LAX

NOVEMBER 2018

ORDER OF SHEETS

TOTAL SHEETS = 60

PROJECT ID: 6721-00-71

WITH: N/A

COUNTY: COLUMBIA

15

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

STH 78 - I39/90

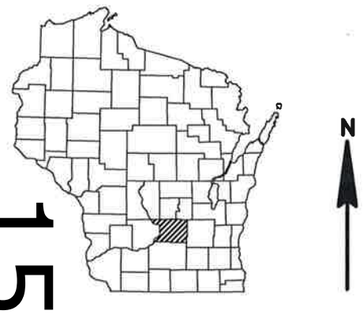
(WISCONSIN RIVER TRIBUTARY BRIDGE B-11-0169)

CTH U

COLUMBIA COUNTY

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
6721-00-71	———	—

STATE PROJECT NUMBER
6721-00-71



N

DESIGN DESIGNATION

A.A.D.T.	(2019)	=	400
A.A.D.T.	(2039)	=	480
D.H.V.	(2039)	=	99
D.D.		=	60/40
T.		=	5.4%
DESIGN SPEED		=	50 MPH
ESALS		=	44,000

CONVENTIONAL SYMBOLS

PLAN

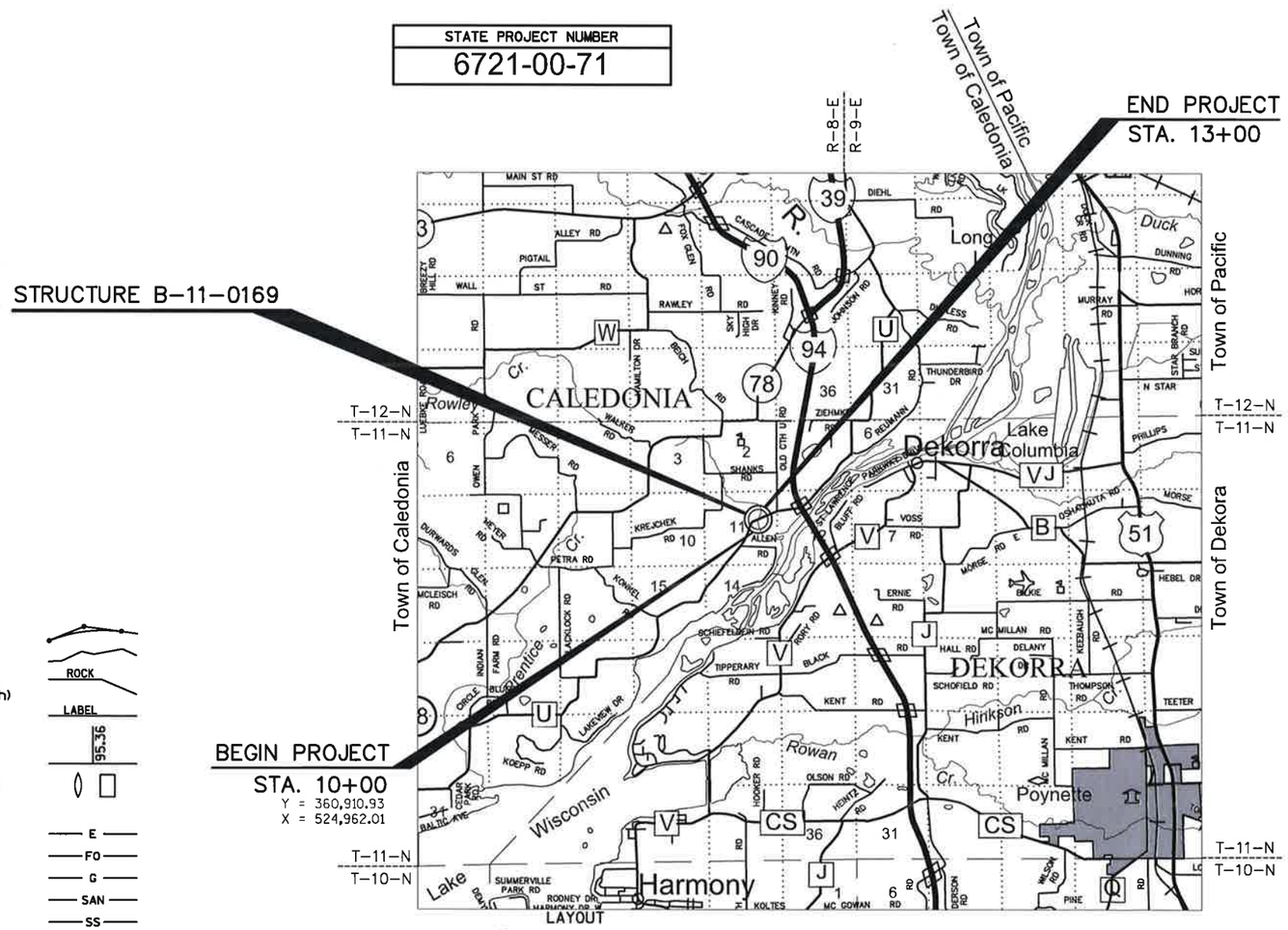
- CORPORATE LIMITS
- PROPERTY LINE
- LOT LINE
- LIMITED HIGHWAY EASEMENT
- EXISTING RIGHT OF WAY
- PROPOSED OR NEW R/W LINE
- SLOPE INTERCEPT
- REFERENCE LINE
- EXISTING CULVERT
- PROPOSED CULVERT (Box or Pipe)
- COMBUSTIBLE FLUIDS (CAUTION)
- MARSH AREA
- WOODED OR SHRUB AREA

PROFILE

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

UTILITIES

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



TOTAL NET LENGTH OF CENTERLINE = 0.057 MILES

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

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

ACCEPTED FOR
COUNTY of COLUMBIA
4/16/2018 (Date) (Highway Commissioner)

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

WISCONSIN PROFESSIONAL ENGINEER
ELLERY A. SCHAFFER
E-41742-6
SPRING GREEN, WI
4/11/2018 (Date) (Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

APPROVED FOR THE DEPARTMENT
DATE: 4/27/18
Management Consultant Signature

E

FILE NAME : S:\PROJECTS\K51070 CTH U, COLUMBIA CO\SHEETSPLAN\TITLE.DWG
LAYOUT NAME - TITLE

PLOT DATE : 4/11/2018 2:04 PM PLOT BY : STRINE, THERESA PLOT NAME :

WISDOT/CADDS SHEET 10

LIST OF STANDARD ABBREVIATIONS

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

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

TOTAL PROJECT AREA= 0.69 ACRES

TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0.58 ACRES

GENERAL NOTES

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

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

DISTURBED AREAS SHOWN WITHIN THE RIGHT–OF–WAY, EXCEPT THE AREAS WITHIN THE FINISHED SHOULDER HINGE POINTS ARE TO BE FERTILIZED (TYPE B), SEEDED (USE SEED MIX NO. 20), AND EROSION MAT URBAN CLASS I TYPE B AS DIRECTED BY THE ENGINEER. ALL POST CONSTRUCTION WET AREAS SHALL BE SEEDED WITH SEEDING MIXTURE NO. 60.

SILT FENCE, TURBIDITY BARRIER, AND TEMPORARY DITCH CHECKS SHALL BE PLACED AS SHOWN ON THE PLAN OR AS DIRECTED BY THE ENGINEER IN THE FIELD. SILT FENCE AND TURBIDITY BARRIER SHALL BE PLACED PRIOR TO CONSTRUCTION AND IN PLACE PRIOR TO STRUCTURE REMOVAL.

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

FILL EXPANSION IS VARIABLE AND IS ESTIMATED AT 25%.

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

ASPHALTIC SURFACE QUANTITIES WERE CALCULATED USING 115 LB/SY/IN. 4–INCH OF ASPHALTIC SURFACE SHALL BE CONSTRUCTED WITH A 1¾–INCH UPPER LAYER AND A 2¼–INCH LOWER LAYER.

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.

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

WETLANDS ARE PRESENT IN THE PROJECT LIMITS. THE CONTRACTOR SHALL NOT OPERATE OR STOCKPILE EQUIPMENT BEYOND THE EXISTING TOE OF SLOPE AT STA. 9+87 – STA. 11+23, RT., STA. 10+00 – STA. 11+95, LT., STA. 11+10 – STA. 11+54, RT., STA. 11+73 – STA. 12+30, LT.

CURVE DATA IS BASED ON THE ARC DEFINITION.

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

COORDINATES AND BEARINGS ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATES SYSTEM (WCCS), COLUMBIA COUNTY.

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

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

CONTACTS

DESIGN CONSULTANT

JEWELL ASSOCIATES ENGINEERS, INC.
560 SUNRISE DRIVE
SPRING GREEN, WI 53588
ATTN: ELLERY SCHAFFER, P.E.
PHONE: (608) 588-7484
CELL: (608) 341-8159
EMAIL: ellery.schaffer@jewellassoc.com

DNR LIAISON

STATE OF WISCONSIN
DNR SOUTH CENTRAL REGION HQ
3911 FISH HATCHERY ROAD
FITCHBURG, WI 53711
ATTN: ERIC HEGGELUND
PHONE: (608) 275-3301
EMAIL: eric.heggelund@wisconsin.gov

COLUMBIA COUNTY HIGHWAY DEPARTMENT

CHRIS HARDY, P.E., COMMISSIONER
338 WEST OLD HWY. 16
PO BOX 875
WYOCENA, WI 53969
PHONE: (608) 429-2136
EMAIL: chris.hardy@co.columbia.wi.us

UTILITIES

ELECTRIC

ALLIANT ENERGY
ATTN: STEVEN KOHLHAGEN
2777 COLUMBIA DRIVE
PORTAGE, WI 53901–9483
OFFICE: (608) 742–0830
EMAIL: stevekohlhagen@alliantenergy.com

TELEPHONE

FRONTIER COMMUNICATIONS
ATTN: JERRY MOORE
2222 W. WISCONSIN ST.
PORTAGE, WI 53901
PH: (608) 742–9507
EMAIL: jerald.r.moore@ftr.com

GAS

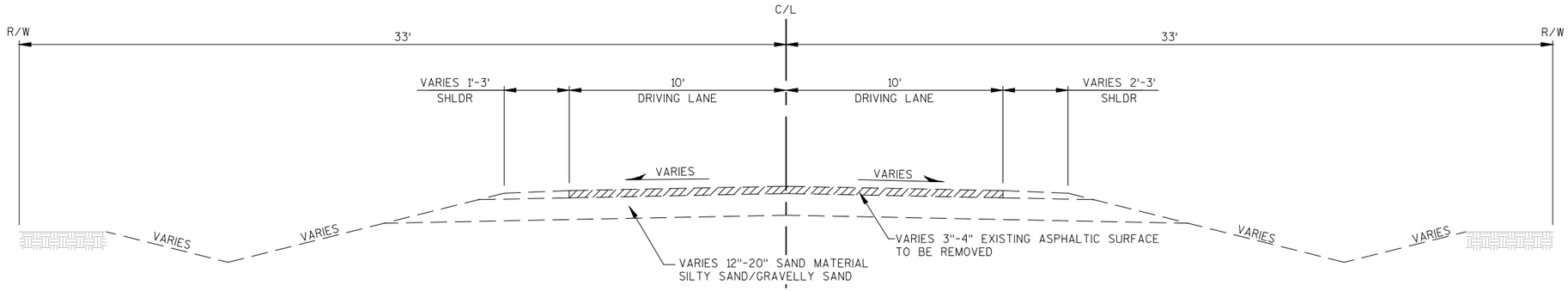
ALLIANT ENERGY
ATTN: STEVEN KOHLHAGEN
2777 COLUMBIA DRIVE
PORTAGE, WI 53901–9483
OFFICE: (608) 742–0830
EMAIL: stevekohlhagen@alliantenergy.com

FIBER OPTICS

TDS METRO MERRIMAC
ATTN: BRANDON SUCHLA
327 PALLISADES ST.
MERRIMAC, WI 53561
PH: (877) 493–9470 EXT. 204
CELL: (608) 370–1608
EMAIL: brandon.suchla@tdstelecom.com

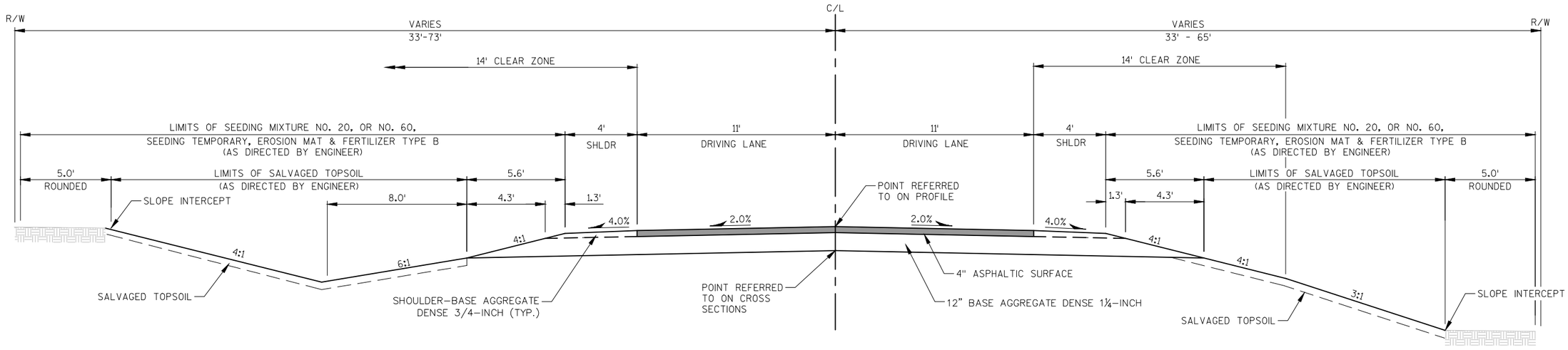
DIGGERS HOTLINE
Dial 811 or (800) 242-8511
www.DiggersHotline.com

* DENOTES UTILITY IS NOT A MEMBER OF DIGGERS HOTLINE



TYPICAL EXISTING SECTION

CTH U



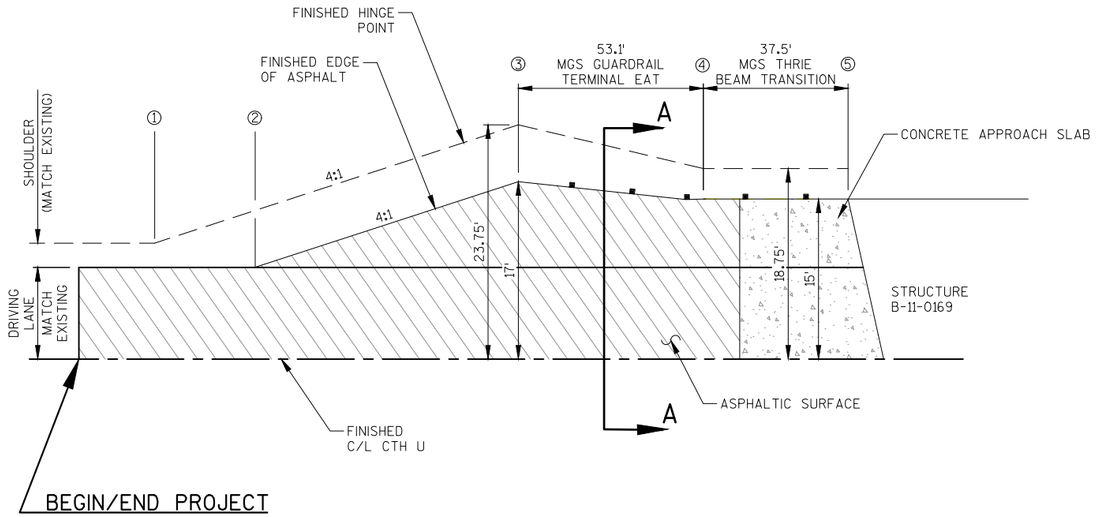
CUT

FILL

TYPICAL FINISHED SECTION

CTH U

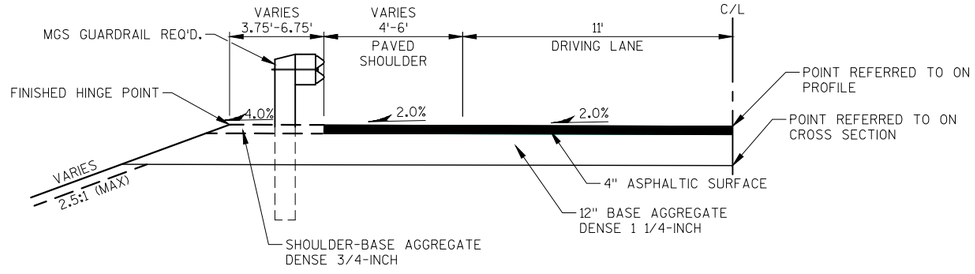
PROJECT NO: 6721-00-71	HWY: CTH U	COUNTY: COLUMBIA	TYPICAL EXISTING SECTION & TYPICAL FINISHED SECTION	SHEET 3	E



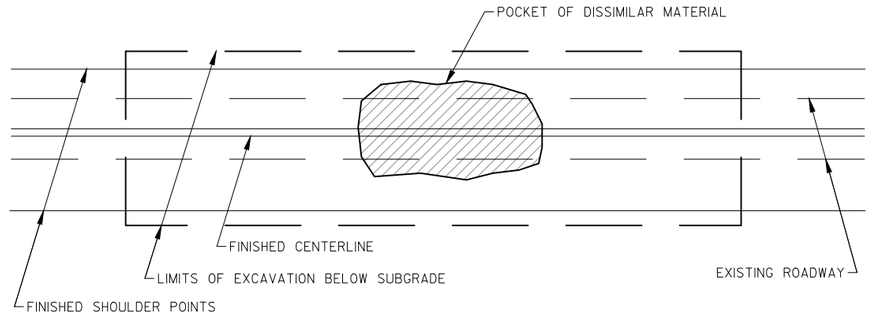
BEAMGUARD LAYOUT TABLE

QUADRANT	LOCATION	STATION ①	②	③	④	⑤
SOUTHWEST	CTH U, RT.	9+87	10+00	10+27	10+80	11+17
NORTHWEST	CTH U, LT.	10+00	10+17	10+44	10+97	11+35
SOUTHEAST	CTH U, RT.	12+94	12+80	12+53	12+00	11+62
NORTHEAST	CTH U. LT.	13+15	12+97	12+70	12+17	11+80

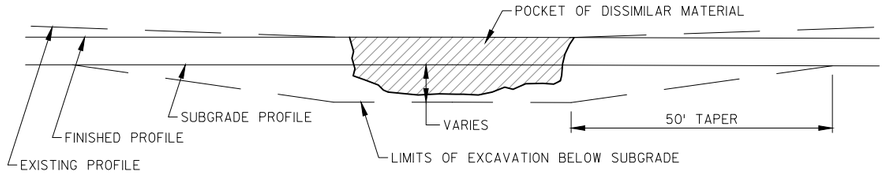
BEAMGUARD LAYOUT DETAIL



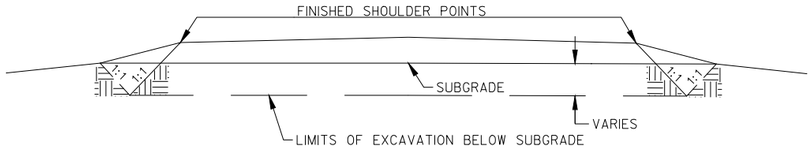
SECTION A-A



PLAN VIEW



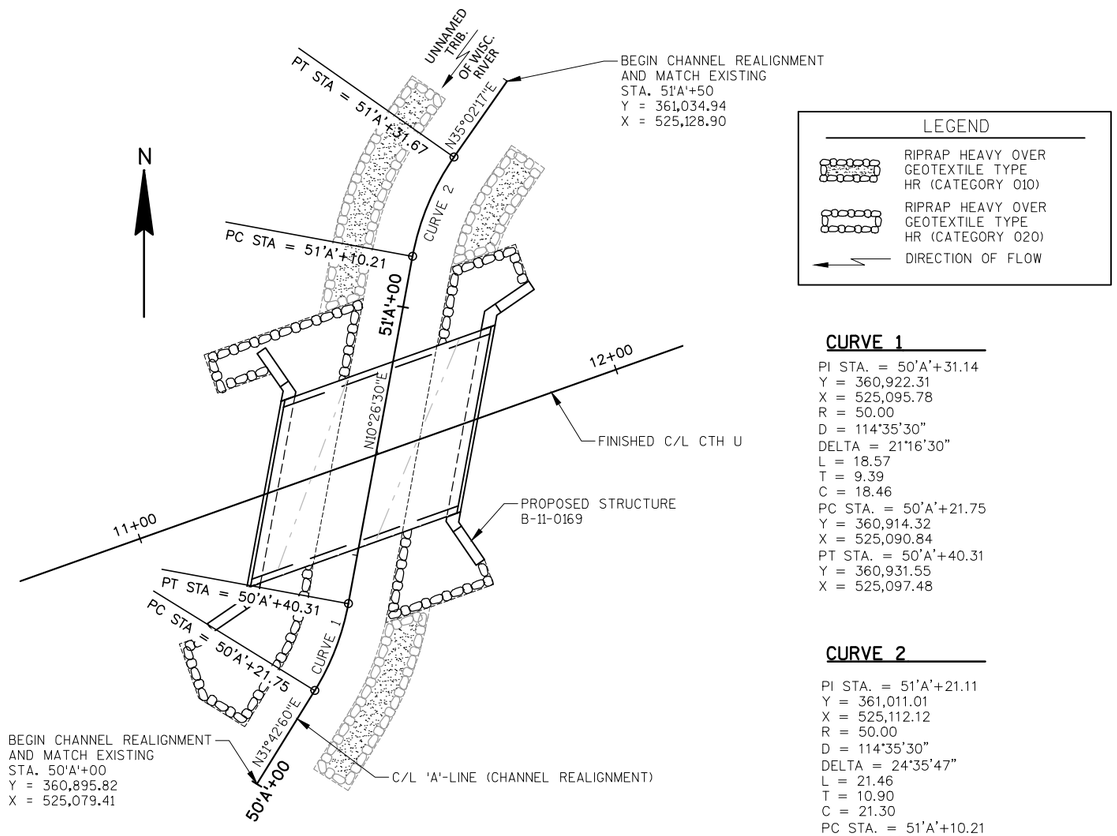
PROFILE VIEW



CROSS SECTION VIEW

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

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



CHANNEL REALIGNMENT - PLAN VIEW

EARTHWORK AT CHANNEL REALIGNMENT TO BE INCLUDED IN CATEGORY 010 MAINLINE QUANTITIES

LEGEND

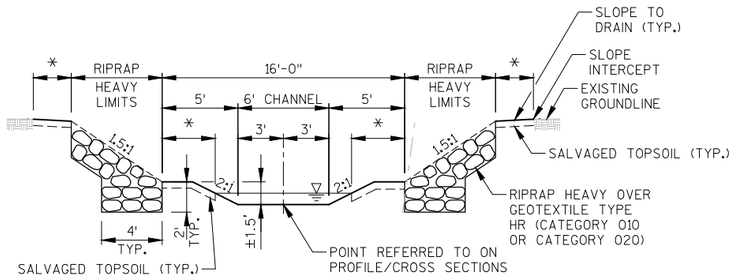
- RIPRAP HEAVY OVER GEOTEXTILE TYPE HR (CATEGORY 010)
- RIPRAP HEAVY OVER GEOTEXTILE TYPE HR (CATEGORY 020)
- DIRECTION OF FLOW

CURVE 1

PI STA. = 50'A'+31.14
Y = 360,922.31
X = 525,095.78
R = 50.00
D = 114°35'30"
DELTA = 21°16'30"
L = 18.57
T = 9.39
C = 18.46
PC STA. = 50'A'+21.75
Y = 360,914.32
X = 525,090.84
PT STA. = 50'A'+40.31
Y = 360,931.55
X = 525,097.48

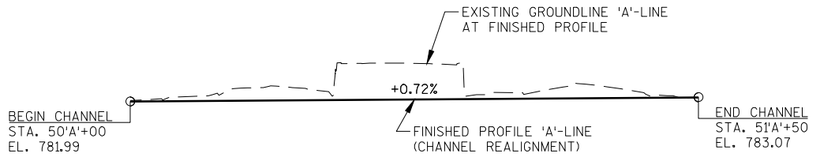
CURVE 2

PI STA. = 51'A'+21.11
Y = 361,011.01
X = 525,112.12
R = 50.00
D = 114°35'30"
DELTA = 24°35'47"
L = 21.46
T = 10.90
C = 21.30
PC STA. = 51'A'+10.21
Y = 361,000.29
X = 525,110.15
PT STA. = 51'A'+31.67
Y = 361,019.93
X = 525,118.38

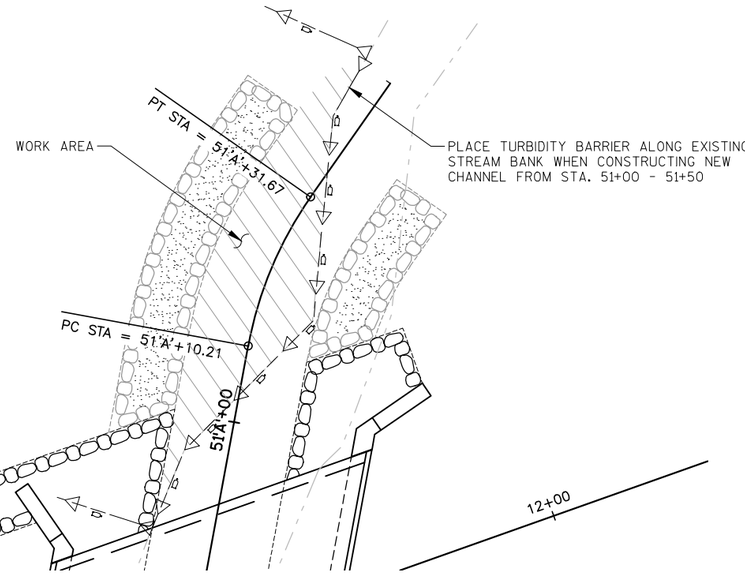


* LIMITS OF SEEDING MIXTURE NO. 60, SEEDING TEMPORARY, SALVAGED TOPSOIL, FERTILIZER TYPE B AND EROSION MAT (INCLUDED IN CATEGORY 010 MAINLINE QUANTITIES)

TYPICAL CHANNEL REALIGNMENT SECTION



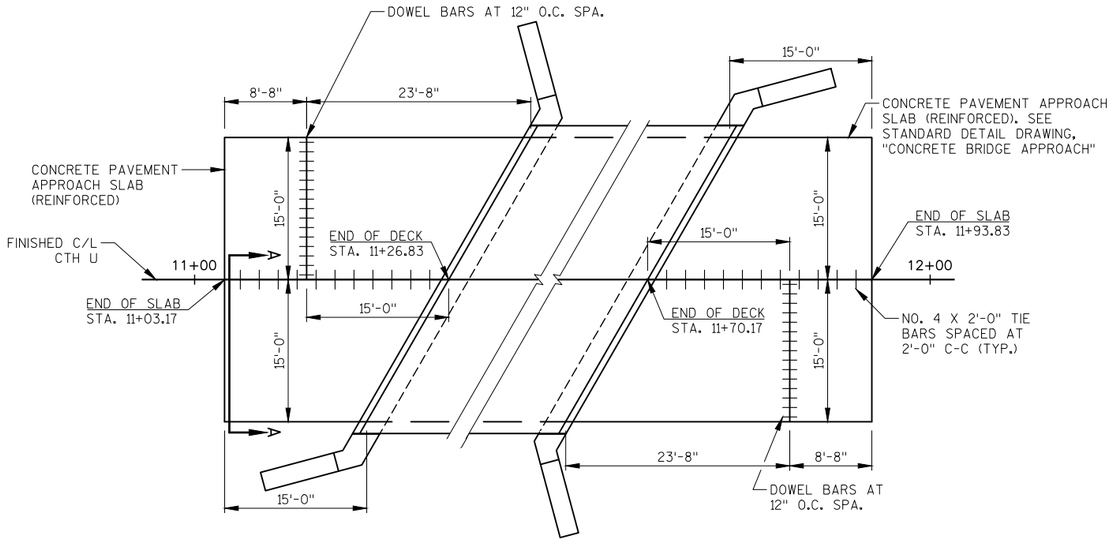
CHANNEL REALIGNMENT - PROFILE GRADE LINE



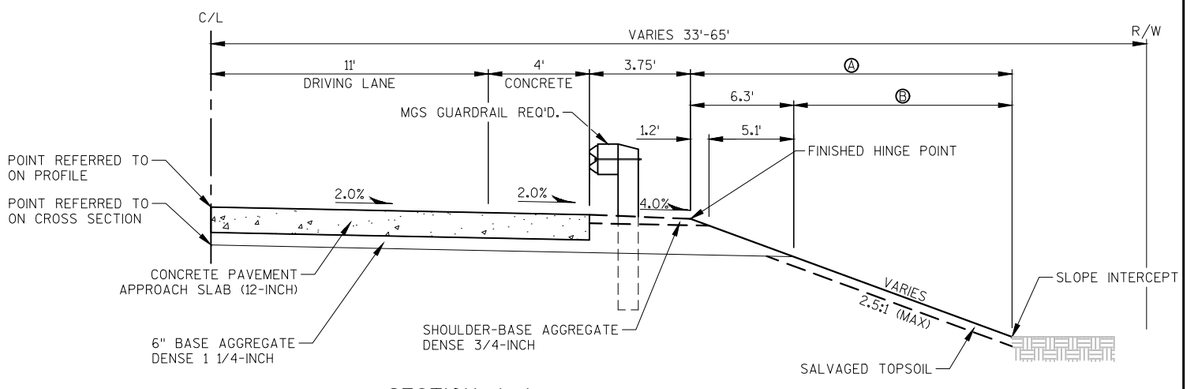
CHANNEL REALIGNMENT - EROSION CONTROL DETAILS

CHANNEL REALIGNMENT DETAILS

PROJECT NO: 6721-00-71	HWY: CTH U	COUNTY: COLUMBIA	CONSTRUCTION DETAILS	SHEET 5	E



STRUCTURE APPROACH DETAILS



SECTION A-A

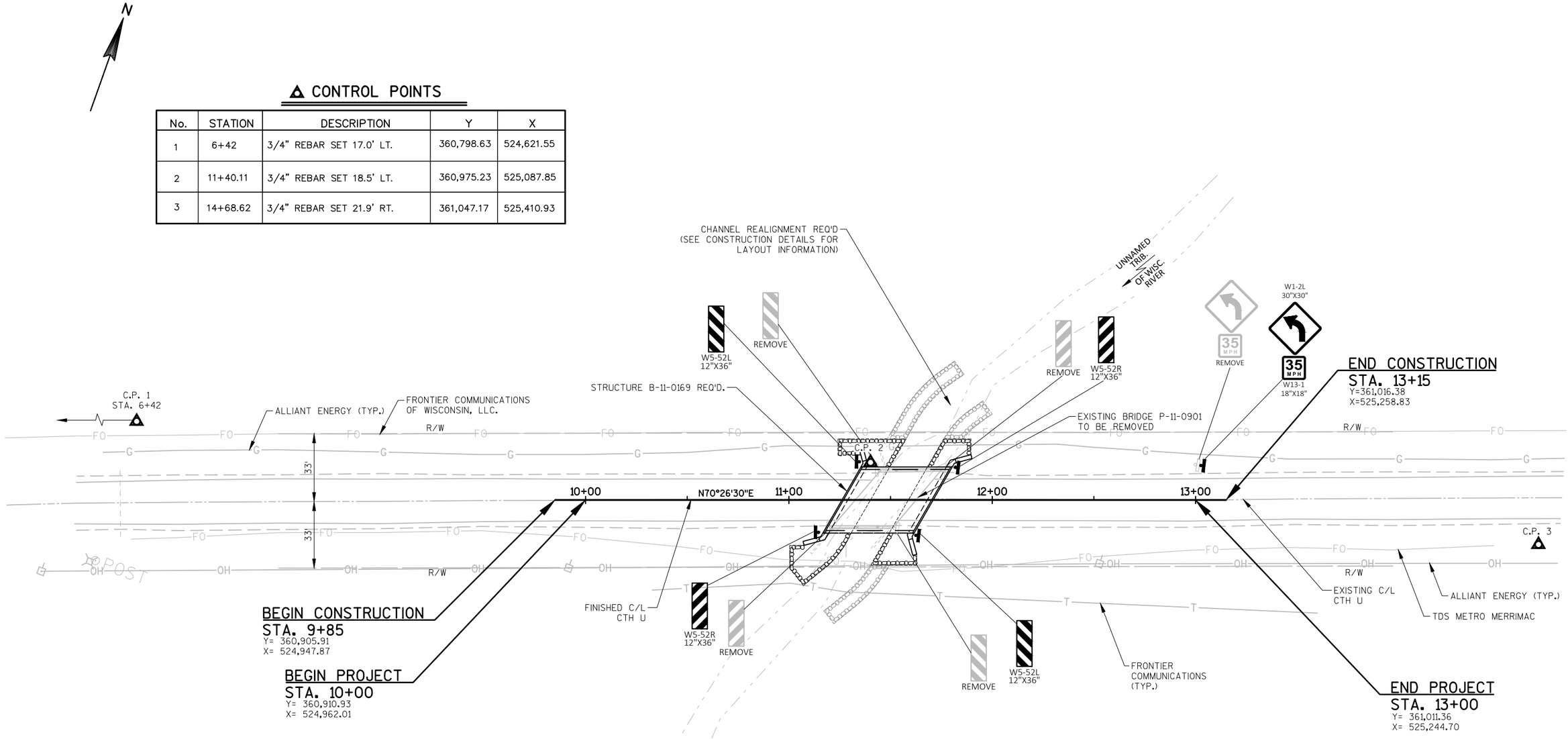
FILL

Ⓐ LIMITS OF SEEDING MIXTURE NO. 20, OR NO. 60, SEEDING TEMPORARY, EROSION MAT & FERTILIZER TYPE B (AS DIRECTED BY ENGINEER)

Ⓑ LIMITS OF SALVAGED TOPSOIL (AS DIRECTED BY ENGINEER)

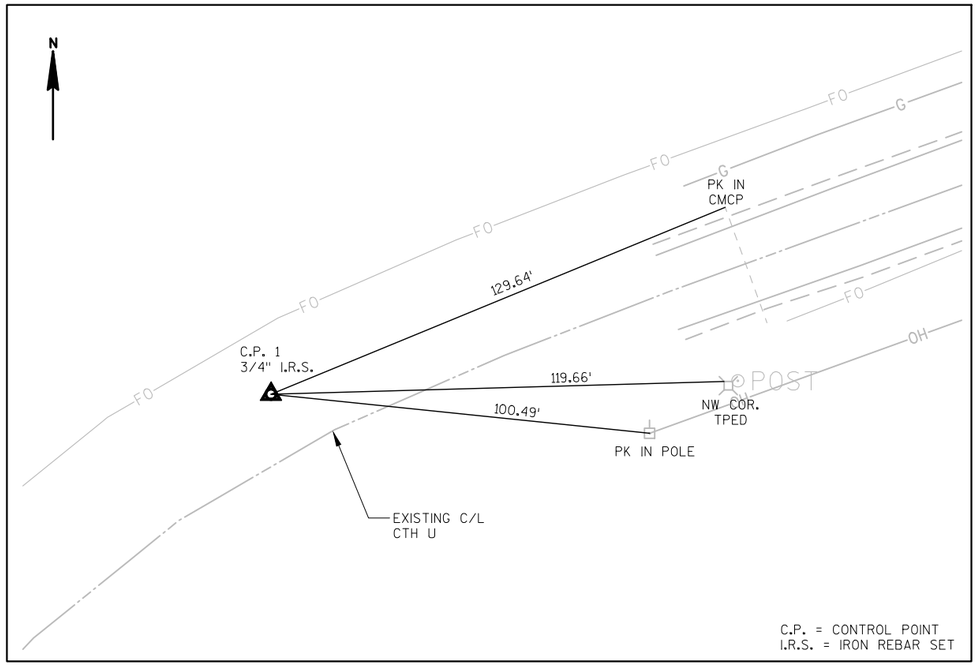
▲ CONTROL POINTS

No.	STATION	DESCRIPTION	Y	X
1	6+42	3/4" REBAR SET 17.0' LT.	360,798.63	524,621.55
2	11+40.11	3/4" REBAR SET 18.5' LT.	360,975.23	525,087.85
3	14+68.62	3/4" REBAR SET 21.9' RT.	361,047.17	525,410.93



PROJECT NO: 6721-00-71	HWY: CTH U	COUNTY: COLUMBIA	TIES AND ALIGNMENT PLAN/PERMANENT SIGNING	SHEET 7	E

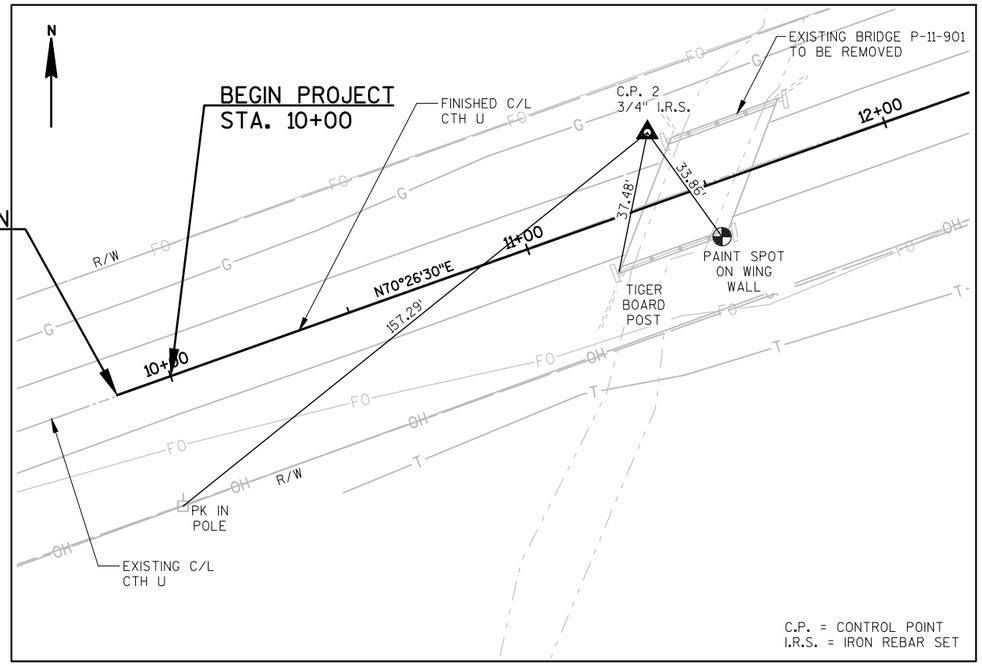
FILE NAME : S:\PROJECTS\K51070 CTH U, COLUMBIA CO\SHEETSPLAN\DETAILS\TIES AND ALIGNMENT.DWG
LAYOUT : ALIGNMENT
PLOT DATE : 4/19/2018
PLOT TIME : 10:34:28 AM
PLOT BY : HANOLD, ROBERT
PLOT SCALE : 1" = 1'



TIES TO C.P.#1

STA. 6+42; 17.0' LT.
Y = 360,798.63
X = 524,621.55

BEGIN CONSTRUCTION
STA. 9+85

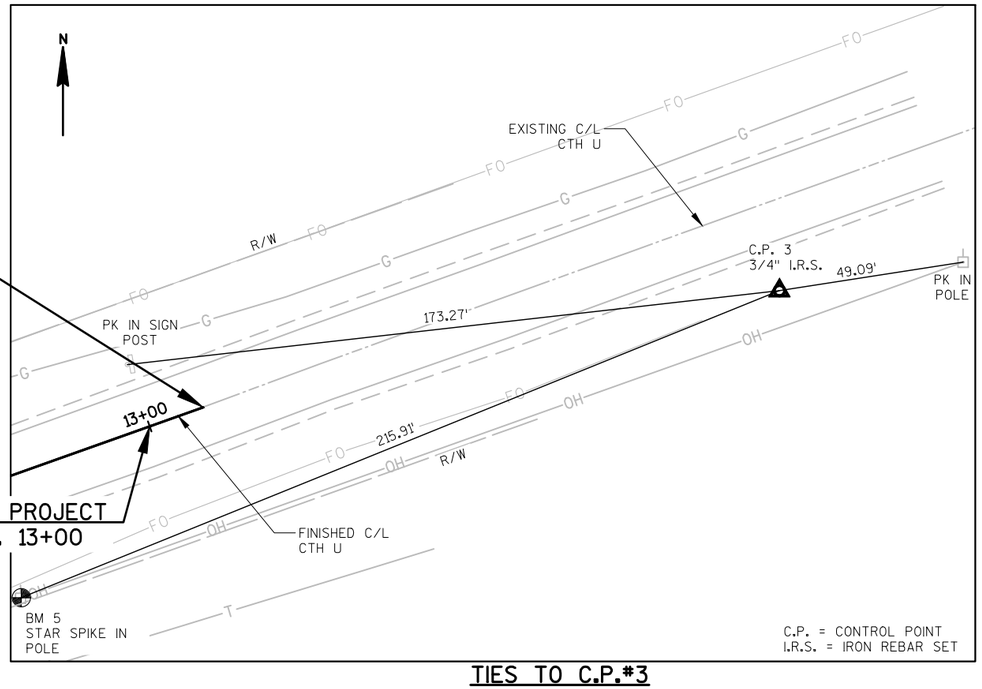


TIES TO C.P.#2

STA. 11+40.11; 18.5' LT.
Y = 360,975.23
X = 525,087.85

END CONSTRUCTION
STA. 13+15

END PROJECT
STA. 13+00



TIES TO C.P.#3

STA. 14+68.62; 21.9' RT.
Y = 361,047.17
X = 525,410.93

CTH U STATION LAYOUT

STATION	Y	X	COMMENTS
9+85.00	360,905.91	524,947.87	BEGIN PROJECT
10+00.00	360,910.93	524,962.01	BEGIN CONSTRUCTION
10+50.00	360,927.67	525,009.12	–
11+00.00	360,944.41	525,056.24	–
11+26.83	360,953.39	525,081.52	END OF DECK
11+50.00	360,961.15	525,103.35	–
11+70.17	360,967.90	525,122.36	END OF DECK
12+00.00	360,977.89	525,150.47	–
12+50.00	360,994.62	525,197.58	–
13+00.00	361,011.36	525,244.70	END PROJECT
13+15.00	361,016.38	525,258.83	END CONSTRUCTION

6721-00-71

Line	Item	Item Description	Unit	Total	Qty
0002	201.0105	Clearing	STA	1.000	1.000
0004	201.0205	Grubbing	STA	1.000	1.000
0006	203.0600.S	Removing Old Structure Over Waterway With Minimal Debris (station) 01. 11+48	LS	1.000	1.000
0008	205.0100	Excavation Common	CY	675.000	675.000
0010	206.1000	Excavation for Structures Bridges (structure) 01. B-11-0169	LS	1.000	1.000
0012	208.0100	Borrow	CY	135.000	135.000
0014	210.1500	Backfill Structure Type A	TON	330.000	330.000
0016	213.0100	Finishing Roadway (project) 01. 6721-00-71	EACH	1.000	1.000
0018	305.0110	Base Aggregate Dense 3/4-Inch	TON	80.000	80.000
0020	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	940.000	940.000
0022	415.0410	Concrete Pavement Approach Slab	SY	150.000	150.000
0024	455.0605	Tack Coat	GAL	40.000	40.000
0026	465.0105	Asphaltic Surface	TON	170.000	170.000
0028	502.0100	Concrete Masonry Bridges	CY	173.000	173.000
0030	502.3200	Protective Surface Treatment	SY	190.000	190.000
0032	505.0400	Bar Steel Reinforcement HS Structures	LB	5,250.000	5,250.000
0034	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	21,280.000	21,280.000
0036	513.4061	Railing Tubular Type M 01. B-11-0169	LF	90.000	90.000
0038	516.0500	Rubberized Membrane Waterproofing	SY	16.000	16.000
0040	550.1100	Piling Steel HP 10-Inch X 42 Lb	LF	555.000	555.000
0042	606.0300	Riprap Heavy	CY	265.000	265.000
0044	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	170.000	170.000
0046	614.2500	MGS Thrie Beam Transition	LF	160.000	160.000
0048	614.2610	MGS Guardrail Terminal EAT	EACH	4.000	4.000
0050	618.0100	Maintenance And Repair of Haul Roads (project) 01. 6721-00-71	EACH	1.000	1.000
0052	619.1000	Mobilization	EACH	1.000	1.000
0054	624.0100	Water	MGAL	9.000	9.000
0056	625.0500	Salvaged Topsoil	SY	1,030.000	1,030.000
0058	627.0200	Mulching	SY	90.000	90.000
0060	628.1504	Silt Fence	LF	880.000	880.000
0062	628.1520	Silt Fence Maintenance	LF	1,760.000	1,760.000
0064	628.1905	Mobilizations Erosion Control	EACH	4.000	4.000
0066	628.1910	Mobilizations Emergency Erosion Control	EACH	2.000	2.000
0068	628.2008	Erosion Mat Urban Class I Type B	SY	1,750.000	1,750.000
0070	628.6005	Turbidity Barriers	SY	85.000	85.000
0072	628.7504	Temporary Ditch Checks	LF	24.000	24.000
0074	629.0210	Fertilizer Type B	CWT	1.100	1.100

6721-00-71

Line	Item	Item Description	Unit	Total	Qty
0076	630.0120	Seeding Mixture No. 20	LB	40.000	40.000
0078	630.0160	Seeding Mixture No. 60	LB	13.000	13.000
0080	630.0200	Seeding Temporary	LB	25.000	25.000
0082	630.0300	Seeding Borrow Pit	LB	2.000	2.000
0084	633.5100	Markers Row	EACH	13.000	13.000
0086	634.0612	Posts Wood 4x6-Inch X 12-FT	EACH	4.000	4.000
0088	634.0616	Posts Wood 4x6-Inch X 16-FT	EACH	1.000	1.000
0090	637.2230	Signs Type II Reflective F	SF	20.500	20.500
0092	638.2602	Removing Signs Type II	EACH	6.000	6.000
0094	638.3000	Removing Small Sign Supports	EACH	5.000	5.000
0096	642.5001	Field Office Type B	EACH	1.000	1.000
0098	643.0420	Traffic Control Barricades Type III	DAY	1,188.000	1,188.000
0100	643.0705	Traffic Control Warning Lights Type A	DAY	1,848.000	1,848.000
0102	643.0900	Traffic Control Signs	DAY	924.000	924.000
0104	643.5000	Traffic Control	EACH	1.000	1.000
0106	645.0111	Geotextile Type DF Schedule A	SY	120.000	120.000
0108	645.0120	Geotextile Type HR	SY	500.000	500.000
0110	646.1020	Marking Line Epoxy 4-Inch	LF	1,200.000	1,200.000
0112	650.4500	Construction Staking Subgrade	LF	435.000	435.000
0114	650.5000	Construction Staking Base	LF	285.000	285.000
0116	650.6500	Construction Staking Structure Layout (structure) 01. B-11-0169	LS	1.000	1.000
0118	650.9910	Construction Staking Supplemental Control (project) 01. 6721-00-71	LS	1.000	1.000
0120	650.9920	Construction Staking Slope Stakes	LF	435.000	435.000
0122	690.0150	Sawing Asphalt	LF	40.000	40.000
0124	715.0415	Incentive Strength Concrete Pavement	DOL	500.000	500.000
0126	715.0502	Incentive Strength Concrete Structures	DOL	1,038.000	1,038.000

ALL ITEMS CATEGORY 010 UNLESS OTHERWISE NOTED

CLEARING & GRUBBING

STATION	LOCATION	201.0105 CLEARING (STA)	201.0205 GRUBBING (STA)
11+00-12+00	MAINLINE	1	1
	TOTALS =	1	1

EARTHWORK SUMMARY

FROM/TO STA	LOCATION	205.0100 EXCAVATION COMMON CUT (CY)	AVAILABLE MATERIAL (CY) (1)	UNEXPANDED FILL (CY)	EXPANDED FILL (CY) FACTOR 1.25 (2)	MASS ORDINATE +/- (CY) (3)	208.0100 BORROW (CY)	WASTE (CY)
STA. 8+65 - STA. 13+30	MAINLINE	400	330	428	535	-135	-135	0
STA. 50'A'+00 - STA. 51'A'+50	CHANNEL REALIGNMENT	275	0	0	0	0	0	275
	TOTALS =	675	330	428	535	-135	-135	275

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

NOTE: WASTE EXCESS CHANNEL REALIGNMENT MATERIAL. DO NOT USE EXCESS EXCAVATED MATERIAL FROM CHANNEL REALIGNMENT (A-LINE) ACTIVITIES IN ROADWAY RECONSTRUCTION APPRAOCH CONSTRUCTION.

BASE AGGREGATE DENSE

STATION - STATION	LOCATION	305.0110 BASE AGGREGATE DENSE 3/4-INCH (TON)	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH (TON)
9+85-11+26	MAINLINE	34	430
11+71-13+15	MAINLINE	36	450
UNDISTRIBUTED	-	10	60
	TOTALS =	80	940

CONCRETE PAVEMENT APPROACH SLAB

STATION - STATION	LOCATION	415.0410 (SY)
11+03 - 11+26	MAINLINE	75
11+71 - 11+94	MAINLINE	75
	TOTALS =	150

ASPHALTIC SURFACE

STATION - STATION	LOCATION	455.0605 TACK COAT (GAL)	465.0105 ASPHALTIC SURFACE (TON)
10+00-13+00	MAINLINE	34	160
-	UNDISTRIBUTED	6	10
	TOTALS =	40	170

RIPRAP HEAVY

STATION - STATION	LOCATION	*606.0300 RIPRAP HEAVY (CY)	*645.0120 GEOTEXTILE TYPE HR (SY)
11+17 - 11+49	MAINLINE, RT.	22	54
11+48 - 11+86	MAINLINE, LT.	28	69
11+76 - 12+00	MAINLINE, LT.	14	37
-	UNDISTRIBUTED	16	30
	TOTALS =	80	190

* MORE LISTED ELSEWHERE

MGS GUARDRAIL

STATION - STATION	LOCATION	614.2500 MGS THRIE BEAM TRANSITION (LF)	614.2610 MGS GUARDRAIL TERMINAL EAT (EACH)
10+27	MAINLINE, RT.	-	1
10+44	MAINLINE, LT.	-	1
10+97-11+35	MAINLINE, LT.	40	-
10+80-11+17	MAINLINE, RT.	40	-
11+80-12+17	MAINLINE, LT.	40	-
11+63-12+00	MAINLINE, RT.	40	-
12+53	MAINLINE, RT.	-	1
12+70	MAINLINE, LT.	-	1
	TOTALS =	160	4

WATER

STATION-STATION	LOCATION	624.0100 (MGAL)
9+85 - 13+15	MAINLINE	9
	TOTALS =	9

FINISHING ITEMS

STATION - STATION	LOCATION	625.0500 SALVAGED TOPSOIL (SY)	627.0200 MULCHING (SY)	628.2008 EROSION MAT URBAN CLASS I TYPE B (SY)	629.0210 FERTILIZER TYPE B (CWT)	630.0120 SEEDING MIXTURE NO. 20 (LB)	*630.0160 SEEDING MIXTURE NO. 60 (LB)	630.0200 SEEDING TEMPORARY (LB)	630.0300 SEEDING BORROW PIT (LB)
10+00 - 13+00	MAINLINE	660	-	1,240	0.8	34	5	17	-
50'A'+00 - 51'A'+00	CHANNEL REALIGNMENT	205	-	205	0.1	-	5	5	-
-	BORROW PIT	-	70		0.1	-	-	-	1
UNDISTRIBUTED	-	165	20	305	0.1	6	3	3	1
	TOTALS =	1,030	90	1,750	1.1	40	13	25	2

* STA. 9+87 - STA. 11+23, RT
STA. 10+00 - STA. 11+95, LT.
STA. 11+10 - STA. 11+54, RT.
STA. 11+73 - STA. 12+30, LT.

FILE NAME : S:\PROJECTS\K51070 CTH U, COLUMBIA CO\SHEETSPLAN\DETAILS\MISC QUANT.DWG
LAYOUT : LAYOUT1
PLOT DATE : 5/22/2018
PLOT TIME : 9:28:00 AM
PLOT BY : STRINE, THERESA
PLOT SCALE : 1" = 1'

ALL ITEMS CATEGORY 010 UNLESS OTHERWISE NOTED

SILT FENCE

STATION - STATION	LOCATION	628.1504 SILT FENCE (LF)	628.1520 SILT FENCE MAINTENANCE (LF)
9+87 - 11+32	MAINLINE, RT	170	340
10+00 - 11+96	MAINLINE, LT	247	494
11+08 - 11+47	MAINLINE, RT	85	170
11+67 - 13+14	MAINLINE, LT	205	410
UNDISTRIBUTED	-	173	346
TOTALS =		880	1,760

MOBILIZATION EROSION CONTROL

PROJECT	628.1905 MOBILIZATIONS EROSION CONTROL (EACH)	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL (EACH)
6721-00-71	4	2
TOTALS =	4	2

TURBIDITY BARRIERS

STATION-STATION	LOCATION	628.6005 (SY)
11+46 - 11+79	MAINLINE	80
-	UNDISTRIBUTED	5
	TOTALS =	85

TEMPORARY DITCH CHECKS

STATION	LOCATION	628.7504 (LF)
11+44	MAINLINE, RT.	8
12+00	MAINLINE, RT.	8
-	UNDISTRIBUTED	8
	TOTALS =	24

MARKERS ROW

PT. NO.	STATION	OFFSET FROM FINISHED C/L	633.5100 (EACH)
101	10+00.00	32.80 LT.	1
102	11+30.00	33.05 LT.	1
103	11+80.00	73.00 LT.	1
104	12+05.00	73.00 LT.	1
105	12+65.00	33.30 LT.	1
106	13+00.00	33.36 LT.	1
107	13+00.00	32.64 RT.	1
108	12+50.00	62.00 RT.	1
109	11+25.00	62.00 RT.	1
110	11+22.00	65.00 RT.	1
111	11+10.00	65.00 RT.	1
112	10+75.00	33.06 RT.	1
113	10+00.00	33.20 RT.	1
		TOTALS =	13

PERMANENT SIGNING

APPROX. STATION	LOCATION	SIGN CODE	SIGN DESCRIPTION	ORDER LINES	SIGN SIZE	634.0612 POSTS WOOD 4X6-INCH X 12-FT (EACH)	634.0616 POSTS WOOD 4X6-INCH X 16-FT (EACH)	637.2230 SIGNS TYPE II REFLECTIVE F (SF)	638.2602 REMOVING SIGNS TYPE II (EACH)	638.3000 REMOVING SMALL SIGN SUPPORTS (EACH)
11+45	MAINLINE, LT	W5-52L	BRIDGE HASH MARKS		12X36	---	---	---	1	1
11+21	MAINLINE, RT	W5-52R	BRIDGE HASH MARKS		12X36	---	---	---	1	1
11+36	MAINLINE, LT.	W5-52L	BRIDGE HASH MARKS		12X36	1	---	3.00	---	---
11+15	MAINLINE, RT	W5-52R	BRIDGE HASH MARKS		12X36	1	----	3.00	---	---
11+76	MAINLINE, LT	W5-52L	BRIDGE HASH MARKS		12X36	---	---	---	1	1
11+52	MAINLINE, RT.	W5-52R	BRIDGE HASH MARKS		12X36	---	---	---	1	1
11+82	MAINLINE, LT.	W5-52L	BRIDGE HASH MARKS		12X36	1	----	3.00	---	---
11+61	MAINLINE, RT.	W5-52R	BRIDGE HASH MARKS		12X36	1	---	3.00	---	---
13+00	MAINLINE, LT.	W1-2L	LEFT CURVE		30X30	---	---	---	1	1
13+00	MAINLINE, LT.	W13-1	ADVISORY SPEED PLATE (YELLOW BACK)	35 MPH	18X18	---	---	---	1	---
13+00	MAINLINE, LT.	W1-2L	LEFT CURVE		30X30	---	1	6.25	---	---
13+00	MAINLINE, LT.	W13-1	ADVISORY SPEED PLATE (YELLOW BACK)	35 MPH	18X18	---	---	2.25	---	---
					TOTALS =	4	1	20.50	6	5

TRAFFIC CONTROL

LOCATION	TRAFFIC CONTROL 643.0420 BARRICADES TYPE III (DAY)	643.0705 WARNING LIGHTS TYPE A (DAY)	643.0900 SIGNS (DAY)	643.5000 TRAFFIC CONTROL (EACH)
PROJECT	1188	1,848	924	1
TOTALS =	1188	1,848	924	1

MARKING LINE EPOXY 4-INCH

STATION - STATION	LOCATION	TYPE	646.1020 (LF)
10+00 - 13+00	MAINLINE, RT	WHITE EDGE LINE	300
10+00 - 13+00	MAINLINE, LT	WHITE EDGE LINE	300
10+00 - 13+00	MAINLINE	DOUBLE YELLOW	600
		TOTALS =	1,200

SAWING ASPHALT

STATION	LOCATION	690.0150 (L.F.)
10+00	MAINLINE	20
13+00	MAINLINE	20
	TOTAL =	40

CONSTRUCTION STAKING

STATION -STATION	LOCATION	CONSTRUCTION STAKING 650.4500 SUBGRADE (LF)	650.5000 BASE (LF)	*650.6500 STRUCTURE LAYOUT (B-11-0169) (LS)	650.9910 SUPPLEMENTAL CONTROL (01. 6721-00-71) (LS)	650.9920 SLOPES STAKES (LF)
9+85-13+15	MAINLINE	285	285	-	-	285
50+00 - 51+50	CHANNEL REALIGNMENT	150	-	-	-	150
-	PROJECT	-	-	1	1	-
	TOTAL =	435	285	1	1	435

*CATEGORY 020

R/W PROJECT NUMBER	SHEET NUMBER	TOTAL SHEETS
6721-00-01		
FEDERAL PROJECT NUMBER	4.01	2

PLAT OF RIGHT-OF-WAY REQUIRED FOR

STH 78-139/90

(WISCONSIN RIVER TRIBUTARY BRIDGE B-11-0169)

CTH U COLUMBIA COUNTY

CONSTRUCTION PROJECT NUMBER

6721-00-71

CONVENTIONAL ABBREVIATIONS

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

CURVE DATA

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

CONVENTIONAL SYMBOLS

FOUND SURVEY MONUMENT (WITH POINT NUMBER) ○1040

R/W MONUMENT ○ ● (SET)

R/W STANDARD △ ▲ (SET)

SIGN ISIGN

SECTION CORNER MONUMENT

SECTION CORNER SYMBOL

FEE (HATCH VARIES)

TEMPORARY LIMITED EASEMENT

PERMANENT LIMITED EASEMENT

R/W BOUNDARY POINT RWB20

PARCEL NUMBER 8

UTILITY PARCEL NUMBER 92

SIGN NUMBER (OFF PREMISE) 21-

BUILDING

PROPOSED R/W LINE

EXISTING H.E. LINE

PROPERTY LINE

LOT & TIE LINES

SLOPE INTERCEPTS

CORPORATE LIMITS

NO ACCESS (BY PREVIOUS ACQUISITION/CONTROL)

NO ACCESS (BY ACQUISITION)

NO ACCESS (BY STATUTORY AUTHORITY)

SECTION LINE

QUARTER LINE

SIXTEENTH LINE

EXISTING CENTERLINE

PROPOSED REFERENCE LINE

PARALLEL OFFSET

ENCROACHMENT TYPE

CONVENTIONAL UTILITY SYMBOLS

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

NOTES

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

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

RIGHT-OF-WAY BOUNDARIES ARE DEFINED WITH COURSES OF THE PERIMETER OF THE HIGHWAY LANDS REFERENCED TO THE U.S. PUBLIC LAND SURVEY SYSTEM OR OTHER "SURVEYS OF PUBLIC RECORD."

STRUCTURE B-11-0169

BEGIN RELOCATION ORDER

STA. 10+00

713.21' NORTH AND 1359.95' WEST OF THE E¼ CORNER OF SECTION 11, T.11N., R.8E., TOWN OF CALEDONIA, COLUMBIA COUNTY, WI

Y= 360,910.93

X= 524,962.01

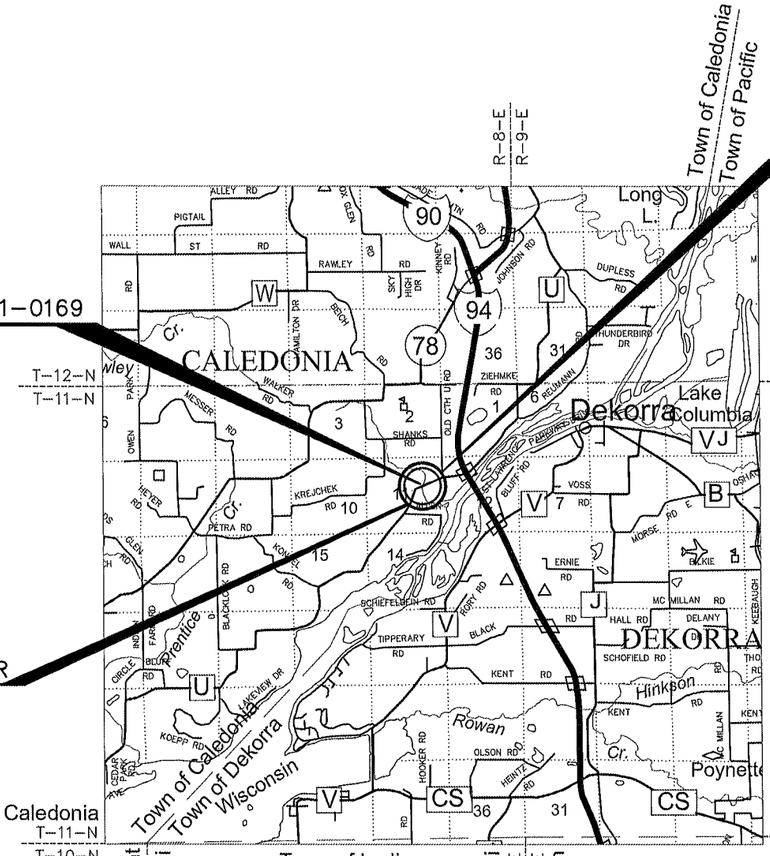
END RELOCATION ORDER

STA. 13+00

813.64' NORTH AND 1077.26' WEST OF THE E¼ CORNER OF SECTION 11, T.11N., R.8E., TOWN OF CALEDONIA, COLUMBIA COUNTY, WI

Y= 361,011.36

X= 525,244.70



TOTAL NET LENGTH OF CENTERLINE = 0.057 MI.

REVISION DATE

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

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

WISCONSIN SCOTT D. WARNER S-2524 RICHLAND CENTER, WI 02-21-2018 LAND SURVEYOR

APPROVED FOR COLUMBIA COUNTY

DATE 3/9/18 (NAME / TITLE)

E

SCHEDULE OF LANDS & INTERESTS REQUIRED

PARCEL NUMBER	OWNER (S)	INTEREST REQUIRED	R/W ACRES REQUIRED			TLE ACRES REQ.
			NEW	EXISTING	TOTAL	
1	JAMES L. MILLER	FEE, TLE	0.20	0.45	0.65	0.04
201	FRONTIER COMMUNICATIONS OF WISCONSIN, LLC		RELEASE OF RIGHTS			
202	MERRIMAC COMMUNICATIONS, LTD.		RELEASE OF RIGHTS			

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

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

BASIS OF EXISTING RIGHT-OF-WAY FOR CTH U WAS BASED ON COUNTY RECORDS, THE CENTERLINE OF EXISTING PAVEMENT, AND WIS. STATUTE 82.31(2).

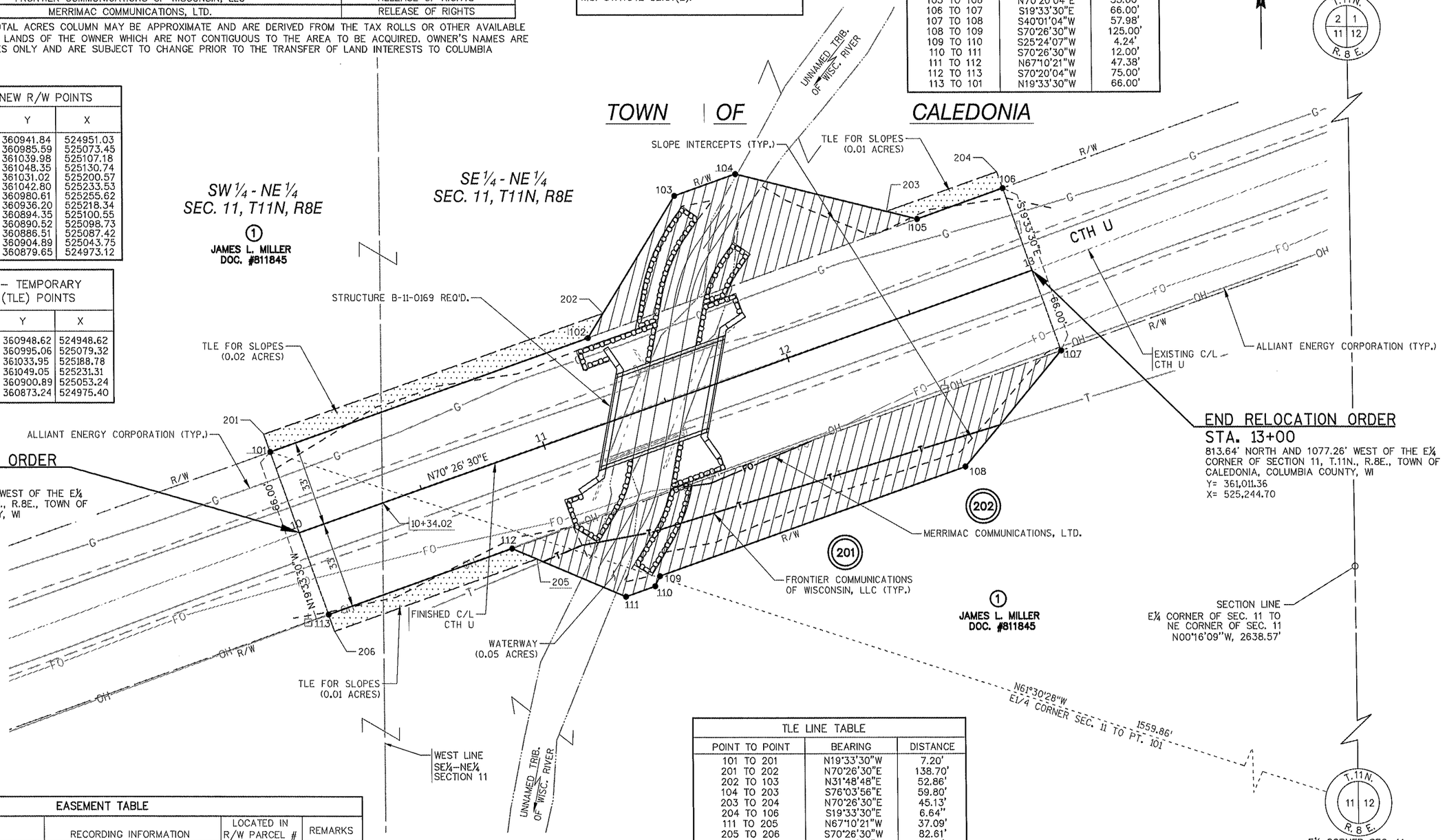
RIGHT OF WAY LINE TABLE		
POINT TO POINT	BEARING	DISTANCE
101 TO 102	N70°20'04"E	130.00'
102 TO 103	N31°48'48"E	64.00'
103 TO 104	N70°26'30"E	25.00'
104 TO 105	S76°03'56"E	71.95'
105 TO 106	N70°20'04"E	35.00'
106 TO 107	S19°33'30"E	66.00'
107 TO 108	S40°01'04"W	57.98'
108 TO 109	S70°26'30"W	125.00'
109 TO 110	S25°24'07"W	4.24'
110 TO 111	S70°26'30"W	12.00'
111 TO 112	N67°10'21"W	47.38'
112 TO 113	S70°20'04"W	75.00'
113 TO 101	N19°33'30"W	66.00'

NE CORNER SEC. 11
MONUMENT NOT RECOVERED.
POSITION COMPUTED FROM
EXISTING REFERENCE
MONUMENTS
Y = 362,836.26
X = 526,309.56

T.11N. (2, 1, 11, 12) R.8E.

COORDINATE TABLE – NEW R/W POINTS				
PT.#	STATION	OFFSET	Y	X
101	10+00.00	32.80 LT.	360941.84	524951.03
102	11+30.00	33.05 LT.	360985.59	525073.45
103	11+80.00	73.00 LT.	361039.98	525107.18
104	12+05.00	73.00 LT.	361048.35	525130.74
105	12+65.00	33.30 LT.	361031.02	525200.57
106	13+00.00	33.36 LT.	361042.80	525233.53
107	13+00.00	32.64 RT.	360980.61	525255.62
108	12+50.00	62.00 RT.	360936.20	525218.34
109	11+25.00	62.00 RT.	360894.35	525100.55
110	11+22.00	65.00 RT.	360890.52	525098.73
111	11+10.00	65.00 RT.	360886.51	525087.42
112	10+75.00	33.06 RT.	360904.89	525043.75
113	10+00.00	33.20 RT.	360879.65	524973.12

COORDINATE TABLE – TEMPORARY LIMITED EASEMENT (TLE) POINTS				
PT.#	STATION	OFFSET	Y	X
201	10+00.00	40.00 LT.	360948.62	524948.62
202	11+38.70	40.00 LT.	360995.06	525079.32
203	12+54.87	40.00 LT.	361033.95	525188.78
204	13+00.00	40.00 LT.	361049.05	525231.31
205	10+82.61	40.00 RT.	360900.89	525053.24
206	10+00.00	40.00 RT.	360873.24	524975.40

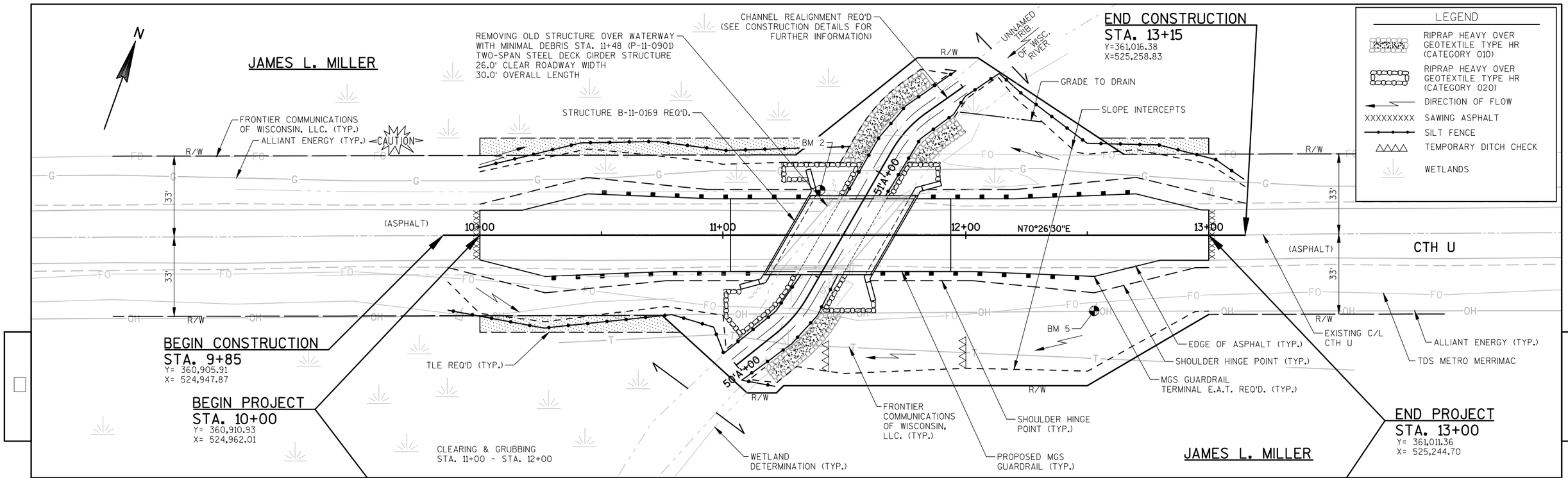


TLE LINE TABLE		
POINT TO POINT	BEARING	DISTANCE
101 TO 201	N19°33'30"W	7.20'
201 TO 202	N70°26'30"E	138.70'
202 TO 103	N31°48'48"E	52.86'
104 TO 203	S76°03'56"E	59.80'
203 TO 204	N70°26'30"E	45.13'
204 TO 106	S19°33'30"E	6.64"
111 TO 205	N67°10'21"W	37.09'
205 TO 206	S70°26'30"W	82.61'
206 TO 113	N19°33'30"W	6.80'

EASEMENT TABLE			
OWNER	RECORDING INFORMATION	LOCATED IN R/W PARCEL #	REMARKS
MERRIMAC COMMUNICATIONS, LTD (GENERAL TELEPHONE COMPANY OF WISCONSIN)	DOC. #342475, VOL. 75, PG. 584	1	BLANKET

REVISION DATE	DATE 3-9-2018	SCALE, FEET 0 20 40	HWY: CTH U	R/W PROJECT NUMBER: 6721-00-01	PLAT SHEET 4.02
	GRID FACTOR N/A		COUNTY: COLUMBIA	CONSTRUCTION PROJECT NUMBER: 6721-00-71	PS&E SHEET E

FILE NAME : S:\Projects\K51070 CTH U, Columbia Co\RW\67210071_Plat Sheets.dwg PLOT DATE : 12/19/2017 2:59 PM PLOT BY : Scott Warner PLOT NAME : PLOT SCALE : 1:1

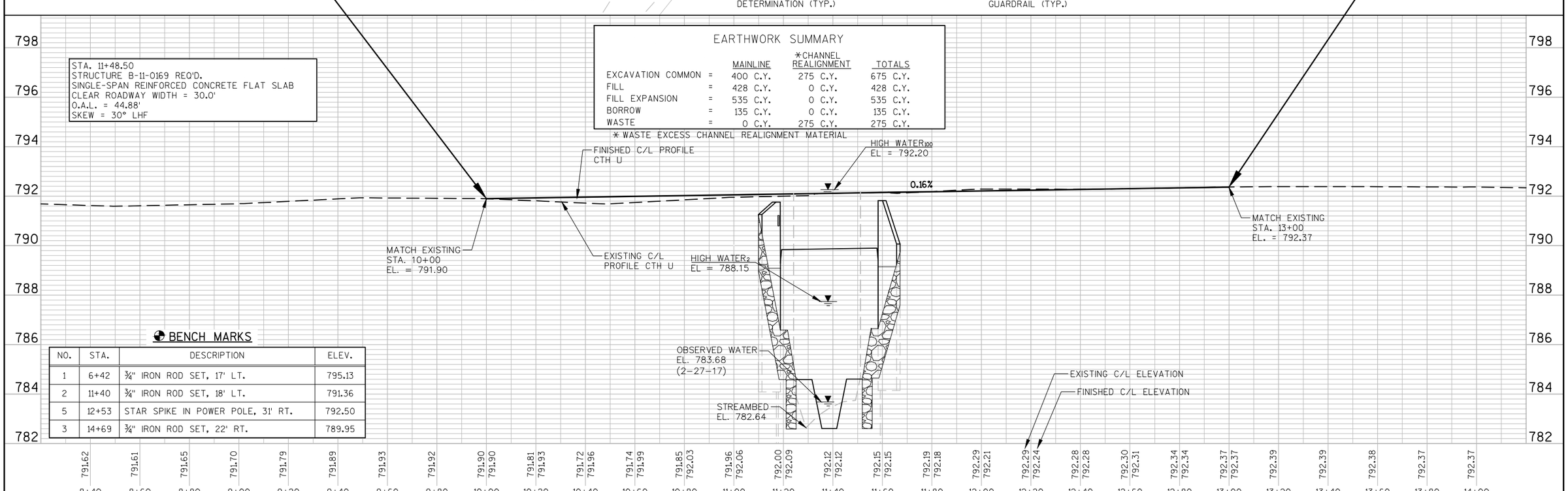


EARTHWORK SUMMARY

	MAINLINE	*CHANNEL REALIGNMENT	TOTALS
EXCAVATION COMMON =	400 C.Y.	275 C.Y.	675 C.Y.
FILL =	428 C.Y.	0 C.Y.	428 C.Y.
FILL EXPANSION =	535 C.Y.	0 C.Y.	535 C.Y.
BORROW =	135 C.Y.	0 C.Y.	135 C.Y.
WASTE =	0 C.Y.	275 C.Y.	275 C.Y.

* WASTE EXCESS CHANNEL REALIGNMENT MATERIAL

STA. 11+48.50
STRUCTURE B-11-0169 REQ'D.
SINGLE-SPAN REINFORCED CONCRETE FLAT SLAB
CLEAR ROADWAY WIDTH = 30.0'
O.A.L. = 44.88'
SKEW = 30° LHF



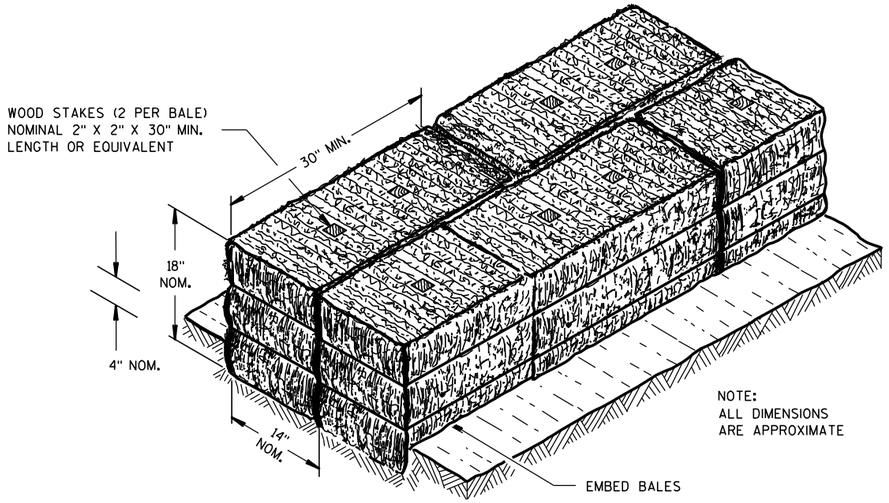
BENCH MARKS

NO.	STA.	DESCRIPTION	ELEV.
1	6+42	¾" IRON ROD SET, 17' LT.	795.13
2	11+40	¾" IRON ROD SET, 18' LT.	791.36
5	12+53	STAR SPIKE IN POWER POLE, 31' RT.	792.50
3	14+69	¾" IRON ROD SET, 22' RT.	789.95

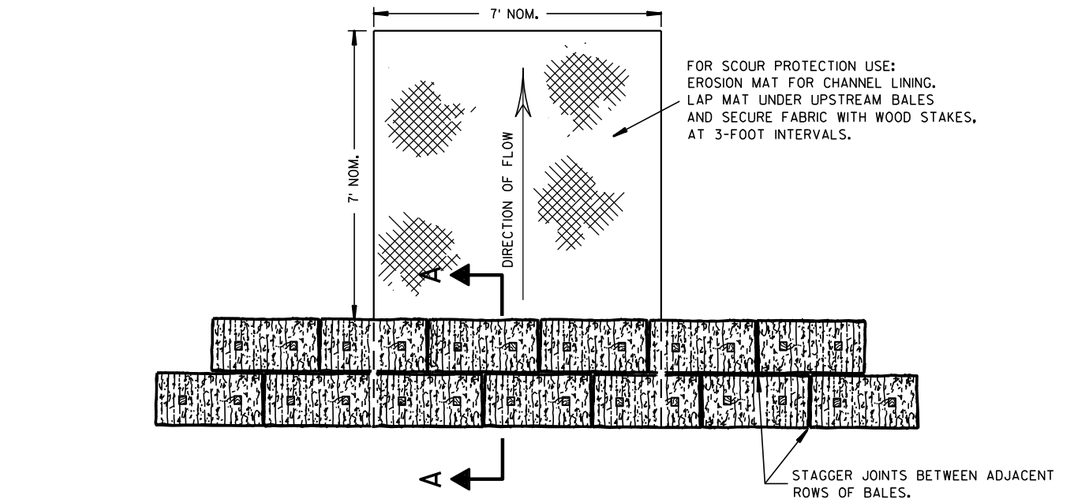
FILE NAME : S:\PROJECTS\K51070 CTH U, COLUMBIA CO\SHEETSPLAN\PLAN & PROFILE SHEETS\K51070_PLAN AND PROFILE1.DWG
LAYOUT : PROFILE1
PLOT DATE : 5/22/2018
PLOT TIME : 9:09:22 AM
PLOT BY : STRINE, THERESA
PLOT SCALE : 1" = 1'

Standard Detail Drawing List

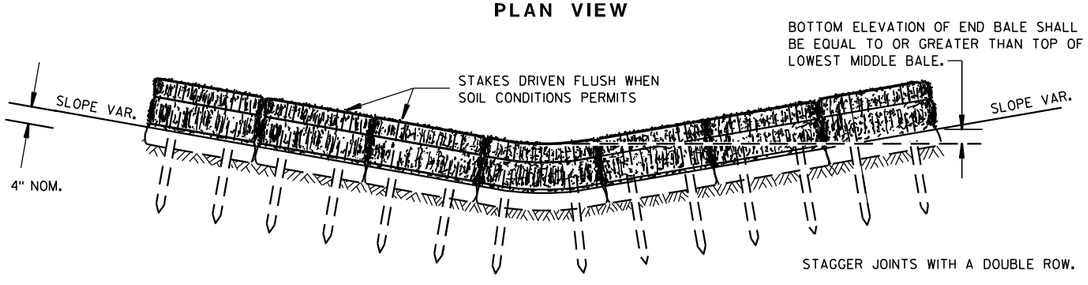
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E11-02	TURBIDITY BARRIER
12A03-10	NAME PLATE (STRUCTURES)
13B02-08A	CONCRETE PAVEMENT APPROACH SLAB
13B02-08B	STRUCTURAL APPROACH SLAB AND CONCRETE PAVEMENT APPROACH SLAB
14B44-03A	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-03B	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-03C	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)
15A01-13A	MARKER POST FOR RIGHT-OF-WAY
15C02-06A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-06B	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C06-09	SIGNING & MARKING FOR TWO LANE BRIDGES
15C08-18A	LONGITUDINAL MARKING (MAINLINE)



SECTION A-A



PLAN VIEW



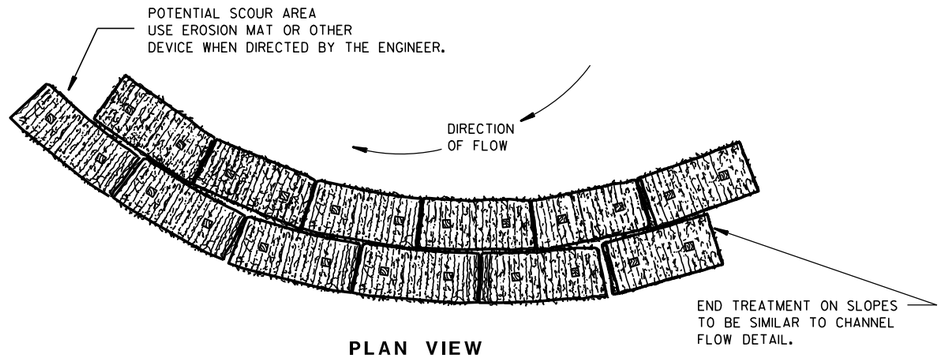
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES ①

GENERAL NOTES

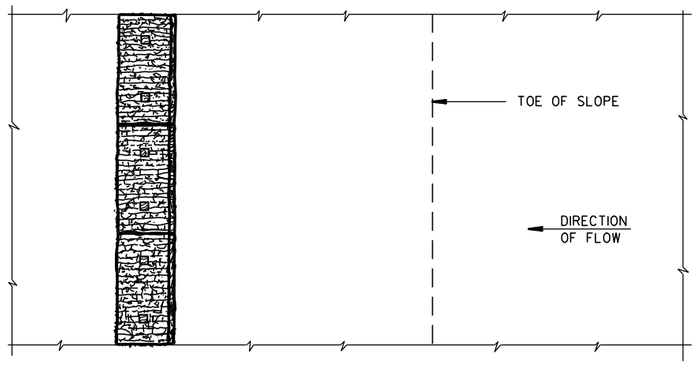
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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

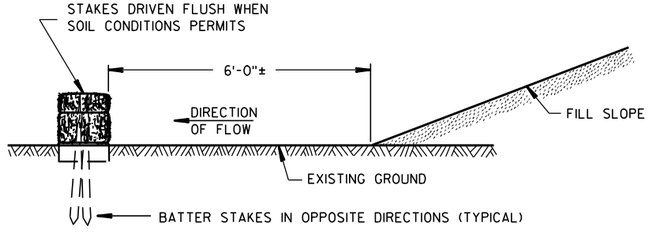


PLAN VIEW

WHEN ALTERING THE DIRECTION OF FLOW



PLAN VIEW



FRONT ELEVATION

WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE

EROSION BALES FOR SHEET FLOW

TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

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

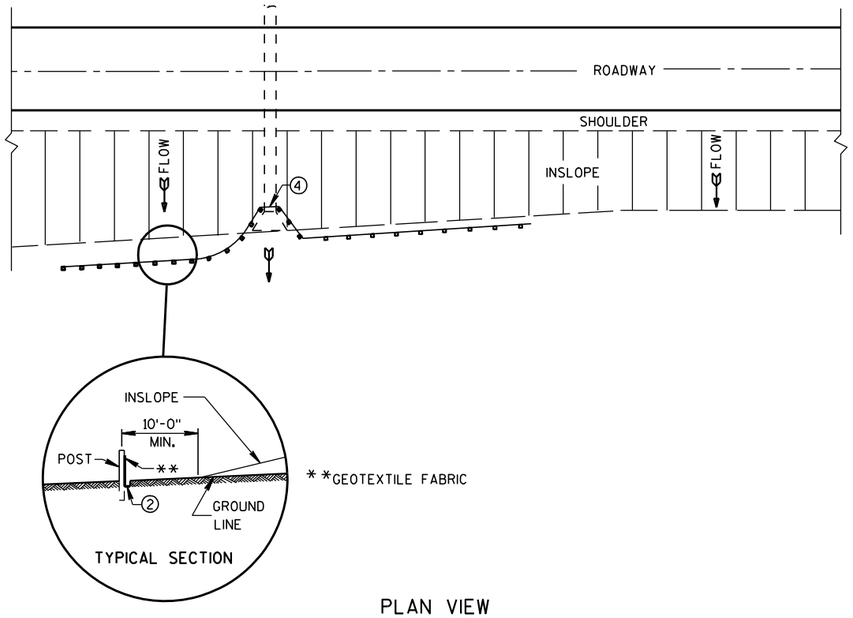
FHWA

6

S.D.D. 8 E 8-3

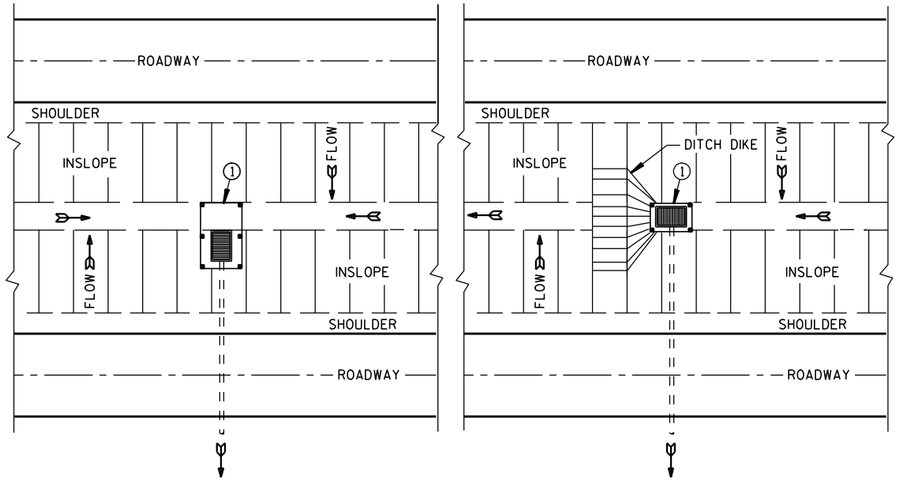
6

S.D.D. 8 E 8-3



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



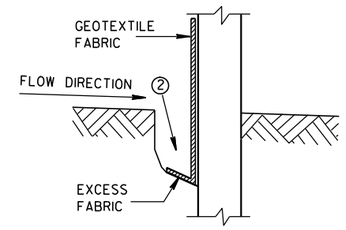
PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

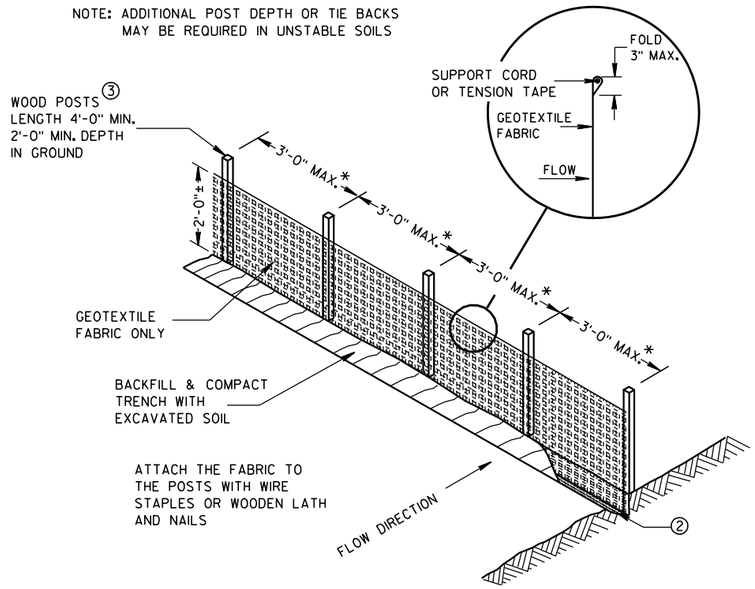
GENERAL NOTES

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

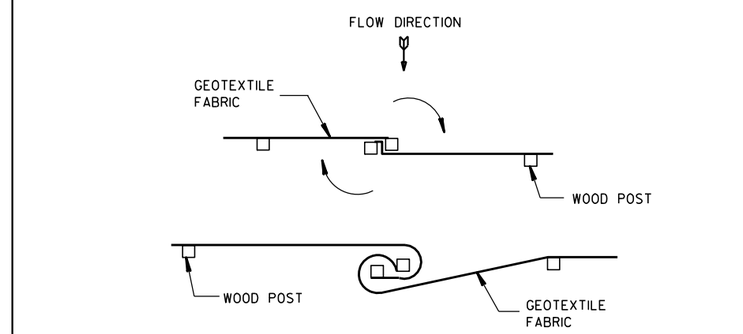
1. HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
2. FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
3. WOOD POSTS SHALL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



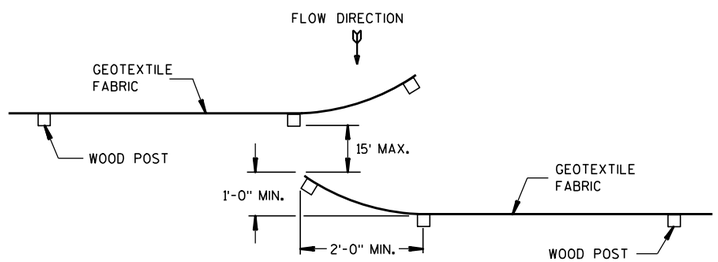
TRENCH DETAIL



SILT FENCE

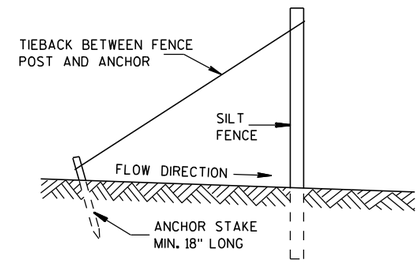


TWIST METHOD



HOOK METHOD

JOINING TWO LENGTHS OF SILT FENCE 5



SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6

S.D.D. 8 E 9-6

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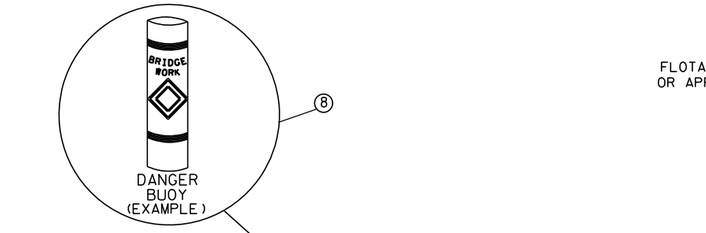
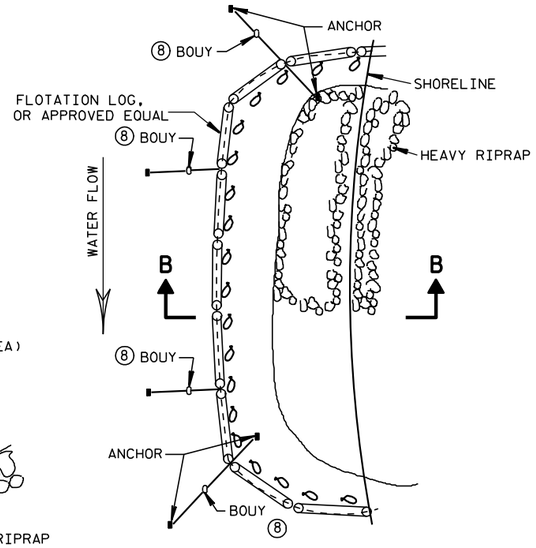
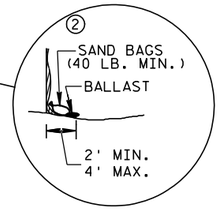
S.D.D. 8 E 9-6

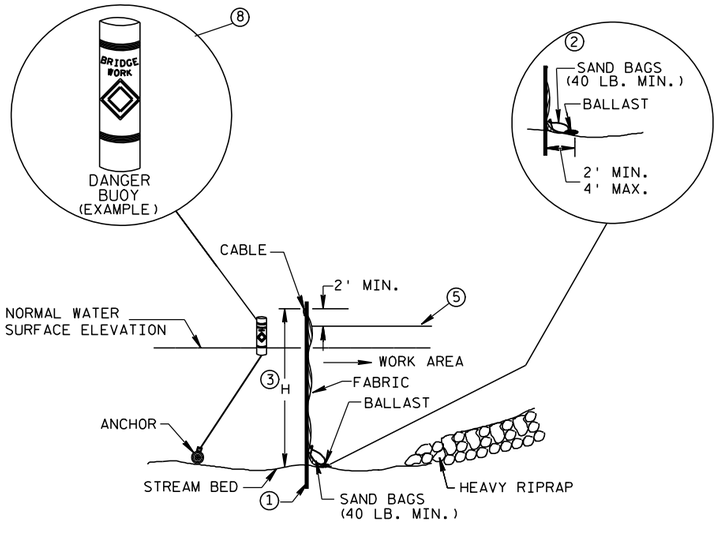


SECTION B-B

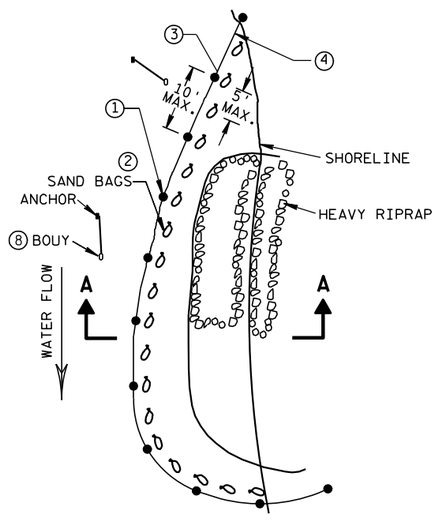




TURBIDITY BARRIER FLOAT ALTERNATIVE
CAUTION - SEE NOTE 6



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.

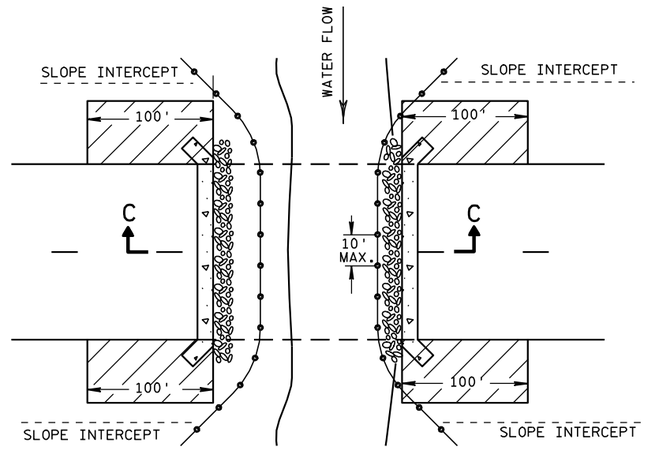
④ IN WATERWAYS SUBJECT TO FLUCTUATING WATER ELEVATIONS, PROVISIONS SHOULD BE MADE TO ALLOW THE WATER TO EQUALIZE ON EACH SIDE OF THE BARRIER. THIS MAY BE ACCOMPLISHED BY LEAVING A PORTION OF THE BARRIER OPEN ON THE UPSTREAM END.

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.

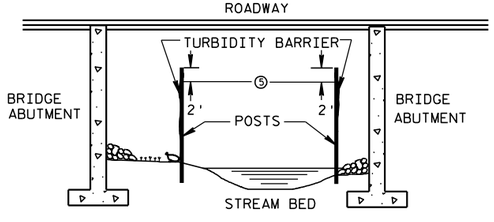
⑥ FLOAT ALTERNATIVE WILL ONLY BE ALLOWED WITH WRITTEN APPROVAL OF THE ENGINEER, AND IS MEANT FOR LOCATIONS WHERE BED ROCK PREVENTS THE INSTALLATION OF POSTS.

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

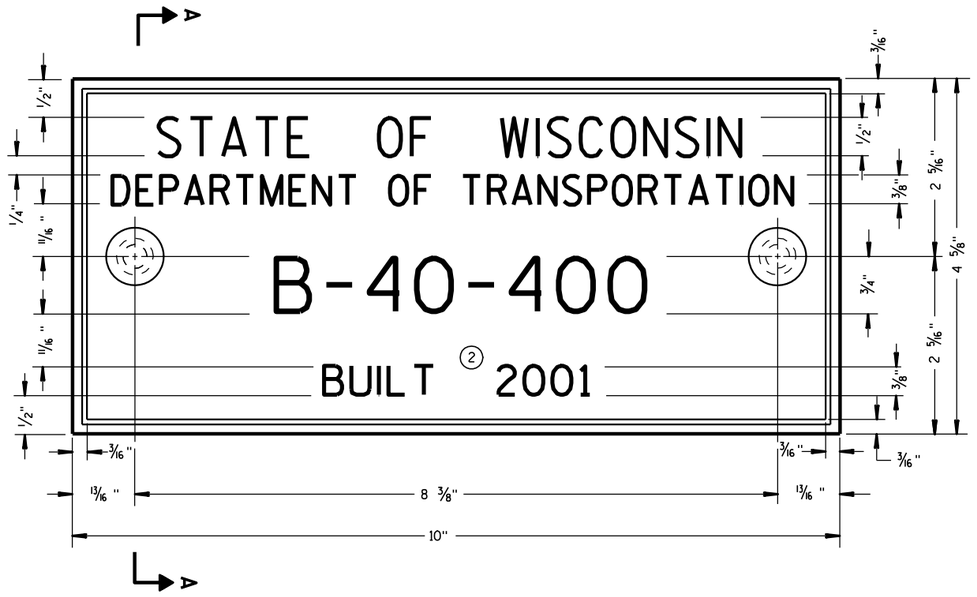
APPROVED
6/04/02 — DATE
/S/ Beth Cannestra — CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6

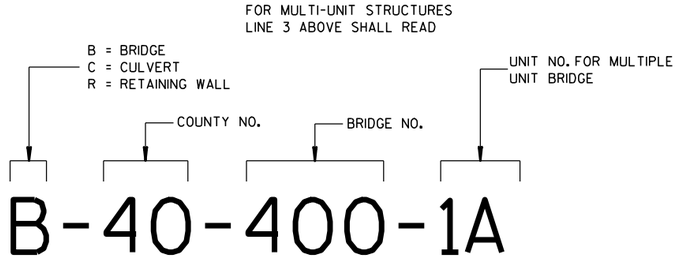
S.D.D. 8 E 11-2

6

S.D.D. 8 E 11-2



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



NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES

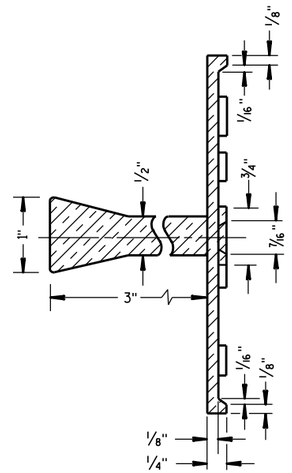
GENERAL NOTES

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.

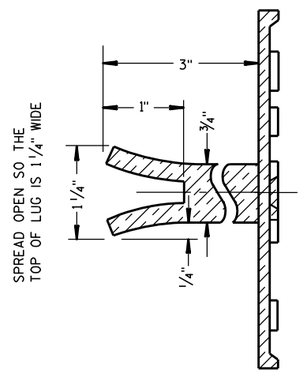
THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

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

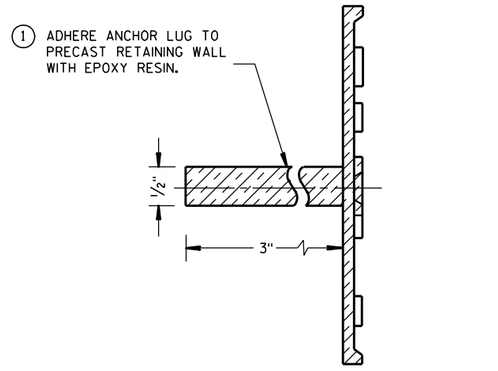
(2) REHABILITATION OF AN EXISTING STRUCTURE SHOULD USE THE DATE OF ORIGINAL STRUCTURE CONSTRUCTION.



SECTION A-A



ALTERNATE LUG



ALTERNATE LUG
(FOR ATTACHMENT TO PRECAST STRUCTURES)

NAME PLATE (STRUCTURES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

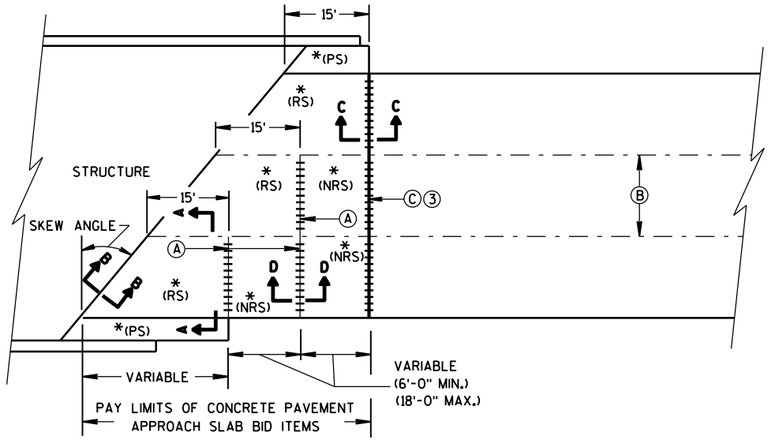
APPROVED

3/26/10 — DATE

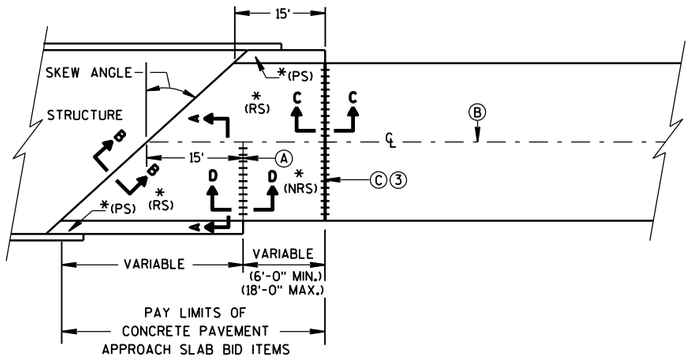
/S/ Scot Beck — CHIEF STRUCTURAL DEVELOPMENT ENGINEER

FHWA

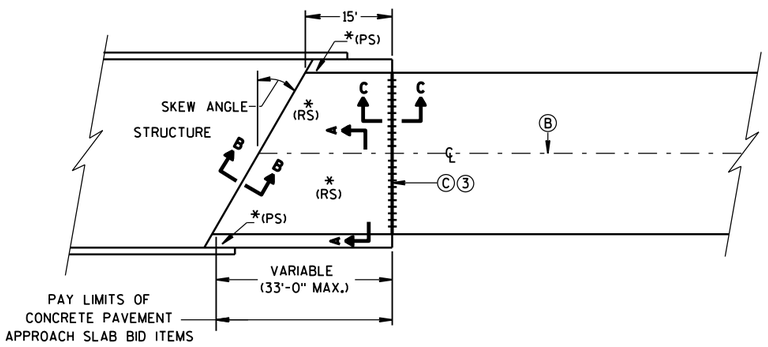
6
S.D.D. 12 A 3-10



SKEWED APPROACH
(PAVEMENT MORE THAN 2 LANES)



SKEWS >20°
(PAVEMENT WIDTH ≤30')



SKEWS ≤20°
(PAVEMENT WIDTH ≤30')

APPROACH SLAB AND ADJACENT PAVEMENT

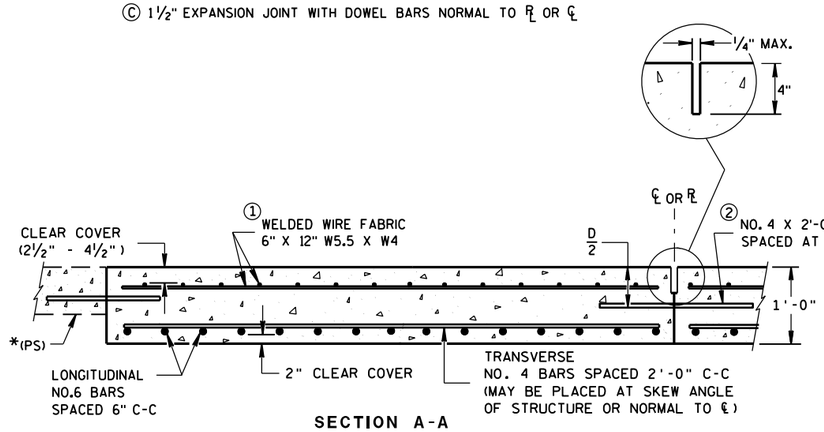
*(RS) = REINFORCED CONCRETE SLAB
*(PS) = PAVED CONCRETE SHOULDER OR CONCRETE DRAINAGE SLAB
(SEE DETAILS ELSEWHERE IN THE PLAN)
*(NRS) = NON-REINFORCED CONCRETE SLAB

***STANDARD DOWEL BAR DIAMETER
(SEE SDD 13C11, & SDD 13C13)

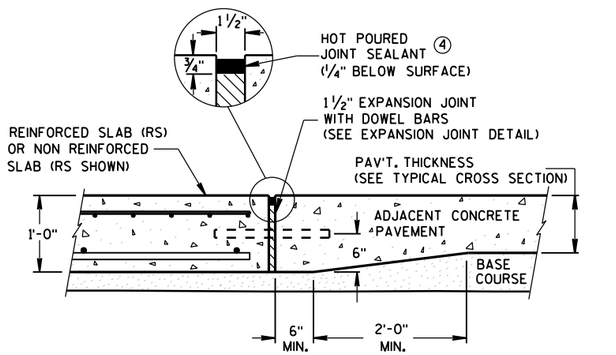
Ⓐ STANDARD CONTRACTION JOINT NORMAL TO ℄ OR ℄

Ⓑ STANDARD LONGITUDINAL JOINT WITH TIE BARS.

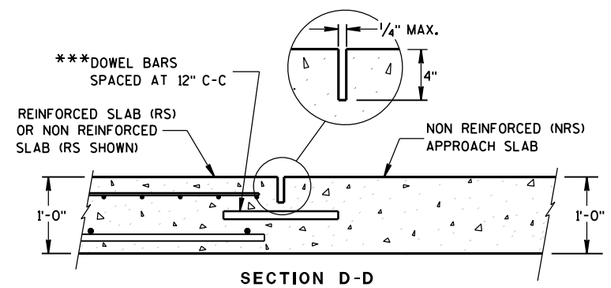
Ⓒ 1½" EXPANSION JOINT WITH DOWEL BARS NORMAL TO ℄ OR ℄



SECTION A-A
REINFORCEMENT POSITIONING DETAIL



SECTION C-C
TRANSITION DETAIL
APPROACH SLAB TO ADJACENT PAVEMENT



SECTION D-D
CONTRACTION JOINT

GENERAL NOTES

THE CONTRACTOR MAY SPLICE NO. 6 BARS IN THE APPROACH SLAB FOR SKEWED STRUCTURES ONLY. STAGGER SPLICES WITH A MAXIMUM OF ONE SPLICE PER BAR. THE LENGTH OF LAP IS 20 INCHES.

TACK WELD DOWEL BARS TO THE BASKETS ON ALTERNATE ENDS.

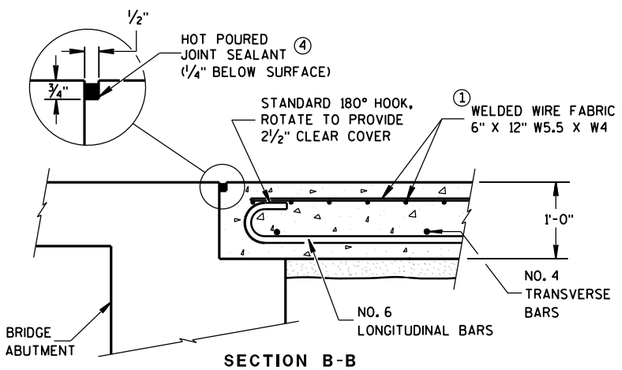
① THE CONTRACTOR MAY USE NO. 4 BARS SPACED AT 2'-0" C-C IN BOTH THE LONGITUDINAL AND TRANSVERSE DIRECTIONS FOR TOP REINFORCEMENT AS AN ALTERNATIVE TO THE WELDED WIRE FABRIC.

② THE CONTRACTOR MAY OMIT TIE BARS BETWEEN REINFORCED SLABS WHERE SLAB REINFORCEMENT BARS EXTEND ACROSS THE CENTERLINE OR REFERENCE LINE.

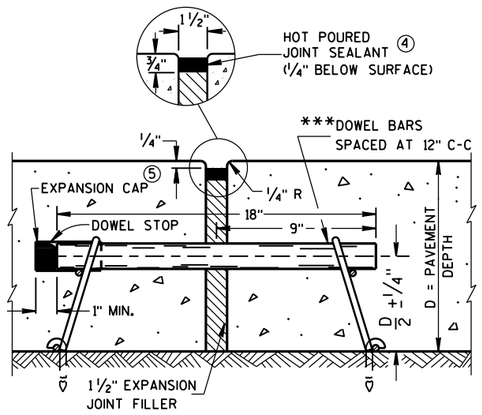
③ DO NOT CONSTRUCT AN EXPANSION JOINT OR INSTALL DOWEL BARS WHEN ABUTTING AN HMA PAVEMENT.

④ USE A JOINT SEALANT MEETING THE REQUIREMENTS OF ASTM D6690.

⑤ PLACE EXPANSION CAP ON THE END OF THE DOWEL THAT IS NOT TACK WELDED TO THE BASKET. DO NOT FORCE DOWEL BAR PAST THE DOWEL STOP.



SECTION B-B
BEND DETAIL
BOTTOM REINFORCEMENT



EXPANSION JOINT DETAIL

CONCRETE PAVEMENT APPROACH SLAB

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

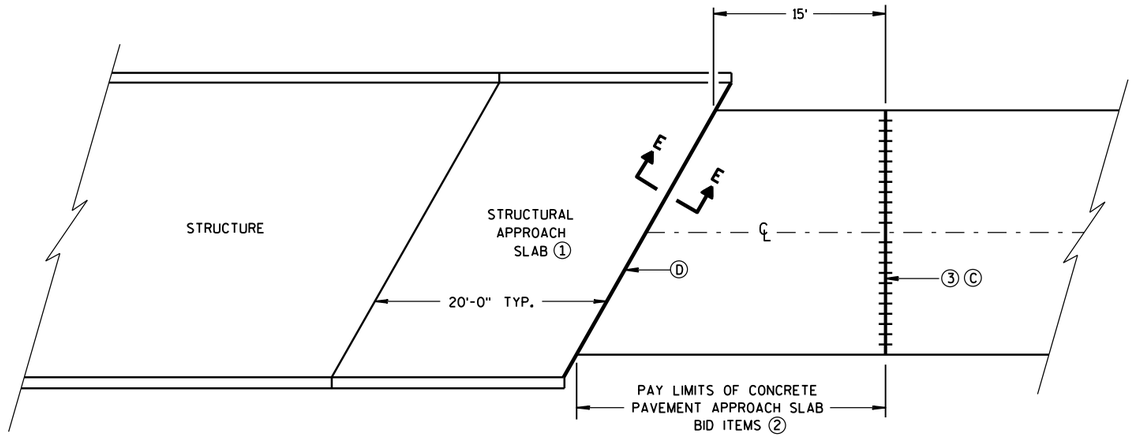
APPROVED
June, 2015
DATE
/S/ Peter Kemp, P.E.
PAVEMENT SUPER
FHWA

6

S.D.D. 13 B 2-8a

6

S.D.D. 13 B 2-8a



GENERAL NOTES

ALL PROJECTS THAT INVOLVE A STRUCTURAL APPROACH SLAB WILL ALSO HAVE A CONCRETE PAVEMENT APPROACH SLAB.

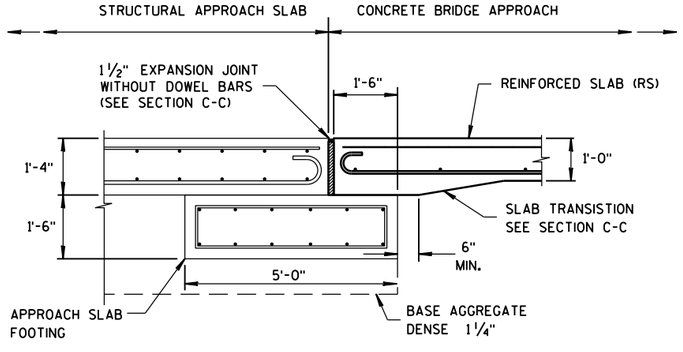
① SEE BRIDGE PLAN.

② CONFORM TO SHEET 13 B 2(A) FOR CONCRETE PAVEMENT APPROACH SLAB DETAILS.

③ DO NOT CONSTRUCT AN EXPANSION JOINT OR INSTALL DOWEL BARS WHEN ABUTTING AN HMA PAVEMENT.

Ⓒ 1½" EXPANSION JOINT WITH DOWEL BARS NORMAL TO ℄ OR ℄

Ⓓ 1½" EXPANSION JOINT (NO DOWELS)



SECTION E-E

FOOTING DETAIL

STRUCTURAL APPROACH SLAB TO CONCRETE BRIDGE APPROACH

STRUCTURAL APPROACH SLAB AND CONCRETE PAVEMENT APPROACH SLAB

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2015 — DATE
/S/ Peter Kemp, P.E. — PAVEMENT SUPERVISOR
FHWA

6

S.D.D. 13 B 2-8b

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.

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

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

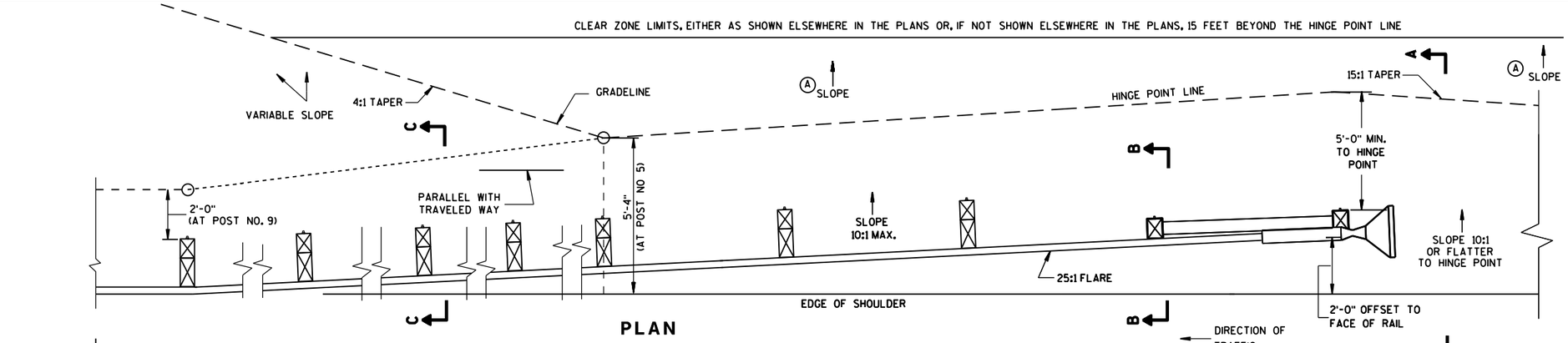
SEE SDD 14B42 FOR MORE INFORMATION.

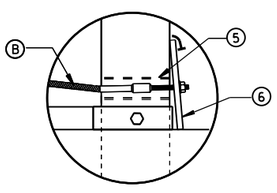
* DO NOT ATTACH BLOCKOUTS TO POSTS 1 AND 2.

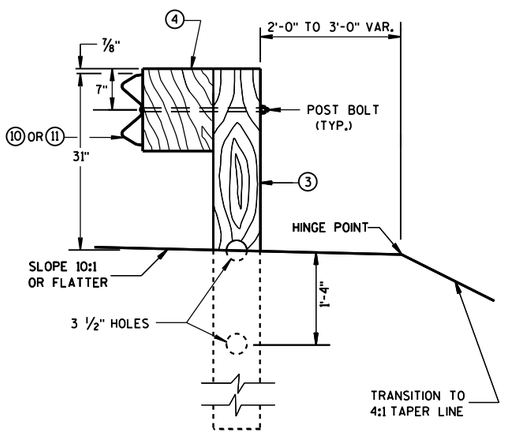
DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

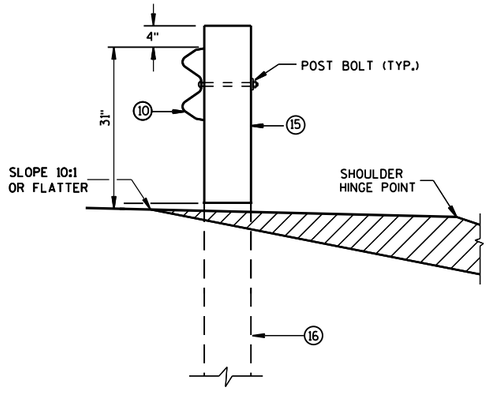
SEE MANUFACTURER'S DRAWING FOR SPLICE LOCATION, HARDWARE DIMENSIONS AND INSTALLATION INSTRUCTIONS.

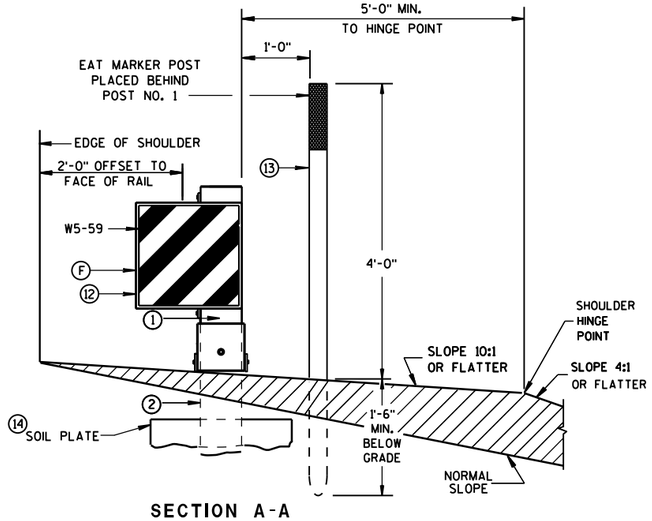
THE CENTER OF THE UPPER 3½" DIAMETER HOLE ON POST NUMBER 3 THROUGH POST 9 IS TO BE FLUSH WITH THE GROUND LINE UP TO A MAXIMUM OF 2" ABOVE GROUND LINE.

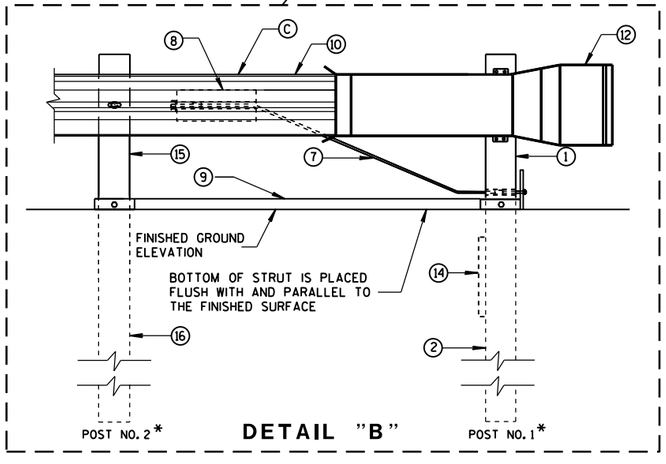








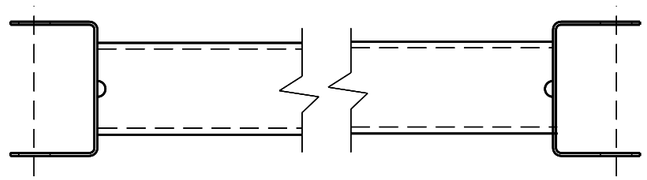




MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

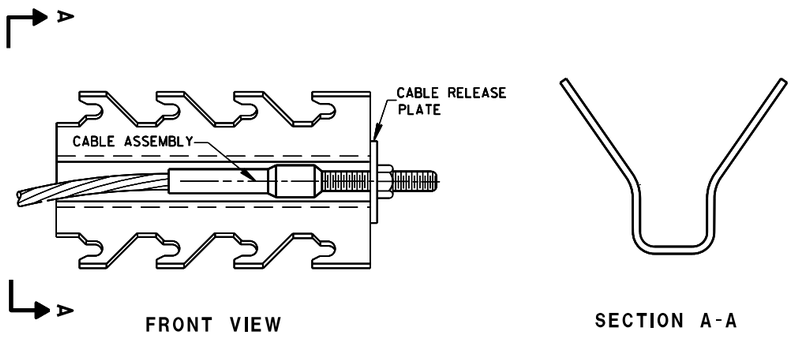
STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

6
S.D.D. 14 B 44-3a



(9) (H)

GENERIC GROUND STRUT



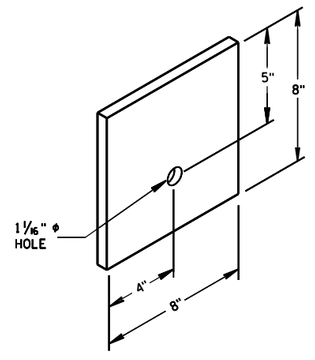
FRONT VIEW

SECTION A-A

GENERIC ANCHOR CABLE BOX (8) (H)

BILL OF MATERIALS

PART NO.	DESCRIPTION MATERIALS PROVIDED BY MGS EAT MANUFACTURER. SEE MANUFACTURER'S DETAILS FOR MORE INFORMATION.
(1)	UPPER POST NO. 1 6" X 6" TUBE
(2)	LOWER POST NO. 1
(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)	IMPACT HEAD
(13)	EAT MARKER POST - YELLOW (SEE APPROVED PRODUCTS LIST)
(14)	SOIL PLATE
(15)	UPPER POST NO. 2
(16)	LOWER POST NO. 2



BEARING PLATE (6)

6

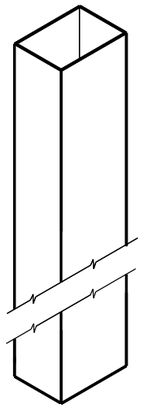
6

S.D.D. 14 B 44-3b

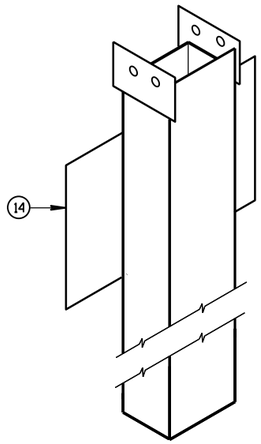
S.D.D. 14 B 44-3b

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

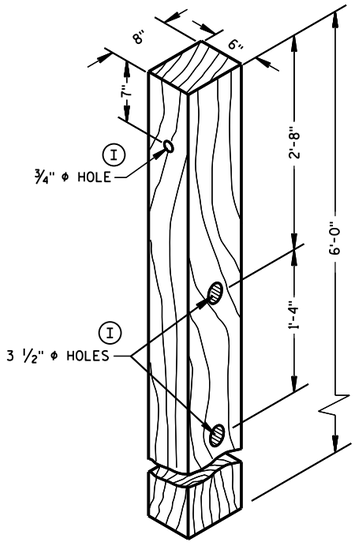
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR



UPPER POST NO. 1 (1)

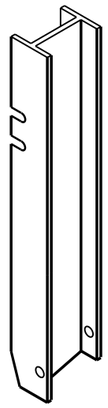


LOWER POST NO. 1 (2)

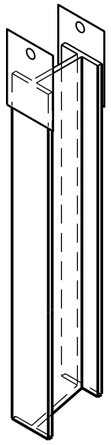


POSTS NUMBER 3-9

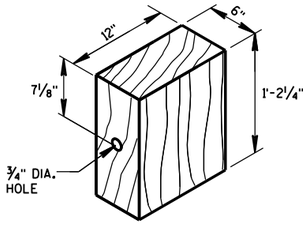
WOOD CRT POST (3)



UPPER POST NO. 2 (15)

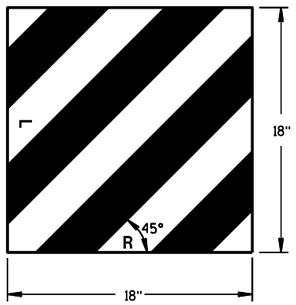


LOWER POST NO. 2 (16)



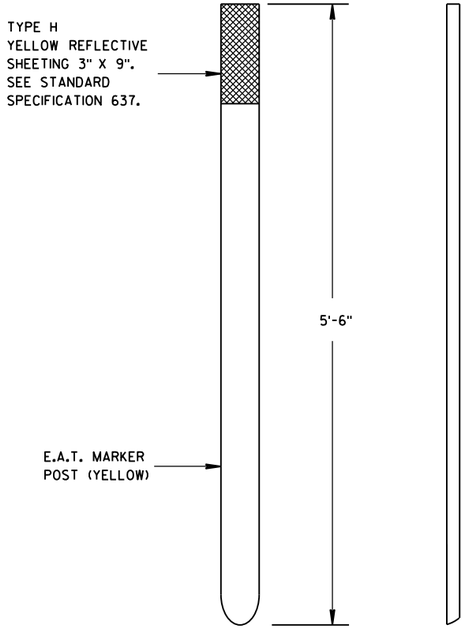
WOOD BLOCKOUT (4)

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



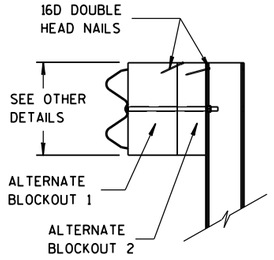
W5-59

REFLECTIVE SHEETING DETAIL (H)

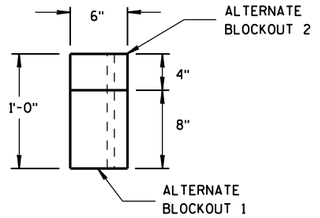


FRONT VIEW SIDE VIEW

E.A.T. MARKER POST (13)



SIDE VIEW



TOP VIEW

ALTERNATE WOOD
BLOCKOUT DETAIL

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

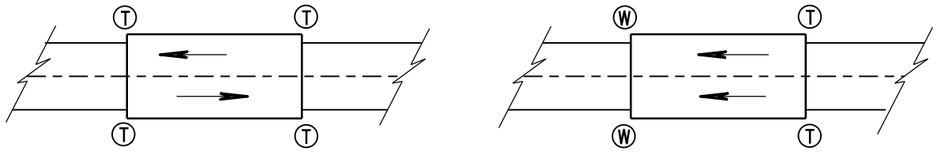
June 2017
DATE

/S/ Rodney Taylor
ROADWAY STANDARDS
UNIT SUPERVISOR

FHWA

6

S.D.D. 14 B 44-3c



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

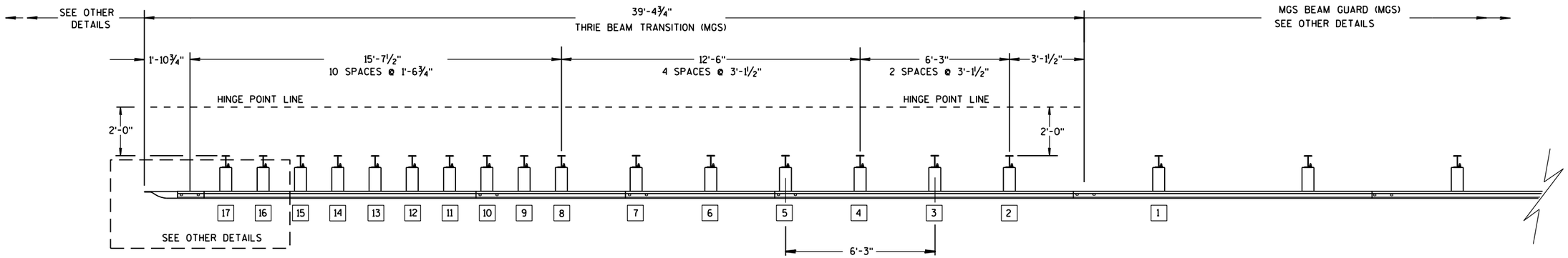
IF ROCK IS ENCOUNTERED, REMOVE ROCK TO FULL DEPTH OF POST PLUS 2½", AND 12" DIAMETER AROUND POST. SEE 14B42 FOR MORE DETAILS.

TRANSITION USES STEEL POSTS ONLY.

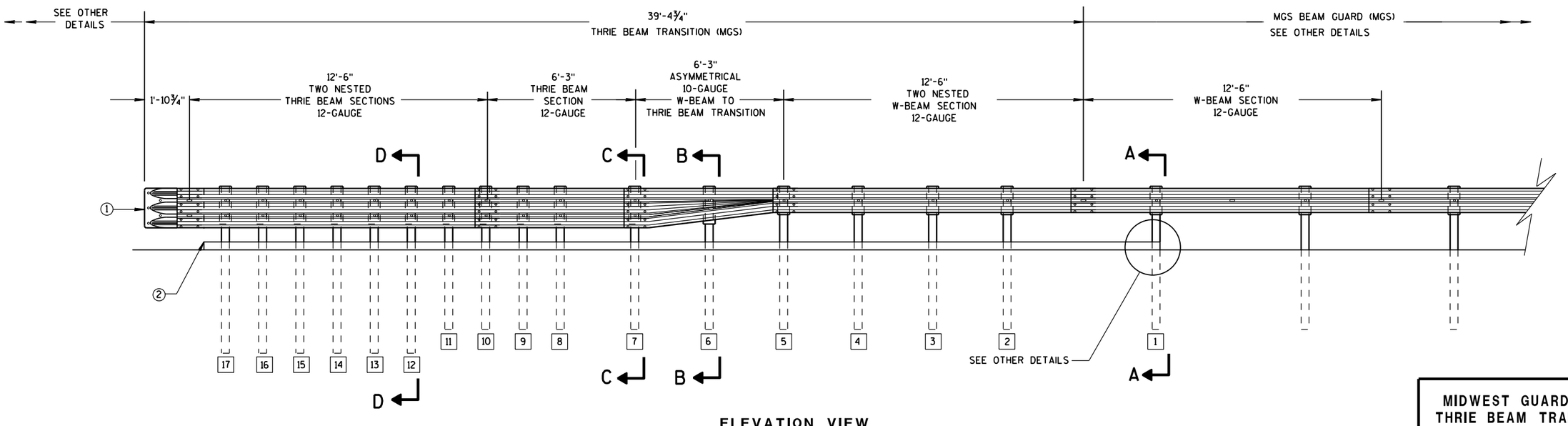
SEE STANDARD DETAIL DRAWING 14 B 42 FOR MORE INFORMATION.

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

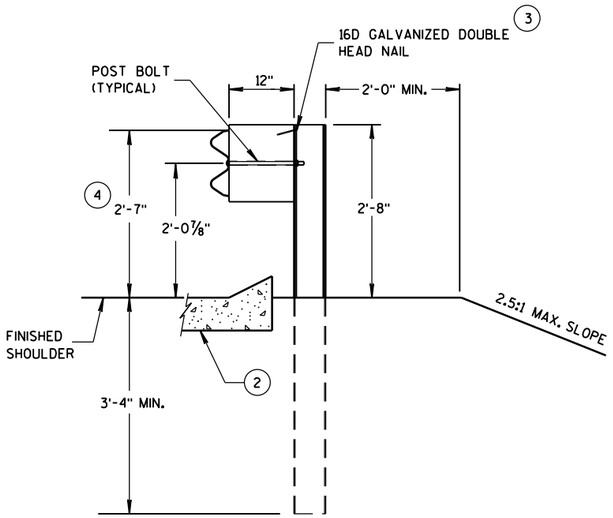
S.D.D. 14 B 45-4a

GENERAL NOTES

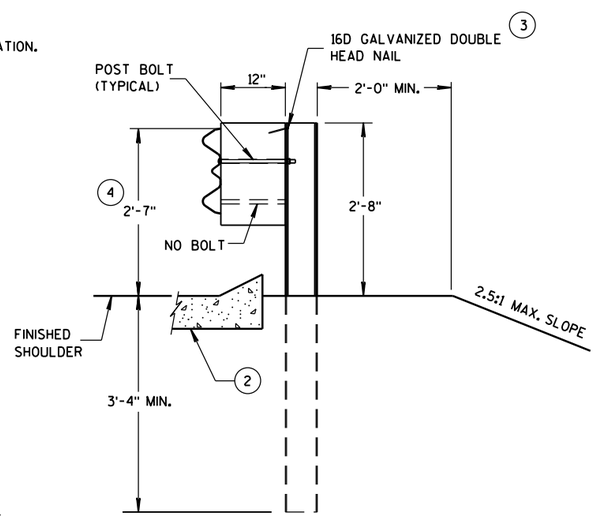
(2) OPTIONAL CURB AND GUTTER OR DRAINAGE_FEATURE SEE PLAN FOR INFORMATION.

(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.

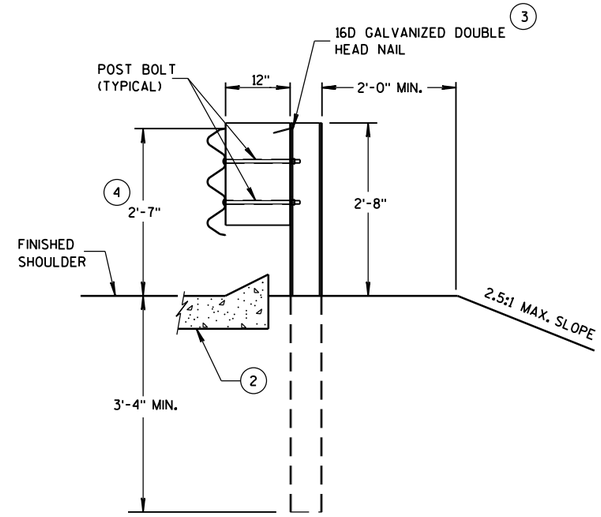
(4) TOLERANCE FOR TOP OF W-BEAM RAIL IS ± 1".



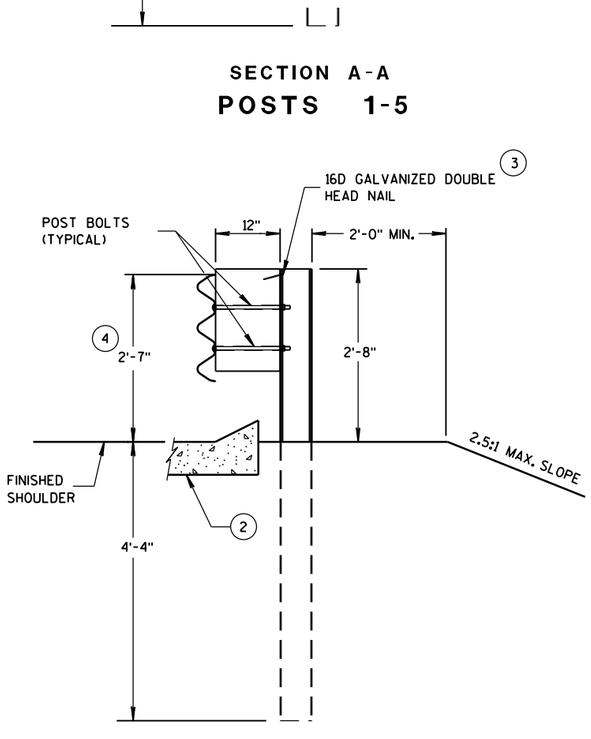
SECTION A-A
POSTS 1-5



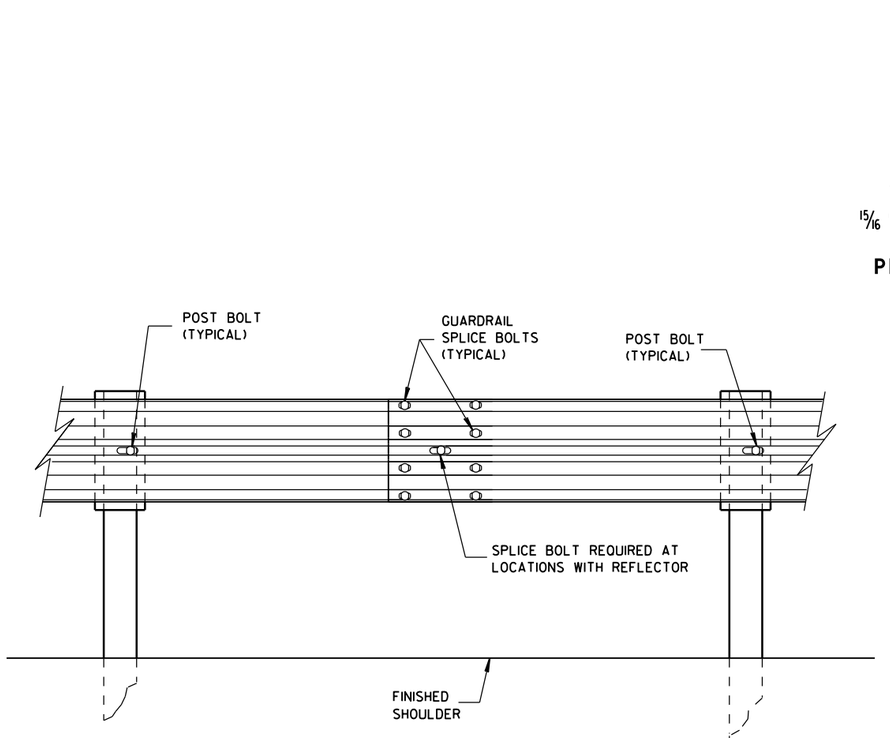
SECTION B-B
POST 6



SECTION C-C
POSTS 7-11



SECTION D-D
POSTS 12-17



SPLICE DETAIL

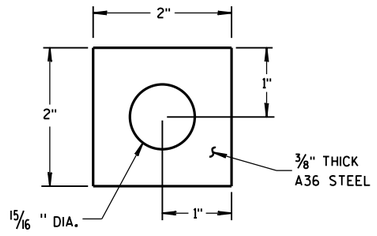
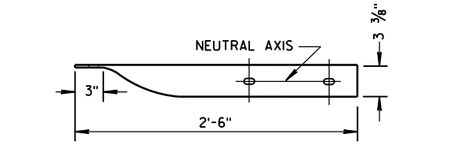
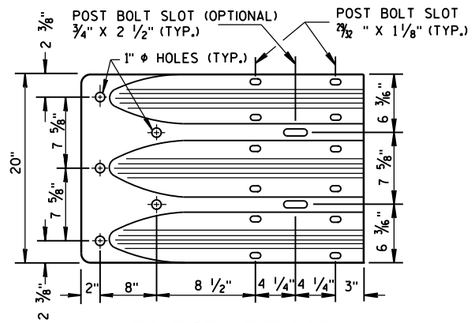
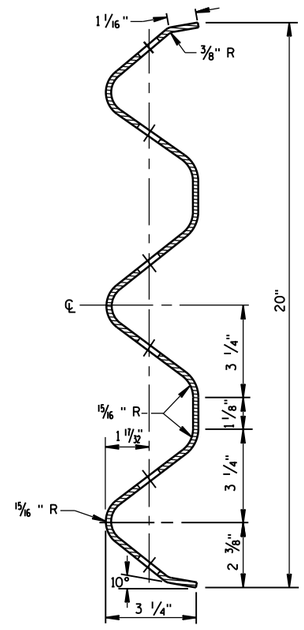


PLATE WASHER DETAIL





THRIE BEAM TERMINAL CONNECTOR



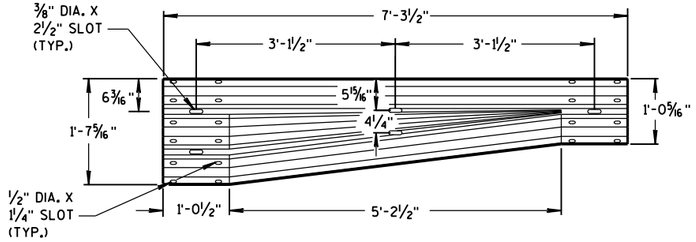
SECTION THRU THRIE BEAM RAIL ELEMENT

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

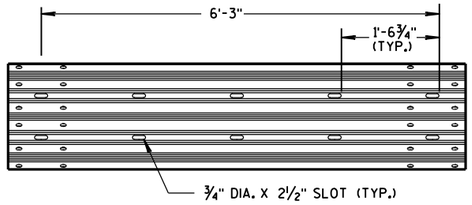
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

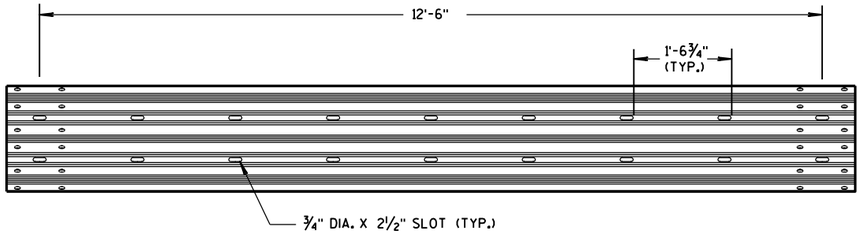
S.D.D. 14 B 45-4b



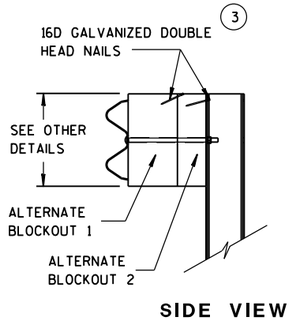
W-BEAM TO THRIE BEAM TRANSITION SECTION



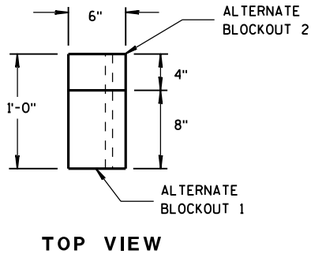
6'-3" THRIE BEAM SECTION



12'-6" THRIE BEAM SECTION

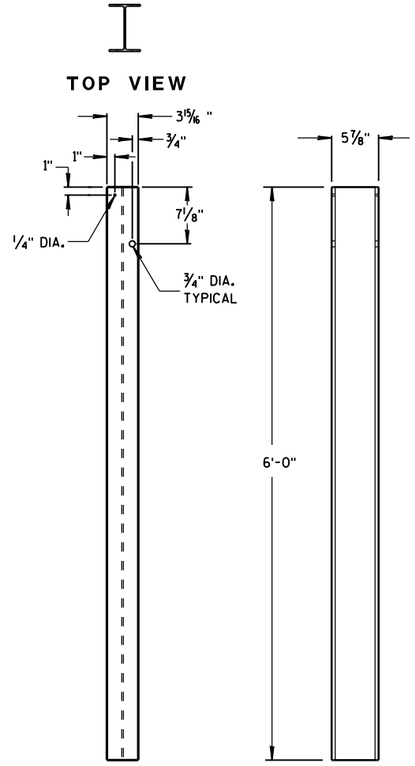


SIDE VIEW



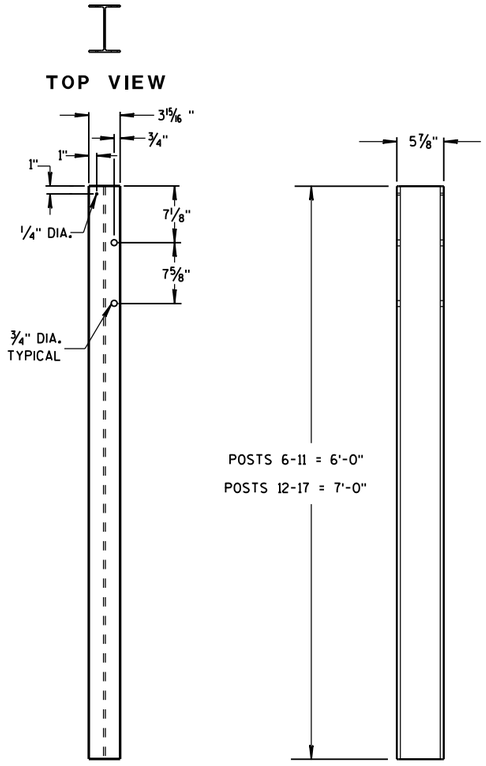
TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL



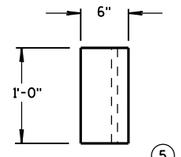
FRONT VIEW SIDE VIEW

STEEL POSTS 1-5

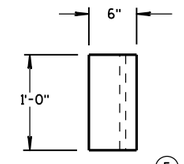


FRONT VIEW SIDE VIEW

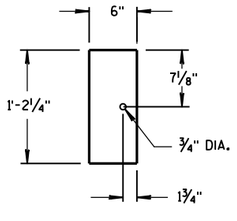
STEEL POSTS 6-17



TOP VIEW (5)

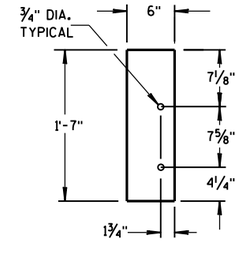


TOP VIEW (5)



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)

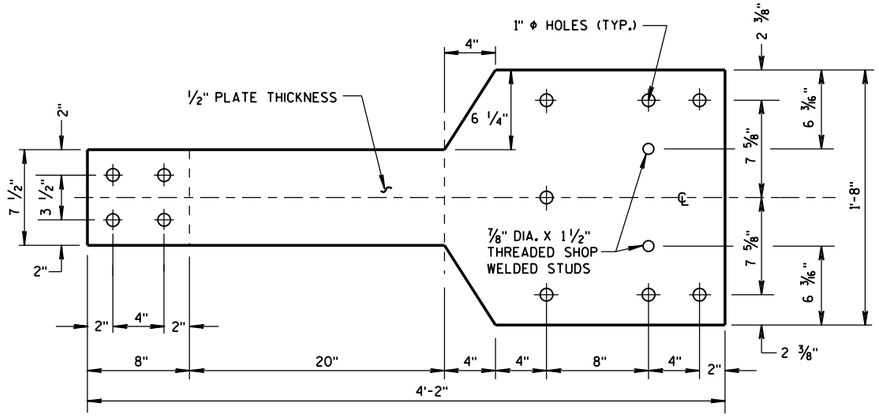
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

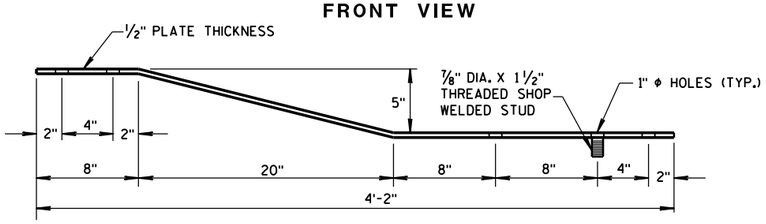
S.D.D. 14 B 45-4c

GENERAL NOTES

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

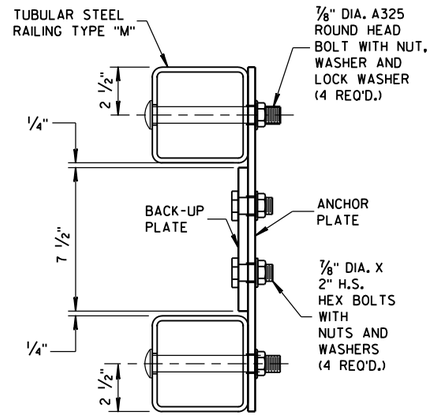


FRONT VIEW

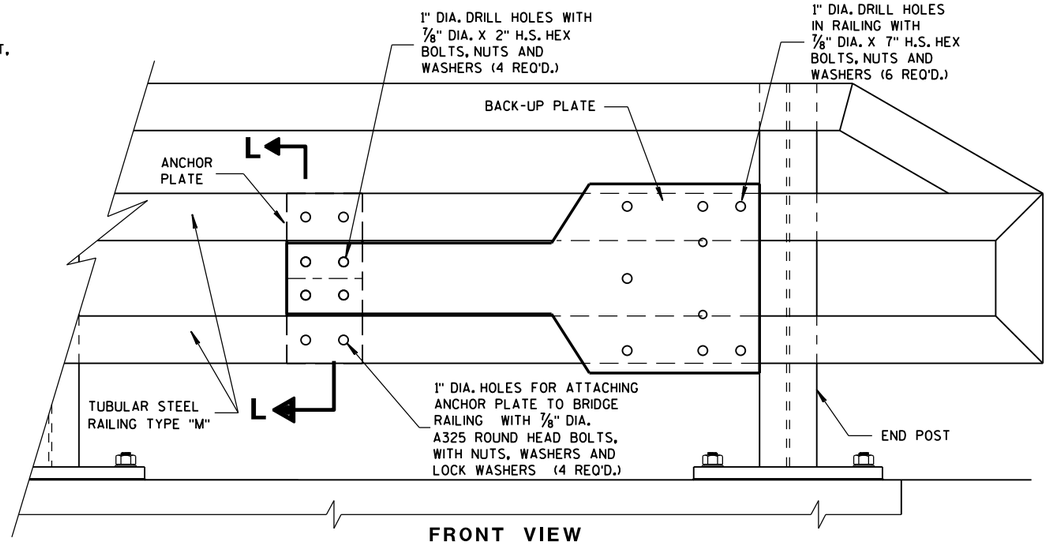


PLAN VIEW

BACK-UP PLATE DETAIL, TYPE "M"

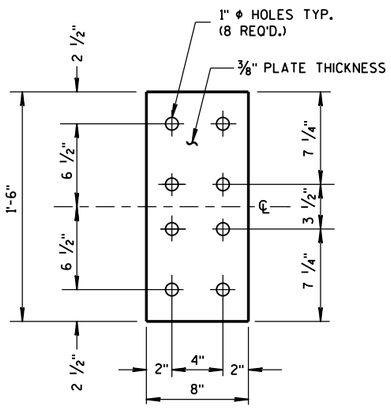


SECTION L-L



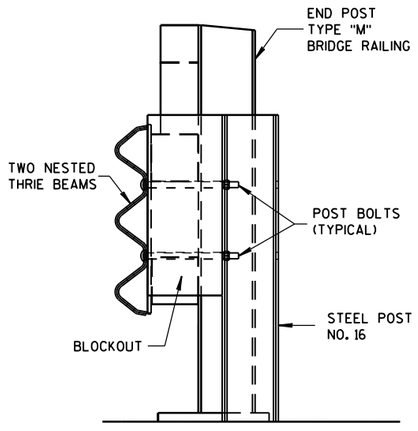
FRONT VIEW

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

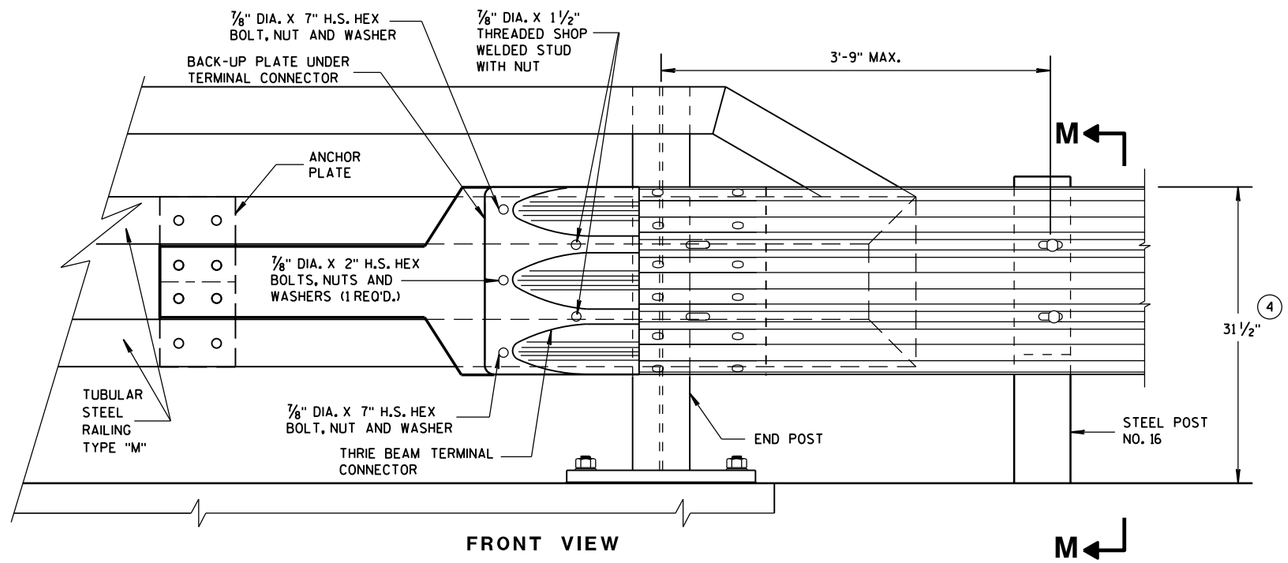


FRONT VIEW

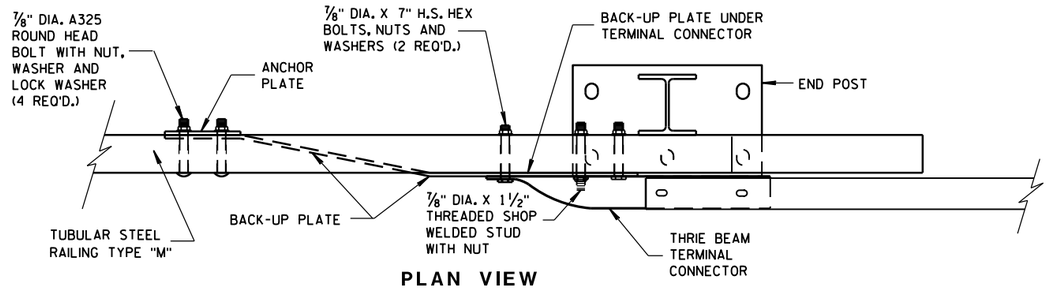
ANCHOR PLATE DETAIL, TYPE "M"



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

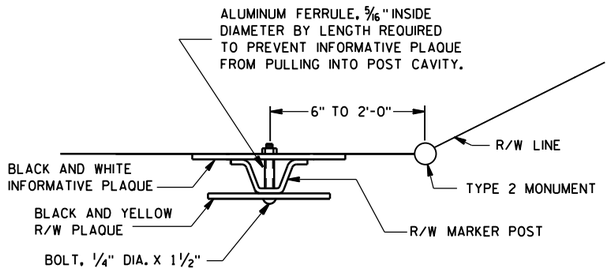
APPROVED
June, 2015 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
FHWA

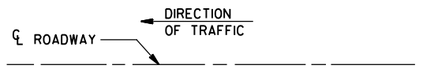
6

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

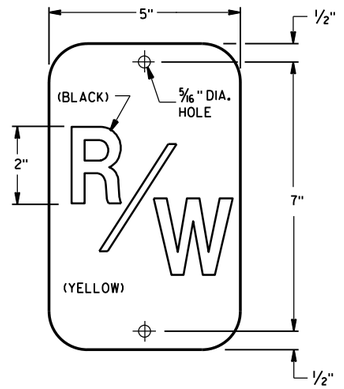
6

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



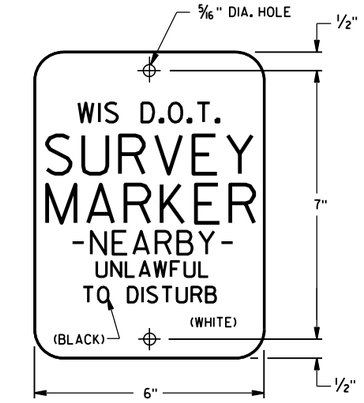


PLAN VIEW



R/W PLAQUE

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



INFORMATIVE PLAQUE

GENERAL NOTES

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

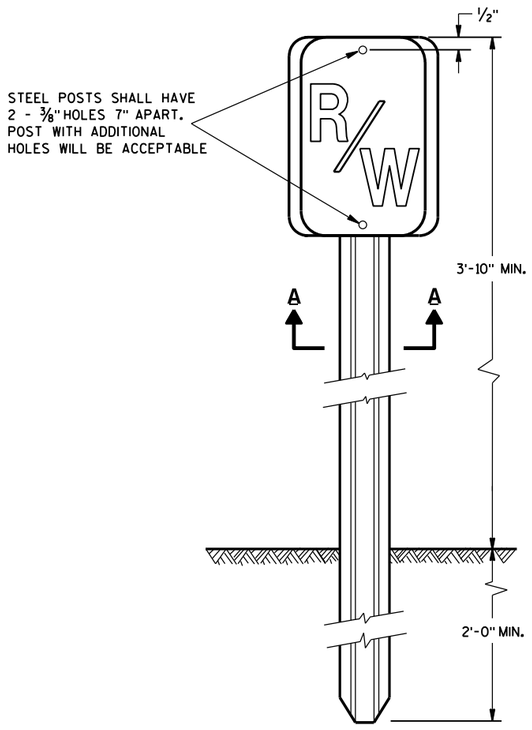
A STEEL MARKER POST FOR RIGHT-OF-WAY SHALL BE PLACED IN THE RIGHT-OF-WAY, WITH THE BACK OF THE POST ON THE LONGER RIGHT-OF-WAY TANGENT, 6 INCHES TO 24 INCHES FROM EACH TYPE 2 MONUMENT TO SERVE AS A GUARD POST, AND AT OTHER LOCATIONS AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

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

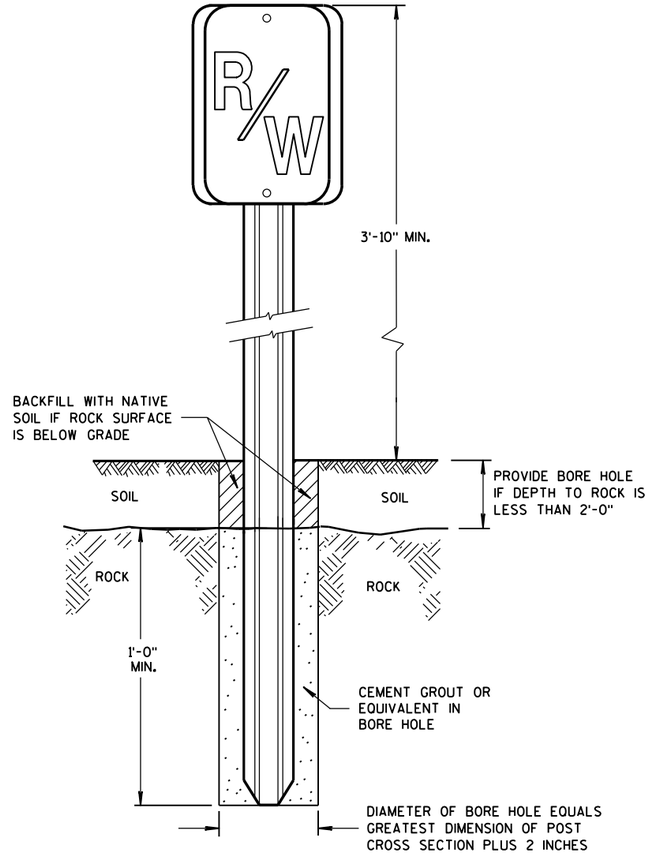
STEEL MARKER POSTS SHALL MEET THE MINIMUM MATERIAL REQUIREMENTS FOR STEEL DELINEATOR POSTS; EXCEPT POSTS PAINTED WITH FEDERAL YELLOW ENAMEL NEED NOT BE ZINC COATED.

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

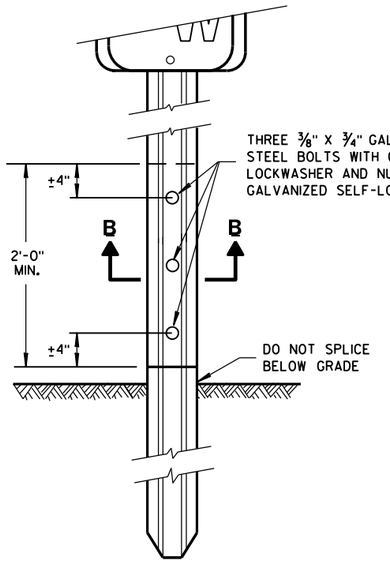
FILL THE BORE HOLE WITH CEMENT GROUT, OR EQUIVALENT. DEPENDING ON THE STABILITY OF THE ROCK.



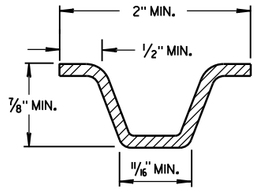
FRONT VIEW
STEEL MARKER POST



FRONT VIEW
ROCK INSTALLATION (1)

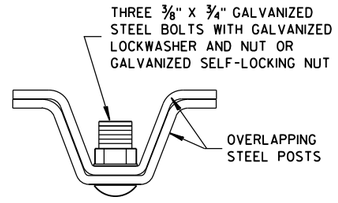


FRONT VIEW
SPLICE DETAIL



MIN. WEIGHT 1.12 LB./FT.

SECTION A-A



SECTION B-B

MARKER POST FOR RIGHT-OF-WAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

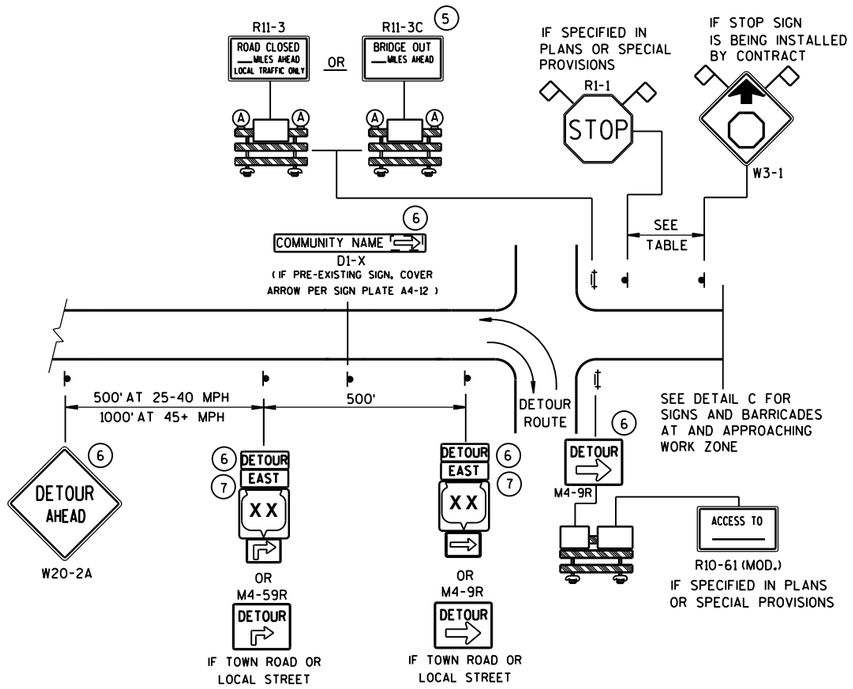
APPROVED
2/18/2016 — DATE
/S/ Ray Kumapayi — CHIEF SURVEYING AND MA[illegible]INEER
FHWA

6

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

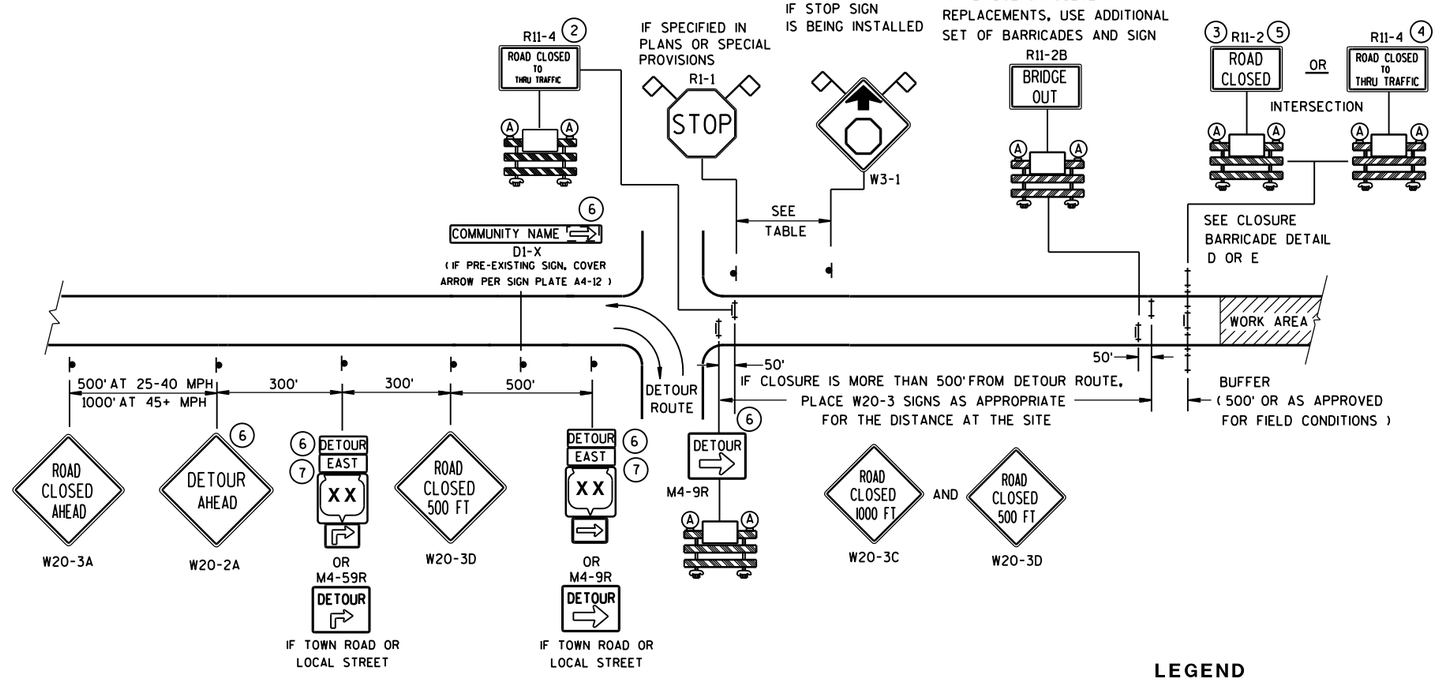
6

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



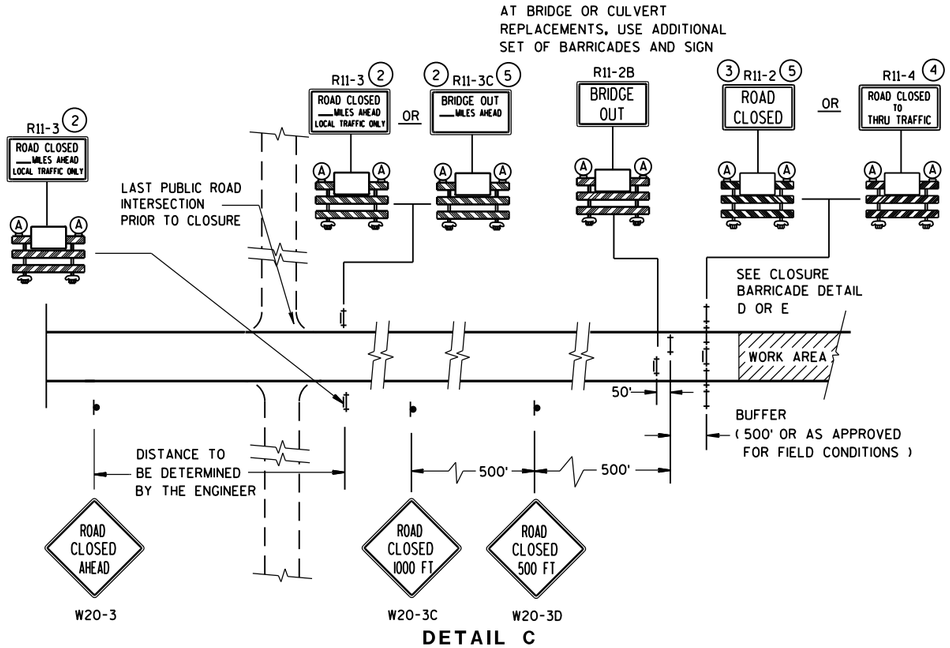
DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR

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

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)

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

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

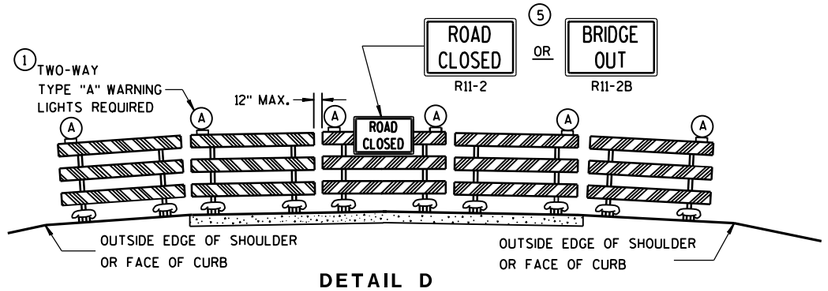
Sept. 2015 — DATE
/S/ Peter Amakobe Atepe
STATEWIDE WORK ZONE TRAFFIC SAFETY ENGINEER
FHWA

6

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

6

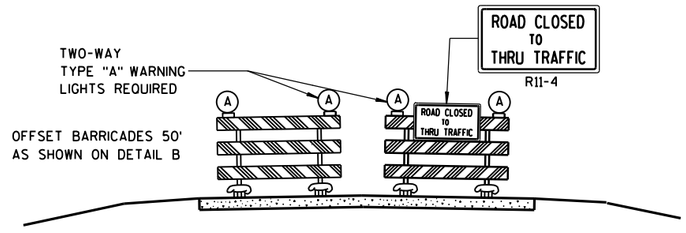
S.D.D. 15 C 2-6a



DETAIL D

ROAD CLOSURE BARRICADE DETAIL

APPROACH VIEW



DETAIL E

LANE CLOSURE BARRICADE DETAIL

APPROACH VIEW

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

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

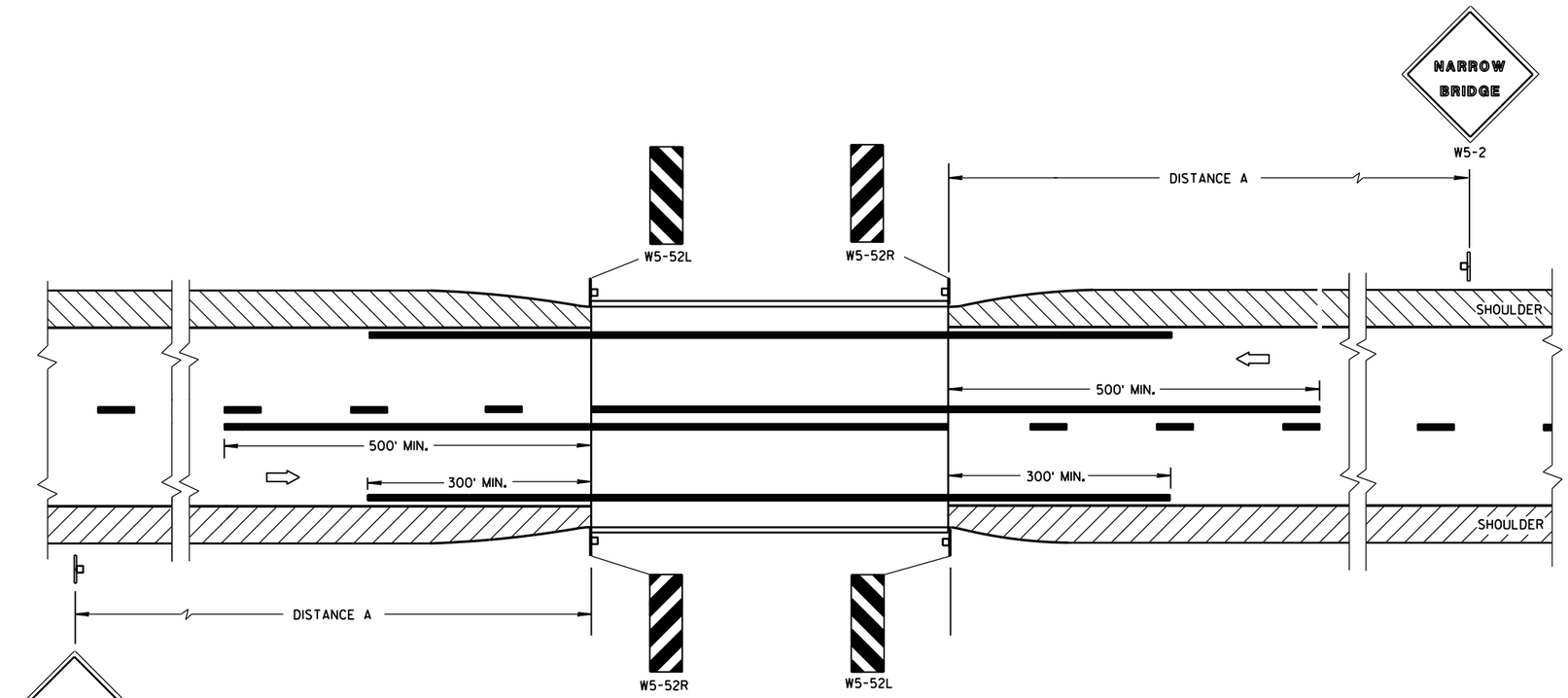
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

Sept. 2015 — DATE

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

6

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



SITUATION 1

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

DISTANCE TABLE

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

GENERAL NOTES

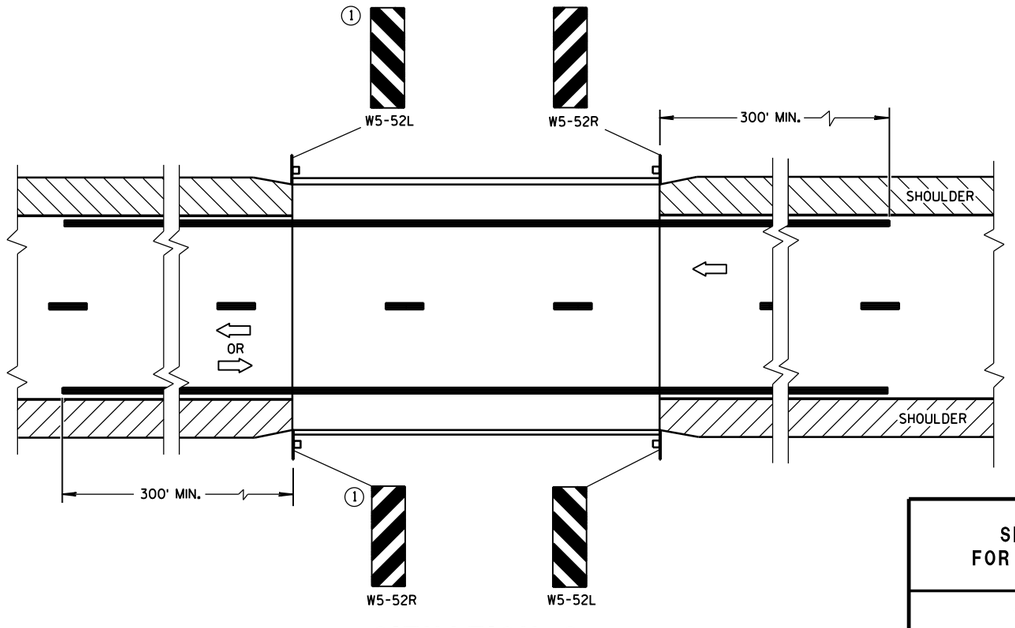
DETAILS OF TRAFFIC CONTROL DEVICES AND INSTALLATION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

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

PLACE THE EDGE OF THE W5-52 SIGN IN LINE WITH FACE OF CURB OR PARAPET.

(1) OMIT ON ONE-WAY TRAVELLED WAYS.

⇨ DIRECTION OF TRAFFIC



SITUATION 2

WARRANTING CRITERIA:

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

SIGNING & MARKING FOR TWO LANE BRIDGES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

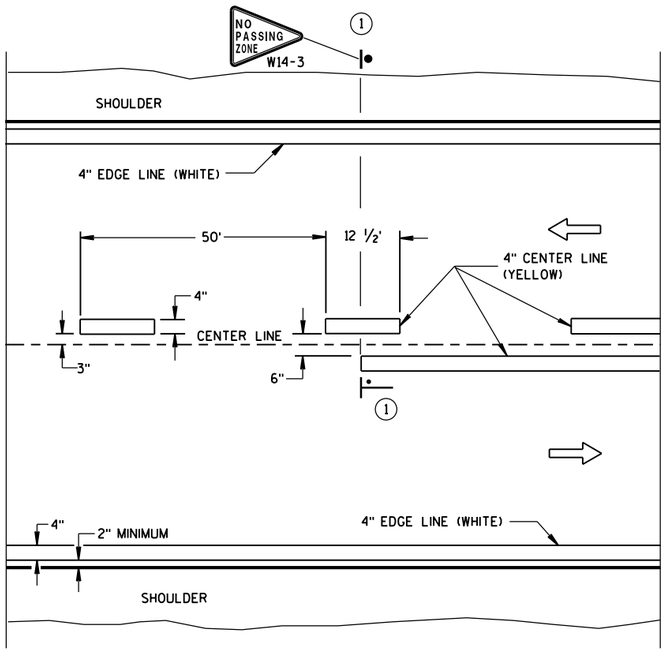
APPROVED
June 2017 — DATE
/S/ Matthew R. Rauch — STATE SIGNING AND MARKING ENGINEER
FHWA

6

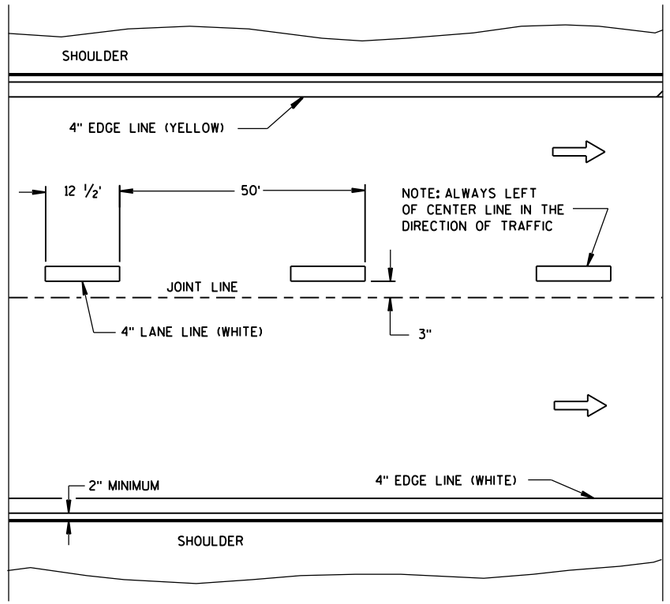
S.D.D. 15 C 6-9

6

S.D.D. 15 C 6-9



TWO WAY TRAFFIC



ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING

GENERAL NOTES

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

(1) LOCATE THE NO PASSING ZONE W14-3 SIGN WITHIN 50 FEET OF THE "T" MARKING.

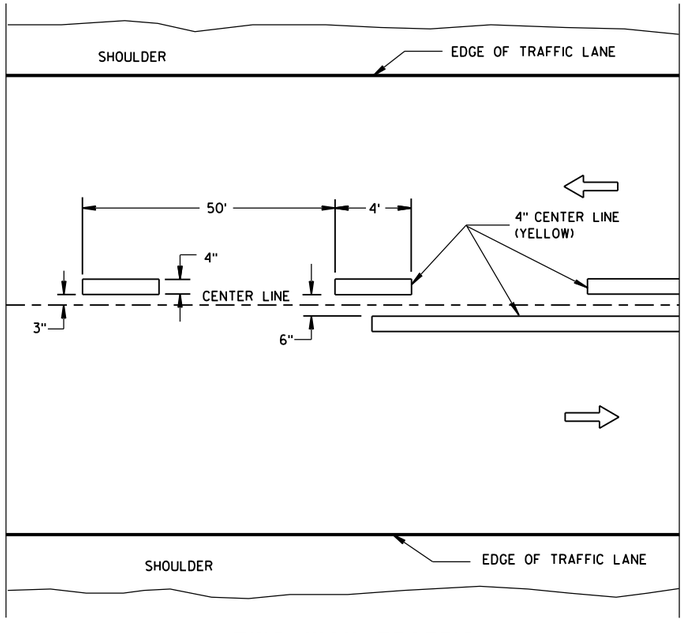
NOTE

ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL

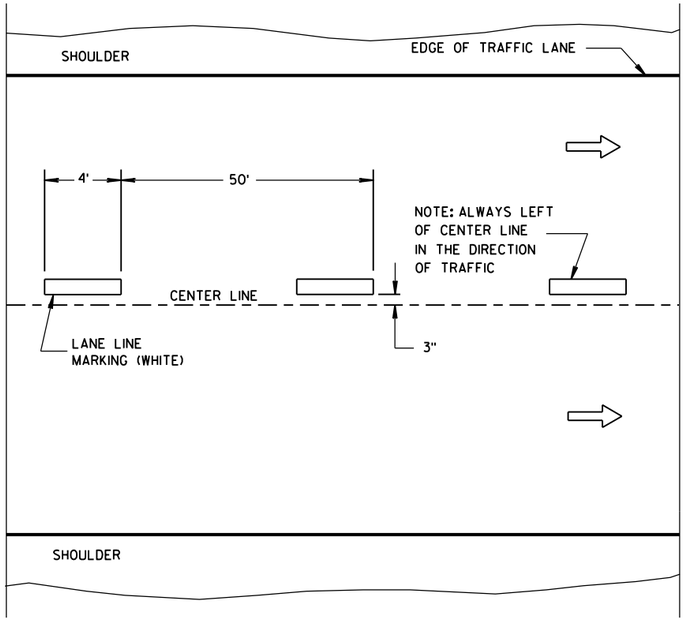
LEGEND

"T" MARKING

POST MOUNTED SIGN



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY PAVEMENT MARKING

LONGITUDINAL MARKING (MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2017 — DATE
/S/ Matthew R. Rauch — STATE SIGNING AND MAR[illegible]INEER
FHWA

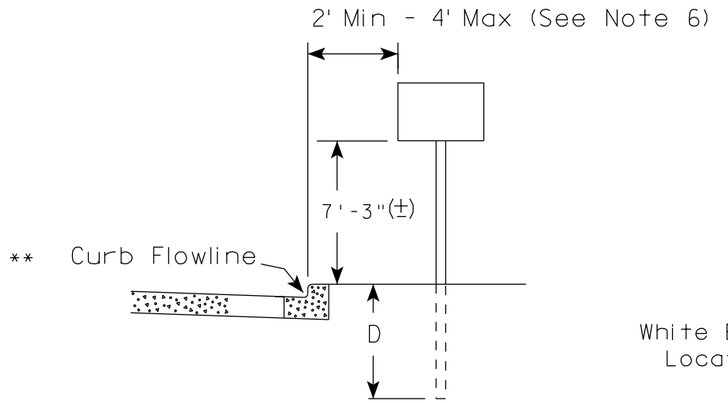
6

S.D.D. 15 C 8-18a

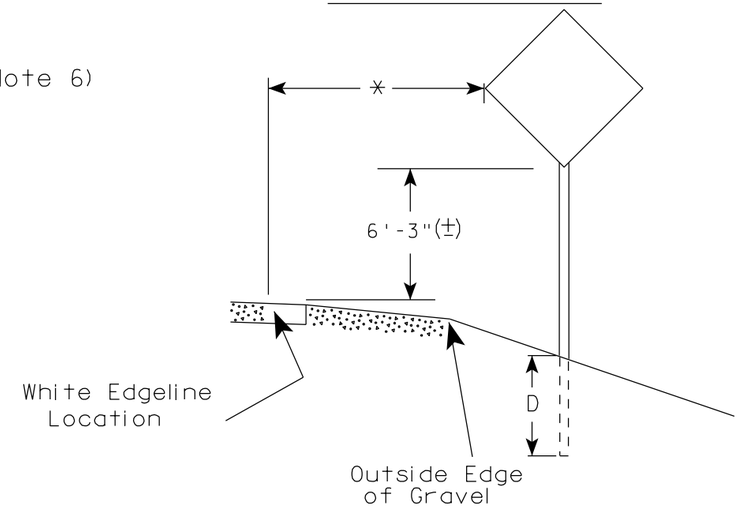
6

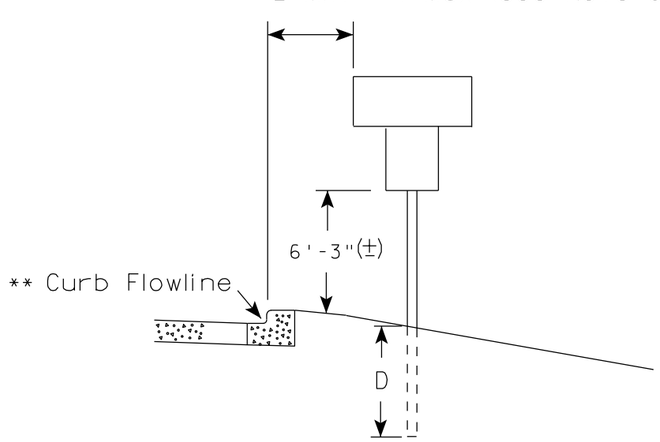
S.D.D. 15 C 8-18a

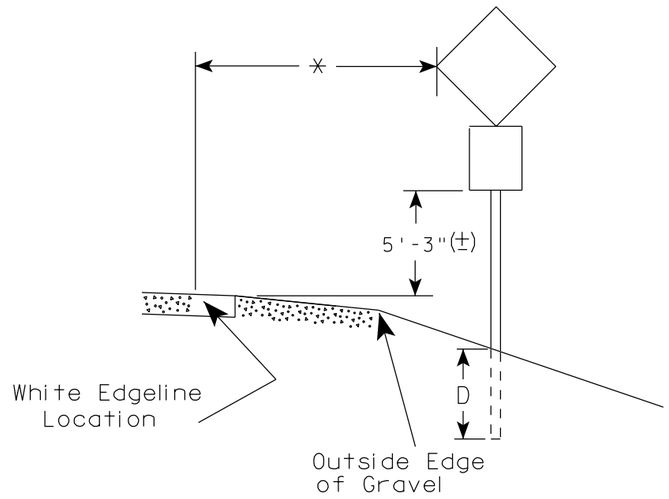
URBAN AREA



RURAL AREA (See Note 2)







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

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

POST EMBEDMENT DEPTH

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

GENERAL NOTES

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

TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

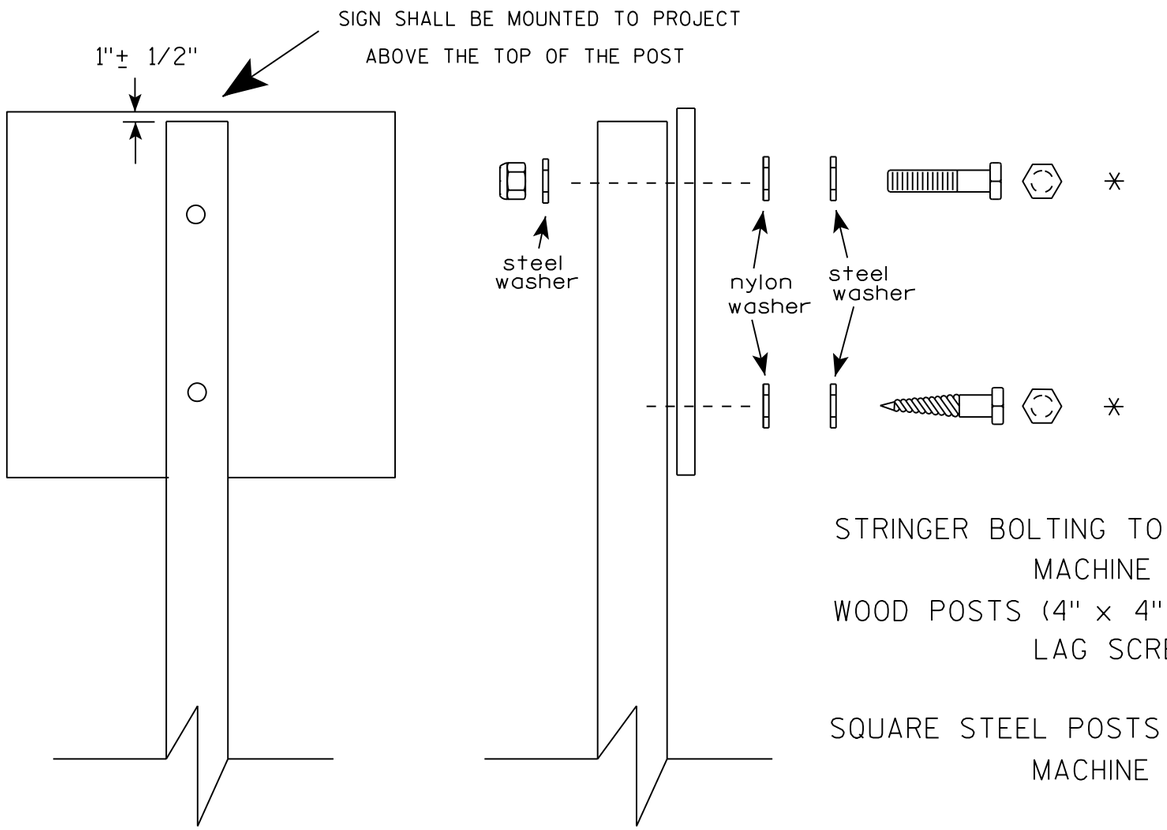
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

7



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

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

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

STRINGER BOLTING TO ALUMINUM SIGNS (SEE SIGN PLATE A4-18)

MACHINE BOLTS - 5/16" X 1-3/4" Length w/ lock nuts

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

LAG SCREWS - 3/8" X 3" (NO STRINGERS ON BACK OF SIGN)
3/8" X 4" (STRINGERS ON BACK OF SIGN)

SQUARE STEEL POSTS (2" x 2")

MACHINE BOLTS - 3/8" X 3-1/4" Length w/ nuts (NO STRINGER ON BACK OF SIGN)
3/8" X 5" Length w/ nuts (STRINGERS ON BACK OF SIGN)

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

WASHERS (ALL POSTS) -

1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON

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

ATTACHMENT OF SIGNS TO POSTS

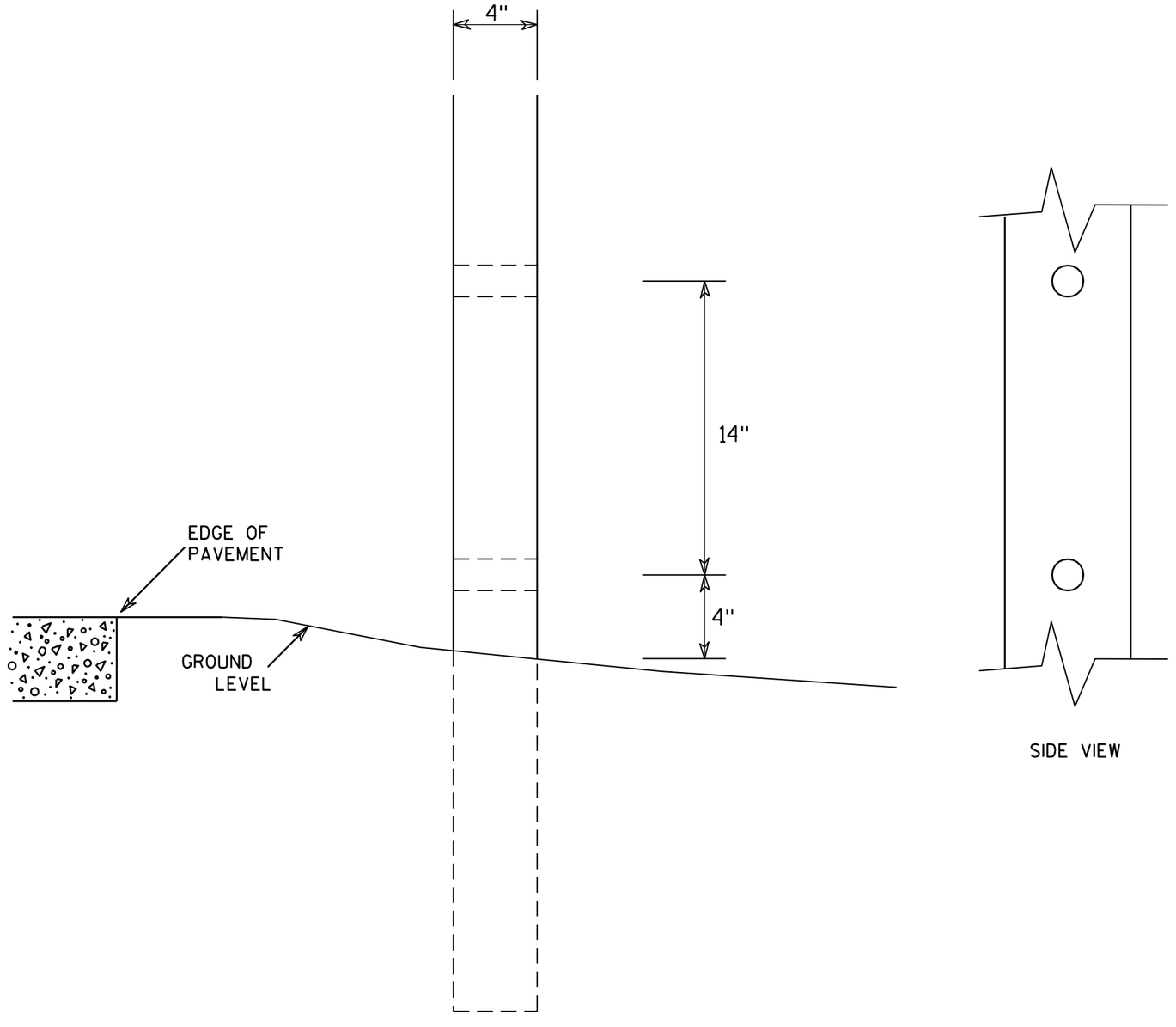
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO:

SHEET NO: E



SIDE VIEW

GENERAL NOTES

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

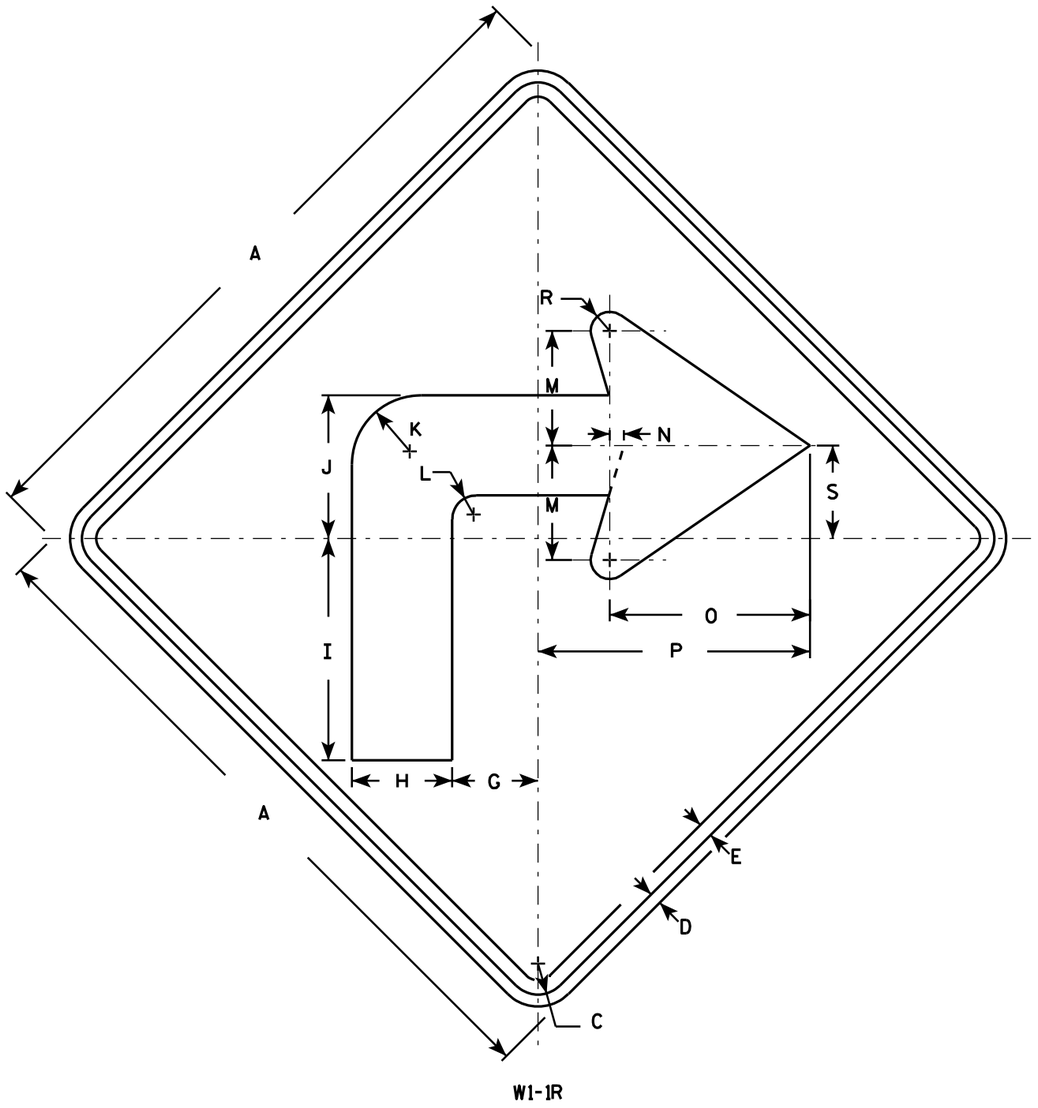
4 X 6 WOOD POST MODIFICATIONS

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: 37	E



W1-1R

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. W1-1L is the same as W1-1R except the arrow is reversed along the vertical centerline.

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	24		1 1/8	3/8	1/2		3	3 1/2	7 3/4	5	2 1/2	7/8	4	1/2	7	9 1/2		5/8	3 1/4								4.0
2S	36		1 5/8	5/8	3/4		4 1/2	5 1/4	11 5/8	7 1/2	3 5/8	1 1/4	6	3/4	10 1/2	14 1/4		1	4 7/8								9.0
2M	36		1 5/8	5/8	3/4		4 1/2	5 1/4	11 5/8	7 1/2	3 5/8	1 1/4	6	3/4	10 1/2	14 1/4		1	4 7/8								9.0
3	36		1 5/8	5/8	3/4		4 1/2	5 1/4	11 5/8	7 1/2	3 5/8	1 1/4	6	3/4	10 1/2	14 1/4		1	4 7/8								9.0
4	48		2 1/4	3/4	1		6	7	15 1/2	10	4 7/8	1 5/8	8	1	14	19		1 1/4	6 1/2								16.0
5	48		2 1/4	3/4	1		6	7	15 1/2	10	4 7/8	1 5/8	8	1	14	19		1 1/4	6 1/2								16.0

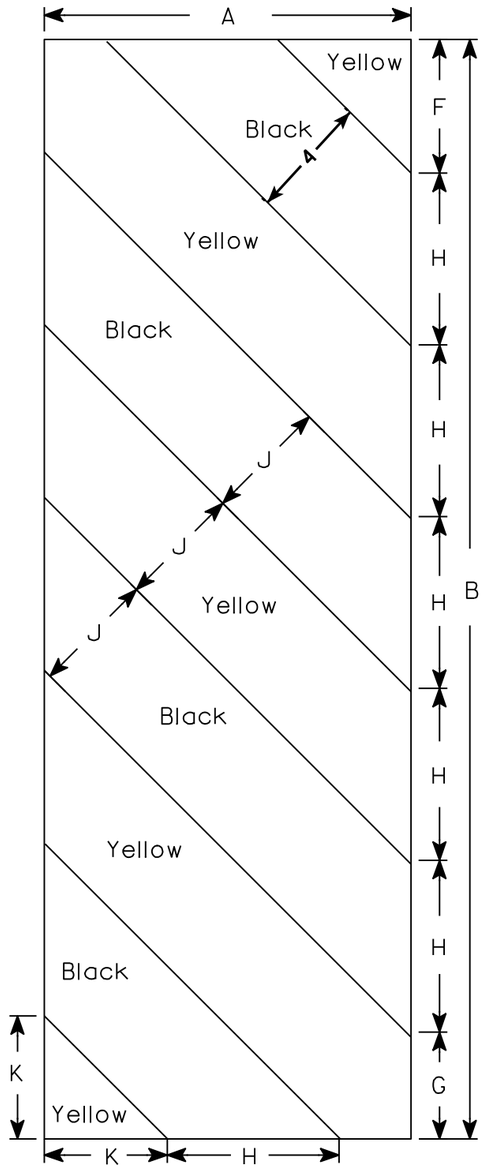
STANDARD SIGN
W1-1

WISCONSIN DEPT OF TRANSPORTATION

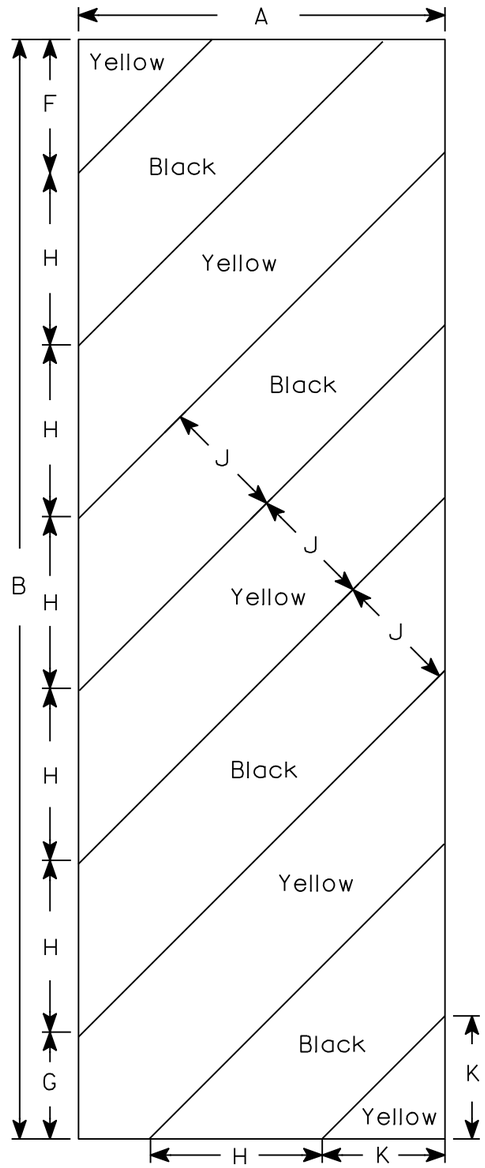
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/15/12 PLATE NO. W1-1.11

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 38 | 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

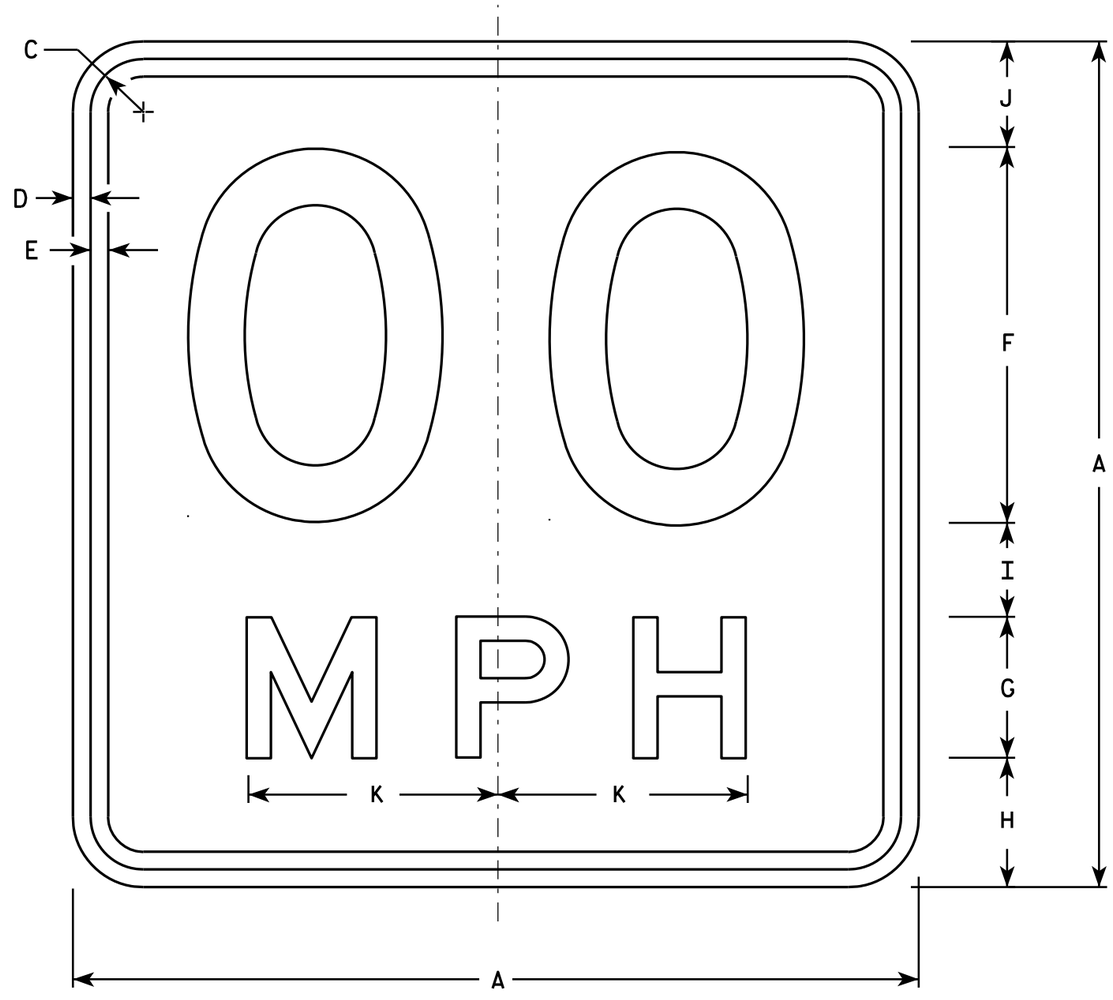
W5-52L & W5-52R

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: 39	E



W13-1

* For 30" x 30" Warning Signs, use 18" x 18" W13-1 signs.
For 36" x 36" Warning Signs, use 24" x 24" W13-1 signs.

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. Message Series - See Note 6
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate numerals and optically space about centerline to achieve proper balance.
6. Line 1 is Series D
   Line 2 is Series E

	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	18		1 1/8	3/8	3/8	8	3	2 3/4	2	2 1/4	5 3/8																2.25
*	2S	18		1 1/8	3/8	3/8	8	3	2 3/4	2	2 1/4	5 3/8																2.25
*	2M	18		1 1/8	3/8	3/8	8	3	2 3/4	2	2 1/4	5 3/8																2.25
	3	24		1 1/8	3/8	1/2	10	4	4	2 3/4	3 1/4	6 5/8																4.00
	4	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00
	5	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00

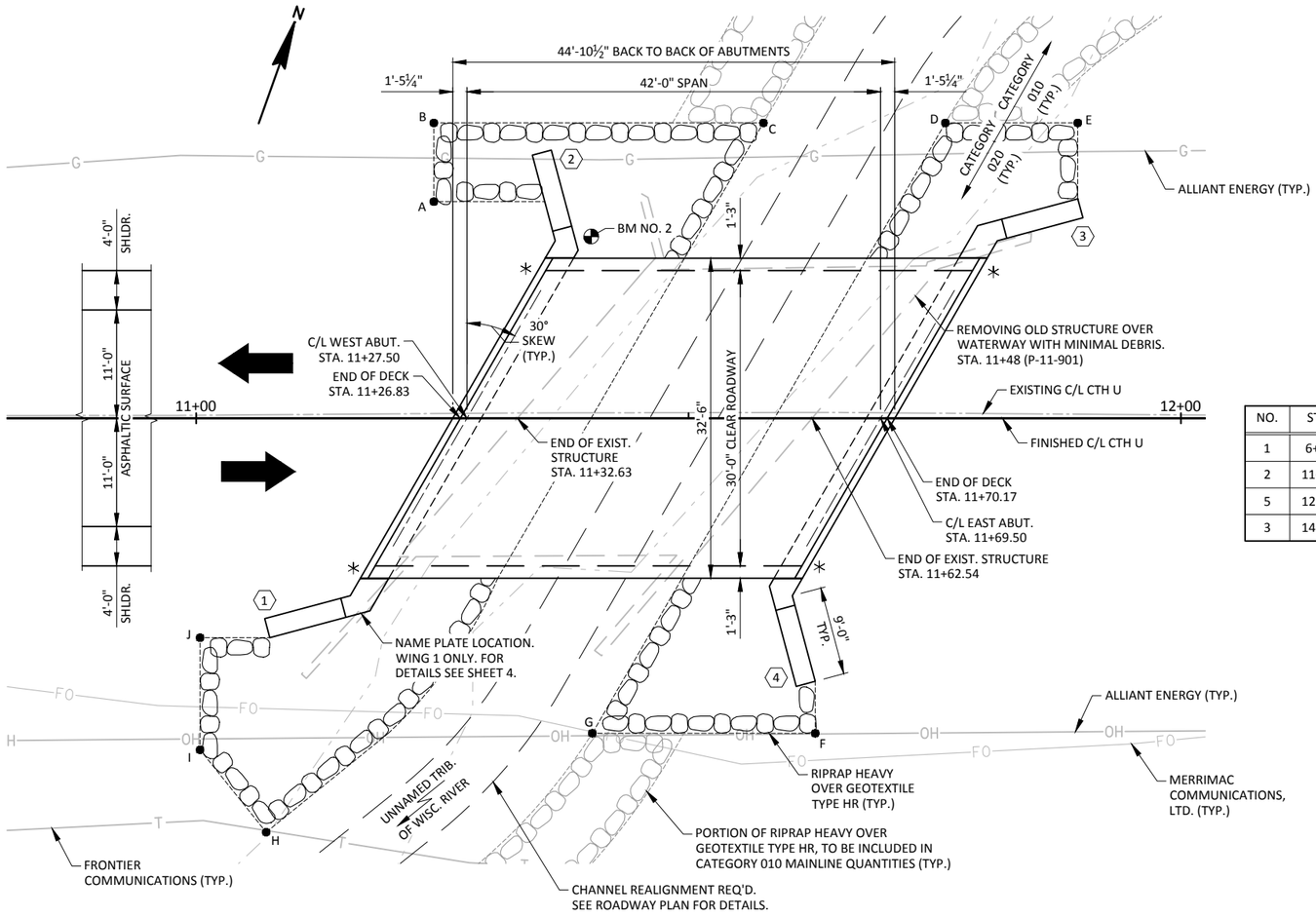
STANDARD SIGN
W13-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew P Rauch
For State Traffic Engineer

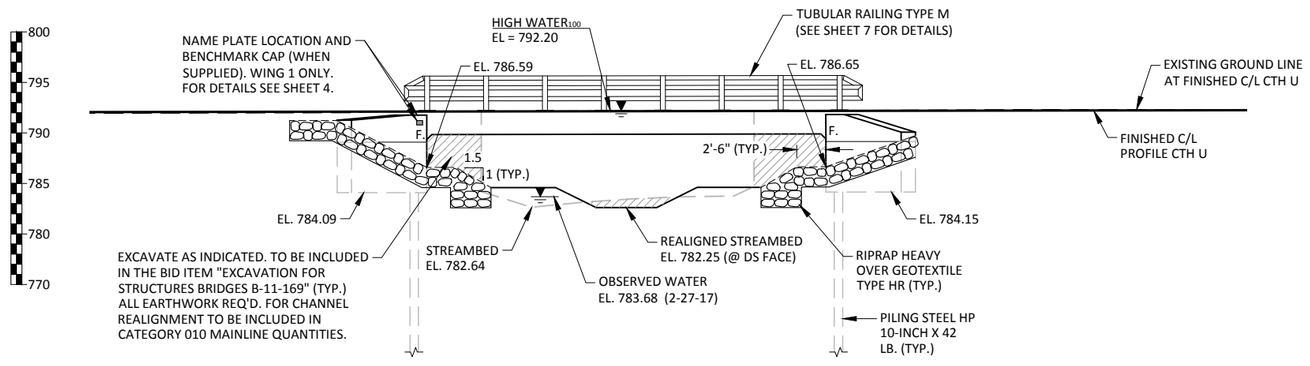
DATE 5/31/12 PLATE NO. W13-1.16

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 40 | E



PLAN B-11-169

(SINGLE-SPAN REINFORCED CONCRETE FLAT SLAB)



ELEVATION

(NORMAL TO UNNAMED TRIB. OF WISC. RIVER)

⬡ INDICATES WING NUMBER

✳ THRIE BEAM RAIL ATTACHMENT

RIPRAP HEAVY LAYOUT

POINT	STATION	OFFSET
A	11+24	22' LT.
B	11+24	30' LT.
C	11+57	30' LT.
D	11+76	30' LT.
E	11+90	30' LT.
F	11+63	32' RT.
G	11+40	32' RT.
H	11+07	42' RT.
I	11+00	34' RT.
J	11+00	22' RT.

BENCH MARKS

NO.	STA.	DESCRIPTION	ELEV.
1	6+42	¾" IRON ROD SET, 17' LT.	795.13
2	11+40	¾" IRON ROD SET, 18' LT.	791.36
5	12+53	STAR SPIKE IN POWER POLE, 31' RT.	792.50
3	14+69	¾" IRON ROD SET, 22' RT.	789.95

STATE PROJECT NUMBER

6721-00-71

DESIGN DATA

LIVE LOAD:

DESIGN LOADING — HL-93
INVENTORY RATING FACTOR — RF=1.07
OPERATING RATING FACTOR — RF=1.38
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV) — 250 KIPS

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

MATERIAL PROPERTIES:

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

FOUNDATION DATA

ABUTMENTS TO BE SUPPORTED ON PILING STEEL HP 10-INCH X 42 LB DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 120 TONS** PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATE 35 FT PILE LENGTHS AT THE WEST ABUTMENT AND 40 FT PILE LENGTHS AT THE EAST ABUTMENT.

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

TRAFFIC DATA

A.D.T. (2019) — 400
A.D.T. (2039) — 480
DESIGN SPEED — 50 M.P.H.

HYDRAULIC DATA

100-YEAR FREQUENCY
DRAINAGE AREA — 6.5 SQ. MI.
Q_{100} TOTAL — 1,450 C.F.S.
THROUGH STRUCTURE — 1,240 C.F.S.
OVERTOPPING ROADWAY — 210 C.F.S.
VELOCITY - THROUGH STRUCTURE — 6.9 F.P.S.
WATERWAY AREA - THROUGH STRUCTURE — 181 SQ. FT.
HIGH WATER$_{100}$ ELEVATION — 792.20
SCOUR CRITICAL CODE — 5

DESIGN ROADWAY OVERFLOW FREQUENCY
ROADWAY OVERTOPPING FREQUENCY — 72 YRS.
Q_{72} — 1,355 C.F.S.
HIGH WATER$_{72}$ ELEVATION — 791.59

EROSION CONTROL
Q_2 — 425 C.F.S.
HIGH WATER$_2$ ELEVATION — 788.15
VELOCITY$_2$ — 3.5 F.P.S.

LIST OF DRAWINGS

NO.	DATE	REVISION	BY

WISCONSIN PROFESSIONAL ENGINEER
PATRICK T. BOLAND
E-36303
SPRING GREEN WIS.
Patrick T. Boland 4-23-18

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

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

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher SDR — 05/16/18
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-11-169

CTH U OVER UNNAMED TRIBUTARY OF THE WISCONSIN RIVER

COUNTY	TOWN/~~CITY/VILLAGE~~
COLUMBIA	CALEDONIA

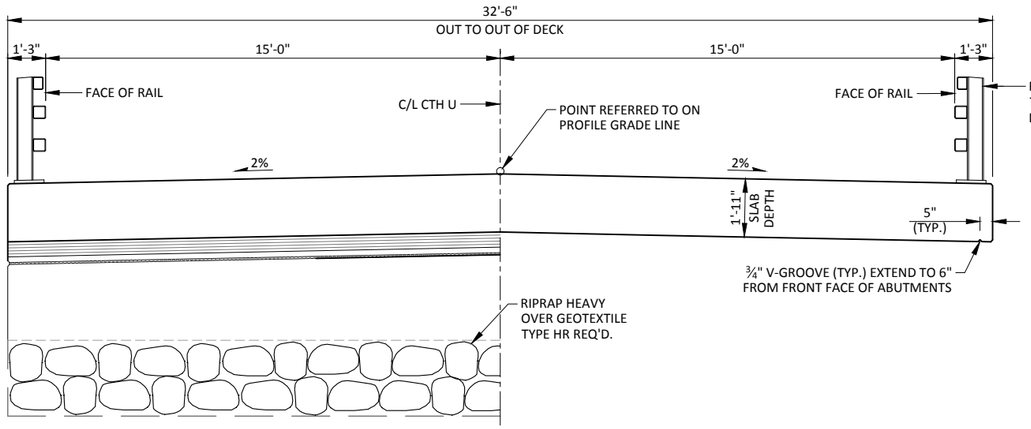
DESIGN SPEC. AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

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

GENERAL PLAN

SHEET 1 OF 7
41

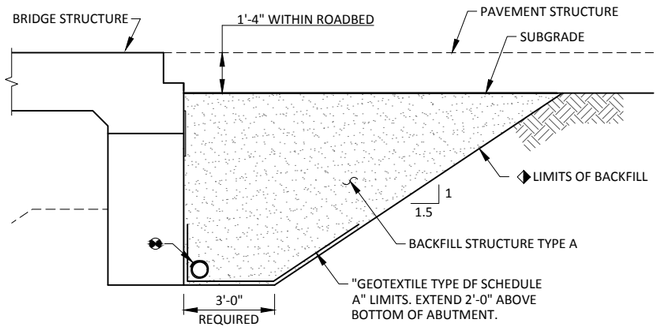
STATE PROJECT NUMBER
6721-00-71



AT ABUTMENT **IN SPAN**

PROPOSED CROSS-SECTION THROUGH ROADWAY

(LOOKING EAST)

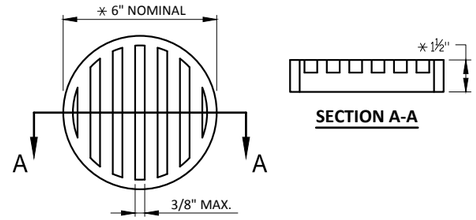


BACKFILL STRUCTURE DETAIL

ABUTMENT BODY SHOWN - WING WALLS SIMILAR
(TYPICAL AT BOTH ABUTMENTS)

◆ BACKFILL STRUCTURE TYPE A PAY LIMITS. BACKFILL BEYOND PAY LIMITS SHALL BE INCIDENTAL TO THE BID ITEM "EXCAVATION FOR STRUCTURES BRIDGES B-11-169". LIMITS OF EXCAVATION SHALL BE DETERMINED BY THE CONTRACTOR.

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



RODENT SCREEN

SECTION A-A

NOTES:

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

ORIENT SCREEN SO SLOTS ARE VERTICAL.

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

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

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

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

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

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

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

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

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

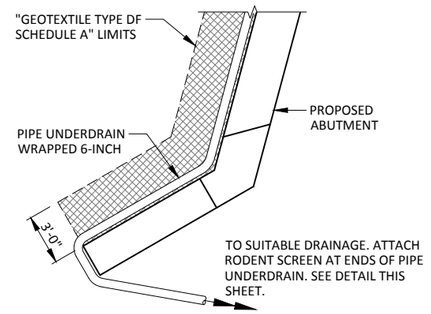
APPLY PROTECTIVE SURFACE TREATMENT TO THE TOP OF THE DECK, THE SIDES OF THE DECK AND EXTERIOR 12" OF THE UNDERSIDE OF THE DECK (CONCRETE MATERIAL ONLY).

THE EXISTING STRUCTURE (P-11-901) IS A TWO-SPAN STEEL DECK GIRDER STRUCTURE SUPPORTED ON FULL RETAINING CONCRETE ABUTMENTS. THE STRUCTURE HAS A CLEAR ROADWAY WIDTH OF 26.0' AND IS 30.0' LONG AND SHALL BE REMOVED.

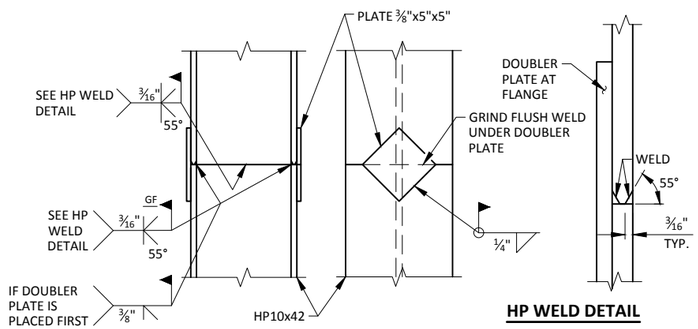
ALL STATIONS AND ELEVATIONS SHOWN ARE IN FEET.

THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES BRIDGES B-11-169" SHALL BE THE EXISTING GROUNDLINE.

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



PIPE UNDERDRAIN DETAIL



HP WELD DETAIL

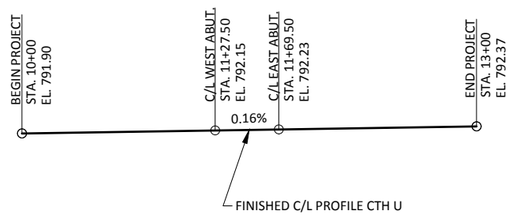
FLANGE SHOWN, WEB SIMILAR

PILE SPLICE DETAIL

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

TOTAL ESTIMATED QUANTITIES

ITEM NUMBER	ITEM DESCRIPTION	UNIT	W. ABUT.	SUPER	E. ABUT.	TOTALS
203.0600.S	REMOVING OLD STRUCTURE OVER WATERWAY WITH MINIMAL DEBRIS STA. 11+48	LS	--	--	--	1
206.1000	EXCAVATION FOR STRUCTURES BRIDGES B-11-169	LS	--	--	--	1
210.1500	BACKFILL STRUCTURE TYPE A	TON	165	--	165	330
502.0100	CONCRETE MASONRY BRIDGES	CY	32	109	32	173
502.3200	PROTECTIVE SURFACE TREATMENT	SY	--	190	--	190
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	2,625	--	2,625	5,250
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	1,440	18,400	1,440	21,280
513.4061	RAILING TUBULAR TYPE M B-11-169	LF	--	90	--	90
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	8	--	8	16
550.1100	PILING STEEL HP 10-INCH X 42 LB	LF	265	--	290	555
606.0300	RIPRAP HEAVY	CY	110	--	75	185
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	85	--	85	170
645.0111	GEOTEXTILE TYPE DF SCHEDULE A	SY	60	--	60	120
645.0120	GEOTEXTILE TYPE HR	SY	185	--	125	310
	NON-BID ITEMS					
	FILLER	SIZE				½" & ¾"
	NAME PLATE					



CTH U - PROFILE GRADE LINE

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-11-169

DRAWN BY RBH | PLANS CK'D. PTB

CROSS SECTIONS AND QUANTITIES

SHEET 2 OF 7

42

8

8

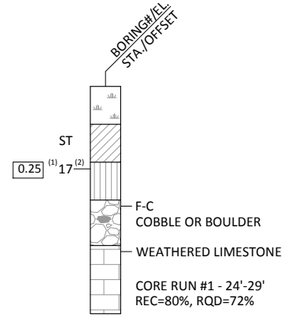
STATE PROJECT NUMBER

6721-00-71

MATERIAL SYMBOLS

Asphalt	Topsoil	Peat
Concrete	Fill	Gravel
Sand	Clay	Silt
Boulders or Cobbles	Limestone	Bedrock (unknown)
Shale	Sandstone	Igneous/ meta

LEGEND OF BORING



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

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

GROUND WATER ELEVATIONS

- AT TIME OF DRILLING
- END OF DRILLING
- AFTER DRILLING

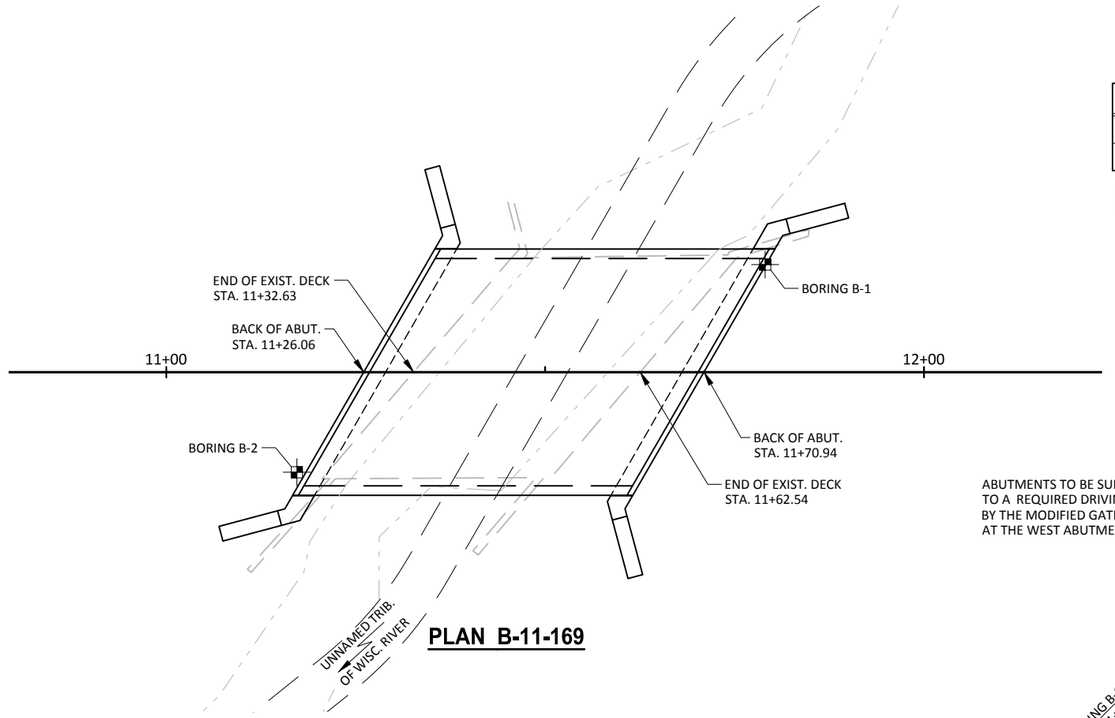
ABBREVIATIONS

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

SOIL BORINGS

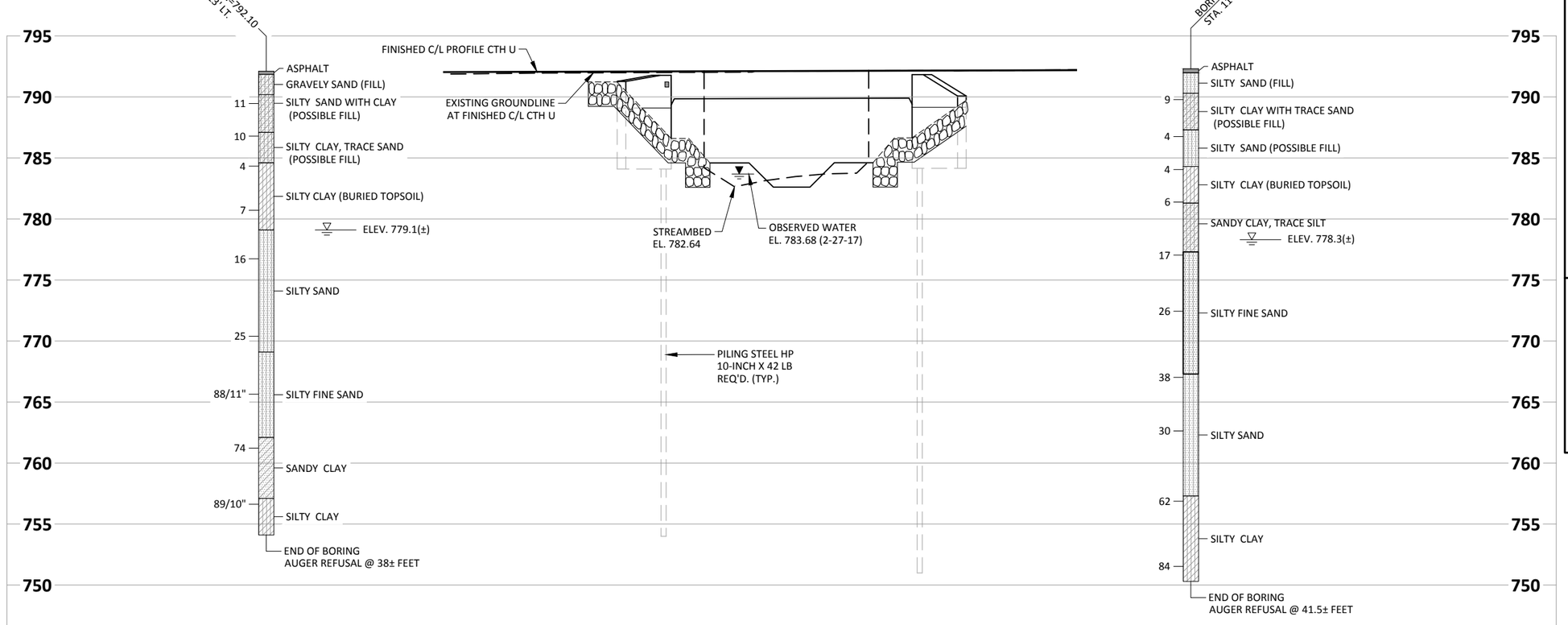
BORING NUMBER	DATE COMPLETED	NORTHING (Y)	EASTING (X)
B-1	05/10/17	360,984.20	525,125.96
B-2	05/11/17	360,937.72	525,076.90

BORINGS & REPORT COMPLETED BY: PSI
1125 W. TUCKAWAY LANE, SUITE B
MENASHA, WI 54952



PLAN B-11-169

ABUTMENTS TO BE SUPPORTED ON PILING STEEL HP 10-INCH X 42 LB DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 120 TONS PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATE 35 FT PILE LENGTHS AT THE WEST ABUTMENT AND 40 FT PILE LENGTHS AT THE EAST ABUTMENT.



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-11-169

DRAWN BY TS | PLANS CK'D. PTB

SUBSURFACE EXPLORATION

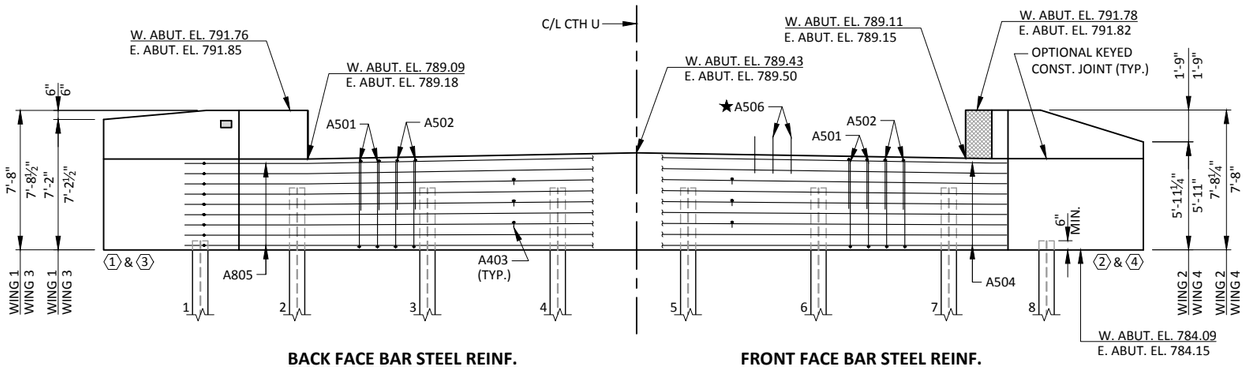
SHEET 3 OF 7

43

8

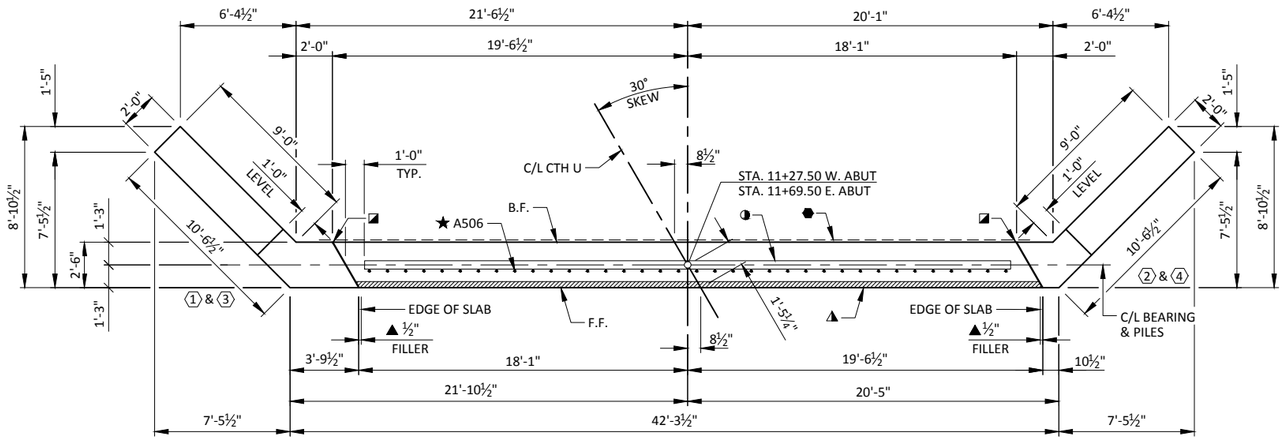
STATE PROJECT NUMBER

6721-00-71

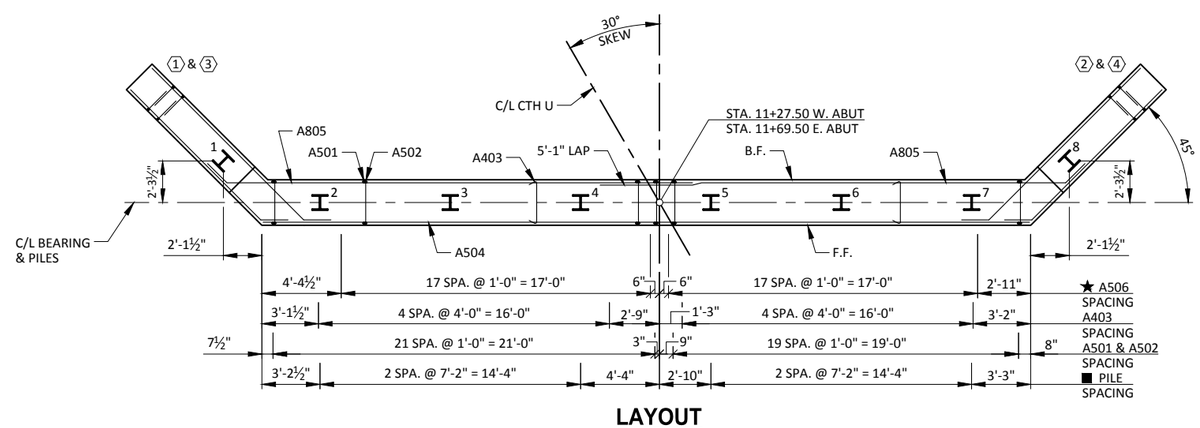


ELEVATION

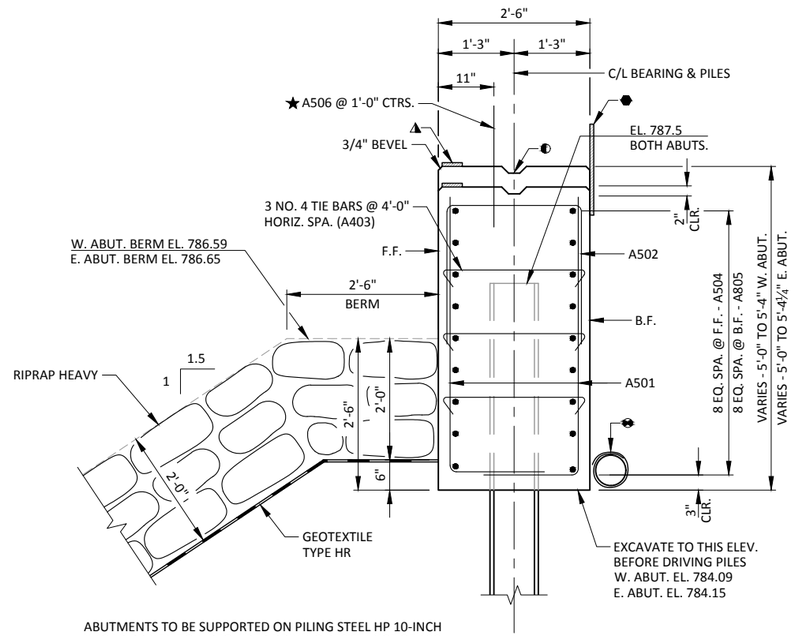
(WEST ABUTMENT LOOKING WEST)
(EAST ABUTMENT LOOKING EAST)



PLAN



LAYOUT



ABUTMENTS TO BE SUPPORTED ON PILING STEEL HP 10-INCH X 42 LB DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 120 TONS PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATE 35 FT PILE LENGTHS AT WEST ABUTMENT AND 40 FT PILE LENGTHS AT EAST ABUTMENT.

TYPICAL SECTION THROUGH ABUTMENT BODY

NOTES

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

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

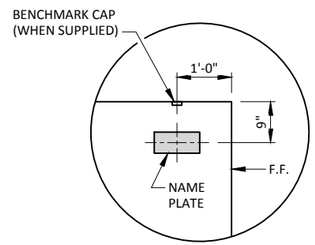
SPACE REINFORCEMENT TO MISS PILING

F.F. - FRONT FACE

B.F. - BACK FACE

LEGEND

- ◑ KEYED CONSTRUCTION JOINT FORMED BY SURFACED & BEVELED 2x6.
- ◪ VERTICAL 18" RUBBERIZED MEMBRANE WATERPROOFING EXTEND FROM 9" BELOW BRIDGE SEAT TO 1" BELOW TOP OF WINGS.
- ⬣ 18" RUBBERIZED MEMBRANE WATERPROOFING. (HORIZONTAL)
- ▲ ½" FILLER EXTEND AS SHOWN. SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF FILLER WITH NON-STAINING GRAY, NON-BITUMINUOS JOINT SEALER. (1" DEEP & HOLD ⅛" BELOW SURFACE OF CONCRETE)
- ◭ ¾" x 4" PREFORMED FILLER, EXTEND FULL LENGTH OF ABUTMENTS BETWEEN EDGES OF SLAB.
- ★ A506 BARS MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE IT HAS TAKEN ITS INITIAL SET. EMBED BAR 1'-0".
- ■ PILE SPACING MEASURED AT BASE OF ABUTMENT BODY.
- ◓ PIPE UNDERDRAIN WRAPPED (6-INCH), SLOPED 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SCREEN AT ENDS OF PIPE UNDERDRAIN AS DETAILED ON SHEET 2. RODENT SCREEN TO BE INCLUDED IN THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH."



NAME PLATE AND BENCHMARK CAP DETAIL

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-11-169

DRAWN BY JZ | PLANS CK'D. PTB

ABUTMENTS

SHEET 4 OF 7

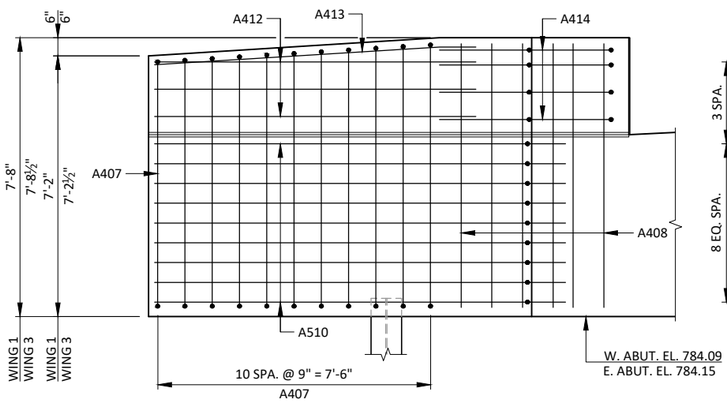
44

8

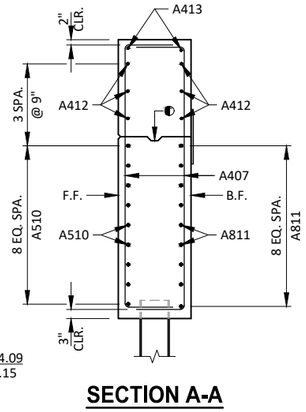
8

STATE PROJECT NUMBER

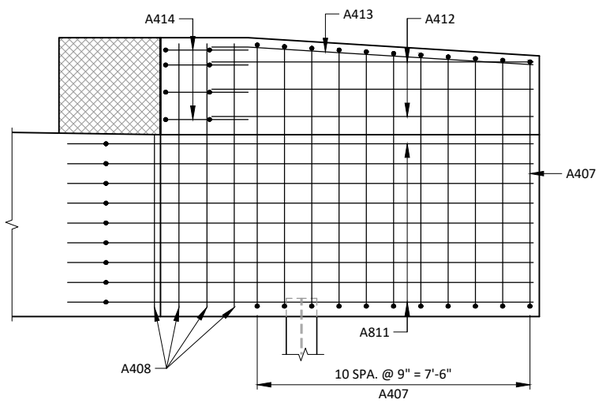
6721-00-71



F.F. ELEVATION - WINGS 1 & 3



SECTION A-A



B.F. ELEVATION - WINGS 1 & 3

BILL OF BARS
TWO ABUTMENTS SHOWN

2,880 LB (COATED)
5,250 LB (UNCOATED)

BAR MARK	NO. REQ'D.	LENGTH	BENT	COAT	BAR SERIES	LOCATION
A501	168	6-1	X			BODY - VERT. - F.F & B.F.
A502	84	7-7	X			BODY - VERT. - TOP
A403	60	2-8	X			TIE BARS
A504	18	42-2				BODY - HORIZ. - F.F.
A805	36	27-3	X			BODY - HORIZ. - B.F.
A506	72	2-0		X		BODY - VERT. - DOWELS
A407	44	9-6	X	X	⚹	WING 1 & WING 3 - VERT. - F.F. & B.F.
A408	36	7-3		X		WINGS - VERT.
A409	4	3-3		X		WINGS - VERT. - TOP
A510	36	11-9	X	X		WINGS - HORIZ. - F.F.
A811	36	13-5	X	X		WINGS - HORIZ. - B.F.
A412	12	8-10		X		WING 1 & WING 3 - HORIZ. - F.F. & B.F.
A413	4	8-10	X	X		WING 1 & WING 3 - HORIZ. - F.F. & B.F.- TOP
A414	8	11-3	X	X		WING 1 & WING 3 - HORIZ. - TOP
A415	44	8-11	X	X	⚹	WING 2 & 4 - VERT. - F.F. & B.F.
A416	4	10-8		X		WING 2 & 4 - HORIZ. - F.F. & B.F.
A417	4	6-9		X		WING 2 & 4 - HORIZ. - F.F. & B.F.
A418	4	3-4		X		WING 2 & 4 - HORIZ. - F.F. & B.F.
A419	4	9-0	X	X		WING 2 & 4 - HORIZ. - F.F. & B.F. - TOP
A420	8	8-4	X	X		WING 2 & 4 - HORIZ. - TOP

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

DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.

⚹ LENGTH SHOWN IS AN AVERAGE LENGTH ONLY. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.

LEGEND

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

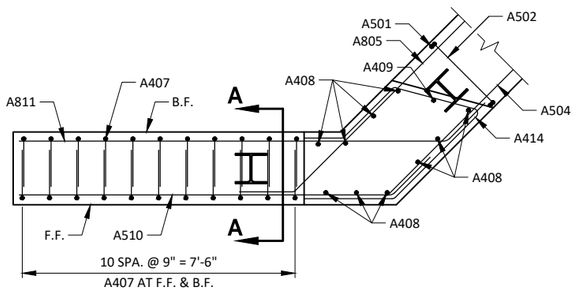
NOTES

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

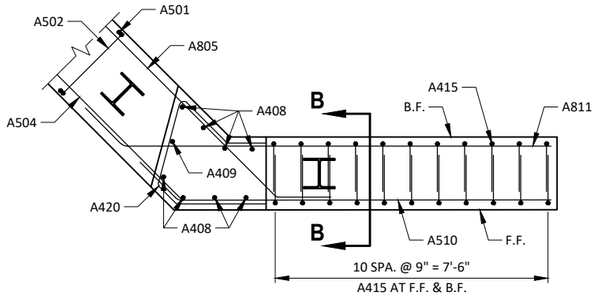
SPACE REINFORCEMENT TO MISS PILING

F.F. - FRONT FACE

B.F. - BACK FACE



PLAN VIEW - WINGS 1 & 3

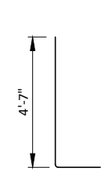


PLAN VIEW - WINGS 2 & 4

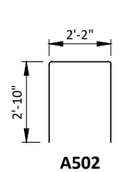
BAR SERIES TABLE

BAR MARK	NO. REQ'D.	LENGTH
A407	4 SERIES OF 11	9-9 TO 9-3
A415	4 SERIES OF 11	9-9 TO 8-1

BUNDLE AND TAG EACH SERIES SEPARATELY.



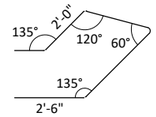
A501



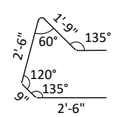
A502

A403

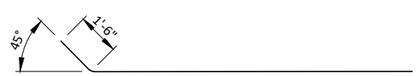
A407 & A415



A414



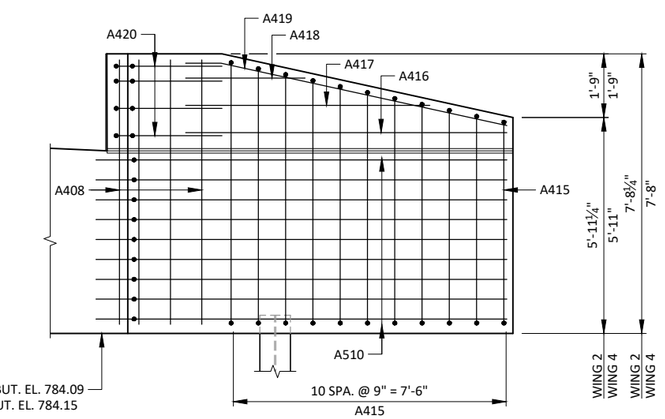
A420



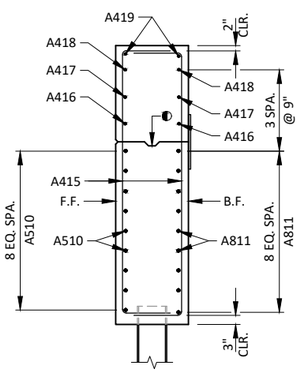
A805, A510 & A811

A413 & A419

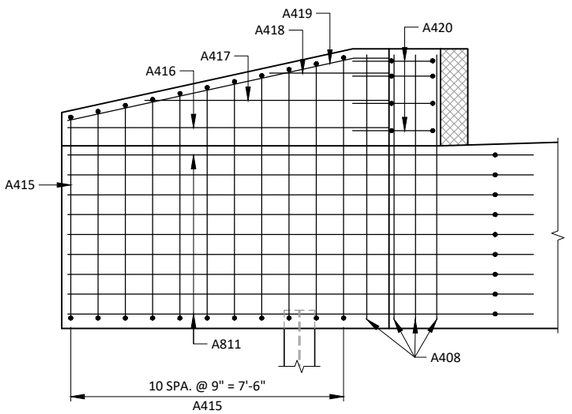
MARK	'A'
A413	176°25'
A419	167°40'



F.F. ELEVATION - WINGS 2 & 4



SECTION A-A



B.F. ELEVATION - WINGS 2 & 4

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-11-0169

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

ABUTMENT DETAILS

SHEET 5 OF 7

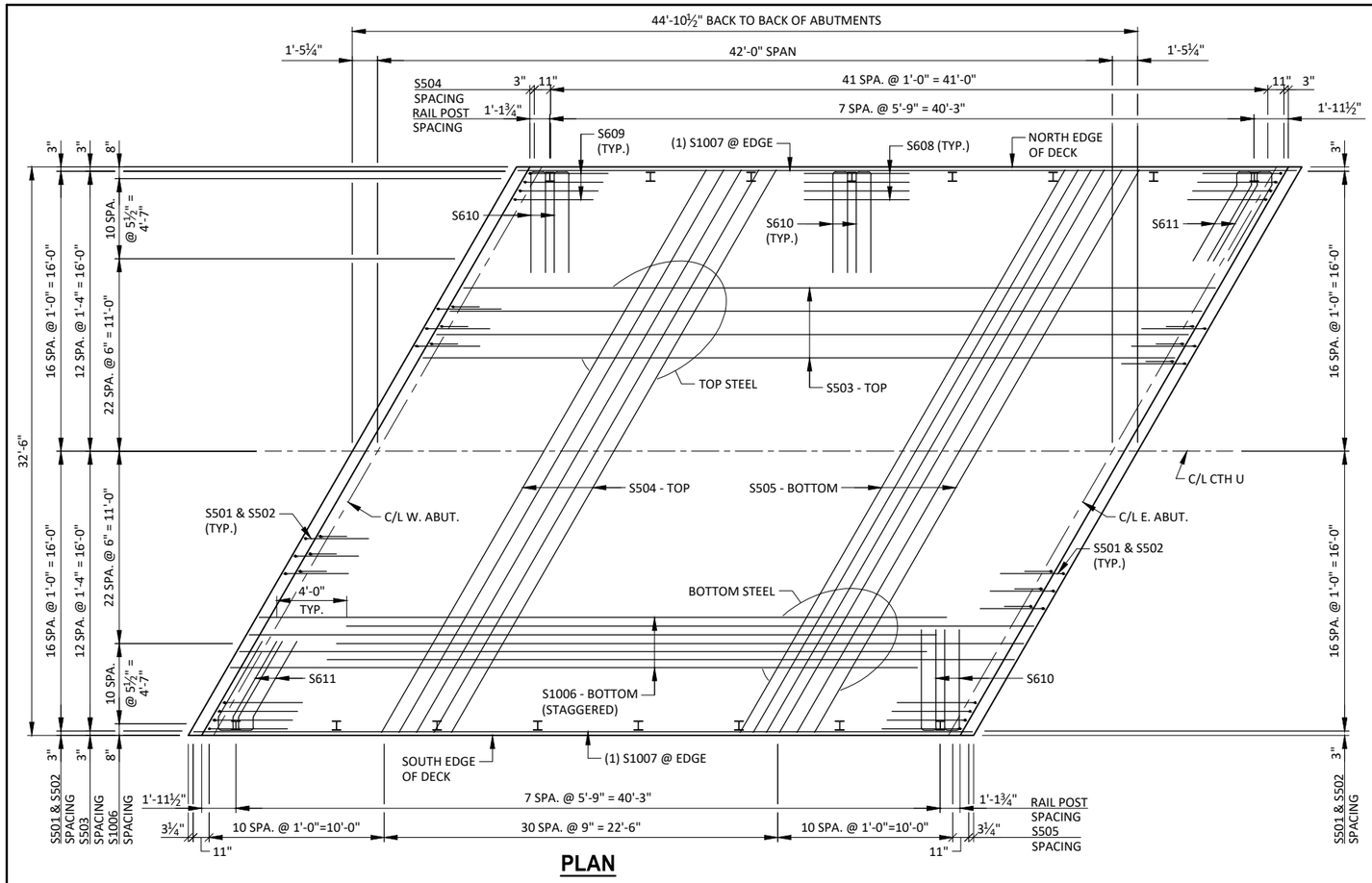
45

8

8

STATE PROJECT NUMBER

6721-00-71



PLAN

NOTES

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

PLACE TRANSVERSE BARS PARALLEL TO THE CENTERLINE OF SUBSTRUCTURE UNITS.

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

BILL OF BARS SUPERSTRUCTURE

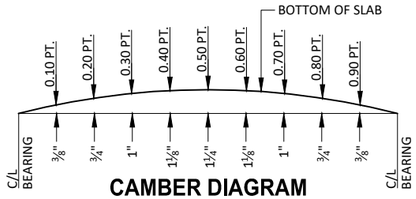
18,400 LB (COATED)

BAR MARK	NO. REQ'D.	LENGTH	BENT	COAT	LOCATION
S501	66	7-7	X	X	END OF DECK
S502	66	3-8	X	X	END OF DECK
S503	25	43-0		X	SLAB - TOP - LONGIT.
S504	50	37-2		X	SLAB - TOP - TRANS.
S505	53	37-2		X	SLAB - BOTTOM - TRANS.
S1006	65	39-3		X	SLAB - BOTTOM - LONGIT. (STAGGERED)
S1007	2	44-6		X	SLAB - BOTTOM - LONGIT. - EDGES
S608	48	6-0		X	RAIL POSTS - INTERIOR
S609	16	6-0	X	X	RAIL POSTS - ENDS
S610	28	12-0	X	X	RAIL POSTS
S611	4	12-0	X	X	RAIL POSTS - CORNERS

NOTES: THE FIRST DIGIT OF A THREE DIGIT BAR MARK AND THE FIRST TWO DIGITS OF A FOUR DIGIT BAR MARK SIGNIFIES THE BAR SIZE.

DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.

SOME BARS HAVE BEEN OMITTED FOR CLARITY.

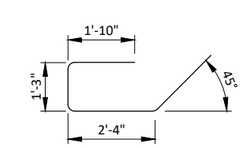


CAMBER DIAGRAM

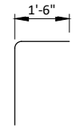
CAMBER SHOWN IS BASED ON 3 TIMES DEAD LOAD DEFLECTIONS. CAMBER SPAN AS SHOWN TO PROVIDE FOR THEORETICAL DEAD LOAD DEFLECTION AND FUTURE PLASTIC FLOW. CAMBER DOES NOT INCLUDE ALLOWANCE FOR FORM SETTLEMENT.

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

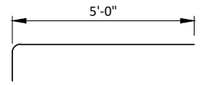
TOP OF DECK ELEVATION AT FINAL GRADE
-SLAB THICKNESS
+CAMBER
+FORM SETTLEMENT/DEFLECTION DUE TO PLACEMENT OF SLAB CONCRETE (COMPUTED BY CONTRACTOR)
=TOP OF SLAB FALSEWORK ELEVATION.



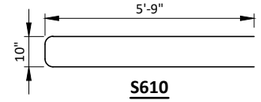
S501



S502



S609

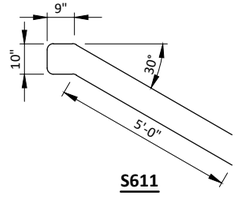


S610

SURVEY TOP OF DECK ELEVATIONS

	W. ABUT.	0.50 PT.	E. ABUT.
NORTH EDGE OF DECK			
CENTER LINE			
SOUTH EDGE OF DECK			

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



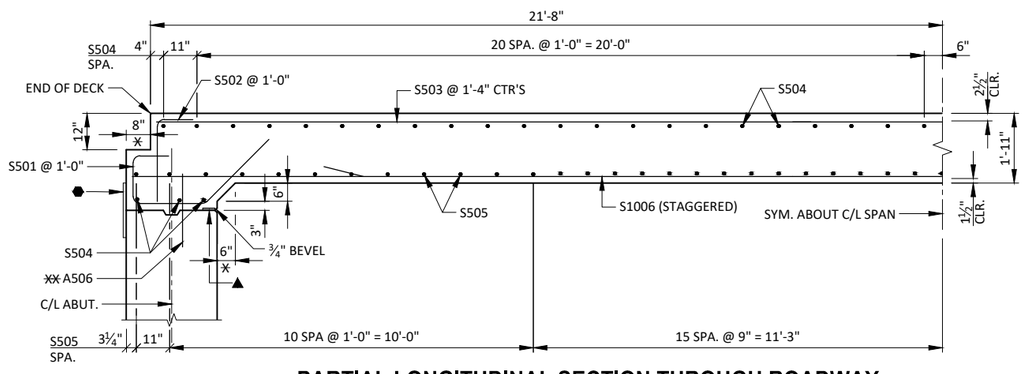
S611

TOP OF DECK ELEVATIONS

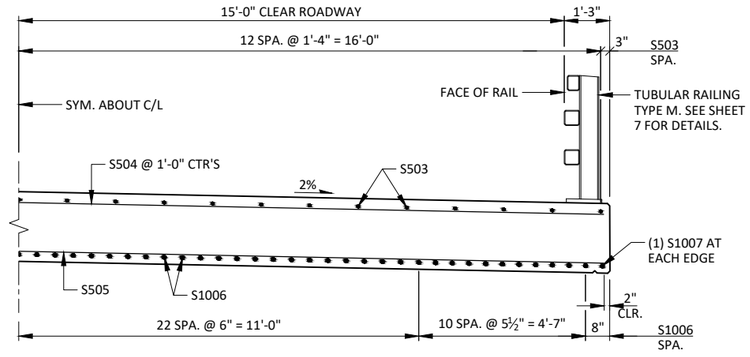
	C/L W. ABUT.	0.10 PNT.	0.20 PNT.	0.30 PNT.	0.40 PNT.	0.50 PNT.	0.60 PNT.	0.70 PNT.	0.80 PNT.	0.90 PNT.	C/L E. ABUT.
N. EDGE	791.78	791.79	791.80	791.80	791.81	791.82	791.82	791.83	791.84	791.84	791.85
C/L	792.10	792.11	792.11	792.12	792.13	792.13	792.14	792.15	792.15	792.16	792.17
S. EDGE	791.76	791.76	791.77	791.77	791.78	791.79	791.79	791.80	791.81	791.81	791.82

LEGEND

- ⬣ 18" RUBBERIZED MEMBRANE WATERPROOFING. (HORIZONTAL)
- ▲ ¾" x 4" PREFORMED FILLER, EXTEND FULL LENGTH OF ABUTMENTS BETWEEN EDGES OF SLAB.
- ✳ DIMENSION IS NORMAL TO THE C/L OF SUBSTRUCTURE UNITS.
- ✳✳ SEE SHEET 4 FOR PLACEMENT OF A506 BARS.



PARTIAL LONGITUDINAL SECTION THROUGH ROADWAY



PARTIAL CROSS SECTION THROUGH ROADWAY

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-11-169

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SUPERSTRUCTURE

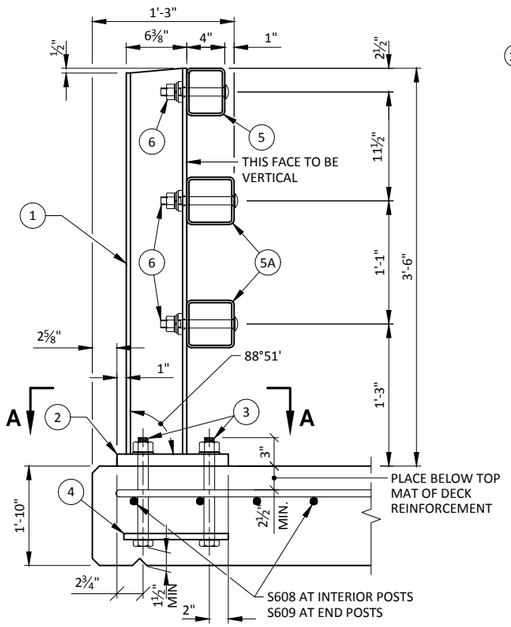
SHEET 6 OF 7

46

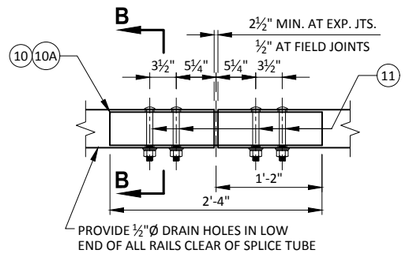
8

FILE NAME : S:\PROJECTS\K51070 CTH U, COLUMBIA CO\STRUCTURE\CAD FILES\FINALS\06 SUPERSTRUCTURE.DWG
PLOT DATE : 2/28/2018 8:13:35 AM
PLOT BY : BOLAND, PATRICK
PLOT SCALE : 1 IN:1 FT
LAYOUT : LAYOUT1

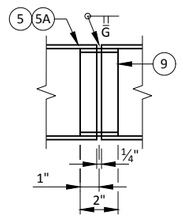
STATE PROJECT NUMBER
6721-00-71



SECTION THROUGH RAILING ON DECK

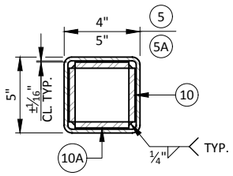


FIELD ERECTION JOINT DETAIL

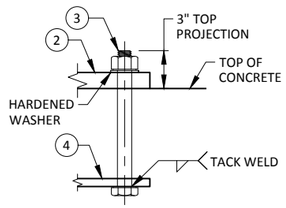


SHOP RAIL SPLICE DETAIL

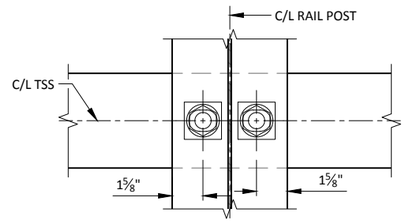
(LOCATION MUST BE SHOWN ON SHOP DRAWINGS)



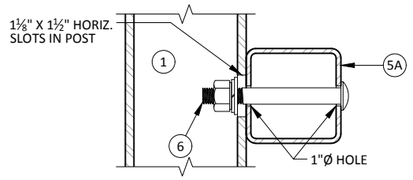
SECTION B-B



ANCHOR BOLTS



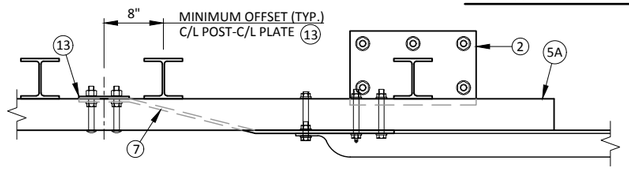
SECTION THROUGH POST WEB



SECTION THROUGH RAIL

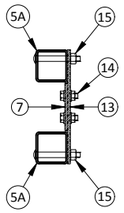
NOTE: CONNECTIONS AT LOWER RAILS SHOWN. CONNECTIONS AT TOP RAIL SIMILAR.

TYPICAL RAIL TO POST CONNECTIONS

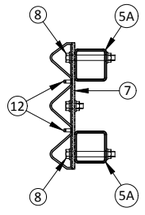


TOP VIEW AT END POST

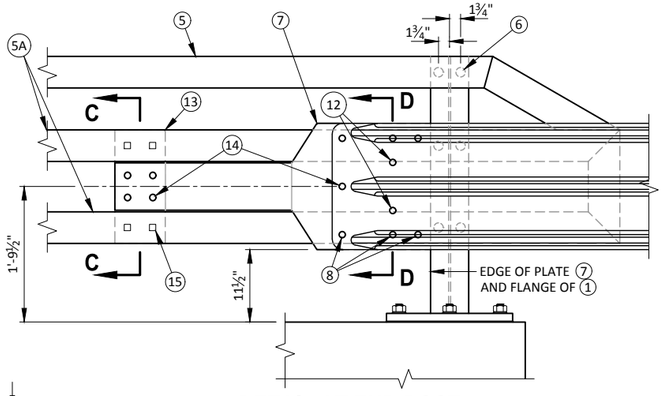
(THRIE BEAM RAIL ATTACHMENT)



SECTION C-C

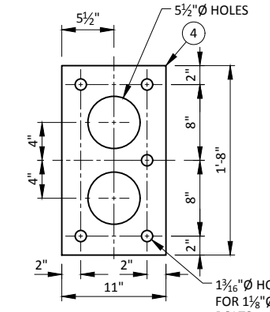


SECTION D-D



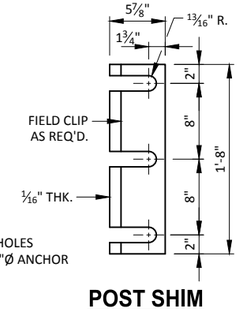
DETAIL AT END POST

(THRIE BEAM RAIL ATTACHMENT)

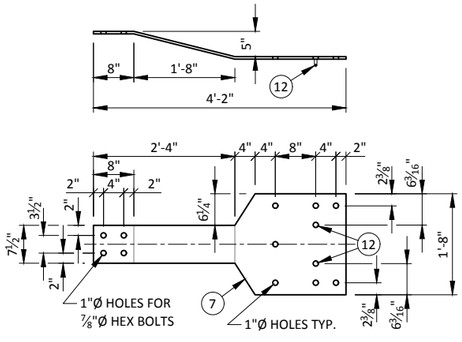


ANCHOR PLATE

AT RAIL TO DECK CONNECTION

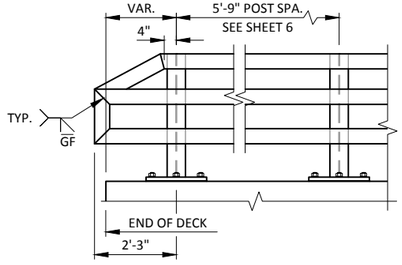


POST SHIM DETAIL

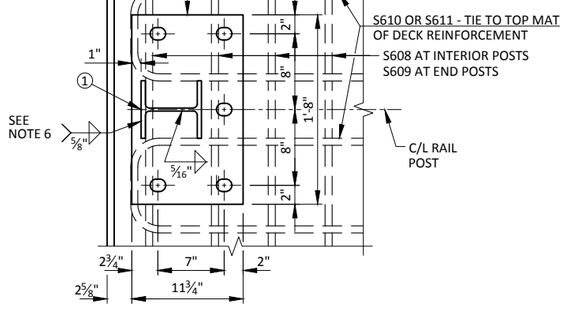


BACK-UP PLATE DETAIL

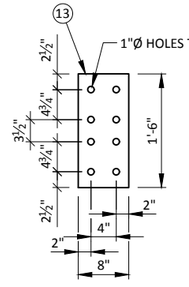
AT BEAM GUARD ATTACHMENT



PART ELEVATION OF RAILING



SECTION A-A



ANCHOR PLATE

AT BEAM GUARD ATTACHMENT

LEGEND

① W6x25 WITH 1⅛" x 1½" HORIZONTAL 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"x11¾"x1'-8" WITH 15/16"x1⅝" SLOTTED HOLES FOR ANCHOR BOLTS NO. 3. WELD TO NO. 1 AS SHOWN. SLOTS PARALLEL TO SHORT SIDE OF PLATE.

③ ASTM A449 - 1⅛" DIAMETER 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. AT POSTS ON CONCRETE SLAB SUPERSTRUCTURES WHERE THE SLAB THICKNESS IS > 16" USE 1'-3" LONG. USE 10¾" LONG AT ALL OTHER LOCATIONS.

④ ⅝"x11"x1'-8" ANCHOR PLATE (GALVANIZED) WITH 13/16" DIAMETER HOLES FOR ANCHOR BOLTS NO. 3

⑤ TSS 5x4x¼ STRUCTURAL TUBING. ATTACH TO NO. 1 WITH NO. 6.

⑤A TSS 5x5x¼ STRUCTURAL TUBING. ATTACH TO NO. 1 WITH NO. 6.

⑥ ⅞" DIAMETER A325 SLOTTED ROUND HEAD BOLT WITH NUT, 3/16"x1⅝"x1⅝" WASHER, AND LOCK WASHER (2 REQ'D. AT EACH RAIL TO POST LOCATION).

⑦ ½" THICK BACK-UP PLATE WITH 2-⅞"x1½" 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" DIAMETER HOLES IN PLATE NO. 7 & TUBES NO. 5A FOR ⅞" DIAMETER 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"x3⅝"x2'-4" PLATE. 2 PER RAIL. USED IN NO. 5 & 5A.

⑩A ⅜"x2⅝"x2'-4" PLATE USED IN NO. 5, ⅜"x3⅝"x2'-4" PLATE USED IN NO. 5A. 2 PER RAIL.

⑪ ⅞" DIAMETER A325 ROUND HEAD BOLT WITH NUT, WASHER, AND LOCK WASHER. USE 15/16"x1¼" LONGIT. SLOTTED HOLES AT FIELD JOINTS AND 15/16"x2¼" MIN. LONGIT. SLOTTED HOLES AT EXPANSION JOINTS IN PLATE NO. 10A.

⑫ ⅞" DIAMETER BY 1½" LONG THREADED SHOP WELDED STUDS (2 REQ'D).

⑬ ⅜"x8"x1'-6" PLATE. BOLT TO RAIL AS SHOWN IN DETAIL. REQ'D. AT THRIE BEAM GUARD RAIL ATTACHMENTS ONLY. PLACE SYM. ABOUT TUBES NO. 5A.

⑭ ⅞" DIAMETER x 2" LONG A325 HEX BOLT WITH NUT AND WASHER (5 REQ'D.).

⑮ 1" DIAMETER HOLES IN TUBES NO. 5A FOR ⅞" A325 ROUND HEAD BOLT WITH NUT, WASHER AND LOCK WASHER (4 REQ'D.). 4 HOLES IN TUBES.

GENERAL NOTES

1. BID ITEM SHALL BE "RAILING TUBULAR TYPE M B-11-169" WHICH INCLUDES ALL ITEMS SHOWN.
2. RAIL POST AND BASE PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A709 GRADE 50. HOLLOW RAILING STRUCTURAL TUBING SHALL CONFORM TO THE REQUIREMENTS OF ASTM A500 GRADE B OR C WITH A CERTIFIED FY=50 KSI. ANCHOR PLATES AND SPLICE TUBE PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A709 GRADE 36.
3. THE NUT SECURING THE POST BASE PLATE TO THE CONCRETE SHALL BE TIGHTENED TO A SNUG FIT AND GIVEN AN ADDITIONAL ⅛ TURN.
4. RAILS SHALL BE CONTINUOUS OVER A MINIMUM OF THREE (3) POSTS WITHOUT SPLICES WHERE POSSIBLE.
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).

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-11-169

DRAWN BY JZ | PLANS CK'D. PTB

TUBULAR RAILING TYPE M

SHEET 7 OF 7

47

8

8

EARTHWORK-CTH U

STATION	AREA (SF) CUT	AREA (SF) SALVAGED/ UNUSABLE PAV'T MATERIAL	AREA (SF) FILL	INCREMENTAL VOL (CY) CUT NOTE 1	INCREMENTAL VOL (CY) SALVAGED/ UNUSABLE PAV'T MATERIAL NOTE 2	INCREMENTAL VOL (CY) FILL NOTE 3	INCREMENTAL VOL (CY) FILL (25%)	CUMMULATIVE VOLUME (CY) CUT 1.00 NOTE 1	CUMMULATIVE VOLUME (CY) FILL	CUMMULATIVE VOLUME (CY) FILL (25%) NOTE 5	CUMMULATIVE VOLUME (CY) MASS ORDINATE NOTE 6
9+85	0	0	0	0	0	0	0	0	0	0	0
10+00	7	0	3	2	0	2	3	2	2	3	-1
10+00	36	0	11	0	0	0	0	2	2	3	-1
10+50	29	0	46	61	0	53	66	63	55	69	-6
11+00	37	0	15	61	0	56	70	124	111	139	-14
11+26	41	0	119	39	0	10	13	163	121	151	12
11+26	0	0	0	0	0	0	0	163	121	151	12
11+71	0	0	0	0	0	0	0	163	121	151	12
11+71	39	0	117	0	0	0	0	163	121	151	12
12+00	45	0	93	45	0	63	79	208	184	230	-22
12+50	63	0	66	101	0	148	185	309	332	415	-105
13+00	33	0	33	90	0	92	115	399	424	530	-130
13+00	3	0	16	0	0	0	0	399	424	530	-130
13+15	0	0	0	1	0	4	5	400	428	535	-135
COLUMN SUBTOTALS =				400	0	428	535				

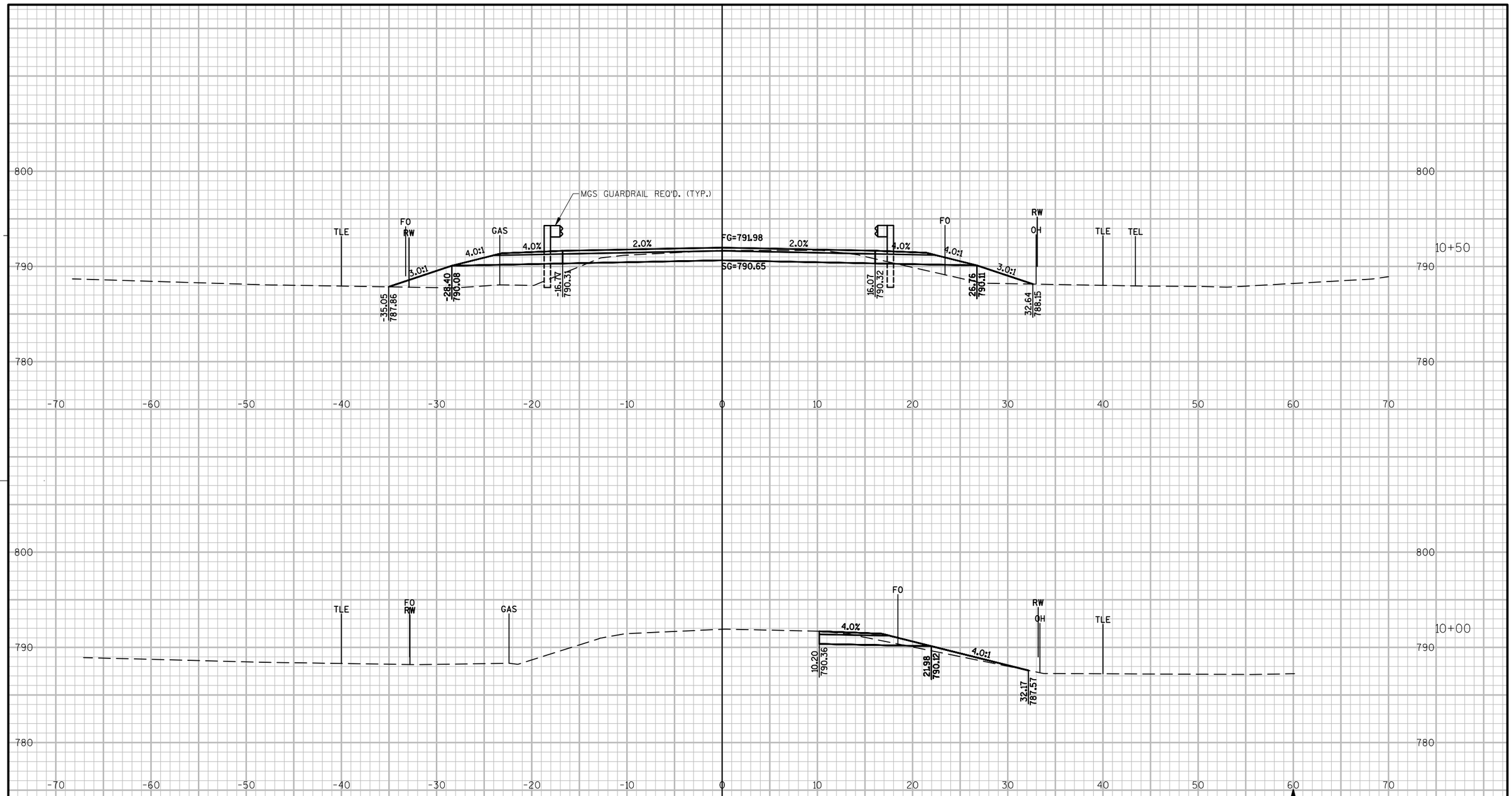
EARTHWORK-CHANNEL REALIGNMENT

STATION	AREA (SF) CUT	AREA (SF) SALVAGED/ UNUSABLE PAV'T MATERIAL	AREA (SF) FILL	INCREMENTAL VOL (CY) CUT NOTE 1	INCREMENTAL VOL (CY) SALVAGED/ UNUSABLE PAV'T MATERIAL NOTE 2	INCREMENTAL VOL (CY) FILL NOTE 3	INCREMENTAL VOL (CY) FILL (25%)	CUMMULATIVE VOLUME (CY) CUT 1.00 NOTE 1	CUMMULATIVE VOLUME (CY) FILL	CUMMULATIVE VOLUME (CY) FILL (25%) NOTE 5	CUMMULATIVE VOLUME (CY) MASS ORDINATE NOTE 6
50+00	0	0	0	0	0	0	0	0	0	0	0
50+50	114	0	0	107	0	0	0	107	0	0	107
51+00	33	0	0	137	0	0	0	244	0	0	244
51+50	0	0	0	31	0	0	0	275	0	0	275
COLUMN SUBTOTALS =				275	0	0	0				

MAINLINE	400	0	428	535	400	428	535	-135
*CHANNEL REALIGNMENT	275	0	0	0	675	428	535	-135

*NOTE: WASTE EXCESS CHANNEL REALIGNMENT MATERIAL

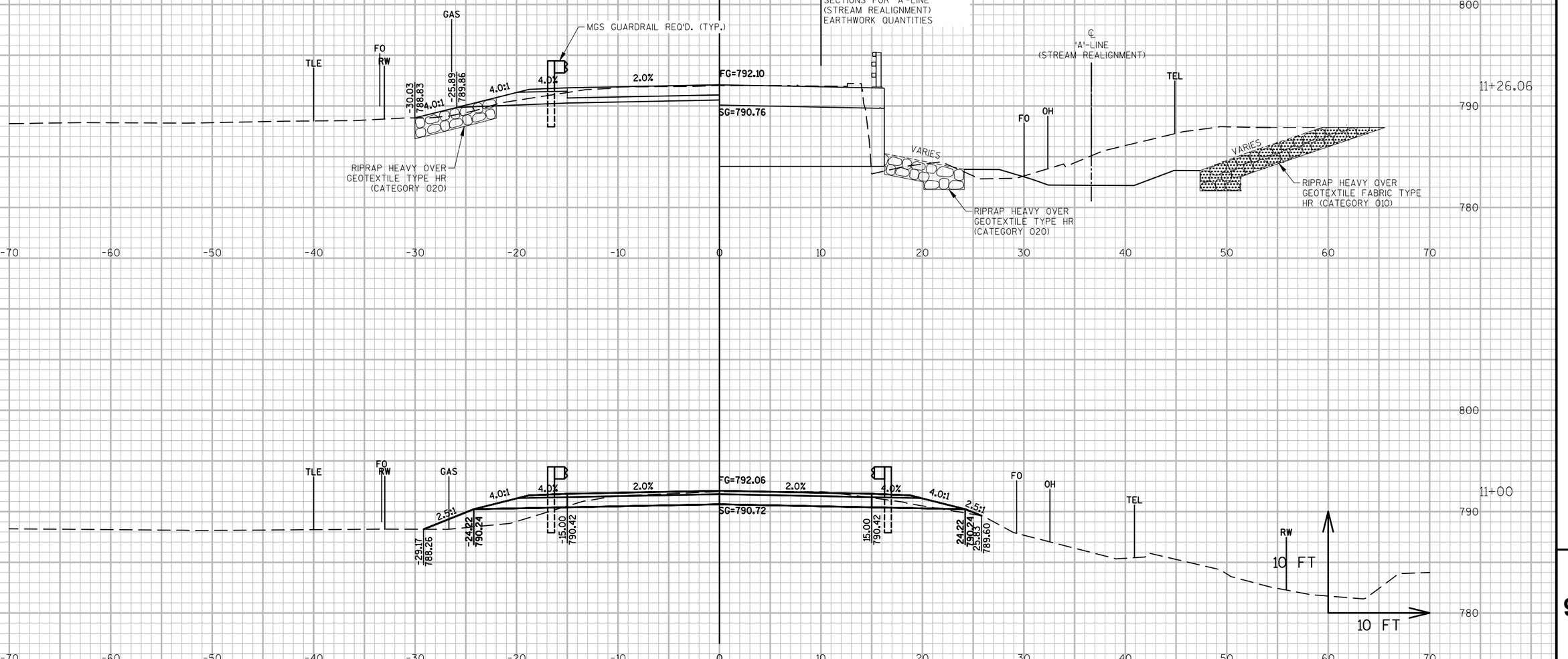
NOTES:	
1 - CUT	CUT INCLUDES SALVAGED/UNUSABLE MATERIAL
2 - SALVAGED/UNUSABLE PAVEMENT MATERIAL	THIS DOES NOT SHOW UP IN CROSS SECTIONS
3 - FILL	DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME
4 - EXPANDED ROCK FACTOR	EXPANDED ROCK FACTOR = 1.1
5 - FILL (25%)	FILL 25%: (UNEXPANDED FILL - (ROCK * ROCK FACTOR))*1.25
6 - MASS ORDINATE	(CUT - FILL (25%))



PROJECT NO: 6721-00-71	HWY: CTH U	COUNTY: COLUMBIA	CROSS SECTIONS: MAINLINE	SHEET 49	E

STRUCTURE
B-11-0169 REQ'D.

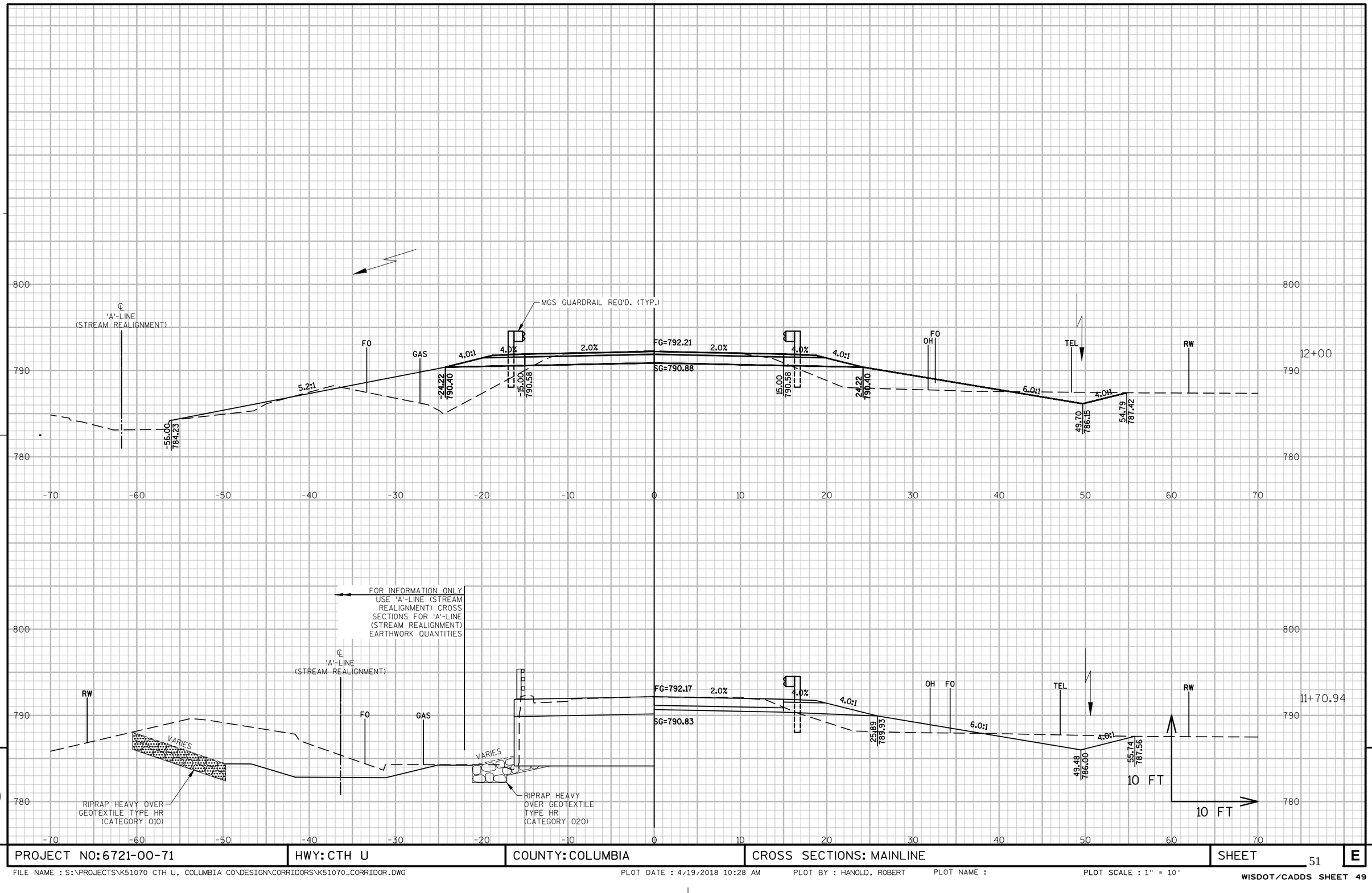
FOR INFORMATION ONLY
USE 'A'-LINE (STREAM REALIGNMENT) CROSS SECTIONS FOR 'A'-LINE (STREAM REALIGNMENT) EARTHWORK QUANTITIES



PROJECT NO: 6721-00-71	HWY: CTH U	COUNTY: COLUMBIA	CROSS SECTIONS: MAINLINE	SHEET 50	E

FILE NAME : S:\PROJECTS\K51070 CTH U, COLUMBIA CO\DESIGN\CORRIDORS\K51070_CORRIDOR.DWG PLOT DATE : 4/19/2018 10:28 AM PLOT BY : HANOLD, ROBERT PLOT NAME : PLOT SCALE : 1" = 10'

WISDOT/CADDS SHEET 49



9

9

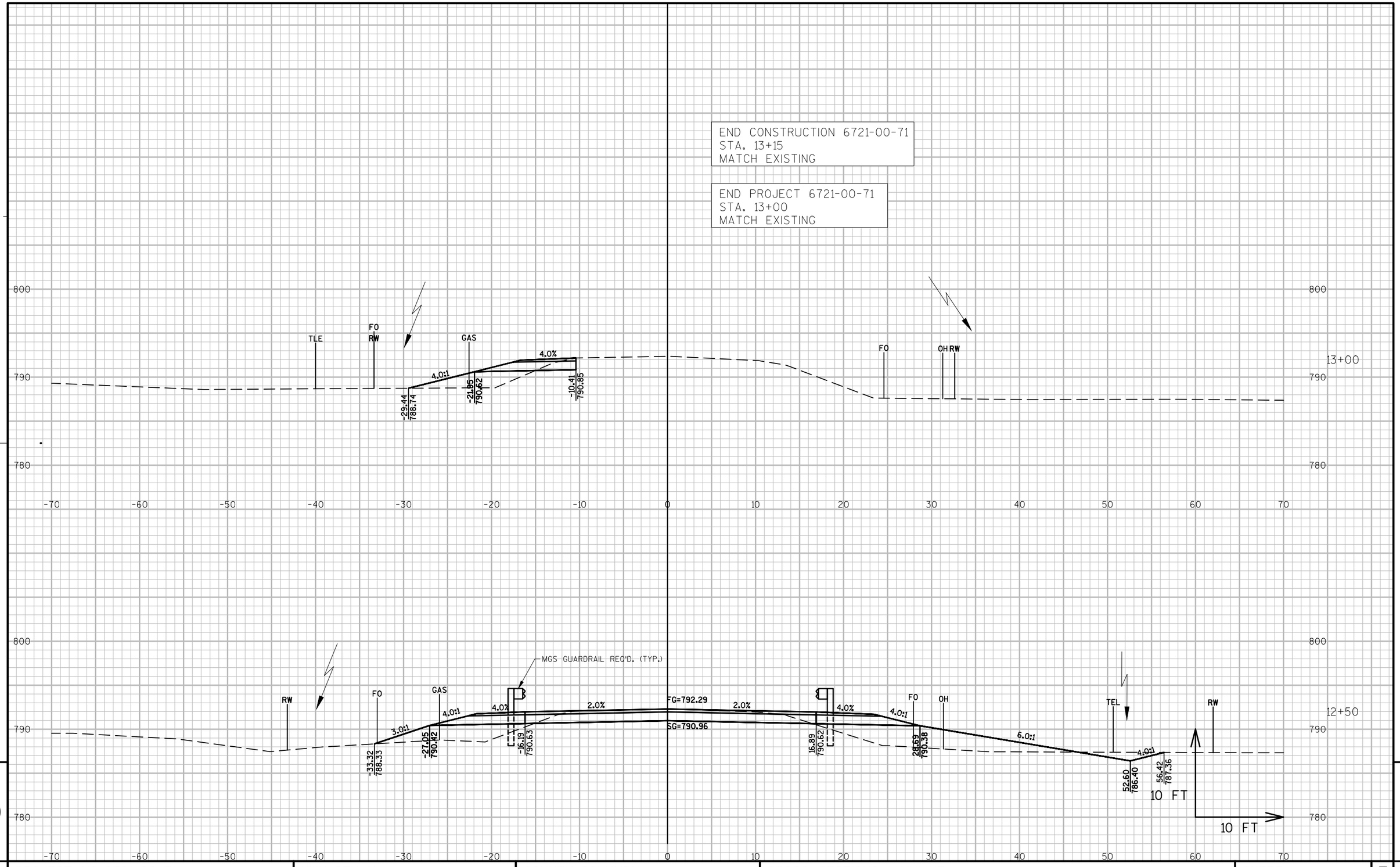
PROJECT NO: 6721-00-71	HWY: CTH U	COUNTY: COLUMBIA	CROSS SECTIONS: MAINLINE	SHEET 51	E

FILE NAME : S:\PROJECTS\K51070 CTH U, COLUMBIA CO\DESIGN\CORRIDORS\K51070_CORRIDOR.DWG PLOT DATE : 4/19/2018 10:28 AM PLOT BY : HANOLD, ROBERT PLOT NAME : PLOT SCALE : 1" = 10'

WISDOT/CADDS SHEET 49

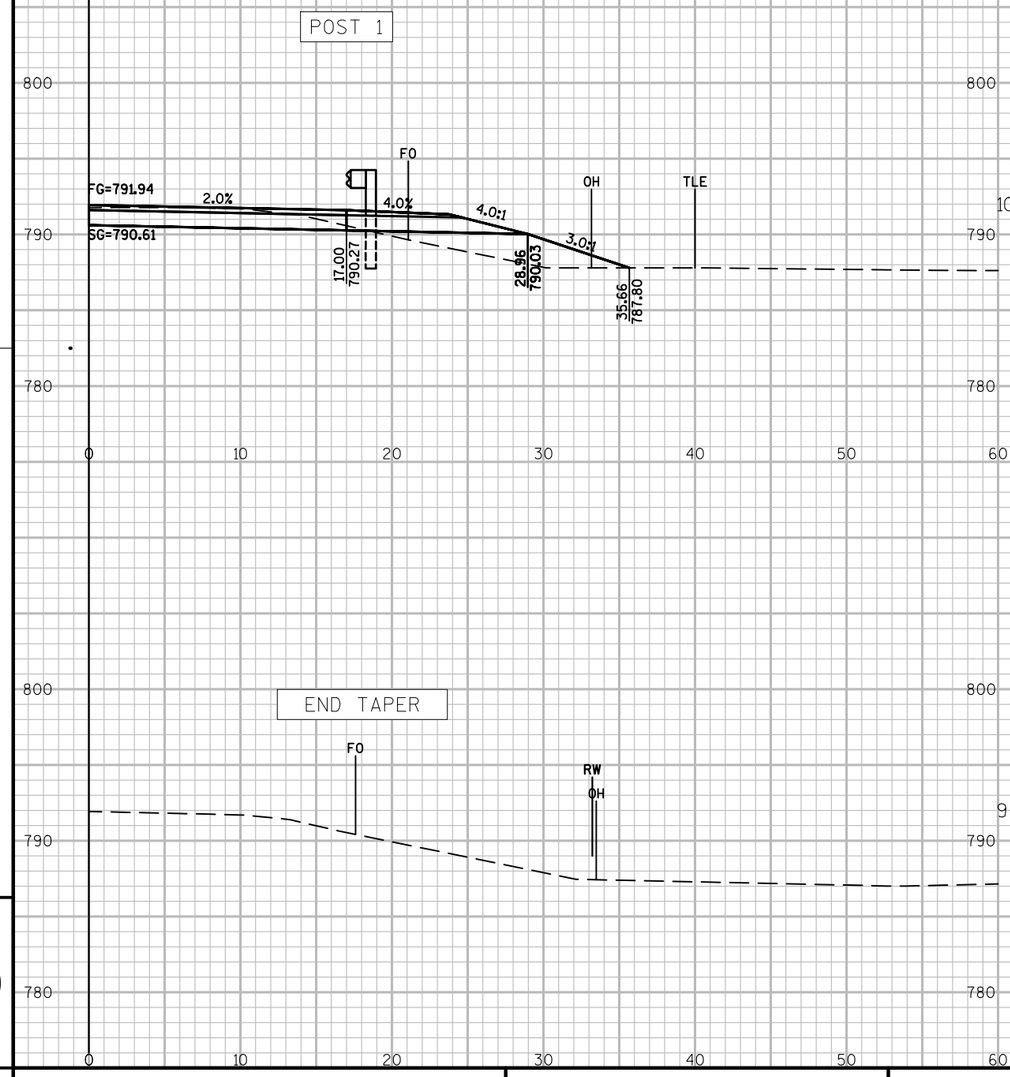
END CONSTRUCTION 6721-00-71
STA. 13+15
MATCH EXISTING

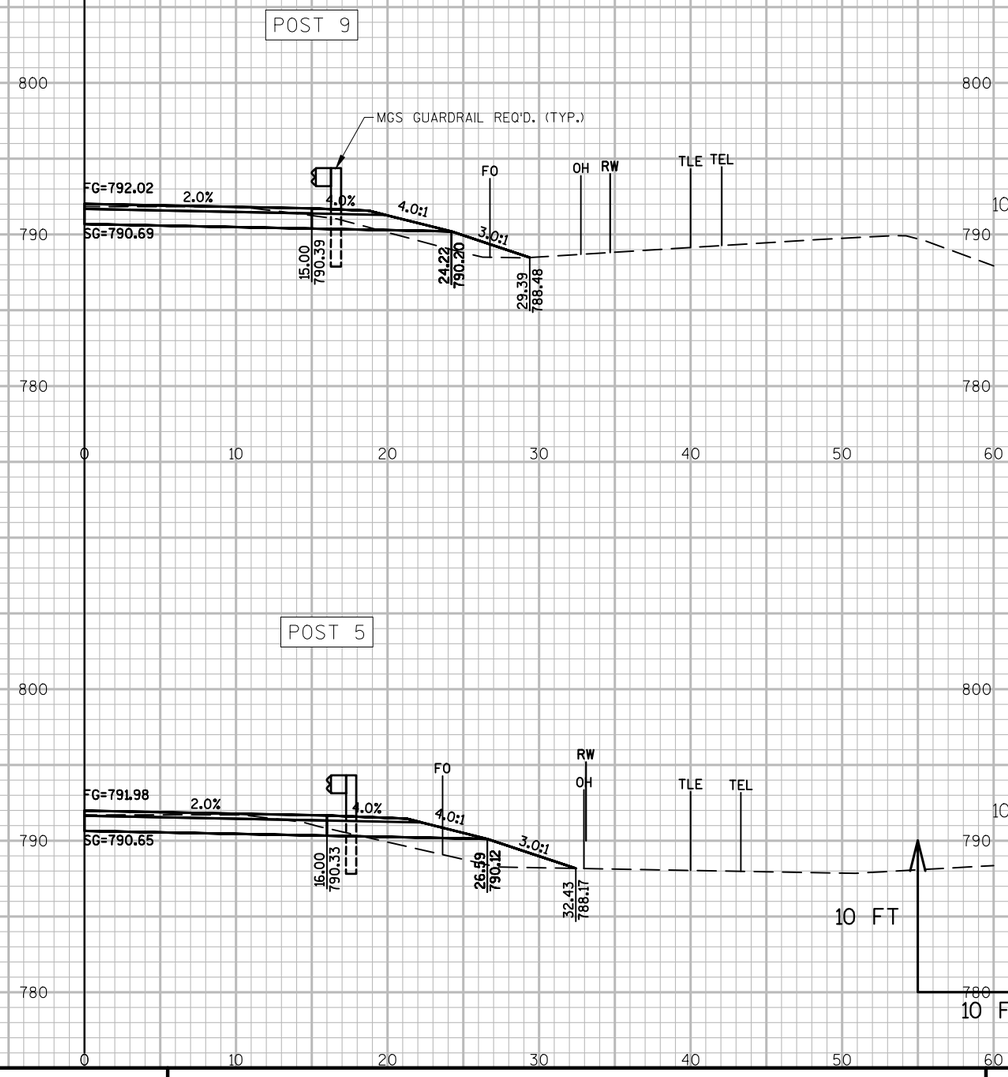
END PROJECT 6721-00-71
STA. 13+00
MATCH EXISTING



PROJECT NO: 6721-00-71	HWY: CTH U	COUNTY: COLUMBIA	CROSS SECTIONS: MAINLINE	SHEET 52	E

FILE NAME : S:\PROJECTS\K51070 CTH U, COLUMBIA CO\DESIGN\CORRIDORS\K51070_CORRIDOR.DWG PLOT DATE : 4/19/2018 10:28 AM PLOT BY : HANOLD, ROBERT PLOT NAME : PLOT SCALE : 1" = 10'



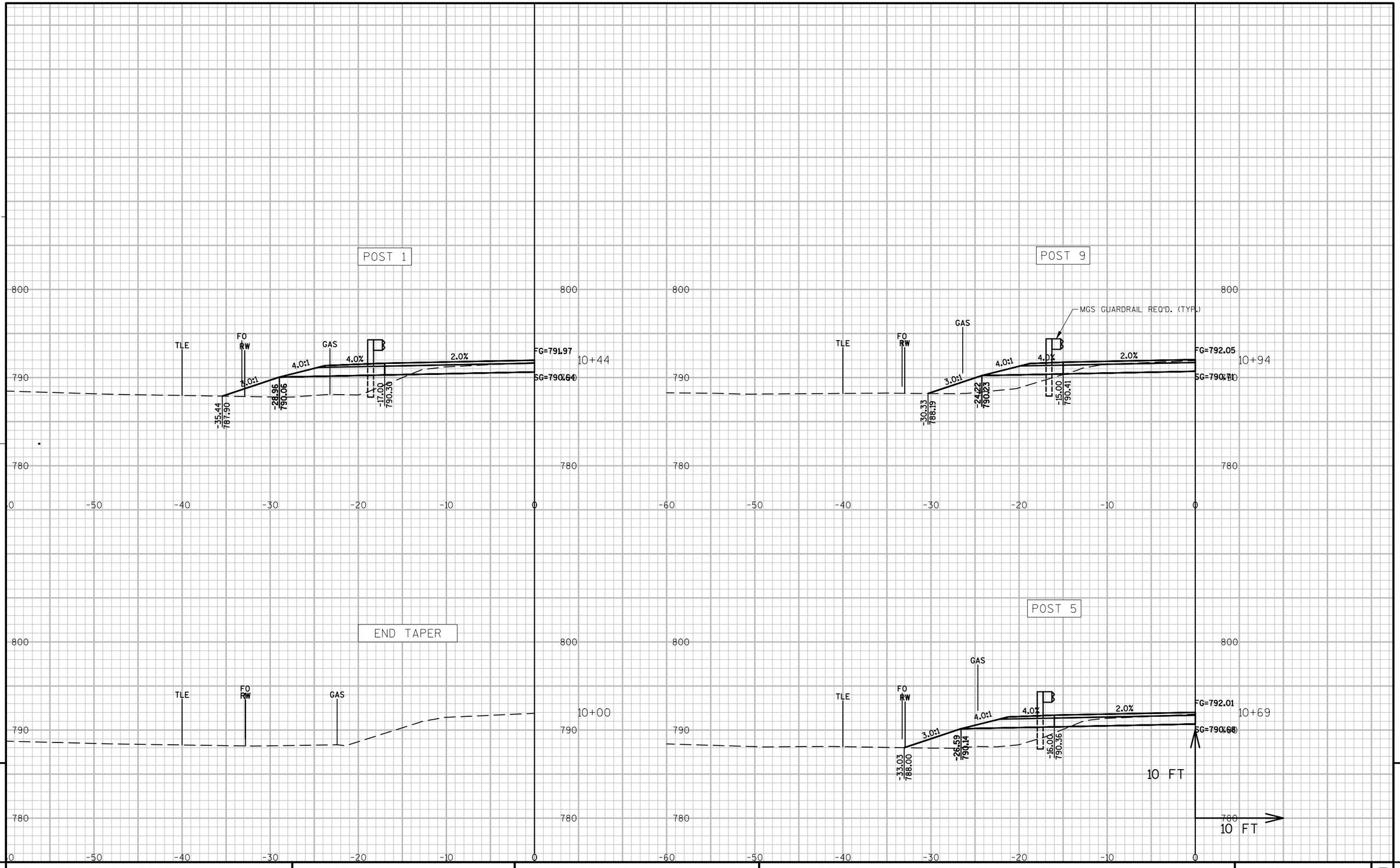


9

9

PROJECT NO: 6721-00-71	HWY: CTH U	COUNTY: COLUMBIA	CROSS SECTIONS: MAINLINE (ENERGY ABSORBING TERMINAL SECTIONS)	SHEET 53	E

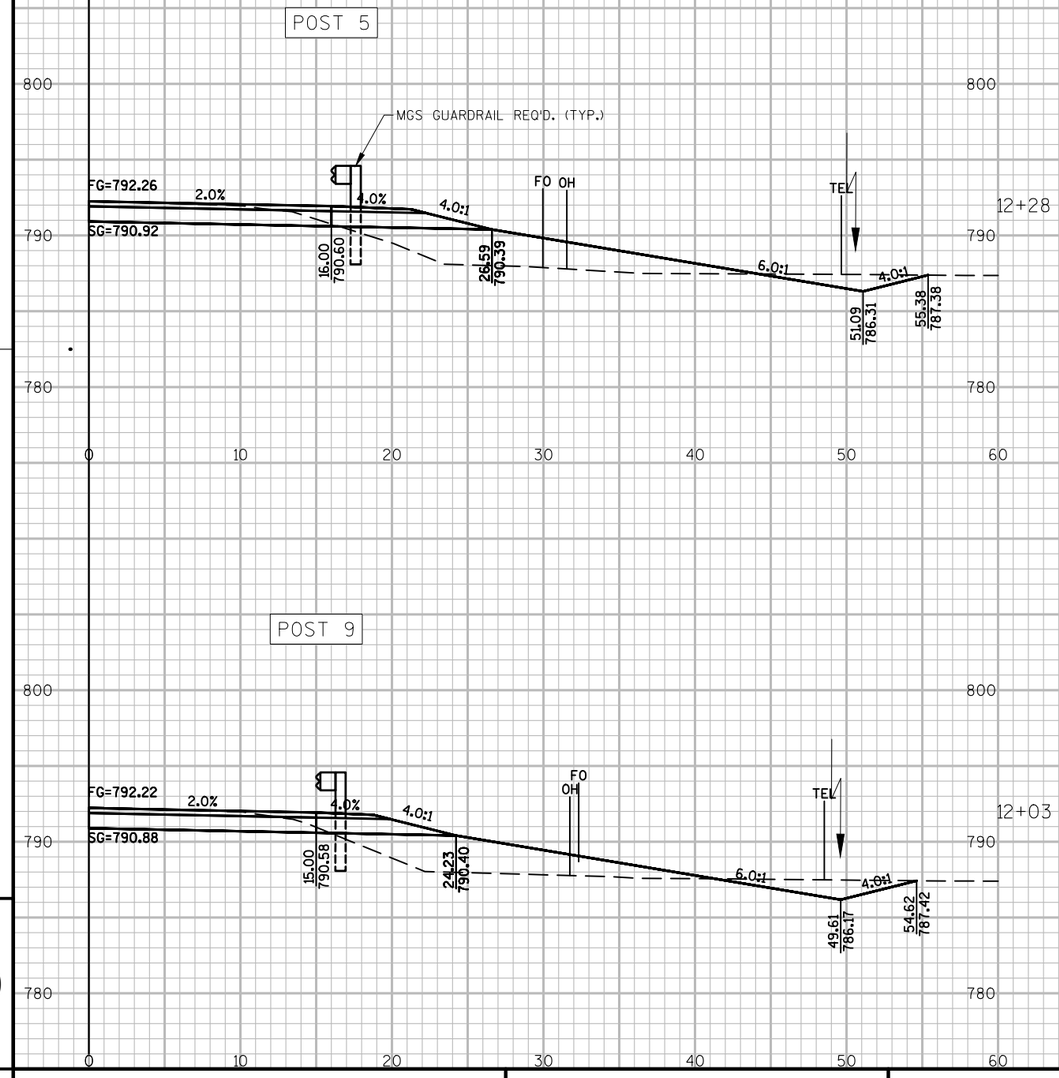
FILE NAME : S:\PROJECTS\K51070 CTH U, COLUMBIA CO\DESIGN\CORRIDORS\K51070_CORRIDOR.DWG PLOT DATE : 4/19/2018 10:28 AM PLOT BY : HANOLD, ROBERT PLOT NAME : PLOT SCALE : 1" = 10'



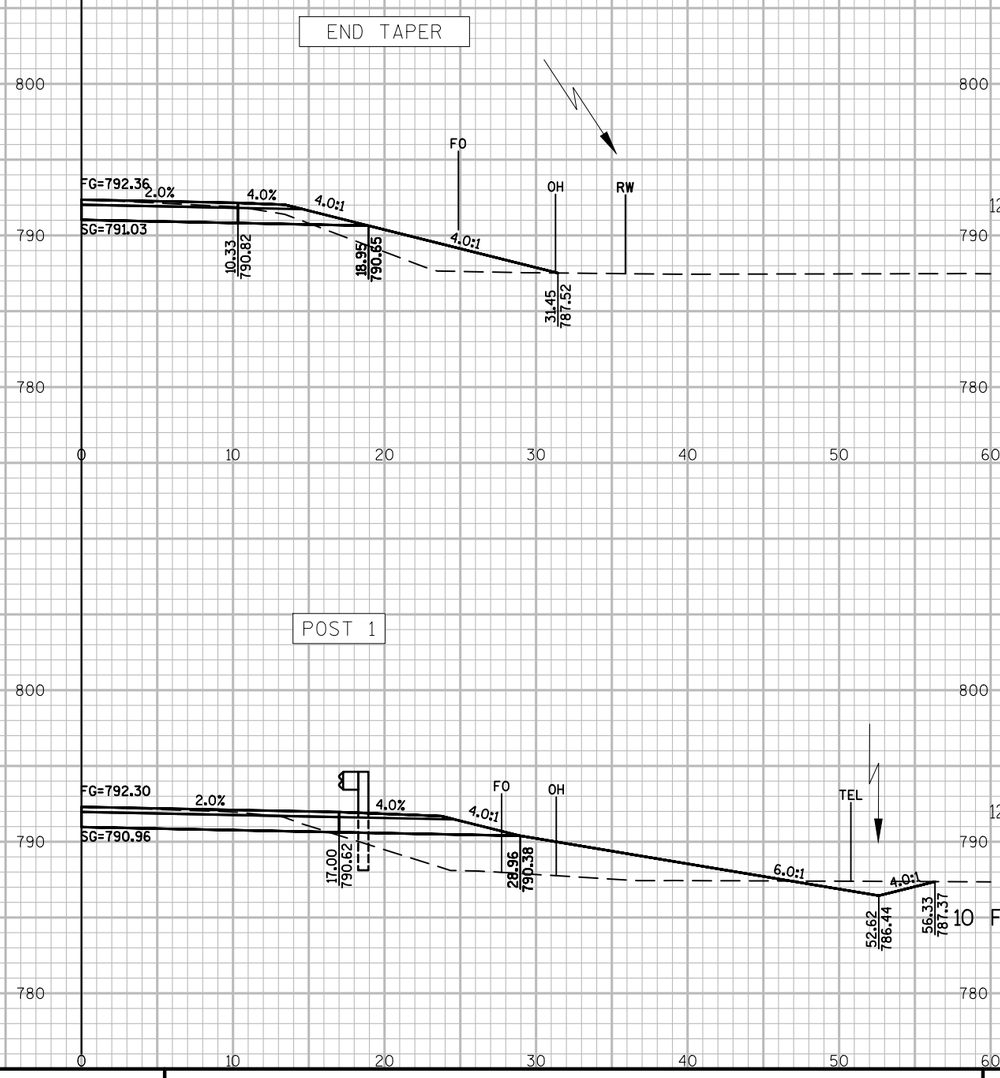
PROJECT NO: 6721-00-71	HWY: CTH U	COUNTY: COLUMBIA	CROSS SECTIONS: MAINLINE (ENERGY ABSORBING TERMINAL SECTIONS)	SHEET 54	E

FILE NAME : S:\PROJECTS\K51070 CTH U, COLUMBIA CO\DESIGN\CORRIDORS\K51070_CORRIDOR.DWG PLOT DATE : 4/19/2018 10:28 AM PLOT BY : HANOLD, ROBERT PLOT NAME : PLOT SCALE : 1" = 10'

POST 5



END TAPER



POST 9

POST 1

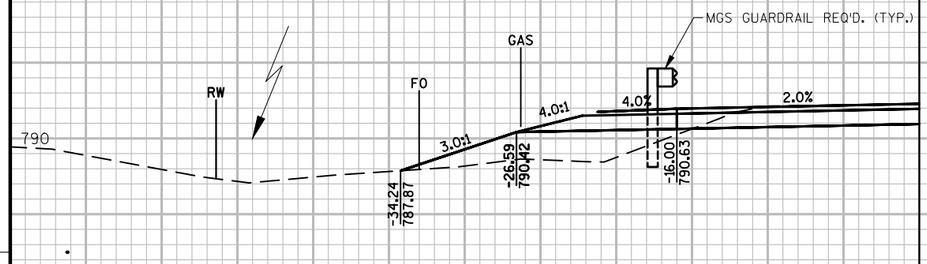
9

9

PROJECT NO: 6721-00-71	HWY: CTH U	COUNTY: COLUMBIA	CROSS SECTIONS: MAINLINE (ENERGY ABSORBING TERMINAL SECTIONS)	SHEET 55	E

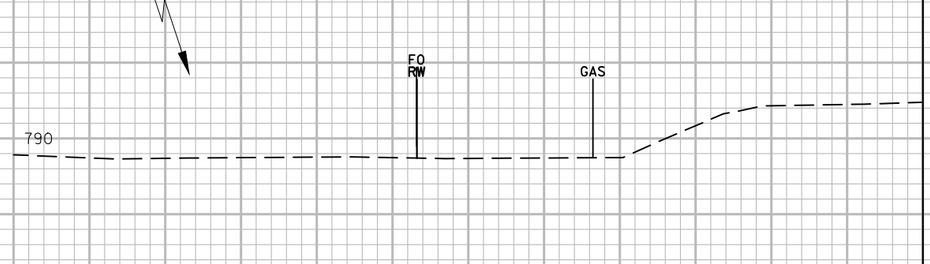
FILE NAME : S:\PROJECTS\K51070 CTH U, COLUMBIA CO\DESIGN\CORRIDORS\K51070_CORRIDOR.DWG PLOT DATE : 4/19/2018 10:28 AM PLOT BY : HANOLD, ROBERT PLOT NAME : PLOT SCALE : 1" = 10'
WISDOT/CADDS SHEET 49

POST 5



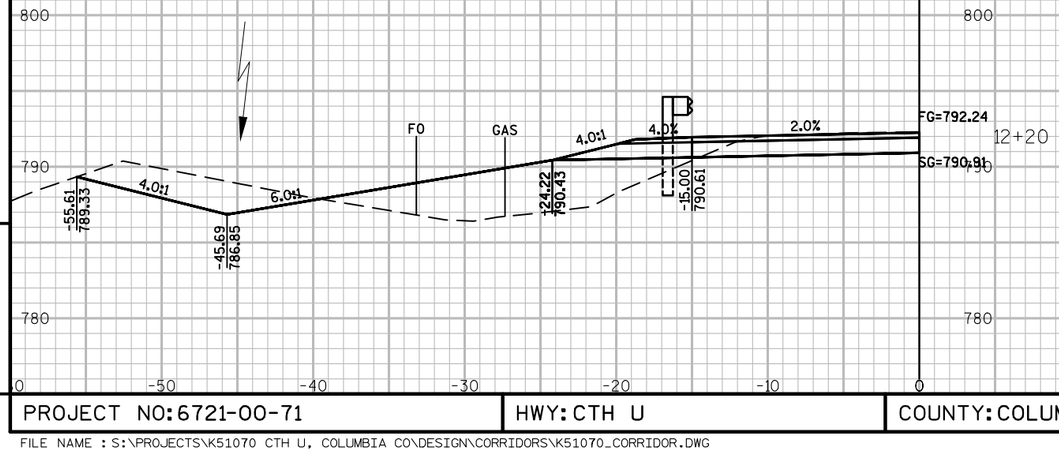
12+45

END TAPER



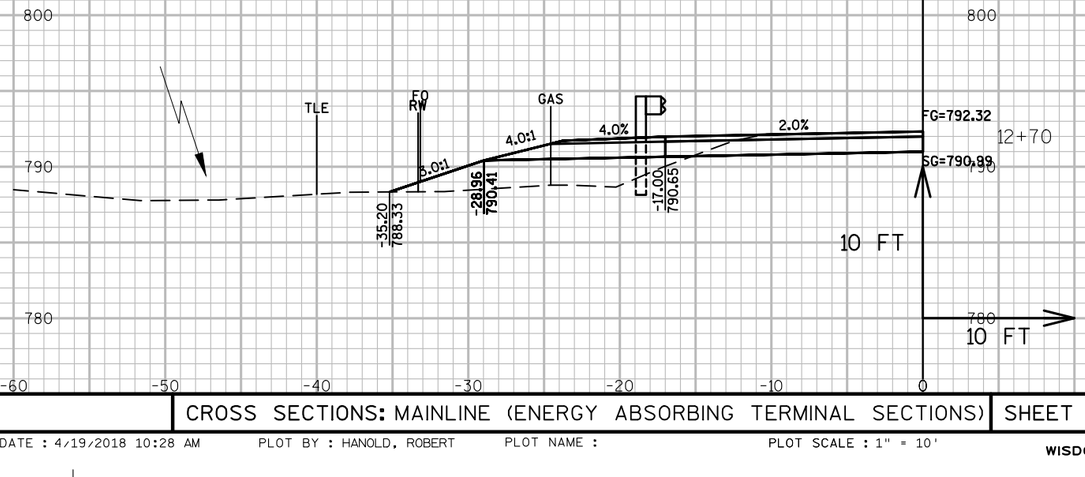
13+15

POST 9



12+20

POST 1



12+70

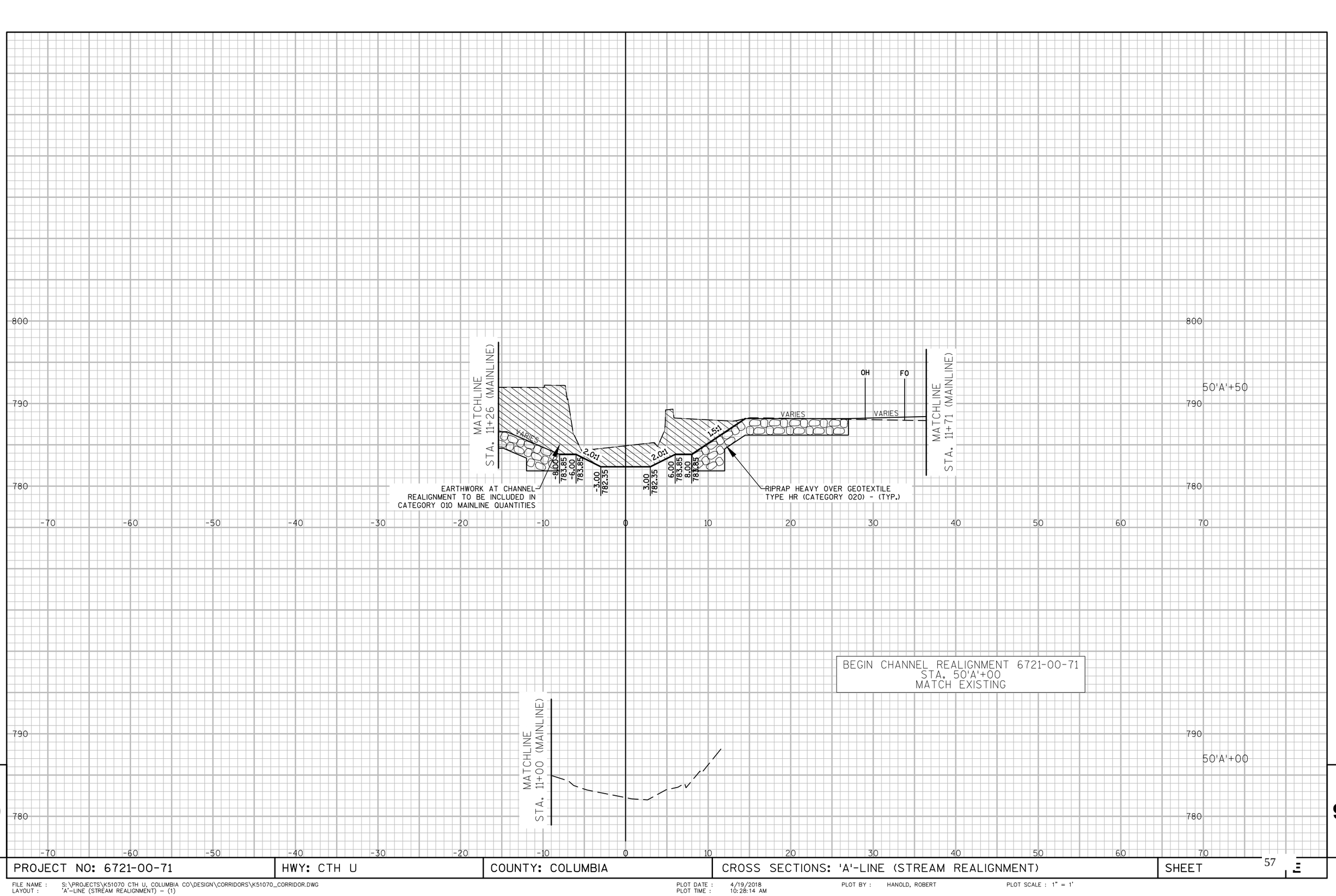
9

9

PROJECT NO: 6721-00-71	HWY: CTH U	COUNTY: COLUMBIA	CROSS SECTIONS: MAINLINE (ENERGY ABSORBING TERMINAL SECTIONS)	SHEET 56	E

FILE NAME : S:\PROJECTS\K51070 CTH U, COLUMBIA CO\DESIGN\CORRIDORS\K51070_CORRIDOR.DWG PLOT DATE : 4/19/2018 10:28 AM PLOT BY : HANOLD, ROBERT PLOT NAME : PLOT SCALE : 1" = 10'

WISDOT/CADDS SHEET 49



PROJECT NO: 6721-00-71	HWY: CTH U	COUNTY: COLUMBIA	CROSS SECTIONS: 'A'-LINE (STREAM REALIGNMENT)	SHEET

FILE NAME : S:\PROJECTS\K51070 CTH U, COLUMBIA CO\DESIGN\CORRIDORS\K51070_CORRIDOR.DWG
LAYOUT : 'A'-LINE (STREAM REALIGNMENT) - (1)
PLOT DATE : 4/19/2018
PLOT TIME : 10:28:14 AM
PLOT BY : HANOLD, ROBERT
PLOT SCALE : 1" = 1'

END CHANNEL REALIGNMENT 6721-00-71
STA. 51'A'+50
MATCH EXISTING

800
790
780

RW
FO
GAS
51'A'+50

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

800
790
780

MATCHLINE
STA. 11+26 (MAINLINE)

RW
FO
GAS

1.5:1
2.0:1
2.0:1

-6.00
784.21
-6.00
784.21
-3.00
782.71
3.00
782.71
6.00
784.21

MATCHLINE
STA. 11+71 (MAINLINE)

RIPRAP HEAVY OVER GEOTEXTILE
TYPE HR (CATEGORY 010) - (TYP.)

EARTHWORK AT CHANNEL
REALIGNMENT TO BE INCLUDED IN
CATEGORY 010 MAINLINE QUANTITIES

51'A'+00

800
790
780

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

9

9

PROJECT NO: 6721-00-71	HWY: CTH U	COUNTY: COLUMBIA	CROSS SECTIONS: 'A'-LINE (STREAM REALIGNMENT)	SHEET 58

FILE NAME : S:\PROJECTS\K51070 CTH U, COLUMBIA CO\DESIGN\CORRIDORS\K51070_CORRIDOR.DWG
LAYOUT : 'A'-LINE (STREAM REALIGNMENT) - (2)

PLOT DATE : 4/19/2018
PLOT TIME : 10:28:15 AM

PLOT BY : HANOLD, ROBERT

PLOT SCALE : 1" = 1'

Notes

Wisconsin Department of Transportation

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