SWL SEPTEMBER 2016

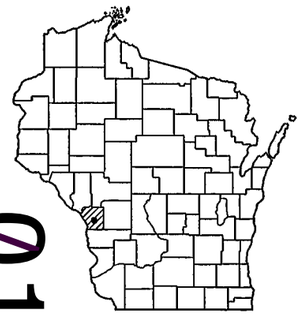
PROJECT ID: 5436-00-70

WITH: N/A

COUNTY: LA CROSSE

ORDER OF SHEETS

TOTAL SHEETS = 38



N

DESIGN DESIGNATION

A.A.D.T. 2017	=	760
A.A.D.T. 2037	=	880
D.H.V. 2037	=	145
D.	=	60/40
T.	=	7.2%
DESIGN SPEED	=	55 mph
ESALS	=	116,800

CONVENTIONAL SYMBOLS

PLAN

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

PROFILE

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

UTILITIES

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

USH 14 - CTH NN

(BRANCH MORMON CREEK BRIDGE C-32-0099)

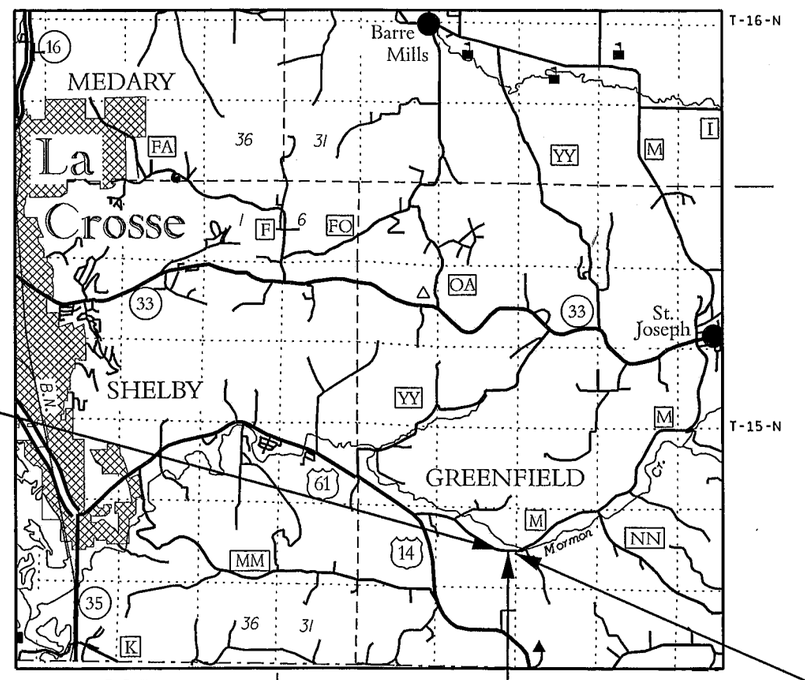
CTH M

LA CROSSE COUNTY

STATE PROJECT NUMBER

5436-00-70

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
5436-00-70	WISC 2016304	1



BEGIN PROJECT
STA. 9+00
Y = 107,801.14
X = 486,769.17

END PROJECT
STA. 12+00

STRUCTURE
C-32-0099

LAYOUT

Scale 0 1 2 MI.

TOTAL NET LENGTH OF CENTERLINE = 0.057 MI.

Coordinates on this plan are referenced to the Wisconsin County Coordinate System (WCCS), La Crosse County.

ACCEPTED FOR LA CROSSE COUNTY

4/8/16 DATE

HIGHWAY COMMISSIONER

ORIGINAL PLANS PREPARED BY:

MSA PROFESSIONAL SERVICES

TRANSPORTATION • MUNICIPAL DEVELOPMENT • ENVIRONMENTAL

1230 South Boulevard Baraboo, WI 53913
608-356-2771 1-800-362-1955 Fax: 608-356-2770
© MSA PROFESSIONAL SERVICES

WISCONSIN
LEAH J. RHODES
E-41726
BARABOO WI
PROFESSIONAL ENGINEER

4/4/2016 Date

Leah J. Rhodes Signature

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	MSA Professional Services, Inc.
Designer	MSA Professional Services, Inc.
Management Consultant	KL Engineering

APPROVED FOR THE DEPARTMENT

DATE: 4/26/16 (Management Consultant Signature)

E

FILE NAME : P:\9200s\9260s\9262\09262007\caddWDOT\Planshts\9262007TS.dgn PLOT DATE : 3/30/2016 PLOT BY : jsnyder PLOT NAME : 09262007TS.DGN PLOT SCALE : 1:20000

WISDOT/CADDS SHEET 10

9262007TS.dgn 3/30/2016 12:04:48 PM jsnyder

STANDARD ABBREVIATIONS

AC	ACRE
AGG	AGGREGATE
<	ANGLE
ASPH	ASPHALTIC
AC	ASPHALT CEMENT
ADT	AVERAGE DAILY TRAFFIC
B & B	BALLED AND BURLAPPED
BM	BENCH MARK
CB	CATCH BASIN
℄ OR C/L	CENTER LINE
C-C	CENTER TO CENTER
CONC	CONCRETE
CO	COUNTY
CTH	COUNTY TRUNK HIGHWAY
CY	CUBIC YARD
CULV	CULVERT
CP	CULVERT PIPE
CPRC	CULVERT PIPE REINFORCED CONCRETE
C & G	CURB AND GUTTER
D	DEGREE OF CURVE
DHV	DESIGN HOUR VOLUME
DIA OR ϕ	DIAMETER
DIST	DISTRICT
DWY	DRIVEWAY
E	EAST
X	EAST GRID COORDINATE
EB	EASTBOUND
ELEC	ELECTRIC
EL OR ELEV	ELEVATION
EMB	EMBANKMENT
EW	ENDWALL
ESALS	EQUIVALENT SINGLE AXLE LOADS
EXC	EXCAVATION
EBS	EXCAVATION BELOW SUBGRADE
EXIST	EXISTING
EXP	EXPANSION
F-F	FACE TO FACE
FERT	FERTILIZER
FE	FIELD ENTRANCE
F/L	FLOW LINE
FT	FOOT
GN	GRID NORTH
HR	HANDICAP RAMP
HT	HEIGHT
CWT	HUNDREDWEIGHT
HYD	HYDRANT
IN DIA	INCH DIAMETER
INL	INLET
ID	INSIDE DIAMETER
I	INTERSECTION ANGLE
IE	INVERT ELEVATION
IP	IRON PIPE OR PIN
JCT	JUNCTION
L	LENGTH OF CURVE
LF	LINEAR FOOT
LC	LONG CHORD OF CURVE
LCB	LONG CHORD BEARING
LS	LUMP SUM
MH	MANHOLE
N	NORTH
Y	NORTH GRID COORDINATE
OE	OUTLET ELEVATION
OL	OUT LOT
OD	OUTSIDE DIAMETER
OH	OVERHEAD LINES
PAVT	PAVEMENT
PLE	PERMANENT LIMITED EASEMENT
PC	POINT OF CURVATURE
PI	POINT OF INTERSECTION
PT	POINT OF TANGENCY
PCC	PORTLAND CEMENT CONCRETE
LB	POUND
PE	PRIVATE ENTRANCE
R OR RAD	RADIUS
RR	RAILROAD
R	RANGE
℄ OR R/L	REFERENCE LINE
REQD	REQUIRED
RT	RIGHT
R/W	RIGHT-OF-WAY
RD	ROAD
SALV	SALVAGED
SAN	SANITARY SEWER
SECT	SECTION
SHLDR	SHOULDER
SW	SIDEWALK
S	SOUTH
SB	SOUTHBOUND
SPECS	SPECIFICATIONS
SQ	SQUARE
SF OR SQ FT	SQUARE FEET
SY	SQUARE YARD
SSPRC	STORM SEWER PIPE REINFORCED CONCRETE
STD	STANDARD
SDD	STANDARD DETAIL DRAWINGS
STH	STATE TRUNK HIGHWAYS
STA	STATION
SS	STORM SEWER
T	TANGENT
TEL	TELEPHONE
TEMP	TEMPORARY
TLE	TEMPORARY LIMITED EASEMENT
T	TON
TC	TOP OF CURB
TN	TOWN
TRANS	TRANSITION
T	TRUCKS (percent of)
TYP	TYPICAL
UNCL	UNCLASSIFIED
USH	UNITED STATES HIGHWAY
VAR	VARIABLE
VERT	VERTICAL
VC	VERTICAL CURVE
VOL	VOLUME
WM	WATER MAIN
WV	WATER VALVE
W	WEST
WB	WESTBOUND
YD	YARD

RUNOFF COEFFICIENT TABLE

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

TOTAL PROJECT AREA = 1.11 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0.82 ACRES

DESIGN CONTACT

MSA PROFESSIONAL SERVICES, INC.
ATTN: LEAH J. RHODES, P.E.
1230 SOUTH BOULEVARD
BARABOO, WI 53913
PHONE: 608-355-8945
lrhodes@msa-ps.com

COUNTY CONTACT

LA CROSSE COUNTY
ATTN: RON CHAMBERLAIN
301 CARLSON ROAD
WEST SALEM, WI 54669
PHONE: 608-786-3810
rchamberlain@lacrossecounty.com

DNR LIAISON

DEPARTMENT OF NATURAL RESOURCES
KAREN KALVELAGE
ENVIRONMENTAL REVIEW AND ANALYSIS SPECIALIST
3550 MORMON COULEE ROAD
LA CROSSE, WI 54601
PHONE: 608-785-9115
karen.kalvelage@wisconsin.gov

UTILITIES

BURIED TELEPHONE:
CENTURYLINK
ATTN: TOM MURRAY
333 NORTH FRONT STREET
LA CROSSE, WI 54601
PHONE: 608-796-7869
tom.l.murray@centurylink.com

OVERHEAD ELECTRIC:
VERNON ELECTRIC COOPERATIVE
ATTN: MARK SEE
110 SAUGSTAD ROAD
WESTBY, WI 54667
PHONE: 608-632-1602
msee@vernonelectric.org

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

* - NOT A MEMBER OF DIGGERS HOTLINE.

GENERAL NOTES

DISTURBED AREAS WITHIN THE RIGHT-OF-WAY, EXCEPT THE AREAS WITHIN THE FINISHED SHOULDER POINTS, SHALL BE FERTILIZED, SEEDED AND MULCHED AS DIRECTED BY THE ENGINEER. OVERSOW PERMANENT SEEDING AREAS WITH TEMPORARY SEED AT 3 LBS PER 1000 SQUARE FEET.

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

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

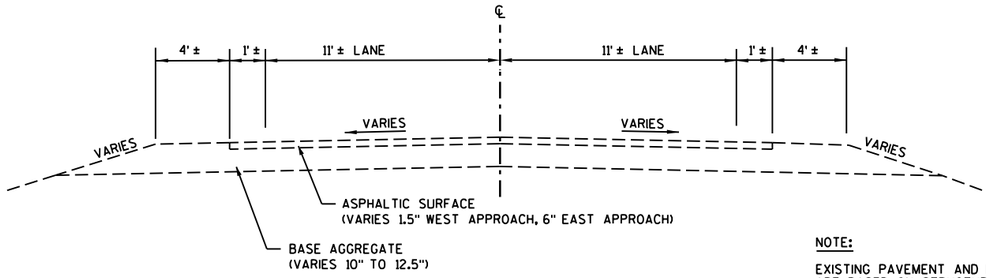
ELEVATIONS SHOWN ON THIS PLAN ARE REFERENCED TO USGS NAVD 88 (96 ADJUSTED). BENCHMARK REFERENCES AT THE PROJECT SITE WERE LOCATED USING GPS TECHNOLOGY.

THE 4½" ASPHALTIC SURFACE SHALL CONSIST OF A 2" UPPER LAYER WITH 12.5MM NOMINAL SIZE AGGREGATE AND A 2½" LOWER LAYER WITH 19.0MM NOMINAL SIZE AGGREGATE.

SILT FENCE TO BE PLACED AS SHOWN ON THE PLAN OR AS DIRECTED BY THE ENGINEER AND IN PLACE PRIOR TO CONSTRUCTION OR BRIDGE REMOVAL.

SLOPES STEEPER THAN 3:1 REQUIRE EROSION MAT.

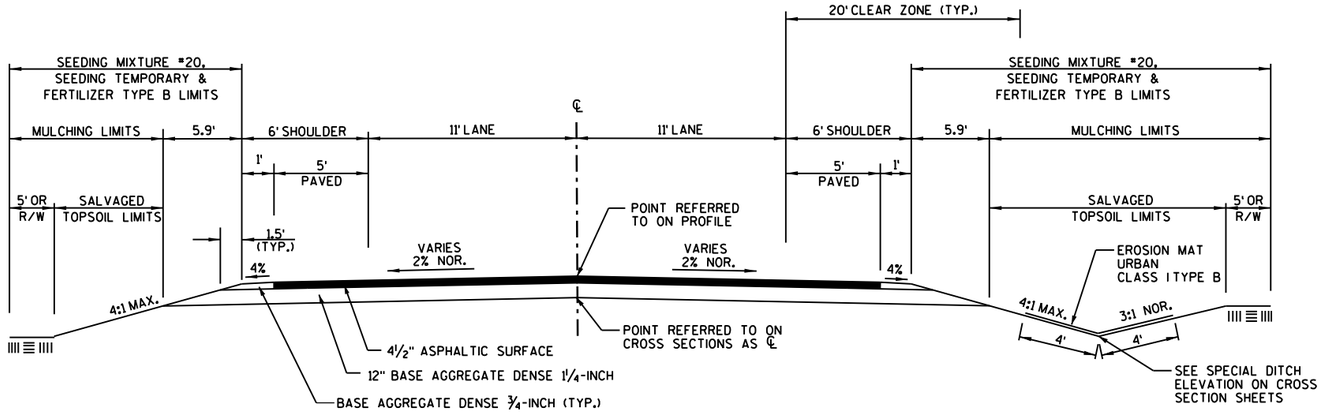
WETLANDS ARE PRESENT ON THE RIVER BANKS. AREAS OUTSIDE THE SLOPE INTERCEPTS SHALL NOT BE DISTURBED IN THIS AREA.



NOTE:

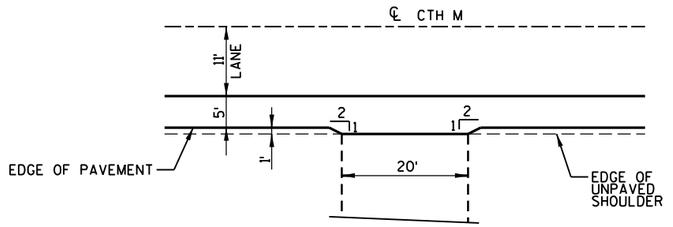
EXISTING PAVEMENT AND BASE THICKNESSES ARE BASED ON STRUCTURE SOIL BORINGS.

TYPICAL EXISTING SECTION

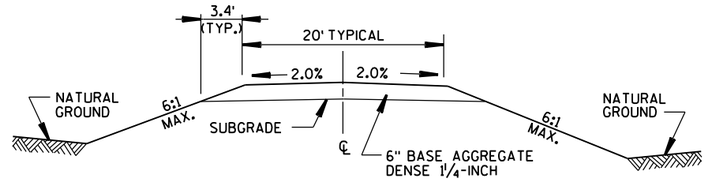


TYPICAL FINISHED SECTION

STA 9+00 - STA 12+00



FIELD ENTRANCE PLAN



FIELD ENTRANCE TYPICAL SECTION

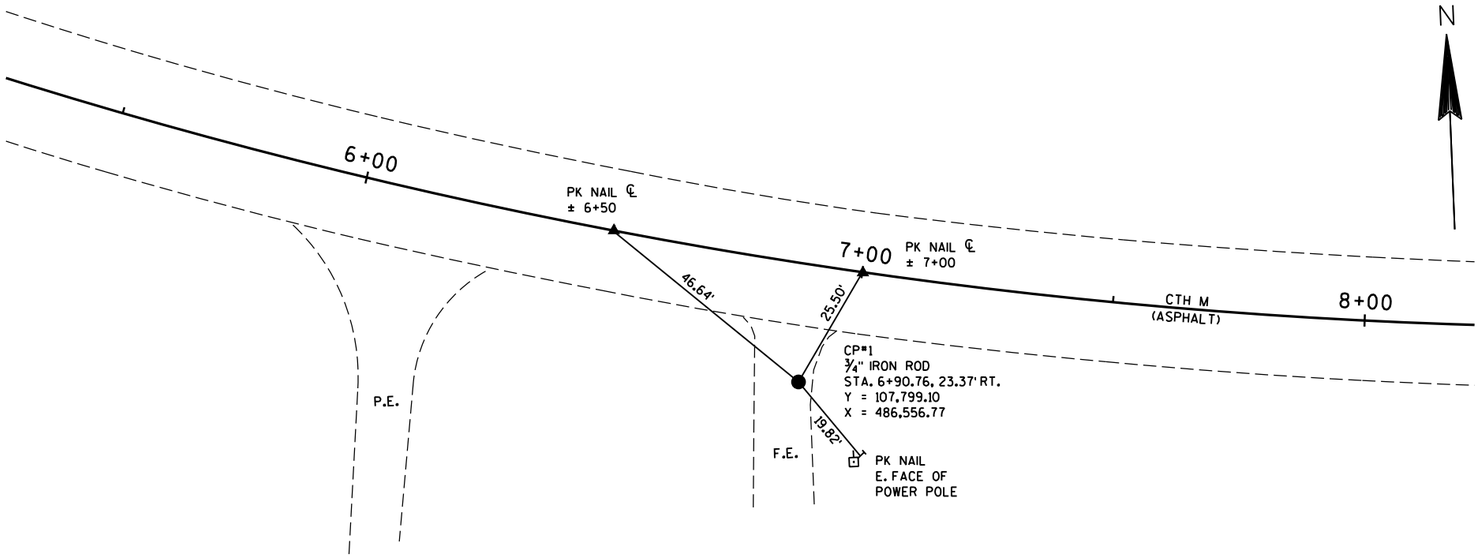
FIELD ENTRANCE DETAILS

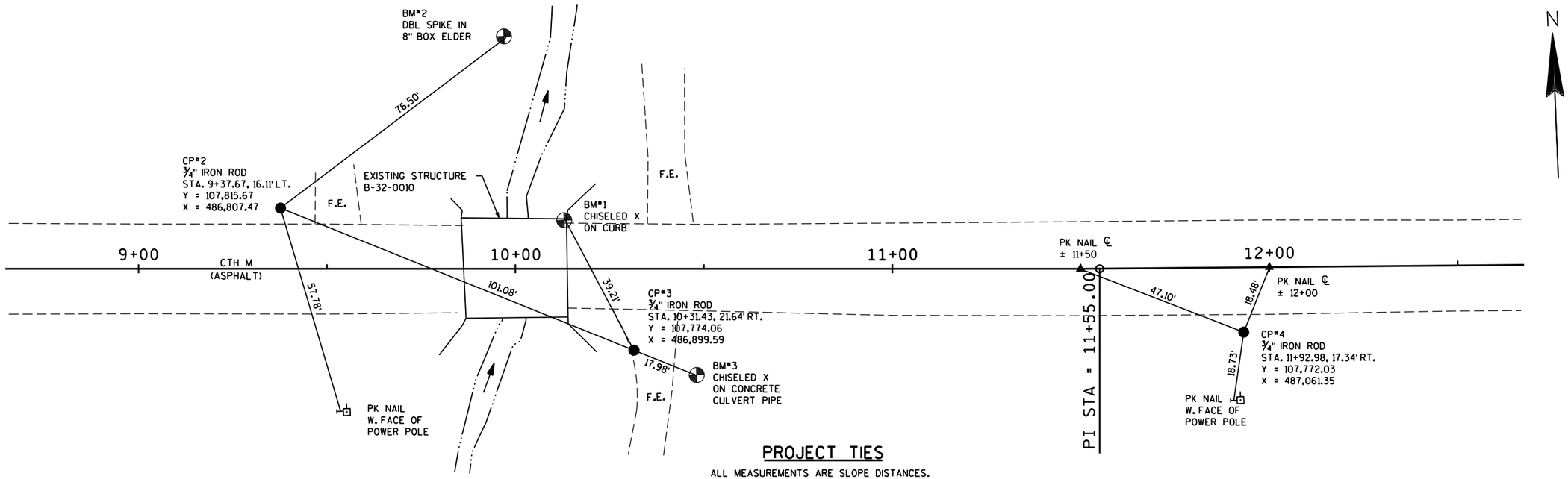
PROJECT NO: 5436-00-70	HWY: CTH M	COUNTY: LA CROSSE	TYPICAL SECTIONS & CONSTRUCTION DETAILS	SHEET 3	E

FILE NAME : P:\9200s\9260s\9262\09262007\caddWDOT\Planshts\9262007XC.dgn PLOT DATE : 2/18/2016 PLOT BY : bhalley PLOT NAME : PLOT SCALE : 1:8

WISDOT/CADDS SHEET 42

9262007XC.dgn 2/18/2016 4:00:34 PM bhalley





PROJECT TIES

ALL MEASUREMENTS ARE SLOPE DISTANCES.

PROJECT NO: 5436-00-70	HWY: CTH M	COUNTY: LA CROSSE	PROJECT CONTROL POINT TIES	SHEET 4	E

2

N

STH 33

DETAIL C

DETOUR SOUTH COUNTY M

DETOUR NORTH COUNTY M

STH 33

CTH M

ST JOSEPH

STH 33

DETAIL D

DETOUR SOUTH COUNTY M

2

DETOUR SOUTH COUNTY M

CTH YY

DETOUR NORTH COUNTY M

CTH M

DETAIL E

KAMMEL COULEE RD.

USH 14/USH 61

DETOUR NORTH COUNTY M

DETAIL B

DETOUR SOUTH COUNTY M

DETAIL A

VALLEY VIEW RD

CTH M

SCHMALTZ ROAD

DETOUR SOUTH COUNTY M

KREIBICH COULEE RD.

DETAIL F

CTH NN

CTH M BRIDGE PROJECT SITE. (ROAD CLOSED)
USE S.D.D. "BARRICADES AND SIGNS FOR MAINLINE CLOSURES". USE ROAD CLOSURE BARRICADE DETAIL FOR SITE AND ADVANCED WARNING SIGNS & DEVICES INCLUDING AT SCHMALTZ RD. AND TEMP RD.

TEMP RD

BR. MORMON CREEK

USH 14/USH 61

LEGEND

- DETOUR ROUTE
- SIGN ON PERMANENT SUPPORT
- DETAIL AREA, SEE "DETOUR PLAN - DETAILS" SHEET
- EXISTING SIGNS TO BE COVERED

PROJECT NO:5436-00-70	HWY:CTH M	COUNTY:LA CROSSE	DETOUR PLAN - OVERVIEW	SHEET 5	E

FILE NAME : P:\9200s\9260s\9262\09262007\caddWDOT\Planshts\9262007Det.dgn PLOT DATE : 2/3/2016 PLOT BY : bhalley PLOT NAME : PLOT SCALE : 1:5000

WISDOT/CADDS SHEET 42

9262007Det.dgn 2/3/2016 4:43:33 PM bhalley

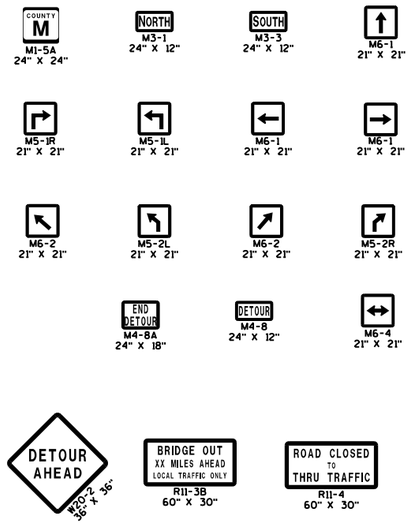
2

LEGEND

- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE AND 2 TYPE A LIGHTS WITHOUT SIGN
- TYPE III BARRICADE AND 2 TYPE A LIGHTS WITH SIGN
- DETOUR ROUTE

TRAFFIC CONTROL NOTES

1. THE EXACT LOCATION AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.
2. ALL SIGNS INAPPROPRIATE TO THE STATUS OF THE CONTROL ZONE INCLUDING PRE-EXISTING SIGNING IN THE VICINITY, SHALL BE COVERED OR REMOVED AS DIRECTED BY THE ENGINEER.
3. TYPE III BARRICADES SHOWN ON THIS SHEET SHALL BE PLACED AT A 50' OFFSET ALONG THE ROADWAY.



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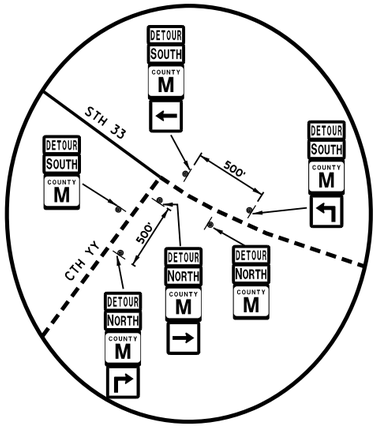
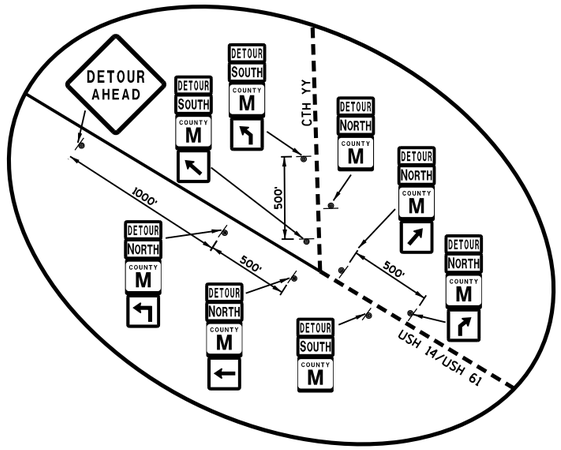
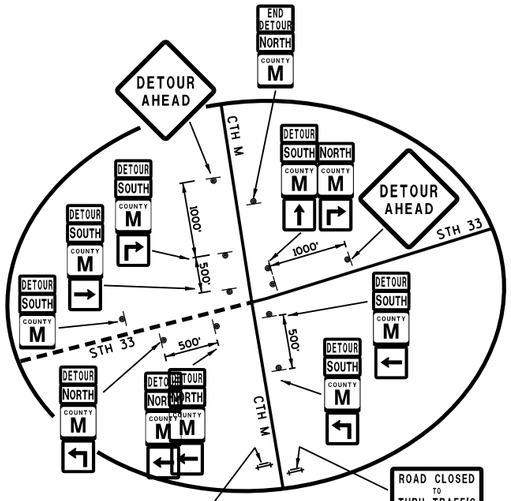


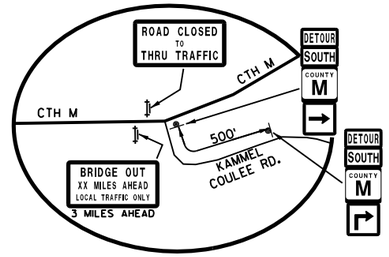
DETAIL C



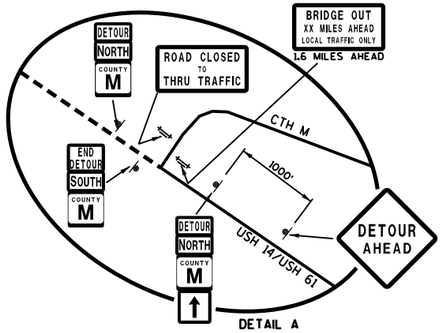
DETAIL B



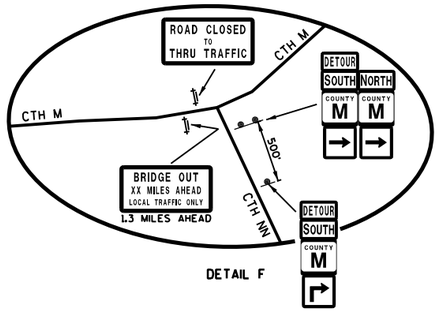
DETAIL D



DETAIL E



DETAIL A



DETAIL F

PROJECT NO: 5436-00-70	HWY: CTH M	COUNTY: LA CROSSE	DETOUR PLAN - DETAILS	SHEET 6	E

DATE 27JUN16 E S T I M A T E O F Q U A N T I T I E S

LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	5436-00-70 QUANTITY
0010	201.0105	Clearing	STA	2.000	2.000
0020	201.0205	Grubbing	STA	2.000	2.000
0030	203.0100	Removing Small Pipe Culverts	EACH	2.000	2.000
0040	203.0600.S	Removing Old Structure Over Waterway With Minimal Debris (station) 01. 10+00	LS	1.000	1.000
0050	205.0100	Excavation Common	CY	992.000	992.000
0060	206.2000	Excavation for Structures Culverts (structure) 01. C-32-99	LS	1.000	1.000
0070	210.0100	Backfill Structure	CY	1,195.000	1,195.000
0080	213.0100	Finishing Roadway (project) 01. 5436-00-70	EACH	1.000	1.000
0090	305.0110	Base Aggregate Dense 3/4-Inch	TON	33.000	33.000
0100	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	1,028.000	1,028.000
0110	311.0115	Breaker Run	CY	390.000	390.000
0120	455.0605	Tack Coat	GAL	53.000	53.000
0130	465.0105	Asphaltic Surface	TON	261.000	261.000
0140	504.0100	Concrete Masonry Culverts	CY	131.000	131.000
0150	505.0400	Bar Steel Reinforcement HS Structures	LB	19,450.000	19,450.000
0160	516.0500	Rubberized Membrane Waterproofing	SY	23.000	23.000
0170	520.1018	Apron Endwalls for Culvert Pipe 18-Inch	EACH	2.000	2.000
0180	520.1030	Apron Endwalls for Culvert Pipe 30-Inch	EACH	2.000	2.000
0190	520.3318	Culvert Pipe Class III-A 18-Inch	LF	44.000	44.000
0200	520.3330	Culvert Pipe Class III-A 30-Inch	LF	44.000	44.000
0210	606.0300	Riprap Heavy	CY	280.000	280.000
0220	619.1000	Mobilization	EACH	1.000	1.000
0230	624.0100	Water	MGAL	85.000	85.000
0240	625.0500	Salvaged Topsoil	SY	1,910.000	1,910.000
0250	627.0200	Mulching	SY	2,330.000	2,330.000
0260	628.1504	Silt Fence	LF	500.000	500.000
0270	628.1520	Silt Fence Maintenance	LF	500.000	500.000
0280	628.1905	Mobilizations Erosion Control	EACH	2.000	2.000
0290	628.1910	Mobilizations Emergency Erosion Control	EACH	2.000	2.000
0300	628.2008	Erosion Mat Urban Class I Type B	SY	650.000	650.000
0310	628.7504	Temporary Ditch Checks	LF	60.000	60.000
0320	629.0210	Fertilizer Type B	CWT	1.800	1.800
0330	630.0120	Seeding Mixture No. 20	LB	75.000	75.000
0340	630.0200	Seeding Temporary	LB	75.000	75.000
0350	633.5100	Markers Row	EACH	10.000	10.000
0360	633.5200	Markers Culvert End	EACH	4.000	4.000
0370	638.2602	Removing Signs Type II	EACH	4.000	4.000
0380	638.3000	Removing Small Sign Supports	EACH	4.000	4.000
0390	642.5001	Field Office Type B	EACH	1.000	1.000
0400	643.0100	Traffic Control (project) 01. 5436-00-70	EACH	1.000	1.000
0410	643.0420	Traffic Control Barricades Type III	DAY	1,534.000	1,534.000
0420	643.0705	Traffic Control Warning Lights Type A	DAY	2,596.000	2,596.000
0430	643.0900	Traffic Control Signs	DAY	1,180.000	1,180.000
0440	643.0920	Traffic Control Covering Signs Type II	EACH	8.000	8.000
0450	643.2000	Traffic Control Detour (project) 01. 5436-00-70	EACH	1.000	1.000
0460	643.3000	Traffic Control Detour Signs	DAY	8,614.000	8,614.000
0470	645.0105	Geotextile Type C	SY	382.000	382.000
0480	645.0120	Geotextile Type HR	SY	530.000	530.000
0490	646.0106	Pavement Marking Epoxy 4-Inch	LF	1,200.000	1,200.000
0500	650.4500	Construction Staking Subgrade	LF	400.000	400.000

3

DATE 27JUN16 E S T I M A T E O F Q U A N T I T I E S

LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	5436-00-70 QUANTITY
0510	650.5000	Construction Staking Base	LF	300.000	300.000
0520	650.6500	Construction Staking Structure Layout (structure) 01. C-32-99	LS	1.000	1.000
0530	650.9910	Construction Staking Supplemental Control (project) 01. 5436-00-70	LS	1.000	1.000
0540	650.9920	Construction Staking Slope Stakes	LF	400.000	400.000
0550	690.0150	Sawing Asphalt	LF	49.000	49.000
0560	715.0502	Incentive Strength Concrete Structures	DOL	786.000	786.000
0570	SPV.0105	Special 01. Temporary Water Diversion, Culvert C-32-99	LS	1.000	1.000

P - PAY PLAN QUANTITY

NOTE:
ALL ITEMS AND QUANTITIES ON THIS SHEET ARE FOR ENGINEER ESTIMATE CATEGORY 0010.

201.0105 CLEARING
201.0205 GRUBBING

STATION	-	STATION	LOCATION	CLEARING STA	GRUBBING STA
9+00	-	11+00	LT	2	2
		TOTALS:		2	2

205.0100 EXCAVATION COMMON **P**

LOCATION	EXC. COMMON CY (3)	FILL CY (1)	EXPANDED FILL CY (2)	WASTE CY
STA 8+00 - STA 9+70	383	80	104	279
STA 10+24 - STA 12+00	609	207	269	340
TOTALS:	992	287	373	619

(1) - NOT A BID ITEM - FOR INFORMATIONAL PURPOSES ONLY.
(2) - FILL EXPANSION 30%
(3) - EXISTING ASPHALTIC PAVEMENT IS INCLUDED IN COMMON EXCAVATION TOTALS. SEE EARTHWORK TABLE.

305.0110 BASE AGGREGATE DENSE 3/4-INCH
305.0120 BASE AGGREGATE DENSE 1 1/4-INCH
624.0100 WATER

STATION	-	STATION	3/4-INCH TON	1 1/4-INCH TON	WATER* MGAL
9+00.00	-	12+00.00	33	955	20
FE STA. 9+53, LT			0	13	0
FE STA. 10+70, LT			0	31	1
FE STA. 10+70, RT			0	29	1
TOTALS:			33	1028	22

*ADDITIONAL QUANTITY INCLUDED WITH EROSION CONTROL ITEMS

455.0605 TACK COAT
465.0105 ASPHALTIC SURFACE

STATION	-	STATION	TACK COAT GAL	ASPHALTIC SURFACE TON
9+00	-	12+00	53	261
		TOTALS:	53	261

203.0100 REMOVING SMALL PIPE CULVERTS
520.3318 CULVERT PIPE CLASS III-A 18-INCH
520.1018 APRON ENDWALLS FOR CULVERT PIPE 18-INCH
520.3330 CULVERT PIPE CLASS III-A 30-INCH
520.1030 APRON ENDWALLS FOR CULVERT PIPE 30-INCH

STATION	LOCATION	MINIMUM THICKNESS (IN.) STEEL	ALUMINUM	REMOVING SMALL PIPE CULVERTS EACH	CULVERT PIPE CLASS III-A 18-INCH LF	APRON ENDWALLS FOR CULVERT PIPE 18-INCH EACH	CULVERT PIPE CLASS III-A 30-INCH LF	APRON ENDWALLS FOR CULVERT PIPE 30-INCH EACH
10+35	28' RT	-	-	1	-	-	-	-
10+45	30' LT	-	-	1	-	-	-	-
10+70	46' RT	0.079	0.075	-	-	-	44	2
10+70	49' LT	0.064	0.060	-	44	2	-	-
TOTAL:				2	44	2	44	2

625.0500 SALVAGED TOPSOIL
627.0200 MULCHING
629.0210 FERTILIZER TYPE B
630.0120 SEEDING MIXTURE NO. 20
630.0200 SEEDING TEMPORARY
624.0100 WATER

STATION	-	STATION	LOCATION	SALVAGED TOPSOIL SY	MULCHING SY	FERTILIZER CWT	SEEDING #20 LB	SEEDING TEMPORARY LB	WATER* MGAL
8+00	-	12+00	RT	1140	1345	1.00	43	43	36
9+00	-	12+00	LT	595	775	0.60	25	25	21
UNDISTRIBUTED				175	210	0.20	7	7	6
TOTALS:				1910	2330	1.80	75	75	63

*ADDITIONAL QUANTITY INCLUDED WITH BASE AGGREGATE ITEMS.

628.1504 SILT FENCE
628.1520 SILT FENCE MAINTENANCE

STATION	-	STATION	LOCATION	FENCE LF	MAINT. LF
9+00	-	10+09	LT	140	140
9+50	-	9+83	RT	70	70
9+90	-	10+58	RT	120	120
10+16	-	10+60	LT	70	70
UNDISTRIBUTED				100	100
			TOTALS:	500	500

628.2008 EROSION MAT URBAN CLASS I TYPE B

LOCATION	URBAN CLASS I TYPE B SY
STA 8+00 - STA 9+53, RT	138
C-32-0099 INLET	142
C-32-0099 OUTLET	77
STA 10+95 - STA 12+00, LT	94
STA 10+95 - STA 12+00, RT	94
UNDISTRIBUTED	105
TOTALS:	650

628.1905 MOBILIZATIONS EROSION CONTROL
628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL

DESCRIPTION	MOBILIZATION EACH	EMERGENCY MOB. EACH
PROJECT 5436-00-70	2	2
TOTALS:	2	2

NOTE:
ALL ITEMS AND QUANTITIES ON THIS SHEET ARE FOR ENGINEER ESTIMATE CATEGORY 0010.

628.7504 TEMPORARY DITCH CHECKS

STATION	LOCATION	TEMPORARY DITCH CHECKS LF
8+00	RT	20
12+00	RT	20
UNDISTRIBUTED		20
	TOTAL:	60

633.5100 MARKERS ROW

STATION	OFFSET	LOCATION	EACH
7+75	41.75	RT	1
7+75	39.92	LT	1
8+78.33	38.92	LT	1
9+50	65.00	RT	1
9+65	39.65	LT	1
9+85	67.00	LT	1
10+50	65.00	RT	1
10+50	67.00	LT	1
12+00	38.83	RT	1
12+00	43.91	LT	1
		TOTAL:	10

633.5200 MARKERS CULVERT END

STATION	LOCATION	EACH
9+83	32' RT	1
9+94	33' LT	1
10+00	32' RT	1
10+11	33' LT	1
	TOTAL:	4

638.2602 REMOVING SIGNS TYPE II
638.3000 REMOVING SMALL SIGN SUPPORTS

STATION	LOCATION	REMOVING SIGNS TYPE II EACH	REMOVING SMALL SIGN SUPPORTS EACH	COMMENTS
9+85	LT	1	1	EXISTING OBJECT MARKER
9+85	RT	1	1	EXISTING OBJECT MARKER
10+15	LT	1	1	EXISTING OBJECT MARKER
10+15	RT	1	1	EXISTING OBJECT MARKER
	TOTALS:	4	4	

643.0420 TRAFFIC CONTROL BARRICADES TYPE III
643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A

DESCRIPTION	DAYS	TRAFFIC CONTROL BARRICADES TYPE III EACH	TRAFFIC CONTROL BARRICADES TYPE III DAYS	TRAFFIC CONTROL WARNING LIGHTS TYPE A EACH	TRAFFIC CONTROL WARNING LIGHTS TYPE A DAYS
PROJECT 5436-00-70	59	26	1534	44	2596
TOTALS:			1534		2596

643.0900 TRAFFIC CONTROL SIGNS
643.3000 TRAFFIC CONTROL DETOUR SIGNS
643.0920 TRAFFIC CONTROL COVERING SIGNS TYPE II

DESCRIPTION	DAYS	TRAFFIC CONTROL SIGNS EACH	TRAFFIC CONTROL SIGNS DAYS	TRAFFIC CONTROL DETOUR SIGNS EACH	TRAFFIC CONTROL DETOUR SIGNS DAYS	TRAFFIC CONTROL COVERING SIGNS TYPE II EACH
PROJECT 5436-00-70	59	20	1180	146	8614	8
TOTALS:			1180		8614	8

646.0106 PAVEMENT MARKING EPOXY 4-INCH

STATION	-	STATION	LOCATION	PAVEMENT MARKING YELLOW LF	PAVEMENT MARKING WHITE LF
9+00	-	12+00	CENTERLINE - DOUBLE SOLID	600	-
9+00	-	12+00	EDGELINE LT & RT - SOLID	-	600
			TOTAL:	600	600

650.4500 CONSTRUCTION STAKING SUBGRADE
650.5000 CONSTRUCTION STAKING BASE
650.9920 CONSTRUCTION STAKING SLOPE STAKES
650.9910 CONSTRUCTION STAKING SUPPLEMENTAL CONTROL 5436-00-70

STATION	-	STATION	SUBGRADE LF	BASE LF	SLOPE STAKES LF	SUPPLEMENTAL CONTROL LS
8+00	-	12+00	400	-	400	-
9+00	-	12+00	-	300	-	-
		TOTALS:	400	0	400	1

690.0150 SAWING ASPHALT

STATION	LF
9+00	24
12+00	25
TOTAL:	49

R/W PROJECT NUMBER	SHEET NUMBER	TOTAL SHEETS
5436-00-00		
FEDERAL PROJECT NUMBER	4.01	2

PLAT OF RIGHT-OF-WAY REQUIRED FOR

USH 14 - CTH NN

(BRANCH MORMON CREEK BRIDGE C-32-0099)

CTH M — LA CROSSE COUNTY

CONSTRUCTION PROJECT NUMBER

5436-00-70

CONVENTIONAL ABBREVIATIONS

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

CURVE DATA

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

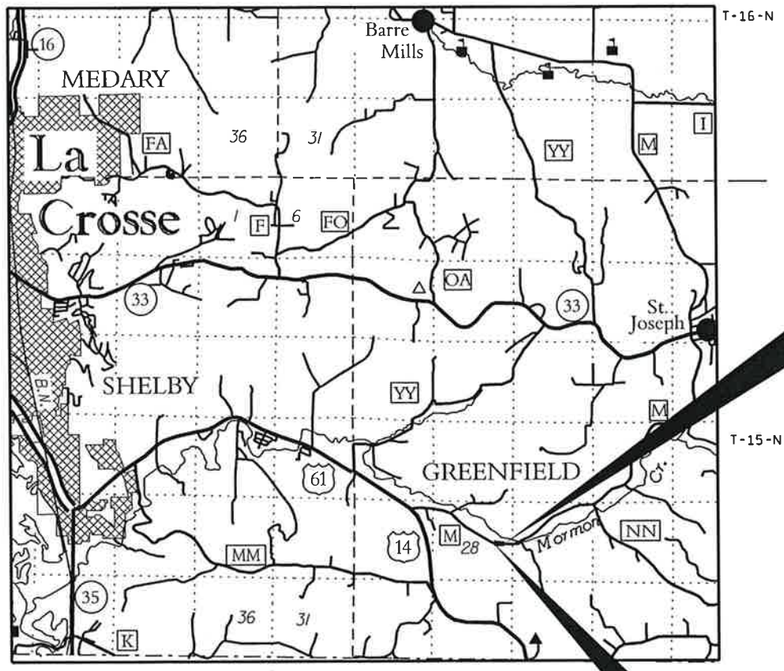
CONVENTIONAL SYMBOLS

FOUND IRON PIPE/PIN	LS (1" UNLESS NOTED)	PROPOSED R/W LINE	
		EXISTING H.E. LINE	
R/W MONUMENT	● =(SET)	PROPERTY LINE	
R/W STANDARD	▲ =(SET)	LOT & TIE LINES	
SIGN	ISIGN	SLOPE INTERCEPTS	
SECTION CORNER MONUMENT	●	CORPORATE LIMITS	
SECTION CORNER SYMBOL	(AM) (PM)	NO ACCESS (BY PREVIOUS ACQUISITION/CONTROL)	
FEE (HATCH VARIES)		NO ACCESS (BY ACQUISITION)	
TEMPORARY LIMITED EASEMENT		NO ACCESS (BY STATUTORY AUTHORITY)	
PERMANENT LIMITED EASEMENT		SECTION LINE	
R/W BOUNDARY POINT	200	QUARTER LINE	
PARCEL NUMBER	104	SIXTEENTH LINE	
UTILITY PARCEL NUMBER	92	EXISTING CENTERLINE	
SIGN NUMBER (OFF PREMISE)	21-5	PROPOSED REFERENCE LINE	
BUILDING		PARALLEL OFFSET	

CONVENTIONAL UTILITY SYMBOLS

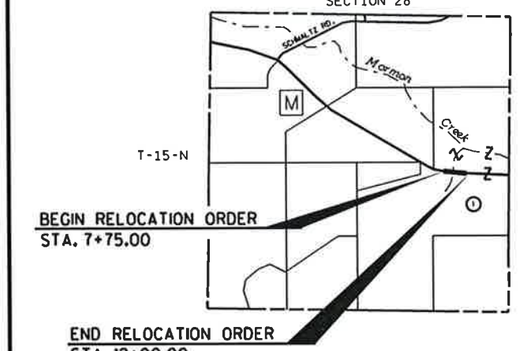
WATER	W
GAS	G
TELEPHONE	T
OVERHEAD TRANSMISSION LINES ELECTRIC	OH
	E
CABLE TELEVISION	TV
FIBER OPTIC	FO
SANITARY SEWER	SAN
STORM SEWER	SS

	NON COMPENSABLE	COMPENSABLE
POWER POLE		
TELEPHONE POLE		
TELEPHONE PEDESTAL		
ELECTRIC TOWER	⊠	



TOTAL NET LENGTH OF CENTERLINE = 0.080 MI.

R-6-W
SECTION 28



LAYOUT
NOT TO SCALE

END RELOCATION ORDER

37.22' SOUTH OF AND 661.60' WEST OF THE EAST 1/4 CORNER OF SEC. 28, T-15-N, R-6-W

BEGIN RELOCATION ORDER

17.18' SOUTH OF AND 1,086.06' WEST OF THE EAST 1/4 CORNER OF SEC. 28, T-15-N, R-6-W

NOTES

POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COUNTY COORDINATES, LA CROSSE COUNTY NAD 83 (2007) 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 (TYPCIALLY 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".

ORIGINAL PLAT PREPARED BY

MSA PROFESSIONAL SERVICES
TRANSPORTATION • MUNICIPAL DEVELOPMENT • ENVIRONMENTAL
1230 South Boulevard Baraboo, WI 53913
608-356-2771 1-800-362-4505 Fax: 608-356-2770

WISCONSIN
GREGORY P. RHINEHART
S-1478
FRIENDSHIP, WI
LAND SURVEYOR

DATE: 5/13/15 Gregory P. Rhinehart
(Registered Land Surveyor)

REVISION DATE

APPROVED FOR LA CROSSE COUNTY

DATE: 5/14/15 (Signature)

E

SCHEDULE OF LANDS & INTERESTS REQUIRED

OWNER'S NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY AND ARE SUBJECT TO CHANGE PRIOR TO THE TRANSFER OF LAND INTERESTS TO THE COUNTY.

PARCEL NUMBER	OWNER(S)	INTEREST REQUIRED	R/W ACRES REQUIRED NEW	EXISTING	TOTAL	TLE ACRES
1	JEAN A. DONLEY AND WAYNE R. DONLEY, AS MARITAL SURVIVORSHIP PROPERTY	FEE & TLE	0.26	0	0.26	0.08
98	CENTURYLINK	RELEASE OF RIGHTS	---	---	---	---
99	VERNON ELECTRIC COOPERATIVE	RELEASE OF RIGHTS	---	---	---	---

ALIGNMENT DATA

PI Sta = 6+09.01
Y = 107813.58
X = 486469.41
I = 26°26'20.05"L
PC Sta = 3+55.32
PT Sta = 8+53.68

CD = S 74°24'13" E
T = 253.70
R = 1080.00
L = 498.36
C = 493.95

PI Sta = 11+50.75
Y = 107790.74
X = 487019.70
I = 00°30'38.38"L

N

NORTHEAST CORNER
SECTION 28, T15N, R6W
Y = 110,462.35
X = 487,734.91
BRASS CAP
(OBSERVED)

N 00°-05'-43" E
2,635.99'

EAST 1/4 CORNER
SECTION 28, T15N, R6W
Y = 107,826.36
X = 487,730.52
BRASS CAP
(OBSERVED)

SE-NE
28-15-6

TOWN

BEGIN RELOCATION ORDER
STA. 7+75.00 (10)
Y = 107,809.18
X = 486,644.47

(1) JEAN A. DONLEY & WAYNE R. DONLEY

N 38°32'58" E 33.89'

9+85.00 67.00' R/W 84.00' TLE

10+50.00 67.00' R/W 84.00' TLE

TLE

0.037 ACRES TLE FOR SLOPES

S 87°37'23" E 65.00'

(104) R/W

S 79°00'45" E 151.31'

12+00.00 43.91'

(105) EXISTING R/W

QUARTER LINE

N 89°05'38" E 1,086.19'

N 86°46'47" E 662.64'

S 01°51'58" W 43.91'

7+75.00 39.92'

(100) C1 R/W

8+78.33 38.92'

S 88°06'03" E 86.67'

(101)

9+50.00 39.52'

9+65.00 39.65'

(102) POINT A

EXISTING R/W

7+00 8+00 9+00 10+00 S 87°37'23" E 11+00 S 88°08'02" E 12+00

℄ CTH M

N 06°33'03" E 39.92'

S 06°33'03" W 41.75'

(10)

VARIES

80'

VARIES

PI STA = 8+53.68

PI STA = 11+50.75

(11)

N 01°51'58" E 38.83'

OH

EXISTING R/W

GUY

7+75.00 41.75'

(200)

S 79°14'23" E 179.89'

R/W

(98) CENTURYLINK
BURIED TELEPHONE
EASEMENT RELEASE
VOL. 163 DEEDS, P. 394

(99) VERNON ELECTRIC COOP
OVERHEAD ELECTRIC
EASEMENT RELEASE
VOL. 185 DEEDS, P. 148

(201) S 87°37'23" E 100.00'

R/W

(202) POINT B

N 82°20'29" E 152.68'

(203)

12+00.00 38.83'

EXISTING R/W

SLOPE INTERCEPTS (TYPICAL)

9+50.00 65.00' R/W 85.00' TLE

TLE

10+50.00 65.00'

10+00.00 95.00'

0.046 ACRES TLE FOR SLOPES

END RELOCATION ORDER
STA. 12+00.00 (11)
Y = 107,789.13
X = 487,068.93

NE-SE
28-15-6

GREENFIELD

POINT NUMBER	Y	X
100	107,848.84	486,649.02
101	107,840.92	486,749.13
102	107,838.05	486,835.76
103	107,864.55	486,856.88
104	107,861.86	486,921.82
105	107,833.02	487,070.36
200	107,767.70	486,639.70
201	107,734.12	486,816.43
202	107,729.97	486,916.35
203	107,750.32	487,067.66

EXISTING HIGHWAY R/W ESTABLISHED FROM PLAT OF SURVEY G-349, RIGHT OF WAY PLAT PROJECT #5012 3 (5), AND EXISTING SECTION CORNERS.

NOTE: INVERSING BETWEEN COORDINATES, IN CLOSE PROXIMITY WITH EACH OTHER, MAY NOT REPLICATE THE BEARINGS AND DISTANCES SHOWN ON THIS PLAT.

R/W CURVE DATA

CURVE	LENGTH	CHORD LENGTH	CHORD BEARING	RADIUS
C1 (100 - 101)	100.46'	100.43'	S 85°-28'-39" E	1,106.00'

REVISION DATE	DATE 5/13/2015	SCALE, FEET 0 20 40	HWY: CTH M	STATE R/W PROJECT NUMBER 5436-00-00	PLAT SHEET 4.02	
	GRID FACTOR N/A		COUNTY: LA CROSSE	CONSTRUCTION PROJECT NUMBER 5436-00-70	PS&E SHEET	E

FILE NAME : P:\9200s\9260s\9262\09262007\caddWDOT\Planshts\Row01.dgn PLOT DATE : 5/13/2015 PLOT BY : bhalley PLOT NAME : PLOT SCALE : 1:40 WISDOT/CADDS SHEET 75

Row01.dgn 5/13/2015 8:25:41 AM bhalley

BENCHMARKS			
NO.	STA./OFFSET	DESCRIPTION	ELEV.
1	10+12.9, 12.9'LT.	CHISELED CROSS ON NE CORNER OF BRIDGE	766.86
2	9+96.9, 61.7'LT.	2 SPIKES IN 8" ϕ BOX ELDER TREE	736.19
3	10+48.1, 28.2'RT.	CHISELED + TOP OF REINFORCED CULVERT PIPE	764.36

PI Sta = 6+09.01
Y = 107813.58
X = 486469.41
I = 26°26'20.05"L

CD = S 74°24'13" E
T = 253.70
R = 1080.00
L = 498.36
C = 493.95

PI Sta = 11+50.75
Y = 107790.74
X = 487019.70
I = 00°30'38.36"L

LEGEND
- SILT FENCE
- EROSION MAT URBAN CLASS I TYPE B
- TEMP DITCH CHECK

N

WAYNE & JEAN DONLEY

WETLAND LIMITS (TYP.)

TLE FOR SLOPES AND GRADING

1-18"ϕ 44' CMP, REO'D
2-ENDWALLS, REO'D
INVERT ELEVATIONS:
INLET ELEV. 761.38
OUTLET ELEV. 760.72

STRUCTURE C-32-0099 REQUIRED

EXISTING STRUCTURE B-32-0010 TO BE REMOVED

SLOPE INTERCEPTS (TYP.)

EDGE OF PAVEMENT

SAWCUT

EXISTING 18"ϕ RCC CULVERT (REMOVE)

EXISTING 30"ϕ RCC CULVERT (REMOVE)

℄ ROADWAY

CENTURYLINK BURIED TELEPHONE

VERNON ELECTRIC COOP OVERHEAD ELECTRIC

SPECIAL DITCH (TYP.)

1-30"ϕ 44' CMP, REO'D
2-ENDWALLS, REO'D
INVERT ELEVATIONS:
INLET ELEV. 761.22
OUTLET ELEV. 760.78

BEGIN CONSTRUCTION
STA 8+00, RIGHT

BEGIN PROJECT
STA. 9+00
Y = 107,801.14
X = 486,769.17

END PROJECT
STA. 12+00
Y = 107,789.13
X = 487,068.93

STA. 10+00, STRUCTURE B-32-0010, REMOVE
STEEL DECK GIRDER BRIDGE
24 FT. CLEAR ROADWAY WIDTH
27 FT. OVERALL LENGTH
0° SKEW

STA. 9+97, STRUCTURE C-32-0099, REQ'D
SINGLE CELL 12'W X 8'H BOX CULVERT
10° LHF SKEW

FINISHED ℄ PROFILE

EXISTING ℄ PROFILE

0.13%

1.5%

1.0%

SPECIAL DITCH LEFT

SPECIAL DITCH RIGHT

HIGH WATER 100
EL. 760.88±

OBSERVED WATER
EL. 755.60±
(02-06-13)

STREAMBED
EL. 754.32±

STA = 9+00.00
EL = 766.39

STA = 12+00.00
EL = 766.78

EARTHWORK SUMMARY
STA. 8+00 - STA. 12+00

EXC. COMMON	992 C.Y.
FILL	287 C.Y.
FILL EXPANSION	30%
WASTE	619 C.Y.

PROJECT NO: 5436-00-70	HWY: CTH M	COUNTY: LA CROSSE	PLAN & PROFILE - CTH M	SHEET	E

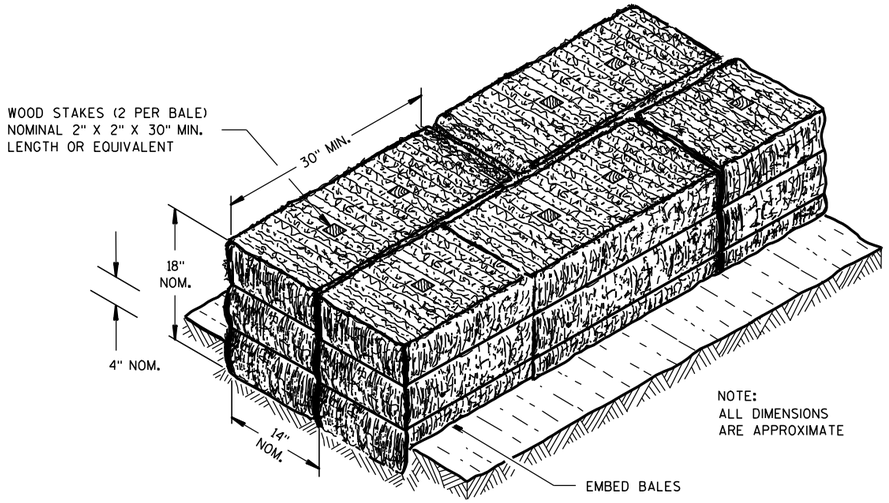
FILE NAME : P:\9200s\9260s\9262\09262007\caddWDOT\Planshts\Panp01.dgn PLOT DATE : 4/13/2016 PLOT BY : jsnyder PLOT NAME : PLOT SCALE : 1:40
WISDOT/CADDS SHEET 30
Panp01.dgn 4/13/2016 11:45:01 AM jsnyder

Standard Detail Drawing List

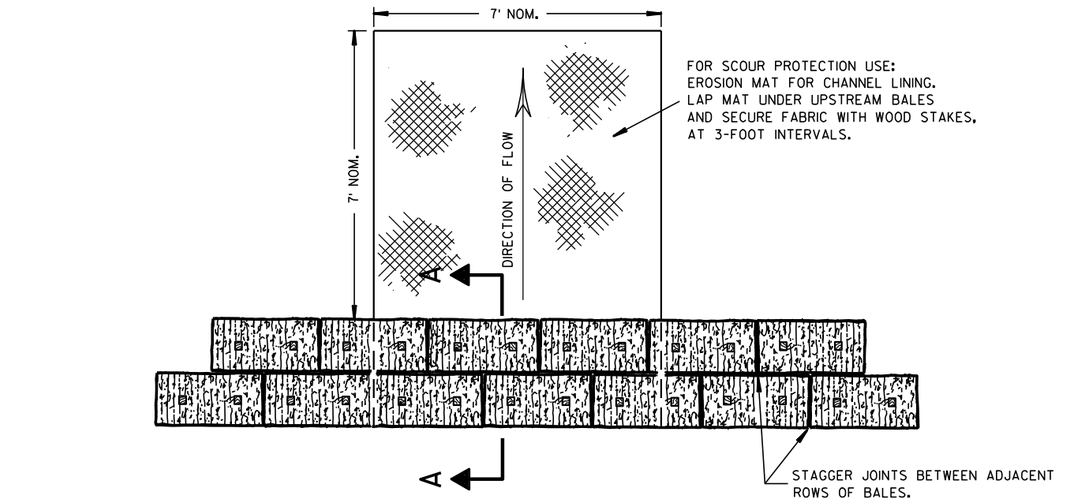
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
08F04-07	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
12A03-10	NAME PLATE (STRUCTURES)
15A01-12A	MARKER POST FOR RIGHT-OF-WAY
15A03-02A	FLEXIBLE MARKER POST 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
15C02-06C	DETOUR SIGNING FOR MAINLINE CLOSURES
15C03-03	BARRICADES AND SIGNS FOR SIDEROAD CLOSURES
15C08-16A	PAVEMENT MARKING (MAINLINE)

6

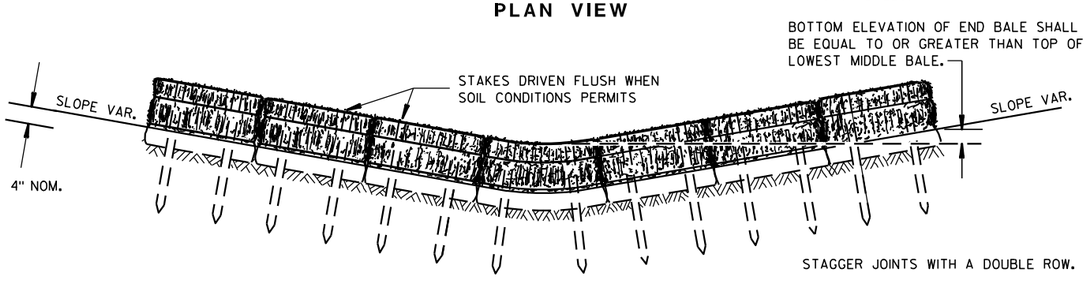
6



SECTION A-A



PLAN VIEW



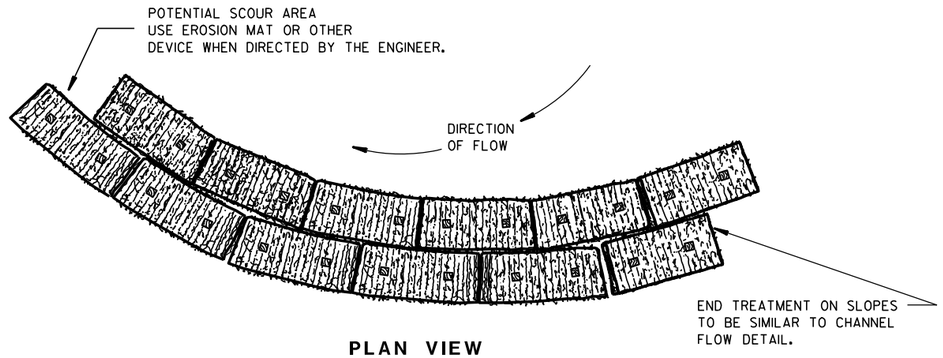
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES ①

GENERAL NOTES

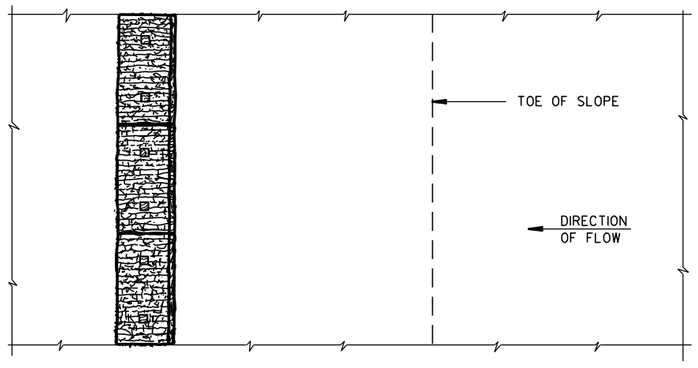
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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.

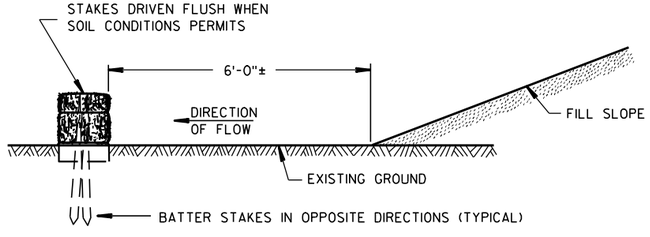


PLAN VIEW

WHEN ALTERING THE DIRECTION OF FLOW



PLAN VIEW



FRONT ELEVATION

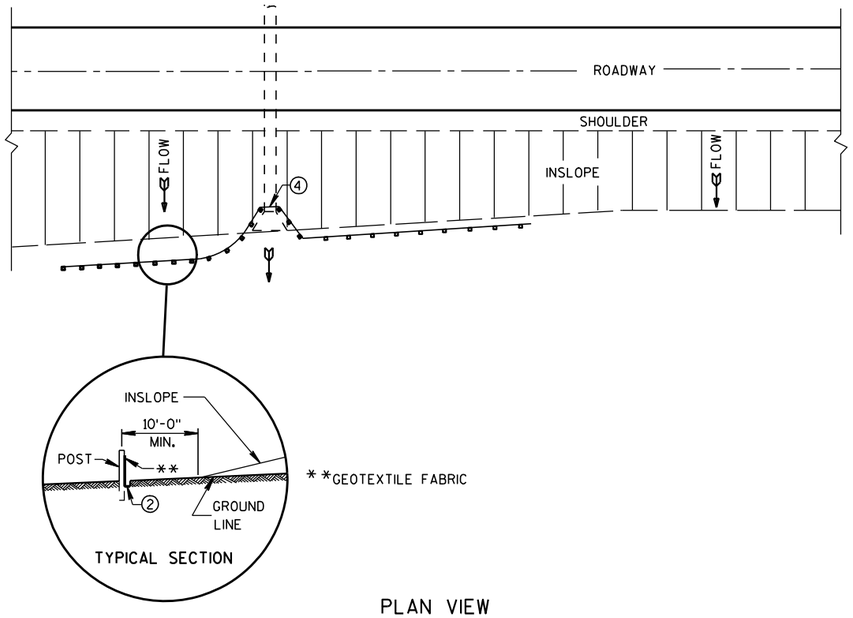
WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE

EROSION BALES FOR SHEET FLOW

TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS

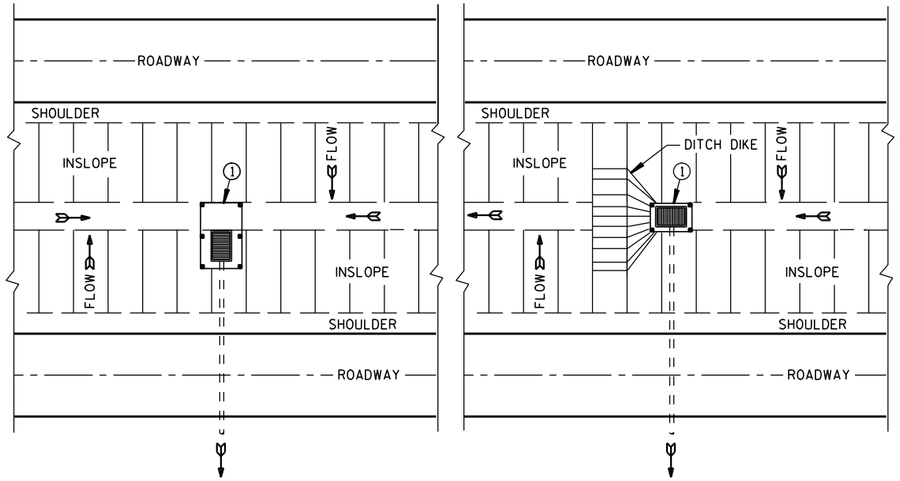
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



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.

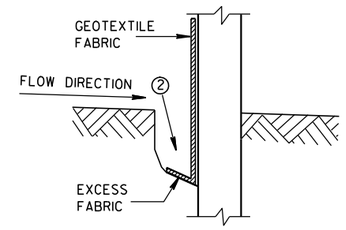
① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.

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.

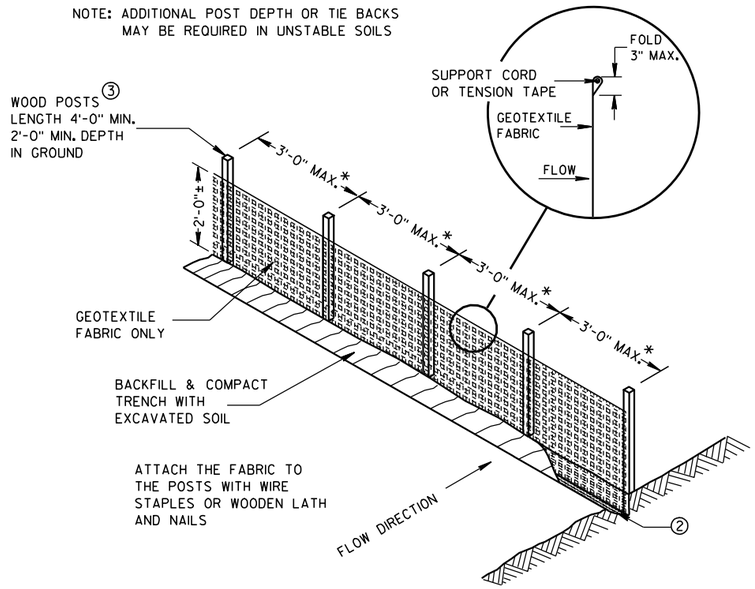
③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1⅛" X 1⅛" OF OAK OR HICKORY.

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.

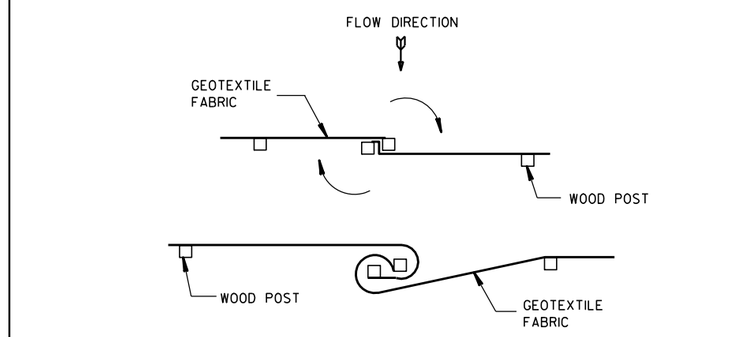


TRENCH DETAIL

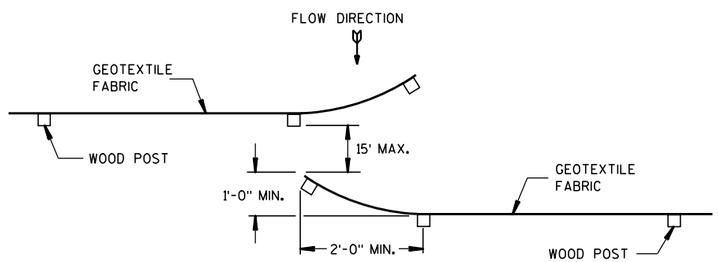


*NOTE: 8'-0" POST SPACING ALLOWED IF A WOVEN GEOTEXTILE FABRIC IS USED.

SILT FENCE

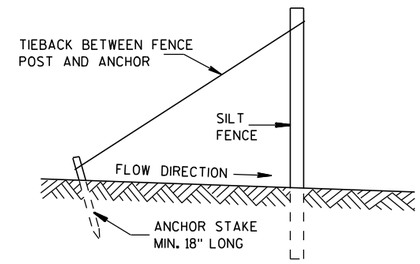


TWIST METHOD



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

6

S.D.D. 8 E 9-6

METAL APRON ENDWALLS

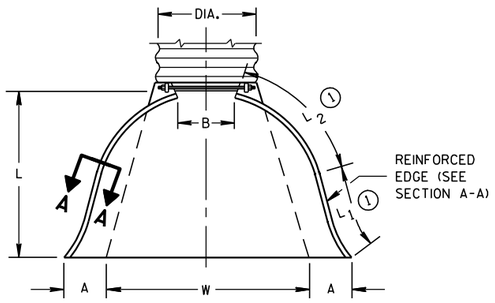
PIPE DIA. (IN.)	MIN. THICK. (Inches) STEEL	MIN. THICK. (Inches) ALUM.	DIMENSIONS (Inches) A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")	APPROX. SLOPE	BODY
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1	1 Pc.
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1	1 Pc.
18	.064	.060	8	10	6	31	15	28 1/4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

× EXCEPT CENTER PANEL SEE GENERAL NOTES

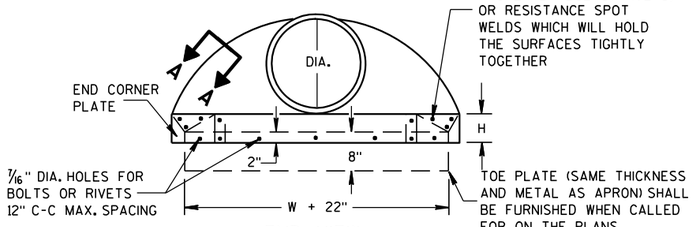
REINFORCED CONCRETE APRON ENDWALLS

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

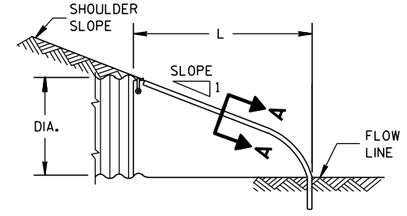
*MINIMUM
**MAXIMUM



PLAN VIEW

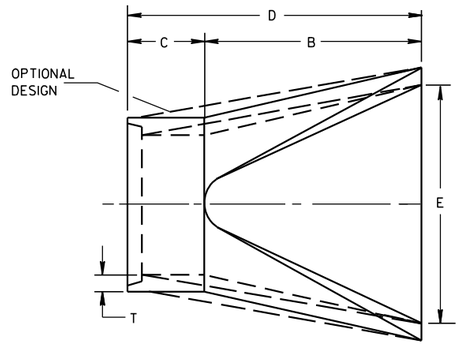


END VIEW

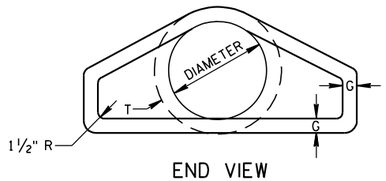


SIDE ELEVATION

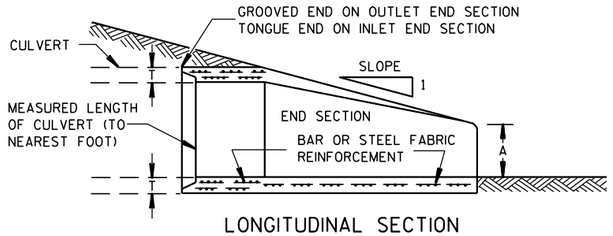
METAL ENDWALLS



PLAN

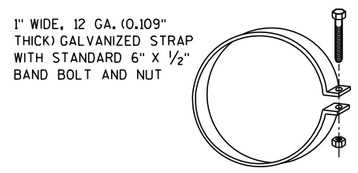


END VIEW



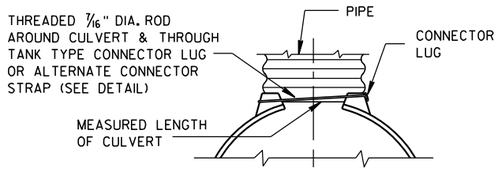
LONGITUDINAL SECTION

CONCRETE ENDWALLS

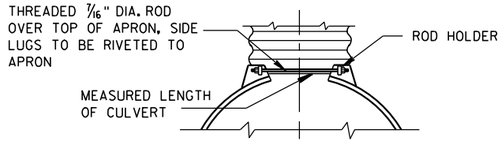


ALTERNATE FOR TYPE 1 CONNECTION

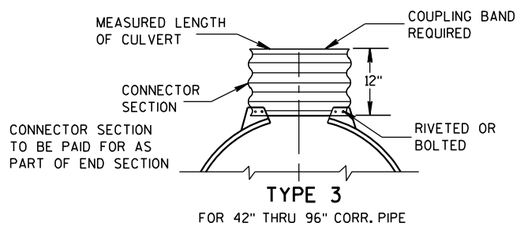
END SECTION CONNECTOR STRAP



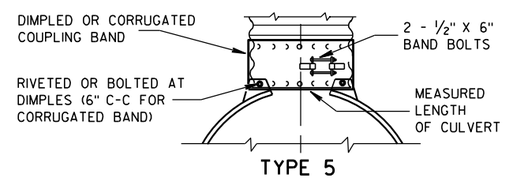
TYPE 1
FOR 12" THRU 24" CORR. PIPE



TYPE 2
FOR 30" THRU 96" CORR. PIPE



TYPE 3
FOR 42" THRU 96" CORR. PIPE



TYPE 5
ALTERNATE FOR:
ALL SIZES CORRUGATED CIRCULAR PIPE

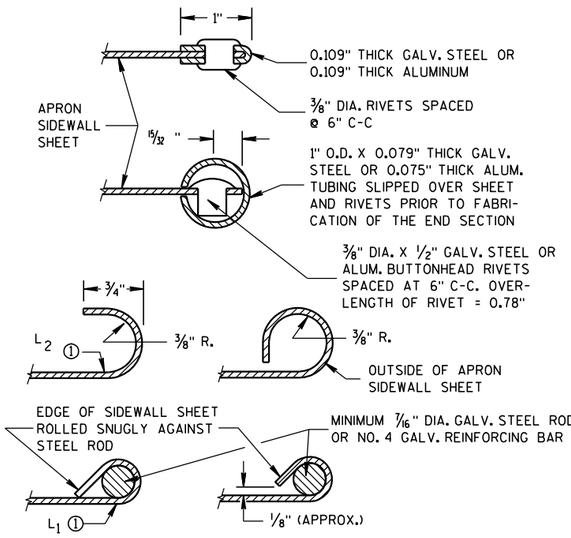
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL. AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

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

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

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

CONNECTION DETAILS



SECTION A-A

GENERAL NOTES

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

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

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

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

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

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

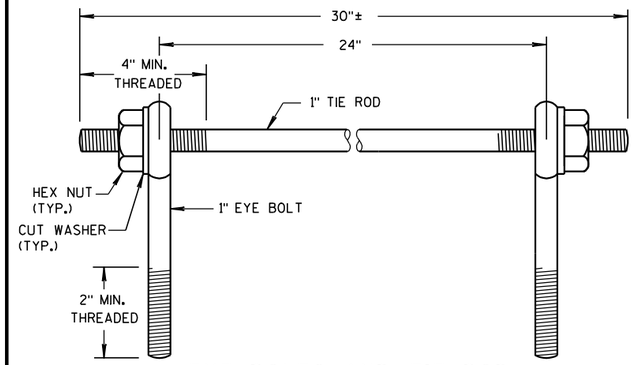
APRON ENDWALLS FOR CULVERT PIPE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

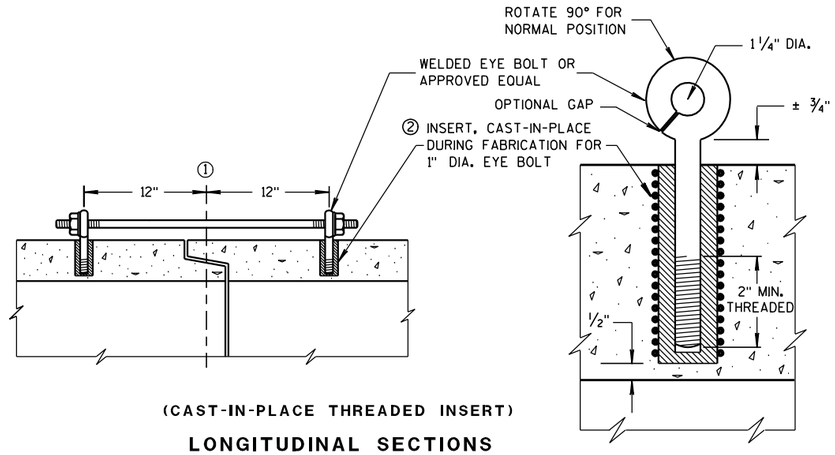
APPROVED
11/30/94 DATE
/S/ Rory L. Rhinesmith
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6

S.D.D. 8 F 1-11



EYE BOLTS AND TIE ROD



(CAST-IN-PLACE THREADED INSERT)

LONGITUDINAL SECTIONS

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

GENERAL NOTES

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

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

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

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

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

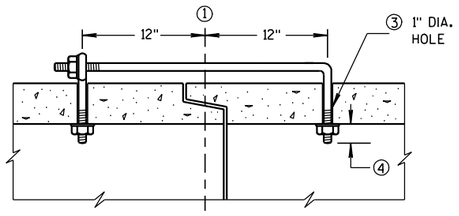
② THE INSIDE OF THE THREADED INSERTS SHALL BE CLEAN TO ALLOW THE INSERTION OF THREADED EYE BOLTS.

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

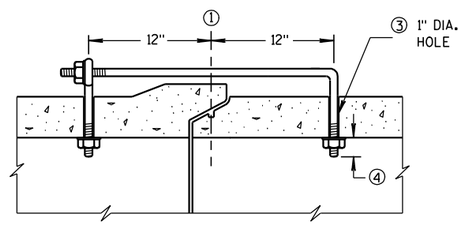
④ BOLT PROJECTION INSIDE OF PIPE SHALL NOT EXCEED 2 INCHES.

⑤ OPENING TO BE ROD DIAMETER PLUS 1 INCH.

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



(TONGUE & GROOVE PIPE)

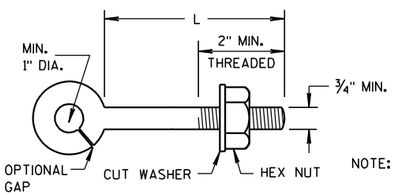


(MODIFIED BELL PIPE)

LONGITUDINAL SECTION

EYE BOLT DIMENSION TABLE

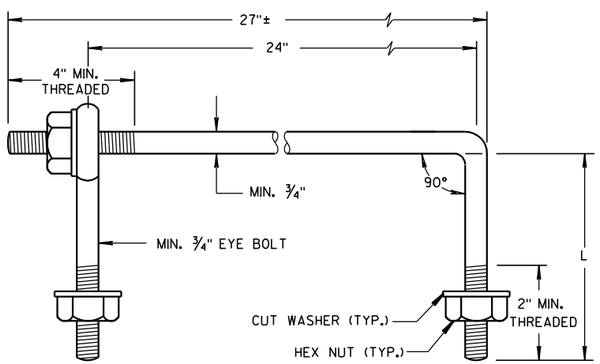
PIPE SIZE	L = LENGTH	
	TONGUE & GROOVE PIPE	MODIFIED BELL PIPE
18" TO 24"	4 1/2"	6 1/4"
30"	5"	7"
36"	5 1/2"	7"
42"	6"	
48"	6 1/2"	
60"	7 1/2"	
66"	8"	



NOTE:

EYE BOLT

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



EYE BOLT AND TIE ROD

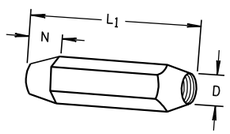
(JOINT TIES FOR 18" TO 66" DIA. CONCRETE PIPE)

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

ADJUSTABLE TIE ROD TABLE

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

DIMENSIONS SHOWN ARE IN INCHES



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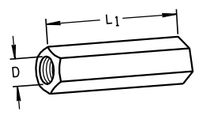
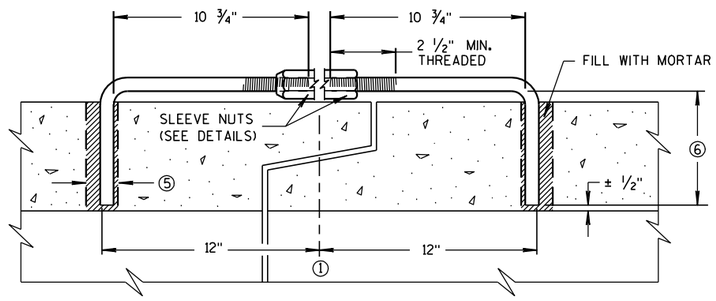


PLAIN

RIGHT AND LEFT THREADS

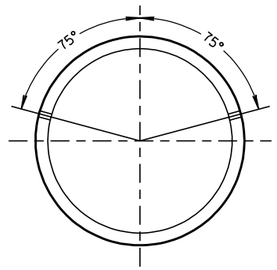
SLEEVE NUTS



LONGITUDINAL SECTION

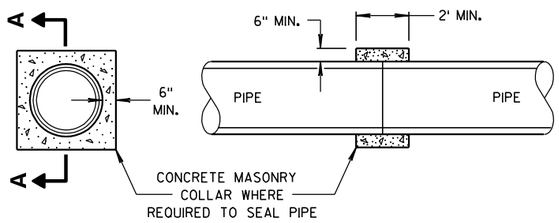
(JOINT TIES FOR 12" TO 108" DIA. CONCRETE PIPE)

ADJUSTABLE TIE ROD (ALTERNATE NO. 3)



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

TRANSVERSE SECTION



SECTION A-A

CONCRETE COLLAR DETAIL

JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

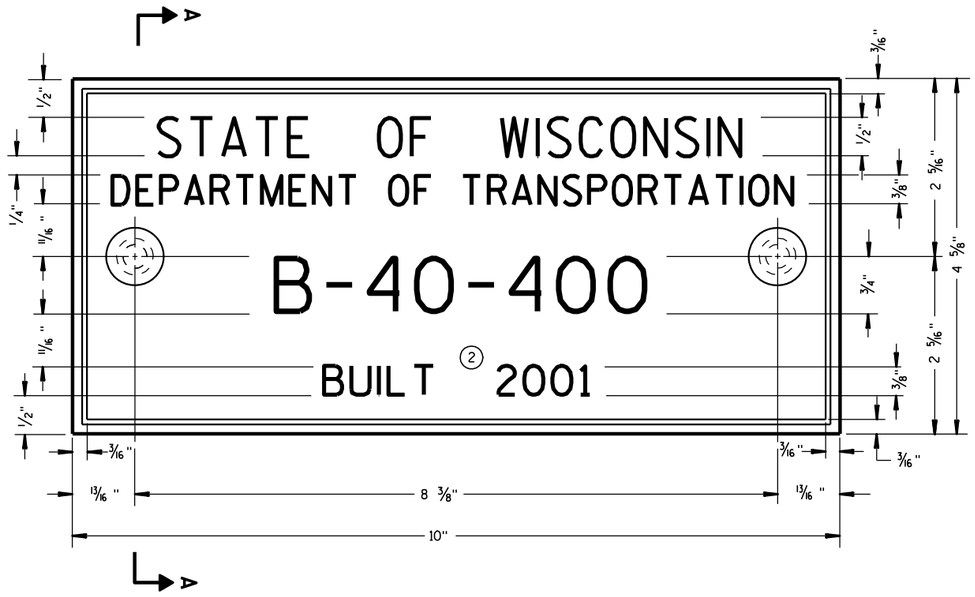
APPROVED
6/5/2012 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
FHWA

6

S.D.D. 8 F 4-7

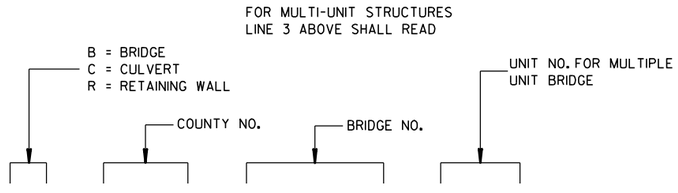
6

S.D.D. 8 F 4-7



TYPICAL NAME PLATE

(BRIDGES, CULVERTS, AND RETAINING WALLS)



NUMBERING DESIGNATION MULTI-UNIT STRUCTURES

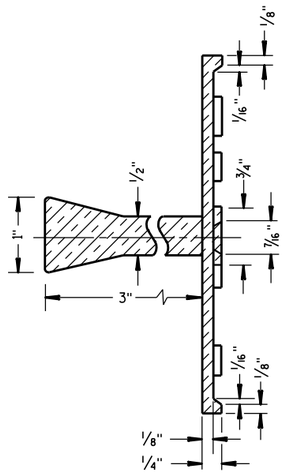
GENERAL NOTES

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

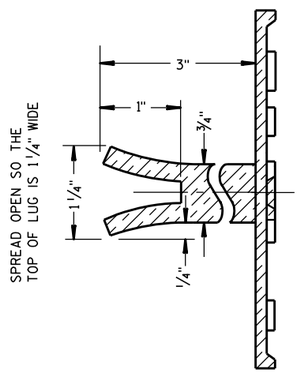
THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

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

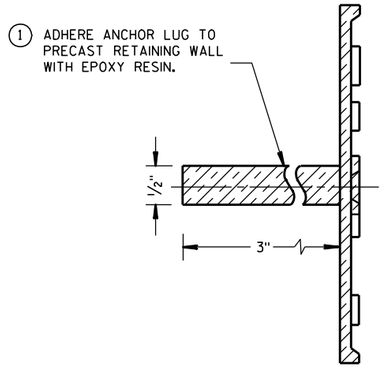
(2) REHABILITATION OF AN EXISTING STRUCTURE SHOULD USE THE DATE OF ORIGINAL STRUCTURE CONSTRUCTION.



SECTION A-A



ALTERNATE LUG



ALTERNATE LUG

(FOR ATTACHMENT TO PRECAST STRUCTURES)

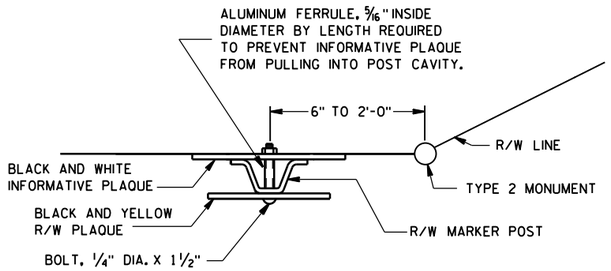
NAME PLATE (STRUCTURES)	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED	
3/26/10 DATE	/S/ Scot Beck -- CHIEF STRUCTURAL DEVELOP ENGINEER
FHWA	

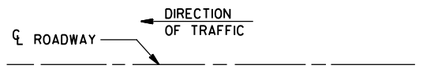
6

S.D.D. 12 A 3-10

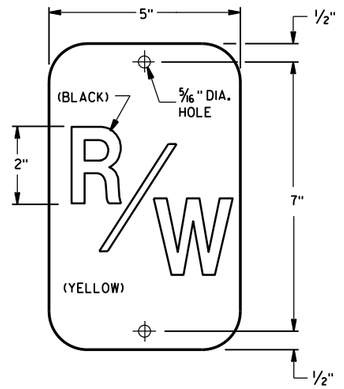
6

S.D.D. 12 A 3-10



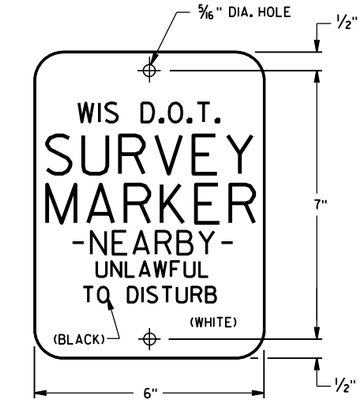


PLAN VIEW



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.

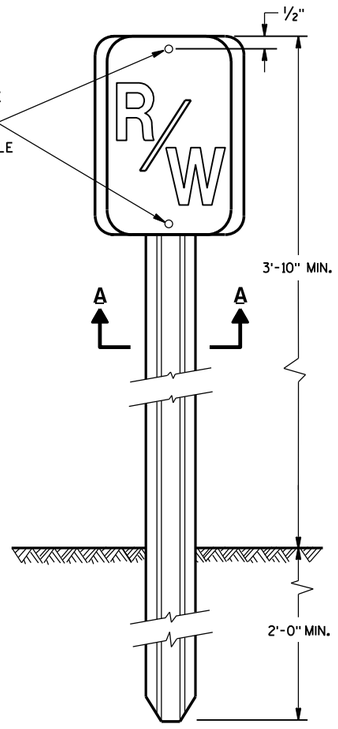
A STEEL MARKER POST FOR RIGHT-OF-WAY SHALL BE PLACED IN THE RIGHT-OF-WAY, WITH THE BACK OF THE POST ON THE LONGER RIGHT-OF-WAY TANGENT, 6 INCHES TO 24 INCHES FROM EACH TYPE 2 MONUMENT TO SERVE AS A GUARD POST, AND AT OTHER LOCATIONS AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

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.

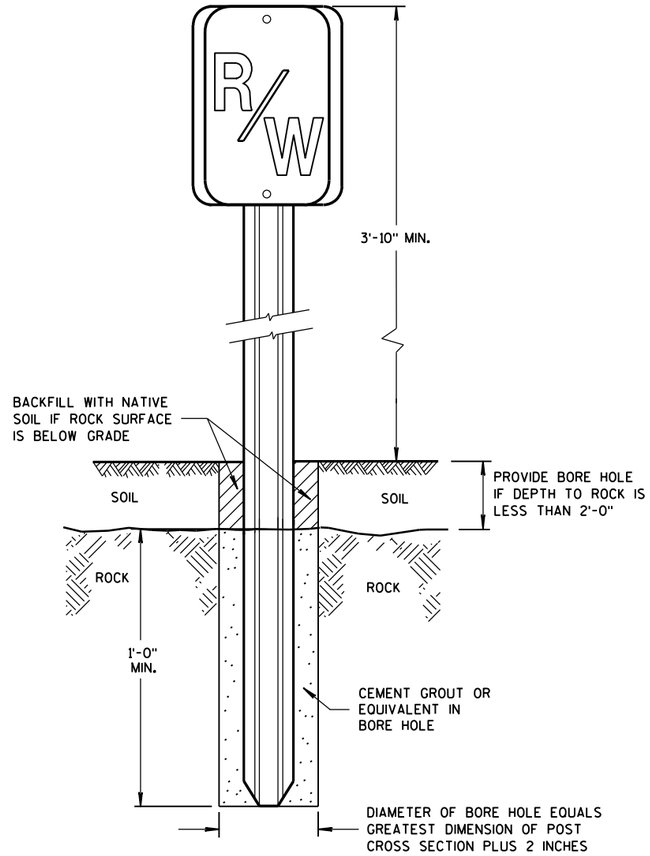
STEEL MARKER POSTS SHALL MEET THE MINIMUM MATERIAL REQUIREMENTS FOR STEEL DELINEATOR POSTS; EXCEPT POSTS PAINTED WITH FEDERAL YELLOW ENAMEL NEED NOT BE ZINC COATED.

(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.

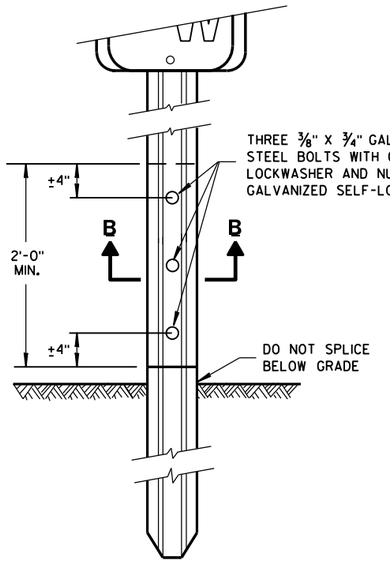
FILL THE BORE HOLE WITH CEMENT GROUT, OR EQUIVALENT. DEPENDING ON THE STABILITY OF THE ROCK.



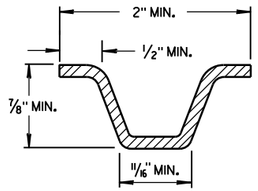
FRONT VIEW
STEEL MARKER POST



FRONT VIEW
ROCK INSTALLATION (1)

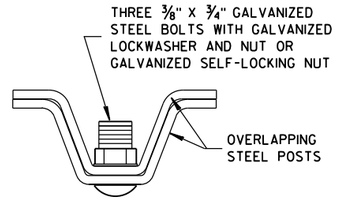


FRONT VIEW
SPLICE DETAIL



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
June, 2015 — DATE
/S/ Ray Kumapayi — CHIEF SURVEYING AND MAPPING ENGINEER
FHWA

6

S.D.D. 15 A 1-12a

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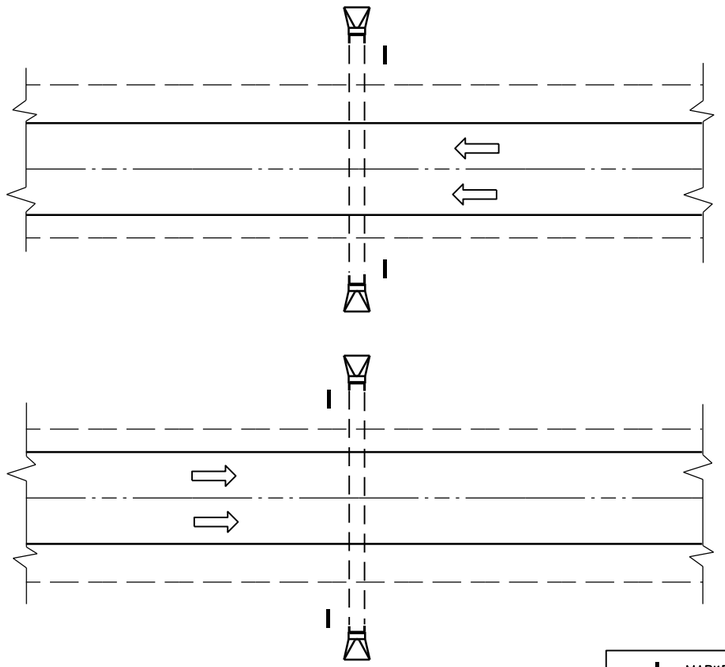
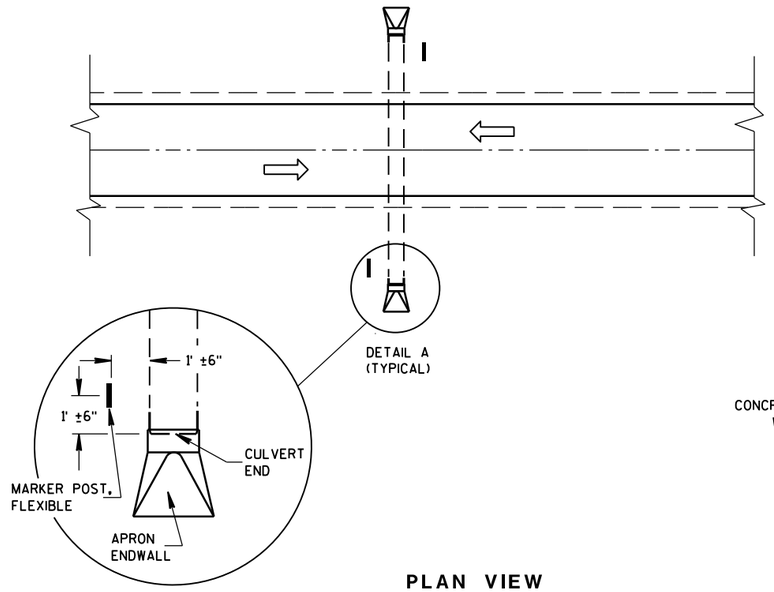
S.D.D. 15 A 1-12a



PLAN VIEW

DIVIDED HIGHWAY



DETAIL A
(TYPICAL)

PLAN VIEW

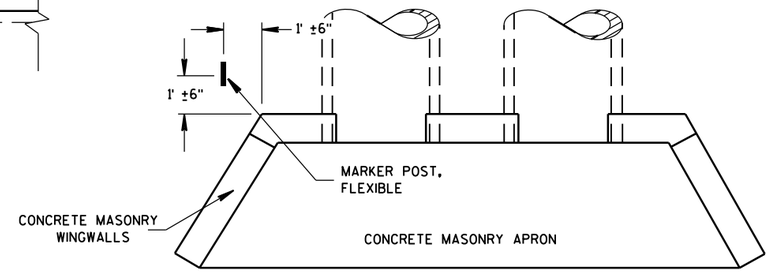
UNDIVIDED HIGHWAY

MARKER POST, FLEXIBLE

DIRECTION OF TRAFFIC FLOW

GENERAL NOTES

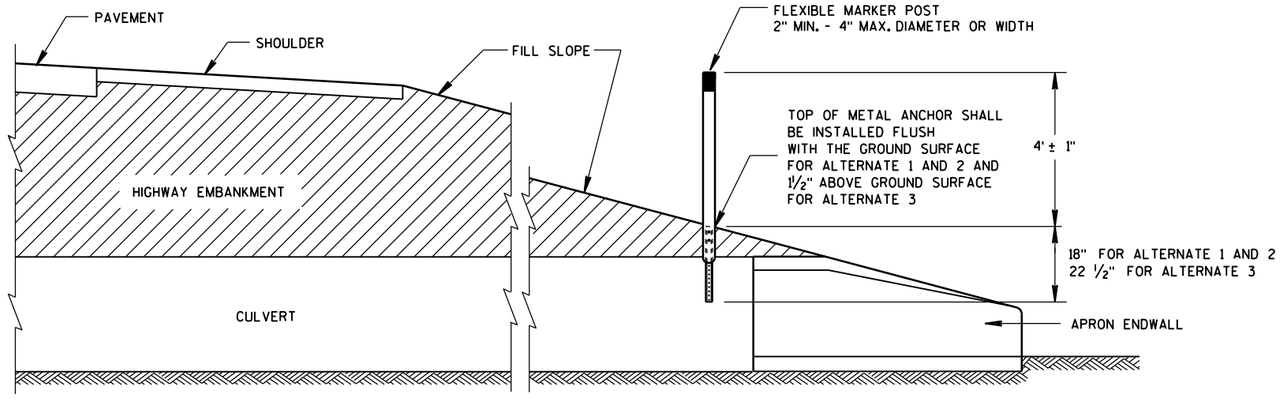
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.



PLAN VIEW

CONCRETE MASONRY ENDWALLS FOR CULVERT PIPE AND PIPE ARCH

FLEXIBLE MARKER POST LOCATION



CROSS SECTION

FLEXIBLE MARKER POST

FLEXIBLE MARKER POST FOR CULVERT END

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

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

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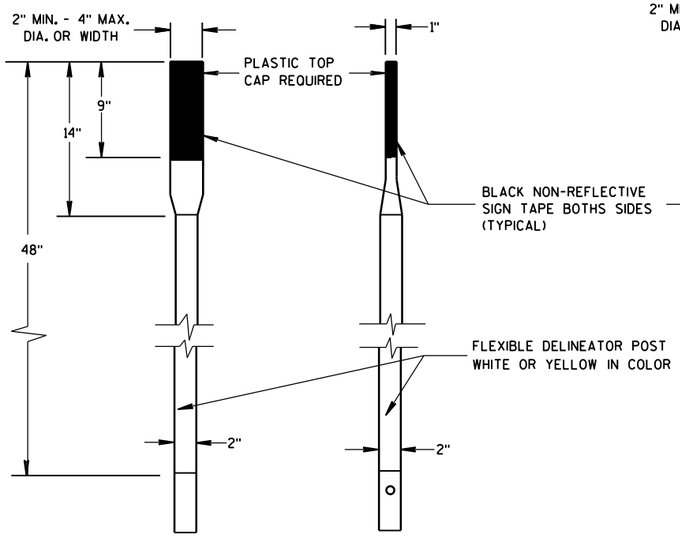
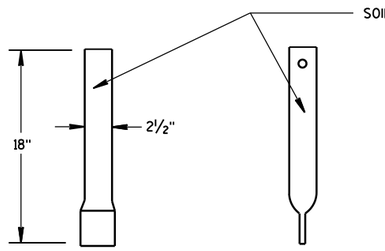
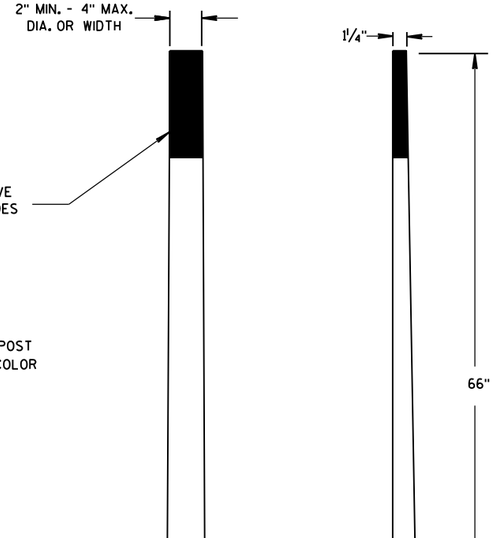
S.D.D. 15 A 3-2a





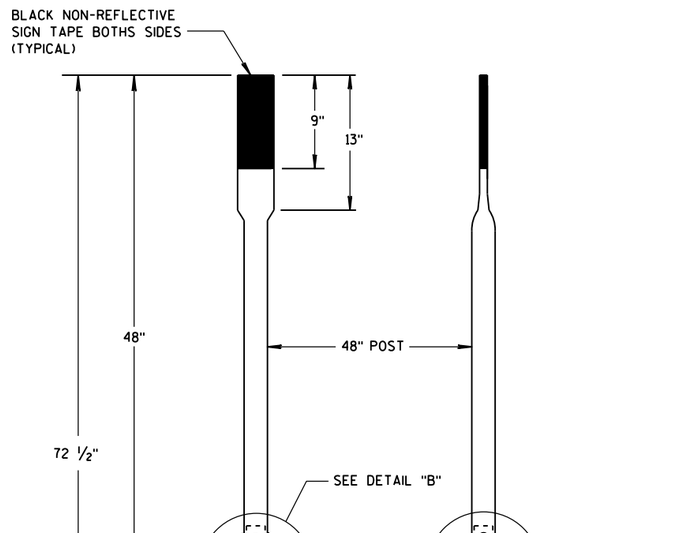
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

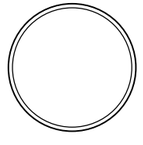
ALTERNATE 2



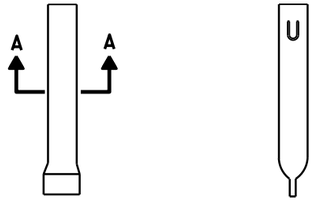
FRONT VIEW SIDE VIEW

ALTERNATE 3

FLEXIBLE MARKER POSTS

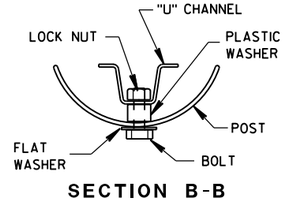


SECTION A-A

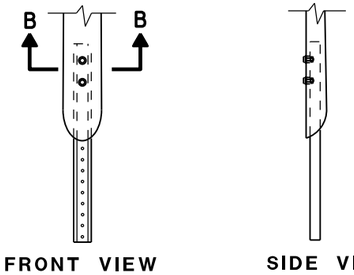


FRONT VIEW SIDE VIEW

ALTERNATE 1

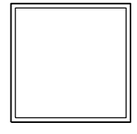


SECTION B-B

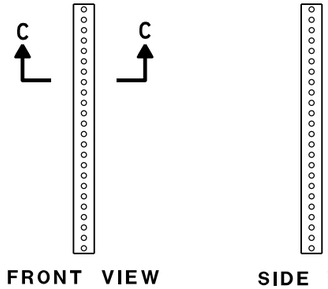


FRONT VIEW SIDE VIEW

ALTERNATE 2



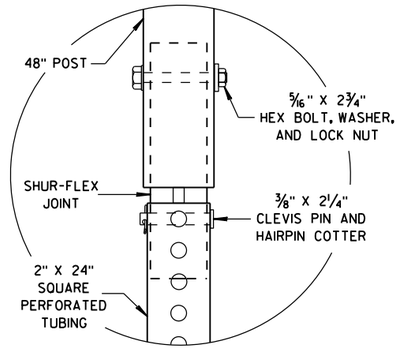
SECTION C-C



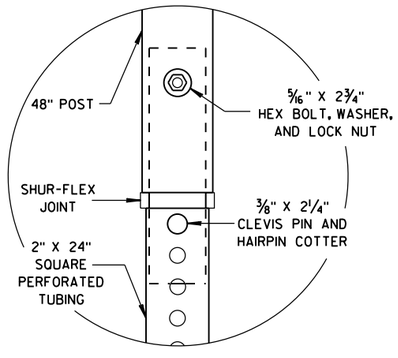
FRONT VIEW SIDE VIEW

ALTERNATE 3

FLEXIBLE MARKER POST ANCHORS



DETAIL B



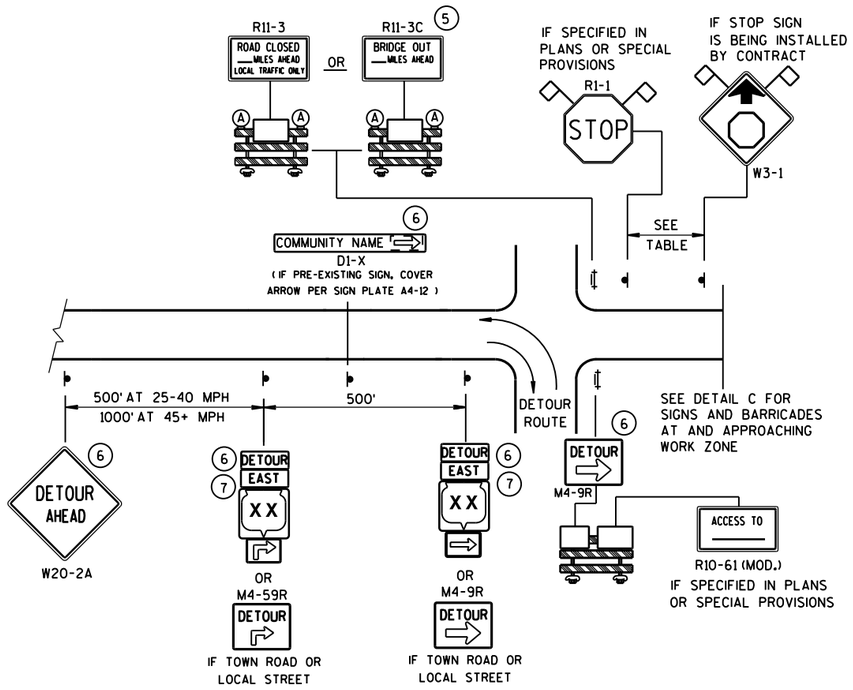
DETAIL C

FLEXIBLE MARKER POST
FOR CULVERT END

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

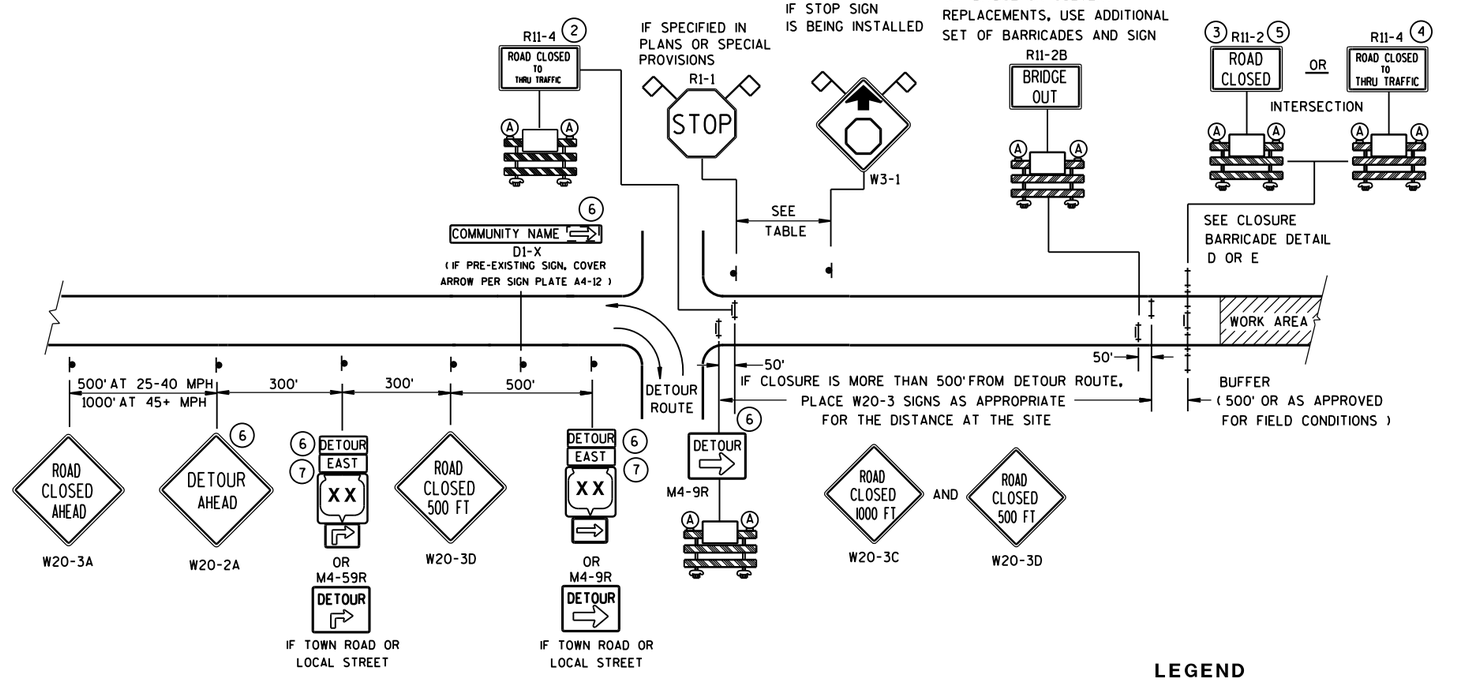
APPROVED
10/1/2012 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
IGN
FHWA

6
S.D.D. 15 A 3-2b



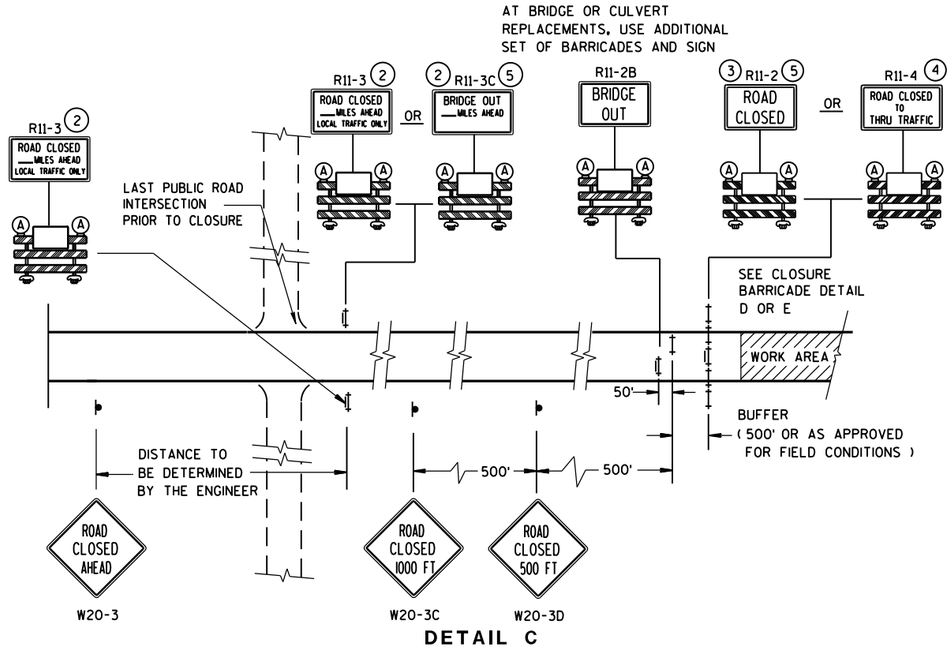
DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR

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)

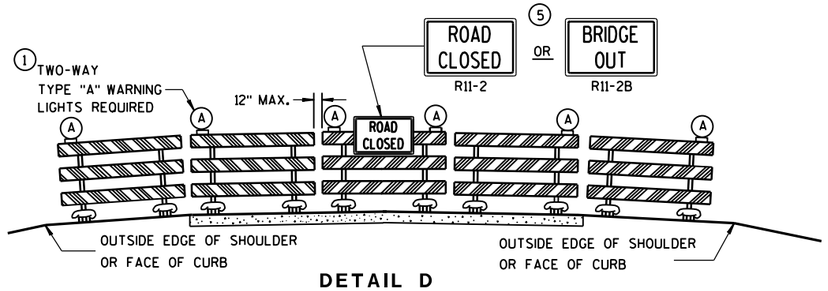
BARRICADES AND SIGNS FOR MAINLINE CLOSURES

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

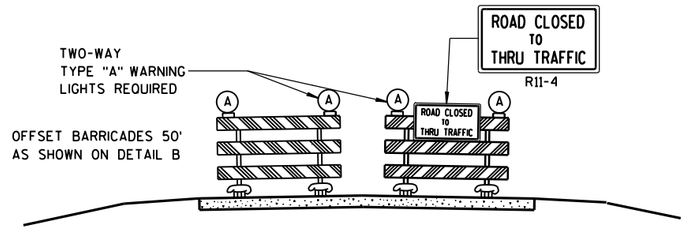
S.D.D. 15 C 2-6a



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 — FIC
FHWA

6

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

THIS DRAWING PROVIDES GENERAL GUIDANCE ON TYPICAL DETOUR SIGN LAYOUT AND SPACING. SEE PROJECT DETOUR SIGNING SHEETS FOR SPECIFIC DETAILS FOR EACH PROJECT.

GENERAL NOTES

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

IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. MODIFY EXISTING SIGNS WHERE POSSIBLE.

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

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

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

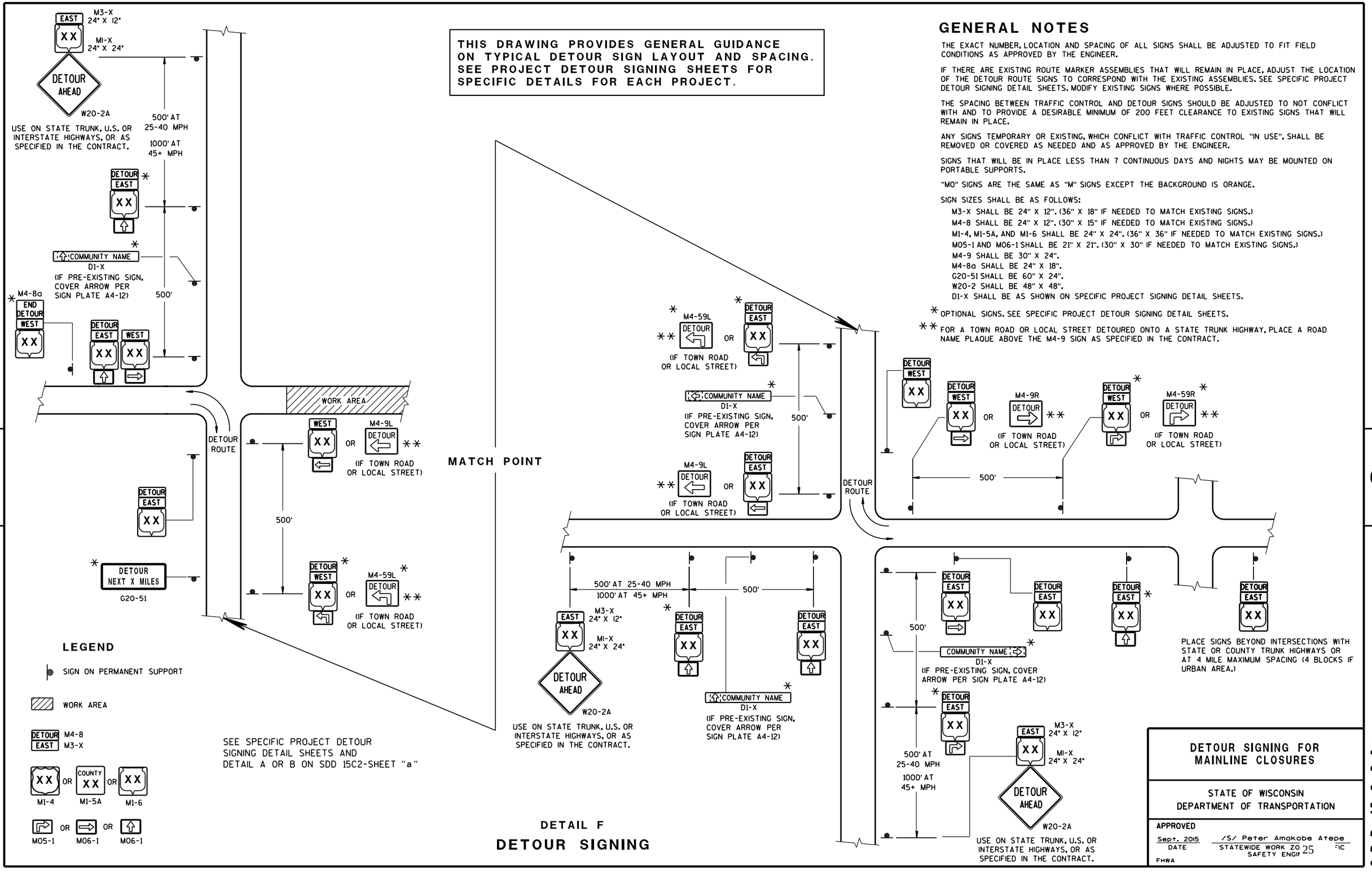
"MO" SIGNS ARE THE SAME AS "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

SIGN SIZES SHALL BE AS FOLLOWS:

- M3-X SHALL BE 24" X 12". (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS.)
- M4-8 SHALL BE 24" X 12". (30" X 15" IF NEEDED TO MATCH EXISTING SIGNS.)
- M1-4, M1-5A, AND M1-6 SHALL BE 24" X 24". (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS.)
- MO5-1 AND MO6-1 SHALL BE 21" X 21". (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS.)
- M4-9 SHALL BE 30" X 24".
- M4-8a SHALL BE 24" X 18".
- G20-51 SHALL BE 60" X 24".
- W20-2 SHALL BE 48" X 48".
- D1-X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.

* OPTIONAL SIGNS. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS.

** FOR A TOWN ROAD OR LOCAL STREET DETOURED ONTO A STATE TRUNK HIGHWAY, PLACE A ROAD NAME PLAQUE ABOVE THE M4-9 SIGN AS SPECIFIED IN THE CONTRACT.



LEGEND

- SIGN ON PERMANENT SUPPORT
- WORK AREA
- DETOUR EAST — M4-8 / M3-X
- XX OR COUNTY XX OR XX — M1-4 / M1-5A / M1-6
- MO5-1 OR MO6-1 OR MO6-1

SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS AND DETAIL A OR B ON SDD 15C2-SHEET "a"

DETAIL F

DETOUR SIGNING

DETOUR SIGNING FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

Sept. 2015 — DATE

/S/ Peter Amakobe Atepe — STATEWIDE WORK ZO... SAFETY ENGI...

FHWA

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

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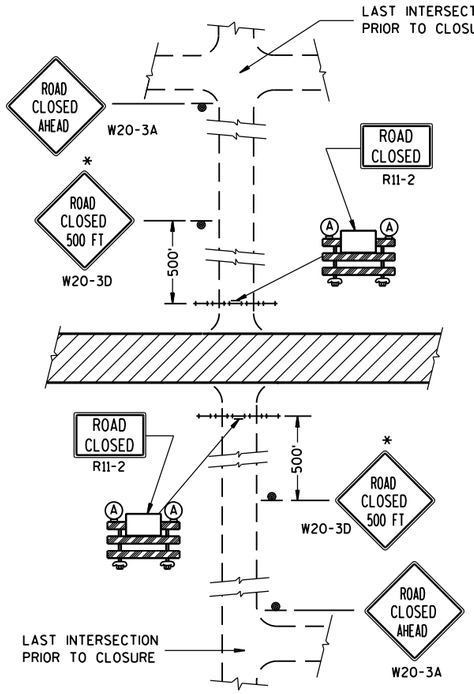
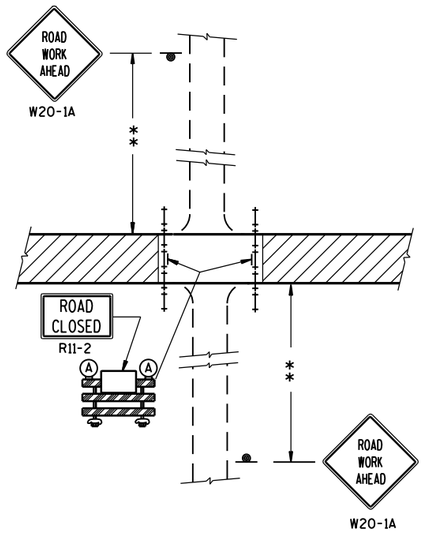


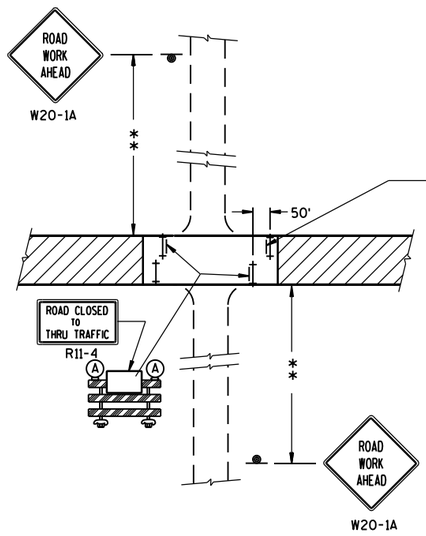
DETAIL 1

(NO ACCESS TO PROJECT)



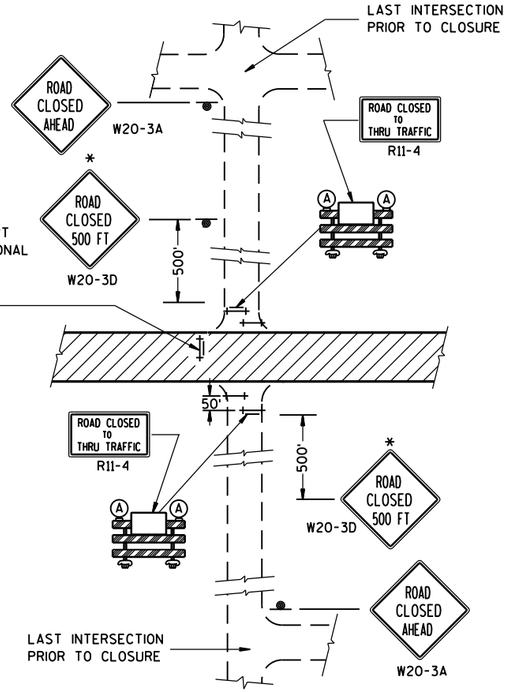
DETAIL 2

(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
Sept. 2015 — DATE
/S/ Peter Amakobe Atepe
STATEWIDE WORK ZO[illegible]FIC SAFETY ENGI[illegible]
FHWA

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S.D.D. 15 C 3-3

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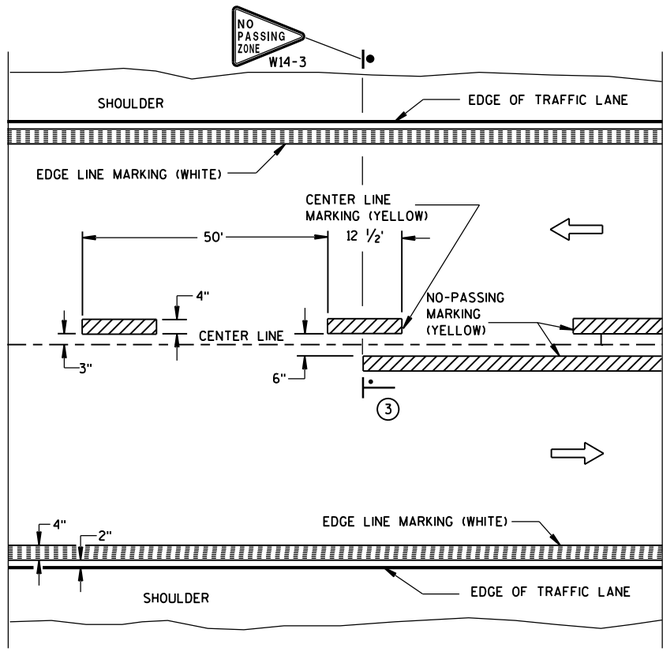
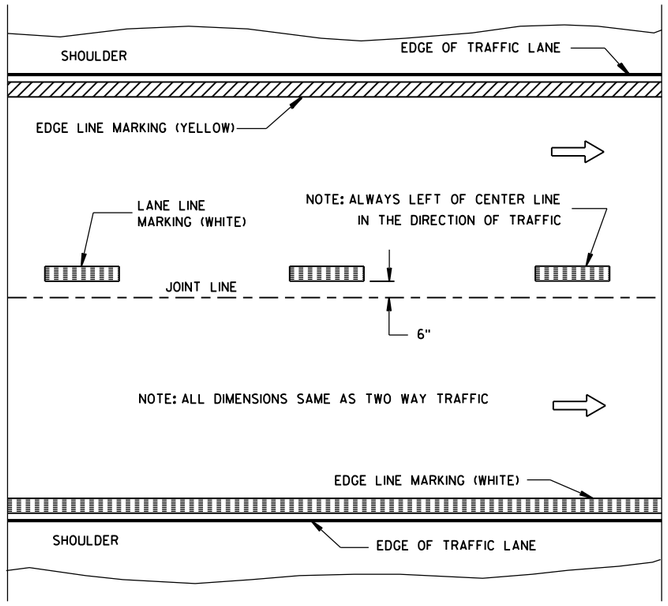
S.D.D. 15 C 3-3

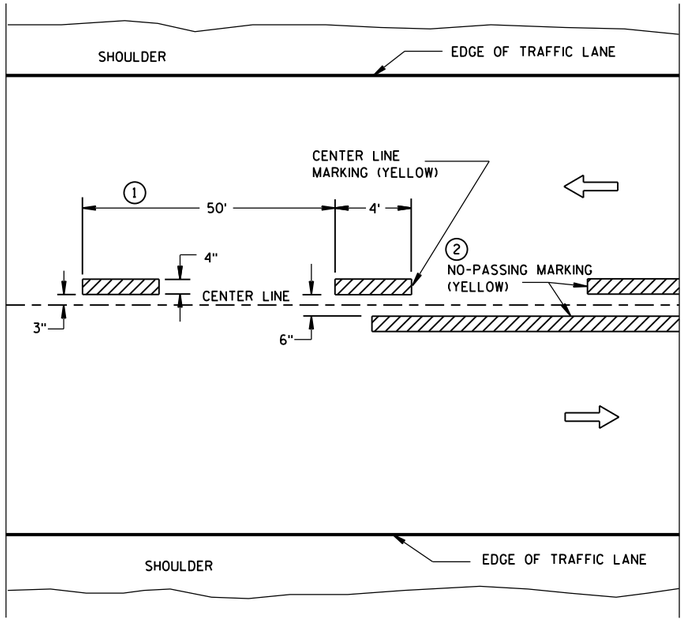


TWO WAY TRAFFIC

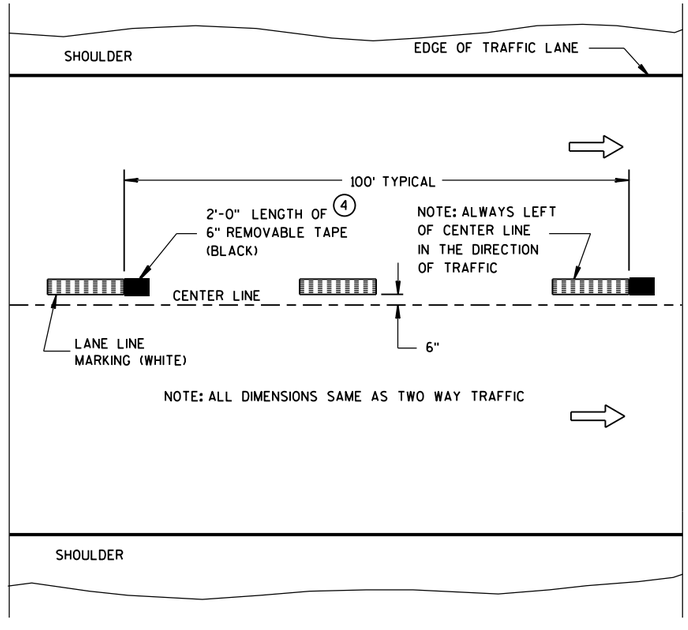


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY (INTERMEDIATE) PAVEMENT MARKING

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

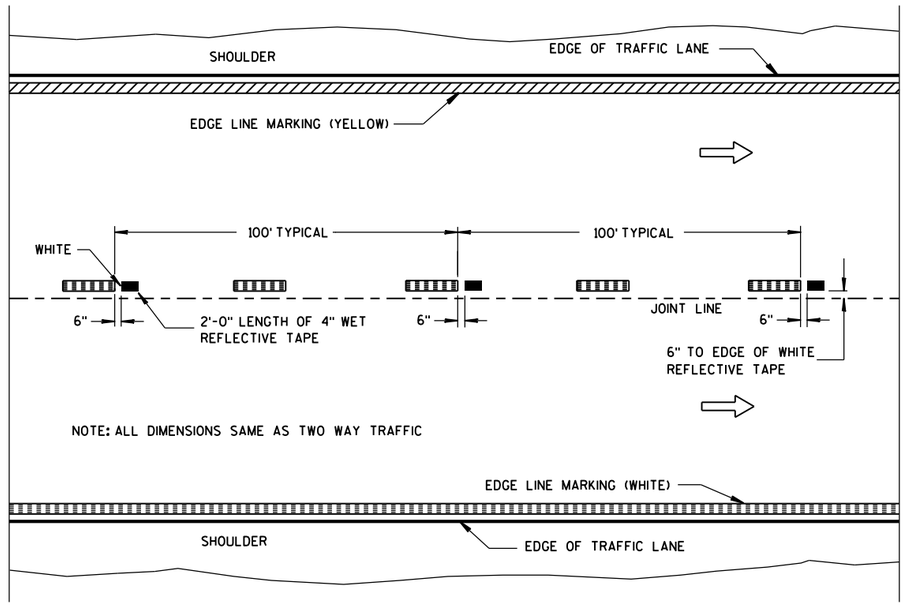
GENERAL NOTES

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

1. HALF CYCLE LENGTHS (25'±) WITH 2' MINIMUM STRIPE LENGTHS SHALL BE PROVIDED ON ROADWAYS (INCLUDING TEMPORARY TRAVELED WAYS) WITH REVERSE CURVATURE, CURVATURE OF OVER 5 DEGREES OR WHEN DIRECTED BY THE ENGINEER TO MARK UNUSUAL ALIGNMENT OF THE TRAVELED WAY.
2. NO PASSING ZONE TEMPORARY PAVEMENT MARKING IS REQUIRED TO BE PLACED, WHERE APPROPRIATE, ALONG WITH CENTERLINE TEMPORARY PAVEMENT MARKING WHEN A SAME DAY PERMANENT PAVEMENT MARKING ITEM IS INCLUDED IN THE CONTRACT.
3. NO PASSING ZONE MARKINGS ARE PLACED ACCORDING TO "T" MARKINGS. IF EXISTING NO PASSING ZONE W14-3 SIGNS ARE BEYOND 50 FEET IN EITHER DIRECTION, THE SIGNS SHALL BE MOVED TO THE "T" MARKINGS.
4. CONCRETE ONLY.

NOTE

ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL



WET REFLECTIVE TAPE SUPPLEMENT TO
SPRAYED OR NON WET REFLECTIVE TAPE LANE LINE

LEGEND

"T" MARKING

POST MOUNTED SIGN

PAVEMENT MARKING (MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

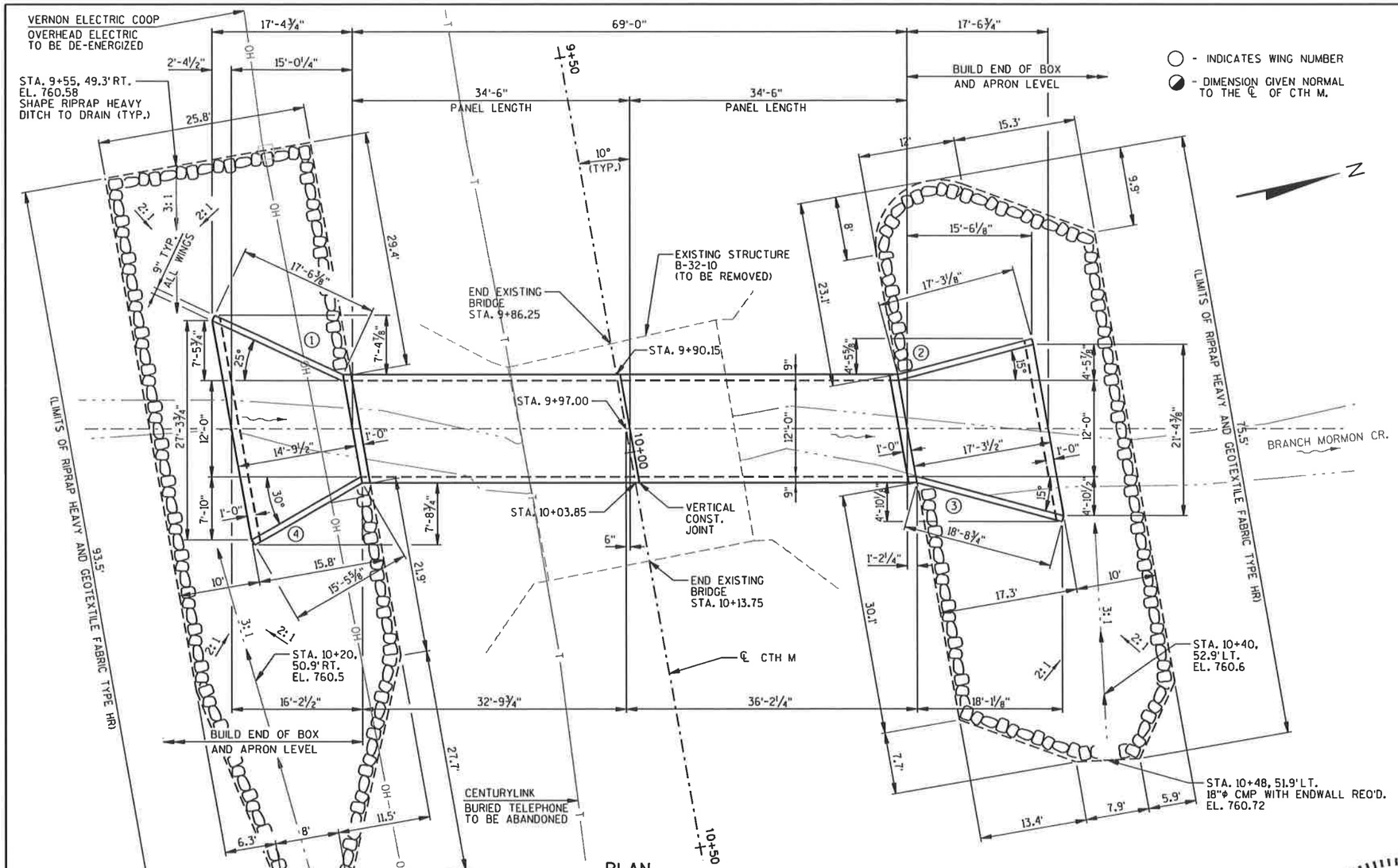
APPROVED
5-13-2013 DATE
/S/ Travis Feltes STATE TRAFFIC E
FHWA

6

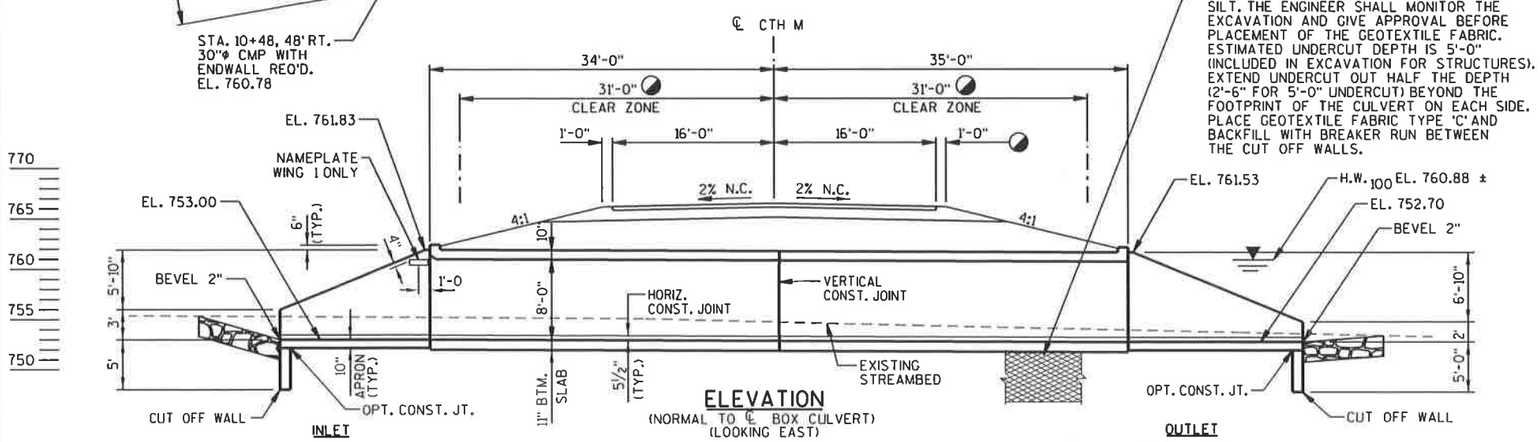
S.D.D. 15 C 8-16a

6

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



PLAN
(SINGLE CELL REINFORCED CONCRETE BOX CULVERT)



ELEVATION
(NORMAL TO ℄ BOX CULVERT)
(LOOKING EAST)

STATE PROJECT NUMBER

5436-00-70

BENCHMARKS

NO.	STA./OFFSET	DESCRIPTION	ELEV.
1	10+12.9, 12.9' LT.	CHISELED CROSS ON NE CORNER OF BRIDGE	766.86
2	9+96.9, 61.7' LT.	2 SPIKES IN 8" ϕ BOX ELDER TREE	736.19
3	10+48.1, 28.2' RT.	CHISELED + TOP OF REINFORCED CULVERT PIPE	764.36

DESIGN DATA

LIVE LOAD;
DESIGN LOADING : HL-93
INVENTORY RATING FACTOR: 1.05
OPERATIONAL RATING FACTOR: 1.35
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV) = 255 KIPS

TRAFFIC DATA;
A.A.D.T. (2017) = 760
A.A.D.T. (2037) = 880

EARTH LOAD : DESIGNED FOR 4.0 FEET TO 5.0 FEET OF FILL

ULTIMATE DESIGN STRESSES;
CONCRETE MASONRY — f'c = 3,500 P.S.I.
BAR STEEL REINFORCEMENT HS STRUCTURES — fy = 60,000 P.S.I.

FOUNDATION DATA;
ALLOWABLE SOIL BEARING CAPACITY — 4,000 P.S.F.

HYDRAULIC DATA;
100 YEAR FREQUENCY
DRAINAGE AREA — 0.66 SQ. MI.
Q_{100} — 500 C.F.S.
VELOCITY — 6.52 F.P.S.
WATERWAY AREA — 77 SQ. FT.
HIGH WATER $_{100}$ ELEVATION — 760.88 ±
ROADWAY OVERFLOW DESIGN FREQUENCY — N/A
Q_2 HIGH WATER ELEVATION (60 C.F.S.) — 757.50 ±
SCOUR CRITICAL CODE — 8

LIST OF DRAWINGS

WISCONSIN
LEAH J. RHODES
E-41726
BARABOO
WI
PROFESSIONAL ENGINEER

Leah J. Rhodes
4/11/2016

NO.	DATE	REVISION	BY

MSA PROFESSIONAL SERVICES
TRANSPORTATION • MUNICIPAL
DEVELOPMENT • ENVIRONMENTAL
1230 South Boulevard Baraboo, WI 53913
608-356-2771 1-800-362-4505 Fax: 608-356-2770

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher SDR 05/06/16
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE C-32-99

CTH M OVER BRANCH MORMON CREEK

COUNTY	TOWN/~~CITY/VILLAGE~~
LA CROSSE	GREENFIELD

DESIGN SPEC.
AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
JAS	LJR	RLR	LJR

GENERAL PLAN

SHEET 28 6

DESIGN CONTACT:
LEAH RHODES
(608) 355-8945

BRIDGE OFFICE CONTACT:
WILLIAM DREHER
(608) 266-8489

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DATE= 4/11/2016

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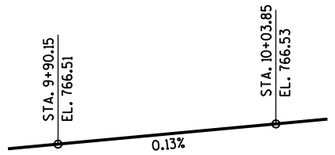
STATE PROJECT NUMBER

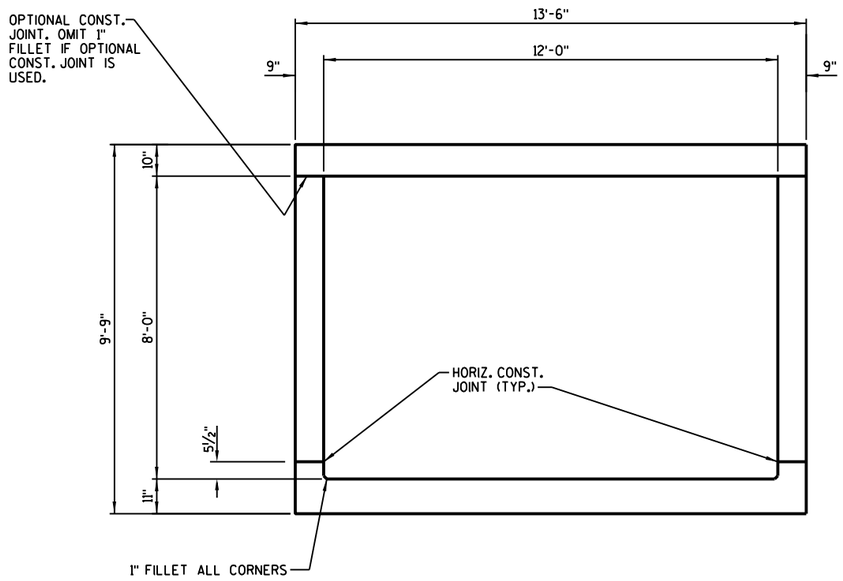
5436-00-70

STRUCTURE ESTIMATED QUANTITIES

ITEM NUMBER	BID ITEM	UNIT	TOTAL
203.0600.S.01	REMOVING OLD STRUCTURE OVER WATERWAY WITH MINIMAL DEBRIS STATION 10+00	LS	1
206.2000.01	EXCAVATION FOR STRUCTURES CULVERTS C-32-99	LS	1
210.0100	BACKFILL STRUCTURE	CY	1195
311.0115	BREAKER RUN	CY	390
504.0100	CONCRETE MASONRY CULVERTS	CY	131
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	19,450
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	23
606.0300	RIPRAP HEAVY	CY	280
645.0105	GEOTEXTILE FABRIC TYPE C	SY	382
645.0120	GEOTEXTILE FABRIC TYPE HR	SY	530
SPV.0105.01	TEMPORARY WATER DIVERSION, CULVERT C-32-99	LS	1
	NON-BID ITEMS		
	PREFORMED FILLER	SIZE	¾"



PROFILE GRADE LINE - CTH M



TYPICAL SECTION THRU BOX

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

THE FIRST DIGIT OF A THREE DIGIT BAR MARK SIGNIFIES THE BAR SIZE.

THE CONCRETE IN THE CUT OFF WALL MAY BE PLACED UNDERWATER IF THE EXCAVATION CANNOT BE DEWATERED.

THE ALTERNATE CUT OFF WALL MAY BE USED IN LIEU OF THE CAST IN PLACE CUT OFF WALLS. PAYMENT SHALL BE BASED ON CONCRETE CUT OFF WALLS.

REMOVE THE EXISTING TIMBER PILING TO EL. 757.0 OR BELOW.

ALL SPACES EXCAVATED AND NOT OCCUPIED BY THE NEW STRUCTURE AND BREAKER RUN SHALL BE BACKFILLED WITH BACKFILL STRUCTURE TO THE ELEVATION OF THE ROADWAY SUBGRADE. THE BACKFILL STRUCTURE ESTIMATED QUANTITIES ASSUMED A 1½:1 EXCAVATION SLOPE. BACKFILL STRUCTURE IS REQUIRED BEHIND ALL WING WALLS.

THIS STRUCTURE WILL REPLACE EXISTING BRIDGE B-32-10, A 27 FT. LONG SINGLE SPAN STEEL DECK GIRDER BRIDGE ON TIMBER BACKED ABUTMENTS AND TIMBER PILING.

THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES CULVERTS (C-32-99)" SHALL BE THE EXISTING GROUND LINE.

THE CONTRACTOR MAY FURNISH A PRECAST CONCRETE BOX CULVERT IN LIEU OF THE CAST-IN-PLACE BOX CULVERT WITH THE ACCEPTANCE OF THE SHOP DRAWINGS BY THE STRUCTURES DESIGN SECTION. THE PRECAST CONCRETE BOX CULVERT SHALL CONFORM TO PRECAST DETAILS IN CHAPTER 36 STANDARDS OF THE CURRENT WISCONSIN DOT BRIDGE MANUAL. PAYMENT FOR THE PRECAST CULVERT SHALL BE BASED ON THE QUANTITIES AND PRICES BID FOR THE ITEMS LISTED IN THE "STRUCTURE ESTIMATED QUANTITIES".

ELEVATIONS SHOWN ON THIS PLAN ARE REFERENCED TO NAVD 88 (1996 ADJUSTED), AND WERE ESTABLISHED AT THE SITE USING GPS TECHNOLOGY.

APRONS AND BOTTOM SLAB MAY BE POURED CONTINUOUSLY.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE C-32-99

DRAWN BY RLR | PLANS CK'D. LJR

CROSS SECTION, QUANTITIES, NOTES & DETAILS

SHEET 7 OF 6
29

8

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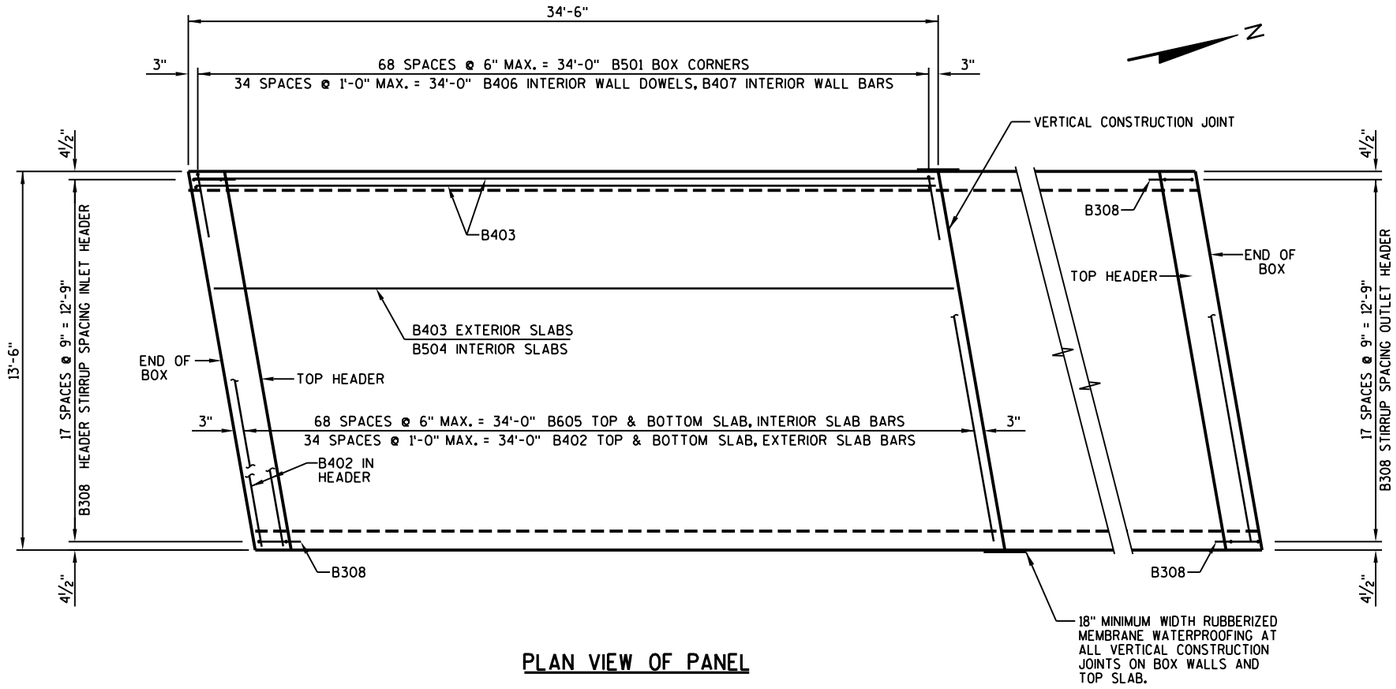
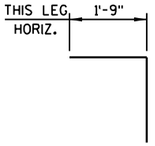
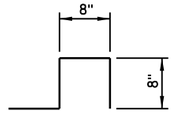
STATE PROJECT NUMBER
5436-00-70



PLAN VIEW OF PANEL



B501

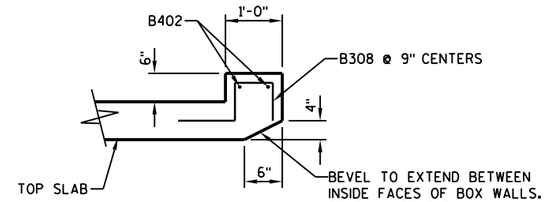


B308

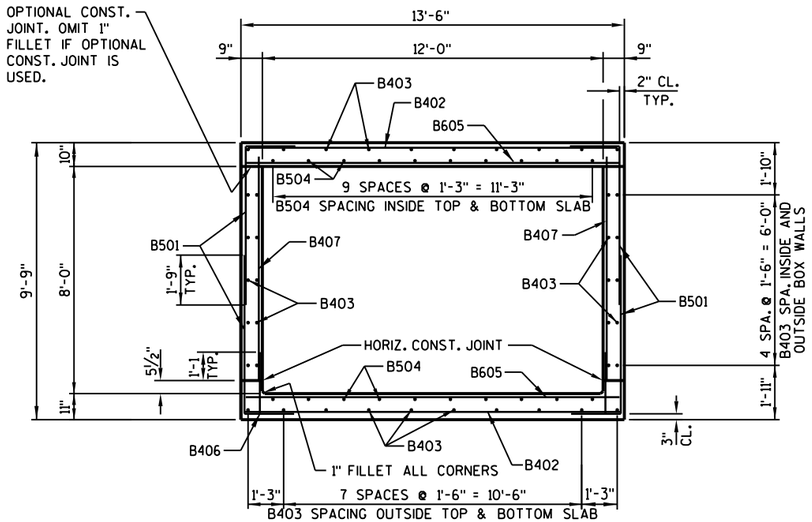
BILL OF BARS — UNCOATED 15,385 LBS.

MARK	NO. REQ'D.	LENGTH	BENT	LOCATION
B501	552	7'-3"	X	BOX CORNERS - TOP & BOTTOM - TRANS.
B402	144	13'-4"		BOX EXTERIOR SLABS & HEADERS - TRANS.
B403	80	34'-2"		BOX EXTERIOR SLABS & WALLS - LONGIT.
B504	40	34'-2"		BOX INTERIOR SLABS - LONGIT.
B605	276	13'-4"		BOX INTERIOR SLABS - TRANS.
B406	140	2'-2"		BOX INTERIOR WALL DOWELS - VERT.
B407	140	7'-10"		BOX INTERIOR WALLS - VERT.
B308	36	2'-3"	X	BOX HEADER STIRRUPS - VERT.
B509	44	4'-0"		BOX VERT. CONST. JOINT DOWELS - VERT.

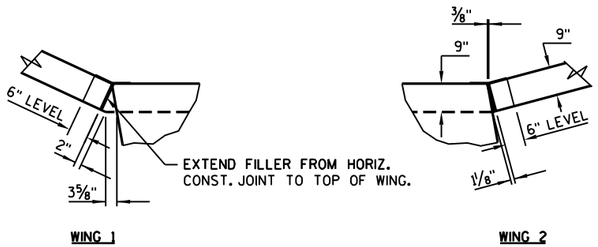
DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.

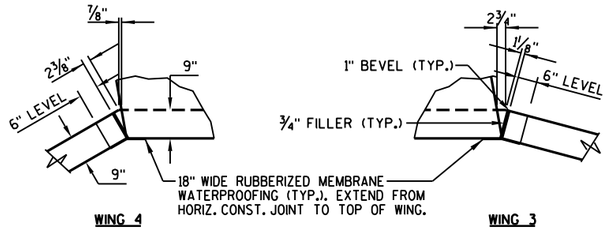


SECTION THRU TOP HEADER

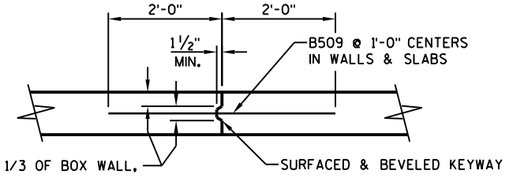


TYPICAL SECTION THRU BOX





CORNER DETAILS



⊛ — IN LIEU OF CONSTRUCTION JOINTS IN THE BOTTOM SLAB, THE CONTRACTOR MAY USE 2" DEEP SAW CUTS WITHIN 12 HOURS AFTER POURING.

VERTICAL CONSTRUCTION JOINT

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE C-32-99

DRAWN BY RLR | PLANS CK'D. JAS

BOX CULVERT

SHEET 3 OF 6
30

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DATE= 2/2/2016

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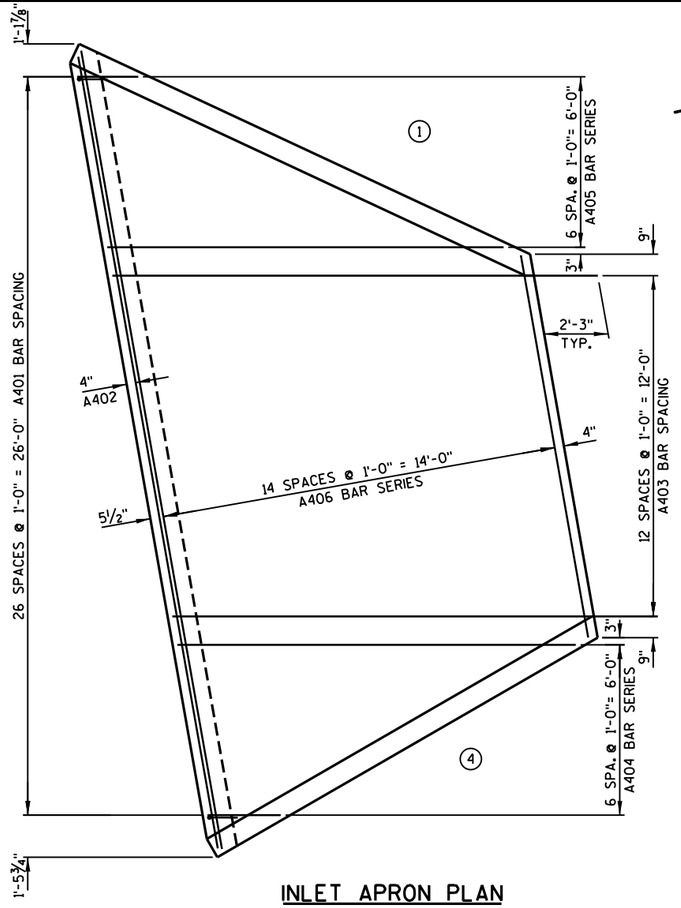
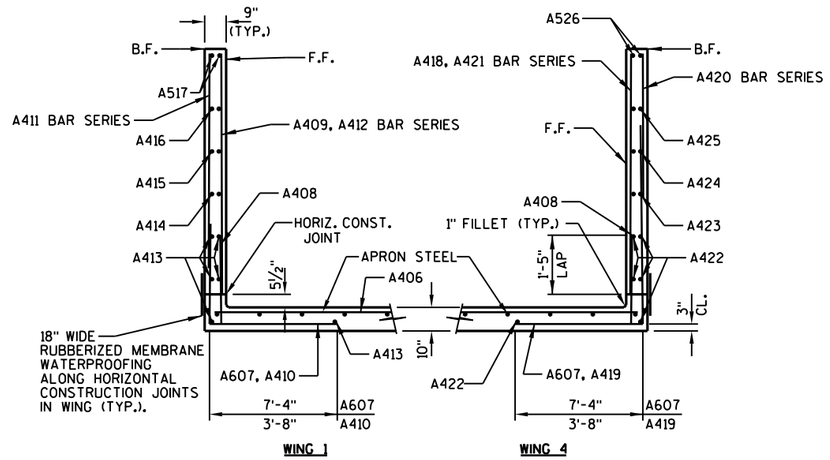
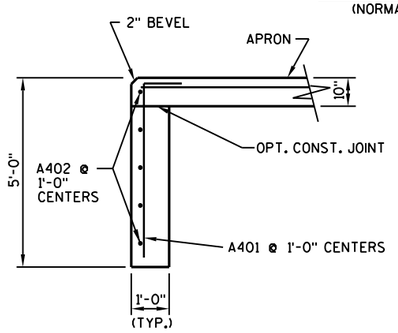
STATE PROJECT NUMBER
5436-00-70



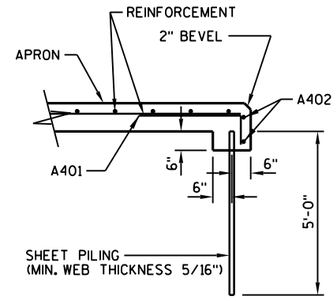
INLET APRON PLAN



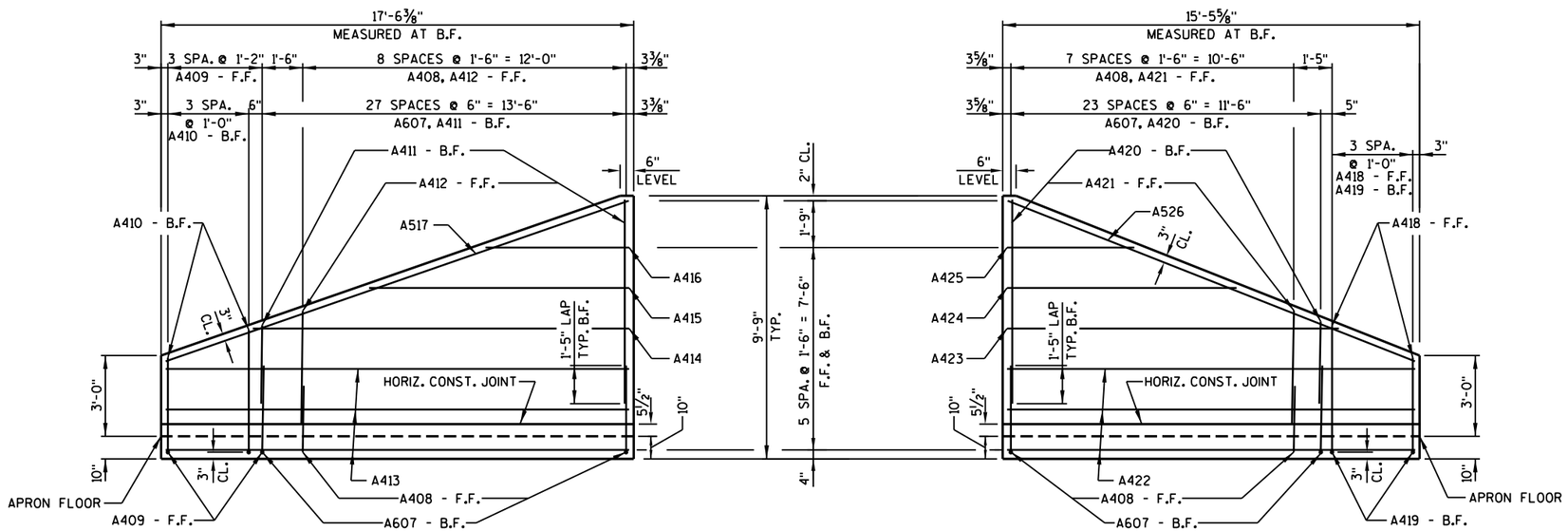
SECTION THRU WINGS
(NORMAL TO WINGWALLS)



SECTION THRU INLET CUT-OFF WALL



ALTERNATE CUT-OFF WALL



WING 1 — INLET WING ELEVATIONS — WING 4

BILL OF BARS — UNCOATED 2060 LBS.

MARK	NUMBER REQUIRED	LENGTH	BENT	BAR SERIES	LOCATION
A401	27	5'-6"	X		INLET APRON CUT-OFF WALL - VERT.
A402	5	28'-3"			INLET APRON CUT-OFF WALL - TRANS.
A403	13	17'-1"			INLET APRON - LONGIT.
A404	7	8'-3"		*	INLET APRON @ WING 4 - LONGIT.
A405	7	8'-0"		*	INLET APRON @ WING 1 - LONGIT.
A406	15	21'-1"		*	INLET APRON - TRANS.
A607	52	10'-5"	X		WINGS 1 & 4 - B.F. DOWELS - VERT.
A408	17	2'-6"			WINGS 1 & 4 - F.F. DOWELS - VERT.
A409	4	4'-1"		*	WING 1 - F.F. - END - VERT.
A410	4	7'-7"	X	*	WING 1 - B.F. - END - VERT.
A411	28	5'-3"		*	WING 1 - B.F. - VERT.
A412	9	6'-3"		*	WING 1 - F.F. - VERT.
A413	6	17'-2"			WING 1 & INLET APRON - LONGIT.
A414	2	13'-11"			WING 1 - F.F. & B.F. - LONGIT.
A415	2	9'-7"			WING 1 - F.F. & B.F. - LONGIT.
A416	2	5'-4"			WING 1 - F.F. & B.F. - LONGIT.
A517	2	18'-2"			WING 1 - F.F. & B.F. - TOP - LONGIT.
A418	4	4'-1"		*	WING 4 - F.F. - END - VERT.
A419	4	7'-8"	X	*	WING 4 - B.F. - END - VERT.
A420	24	5'-4"		*	WING 4 - B.F. - VERT.
A421	8	6'-3"		*	WING 4 - F.F. - VERT.
A422	6	15'-1"			WING 4 & INLET APRON - LONGIT.
A423	2	12'-3"			WING 4 - F.F. & B.F. - LONGIT.
A424	2	8'-6"			WING 4 - F.F. & B.F. - LONGIT.
A425	2	4'-8"			WING 4 - F.F. & B.F. - LONGIT.
A526	2	16'-2"			WING 4 - F.F. & B.F. - TOP - LONGIT.

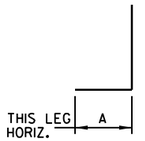
DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.

* - LENGTH SHOWN FOR BAR IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS. BENT BARS IF USED IN BAR SERIES TABLE SHALL BE BENT AFTER CUTTING.

BAR SERIES TABLE

MARK	NO. REQUIRED	LENGTH
A404	1 SERIES OF 7	2'-6" TO 14'-0"
A405	1 SERIES OF 7	2'-1" TO 13'-11"
A406	1 SERIES OF 15	13'-8" TO 28'-6"
A409	1 SERIES OF 4	3'-6" TO 4'-8"
A410	1 SERIES OF 4	7'-1" TO 8'-1"
A411	1 SERIES OF 28	2'-11" TO 7'-7"
A412	1 SERIES OF 9	4'-2" TO 8'-4"
A418	1 SERIES OF 4	3'-6" TO 4'-8"
A419	1 SERIES OF 4	7'-1" TO 8'-3"
A420	1 SERIES OF 24	3'-1" TO 7'-7"
A421	1 SERIES OF 8	4'-2" TO 8'-4"

BUNDLE AND TAG EACH SERIES SEPARATELY



MARK	A
A401	1'-0"
A607	7'-4"
A410 A419	3'-8"

LEGEND

◯ — INDICATES WING NUMBER

F.F. — FRONT FACE

B.F. — BACK FACE

CL. — CLEAR

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE C-32-99

DRAWN BY RLR | PLANS CK'D. JAS

INLET APRON & WING DETAILS

SHEET 4 OF 6
31

8

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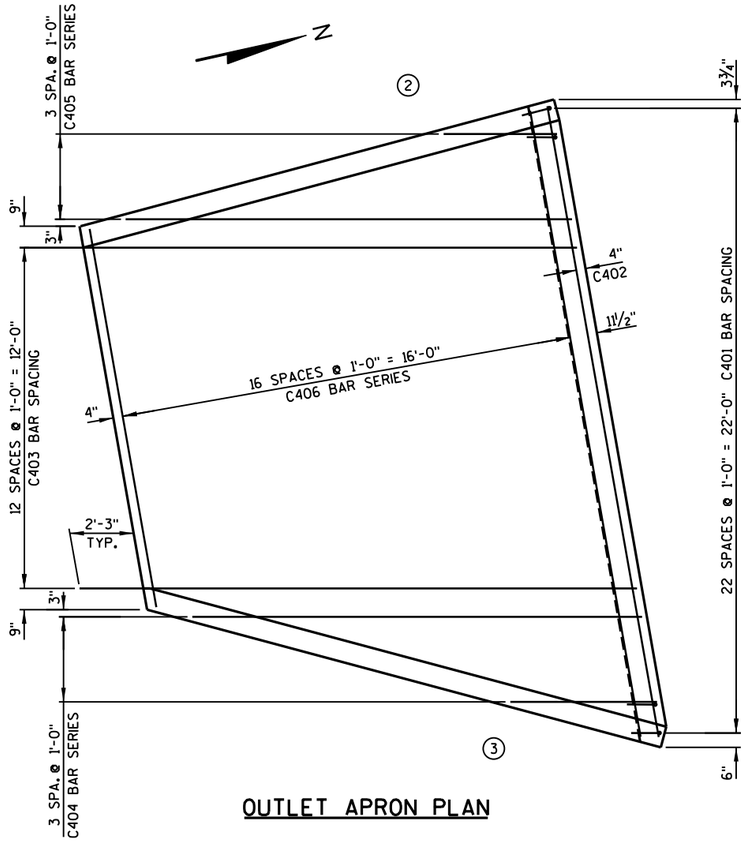
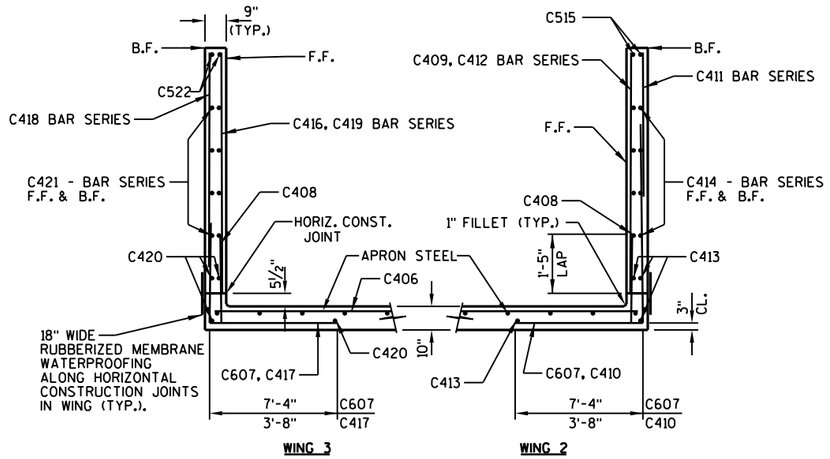
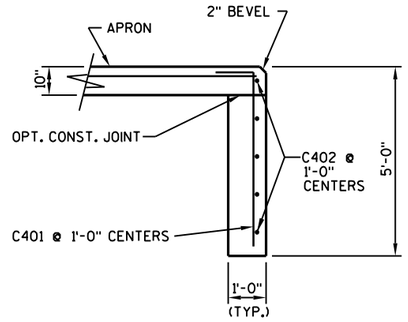


OUTLET APRON PLAN



SECTION THRU WINGS

(NORMAL TO WINGWALLS)



SECTION THRU OUTLET CUT OFF WALL

FOR ALTERNATE CUT OFF WALL DETAIL, SEE SHEET 4.

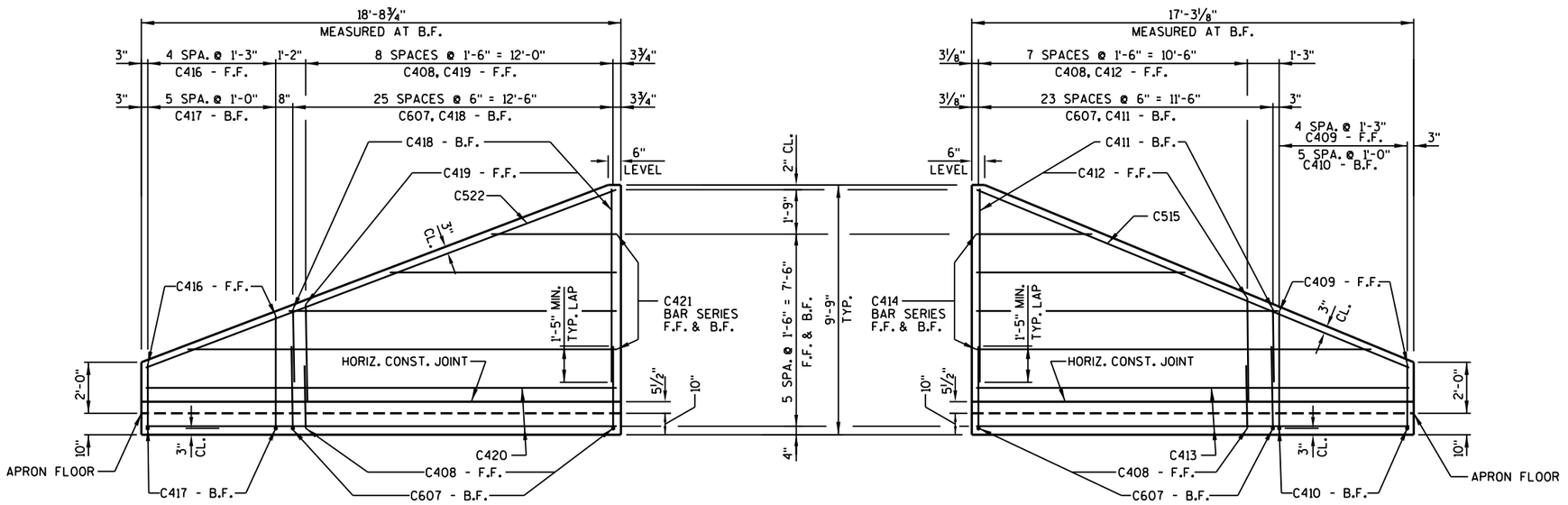
BILL OF BARS

UNCOATED 2005 LBS.

MARK	NUMBER REQUIRED	LENGTH	BENT	BAR SERIES	LOCATION
C401	23	5'-6"	X		OUTLET APRON CUT-OFF WALL - VERT.
C402	5	22'-6"			OUTLET APRON CUT-OFF WALL - TRANS.
C403	13	19'-8"			OUTLET APRON - LONGIT.
C404	4	10'-6"		*	OUTLET APRON @ WING 3 - LONGIT.
C405	4	9'-10"		*	OUTLET APRON @ WING 2 - LONGIT.
C406	17	17'-11"		*	OUTLET APRON - TRANS.
C607	50	10'-5"	X		WINGS 2 & 3 - B.F. DOWELS - VERT.
C408	17	2'-6"			WINGS 2 & 3 - F.F. DOWELS - VERT.
C409	5	3'-6"		*	WING 2 - F.F. - END - VERT.
C410	6	7'-1"	X	*	WING 2 - B.F. - END - VERT.
C411	24	5'-3"		*	WING 2 - B.F. - VERT.
C412	8	6'-2"		*	WING 2 - F.F. - VERT.
C413	4	16'-11"			WING 2 & OUTLET APRON - LONGIT.
C414	8	9'-11"		*	WING 2 - F.F. & B.F. - LONGIT.
C515	2	18'-3"			WING 2 - F.F. & B.F. - TOP - LONGIT.
C416	5	3'-5"		*	WING 3 - F.F. - END - VERT.
C417	6	7'-0"	X	*	WING 3 - B.F. - END - VERT.
C418	26	5'-3"		*	WING 3 - B.F. - VERT.
C419	9	6'-0"		*	WING 3 - F.F. - VERT.
C420	4	18'-4"			WING 3 & OUTLET APRON - LONGIT.
C421	8	10'-9"		*	WING 3 - F.F. & B.F. - LONGIT.
C522	2	19'-7"			WING 3 - F.F. & B.F. - TOP - LONGIT.

DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.

* - LENGTH SHOWN FOR BAR IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS. BENT BARS IF USED IN BAR SERIES TABLE SHALL BE BENT AFTER CUTTING.



WING 3

OUTLOT WING ELEVATIONS

WING 2

THIS LEG HORIZ. A

MARK	A
C401	1'-0"
C607	7'-4"
C410 C417	3'-8"

BAR SERIES TABLE

MARK	NO. REQUIRED	LENGTH
C404	1 SERIES OF 4	5'-2" TO 15'-10"
C405	1 SERIES OF 4	4'-0" TO 15'-8"
C406	1 SERIES OF 17	13'-6" TO 22'-4"
C409	1 SERIES OF 5	2'-6" TO 4'-6"
C410	1 SERIES OF 6	6'-1" TO 8'-1"
C411	1 SERIES OF 24	2'-11" TO 7'-7"
C412	1 SERIES OF 8	4'-0" TO 8'-4"
C414	2 SERIES OF 4	4'-6" TO 15'-4"
C416	1 SERIES OF 5	2'-6" TO 4'-4"
C417	1 SERIES OF 6	6'-1" TO 7'-11"
C418	1 SERIES OF 26	2'-11" TO 7'-7"
C419	1 SERIES OF 9	3'-9" TO 8'-3"
C421	2 SERIES OF 4	4'-10" TO 16'-8"

BUNDLE AND TAG EACH SERIES SEPARATELY

LEGEND

◯ — INDICATES WING NUMBER

F.F.— FRONT FACE

B.F.— BACK FACE

CL. — CLEAR

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE C-32-99

DRAWN BY RLR | PLANS CK'D. JAS

OUTET APRON & WING DETAILS

SHEET 5 OF 6

32

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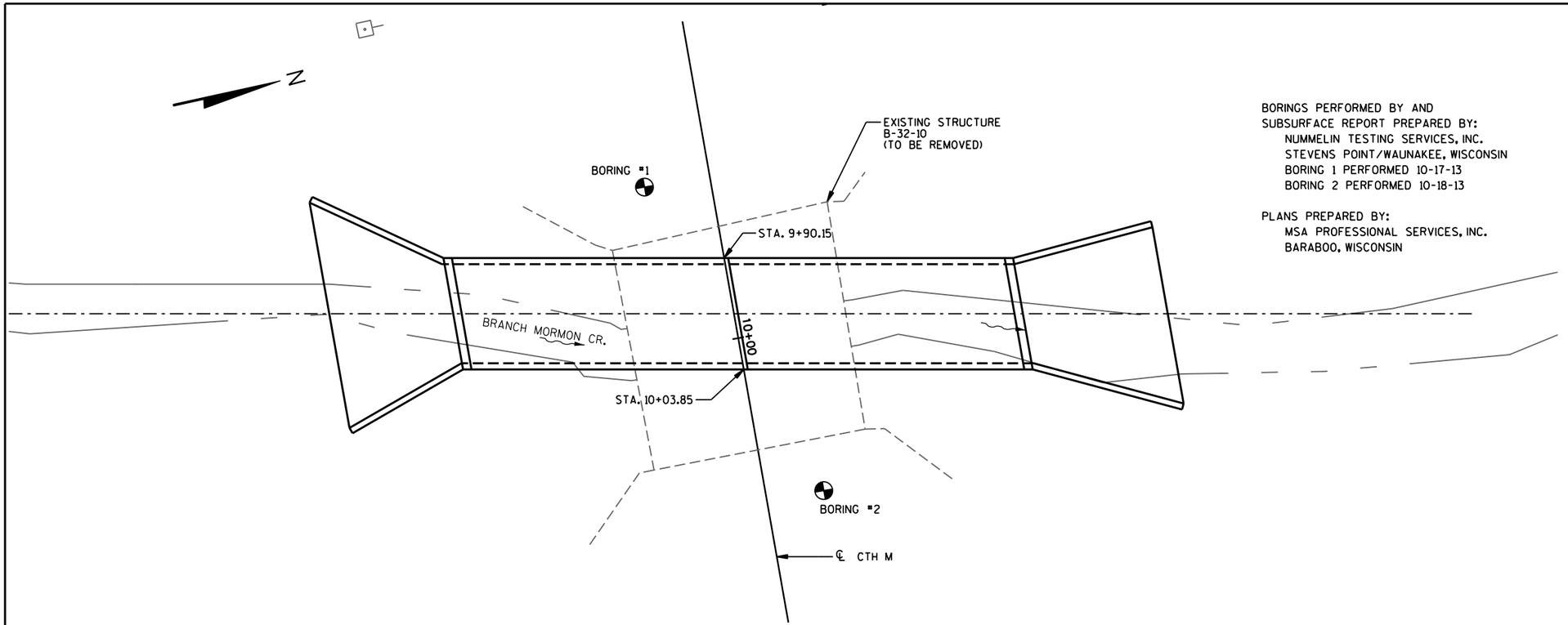
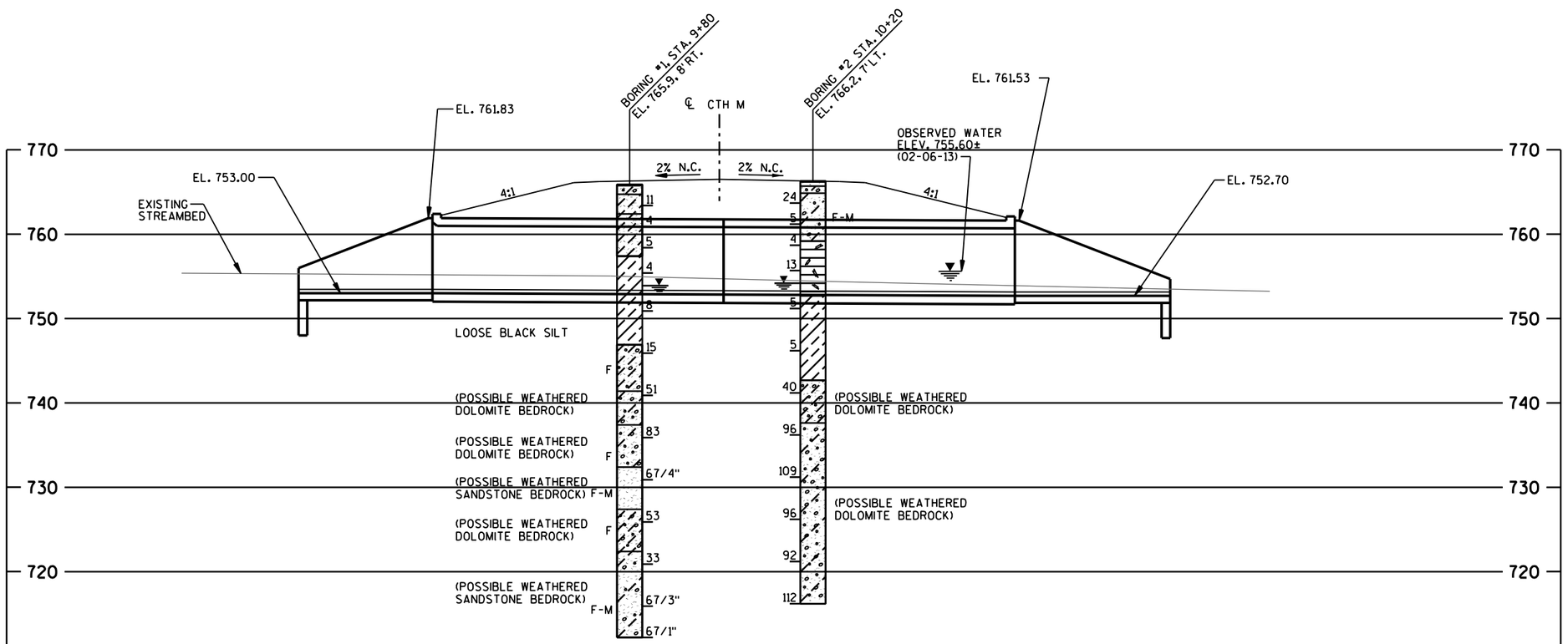


BORINGS PERFORMED BY AND
SUBSURFACE REPORT PREPARED BY:
NUMMELIN TESTING SERVICES, INC.
STEVENS POINT/WAUNAKEE, WISCONSIN
BORING 1 PERFORMED 10-17-13
BORING 2 PERFORMED 10-18-13

PLANS PREPARED BY:
MSA PROFESSIONAL SERVICES, INC.
BARABOO, WISCONSIN



STATE PROJECT NUMBER

5436-00-70

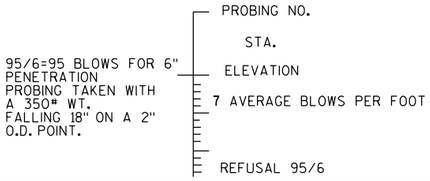
ABBREVIATIONS

F — FINE M — MEDIUM C — COARSE
WS — WEATHERED SO — SOUND

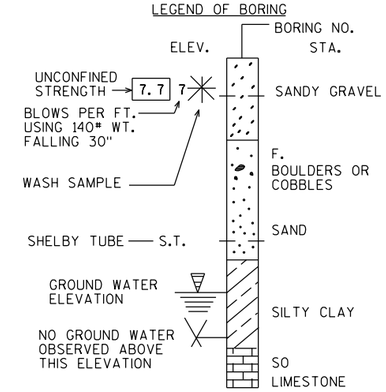
MATERIAL SYMBOLS

TOPSOIL SILT SANDSTONE
SAND PEAT LIMESTONE
GRAVEL CLAY IGNEOUS ROCK

LEGEND OF PROBING



LEGEND OF BORING



UNLESS OTHERWISE SPECIFIED, THE BLOWS PER FOOT AT THE LOCATIONS INDICATED ARE BASED ON DRIVING A 2" O.D. X 1.4" I.D. SPLIT SPOON SAMPLER WITH A 140# HAMMER HAVING A FREE FALL OF 30". THE BLOW COUNT IS TAKEN IN UNDISTURBED SOIL IMMEDIATELY BELOW A CASED OR OPEN HOLE ELIMINATING SIDE FRICTION ON THE DRIVE PIPE.

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

TO OBTAIN RELATIVE DATA CONCERNING THE CHARACTER OF MATERIAL IN AND UPON WHICH THE FOUNDATION MIGHT BE BUILT, BORINGS AND/OR SOUNDINGS WERE MADE AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING. THE DATA PRESENTED HEREIN REPRESENTS THE FINDINGS OF THE SUBSURFACE EXPLORATIONS MADE. HOWEVER, BECAUSE THE DEPTHS INVESTIGATED ARE LIMITED AND THE AREA OF THE BORINGS AND/OR SOUNDINGS IS VERY SMALL IN RELATION TO THE ENTIRE AREA, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT CONDITIONS BELOW THE DEPTHS INVESTIGATED OR THAT THE CLASSIFICATION OF MATERIAL ENCOUNTERED IN THESE INVESTIGATIONS IS NECESSARILY TYPICAL OF THE ENTIRE SITE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE C-32-99

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SUBSURFACE EXPLORATION

SHEET 6 OF 6
33

8

8

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DATE=2/2/2016

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PROJECT I.D. 5436-00-70 EARTHWORK SUMMARY

STA	EXCAVATION COMMON CY	EXCAVATION ROCK CY	FILL (1) CY	EXPANDED FILL (2) CY	WASTE CY	BORROW CY
8+00.00						
	16	0	3	4	12	-12
8+50.00						
	92	0	11	14	78	-78
9+00.00						
	88	0	13	17	71	-71
9+25.00						
	118	0	20	26	92	-92
9+50.00						
	69	0	33	43	26	-26
9+70.00						
STRUCTURE C-32-0099						
10+25.00						
	183	0	31	40	143	-143
10+50.00						
	73	0	40	52	21	-21
10+70.00						
	86	0	60	78	8	-8
11+00.00						
	162	0	48	62	100	-100
11+50.00						
	59	0	19	25	34	-34
11+75.00						
	46	0	9	12	34	-34
12+00.00						
SUBTOTALS						
SOUTH APPROACH	383	0	80	104	279	-279
NORTH APPROACH	609	0	207	269	340	-340
UNUSABLE PAVEMENT (3)						93
TOTALS	**992**	**0**	**287**	**373**	**619**	**-526**

(1) - NOT A BID ITEM - FOR INFORMATIONAL PURPOSES ONLY.
(2) - FILL EXPANSION 30%
(3) - EXISTING PAVEMENT BASED ON AVERAGE ASPHALT THICKNESS OF 1.5" AT WEST APPR & 6" AT EAST APPR PER BORING LOG.

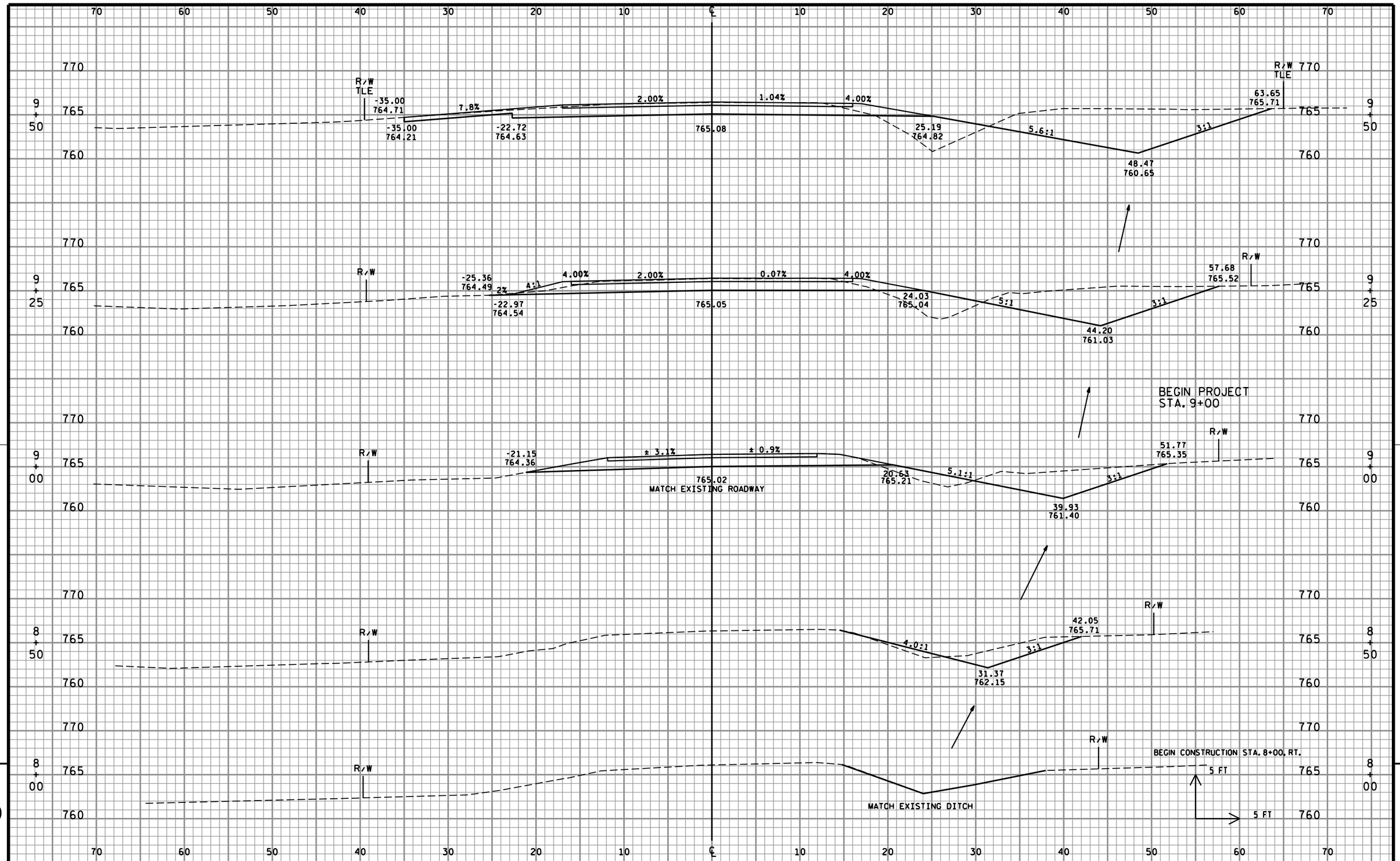
9

9

PROJECT NO: 5436-00-70 | HWY: CTH M | COUNTY: LA CROSSE | EARTHWORK | SHEET | E

FILE NAME P:\9200s\9260s\9262\09262007\Estimate\9262007_MiscQty & Earthwork Borders.dgn PLOT DATE :2/1/2016 PLOT BY :jsnyder PLOT NAME : PLOT SCALE :1:20

WISDOT/CADDS SHEET 49



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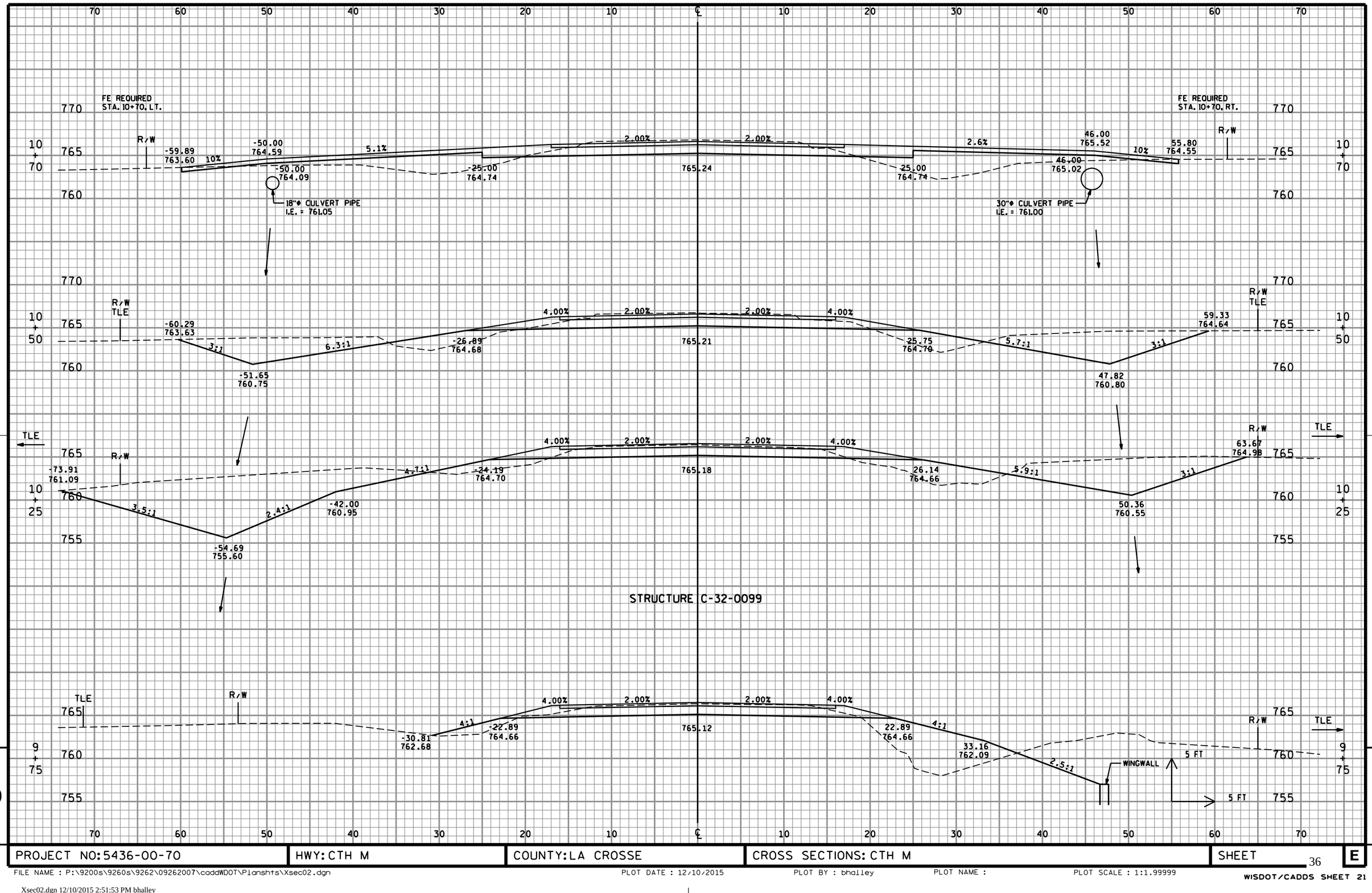
PROJECT NO: 5436-00-70	HWY: CTH M	COUNTY: LA CROSSE	CROSS SECTIONS: CTH M	SHEET	E

FILE NAME : P:\9200s\9260s\9262\09262007\caddWDOT\Planshts\Xsec01.dgn PLOT DATE : 12/17/2015 PLOT BY : bhalley PLOT NAME : PLOT SCALE : 1:1.99999

WISDOT/CADDS SHEET 21

Xsec01.dgn 12/17/2015 1:33:33 PM bhalley



PROJECT NO: 5436-00-70	HWY: CTH M	COUNTY: LA CROSSE	CROSS SECTIONS: CTH M	SHEET	E

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WISDOT/CADDS SHEET 21

Xsec02.dgn 12/10/2015 2:51:53 PM bhalley

70 60 50 40 30 20 10 ℄ 10 20 30 40 50 60 70

770 765 760

END PROJECT
STA. 12+00

12 + 00

R/W

-20.50
765.02

± 1.9%

± 2.3%

18.96
764.97

765.41
MATCH EXISTING

MATCH EXISTING DITCH

MATCH EXISTING DITCH

11 + 75

-38.10
763.23

3:1

5.1:1

-24.81
764.88

-36.27
762.63

4.00%

2.00%

2.00%

4.00%

765.38

4.2:1

23.30
764.91

3:1

35.31
762.05

39.73
763.52

11 + 50

-43.93
763.73

3:1

5.4:1

-25.41
764.84

-39.48
762.25

765.34

4.5:1

23.82
764.87

3:1

37.67
761.80

43.76
763.83

11 + 00

-52.49
763.81

3:1

5.9:1

-26.25
764.75

-45.57
761.50

765.28

5.1:1

-24.85
764.78

3:1

42.74
761.30

51.70
764.28

5 FT

5 FT

9

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PROJECT NO: 5436-00-70	HWY: CTH M	COUNTY: LA CROSSE	CROSS SECTIONS: CTH M	SHEET	E

FILE NAME : P:\9200s\9260s\9262\09262007\caddWDOT\Planshts\Xsec03.dgn PLOT DATE : 12/17/2015 PLOT BY : bhalley PLOT NAME : PLOT SCALE : 1:1.99999

WISDOT/CADDS SHEET 21

Xsec03.dgn 12/17/2015 1:15:21 PM bhalley

Wisconsin Department of Transportation

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