LAX

MARCH 2019

PROJECT ID: 5516-00-70

WITH: N/A

COUNTY: MONROE

ORDER OF SHEETS

TOTAL SHEETS = 80

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
5516-00-70	WISC 2019153	1

VILLAGE OF KENDALL, WHITE STREET

(BRANCH BARABOO RIVER BRIDGE B-41-0306)

CTH W

MONROE COUNTY

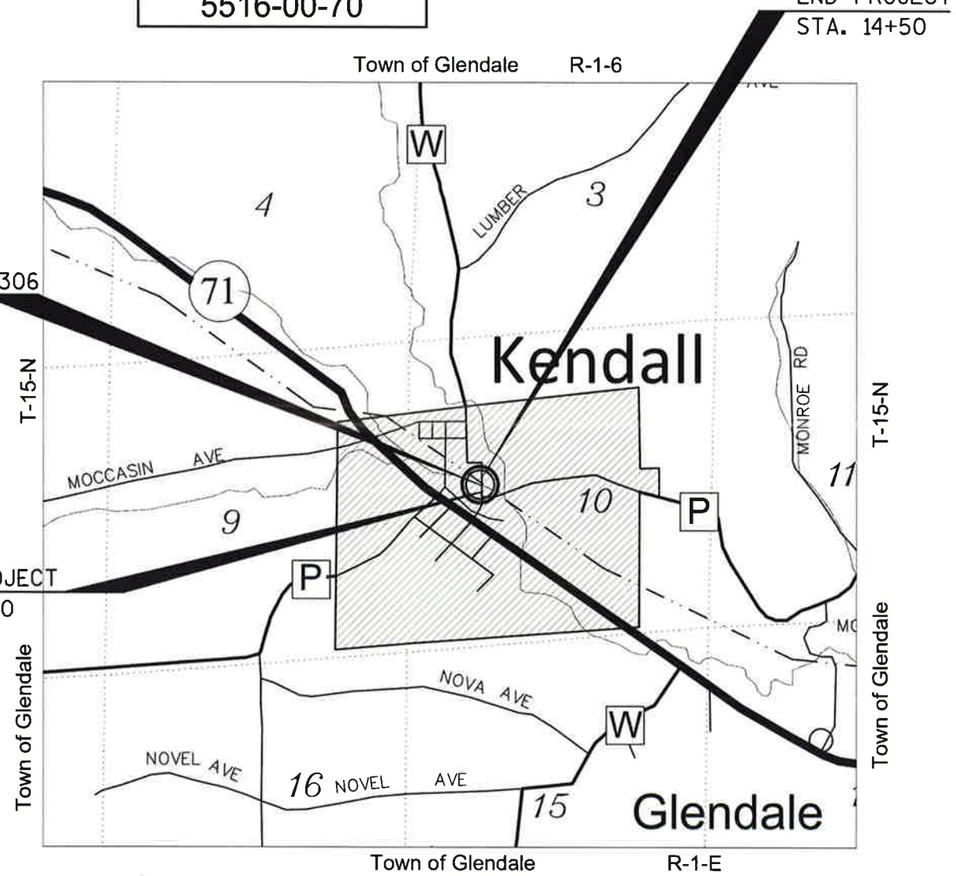
AS-BUILT PLAN

SUPERVISOR: Jim Savoldelli
PROJECT MANAGER: John Bainter
PROJECT ENGINEER: Elizabeth Reis, DAAR Engineering
CONTRACTOR: Pheifer Brothers Construction
CONSTRUCTION STARTED: 5-16-19
SUBSTANTIALLY COMPLETE: 7-18-19

Subcontractor List
Augelli Concrete & Excavating
C&L Contracting
Central State Signing
Century Fence Company
Gerke Excavating
Hard Rock Sawing & Drilling Specialist
Mathy Construction
SJK Engineering
Southpaw Fencing
Terra Engineering & Construction

N

STATE PROJECT NUMBER
5516-00-70



LAYOUT SCALE 0 1/2 MILE

TOTAL NET LENGTH OF CENTERLINE = 0.047 MI.

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

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

DESIGN DESIGNATION

A.A.D.T.	(2019)	=	650
A.A.D.T.	(2039)	=	710
D.H.V.	(2039)	=	55
D.D.		=	60/40
T.		=	7.3%
DESIGN SPEED		=	30 M.P.H.
ESALS		=	88,000

Sheets Revised: 12, 13, 55, 56, 58, 59, 60, 61, 62, 63, 64, 66

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

ACCEPTED FOR
COUNTY of MONROE
10/22/2018 (Date) (Highway Commissioner)

ORIGINAL PLANS PREPARED BY
JEWELL associates engineers, inc.
Engineers - Architects - Surveyors

WISCONSIN ELLERY A. SCHAFFER E-41742-6 SPRING GREEN, WI PROFESSIONAL ENGINEER

10/16/2018 (Date) (Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY
Surveyor JEWELL ASSOCIATES ENGINEERS, INC.
Designer JEWELL ASSOCIATES ENGINEERS, INC.
Management Consultant KL ENGINEERING, INC.

APPROVED FOR THE DEPARTMENT
DATE: 10/30/18
Management Consultant Signature

E

FILE NAME : S:\PROJECTS\M08060 MONROE CO CTH W BRIDGE\SHEETSPLAN\TITLE.DWG
LAYOUT NAME - TITLE - TITLE SHEET 1 IN EQ 0.5 MI

PLOT DATE : 10/16/2018 3:10 PM PLOT BY : STEPHANIE POTTER PLOT NAME :

WISDOT/CADDS SHEET 10

LIST OF STANDARD ABBREVIATIONS

ABUT	Abutment	INV	Invert	SALV	Salvaged
AC	Acre	IP	Iron Pipe or Pin	SAN S	Sanitary Sewer
AGG	Aggregate	IRS	Iron Rod Set	SEC	Section
AH	Ahead	JT	Joint	SHLDR	Shoulder
<	Angle	JCT	Junction	SHR	Shrinkage
ASPH	Asphaltic	LHF	Left-Hand Forward	SW	Sidewalk
AVG	Average	L	Length of Curve	S	South
ADT	Average Daily Traffic	LIN FT or LF	Linear Foot	SQ	Square
BAD	Base Aggregate Dense	LC	Long Chord of Curve	SF or SQ FT	Square Feet
BK	Back	MH	Manhole	SY or SQ YD	Square Yard
BF	Back Face	MB	Mailbox	STD	Standard
BM	Bench Mark	ML or M/L	Match Line	SDD	Standard Detail Drawings
BR	Bridge	N	North	STH	State Trunk Highways
C or C/L	Center Line	Y	North Grid Coordinate	STA	Station
CC	Center to Center	OD	Outside Diameter	SS	Storm Sewer
CTH	County Trunk Highway	PLE	Permanent Limited Easement	SG	Subgrade
CR	Creek			SE	Superelevation
CR	Crushed	PT	Point	SL or S/L	Survey Line
CY or CU YD	Cubic Yard	PC	Point of Curvature	SV	Septic Vent
CP	Culvert Pipe	PI	Point of Intersection	T	Tangent
C & G	Curb and Gutter	PRC	Point of Reverse Curvature	TEL	Telephone
D	Degree of Curve	PT	Point of Tangency	TEMP	Temporary
DHV	Design Hour Volume	POC	Point On Curve	TI	Temporary Interest
DIA	Diameter	POT	Point on Tangent	TLE	Temporary Limited Easement
E	East	PVC	Polyvinyl Chloride		
X	East Grid Coordinate	PCC	Portland Cement Concrete	t	Ton
ELEC	Electric (al)	LB	Pound	T or TN	Town
EL or ELEV	Elevation	PSI	Pounds Per Square Inch	TRANS	Transition
ESALS	Equivalent Single Axle Loads	PE	Private Entrance	TL or T/L	Transit Line
		R	Radius	T	Trucks (percent of)
EBS	Excavation Below Subgrade	RR	Railroad	TYP	Typical
FF	Face to Face	R	Range	UNCL	Unclassified
FE	Field Entrance	RL or R/L	Reference Line	UG	Underground Cable
F	Fill	RP	Reference Point	USH	United States Highway
FG	Finished Grade	RCCP	Reinforced Concrete Culvert Pipe	VAR	Variable
FL or F/L	Flow Line			V	Velocity or Design Speed
FT	Foot	REQ'D	Required	VERT	Vertical
FTG	Footing	RES	Residence or Residential	VC	Vertical Curve
GN	Grid North	RW	Retaining Wall	VOL	Volume
HT	Height	RT	Right	WM	Water Main
CWT	Hundredweight	RHF	Right-Hand Forward	WV	Water Valve
HYD	Hydrant	R/W	Right-of-Way	W	West
INL	Inlet	R	River	WB	Westbound
ID	Inside Diameter	RD	Road	YD	Yard
		RDWY	Roadway		

	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= 0.59 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0.49 ACRES

GENERAL NOTES

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

NO TREES OR SHRUBS ARE TO BE REMOVED UNLESS SUCH TREES OR SHRUBS HAVE FIRST BEEN INDICATED FOR REMOVAL BY THE ENGINEER IN THE FIELD.

EXCAVATION BELOW SUBGRADE (EBS) IS NOT USED TO BALANCE YARDAGE, AND IS NOT SHOWN ON THE CROSS SECTIONS BUT IS MEASURED AND PAID FOR AS COMMON EXCAVATION. EXACT LOCATIONS OF EBS WILL BE DETERMINED BY THE ENGINEER.

DISTURBED AREAS SHOWN WITHIN THE RIGHT-OF-WAY, EXCEPT THE AREAS WITHIN THE FINISHED SHOULDER POINTS ARE TO BE FERTILIZED (TYPE B), SEEDED (USE SEED MIX NO. 40), AND EROSION MATTED AS DIRECTED BY THE ENGINEER.

WHEN THE QUANTITY OF THE ITEM OF BASE AGGREGATE DENSE, OR ASPHALTIC SURFACE IS MEASURED FOR PAYMENT BY THE TON, THE DEPTH OR THICKNESS OF THE COURSE SHOWN ON THE PLANS IS APPROXIMATE, AND THE ACTUAL THICKNESS WILL DEPEND ON THE DISTRIBUTION OF THE MATERIAL AS DIRECTED BY THE ENGINEER IN THE FIELD.

SILT FENCE AND TEMPORARY DITCH CHECKS (WORK BY OTHERS) SHALL BE PLACED AS SHOWN ON THE PLAN OR AS DIRECTED BY THE ENGINEER IN THE FIELD. SILT FENCE SHALL BE PLACED PRIOR TO CONSTRUCTION AND IN PLACE PRIOR TO STRUCTURE REMOVAL.

EROSION MAT ALL MAINLINE SLOPES AS DIRECTED BY THE ENGINEER IN THE FIELD.

FILL EXPANSION IS VARIABLE AND IS ESTIMATED AT 25%.

ADJUST DITCH GRADING AS NECESSARY TO FIT FIELD CONDITIONS AND AS DIRECTED BY THE ENGINEER.

REMOVAL OF ASPHALTIC OR CONCRETE SURFACES WHERE AN ABUTTING ASPHALTIC OR CONCRETE SURFACE IS TO REMAIN IN PLACE SHALL REQUIRE A SAWCUT MEETING THE APPROVAL OF THE ENGINEER IN THE FIELD.

THE LOCATION OF ALL PERMANENT SIGNING SHALL BE VERIFIED BY THE ENGINEER IN THE FIELD PRIOR TO PLACEMENT.

4-INCHES OF ASPHALTIC SURFACE SHALL BE CONSTRUCTED WITH A 1 3/4-INCH UPPER LAYER AND A 2 1/4-INCH LOWER LAYER.

ASPHALTIC SURFACE QUANTITIES WERE CALCULATED USING 115 LB/SY/IN.

THE EXACT LOCATION OF PRIVATE AND COMMERCIAL ENTRANCES TO BE DETERMINED BY THE ENGINEER IN THE FIELD.

ACCURACY OF INLET AND DISCHARGE ELEVATIONS FOR DRAINAGE STRUCTURES SHALL BE VERIFIED BY THE ENGINEER IN THE FIELD.

CURB AND GUTTER ELEVATIONS ARE GIVEN ON THE FLANGE LINE, UNLESS OTHERWISE NOTED.

ALL RADII DIMENSIONS ON THE PLAN FOR CURB AND GUTTER ARE TO THE FLANGE OF THE CURB AND GUTTER.

EXISTING DRIVEWAYS SHALL BE RESTORED IN KIND AND THEIR LOCATION VERIFIED BY THE ENGINEER IN THE FIELD.

EXPANSION JOINTS SHALL BE CONSTRUCTED AT ALL RADII POINTS IN THE CURB & GUTTER.

THE COST OF CONNECTING CULVERT PIPE OR STORM SEWER TO EXISTING DRAINAGE STRUCTURES SHALL BE INCIDENTAL TO THE COST OF INSTALLING THE CULVERT OR STORM SEWER.

STORM SEWER ELEVATION ELEVATIONS, LENGTHS, AND LOCATIONS AS SHOWN ON THE PLANS AND CROSS SECTIONS MAY BE ADJUSTED TO FIT FIELD CONDITIONS.

MISCELLANEOUS REMOVAL ITEMS REQUIRING RESTORATIONS OF CONCRETE OR ASPHALT DRIVEWAYS, SIDEWALKS, OR SIDE STREETS SHALL BE REMOVED TO AN EXISTING JOINT OR SAWED AS DETERMINED BY THE ENGINEER IN THE FIELD OR AS SHOWN ON THE PLANS.

TRANSVERSE JOINTS IN CONCRETE SIDEWALK SHALL BE CONSTRUCTED AT INTERVALS EQUAL TO THE WIDTH OF THE CONCRETE SIDEWALK, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

NO STORM SEWER SHALL BE REMOVED UNTIL DIRECTED BY THE ENGINEER.

INTEGRATED BANK MANAGEMENT SYSTEM TO INCLUDE SALVAGED TOPSOIL, SEEDING TEMPORARY, FERTILIZER TYPE B, SEEDING MIXTURE NO. 60, & EROSION MAT URBAN CLASS I TYPE B PLACED OVER RIPRAP HEAVY OVER GEOTEXTILE TYPE HR.

CONTACTS

MONROE COUNTY HIGHWAY DEPARTMENT:

DAVID OHNSTAD, COMMISSIONER
803 WASHINGTON STREET
SPARTA, WI 54656
PH: (608) 269-8740
CELL: (608) 487-6216
EMAIL: david.ohnstad@co.monroe.wi.us

DNR LIAISON:

STATE OF WISCONSIN
DNR SERVICE CENTER
3550 MORMON COULEE ROAD
LACROSSE, WI 54601
ATTN: KAREN KALVELAGE
PH: (608) 785-9115
EMAIL: Karen.Kalvelage@wisconsin.gov

DESIGN CONSULTANT:

JEWELL ASSOCIATES ENGINEERS, INC.
560 SUNRISE DRIVE
SPRING GREEN, WI 53588
ATTN: ELLERY SCHAFFER, P.E.
PH: (608) 459-6027
CELL: (608) 341-8159
EMAIL: ellery.schaffer@jewellassoc.com

UTILITIES

COMMUNICATION

CENTURYLINK
ATTN: BRIAN STELPLUGH
333 NORTH FRONT STREET
LA CROSSE, WI 54601
PH: (608) 796-5142
CELL: (608) 780-1238
EMAIL: brian.stelplugh@centurylink.com

ELECTRIC

ALLIANT ENERGY
ATTN: MARK SCHOEN
338 EAST STATE STREET
MAUSTON, WI 53948
PH: (608) 847-1315
CELL: (608) 206-4819
EMAIL: MarkSchoen@alliantenergy.com

GAS

MADISON GAS & ELECTRIC CO. (MGE)
ATTN: SHAUN ENDRES
133 SOUTH BLAIR STREET
MADISON, WI 53788
PH: (608) 252-7224
EMAIL: SEndres@mge.com

SEWER AND WATER

VILLAGE OF KENDALL PUBLIC WORKS DEPT.
ATTN: DAVID GRUEN, DPW
219 WEST SOUTH RAILROAD ST.
KENDALL, WI 54638
PH: (608) 463-7232
CELL: (608) 797-0076
EMAIL: dave.kendall@centurytel.net

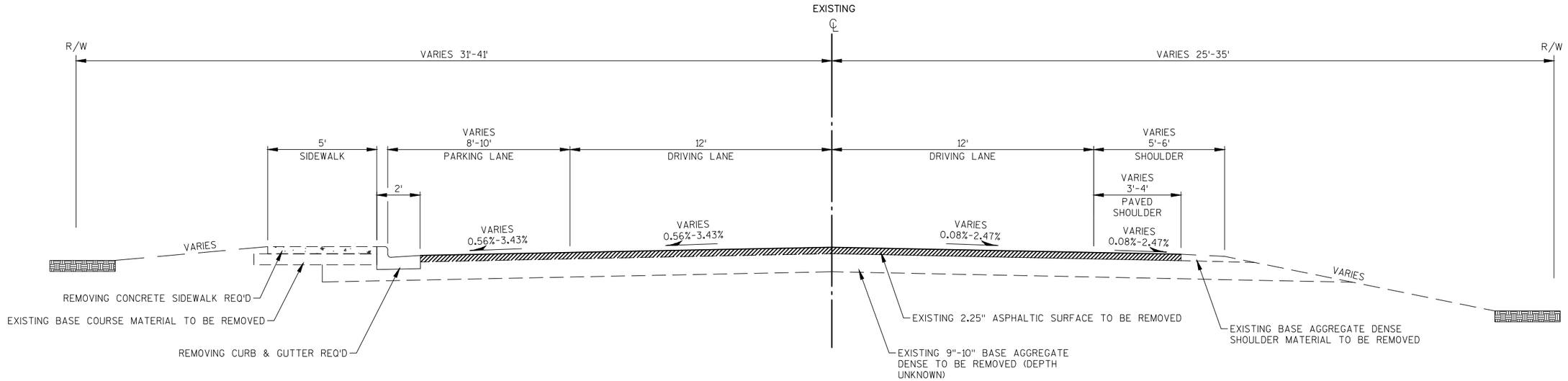
COMMUNICATION

COMMUNITY ANTENNA SYSTEMS, INC.
ATTN: RANDY KUBARSKI
1010 LAKE STREET
HILLSBORO, WI 54634
PH: (608) 489-2321
CELL: (608) 604-3695
EMAIL: comant@comantenna.com

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

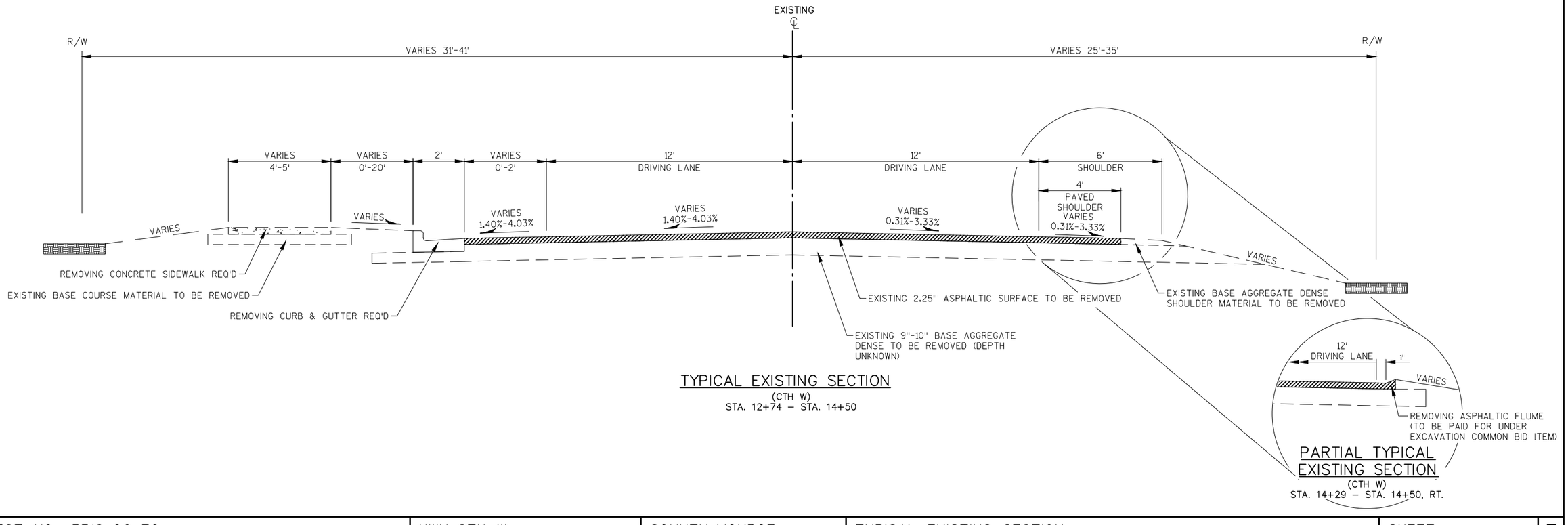
* DENOTES UTILITY IS NOT A MEMBER OF DIGGERS HOTLINE

2



TYPICAL EXISTING SECTION

(CTH W)
STA. 12+00 – STA. 12+74



TYPICAL EXISTING SECTION

(CTH W)
STA. 12+74 – STA. 14+50

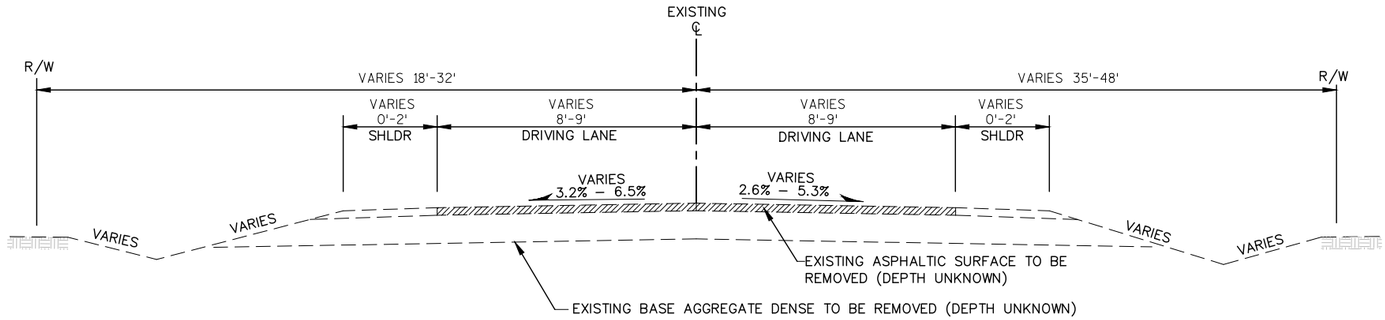
PARTIAL TYPICAL EXISTING SECTION

(CTH W)
STA. 14+29 – STA. 14+50, RT.

PROJECT NO: 5516-00-70	HWY: CTH W	COUNTY: MONROE	TYPICAL EXISTING SECTION	SHEET 3	E

FILE NAME : S:\PROJECTS\M08060 MONROE CO CTH W BRIDGE\SHEETSPLAN\TYPICALS\EXISTING TYP.DWG
LAYOUT : EXISTING CTH W
PLOT DATE : 10/2/2018
PLOT TIME : 3:59:35 PM
PLOT BY : JULIA ZEHNER
PLOT SCALE : 1" = 1'

2



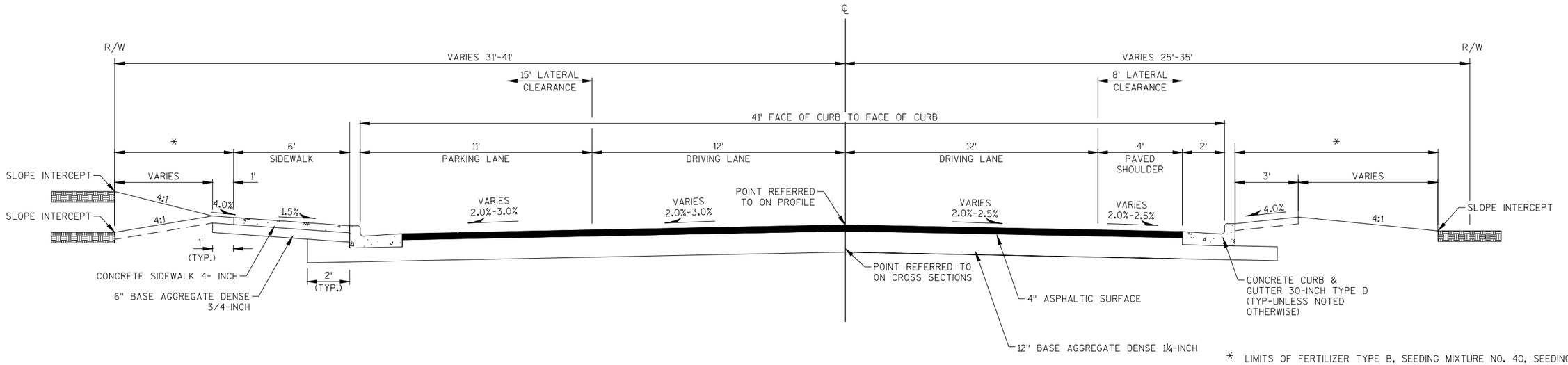
TYPICAL EXISTING SECTION

'A'-LINE
(OLD GLENDALE ROAD)

PROJECT NO: 5516-00-70	HWY: CTH W	COUNTY: MONROE	TYPICAL EXISTING SECTION	SHEET 4	E

FILE NAME : S:\PROJECTS\M08060 MONROE CO CTH W BRIDGE\SHEETSPLAN\TYPICALS\EXISTING TYP.DWG
LAYOUT : EXISTING OLD GLENDALE RD
PLOT DATE : 10/2/2018
PLOT TIME : 4:01:12 PM
PLOT BY : JULIA ZEHNER
PLOT SCALE : 1" = 1'

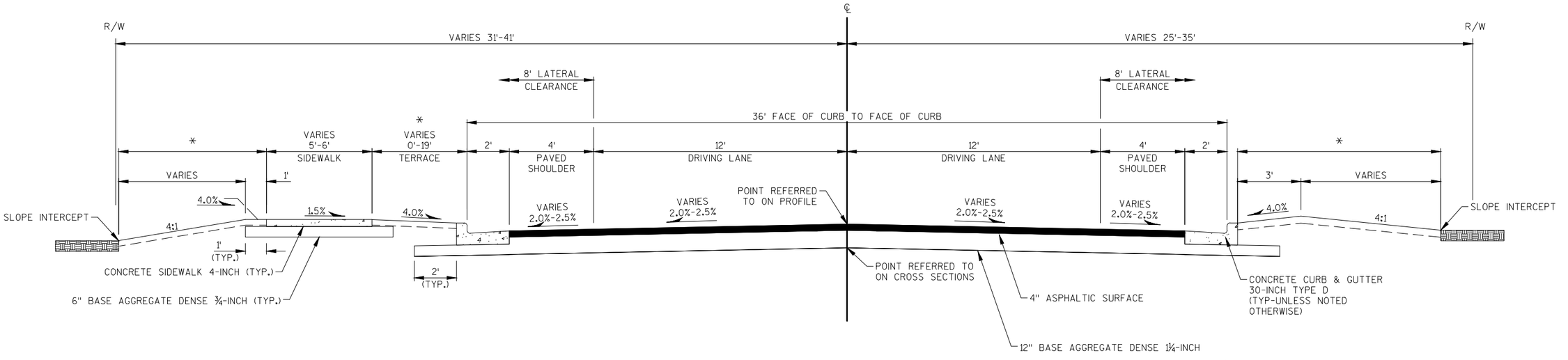
2



* LIMITS OF FERTILIZER TYPE B, SEEDING MIXTURE NO. 40, SEEDING TEMPORARY, EROSION MAT CLASS I TYPE A AND TOPSOIL (AS DIRECTED BY ENGINEER)

TYPICAL FINISHED SECTION

(CTH W)
STA. 12+00 – STA. 12+74



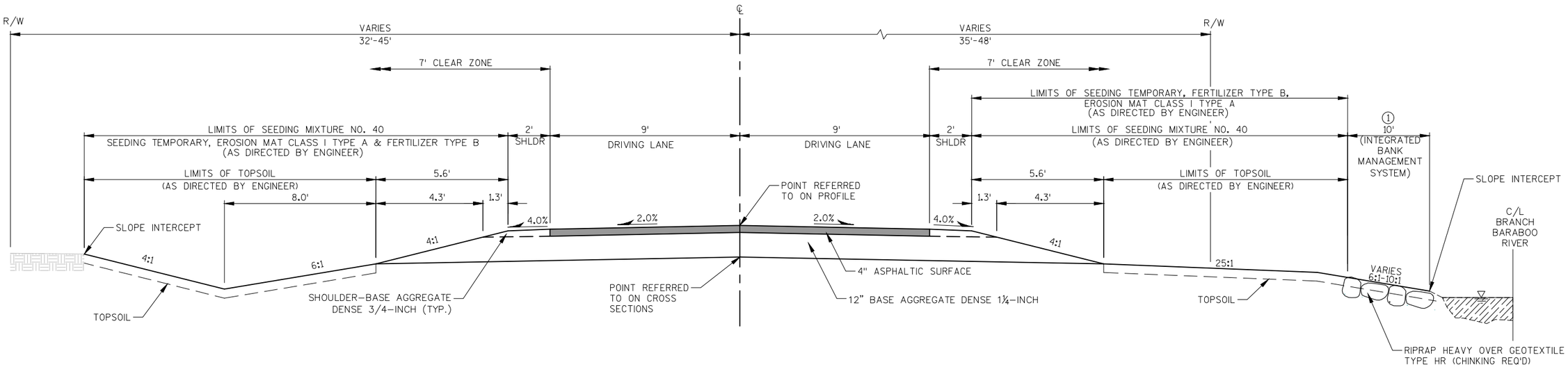
* LIMITS OF FERTILIZER TYPE B, SEEDING MIXTURE NO. 40, SEEDING TEMPORARY, EROSION MAT CLASS I TYPE A AND TOPSOIL (AS DIRECTED BY ENGINEER)

TYPICAL FINISHED SECTION

(CTH W)
STA. 12+74 – STA. 14+50

PROJECT NO: 5516-00-70	HWY: CTH W	COUNTY: MONROE	TYPICAL FINISHED SECTION	SHEET 5	E

FILE NAME : S:\PROJECTS\M08060 MONROE CO CTH W BRIDGE\SHEETSPLAN\TYPICALS\PROPOSED TYP.DWG
LAYOUT : FINISHED CTH W
PLOT DATE : 10/16/2018
PLOT TIME : 3:49:26 PM
PLOT BY : STEPHANIE POTTER
PLOT SCALE : 1" = 1'



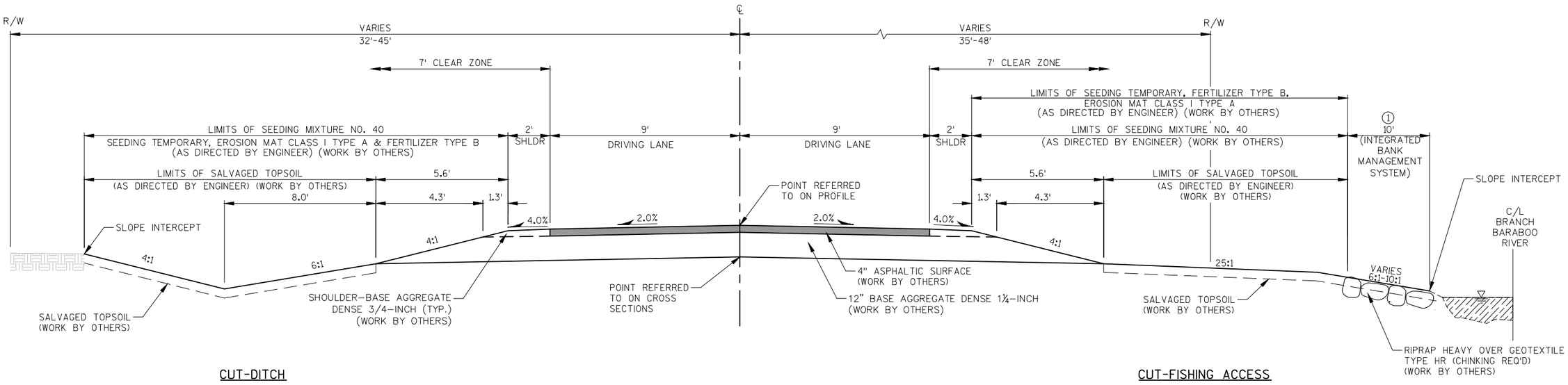
CUT-DITCH

CUT-FISHING ACCESS

① LIMITS OF TOPSOIL, SEEDING TEMPORARY, FERTILIZER TYPE B, EROSION MAT URBAN CLASS I TYPE B, SEEDING MIXTURE NO. 60

TYPICAL FINISHED SECTION

('A'-LINE)
STA. 20'A'+13.61 – STA. 20'A'+40.63



CUT-DITCH

CUT-FISHING ACCESS

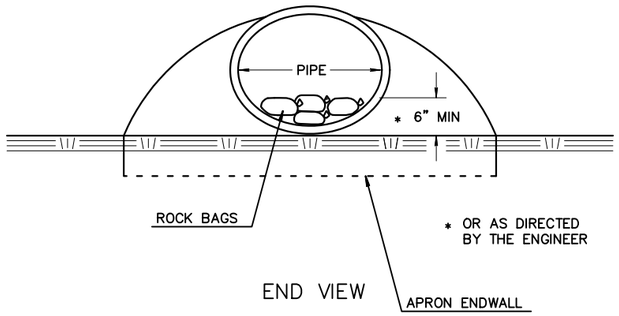
① LIMITS OF SALVAGED TOPSOIL, SEEDING TEMPORARY, FERTILIZER TYPE B, EROSION MAT URBAN CLASS I TYPE B, SEEDING MIXTURE NO. 60 (WORK BY OTHERS)

TYPICAL FINISHED SECTION

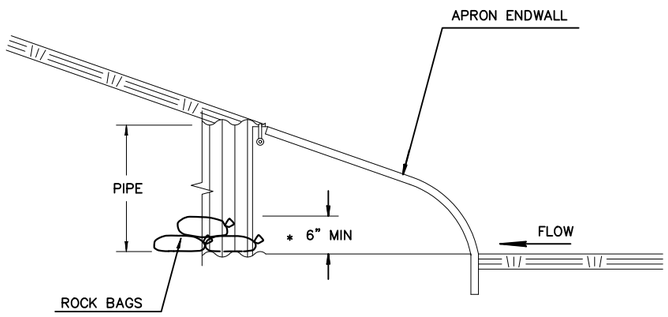
('A'-LINE)
STA. 20'A'+40.63 – STA. 21'A'+80
(WORK BY OTHERS)

PROJECT NO: 5516-00-70	HWY: CTH W	COUNTY: MONROE	TYPICAL FINISHED SECTION	SHEET 6	E

FILE NAME : S:\PROJECTS\M08060 MONROE CO CTH W BRIDGE\SHEETSPLAN\TYPICALS\PROPOSED TYP.DWG
LAYOUT : FINISHED OLD GLEN
PLOT DATE : 12/11/2018
PLOT TIME : 10:55:29 AM
PLOT BY : STEPHANIE POTTER
PLOT SCALE : 1" = 1'



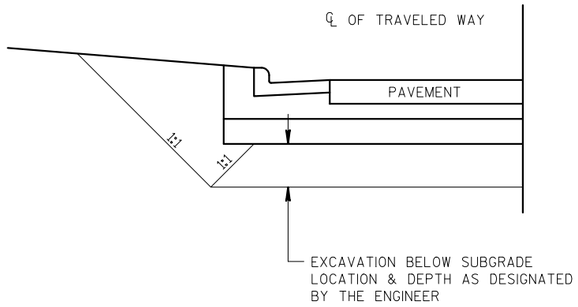
END VIEW



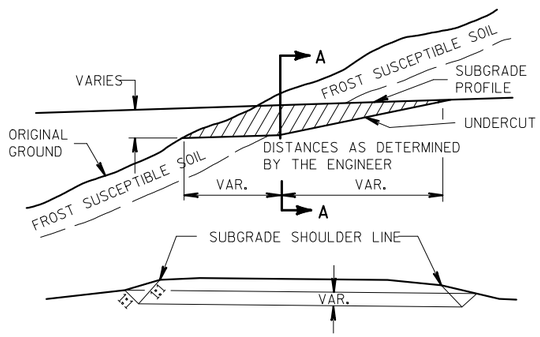
SIDE VIEW

CULVERT PIPE CHECKS (WORK BY OTHERS)

ESTIMATED BAG SIZE = 18" X 12" X 6"	
PIPE SIZE	ESTIMATED NO. OF BAGS
12"	1
15"	2
18"	2
21"	3
14" X 23"	3
24"	3
27"	4
30"	5
19" X 30"	5
36"	7
24" X 38"	8
42"	8
29" X 45"	10
48"	10
34" X 53"	10
38" X 60"	13
60"	13
66"	15
53" X 83"	19



URBAN DETAIL FOR EXCAVATION BELOW SUBGRADE



SECTION A-A

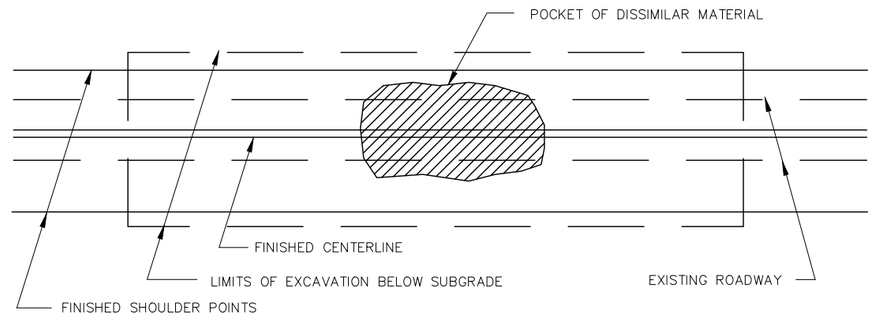
CROSS SECTION SHOWING UNDERCUT

DETAIL FOR EXCAVATION BELOW SUBGRADE AT CUTS

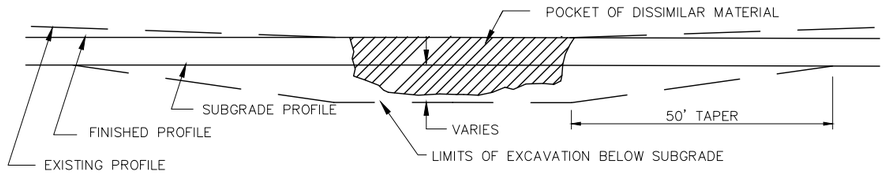
NOTE: EXACT LOCATIONS AND EXTENT OF E.B.S. SECTIONS SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.

E.B.S. AREA TO BE BACKFILLED WITH BREAKER RUN.

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

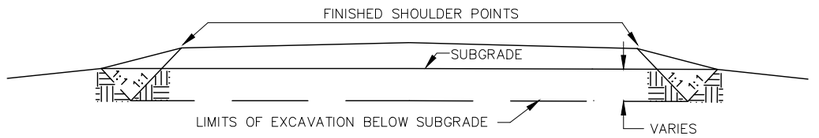


PLAN VIEW



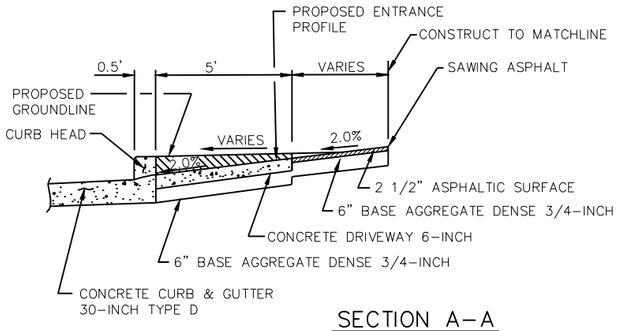
PROFILE VIEW

RURAL EXCAVATION BELOW SUBGRADE (E.B.S.)

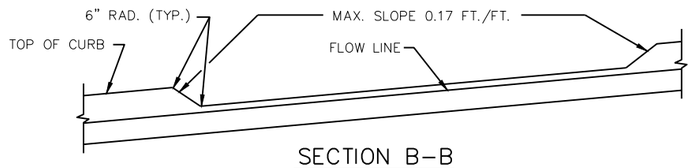


CROSS SECTION VIEW

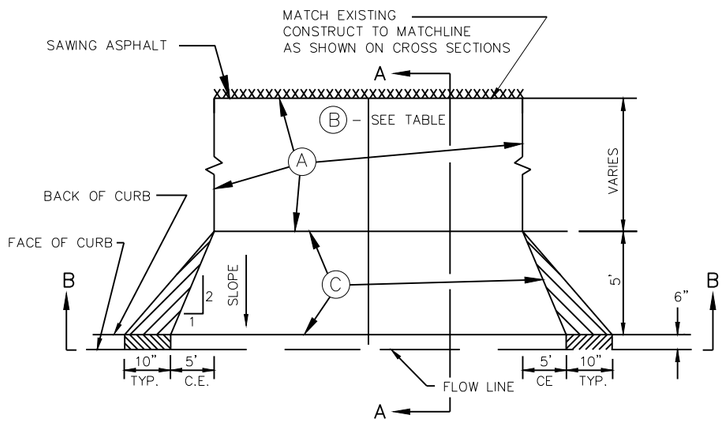
1. EXACT LOCATION OF E.B.S. (EXCAVATION BELOW SUBGRADE) SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.
2. E.B.S. AREA TO BE BACKFILLED WITH MATERIAL ACCEPTABLE TO THE ENGINEER. BACKFILL MUST BE HOMOGENEOUS WITH ADJOINING FILL MATERIAL.
3. THE FILL SECTION WITHIN 100' OF THE MOUTH OF THE CUT MUST BE KEPT 2' BELOW SUBGRADE UNTIL E.B.S. IS COMPLETED. LATERAL LIMITS OF EXCAVATION SHALL BE THE SUBGRADE SHOULDER POINTS.



SECTION A–A



SECTION B–B



DRIVEWAY DETAIL (URBAN)

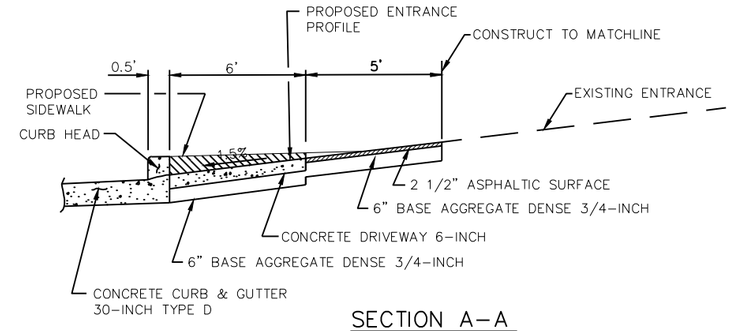
C.E. STA. 12+34, RT.

C.E. STA. 12+34, RT.

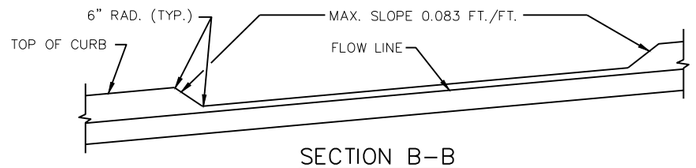
	EXISTING	PROPOSED
(A)	ASPHALT	2 ½" ASPHALTIC SURFACE OVER 6" BASE AGGREGATE DENSE 3/4–INCH
(B)	WIDTH: 30'	WIDTH: 30'
(C)	EXISTING: ASPHALT	PROPOSED: CONCRETE DRIVEWAY 6–INCH OVER 6" BASE AGGREGATE DENSE 3/4–INCH

P.E. STA. 12+22, LT. & P.E STA. 12+59, LT.

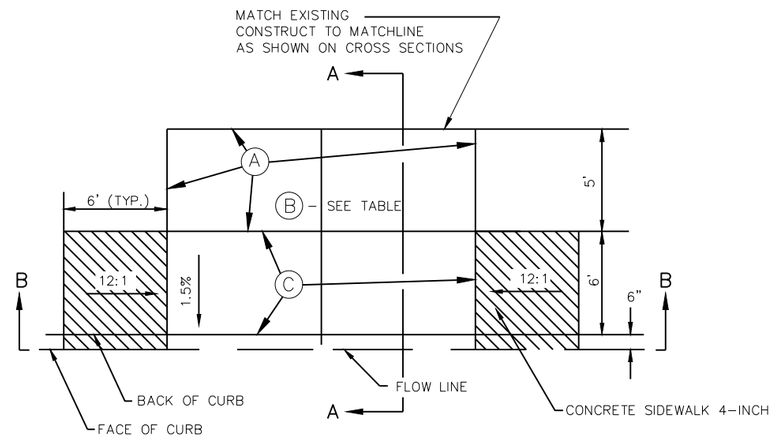
	EXISTING	PROPOSED
(A)	BASE AGGREGATE DENSE 3/4–INCH	2 ½" ASPHALTIC SURFACE OVER 6" BASE AGGREGATE DENSE 3/4–INCH
(B)	WIDTH: P.E. STA. 12+22, LT. – 14'; P.E. STA. 12+59, LT. – 16'	WIDTH: P.E. STA. 12+22, LT. – 14'; P.E. STA. 12+59, LT. – 16'
(C)	EXISTING: BASE AGGREGATE DENSE 3/4–INCH	PROPOSED: CONCRETE DRIVEWAY 6–INCH OVER 6" BASE AGGREGATE DENSE 3/4–INCH



SECTION A–A

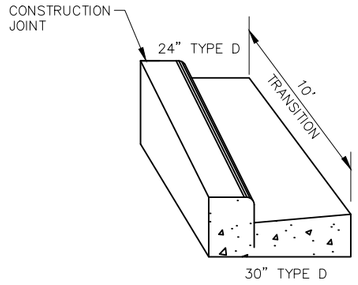


SECTION B–B



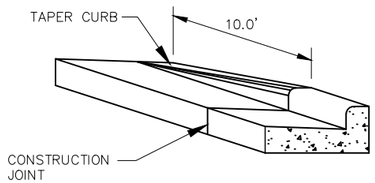
DRIVEWAY DETAIL (URBAN)

P.E. STA. 12+22, LT.
P.E. STA. 12+59, LT.

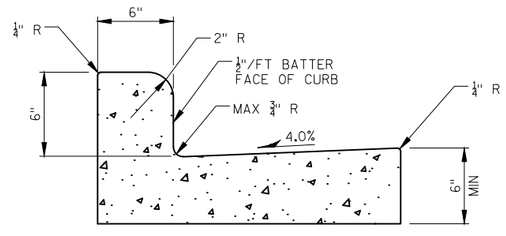


CURB & GUTTER TRANSITION DETAIL

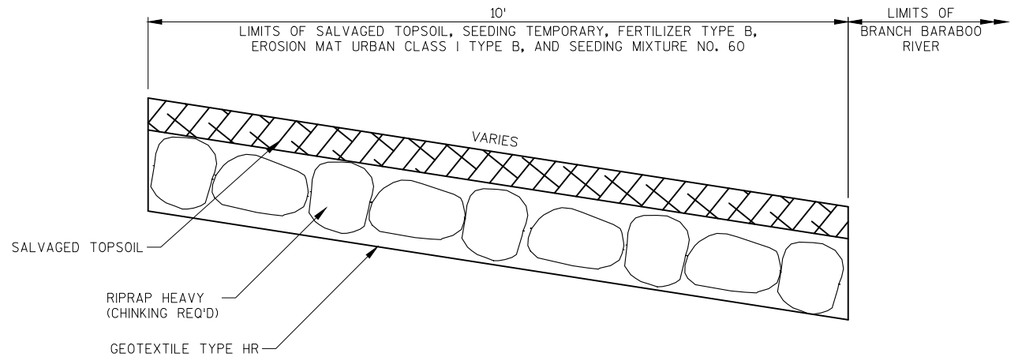
PAID FOR AS CONCRETE CURB & GUTTER 30-INCH TYPE D



DETAIL OF CURB & GUTTER TERMINI

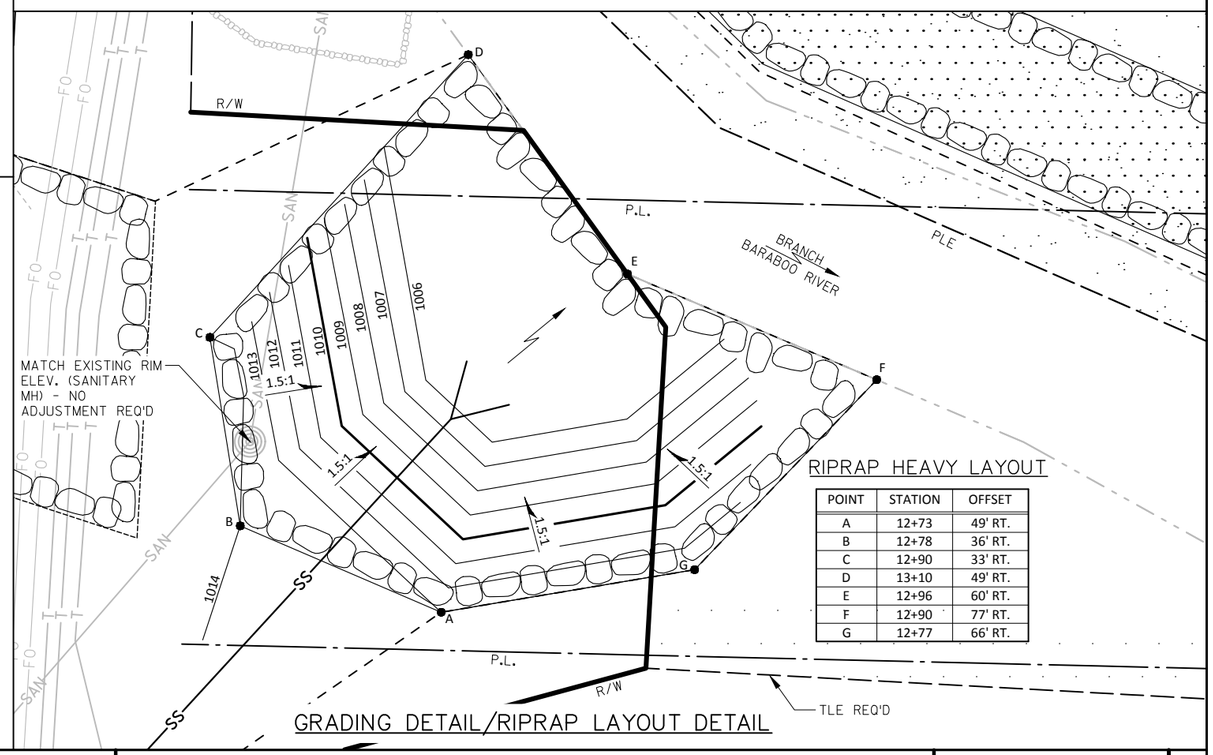


CONCRETE CURB & GUTTER 24-INCH TYPE D



INTEGRATED BANK MANAGEMENT SYSTEM DETAIL

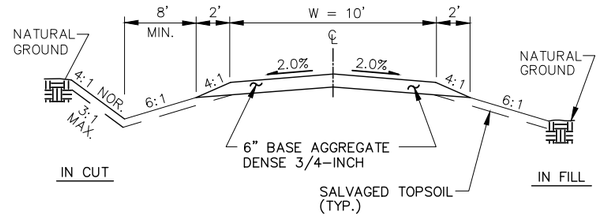
(STA. 20'A'+26 – STA. 20'A'+40.63, RT.)
(STA. 20'A'+40.63 – STA. 21'A'+08, RT. – WORK BY OTHERS)



GRADING DETAIL/RIPRAP LAYOUT DETAIL

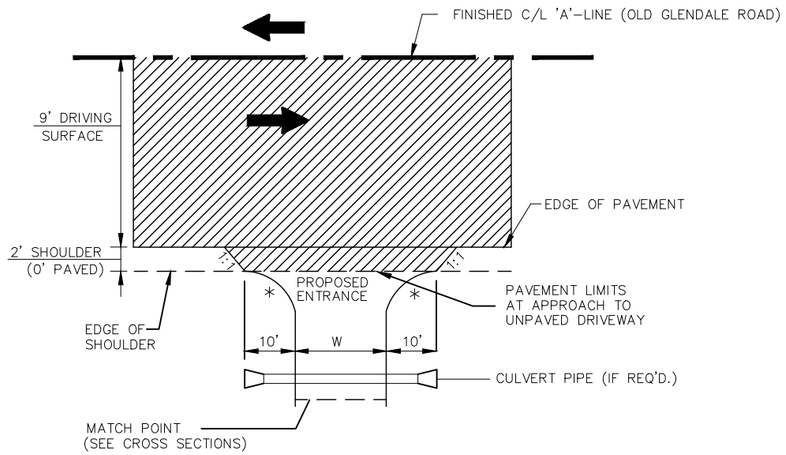
RIPRAP HEAVY LAYOUT

POINT	STATION	OFFSET
A	12+73	49' RT.
B	12+78	36' RT.
C	12+90	33' RT.
D	13+10	49' RT.
E	12+96	60' RT.
F	12+90	77' RT.
G	12+77	66' RT.



TYPICAL CROSS-SECTION FOR P.E.

P.E. – STA. 20'A'+66, LT.
P.E. – STA. 21'A'+24, RT.
P.E. – STA. 21'A'+65, LT.



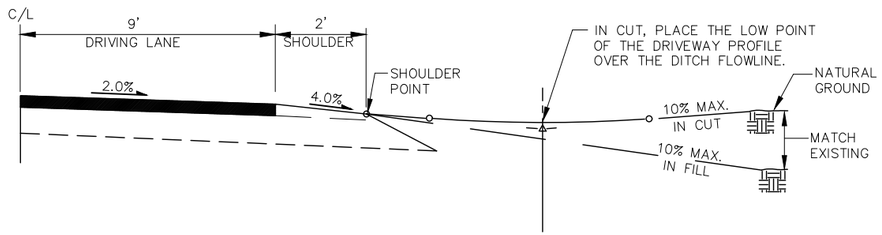
PLAN VIEW

APPROACH AT P.E.

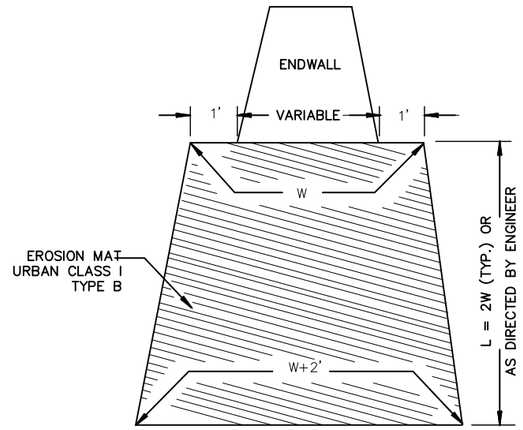
TYPICAL PRIVATE ENTERANCE (P.E.) DETAILS

LIMITS OF ASPHALTIC SURFACE

* RADIUS = 10' (UNLESS OTHERWISE NOTED)



TYPICAL P.E. PROFILE



EROSION MAT URBAN CLASS I TYPE B TREATMENT AT CULVERTS

SEE MISCELLANEOUS QUANTITIES SHEET FOR LOCATION

MERCY ENTERPRISES LLC

MARK A. AND SHERYL S. DOBBRATZ

DALE F. SR. HANEY

SHAUNA BEISKER

IRENE L. SARTORI

LANCE F. ELLIOTT

STRUCTURE B-41-306 REQ'D

BRANCH BARABOO RIVER

BEGIN PROJECT
STA. 12+00

END PROJECT
STA. 14+50

CTH W

VILLAGE OF KENDALL (DISCONTINUED - WATERMAIN TO REMAIN)

VILLAGE OF KENDALL (DISCONTINUED - REMOVING SANITARY SEWER REQ'D)

EXISTING DISCONTINUED SANITARY SEWER TO REMAIN (8" CLAY PIPE)

EXISTING C/L CTH W

FINISHED C/L CTH W

VILLAGE OF KENDALL (TYP.)

CONCRETE SIDEWALK 4-INCH REQ'D

(ASPHALT)

N03°07'37"E

STA. 12+74
21.0' LT.

STA. 12+90
16.0' LT.

STA. 13+95
24.5' LT.

STA. 14+35
39.0' LT.

STA. 14+50
39.47' LT.
1022.20 (MATCH EXISTING)

STA. 14+25
16.0' LT.

STA. 13+82.66
36.0' RT.

STA. 14+09.74 (MAINLINE)=
STA. 20'A'+00 'A'-LINE
(OLD GLENDALE ROAD)

STA. 14+40.47
31.0' RT.

Y=325,166.08
X=743,402.23

Y=325,224.08
X=743,400.39

STA. 20'A'+34.41
29.0' RT.

STA. 20'A'+32.63
29.0' LT.

ASPHALTIC FLUME REQ'D (TYP.)

BEGIN CONSTRUCTION
STA. 20'A'+13.61

END CONSTRUCTION
BEGIN CONSTRUCTION
(WORK BY OTHERS)
STA. 20'A'+40.63

EXISTING C/L OLD GLENDALE ROAD

FINISHED C/L
'A'-LINE
(OLD GLENDALE ROAD)

STA. 21'A'+00
(1) CULVERT PIPE CLASS III-A 24-INCH
(2) APRON ENDWALLS REQ'D
SKEW=0°
(WORK BY OTHERS)

OLD GLENDALE ROAD

N90°00'00"E

BUILDING

SLOPE INTERCEPTS

TLE REQ'D

SLOPE INTERCEPTS

CTH W & OLD GLENDALE ROAD

1020.95
1017.40
1016.06
1017.09
1018.21
1019.28
1015.76
1016.48
1016.70
1018.02
1019.07
1019.87
1016.96
1016.92

12:1
10:1
3.0%
2.5%
2.2%
2.0%
6'
16'
11'
9'
R=20'
R/W

12+00
13+00
14+00

LEGEND

- INTEGRATED BANK MANAGEMENT SYSTEM (SEE CONSTRUCTION DETAILS)
- RIPRAP HEAVY OVER GEOTEXTILE TYPE HR (CATEGORY 010)
- RIPRAP HEAVY OVER GEOTEXTILE TYPE HR (CATEGORY 020)
- DIRECTION OF FLOW
- XXXXXXXXX SAWING ASPHALT/CONCRETE
- * MATCH EXISTING

① MONROE COUNTY
② ½ INTEREST VILLAGE OF KENDALL
½ INTEREST THE MANAGERS OF CAMP NUMBER 710 MODERN WOODMAN OF KENDALL, WISCONSIN
③ THE MANAGERS OF KENDALL CAMP NUMBER 710 MODERN WOODMAN OF AMERICA

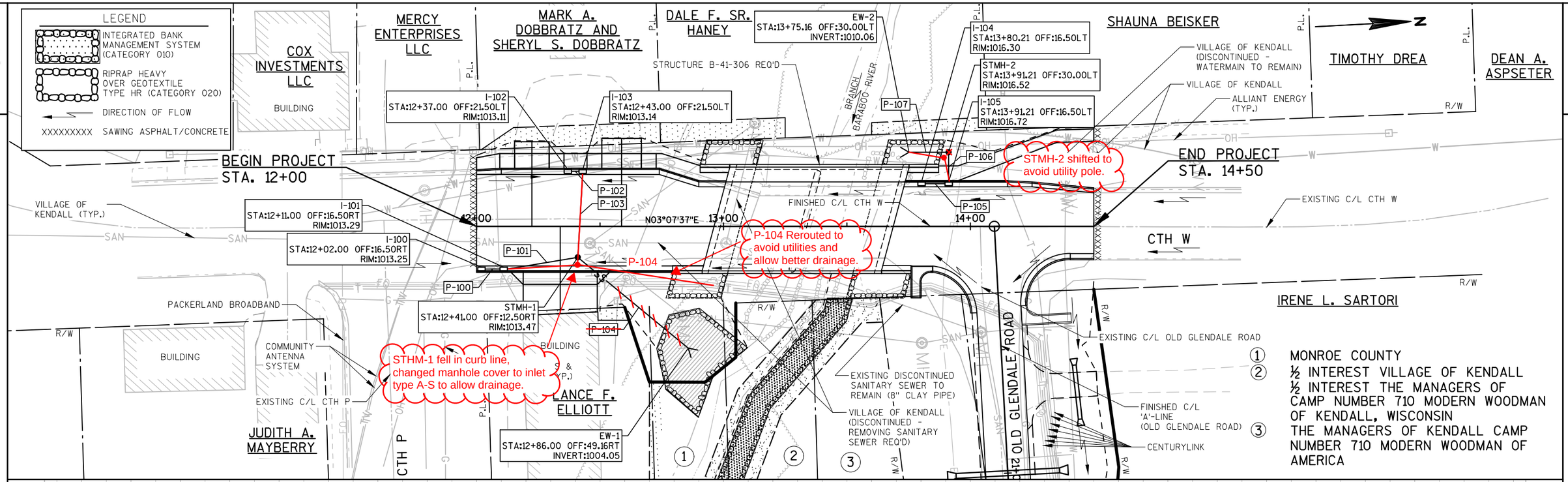
PROJECT NO: 5516-00-70	HWY: CTH W	COUNTY: MONROE	INTERSECTION DETAILS	SHEET 11	E

FILE NAME : S:\PROJECTS\M08060 MONROE CO CTH W BRIDGE\SHEETSPLAN\DETAILS\INTERSECTION DETAILS.DWG
LAYOUT : LAYOUT1

PLOT DATE : 10/29/2018
PLOT TIME : 8:55:44 AM

PLOT BY : STEPHANIE POTTER

PLOT SCALE : 1" = 1'



STA. 12+46 - STA. 13+01, RT.
REMOVING SANITARY SEWER REQ'D

STA. 13+01, RT.
REMOVING MANHOLES REQ'D

STA. 13+01 - STA. 13+13
REMOVING SANITARY SEWER REQ'D

STA. 12+46, RT.
ADJUSTING MANHOLE COVERS REQ'D

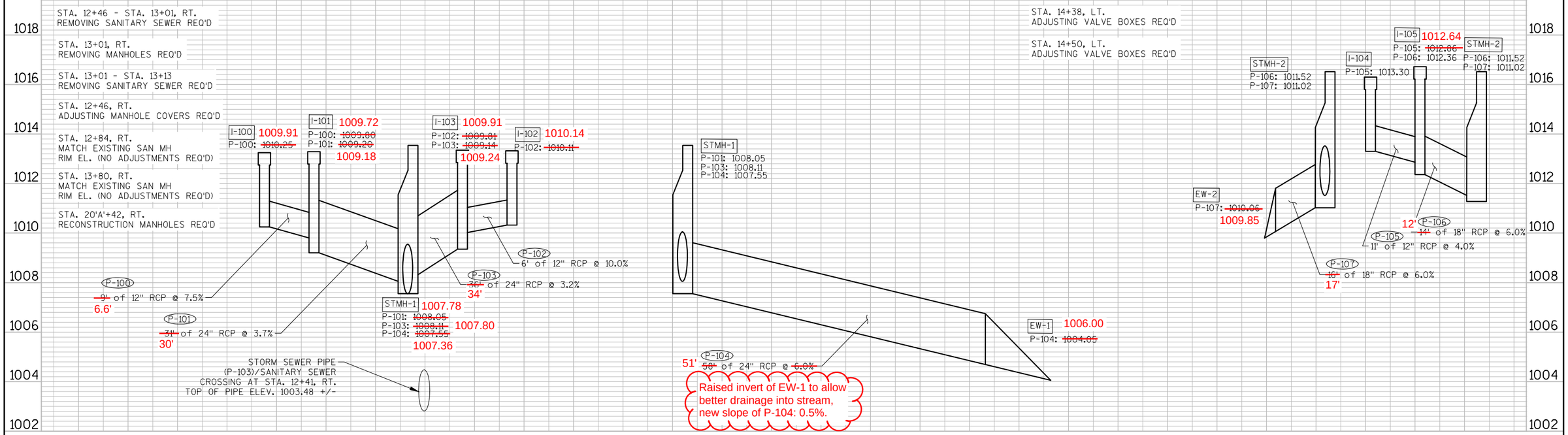
STA. 12+84, RT.
MATCH EXISTING SAN MH RIM EL. (NO ADJUSTMENTS REQ'D)

STA. 13+80, RT.
MATCH EXISTING SAN MH RIM EL. (NO ADJUSTMENTS REQ'D)

STA. 20'A'+42, RT.
RECONSTRUCTION MANHOLES REQ'D

STA. 14+38, LT.
ADJUSTING VALVE BOXES REQ'D

STA. 14+50, LT.
ADJUSTING VALVE BOXES REQ'D



PROJECT NO: 5516-00-70	HWY: CTH W	COUNTY: MONROE	CONSTRUCTION DETAILS: STORM SEWER PLAN	SHEET 12	E

FILE NAME : S:\PROJECTS\M08060 MONROE CO CTH W BRIDGE\SHEETSPLAN\DETAILS\STORM SEWER PLAN.DWG
LAYOUT : LAYOUT1
PLOT DATE : 10/29/2018
PLOT TIME : 9:00:37 AM
PLOT BY : STEPHANIE POTTER
PLOT SCALE : 1" = 1' 1 IN:40 FT

Silt fence deemed insufficent erosion control protection, installed turbidity barrier on N and S shores of river. Turbidity barrier on S shore became undermined, installed sheeting.

N

*THE VILLAGE OF KENDALL WILL REMOVE VILLAGE ROAD SIGNS PRIOR TO CONSTRUCTION AND RE-ERECT POST CONSTRUCTION.

STRUCTURE B-41-306 REQ'D

OLD GLENDALE RD *

BRANCH BARABOO RIVER

REMOVE

REMOVE

FINISHED C/L CTH W

EXISTING C/L CTH W

12+00

13+00

14+00

21+00

1

BEGIN PROJECT
STA. 12+00

EXISTING C/L CTH P

REMOVE

BEGIN CONSTRUCTION
STA. 20'A'+13.61

6'X12'

REMOVE

NO PARKING BETWEEN SIGNS
R7-52D
12"X18"

REMOVE

6'X12'

STOP

REMOVE

STOP
R1-1
30"X30"

END PROJECT
STA. 14+50

FINISHED C/L
'A'-LINE
(OLD GLENDALE ROAD)

END CONSTRUCTION
BEGIN CONSTRUCTION
(WORK BY OTHERS)
STA. 20'A'+40.63

EXISTING C/L OLD GLENDALE ROAD

END CONSTRUCTION
(WORK BY OTHERS)
STA. 21'A'+80

LEGEND

- INTEGRATED BANK MANAGEMENT SYSTEM (SEE CONSTRUCTION DETAILS)
- RIPRAP HEAVY OVER GEOTEXTILE TYPE HR (CATEGORY 010)
- RIPRAP HEAVY OVER GEOTEXTILE TYPE HR (CATEGORY 020)
- EROSION MAT URBAN CLASS I B
- DIRECTION OF FLOW
- SILT FENCE
- TEMPORARY DITCH CHECK (WORK BY OTHERS)
- CULVERT PIPE CHECKS (WORK BY OTHERS)
- TYPE A INLET PROTECTION PLACED PRIOR TO CURB & GUTTER CONSTRUCTION AND TYPE C INLET PROTECTION AFTER
- ① MARKING LINE EPOXY 4-INCH (LANE LINE MARKING-DOUBLE YELLOW)

PROJECT NO: 5516-00-70	HWY: CTH W	COUNTY: MONROE	EROSION CONTROL, SIGNING, AND PAVEMENT MARKING PLAN	SHEET 13	E

FILE NAME : S:\PROJECTS\M08060 MONROE CO CTH W BRIDGE\SHEETSPLAN\DETAILS\SIGNING AND PAVEMENT MARKING.DWG
LAYOUT :

PLOT DATE : 12/11/2018
PLOT TIME : 10:56:16 AM

PLOT BY : STEPHANIE POTTER

PLOT SCALE : 1" = 1'

2

COX INVESTMENTS LLC

MERCY ENTERPRISES LLC

MARK A. AND SHERYL S. DOBBRATZ

DALE F. SR. HANEY

SHAUNA BEISKER

TIMOTHY DREA

IRENE L. SARTORI

JUDITH A. MAYBERRY

LANCE F. ELLIOTT

ESTA PARRISH

BUILDING

P.L.

R/W

ALLIANT ENERGY (TYP.)

STRUCTURE B-41-306 REQ'D

VILLAGE OF KENDALL (DISCONTINUED - REMOVING SANITARY SEWER REQ'D)

BRANCH BARABOO RIVER

VILLAGE OF KENDALL (DISCONTINUED-WATERMAIN TO REMAIN)

VILLAGE OF KENDALL

MADISON GAS & ELECTRIC (TYP.)

C.P. 1

C.P. 2

C.P. 3

CTH W

66'

FINISHED C/L CTH W

N03°07'37"E

12+00

13+00

14+00

EXISTING C/L CTH W

TLE REQ'D (TYP.)

EXISTING DISCONTINUED SANITARY SEWER TO REMAIN (8" CLAY PIPE)

EXISTING C/L OLD GLENDALE ROAD

CTH P

OLD GLENDALE ROAD

N90°00'00"E

21+00

CENTURYLINK

FINISHED C/L 'A'-LINE (OLD GLENDALE ROAD)

BEGIN PROJECT
STA. 12+00
Y= 324,985.66
X= 743,356.32

EXISTING C/L CTH P

PACKERLAND BROADBAND

COMMUNITY ANTENNA SYSTEM

BEGIN CONSTRUCTION
STA. 20'A'+13.61
Y= 325,195.08
X= 743,381.37

END PROJECT
STA. 14+50
Y= 325,235.29
X= 743,369.96

END CONSTRUCTION
BEGIN CONSTRUCTION
(WORK BY OTHERS)
STA. 20'A'+40.63
Y= 325,195.08
X= 743,547.76

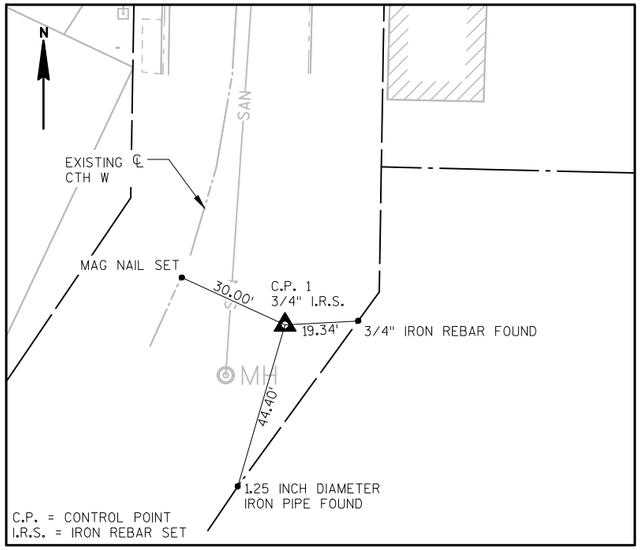
END CONSTRUCTION (WORK BY OTHERS)
STA. 21'A'+80
Y= 325,195.08
X= 743,547.76

① MONROE COUNTY
② ½ INTEREST VILLAGE OF KENDALL
½ INTEREST THE MANAGERS OF CAMP NUMBER 710 MODERN WOODMAN OF KENDALL, WISCONSIN
③ THE MANAGERS OF KENDALL CAMP NUMBER 710 MODERN WOODMAN OF AMERICA

PROJECT NO: 5516-00-70	HWY: CTH W	COUNTY: MONROE	ALIGNMENT & TIES DETAIL	SHEET 14	E

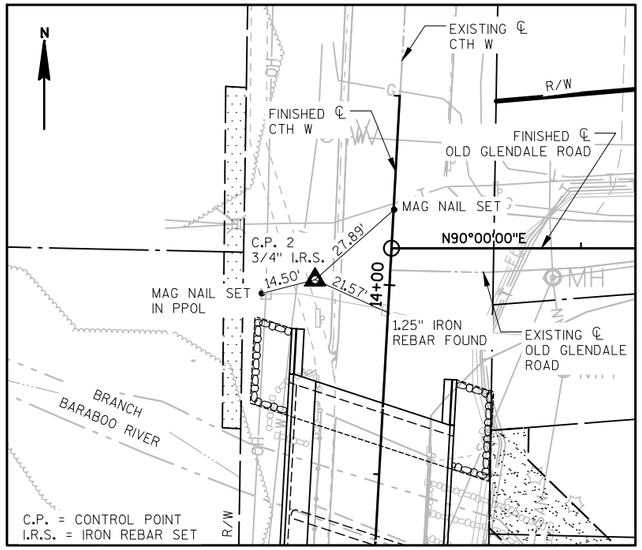
FILE NAME : S:\PROJECTS\M08060 MONROE CO CTH W BRIDGE\SHEETSPLAN\DETAILS\ALIGNMENT & TIES.DWG
LAYOUT : LAYOUT1
PLOT DATE : 10/29/2018
PLOT TIME : 10:40:53 AM
PLOT BY : JULIA ZEHNER
PLOT SCALE : 1" = 1'

2



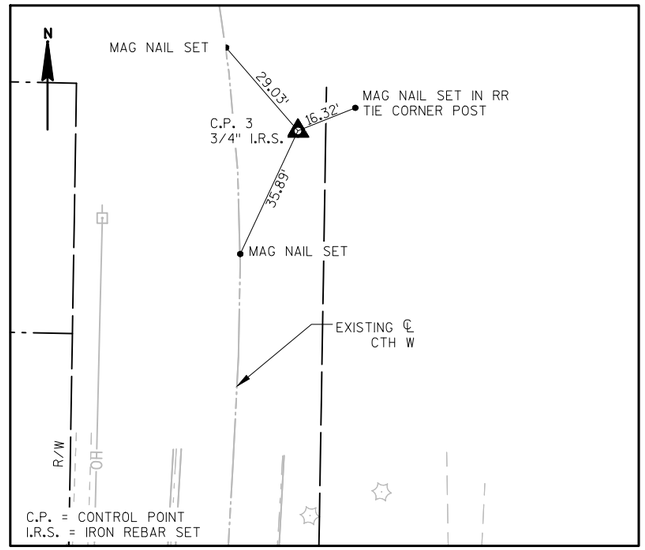
TIES TO C.P.#1

STA. 10+04; 30.38' RT.
Y = 324,781.04
X = 743,363.20



TIES TO C.P.#2

STA. 14+00; 19.69' LT.
Y = 325,186.77
X = 743,347.59



TIES TO C.P.#3

STA. 15+93; 16.84' RT.
Y = 325,379.64
X = 743,390.43

⚠ CONTROL POINTS

No.	STATION	DESCRIPTION	Y	X
1	10+04	3/4" IRON REBAR SET 30.38' RT.	324,781.04	743,363.20
2	14+00	3/4" IRON REBAR SET 19.69' LT.	325,186.77	743,347.59
3	15+93	3/4" IRON REBAR SET 16.84' RT.	325,379.64	743,390.43

MAINLINE STATION LAYOUT

STATION	Y	X	COMMENTS
12+00	324,985.66	743,356.32	BEGIN PROJECT
12+50	325,035.59	743,359.05	–
12+96.18	325,081.70	743,361.57	END OF DECK
13+00	325,085.51	743,361.78	–
13+50	325,135.44	743,364.51	–
13+68.76	325,154.17	743,365.53	END OF DECK
14+00	325,185.36	743,367.23	–
14+50	325,235.29	743,369.96	END OF PROJECT

CULVERT PIPE LAYOUT TABLE

STATION	LOCATION	UPSTREAM			DOWNSTREAM		
		Y	X	ELEV.	Y	X	ELEV.
20'A'+66	'A'–LINE, LT.	325,224.33	743,425.57	1012.67	325,225.52	743,447.54	1011.74
21'A'+00	'A'–LINE	325,216.08	743,467.76	1010.83	325,174.08	743,467.76	1010.59
21'A'+24	'A'–LINE, RT.	325,169.74	743,520.50	1010.07	325,158.56	743,492.57	1009.93

'A'-LINE STATION LAYOUT

STATION	Y	X	COMMENTS
20'A'+13.61	325,195.08	743,381.37	BEGIN CONSTRUCTION
20'A'+40.63	325,195.08	743,408.39	END CONSTRUCTION/BEGIN CONSTRUCTION (WORK BY OTHERS)
20'A'+50	325,195.08	743,417.76	–
21'A'+00	325,195.08	743,467.76	–
21'A'+50	325,195.08	743,517.76	–
21'A'+80	325,195.08	743,547.76	END CONSTRUCTION (WORK BY OTHERS)

FILE NAME : S:\PROJECTS\M08060 MONROE CO CTH W BRIDGE\SHEETSPLAN\DETAILS\ALIGNMENT & TIES.DWG
LAYOUT : LAYOUT2
PLOT DATE : 10/3/2018
PLOT TIME : 2:05:40 PM
PLOT BY : JULIA ZEHNER
PLOT SCALE : 1" = 1'

5516-00-70

Line	Item	Item Description	Unit	Total	Qty
0002	201.0105	Clearing	STA	1.000	1.000
0004	201.0205	Grubbing	STA	1.000	1.000
0006	203.0600.S	Removing Old Structure Over Waterway With Minimal Debris (station) 01. 13+35	LS	1.000	1.000
0008	204.0100	Removing Pavement	SY	2.000	2.000
0010	204.0150	Removing Curb & Gutter	LF	205.000	205.000
0012	204.0155	Removing Concrete Sidewalk	SY	100.000	100.000
0014	204.0190	Removing Surface Drains	EACH	1.000	1.000
0016	204.0210	Removing Manholes	EACH	1.000	1.000
0018	204.0220	Removing Inlets	EACH	1.000	1.000
0020	204.0245	Removing Storm Sewer (size) 01. 18-Inch	LF	78.000	78.000
0022	205.0100	Excavation Common	CY	660.000	660.000
0024	206.1000	Excavation for Structures Bridges (structure) 01. B-41-306	LS	1.000	1.000
0026	210.1500	Backfill Structure Type A	TON	345.000	345.000
0028	213.0100	Finishing Roadway (project) 01. 5516-00-70	EACH	1.000	1.000
0030	305.0110	Base Aggregate Dense 3/4-Inch	TON	90.000	90.000
0032	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	660.000	660.000
0034	416.0160	Concrete Driveway 6-Inch	SY	40.000	40.000
0036	455.0605	Tack Coat	GAL	40.000	40.000
0038	465.0105	Asphaltic Surface	TON	185.000	185.000
0040	465.0315	Asphaltic Flumes	SY	20.000	20.000
0042	502.0100	Concrete Masonry Bridges	CY	352.000	352.000
0044	502.3200	Protective Surface Treatment	SY	375.000	375.000
0046	502.3210	Pigmented Surface Sealer	SY	82.000	82.000
0048	505.0400	Bar Steel Reinforcement HS Structures	LB	6,780.000	6,780.000
0050	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	44,070.000	44,070.000
0052	513.7016	Railing Steel Type C3	LF	190.000	190.000
0054	516.0500	Rubberized Membrane Waterproofing	SY	16.000	16.000
0056	522.1018	Apron Endwalls for Culvert Pipe Reinforced Concrete 18-Inch	EACH	1.000	1.000
0058	522.1024	Apron Endwalls for Culvert Pipe Reinforced Concrete 24-Inch	EACH	1.000	1.000
0060	550.0020	Pre-Boring Rock or Consolidated Materials	LF	96.000	96.000
0062	550.0500	Pile Points	EACH	12.000	12.000
0064	550.1100	Piling Steel HP 10-Inch X 42 Lb	LF	340.000	340.000
0066	601.0411	Concrete Curb & Gutter 30-Inch Type D	LF	295.000	295.000
0068	601.0415	Concrete Curb & Gutter 6-Inch Sloped 30-Inch Type J	LF	16.000	16.000
0070	602.0405	Concrete Sidewalk 4-Inch	SF	1,020.000	1,020.000
0072	606.0300	Riprap Heavy	CY	240.000	240.000
0074	608.0312	Storm Sewer Pipe Reinforced Concrete Class III 12-	LF	26.000	26.000

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Line	Item	Item Description	Unit	Total	Qty
		Inch			
0076	608.0318	Storm Sewer Pipe Reinforced Concrete Class III 18-Inch	LF	30.000	30.000
0078	608.0324	Storm Sewer Pipe Reinforced Concrete Class III 24-Inch	LF	125.000	125.000
0080	611.0420	Reconstructing Manholes	EACH	1.000	1.000
0082	611.0535	Manhole Covers Type J-Special	EACH	2.000	2.000
0084	611.0603	Inlet Covers Type A-S	EACH	1.000	1.000
0086	611.0639	Inlet Covers Type H-S	EACH	5.000	5.000
0088	611.2004	Manholes 4-FT Diameter	EACH	2.000	2.000
0090	611.3004	Inlets 4-FT Diameter	EACH	1.000	1.000
0092	611.3230	Inlets 2x3-FT	EACH	5.000	5.000
0094	611.8110	Adjusting Manhole Covers	EACH	1.000	1.000
0096	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	200.000	200.000
0098	618.0100	Maintenance And Repair of Haul Roads (project) 01. 5516-00-70	EACH	1.000	1.000
0100	619.1000	Mobilization	EACH	1.000	1.000
0102	624.0100	Water	MGAL	6.000	6.000
0104	625.0100	Topsoil	SY	425.000	425.000
0106	628.1504	Silt Fence	LF	690.000	690.000
0108	628.1520	Silt Fence Maintenance	LF	2,070.000	2,070.000
0110	628.1905	Mobilizations Erosion Control	EACH	4.000	4.000
0112	628.1910	Mobilizations Emergency Erosion Control	EACH	4.000	4.000
0114	628.2002	Erosion Mat Class I Type A	SY	390.000	390.000
0116	628.2008	Erosion Mat Urban Class I Type B	SY	45.000	45.000
0118	628.7005	Inlet Protection Type A	EACH	6.000	6.000
0120	628.7015	Inlet Protection Type C	EACH	6.000	6.000
0122	629.0210	Fertilizer Type B	CWT	1.000	1.000
0124	630.0140	Seeding Mixture No. 40	LB	8.000	8.000
0126	630.0160	Seeding Mixture No. 60	LB	1.000	1.000
0128	630.0200	Seeding Temporary	LB	4.000	4.000
0130	633.5100	Markers Row	EACH	10.000	10.000
0132	633.5200	Markers Culvert End	EACH	2.000	2.000
0134	634.0816	Posts Tubular Steel 2x2-Inch X 16-FT	EACH	2.000	2.000
0136	637.2210	Signs Type II Reflective H	SF	6.680	6.680
0138	638.2602	Removing Signs Type II	EACH	6.000	6.000
0140	638.3000	Removing Small Sign Supports	EACH	6.000	6.000
0142	642.5001	Field Office Type B	EACH	1.000	1.000
0144	643.0420	Traffic Control Barricades Type III	DAY	1,560.000	1,560.000
0146	643.0705	Traffic Control Warning Lights Type A	DAY	2,500.000	2,500.000

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Line	Item	Item Description	Unit	Total	Qty
0148	643.0900	Traffic Control Signs	DAY	1,330.000	1,330.000
0150	643.5000	Traffic Control	EACH	1.000	1.000
0152	645.0111	Geotextile Type DF Schedule A	SY	110.000	110.000
0154	645.0120	Geotextile Type HR	SY	450.000	450.000
0156	646.1020	Marking Line Epoxy 4-Inch	LF	500.000	500.000
0158	650.4000	Construction Staking Storm Sewer	EACH	10.000	10.000
0160	650.4500	Construction Staking Subgrade	LF	205.000	205.000
0162	650.5000	Construction Staking Base	LF	205.000	205.000
0164	650.5500	Construction Staking Curb Gutter and Curb & Gutter	LF	336.000	336.000
0166	650.6500	Construction Staking Structure Layout (structure) 01. B-41-306	LS	1.000	1.000
0168	650.9910	Construction Staking Supplemental Control (project) 01. 5516-00-70	LS	1.000	1.000
0170	650.9920	Construction Staking Slope Stakes	LF	205.000	205.000
0172	690.0150	Sawing Asphalt	LF	95.000	95.000
0174	690.0250	Sawing Concrete	LF	14.000	14.000
0176	715.0502	Incentive Strength Concrete Structures	DOL	2,112.000	2,112.000
0178	ASP.1T0A	On-the-Job Training Apprentice at $5.00/HR	HRS	600.000	600.000
0180	ASP.1T0G	On-the-Job Training Graduate at $5.00/HR	HRS	200.000	200.000
0182	SPV.0060	Special 01. Adjusting Valve Boxes	EACH	2.000	2.000
0184	SPV.0090	Special 01. Removing Sanitary Sewer	LF	105.000	105.000
0186	SPV.0090	Special 02. Concrete Curb & Gutter 24-inch Type D	LF	25.000	25.000
0188	SPV.0090	Special 03. Construction Staking Sidewalk	LF	180.000	180.000

3

CLEARING & GRUBBING

STATION - STATION	LOCATION	201.0105 CLEARING (STA.) CATEGORY 010	201.0105 CLEARING (STA.) WORK BY OTHERS	201.0205 GRUBBING (STA.) CATEGORY 010	201.0205 GRUBBING (STA.) WORK BY OTHERS
13+00 - 14+00	MAINLINE	1	-	1	-
20'A'+50 - 21'A'+50	'A'-LINE, RT.	-	1	-	1
	TOTALS =	1	1	1	1

REMOVING CURB & GUTTER

STATION - STATION	LOCATION	204.0150 (LF) CATEGORY 010
12+00 - 13+15	MAINLINE, LT.	117
13+64 - 14+50	MAINLINE, LT.	88
	TOTAL =	205

REMOVING PAVEMENT

STATION - STATION	LOCATION	204.0100 (SY) CATEGORY 010
20'A'+39 - 20'A'+45	'A'-LINE, RT.	2
	TOTAL =	2

REMOVING SURFACE DRAINS

STATION	LOCATION	204.0190 (EACH) CATEGORY 010
13+81	MAINLINE, LT.	1
	TOTAL =	1

3

REMOVING CONCRETE SIDEWALK

STATION - STATION	LOCATION	204.0155 (SY) CATEGORY 010	204.0155 (SY) WORK BY OTHERS
12+00 - 13+16	MAINLINE, LT.	60	-
13+65 - 14+50	MAINLINE, LT.	40	-
21'A'+48	'A'-LINE, LT.	-	7
	TOTALS =	100	7

REMOVING MANHOLES & SANITARY SEWER (NON-PARTICIPATING)

STATION - STATION	LOCATION	204.0210 REMOVING MANHOLES (EACH) CATEGORY 040	SPV.0090.01 REMOVING SANITARY SEWER (LF) CATEGORY 040	DESCRIPTION
12+46 - 13+01	MAINLINE, RT.	-	55	8" - CLAY PIPE
13+01	MAINLINE, RT.	1	-	-
13+01 - 13+13	MAINLINE	-	50	6" - CLAY PIPE
	TOTALS =	1	105	

REMOVING INLETS & STORM SEWER

STATION - STATION	LOCATION	204.0220 REMOVING INLETS (EACH) CATEGORY 010	204.0245 REMOVING STORM SEWER (18-INCH) (LF) CATEGORY 010
12+38	MAINLINE, LT.	1	-
12+38 - 13+15	MAINLINE, LT.	-	78
	TOTALS =	1	78

EARTHWORK SUMMARY

STATION - STATION	LOCATION	(1) 205.0100 EXCAVATION COMMON CUT (CY) CATEGORY 010	(1) 205.0100 EXCAVATION COMMON CUT (CY) WORK BY OTHERS	AVAILABLE MATERIAL (CY) (2) CATEGORY 010	AVAILABLE MATERIAL (CY) (2) WORK BY OTHERS	UNEXPANDED FILL (CY) CATEGORY 010	UNEXPANDED FILL (CY) WORK BY OTHERS	EXPANDED FILL (CY) FACTOR 1.25 (3) (CY) CATEGORY 010	EXPANDED FILL (CY) FACTOR 1.25 (3) (CY) WORK BY OTHERS	MASS ORDINATE +/- (CY) (4) CATEGORY 010	MASS ORDINATE +/- (CY) (4) WORK BY OTHERS	WASTE (CY) CATEGORY 010	WASTE (CY) WORK BY OTHERS
12+00 - 14+50	MAINLINE	455	-	455	-	-	-	-	-	455	-	455	
20'A'+13.61 - 20'A'+40.63	'A'-LINE	115	-	115	-	20	-	25	-	90	-	90	
20'A'+40.63 - 21'A'+80	'A'-LINE	-	860	-	860	-	47	-	60	-	800		800
DRIVEWAYS	MAINLINE	30	-	30	-	-	-	-	-	30	-	30	
DRIVEWAYS	'A'-LINE	-	35	-	35	-	8	-	10	-	25		25
STORM SEWER OUTLET	MAINLINE, RT.	60	-	60	-	-	-	-	-	60	-	60	
	TOTALS =	660	895	660	895	20	55	25	70	635	825	635	825

NOTES:
1.) SALVAGED/UNUSABLE PAVEMENT MATERIAL IS INCLUDED IN CUT
2.) AVAILABLE MATERIAL = CUT
3.) EXPANDED FILL FACTOR 1.25: EXPANDED FILL = (UNEXPANDED FILL)*1.25
4.) THE MASS ORDINATE + OR - QTY CALCULATED FOR THE DIVISION. PLUS QUANTITY INDICATES AN EXCESS OF MATERIAL WITHIN THE CATEGORY. MINUS INDICATES A SHORTAGE OF MATERIAL WITHIN THE CATEGORY.

BASE AGGREGATE DENSE

STATION - STATION	LOCATION	305.0110 BASE AGGREGATE DENSE 3/4-INCH (TON) CATEGORY 010	305.0110 BASE AGGREGATE DENSE 3/4-INCH (TON) WORK BY OTHERS	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH (TON) CATEGORY 010	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH (TON) WORK BY OTHERS
12+00 - 14+50	MAINLINE	50	-	539	-
20'A'+13.61 - 20'A'+40.63	A'-LINE	1	-	61	-
20'A'+40.63 - 21'A'+80	A'-LINE	-	17	-	285
DRIVEWAYS	MAINLINE	27	-	-	-
DRIVEWAYS	A'-LINE	-	48	-	-
-	UNDISTRIBUTED	12	5	60	25
	TOTALS =	90	70	660	310

CONCRETE DRIVEWAY 6-INCH

STATION	LOCATION	416.0160 (SY) CATEGORY 010
12+22	MAINLINE, LT.	9
12+34	MAINLINE, RT.	20
12+59	MAINLINE, LT.	11
	TOTALS =	40

ASPHALTIC SURFACE

STATION - STATION	LOCATION	455.0605 TACK COAT (GAL) CATEGORY 010	455.0605 TACK COAT (GAL) WORK BY OTHERS	465.0105 ASPHALTIC SURFACE (TON) CATEGORY 010	465.0105 ASPHALTIC SURFACE (TON) WORK BY OTHERS
12+00 - 14+50	MAINLINE	32	-	149	-
20'A'+13.61 - 20'A'+40.63	'A'-LINE	4	-	17	-
20'A'+40.63 - 21'A'+80	'A'-LINE	-	14	-	64
DRIVEWAYS	MAINLINE	-	-	9	-
-	UNDISTRIBUTED	4	1	10	6
	TOTALS =	40	15	185	70

ASPHALTIC FLUMES

STATION	LOCATION	465.0315 (SY) CATEGORY 010
13+78	MAINLINE, RT	8
20'A'+39	'A'-LINE, LT.	12
	TOTAL=	20

FILE NAME : S:\PROJECTS\M08060 MONROE CO CTH W BRIDGE\SHEETSPLAN\DETAILS\MISCELLANEOUS QUANTITIES.DWG
LAYOUT :
PLOT DATE : 12/11/2018
PLOT TIME : 11:08:49 AM
PLOT BY : STEPHANIE POTTER
PLOT SCALE : 1" = 1'

CONCRETE CURB & GUTTER

STATION-STATION	LOCATION	601.0411 CONCRETE CURB & GUTTER 30-INCH TYPE D (LF) CATEGORY 010	601.0415 CONCRETE CURB & GUTTER 6-INCH SLOPED 30-INCH TYPE J (LF) CATEGORY 010	SPV.0090.02 CONCRETE CURB & GUTTER 24-INCH TYPE D (LF) CATEGORY 010	650.5500 CONSTRUCTION STAKING CURB & GUTTER (LF) CATEGORY 010
12+00 - 12+74	MAINLINE, LT.	74	-	-	74
12+00 - 12+92	MAINLINE, RT.	92	-	-	92
12+74 - 12+90	MAINLINE, LT.	-	16	-	16
12+90 - 13+01	MAINLINE, LT.	11	-	-	11
13+64 - 14+50	MAINLINE, RT	66	-	-	66
13+73 - 14+25	MAINLINE, LT.	52	-	-	52
14+25 - 14+50	MAINLINE, LT.	-	-	25	25
	TOTALS =	295	16	25	336

CULVERT PIPE

STATION	LOCATION	520.1018 APRON ENDWALLS FOR CULVERT PIPE 18-INCH (EACH) WORK BY OTHERS	520.1024 APRON ENDWALLS FOR CULVERT PIPE 24-INCH (EACH) WORK BY OTHERS	520.3318 CULVERT PIPE CLASS III-A 18-INCH (LF) WORK BY OTHERS	520.3324 CULVERT PIPE CLASS III-A 24-INCH (LF) WORK BY OTHERS	628.7555 CULVERT PIPE CHECKS (EACH) WORK BY OTHERS	*633.5200 MARKERS CULVERT END CHECKS (EACH) WORK BY OTHERS	650.6000 CONSTRUCTION STAKING PIPE CULVERTS (EACH) WORK BY OTHERS
20'A'+66	'A'-LINE, LT. (P.E.)	2	-	22	-	2	-	1
21'A'+00	'A'-LINE	-	2	-	42	3	2	1
21'A'+24	'A'-LINE, RT. (P.E.)	2	-	30	-	2	-	1
-	UNDISTRIBUTED	-	-	-	-	1	-	-
	TOTALS =	4	2	52	42	8	2	3

*MORE LISTED ELSEWHERE

CONCRETE SIDEWALK 4-INCH

STATION - STATION	LOCATION	602.0405 CONCRETE SIDEWALK 4-INCH (SF) CATEGORY 010	SPV.0090.03 CONSTRUCTION STAKING SIDEWALK (LF) CATEGORY 010
12+00 - 13+03	MAINLINE, LT.	607	104
13+74 - 14+50	MAINLINE, LT.	413	76
	TOTALS =	1020	180

STORM SEWER PIPES

PIPE NUMBER	FROM STRUCTURE	TO STRUCTURE	INLET ELEVATION (FT)	OUTLET ELEVATION (FT)	% SLOPE	APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 522.1018 18-INCH (EACH) CATEGORY 010	APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 522.1024 24-INCH (EACH) CATEGORY 010	REINFORCED CONCRETE PIPE CLASS III STORM SEWER 608.0312 12-INCH (LF) CATEGORY 010	REINFORCED CONCRETE PIPE CLASS III STORM SEWER 608.0318 18-INCH (LF) CATEGORY 010	REINFORCED CONCRETE PIPE CLASS III STORM SEWER 608.0324 24-INCH (LF) CATEGORY 010	INFORMATIONAL PURPOSES ONLY JOINT TIES (EACH) CATEGORY 010
P-100	I-100	I-101	1010.25	1009.80	7.5	-	-	9	-	-	-
P-101	I-101	STMH-1	1009.20	1008.05	3.7	-	-	-	-	31	-
P-102	I-102	I-103	1010.11	1009.81	10.0	-	-	6	-	-	-
P-103	I-103	STMH-1	1009.14	1008.11	3.2	-	-	-	-	36	-
P-104	STMH-1	EW-1	1007.55	1004.05	6.0	-	1	-	-	58	6
P-105	I-104	I-105	1013.30	1012.86	4.0	-	-	11	-	-	-
P-106	I-105	STMH-2	1012.36	1011.52	6.0	-	-	-	14	-	-
P-107	STMH-2	EW-2	1011.02	1010.06	6.0	1	-	-	16	-	6
					TOTALS =	1	1	26	30	125	12

RIPRAP HEAVY/GEOTEXTILE TYPE HR

STATION - STATION	LOCATION	* 606.0300 RIPRAP HEAVY (LF) CATEGORY 010	* 606.0300 RIPRAP HEAVY (LF) WORK BY OTHERS	* 645.0120 GEOTEXTILE TYPE HR (SY) CATEGORY 010	* 645.0120 GEOTEXTILE TYPE HR (SY) WORK BY OTHERS
12+73 - 13+10	MAINLINE, RT.	67	-	129	-
20'A'+26 - 20'A'+40.63	'A'-LINE, RT.	14	-	37	-
20'A'+40.63 - 21'A'+08	'A'-LINE, RT.	-	67	-	131
-	UNDISTRIBUTED	9	3	14	9
	TOTALS =	90	70	180	140

* MORE LISTED ELSEWHERE

STORM SEWER STRUCTURES

STRUCTURE NUMBER	STATION	LOCATION	RIM ELEVATION (FT)	611.0535 MANHOLE COVERS TYPE J-SPECIAL (EACH) CATEGORY 010	611.0639 INLET COVERS TYPE H-S (EACH) CATEGORY 010	611.0603 INLET COVERS TYPE A-S (EACH) CATEGORY 010	611.2004 MANHOLES 4-FT DIAMETER (EACH) CATEGORY 010	611.3004 INLETS 4-FT DIAMETER (EACH) CATEGORY 010	611.3230 INLETS 2X3-FT (EACH) CATEGORY 010	STRUCTURE DEPTH (FT)	628.7005 INLET PROTECTION TYPE A (EACH) CATEGORY 010	628.7015 INLET PROTECTION TYPE C (EACH) CATEGORY 010	*633.5200 MARKERS CULVERT END (EACH) CATEGORY 010	650.4000 CONSTRUCTION STAKING STORM SEWER (EACH) CATEGORY 010
I-100	12+02.00	MAINLINE, 16.50' RT.	1013.25	-	1	-	-	-	1	2.00	1	1	-	1
I-101	12+11.00	MAINLINE, 16.50' RT.	1013.29	-	-	1	-	1	-	3.01	1	1	-	1
I-102	12+37.00	MAINLINE, 21.50' LT.	1013.11	-	1	-	-	-	1	2.00	1	1	-	1
I-103	12+43.00	MAINLINE, 21.50' LT.	1013.14	-	1	-	-	-	1	3.00	1	1	-	1
STMH 1	12+41.00	MAINLINE, 12.50' RT.	1013.47	1	-	-	1	-	-	4.67	-	-	-	1
EW-1	12+86.00	MAINLINE, 49.16' RT.	-	-	-	-	-	-	-	-	-	-	1	1
I-104	13+80.21	MAINLINE, 16.50' LT.	1016.30	-	1	-	-	-	1	2.00	1	1	-	1
I-105	13+91.21	MAINLINE, 16.50' LT.	1016.72	-	1	-	-	-	1	3.36	1	1	-	1
STMH-2	13+91.21	MAINLINE, 30.00' LT.	1016.52	1	-	-	1	-	-	4.25	-	-	-	1
EW-2	13+75.16	MAINLINE, 30.00' LT.	-	-	-	-	-	-	-	-	-	-	1	1
		TOTALS =		2	5	1	2	1	5		6	6	2	10

NOTES:
STATION AND OFFSET OF MANHOLE STRUCTURES ARE MEASURED FROM CENTER OF STRUCTURE.
STATION AND OFFSET OF INLET STRUCTURES ARE MEASURED TO FLANGE OF INLET.
ALL RIM ELEVATIONS ARE MEASURED TO THE FLANGE OF THE INLET.
STRUCTURE DEPTH (INLET 2x3-FT) = RIM ELEVATION - INVERT LOWEST PIPE- 6 INCHES (RINGS) - 5 INCHES (CASTING HEIGHT).
STRUCTURE DEPTH (INLET 4-FT DIAMETER) = RIM ELEVATION - INVERT LOWEST PIPE- 6 INCHES (RINGS) - 7 INCHES (CASTING HEIGHT).
STRUCTURE DEPTH (MANHOLE 4-FT DIAM.) = RIM ELEVATION - INVERT LOWEST PIPE- 6 INCHES (RINGS) - 9 INCHES (CASTING HEIGHT).

*MORE LISTED ELSEWHERE

ADJUSTING MANHOLE COVERS (NON-PARTICIPATING)

STATION	LOCATION	611.8110 (EACH) CATEGORY 040	DESCRIPTION	EXISTING ELEVATION	PROPOSED ELEVATION	DIFFERENCE
12+46	MAINLINE, 7' RT.	1	SANITARY MANHOLE	1013.74	1013.63	LOWER 0.11'
	TOTAL =	1				

RECONSTRUCTING MANHOLES (NON-PARTICIPATING)

STATION	LOCATION	611.0420 (EACH) CATEGORY 040	DESCRIPTION	EXISTING ELEVATION	PROPOSED ELEVATION	DIFFERENCE
20'A'+42	'A'-LINE, 8' RT.	1	SANITARY MANHOLE	1015.15	1016.74	RAISE 1.59'
	TOTAL =	1				

WATER

PROJECT	LOCATION	624.0100 (MGAL) CATEGORY 010	WORK BY OTHERS
5516-00-70	MAINLINE	6	3
	TOTALS =	6	3

FINISHING ITEMS

STATION - STATION	LOCATION	625.0100 TOPSOIL (SY) CATEGORY 010	625.0100 TOPSOIL (SY) WORK BY OTHERS	625.0500 SALVAGED TOPSOIL (SY) CATEGORY 010	625.0500 SALVAGED TOPSOIL (SY) WORK BY OTHERS	629.0210 FERTILIZER TYPE B (CWT) CATEGORY 010	629.0210 FERTILIZER TYPE B (CWT) WORK BY OTHERS	630.0140 SEEDING MIXTYURE NO. 40 (LB) CATEGORY 010	630.0140 SEEDING MIXTYURE NO. 40 (LB) WORK BY OTHERS	630.0160 SEEDING MIXTYURE NO. 60 (LB) CATEGORY 010	630.0160 SEEDING MIXTYURE NO. 60 (LB) WORK BY OTHERS	630.0200 SEEDING TEMPORARY (LB) CATEGORY 010	630.0200 SEEDING TEMPORARY (LB) WORK BY OTHERS
*12+00 - 14+50	MAINLINE	341	-	0.5	-	6	-	0.3	-	3	-		
20'A'+40.63 - 21'A'+80	'A'-LINE	-	1127	-	0.8	-	22	-	1.2	-	12		
-	UNDISTRIBUTED	84	273	0.5	0.2	2	6	0.7	0.8	1	3		
	TOTALS =	425	1400	1.0	1.0	8	28	1.0	2.0	4	15		

*INCLUDES STA. 20'A'+13.61 - STA. 20'A'+40.63

SILT FENCE

STATION - STATION	LOCATION	628.1504 SILT FENCE (LF) CATEGORY 010	628.1504 SILT FENCE (LF) WORK BY OTHERS	628.1520 SILT FENCE MAINTENANCE (LF) CATEGORY 010	628.1520 SILT FENCE MAINTENANCE (LF) WORK BY OTHERS
12+76 - 13+18	MAINLINE, LT.	86	-	258	-
12+58 - 13+09	MAINLINE, RT.	165	-	495	-
13+27 - 13+37	MAINLINE	130	-	390	-
13+53 - 14+50	MAINLINE, LT	128	-	384	-
20'A'+00 - 20'A'+40.63	'A'-LINE, RT.	47	-	141	-
20'A'+40.63 - 21'A'+00	'A'-LINE, RT.	-	184	-	184
-	UNDISTRIBUTED	134	46	402	46
	TOTALS =	690	230	2070	230

EROSION MAT

STATION - STATION	LOCATION	EROSION MAT 628.2002 CLASS I TYPE A (SY) CATEGORY 010	EROSION MAT 628.2002 CLASS I TYPE A (SY) WORK BY OTHERS	EROSION MAT 628.2008 URBAN CLASS I TYPE B (SY) CATEGORY 010	EROSION MAT 628.2008 URBAN CLASS I TYPE B (SY) WORK BY OTHERS	COMMENTS
*12+00 - 14+50	MAINLINE	312	-	-	-	-
13+78	MAINLINE, RT.	-	-	8	-	FLUME
20'A'+26 - 20'A'+40.63	'A'-LINE, RT.	-	-	21	-	INTEGRATED BANK MANAGEMENT SYSTEM
20'A'+40.63 - 21'A'+80	'A'-LINE	-	1193	-	-	-
20'A'+40.63 - 21'A'+80	'A'-LINE	-	-	-	88	INTEGRATED BANK MANAGEMENT SYSTEM
20'A'+39	'A'-LINE, LT.	-	-	8	-	FLUME
20'A'+66	'A'-LINE, LT.	-	-	-	6	DISCHARGE AT CULVERT PIPE
21'A'+00	'A'-LINE, RT.	-	-	-	8	DISCHARGE AT CULVERT PIPE
21'A'+24	'A'-LINE, RT.	-	-	-	6	DISCHARGE AT CULVERT PIPE
-	UNDISTRIBUTED	78	297	8	22	-
	TOTALS =	390	1490	45	130	

*INCLUDES STA. 20'A'+13.61 - STA. 20'A'+40.63
P PAY PLAN QUANTITY

MOBILIZATION EROSION CONTROL

PROJECT	628.1905 MOBILIZATIONS EROSION CONTROL (EACH) CATEGORY 010	628.1905 MOBILIZATIONS EROSION CONTROL (EACH) WORK BY OTHERS	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL (EACH) CATEGORY 010	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL (EACH) WORK BY OTHERS
5516-00-70	4	2	4	1
TOTALS =	4	2	4	1

TEMPORARY DITCH CHECKS

STATION	LOCATION	628.7504 (LF) WORK BY OTHERS
21'A'+50	'A'-LINE, LT	8
-	UNDISTRIBUTED	8
	TOTAL =	16

MARKERS ROW

POINT	STATION	LOCATION	633.5100 (EACH) CATEGORY 010	633.5100 (EACH) WORK BY OTHERS
101	12+00	MAINLINE, 31.05, LT.	1	-
102	14+50	MAINLINE, 40.58, LT.	1	-
103	14+50	MAINLINE, 25.47, RT.	1	-
104	21+00	MAINLINE, 45.00, LT.	-	1
105	22+00	MAINLINE, 31.56, LT.	-	1
106	22+00	MAINLINE, 34.64, RT.	-	1
107	13+63.16	MAINLINE, 28.78, RT.	1	-
108	13+05	MAINLINE, 31.00, RT.	1	-
109	13+05	MAINLINE, 53.00, RT.	1	-
110	12+92.55	MAINLINE, 63.08, RT.	1	-
111	12+70	MAINLINE, 63.00, RT.	1	-
112	12+60	MAINLINE, 32.71, RT.	1	-
113	12+03.96	MAINLINE, 34.85, RT.	1	-
		TOTAL =	10	3

PERMANENT SIGNING

APPROX. STATION	LOCATION	SIGN CODE	SIGN DESCRIPTION	SIZE (INCH X INCH)	634.0816 POSTS TUBULAR STEEL 2X2-INCH X 16-FT (EACH) CATEGORY 010	637.2210 SIGNS TYPE II REFLECTIVE H (SF) CATEGORY 010	638.2602 REMOVING SIGNS TYPE II (EACH) CATEGORY 010	638.3000 REMOVING SMALL SIGN SUPPORTS (EACH) CATEGORY 010
13+05	MAINLINE, RT.	W5-52R	BRISGE HASH MARKS	12X36	-	-	1	1
13+16	MAINLINE, LT.	W5-52L	BRISGE HASH MARKS	12X36	-	-	1	1
13+56	MAINLINE, RT.	W5-52L	BRISGE HASH MARKS	12X36	-	-	1	1
13+66	MAINLINE, LT.	W5-52R	BRISGE HASH MARKS	12X36	-	-	1	1
14+33	MAINLINE, RT.	R7-52	NO PARKING BETWEEN SIGNS (ARROWS)	12x18	-	-	1	1
14+39	MAINLINE, RT.	R7-52	NO PARKING BETWEEN SIGNS (ARROWS)	12x18	1	1.50	-	-
20'A'+29	'A'-LINE, LT.	R1-1	STOP	30X30	-	-	1	1
20'A'+32	'A'-LINE, LT.	R1-1	STOP	30X30	1	5.18	-	-
			TOTALS =		2	6.68	6	6

TRAFFIC CONTROL

PROJECT	643.0420 TRAFFIC CONTROL BARRICADES TYPE III (DAY) CATEGORY 010	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A (DAY) CATEGORY 010	643.0900 TRAFFIC CONTROL SIGNS (DAY) CATEGORY 010	643.5000 TRAFFIC CONTROL (5516-00-70) (EACH) CATEGORY 010
5516-00-70	1560	2500	1330	1
TOTALS =	1560	2500	1330	1

PAVEMENT MARKING

STATION - STATION	LOCATION	DESCRIPTION	646.1020 MARKING LINE EPOXY 4-INCH (LF) CATEGORY 010
12+00 - 14+50	MAINLINE	DOUBLE YELLOW	500
		TOTAL =	500

CONSTRUCTION STAKING

STATION - STATION	LOCATION	CONSTRUCTION STAKING: 650.4500 SUBGRADE (LF) CATEGORY 010	650.4500 SUBGRADE (LF) WORK BY OTHERS	650.5000 BASE (LF) CATEGORY 010	650.5000 BASE (LF) WORK BY OTHERS	650.6500 STRUCTURE LAYOUT (B-41-306) (LS) CATEGORY 020	650.9910 SUPPLEMENTAL CONTROL (5516-00-70) (LS) CATEGORY 010	650.9920 SLOPE STAKES (LF) CATEGORY 010	650.9920 SLOPE STAKES (LF) WORK BY OTHERS
12+00 - 14+50	MAINLINE	177	-	177	-	-	-	177	-
20'A'+13.61 - 20'A'+40.63	'A'-LINE	28	-	28	-	-	-	28	-
20'A'+40.63 - 21'A'+80	'A'-LINE	-	140	-	140	-	-	-	140
-	PROJECT	-	-	-	-	1	1	-	-
	TOTALS =	205	140	205	140	1	1	205	140

SAWING ASPHALT/SAWING CONCRETE

STATION	LOCATION	690.0150 SAWING ASPHALT (LF) CATEGORY 010	690.0150 SAWING ASPHALT (LF) WORK BY OTHERS	690.0250 SAWING CONCRETE (LF) CATEGORY 010
12+00	MAINLINE	37	-	-
12+00	MAINLINE, LT.	-	-	7
12+34	MAINLINE, RT.	30	-	-
14+50	MAINLINE	28	-	-
14+50	MAINLINE, LT	-	-	7
21'A'+80	'A'-LINE	-	18	-
	TOTALS =	95	18	14

ADJUSTING VALVE BOXES (NON-PARTICIPATING)

STATION	LOCATION	SPV.0060.01 (EACH) CATEGORY 040
14+38	MAINLINE, LT.	1
14+50	MAINLINE, LT.	1
	TOTAL =	2

R/W PROJECT NUMBER	SHEET NUMBER	TOTAL SHEETS
5516-00-00		
FEDERAL PROJECT NUMBER	4.01	2

PLAT OF RIGHT-OF-WAY REQUIRED FOR

VILLAGE OF KENDALL, WHITE STREET

(BRANCH OF BARABOO RIVER BRIDGE B-41-0306)

CTH W — MONROE COUNTY

CONSTRUCTION PROJECT NUMBER
5516-00-70

CONVENTIONAL ABBREVIATIONS

ACCESS POINT/ DRIVEWAY CONNECTION	AP	PROPERTY LINE	PL
ACCESS RIGHTS	AR	RECORDED AS	(100')
ACRES	AC.	REFERENCE LINE	R/L
AND OTHERS	ET.AL.	RELEASE OF RIGHTS	ROR
BARN	B.	REMAINING	REM.
CENTERLINE	C/L	RIGHT-OF-WAY	R/W
CERTIFIED SURVEY MAP	CSM	SECTION	SEC.
CORNER	COR.	SHED	S.
CONVEYANCE OF RIGHTS	CR	STATION	STA.
DOCUMENT	DOC.	TEMPORARY LIMITED EASEMENT	TLE
EASEMENT	EASE.	VOLUME	V.
GARAGE	G.		
HIGHWAY EASEMENT	H.E.	CURVE DATA	
HOUSE	H.	LONG CHORD	LCH
HOUSE TRAILER	H.T.	LONG CHORD BEARING	LCB
LAND CONTRACT	LC	RADIUS	R
MONUMENT	MON.	DEGREE OF CURVE	D
PAGE	P.	CENTRAL ANGLE OR DELTA	DELTA
PERMANENT LIMITED EASEMENT	PLE	LENGTH OF CURVE	L
		TANGENT	TAN

CONVENTIONAL SYMBOLS

FOUND SURVEY MONUMENT (WITH POINT NUMBER)	o1040	PROPOSED R/W LINE	
R/W MONUMENT	o • (SET)	EXISTING H.E. LINE	
R/W STANDARD	△ ▲ (SET)	PROPERTY LINE	
SIGN	ISIGN	LOT & TIE LINES	
SECTION CORNER MONUMENT		SLOPE INTERCEPTS	
SECTION CORNER SYMBOL		CORPORATE LIMITS	
FEE (HATCH VARIES)		NO ACCESS (BY PREVIOUS ACQUISITION/CONTROL)	
TEMPORARY LIMITED EASEMENT		NO ACCESS (BY ACQUISTION)	
PERMANENT LIMITED EASEMENT		NO ACCESS (BY STATUTORY AUTHORITY)	
R/W BOUNDARY POINT	RWB20	SECTION LINE	
PARCEL NUMBER	8	QUARTER LINE	
UTILITY PARCEL NUMBER	92	SIXTEENTH LINE	
SIGN NUMBER (OFF PREMISE)	21-	EXISTING CENTERLINE	
BUILDING		PROPOSED REFERENCE LINE	
		PARALLEL OFFSET	
		ENCROACHMENT	E-D/TYPE

CONVENTIONAL UTILITY SYMBOLS

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

NOTES

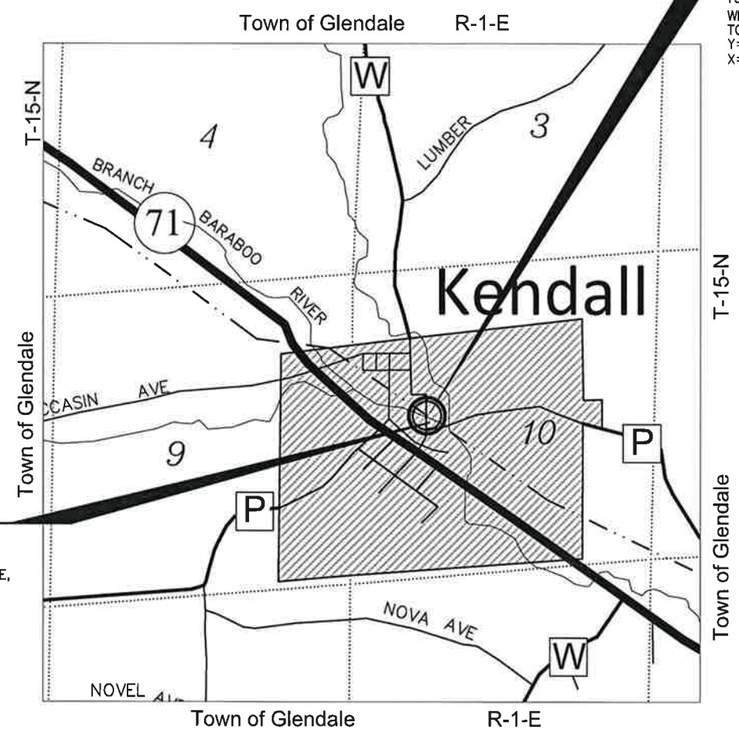
POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COORDINATE REFERENCE SYSTEM (WISCRS) COORDINATES, MONROE COUNTY, NAD 83 (2011) IN US SURVEY FEET. VALUES SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

RIGHT-OF-WAY MONUMENTS ARE TYPE 2 MONUMENTS (TYPICALLY 3/4" X 24" REBAR) AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT.

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."

END RELOCATION ORDER
STA. 14+50
159.61' NORTH AND 1326.98' EAST OF THE WEST ¼ CORNER OF SECTION 10, T15N, R1E, TOWN OF GLENDALE, MONROE COUNTY, WI
Y= 325,235.29
X= 743,369.96

BEGIN RELOCATION ORDER
STA. 12+00
90.02' SOUTH AND 1313.34' EAST OF THE WEST ¼ CORNER OF SECTION 10, T15N, R1E, TOWN OF GLENDALE, MONROE COUNTY, WI
Y= 324,985.66
X= 743,356.32



N

LAYOUT
SCALE 0 — 1/2 MI.

TOTAL NET LENGTH OF CENTERLINE = 0.047 MI.

REVISION DATE

JEWELL
associates engineers, inc.
Engineers - Architects - Surveyors
560 SUNRISE DRIVE
SPRING GREEN, WI 53588
PHONE : 608.588.7484
www.jewellassoc.com

I HEREBY CERTIFY THAT THIS PLAT WAS MADE FOR THE VILLAGE OF KENDALL, MONROE COUNTY, WISCONSIN AND IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

WISCONSIN
SCOTT D. WARNER
S-2524
RICHLAND CENTER, WI
09-06-2018
LAND SURVEYOR

APPROVED FOR MONROE COUNTY
DATE: 09/13/18 (NAME/TITLE) Hwy Commissioner

FILE NAME : S:\Projects\M08060 Monroe Co CTH W Bridge\RW\55160070_Title.dwg PLOT DATE: 9/21/2017 1:16 PM PLOT BY: Scott Warner PLOT NAME : PLOT SCALE : 1:1

WISDOT/CADDS SHEET 50

TLE LINE TABLE			
POINT	TO POINT	BEARING	DISTANCE
101	TO 201	N00°56'38"E	2.00'
201	TO 202	N31°12'01"W	15.74'
202	TO 203	N01°02'40"E	110.07'
203	TO 204	S86°52'23"E	8.19'
204	TO 205	N00°56'38"E	35.03'
205	TO 206	N86°52'23"W	4.85'
206	TO 207	N00°34'56"E	90.09'
207	TO 102	S86°52'23"E	5.42'
106	TO 208	S85°34'47"W	64.19'
208	TO 209	S16°41'10"W	110.71'
209	TO 111	N86°52'23"W	49.00'
111	TO 210	S74°51'17"W	26.33'
210	TO 211	S03°07'37"W	12.55'
211	TO 212	N88°05'05"W	3.42'
212	TO 213	S00°26'03"W	30.59'
213	TO 214	S88°50'49"E	3.99'
214	TO 215	S03°07'37"W	8.71'
215	TO 216	N86°52'23"W	5.38'
216	TO 113	S00°56'38"W	6.04'

COORDINATE TABLE – FOUND SURVEY MONUMENTS					
PT.#	STATION	OFFSET	Y	X	DESCRIPTION
498	12+03.96	34.84 RT.	324987.72	743391.32	FOUND ⅜"ø IRON REBAR
723	13+92.54	0.43 RT.	325177.89	743367.25	FOUND 1 ½"ø IRON REBAR
785	15+39.86	44.02 LT.	325326.20	743331.00	FOUND ¾"ø IRON REBAR
786	16+11.84	40.20 LT.	325392.24	743331.91	FOUND ¾"ø IRON REBAR

COORDINATE TABLE – PERMANENT LIMITED EASEMENT (PLE) POINTS				
PT.#	STATION	OFFSET	Y	X
301	13+64.48	38.74' RT.	325147.78	743403.98
302	13+55.90	39.07' RT.	325139.20	743403.83
303	13+23.32	76.34' RT.	325104.63	743439.28
304	13+06.80	120.46' RT.	325085.72	743482.43
305	12+88.07	113.45' RT.	325067.41	743474.41
306	13+05.87	65.92' RT.	325087.78	743427.92
307	13+37.47	29.76' RT.	325121.30	743393.54

RIGHT OF WAY LINE TABLE			
POINT	TO POINT	BEARING	DISTANCE
101	TO 102	N00°56'38"E	250.18'
102	TO 103	S86°52'23"E	66.05'
103	TO 104	N85°06'53"E	72.64'
104	TO 105	S82°20'40"E	100.90'
105	TO 106	S00°00'00"W	66.20'
106	TO 107	S85°34'47"W	174.32'
107	TO 108	S00°56'38"W	58.21'
108	TO 109	S86°52'23"E	22.00'
109	TO 110	S35°50'56"E	16.02'
110	TO 111	S03°19'23"W	22.55'
111	TO 112	S74°51'17"W	31.89'
112	TO 113	S00°56'38"W	56.08'
113	TO 114	N86°52'23"W	34.85'
114	TO 115	S03°07'37"W	3.97'
115	TO 101	N86°52'23"W	31.05'

COORDINATE TABLE – NEW R/W POINTS				
PT.#	STATION	OFFSET	Y	X
101	12+00.00	31.05 LT.	324987.35	743325.32
102	14+50.00	40.58 LT.	325237.50	743329.44
103	14+50.00	25.47 RT.	325233.90	743395.39
104	21+00.00	45.00 LT.	325240.08	743467.76
105	22+00.00	31.56 LT.	325226.64	743567.76
106	22+00.00	34.64 RT.	325160.45	743567.76
107	13+63.16	28.78 RT.	325147.01	743393.96
108	13+05.00	31.00 RT.	325088.81	743393.00
109	13+05.00	53.00 RT.	325087.61	743414.97
110	12+92.55	63.08 RT.	325074.63	743424.35
111	12+70.00	63.00 RT.	325052.12	743423.05
112	12+60.00	32.71 RT.	325043.79	743392.26
113	12+03.96	34.85 RT.	324987.72	743391.34
114	12+03.96	0.00	324989.62	743356.54
115	12+00.00	0.00	324985.66	743356.32

COORDINATE TABLE – TEMPORARY LIMITED EASEMENT (TLE) POINTS				
PT.#	STATION	OFFSET	Y	X
201	12+02.00	31.12' LT.	324989.35	743325.36
202	12+15.00	40.00' LT.	325002.82	743317.20
203	13+25.00	44.00' LT.	325112.87	743319.21
204	13+25.00	35.81' LT.	325112.43	743327.38
205	13+60.00	37.15' LT.	325147.45	743327.96
206	13+60.00	42.00' LT.	325147.71	743323.11
207	14+50.00	46.00' LT.	325237.80	743324.03
208	21+36.00	39.59' RT.	325155.50	743503.76
209	12+70.00	112.00' RT.	325049.45	743471.97
210	12+61.75	38.00' RT.	325045.24	743397.63
211	12+49.20	38.00' RT.	325032.71	743396.95
212	12+49.13	34.58' RT.	325032.83	743393.53
213	12+18.57	36.02' RT.	325002.24	743393.30
214	12+18.71	40.00' RT.	325002.16	743397.28
215	12+10.00	40.00' RT.	324993.46	743396.81
216	12+10.00	34.62' RT.	324993.76	743391.44

PLE LINE TABLE			
POINT	TO POINT	BEARING	DISTANCE
106	TO 301	S85°34'47"W	164.28'
301	TO 302	S00°56'38"W	8.59'
302	TO 303	S45°43'06"E	49.51'
303	TO 304	S66°20'18"E	47.12'
304	TO 305	S23°39'42"W	20.00'
305	TO 306	N66°20'18"W	50.76'
306	TO 307	N45°43'06"W	48.02'
307	TO 108	S00°56'38"W	32.50'

EASEMENT TABLE			
OWNER	RECORDING INFORMATION	LOCATED IN R/W PARCEL #	REMARKS
WISCONSIN POWER & LIGHT COMPANY (N.K.A. ALLIANT ENERGY)	DOC. #650049	4	5'X5' SQUARE EASEMENT AREA NEAR STA. 14+00, 38.5' LT. – 43.5' LT.
	DOC. #178143, VOL.137, PG.587	3	BLANKET EASEMENT OVER R/W PARCEL 3
	DOC. #178204, VOL.137, PG.592	3	BLANKET EASEMENT OVER R/W PARCEL 3

NOTE: EXISTING C/L OF CTH W WAS BASED ON CENTERLINE OF EXISTING PAVEMENT.

BASIS OF EXISTING RIGHT-OF-WAY FOR CTH W WAS BASED ON 03CSM037, 07CSM048, 24CSM020, 24CSM036, PLAT OF SURVEY CSR 1022, AND THE ORIGINAL PLAT OF THE VILLAGE OF KENDALL.
BASIS OF EXISTING RIGHT-OF-WAY FOR CTH P WAS BASED ON HIGHWAY RELOCATION C.T.H. "P" CSR 1019.
BASIS OF EXISTING RIGHT-OF-WAY FOR OLD GLENDALE ROAD WAS BASED ON PLAT OF SURVEY CSR 1022.

SCHEDULE OF LANDS & INTERESTS REQUIRED

PARCEL NUMBER	OWNER (S)	INTEREST REQUIRED	R/W ACRES REQUIRED NEW	EXISTING	TOTAL	TLE ACRES REQ.	PLE ACRES REQ.
1	MARK A. DOBBRATZ AND SHERYL S. DOBBRATZ HUSBAND AND WIFE AS SURVIVORSHIP MARITAL PROPERTY	TLE	–	–	–	0.01	–
2	LANCE F. ELLIOTT	FEE, TLE	0.01	–	0.01	0.01	–
3	MONROE COUNTY	FEE,PLE,TLE	0.02	–	0.02	0.04	0.01
4	DALE F. HANEY, SR. & REBECCA A. HANEY, HUSBAND AND WIFE, AS SURVIVORSHIP MARITAL PROPERTY	TLE	–	–	–	0.01	–
5	1/2 INTEREST VILLAGE OF KENDALL 1/2 INTEREST THE "MANAGERS" OF KENDALL CAMP NO. 710 M.W. OF KENDALL, WISCONSIN	FEE, PLE, TLE	0.01	–	0.01	0.06	0.03
6	THE MANAGERS OF KENDALL CAMP NUMBER 710 MODERN WOODMAN OF AMERICA	PLE,TLE	–	–		0.07	0.01
7	SHAUNA BEISKER, A SINGLE PERSON, AND JOSEPH F. BECWAR, A SINGLE PERSON, AS JOINT TENANTS	TLE	–	–	–	0.01	–
8	CARRIE J. OLSON AND CHRIS NEAL (A/K/A CHRISTOPHER D. NEAL), HUSBAND AND WIFE AS SURVIVORSHIP MARITAL PROPERTY	FEE	0.06	–	0.06	–	–
9	EBERHARDT AND MURRAY, INC.	FEE	–	0.13	0.13	–	–
201	ALLIANT ENERGY CORPORATION	RELEASE OF RIGHTS					
202	CENTURYLINK, INC.	RELEASE OF RIGHTS					
203	VILLAGE OF KENDALL	RELEASE OF RIGHTS					

NOTE: AREAS SHOWN IN THE TOTAL ACRES COLUMN MAY BE APPROXIMATE AND ARE DERIVED FROM THE TAX ROLLS OR OTHER AVAILABLE SOURCES AND MAY NOT INCLUDE LANDS OF THE OWNER WHICH ARE NOT CONTIGUOUS TO THE AREA TO BE ACQUIRED. OWNER'S NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY AND ARE SUBJECT TO CHANGE PRIOR TO THE TRANSFER OF LAND INTERESTS TO MONROE COUNTY.

BEGIN RELOCATION ORDER
STA. 12+00
90.02' SOUTH AND 1313.34' EAST OF THE WEST ¼ CORNER OF SECTION 10, T15N, R1E, TOWN OF GLENDALE, MONROE COUNTY, WI
Y= 324,985.66
X= 743,356.32

END RELOCATION ORDER
STA. 14+50
159.61' NORTH AND 1326.98' EAST OF THE WEST ¼ CORNER OF SECTION 10, T15N, R1E, TOWN OF GLENDALE, MONROE COUNTY, WI
Y= 325,235.29
X= 743,369.96

BEGIN CONSTRUCTION
STA. 20'A'+00.00
Y= 325,195.08
X= 743,367.76

END CONSTRUCTION
STA. 22'A'+00
Y= 325,195.08
X= 743,567.76

W1/4 CORNER SEC. 10 FOUND SLIMLINE HARRISON MONUMENT
Y = 325,075.68
X = 742,042.98

W¼ CORNER OF SEC. 10 TO E¼ CORNER OF SEC. 10 N85°34'47"E, 5297.75'

E1/4 CORNER SEC. 10 FOUND SLIMLINE HARRISON MONUMENT
Y = 325,483.98
X = 747,324.98

13+95.32 ALINGMENT CROSSES ¼ SECTION LINE

22+19.12 ALINGMENT CROSSES ¼ SECTION LINE

C/L STA. 14+09.74 (MAINLINE)= C/L STA. 20+00.00 (OLD GLENDALE ROAD) Y=325,195.08 X=743,367.76

BP. 20+00.00

VILLAGE OF KENDALL

CTH W A/K/A WHITE ST.

FINISHED C/L CTH W

EXISTING C/L CTH W R/W

E. LINE NW¼-SW¼

E. LINE SW¼-NW¼

CENTURYLINK, INC.

ALLIANT ENERGY CORPORATION (TYP.)

MADISON GAS & ELECTRIC (TYP.)

MADISON GAS & ELECTRIC CO. (MGE) (TYP.)

STRUCTURE B-41-0306 REQ'D.

TLE FOR SLOPES (0.01 AC.)

TLE FOR SLOPES (0.01 ACRES)

TLE FOR SLOPES (0.03 AC.)

TLE FOR SLOPES (0.07 AC.)

TLE FOR SLOPES (0.04 AC.)

PLE FOR RIPRAP (0.03 AC.)

PLE FOR RIPRAP (0.01 AC.)

HIGHWAY RELOCATION C.T.H. "P" CSR 1019

OLD GLENDALE ROAD

OUTLOT 26

ASSESSOR'S PLAT OF THE VILLAGE OF KENDALL

BLOCK 1 ORIGINAL PLAT OF KENDALL

BLOCK 10 ORIGINAL PLAT OF KENDALL

BLOCK 1 MEDBURY'S ADDITION

BRANCH BARABOO RIVER

DRAINAGE AGREEMENT VOL. 15-MISC. P. 529 DOC. 182003

ALLIANT ENERGY EASEMENT DOC 650049

MARK A. DOBBRATZ AND SHERYL S. DOBBRATZ HUSBAND AND WIFE AS SURVIVORSHIP MARITAL PROPERTY. DOC #545959

LANCE F. ELLIOTT DOC #45365, VOL 226 PG.293

MONROE COUNTY DOC #242459, VOL 190 PG.37

DALE F. HANEY, SR. & REBECCA A. HANEY, HUSBAND AND WIFE, AS SURVIVORSHIP MARITAL PROPERTY. DOC #616064

½ INTEREST VILLAGE OF KENDALL 1/2 INTEREST THE "MANAGERS" OF KENDALL CAMP NO. 710 M.W. OF KENDALL, WISCONSIN VOL 76, PG. 197 VOL 76, PG. 198

THE MANAGERS OF KENDALL CAMP NUMBER 710 MODERN WOODMAN OF AMERICA VOL. 74, PG. 156, DOC. 87731

IRENE L. SARTORI a/k/a IRENE L. SARTORI, A LIFE ESTATE INTEREST, AND EBERHARDT AND MURRAY, INC. VOL. 192, PG. 276

IRENE L SARTORI a/k/a IRENE L. SARTORI, A LIFE ESTATE INTEREST, AND CARRIE J. OLSON AND CHRIS NEAL (A/K/A CHRISTOPHER D. NEAL), HUSBAND AND WIFE, AS SURVIVORSHIP MARITAL PROPERTY. DOC #606575

PLAT OF SURVEY BY LAURENCE E. JOHNS III DATED JUNE 18, 2010 CSR 1022

OWNER UNKNOWN

SHAUNA BEISKER, A SINGLE PERSON, AND JOSEPH F. BECWAR, A SINGLE PERSON, AS JOINT TENANTS. DOC #632582

IRENE L. SARTORI A LIFE ESTATE INTEREST, AND EBERHARDT AND MURRAY, INC. VOL. 24CSM PG. 036

SLOPE INTERCEPTS (TYP.)

NW¼ - SW¼ SEC. 10, T15N, R1E

NE¼ - SW¼ SEC. 10, T15N, R1E

SW¼ - NW¼ SEC. 10, T15N, R1E

SE¼ - NW¼ SEC. 10, T15N, R1E

S00°00'00"W 66.20'

N90°00'00"W

S86°03'35"E 1285.38' (W¼ CORNER SEC. 10 TO PT. 101)

S03°07'37"W 3.96'

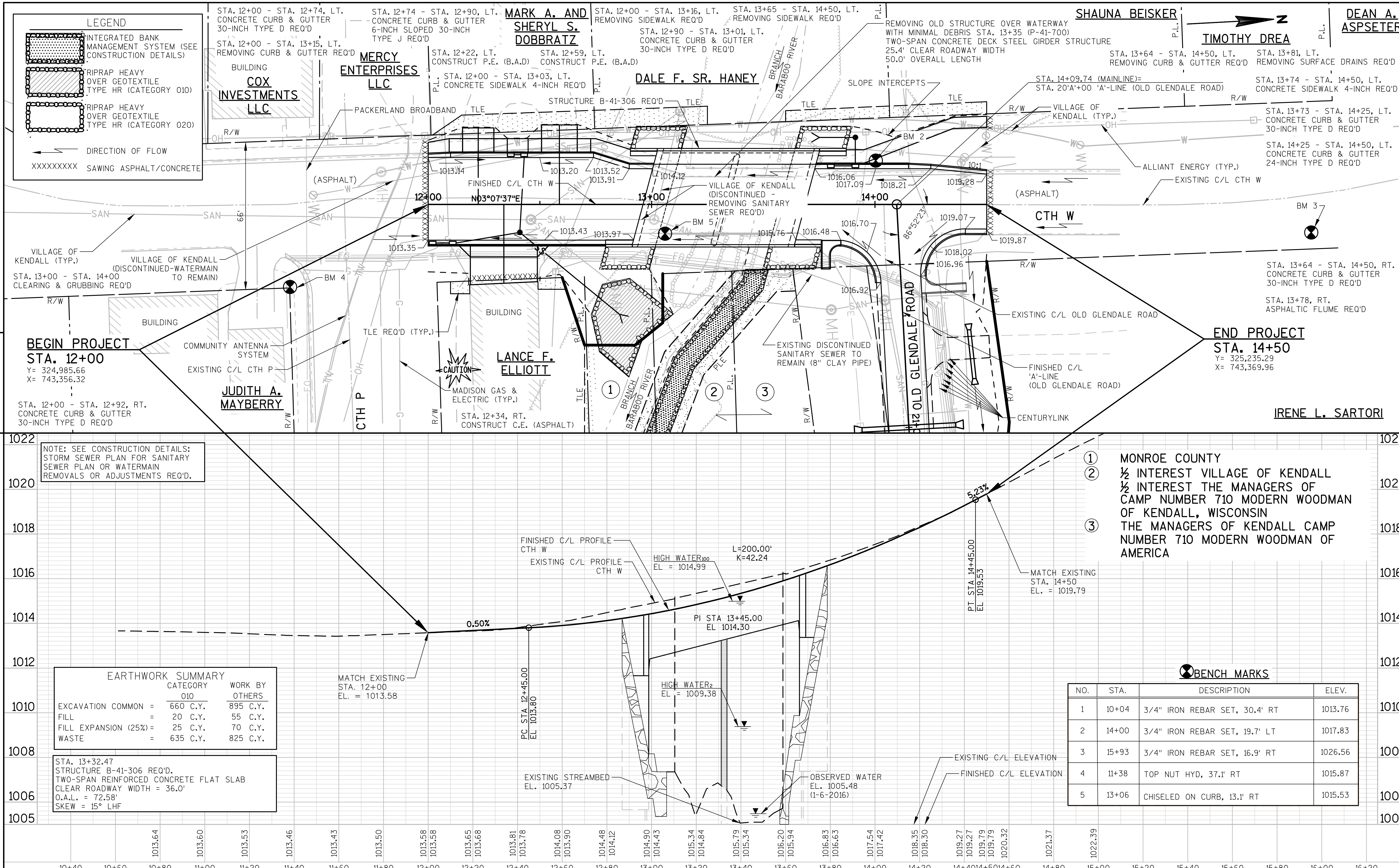
N3° 07' 37"E 18.00

93°13'37"

REVISION DATE	DATE 9/13/2018	SCALE, FEET 0 20 40	HWY: CTH W	R/W PROJECT NUMBER: 5516-00-00	PLAT SHEET 4.02
	GRID FACTOR N/A		COUNTY: MONROE	CONSTRUCTION PROJECT NUMBER: 5516-00-70	PS&E SHEET 24 E

FILE NAME : S:\Projects\M08060 Monroe Co CTH W Bridge\RW\55160070_Plat Sheets.dwg PLOT DATE : 9/6/2018 3:12 PM PLOT BY : Scott Warner PLOT NAME : PLOT SCALE : 1:1

WISDOT/CADDS SHEET 75



EARTHWORK SUMMARY

	CATEGORY 010	WORK BY OTHERS
EXCAVATION COMMON =	660 C.Y.	895 C.Y.
FILL =	20 C.Y.	55 C.Y.
FILL EXPANSION (25%) =	25 C.Y.	70 C.Y.
WASTE =	635 C.Y.	825 C.Y.

BENCH MARKS

NO.	STA.	DESCRIPTION	ELEV.
1	10+04	3/4" IRON REBAR SET, 30.4' RT	1013.76
2	14+00	3/4" IRON REBAR SET, 19.7' LT	1017.83
3	15+93	3/4" IRON REBAR SET, 16.9' RT	1026.56
4	11+38	TOP NUT HYD, 37.1' RT	1015.87
5	13+06	CHISELED ON CURB, 13.1' RT	1015.53

PROJECT NO: 5516-00-70	HWY: CTH W	COUNTY: MONROE	PLAN AND PROFILE: MAINLINE	SHEET 25	E

FILE NAME : S:\PROJECTS\M08060 MONROE CO CTH W BRIDGE\SHEETSPLAN\PLAN & PROFILE SHEETS\050101_PP.DWG
LAYOUT : LAYOUT NAME - 050101_PP - LAYOUT1
PLOT DATE : 10/29/2018 PLOT TIME : 10:49:10 AM
PLOT BY : JULIA ZEHNER
PLOT SCALE : 1 IN:40 FT

LEGEND

- INTEGRATED BANK MANAGEMENT SYSTEM (SEE CONSTRUCTION DETAILS)
- RIPRAP HEAVY OVER GEOTEXTILE TYPE HR (CATEGORY 020)
- DIRECTION OF FLOW
- XXXXXXXXX SAWING ASPHALT/CONCRETE

VILLAGE OF KENDALL
EXISTING C/L CTH W
ALLIANT ENERGY (TYP.)
STA. 14+09.74 (MAINLINE)= STA. 20'A'+00 'A'-LINE (OLD GLENDALE ROAD)
FINISHED C/L CTH W
VILLAGE OF KENDALL (DISCONTINUED-WATERMAIN TO REMAIN) TLE REQ'D (TYP.)
CTH W (ASPHALT)
R/W
STA. 20'A'+66, LT.
CONSTRUCT P.E. (B.A.D.)
(WORK BY OTHERS)
(1) CULVERT PIPE CLASS III-A 18-INCH
(2) APRON ENDWALLS REQ'D
SKEW=3° RHF
(WORK BY OTHERS)
STA. 20'A'+39, LT.
ASPHALTIC FLUME REQ'D
STA. 21'A'+48, LT.
REMOVING SIDEWALK REQ'D
(WORK BY OTHERS)
STA. 21'A'+65, LT.
CONSTRUCT P.E. (B.A.D.)
(WORK BY OTHERS)
SLOPE INTERCEPTS
MADISON GAS & ELECTRIC (TYP.)
CAUTION
N
IRENE L. SARTORI
SHAUNA BEISKER
86°52'23"
CENTURYLINK
OLD GLENDALE ROAD 21'A'
N90°00'00"E
(BASE AGGREGATE DENSE)
66'
MH
VILLAGE OF KENDALL (TYP.)
P.L.
STA. 20'A'+50 - STA. 21'A'+50
CLEARING & GRUBBING REQ'D
(WORK BY OTHERS)
STA. 20'A'+39 - STA. 20'A'+45
REMOVING PAVEMENT REQ'D
14+00
EXISTING C/L OLD GLENDALE ROAD
FINISHED C/L 'A'-LINE (OLD GLENDALE ROAD)
BRANCH BARABOO RIVER
EXISTING DISCONTINUED SANITARY SEWER TO REMAIN (8" CLAY PIPE)
ESTA PARRISH
BEGIN CONSTRUCTION
STA. 20'A'+13.61
Y= 325,195.08
X= 743,381.37
END CONSTRUCTION
BEGIN CONSTRUCTION
(WORK BY OTHERS)
STA. 20'A'+40.63
Y= 325,195.08
X= 743,408.39
STA. 21'A'+00
(1) CULVERT PIPE CLASS III-A 24-INCH
(2) APRON ENDWALLS REQ'D
SKEW=0°
(WORK BY OTHERS)
END CONSTRUCTION
(WORK BY OTHERS)
STA. 21'A'+80
Y= 325,195.08
X= 743,547.76
STA. 21'A'+24, RT.
CONSTRUCT P.E. (B.A.D.)
(WORK BY OTHERS)
(1) CULVERT PIPE CLASS III-A 18-INCH
(2) APRON ENDWALLS REQ'D
SKEW=4° LHF
(WORK BY OTHERS)
DALE F. SR. HANEY
5
5

NOTE: SEE CONSTRUCTION DETAILS: STORM SEWER PLAN FOR SANITARY SEWER PLAN OR WATERMAIN REMOVALS OR ADJUSTMENTS REQ'D.

② ½ INTEREST VILLAGE OF KENDALL
½ INTEREST THE MANAGERS OF CAMP NUMBER 710 MODERN WOODMAN OF KENDALL, WISCONSIN

③ THE MANAGERS OF KENDALL CAMP NUMBER 710 MODERN WOODMAN OF AMERICA

EARTHWORK SUMMARY

	CATEGORY 010	WORK BY OTHERS
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FILL =	20 C.Y.	55 C.Y.
FILL EXPANSION (25%) =	25 C.Y.	70 C.Y.
WASTE =	635 C.Y.	825 C.Y.

BENCH MARKS

NO.	STA.	DESCRIPTION	ELEV.
1	10+04	3/4" IRON REBAR SET, 30.4' RT	1013.76
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3	15+93	3/4" IRON REBAR SET, 16.9' RT	1026.56
4	11+38	TOP NUT HYD, 37.1' RT	1015.87
5	13+06	CHISELED ON CURB, 13.1' RT	1015.53

PI STA 20'A'+53.00
EL 1016.77
FINISHED C/L PROFILE 'A'-LINE (OLD GLENDALE ROAD)
PC STA 20'A'+15.50
EL 1017.53
PT STA 20'A'+90.50
EL 1015.39
-2.00%
+2.00%
STA. 20'A'+00
EL. = 1017.83
PVI STA 20'A'+13.61
EL 1017.56
L=75.00'
K=36.78
-4.70%
L=75.00'
K=44.09
-1.66%
MATCH EXISTING
STA. 21'A'+80
EL. = 1013.05
PI STA 21'A'+32.00
EL 1013.85
+0.5%
PC STA 20'A'+94.50
EL 1015.24
EXISTING C/L PROFILE 'A'-LINE (OLD GLENDALE ROAD)
BEGIN SPECIAL DITCH
STA. 21'A'+00, LT.
EL. = 1010.89
STA. 21'A'+50, LT.
EL. = 1011.14
PT STA 21'A'+69.50
EL 1013.22
EXISTING C/L ELEVATION
FINISHED C/L ELEVATION

1022 1020 1018 1016 1014 1012 1010 1008 1006

1017.90 1017.84 | 1017.12 1017.43 | 1015.24 1016.97 | 1014.30 1016.41 | 1014.00 1015.76 | 1013.68 1015.04 | 1013.49 1014.38 | 1013.34 1013.83 | 1013.20 1013.40 | 1013.05 1013.05 | 1012.71 | 1012.47 | 1012.95

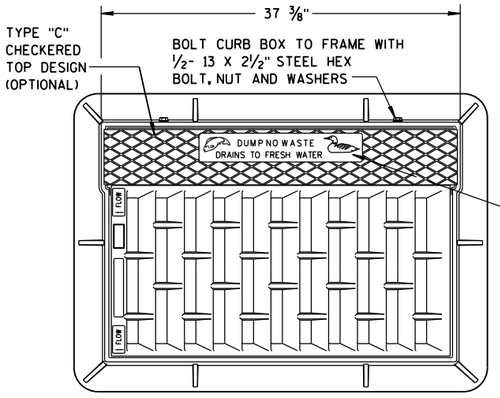
17'A'+20 17'A'+40 17'A'+60 17'A'+80 18'A'+00 18'A'+20 18'A'+40 18'A'+60 18'A'+80 19'A'+00 19'A'+20 19'A'+40 19'A'+60 19'A'+80 20'A'+00 20'A'+20 20'A'+40 20'A'+60 20'A'+80 21'A'+00 21'A'+20 21'A'+40 21'A'+60 21'A'+80 22'A'+00 22'A'+20 22'A'+40 22'A'+60 22'A'+80

PROJECT NO: 5516-00-70	HWY: CTH W	COUNTY: MONROE	PLAN AND PROFILE: 'A'-LINE (OLD GLENDALE ROAD)	SHEET 26	E

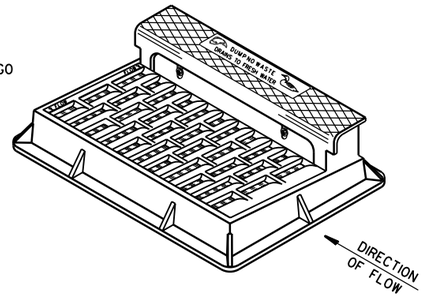
FILE NAME : S:\PROJECTS\M08060 MONROE CO CTH W BRIDGE\SHEETSPLAN\PLAN & PROFILE SHEETS\050102_PP.DWG
LAYOUT : LAYOUT NAME - 050102_PP - LAYOUT1
PLOT DATE : 10/29/2018
PLOT TIME : 10:53:35 AM
PLOT BY : JULIA ZEHNER
PLOT SCALE : 1 IN:40 FT

Standard Detail Drawing List

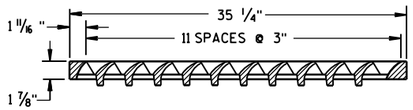
08A05-19A	INLET COVERS TYPE A, H, A-S, H-S & Z
08A05-19D	INLET COVER TYPE BW, MANHOLE COVERS, TYPE K, J, J-S, L & M
08B09-02	MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT AND 8-FT DIAMETER
08C06-02	INLETS 3-FT AND 4-FT DIAMETER
08C07-02	INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT
08D01-20A	CONCRETE CURB & GUTTER
08D04-05	CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES
08D18-02	DRIVEWAY AND SIDEWALK RAMPS TYPES X & Y
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
12A03-10	NAME PLATE (STRUCTURES)
15A01-13A	MARKER POST FOR RIGHT-OF-WAY
15A03-02A	FLEXIBLE MARKER POST FOR CULVERT END
15A03-02B	FLEXIBLE MARKER POST FOR CULVERT END
15C02-06A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-06B	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C03-05	BARRICADES AND SIGNS FOR SIDEROAD CLOSURES
15C08-19A	LONGITUDINAL MARKING (MAINLINE)
15D38-02A	TEMPORARY TRAFFIC CONTROL SIGN MOUNTING
15D38-02B	ATTACHMENT OF SIGNS TO POSTS

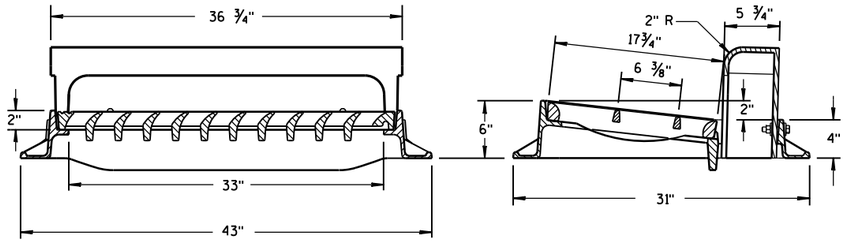


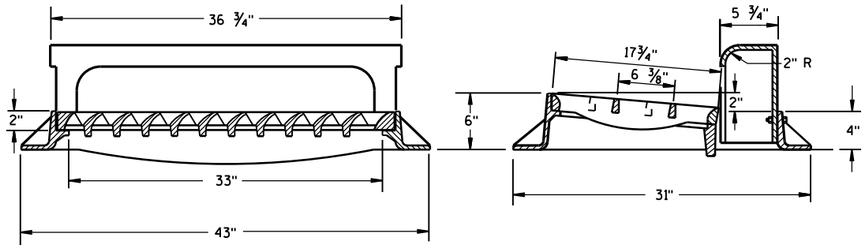
NOTE:
GRATE IS REVERSIBLE.



NOTE: CURB BOX HEIGHT ADJUSTABLE 6" TO 9"

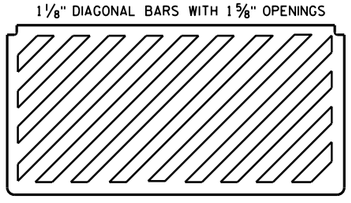






TYPE "H"

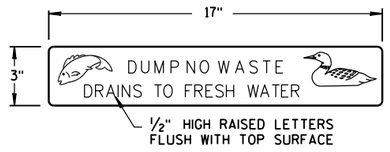
NOTE: EITHER CASTING IS ACCEPTABLE



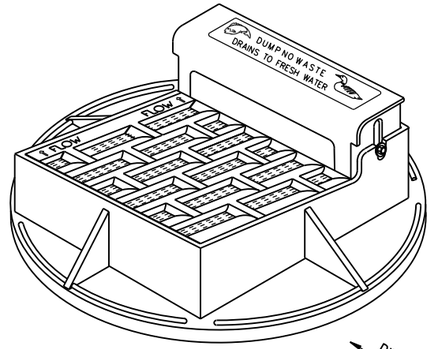
SPECIAL GRATE FOR TYPE "H" COVER

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

(NOTED AS TYPE H-S ON DRAINAGE TABLE)



LOGO DETAIL



NOTE: CURB BOX ADJUSTABLE 4" TO 9"

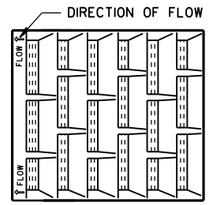
NOTE:
GRATE IS REVERSIBLE.

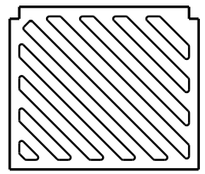
GENERAL NOTES

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

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

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

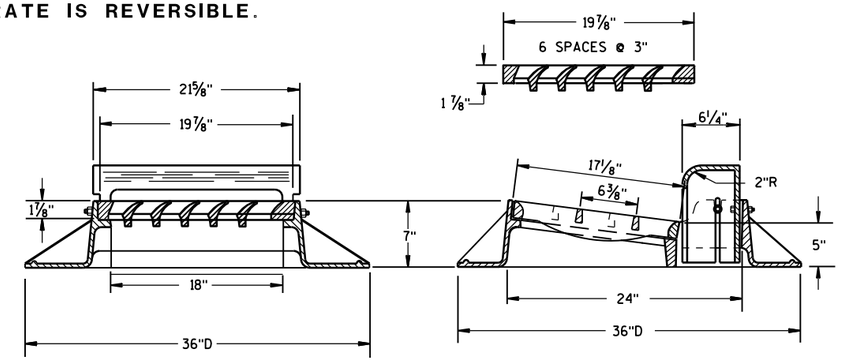




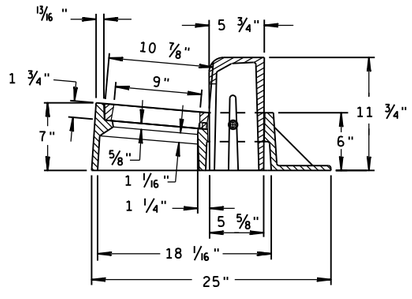
SPECIAL GRATE FOR TYPE "A" COVER

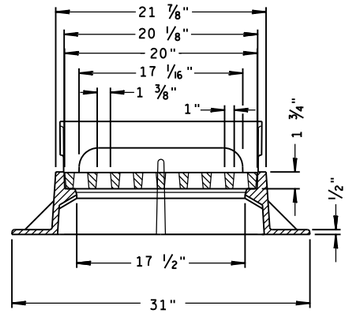
(MEASURES 19 3/4" X 17" X 1 7/8")

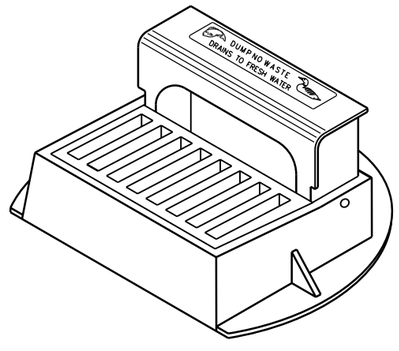
(NOTED AS TYPE A-S ON DRAINAGE TABLE)



TYPE "A"







TYPE "Z"

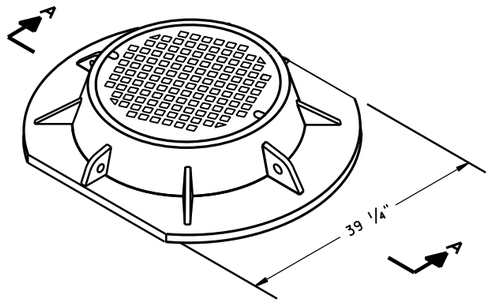
INLET COVERS
TYPE A, H, A-S, H-S & Z

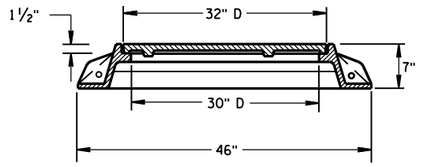
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

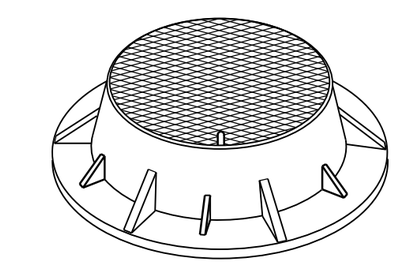
6

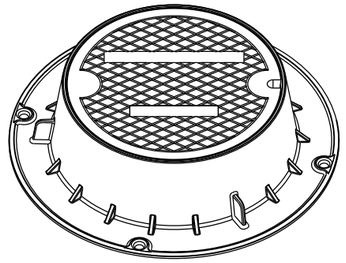
S.D.D. 8 A 5-19a

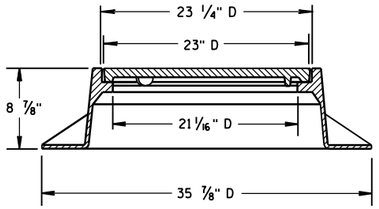


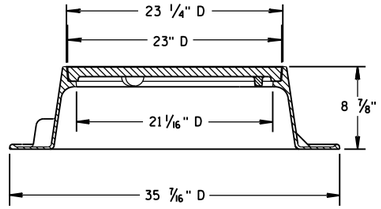


SECTION A-A
TYPE "K"









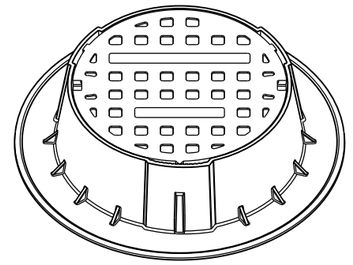
TYPE "J"
NOTE: EITHER CASTING IS ACCEPTABLE

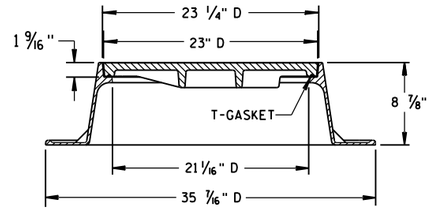
GENERAL NOTES

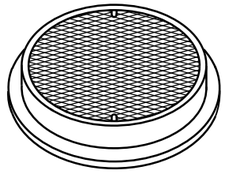
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

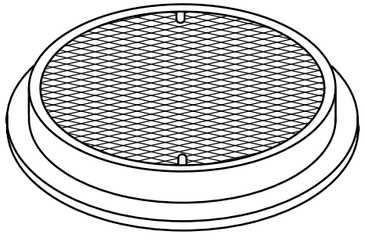
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR MANHOLE COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

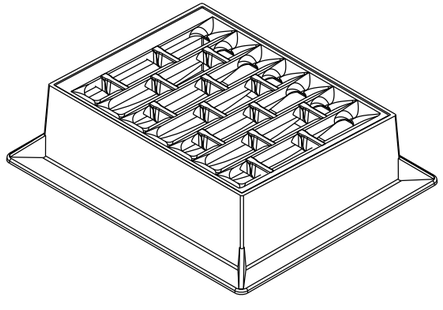
ROUND FRAMES AND COVERS SHALL HAVE CONTINUOUSLY MACHINED BEARING SURFACES TO PREVENT ROCKING AND RATTLING.

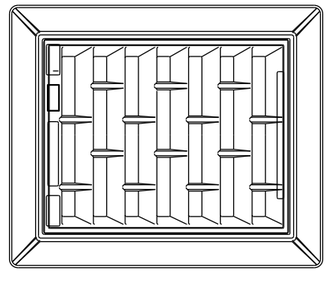


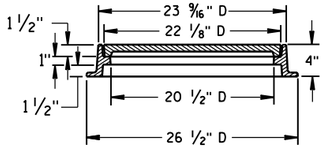




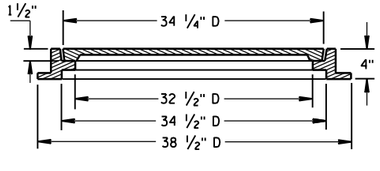








TYPE "L"



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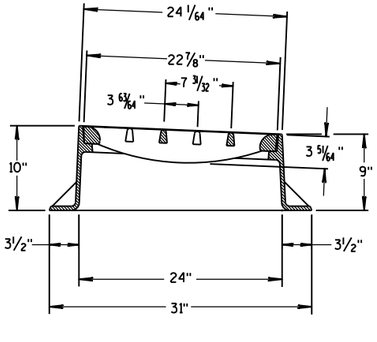
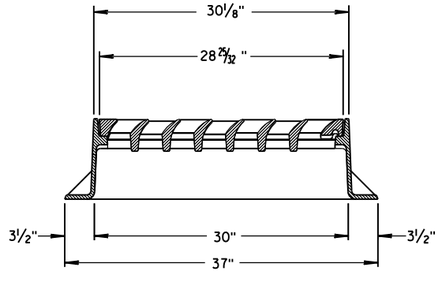
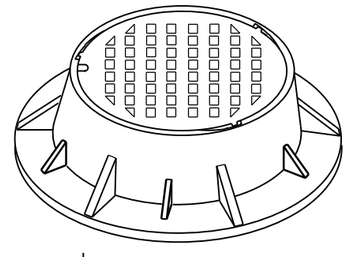
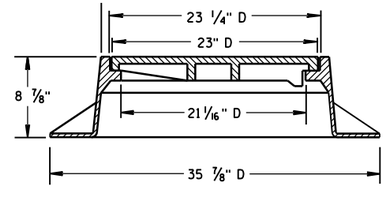




INLET COVER TYPE "BW"





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

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

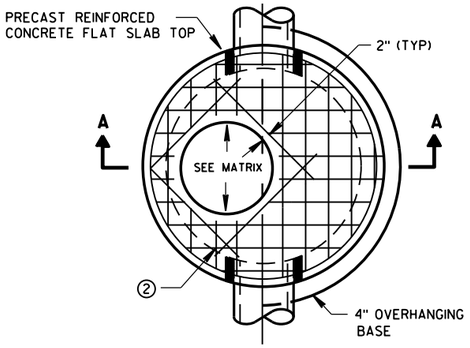
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11/27/2013
DATE
FHWA

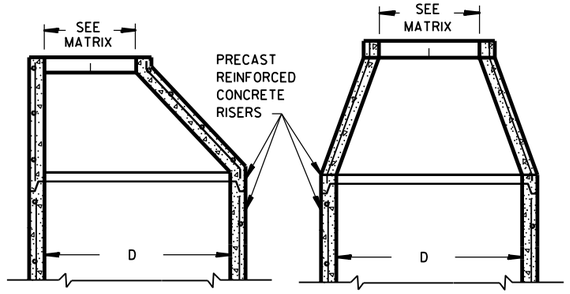
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER

6

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

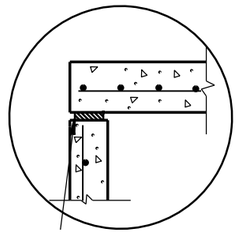


PLAN VIEW CIRCULAR OPENING

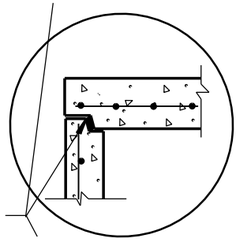


OPTIONAL PRECAST REINFORCED CONCRETE ECCENTRIC TOP

OPTIONAL PRECAST REINFORCED CONCRETE CONCENTRIC TOP

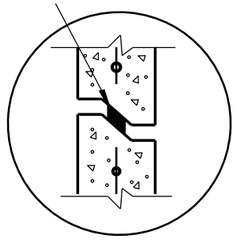


TOP WITH PLAIN END JOINT



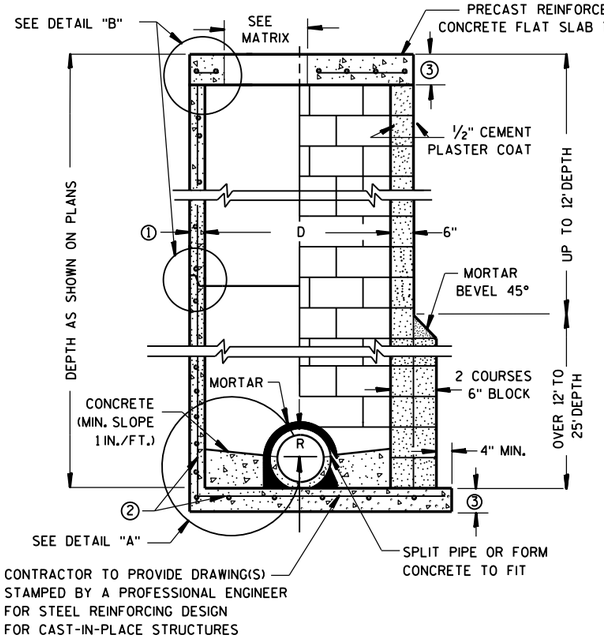
JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C990 (TYP)

TOP WITH TONGUE AND GROOVE JOINT



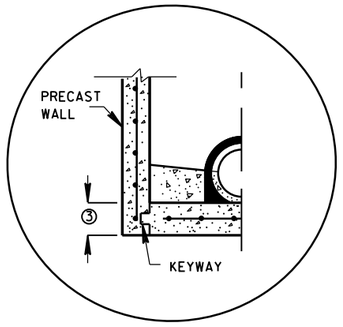
RISER WITH TONGUE AND GROOVE JOINT

DETAIL "B"

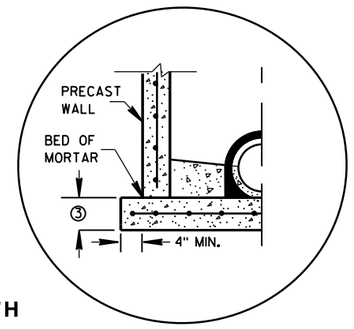


PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

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

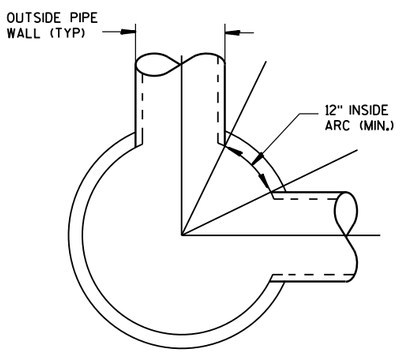


PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION



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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

Sept., 2016
DATE

/S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT
UNIT SUPERV

FHWA

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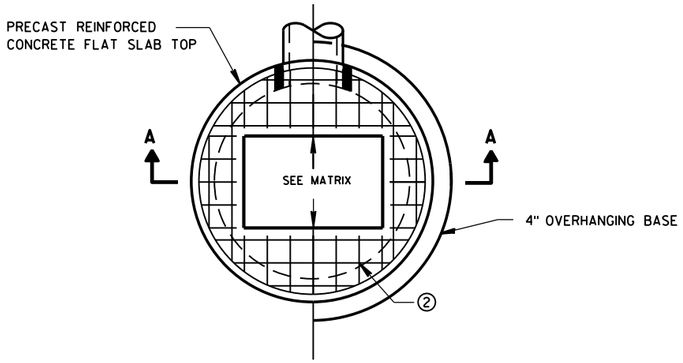
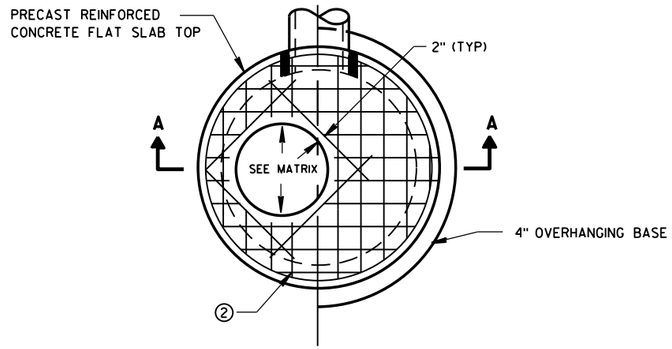
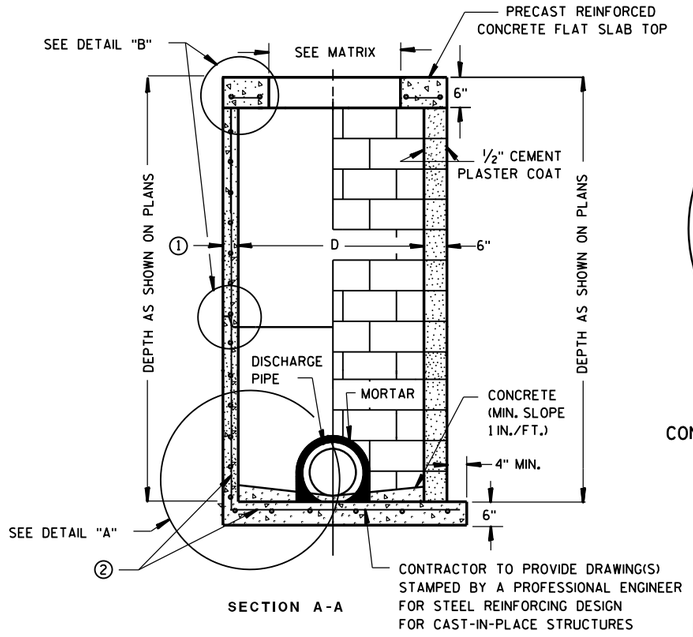
S.D.D. 8 B 9-2



PLAN VIEW RECTANGULAR OPENING



PLAN VIEW CIRCULAR OPENING

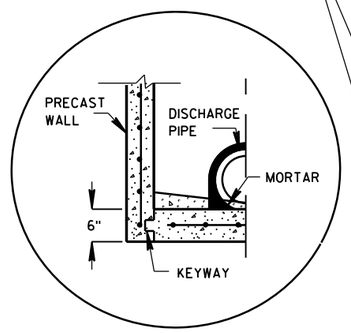


SECTION A-A

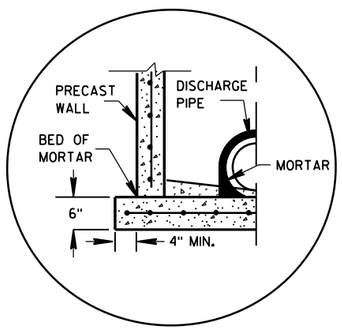
PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

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

CIRCULAR INLETS W/ FLAT TOP

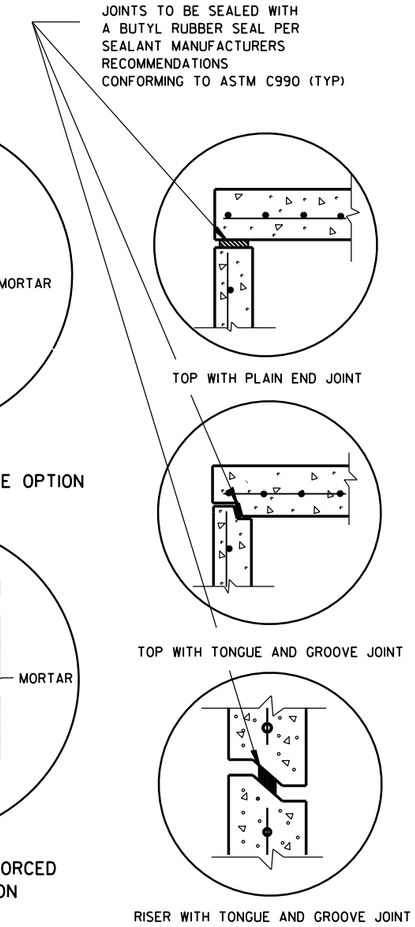


PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

DETAIL "A"



DETAIL "B"

GENERAL NOTES

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

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

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

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

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

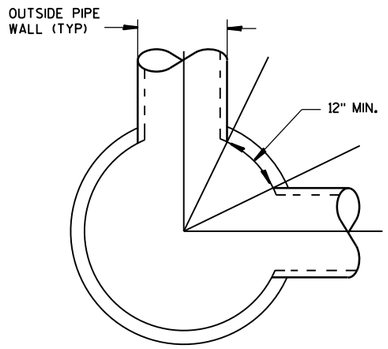
FOR ADDITIONAL CONFIGURATIONS, MAINTAIN A MINIMUM OF 12 INCHES AS MEASURED FROM THE INSIDE OF THE STRUCTURE WALL BETWEEN THE OUTSIDE PIPE WALLS OF ADJACENT PIPES. SEE DETAIL "C".

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
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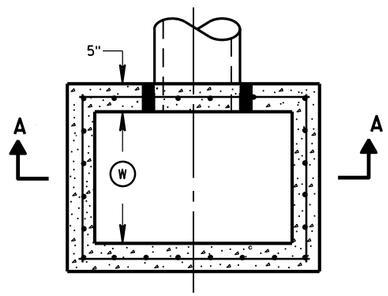
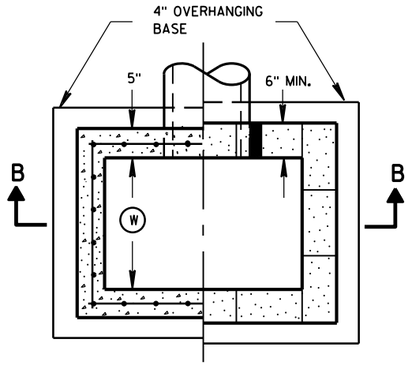
S.D.D. 8 C 6-2

6

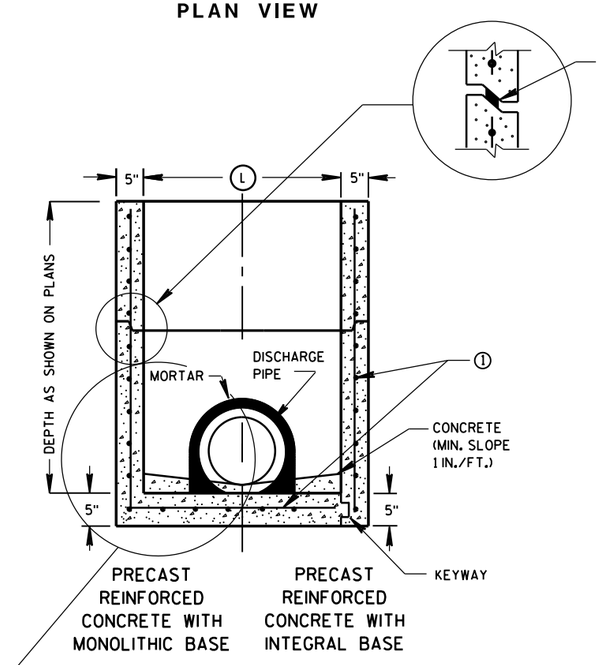
S.D.D. 8 C 6-2



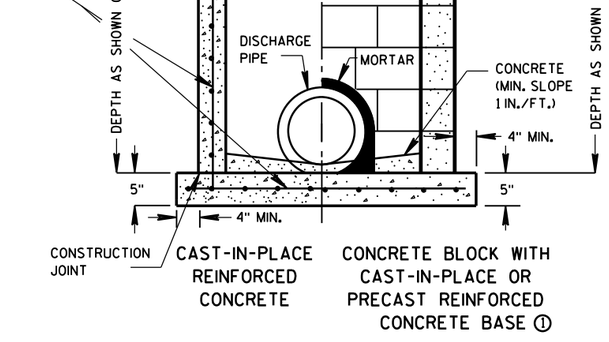
PLAN VIEW



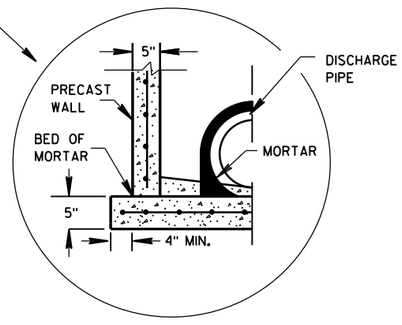
PLAN VIEW



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.

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

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

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

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

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

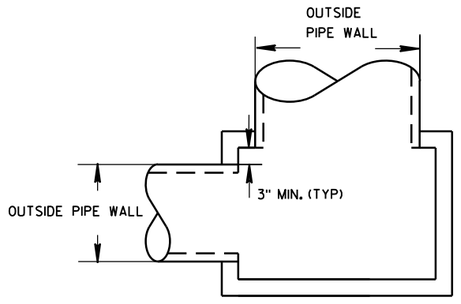
② CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.

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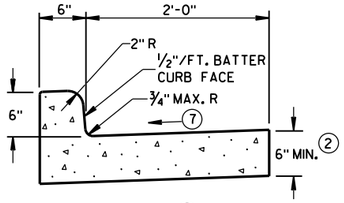
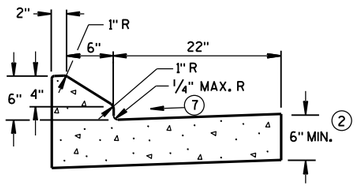
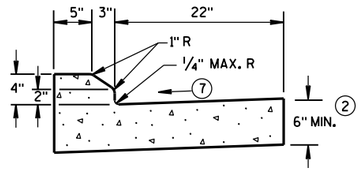
INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT



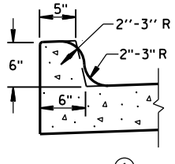
TYPES A (1) & D



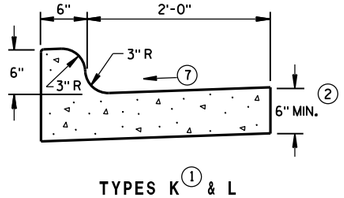
6" SLOPED CURB TYPES G (1) & J



4" SLOPED CURB TYPES G (1) & J

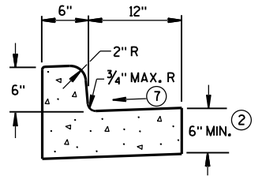


TYPES K (1) & L
(OPTIONAL CURB SHAPE)



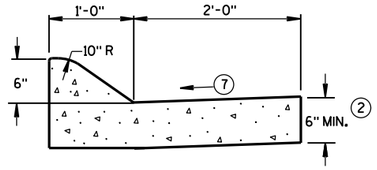
TYPES K (1) & L

CONCRETE CURB & GUTTER 30"

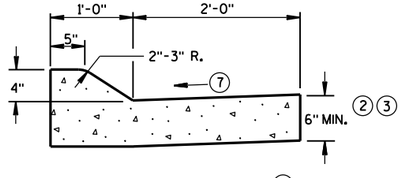


TYPES A (1) & D

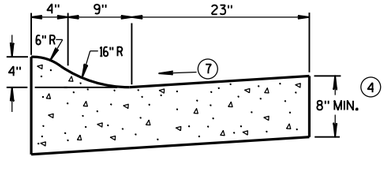
CONCRETE CURB & GUTTER 18"



6" SLOPED CURB TYPES A (1) & D

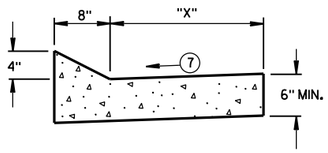


4" SLOPED CURB TYPES A (1) & D



4" SLOPED CURB TYPES R (1) & T (5)

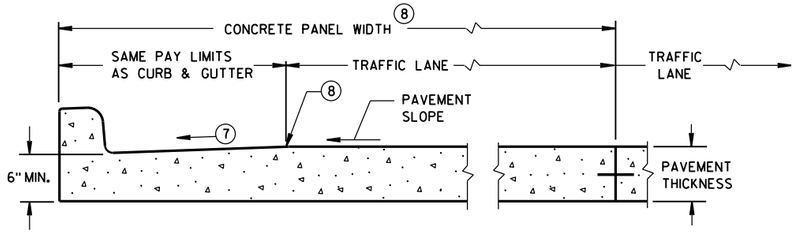
CONCRETE CURB & GUTTER 36"



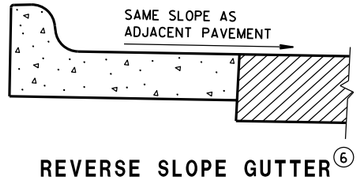
TYPES TBT & TBTT (1)

CONCRETE CURB & GUTTER

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



PARTIAL SECTION OF PAVEMENT *
WITH INTEGRAL CURB & GUTTER



REVERSE SLOPE GUTTER (6)
(TYPICAL FOR ALL CURB & GUTTER TYPES)

GENERAL NOTES

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

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

INTEGRAL CURB & GUTTER SHALL CONFORM TO THE DETAILS SHOWN FOR CONCRETE CURB & GUTTER INCLUDING THE TRANSVERSE GUTTER SLOPE.

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

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

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

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

(3) USE 8" MINIMUM GUTTER THICKNESS WHEN USED WITH AN ADJACENT CONCRETE TRUCK APRON PLACED BEHIND BACK OF CURB.

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

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

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

(7) USE 4% GUTTER CROSS SLOPE UNLESS OTHERWISE NOTED IN THE PLANS.

(8) INCLUDE LONGITUDINAL JOINT AND TIE BARS ALONG LANE EDGE WHEN CONCRETE PANEL WIDTH EXCEEDS THE MAXIMUM WIDTH PER TABLE BELOW. LONGITUDINAL JOINT(S) ARE NOT ALLOWED WITHIN TRAFFIC LANES AND BIKE LANES. LONGITUDINAL JOINT MAY BE SAWED.

PAVEMENT THICKNESS AND MAXIMUM CONCRETE PANEL WIDTH TABLE

PAVEMENT THICKNESS	MAXIMUM PANEL WIDTH
LESS THAN 10"	12'
10" & ABOVE	15'

* BIKE LANE IS NOT SHOWN.

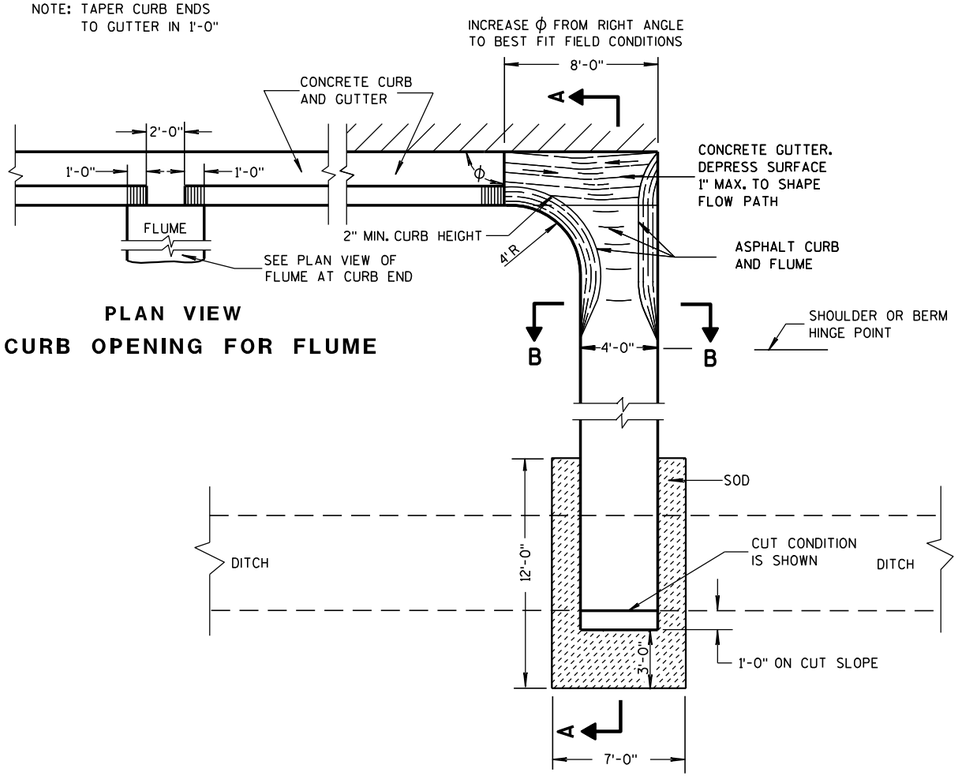
CONCRETE CURB & GUTTER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

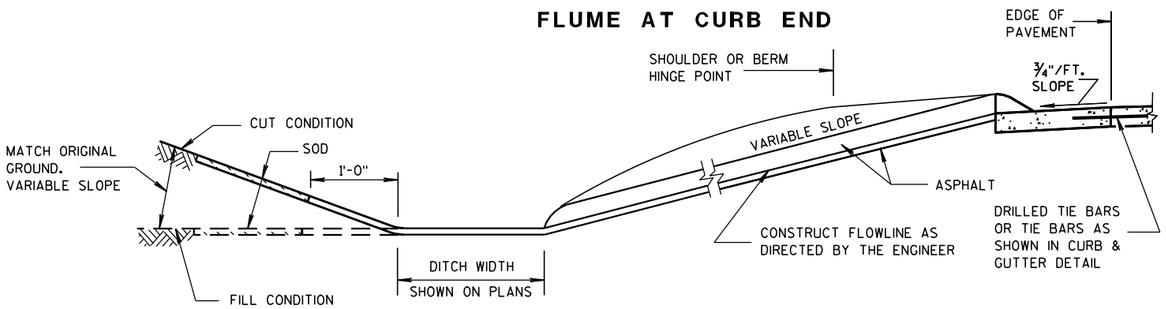
S.D.D. 8 D 1-20a

ASPHALTIC FLUME

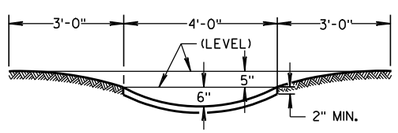


PLAN VIEW
CURB OPENING FOR FLUME

PLAN VIEW
FLUME AT CURB END



SECTION A-A



SECTION B-B

GENERAL NOTES

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

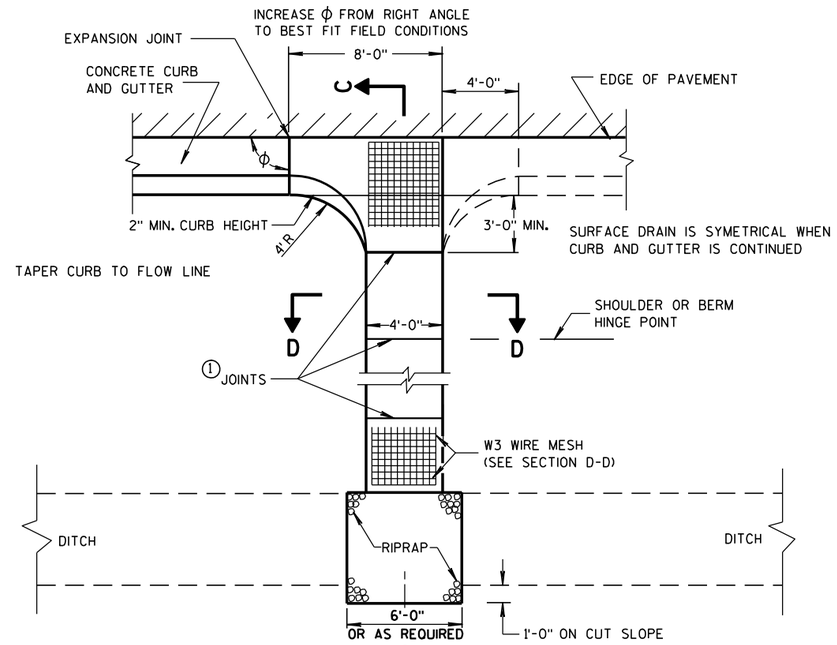
WELDED STEEL WIRE FABRIC SHALL BE IN ACCORDANCE WITH AASHTO SPECIFICATION M55.

① JOINTS SHALL BE $\frac{1}{8}$ TO $\frac{1}{4}$ INCH WIDE BY $1\frac{1}{2}$ INCHES DEEP AND SPACED AT UNIFORM INTERVALS OF APPROXIMATELY 4 FEET.

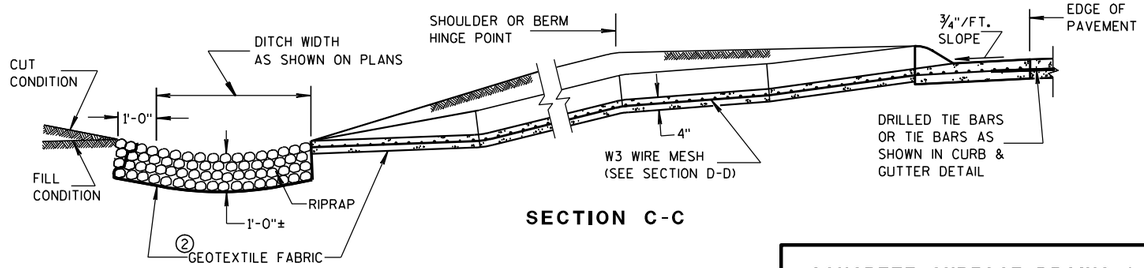
② GEOTEXTILE FABRIC TYPE "R" SHALL UNDERLAY THE FULL LENGTH AND WIDTH OF THE CONCRETE SURFACE DRAIN AND RIPRAP.

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

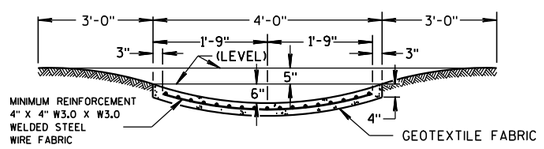
③ CONCRETE SURFACE DRAIN



PLAN VIEW



SECTION C-C



SECTION D-D

CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

6

S.D.D. 8 D 4-5

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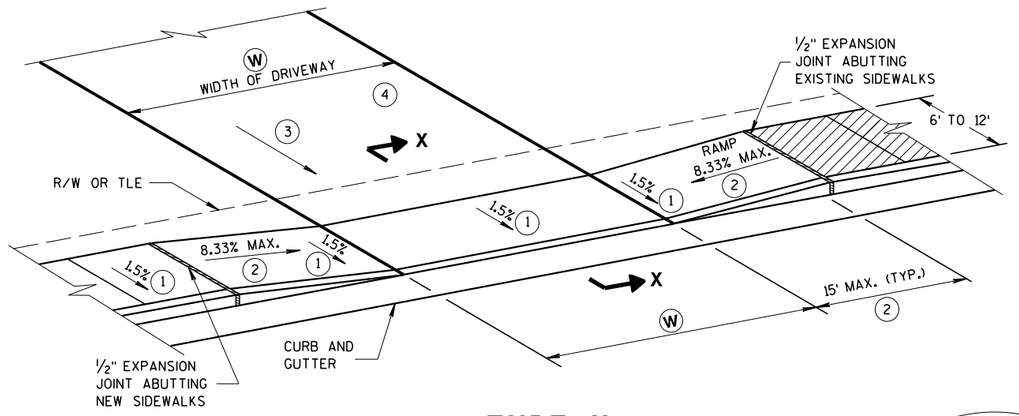
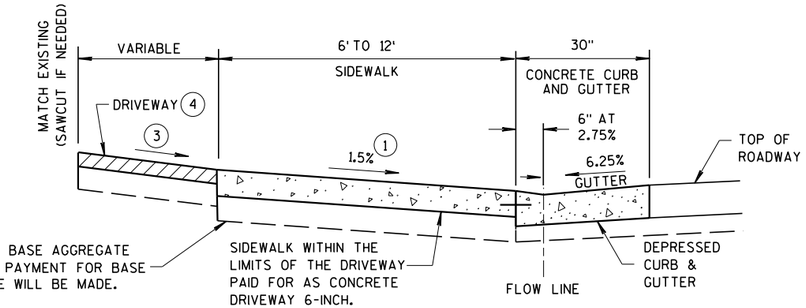
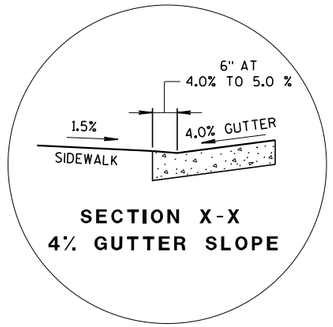
S.D.D. 8 D 4-5



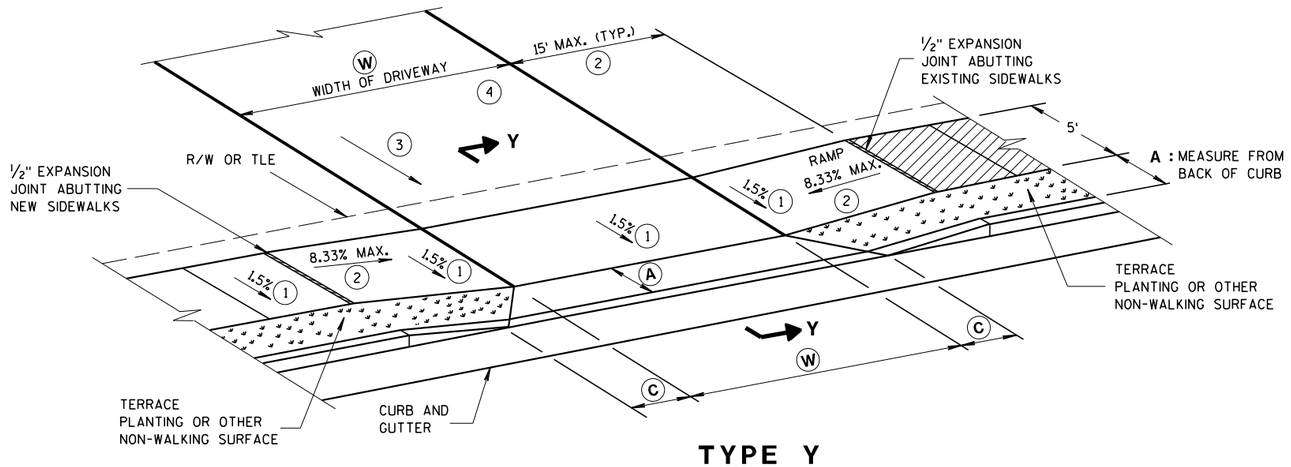
TYPE X
SIDEWALK ABUTS CURB & GUTTER
TERRACE VARIES 0 TO 3 FEET



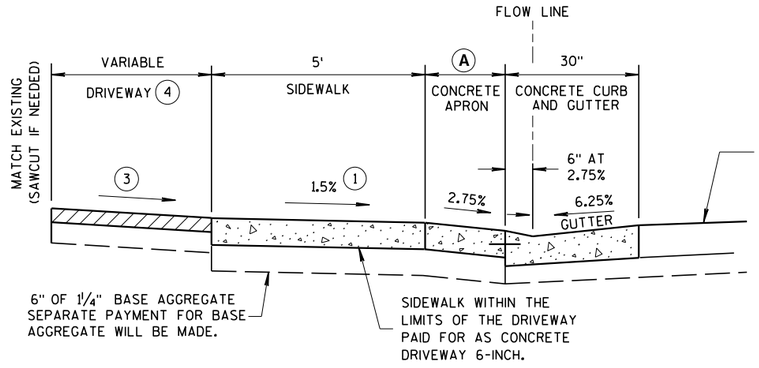
SECTION X-X



SECTION X-X
4% GUTTER SLOPE



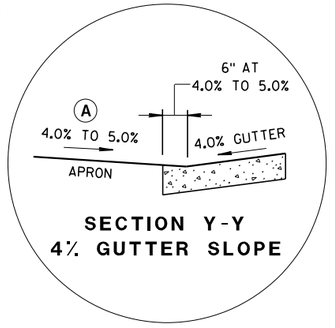
TYPE Y
SIDEWALK WITH NARROWER TERRACE
TERRACE VARIES 4 TO 6 FEET



NOTE: SIDEWALK MAY BE DEPRESSED IN DRIVEWAY AREAS

SECTION Y-Y

DRIVEWAY DETAIL
WITH CONCRETE CURB & GUTTER
(URBAN AND SUBURBAN)



SECTION Y-Y
4% GUTTER SLOPE

Ⓦ: 12' MIN. - 24' MAX. RESIDENTIAL AND NON-COMMERCIAL (PE & FE)
16' MIN. - 35' MAX. COMMERCIAL (CE)

GENERAL NOTES

PROVIDE CONSTRUCTION JOINTS ALONG THE CENTER OF THE CONCRETE FOR DRIVEWAYS UNDER 20 FEET IN WIDTH AND AT THE THIRD POINTS OVER 20 FEET IN WIDTH.

Ⓦ IS SHOWN ON PLAN AND PROFILE SHEETS.

OFFSETS, ELEVATIONS, AND PERCENT GRADE ARE SHOWN ON THE CROSS SECTIONS.

(1) CONSTRUCTION TOLERANCE OF 0.5% ± FOR SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2%.

(2) THE SIDEWALK RAMP MAXIMUM RUNNING SLOPE SHALL NOT REQUIRE THE RAMP LENGTH TO EXCEED 15 FEET TO AVOID CHASING THE SLOPE INDEFINITELY WHEN CONNECTING TO STEEP GRADES. WHEN APPLYING THE 15 FOOT MAXIMUM LENGTH, THE RUNNING SLOPE OF THE SIDEWALK SHALL BE AS FLAT AS FEASIBLE AND NOT EXCEED THE LONGITUDINAL GRADE OF THE ROADWAY. SLOPE SIDEWALK RAMP TOWARD APRON AS SHOWN WHERE THERE IS NO TERRACE OR WHERE THE TERRACE WIDTH IS LESS THAN 6 FEET WIDE.

(3) DRIVEWAY SLOPES: DESIRABLE MAXIMUM
- 10.5% UP AWAY FROM SIDEWALK (SAG)
- 8.5% DOWN AWAY FROM SIDEWALK (CREST)
- ABSOLUTE MAXIMUM 15% FOR BOTH CREST AND SAG

(4) DRIVEWAY TYPES
- 6-INCH CONCRETE DRIVEWAY PAVEMENT OVER 6-INCH BASE AGGREGATE
- 2-INCH TO 3-INCH ASPHALTIC SURFACE OVER 6-INCH BASE AGGREGATE
- 6-INCH BASE AGGREGATE (MAY BE INCREASED FOR CLAY SUBGRADES)

TABLE Y

Ⓐ FEET	Ⓒ FEET
3.5'	2.0'
4.5'	3.0'
5.5'	3.5'

NOT TO SCALE

DRIVEWAY AND SIDEWALK RAMPS TYPES X & Y

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

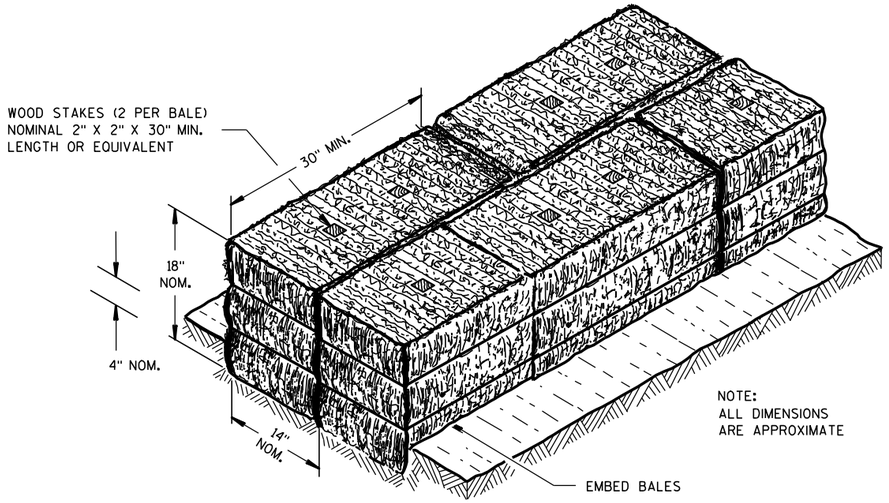
APPROVED
March 2018 — DATE
/S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR
FHWA

6

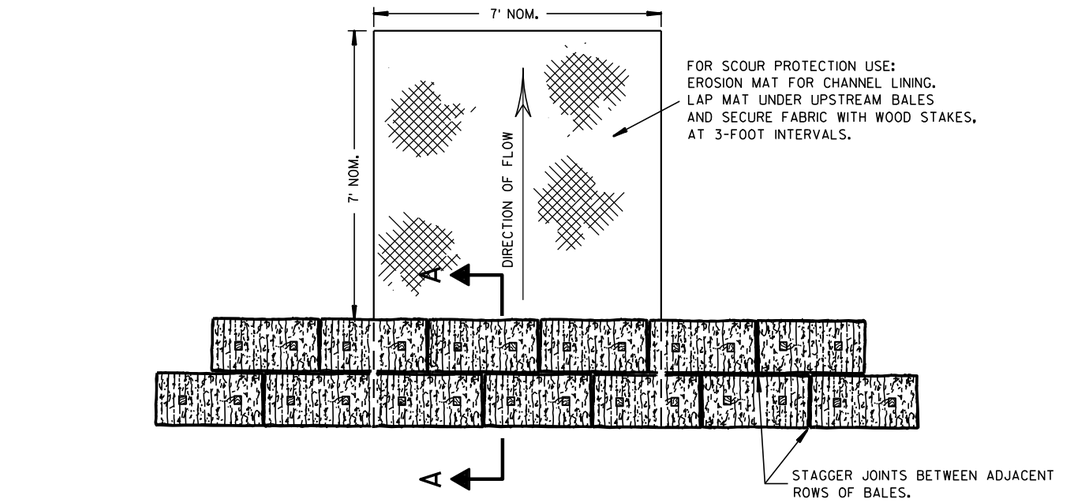
S.D.D. 8 D 18-2

6

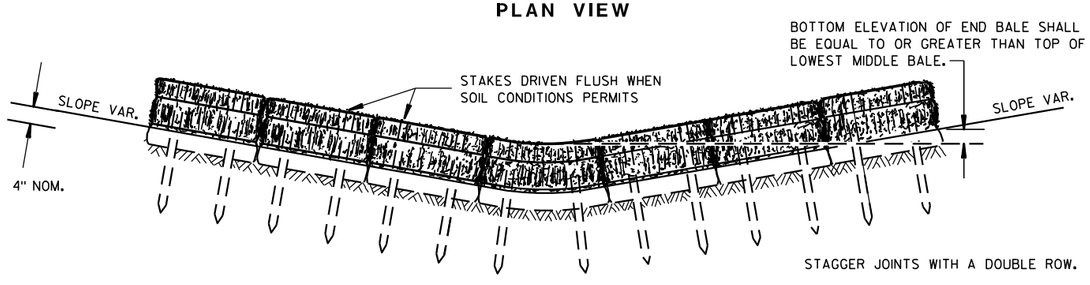
S.D.D. 8 D 18-2



SECTION A-A



PLAN VIEW



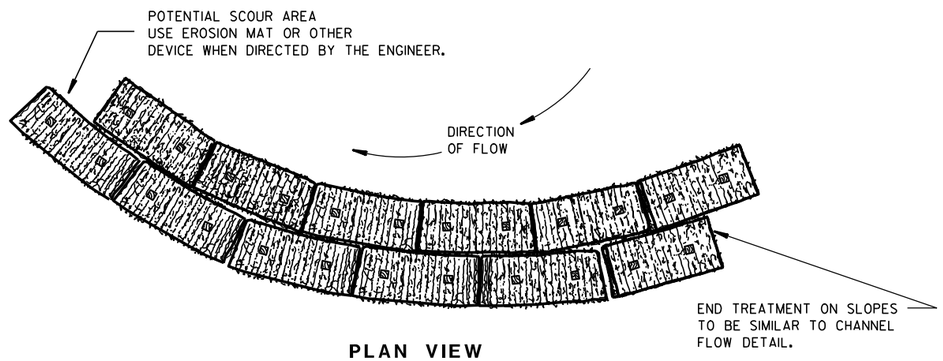
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES ①

GENERAL NOTES

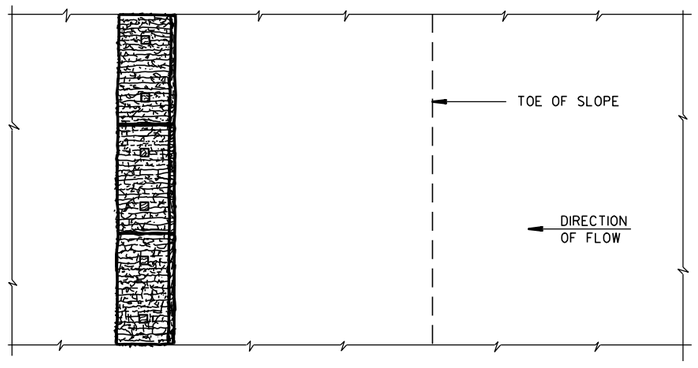
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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

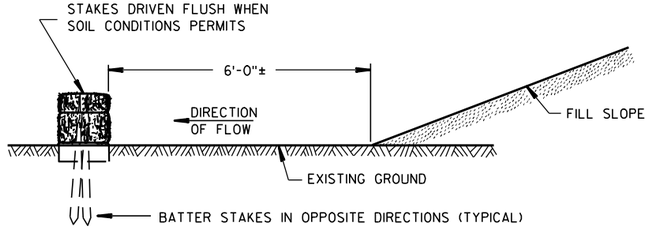


PLAN VIEW

WHEN ALTERING THE DIRECTION OF FLOW



PLAN VIEW



FRONT ELEVATION

WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE

EROSION BALES FOR SHEET FLOW

TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

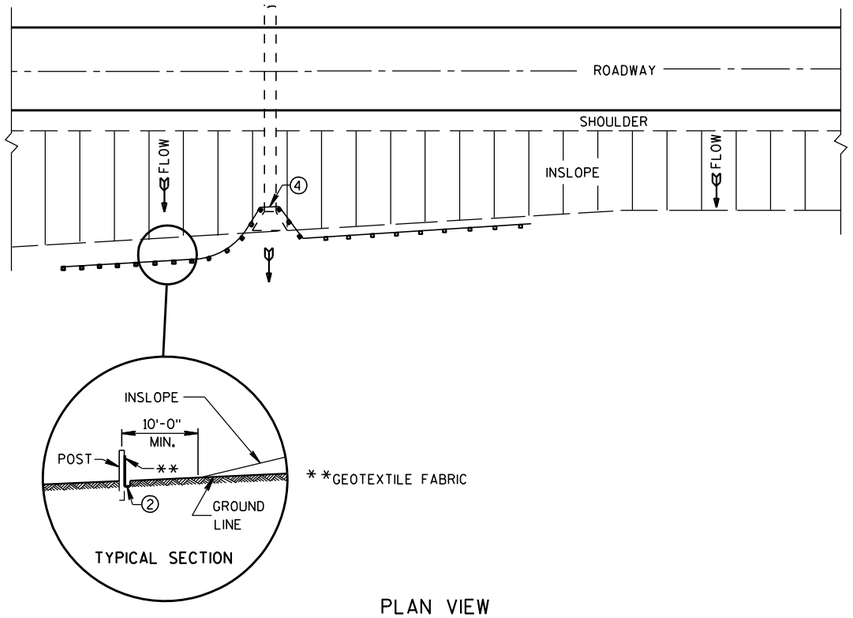
6/04/02 — DATE

/S/ Beth Cannestra — CHIEF ROADWAY DEVELOPMENT ENGINEER

FHWA

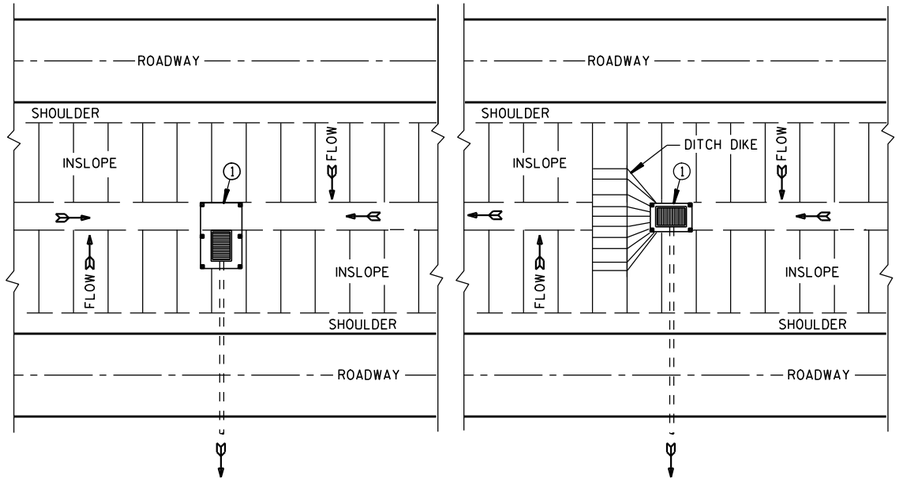
6

S.D.D. 8 E 8-3



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



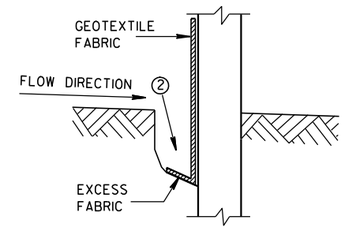
PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

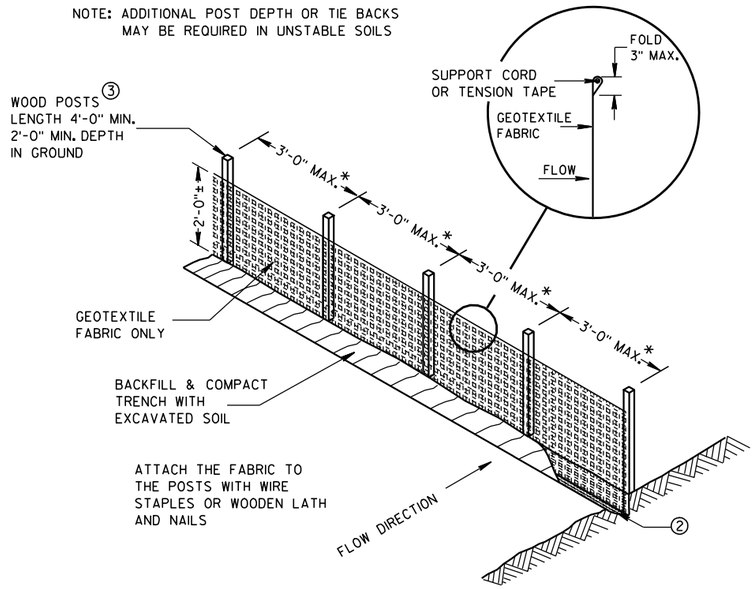
GENERAL NOTES

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

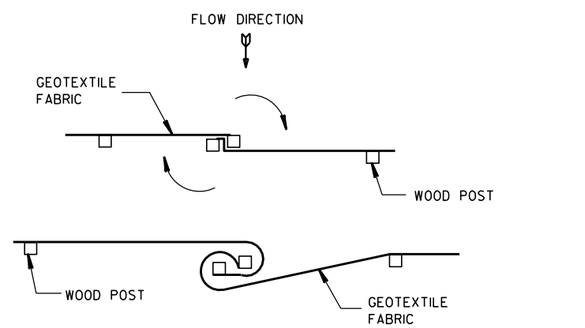
1. HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
2. FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
3. WOOD POSTS SHALL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



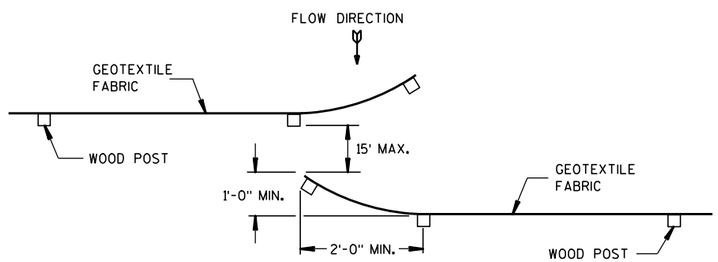
TRENCH DETAIL



SILT FENCE

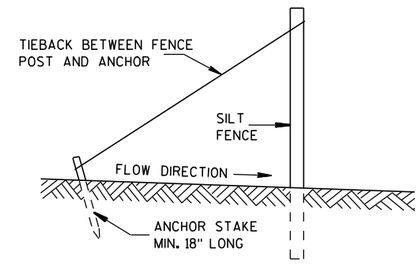


TWIST METHOD



HOOK METHOD

JOINING TWO LENGTHS OF SILT FENCE 5



SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6

S.D.D. 8 E 9-6

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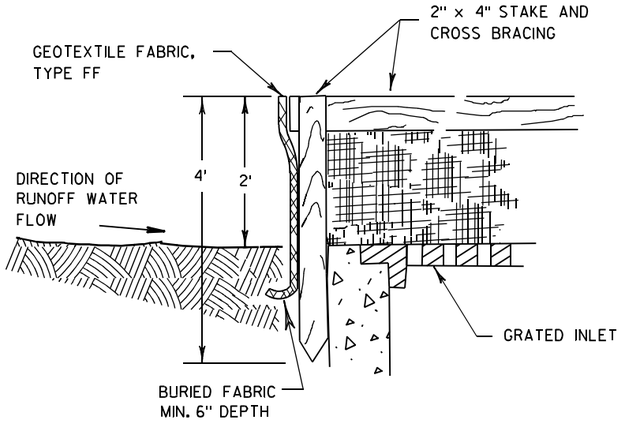
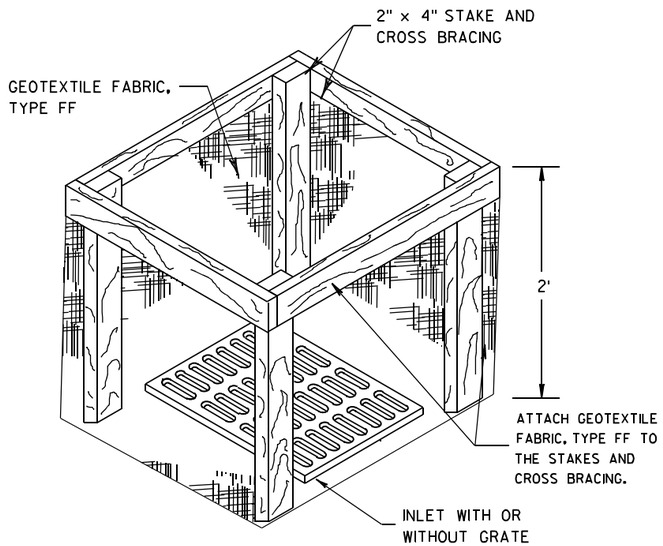
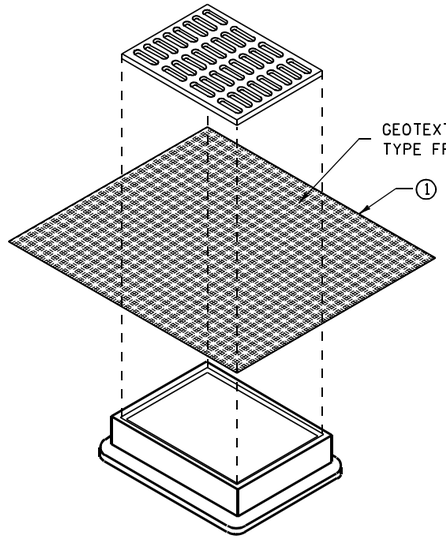
S.D.D. 8 E 9-6



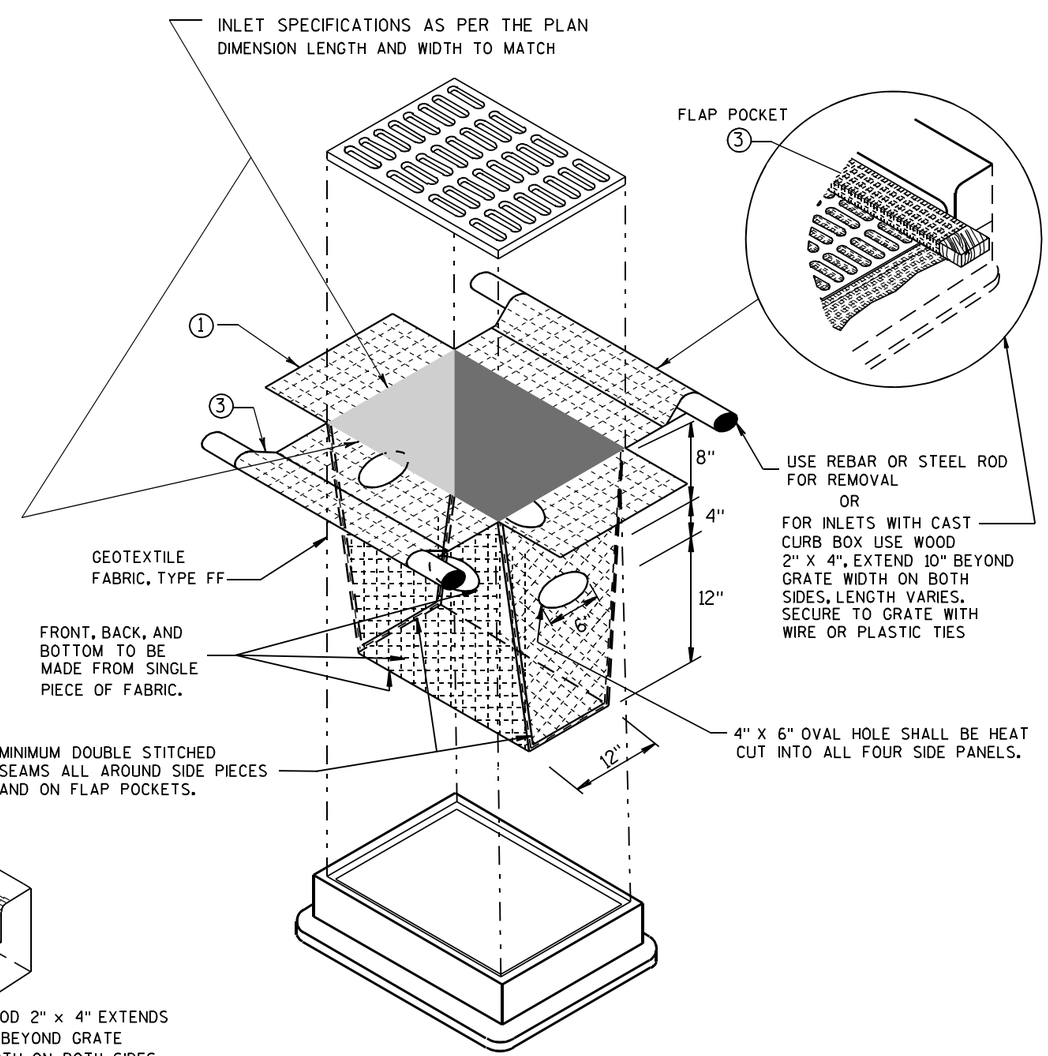


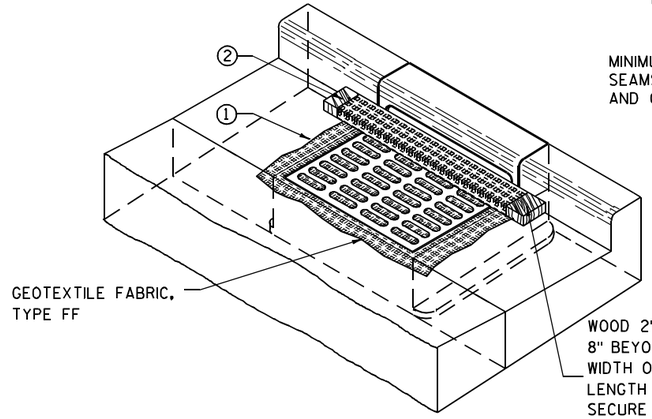
INLET PROTECTION, TYPE A



INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)

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





INLET PROTECTION, TYPE C (WITH CURB BOX)

INLET PROTECTION, TYPE D

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

GENERAL NOTES

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

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

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

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

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

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

INSTALLATION NOTES

TYPE B & C

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

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

TYPE D

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

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

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

INLET PROTECTION
TYPE A, B, C, AND D

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

10/16/02
DATE

/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER

FHWA

6

S.D.D. 8 E 10-2

METAL APRON ENDWALLS

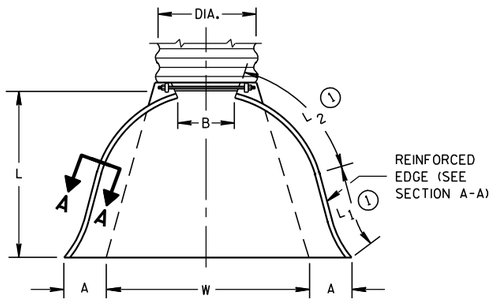
PIPE DIA. (IN.)	MIN. THICK. (Inches) STEEL	MIN. THICK. (Inches) ALUM.	DIMENSIONS (Inches) A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")	APPROX. SLOPE	BODY
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1	1 Pc.
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1	1 Pc.
18	.064	.060	8	10	6	31	15	28 1/4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

× EXCEPT CENTER PANEL SEE GENERAL NOTES

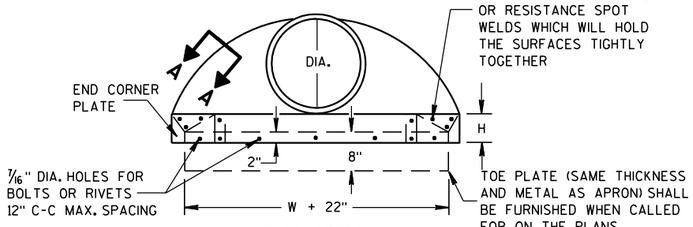
REINFORCED CONCRETE APRON ENDWALLS

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

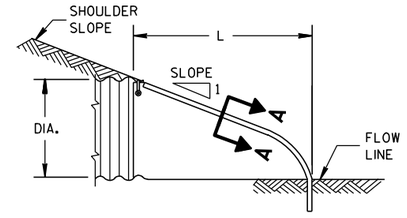
*MINIMUM
**MAXIMUM



PLAN VIEW

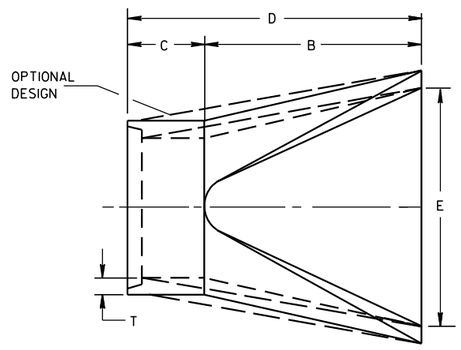


END VIEW

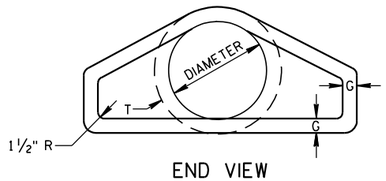


SIDE ELEVATION

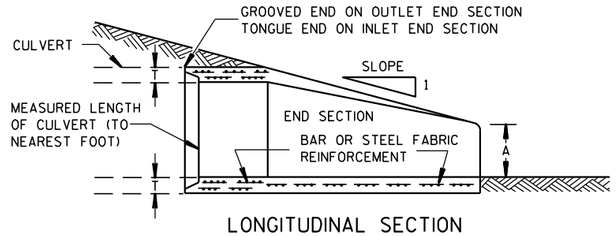
METAL ENDWALLS



PLAN

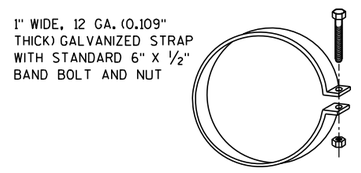


END VIEW



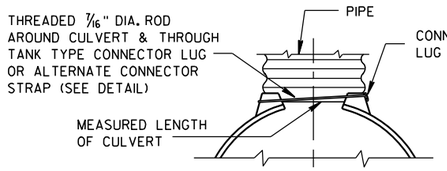
LONGITUDINAL SECTION

CONCRETE ENDWALLS

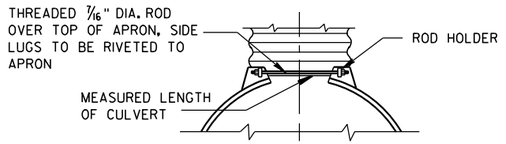


ALTERNATE FOR TYPE 1 CONNECTION

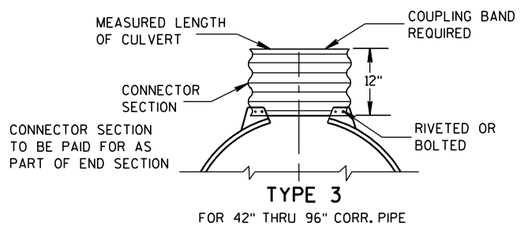
END SECTION CONNECTOR STRAP



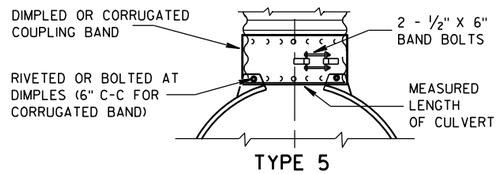
TYPE 1
FOR 12" THRU 24" CORR. PIPE



TYPE 2
FOR 30" THRU 96" CORR. PIPE



TYPE 3
FOR 42" THRU 96" CORR. PIPE



TYPE 5
ALTERNATE FOR:
ALL SIZES CORRUGATED CIRCULAR PIPE

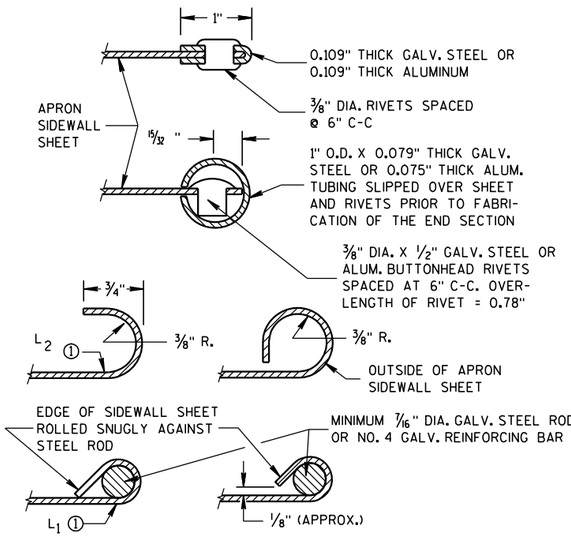
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL. AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

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

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

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

CONNECTION DETAILS



SECTION A-A

GENERAL NOTES

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

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

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

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

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

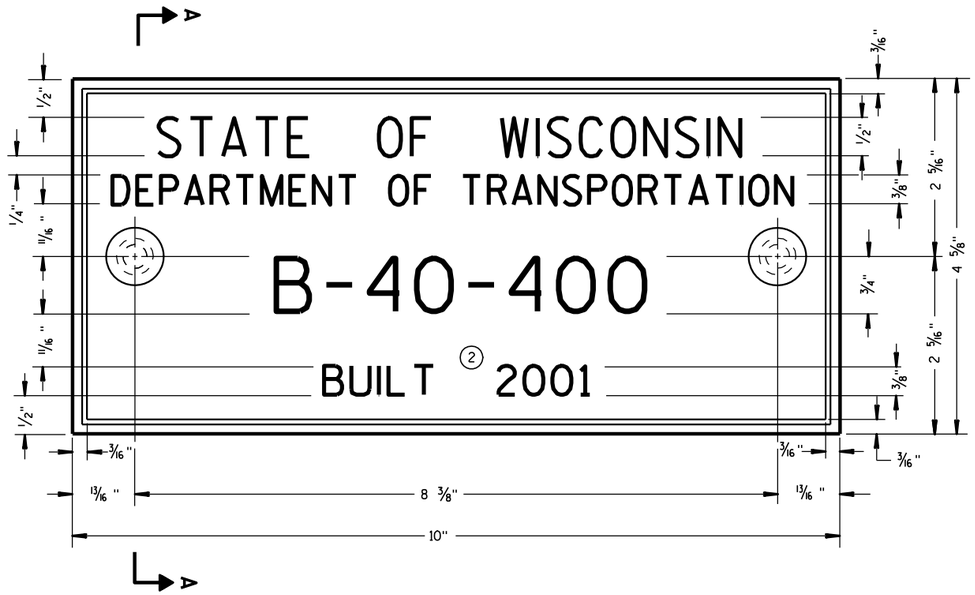
① FOR PIPE SIZES UP TO 60" DIAMETER, A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

APRON ENDWALLS FOR CULVERT PIPE

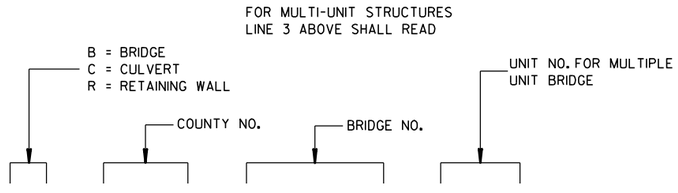
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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



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



NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES

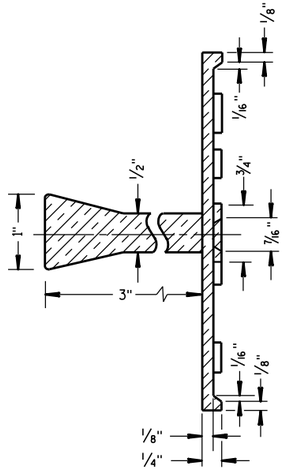
GENERAL NOTES

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

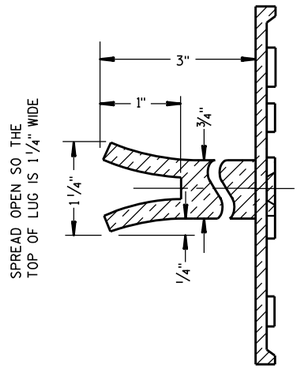
THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

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

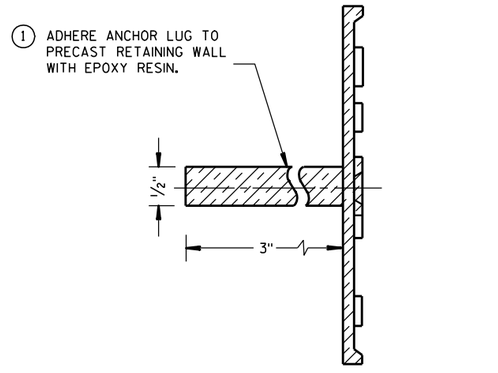
(2) REHABILITATION OF AN EXISTING STRUCTURE SHOULD USE THE DATE OF ORIGINAL STRUCTURE CONSTRUCTION.



SECTION A-A



ALTERNATE LUG



ALTERNATE LUG
(FOR ATTACHMENT TO PRECAST STRUCTURES)

NAME PLATE (STRUCTURES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

3/26/10 DATE — /S/ Scot Beck — CHIEF STRUCTURAL DEVELOPMENT ENGINEER

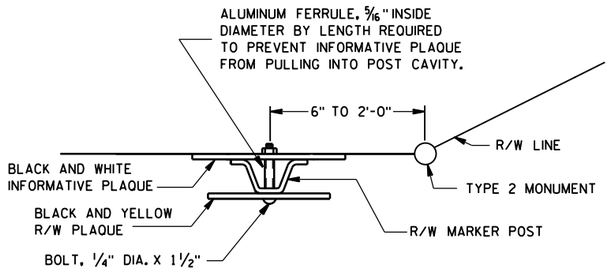
FHWA

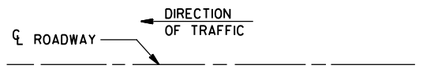
6

S.D.D. 12 A 3-10

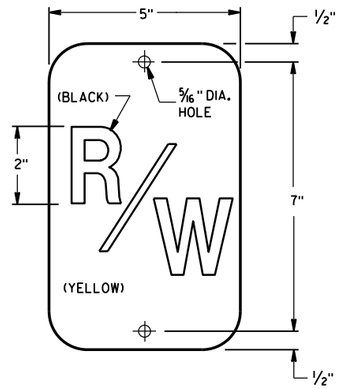
6

S.D.D. 12 A 3-10



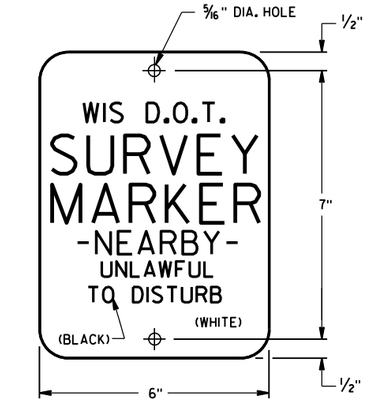


PLAN VIEW



R/W PLAQUE

THE RIGHT-OF-WAY PLAQUE AND INFORMATIVE PLAQUE WILL BE FURNISHED BY THE WISCONSIN DEPARTMENT OF TRANSPORTATION.



INFORMATIVE PLAQUE

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.

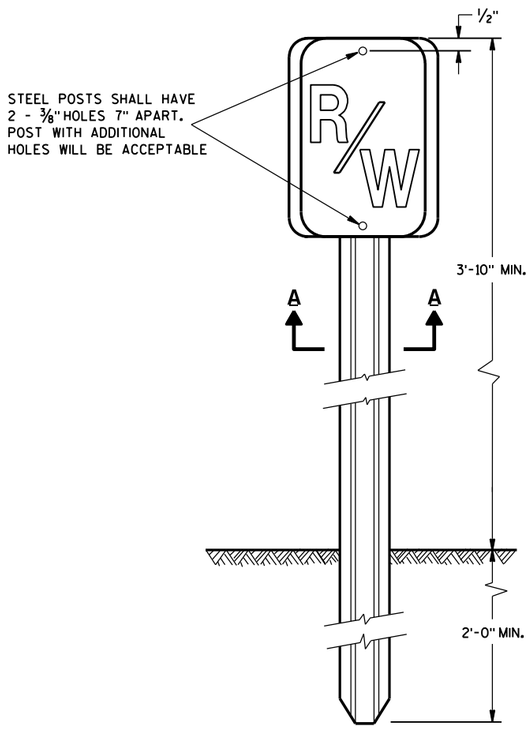
A STEEL MARKER POST FOR RIGHT-OF-WAY SHALL BE PLACED IN THE RIGHT-OF-WAY, WITH THE BACK OF THE POST ON THE LONGER RIGHT-OF-WAY TANGENT, 6 INCHES TO 24 INCHES FROM EACH TYPE 2 MONUMENT TO SERVE AS A GUARD POST, AND AT OTHER LOCATIONS AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

THE "R/W" PLAQUE SHALL FACE THE ROADWAY AND THE INFORMATIVE PLAQUE SHALL FACE AWAY FROM THE ROADWAY. R/W AND INFORMATIVE PLAQUES WILL BE FURNISHED BY THE DEPARTMENT OF TRANSPORTATION.

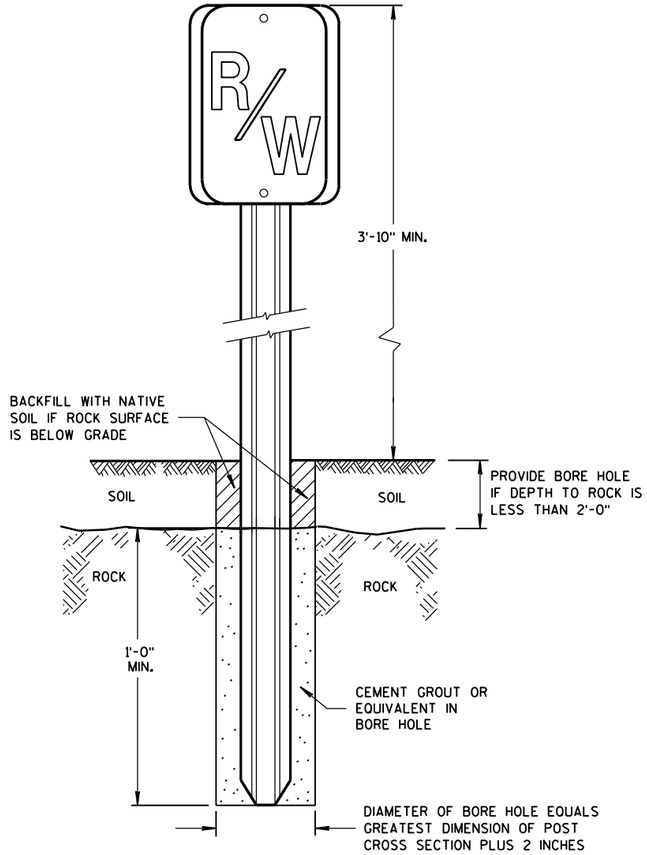
STEEL MARKER POSTS SHALL MEET THE MINIMUM MATERIAL REQUIREMENTS FOR STEEL DELINEATOR POSTS; EXCEPT POSTS PAINTED WITH FEDERAL YELLOW ENAMEL NEED NOT BE ZINC COATED.

(1) IN AREAS OF SOLID ROCK, DRILL A BORE HOLE 2" GREATER THAN THE WIDEST DIMENSION OF THE POST CROSS SECTION INTO THE ROCK TO A MINIMUM DEPTH OF 12 INCHES. CUT OR SPLICE THE POST SO THAT A MINIMUM LENGTH OF 3'10" PROTRUDES ABOVE THE GROUND. BLOW OUT THE BORE HOLE IN THE ROCK USING COMPRESSED AIR.

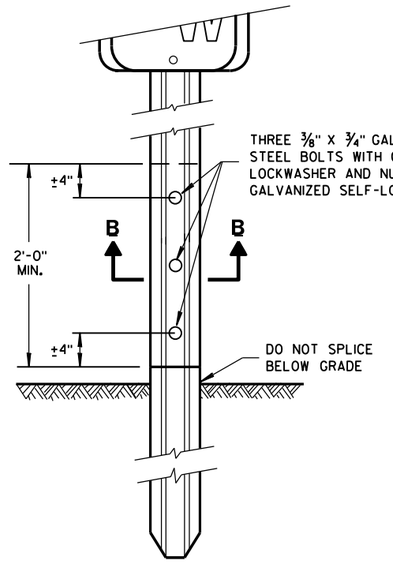
FILL THE BORE HOLE WITH CEMENT GROUT, OR EQUIVALENT. DEPENDING ON THE STABILITY OF THE ROCK.



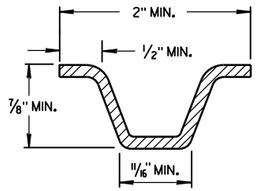
FRONT VIEW
STEEL MARKER POST



FRONT VIEW
ROCK INSTALLATION (1)

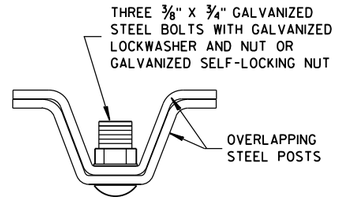


FRONT VIEW
SPLICE DETAIL



MIN. WEIGHT 1.12 LB./FT.

SECTION A-A



SECTION B-B

MARKER POST FOR RIGHT-OF-WAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

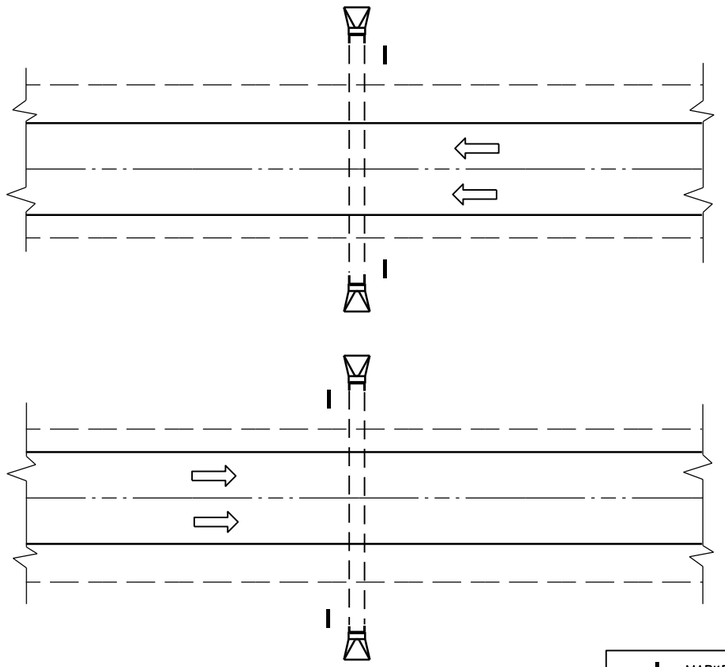
APPROVED
2/18/2016 — DATE
/S/ Ray Kumapayi — CHIEF SURVEYING AND MA[illegible]INEER
FHWA

6

S.D.D. 15 A 1-13a

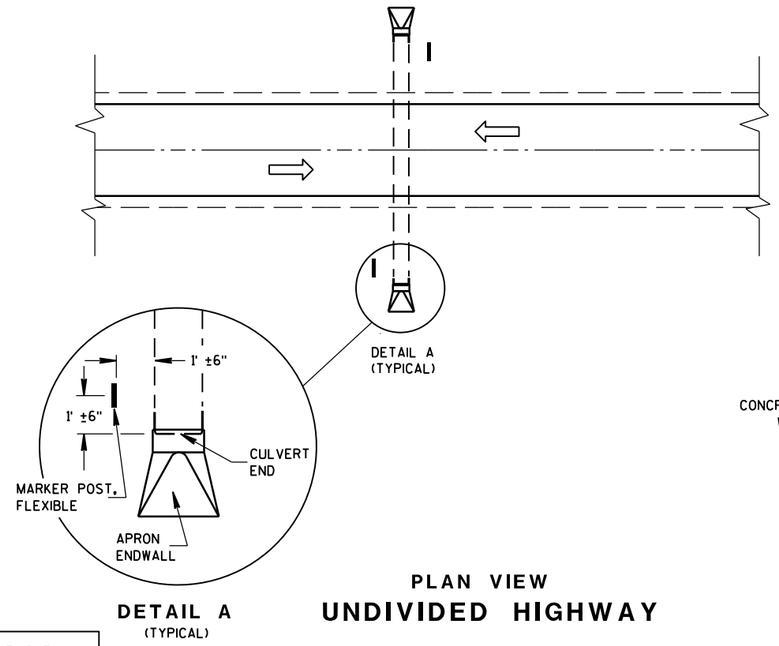
6

S.D.D. 15 A 1-13a



PLAN VIEW

DIVIDED HIGHWAY



DETAIL A
(TYPICAL)

PLAN VIEW

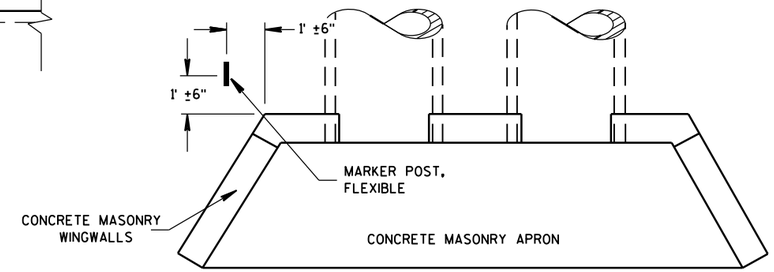
UNDIVIDED HIGHWAY

MARKER POST, FLEXIBLE

DIRECTION OF TRAFFIC FLOW

GENERAL NOTES

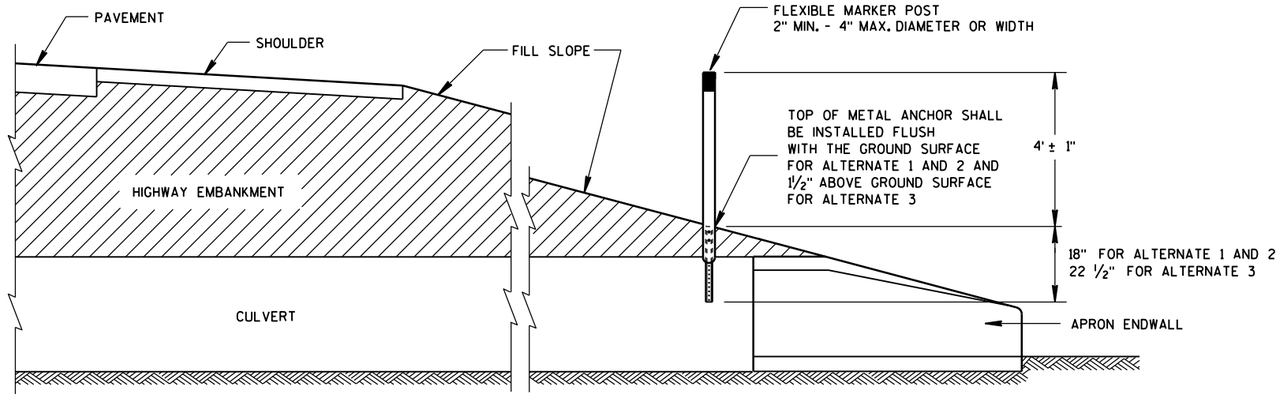
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.



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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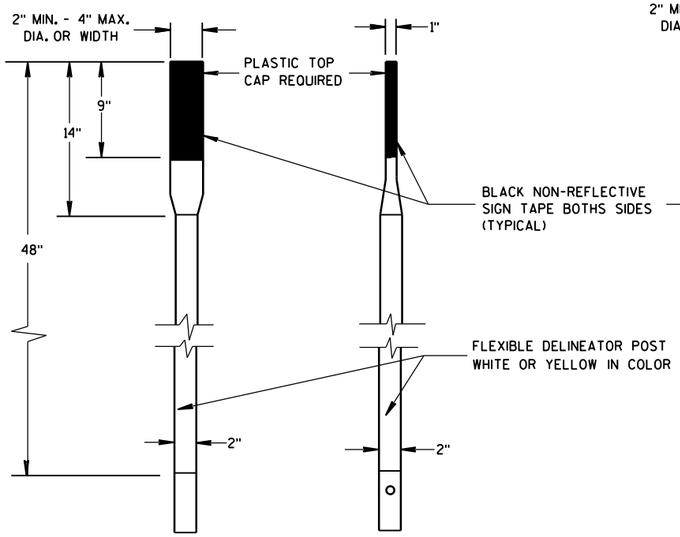
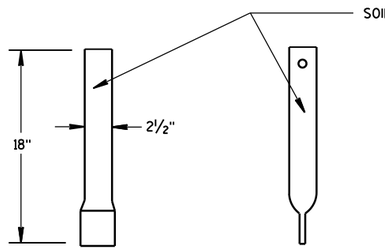
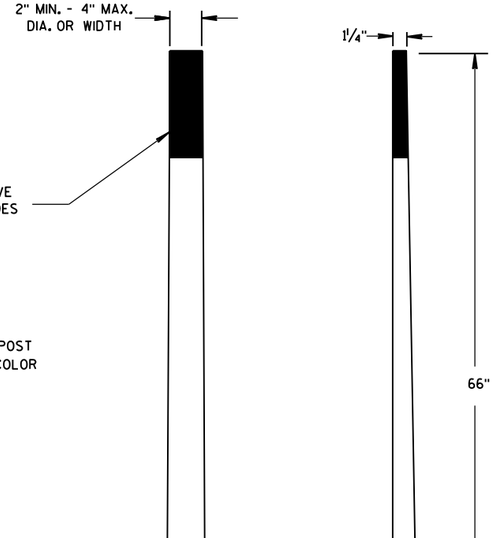
S.D.D. 15 A 3-2a





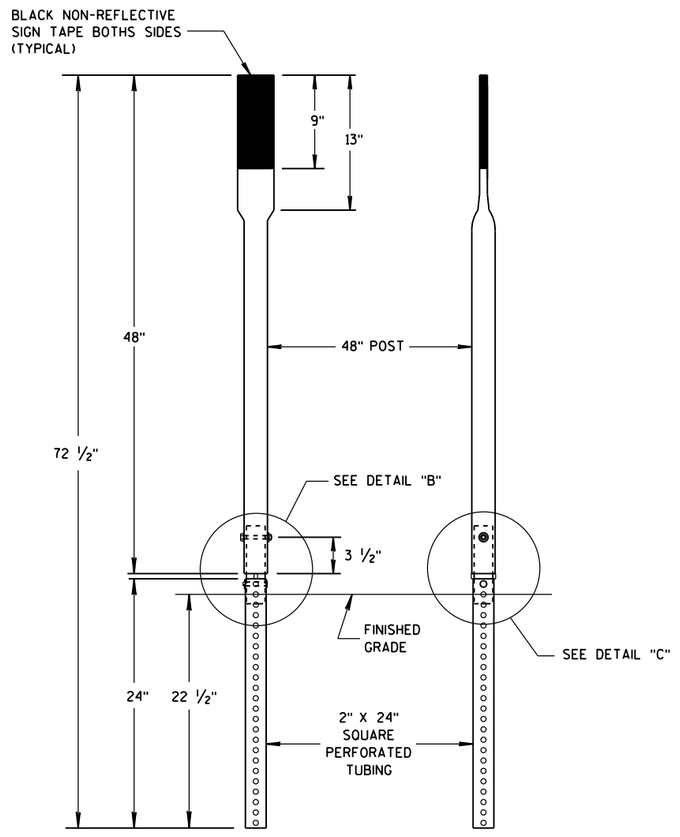
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

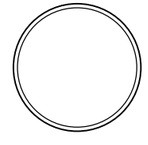
ALTERNATE 2



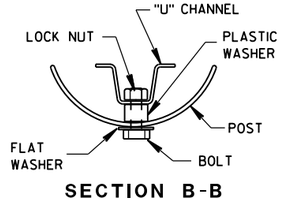
FRONT VIEW SIDE VIEW

ALTERNATE 3

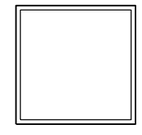
FLEXIBLE MARKER POSTS



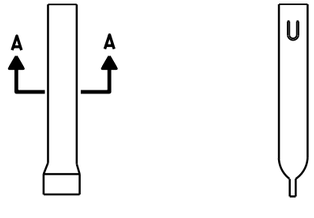
SECTION A-A



SECTION B-B

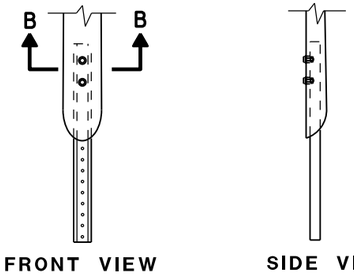


SECTION C-C



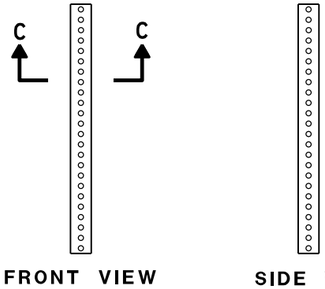
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

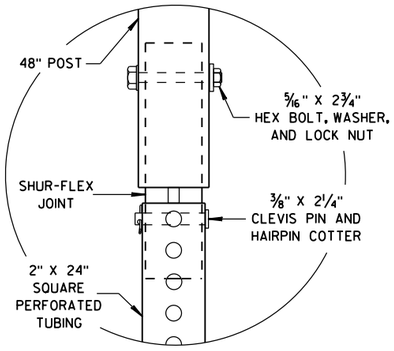
ALTERNATE 2



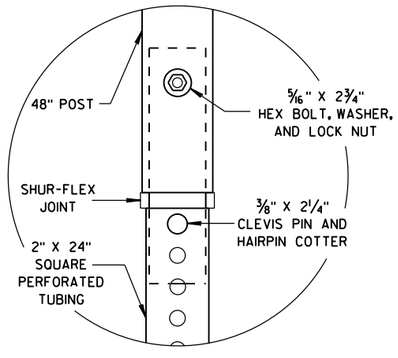
FRONT VIEW SIDE VIEW

ALTERNATE 3

FLEXIBLE MARKER POST ANCHORS



DETAIL B



DETAIL C

FLEXIBLE MARKER POST
FOR CULVERT END

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
10/1/2012 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
FHWA

6

S.D.D. 15 A 3-2b

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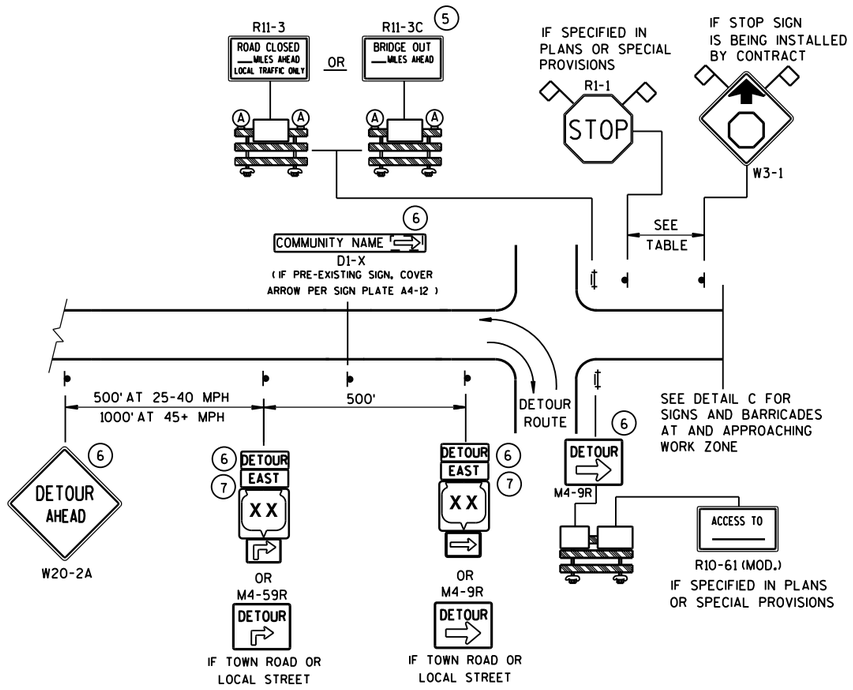
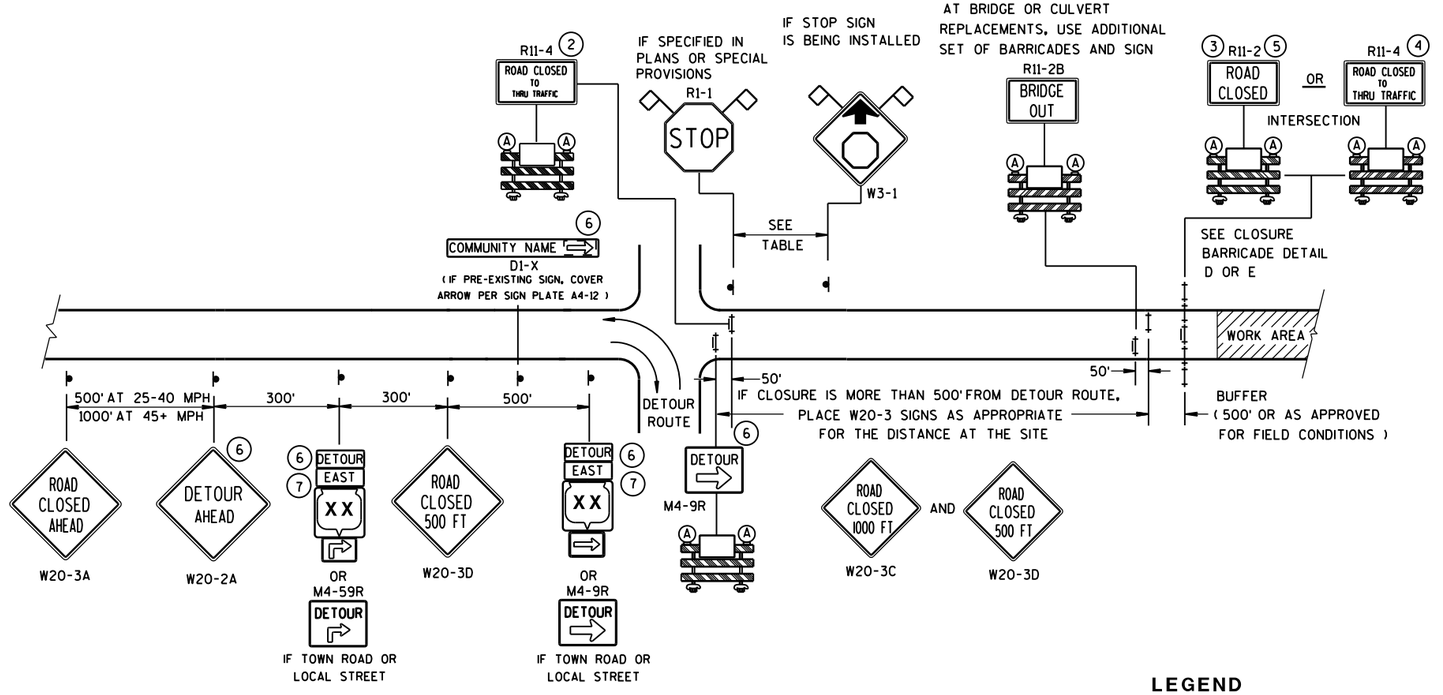
S.D.D. 15 A 3-2b



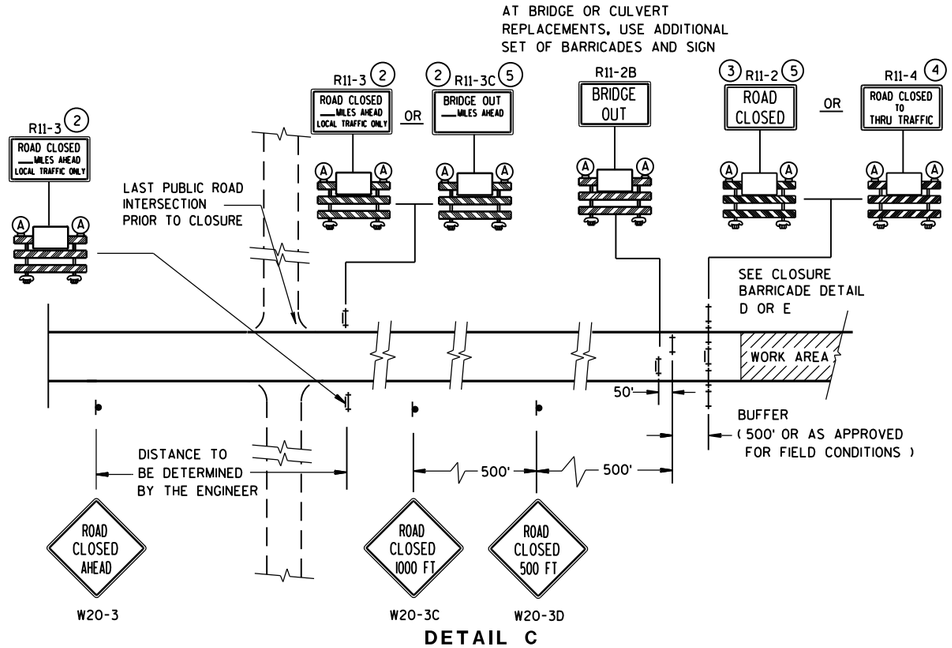


DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR

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)

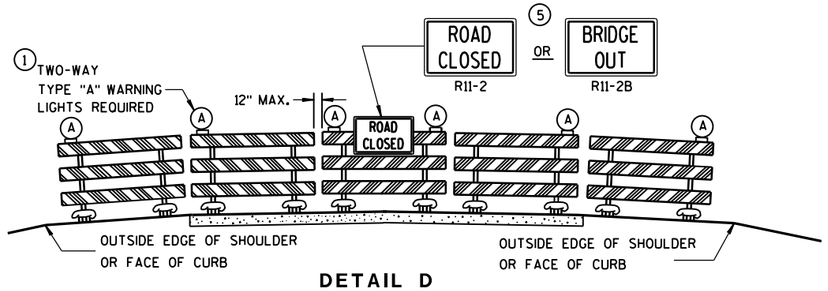
BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

Sept. 2015 — DATE
/S/ Peter Amakobe Atepe
STATEWIDE WORK ZONE TRAFFIC SAFETY ENGINEER
FHWA

S.D.D. 15 C 2-6a

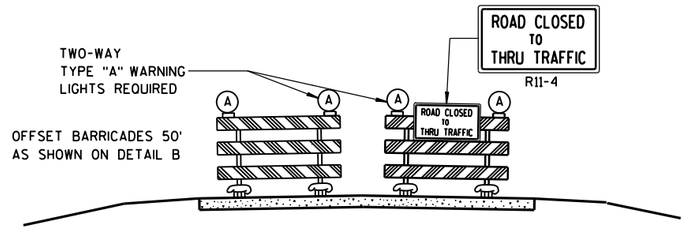
S.D.D. 15 C 2-6a



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 — FHWA — FIC

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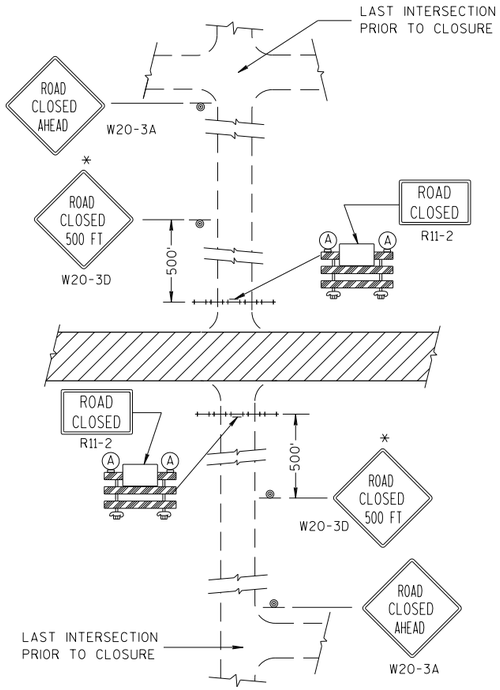
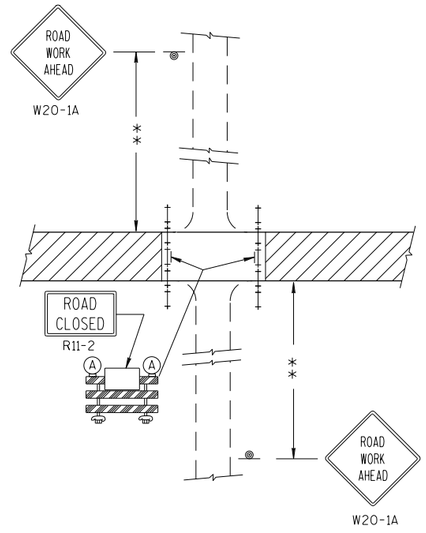
S.D.D. 15 C 2-6b



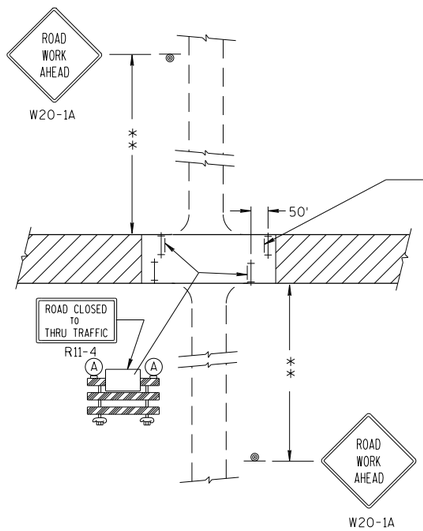
DETAIL 1

(NO ACCESS TO PROJECT)



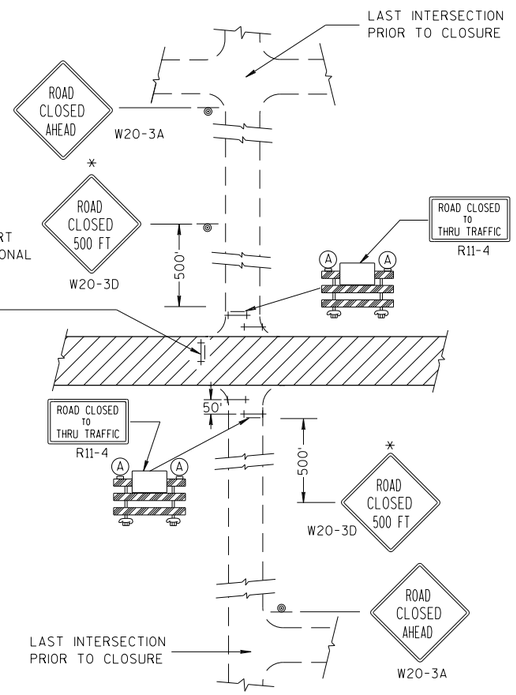
DETAIL 2

(PUBLIC CROSS-TRAFFIC MAINTAINED.
NO ACCESS TO PROJECT).



DETAIL 3

(PUBLIC CROSS-TRAFFIC MAINTAINED. CONTRACTOR,
LOCAL BUSINESS AND RESIDENT ACCESS).



DETAIL 4

(CONTRACTOR, LOCAL BUSINESS AND
RESIDENT ACCESS TO PROJECT)

GENERAL NOTES

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

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

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

IF A "STOP" SIGN MUST BE REMOVED FOR A WORK OPERATION, A TEMPORARY "STOP" SIGN SHALL BE PLACED PRIOR TO THE SIGN REMOVAL, OR A FLAGGER SHALL BE PROVIDED UNTIL THE SIGN IS RE-ESTABLISHED.

BARRICADES THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY RE-ESTABLISHED UPON COMPLETION OF THE OPERATION OR, FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

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

ALL TYPE III BARRICADES SHALL HAVE RAILS REFLECTORIZED ON BOTH FACES. STRIPES SHALL BE PROPERLY SLOPED DOWN TOWARD THE TRAFFIC SIDE OR AS SHOWN IN THE ROAD CLOSURE BARRICADE DETAIL D FOR FULL ROAD CLOSURES.

TYPE "A" LOW-INTENSITY FLASHING WARNING LIGHTS SHALL BE VISIBLE ON BOTH SIDES OF THE BARRICADE.

THE R11-2, R11-3 AND R11-4 SIGNS PLACED ON BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE OR BOTTOM RAILS.

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:
R11-2 SHALL BE 48" X 30".
R11-4 AND R11-3 SHALL BE 60" X 30".

*OMIT THE "ROAD CLOSED 500 FT." SIGN IF THE LAST INTERSECTION IS 500 FT. OR LESS FROM THE WORK ZONE.

**500' MAX. OR AT LAST INTERSECTION WHICHEVER IS CLOSER.

LEGEND

- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- (A) TYPE "A" WARNING LIGHT (FLASHING)
- WORK AREA

BARRICADES AND SIGNS FOR SIDEROAD CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

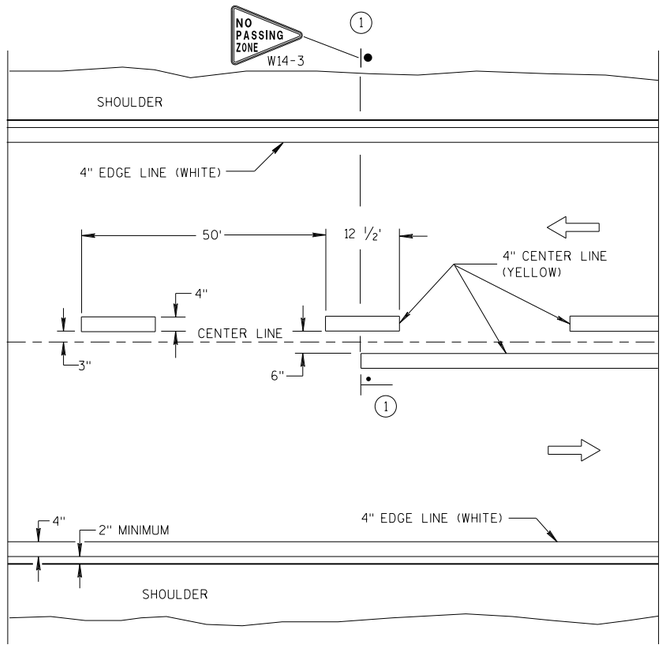
7/2018
DATE

/S/ Andrew Heidtke
WORK ZONE ENGI

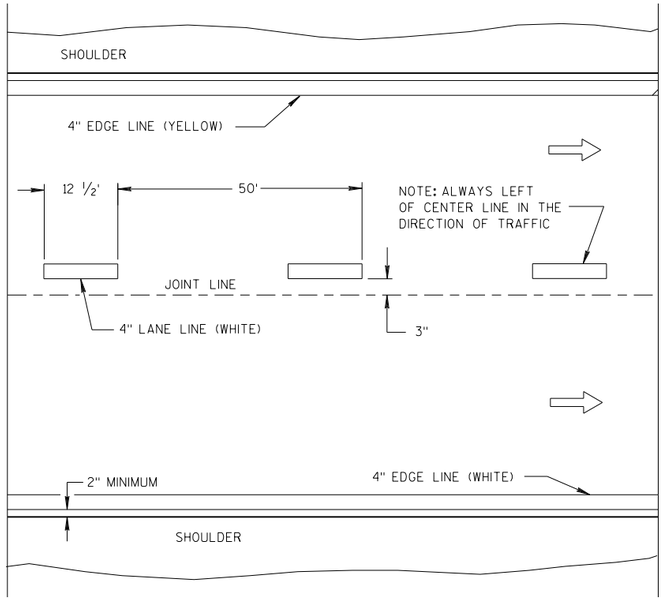
FHWA

6

S.D.D. 15 C 3-5



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.

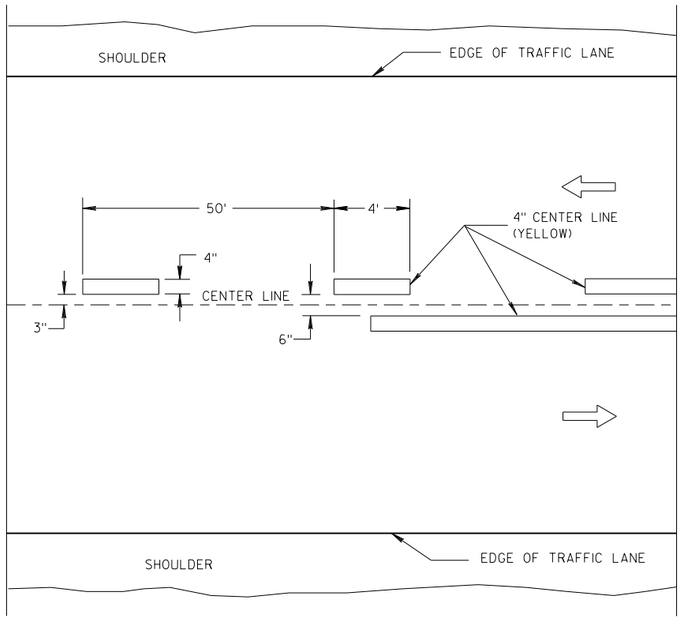
NOTE

ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL

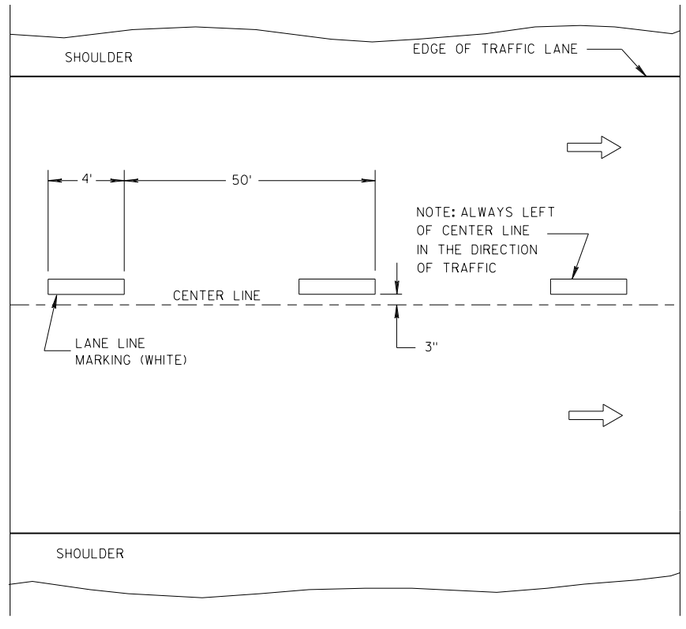
LEGEND

"T" MARKING

POST MOUNTED SIGN



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY PAVEMENT MARKING

LONGITUDINAL MARKING (MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

7/2018 DATE

/S/ Matthew R. Rauch
STATE SIGNING AND MARKING ENGINEER

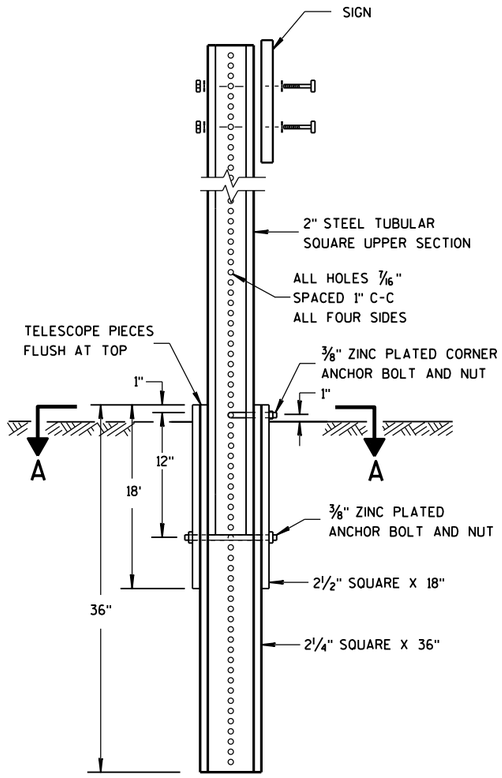
FHWA

6

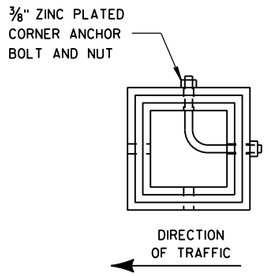
S.D.D. 15 C 8-19a

6

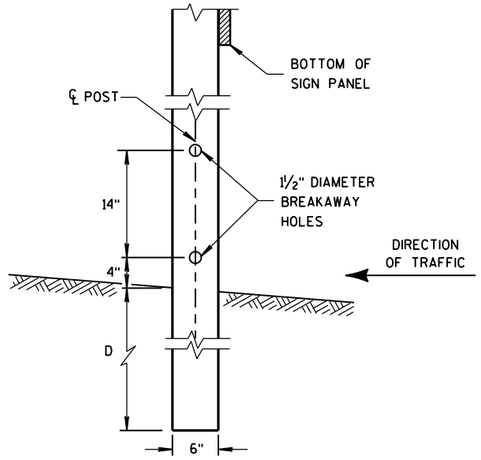
S.D.D. 15 C 8-19a



DETAIL OF TUBULAR STEEL SIGN POST



SECTION A-A



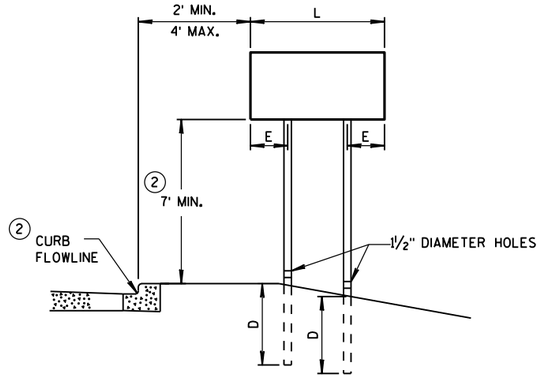
4"x6" WOOD POST MODIFICATION

GENERAL NOTES

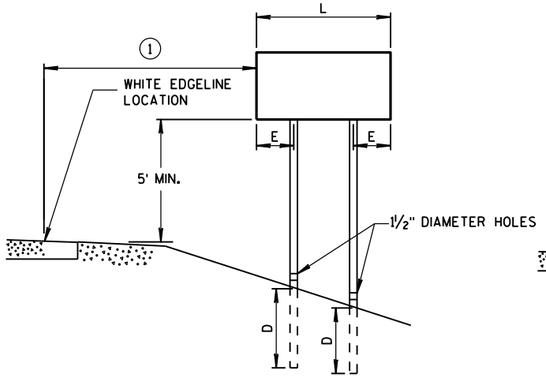
1. 6 FEET FROM THE EDGE OF PAVEMENT (EDGE LINE LOCATION) UNLESS OTHERWISE DIRECTED BY THE PROJECT ENGINEER. LATERAL OFFSET SHOULD BE ADJUSTED TO AVOID THE DITCH FLOWLINE.

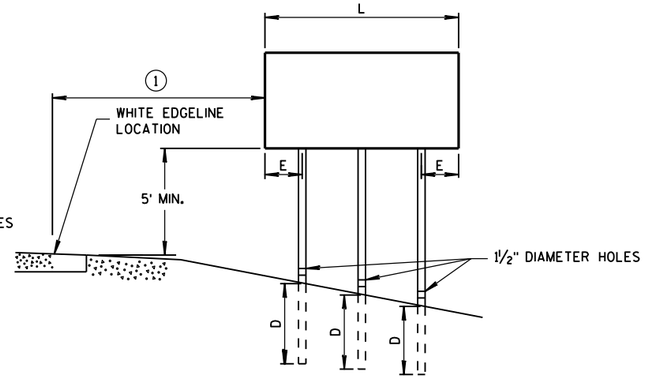
2. THE EXISTENCE OF CURB AND GUTTER DOES NOT IN ITSELF MANDATE THE VERTICAL CLEARANCE ILLUSTRATED. THAT HEIGHT IS TYPICALLY MEASURED WHERE THERE IS SIDEWALK ADJACENT TO THE ROADWAY OR PARKING IS PERMITTED. IN THE ABSENCE OF SIDEWALK, VERTICAL CLEARANCE IS MEASURED FROM THE TOP OF THE CURB. IF NO SIDEWALK 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

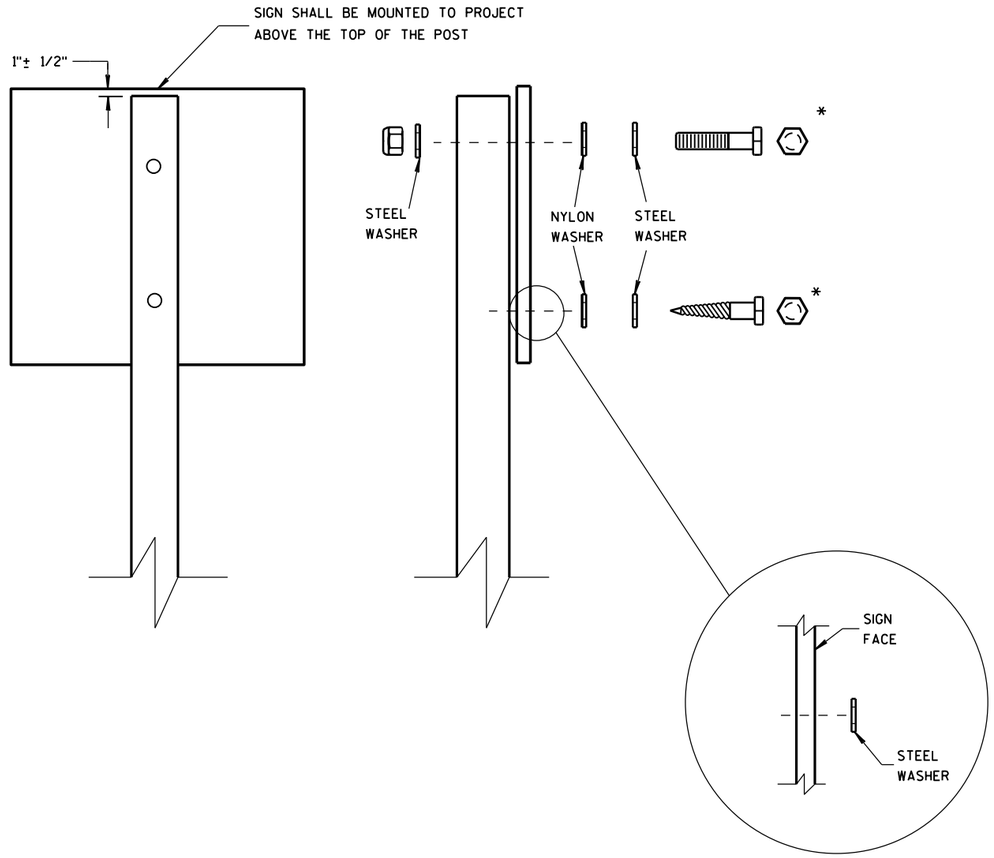
POST SPACING REQUIREMENTS		NUMBER OF WOOD POSTS REQUIRED
L	E	
48" OR LESS AND LESS THAN 20 SQ. FT.	-	1
LESS THAN 60"	12"	2
60" TO 120"	L/5	2
GREATER THAN 120" LESS THAN 168"	12"	3
168" AND GREATER	12"	4

SEE NOTE 3

TEMPORARY TRAFFIC CONTROL SIGN MOUNTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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

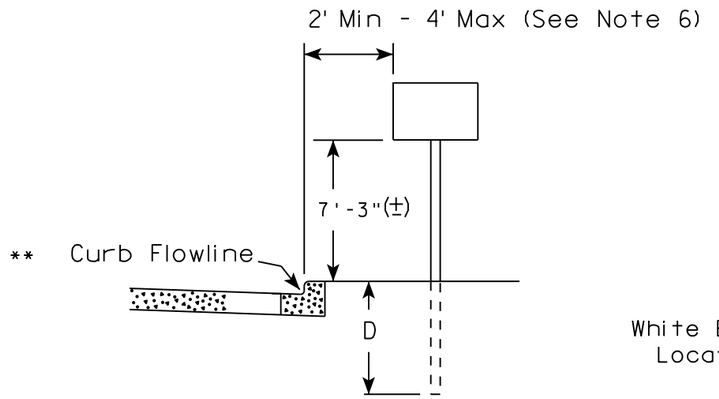
APPROVED

June 2017
DATE

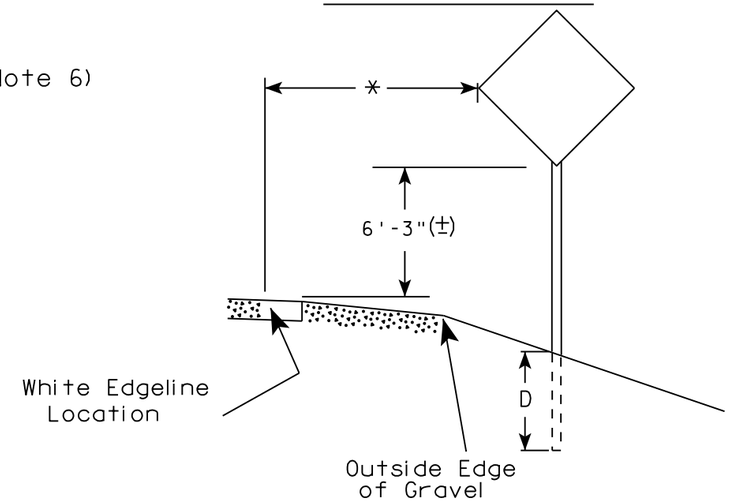
/S/ Andrew Heldtke
WORK ZONE ENG

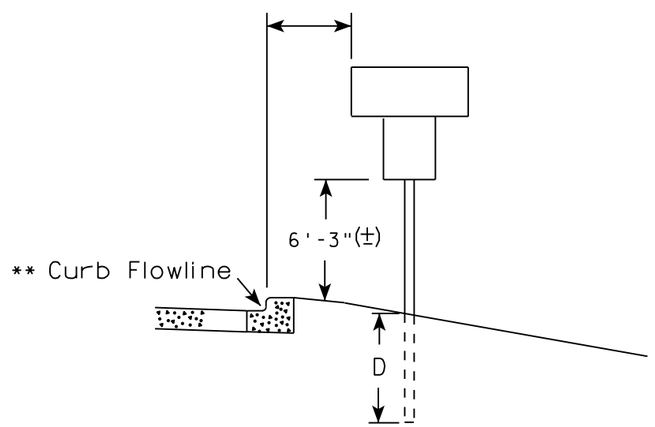
FHWA

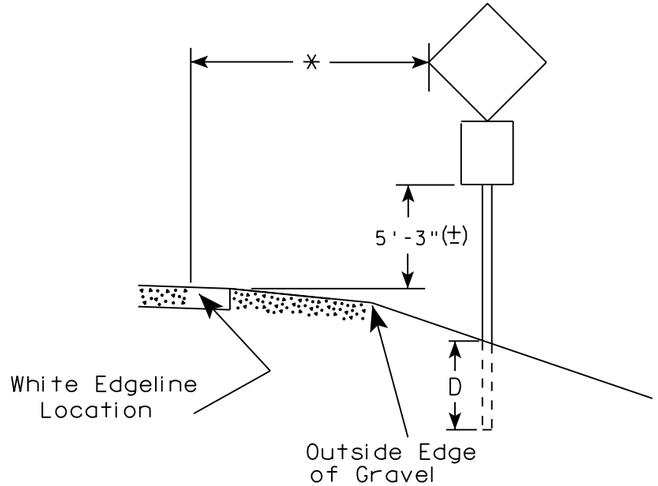
URBAN AREA



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

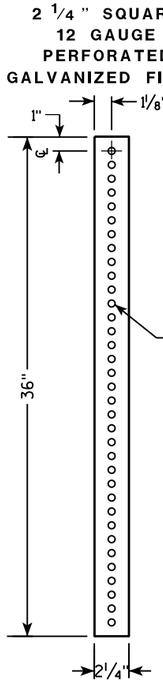
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

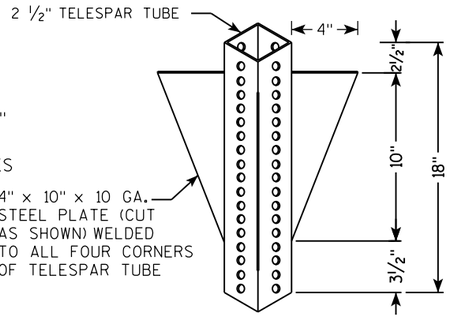
DATE 8/21/17 PLATE NO. A4-3.21

TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM

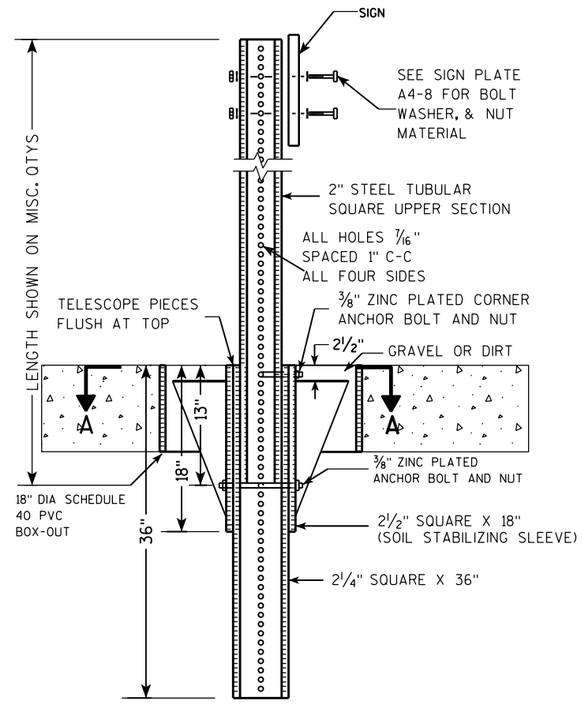
2 1/4 " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



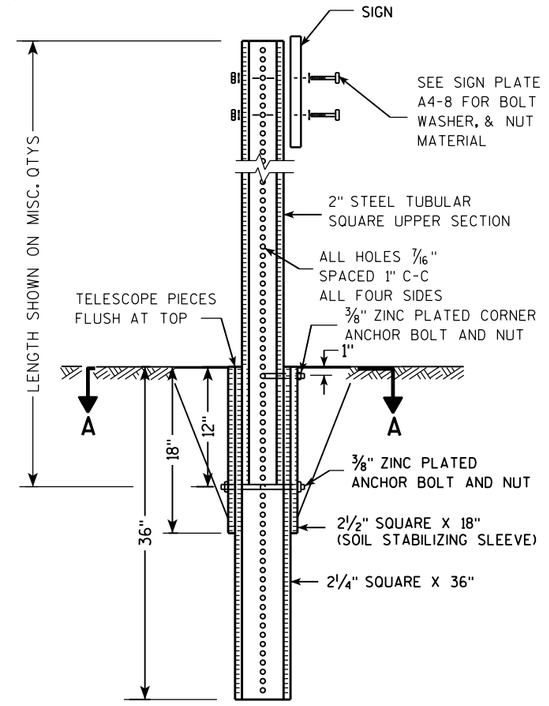
2 1/2 " SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH

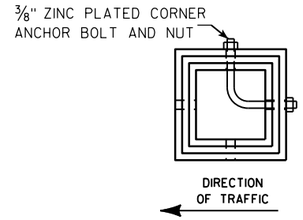


DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



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

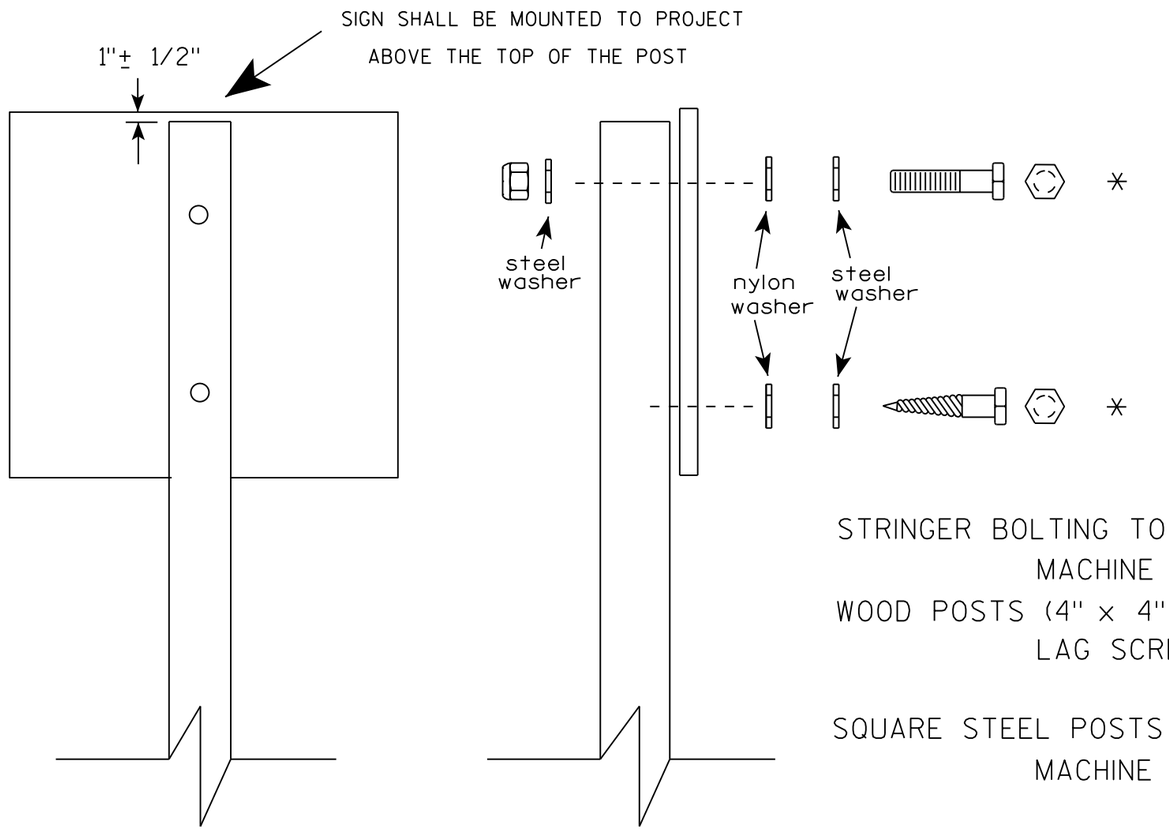
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/05/15 PLATE A4-9.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A49.DGN PLOT DATE : 05-FEB-2015 17:09 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 13.659812:1.000000
WISDOT/CADDS SHEET 42



Nuts, bolts and lags used for mounting signs shall have hexagonal heads and shall be either :

a. Hot dip galvanized in accordance with ASTM Designation: A 153, Class D, or SC 3

b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.

Threads on bolts and nuts shall be manufactured with sufficient allowance for the cadmium plate or galvanized coating to permit the nuts to run freely on the bolts.

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

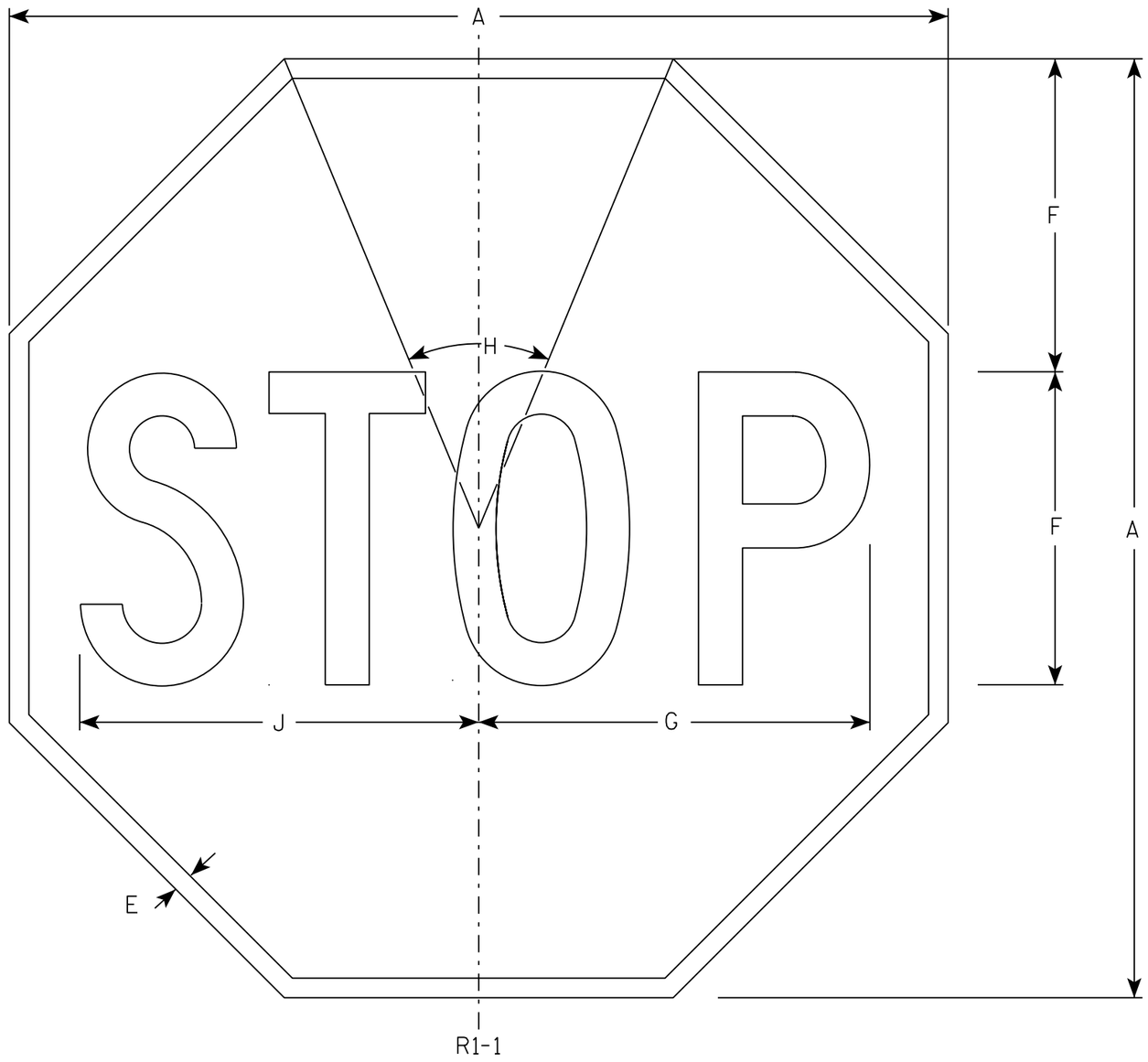
DATE 8/11/16 PLATE NO. A4-8.8

7

PROJECT NO:

SHEET NO: E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\A48.DGN PLOT DATE : 11-AUG-2016 11:35 PLOT BY : $$ plotuser $$



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

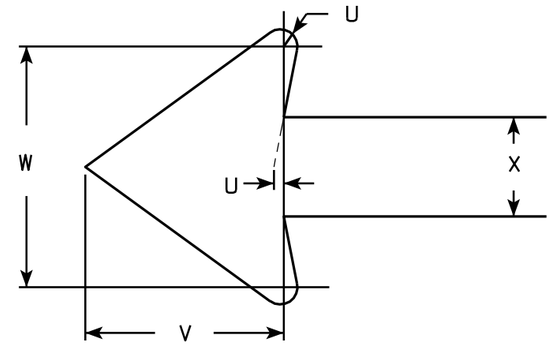
DATE 11/12/15 PLATE NO. R1-1.13

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 53	E

R7-52

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Red
3. Message Series - See Note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Lines 1, 3 and 4 are series C, line 2 is series B.
6. R7-52D (double arrow)
   R7-52L (left arrow)
   R7-52R (right arrow)



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	12	18	1 1/8	3/8	3/8	3	1 7/8	1 1/2	7/8	7/8	2	2 1/2	2	2	4 7/8	4 7/8	5 1/8	5	3 1/8	3 7/8	1/8	1 1/2	1 3/4	3/4			1.5
2S	18	24	1 1/8	3/8	1/2	4	2 1/2	2 1/2	1 1/4	1	2	3 1/4	2 3/4	2 5/8	7 1/8	7	6 3/8	6 1/4	3 7/8	5 7/8	1/4	2 1/4	2 5/8	1 1/8			3.0
2M	24	30	1 1/8	3/8	1/2	5	3	3	2	1 1/4	2 1/2	4	3 1/4	3 3/8	9 1/4	9 1/4	7 5/8	7 5/8	4 3/4	7 3/4	1/4	3	3 1/2	1 1/2			5.0
3	24	30	1 1/8	3/8	1/2	5	3	3	2	1 1/4	2 1/2	4	3 1/4	3 3/8	9 1/4	9 1/4	7 5/8	7 5/8	4 3/4	7 3/4	1/4	3	3 1/2	1 1/2			5.0
4																											
5																											

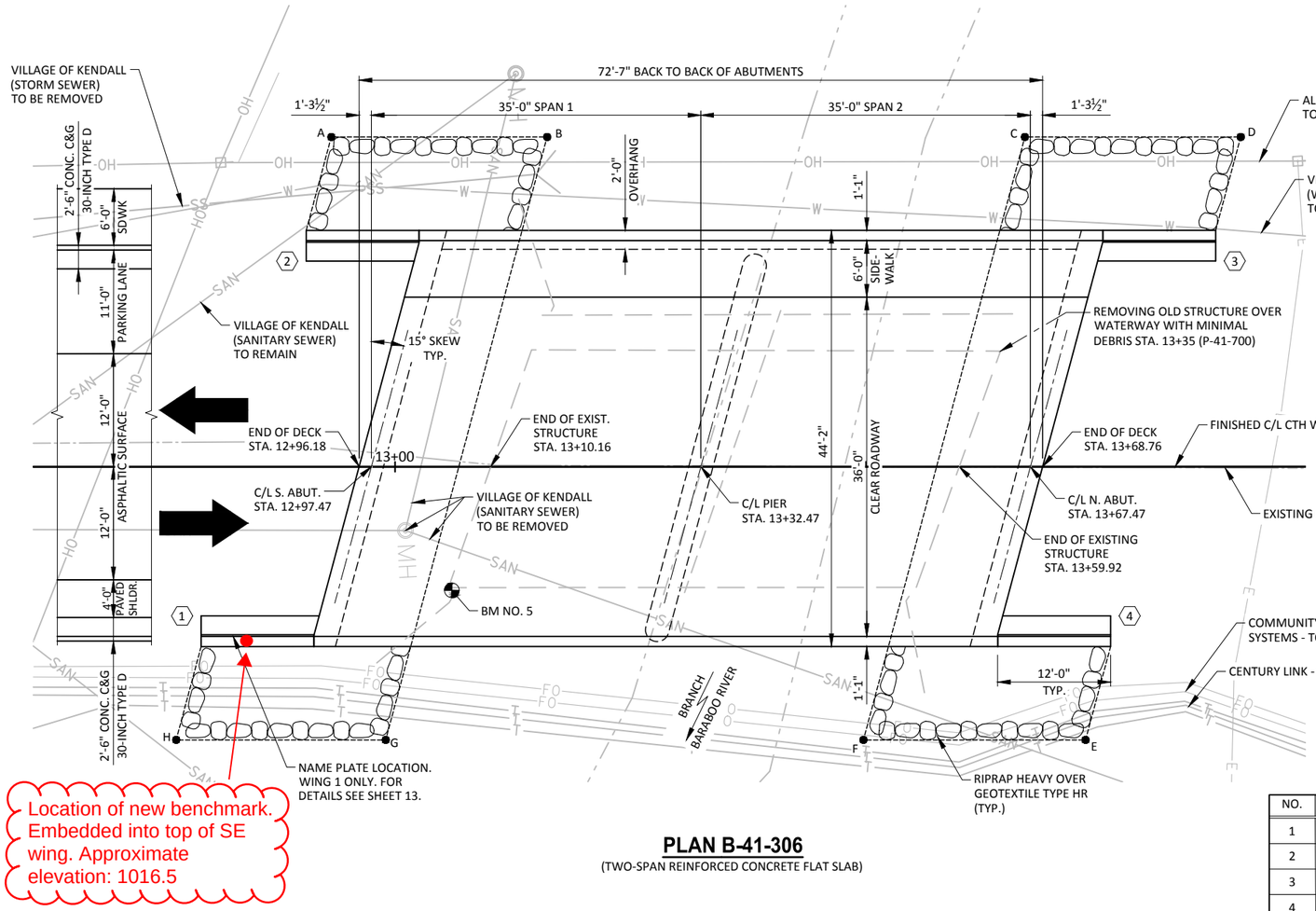
STANDARD SIGN
R7-52

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/31/2011 PLATE NO. R7-52.6

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 54	E



Location of new benchmark. Embedded into top of SE wing. Approximate elevation: 1016.5

PLAN B-41-306

(TWO-SPAN REINFORCED CONCRETE FLAT SLAB)

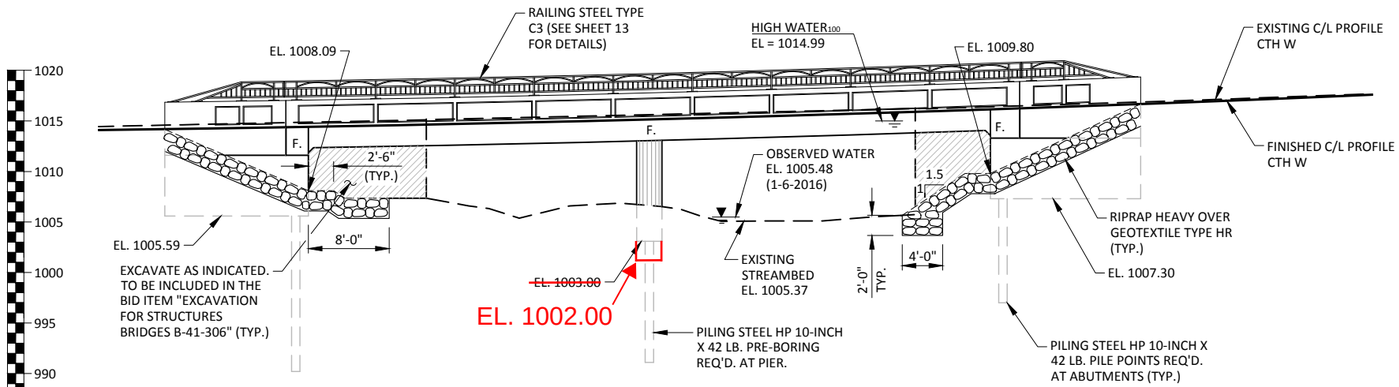
INDICATES WING NUMBER

RIPRAP HEAVY LAYOUT

POINT	STATION	OFFSET
A	12+93	35' LT.
B	13+16	35' LT.
C	13+67	35' LT.
D	13+90	35' LT.
E	13+73	29' RT.
F	13+50	29' RT.
G	12+99	29' RT.
H	12+77	29' RT.

BENCH MARKS

NO.	STA.	DESCRIPTION	ELEV.
1	10+04	3/4" IRON REBAR SET, 30.4' RT	1013.76
2	14+00	1/2" IRON REBAR SET, 19.7' LT	1017.83
3	15+93	3/4" IRON REBAR SET, 16.8' RT	1026.56
4	11+38	TOP NUT HYD, 37.1' RT	1015.87
5	13+06	CHISELED ON CURB, 13.1' RT	1015.53



ELEVATION

(NORMAL TO BRANCH OF BARABOO RIVER)

DESIGN DATA

LIVE LOAD:

DESIGN LOADING — HL-93
INVENTORY RATING FACTOR — RF=1.42
OPERATING RATING FACTOR — RF=1.83
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV) — 250 KIPS

STRUCTURE IS DESIGNED FOR A FUTURE WEARING SURFACE OF 20 P.S.F.

MATERIAL PROPERTIES:

CONCRETE MASONRY, SUPERSTRUCTURE — f'c = 4,000 P.S.I.
ALL OTHER — f'c = 3,500 P.S.I.
HIGH-STRENGTH BAR STEEL REINFORCEMENT, GRADE 60 — fy = 60,000 P.S.I.

FOUNDATION DATA

ABUTMENTS TO BE SUPPORTED ON PILING STEEL HP 10-INCH X 42 LB DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 140 TONS** PER PILE AND PIER TO BE SUPPORTED ON PILING STEEL HP 10-INCH X 42 LB DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 170 TONS** PER PILE AS AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATE 15 FT PILE LENGTHS AT SOUTH ABUTMENT, 20 FT PILE LENGTHS AT PIER, AND 15 FT PILE LENGTHS AT NORTH ABUTMENT. PILE POINTS ARE REQUIRED AT BOTH ABUTMENTS AND PRE-BORING IS REQUIRED AT THE PIER.

**THE FACTORED AXIAL RESISTANCE OF PILES IN COMPRESSION USED FOR DESIGN IS THE REQUIRED DRIVING RESISTANCE MULTIPLIED BY A RESISTANCE FACTOR OF 0.5 USING MODIFIED GATES TO DETERMINE DRIVEN PILE CAPACITY.

TRAFFIC DATA

A.D.T. (2019) — 650
A.D.T. (2039) — 710
DESIGN SPEED — 30 M.P.H.

HYDRAULIC DATA

100 YEAR FREQUENCY
DRAINAGE AREA — 8.5 SQ. MI.
Q_{100} TOTAL — 2,200 C.F.S.
THROUGH STRUCTURE — 1,965 C.F.S.
OVERTOPPING ROADWAY — 235 C.F.S.
VELOCITY - THROUGH STRUCTURE — 4.7 F.P.S.
WATERWAY AREA - THROUGH STRUCTURE — 421.8 SQ. FT.
HIGH WATER$_{100}$ ELEVATION — 1014.99
SCOUR CRITICAL CODE — 5

DESIGN ROADWAY OVERFLOW FREQUENCY
ROADWAY OVERFLOW FREQUENCY — 38 YEARS
$Q_{OVERTOPPING}$ — 1,850 C.F.S.
OVERTOPPING ELEVATION — 1013.78

EROSION CONTROL
Q_2 — 580 C.F.S.
VELOCITY$_2$ — 3.3 F.P.S.
HIGH WATER$_2$ ELEVATION — 1009.38

WISCONSIN PROFESSIONAL ENGINEER
PATRICK T. BOLAND
E-36303
SPRING GREEN WIS
Boland Patrick 10-24-18

LIST OF DRAWINGS

DESIGN CONSULTANT
PATRICK BOLAND, PE
(608) 588-7484

BRIDGE OFFICE CONTACT
WILLIAM DREHER, PE
(608) 266-8489

STATE PROJECT NUMBER
5516-00-70

NO.	DATE	REVISION	BY

JEWELL associates engineers, inc.
Engineers - Architects - Surveyors
560 SUNRISE DRIVE
SPRING GREEN, WI 53588
PHONE: (608) 588-7484
FAX: (608) 588-9322

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
ACCEPTED William C. Dreher SDR — 11/07/18
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-41-306

CTH W OVER BRANCH BARABOO RIVER

COUNTY: MONROE — ~~TOWN/CITY~~/VILLAGE: KENDALL
DESIGN SPEC.: AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

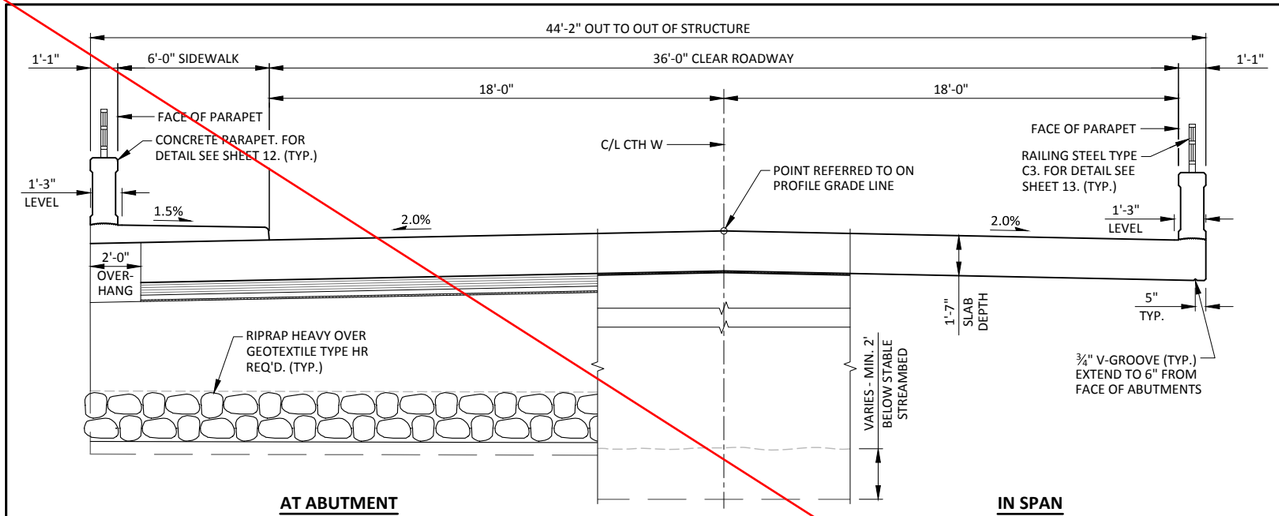
DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
JZ	PTB	JZ	PTB

GENERAL PLAN

SHEET 1 OF 14
55

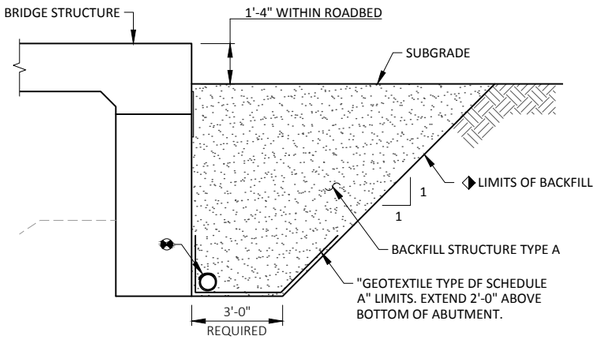
STATE PROJECT NUMBER

5516-00-70



PROPOSED CROSS-SECTION THROUGH ROADWAY

(LOOKING NORTH)



BACKFILL STRUCTURE DETAIL

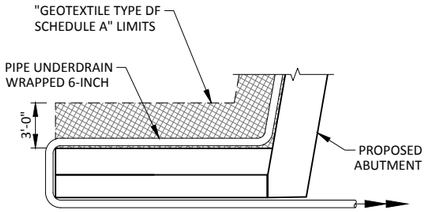
(TYPICAL AT BOTH ABUTMENTS)

◆ "BACKFILL STRUCTURE TYPE A" PAY LIMITS. BACKFILL BEYOND PAY LIMITS SHALL BE INCIDENTAL TO THE BID ITEM "EXCAVATION FOR STRUCTURES B-41-306". LIMITS OF EXCAVATION SHALL BE DETERMINED BY THE CONTRACTOR.

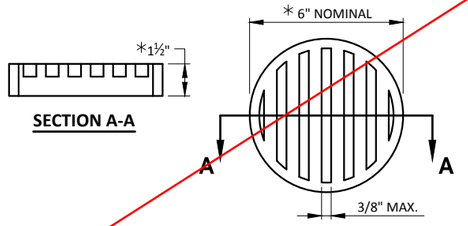
◆◆ PIPE UNDERDRAIN WRAPPED 6-INCH, SLOPED 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SCREEN AT ENDS OF PIPE UNDERDRAIN AS DETAILED ON THIS SHEET. RODENT SCREEN TO BE INCLUDED IN THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH."

TOTAL ESTIMATED QUANTITIES

ITEM NUMBER	ITEM DESCRIPTION	UNIT	S. ABUT.	PIER	N. ABUT.	SUPER.	TOTALS
203.0600.S	REMOVING OLD STRUCTURE OVER WATERWAY WITH MIN. DEBRIS STA. 13+35	LS	--	--	--	--	1
206.1000	EXCAVATION FOR STRUCTURES BRIDGES B-41-306	LS	--	--	--	--	1
210.1500	BACKFILL STRUCTURE TYPE A	TON	170	--	175	--	345
502.0100	CONCRETE MASONRY BRIDGES	CY	47	40	48	217	352
502.3200	PROTECTIVE SURFACE TREATMENT	SY	--	--	--	375	375
502.3210	PIGMENTED SURFACE SEALER	SY	--	--	--	82	82
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	2,470	1,760	2,550	--	6,780
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	1,630	80	1,700	40,660	44,070
513.7016	RAILING STEEL TYPE C3	LF	--	--	--	190	190
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	8	--	8	--	16
550.0020	PRE-BORING ROCK OR CONSOLIDATED MATERIALS	LF	--	96	--	--	96
550.0500	PILE POINTS	EACH	6	--	6	--	12
550.1100	PILING STEEL HP 10-INCH X 42 LB	LF	90	160	90	--	340
606.0300	RIPRAP HEAVY	CY	65	--	85	--	150
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	100	--	100	--	200
645.0111	GEOTEXTILE TYPE DF SCHEDULE A	SY	55	--	55	--	110
645.0120	GEOTEXTILE TYPE HR	SY	130	--	140	--	270
	NON-BID ITEMS						
	FILLER	SIZE	--	--	--	--	½" & ¾"
	NAME PLATE						



PIPE UNDERDRAIN DETAIL



RODENT SCREEN

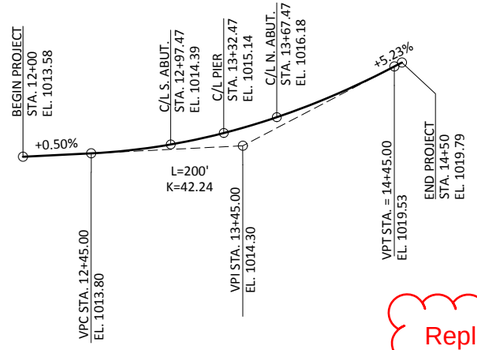
NOTES:

* DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING.

ORIENT SCREEN SO SLOTS ARE VERTICAL.

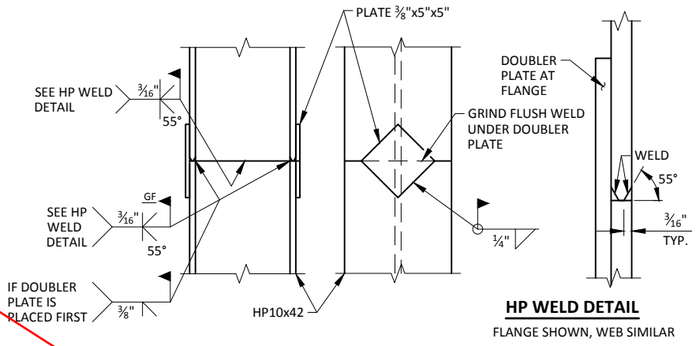
THE RODENT SCREEN, PIPE COUPLING AND SCREWS SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".

THE RODENT SCREEN SHALL BE A PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALLY AVAILABLE AS A FLOOR STRAINER. A PIPE COUPLING IS REQUIRED FOR THE ATTACHMENT OF THIS SCREEN TO THE EXPOSED ENDS OF THE PIPE UNDERDRAIN. THE SCREEN SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X 1-INCH STAINLESS STEEL SHEET METAL SCREWS.



PROFILE GRADE LINE

CTH W



HP WELD DETAIL

FLANGE SHOWN, WEB SIMILAR

PILE SPLICE DETAIL

STEEL "HP" PILE MATERIAL SHALL BE ASTM A 572 GRADE 50.

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

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

THE FIRST OR FIRST TWO DIGITS OF A BAR MARK SIGNIFIES THE BAR SIZE.

JOINT FILLER SHALL CONFORM TO A.A.S.H.T.O. DESIGNATION MI53, TYPE I, II OR III OR A.A.S.H.T.O. DESIGNATION M213.

THE SLOPE OF FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH RIPRAP HEAVY AND GEOTEXTILE TYPE HR TO THE EXTENT SHOWN ON SHEET 1 AND IN THE ABUTMENT DETAILS, OR AS DIRECTED BY THE ENGINEER IN THE FIELD.

AT THE BACK FACE OF ABUTMENTS, ALL VOLUME WHICH CANNOT BE PLACED BEFORE ABUTMENT CONSTRUCTION AND IS NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH BACKFILL STRUCTURE TYPE A. SEE THIS SHEET FOR DETAIL.

ANY EXCAVATION BELOW THE ABUTMENT AND ASSOCIATED ABUTMENT BEDDING MATERIALS REQUIRE THE APPROVAL OF THE ENGINEER IN THE FIELD.

APPLY PROTECTIVE SURFACE TREATMENT TO THE TOP OF THE DECK, TO THE CURB FACE AND TO THE TOP OF THE RAISED SIDEWALK (FINISHED AREAS ONLY) INCLUDING SIDEWALK AREAS ADJACENT TO WING WALLS.

APPLY PIGMENTED SURFACE SEALER TO THE INSIDE AND TOP FACES OF PARAPETS (CONCRETE MATERIAL ONLY), INCLUDING PARAPETS ON ABUTMENT WINGS.

THE EXISTING STRUCTURE (P-41-700) IS A TWO-SPAN STEEL DECK GIRDER STRUCTURE WITH A CONCRETE DECK SUPPORTED ON FULL RETAINING CONCRETE ABUTMENTS. THE STRUCTURE IS 30.1' WIDE BY 50.0' LONG AND SHALL BE REMOVED.

ALL STATIONS AND ELEVATIONS SHOWN ARE IN FEET.

THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES BRIDGES B-41-306" SHALL BE THE EXISTING GROUNDLINE.

SLAB FALSEWORK SHALL BE SUPPORTED ON PILES OR THE SUBSTRUCTURE UNLESS AN ALTERNATIVE METHOD IS APPROVED BY THE ENGINEER IN THE FIELD.

Replaced by page "Revised 56"

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-41-306

DRAWN BY: JZ | PLANS CK'D.: PTB

CROSS SECTION AND QUANTITIES

SHEET 2 OF 14

56

8

8

FILE NAME : S:\PROJECTS\M08060 MONROE CO CTH W BRIDGE\STRUCTURE\CAD FILES\FINALS\02 CROSS SECTION AND QUANTITIES.DWG
LAYOUT : LAYOUT1

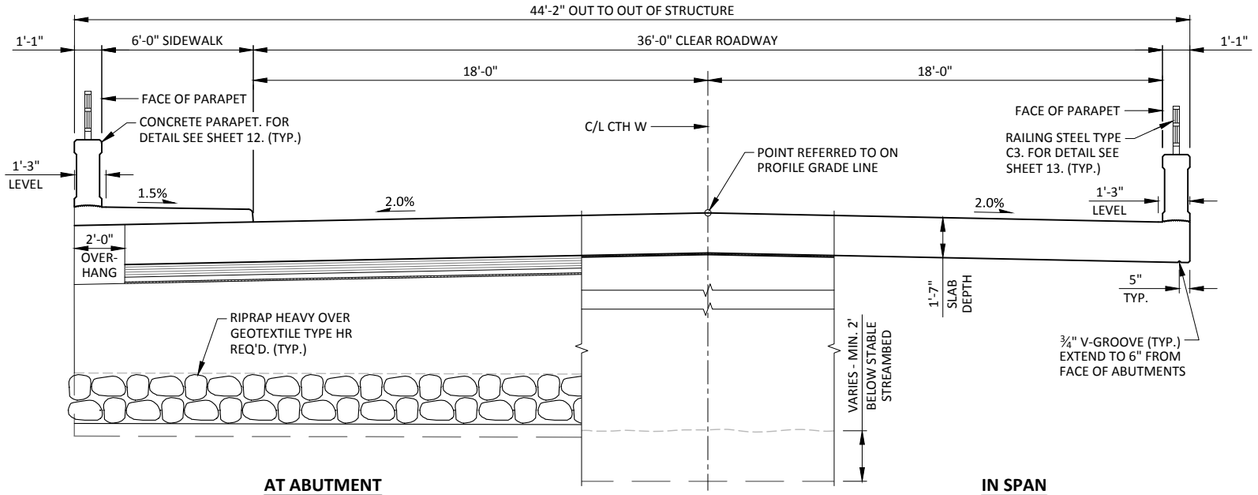
PLOT DATE : ----
PLOT TIME : ----

PLOT BY : BOLAND, PATRICK

PLOT SCALE : 1" = 1'

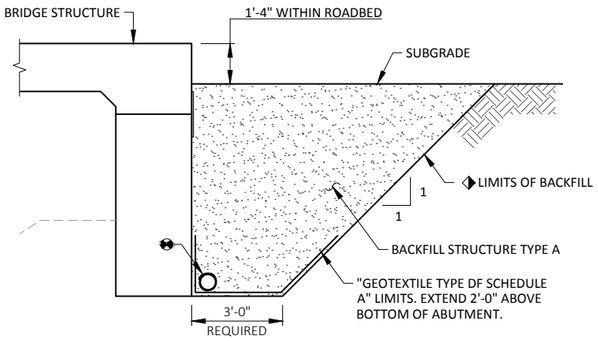
STATE PROJECT NUMBER

5516-00-70



PROPOSED CROSS-SECTION THROUGH ROADWAY

(LOOKING NORTH)



◆ "BACKFILL STRUCTURE TYPE A" PAY LIMITS. BACKFILL BEYOND PAY LIMITS SHALL BE INCIDENTAL TO THE BID ITEM "EXCAVATION FOR STRUCTURES B-41-306". LIMITS OF EXCAVATION SHALL BE DETERMINED BY THE CONTRACTOR.

● PIPE UNDERDRAIN WRAPPED 6-INCH, SLOPED 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SCREEN AT ENDS OF PIPE UNDERDRAIN AS DETAILED ON THIS SHEET. RODENT SCREEN TO BE INCLUDED IN THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH."

BACKFILL STRUCTURE DETAIL

(TYPICAL AT BOTH ABUTMENTS)

TOTAL ESTIMATED QUANTITIES

ITEM NUMBER	ITEM DESCRIPTION	UNIT	S. ABUT.	PIER	N. ABUT.	SUPER.	TOTALS
203.0600.S	REMOVING OLD STRUCTURE OVER WATERWAY WITH MIN. DEBRIS STA. 13+35	LS	--	--	--	--	1
206.1000	EXCAVATION FOR STRUCTURES BRIDGES B-41-306	LS	--	--	--	--	1
210.1500	BACKFILL STRUCTURE TYPE A	TON	170	--	175	--	345
502.0100	CONCRETE MASONRY BRIDGES	CY	47	40	48	217	352
502.3200	PROTECTIVE SURFACE TREATMENT	SY	--	--	--	375	375
502.3210	PIGMENTED SURFACE SEALER	SY	~~2,690~~	--	~~2,770~~	82	82
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	~~2,470~~	1,760	~~2,550~~	--	~~6,780~~ 7,220
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	1,630	80	1,700	40,660	44,070
513.7016	RAILING STEEL TYPE C3	LF	--	--	--	190	190
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	8	--	8	--	16
550.0020	PRE-BORING ROCK OR CONSOLIDATED MATERIALS	LF	--	96	--	--	96
550.0500	PILE POINTS	EACH	6	--	6	--	12
550.1100	PILING STEEL HP 10-INCH X 42 LB	LF	90	160	90	--	340
606.0300	RIPRAP HEAVY	CY	65	--	85	--	150
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	100	--	100	--	200
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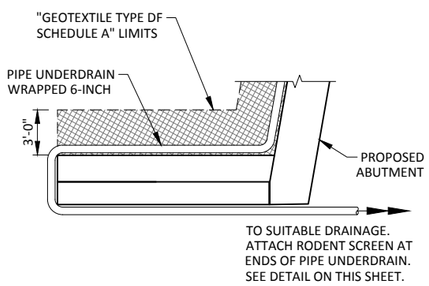
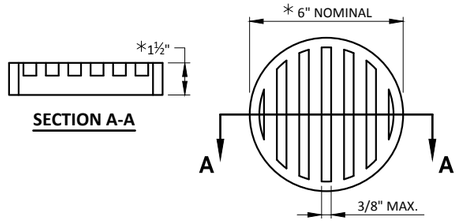
645.0120	GEOTEXTILE TYPE HR	SY	130	--	140	--	270
	NON-BID ITEMS						
	FILLER	SIZE	--	--	--	--	½" & ¾"
	NAME PLATE						



PIPE UNDERDRAIN DETAIL



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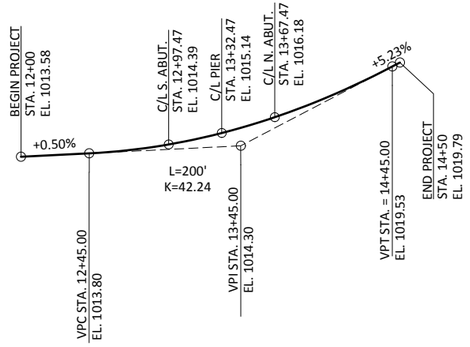
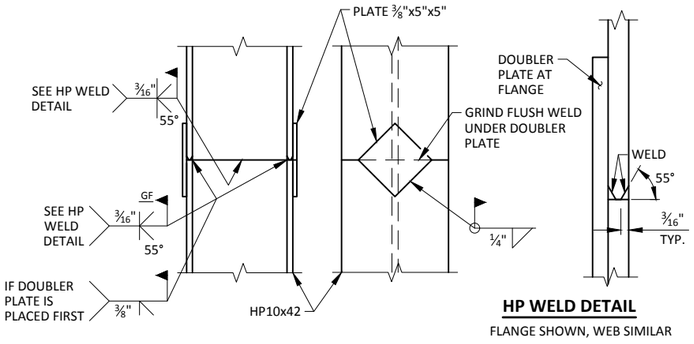


PROFILE GRADE LINE

CTH W



HP WELD DETAIL

FLANGE SHOWN, WEB SIMILAR

PILE SPLICE DETAIL

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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-41-306

DRAWN BY JZ | PLANS CK'D. PTB

CROSS SECTION AND QUANTITIES

~~SHEET 2 OF 14~~

Revised 56

8

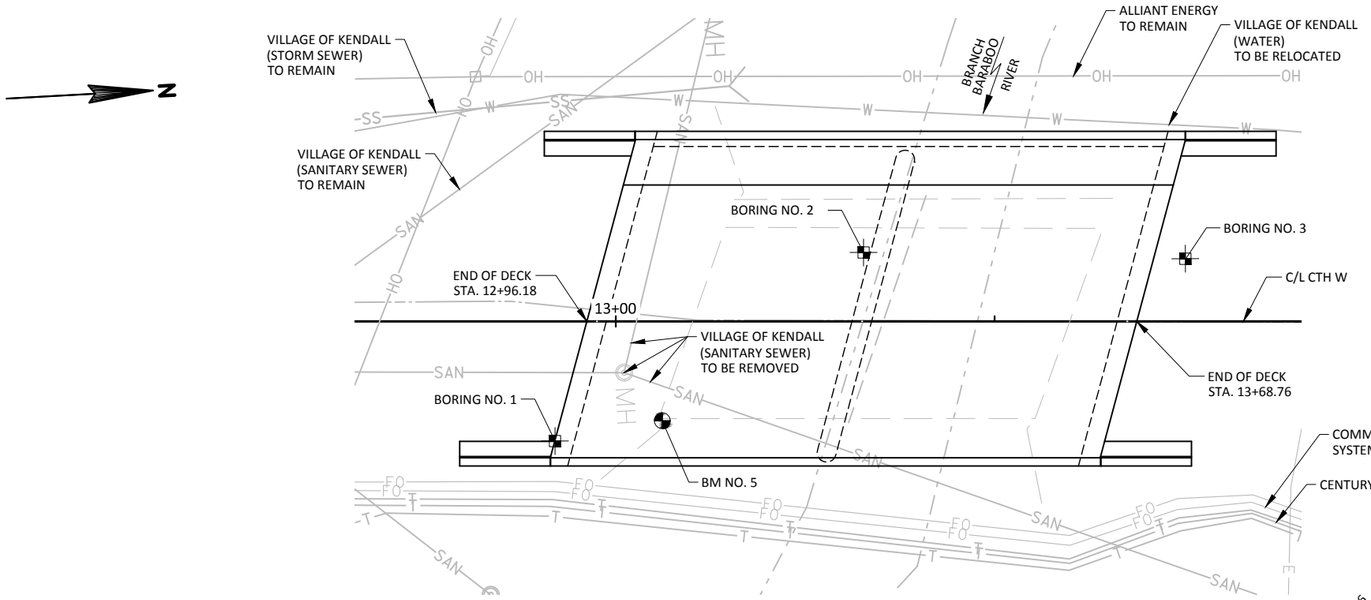
8

FILE NAME : S:\PROJECTS\M08060 MONROE CO CTH W BRIDGE\STRUCTURE\CAD FILES\FINALS\02 CROSS SECTION AND QUANTITIES.DWG
LAYOUT : LAYOUT1

PLOT DATE : ----
PLOT TIME : ----

PLOT BY : BOLAND, PATRICK

PLOT SCALE : 1" = 1'

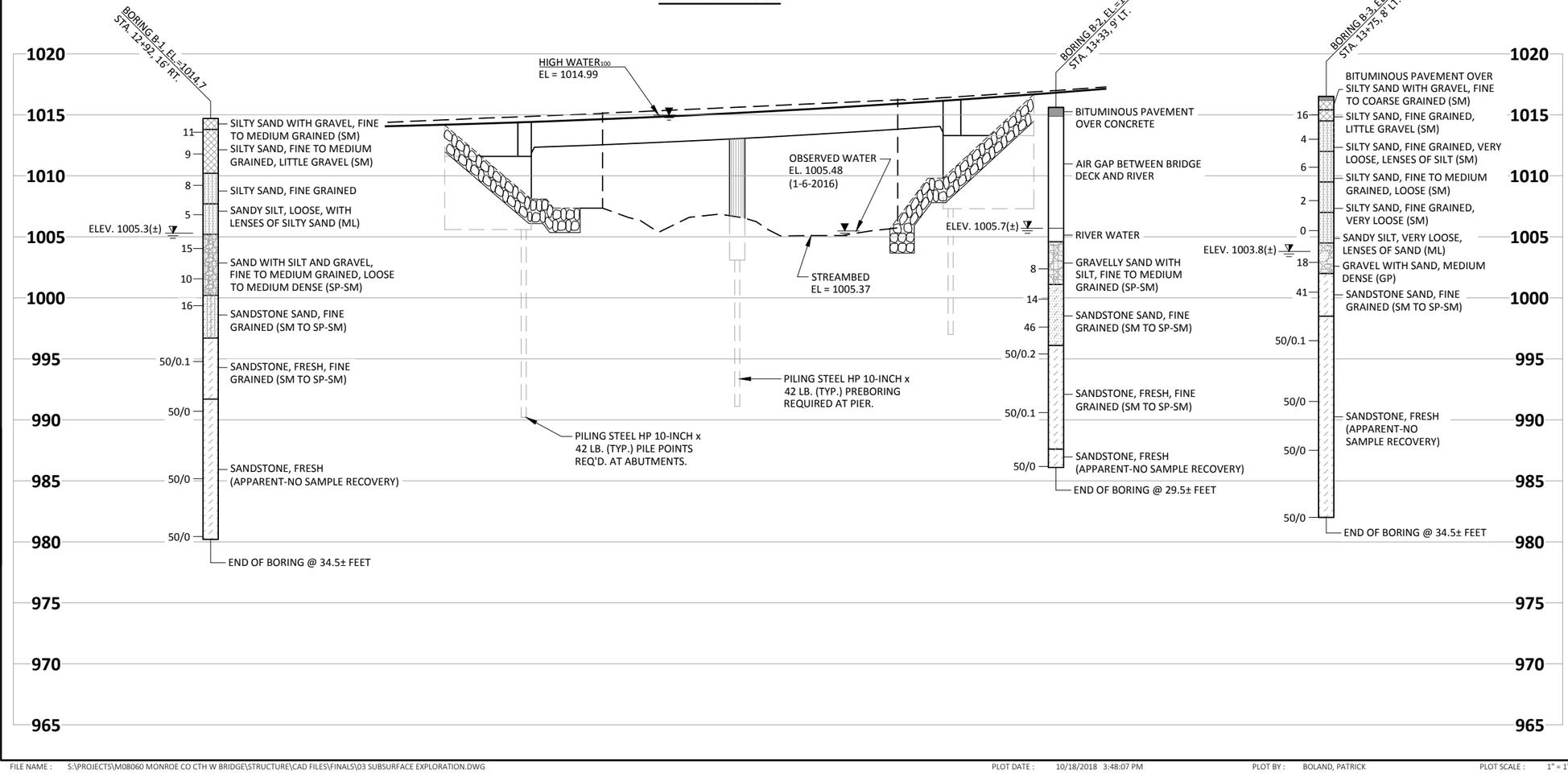


PLAN B-41-306

SOIL BORINGS

BORING NUMBER	DATE COMPLETED	NORTHING (Y)	EASTING (X)
1	03/21/17	325,076.62	743,377.06
2	03/20/17	325,118.59	743,354.55
3	03/21/17	325,161.00	743,357.62

BORINGS & REPORT COMPLETED BY: AMERICAN ENGINEERING TESTING, INC.
4203 SCHOFIELD AVE.
SCHOFIELD, WI 54476



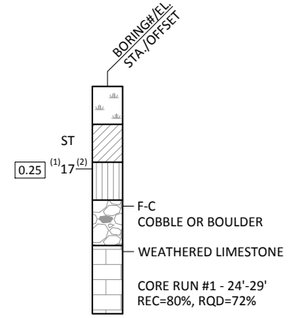
STATE PROJECT NUMBER

5516-00-70

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 ELEVATIONS

AT TIME OF DRILLING
END OF DRILLING
AFTER DRILLING

ABBREVIATIONS

F-FINE M-MEDIUM C-COURSE ST-SHELBY TUBE

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

BORINGS WERE COMPLETED AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING TO OBTAIN INFORMATION CONCERNING THE CHARACTER OF SUBSURFACE MATERIALS FOUND AT THE SITE. BECAUSE THE INVESTIGATED DEPTHS ARE LIMITED AND THE AREA OF THE BORINGS IS VERY SMALL IN RELATION TO THE ENTIRE SITE, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT SIMILAR SUBSURFACE CONDITIONS BELOW, BETWEEN, OR BEYOND THESE BORINGS. VARIATIONS IN SOIL CONDITIONS SHOULD BE EXPECTED AND FLUCTUATIONS IN GROUNDWATER LEVELS MAY OCCUR.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-41-306

DRAWN BY TMS | PLANS CK'D. PTB

SUBSURFACE EXPLORATION

SHEET 3 OF 14

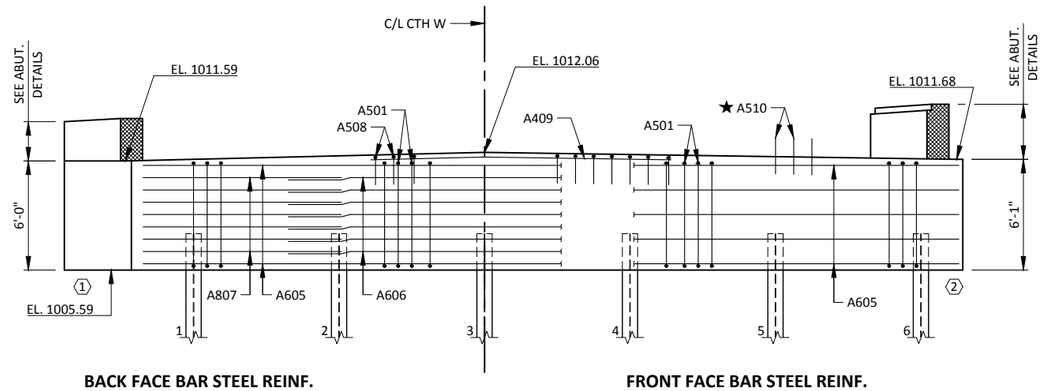
57

8

FILE NAME : S:\PROJECTS\M08060 MONROE CO CTH W BRIDGE\STRUCTURE\CAD FILES\FINALS\03 SUBSURFACE EXPLORATION.DWG PLOT DATE : 10/18/2018 3:48:07 PM PLOT BY : BOLAND, PATRICK PLOT SCALE : 1" = 1' LAYOUT : LAYOUT1

STATE PROJECT NUMBER

5516-00-70

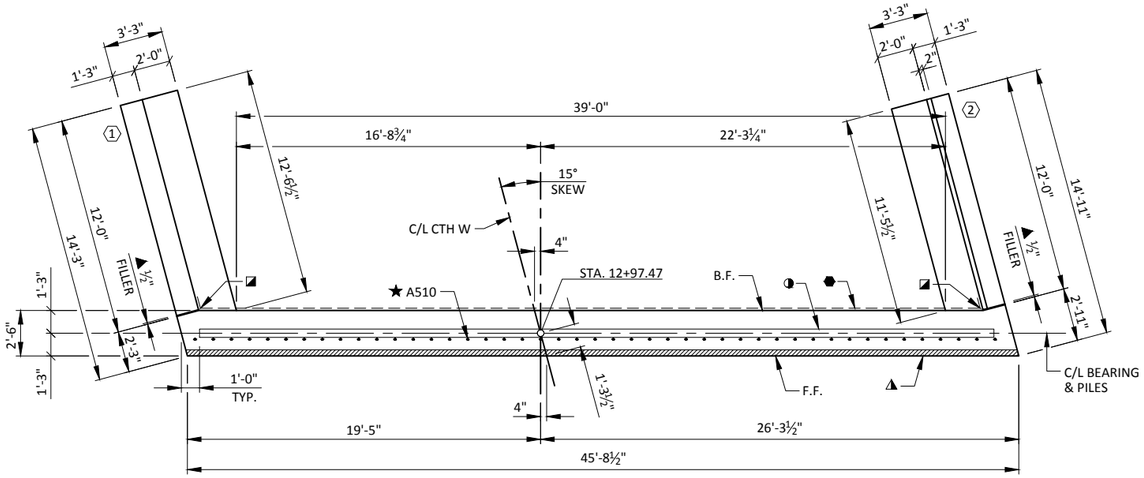


BACK FACE BAR STEEL REINF.

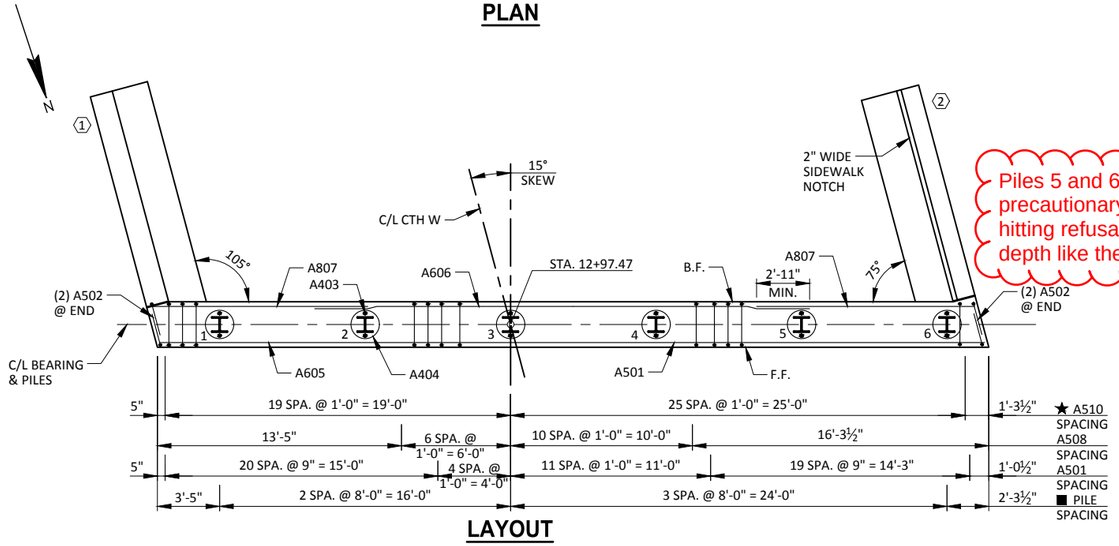
FRONT FACE BAR STEEL REINF.

ELEVATION

(SOUTH ABUTMENT LOOKING SOUTH)



PLAN



LAYOUT

Piles 5 and 6 pre-bored 11' as a precautionary measure to avoid hitting refusal before minimum depth like the north abutment.

NOTES

SOME BARS HAVE BEEN OMITTED FOR CLARITY. SEE SHEET 5 FOR BILL OF BARS.

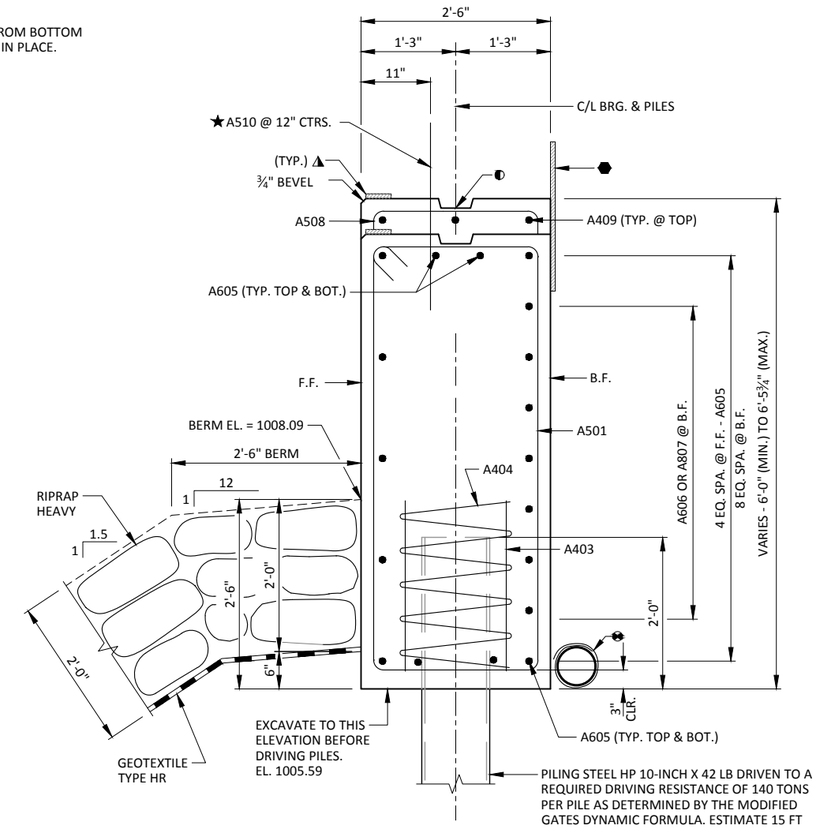
SEAT ELEVATIONS SHOWN IN THE ELEVATION VIEW ARE TAKEN AT THE C/L OF BEARING (NEGLECTING THE KEYED CONSTRUCTION JOINT).

DO NOT PLACE FILL HIGHER THAN 3 FEET FROM BOTTOM OF ABUTMENT UNTIL SUPERSTRUCTURE IS IN PLACE.

SPACE REINFORCEMENT TO MISS PILING

F.F. - FRONT FACE

B.F. - BACK FACE



TYPICAL SECTION THROUGH ABUTMENT BODY

LEGEND

- ◑ KEYED CONSTRUCTION JOINT FORMED BY SURFACED & BEVELED 2x6.
- ◪ VERTICAL 18" RUBBERIZED MEMBRANE WATERPROOFING EXTEND FROM 9" BELOW BRIDGE SEAT TO 1" BELOW TOP OF WINGS.
- ⬣ 18" RUBBERIZED MEMBRANE WATERPROOFING. (HORIZONTAL)
- ▲ ½" FILLER EXTEND AS SHOWN. SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF FILLER WITH NON-STAINING GRAY, NON-BITUMINUOS JOINT SEALER. (1" DEEP & HOLD ⅛" BELOW SURFACE OF CONCRETE)
- ◭ ¾" x 4" PREFORMED FILLER, EXTEND FULL LENGTH OF ABUTMENTS BETWEEN EDGES OF SLAB.
- ★ A510 BARS MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE IT HAS TAKEN ITS INITIAL SET. EMBED BAR 1'-0".
- ■ PILE SPACING MEASURED AT BASE OF ABUTMENT BODY.
- ⬙ PIPE UNDERDRAIN WRAPPED (6-INCH), SLOPED 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SCREEN AT ENDS OF PIPE UNDERDRAIN AS DETAILED ON SHEET 2. RODENT SCREEN TO BE INCLUDED IN THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH."

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-41-306

DRAWN BY JZ | PLANS CK'D. PTB

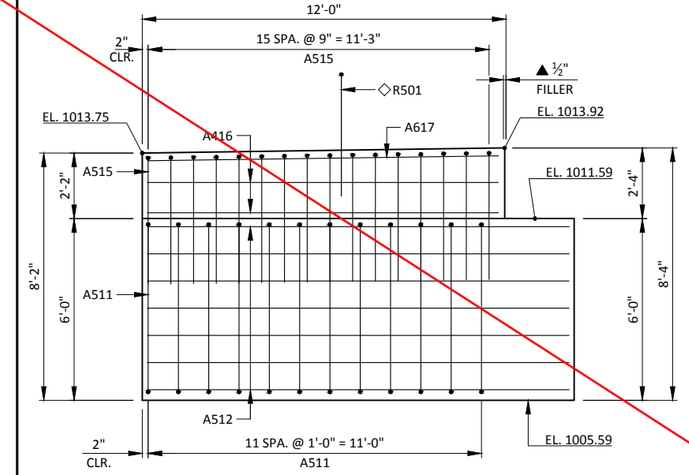
SOUTH ABUTMENT

SHEET 4 OF 14

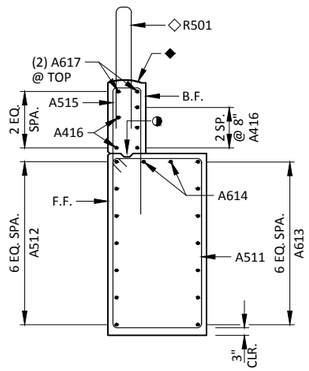
58

8

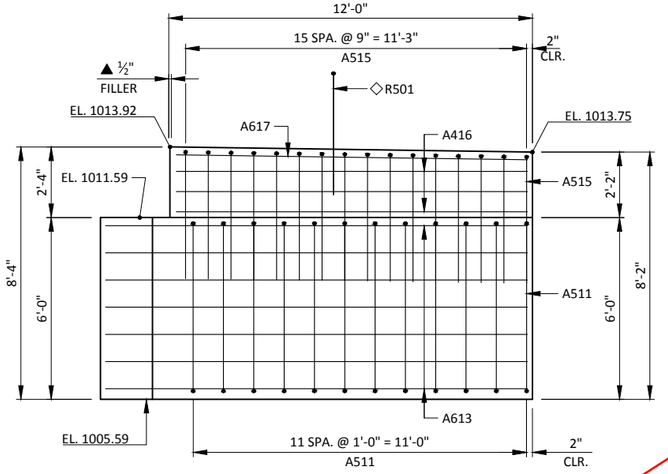
8



F.F. ELEVATION - WING 1



SECTION A-A



B.F. ELEVATION - WING 1

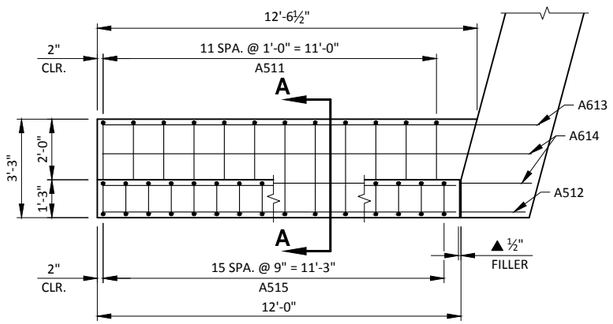
LEGEND

◐ OPTIONAL KEYED CONSTRUCTION JOINT FORMED BY SURFACED & BEVELED 2x6. ¾-INCH "V" GROOVE AT FRONT FACE OF WING WALL AND HORIZONTAL 18" RUBBERIZED MEMBRANE WATERPROOFING AT BACK FACE IF CONSTRUCTION JOINT IS USED. COST IS INCIDENTAL TO THE BID ITEM "CONCRETE MASONRY BRIDGES".

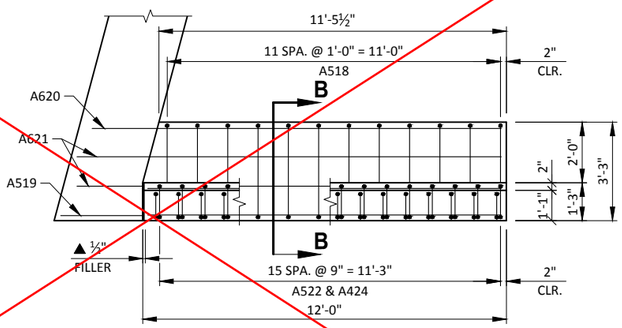
▲ ½" FILLER EXTEND AS SHOWN. SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF FILLER WITH NON-STAINING GRAY, NON-BITUMINUOS JOINT SEALER. (1" DEEP & HOLD ⅛" BELOW SURFACE OF CONCRETE)

◇ R501 AND R502 BARS TO BE TIED TO WING STEEL BEFORE WING IS POURED. SEE SHEET 12 OF 14 FOR PLACEMENT.

◆ SEE SHEET 12 OF 14 FOR TOP OF WING DETAILS.

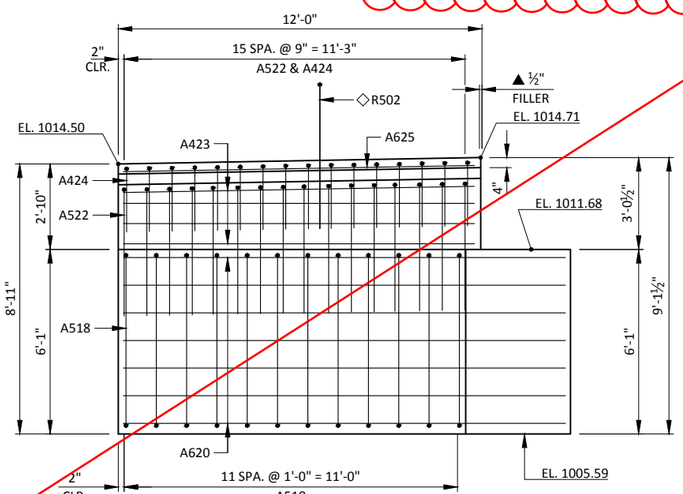


PLAN VIEW - WING 1

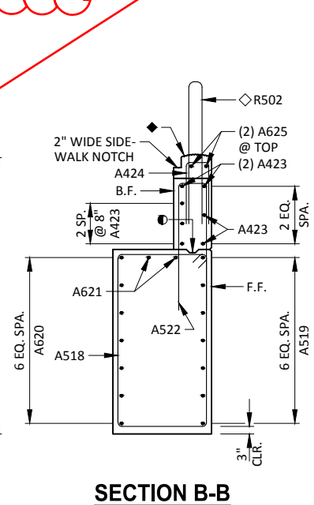


PLAN VIEW - WING 2

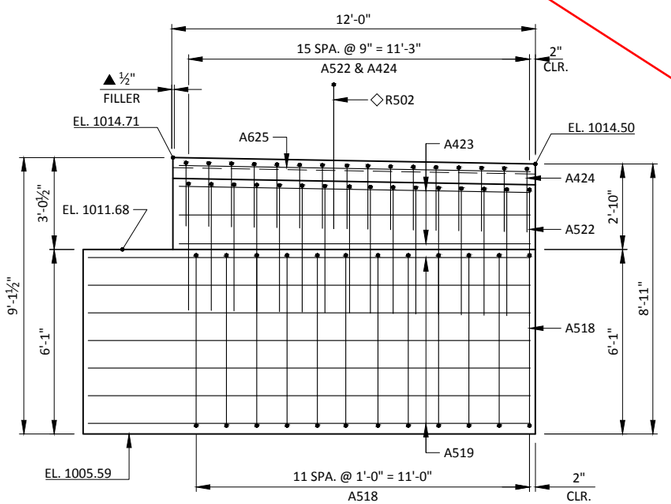
Replaced by page "Revised 59"



B.F. ELEVATION - WING 2



SECTION B-B



F.F. ELEVATION - WING 2

NOTES

SOME BARS HAVE BEEN OMITTED FOR CLARITY. SEE THIS SHEET FOR BILL OF BARS.

SPACE REINFORCEMENT TO MISS PILING

F.F. - FRONT FACE

B.F. - BACK FACE

STATE PROJECT NUMBER

5516-00-70

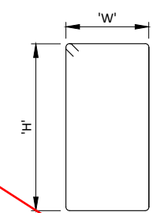
BILL OF BARS
SOUTH ABUTMENT

1,630 LB (COATED)
2,470 LB (UNCOATED)

BAR MARK	NO. REQ'D.	LENGTH	BENT	COAT	LOCATION
A501	55	16-0	X		BODY -VERT. - STIRRUP
A502	4	8-10	X		BODY - VERT. - STIRRUP AT ENDS
A403	12	2-3			BODY - VERT. - 2 PER PILE
A404	6	28-0	X		BODY - SPIRAL - 1 PER PILE
A605	11	45-3			BODY - HORIZ. - F.F. & TOP
A606	7	27-3			BODY - HORIZ. - B.F.
A807	7	12-0			BODY - HORIZ. - B.F.
A508	17	5-3	X		BODY - VERT. - TOP
A409	3	16-6			BODY - HORIZ. - TOP
A510	45	2-0		X	BODY - VERT. - DOWELS
A511	12	17-6	X	X	WING 1 - VERT. - STIRRUP
A512	7	13-11		X	WING 1- HORIZ. - F.F.
A613	7	14-5		X	WING 1 - HORIZ. - B.F.
A614	2	14-2		X	WING 1 - HORIZ. - TOP
A515	16	9-0	X	X	WING 1 - VERT. - TOP
A416	5	11-7		X	WING 1 - HORIZ. - F.F. & B.F.
A617	2	11-7		X	WING 1 - HORIZ. - TOP
A518	12	17-8	X	X	WING 2 - VERT. - STIRRUP
A519	7	14-6		X	WING 2 - HORIZ. - F.F.
A620	7	13-6		X	WING 2 - HORIZ. - B.F.
A621	2	14-0		X	WING 2 - HORIZ. - TOP
A522	16	9-0	X	X	WING 2 - VERT. - TOP
A423	7	11-7		X	WING 2 - HORIZ. - F.F. & B.F.
A424	16	4-9	X	X	WING 2 - VERT. - SIDEWALK NOTCH
A625	2	11-7		X	WING 2 - HORIZ. - TOP

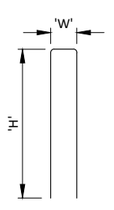
NOTES: THE FIRST DIGIT OF A BAR MARK SIGNIFIES THE BAR SIZE.

DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.



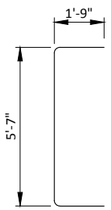
A501, A511, A518

BAR MARK	'W'	'H'
A501	2-2	5-7
A511	2-11	5-7
A518	2-11	5-8

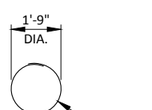


A508, A515, A522, A424

BAR MARK	'W'	'H'
A508	2-2	1-8
A515	0-11	4-2
A522	0-11	4-2
A424	0-9	2-1



A502



A404

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-41-306

DRAWN BY JZ | PLANS CK'D. PTB

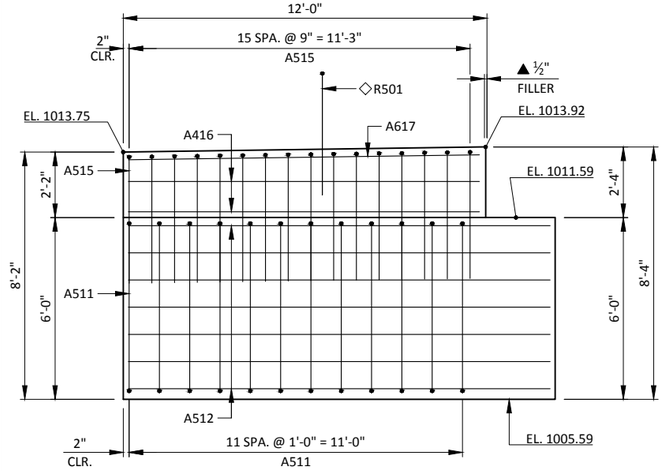
SOUTH ABUTMENT DETAILS

SHEET 5 OF 14

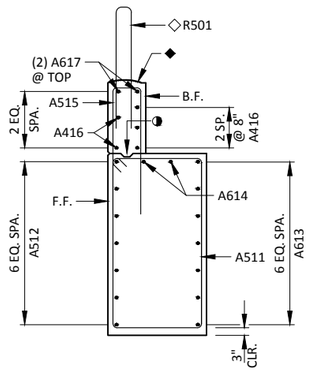
59

8

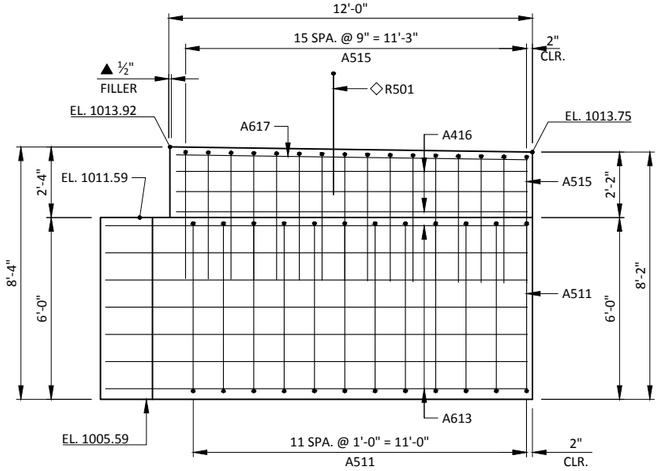
8



F.F. ELEVATION - WING 1



SECTION A-A



B.F. ELEVATION - WING 1

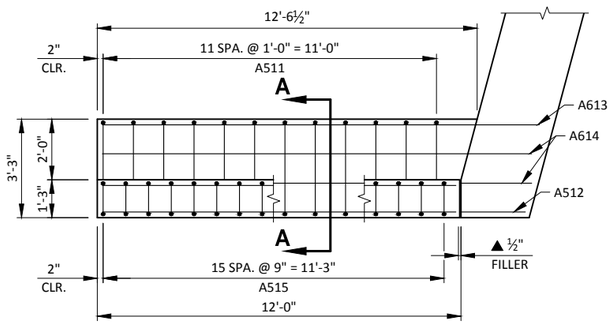
LEGEND

◐ OPTIONAL KEYED CONSTRUCTION JOINT FORMED BY SURFACED & BEVELED 2x6. ¾-INCH "V" GROOVE AT FRONT FACE OF WING WALL AND HORIZONTAL 18" RUBBERIZED MEMBRANE WATERPROOFING AT BACK FACE IF CONSTRUCTION JOINT IS USED. COST IS INCIDENTAL TO THE BID ITEM "CONCRETE MASONRY BRIDGES".

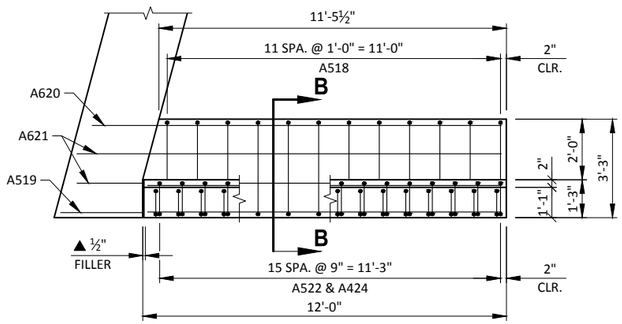
▲ ½" FILLER EXTEND AS SHOWN. SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF FILLER WITH NON-STAINING GRAY, NON-BITUMINUOS JOINT SEALER. (1" DEEP & HOLD ⅛" BELOW SURFACE OF CONCRETE)

◇ R501 AND R502 BARS TO BE TIED TO WING STEEL BEFORE WING IS POURED. SEE SHEET 12 OF 14 FOR PLACEMENT.

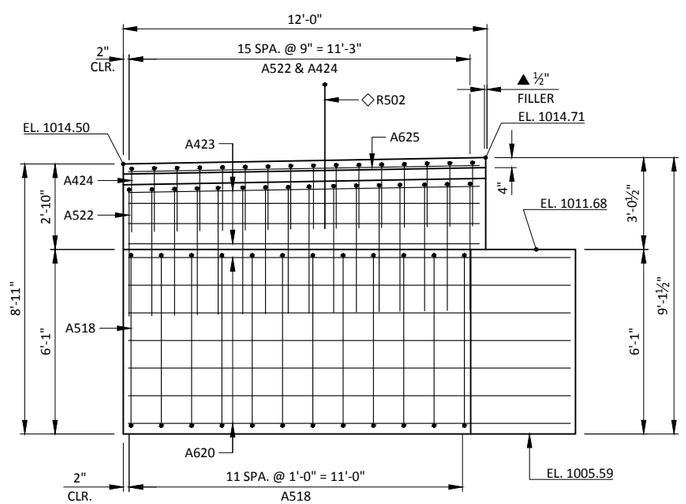
◆ SEE SHEET 12 OF 14 FOR TOP OF WING DETAILS.



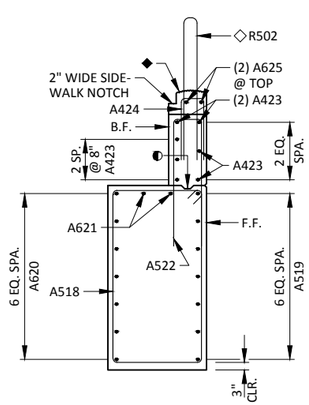
PLAN VIEW - WING 1



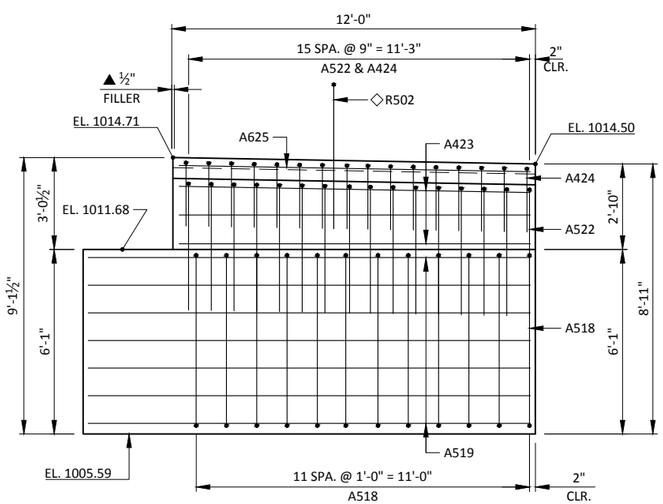
PLAN VIEW - WING 2



B.F. ELEVATION - WING 2



SECTION B-B



F.F. ELEVATION - WING 2

NOTES

SOME BARS HAVE BEEN OMITTED FOR CLARITY. SEE THIS SHEET FOR BILL OF BARS.

SPACE REINFORCEMENT TO MISS PILING

F.F. - FRONT FACE

B.F. - BACK FACE

STATE PROJECT NUMBER

5516-00-70

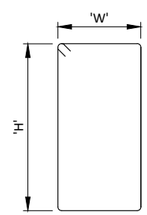
BILL OF BARS
SOUTH ABUTMENT

1,630 LB (COATED)
2,690 ~~2,479~~ LB (UNCOATED)

BAR MARK	NO. REQ'D.	LENGTH	BENT	COAT	LOCATION
A501	55	16-0	X		BODY -VERT. - STIRRUP
A502	4	8-10	X		BODY - VERT. - STIRRUP AT ENDS
A403	12	2-3			BODY - VERT. - 2 PER PILE
A404	6	28-0	X		BODY - SPIRAL - 1 PER PILE
A605	11	45-3			BODY - HORIZ. - F.F. & TOP
A606	7	27-3			BODY - HORIZ. - B.F.
A807	14 ~~7~~	12-0			BODY - HORIZ. - B.F.
A508	17	5-3	X		BODY - VERT. - TOP
A409	3	16-6			BODY - HORIZ. - TOP
A510	45	2-0		X	BODY - VERT. - DOWELS
A511	12	17-6	X	X	WING 1 - VERT. - STIRRUP
A512	7	13-11		X	WING 1- HORIZ. - F.F.
A613	7	14-5		X	WING 1 - HORIZ. - B.F.
A614	2	14-2		X	WING 1 - HORIZ. - TOP
A515	16	9-0	X	X	WING 1 - VERT. - TOP
A416	5	11-7		X	WING 1 - HORIZ. - F.F. & B.F.
A617	2	11-7		X	WING 1 - HORIZ. - TOP
A518	12	17-8	X	X	WING 2 - VERT. - STIRRUP
A519	7	14-6		X	WING 2 - HORIZ. - F.F.
A620	7	13-6		X	WING 2 - HORIZ. - B.F.
A621	2	14-0		X	WING 2 - HORIZ. - TOP
A522	16	9-0	X	X	WING 2 - VERT. - TOP
A423	7	11-7		X	WING 2 - HORIZ. - F.F. & B.F.
A424	16	4-9	X	X	WING 2 - VERT. - SIDEWALK NOTCH
A625	2	11-7		X	WING 2 - HORIZ. - TOP

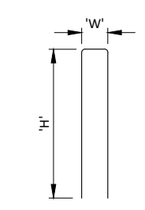
NOTES: THE FIRST DIGIT OF A BAR MARK SIGNIFIES THE BAR SIZE.

DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.



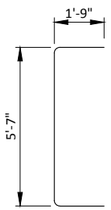
A501, A511, A518

BAR MARK	'W'	'H'
A501	2-2	5-7
A511	2-11	5-7
A518	2-11	5-8

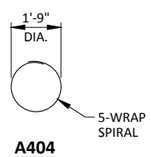


A508, A515, A522, A424

BAR MARK	'W'	'H'
A508	2-2	1-8
A515	0-11	4-2
A522	0-11	4-2
A424	0-9	2-1



A502



A404

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-41-306

DRAWN BY JZ | PLANS CK'D. PTB

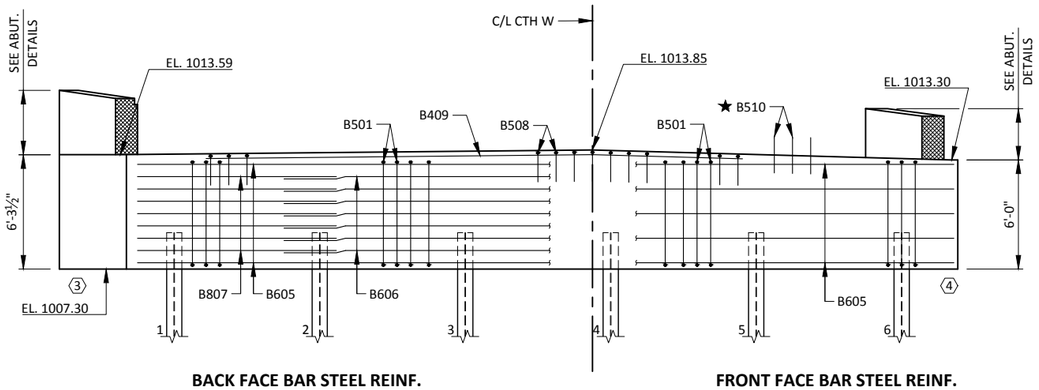
SOUTH ABUTMENT DETAILS

~~SHEET 5 OF 14~~

Revised 59

8

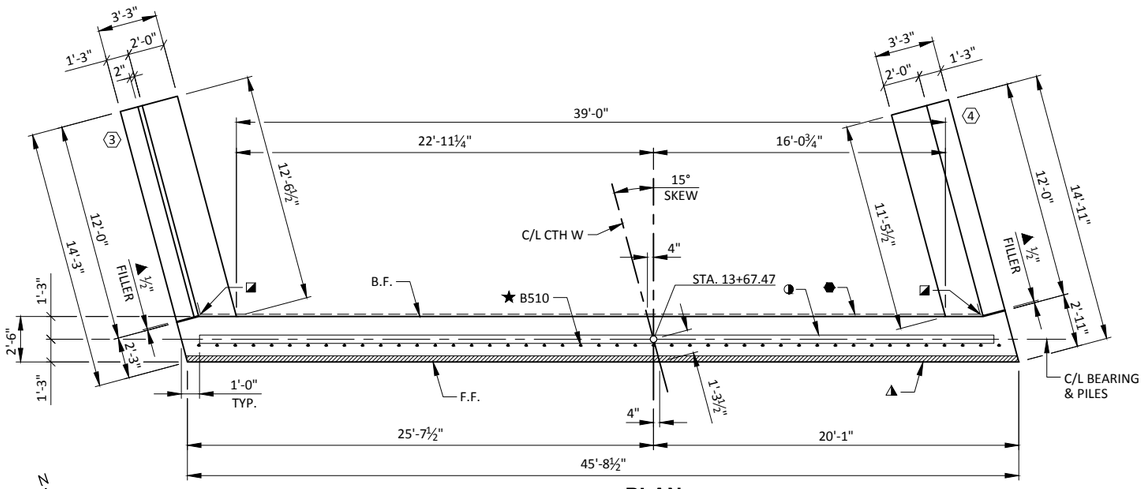
8



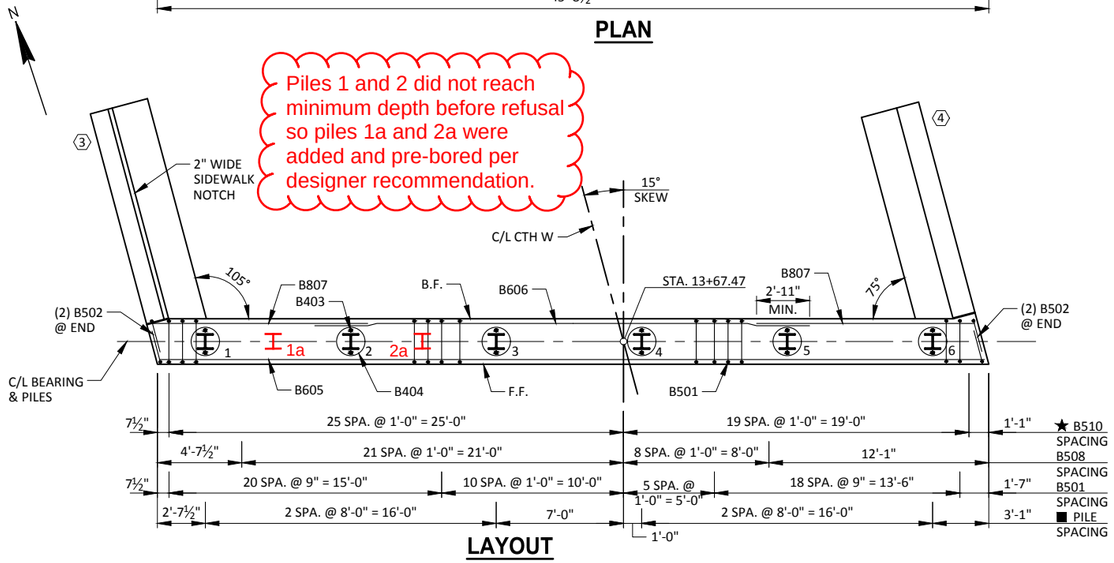
BACK FACE BAR STEEL REINF. **FRONT FACE BAR STEEL REINF.**

ELEVATION

(NORTH ABUTMENT LOOKING NORTH)



PLAN



LAYOUT

NOTES

SOME BARS HAVE BEEN OMITTED FOR CLARITY. SEE SHEET 7 FOR BILL OF BARS.

SEAT ELEVATIONS SHOWN IN THE ELEVATION VIEW ARE TAKEN AT THE C/L OF BEARING (NEGLECTING THE KEYED CONSTRUCTION JOINT).

DO NOT PLACE FILL HIGHER THAN 3 FEET FROM BOTTOM OF ABUTMENT UNTIL SUPERSTRUCTURE IS IN PLACE.

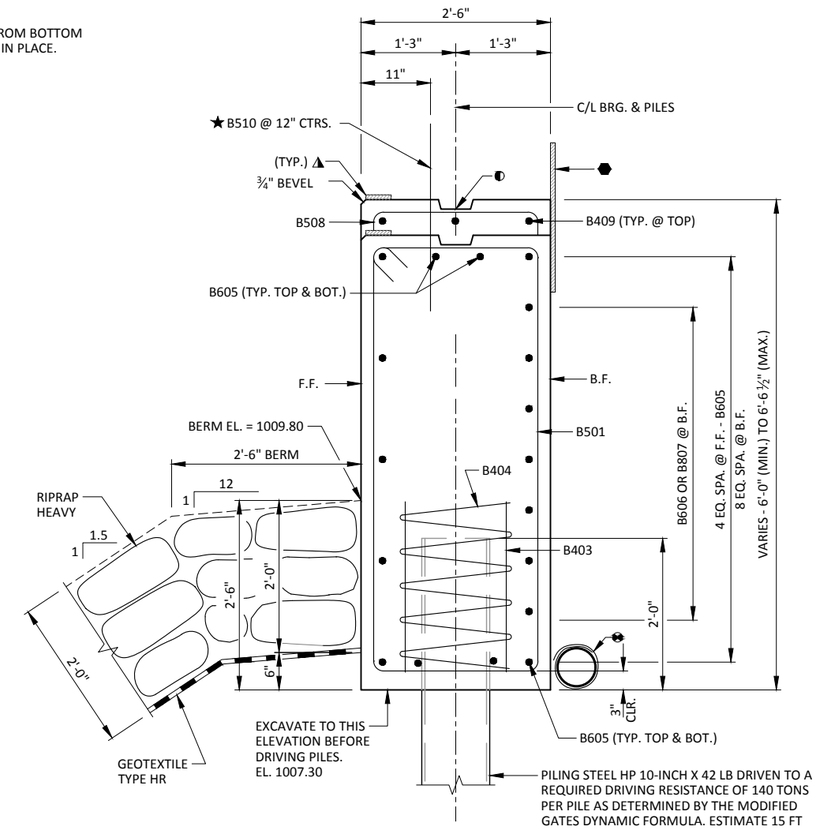
SPACE REINFORCEMENT TO MISS PILING

F.F. - FRONT FACE

B.F. - BACK FACE

STATE PROJECT NUMBER

5516-00-70



TYPICAL SECTION THROUGH ABUTMENT BODY

LEGEND

- ◑ KEYED CONSTRUCTION JOINT FORMED BY SURFACED & BEVELED 2x6.
- ◪ VERTICAL 18" RUBBERIZED MEMBRANE WATERPROOFING EXTEND FROM 9" BELOW BRIDGE SEAT TO 1" BELOW TOP OF WINGS.
- ⬣ 18" RUBBERIZED MEMBRANE WATERPROOFING. (HORIZONTAL)
- ▲ ½" FILLER EXTEND AS SHOWN. SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF FILLER WITH NON-STAINING GRAY, NON-BITUMINUOS JOINT SEALER. (1" DEEP & HOLD ⅛" BELOW SURFACE OF CONCRETE)
- ◭ ¾" x 4" PREFORMED FILLER, EXTEND FULL LENGTH OF ABUTMENTS BETWEEN EDGES OF SLAB.
- ★ B510 BARS MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE IT HAS TAKEN ITS INITIAL SET. EMBED BAR 1'-0".
- ■ PILE SPACING MEASURED AT BASE OF ABUTMENT BODY.
- ⬬ PIPE UNDERDRAIN WRAPPED (6-INCH), SLOPED 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SCREEN AT ENDS OF PIPE UNDERDRAIN AS DETAILED ON SHEET 2. RODENT SCREEN TO BE INCLUDED IN THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH."

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-41-306

DRAWN BY JZ | PLANS CK'D. PTB

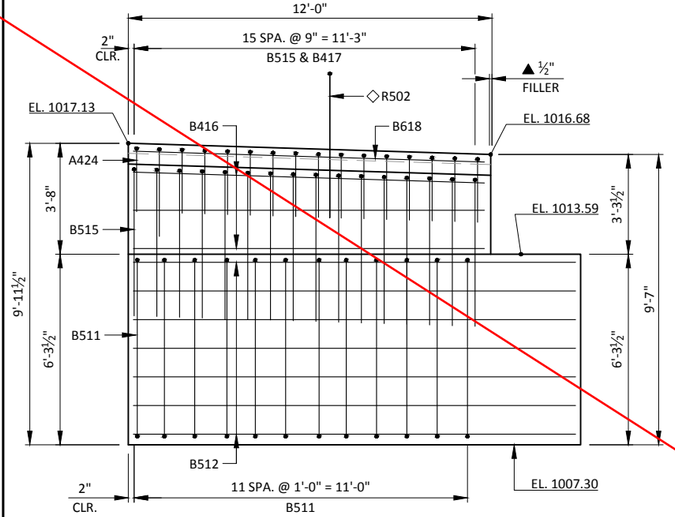
NORTH ABUTMENT

SHEET 6 OF 14

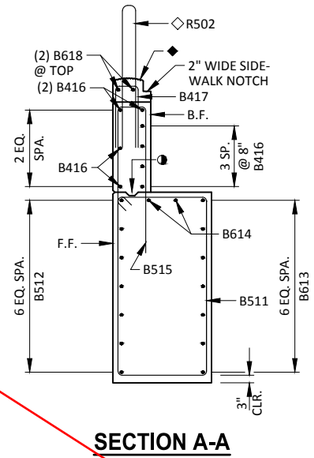
60

8

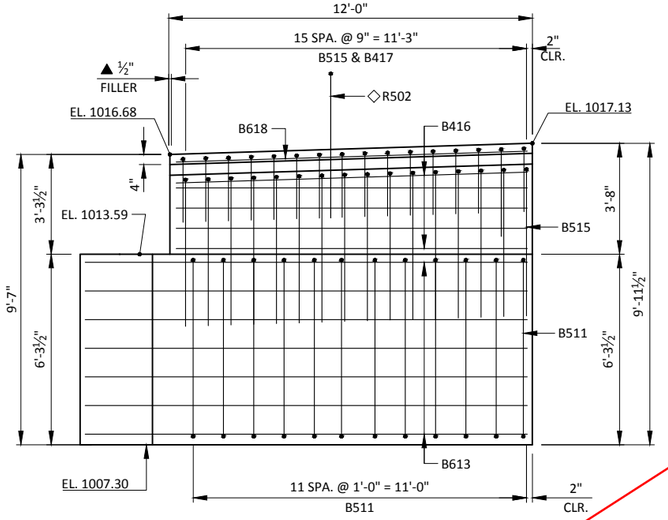
8



F.F. ELEVATION - WING 3



SECTION A-A



B.F. ELEVATION - WING 3

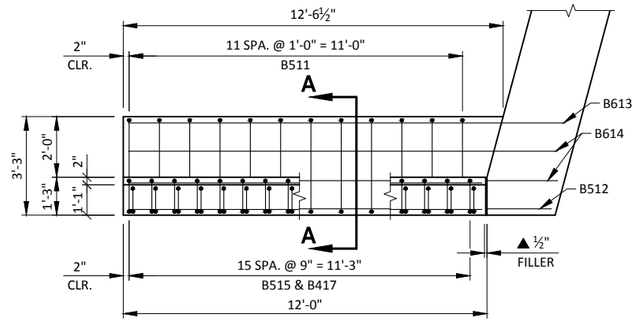
LEGEND

◐ OPTIONAL KEYED CONSTRUCTION JOINT FORMED BY SURFACED & BEVELED 2x6. ¾-INCH "V" GROOVE AT FRONT FACE OF WING WALL AND HORIZONTAL 18" RUBBERIZED MEMBRANE WATERPROOFING AT BACK FACE IF CONSTRUCTION JOINT IS USED. COST IS INCIDENTAL TO THE BID ITEM "CONCRETE MASONRY BRIDGES".

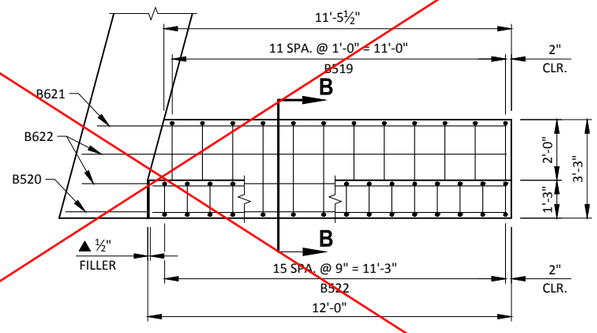
▲ ½" FILLER EXTEND AS SHOWN. SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF FILLER WITH NON-STAINING GRAY, NON-BITUMINUOS JOINT SEALER. (1" DEEP & HOLD ⅛" BELOW SURFACE OF CONCRETE)

◇ R501 AND R502 BARS TO BE TIED TO WING STEEL BEFORE WING IS POURED. SEE SHEET 12 OF 14 FOR PLACEMENT.

◆ SEE SHEET 12 OF 14 FOR TOP OF WING DETAILS.

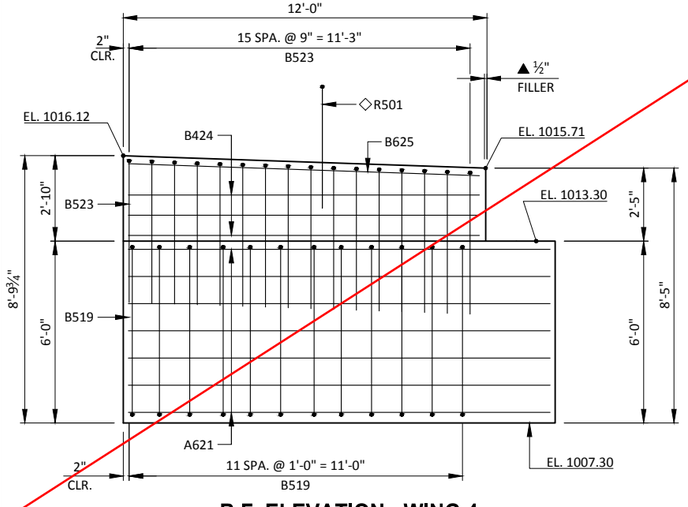


PLAN VIEW - WING 3

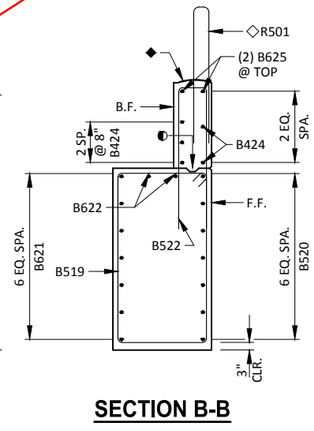


PLAN VIEW - WING 4

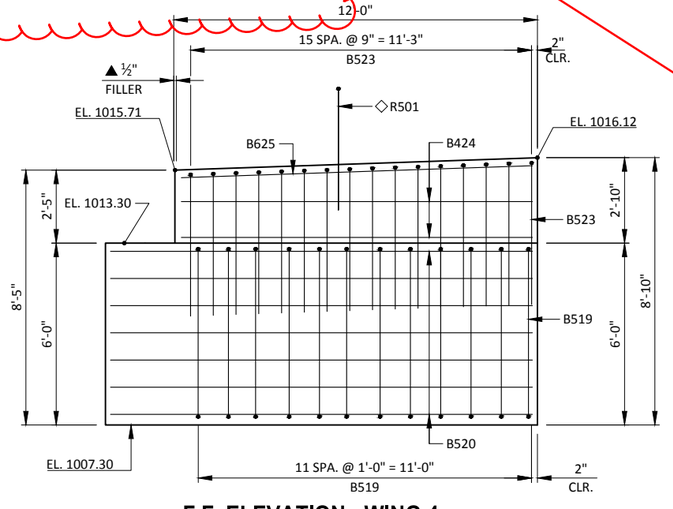
Replaced by page "Revised 61"



B.F. ELEVATION - WING 4



SECTION B-B



F.F. ELEVATION - WING 4

NOTES

SOME BARS HAVE BEEN OMITTED FOR CLARITY. SEE THIS SHEET FOR BILL OF BARS.

SPACE REINFORCEMENT TO MISS PILING

F.F. - FRONT FACE

B.F. - BACK FACE

STATE PROJECT NUMBER

5516-00-70

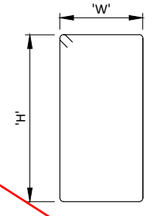
BILL OF BARS
NORTH ABUTMENT

1,700 LB (COATED)
2,550 LB (UNCOATED)

BAR MARK	NO. REQ'D.	LENGTH	BENT	COAT	LOCATION
B501	54	16-0	X		BODY -VERT. - STIRRUP
B502	4	8-10	X		BODY - VERT. - STIRRUP AT ENDS
B403	12	2-3			BODY - VERT. - 4 PER PILE
B404	6	28-0	X		BODY - SPIRAL - 3 PER PILE
B605	11	45-3			BODY - HORIZ. - F.F. & TOP
B606	7	27-3			BODY - HORIZ. - B.F.
B807	7	12-0			BODY - HORIZ. - B.F.
B508	30	5-3	X		BODY - VERT. - TOP
B409	3	29-6			BODY - HORIZ. - TOP
B510	45	2-0		X	BODY - VERT. - DOWELS
B511	12	18-0	X	X	WING 3 - VERT. - STIRRUP
B512	7	13-11		X	WING 3- HORIZ. - F.F.
B613	7	14-5		X	WING 3 - HORIZ. - B.F.
B614	2	14-2		X	WING 3 - HORIZ. - TOP
B515	16	10-4	X	X	WING 3 - VERT. - TOP
B416	5	11-7		X	WING 3 - HORIZ. - F.F. & B.F.
B417	16	4-9	X	X	WING 3 - VERT. - SIDEWALK NOTCH
B618	8	11-7		X	WING 3 - HORIZ. - TOP
B519	12	17-6	X	X	WING 4 - VERT. - STIRRUP
B520	7	14-6		X	WING 4 - HORIZ. - F.F.
B621	7	13-6		X	WING 4 - HORIZ. - B.F.
B622	2	14-0		X	WING 4 - HORIZ. - TOP
B523	16	11-2	X	X	WING 4 - VERT. - TOP
B424	5	11-7		X	WING 4 - HORIZ. - F.F. & B.F.
B625	2	4-9		X	WING 4 - HORIZ. - TOP

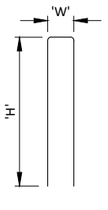
NOTES: THE FIRST DIGIT OF A BAR MARK SIGNIFIES THE BAR SIZE.

DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.



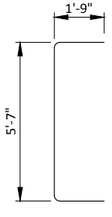
B501, B511, B519

BAR MARK	'W'	'H'
B501	2-2	5-7
B511	2-11	5-10
B519	2-11	5-7

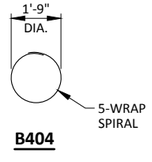


B508, B515, B417, B523

BAR MARK	'W'	'H'
B508	2-2	1-8
B515	0-11	4-10
B417	0-9	2-1
B523	0-11	5-3



B502



B404

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-41-306

DRAWN BY JZ | PLANS CK'D. PTB

NORTH ABUTMENT DETAILS

SHEET 7 OF 14

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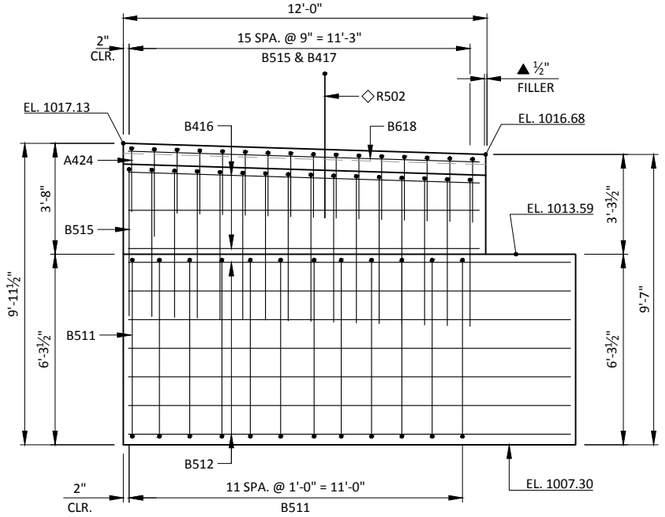
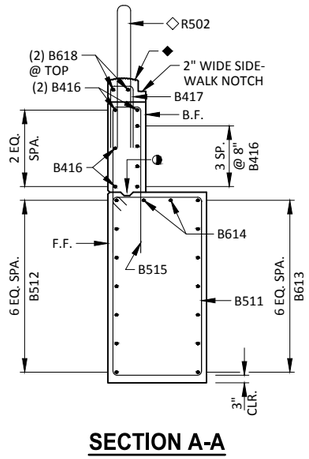
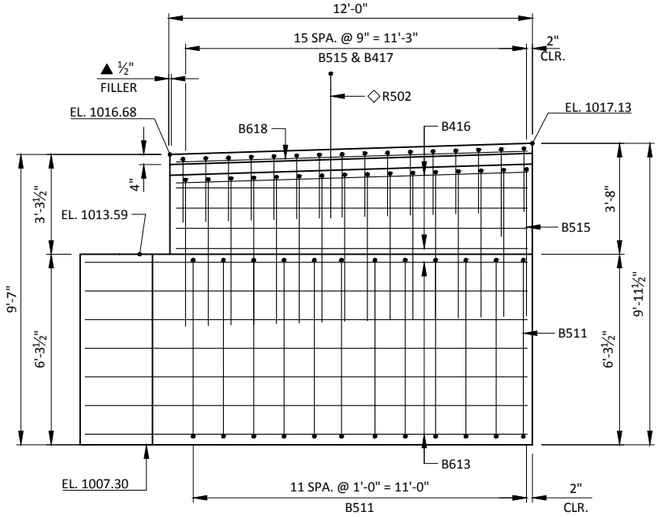


F.F. ELEVATION - WING 3



SECTION A-A



B.F. ELEVATION - WING 3

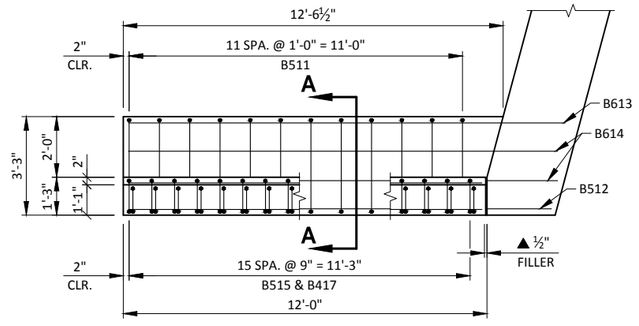
LEGEND

◐ OPTIONAL KEYED CONSTRUCTION JOINT FORMED BY SURFACED & BEVELED 2x6. ¾-INCH "V" GROOVE AT FRONT FACE OF WING WALL AND HORIZONTAL 18" RUBBERIZED MEMBRANE WATERPROOFING AT BACK FACE IF CONSTRUCTION JOINT IS USED. COST IS INCIDENTAL TO THE BID ITEM "CONCRETE MASONRY BRIDGES".

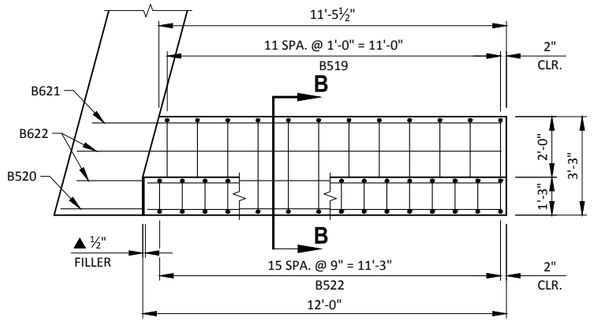
▲ ½" FILLER EXTEND AS SHOWN. SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF FILLER WITH NON-STAINING GRAY, NON-BITUMINUOS JOINT SEALER. (1" DEEP & HOLD ⅛" BELOW SURFACE OF CONCRETE)

◇ R501 AND R502 BARS TO BE TIED TO WING STEEL BEFORE WING IS POURED. SEE SHEET 12 OF 14 FOR PLACEMENT.

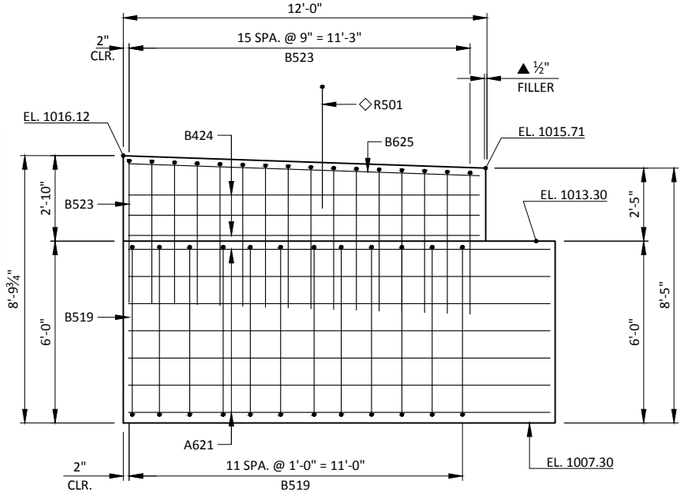
◆ SEE SHEET 12 OF 14 FOR TOP OF WING DETAILS.



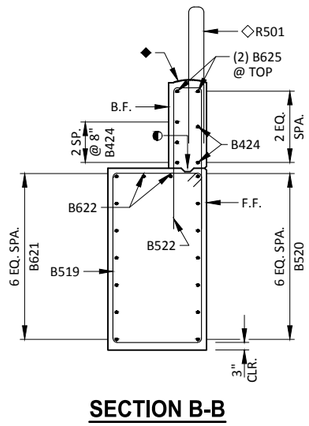
PLAN VIEW - WING 3



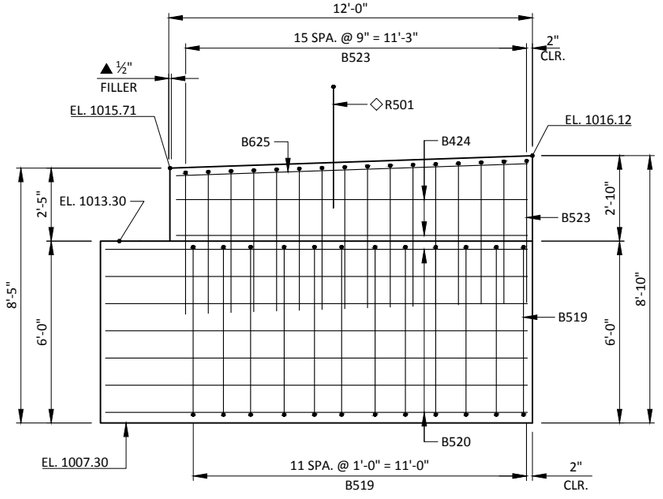
PLAN VIEW - WING 4



B.F. ELEVATION - WING 4



SECTION B-B



F.F. ELEVATION - WING 4

NOTES

SOME BARS HAVE BEEN OMITTED FOR CLARITY. SEE THIS SHEET FOR BILL OF BARS.

SPACE REINFORCEMENT TO MISS PILING

F.F. - FRONT FACE

B.F. - BACK FACE

STATE PROJECT NUMBER

5516-00-70

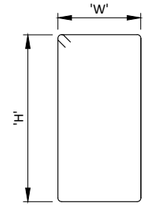
BILL OF BARS
NORTH ABUTMENT

1,700 LB (COATED)
2,770 ~~2,550~~ LB (UNCOATED)

BAR MARK	NO. REQ'D.	LENGTH	BENT	COAT	LOCATION
B501	54	16-0	X		BODY -VERT. - STIRRUP
B502	4	8-10	X		BODY - VERT. - STIRRUP AT ENDS
B403	12	2-3			BODY - VERT. - 4 PER PILE
B404	6	28-0	X		BODY - SPIRAL - 3 PER PILE
B605	11	45-3			BODY - HORIZ. - F.F. & TOP
B606	7	27-3			BODY - HORIZ. - B.F.
B807	14 ~~7~~	12-0			BODY - HORIZ. - B.F.
B508	30	5-3	X		BODY - VERT. - TOP
B409	3	29-6			BODY - HORIZ. - TOP
B510	45	2-0		X	BODY - VERT. - DOWELS
B511	12	18-0	X	X	WING 3 - VERT. - STIRRUP
B512	7	13-11		X	WING 3- HORIZ. - F.F.
B613	7	14-5		X	WING 3 - HORIZ. - B.F.
B614	2	14-2		X	WING 3 - HORIZ. - TOP
B515	16	10-4	X	X	WING 3 - VERT. - TOP
B416	8 ~~5~~	11-7		X	WING 3 - HORIZ. - F.F. & B.F.
B417	16	4-9	X	X	WING 3 - VERT. - SIDEWALK NOTCH
B618	2 ~~8~~	11-7		X	WING 3 - HORIZ. - TOP
B519	12	17-6	X	X	WING 4 - VERT. - STIRRUP
B520	7	14-6		X	WING 4 - HORIZ. - F.F.
B621	7	13-6		X	WING 4 - HORIZ. - B.F.
B622	2	14-0		X	WING 4 - HORIZ. - TOP
B523	16	11-2	X	X	WING 4 - VERT. - TOP
B424	5	11-7		X	WING 4 - HORIZ. - F.F. & B.F.
B625	2	4-9		X	WING 4 - HORIZ. - TOP

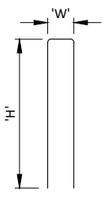
NOTES: THE FIRST DIGIT OF A BAR MARK SIGNIFIES THE BAR SIZE.

DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.



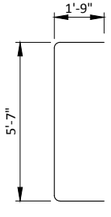
B501, B511, B519

BAR MARK	'W'	'H'
B501	2-2	5-7
B511	2-11	5-10
B519	2-11	5-7



B508, B515, B417, B523

BAR MARK	'W'	'H'
B508	2-2	1-8
B515	0-11	4-10
B417	0-9	2-1
B523	0-11	5-3



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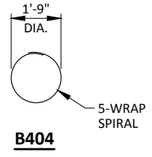

B404

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-41-306

DRAWN BY JZ | PLANS CK'D. PTB

NORTH ABUTMENT DETAILS

~~SHEET 7 OF 14~~

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STATE PROJECT NUMBER

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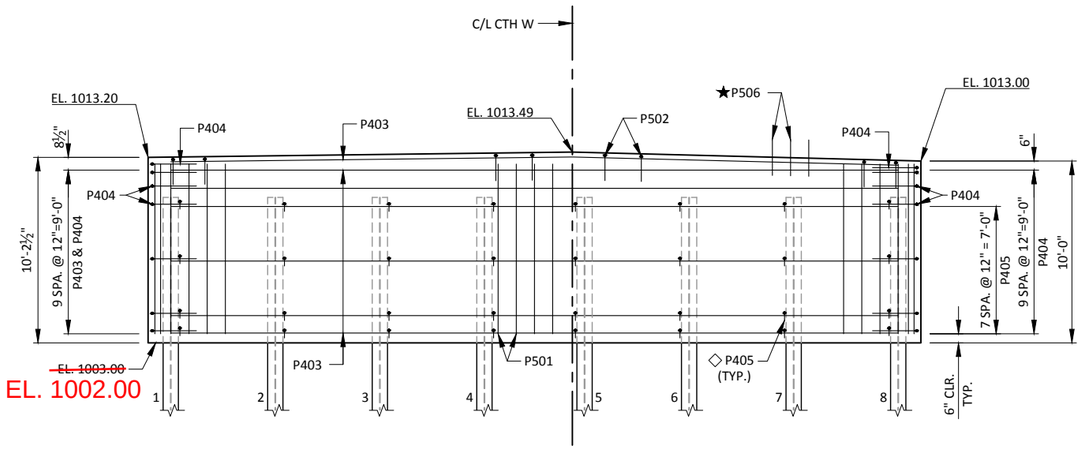
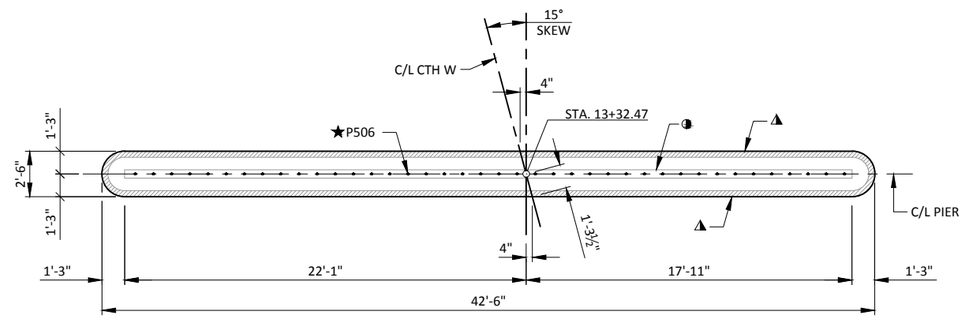
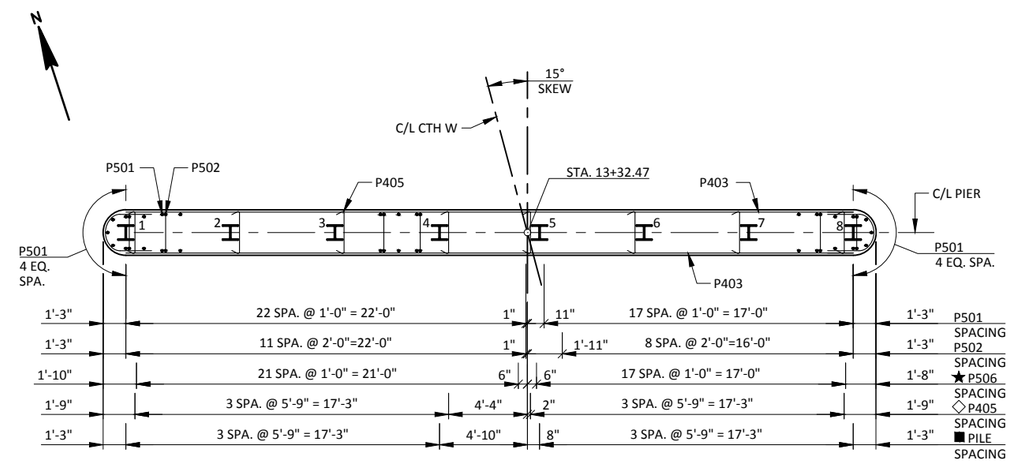


ELEVATION
(PIER LOOKING NORTH)



PLAN



LAYOUT

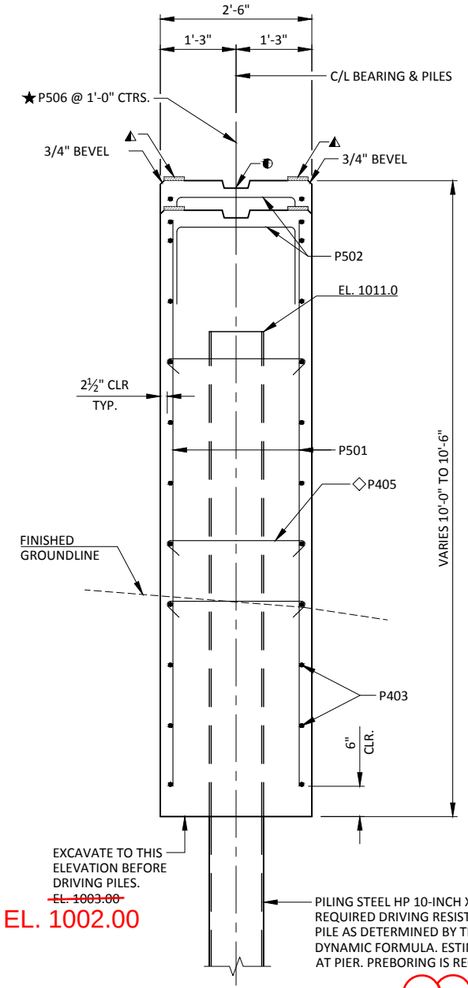
NOTES

SOME BARS HAVE BEEN OMITTED FOR CLARITY. SEE THIS SHEET FOR BILL OF BARS.

SEAT ELEVATIONS SHOWN IN THE ELEVATION VIEW ARE TAKEN AT THE C/L OF BEARING (NEGLECTING THE KEYED CONSTRUCTION JOINT).

TOP OF PIER ELEVATIONS ARE ¾" BELOW BOTTOM OF DECK TO ALLOW FOR FILLER.

E.F. - EACH FACE



TYPICAL SECTION THROUGH PIER

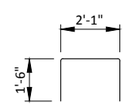
BILL OF BARS
PIER

80 LB (COATED)
1,760 LB (UNCOATED)

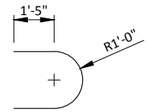
	BAR MARK	NO. REQ'D.	LENGTH	BENT	COAT	LOCATION
	P501	88	9-4			BODY - VERT. - E.F.
	P502	21	4-10	X		BODY - VERT. - TOP
	P403	22	40-0			BODY - HORIZ. - E.F.
	P404	22	6-0	X		BODY - HORIZ. - ENDS
◇	P405	64	2-10	X		BODY - TIES
★	P506	40	2-0		X	BODY - VERT. - DOWELS

NOTES: THE FIRST DIGIT OF A BAR MARK SIGNIFIES THE BAR SIZE.

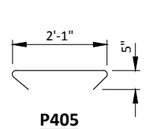
DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.



P502



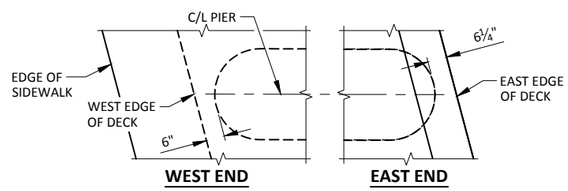
P404



P405

LEGEND

- ◑ KEYED CONSTRUCTION JOINT FORMED BY SURFACED & BEVELED 2x6.
- ◭ ¾"x4" PREFORMED FILLER, EXTEND FULL LENGTH OF PIER AS SHOWN.
- ★ P506 BARS MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE IT HAS TAKEN ITS INITIAL SET. EMBED BAR 1'-0".
- ■ PILE SPACING MEASURED AT BASE OF SHAFT.
- ◇ PLACE P405 BARS ADJACENT TO PILING @ 12" VERTICAL SPACING FROM BASE OF SHAFT TO TOP OF PILING.



PLAN AT END OF PIER

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-41-306

DRAWN BY JZ | PLANS CK'D. PTB

PIER

SHEET 8 OF 14

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STATE PROJECT NUMBER
5516-00-70

TOP OF DECK ELEVATIONS

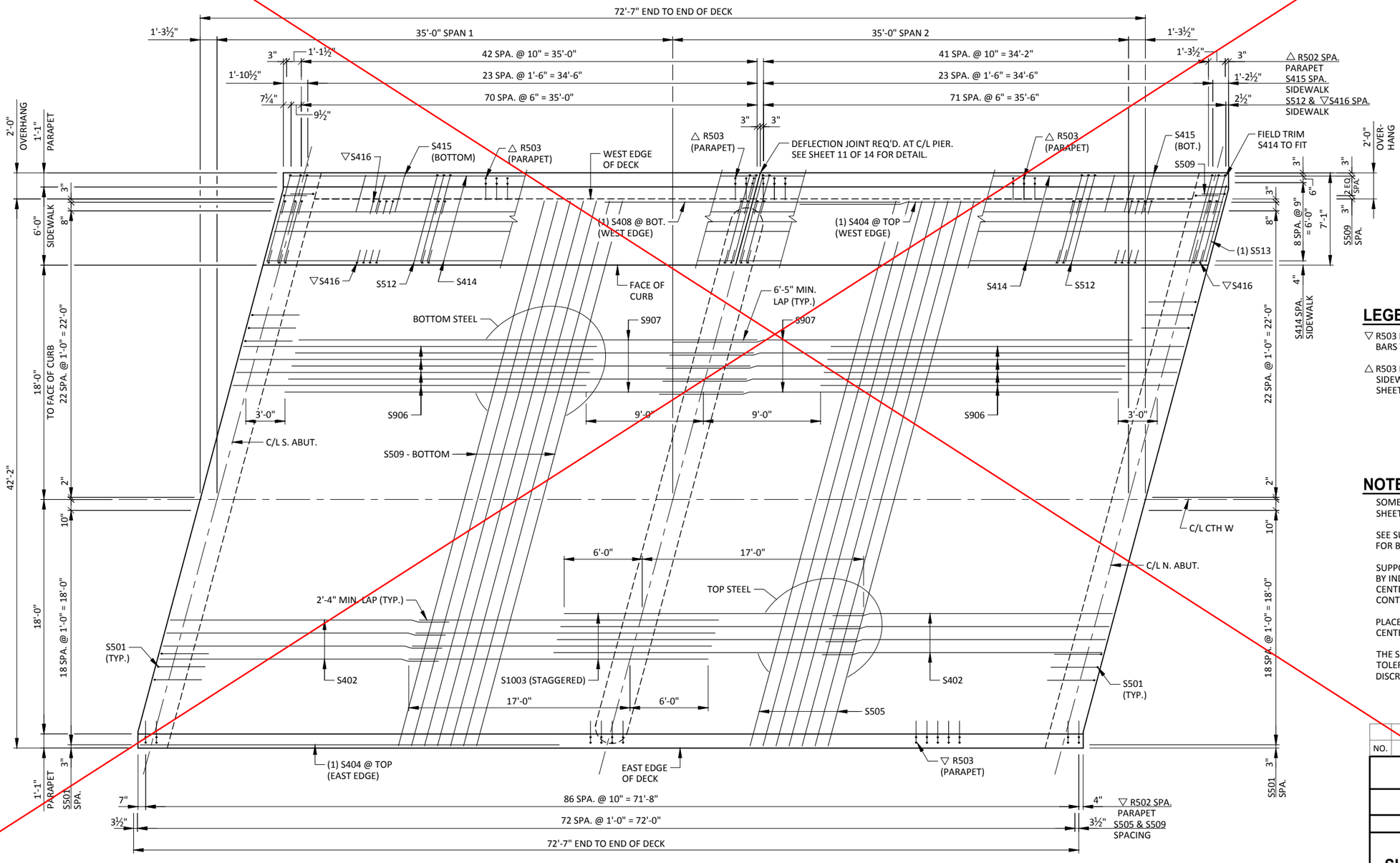
	C/L S. ABUT.	0.10 PNT.	0.20 PNT.	0.30 PNT.	0.40 PNT.	0.50 PNT.	0.60 PNT.	0.70 PNT.	0.80 PNT.	0.90 PNT.	C/L PIER	0.10 PNT.	0.20 PNT.	0.30 PNT.	0.40 PNT.	0.50 PNT.	0.60 PNT.	0.70 PNT.	0.80 PNT.	0.90 PNT.	C/L N. ABUT.
W. EDGE	1014.04	1014.11	1014.18	1014.25	1014.33	1014.40	1014.49	1014.57	1014.66	1014.75	1014.84	1014.94	1015.04	1015.14	1015.25	1015.35	1015.46	1015.58	1015.70	1015.81	1015.94
FACE CURB	1014.11	1014.18	1014.25	1014.32	1014.40	1014.47	1014.55	1014.64	1014.72	1014.81	1014.91	1015.00	1015.10	1015.20	1015.30	1015.41	1015.52	1015.63	1015.75	1015.87	1015.99
C/L	1014.39	1014.45	1014.51	1014.58	1014.65	1014.73	1014.80	1014.88	1014.97	1015.05	1015.14	1015.23	1015.32	1015.42	1015.52	1015.62	1015.73	1015.84	1015.95	1016.07	1016.18
E. EDGE	1013.92	1013.98	1014.04	1014.10	1014.17	1014.24	1014.31	1014.39	1014.47	1014.55	1014.63	1014.72	1014.81	1014.90	1015.00	1015.10	1015.20	1015.30	1015.41	1015.52	1015.63

SURVEY TOP OF DECK ELEVATIONS

	S. ABUT.	0.50 PT.	PIER	0.50 PT.	N. ABUT.
WEST EDGE					
CENTERLINE					
EAST EDGE					

PRIOR TO RELEASING SLAB FASLEWORK, TAKE TOP OF DECK ELEVATIONS AT THE C/L OF THE ABUTMENTS, THE C/L OF THE PIERS AND AT 0.50 PTS. TO VERIFY CAMBER. TAKE TOP OF DECK ELEVATIONS AT THE WEST EDGE OF DECK, CENTER LINE, AND EAST EDGE OF DECK. RECORD THE ELEVATIONS IN THE ABOVE TABLE FOR THE "AS BUILT" PLANS.

Replaced by page "Revised 63"



PLAN

LEGEND

▽ R503 PARAPET BARS AT EAST EDGE AND S416 SIDEWALK BARS TO BE TIED TO DECK STEEL BEFORE DECK IS POURED.

△ R503 PARAPET BARS AT WEST EDGE TO BE TIED TO SIDEWALK STEEL BEFORE SIDEWALK IS POURED. SEE THIS SHEET FOR BAR LAYOUT.

NOTES

SOME BARS HAVE BEEN OMITTED FOR CLARITY. SEE SHEET 11 FOR BILL OF BARS.

SEE SUPERSTRUCTURE DETAIL SHEET (SHEET 10 OF 14) FOR BAR SPACINGS NOT SHOWN ON THIS SHEET.

SUPPORT ALTERNATE TOP TRANSVERSE BARS IN SLAB BY INDIVIDUAL BAR CHAIRS AT APPROX. 3'-0" CENTERS. SUPPORT BOTTOM LONGITUDINAL BARS BY CONTINUOUS BAR CHAIRS AT APPROX. 4'-0" CENTERS.

PLACE TRANSVERSE BARS PARALLEL TO THE CENTERLINE OF SUBSTRUCTURE UNITS.

THE SLAB THICKNESS DIMENSION IS MINIMUM. ANY TOLERANCES NECESSARY TO CORRECT CONSTRUCTION DISCREPANCIES ARE TO BE PLUS (+).

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-41-306

DRAWN BY JZ | PLANS CK'D. PTB

SUPERSTRUCTURE

SHEET 9 OF 14

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STATE PROJECT NUMBER

5516-00-70

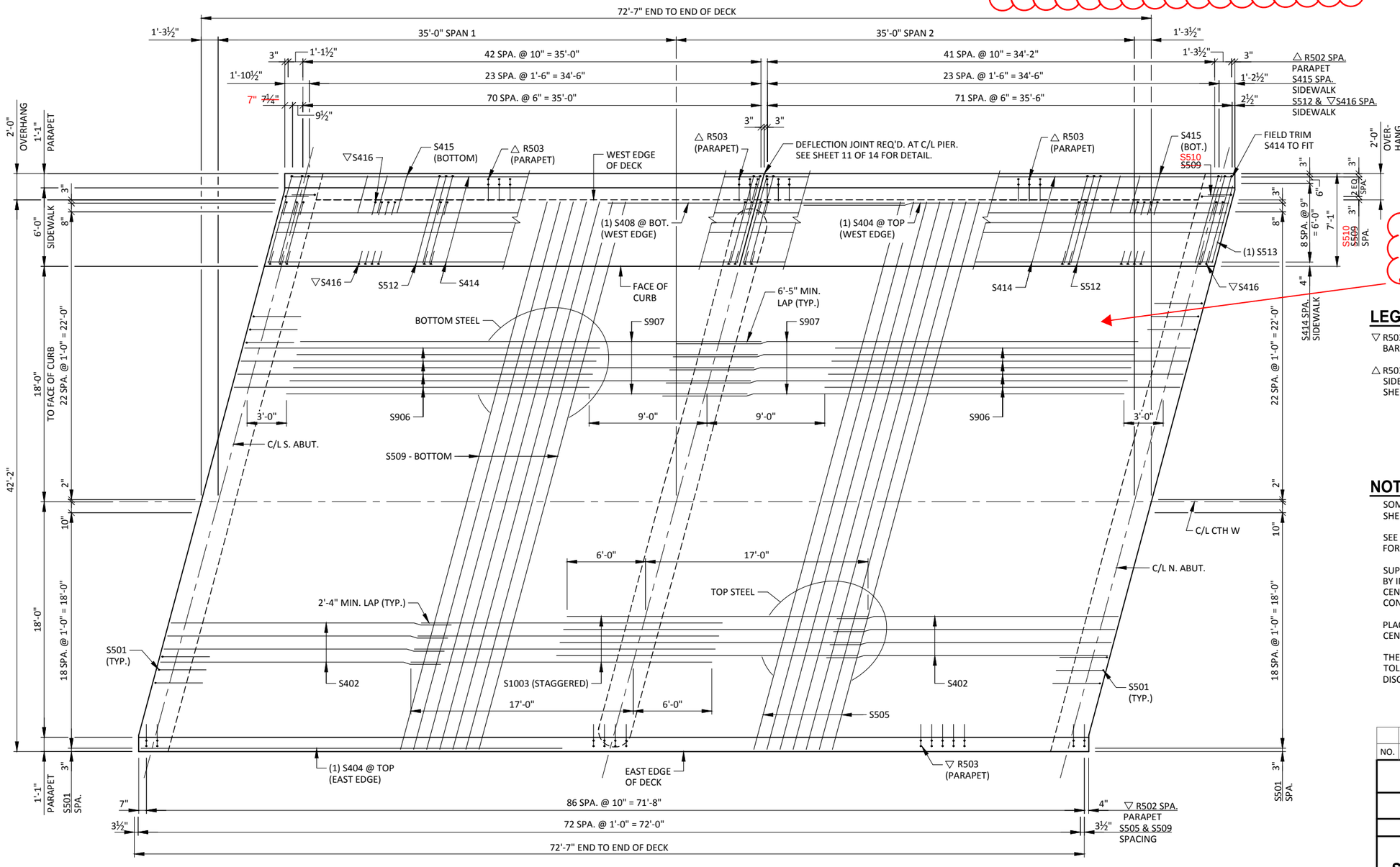
TOP OF DECK ELEVATIONS

	C/L S. ABUT.	0.10 PNT.	0.20 PNT.	0.30 PNT.	0.40 PNT.	0.50 PNT.	0.60 PNT.	0.70 PNT.	0.80 PNT.	0.90 PNT.	C/L PIER	0.10 PNT.	0.20 PNT.	0.30 PNT.	0.40 PNT.	0.50 PNT.	0.60 PNT.	0.70 PNT.	0.80 PNT.	0.90 PNT.	C/L N. ABUT.
W. EDGE	1014.04	1014.11	1014.18	1014.25	1014.33	1014.40	1014.49	1014.57	1014.66	1014.75	1014.84	1014.94	1015.04	1015.14	1015.25	1015.35	1015.46	1015.58	1015.70	1015.81	1015.94
FACE CURB	1014.11	1014.18	1014.25	1014.32	1014.40	1014.47	1014.55	1014.64	1014.72	1014.81	1014.91	1015.00	1015.10	1015.20	1015.30	1015.41	1015.52	1015.63	1015.75	1015.87	1015.99
C/L	1014.39	1014.45	1014.51	1014.58	1014.65	1014.73	1014.80	1014.88	1014.97	1015.05	1015.14	1015.23	1015.32	1015.42	1015.52	1015.62	1015.73	1015.84	1015.95	1016.07	1016.18
E. EDGE	1013.92	1013.98	1014.04	1014.10	1014.17	1014.24	1014.31	1014.39	1014.47	1014.55	1014.63	1014.72	1014.81	1014.90	1015.00	1015.10	1015.20	1015.30	1015.41	1015.52	1015.63

SURVEY TOP OF DECK ELEVATIONS

	S. ABUT.	0.50 PT.	PIER	0.50 PT.	N. ABUT.
WEST EDGE	1014.04	1014.46	1014.90	1015.49	1016.06
CENTERLINE	1014.27	1014.70	1015.14	1015.69	1016.24
EAST EDGE	1013.95	1014.29	1014.68	1015.21	1015.81

PRIOR TO RELEASING SLAB FASLEWORK, TAKE TOP OF DECK ELEVATIONS AT THE C/L OF THE ABUTMENTS, THE C/L OF THE PIERS AND AT 0.50 PTS. TO VERIFY CAMBER. TAKE TOP OF DECK ELEVATIONS AT THE WEST EDGE OF DECK, CENTER LINE, AND EAST EDGE OF DECK. RECORD THE ELEVATIONS IN THE ABOVE TABLE FOR THE "AS BUILT" PLANS.



PLAN

Non-pigmented protective surface treatment used on deck: TK-590-1-MS, TK Products.

LEGEND

▽ R503 PARAPET BARS AT EAST EDGE AND S416 SIDEWALK BARS TO BE TIED TO DECK STEEL BEFORE DECK IS POURED.

△ R503 PARAPET BARS AT WEST EDGE TO BE TIED TO SIDEWALK STEEL BEFORE SIDEWALK IS POURED. SEE THIS SHEET FOR BAR LAYOUT.

NOTES

SOME BARS HAVE BEEN OMITTED FOR CLARITY. SEE SHEET 11 FOR BILL OF BARS.

SEE SUPERSTRUCTURE DETAIL SHEET (SHEET 10 OF 14) FOR BAR SPACINGS NOT SHOWN ON THIS SHEET.

SUPPORT ALTERNATE TOP TRANSVERSE BARS IN SLAB BY INDIVIDUAL BAR CHAIRS AT APPROX. 3'-0" CENTERS. SUPPORT BOTTOM LONGITUDINAL BARS BY CONTINUOUS BAR CHAIRS AT APPROX. 4'-0" CENTERS.

PLACE TRANSVERSE BARS PARALLEL TO THE CENTERLINE OF SUBSTRUCTURE UNITS.

THE SLAB THICKNESS DIMENSION IS MINIMUM. ANY TOLERANCES NECESSARY TO CORRECT CONSTRUCTION DISCREPANCIES ARE TO BE PLUS (+).

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-41-306

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SUPERSTRUCTURE

~~SHEET 9 OF 14~~

Revised 63

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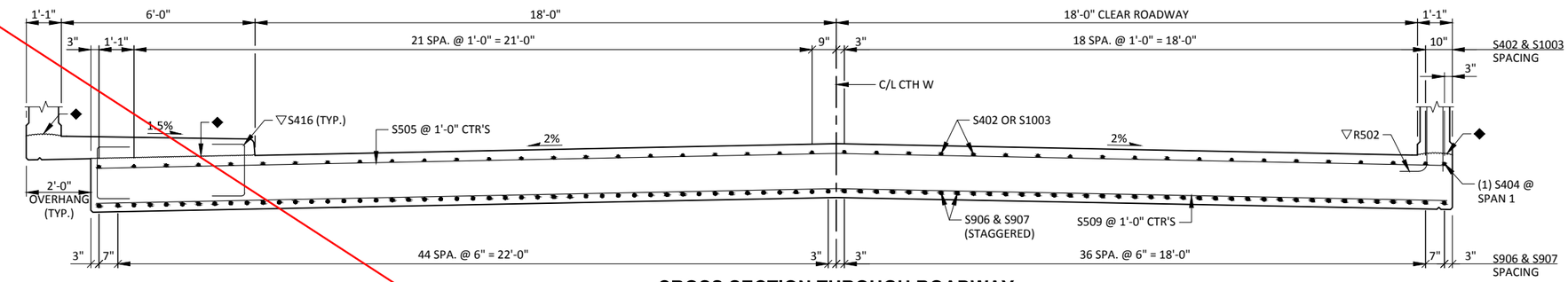
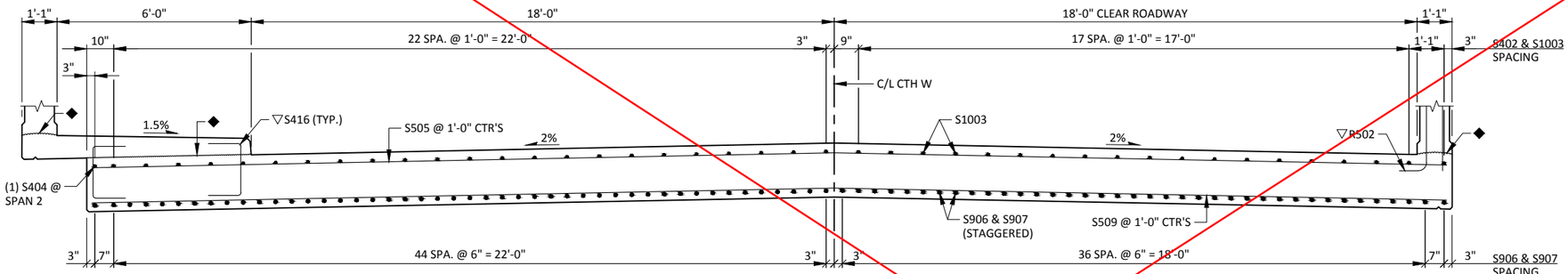


CROSS SECTION THROUGH ROADWAY

SPAN 1 - LOOKING NORTH



CROSS SECTION THROUGH ROADWAY

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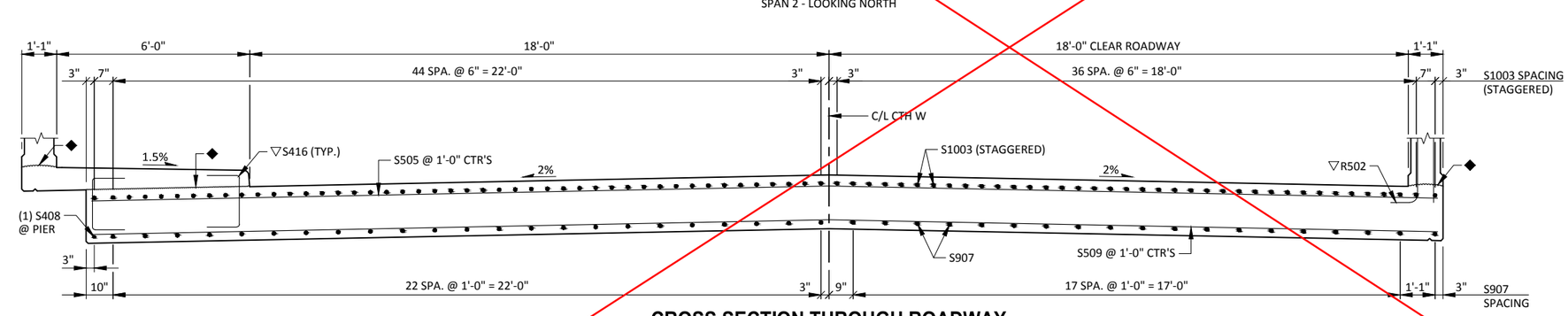
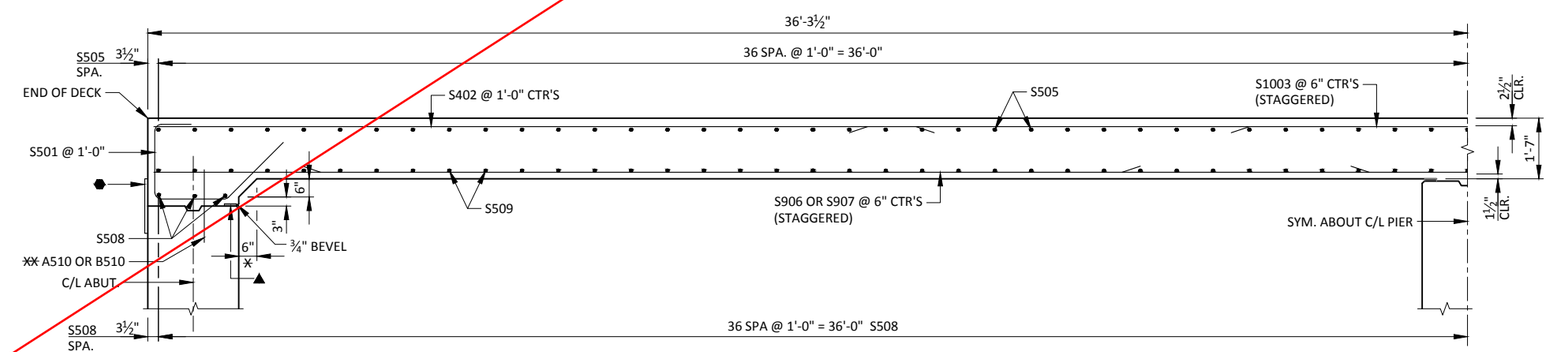
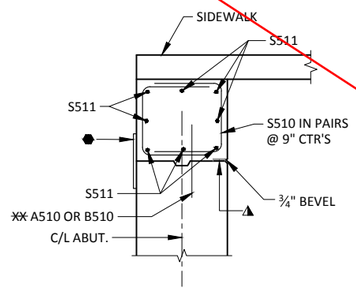


CROSS SECTION THROUGH ROADWAY

AT PIER - LOOKING NORTH



PARTIAL LONGITUDINAL SECTION THROUGH ROADWAY



PARTIAL LONGITUDINAL SECTION UNDER SIDEWALK

STATE PROJECT NUMBER

5516-00-70

LEGEND

- ⬟ 18" RUBBERIZED MEMBRANE WATERPROOFING. (HORIZONTAL)
- ▲ ¾" x 4" PREFORMED FILLER, EXTEND FULL LENGTH OF ABUTMENTS BETWEEN EDGES OF SLAB.
- ◆ CONSTRUCTION JOINT - STRIKE OFF AND LEAVE ROUGH. FINISH ALL AREAS THAT WILL NOT BE COVERED WITH SIDEWALK OR PARAPET AT COMPLETION. FOR SLAB PLACEMENT, MATCH BRIDGE CROSS SLOPE.
- ▽ R502 PARAPET BARS AT EAST EDGE AND S416 SIDEWALK BARS TO BE TIED TO DECK STEEL BEFORE DECK IS POURED. SEE SHEET 9 OF 14 FOR BAR LAYOUT.
- ∗ DIMENSION IS NORMAL TO THE C/L OF SUBSTRUCTURE UNITS.
- ∗∗ SEE SHEETS 4 OR 6 FOR PLACEMENT OF A510 OR B510 BARS.

NOTES

PARAPETS AND SIDEWALKS PLACED ON TOP OF THE SLAB SHALL BE POURED AFTER FALSEWORK HAS BEEN RELEASED.

Replaced by page "Revised 64"

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-41-306

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SUPERSTRUCTURE DETAILS (1 OF 2)

SHEET 10 OF 14

64

8

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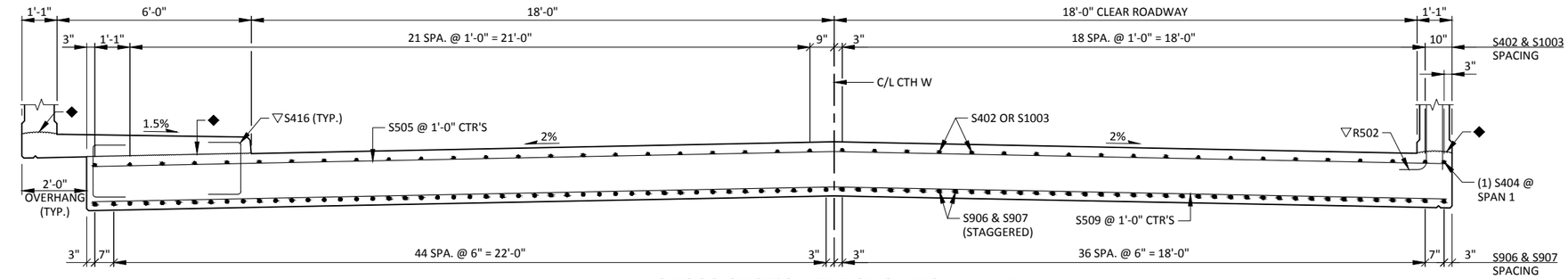
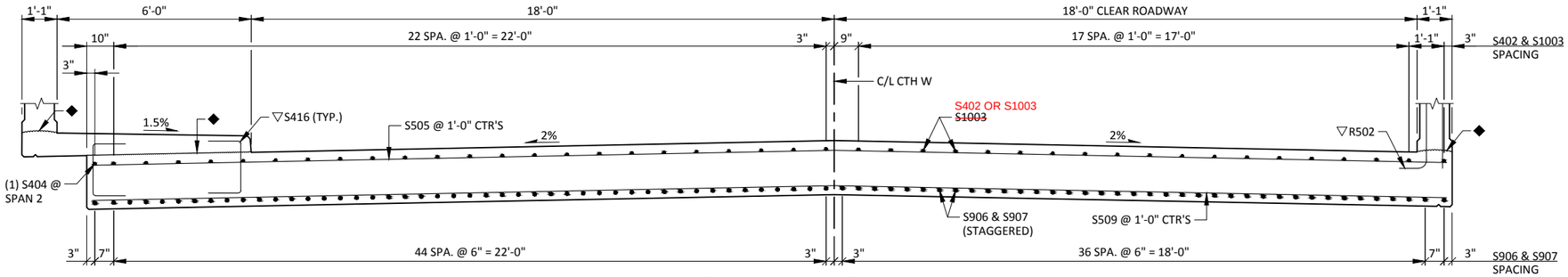
STATE PROJECT NUMBER
5516-00-70



CROSS SECTION THROUGH ROADWAY

SPAN 1 - LOOKING NORTH



CROSS SECTION THROUGH ROADWAY

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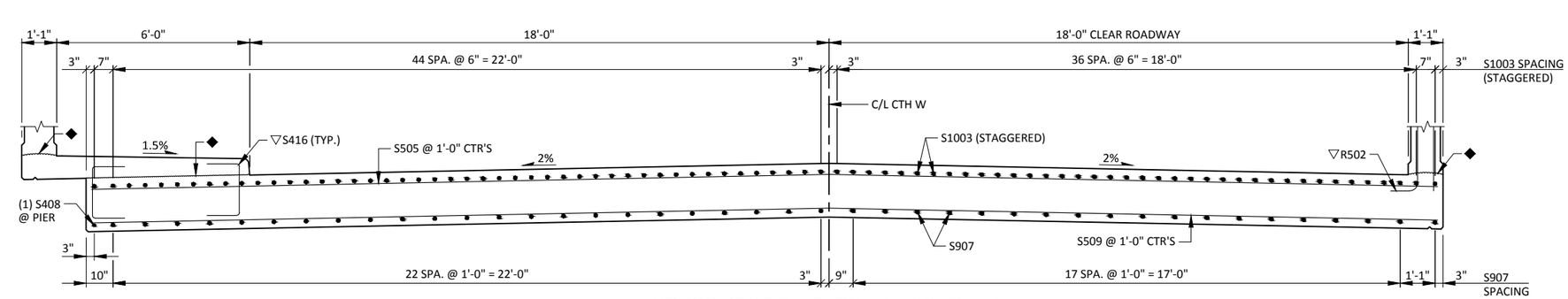
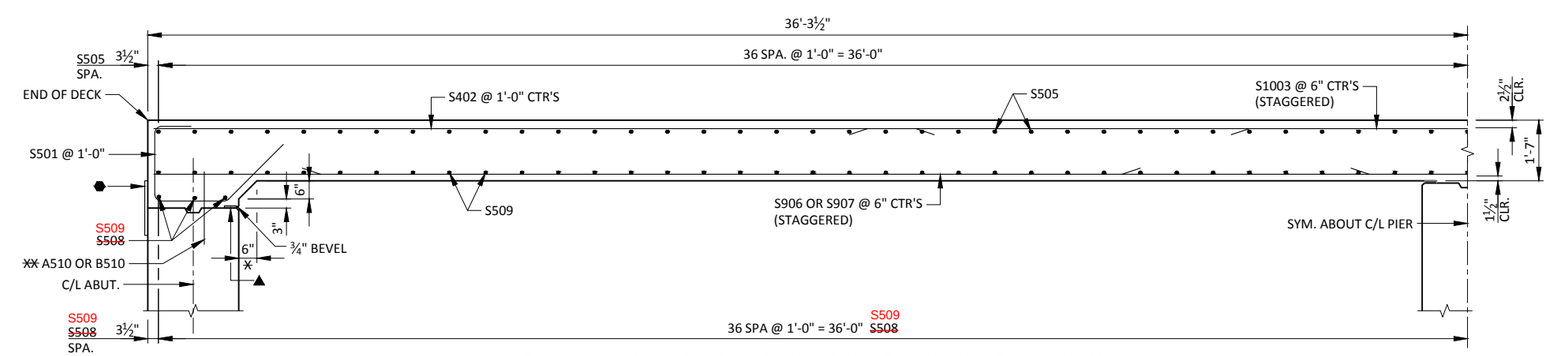
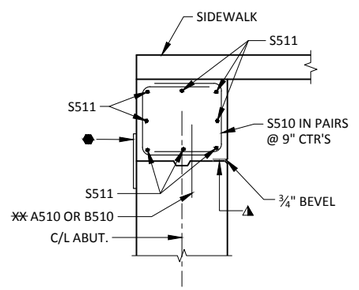


CROSS SECTION THROUGH ROADWAY

AT PIER - LOOKING NORTH



PARTIAL LONGITUDINAL SECTION THROUGH ROADWAY



PARTIAL LONGITUDINAL SECTION UNDER SIDEWALK

LEGEND

- ⬣ 18" RUBBERIZED MEMBRANE WATERPROOFING. (HORIZONTAL)
- ▲ ¾" x 4" PREFORMED FILLER, EXTEND FULL LENGTH OF ABUTMENTS BETWEEN EDGES OF SLAB.
- ◆ CONSTRUCTION JOINT - STRIKE OFF AND LEAVE ROUGH. FINISH ALL AREAS THAT WILL NOT BE COVERED WITH SIDEWALK OR PARAPET AT COMPLETION. FOR SLAB PLACEMENT, MATCH BRIDGE CROSS SLOPE.
- ▽ R502 PARAPET BARS AT EAST EDGE AND S416 SIDEWALK BARS TO BE TIED TO DECK STEEL BEFORE DECK IS POURED. SEE SHEET 9 OF 14 FOR BAR LAYOUT.
- ∗ DIMENSION IS NORMAL TO THE C/L OF SUBSTRUCTURE UNITS.
- ∗∗ SEE SHEETS 4 OR 6 FOR PLACEMENT OF A510 OR B510 BARS.

NOTES

PARAPETS AND SIDEWALKS PLACED ON TOP OF THE SLAB SHALL BE POURED AFTER FALSEWORK HAS BEEN RELEASED.

8

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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
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SUPERSTRUCTURE DETAILS (1 OF 2)

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LEGEND

▽ S416 SIDEWALK BARS TO BE TIED TO DECK STEEL BEFORE DECK IS POURED.

△ R502 PARAPET BARS TO BE TIED TO SIDEWALK STEEL BEFORE SIDEWALK IS POURED. SEE THIS SHEET 9 OF 14 FOR BAR LAYOUT.

◆ CONSTRUCTION JOINT - STRIKE OFF AND LEAVE ROUGH. FINISH ALL AREAS THAT WILL NOT BE COVERED WITH SIDEWALK OR PARAPET AT COMPLETION. FOR SLAB PLACEMENT, MATCH BRIDGE CROSS SLOPE.

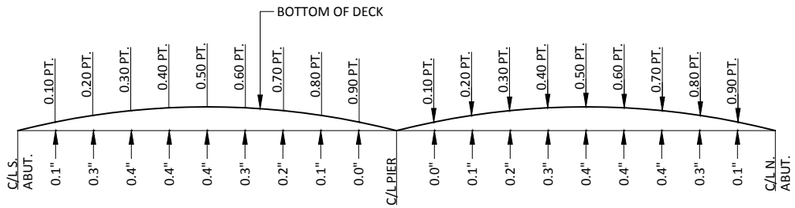
NOTES

SOME BARS HAVE BEEN OMITTED FOR CLARITY. SEE THIS SHEET FOR BILL OF BARS.

SUPPORT ALTERNATE TOP TRANSVERSE BARS IN SLAB BY INDIVIDUAL BAR CHAIRS AT APPROX. 3'-0" CENTERS. SUPPORT BOTTOM LONGITUDINAL BARS BY CONTINUOUS BAR CHAIRS AT APPROX. 4'-0" CENTERS.

PLACE TRANSVERSE BARS PARALLEL TO THE CENTERLINE OF SUBSTRUCTURE UNITS.

THE SLAB THICKNESS DIMENSION IS MINIMUM. ANY TOLERANCES NECESSARY TO CORRECT CONSTRUCTION DISCREPANCIES ARE TO BE PLUS (+).



CAMBER DIAGRAM

CAMBER SHOWN IS BASED ON 3 TIMES DEAD LOAD DEFLECTIONS. CAMBER SPANS AS SHOWN TO PROVIDE FOR THEORETICAL DEAD LOAD DEFLECTION AND FUTURE CREEP. CAMBER DOES NOT INCLUDE ALLOWANCE FOR FORM SETTLEMENT.

TO DETERMINE FALSEWORK ELEVATION AT EDGE OF SLAB OR CENTER LINE FOLLOW THIS PROCEDURE:

TOP OF SLAB ELEVATION AT FINAL GRADE
-SLAB THICKNESS
+CAMBER
+FORM SETTLEMENT/DEFLECTION DUE TO PLACEMENT OF SLAB CONCRETE (COMPUTED BY CONTRACTOR)
=TOP OF SLAB FALSEWORK ELEVATION.

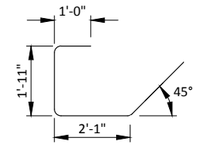
BILL OF BARS
SUPERSTRUCTURE

37,500 LB (COATED)

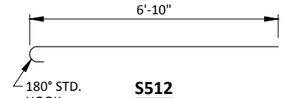
BAR MARK	NO. REQ'D.	LENGTH	BENT	COAT	LOCATION
S501	86	6-10	X	X	END OF DECK
S402	84	21-6		X	SLAB - TOP - LONGITUDINAL
S1003	84	23-0		X	SLAB - TOP - LONGITUDINAL
S404	2	32-6		X	SLAB - TOP - LONGITUDINAL @ EDGES
S505	73	43-3		X	SLAB - TOP - TRANSVERSE
S906	84	27-2		X	SLAB - BOTTOM - LONGITUDINAL
S907	84	35-3		X	SLAB - BOTTOM - LONGITUDINAL
S408	1	22-8		X	SLAB - BOTTOM - LONGITUDINAL @ W. EDGE
S509	79	43-3		X	SLAB - BOTTOM - TRANSVERSE
S510	12	5-3	X	X	END OF DECK - UNDER SIDEWALK - STIRRUPS
S511	16	4-9		X	END OF DECK - UNDER SIDEWALK - TRANS.
S512	144	7-5	X	X	SIDEWALK - TOP - TRANSVERSE
S513	1	6-1		X	SIDEWALK - TOP - TRANSVERSE @ N. END
S414	26	35-11		X	SIDEWALK - LONGITUDINAL
S415	48	3-0		X	SIDEWALK - TRANSVERSE @ UNDERSIDE
S416	288	3-4	X	X	SIDEWALK - STIRRUPS

NOTES: THE FIRST DIGIT OF A BAR MARK SIGNIFIES THE BAR SIZE.

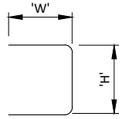
DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.



S501

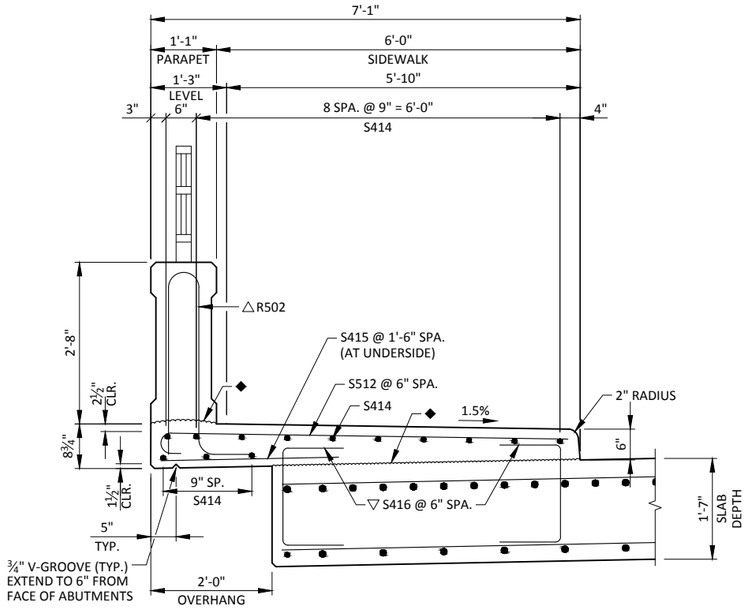


S512

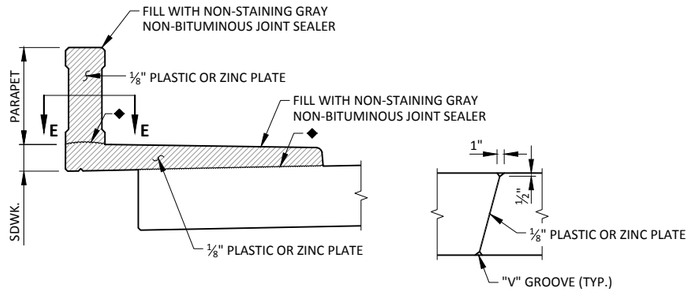


BAR MARK	W	H
S510	1-9	2-0
S416	1-0	1-6

S510, S416



SECTION THROUGH RAISED SIDEWALK



SECTION E-E

NOTE: WHEN PARAPETS ARE POURED CONTINUOUSLY FROM END TO END, THEY SHALL BE SEPARATED AT THE DEFLECTION JOINT BY A PIECE OF ⅛" PLASTIC OR ZINC PLATE CUT AS SHOWN. IF CONSTRUCTION JOINT IN THE PARAPET IS USED AT THE DEFLECTION JOINT, ONE SIDE OF JOINT SHALL BE COATED WITH AN APPROVED LIQUID BOND BREAKER AND PLATE SEPARATOR MAY BE OMITTED.

DEFLECTION JOINT DETAIL

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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-41-306

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SUPERSTRUCTURE DETAILS (2 OF 2)

SHEET 11 OF 14

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STATE PROJECT NUMBER

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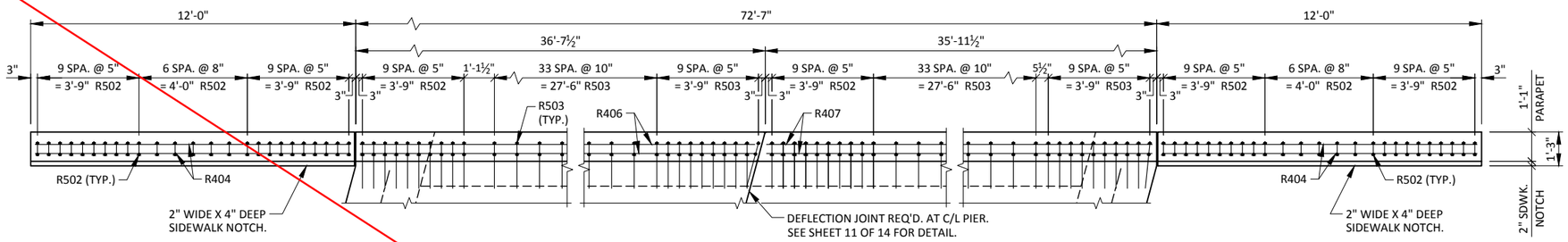
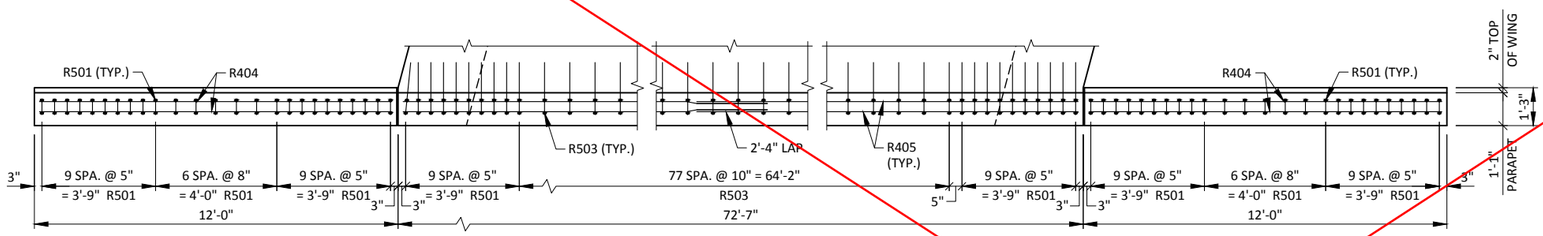


PART PLAN OF WEST PARAPET



PART PLAN OF EAST PARAPET

Replaced by page "Revised 66"

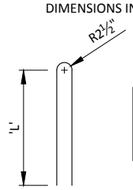
BILL OF BARS
PARAPETS

3,160 LB (COATED)

BAR MARK	NO. REQ'D.	LENGTH	BENT	COAT	LOCATION
R501	38	8-4	X	X	PARAPET - VERT. - EAST WINGS
R502	38	10-0	X	X	PARAPET - VERT. - WEST WINGS
R503	174	6-9	X	X	PARAPET - VERT. - DECK
R404	24	11-7		X	PARAPET - HORIZ. - WINGS
R405	12	37-4		X	PARAPET - HORIZ. - EAST PARAPET
R406	6	36-1		X	PARAPET - HORIZ. - WEST PARAPET - SOUTH
R407	6	35-9		X	PARAPET - HORIZ. - WEST PARAPET - NORTH

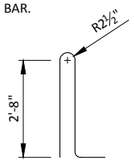
NOTES: THE FIRST DIGIT OF A BAR MARK SIGNIFIES THE BAR SIZE.

DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.

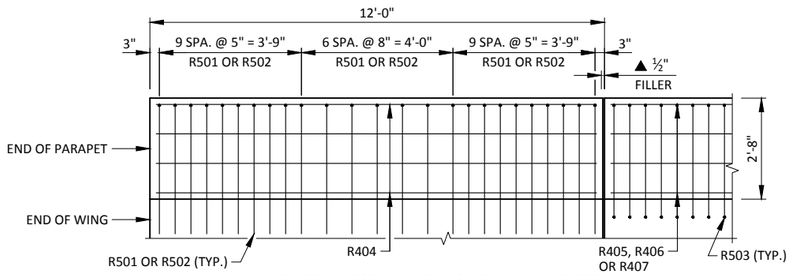


BAR MARK	L
R501	3-10
R502	4-8

R501, R502

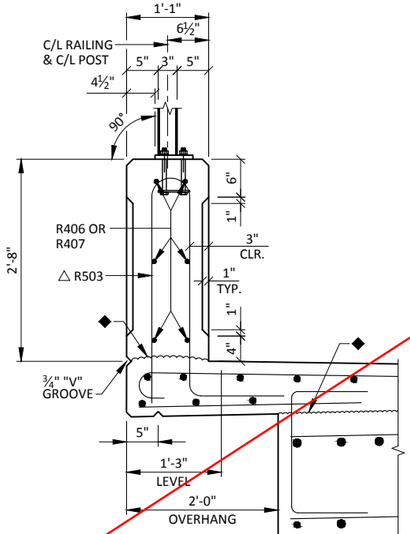


R503



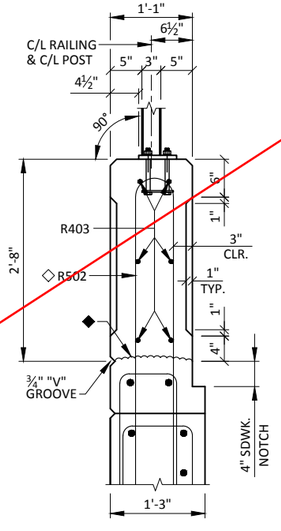
ELEVATION AT WING PARAPET

ALL WINGS SIMILAR



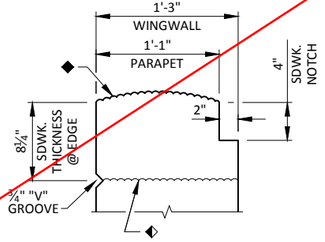
SECTION THROUGH PARAPET AT RAISED SIDEWALK

(WEST PARAPET)

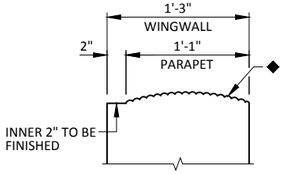


SECTION THROUGH PARAPET AT WING WITH SIDEWALK

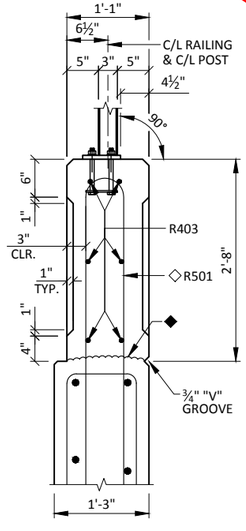
(WEST PARAPET)



TOP OF WING DETAIL WEST WINGS

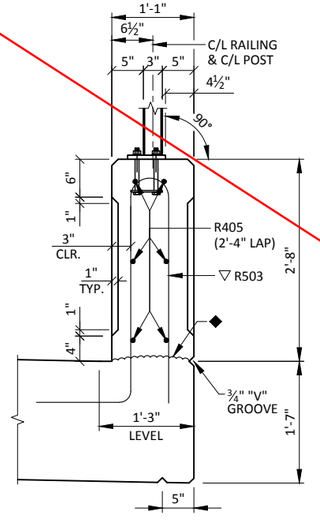


TOP OF WING DETAIL EAST WINGS



SECTION THROUGH PARAPET AT WING WITHOUT SIDEWALK

(EAST PARAPET)



SECTION THROUGH PARAPET ON BRIDGE

(EAST PARAPET)

LEGEND

- ▲ ½" FILLER EXTEND AS SHOWN. SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF FILLER WITH NON-STAINING GRAY, NON-BITUMINUOS JOINT SEALER. (1" DEEP & HOLD ⅛" BELOW SURFACE OF CONCRETE)
- ◆ CONSTRUCTION JOINT - STRIKE OFF AND LEAVE ROUGH. FINISH ALL AREAS THAT WILL NOT BE COVERED WITH SIDEWALK OR PARAPET AT COMPLETION. FOR SLAB PLACEMENT, MATCH BRIDGE CROSS SLOPE.
- ◆ OPTIONAL CONSTRUCTION JOINT. LEAVE ROUGH. POUR CONCRETE ABOVE THIS JOINT AFTER DECK IS IN PLACE. IF JOINT IS USED, UTILIZE RUBBERIZED MEMBRANE WATERPROOFING (COST IS INCIDENTAL TO "CONCRETE MASONRY BRIDGES").
- ▽ R503 BARS AT EAST EDGE TO BE TIED TO DECK STEEL BEFORE DECK IS POURED. ADJUST LOCATION OF BARS TO ALLOW PLACEMENT OF ANCHOR ASSEMBLY FOR RAILING.
- △ R503 BARS AT WEST EDGE TO BE TIED TO SIDEWALK STEEL BEFORE SIDEWALK IS POURED. ADJUST LOCATION OF BARS TO ALLOW PLACEMENT OF ANCHOR ASSEMBLY FOR RAILING.
- ◇ R501 AND R502 BARS TO BE TIED TO WING STEEL BEFORE WING IS POURED. ADJUST LOCATION OF BARS TO ALLOW PLACEMENT OF ANCHOR ASSEMBLY FOR RAILING.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-41-306

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PARAPET DETAILS

SHEET 12 OF 14

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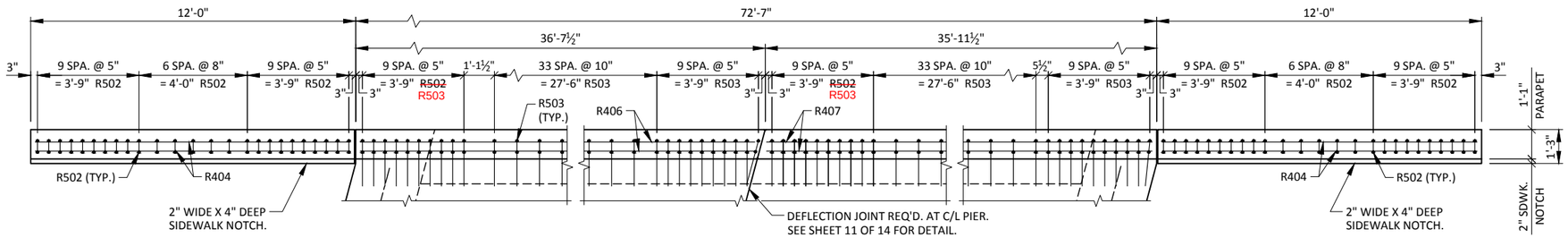
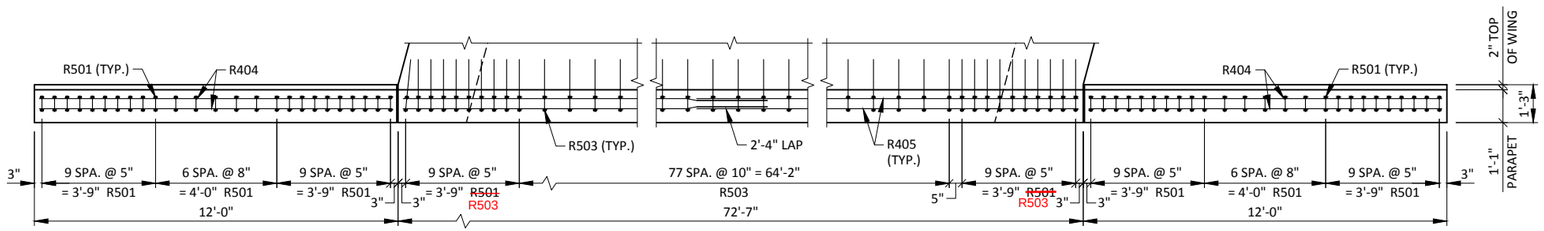
STATE PROJECT NUMBER

5516-00-70



PART PLAN OF WEST PARAPET



PART PLAN OF EAST PARAPET

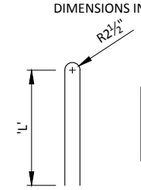
BILL OF BARS
PARAPETS

3,160 LB (COATED)

BAR MARK	NO. REQ'D.	LENGTH	BENT	COAT	LOCATION
R501	50 ~~38~~	8-4	X	X	PARAPET - VERT. - EAST WINGS
R502	50 ~~38~~	10-0	X	X	PARAPET - VERT. - WEST WINGS
R503	203 ~~174~~	6-9	X	X	PARAPET - VERT. - DECK
R404	24	11-7		X	PARAPET - HORIZ. - WINGS
R405	12	37-4		X	PARAPET - HORIZ. - EAST PARAPET
R406	6	36-1		X	PARAPET - HORIZ. - WEST PARAPET - SOUTH
R407	6	35-9		X	PARAPET - HORIZ. - WEST PARAPET - NORTH

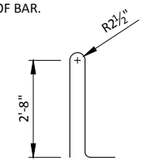
NOTES: THE FIRST DIGIT OF A BAR MARK SIGNIFIES THE BAR SIZE.

DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.

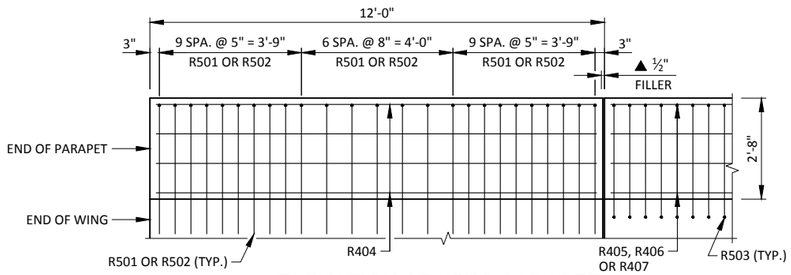


BAR MARK	L
R501	3-10
R502	4-8

R501, R502

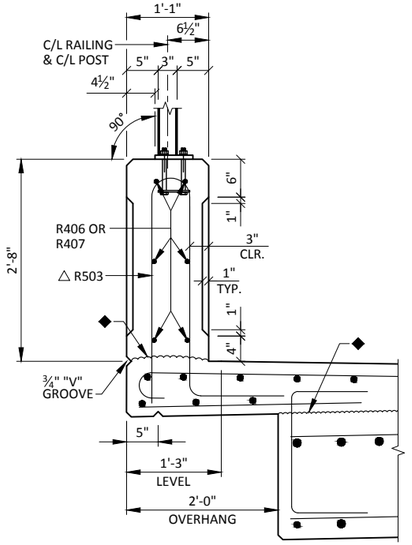


R503



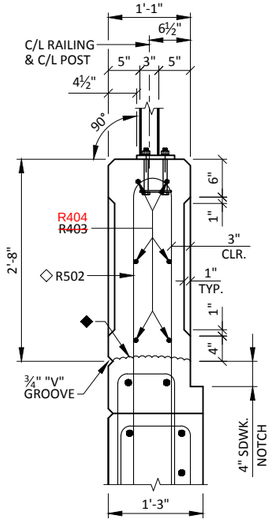
ELEVATION AT WING PARAPET

ALL WINGS SIMILAR



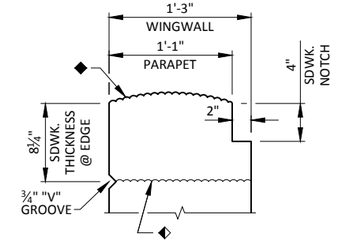
SECTION THROUGH PARAPET AT RAISED SIDEWALK

(WEST PARAPET)

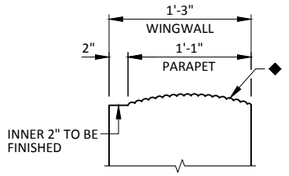


SECTION THROUGH PARAPET AT WING WITH SIDEWALK

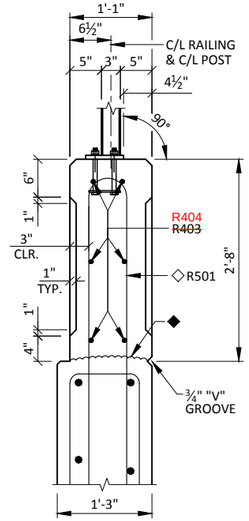
(WEST PARAPET)



TOP OF WING DETAIL WEST WINGS

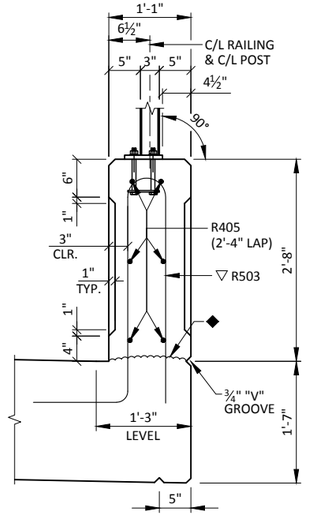


TOP OF WING DETAIL EAST WINGS



SECTION THROUGH PARAPET AT WING WITHOUT SIDEWALK

(EAST PARAPET)



SECTION THROUGH PARAPET ON BRIDGE

(EAST PARAPET)

LEGEND

- ▲ ½" FILLER EXTEND AS SHOWN. SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF FILLER WITH NON-STAINING GRAY, NON-BITUMINUOS JOINT SEALER. (1" DEEP & HOLD ⅛" BELOW SURFACE OF CONCRETE)
- ◆ CONSTRUCTION JOINT - STRIKE OFF AND LEAVE ROUGH. FINISH ALL AREAS THAT WILL NOT BE COVERED WITH SIDEWALK OR PARAPET AT COMPLETION. FOR SLAB PLACEMENT, MATCH BRIDGE CROSS SLOPE.
- ◆ OPTIONAL CONSTRUCTION JOINT. LEAVE ROUGH. POUR CONCRETE ABOVE THIS JOINT AFTER DECK IS IN PLACE. IF JOINT IS USED, UTILIZE RUBBERIZED MEMBRANE WATERPROOFING (COST IS INCIDENTAL TO "CONCRETE MASONRY BRIDGES").
- ▽ R503 BARS AT EAST EDGE TO BE TIED TO DECK STEEL BEFORE DECK IS POURED. ADJUST LOCATION OF BARS TO ALLOW PLACEMENT OF ANCHOR ASSEMBLY FOR RAILING.
- △ R503 BARS AT WEST EDGE TO BE TIED TO SIDEWALK STEEL BEFORE SIDEWALK IS POURED. ADJUST LOCATION OF BARS TO ALLOW PLACEMENT OF ANCHOR ASSEMBLY FOR RAILING.
- ◇ R501 AND R502 BARS TO BE TIED TO WING STEEL BEFORE WING IS POURED. ADJUST LOCATION OF BARS TO ALLOW PLACEMENT OF ANCHOR ASSEMBLY FOR RAILING.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-41-306

DRAWN BY JZ | PLANS CK'D. PTB

PARAPET DETAILS

~~SHEET 12 OF 14~~

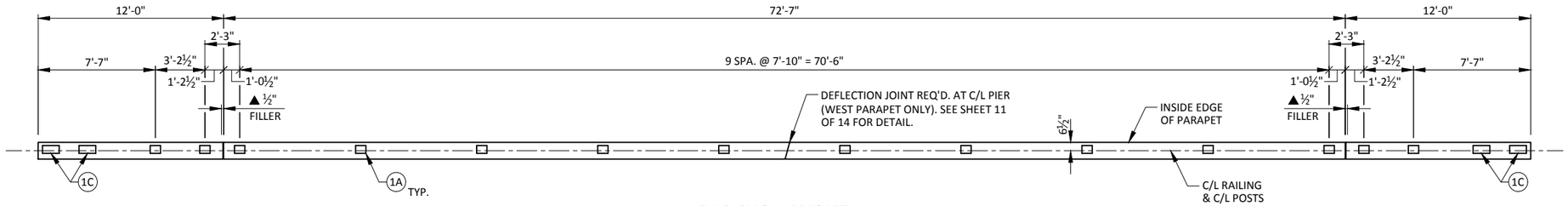
Revised 66

8

8

STATE PROJECT NUMBER

5516-00-70

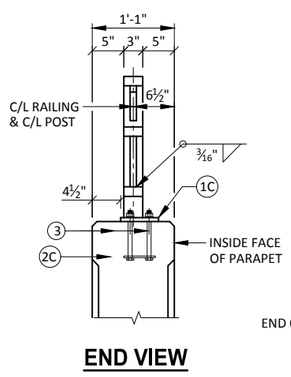


RAILING LAYOUT

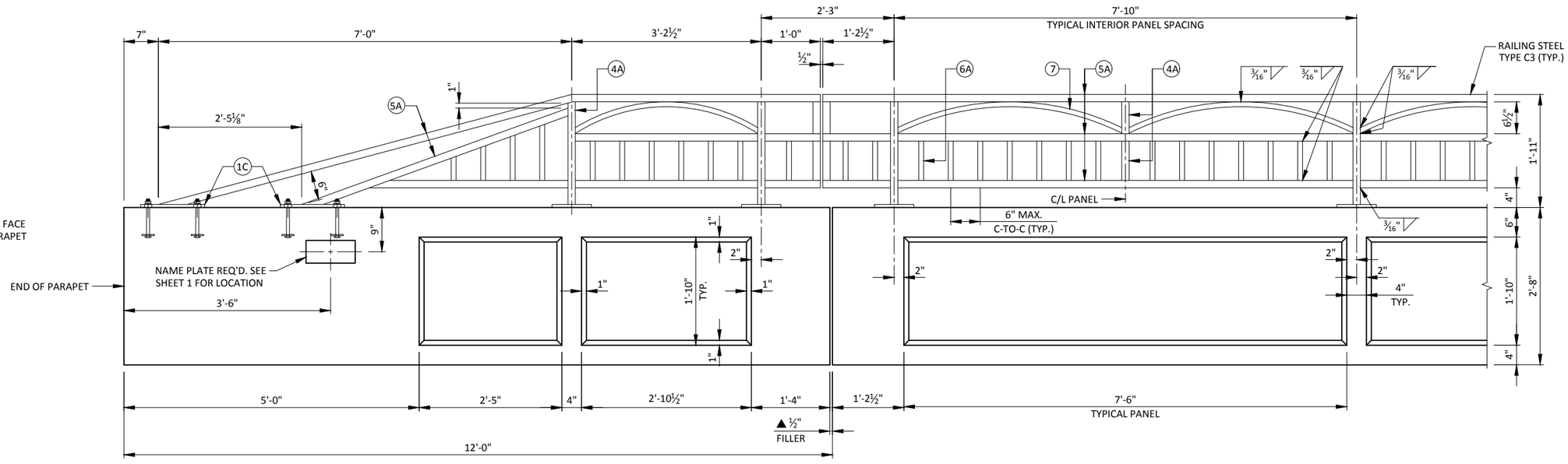
WEST RAIL SHOWN
EAST RAIL SIMILAR

LEGEND

▲ ½" FILLER EXTEND AS SHOWN. SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF FILLER WITH NON-STAINING GRAY, NON-BITUMINUOS JOINT SEALER. (1" DEEP & HOLD ⅛" BELOW SURFACE OF CONCRETE)



END VIEW



PARAPET AND RAILING ELEVATION

ALL WINGS SIMILAR

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-41-306

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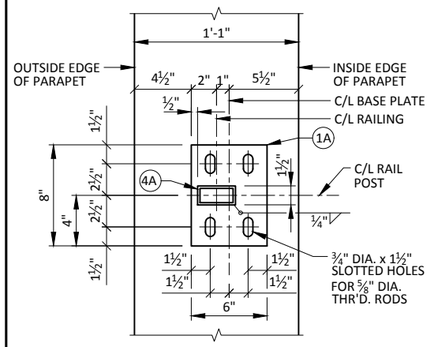
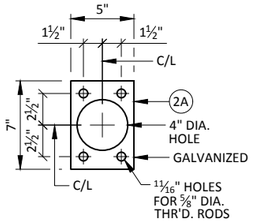
STEEL RAILING TYPE C3

SHEET 13 OF 14

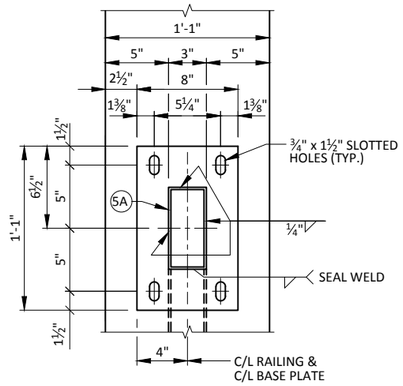
67



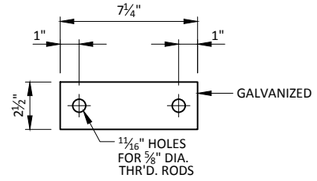
TYPICAL RAIL POST BASE PLATE



ANCHOR PLATE

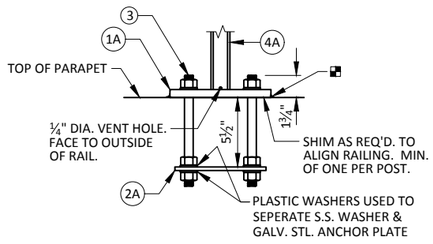


END RAIL BASE PLATE



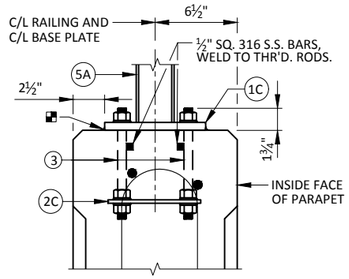
END RAIL ANCHOR PLATE

FOR END RAIL BASE PLATES
2 REQ'D. PER END RAIL BASE PLATE



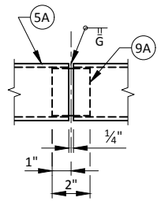
ANCHORAGE FOR RAIL POSTS

NOTE: ANCHOR PLATE NOT REQ'D. WHEN ADHESIVE ANCHORS ARE USED.



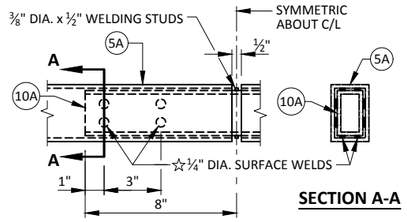
ANCHORAGE FOR END RAIL

NOTE: ANCHOR PLATE NOT REQ'D. WHEN ADHESIVE ANCHORS ARE USED.



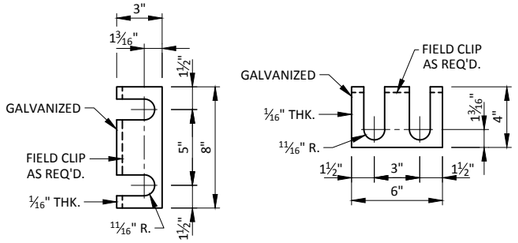
SHOP RAIL SPLICE DETAIL

(LOCATION MUST BE SHOWN ON SHOP DRAWINGS)



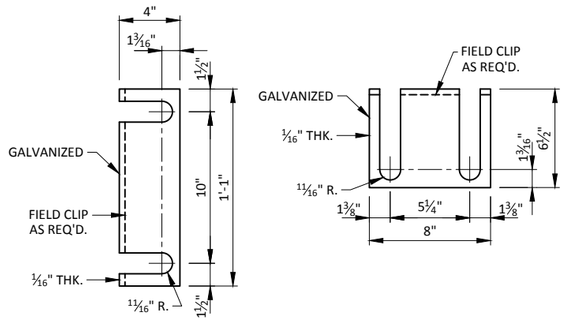
FIELD ERECTION JOINT DETAIL

☆MIN. ⅝" FLAT SURFACE DIA. PUNCHINGS OR STUDS MAY BE USED AS AN ALTERNATE.



RAIL POST SHIM DETAIL

(2 SETS PER POST)



END RAIL SHIM DETAIL

(2 SETS PER POST)

LEGEND

(1A) PLATE ⅝" x 6" x 8" WITH ¾" x 1½" SLOTTED HOLES.

(1C) PLATE ⅝" x 8" x 1'-1" WITH ¾" x 1½" SLOTTED HOLES.

(2A) ¼" x 5" x 7" ANCHOR PLATE WITH 11/16" DIA. HOLES FOR THR'D. RODS NO. 3.

(2C) ¼" x 2½" x 7¼" ANCHOR PLATE WITH 11/16" DIA. HOLES FOR THR'D. RODS NO. 3.

(3) ⅝" DIA. x 9" LONG, TYPE 316 STAINLESS STEEL THREADED RODS (MIN. TENSILE STRENGTH = 70 KSI) WITH NUT AND WASHERS OF SAME ALLOY GROUP. ALTERNATIVE ANCHORAGE: CONCRETE ADHESIVE ANCHORS ⅝-INCH. EMBED 7" IN CONCRETE FOR RAIL POSTS. EMBED 5" IN CONCRETE FOR END RAILS. ADHESIVE ANCHORS SHALL CONFORM TO SECTION 502.2.12 OF THE STANDARD SPECIFICATIONS.

(4A) STRUCTURAL TUBING 3" x 1½" x 3/16". PLACE VERTICAL. WELD TO NO. 1 & 5.

(5A) STRUCTURAL TUBING 3" x 1½" x 3/16" RAILS. WELD TO NO. 1 & NO. 4. INSIDE OF TUBE TO BE PAINTED AT ALL FIELD ERECTION & EXPANSION JOINTS.

(6A) BAR 1"x1" PICKETS. WELD TO NO. 5. (SPACE AT 6" MAX. C/L TO C/L SPACING). PLACE VERTICAL.

(7) BAR 1"x1". BEND TO REQUIRED RADIUS. WELD TO NO. 4 & 5.

(9A) RECTANGULAR SLEEVE FABRICATED FROM 3/16" PLATES. PROVIDE "SLIDING FIT".

(10A) RECTANGULAR SLEEVE FABRICATED FROM 3/16" PLATES. (1'-4" @ FIELD ERECTION JOINTS.)

NOTES

BID ITEM SHALL BE "RAILING STEEL TYPE C3", WHICH SHALL INCLUDE ALL STEEL ITEMS SHOWN.

POST BASE PLATES SHALL BE FLAT WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL. ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUTS.

ALL PLATES, BARS, AND RECTANGULAR SLEEVES SHALL CONFORM TO ASTM A709 GRADE 36. ALL STRUCTURAL TUBING SHALL CONFORM TO ASTM A500 GRADE B.

ANCHORAGES SHALL BE ACCURATELY PLACED TO PROVIDE CORRECT ALIGNMENT OF RAILING. SET NORMAL TO GRADE.

CUT BOTTOM OF POST TO MAKE POST VERTICAL IN BOTH TRANSVERSE AND LONGITUDINAL DIRECTION.

STEEL SHIMS SHALL BE PROVIDED & USED UNDER BASE PLATES WHERE REQUIRED FOR ALIGNMENT AND SHALL BE GALVANIZED.

CAULK AROUND PERIMETER OF BASE PLATES, NO. 1, AND FILL BOLT SLOT OPENINGS IN SHIMS AND BASE PLATES WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER.

ALL JOINTS AND RECESSES IN CONCRETE PARAPET ARE TO BE VERTICAL.

ALL MATERIAL (EXCEPT NO. 3) SHALL BE GALVANIZED AFTER FABRICATION. PRIOR TO GALVANIZING, THE STEEL RAILING SHOULD BE GIVEN A NO. 6 BLAST CLEANING PER SSPC SPECIFICATIONS. PAINT OVER GALVANIZING WITH AN APPROVED TIE COAT AND TOP COAT AS SPECIFIED IN THE CONTRACT DOCUMENTS. THE FINISH COLOR SHALL BE FEDERAL COLOR NO. 27038 (BLACK) OR SIMILAR COLOR APPROVED BY THE ENGINEER IN THE FIELD.

RAILING SHALL BE FABRICATED IN LENGTHS THAT INCLUDE 3 OR 4 POSTS.

VENT HOLES SHALL BE DRILLED IN POST AND RAIL MEMBERS AS REQ'D. TO FACILITATE GALVANIZING AND DRAINAGE.

AT COMPLETION OF STEEL RAILING INSTALLATION, PAINT THE TOPS OF ANCHOR BOLTS AND NUTS WITH THE TIE COAT. TOUCH-UP PAINT WITH THE TOP COAT ALL DAMAGED AREAS AND THE ANCHOR BOLTS TO THE SATISFACTION OF THE ENGINEER IN THE FIELD AT NO EXTRA COST.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-41-306

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STEEL RAILING TYPE C3 DETAILS

SHEET 14 OF 14

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EARTHWORK-MAINLINE

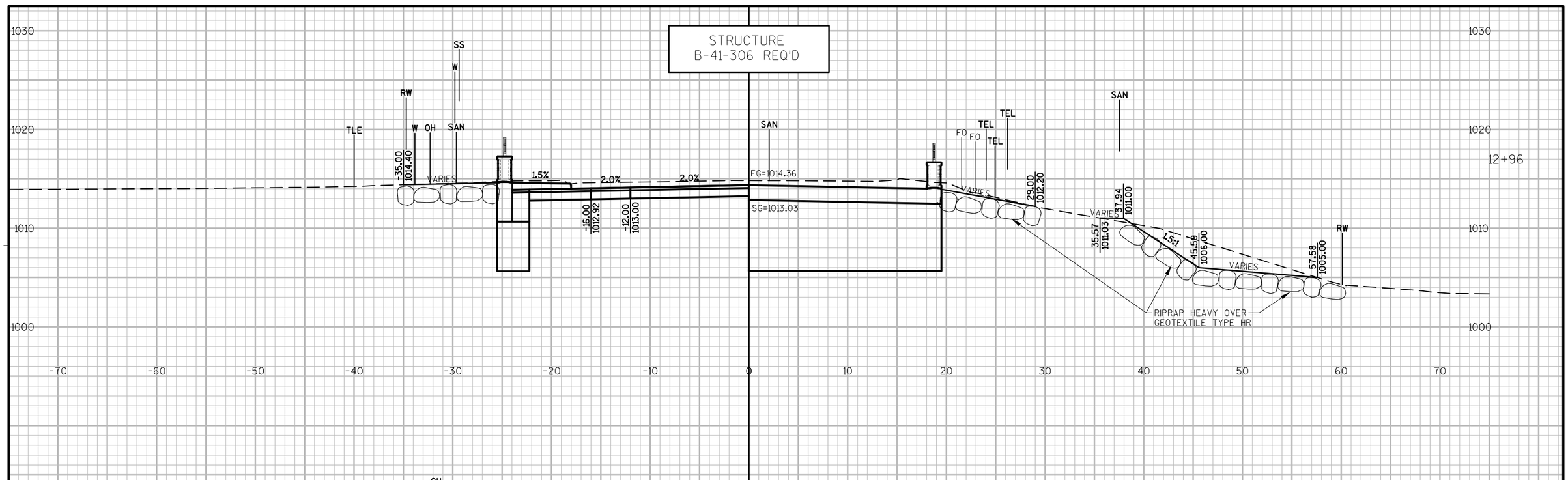
	AREA (SF)		INCREMENTAL VOL (CY)			CUMMULATIVE VOLUME (CY)			
STATION	CUT	FILL	CUT NOTE 1	FILL NOTE 2	FILL (25%)	CUT 1.00 NOTE 1	FILL	FILL (25%) NOTE 3	MASS ORDINATE NOTE 4
12+00	72	0	0	0	0	0	0	0	0
12+50	75	0	137	0	0	137	0	0	137
12+96	85	0	136	0	0	273	0	0	273
12+96	0	0	0	0	0	273	0	0	273
13+69	0	0	0	0	0	273	0	0	273
13+69	57	0	0	0	0	273	0	0	273
14+00	57	0	67	0	0	340	0	0	340
14+50	67	0	115	0	0	455	0	0	455
COLUMN SUBTOTALS =			455	0	0				

EARTHWORK- 'A'-LINE (OLD GLENDALE ROAD)

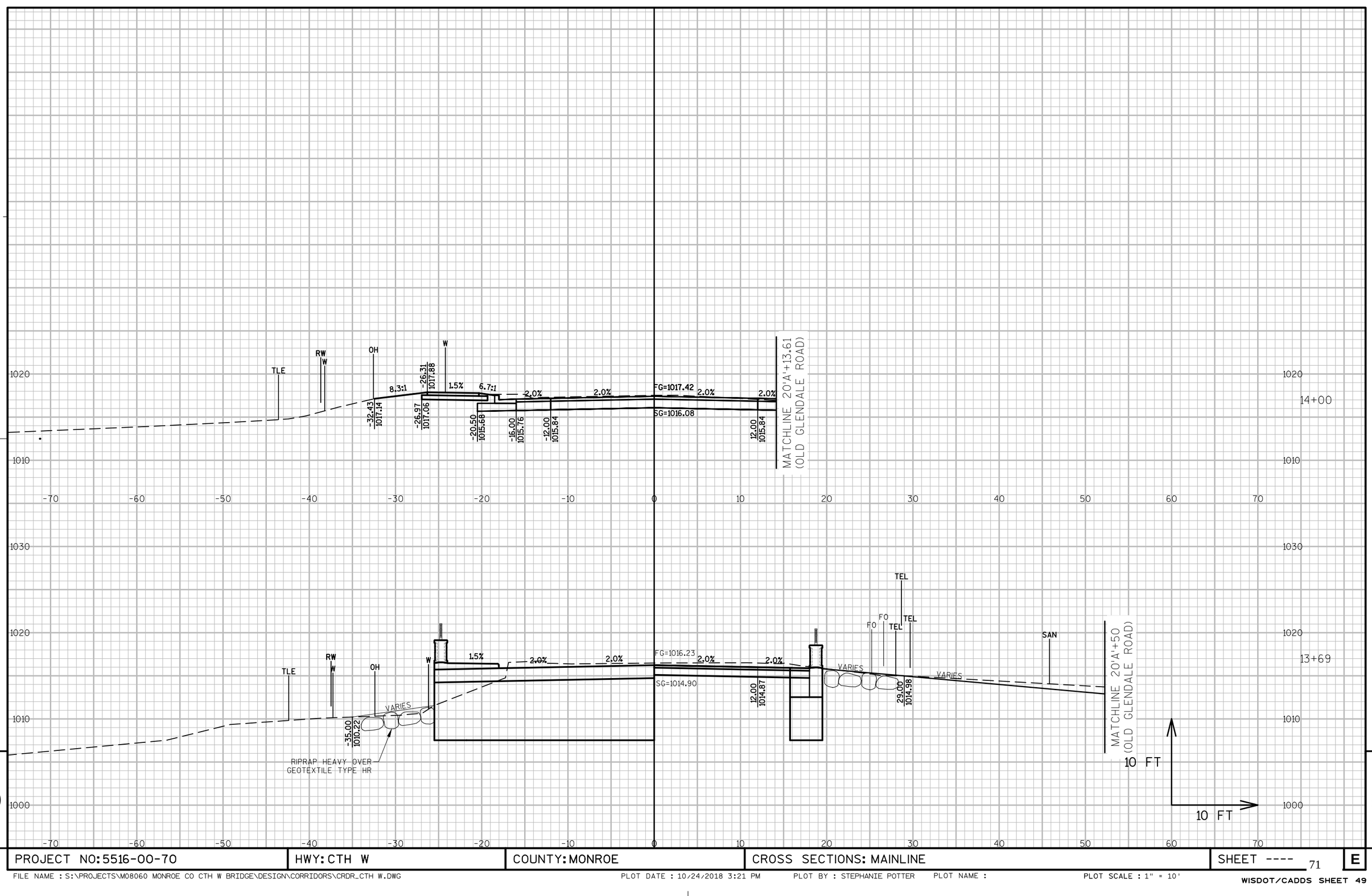
	AREA (SF)		INCREMENTAL VOL (CY)			CUMMULATIVE VOLUME (CY)			
STATION	CUT	FILL	CUT NOTE 1	FILL NOTE 2	FILL (25%)	CUT 1.00 NOTE 1	FILL	FILL (25%) NOTE 3	MASS ORDINATE NOTE 4
20'A'+13.61	115	0	0	0	0	0	0	0	0
20'A'+50	108	30	149	20	26	149	20	26	123
21'A'+00	312	10	389	37	47	538	57	73	465
21'A'+50	70	0	354	10	12	892	67	85	807
21'A'+80	78	0	83	0	0	975	67	85	890
COLUMN SUBTOTALS =			975	67	85				
MAINLINE =			455	0	0	455	0	0	455
A'-LINE =			975	67	85	1430	67	85	1345
DRIVEWAYS =			65	8	10	1495	75	95	1400
STORM SEWER OUTLET =			60	0	0	1555	75	95	1460

NOTES:	
1 - CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL IS INCLUDED IN CUT
2 - FILL	DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME
3 - FILL (25%)	EXPANDED FILL FACTOR 1.25: FILL (25%) = (UNEXPANDED FILL)*1.25
4 - MASS ORDINATE	THE MASS ORDINATE + OR - QTY CALCULATED FOR THE DIVISION. PLUS QUANTITY INDICATES AN EXCESS OF MATERIAL WITHIN THE CATEGORY. MINUS INDICATES A SHORTAGE OF MATERIAL WITHIN THE CATEGORY.

STRUCTURE
B-41-306 REQ'D



PROJECT NO: 5516-00-70	HWY: CTH W	COUNTY: MONROE	CROSS SECTIONS: MAINLINE	SHEET ---- 70	E



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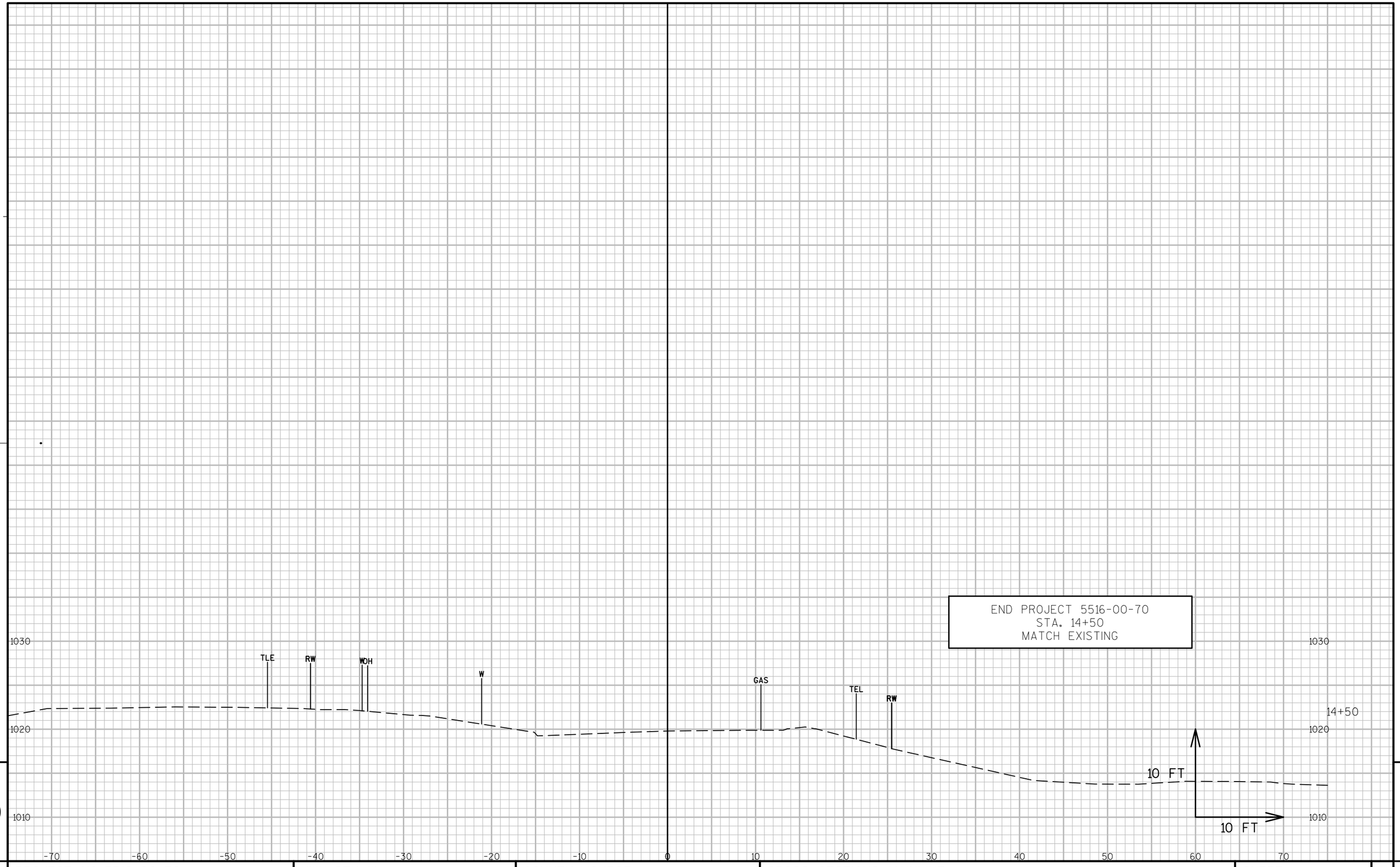
PROJECT NO: 5516-00-70	HWY: CTH W	COUNTY: MONROE	CROSS SECTIONS: MAINLINE	SHEET ----	E

FILE NAME : S:\PROJECTS\M08060 MONROE CO CTH W BRIDGE\DESIGN\CORRIDORS\CRDR_CTH W.DWG PLOT DATE : 10/24/2018 3:21 PM PLOT BY : STEPHANIE POTTER PLOT NAME : PLOT SCALE : 1" = 10'



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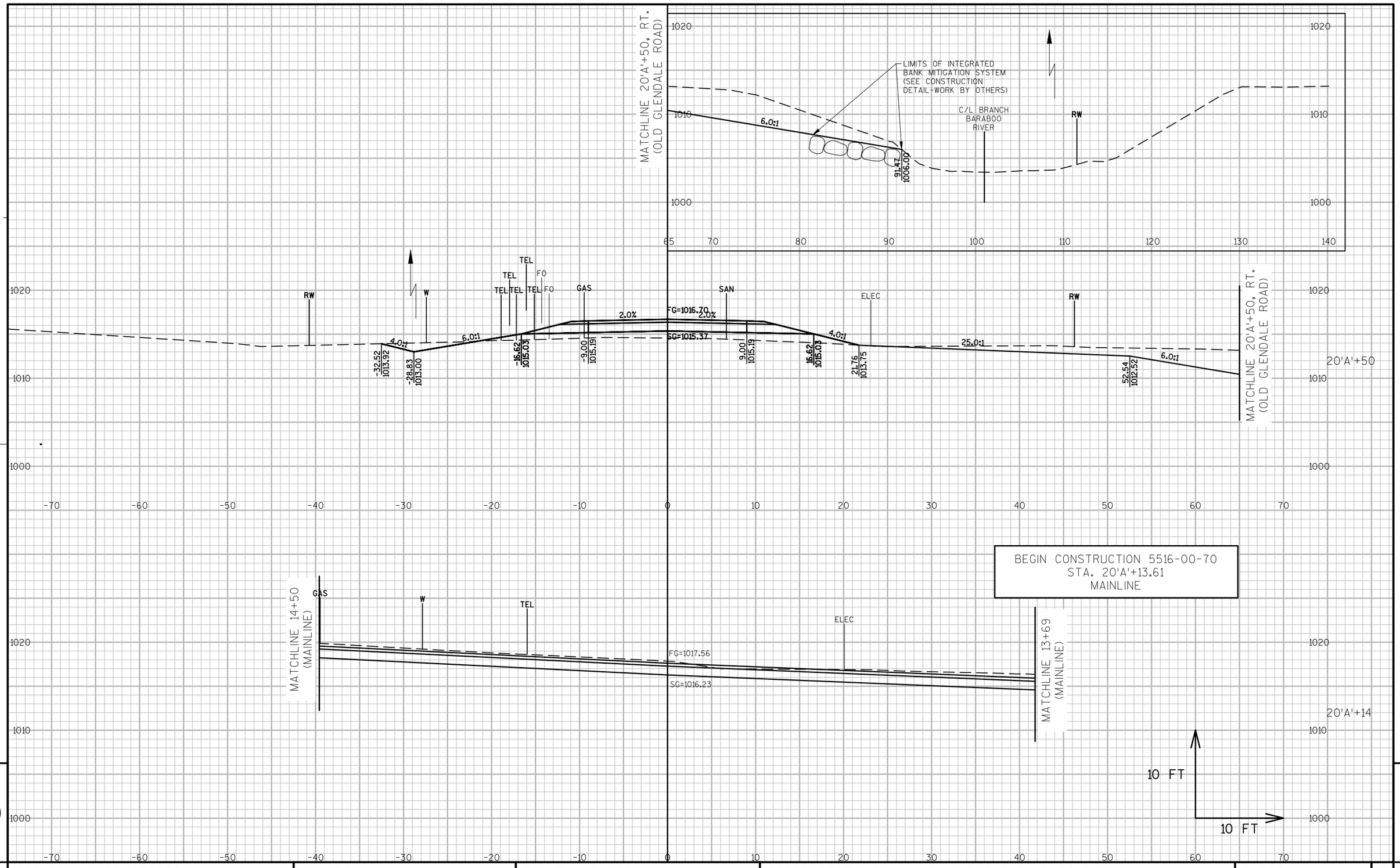
9

PROJECT NO: 5516-00-70	HWY: CTH W	COUNTY: MONROE	CROSS SECTIONS: MAINLINE	SHEET ----	E

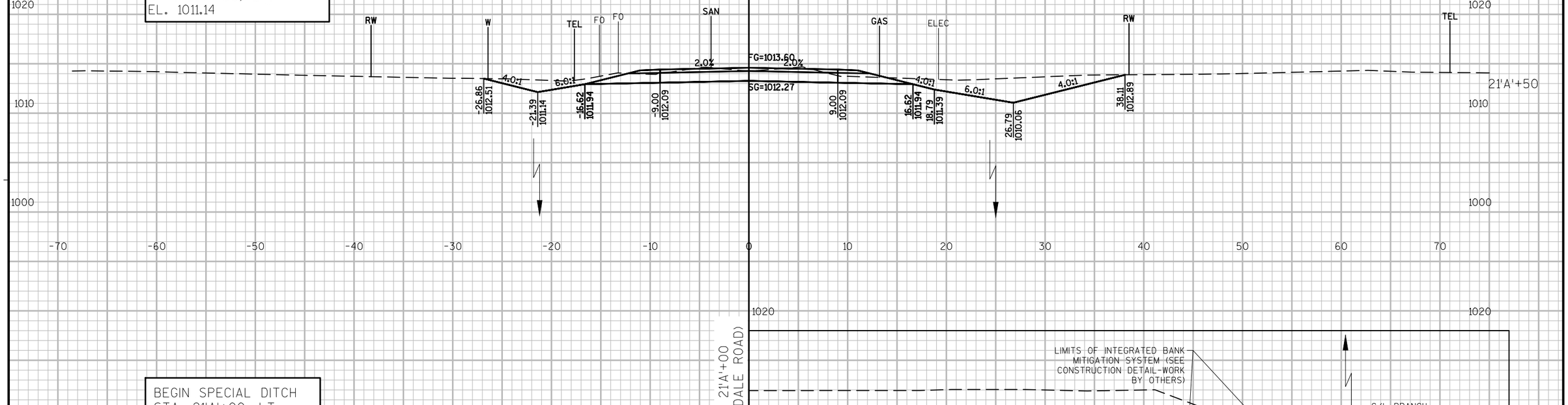
FILE NAME : S:\PROJECTS\M08060 MONROE CO CTH W BRIDGE\DESIGN\CORRIDORS\CRDR_CTH W.DWG PLOT DATE : 10/24/2018 3:21 PM PLOT BY : STEPHANIE POTTER PLOT NAME : PLOT SCALE : 1" = 10'



PROJECT NO: 5516-00-70	HWY: CTH W	COUNTY: MONROE	CROSS SECTIONS: 'A'-LINE (OLD GLENDALE ROAD)	SHEET ----

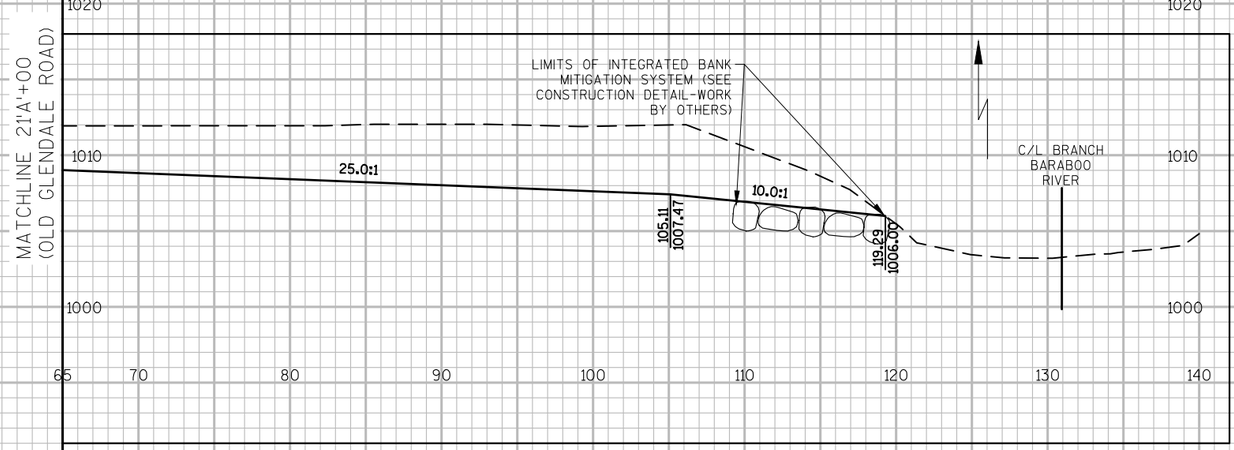
FILE NAME : S:\PROJECTS\M08060 MONROE CO CTH W BRIDGE\DESIGN\CORRIDORS\CRDR_CTH W.DWG PLOT DATE : 10/24/2018 3:21 PM PLOT BY : STEPHANIE POTTER PLOT NAME : PLOT SCALE : 1" = 10'

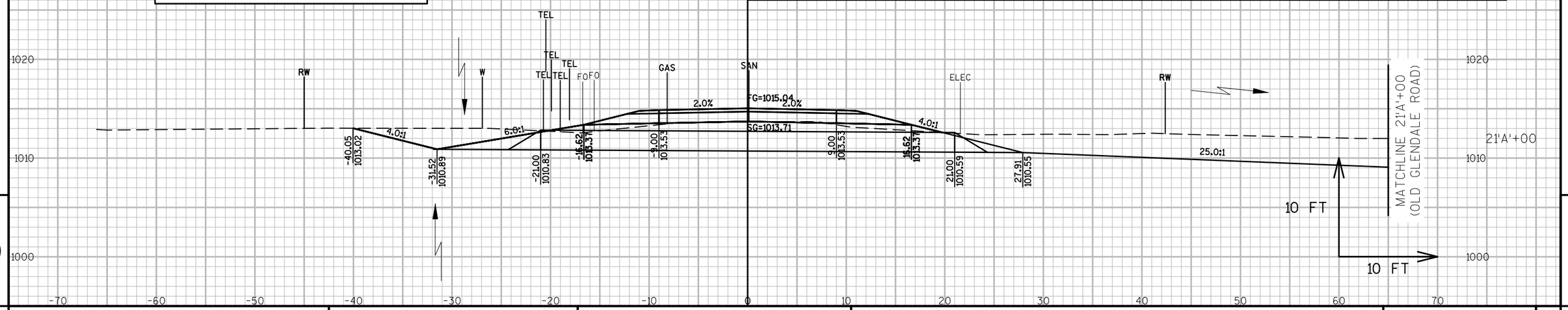
END SPECIAL DITCH
STA. 21'A'+50, LT.
EL. 1011.14



BEGIN SPECIAL DITCH
STA. 21'A'+00, LT.
EL. 1010.89
S=+0.5%

STA. 21'A'+00
(1) CULVERT PIPE CLASS III-A 24-INCH
(2) APRON ENDWALLS REQ'D
SKEW=0°
(WORK BY OTHERS)





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PROJECT NO: 5516-00-70	HWY: CTH W	COUNTY: MONROE	CROSS SECTIONS: 'A'-LINE (OLD GLENDALE ROAD)	SHEET ----	E

FILE NAME : S:\PROJECTS\M08060 MONROE CO CTH W BRIDGE\DESIGN\CORRIDORS\CRDR_CTH W.DWG
PLOT DATE : 10/24/2018 3:21 PM
PLOT BY : STEPHANIE POTTER
PLOT NAME :
PLOT SCALE : 1" = 10'
WISDOT/CADDS SHEET 49

END CONSTRUCTION 5516-00-70
STA. 21'A'+80
MATCH EXISTING

RW W TEL FO FO SAN GAS RW

21'A'+80

1020 1010 1000

10 FT

10 FT

-70 -60 -50 -40 -30 -20 -10 0 10 20 30 40 50 60 70

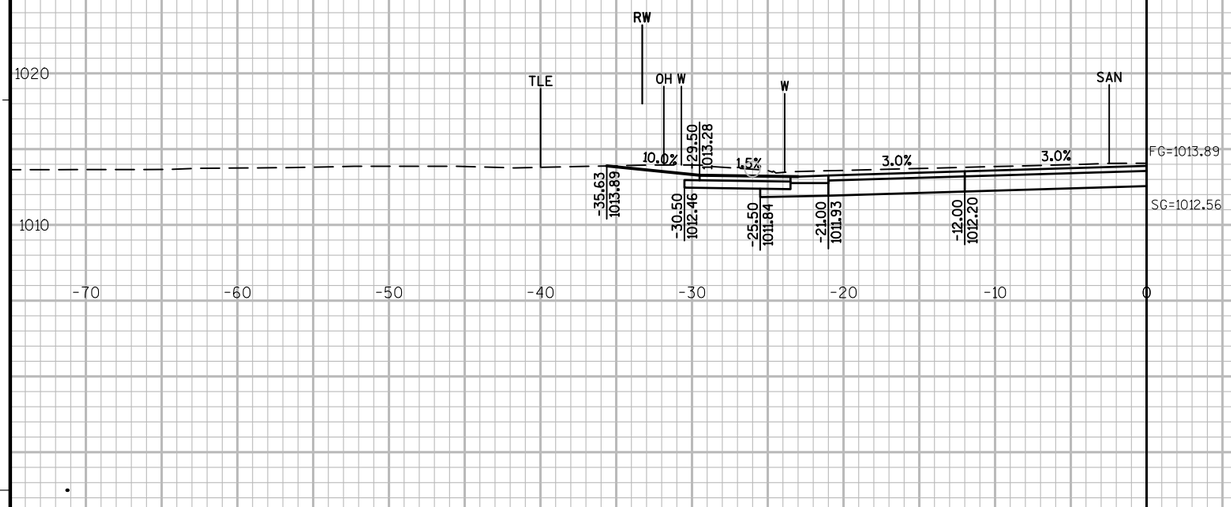
9

9

PROJECT NO:5516-00-70	HWY: CTH W	COUNTY: MONROE	CROSS SECTIONS: 'A'-LINE (OLD GLENDALE ROAD)	SHEET ---- 75	E

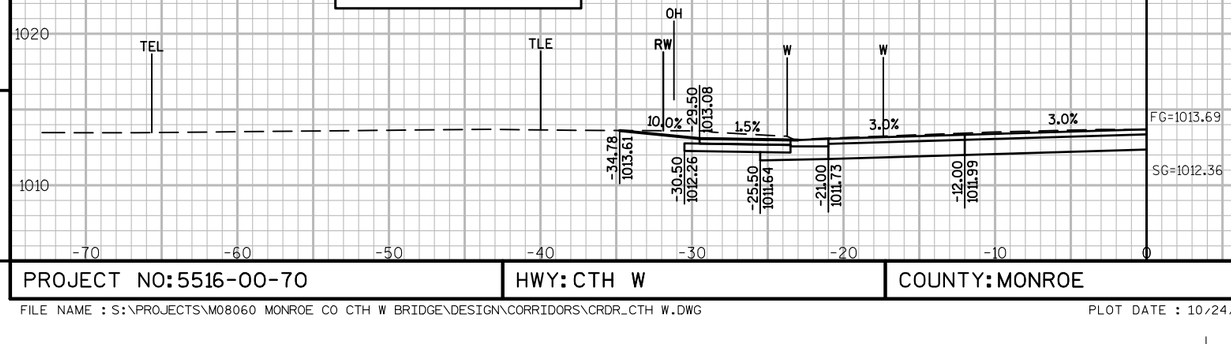
FILE NAME : S:\PROJECTS\M08060 MONROE CO CTH W BRIDGE\DESIGN\CORRIDORS\CRDR_CTH W.DWG PLOT DATE : 10/24/2018 3:21 PM PLOT BY : STEPHANIE POTTER PLOT NAME : PLOT SCALE : 1" = 10'

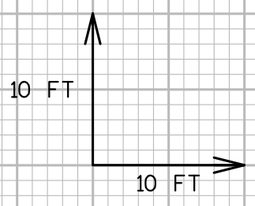
STA. 12+59, LT.
CONSTRUCT P.E.



STA. 12+34, RT.
CONSTRUCT C.E.

STA. 12+22, LT.
CONSTRUCT P.E.





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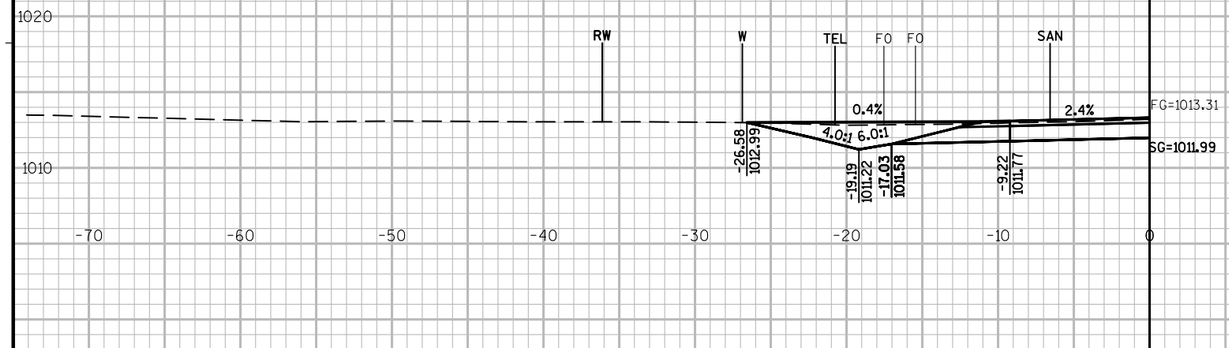
PROJECT NO: 5516-00-70	HWY: CTH W	COUNTY: MONROE	CROSS SECTIONS: DRIVEWAYS	SHEET ---- 76	E

FILE NAME : S:\PROJECTS\M08060 MONROE CO CTH W BRIDGE\DESIGN\CORRIDORS\CRDR_CTH W.DWG PLOT DATE : 10/24/2018 3:21 PM PLOT BY : STEPHANIE POTTER PLOT NAME : PLOT SCALE : 1" = 10'

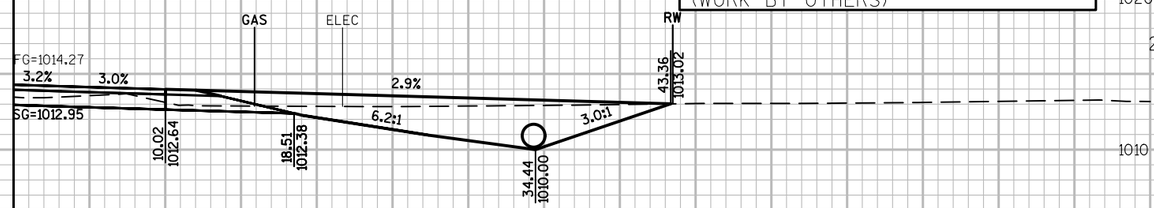
WISDOT/CADDS SHEET 49

STA. 21'A'+65, LT.
CONSTRUCT P.E.
(WORK BY OTHERS)



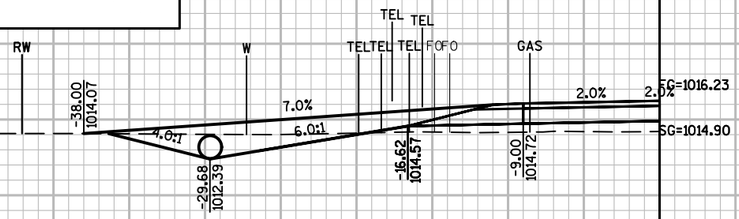
21'A'+65

STA. 21'A'+24, RT.
CONSTRUCT P.E.
(WORK BY OTHERS)
(1) CULVERT PIPE CLASS III-A 18-INCH
(2) APRON ENDWALLS REQ'D
SKEW=4° L.H.F.
(WORK BY OTHERS)

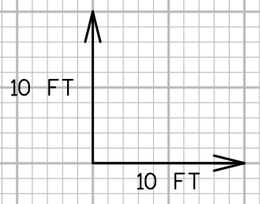


21'A'+24

STA. 20'A'+66, LT.
CONSTRUCT P.E.
(WORK BY OTHERS)
(1) CULVERT PIPE CLASS III-A 18-INCH
(2) APRON ENDWALLS REQ'D
SKEW=3° R.H.F.
(WORK BY OTHERS)



20'A'+66



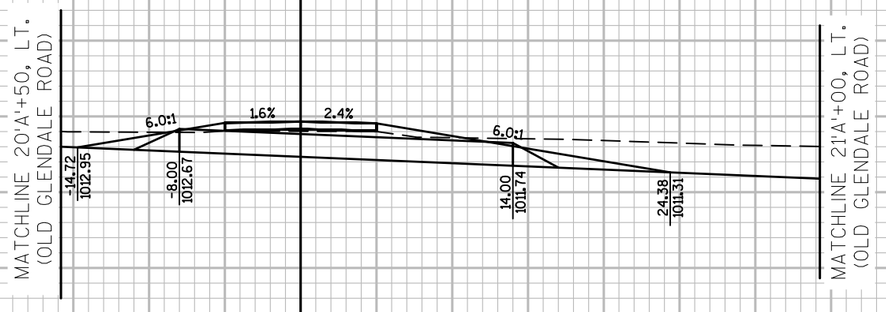
9

9

PROJECT NO: 5516-00-70	HWY: CTH W	COUNTY: MONROE	CROSS SECTIONS: DRIVEWAYS (WORK BY OTHERS)	SHEET ----	E

FILE NAME : S:\PROJECTS\M08060 MONROE CO CTH W BRIDGE\DESIGN\CORRIDORS\CRDR_CTH W.DWG PLOT DATE : 10/24/2018 3:21 PM PLOT BY : STEPHANIE POTTER PLOT NAME : PLOT SCALE : 1" = 10'
WISDOT/CADDS SHEET 49

STA. 20'A'+66, LT.
CONSTRUCT P.E.
(WORK BY OTHERS)
(1) CULVERT PIPE CLASS III-A 18-INCH
(2) APRON ENDWALLS REQ'D
SKEW=3° R.H.F.
(WORK BY OTHERS)



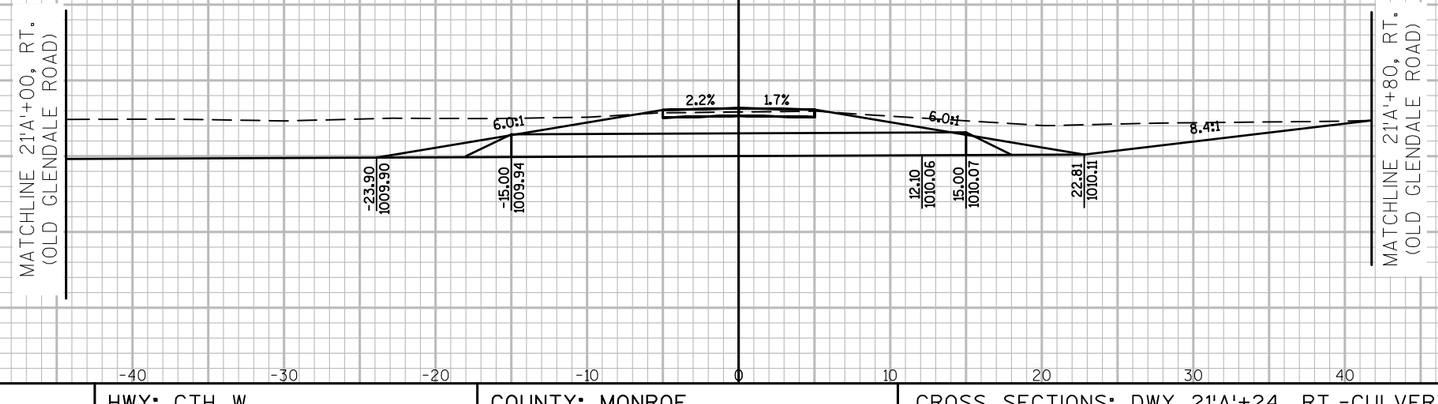
1030
1020
1010
1000
-70 -60 -50 -40 -30 -20 -10 0 10 20 30 40 50 60 70
10+30

9

PROJECT NO: 5516-00-70	HWY: CTH W	COUNTY: MONROE	CROSS SECTIONS: DWY 20'A'+66, LT.-CULVERT (WORK BY OTHERS)	SHEET

FILE NAME : S:\PROJECTS\M08060 MONROE CO CTH W BRIDGE\DESIGN\CORRIDORS\CRDR_CTH W.DWG
LAYOUT : SECTION SHEET - (3)
PLOT DATE : 10/24/2018
PLOT TIME : 3:21:36 PM
PLOT BY : STEPHANIE POTTER
PLOT SCALE : 1" = 1'

STA. 21'A'+24, RT.
CONSTRUCT P.E.
(WORK BY OTHERS)
(1) CULVERT PIPE CLASS III-A 18-INCH
(2) APRON ENDWALLS REQ'D
SKEW=4° L.H.F.
(WORK BY OTHERS)



9

9

PROJECT NO: 5516-00-70	HWY: CTH W	COUNTY: MONROE	CROSS SECTIONS: DWY 21'A'+24, RT.-CULVERT (WORK BY OTHERS)	SHEET

FILE NAME : S:\PROJECTS\M08060 MONROE CO CTH W BRIDGE\DESIGN\CORRIDORS\CRDR_CTH W.DWG
LAYOUT : SECTION SHEET - (5)

PLOT DATE : 10/24/2018
PLOT TIME : 3:21:38 PM

PLOT BY : STEPHANIE POTTER

PLOT SCALE : 1" = 1'

Wisconsin Department of Transportation

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