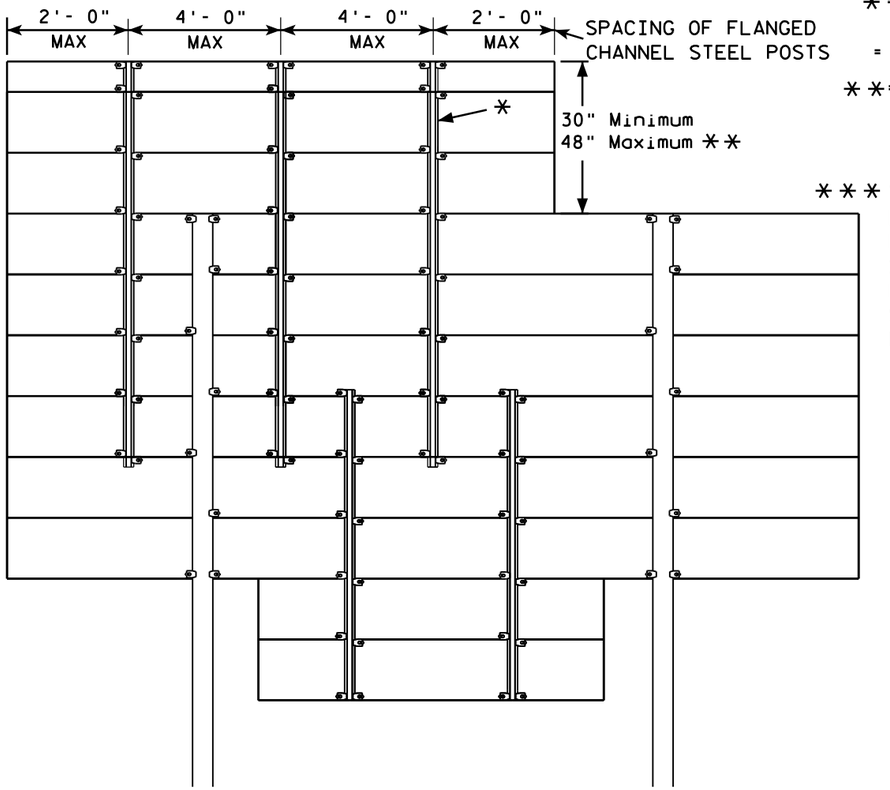
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 8/21/17 PLATE NO. A4-4.15

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 282	E

GROUND MOUNTED SIGN

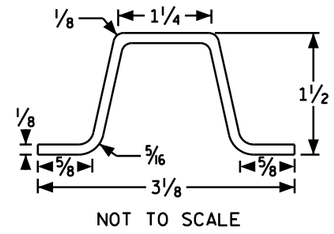


*=2.00 lb/ft FLANGED CHANNEL, MIN. YIELD STRENGTH = 60,000 PSI (GRADE 60) GALVANIZED

**=FOR 48" HEIGHT PANELS ON OVERHEAD STRUCTURES, ENTIRE SIGN SHALL BE CENTERED VERTICALLY ABOUT THE DEPTH OF THE TRUSS.

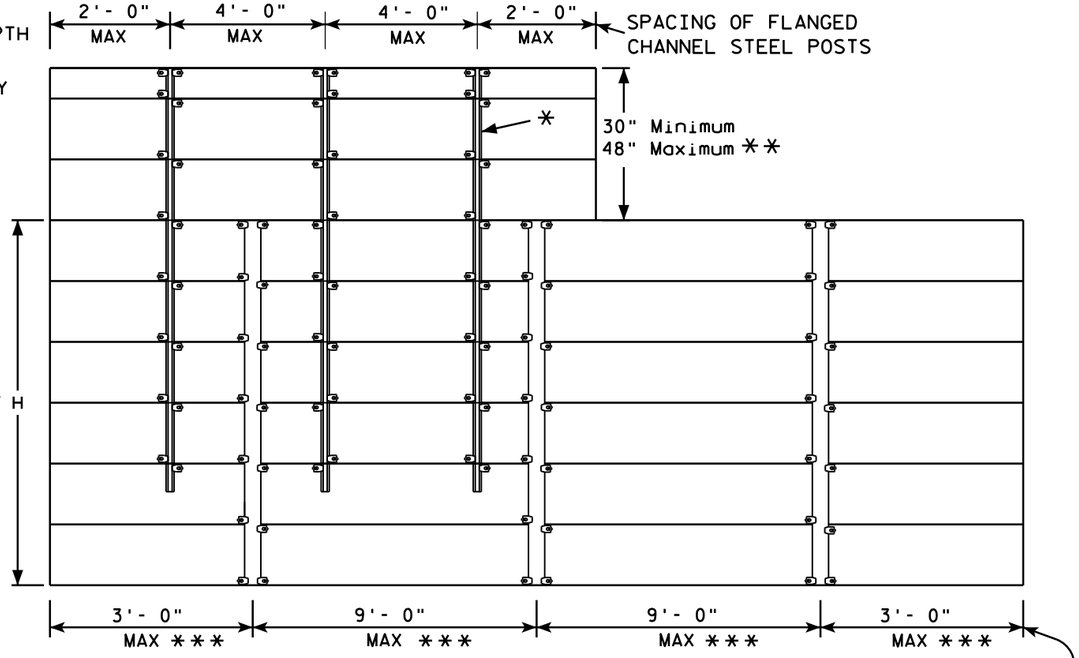
*** THESE SPACING DISTANCES SHALL ONLY BE USED WHEN THE MAIN SIGN HAS A MAXIMUM HEIGHT (DIMENSION H) OF 16 FT OR LESS. FOR SIGNS WITH A HEIGHT OF GREATER THAN 16 FT, STRUCTURAL CALCULATIONS SHALL BE PERFORMED.

FLANGE CHANNEL DETAIL



NOT TO SCALE

SIGN BRIDGE MOUNTED SIGN



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.

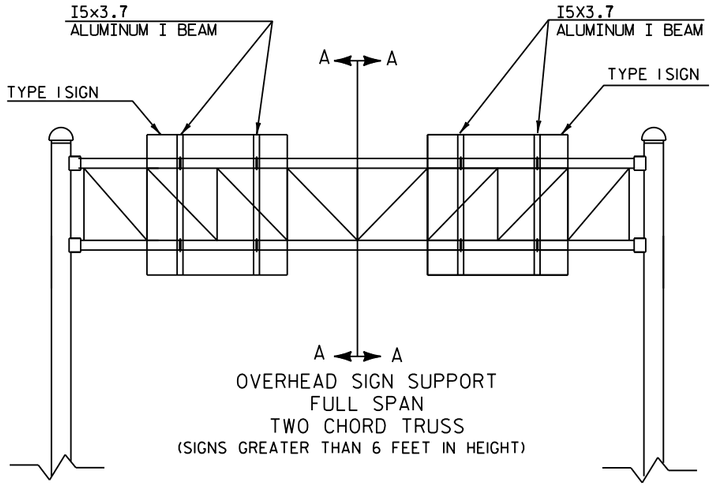
ATTACHMENT OF GUIDE SIGNS TO SUPPORTS

WISCONSIN DEPT OF TRANSPORTATION

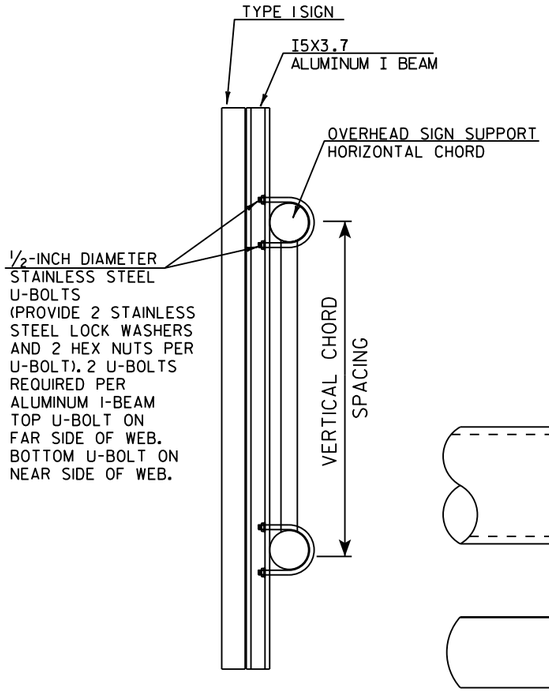
APPROVED Matthew R Rauch for State Traffic Engineer

DATE 12/05/13 PLAT 283 A4-6.12

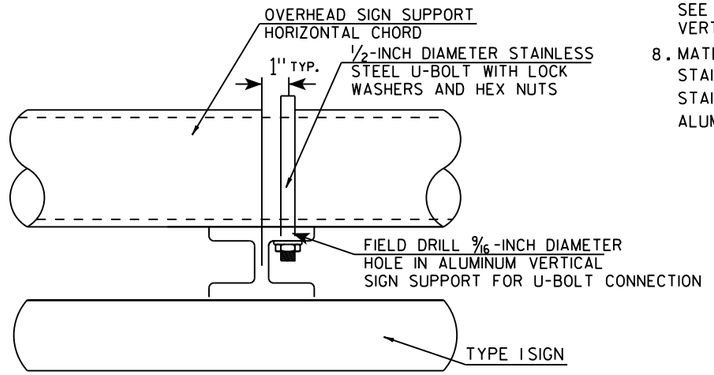
PROJECT NO: | SHEET NO: E



OVERHEAD SIGN SUPPORT
FULL SPAN
TWO CHORD TRUSS
(SIGNS GREATER THAN 6 FEET IN HEIGHT)



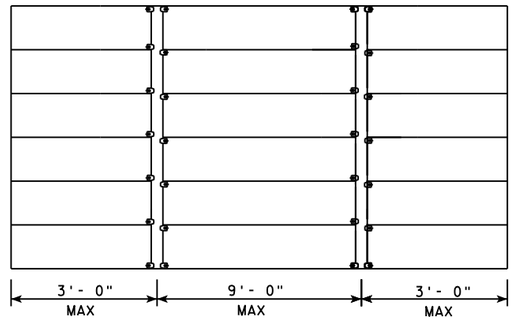
CUT SECTION A-A



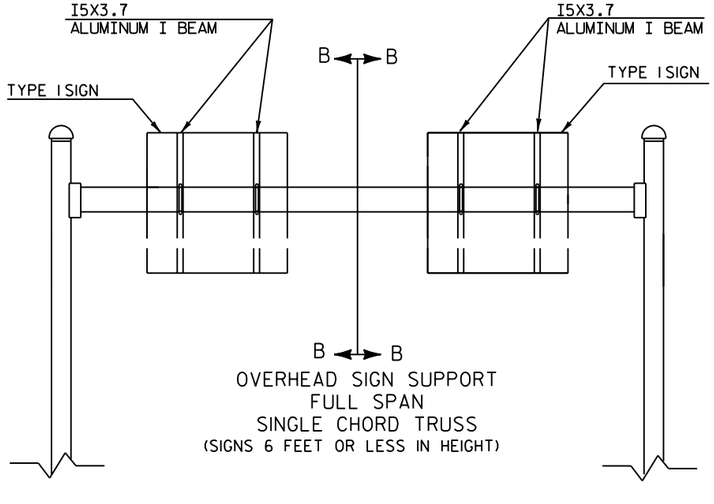
TYPICAL SIGN CONNECTION FOR
TWO CHORD TRUSS
PLAN VIEW

GENERAL NOTES

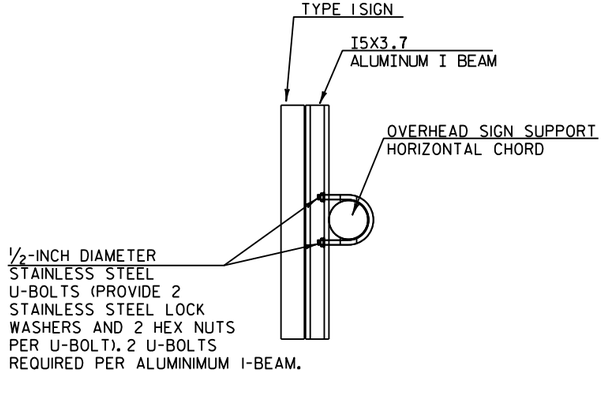
1. USE STAINLESS STEEL U-BOLTS, WASHERS, AND NUTS.
2. USE CLIPS ON EVERY EXTRUDED PANEL JOINT PER SIGN PLATE A4-6.
3. USE ALUMINUM VERTICAL SIGN SUPPORT BEAMS HAVING A 5 INCH BEAM DEPTH AND WEIGHT OF 3.7 LBS PER FOOT.
4. U-BOLTS SHALL BE STAINLESS STEEL AND MANUFACTURED TO THE PROPER SIZE TO FIT THE 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.



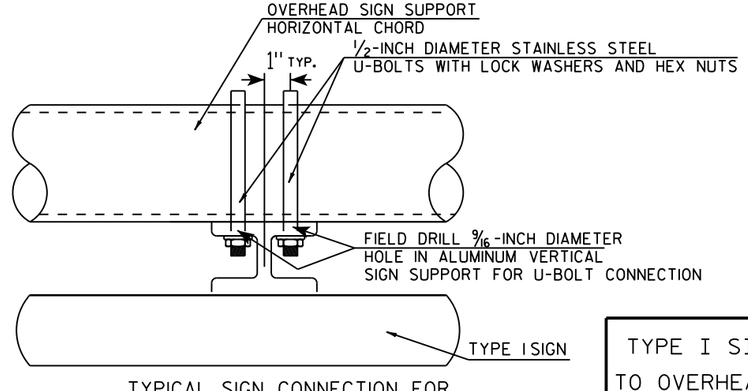
SPACING OF I5X3.7 ALUMINUM
VERTICAL SIGN SUPPORT



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

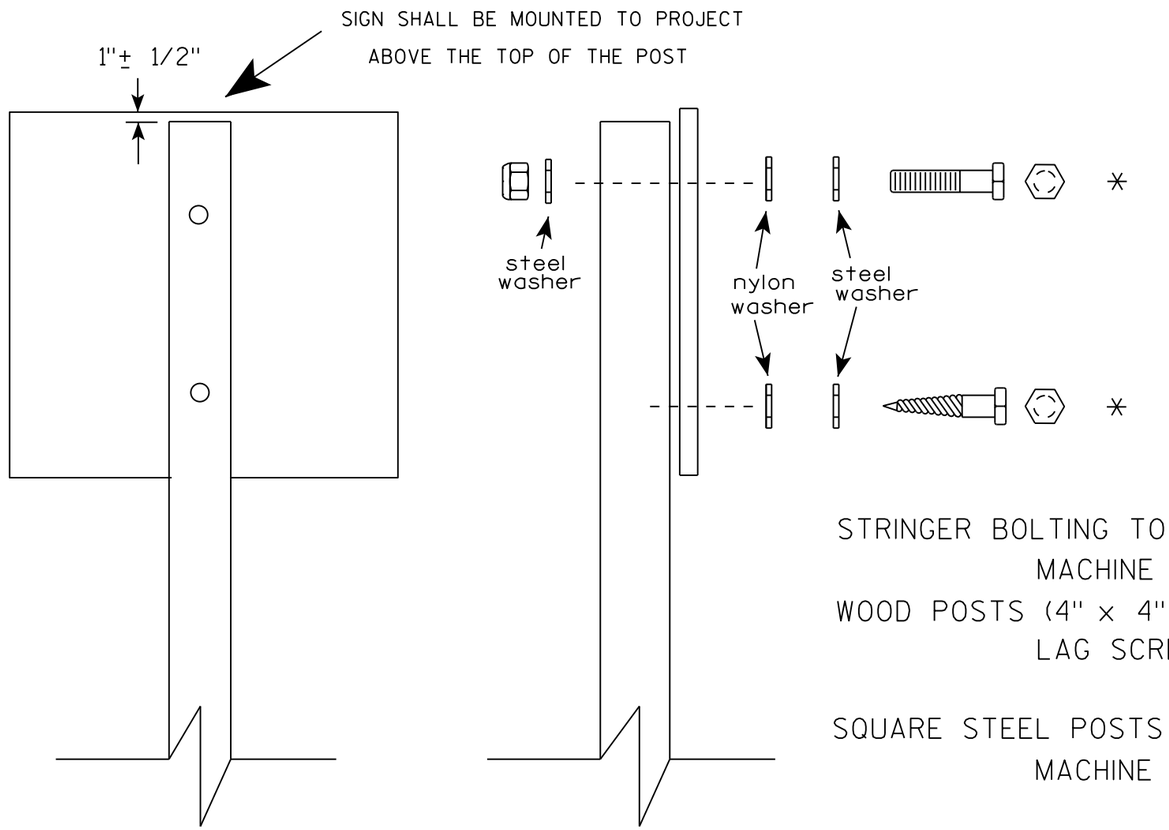
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/10/15 PLATE NO. A4-7,4

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\A47.DGN PLOT DATE : 01-DEC-2015 17:42 PLOT BY : $$ plotuser $$ PLOT NAME : PLOT SCALE : 38.916838:1.000000



Nuts, bolts and lags used for mounting signs shall have hexagonal heads and shall be either :

a. Hot dip galvanized in accordance with ASTM Designation: A 153, Class D, or SC 3
b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.

Threads on bolts and nuts shall be manufactured with sufficient allowance for the cadmium plate or galvanized coating to permit the nuts to run freely on the bolts.

STRINGER BOLTING TO ALUMINUM SIGNS (SEE SIGN PLATE A4-18)
MACHINE BOLTS - 5/16" X 1-3/4" Length w/ lock nuts
WOOD POSTS (4" x 4" or 4" x 6")
LAG SCREWS - 3/8" X 3" (NO STRINGERS ON BACK OF SIGN)
3/8" X 4" (STRINGERS ON BACK OF SIGN)
SQUARE STEEL POSTS (2" x 2")
MACHINE BOLTS - 3/8" X 3-1/4" Length w/ nuts (NO STRINGER ON BACK OF SIGN)
3/8" X 5" Length w/ nuts (STRINGERS ON BACK OF SIGN)
RIVETS - 9/32 " (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL
O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH
WASHERS (ALL POSTS) -
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON

* Two different fastening systems are shown for illustration purposes. On any individual sign, either one or the other system shall be used. Actual number of fasteners per sign varies with the sign area, but normally there are two. For a single post installation, all signs greater than 9 sq. ft. require the use of 3 fasteners.

ATTACHMENT OF SIGNS TO POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

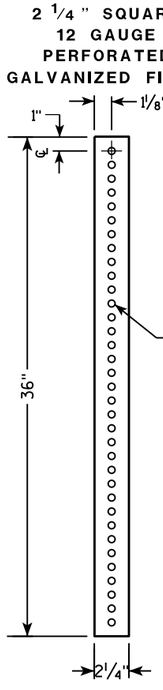
DATE 8/11/16 PLATE NO. A4-8.8

PROJECT NO: SHEET NO: E

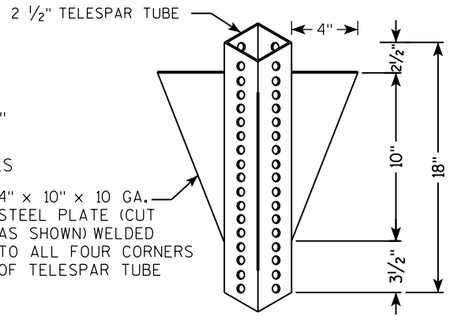
FILE NAME : C:\CADfiles\Projects\tr_stdplate\A48.DGN PLOT DATE : 11-AUG-2016 11:35 PLOT BY : $$ plotuser $$

TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM

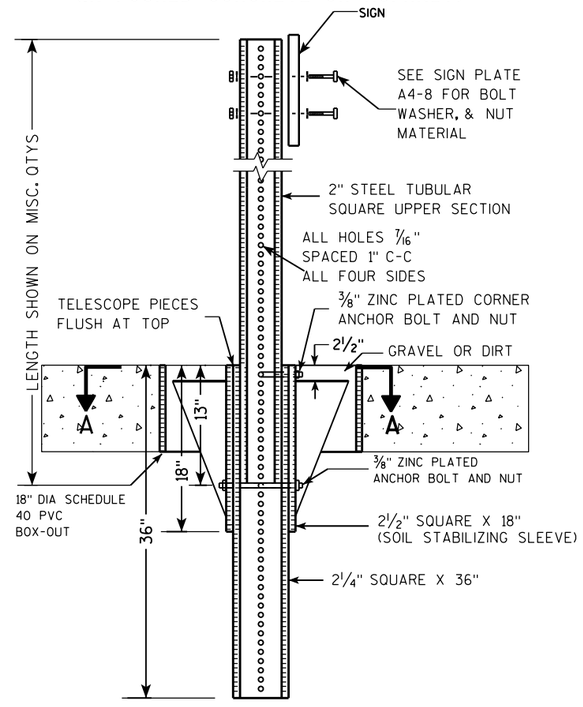
2 1/4 " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



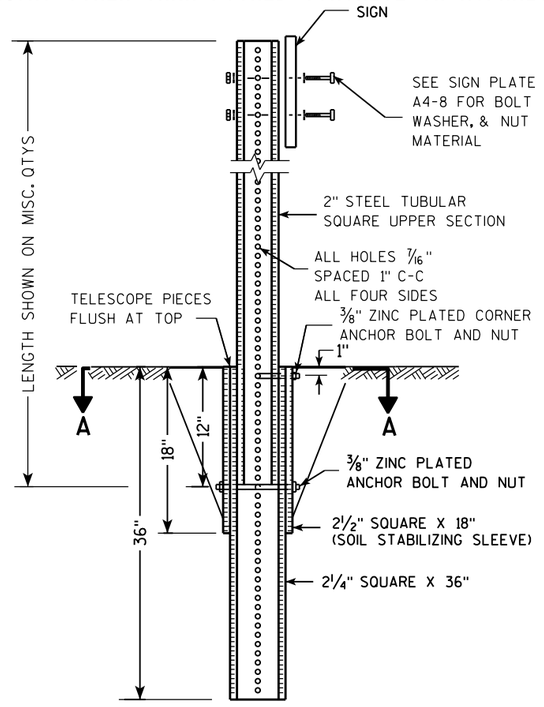
2 1/2 " SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH

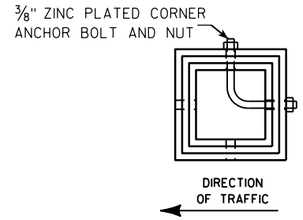


DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



DETAIL OF TUBULAR STEEL SIGN POST
(IN LOCATIONS OTHER THAN POURED CONCRETE OR ASPHALT)





SECTION A-A

Area of Sign Installation (Sq. Ft.)	Number of Required Posts
9 or less	1
Greater than 9 less than or equal to 18	2
Greater than 18 less than or equal to 27	3

Signs wider than 3 feet or larger than 9 sq. ft shall be mounted on multiple posts (see above table).

TUBULAR STEEL
SIGN POST
A4-9

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

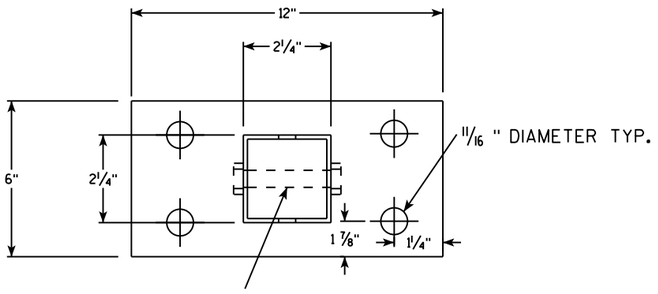
DATE 2/05/15 PLATE 286 A4-9.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

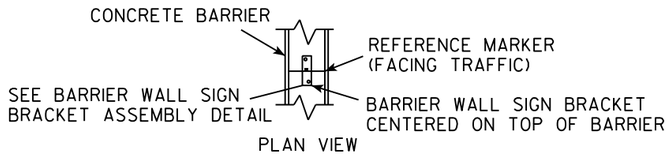
TYPICAL BARRIER WALL SIGN PLACEMENT DETAILS

TYPICAL REFERENCE MARKER MOUNTING DETAILS

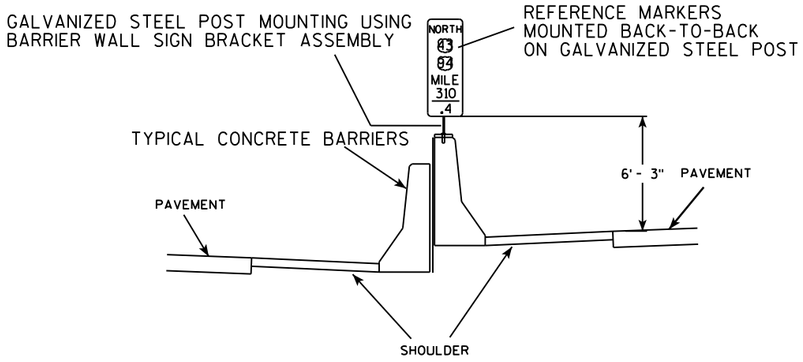
BARRIER WALL SIGN BRACKET ASSEMBLY
NOT TO SCALE



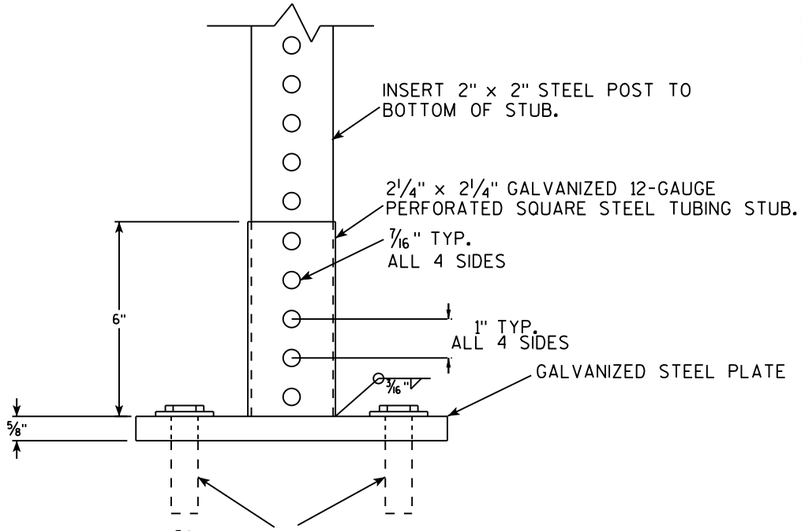
3½" X ⅜" GALVANIZED STEEL BOLT & HARDWARE
PLAN VIEW



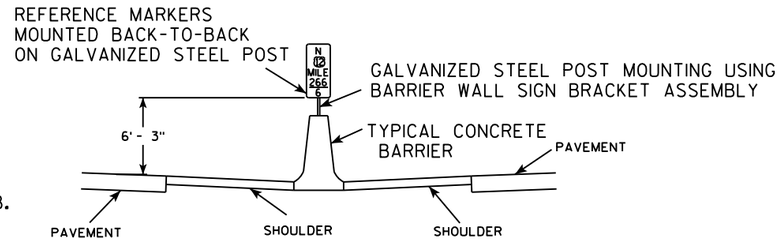
MEDIAN BARRIER MOUNTING DETAIL



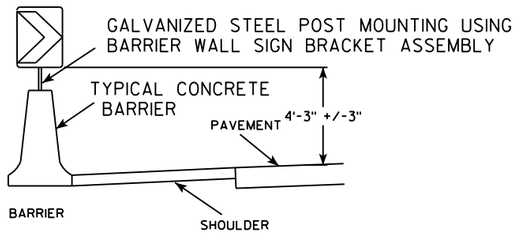
TYPICAL ENHANCED REFERENCE
MARKER PLACEMENT ON DOUBLE MEDIAN BARRIER



SIDE VIEW



TYPICAL ENHANCED REFERENCE
MARKER PLACEMENT ON SINGLE MEDIAN BARRIER



TYPICAL CHEVRON MARKER PLACEMENT

NOTES

1) ALL MATERIAL TO BE APPROVED BY ENGINEER BEFORE INSTALLATION
2) SEE SIGN PLATE A4-8 FOR SIGN HARDWARE REQUIREMENTS.

SIGN MOUNTING ON BARRIER WALL

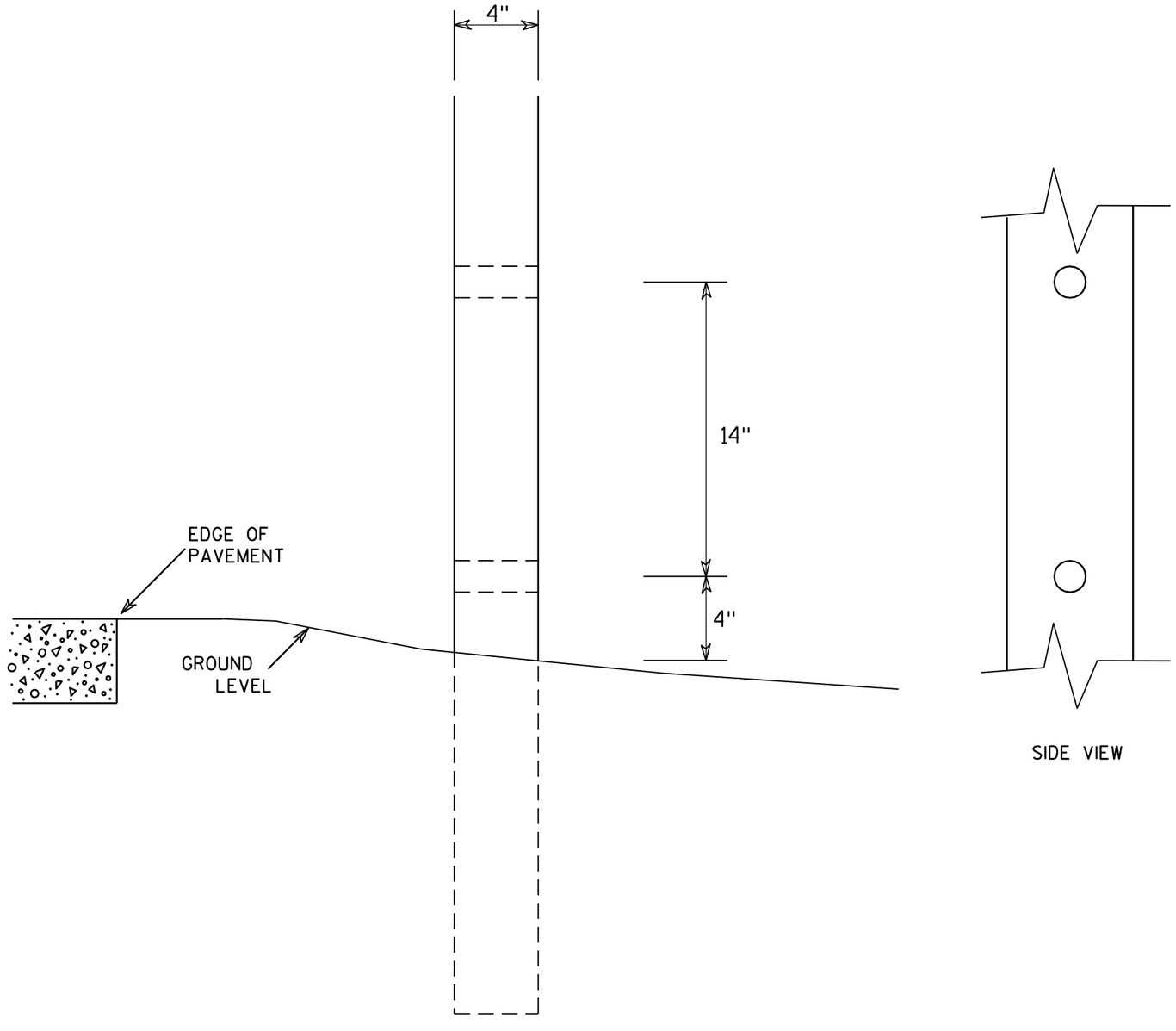
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/16/15 PLATE ... A4-10.4

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\A410.DGN PLOT DATE : 16-MAR-2015 14:27 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 14.593816:1.000000
WISDOT/CADDS SHEET 42



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

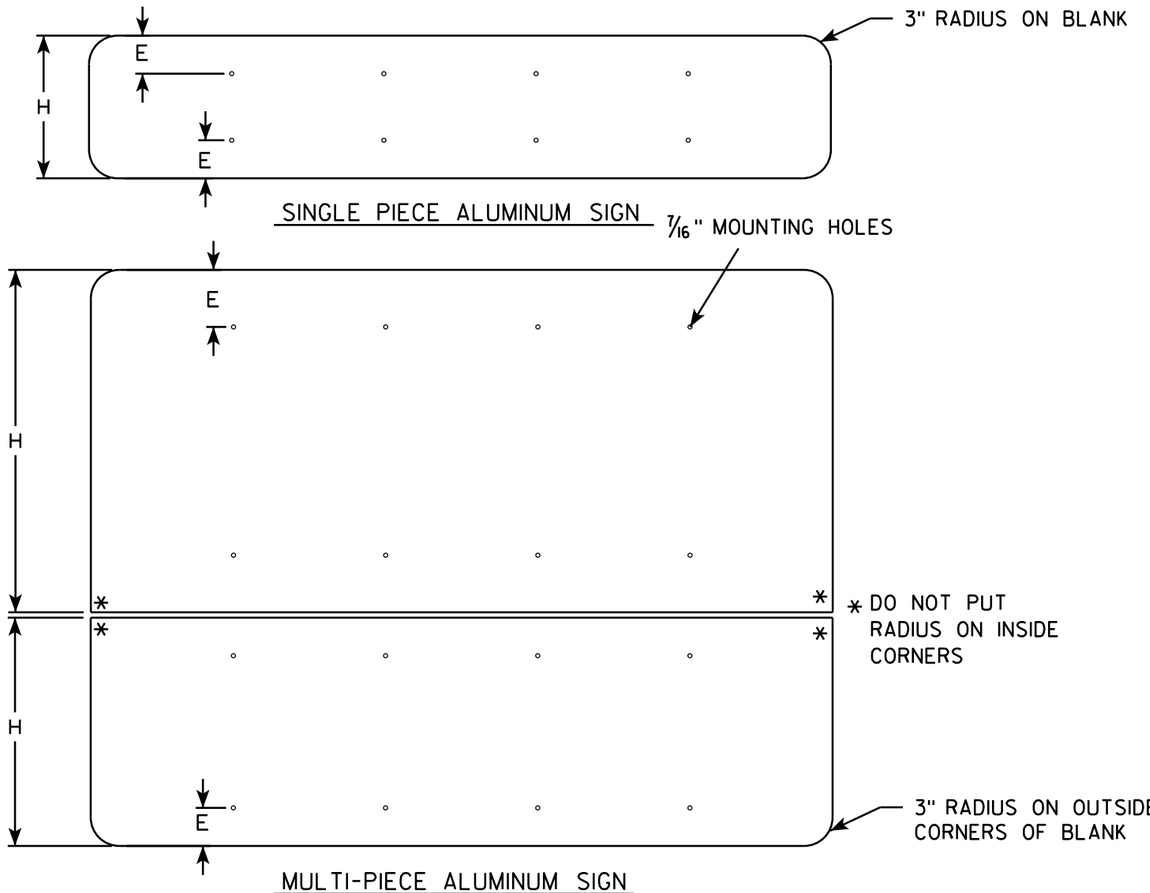
4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spang
for State Traffic Engineer

DATE 3/27/97 PLATE NO. A4-11.2

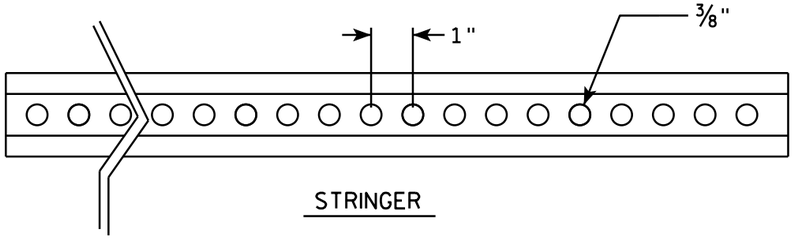
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 288	E



GENERAL NOTES

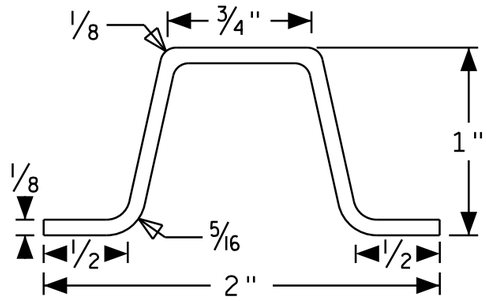
- ALL SIGNS OVER 60" IN WIDTH SHALL HAVE A 3" RADIUS ON THE OUTSIDE CORNERS OF THE ALUMINUM BLANK.
- MOUNTING HOLES SHALL BE 7/16" DIAMETER.
- SEE CHART FOR HOLE SPACING REQUIREMENTS
- FOR SIGN PANELS WITH DIMENSION (H) 36" AND OVER, DIMENSION E SHALL BE 6"
- FOR SIGN PANELS WITH DIMENSION (H) UNDER 36", DIMENSION E SHALL BE 4"
- SIGN STRINGER MATERIAL SHALL CONSIST OF STEEL CHANNEL POST SECTIONS, WEIGHING 1.12 LBS/FT IN ACCORDANCE WITH SECTION 633.2.1 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION.
- SEE SIGN PLATE A4-8 FOR SIGN STRINGER BOLTING REQUIREMENTS.

SIGN WIDTH	STRINGER WIDTH	POSTS	HOLE SPACING	MOUNTING HOLES
78"	72"	2	16"	15" 31" 47" 63"
84"	72"	2	17"	16½" 33½" 50½" 67½"
90"	72"	2	18"	18" 36" 54" 72"
96"	90"	2	19"	19½" 38½" 57½" 76½"
102"	90"	2	20"	21" 41" 61" 81"
108"	90"	2	21"	22½" 43½" 64½" 85½"
114"	108"	3	15"	12" 27" 42" 57" 72" 87" 102"
120"	108"	3	16"	12" 28" 44" 60" 76" 92" 108"
126"	108"	3	17"	12" 29" 46" 63" 80" 97" 114"
132"	126"	3	18"	12" 30" 48" 66" 84" 102" 120"
138"	126"	3	19"	12" 31" 50" 69" 88" 107" 126"
144"	126"	3	20"	12" 32" 52" 72" 92" 112" 132"

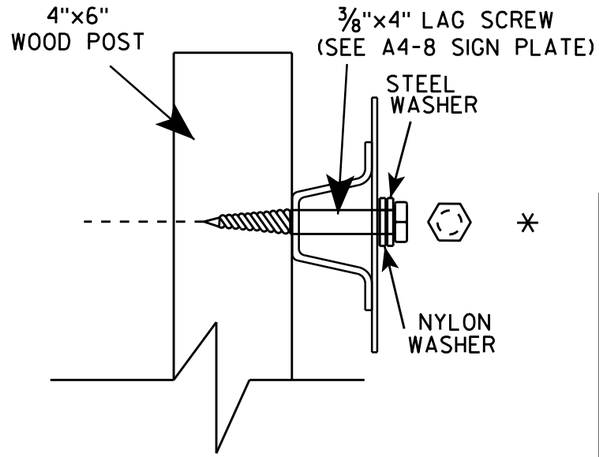


STRINGER

CROSS SECTION VIEW OF CHANNEL



POST MOUNTING



SIGN STRINGER MOUNTING REQUIREMENTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch

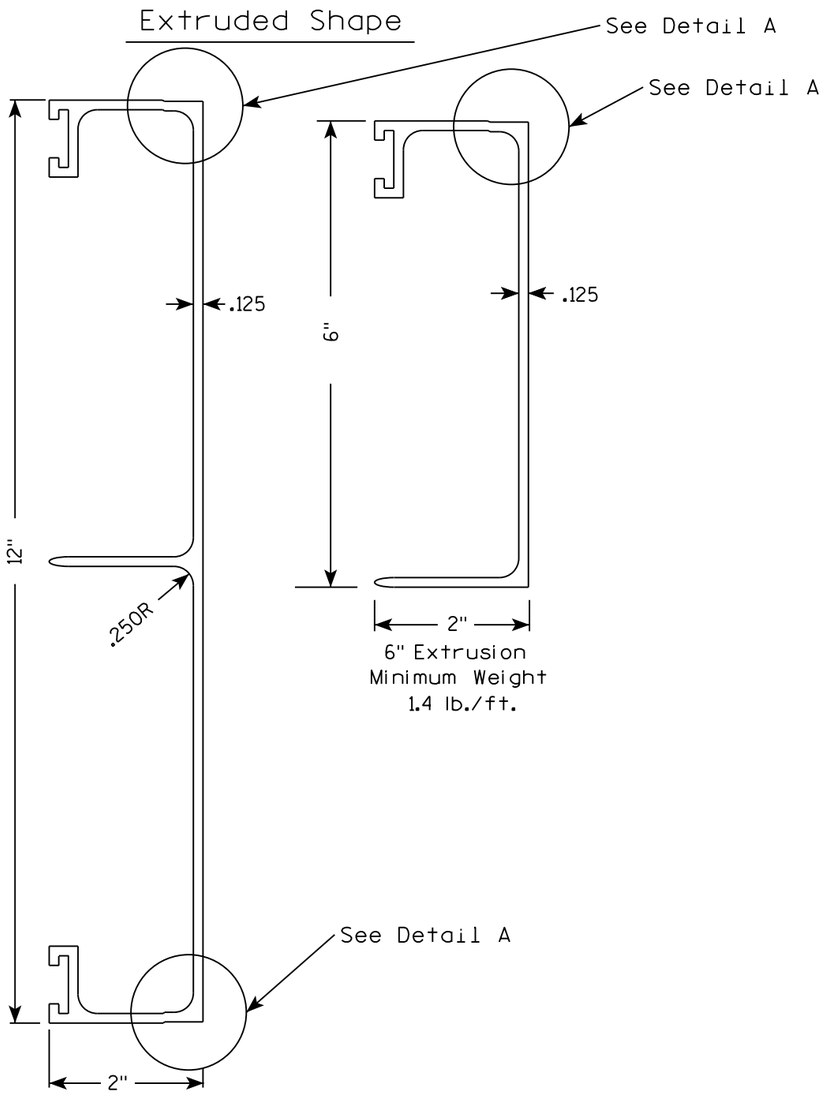
for State Traffic Engineer

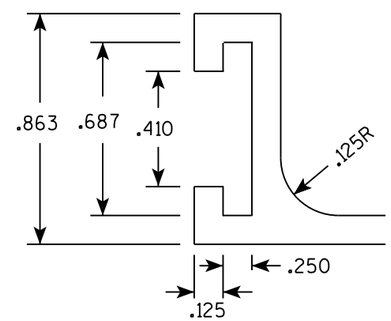
DATE 4/26/16 PLATE NO A4-18.1

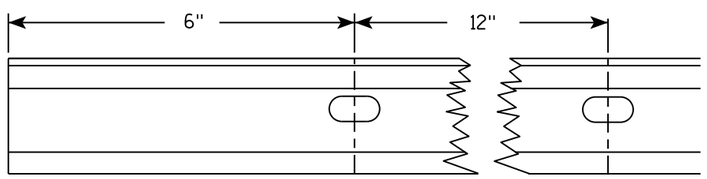
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\A418.dgn PLOT DATE : 27-APR-2016 13:56 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 41.805205:1.000000 WISDOT/CADDS SHEET 42

Extruded Shape







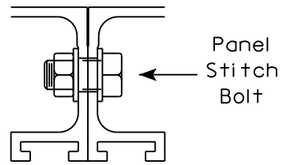
Punch 7/16" x 7/8" oval holes beginning 6" in from end of extrusion 12" CC on both edges of 6" and 12" panels.

Hardware

STITCH BOLT, WASHER & NUT

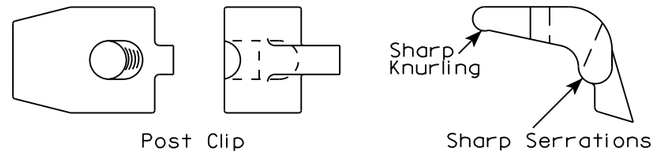
The hardware includes:

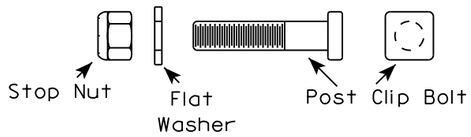
3/8 " - 16 X 3/4 " Economy Bolt 2024-T4 alloy
3/8 " - Stainless steel stop nut
3/8" X .064 Flat Washers, Alclad 2024-T4 alloy



POST CLIP, POST CLIP BOLT, WASHER & NUT

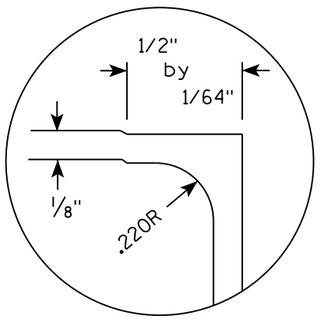
Post Clip shall be Alum. Alloy 356-T6
Post Clip Bolt shall be Stainless Steel.
Flat washer shall be 3/8" X .091, Stainless Steel.
Stop nut shall be stainless steel.





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.
4. Edge wrapping of sign sheeting required on all extrusions joints shown in Detail A.



DETAIL A (EDGE WRAP JOINT)

ALUMINUM EXTRUSIONS FOR TYPE I SIGNS

WISCONSIN DEPT OF TRANSPORTATION

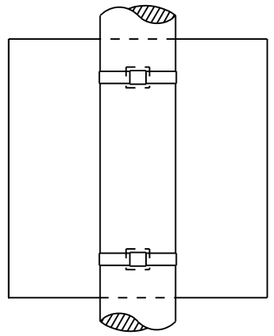
APPROVED Matthew R Rauch
for State Traffic Engineer

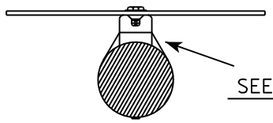
DATE 11/30/16 PLATE NO. A5-2.10

PROJECT NO:				SHEET NO: 290	E

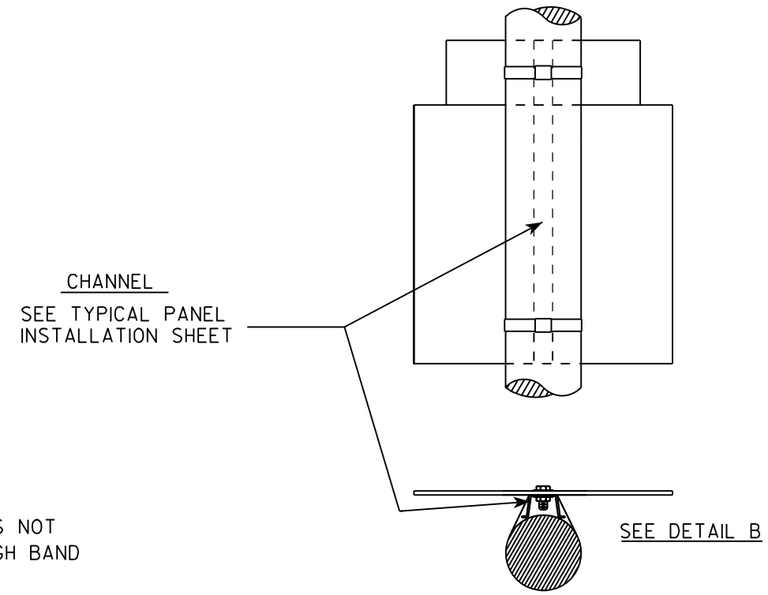
BANDING

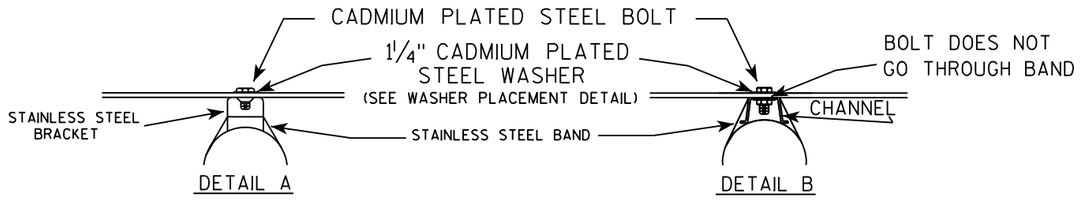
SINGLE SIGN



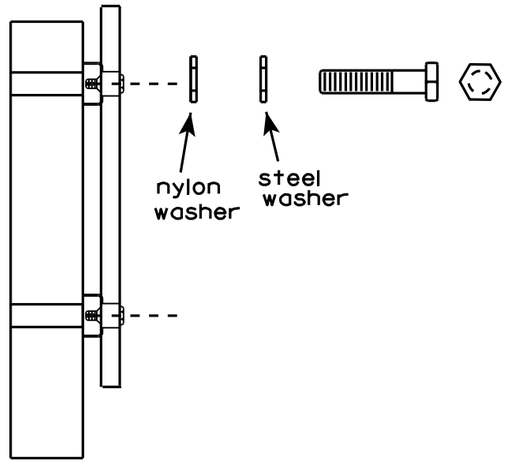


"J" ASSEMBLY





WASHER PLACEMENT



WASHERS (ALL POSTS) -
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON
FOR ALL TYPE H SIGNS

GENERAL NOTES

1. Any sign over 3 feet in width shall use the V-Block banding method. See A5-10 standard plate.
2. Signs 3 feet or greater in height shall have three bracket bands installed. Signs less than 3 feet in height shall have two bracket bands installed.
3. Banding and assembly bracket shall be stainless steel. All bands shall be 3/4" in width and 0.025" thickness.

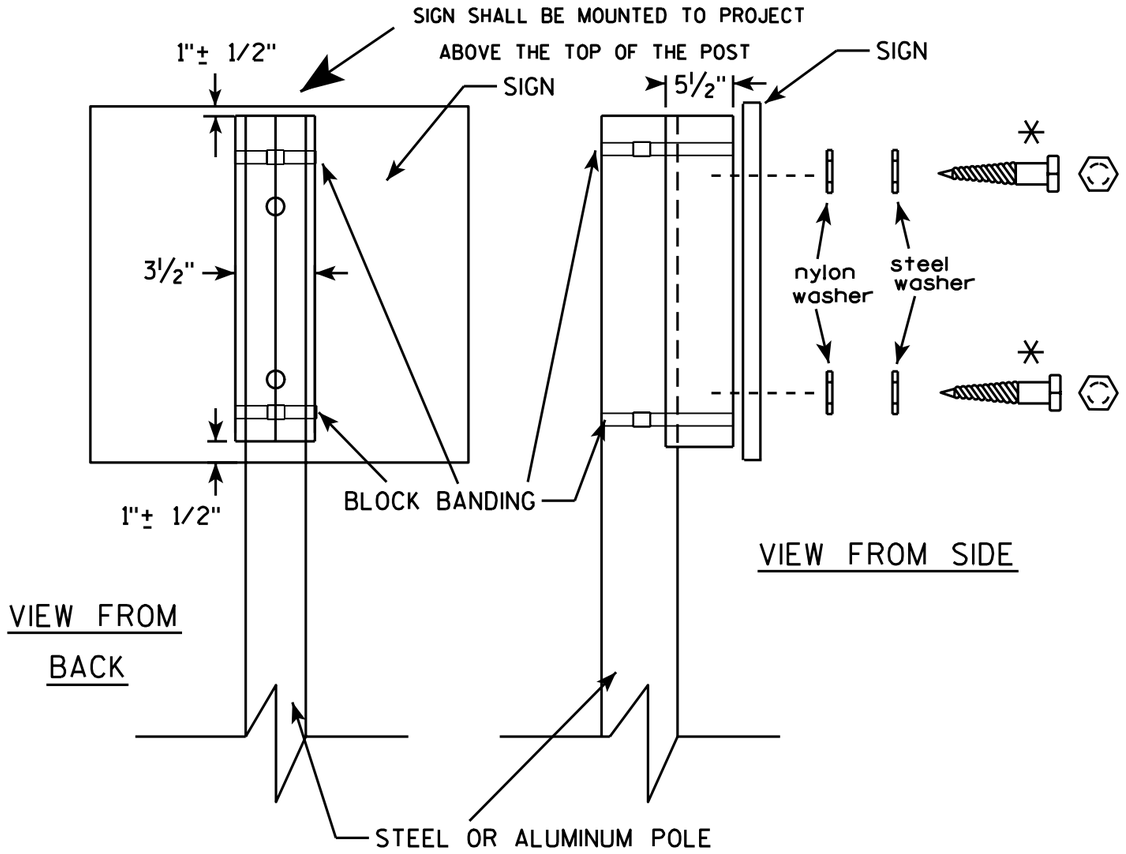
STANDARD SIGN
SIGN BANDING DETAILS

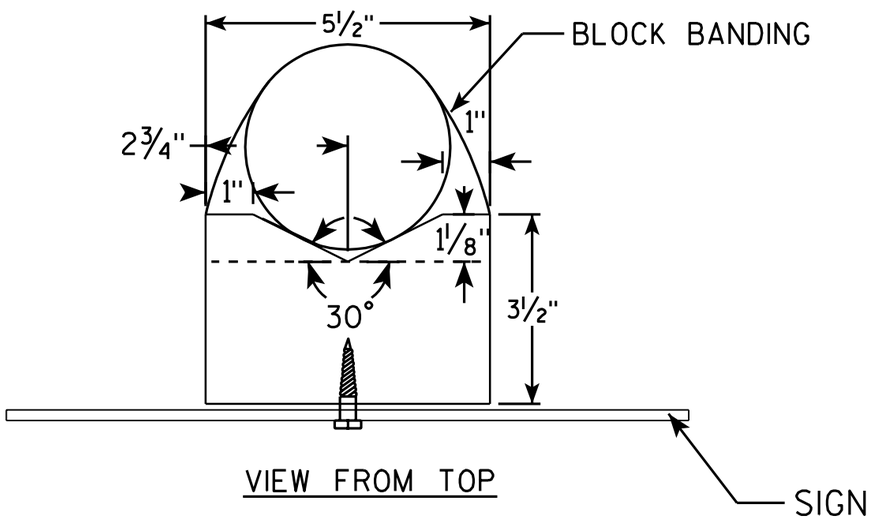
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 8/16/13 PLATE NO. A5-9.3

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 291	E





GENERAL NOTES

1. WOOD 4"X6" POST MATERIAL SHALL CONFORM TO 507.2.2 OF THE WisDOT STANDARD SPECIFICATIONS
2. BLOCK BANDING AND CLIPS SHALL BE STAINLESS STEEL, ¾" WIDTH AND 0.025" THICKNESS
3. SIGNS 3' OR GREATER IN HEIGHT SHALL UTILIZE 3 BLOCK BANDS. SIGNS UNDER 3' IN HEIGHT SHALL UTILIZE 2 BLOCK BANDS
4. ACTUAL NUMBER OF FASTENERS PER SIGN VARIES WITH THE SIGN AREA, BUT NORNALLY THERE ARE TWO. FOR SIGNS GREATER THAN 9 S.F. 3 FASTENERS SHALL BE USED.
5. ALL SIGN MOUNTING BOLTS AND WASHERS SHALL BE EITHER:
   a. Hot dip or mechanically galvanized in accordance with ASTM Designation: A 153, Class D, or
   b. Cadmium plated in accordance with ASTM Designation : B 766 TYPE 3, Class 12, or
   c. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.
6. ALL BOLTS SHALL HAVE HEXAGONAL HEADS.
7. STEEL WASHERS SHALL BE 1¼" O.D. X ⅜" I.D. X 1/16"
8. NYLON WASHERS SHALL BE 1¼" O.D. X ⅜" I.D. X .080 FOR TYPE H OR TYPE F FACE SIGN

✳ LAG BOLTS SHALL BE ⅜" X 2½"

BLOCK BANDING DETAIL (V-BLOCK OPTION)

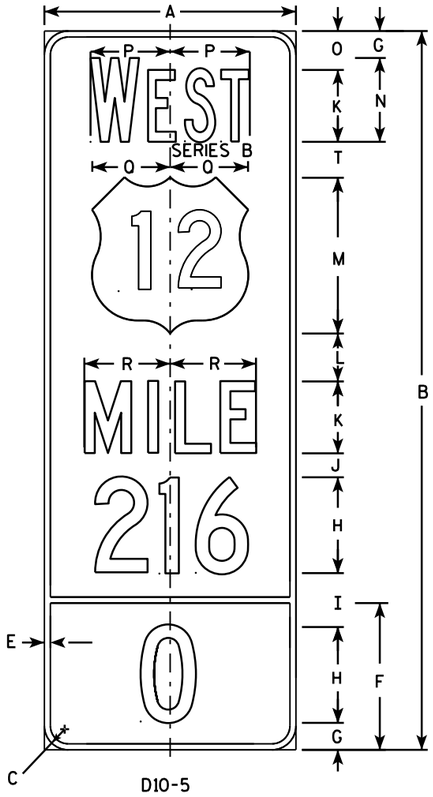
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

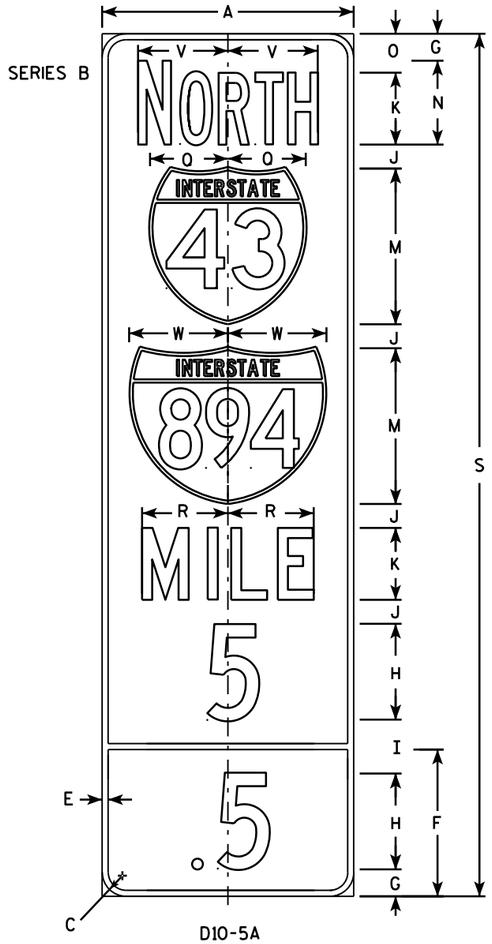
DATE 7/12/07 PLATE NO. A5-10.1

PROJECT NO:

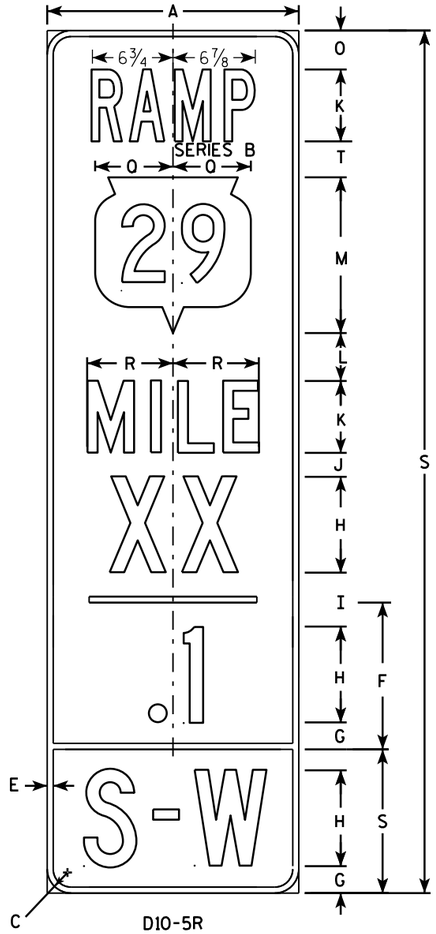
SHEET NO: 292 E



D10-5



D10-5A



D10-5R

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - BLUE
   Message - WHITE
3. Interstate Shield Color
   Background - Top Red
   - Bottom Blue
   Message - White
4. Message Series - C or as noted on the Sign.
5. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
6. The decimal point is required for all digits except "0".
7. Optically adjust mileage numbers about the centerline of the sign to achieve proper balance.
8. Optically adjust Ramp direction letters about the centerline of the sign to achieve proper balance.



SERIES B



SERIES B

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	O	R	S	T	U	V	W	X	Y	Z	D10-5 Area sq. ft.	D10-5A Area sq. ft.	D10-5R Area sq. ft.
1																													
2																													
3																													
4	21	60	1 ½		½	12 ¼	2 ¼	8	4 ½	2	6	4	13	7	3 ¼	6 ⅝	6 ½	7 ⅛	72	3		7 ½	8 ¼				8.75	10.5	10.5
5	21	60	1 ½		½	12 ¼	2 ¼	8	4 ½	2	6	4	13	7	3 ¼	6 ⅝	6 ½	7 ⅛	72	3		7 ½	8 ¼				8.75	10.5	10.5

STANDARD SIGN
D10-5

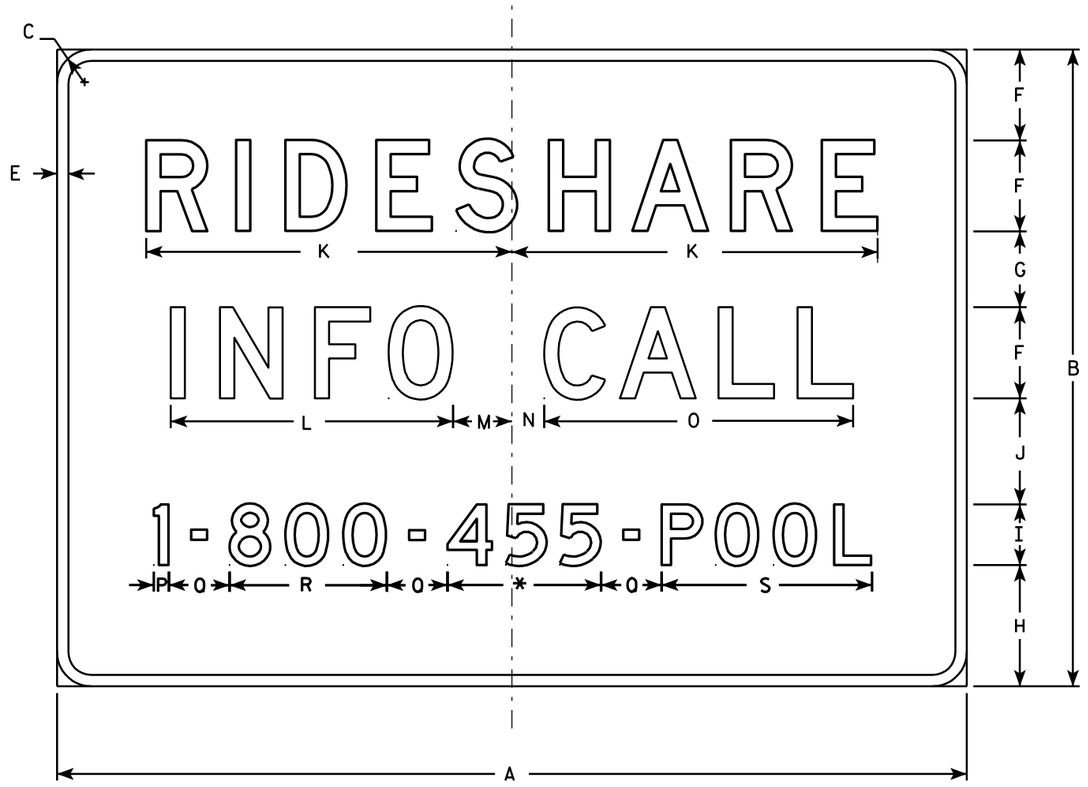
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 6/26/14 PL 293 D10-5.2

PROJECT NO:

SHEET NO: E



D12-2A

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 - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate numerals and adjust spacing as required to achieve proper balance.

Metric equivalent for this sign is:

SIZE	
1	1200 mm X 525 mm
2	1500 mm X 1050 mm
3	
4	1500 mm X 1050 mm
5	1950 mm X 1350 mm

* Variable (See note 5)

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area m2
1	48	21	1 1/2		1/2	3	2 3/4	3 1/2	3	2 3/4	12 1/8	9 3/8	2	1 1/8	10 1/4	3/4	3	7 3/4	10 5/8								7.0	0.63
2	60	42	2 1/4		3/4	6	5	8	4	7	24 1/8	18 5/8	3 1/8	2 1/8	20 1/8	1	4	10 3/8	13 7/8								17.5	1.58
3																												
4	60	42	2 1/4		3/4	6	5	8	4	7	24 1/8	18 5/8	3 1/8	2 1/8	20 1/8	1	4	10 3/8	13 7/8								17.5	1.58
5	78	54	3		1	8	6	10	6	8	30 1/8	23 5/8	4 1/8	2 1/8	26 3/8	1 1/2	5	15 1/2	21 1/4								29.25	2.63

STANDARD SIGN
D12-2A

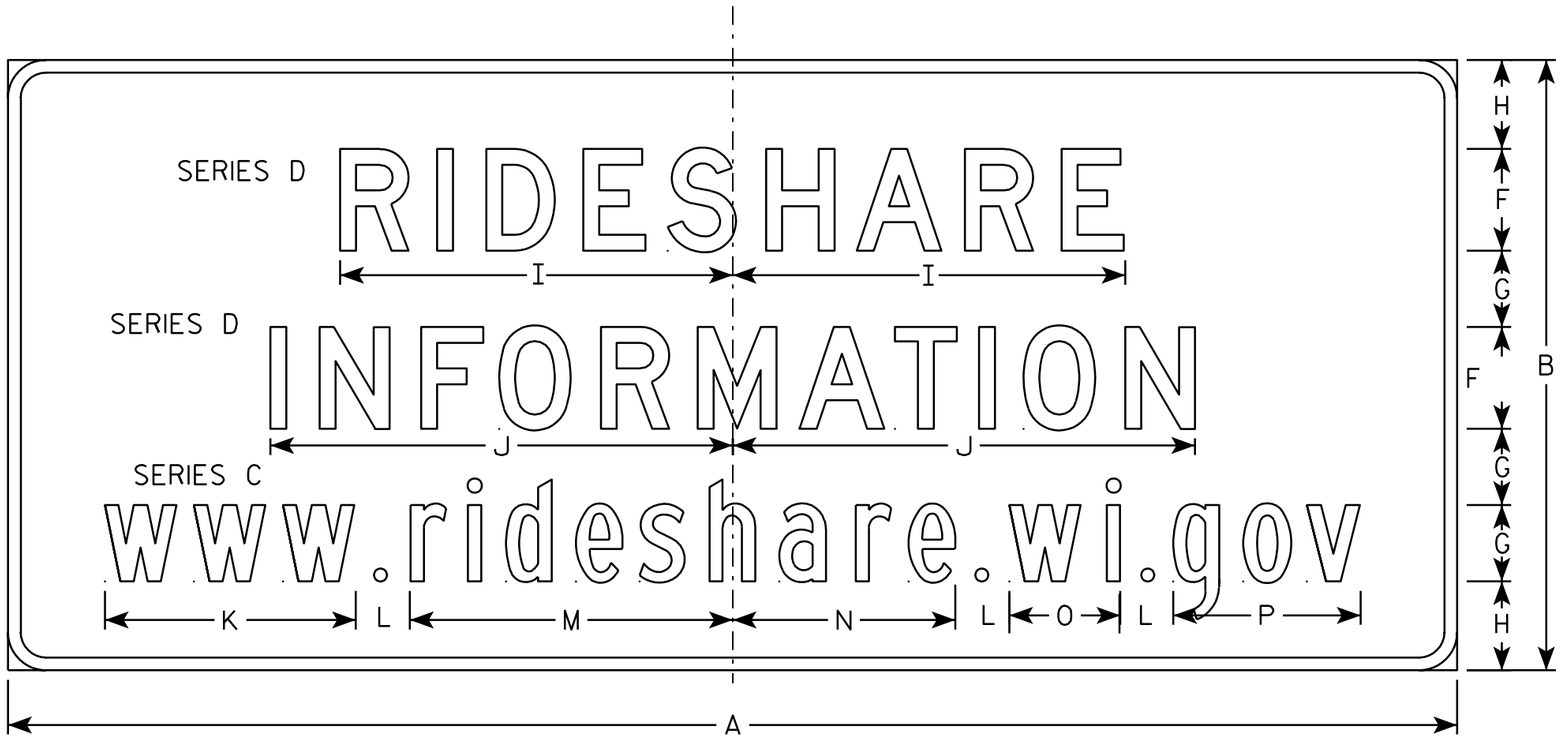
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spay for State Traffic Engineer

DATE 1/16/02 PLATE NO. D12-2A.3

PROJECT NO:

SHEET NO: 294 E



D12-2B

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. Message Series - Lines 1 & 2 are Series D and Line 3 is Series C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

Metric equivalent for this sign is:

SIZE	
1	
2	2100 mm X 900 mm
3	
4	2850 mm X 1200 mm
5	2850 mm X 1200 mm

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area m2
1																												
2	84	36	2 1/4		3/4	6	4 1/2	5 1/4	24 1/4	28 5/8	14 3/4	3	19	13 1/8	6 1/2	11											21.0	1.90
3																												
4	114	48	3		1	8	6	7	30 7/8	36 3/8	19 3/4	4 1/4	25 3/8	17 1/2	8 3/4	14 3/4											38.0	3.42
5	114	48	3		1	8	6	7	30 7/8	36 3/8	19 3/4	4 1/4	25 3/8	17 1/2	8 3/4	14 3/4											38.0	3.42

STANDARD SIGN
D12-2B

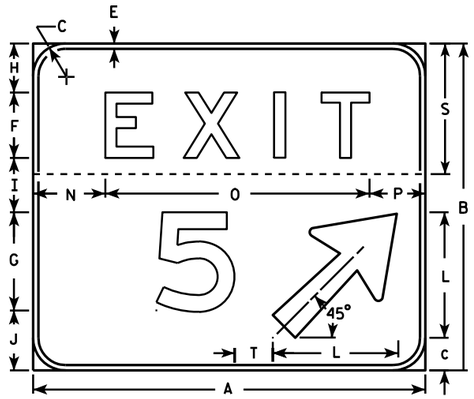
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

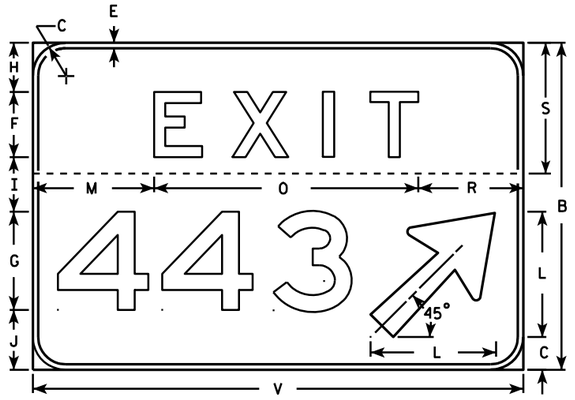
DATE 8/04/08 PLATE NO D12-2B.2

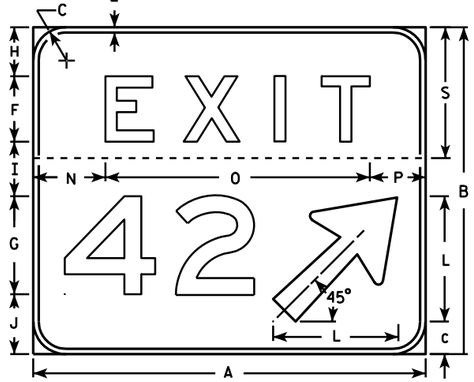
PROJECT NO:

SHEET NO: 295 E

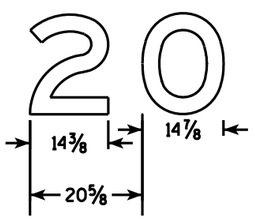


NOTE: T diminision shall be measured from the back of the number to the front of the arrow





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

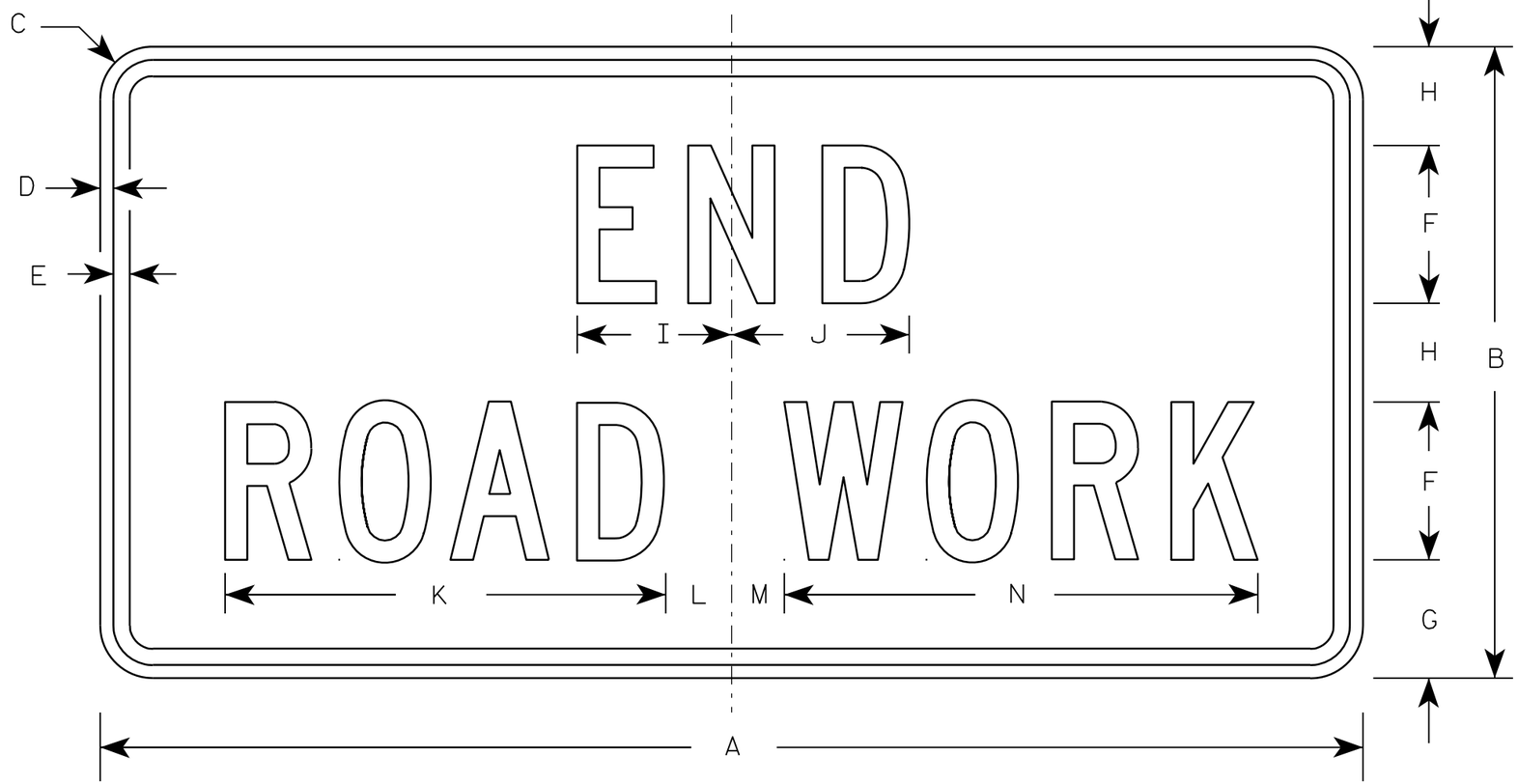
STANDARD SIGN
E5-1A

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: 296 | E



G20-2A

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

Metric equivalent for this sign is:

SIZE	
1	900 mm X 450 mm
2	1200 mm X 600 mm
3	1200 mm X 600 mm
4	1200 mm X 600 mm
5	1200 mm X 600 mm

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area m2
1	36	18	1 1/8	3/8	1/2	4	3 3/4	2 1/2	4 1/8	4 1/8	11 1/8	2	1	12 1/8													4.5	0.41
2	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
3	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
4	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
5	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72

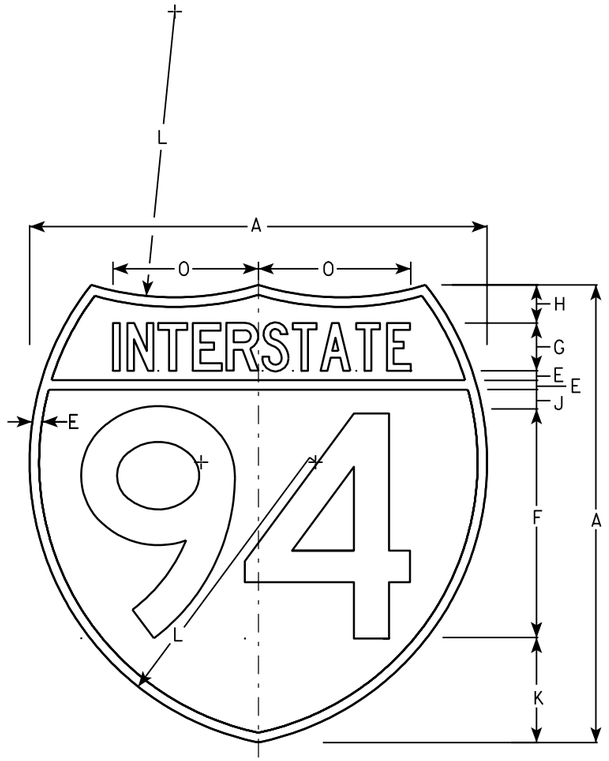
STANDARD SIGN
G20-2A

WISCONSIN DEPT OF TRANSPORTATION

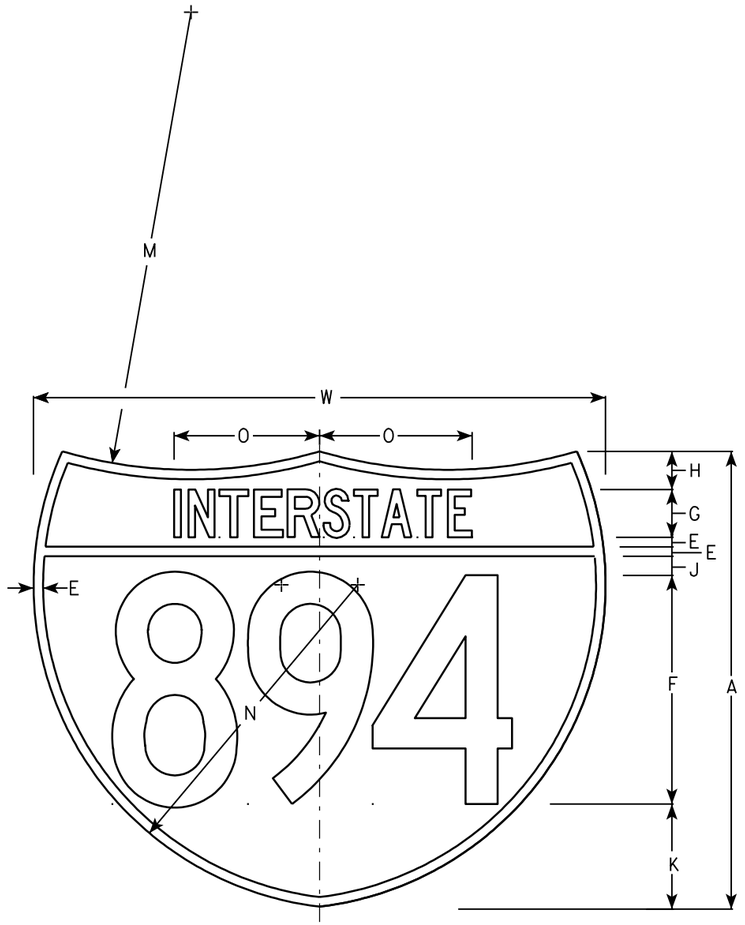
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 9/30/09 PLATE NO. G20-2A.8

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 297	E



M1-1



M1-1A

NOTES

1. Sign is Type II - See Note 6 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Top Red - Bottom Blue (See Note 6)
   Message - White - See Note 6
3. Message Series - See note 5
4. Substitute appropriate numerals & ajust spacing as per plate A10-1.
5. M1-1 - Numerals - D
   Interstate - C
   M1-1A - All copy - C
6. Permanent Signs
   Message - Type H Reflective
   Detour or other temporary signs
   Background - Reflective
   Message - Reflective

Metric equivalent for these signs are:

SIZE	M1-1	SIZE	M1-1A
1			
2	600 mm X 600 mm	2	600 mm X 750 mm
3	900 mm X 900 mm	3	900 mm X 1125 mm
4	900 mm X 900 mm	4	900 mm X 1125 mm
5	900 mm X 900 mm	5	900 mm X 1125 mm

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	M1-1 Area sq. ft.	M1-1A Area sq. ft.	M1-1 Area m2	M1-1A Area m2
1																													
2	24				1/2	12	2 1/2	2		1	5 1/2	15	24	17	7 7/8								30			3.13	3.91	.36	.46
3	36				3/4	18	3 3/4	3		1 1/2	8 1/4	22 1/2	36	25 1/2	11 3/4								45			7.03	8.79	.81	1.05
4	36				3/4	18	3 3/4	3		1 1/2	8 1/4	22 1/2	36	25 1/2	11 3/4								45			7.03	8.79	.81	1.05
5	36				3/4	18	3 3/4	3		1 1/2	8 1/4	22 1/2	36	25 1/2	11 3/4								45			7.03	8.79	.81	1.05

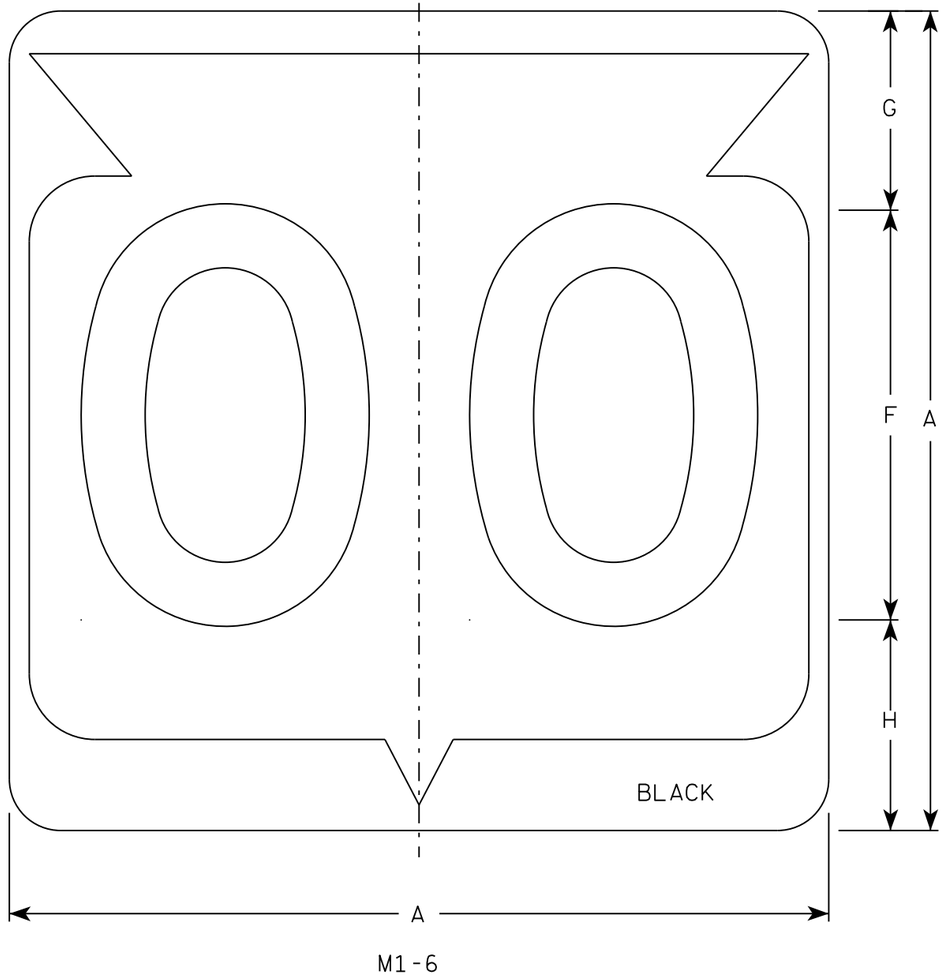
INTERSTATE ROUTE MARKER
M1-1 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 08/23/05 PLATE NO. M1-1.8

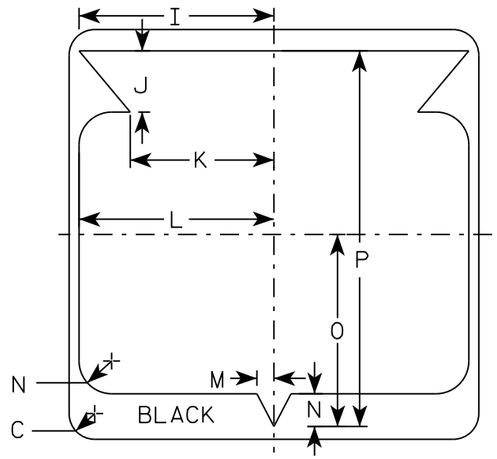
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 298	E



M1-6

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - D except 3 number signs Series C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24		1 1/2			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
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
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
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

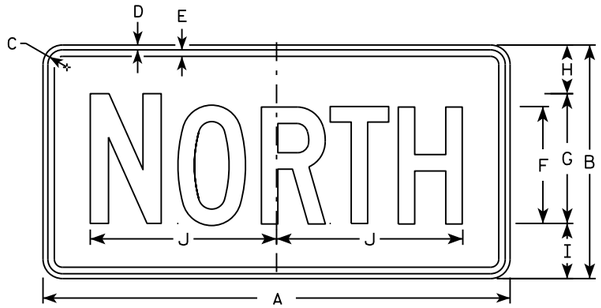
STATE ROUTE MARKER M1-6 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

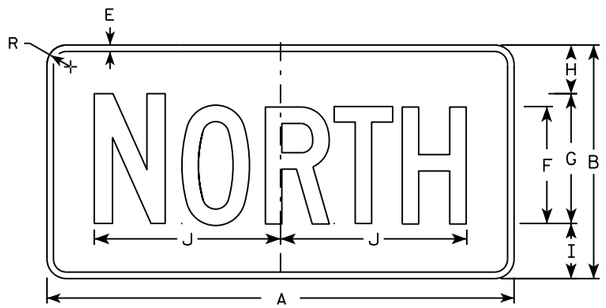
APPROVED Matthew R Rauch for State Traffic Engineer

DATE 3/16/18 PLATE NO. M1-6.10

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 299 | E



M3-1
MM3-1
MP3-1



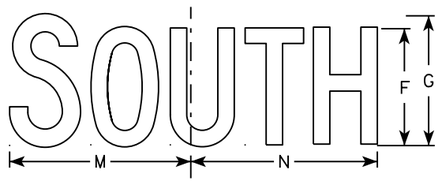
MB3-1
MK3-1
MN3-1



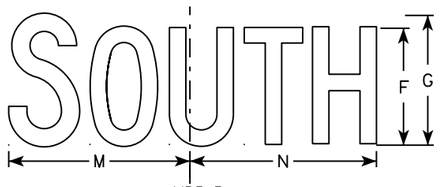
M3-2
MM3-2
MP3-2



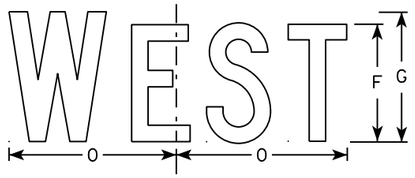
MB3-2
MK3-2
MN3-2



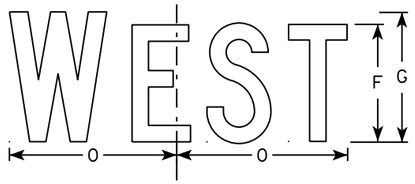
M3-3
MM3-3
MP3-3



MB3-3
MK3-3
MN3-3



M3-4
MM3-4
MP3-4



MB3-4
MK3-4
MN3-4

NOTES

1. All Signs Type II - Type H
2. Color:
   Background - See note 5
   Message - See note 5
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. M3-1 thru M3-4 Background - White
   Message - Black
   MB3-1 thru MB3-4 Background - Blue
   Message - White
   MK3-1 thru MK3-4 Background - Green
   Message - White
   MM3-1 thru MM3-4 Background - White
   Message - Green
   MN3-1 thru MN3-4 Background - Brown
   Message - White
   MP3-1 thru MP3-4 Background - White
   Message - Blue
6. Note the first letter of each direction is larger than the remainder of the message.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	12	1 1/8	3/8	3/8	6	7	2 1/4	2 3/4	10 1/4	7 7/8	8 3/8	10 1/4	9 3/4	8 3/4			1 1/2									2.00
3	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5
4	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5
5	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5

STANDARD SIGNS
M3-1 thur M3-4
SERIES

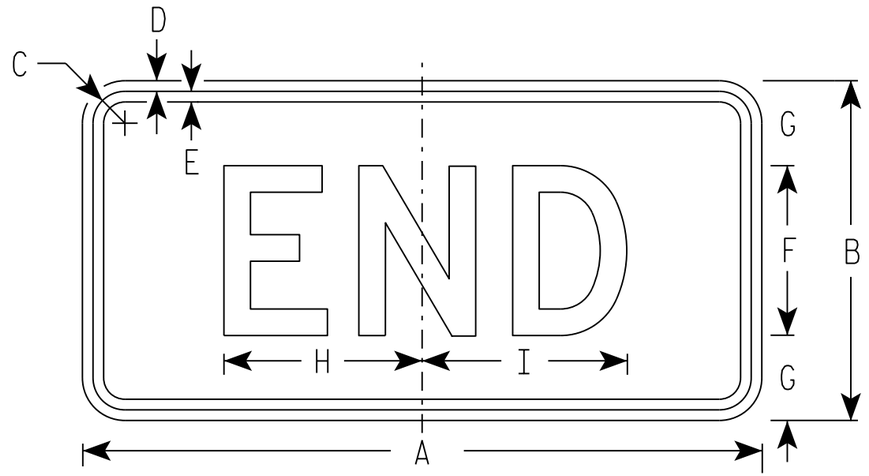
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew P Rauch for State Traffic Engineer

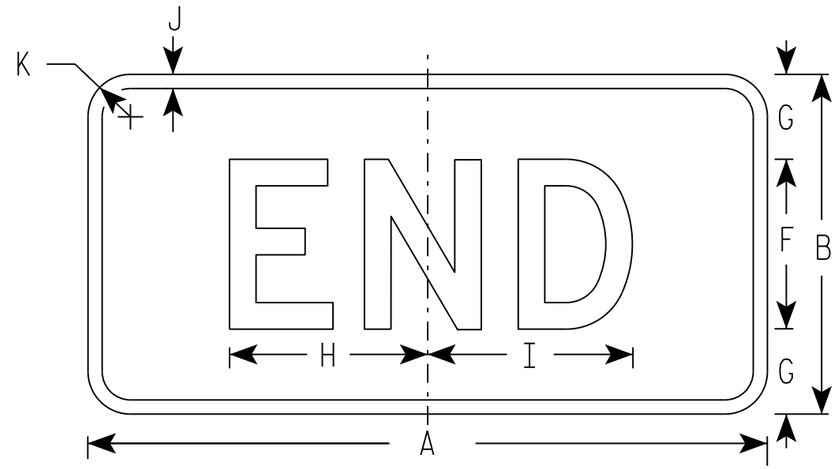
DATE 10/15/15 PLATE NO M3-1.14

PROJECT NO: | HWY: | COUNTY: | SHEET NO: E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\M31.DGN PLOT DATE : 01-DEC-2015 17:54 PLOT BY : $$ plotuser $$ PLOT NAME : PLOT SCALE : 11.675051:1.000000



M4-6
MM4-6
MP4-6



MB4-6
MK4-6
MN4-6
MR4-6

NOTES

1. Sign is Type II - Type H
2. Color:
   Background - See note 5
   Message - See note 5
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. M4-6 Background - White
   Message - Black

   MB4-6 Background - Blue
   Message - White

   MK4-6 Background - Green
   Message - White

   MM4-6 Background - White
   Message - Green

   MN4-6 Background - Brown
   Message - White

   MP4-6 Background - White
   Message - Blue

   MR4-6 Background - Brown
   Message - Yellow

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	12	1 1/8	3/8	3/8	6	3	7	7 1/4	1/2	1 1/2																2.00
3	36	18	1 1/8	3/8	1/2	9	4 1/2	12	11 7/8	1/2	1 1/2																4.5
4	36	18	1 1/8	3/8	1/2	9	4 1/2	12	11 7/8	1/2	1 1/2																4.5
5	36	18	1 1/8	3/8	1/2	9	4 1/2	12	11 7/8	1/2	1 1/2																4.5

STANDARD SIGN
M4-6

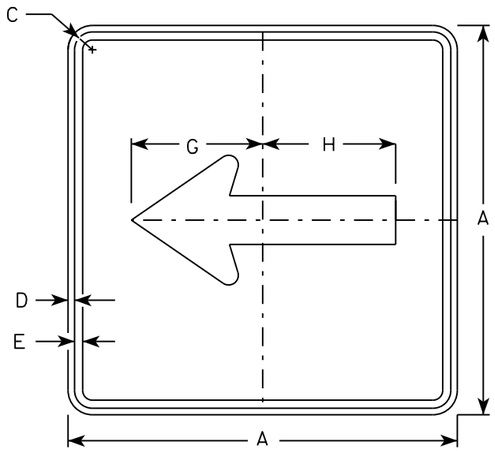
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

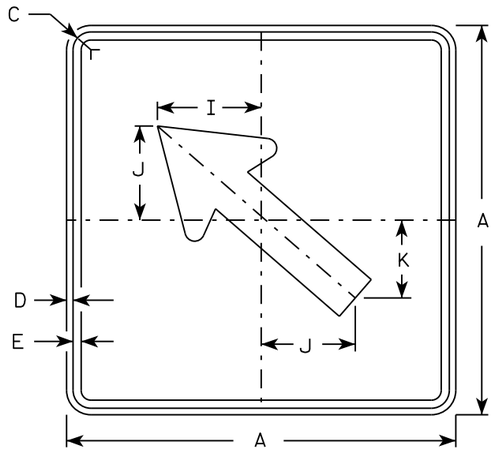
DATE 10/15/15 PLATE 301 '14-7.9

PROJECT NO: | HWY: | COUNTY: | SHEET NO: E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\M46.DGN PLOT DATE : 01-DEC-2015 17:55 PLOT BY : $$ plotuser $$ PLOT NAME : PLOT SCALE : 5.351066:1.000000



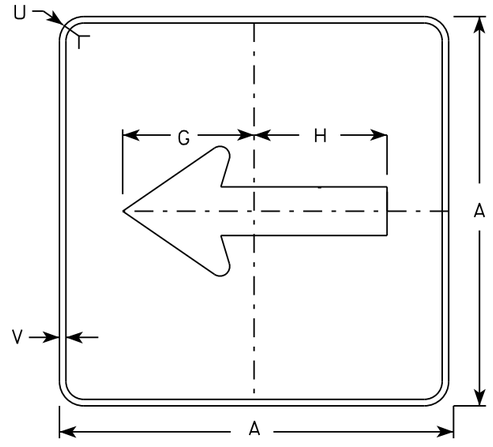
M6-1
MM6-1
MO6-1
MP6-1



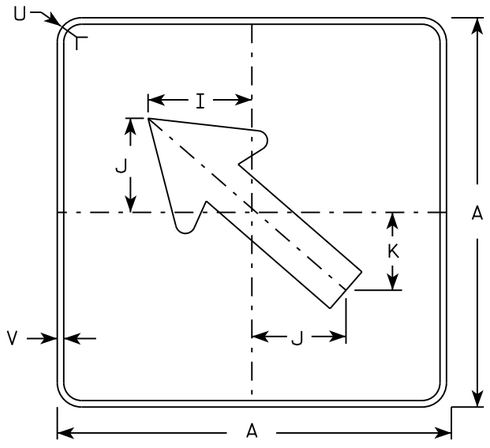
M6-2
MM6-2
MO6-2
MP6-2

NOTES

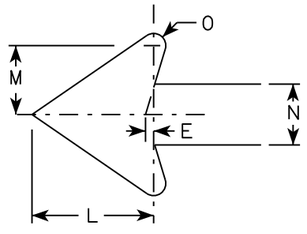
1. Signs are Type II - Type H except as Shown
2. Color:
   Background - See note 4
   Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. M6-1 and M6-2 Background - White
   Message - Black
   MB6-1 and MB6-2 Background - Blue
   Message - White
   MK6-1 and MK6-2 Background - Green
   Message - White
   MM6-1 and MM6-2 Background - White
   Message - Green
   MN6-1 and MN6-2 Background - Brown
   Message - White
   MO6-1 and MO6-2 Background - Orange - Type F Reflective
   Message - Black
   MP6-1 and MP6-2 Background - White
   Message - Blue
   MR6-1 and MR6-2 Background - Brown
   Message - Yellow



MB6-1
MK6-1
MN6-1
MR6-1



MB6-2
MK6-2
MN6-2
MR6-2



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	21		1 1/8	3/8	3/8		7 1/2	7 1/8	5 5/8	5	4 1/4	5 1/4	3	2 5/8	1/2						1 1/2	1/2						3.06
3	30		1 3/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2						6.25
4	30		1 3/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2						6.25
5	30		1 3/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2						6.25

STANDARD SIGN
M6-1 & M6-2
SERIES

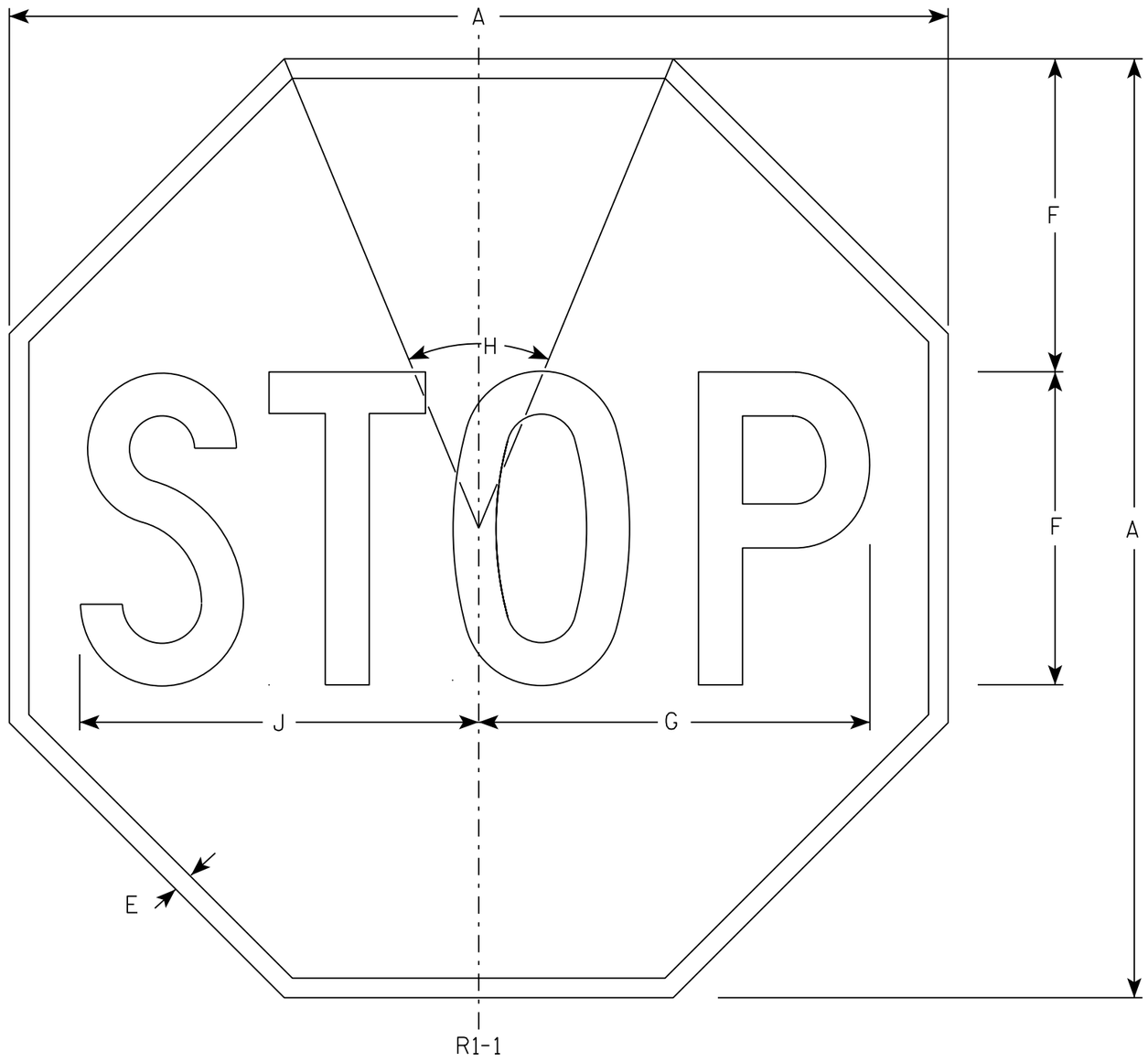
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/15/15 PLATE 302 M6-1.15

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\M61.DGN PLOT DATE : 01-DEC-2015 17:57 PLOT BY : $$ plotuser $$ PLOT NAME : PLOT SCALE : 11.675051:1.000000



NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Red
   Message - White
3. Message Series - C

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30				5/8	10	12 1/2	45°		12 3/4																	5.18
2S	30				5/8	10	12 1/2	45°		12 3/4																	5.18
2M	36				3/4	12	15	45°		15 3/8																	7.46
3	36				3/4	12	15	45°		15 3/8																	7.46
4	48				1	16	20	45°		20 1/2																	13.25
5	48				1	16	20	45°		20 1/2																	13.25
6	18				3/8	6	7 3/4	45°		7 3/4																	1.86
7	12				1/4	4	5	45°		5 1/8																	0.78

STANDARD SIGN

R1-1

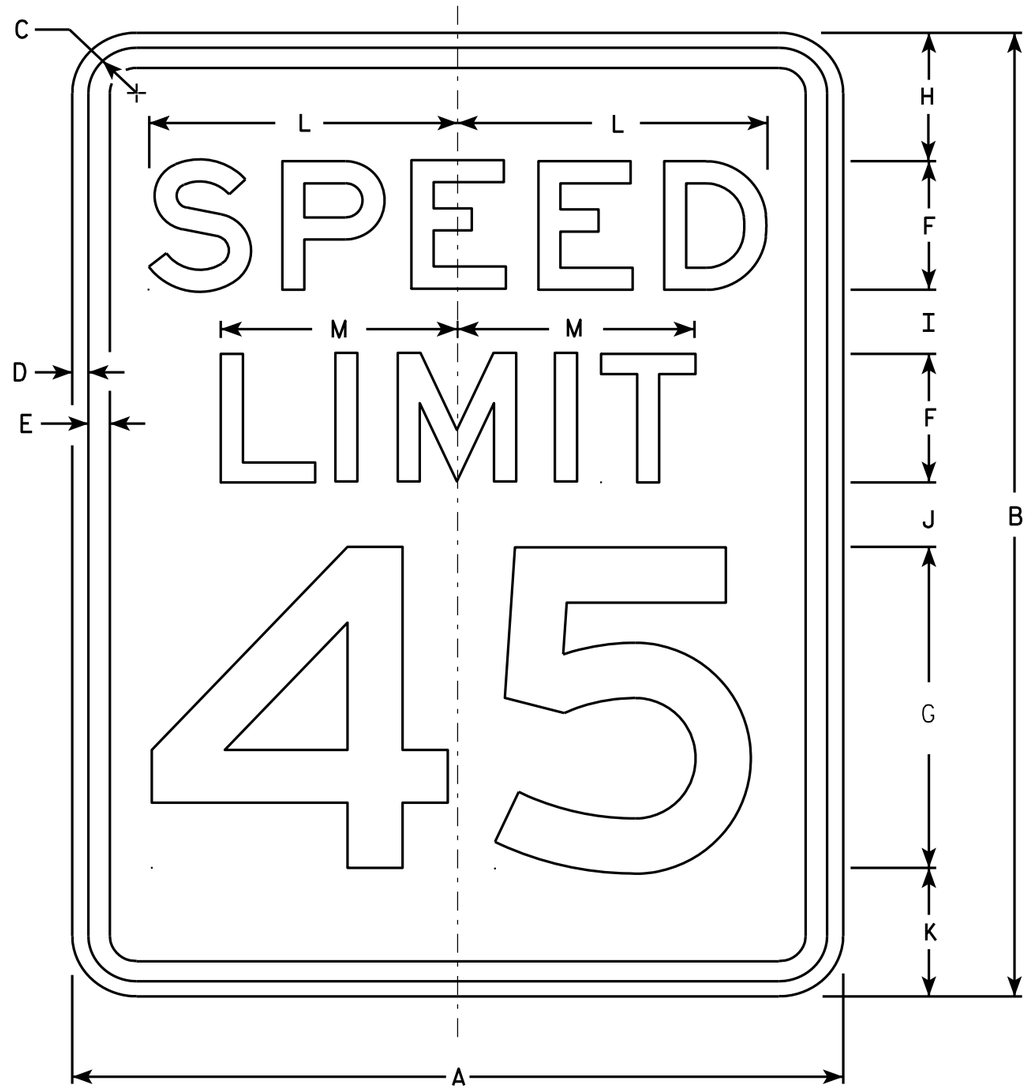
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch

for State Traffic Engineer

DATE 11/12/15 PLATE NO. R1-1.13

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 303	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

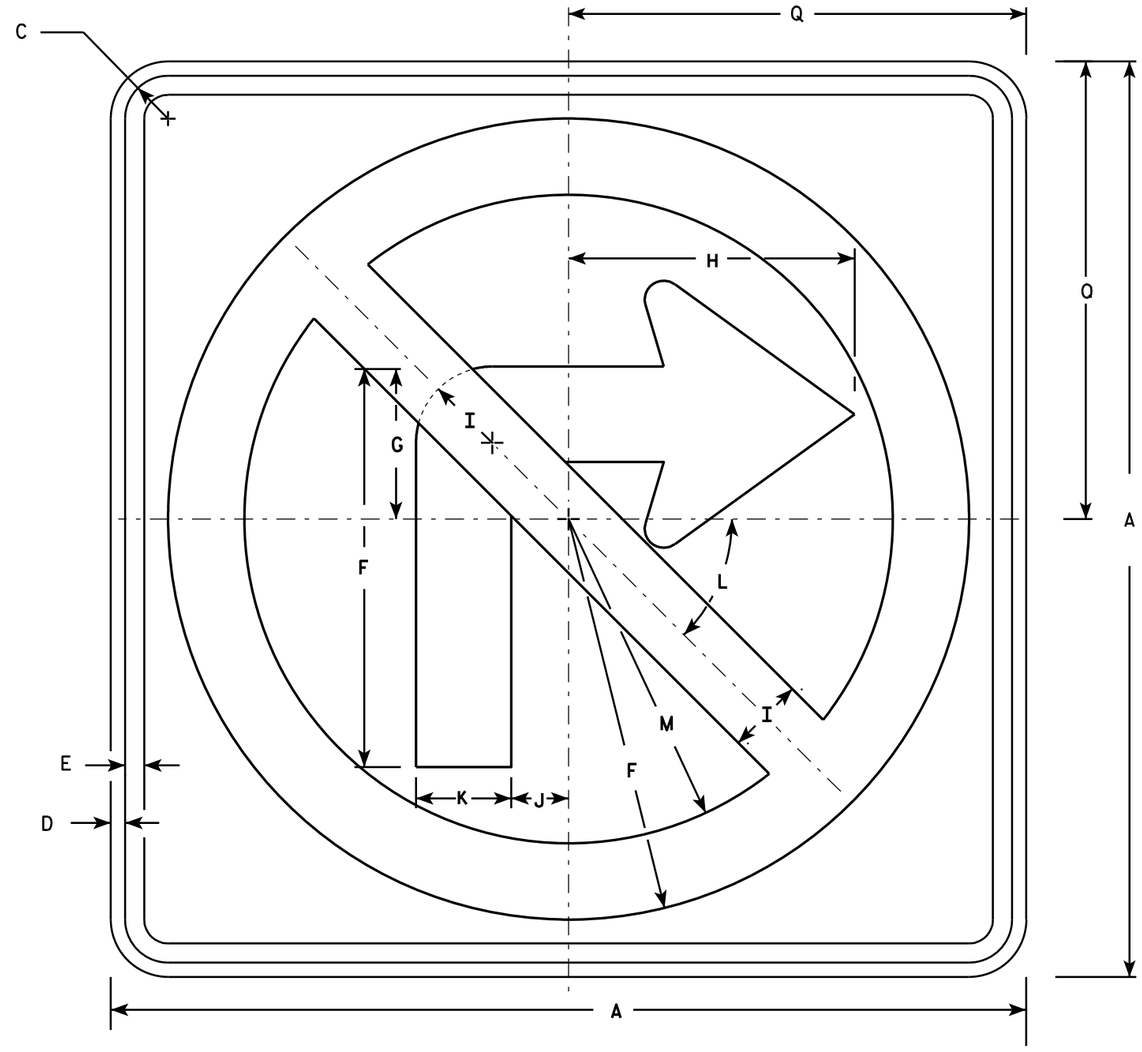
STANDARD SIGN
R2-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/26/10 PLATE NO. R2-1.13

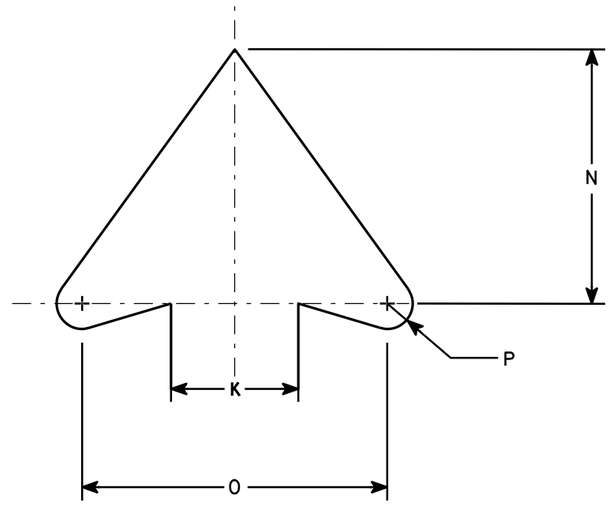
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 304 | E



R3-1

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. Border & Arrow are non reflective black, the circle with diagonal bar is reflective red.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/8	3/8	1/2	10 1/2	4	7 1/2	2	1 1/2	2 1/2	45	8 1/2	5	6	1/2	12										4.0
2S	24		1 1/8	3/8	1/2	10 1/2	4	7 1/2	2	1 1/2	2 1/2	45°	8 1/2	5	6	1/2	12										4.0
2M	36		1 5/8	5/8	3/4	15 3/4	6	11 1/4	3	2 1/4	3 3/4	45	12 3/4	7 1/2	9	3/4	18										9.0
3	36		1 5/8	5/8	3/4	15 3/4	6	11 1/4	3	2 1/4	3 3/4	45	12 3/4	7 1/2	9	3/4	18										9.0
4	36		1 5/8	5/8	3/4	15 3/4	6	11 1/4	3	2 1/4	3 3/4	45°	12 3/4	7 1/2	9	3/4	18										9.0
5	48		2 1/4	3/4	1	21	8	15	4	3	5	45°	17	10	12	1	24										16.0

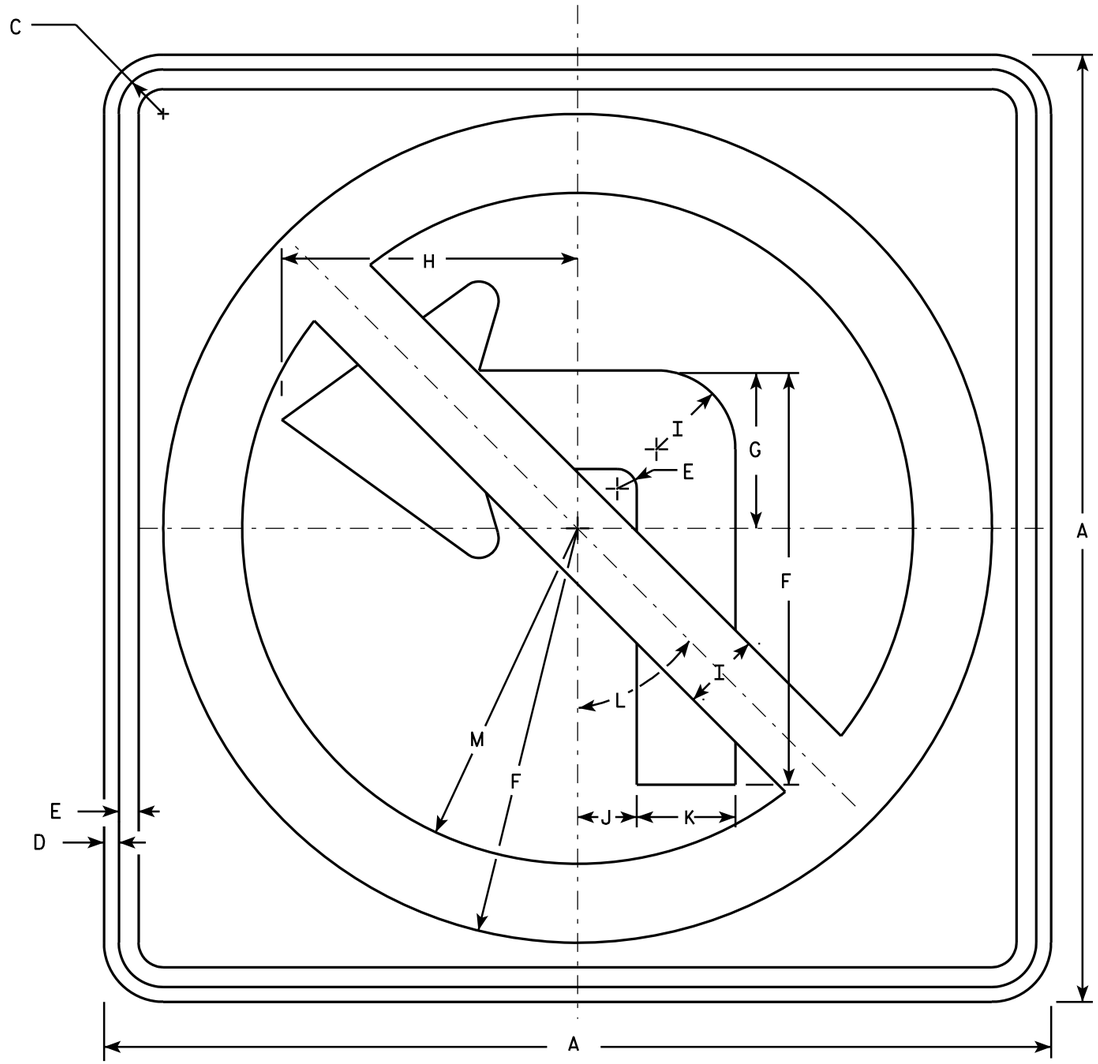
STANDARD SIGN
R3-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/08/10 PLATE NO. R3-1.5

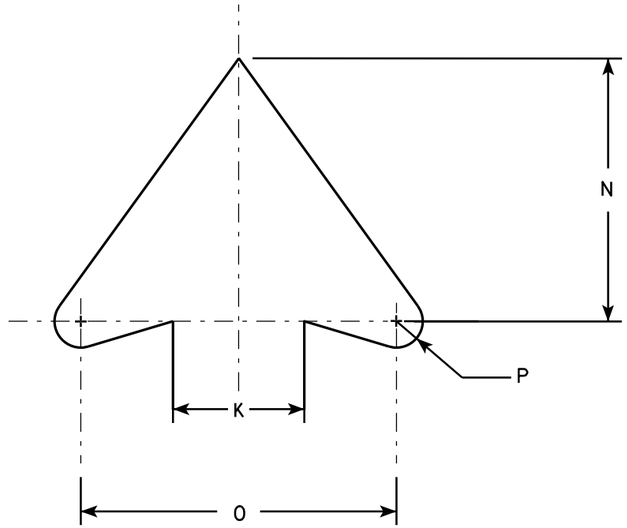
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 305	E



R3-2

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. Border & Arrow are non reflective black, the circle with diagonal bar is reflective red.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/8	3/8	1/2	10 1/2	4	7 1/2	2	1 1/2	2 1/2	45°	8 1/2	5	6	1/2											4.0
2S	24		1 1/8	3/8	1/2	10 1/2	4	7 1/2	2	1 1/2	2 1/2	45°	8 1/2	5	6	1/2											4.0
2M	36		1 5/8	5/8	3/4	15 3/4	6	11 1/4	3	2 1/4	3 3/4	45°	12 3/4	7 1/2	9	3/4											9.0
3	36		1 5/8	5/8	3/4	15 3/4	6	11 1/4	3	2 1/4	3 3/4	45°	12 3/4	7 1/2	9	3/4											9.0
4	36		1 5/8	5/8	3/4	15 3/4	6	11 1/4	3	2 1/4	3 3/4	45°	12 3/4	7 1/2	9	3/4											9.0
5	48		2 1/4	3/4	1	21	8	15	4	3	5	45°	17	10	12	1											16.0

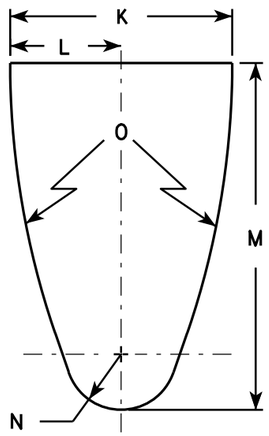
STANDARD SIGN
R3-2

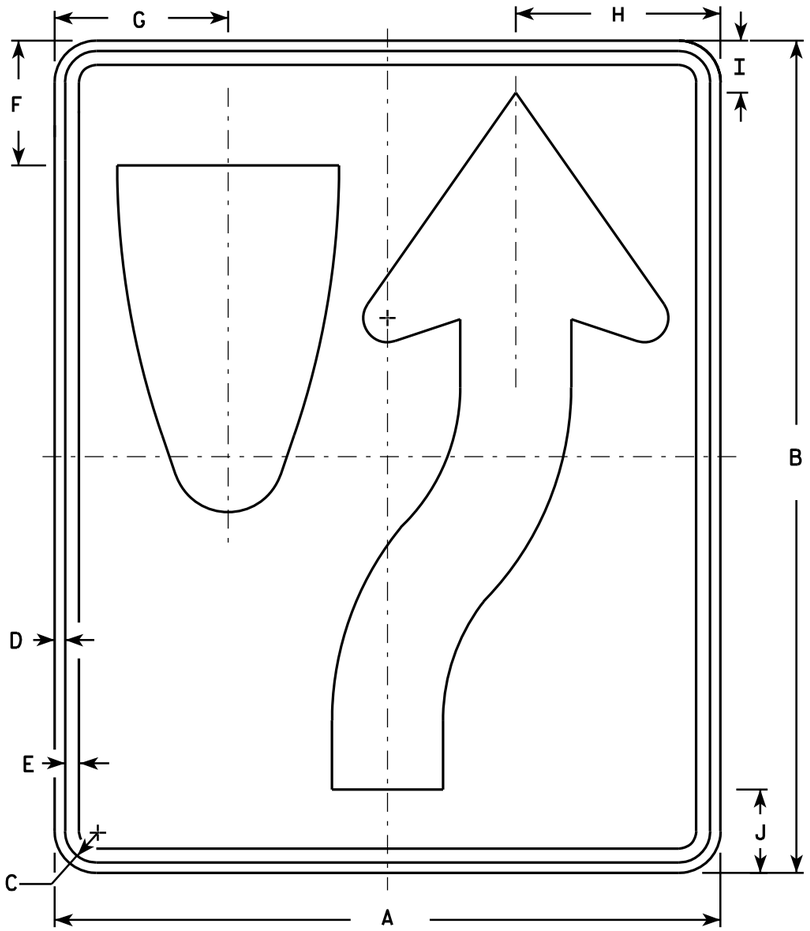
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/08/10 PLATE NO. R3-2.10

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 306	E

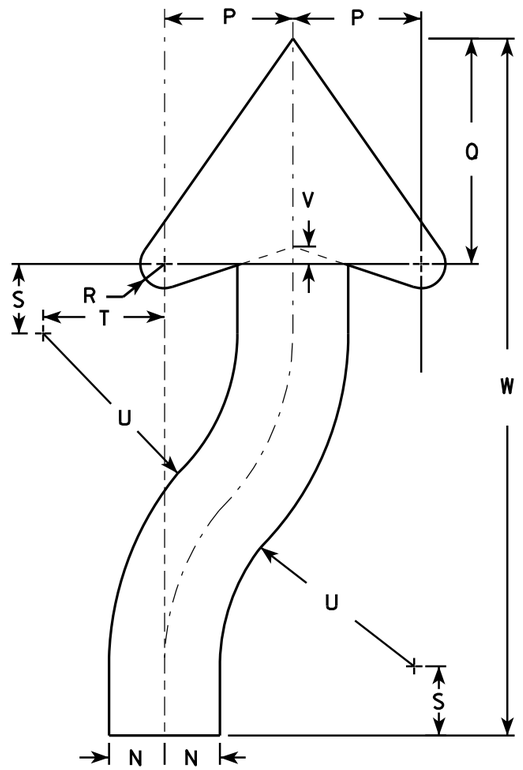




R4-7

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition. material is plywood but borders shall be rounded
2. Color:
   Background - White
   Message - Black
3. Corners may be square or rounded when base as shown. When base material is metal, the corners and borders shall be rounded.
4. R4-8 is the same as R4-7 except Legend is reversed.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	18	24	1 1/8	3/8	1/2	3 3/8	4 3/4	5 1/2	1 3/8	2 1/4	6	3	9 3/8	1 1/2	22 1/2	3 1/2	6 1/8	5/8	1 7/8	3 1/4	6 3/4	1/2	20 3/8				3.0
2S	24	30	1 1/8	3/8	1/2	4 1/2	6 1/4	7 3/8	1 7/8	3	8	4	12 1/2	2	30	4 5/8	8 1/8	7/8	2 1/2	4 3/8	9	5/8	25 1/8				5.0
2M	24	30	1 1/8	3/8	1/2	4 1/2	6 1/4	7 3/8	1 7/8	3	8	4	12 1/2	2	30	4 5/8	8 1/8	7/8	2 1/2	4 3/8	9	5/8	25 1/8				5.0
3	36	48	1 3/4	1/2	5/8	6 3/4	9 3/8	11 1/8	2 7/8	4 1/2	12	6	18 3/4	3	45	6 7/8	12 1/4	1 1/4	3 3/4	6 5/8	13 1/2	1	40 3/4				12.0
4	36	48	1 3/4	1/2	5/8	6 3/4	9 3/8	11 1/8	2 7/8	4 1/2	12	6	18 3/4	3	45	6 7/8	12 1/4	1 1/4	3 3/4	6 5/8	13 1/2	1	40 3/4				12.0
5	48	60	2 1/4	3/4	1	9	12 1/2	14 3/4	3 3/4	6	16	8	25	4	60	9 1/4	16 1/4	1 5/8	5	8 3/4	18	1 1/4	50 1/4				20.0

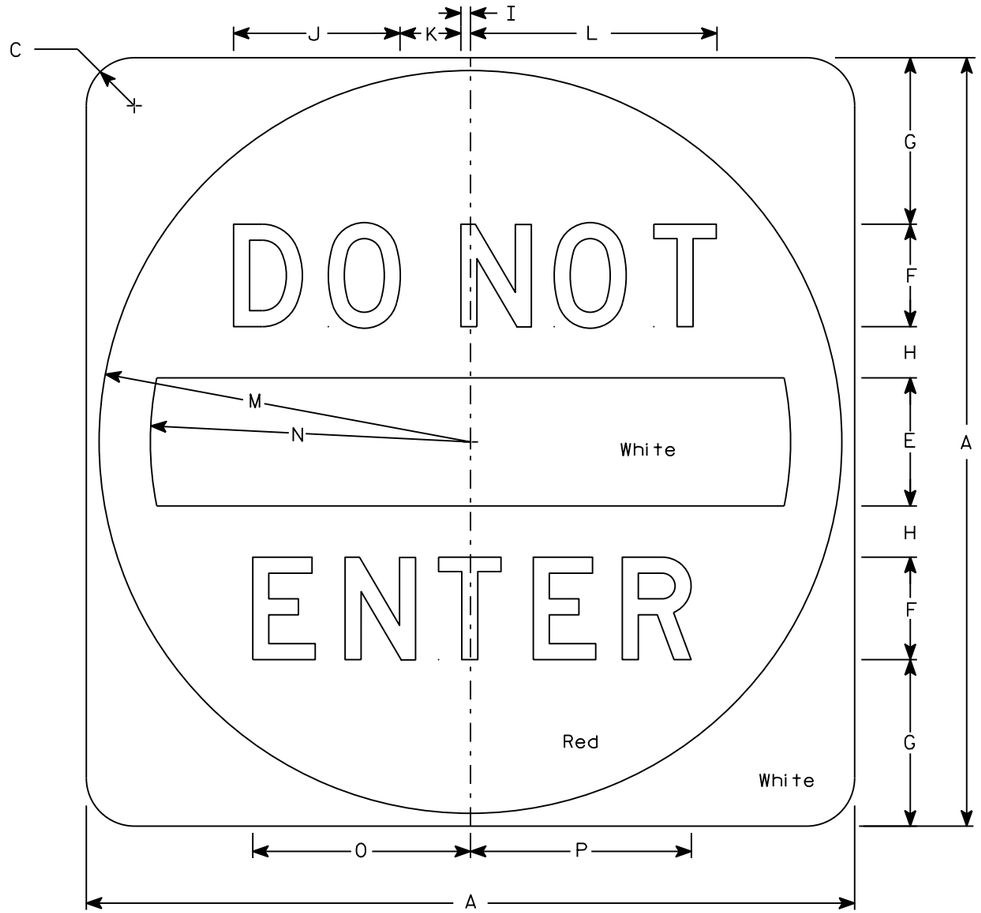
STANDARD SIGN
R4-7 & R4-8

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

DATE 3/25/2011 PLATE NO. R4-7.8

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 307	E



R5-1

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - See detail
   Message - White
3. Message Series - D

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30		1 7/8		5	4	6 1/2	2	3/8	6 1/2	2 3/8	9 5/8	14 1/2	12 1/2	8 1/2	8 5/8											6.25
2M	36		2 1/4		6	5	7 1/2	2 1/2	1/2	8 1/8	3	12 1/8	17 1/2	15	10 5/8	10 3/4											9.0
3	36		2 1/4		6	5	7 1/2	2 1/2	1/2	8 1/8	3	12 1/8	17 1/2	15	10 5/8	10 3/4											9.0
4	36		2 1/4		6	5	7 1/2	2 1/2	1/2	8 1/8	3	12 1/8	17 1/2	15	10 5/8	10 3/4											9.0
5	48		3		8	6	11	3	5/8	9 3/4	3 5/8	14 1/2	23 1/2	20	12 3/4	12 7/8											16.0

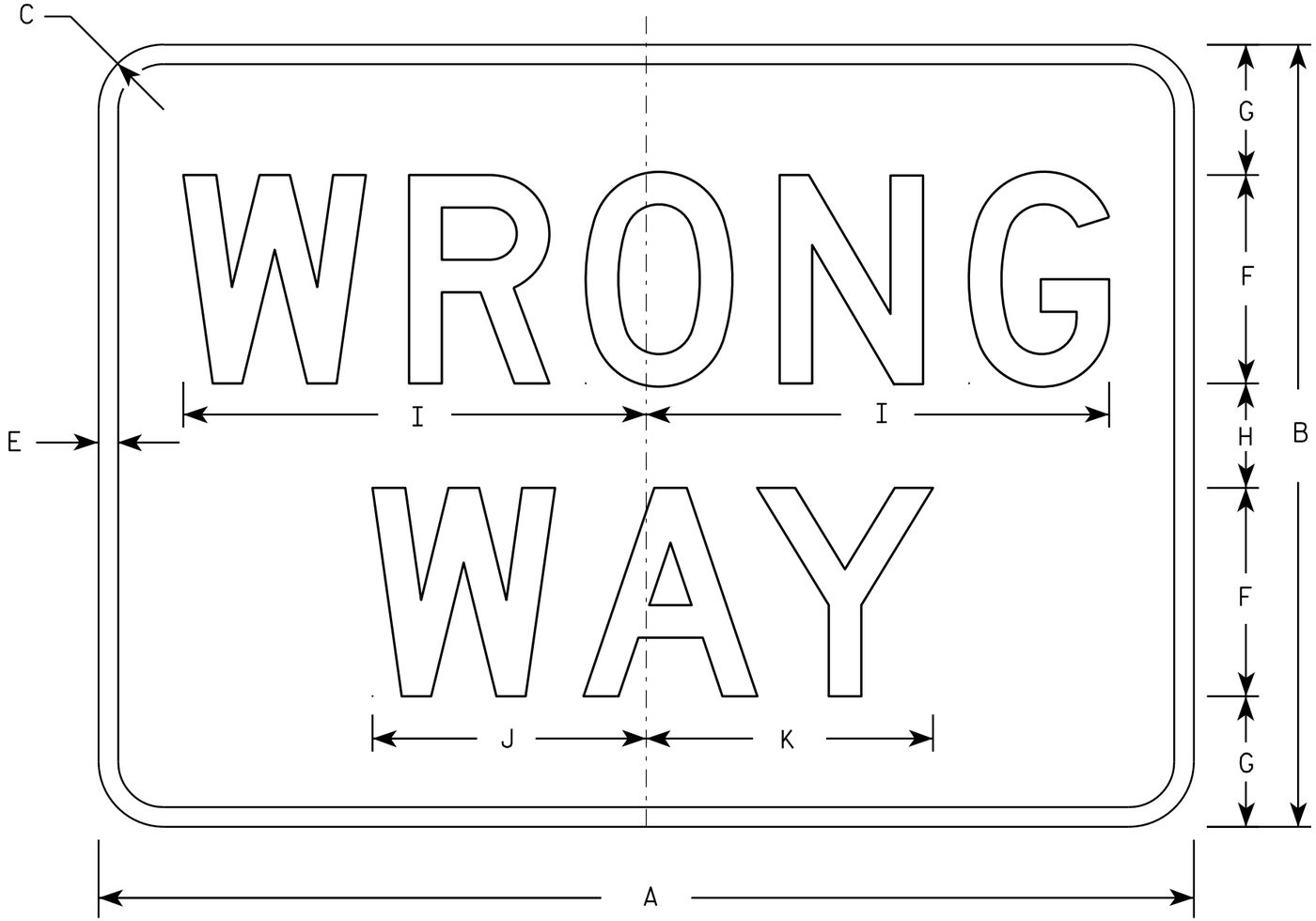
STANDARD SIGN
R5-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/15/18 PLATE NO. R5-1.16

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 308 | E



R5-1A

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Red
   Message - White
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30	18	1 1/2		1/2	5	3	2	11	6 1/2	6 7/8																3.75
2S	36	24	2		5/8	6	4 1/2	3	13 1/4	7 7/8	8 1/4																6.00
2M	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75
3	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75
4	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75
5	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75

STANDARD SIGN
R5-1A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/17/10 PLATE NO. R5-1A.2

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 309	E



R5-57

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - Lines 1, 2, and 5 are Series C.
   Lines 3 and 4 are Series B.
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S																											
2M																											
3																											
4	36		1 5/8	5/8	3/4	4	3	2	3 1/2	14 1/4	14 7/8	11	11 1/2	4 3/4	1 3/4	9		1 3/8	10	11	2 1/2	1 3/4	15 1/2	13	13 5/8		9.0
5	36		1 5/8	5/8	3/4	4	3	2	3 1/2	14 1/4	14 7/8	11	11 1/2	4 3/4	1 3/4	9		1 3/8	10	11	2 1/2	1 3/4	15 1/2	13	13 5/8		9.0

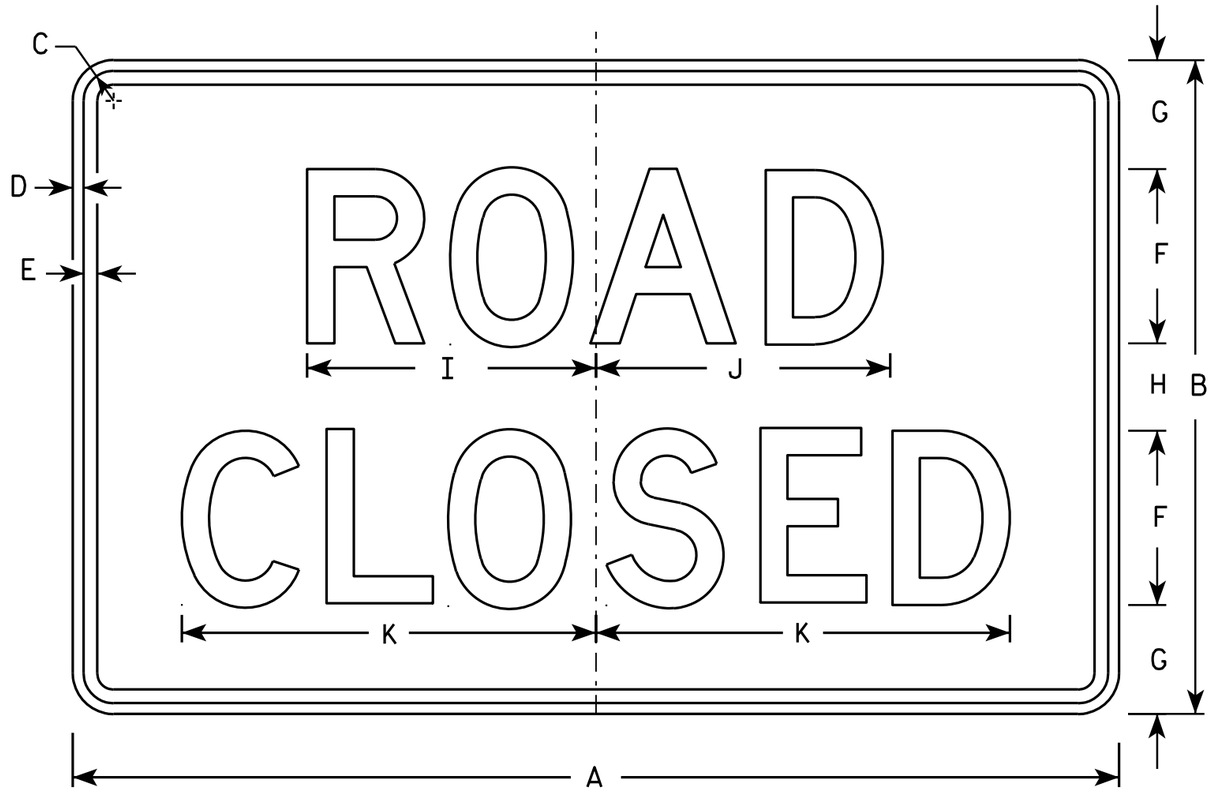
STANDARD SIGN
R5-57

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/29/2011 PLATE NO. R5-57.10

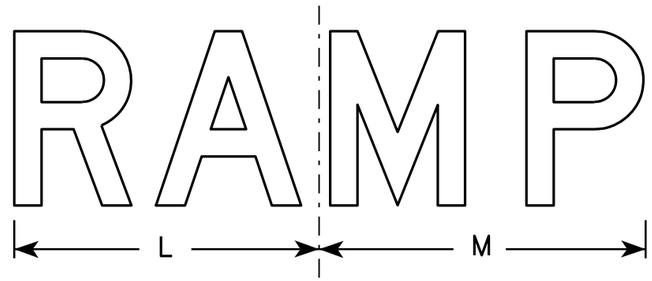
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 310 | E



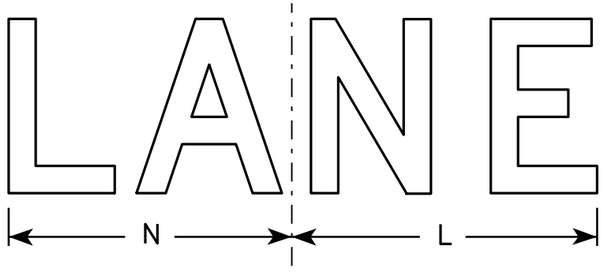
R11-2

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Modify the message as required.



R11-2R



R11-2L

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13													10.0
2M	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13													10.0
3	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13													10.0
4	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13													10.0
5	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13													10.0

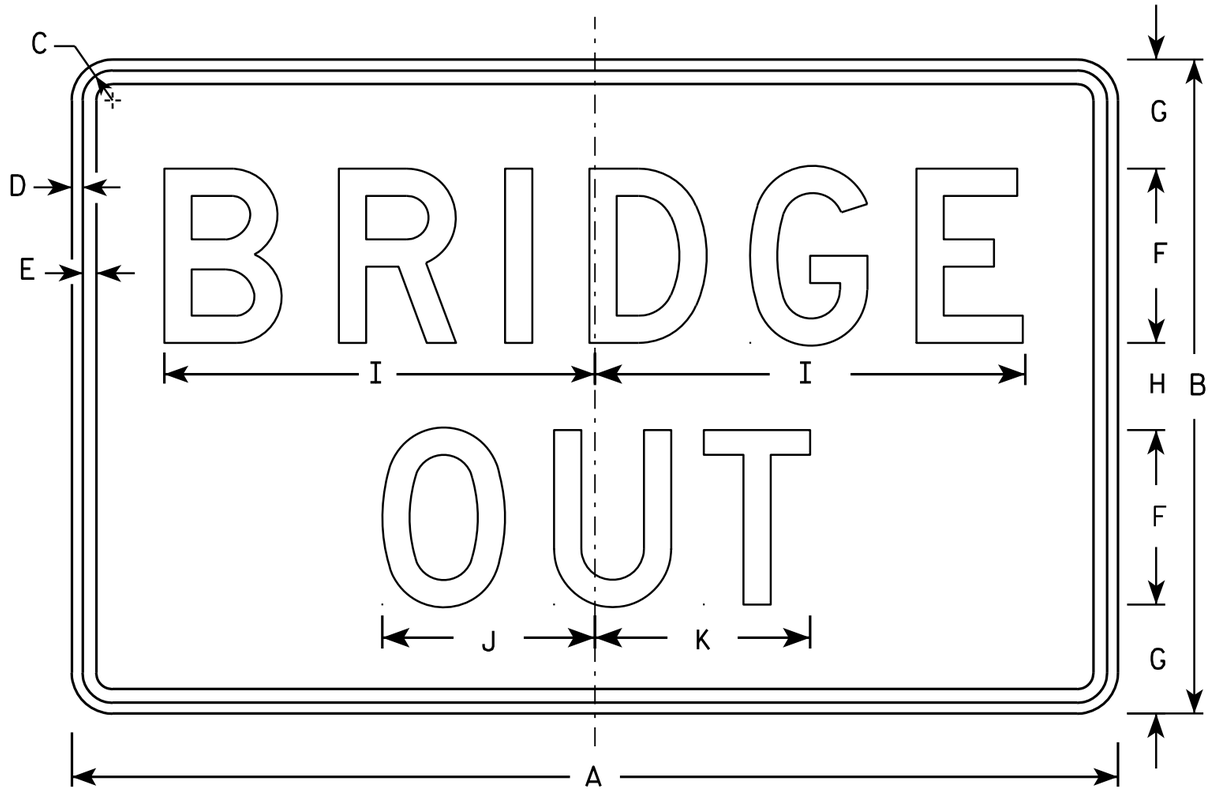
STANDARD SIGN
R11-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/1/11 PLATE NO. R11-2.10

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 311 | E



R11-2B

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	30	1 3/8	1/2	5/8	8	5	4	19 3/4	9 3/4	9 7/8																10.0
2M	48	30	1 3/8	1/2	5/8	8	5	4	19 3/4	9 3/4	9 7/8																10.0
3	48	30	1 3/8	1/2	5/8	8	5	4	19 3/4	9 3/4	9 7/8																10.0
4	48	30	1 3/8	1/2	5/8	8	5	4	19 3/4	9 3/4	9 7/8																10.0
5	48	30	1 3/8	1/2	5/8	8	5	4	19 3/4	9 3/4	9 7/8																10.0

STANDARD SIGN
R11-2B

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

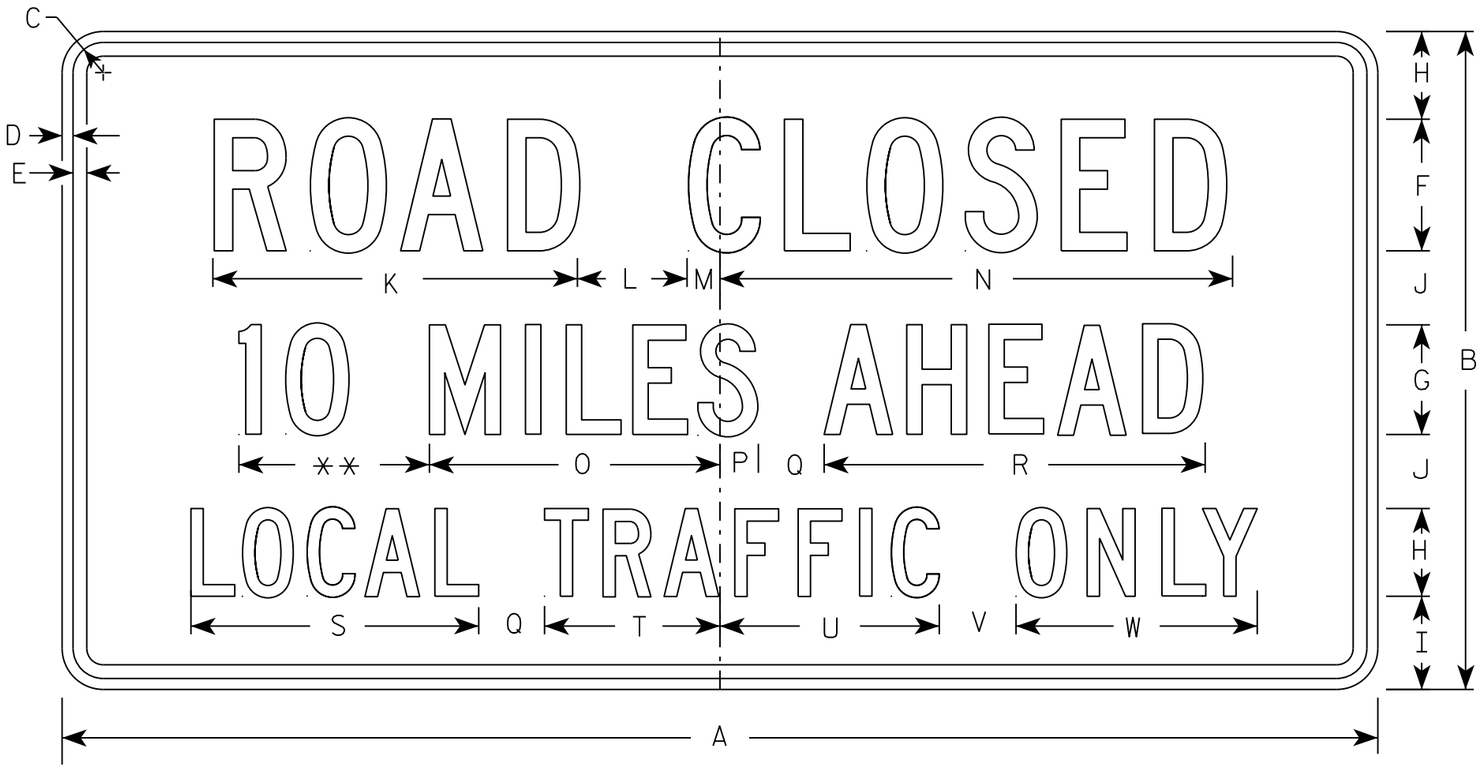
DATE 4/1/11 PLATE NO. R11-2B.2

PROJECT NO:

SHEET NO: 312 E

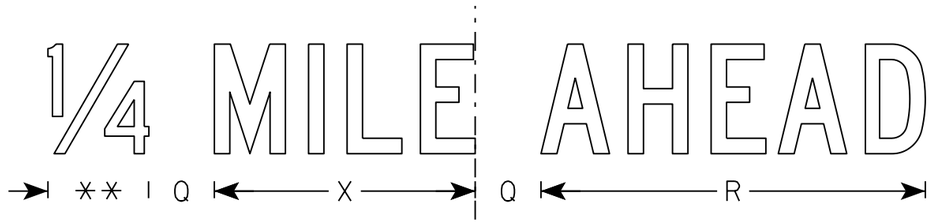
NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate numerals to nearest quarter mile and optically adjust spacing to achieve proper balance.



R11-3

** See Note 5



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36	18	1 3/8	1/2	5/8	4	3	2 1/2	2	2	11 1/8	3	1 1/8	15 1/4	8	1 1/2	2	10 3/4	8 3/8	4 3/4	6 1/2	2	6 3/4	7 1/8			4.5
2S	60	30	1 3/8	1/2	5/8	6	5	4	4 1/4	3 3/8	16 5/8	5	1 1/2	23	13 1/4	1 3/4	3	17 3/8	13 1/8	8	10	3 1/2	11	11 7/8			12.5
2M	60	30	1 3/8	1/2	5/8	6	5	4	4 1/4	3 3/8	16 5/8	5	1 1/2	23	13 1/4	1 3/4	3	17 3/8	13 1/8	8	10	3 1/2	11	11 7/8			12.5
3																											
4																											
5																											

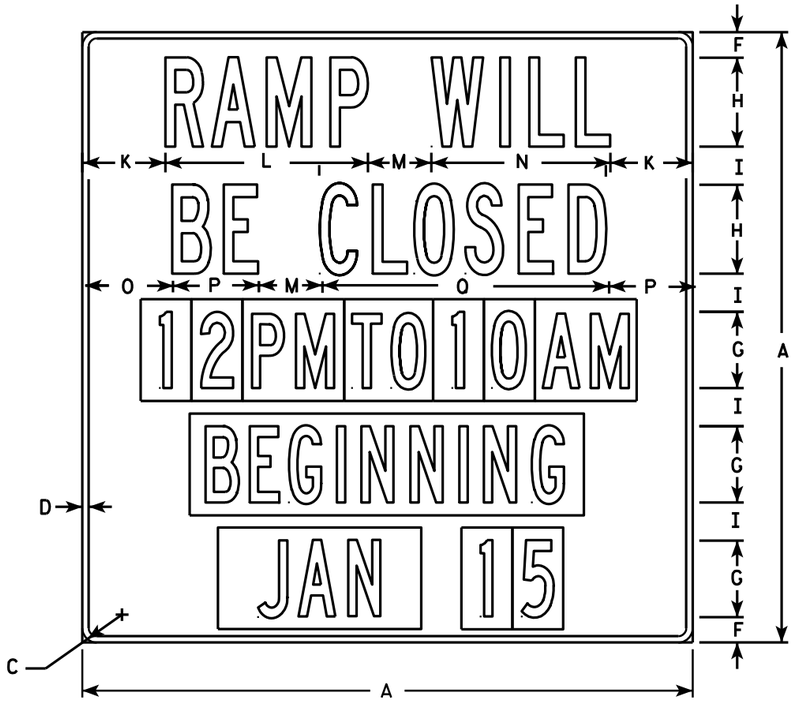
STANDARD SIGN
R11-3

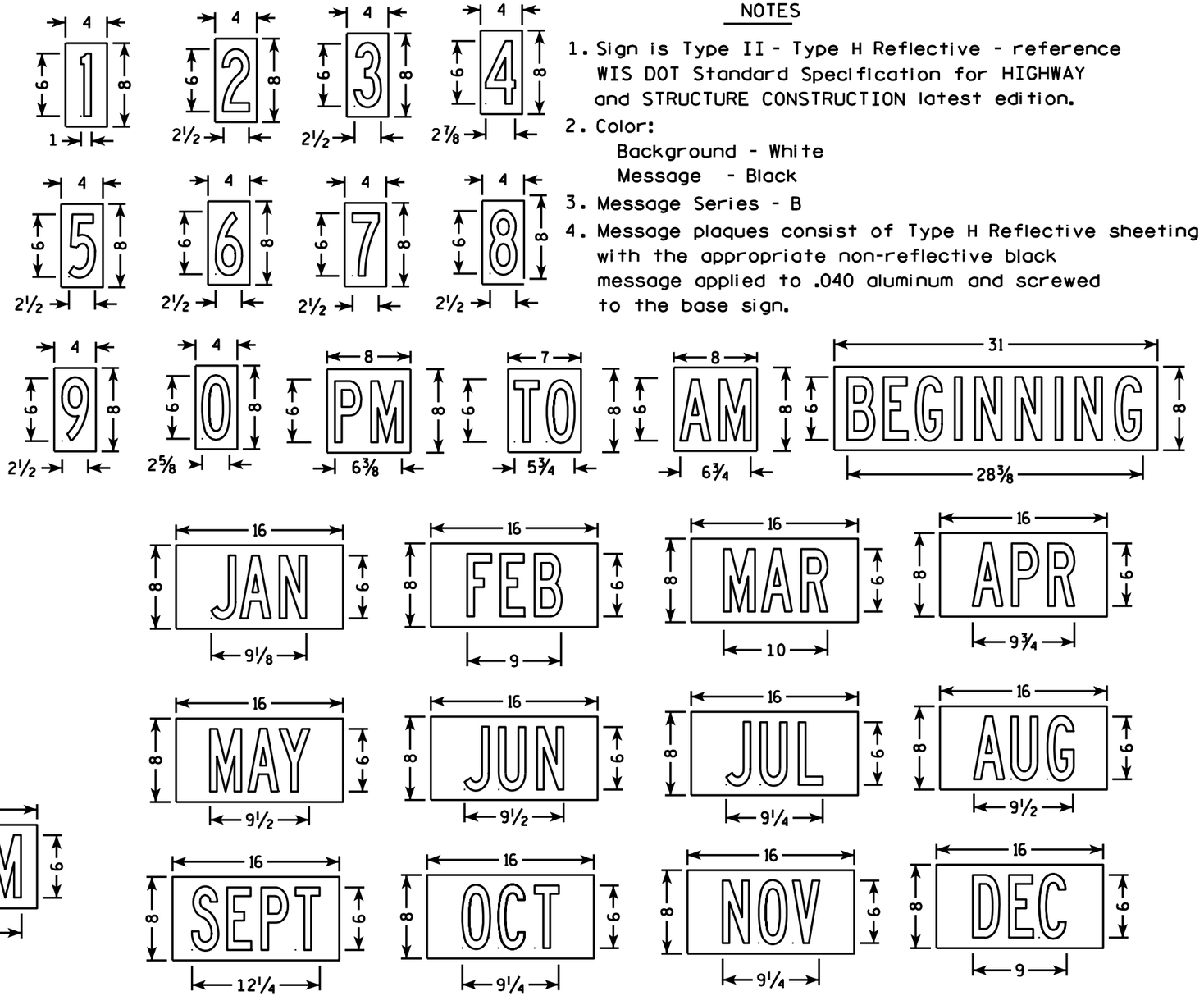
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/15/17 PLATE NO. R11-3.8

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 313	E





NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - B
4. Message plaques consist of Type H Reflective sheeting with the appropriate non-reflective black message applied to .040 aluminum and screwed to the base sign.

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		2 1/4	1/2		2	6	7	3		6 1/2	15 7/8	5	14 1/8	6 7/8	6 3/4	22 1/2										16.0
2M	48		2 1/4	1/2		2	6	7	3		6 1/2	15 7/8	5	14 1/8	6 7/8	6 3/4	22 1/2										16.0
3																											
4																											
5																											

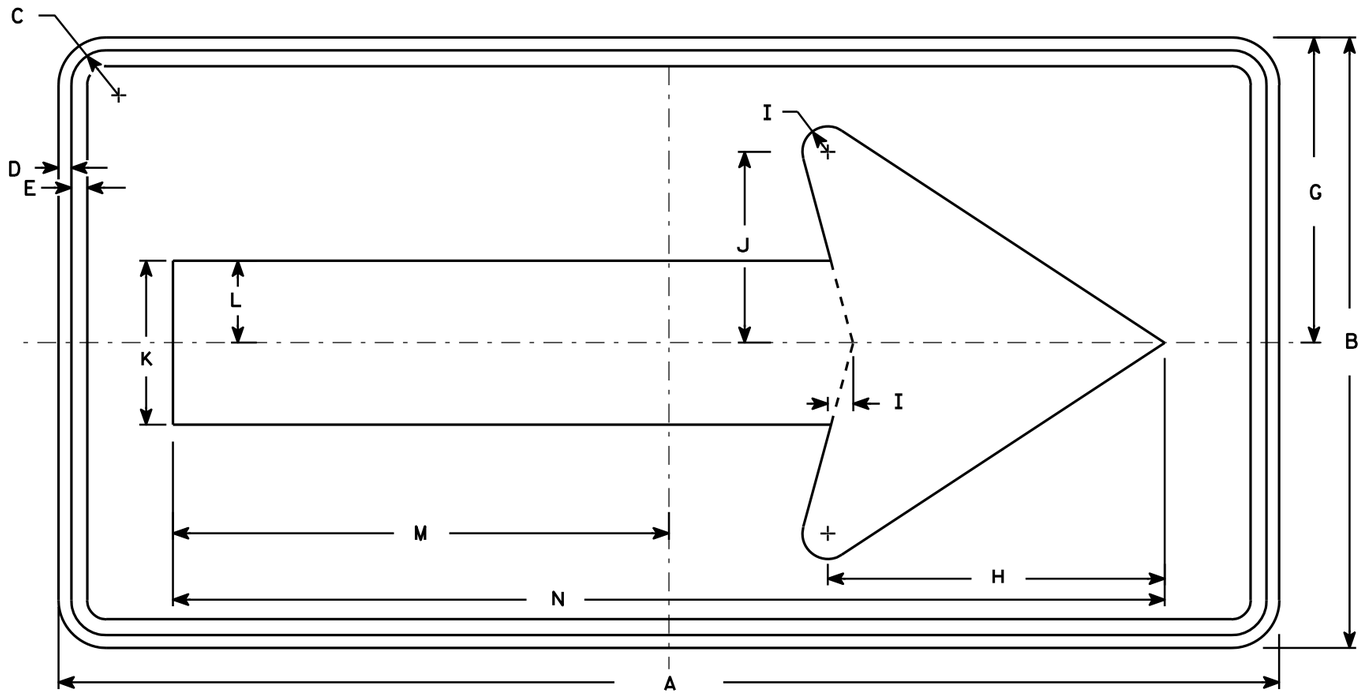
STANDARD SIGN
R11-51

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/1/11 PLATE NO. R11-51.4

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 314	E



W1-6

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - 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.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36	18	1 1/8	3/8	3/8		9	10	3/4	5 5/8	4 3/4	2 3/8	14 5/8	29 1/4													4.5
2S	48	24	1 3/8	1/2	5/8		12	13 1/4	1	7 1/2	6 1/2	3 1/4	19 1/2	39													8.0
2M	48	24	1 3/8	1/2	5/8		12	13 1/4	1	7 1/2	6 1/2	3 1/4	19 1/2	39													8.0
3	60	30	1 3/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5
4	60	30	1 3/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5
5	96	48	2 1/4	3/4	1		24	26 1/2	2	15	13	6 1/2	39	78													32.0

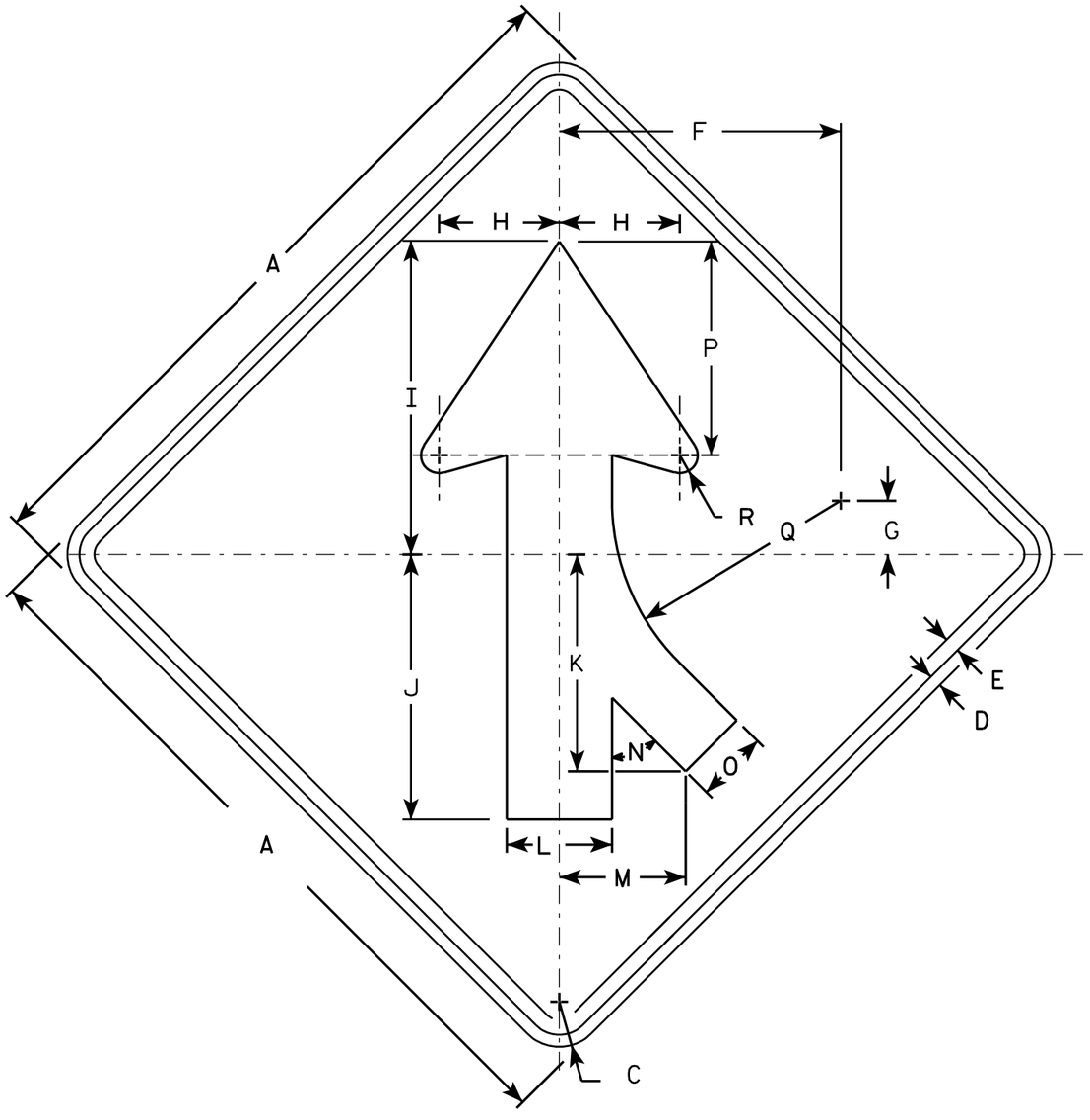
STANDARD SIGN
W1-6

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 6/7/10 PLATE NO. W1-6.8

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 315



W4-1 R

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. W4-1L is the same as W4-1R except the arrow is reversed along the vertical centerline.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30		1 3/8	1/2	5/8	11 5/8	2 1/2	5	13	11	9	4 3/8	5 1/4	45°	3	8 7/8	9 1/2	3/4									6.25
2S	36		1 5/8	5/8	3/4	14	2 3/4	6	15 3/4	13 1/4	10 1/4	5 1/4	6 3/8	45°	3 5/8	10 5/8	11 3/8	7/8									9.0
2M	36		1 5/8	5/8	3/4	14	2 3/4	6	15 3/4	13 1/4	10 1/4	5 1/4	6 3/8	45°	3 5/8	10 5/8	11 3/8	7/8									9.0
3	36		1 5/8	5/8	3/4	14	2 3/4	6	15 3/4	13 1/4	10 1/4	5 1/4	6 3/8	45°	3 5/8	10 5/8	11 3/8	7/8									9.0
4	48		2 1/4	3/4	1	18 3/4	3 5/8	8	20 1/2	17 1/2	14 3/8	7	8 3/8	45°	4 3/4	14 1/4	15 1/4	1 1/4									16.0
5	48		2 1/4	3/4	1	18 3/4	3 5/8	8	20 1/2	17 1/2	14 3/8	7	8 3/8	45°	4 3/4	14 1/4	15 1/4	1 1/4									16.0

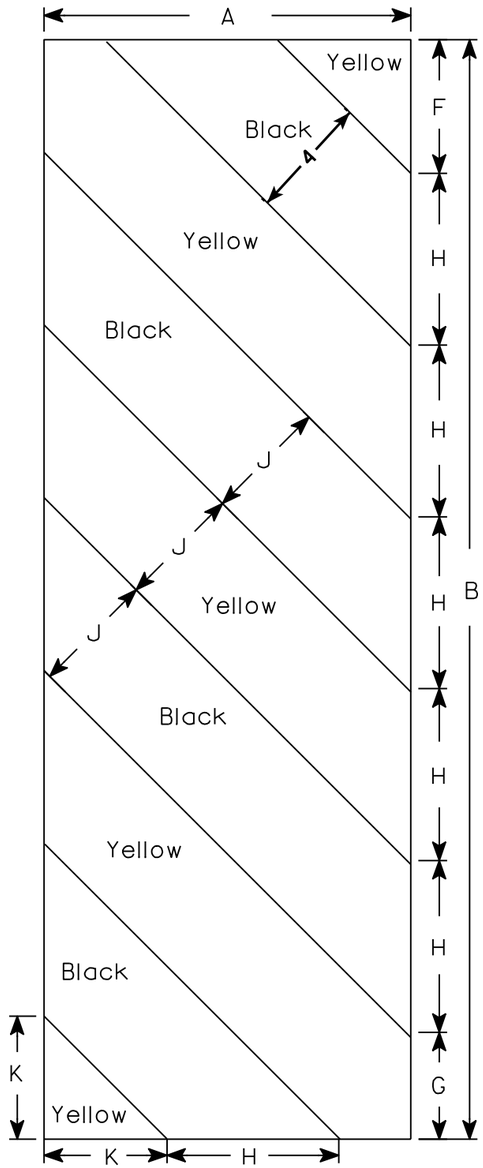
STANDARD SIGN
W4-1

WISCONSIN DEPT OF TRANSPORTATION

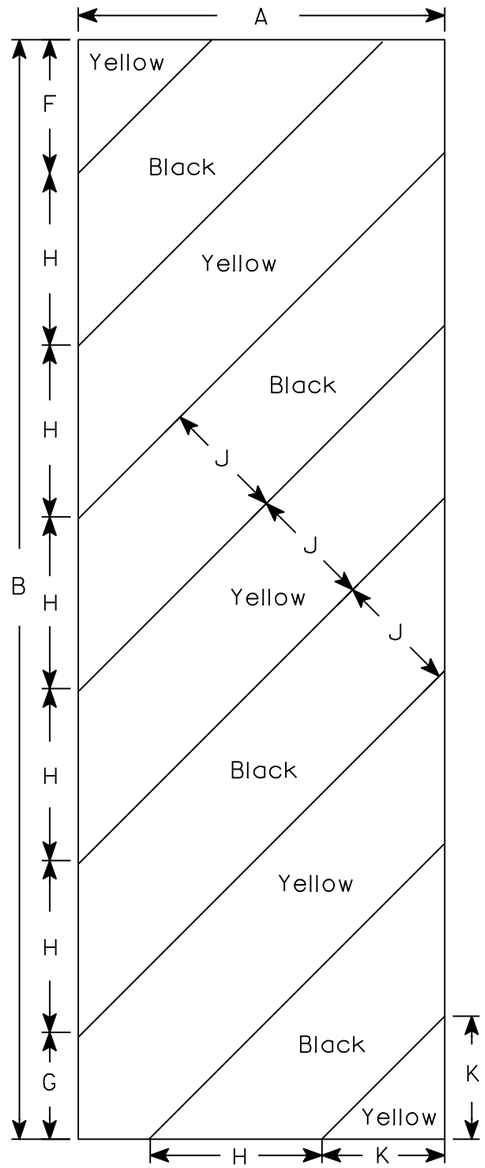
APPROVED Matthew R Rauch for State Traffic Engineer

DATE 03/12/13 PLATE NO. W4-1.14

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 316	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

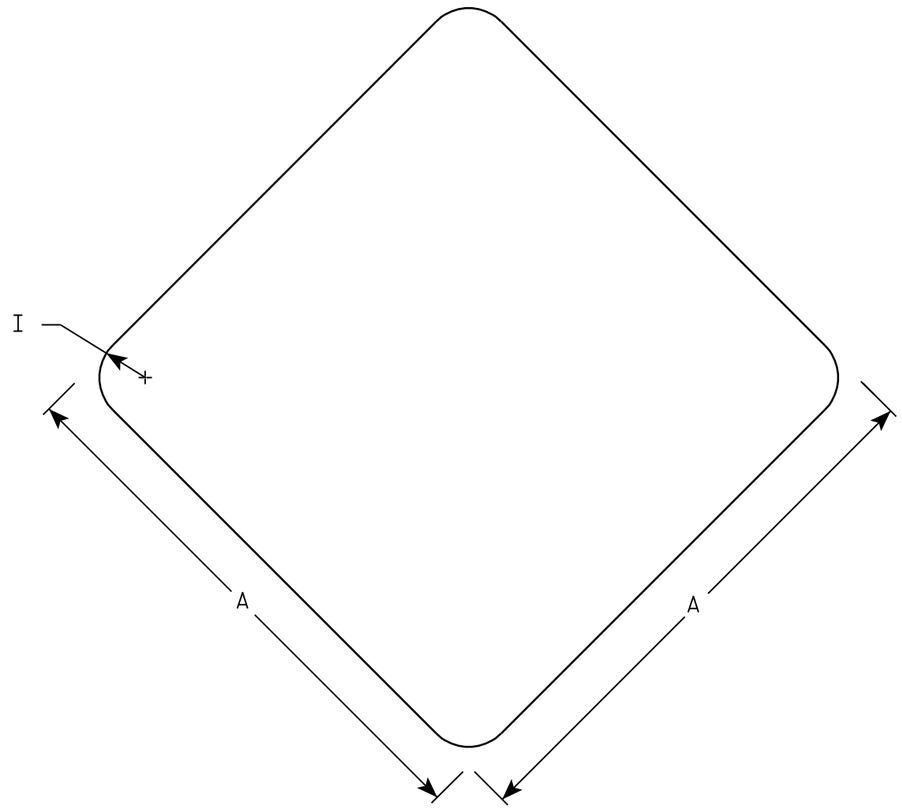
W5-52L & W5-52R

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: 317 | E



W5-54

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
3. Corners may be square or rounded when base material is plywood. When base material is metal the corners shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	12								1																		1.0
2S	18								1 ½																		2.25
2M	18								1 ½																		2.25
3																											
4																											
5																											

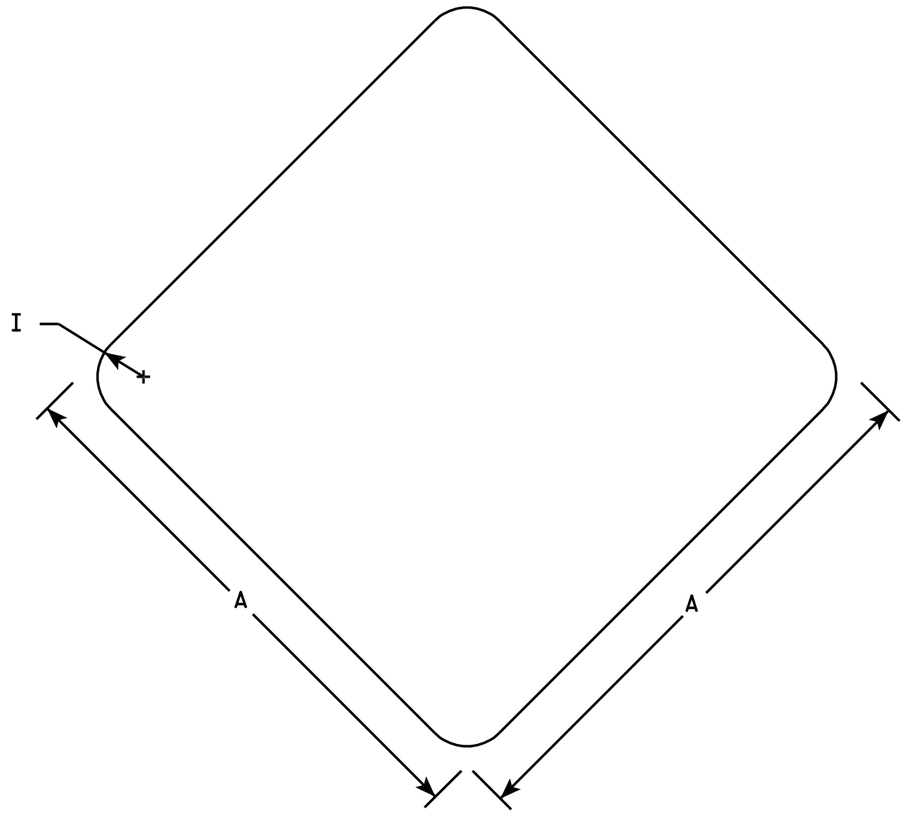
STANDARD SIGN
W5-54

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/3/10 PLATE NO. W5-54.8

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 318	E



W5-56

NOTES

1. Sign is Type II - Type SH Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Red
3. Corners may be square or rounded when base material is plywood. When base material is metal the corners shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	12								1																		1.0
2S	18								1 ½																		2.25
2M	18								1 ½																		2.25
3																											
4																											
5																											

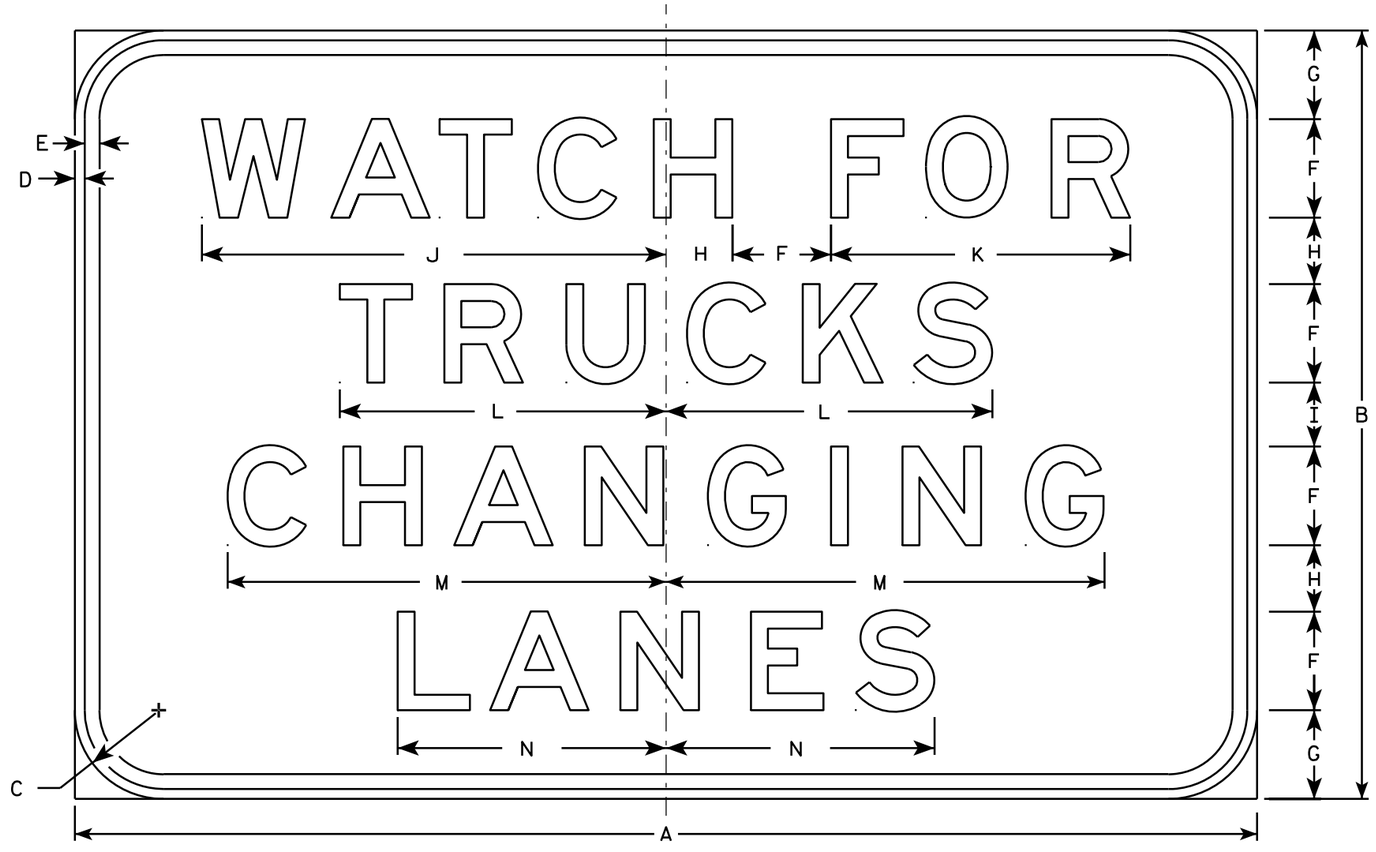
STANDARD SIGN
W5-56

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/2/10 PLATE NO. W5-56.6

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 319	E



W7-61

NOTES

1. Sign is Type I- Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - Black Non-Reflective
3. Message Series - E

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																											
5	120	78	9	1	1 1/2	10	9	6 3/4	6 1/2	47 1/8	30 3/8	33 1/8	44 1/2	27 1/4													65.0

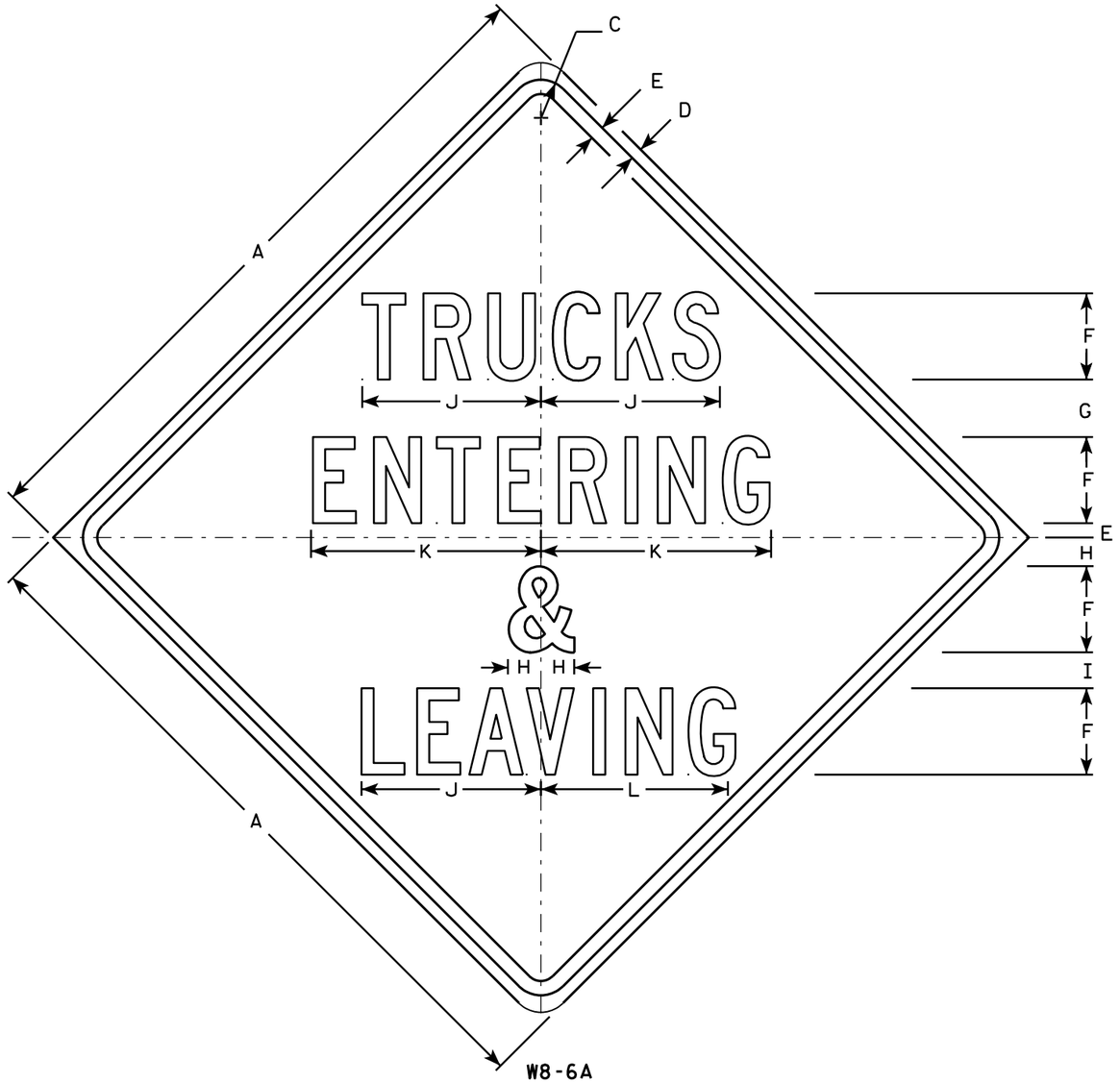
STANDARD SIGN
W7-61

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 03/14/13 PLATE NO. W7-61.8

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 320	E



W8-6A

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 3/8	1/2	5/8	4 1/2	3	1 1/2	1 7/8	9 3/8	12	9 3/4															9
2S	48		2 1/4	3/4	1	6	4	2	2 1/2	12 1/2	16	13															16
2M	48		2 1/4	3/4	1	6	4	2	2 1/2	12 1/2	16	13															16
3	48		2 1/4	3/4	1	6	4	2	2 1/2	12 1/2	16	13															16
4	48		2 1/4	3/4	1	6	4	2	2 1/2	12 1/2	16	13															16
5	48		2 1/4	3/4	1	6	4	2	2 1/2	12 1/2	16	13															16

STANDARD SIGN
W8-6A

WISCONSIN DEPT OF TRANSPORTATION

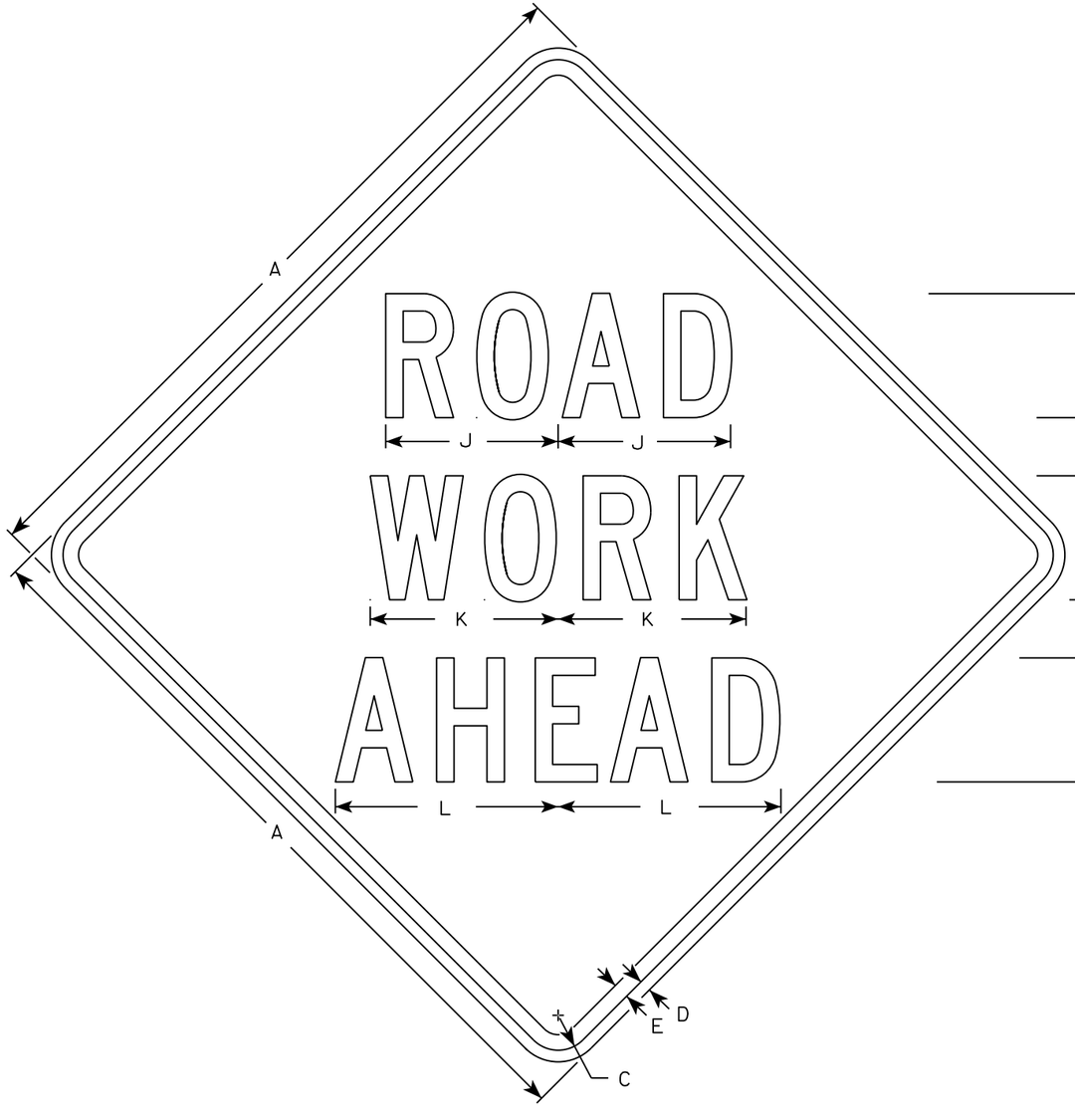
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/23/11 PLATE NO. W8-6A.2

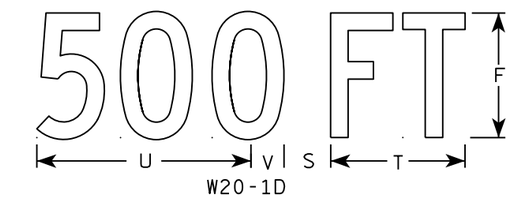
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 321 | E

7

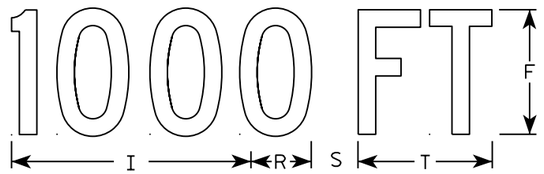
FILE NAME : C:\Users\PROJECTS\tr_stdplate\W86A.DGN PLOT DATE : 23-MAR-2011 10:02 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 10.136330:1.000000 WISDOT/CADDS SHEET 42



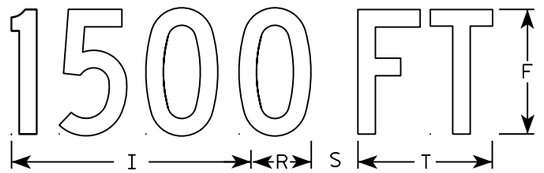
W20-1A



W20-1D



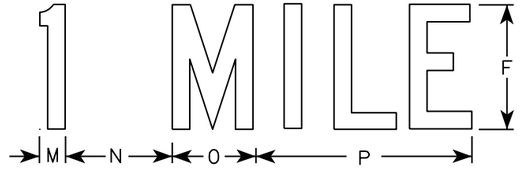
W20-1C



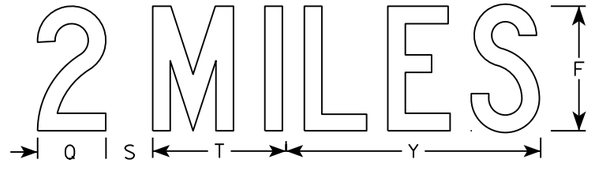
W20-1B



W20-1G



W20-1F



W20-1E

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 3/8	1/2	5/8	5	2 5/8	3 1/4	10 1/8	7	7 5/8	8 7/8	1 1/8	4 1/2	3 1/2	9		2 1/2	2 1/4	5 5/8	9	1 3/8	8	1 3/4	10 3/4	6	9.0
2S	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
2M	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
3	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
4	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
5	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0

STANDARD SIGN
W20-1A, B, C, D, F & G

WISCONSIN DEPT OF TRANSPORTATION

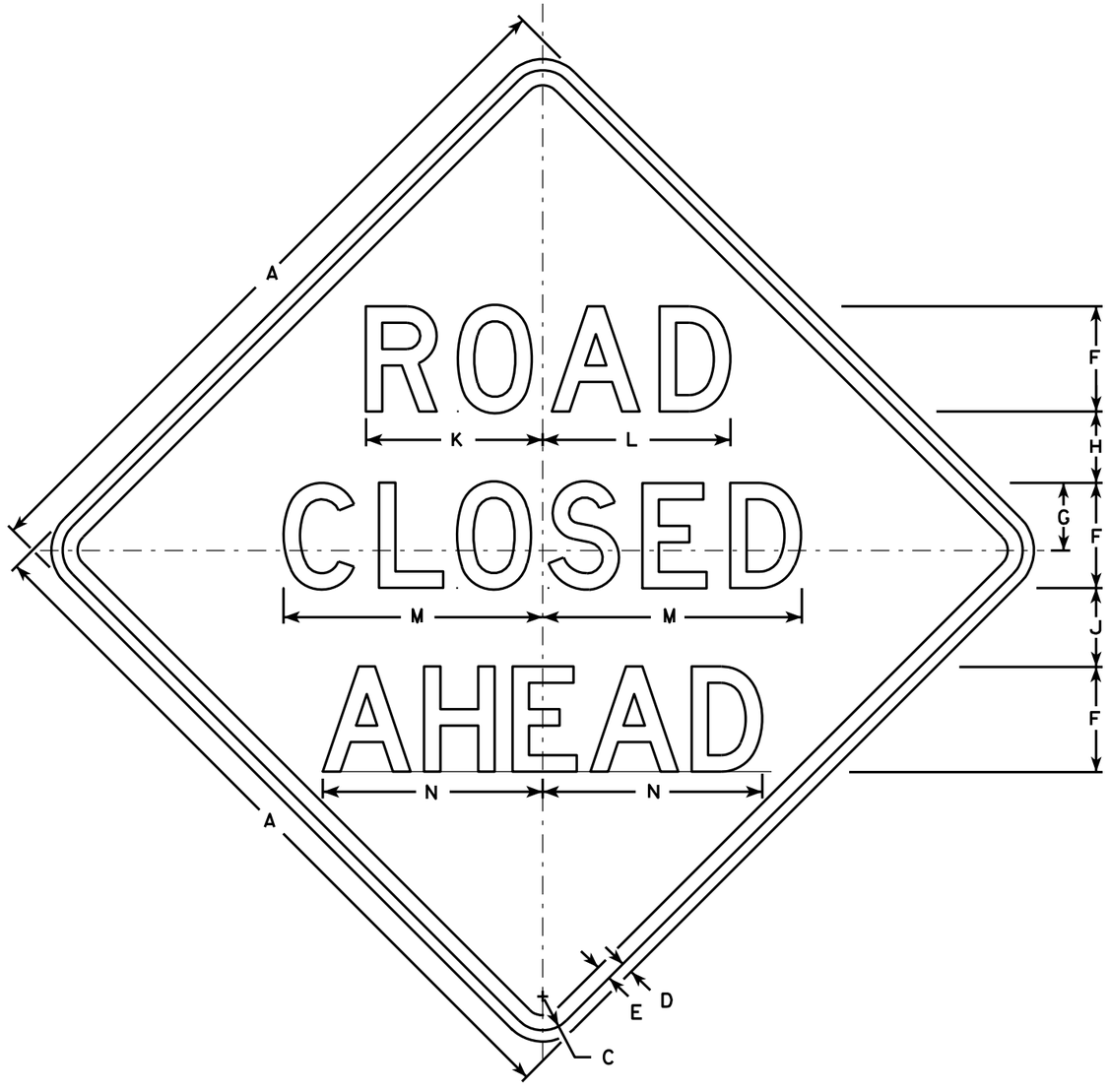
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/07/15 PLATE NO. W20-1.10

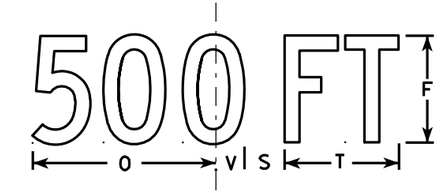
PROJECT NO:

SHEET NO: E

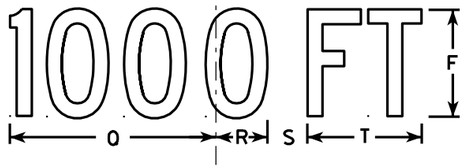
FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W201.DGN PLOT DATE : 01-DEC-2015 18:24 PLOT BY : $$ plotuser $$



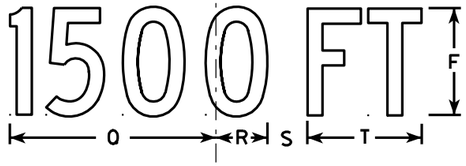
W20-3A



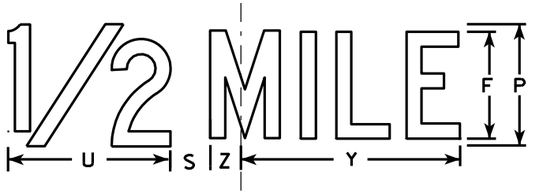
W20-3D



W20-3C



W20-3B



W20-3G



W20-3F

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - see note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Lines 1 and 2 are Series D.
   Line 3 is Series D for AHEAD and Series C for all other distances.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	5	3 3/8	3 1/2	1 1/8	4	8 3/8	8 7/8	12 1/2	11	9	6	10 1/8	2 1/2	1 7/8	5 5/8	8	1 3/8	4 1/2	3 1/2	10 3/4	1 3/4	9.0
2S	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
2M	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
3	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
4	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
5	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0

STANDARD SIGN
W20-3A, B, C, D, F & G

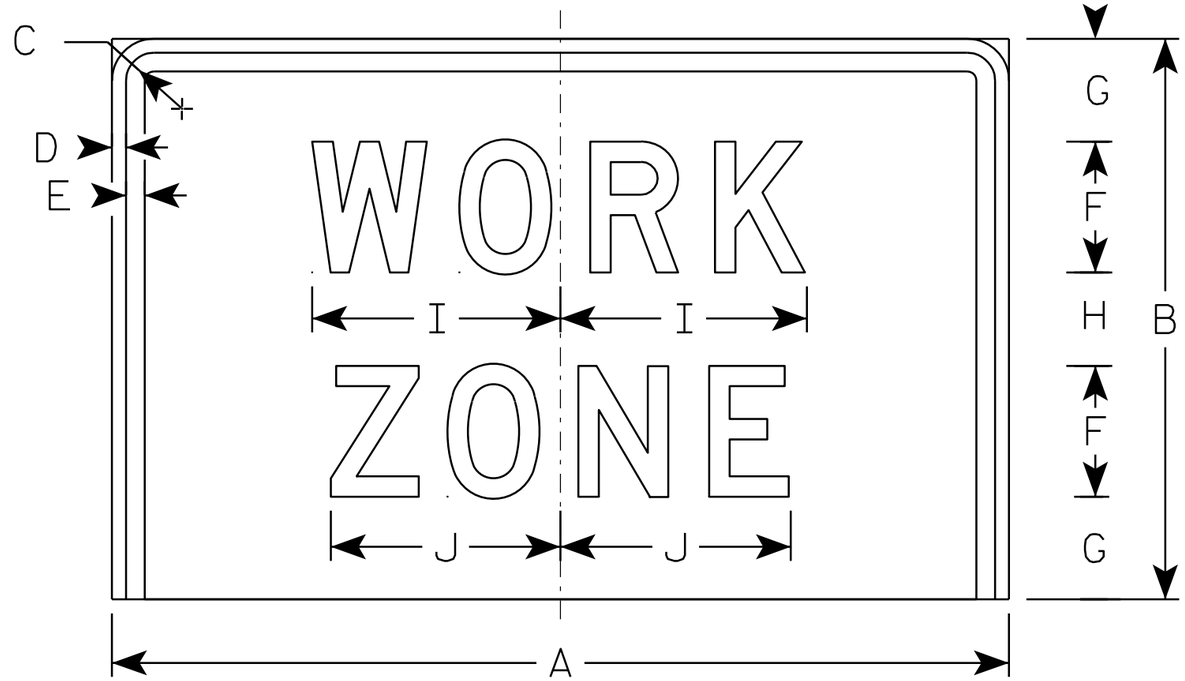
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer
DATE 3/18/11 PLATE NO. W20-3.7

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 323 | E

7

FILE NAME : C:\Users\PROJECTS\tr_stdplate\W203.DGN PLOT DATE : 18-MAR-2011 12:08 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 9.931739:1.000000
WISDOT/CADDS SHEET 42



W21-620

NOTES

1. Sign is Type II - Type F - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - D

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	30	2 1/4	3/4	1	7	5 1/2	5	13 1/4	12 1/4																	10.0
2M	48	30	2 1/4	3/4	1	7	5 1/2	5	13 1/4	12 1/4																	10.0
3																											
4																											
5																											

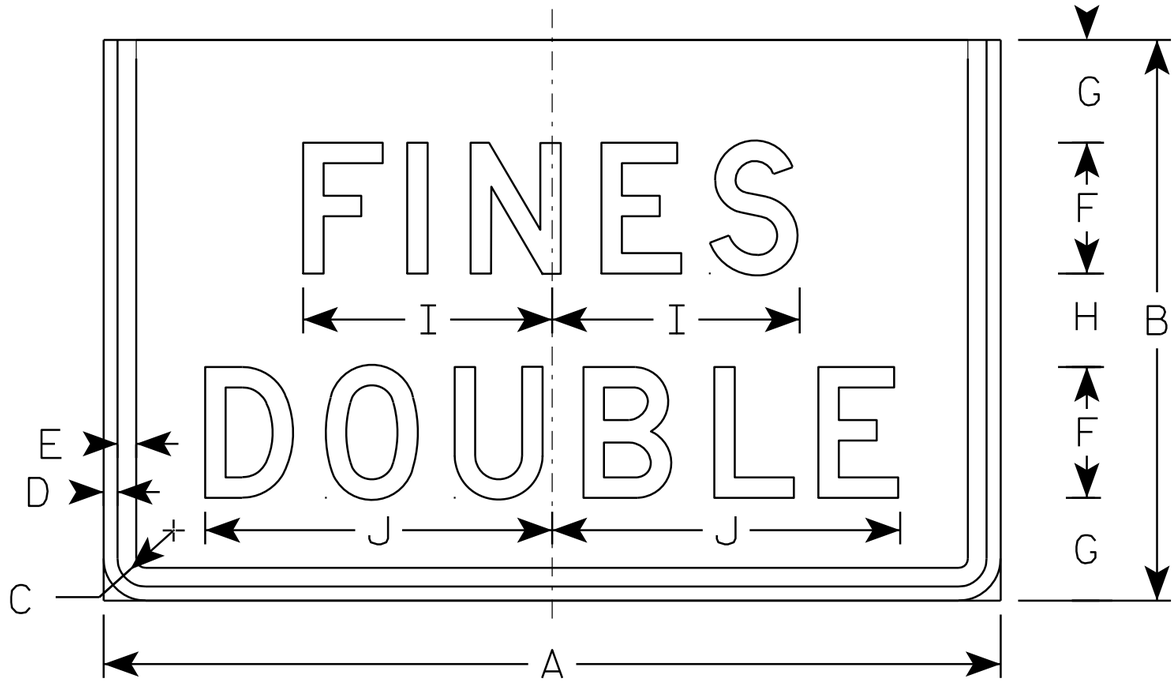
STANDARD SIGN
W21-620

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/21/11 PLATE NO. W21-620.2

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 324	E



W21-62R

NOTES

1. Sign is Type II - Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - D

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	30	2 1/4	3/4	1	7	5 1/2	5	13 1/4	18 5/8																	10.0
2M	48	30	2 1/4	3/4	1	7	5 1/2	5	13 1/4	18 5/8																	10.0
3																											
4																											
5																											

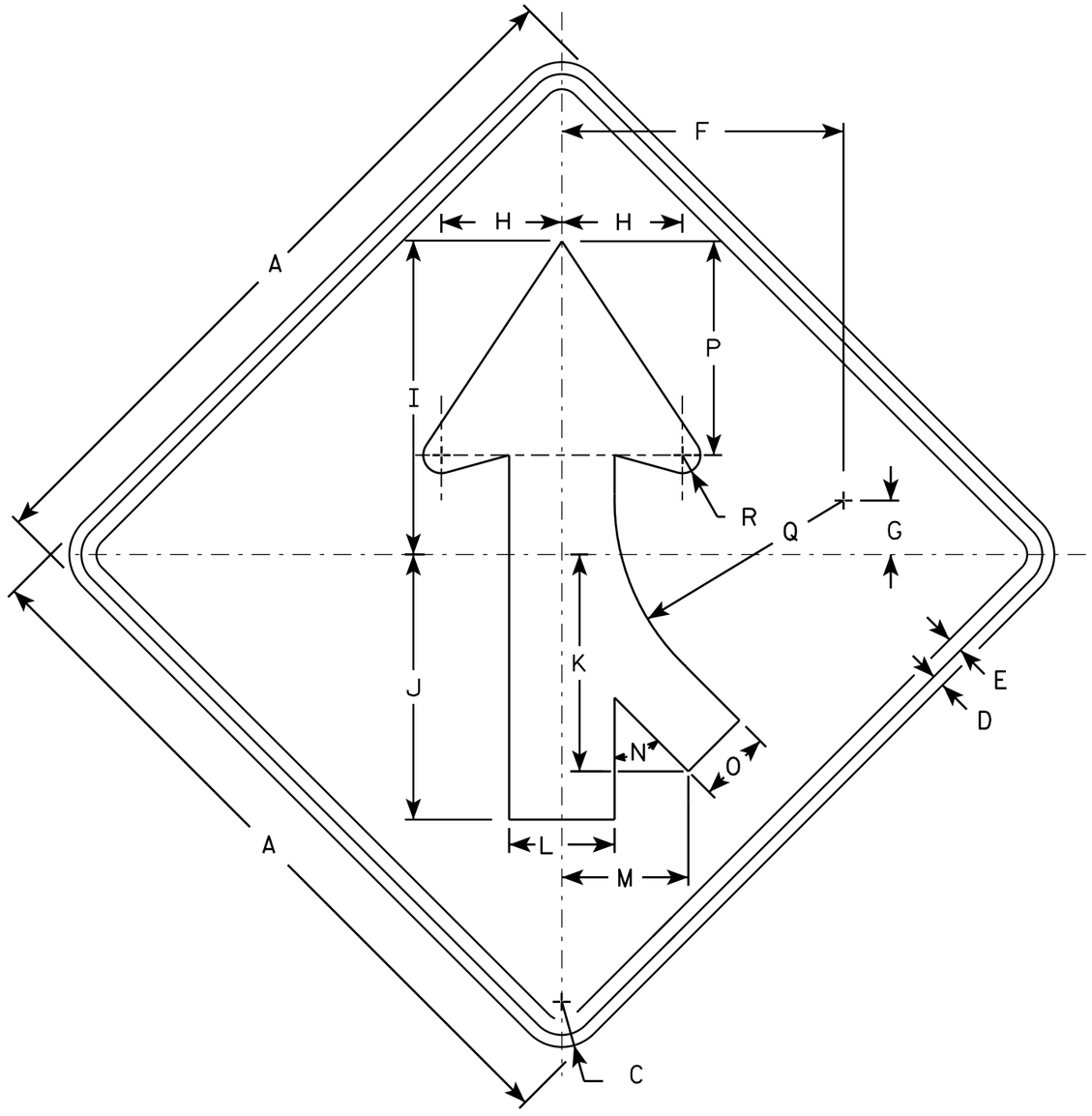
STANDARD SIGN
W21-62R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/21/11 PLATE NO. W21-62R.2

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 325	E



W04-1R

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. 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	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
2S	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
2M	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
3	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
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
W04-1

WISCONSIN DEPT OF TRANSPORTATION

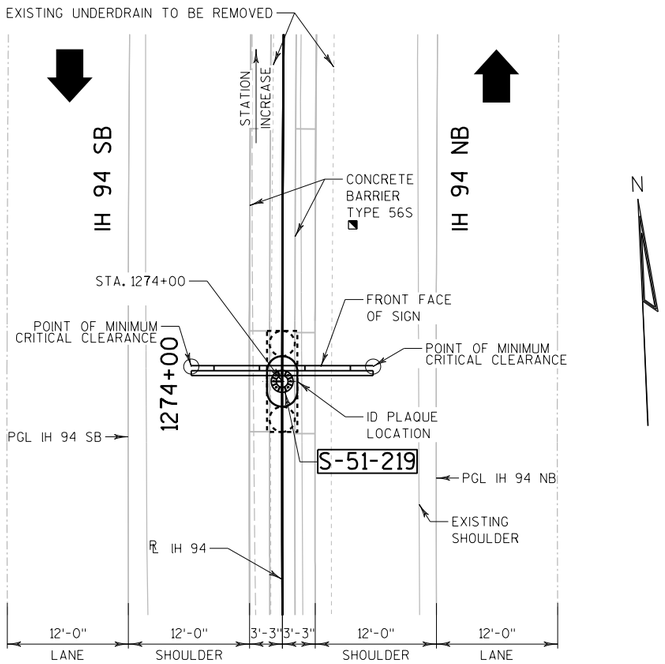
APPROVED Matthew L Rauch
for State Traffic Engineer

DATE 11/20/13 PLATE NO. W04-1.1

PROJECT NO: | HWY: | COUNTY: | SHEET NO: E

7

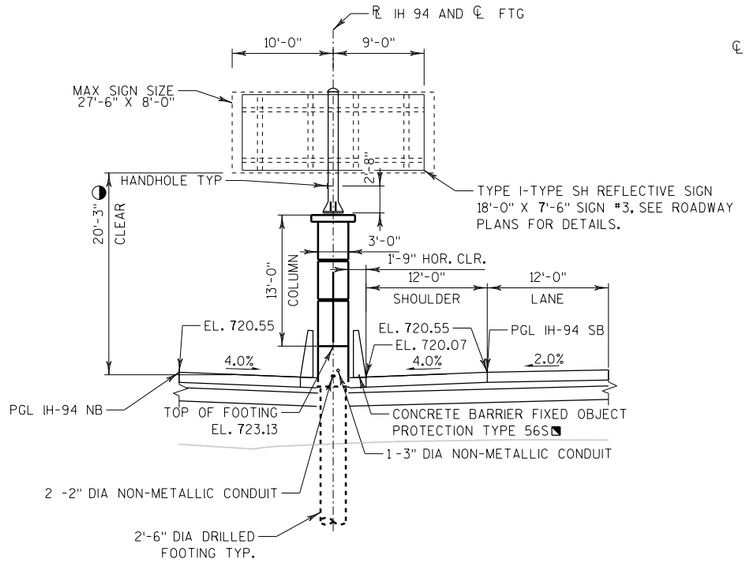
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\W041.DGN PLOT DATE : 20-NOV-2013 11:38 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 6.080757:1.000000
WISDOT/CADDS SHEET 42



PLAN

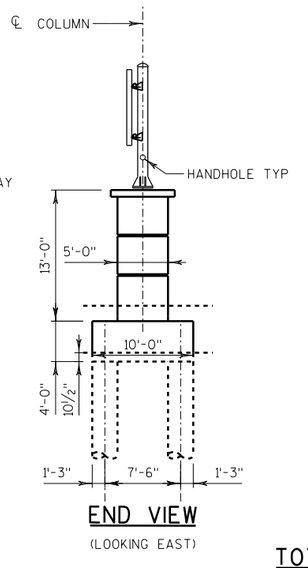
◥ CONCRETE BARRIER. SEE ROADWAY PLANS.

◑ INCLUDES ADDITIONAL 2'-0" OF CLEARANCE FOR FUTURE CATWALK INSTALLATION



ELEVATION

(LOOKING SOUTH AT FRONT FACE OF SIGN)
STRUCTURE S-51-219
IH 94
STA. 1274+00



END VIEW

(LOOKING EAST)

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

BAR STEEL SHALL BE 3" CLEAR UNLESS DETAILED OTHERWISE.

REINFORCEMENT BENDING DIMENSIONS ARE OUT TO OUT OF BAR. ALL REINFORCING BARS ARE IN ENGLISH UNITS. THE FIRST DIGIT OF A THREE-DIGIT BAR MARK OR THE FIRST TWO OF A FOUR-DIGIT BAR MARK SIGNIFIES THE BAR SIZE.

SIGN BRIDGE IDENTIFICATION PLAQUE SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "SINGLE POLE SIGN SUPPORT ONE SIGN S-51-219" LOCATE AND FABRICATE IN ACCORDANCE WITH S.D.D. 12A 3-10, "STRUCTURE IDENTIFICATION PLAQUES, RAMP GATES, SIGN BRIDGES, OVERHEAD SIGN SUPPORTS, & TRAFFIC SIGNALS".

CENTER SIGN HORIZONTALLY ON UPRIGHT.

CENTER ANCHOR ROD ASSMEBLY TO MISS BAR STEEL REINFORCEMENT AND MAKE SURE IT IS PLUMB. MAINTAIN ANCHOR ROD PROJECTION ABOVE FOOTING AS DETAILED ON PLAN. ANCHOR ROD ASSEMBLY SHALL BE RIGIDLY SECURE IN POSITION DURING CONCRETE PLACEMENT USING STEEL ANCHOR PLATE AND TOP PLATE. DO NOT WELD THE ANCHOR ROD.

ALL STATIONS AND ELEVATIONS ARE IN FEET UNLESS OTHERWISE SHOWN. ELEVATIONS SHOWN ON THIS PLAN ARE REFERENCED TO NAVD 88 DATUM. COORDINATES ON THE PLANE ARE REFERNCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), RACINE COUNTY ZONE, NAD 83 (1997).

ALL STRUCTURAL STEEL MEMBERS, PLATES, ANCHOR RODS, H.S. BOLTS, NUTS, AND WASHERS SHALL BE GALVANIZED PER SECTION 641 OF THE WISCONSIN STANDARD SPECIFICATIONS.

ALTERNATE DESIGNS ARE NOT ALLOWED WITHOUT APPROVAL FROM THE ENGINEER.

WELD TEST AS PER AWS D1.1.

WELDED CONNECTIONS CAN BE USED IN LIEU OF BOLTED CONNECTIONS IF UNIT CAN BE GALVANIZED IN ONE PIECE.

STEEL ANCHOR BOLTS SHALL MEET THE REQUIREMENTS OF ASTM F1554 GRADE 55, ASTM A563A HEAVY HEX HEAD NUTS, AND ASTM F436 WASHERS.

UNLESS DETAILED OTHERWISE IN THE PLANS ALL BOLTED CONNECTIONS SHALL BE MADE WITH ¾" DIAMETER A325 GALVANIZED BOLTS. INSTALL FIELD CONNECTIONS WITH DTI WASHERS.

CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO THE PROJECT ENGINEER PRIOR TO FABRICATION OF THE STRUCTURE. CONTRACTOR SHALL SHOW SIGNS ON SHOP DRAWINGS. PROJECT ENGINEER TO SEND SHOP DRAWINGS TO BUREAU OF STRUCTURES AND TOM HEYDEL, SE REGION TRAFFIC, FOR REVIEW.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR DRILLING OR EXCAVATING AND MAINTAINING A STABLE AND OPEN HOLE FOR SUBSEQUENT INSTALLATION OF CONCRETE MASONRY FOR THE SUPPORT BASES. PARTIAL OR FULL DEPTH TEMPORARY CASING MAY BE REQUIRED TO MAINTAIN THE STABILITY OF THE EXCAVATED HOLE FOR THE SIGN SUPPORT PRIOR TO FILLING THE HOLE WITH CONCRETE. WORK FOR TEMPORARY CASING IF USED SHALL BE INCLUDED IN BID ITEM "SIGN SUPPORTS CONCRETE MASONRY".

THE INFORMATION SHOWN ON THESE DRAWINGS CONCERNING TYPE AND LOCATION OF UNDERGROUND UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL-INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATION OF THE TYPE AND LOCATION OF UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE.

ALL NON-METALLIC CONDUIT SHOWN ON STRUCTURE S-51-219 IS INCIDENTAL TO THE BID ITEM "SIGN SUPPORT CONCRETE MASONRY"

ALL STRUCTURAL STEEL MEMBERS SHALL BE GALVANIZED.

TOTAL ESTIMATED QUANTITIES

ITEM NO.	BID ITEM	UNIT	QUANTITY
517.1010.S.4206	CONCRETE STAINING S-51-219	SF	212
636.0100	SIGN SUPPORT CONCRETE MASONRY	CY	19
636.1500	SIGN SUPPORTS STEEL COATED REINFORCEMENT HS	LB	4,400
641.0100.0219	SINGLE POLE SIGN SUPPORT ONE SIGN S-51-219	LS	1
SPV.0075.4001	OBSTRUCTIONS SIGN SUPPORTS CONCRETE MASONRY	HRS	1

ALL ITEMS ARE CATEGORY 6710

STATE PROJECT NUMBER

1035-01-82

MATERIAL PROPERTIES

CONCRETE MASONRY_____f'c = 3.5 KSI
HIGH STRENGTH BAR STEEL REINFORCEMENT___GRADE 60_____fy = 60 KSI
CHORD PIPE & COLUMN_____API SPEC. 5L GRADE 42, PSL-2 __fy = 42 KSI ☆
STRUCTURAL ANGLES, PLATES, AND BARS__ASTM A709 GRADE 36____fy = 36 KSI
ANCHOR BOLTS_____ASTM F1554 GRADE 55_____fy = 55 KSI
HIGH STRENGTH BOLTS_____A325_____fy = 92 KSI
STRUCTURAL MEMBERS GALVANIZED_____ASTM A123
HARDWARE GALVANIZED _____ASTM A153 CLASS C

☆ ALTERNATE MATERIAL FOR COLUMN AND CHORDS LESS THAN 10" DIAMETER MAY BE ASTM A500 GRADE fy = 42 KSI OR GRADE C fy = 46 KSI.

DESIGN DATA

STRUCTURE NO.	DESIGN SIGN AREA	MAX. SIGN DEPTH
S-51-219	220 SF	8'-0"

DESIGNED ACCORDING TO AASHTO "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS", 2013 6TH EDITION.

DEAD LOAD - WT. OF SIGN, SUPPORTING STRUCTURE, CATWALK, LIGHTS,
LIVE LOAD - SINGLE LINE LOAD OF 500 LBS DISTRIBUTED OVER 2'-0" CATWALK
ICE LOAD - 3 PSF TO ONE FACE OF SIGN & AROUND SURFACE OF MEMBERS.
WIND PRESSURE - 90 MPH (3-SEC. 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
I.	DEAD	100
II.	DEAD + WIND	133
III.	DEAD + ICE+ ½ WIND	133
IV.	FATIGUE CATEGORY 1 WITHOUT GALLOPING	**

** SEE SECTION 11 OF THE "AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS", 5TH EDITION FOR FATIGUE LOADS AND STRESS LIMITS.

FOUNDATION DATA

THE FOLLOWING ASSUMPTIONS WERE USED FOR THE DESIGN OF THE FOUNDATION SYSTEM:

ALLOWABLE SKIN FRICTION = 550 PSF

SOIL COHESION = 1,500 PSF

SOIL FRICTION ANGLE = 0°

SIGN STRUCTURE FOUNDATION TO BE SUPPORTED ON DRILLED SHAFTS WITH AN ALLOWABLE BEARING RESISTANCE OF 12,000 PSF. THE SE REGION GEOTECHNICAL ENGINEER SHALL VISUALLY INSPECT THE SUBSURFACE SOILS TO CONFIRM THE ALLOWABLE BEARING RESISTANCE PRIOR TO CONSTRUCTION OF THE DRILLED SHAFTS.

STRUCTURES DESIGN CONTACTS

BRIDGE OFFICE: WILLIAM DREHER (608) 266-8489
CONSULTANT: MICHAEL D. RADTKE (414) 347-1607

WISCONSIN
ANTHONY J. CASTLE
E-43345-6
SOUTH MILWAUKEE, WI
PROFESSIONAL ENGINEER
4/2/2018

LIST OF DRAWINGS

1. PLAN AND ELEVATION
2. SUBSURFACE EXPLORATION
3. FOOTING DETAILS
4. COLUMN DETAILS
5. BUTTERFLY SIGN DETAILS
6. HANDHOLE DETAILS

NO.	DATE	REVISION	BY

emcs INC
1300 W. Canal Street, Suite 200
Milwaukee, WI 53233
414.347.1607 Fax 414.347.1347

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
ACCEPTED William C. Dreher 4/4/18
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE S-51-219

SIGN STRUCTURE ON IH 94 AT 7 MILE ROAD

COUNTY	TOWN
RACINE	SOMERS

DESIGN SPEC.
AASHTO STD. SPEC. FOR STR. SUPPORTS

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
JRM	AJC	JRM	MDR

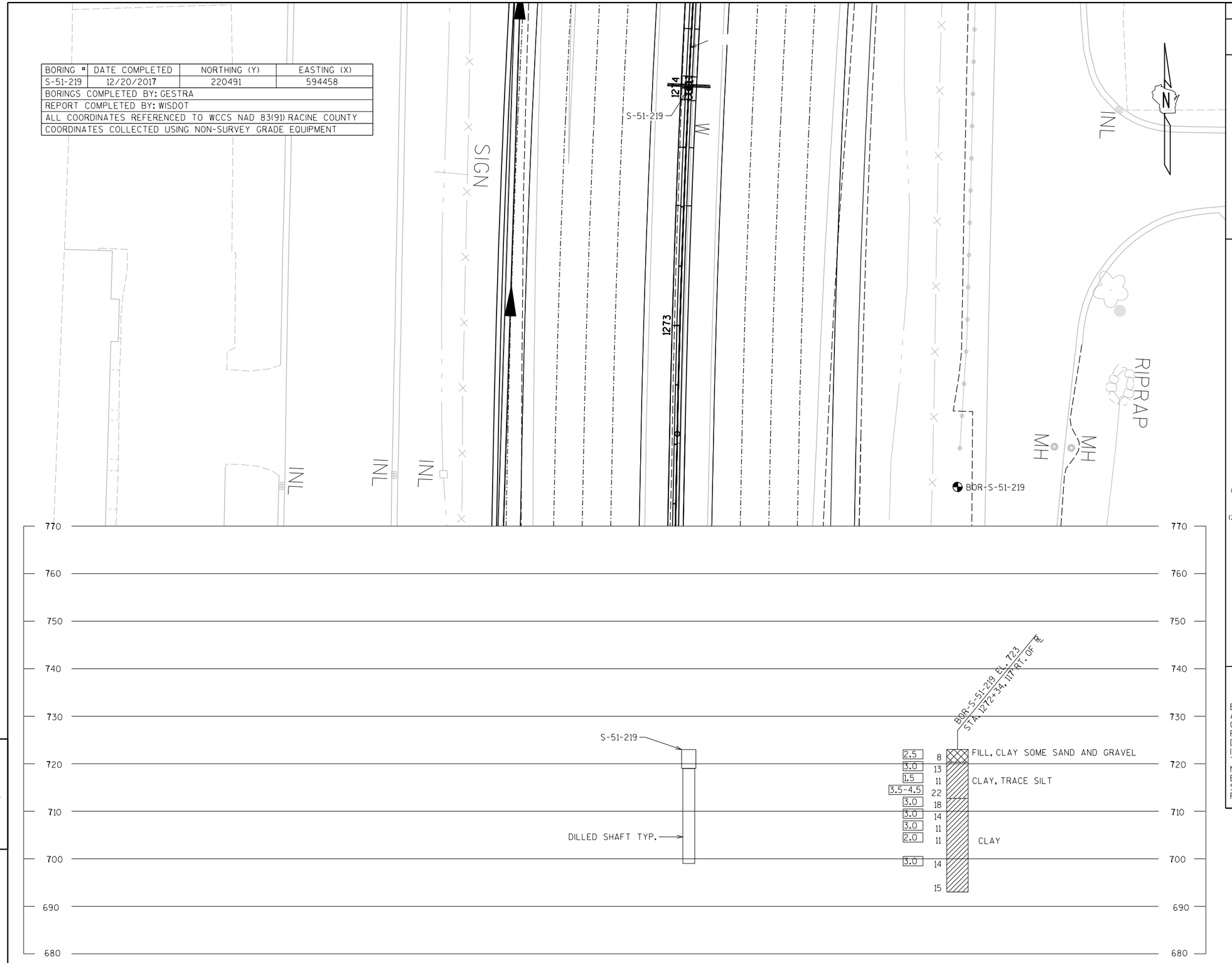
PLAN AND ELEVATION

SHEET 1 OF 6
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BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
S-51-219	12/20/2017	220491	594458
BORINGS COMPLETED BY: GESTRA			
REPORT COMPLETED BY: WISDOT			
ALL COORDINATES REFERENCED TO WCCS NAD 83(91) RACINE COUNTY			
COORDINATES COLLECTED USING NON-SURVEY GRADE EQUIPMENT			



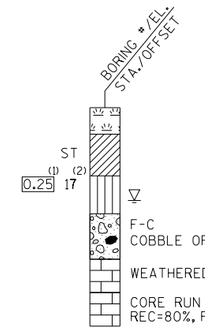
STATE PROJECT NUMBER

1035-01-82

MATERIAL SYMBOLS

ASPHALT	TOPSOIL	PEAT
CONCRETE	FILL	GRAVEL
SAND	CLAY	SILT
BOULDERS OR COBBLES	LIMESTONE	BEDROCK (UNKNOWN)
SHALE	SANDSTONE	IGNEOUS/ META

LEGEND OF BORING



(1) UNCONFINED STRENGTH, AS DETERMINED BY A POCKET PENETROMETER (TSF)

(2) UNLESS OTHERWISE, SPECIFIED THE SPT 'N' VALUE IS BASED ON AASHTO T-206, STANDARD PENETRATION TEST. THE SPT 'N' VALUE PRESENTED HAS NOT BEEN CORRECTED FOR OVERBURDEN PRESSURE OR HAMMER EFFICIENCY.

GROUND WATER ELEVATION

▽ AT TIME OF DRILLING

▼ END OF DRILLING

▽ AFTER DRILLING

ABBREVIATIONS

F-FINE M-MEDIUM C-COARSE ST-SHELBY TUBE

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

BORINGS WERE COMPLETED AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING TO OBTAIN INFORMATION CONCERNING THE CHARACTER OF SUBSURFACE MATERIALS FOUND AT THE SITE. BECAUSE THE INVESTIGATED DEPTHS ARE LIMITED AND THE AREA OF THE BORINGS IS VERY SMALL IN RELATION TO THE ENTIRE SITE, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT SIMILAR SUBSURFACE CONDITIONS BELOW, BETWEEN, OR BEYOND THESE BORINGS. VARIATIONS IN SOIL CONDITIONS SHOULD BE EXPECTED AND FLUCTUATIONS IN GROUNDWATER LEVELS MAY OCCUR.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE S-51-219

DRAWN BY TLP | PLANS CK'D. AJC

SUBSURFACE EXPLORATION

SHEET 2 OF 6

328

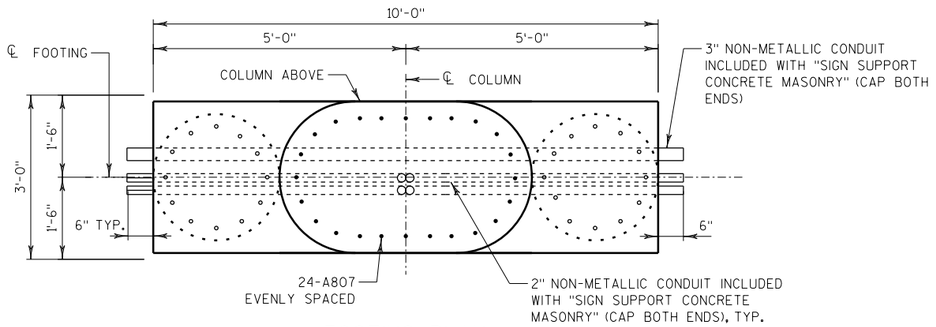
8

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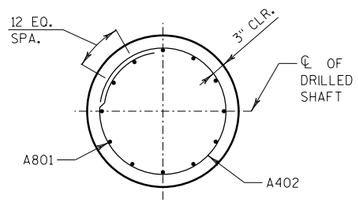
STATE PROJECT NUMBER

1035-01-82

N



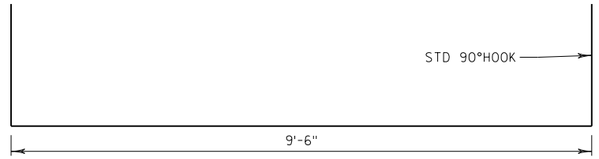
FOOTING PLAN



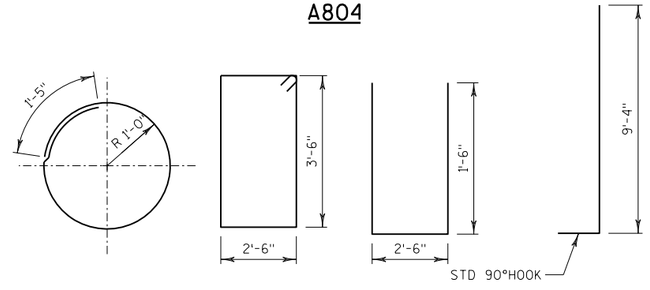
SECTION F

BILL OF BARS

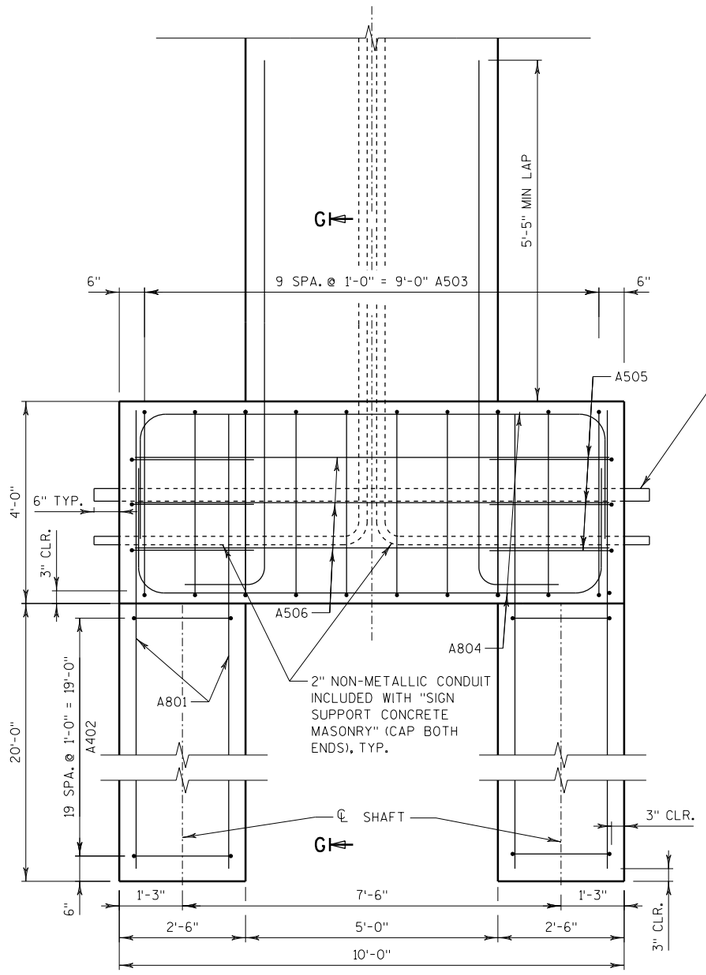
BAR MARK	COAT	NO.	LENGTH	BENT	LOCATION
A801	X	24	23'-6"		DRILLED SHAFT - VERTICALS
A402	X	40	7'-9"	X	DRILLED SHAFT - STIRRUPS
A503	X	10	12'-8"	X	FOOTING STIRRUPS
A804	X	8	11'-9"	X	FOOTING TOP & BOTTOM
A505	X	6	5'-3"	X	FOOTING - END BARS
A506	X	6	9'-6"		FOOTING SIDES
A807	X	24	10'-6"	X	FOOTING - DOWELS



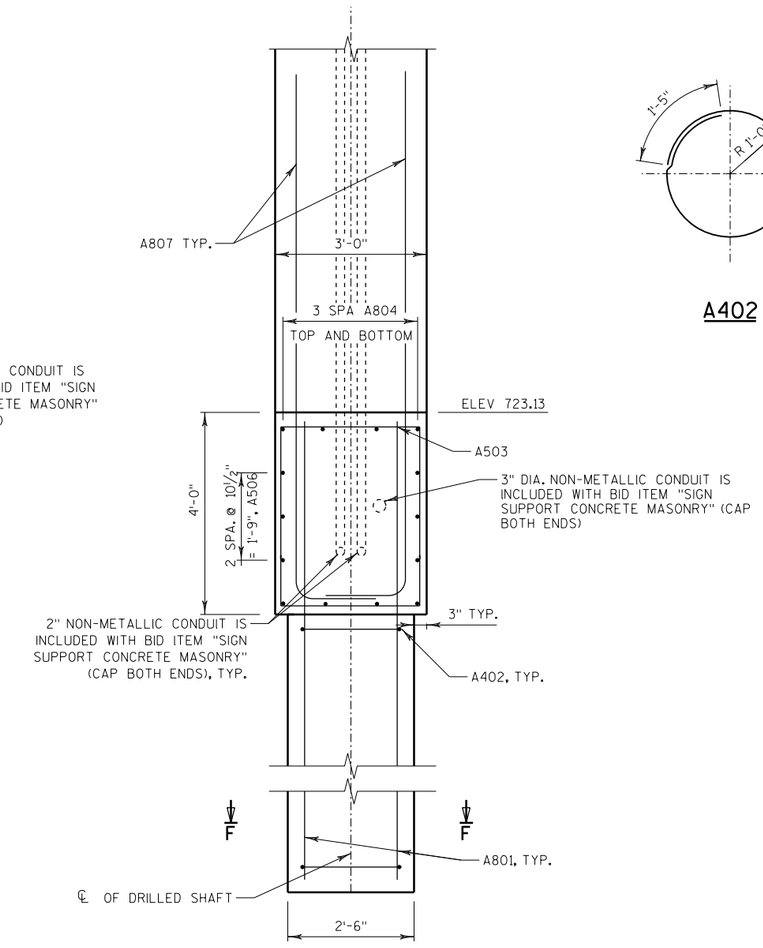
A804



A402 A503 A505 A807



ELEVATION
(LOOKING EAST)



SECTION G

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE S-51-219

DRAWN BY JRM | PLANS CK'D. MDR

FOOTING DETAILS

SHEET 3 OF 6
329

8

8

FILE NAME : Z:\Racine\07 Structures\S-51-219 (EMCS)\Plan\080103_fd_S510219.dgn

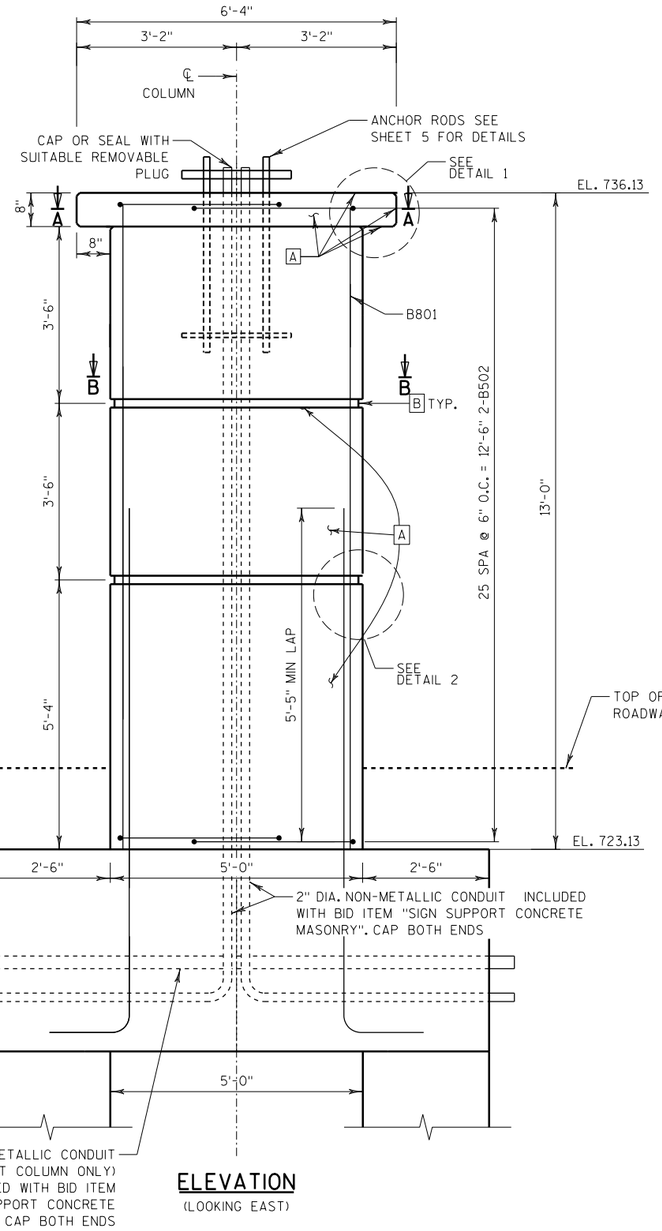
PLOT DATE : 4/2/2018

PLOT BY : jrm

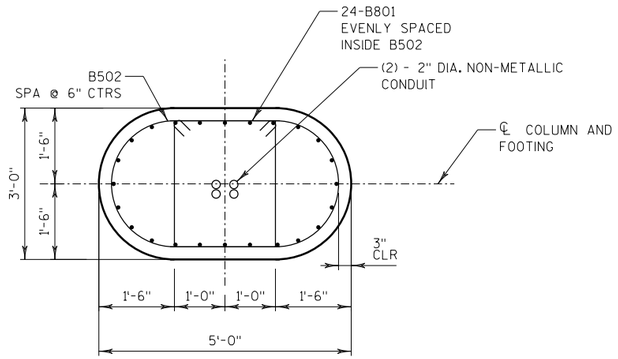
STATE PROJECT NUMBER
1035-01-82

CONCRETE STAINING SCHEDULE

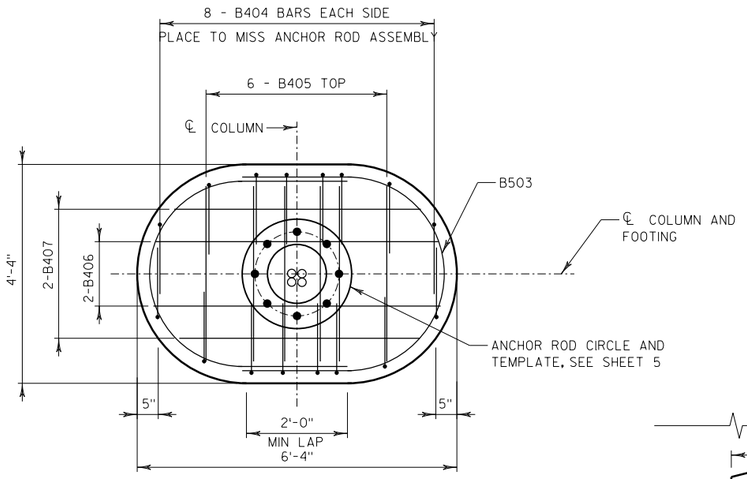
MARK	COLOR	LOCATION	NOTES	STAIN COLOR
A	BASE COLOR	COLUMN	COLUMNS EXCEPT AS NOTED FOR ACCENT COLORS FROM TOP OF COLUMN TO 1'BELOW GRADE	FEDERAL #33564
B	ACCENT COLOR #1	RUSTICATIONS	RUSTICATIONS	FEDERAL #33448



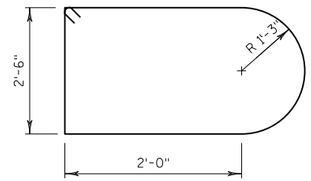
ELEVATION
(LOOKING EAST)



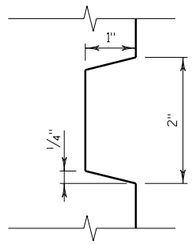
SECTION B-B
TYPICAL COLUMN SECTION



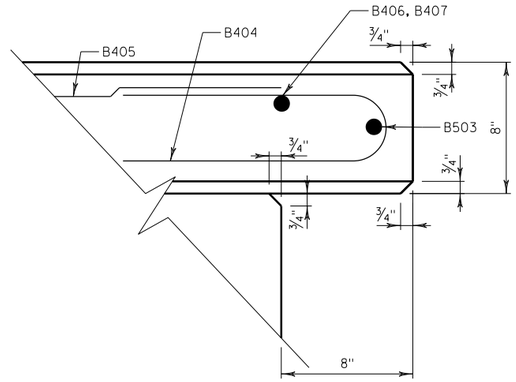
SECTION A-A



B502



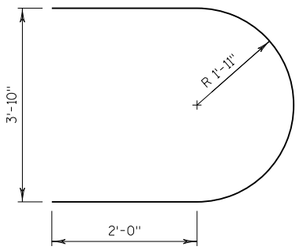
DETAIL 2



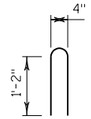
DETAIL 1

BILL OF BARS

BAR MARK	COAT	NO.	LENGTH	BENT	LOCATION
B801	X	24	12'-8"		COLUMN - VERTICALS
B502	X	52	11'-2"	X	COLUMN - STIRRUPS
B503	X	2	10'-1"	X	COLUMN CAP PERIMETER
B404	X	16	2'-11"	X	COLUMN CAP
B405	X	6	3'-7"		COLUMN CAP
A406	X	2	5'-6"		COLUMN CAP
A407	X	2	3'-9"		COLUMN CAP



B503



B404

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE S-51-219

DRAWN BY JRM | PLANS CK'D. MDR

COLUMN DETAILS

SHEET 4 OF 6
330

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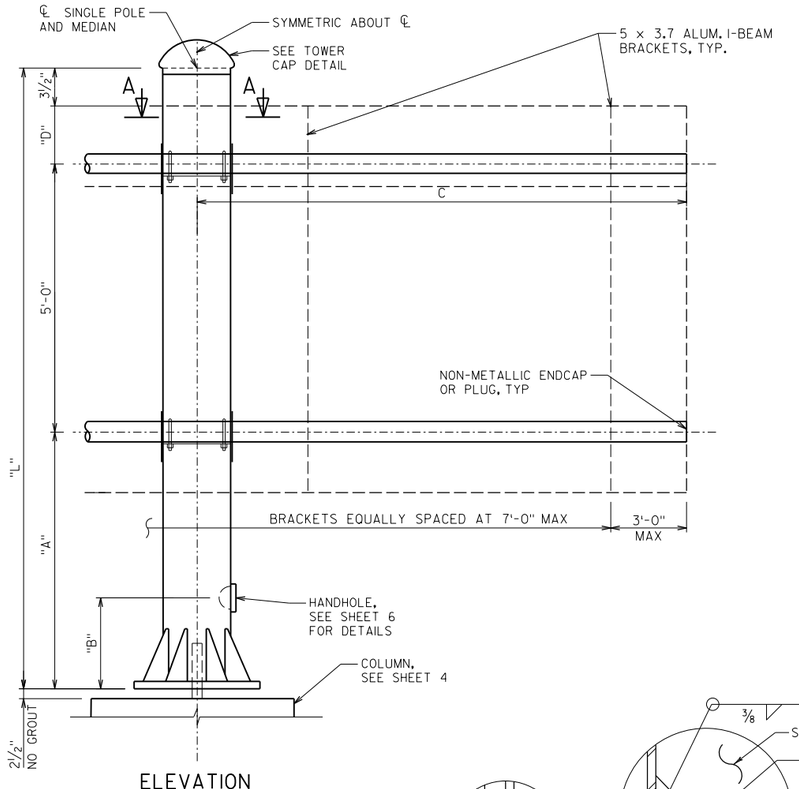
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PLOT DATE : 4/2/2018

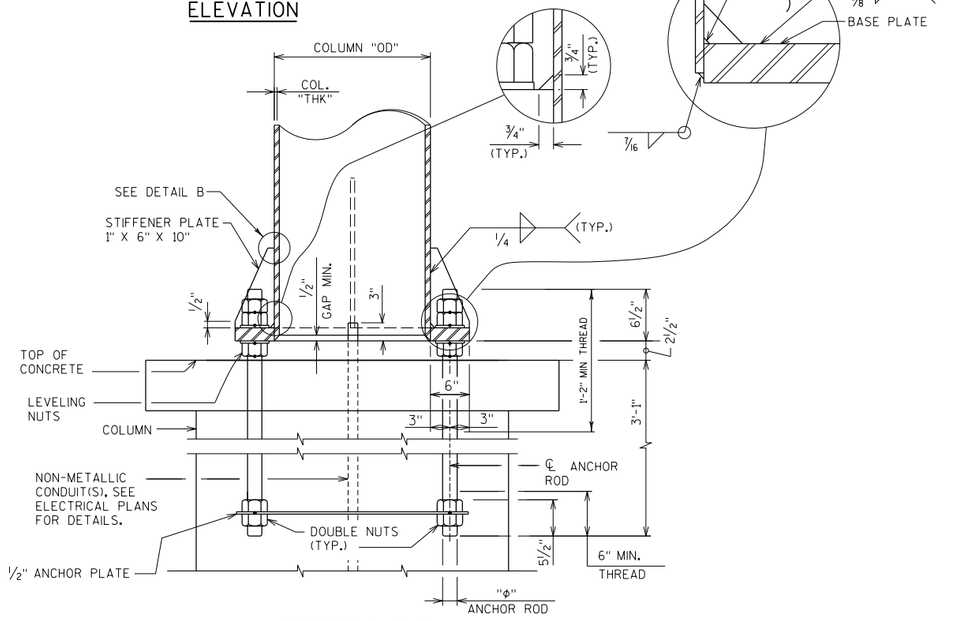
PLOT BY : jrm

STATE PROJECT NUMBER

1035-01-82



ELEVATION

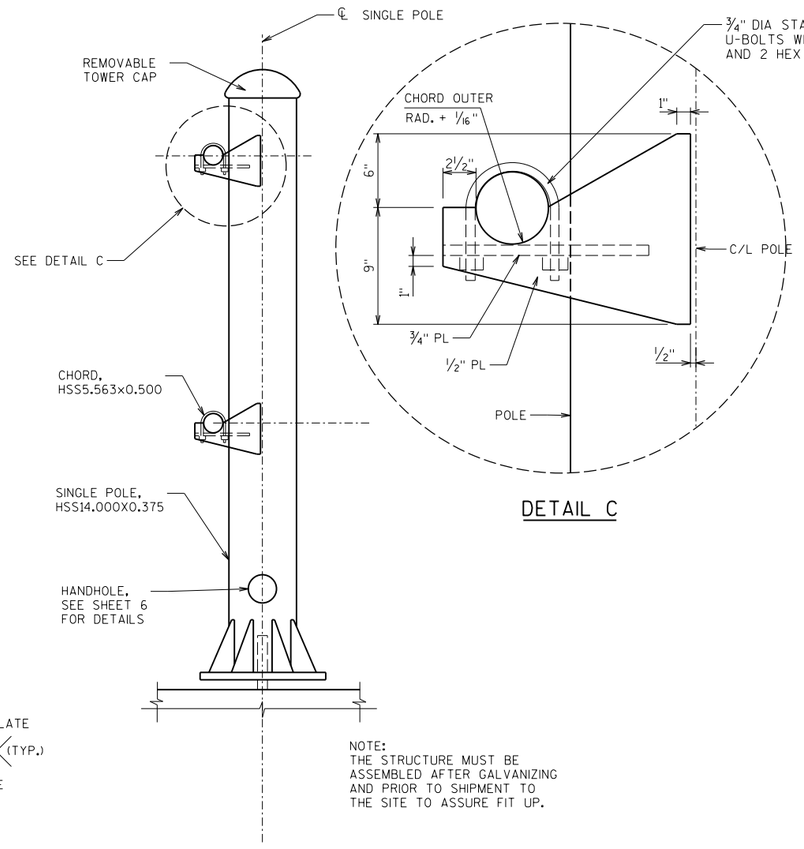


SECTION C-C

TABLE

STRUCTURE	CHORDS (O.D. X THK.)	COLUMNS O.D. X THK.	L	A	B	C (NS)	C (FS)	D	ANCHOR BOLTS*
S-51-219	5.563" X 0.500"	14.00" O.D. X 0.375"	12'-0"	5'-2½"	2'-8"	9'-0"	9'-0"	1'-6"	8 - 1¾" DIA. X 3'-10" LONG

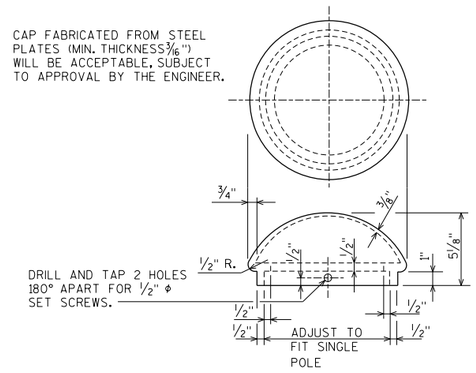
* INCLUDES 9" BOLT STAND OFF FROM TOP OF CONCRETE



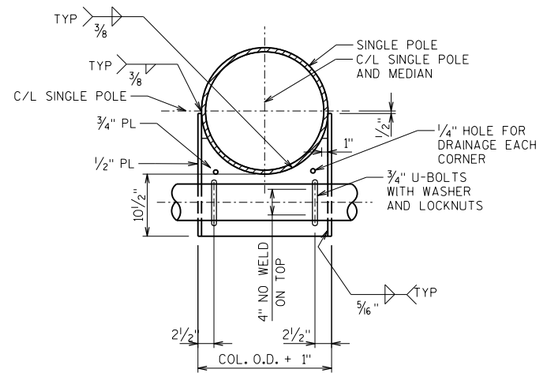
NOTE:
THE STRUCTURE MUST BE ASSEMBLED AFTER GALVANIZING AND PRIOR TO SHIPMENT TO THE SITE TO ASSURE FIT UP.

END VIEW

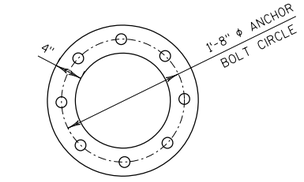
DETAIL C



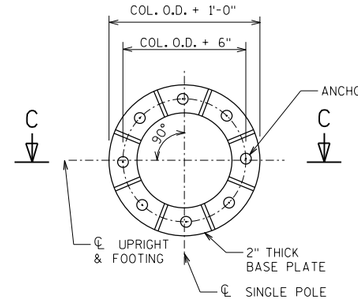
TOWER CAP DETAIL



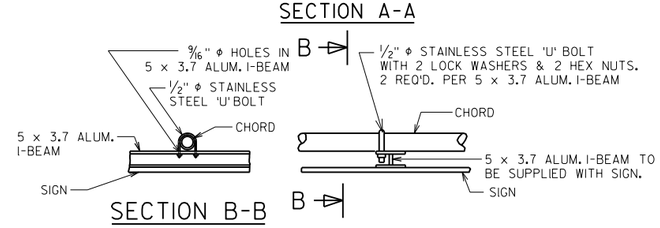
SECTION A-A



ANCHOR PLATE/TOP TEMPLATE



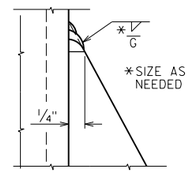
BASE PLATE DETAILS



SECTION B-B

TYPICAL SIGN AND BRACKET CONNECTION

NOTE: 5 x 3.7 ALUM. I-BEAM TO BE SUPPLIED WITH SIGN



DETAIL B

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE S-51-219

DRAWN BY JRM | PLANS CK'D. MDR

BUTTERFLY SIGN DETAILS

SHEET 5 OF 6
331

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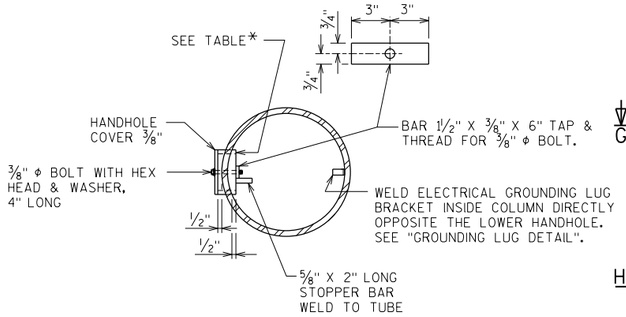
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PLOT DATE : 4/2/2018

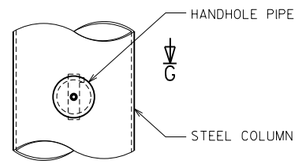
PLOT BY : jrm

STATE PROJECT NUMBER

1035-01-82



SECTION G-G



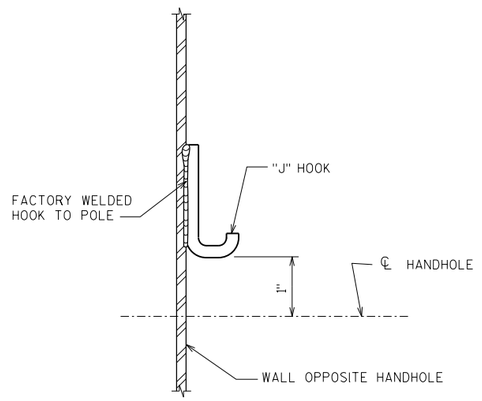
HANDHOLE DETAILS

HANDHOLE NOTES

HANDHOLES SHALL BE LOCATED IN THE STEEL COLUMN OF THE SIGN BRIDGE STRUCTURE. THE CONTRACTOR SHALL VERIFY THE LOCATION OF THE ELECTRICAL SERVICE ENTRANCE WITH THE REGION TRAFFIC ENGINEER PRIOR TO FABRICATION OF THE SIGN BRIDGE COLUMNS AND MEMBERS. CONDUIT (AS REQ'D.) SHALL BE LOCATED, PLACED AND SIZED AS SHOWN.

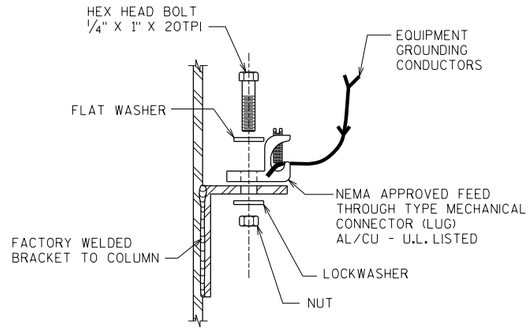
UNLESS NOTED OTHERWISE, ALL HANDHOLE ELEMENTS TO BE GALVANIZED PER SECTION 641 OF THE WISDOT STANDARAD SPECIFICTIONS.

* COLUMN O.D. SIZE	HANDHOLE PIPE O.D. X MIN. THK.
UP TO AND INCLD. 16" X 0.375"	5.562" X 0.500"
GREATER THAN 16" X 0.375" TO AND INCLD. 24" X 0.562"	6.625" X 0.562"



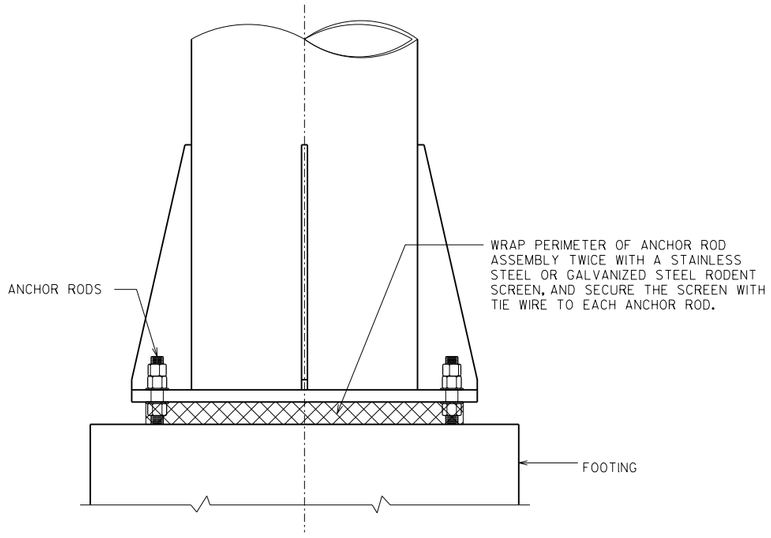
TYPICAL "J" HOOK LOCATION

THE "J" HOOK SHALL BE FACTORY WELDED TO THE INSIDE OF ALL COLUMNS CONTAINING ELECTRICAL WIRING. THE "J" HOOK SHALL BE ATTACHED ABOVE THE CENTERLINE OF THE UPPER HANDHOLE AND MOUNTED DIRECTLY OPPOSITE THE HANDHOLE AS SHOWN IN THE DRAWING.



GROUNDING LUG DETAIL

STAINLESS STEEL BOLTS, NUT AND WASHERS



RODENT SCREEN

(REQ'D. ONLY WHEN ELECTRICAL DEVICES ARE INSTALLED)

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE S-51-219

DRAWN BY JRM | PLANS CK'D. MDR

HANDHOLE DETAILS

SHEET 6 OF 6

FILE NAME : Z:\Racine\07 Structures\S-51-219 (EMCS)\Plan\080106_hd_S510219.dgn

PLOT DATE : 4/2/2018

PLOT BY : jrm

IH 94 STAGE 1B TOTAL

STATION	Distance	AREA (SF) Cut	AREA (SF) Fill	Incremental Vol (CY) (Unadjusted) Cut	Incremental Vol (CY) (Unadjusted) Fill	Cumulative Vol (CY) Cut 1.00	Cumulative Vol (CY) Fill 1.00	Mass Ordinate
1268+00	0.00	21	39	0	0	0	0	0
1268+50	50.00	22	36	40	69	40	69	-29
1269+00	50.00	21	36	40	66	79	136	-56
1269+50	50.00	22	38	39	68	119	204	-85
1270+00	50.00	21	38	40	71	158	275	-117
1270+50	50.00	21	33	39	66	197	341	-144
1271+00	50.00	21	34	39	62	236	404	-168
1271+50	50.00	25	28	42	57	278	461	-182
1272+00	50.00	25	25	46	49	324	510	-186
1272+50	50.00	28	21	49	43	373	553	-180
1273+00	50.00	35	7	58	27	431	580	-148
1273+50	50.00	36	6	66	13	497	592	-95
1274+00	50.00	39	8	70	13	567	605	-38
1274+50	50.00	40	10	74	17	640	622	18
1275+00	50.00	44	16	78	24	718	646	72
1275+50	50.00	44	16	81	29	799	675	124
1276+00	50.00	42	20	80	33	879	708	171
1276+50	50.00	42	19	78	36	957	744	212
1277+00	50.00	50	7	85	24	1,042	768	274
1277+50	50.00	66	0	108	6	1,149	774	375
1278+00	50.00	119	1	172	1	1,321	775	546
1278+50	50.00	154	0	253	1	1,574	776	798
1279+00	50.00	206	9	334	8	1,907	784	1,123
1279+50	50.00	209	51	385	55	2,292	839	1,453
1280+00	50.00	192	82	372	123	2,664	962	1,703
1280+50	50.00	175	95	341	164	3,005	1,126	1,879
1281+00	50.00	169	127	319	206	3,324	1,332	1,992
1281+50	50.00	166	141	310	249	3,634	1,581	2,053
1282+00	50.00	158	169	299	287	3,934	1,868	2,065
1282+50	50.00	159	195	293	337	4,227	2,206	2,021
1283+00	50.00	164	208	299	373	4,526	2,578	1,948
1283+50	50.00	153	212	294	388	4,820	2,966	1,853
1284+00	50.00	144	210	275	390	5,095	3,357	1,738
1284+50	50.00	141	198	263	378	5,358	3,734	1,624
1285+00	50.00	136	208	256	376	5,615	4,110	1,504
1285+24	23.77	134	222	119	189	5,734	4,300	1,434
1285+50	26.23	189	245	157	227	5,891	4,527	1,364
1286+00	50.00	163	270	326	477	6,217	5,003	1,214
1286+29	28.77	143	262	163	283	6,380	5,287	1,093
1286+50	21.23	135	244	109	199	6,489	5,485	1,004
1286+54	4.10	131	242	20	37	6,510	5,522	987
1286+79	25.33	109	235	112	223	6,622	5,746	876
1287+00	20.57	248	462	136	265	6,758	6,011	747
1287+20	20.00	168	545	154	373	6,912	6,384	528
1287+50	30.00	164	617	184	645	7,096	7,029	67
1288+00	50.00	117	821	261	1,331	7,357	8,360	-1,003
1288+50	50.00	27	929	134	1,620	7,491	9,980	-2,489
1289+00	50.00	0	1,354	25	2,113	7,516	12,093	-4,577
1289+50	50.00	0	1,235	0	2,397	7,516	14,490	-6,974
1290+00	50.00	5	566	5	1,667	7,521	16,157	-8,637
1290+50	50.00	25	469	28	959	7,549	17,116	-9,567
1291+00	50.00	25	481	46	879	7,595	17,995	-10,400
1291+50	50.00	23	483	44	892	7,639	18,888	-11,248
1292+00	50.00	23	475	42	888	7,681	19,776	-12,094
1292+50	50.00	22	465	41	871	7,723	20,647	-12,924
1293+00	50.00	22	440	41	838	7,763	21,485	-13,721
IH 94 STAGE 1B TOTAL				7,763	21,485	7,763	21,485	-13,721

WFR TOTAL

STATION	Distance	AREA (SF) Cut	AREA (SF) Fill	Incremental Vol (CY) (Unadjusted) Cut	Incremental Vol (CY) (Unadjusted) Fill	Cumulative Vol (CY) Cut 1.00	Cumulative Vol (CY) Fill 1.00	Mass Ordinate
4288+00	0.00	175	0	0	0	0	0	0
4288+50	50.00	124	10	277	9	277	9	268
4289+00	50.00	122	20	228	28	505	37	468
4289+50	50.00	207	30	305	47	809	84	726
4290+00	50.00	350	37	516	63	1,325	146	1,179
4290+50	50.00	529	114	814	140	2,139	287	1,853
4291+00	50.00	654	71	1,096	172	3,235	459	2,777
4291+25	25.49	681	35	630	50	3,866	509	3,357
4291+50	24.51	634	0	597	16	4,463	525	3,938
4292+00	50.00	292	0	857	0	5,320	525	4,795
4292+50	50.00	185	0	441	0	5,761	526	5,236
4293+00	50.00	67	58	233	54	5,994	580	5,414
4293+50	50.00	90	91	146	138	6,139	718	5,421
4294+00	50.00	196	1	265	86	6,404	804	5,601
4294+50	50.00	260	15	422	16	6,827	819	6,008
4294+98	47.80	314	26	508	37	7,335	856	6,479
4295+00	2.20	314	26	26	2	7,361	858	6,503
4295+50	50.00	277	21	547	44	7,908	901	7,006
4296+00	50.00	228	7	467	26	8,375	927	7,448
4296+50	50.00	207	9	403	14	8,777	941	7,836
4297+00	50.00	231	4	405	12	9,183	953	8,229
4297+10	10.00	243	15	88	4	9,270	957	8,313
WFR TOTAL				9,270	957	9,270	957	8,313

IH 94 STAGE 2 TOTAL

STATION	Distance	AREA (SF) Cut	AREA (SF) Fill	Incremental Vol (CY) (Unadjusted) Cut	Incremental Vol (CY) (Unadjusted) Fill	Cumulative Vol (CY) Cut 1.00	Cumulative Vol (CY) Fill 1.00	Mass Ordinate
1268+00	0.00	202	39	0	0	0	0	0
1268+50	50.00	203	47	375	79	375	79	296
1269+00	50.00	205	50	378	89	753	169	584
1269+50	50.00	210	37	384	81	1,137	250	887
1270+00	50.00	211	25	389	58	1,526	308	1,219
1270+50	50.00	208	17	387	38	1,913	346	1,567
1271+00	50.00	203	23	380	36	2,294	382	1,912
1271+50	50.00	215	33	387	51	2,681	434	2,248
1272+00	50.00	227	43	409	70	3,091	504	2,587
1272+50	50.00	239	42	432	78	3,522	582	2,940
1273+00	50.00	248	26	451	63	3,973	645	3,328
1273+50	50.00	249	26	460	49	4,433	694	3,739
1274+00	50.00	253	24	465	46	4,898	741	4,157
1274+50	50.00	249	33	465	52	5,363	793	4,570
1275+00	50.00	245	40	458	68	5,820	861	4,959
1275+39	39.47	240	51	354	67	6,175	928	5,247
1275+50	10.53	238	57	93	21	6,268	949	5,319
1275+64	14.13	236	64	124	32	6,392	981	5,412
1275+89	24.63	235	91	215	71	6,607	1,051	5,556
1276+00	11.24	235	91	98	38	6,705	1,089	5,616
1276+50	50.00	236	71	436	149	7,142	1,238	5,903
1276+94	43.76	239	36	385	86	7,527	1,325	6,202
1277+00	6.24	240	34	55	8	7,582	1,333	6,249
1277+50	50.00	255	0	458	32	8,040	1,364	6,676
1278+00	50.00	275	0	491	0	8,532	1,364	7,167
1278+50	50.00	292	0	525	0	9,057	1,364	7,692
1279+00	50.00	304	0	552	0	9,608	1,364	8,244
1279+50	50.00	313	2	572	1	10,180	1,366	8,814
1280+00	50.00	318	36	584	35	10,765	1,401	9,364
1280+50	50.00	236	13	513	45	11,277	1,446	9,831
1281+00	50.00	303	64	499	71	11,777	1,517	10,259
1281+50	50.00	300	90	558	142	12,335	1,660	10,675
1282+00	50.00	289	110	545	185	12,880	1,845	11,035
1282+50	50.00	277	137	524	228	13,404	2,073	11,331
1283+00	50.00	261	165	498	279	13,902	2,353	11,549
1283+50	50.00	253	180	476	319	14,378	2,672	11,707
1284+00	50.00	246	203	462	354	14,841	3,026	11,815
1284+50	50.00	231	233	442	404	15,283	3,429	11,853
1285+00	50.00	216	260	414	457	15,697	3,886	11,811
1285+50	50.00	209	305	393	523	16,090	4,410	11,680
1286+00	50.00	192	365	371	620	16,461	5,030	11,431
1286+50	50.00	185	421	349	728	16,810	5,758	11,052
1287+00	50.00	203	493	360	847	17,170	6,605	10,565
1287+50	50.00	137	508	315	927	17,485	7,531	9,954
1288+00	50.00	125	563	243	991	17,728	8,523	9,206
1288+50	50.00	132	630	238	1,105	17,967	9,627	8,339
1289+00	50.00	145	679	257	1,212	18,223	10,840	7,384
1289+50	50.00	127	1,087	252	1,635	18,475	12,475	6,000
1290+00	50.00	159	2,010	265	2,867	18,740	15,342	3,398
1290+50	50.00	126	2,278	264	3,970	19,004	19,312	-309
1291+00	50.00	98	1,367	181	2,531	19,185	21,844	-2,659
1291+50	50.00	120	773	201	1,981	19,386	23,825	-4,439
1292+00	50.00	118	790	220	1,447	19,606	25,272	-5,666
1292+50	50.00	28	699	135	1,379	19,741	26,651	-6,909
1293+00	50.00	12	681	38	1,278	19,779	27,928	-8,149
IH 94 STAGE 2 TOTAL				19,779	27,928	19,779	27,928	-8,149

IH 94 SB STAGE 3 TOTAL

STATION	Distance	AREA (SF) Cut	AREA (SF) Fill	Incremental Vol (CY) (Unadjusted) Cut	Incremental Vol (CY) (Unadjusted) Fill	Cumulative Vol (CY) Cut 1.00	Cumulative Vol (CY) Fill 1.00	Mass Ordinate
1268+00	0.00	25	0	0	0	0	0	0
1268+50	50.00	25	0	47	0	47	0	47
1269+00	50.00	25	0	47	0	94	0	94
1269+50	50.00	25	0	46	0	140	0	140
1270+00	50.00	25	0	47	0	187	0	187
1270+50	50.00	26	0	47	0	234	0	234
1271+00	50.00	26	0	48	0	282	0	282
1271+50	50.00	26	0	48	0	331	0	331
1272+00	50.00	27	0	49	0	380	0	380
1272+50	50.00	28	0	51	0	431	0	431
1273+00	50.00	29	0	52	0	483	0	483
1273+50	50.00	29	0	54	0	537	0	537
1274+00	50.00	29	0	54	0	590	0	590
1274+50	50.00	28	0	53	0	643	0	643
1275+00	50.00	28	0	53	0	696	0	696
1275+39	39.47	28	0	41	0	737	0	737
1275+50	10.53	28	0	11	0	748	0	748
1275+64	14.13	27	0	14	0	762	0	762
1275+89	24.63	27	0	25	0	787	0	787
1276+00	11.24	27	0	11	0	798	0	798
1276+50	50.00	27	0	50	0	849	0	849
1276+94	43.76	29	0	46	0	894	0	894
1277+00	6.24	29	0	7	0	901	0	901
1277+50	50.00	29	0	53	0	954	0	954
1278+00	50.00	29	0	54	0	1,008	0	1,008
1278+50	50.00	29	0	54	0	1,062	0	1,062
1279+00	50.00	29	0	54	0	1,116	0	1,116
1279+50	50.00	29	0	54	0	1,170	0	1,170
1280+00	50.00	28	0	53	0	1,223	0	1,223
1280+50	50.00	28	0	52	0	1,275	0	1,275
1281+00	50.00	28	0	52	0	1,326	0	1,326
1281+50	50.00	27	0	50	0	1,377	0	1,377
1282+00	50.00	26	0	48	0	1,425	0	1,425
1282+50	50.00	25	0	47	0	1,472	0	1,472
1283+00	50.00	24	0	45	0	1,516	0	1,516
1283+50	50.00	23	0	43	0	1,559	0	1,559
1284+00	50.00	22	0	42	0	1,601	0	1,601
1284+50	50.00	21	0	40	0	1,641	0	1,641
1285+00	50.00	21	0	39	0	1,681	0	1,681
1285+50	50.00	21	0	39	0	1,720	0	1,720
1286+00	50.00	20	0	38	0	1,758	0	1,758
1286+50	50.00	19	0	36	0	1,794	0	1,794
1287+00	50.00	18	0	34	0	1,829	0	1,829
1287+50	50.00	16	0	32	0	1,861	0	1,861
1288+00	50.00	16	0	30	0	1,890	0	1,890
1288+50	50.00	17	0	31	0	1,921	0	1,921
1289+00	50.00	19	0	33	0	1,954	0	1,954
1289+50	50.00	0	112	18	103	1,972	103	1,869
1290+00	50.00	0	130	0	223	1,972	327	1,645
1290+50	50.00	4	30	3	148	1,975	474	1,501
1291+00	50.00	19	0	35	0	2,010	474	1,536
1291+50	50.00	18	0	34	0	2,044	474	1,569
1292+00	50.00	16	0	31	0	2,074	474	1,600
1292+50	50.00	14	0	28	0	2,102	474	1,628
1293+00	50.00	12	0	24	0	2,126	474	1,652
IH 94 SB STAGE 3 TOTAL				2,126	474	2,126	474	1,652

IH 94 NB STAGE 3 TOTAL

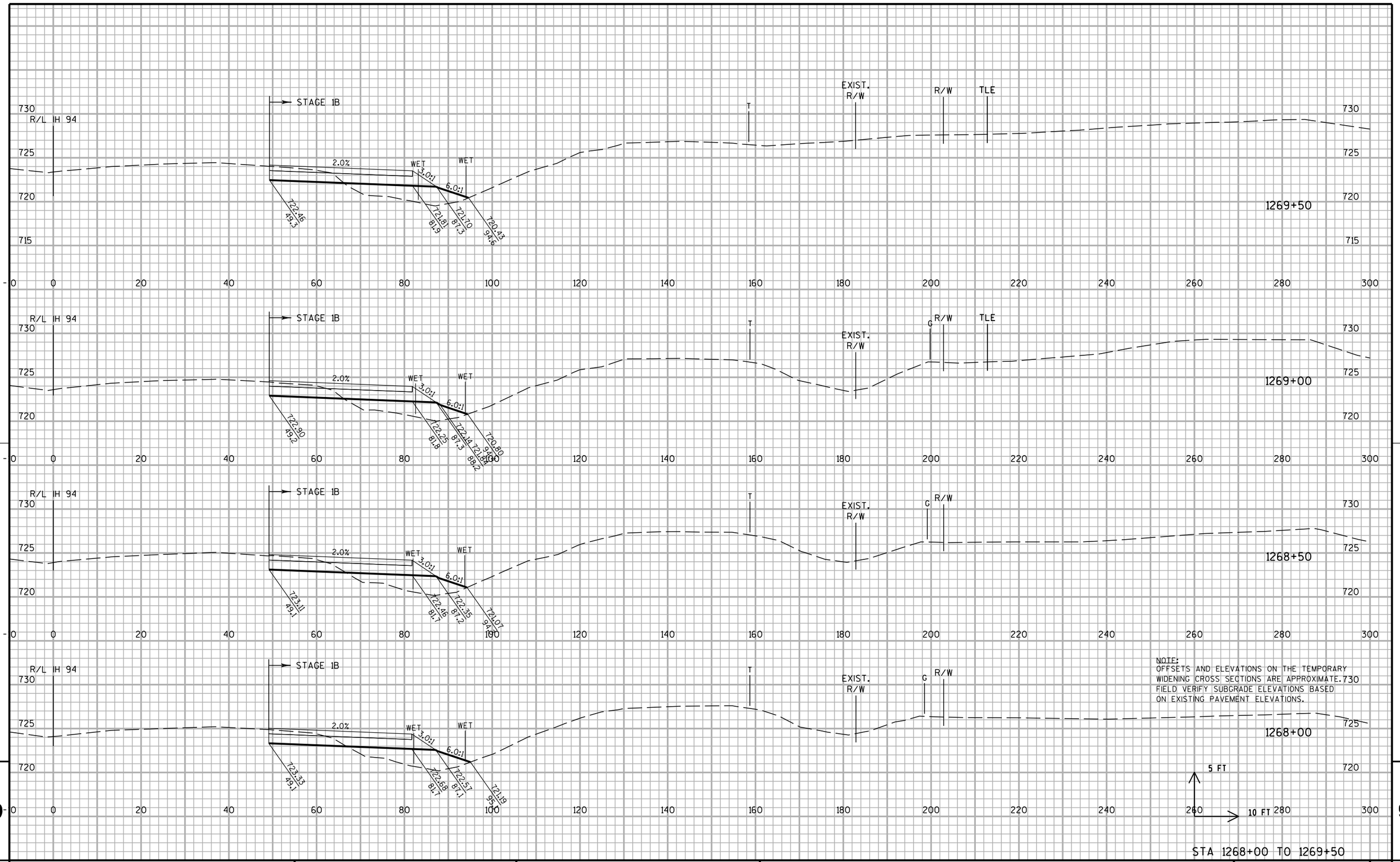
STATION	Distance	AREA (SF) Cut	AREA (SF) Fill	Incremental Vol (CY) (Unadjusted) Cut	Incremental Vol (CY) (Unadjusted) Fill	Cumulative Vol (CY) Cut 1.00	Cumulative Vol (CY) Fill 1.00	Mass Ordinate
1268+00	0.00	27	0	0	0	0	0	0
1268+50	50.00	28	0	51	0	51	0	51
1269+00	50.00	27	0	51	0	102	0	102
1269+50	50.00	26	0	49	0	151	0	151
1270+00	50.00	26	0	48	0	199	0	199
1270+50	50.00	26	0	49	0	248	0	248
1271+00	50.00	26	0	49	0	296	0	296
1271+50	50.00	25	0	48	0	344	0	344
1272+00	50.00	26	0	48	0	392	0	392
1272+50	50.00	28	0	50	0	442	0	442
1273+00	50.00	29	0	53	0	495	0	495
1273+50	50.00	29	0	54	0	549	0	549
1274+00	50.00	30	0	55	0	604	0	604
1274+50	50.00	30	0	56	0	660	0	660
1275+00	50.00	31	0	57	0	716	0	716
1275+50	50.00	31	0	57	0	774	0	774
1276+00	50.00	30	0	56	0	830	0	830
1276+50	50.00	30	0	55	0	885	0	885
1277+00	50.00	27	0	52	0	937	0	937
1277+50	50.00	30	0	53	0	990	0	990
1278+00	50.00	30	0	56	0	1,047	0	1,047
1278+50	50.00	30	0	56	0	1,103	0	1,103
1279+00	50.00	28	0	54	0	1,157	0	1,157
1279+50	50.00	28	0	52	0	1,209	0	1,209
1280+00	50.00	27	0	51	0	1,260	0	1,260
1280+50	50.00	26	0	49	0	1,309	0	1,309
1281+00	50.00	25	0	47	0	1,356	0	1,356
1281+50	50.00	23	0	45	0	1,401	0	1,401
1282+00	50.00	22	0	42	0	1,443	0	1,443
1282+50	50.00	21	0	41	0	1,484	0	1,484
1283+00	50.00	20	0	38	0	1,522	0	1,522
1283+50	50.00	19	0	36	0	1,558	0	1,558
1284+00	50.00	18	0	34	0	1,592	0	1,592
1284+50	50.00	18	0	33	0	1,625	0	1,625
1285+00	50.00	17	0	32	0	1,657	0	1,657
1285+24	23.77	16	0	14	0	1,671	0	1,671
1285+50	26.23	16	0	16	0	1,687	0	1,687
1286+00	50.00	16	0	30	0	1,717	0	1,717
1286+29	28.77	15	0	16	0	1,734	0	1,734
1286+50	21.23	14	0	12	0	1,745	0	1,745
1286+54	4.10	14	0	2	0	1,747	0	1,747
1286+79	25.33	14	0	13	0	1,761	0	1,761
1287+00	20.57	14	0	10	0	1,771	0	1,771
1287+20	20.00	13	0	10	0	1,781	0	1,781
1287+50	30.00	12	0	14	0	1,795	0	1,795
1288+00	50.00	12	0	22	0	1,817	0	1,817
1288+50	50.00	12	0	22	0	1,839	0	1,839
1289+00	50.00	5	25	15	23	1,854	23	1,831
1289+50	50.00	0	168	4	179	1,858	202	1,656
1290+00	50.00	0	166	0	310	1,858	512	1,346
1290+50	50.00	6	5	5	159	1,864	671	1,193
1291+00	50.00	12	0	16	4	1,880	675	1,205
1291+50	50.00	11	0	21	0	1,901	675	1,226
1292+00	50.00	10	0	19	0	1,920	675	1,245
1292+50	50.00	10	0	18	0	1,938	675	1,263
1293+00	50.00	10	0	18	0	1,956	675	1,281
IH 94 NB STAGE 3 TOTAL				1,956	675	1,956	675	1,281

IH 94 STAGE 4 TOTAL

STATION	Distance	AREA (SF) Cut	AREA (SF) Fill	Incremental Vol (CY) (Unadjusted) Cut	Incremental Vol (CY) (Unadjusted) Fill	Cumulative Vol (CY) Cut 1.00	Cumulative Vol (CY) Fill 1.00	Mass Ordinate
1268+00	0.00	236	0	0	0	0	0	0
1268+50	50.00	240	0	441	0	441	0	441
1269+00	50.00	241	0	446	0	886	0	886
1269+50	50.00	234	0	440	0	1,326	0	1,326
1270+00	50.00	244	0	442	0	1,768	0	1,768
1270+50	50.00	250	0	457	0	2,225	0	2,225
1271+00	50.00	260	0	472	0	2,697	0	2,697
1271+50	50.00	270	0	491	0	3,188	0	3,188
1272+00	50.00	284	0	513	0	3,701	0	3,701
1272+50	50.00	300	0	540	0	4,241	0	4,241
1273+00	50.00	306	0	561	0	4,802	0	4,802
1273+50	50.00	321	0	581	0	5,383	0	5,383
1274+00	50.00	318	0	592	0	5,975	0	5,975
1274+50	50.00	322	0	593	0	6,568	0	6,568
1275+00	50.00	319	0	593	0	7,161	0	7,161
1275+50	50.00	318	0	589	0	7,750	0	7,750
1276+00	50.00	314	0	585	0	8,335	0	8,335
1276+50	50.00	307	0	576	0	8,911	0	8,911
1277+00	50.00	301	0	563	0	9,474	0	9,474
1277+50	50.00	298	0	554	0	10,029	0	10,029
1278+00	50.00	293	0	547	0	10,576	0	10,576
1278+50	50.00	290	0	540	0	11,116	0	11,116
1279+00	50.00	272	0	520	0	11,636	0	11,636
1279+50	50.00	263	0	495	0	12,131	0	12,131
1280+00	50.00	253	0	478	0	12,609	0	12,609
1280+50	50.00	240	1	457	0	13,066	0	13,065
1281+00	50.00	234	0	439	1	13,505	1	13,504
1281+50	50.00	219	0	420	0	13,925	1	13,924
1282+00	50.00	212	0	400	0	14,325	1	14,323
1282+50	50.00	193	2	375	2	14,700	4	14,696
1283+00	50.00	179	4	344	5	15,044	9	15,035
1283+50	50.00	170	5	323	8	15,367	17	15,350
1284+00	50.00	169	5	314	10	15,682	27	15,654
1284+50	50.00	158	8	303	12	15,985	40	15,945
1285+00	50.00	148	11	283	17	16,268	57	16,211
1285+24	23.77	144	12	128	10	16,397	67	16,329
1285+50	26.23	145	16	140	14	16,537	81	16,456
1286+00	50.00	141	22	265	35	16,802	116	16,686
1286+29	28.77	132	28	145	27	16,947	143	16,805
1286+50	21.23	125	27	101	21	17,048	164	16,884
1286+54	4.10	123	26	19	4	17,067	168	16,899
1286+79	25.33	115	27	112	25	17,179	193	16,986
1287+00	20.57	110	29	86	21	17,265	214	17,050
1287+20	20.00	105	41	79	26	17,344	240	17,103
1287+50	30.00	98	34	113	42	17,457	282	17,174
1288+00	50.00	90	26	174	56	17,631	338	17,292
1288+50	50.00	81	27	159	49	17,789	387	17,402
1289+00	50.00	37	326	110	326	17,899	714	17,185
1289+50	50.00	30	730	63	977	17,962	1,691	16,271
1290+00	50.00	28	548	54	1,183	18,016	2,873	15,143
1290+50	50.00	60	25	82	530	18,097	3,403	14,694
1291+00	50.00	65	22	116	43	18,213	3,446	14,767
1291+50	50.00	58	25	113	43	18,327	3,490	14,837
1292+00	50.00	52	27	101	48	18,428	3,538	14,890
1292+50	50.00	44	29	89	52	18,517	3,590	14,927
1293+00	50.00	47	26	85	51	18,602	3,641	14,961
IH 94 STAGE 4 TOTAL				18,602	3,641	18,602	3,641	14,961

IH 94 SB STAGE 5 TOTAL

STATION	Distance	AREA (SF) Cut	AREA (SF) Fill	Incremental Vol (CY) (Unadjusted) Cut	Incremental Vol (CY) (Unadjusted) Fill	Cumulative Vol (CY) Cut 1.00	Cumulative Vol (CY) Fill 1.00	Mass Ordinate
1268+00	0.00	3	0	0	0	0	0	0
1268+50	50.00	2	0	5	0	5	0	5
1269+00	50.00	3	0	5	0	9	0	9
1269+50	50.00	2	0	5	0	14	0	14
1270+00	50.00	2	0	4	0	18	0	18
1270+50	50.00	2	0	4	0	23	0	23
1271+00	50.00	2	0	4	0	27	0	27
1271+50	50.00	2	0	4	0	31	0	31
1272+00	50.00	2	0	4	0	36	0	36
1272+50	50.00	2	0	4	0	40	0	40
1273+00	50.00	2	0	4	0	44	0	44
1273+50	50.00	2	0	4	0	49	0	49
1274+00	50.00	2	0	4	0	53	0	53
1274+50	50.00	2	0	4	0	57	0	57
1275+00	50.00	4	0	6	0	64	0	64
1275+39	39.47	4	0	6	0	70	0	70
1275+50	10.53	4	0	2	0	72	0	72
1275+64	14.13	4	0	2	0	74	0	74
1275+89	24.63	5	0	4	0	78	0	78
1276+00	11.24	4	0	2	0	79	0	79
1276+50	50.00	4	0	8	0	87	0	87
1276+94	43.76	7	0	9	0	96	0	96
1277+00	6.24	7	0	2	0	98	0	98
1277+50	50.00	7	0	12	0	110	0	110
1278+00	50.00	7	0	12	0	122	0	122
1278+50	50.00	7	0	12	0	135	0	135
1279+00	50.00	7	0	12	0	147	0	147
1279+50	50.00	7	0	12	0	160	0	160
1280+00	50.00	7	0	12	0	172	0	172
1280+50	50.00	7	0	12	0	184	0	184
1281+00	50.00	7	0	12	0	197	0	197
1281+50	50.00	7	0	12	0	209	0	209
1282+00	50.00	7	0	12	0	222	0	222
1282+50	50.00	7	0	12	0	234	0	234
1283+00	50.00	7	0	12	0	247	0	247
1283+50	50.00	7	0	12	0	259	0	259
1284+00	50.00	7	0	12	0	271	0	271
1284+50	50.00	7	0	12	0	284	0	284
1285+00	50.00	7	0	12	0	296	0	296
1285+50	50.00	7	0	12	0	309	0	309
1286+00	50.00	7	0	12	0	321	0	321
1286+50	50.00	7	0	12	0	334	0	334
1287+00	50.00	7	0	12	0	346	0	346
1287+50	50.00	7	0	12	0	358	0	358
1288+00	50.00	7	0	12	0	371	0	371
1288+50	50.00	7	0	12	0	383	0	383
1289+00	50.00	7	0	12	0	396	0	396
1289+50	50.00	7	0	12	0	408	0	408
1290+00	50.00	7	0	12	0	421	0	421
1290+50	50.00	7	0	12	0	433	0	433
1291+00	50.00	7	0	12	0	445	0	445
1291+50	50.00	7	0	12	0	458	0	458
1292+00	50.00	7	0	12	0	470	0	470
1292+50	50.00	7	0	12	0	483	0	483
1293+00	50.00	7	0	12	0	495	0	495
IH 94 SB STAGE 5 TOTAL				495	0	495	0	495

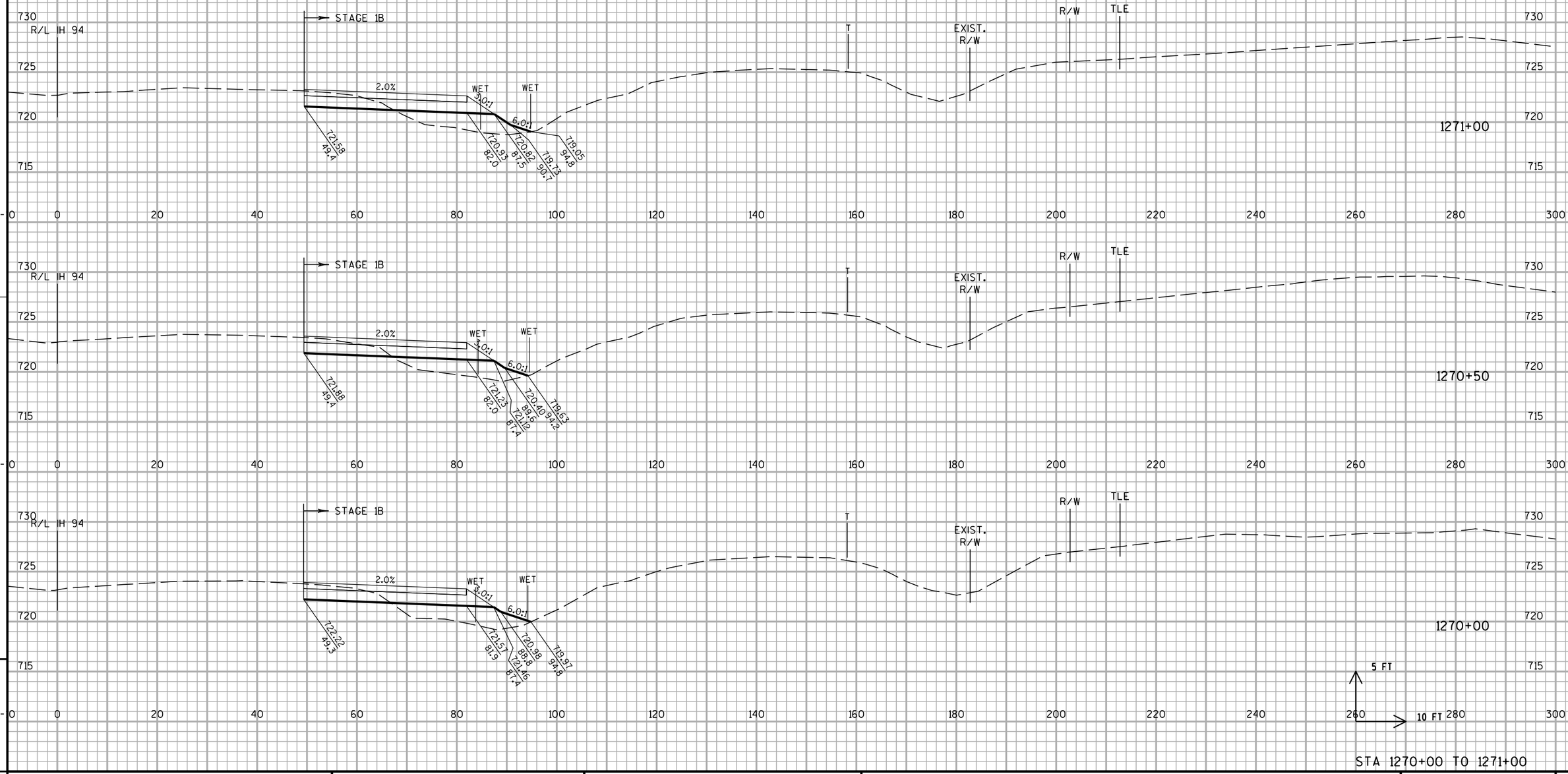


NOTE:
OFFSETS AND ELEVATIONS ON THE TEMPORARY WIDENING CROSS SECTIONS ARE APPROXIMATE. FIELD VERIFY SUBGRADE ELEVATIONS BASED ON EXISTING PAVEMENT ELEVATIONS.

5 FT
10 FT

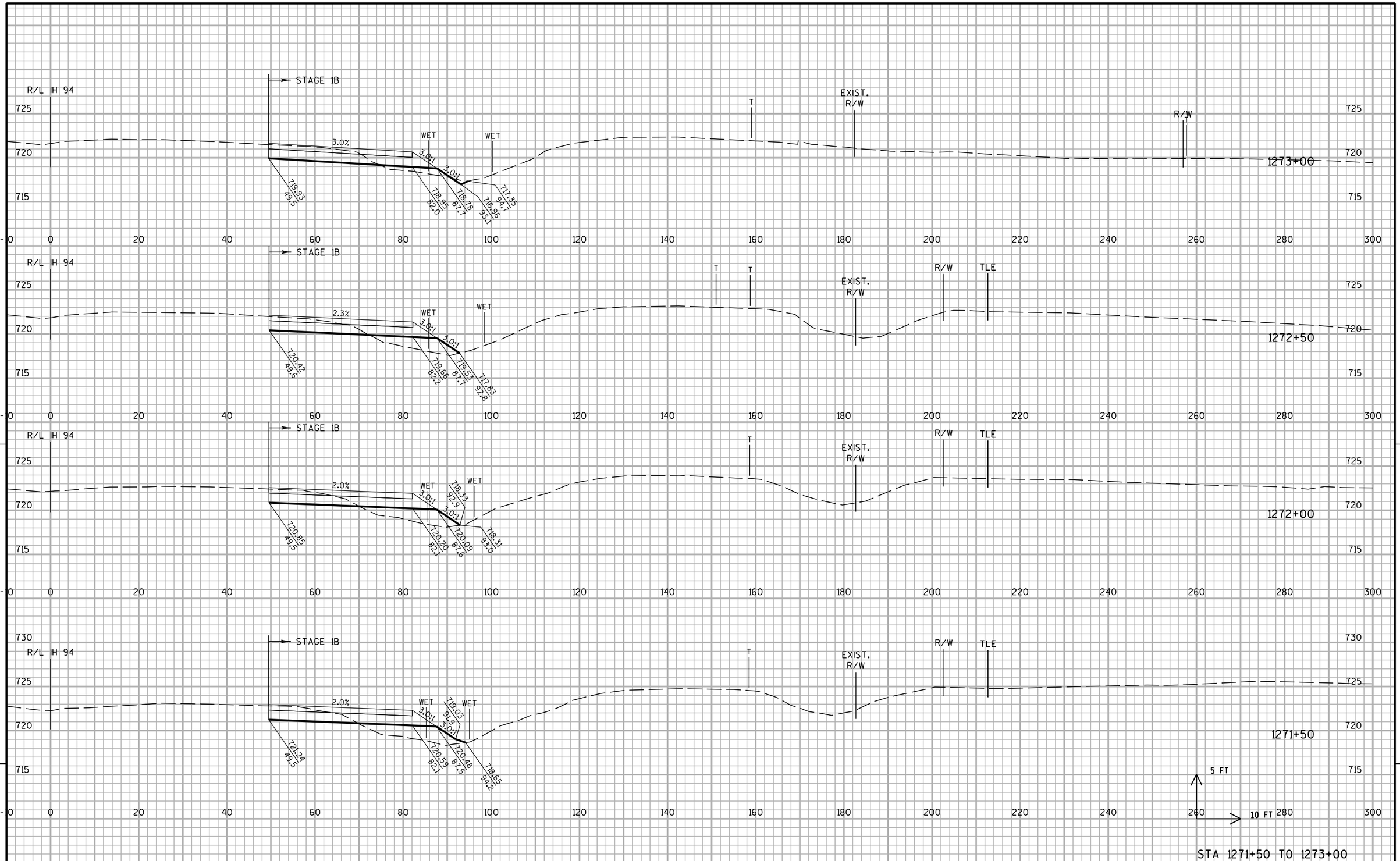
STA 1268+00 TO 1269+50

PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	CROSS SECTIONS: IH 94 NORTHBOUND STAGE 1B	SHEET 339	E



STA 1270+00 TO 1271+00

PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	CROSS SECTIONS: IH 94 NORTHBOUND STAGE 1B	SHEET 340	E

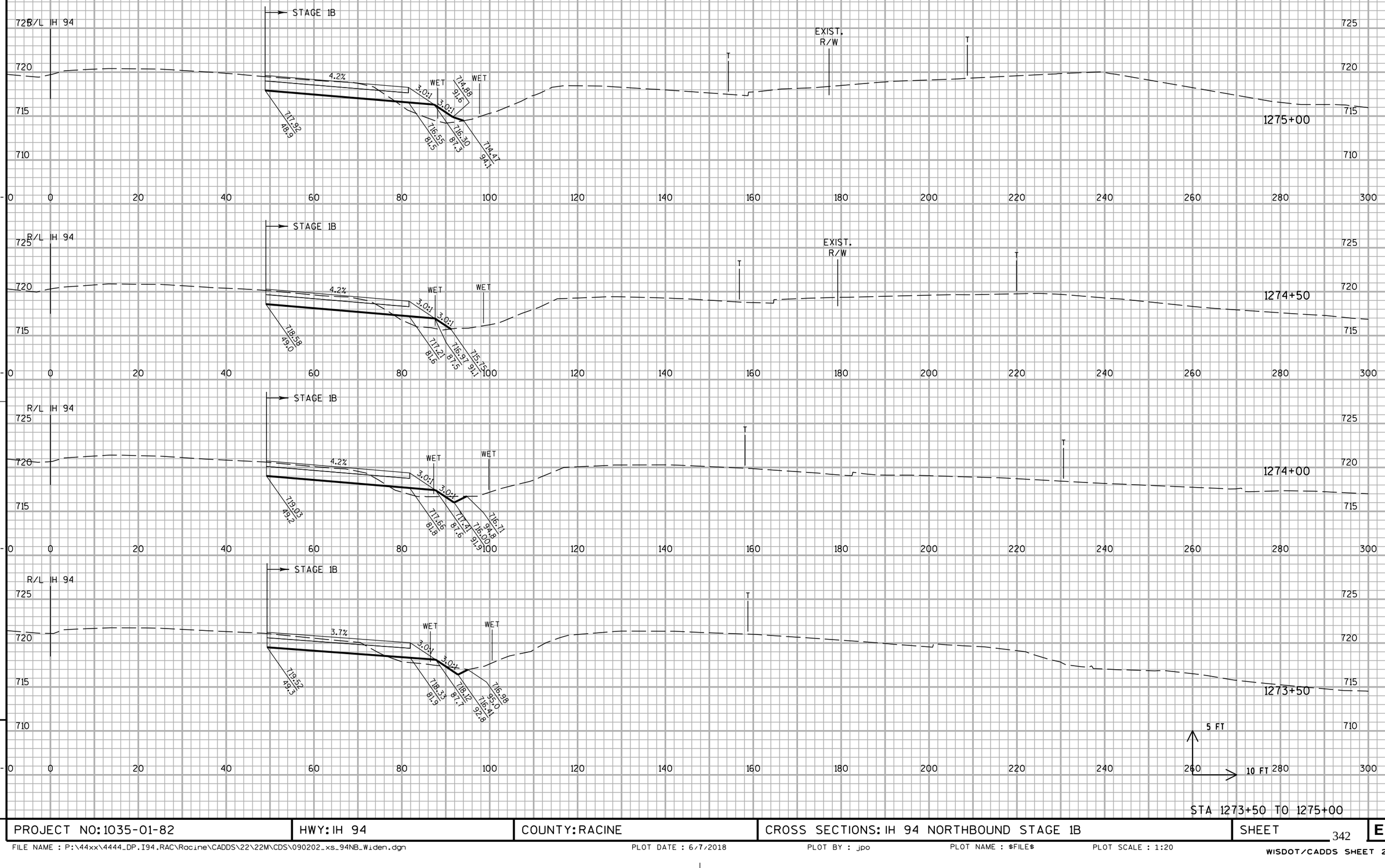


STA 1271+50 TO 1273+00

PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	CROSS SECTIONS: IH 94 NORTHBOUND STAGE 1B	SHEET 341	E

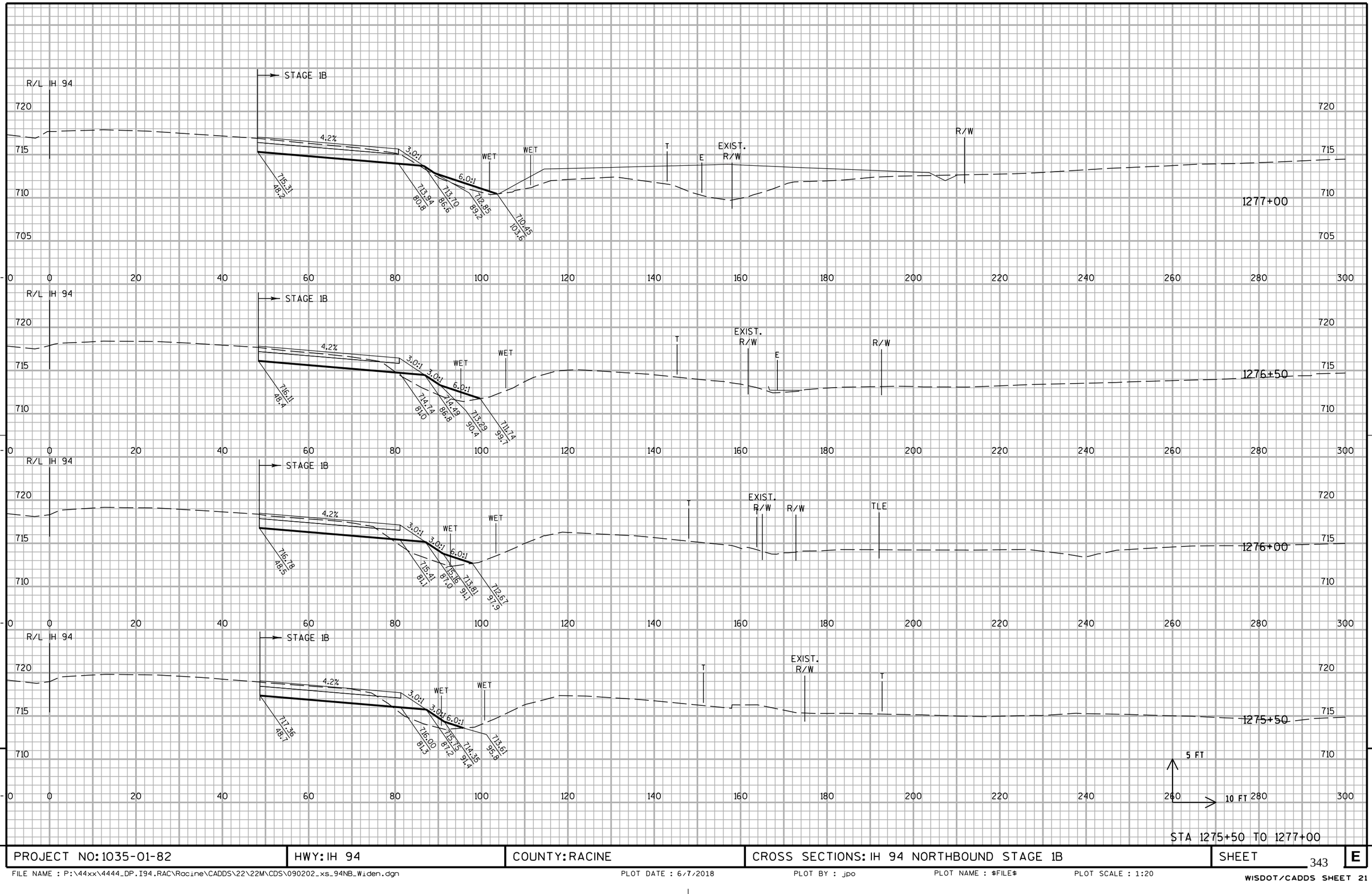
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WISDOT/CADDS SHEET 21



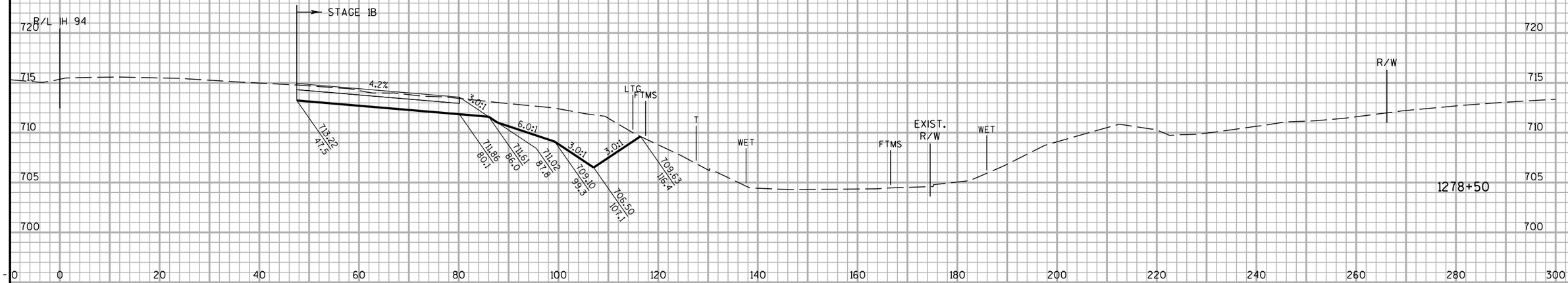
STA 1273+50 TO 1275+00

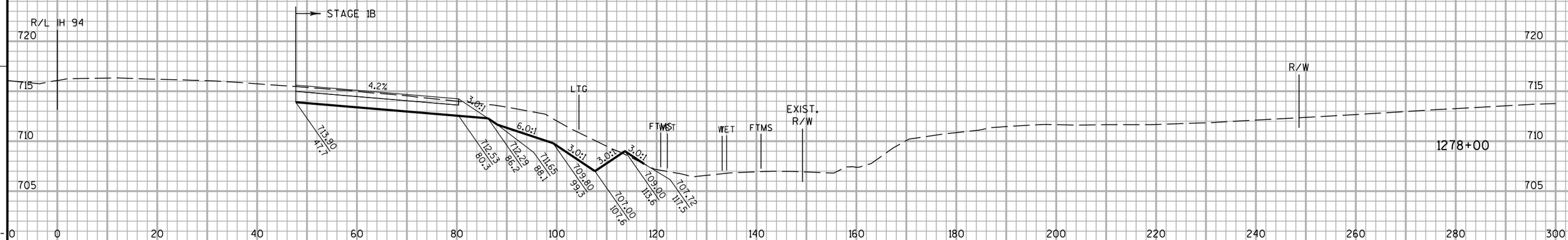
PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	CROSS SECTIONS: IH 94 NORTHBOUND STAGE 1B	SHEET 342	E

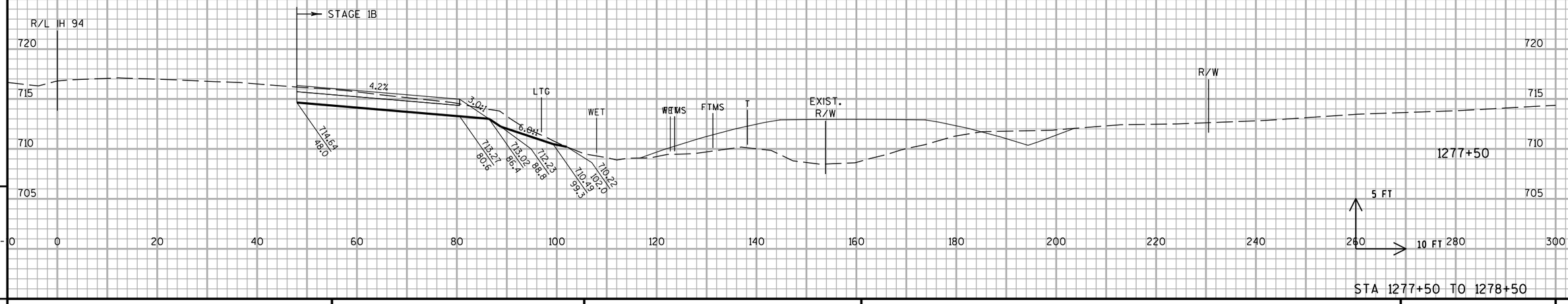


STA 1275+50 TO 1277+00

PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	CROSS SECTIONS: IH 94 NORTHBOUND STAGE 1B	SHEET 343	E







9

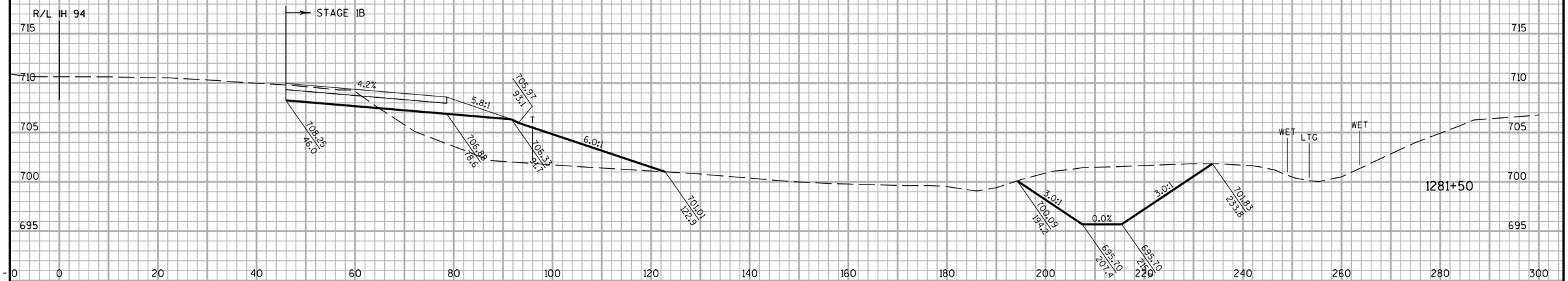
9

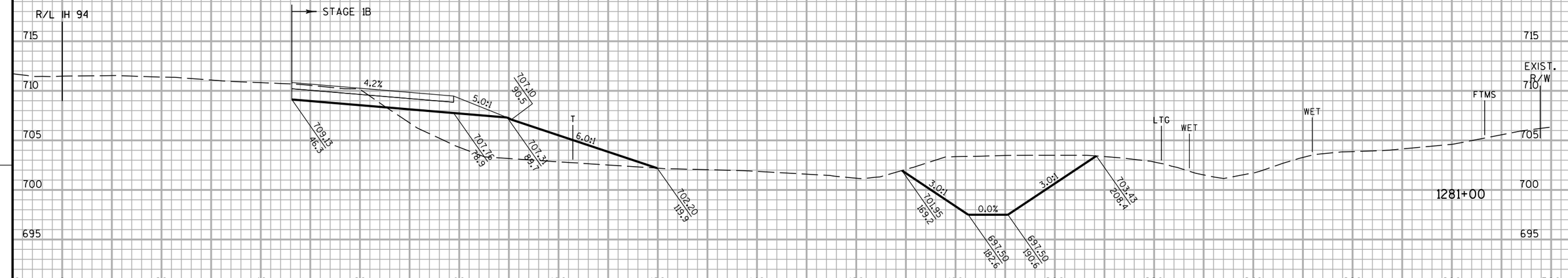
STA 1277+50 TO 1278+50

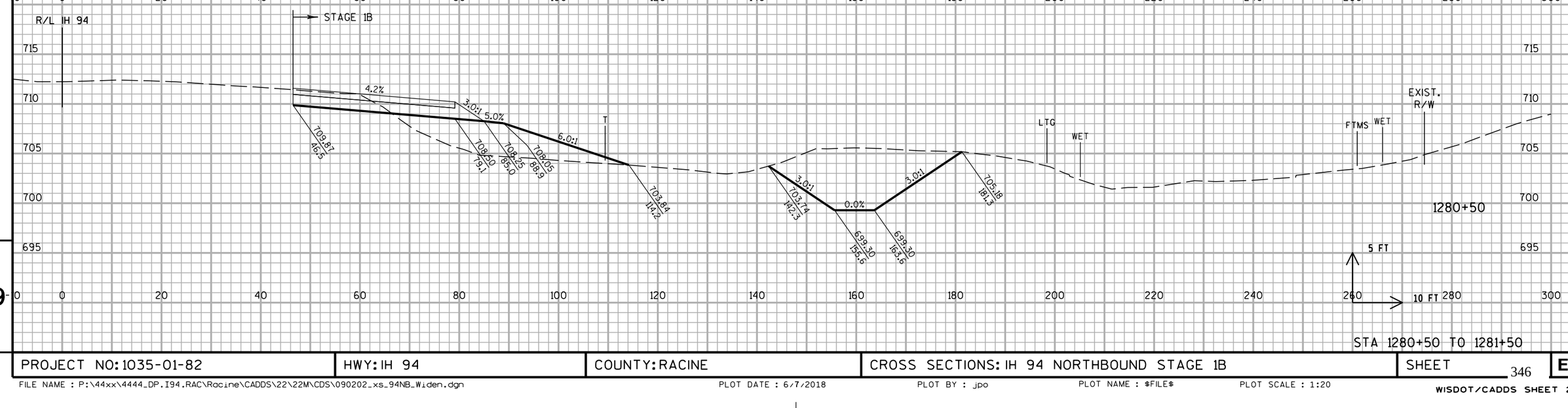
PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	CROSS SECTIONS: IH 94 NORTHBOUND STAGE 1B	SHEET 344	E

STA 1279+00 TO 1280+00

PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	CROSS SECTIONS: IH 94 NORTHBOUND STAGE 1B	SHEET 345	E





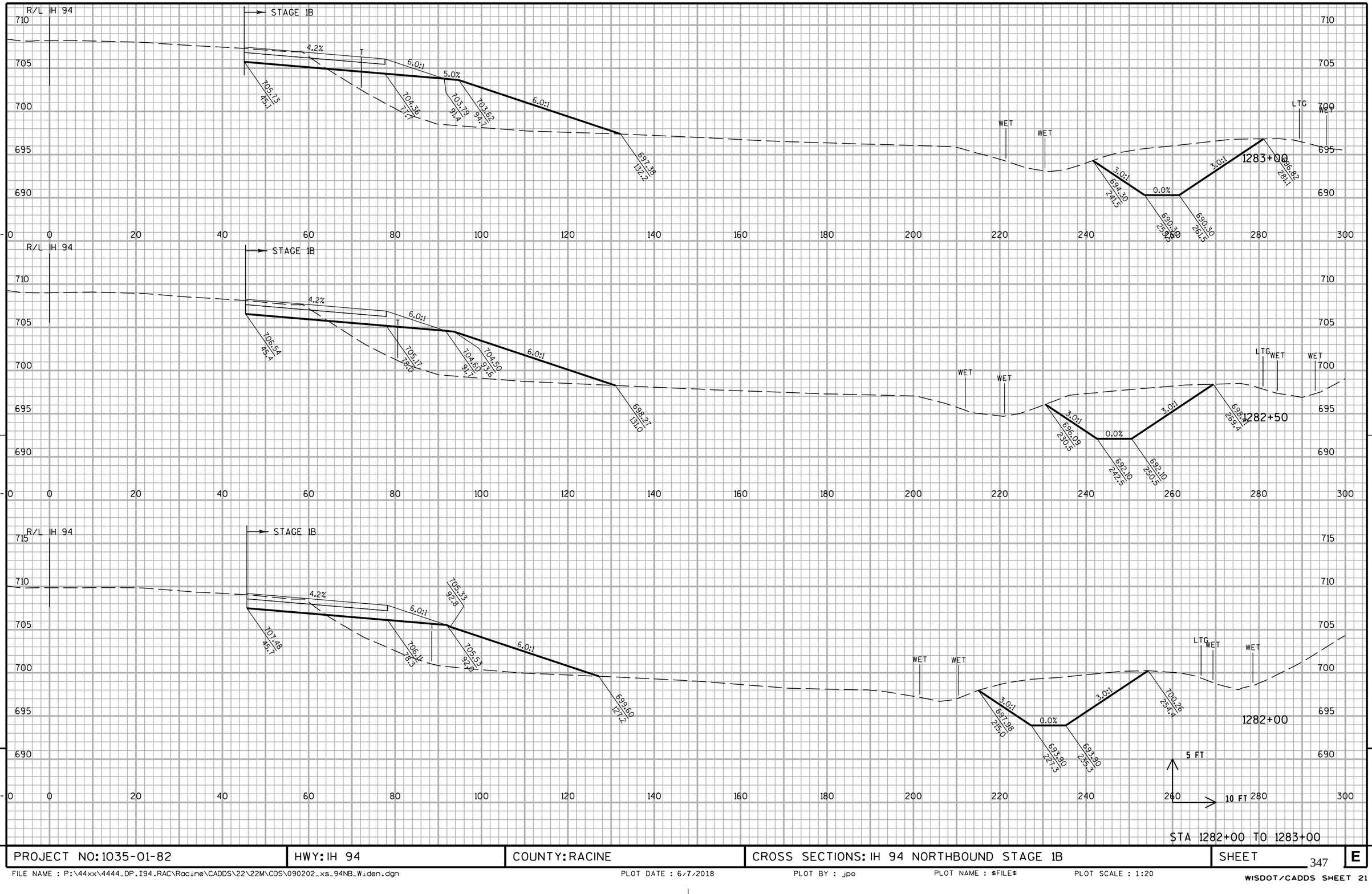


9

9

STA 1280+50 TO 1281+50

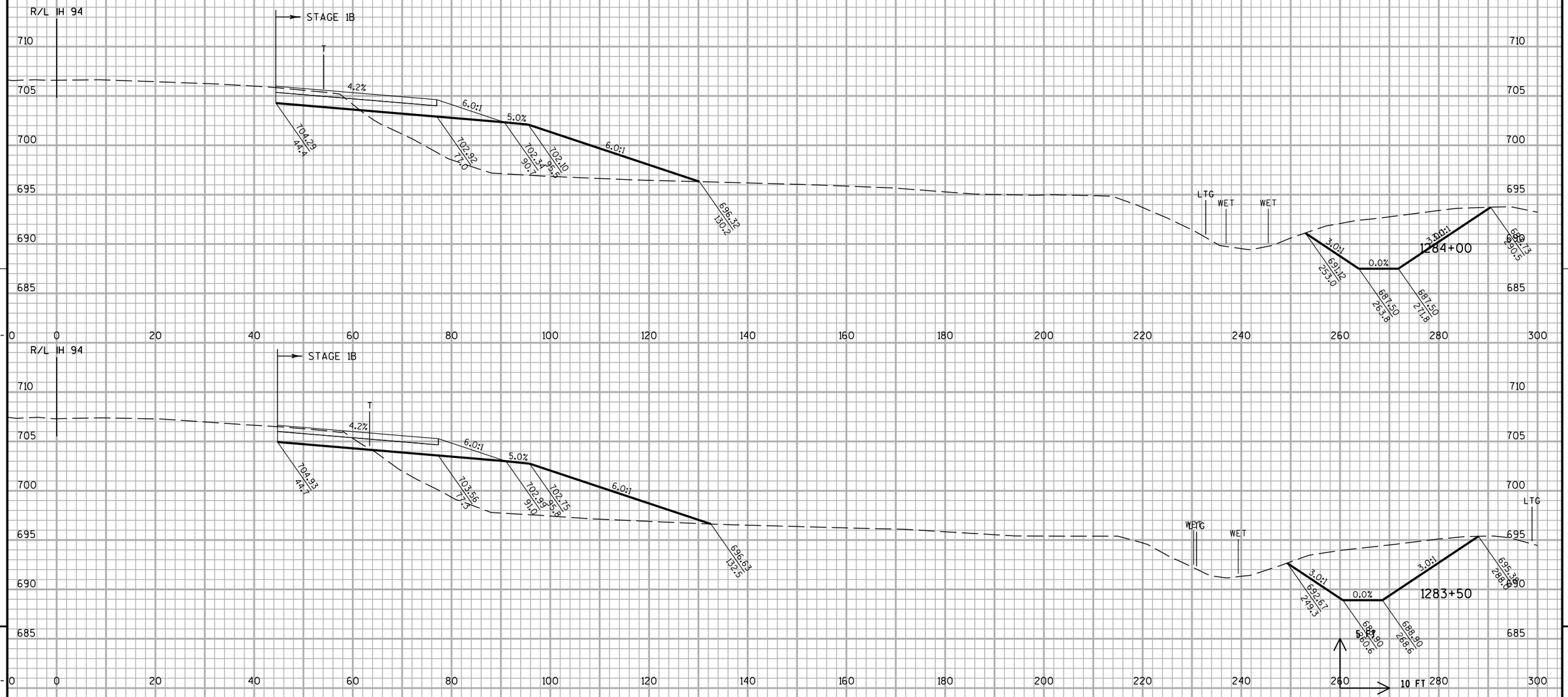
PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	CROSS SECTIONS: IH 94 NORTHBOUND STAGE 1B	SHEET 346	E



PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	CROSS SECTIONS: IH 94 NORTHBOUND STAGE 1B	SHEET 347	E

FILE NAME : P:\44xx\4444_DP.I94.RAC\Racine\CADDS\22\22M\CDS\090202_xs_94NB_Widen.dgn PLOT DATE : 6/7/2018 PLOT BY : jpo PLOT NAME : $FILE$ PLOT SCALE : 1:20

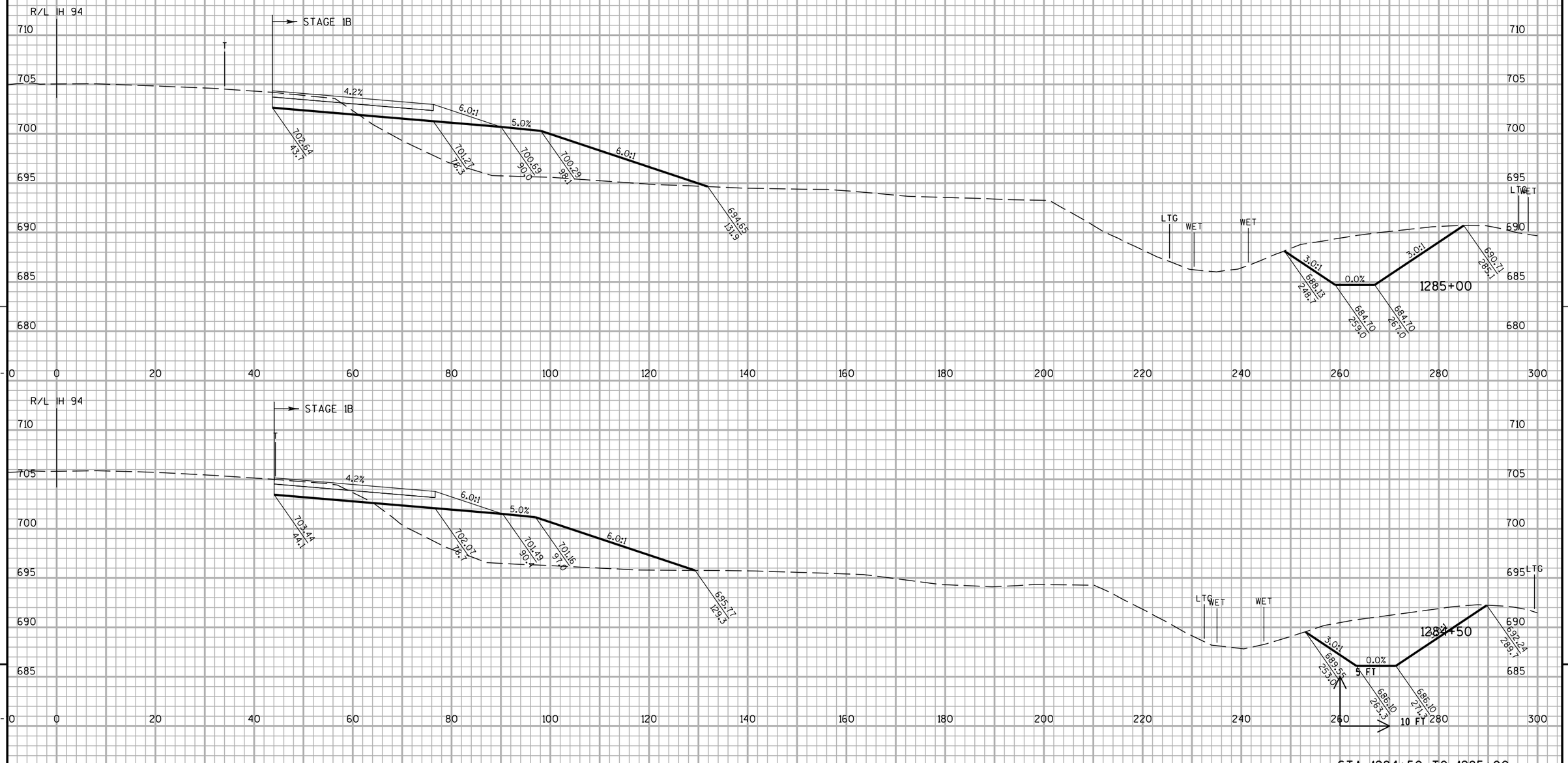
WISDOT/CADDS SHEET 21



PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	CROSS SECTIONS: IH 94 NORTHBOUND STAGE 1B	SHEET 348	E

FILE NAME : P:\44xx\4444_DP.I94.RAC\Racine\CADDS\22\22M\CDS\090202_xs_94NB_Widen.dgn PLOT DATE : 6/7/2018 PLOT BY : jpo PLOT NAME : $FILE$ PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21



PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	CROSS SECTIONS: IH 94 NORTHBOUND STAGE 1B	SHEET 349	E

FILE NAME : P:\44xx\4444_DP.I94.RAC\Racine\CADDS\22\22M\CDS\090202_xs_94NB_Widen.dgn PLOT DATE : 6/7/2018 PLOT BY : jpo PLOT NAME : $FILE$ PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21

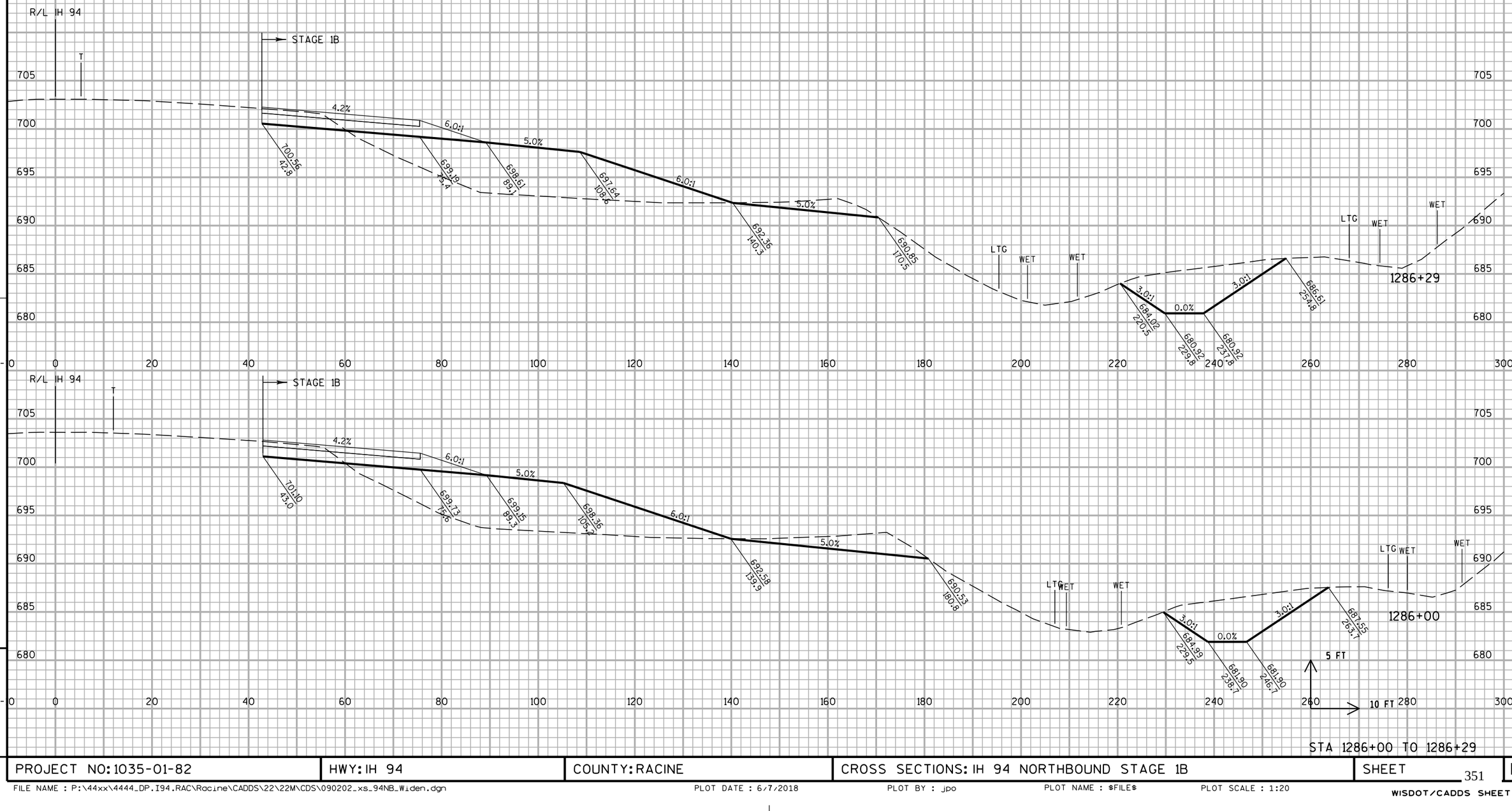


STA 1285+24 TO 1285+50

PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	CROSS SECTIONS: IH 94 NORTHBOUND STAGE 1B	SHEET 350	E

FILE NAME : P:\44xx\4444_DP.I94.RAC\Racine\CADDS\22\22M\CDS\090202_xs_94NB_Widen.dgn PLOT DATE : 6/7/2018 PLOT BY : jpo PLOT NAME : $FILE$ PLOT SCALE : 1:20

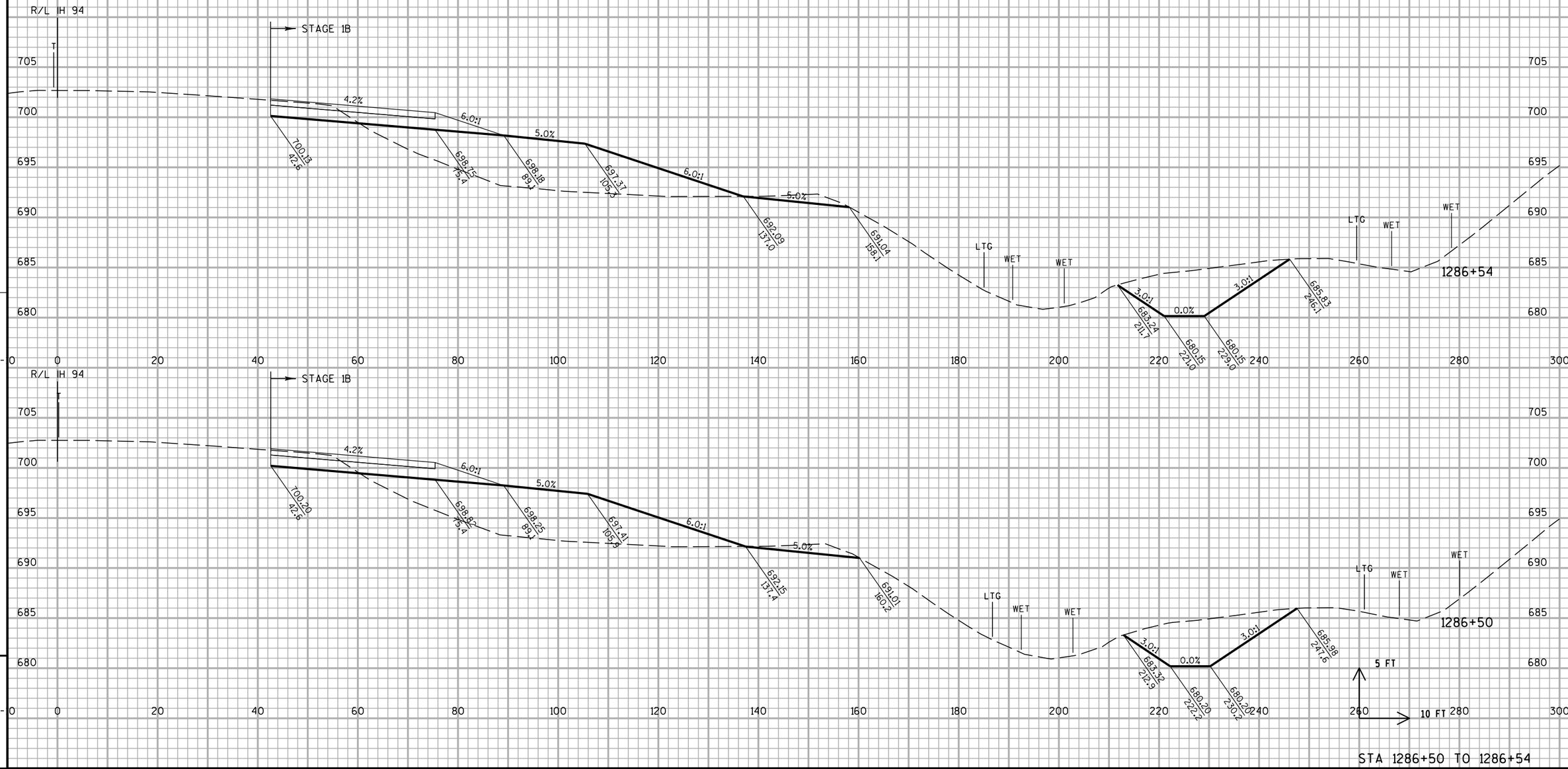
WISDOT/CADDS SHEET 21



PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	CROSS SECTIONS: IH 94 NORTHBOUND STAGE 1B	SHEET 351	E

FILE NAME : P:\44xx\4444_DP.I94.RAC\Racine\CADDS\22\22M\CDS\090202_xs_94NB_Widen.dgn PLOT DATE : 6/7/2018 PLOT BY : jpo PLOT NAME : $FILE$ PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21

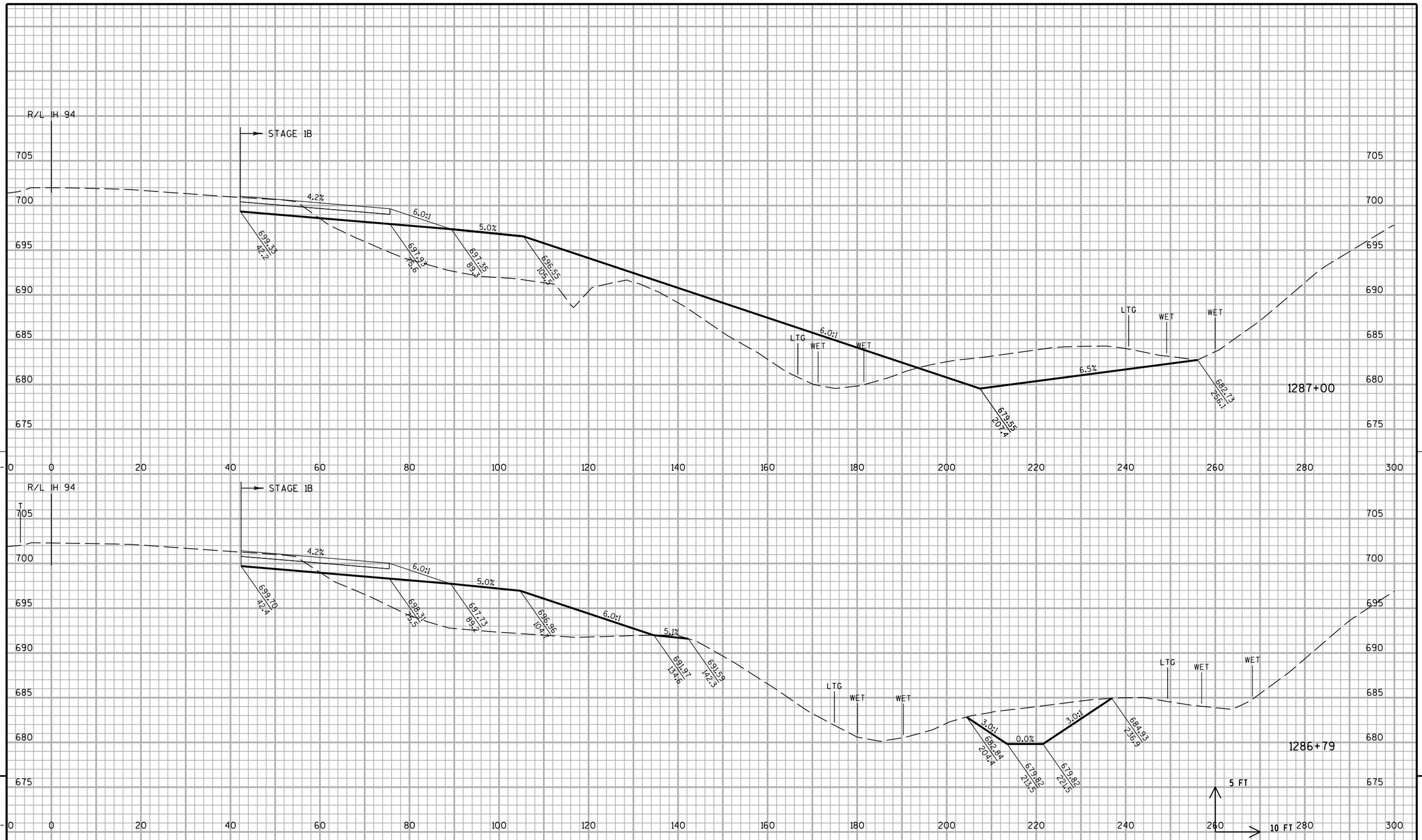


STA 1286+50 TO 1286+54

PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	CROSS SECTIONS: IH 94 NORTHBOUND STAGE 1B	SHEET 352	E

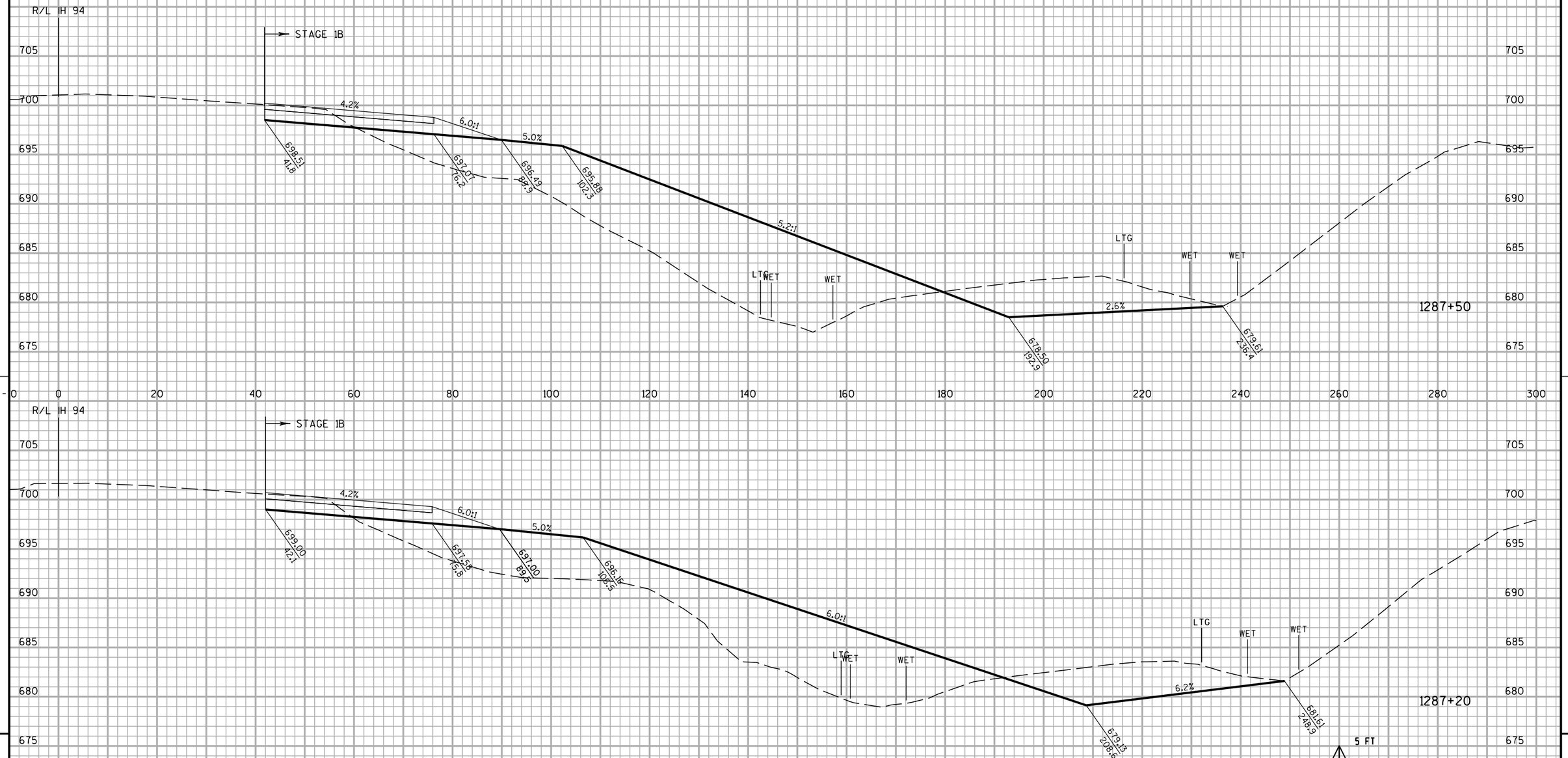
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WISDOT/CADDS SHEET 21



PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	CROSS SECTIONS: IH 94 NORTHBOUND STAGE 1B	SHEET 353	E

FILE NAME : P:\44xx\4444_DP.I94.RAC\Racine\CADDS\22\22M\CDS\090202_xs_94NB_Widen.dgn
PLOT DATE : 6/7/2018
PLOT BY : jpo
PLOT NAME : $FILE$
PLOT SCALE : 1:20
WISDOT/CADDS SHEET 21

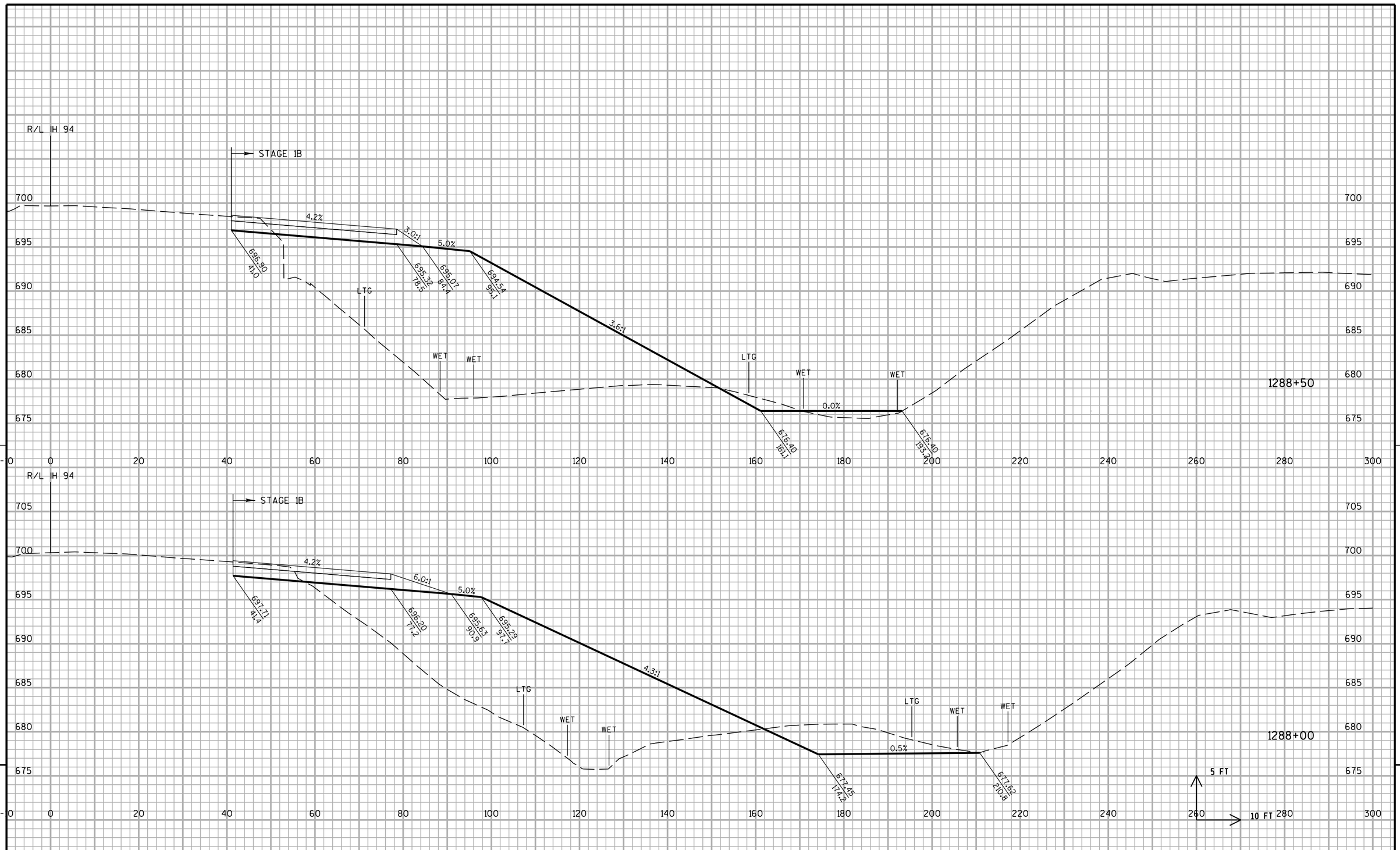


STA 1287+20 TO 1287+50

PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	CROSS SECTIONS: IH 94 NORTHBOUND STAGE 1B	SHEET 354	E

FILE NAME : P:\44xx\4444_DP.I94.RAC\Racine\CADDS\22\22M\CDS\090202_xs_94NB_Widen.dgn PLOT DATE : 6/7/2018 PLOT BY : jpo PLOT NAME : $FILE$ PLOT SCALE : 1:20

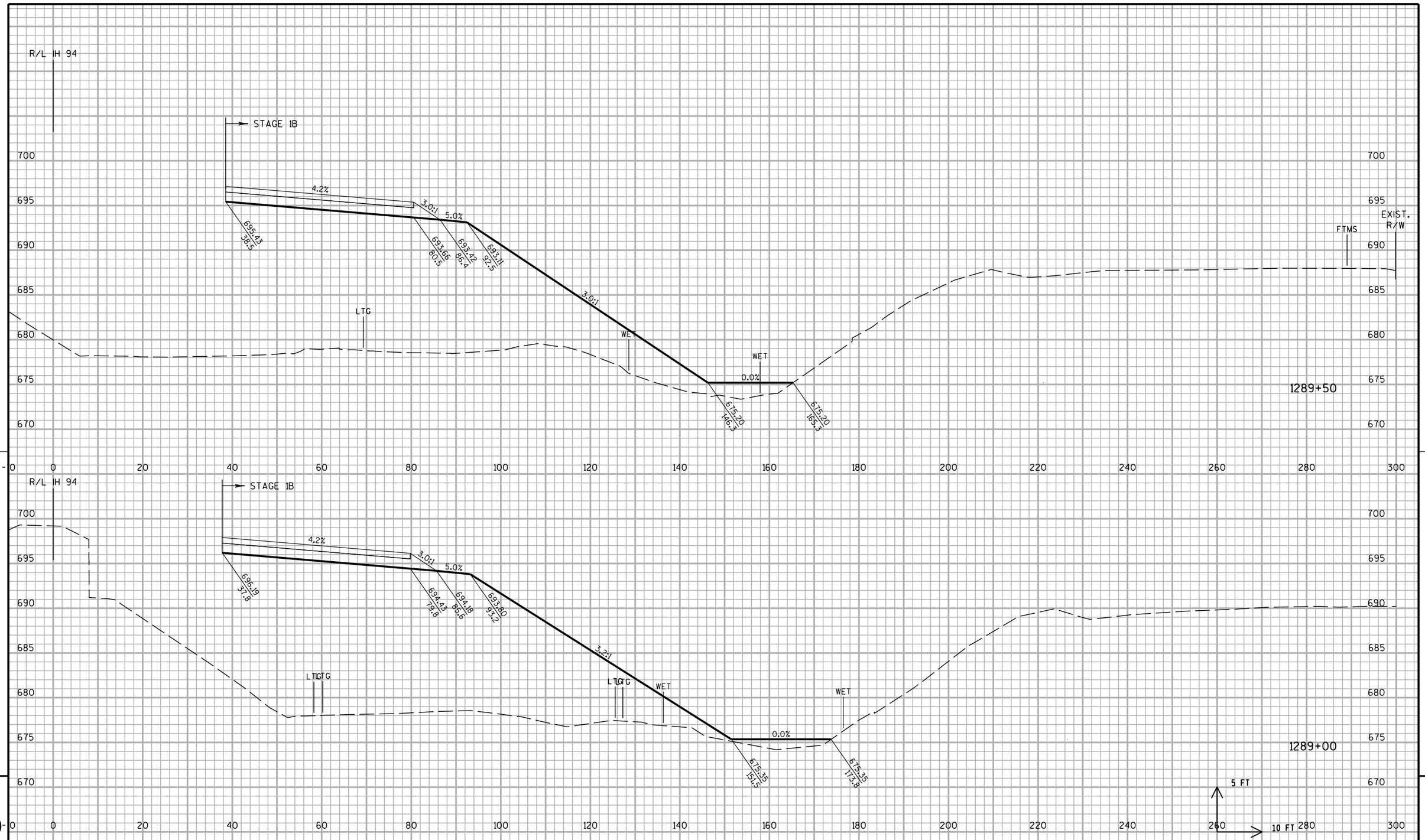
WISDOT/CADDS SHEET 21



PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	CROSS SECTIONS: IH 94 NORTHBOUND STAGE 1B	SHEET 355	E

FILE NAME : P:\44xx\4444_DP.I94.RAC\Racine\CADDS\22\22M\CDS\090202_xs_94NB_Widen.dgn PLOT DATE : 6/7/2018 PLOT BY : jpo PLOT NAME : $FILE$ PLOT SCALE : 1:20

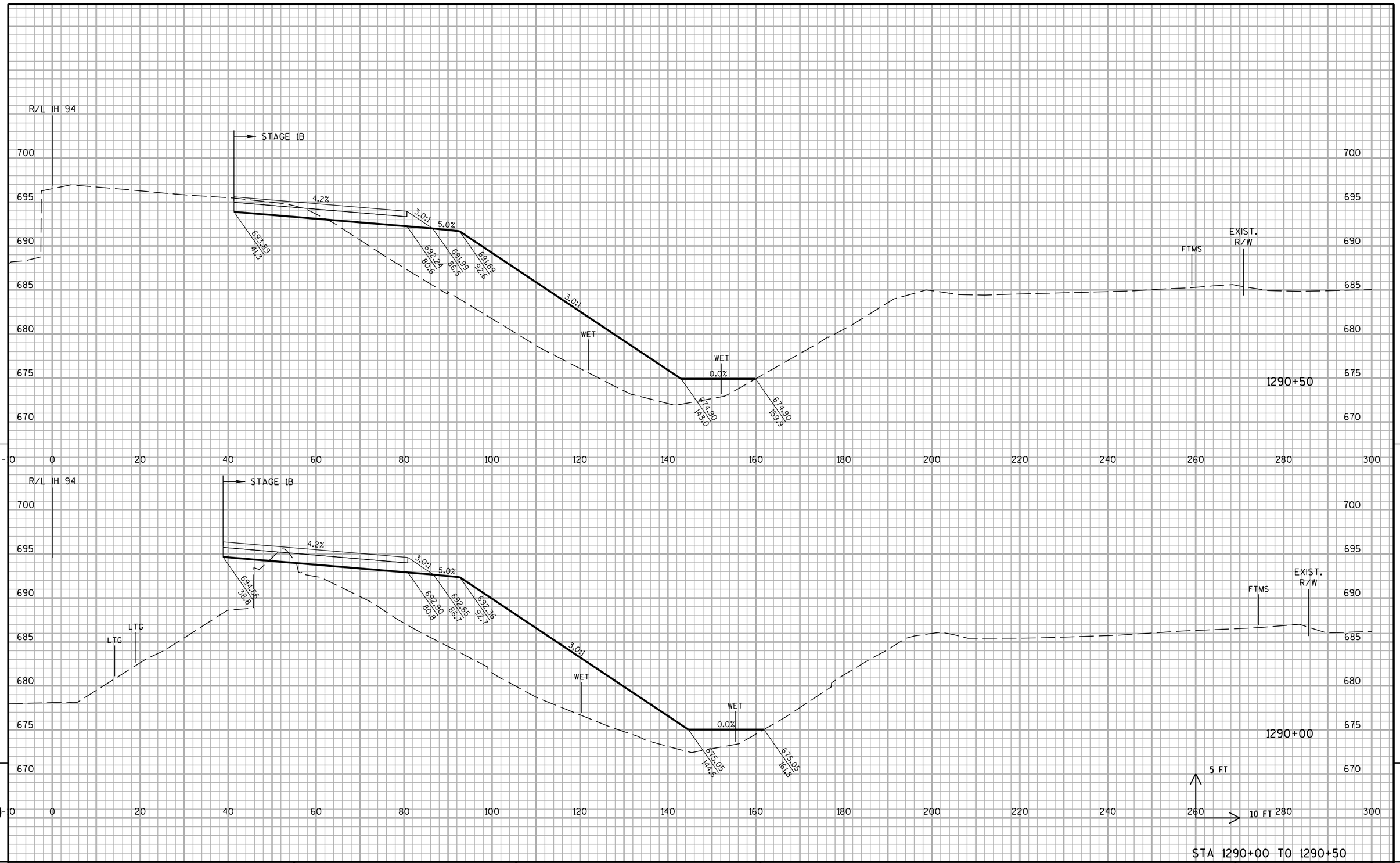
WISDOT/CADDS SHEET 21



PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	CROSS SECTIONS: IH 94 NORTHBOUND STAGE 1B	SHEET 356	E

FILE NAME : P:\44xx\4444_DP.I94.RAC\Racine\CADDS\22\22M\CDS\090202_xs_94NB_Widen.dgn PLOT DATE : 6/7/2018 PLOT BY : jpo PLOT NAME : $FILE$ PLOT SCALE : 1:20

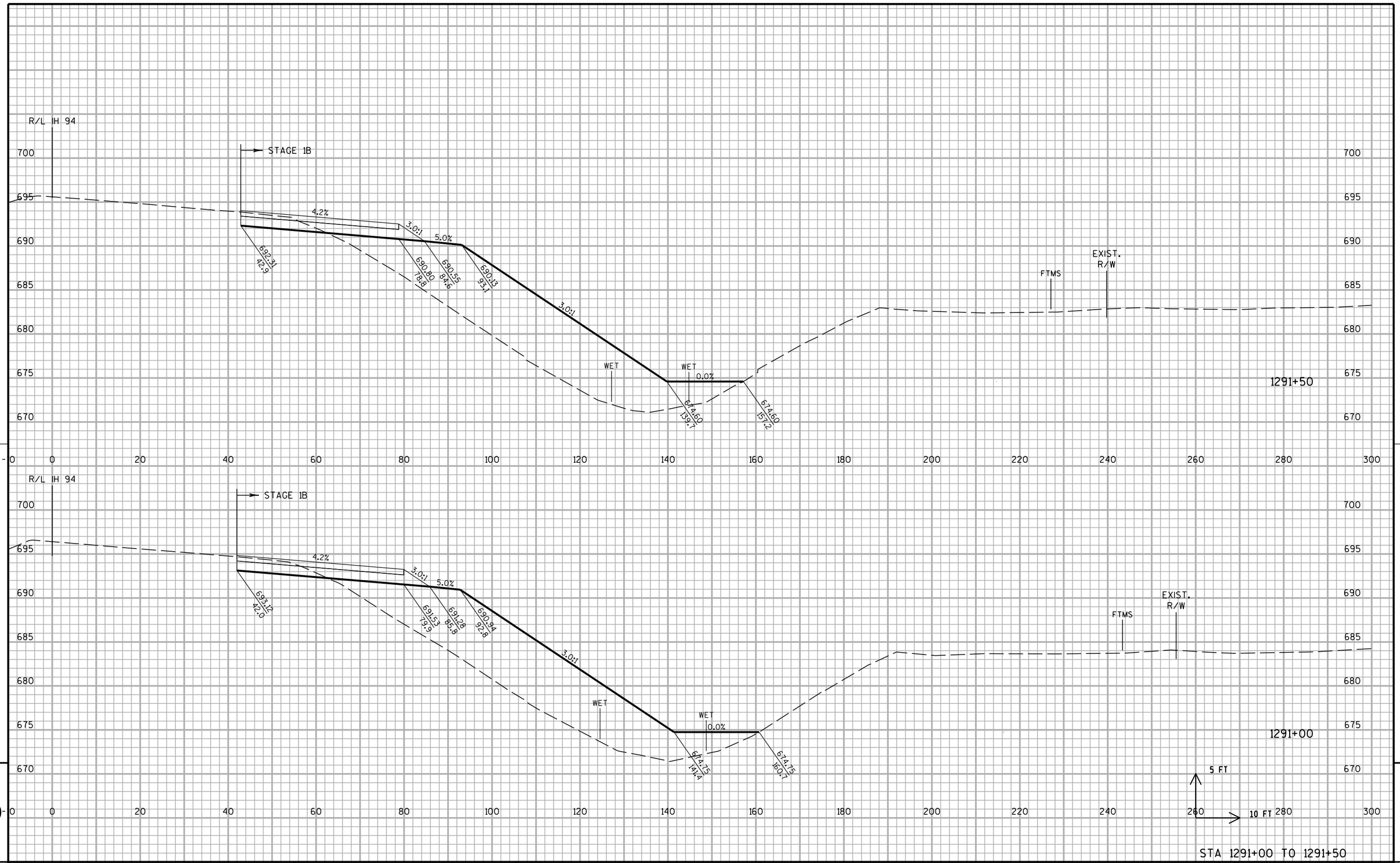
WISDOT/CADDS SHEET 21



PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	CROSS SECTIONS: IH 94 NORTHBOUND STAGE 1B	SHEET 357	E

FILE NAME : P:\44xx\4444_DP.I94.RAC\Racine\CADDS\22\22M\CDS\090202_xs_94NB_Widen.dgn PLOT DATE : 6/7/2018 PLOT BY : jpo PLOT NAME : $FILE$ PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21

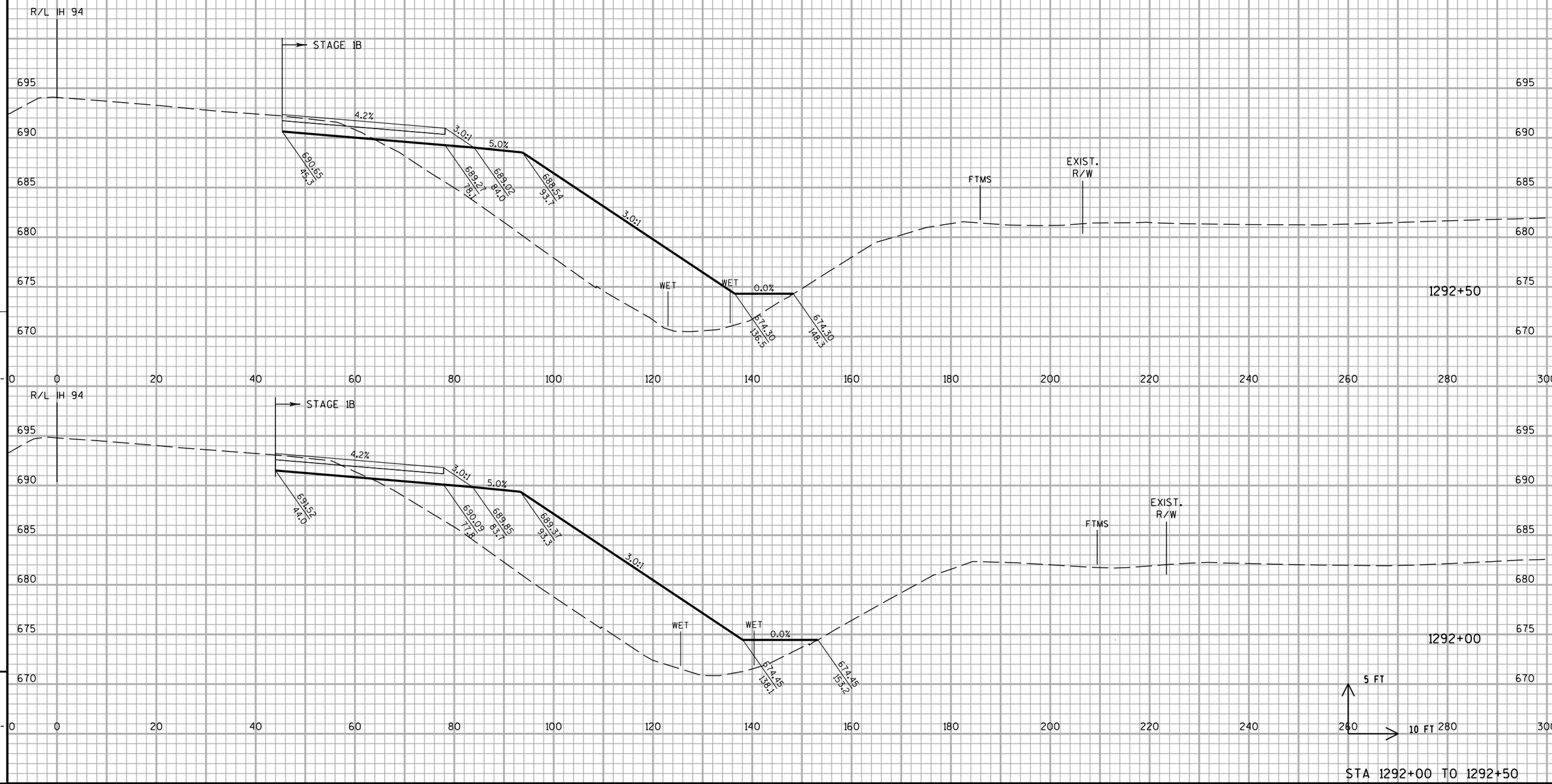


STA 1291+00 TO 1291+50

PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	CROSS SECTIONS: IH 94 NORTHBOUND STAGE 1B	SHEET 358	E

FILE NAME : P:\44xx\4444_DP.I94.RAC\Racine\CADDS\22\22M\CDS\090202_xs_94NB_Widen.dgn PLOT DATE : 6/7/2018 PLOT BY : jpo PLOT NAME : $FILE$ PLOT SCALE : 1:20

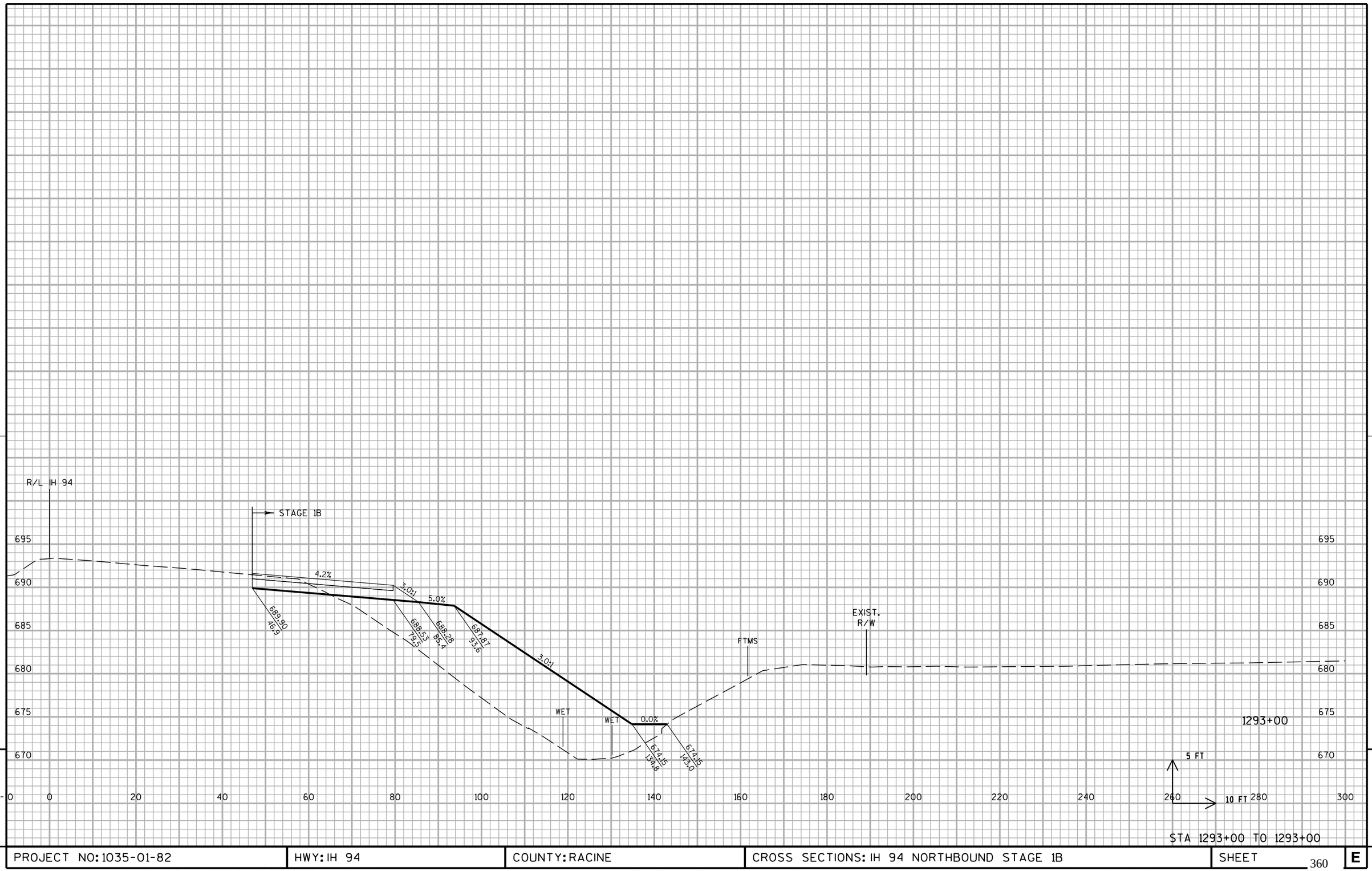
WISDOT/CADDS SHEET 21



PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	CROSS SECTIONS: IH 94 NORTHBOUND STAGE 1B	SHEET 359	E

FILE NAME : P:\44xx\4444_DP.I94.RAC\Racine\CADDS\22\22M\CDS\090202_xs_94NB_Widen.dgn PLOT DATE : 6/7/2018 PLOT BY : jpo PLOT NAME : $FILE$ PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21

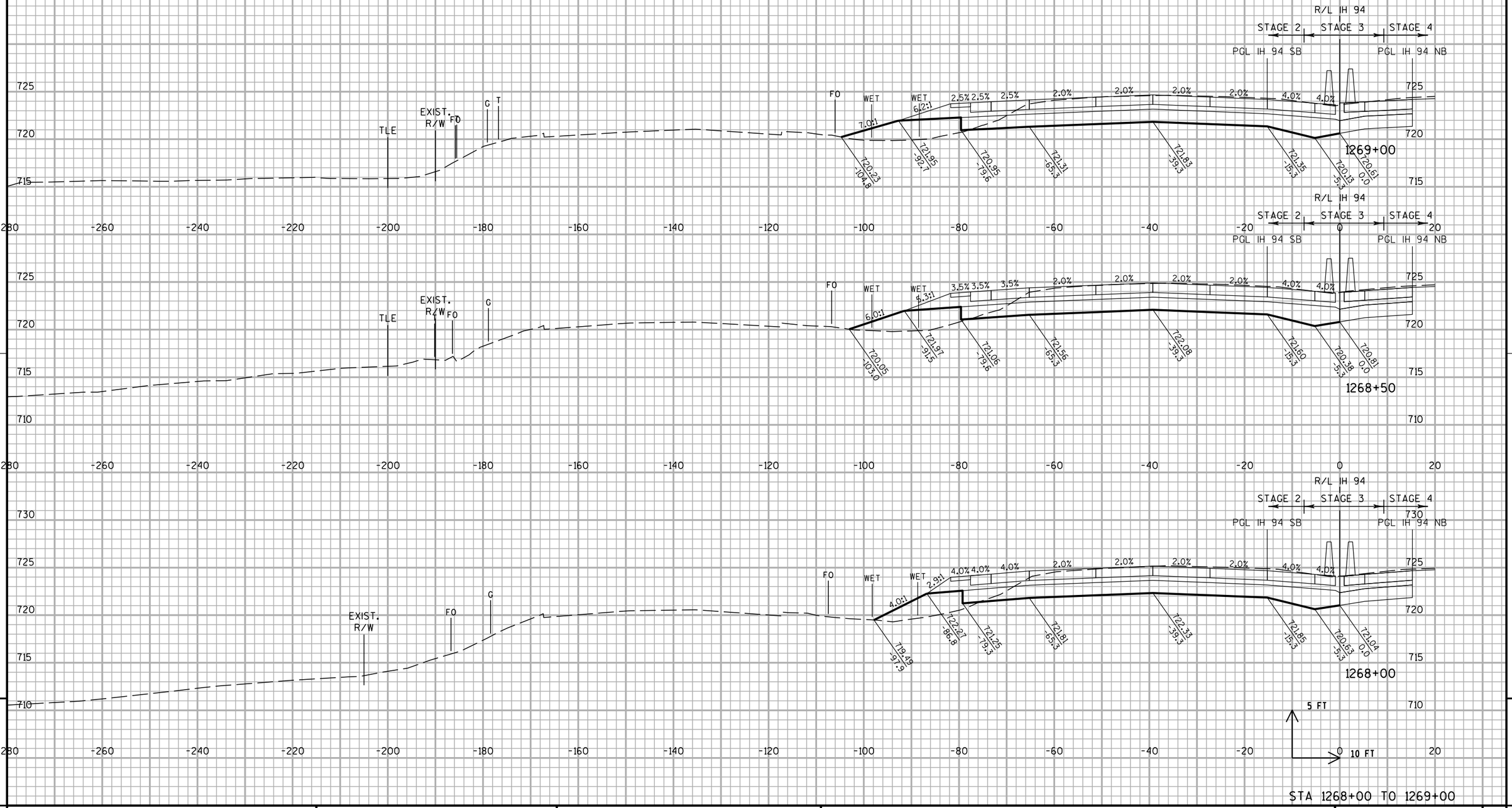


STA 1293+00 TO 1293+00

PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	CROSS SECTIONS: IH 94 NORTHBOUND STAGE 1B	SHEET 360	E

FILE NAME : P:\44xx\4444_DP.I94.RAC\Racine\CADDS\22\22M\CDS\090202_xs_94NB_Widen.dgn PLOT DATE : 6/7/2018 PLOT BY : jpo PLOT NAME : $FILE$ PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21



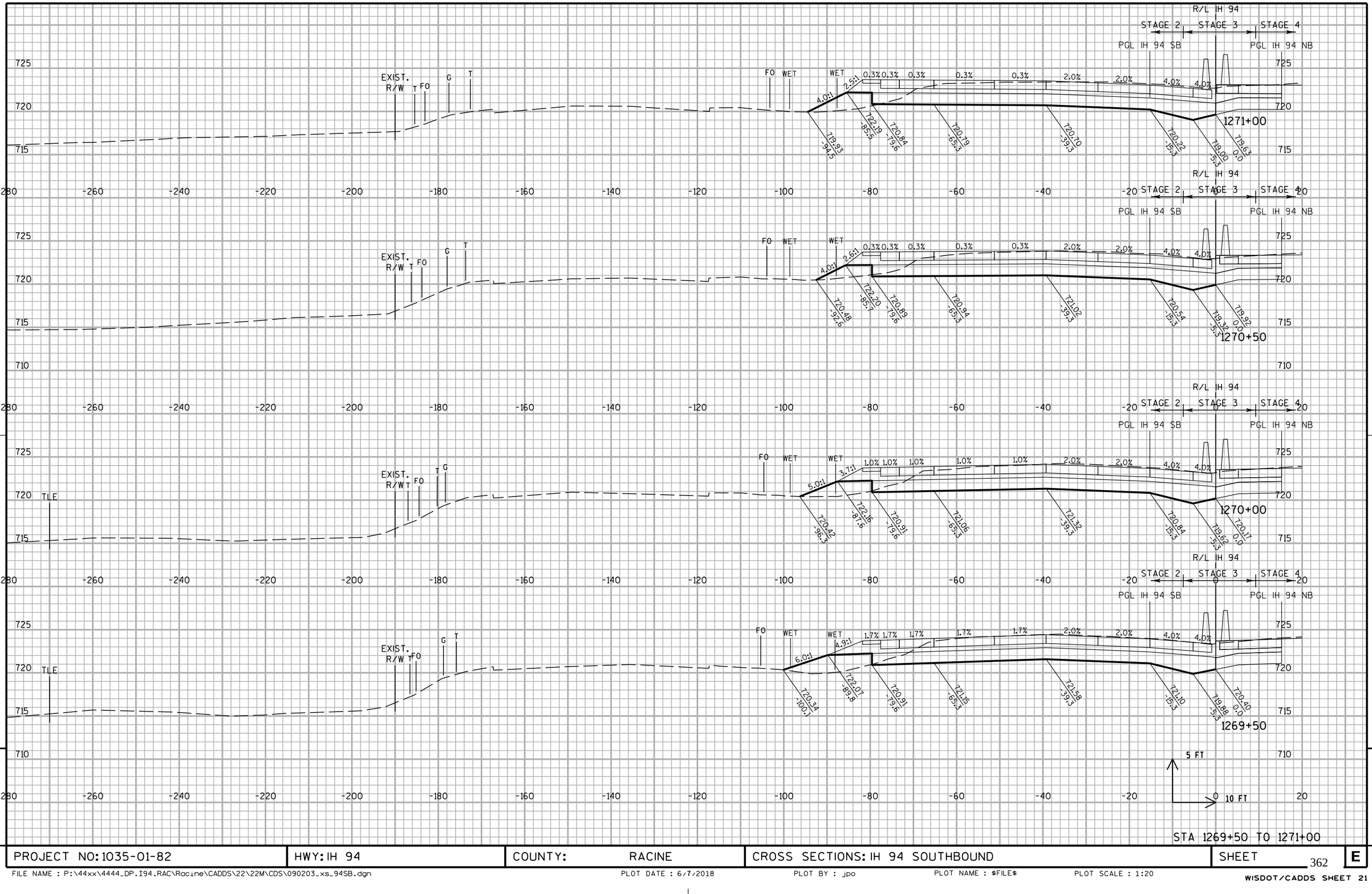
STA 1268+00 TO 1269+00

PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	CROSS SECTIONS: IH 94 SOUTHBOUND	SHEET 361	E

FILE NAME : P:\44xx\4444_DP.I94.RAC\Racine\CADDS\22\22M\CDS\090203_xs_94SB.dgn | PLOT DATE : 6/7/2018 | PLOT BY : jpo | PLOT NAME : $FILE$ | PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21

9 9

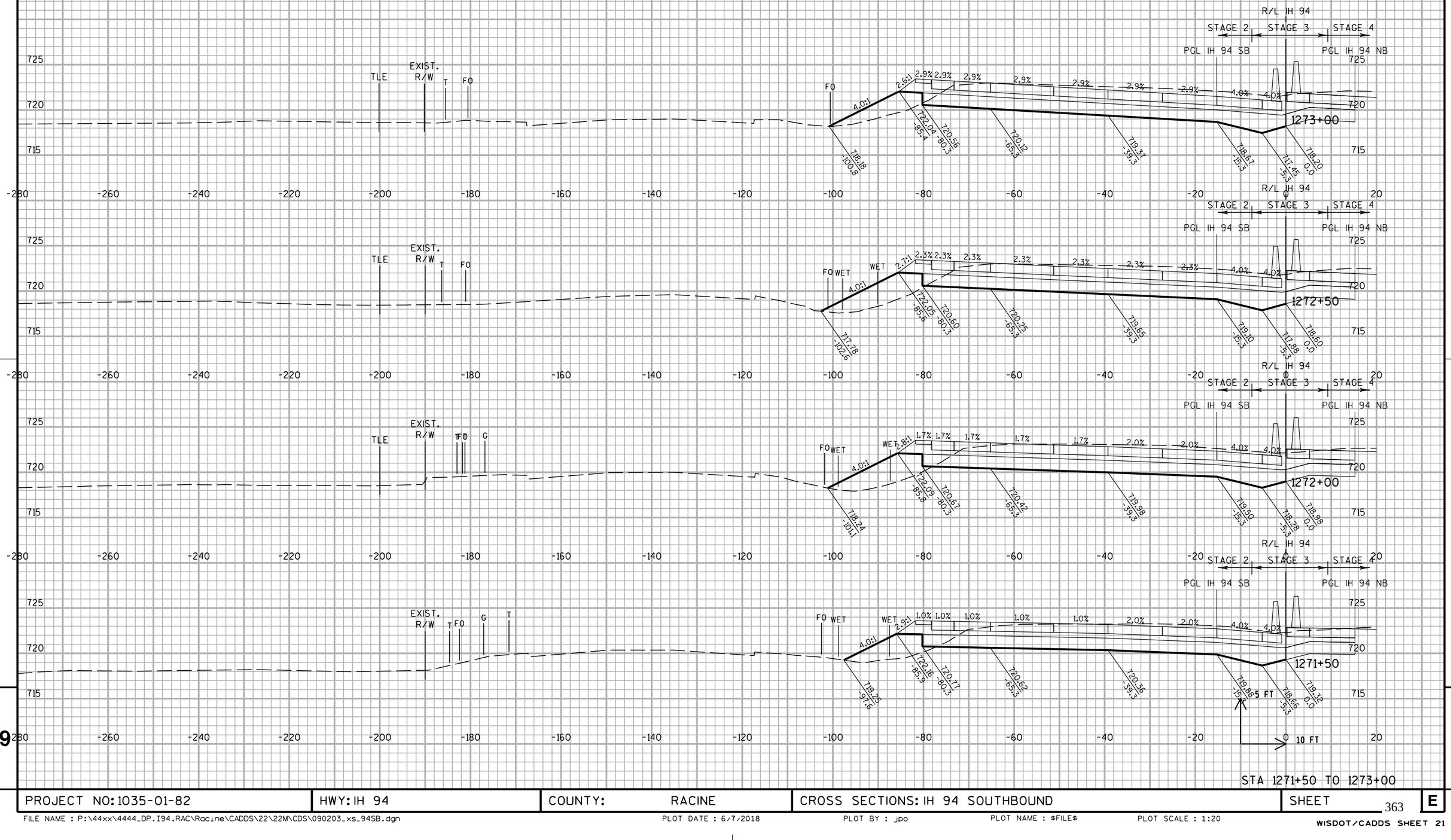


STA 1269+50 TO 1271+00

PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	CROSS SECTIONS: IH 94 SOUTHBOUND	SHEET 362	E

FILE NAME : P:\44xx\4444_DP.I94.RAC\Racine\CADDS\22\22M\CDS\090203_xs_94SB.dgn PLOT DATE : 6/7/2018 PLOT BY : jpo PLOT NAME : $FILE$ PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21



STA 1271+50 TO 1273+00

PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	CROSS SECTIONS: IH 94 SOUTHBOUND	SHEET 363	E

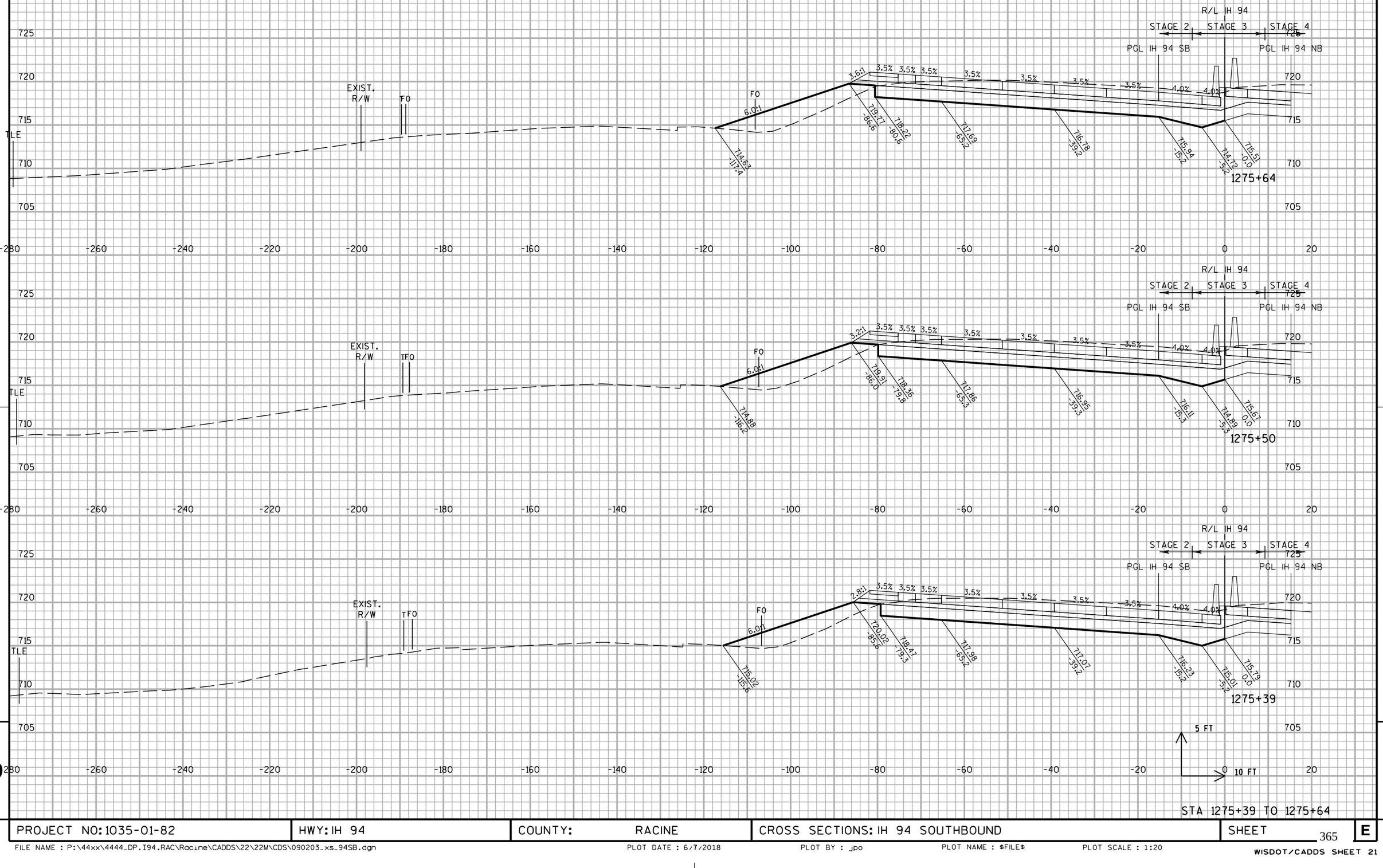
FILE NAME : P:\44xx\4444_DP.I94.RAC\Racine\CADDS\22\22M\CDS\090203_xs_94SB.dgn PLOT DATE : 6/7/2018 PLOT BY : jpo PLOT NAME : $FILE$ PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21

PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	CROSS SECTIONS: IH 94 SOUTHBOUND	SHEET 364	E

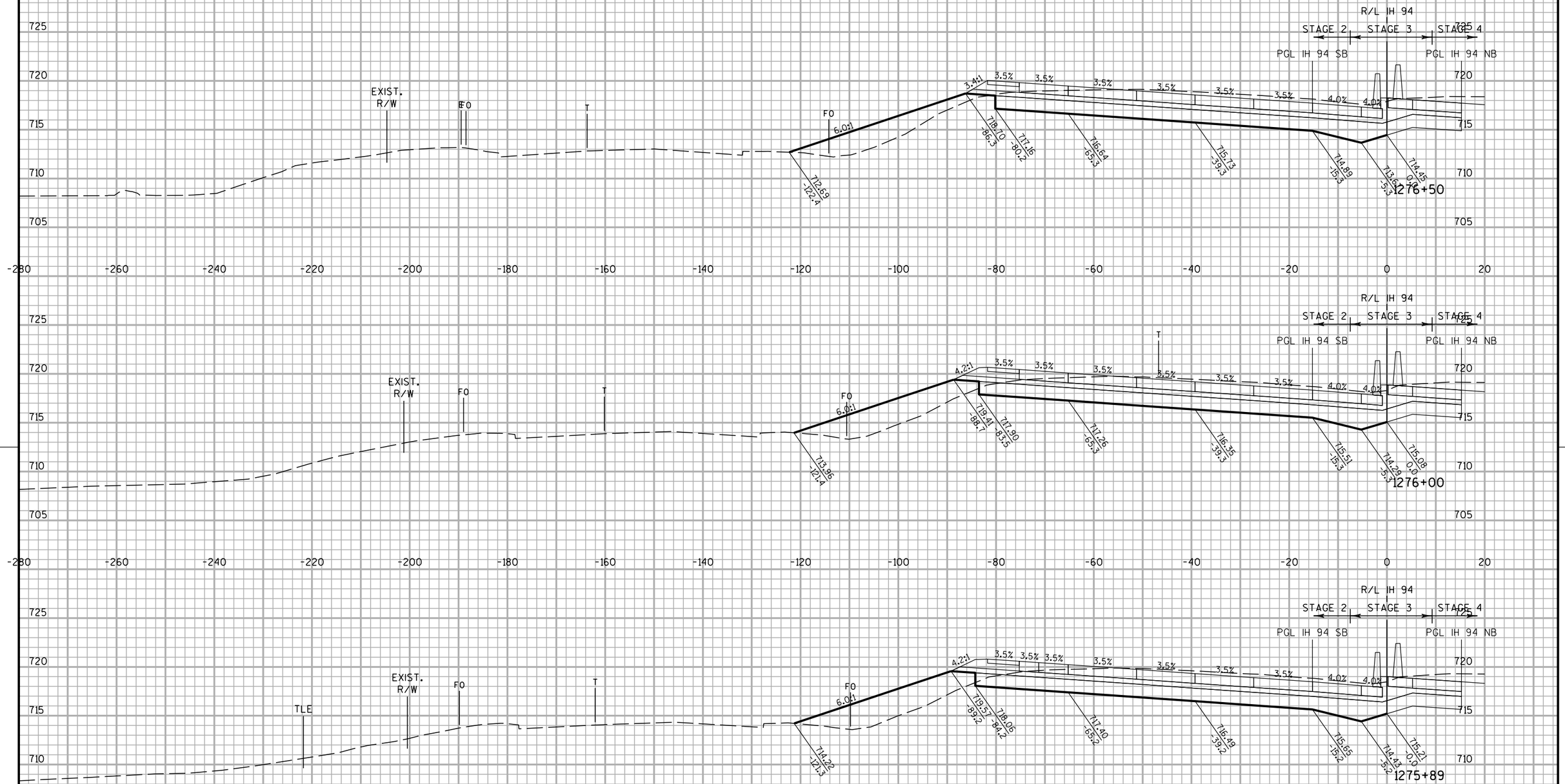
FILE NAME : P:\44xx\4444_DP.I94.RAC\Racine\CADDS\22\22M\CDS\090203_xs_94SB.dgn PLOT DATE : 6/7/2018 PLOT BY : jpo PLOT NAME : $FILE$ PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21

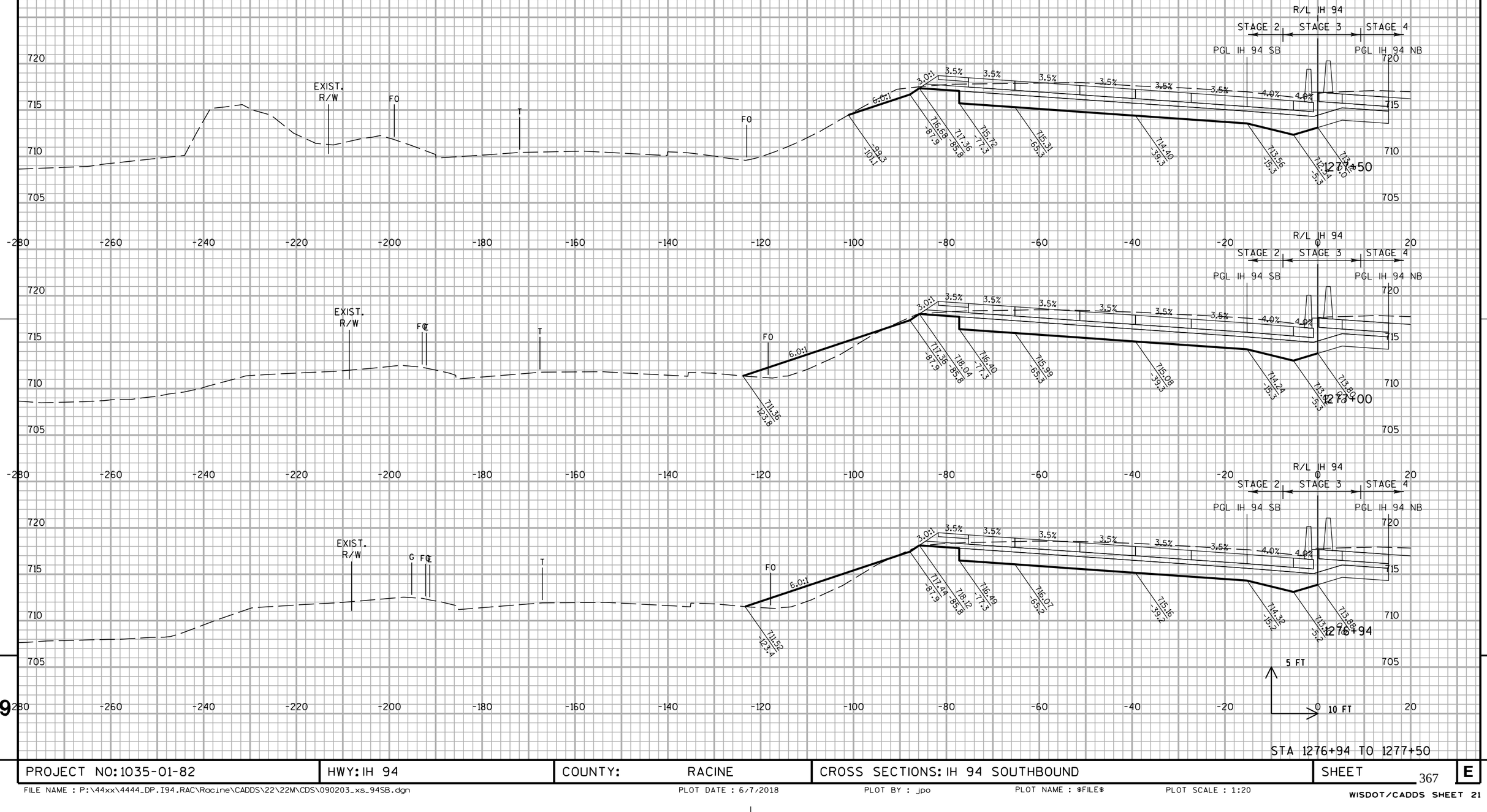


STA 1275+39 TO 1275+64

PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	CROSS SECTIONS: IH 94 SOUTHBOUND	SHEET 365	E



PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	CROSS SECTIONS: IH 94 SOUTHBOUND	SHEET 366	E

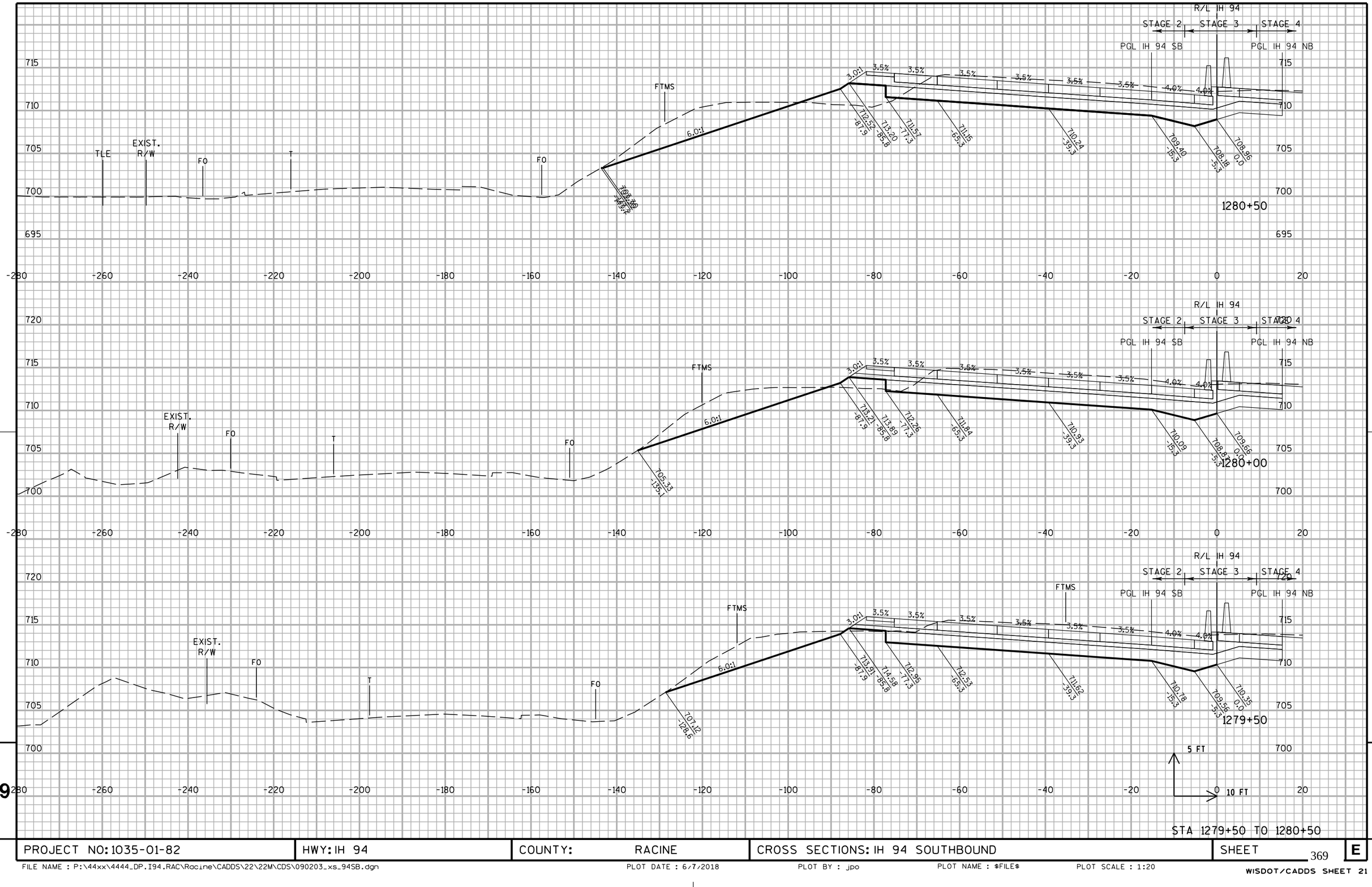


STA 1276+94 TO 1277+50

PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	CROSS SECTIONS: IH 94 SOUTHBOUND	SHEET 367	E

STA 1278+00 TO 1279+00

PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	CROSS SECTIONS: IH 94 SOUTHBOUND	SHEET 368	E



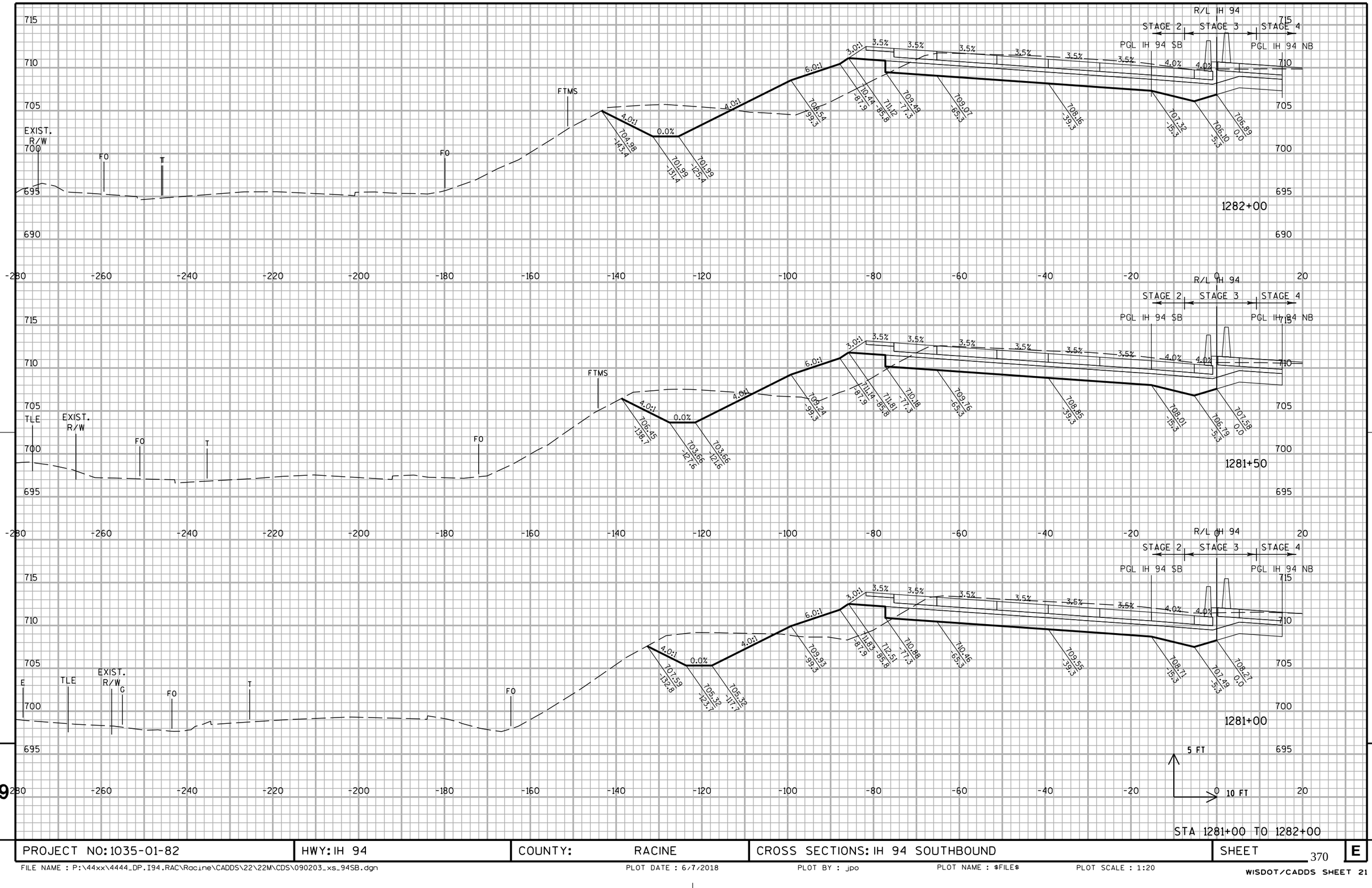
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PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	CROSS SECTIONS: IH 94 SOUTHBOUND	SHEET 369	E

FILE NAME : P:\44xx\4444_DP.I94.RAC\Racine\CADDS\22\22M\CDS\090203_xs_94SB.dgn PLOT DATE : 6/7/2018 PLOT BY : jpo PLOT NAME : $FILE$ PLOT SCALE : 1:20

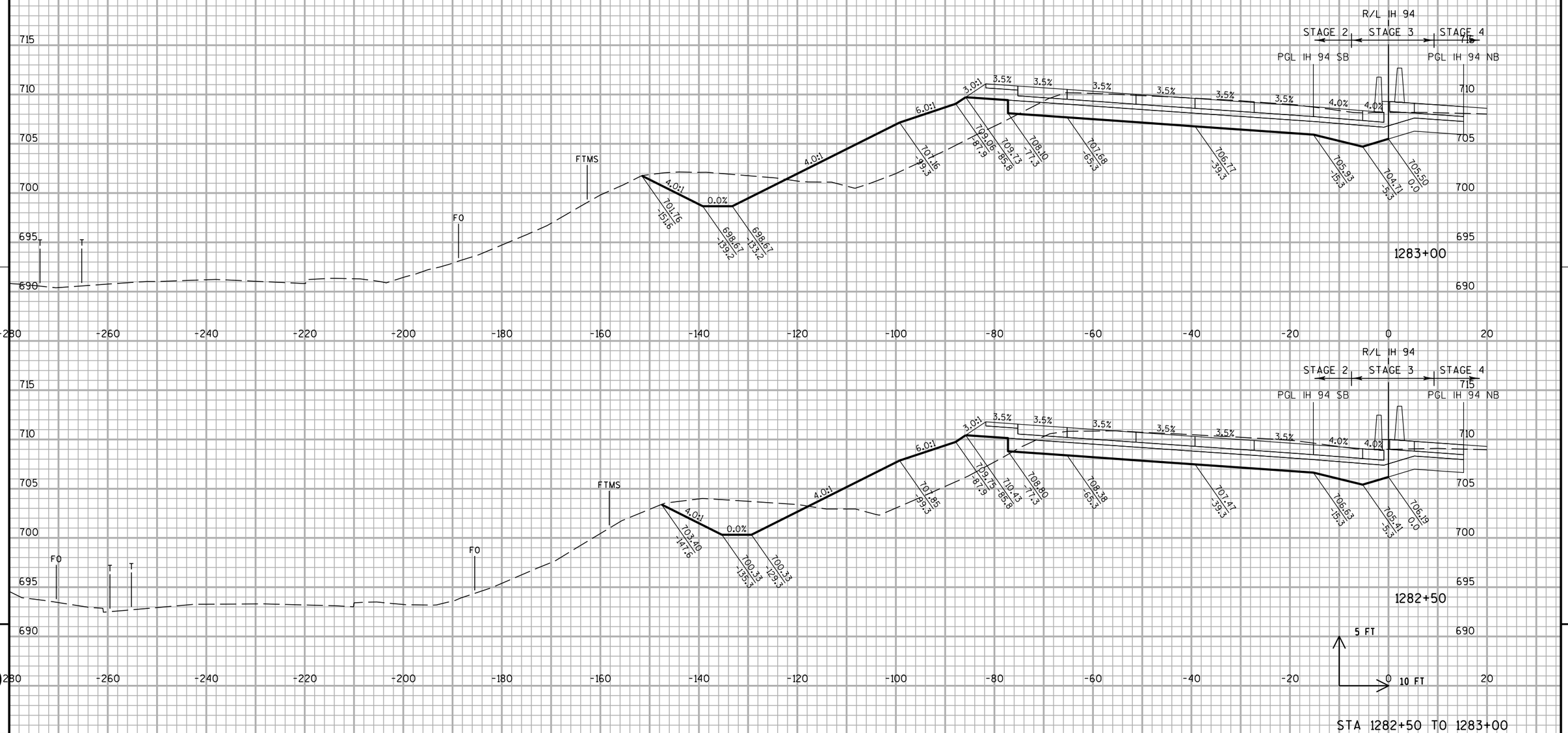
WISDOT/CADDS SHEET 21



PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	CROSS SECTIONS: IH 94 SOUTHBOUND	SHEET 370	E

FILE NAME : P:\44xx\4444_DP.I94.RAC\Racine\CADDS\22\22M\CDS\090203_xs_94SB.dgn PLOT DATE : 6/7/2018 PLOT BY : jpo PLOT NAME : $FILE$ PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21

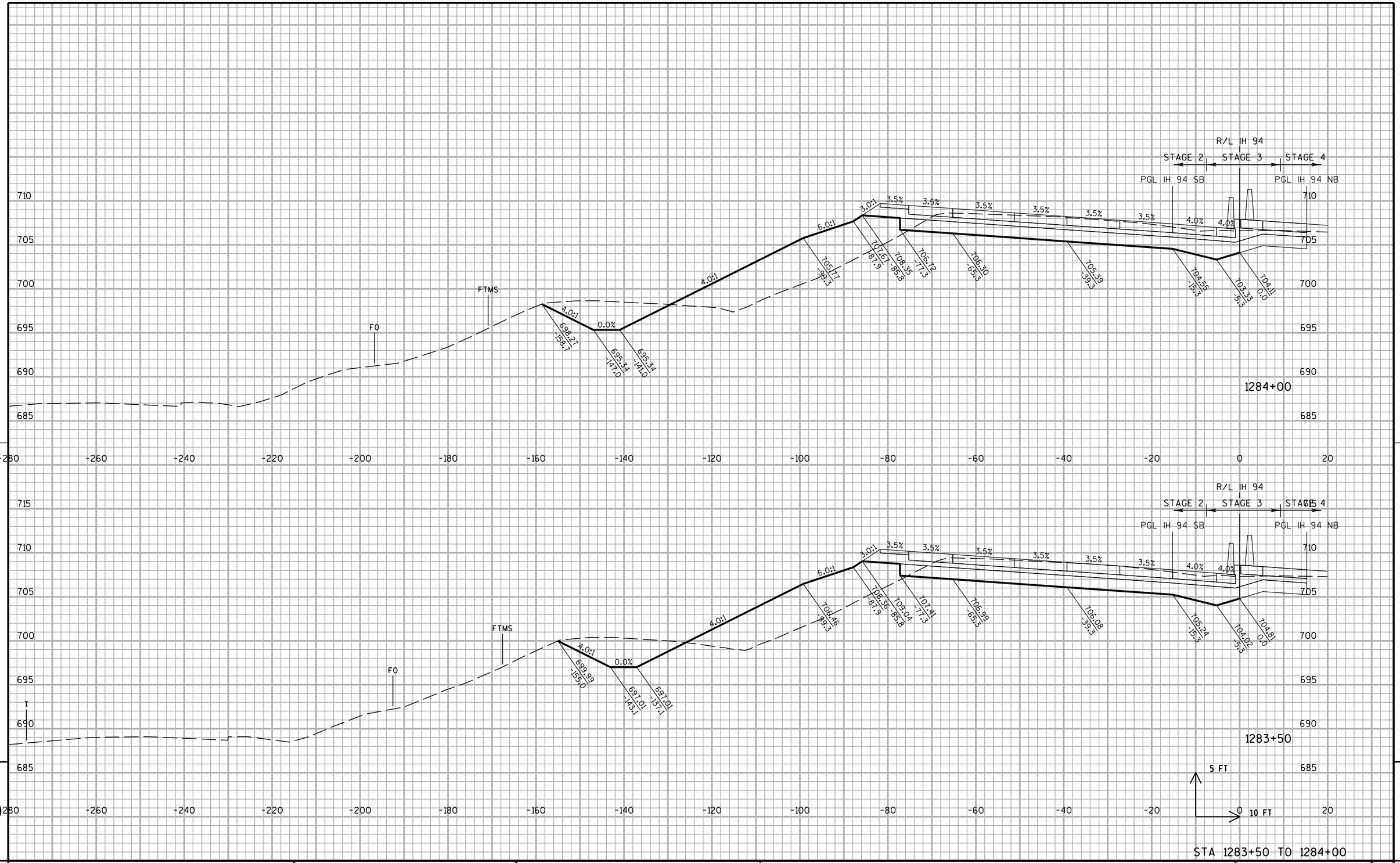


STA 1282+50 TO 1283+00

PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	CROSS SECTIONS: IH 94 SOUTHBOUND	SHEET 371	E

FILE NAME : P:\44xx\4444_DP.I94.RAC\Racine\CADDS\22\22M\CDS\090203_xs_94SB.dgn PLOT DATE : 6/7/2018 PLOT BY : jpo PLOT NAME : $FILE$ PLOT SCALE : 1:20

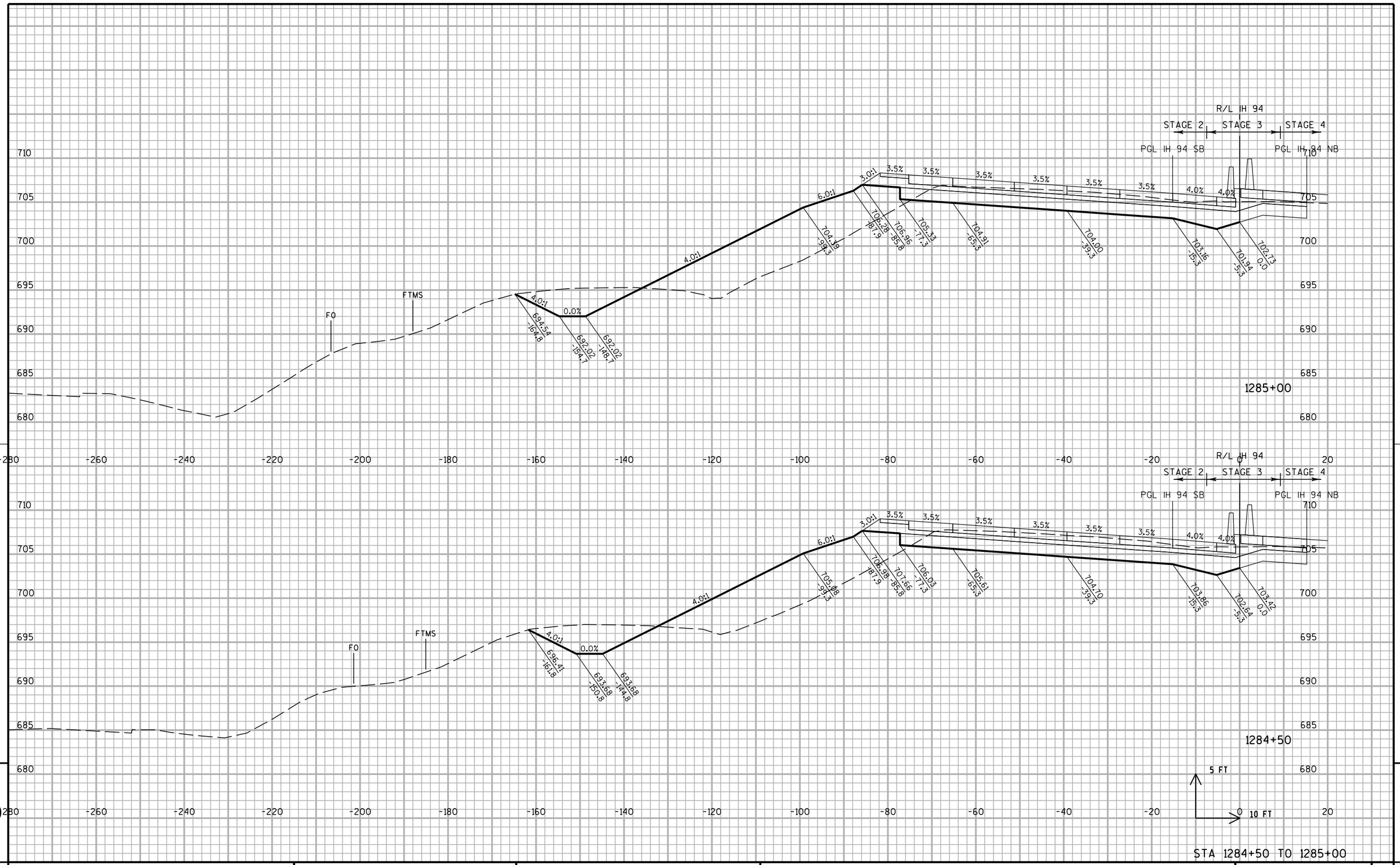
WISDOT/CADDS SHEET 21



PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	CROSS SECTIONS: IH 94 SOUTHBOUND	SHEET 372 E

FILE NAME : P:\44xx\4444_DP.I94.RAC\Racine\CADDS\22\22M\CDS\090203_xs_94SB.dgn | PLOT DATE : 6/7/2018 | PLOT BY : jpo | PLOT NAME : $FILE$ | PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21

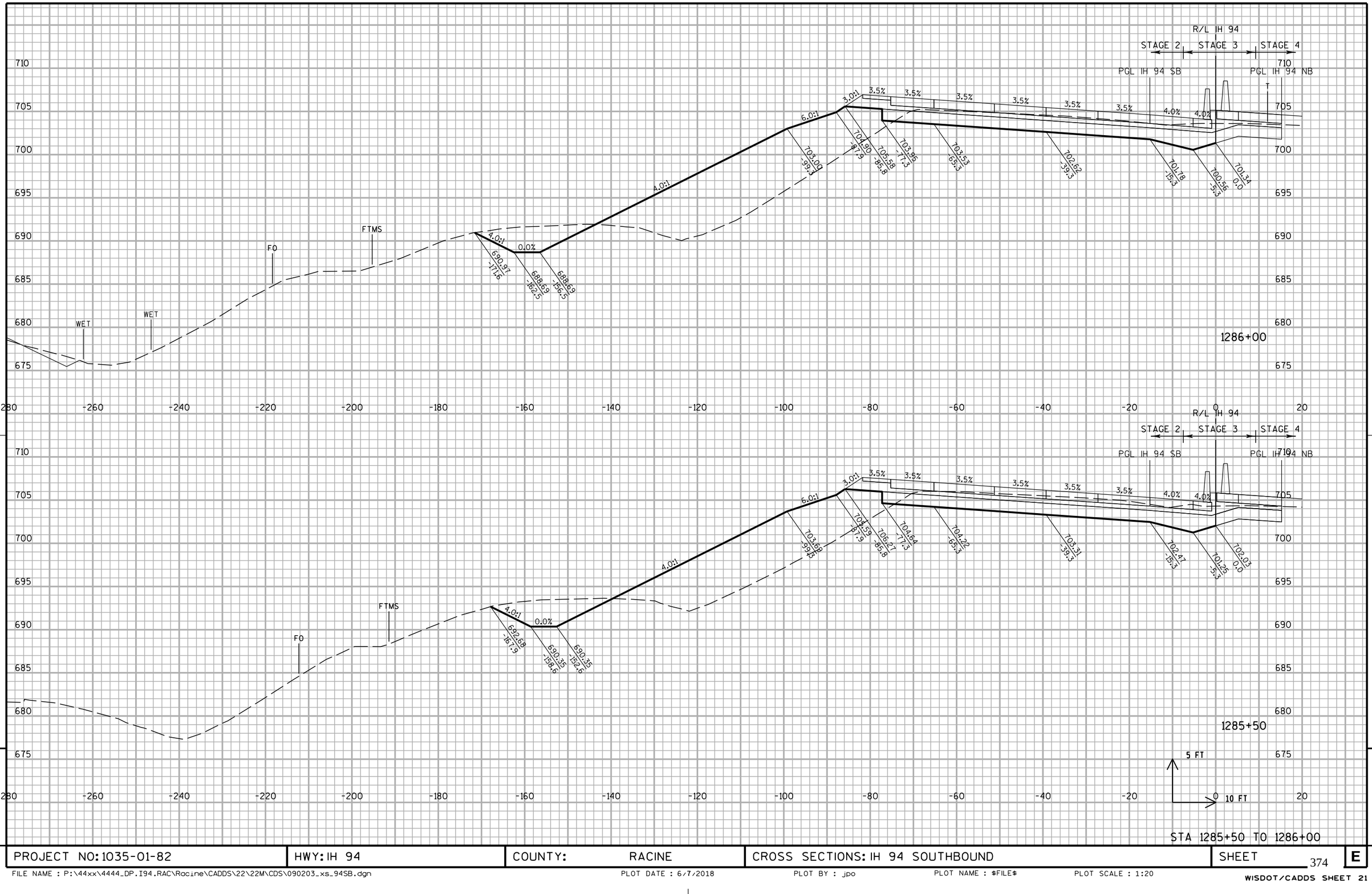


STA 1284+50 TO 1285+00

PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	CROSS SECTIONS: IH 94 SOUTHBOUND	SHEET 373	E

FILE NAME : P:\44xx\4444_DP.I94.RAC\Racine\CADDS\22\22M\CDS\090203_xs_94SB.dgn | PLOT DATE : 6/7/2018 | PLOT BY : jpo | PLOT NAME : $FILE$ | PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21

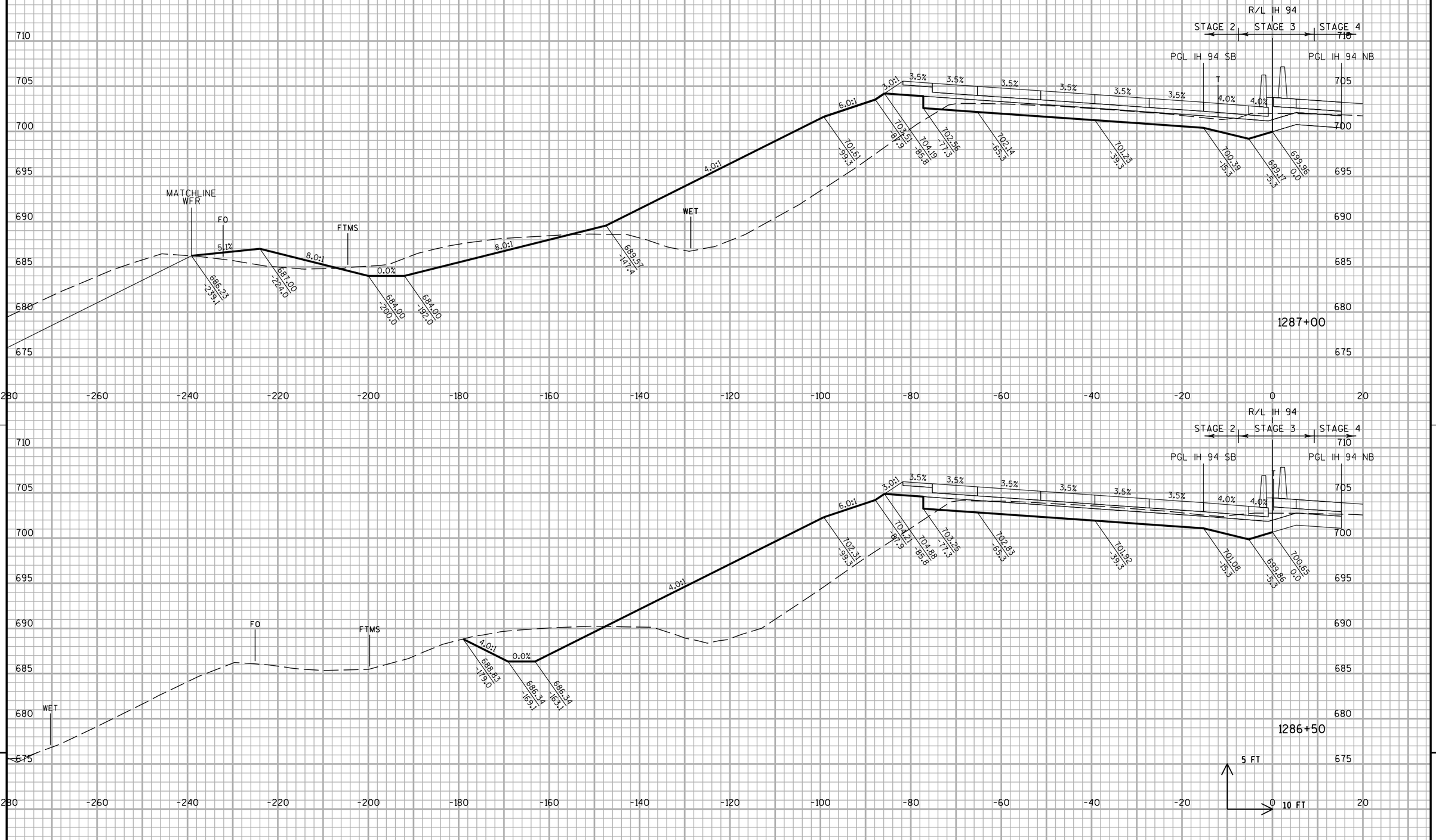


STA 1285+50 TO 1286+00

PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	CROSS SECTIONS: IH 94 SOUTHBOUND	SHEET 374	E

FILE NAME : P:\44xx\4444_DP.I94.RAC\Racine\CADDS\22\22M\CDS\090203_xs_94SB.dgn PLOT DATE : 6/7/2018 PLOT BY : jpo PLOT NAME : $FILE$ PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21

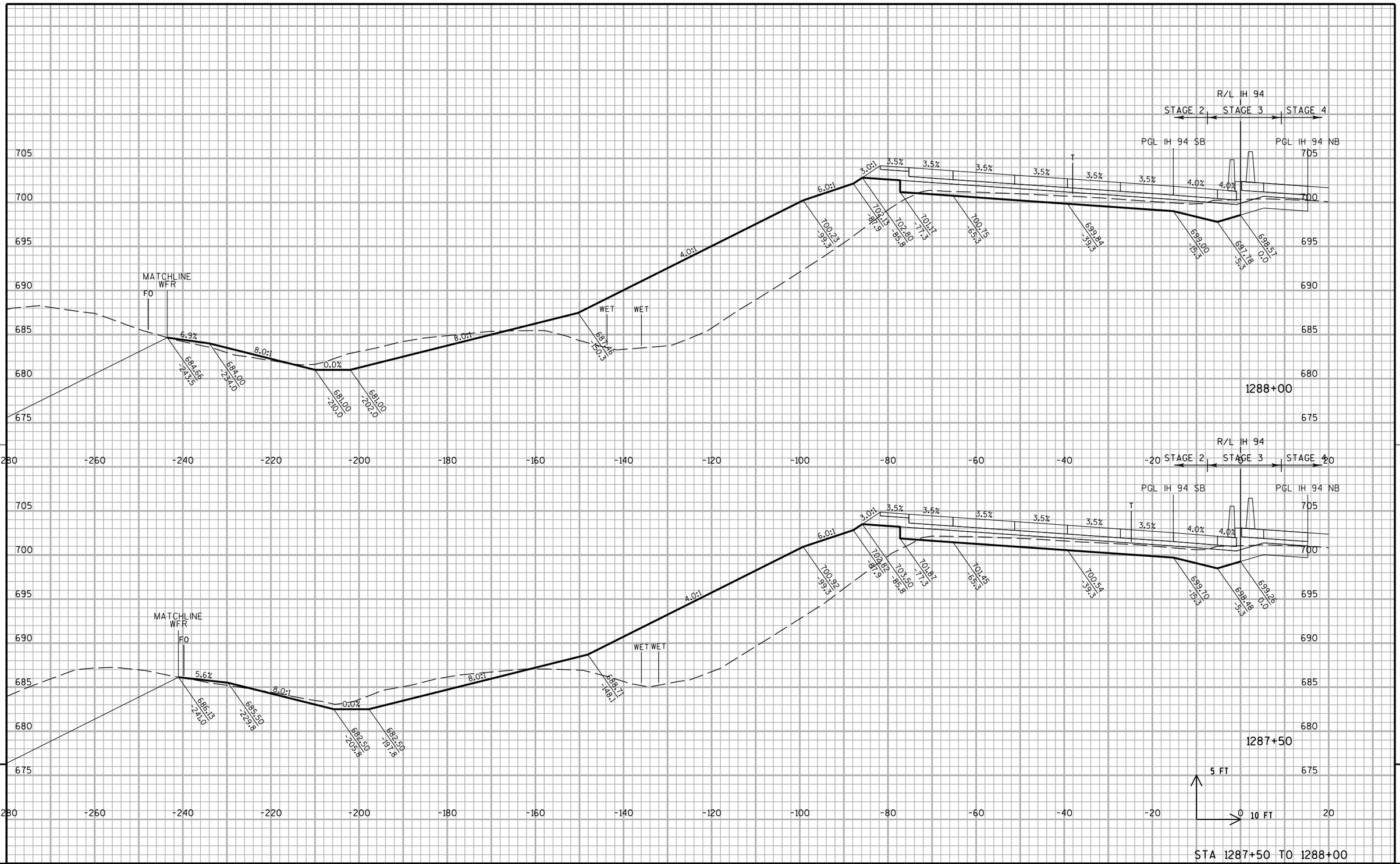


STA 1286+50 TO 1287+00

PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	CROSS SECTIONS: IH 94 SOUTHBOUND	SHEET 375	E

FILE NAME : P:\44xx\4444_DP.I94.RAC\Racine\CADDS\22\22M\CDS\090203_xs_94SB.dgn PLOT DATE : 6/7/2018 PLOT BY : jpo PLOT NAME : $FILE$ PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21

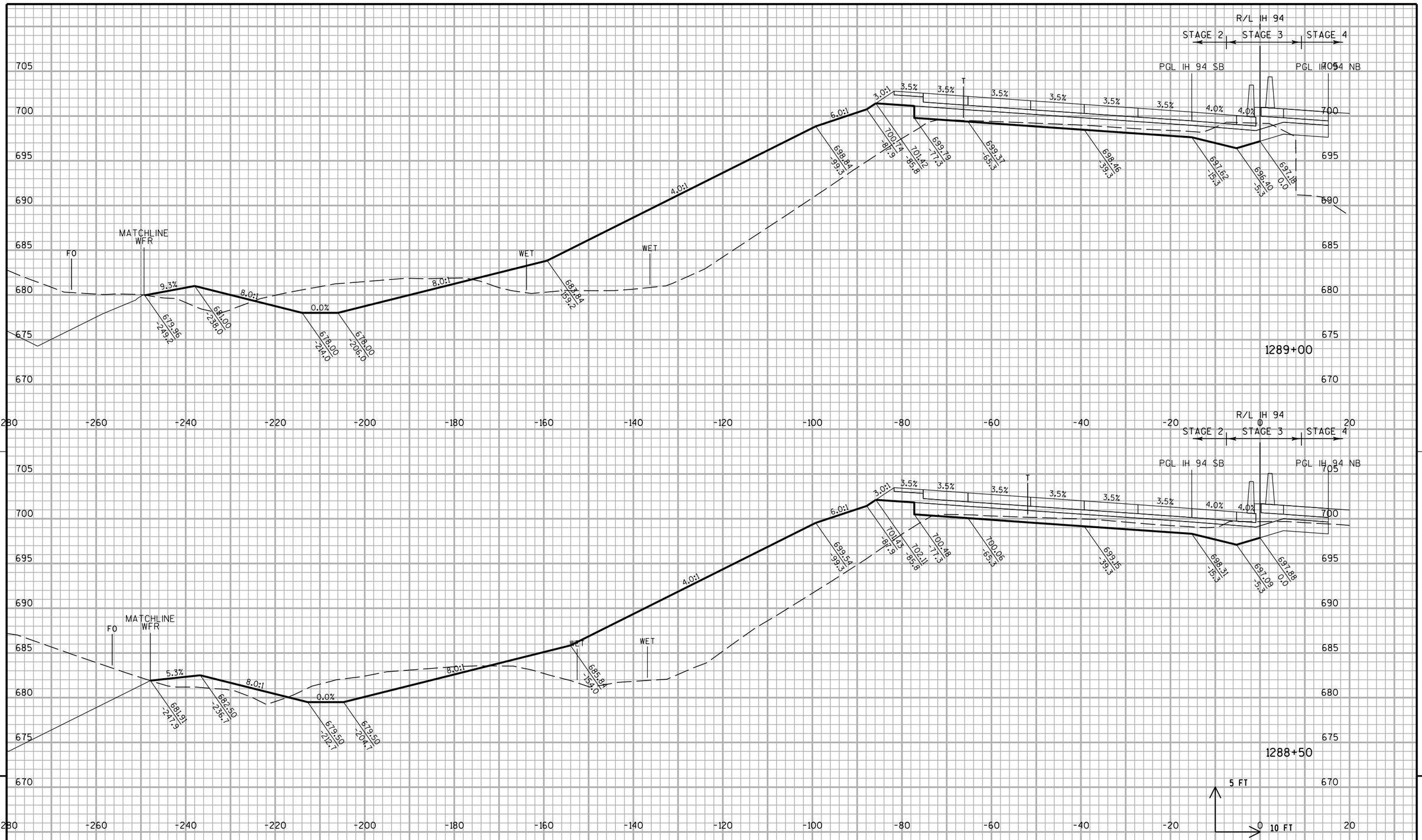


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PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	CROSS SECTIONS: IH 94 SOUTHBOUND	SHEET	E

FILE NAME : P:\44xx\4444_DP.I94.RAC\Racine\CADDS\22\22M\CDS\090203_xs_94SB.dgn | PLOT DATE : 6/7/2018 | PLOT BY : jpo | PLOT NAME : $FILE$ | PLOT SCALE : 1:20

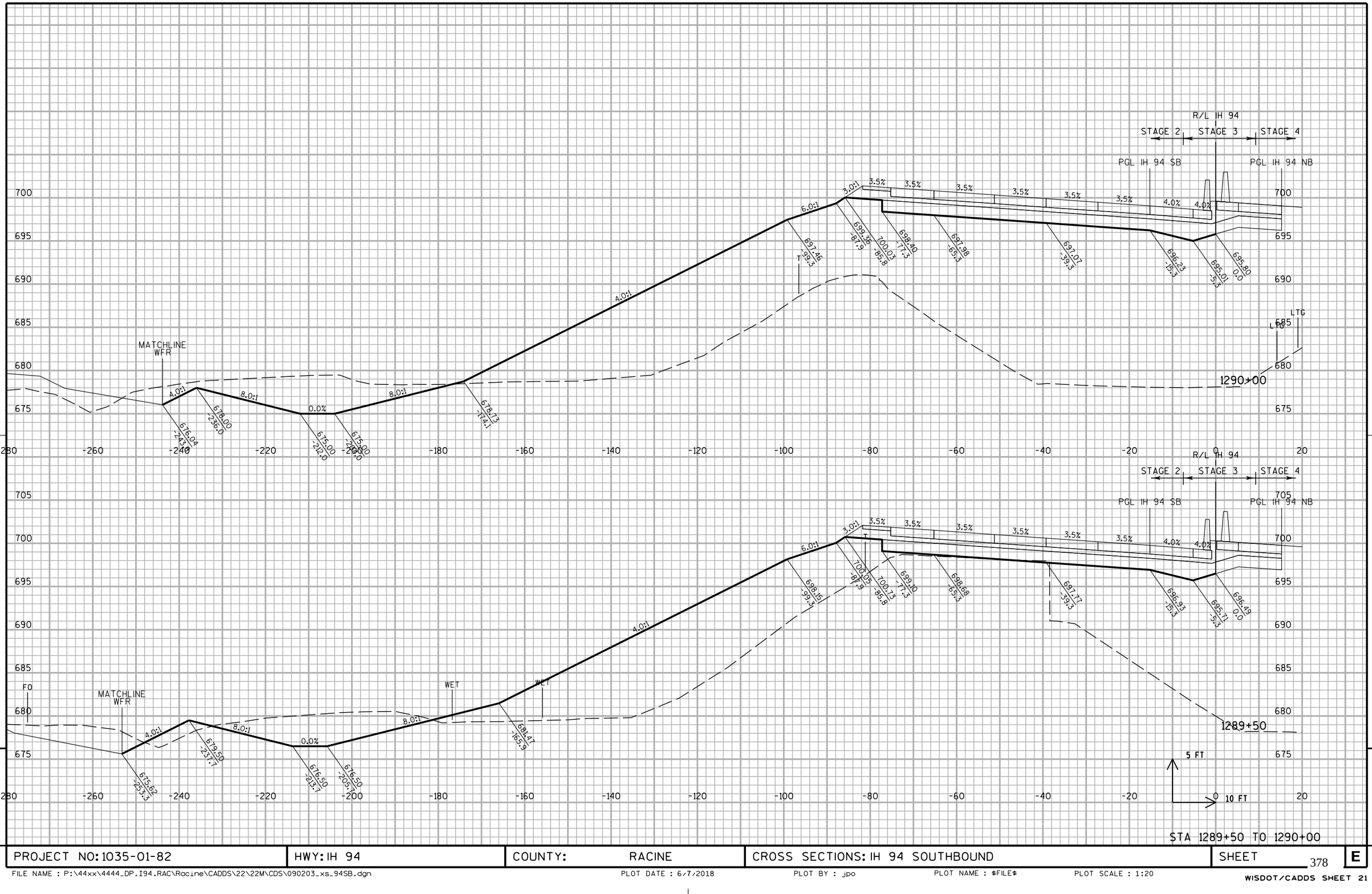


STA 1288+50 TO 1289+00

PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	CROSS SECTIONS: IH 94 SOUTHBOUND	SHEET 377	E

FILE NAME : P:\44xx\4444_DP.I94.RAC\Racine\CADDS\22\22M\CDS\090203_xs_94SB.dgn | PLOT DATE : 6/7/2018 | PLOT BY : jpo | PLOT NAME : $FILE$ | PLOT SCALE : 1:20

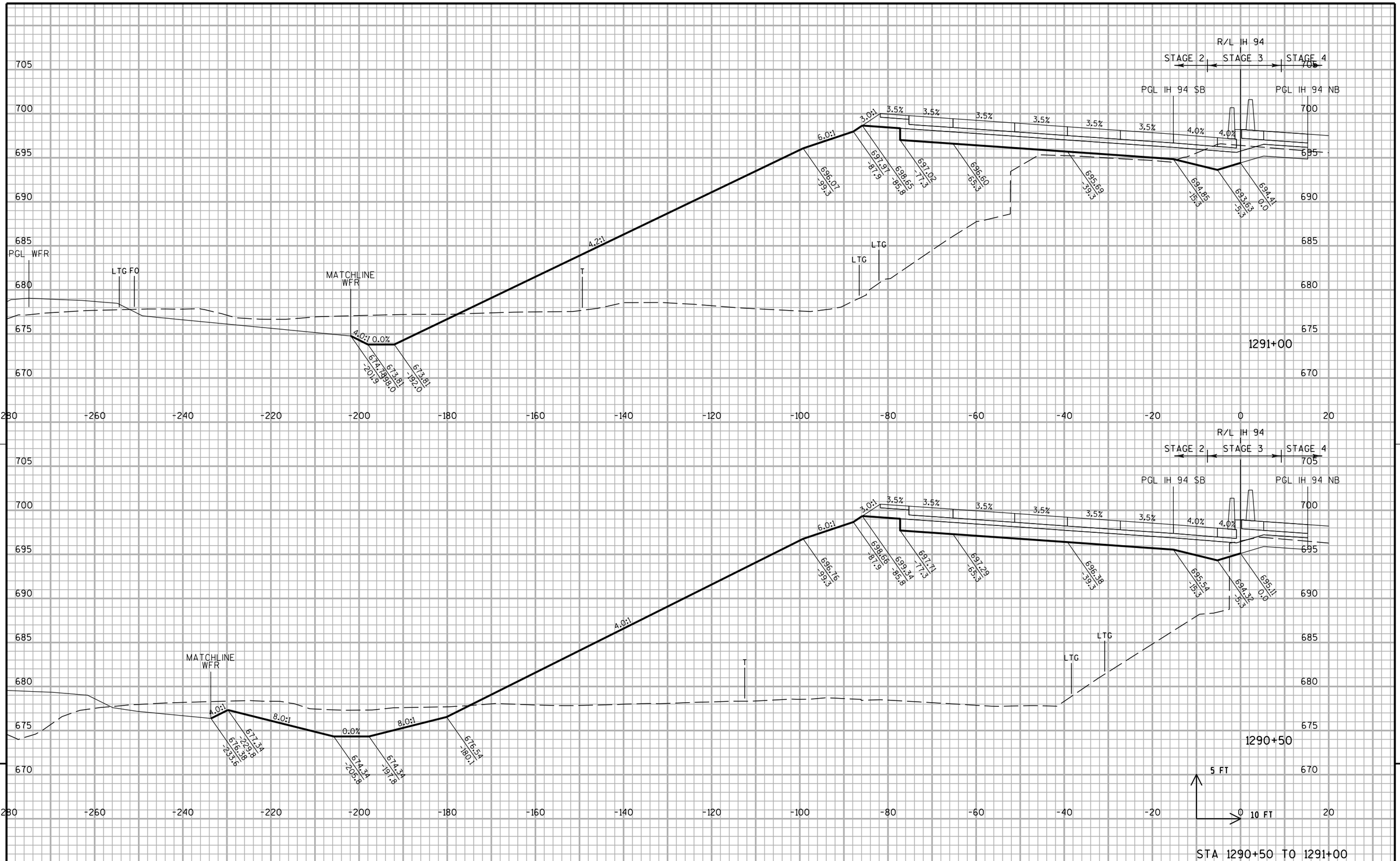
WISDOT/CADDS SHEET 21



PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	CROSS SECTIONS: IH 94 SOUTHBOUND	SHEET 378	E

FILE NAME : P:\44xx\4444_DP.I94.RAC\Racine\CADDS\22\22M\CDS\090203_xs_94SB.dgn PLOT DATE : 6/7/2018 PLOT BY : jpo PLOT NAME : $FILE$ PLOT SCALE : 1:20

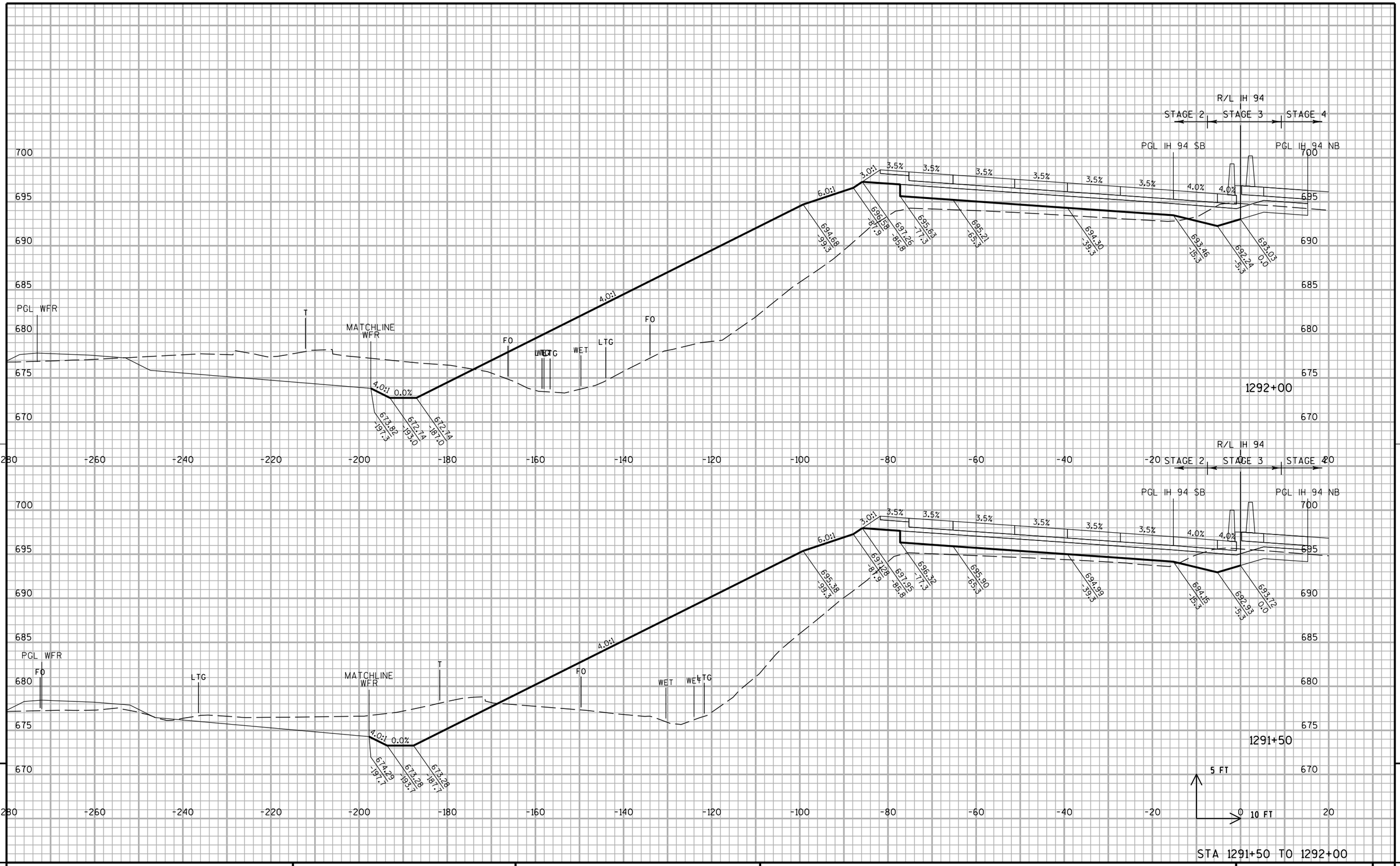
WISDOT/CADDS SHEET 21



PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	CROSS SECTIONS: IH 94 SOUTHBOUND	SHEET 379	E

FILE NAME : P:\44xx\4444_DP.I94.RAC\Racine\CADDS\22\22M\CDS\090203_xs_94SB.dgn PLOT DATE : 6/7/2018 PLOT BY : jpo PLOT NAME : $FILE$ PLOT SCALE : 1:20

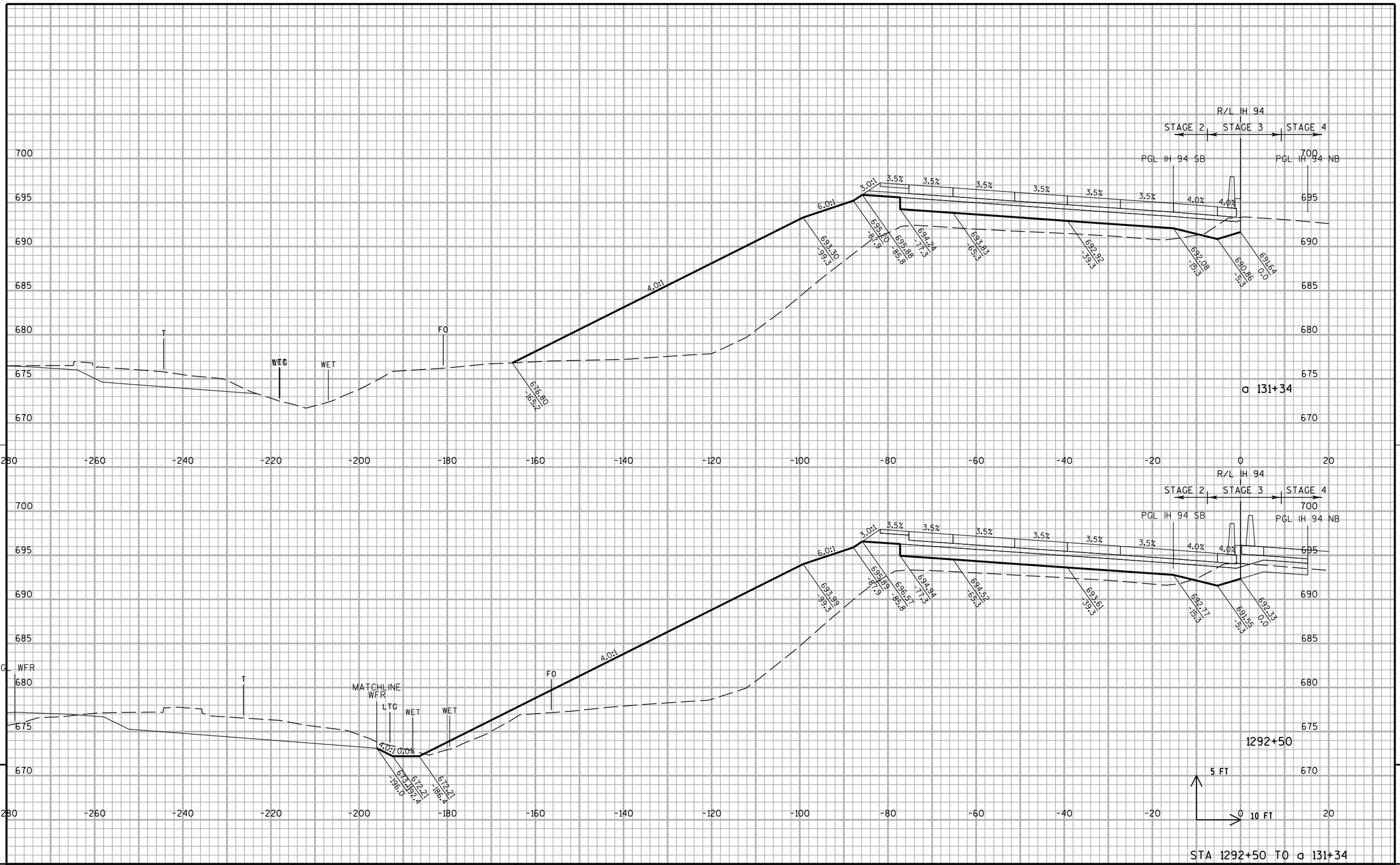
WISDOT/CADDS SHEET 21



PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	CROSS SECTIONS: IH 94 SOUTHBOUND	SHEET 380	E

FILE NAME : P:\44xx\4444_DP.I94.RAC\Racine\CADDS\22\22M\CDS\090203_xs_94SB.dgn PLOT DATE : 6/7/2018 PLOT BY : jpo PLOT NAME : $FILE$ PLOT SCALE : 1:20

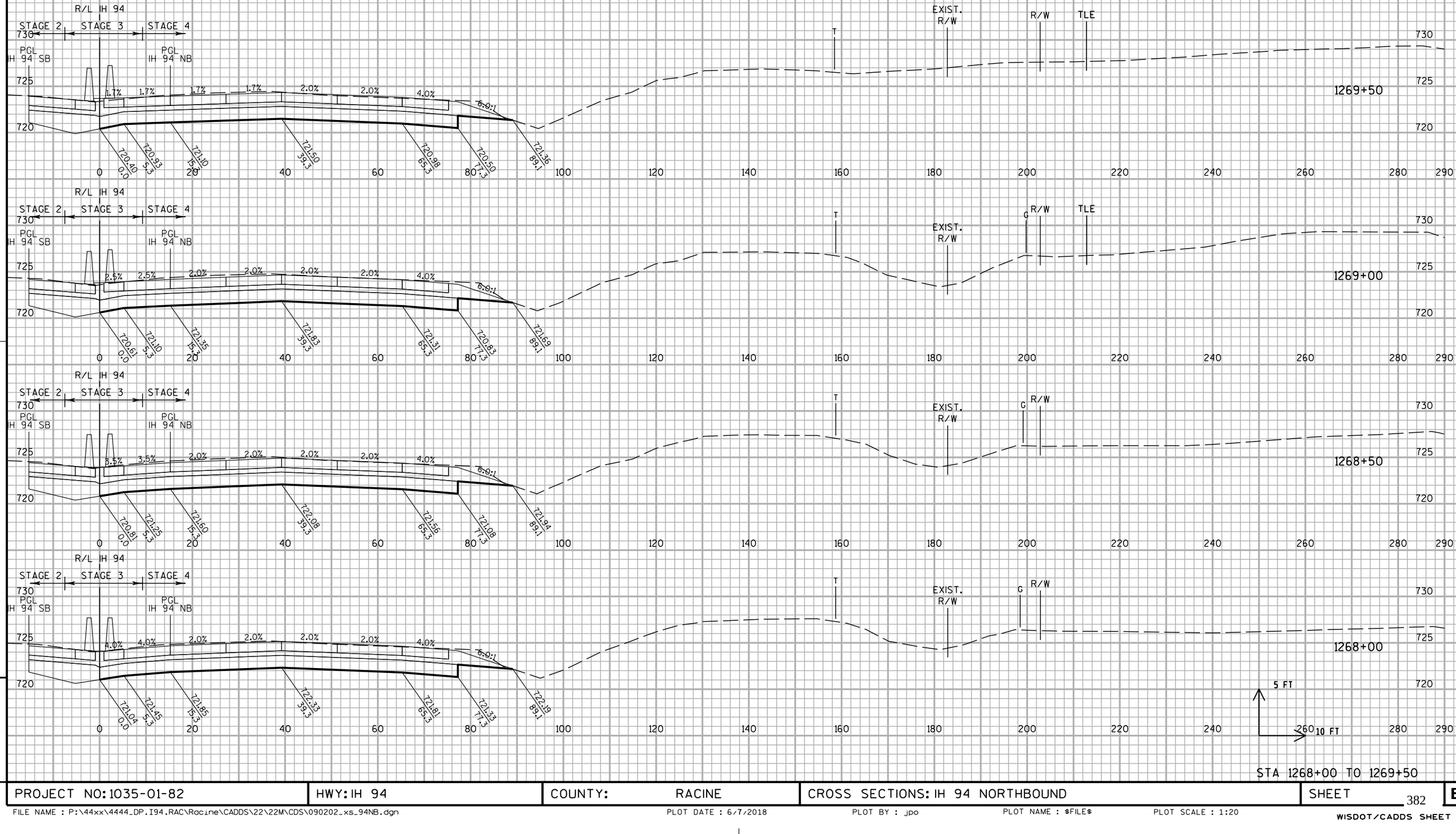
WISDOT/CADDS SHEET 21



PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	CROSS SECTIONS: IH 94 SOUTHBOUND	SHEET 381	E

FILE NAME : P:\44xx\4444_DP.I94.RAC\Racine\CADDS\22\22M\CDS\090203_xs_94SB.dgn PLOT DATE : 6/7/2018 PLOT BY : jpo PLOT NAME : $FILE$ PLOT SCALE : 1:20

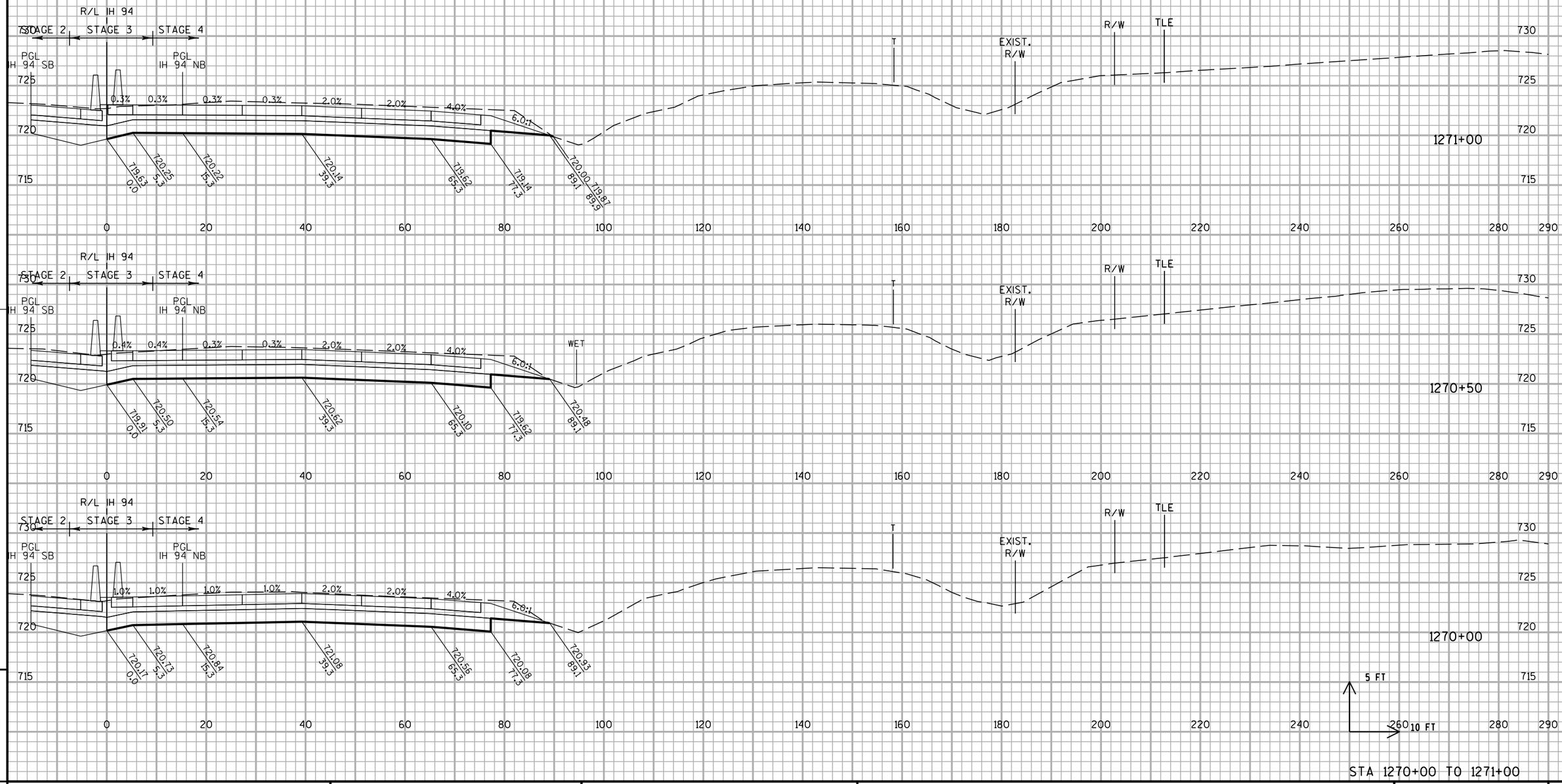
WISDOT/CADDS SHEET 21



PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	CROSS SECTIONS: IH 94 NORTHBOUND	SHEET 382	E

FILE NAME : P:\44xx\4444_DP.I94.RAC\Racine\CADDS\22\22M\CDS\090202_xs_94NB.dgn PLOT DATE : 6/7/2018 PLOT BY : jpo PLOT NAME : $FILE$ PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21



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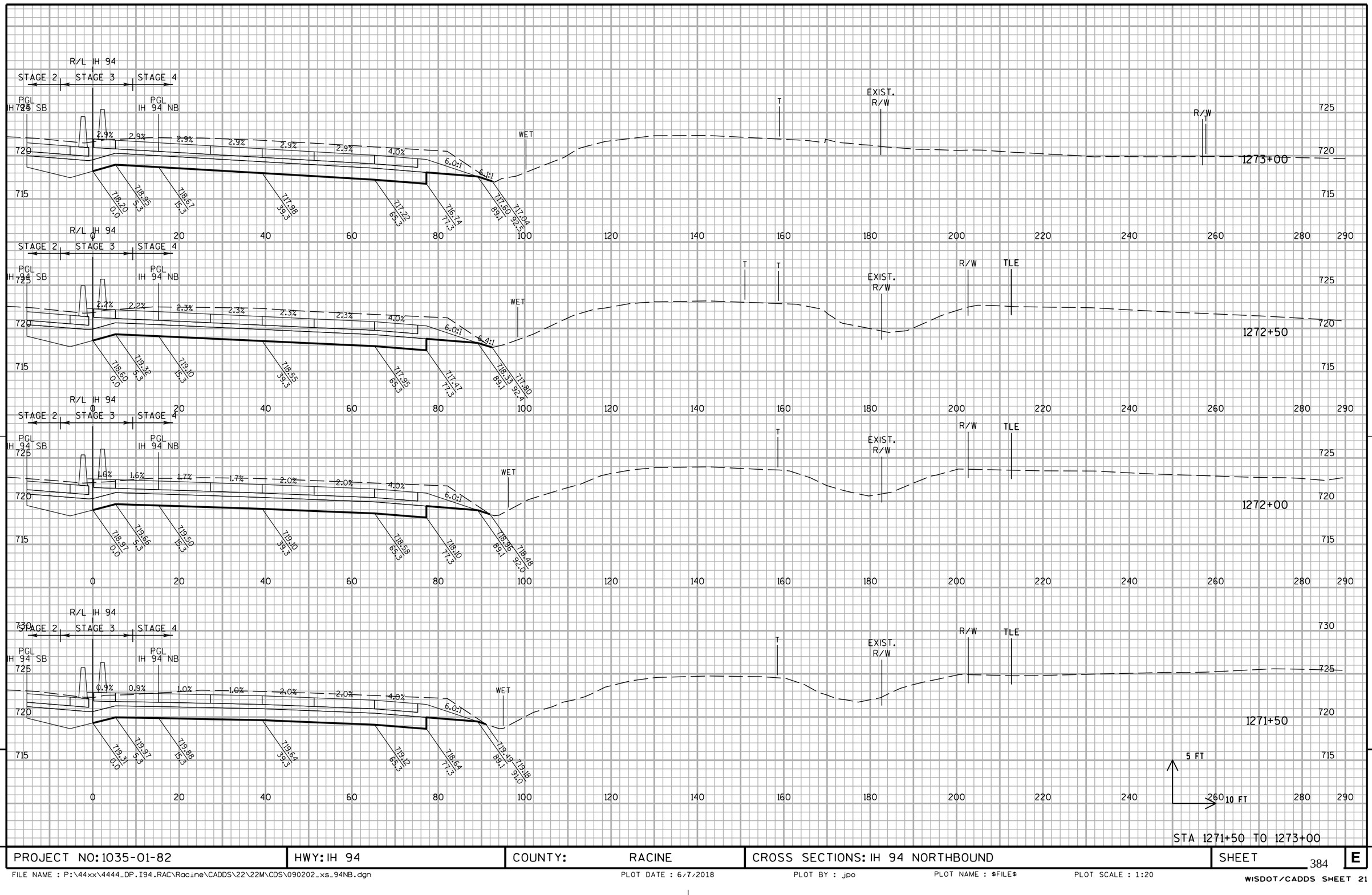
9

STA 1270+00 TO 1271+00

PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	CROSS SECTIONS: IH 94 NORTHBOUND	SHEET 383	E

FILE NAME : P:\44xx\4444_DP.I94.RAC\Racine\CADDS\22\22M\CDS\090202_xs_94NB.dgn PLOT DATE : 6/7/2018 PLOT BY : jpo PLOT NAME : $FILE$ PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21

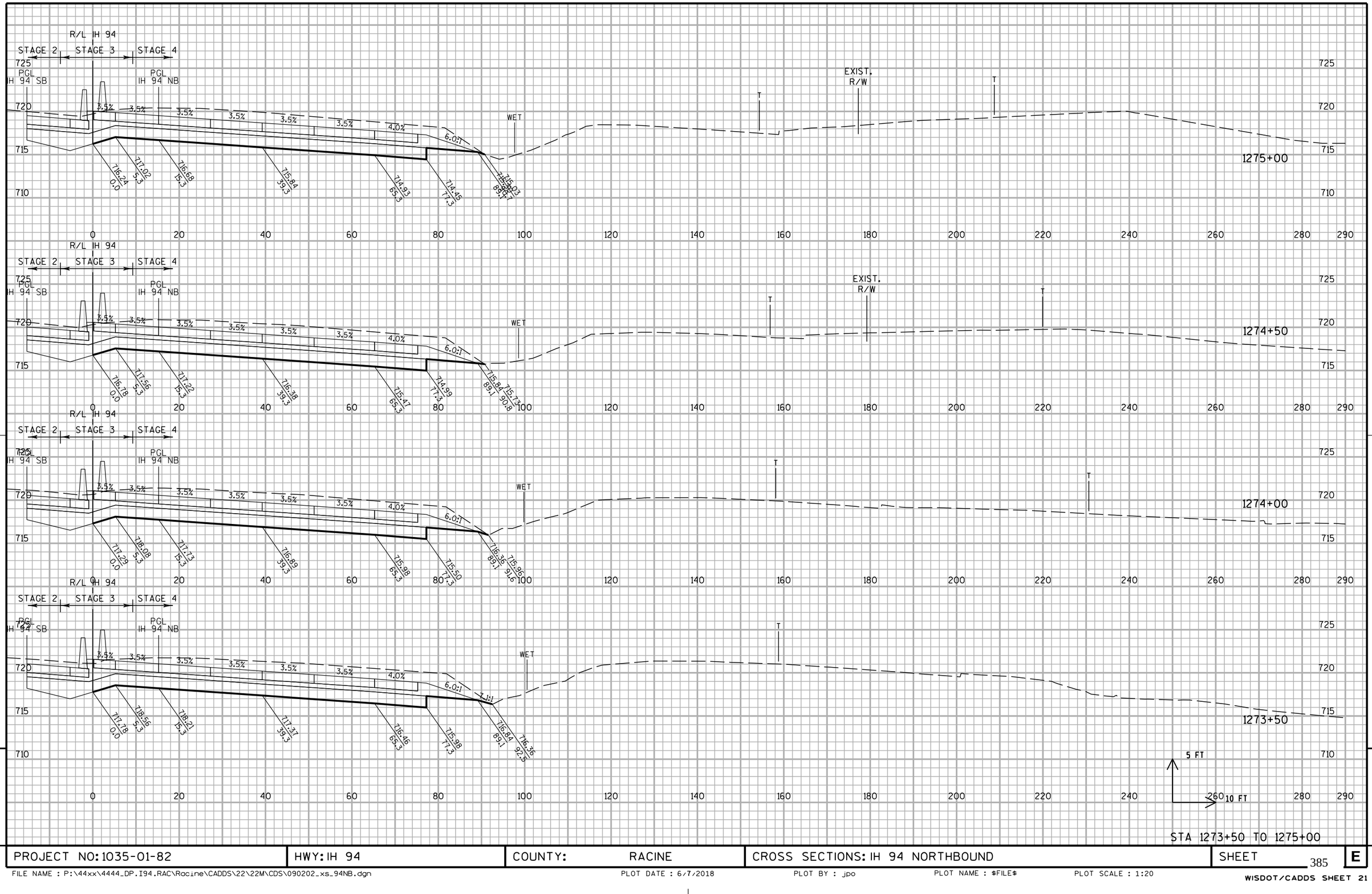


STA 1271+50 TO 1273+00

PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	CROSS SECTIONS: IH 94 NORTHBOUND	SHEET 384	E

FILE NAME : P:\44xx\4444_DP.I94.RAC\Racine\CADDS\22\22M\CDS\090202_xs_94NB.dgn PLOT DATE : 6/7/2018 PLOT BY : jpo PLOT NAME : $FILE$ PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21

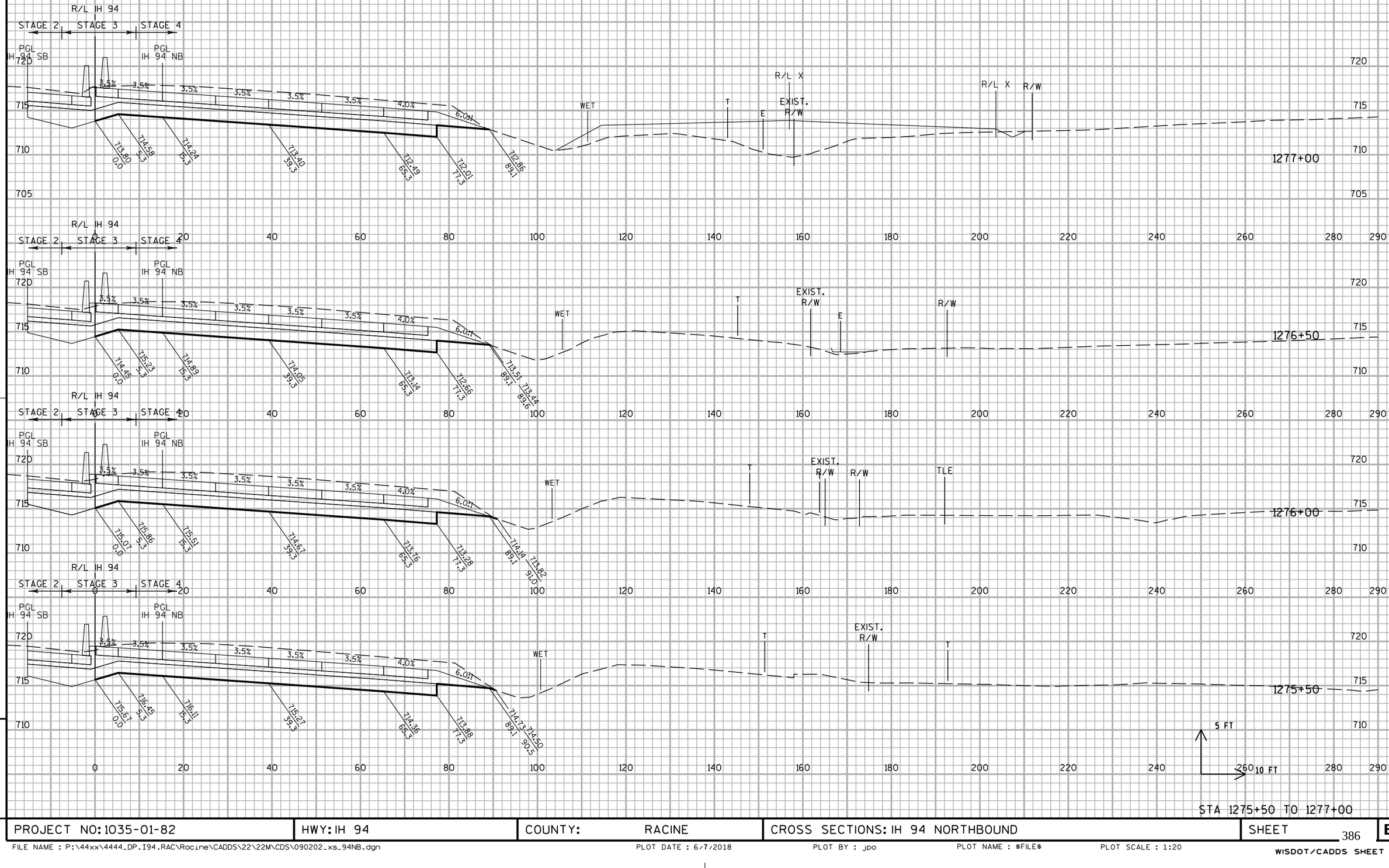


STA 1273+50 TO 1275+00

PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	CROSS SECTIONS: IH 94 NORTHBOUND	SHEET 385	E

FILE NAME : P:\44xx\4444_DP.I94.RAC\Racine\CADDS\22\22M\CDS\090202_xs_94NB.dgn PLOT DATE : 6/7/2018 PLOT BY : jpo PLOT NAME : $FILE$ PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21

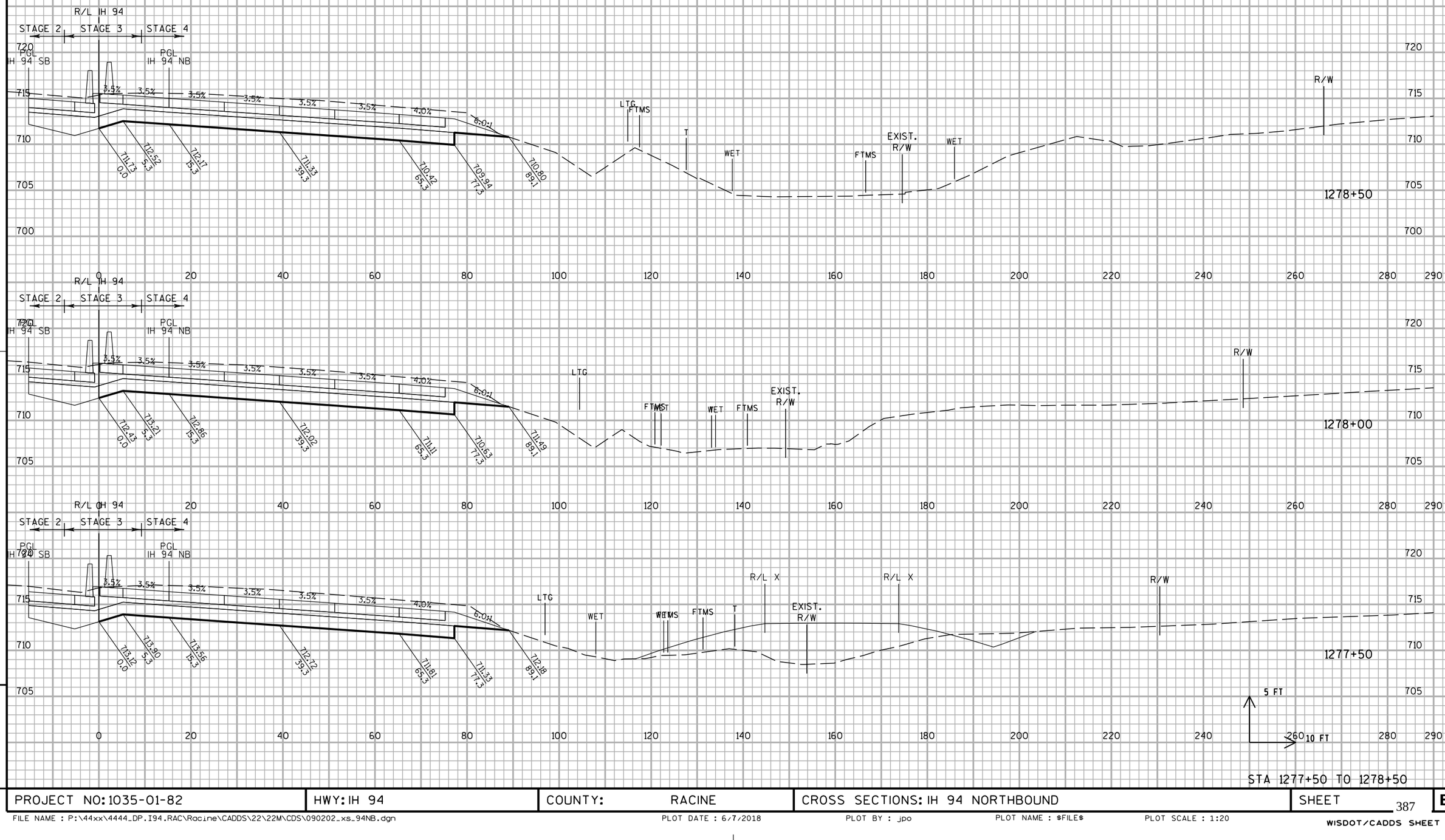


STA 1275+50 TO 1277+00

PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	CROSS SECTIONS: IH 94 NORTHBOUND	SHEET 386	E

FILE NAME : P:\44xx\4444_DP.I94.RAC\Racine\CADDS\22\22M\CDS\090202_xs_94NB.dgn PLOT DATE : 6/7/2018 PLOT BY : jpo PLOT NAME : $FILE$ PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21

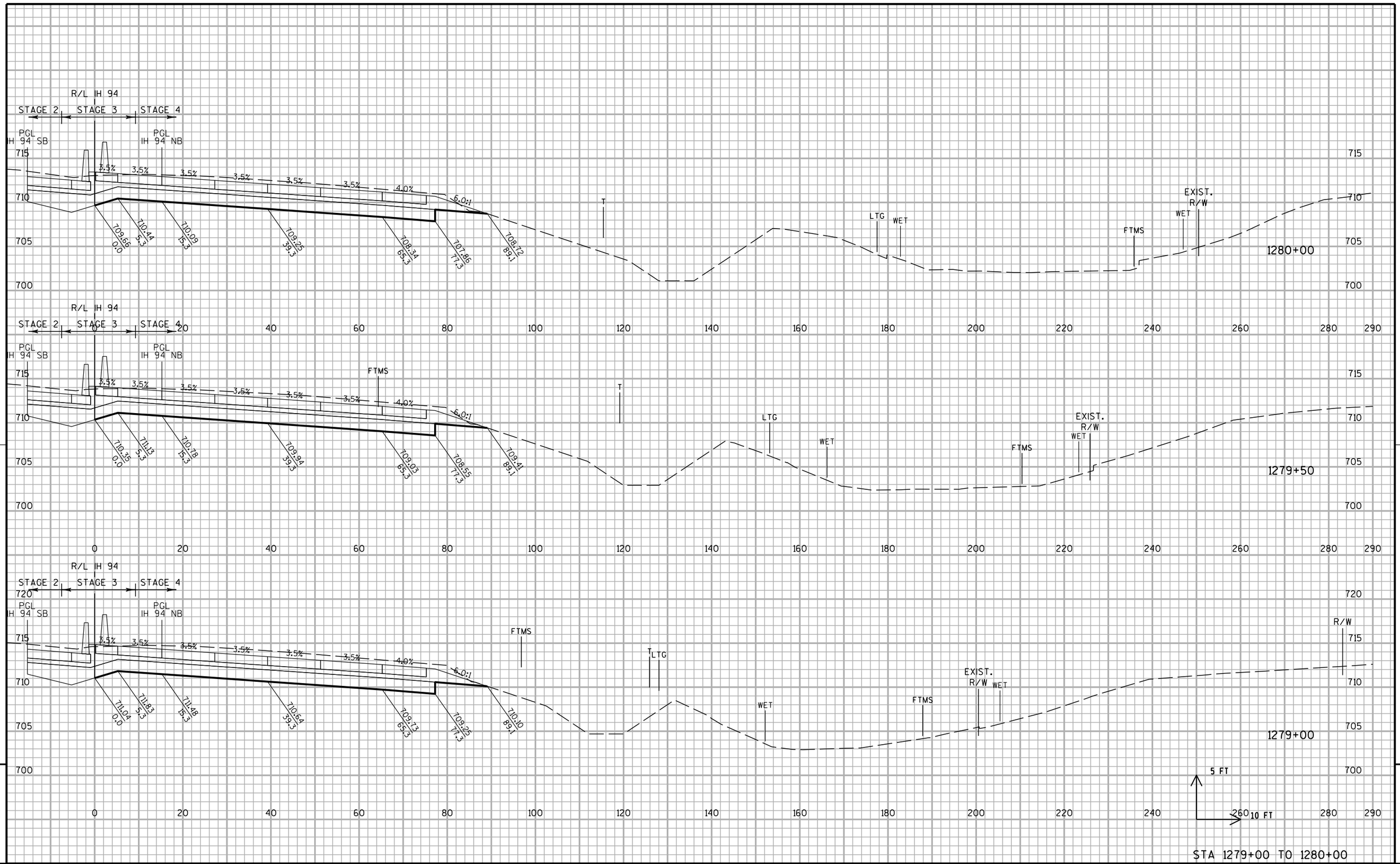


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PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	CROSS SECTIONS: IH 94 NORTHBOUND	SHEET 387	E

FILE NAME : P:\44xx\4444_DP.I94.RAC\Racine\CADDS\22\22M\CDS\090202_xs_94NB.dgn | PLOT DATE : 6/7/2018 | PLOT BY : jpo | PLOT NAME : $FILE$ | PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21

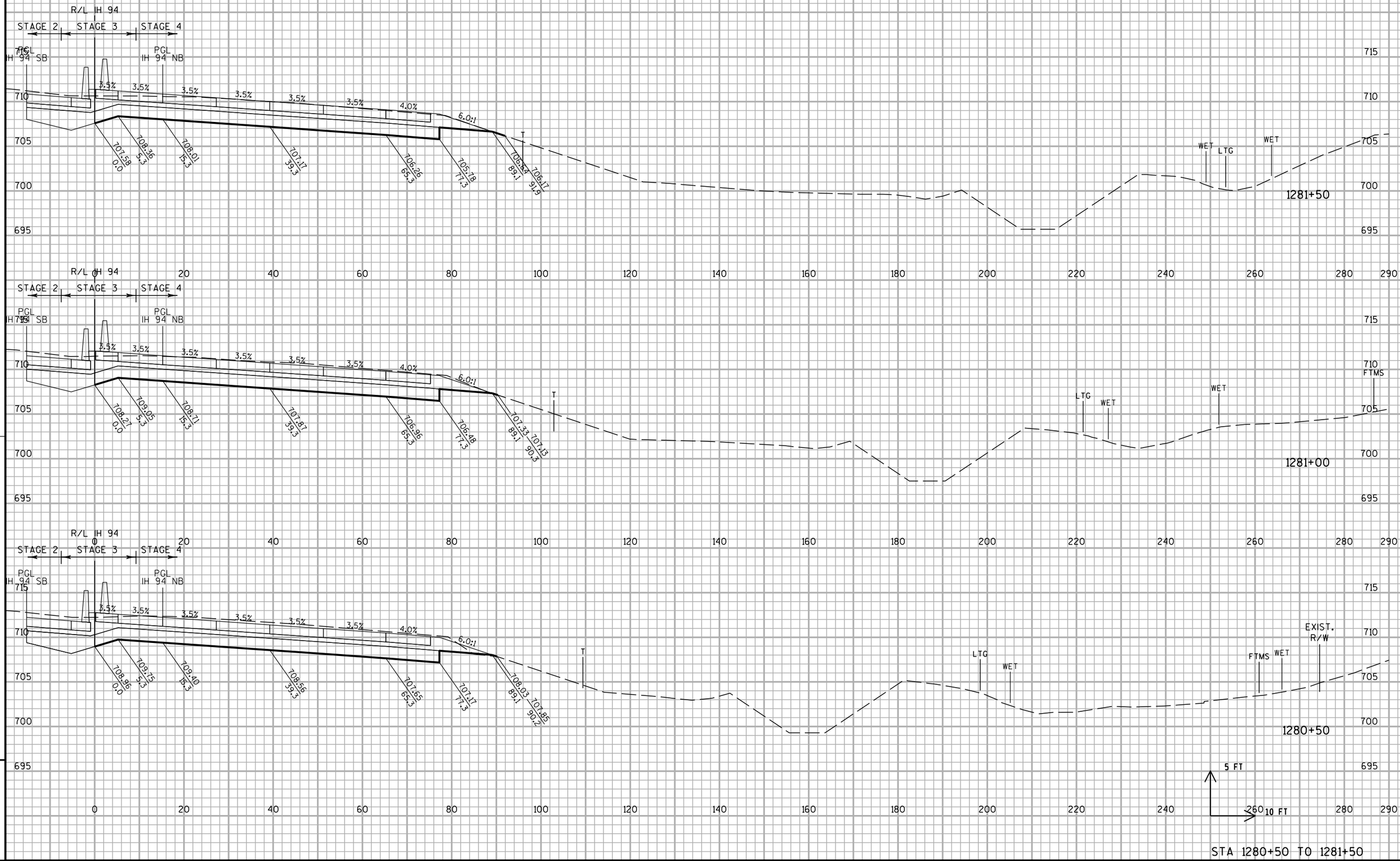


STA 1279+00 TO 1280+00

PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	CROSS SECTIONS: IH 94 NORTHBOUND	SHEET 388	E

FILE NAME : P:\44xx\4444_DP.I94.RAC\Racine\CADDS\22\22M\CDS\090202_xs_94NB.dgn PLOT DATE : 6/7/2018 PLOT BY : jpo PLOT NAME : $FILE$ PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21

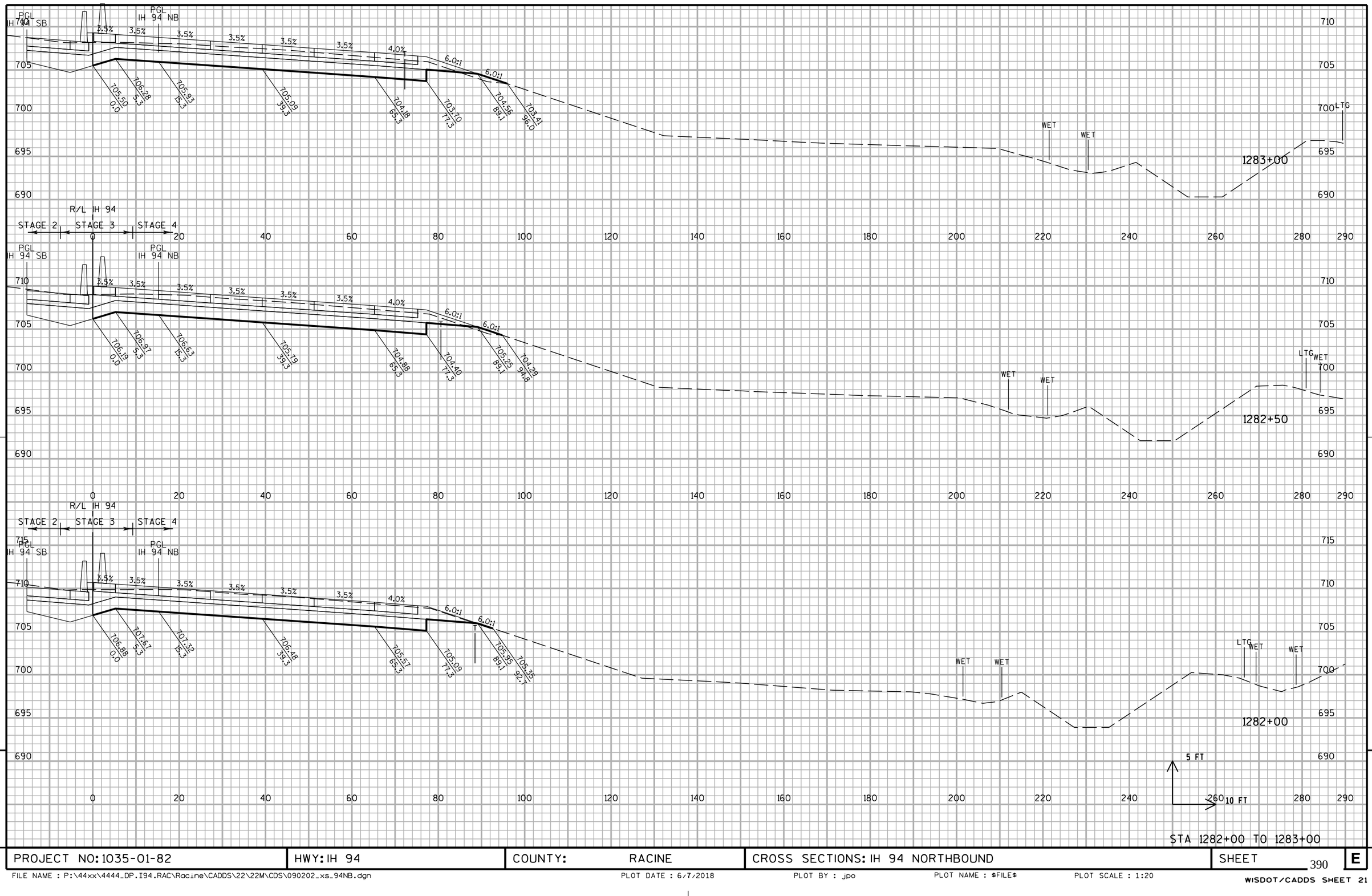


STA 1280+50 TO 1281+50

PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	CROSS SECTIONS: IH 94 NORTHBOUND	SHEET 389	E

FILE NAME : P:\44xx\4444_DP.I94.RAC\Racine\CADDS\22\22M\CDS\090202_xs_94NB.dgn PLOT DATE : 6/7/2018 PLOT BY : jpo PLOT NAME : $FILE$ PLOT SCALE : 1:20

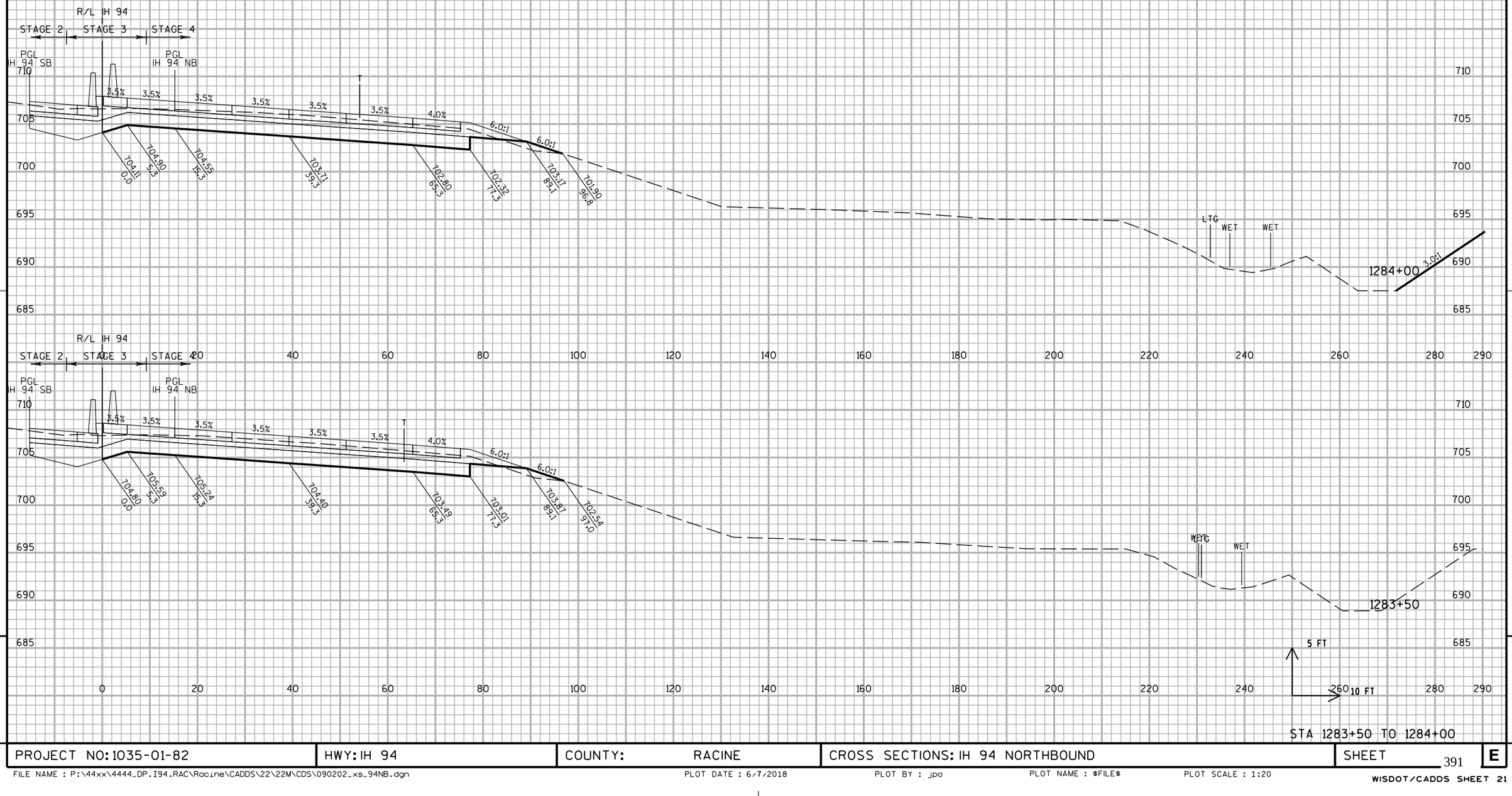
WISDOT/CADDS SHEET 21



PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	CROSS SECTIONS: IH 94 NORTHBOUND	SHEET 390	E

FILE NAME : P:\44xx\4444_DP.I94.RAC\Racine\CADDS\22\22M\CDS\090202_xs_94NB.dgn PLOT DATE : 6/7/2018 PLOT BY : jpo PLOT NAME : $FILE$ PLOT SCALE : 1:20

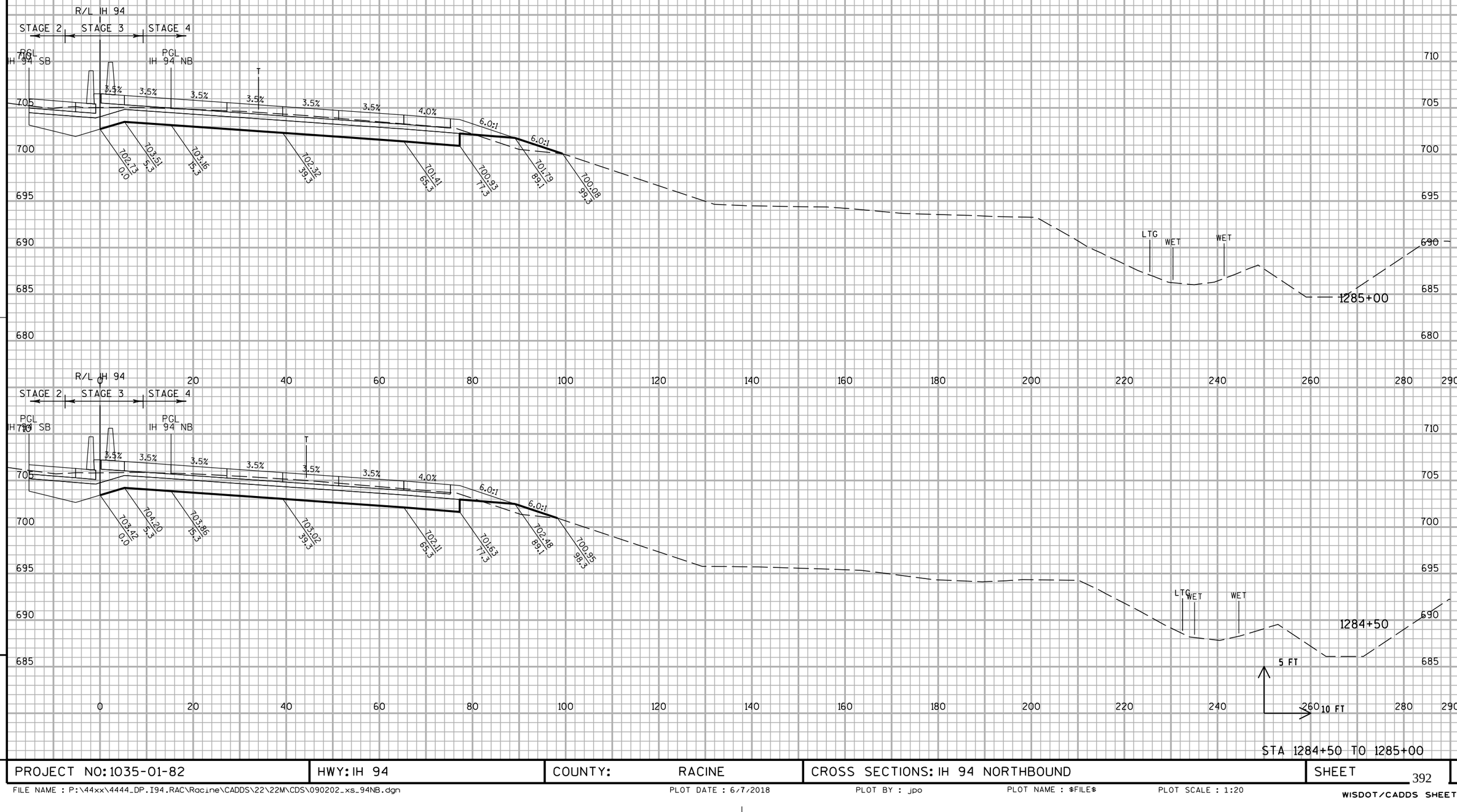
WISDOT/CADDS SHEET 21



PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	CROSS SECTIONS: IH 94 NORTHBOUND	SHEET 391	E

FILE NAME : P:\44xx\4444_DP.I94.RAC\Racine\CADDS\22\22M\CDS\090202_xs_94NB.dgn PLOT DATE : 6/7/2018 PLOT BY : jpo PLOT NAME : $FILE$ PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21

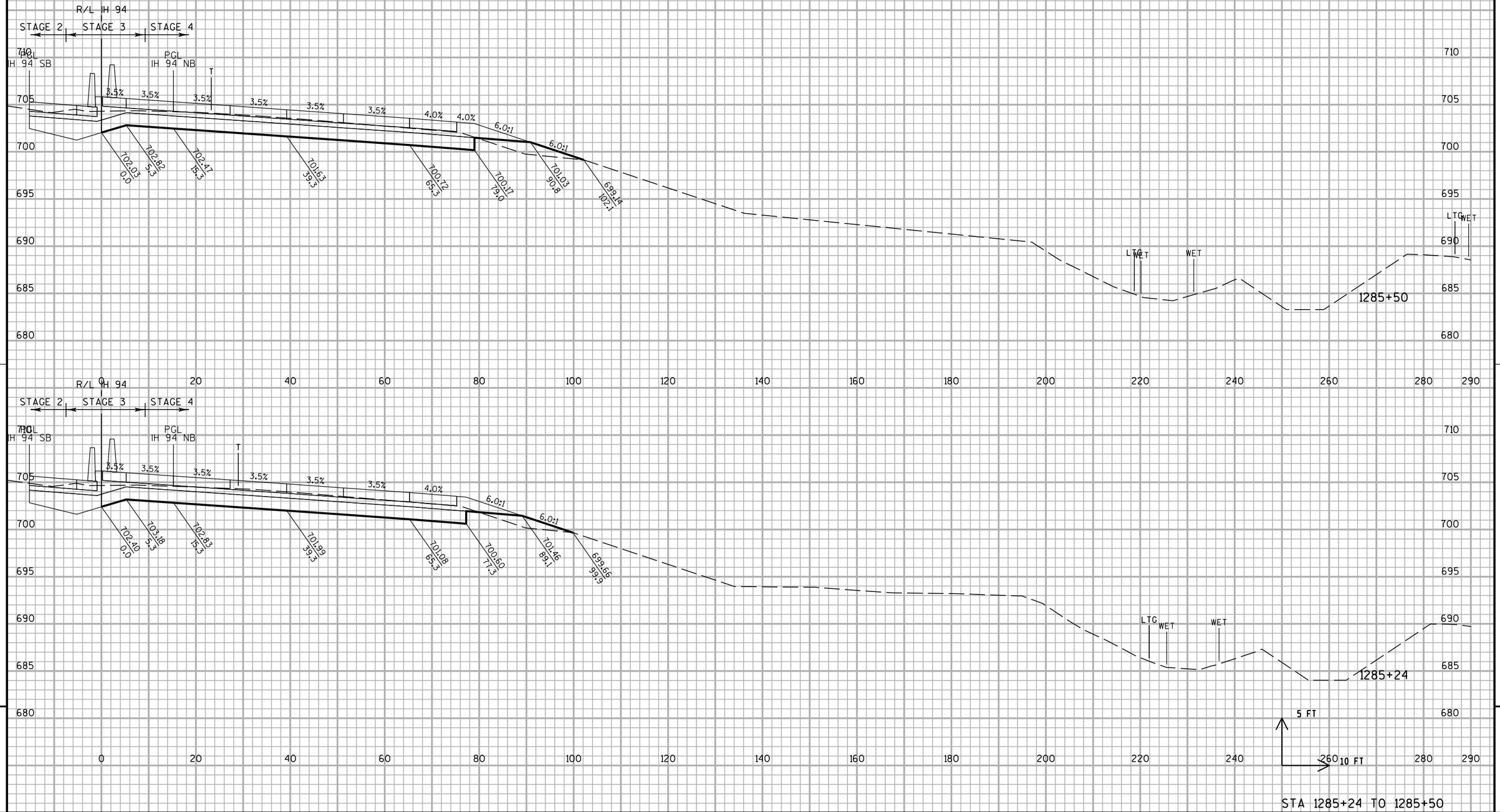


STA 1284+50 TO 1285+00

PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	CROSS SECTIONS: IH 94 NORTHBOUND	SHEET 392	E

FILE NAME : P:\44xx\4444_DP.I94.RAC\Racine\CADDS\22\22M\CDS\090202_xs_94NB.dgn PLOT DATE : 6/7/2018 PLOT BY : jpo PLOT NAME : $FILE$ PLOT SCALE : 1:20

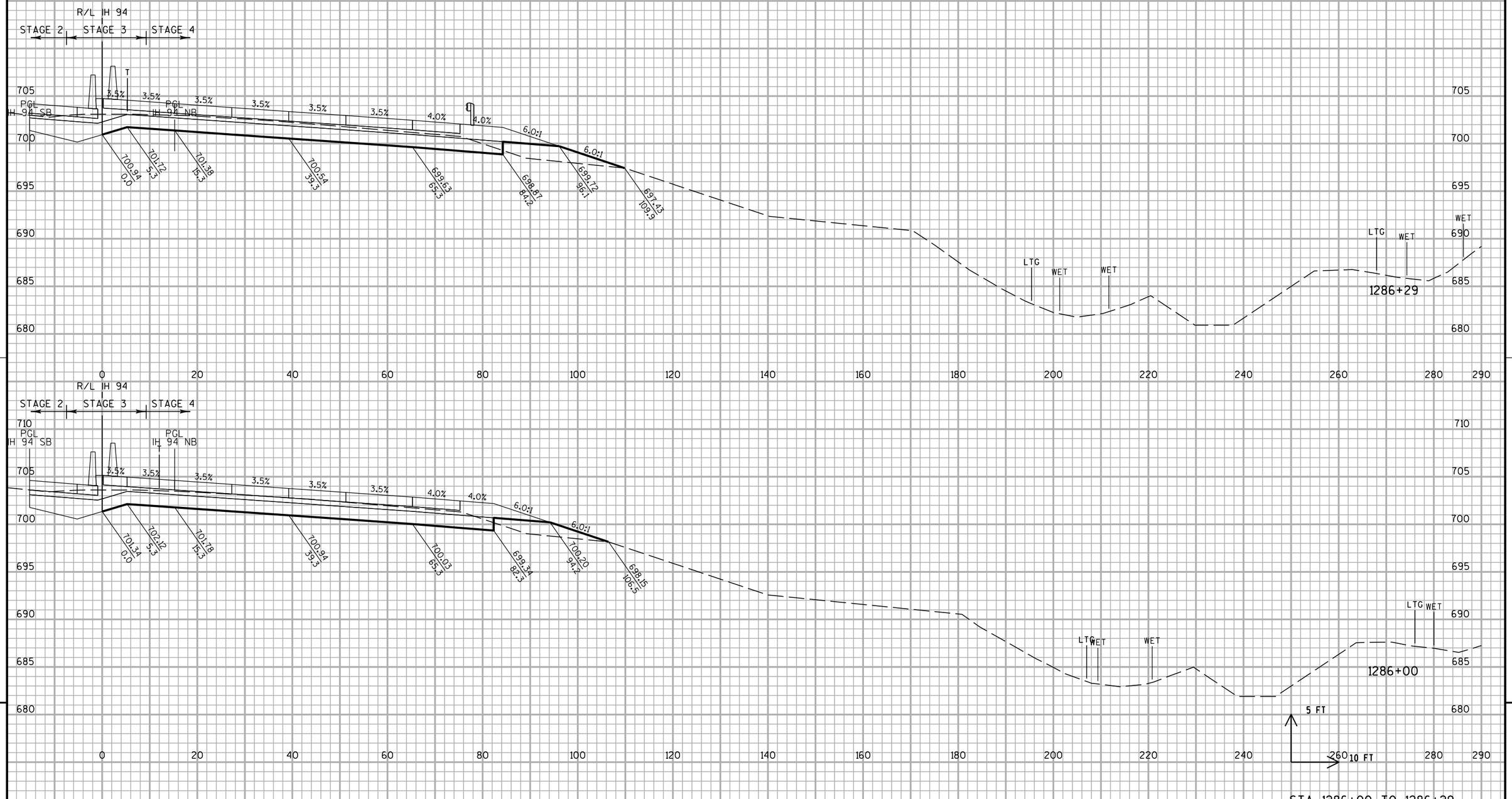
WISDOT/CADDS SHEET 21



PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	CROSS SECTIONS: IH 94 NORTHBOUND	SHEET 393	E

FILE NAME : P:\44xx\4444_DP.I94.RAC\Racine\CADDS\22\22M\CDS\090202_xs_94NB.dgn PLOT DATE : 6/7/2018 PLOT BY : jpo PLOT NAME : $FILE$ PLOT SCALE : 1:20

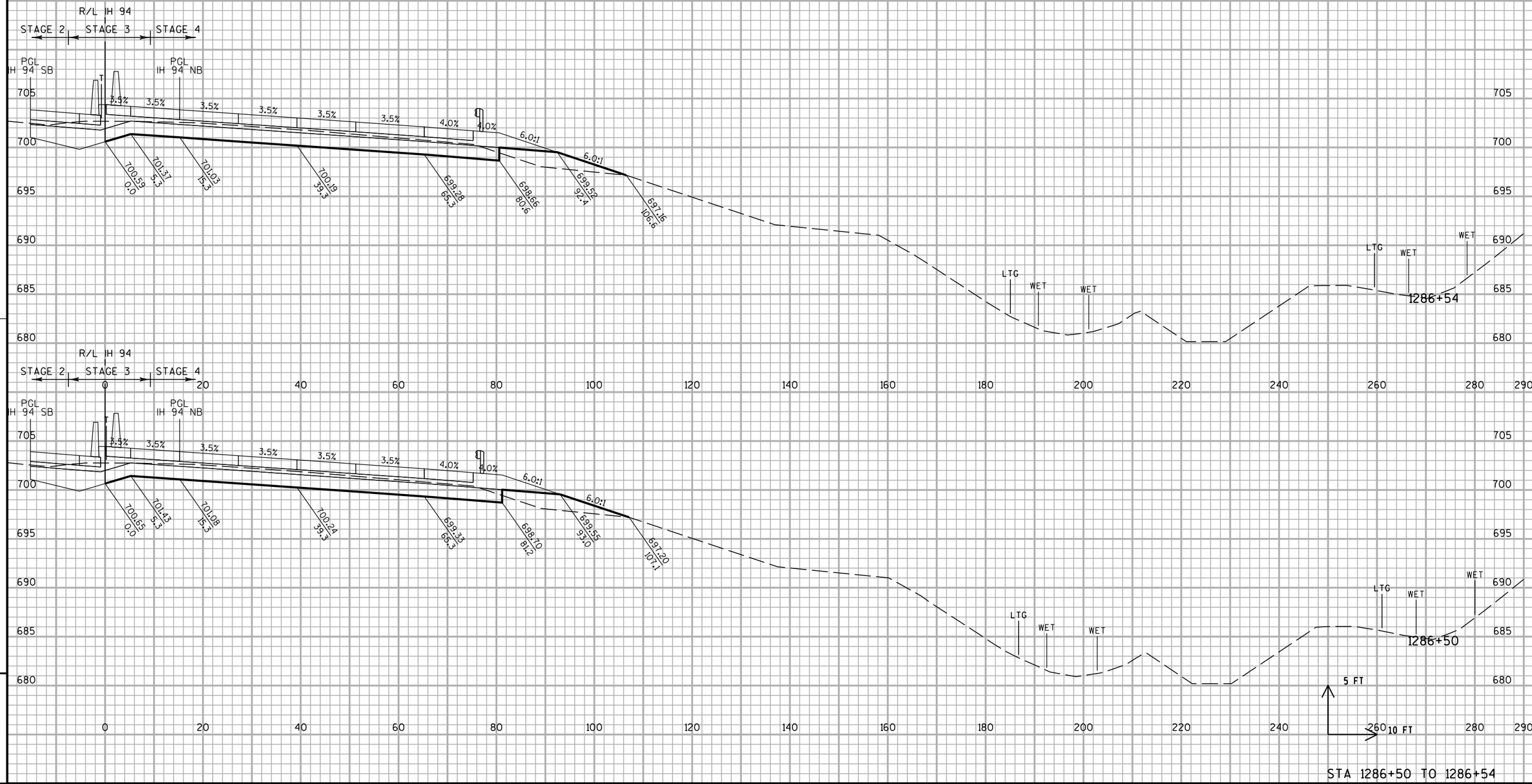
WISDOT/CADDS SHEET 21



PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	CROSS SECTIONS: IH 94 NORTHBOUND	SHEET 394	E

FILE NAME : P:\44xx\4444_DP.I94.RAC\Racine\CADDS\22\22M\CDS\090202_xs_94NB.dgn PLOT DATE : 6/7/2018 PLOT BY : jpo PLOT NAME : $FILE$ PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21



9

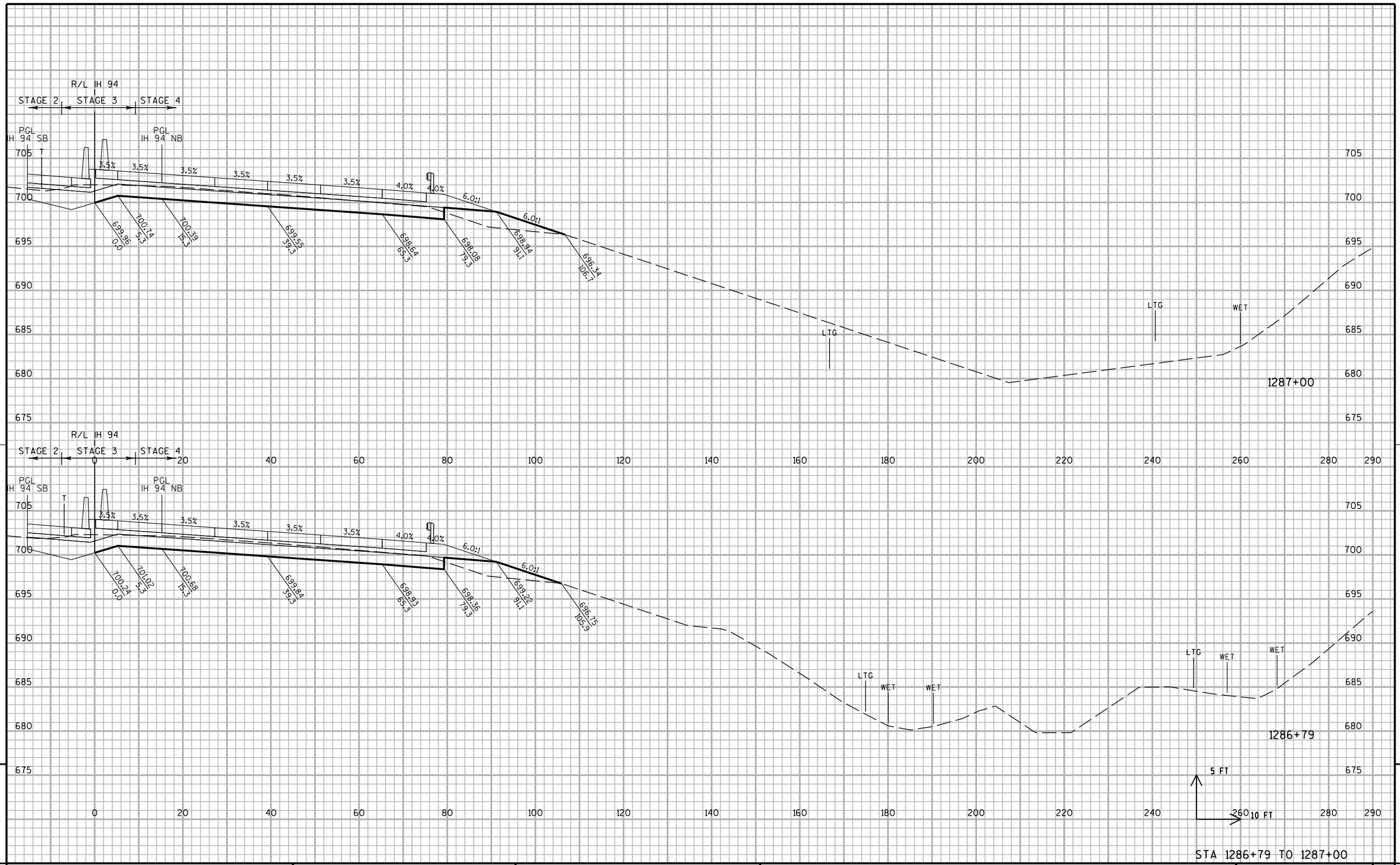
9

STA 1286+50 TO 1286+54

PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	CROSS SECTIONS: IH 94 NORTHBOUND	SHEET 395	E

FILE NAME : P:\44xx\4444_DP.I94.RAC\Racine\CADDS\22\22M\CDS\090202_xs_94NB.dgn PLOT DATE : 6/7/2018 PLOT BY : jpo PLOT NAME : $FILE$ PLOT SCALE : 1:20

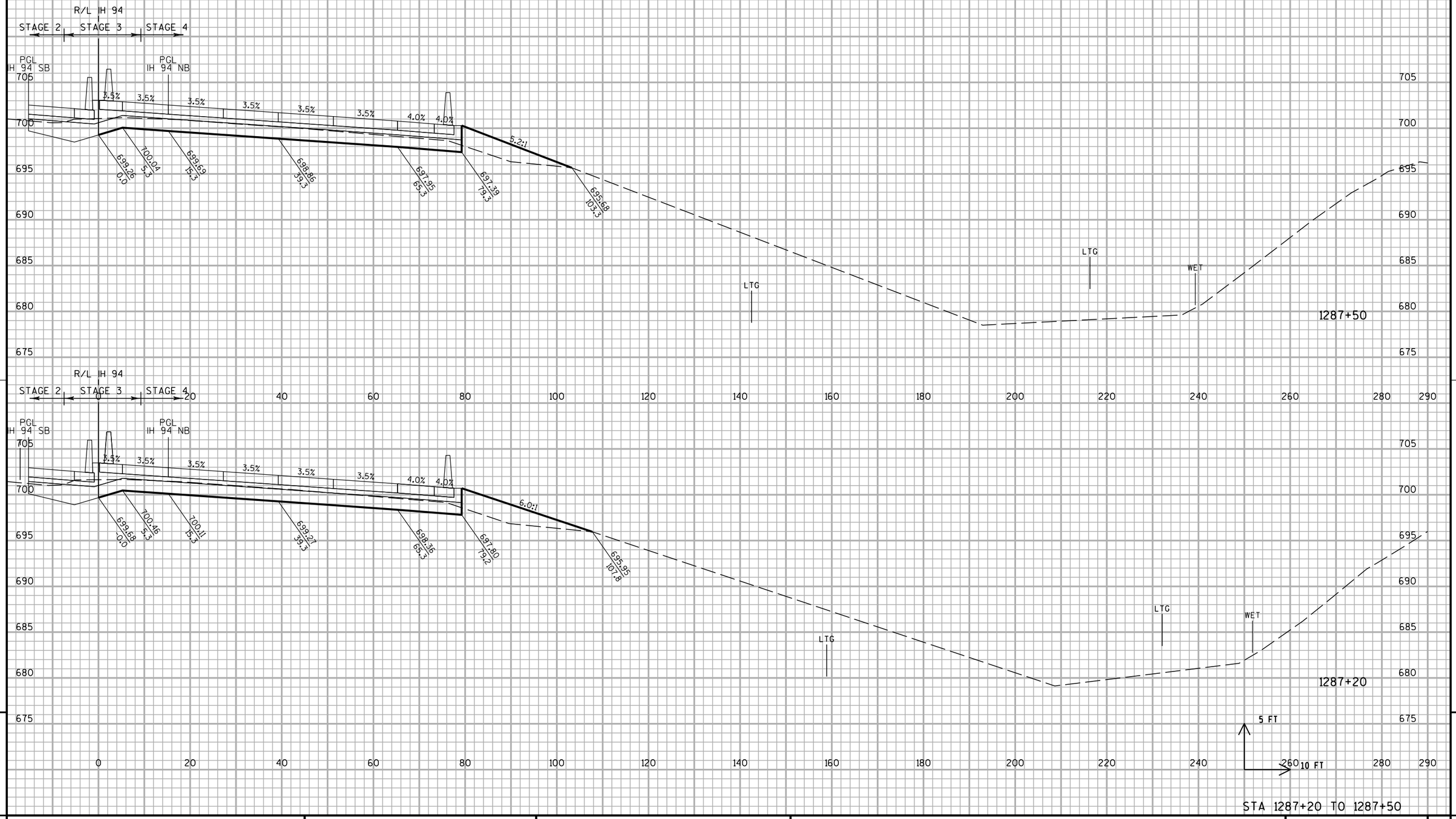
WISDOT/CADDS SHEET 21



9

PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	CROSS SECTIONS: IH 94 NORTHBOUND	SHEET 396	E

STA 1286+79 TO 1287+00

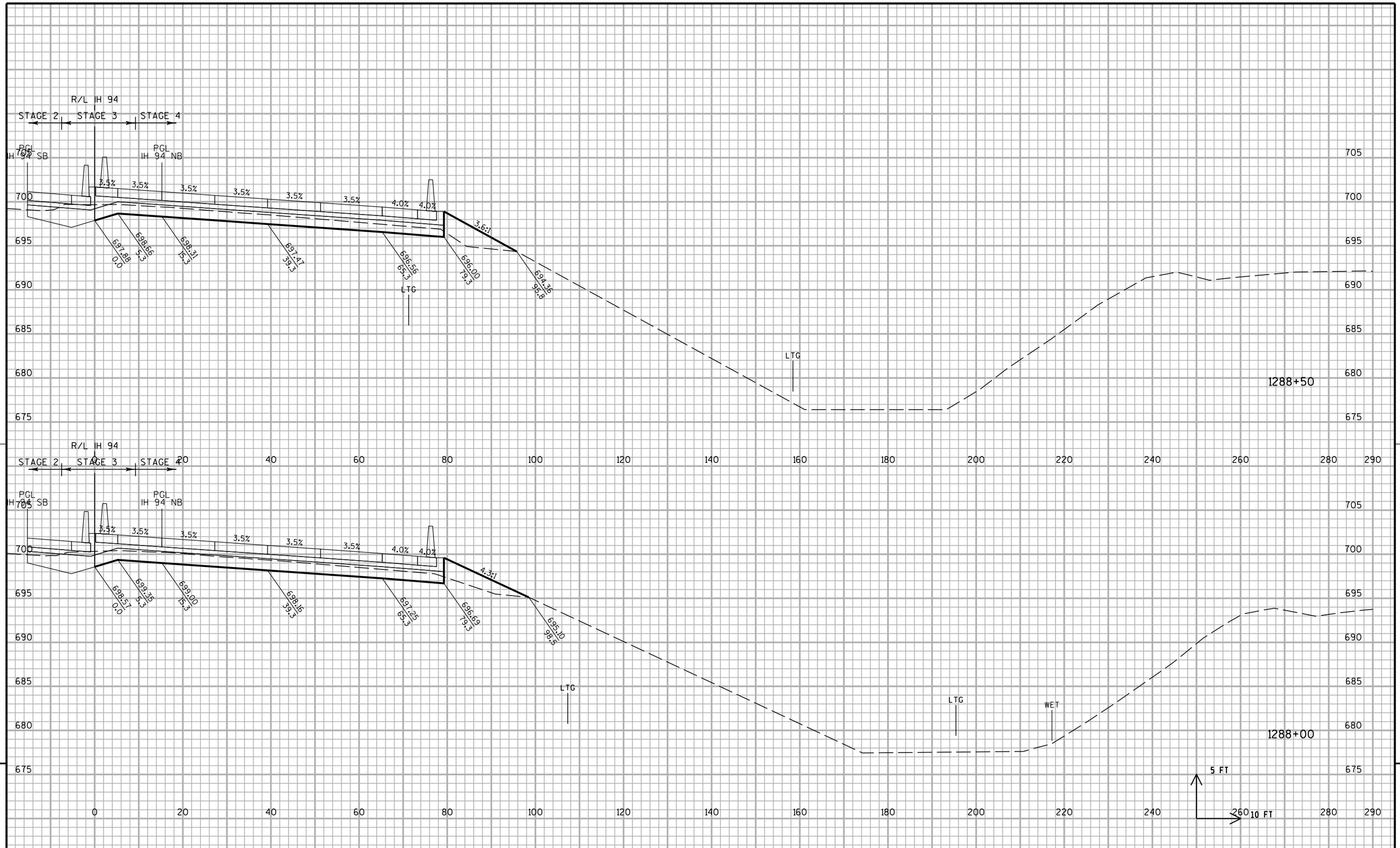


STA 1287+20 TO 1287+50

PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	CROSS SECTIONS: IH 94 NORTHBOUND	SHEET 397	E

FILE NAME : P:\44xx\4444_DP.I94.RAC\Racine\CADDS\22\22M\CDS\090202_xs_94NB.dgn PLOT DATE : 6/7/2018 PLOT BY : jpo PLOT NAME : $FILE$ PLOT SCALE : 1:20

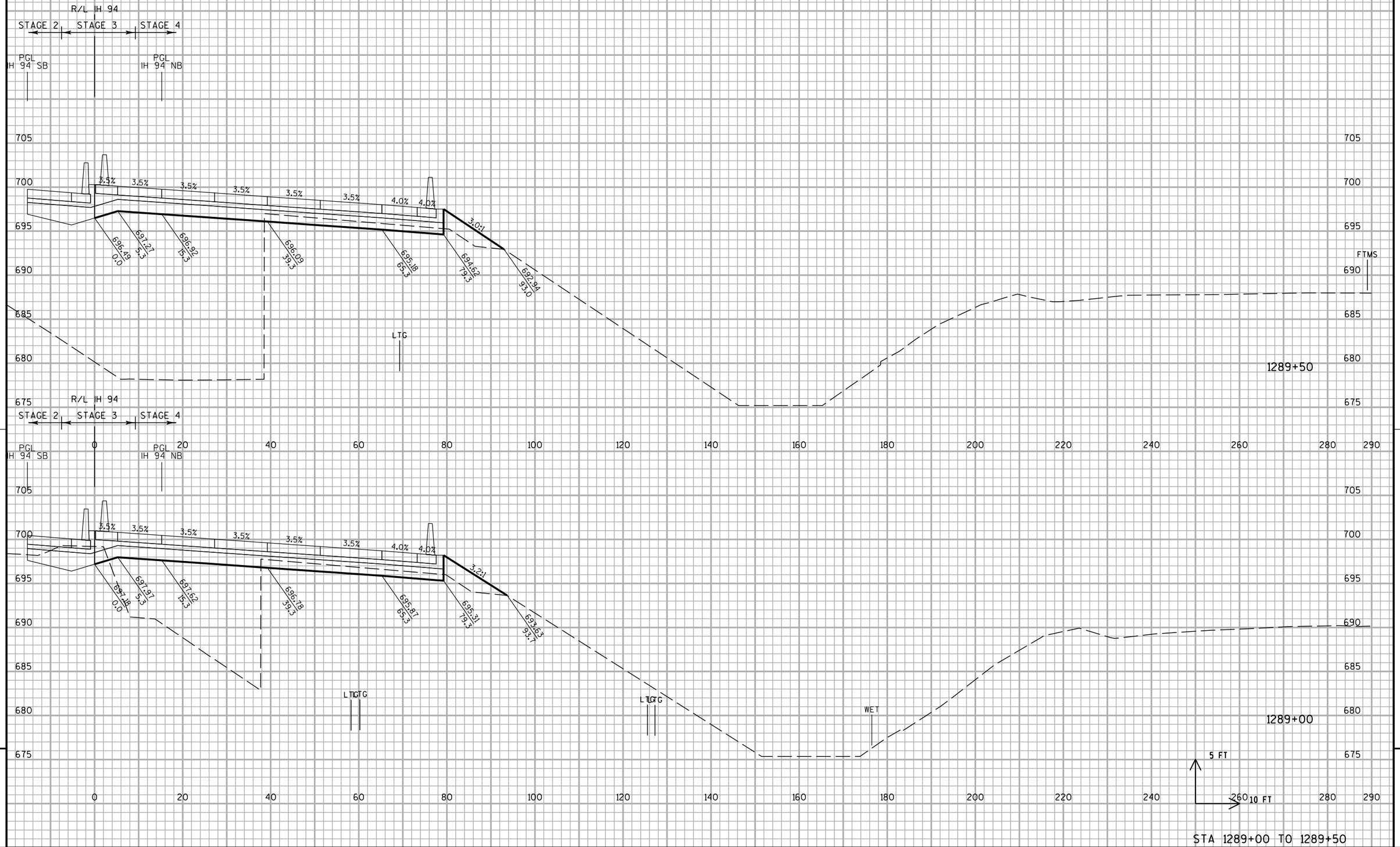
WISDOT/CADDS SHEET 21



PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	CROSS SECTIONS: IH 94 NORTHBOUND	SHEET 398	E

FILE NAME : P:\44xx\4444_DP.I94.RAC\Racine\CADDS\22\22M\CDS\090202_xs_94NB.dgn PLOT DATE : 6/7/2018 PLOT BY : jpo PLOT NAME : $FILE$ PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21

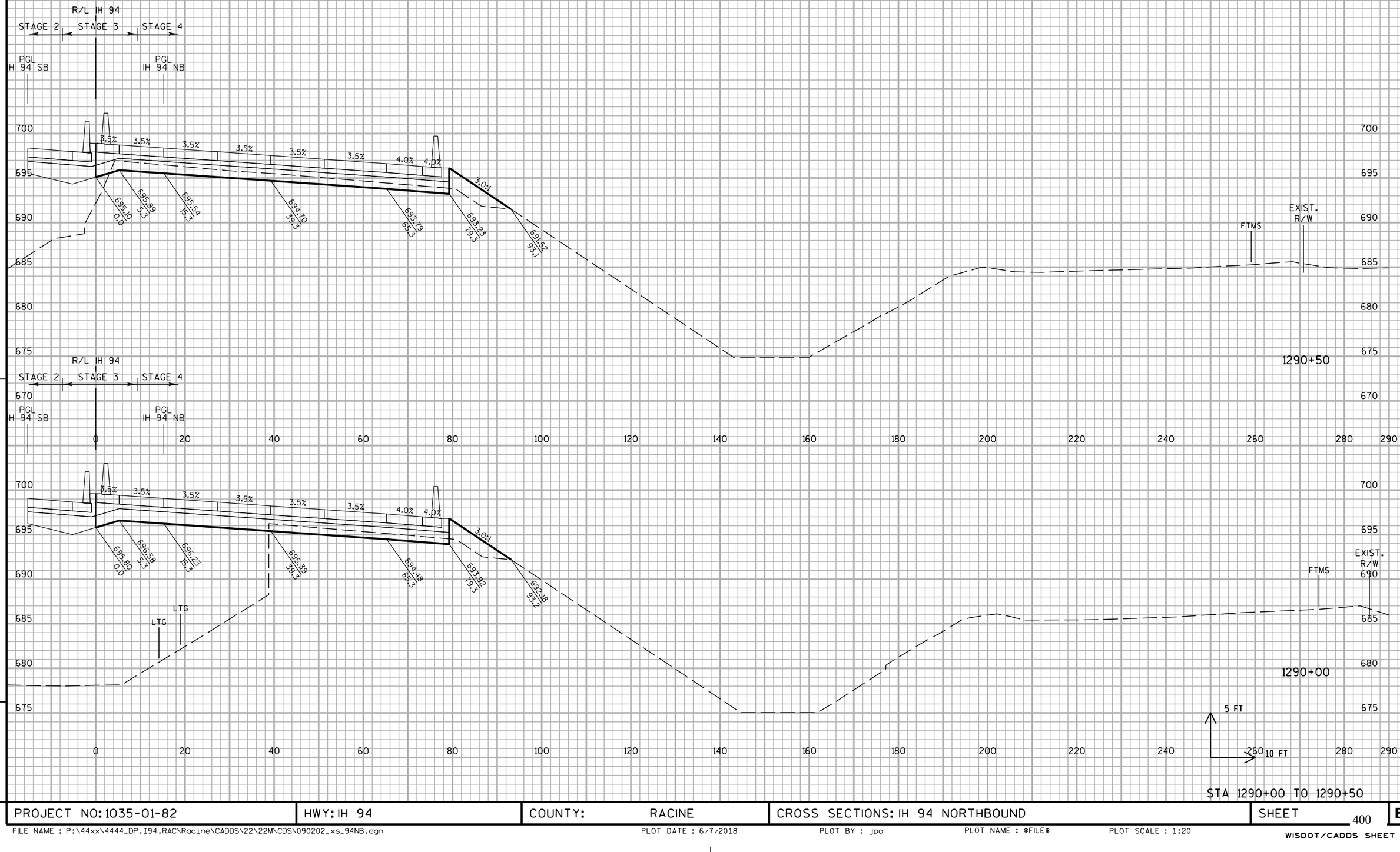


STA 1289+00 TO 1289+50

PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	CROSS SECTIONS: IH 94 NORTHBOUND	SHEET 399	E

FILE NAME : P:\44xx\4444_DP.I94.RAC\Racine\CADDS\22\22M\CDS\090202_xs_94NB.dgn PLOT DATE : 6/7/2018 PLOT BY : jpo PLOT NAME : $FILE$ PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21

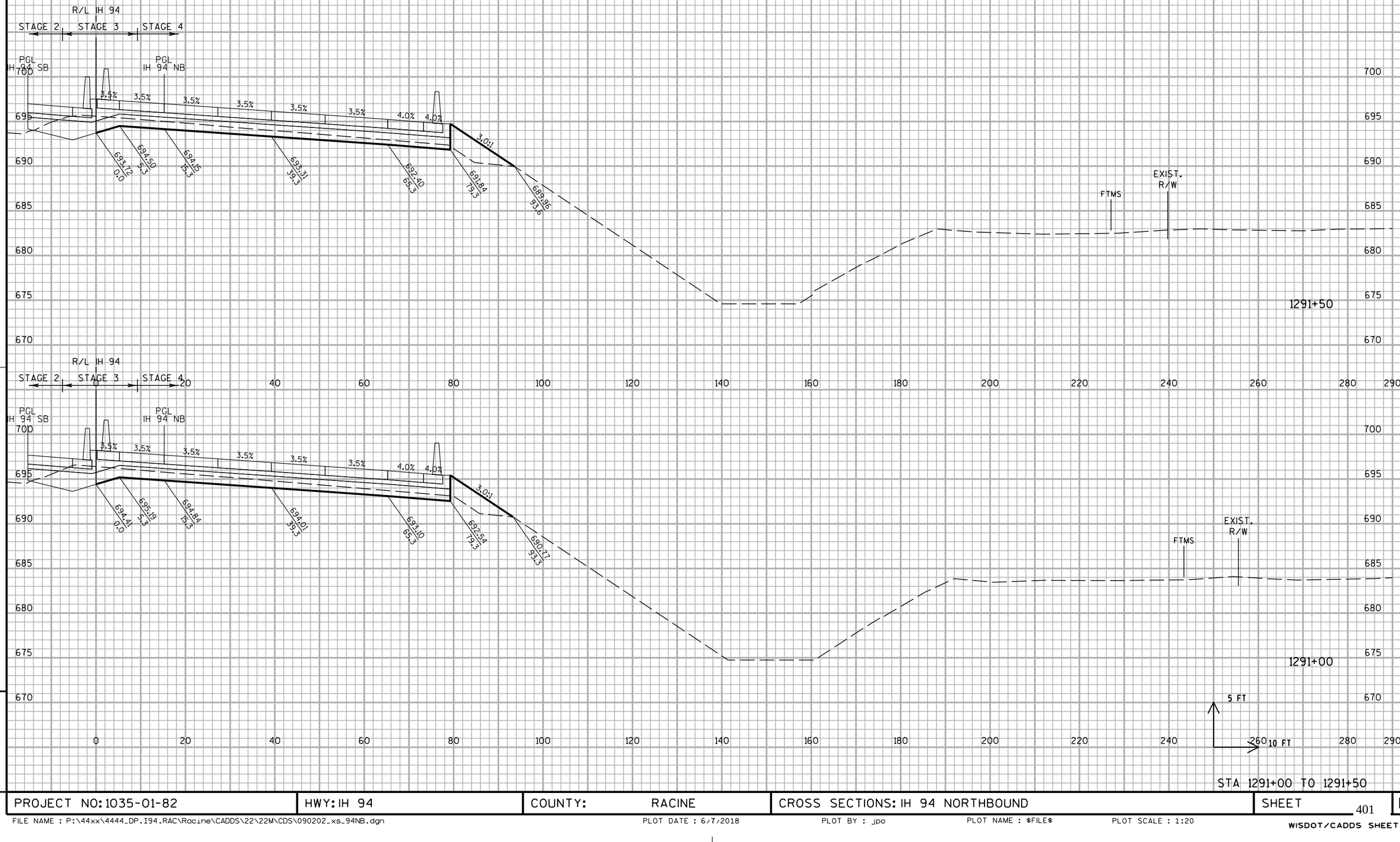


STA 1290+00 TO 1290+50

PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	CROSS SECTIONS: IH 94 NORTHBOUND	SHEET 400	E

FILE NAME : P:\44xx\4444_DP.I94.RAC\Racine\CADDS\22\22M\CDS\090202_xs_94NB.dgn PLOT DATE : 6/7/2018 PLOT BY : jpo PLOT NAME : $FILE$ PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21

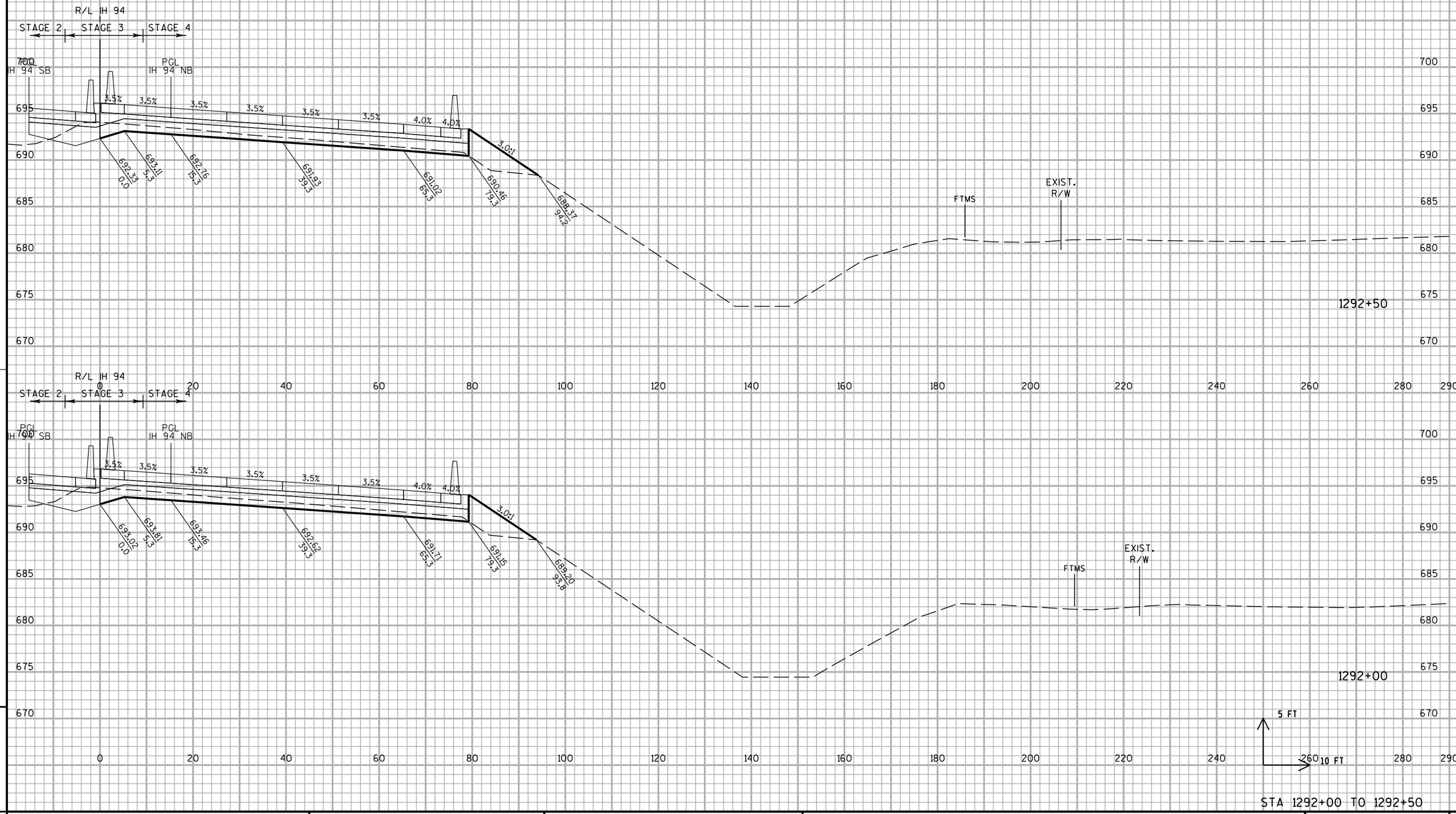


PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	CROSS SECTIONS: IH 94 NORTHBOUND	SHEET 401	E

STA 1291+00 TO 1291+50

FILE NAME : P:\44xx\4444_DP.I94.RAC\Racine\CADDS\22\22M\CDS\090202_xs_94NB.dgn PLOT DATE : 6/7/2018 PLOT BY : jpo PLOT NAME : $FILE$ PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21

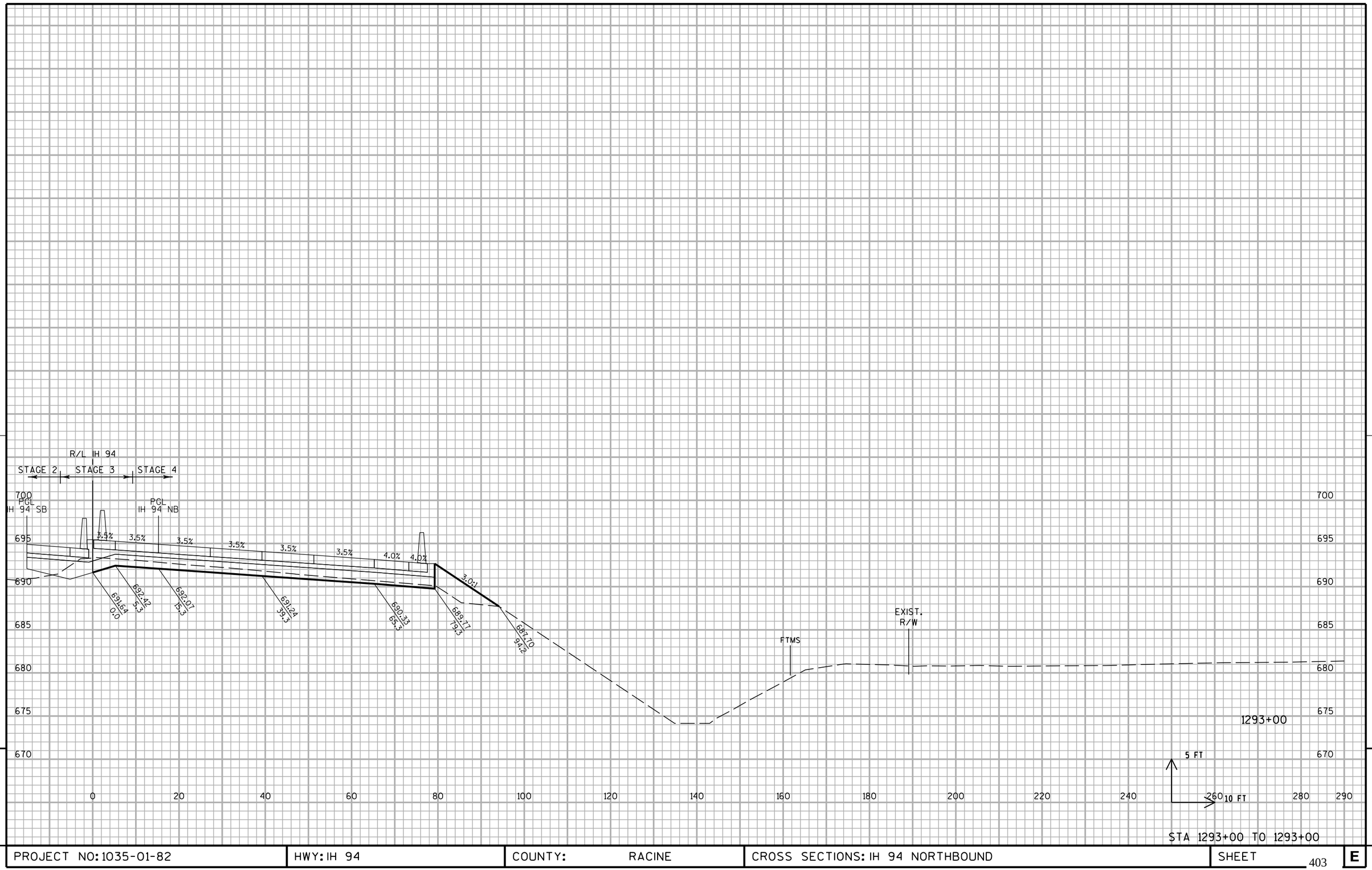


STA 1292+00 TO 1292+50

PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	CROSS SECTIONS: IH 94 NORTHBOUND	SHEET 402	E

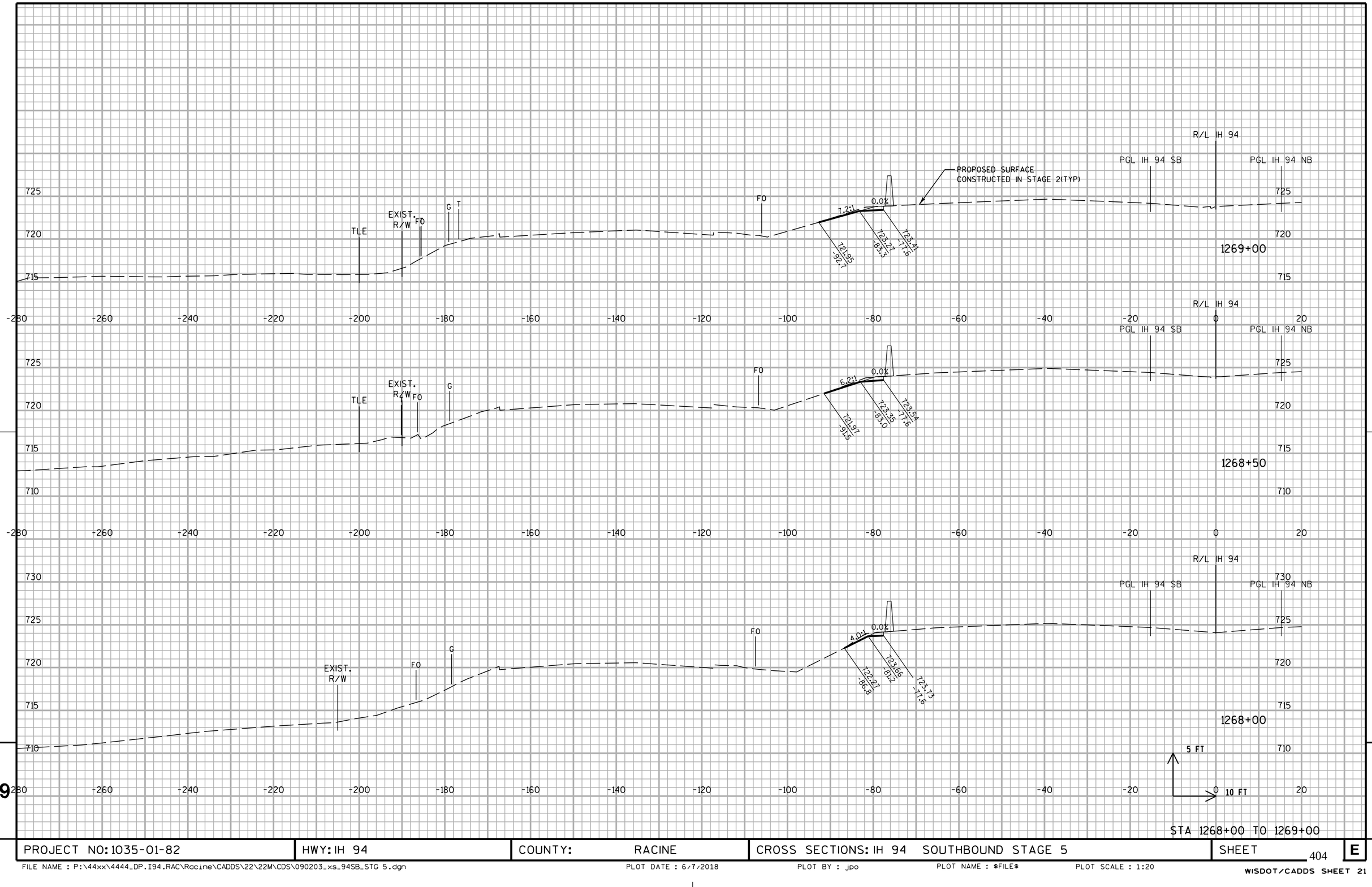
FILE NAME : P:\44xx\4444_DP.I94.RAC\Racine\CADDS\22\22M\CDS\090202_xs_94NB.dgn PLOT DATE : 6/7/2018 PLOT BY : jpo PLOT NAME : $FILE$ PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21



STA 1293+00 TO 1293+00

PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	CROSS SECTIONS: IH 94 NORTHBOUND	SHEET 403	E

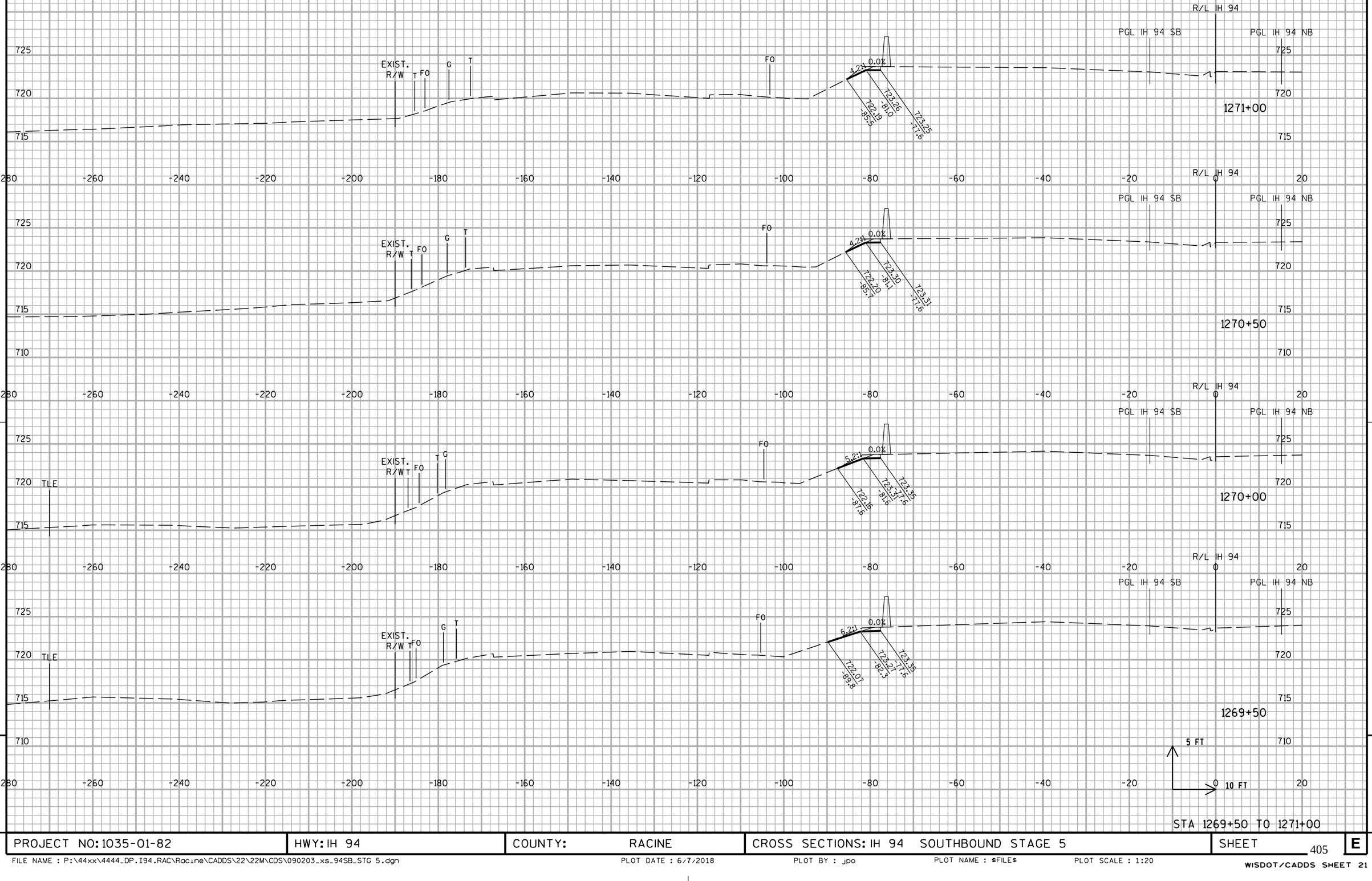


STA 1268+00 TO 1269+00

PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	CROSS SECTIONS: IH 94 SOUTHBOUND STAGE 5	SHEET 404	E

FILE NAME : P:\44xx\4444_DP.I94.RAC\Racine\CADDS\22\22M\CDS\090203_xs_94SB_STG 5.dgn PLOT DATE : 6/7/2018 PLOT BY : jpo PLOT NAME : $FILE$ PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21

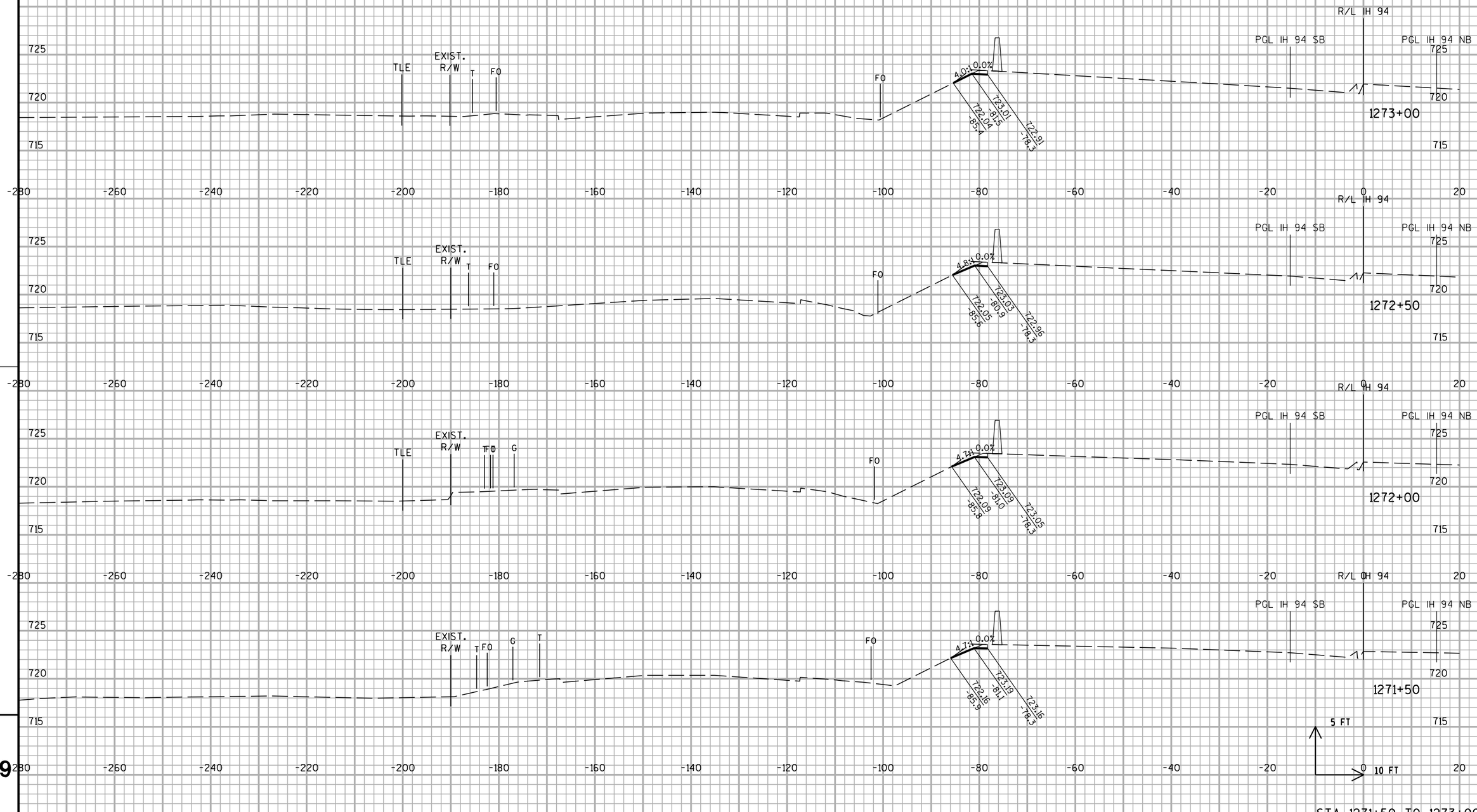


STA 1269+50 TO 1271+00

PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	CROSS SECTIONS: IH 94 SOUTHBOUND STAGE 5	SHEET 405	E

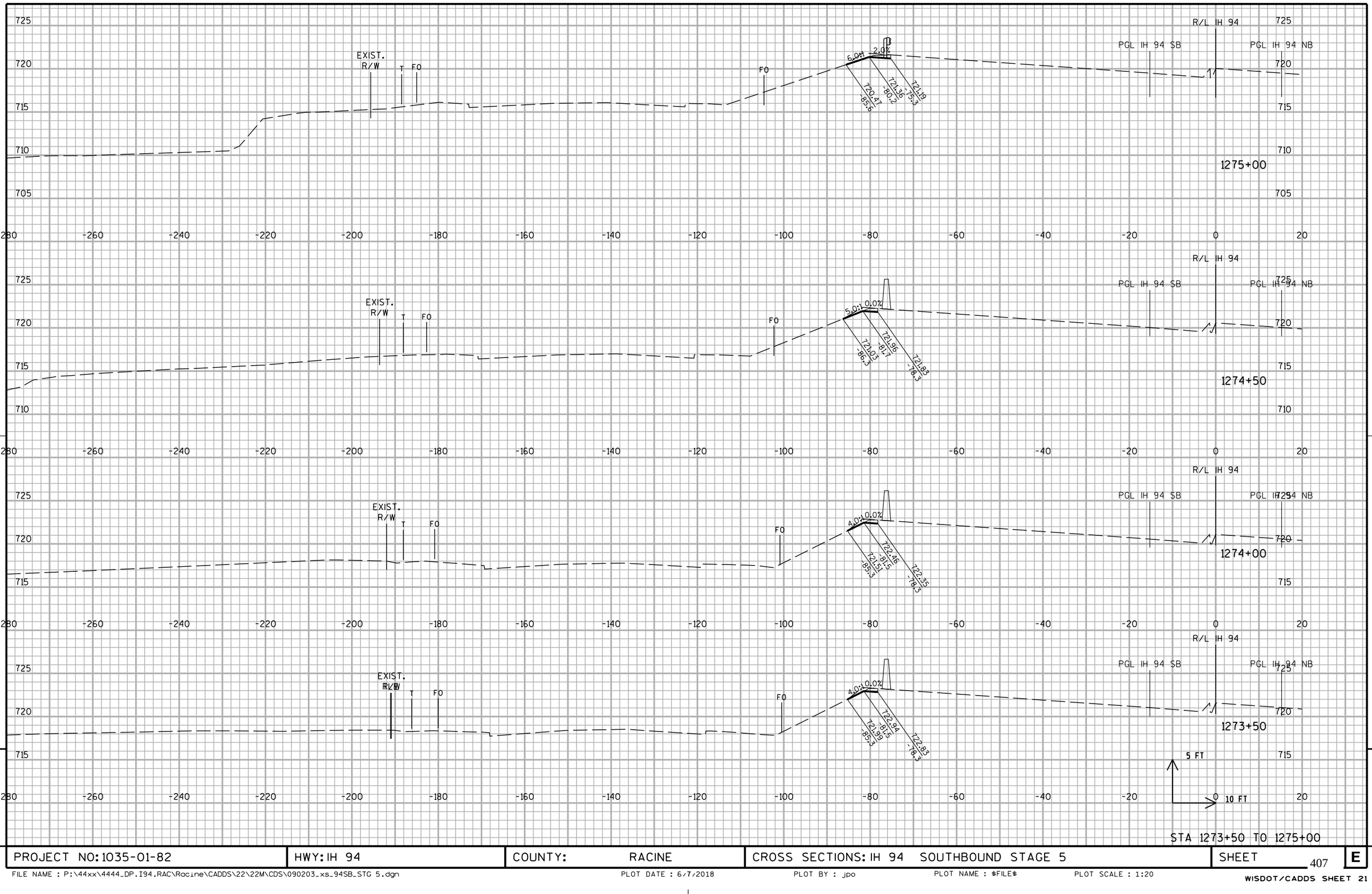
FILE NAME : P:\44xx\4444_DP.I94.RAC\Racine\CADDS\22\22M\CDS\090203_xs_94SB_STG 5.dgn | PLOT DATE : 6/7/2018 | PLOT BY : jpo | PLOT NAME : $FILE$ | PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21



STA 1271+50 TO 1273+00

PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	CROSS SECTIONS: IH 94 SOUTHBOUND STAGE 5	SHEET 406	E

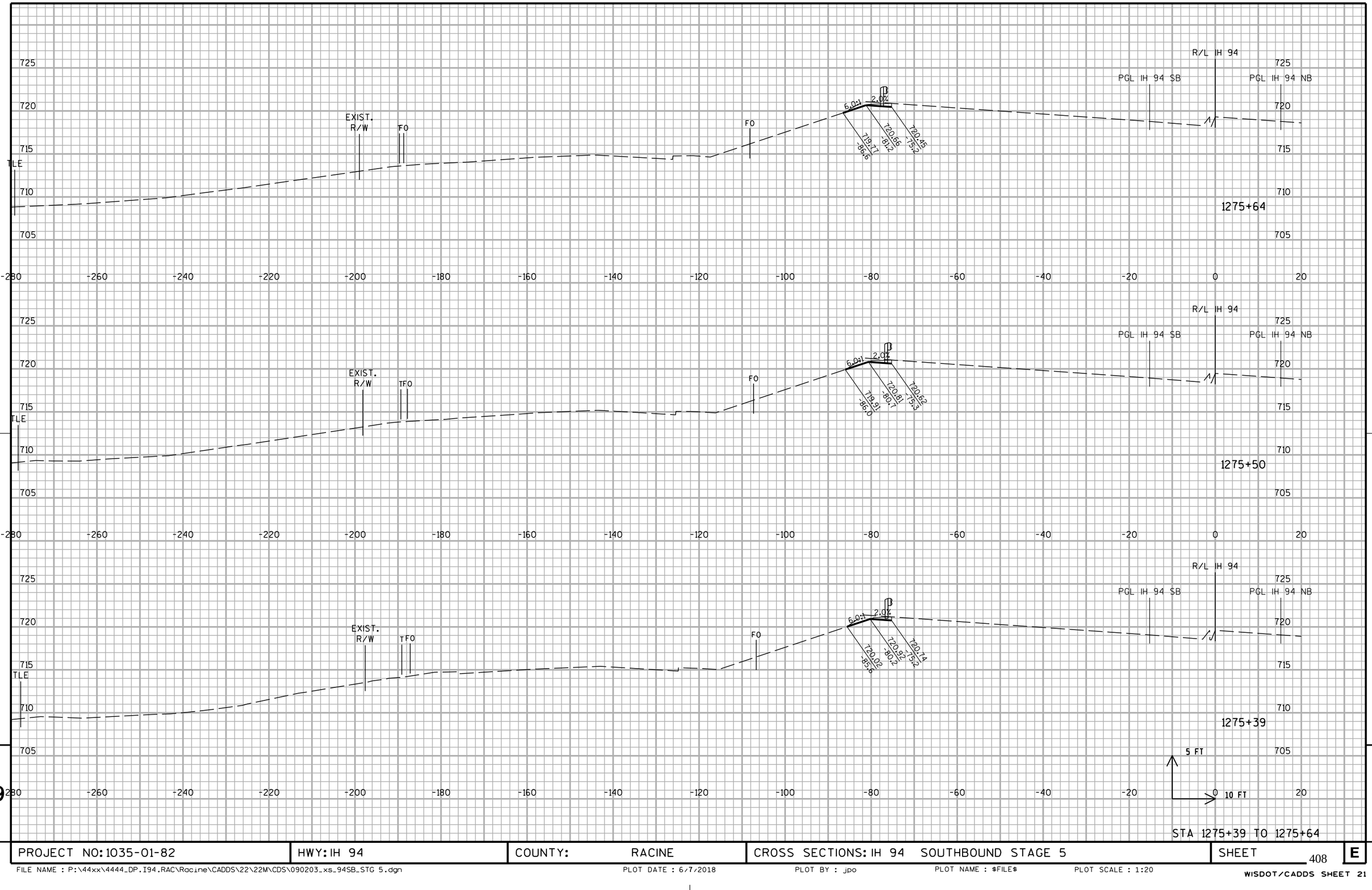


STA 1273+50 TO 1275+00

PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	CROSS SECTIONS: IH 94 SOUTHBOUND STAGE 5	SHEET 407	E

FILE NAME : P:\44xx\4444_DP.I94.RAC\Racine\CADDS\22\22M\CDS\090203_xs_94SB_STG 5.dgn | PLOT DATE : 6/7/2018 | PLOT BY : jpo | PLOT NAME : $FILE$ | PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21

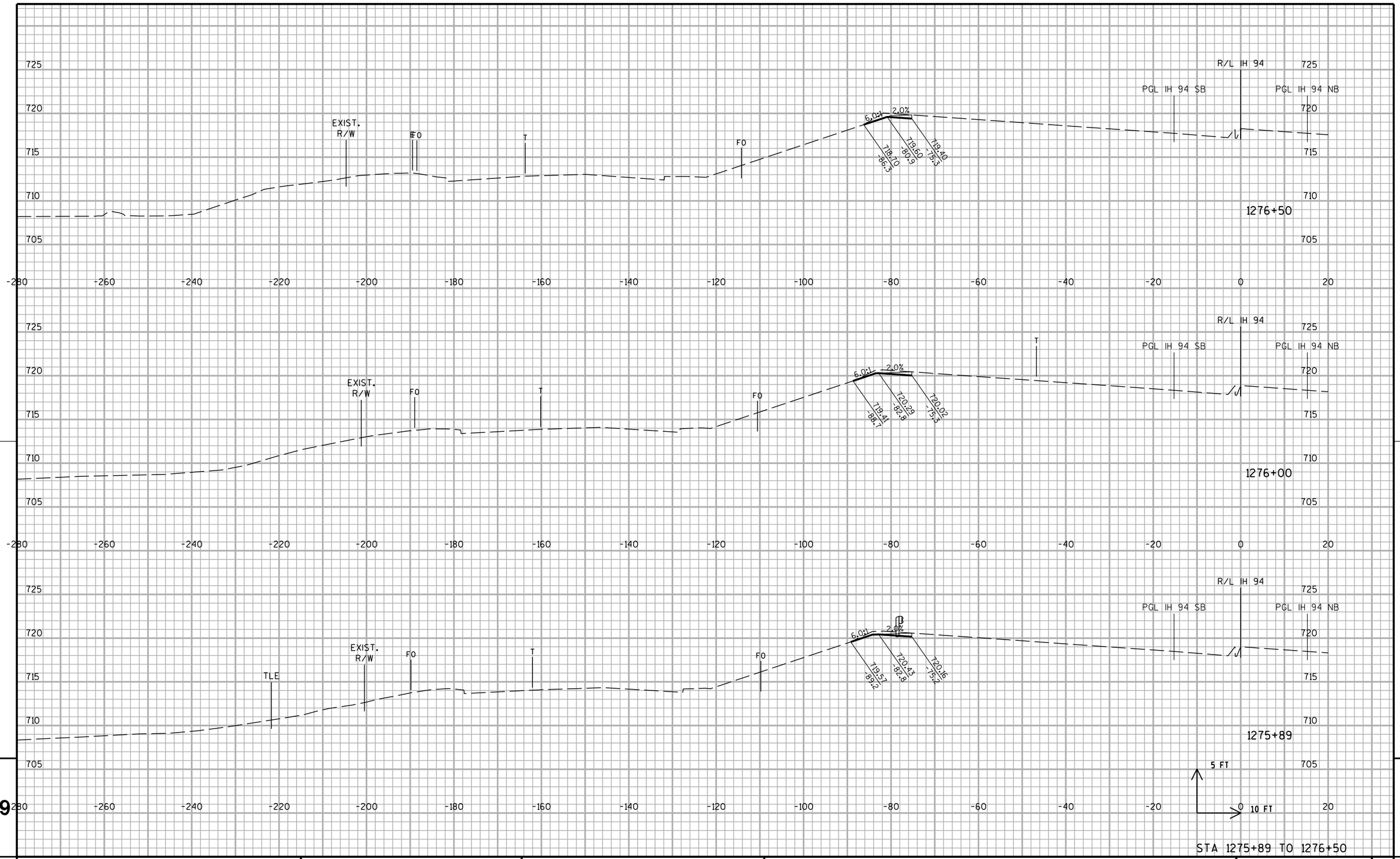


PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	CROSS SECTIONS: IH 94 SOUTHBOUND STAGE 5	SHEET 408	E

STA 1275+39 TO 1275+64

FILE NAME : P:\44xx\4444_DP.I94.RAC\Racine\CADDS\22\22M\CDS\090203_xs_94SB_STG 5.dgn | PLOT DATE : 6/7/2018 | PLOT BY : jpo | PLOT NAME : $FILE$ | PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21

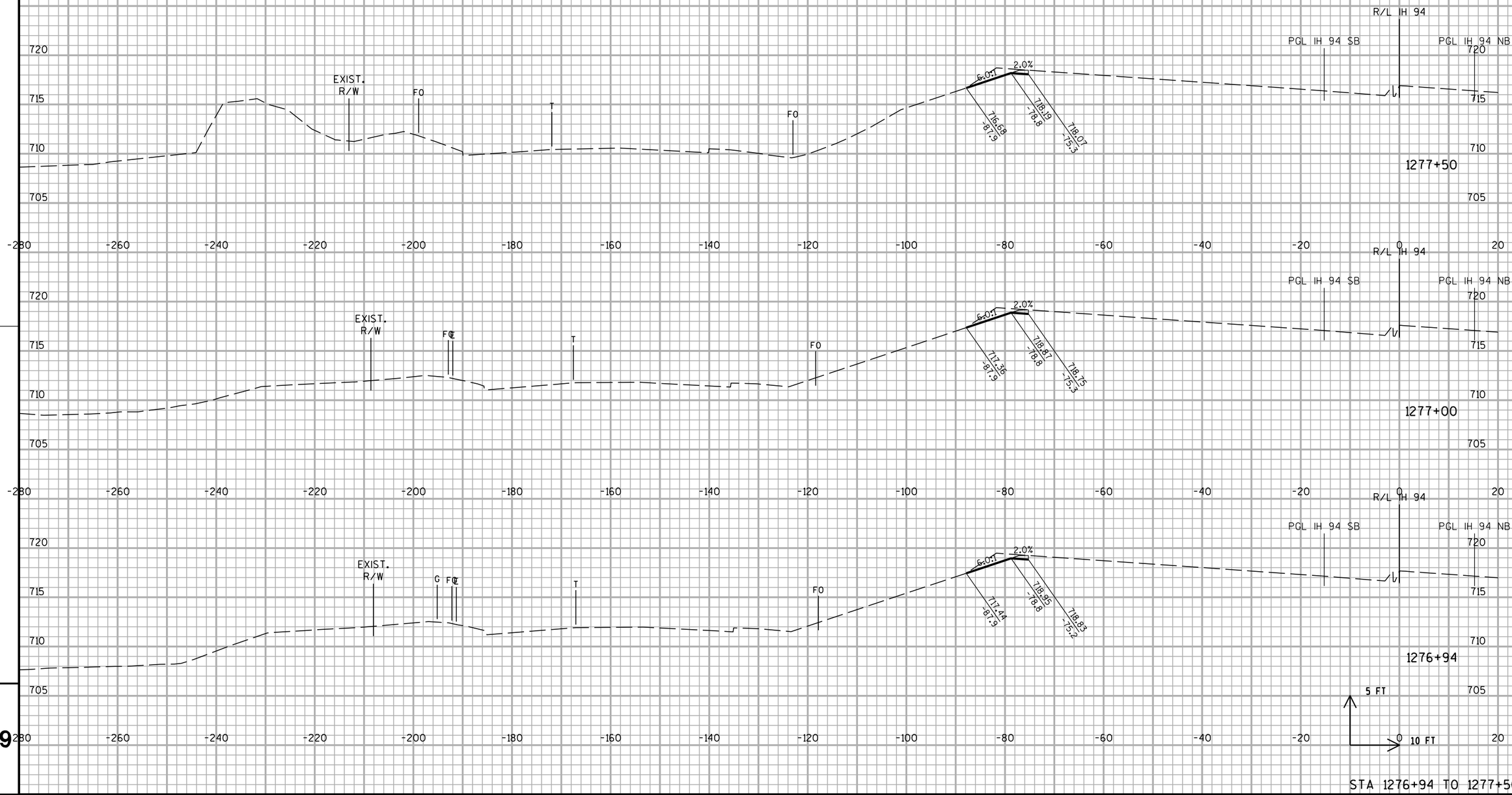


STA 1275+89 TO 1276+50

PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	CROSS SECTIONS: IH 94 SOUTHBOUND STAGE 5	SHEET 409	E

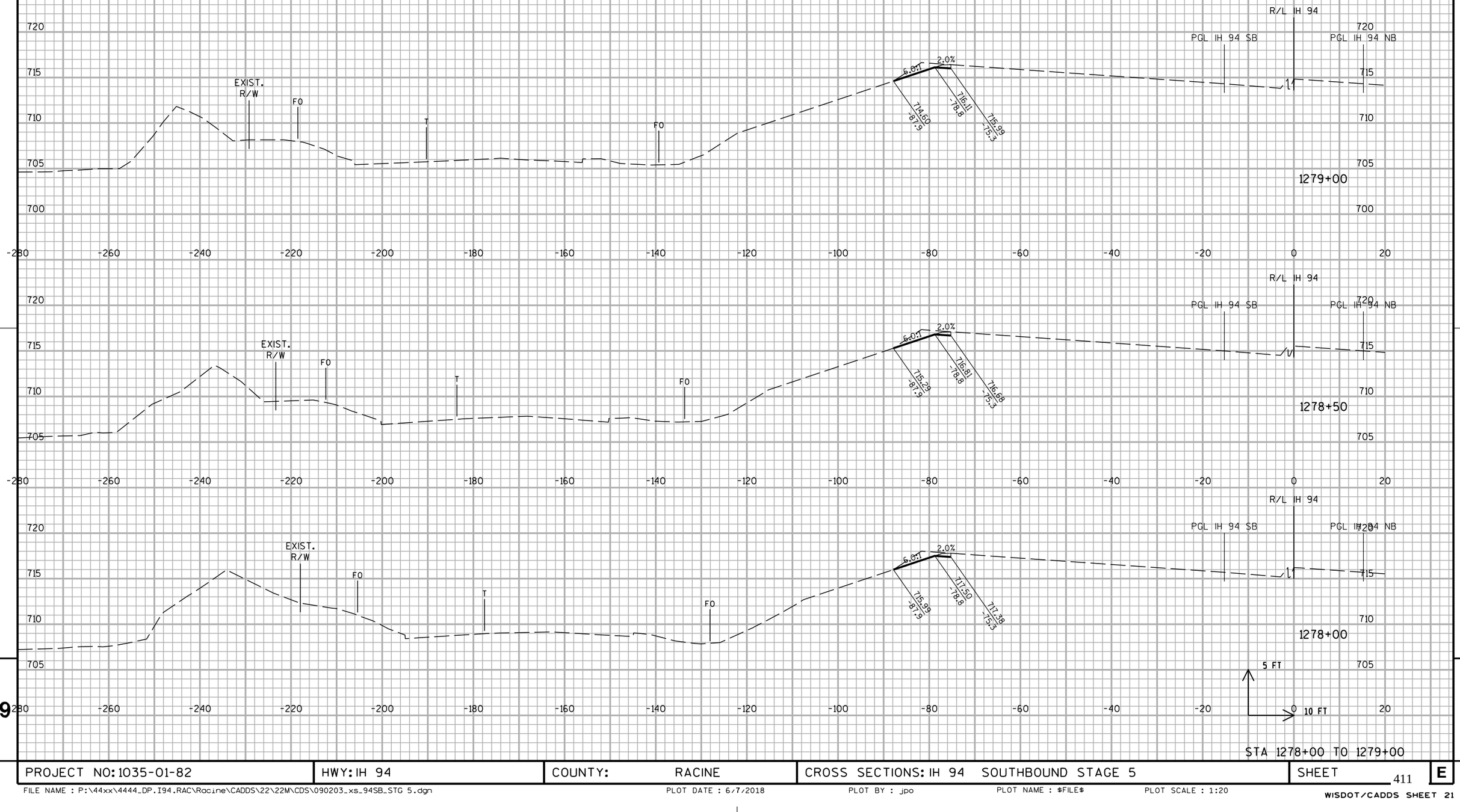
FILE NAME : P:\44xx\4444_DP.I94.RAC\Racine\CADDS\22\22M\CDS\090203_xs_94SB_STG 5.dgn | PLOT DATE : 6/7/2018 | PLOT BY : jpo | PLOT NAME : $FILE$ | PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21



STA 1276+94 TO 1277+50

PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	CROSS SECTIONS: IH 94 SOUTHBOUND STAGE 5	SHEET 410	E



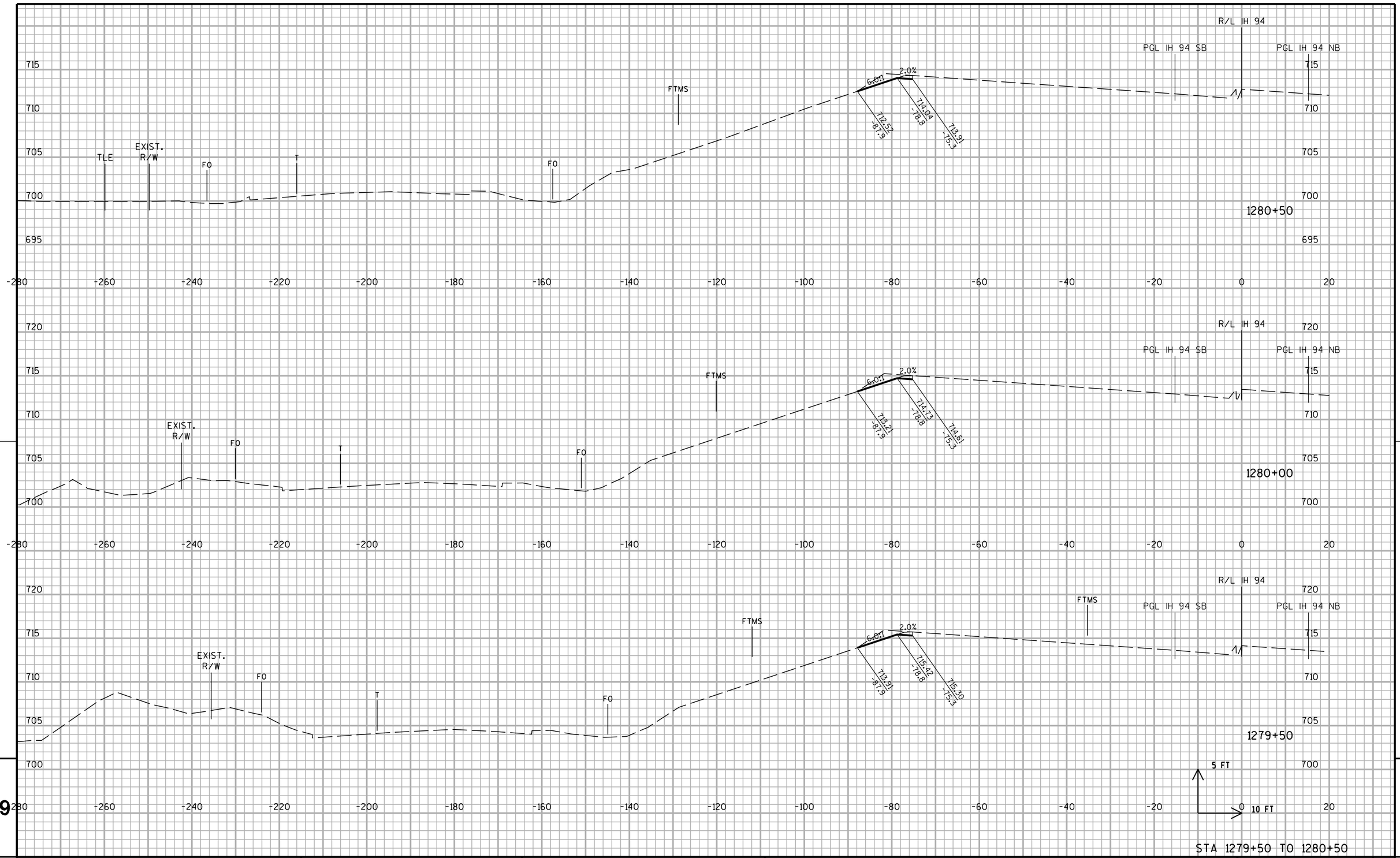
STA 1278+00 TO 1279+00

PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	CROSS SECTIONS: IH 94 SOUTHBOUND STAGE 5	SHEET 411	E

FILE NAME : P:\44xx\4444_DP.I94.RAC\Racine\CADDS\22\22M\CDS\090203_xs_94SB_STG 5.dgn | PLOT DATE : 6/7/2018 | PLOT BY : jpo | PLOT NAME : $FILE$ | PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21

9

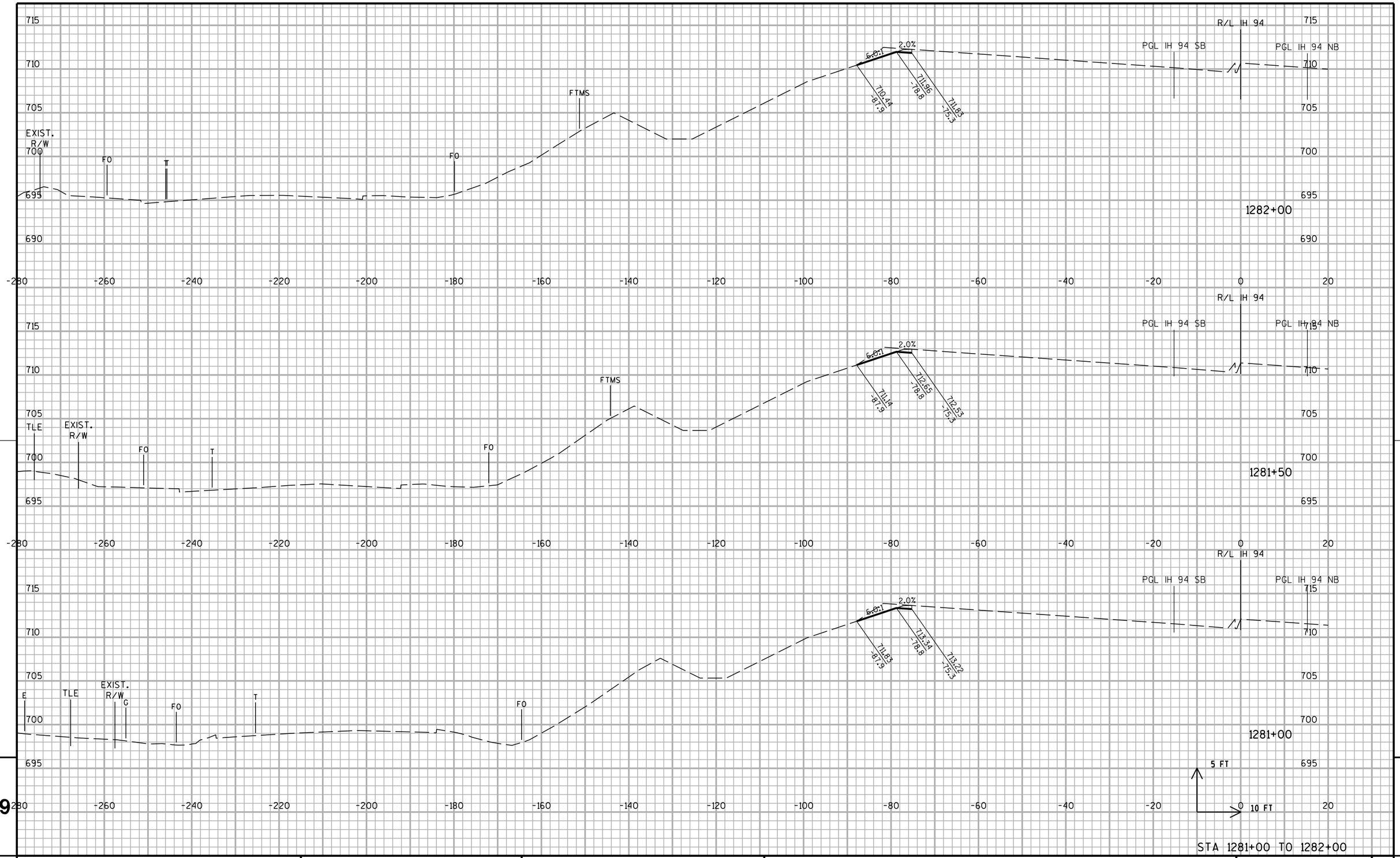


STA 1279+50 TO 1280+50

PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	CROSS SECTIONS: IH 94 SOUTHBOUND STAGE 5	SHEET 412	E

FILE NAME : P:\44xx\4444_DP.I94.RAC\Racine\CADDS\22\22M\CDS\090203_xs_94SB_STG 5.dgn | PLOT DATE : 6/7/2018 | PLOT BY : jpo | PLOT NAME : $FILE$ | PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21

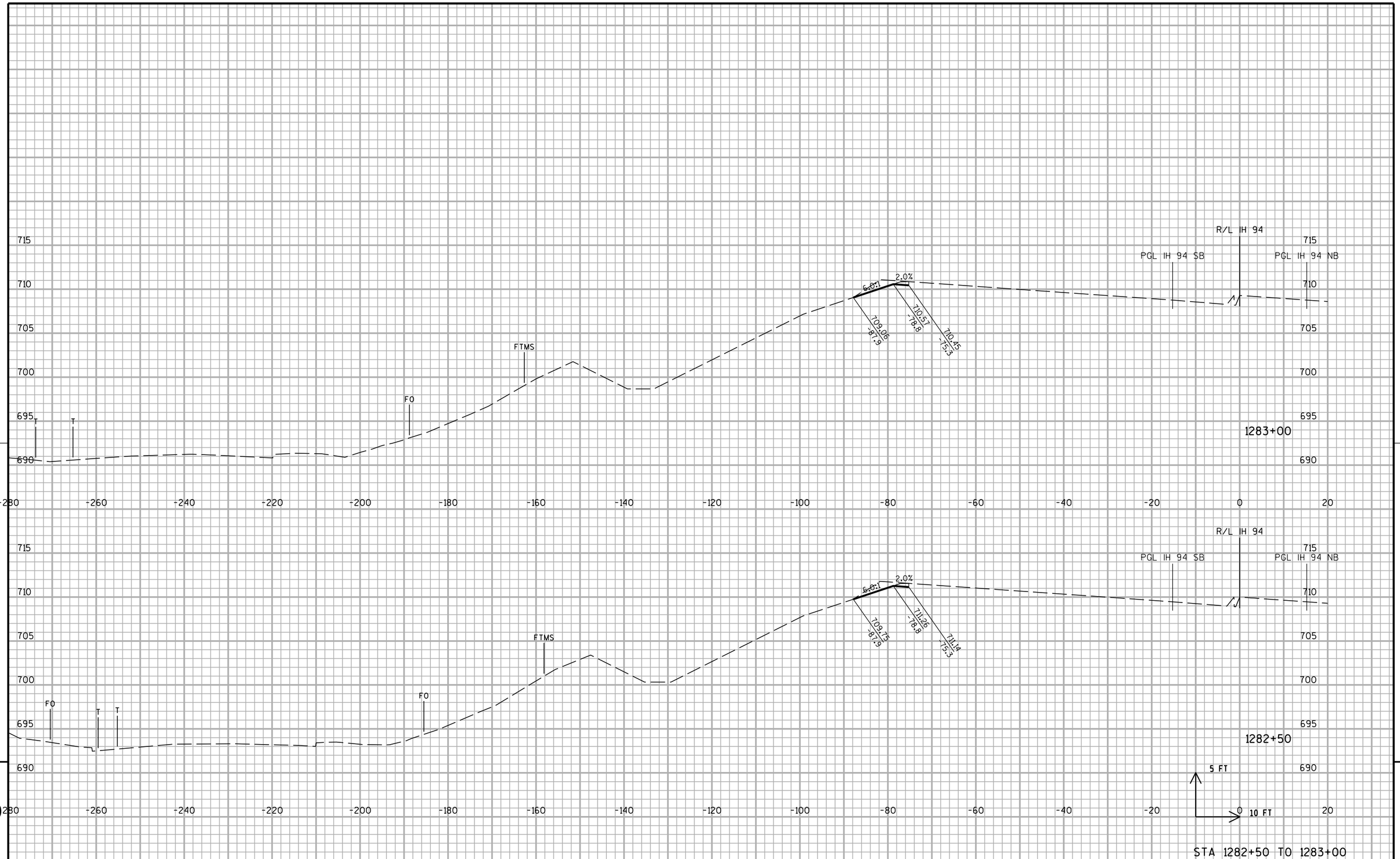


STA 1281+00 TO 1282+00

PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	CROSS SECTIONS: IH 94 SOUTHBOUND STAGE 5	SHEET 413	E

FILE NAME : P:\44xx\4444_DP.I94.RAC\Racine\CADDS\22\22M\CDS\090203_xs_94SB_STG 5.dgn PLOT DATE : 6/7/2018 PLOT BY : jpo PLOT NAME : $FILE$ PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21

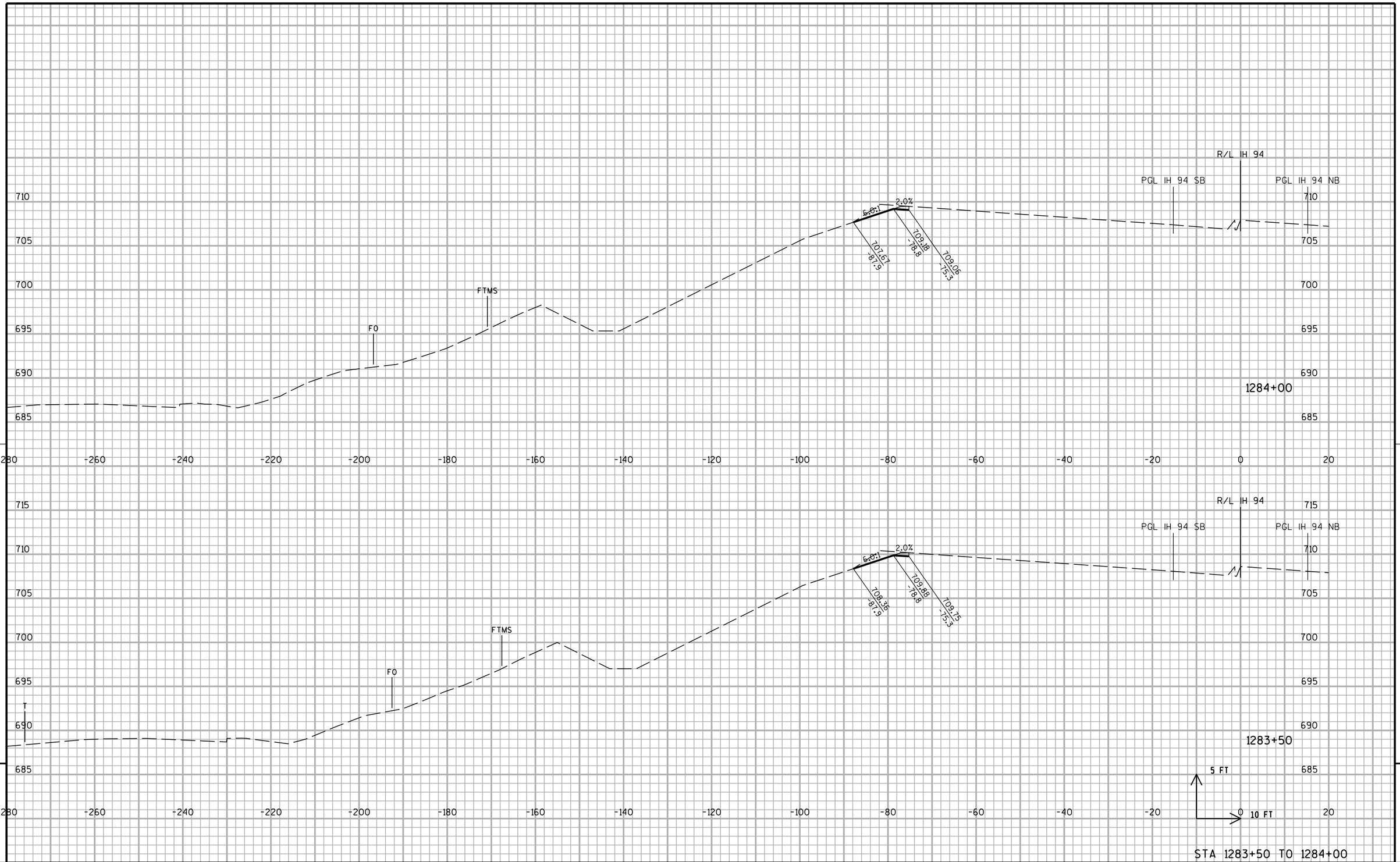


STA 1282+50 TO 1283+00

PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	CROSS SECTIONS: IH 94 SOUTHBOUND STAGE 5	SHEET 414	E

FILE NAME : P:\44xx\4444_DP.I94.RAC\Racine\CADDS\22\22M\CDS\090203_xs_94SB_STG 5.dgn | PLOT DATE : 6/7/2018 | PLOT BY : jpo | PLOT NAME : $FILE$ | PLOT SCALE : 1:20

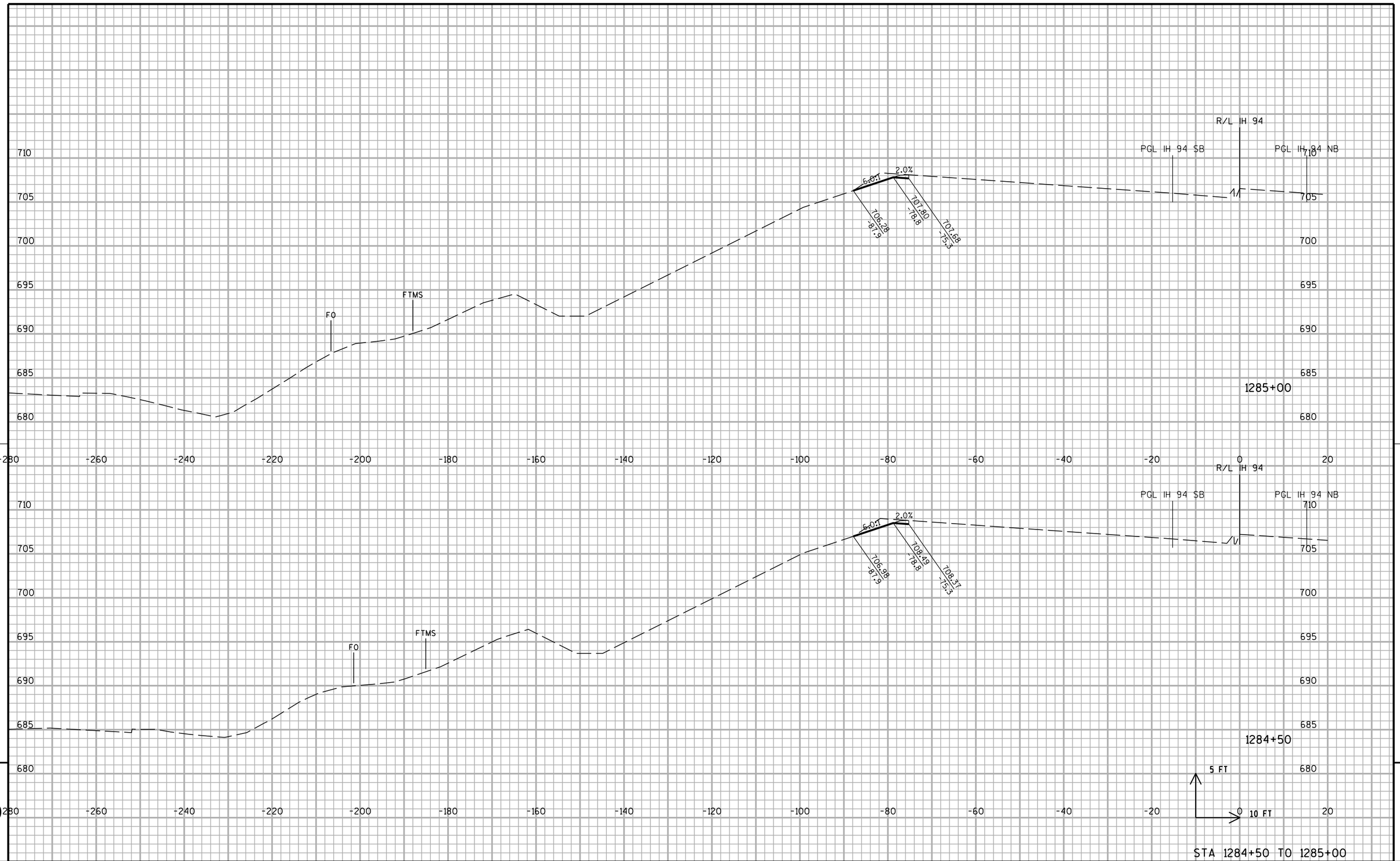
WISDOT/CADDS SHEET 21



PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	CROSS SECTIONS: IH 94 SOUTHBOUND STAGE 5	SHEET 415	E

FILE NAME : P:\44xx\4444_DP.I94.RAC\Racine\CADDS\22\22M\CDS\090203_xs_94SB_STG 5.dgn | PLOT DATE : 6/7/2018 | PLOT BY : jpo | PLOT NAME : $FILE$ | PLOT SCALE : 1:20

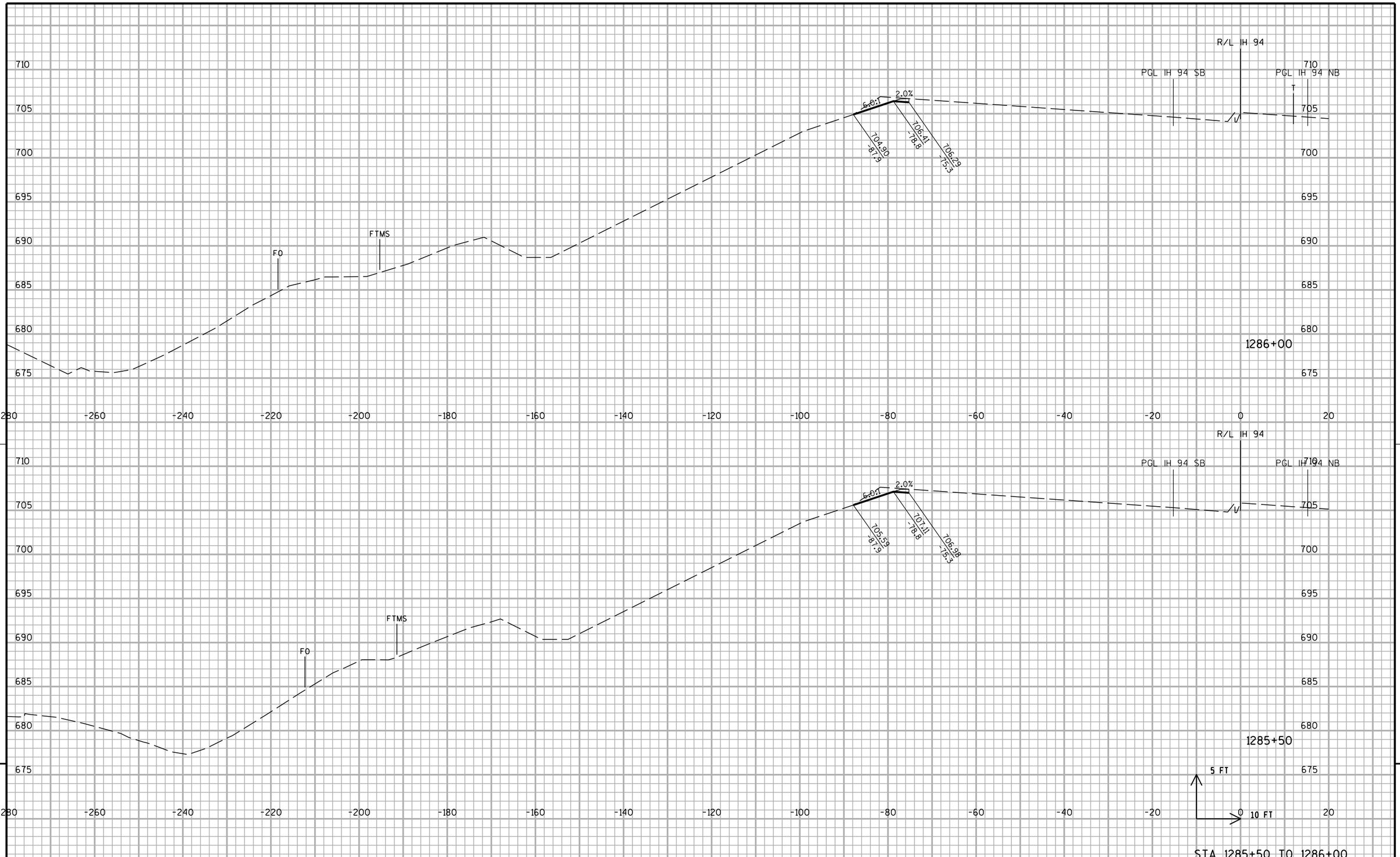
WISDOT/CADDS SHEET 21



PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	CROSS SECTIONS: IH 94 SOUTHBOUND STAGE 5	SHEET 416	E

FILE NAME : P:\44xx\4444_DP.I94.RAC\Racine\CADDS\22\22M\CDS\090203_xs_94SB_STG 5.dgn | PLOT DATE : 6/7/2018 | PLOT BY : jpo | PLOT NAME : $FILE$ | PLOT SCALE : 1:20

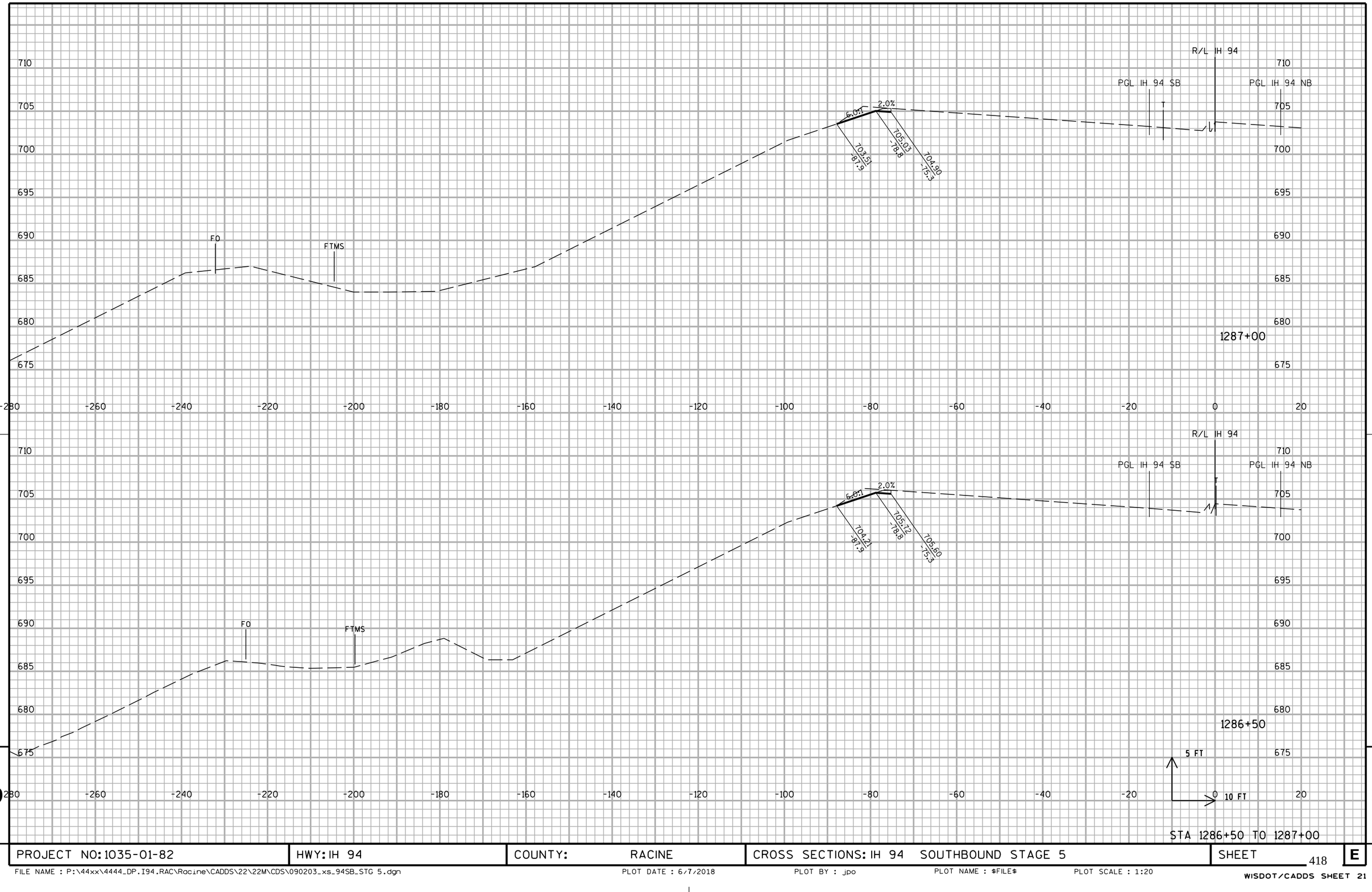
WISDOT/CADDS SHEET 21



PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	CROSS SECTIONS: IH 94 SOUTHBOUND STAGE 5	SHEET 417	E

FILE NAME : P:\44xx\4444_DP.I94.RAC\Racine\CADDS\22\22M\CDS\090203_xs_94SB_STG 5.dgn | PLOT DATE : 6/7/2018 | PLOT BY : jpo | PLOT NAME : $FILE$ | PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21

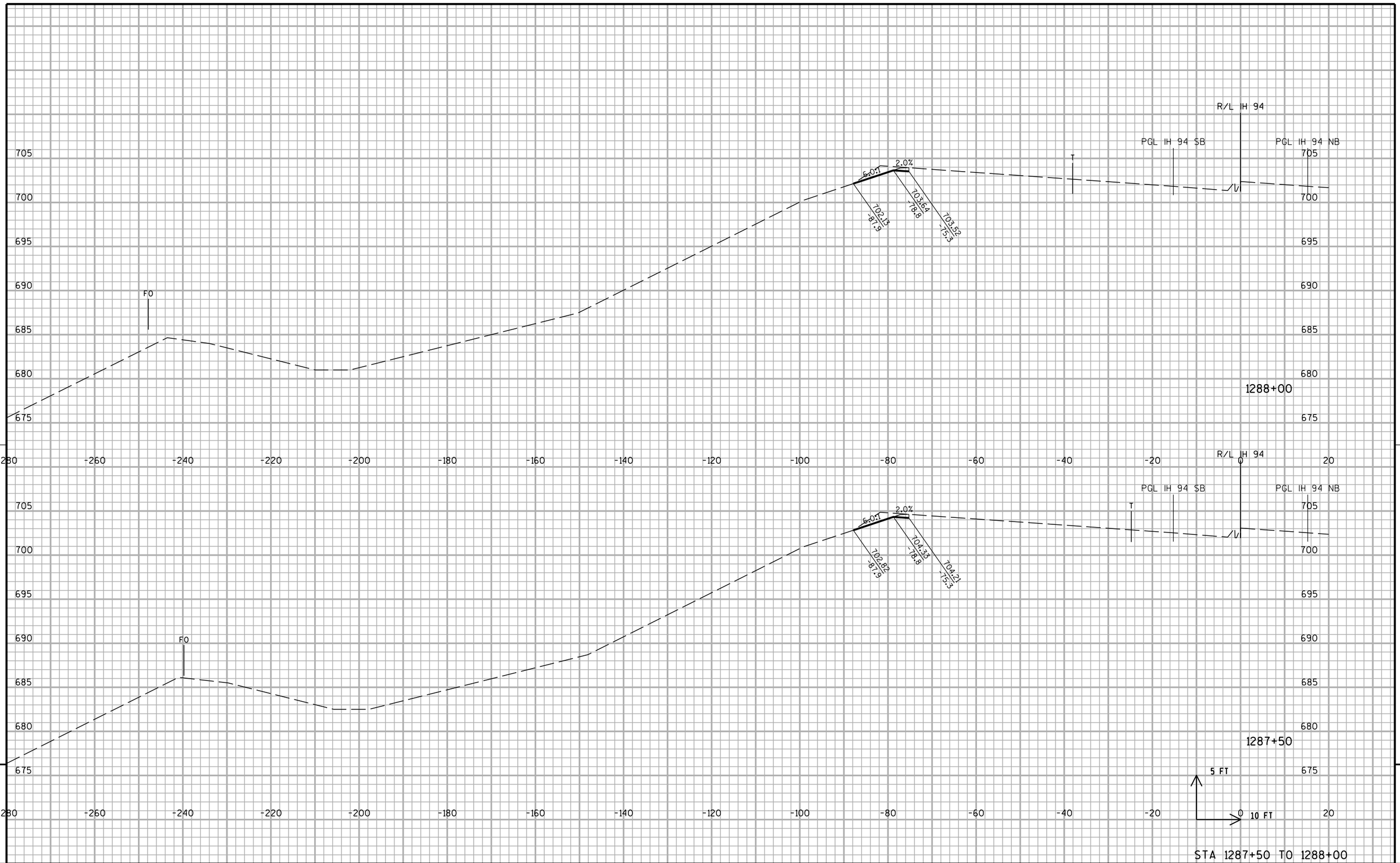


STA 1286+50 TO 1287+00

PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	CROSS SECTIONS: IH 94 SOUTHBOUND STAGE 5	SHEET 418	E

FILE NAME : P:\44xx\4444_DP.I94.RAC\Racine\CADDS\22\22M\CDS\090203_xs_94SB_STG 5.dgn | PLOT DATE : 6/7/2018 | PLOT BY : jpo | PLOT NAME : $FILE$ | PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21

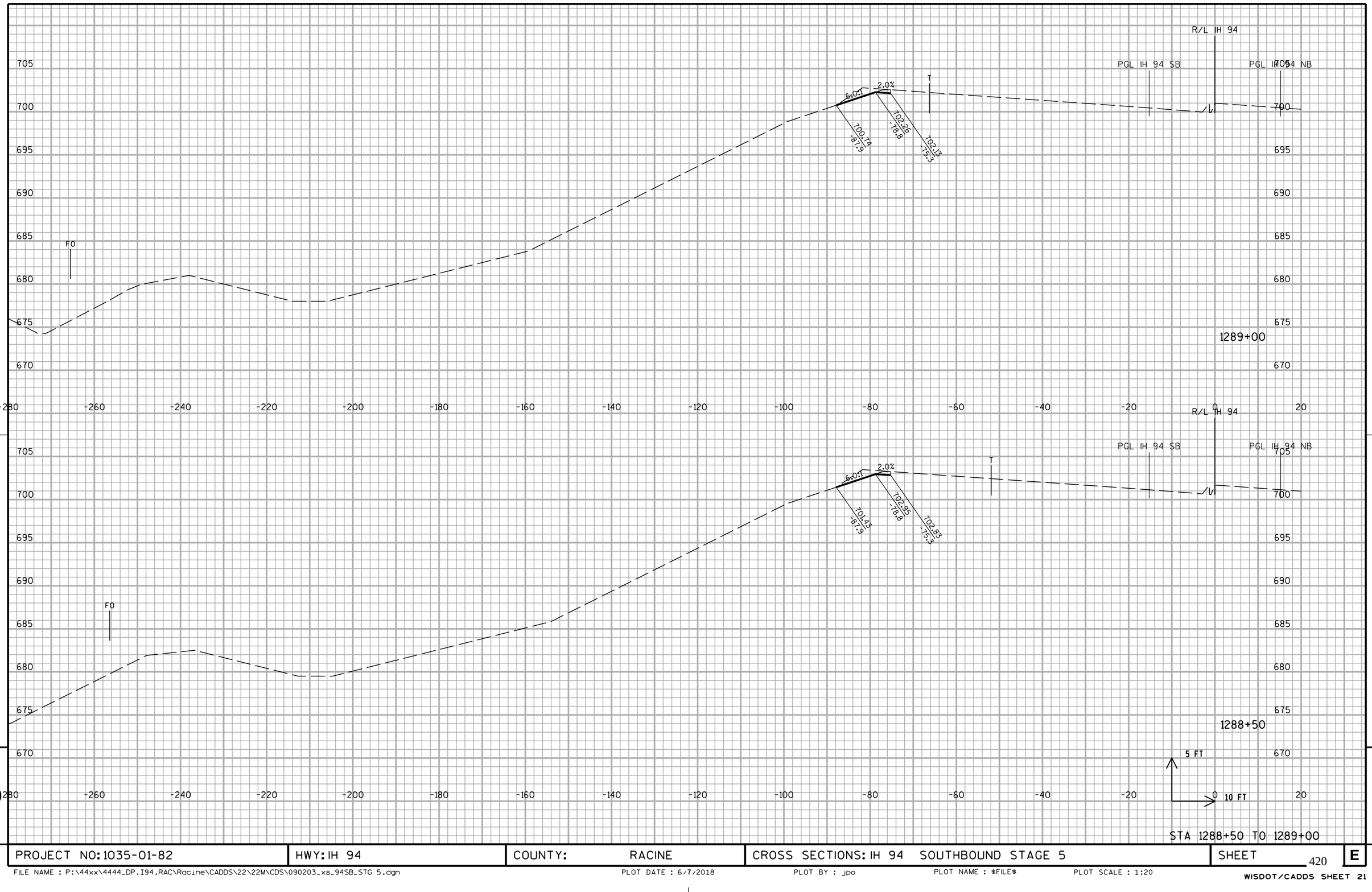


STA 1287+50 TO 1288+00

PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	CROSS SECTIONS: IH 94 SOUTHBOUND STAGE 5	SHEET 419	E

FILE NAME : P:\44xx\4444_DP.I94.RAC\Racine\CADDS\22\22M\CDS\090203_xs_94SB_STG 5.dgn | PLOT DATE : 6/7/2018 | PLOT BY : jpo | PLOT NAME : $FILE$ | PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21

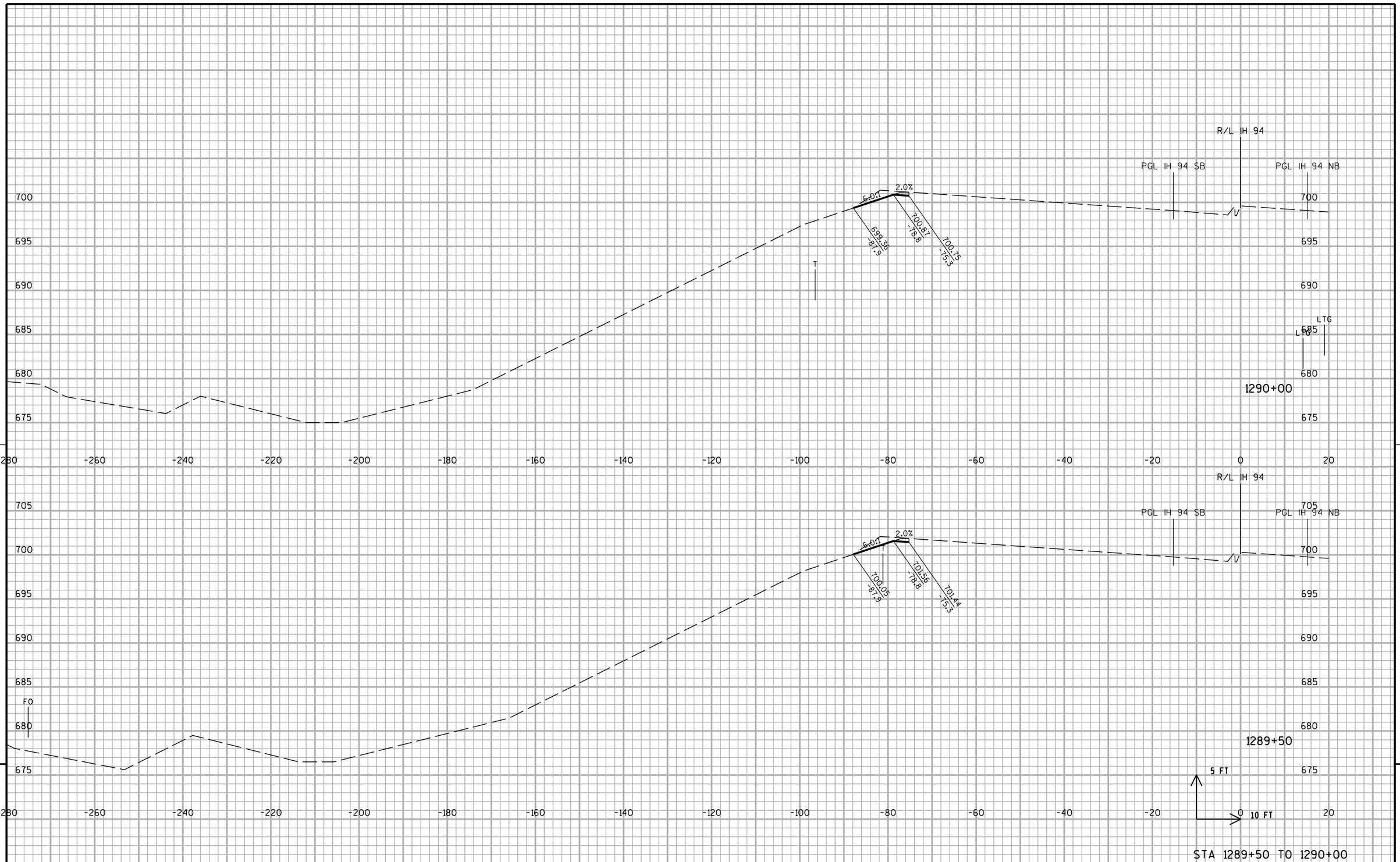


STA 1288+50 TO 1289+00

PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	CROSS SECTIONS: IH 94 SOUTHBOUND STAGE 5	SHEET 420	E

FILE NAME : P:\44xx\4444_DP.I94.RAC\Racine\CADDS\22\22M\CDS\090203_xs_94SB_STG 5.dgn | PLOT DATE : 6/7/2018 | PLOT BY : jpo | PLOT NAME : $FILE$ | PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21

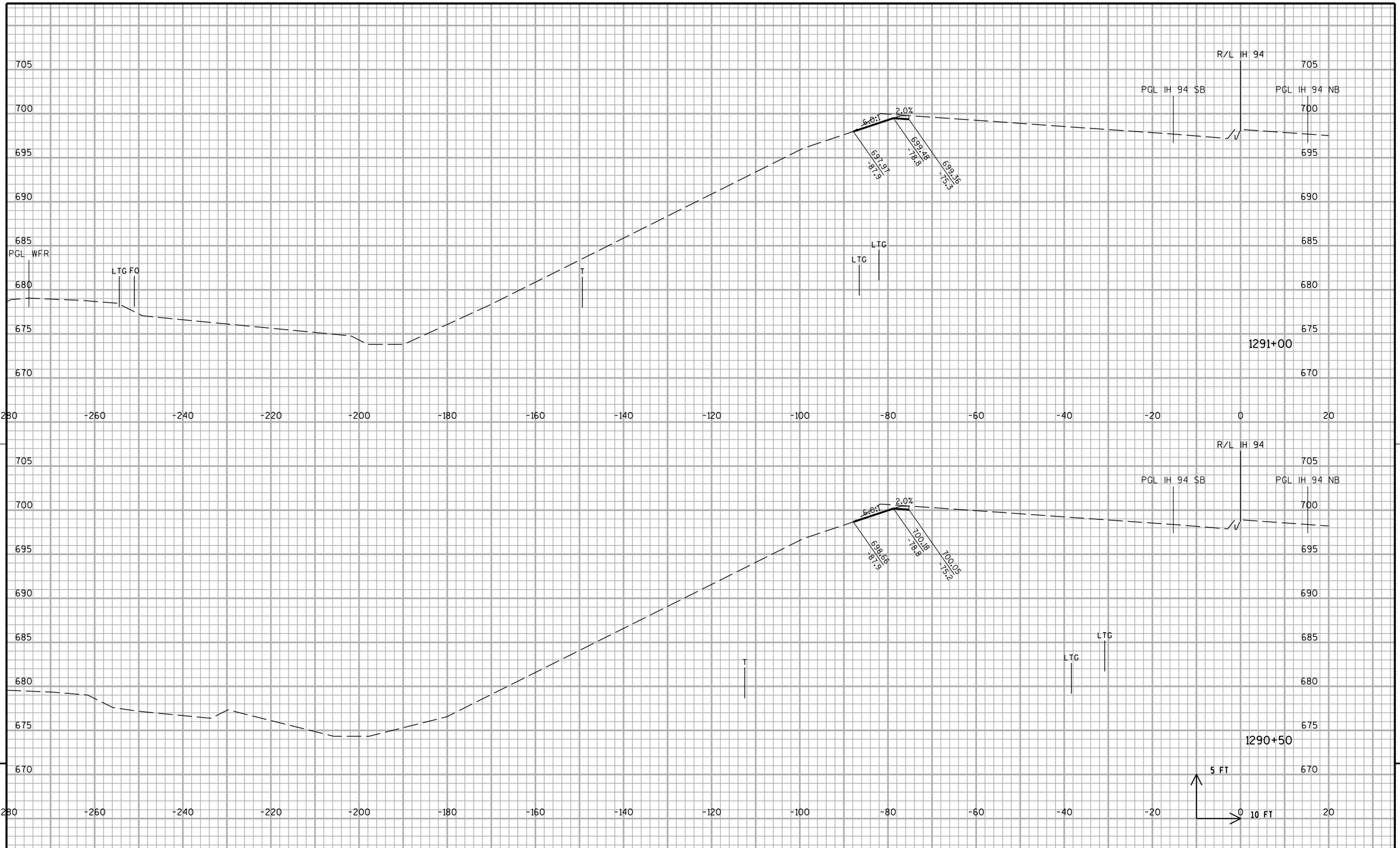


STA 1289+50 TO 1290+00

PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	CROSS SECTIONS: IH 94 SOUTHBOUND STAGE 5	SHEET 421	E

FILE NAME : P:\44xx\4444_DP.I94.RAC\Racine\CADDS\22\22M\CDS\090203_xs_94SB_STG 5.dgn | PLOT DATE : 6/7/2018 | PLOT BY : jpo | PLOT NAME : $FILE$ | PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21



9

9

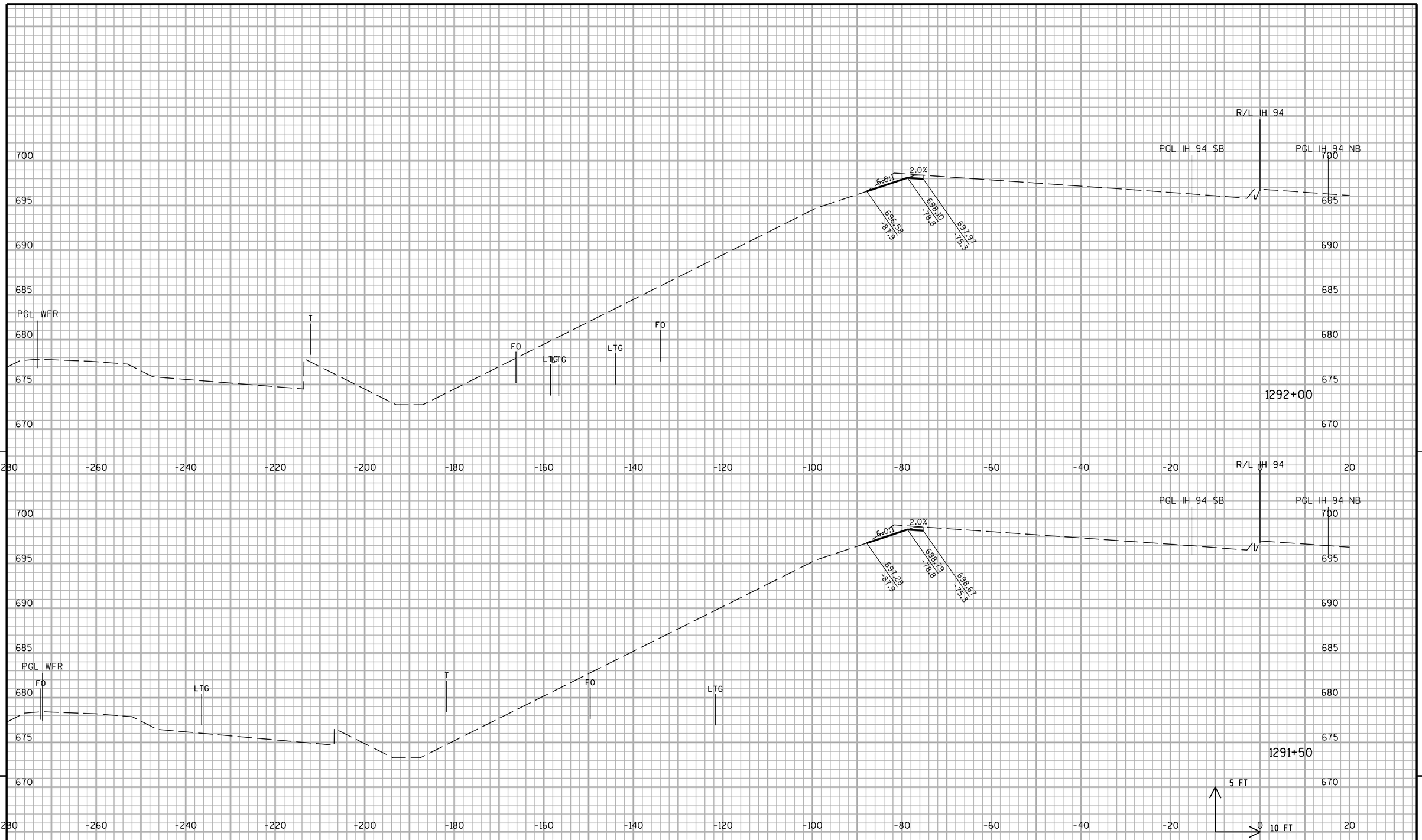
STA 1290+50 TO 1291+00

PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	CROSS SECTIONS: IH 94 SOUTHBOUND STAGE 5	SHEET 422	E

FILE NAME : P:\44xx\4444_DP.I94.RAC\Racine\CADDS\22\22M\CDS\090203_xs_94SB_STG 5.dgn

PLOT DATE : 6/7/2018 PLOT BY : jpo PLOT NAME : $FILE$ PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21



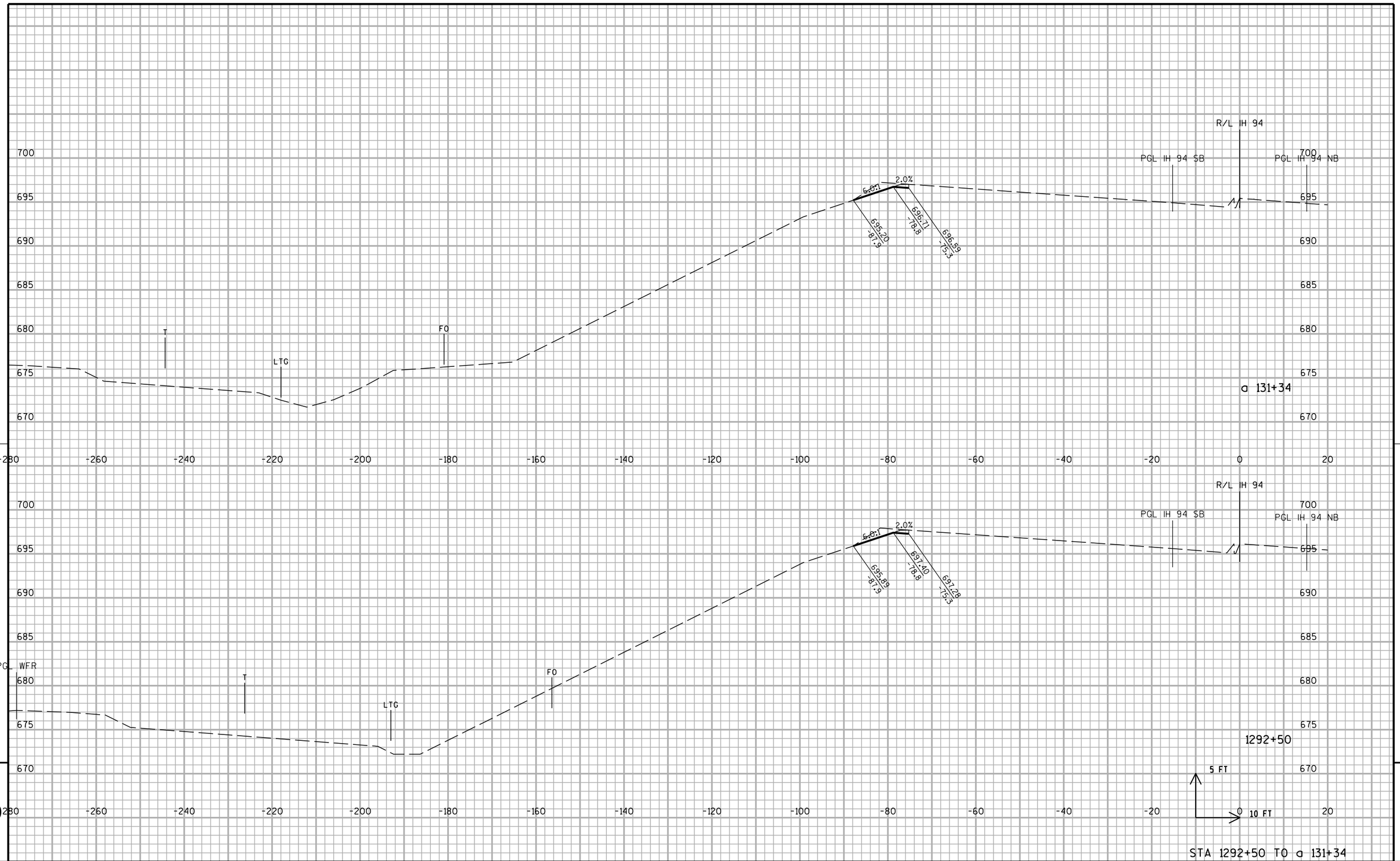
9

9

STA 1291+50 TO 1292+00

PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	CROSS SECTIONS: IH 94 SOUTHBOUND STAGE 5	SHEET	E

FILE NAME : P:\44xx\4444_DP.I94.RAC\Racine\CADDS\22\22M\CDS\090203_xs_94SB_STG 5.dgn | PLOT DATE : 6/7/2018 | PLOT BY : jpo | PLOT NAME : $FILE$ | PLOT SCALE : 1:20

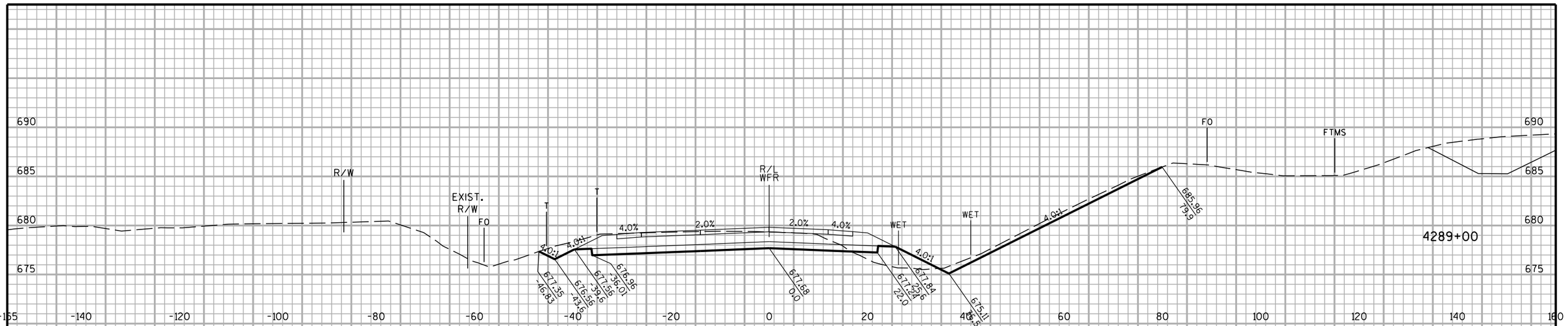


STA 1292+50 TO ℄ 131+34

PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	CROSS SECTIONS: IH 94 SOUTHBOUND STAGE 5	SHEET 424	E

FILE NAME : P:\44xx\4444_DP.I94.RAC\Racine\CADDS\22\22M\CDS\090203_xs_94SB_STG 5.dgn | PLOT DATE : 6/7/2018 | PLOT BY : jpo | PLOT NAME : $FILE$ | PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21

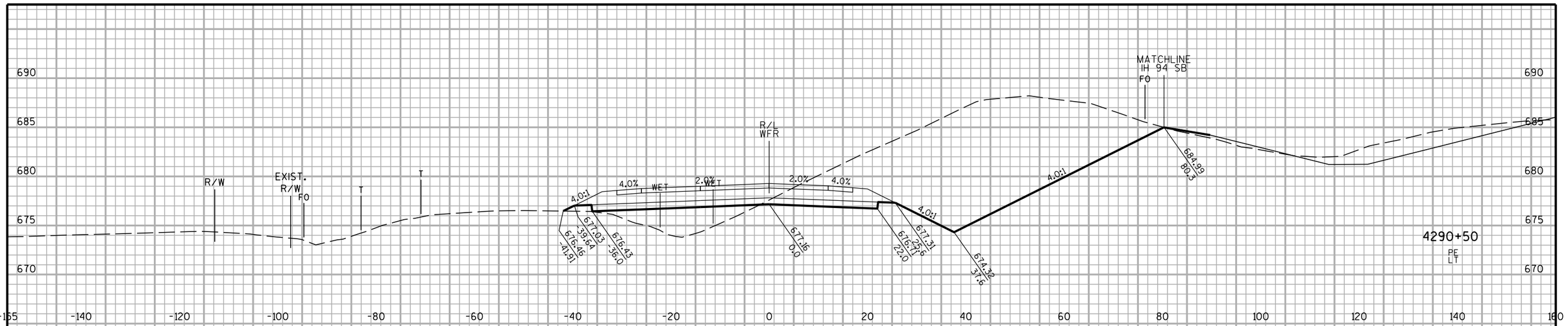


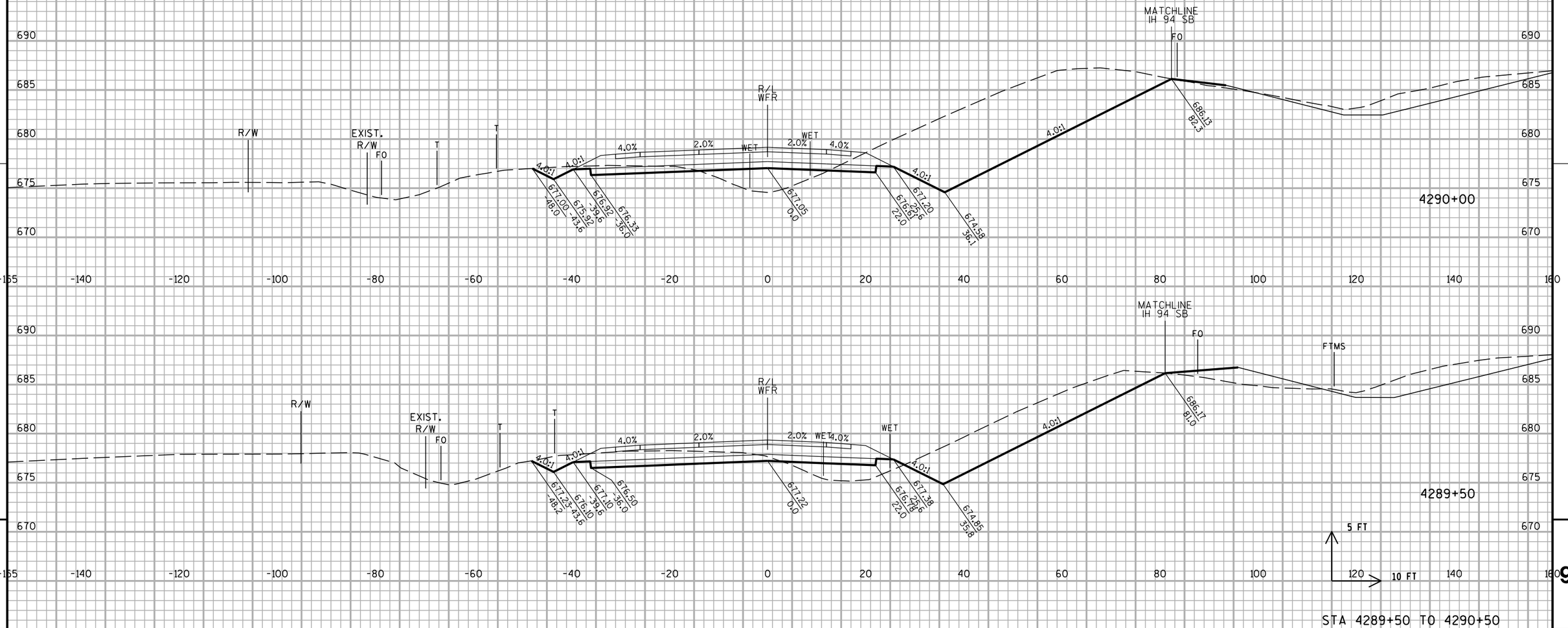
STA 4288+00 TO 4289+00

PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	CROSS SECTIONS: WEST FRONTAGE ROAD	SHEET 425	E

FILE NAME : P:\44xx\4444_DP.I94.RAC\Racine\CADDS\22\22M\CDS\090204_xs_WFR.dgn PLOT DATE : 6/14/2018 PLOT BY : ccd PLOT NAME : $FILE$ PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21



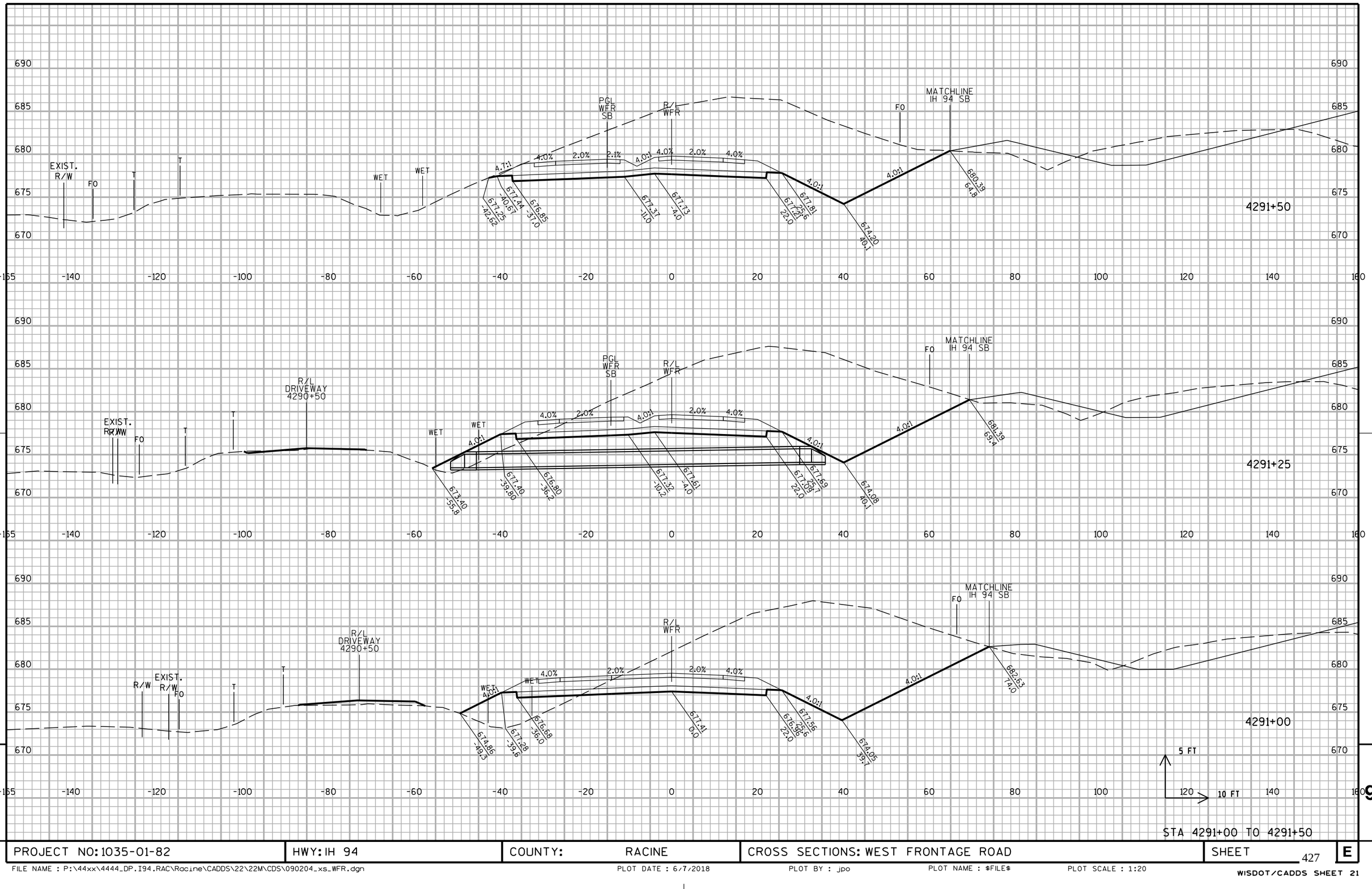


STA 4289+50 TO 4290+50

PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	CROSS SECTIONS: WEST FRONTAGE ROAD	SHEET 426	E

FILE NAME : P:\44xx\4444_DP.I94.RAC\Racine\CADDS\22\22M\CDS\090204_xs_WFR.dgn PLOT DATE : 6/7/2018 PLOT BY : jpo PLOT NAME : $FILE$ PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21

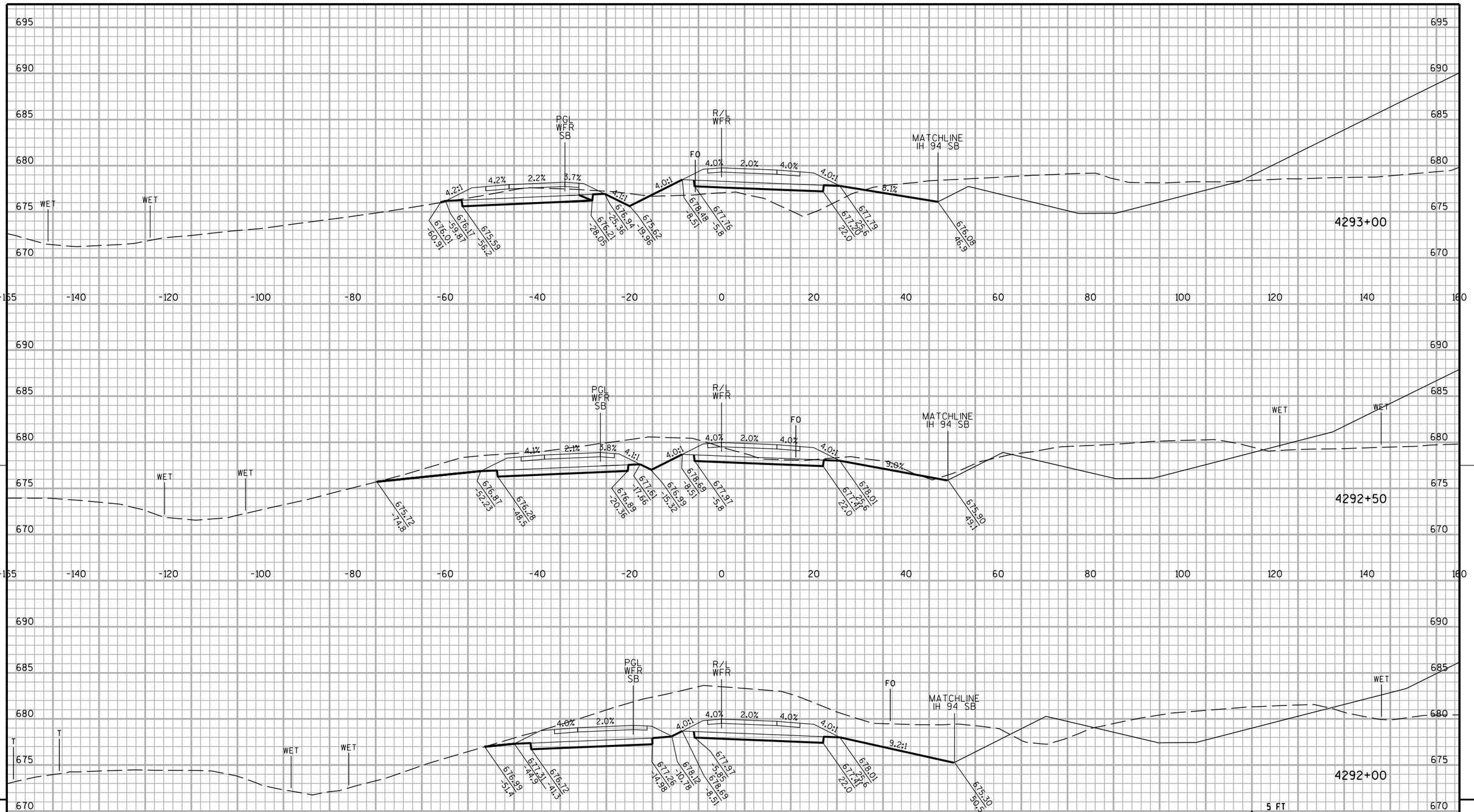


STA 4291+00 TO 4291+50

PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	CROSS SECTIONS: WEST FRONTAGE ROAD	SHEET 427	E

FILE NAME : P:\44xx\4444_DP.I94.RAC\Racine\CADDS\22\22M\CDS\090204_xs_WFR.dgn PLOT DATE : 6/7/2018 PLOT BY : jpo PLOT NAME : $FILE$ PLOT SCALE : 1:20

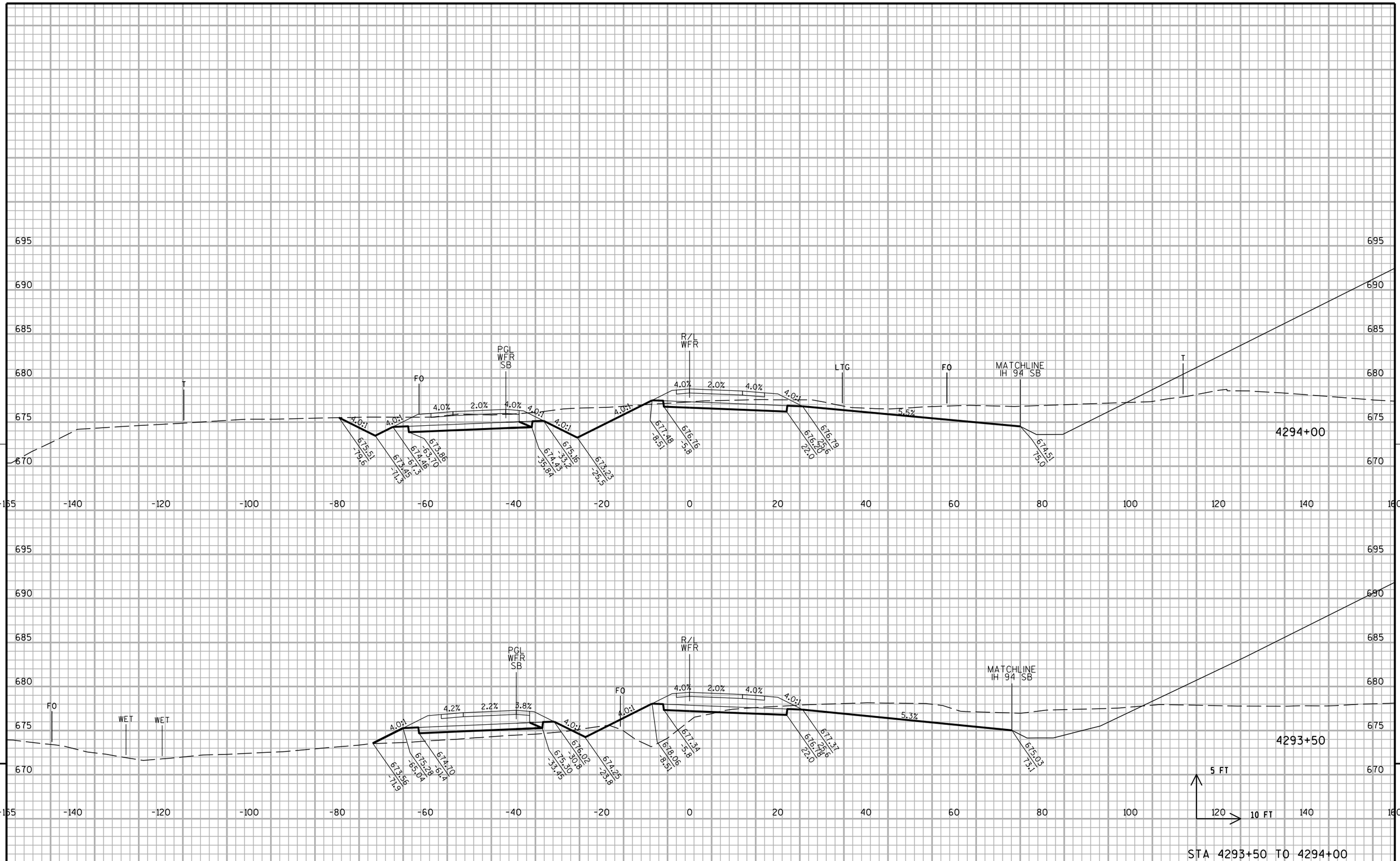
WISDOT/CADDS SHEET 21



9

PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	CROSS SECTIONS: WEST FRONTAGE ROAD	SHEET 428	E

STA 4292+00 TO 4293+00

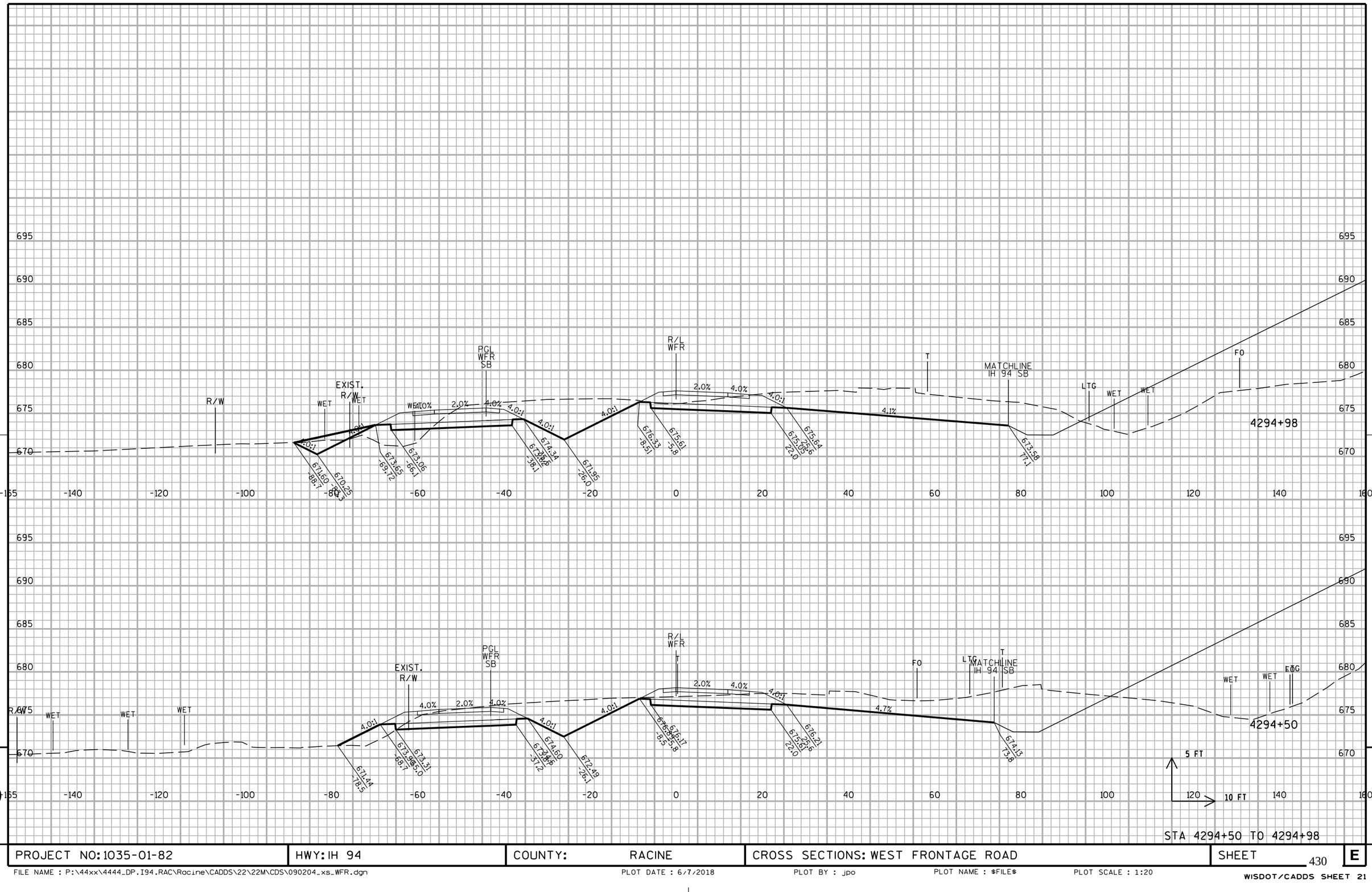


STA 4293+50 TO 4294+00

PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	CROSS SECTIONS: WEST FRONTAGE ROAD	SHEET 429	E

FILE NAME : P:\44xx\4444_DP.I94.RAC\Racine\CADDS\22\22M\CDS\090204_xs_WFR.dgn PLOT DATE : 6/7/2018 PLOT BY : jpo PLOT NAME : $FILE$ PLOT SCALE : 1:20

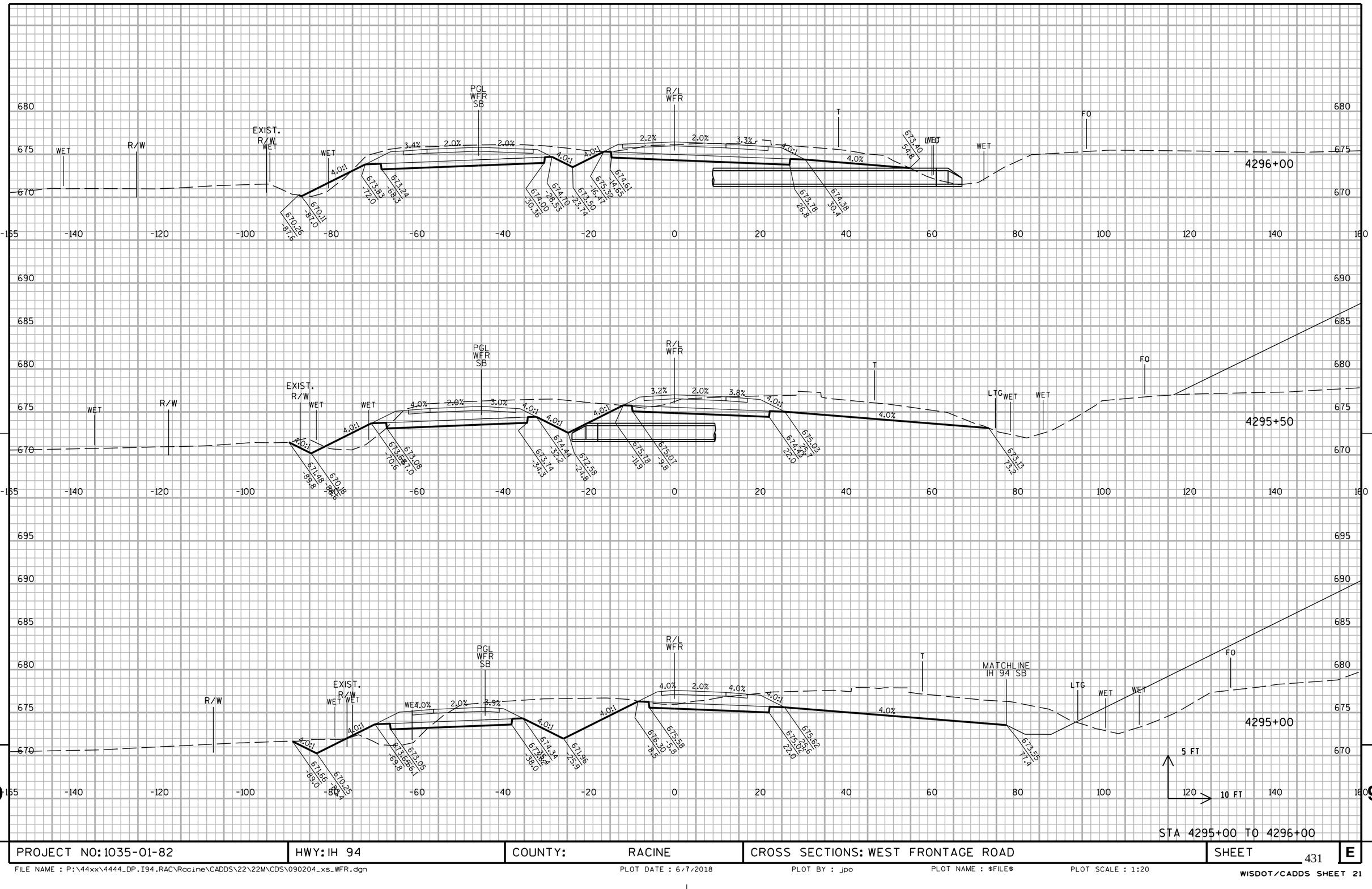
WISDOT/CADDS SHEET 21



STA 4294+50 TO 4294+98

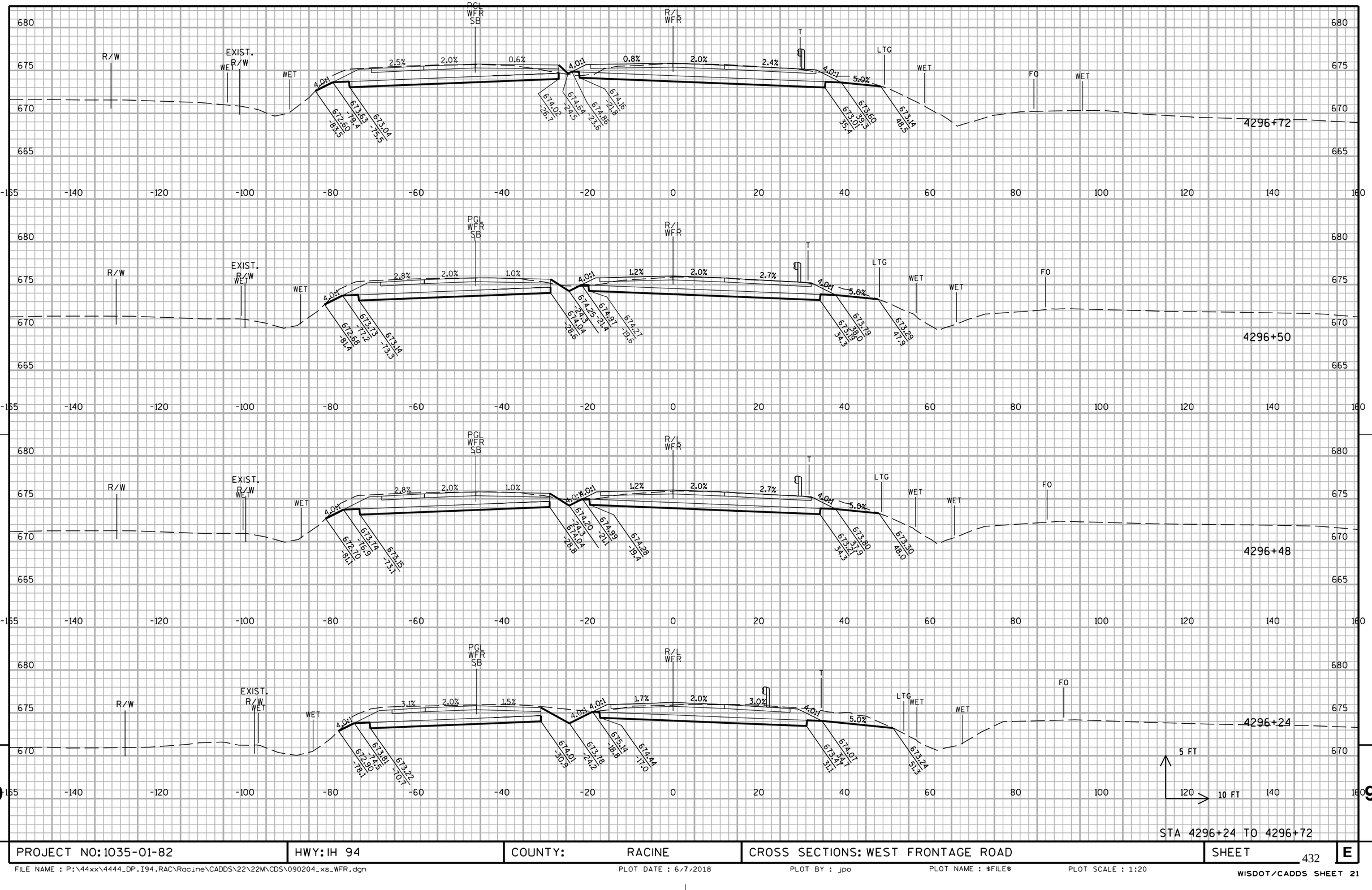
PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	CROSS SECTIONS: WEST FRONTAGE ROAD	SHEET 430	E

FILE NAME : P:\44xx\4444_DP.I94.RAC\Racine\CADDS\22\22M\CDS\090204_xs_WFR.dgn | PLOT DATE : 6/7/2018 | PLOT BY : jpo | PLOT NAME : $FILE$ | PLOT SCALE : 1:20



STA 4295+00 TO 4296+00

PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	CROSS SECTIONS: WEST FRONTAGE ROAD	SHEET 431	E

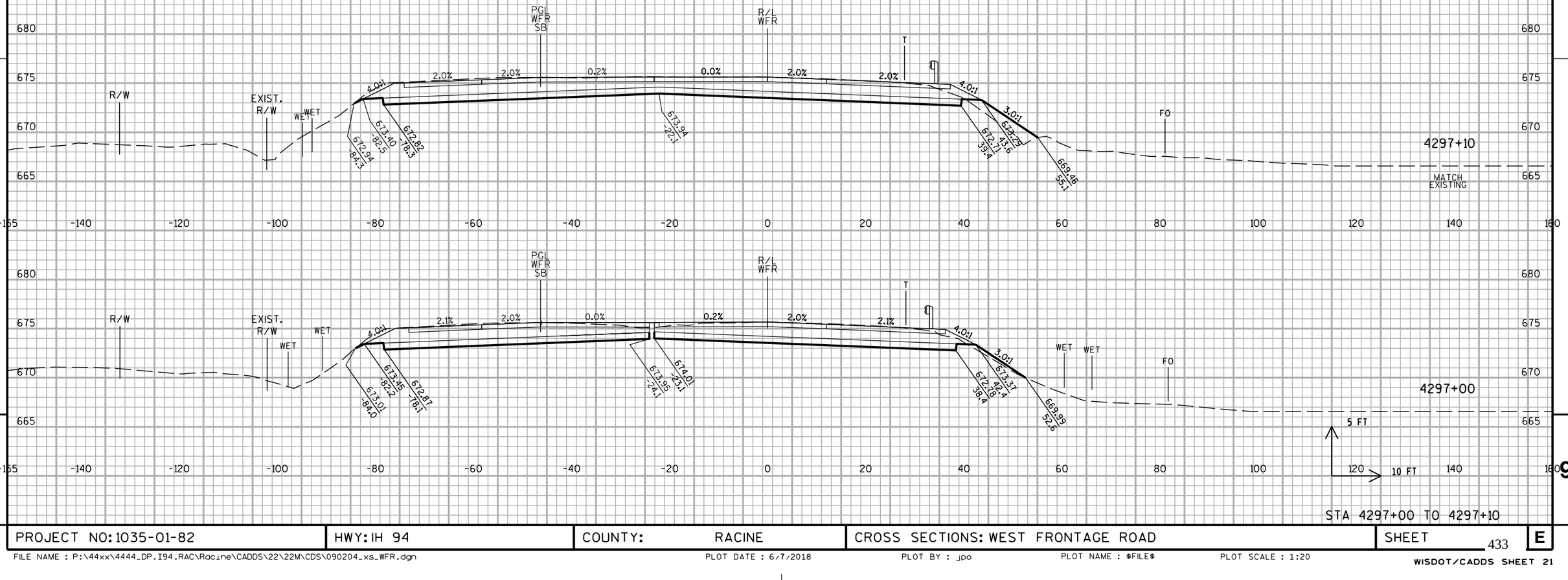


STA 4296+24 TO 4296+72

PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	CROSS SECTIONS: WEST FRONTAGE ROAD	SHEET 432	E

FILE NAME : P:\44xx\4444_DP.I94.RAC\Racine\CADDS\22\22M\CDS\090204_xs_WFR.dgn | PLOT DATE : 6/7/2018 | PLOT BY : jpo | PLOT NAME : $FILE$ | PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21

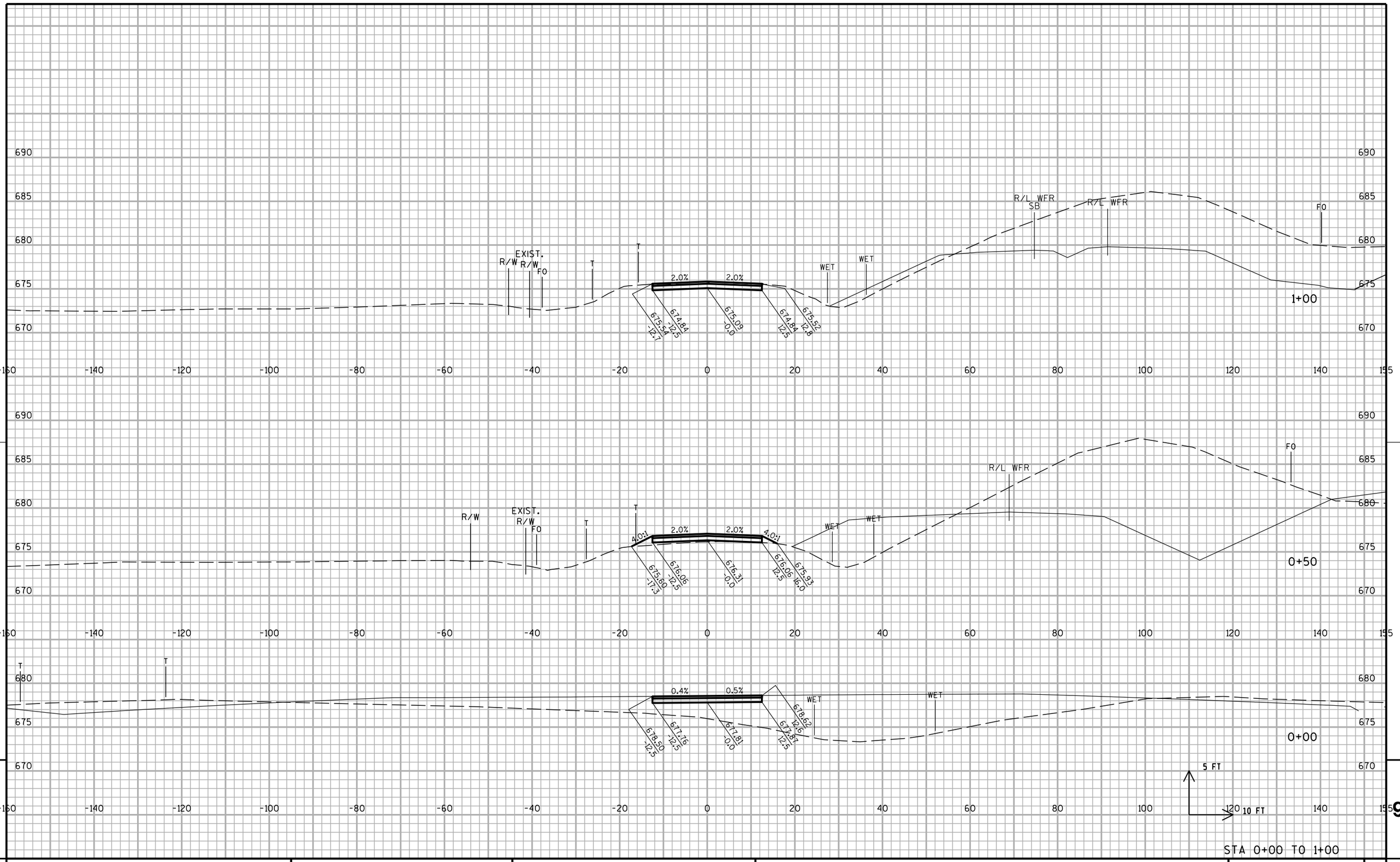


STA 4297+00 TO 4297+10

PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	CROSS SECTIONS: WEST FRONTAGE ROAD	SHEET 433	E

FILE NAME : P:\44xx\4444_DP.I94.RAC\Racine\CADDS\22\22M\CDS\090204_xs_WFR.dgn | PLOT DATE : 6/7/2018 | PLOT BY : jpo | PLOT NAME : $FILE$ | PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21

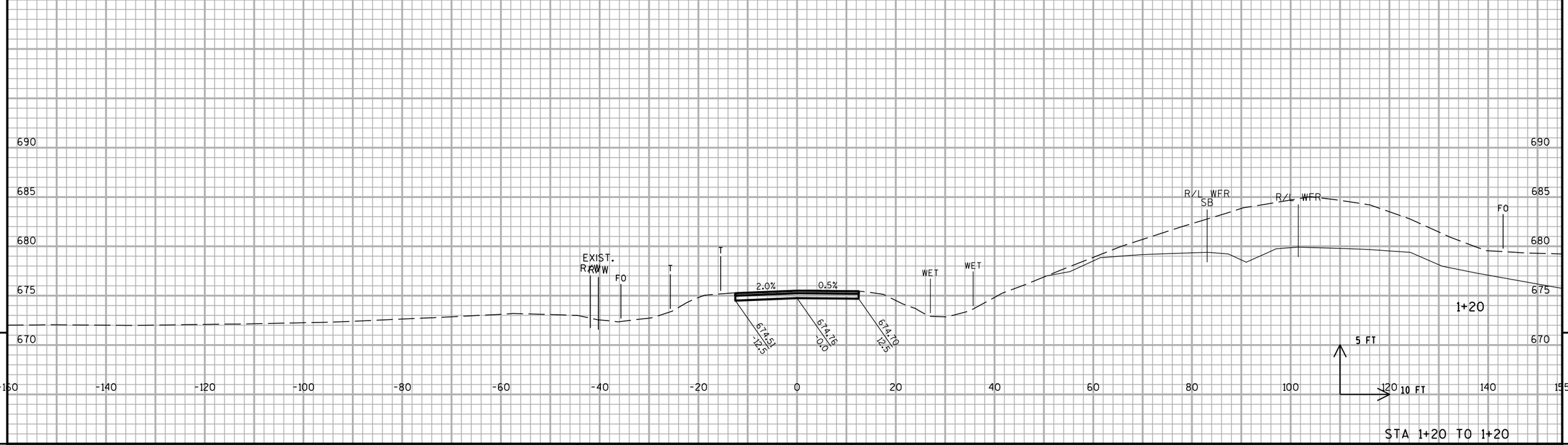


STA 0+00 TO 1+00

PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	CROSS SECTIONS: DRIVEWAY 4290+50 LT	SHEET 434	E

FILE NAME : P:\44xx\4444_DP.I94.RAC\Racine\CADDS\22\22M\CDS\090204_xs_WFR.dgn | PLOT DATE : 6/7/2018 | PLOT BY : jpo | PLOT NAME : $FILE$ | PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21

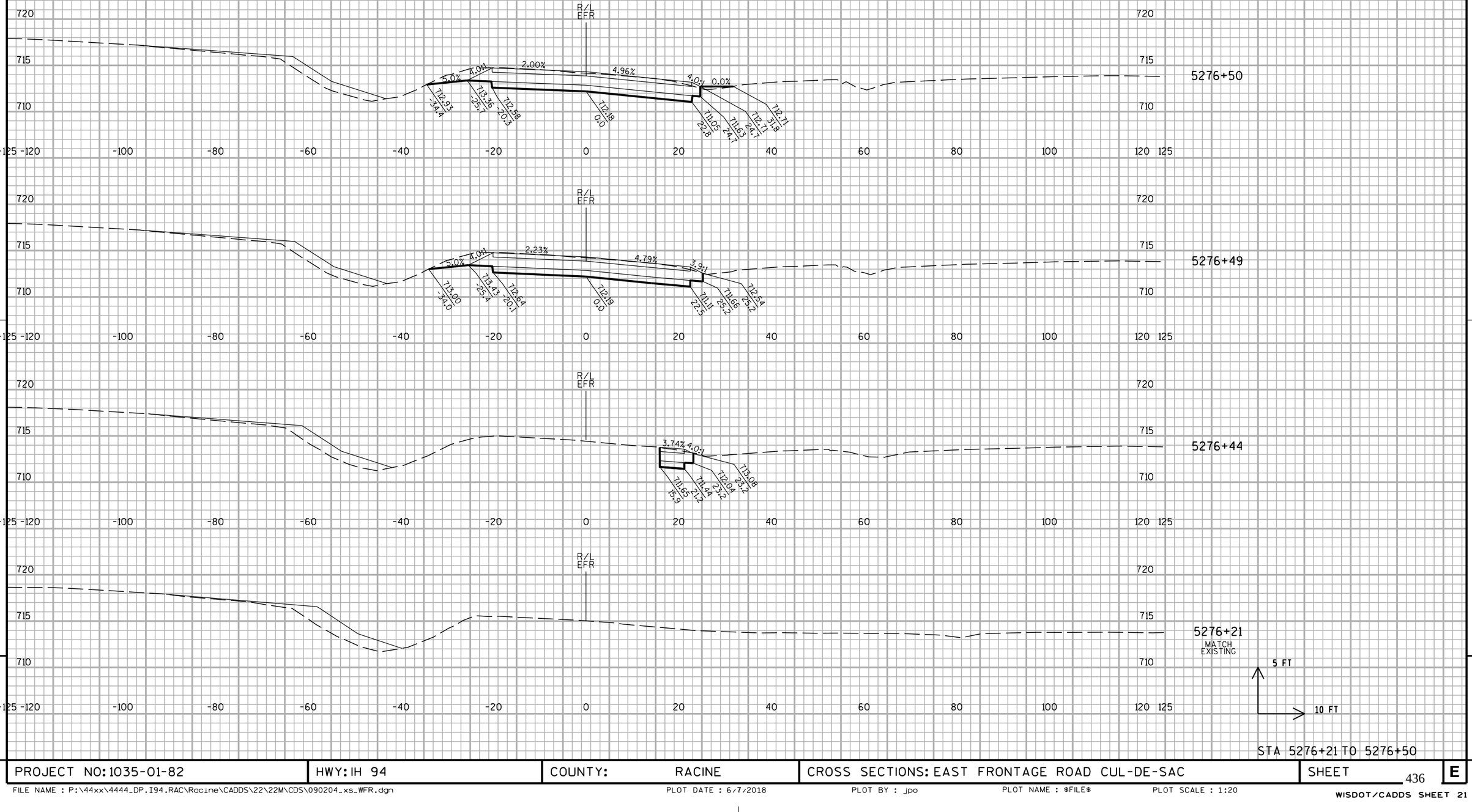


STA 1+20 TO 1+20

PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	CROSS SECTIONS: DRIVEWAY 4290+50 LT	SHEET 435	E

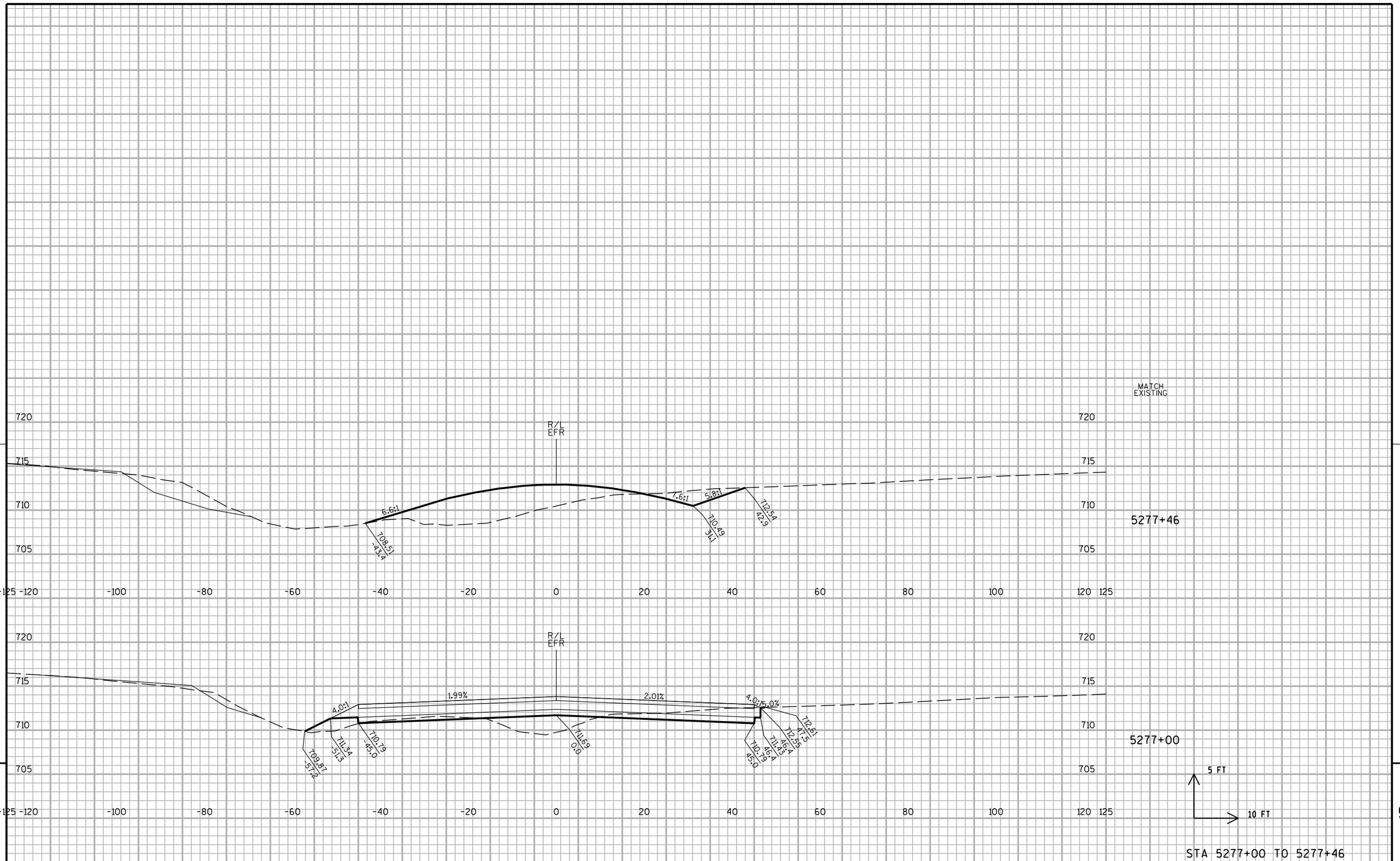
FILE NAME : P:\44xx\4444_DP.I94.RAC\Racine\CADDS\22\22M\CDS\090204_xs_WFR.dgn PLOT DATE : 6/7/2018 PLOT BY : jpo PLOT NAME : $FILE$ PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21



STA 5276+21 TO 5276+50

PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	CROSS SECTIONS: EAST FRONTAGE ROAD CUL-DE-SAC	SHEET 436	E



STA 5277+00 TO 5277+46

PROJECT NO: 1035-01-82	HWY: IH 94	COUNTY: RACINE	CROSS SECTIONS: EAST FRONTAGE ROAD CUL-DE-SAC	SHEET E

FILE NAME : P:\44xx\4444_DP.I94.RAC\Racine\CADDS\22\22M\CDS\090204_xs_WFR.dgn PLOT DATE : 6/7/2018 PLOT BY : jpo PLOT NAME : $FILE$ PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21

Wisconsin Department of Transportation

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