SWL

FEB 2014

PROJECT ID: 5018-00-70

WITH: N/A

COUNTY: MONROE

ORDER OF SHEETS

TOTAL SHEETS = 44

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

TOWN OF SHELDON, NORDALE AVENUE

(BRANCH KICKAPOO RIVER BRIDGE B-41-0300)

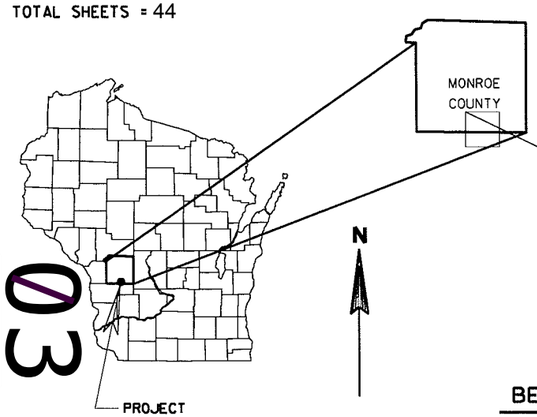
TOWN ROAD

MONROE COUNTY

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
5018-00-70	WISC 2014054	1

STATE PROJECT NUMBER

5018-00-70



03

DESIGN DESIGNATION

A.D.T. (2014)	=	150
A.D.T. (2034)	=	200
D.H.V.	=	20
D.	=	50/50
T.	=	5.0
DESIGN SPEED	=	30 MPH
ESALS	=	N/A

CONVENTIONAL SYMBOLS

PLAN

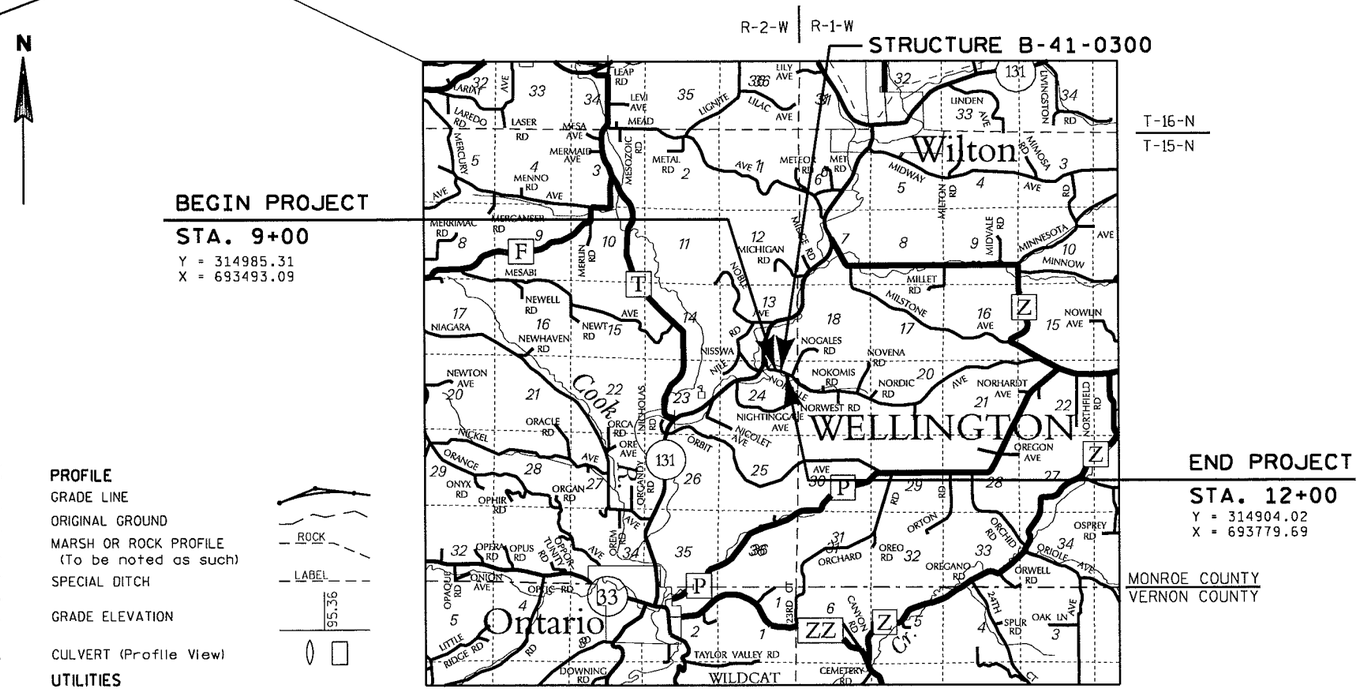
- CORPORATE LIMITS
- PROPERTY LINE (PL + 58.1)
- LOT LINE
- LIMITED HIGHWAY EASEMENT
- EXISTING RIGHT OF WAY
- PROPOSED OR NEW R/W LINE
- SLOPE INTERCEPT
- REFERENCE LINE
- EXISTING CULVERT
- PROPOSED CULVERT (Box or Pipe)
- COMBUSTIBLE FLUIDS (CAUTION)
- HIGH VOLTAGE (CAUTION)
- MARSH AREA
- WOODED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

PROFILE

- GRADE LINE
- ORIGINAL GROUND
- MARSH OR ROCK PROFILE (To be noted as such) (ROCK)
- SPECIAL DITCH (LABEL)
- GRADE ELEVATION (955.36)
- CULVERT (Profile View)

UTILITIES

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



BEGIN PROJECT

STA. 9+00

Y = 314985.31

X = 693493.09

END PROJECT

STA. 12+00

Y = 314904.02

X = 693779.69

LAYOUT

SCALE 0 1 MI.

TOTAL NET LENGTH OF CENTERLINE = 0.057 MI.

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

ACCEPTED FOR

Town of Sheldon

Oct 18 2013 Dennis Hildebrand

Date Chairman

ACCEPTED FOR

County of Monroe

10/9/2013 Jack Dittmann

Date County Highway Commissioner

ORIGINAL PLANS PREPARED BY

AYRES ASSOCIATES

3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

WISCONSIN PROFESSIONAL ENGINEER DANIEL N. SYDOW E-38363 WI

DATE 10/14/2013

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

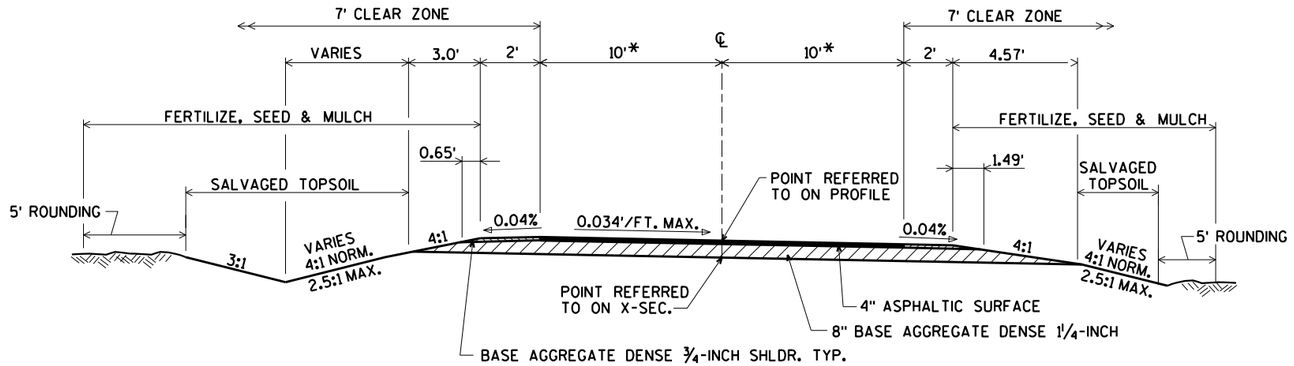
Surveyor	AYRES ASSOCIATES INC
Designer	AYRES ASSOCIATES INC
Management Consultant	KJOHNSON ENGINEERS, INC.
C.O. Examiner	

APPROVED FOR THE DEPARTMENT

DATE: 10/29/2013 Kirby A. Johnson

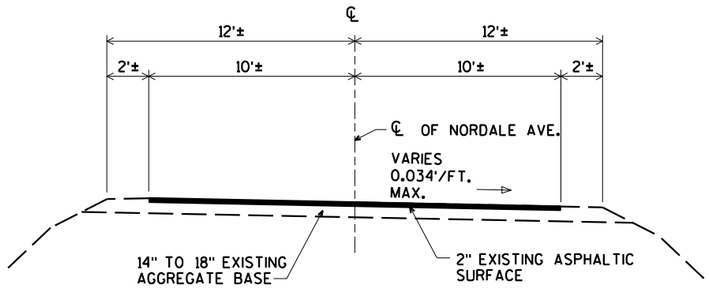
Management Consultant Signature

E



TYPICAL FINISHED SECTION

* ASPHALTIC SURFACE SHALL BE PLACED 24' WIDE AT ENDS OF BRIDGE AND TAPER TO 20' WIDE AT 50' FROM THE ENDS OF THE BRIDGE.



TYPICAL EXISTING SECTION

GENERAL NOTES

EROSION CONTROL ITEMS TO BE PLACED AS SHOWN ON THE PLAN OR AS DIRECTED BY THE ENGINEER.

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

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

THE DEPARTMENT OF TRANSPORTATION WILL FURNISH THE CONTRACTOR WITH A MONUMENT TO BE INSTALLED BY THE CONTRACTOR AS DIRECTED BY THE ENGINEER.

DISTURBED AREAS WITHIN THE RIGHT-OF-WAY, EXCLUSIVE OF THE ROADBED, SHALL BE FERTILIZED, SEEDED, AND MULCHED AS DIRECTED BY THE ENGINEER.

SEED MIXTURE NO. 20 AND SEEDING TEMPORARY SHALL BE USED IN THE PROJECT AND SHALL BE PLACED AS SHOWN IN THE PLANS AND/OR AS DIRECTED BY THE ENGINEER.

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

ASPHALTIC SURFACE SHALL BE CONSTRUCTED WITH A 2" UPPER LAYER AND A 2" LOWER LAYER. ASPHALTIC SURFACE SHALL USE ½" NOMINAL AGGREGATE SIZE.

UTILITIES

CENTURYLINK
311 SOUTH COURT
SPARTA, WI 54656
ATTN: RANDY ABBOTT
608-269-0819
randy.abbott@centurylink.com

ALLIANT ENERGY
338 EAST STATE ST.
MAUSTON, WI 53948
ATTN: LISA KLEMME
608-219-1502
lisaklemme@alliantenergy.com

**DENOTES UTILITIES THAT ARE NOT DIGGERS HOTLINE MEMBERS

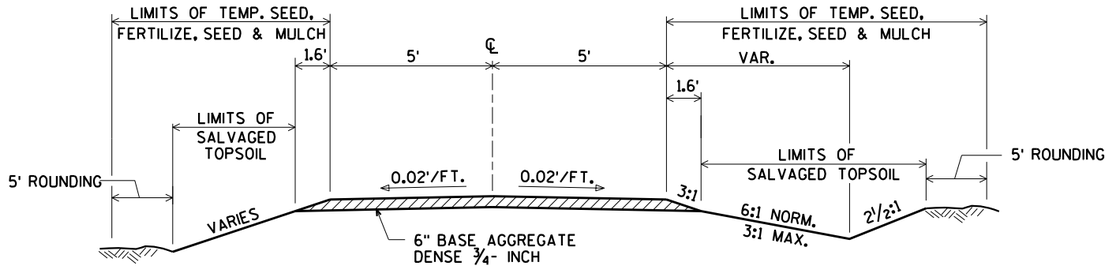
DIGGERS HOTLINE
Dial 811 or (800) 242-8511
www.DiggersHotline.com

ABBREVIATIONS

AC	ACRES
CHIS	CHISELED
℄	CENTERLINE
COR	CORNER
CNT	COUNT
CY	CUBIC YARD
EL	ELEVATION
GAL	GALLON
H	HOUSE
IP	IRON PIPE
LB	POUND
LF	LINEAR FEET
LS	LUMP SUM
LT	LEFT
MAX	MAXIMUM
MIN	MINIMUM
MON	MONUMENT
NORM	NORMAL
OAL	OVERALL LENGTH
PC	POINT OF CURVATURE
PD	PEDESTAL
PI	POINT OF INTERSECTION
PK	PARKER-KALON
PL	PROPERTY LINE
PLE	PERMANENT LIMITED EASEMENT
PP	POWER POLE
PT	POINT OF TANGENCY
R	RADIUS
REQ'D	REQUIRED
RT	RIGHT
R/W	RIGHT-OF-WAY
SF	SQUARE FEET
SHLDR	SHOULDER
STA	STATION
SY	SQUARE YARD
TLE	TEMPORARY LIMITED EASEMENT
VAR	VARIES
WL	WELL

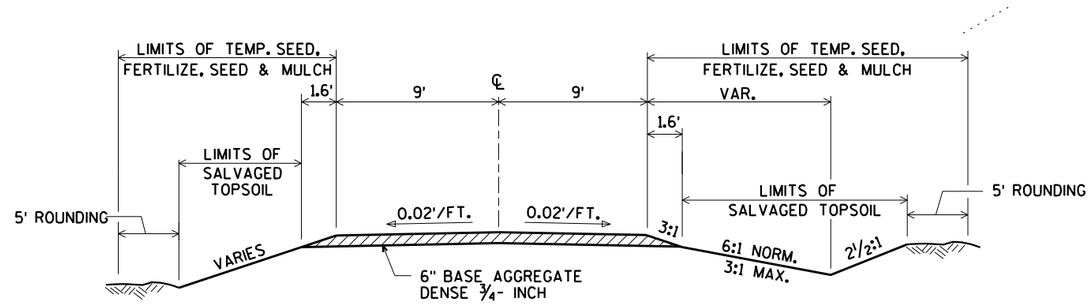
WISCONSIN DEPARTMENT OF NATURAL RESOURCES CONTACT:
KAREN KALVELAGE
3550 MORMON COULEE RD.
LACROSSE, WI. 54601
608-785-9115
karen.kalvelage@wisconsin.gov

DESIGNER
AYRES ASSOCIATES
3433 OAKWOOD HILLS PARKWAY
EAU CLAIRE, WI 54701
ATTN: DANIEL N. SYDOW
715-834-3161
sydowd@AyresAssociates.com



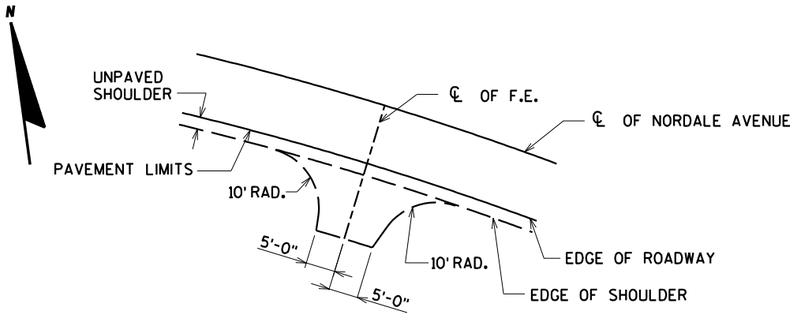
TYPICAL SECTION FOR FIELD ENTRANCE

(STA. 11+70 F.E. RT.)



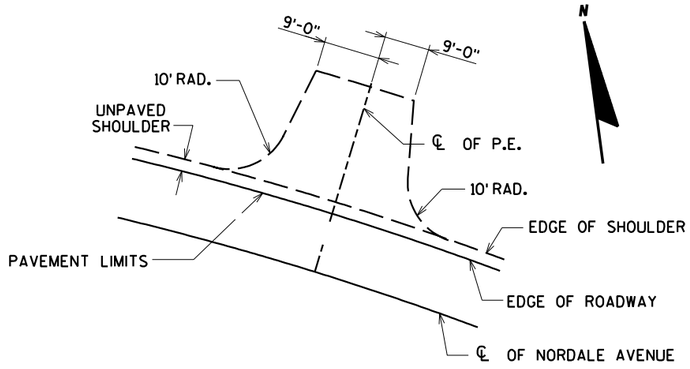
TYPICAL SECTION FOR PRIVATE ENTRANCE

(STA. 11+70 P.E. LT.)



(STA. 11+70 F.E. RT.)

FIELD ENTRANCE PLAN

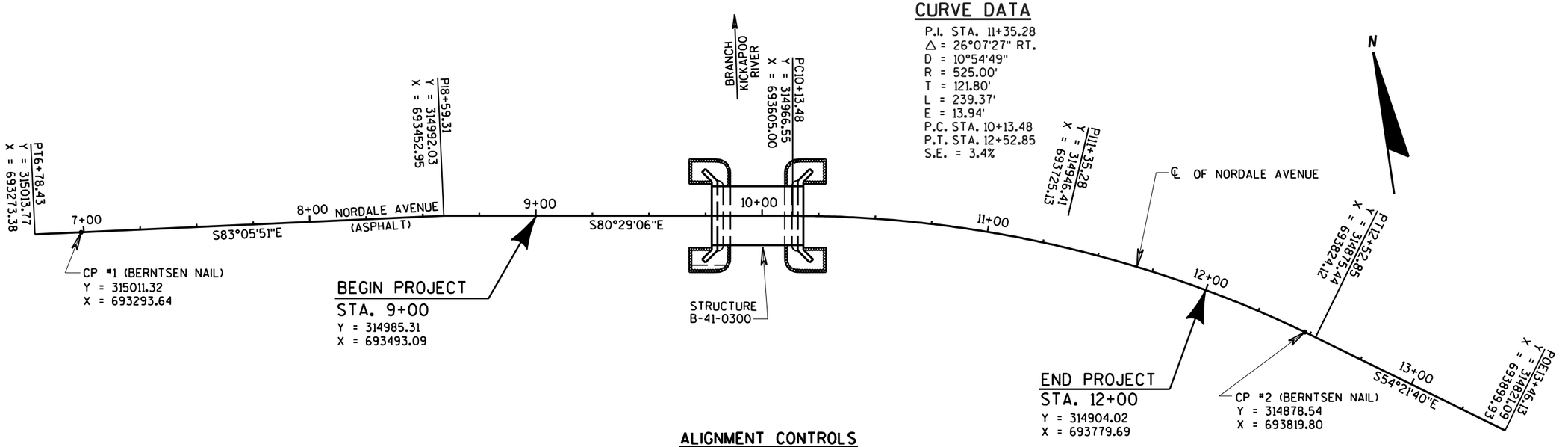


(STA. 11+70 P.E. LT.)

PRIVATE ENTRANCE PLAN

PROJECT NO: 5018-00-70	HWY: NORDALE AVENUE	COUNTY: MONROE	ENTRANCE DETAILS	SHEET 3	E

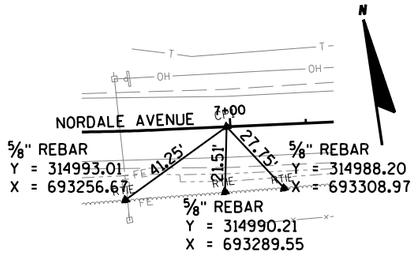
2



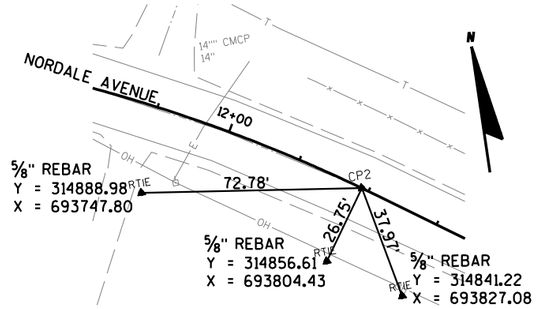
CURVE DATA

P.I. STA. 11+35.28
△ = 26°07'27" RT.
D = 10°54'49"
R = 525.00'
T = 121.80'
L = 239.37'
E = 13.94'
P.C. STA. 10+13.48
P.T. STA. 12+52.85
S.E. = 3.4%

ALIGNMENT CONTROLS

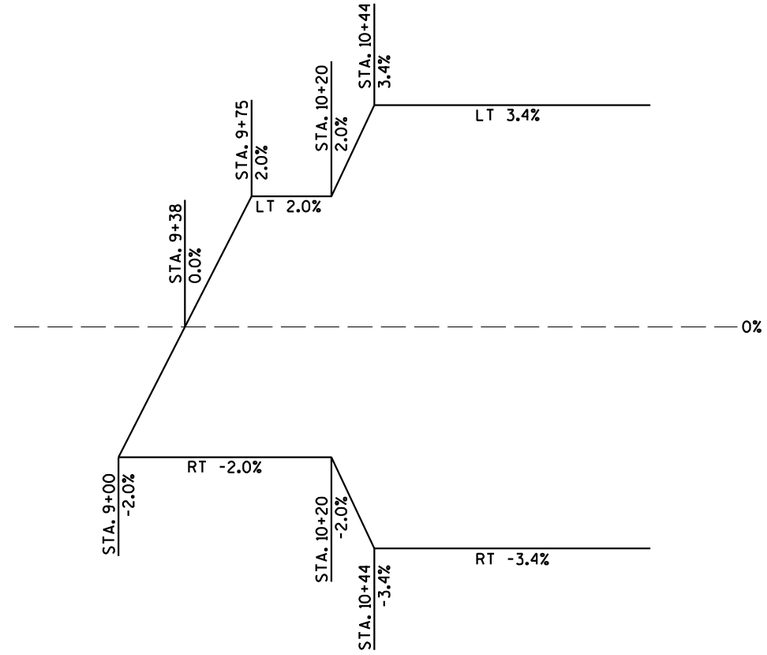


CP #1 (BERNTSEN NAIL)
STA. 6+99, ON ℄
Y = 315011.32
X = 693293.64



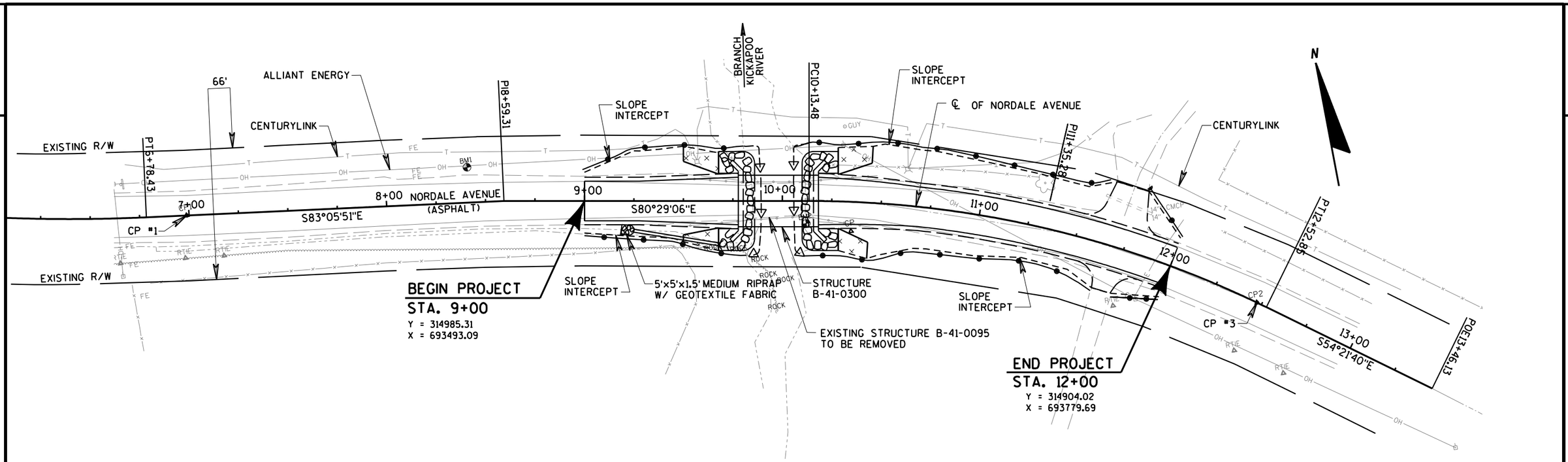
CP #2 (BERNTSEN NAIL)
STA. 12+47, ON ℄
Y = 314878.54
X = 693819.80

ALIGNMENT TIES



SUPERELEVATION DIAGRAM

PROJECT NO: 5018-00-70	HWY: NORDALE AVENUE	COUNTY: MONROE	ALIGNMENT CONTROLS, TIES & SUPERELEVATION DIAGRAM	SHEET 4	E



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

TOTAL PROJECT AREA = 0.453 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0.329 ACRES

HIGH WATER $_2$ EL. 914.8

LEGEND

- EROSION MAT CLASS II TYPE C
- TEMPORARY DITCH CHECKS (UNDISTRIBUTED)
- SILT FENCE
- RIPRAP
- TURBIDITY BARRIER

PROJECT NO: 5018-00-70	HWY: NORDALE AVENUE	COUNTY: MONROE	EROSION CONTROL	SCALE, FEET 0 25 50	SHEET 5	E

DATE 04DEC13 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	5018-00-70 QUANTITY
0010	201.0105	CLEARING	STA	3.000	3.000
0020	201.0205	GRUBBING	STA	3.000	3.000
0030	203.0600.S	REMOVING OLD STRUCTURE OVER WATERWAY WITH MINIMAL DEBRIS (STATION) 01. 9+98	LS	1.000	1.000
0040	205.0100	EXCAVATION COMMON	CY	221.000	221.000
0050	206.1000	EXCAVATION FOR STRUCTURES BRIDGES (STRUCTURE) 01. B-41-0300	LS	1.000	1.000
0060	210.0100	BACKFILL STRUCTURE	CY	240.000	240.000
0070	213.0100	FINISHING ROADWAY (PROJECT) 01. 5018-00-70	EACH	1.000	1.000
0080	305.0110	BASE AGGREGATE DENSE 3/4-INCH	TON	55.000	55.000
0090	305.0120	BASE AGGREGATE DENSE 1 1/4-INCH	TON	385.000	385.000
0100	455.0605	TACK COAT	GAL	16.000	16.000
0110	465.0105	ASPHALTIC SURFACE	TON	145.000	145.000
0120	502.0100	CONCRETE MASONRY BRIDGES	CY	60.000	60.000
0130	502.3200	PROTECTIVE SURFACE TREATMENT	SY	145.000	145.000
0140	505.0405	BAR STEEL REINFORCEMENT HS BRIDGES	LB	4,340.000	4,340.000
0150	505.0605	BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB	13,260.000	13,260.000
0160	513.7050	RAILING STEEL TYPE W (STRUCTURE) 01. B-41-0300	LS	1.000	1.000
0170	516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	18.000	18.000
0180	520.0115	CULVERT PIPE CLASS III 15-INCH	LF	44.000	44.000
0190	520.1015	APRON ENDWALLS FOR CULVERT PIPE 15-INCH	EACH	2.000	2.000
0200	550.0020	PRE-BORING ROCK OR CONSOLIDATED MATERIALS	LF	60.000	60.000
0210	550.0500	PILE POINTS	EACH	5.000	5.000
0220	550.1100	PILING STEEL HP 10-INCH X 42 LB	LF	185.000	185.000
0230	606.0200	RIPRAP MEDIUM	CY	2.000	2.000
0240	606.0300	RIPRAP HEAVY	CY	100.000	100.000
0250	612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	140.000	140.000
0260	614.0920	SALVAGED RAIL	LF	194.000	194.000
0270	619.1000	MOBILIZATION	EACH	1.000	1.000
0280	625.0500	SALVAGED TOPSOIL	SY	620.000	620.000
0290	627.0200	MULCHING	SY	1,165.000	1,165.000
0300	628.1504	SILT FENCE	LF	715.000	715.000
0310	628.1520	SILT FENCE MAINTENANCE	LF	1,430.000	1,430.000
0320	628.1905	MOBILIZATIONS EROSION CONTROL	EACH	5.000	5.000
0330	628.1910	MOBILIZATIONS EMERGENCY EROSION CONTROL	EACH	2.000	2.000
0340	628.2027	EROSION MAT CLASS II TYPE C	SY	105.000	105.000
0350	628.6005	TURBIDITY BARRIERS	SY	175.000	175.000
0360	628.7504	TEMPORARY DITCH CHECKS	LF	50.000	50.000
0370	629.0210	FERTILIZER TYPE B	CWT	0.800	0.800
0380	630.0120	SEEDING MIXTURE NO. 20	LB	35.000	35.000
0390	630.0200	SEEDING TEMPORARY	LB	30.000	30.000
0400	634.0612	POSTS WOOD 4X6-INCH X 12-FT	EACH	4.000	4.000
0410	637.2230	SIGNS TYPE II REFLECTIVE F	SF	12.000	12.000
0420	642.5001	FIELD OFFICE TYPE B	EACH	1.000	1.000
0430	643.0100	TRAFFIC CONTROL (PROJECT) 01. 5018-00-70	EACH	1.000	1.000
0440	645.0120	GEOTEXTILE FABRIC TYPE HR	SY	238.000	238.000
0450	650.4500	CONSTRUCTION STAKING SUBGRADE	LF	260.000	260.000
0460	650.5000	CONSTRUCTION STAKING BASE	LF	260.000	260.000
0470	650.6000	CONSTRUCTION STAKING PIPE CULVERTS	EACH	1.000	1.000
0480	650.6500	CONSTRUCTION STAKING STRUCTURE LAYOUT (STRUCTURE) 01. B-41-0300	LS	1.000	1.000

3

DATE 04DEC13 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	5018-00-70 QUANTITY
0490	650.9910	CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (PROJECT) 01. 5018-00-70	LS	1.000	1.000
0500	650.9920	CONSTRUCTION STAKING SLOPE STAKES	LF	260.000	260.000
0510	690.0150	SAWING ASPHALT	LF	40.000	40.000
0520	715.0502	INCENTIVE STRENGTH CONCRETE STRUCTURES	DOL	816.000	816.000
0530	SPV.0035	SPECIAL 01. SPECIAL FIBER REINFORCED CONCRETE MASONRY FOR BRIDGE, STRUCTURE B-41-0300	CY	76.000	76.000

3

CLEARING AND GRUBBING (CATEGORY 0010)

STATION TO STATION	201.0105 CLEARING STA	201.0205 GRUBBING STA
Sta. 9+00 to Sta. 12+00	3	3

EARTHWORK SUMMARY (CATEGORY 0010)

DIVISION	STATION TO STATION	LOCATION	**P** 205.0100 EXCAVATION COMMON CUT (2) CY	EBS (3) CY	SALVAGED/ UNUSEABLE PAVEMENT MATERIAL (4) CY	AVAILABLE MATERIAL (5) CY	UNEXPANDED FILL CY	EXPANDED FILL (6) CY	MASS ORDINATE ±(7) CY	WASTE CY	COMMENTS:
1	9+00 TO 9+77.75	NORDALE AVE.	55	0	0	55	40	52	3	3	
	10+18.25 TO 12+00	NORDALE AVE.	166	0	0	166	87	113	53	53	
	GRANDTOTAL		221	0	0	221	127	165	56	56	

TOTAL EXCAVATION COMMON **221**

NOTES:
1) EXCAVATION COMMON IS THE SUM OF THE CUT AND EBS EXCAVATION COLUMNS. ITEM NUMBER 205.0100
2) SALVAGED/UNUSEABLE PAVEMENT MATERIAL IS INCLUDED IN CUT.
3) EBS EXCAVATION TO BE BACKFILLED WITH BORROW MATERIAL.
4) SALVAGED/UNUSEABLE PAVEMENT MATERIAL
5) AVAILABLE MATERIAL = CUT - SALVAGED/UNUSEABLE PAVEMENT MATERIAL
6) EXPANDED FILL FACTOR = 1.30
EXPANDED FILL = UNEXPANDED FILL * FILL FACTOR
7) THE MASS ORDINATE ± QTY CALCULATED FOR THE DIVISION.
PLUS (+) QUANTITY INDICATES AN EXCESS OF MATERIAL WITHIN THE DIVISION.
MINUS (-) QUANTITY INDICATES A SHORTAGE OF MATERIAL WITHIN THE DIVISION.

213.0100 FINISHING ROADWAY (CATEGORY 0010)

LOCATION	EACH
PROJECT 5018-00-70	1

BASE AGGREGATE DENSE (CATEGORY 0010)

STATION TO STATION	LOCATION	305.0110 3/4-INCH TON	305.0120 1 1/4-INCH TON
Sta. 9+00 to Sta. 9+77.75	Shoulders	10	---
Sta. 10+18.25 to Sta. 12+00	Shoulders	20	---
PE Sta.11+70, LT	PE LT	18	---
FE Sta.11+70, RT	FE RT	7	
Sta. 9+00 to Sta. 9+77.75	Mainline	---	120
Sta. 10+18.25 to Sta. 12+00	Mainline	---	265
TOTALS		55	385

455.0605 TACK COAT (CATEGORY 0010)

STATION TO STATION	LOCATION	GAL
Sta. 9+00 to Sta. 9+77.75	Mainline	5
Sta. 10+18.25 to Sta. 12+00	Mainline	11
TOTAL		16

465.0105 ASPHALTIC SURFACE (CATEGORY 0010)

STATION TO STATION	LOCATION	TON
Sta. 9+00 to Sta. 9+77.75	Mainline	45
Sta. 10+18.25 to Sta. 12+00	Mainline	100
TOTAL		145

520.0115 CULVERT PIPE CLASS III 15-INCH (CATEGORY 0010)

STATION TO STATION	LOCATION	LF
Sta. 9+25 to Sta. 9+68.45	15'/21.96' RT	44

NOTE:
PROVIDE 0.064 INCH MINIMUM WALL THICKNESS FOR CORRUGATED STEEL PIPE

520.1015 APRON ENDWALLS FOR CULVERT PIPE 15-INCH (CATEGORY 0010)

STATION TO STATION	LOCATION	EACH
Sta. 9+25	15' RT	1
Sta. 9+68.45	21.96' RT	1
TOTAL		2

606.0200 RIPRAP MEDIUM (CATEGORY 0010)

STATION TO STATION	LOCATION	CY
Sta. 9+25	15' RT	2

614.0920 SALVAGED RAIL (CATEGORY 0010)

STATION TO STATION	LOCATION	LF
Sta. 9+51 to Sta. 10+48	LT	97
Sta. 9+49 to Sta. 10+46	RT	97
TOTAL		194

619.1000 MOBILIZATION

LOCATION	EACH
PROJECT 5018-00-70 (CATEGORY 0010)	0.2
PROJECT 5018-00-70 (CATEGORY 0020)	0.8
TOTAL	1

SALVAGED TOPSOIL, MULCHING, FERTILIZER, SEED & TEMPORARY SEED (CATEGORY 0010)

STATION TO STATION	LOCATION	625.0500 SALVAGED TOPSOIL SY	627.0200 MULCHING SY	629.0210 FERTILIZER TYPE B CWT	630.0120 SEEDING NO. 20 LB	630.0200 SEEDING TEMPORARY LB
Sta.9+00 to Sta. 12+00	Mainline	620	930	0.6	27	25
Undistributed		---	235	0.2	8	5
TOTALS		620	1,165	0.8	35	30

SILT FENCE & SILT FENCE MAINTENANCE (CATEGORY 0010)

STATION TO STATION	LOCATION	628.1504 LF	628.1520 MAINTENANCE LF
Sta. 9+00 to Sta. 9+82	RT	85	170
Sta. 9+00 to Sta. 9+81	LT	85	170
Sta. 10+06 to Sta. 11+59	LT	165	330
Sta. 10+08 to Sta. 11+65	RT	155	310
Sta. 11+76 to Sta. 12+00	RT	50	100
Sta. 11+78 to Sta. 12+00	LT	30	60
Undistributed		145	290
TOTALS		715	1,430

MOBILIZATIONS EROSION CONTROL & EMERGENCY EROSION CONTROL (CATEGORY 0010)

LOCATION	628.1905 MOBILIZATIONS EROSION CONTROL EACH	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH
PROJECT 5018-00-70	5	2

628.2027 EROSION MAT CLASS II TYPE C (CATEGORY 0010)

STATION TO STATION	LOCATION	SY
Sta. 9+50 to Sta. 9+67.75	RT	20
Sta. 9+50 to Sta. 9+67.75	LT	20
Sta. 10+28.25 to Sta. 10+44	LT	25
Sta. 10+28.25 to Sta. 10+44	RT	20
Undistributed		20
TOTAL		105

628.6005 TURBIDITY BARRIERS (CATEGORY 0010)

STATION TO STATION	SY
West Abutment	80
East Abutment	60
Undistributed	35
TOTAL	175

628.7504 TEMPORARY DITCH CHECKS (CATEGORY 0010)

LOCATION	LF
UNDISTRIBUTED	50

634.0612 WOOD POSTS 4X6 INCH X 12 FT (CATEGORY 0010)

STATION	LOCATION	EACH
Sta. 9+77	LT (W5-52L)	1
Sta. 9+77	RT (W5-52R)	1
Sta. 10+19	LT (W5-52R)	1
Sta. 10+19	RT (W5-52L)	1
TOTAL		4

637.2230 SIGNS TYPE II REFLECTIVE F (CATEGORY 0010)

STATION			SF
Sta. 9+77	LT	W5-52L	3
Sta. 9+77	RT	W5-52R	3
Sta. 10+19	LT	W5-52R	3
Sta. 10+19	RT	W5-52L	3
TOTAL			12

642.5001 FIELD OFFICE TYPE B (CATEGORY 0010)

LOCATION	EACH
PROJECT 5018-00-70	1

643.0100 TRAFFIC CONTROL (CATEGORY 0010)

LOCATION	EACH
PROJECT 5018-00-70	1

645.0120 GEOTEXTILE FABRIC TYPE HR (CATEGORY 0010)

STATION TO STATION	LOCATION	SY
Sta. 9+25	15' RT	8

CONSTRUCTION STAKING

CATEGORY	LOCATION	650.4500 SUBGRADE LF	650.5000 BASE LF	650.6000 PIPE CULVERTS EACH	650.6500 STRUCTURE LAYOUT LS	650.9910 SUPPLEMENTARY CONTROL LS	650.9920 SLOPE STAKES LF
0010	Sta. 9+00 to Sta. 12+00	260	260	---	---	1	260
0010	Sta. 9+25 to Sta. 9+68.45, RT	---	---	1	---	---	---
0020	B-41-0300	---	---	---	1	---	---
TOTALS		260	260	1	1	1	260

690.0150 SAWING ASPHALT (CATEGORY 0010)

STATION	LOCATION	LF
Sta. 9+00	Mainline	19
Sta. 12+00	Mainline	21
TOTAL		40

NOTES:
FOR ALIGNMENT CONTROLS AND TIES,
SEE ALIGNMENT CONTROLS & TIES SHEET.

SALVAGE EXISTING GUARDRAIL POSTS, GUARDRAIL,
AND INTERIOR STEEL BEAMS TO THE COUNTY.

BENCH MARKS			
NO.	STA.	DESCRIPTION	ELEV.
1	8+40	R.R. SPIKE SET IN POWER POLE, 18' LT.	924.58
2	10+12	BERNSTEN NAIL IN TOP OF TIMBER WING WALL, 11' RT.	917.24

ORIGIN OF LEVELS
MONROE COUNTY GPS PT
PID DH5141
DESIGNATION WELLINGTON WEST
BRONZE MARKER SET IN TOP OF CONCRETE POST
EL. 970.5 (NAVD88)

BEGIN PROJECT
STA. 9+00
(SAWCUT REQUIRED)
Y = 314985.31
X = 693493.09

END PROJECT
STA. 12+00
(SAWCUT REQUIRED)
Y = 314904.02
X = 693779.69

NET LENGTH OF CENTERLINE STA. 9+00 TO 12+00 = 300 LIN. FT.

CP CLASS III 15-INCH REQ'D
1 - L=44'
INLET EL. 919.83
OUTLET EL. 916.58
2 - ENDWALLS REQ'D
STA. 9+25, 15' RT
STA. 9+68.45, 21.96' RT

CONSTRUCT PE
STA. 11+70, LT
EXISTING 14"Φ CP TO REMAIN IN PLACE

CONSTRUCT FE
STA. 11+70, RT

EARTHWORK SUMMARY
STA. 9+00 TO STA. 9+77.75
EXC. COMMON 55 C.Y.
FILL 40 C.Y.
SHR. = 30%
WASTE 3 C.Y.

EARTHWORK SUMMARY
STA. 10+18.25 TO STA. 12+00
EXC. COMMON 166 C.Y.
FILL 87 C.Y.
SHR. = 30%
WASTE 53 C.Y.

REMOVING OLD STRUCTURE OVER WATERWAY
WITH MINIMAL DEBRIS STATION 10+00, STRUCTURE B-41-0095
SINGLE-SPAN STEEL GIRDER BRIDGE
18.8' CLEAR RDWY. x 34.0' O.A.L.
0° SKEW

STA. 9+98
STRUCTURE B-41-0300 REQ'D.
SINGLE SPAN CONCRETE FLAT SLAB BRIDGE
24'-0" CLEAR ROADWAY x 40'-6" O.A.L.
0° SKEW

PROJECT NO: 5018-00-70	HWY: NORDALE AVENUE	COUNTY: MONROE	PLAN AND PROFILE	SCALE, FEET 0 25 50	SHEET E

U:\42-0881.00 - Monroe Co, Tn Sheldon, Nordale Ave\RDWY\420881 pp.dgn 10/23/2013 $PLOT NA PENTABLE:BReau_shd_util.tbl BRIDGE 1:49.9999

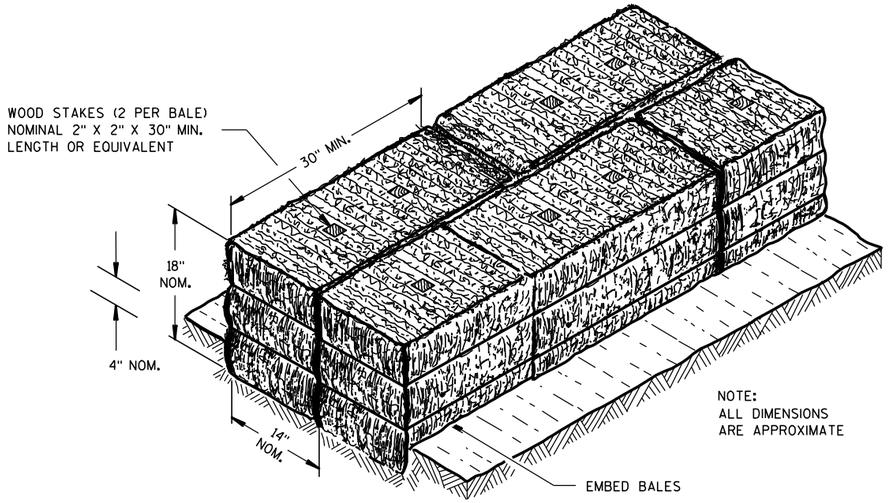
WISDOT/CADDS SHEET 40

Standard Detail Drawing List

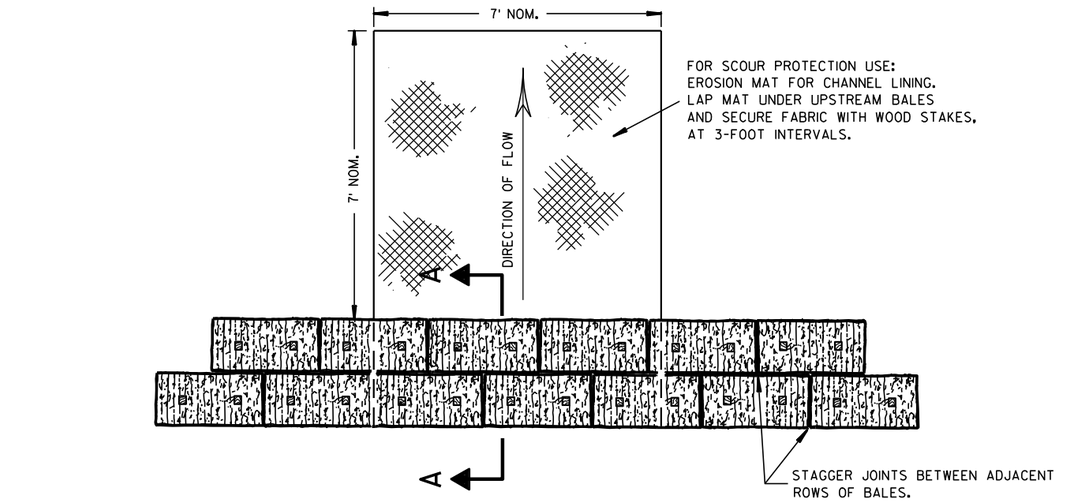
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E11-02	TURBIDITY BARRIER
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
12A03-10	NAME PLATE (STRUCTURES)
15C02-05A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-05B	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C06-06	SIGNING & MARKING FOR TWO LANE BRIDGES

6

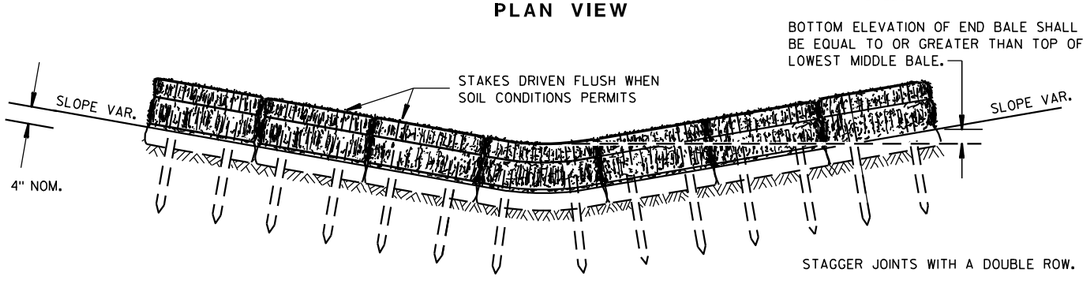
6



SECTION A-A



PLAN VIEW



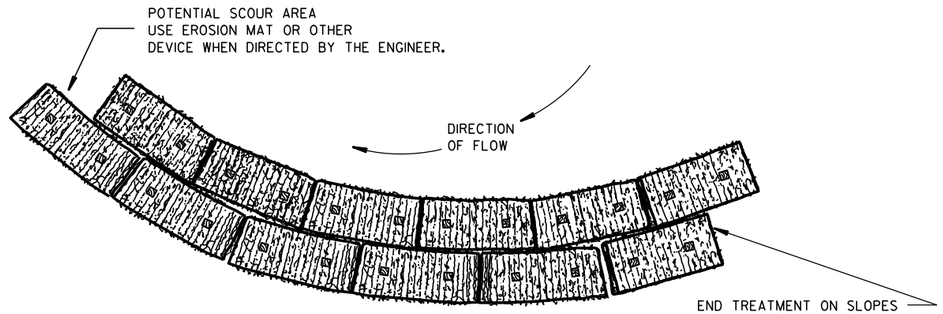
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES ①

GENERAL NOTES

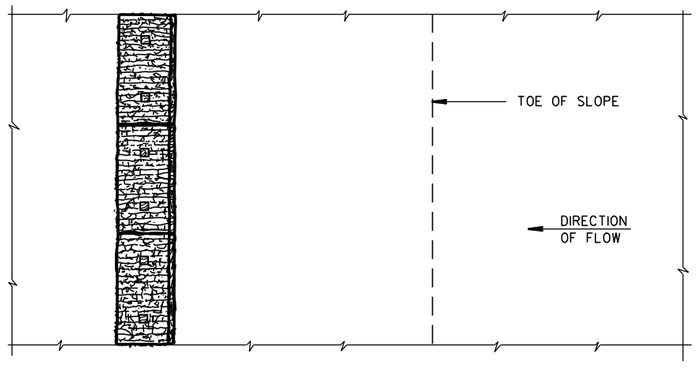
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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.

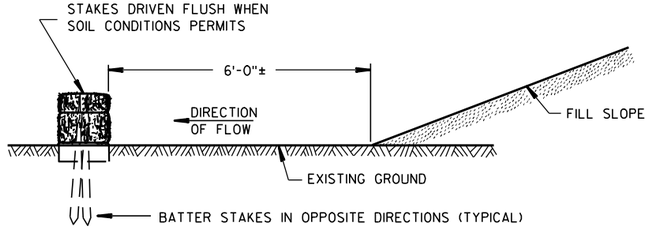


PLAN VIEW

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

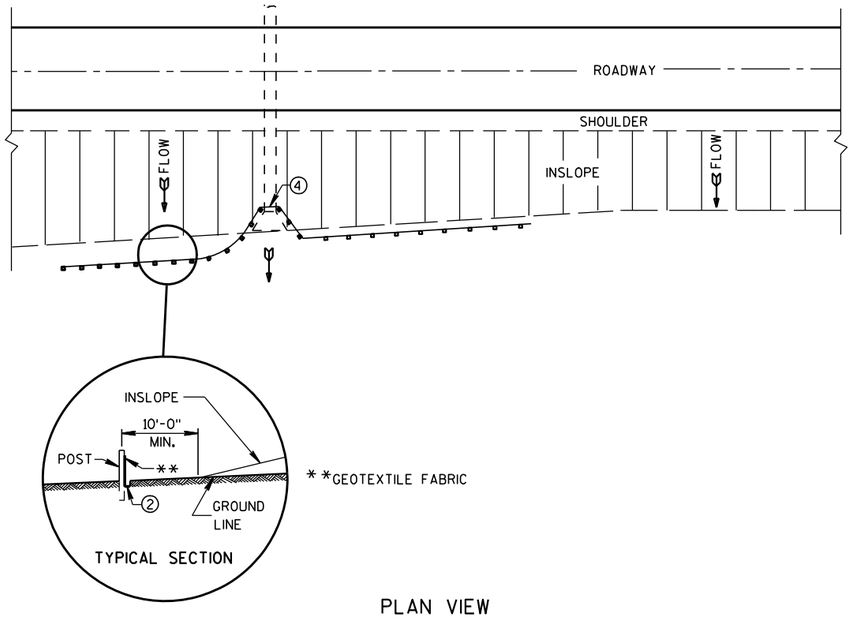
APPROVED
6/04/02 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6

S.D.D. 8 E 8-3

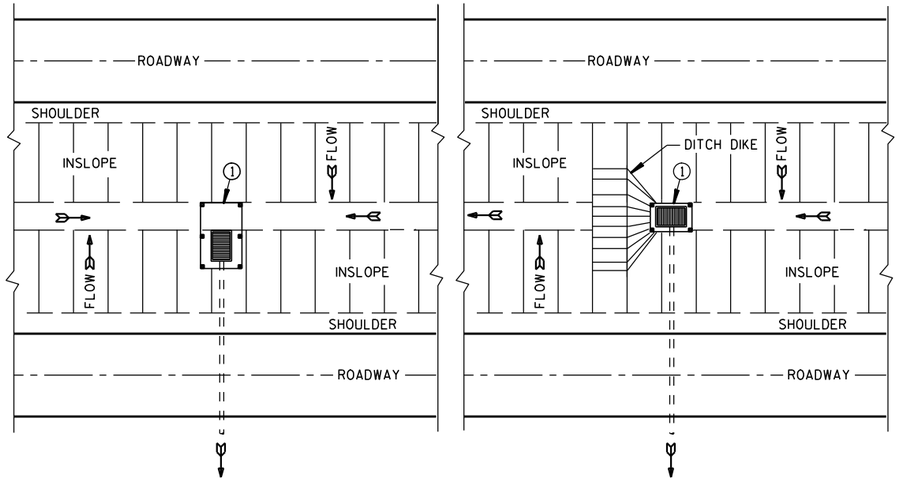
6

S.D.D. 8 E 8-3



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

GENERAL NOTES

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

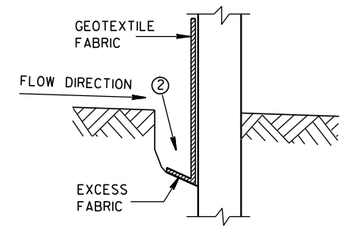
① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.

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

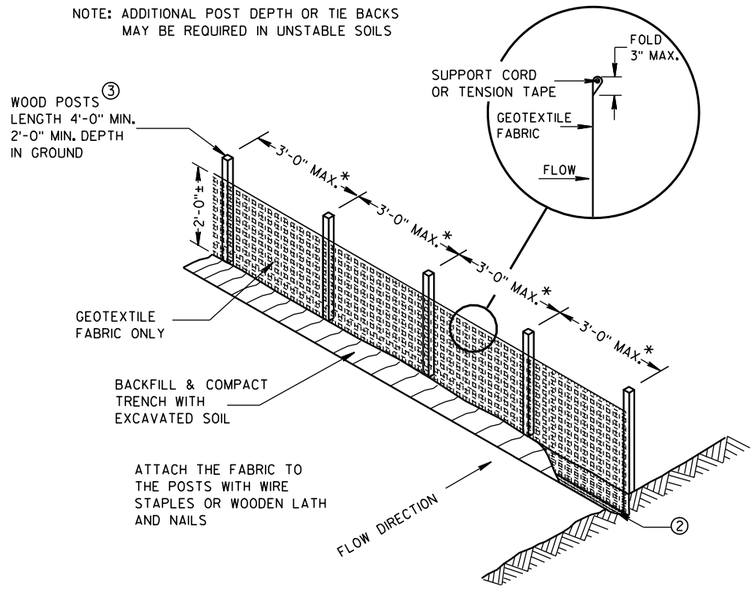
③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1⅛" X 1⅛" OF OAK OR HICKORY.

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

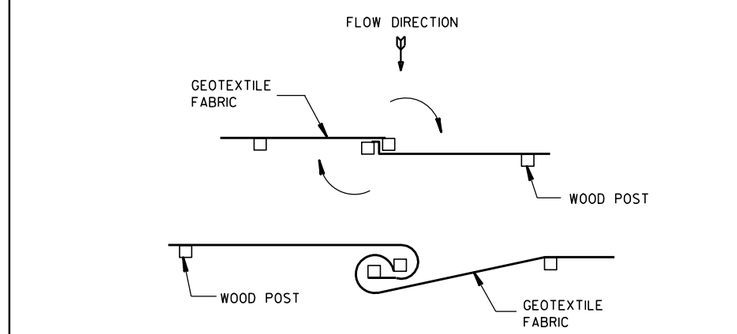
⑤ CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



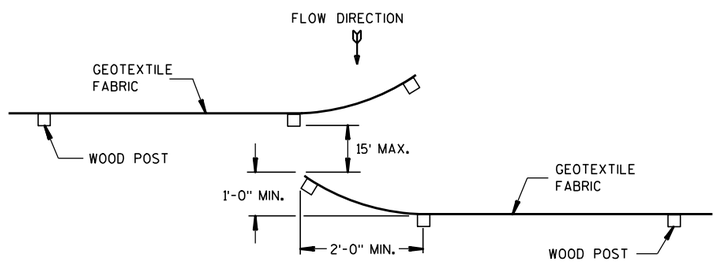
TRENCH DETAIL



SILT FENCE

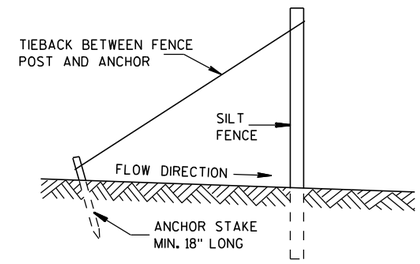


TWIST METHOD



HOOK METHOD

JOINING TWO LENGTHS OF SILT FENCE ⑤



SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

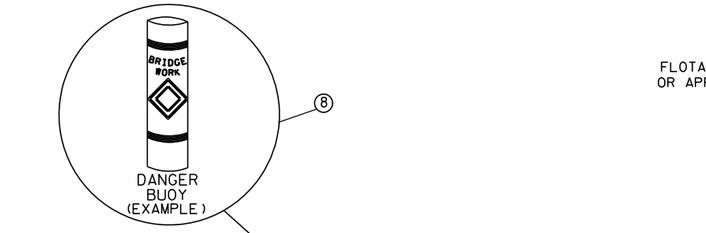
APPROVED
4-29-05 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6

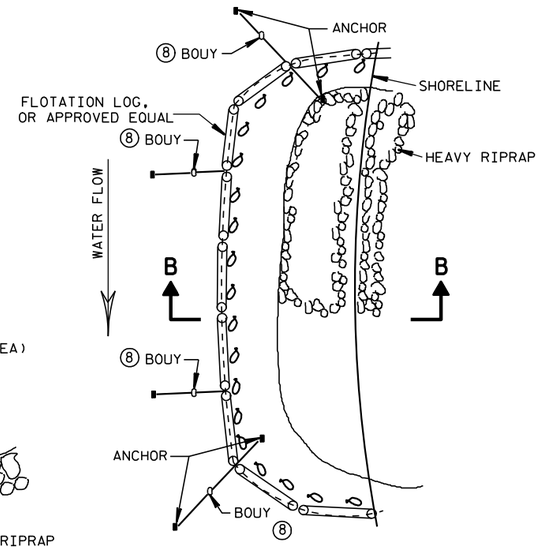
S.D.D. 8 E 9-6

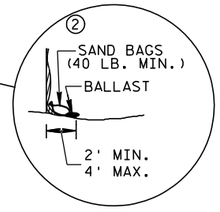
6

S.D.D. 8 E 9-6

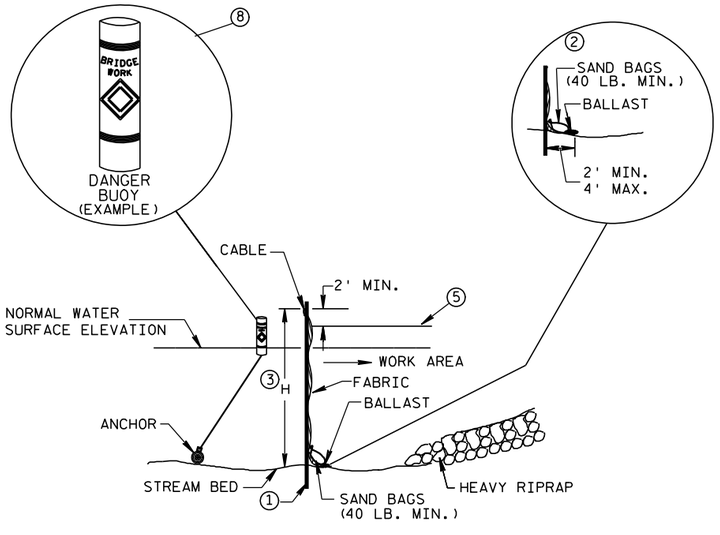


SECTION B-B

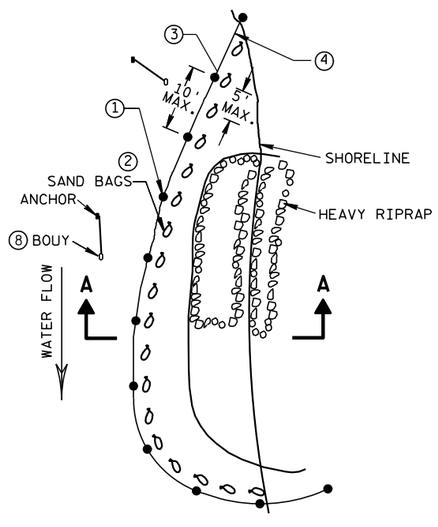




TURBIDITY BARRIER FLOAT ALTERNATIVE
CAUTION - SEE NOTE 6



SECTION A-A



PLAN VIEW

TURBIDITY BARRIER STANDARD POST INSTALLATION

TURBIDITY BARRIER PLACEMENT DETAILS

GENERAL NOTES

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

TURBIDITY BARRIER MAY BE REMOVED AT THE ENGINEERS DISCRETION, WHEN PERMANENT EROSION CONTROL MEASURES HAVE BEEN ESTABLISHED.

① DRIVEN STEEL POSTS, PIPES, OR CHANNELS. LENGTH SHALL BE SUFFICIENT TO SECURELY SUPPORT BARRIER AT HIGH WATER ELEVATIONS.

② SANDBAGS TO BE USED AS ADDITIONAL BALLAST WHEN ORDERED BY THE ENGINEER TO MEET ADVERSE FIELD CONDITIONS. SPACE AS APPROPRIATE FOR SITE CONDITIONS.

③ WHEN BARRIER HEIGHT, H, EXCEEDS 8 FT., POST SPACING MAY NEED TO BE DECREASED.

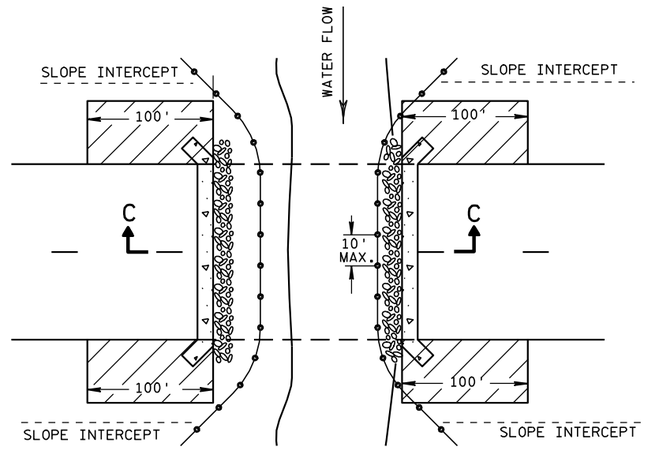
④ IN WATERWAYS SUBJECT TO FLUCTUATING WATER ELEVATIONS, PROVISIONS SHOULD BE MADE TO ALLOW THE WATER TO EQUALIZE ON EACH SIDE OF THE BARRIER. THIS MAY BE ACCOMPLISHED BY LEAVING A PORTION OF THE BARRIER OPEN ON THE UPSTREAM END.

⑤ ESTIMATED HIGH WATER ELEVATION DURING CONSTRUCTION PERIOD. MIMIMUM BARRIER HEIGHT SHALL BE 2'GREATER THAN EITHER THE 02 ELEVATION OR THE ESTIMATED HIGH WATER ELEVATION DURING CONSTRUCTION, WICHEVER IS GREATER.

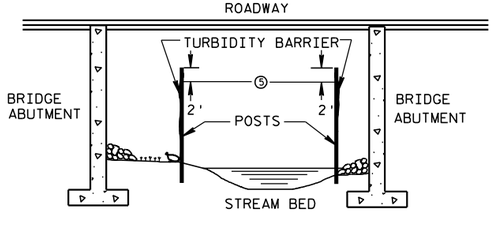
⑥ FLOAT ALTERNATIVE WILL ONLY BE ALLOWED WITH WRITTEN APPROVAL OF THE ENGINEER, AND IS MEANT FOR LOCATIONS WHERE BED ROCK PREVENTS THE INSTALLATION OF POSTS.

⑦ ALLOW SUFFICIENT SLACK VERTICALLY AND HORIZONTALLY SO THAT SEDIMENT BUILD UP WILL NOT SEPARATE OR LOWER THE TURBIDITY BARRIER.

⑧ USE AS DIRECTED BY COAST GUARD OR DNR PERMIT WHEN WORKING IN NAVIGABLE WATERWAYS.



PLAN VIEW



SECTION C-C

TURBIDITY BARRIER DETAIL SHOWING TYPICAL PLACEMENT AT STRUCTURES

TURBIDITY BARRIER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6

S.D.D. 8 E 11-2

S.D.D. 8 E 11-2

METAL APRON ENDWALLS

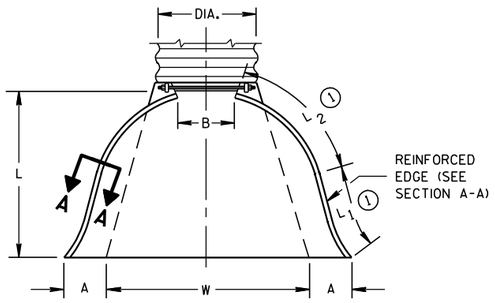
PIPE DIA. (IN.)	MIN. THICK. (Inches) STEEL	MIN. THICK. (Inches) ALUM.	DIMENSIONS (Inches) A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")	APPROX. SLOPE	BODY
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1	1 Pc.
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1	1 Pc.
18	.064	.060	8	10	6	31	15	28 1/4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

× EXCEPT CENTER PANEL SEE GENERAL NOTES

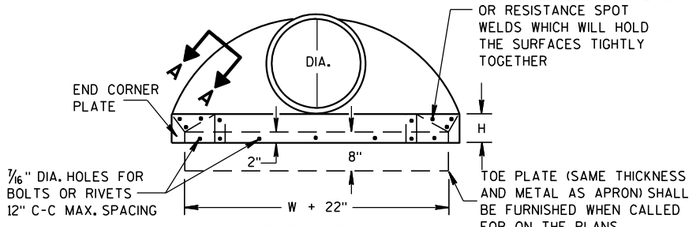
REINFORCED CONCRETE APRON ENDWALLS

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

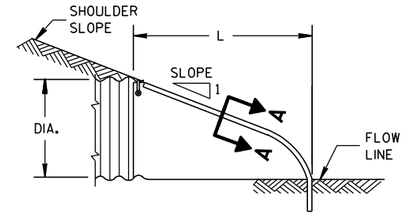
*MINIMUM
**MAXIMUM



PLAN VIEW

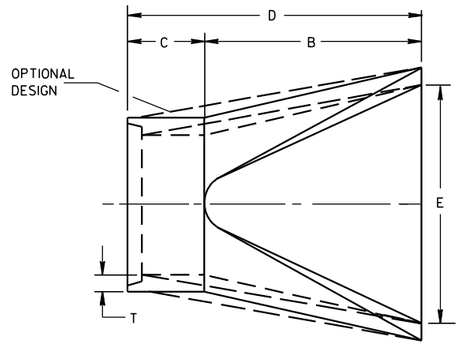


END VIEW

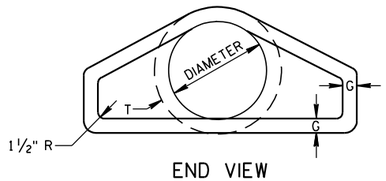


SIDE ELEVATION

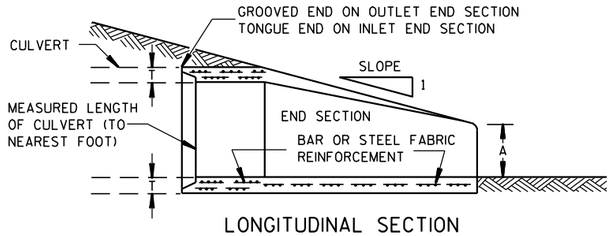
METAL ENDWALLS



PLAN

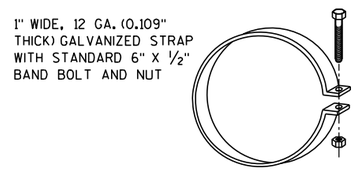


END VIEW



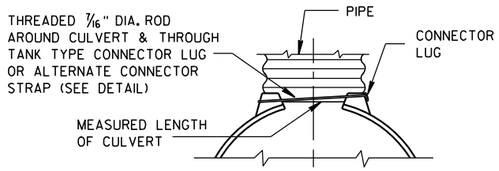
LONGITUDINAL SECTION

CONCRETE ENDWALLS

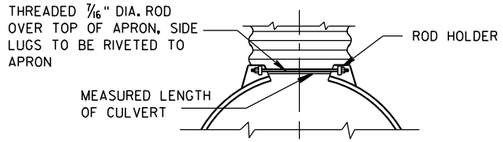


ALTERNATE FOR TYPE 1 CONNECTION

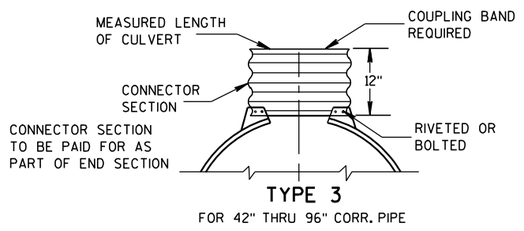
END SECTION CONNECTOR STRAP



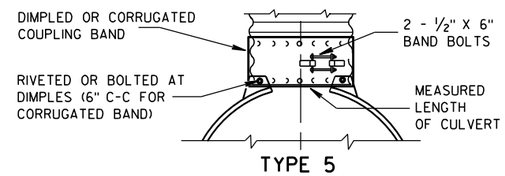
TYPE 1
FOR 12" THRU 24" CORR. PIPE



TYPE 2
FOR 30" THRU 96" CORR. PIPE



TYPE 3
FOR 42" THRU 96" CORR. PIPE



TYPE 5
ALTERNATE FOR:
ALL SIZES CORRUGATED CIRCULAR PIPE

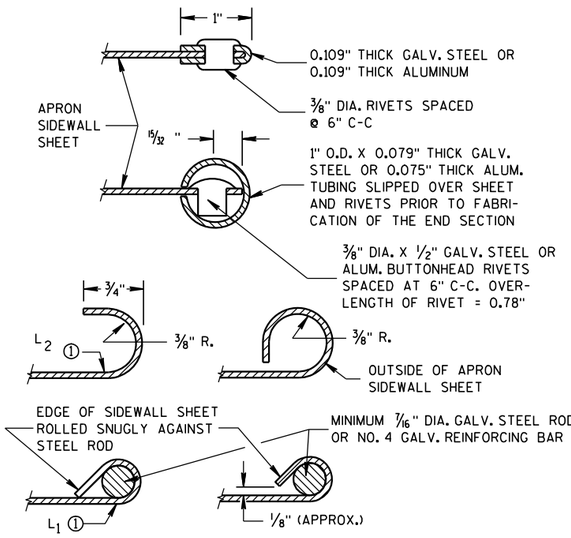
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL. AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

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

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

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

CONNECTION DETAILS



SECTION A-A

GENERAL NOTES

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

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

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

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

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

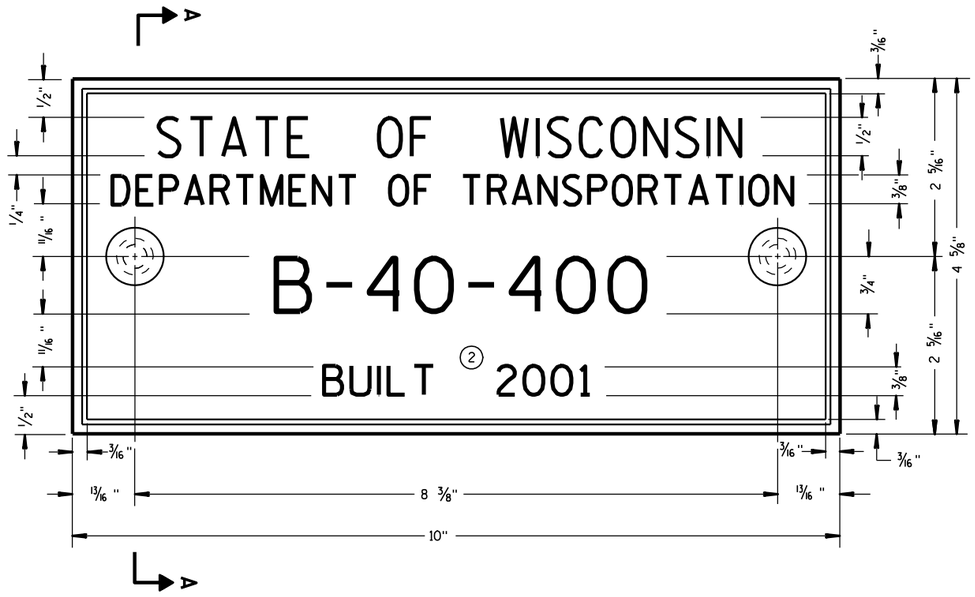
① FOR PIPE SIZES UP TO 60" DIAMETER, A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

APRON ENDWALLS FOR CULVERT PIPE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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



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

NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES

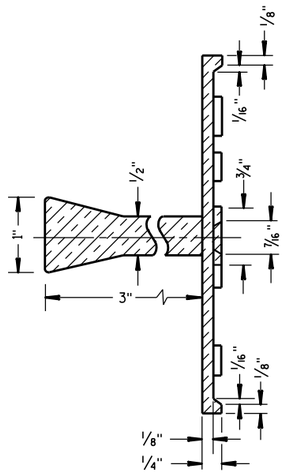
GENERAL NOTES

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

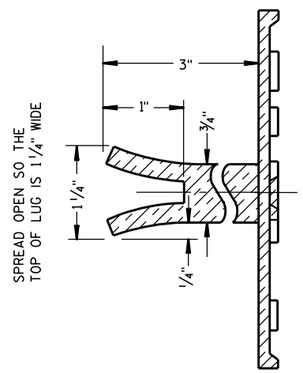
THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

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

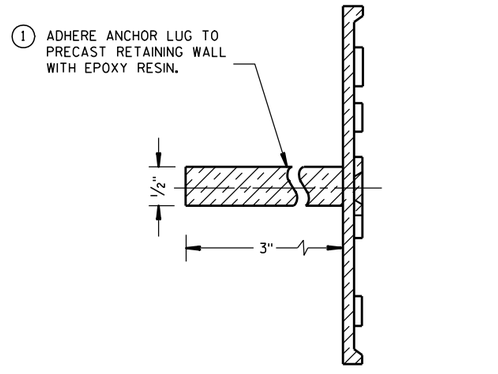
(2) REHABILITATION OF AN EXISTING STRUCTURE SHOULD USE THE DATE OF ORIGINAL STRUCTURE CONSTRUCTION.



SECTION A-A



ALTERNATE LUG



ALTERNATE LUG
(FOR ATTACHMENT TO PRECAST STRUCTURES)

NAME PLATE (STRUCTURES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

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

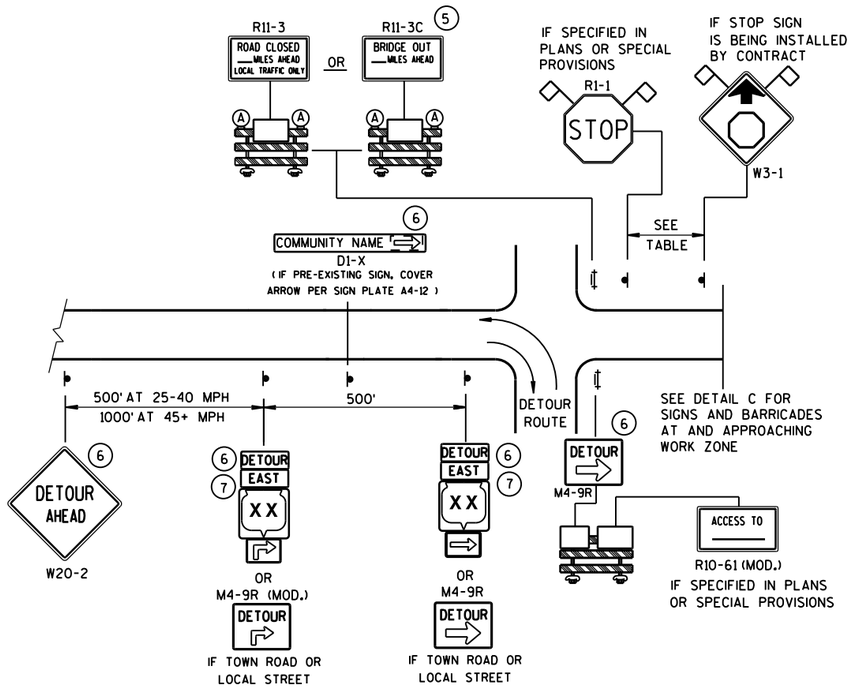
FHWA

6

S.D.D. 12 A 3-10

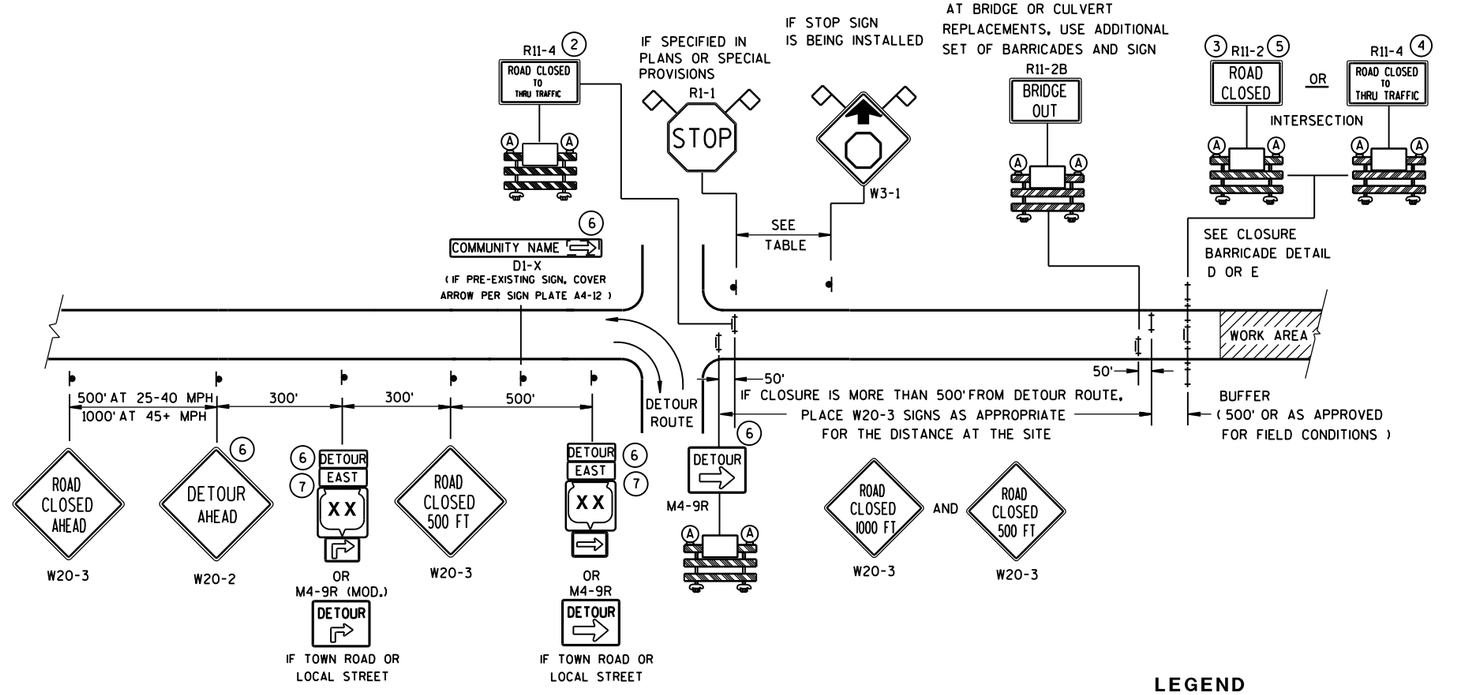
6

S.D.D. 12 A 3-10



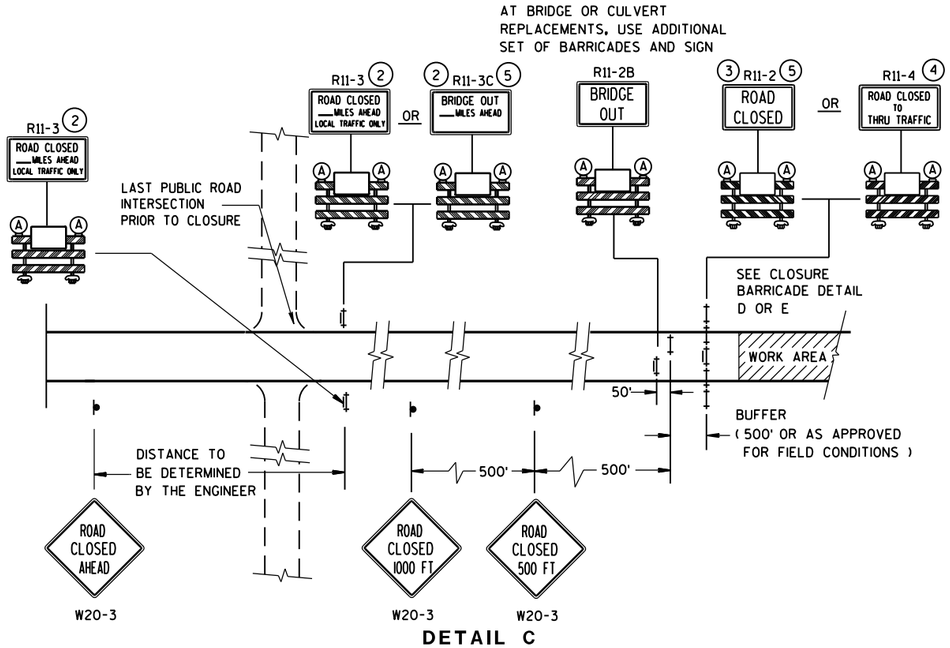
DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR

WORK ZONE GREATER THAN ½ MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)



DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR

WORK ZONE LESS THAN ½ MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)



DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR

SPEED LIMIT (MPH)	"STOP AHEAD" ADVANCE WARNING DISTANCE (FT)
25	200
30	200
35	350
40	350
45	500
50	550
55	750

SEE SDD 15C2-SHEET "**b**"
FOR GENERAL NOTES
AND FOOTNOTES (1) THROUGH (7)

LEGEND

- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- (A) TYPE "A" WARNING LIGHT (FLASHING)
- WORK AREA
- DETOUR / EAST — M4-8 / M3-X
- XX — M1-4; COUNTY XX — M1-5A; XX — M1-6
- M05-1 OR M06-1
- FLAGS, 16" X 16" MIN., (ORANGE)

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

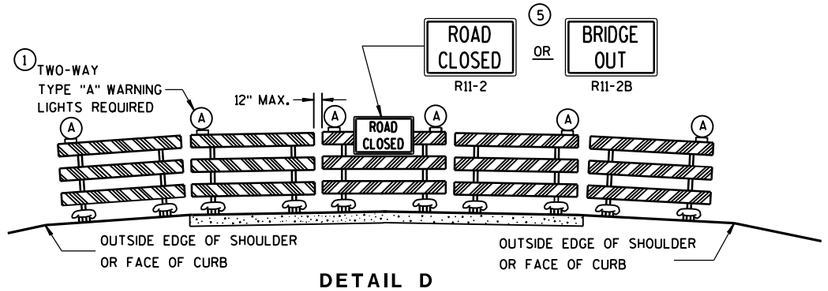
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

8/2013 DATE — /S/ Travis Feltes STATE TRAFFIC ENGINEER — DESIGN

FHWA

6

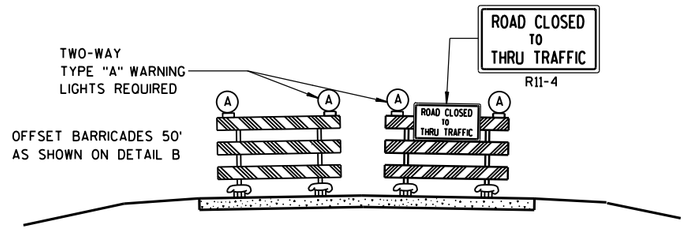
S.D.D. 15 C 2-5a



DETAIL D

ROAD CLOSURE BARRICADE DETAIL

APPROACH VIEW



DETAIL E

LANE CLOSURE BARRICADE DETAIL

APPROACH VIEW

SEE SDD 15C2-SHEET "**a**" FOR LEGEND

GENERAL NOTES

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

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

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

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

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

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

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

THE R11-2, R11-3, M4-9, R11-4 AND R10-61 SIGNS PLACED ON BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE OR BOTTOM RAILS.

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

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:
- R11-2 SHALL BE 48" X 30".
- R11-3, R11-4 AND R10-61 SHALL BE 60" X 30".
- M4-9 SHALL BE 30" X 24".
- M3-X SHALL BE 24" X 12". (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS.)
- M4-8 SHALL BE 24" X 12". (30" X 15" IF NEEDED TO MATCH EXISTING SIGNS.)
- M1-4, M1-5A, AND M1-6 SHALL BE 24" X 24". (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS.)
- M05-1 AND M06-1 SHALL BE 21" X 21". (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS.)
- D1-X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.
- R1-1 SHALL BE 36" X 36".

(1) TWO WARNING LIGHTS SHALL BE PROVIDED ON THE CENTER BARRICADE AND A MINIMUM OF ONE WARNING LIGHT SHALL BE PROVIDED ON EACH OF THE OTHER BARRICADES WITHIN THE ROADWAY LIMITS. SPACING OF THE WARNING LIGHTS SHALL BE UNIFORM TO THE EDGE OF ROADWAY AS SHOWN (APPROX. 8-FOOT LIGHT SPACING).

(2) THESE SIGNS AND BARRICADES ARE NOT REQUIRED IF ROAD CLOSURE BEGINS AT INTERSECTION.

(3) FOR ROAD CLOSURE WITHOUT LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL D.

(4) FOR ROAD CLOSURE WITH LOCAL ACCESS TO PROJECT, SEE LANE CLOSURE BARRICADE DETAIL E.

(5) FOR BRIDGE OR CULVERT REPLACEMENTS, SUBSTITUTE "BRIDGE OUT" INSTEAD OF "ROAD CLOSED" ON R11-2 AND R11-3 SIGNS.

(6) INSTALL DETOUR AND COMMUNITY GUIDE SIGNS AND ARROWS ONLY IF SPECIFIED IN THE CONTRACT. IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. MODIFY EXISTING SIGNS WHERE POSSIBLE. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. IF DETOUR SIGNS ARE BEING INSTALLED BY OTHERS, PLACE THE CONTRACTED TRAFFIC CONTROL SIGNS TO ALLOW FOR PLACEMENT OF ALL WARNING, DETOUR AND GUIDE SIGNS AS SHOWN.

(7) "EAST" CARDINAL DIRECTION MARKERS AND RIGHT TURN ARROWS ARE SHOWN. USE OTHER CARDINAL DIRECTIONS AND ARROWS AS APPROPRIATE.

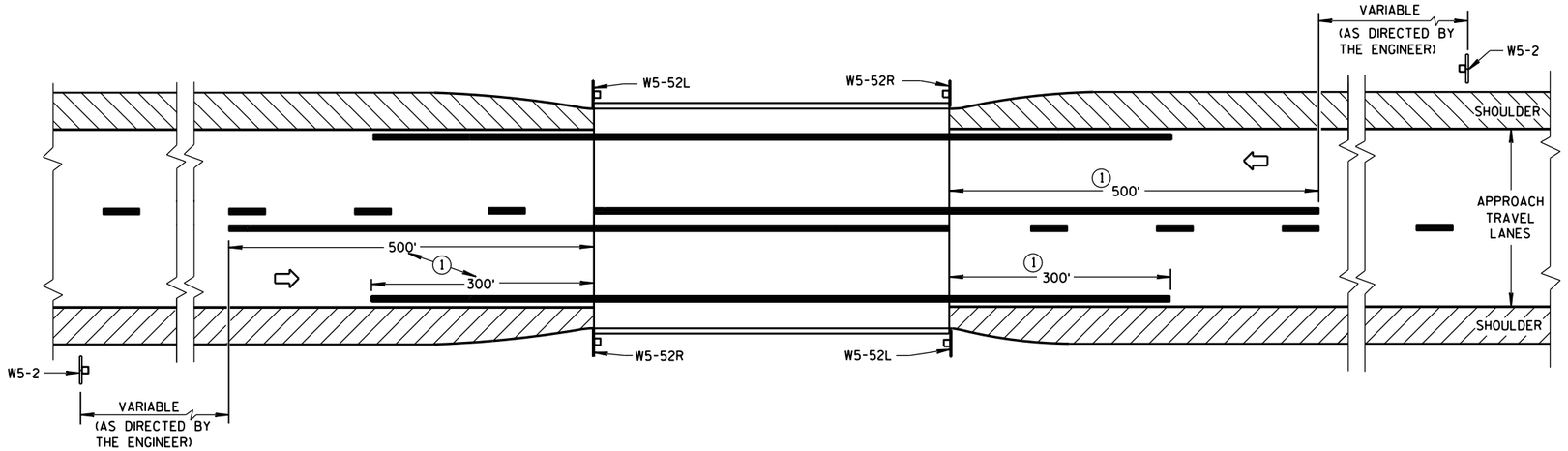
BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

8/2013 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
DESIGN
FHWA

6

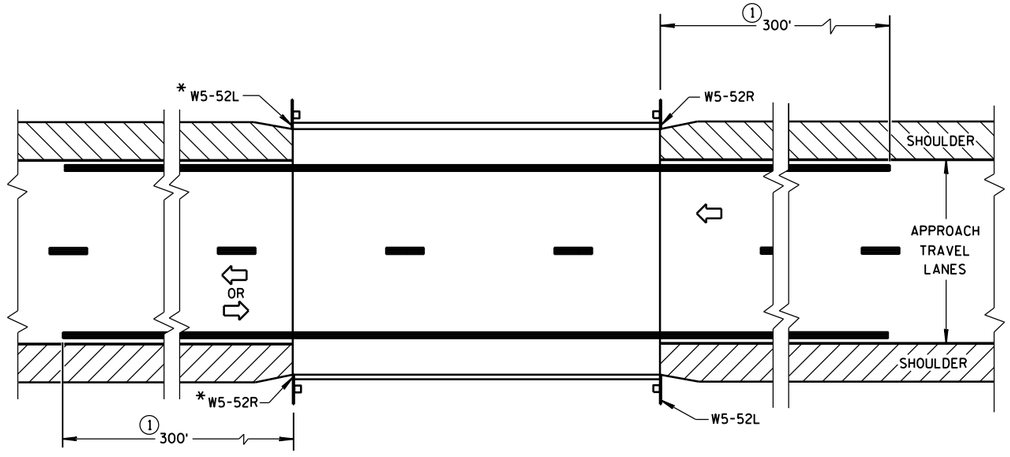
S.D.D. 15 C 2-5b



SITUATION 1

WARRANTING CRITERIA:

BRIDGE WIDTH IS AT LEAST 18 FEET BUT LESS THAN 24 FEET



*OMIT ON ONE-WAY TRAVELLED WAYS

SITUATION 2

WARRANTING CRITERIA:

1. BRIDGE WIDTH IS AT LEAST 24 FEET AND
2. BRIDGE IS LESS THAN 6 FEET WIDER (ON EACH SIDE) THAN APPROACH TRAVEL LANES.

GENERAL NOTES

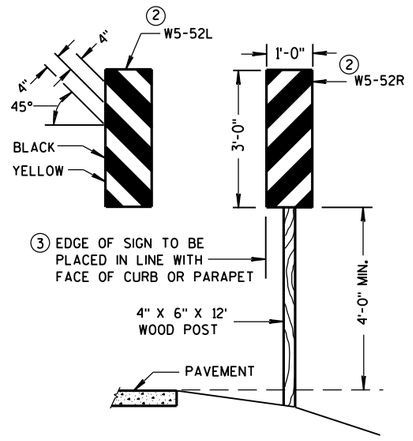
DETAILS OF TRAFFIC CONTROL DEVICES AND INSTALLATION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

PAVEMENT MARKING SHOWN ON THIS DRAWING IS NOT REQUIRED UNLESS OTHERWISE SPECIFIED IN THE CONTRACT. WHEN SPECIFIED, PAVEMENT MARKING SHALL CONFORM TO THIS DRAWING AND OTHER CONTRACT REQUIREMENTS.

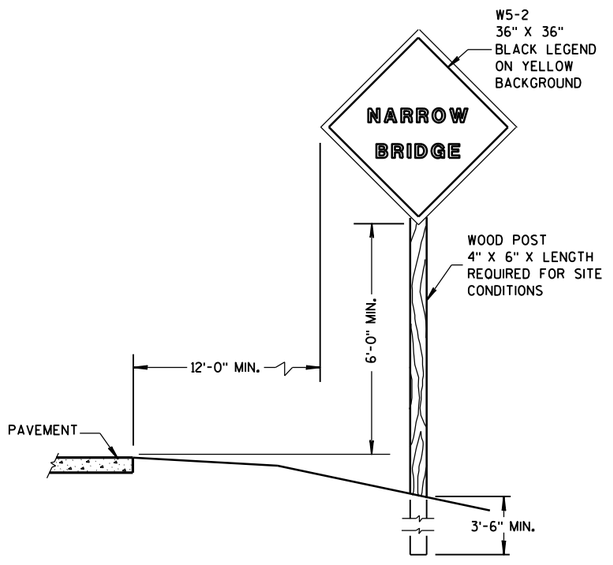
(1) MINIMUM DISTANCE UNLESS OTHERWISE SHOWN ON THE PLAN.

(2) FACE OF OBJECT MARKERS W5-52R, AND W5-52L SHALL BE COVERED WITH TYPE F REFLECTIVE SHEETING.

(3) LOCATE OBJECT MARKER POST(S) BEHIND GUARDRAIL WHEN PRESENT.



OBJECT MARKER PLACEMENT



SIGN PLACEMENT

SIGNING & MARKING FOR TWO LANE BRIDGES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

3/4/2013 — DATE

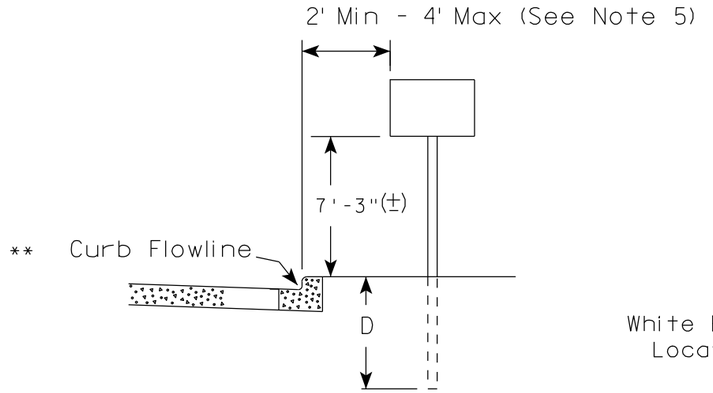
/S/ Travis Feltes — STATE TRAFFIC ENGINEER

FHWA

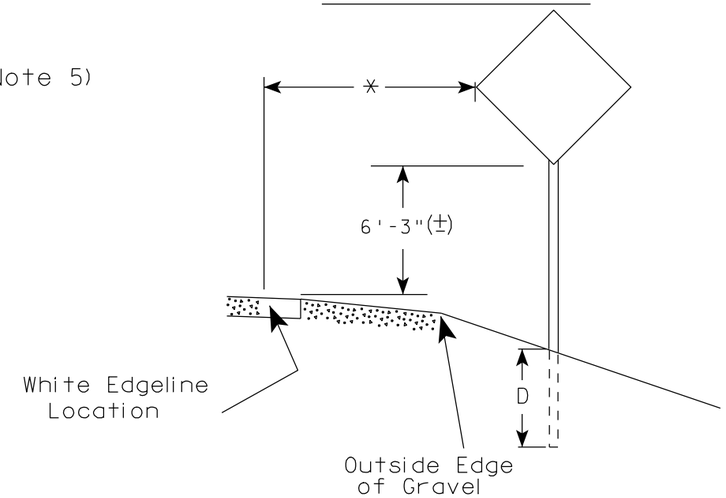
6

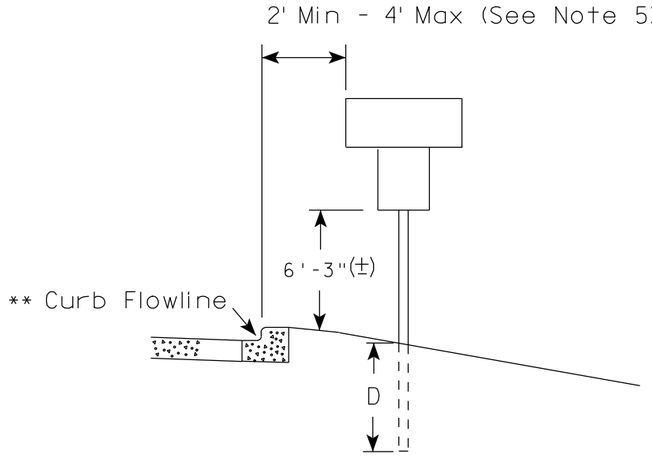
S.D.D. 15 C 6-6

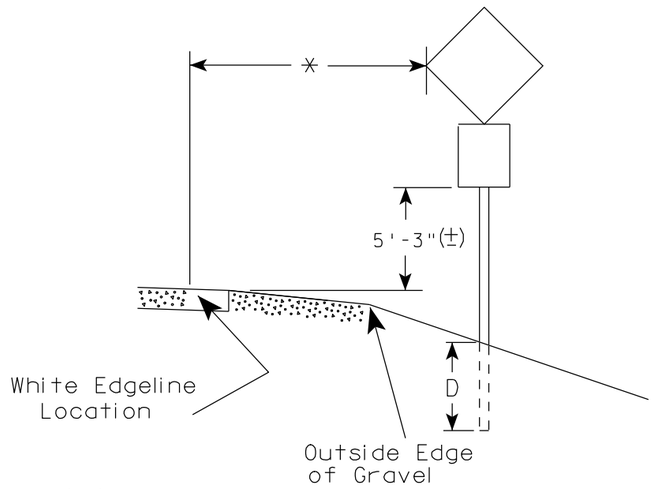
URBAN AREA



RURAL AREA (See Note 2)







** The existence of curb and gutter does not in itself mandate the vertical clearance illustrated. That height is typically measured where there is sidewalk adjacent to the roadway or parking is permitted. In the absence of sidewalk vertical clearance is measured from the top of the curb. Offset of signs is measured from the flow line.

* 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.

GENERAL NOTES

1. Signs wider than 4 feet or larger than 20 sq. ft. shall be mounted on multiple posts. Refer to plate A4-4.
2. If signs are mounted on barrier wall, see A4-10 sign plate.
3. For expressways and freeways, mounting height is 7'- 3" (±) or 6'-3" (±) depending upon existence of a sub-sign.
4. Minimum mounting height for J assemblies (A4-5) is 7'-3" (±) or 6'-3" (±) per urban or rural detail respectively.
5. Minimum mounting height for signs mounted on traffic signal poles is 5'- 3" (±).
6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
7. The (±) tolerance for mounting height is 3 inches.
8. Folding stop signs (R1-1F) shall be mounted at a height of 5'-3" (±) or as directed by the Engineer.
9. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Clearance Markers (W5-52), Mile Markers (D10 series) & End of Road Markers (W5-56 & W5-56A) shall be mounted at a height of 4'-3" (±).

POST EMBEDMENT DEPTH

Area of Sign Installation (Sq. Ft.)	D (Min)
20 or Less	4'
Greater than 20	5'

TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

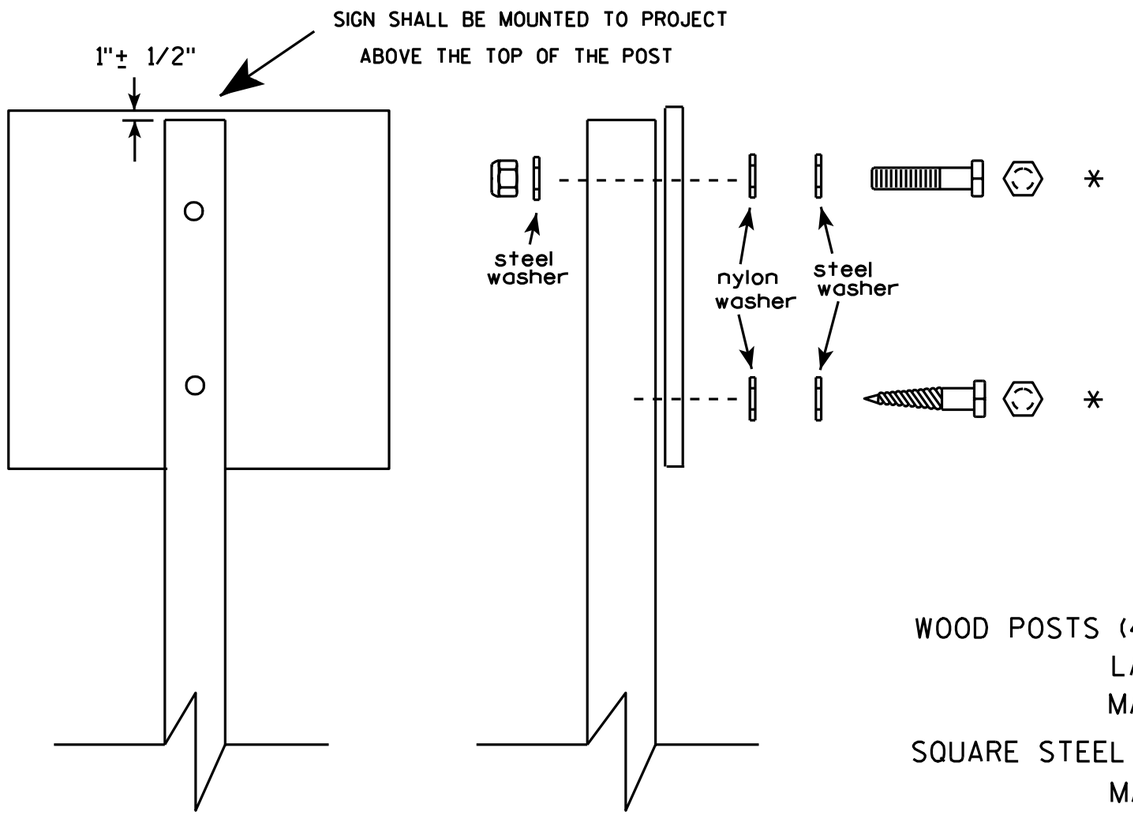
DATE 9/21/2011 PLATE NO. A4-3.16

7

7

PROJECT NO: 5018-00-70 | HWY: NORDALE AVENUE | COUNTY: MONROE | SHEET NO: 21 | E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\A43.DGN PLOT DATE : 21-SEP-2011 13:33 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 101.303739:1.000000 WISDOT/CADDS SHEET 42



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

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

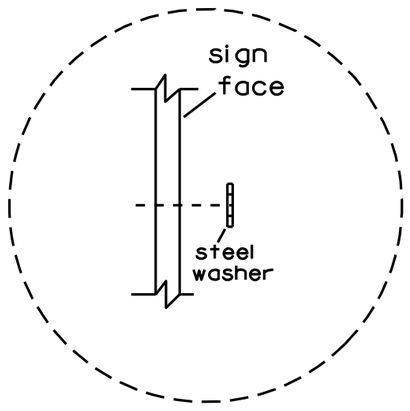
b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.

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

WOOD POSTS (4" x 4" or 4" x 6")
LAG SCREWS - 3/8" X 3"
MACHINE BOLTS - 5/16" X 6-1/2" or 7" Length w/ nuts

SQUARE STEEL POSTS (2" x 2")
MACHINE BOLTS - 3/8" X 3-1/4" Length w/ nuts
RIVETS - 9/32 " (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL
O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH

WASHERS (ALL POSTS) -
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON for all Type H signs.



Washer Placement when Sign Has Other Than Type H or Type F Face

* Two different fastening systems are shown for illustration purposes. On any individual sign, either one or the other system shall be used. Actual number of fasteners per sign varies with the sign area, but normally there are two. For a single post installation, all signs greater than 9 sq. ft. require the use of 3 fasteners.

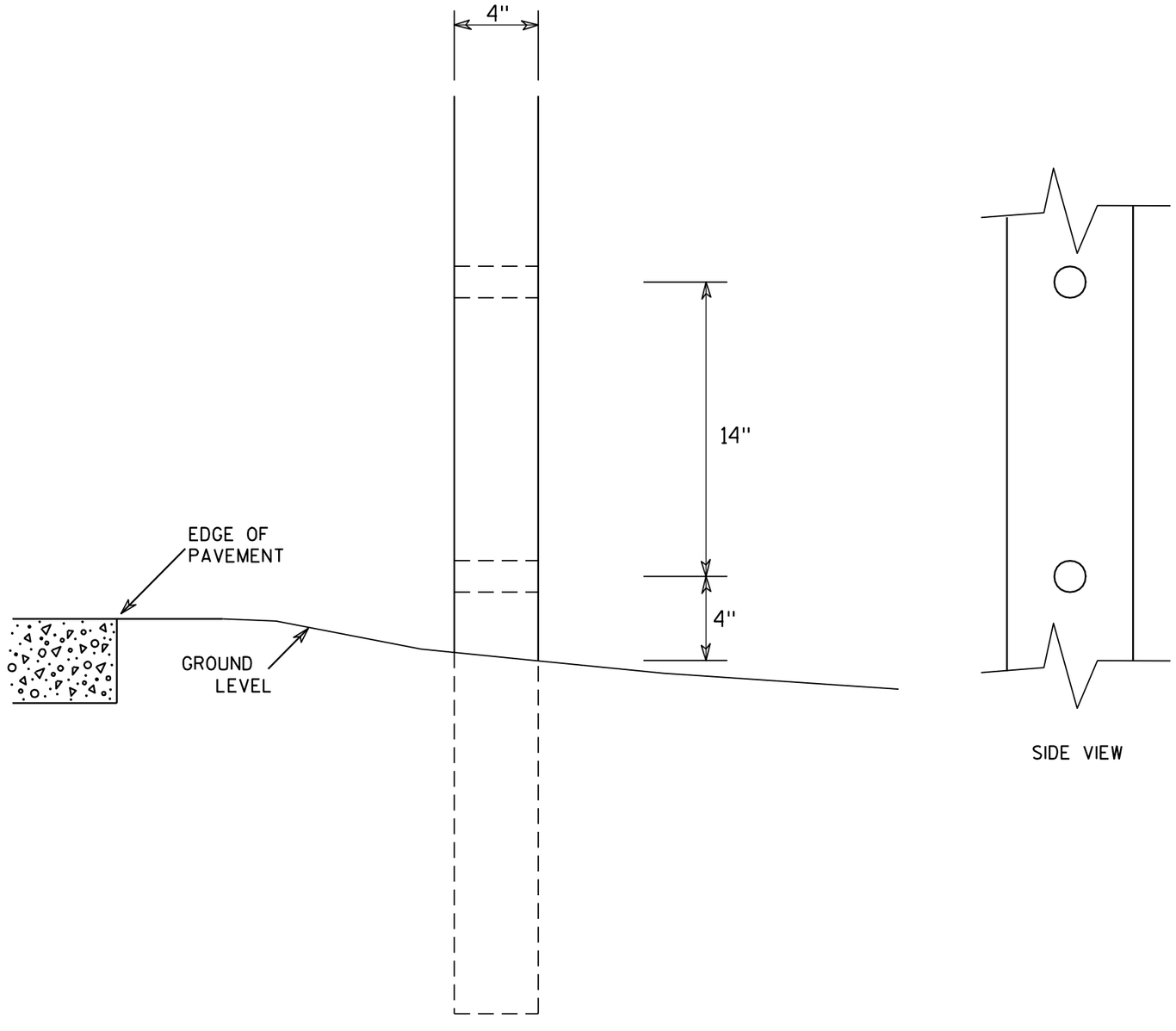
ATTACHMENT OF SIGNS TO POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/23/10 PLATE NO. A4-8.7

PROJECT NO: 5018-00-70	HWY: NORDALE AVENUE	COUNTY: MONROE		SHEET NO: 22	E



SIDE VIEW

GENERAL NOTES

1. All 4 x 6 Wood Posts shall be modified by having two 1½" diameter holes drilled perpendicular to the roadway centerline.

7

7

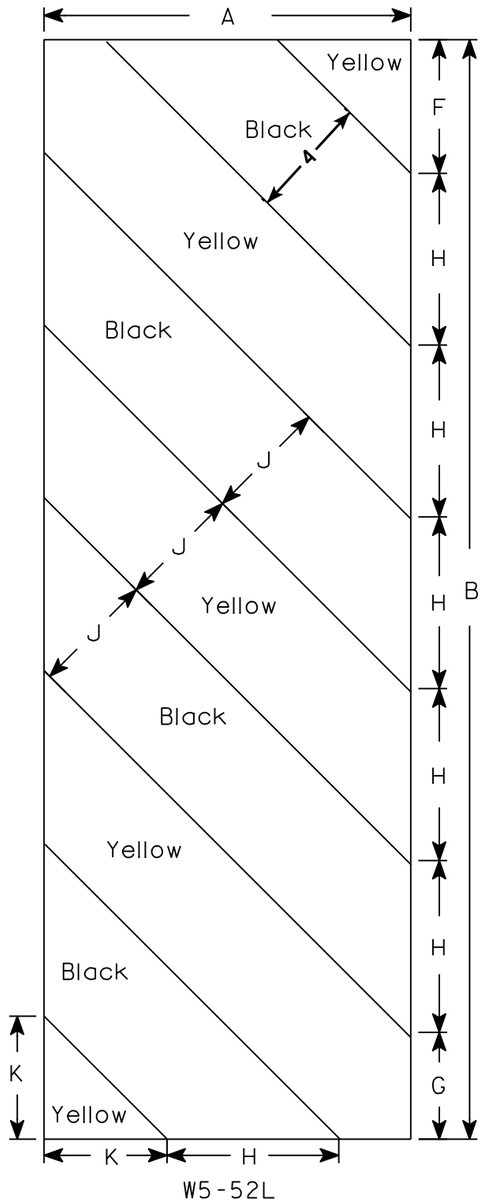
4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

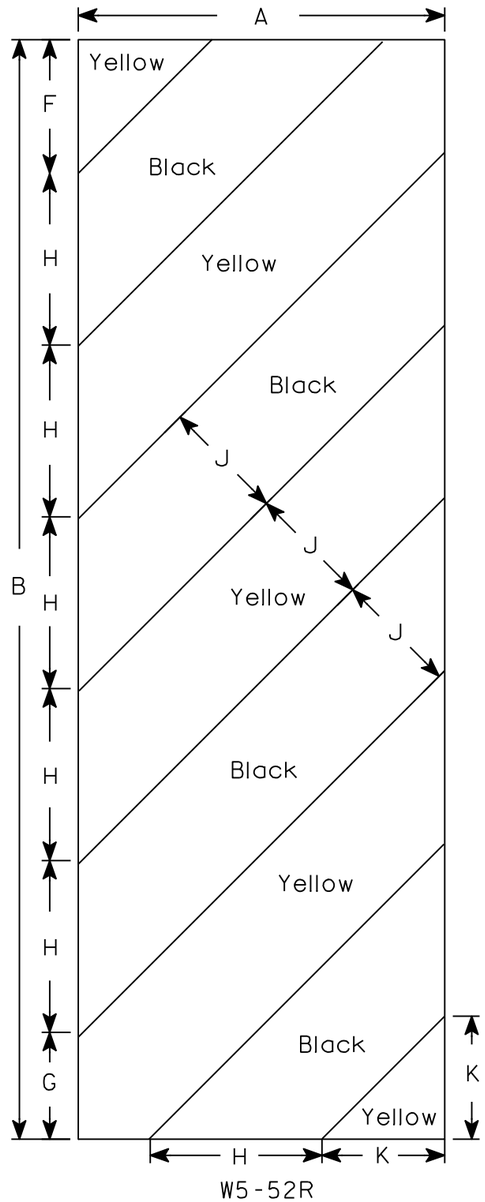
APPROVED Chester J Spang for State Traffic Engineer

DATE 3/27/97 PLATE NO. A4-11.2

PROJECT NO: 5018-00-70	HWY: NORDALE AVENUE	COUNTY: MONROE		SHEET NO: 23	E



W5-52L



W5-52R

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. Alternate colors of stripes as shown.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	12	36				4 3/8	3 1/2	5 5/8	45°	4	4																3.0
2M	12	36				4 3/8	3 1/2	5 5/8	45°	4	4																3.0
3	18	54				6	5 1/2	8 1/2	45°	6	6 9/16																6.75
4																											
5																											

STANDARD SIGN

W5-52L & W5-52R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/29/12 PLATE NO. W5-52.9

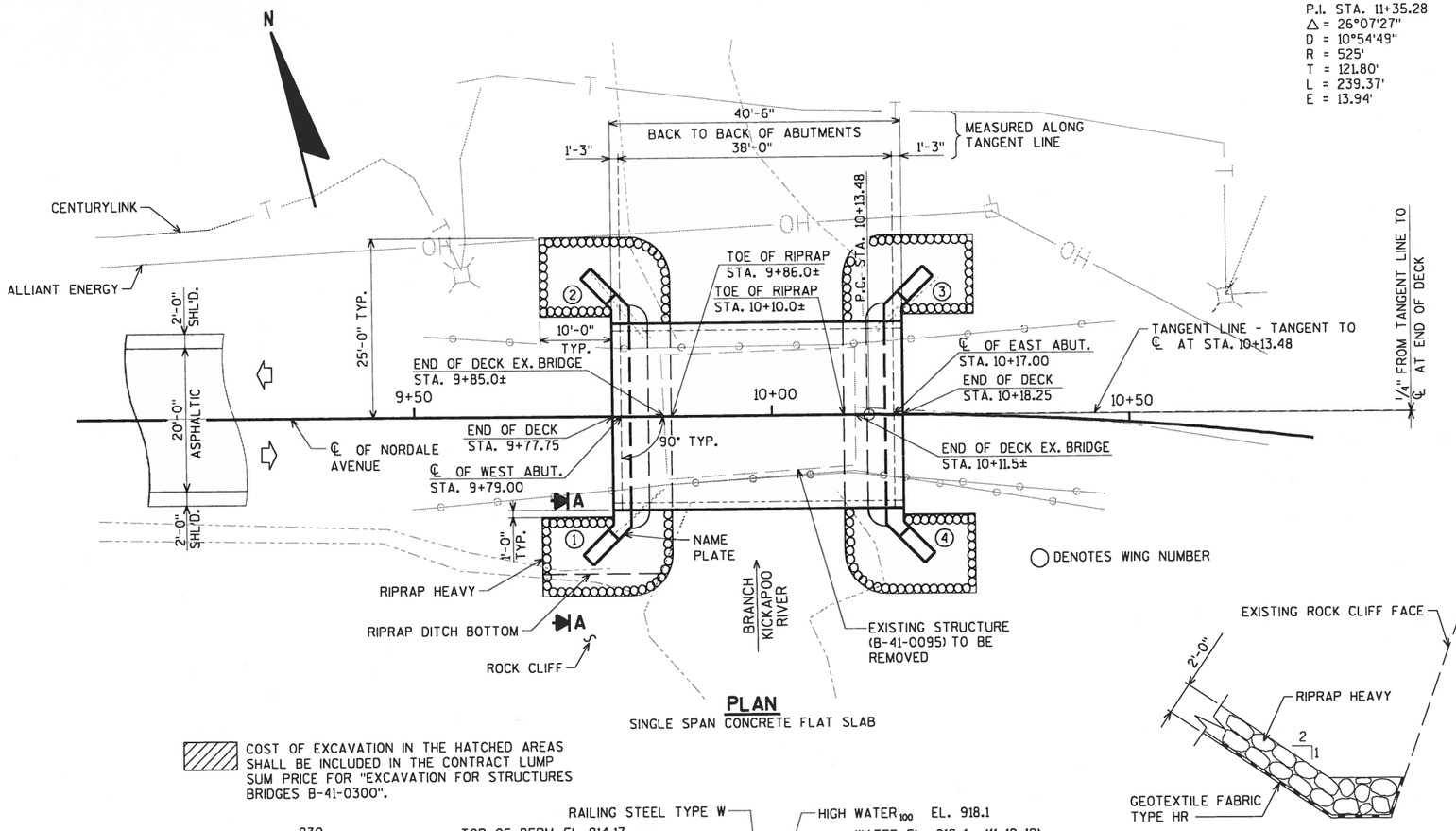
PROJECT NO: 5018-00-70	HWY: NORDALE AVENUE	COUNTY: MONROE		SHEET NO: 24	E

STATE PROJECT NUMBER

5018-00-70

CURVE DATA

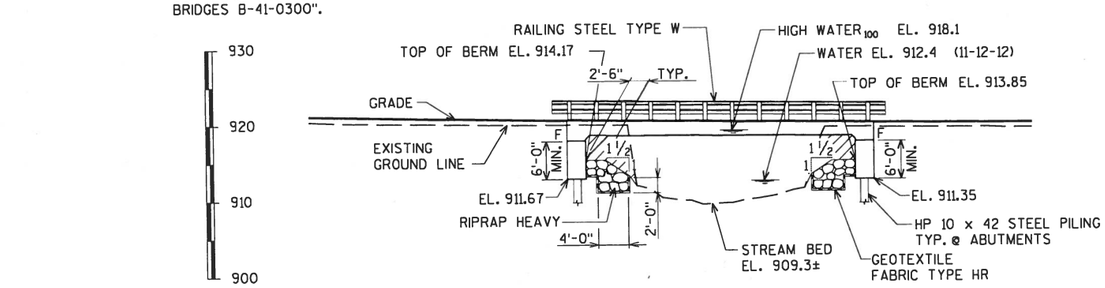
P.I. STA. 11+35.28
△ = 26°07'27"
D = 10°54'49"
R = 525'
T = 121.80'
L = 239.37'
E = 13.94'



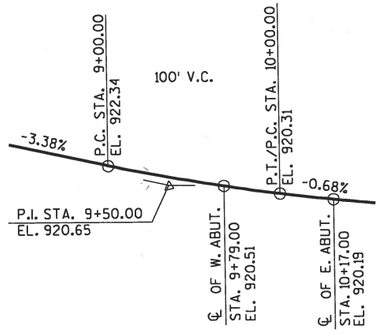
PLAN

SINGLE SPAN CONCRETE FLAT SLAB

COST OF EXCAVATION IN THE HATCHED AREAS SHALL BE INCLUDED IN THE CONTRACT LUMP SUM PRICE FOR "EXCAVATION FOR STRUCTURES BRIDGES B-41-0300".



ELEVATION

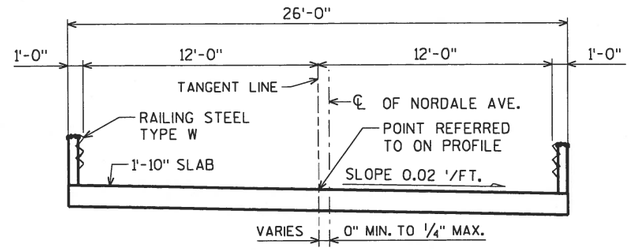


PROFILE GRADE LINE

(NORDALE AVENUE)

BENCH MARK:
BERSTEIN NAIL IN TOP OF TIMBER WING WALL
STA. 10+12, 11' RT.
EL. 917.24

SECTION A-A



CROSS SECTION THRU BRIDGE

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HL-93
INVENTORY RATING FACTOR: 1.24
OPERATING RATING FACTOR : 1.61
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV) = 250 KIPS

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

ULTIMATE DESIGN STRESSES:

CONCRETE MASONRY { SLAB ____ f'c = 4,000 p.s.i.
ALL OTHER ____ f'c = 3,500 p.s.i.
HIGH STRENGTH BAR STEEL REINFORCEMENT (GRADE 60) ____ fy = 60,000 p.s.i.

HYDRAULIC DATA:

100 YEAR FLOOD
DRAINAGE AREA = 5.4 sq. mi.
WATERWAY AREA = 215 sq. ft.
V = 6.8 f.p.s.
Q_{100} = 1,460 c.f.s.
HIGH $WATER_{100}$ EL. 918.1
HIGH $WATER_{2}$ EL. 914.8
RDWY. OVERFLOW = N/A
SCOUR CRITICAL CODE = 8
DATUM = NAVD88 (2007)

FOUNDATION DATA:

ABUTMENTS TO BE SUPPORTED ON HP 10 x 42 STEEL PILING (PRE-BORED AT WEST ABUTMENT, PILE POINTS AT EAST ABUTMENT.) DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 120 TONS ǂ PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED LENGTH 15'-0" AT WEST ABUTMENT AND 25'-0" AT EAST ABUTMENT.

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

TRAFFIC DATA:

A.D.T. = 150 (2014)
A.D.T. = 200 (2034)
R.D.S. = 30 M.P.H.

LIST OF DRAWINGS

WISCONSIN
DANIEL N. SYDOW
E-38363
WI
PROFESSIONAL ENGINEER
10/23/2013

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

CONSULTANT CONTACT:
DAN SYDOW
(715)-834-3161

NO.	DATE	REVISION	BY

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher KAR 11/27/13
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE B-41-0300

NORDALE AVENUE OVER BR. KICKAPOO RIVER

COUNTY	TOWN/~~CITY/VILLAGE~~
MONROE	SHELDON

DESIGN SPEC.
AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
JCK	CJM	CJM	DNS

GENERAL PLAN

SHEET 1 OF 12

25

I.D.

DATE:

8

8

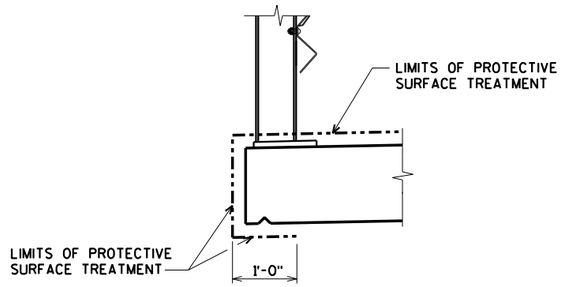
DATE: 8-9-13 / 8-22-13
DATE:
DATE: 8-26-13
CHECKED BY: JCK/KLW
BACK CHECKED BY:
CORRECTED BY: CJM
$PRFNAME$
U:\42-0881.00 - Monroe Co. Tn Sheldon. Nordale Ave\BRIDGE\420881_GP.dgn

10/23/2013

PENTABLE:BReau_shd_util.tbl

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	W. ABUT.	E. ABUT.	SUPER.	TOTAL
203.0600.S	REMOVING OLD STRUCTURE OVER WATERWAY WITH MINIMAL DEBRIS STATION 9+98	LS	-----	-----	-----	1
206.1000	EXCAVATION FOR STRUCTURES BRIDGES B-41-0300	LS	-----	-----	-----	1
210.0100	BACKFILL STRUCTURE	CY	120	120	-----	240
502.0100	CONCRETE MASONRY BRIDGES	CY	30	30	-----	60
502.3200	PROTECTIVE SURFACE TREATMENT	SY	-----	-----	145	145
505.0405	BAR STEEL REINFORCEMENT HS BRIDGES	LB	2170	2170	-----	4340
505.0605	BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB	720	720	11,820	13,260
513.7050	RAILING STEEL TYPE W B-41-0300	LS	-----	-----	-----	1
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	9	9	-----	18
550.0020	PRE-BORING ROCK OR OTHER CONSOLIDIDATED MATERIAL	LF	60	-----	-----	60
550.0500	PILE POINTS	EACH	-----	5	-----	5
550.1100	PILING STEEL HP 10-INCH x 42 LB	LF	60	125	-----	185
606.0300	RIPRAP HEAVY	CY	50	50	-----	100
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	70	70	-----	140
645.0120	GEOTEXTILE FABRIC TYPE HR	SY	115	115	-----	230
SPV.0035	SPECIAL FIBER REINFORCED CONCRETE MASONRY FOR BRIDGES, STRUCTURE B-41-0300	CY	-----	-----	76	76
	NON-BID ITEMS					
	FILLER	SIZE	-----	-----	-----	½" & ¾"



PROTECTIVE SURFACE TREATMENT DETAIL

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

THE FIRST DIGIT OF A THREE DIGIT BAR NO. AND THE FIRST TWO DIGITS OF A FOUR DIGIT BAR NO. SIGNIFIES THE BAR SIZE.

JOINT FILLER SHALL CONFORM TO THE REQUIREMENTS OF A.A.S.H.T.O. DESIGNATION M 153, TYPE I, II OR III OR A.A.S.H.T.O. DESIGNATION M 213.

THE SLOPE OF THE FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH RIPRAP HEAVY AND GEOTEXTILE FABRIC TYPE HR TO THE EXTENT SHOWN ON THE GENERAL PLAN SHEET AND IN THE ABUTMENT DETAILS.

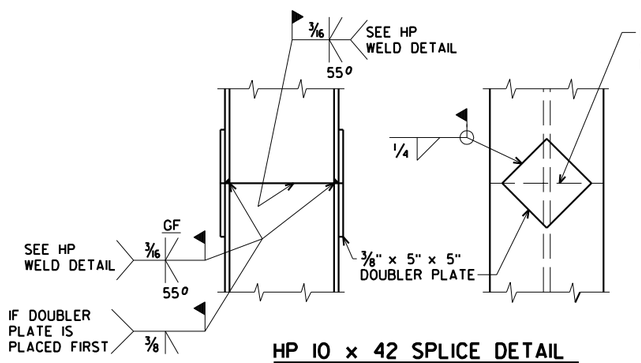
SLAB FALSEWORK SHALL BE SUPPORTED ON PILES UNLESS OTHERWISE APPROVED BY THE ENGINEER.

THE EXISTING GROUND LINE SHALL BE THE UPPER LIMIT FOR EXCAVATION FOR STRUCTURES.

THE EXISTING STRUCTURE, B-41-0095, TO BE REMOVED, IS A SINGLE SPAN STEEL DECK GIRDER BRIDGE 34.0 FEET OVERALL LENGTH WITH A 18.8' CLEAR ROADWAY WIDTH.

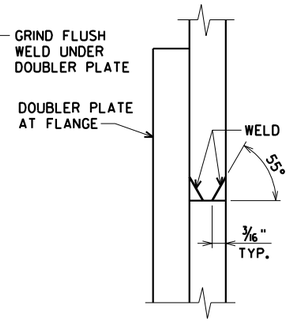
AT BACKFACE OF ABUTMENTS ALL EXCAVATED VOLUME NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH BACKFILL STRUCTURE.

PROTECTIVE SURFACE TREATMENT IS TO BE APPLIED AS SHOWN IN DETAIL ON THIS SHEET.



HP 10 x 42 SPLICE DETAIL

GRINDING MAY BE USED IN LIEU OF BACKGOUGING



HP WELD DETAIL

FLANGE SHOWN, WEB SIMILAR

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

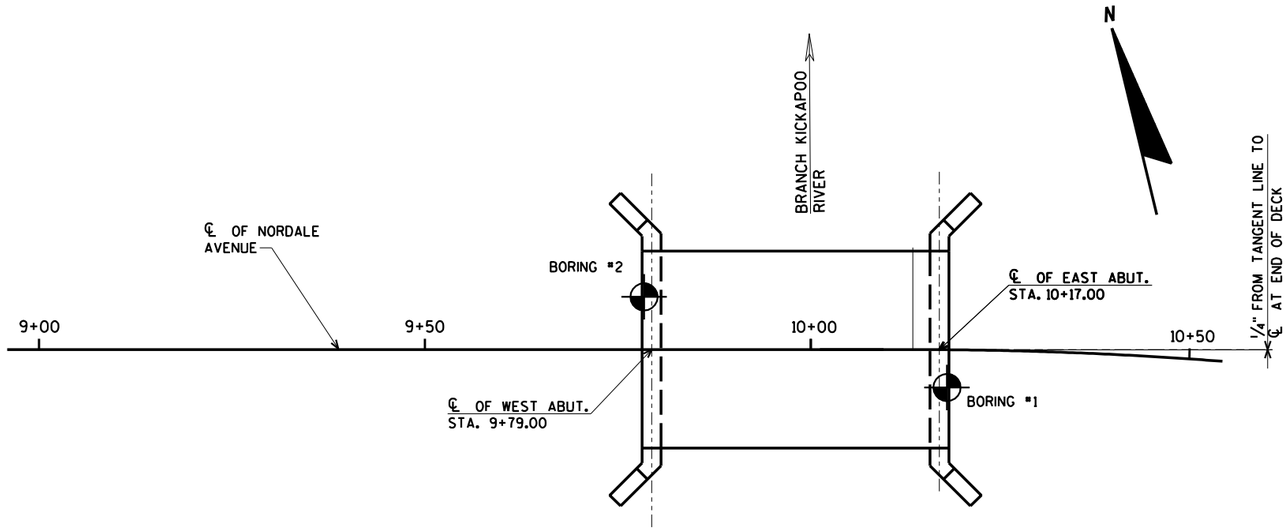
STRUCTURE B-41-0300

DRAWN BY CJM | PLANS CK'D. JCK

QUANTITIES AND NOTES

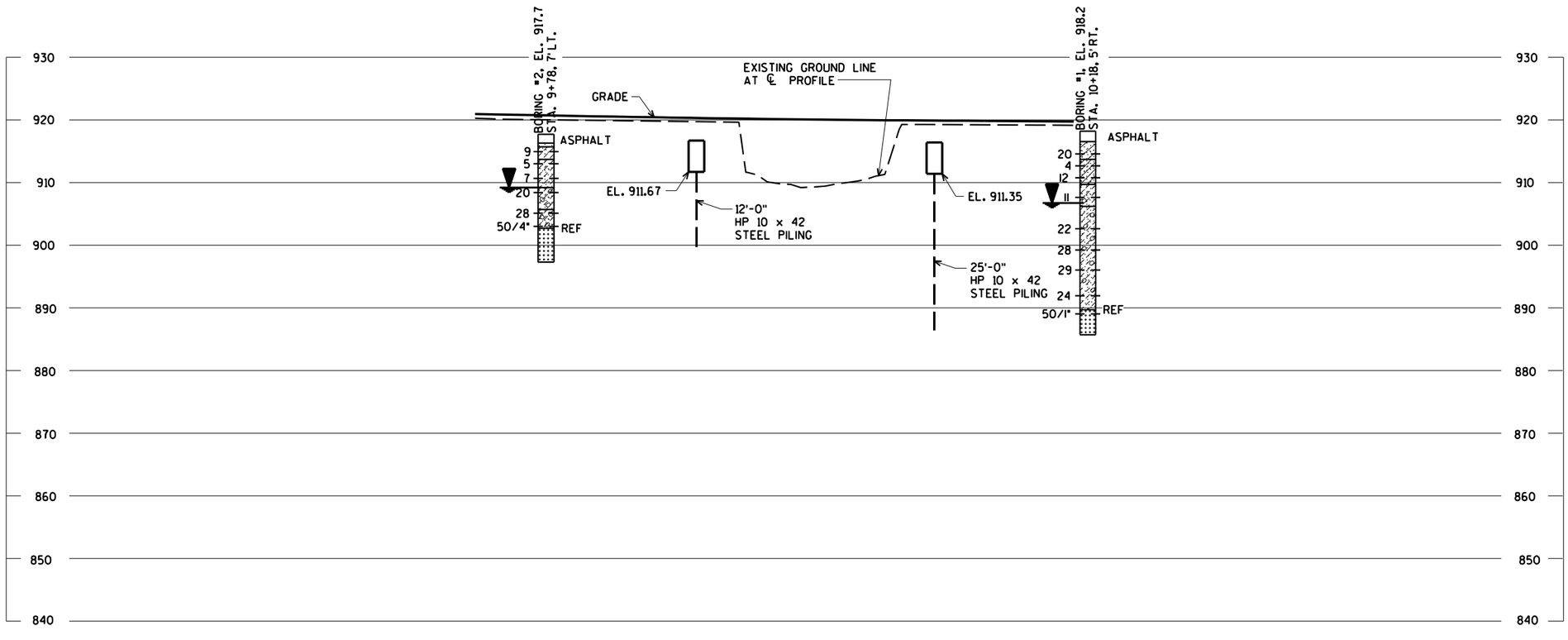
SHEET 2 OF 12
26

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com



BORINGS TAKEN BY:
GEOTECHNICAL DRILLING CONTRACTORS, LLC
WAUSAU, WI
MARCH 25, 2013

GEOTECHNICAL REPORT BY:
RIVER VALLEY TESTING, INC.
NEENAH, WI
MAY 3, 2013



STATE PROJECT NUMBER

5018-00-70

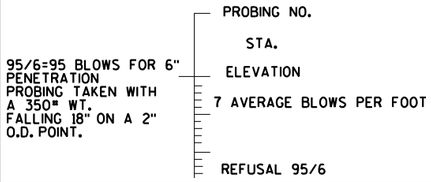
ABBREVIATIONS

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

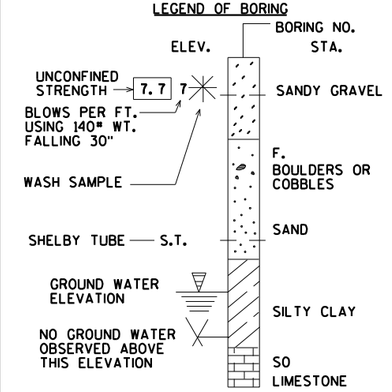
MATERIAL SYMBOLS

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 B-41-0300

DRAWN BY CJM | PLANS CK'D. JCK

SUBSURFACE EXPLORATION

SHEET 3 OF 12
27

8

8

$PRFNAME$
U:\42-0881.00 - Monroe Co, Tn Sheldon, Nordale Ave\BRIDGE\420881_SOILS.dgn

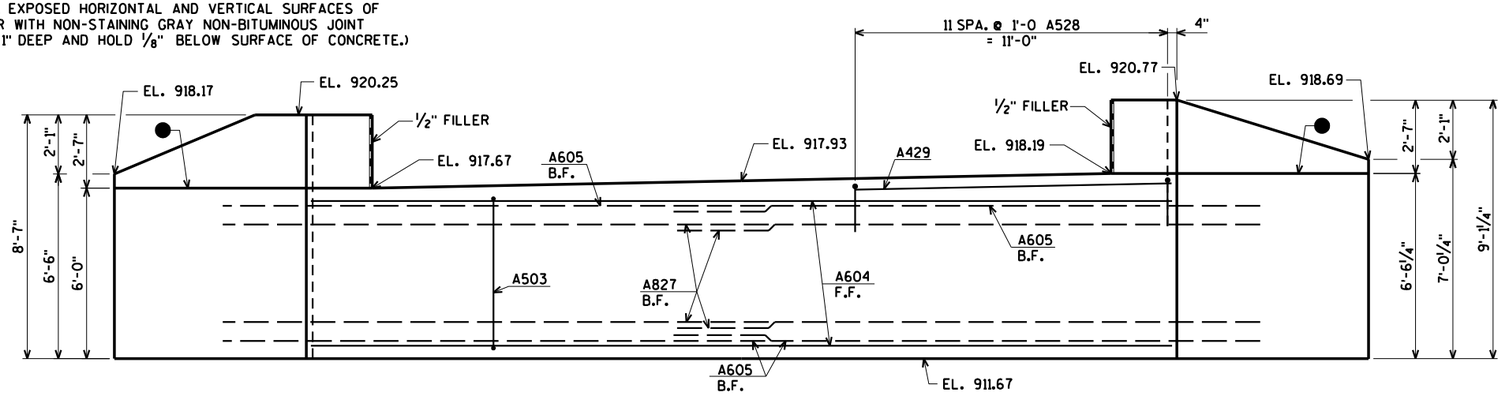
10/23/2013

PENTABLE:BRead_shd_util.tbl

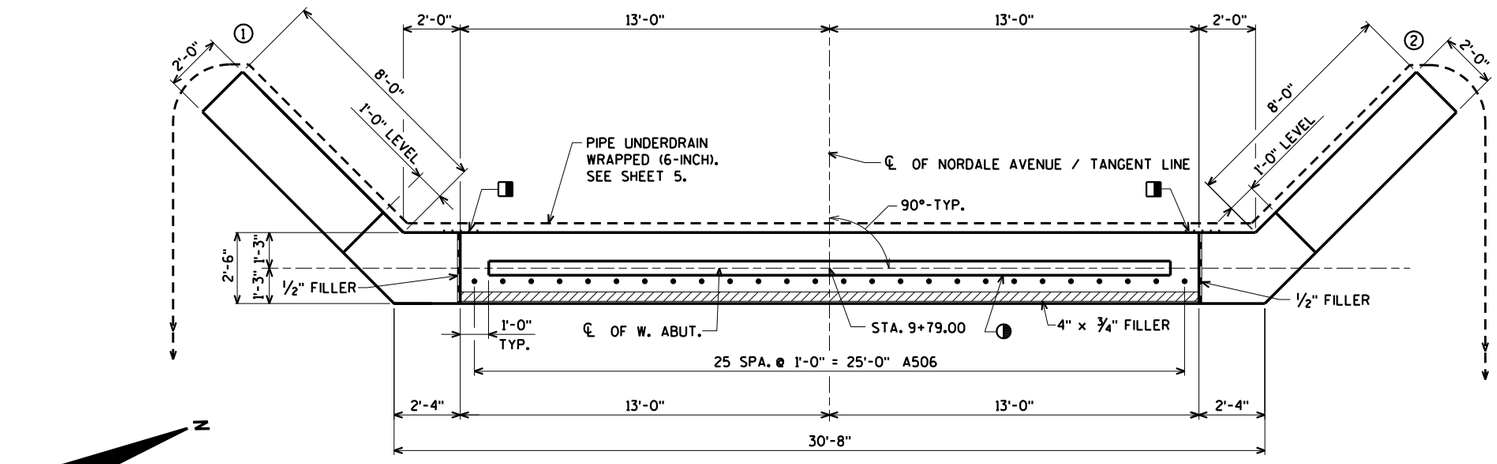
NOTE: SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE.)

STATE PROJECT NUMBER

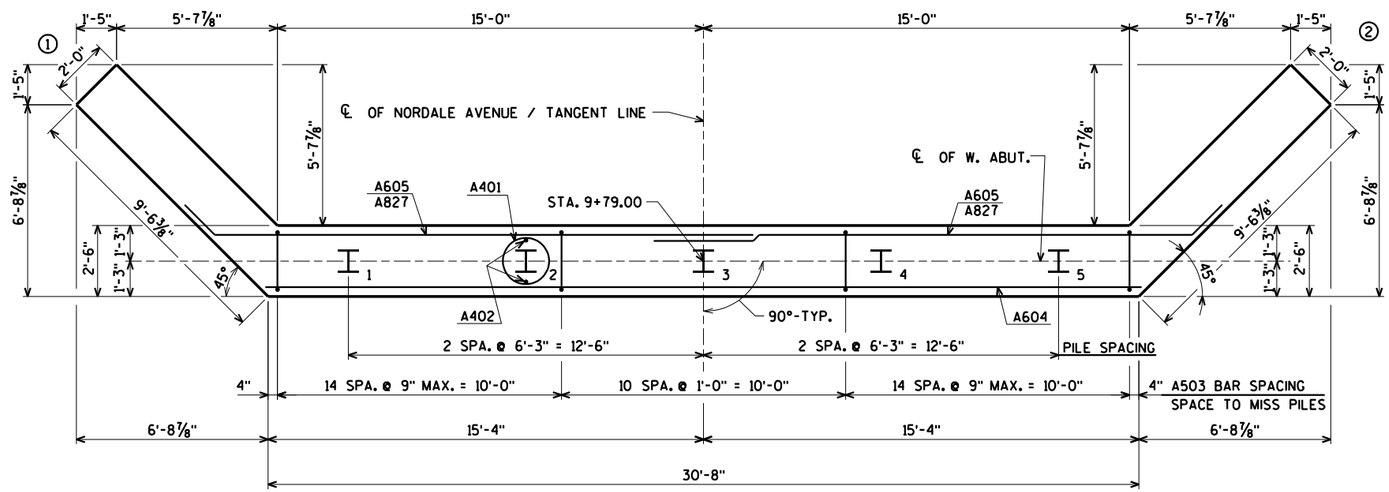
5018-00-70



ELEVATION
(LOOKING WEST)



PLAN



PILE LAYOUT

● OPT. KEYED CONST. JOINT - FORMED BY A BEVELED 2" × 6" WITH RUBBERIZED MEMBRANE WATERPROOFING ON B.F.

◑ KEYED CONST. JOINT - FORMED BY A BEVELED 2" × 6".

◨ VERTICAL 18" RUBBERIZED MEMBRANE WATERPROOFING TO EXTEND FROM BRIDGE SEAT TO TOP OF WING WALL.

FOR PILE SPLICE DETAIL SEE SHEET 2.

B.F. DENOTES BACK FACE

F.F. DENOTES FRONT FACE

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-41-0300

DRAWN BY CJM | PLANS CK'D. JCK

WEST ABUTMENT

SHEET 4 OF 12
28

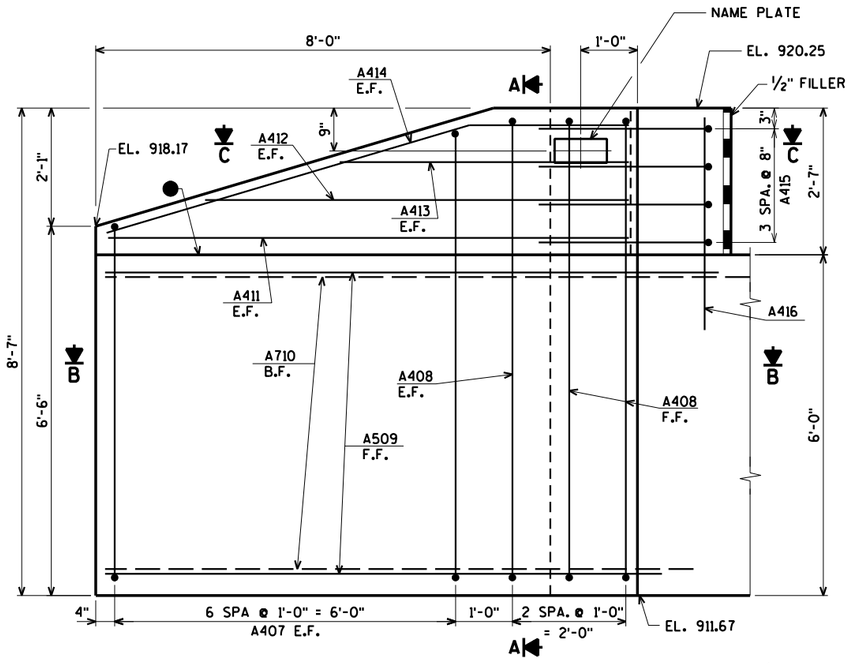
ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

8

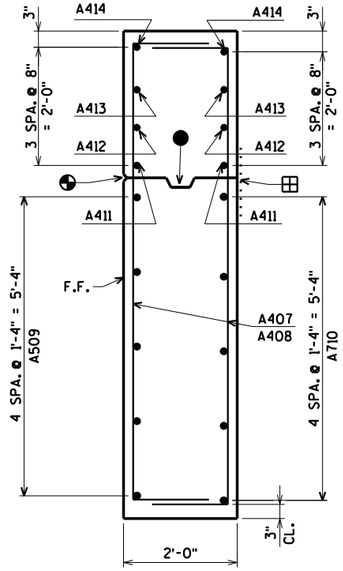
8

STATE PROJECT NUMBER

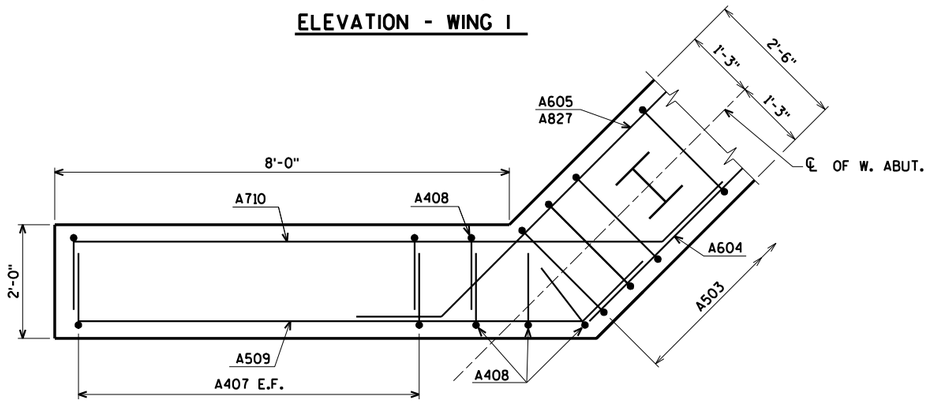
5018-00-70



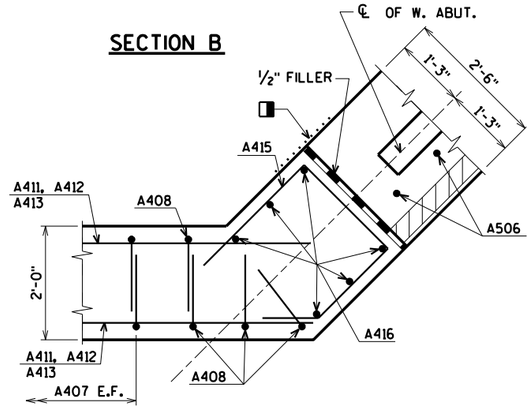
ELEVATION - WING 1



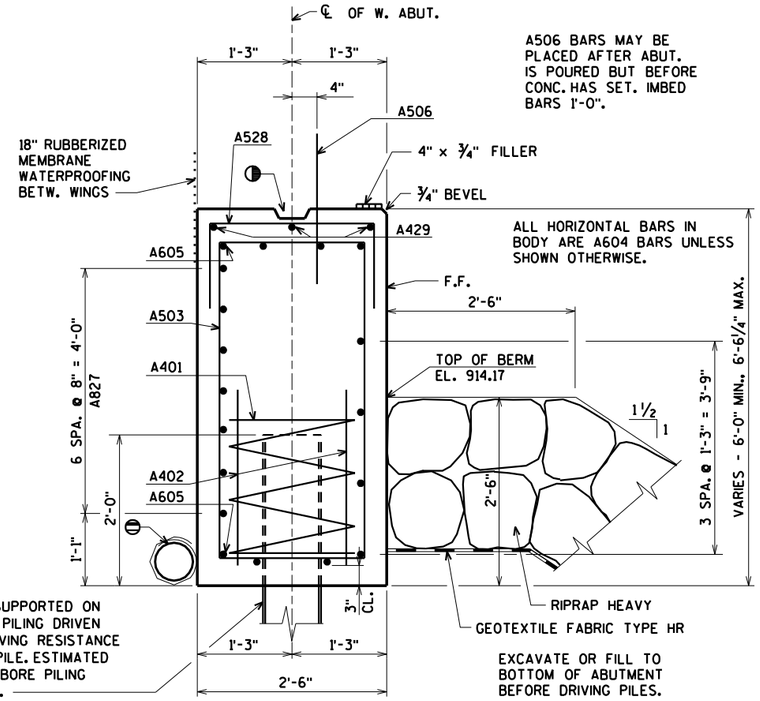
SECTION A



SECTION B



SECTION C



18" RUBBERIZED MEMBRANE WATERPROOFING BETW. WINGS

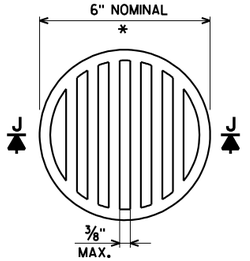
A506 BARS MAY BE PLACED AFTER ABUT. IS POURED BUT BEFORE CONC. HAS SET. IMBED BARS 1'-0".

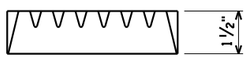
ALL HORIZONTAL BARS IN BODY ARE A604 BARS UNLESS SHOWN OTHERWISE.

ABUTMENT TO BE SUPPORTED ON HP 10 x 42 STEEL PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 120 TONS PER PILE. ESTIMATED LENGTH 12'-0". PRE-BORE PILING 3'-0" INTO BEDROCK.

EXCAVATE OR FILL TO BOTTOM OF ABUTMENT BEFORE DRIVING PILES.

TYPICAL SECTION THRU BODY





SECTION J-J

* DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING. ORIENT SO SLOTS ARE VERTICAL.

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

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

RODENT SHIELD DETAIL

- PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN AS DETAILED ON SDD REINFORCED CONCRETE APRON ENDWALL FOR PIPE UNDERDRAIN. RODENT SHIELD TO BE INCLUDED IN BID PRICE OF "PIPE UNDERDRAIN WRAPPED 6-INCH".
- KEYED CONST. JOINT - FORMED BY A BEVELED 2" x 6".
- 18" RUBBERIZED MEMBRANE WATERPROOFING ON BACK FACE. NOT REQUIRED IF CONST. JT. IS NOT USED.
- OPT. KEYED CONST. JOINT - FORMED BY A BEVELED 2" x 6" WITH RUBBERIZED MEMBRANE WATERPROOFING ON B.F.
- ¾" 'V' GROOVE ON F.F. OF WING WALL NOT REQUIRED IF CONST. JT. IS NOT USED.
- VERTICAL 18" RUBBERIZED MEMBRANE WATERPROOFING TO EXTEND FROM BRIDGE SEAT TO TOP OF WING WALL.

FOR PILE SPLICE DETAIL SEE SHEET 2.

B.F. DENOTES BACK FACE

E.F. DENOTES EACH FACE

F.F. DENOTES FRONT FACE

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-41-0300

DRAWN BY CJM | PLANS CK'D. JCK

WEST ABUT. & WING 1 DETAILS

SHEET 5 OF 12
29

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
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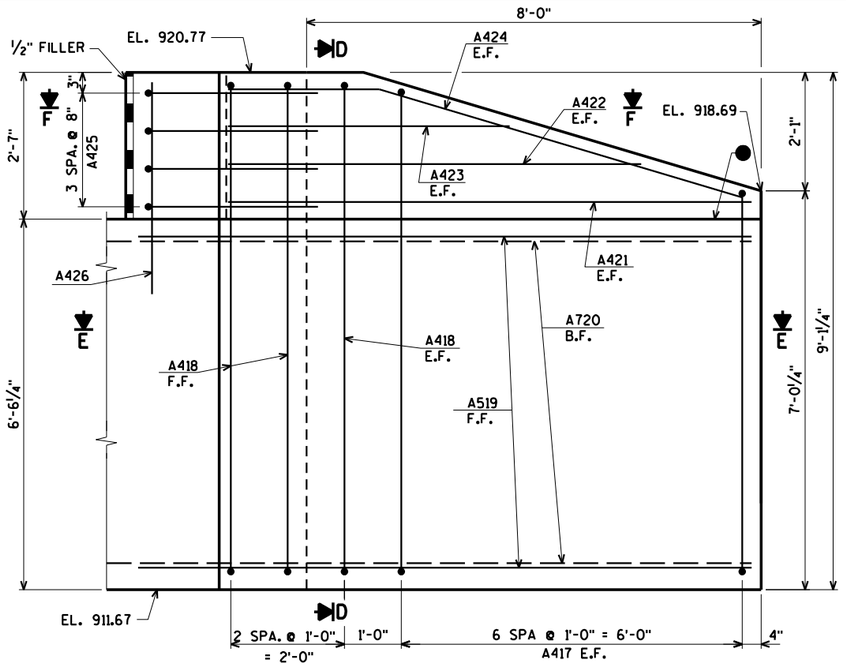
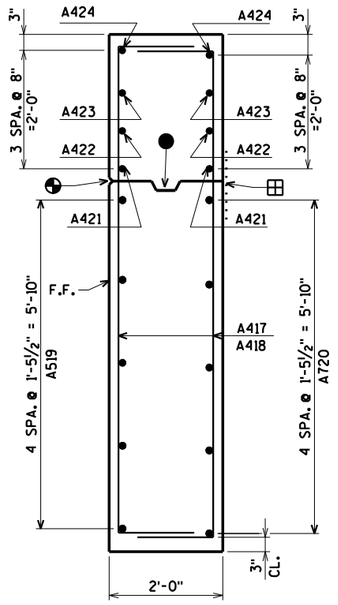
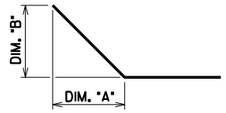


ELEVATION - WING 2



SECTION D



BAR NO.	DIM. "A"	DIM. "B"
A605	1'-0¾"	1'-0¾"
A509	1'-0¾"	1'-0¾"
A710	1'-0¾"	1'-0¾"
A414	6'-10"	2'-0"
A519	1'-0¾"	1'-0¾"
A720	1'-0¾"	1'-0¾"
A424	6'-10"	2'-0"
A827	1'-0¾"	1'-0¾"

BAR SERIES TABLE

BAR MARK	NO REO'D.	LENGTH
A407	1 SERIES OF 7	8'-8" TO 10'-6
A417	1 SERIES OF 7	9'-2" TO 10'-11"

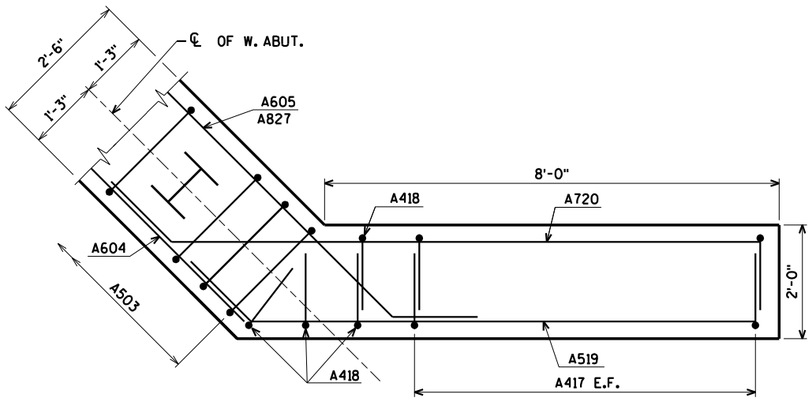
BUNDLE AND TAG EACH SERIES SEPARATELY.

BILL OF BARS - WEST ABUTMENT

BAR. NO.	COATED BAR	NO. REO'D.	LENGTH	BENT BAR	BUNDLED	BAR SERIES	2,170# UNCOATED 720# COATED LOCATION
A401		5	28-0	X			BODY @ PILES
A402		10	2-3				BODY @ PILES
A503		39	15-8	X			BODY VERT.
A604		9	30-4				BODY HORIZ. F.F.
A605		4	20-4	X			BODY HORIZ. B.F.
A506	X	26	2-0				BODY DOWELS
A407	X	7	9-7	X		⊗	WING 1 VERT. E.F.
A408	X	4	10-8	X			WING 1 VERT. E.F.
A509	X	5	10-8	X			WING 1 HORIZ. F.F.
A710	X	5	12-4	X			WING 1 HORIZ. B.F.
A411	X	2	9-2				WING 1 HORIZ. E.F.
A412	X	2	7-1				WING 1 HORIZ. E.F.
A413	X	2	4-10				WING 1 HORIZ. E.F.
A414	X	2	9-6	X			WING 1 DIAG. E.F.
A415	X	4	8-5	X			WING 1 HORIZ.
A416	X	6	3-8				WING 1 VERT.
A417	X	7	10-0	X		⊗	WING 2 VERT. E.F.
A418	X	4	11-2	X			WING 2 VERT. E.F.
A519	X	5	10-8	X			WING 2 HORIZ. F.F.
A720	X	5	12-4	X			WING 2 HORIZ. B.F.
A421	X	2	9-2				WING 2 HORIZ. E.F.
A422	X	2	7-1				WING 2 HORIZ. E.F.
A423	X	2	4-10				WING 2 HORIZ. E.F.
A424	X	2	9-6	X			WING 2 DIAG. E.F.
A425	X	4	8-5	X			WING 2 HORIZ.
A426	X	6	3-8				WING 2 VERT.
A827		14	21-5	X			BODY HORIZ. B.F.
A528		12	5-7	X			BODY VERT.
A429		3	11-5				BODY HORIZ.

BENDING DIMENSIONS ARE OUT TO OUT OF BARS.

⊗ LENGTH SHOWN FOR BAR IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.



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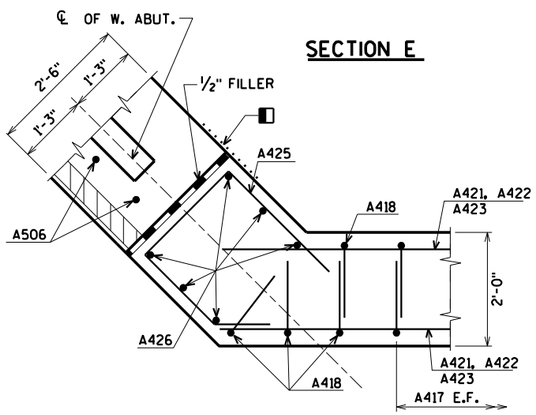

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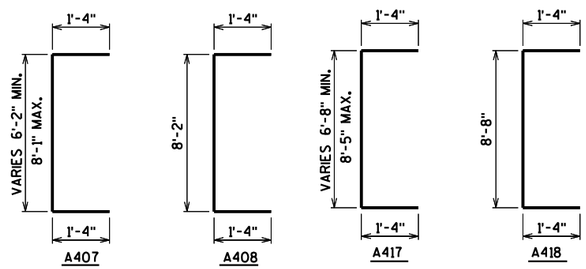

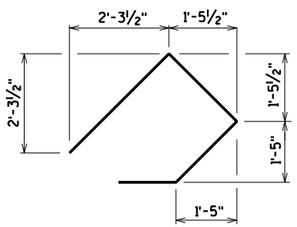

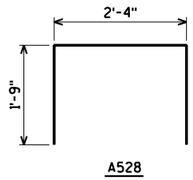

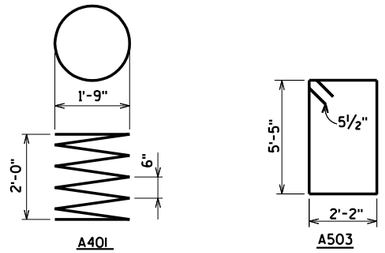

● OPT. KEYED CONST. JOINT - FORMED BY A BEVELED 2" x 6" WITH RUBBERIZED MEMBRANE WATERPROOFING ON B.F.

◔ ¾" 'V' GROOVE ON F.F. OF WING WALL NOT REQUIRED IF CONST. JT. IS NOT USED.

◨ VERTICAL 18" RUBBERIZED MEMBRANE WATERPROOFING TO EXTEND FROM BRIDGE SEAT TO TOP OF WING WALL.

FOR PILE SPLICE DETAIL SEE SHEET 2.

B.F. DENOTES BACK FACE

E.F. DENOTES EACH FACE

F.F. DENOTES FRONT FACE

⊞ 18" RUBBERIZED MEMBRANE WATERPROOFING ON BACK FACE. NOT REQUIRED IF CONST. JT. IS NOT USED.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-41-0300

DRAWN BY CJM | PLANS CK'D. JCK

WING 2 DETAILS & WEST ABUTMENT BILL OF BARS

SHEET 6 OF 12
30

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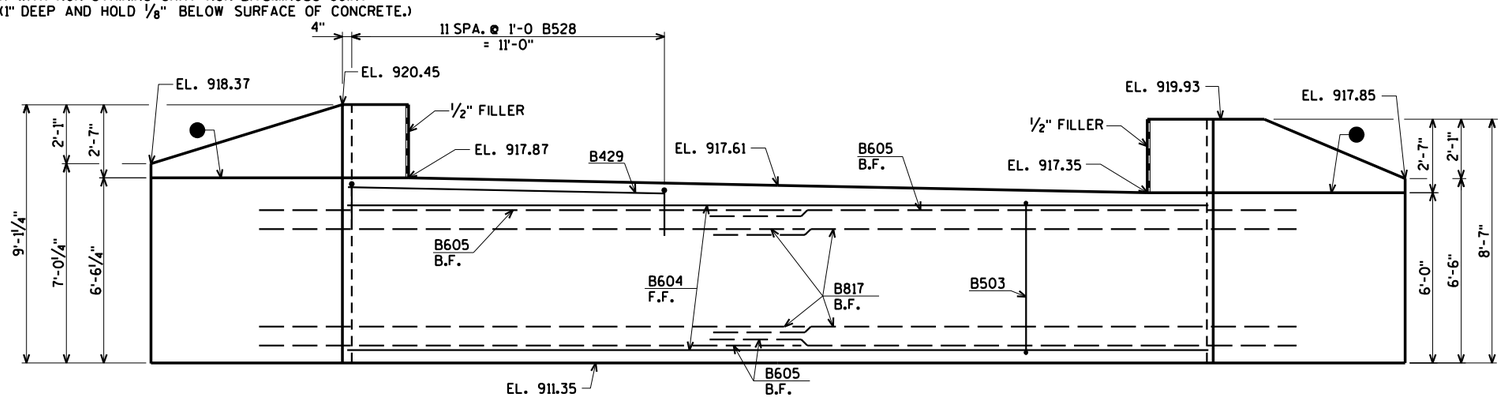
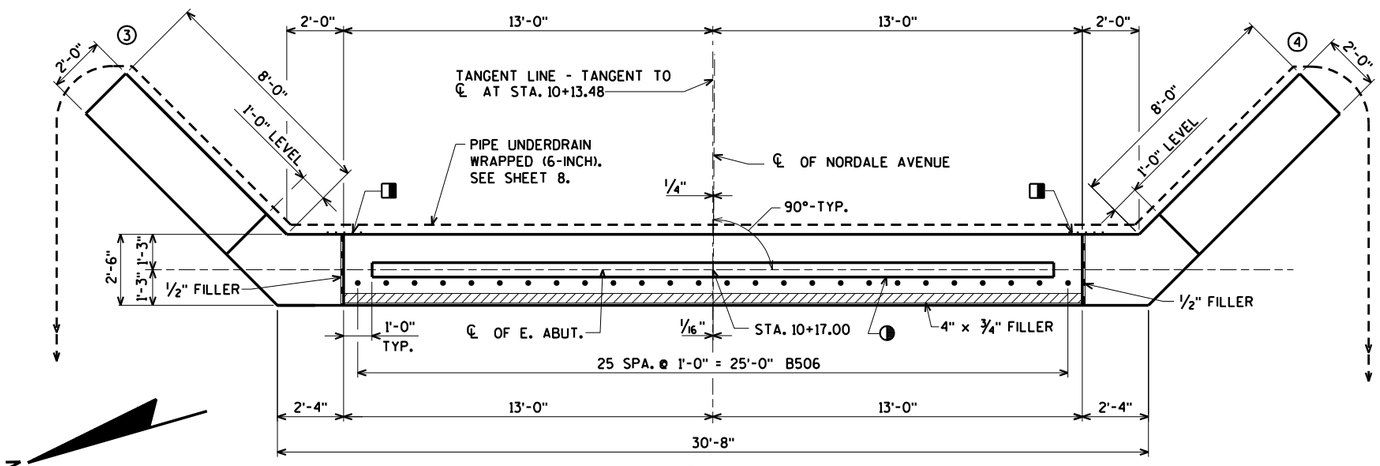
NOTE: SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE.)

STATE PROJECT NUMBER

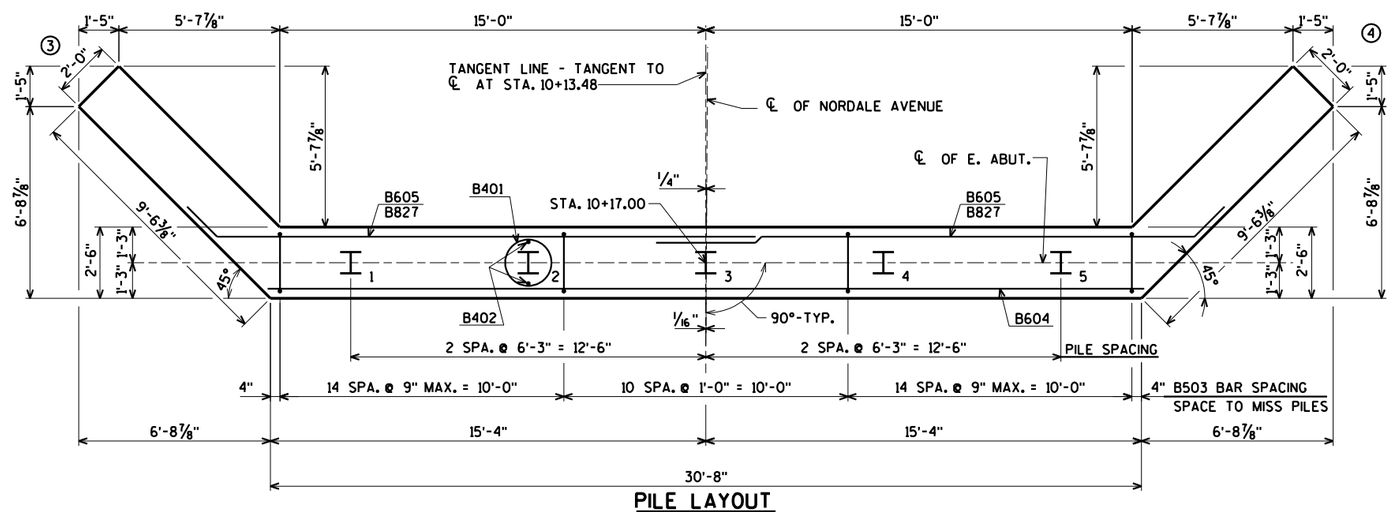
5018-00-70



ELEVATION
(LOOKING EAST)



PLAN



PILE LAYOUT

- ● OPT. KEYED CONST. JOINT - FORMED BY A BEVELED 2" x 6" WITH RUBBERIZED MEMBRANE WATERPROOFING ON B.F.
- ◑ KEYED CONST. JOINT - FORMED BY A BEVELED 2" x 6".
- ◨ VERTICAL 18" RUBBERIZED MEMBRANE WATERPROOFING TO EXTEND FROM BRIDGE SEAT TO TOP OF WING WALL.

FOR PILE SPLICE DETAIL SEE SHEET 2.

B.F. DENOTES BACK FACE

F.F. DENOTES FRONT FACE

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-41-0300

DRAWN BY CJM | PLANS CK'D. JCK

EAST ABUTMENT

SHEET 7 OF 12
31

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$PRFNAME$
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10/23/2013

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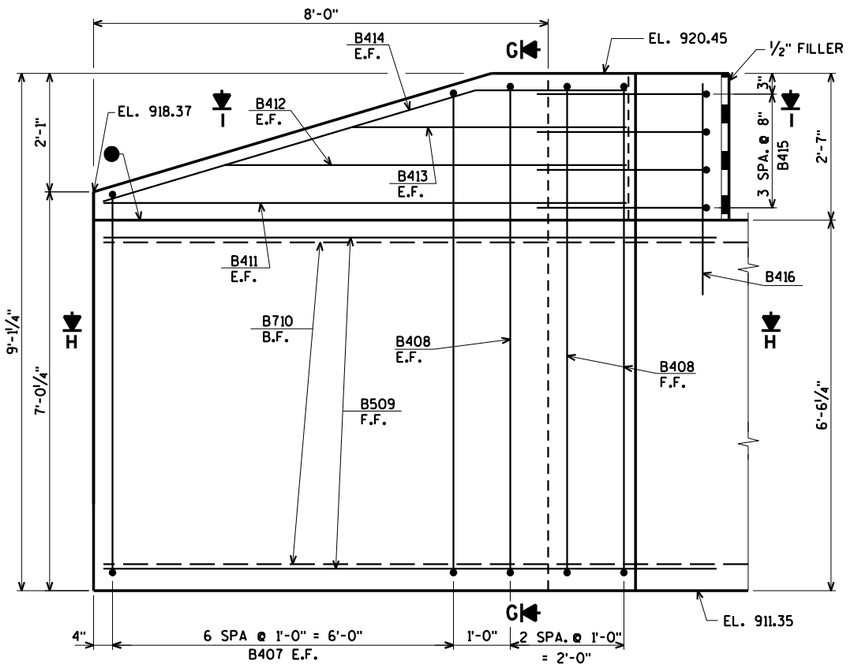
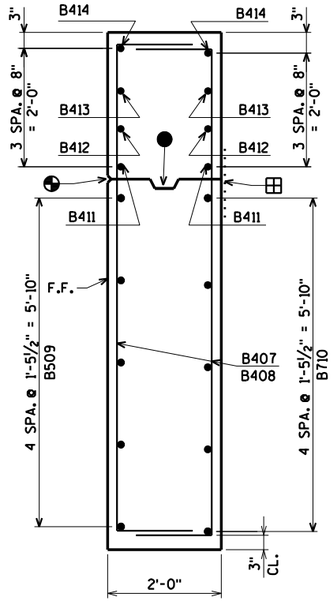
STATE PROJECT NUMBER

5018-00-70



ELEVATION - WING 3



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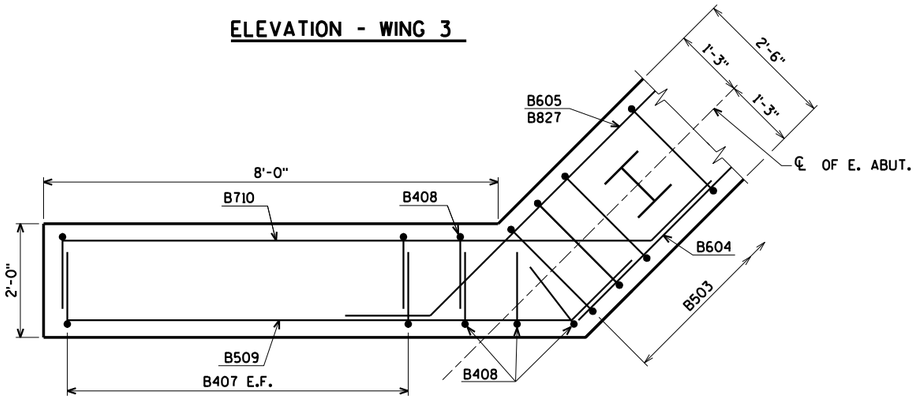

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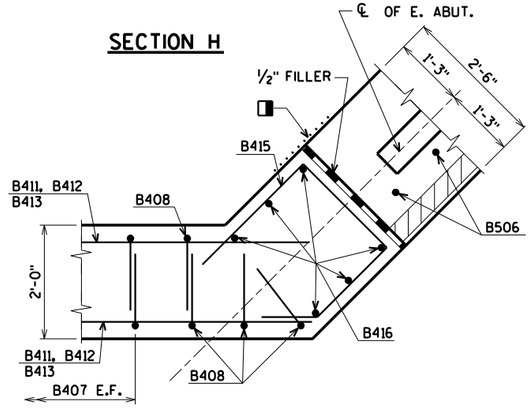
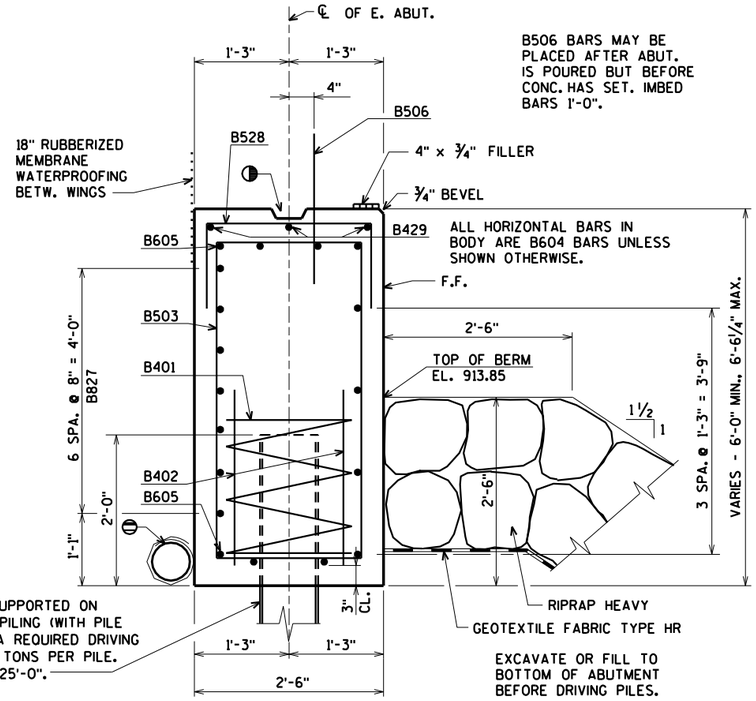


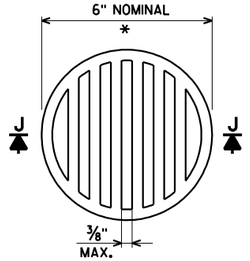
SECTION I

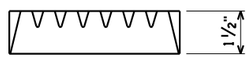


ABUTMENT TO BE SUPPORTED ON HP 10 x 42 STEEL PILING (WITH PILE POINTS) DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 120 TONS PER PILE. ESTIMATED LENGTH 25'-0".

EXCAVATE OR FILL TO BOTTOM OF ABUTMENT BEFORE DRIVING PILES.

TYPICAL SECTION THRU BODY





SECTION J-J

* DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING. ORIENT SO SLOTS ARE VERTICAL.

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

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

RODENT SHIELD DETAIL

- PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN AS DETAILED ON SDD REINFORCED CONCRETE APRON ENDWALL FOR PIPE UNDERDRAIN. RODENT SHIELD TO BE INCLUDED IN BID PRICE OF "PIPE UNDERDRAIN WRAPPED 6-INCH".
- KEYED CONST. JOINT - FORMED BY A BEVELED 2" x 6".
- 18" RUBBERIZED MEMBRANE WATERPROOFING ON BACK FACE. NOT REQUIRED IF CONST. JT. IS NOT USED.
- OPT. KEYED CONST. JOINT - FORMED BY A BEVELED 2" x 6" WITH RUBBERIZED MEMBRANE WATERPROOFING ON B.F.
- ¾" 'V' GROOVE ON F.F. OF WING WALL NOT REQUIRED IF CONST. JT. IS NOT USED.
- VERTICAL 18" RUBBERIZED MEMBRANE WATERPROOFING TO EXTEND FROM BRIDGE SEAT TO TOP OF WING WALL.

FOR PILE SPLICE DETAIL SEE SHEET 2.

B.F. DENOTES BACK FACE

E.F. DENOTES EACH FACE

F.F. DENOTES FRONT FACE

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-41-0300

DRAWN BY CJM | PLANS CK'D. JCK

EAST ABUT. & WING 3 DETAILS

SHEET 8 OF 12
32

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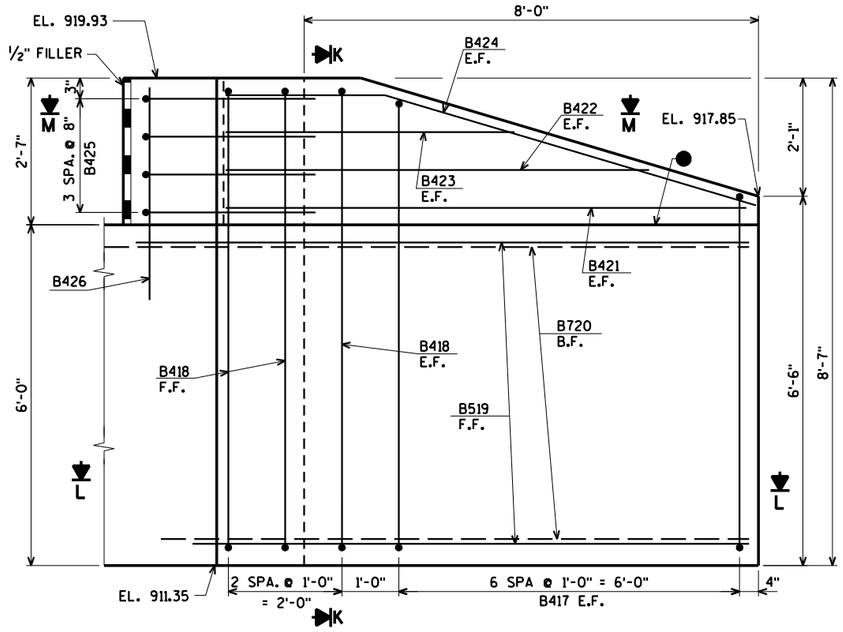
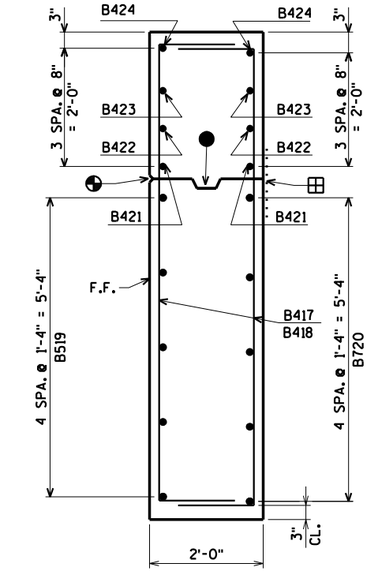
8

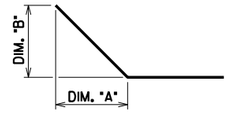
8



ELEVATION - WING 4



SECTION K



BAR NO.	DIM. "A"	DIM. "B"
B605	1'-0¾"	1'-0¾"
B509	1'-0¾"	1'-0¾"
B710	1'-0¾"	1'-0¾"
B414	6'-8"	2'-0"
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B720	1'-0¾"	1'-0¾"
B424	6'-8"	2'-0"
B827	1'-0¾"	1'-0¾"

BAR SERIES TABLE

BAR MARK	NO REO'D.	LENGTH
B407	1 SERIES OF 7	9'-2" TO 10'-11"
B417	1 SERIES OF 7	8'-8" TO 10'-6"

BUNDLE AND TAG EACH SERIES SEPARATELY.

BILL OF BARS - EAST ABUTMENT

BAR. NO.	COATED BAR	NO. REQ'D.	LENGTH	BENT BAR	BUNDLED	BAR SERIES	2,170# UNCOATED 720# COATED LOCATION
B401		5	28-0	X			BODY @ PILES
B402		10	2-3				BODY @ PILES
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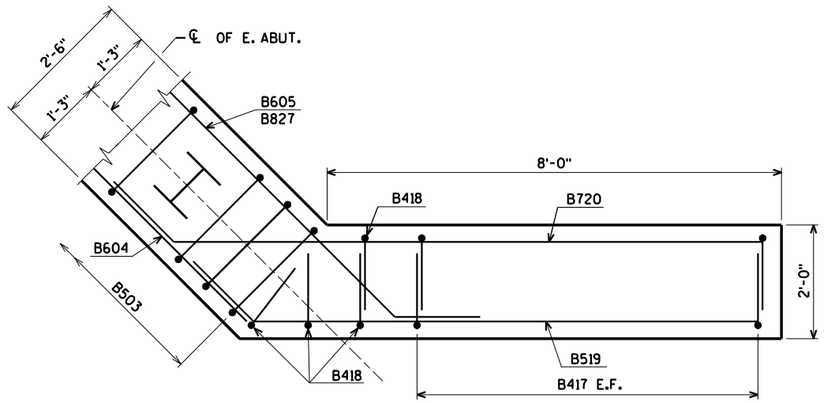
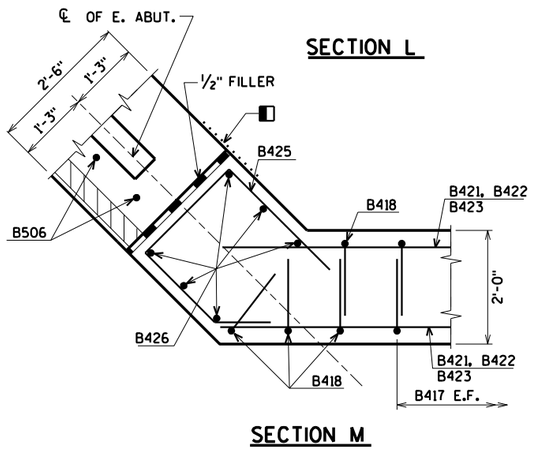
B604		9	30-4				BODY HORIZ. F.F.
B605		4	20-4	X			BODY HORIZ. B.F.
B506	X	26	2-0				BODY DOWELS
B407	X	7	10-0	X		⊗	WING 3 VERT. E.F.
B408	X	4	11-2	X			WING 3 VERT. E.F.
B509	X	5	10-8	X			WING 3 HORIZ. F.F.
B710	X	5	12-4	X			WING 3 HORIZ. B.F.
B411	X	2	9-2				WING 3 HORIZ. E.F.
B412	X	2	7-1				WING 3 HORIZ. E.F.
B413	X	2	4-10				WING 3 HORIZ. E.F.
B414	X	2	9-6	X			WING 3 DIAG. E.F.
B415	X	4	8-5	X			WING 3 HORIZ.
B416	X	6	3-8				WING 3 VERT.
B417	X	7	9-7	X		⊗	WING 4 VERT. E.F.
B418	X	4	10-8	X			WING 4 VERT. E.F.
B519	X	5	10-8	X			WING 4 HORIZ. F.F.
B720	X	5	12-4	X			WING 4 HORIZ. B.F.
B421	X	2	9-2				WING 4 HORIZ. E.F.
B422	X	2	7-1				WING 4 HORIZ. E.F.
B423	X	2	4-10				WING 4 HORIZ. E.F.
B424	X	2	9-6	X			WING 4 DIAG. E.F.
B425	X	4	8-5	X			WING 4 HORIZ.
B426	X	6	3-8				WING 4 VERT.
B827		14	21-5	X			BODY HORIZ. B.F.
B528		12	5-7	X			BODY VERT
B429		3	11-5				BODY HORIZ.

BENDING DIMENSIONS ARE OUT TO OUT OF BARS.

⊗ LENGTH SHOWN FOR BAR IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.



SECTION L



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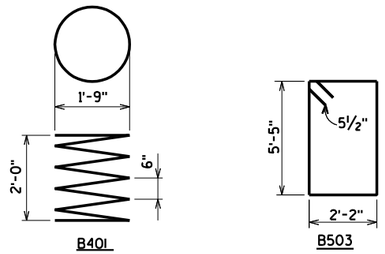

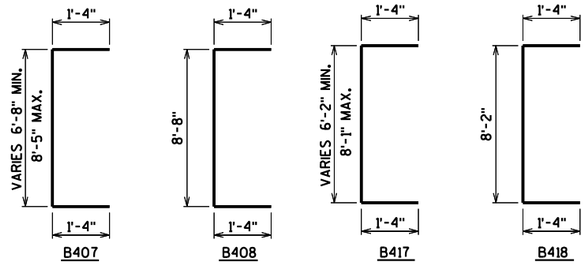

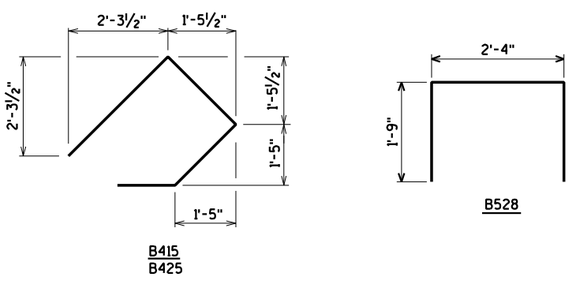

● OPT. KEYED CONST. JOINT - FORMED BY A BEVELED 2" x 6" WITH RUBBERIZED MEMBRANE WATERPROOFING ON B.F.

◔ ¾" 'V' GROOVE ON F.F. OF WING WALL NOT REQUIRED IF CONST. JT. IS NOT USED.

◨ VERTICAL 18" RUBBERIZED MEMBRANE WATERPROOFING TO EXTEND FROM BRIDGE SEAT TO TOP OF WING WALL.

FOR PILE SPLICE DETAIL SEE SHEET 2.

B.F. DENOTES BACK FACE

E.F. DENOTES EACH FACE

F.F. DENOTES FRONT FACE

⊞ 18" RUBBERIZED MEMBRANE WATERPROOFING ON BACK FACE. NOT REQUIRED IF CONST. JT. IS NOT USED.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-41-0300

DRAWN BY CJM | PLANS CK'D. JCK

WING 4 DETAILS & EAST ABUT. BILL OF BARS

SHEET 9 OF 12
33

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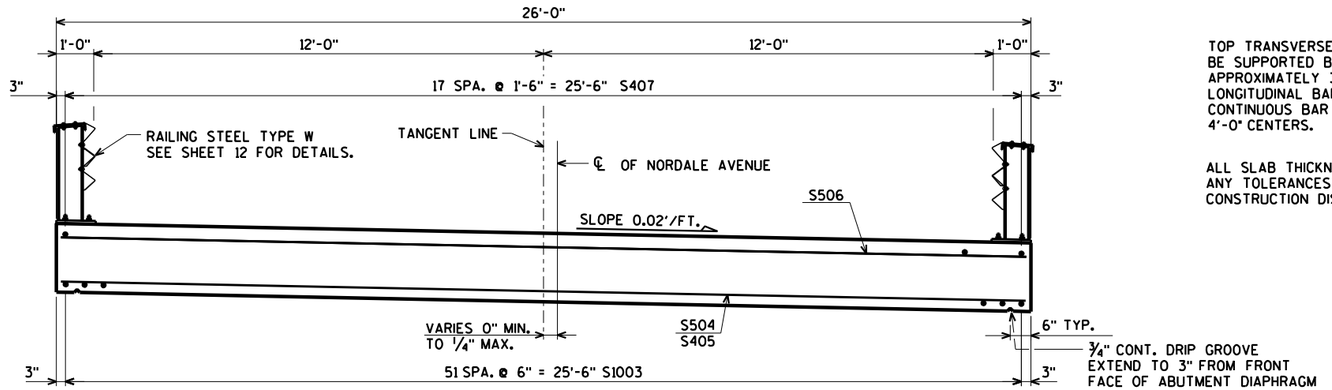


CROSS SECTION THRU BRIDGE

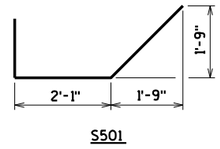
TOP TRANSVERSE BARS IN SLAB SHALL BE SUPPORTED BY INDIVIDUAL BAR CHAIRS AT APPROXIMATELY 3'-0" CENTERS EACH WAY. BOTTOM LONGITUDINAL BARS SHALL BE SUPPORTED BY CONTINUOUS BAR CHAIRS AT APPROXIMATELY 4'-0" CENTERS.

ALL SLAB THICKNESS DIMENSIONS ARE MINIMUM. ANY TOLERANCES NECESSARY TO CORRECT CONSTRUCTION DISCREPANCIES ARE TO BE PLUS (+).

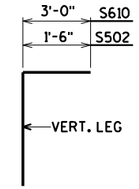
BILL OF BARS

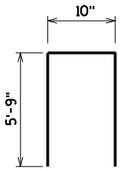
BAR. NO.	COATED BAR	NO. REQ'D.	LENGTH	BENT BAR	BUNDLED	BAR SERIES	11,820# COATED LOCATION
S501	X	54	6-6	X			SLAB @ ABUT.
S502	X	54	3-6	X			SLAB @ ABUT.
S1003	X	52	34-7				SLAB LONG. BOT.
S504	X	33	25-8				SLAB TRANS. BOT.
S405	X	22	25-8				SLAB TRANS. BOT.
S506	X	41	25-8				SLAB TRANS. TOP
S407	X	18	40-2				SLAB LONG. TOP
S608	X	28	12-0	X			SLAB @ RAIL POSTS
S609	X	20	4-0				SLAB @ INT. RAIL POSTS
S610	X	8	4-0	X			SLAB @ END RAIL POSTS

BENDING DIMENSIONS ARE OUT TO OUT OF BARS.



S501





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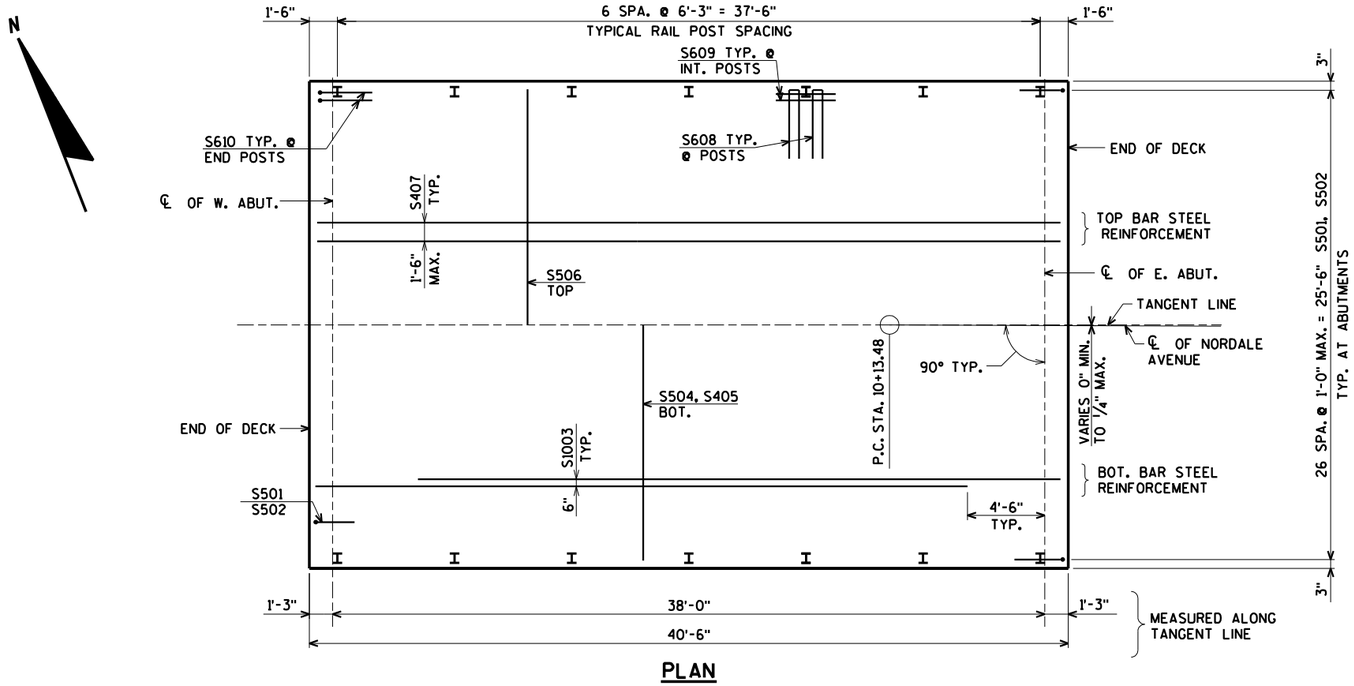


PLAN

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-41-0300

DRAWN BY CJM | PLANS CK'D. JCK

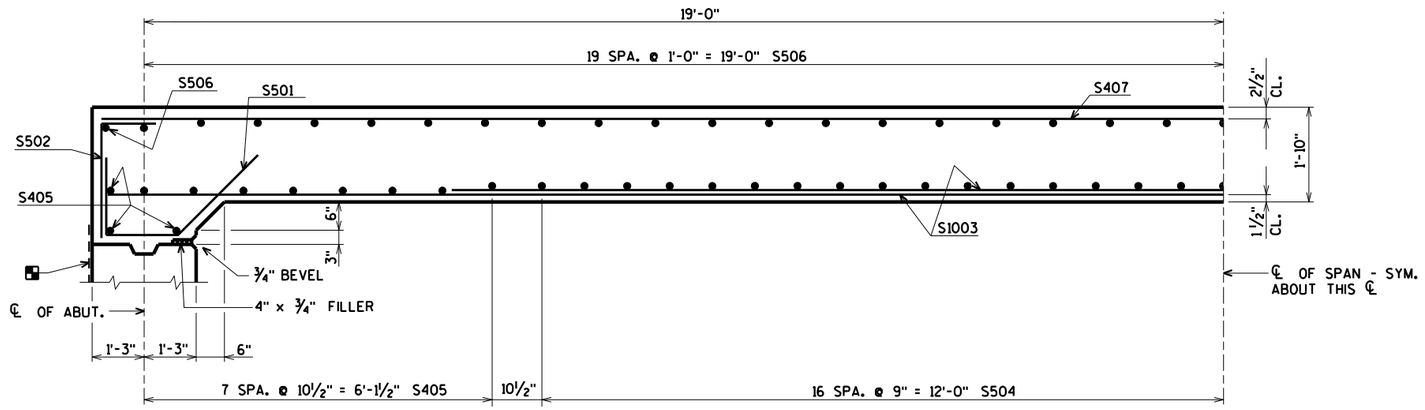
SUPERSTRUCTURE

SHEET 10 OF 12
34

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

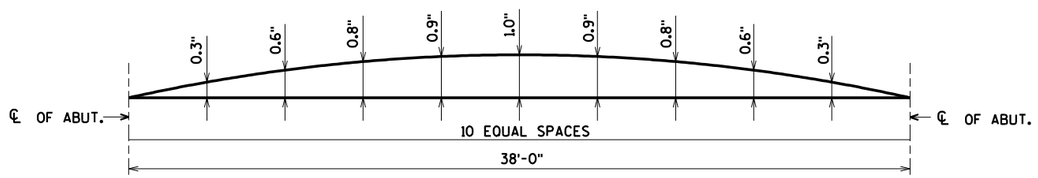
STATE PROJECT NUMBER

5018-00-70



PART LONGITUDINAL SECTION

■ 18" RUBBERIZED MEMBRANE WATERPROOFING



CAMBER DIAGRAM

CAMBER SPANS AS SHOWN TO PROVIDE FOR DEADLOAD DEFLECTION & FUTURE CREEP. CAMBER DOES NOT INCLUDE ALLOWANCE FOR FORM SETTLEMENT.

PRIOR TO RELEASING SLAB FALSEWORK, TAKE TOP OF SLAB ELEVATIONS AT THE ℄ OF ABUTMENTS, AND AT ½ PT. TO VERIFY CAMBER. TAKE ELEVATIONS ALONG EDGE OF SLAB AND CROWN OR ℄.

TOP OF DECK ELEVATIONS

LOCATION	℄ OF W. ABUT.	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	℄ OF E. ABUT.
N. EDGE OF SLAB	920.77	920.73	920.69	920.65	920.61	920.58	920.56	920.53	920.51	920.48	920.45
℄ OF STRUCTURE	920.51	920.47	920.43	920.39	920.35	920.32	920.30	920.27	920.25	920.22	920.19
S. EDGE OF SLAB	920.25	920.21	920.17	920.13	920.09	920.06	920.04	920.01	919.99	919.96	919.93

ELEVATIONS SHOWN ARE FINISHED DECK AND DO NOT INCLUDE ALLOWANCES OF DEAD LOAD DEFLECTION AND FUTURE CREEP.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-41-0300

DRAWN BY CJM | PLANS CK'D. JCK

SUPERSTRUCTURE DETAILS

SHEET 11 OF 12
35

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
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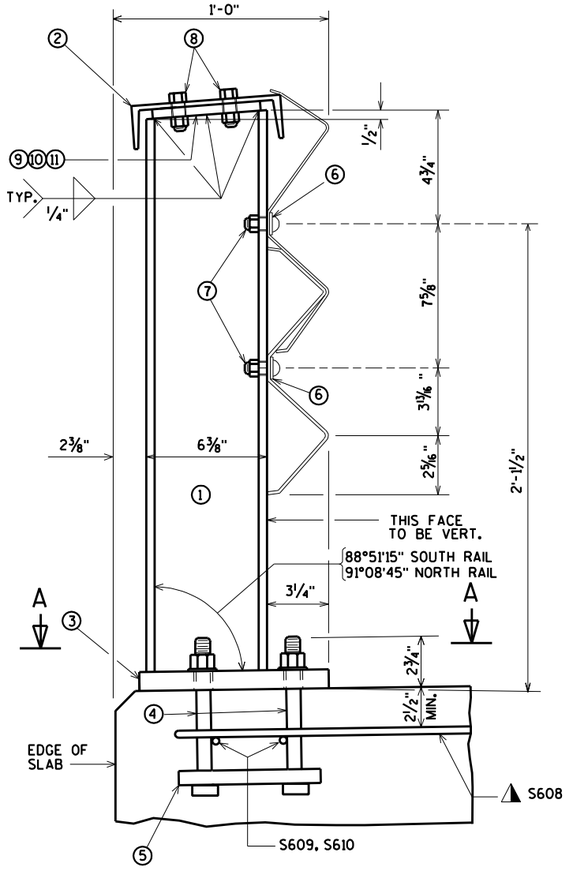
8

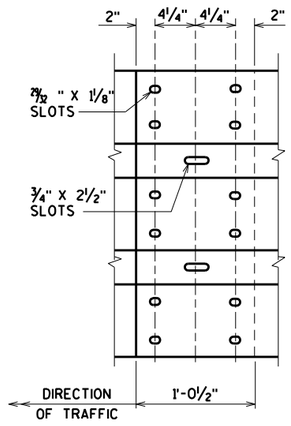
$PRFNAME$
U:\42-0881.00 - Monroe Co, Tn Sheldon, Nordale Ave\BRIDGE\420881_Wrail.dgn

STATE PROJECT NUMBER

5018-00-70

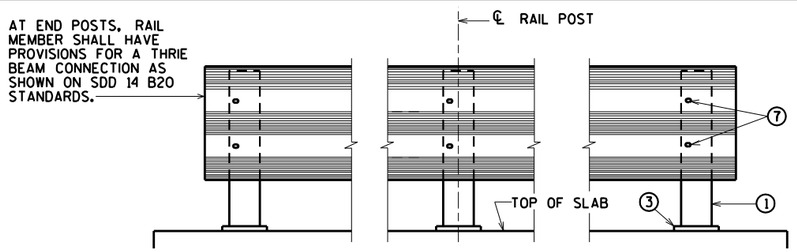


SECTION THRU RAILING

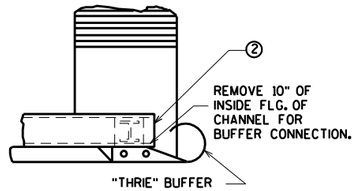


RAIL MEMBER SPLICE

5/8" DIA. BUTTON HEAD OVAL SHOULDER BOLTS WITH HEX. NUTS AT ALL SLOTS.

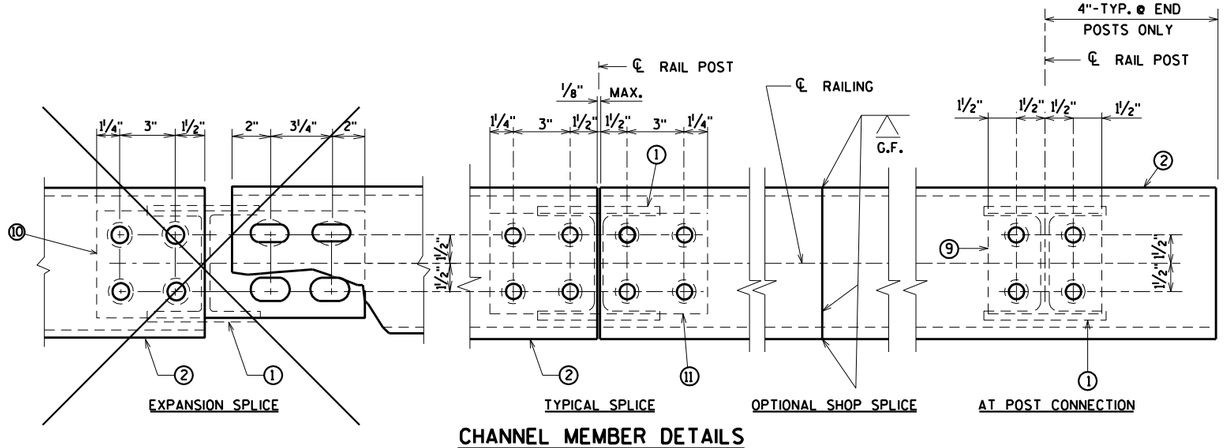


ELEVATION

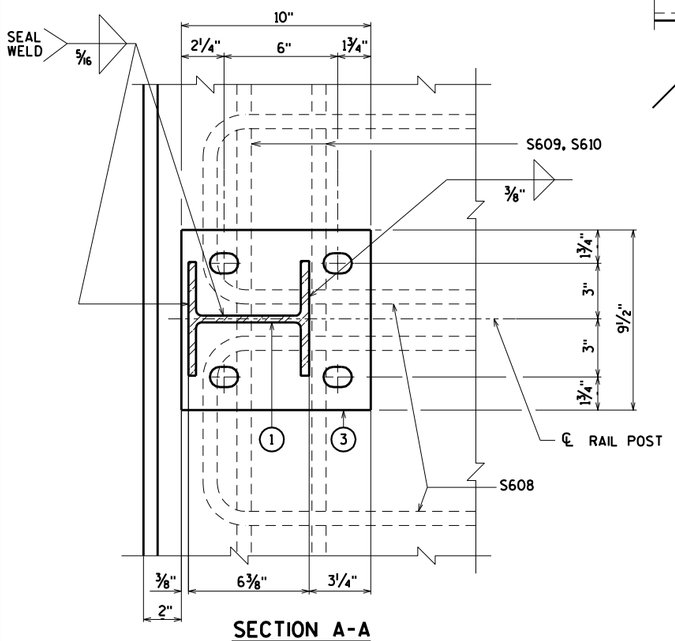


TERMINAL DETAIL

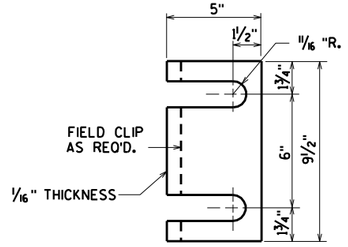
USE FOR LESS THAN 300 A.D.T.



CHANNEL MEMBER DETAILS

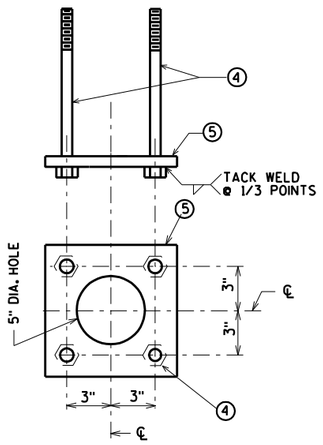


SECTION A-A



POST SHIM DETAIL

(4 PER POST)



ANCHORAGE DETAIL

LEGEND

① W6x25 WITH 2 - 3/4" x 2 1/2" VERT. SLOTS IN FLG. (SLOT ON OTHER SIDE OF WEB IS OPTIONAL) FOR NO. 7. CUT BOTTOM OF POST TO MATCH CROSS SLOPE OF ROADWAY. PLACE POSTS VERTICAL AND NORMAL TO GRADE LINE.

② C8x11.5 WITH 13/16 " DIA. HOLES FOR NO. 8.

③ BASE PLATE 1" X 9 1/2" x 10" WITH 1 1/16" x 1 1/2" SLOTTED HOLES FOR ANCHOR BOLTS NO. 4. WELD TO NO. 1 AS SHOWN.

④ A325 - 7/8" DIA. HEX BOLTS (GALVANIZED) WITH A325 NUT AND WASHER. 14" LONG AT END POSTS AND AT POSTS ON CONCRETE SLAB SUPERSTRUCTURES WHERE THE SLAB THICKNESS IS > 15". ~~USE 8" LONG AT ALL OTHER LOCATIONS.~~ 4 REQ'D. PER POST. THREAD 3" AND PLACE NORMAL TO PLATE NO. 3. CHAMFER TOP OF BOLTS BEFORE THREADING.

⑤ 1/4" x 8" x 8" FLAT BAR WITH 13/16 " DIA. HOLES FOR ANCHOR BOLTS NO. 4.

⑥ 1 3/4" x 3" MOUNTING BOLT WASHER (GALVANIZED).

⑦ 5/8" DIA. BUTTON HEAD POST MOUNTING BOLT WITH ROUND WASHER AND NUT.

⑧ 5/8" DIA. x 2" HEX BOLTS WITH NUT AND TWO WASHERS EACH.

⑨ PLATE 1/2" x 5 3/4" x 6" AT BASIC POST CONNECTION. 1 1/4" DIA. HOLES IN PLATE. 13/16 " DIA. HOLES IN CHANNEL.

⑩ ~~PLATE 1/2" x 5 3/4" x 1'-2 1/2". 1 1/4" DIA. HOLES IN PLATE. 13/16 " DIA. HOLES IN CHANNEL. EXPANSION SLOTS ON JOINT SIDE OF POST, 1 1/16" x 2 1/4" IN PLATE, 13/16 " X 2 1/4" IN CHANNEL. (AT EXPANSION SPLICE.)~~

⑪ PLATE 1/2" x 5 3/4" x 11 1/2". 1 1/4" DIA. HOLES IN PLATE. 13/16 " DIA. HOLES IN CHANNEL. (AT TYPICAL SPLICE.)

GENERAL NOTES

BID ITEM SHALL BE "RAILING STEEL TYPE W B-41-0300" WHICH INCLUDES ALL ITEMS SHOWN.

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

ALL MATERIAL EXCEPT ANCHORAGE DETAIL NO. 5 SHALL BE GALVANIZED AFTER FABRICATION.

PRIOR TO GALVANIZING, ALL STEEL RAILING POSTS AND CHANNELS SHALL BE GIVEN A NO. 6 COMMERCIAL BLAST CLEANING BY SSPC SPECS.

ALL MATERIAL USED IN FABRICATION SHALL BE MADE FROM MATERIALS CONFORMING TO ASTM DESIGNATION A709 GRADE 36 UNLESS NOTED OTHERWISE.

FILL BOLT SLOT OPENINGS IN POST SHIMS & PLATE NO. 3 WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER.

CHANNEL MEMBER SHALL BE ATTACHED CONTINUOUSLY TO A MINIMUM OF FOUR POSTS AND A MAXIMUM OF EIGHT (EXCEPT AT ABUTMENTS).

AT ~~EXPANSION SLOTS IN RAIL AND~~ CHANNEL MEMBERS, TIGHTEN BOLTS, BACK OFF ONE HALF TURN AND BURR THREADS. RAIL MEMBERS SHALL BE LAPPED IN THE DIRECTION OF TRAFFIC AND THE UPPER RAIL SHALL LAP THE LOWER RAIL.

STEEL POST SHIMS MAY BE USED UNDER POSTS WHERE REQ'D. FOR ALIGNMENT.

SEE STANDARD SPECIFICATIONS FOR RAIL TYPE.

▲ TIE TO TOP MAT OF STEEL.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-41-0300

DRAWN BY CJM | PLANS CK'D. JCK

RAILING STEEL TYPE "W"

SHEET 12 OF 12
36

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

*EARTHWORK SUMMARY (CATEGORY 0010)

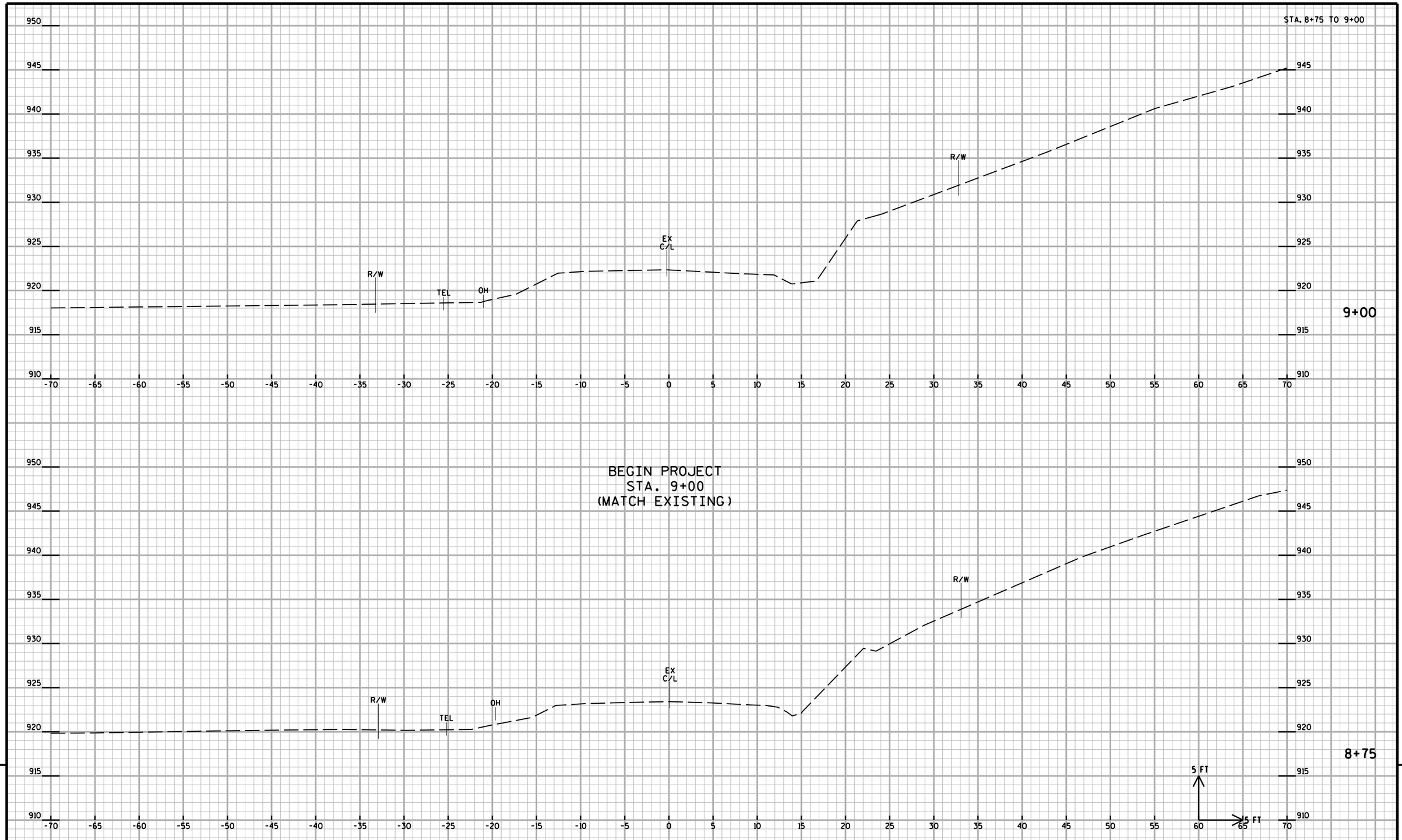
		AREA			INCREMENTAL VOLUME			CUMULATIVE VOLUME		
DIVISION	STATION	CUT SF	SALVAGED/ UNUSEABLE PAVEMENT MATERIAL SF	FILL SF	CUT (1) CY	SALVAGED/ UNUSEABLE PAVEMENT MATERIAL (2) CY	FILL (3) CY	CUT (1) 1.00 CY	EXPANDED FILL (4) 1.30 CY	MASS ORDINATE ±(5) CY
1	9+00	19	0	0						
NORDALE AVENUE	9+25	21	0	11	19	0	5	19	7	13
	9+50	17	0	20	18	0	14	37	25	12
	9+77.75	17	0	20	18	0	21	55	52	3
	STRUCTURE (B-41-0300)									
	10+18.25	43	0	1	11	0	0	66	52	14
	10+25	43	0	1	26	0	18	92	75	17
	10+50	13	0	37	14	0	29	106	113	-7
	10+75	18	0	25	19	0	17	125	135	-10
	11+00	23	0	12	23	0	9	148	147	1
	11+25	26	0	7	24	0	5	172	153	19
	11+50	26	0	4	20	0	3	192	157	35
	11+70	28	0	4	5	0	1	197	159	38
	11+75	28	0	5	24	0	5	221	165	56
	12+00	25	0	5						
TOTALS					221	0	127			

205.0100 EXCAVATION COMMON = SAY 221

NOTES:
1) EXCAVATION COMMON IS THE SUM OF THE CUT COLUMN. ITEM NUMBER 205.0100
2) SALVAGED/UNUSEABLE PAVEMENT MATERIAL IS INCLUDED IN CUT.
3) DOES NOT INCLUDE UNUSABLE PAVEMENT EXCAVATION VOLUME.
4) EXPANDED FILL FACTOR = 1.30 EXPANDED FILL = UNEXPANDED FILL * FILL FACTOR
5) THE MASS ORDINATE ± QTY CALCULATED FOR THE DIVISION.

PLUS (+) QUANTITY INDICATES AN EXCESS OF MATERIAL WITHIN THE DIVISION.
MINUS (-) QUANTITY INDICATES A SHORTAGE OF MATERIAL WITHIN THE DIVISION.

STA. 8+75 TO 9+00



9

9

PROJECT NO: 5018-00-70	HWY: NORDALE AVENUE	COUNTY: MONROE	CROSS SECTIONS	SHEET	E

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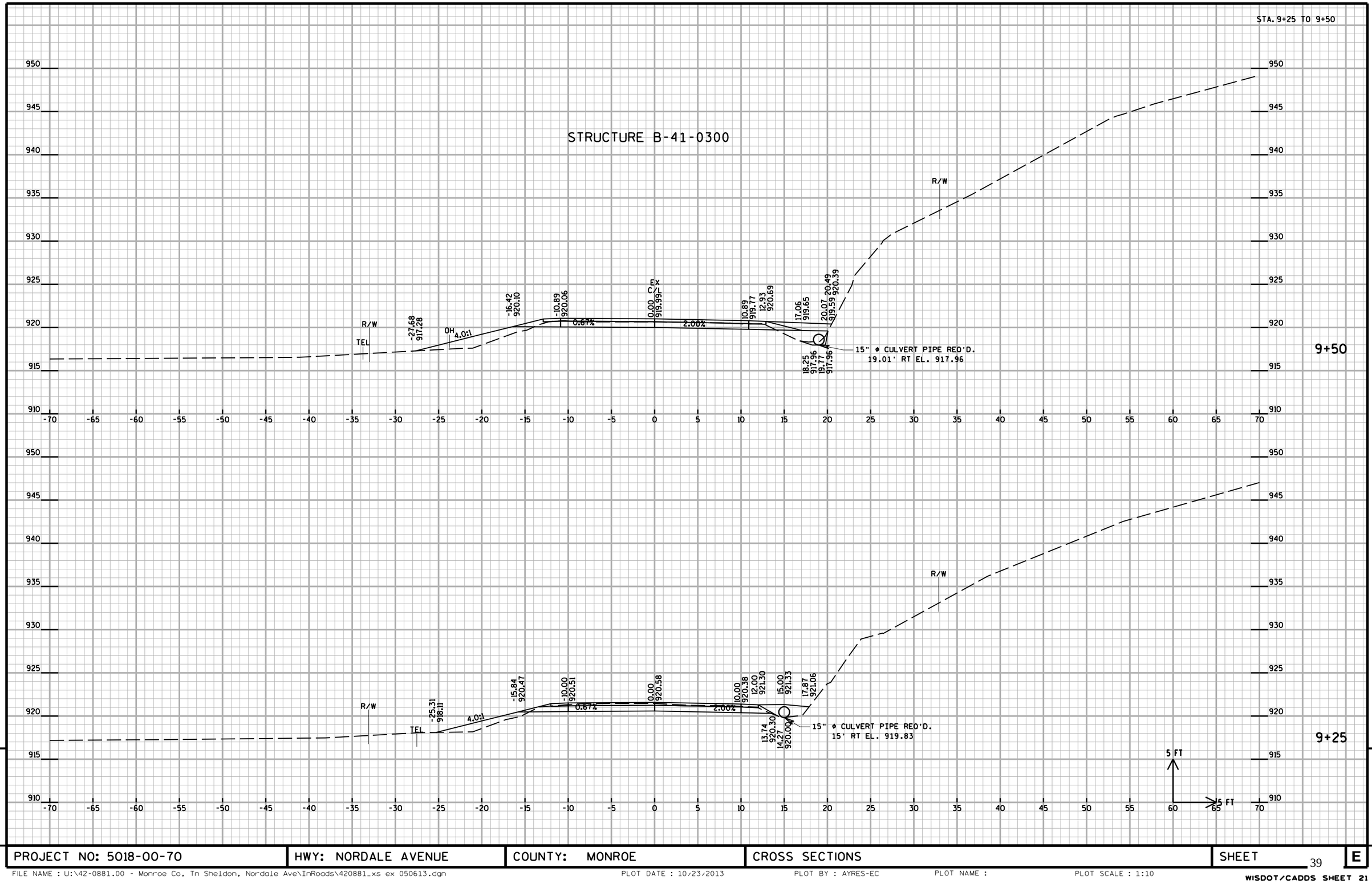
WISDOT/CADDS SHEET 21

STA. 9+25 TO 9+50

STRUCTURE B-41-0300



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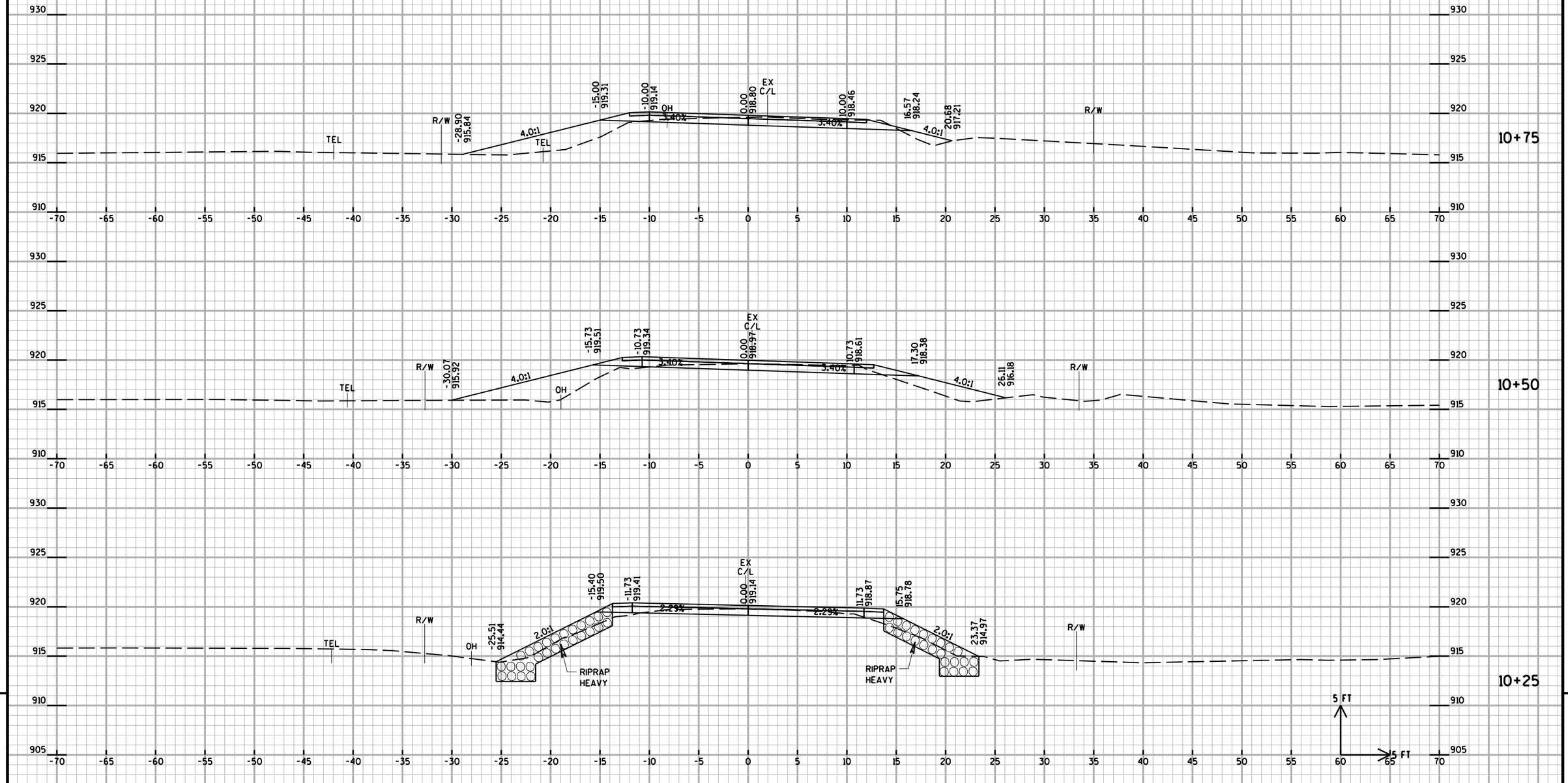
PROJECT NO: 5018-00-70	HWY: NORDALE AVENUE	COUNTY: MONROE	CROSS SECTIONS	SHEET	E

FILE NAME : U:\42-0881.00 - Monroe Co, Tn Sheldon, Nordale Ave\InRoads\420881_xs ex 050613.dgn PLOT DATE : 10/23/2013 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:10

WISDOT/CADDS SHEET 21

STA. 10+25 TO 10+75



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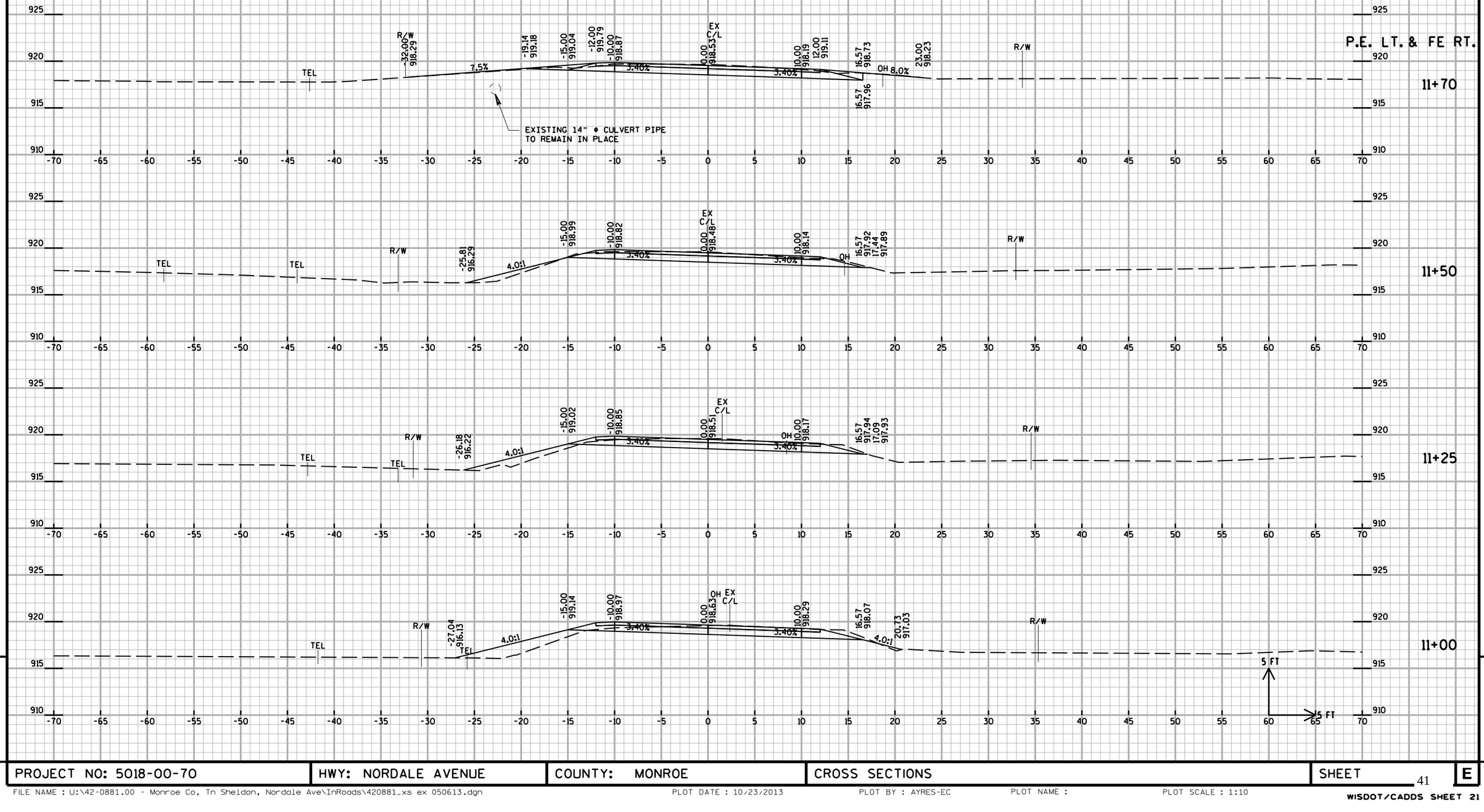
STA. 11+00 TO 11+70

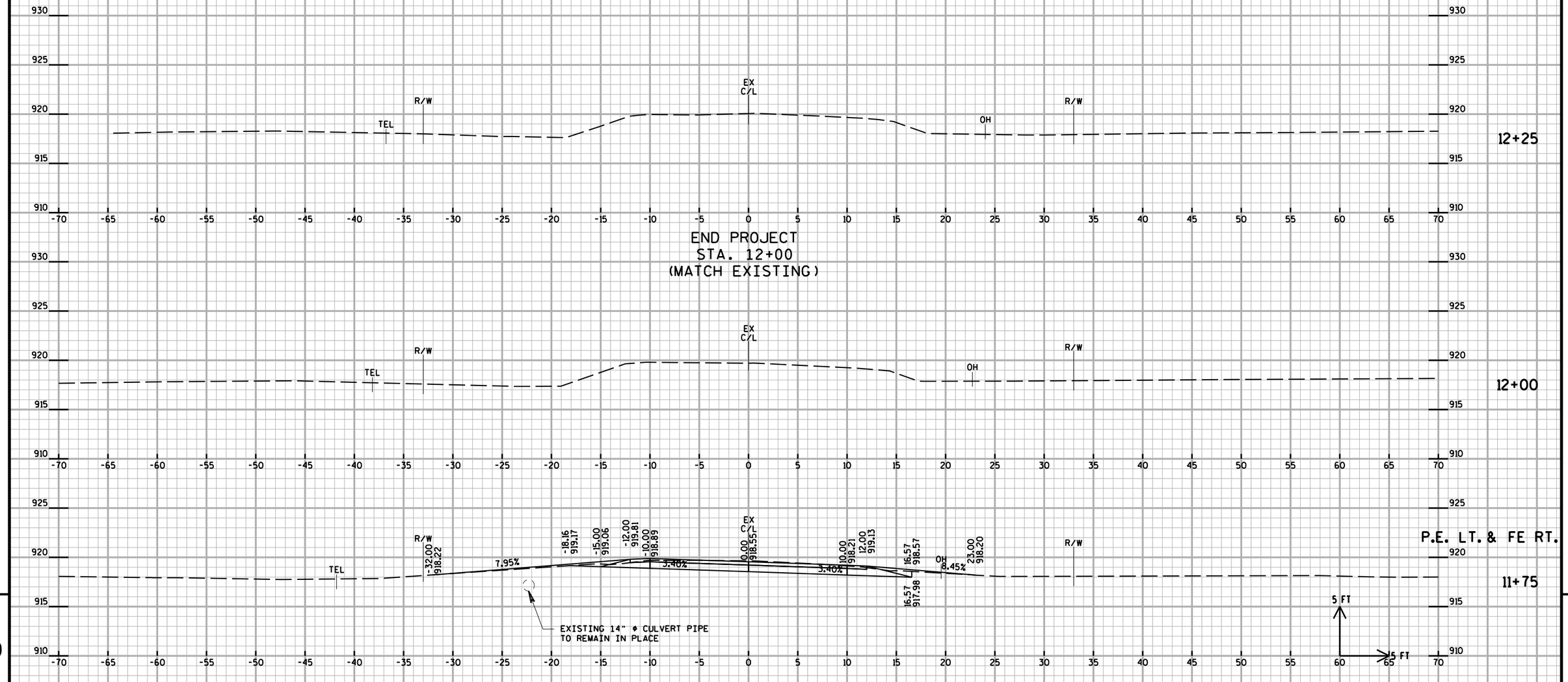


PROJECT NO: 5018-00-70	HWY: NORDALE AVENUE	COUNTY: MONROE	CROSS SECTIONS	SHEET	E

FILE NAME : U:\42-0881.00 - Monroe Co, Tn Sheldon, Nordale Ave\InRoads\420881_xs ex 050613.dgn PLOT DATE : 10/23/2013 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:10

WISDOT/CADDS SHEET 21

STA. 11+75 TO 12+25



9 9

PROJECT NO: 5018-00-70	HWY: NORDALE AVENUE	COUNTY: MONROE	CROSS SECTIONS	SHEET 42	E

Notes

Wisconsin Department of Transportation

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