SWL FEB 2017

PROJECT ID: 5942-00-73

WITH: N/A

COUNTY: ROCK

ORDER OF SHEETS

TOTAL SHEETS = 48

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
5942-00-73	WISC 2017021	1

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

TOWN OF PLYMOUTH - TOWN OF CENTER

(BASS CREEK BRIDGE B-53-0290)

CTH H

ROCK COUNTY

STATE PROJECT NUMBER
5942-00-73

N

DESIGN DESIGNATION

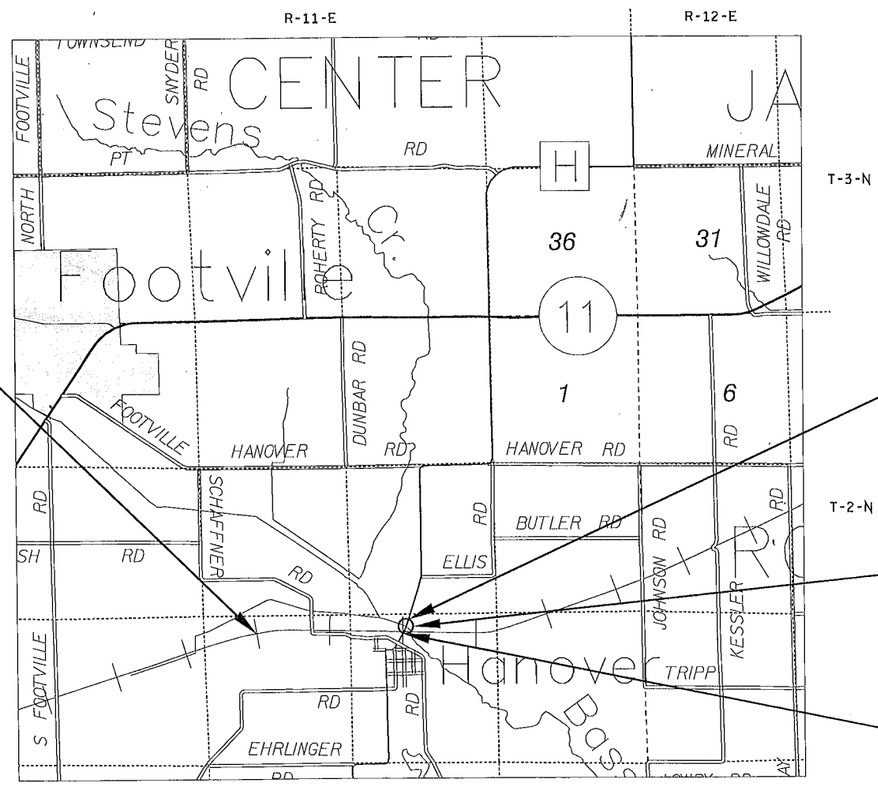
A.A.D.T.	2017	=	770
A.A.D.T.	2037	=	850
D.H.V.		=	141
D.D.		=	60/40
T.		=	8.7%
DESIGN SPEED		=	25 MPH
ESALS		=	66,000

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)
- 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 (95.36)
- CULVERT (Profile View)

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



LAYOUT

SCALE 0 1 MILE

TOTAL NET LENGTH OF CENTERLINE = 0.066 MILES

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COUNTY COORDINATES, ROCK COUNTY, NAD83 (2007), IN U.S. SURVEY FEET. VALUES ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

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

ACCEPTED FOR

COUNTY of ROCK

Director of Public Works

7-13-16 Benjamin J. Coopman Jr
(Date) (Signature & Title of Official)

ORIGINAL PLANS PREPARED BY

WESTBROOK
Associated Engineers, Inc.
619 EAST HOXIE STREET
P.O. BOX 429
SPRING GREEN, WISCONSIN 53588
PHONE (608) 588-7866
FAX (608) 588-7954

WISCONSIN
AARON B. PALMER
E-35695
RICHLAND CENTER, WI
PROFESSIONAL ENGINEER

7-13-2016 Aaron B Palmer
(Date) (Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

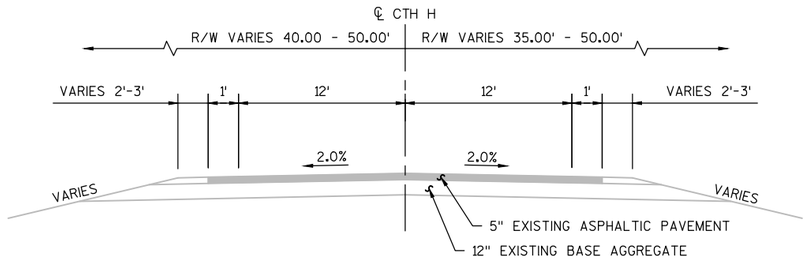
PREPARED BY

Surveyor	WESTBROOK
Designer	WESTBROOK
Management Consultant	KL ENGINEERING, INC.

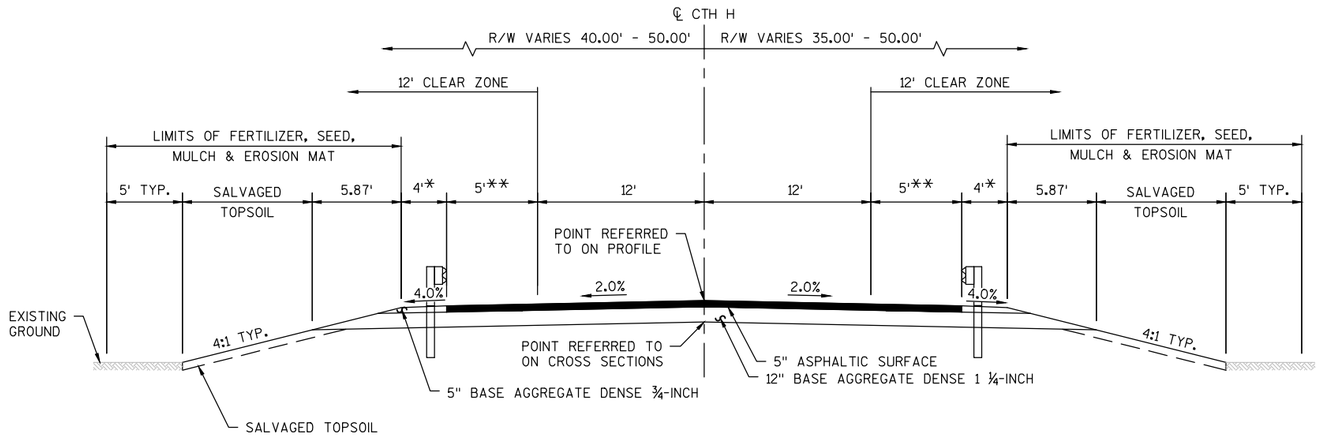
APPROVED FOR THE DEPARTMENT

DATE: 7/28/16 Management Consultant Signature

E



TYPICAL EXISTING SECTION



*SHOULDER TO TAPER TO MATCH EXISTING BEYOND GUARDRAIL LIMITS.
**ADDITIONAL 2' OFFSET AT FACE OF RAIL AT EAT POST 1.

TYPICAL FINISHED SECTION

GENERAL NOTES

EROSION CONTROL ITEMS TO BE PLACED AS SHOWN ON THE PLAN OR AS DIRECTED BY THE ENGINEER. SILT FENCE SHALL BE IN PLACE PRIOR TO CONSTRUCTION.

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

DISTURBED AREAS WITHIN THE RIGHT-OF-WAY, EXCEPT THE DRIVING LANES AND THE SHOULDERS ARE TO BE FERTILIZED, SEEDED, TEMPORARY SEEDED, AND MULCHED, OR AS DIRECTED BY THE ENGINEER.

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

WETLANDS ARE PRESENT AT THE LOCATIONS SHOWN IN THE PLANS. DO NOT OPERATE MACHINERY OUTSIDE OF THE SLOPE INTERCEPTS IN THESE LOCATIONS.

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

EXACT LOCATION AND WIDTH OF ALL DRIVEWAY ENTRANCES TO BE DETERMINED BY THE ENGINEER. DRIVEWAYS SHALL BE REPLACED IN KIND.

THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN. THE CONTRACTOR IS RESPONSIBLE FOR FIELD LOCATING ALL UTILITIES.

D.O.T. MONUMENT IS TO BE FURNISHED BY THE STATE AND PLACED BY THE CONTRACTOR IN THE SAME WING THAT THE PROPOSED NAME PLATE WILL BE PLACED, AS DIRECTED BY THE ENGINEER.

COORDINATES ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), ROCK COUNTY, HORIZONTAL DATUM NAD83 (2007), ELEVATION DATUM NAVD88 (2007).

ASPHALTIC SURFACE LAYERS:
- UPPER: 2"
- LOWER: 3"

UTILITIES

ELECTRIC AND GAS
WISCONSIN POWER & LIGHT
ATTN: JASON HOGAN
SUITE 1000
4902 N BILTMORE LANE
MADISON, WI 53718
(608) 458-4871
jasonhogan@alliantenergy.com

COMMUNICATIONS
FRONTIER
ATTN:ROBERT CHURCH
2222 WEST WISCONSIN STREET
PORTAGE, WI 53901
(608) 742-1817
robert.church@ftr.com

COMMUNICATIONS
CENTURYLINK
ATTN: MARK MURN
224 INDUSTRIAL DRIVE
NORTH PRAIRIE, WI 53153
(262) 392-5210
mark.murn@centurylink.com

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

* DENOTES UTILITY IS NOT A MEMBER OF DIGGERS HOTLINE

CONTACTS

CONSULTANT LIAISON
WESTBROOK ASSOCIATED ENGINEERS, INC.
619 EAST HOXIE STREET
SPRING GREEN, WI 53588

ATTN: AARON PALMER, P.E.
PH: (608) 588-7866
FAX: (608) 588-7954
aplamer@westbrookeng.com

COUNTY LIAISON
ROCK COUNTY DEPT. OF PUBLIC WORKS
3715 NEWVILLE ROAD
JANESVILLE, WI 53545-8844

ATTN: DUANE JORGENSON, P.E.
PH: (608) 757-5489
FAX: (608) 757-5470
jorgend@co.rock.wi.us

WisDNR LIAISON
DNR SOUTH CENTRAL REGION HQ
3911 FISH HATCHERY ROAD
FITCHBURG, WI 53711

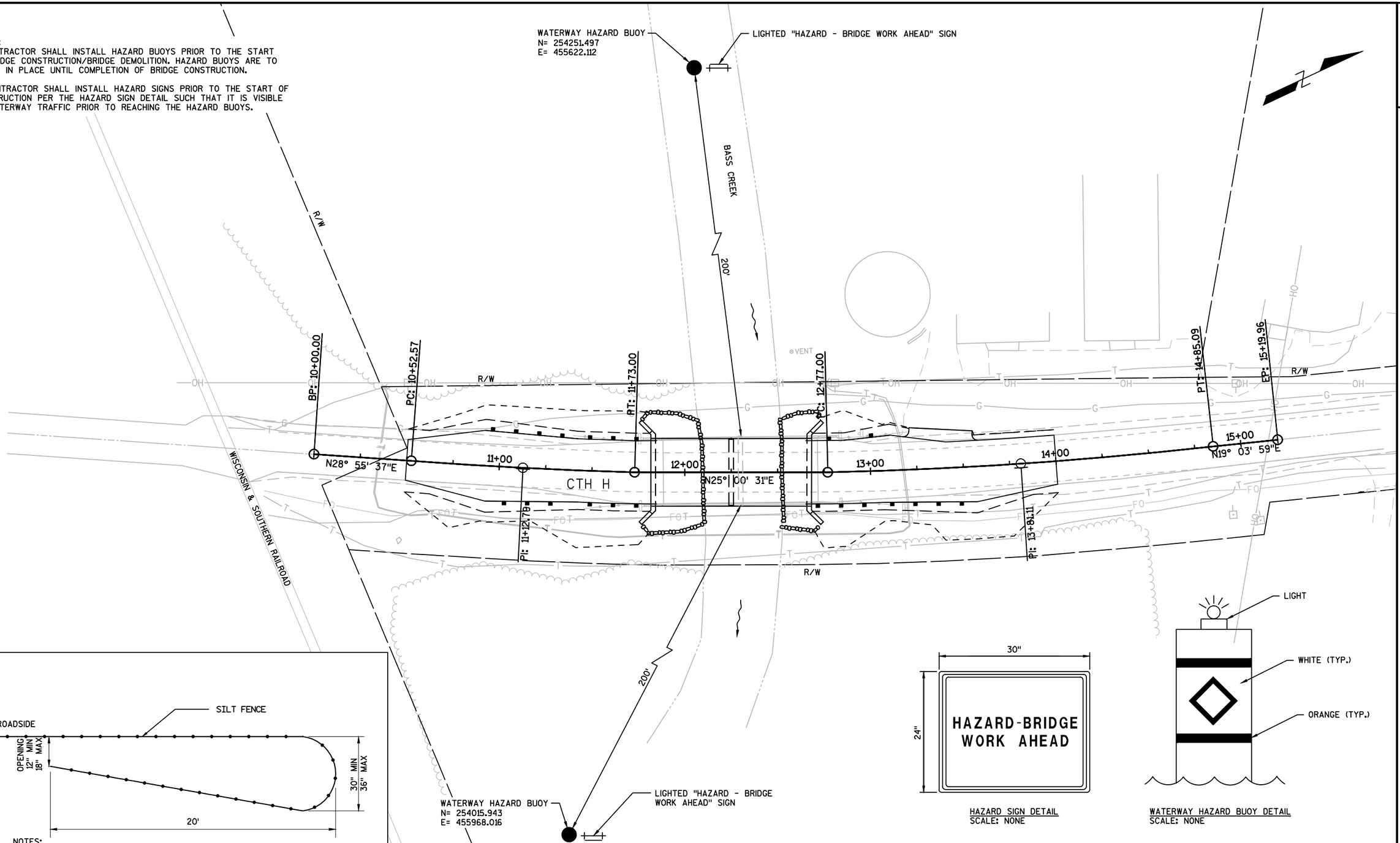
ATTN: LAURA BUB
PH: (608) 275-3485
laura.bub@wisconsin.gov

STANDARD ABBREVIATIONS

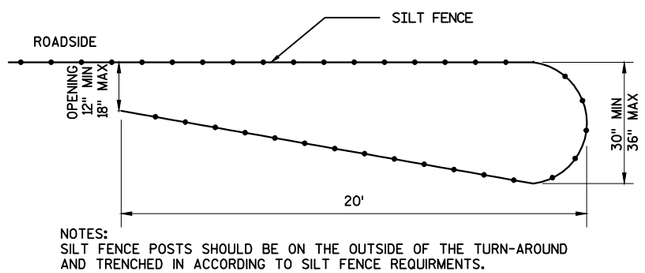
ADT	AVERAGE DAILY TRAFFIC	L.F.	LINEAR FEET	REQ'D.	REQUIRED
AGG.	AGGREGATE	L.H.F.	LEFT HAND FORWARD	RT.	RIGHT
B.M.	BENCH MARK	L.S.	LUMP SUM	R/W	RIGHT-OF-WAY
℄ OR CL	CENTERLINE	LT.	LEFT	RD.	ROAD
CR.	CRUSHED	MAX.	MAXIMUM	RDWY.	ROADWAY
C.T.H.	COUNTY TRUNK HIGHWAY	MIN.	MINIMUM	S.	SOUTH
CWT.	HUNDREDWEIGHT	N.	NORTH	SE	SOUTHEAST
C.Y.	CUBIC YARD	NOR.	NORMAL	SHRK.	SHRINKAGE
D.H.	DOUBLE HEADED	PAV'T.	PAVEMENT	S.R.	SIDE ROAD
D.H.V.	DESIGN HOURLY VOLUME	P.C.	POINT OF CURVE	STD.	STANDARD
DIR.	DIRECTED	P.I.	POINT OF INTERSECTION	S.T.H.	STATE TRUNK HIGHWAY
E.	EAST	P.E.	PRIVATE ENTRANCE	STA.	STATION
COR.	CORNER	P.K.	PARKER-KALON NAIL	S.Y.	SQUARE YARD
EL. OR ELEV.	ELEVATION	ℙ OR PL	PROPERTY LINE	T	TANGENT LENGTH OF CURVE
F.E.	FIELD ENTRANCE	P.P.	POWER POLE	TL	TRANSIT LINE
FT.	FOOT (FEET)	PROJ.	PROJECT	UNCL.	UNCLASSIFIED EXCAVATION
GAL.	GALLON	P.T.	POINT OF TANGENCY	V	DESIGN SPEED
H.W.	HIGH WATER	PVMT.	PAVEMENT	V.C.	VERTICAL CURVE
IN.	INCHES	R.	RADIUS	VAR.	VARIABLE
K	SIGHT DISTANCE	R.R.	RAILROAD	W.	WEST
L.	LENGTH OF CURVE	REINF.	REINFORCED		

NOTES:
1. CONTRACTOR SHALL INSTALL HAZARD BUOYS PRIOR TO THE START OF BRIDGE CONSTRUCTION/BRIDGE DEMOLITION. HAZARD BUOYS ARE TO REMAIN IN PLACE UNTIL COMPLETION OF BRIDGE CONSTRUCTION.

2. CONTRACTOR SHALL INSTALL HAZARD SIGNS PRIOR TO THE START OF CONSTRUCTION PER THE HAZARD SIGN DETAIL SUCH THAT IT IS VISIBLE TO WATERWAY TRAFFIC PRIOR TO REACHING THE HAZARD BUOYS.



HAZARD BUOY LAYOUT



NOTES:
SILT FENCE POSTS SHOULD BE ON THE OUTSIDE OF THE TURN-AROUND AND TRENCHED IN ACCORDING TO SILT FENCE REQUIRMENTS.

ANIMAL EXCLUSION FENCING

HAZARD SIGN DETAIL
SCALE: NONE

WATERWAY HAZARD BUOY DETAIL
SCALE: NONE

PROJECT NO: 5942-00-73	HWY: CTH H	COUNTY: ROCK	CONSTRUCTION DETAILS	SHEET 3	E

LEGEND

FLOW ARROW
STREAM EDGE
BENCHMARK
CONTROL POINT

EXISTING R/W

PI STA = 11+12.79
Y = 254076.574
X = 455779.012
DELTA = 2°36'14"
D = 2°09'44"
T = 60.23'
L = 120.43'
R = 2650.00'
PC STA = 10+52.57
PT STA = 11+73.00

BASS CREEK

PI STA = 13+81.11
Y = 254320.015
X = 455891.772
DELTA = 5°01'12"
D = 2°24'45"
T = 104.11'
L = 208.09'
R = 2375.00'
PC STA = 12+77.00
PT STA = 14+85.09

BP: 10+00.00
N = 253978.02
E = 455724.16

BM #1
Y 112 RESET
N = 254151.70
E = 455796.68
ELEV. = 786.819

BM #3
PAINT AT LADDER BASE
N = 254284.12
E = 455797.02
ELEV. = 784.194

CP #3
⅜" REBAR
N = 254241.13
E = 455831.15
ELEV. = 784.748

EP: 15+19.96
N = 254451.62
E = 455936.44

BOP: 10+50.00
N = 254021.78
E = 455748.35

EOP: 14+00.00
N = 254338.54
E = 455896.41

CP #1
GIN SPIKE
N = 253945.73
E = 455727.50
ELEV. = 784.087

BM #2
PAINTED CONCRETE
N = 254000.90
E = 455785.28
ELEV. = 782.164

CP #2
⅜" REBAR
N = 254122.27
E = 455830.63
ELEV. = 785.371

CP #4
⅜" REBAR
N = 254423.68
E = 455947.65
ELEV. = 782.402

WISCONSIN & SOUTHERN RAILROAD

CTH H

10+00 11+00 12+00 13+00 14+00 15+00 15+20

PI: 11+12.79

PI: 13+81.11

BUILDING

SILO

VENT

TIES TO CP1

217.23'
79.88'

TIES TO CP2

44.94'
129.56'

TIES TO CP3

54.89'
24.39'

TIES TO CP4

52.38'
18.65'

PROJECT NO: 5942-00-73	HWY: CTH H	COUNTY: ROCK	ALIGNMENT DETAILS & CONTROL TIES	SHEET 4	E

Estimate Of Quantities

5942-00-73

Line	Item	Item Description	Unit	Total	Qty
0010	203.0600.S	Removing Old Structure Over Waterway With Minimal Debris (station) 01. 12+30	LS	1.000	1.000
0020	204.0165	Removing Guardrail	LF	138.000	138.000
0030	205.0100	Excavation Common	CY	409.000	409.000
0040	206.1000	Excavation for Structures Bridges (structure) 01. B-53-0290	LS	1.000	1.000
0050	210.1500	Backfill Structure Type A	TON	438.000	438.000
0060	213.0100	Finishing Roadway (project) 01. 5942-00-73	EACH	1.000	1.000
0070	305.0110	Base Aggregate Dense 3/4-Inch	TON	100.000	100.000
0080	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	955.000	955.000
0090	455.0605	Tack Coat	GAL	50.000	50.000
0100	465.0105	Asphaltic Surface	TON	280.000	280.000
0110	502.0100	Concrete Masonry Bridges	CY	257.000	257.000
0120	502.3200	Protective Surface Treatment	SY	397.000	397.000
0130	505.0400	Bar Steel Reinforcement HS Structures	LB	8,720.000	8,720.000
0140	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	47,630.000	47,630.000
0150	513.4061	Railing Tubular Type M (structure) 01. B-53-0290	LF	178.000	178.000
0160	516.0500	Rubberized Membrane Waterproofing	SY	16.000	16.000
0170	550.0500	Pile Points	EACH	24.000	24.000
0180	550.2108	Piling CIP Concrete 10 3/4 X 0.50-Inch	LF	760.000	760.000
0190	550.2128	Piling CIP Concrete 12 3/4 X 0.50-Inch	LF	400.000	400.000
0200	606.0300	Riprap Heavy	CY	251.000	251.000
0210	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	150.000	150.000
0220	614.0200	Steel Thrie Beam Structure Approach	LF	21.000	21.000
0230	614.2500	MGS Thrie Beam Transition	LF	120.000	120.000
0240	614.2610	MGS Guardrail Terminal EAT	EACH	3.000	3.000
0250	619.1000	Mobilization	EACH	1.000	1.000
0260	624.0100	Water	MGAL	21.000	21.000
0270	625.0500	Salvaged Topsoil	SY	130.000	130.000
0280	627.0200	Mulching	SY	910.000	910.000
0290	628.1504	Silt Fence	LF	1,050.000	1,050.000
0300	628.1520	Silt Fence Maintenance	LF	2,100.000	2,100.000
0310	628.1905	Mobilizations Erosion Control	EACH	2.000	2.000
0320	628.1910	Mobilizations Emergency Erosion Control	EACH	2.000	2.000
0330	628.2008	Erosion Mat Urban Class I Type B	SY	910.000	910.000
0340	628.6005	Turbidity Barriers	SY	240.000	240.000
0350	629.0210	Fertilizer Type B	CWT	0.600	0.600
0360	630.0130	Seeding Mixture No. 30	LB	17.000	17.000
0370	630.0200	Seeding Temporary	LB	25.000	25.000
0380	634.0612	Posts Wood 4x6-Inch X 12-FT	EACH	4.000	4.000

5942-00-73

Line	Item	Item Description	Unit	Total	Qty
0390	637.2230	Signs Type II Reflective F	SF	12.000	12.000
0400	642.5001	Field Office Type B	EACH	1.000	1.000
0410	643.0100	Traffic Control (project) 01. 5942-00-73	EACH	1.000	1.000
0420	643.0300	Traffic Control Drums	DAY	750.000	750.000
0430	643.0420	Traffic Control Barricades Type III	DAY	1,350.000	1,350.000
0440	643.0705	Traffic Control Warning Lights Type A	DAY	2,400.000	2,400.000
0450	643.0900	Traffic Control Signs	DAY	1,800.000	1,800.000
0460	645.0120	Geotextile Type HR	SY	437.000	437.000
0470	646.0106	Pavement Marking Epoxy 4-Inch	LF	1,050.000	1,050.000
0480	650.4500	Construction Staking Subgrade	LF	264.000	264.000
0490	650.5000	Construction Staking Base	LF	264.000	264.000
0500	650.6500	Construction Staking Structure Layout (structure) 01. B-53-0290	LS	1.000	1.000
0510	650.9910	Construction Staking Supplemental Control (project) 01. 5942-00-73	LS	1.000	1.000
0520	650.9920	Construction Staking Slope Stakes	LF	264.000	264.000
0530	690.0150	Sawing Asphalt	LF	52.000	52.000
0540	715.0502	Incentive Strength Concrete Structures	DOL	1,542.000	1,542.000
0550	ASP.1T0A	On-the-Job Training Apprentice at $5.00/HR	HRS	300.000	300.000
0560	ASP.1T0G	On-the-Job Training Graduate at $5.00/HR	HRS	100.000	100.000
0570	SPV.0060	Special 01. Guardrail Terminal EAT TL-2	EACH	1.000	1.000

3

3

REMOVING GUARDRAIL

STATION	- STATION	LOCATION	204.0165 REMOVING GUARDRAIL (LF)
11+46	11+78	RT	32
11+39	11+78	LT	38
12+82	13+12	RT	30
11+82	13+21	LT	38
		TOTALS	138

BASE AGGREGATE DENSE

STATION	- STATION	LOCATION	305.0120 1 1/4-INCH (TON)	305.0110 3/4-INCH (TON)
10+50.00	11+81.75	MAINLINE	495	50
12+68.25	14+00.00	MAINLINE	460	40
		PE	—	10
		TOTAL	955	100

ASPHALTIC ITEMS

STATION	- STATION	LOCATION	465.0105 ASPHALTIC SURFACE (TON)	455.0605 TACK COAT (GAL)
10+50.00	11+81.75	MAINLINE	140	25
12+68.25	14+00.00	MAINLINE	135	25
		PE	5	---
		TOTALS	280	50

BEAM GUARD AND TERMINALS

STATION	- STATION	LOCATION	614.0200 STEEL THRIE BEAM STRUCTURE APPROACH (LF)	614.2500 MGS THRIE BEAM TRANSITION (LF)	614.2610 MGS GUARDRAIL TERMINAL EAT (EA)	SPV.0060.01 GUARDRAIL TERMINAL EAT TL-2 (EA)
10+50.00	11+81.75	LT	—	40	1	—
10+50.00	11+81.75	RT	—	40	1	—
12+68.25	14+00.00	LT	21	—	---	1
12+68.25	14+00.00	RT	—	40	1	—
		TOTALS	21	120	3	1

WATER

STATION	- STATION	LOCATION	624.0100 WATER (MGAL)
10+50.00	11+81.75	MAINLINE	11
12+68.25	14+00.00	MAINLINE	10
		TOTALS	21

FINISHING ITEMS

STATION	- STATION	LOCATION	625.0500 SALVAGED TOPSOIL (SY)	627.0200 MULCHING (SY)	629.0210 FERTILIZER TYPE B (CWT)	630.0200 SEEDING TEMPORARY (LB)	630.0130 SEEDING, MIXTURE NO. 30 (LB)
10+50.00	11+81.75	MAINLINE	60	430	0.3	12	8
12+68.25	14+00.00	MAINLINE	70	300	0.2	8	6
		UNDISTRIBUTED	---	180	0.1	5	3
		TOTALS	130	910	0.6	25	17

EROSION CONTROL ITEMS

STATION	- STATION	LOCATION	628.1504 SILT FENCE (LF)	628.1520 SILT FENCE MAINTENANCE (LF)	6280.1905 MOBILIZATIONS EROSION CONTROL (EACH)	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL (EACH)	628.2008 EROSION MAT URBAN CLASS I TYPE B (SY)	628.6005 TURBIDITY BARRIERS (SY)
10+50.00	11+81.75	MAINLINE	475	950	---	—	430	95
11+81.75	14+00.00	MAINLINE	365	730	---	—	300	105
		UNDISTRIBUTED	210	420	2	2	180	40
		TOTALS	1050	2100	2	2	910	240

POSTS WOOD 6x4-INCH X 12 FT

LOCATION		634.0612 EACH
4 CORNERS OF BRIDGE		4
	TOTAL	4

SIGNS TYPE II REFLECTIVE F

LOCATION	TYPE	637.2230 (SF)
4 CORNERS OF BRIDGE	W5-52, LT. & RT.	12
	TOTAL	12

TRAFFIC CONTROL

STATION	- STATION	643.0300 TRAFFIC CONTROL DRUMS (NO.)	(DAYS)	643.0420 TRAFFIC CONTROL BARRICADES TYPE III (NO.)	(DAYS)	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A (NO.)	(DAYS)	643.0900 TRAFFIC CONTROL SIGNS (NO.)	(DAYS)
10+50.00	11+81.75	---	---	9	675	16	1200	10	750
12+68.25	14+00.00	---	---	9	675	16	1200	10	750
SIDEROADS		---	---	—	—	---	---	4	300
UNDISTRIBUTED		10	750	—	—	---	---	---	—
	TOTALS	10	750	18	1350	32	2400	24	1800

PAVEMENT MARKING EPOXY 4-INCH

STATION	- STATION	LOCATION	646.0106 (LF)
10+50.00	14+00.00	CENTER LINE	350
10+50.00	14+00.00	PVMT EDGE	700
		TOTAL	1050

LAYOUT ITEMS

STATION	- STATION	LOCATION	650.4500 CONSTRUCTION STAKING SUBGRADE (LF)	650.5000 CONSTRUCTION STAKING BASE (LF)	650.9920 CONSTRUCTION STAKING SLOPE STAKES (LF)
10+50.00	11+81.75	MAINLINE	132	132	132
12+68.25	14+00.00	MAINLINE	132	132	132
		TOTALS	264	264	264

SAWING ASPHALTIC PAVEMENT

STATION	LOCATION	690.0150 SAWING ASPHALT (L.F.)
10+50.00	MAINLINE	26
14+00.00	MAINLINE	26
	TOTALS	52

3

Division	From/To Station	Location	Common Excavation (1)	(item # 205.0100)	Salvaged/Unusable Pavement Material (4)	Available Material (5)	Marsh Excavation (6)	Rock Excavation (7)	Reduced Marsh in Fill (8)	Reduced EBS in Fill (9)	Expanded Marsh Backfill (10)	Expanded EBS Backfill (11)	Expanded Rock (12)	Unexpanded Fill	Expanded Fill (13)	Mass Ordinate +/- (14)	Waste	Borrow	Comment:
			Cut (2)	EBS Excavation (3)			(item #205.0500)	item #205.0200	Factor 0.60	Factor 0.80	Factor 1.50	Factor 1.30	Factor 1.10		Factor 1.30			(item #208.0100)	
1	10+50 to 11+75	Mainline CTH H	141	0	23	117	0	0	0	0	0	0	0	3	4	113			
						0									0	0			
						0									0	0			
						0									0	0			
Division 1 Subtotal			141	0	23	117	0	0	0	0	0	0	0	3	4	113			
2	12+75 to 14.00	Mainline CTH H	269	0	57	212	0	0	0	0	0	0	0	21	27	185			
						0									0	0			
						0									0	0			
						0									0	0			
						0									0	0			
Division 2 Subtotal			269	0	57	212	0	0	0	0	0	0	0	21	27	185	298		
Grand Total			409	0	80	329	0	0	0	0	0	0	0	24	31	298	298	0	
			Total Common Exc	409															

1) Common Excavation is the sum of the Cut and EBS Excavation columns. Item number 205.0100
2) Salvaged/Unsuable Pavement Material is included in Cut.
3) EBS Excavation to be backfilled with Select Borrow material. Note: this is designers choice, can be backfilled with Borrow, or Cut as well.
4) Salvaged/Unusable Pavement Material
5) Available Material = Cut - Salvaged/Unusable Pavement Material
6) Marsh Excavation - to be backfilled with Select Borrow Material. Note: this is designers choice, can be backfilled with Borrow, or Cut as well. Item number 205.0500
7) Rock Excavation item number 205.0200
8) Reduced Marsh in Fill - Excavated Marsh material is usuable in Fills outside the 1:1 slope. Marsh in Fill Reduction factor = 0.6
9) Reduced EBS in Fill - Excavated EBS material is usuable in Fills outside the 1:1 slope. EBS in Fill Reduction factor = 0.8
10) Expanded Marsh Backfill - This is to be filled with Select Borrow material. Marsh Backfill Factor = 1.5. Item number 208.11
11) Expanded EBS Backfill - This is to be filled with Select Borrow material. EBS Backfill Factor = 1.3. Item number 208.11
12) Expanded Rock - Factor = 1.1.
13) Expanded Fill. Factor = 1.25
Depending on selections: **Expanded Fill = (Unexpanded Fill - Rock* Rock Factor - Reduced Marsh - Reduced EBS) * Fill Factor**
Or Expanded Fill = (Unexpanded Fill - Rock* Rock Factor - Reduced EBS) * Fill Factor
Or Expanded Fill = (Unexpanded Fill - Rock* Rock Factor - Reduced Marsh) * Fill Factor
Or Expanded Fill = (Unexpanded Fill - Rock* Rock Factor) * Fill Factor
14) The Mass Ordinate + or - Qty calculated for the Division. Plus quantity indicates an excess of material within the Division. Minus indicates a shortage of material within the Division.

LEGEND

XXXX SAWCUT, MATCH EXISTING

FLOW ARROW

STREAM EDGE

EROSION MAT URBAN CLASS 1 TYPE B

WETLAND IMPACT

WETLAND

EXISTING C/L CTH H

STATE OF WISCONSIN
DEPT. OF NATURAL RESOURCES

PI STA = 11+12.79
Y = 254 076.574
X = 455 779.012
DELTA = 2°36'14"
D = 2°09'44"
T = 60.23'
L = 120.43'
R = 2650.00'
PC STA = 10+52.57
PT STA = 11+73.00

CASH FARMS INC.

PI STA = 13+81.11
Y = 254 320.015
X = 455 891.772
DELTA = 5°01'12"
D = 2°24'45"
T = 104.11'
L = 208.09'
R = 2375.00'
PC STA = 12+77.00
PT STA = 14+85.09

EXISTING R/W

BASS CREEK

SILO

BUILDING

BUILDING

BUILDING

VENT

WISCONSIN POWER & LIGHT

CAUTION

WETLAND BOUNDARY

MGS THRIE BEAM TRANSITION

STEEL THRIE BEAM STRUCTURE APPROACH

BM #3

STA. 13+39, LT CONSTRUCT C.E.

ANIMAL EXCLUSION FENCING, TYP. (SEE CONSTRUCTION DETAIL)

GUARDRAIL TERMINAL EAT TL-2

BP: 10+00.00

PC: 10+52.57

PT: 11+73.00

PC: 12+77.00

PT: 14+85.09

EP: 15+19.96

MGS EAT

BM #1

CP #3

PROPOSED C/L CTH H

CTH H (ASPHALT)

11+00

12+00

13+00

14+00

15+00

CP #1

CP #2

CP #4

BM #2

CENTURYLINK

FRONTIER

WETLAND BOUNDARY

SLOPE INTERCEPT, TYP.

MGS THRIE BEAM TRANSITION

STA. 12+30
REMOVE EXISTING STRUCTURE B-53-99
2-SPAN CONCRETE HAUNCH SLAB STRUCTURE

TURBIDITY BARRIER TYP.

PROPOSED STRUCTURE B-53-0290

MGS THRIE BEAM TRANSITION

WETLAND BOUNDARY

SLOPE INTERCEPT

SILT FENCE TYP.

EXISTING R/W

AMERICAN TRANSMISSION COMPANY

BEGIN PROJECT
STA. 10+50
Y = 254021.778
X = 455748.345

END PROJECT
STA. 14+00
Y = 254338.542
X = 455896.414

BENCH MARKS

NO.	STATION	DESCRIPTION	ELEV.
1	11+88.30	NGS CAP ON BRIDGE, 17.48' LT	786.85
2	10+49.55	WHITE PAINT MARK ON CONCRETE SLAB, 42.4' RT	782.16
3	13+11.25	WHITE PAINT MARK AT BASE OF LADDER, 72.1' LT	784.19

VPI STA 12+15.00
VPI EL 787.31

PROPOSED C/L PROFILE CTH H

1.47%

-1.50%

HIGH WATER$_{100}$
EL. = 784.38

VPC STA 10+90.00
VPC EL 785.47

STA 10+50.00
EL 784.88

VPT STA 13+40.00
VPT EL 785.43

STA 14+00.00
EL 784.54

VCL = 250.00

K = 84.05

OBSERVED WATER
EL. = 775.54'
(6-23-15)

EXISTING GROUNDLINE

PROPOSED C/L ELEVATION

EXISTING C/L ELEVATION

APPROX. STREAMBED EL. = 773.00'

STA. 12+43.00
REMOVE EXISTING STRUCTURE B-53-99
83.2' OVERALL LENGTH AND
34.0' CLEAR ROADWAY WIDTH
TWO SPAN REINFORCED CONCRETE
HAUNCH SLAB BRIDGE

STA. 12+25.00
STRUCTURE B-53-290 REQUIRED
86.5' OVERALL LENGTH AND
34.0' CLEAR ROADWAY WIDTH
CONTINUOUS TWO SPAN CONCRETE
HAUNCH SLAB BRIDGE

	784.57	784.88	785.64	786.27	779.45	775.38	785.75	785.31	784.54	783.77		783.48		
		784.88	785.61	786.14	786.37	786.30	785.94	785.28	784.54					
	10+00	10+50	11+00	11+50	12+00	12+50	13+00	13+50	14+00	14+50		15+00		

PROJECT NO: 5942-00-73	HWY: CTH H	COUNTY: ROCK	PLAN AND PROFILE: MAINLINE	SHEET 9	E

FILE NAME : G:\00-PROJECT FILES\2015\15109 5942-00-03 BASS CREEK BRIDGE B-53-0099\CAD\SHEETSPLAN\050101_PP.DWG
LAYOUT NAME - SHEET - (1)

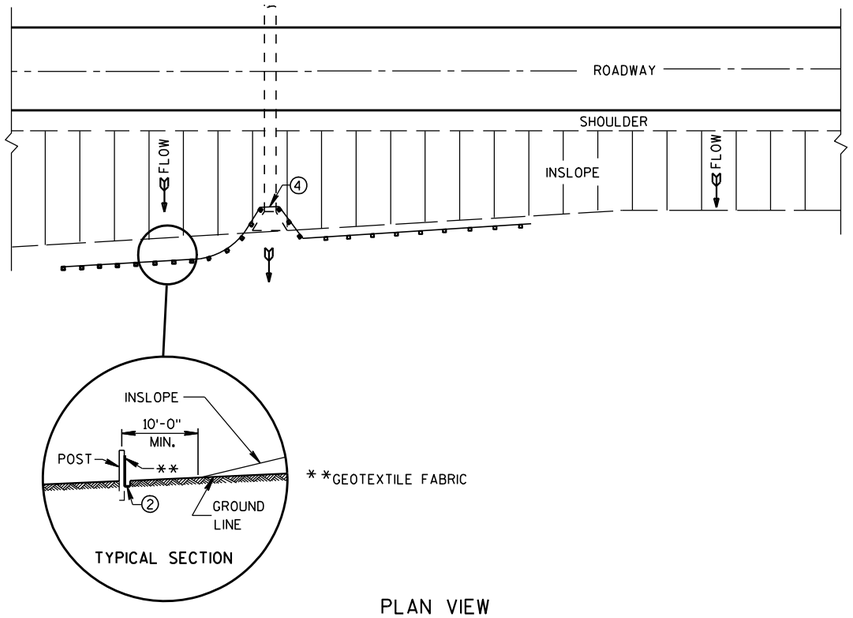
PLOT DATE : 11/16/2016 8:53 AM PLOT BY : ERIK MEYER PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 44

Standard Detail Drawing List

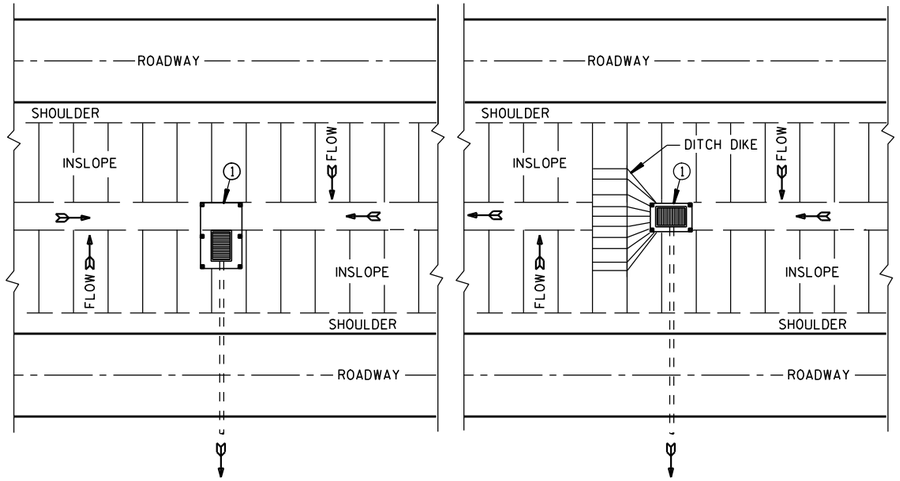
08E09-06	SILT FENCE
08E11-02	TURBIDITY BARRIER
12A03-10	NAME PLATE (STRUCTURES)
14B20-11A	STEEL THRIE BEAM STRUCTURE APPROACH
14B44-02A	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-02B	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-02C	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B45-04A	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04B	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04C	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04H	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
15C02-06A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-06B	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C03-03	BARRICADES AND SIGNS FOR SIDEROAD CLOSURES
15C06-07	SIGNING & MARKING FOR TWO LANE BRIDGES
15C08-16A	PAVEMENT MARKING (MAINLINE)
15D38-01A	TEMPORARY TRAFFIC CONTROL FIXED MESSAGE SIGNS
15D38-01B	ATTACHMENT OF SIGNS TO POSTS

6



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



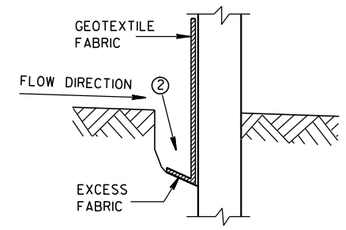
PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

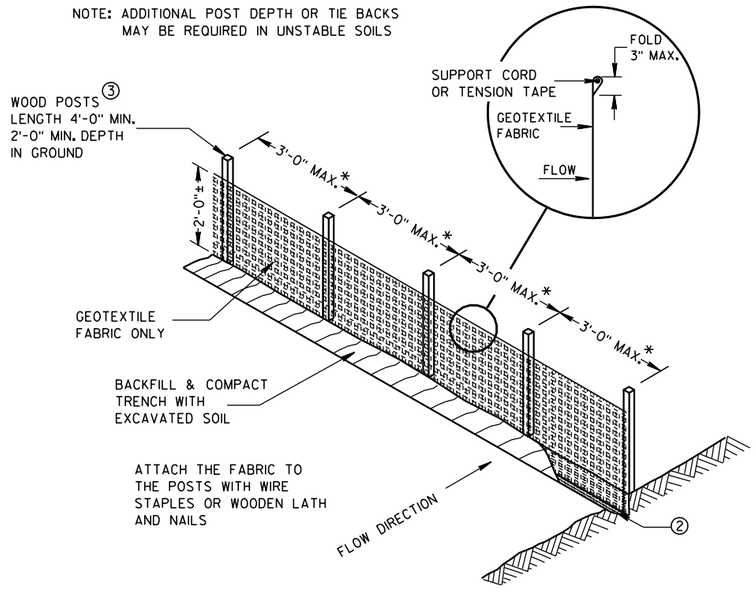
GENERAL NOTES

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

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

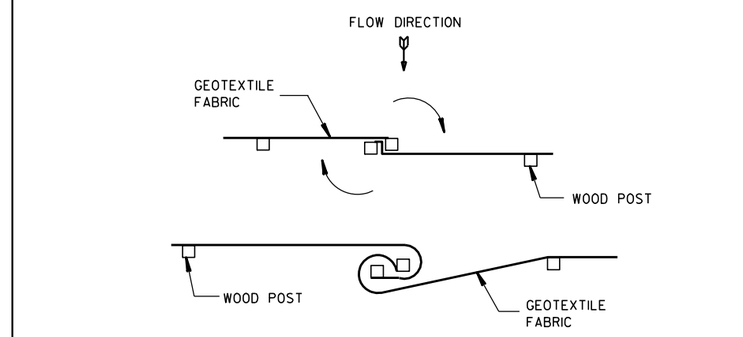


TRENCH DETAIL

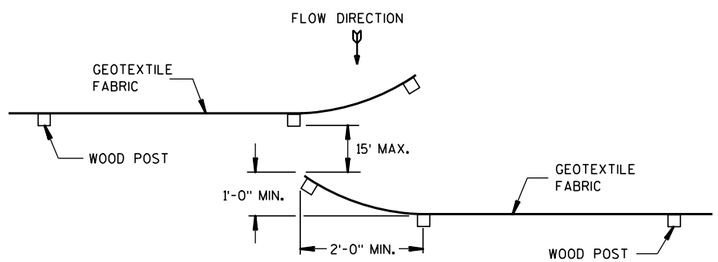


*NOTE: 8'-0" POST SPACING ALLOWED IF A WOVEN GEOTEXTILE FABRIC IS USED.

SILT FENCE

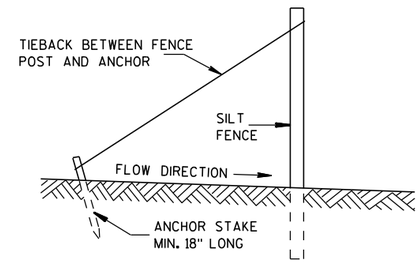


TWIST METHOD



HOOK METHOD

JOINING TWO LENGTHS OF SILT FENCE 5



SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

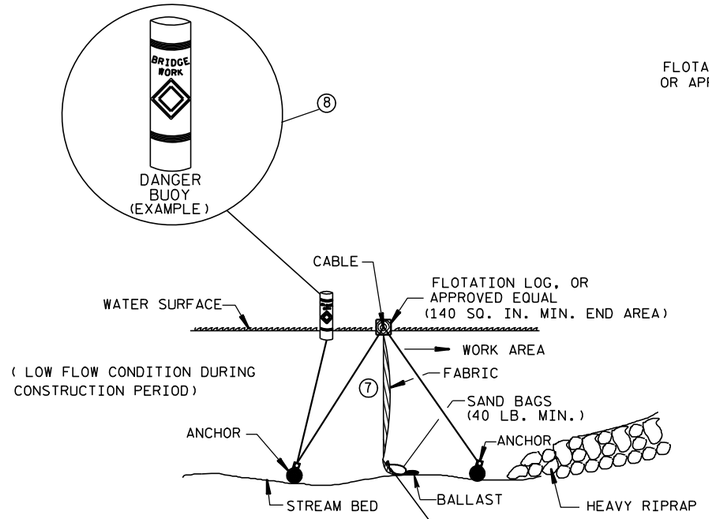
SILT FENCE	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 4-29-05 DATE	/S/ Beth Cannestra CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA	

6

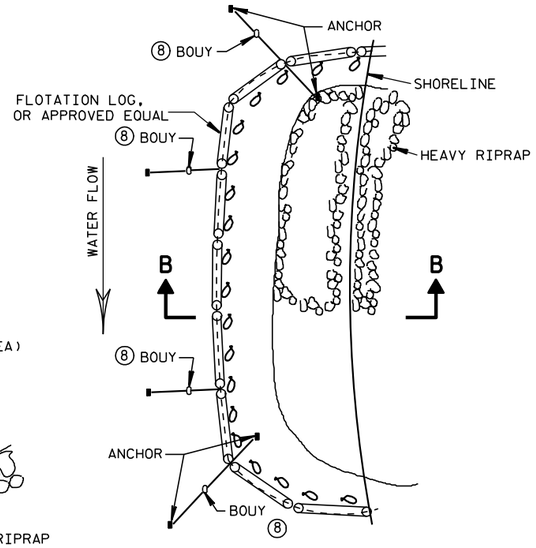
S.D.D. 8 E 9-6

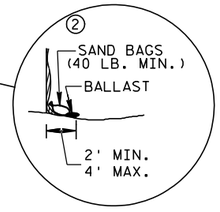
6

S.D.D. 8 E 9-6

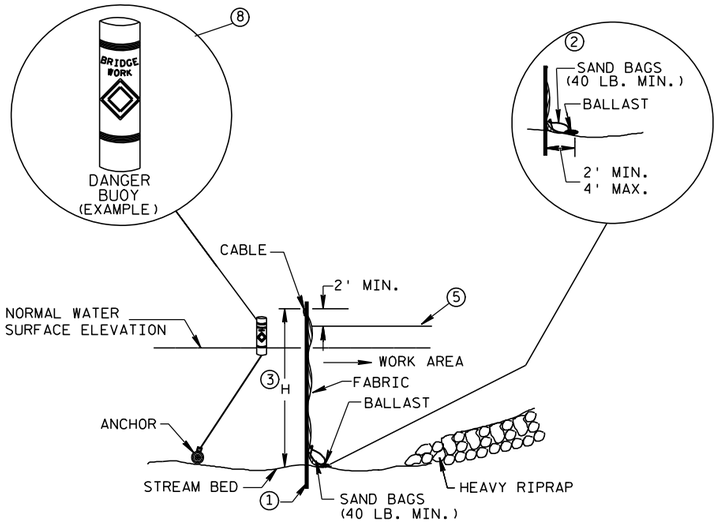


SECTION B-B

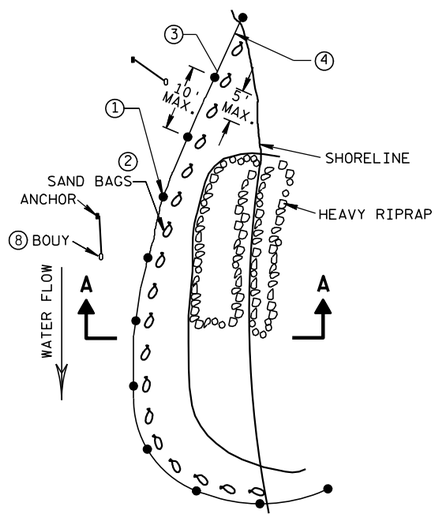




TURBIDITY BARRIER FLOAT ALTERNATIVE
CAUTION - SEE NOTE 6



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.

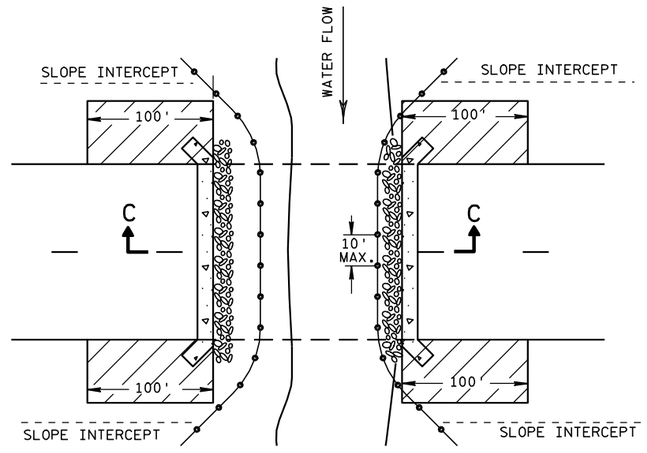
④ IN WATERWAYS SUBJECT TO FLUCTUATING WATER ELEVATIONS, PROVISIONS SHOULD BE MADE TO ALLOW THE WATER TO EQUALIZE ON EACH SIDE OF THE BARRIER. THIS MAY BE ACCOMPLISHED BY LEAVING A PORTION OF THE BARRIER OPEN ON THE UPSTREAM END.

⑤ ESTIMATED HIGH WATER ELEVATION DURING CONSTRUCTION PERIOD. MIMIMUM BARRIER HEIGHT SHALL BE 2'GREATER THAN EITHER THE O2 ELEVATION OR THE ESTIMATED HIGH WATER ELEVATION DURING CONSTRUCTION, WICHEVER IS GREATER.

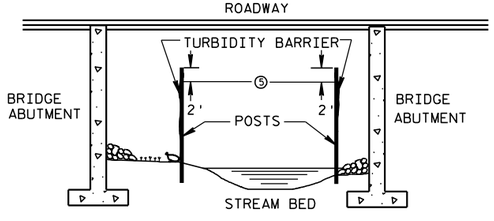
⑥ FLOAT ALTERNATIVE WILL ONLY BE ALLOWED WITH WRITTEN APPROVAL OF THE ENGINEER, AND IS MEANT FOR LOCATIONS WHERE BED ROCK PREVENTS THE INSTALLATION OF POSTS.

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



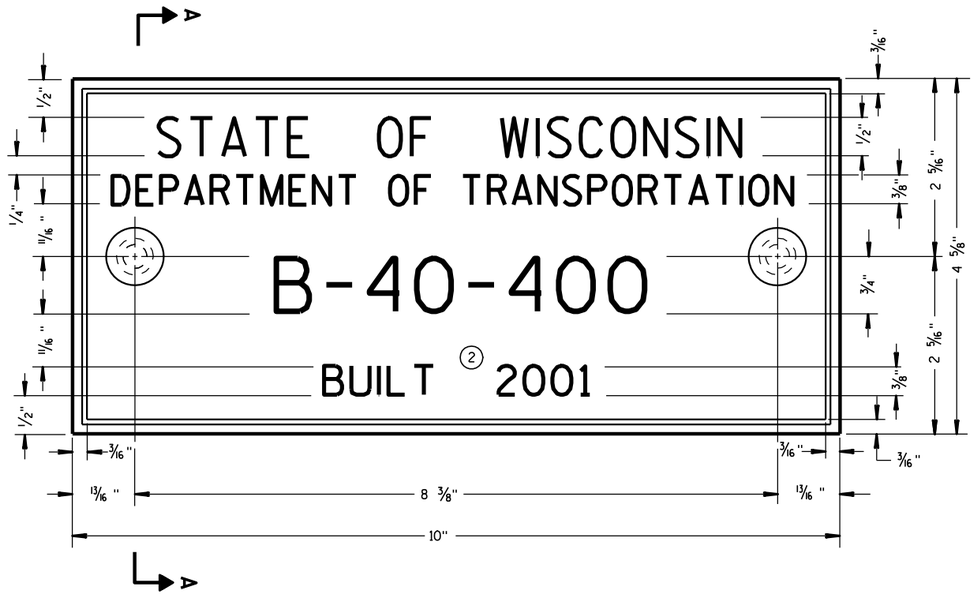
SECTION C-C

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	

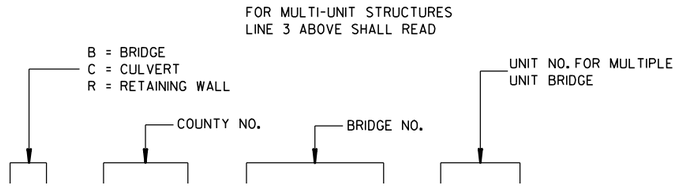
6

S.D.D. 8 E 11-2



TYPICAL NAME PLATE

(BRIDGES, CULVERTS, AND RETAINING WALLS)



NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES

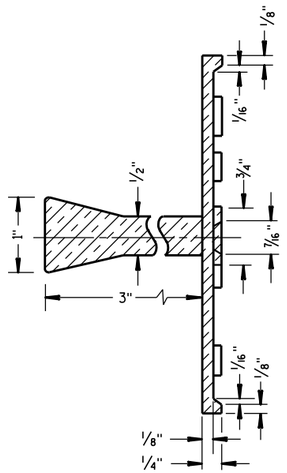
GENERAL NOTES

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.

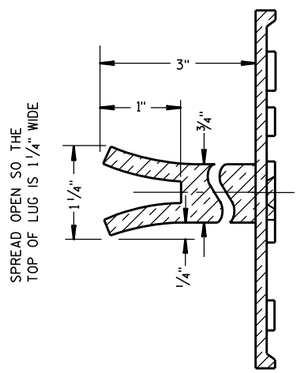
THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

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

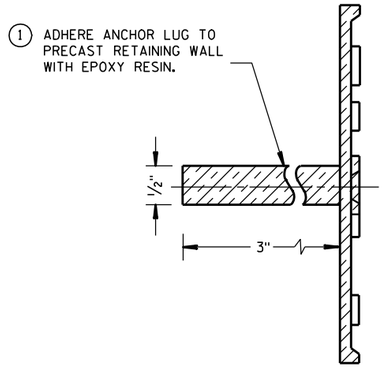
(2) REHABILITATION OF AN EXISTING STRUCTURE SHOULD USE THE DATE OF ORIGINAL STRUCTURE CONSTRUCTION.



SECTION A-A



ALTERNATE LUG



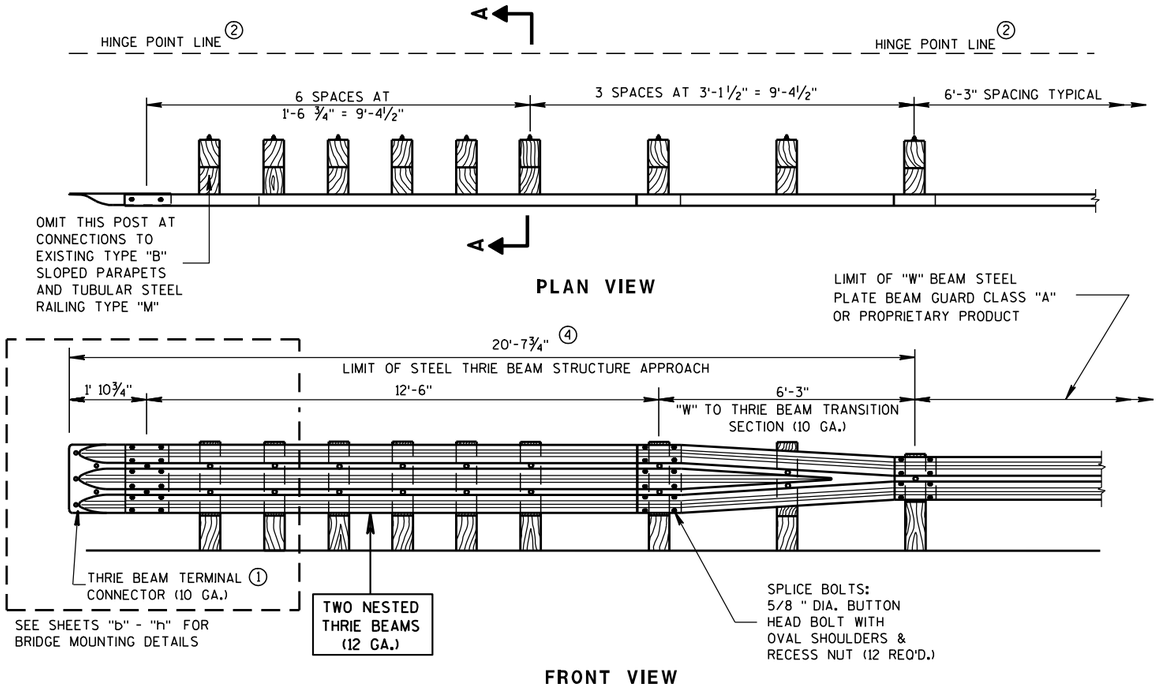
ALTERNATE LUG

(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



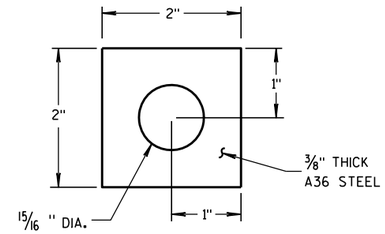


PLATE WASHER DETAIL

GENERAL NOTES

BOLT THE THRIE BEAM TO ALL POSTS AND BLOCKOUTS. DRILL OR PUNCH BOLT HOLES IN THE BEAM IF THE POST SPACING IS LESS THAN 6'-3".

DO NOT USE STEEL POSTS AND NOTCHED PLASTIC BLOCKOUTS IN THE STEEL THRIE BEAM STRUCTURAL APPROACH AND THE TRANSITION SECTION OF STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATIONS.

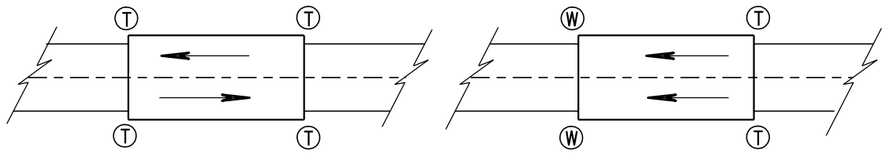
IF ROCK IS ENCOUNTERED, REMOVE ROCK TO FULL DEPTH OF POST PLUS 2 1/2" , AND 12" DIAMETER AROUND POST. SEE 14B15 FOR MORE DETAILS.

① BRIDGE RAILING TYPE "W" DOES NOT REQUIRE A TERMINAL CONNECTOR.

② MINIMUM EMBEDMENT SHALL BE 4'-0". WHERE EXISTING CONDITIONS DO NOT PERMIT THE APPROPRIATE EARTHWORK SHOWN ON THE PLAN TYPICAL SECTIONS OR DETAILS, THE ENGINEER MAY ALLOW THE REDUCTION OR ELIMINATION OF THE 2 FOOT DISTANCE TO THE HINGE POINT. OTHERWISE BUILD AS THE PLAN SHOWS OR AS THE ENGINEER DIRECTS. IF THE 2 FOOT DISTANCE TO THE HINGE POINT IS REDUCED OR ELIMINATED, INCREASE THE POST EMBEDMENT DEPTH TO 4'-6" OR MORE.

③ POST BOLTS ARE 5/8" DIAMETER ASTM A307 BUTTON HEAD BOLT. A POST BOLT REQUIRES A 5/8" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX AND A 5/8" DIAMETER F844 FLAT WASHER. LENGTH OF POST BOLT MAY VARY.

④ ALL WOOD POSTS MUST BE 6" X 8" AND AT LEAST 7'-0" LONG.



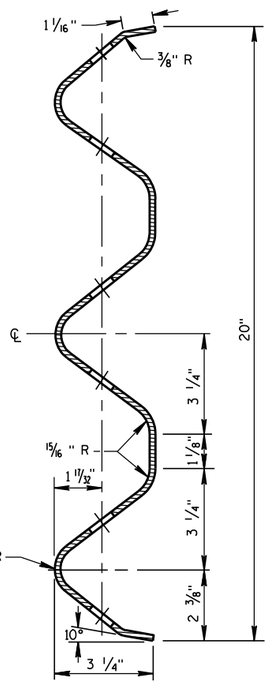
TWO WAY TRAFFIC

ONE WAY TRAFFIC

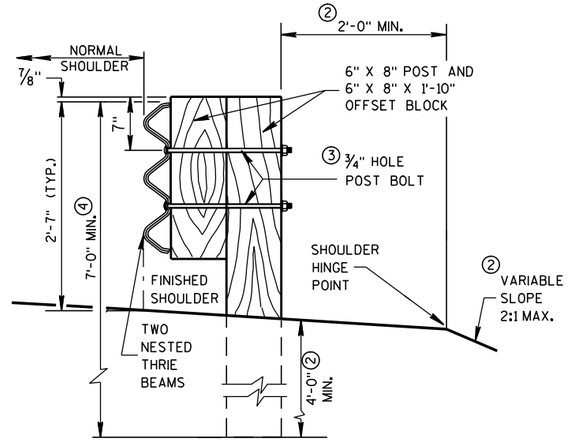
T THRIE BEAM CONNECTION

W W-BEAM CONNECTION WHEN REQUIRED

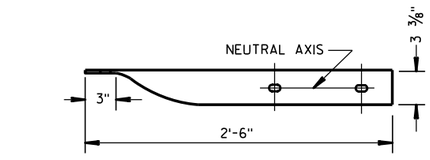
TYPICAL LOCATIONS OF THRIE BEAM AND W-BEAM CONNECTIONS TO BRIDGE

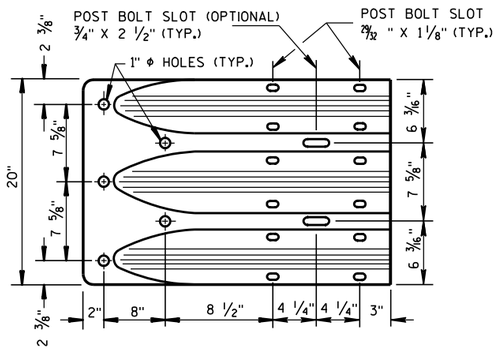


SECTION THRU THRIE BEAM RAIL ELEMENT

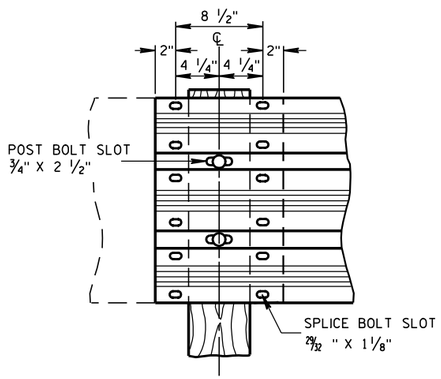


SECTION A-A





THRIE BEAM TERMINAL CONNECTOR



THRIE BEAM SPLICE

STEEL THRIE BEAM STRUCTURE APPROACH

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8/31/2012 DATE — /S/ Jerry H. Zogg ROADWAY STANDARDS ENGINEER

FHWA

6
S.D.D. 14 B 20-11a

GENERAL NOTES

(A) THE SLOPE IN THE AREA BOUNDED BY THE GRADELINE, THE HINGE POINT LINE (HPL), AND THE CLEAR ZONE LIMITS (CZL) SHALL BE 4:1 OR FLATTER.

(B) AFTER FINAL ASSEMBLY, RECHECK CABLE TO BE SURE IT IS TAUT AND HAS NOT RELAXED.

(C) DIFFERENT MANUFACTURES REQUIRE DIFFERENT PERFORATED W-BEAM RAIL END PANELS. SEE MANUFACTURES INFORMATION.

(D) THE TOP OF THE STEEL TUBE ON POST 1 AND POST 2 SHALL NOT BE MORE THAN 3" ABOVE THE FINISH GROUND ELEVATION.

(F) ATTACH ALUMINUM SHEET TO E.A.T. HEAD USING 4 STAINLESS STEEL SELF-TAPPING SCREWS. ONE SCREW PER CORNER.

(G) ½" DIAMETER X 3" LONG LAG BOLT AND WASHER.

(H) HARDWARE VARIES BETWEEN DIFFERENT MANUFACTURES. SEE MANUFACTURE'S DRAWING FOR INFORMATION.

(I) DIMENSIONS MAY VARY. SEE MANUFACTURE'S INFORMATION.

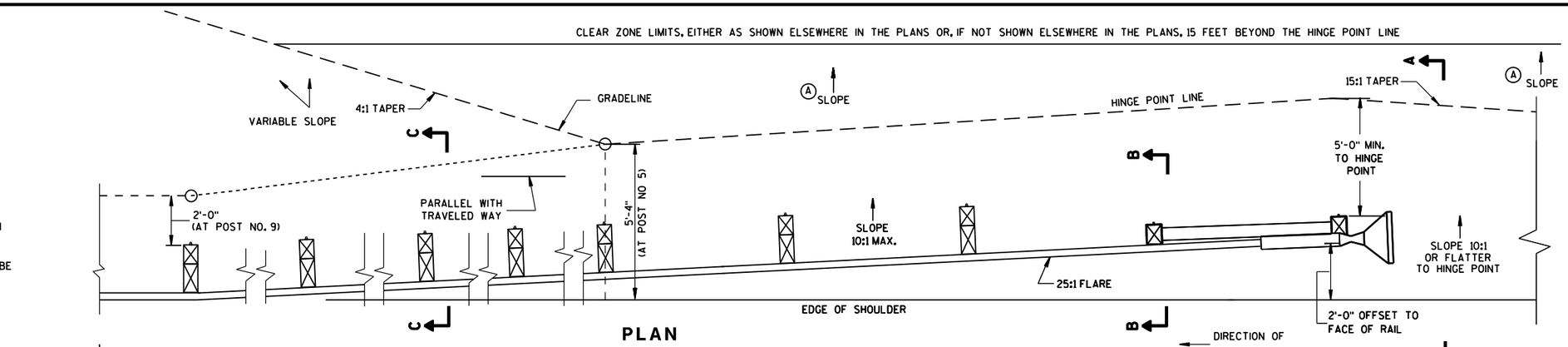
SEE SDD 14B42 FOR MORE INFORMATION.

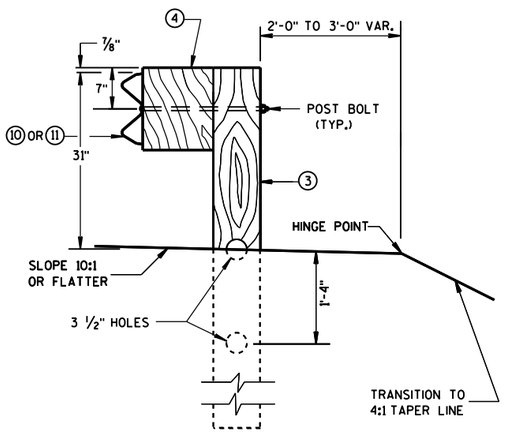
* DO NOT ATTACH BLOCKOUTS TO POSTS 1 AND 2.

DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

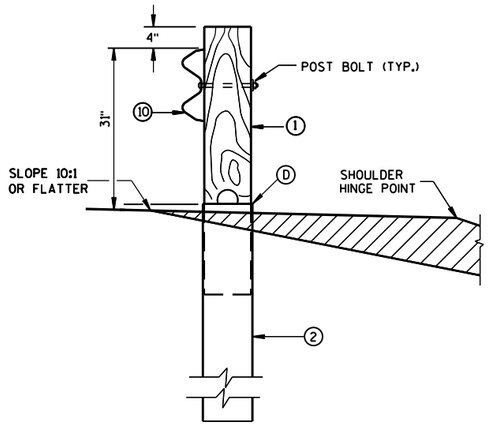
W-BEAM RAIL SPLICES ARE LOCATED AT POST NUMBER 3, AND BETWEEN POST 5 AND 6, BETWEEN POSTS 7 AND 8, AND MIDDLE OF THE SPAN AFTER POST 9.

THE CENTER OF THE UPPER 3½" DIAMETER HOLE ON POST NUMBER 3 THROUGH POST 9 IS TO BE FLUSH WITH THE GROUND LINE UP TO A MAXIMUM OF 2" ABOVE GROUND LINE.

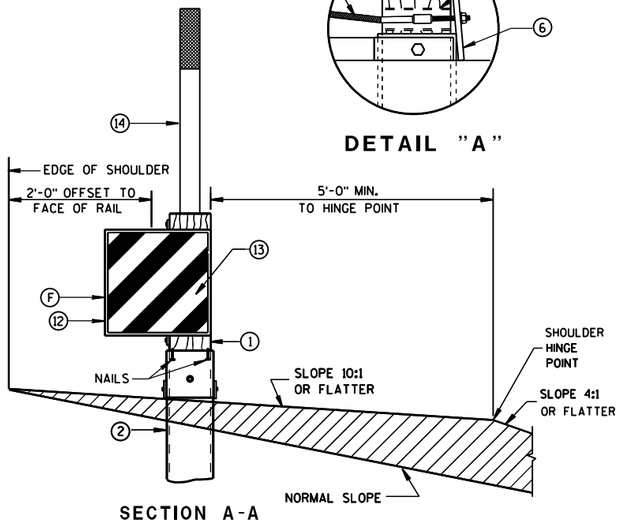




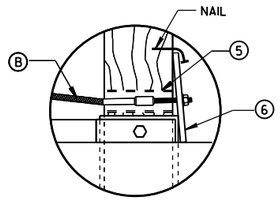
SECTION C-C
TYPICAL AT POST NOS. 3-9



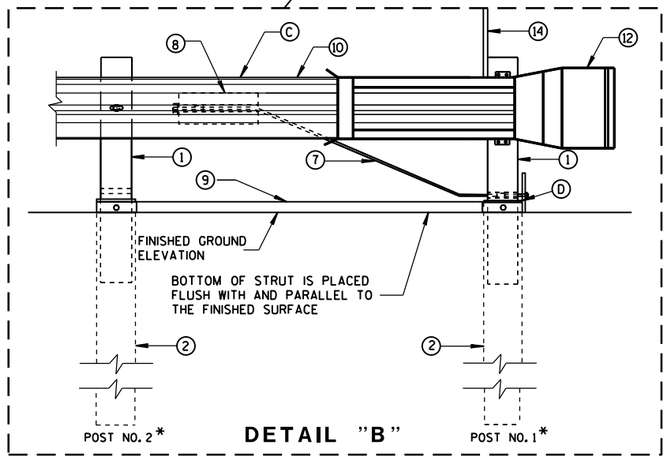
SECTION B-B
TYPICAL AT POST NO. 2*



SECTION A-A
TYPICAL AT POST NO. 1*



DETAIL "A"



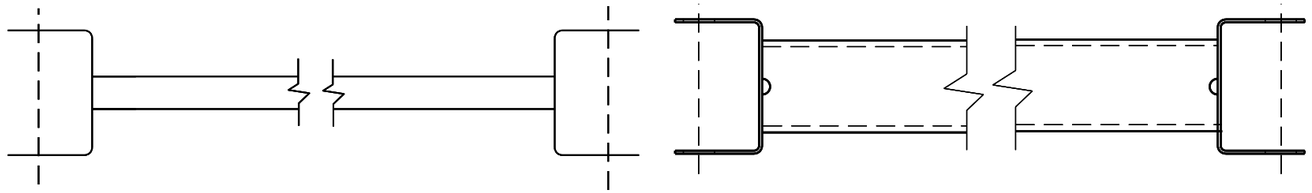
DETAIL "B"

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

S.D.D. 14 B 44-2a

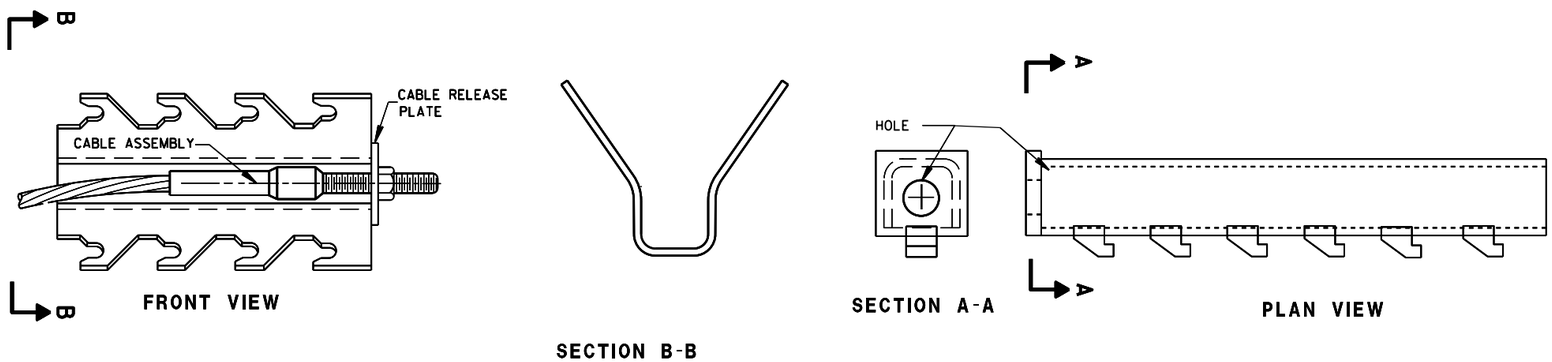
S.D.D. 14 B 44-2a



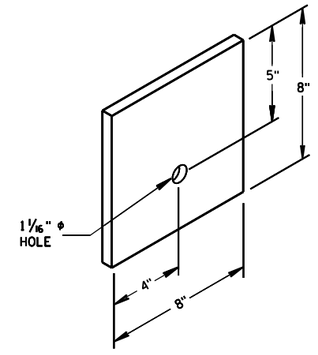
GENERIC GROUND STRUT (9) (H)

BILL OF MATERIALS

PART NO.	DESCRIPTION MATERIALS PROVIDED BY MGS EAT MANUFACTURER. SEE MANUFACTURER'S DETAILS FOR MORE INFORMATION.
(1)	WOOD BREAKAWAY POST
(2)	6" X 8" X 0.188", 6'-0" LONG FOUNDATION TUBE AT POSTS 1 AND 2
(3)	WOOD CRT
(4)	WOOD BLOCKOUT
(5)	PIPE SLEEVE
(6)	BEARING PLATE
(7)	BCT CABLE ASSEMBLY
(8)	ANCHOR CABLE BOX
(9)	GROUND STRUT
(10)	PERFORATED W-BEAM RAIL END PANEL, 12'-6" LONG.
(11)	STANDARD W-BEAM RAIL. MULTIPLE SECTIONS REQUIRED. SECTIONS VARY IN LENGTH.
(12)	END SECTION EAT
(13)	0.040" ALUMINUM SHEET WITH REFLECTIVE SHEETING TYPE F PER SECTION 637 OF THE STANDARD SPECIFICATIONS
(14)	EAT MARKER POST - YELLOW (SEE APPROVED PRODUCTS LIST)



GENERIC ANCHOR CABLE BOX (8) (H)

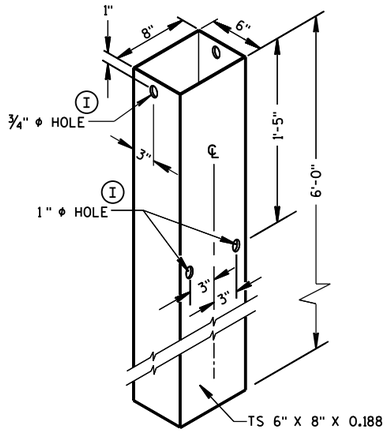


BEARING PLATE (6)

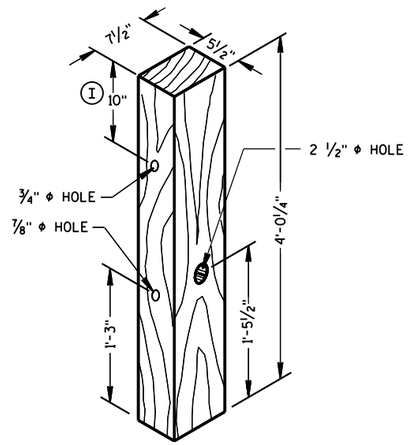
MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6
S.D.D. 14 B 44-2b

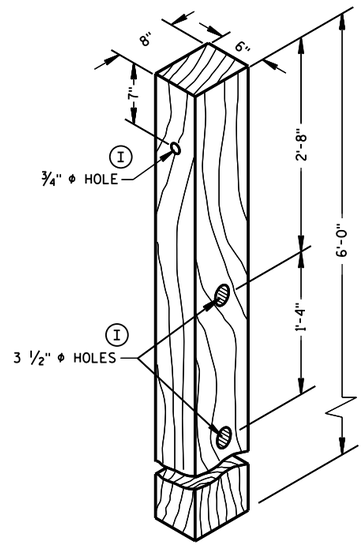


FOUNDATION TUBE (2)



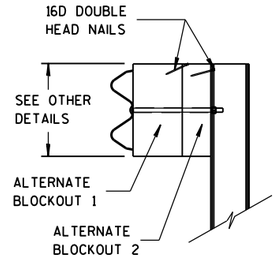
POSTS NUMBER 1 AND 2

WOOD BREAKAWAY POST (1)

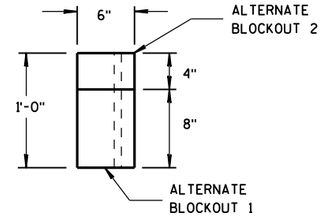


POSTS NUMBER 3-9

WOOD CRT POST (3)

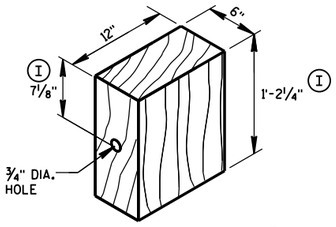


SIDE VIEW



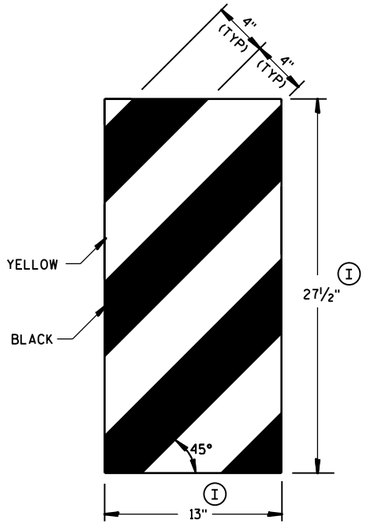
TOP VIEW

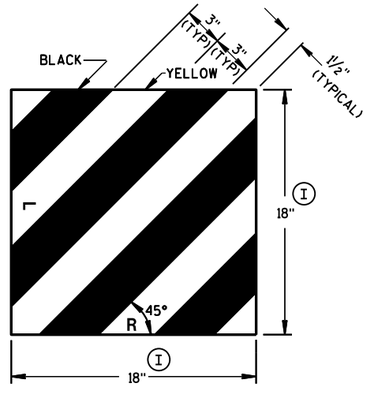
ALTERNATE WOOD BLOCKOUT DETAIL



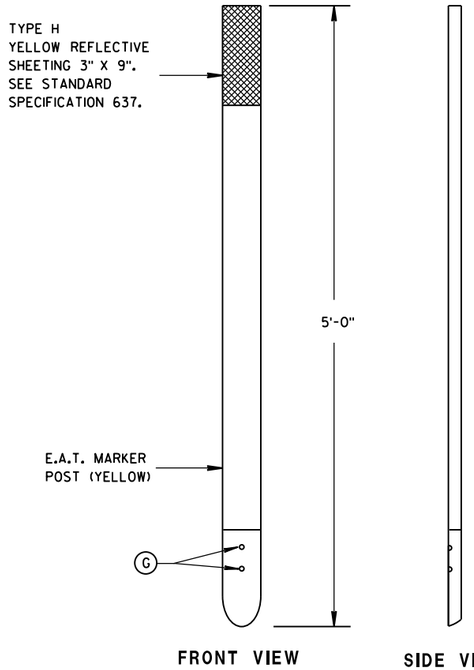
WOOD BLOCKOUT (4)

REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2





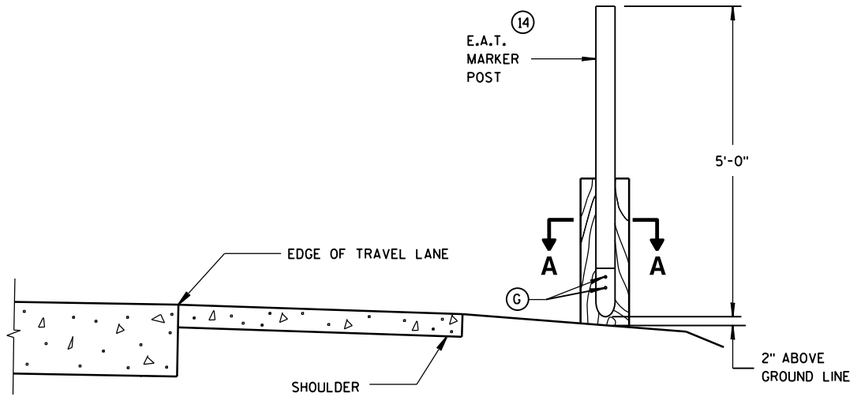
GENERIC REFLECTIVE SHEETING (13) (H)



FRONT VIEW

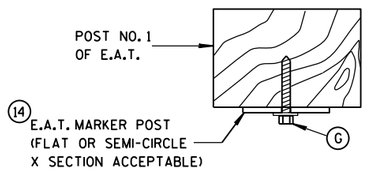
SIDE VIEW

E.A.T. MARKER POST (14)



TYPICAL INSTALLATION OF E.A.T. MARKER POST BACKSIDE OF POST NO. 1

(E.A.T. AND RAIL REMOVED FOR CLARITY)



SECTION A-A

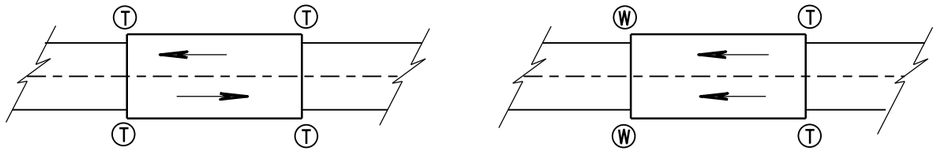
MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2014 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
FHWA

6

S.D.D. 14 B 44-2c



TWO WAY TRAFFIC

ONE WAY TRAFFIC

Ⓣ THRIE BEAM CONNECTION

Ⓦ W-BEAM CONNECTION WHEN REQUIRED

TYPICAL LOCATIONS OF THRIE BEAM AND W-BEAM CONNECTIONS TO BRIDGE

GENERAL NOTES

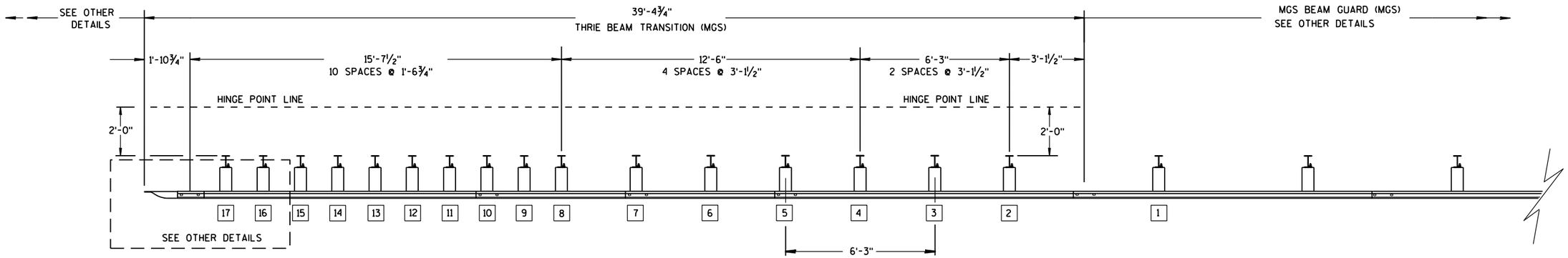
IF ROCK IS ENCOUNTERED, REMOVE ROCK TO FULL DEPTH OF POST PLUS 2½", AND 12" DIAMETER AROUND POST. SEE 14B42 FOR MORE DETAILS.

TRANSITION USES STEEL POSTS ONLY.

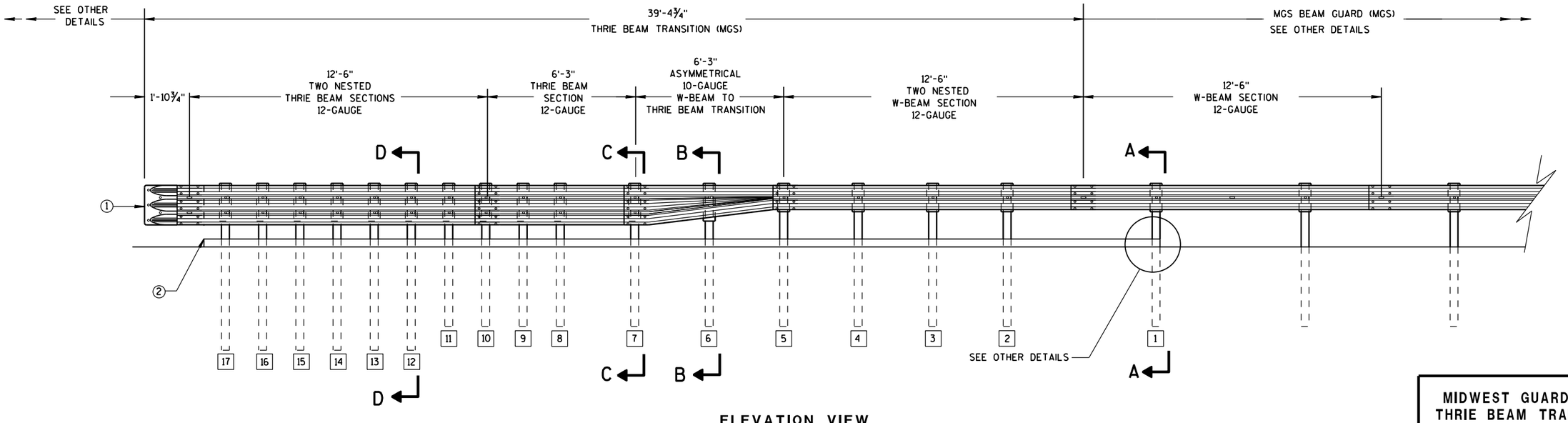
SEE STANDARD DETAIL DRAWING 14 B 42 FOR MORE INFORMATION.

① BRIDGE RAILING TYPE "W" DOES NOT REQUIRE A TERMINAL CONNECTOR.

② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.



PLAN VIEW



ELEVATION VIEW

MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

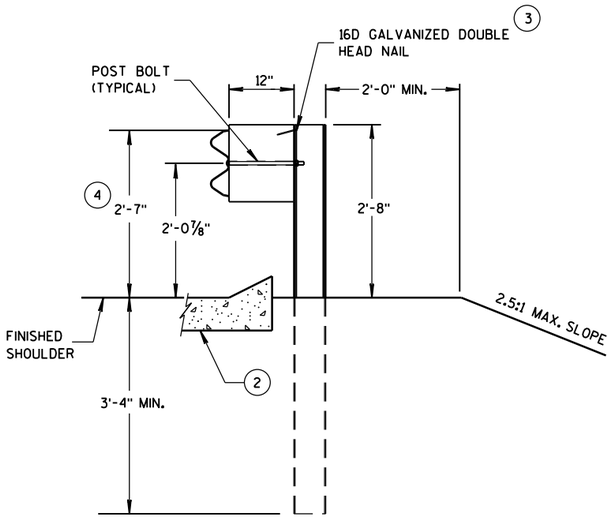
S.D.D. 14 B 45-4a

GENERAL NOTES

(2) OPTIONAL CURB AND GUTTER OR DRAINAGE_FEATURE SEE PLAN FOR INFORMATION.

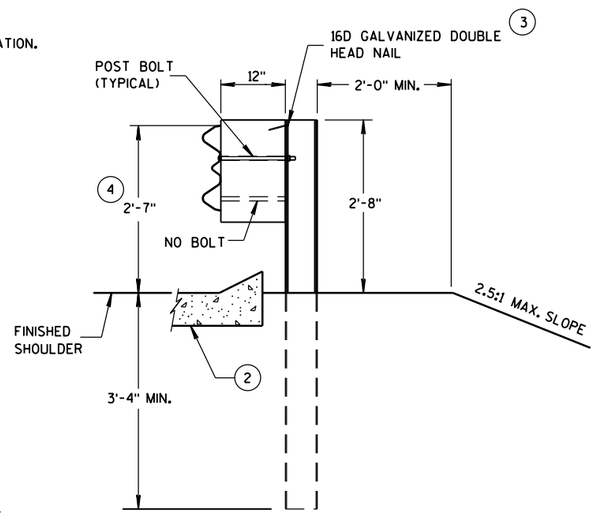
(3) WHEN USING STEEL POSTS AND WOOD BLOCKOUTS INSTALL FOUR 10D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.

(4) TOLERANCE FOR TOP OF W-BEAM RAIL IS ± 1".



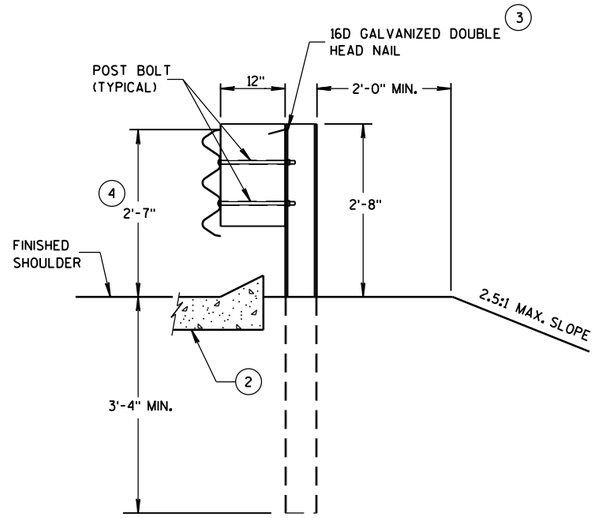
SECTION A-A

POSTS 1-5



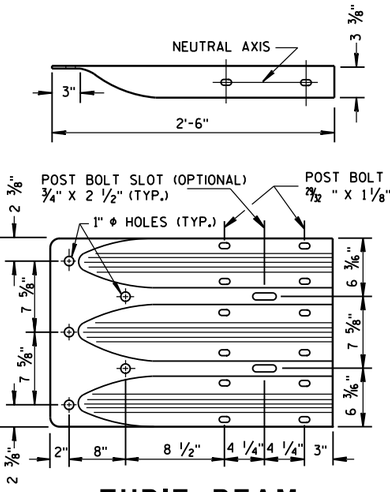
SECTION B-B

POST 6



SECTION C-C

POSTS 7-11



THRIE BEAM TERMINAL CONNECTOR

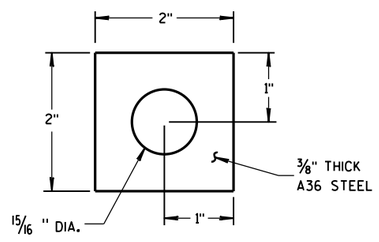
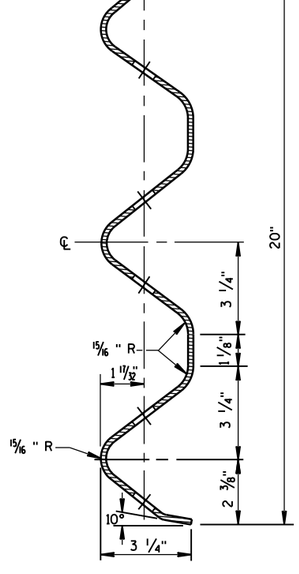
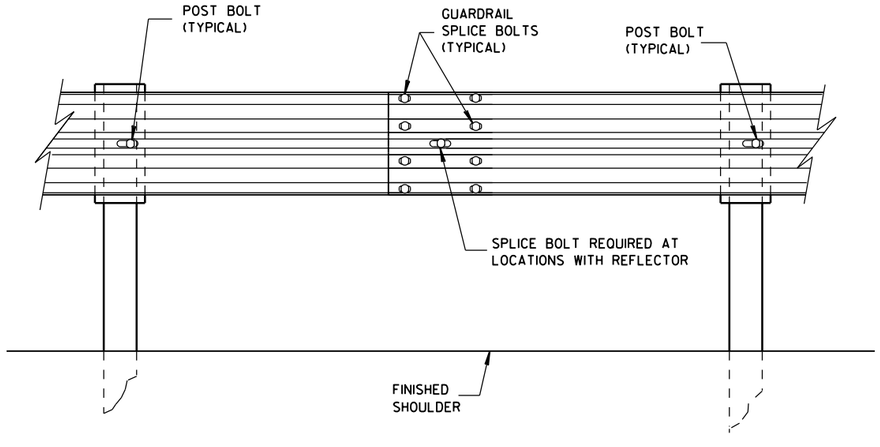


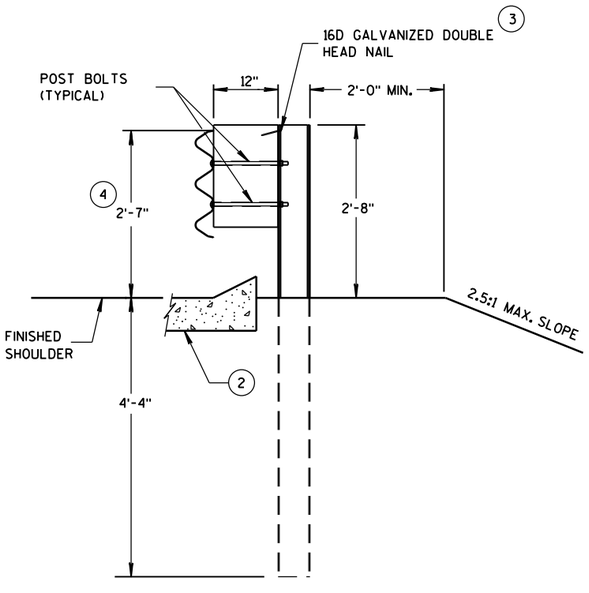
PLATE WASHER DETAIL



SECTION THRU THRIE BEAM RAIL ELEMENT



SPLICE DETAIL



SECTION D-D

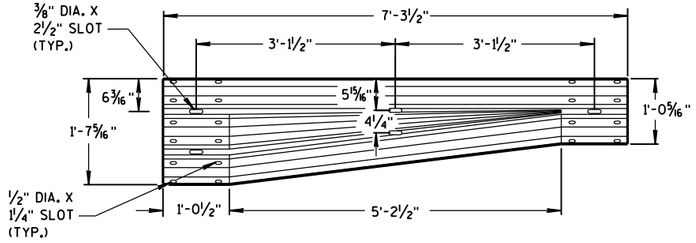
POSTS 12-17

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

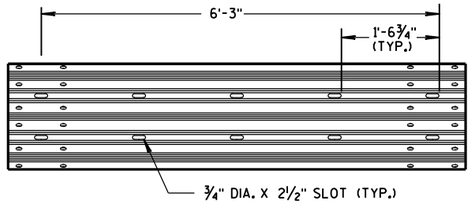
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

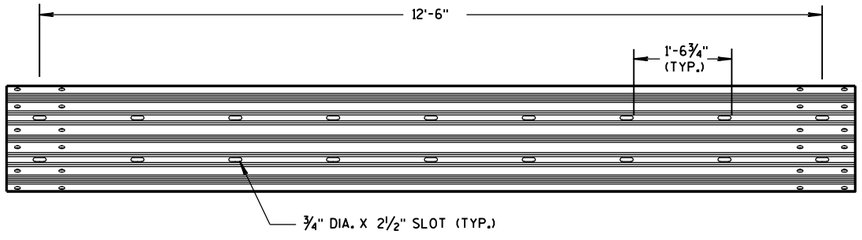
S.D.D. 14 B 45-4b



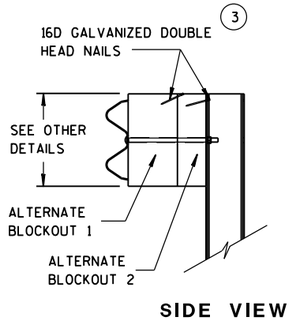
W-BEAM TO THRIE BEAM TRANSITION SECTION



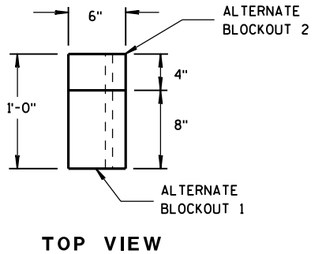
6'-3" THRIE BEAM SECTION



12'-6" THRIE BEAM SECTION

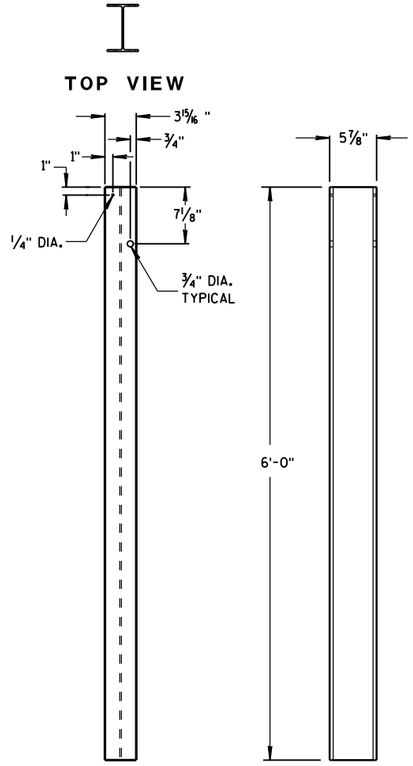


SIDE VIEW



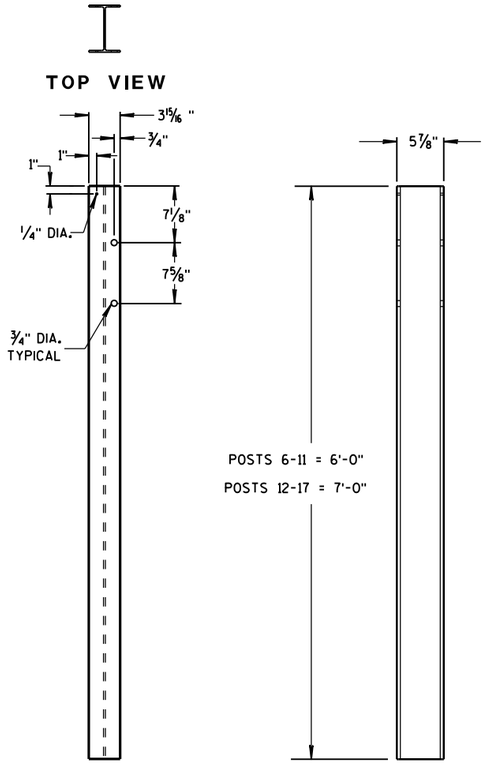
TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL



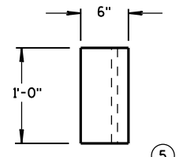
FRONT VIEW SIDE VIEW

STEEL POSTS 1-5

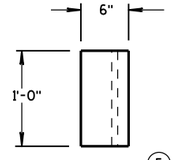


FRONT VIEW SIDE VIEW

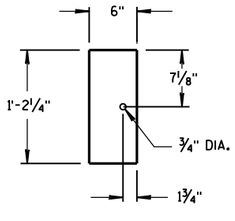
STEEL POSTS 6-17



TOP VIEW 5

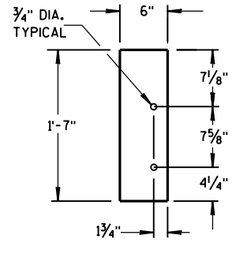


TOP VIEW 5



FRONT VIEW

BLOCKOUT POSTS 1-5



FRONT VIEW

BLOCKOUT POSTS 6-17

GENERAL NOTES

STEEL POSTS ARE W6X9 OR W6X8.5.

BOLT HOLES FOR POST ARE ON FRONT AND OF SIDE OF POST.

(3) WHEN USING STEEL POSTS AND WOOD BLOCKOUTS INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.

(5) WOOD BLOCKS MAY BE CONSTRUCTED OUT OF 2 WOOD BLOCKS. SEE ALTERNATE WOOD BLOCK DETAIL.

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

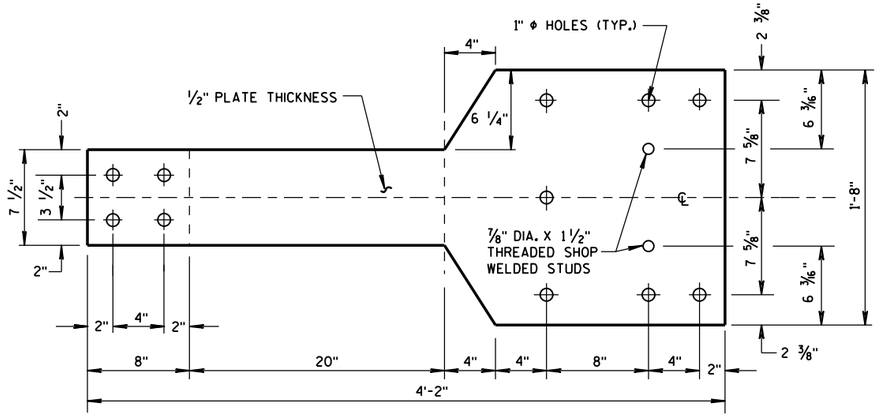
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

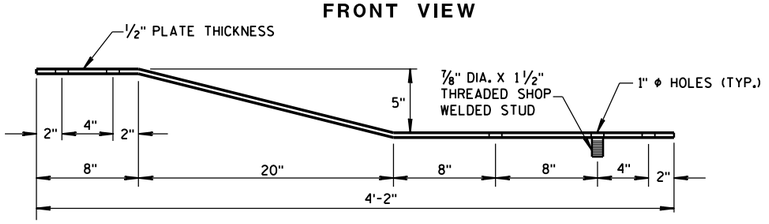
S.D.D. 14 B 45-4c

GENERAL NOTES

(4) TOLERANCE FOR TOP OF W-BEAM RAIL IS ± 1".

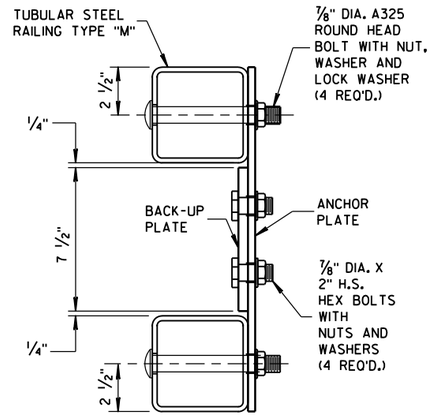


FRONT VIEW

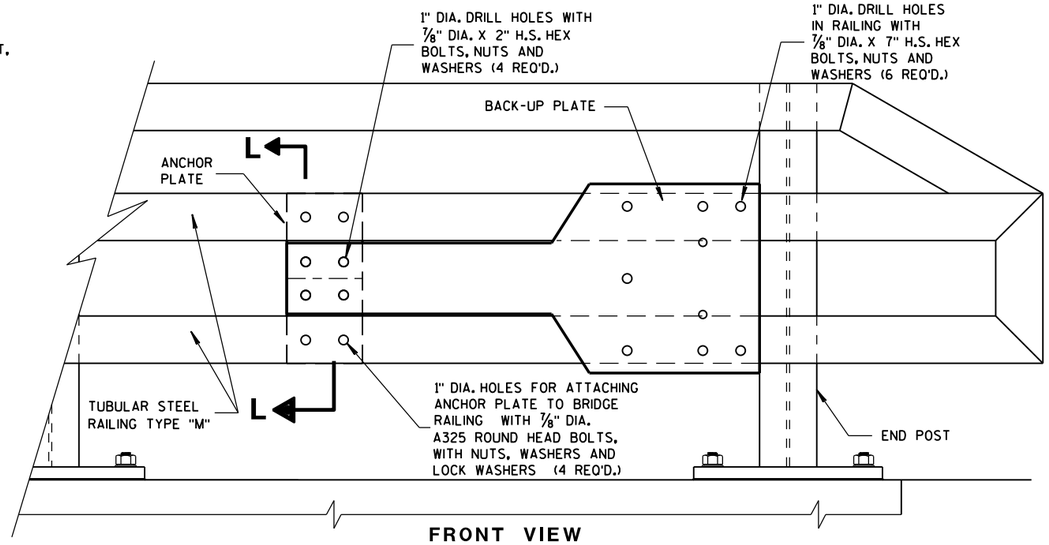


PLAN VIEW

BACK-UP PLATE DETAIL, TYPE "M"

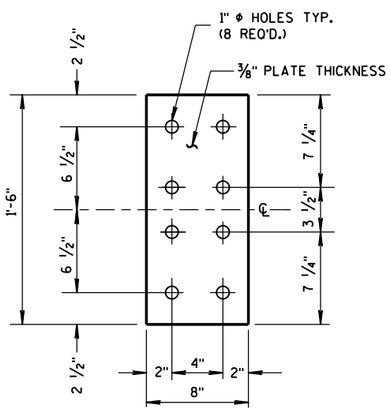


SECTION L-L



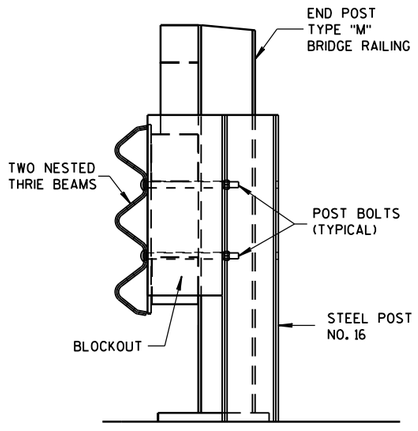
FRONT VIEW

ANCHOR AND BACK-UP PLATE MOUNTING TO BRIDGE RAILING, TYPE "M"

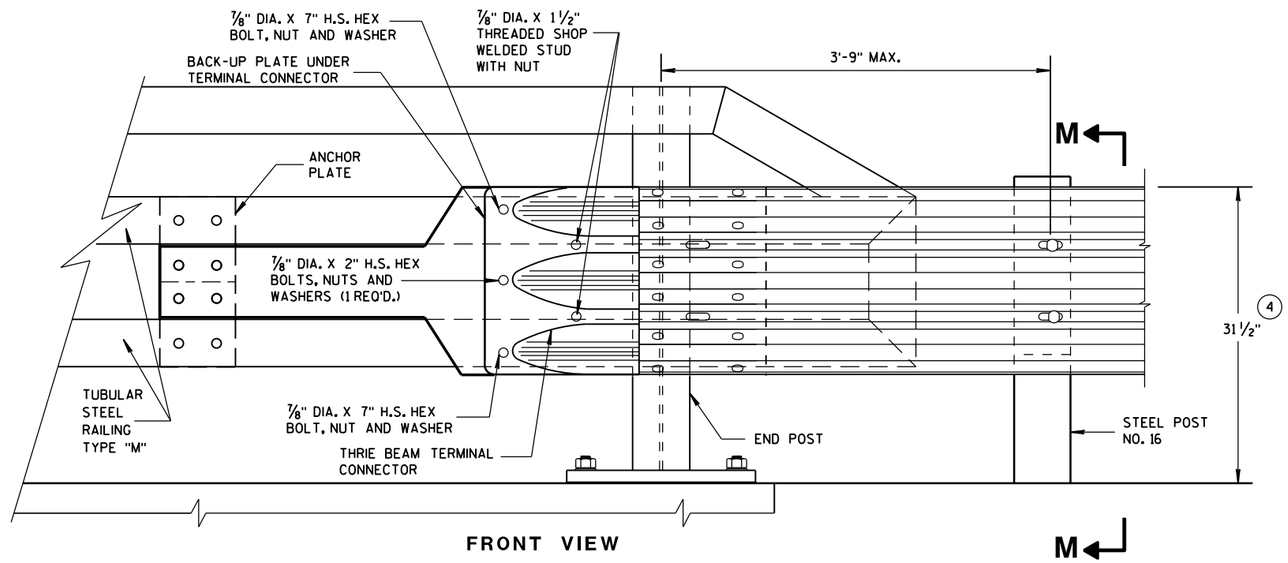


FRONT VIEW

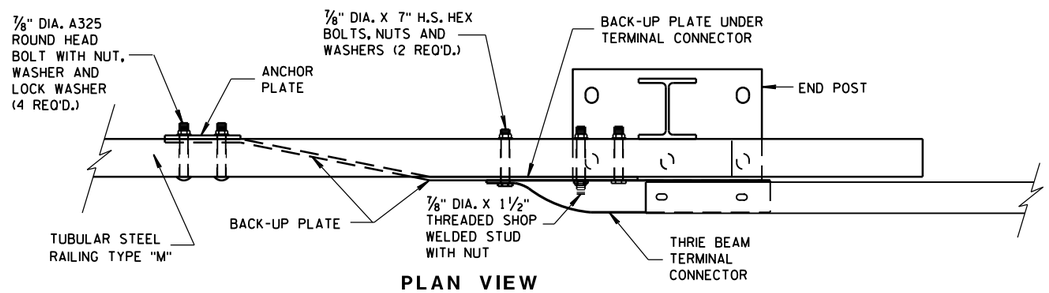
ANCHOR PLATE DETAIL, TYPE "M"



SECTION M-M



FRONT VIEW



PLAN VIEW

THRIE BEAM CONNECTION TO TUBULAR RAILING, TYPE "M"

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

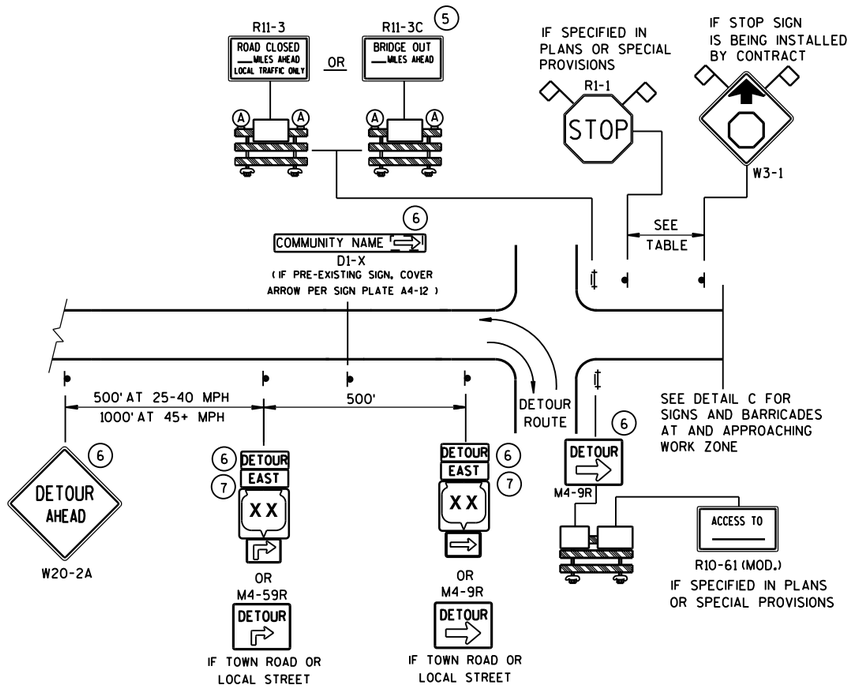
APPROVED
June, 2015 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
FHWA

6

S.D.D. 14 B 45-4h

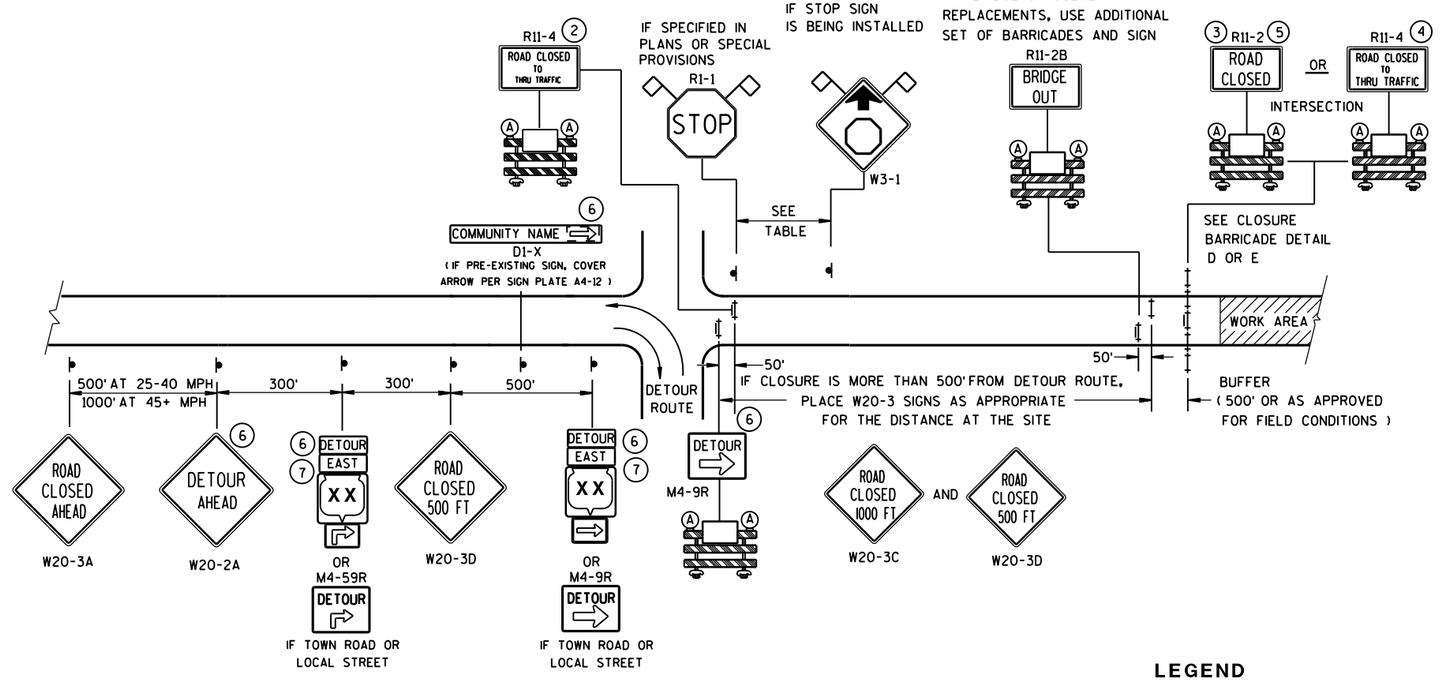
6

S.D.D. 14 B 45-4h



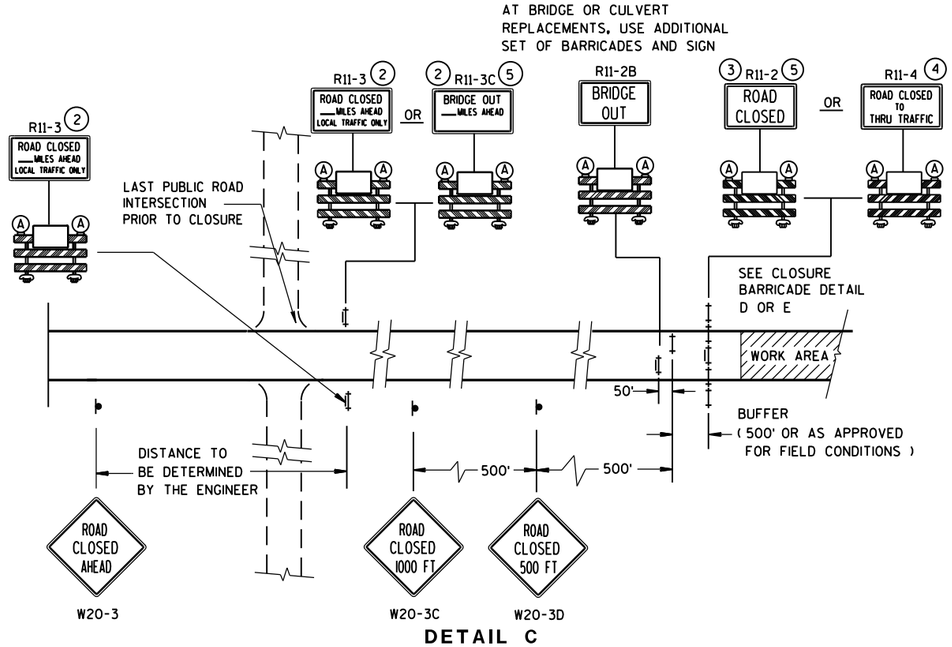
DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR

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)

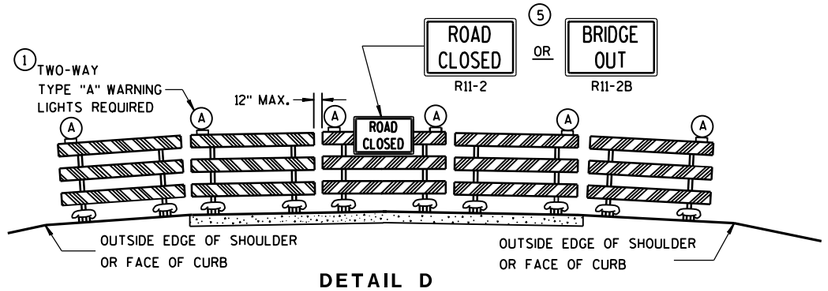
BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6

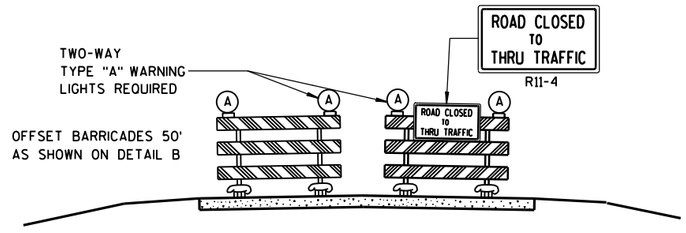
S.D.D. 15 C 2-6a



DETAIL D

ROAD CLOSURE BARRICADE DETAIL

APPROACH VIEW



DETAIL E

LANE CLOSURE BARRICADE DETAIL

APPROACH VIEW

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

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

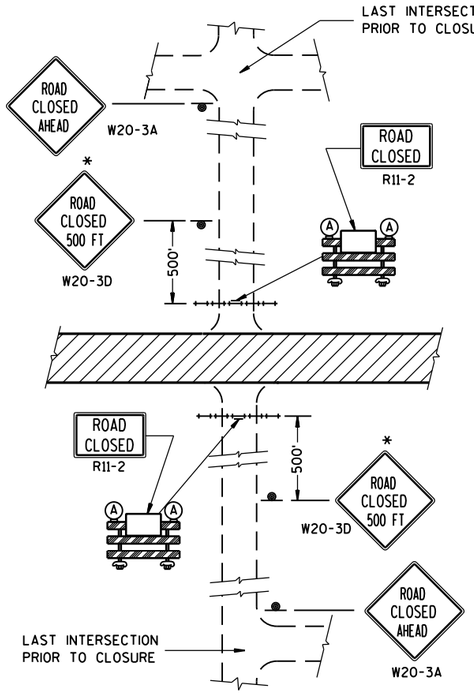
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

Sept. 2015 — DATE

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

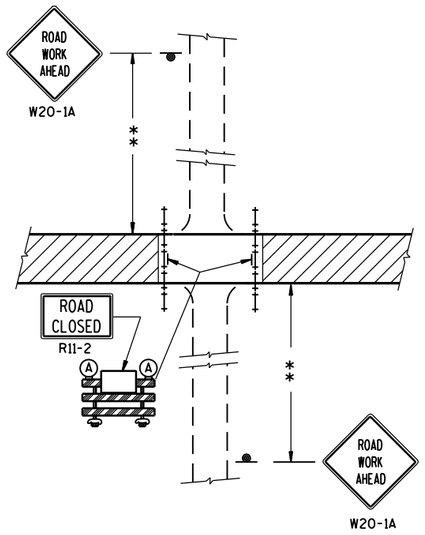
6

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



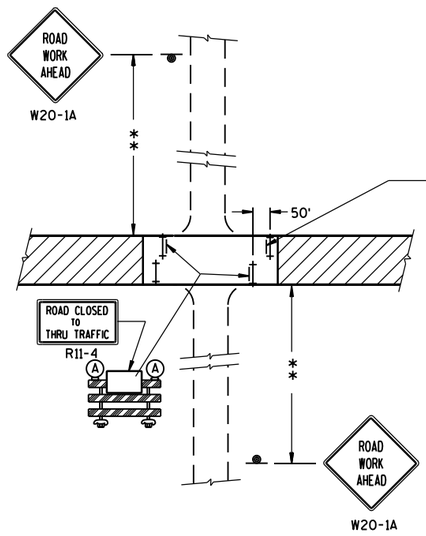
DETAIL 1

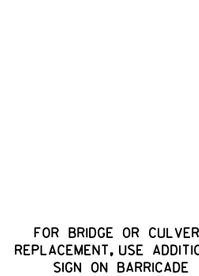
(NO ACCESS TO PROJECT)

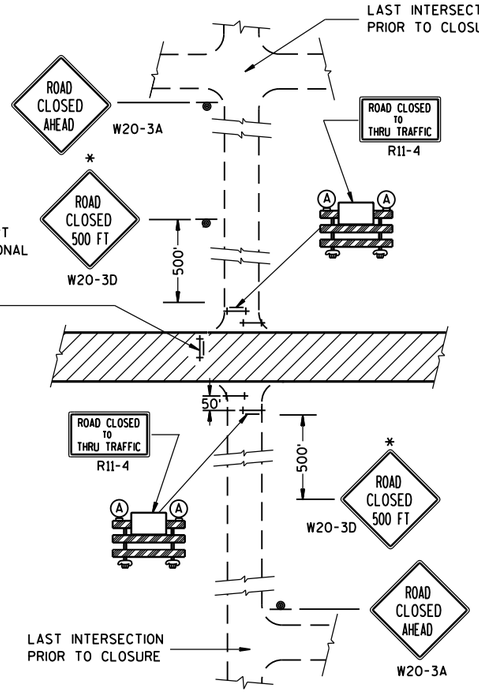


DETAIL 2

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







DETAIL 3

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

DETAIL 4

(CONTRACTOR, LOCAL BUSINESS AND RESIDENT ACCESS TO PROJECT)

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

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

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

LEGEND

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

BARRICADES AND SIGNS FOR SIDEROAD CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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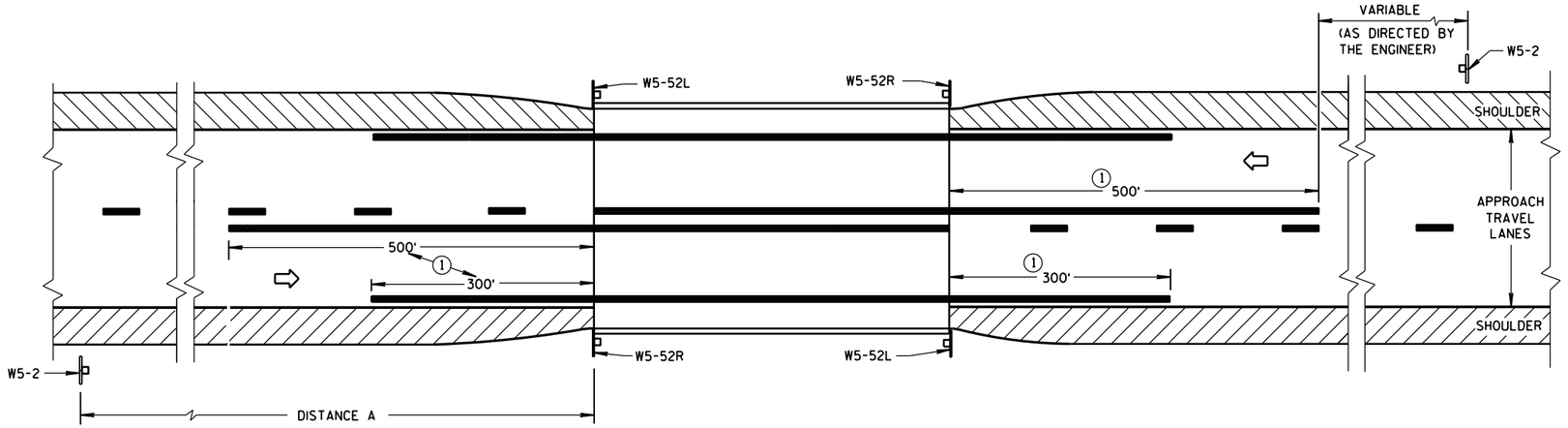
S.D.D. 15 C 3-3

6

S.D.D. 15 C 3-3



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.

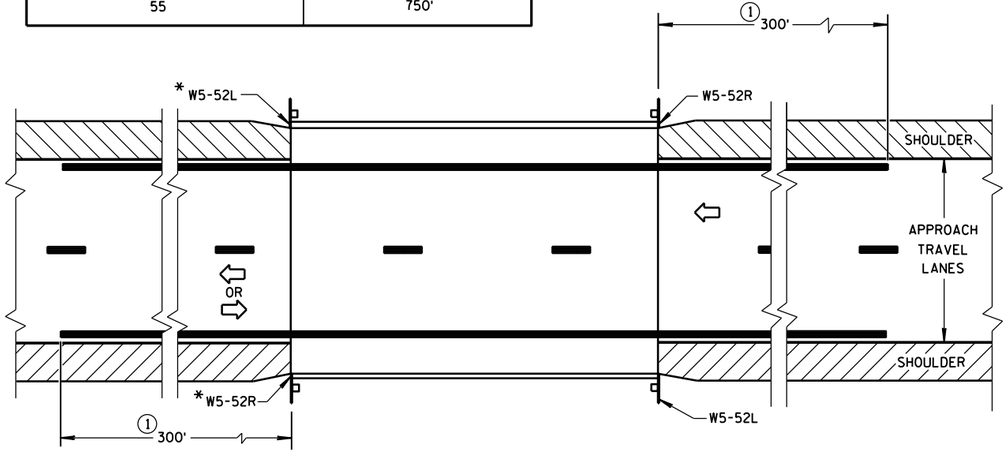
DISTANCE TABLE

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

SITUATION 1

WARRANTING CRITERIA:

BRIDGE WIDTH IS AT LEAST 16 FEET BUT LESS THAN 24 FEET

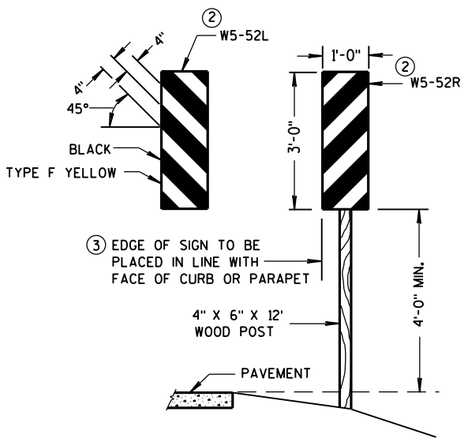


*OMIT ON ONE-WAY TRAVELLED WAYS

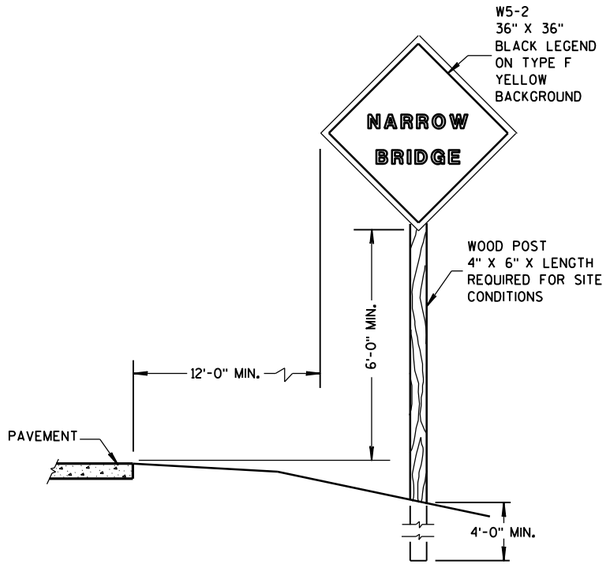
SITUATION 2

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.



OBJECT MARKER PLACEMENT



SIGN PLACEMENT

SIGNING & MARKING FOR TWO LANE BRIDGES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

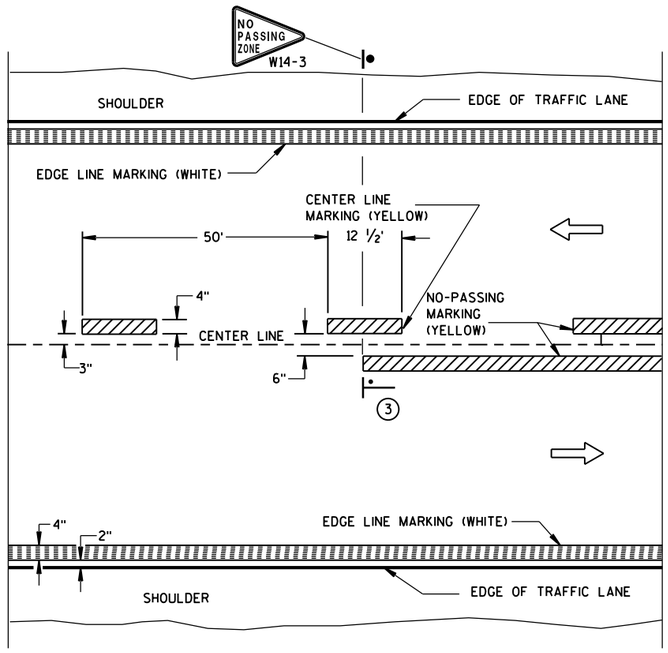
3-2014 DATE

/S/ Travis Feltes STATE TRAFFIC ENGINEER

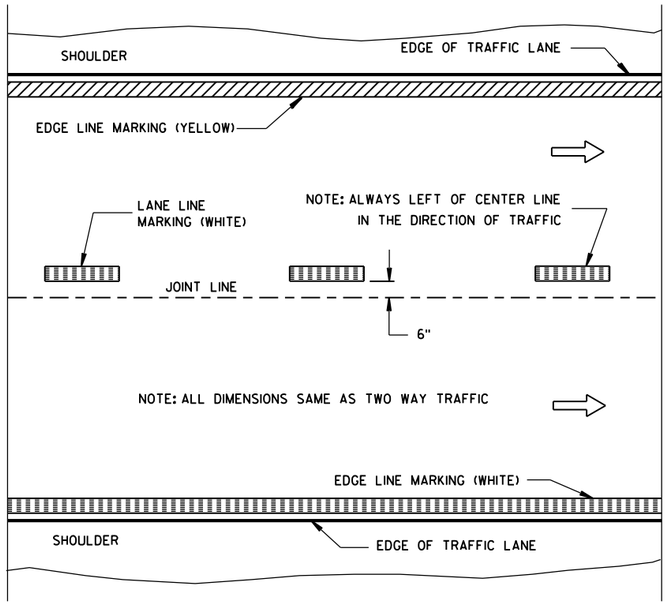
FHWA

6

S.D.D. 15 C 6-7

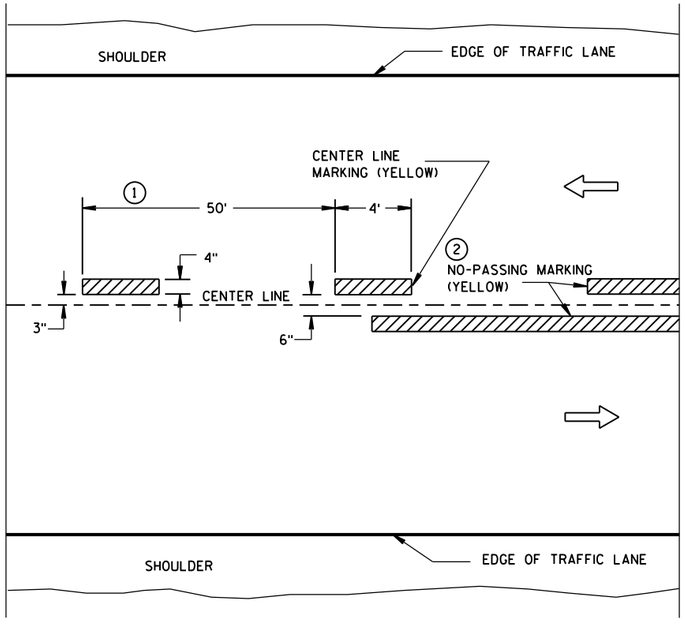


TWO WAY TRAFFIC

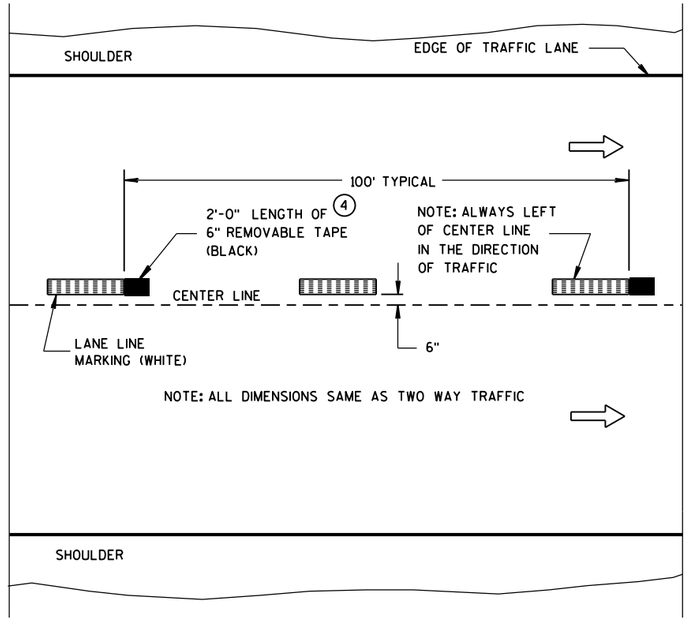


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY (INTERMEDIATE) PAVEMENT MARKING

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

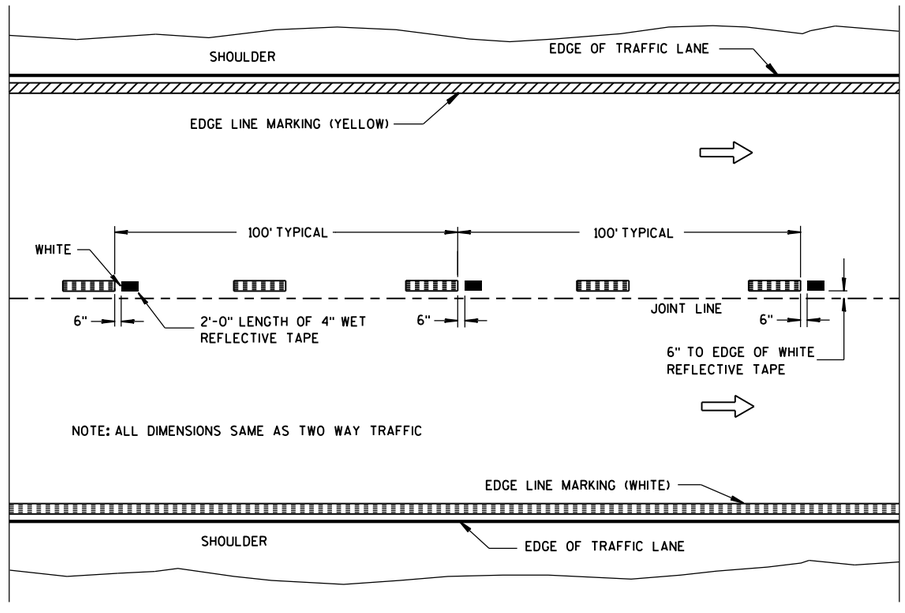
GENERAL NOTES

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

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

NOTE

ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL



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

LEGEND

"T" MARKING

POST MOUNTED SIGN

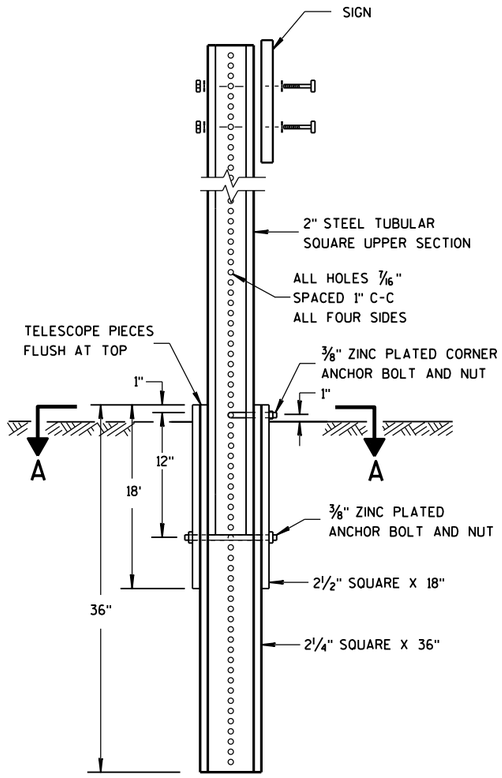
PAVEMENT MARKING (MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

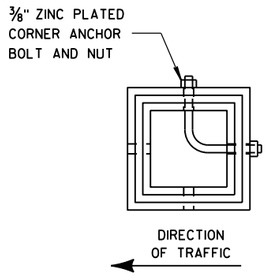
APPROVED
5-13-2013 DATE
/S/ Travis Feltes STATE TRAFFIC E
FHWA

6

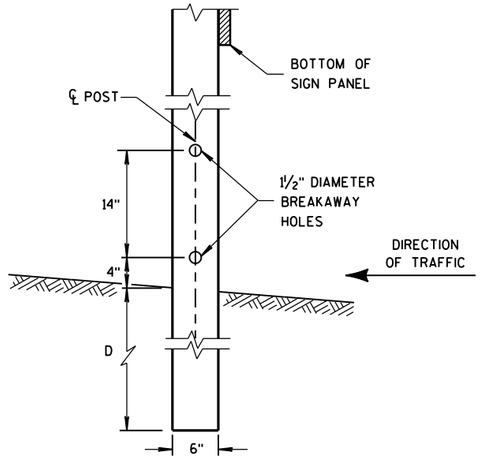
S.D.D. 15 C 8-16a



DETAIL OF TUBULAR STEEL SIGN POST



SECTION A-A



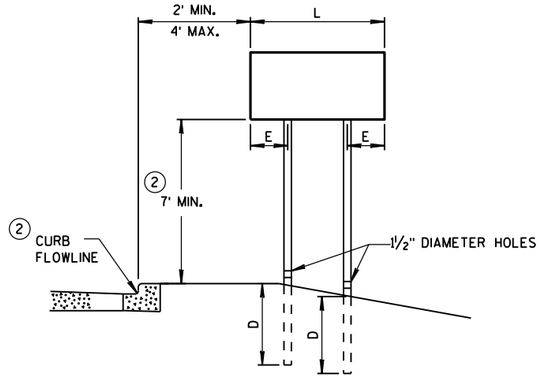
4"x6" WOOD POST MODIFICATION

GENERAL NOTES

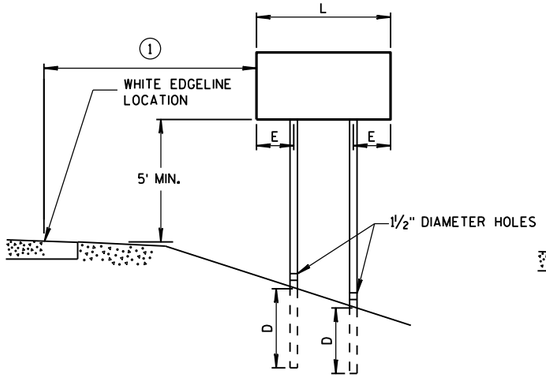
(1) 6 FEET FROM THE EDGE OF PAVEMENT (EDGE LINE LOCATION) UNLESS OTHERWISE DIRECTED BY THE PROJECT ENGINEER. LATERAL OFFSET SHOULD BE ADJUSTED TO AVOID THE DITCH FLOWLINE.

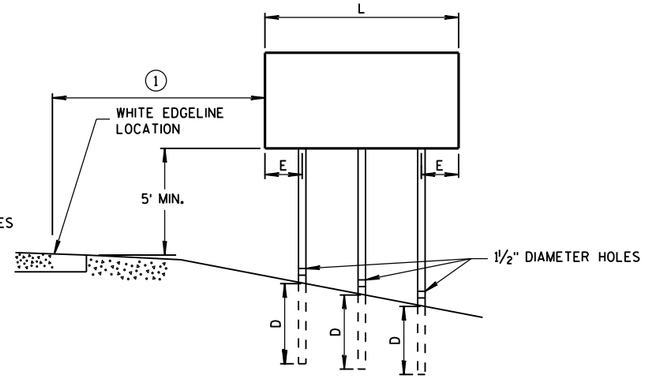
(2) THE EXISTENCE OF CURB AND GUTTER DOES NOT IN ITSELF MANDATE THE VERTICAL CLEARANCE ILLUSTRATED. THAT HEIGHT IS TYPICALLY MEASURED WHERE THERE IS SIDEWALK ADJACENT TO THE ROADWAY OR PARKING IS PERMITTED. IN THE ABSENCE OF SIDEWALK, VERTICAL CLEARANCE IS MEASURED FROM THE TOP OF THE CURB. IF NO SIDEWALK AND NO PARKING, VERTICAL CLEARANCE MAY BE REDUCED TO 5 FOOT MINIMUM. OFFSET OF SIGNS IS MEASURED FROM THE CURB FLOWLINE.

(3) FOR SIGNS REQUIRING 4 POSTS, SPACE INTERMEDIATE POSTS EVENLY.



URBAN AREA





RURAL AREA

POST MOUNTING DETAIL FOR TEMPORARY TRAFFIC CONTROL FIXED MESSAGE SIGNS

TUBULAR STEEL POSTS

AREA OF SIGN INSTALLATION (SQ. FT.)	NUMBER OF REQUIRED TUBULAR STEEL POSTS
9 OR LESS	1
GREATER THAN 9 LESS THAN OR EQUAL TO 18	2
GREATER THAN 18 LESS THAN OR EQUAL TO 27	3

SIGNS WIDER THAN 3 FEET OR LARGER THAN 9 SQ. FT. SHALL BE MOUNTED ON MULTIPLE POSTS (SEE ABOVE TABLE).

SIGNS LARGER THAN 27 SQ. FT. SHALL NOT BE MOUNTED ON TUBULAR STEEL POSTS.

WOOD POST EMBEDMENT DEPTH

AREA OF SIGN INSTALLATION (SQ. FT.)	D (MIN)
20 OR LESS	4'
GREATER THAN 20	5'

4" X 6" WOOD POST

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

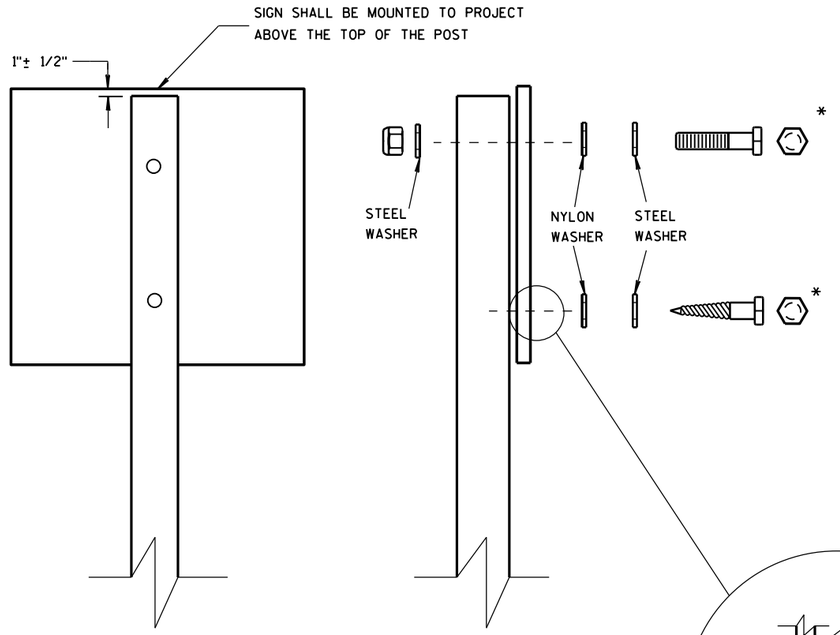
SEE NOTE (3)

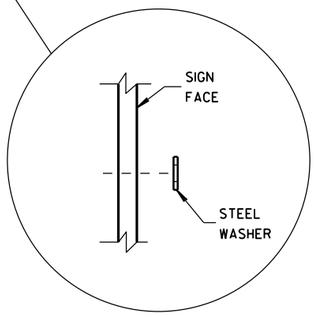
TEMPORARY TRAFFIC CONTROL FIXED MESSAGE SIGNS

STATE OF WISCONSIN DEPARTMENT OF TRANSPO

6

S.D.D. 15 D 38-1a





WASHER PLACEMENT WHEN SIGN HAS OTHER THAN TYPE H OR TYPE F FACE

NUTS, BOLTS AND LAGS USED FOR MOUNTING SIGNS SHALL HAVE HEXAGONAL HEADS AND SHALL BE EITHER:

A. HOT DIP GALVANIZED IN ACCORDANCE WITH ASTM DESIGNATION: A 153, CLASS D, OR SC 3

B. ELECTRO-GALVANIZED IN ACCORDANCE WITH ASTM DESIGNATION: B 633, TYPE III, SC 3

THREADS ON BOLTS AND NUTS SHALL BE MANUFACTURED WITH SUFFICIENT ALLOWANCE FOR THE CADMIUM PLATE OR GALVANIZED COATING TO PERMIT THE NUTS TO RUN FREELY ON THE BOLTS.

WOOD POSTS (4" x 4" or 4" x 6")

LAG SCREWS - 3/8" X 3"

MACHINE BOLTS - 5/16" X 6-1/2" OR 7" LENGTH W/ NUTS

SQUARE STEEL POSTS (2" x 2")

MACHINE BOLTS - 3/8" X 3-1/4" LENGTH W/ NUTS

RIVETS - 9/32" (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH

WASHERS (ALL POSTS) -

1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL

1-1/4" O.D. X 3/8" I.D. X .080 NYLON FOR ALL TYPE H SIGNS

* TWO DIFFERENT FASTENING SYSTEMS ARE SHOWN FOR ILLUSTRATION PURPOSES. ON ANY INDIVIDUAL SIGN, EITHER ONE OR THE OTHER SYSTEM SHALL BE USED. ACTUAL NUMBER OF FASTENERS PER SIGN VARIES WITH THE SIGN AREA. FOR A SINGLE POST INSTALLATION, ALL SIGNS GREATER THAN 9 SQ. FT. REQUIRE THE USE OF 3 FASTENERS.

6

6

S.D.D. 15 D 38-1b

S.D.D. 15 D 38-1b

ATTACHMENT OF SIGNS TO POSTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

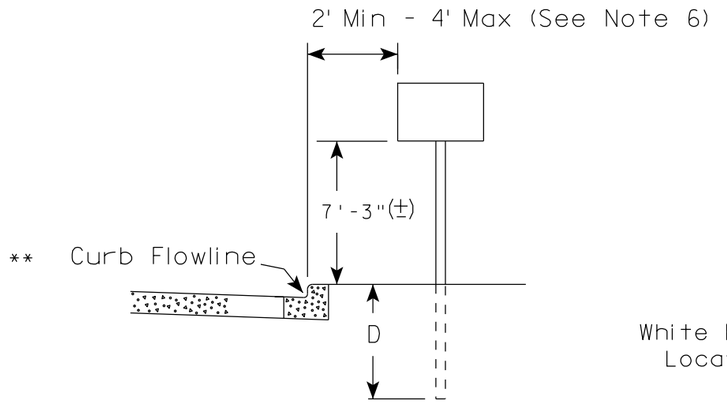
Feb. 2015 — DATE

/S/ Travis Feltes — STATE TRAFFIC ENGINEER

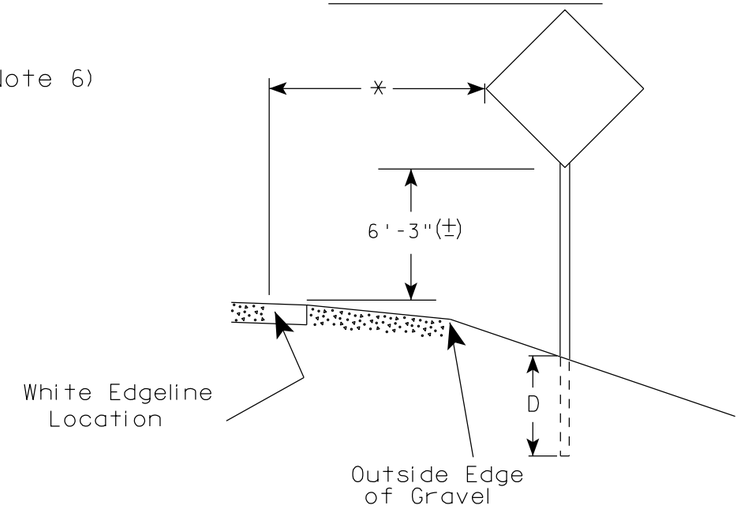
FHWA

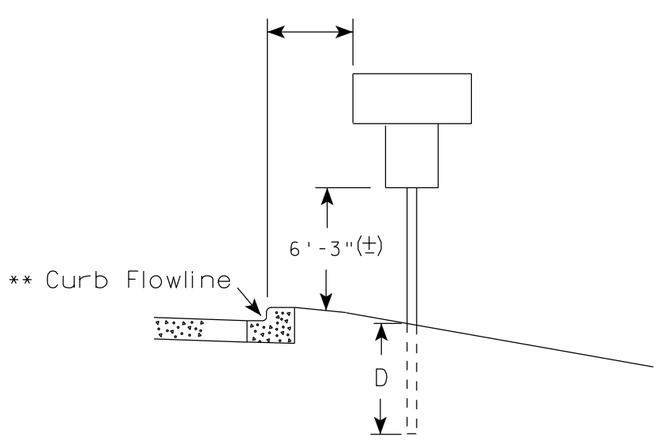
SIGN

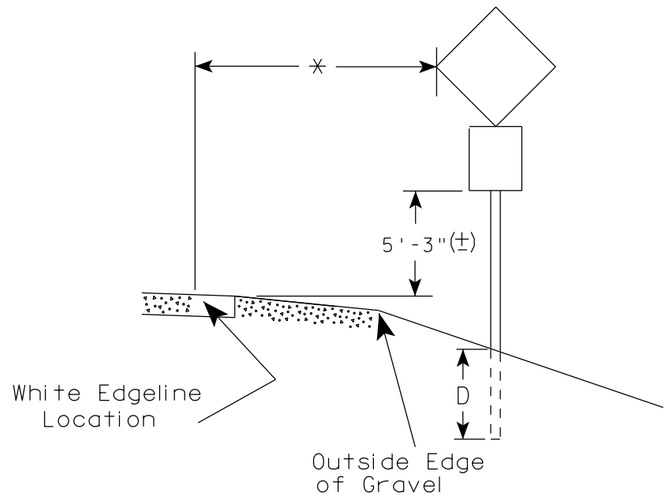
URBAN AREA



RURAL AREA (See Note 2)







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" (±).

POST EMBEDMENT DEPTH

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

** 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.

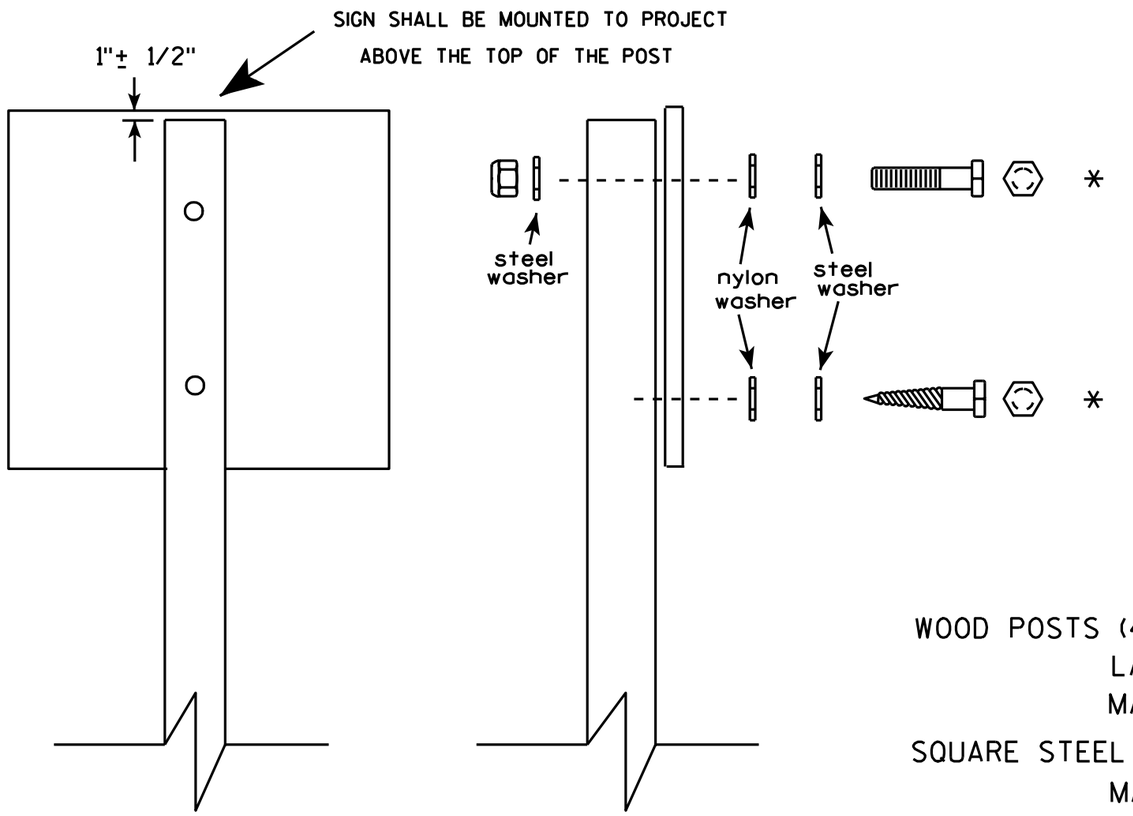
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

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



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

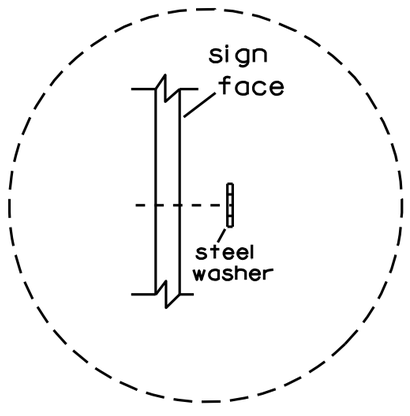
b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.

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

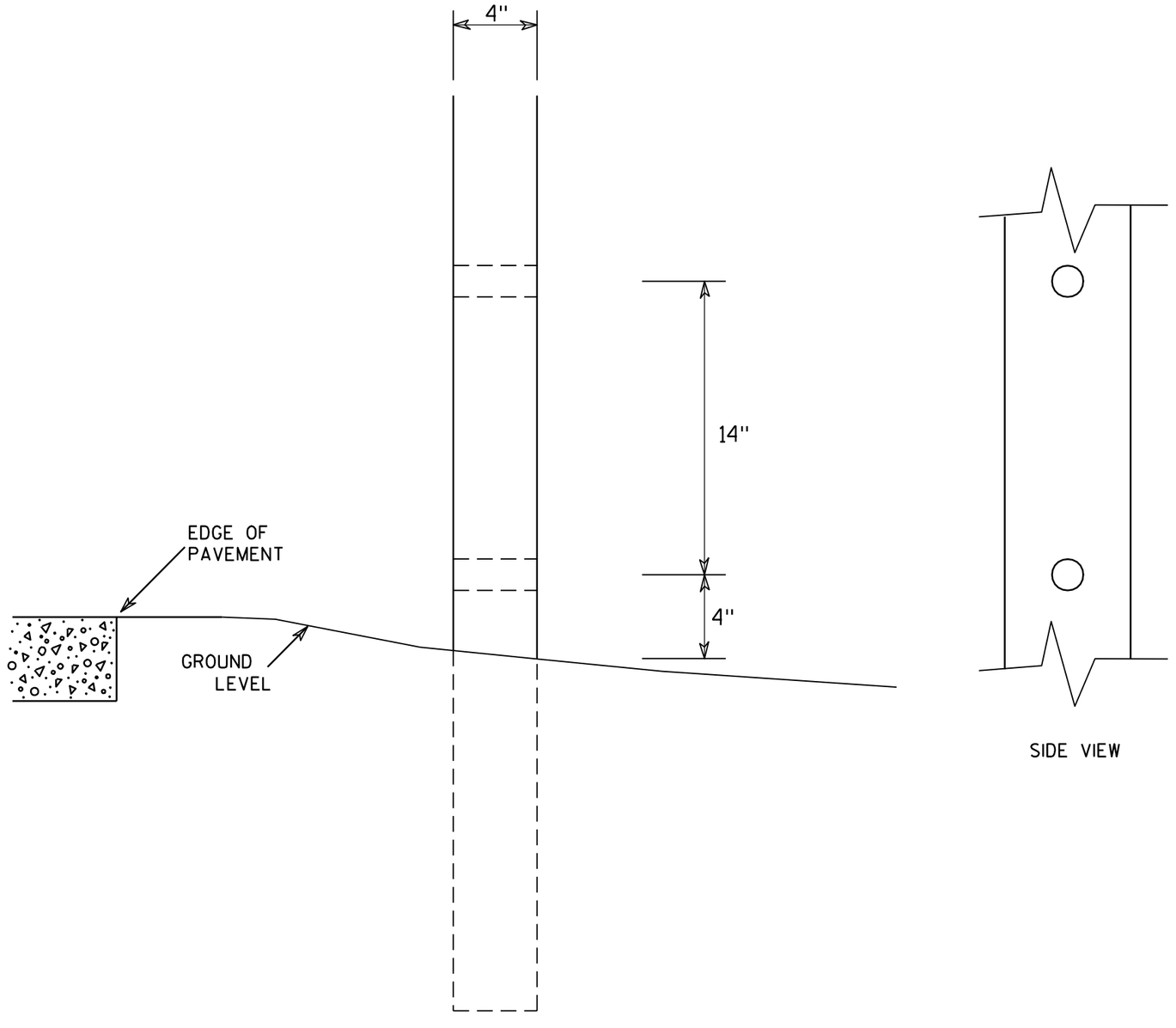
DATE 3/23/10 PLATE NO. A4-8.7

7

7

PROJECT NO:

SHEET NO: 30 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.

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7

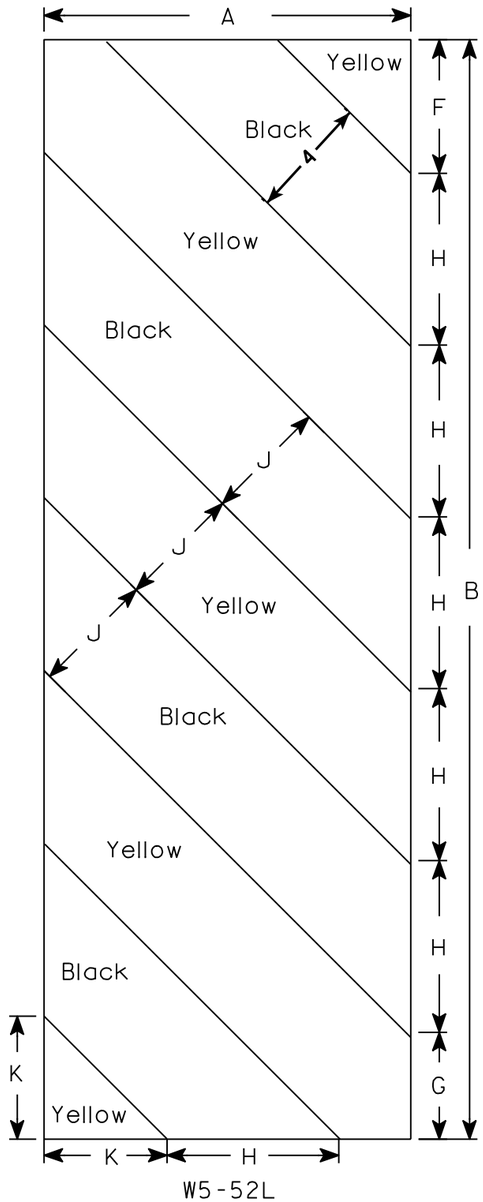
4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

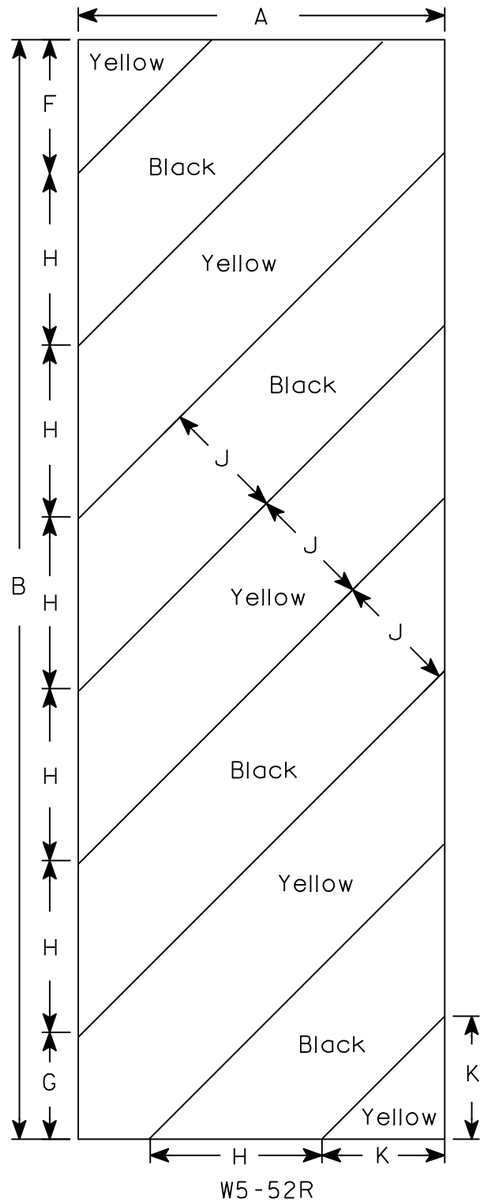
APPROVED Chester J Spang
for State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 31	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

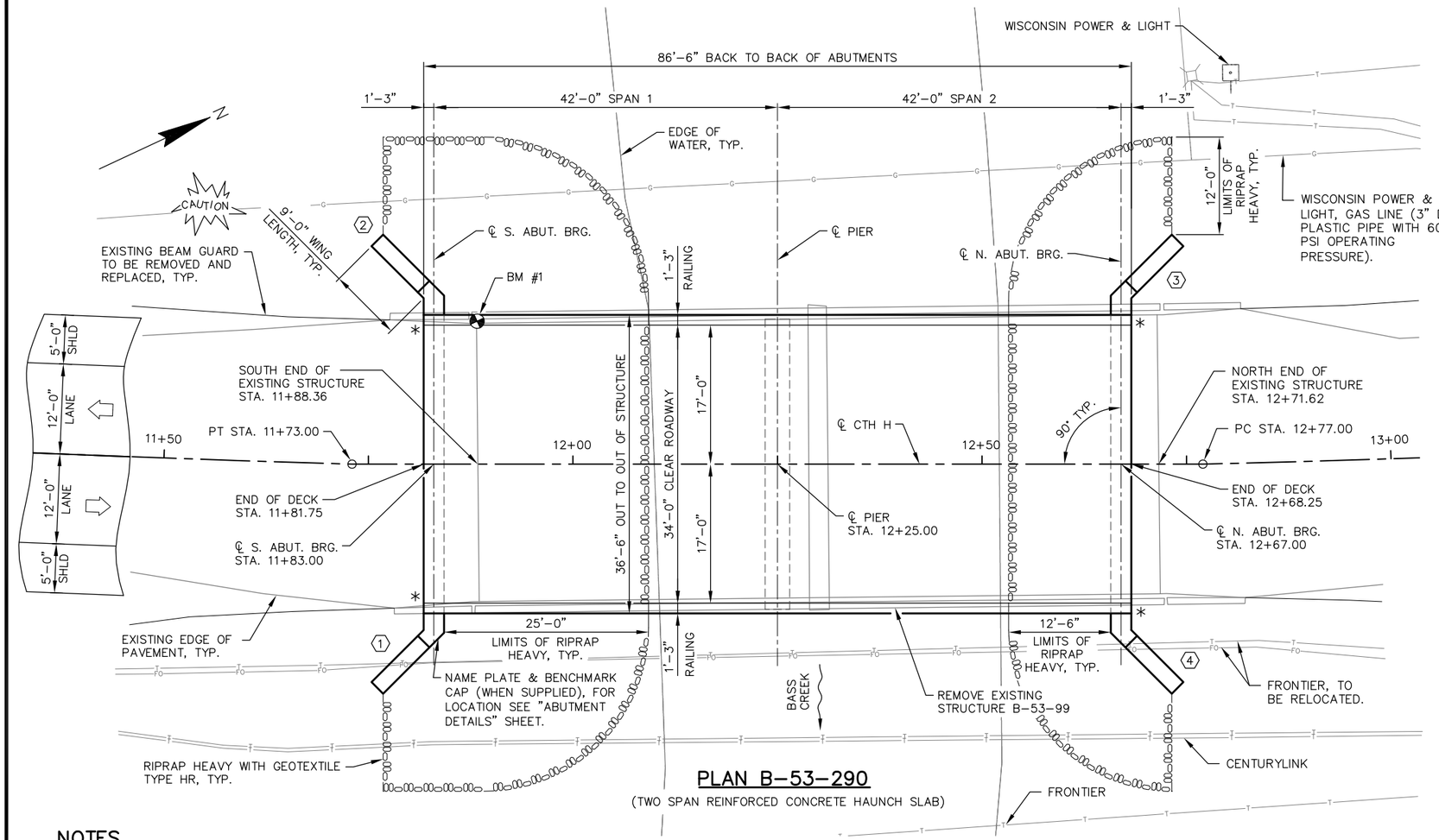
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 32	E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\W552.DGN PLOT DATE : 29-MAY-2012 13:03 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 4.961899:1.000000

WISDOT/CADDS SHEET 42

7

7



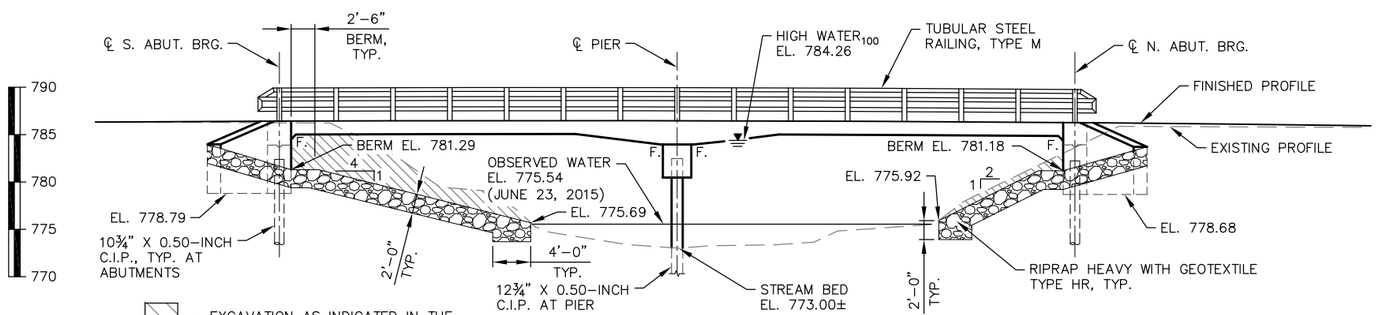
PLAN B-53-290

(TWO SPAN REINFORCED CONCRETE HAUNCH SLAB)

NOTES

* LOCATION OF BEAM GUARD ATTACHMENT

⬡ INDICATES WING NUMBER



▨ – EXCAVATION AS INDICATED IN THE HATCH AREAS, TO BE INCLUDED IN THE BID ITEM "EXCAVATION FOR STRUCTURES BRIDGES B-53-290".

ELEVATION

(NORMAL TO BASS CREEK, LOOKING WEST)

TRAFFIC DATA:

A.A.D.T. (2017)	770
A.A.D.T. (2037)	850
DESIGN SPEED	25 M.P.H.

DESIGN DATA

STATE PROJECT NUMBER: 5942-00-73

LIVE LOAD:

DESIGN LOADING	HL-93
INVENTORY RATING FACTOR	RF=1.16
OPERATING RATING FACTOR	RF=1.51
WISCONSIN STANDARD PERMIT VEHICLE RATING (WIS.-SPV):	250 KIPS

SURFACE IS DESIGNED FOR A FUTURE WEARING SURFACE OF 20 POUNDS PER SQUARE FOOT.

MATERIAL PROPERTIES:

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

FOUNDATION DATA:

ABUTMENTS TO BE SUPPORTED ON 10¾" X 0.50-INCH C.I.P. PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 100 TONS PER PILE AT THE S. ABUT. AND 100 TONS PER PILE AT THE N. ABUT. AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED 40 FT PILE LENGTHS AT SOUTH ABUTMENT AND 55 FT PILE LENGTHS AT NORTH ABUTMENT.

PIER TO BE SUPPORTED ON 12¾" X 0.50-INCH C.I.P. PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 210 TONS PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED 50 FT PILE LENGTHS.

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 DYNAMIC FORMULA TO DETERMINE DRIVEN PILE CAPACITY.

DUE TO THE PRESENCE OF COBBLES AND BOULDERS HARD DRIVING SHOULD BE EXPECTED. PILE POINTS SHALL BE USED TO PROTECT THE PILES DURING DRIVING.

HYDRAULIC DATA:

	DESIGN	REGULATORY
Q_{100}	4200 C.F.S.	9000 C.F.S.
Q_{100} (THRU BRIDGE)	3948 C.F.S.	2946 C.F.S.
Q_{100} (ROAD)	252 C.F.S.	6054 C.F.S.
DRAINAGE AREA	46.9 SQ. MI.	46.9 SQ. MI.
BRIDGE WATER AREA	568 SQ. FT.	635 SQ. FT.
BRIDGE VELOCITY	6.95 F.P.S.	4.64 F.P.S.
HIGH WATER$_{100}$ EL.	784.26 FT	786.54 FT
OVERTOPPING Q	2900 C.F.S.	
OVERTOPPING EL.	783.48 FT	
OVERTOPPING RDWY	17.5 YR	
SCOUR CRITICAL CODE	5	
Q_2	1495 C.F.S	
Q_2 ELEVATION	781.93 FT	

BENCH MARKS

NO.	STATION	DESCRIPTION	ELEVATION
BM #1	11+88.30	BRASS CAP ON SOUTHWEST PARAPET, 17.48' LT.	786.85
BM #2	10+49.55	WHITE PAINT MARK ON CONCRETE SLAB, 42.40' RT.	782.16
BM #3	13+11.25	WHITE PAINT MARK AT BASE OF LADDER, 72.10' LT.	784.19

HORIZONTAL DATUM AND ADJUSTMENT: NAD 83 (2007)
VERTICAL DATUM AND ADJUSTMENT: NAVD 88 (2007)
COORDINATE REFERENCE SYSTEM: ROCK COUNTY

LIST OF DRAWINGS

BRIDGE OFFICE CONTACT
WILLIAM DREHER, P.E.
(608) 266-8489

CONSULTANT CONTACT
ANDY KNUTSON, P.E., S.E.
(608) 588-7866

WISCONSIN PROFESSIONAL ENGINEER
ANDREW C. KNUTSON
E-34662
SPRING GREEN, WI
7/18/2016

NO.	DATE	REVISION	BY

WESTBROOK Associated Engineers, Inc.
619 EAST HOXIE STREET
P.O. BOX 429
SPRING GREEN, WI 53588
PHONE (608) 588-7866
FAX (608) 588-7954

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher SDR 08/09/16
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-53-290

CTH H OVER BASS CREEK

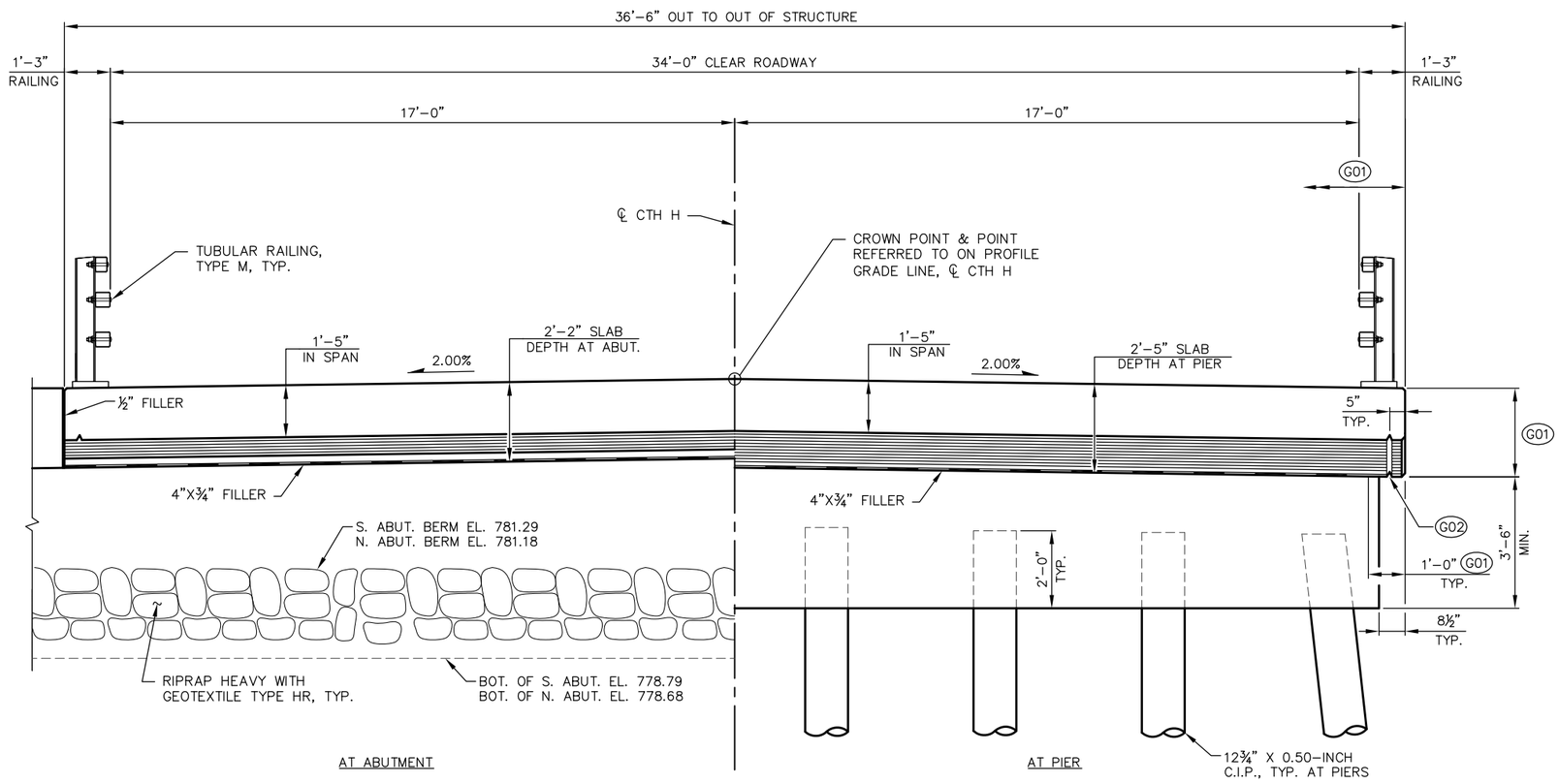
COUNTY: ROCK	TOWN/~~CITY/VILLAGE~~: PLYMOUTH
DESIGN SPEC.: AASHTO LRFD DESIGN SPEC.	
DESIGNED BY: CDS	DESIGN CK'D.: JDO
DRAWN BY: JDO	PLANS CK'D.: ABP

GENERAL PLAN

SHEET 1 OF 9

33

STATE PROJECT NUMBER
5942-00-73



CROSS SECTION THRU ROADWAY

(LOOKING NORTH)

NOTES

(G01) COAT WITH "PROTECTIVE SURFACE TREATMENT" AS PER THE STANDARD SPECIFICATIONS.

(G02) ¾" V-GROOVE. EXTEND V-GROOVE TO 6" FROM FRONT FACE OF ABUTMENT DIAPHRAGM. V-GROOVES ARE REQUIRED.

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

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

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

THE FINISHED GRADED SECTION SHALL BE THE UPPER LIMITS OF EXCAVATION FOR STRUCTURES.

AT ABUTMENTS, CONCRETE POURED UNDER WATER WILL BE ALLOWED AND SHALL BE DONE IN ACCORDANCE WITH SECTION 502.3.5.3 OF THE STANDARD SPECIFICATIONS.

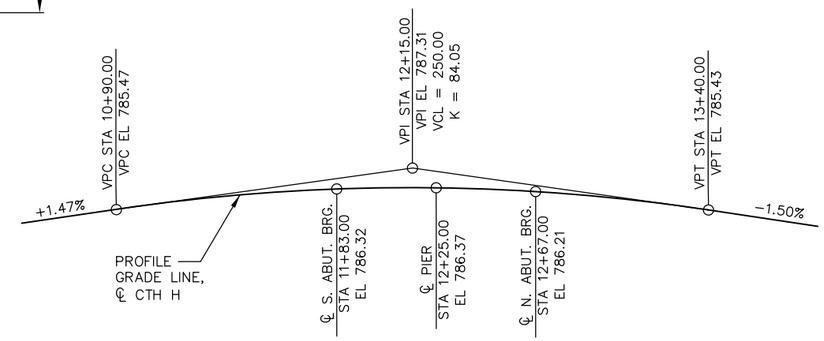
SLAB FALSEWORK SHALL BE SUPPORTED ON PILES OR THE SUBSTRUCTURE, UNLESS AN ALTERNATE METHOD IS APPROVED BY THE ENGINEER.

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

THE EXISTING STRUCTURE (B-53-99) IS A CONTINUOUS TWO SPAN CONCRETE HAUNCH SLAB STRUCTURE WITH AN OVERALL LENGTH OF 84.67-FT AND A CLEAR ROADWAY WIDTH OF 34-FT TO BE REMOVED.

DO NOT PLACE FILL ABOVE 3'-0" FROM BOTTOM OF ABUTMENT UNTIL SUPERSTRUCTURE IS IN PLACE.

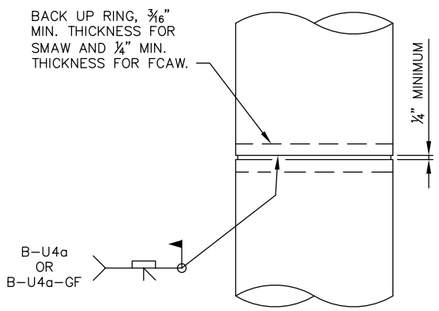
THE QUANTITY FOR BACKFILL STRUCTURE TYPE A, BID ITEMS 210.1100 IS CALCULATED BASED ON THE FIGURE 12.6-1 IN THE WISCONSIN DEPARTMENT OF TRANSPORTATION BRIDGE MANUAL.



PROFILE GRADE LINE, ℄ CTH H

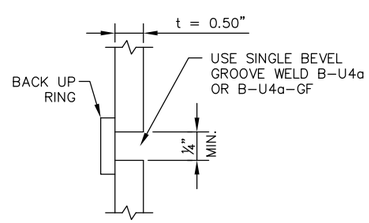
TOTAL ESTIMATED QUANTITIES

ITEM NO.	BID ITEMS	UNIT	S. ABUT.	PIER	N. ABUT.	SUPER.	TOTALS
203.0600.S	REMOVING OLD STRUCTURE OVER WATERWAY WITH MINIMAL DEBRIS STA. 12+30	LS	---	---	---	---	1
206.1000	EXCAVATION FOR STRUCTURES BRIDGES B-53-290	LS	---	---	---	---	1
210.1500	BACKFILL STRUCTURE TYPE A	TON	219	---	219	---	438
502.0100	CONCRETE MASONRY BRIDGES	CY	29	14	29	185	257
502.3200	PROTECTIVE SURFACE TREATMENT	SY	---	---	---	397	397
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	2550	3620	2550	---	8720
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	1395	80	1395	44760	47630
513.4061	RAILING TUBULAR TYPE M B-53-290	LF	---	---	---	---	178
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	8	---	8	---	16
550.0500	PILE POINTS	EACH	8	8	8	---	24
550.2108	PILING CIP CONCRETE 10 3/4 X 0.50-INCH	LF	320	---	440	---	760
550.2128	PILING CIP CONCRETE 12 3/4 X 0.50-INCH	LF	---	400	---	---	400
606.0300	RIPRAP HEAVY	CY	162	---	89	---	251
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	75	---	75	---	150
645.0120	GEOTEXTILE TYPE HR	SY	277	---	160	---	437
(NON-BID ITEM)	FILLER	SIZE	---	---	---	---	½" & ¾"



CAST-IN-PLACE 'PIPE PILE'

NOTE: CAST-IN-PLACE PILE SHELL MATERIAL SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATION.



C.I.P. PILE WELD DETAIL

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-53-290

DRAWN BY JDO | PLANS CK'D ABP

CROSS SECTION, GENERAL NOTES & QUANTITIES

SHEET 2 OF 9

34

I.D. 5942-00-73 PLOT DATE: Jul 18, 2016

FILE: 02_B530290_qnt.dwg
PLOT SCALE:

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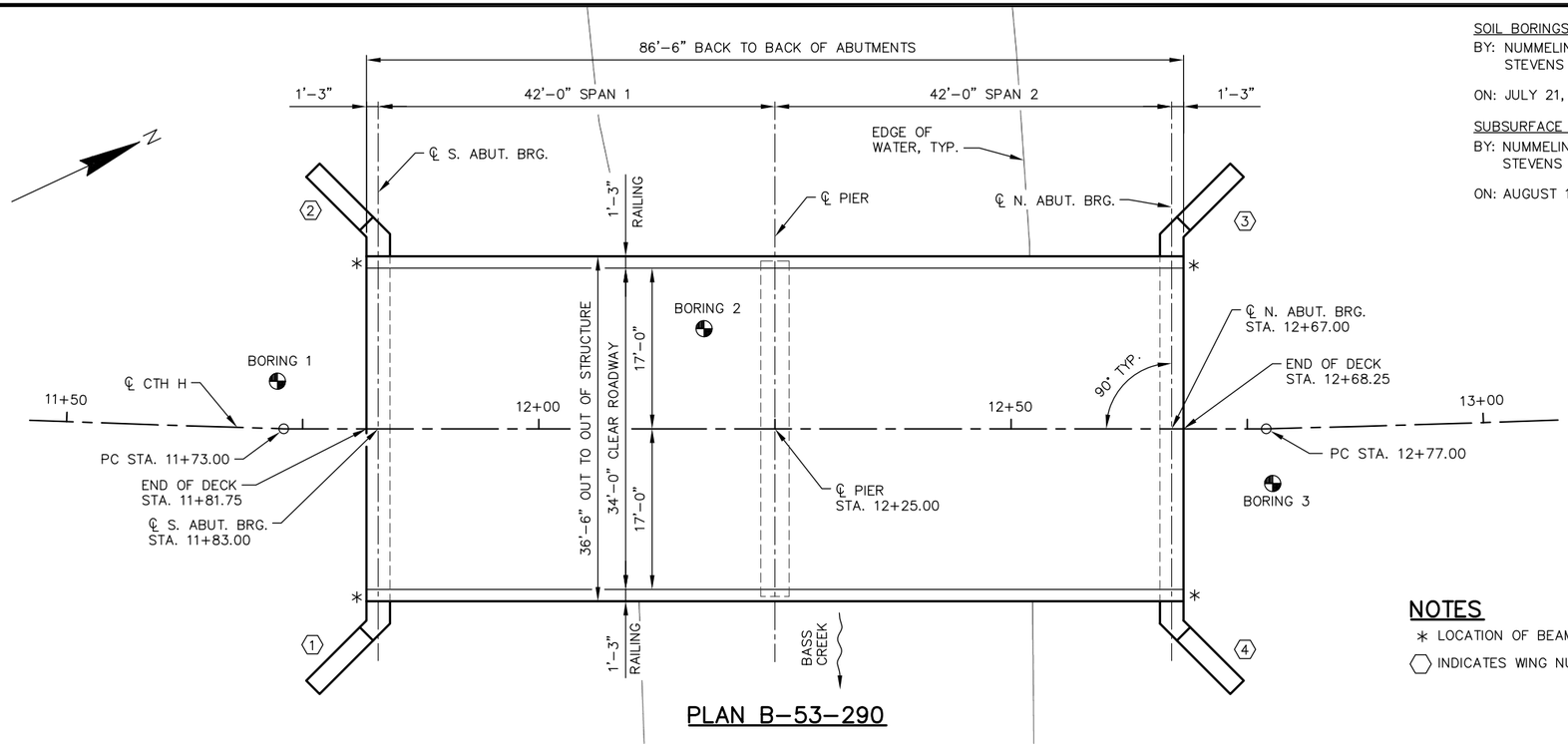


PLAN B-53-290

SOIL BORINGS
BY: NUMMELIN TESTING SERVICES, INC.
STEVENS POINT/WAUNAKEE, WI

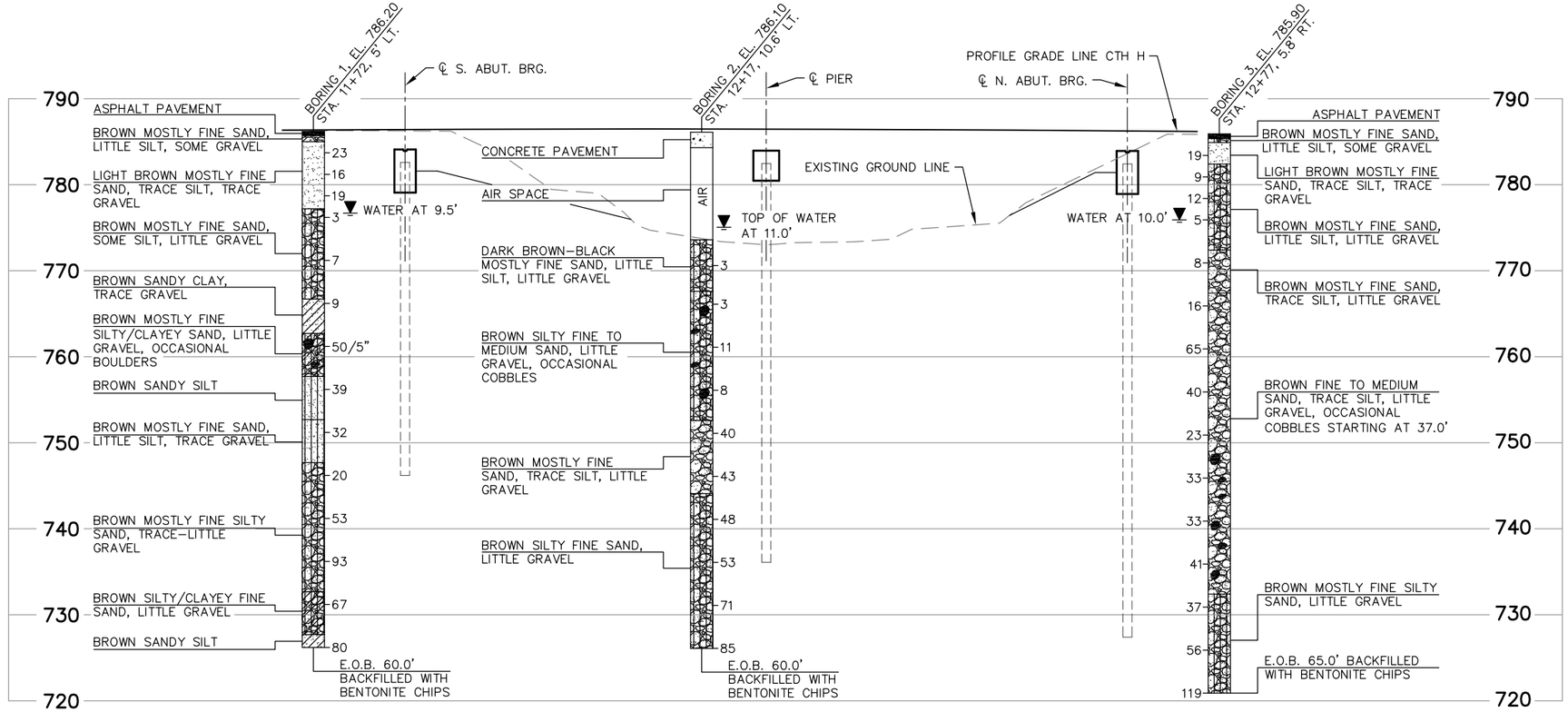
ON: JULY 21, 2015 thru JULY 23, 2015

SUBSURFACE INVESTIGATION REPORT
BY: NUMMELIN TESTING SERVICES, INC.
STEVENS POINT/WAUNAKEE, WI

ON: AUGUST 13, 2015

NOTES

* LOCATION OF BEAM GUARD ATTACHMENT
⬡ INDICATES WING NUMBER



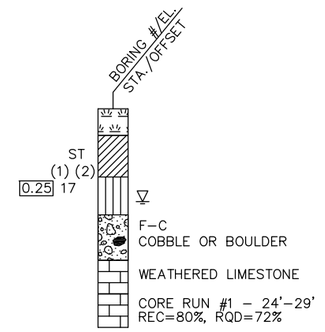
STATE PROJECT NUMBER

5942-00-73

MATERIAL SYMBOLS

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

LEGEND OF BORING



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

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

GROUND WATER ELEVATION

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

ABBREVIATIONS

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

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

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

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-53-290

DRAWN BY JDO | PLANS CK'D ABP

SUBSURFACE EXPLORATION

SHEET 3 OF 9

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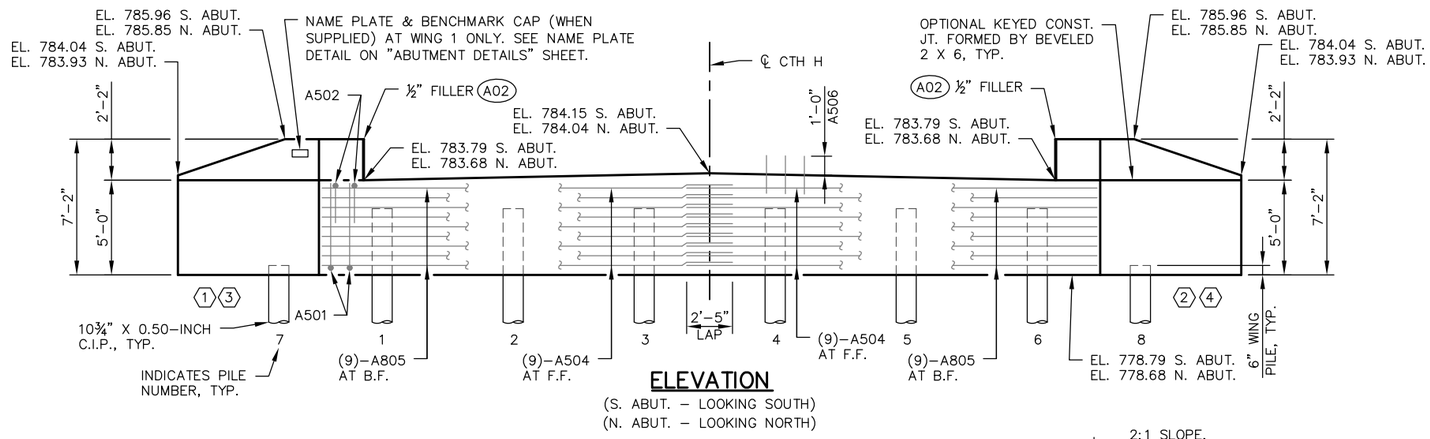
I.D. 5942-00-73

PLOT DATE: Jul 18, 2016

FILE: 03_B530290_bor.dwg
PLOT SCALE:

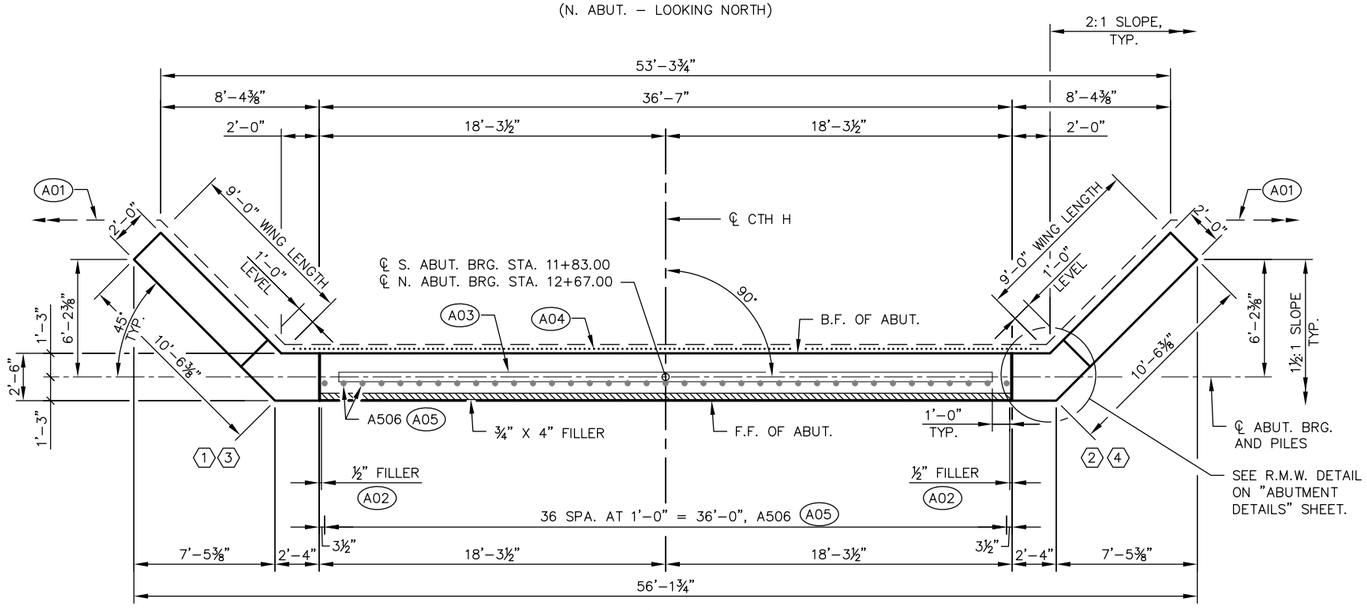
STATE PROJECT NUMBER

5942-00-73

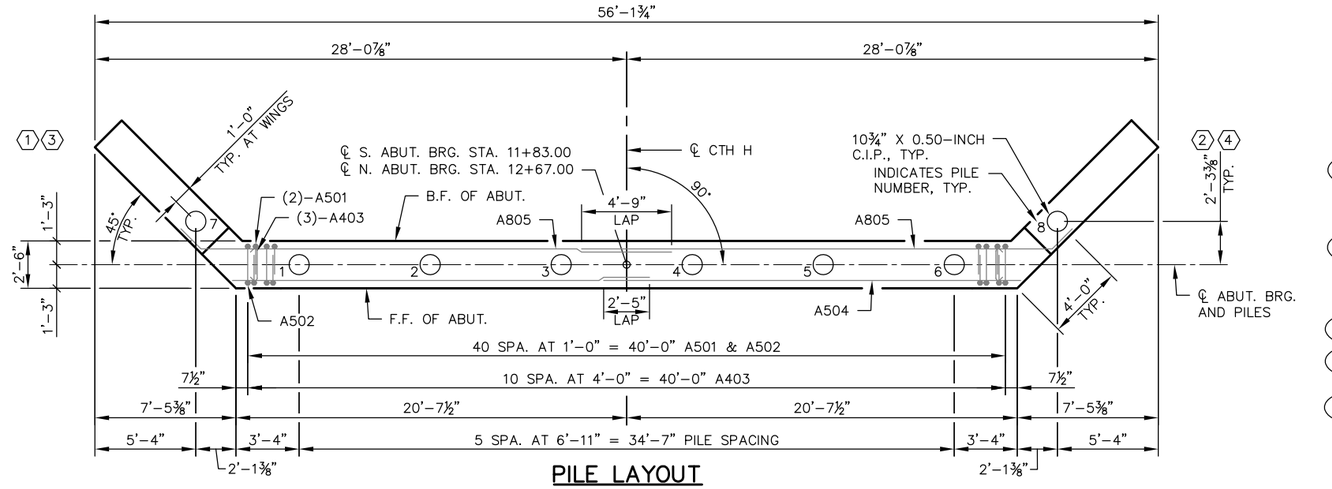


ELEVATION

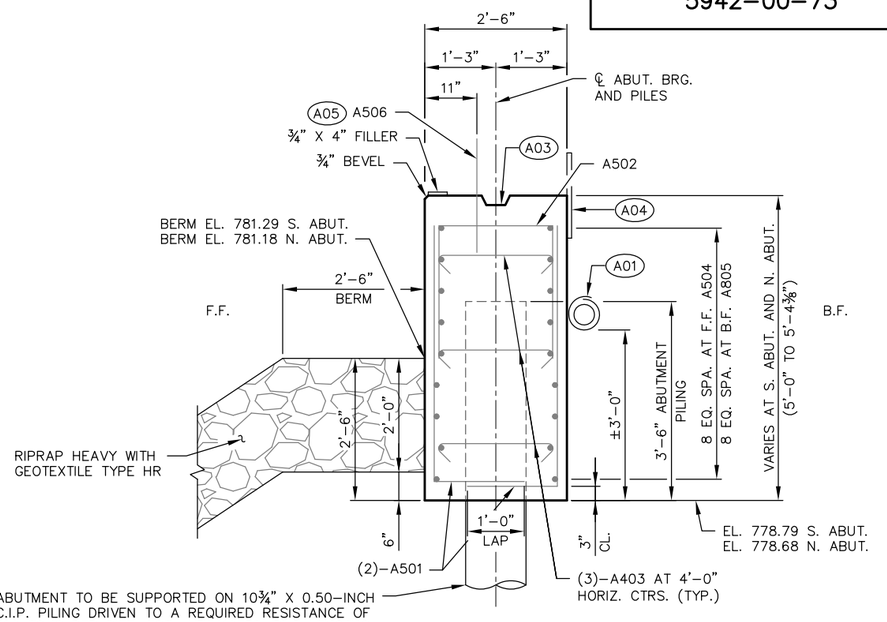
(S. ABUT. – LOOKING SOUTH)
(N. ABUT. – LOOKING NORTH)



PLAN



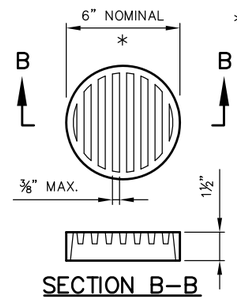
PILE LAYOUT



ABUTMENT TO BE SUPPORTED ON 10¾" X 0.50-INCH C.I.P. PILING DRIVEN TO A REQUIRED RESISTANCE OF 100 TONS PER PILE. ESTIMATE 40 FT. PILE LENGTHS AT THE S. ABUT. AND 55 FT. PILE LENGTHS AT THE N. ABUT.

TYPICAL SECTION THRU ABUTMENT

F.F. – FRONT FACE
B.F. – BACK FACE



SECTION B-B

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

THE RODENT SHIELD SHALL BE A PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALLY AVAILABLE AS A FLOOR STRAINER. A PIPE COUPLING IS REQUIRED FOR THE ATTACHMENT OF THIS SHIELD TO THE 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.

THE RODENT SHIELD. PIPE COUPLING AND SCREWS SHALL BE INCLUDED WITH THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".

RODENT SHIELD DETAIL

NOTES

DO NOT PLACE FILL ABOVE 3'-0" FROM THE BOTTOM OF THE ABUTMENT UNTIL SUPERSTRUCTURE IS IN PLACE.

(A01) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE, ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN. RODENT SHIELD SHALL BE INCLUDED WITH THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".

(A02) 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)

(A03) KEYED CONSTRUCTION JOINT FORMED BY A BEVELED 2" X 6".

(A04) 18" RUBBERIZED MEMBRANE WATERPROOFING (R.M.W.), SEAL ALL VERTICAL AND HORIZONTAL JOINTS ON BACK FACE.

(A05) A506 BARS MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE IT HAS TAKEN ITS INITIAL SET. EMBED BAR 1'-0".

⬡ INDICATES WING NUMBER

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-53-290

DRAWN BY JDO | PLANS CK'D ABP

ABUTMENTS

SHEET 4 OF 9

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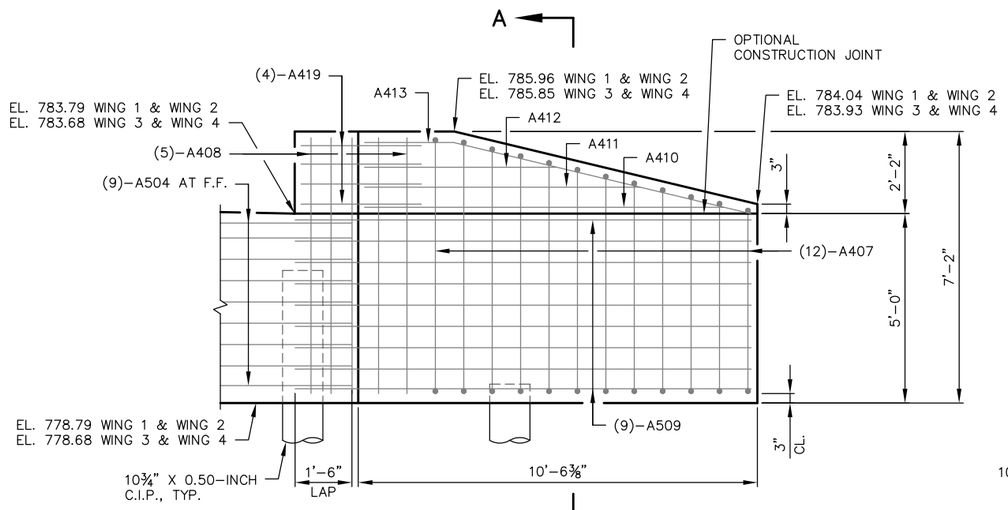
I.D. 5942-00-73

PLOT DATE: Jul 18, 2016

FILE: 04-05_B530290_abut.dwg
PLOT SCALE:

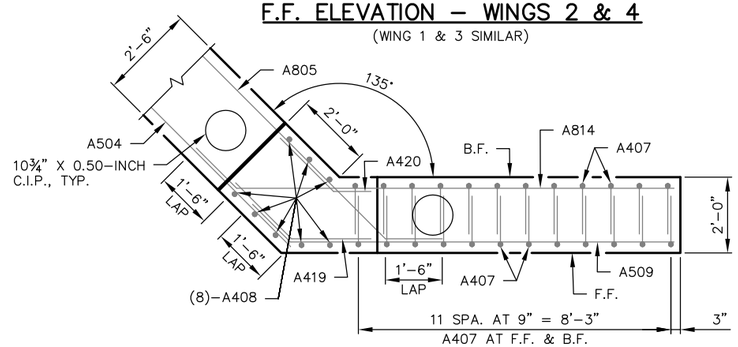


F.F. ELEVATION – WINGS 2 & 4

(WING 1 & 3 SIMILAR)

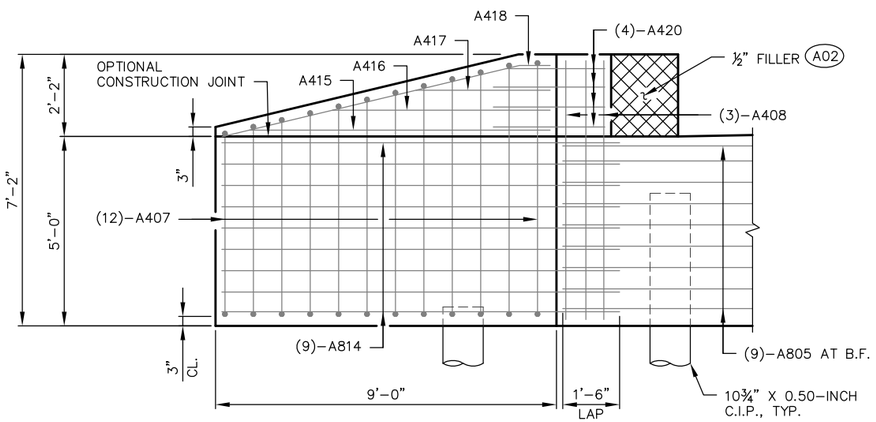
SECTION A–A

F.F. = FRONT FACE
B.F. = BACK FACE



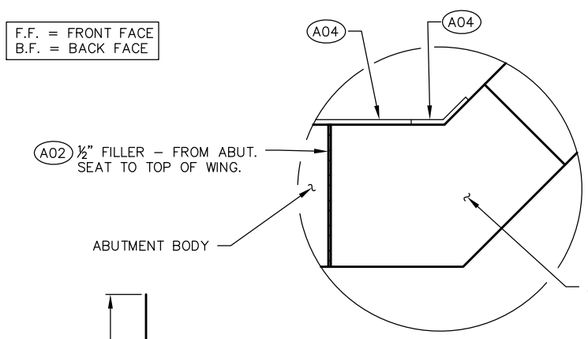
PLAN – WINGS 2 & 4

(WING 1 & 3 SIMILAR)

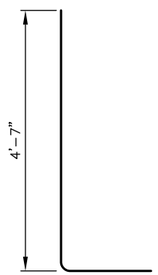


B.F. ELEVATION – WINGS 2 & 4

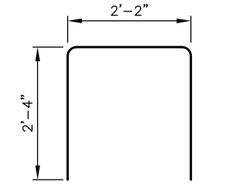
(WING 1 & 3 SIMILAR)



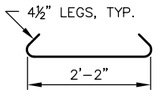
R.M.W. DETAIL



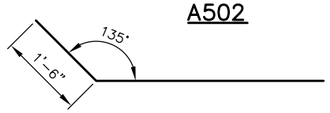
A501



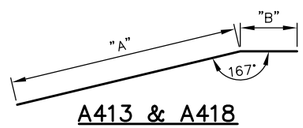
A502



A403



A805, A509 & A814

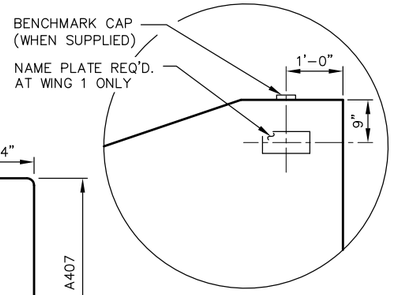


A413 & A418

BAR BEND DIMENSIONS

MARK	"A"	"B"
A413	8'–0"	2'–4"
A418	8'–0"	0'–9"

A407

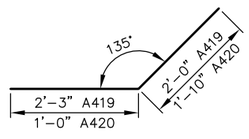


NAME PLATE DETAIL

BAR SERIES TABLE

MARK	NO. REQ'D	LENGTH
A407	8 SERIES OF 12	7'–4" TO 9'–3"

BUNDLE AND TAG EACH SERIES SEPARATELY.



A419 & A420

STATE PROJECT NUMBER

5942–00–73

BILL OF BARS
BOTH ABUTMENTS

COATED = 2,790 LBS.
UNCOATED = 5,100 LBS.

MARK	NUMBER COATED	NUMBER UNCOATED	LENGTH	BENT	BAR SERIES	LOCATION	
A501		164	6'–1"	X		BODY STIRRUP – F.F. & B.F.	VERT.
A502		82	6'–7"	X		BODY STIRRUP – TOP	VERT.
A403		66	2'–11"	X		BODY – TIES	HORIZ.
A504		36	21'–10"			BODY – F.F.	HORIZ.
A805		36	26'–6"	X		BODY – B.F.	HORIZ.
A506	74		2'–0"			BODY – DOWELS	VERT.
A407	96		8'–4"	X	⚠	WINGS 1 THRU 4 – STIRRUP – F.F. & B.F.	VERT.
A408	32		6'–9"			WINGS 1 THRU 4 – F.F. & B.F.	VERT.
A509	36		11'–9"	X		WINGS 1 THRU 4 – F.F.	HORIZ.
A410	4		10'–0"			WINGS 1 THRU 4 – F.F.	HORIZ.
A411	4		7'–9"			WINGS 1 THRU 4 – F.F.	HORIZ.
A412	4		5'–7"			WINGS 1 THRU 4 – F.F.	HORIZ.
A413	4		10'–4"	X		WINGS 1 THRU 4 – F.F. – TOP	HORIZ.
A814	36		13'–3"	X		WINGS 1 THRU 4 – B.F.	HORIZ.
A415	4		8'–5"			WINGS 1 THRU 4 – B.F.	HORIZ.
A416	4		6'–3"			WINGS 1 THRU 4 – B.F.	HORIZ.
A417	4		4'–0"			WINGS 1 THRU 4 – B.F.	HORIZ.
A418	4		8'–9"	X		WINGS 1 THRU 4 – B.F. – TOP	HORIZ.
A419	16		4'–2"	X		WINGS 1 THRU 4 – F.F. CORNER	HORIZ.
A420	16		2'–9"	X		WINGS 1 THRU 4 – B.F. CORNER	HORIZ.

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

ALL BAR BEND DIMENSIONS ARE OUT TO OUT OF BAR.

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

NOTES

(A02) 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.)

(A04) 18" RUBBERIZED MEMBRANE WATERPROOFING (R.M.W.). SEAL ALL VERTICAL AND HORIZONTAL JOINTS ON BACK FACE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B–53–290

DRAWN BY JDO | PLANS CK'D ABP

ABUTMENT DETAILS

SHEET 5 OF 9

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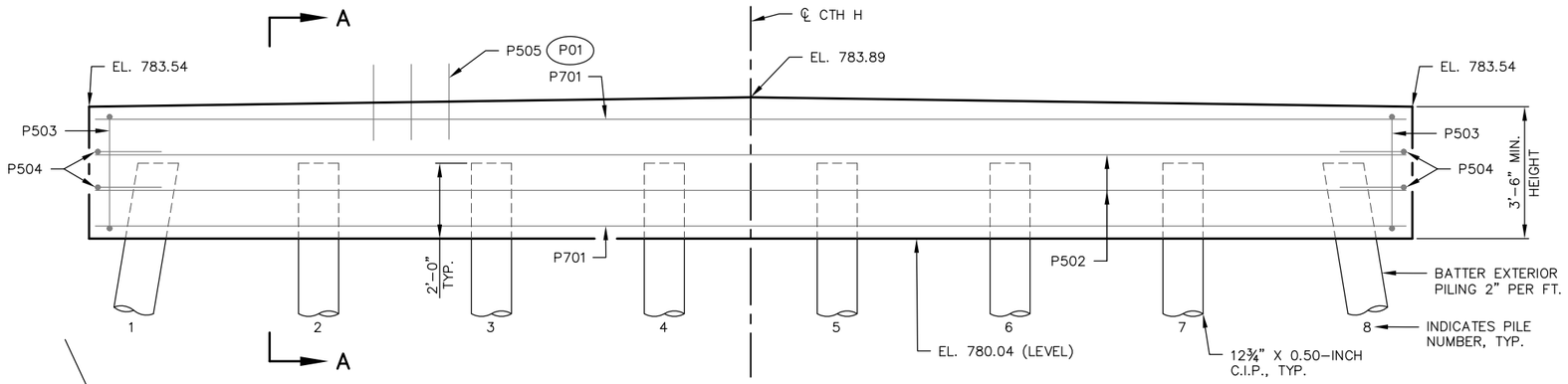
8

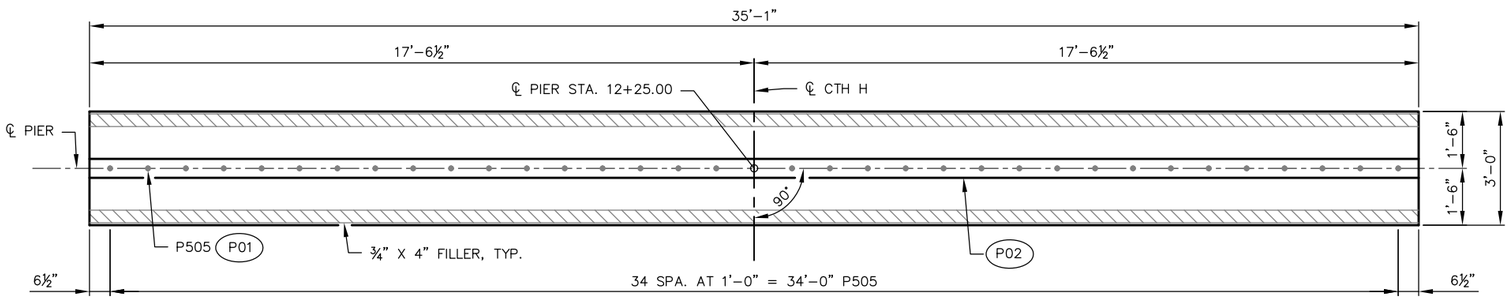
I.D. 5942–00–73

PLOT DATE: Jul 18, 2016

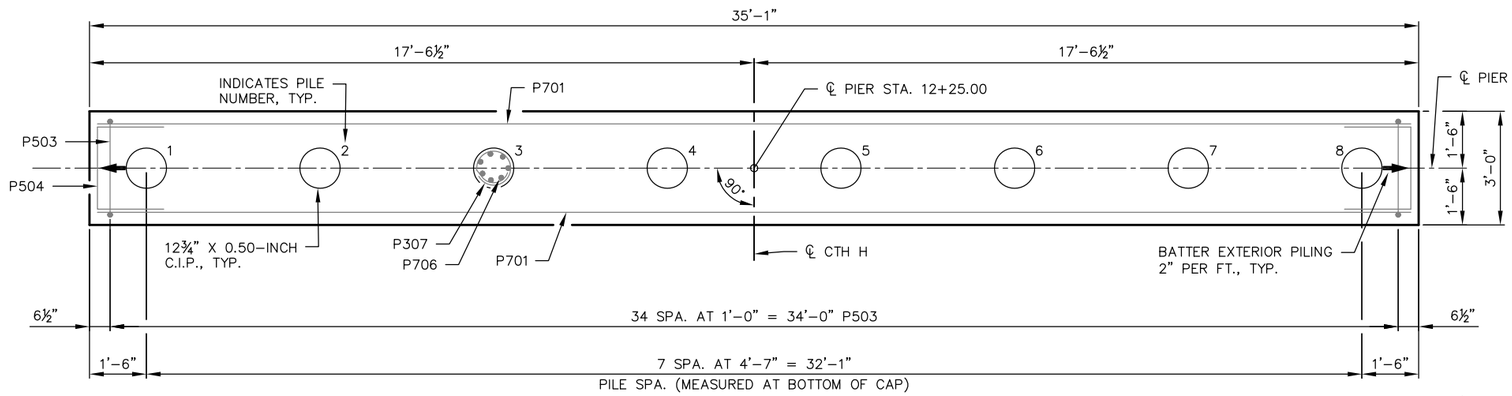
FILE: 04–05_B530290_abut.dwg
PLOT SCALE:



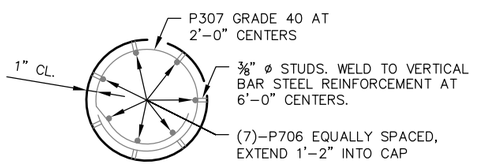
ELEVATION
(LOOKING NORTH)



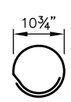
PLAN



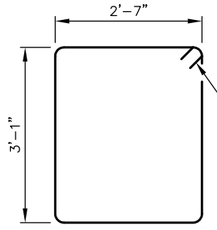
PILE AND REINFORCEMENT PLAN



SECTION THRU CONCRETE CAST-IN-PLACE PILING AT PIER



P307



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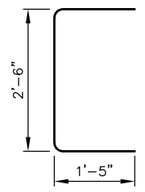

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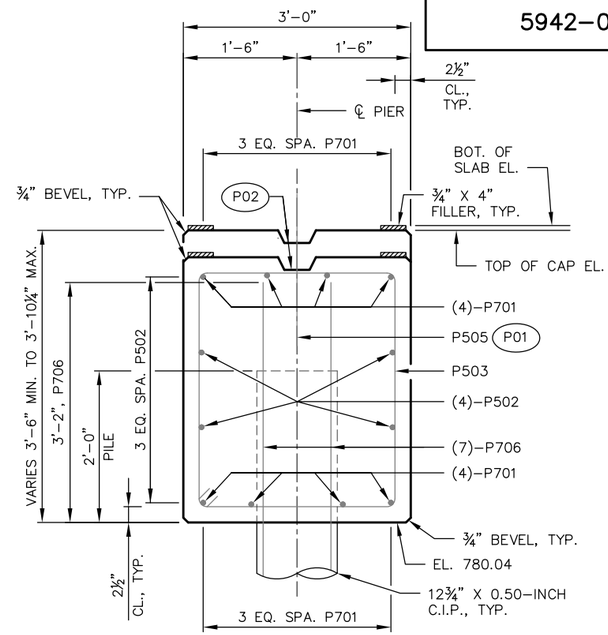

SECTION A-A

STATE PROJECT NUMBER

5942-00-73

BILL OF BARS
PIER

COATED = 80 LBS.
UNCOATED = 3,620 LBS

MARK	NUMBER COATED	NUMBER UNCOATED	LENGTH	BENT	BAR SERIES	LOCATION	
P701		8	34'-9"			PIER CAP - TOP & BOTTOM	HORIZ.
P502		4	34'-9"			PIER CAP - SIDES	HORIZ.
P503		35	12'-0"	X		PIER CAP - STIRRUP	VERT.
P504		4	5'-1"	X		PIER CAP - END STIRRUP	HORIZ.
P505	35		2'-0"			PIER CAP - DOWELS	VERT.
P706		56	20'-3"			PILE VERT.	VERT.
P307		88	3'-10"	X		PILE TIES	HORIZ.

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

ALL BAR BEND DIMENSIONS ARE OUT TO OUT OF BAR.

NOTES

PIER TO BE SUPPROTED ON 12¾" X 0.50" C.I.P. PILING DRIVEN TO A REQUIRED RESISTANCE OF 210 TONS PER PILE. ESTIMATE 50 FT. PILE LENGTHS AT THE PIER.

FOR PILE SPLICE DETAILS SEE "CROSS SECTION, GENERAL NOTES & QUANTITIES" SHEET.

(P01) P505 BARS MAY BE PLACED AFTER CONCRETE IS PLACED, BUT BEFORE INITIAL SET HAS TAKEN PLACE.

(P02) KEYED CONSTRUCTION JOINT FORMED BY BEVELED 2"x6".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-53-290

DRAWN BY JDO | PLANS CK'D ABP

PIER

SHEET 6 OF 9

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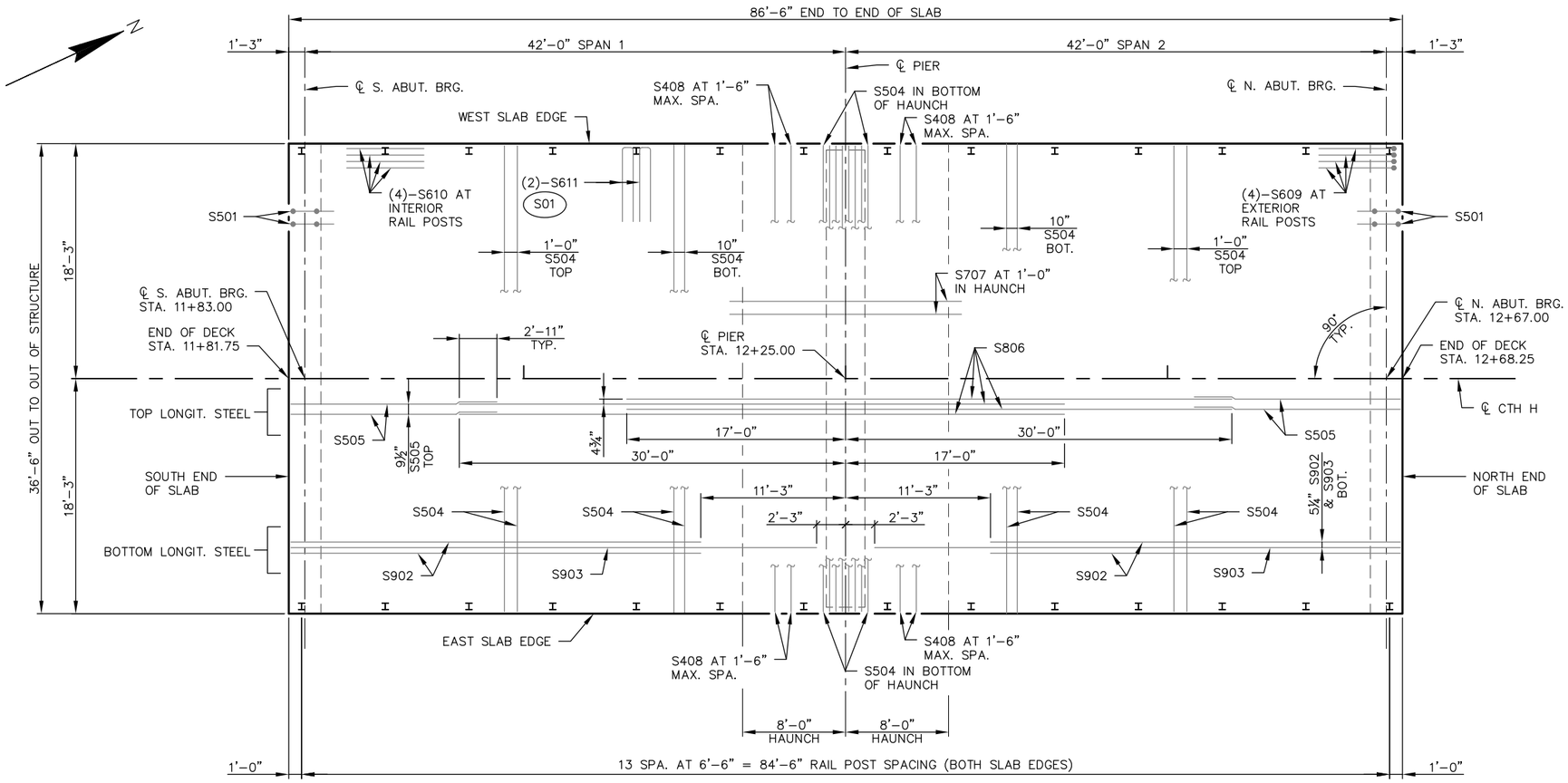
FILE: 06_B530290_pier.dwg
PLOT SCALE:

I.D. 5942-00-73

PLOT DATE: Jul 18, 2016

STATE PROJECT NUMBER

5942-00-73



PLAN

NOTES

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 (+).

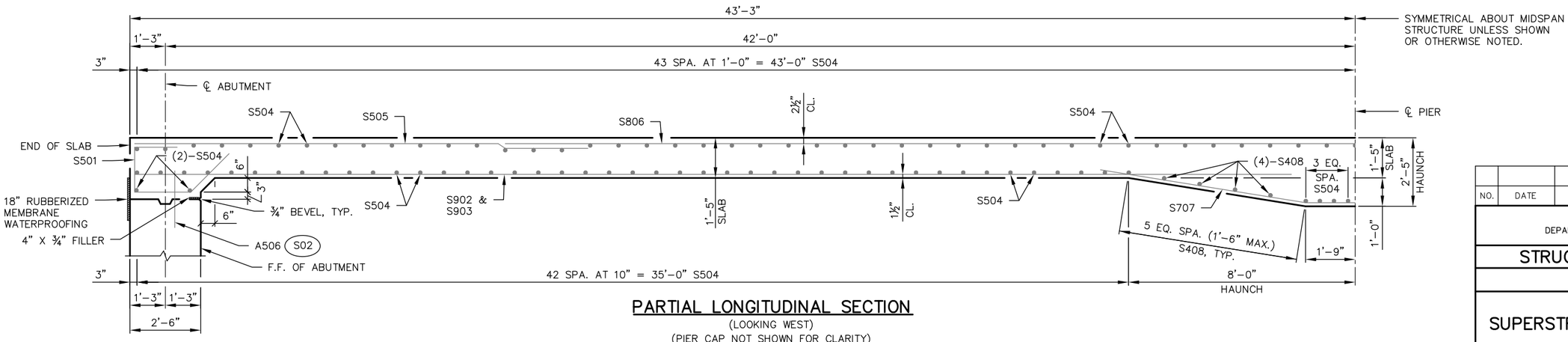
RAILING TO BE PLACED ON THE SLAB AFTER FALSEWORK HAS BEEN RELEASED.

(S01) ADJUST ORIENTATION OF S611 BAR AT END POST TO ENSURE CLEAR COVER AT END OF DECK.

(S02) SEE "ABUTMENTS" SHEET FOR PLACEMENT OF A506 BARS.

TOP OF DECK ELEVATIONS

SPAN PT	W. SLAB EDGE	℄ CTH H	E. SLAB EDGE
℄ S. ABUT.	785.96	786.32	785.96
0.1	785.98	786.34	785.98
0.2	785.99	786.35	785.99
0.3	786.00	786.36	786.00
0.4	786.01	786.37	786.01
0.5	786.01	786.37	786.01
0.6	786.02	786.38	786.02
0.7	786.02	786.38	786.02
0.8	786.02	786.38	786.02
0.9	786.02	786.38	786.02
℄ PIER	786.01	786.37	786.01
1.1	786.01	786.37	786.01
1.2	786.00	786.36	786.00
1.3	785.99	786.35	785.99
1.4	785.97	786.33	785.97
1.5	785.96	786.32	785.96
1.6	785.94	786.30	785.94
1.7	785.92	786.28	785.92
1.8	785.90	786.26	785.90
1.9	785.88	786.24	785.88
℄ N. ABUT.	785.85	786.21	785.85



F.F. – FRONT FACE
B.F. – BACK FACE

PARTIAL LONGITUDINAL SECTION

(LOOKING WEST)
(PIER CAP NOT SHOWN FOR CLARITY)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-53-290

DRAWN BY JDO | PLANS CK'D ABP

SUPERSTRUCTURE

SHEET 7 OF 9

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I.D. 5942-00-73

PLOT DATE: Jul 18, 2016

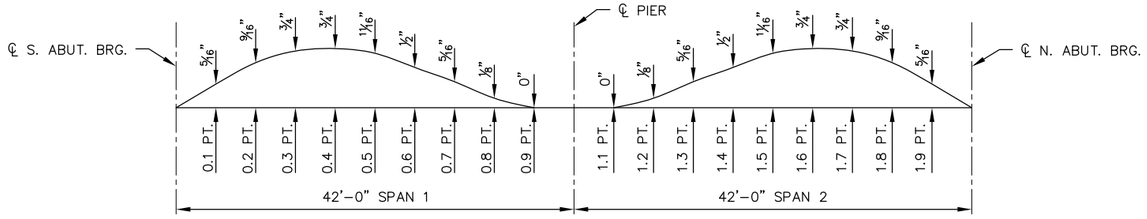
FILE: 07-08_B530290_super.dwg
PLOT SCALE:

8

8

STATE PROJECT NUMBER

5942-00-73



SLAB CAMBER DIAGRAM

TO DETERMINE FALSEWORK ELEVATION AT EDGE OF SLAB, CROWN OR REFERENCE LINE FOLLOW THIS PROCEDURE:

	TOP OF SLAB ELEVATION AT FINAL GRADE
LESS	SLAB THICKNESS
PLUS	CAMBER
PLUS	FORM SETTLEMENT/DEFLECTION DUE TO PLACEMENT OF SLAB CONCRETE (TO BE COMPUTED BY THE CONTRACTOR)
EQUALS	TOP OF SLAB FALSEWORK ELEVATION.

SURVEY TOP OF SLAB ELEVATIONS

	℄ S. ABUT. BRG.	5/10 PT.	℄ PIER	5/10 PT.	℄ N. ABUT. BRG.
WEST SLAB EDGE					
℄ CTH H					
EAST SLAB EDGE					

PRIOR TO RELEASING SLAB FALSEWORK, TAKE TOP OF DECK ELEVATIONS AT THE ℄ OF ABUTMENTS, ℄ OF PIER AND AT 5/10 POINTS TO VERIFY CAMBER. TAKE ELEVATIONS ALONG EDGE OF SLAB AND REFERENCE LINE. RECORD THE ELEVATIONS IN THE ABOVE TABLE FOR THE "AS BUILT" PLANS.

BILL OF BARS
SUPERSTRUCTURE

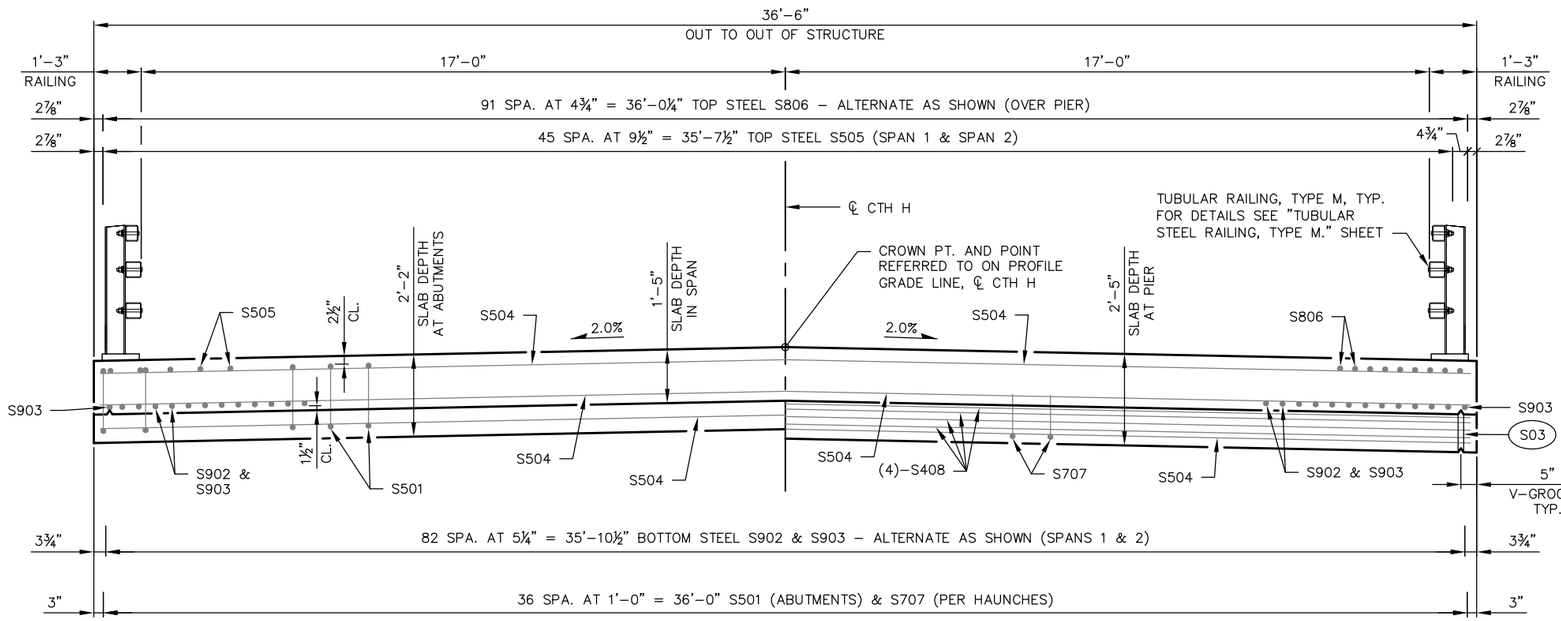
COATED = 44,760 LBS.

MARK	NUMBER COATED	NUMBER UNCOATED	LENGTH	BENT	BAR SERIES	LOCATION	
S501	74		7'-0"	X		SLAB AT ABUTMENT - TIES	LONGIT.
S902	82		31'-10"			SLAB - BOTTOM	LONGIT.
S903	84		40'-10"			SLAB - BOTTOM	LONGIT.
S504	185		36'-2"			SLAB - TOP & BOTTOM	TRANS.
S505	94		16'-0"			SLAB - TOP	LONGIT.
S806	92		47'-0"			SLAB - TOP OVER PIER	LONGIT.
S707	37		18'-2"	X		SLAB - BOTTOM IN HAUNCH	LONGIT.
S408	8		36'-2"			SLAB - IN HAUNCH	TRANS.
◑ S609	16		6'-0"	X		RAILING ANCHORS - END POSTS	LONGIT.
◑ S610	96		6'-0"			RAILING ANCHORS - INTERIOR POSTS	LONGIT.
◑ S611	56		12'-0"	X		RAILING ANCHORS	TRANS.

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

ALL BAR BEND DIMENSIONS ARE OUT TO OUT OF BAR.

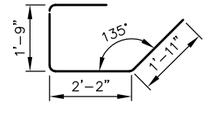
◑ SEE "SUPERSTRUCTURE" SHEET AND "TUBULAR STEEL RAILING, TYPE M" SHEET FOR PLACEMENT.



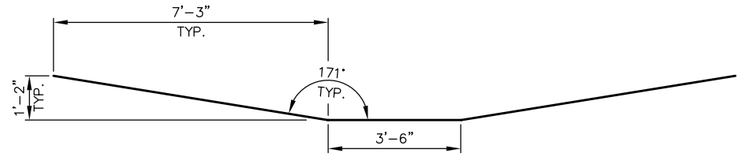
AT ABUTMENTS

AT PIER

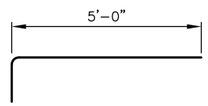
CROSS SECTION THRU ROADWAY
(LOOKING NORTH)



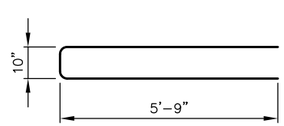
S501



S707



S609



S611

NOTES

CAMBER SPANS AS SHOWN TO PROVIDE FOR DEAD LOAD DEFLECTION AND FUTURE CREEP. CAMBER DOES NOT INCLUDE ALLOWANCE FOR FORM SETTLEMENT.

(S03) ¾" V-GROOVE. EXTEND V-GROOVE TO 6" FROM FRONT FACE OF ABUTMENT DIAPHRAGM. V-GROOVES ARE REQUIRED.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-53-290

DRAWN BY JDO | PLANS CK'D ABP

SUPERSTRUCTURE DETAILS

SHEET 8 OF 9

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I.D. 5942-00-73

PLOT DATE: Jul 18, 2016

FILE: 07-08_B530290_super.dwg
PLOT SCALE:

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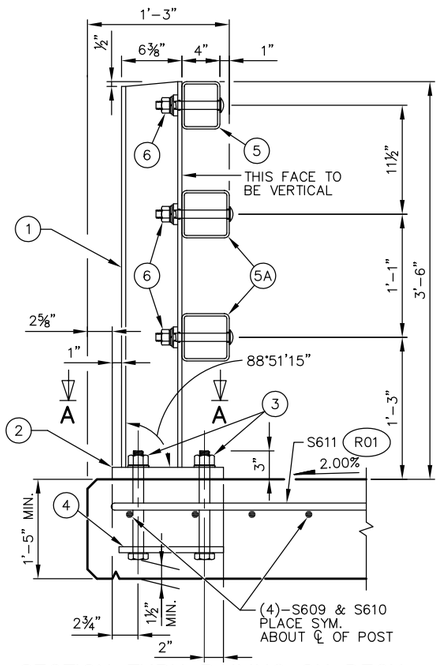
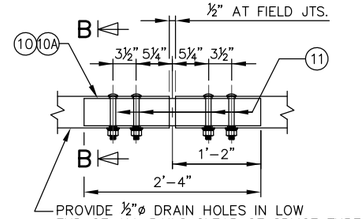
STATE PROJECT NUMBER

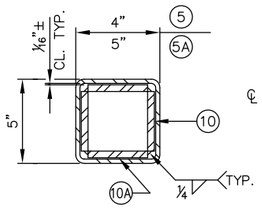
5942-00-73



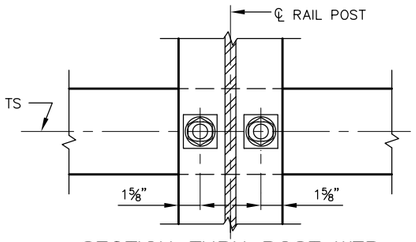
SECTION THRU RAILING ON DECK



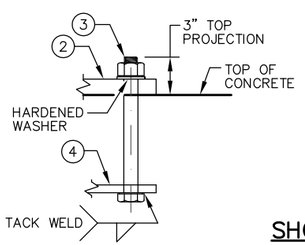
FIELD ERECTION JOINT DETAIL



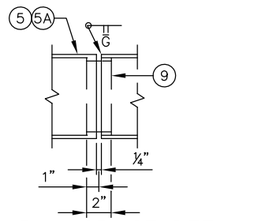
SECTION B–B



SECTION THRU POST WEB

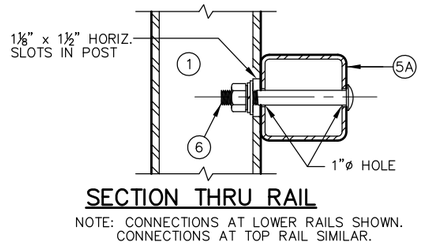


ANCHOR BOLTS



SHOP RAIL SPLICE DETAIL

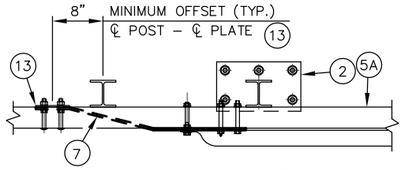
(LOCATION MUST BE SHOWN ON SHOP DRAWINGS)



SECTION THRU RAIL

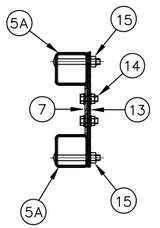
NOTE: CONNECTIONS AT LOWER RAILS SHOWN. CONNECTIONS AT TOP RAIL SIMILAR.

TYPICAL RAIL TO POST CONNECTIONS

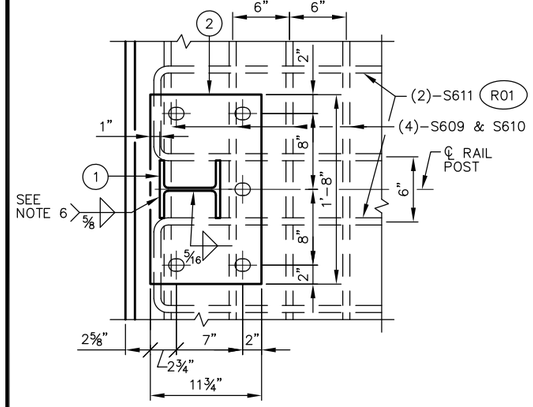


TOP VIEW AT END POST

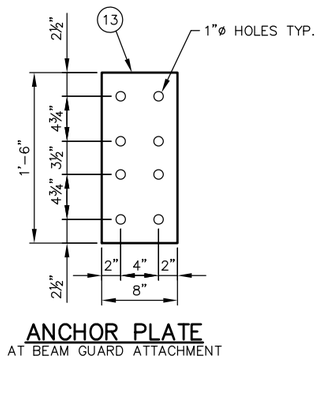
(THRIE BEAM RAIL ATTACHMENT)



SECTION C–C

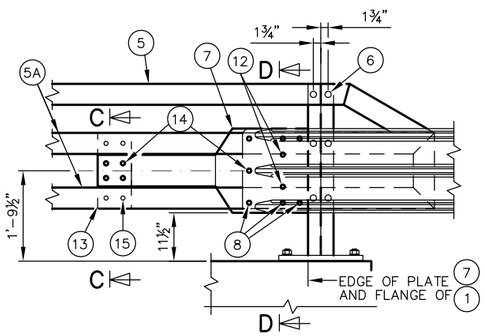


SECTION A–A



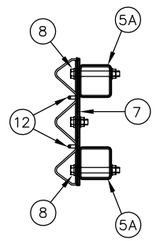
ANCHOR PLATE

AT BEAM GUARD ATTACHMENT



DETAIL AT END POST

(THRIE BEAM RAIL ATTACHMENT)



SECTION D–D

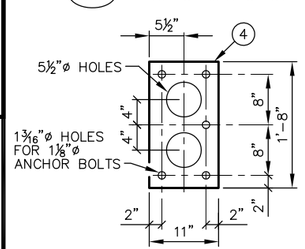
LEGEND

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 1 5⁄16" 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 CONSTRUCTABILITY.)
4. ⅝" x 11" x 1'-8" ANCHOR PLATE (GALVANIZED) WITH 1 3⁄16" 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"ø A325 ROUND HEAD BOLT WITH NUT, WASHER AND LOCK WASHER. USE 15⁄16" x 1¼" LONGIT. SLOTTED HOLES AT FIELD JOINTS AND 15⁄16" 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. REQUIRED AT THRIE BEAM GUARD RAIL ATTACHMENTS ONLY. PLACE SYMMETRICALLY ABOUT TUBES NO. 5A.
14. ⅞" DIA. x 2" LONG A325 HEX BOLT WITH NUT AND WASHER (5 REQ'D.).
15. 1"ø 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.

NOTES

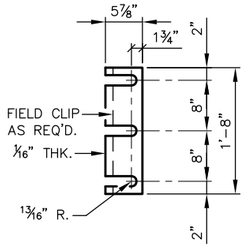
1. BID ITEM SHALL BE "RAILING TUBULAR TYPE M B-53-290" WHICH INCLUDES ALL ITEMS SHOWN.
2. RAIL POST AND BASE PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A709 GRADE 50. HOLLOW RAILING STRUCTURAL TUBING SHALL CONFORM TO THE REQUIREMENTS OF ASTM A500 GRADE B OR C WITH A CERTIFIED FY = 50 ksi. ANCHOR 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 1/8 TURN.
4. RAILS SHALL BE CONTINUOUS OVER A MINIMUM OF THREE (3) POSTS WITHOUT SPLICES WHERE POSSIBLE.
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 S.S.P.C. SPECIFICATIONS.
10. THIS RAILING MEETS NCHRP REPORT 350 EVALUATION CRITERIA FOR TEST LEVEL 4 (TL-4).
11. PLACE FIRST BOTTOM LONGITUDINAL BAR CLEAR OF DRIP GROOVE.

R01 TIE TO TOP MAT OF STEEL.

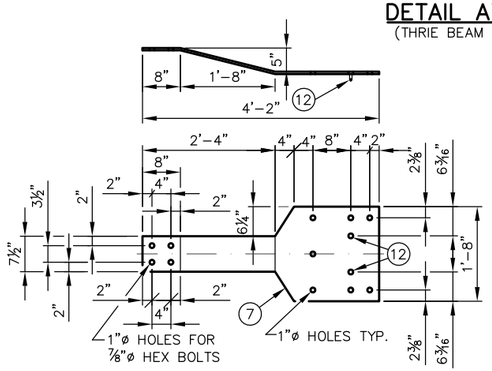


ANCHOR PLATE

AT RAIL TO DECK CONNECTION

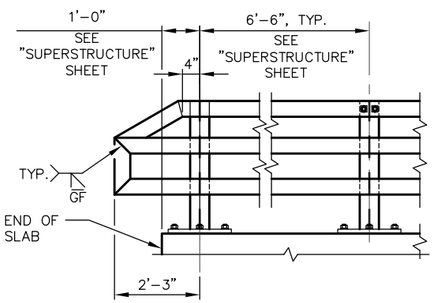


POST SHIM DETAIL



BACK-UP PLATE DETAIL

AT BEAM GUARD ATTACHMENTS



PART ELEVATION OF RAILING

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-53-290

DRAWN BY JDO | PLANS CK'D ABP

TUBULAR STEEL RAILING, TYPE M

SHEET 9 OF 9

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I.D. 5942-00-73

PLOT DATE: Jul 18, 2016

FILE: 09_B530290_mrail.dwg
PLOT SCALE:

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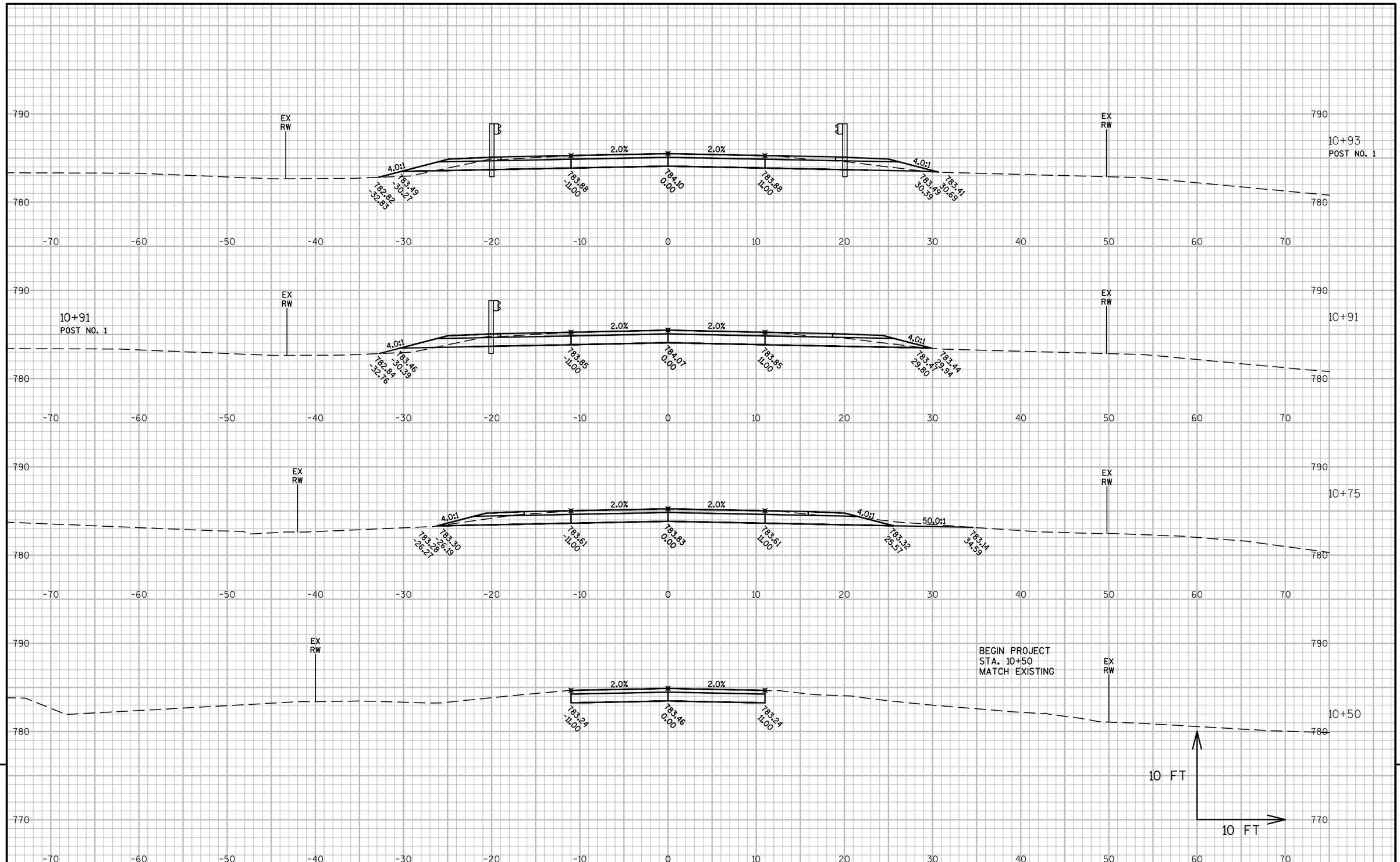
DIVISION 1 MAINLINE SOUTH APPROACH

		AREA (SF)						Incremental Vol (CY) (Unadjusted)						Cumulative Vol (CY)							
STATION	Distance	Cut	Salvaged/Unusable Pavement Material	Fill	Marsh Exc	Rock Exc	EBS	Cut	Salvaged/Unusable Pavement Material	Fill	Marsh Exc	Rock Exc	EBS	Cut	Expanded Fill	Expanded Marsh Backfill	Expanded Rock	Expanded EBS Backfill	Reduced Marsh in Fill	Reduced EBS In Fill	Mass Ordinate
								Note 1	Note 2	Note 3				1	1.25	1.50	1.10	1.30	0.60	0.80	
														Note 1		Note 4		Note 5	Note 6	Note 7	Note 8
10+50		31.2	9.1	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10+75	25	59.8	9.2	0.0	0	0	0	42	8	0	0	0	0	42	0	0	0	0	0	0	34
10+91	16	60.6	9.3	2.0	0	0	0	36	5	1	0	0	0	78	1	0	0	0	0	0	63
10+93	2	60.6	9.3	2.1	0	0	0	4	1	0	0	0	0	82	1	0	0	0	0	0	67
11+18	25	65.3	9.6	3.6	0	0	0	58	9	3	0	0	0	141	4	0	0	0	0	0	113
11+43	25	73.6	11.6	1.0	0	0	0	64	10	2	0	0	0	205	7	0	0	0	0	0	165
11+75	32	72.2	14.0	0.8	0	0	0	86	15	1	0	0	0	291	8	0	0	0	0	0	235
						Column totals		141	23	3	0	0	0								

DIVISION 2 MAINLINE NORTH APPROACH

		AREA (SF)						Incremental Vol (CY) (Unadjusted)						Cumulative Vol (CY)							
STATION	Distance	Cut	Salvaged/Unusable Pavement Material	Fill	Marsh Exc	Rock Exc	EBS	Cut	Salvaged/Unusable Pavement Material	Fill	Marsh Exc	Rock Exc	EBS	Cut	Expanded Fill	Expanded Marsh Backfill	Expanded Rock	Expanded EBS Backfill	Reduced Marsh in Fill	Reduced EBS In Fill	Mass Ordinate
								Note 1	Note 2	Note 3				1.00	1.25	1.50	1.10	1.30	0.60	0.80	
														Note 1		Note 4		Note 5	Note 6	Note 7	Note 8
12+75		43.4	14.4	43.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12+86	11	50.6	13.9	20.1	0	0	0	19	6	13	0	0	0	19	16	0	0	0	0	0	-3
13+07	21	59.2	12.4	0.0	0	0	0	43	10	8	0	0	0	62	26	0	0	0	0	0	20
13+11	4	61.9	12.4	0.0	0	0	0	9	2	0	0	0	0	71	26	0	0	0	0	0	27
13+32	21	61.7	12.3	0.0	0	0	0	48	10	0	0	0	0	119	26	0	0	0	0	0	66
13+39	7	66.9	12.3	0.0	0	0	0	17	3	0	0	0	0	136	26	0	0	0	0	0	79
13+57	18	67.5	11.8	0.0	0	0	0	45	8	0	0	0	0	180	26	0	0	0	0	0	116
13+75	18	64.6	11.4	0.0	0	0	0	44	8	0	0	0	0	224	26	0	0	0	0	0	152
14+00	25	31.2	11.0	0.0	0	0	0	44	10	0	0	0	0	269	26	0	0	0	0	0	186
						Column totals		269	57	21	0	0	0								

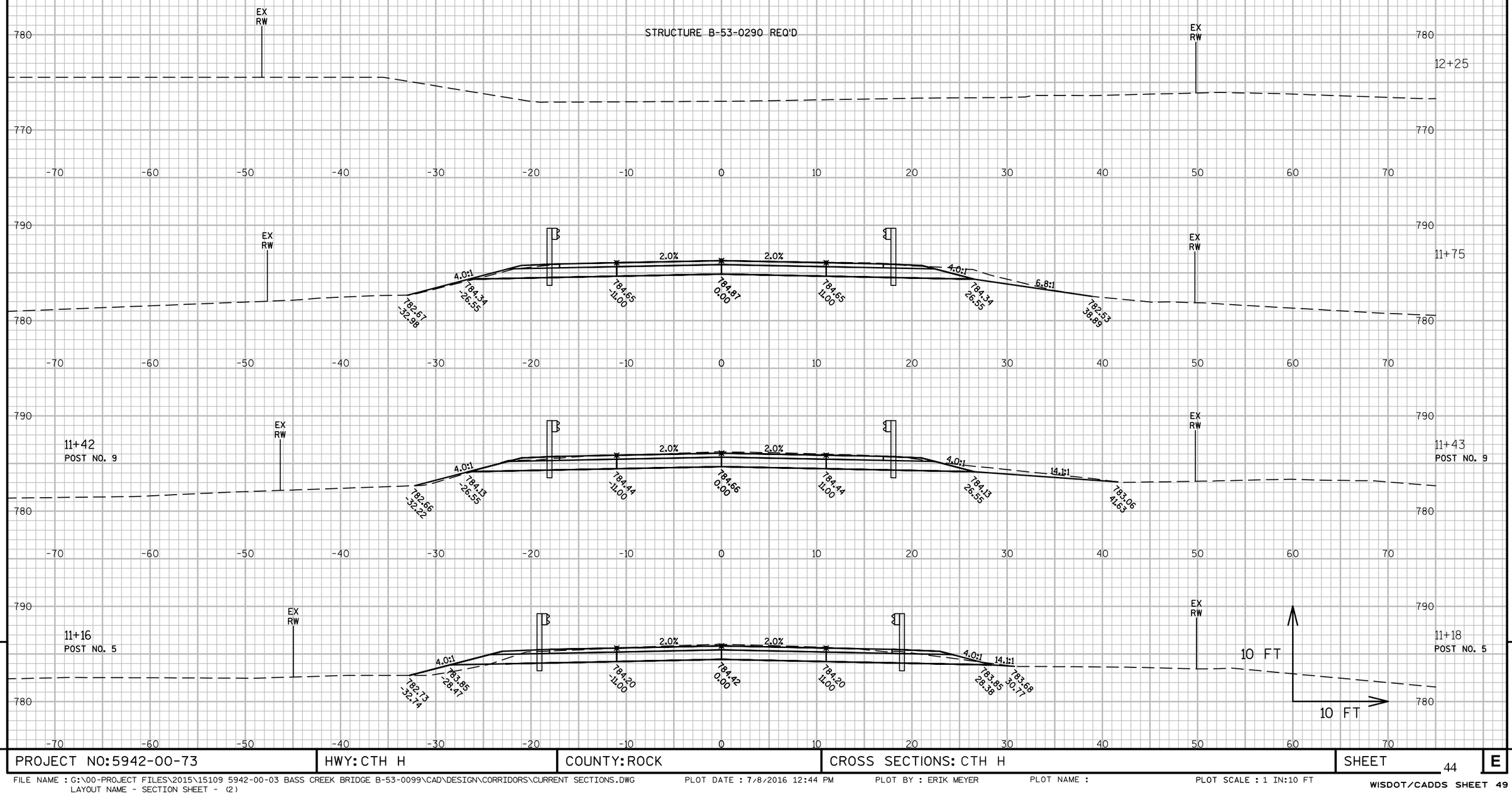
Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded Marsh Backfill	Will be backfilled with Granular Backfill (or Cut, or Borrow)
5 - Expanded EBS	Will be backfilled with Granular Backfill (or Cut, or Borrow)
6 - Reduced Marsh in Fill	Reduced Marsh Excavation that can be used in Fill
7 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
8 - Mass Ordinate	If Marsh or EBS to be backfilled with Cut or Borrow: [(Cut + Marsh Exc + EBS) - ((Fill - Reduced Marsh in Fill) - (Reduced EBS in Fill) - Expanded Rock) * Fill Factor)]
8 - Mass Ordinate	If Marsh and EBS to be backfilled with Granular: [(Cut + EBS + Marsh Exc) - ((Fill - (Reduced Marsh in Fill) - (Reduced EBS in Fill) - (Expanded Rock)) * Fill Factor))]
8 - Mass Ordinate	If Marsh and EBS to be backfilled with Granular: [(Cut) - ((Fill - Expanded Rock) * Fill Factor))]
8 - Mass Ordinate	If Marsh and EBS to be backfilled with Cut or Borrow: [(Cut) - ((Fill - Expanded Rock) * Fill Factor))]



PROJECT NO: 5942-00-73	HWY: CTH H	COUNTY: ROCK	CROSS SECTIONS: CTH H	SHEET 43	E

FILE NAME : G:\00-PROJECT FILES\2015\15109 5942-00-03 BASS CREEK BRIDGE B-53-0099\CAD\DESIGN\CORRIDORS\CURRENT SECTIONS.DWG
LAYOUT NAME - SECTION SHEET - (1)
PLOT DATE : 7/8/2016 12:44 PM PLOT BY : ERIK MEYER PLOT NAME : PLOT SCALE : 1 IN:10 FT

STRUCTURE B-53-0290 REQ'D

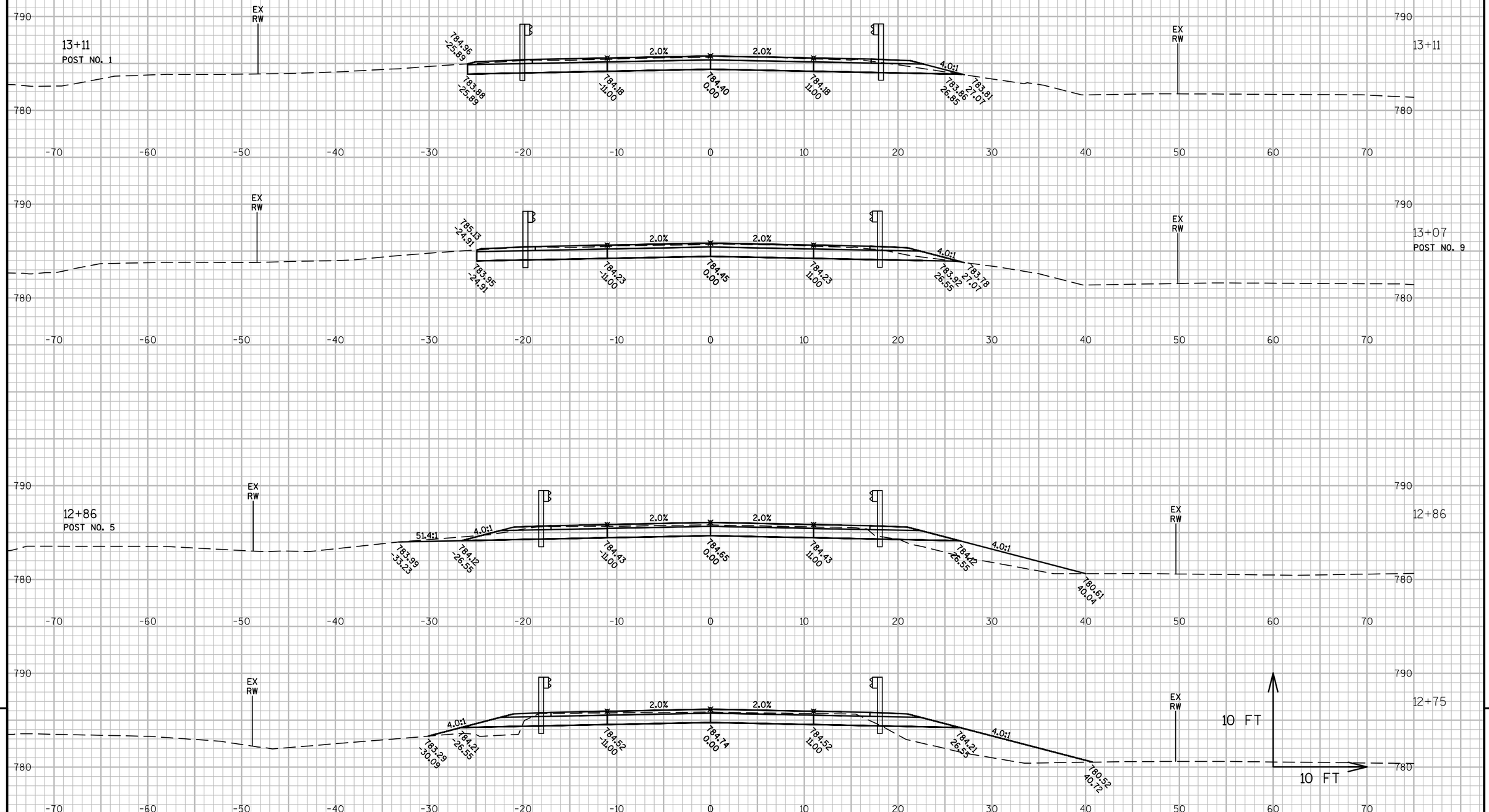


9

9

PROJECT NO: 5942-00-73	HWY: CTH H	COUNTY: ROCK	CROSS SECTIONS: CTH H	SHEET 44	E

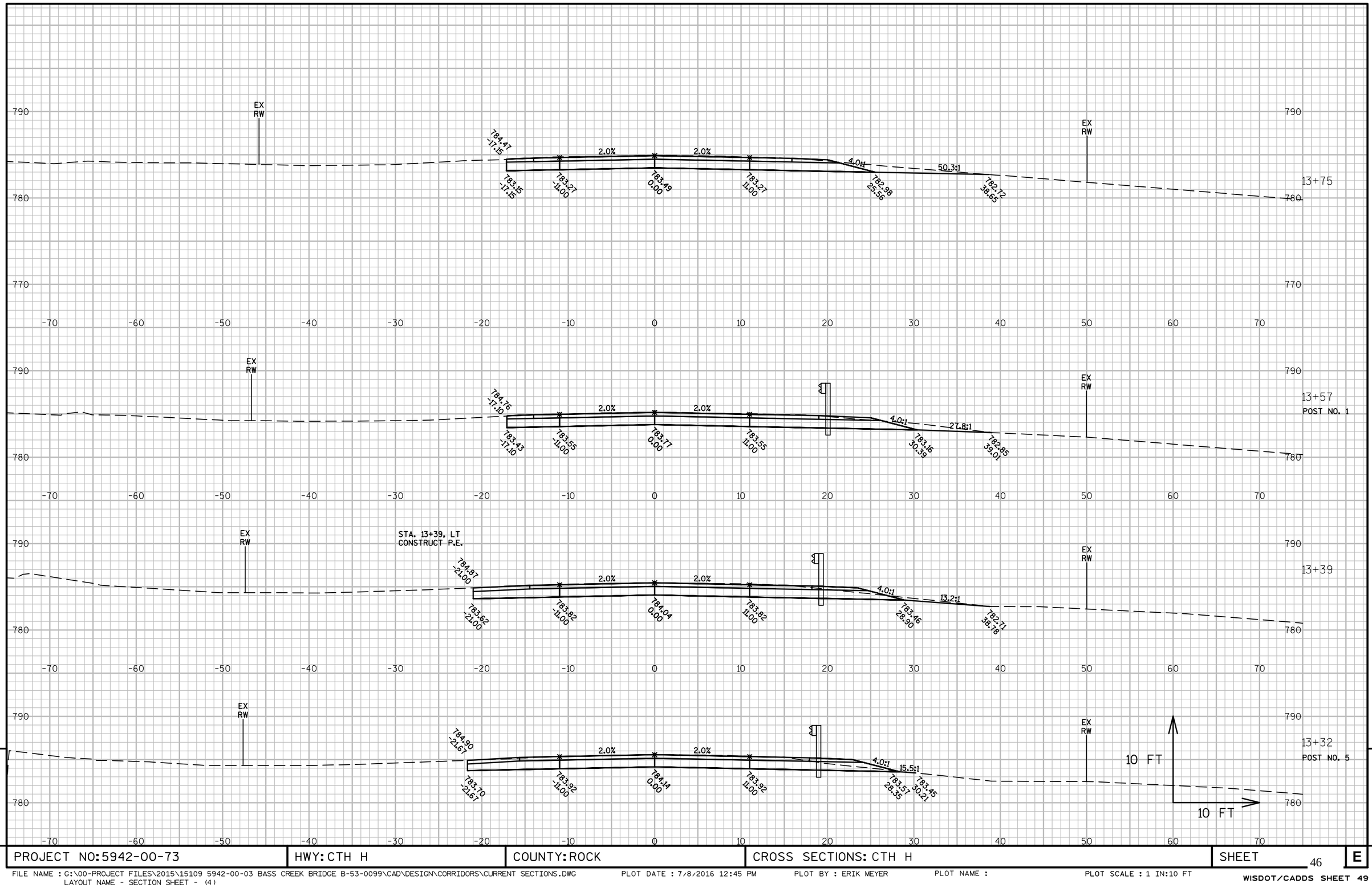
FILE NAME : G:\00-PROJECT FILES\2015\15109 5942-00-03 BASS CREEK BRIDGE B-53-0099\CAD\DESIGN\CORRIDORS\CURRENT SECTIONS.DWG
LAYOUT NAME - SECTION SHEET - (2)
PLOT DATE : 7/8/2016 12:44 PM
PLOT BY : ERIK MEYER
PLOT NAME :
PLOT SCALE : 1 IN:10 FT
WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 5942-00-73	HWY: CTH H	COUNTY: ROCK	CROSS SECTIONS: CTH H	SHEET 45	E



9

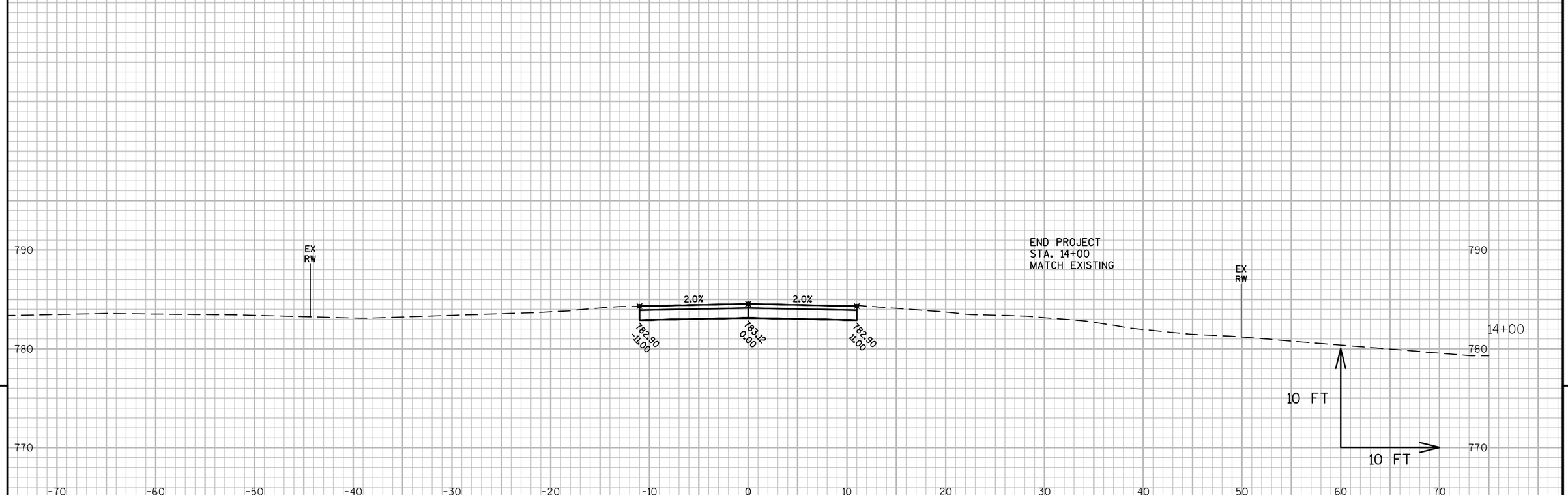
9

PROJECT NO: 5942-00-73	HWY: CTH H	COUNTY: ROCK	CROSS SECTIONS: CTH H	SHEET 46	E

FILE NAME : G:\00-PROJECT FILES\2015\15109 5942-00-03 BASS CREEK BRIDGE B-53-0099\CAD\DESIGN\CORRIDORS\CURRENT SECTIONS.DWG
LAYOUT NAME - SECTION SHEET - (4)

PLOT DATE : 7/8/2016 12:45 PM PLOT BY : ERIK MEYER PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 5942-00-73	HWY: CTH H	COUNTY: ROCK	CROSS SECTIONS: CTH H	SHEET 47	E

Wisconsin Department of Transportation

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