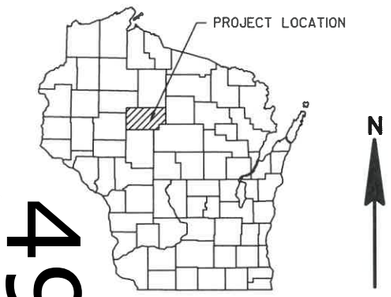
NWL MAY 2017

PROJECT ID: 8891-00-70
WITH: N/A

COUNTY: TAYLOR

ORDER OF SHEETS

TOTAL SHEETS = 34



49

DESIGN DESIGNATION 8891-00-70

A.A.D.T.	2017	= 50
A.A.D.T.	2037	= 70
D.H.V.		= 7
D.D.		= 50/50
T.		= 10%
DESIGN SPEED		= 40
ESALS		= 36,500

CONVENTIONAL SYMBOLS

PLAN
- CORPORATE LIMITS
- PROPERTY LINE
- LOT LINE
- LIMITED HIGHWAY EASEMENT
- EXISTING RIGHT OF WAY
- PROPOSED OR NEW R/W LINE
- SLOPE INTERCEPT
- REFERENCE LINE (300'EB')
- EXISTING CULVERT
- PROPOSED CULVERT (Box or Pipe)
- COMBUSTIBLE FLUIDS (CAUTION)
- MARSH AREA
- WOODED OR SHRUB AREA

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

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
8891-00-70		

T HAMMEL, CENTER AVENUE

WASHINGTON CREEK BRIDGE B-60-0143

LOC STR

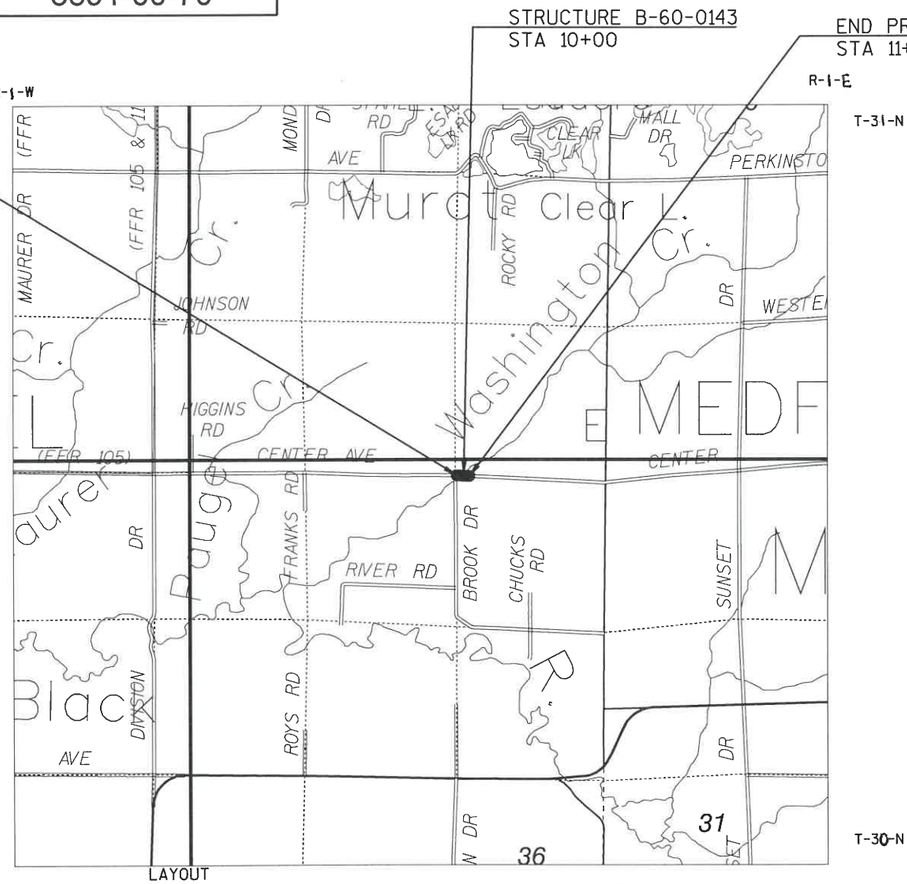
TAYLOR COUNTY

STATE PROJECT NUMBER
8891-00-70

BEGIN PROJECT
STA 8+75
Y = 347542.715
X = 621768.920

STRUCTURE B-60-0143
STA 10+00

END PROJECT
STA 11+50



LAYOUT

SCALE 0 1 MILE

TOTAL NET LENGTH OF CENTERLINE = 0.052 MI

COORDINATES ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM, TAYLOR COUNTY

ACCEPTED FOR
TOWN of HAMMEL
12-5-16 (Date)
Chairman (Signature & Title of Official)

ORIGINAL PLANS PREPARED BY

SEH WISCONSIN TARA L. KRISTA 37975 CHIPPEWA FALLS, WI PROFESSIONAL ENGINEER
12-6-16 (Date)
(Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY
Surveyor SEH
Designer SEH
Management Consultant KNIGHT E/A INC.
C.O. Examiner

APPROVED FOR THE DEPARTMENT
DATE: 1/26/17
(Management Consultant Signature)

E

FILE NAME : P:\FJ\H\HAMMT\133758\CIVIL 3D\SHEETSPLAN\010101-TI.DWG
LAYOUT NAME - 010101-TI

PLOT DATE : 12/2/2016 8:41 AM PLOT BY : SEH PLOT NAME :

WISDOT/CADDS SHEET 10

GENERAL NOTES:

ELEVATIONS SHOWN ON THE PLAN ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).

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

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

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

THE EXACT LOCATION OF THE EROSION CONTROL DEVICES SHALL BE DETERMINED IN THE FIELD.

DISTURBED AREAS WITHIN THE RIGHT-OF-WAY, EXCEPT THE AREAS WITHIN THE FINISHED SHOULDER POINTS, ARE TO BE 4-INCH TOPSOILED, FERTILIZED, TEMPORARY SEEDED, SEEDED AND MULCHED.

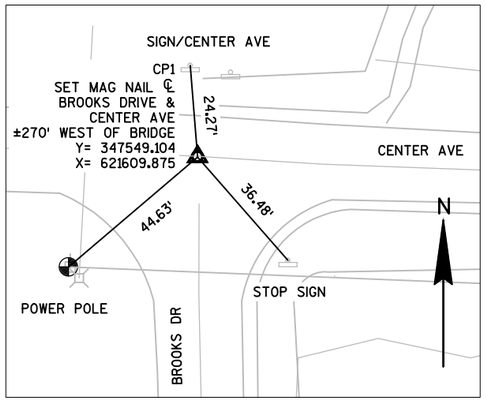
ALL PAVEMENT DIMENSIONS AND STATIONS ARE SHOWN TO THE EDGE OF PAVEMENT UNLESS NOTED OTHERWISE.

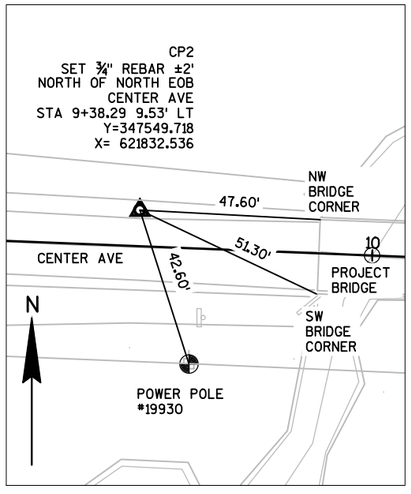
A VERTICAL SAWCUT SHALL BE MADE THROUGH EXISTING DRIVEWAYS AND PAVEMENTS AT REMOVAL LIMITS.

3.5-INCH ASPHALTIC SURFACE SHALL BE CONSTRUCTED WITH A 1.75-INCH UPPER LAYER AND A 1.75-INCH LOWER LAYER.

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

WISDOT MONUMENTS WILL BE SUPPLIED BY THE STATE AND INSTALLED BY THE CONTRACTOR AS DIRECTED BY THE ENGINEER.





ALIGNMENT TIES

RUNOFF COEFFICIENT TABLE

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

TOTAL PROJECT AREA = 0.15 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0.13 ACRES

UTILITY CONTACTS:

TAYLOR COUNTY ELECTRIC COOPERATIVE
N1831 STH 13
MEDFORD, WI 54451
TELEPHONE: 715.678.2411 EXT. 225
ATTENTION: KEVIN COMSTOCK
EMAIL: KEVIN@TAYLORELECTIC.ORG

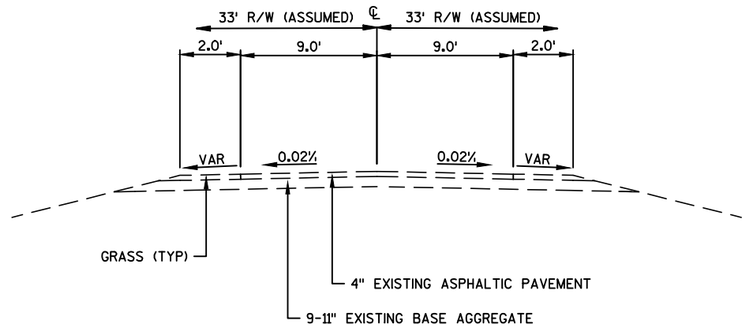
DIGGERS HOTLINE
Dial 811 or (800)242-8511
www.DiggersHotline.com

DESIGN CONTACT:
SEH
10 NORTH BRIDGE STREET
CHIPPEWA FALLS, WI 54729-2550
TELEPHONE: 715.720.6291
ATTENTION: TARA KRISTA
EMAIL: TKRISTA@SEHINC.COM

MUNICIPAL CONTACT:
TOWN OF HAMMEL
W7856 PERKINSTOWN AVENUE
MEDFORD, WI 54454
TELEPHONE: 715.965.6439
ATTENTION: STEVE DEML
EMAIL: SPDEML@LIVE.COM

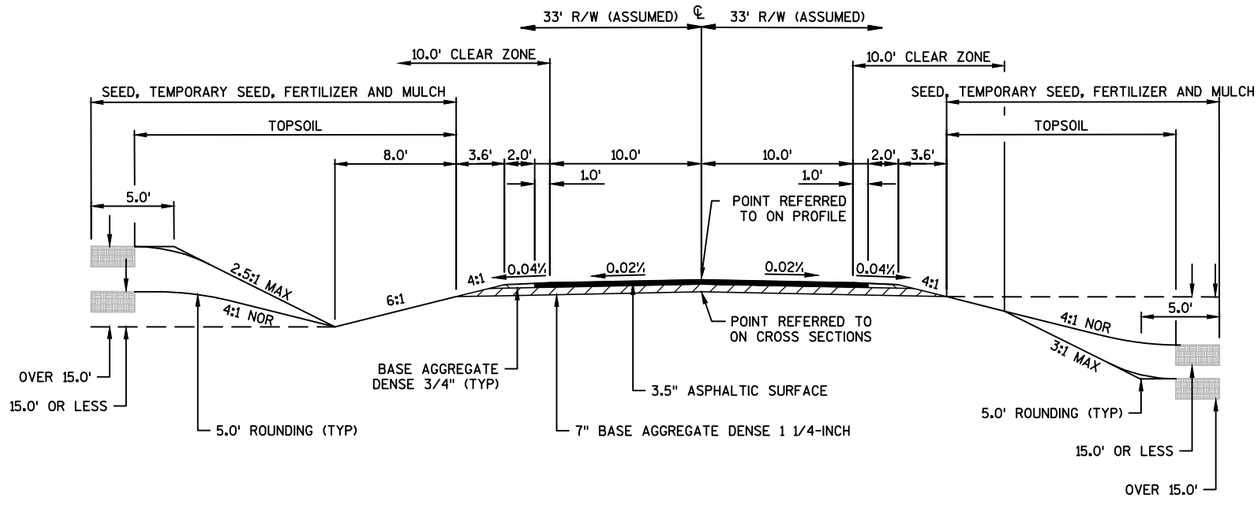
WDNR CONTACT:
DNR NORTHERN REGION HQ
107 SUTLIFF AVENUE
RHINELANDER, WI 54501
TELEPHONE: 715.365.8916
ATTENTION: JON SIMONSEN
EMAIL: JONATHAN.SIMONSEN@WISCONSIN.GOV

2



TYPICAL EXISTING SECTION

STA 8+75 TO STA 9+85.88
STA 10+15.53 TO STA 11+50



CUT **TYPICAL FINISHED SECTION** FILL

STA 8+75 TO STA 9+78.67
STA 10+21.33 TO STA 11+50

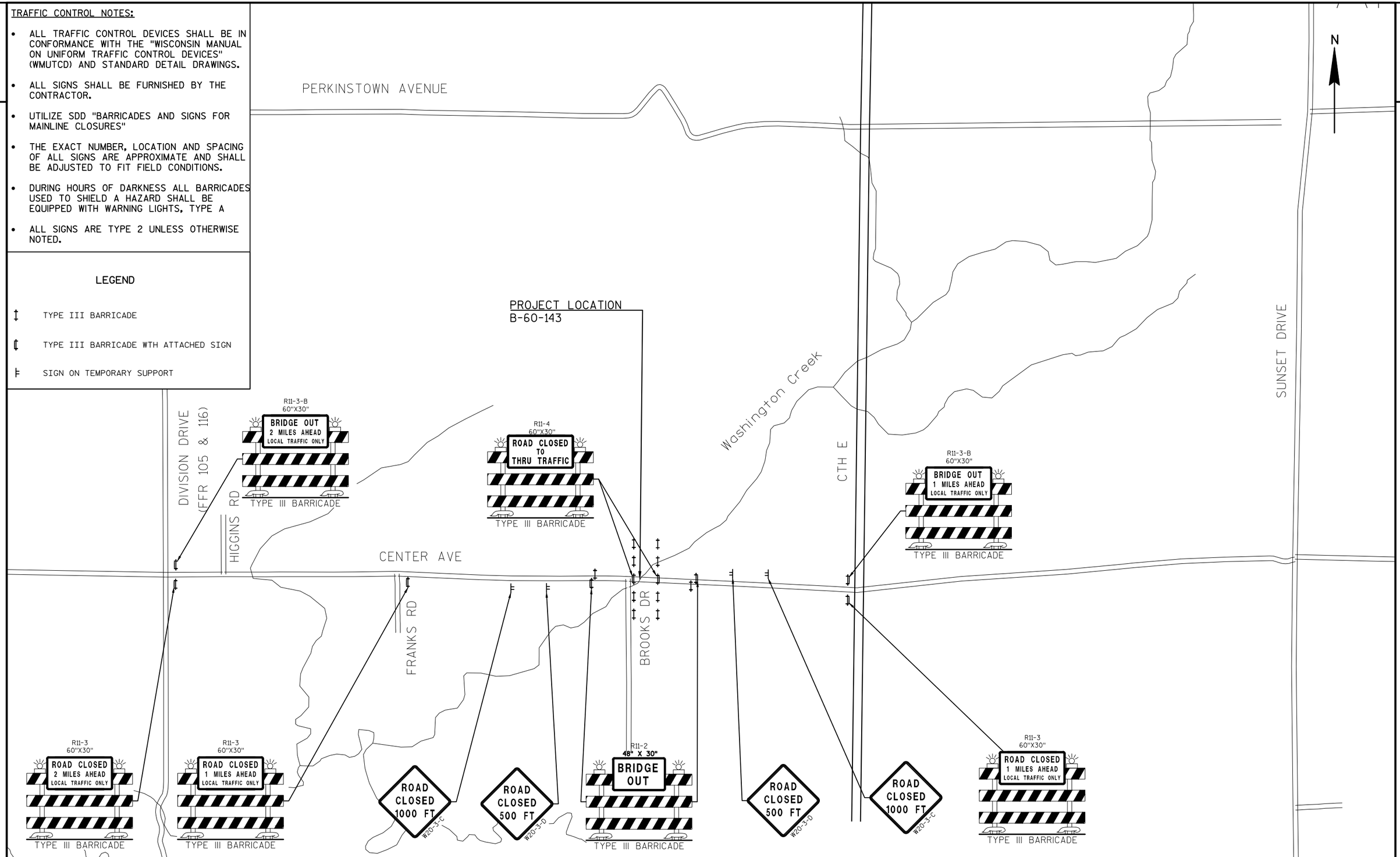
PROJECT NO: 8891-00-70	HWY: CENTER AVENUE	COUNTY: TAYLOR	TYPICAL SECTIONS	SHEET 3	E

TRAFFIC CONTROL NOTES:

- ALL TRAFFIC CONTROL DEVICES SHALL BE IN CONFORMANCE WITH THE "WISCONSIN MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (WMUTCD) AND STANDARD DETAIL DRAWINGS.
- ALL SIGNS SHALL BE FURNISHED BY THE CONTRACTOR.
- UTILIZE SDD "BARRICADES AND SIGNS FOR MAINLINE CLOSURES"
- THE EXACT NUMBER, LOCATION AND SPACING OF ALL SIGNS ARE APPROXIMATE AND SHALL BE ADJUSTED TO FIT FIELD CONDITIONS.
- DURING HOURS OF DARKNESS ALL BARRICADES USED TO SHIELD A HAZARD SHALL BE EQUIPPED WITH WARNING LIGHTS, TYPE A
- ALL SIGNS ARE TYPE 2 UNLESS OTHERWISE NOTED.

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- SIGN ON TEMPORARY SUPPORT



PROJECT NO: 8891-00-70	HWY: CENTER AVENUE	COUNTY: TAYLOR	TRAFFIC CONTROL	SHEET 4	E

Estimate Of Quantities

8891-00-70

Line	Item	Item Description	Unit	Total	Qty
0010	201.0105	Clearing	STA	1.000	1.000
0020	201.0205	Grubbing	STA	1.000	1.000
0030	203.0600.S	Removing Old Structure Over Waterway With Minimal Debris (station) 01. Station 10+00	LS	1.000	1.000
0040	205.0100	Excavation Common	CY	81.000	81.000
0050	206.1000	Excavation for Structures Bridges (structure) 01. B-60-0143	LS	1.000	1.000
0060	208.0100	Borrow	CY	333.000	333.000
0070	210.1500	Backfill Structure Type A	TON	180.000	180.000
0080	213.0100	Finishing Roadway (project) 01. 8891-00-70	EACH	1.000	1.000
0090	305.0110	Base Aggregate Dense 3/4-Inch	TON	32.000	32.000
0100	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	288.000	288.000
0110	455.0605	Tack Coat	GAL	33.000	33.000
0120	465.0105	Asphaltic Surface	TON	110.000	110.000
0130	502.0100	Concrete Masonry Bridges	CY	138.000	138.000
0140	502.3200	Protective Surface Treatment	SY	175.000	175.000
0150	505.0400	Bar Steel Reinforcement HS Structures	LB	3,470.000	3,470.000
0160	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	18,765.000	18,765.000
0170	506.0105	Structural Steel Carbon	LB	495.000	495.000
0180	513.4061	Railing Tubular Type M (structure) 01. B-60-0143	LF	131.000	131.000
0190	516.0500	Rubberized Membrane Waterproofing	SY	18.000	18.000
0200	550.0020	Pre-Boring Rock or Consolidated Materials	LF	130.000	130.000
0210	550.1100	Piling Steel HP 10-Inch X 42 Lb	LF	150.000	150.000
0220	606.0300	Riprap Heavy	CY	100.000	100.000
0230	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	170.000	170.000
0240	619.1000	Mobilization	EACH	1.000	1.000
0250	624.0100	Water	MGAL	3.000	3.000
0260	625.0100	Topsoil	SY	625.000	625.000
0270	627.0200	Mulching	SY	750.000	750.000
0280	628.1504	Silt Fence	LF	550.000	550.000
0290	628.1520	Silt Fence Maintenance	LF	550.000	550.000
0300	628.1905	Mobilizations Erosion Control	EACH	3.000	3.000
0310	628.1910	Mobilizations Emergency Erosion Control	EACH	3.000	3.000
0320	628.6005	Turbidity Barriers	SY	70.000	70.000
0330	629.0205	Fertilizer Type A	CWT	0.500	0.500
0340	630.0120	Seeding Mixture No. 20	LB	20.000	20.000
0350	630.0200	Seeding Temporary	LB	20.000	20.000
0360	634.0612	Posts Wood 4x6-Inch X 12-FT	EACH	4.000	4.000
0370	637.2230	Signs Type II Reflective F	SF	12.000	12.000
0380	638.2602	Removing Signs Type II	EACH	6.000	6.000

8891-00-70

Line	Item	Item Description	Unit	Total	Qty
0390	638.3000	Removing Small Sign Supports	EACH	6.000	6.000
0400	642.5001	Field Office Type B	EACH	1.000	1.000
0410	643.0100	Traffic Control (project) 01. 8891-00-70	EACH	1.000	1.000
0420	643.0420	Traffic Control Barricades Type III	DAY	1,360.000	1,360.000
0430	643.0705	Traffic Control Warning Lights Type A	DAY	2,720.000	2,720.000
0440	643.0900	Traffic Control Signs	DAY	952.000	952.000
0450	645.0120	Geotextile Type HR	SY	220.000	220.000
0460	650.4500	Construction Staking Subgrade	LF	233.000	233.000
0470	650.5000	Construction Staking Base	LF	233.000	233.000
0480	650.6500	Construction Staking Structure Layout (structure) 01. B-60-0143	LS	1.000	1.000
0490	650.9910	Construction Staking Supplemental Control (project) 01. 8891-00-70	LS	1.000	1.000
0500	650.9920	Construction Staking Slope Stakes	LF	233.000	233.000
0510	690.0150	Sawing Asphalt	LF	36.000	36.000
0520	715.0502	Incentive Strength Concrete Structures	DOL	828.000	828.000

3

CLEARING & GRUBBING

STATION - STATION	LOCATION	201.0105 CLEARING STA	201.0205 GRUBBING STA
CENTER AVENUE			
9+00 - 10+00	LT & RT	1	1
ITEM TOTALS		1	1

EXCAVATION

STATION - STATION	LOCATION	205.0100 COMMON CY	AIR FILL CY	EXPAND. FILL CY	208.0100 BORROW CY
CENTER AVENUE					
8+75 - 9+78.66	LT & RT	32	169	220	188
10+21.34 - 11+50	LT & RT	49	149	194	145
ITEM TOTALS		81	318	414	333

NOTES:
1) SALVAGED/UNUSABLE PAVEMENT MATERIAL IS INCLUDED IN COMMON EXCAVATION
2) FILL DOES NOT INCLUDE UNUSABLE PAVEMENT EXCAVATION VOLUME.
3) FILL WILL BE BACKFILLED WITH CUT OR BORROW.
4) POSITIVE BORROW INDICATES A SHORTAGE OF MATERIAL.
5) EXPANSION FACTOR = 1.3

FINISHING ROADWAY (8891-00-70)

STATION - STATION	213.0100 EACH
CENTER AVENUE	
8+75 - 11+50	1
ITEM TOTAL	1

BASE AGGREGATE DENSE

STATION - STATION	LOCATION	305.0110 3/4-INCH TON	305.0120 1 1/4-INCH TON	624.0100 WATER MGAL
CENTER AVENUE				
8+75 - 9+78.67	LT & RT	14	128	1.5
10+21.33 - 11+50	LT & RT	18	160	1.5
ITEM TOTALS		32	288	3

ASPHALTIC PAVEMENT ITEMS

STATION - STATION	LT & RT	455.0605 TACK COAT GAL	465.0105 ASHALTIC SURFACE TON
CENTER AVENUE			
8+75 - 9+78.67	LT & RT	15	50
10+21.33 - 11+50	LT & RT	18	60
ITEM TOTALS		33	110

MOBILIZATION

STATION - STATION	619.1000 EACH
CENTER AVENUE	
CATEGORY 0010	0.25
CATEGORY 0020	0.75
ITEM TOTAL	1

TOPSOIL, MULCHING AND SEEDING

STATION - STATION	LOCATION	625.0100 TOPSOIL SY	627.0200 MULCHING SY	629.0205 FERTILIZER TYPE A CWT	630.0120 SEEDING MIXTURE NO. 20 LB	630.0200 SEEDING TEMPORARY LB
CENTER AVENUE						
8+75 - 9+78.66	LT & RT	300	350	0.25	10	10
10+21.34 - 11+50	LT & RT	325	400	0.25	10	10
ITEM TOTALS		625	750	0.5	20	20

EROSION CONTROL ITEMS

STATION - STATION	LOCATION	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF	628.6005 TURBIDITY BARRIER SY
CENTER AVENUE				
8+75 - 9+78.66	LT & RT	250	250	35
10+21.34 - 11+50	LT & RT	300	300	35
ITEM TOTALS		550	550	70

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

3

MOBILIZATIONS EROSION CONTROL

STATION - STATION	628.1905 EROSION CONTROL EACH	628.1910 EMERGENCY EROSION CONTROL EACH
CENTER AVENUE		
8+75 - 11+50	3	3
ITEM TOTALS	3	3

CONSTRUCTION STAKING

STATION - STATION	LOCATION	650.4500 SUBGRADE LF	650.5000 BASE LF	*650.6500 STRUCTURE LAYOUT (B-60-0143) LS	650.9910 SUPPLEMENTAL CONTROL (8891-00-70) LS	650.9920 SLOPE STAKES LF
CENTER AVENUE					1	
8+75 - 9+78.66	LT & RT	104	104	-	-	104
10+00	LT & RT	-	-	1	-	
10+21.34 - 11+50	LT & RT	129	129	-	-	129
ITEM TOTALS		233	233	1	1	233

*CATEGORY 0020

3

PERMANENT SIGNING

SIGN GROUP CODE	SIGN CODE		TYPE II SIZE	637.2230 SIGNS TYPE II REFLECTIVE F SF	634.0612 POSTS WOOD 4X6-INCH 12-FT EACH	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH	REMARKS
CENTER AVENUE								
1-1	W5-52L	CLEARANCE STRIPER	12" X 36"	3	1	1	1	REPLACE
1-2	W5-52R	CLEARANCE STRIPER	12" X 36"	3	1	1	1	REPLACE
1-3		WEIGHT LIMIT 40 TONS		-	-	1	1	REMOVE
1-4		WEIGHT LIMIT 40 TONS		-	-	1	1	REMOVE
1-5	W5-52R	CLEARANCE STRIPER	12" X 36"	3	1	1	1	REPLACE
1-6	W5-52L	CLEARANCE STRIPER	12" X 36"	3	1	1	1	REPLACE
ITEM TOTALS				12	4	6	6	

SAWING ASPHALT

STATION - STATION	LOCATION	690.0150 LF
CENTER AVENUE		
8+75	LT & RT	18
11+50	LT & RT	18
ITEM TOTAL		36

FIELD OFFICE TYPE B

STATION - STATION	642.5001 EACH
CENTER AVENUE	
8+75 - 11+50	1
ITEM TOTAL	1

TRAFFIC CONTROL

STATION - STATION	643.0100 PROJECT (8891-00-70) EACH	643.0420 BARRICADES TYPE III DAY	643.0705 WARNING LIGHTS TYPE A DAY	643.0900 SIGNS DAY
CENTER AVENUE				
8+75 - 11+50	1	1360	2720	952
ITEM TOTAL	1	1360	2720	952

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

BENCHMARK TABLE

NO	STATION	DESCRIPTION	ELEV
1	--	SET ⅜" SPK IN PP *19931 ± 20' SOUTH OF SOUTH EOB CENTER AVE. ± 300' WEST OF EXISTING BRIDGE	1358.41
2	9+52.79 30.7' RT	SET ⅜" SPK IN PP *19930 ± 20' SOUTH OF SOUTH EOB CENTER AVE. ± 30' WEST OF EXISTING BRIDGE	1357.38
3	---	SET ⅜" SPK IN PP *19929 ± 20' SOUTH OF SOUTH EOB CENTER AVE. ± 190' EAST OF EXISTING BRIDGE	1359.39

UTILITY LOCATIONS ARE APPROXIMATE.
ACTUAL LOCATIONS MUST BE FIELD VERIFIED.

scale 40 0 40 80 feet

STEVEN J. & SHERRY L. CHARITON

JOHN J. & THERESE FREUDENTHAL

N

LEGEND
- SILT FENCE
- RIPRAP HEAVY
- TURBIDITY BARRIER

REPLACE 1-1 W5-52L 12"X36"
REPLACE 1-2 W5-52R 12"X36"
REMOVE 1-3 WEIGHT LIMIT 40 TONS
REMOVE 1-4 WEIGHT LIMIT 40 TONS
REPLACE 1-5 W5-52R 12"X36"
REPLACE 1-6 W5-52L 12"X36"

R/W (TYP)
R/W 66.0'
SLOPE INTERCEPTS (TYP)
REMOVE EXISTING STRUCTURE P-60-0123
B-60-0143 PROPOSED STRUCTURE 20° SKEW LHF

CP1
CP2
BM1
BM2
BM3
S87°43'15"E
9+00
10+00
11+00
CENTER AVE
BROOKS DRIVE
TAYLOR COUNTY ELECTRIC COOPERATIVE
WASHINGTON CREEK

BP: 8+00.00
Y= 347545.697
X= 621693.979

EP: 12+00.00
Y= 347529.790
X= 622093.663

STA 9+50.45
11.0' LT
STA 10+58.11
11.0' LT
STA 9+41.89
11.0' RT
STA 10+49.55
11.0' RT

BEGIN PROJECT
STA 8+75
MATCH EXISTING
SAWCUT REQ'D
Y= 347542.715
X= 621768.920

END PROJECT
STA 11+50
MATCH EXISTING
SAWCUT REQ'D
Y= 347531.779
X= 622043.702

EARTHWORK SUMMARY
STA 8+75 TO STA 9+78.67

CUT	32 CY
FILL	169 CY
FILL AT 1.3% EXP	220 CY
BORROW	188 CY

EARTHWORK SUMMARY
STA 10+21.33 TO STA 11+50

CUT	49 CY
FILL	149 CY
FILL AT 1.3% EXP	194 CY
BORROW	145 CY

VCL = 135.00
K = 89.11
VPC STA 8+75.00
VPC EL 1360.79
VPI STA 9+42.50
VPI EL 1361.78
VPT STA 10+10.00
VPT EL 1361.75
1.47%
-0.04%
FINISHED ℄ PROFILE
EXISTING ℄ PROFILE
HIGH WATER 100 YR
EL 1361.06
OBSERVED WATER
EL 1355.05 (8/25/15)

STATION 10+00
STRUCTURE B-60-0143 REQ'D
SINGLE SPAN CONCRETE FLAT SLAB
42.66' OVERALL LENGTH
24.0' CLEAR ROADWAY WIDTH
20° SKEW LHF

STATION 10+00
REMOVE STRUCTURE P-60-0123
SINGLE SPAN STEEL DECK GIRDER BRIDGE
30.2' OVERALL LENGTH
20.0' OVERALL WIDTH

EXISTING ℄ ELEVATION
FINISHED ℄ ELEVATION

	6+50	7+00	8+00	9+00	10+00	11+00	12+00	12+50
EXISTING ℄ ELEVATION	1360.69	1360.71	1360.97	1361.34	1354.12	1361.54	1361.60	1361.69	1361.73
FINISHED ℄ ELEVATION			1361.12	1361.57	1361.75	1361.73	1361.71	1361.69	

1365 1360 1355 1353

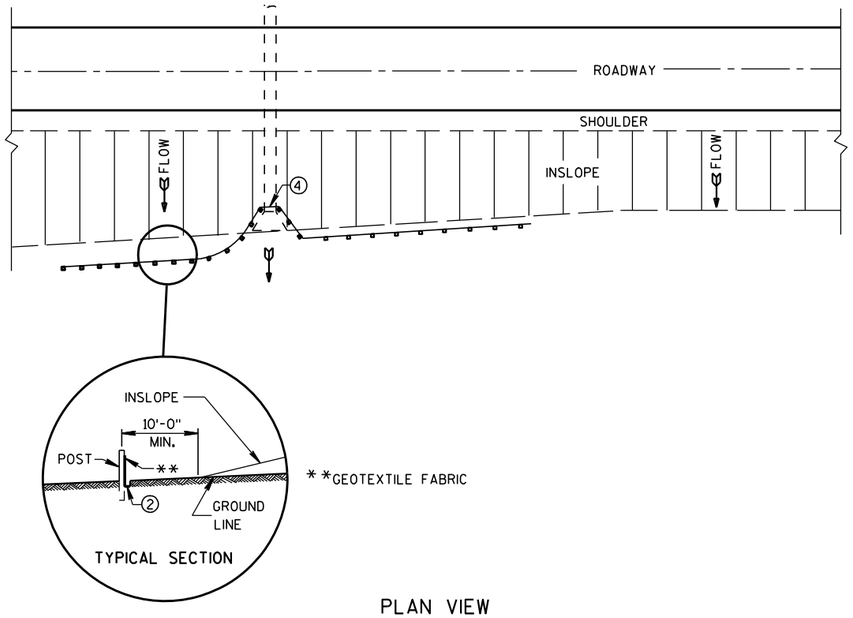
PROJECT NO: 8891-00-70	HWY: CENTER AVENUE	COUNTY: TAYLOR	PLAN AND PROFILE: CENTER AVENUE	SHEET 9 E

FILE NAME : P:\FJ\H\HAMMT\133758\CIVIL 3D\SHEETSPLAN\050101 PP.DWG
LAYOUT NAME - 050101 PP
PLOT DATE : 12/29/2016 4:46 PM PLOT BY : BILL MCELROY PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 44

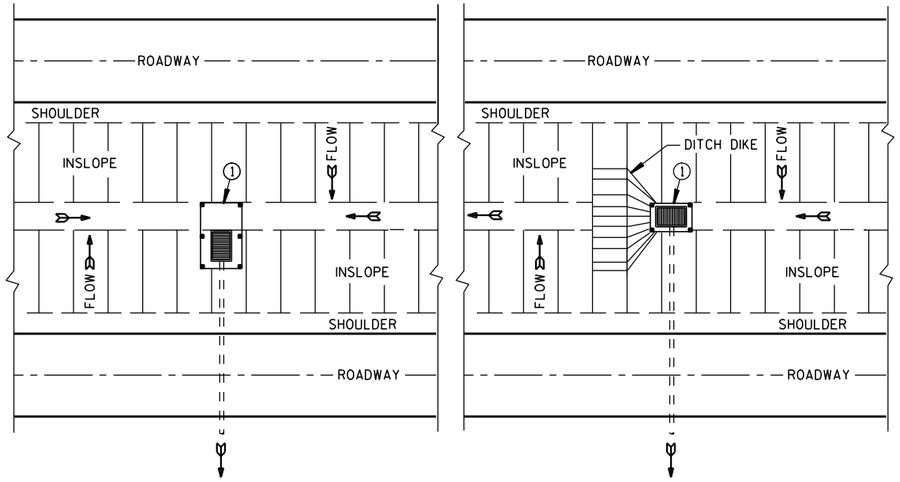
Standard Detail Drawing List

08E09-06	SILT FENCE
08E11-02	TURBIDITY BARRIER
12A03-10	NAME PLATE (STRUCTURES)
15C02-06A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-06B	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C06-08	SIGNING & MARKING FOR TWO LANE BRIDGES



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.

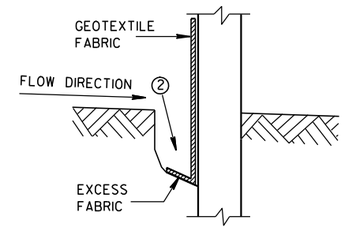
① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.

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.

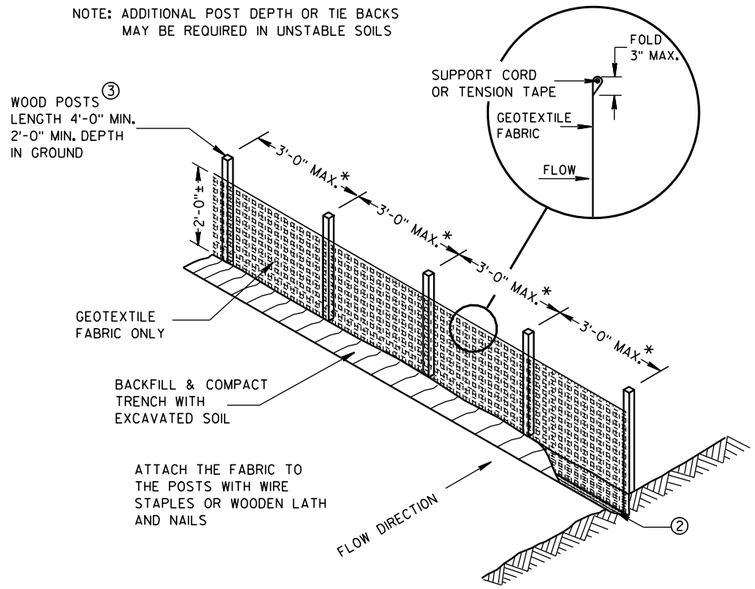
③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1⅛" X 1⅛" OF OAK OR HICKORY.

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

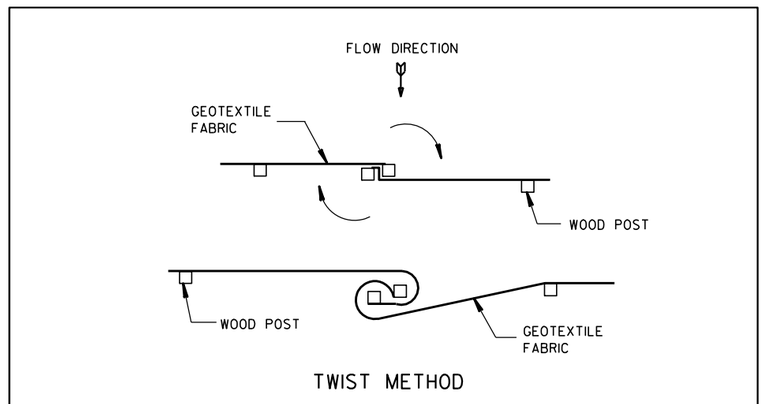
⑤ CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



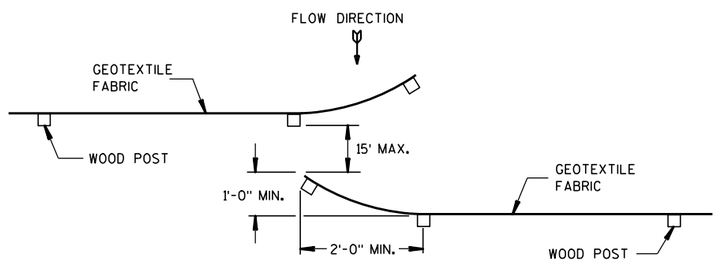
TRENCH DETAIL



SILT FENCE

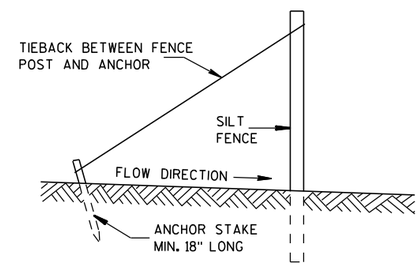


TWIST METHOD



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

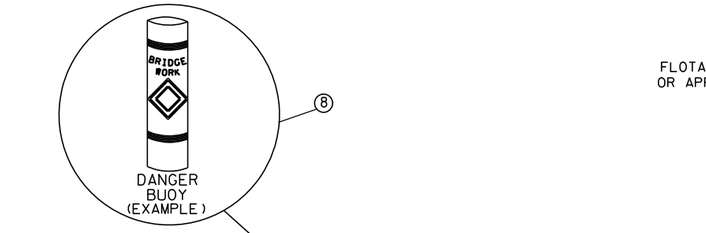
APPROVED
4-29-05 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6

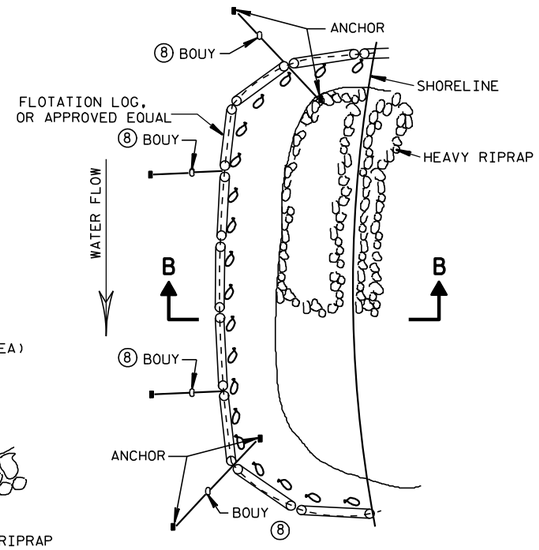
S.D.D. 8 E 9-6

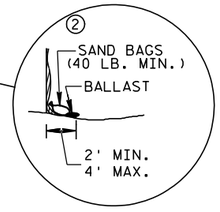
6

S.D.D. 8 E 9-6

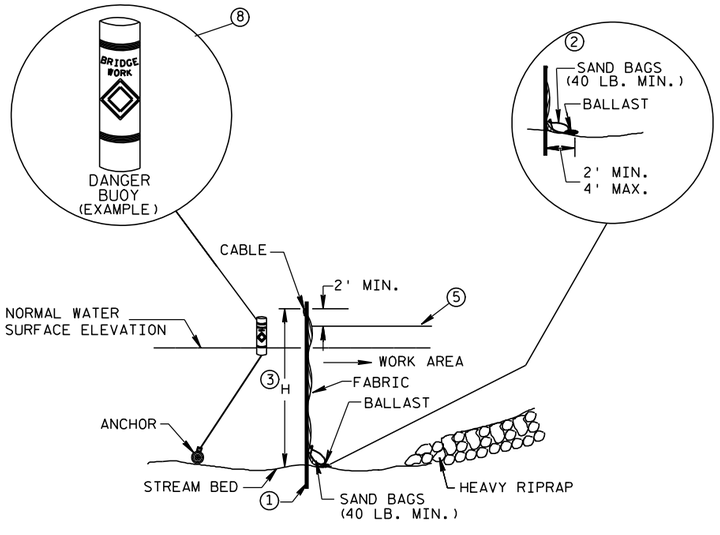


SECTION B-B

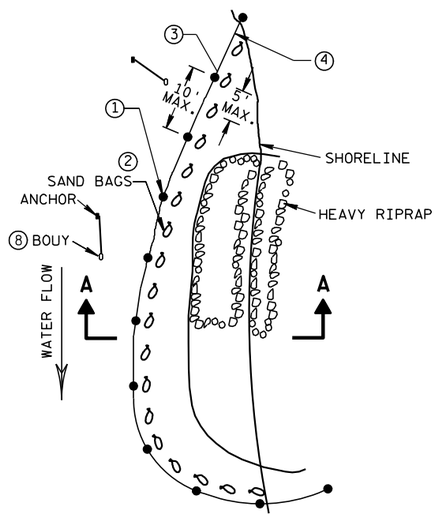




TURBIDITY BARRIER FLOAT ALTERNATIVE
CAUTION - SEE NOTE 6



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.

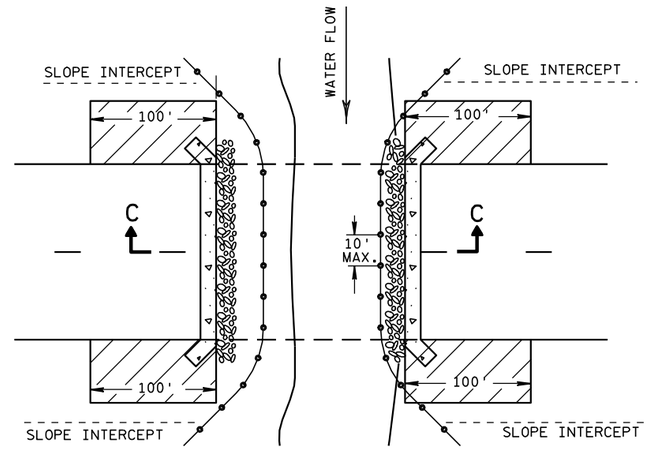
④ IN WATERWAYS SUBJECT TO FLUCTUATING WATER ELEVATIONS, PROVISIONS SHOULD BE MADE TO ALLOW THE WATER TO EQUALIZE ON EACH SIDE OF THE BARRIER. THIS MAY BE ACCOMPLISHED BY LEAVING A PORTION OF THE BARRIER OPEN ON THE UPSTREAM END.

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.

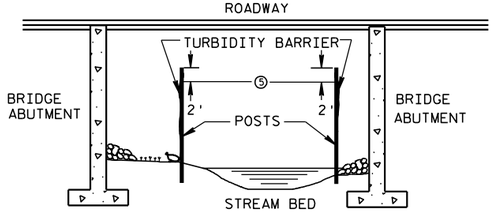
⑥ FLOAT ALTERNATIVE WILL ONLY BE ALLOWED WITH WRITTEN APPROVAL OF THE ENGINEER, AND IS MEANT FOR LOCATIONS WHERE BED ROCK PREVENTS THE INSTALLATION OF POSTS.

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

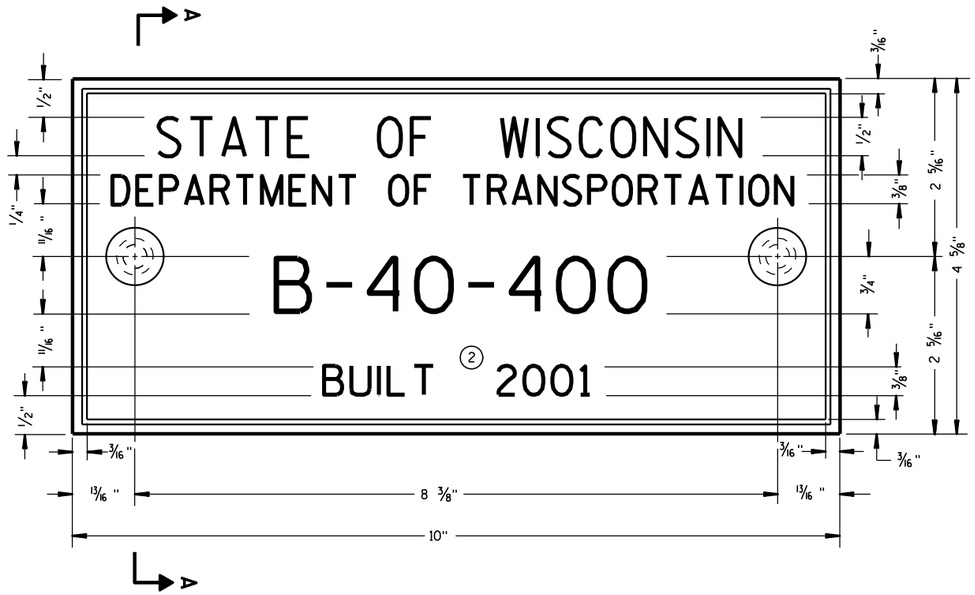
APPROVED
6/04/02 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6

S.D.D. 8 E 11-2

6

S.D.D. 8 E 11-2



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

FOR MULTI-UNIT STRUCTURES
LINE 3 ABOVE SHALL READ

B = BRIDGE
C = CULVERT
R = RETAINING WALL

COUNTY NO.

BRIDGE NO.

UNIT NO. FOR MULTIPLE UNIT BRIDGE

B-40-400-1A

NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES

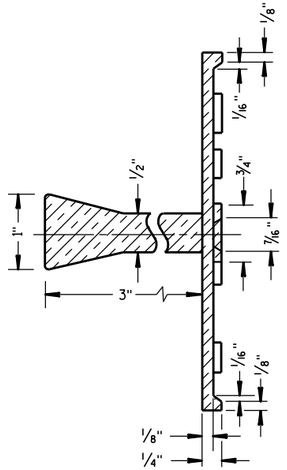
GENERAL NOTES

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.

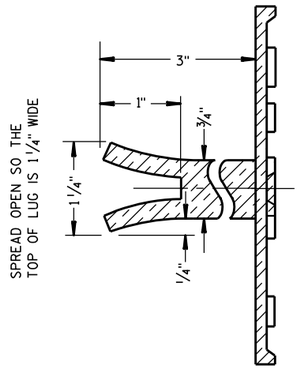
THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

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

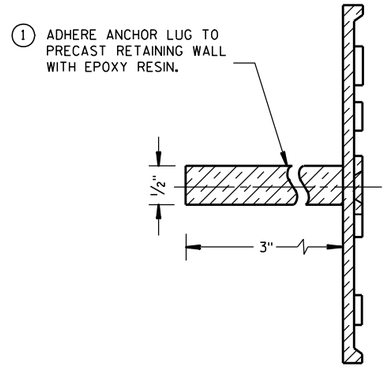
(2) REHABILITATION OF AN EXISTING STRUCTURE SHOULD USE THE DATE OF ORIGINAL STRUCTURE CONSTRUCTION.



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

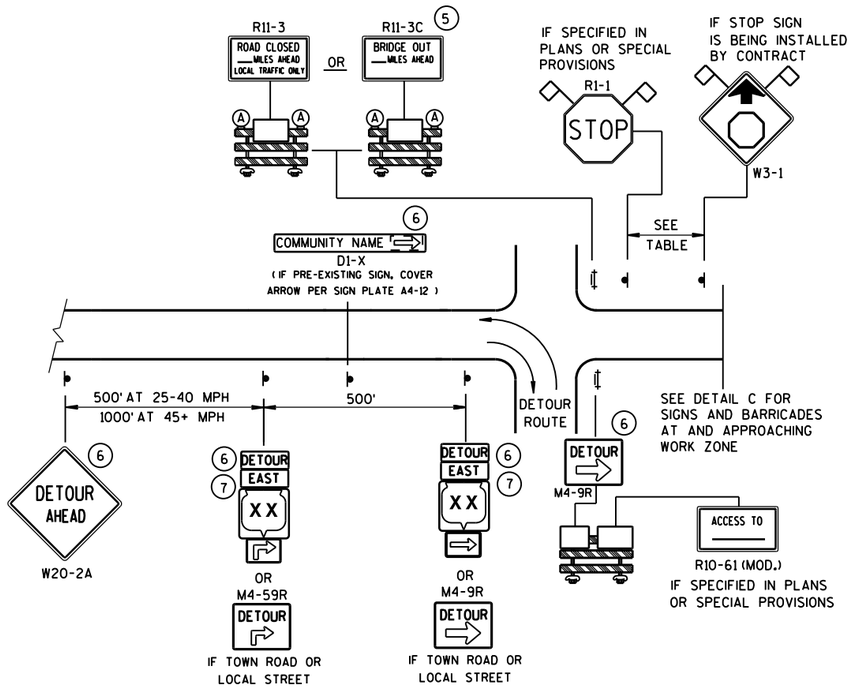
FHWA

6

S.D.D. 12 A 3-10

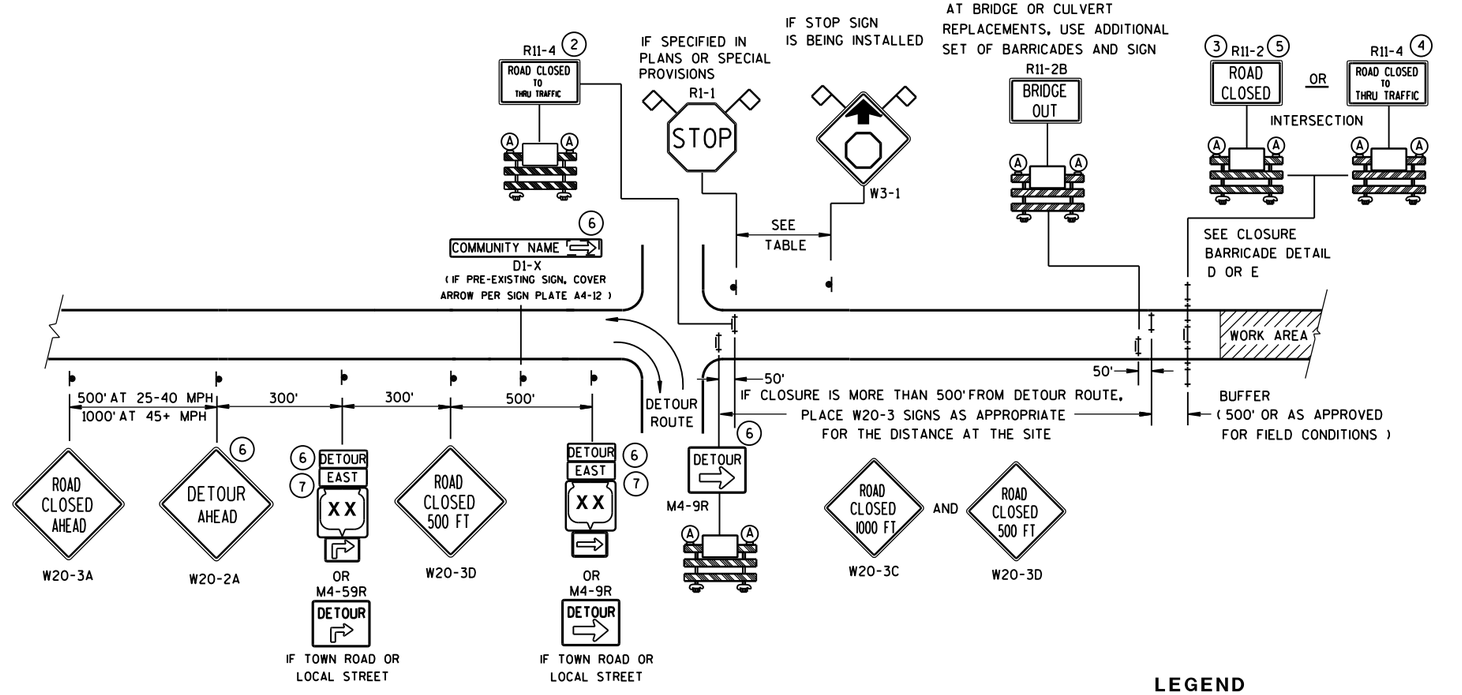
6

S.D.D. 12 A 3-10



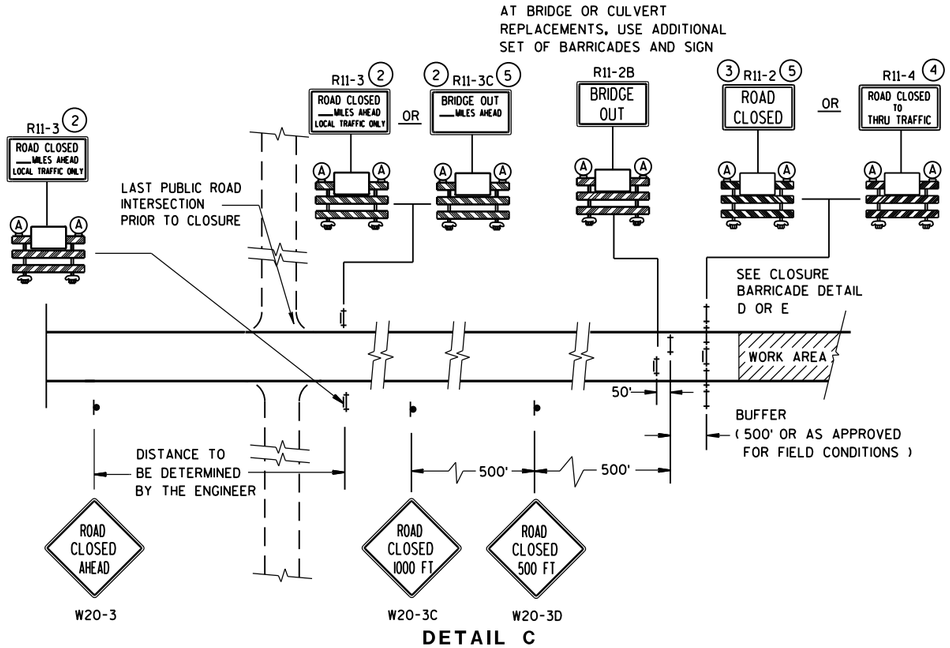
DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR

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

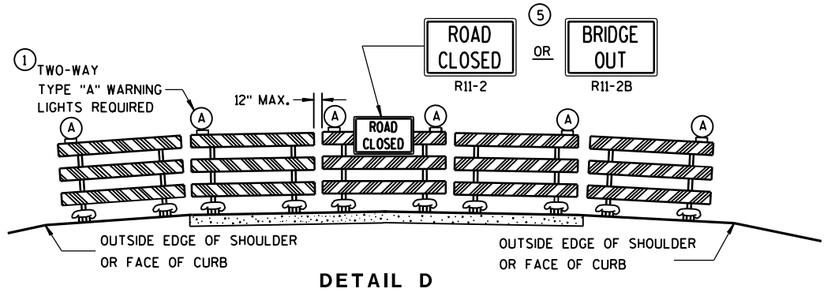
Sept. 2015 — DATE
/S/ Peter Amakobe Atepe
STATEWIDE WORK ZONE TRAFFIC SAFETY ENGINEER
FHWA

6

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

6

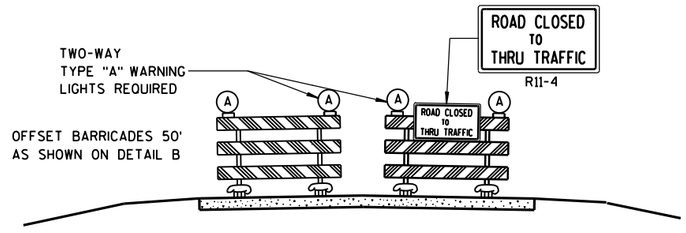
S.D.D. 15 C 2-6a



DETAIL D

ROAD CLOSURE BARRICADE DETAIL

APPROACH VIEW



DETAIL E

LANE CLOSURE BARRICADE DETAIL

APPROACH VIEW

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

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

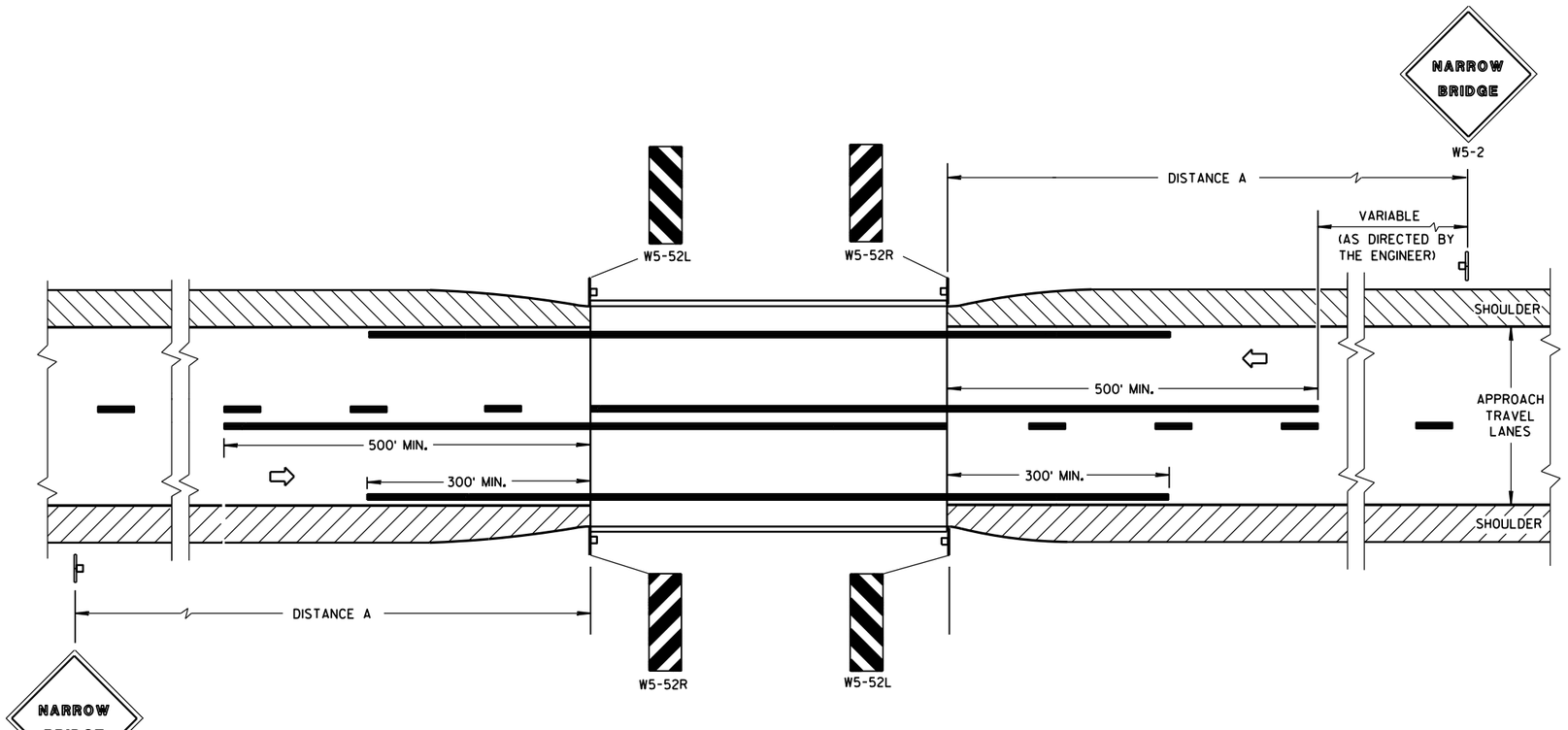
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

Sept. 2015 — DATE

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

6

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

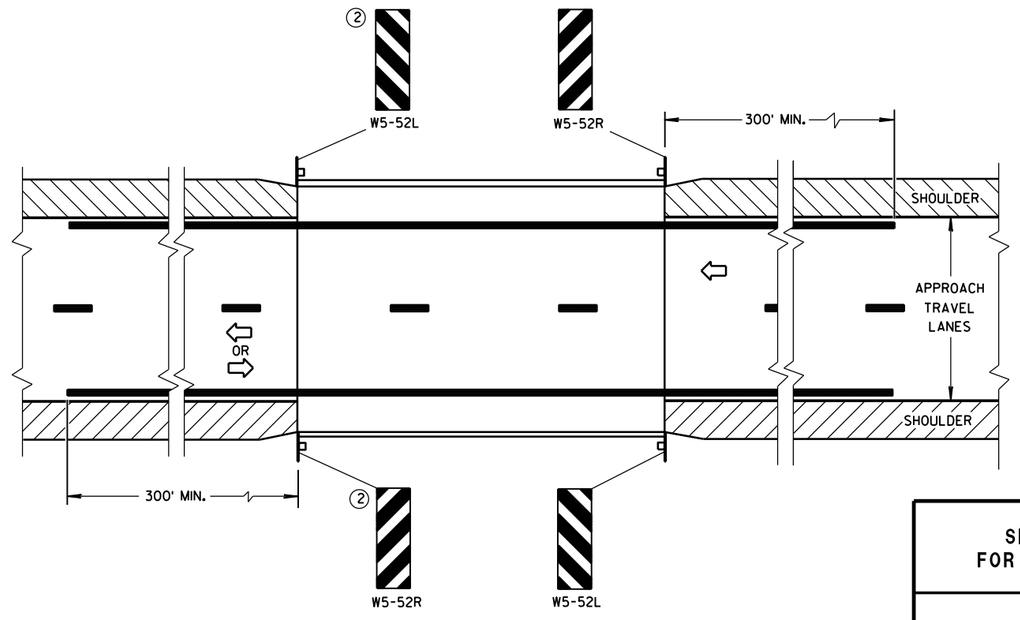


SITUATION 1

WARRANTING CRITERIA:
BRIDGE WIDTH IS AT LEAST 16 FEET BUT LESS THAN 24 FEET.

DISTANCE TABLE

POSTED OR 85th PERCENTILE SPEED	DISTANCE "A"
25	150'
30	200'
35	250'
40	300'
45	400'
50	550'
55	750'



SITUATION 2

WARRANTING CRITERIA:

1. BRIDGE WIDTH IS AT LEAST 24 FEET AND
2. BRIDGE SHOULDER WIDTH IS LESS THAN 6 FEET.

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.

① LOCATE W5-52 SIGN POST(S) BEHIND GUARDRAIL WHEN PRESENT.

② OMIT ON ONE-WAY TRAVELLED WAYS.

③ EDGE OF W5-52 SIGN SHALL BE PLACED IN LINE WITH FACE OF CURB OR PARAPET.

SIGNING & MARKING FOR TWO LANE BRIDGES

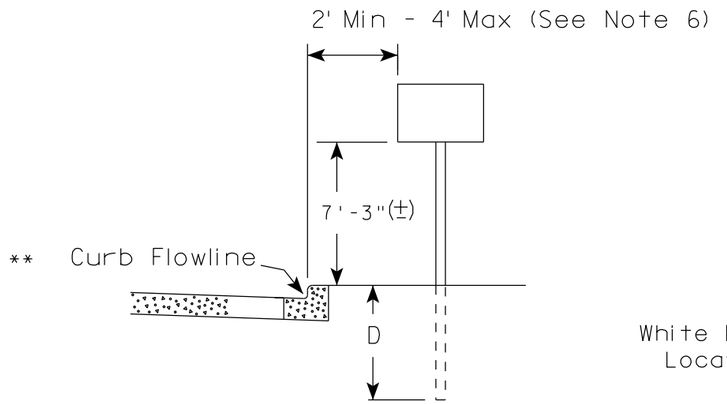
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
4-18-16 — DATE
/S/ Matthew R. Rauch — STATE SIGNING AND MAR ...EER
FHWA

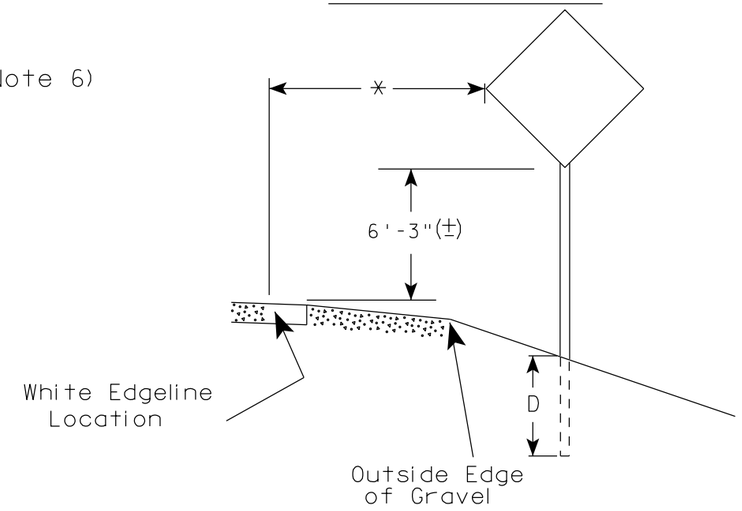
6

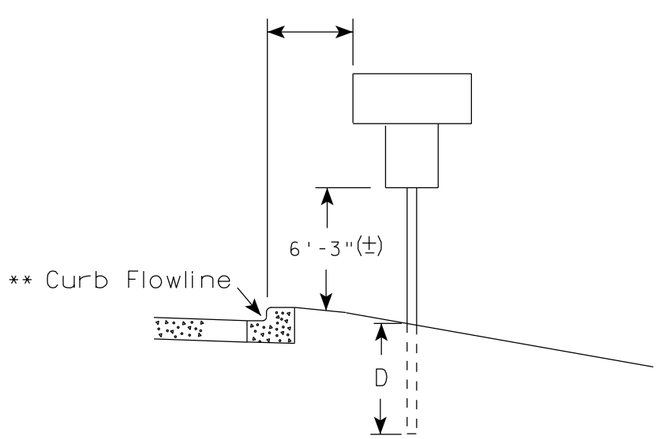
S.D.D. 15 C 6-8

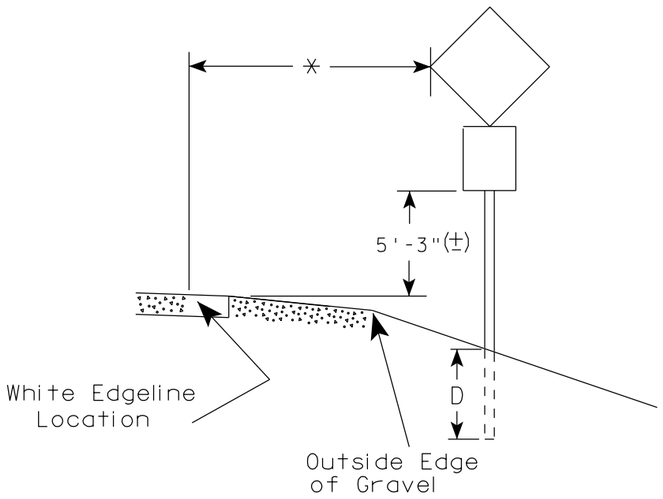
URBAN AREA



RURAL AREA (See Note 2)







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

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

POST EMBEDMENT DEPTH

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

GENERAL NOTES

1. Signs wider than 4 feet or 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.
2. If signs are mounted on barrier wall, see A4-10 sign plate.
3. For expressways and freeways, mounting height is 7'- 3" (±) or 6'-3" (±) depending upon existence of a sub-sign.
4. Minimum mounting height for J assemblies (A2-1S) 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 signs shall be mounted at a height of 5'-3" (±) or as directd by the Engineer.
9. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Enhanced Reference Markers, Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4'-3" (±).

TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

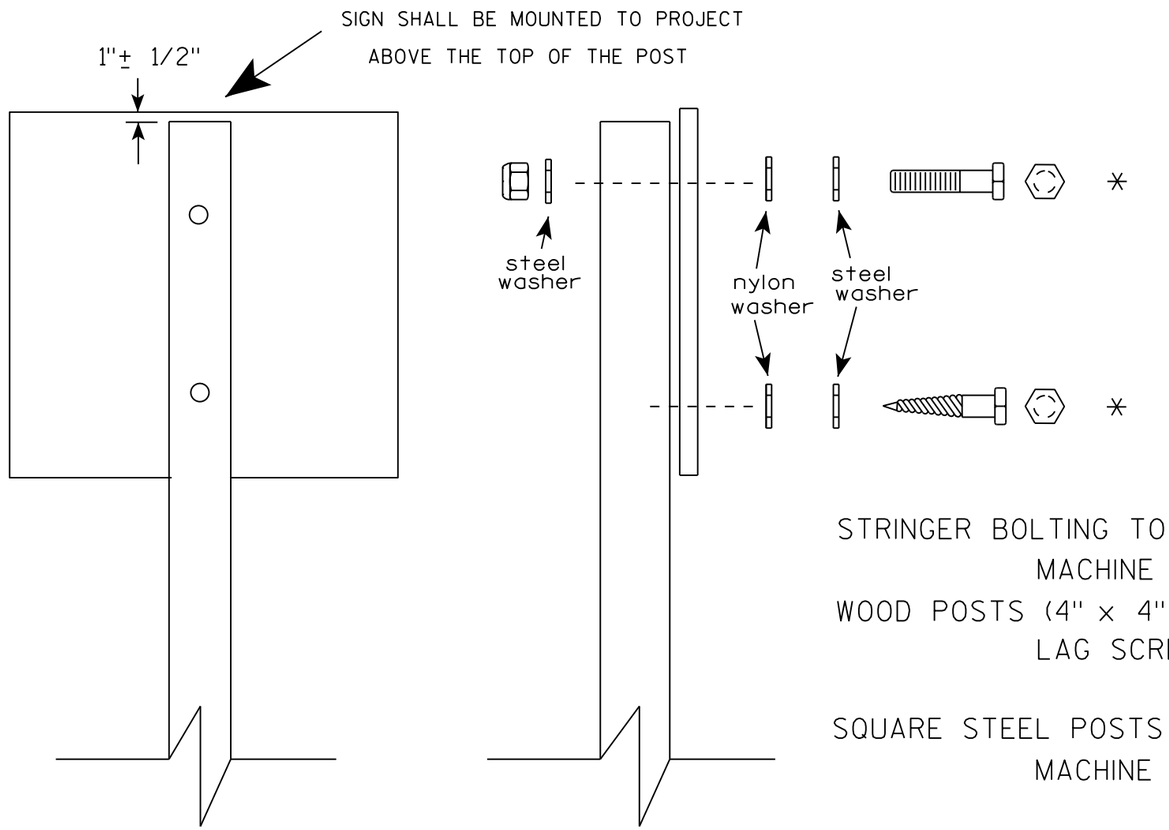
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 7/23/15 PLATE NO. A4-3.20

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\A43.DGN PLOT DATE : 23-JUL-2015 15:21 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 99.237937:1.000000 WISDOT/CADDS SHEET 42



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

a. Hot dip galvanized in accordance with ASTM Designation: A 153, Class D, or SC 3
b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.

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

STRINGER BOLTING TO ALUMINUM SIGNS (SEE SIGN PLATE A4-18)
MACHINE BOLTS - 5/16" X 1-3/4" Length w/ lock nuts
WOOD POSTS (4" x 4" or 4" x 6")
LAG SCREWS - 3/8" X 3" (NO STRINGERS ON BACK OF SIGN)
3/8" X 4" (STRINGERS ON BACK OF SIGN)
SQUARE STEEL POSTS (2" x 2")
MACHINE BOLTS - 3/8" X 3-1/4" Length w/ nuts (NO STRINGER ON BACK OF SIGN)
3/8" X 5" Length w/ nuts (STRINGERS ON BACK OF SIGN)
RIVETS - 9/32 " (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL
O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH
WASHERS (ALL POSTS) -
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON

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

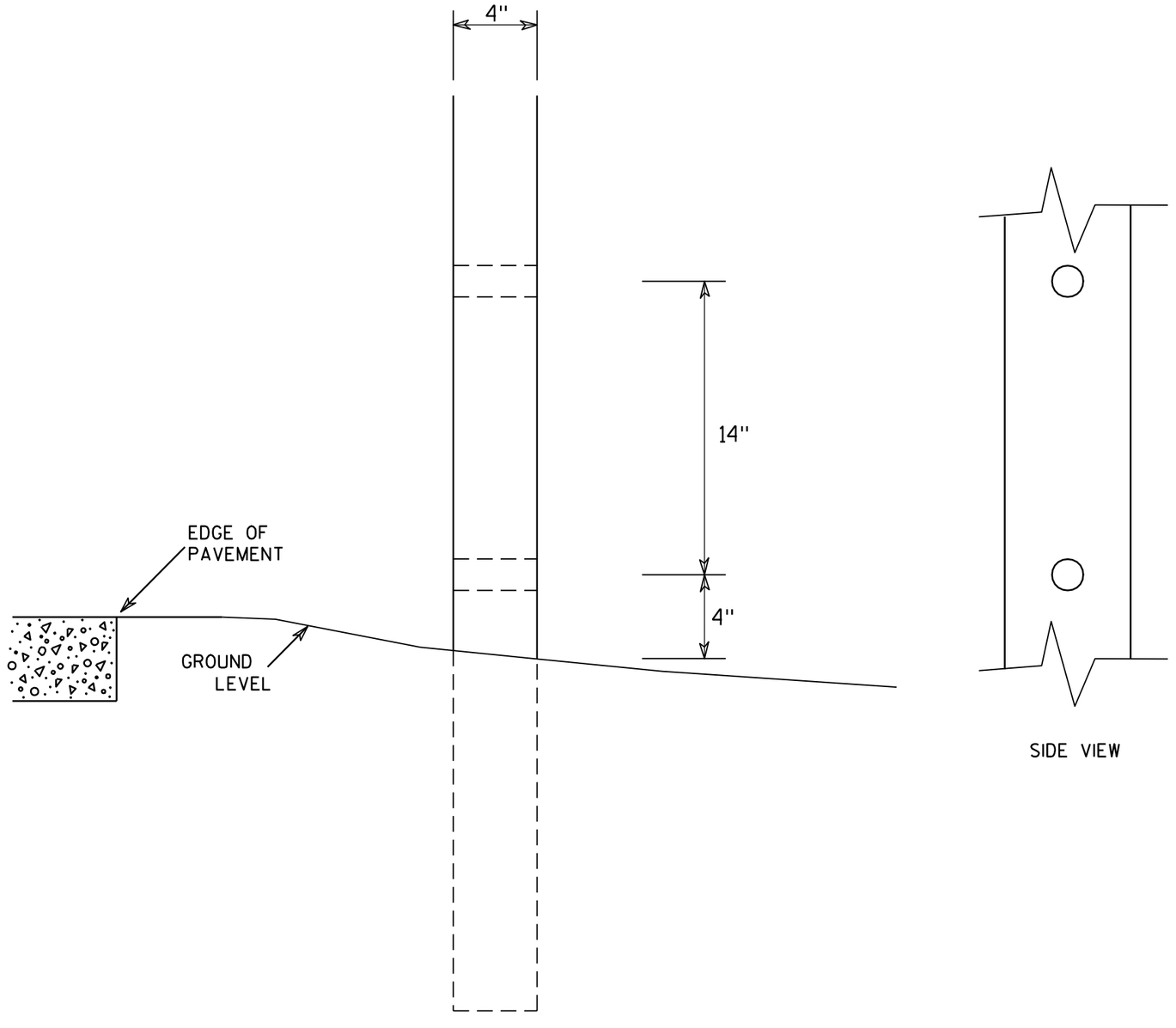
ATTACHMENT OF SIGNS TO POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

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

PROJECT NO: SHEET NO: E



SIDE VIEW

GENERAL NOTES

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

7

7

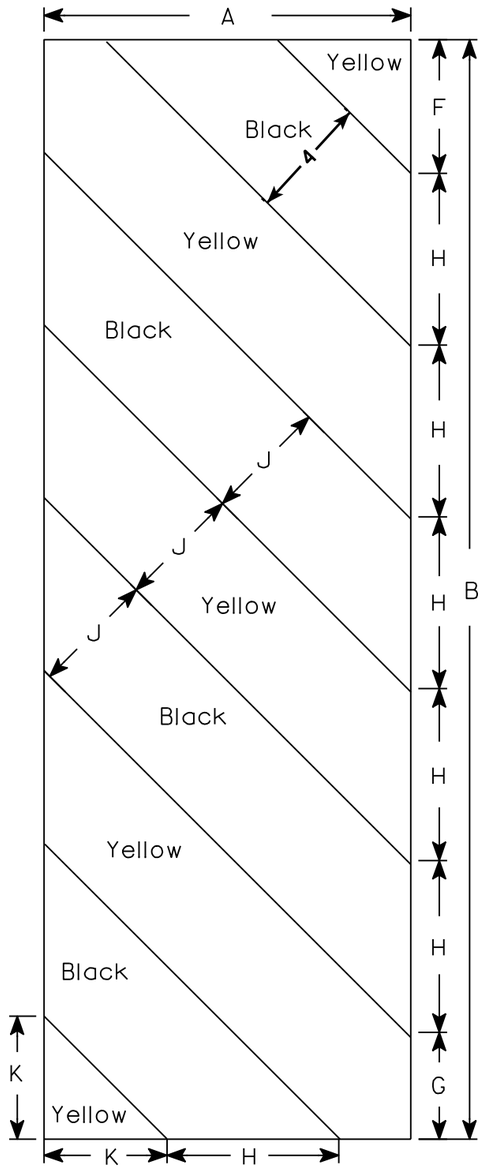
4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

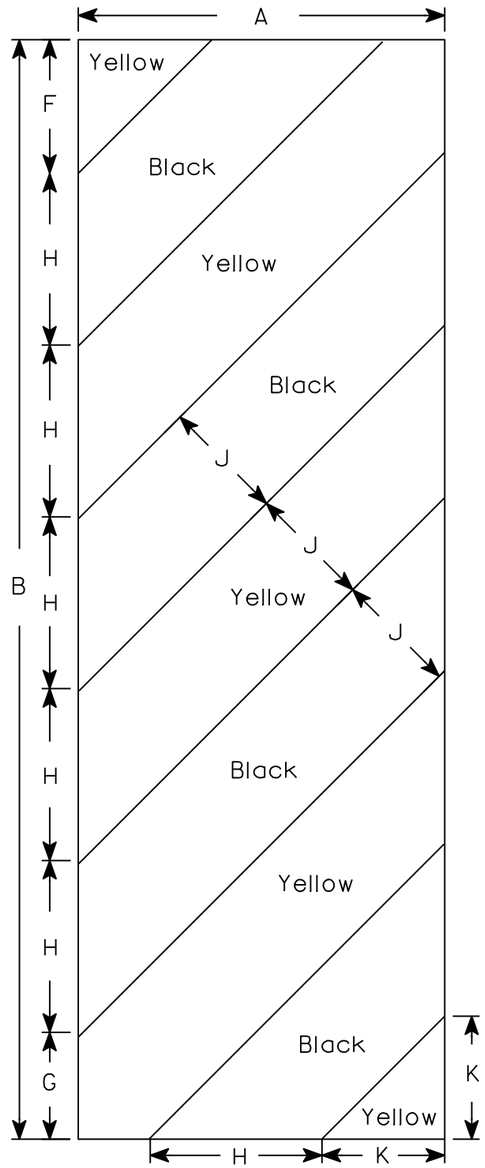
APPROVED Chester J Spang
for State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 19	E



W5-52L



W5-52R

NOTES

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

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

STANDARD SIGN

W5-52L & W5-52R

WISCONSIN DEPT OF TRANSPORTATION

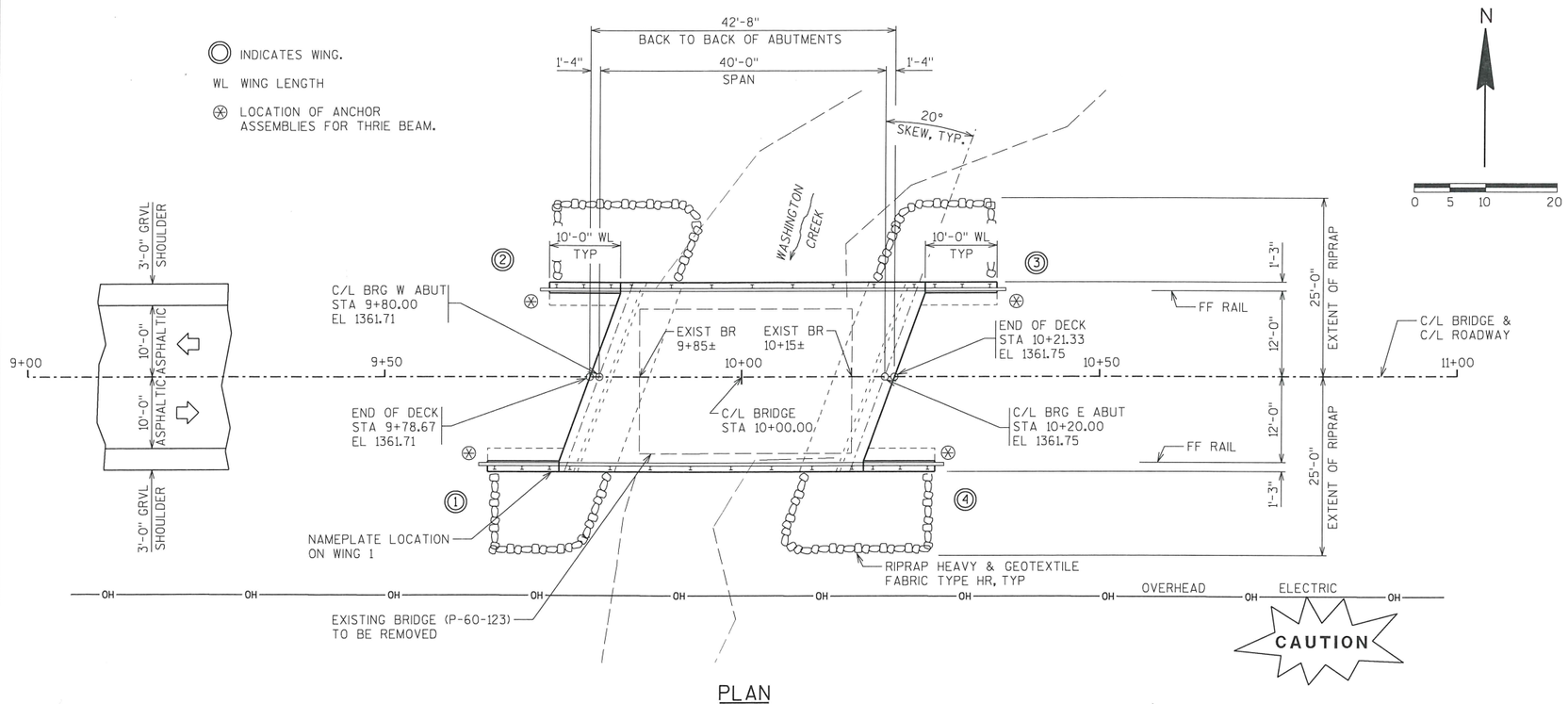
APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 20	E

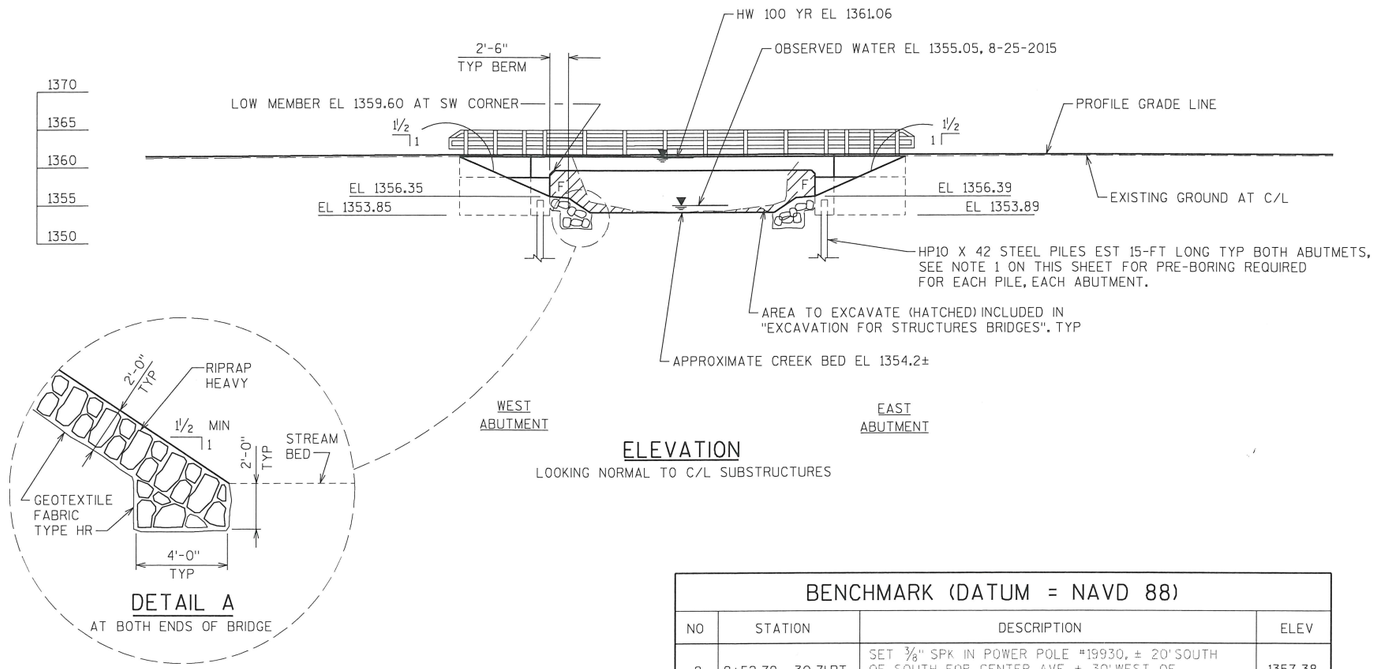
PLOT TIME: 9:54:24 AM
PLOT DATE: 2/21/2017
FILE NAME : S:\FJN\HAMMT\137581\5-final-dsgn\5l-drawings\20-Struct\bridge\b60143gl.dgn

STATE PROJECT NUMBER
8891-00-70



PLAN

SINGLE-SPAN REINFORCED CONCRETE FLAT SLAB



ELEVATION

LOOKING NORMAL TO C/L SUBSTRUCTURES

DETAIL A

AT BOTH ENDS OF BRIDGE

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HL-93
INVENTORY RATING FACTOR: RF = 1.14
OPERATING RATING FACTOR: RF = 1.47
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV) = 250 KIPS

STRUCTURE IS DESIGNED FOR A FUTURE WEARING SURFACE OF 20 PSF

INVENTORY AND OPERATING RATINGS DO NOT INCLUDE FUTURE WEARING SURFACE.

MATERIAL PROPERTIES:

CONCRETE MASONRY - SUPERSTRUCTURE	f'c = 4,000 psi
- ALL OTHER	f'c = 3,500 psi
HIGH STRENGTH BAR STEEL REINFORCEMENT AASHTO GRADE 60	fy = 60,000 psi

FOUNDATION DATA

ABUTMENTS TO BE SUPPORTED ON HP 10X42 STEEL PILING WITH A REQUIRED DRIVING RESISTANCE OF 140 TONS* PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC EQUATION. ESTIMATED 15-FEET LONG AT EACH ABUTMENT.

*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.

HYDRAULIC DATA

100 YEAR FREQUENCY

Q_{100}	1300	CFS
Q_{100} OVER ROAD	128	CFS
Q_{100} THRU STRUCTURE	1172	CFS
VELOCITY	7.63	FPS
HIGH WATER$_{100}$ EL	1361.06	FT
WATERWAY AREA	154	SQ FT
DRAINAGE AREA	12.7	SQ MI

ROAD OVERFLOW

YEAR	35	
Q	1050	CFS
LOW ROAD ELEV	1360.7	FT

2 YEAR FREQUENCY

Q_2	363	CFS
Q_2 HIGH WATER EL	1357.8	FT

SCOUR CODE 8

TRAFFIC DATA

ADT (2018)	=	50
ADT (2038)	=	70
DVH	=	7
DD	=	50 %
T	=	10 %
DESIGN SPEED	=	40 MPH

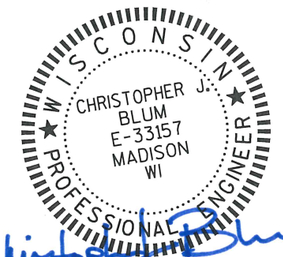
NOTE 1

BOTH ABUTMENTS WILL REQUIRE PRE-BORING TO A DEPTH OF 1341±. THE PRE-BORING SHALL BE BACKFILLED WITH CONCRETE TO THE BOTTOM OF ABUTMENT TO HELP WITHSTAND CORROSION. TYPICAL EACH PILE, EACH ABUTMENT.

LIST OF DRAWINGS

BENCHMARK (DATUM = NAVD 88)

NO	STATION	DESCRIPTION	ELEV
2	9+52.79 30.7' RT	SET ⅜" SPK IN POWER POLE #19930, ± 20' SOUTH OF SOUTH EOB CENTER AVE, ± 30' WEST OF EXISTING BRIDGE	1357.38



SEH CONTACT: CHRIS BLUM, PE, 608.620.6192
WISDOT BRIDGE OFFICE CONTACT: BILL DREHER, PE, 608.266.8489

NO.	DATE	REVISION	BY

SEH
SHORT ELLIOTT HENDRICKSON INC.

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher SDR 02/21/17
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE B-60-143

CENTER AVENUE OVER WASHINGTON CREEK

COUNTY	TOWN/~~CITY/VILLAGE~~
TAYLOR	HAMMEL

DESIGN SPEC. AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
CJB	CJB	DLF	CJB

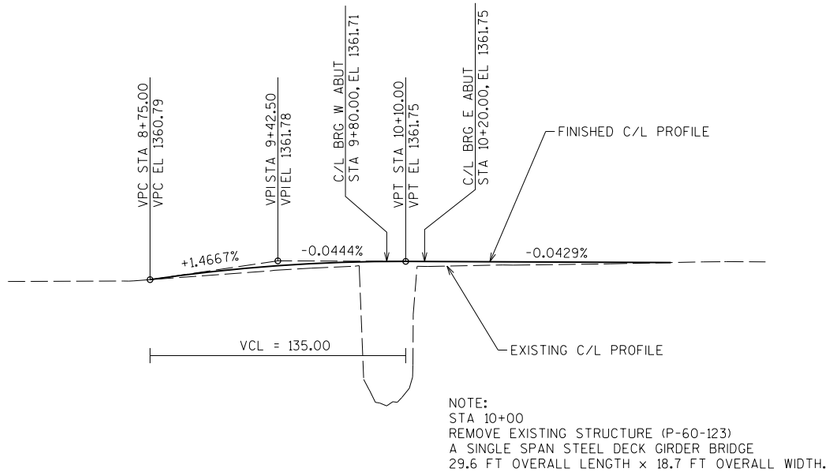
GENERAL PLAN

SHEET 21 OF 7

8

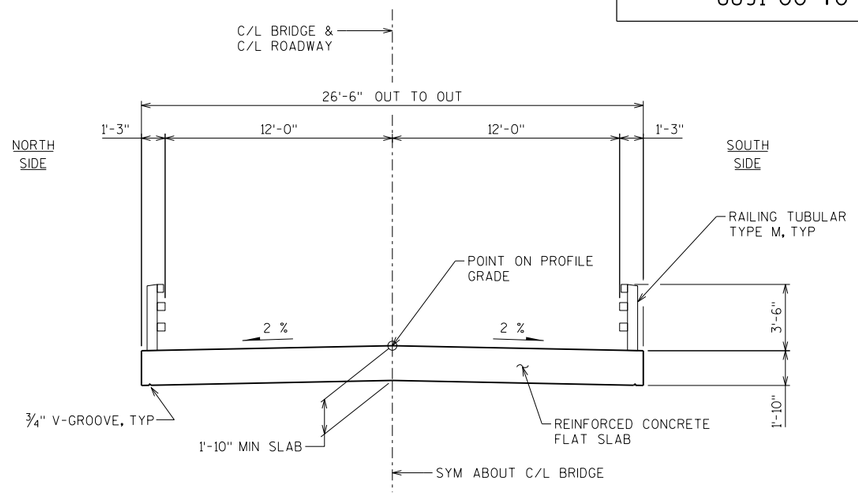
8

STATE PROJECT NUMBER
8891-00-70



NOTE:
STA 10+00
REMOVE EXISTING STRUCTURE (P-60-123)
A SINGLE SPAN STEEL DECK GIRDER BRIDGE
29.6 FT OVERALL LENGTH x 18.7 FT OVERALL WIDTH.

PROFILE GRADE LINE

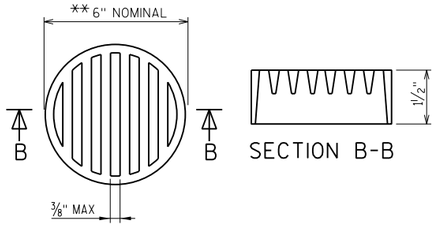


CROSS SECTION THRU BRIDGE
(LOOKING EAST)

TOTAL ESTIMATED QUANTITIES - B-60-143

	BID ITEM NUMBER	BID ITEMS	UNIT	WEST ABUT	EAST ABUT	SUPER	TOTALS
	203.0600.S	REMOVING OLD STRUCTURE OVER WATERWAY WITH MINIMAL DEBRIS STATION 10+00	LS	-	-	-	1
	206.1000	EXCAVATION FOR STRUCTURES BRIDGES B-60-143	LS	-	-	-	1
	210.1500	BACKFILL STRUCTURE TYPE A	TON	90	90	-	180
	502.0100	CONCRETE MASONRY BRIDGES	CY	28.5	28.5	81.0	138
	502.3200	PROTECTIVE SURFACE TREATMENT	SY	-	-	175	175
	505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	1,735	1,735	-	3470
	505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	1,520	1,520	15,725	18,765
	506.0105	STRUCTURAL CARBON STEEL	LB	-	-	495	495
	513.4061	RAILING TUBULAR TYPE M B-60-143	LF	-	-	131	131
	516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	9	9	-	18
	550.0020	PRE-BORING ROCK OR CONSOLIDATED MATERIALS	LF	65	65	-	130
	550.1100	PILING STEEL HP 10-INCH X 42 LB	LF	75	75	-	150
	606.0300	RIPRAP HEAVY	CY	50	50	-	100
(1)	612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	85	85	-	170
	645.0120	GEOTEXTILE TYPE HR	SY	110	110	-	220
		NON-BID ITEMS					
		FILLER	SIZE	———	———	———	1/2 & 3/4

(1) INCLUDES RODENT SHIELD FOR PIPE UNDERDRAIN PER SDD 8F6-4.

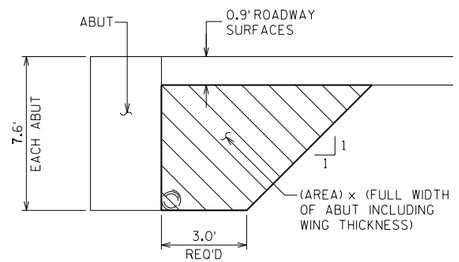


RODENT SHEILD

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

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

THE RODENT SHIELD SHALL BE A PVC GRATE SIMLAR 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 STAINLESS STEEL SHEET METAL SCREWS.



BACKFILL STRUCTURE LIMITS

A FACTOR OF 2.0 WAS USED TO CONVERT CU YDS TO TONS

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

SEE ROADWAY DRAWINGS FOR EXISTING UTILITY LOCATIONS.

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

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

SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-ASPHALTIC JOINT SEALER (1" DEEP & HOLD 1/8" BELOW SURFACE OF CONCRETE).

THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES BRIDGES B-60-143" SHALL BE THE EXISTING GROUNDLINE.

AT THE BACKFACE OF ABUTMENTS ALL VOLUME WHICH CANNOT BE PLACED BEFORE ABUTMENT CONSTRUCTION AND IS NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH STRUCTURE BACKFILL.

THE QUANTITY FOR BACKFILL STRUCTURE, BID ITEM 210.0100 IS CALCULATED BASED ON THE APPLICABLE FIGURES 12.6-1 AND 12.6-2 IN THE WISCONSIN DEPARTMENT OF TRANSPORTATION BRIDGE MANUAL.

BACKFILL BEYOND BACKFILL PAY LIMITS SHALL BE INCIDENTAL TO EXCAVATION FOR STRUCTURES. LIMITS OF EXCAVATION SHALL BE DETERMINED BY THE CONTRACTOR.

FILLER SHALL CONFORM TO THE REQUIREMENTS OF AASHTO DESIGNATION :M153 TYPE 1, 2, OR 3 OR AASHTO DESIGNATION :M213.

COAT WITH "PROTECTIVE SURFACE TREATMENT" PER THE STANDARD SPECIFICATIONS AND THE SUPERSTRUCTURE DETAILS SHEET.

FOR EXISTING STRUCTURE SEE PROFILE GRADE LINE THIS SHEET.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-60-143

DRAWN BY	DLF	PLANS CK'D.	CJB

CROSS SECTION AND QUANTITIES

SHEET 2 OF 7
22

8

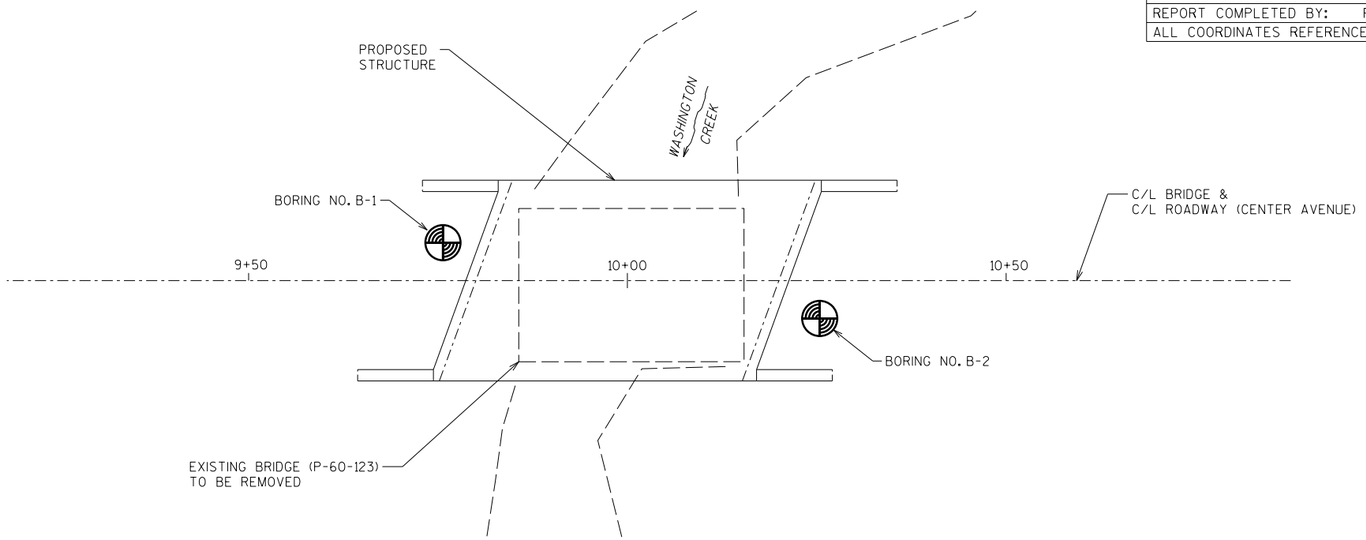
8

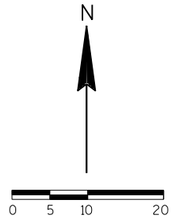
BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
B-1	1-28-16	-	-
B-2	1-28-16 / 2-24-16	-	-
BORINGS COMPLETED BY:	PROFESSIONAL SERVICES INDUSTRIES, INC		
REPORT COMPLETED BY:	PROFESSIONAL SERVICES INDUSTRIES, INC		
ALL COORDINATES REFERENCED TO NAVD 88 TAYLOR COUNTY			

SOIL BORINGS PERFORMED BY:

PROFESSIONAL SERVICE INDUSTRIES, Inc.
12839 30TH AVENUE, SUITE A
Chippewa Falls, WI 54729
715-738-2770 Fax 715-738-2771

REPORT BY:
JEFFREY A MANNINEN
BRANCH MANAGER





STATE PROJECT NUMBER

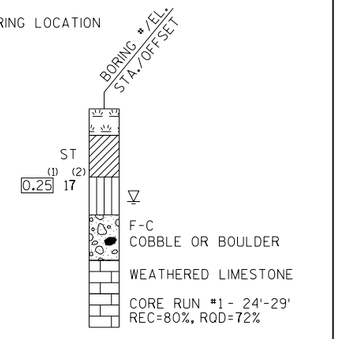
8891-00-70

MATERIAL SYMBOLS

ASPHALT, TOPSOIL, PEAT, CONCRETE, FILL, GRAVEL, SAND, CLAY, SILT, BOULDERS OR COBBLES, LIMESTONE, BEDROCK (UNKNOWN), SHALE, SANDSTONE, IGNEOUS/META

LEGEND OF BORING

= BORING LOCATION



(1) UNCONFINED STRENGTH, AS DETERMINED BY A POCKET PENETROMETER (TSF)

(2) UNLESS OTHERWISE, SPECIFIED THE SPT 'N' VALUE IS BASED ON AASHTO T-206, STANDARD PENETRATION TEST. THE SPT 'N' VALUE PRESENTED HAS NOT BEEN CORRECTED FOR OVERBURDEN PRESSURE OR HAMMER EFFICIENCY.

GROUND WATER ELEVATION

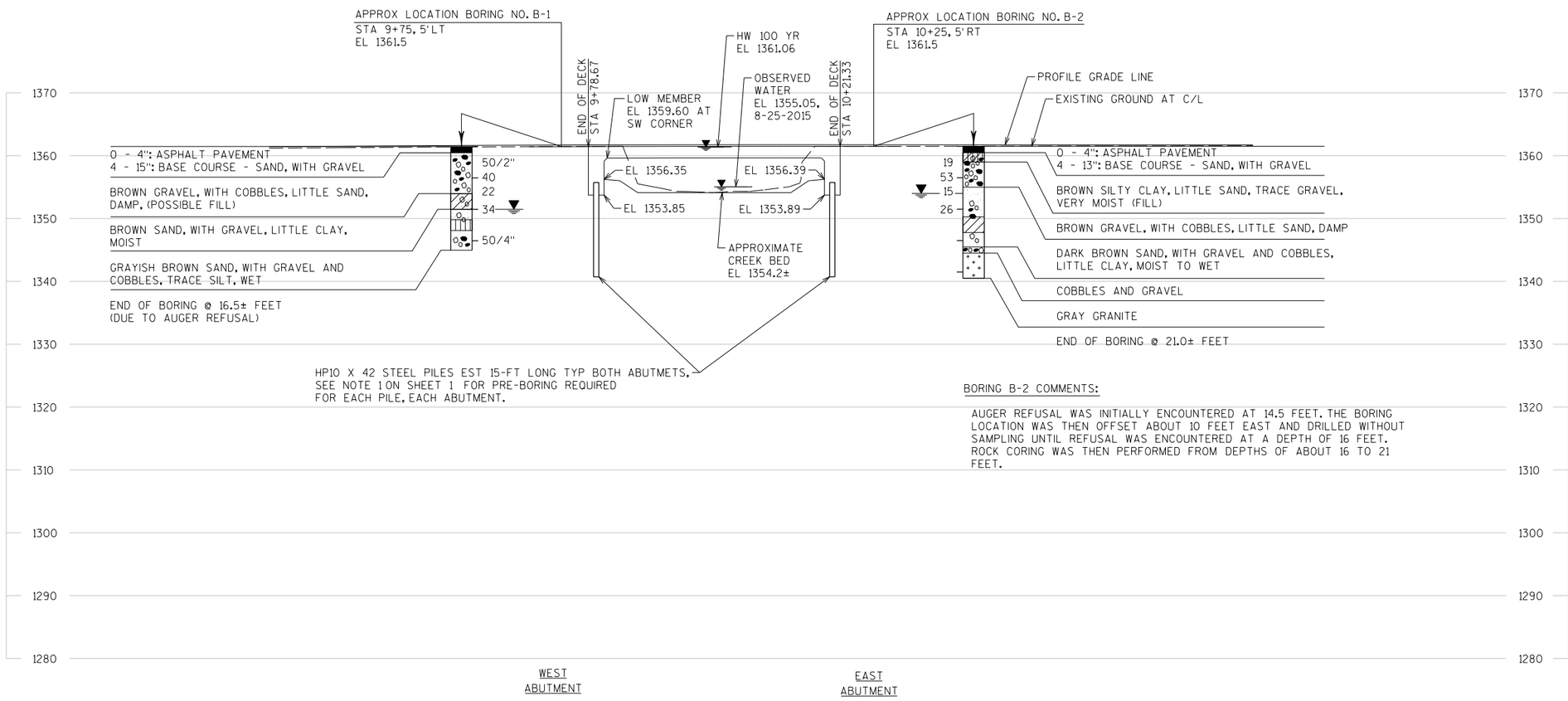
- ▽ AT TIME OF DRILLING
- ▼ END OF DRILLING
- ▽ AFTER DRILLING

ABBREVIATIONS

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

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

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



HP10 X 42 STEEL PILES EST 15-FT LONG TYP BOTH ABUTMETS, SEE NOTE 10N SHEET 1 FOR PRE-BORING REQUIRED FOR EACH PILE, EACH ABUTMENT.

BORING B-2 COMMENTS:

AUGER REFUSAL WAS INITIALLY ENCOUNTERED AT 14.5 FEET. THE BORING LOCATION WAS THEN OFFSET ABOUT 10 FEET EAST AND DRILLED WITHOUT SAMPLING UNTIL REFUSAL WAS ENCOUNTERED AT A DEPTH OF 16 FEET. ROCK CORING WAS THEN PERFORMED FROM DEPTHS OF ABOUT 16 TO 21 FEET.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-60-143

DRAWN BY DLF | PLANS CK'D. CJB

SUBSURFACE EXPLORATION

SHEET 3 OF 7

23

8

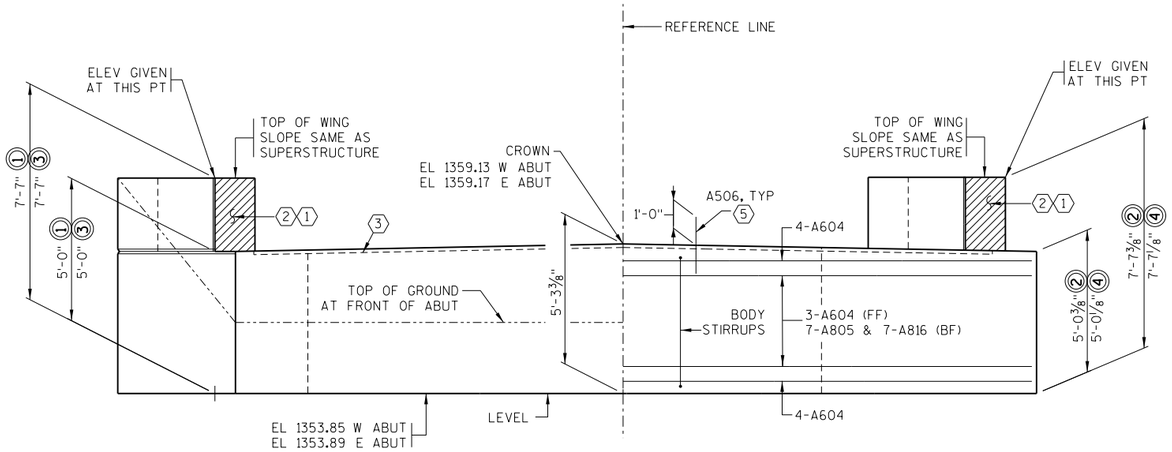
8

PLOT DATE: 2/21/2017 PLOT TIME: 9:54:25 AM

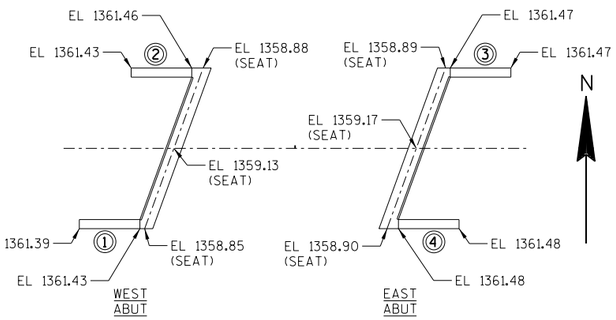
FILE NAME : S:\FJV\HAMMT\33758\5-final-dsgn\5l-drawings\20-Struct\bridge\b60143bl.dgn

PLOT TIME: 9:54:25 AM
PLOT DATE: 2/21/2017
FILE NAME : S:\FJH\HAMMT\13758\5-final-dsgn\5i-drawings\20-Struct\bridge\b60143di.dgn

STATE PROJECT NUMBER
8891-00-70



FRONT ELEVATION



ELEVATIONS GIVEN AT THESE POINTS

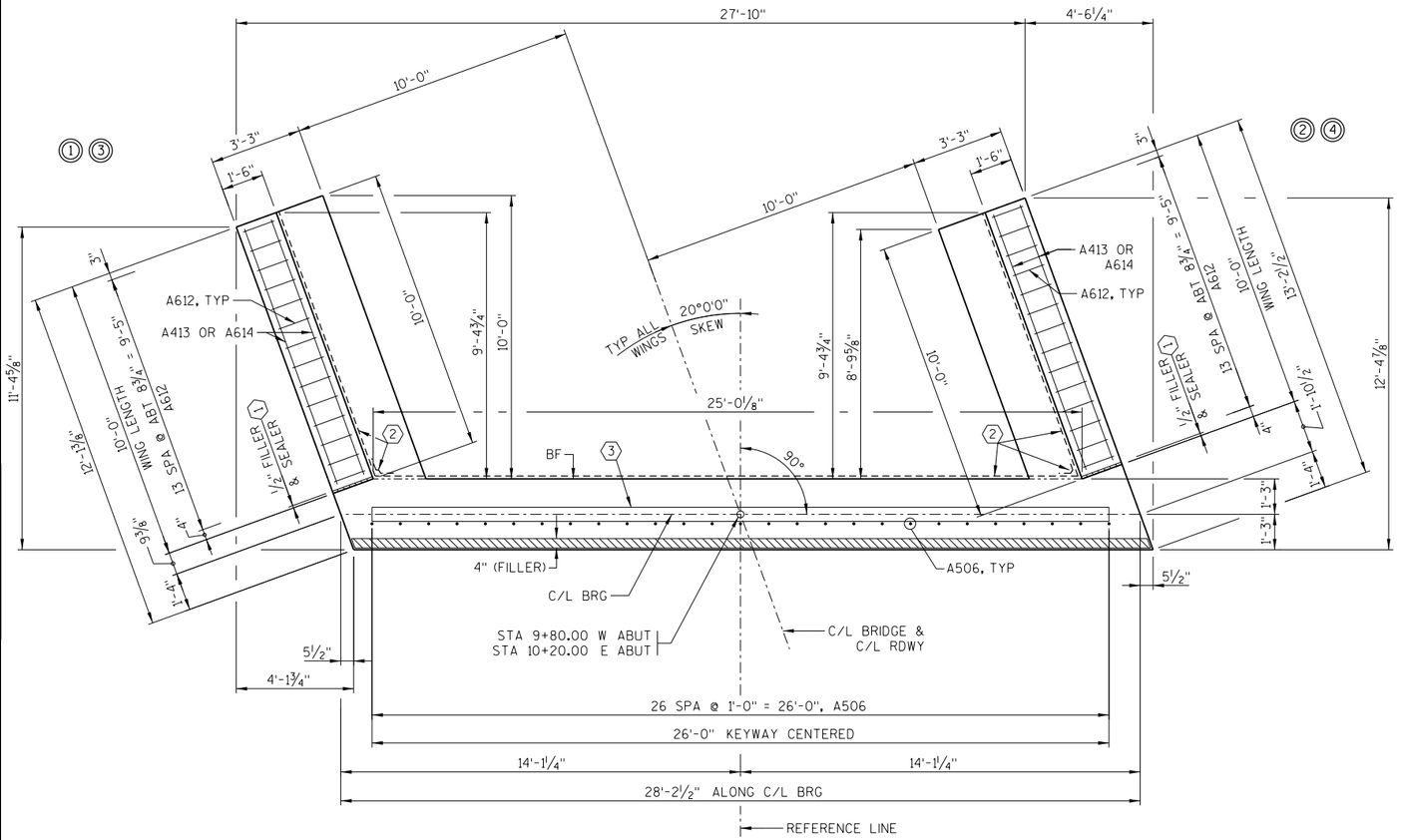
ABUTMENT NOTES

1. SEAL ALL EXPOSED HORIZ. AND VERTICAL SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-ASPHALTIC JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE). FILLER INCLUDED IN WING LENGTH.
2. 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZ & VERT JOINTS ON BACKFACE. VERTICAL WATERPROOFING TO EXTEND FROM BRIDGE SEAT TO TOP OF WING.
3. KEYED CONSTRUCTION JOINT FORMED BY A BEVELED 2" X 6".
4. OPTIONAL KEYED CONSTRUCTION JOINT FORMED BY A BEVELED 2" X 6" WITH MEMBRANE ON BACKFACE.
5. A506 BARS MAY BE PLACED AFTER CONC HAS BEEN POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE.

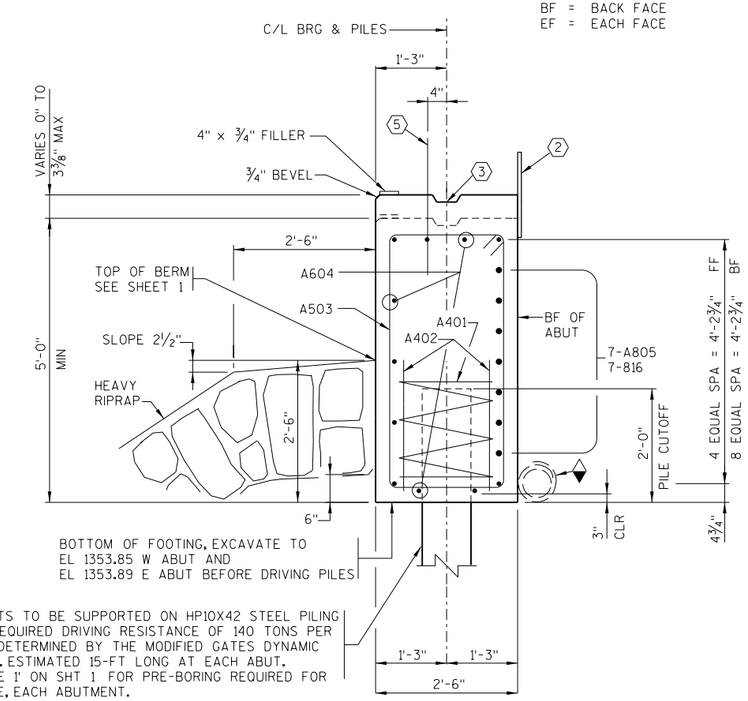
◆ PIPE UNDERDRAIN WRAPPED (6-INCH) SLOPE 0.5% MIN BEHIND ABUTMENT BODY AND WINGS TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAN.

W ABUT = WEST ABUTMENT
E ABUT = EAST ABUTMENT

FF = FRONT FACE
BF = BACK FACE
EF = EACH FACE

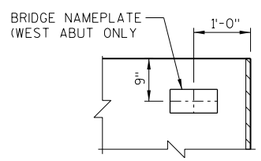


PLAN



TYPICAL SECTION THRU BODY

ALL HORIZ BARS TO BE A604 UNLESS OTHERWISE SHOWN OF NOTED



NAMEPLATE LOCATION DETAIL

(ON WING 1 WEST ABUTMENT ONLY)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-60-143

DRAWN BY DLF | PLANS CK'D. CJB

WEST AND EAST ABUTMENT DETAILS

SHEET 4 OF 7
24

8

8

PLOT TIME: 9:54:25 AM
PLOT DATE: 2/21/2017
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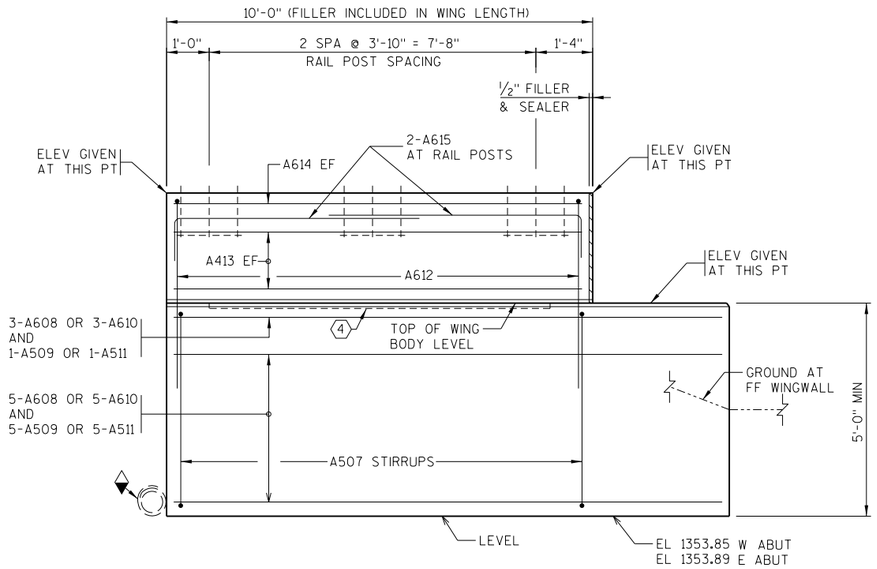
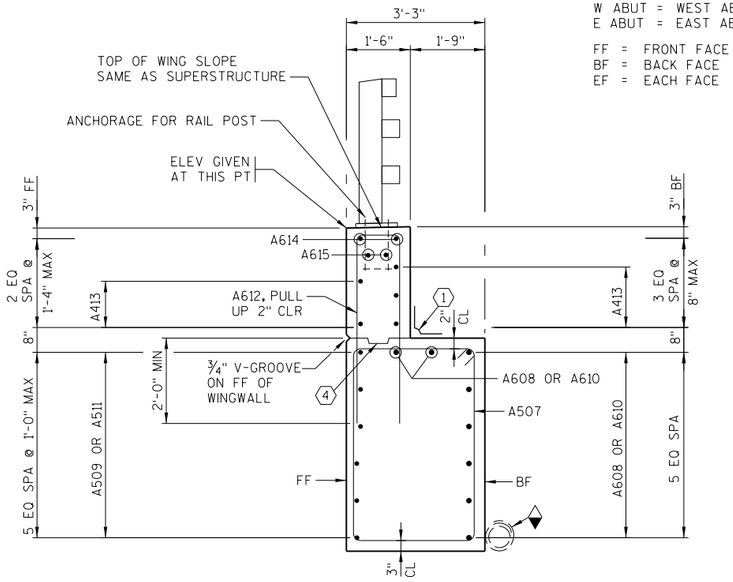


TYP WING ELEVATION



TYP SECTION THRU WINGWALLS

W ABUT = WEST ABUTMENT
E ABUT = EAST ABUTMENT

FF = FRONT FACE
BF = BACK FACE
EF = EACH FACE

STATE PROJECT NUMBER
8891-00-70

NOTE: THE FIRST DIGIT OF THE BAR MARK SIGNIFIES THE ENGLISH BAR DIAMETER SIZE.

DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT.

* NO. REQ'D. IS FOR 2 ABUTMENTS. DIVIDE BY 2 FOR EACH ABUTMENT.

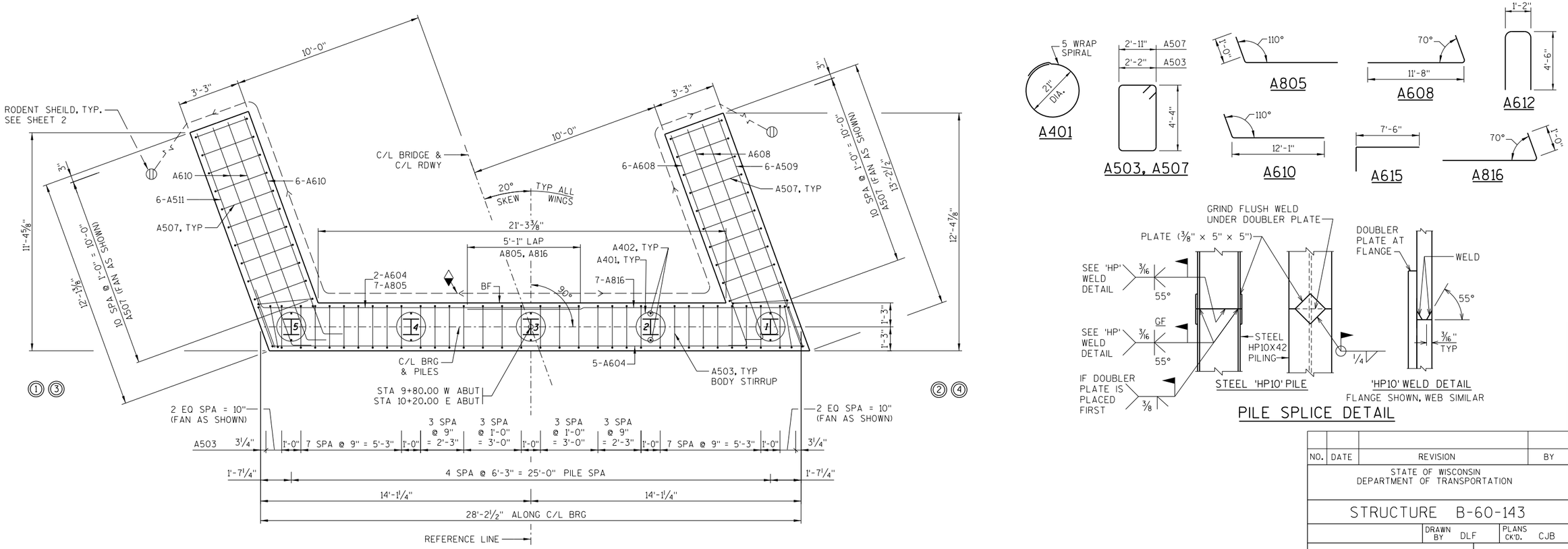
BILL OF BARS — BOTH ABUTMENTS

BAR MARK	COAT	NO.* REQ'D.	LENGTH (FT-IN)	BAR SERIES	BENT	LOCATION
A401		10	28 - 0		X	BODY AT PILES
A402		20	2 - 3			BODY AT PILES
A503		72	13 - 7		X	BODY STIRRUPS
A604		22	27 - 10			BODY HORIZ
A805		14	17 - 11		X	BODY HORIZ BF
A506	X	54	2 - 0			BODY DOWELS
A507	X	44	15 - 1		X	WING STIRRUPS
A608	X	16	13 - 2		X	WING HORIZ BF 2 & 4
A509	X	12	12 - 8			WING HORIZ FF 2 & 4
A610	X	16	13 - 7		X	WING HORIZ BF 1 & 3
A511	X	12	11 - 10			WING HORIZ FF 1 & 3
A612	X	56	9 - 10		X	WING VERT
A413	X	20	9 - 7			WING HORIZ EF
A614	X	8	9 - 7			WING HORIZ EF TOP
A615	X	16	9 - 0		X	WING AT RAIL POST
A816		14	17 - 1		X	BODY HORIZ BF

NOTES

SEE SHEET 4 FOR ABUTMENT NOTES (1) (4) AND ◆.

SEE SHEET 7 FOR RAILING NOTES.



FOOTING LAYOUT

PILE SPLICE DETAIL

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-60-143

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WEST AND EAST ABUTMENT DETAILS

SHEET 5 OF 7
25

8

PLOT TIME: 9:54:25 AM
PLOT DATE: 2/21/2017
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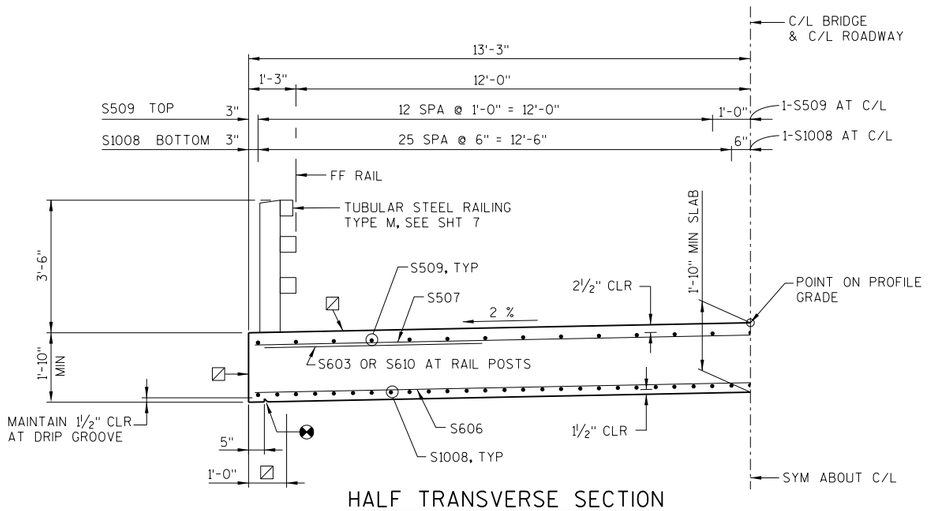
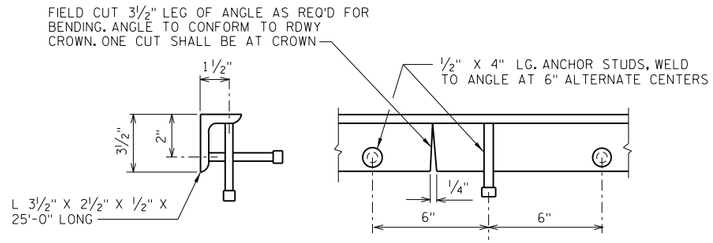
STATE PROJECT NUMBER

8891-00-70



HALF TRANSVERSE SECTION



PROTECTION ANGLE ARMOR

(PAYMENT BASED ON 9.9 LBS/FT)

PROTECTION ANGLE ARMOR NOTES:

ONE FIELD SPLICE SHALL BE PERMITTED IN ANGLES OVER 34'-0" IN LENGTH.

ANGLE AND STUDS TO BE PAID FOR AT THE UNIT PRICE BID FOR "STRUCTURAL CARBON STEEL". NO PAINTING REQUIRED.

SANDBLAST PROTECTION ANGLE AFTER FABRICATION IN ACCORDANCE WITH SSPC SP. #6 "COMMERCIAL BLAST CLEANING". AFTER BLAST CLEANING, THE PROTECTION ANGLE SHALL BE HOT DIPPED GALVANIZED.

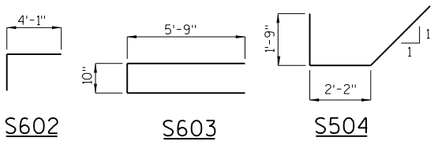
ALL MATERIALS USED IN FABRICATION SHALL BE MADE FROM MATERIALS CONFORMING TO ASTM DESIGNATION A709 GRADE 36.

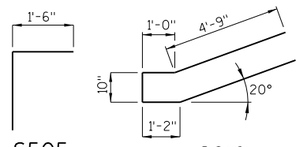
NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE ENGLISH BAR DIAMETER SIZE.

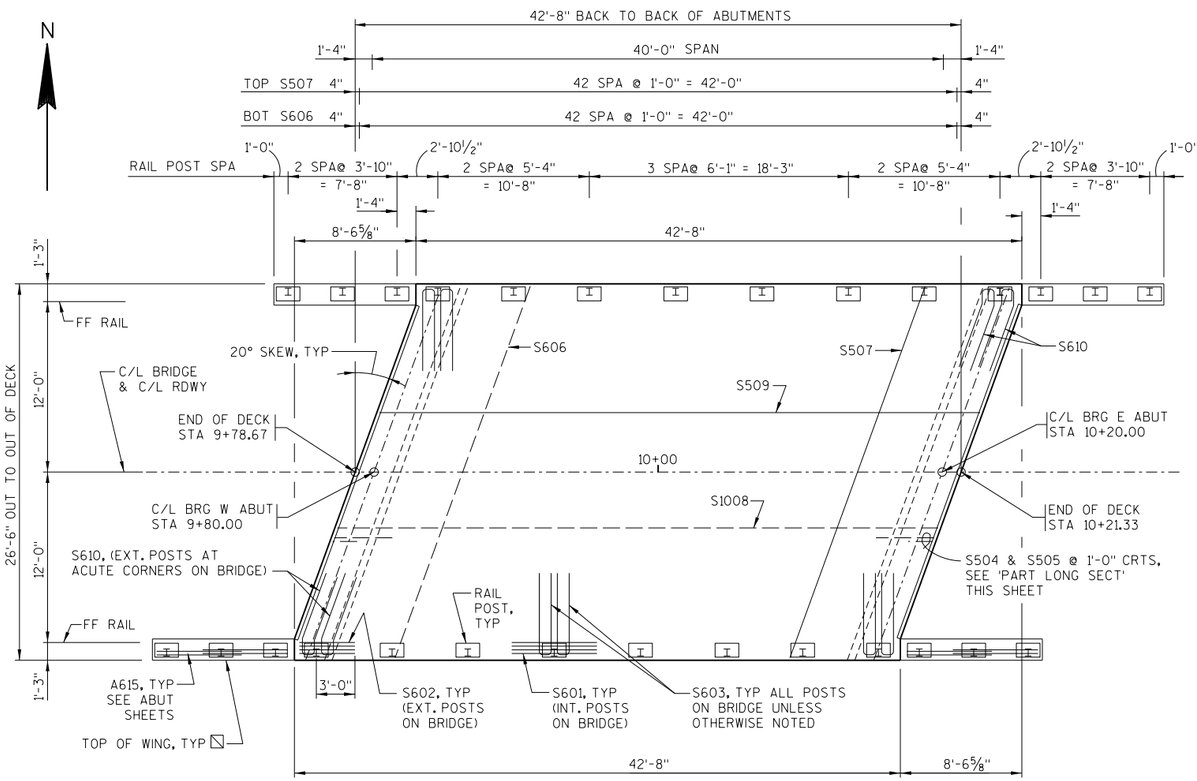
DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT.

BILL OF BARS — SUPERSTRUCTURE

BAR MARK	COAT	NO. REQ'D.	LENGTH (FT-IN)	BAR SERIES	BENT	LOCATION
S601	X	48	6 - 0			RAIL POST
S602	X	16	6 - 0		X	RAIL POST
S603	X	28	12 - 0		X	RAIL POST
S504	X	54	6 - 1		X	END OF DECK
S505	X	54	3 - 4		X	END OF DECK
S606	X	47	27 - 10			BOT TRANS
S507	X	43	27 - 10			TOP TRANS
S1008	X	53	42 - 3			BOT LONG
S509	X	27	42 - 3			TOP LONG
S610	X	4	12 - 0		X	RAIL POST EXT.





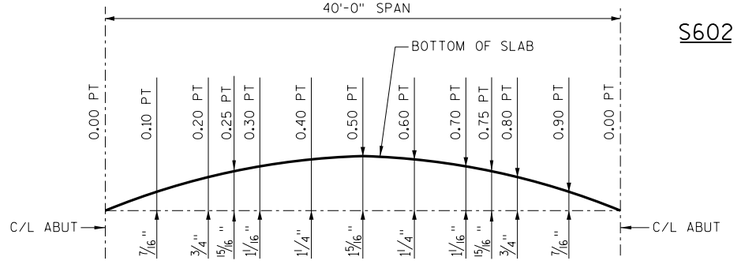


DECK PLAN

——— INDICATES TOP BAR STEEL REINFORCEMENT
— — — — — — INDICATES BOTTOM BAR STEEL REINFORCEMENT

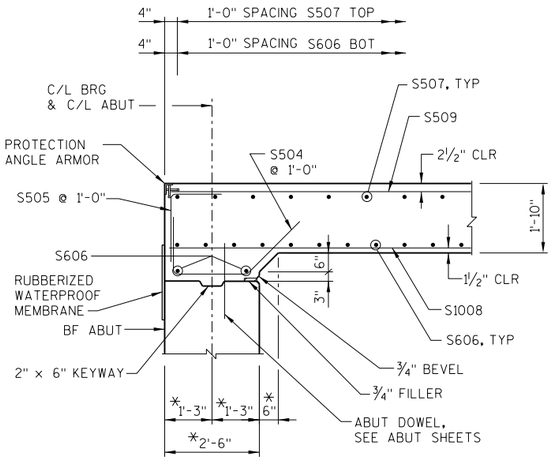
FINAL TOP OF DECK ELEVATIONS

	WEST ABUT	.1	.2	.3	.4	.5	.6	.7	.8	.9	EAST ABUT
NORTH EDGE OF DECK	1361.47	1361.47	1361.48	1361.49	1361.49	1361.49	1361.49	1361.49	1361.49	1361.49	1361.48
C/L	1361.71	1361.72	1361.73	1361.74	1361.75	1361.75	1361.75	1361.75	1361.75	1361.75	1361.75
SOUTH EDGE OF DECK	1361.44	1361.45	1361.46	1361.47	1361.48	1361.48	1361.49	1361.49	1361.49	1361.48	1361.48



CAMBER DIAGRAM

CAMBER SPAN AS SHOWN TO PROVIDE FOR DEAD LOAD DEFLECTION & FUTURE CREEP. CAMBER DOES NOT INCLUDE VERTICAL ROADWAY PROFILE OR ALLOWANCE FOR FORM SETTLEMENT. DEAD LOAD DEFLECTION ONLY EQUALS APPROXIMATELY 1/3 OF CAMBER VALUES SHOWN.



AT ABUTMENTS

* DIMENSION IS TAKEN NORMAL TO C/L SUBSTRUCTURE UNITS.

PARTIAL LONGITUDINAL SECTION

SUPERSTRUCTURE NOTES:

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

PRIOR TO RELEASING SLAB FLASEWORK, TAKE TOP OF SLAB ELEVATIONS AT C/L ABUTMENTS AND 5/10 POINTS TO VERIFY CAMBER. TAKE ELEVATIONS ALONG EDGE LINE AND CROWN OR C/L.

TRANSVERSE BARS SHALL BE PLACED PLACED PARALLEL TO THE C/L OF SUBSTRUCTURE UNITS.

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 ON CONTINUOUS BAR CHAIRS APPROXIMATELY 4'-0" CENTERS.

¾" V-GROOVE, EXTEND V-GROOVE TO 6" FROM FRONT FACE OF ABUTMENT DIAPHRAGM.

COAT WITH "PROTECTIVE SURFACE TREATMENT" PER THE STANDARD SPECIFICATIONS. PROTECTIVE SURFACE TREATMENT TO BE APPLIED TO THE TOP AND EXTERIOR EXPOSED FACE OF WINGS, AND THE END 1'-0" OF THE FRONT FACE OF ABUTMENT.

FF = FRONT FACE
BF = BACK FACE
EF = EACH FACE

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-60-143

DRAWN BY DLF | PLANS CK'D. CJB

SUPERSTRUCTURE DETAILS

SHEET 6 OF 7
26

8

8

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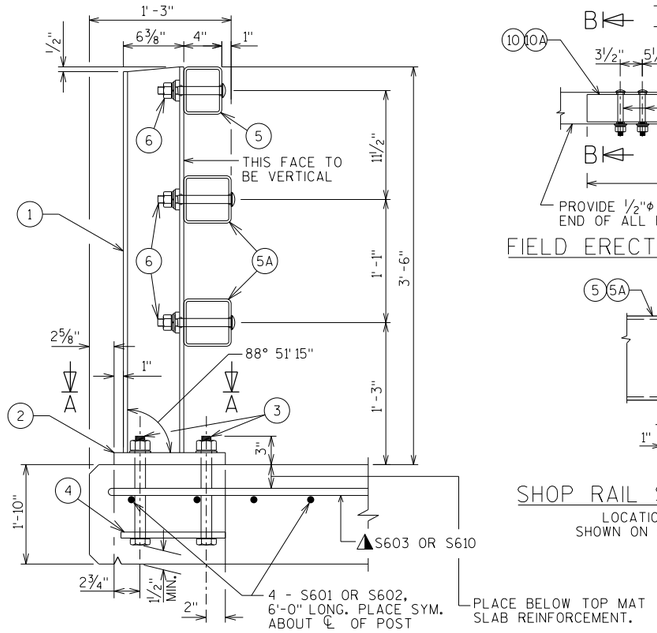
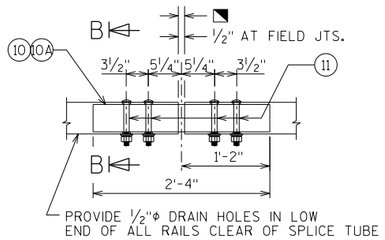
STATE PROJECT NUMBER

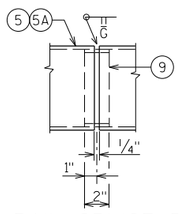
8891-00-70



SECTION THRU RAILING ON SLAB

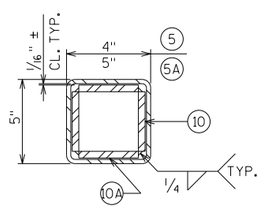


FIELD ERECTION JOINT DETAIL

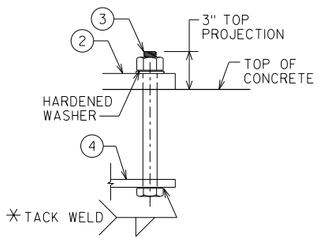


SHOP RAIL SPLICE DETAIL

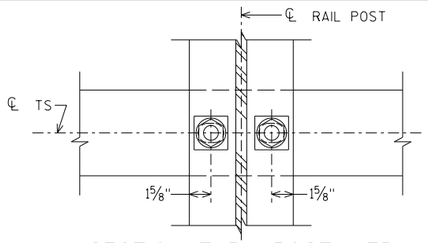
LOCATION MUST BE SHOWN ON SHOP DRAWINGS



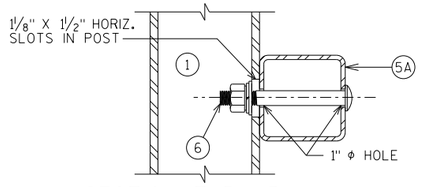
SECTION B-B



ANCHOR BOLTS



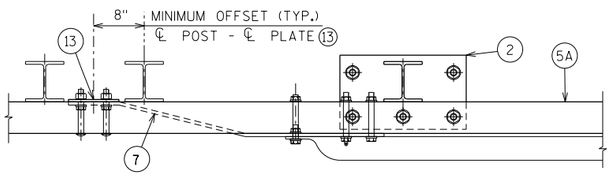
SECTION THRU POST WEB



SECTION THRU RAIL

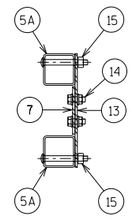
NOTE: CONNECTIONS AT LOWER RAILS SHOWN. CONNECTIONS AT TOP RAIL SIMILAR.

TYPICAL RAIL TO POST CONNECTIONS



TOP VIEW AT END POST

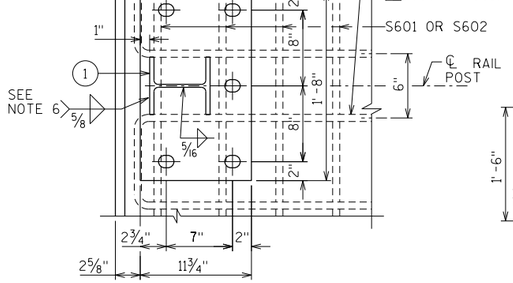
THRIE BEAM RAIL ATTACHMENT



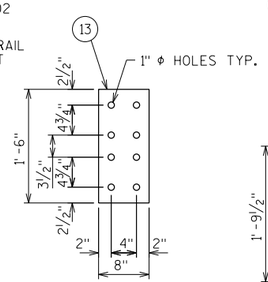
SECTION C-C

LEGEND

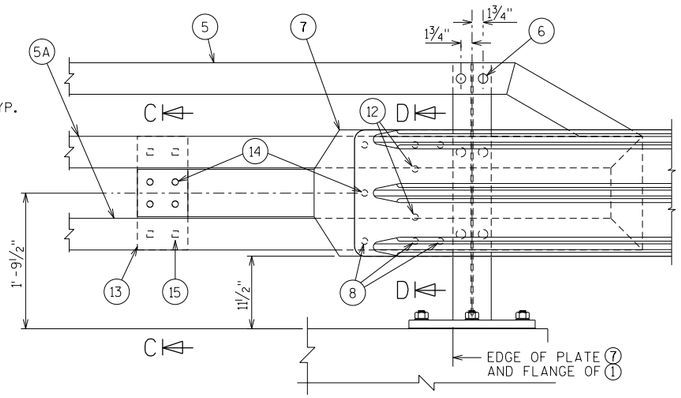
1. W6 x 25 WITH 1⅛" X 1½" HORIZ. SLOTS ON EACH SIDE OF POST FOR BOLT NO. 6. CUT BOTTOM OF POST TO MATCH CROSS SLOPE OF ROADWAY. PLACE POST VERTICAL. PLACE POSTS NORMAL TO GRADE LINE.
2. PLATE 1¼" x 11¾" x 1'-8" WITH 1⅜16" X 1⅝" SLOTTED HOLES FOR ANCHOR BOLTS NO. 3. WELD TO NO. 1 AS SHOWN. SLOTS PARALLEL TO SHORT SIDE OF PLATE.
3. ASTM A449 - 1⅛" DIA. ANCHOR BOLTS WITH NUT AND HARDENED WASHER (ALL GALVANIZED). 5 REQ'D. PER POST. THREAD 3" AND PLACE NORMAL TO PLATE NO. 2. CHAMFER TOP OF BOLTS BEFORE THREADING. USE 1'-9" LONG IN ABUTMENT WINGS. AT POSTS ON CONCRETE SLAB SUPERSTRUCTURES WHERE THE SLAB THICKNESS IS > 16" USE 1'-3" LONG. USE 10¾" LONG AT ALL OTHER LOCATIONS. (AN EQUIVALENT THREADED ROD WITH NUTS AND HARDENED WASHERS MAY BE SUBSTITUTED FOR ANCHOR BOLTS IN WINGS IF REQ'D. FOR CONSTRUCTIBILITY.)
4. ⅝" x 11" x 1'-8" ANCHOR PLATE (GALVANIZED) WITH 1⅜16" DIA. HOLES FOR ANCHOR BOLTS NO. 3
5. TS 5 x 4 x 0.25 STRUCTURAL TUBING. ATTACH TO NO. 1 WITH NO. 6.
5A. TS 5 x 5 x 0.25 STRUCTURAL TUBING. ATTACH TO NO. 1 WITH NO. 6.
6. ⅞" DIA. A325 SLOTTED ROUND HEAD BOLT WITH NUT, 3⁄16" X 1⅝" X 1⅝" WASHER, AND LOCK WASHER (2 REQ'D. AT EACH RAIL TO POST LOCATION.)
7. ½" THK. BACK-UP PLATE WITH 2 - ⅞" X 1½" THREADED SHOP WELDED STUDS (NO. 12). BOLT TO RAIL AS SHOWN IN DETAIL. REQUIRED AT THRIE BEAM GUARD RAIL ATTACHMENTS ONLY. PLACE SYMMETRICALLY ABOUT TUBES NO. 5A.
8. 1" DIA. HOLES IN PLATE NO. 7 & TUBES NO. 5A FOR ⅞" DIA. A325 BOLTS WITH HEX NUTS AND WASHERS. 6 HOLES IN TUBES AND PLATE NO. 7.
9. SPLICE SLEEVE FABRICATED FROM ¼" PLATE. PROVIDE "SLIDING FIT".
10. ⅜" X 3⅝" X 2'-4" PLATE. 2 PER RAIL. USED IN NO. 5 & 5A.
10A. ⅜" X 2⅝" X 2'-4" PLATE USED IN NO. 5, ⅜" X 3⅝" X 2'-4" PLATE USED IN NO. 5A. 2 PER RAIL.
11. ⅞" Φ A325 ROUND HEAD BOLT WITH NUT, WASHER, AND LOCK WASHER. USE 1⅝16 " X 1¼" LONGIT. SLOTTED HOLES AT FIELD JOINTS AND 1⅝16 " X 2¼" MIN. LONGIT. SLOTTED HOLES AT EXP. JOINTS IN PLATE NO. 10A.
12. ⅞" DIA. X 1½" LONG THREADED SHOP WELDED STUDS (2 REQ'D).
13. ⅜" X 8" X 1'-6" PLATE. BOLT TO RAIL AS SHOWN IN DETAIL. REQ'D. AT THRIE BEAM GUARD RAIL ATTACHMENTS ONLY. PLACE SYM. ABOUT TUBES NO. 5A.
14. ⅞" DIA. X 2" LONG A325 HEX BOLT WITH NUT AND WASHER (5 REQ'D.).
15. 1" Φ HOLES IN TUBES NO. 5A FOR ⅞" DIA. A325, ROUND HEAD BOLT WITH NUT, WASHER AND LOCK WASHER (4 REQ'D.). 4 HOLES IN TUBES.



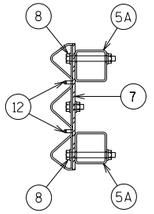
SECTION A-A



ANCHOR PLATE
AT BEAM GUARD ATTACHMENT



DETAIL AT END POST
THRIE BEAM RAIL ATTACHMENT



SECTION D-D

GENERAL NOTES

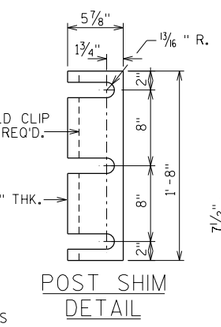
1. BID ITEM SHALL BE "RAILING TUBULAR TYPE M B-60-143" WHICH INCLUDES ALL ITEMS SHOWN.
2. RAIL POST AND BASE PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A709 GRADE 50. HOLLOW RAILING STRUCTURAL TUBING SHALL CONFORM TO THE REQUIREMENTS OF ASTM A500 GRADE B OR C WITH A CERTIFIED FY = 50 KSI. ANCHOR PLATES, AND SPLICE TUBE PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A709 GRADE 36.
3. THE NUT SECURING THE POST BASE PLATE TO THE CONCRETE SHALL BE TIGHTENED TO A SNUG FIT AND GIVEN AN ADDITIONAL ⅛ TURN.
4. RAILS SHALL BE CONTINUOUS OVER A MINIMUM OF THREE (3) POSTS WITHOUT SPLICES WHERE POSSIBLE. RAILS SHALL BE SPLICED IN A PANEL OVER EXPANSION JOINTS.
5. ENDS OF TUBE SECTIONS SHALL BE SAWED. GRIND SMOOTH EXPOSED EDGES. ALL CUT ENDS SHALL BE TRUE AND SMOOTH.
6. WELD IS THE SAME ON BOTH FLANGES. FLANGE WELD DOES NOT REQUIRE MAGNETIC PARTICLE TESTING.
7. FILL BOLT SLOT OPENINGS IN POST SHIMS AND PLATE NO. 2 AND CAULK AROUND PERIMETER OF PLATE NO. 2 WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. STEEL POST SHIMS MAY BE USED UNDER POSTS WHERE REQ'D. FOR ALIGNMENT.
8. POST BASE PLATES SHALL BE FLAT WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL. ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUT.
9. ALL MATERIAL SHALL BE GALVANIZED AFTER FABRICATION. PRIOR TO GALVANIZING, ALL STEEL RAILING POSTS & STEEL TUBING SHALL BE GIVEN A NO. 6 BLAST CLEANING BY SSPC SPECIFICATIONS.
10. THIS RAILING MEETS NCHRP REPORT 350 EVALUATION CRITERIA FOR TEST LEVEL 4 (TL-4).

▲ TIE TO TOP MAT OF STEEL.

✳ FOR ANCHOR BOLTS IN WINGS, TACK WELD MAY BE USED IN FIELD AFTER ANCHOR PLATE IS IN POSITION IF REQ'D. FOR CONSTRUCTIBILITY.

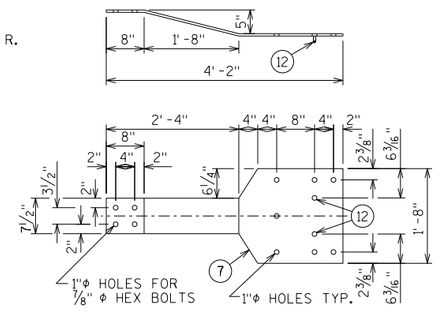
◥ RDWY. OPENING OR ½" OPENING FOR A1 ABUTMENT.

SEE SHEET 5 AND 6 FOR RAIL POST SPACING.

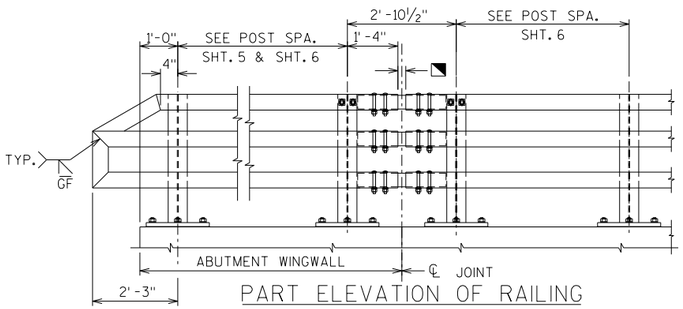


ANCHOR PLATE
AT RAIL TO SLAB CONNECTION

POST SHIM DETAIL



BACK-UP PLATE DETAIL
AT BEAM GUARD ATTACHMENT



PART ELEVATION OF RAILING

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-60-143

DRAWN BY DLF | PLANS CK'D. CJB

TUBULAR STEEL RAILING TYPE M

SHEET 7 OF 7

27

RAILM
7-16

CENTER AVENUE								
		AREA (SF)		Incremental Vol (CY) (Unadjusted)		Cumulative Vol (CY)		
Station	Distance	Cut	Fill	Cut Note 1	Fill Note 2	Cut 1.00 Note 1	Expanded Fill 1.30 Note 3	Mass Ordinate Note 4
8+75	0.00	0.00	0.00	0.0	0.0	0	0	0
9+00	25.00	10.79	40.69	5.0	18.8	5	24	-19
9+42	42.00	8.26	63.1	14.8	80.7	20	129	-109
9+50	8.00	10.2	64.67	2.7	18.9	23	154	-131
9+63	13.00	11.1	52.41	5.1	28.2	28	191	-164
9+73	10.00	10	66.00	3.9	21.9	32	220	-188
9+79	6.00	0.00	0.00	1.1	7.3	33	230	-197
10+21	42.00	0.00	0.00	0.0	0.0	33	230	-197
10+27	6.00	10.22	20.00	1.1	2.2	34	233	-199
10+37	10.00	11.69	35.12	4.1	10.2	38	246	-208
10+50	13.00	12.11	38.29	5.7	17.7	44	269	-225
10+58	8.00	12.54	35.87	3.7	11.0	48	283	-235
11+00	42.00	13.22	35.01	20.0	55.1	68	355	-287
11+25	25.00	7.50	32.25	9.6	31.1	78	395	-317
11+50	25.00	0.00	0.00	3.5	14.9	81	414	-333

Notes:

1) Salvaged/Unusable Pavement Material is included in Cut.
2) Does not include Unusable Pavement Excavation volume.
3) Will be backfilled with Cut or Borrow.
4) Plus quantity indicates an excess of material. Minus indicates a shortage of material.

9

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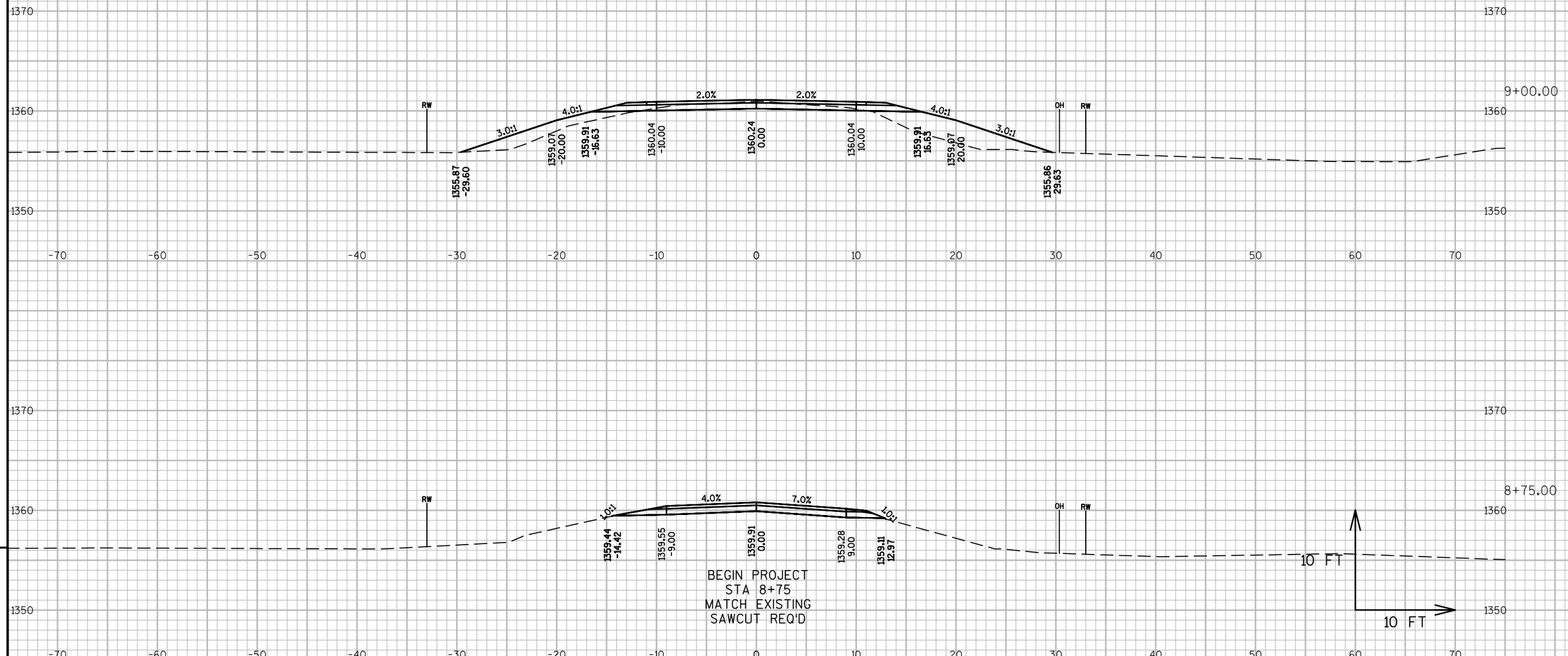
PROJECT NO: 8891-00-70 | HWY: CENTER AVENUE | COUNTY: TAYLOR | EARTHWORK TABULATIONS | SHEET 28 | E

FILE NAME : P:\FJ\H\HAMMT\133758\CIVIL 3D\SHEETSPLAN\090101-EW.DWG
LAYOUT NAME - 090101-EW

PLOT DATE : 12/29/2016 4:46 PM PLOT BY : BILL MCELROY PLOT NAME : PLOT SCALE : 1 IN:2 FT

WISDOT/CADDS SHEET 49

UTILITY LOCATIONS ARE APPROXIMATE.
ACTUAL LOCATIONS MUST BE FIELD VERIFIED.



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PROJECT NO: 8891-00-70	HWY: CENTER AVENUE	COUNTY: TAYLOR	CROSS SECTIONS: CENTER AVENUE	SHEET 29	E

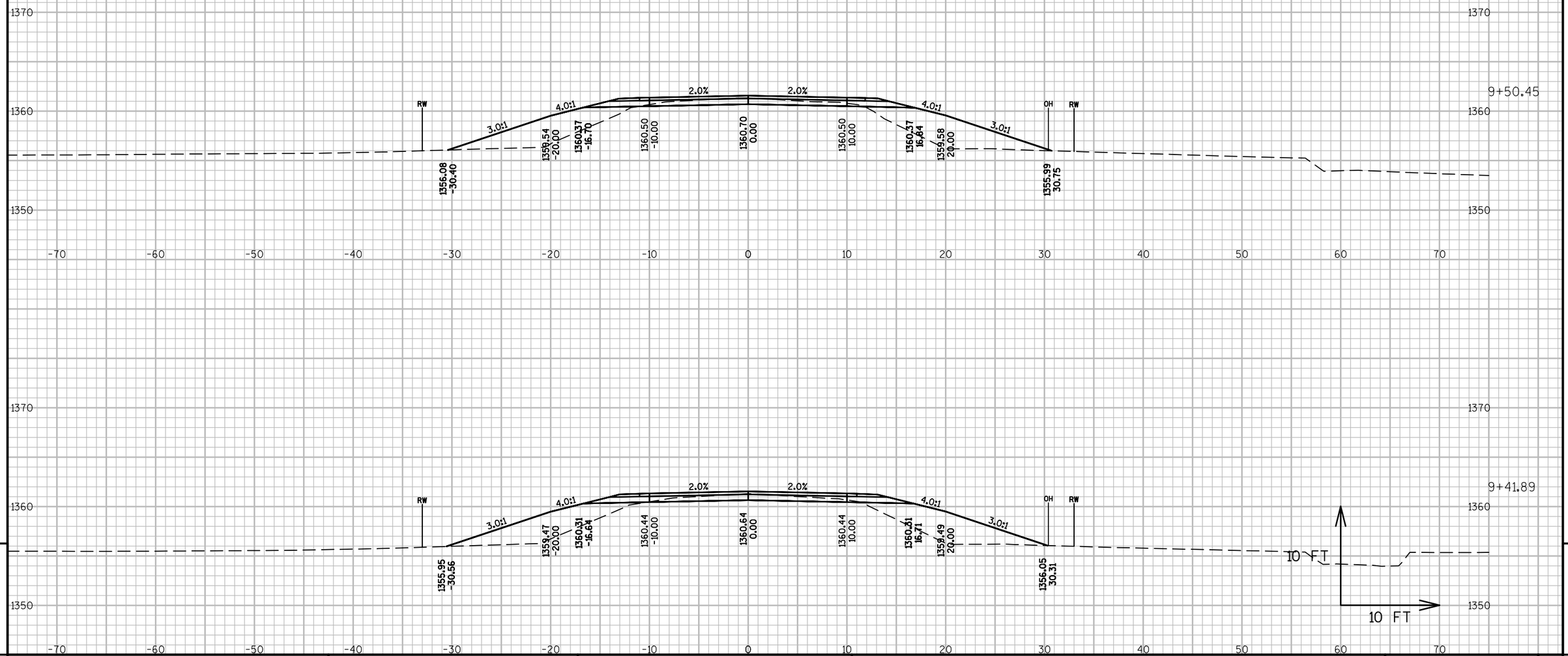
FILE NAME : P:\FJ\H\HAMMT\133758\CIVIL 3D\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 01

PLOT DATE : 12/30/2016 10:04 AM PLOT BY : JUSTIN SHAVLIK PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49

UTILITY LOCATIONS ARE APPROXIMATE.
ACTUAL LOCATIONS MUST BE FIELD VERIFIED.

STRUCTURE B-60-143
STA 10+00



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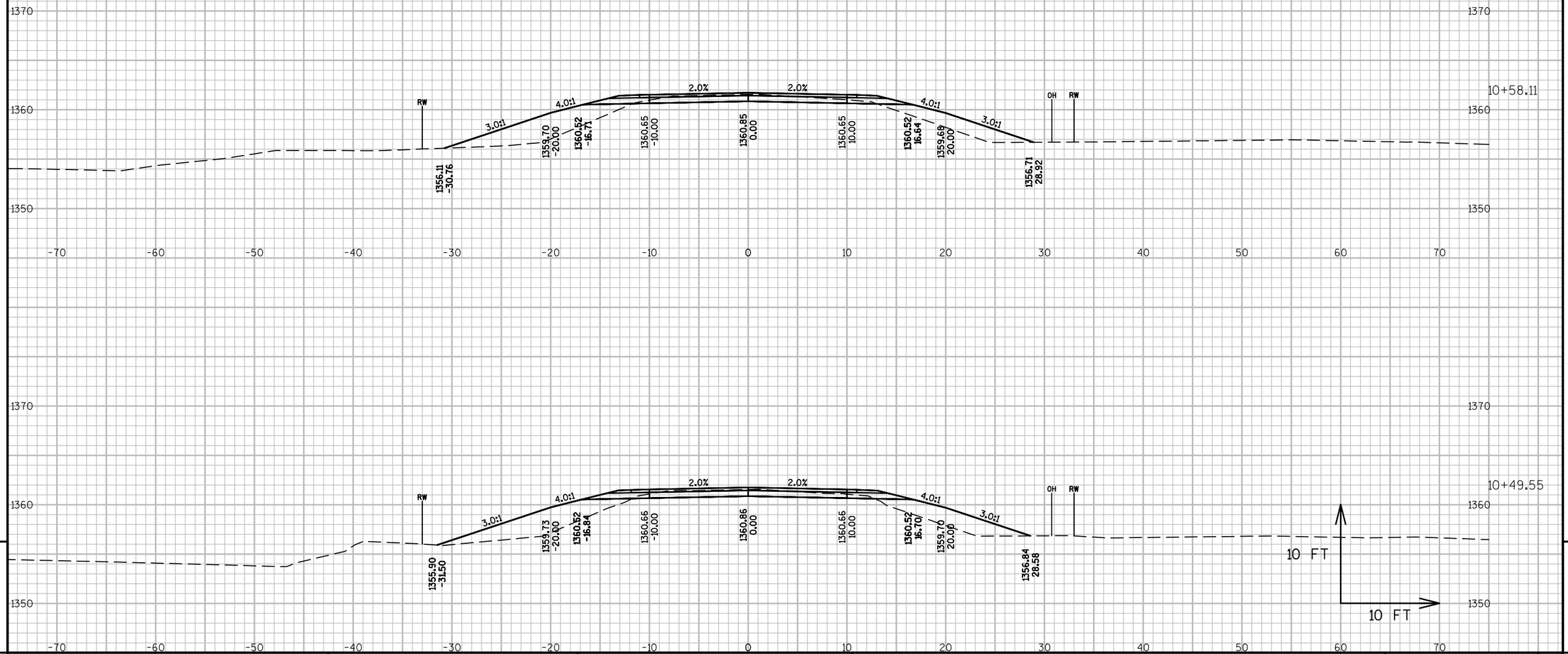
PROJECT NO: 8891-00-70	HWY: CENTER AVENUE	COUNTY: TAYLOR	CROSS SECTIONS: CENTER AVENUE	SHEET 30	E

FILE NAME : P:\FJ\H\HAMMT\133758\CIVIL 3D\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 02

PLOT DATE : 12/30/2016 10:04 AM PLOT BY : JUSTIN SHAVLIK PLOT NAME : PLOT SCALE : 1 IN:10 FT

UTILITY LOCATIONS ARE APPROXIMATE.
ACTUAL LOCATIONS MUST BE FIELD VERIFIED.



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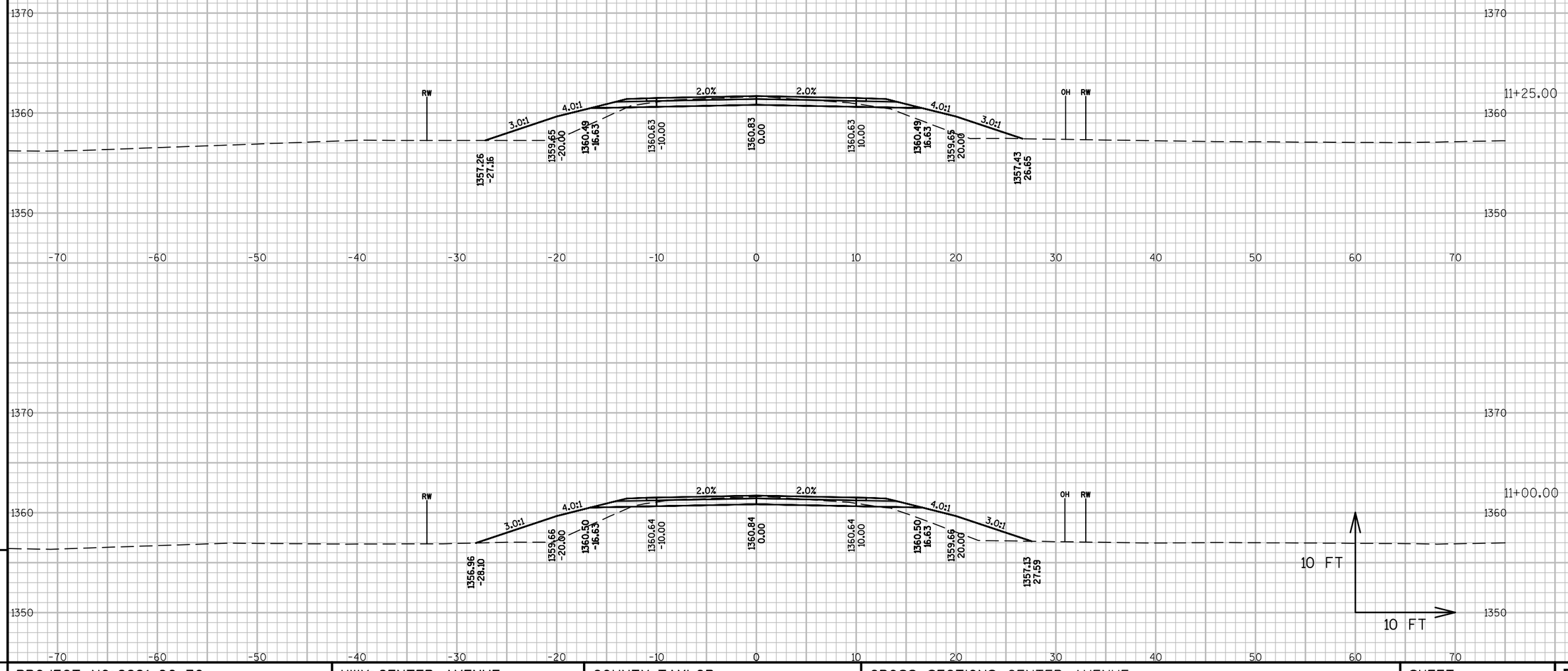
PROJECT NO: 8891-00-70	HWY: CENTER AVENUE	COUNTY: TAYLOR	CROSS SECTIONS: CENTER AVENUE	SHEET 31	E

FILE NAME : P:\FJ\H\HAMMT\133758\CIVIL 3D\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 03

PLOT DATE : 12/30/2016 10:04 AM PLOT BY : JUSTIN SHAVLIK PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49

UTILITY LOCATIONS ARE APPROXIMATE.
ACTUAL LOCATIONS MUST BE FIELD VERIFIED.



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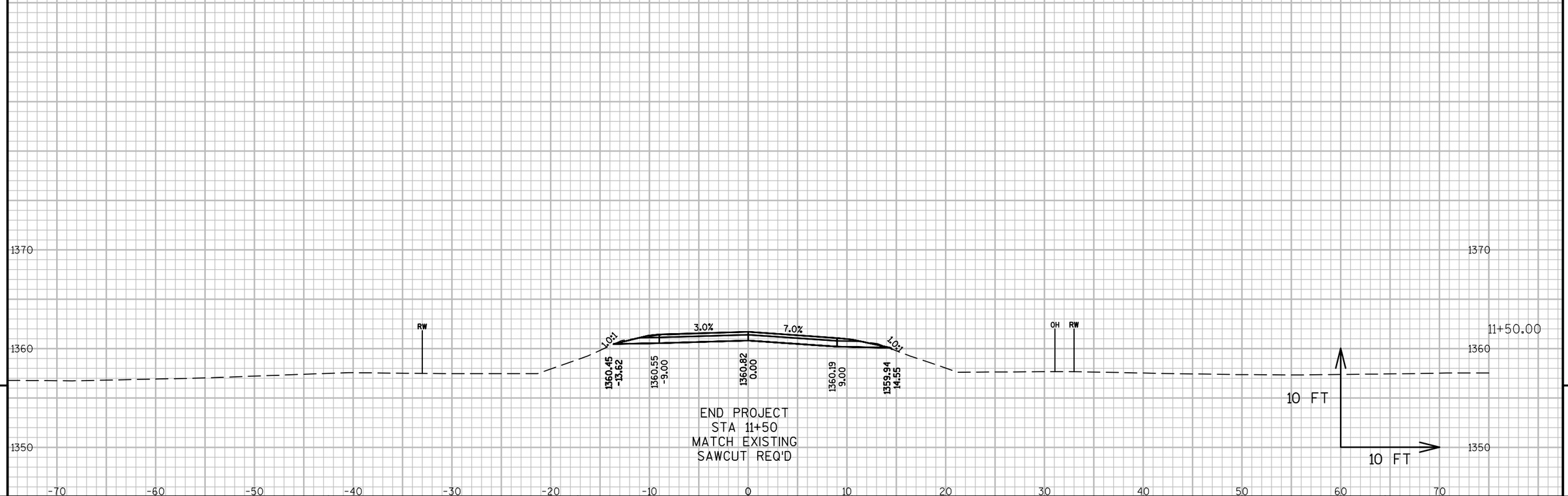
PROJECT NO: 8891-00-70	HWY: CENTER AVENUE	COUNTY: TAYLOR	CROSS SECTIONS: CENTER AVENUE	SHEET 32	E

FILE NAME : P:\FJ\H\HAMMT\133758\CIVIL 3D\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 04

PLOT DATE : 12/30/2016 10:04 AM PLOT BY : JUSTIN SHAVLIK PLOT NAME : PLOT SCALE : 1 IN:10 FT

UTILITY LOCATIONS ARE APPROXIMATE.
ACTUAL LOCATIONS MUST BE FIELD VERIFIED.



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PROJECT NO: 8891-00-70	HWY: CENTER AVENUE	COUNTY: TAYLOR	CROSS SECTIONS: CENTER AVENUE	SHEET 33	E

FILE NAME : P:\FJ\H\HAMMT\133758\CIVIL 3D\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 05

PLOT DATE : 12/30/2016 10:04 AM PLOT BY : JUSTIN SHAVLIK PLOT NAME : PLOT SCALE : 1 IN:10 FT

Wisconsin Department of Transportation

Dedicated people creating transportation solutions
through innovation and exceptional service.

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