

VERNON

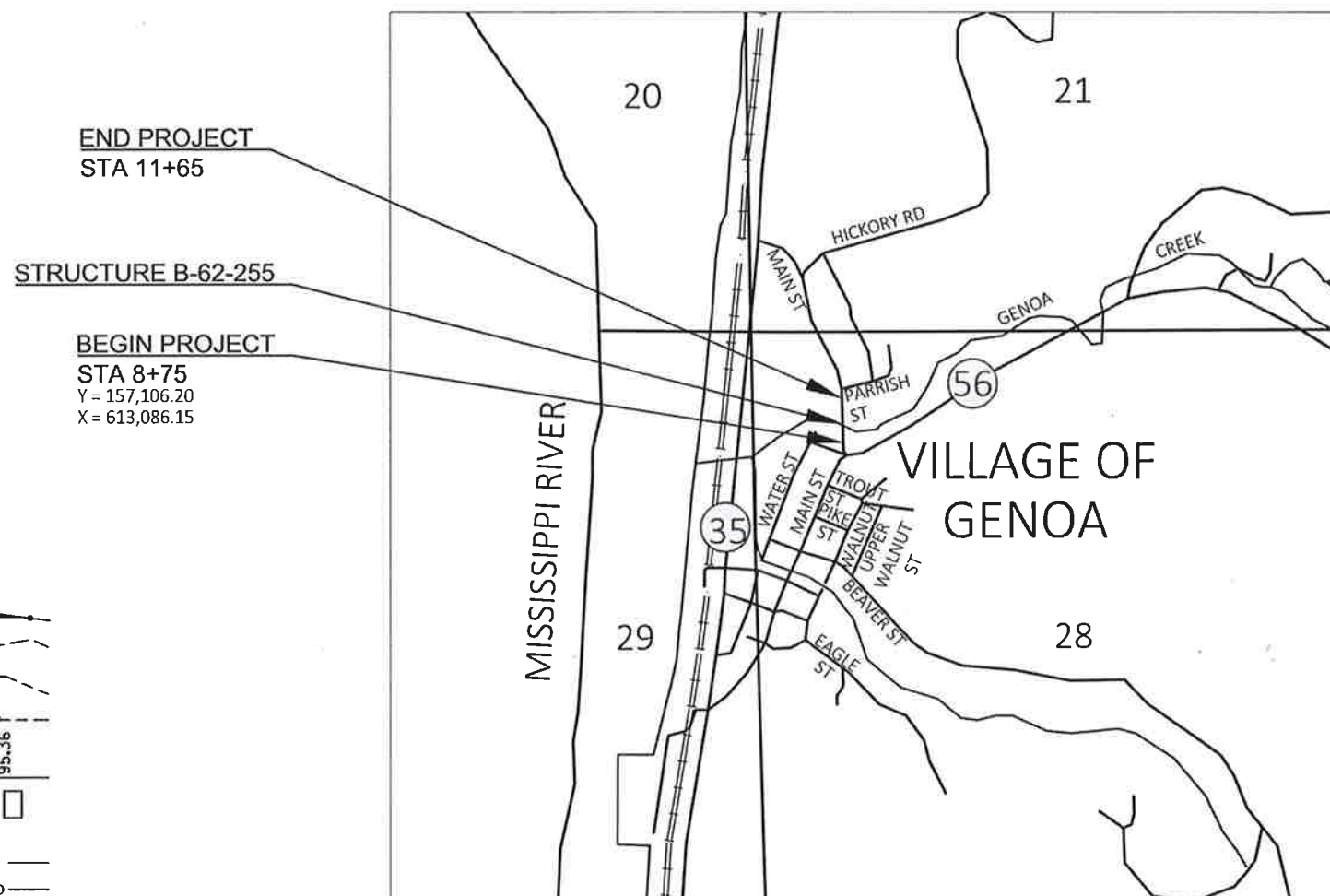
WOODED OR SHRUB AREA

PROFILE
 GRADE LINE
 ORIGINAL GROUND
 MARSH OR ROCK PROFILE
 (To be noted as such)
 SPECIAL DITCH

 GRADE ELEVATION

 CULVERT (Profile View)
 UTILITIES
 ELECTRIC
 FIBER OPTIC
 GAS
 SANITARY SEWER
 STORM SEWER
 TELEPHONE
 WATER
 UTILITY PEDESTAL
 POWER POLE
 TELEPHONE POLE

5386-00-72



LAYOUT

SCALE 0 1/4 MILE

TOTAL NET LENGTH OF CENTERLINE = 0.055 MI

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COUNTY COORDINATES, VERNON COUNTY, NAD83 (2011), IN U.S. SURVEY FEET. VALUES ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
5386-00-72		

ACCEPTED FOR
VILLAGE OF GENOA

4-9-18 (Date)  (Signature)

ACCEPTED FOR
COUNTY OF VERNON

3-26-2018 *Phil Hewitt*
(Date) (Highway Commissioner)

ORIGINAL PLANS PREPARED BY

MSA

PROFESSIONAL SERVICE
TRANSPORTATION • MUNICIPAL
DEVELOPMENT • ENVIRONMENTAL

1230 South Boulevard, Baraboo, WI 53003
800.396.2721 1.800.562.4505 Fax 800.396.3733

DATE: 3/22/18 Julie A. Snyder
(Professional Engineer)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor MSA PROFESSIONAL SERVICES, INC.

Designer MSA PROFESSIONAL SERVICES, INC.

Management
Consultant KL ENGINEERING, INC.

APPROVED FOR THE DEPARTMENT

DATE: 4/24/18 Jeff Melville
MANAGEMENT CONSULTANT
(Signature)

F

STANDARD ABBREVIATIONS

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

RUNOFF COEFFICIENT TABLE

	HYDROLOGIC SOIL GROUP											
	A			B			C			D		
	SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)		
LAND USE:	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER
ROW CROPS	.08	.16	.22	.12	.20	.27	.15	.24	.33	.19	.28	.38
	.22	.30	.38	.26	.34	.44	.30	.37	.50	.34	.41	.56
MEDIAN STRIP-TURF	.19	.20	.24	.19	.22	.26	.20	.23	.30	.20	.25	.30
	.24	.26	.30	.25	.28	.33	.26	.30	.37	.27	.32	.40
SIDE SLOPE-TURF			.25			.27			.28			.30
			.32			.34			.36			.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 = 0.43 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0.43 ACRES

DESIGN CONTACT

MSA PROFESSIONAL SERVICES, INC.
ATTN: JOLIE SNYDER
1230 SOUTH BOULEVARD
BARABOO, WI 53913
608-355-8912
JSNYDER@MSA-PS.COM

COUNTY CONTACT

VERNON COUNTY
ATTN: PHIL HEWITT, HIGHWAY COMMISSIONER
602 NORTH MAIN STREET
VIROQUA, WI 54665
608-637-5452
PHILHEWITT@VERNONCOUNTY.ORG

VILLAGE CONTACT

VILLAGE OF GENOA
ATTN: RICHARD PHILLIPS, PRESIDENT
PO BOX 2
GENOA, WI 54632
608-317-3182
SAL_RICK85@YAH00.COM

DNR LIAISON

WISCONSIN DEPARTMENT OF NATURAL RESOURCES
ATTN: KAREN KALVELAGE
3550 MORMON COULEE ROAD
LA CROSSE, WI 54601
608-785-9115
KAREN.KALVELAGE@WISCONSIN.GOV

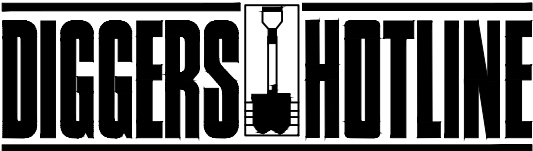
UTILITIES

COMMUNICATION:
VERNON COMMUNICATIONS COOPERATIVE
ATTN: SCOTT FREDERICK
103 NORTH MAIN STREET
P.O. BOX 20
WESTBY, WI 54667
608-632-0615 (OFFICE)
608-632-0607 (CELL)
SFREDERICK@VERNONCOM.COOP

ELECTRIC:
XCEL ENERGY
ATTN: JAYMIE HOLTE
3215 COMMERCE STREET
LA CROSSE, WI 54603
608-789-3698
JAYMIE.L.HOLTE@XCELENERGY.COM

* SANITARY SEWER & WATER:
VILLAGE OF GENOA
ATTN: JOHN SHEPHERD
P.O. BOX 98
GENOA, WI 54632
608-804-0026
JONNAS41@GMAIL.COM

* NOT A MEMBER OF
DIGGERS HOTLINE



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

GENERAL NOTES

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

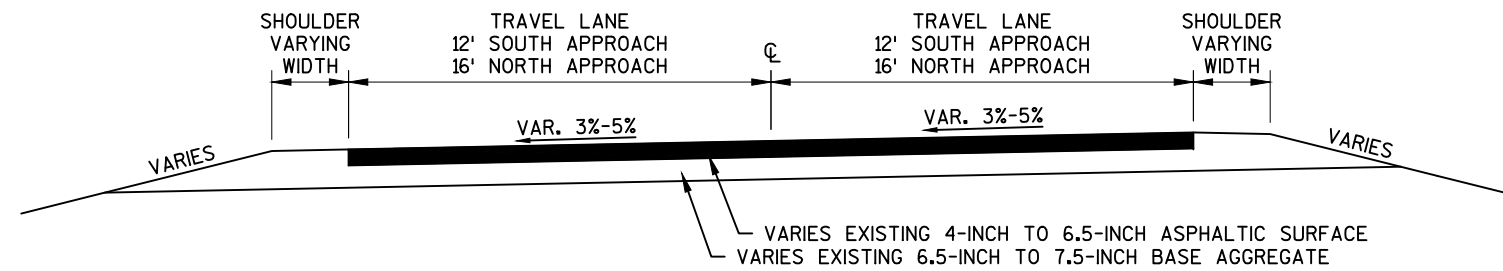
THE LOCATIONS OF EXISTING UTILITY INSTALLATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE AREA THAT ARE NOT SHOWN.

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

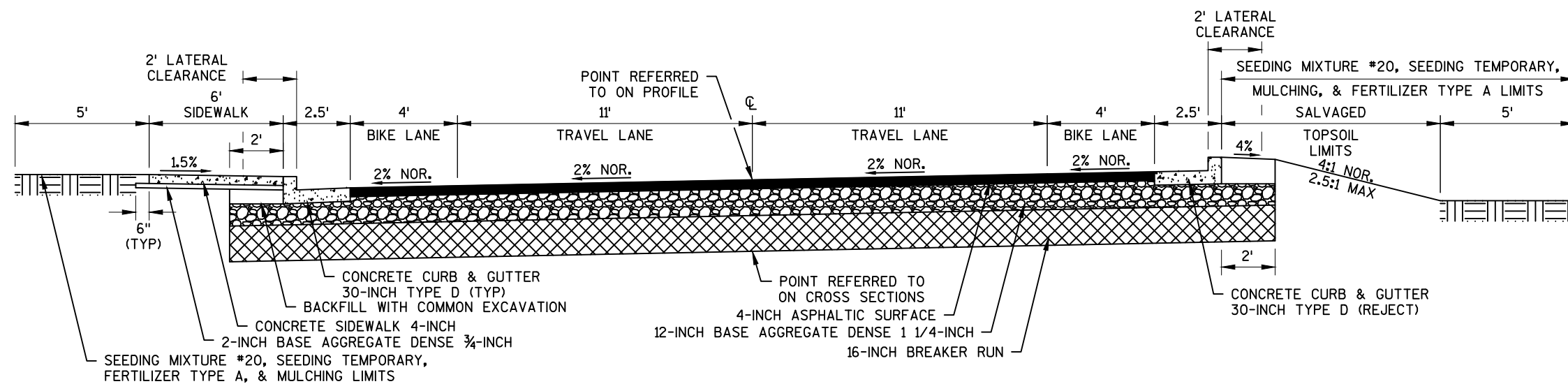
ELEVATIONS SHOWN ON THIS PLAN ARE REFERENCED TO USGS NAVD 88 (2012 ADJUSTED). BENCHMARKS WERE LOCATED IN THE FIELD USING GPS TECHNOLOGY.

THE 4" ASPHALTIC SURFACE SHALL CONSIST OF A 1¾" UPPER LAYER WITH 12.5MM NOMINAL SIZE AGGREGATE AND A 2¼" LOWER LAYER 19.0MM NOMINAL SIZE AGGREGATE.

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

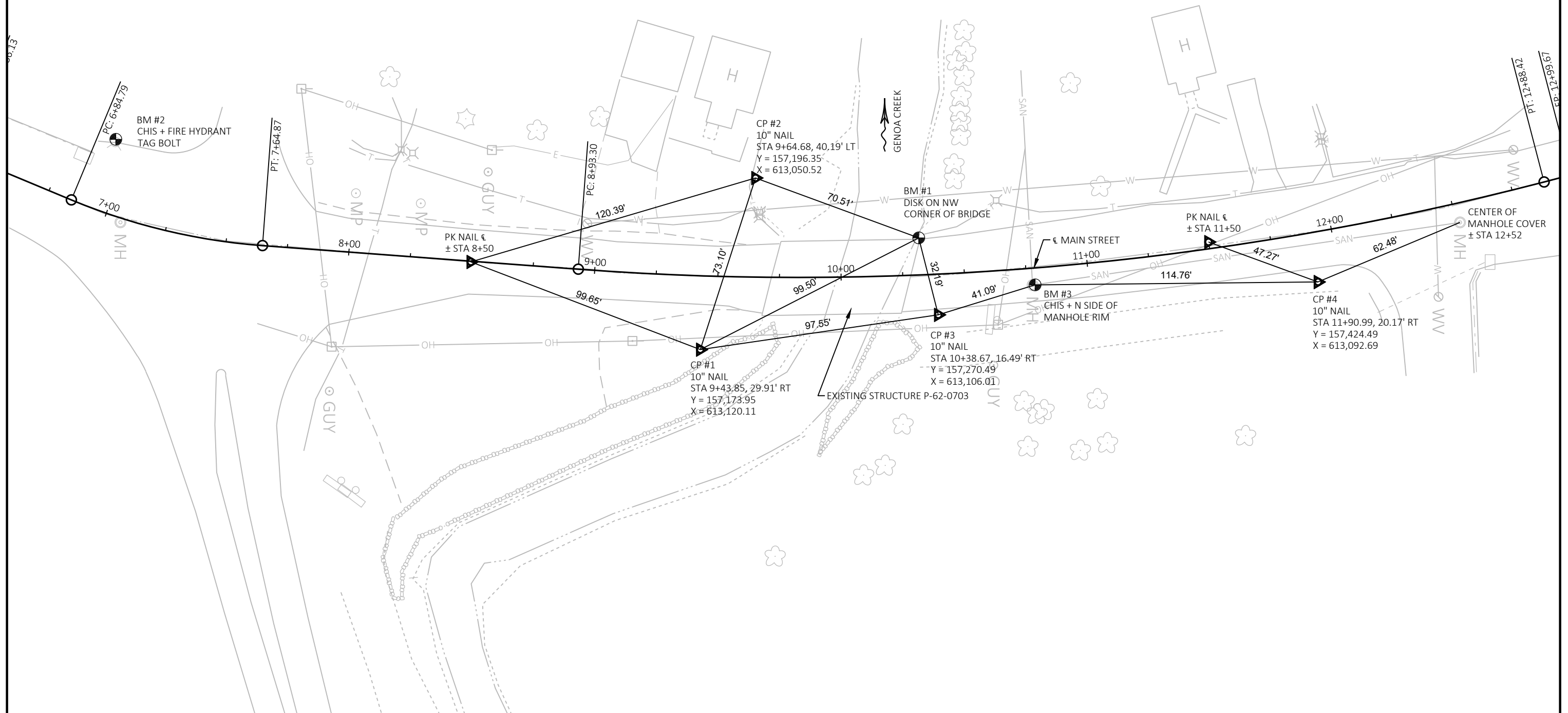


EXISTING TYPICAL SECTION



FINISHED TYPICAL SECTION

STA 8+75 - STA 11+65



PROJECT NO: 5386-00-72

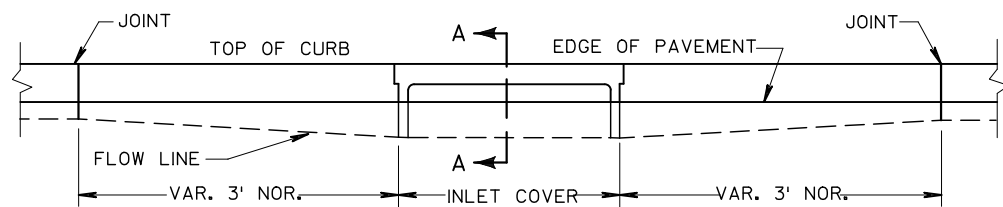
HWY: LOCAL STREET

COUNTY: VERNON

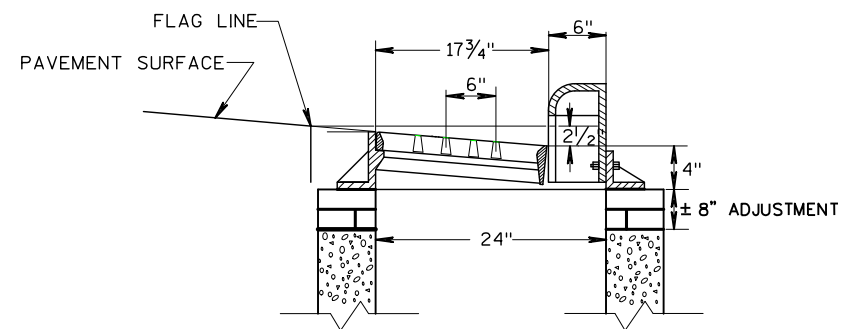
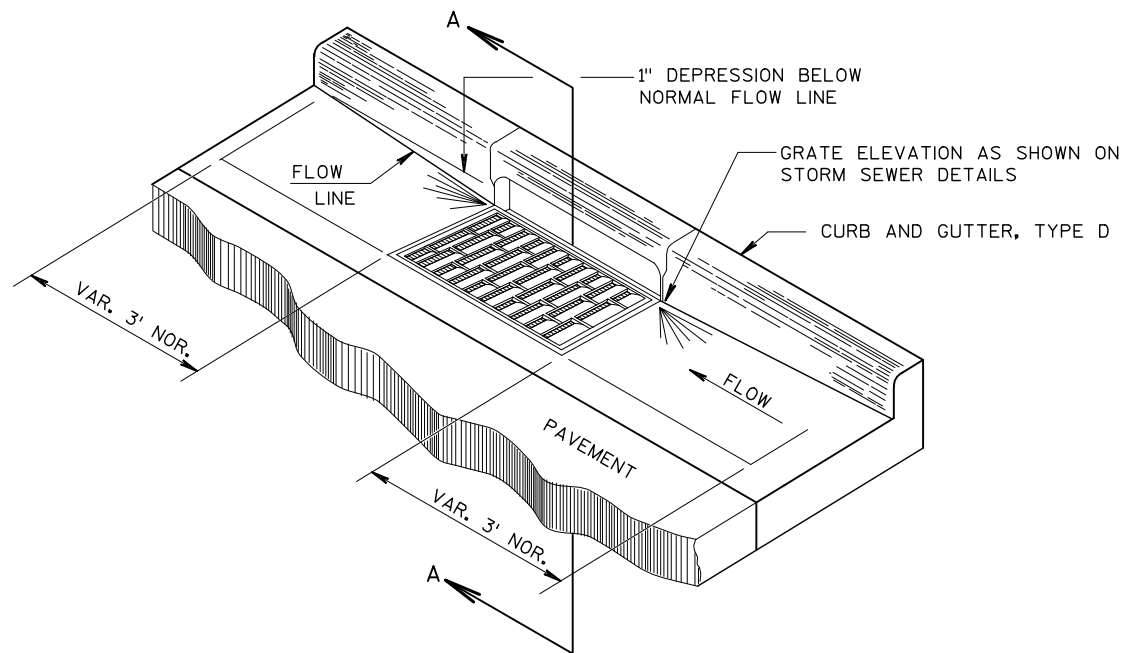
CONTROL POINT TIES AND COORDINATES

SHEET

E



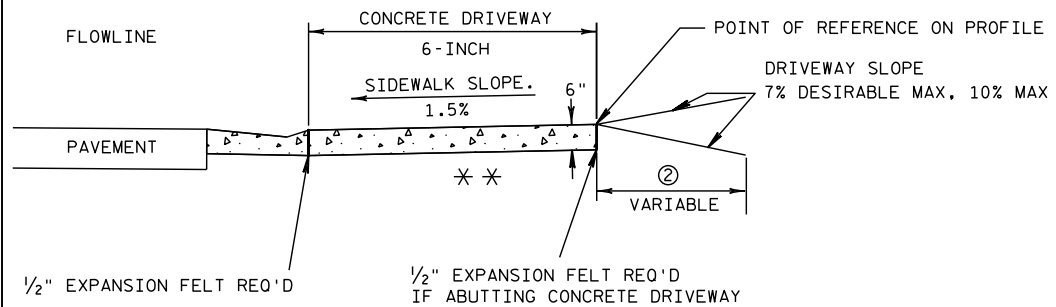
ELEVATION



SECTION A-A

DETAIL OF CURB AND GUTTER AT INLETS
(TYPE 2X3-H INLET SHOWN)

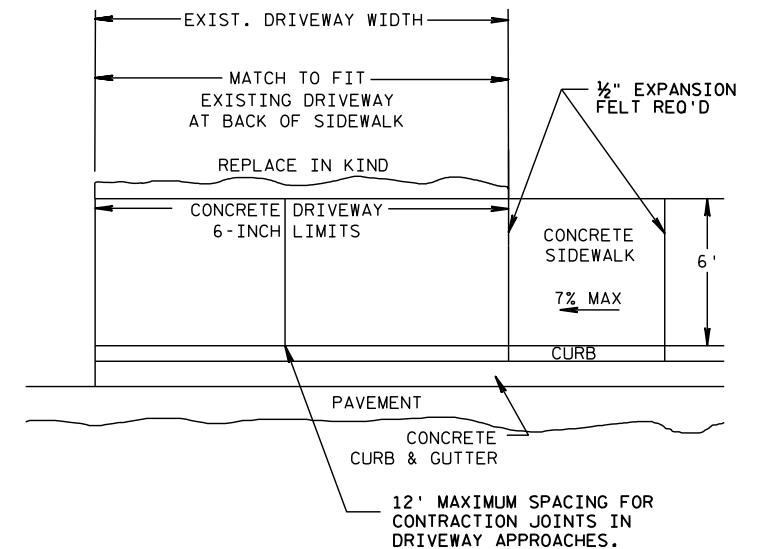
DRIVEWAY ENTRANCE DETAIL WITH SIDEWALK, CURB & GUTTER



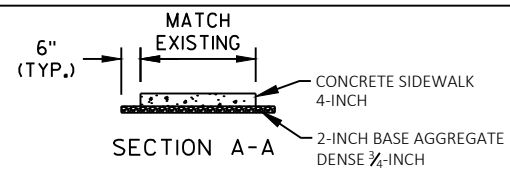
TYPICAL SIDEWALK SECTION

② - 6" BASE AGG. DENSE 3/4-INCH

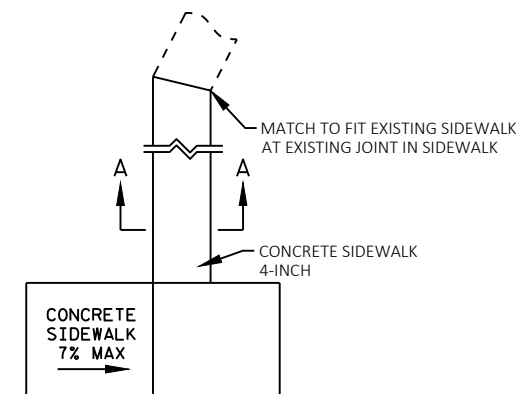
* * = 6" BASE AGG. DENSE 3/4-INCH
REQ'D UNDER CONCRETE DRWY



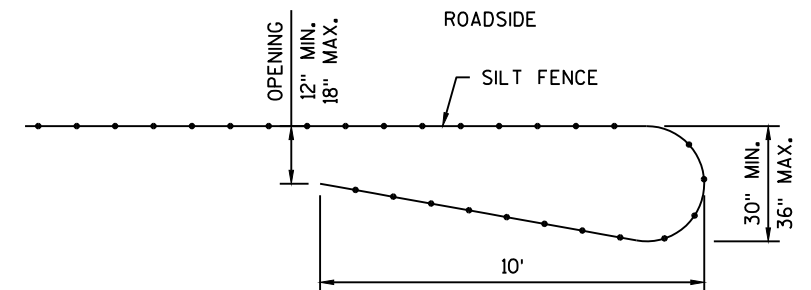
PLAN VIEW
STA 9+10, LT



SECTION A-A



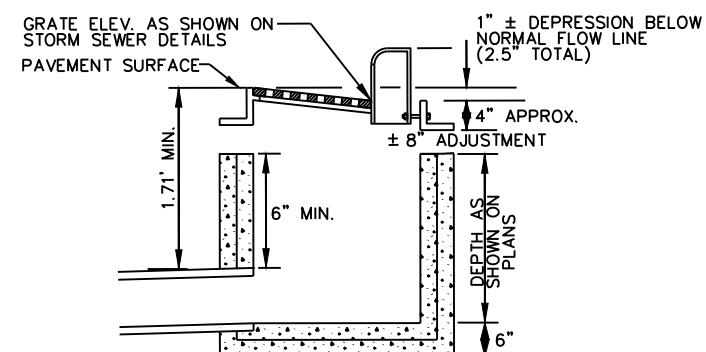
PLAN VIEW
PRIVATE SIDEWALK
STA 11+45, LT



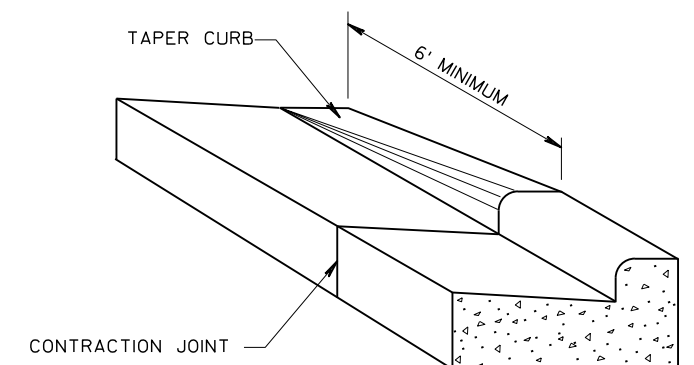
NOTE:
THE PURPOSE OF THE TURTLE TURN-AROUNDS ARE TO REDIRECT THE TURTLES AWAY FROM THE CONSTRUCTION ZONE. DESIGN SHOULD ALSO INCLUDE TRENCHED-IN SEDIMENT FENCING AND FENCING SUPPORTS ON THE UPSLOPE SIDE OF FENCE. SILT FENCE POSTS FOR THE TURN-AROUND SHOULD BE ON THE OUTSIDE OF THE TURN-AROUND.

TEMPORARY TURTLE TURN-AROUND DETAIL

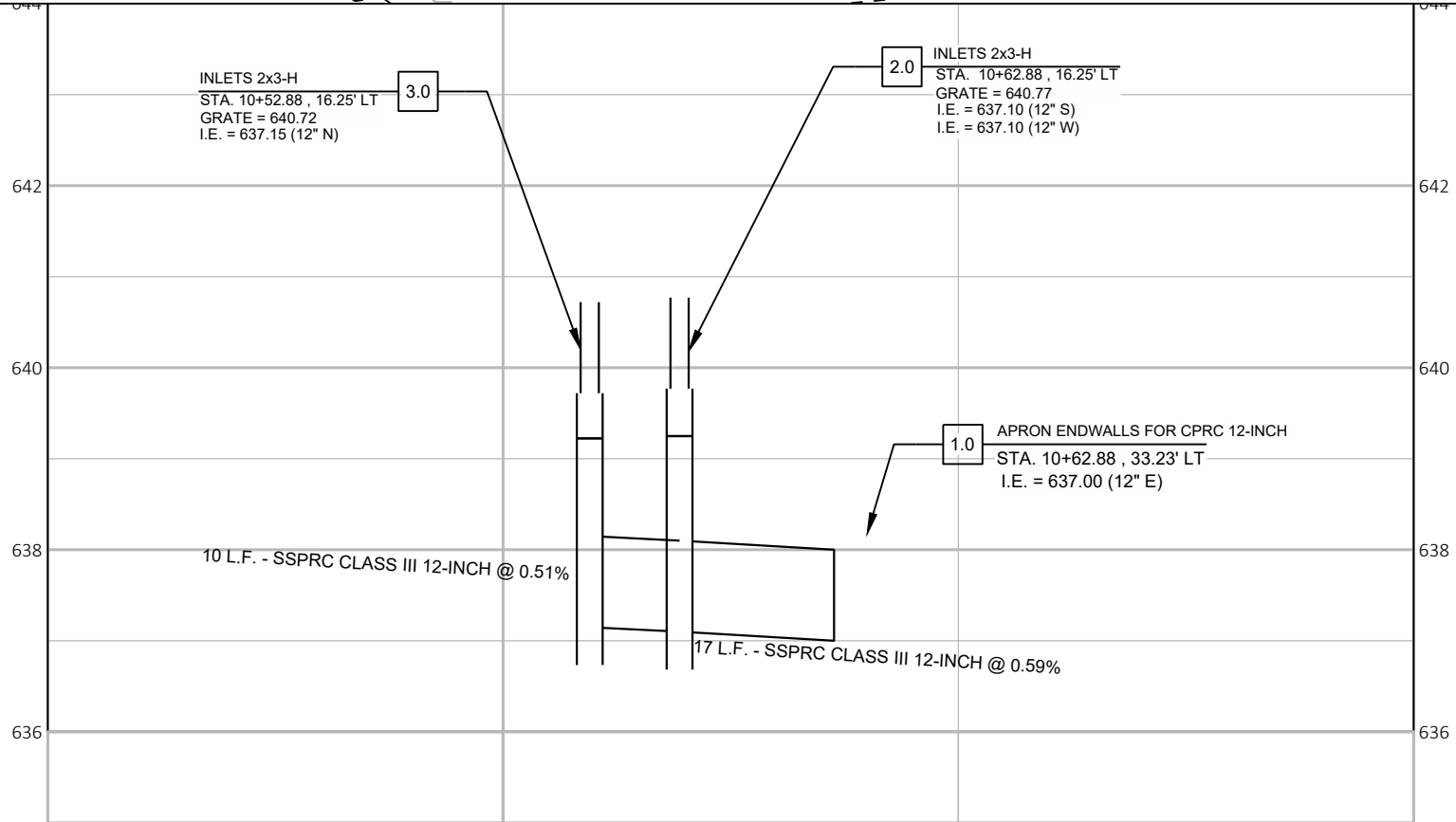
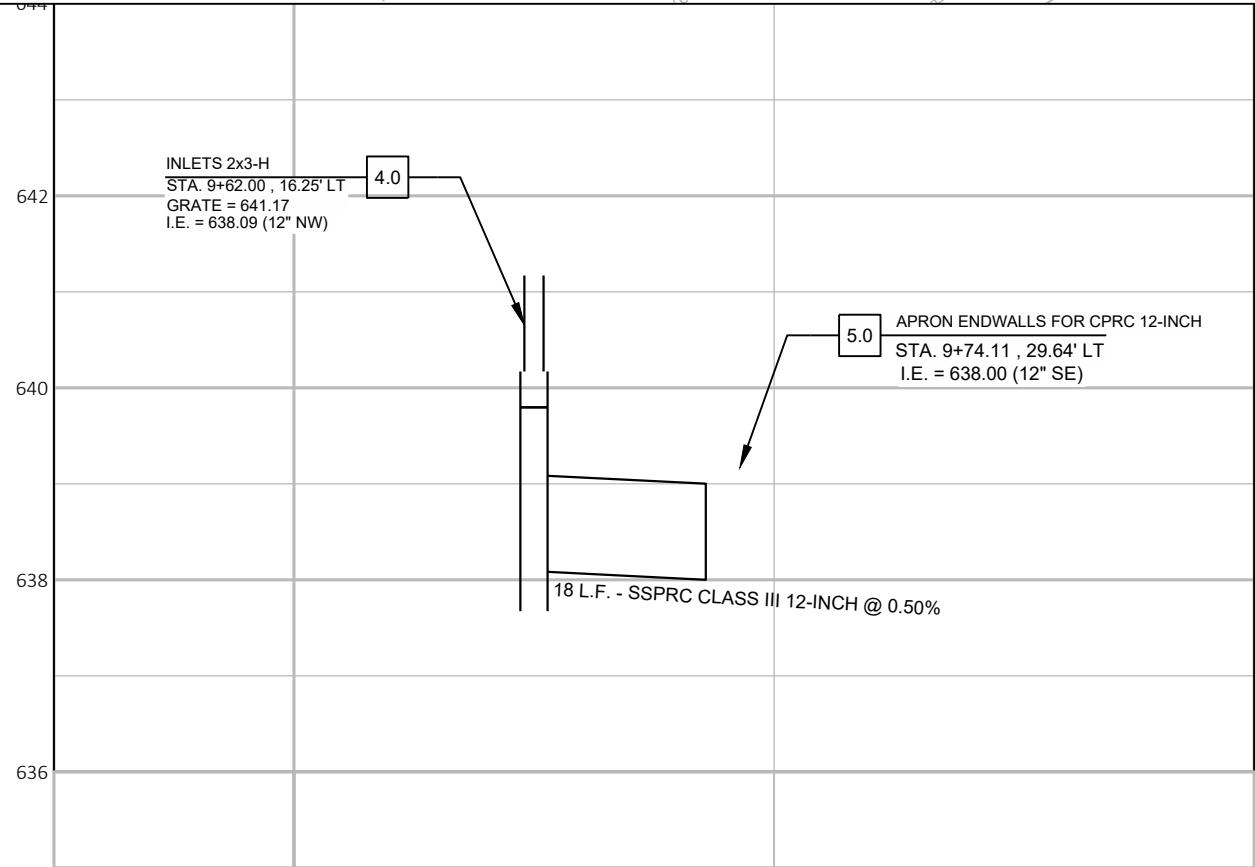
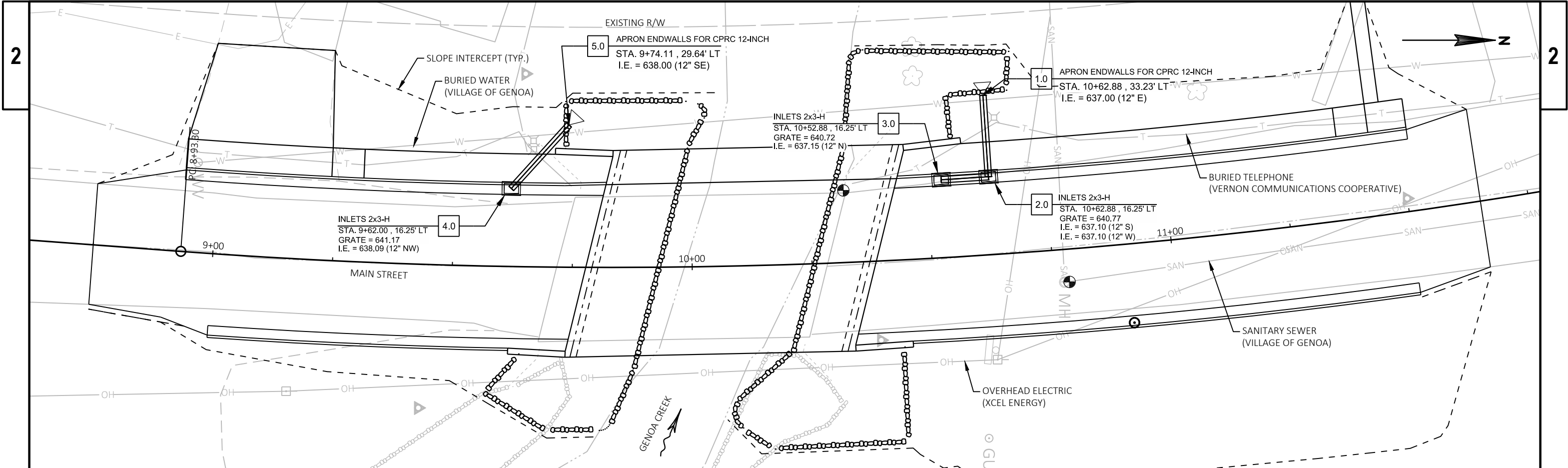
SEE PLAN & PROFILE SHEET FOR LOCATIONS



DETAIL FOR COMPUTING INLET ELEVATIONS
INLET COVERS - H



DETAIL OF CURB & GUTTER TERMINI



Estimate Of Quantities

5386-00-72

Line	Item	Item Description	Unit	Total	Qty
0002	201.0105	Clearing	STA	2.000	2.000
0004	201.0205	Grubbing	STA	2.000	2.000
0006	203.0600.S	Removing Old Structure Over Waterway With Minimal Debris (station) 01. 10+00	LS	1.000	1.000
0008	205.0100	Excavation Common **P**	CY	859.000	859.000
0010	206.1000	Excavation for Structures Bridges (structure) 01. B-62-255	LS	1.000	1.000
0012	210.1500	Backfill Structure Type A	TON	380.000	380.000
0014	213.0100	Finishing Roadway (project) 01. 5386-00-72	EACH	1.000	1.000
0016	305.0110	Base Aggregate Dense 3/4-Inch	TON	43.000	43.000
0018	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	623.000	623.000
0020	311.0110	Breaker Run	TON	778.000	778.000
0022	416.0160	Concrete Driveway 6-Inch	SY	20.000	20.000
0024	455.0605	Tack Coat	GAL	38.000	38.000
0026	465.0105	Asphaltic Surface	TON	169.000	169.000
0028	502.0100	Concrete Masonry Bridges	CY	219.000	219.000
0030	502.3200	Protective Surface Treatment	SY	280.000	280.000
0032	502.3210	Pigmented Surface Sealer	SY	80.000	80.000
0034	503.0137	Prestressed Girder Type I 36W-Inch	LF	236.000	236.000
0036	505.0400	Bar Steel Reinforcement HS Structures	LB	5,230.000	5,230.000
0038	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	26,020.000	26,020.000
0040	506.2605	Bearing Pads Elastomeric Non-Laminated	EACH	8.000	8.000
0042	506.4000	Steel Diaphragms (structure) 01. B-62-255	EACH	3.000	3.000
0044	511.1200	Temporary Shoring (structure) 01. B-62-255	SF	10.000	10.000
0046	513.7016	Railing Steel Type C3 01. B-62-255	LF	83.000	83.000
0048	516.0500	Rubberized Membrane Waterproofing	SY	25.000	25.000
0050	522.1012	Apron Endwalls for Culvert Pipe Reinforced Concrete 12-Inch	EACH	2.000	2.000
0052	550.0500	Pile Points	EACH	12.000	12.000
0054	550.1100	Piling Steel HP 10-Inch X 42 Lb	LF	600.000	600.000
0056	601.0411	Concrete Curb & Gutter 30-Inch Type D	LF	388.000	388.000
0058	602.0405	Concrete Sidewalk 4-Inch	SF	1,040.000	1,040.000
0060	606.0300	Riprap Heavy	CY	260.000	260.000
0062	608.0312	Storm Sewer Pipe Reinforced Concrete Class III 12-Inch	LF	50.000	50.000
0064	611.0624	Inlet Covers Type H	EACH	3.000	3.000
0066	611.3230	Inlets 2x3-FT	EACH	3.000	3.000
0068	611.8110	Adjusting Manhole Covers	EACH	1.000	1.000
0070	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	220.000	220.000
0072	618.0100	Maintenance And Repair of Haul Roads (project) 01. 5386-00-72	EACH	1.000	1.000

Estimate Of Quantities

5386-00-72

Line	Item	Item Description	Unit	Total	Qty
0074	619.1000	Mobilization	EACH	1.000	1.000
0076	624.0100	Water	MGAL	63.000	63.000
0078	625.0500	Salvaged Topsoil	SY	650.000	650.000
0080	627.0200	Mulching	SY	800.000	800.000
0082	628.1504	Silt Fence	LF	630.000	630.000
0084	628.1520	Silt Fence Maintenance	LF	630.000	630.000
0086	628.1905	Mobilizations Erosion Control	EACH	2.000	2.000
0088	628.1910	Mobilizations Emergency Erosion Control	EACH	2.000	2.000
0090	628.6005	Turbidity Barriers	SY	105.000	105.000
0092	628.7005	Inlet Protection Type A	EACH	3.000	3.000
0094	628.7015	Inlet Protection Type C	EACH	3.000	3.000
0096	629.0205	Fertilizer Type A	CWT	0.500	0.500
0098	630.0120	Seeding Mixture No. 20	LB	25.000	25.000
0100	630.0200	Seeding Temporary	LB	25.000	25.000
0102	634.0612	Posts Wood 4x6-Inch X 12-FT	EACH	2.000	2.000
0104	634.0614	Posts Wood 4x6-Inch X 14-FT	EACH	1.000	1.000
0106	634.0616	Posts Wood 4x6-Inch X 16-FT	EACH	1.000	1.000
0108	637.2210	Signs Type II Reflective H	SF	5.000	5.000
0110	637.2230	Signs Type II Reflective F	SF	12.250	12.250
0112	638.2602	Removing Signs Type II	EACH	6.000	6.000
0114	638.3000	Removing Small Sign Supports	EACH	5.000	5.000
0116	642.5001	Field Office Type B	EACH	1.000	1.000
0118	643.0420	Traffic Control Barricades Type III	DAY	1,552.000	1,552.000
0120	643.0705	Traffic Control Warning Lights Type A	DAY	2,134.000	2,134.000
0122	643.0900	Traffic Control Signs	DAY	970.000	970.000
0124	643.5000	Traffic Control	EACH	1.000	1.000
0126	645.0111	Geotextile Type DF Schedule A	SY	84.000	84.000
0128	645.0120	Geotextile Type HR	SY	475.000	475.000
0130	646.1020	Marking Line Epoxy 4-Inch	LF	1,160.000	1,160.000
0132	650.4000	Construction Staking Storm Sewer	EACH	5.000	5.000
0134	650.4500	Construction Staking Subgrade	LF	230.000	230.000
0136	650.5000	Construction Staking Base	LF	230.000	230.000
0138	650.5500	Construction Staking Curb Gutter and Curb & Gutter	LF	388.000	388.000
0140	650.6500	Construction Staking Structure Layout (structure) 01. B-62-255	LS	1.000	1.000
0142	650.9910	Construction Staking Supplemental Control (project) 01. 5386-00-72	LS	1.000	1.000
0144	650.9920	Construction Staking Slope Stakes	LF	230.000	230.000
0146	690.0150	Sawing Asphalt	LF	58.000	58.000
0148	715.0502	Incentive Strength Concrete Structures	DOL	1,314.000	1,314.000

Estimate Of Quantities

5386-00-72					
0150	SPV.0060	Special 01. Utility Line Opening (ULO)	EACH	1.000	1.000

CLEARING & GRUBBING			
STATION - STATION	LOCATION	201.0105	201.0205
		CLEARING STA	GRUBBING STA
10+00 - 12+00	LT	2	2
TOTALS:		2	2

EARTHWORK				
STATION - STATION	205.0100 **P** EXCAVATION COMMON CY (3)	FILL CY (1)	EXPANDED FILL CY (2)	UNUSABLE PAVEMENT CY (1)
8+75.00 - 9+77.80	352	42	55	29
10+38.40 - 11+65.00	507	243	315	81
TOTALS:	859	285	370	110

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

BASE AGGREGATE ITEMS				
	305.0110 BASE AGGREGATE DENSE 3/4-INCH	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH	311.0110 BREAKER RUN	624.0100 WATER (1)
STATION - STATION	TON	TON	TON	MGAL
8+75.00 - 9+77.80	33	274	342	19
10+38.40 - 11+65.00	10	349	436	24
TOTALS:	43	623	778	43

(1) - ADDITIONAL QUANTITIES LISTED ELSEWHERE

ASPHALT PAVEMENT ITEMS		
	455.0605 TACK COAT GAL	465.0105 ASPHALTIC SURFACE TON
STATION - STATION		
8+75.00 - 9+77.80	17	75
10+38.40 - 11.65.00	21	94
TOTALS:	38	169

CURB & GUTTER				
STATION	LOCATION	601.0411 CONCRETE CURB & GUTTER 30-INCH TYPE D	601.0411 CONCRETE CURB & GUTTER 30-INCH TYPE D (REJECT)	650.5500 CONSTRUCTION STAKING CURB GUTTER AND CURB & GUTTER
		LF	LF	LF
8+93.16 - 9+82.00	LT	89	—	89
9+00.00 - 9+74.23	RT	—	74	74
10+42.89 - 11+51.77	LT	109	—	109
10+33.66 - 11+50.00	RT	—	116	116
TOTALS:		198	190	388

CONCRETE SIDEWALK			
STATION	LOCATION	416.0160	602.0405
		CONCRETE DRIVEWAY 6-INCH SY	CONCRETE SIDEWALK 4-INCH SF
8+93.16 - 9+24.00	LT	20	—
9+24.00 - 9+83.49	LT	—	345
10+43.63 - 11+51.78	LT	—	695
TOTALS:		20	1040

STORM SEWER	
	608.0312
	STORM SEWER
	PIPE REINFORCED
	CONCRETE CLASS III
	12-INCH
STRUCTURE - STRUCTURE	LF
1.0 - 2.0	20
2.0 - 3.0	10
4.0 - 5.0	20
TOTALS:	50

STORM SEWER STRUCTURES						
STRUCTURE	STATION	LOCATION	522.1012	611.0624	611.3230	650.4000
			APRON ENDWALLS	INLET	INLETS	CONSTRUCTION
			FOR CULVERT PIPE	COVERS	2X3-FT	STAKING
			REINFORCED	TYPE H		STORM
			CONCRETE 12-INCH			SEWER
			EACH	EACH	EACH	EACH
1.0	10+62.88	35.91' LT	1	—	—	1
2.0	10+62.88	16.25' LT	—	1	1	1
3.0	10+52.88	16.25' LT	—	1	1	1
4.0	9+62.00	16.25' LT	—	1	1	1
5.0	9+74.11	29.64' LT	1	—	—	1
TOTALS:			2	3	3	5

ADJUSTING MANHOLE COVERS		
STATION	LOCATION	*611.8110 ADJUSTING MANHOLE COVERS EACH
STA. 10+77	7' RT	1
TOTALS:		1

* CATEGORY 0030 ITEM

MAINTENANCE AND REPAIR OF HAUL ROADS	
	*618.0100
	MAINTENANCE AND REPAIR OF HAUL ROADS
DESCRIPTION	EACH
PROJECT 5386-00-72	1
TOTAL:	1

* CATEGORY 0040 ITEM

RESTORATION ITEMS							
		625.0500 SALVAGED TOPSOIL	627.0200 MULCHING	629.0205 FERTILIZER TYPE A	630.0120 SEEDING MIXTURE NO. 20	630.0200 SEEDING TEMPORARY	624.0100 WATER (1)
STATION - STATION	LOCATION	SY	SY	CWT	LB	LB	MGAL
8+75 - 9+71	LT	35	35	0.02	1	1	1
8+75 - 9+62	RT	40	85	0.05	2	2	2
10+57 - 11+65	LT	60	60	0.04	2	2	1
10+45 - 11+65	RT	385	465	0.29	13	13	11
UNDISTRIBUTED	—	130	155	0.10	7	7	5
	TOTALS:	650	800	0.50	25	25	20

(1) - ADDITIONAL QUANTITIES LISTED ELSEWHERE

SILT FENCE				
		628.1504 SILT FENCE	628.1520 SILT FENCE MAINTENANCE	628.6005 TURBIDITY BARRIERS
STATION - STATION	LOCATION	LF	LF	SY
8+75 - 9+65	LT	125	125	—
9+00 - 9+60	RT	85	85	—
9+60 - 10+05	LT & RT	—	—	47
10+05 - 10+45	LT & RT	—	—	38
10+45 - 11+65	LT	145	145	—
10+15 - 11+50	RT	160	160	—
UNDISTRIBUTED	—	115	115	20
	TOTALS:	630	630	105

MOBILIZATION EROSION CONTROL		
DESCRIPTION	628.1905 MOBILIZATION EROSION CONTROL EACH	628.1910 MOBILIZATION EMERGENCY EROSION CONTROL EACH
PROJECT 5386-00-72	2	2
TOTALS:	2	2

NOTE: ALL ITEMS ARE CATEGORY 0010 UNLESS NOTED OTHERWISE.

SIGNING ITEMS											
STATION	LOCATION	SIGN CODE	SIZE	634.0612	634.0614	634.0616	637.2210	637.2230	638.2602	638.3000	COMMENTS
				POST WOOD 4x6-INCH X 12-FT	POST WOOD 4x6-INCH X 14-FT	POST WOOD 4x6-INCH X 16-FT	SIGNS TYPE II REFLECTIVE H	SIGNS TYPE II REFLECTIVE F	REMOVING SIGNS TYPE II	REMOVING SMALL SIGN SUPPORTS	
				EACH	EACH	EACH	SF	SF	EACH	EACH	
9+68	RT	—	—	—	—	—	—	—	1	1	EXISTING OBJECT MARKER
9+76	LT	—	—	—	—	—	—	—	1	1	EXISTING OBJECT MARKER
9+62	RT	W5-52R	12"x36"	1	—	—	—	3	—	—	OBJECT MARKER
10+24	RT	—	—	—	—	—	—	—	1	1	EXISTING OBJECT MARKER
10+33	LT	—	—	—	—	—	—	—	1	1	EXISTING OBJECT MARKER
10+45	RT	W5-52L	12"x36"	1	—	—	—	3	—	—	OBJECT MARKER
10+62	RT	—	—	—	—	—	—	—	1	1	EXISTING SPEED LIMIT 25 MPH
10+62	RT	—	—	—	—	—	—	—	1	—	EXISTING FIRE TRUCK CROSSING
9+25	RT	R2-1	24"x30"	—	1	—	5	—	—	—	SPEED LIMIT 25 MPH
10+62	RT	W11-8	30"x30"	—	—	1	—	6.25	—	—	FIRE TRUCK CROSSING
TOTALS:				2	1	1	5	12.25	6	5	

INLET PROTECTION				
STRUCTURE	STATION	LOCATION	628.7005	628.7015
			INLET PROTECTION TYPE A EACH	INLET PROTECTION TYPE C EACH
2.0	10+62.88	16.25' LT	1	1
3.0	10+52.88	16.25' LT	1	1
4.0	9+62.00	16.25' LT	1	1
TOTALS:			3	3

PAVEMENT MARKING			
STATION - STATION	LOCATION	646.1020	646.1020
		MARKING LINE EPOXY 4-INCH YELLOW LF	MARKING LINE EPOXY 4-INCH WHITE LF
8+75 - 11+65	CENTERLINE	580	—
8+75 - 11+65	LT EDGE LINE	—	290
8+75 - 11+65	RT EDGE LINE	—	290
TOTALS:		580	580

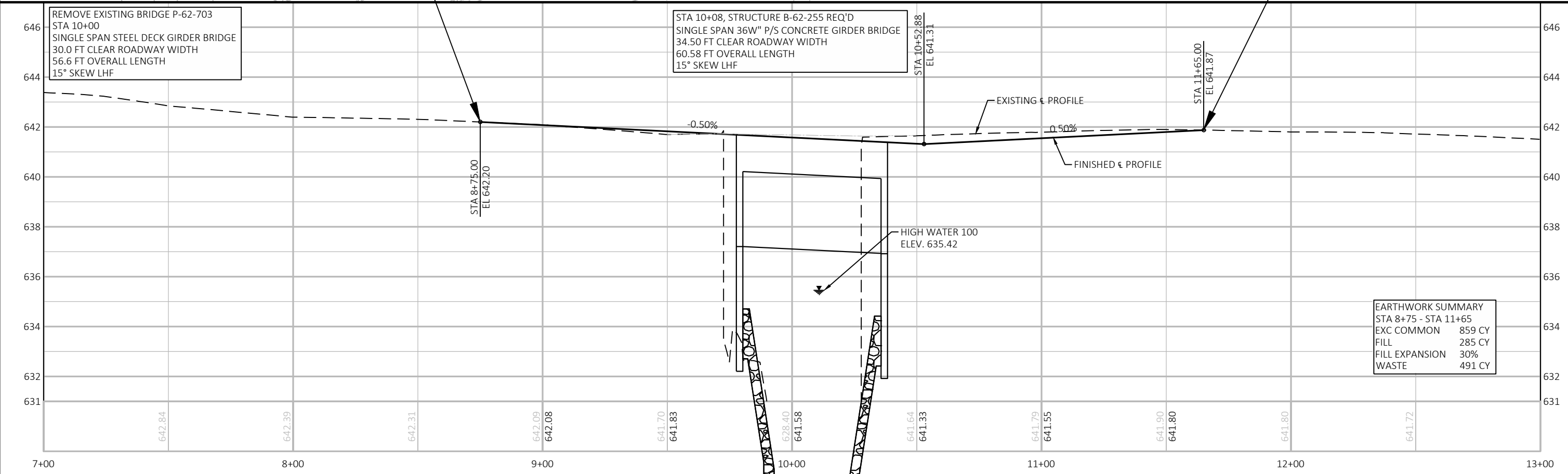
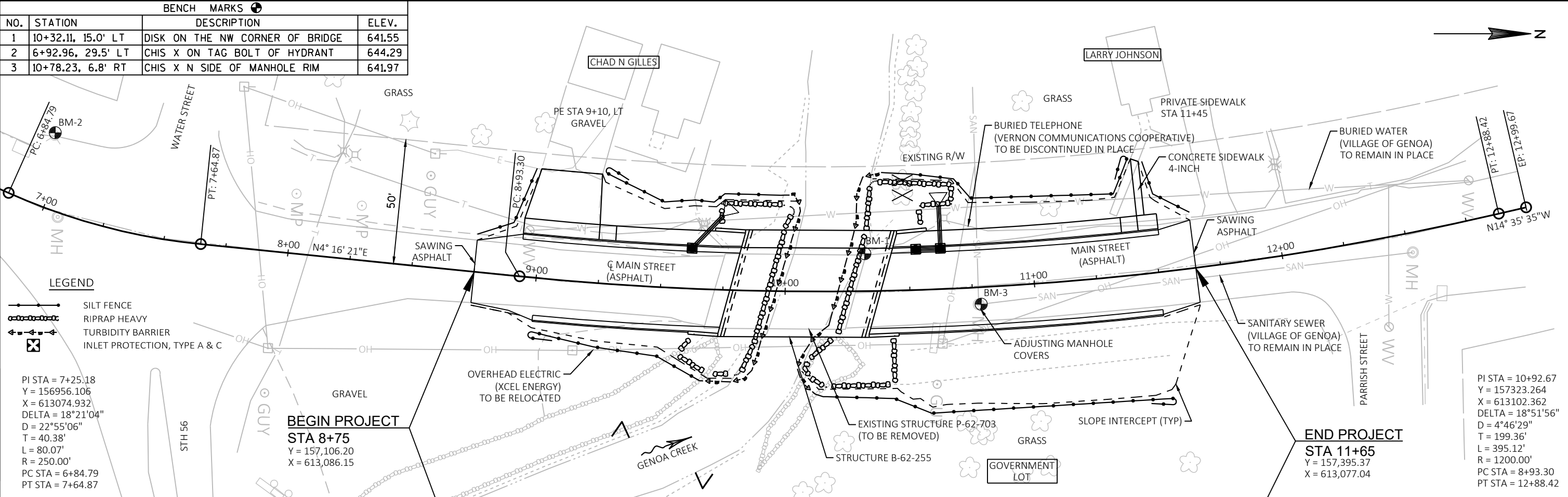
TRAFFIC CONTROL ITEMS							
LOCATION	DAYS	EACH	643.0420	643.0705	EACH	EACH	DAYS
			TRAFFIC CONTROL BARRICADES TYPE III	TRAFFIC CONTROL WARNING LIGHTS TYPE A			
BEGINNING OF PROJECT	97	7	679	10	970	4	388
END OF PROJECT	97	7	679	10	970	4	388
UNDISTRIBUTED	97	2	194	2	194	2	194
TOTALS:			1,552		2,134		970

SAWING PAVEMENT ITEMS	
STATION	690.0150
	SAWING ASPHALT LF
8+75	25
11+65	33
TOTAL:	58

CONSTRUCTION STAKING				
STATION - STATION	LF	650.4500	650.5000	650.9910
		CONSTRUCTION STAKING SUBGRADE	CONSTRUCTION STAKING BASE	CONSTRUCTION STAKING SLOPE SUPPLEMENTAL CONTROL
8+75.00 - 9+77.80	103		103	—
10+38.40 - 11+65.00	127		127	—
5386-00-72	—		—	1
TOTALS:	230		230	1

NOTE: ALL ITEMS ARE CATEGORY 0010 UNLESS NOTED OTHERWISE.

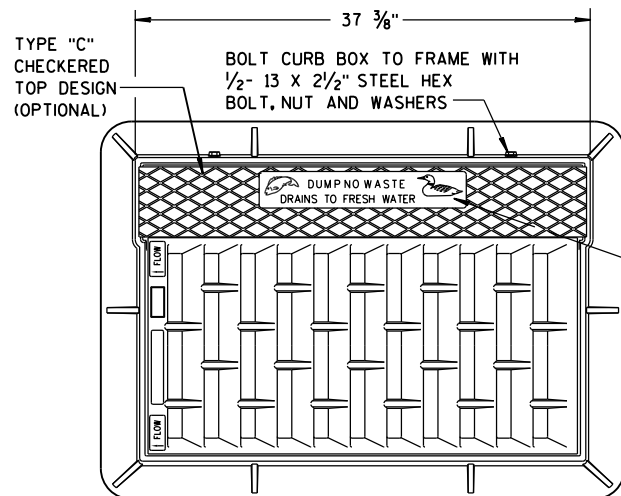
BENCH MARKS			
NO.	STATION	DESCRIPTION	ELEV.
1	10+32.11, 15.0' LT	DISK ON THE NW CORNER OF BRIDGE	641.55
2	6+92.96, 29.5' LT	CHIS X ON TAG BOLT OF HYDRANT	644.29
3	10+78.23, 6.8' RT	CHIS X N SIDE OF MANHOLE RIM	641.97



PROJECT NO: 5386-00-72	HWY: LOCAL STREET	COUNTY: VERNON	PLAN AND PROFILE: MAIN STREET	SHEET	E
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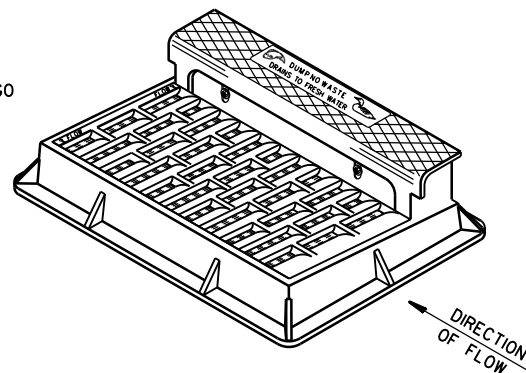
Standard Detail Drawing List

08A05-19A	INLET COVERS TYPE A, H, A-S, H-S & Z
08C07-02	INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT
08D01-20A	CONCRETE CURB & GUTTER
08D01-20B	CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS
08D18-02	DRIVEWAY AND SIDEWALK RAMPS TYPES X & Y
08E09-06	SILT FENCE
08E11-02	TURBIDITY BARRIER
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
12A03-10	NAME PLATE (STRUCTURES)
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)
15C11-07B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15D38-02A	TEMPORARY TRAFFIC CONTROL SIGN MOUNTING
15D38-02B	ATTACHMENT OF SIGNS TO POSTS

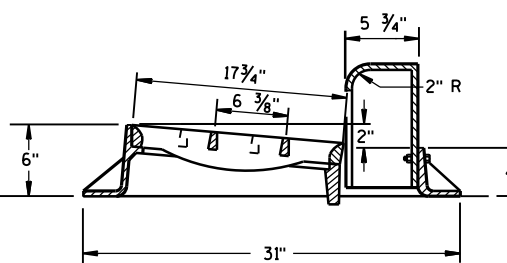
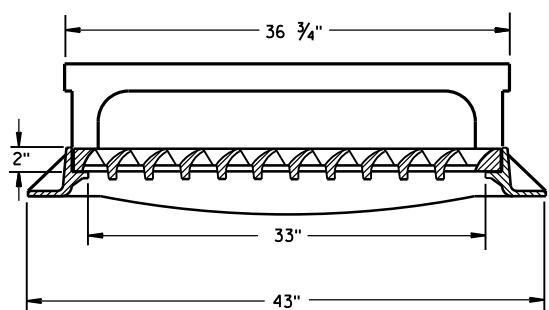
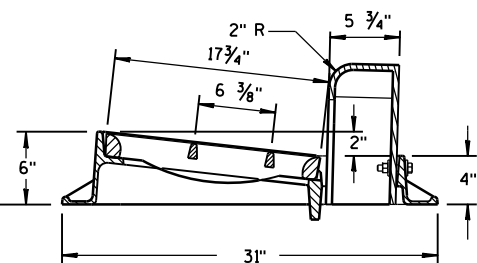
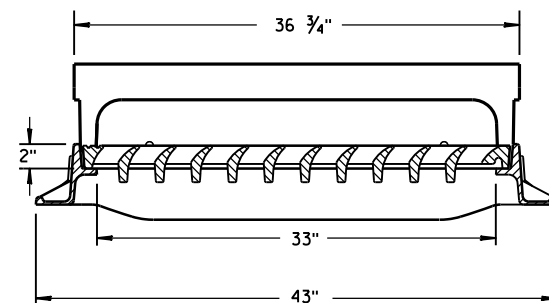
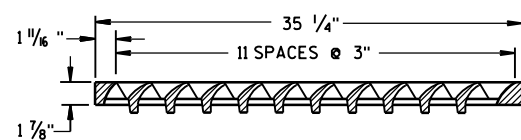


SEE LOGO
DETAIL

NOTE:
GRATE IS REVERSIBLE.

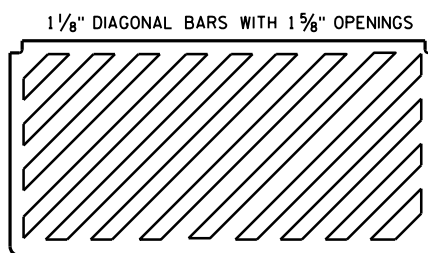


NOTE: CURB BOX HEIGHT ADJUSTABLE 6" TO 9"



TYPE "H"

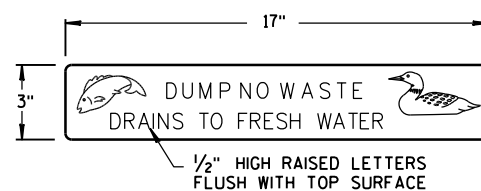
NOTE: EITHER CASTING IS ACCEPTABLE



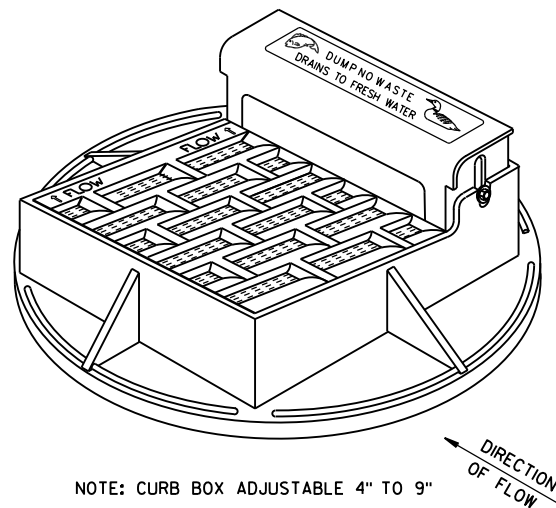
**SPECIAL GRATE FOR
TYPE "H" COVER**

(MEASURES 35 1/4" X 17 3/4" X 2")

(NOTED AS TYPE H-S ON DRAINAGE TABLE)

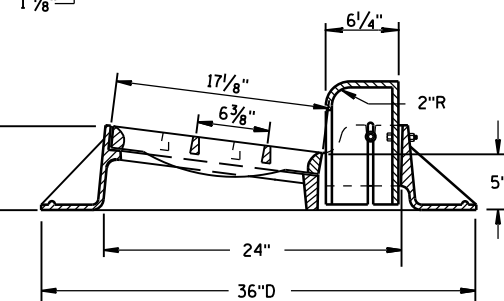
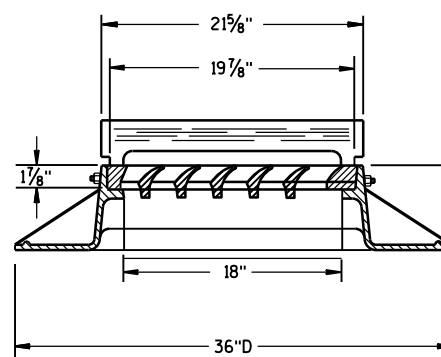
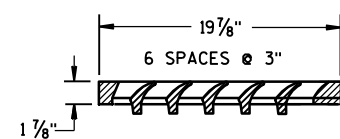
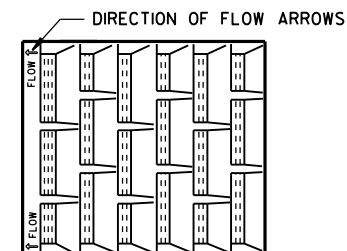


LOGO DETAIL

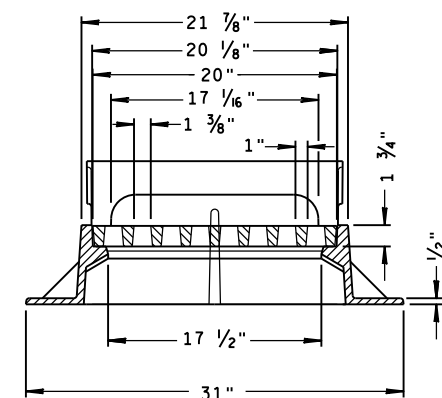
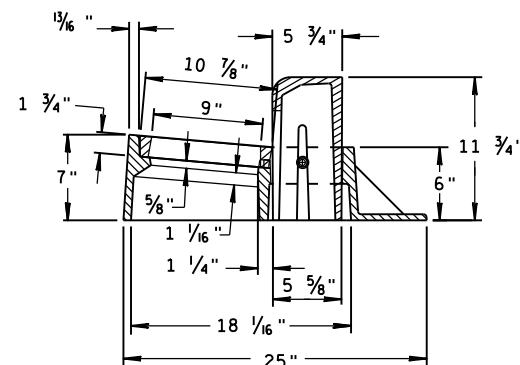


NOTE: CURB BOX ADJUSTABLE 4" TO 9"

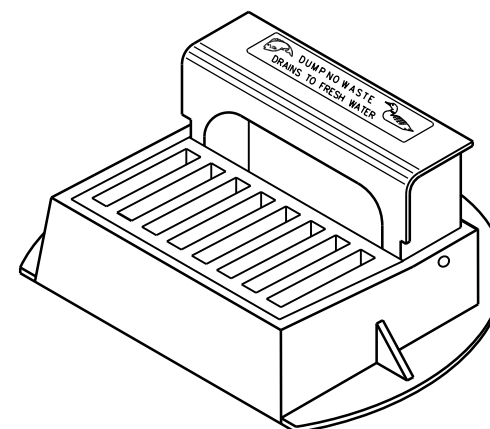
NOTE:
GRATE IS REVERSIBLE.



TYPE "A"



TYPE "Z"

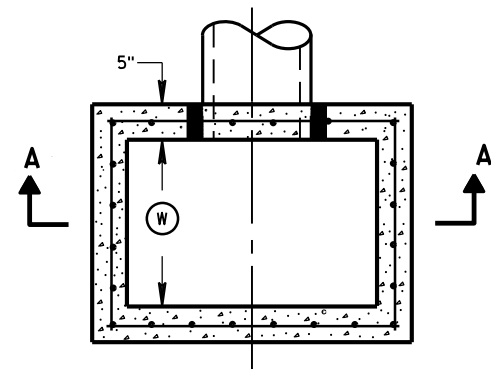


**INLET COVERS
TYPE A, H, A-S, H-S & Z**

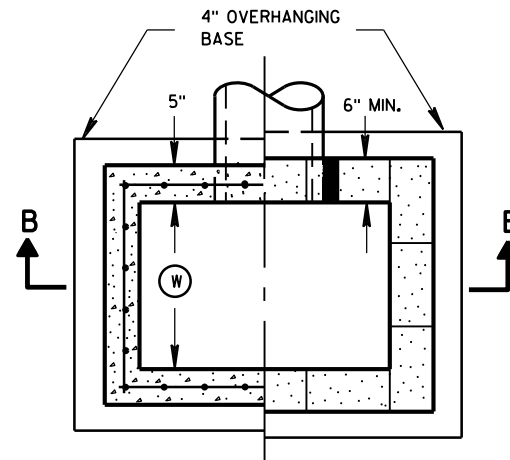
**STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION**

APPROVED
11-27-13
DATE
FHWA

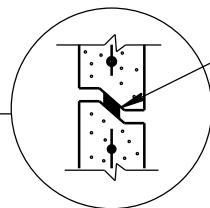
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER



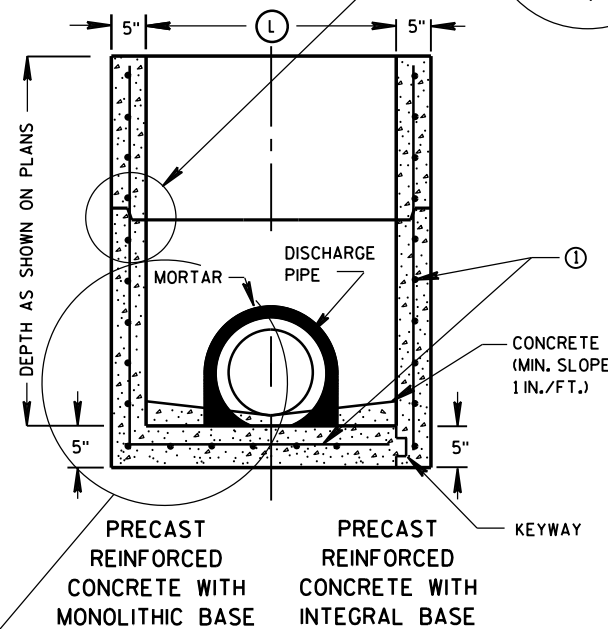
PLAN VIEW



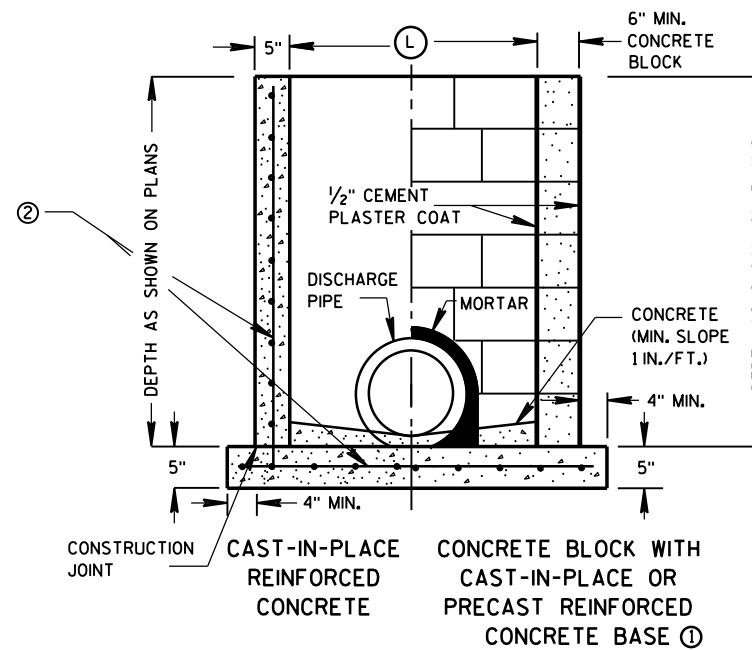
PLAN VIEW



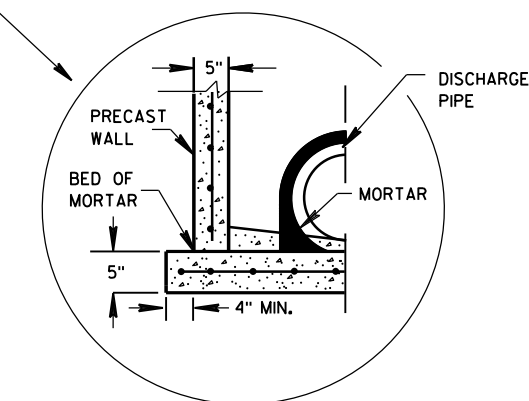
RISER JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C 990 (TYP)



SECTION A-A



SECTION B-B



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT

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.

UNLESS OTHERWISE AUTHORIZED IN WRITING BY THE ENGINEER, THE CONTRACTOR SHALL NOT ORDER AND DELIVER PRECAST INLET UNITS REQUIRED FOR THE PROJECT UNTIL A LIST OF SIZES IS FURNISHED BY THE ENGINEER.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR UNDERGROUND DRAINAGE STRUCTURES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ALL PRECAST INLET UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF ASTM C 913.

ALL DRAINAGE STRUCTURES ARE DESIGNATED ON THE PLANS AS "MANHOLES 3X3-L", "CATCH BASINS 4-B", "INLETS 2X3-H", ETC. THE FIRST NUMBERS DESIGNATES THE SIZE OF THE STRUCTURE, AND THE FOLLOWING LETTER DESIGNATES THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

BASES SHALL BE PLACED ON A BED OF MATERIAL AT LEAST 6 INCHES IN DEPTH, WHICH MEETS THE REQUIREMENTS OF FOUNDATION BACKFILL. THIS BEDDING SHALL BE COMPACTED AND PROVIDE UNIFORM SUPPORT FOR THE ENTIRE AREA OF THE BASE.

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

PRECAST REINFORCED RISERS SHALL HAVE A TONGUE AND GROOVE JOINT WITH TONGUE UP OR DOWN.

4" OVERHANGING BASES ARE REQUIRED FOR CAST-IN-PLACE REINFORCED CONCRETE AND CONCRETE BLOCK INSTALLATIONS. 4" OVERHANG IS REQUIRED WHEN SEPARATE PRECAST BASE IS PROVIDED. OVERHANG IS NOT REQUIRED ON PRECAST STRUCTURES WITH AN INTEGRAL OR MONOLITHIC BASE.

MAXIMUM INSIDE PIPE DIAMETER DETERMINED BY 3 INCH CLEARANCE ON EACH SIDE OF THE OUTSIDE WALL OF THE PIPE. SEE DETAIL "A". ASSUMES PIPE ENTERS PERPENDICULAR TO THE STRUCTURE.

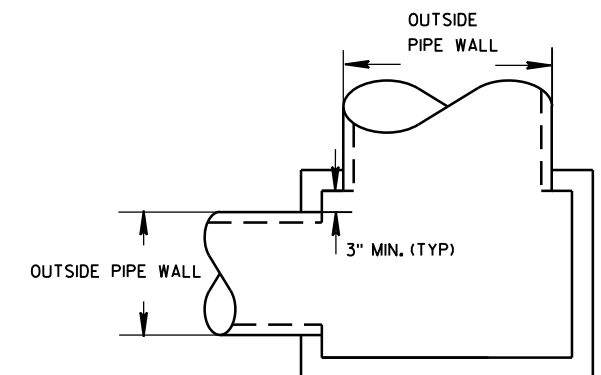
- 1 FOR PRECAST INLETS PROVIDE REINFORCING STEEL IN ACCORDANCE TO ASTM C 913.
- 2 CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.

INLET COVER MATRIX

INLET SIZE		INLET COVER TYPE	ALL A'S	ALL B'S	BW	F	ALL H'S	S	T	V	WM
	WIDTH ① (FT)	LENGTH ② (FT)									
2X2-FT	2	2	X	X				X		X	
2X2.5-FT	2	2.5			X			X	X	X	X
2X3-FT	2	3					X				
2.5X3-FT	2.5	3				X					

PIPE MATRIX

INLET SIZE	MAXIMUM INSIDE PIPE DIAMETER	
	WIDTH (IN)	LENGTH (IN)
2X2-FT	12	12
2X2.5-FT	12	18
2X3-FT	12	24
2.5X3-FT	18	24

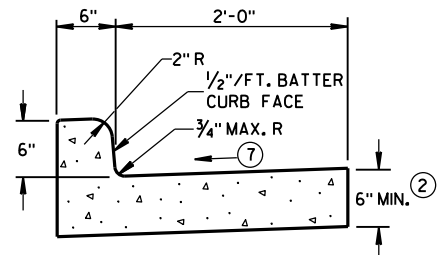


DETAIL "A"

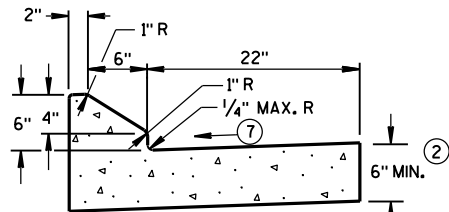
INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

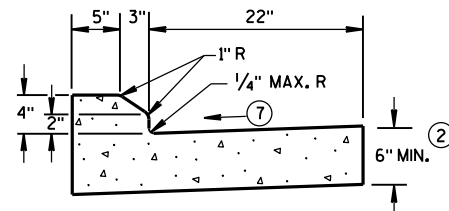
APPROVED
Sept., 2016 /S/ Rodney Taylor
DATE ROADWAY STANDARDS DEVELOPMENT
FHWA UNIT SUPERVISOR



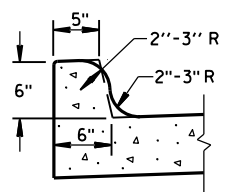
TYPES A^① & D



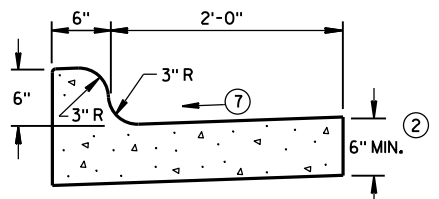
6" SLOPED CURB TYPES G^① & J



4" SLOPED CURB TYPES G^① & J

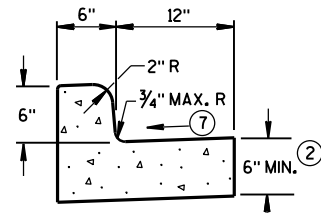


TYPES K^① & L
(OPTIONAL CURB SHAPE)



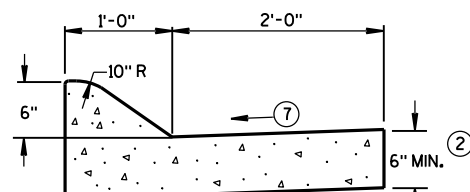
TYPES K^① & L

CONCRETE CURB & GUTTER 30"

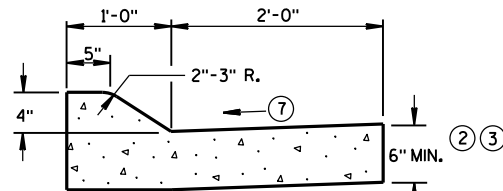


TYPES A^① & D

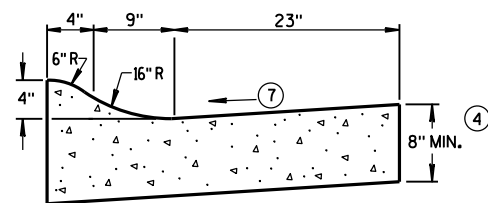
CONCRETE CURB & GUTTER 18"



6" SLOPED CURB TYPES A^① & D

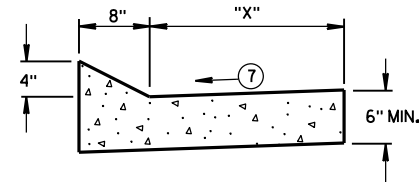


4" SLOPED CURB TYPES A^① & D



4" SLOPED CURB TYPES R^① & T^⑤

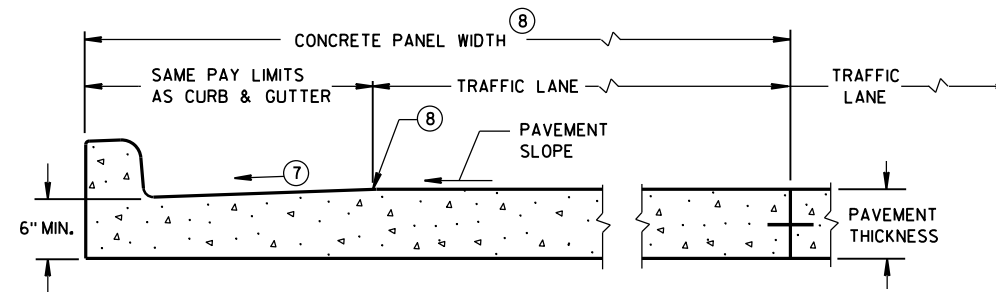
CONCRETE CURB & GUTTER 36"



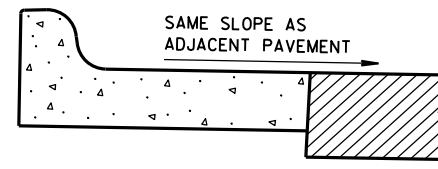
TYPES TBT & TBTT^①

CONCRETE CURB & GUTTER

TBT & TBTT	"X"
30"	22"
36"	28"



PARTIAL SECTION OF PAVEMENT
WITH INTEGRAL CURB & GUTTER



REVERSE SLOPE GUTTER^⑥
(TYPICAL FOR ALL CURB & GUTTER TYPES)

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

INTEGRAL CURB & GUTTER SHALL CONFORM TO THE DETAILS SHOWN FOR CONCRETE CURB & GUTTER INCLUDING THE TRANSVERSE GUTTER SLOPE.

WHERE THE TRANSVERSE JOINTS IN THE PAVEMENT ARE REQUIRED TO BE SEALED, THE JOINTS IN THE INTEGRAL CURB AND GUTTER SHALL BE SEALED TO THE FACE OF CURB WITH THE SAME TYPE OF SEALANT. THE COST OF FURNISHING AND INSTALLING THIS SEALANT SHALL BE INCIDENTAL TO THE ITEM CONCRETE CURB AND GUTTER.

UNLESS OTHERWISE SHOWN ON THE TYPICAL CROSS SECTIONS, THE BASE AGGREGATE AND COMMON EXCAVATION LIMITS ARE 2'-0" BEHIND THE BACK OF CURBS.

- ① TIE BARS ARE REQUIRED FOR CURB AND GUTTER TYPES A, G, K, R AND TBTT.
- ② THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ③ USE 8" MINIMUM GUTTER THICKNESS WHEN USED WITH AN ADJACENT CONCRETE TRUCK APRON PLACED BEHIND BACK OF CURB.
- ④ THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 8" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ⑤ THE FACE OF CURB IS 6" FROM THE BACK OF CURB.
- ⑥ WHEN REVERSE SLOPE GUTTER IS REQUIRED, THE LOCATION(S) WILL BE SHOWN ELSEWHERE IN THE PLAN.
- ⑦ USE 4% GUTTER CROSS SLOPE UNLESS OTHERWISE NOTED IN THE PLANS.
- ⑧ INCLUDE LONGITUDINAL JOINT AND TIE BARS ALONG LANE EDGE WHEN CONCRETE PANEL WIDTH EXCEEDS THE MAXIMUM WIDTH PER TABLE BELOW. LONGITUDINAL JOINT(S) ARE NOT ALLOWED WITHIN TRAFFIC LANES AND BIKE LANES. LONGITUDINAL JOINT MAY BE SAWED.

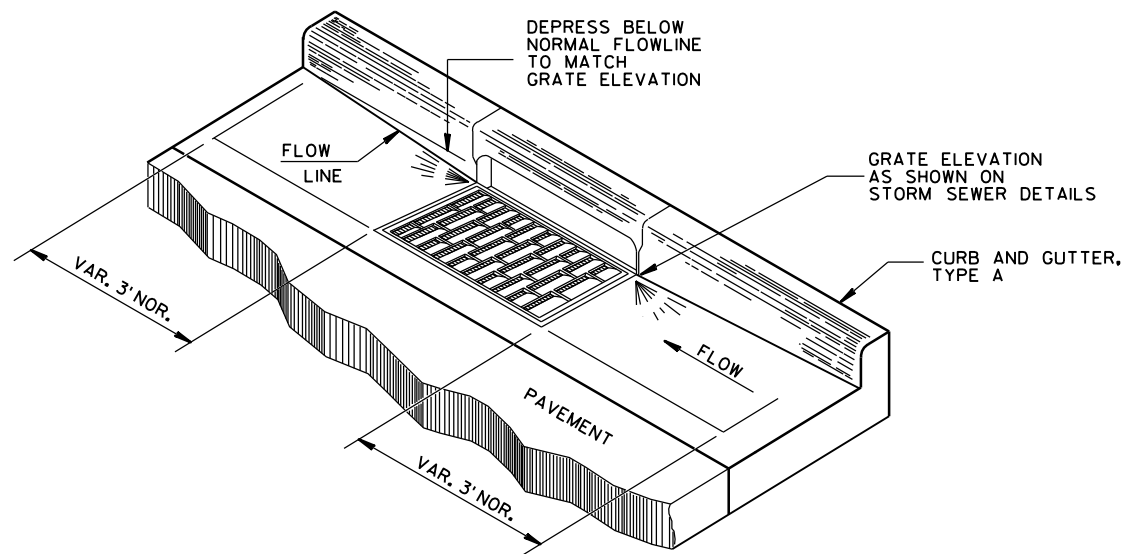
PAVEMENT THICKNESS AND MAXIMUM CONCRETE PANEL WIDTH TABLE

PAVEMENT THICKNESS	MAXIMUM PANEL WIDTH
LESS THAN 10"	12'
10" & ABOVE	15'

* BIKE LANE IS NOT SHOWN.

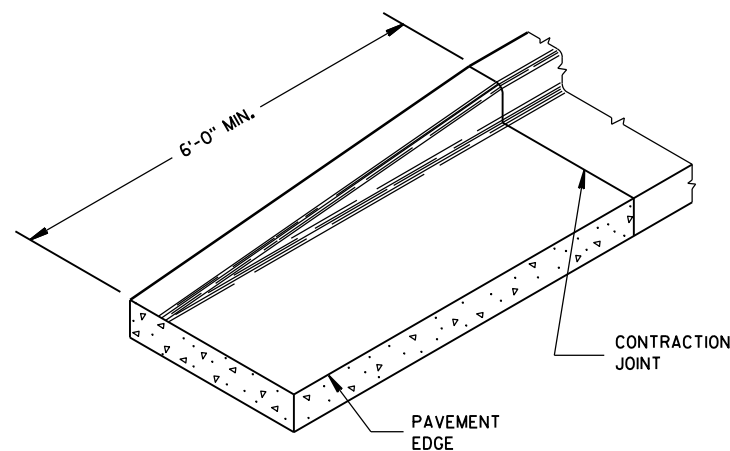
CONCRETE CURB & GUTTER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

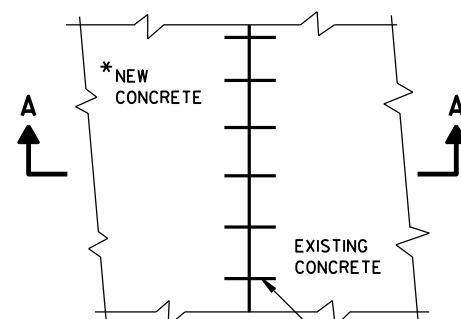


DETAIL OF CURB AND GUTTER AT INLETS

(TYPE H INLET COVER SHOWN)

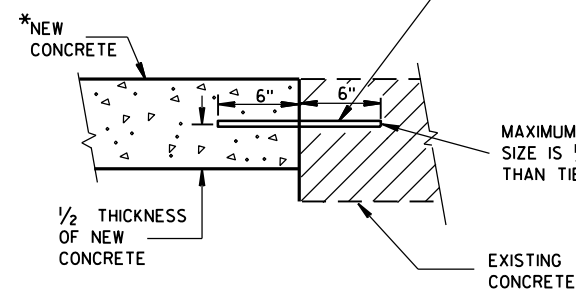


END SECTION CURB & GUTTER



PLAN VIEW

*NEW CURB & GUTTER, SURFACE DRAINS, CONCRETE PAVEMENT OR OTHER NEW CONCRETE.



**SECTION A-A
TIE BARS DRILLED
INTO EXISTING PAVEMENT**

NO. 6 TIE BARS SPACED 2'-6" C-C, INSTALLED PERPENDICULAR TO THE LONGITUDINAL JOINT.

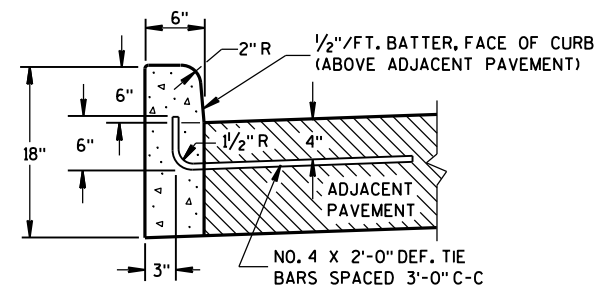
GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

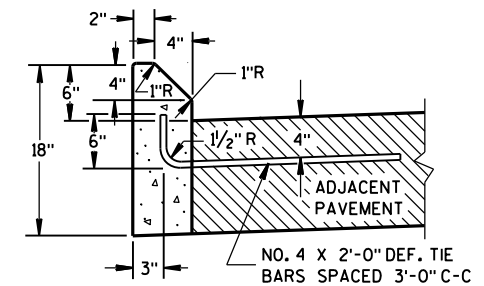
PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

UNLESS OTHERWISE SHOWN ON THE TYPICAL CROSS SECTIONS, THE BASE AGGREGATE AND COMMON EXCAVATION LIMITS ARE 2'-0" BEHIND THE BACK OF CURBS.

- ① TIE BARS ARE REQUIRED FOR CURB AND GUTTER TYPES A, G, K, R AND TBTT.
- ② THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ⑨ REFER TO SDD 8D18 AND SDD 8D19 FOR ADDITIONAL DRIVEWAY ENTRANCE CURB DETAILS.

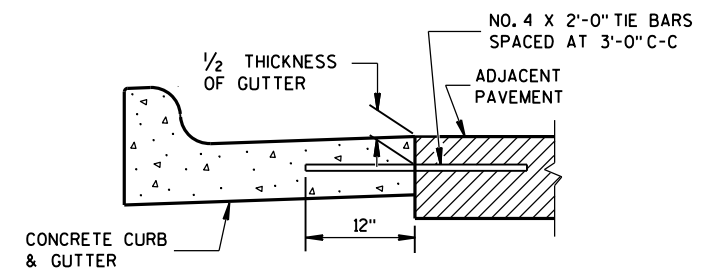


TYPES A^① & D

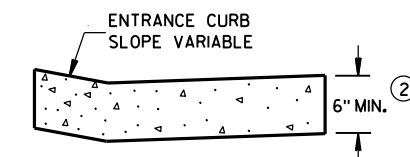


TYPES G^① & J

CONCRETE CURB



TYPICAL TIE BAR LOCATION^①



DRIVEWAY ENTRANCE CURB^⑨
(WHEN DIRECTED BY THE ENGINEER)

CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

June, 2017

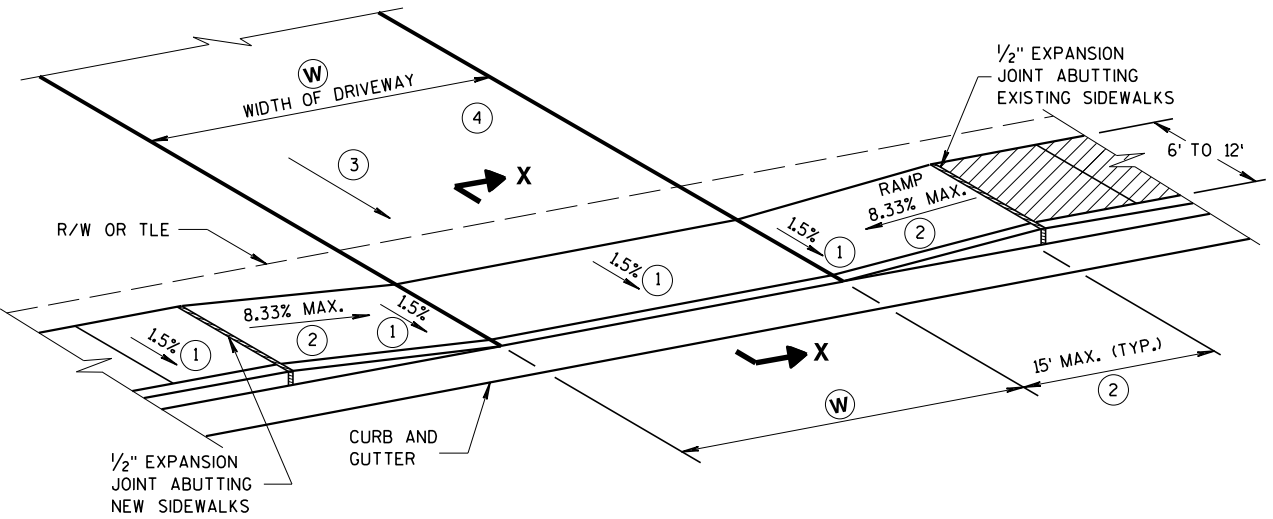
DATE

FHWA

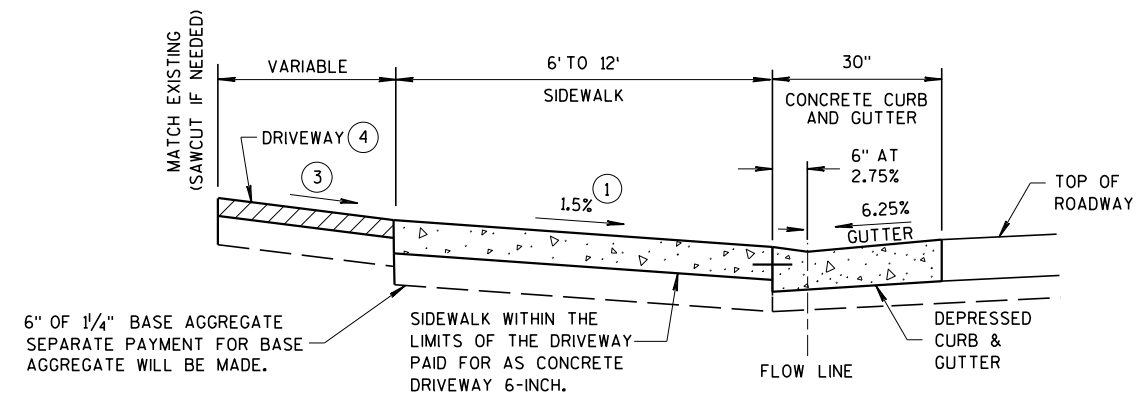
/S/ Rodney Taylor

ROADWAY STANDARDS DEVELOPMENT

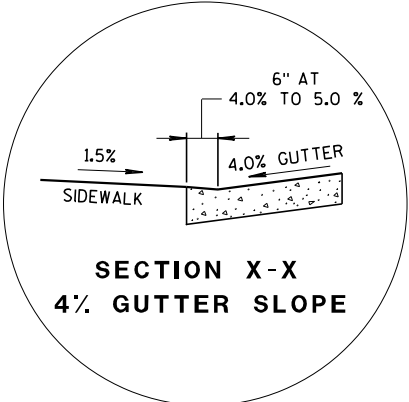
UNIT SUPERVISOR



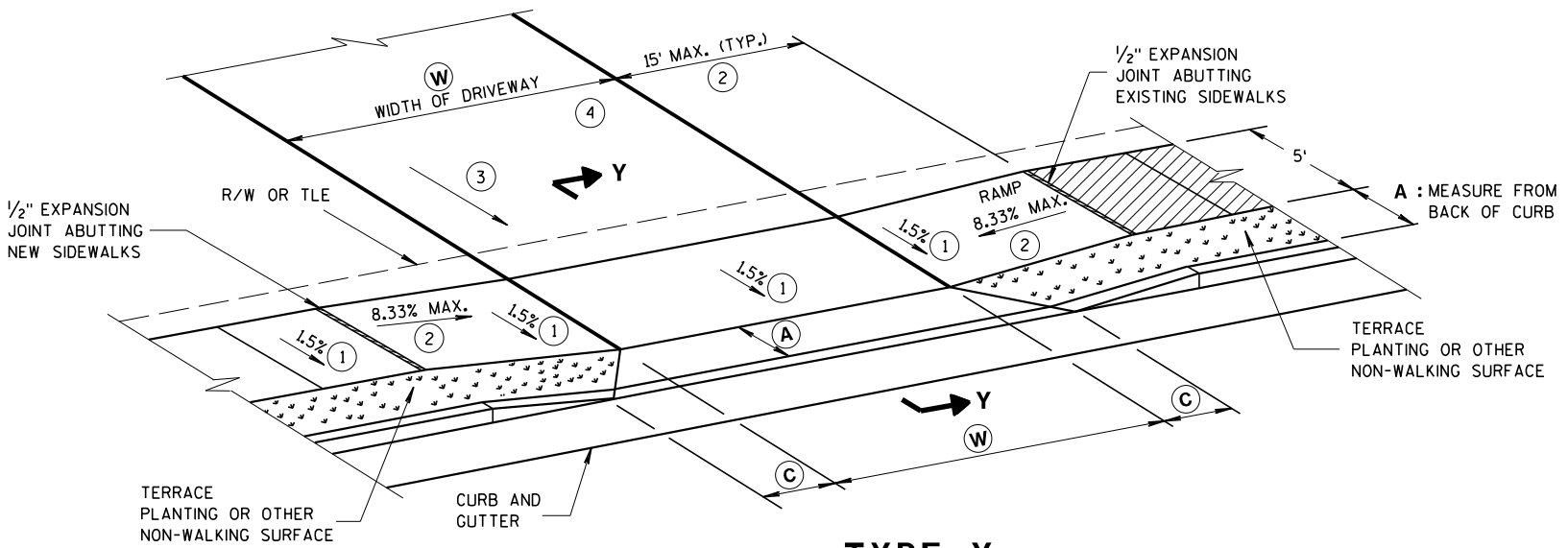
TYPE X
SIDEWALK ABUTS CURB & GUTTER
TERRACE VARIES 0 TO 3 FEET



SECTION X-X



SECTION X-X
4% GUTTER SLOPE



TYPE Y
SIDEWALK WITH NARROWER TERRACE
TERRACE VARIES 4 TO 6 FEET

W: 12' MIN. - 24' MAX. RESIDENTIAL AND NON-COMMERCIAL (PE & FE)
16' MIN. - 35' MAX. COMMERCIAL (CE)

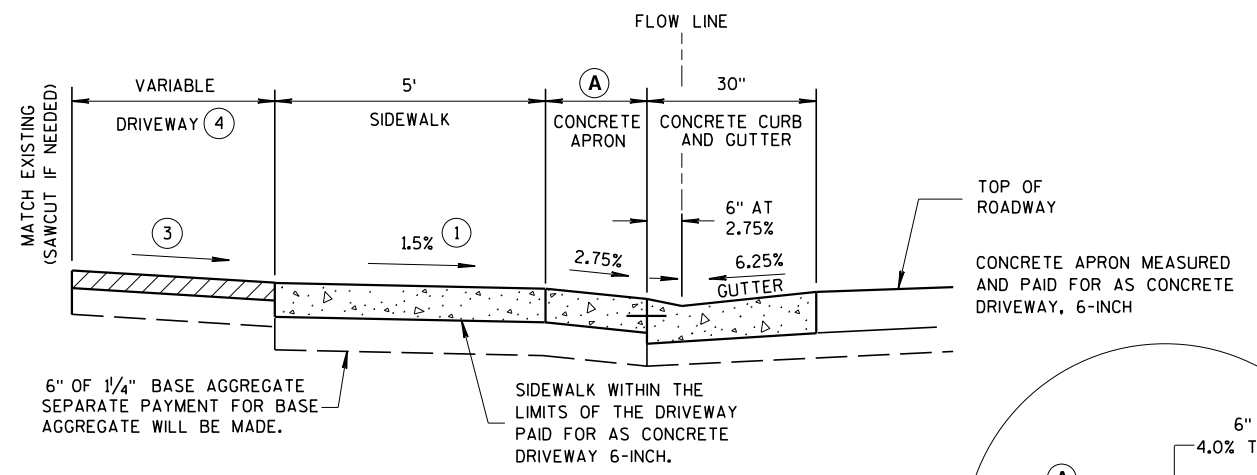
GENERAL NOTES

PROVIDE CONSTRUCTION JOINTS ALONG THE CENTER OF THE CONCRETE FOR DRIVEWAYS UNDER 20 FEET IN WIDTH AND AT THE THIRD POINTS OVER 20 FEET IN WIDTH.

W IS SHOWN ON PLAN AND PROFILE SHEETS.

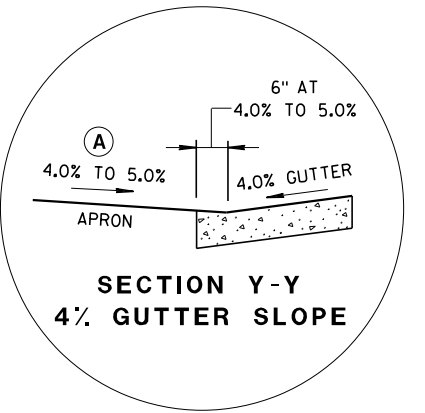
OFFSETS, ELEVATIONS, AND PERCENT GRADE ARE SHOWN ON THE CROSS SECTIONS.

- 1 CONSTRUCTION TOLERANCE OF 0.5% ± FOR SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2%.
- 2 THE SIDEWALK RAMP MAXIMUM RUNNING SLOPE SHALL NOT REQUIRE THE RAMP LENGTH TO EXCEED 15 FEET TO AVOID CHASING THE SLOPE INDEFINITELY WHEN CONNECTING TO STEEP GRADES. WHEN APPLYING THE 15 FOOT MAXIMUM LENGTH, THE RUNNING SLOPE OF THE SIDEWALK SHALL BE AS FLAT AS FEASIBLE AND NOT EXCEED THE LONGITUDINAL GRADE OF THE ROADWAY. SLOPE SIDEWALK RAMP TOWARD APRON AS SHOWN WHERE THERE IS NO TERRACE OR WHERE THE TERRACE WIDTH IS LESS THAN 6 FEET WIDE.
- 3 DRIVEWAY SLOPES: DESIRABLE MAXIMUM
10.5% UP AWAY FROM SIDEWALK (SAG)
8.5% DOWN AWAY FROM SIDEWALK (CREST)
ABSOLUTE MAXIMUM 15% FOR BOTH CREST AND SAG
- 4 DRIVEWAY TYPES
 - 6-INCH CONCRETE DRIVEWAY PAVEMENT OVER 6-INCH BASE AGGREGATE
 - 2-INCH TO 3-INCH ASPHALTIC SURFACE OVER 6-INCH BASE AGGREGATE
 - 6-INCH BASE AGGREGATE (MAY BE INCREASED FOR CLAY SUBGRADES)



NOTE: SIDEWALK MAY BE DEPRESSED IN DRIVEWAY AREAS

SECTION Y-Y
DRIVEWAY DETAIL
WITH CONCRETE CURB & GUTTER
(URBAN AND SUBURBAN)



SECTION Y-Y
4% GUTTER SLOPE

TABLE Y

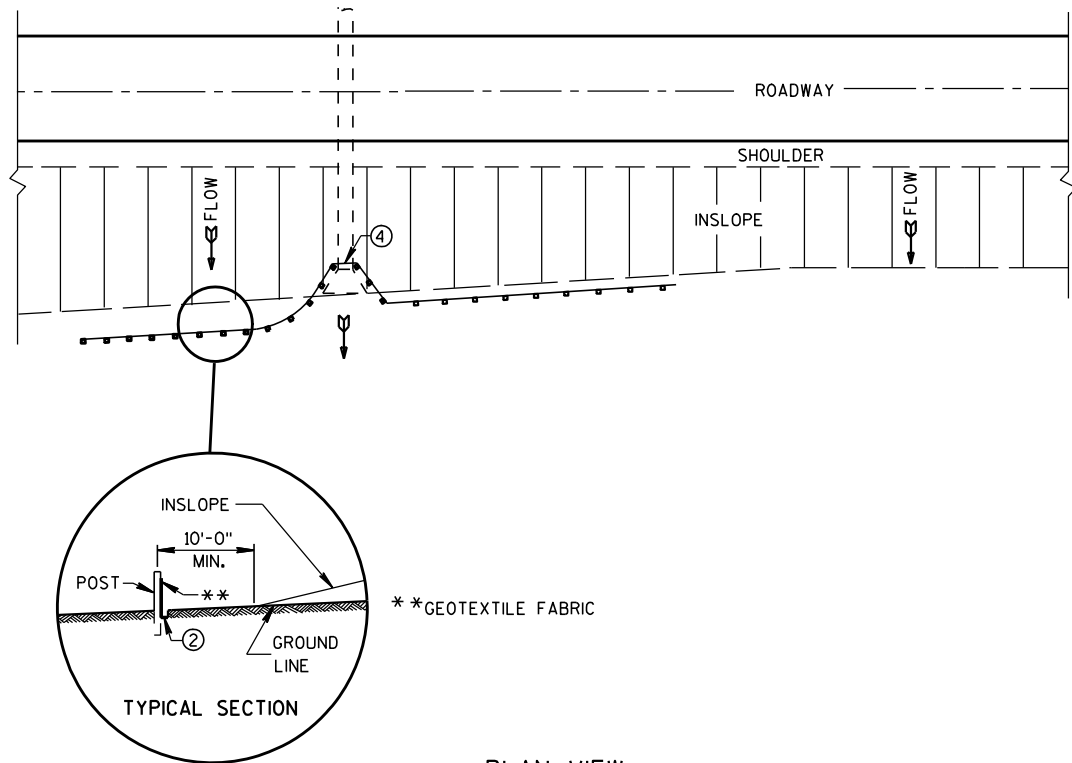
A FEET	C FEET
3.5'	2.0'
4.5'	3.0'
5.5'	3.5'

NOT TO SCALE

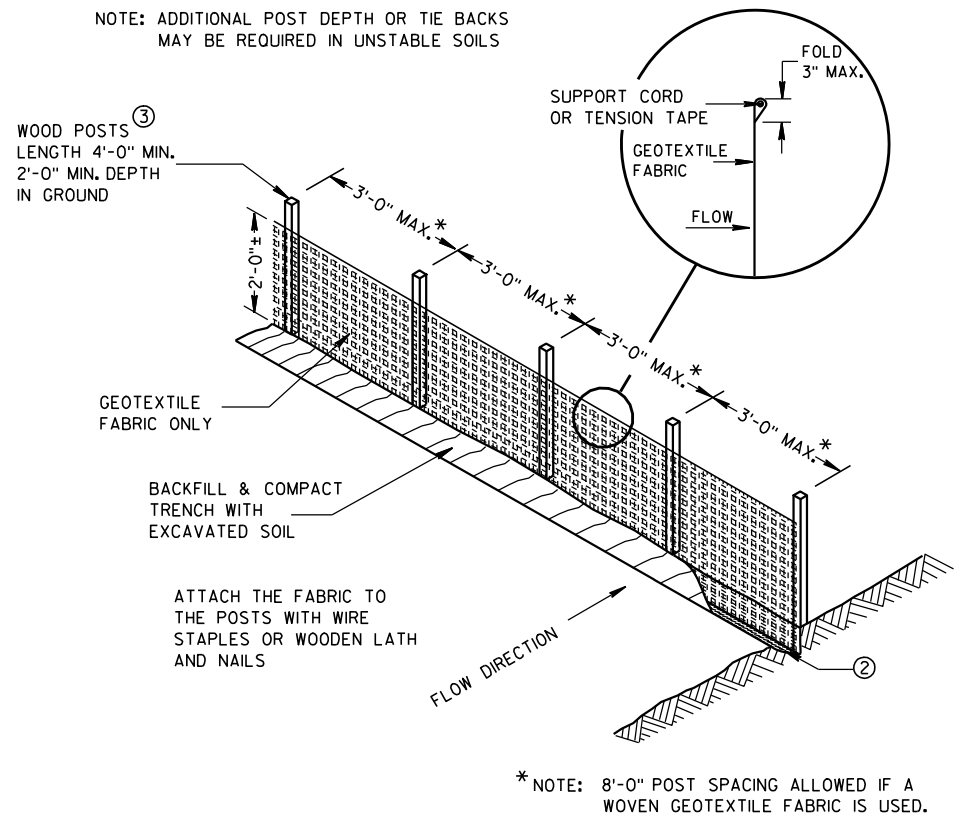
DRIVEWAY AND SIDEWALK
RAMPS
TYPES X & Y

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

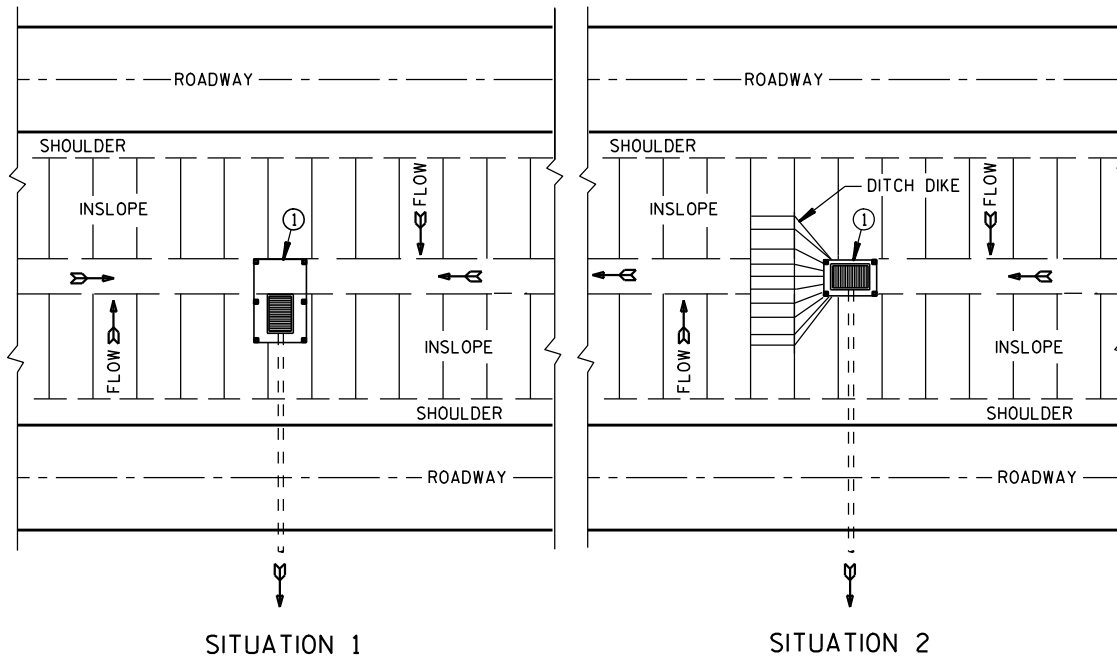
APPROVED
March 2018 /S/ Rodney Taylor
DATE ROADWAY STANDARDS DEVELOPMENT
FHWA UNIT SUPERVISOR



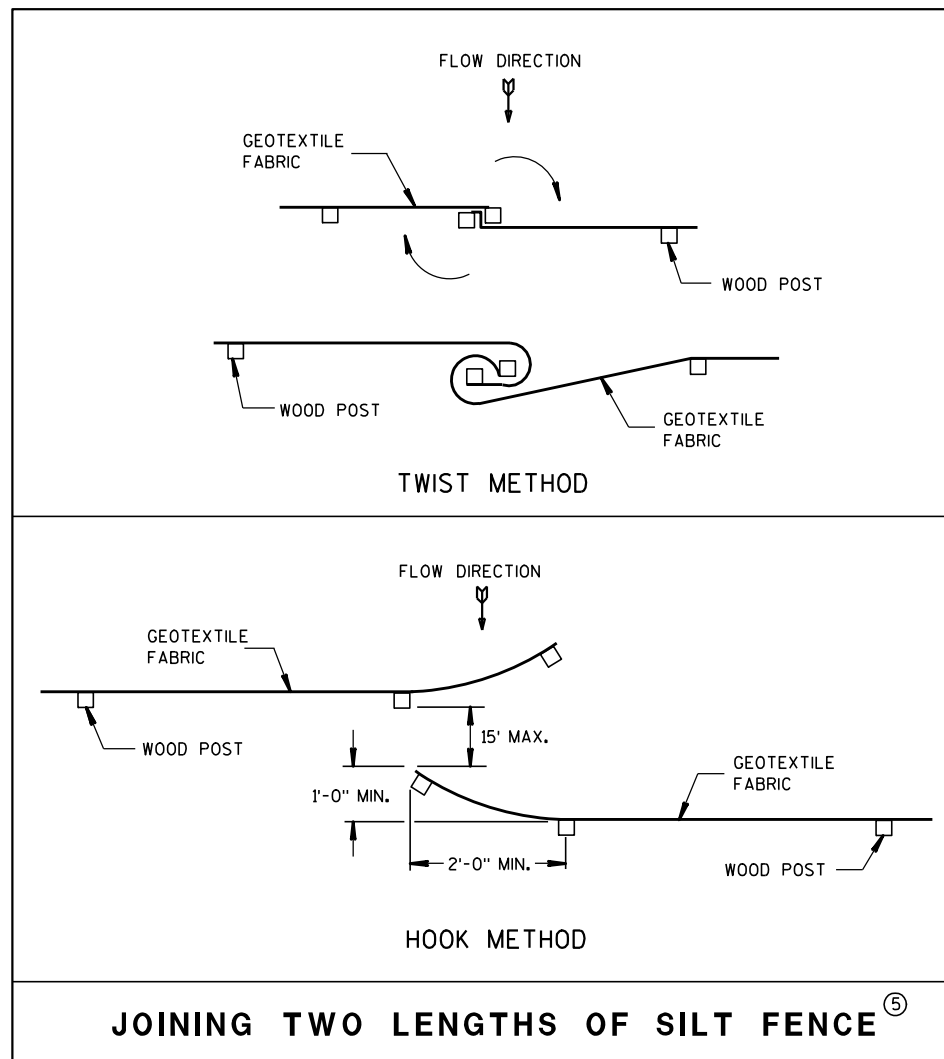
PLAN VIEW
TYPICAL APPLICATION OF SILT FENCE



SILT FENCE



SITUATION 1
SITUATION 2
PLAN VIEW
SILT FENCE AT MEDIAN SURFACE DRAINS

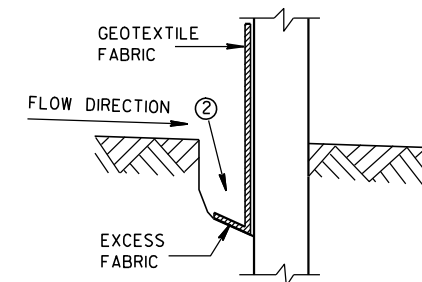


JOINING TWO LENGTHS OF SILT FENCE (5)

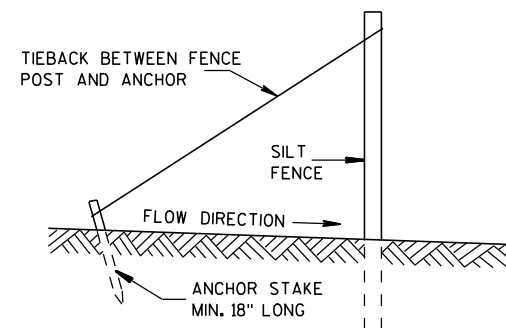
GENERAL NOTES

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 1 1/8" X 1 1/8" 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

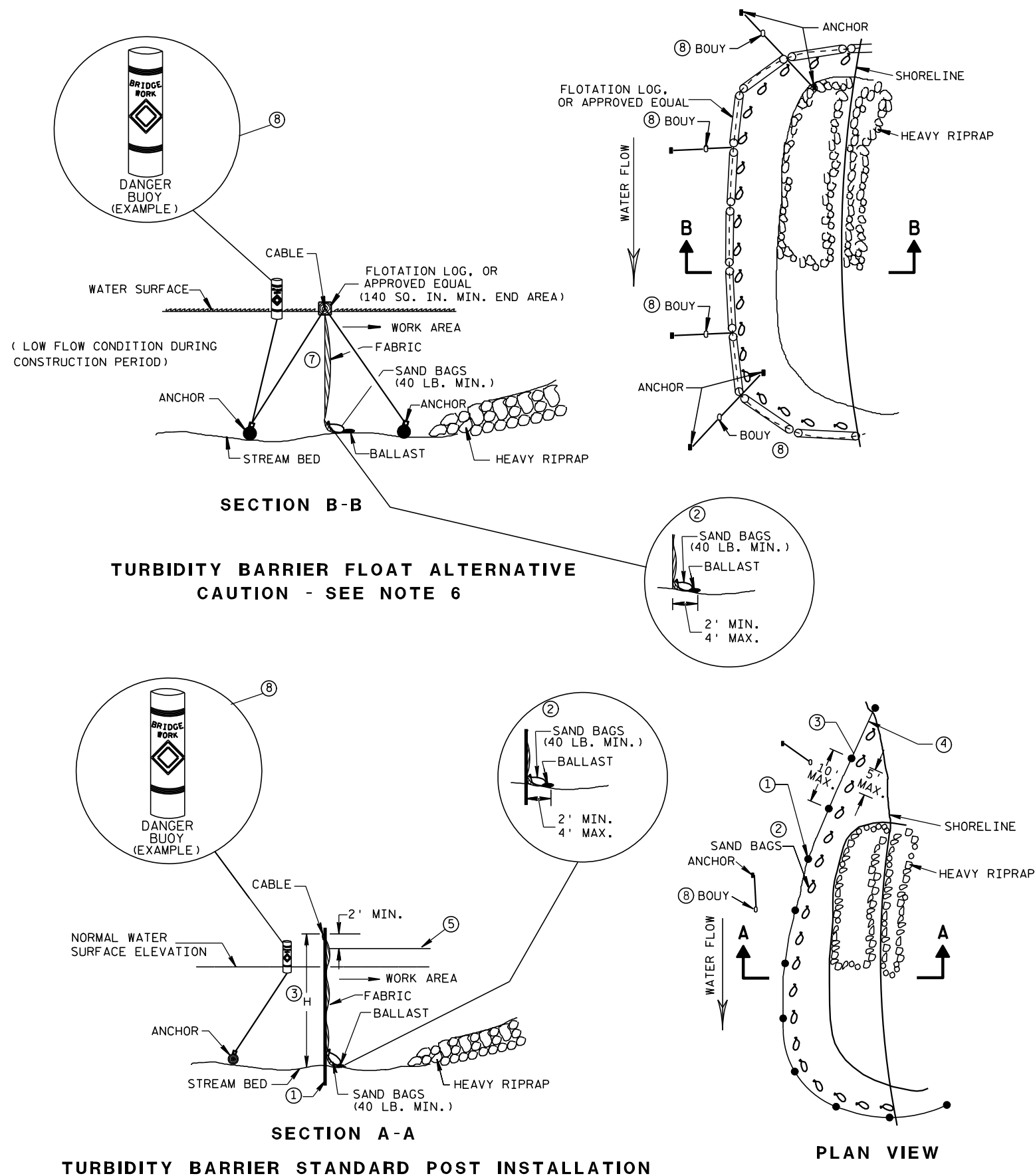


SILT FENCE TIE BACK
(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

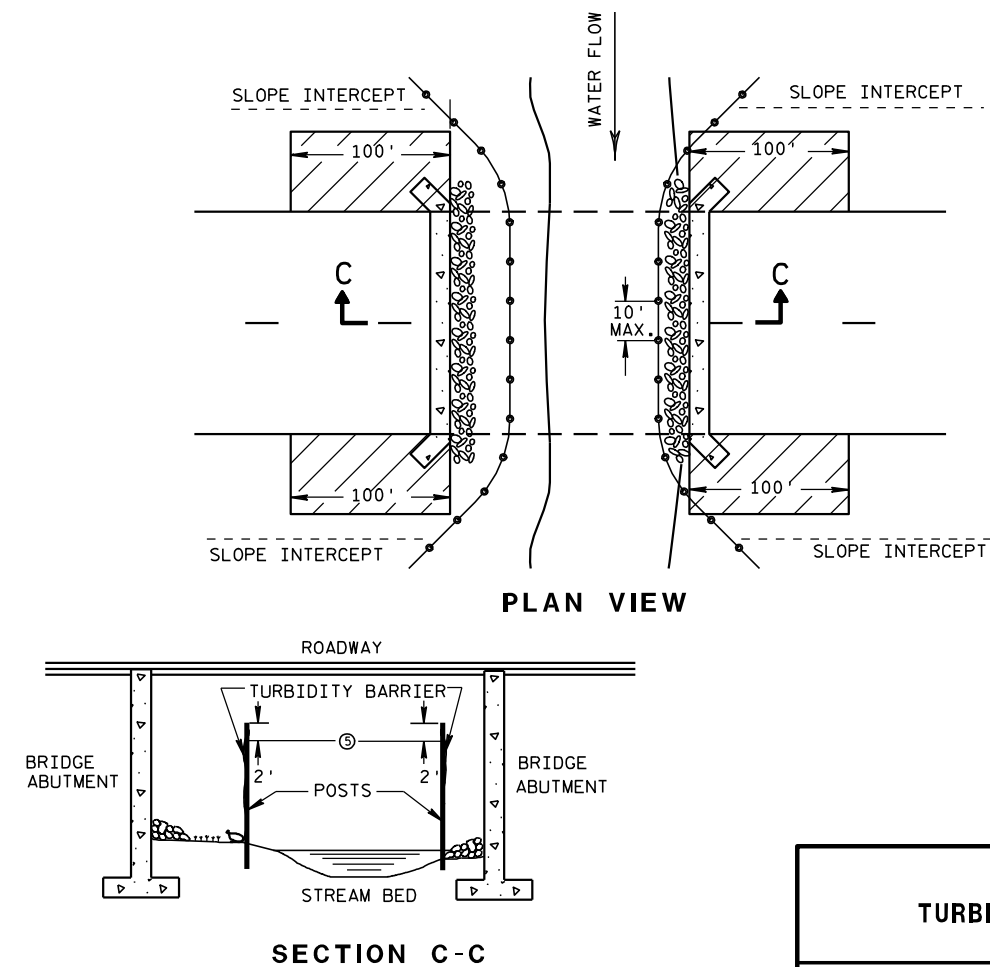


GENERAL NOTES

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. MINIMUM BARRIER HEIGHT SHALL BE 2' GREATER THAN EITHER THE 02 ELEVATION OR THE ESTIMATED HIGH WATER ELEVATION DURING CONSTRUCTION, WHICHEVER 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.



TURBIDITY BARRIER DETAIL SHOWING TYPICAL PLACEMENT AT STRUCTURES

TURBIDITY BARRIER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

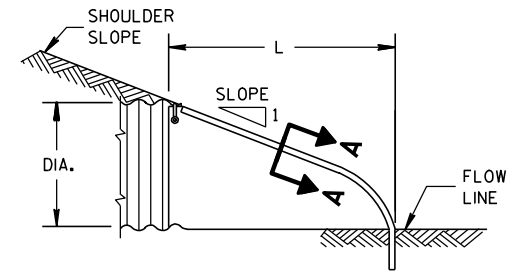
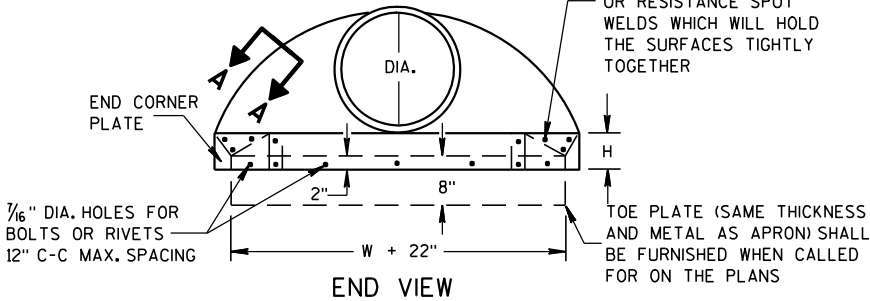
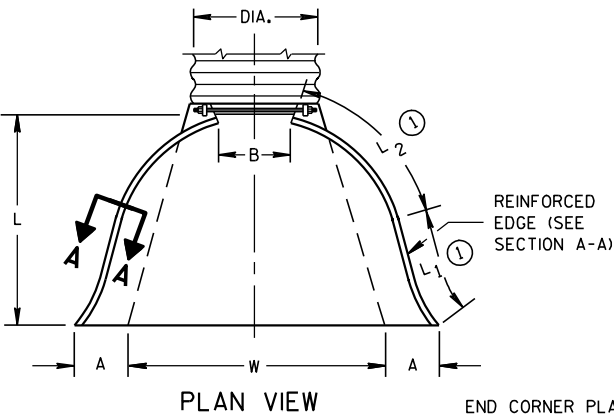
6/04/02
DATE

FHWA

/S/ Beth Canestra
CHIEF ROADWAY DEVELOPMENT ENGINEER

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

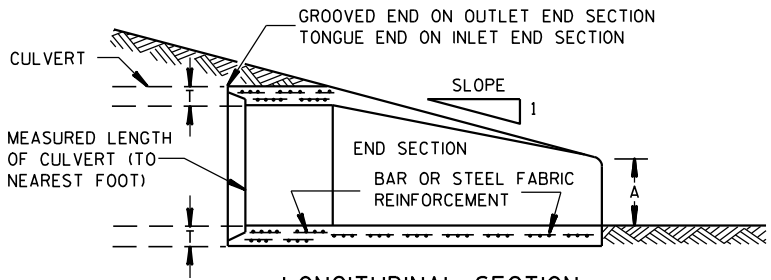
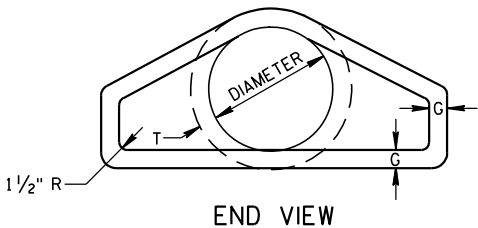
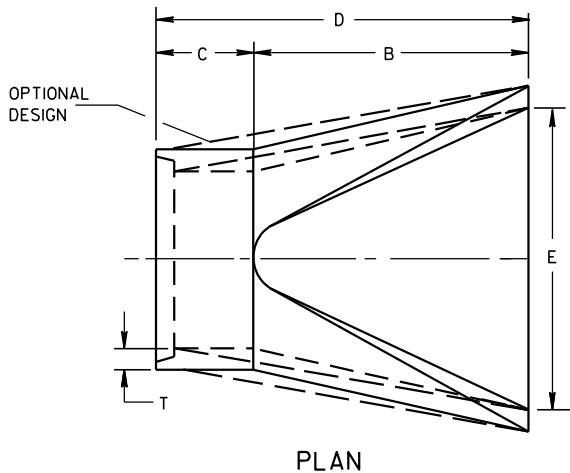
* EXCEPT CENTER PANEL
SEE GENERAL NOTES



METAL ENDWALLS

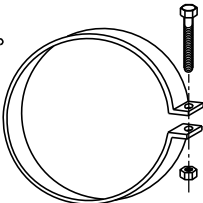
REINFORCED CONCRETE APRON ENDWALLS											
PIPE DIA. (IN.)	DIMENSIONS (Inches)							APPROX. SLOPE			
	T	A	B	C	D	E	G				
12	2	4	24	48 1/8	72 1/8	24	2	3 to 1			
15	2 1/4	6	27	46	73	30	2 1/4	3 to 1			
18	2 1/2	9	27	46	73	36	2 1/2	3 to 1			
21	2 3/4	9	36	37 1/2	73 1/2	42	2 3/4	3 to 1			
24	3	9 1/2	43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

* MINIMUM
** MAXIMUM

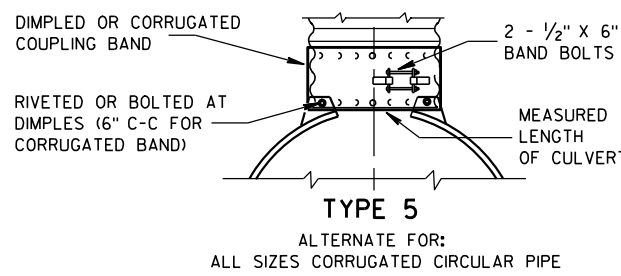
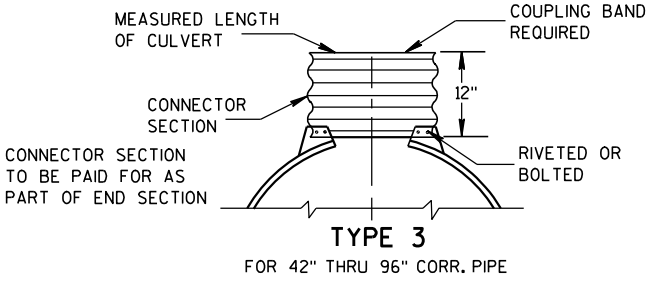
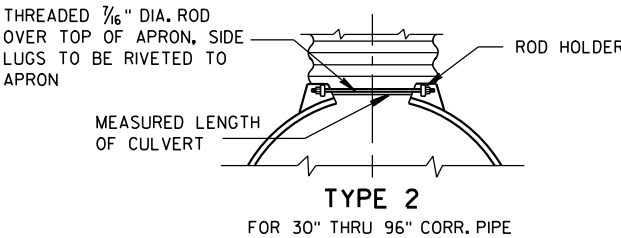
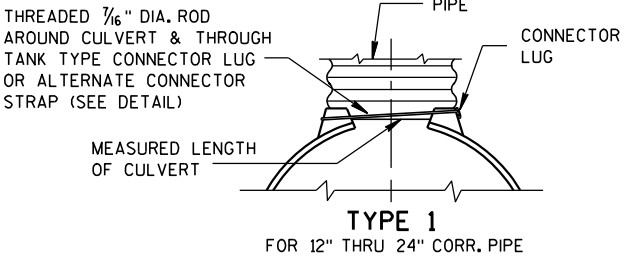


CONCRETE ENDWALLS

1" WIDE, 12 GA. (0.109" THICK) GALVANIZED STRAP WITH STANDARD 6" X 1/2" BAND BOLT AND NUT



ALTERNATE FOR TYPE 1 CONNECTION
END SECTION CONNECTOR STRAP



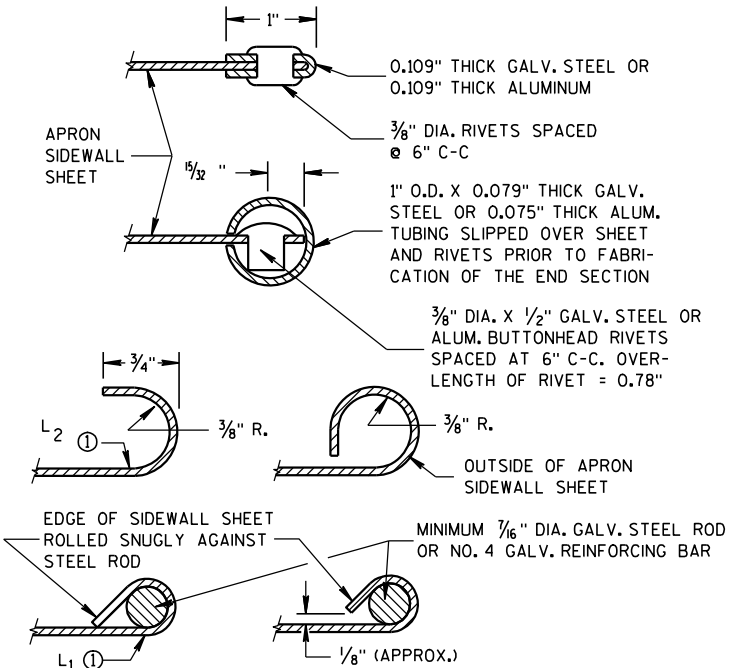
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL, AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

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

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

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

CONNECTION DETAILS



SECTION A-A

GENERAL NOTES

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

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

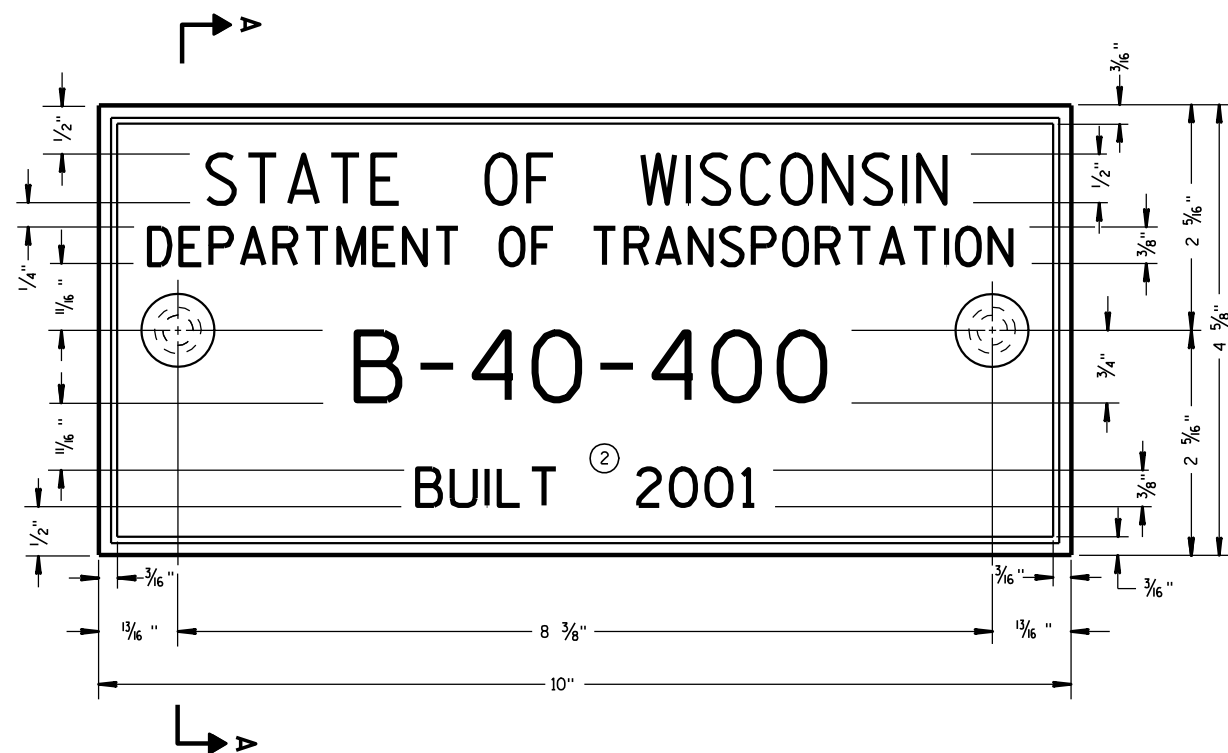
ALL THREE PIECE STEEL APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.109" SIDES AND 0.138" CENTER PANELS. ALL THREE PIECE ALUMINUM APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.105" SIDES AND 0.134" CENTER PANELS. THE WIDTH OF CENTER PANELS SHALL BE GREATER THAN 20 PERCENT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

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

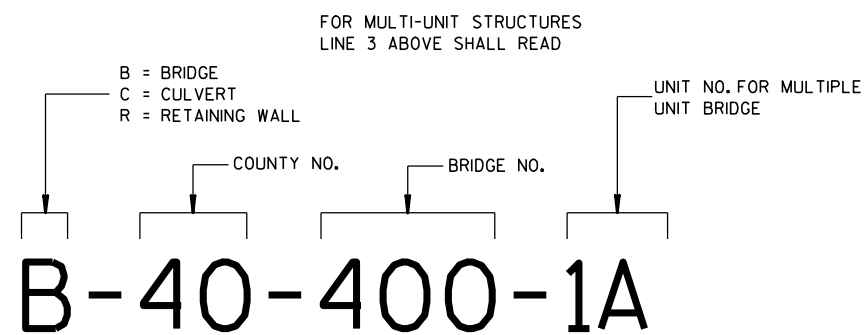
WHERE TWO OR MORE PIPES WITH APRON ENDWALLS ARE LAID ADJACENT TO EACH OTHER, THEY SHALL BE SEPARATED BY A DISTANCE SUFFICIENT TO PROVIDE A MINIMUM CLEARANCE OF 6 INCHES BETWEEN APRON ENDWALLS.

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

APRON ENDWALLS FOR CULVERT PIPE	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 11/30/94 DATE	/S/ Rory L. Rhinesmith CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA	



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



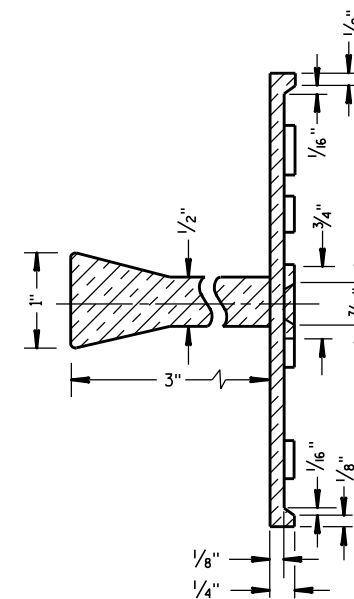
**NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES**

GENERAL NOTES

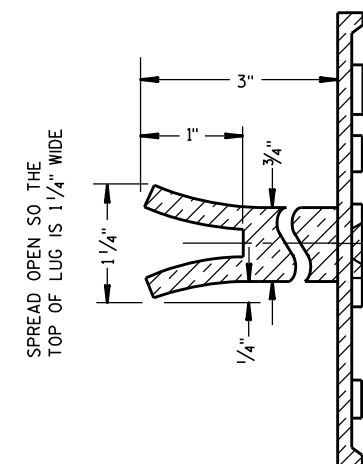
NAME PLATES TO BE INSTALLED ON BRIDGES, CULVERTS, AND RETAINING WALLS SHALL CONFORM TO THE REQUIREMENTS OF SECTION 502.3.11 OF THE STANDARD SPECIFICATIONS.

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.

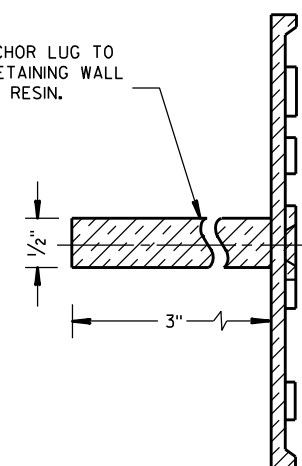


SECTION A-A



ALTERNATE LUG

- 1 ADHERE ANCHOR LUG TO PRECAST RETAINING WALL WITH EPOXY RESIN.



ALTERNATE LUG
(FOR ATTACHMENT TO PRECAST STRUCTURES)

**NAME PLATE
(STRUCTURES)**

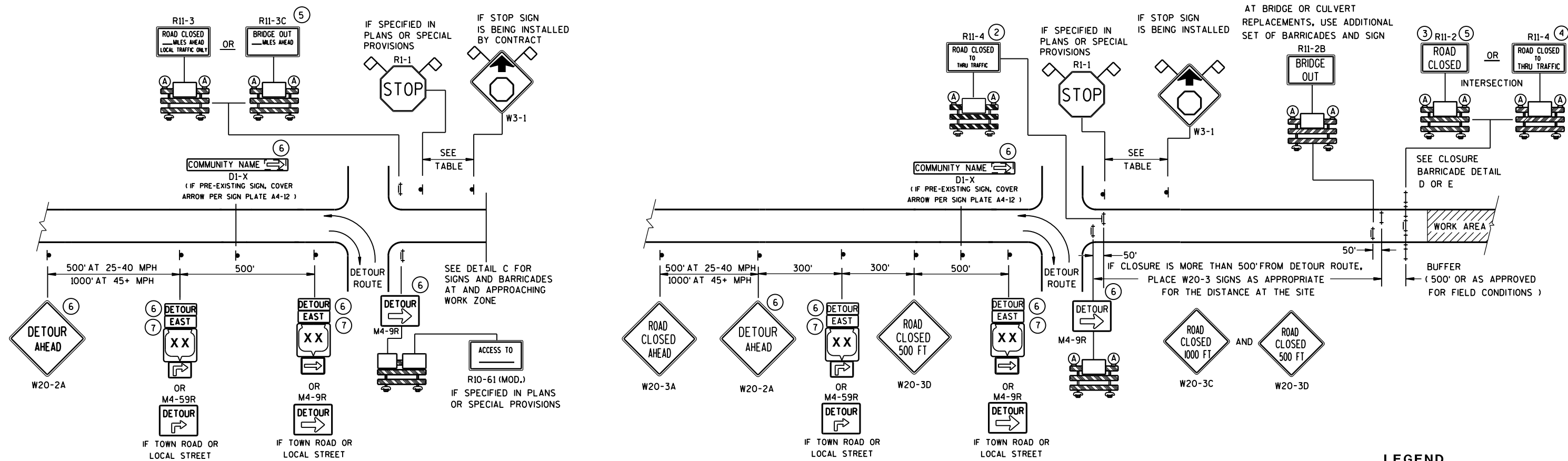
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

3/26/10
DATE

FHWA

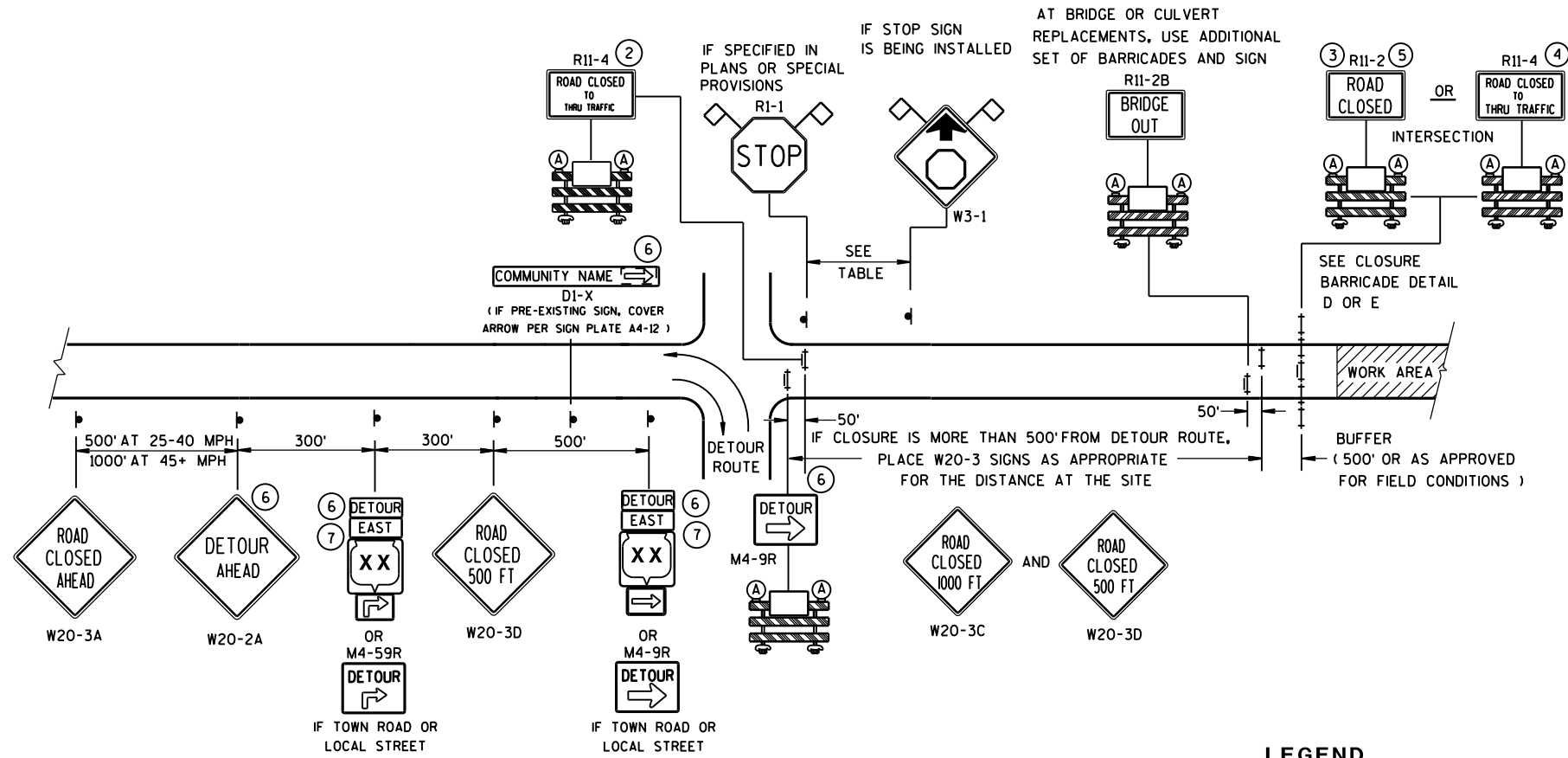
/S/ Scot Becker
CHIEF STRUCTURAL DEVELOPMENT ENGINEER



DETAIL A

MAINLINE CLOSURE WITH POSTED DETOUR

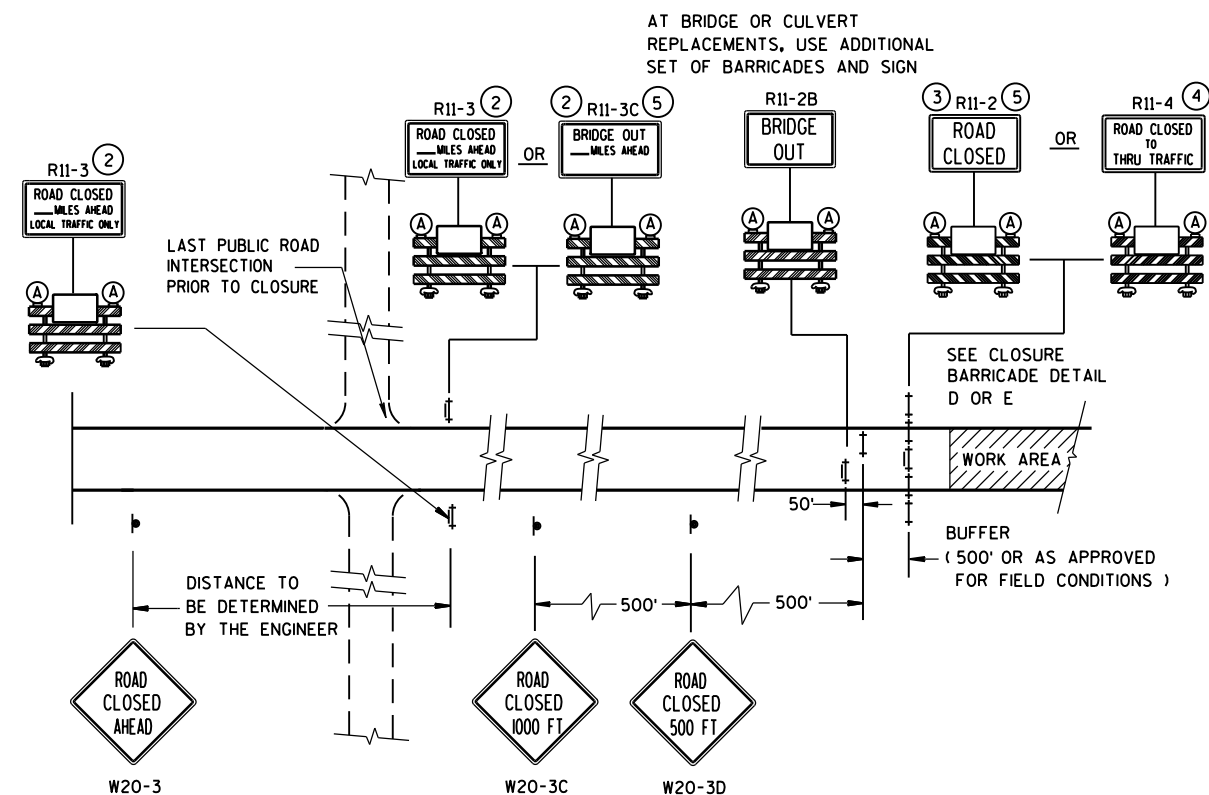
WORK ZONE GREATER THAN 1/2 MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)



DETAIL B

MAINLINE CLOSURE WITH POSTED DETOUR

WORK ZONE LESS THAN 1/2 MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)



DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR

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

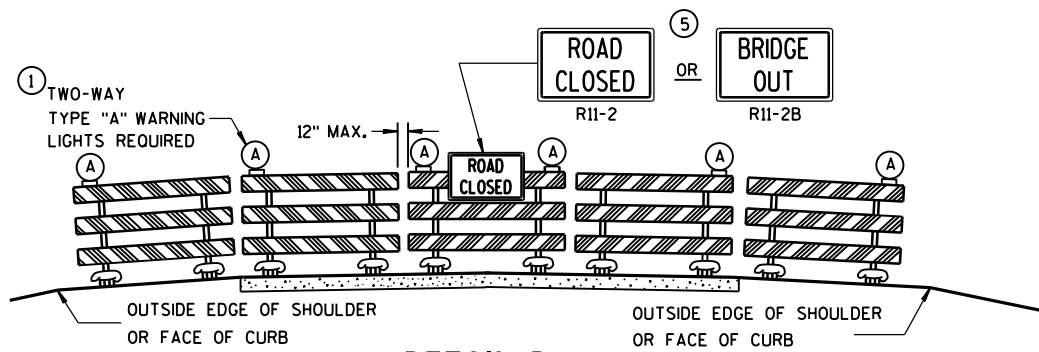
- # LEGEND
-  SIGN ON PERMANENT SUPPORT
-  TYPE III BARRICADE
-  TYPE III BARRICADE WITH ATTACHED SIGN
-  TYPE "A" WARNING LIGHT (FLASHING)
-  WORK AREA
-  M4-8
 M3-X
-  M1-4 OR  M1-5A OR  M1-6
-  M05-1 OR  M06-1
- FLAGS, 16" X 16" MIN., (ORANGE)

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

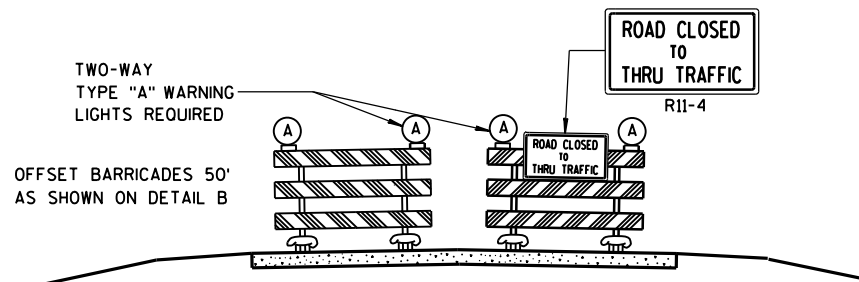
BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



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.

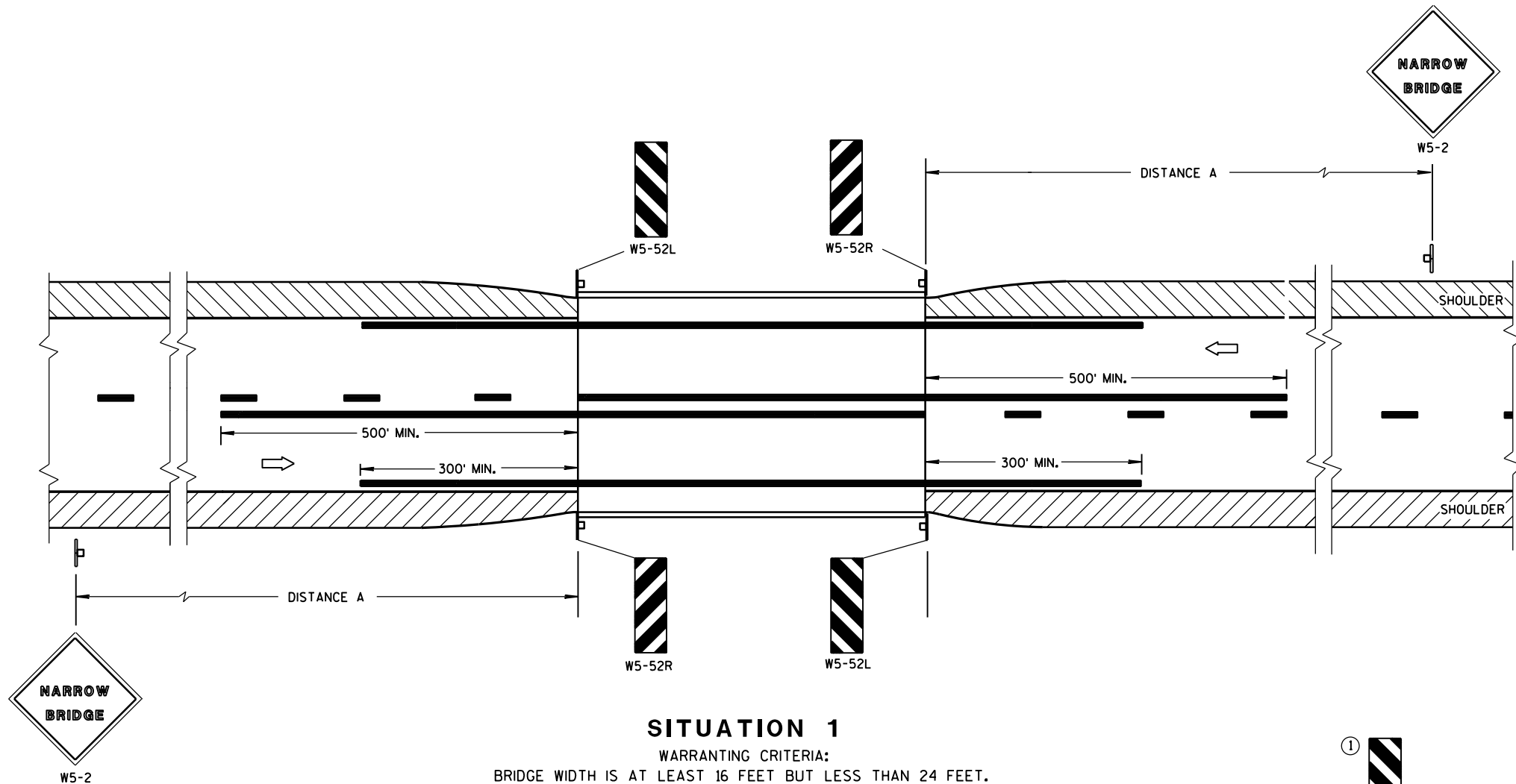
"WO AND "MO" SIGNS ARE THE SAME AS "W" AND "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

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 Amokobe Atepe STATEWIDE WORK ZONE TRAFFIC SAFETY ENGINEER
FHWA	



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

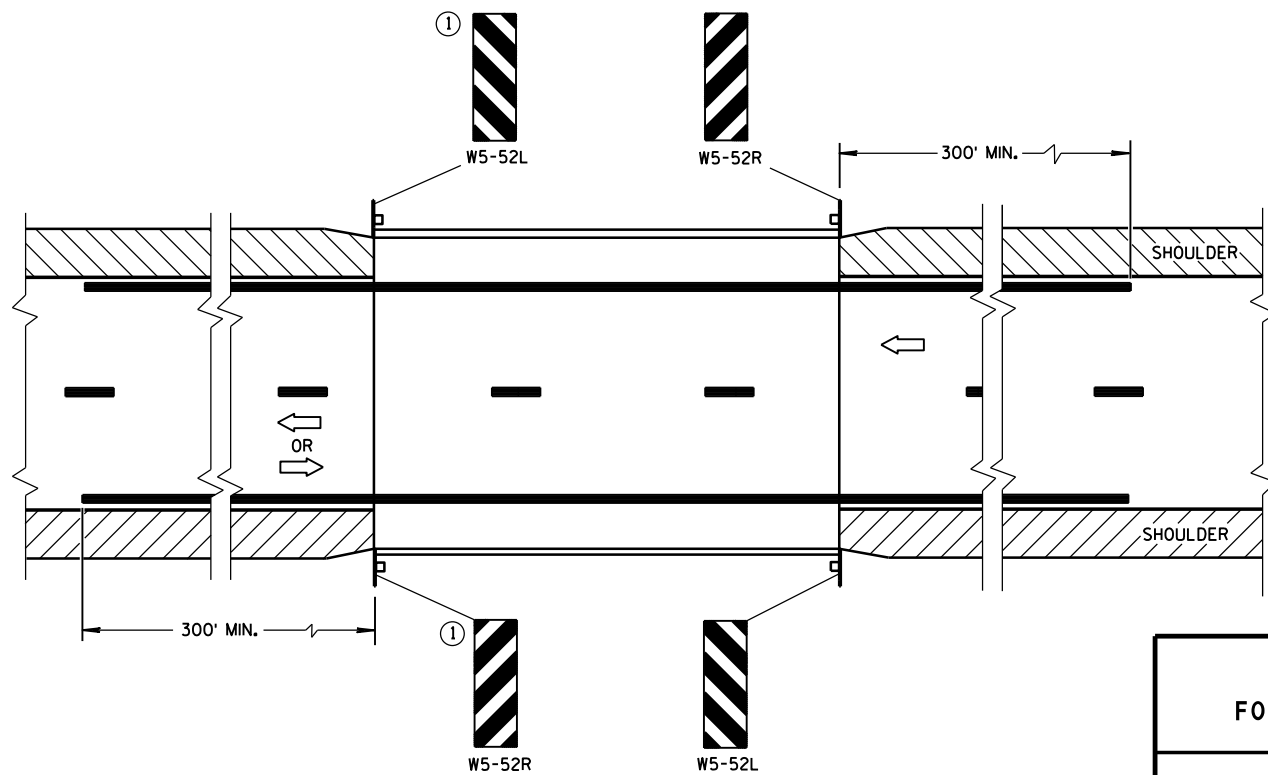
DETAILS OF TRAFFIC CONTROL DEVICES AND INSTALLATION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

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

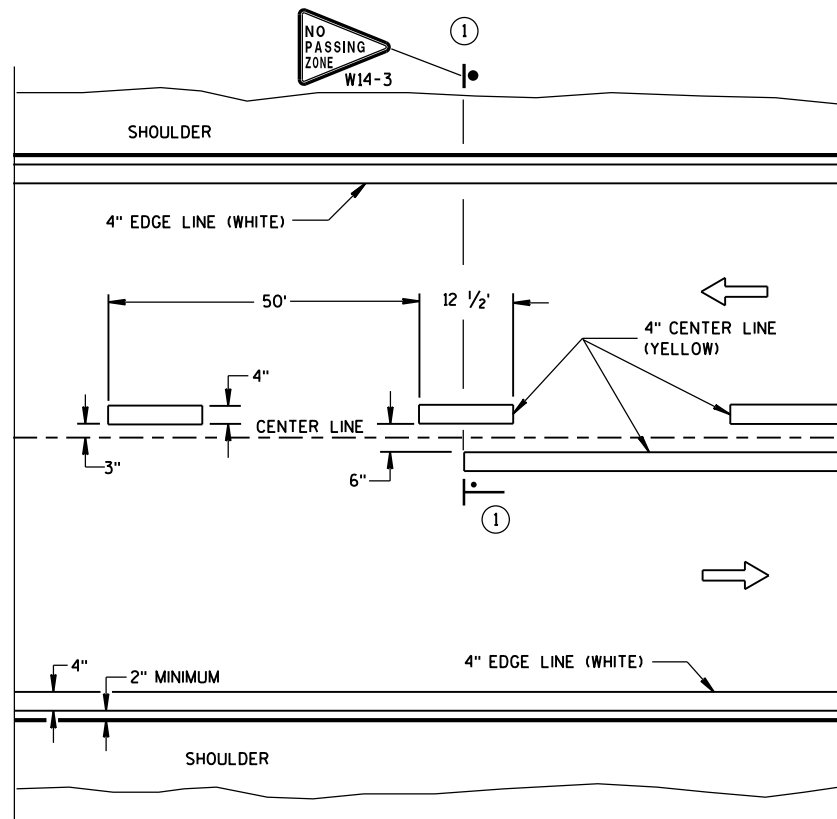
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

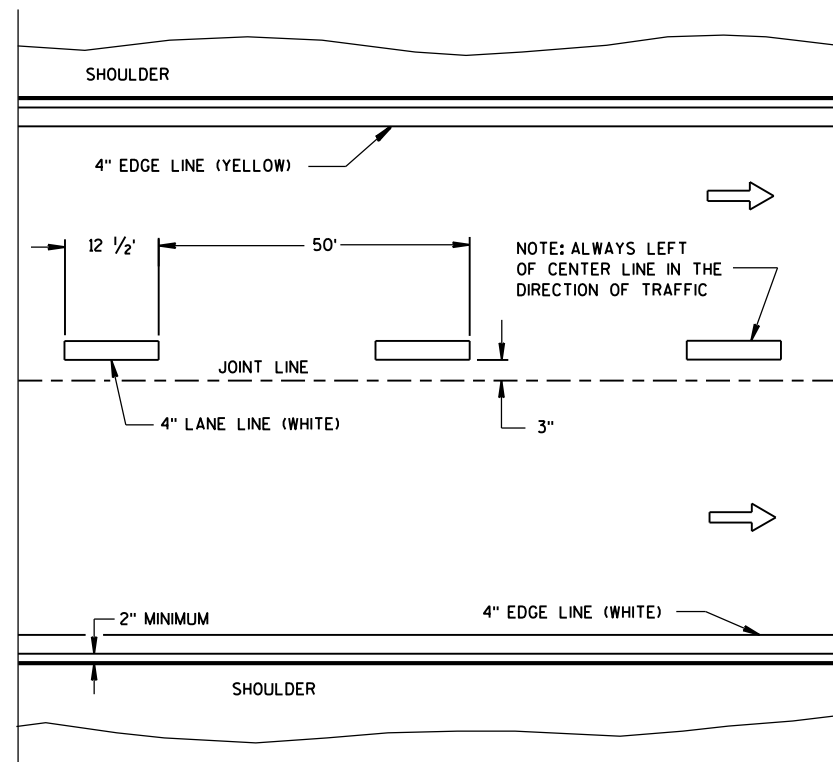
June 2017
DATE

/S/ Matthew R. Rauch
STATE SIGNING AND MARKING ENGINEER

FHWA

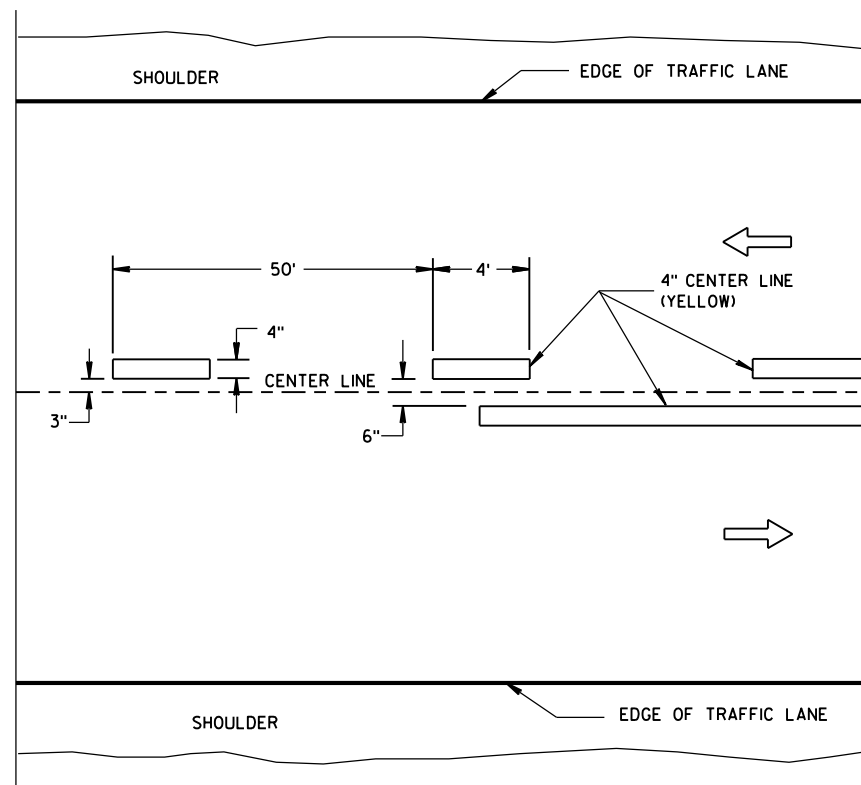


TWO WAY TRAFFIC

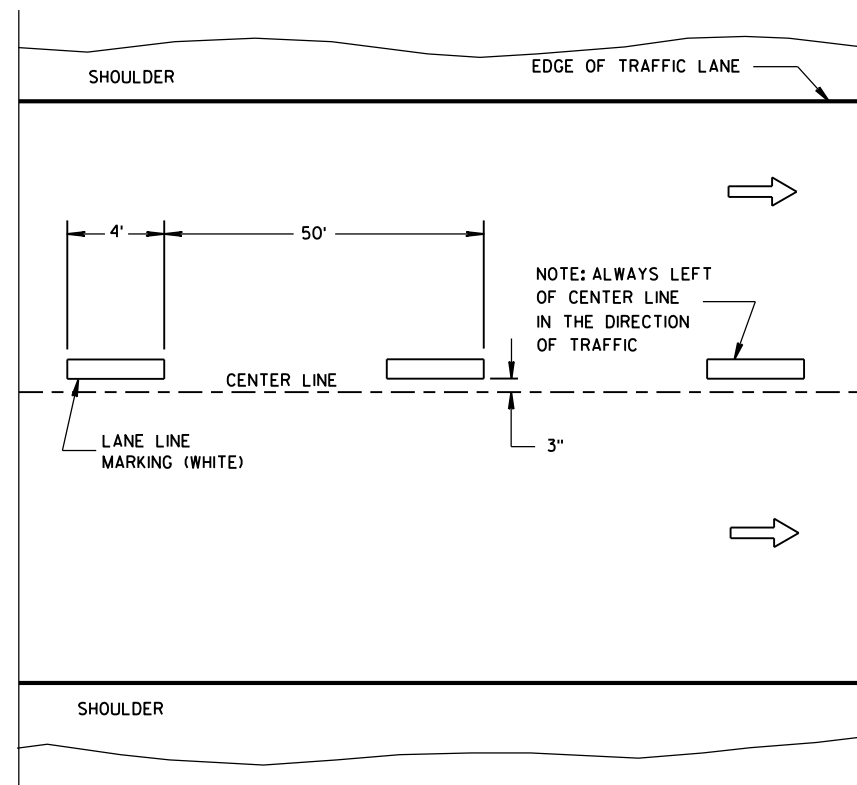


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY PAVEMENT MARKING

GENERAL NOTES

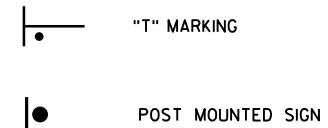
DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS.

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

NOTE

ARROW SYMBOL () SHOWS DIRECTION OF TRAVEL

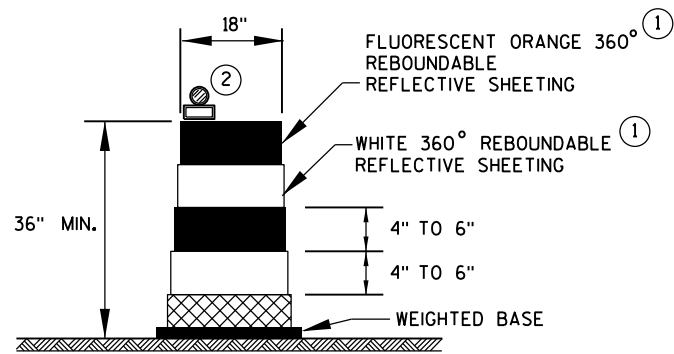
LEGEND



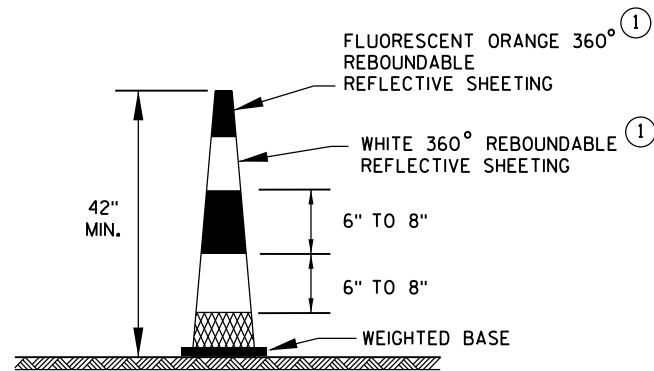
LONGITUDINAL MARKING (MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



DRUM

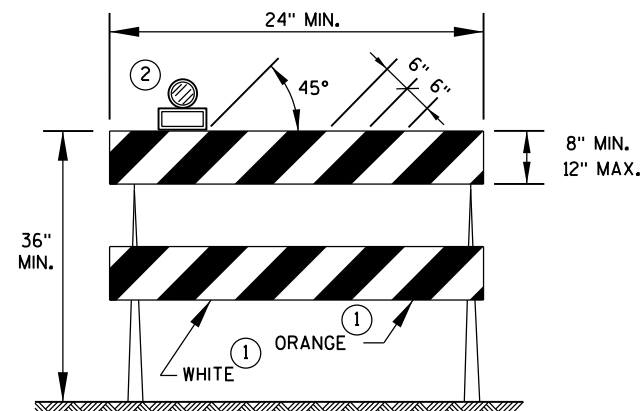


42" CONE

DO NOT USE IN TAPERS
1/2 SPACING OF DRUMS

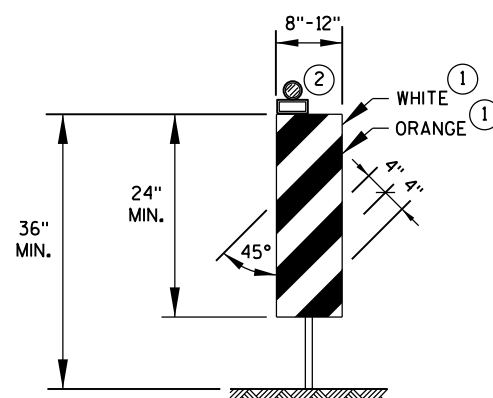
GENERAL NOTES

- ① REFLECTIVE SHEETING SHALL FOLLOW THE REQUIREMENTS IN THE APPROVED PRODUCTS LISTING FOR SIGN SHEETING.
- ② LOCATION OF WARNING LIGHTS WHEN SHOWN ON THE PLAN.



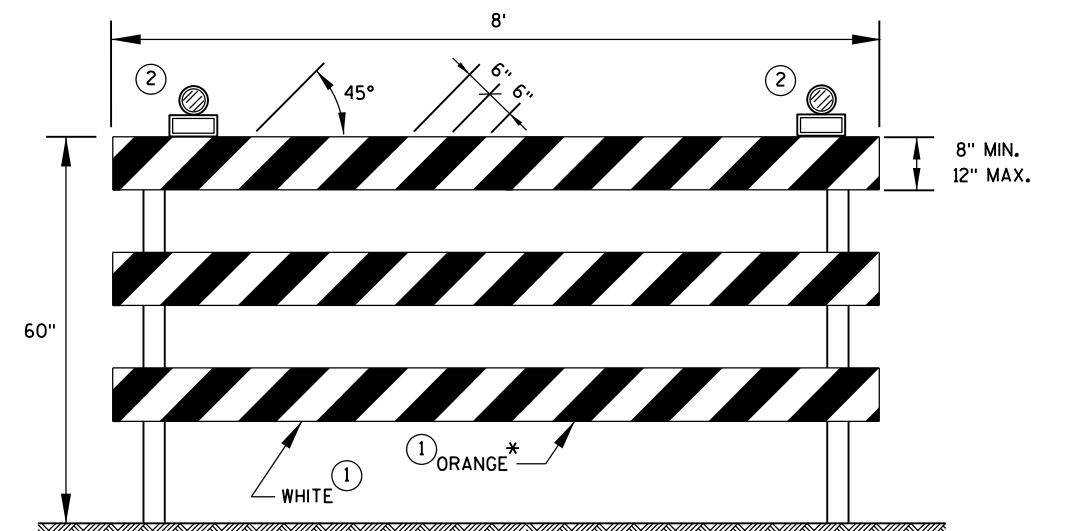
TYPE 2 BARRICADE

FOR RAILS LESS THAN 36" LONG, 4" WIDE STRIPES MAY BE USED.
ALL STRIPES SHALL SLOPE DOWNWARD TO THE TRAFFIC SIDE FOR CHANNELIZATION.



VERTICAL PANEL

THE STRIPES SHALL SLOPE DOWNWARD TO THE TRAFFIC SIDE FOR CHANNELIZATION.



TYPE 3 BARRICADE

IF SIGN MOUNTED, DO NOT COVER MORE THAN 50% OF THE TOP TWO RAILS OR 33% OF THE TOTAL AREA OF THE THREE RAILS.

* IF USED FOR A PERMANENT APPLICATION, USE RED SHEETING.

CHANNELIZING DEVICES
DRUMS, CONES, BARRICADES
AND VERTICAL PANELS

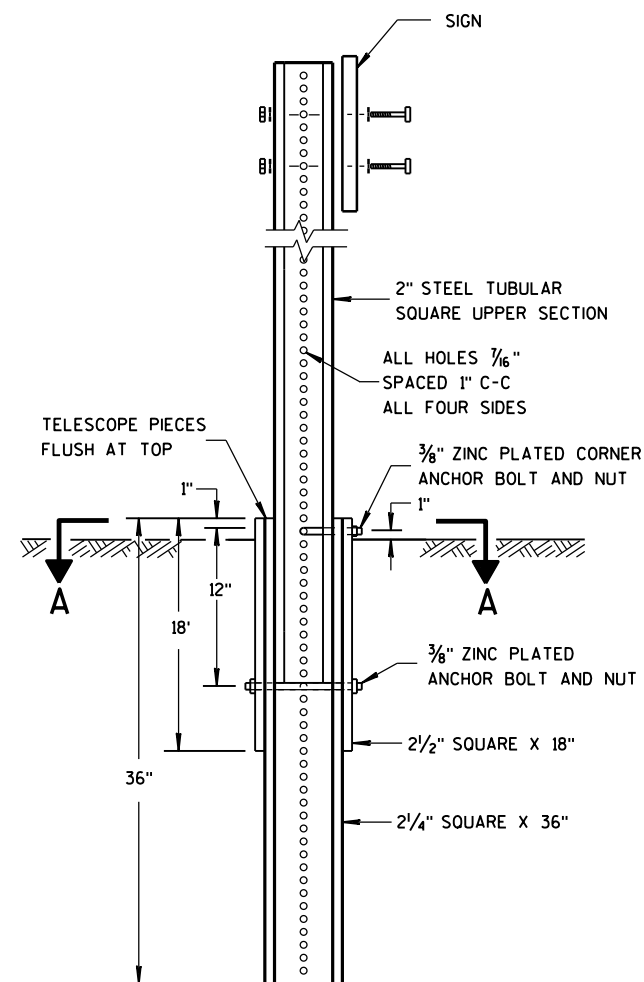
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

June 2017
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

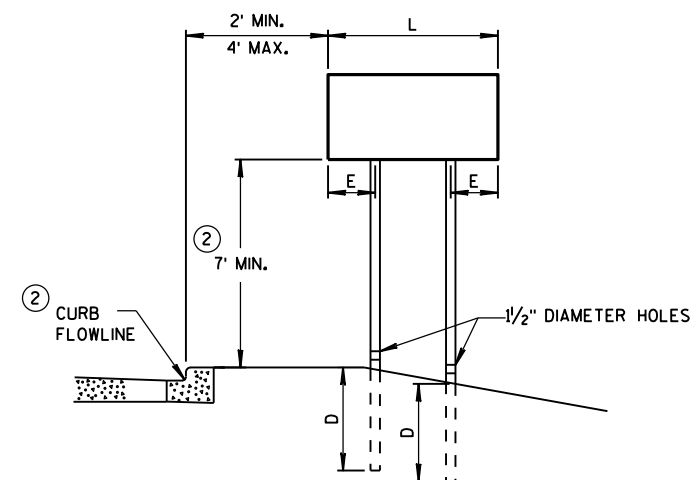
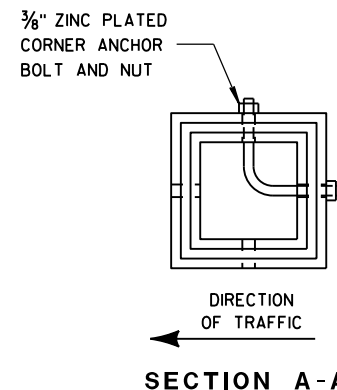


DETAIL OF TUBULAR STEEL SIGN POST

TUBULAR STEEL POSTS

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

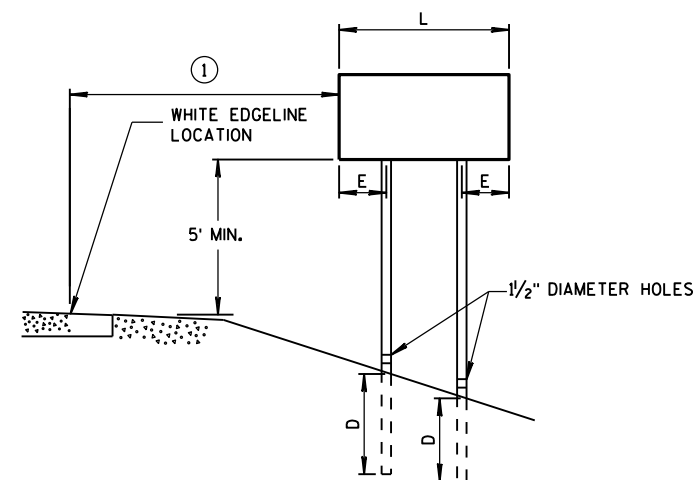
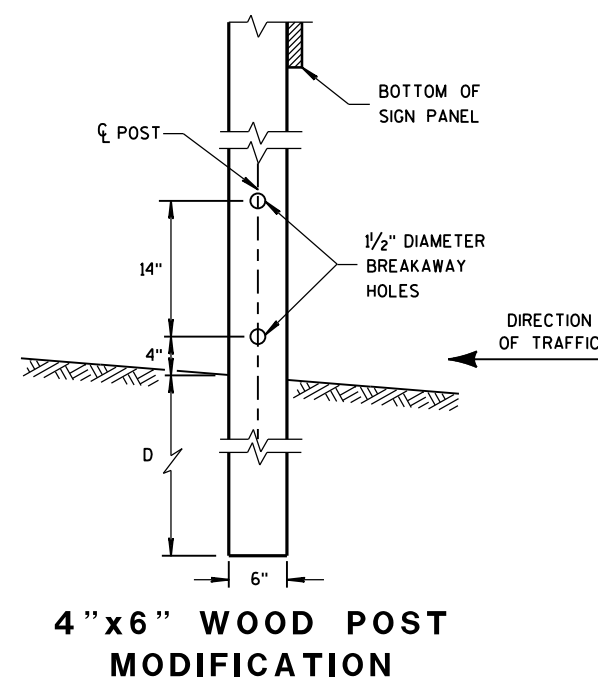
SIGNS WIDER THAN 3 FEET OR LARGER THAN 9 SQ. FT. SHALL BE MOUNTED ON MULTIPLE POSTS (SEE ABOVE TABLE).
SIGNS LARGER THAN 27 SQ. FT. SHALL NOT BE MOUNTED ON TUBULAR STEEL POSTS.



URBAN AREA

POST MOUNTING DETAIL FOR TEMPORARY TRAFFIC CONTROL FIXED MESSAGE SIGNS

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



RURAL AREA

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

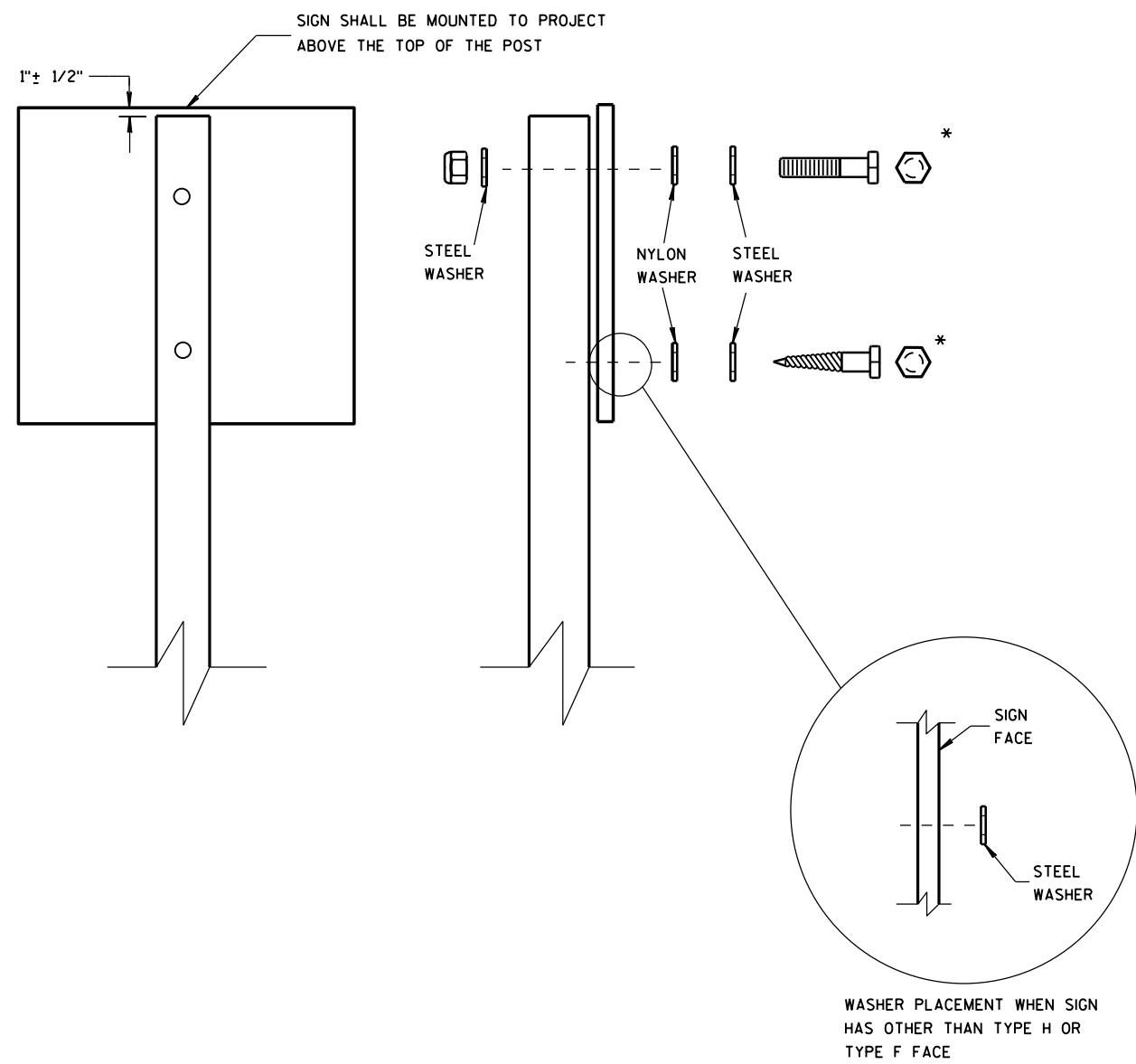
SEE NOTE ③

GENERAL NOTES

- ① 6 FEET FROM THE EDGE OF PAVEMENT (EDGE LINE LOCATION) UNLESS OTHERWISE DIRECTED BY THE PROJECT ENGINEER. LATERAL OFFSET SHOULD BE ADJUSTED TO AVOID THE DITCH FLOWLINE.
- ② THE EXISTENCE OF CURB AND GUTTER DOES NOT IN ITSELF MANDATE THE VERTICAL CLEARANCE ILLUSTRATED. THAT HEIGHT IS TYPICALLY MEASURED WHERE THERE IS SIDEWALK ADJACENT TO THE ROADWAY OR PARKING IS PERMITTED. IN THE ABSENCE OF SIDEWALK, VERTICAL CLEARANCE IS MEASURED FROM THE TOP OF THE CURB. IF NO SIDEWALK AND NO PARKING, VERTICAL CLEARANCE MAY BE REDUCED TO 5 FOOT MINIMUM. OFFSET OF SIGNS IS MEASURED FROM THE CURB FLOWLINE.
- ③ FOR SIGNS REQUIRING 4 POSTS, SPACE INTERMEDIATE POSTS EVENLY.

TEMPORARY TRAFFIC CONTROL SIGN MOUNTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



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

- A. HOT DIP GALVANIZED IN ACCORDANCE WITH ASTM DESIGNATION: A 153, CLASS D, OR SC 3
- B. ELECTRO-GALVANIZED IN ACCORDANCE WITH ASTM DESIGNATION: B 633, TYPE III, SC 3

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

- WOOD POSTS (4" x 4" or 4" x 6")
- LAG SCREWS - 3/8" x 3"
 - MACHINE BOLTS - 5/16" x 6-1/2" OR 7" LENGTH W/ NUTS

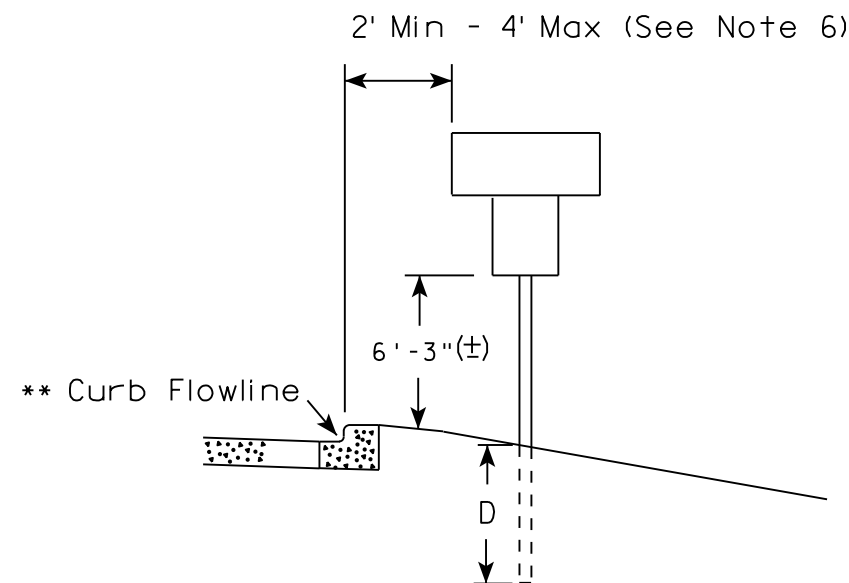
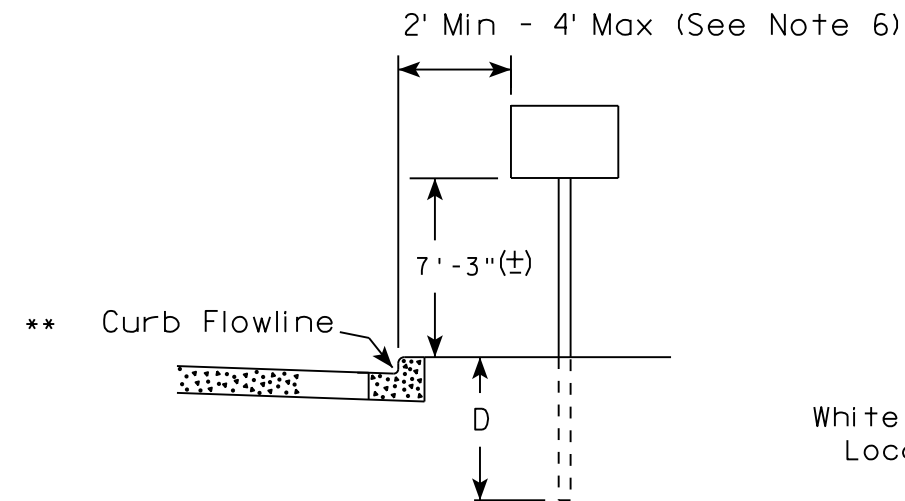
- SQUARE STEEL POSTS (2" x 2")
- MACHINE BOLTS - 3/8" x 3-1/4" LENGTH W/ NUTS
 - RIVETS - 9/32" (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH

- WASHERS (ALL POSTS) -
- 1-1/4" O.D. x 3/8" I.D. x 1/16" STEEL
 - 1-1/4" O.D. x 3/8" I.D. x .080 NYLON FOR ALL TYPE H SIGNS

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

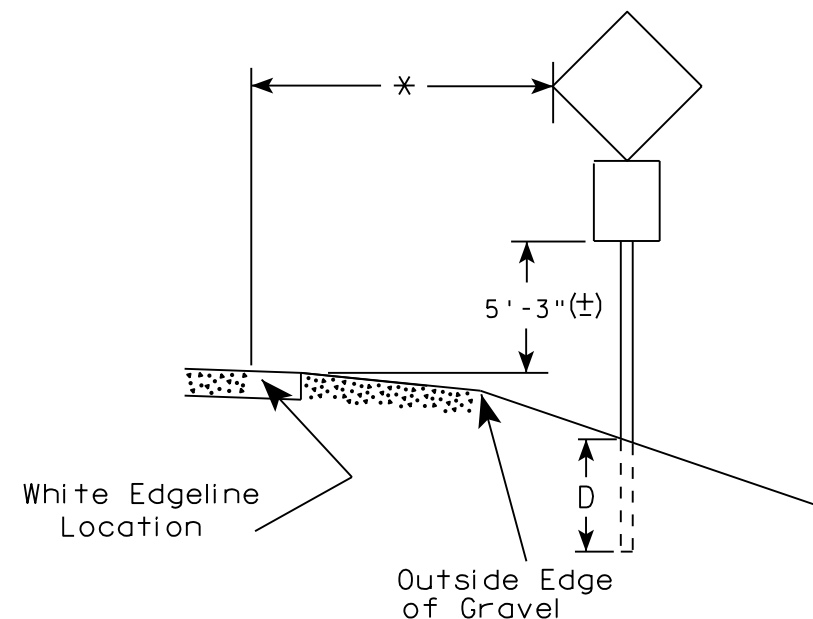
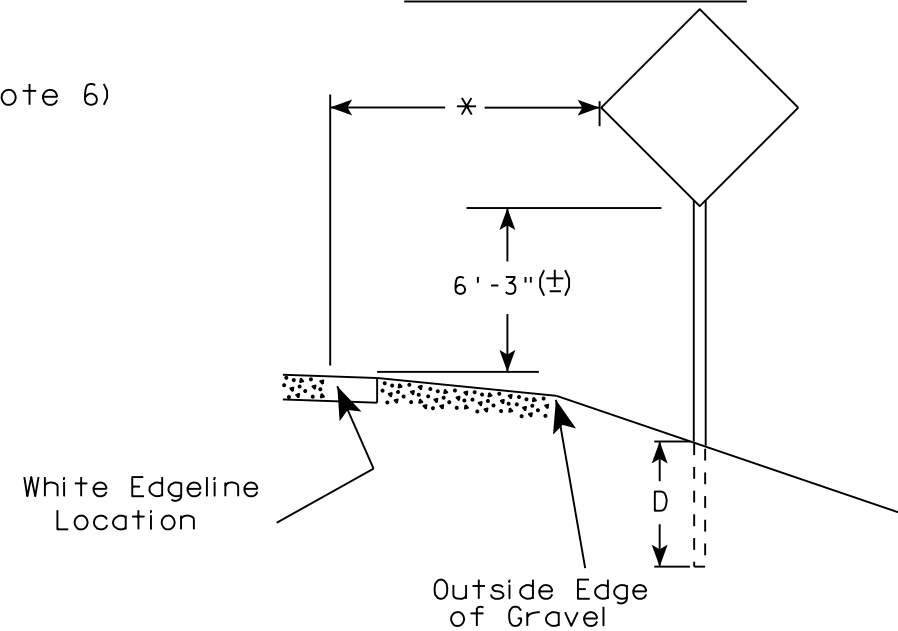
ATTACHMENT OF SIGNS TO POSTS	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED June 2017 DATE	/S/ Andrew Heidtke WORK ZONE ENGINEER
FHWA	

URBAN AREA



✱✱ 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.

RURAL AREA (See Note 2)



✱ 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

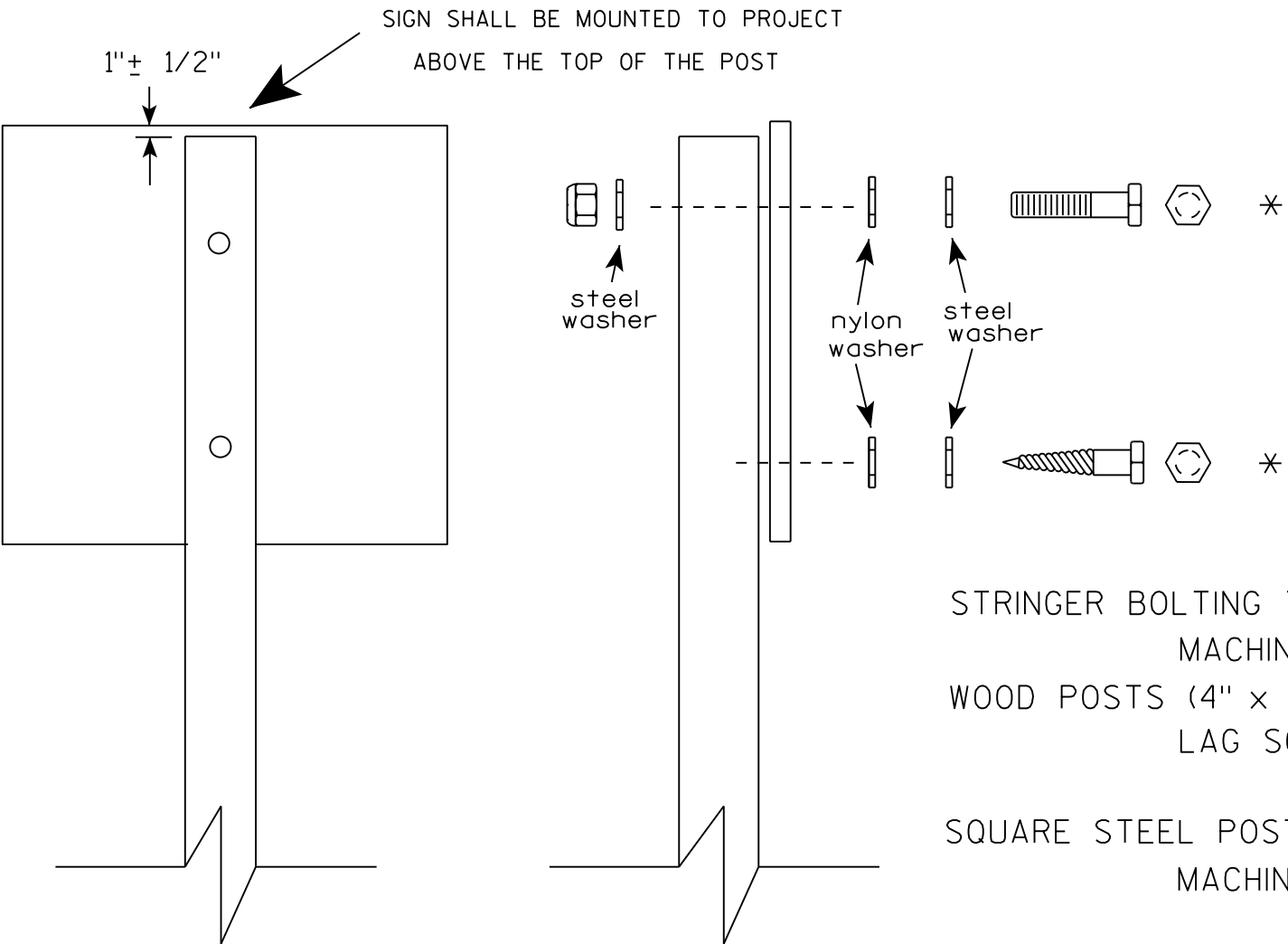
1. Signs wider than 4 feet or 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.
2. If signs are mounted on barrier wall, see A4-10 sign plate.
3. For expressways and freeways, mounting height is 7'-3" (±) or 6'-3" (±) depending upon existence of a sub-sign.
4. J-Assemblies are considered to be one sign for mounting height.
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 directed by the Engineer.
9. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), 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 8/21/17 PLATE NO. A4-3.21



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 - $\frac{5}{16}$ " X 1-3/4" Length w/ lock nuts
- WOOD POSTS (4" x 4" or 4" x 6")
- LAG SCREWS - $\frac{3}{8}$ " X 3" (NO STRINGERS ON BACK OF SIGN)
 - $\frac{3}{8}$ " X 4" (STRINGERS ON BACK OF SIGN)
- SQUARE STEEL POSTS (2" x 2")
- MACHINE BOLTS - $\frac{3}{8}$ " X 3-1/4" Length w/ nuts (NO STRINGER ON BACK OF SIGN)
 - $\frac{3}{8}$ " X 5" Length w/ nuts (STRINGERS ON BACK OF SIGN)
- RIVETS - $\frac{9}{32}$ " (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 $\frac{3}{8}$ " I.D. X $\frac{1}{16}$ " STEEL
 - 1-1/4" O.D. X $\frac{3}{8}$ " 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.

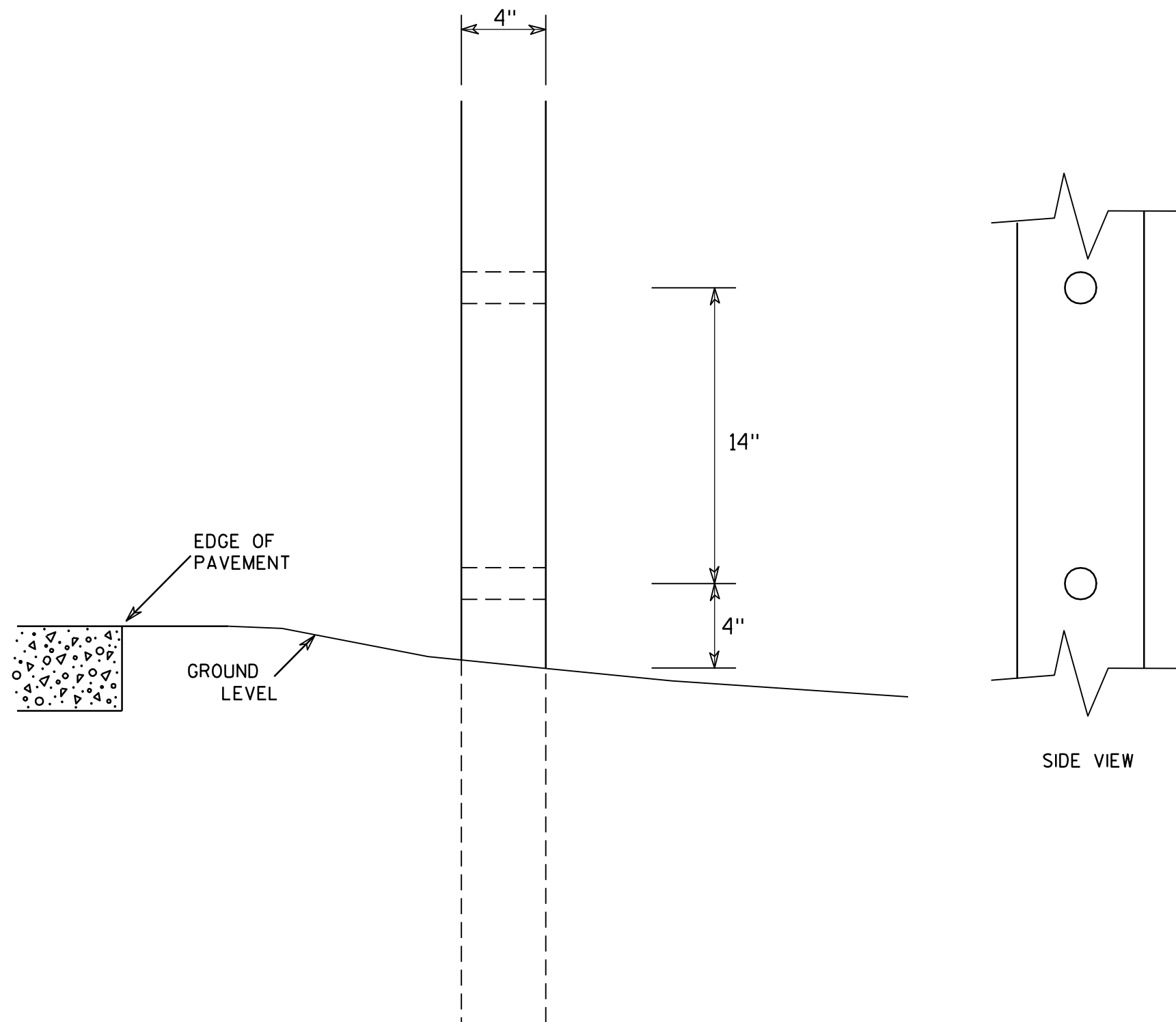
ATTACHMENT OF SIGNS
TO POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

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

7



GENERAL NOTES

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

7

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

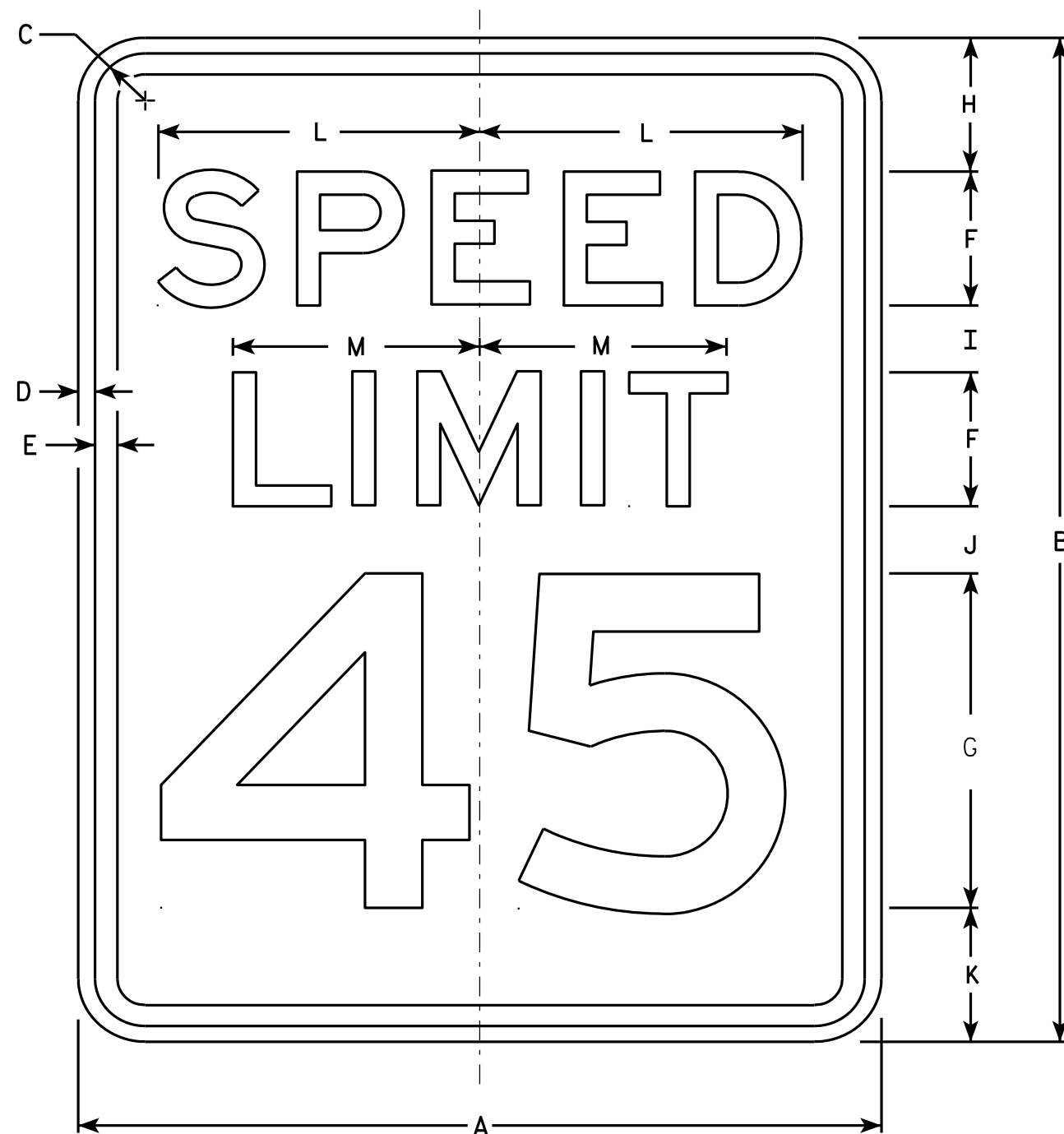
PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E



NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - White
Message - Black
3. Message Series - E
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 adjust spacing to achieve proper balance.

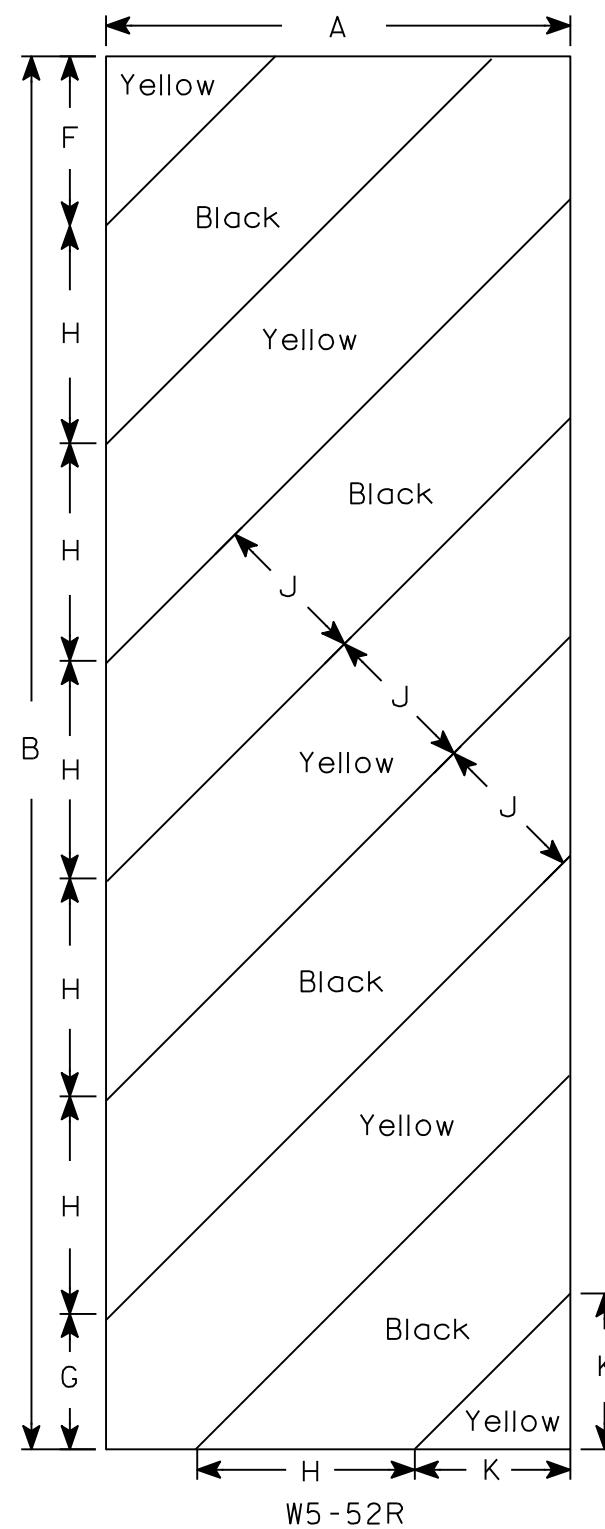
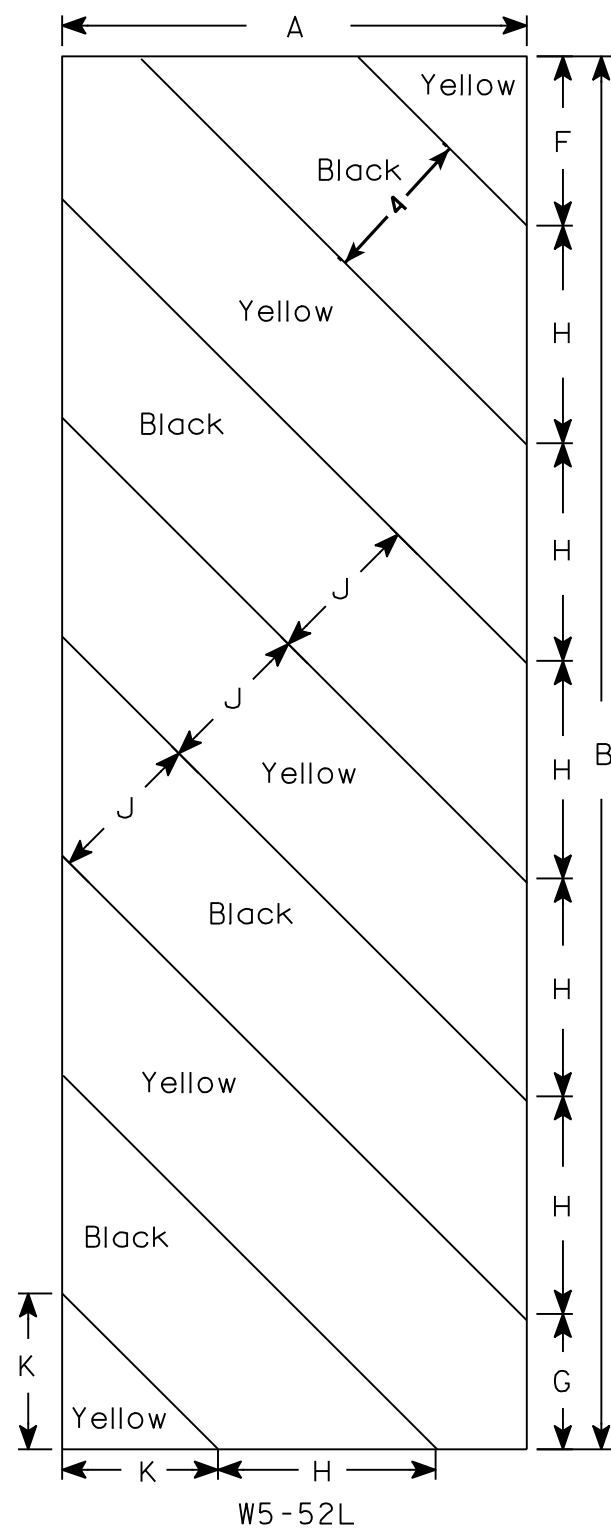
R2-1

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	24	1 1/8	3/8	1/2	3	8	3	2	2	3	7 1/4	5 1/2														3.0
2S	24	30	1 1/8	3/8	1/2	4	10	3	2 1/4	3 3/8	3 3/8	9 5/8	7 3/8														5.0
2M	30	36	1 3/8	1/2	5/8	5	12	5	2 1/2	2 1/2	4	12	9 1/4														7.5
3	36	48	1 3/8	1/2	5/8	6	14	6	5	5	6	14 3/8	11														12.0
4	36	48	1 3/8	1/2	5/8	6	14	6	5	5	6	14 3/8	11														12.0
5	48	60	2 1/4	3/4	1	8	20	6	4 1/2	6 3/4	6 3/4	19 1/4	14 5/8														20.0

STANDARD SIGN R2-1

WISCONSIN DEPT OF TRANSPORTATION
APPROVED *Matthew R. Rauch*
For State Traffic Engineer
DATE 5/26/10 PLATE NO. R2-1.13

PROJECT NO: HWY: COUNTY: SHEET NO: E



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.

[illegible]

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

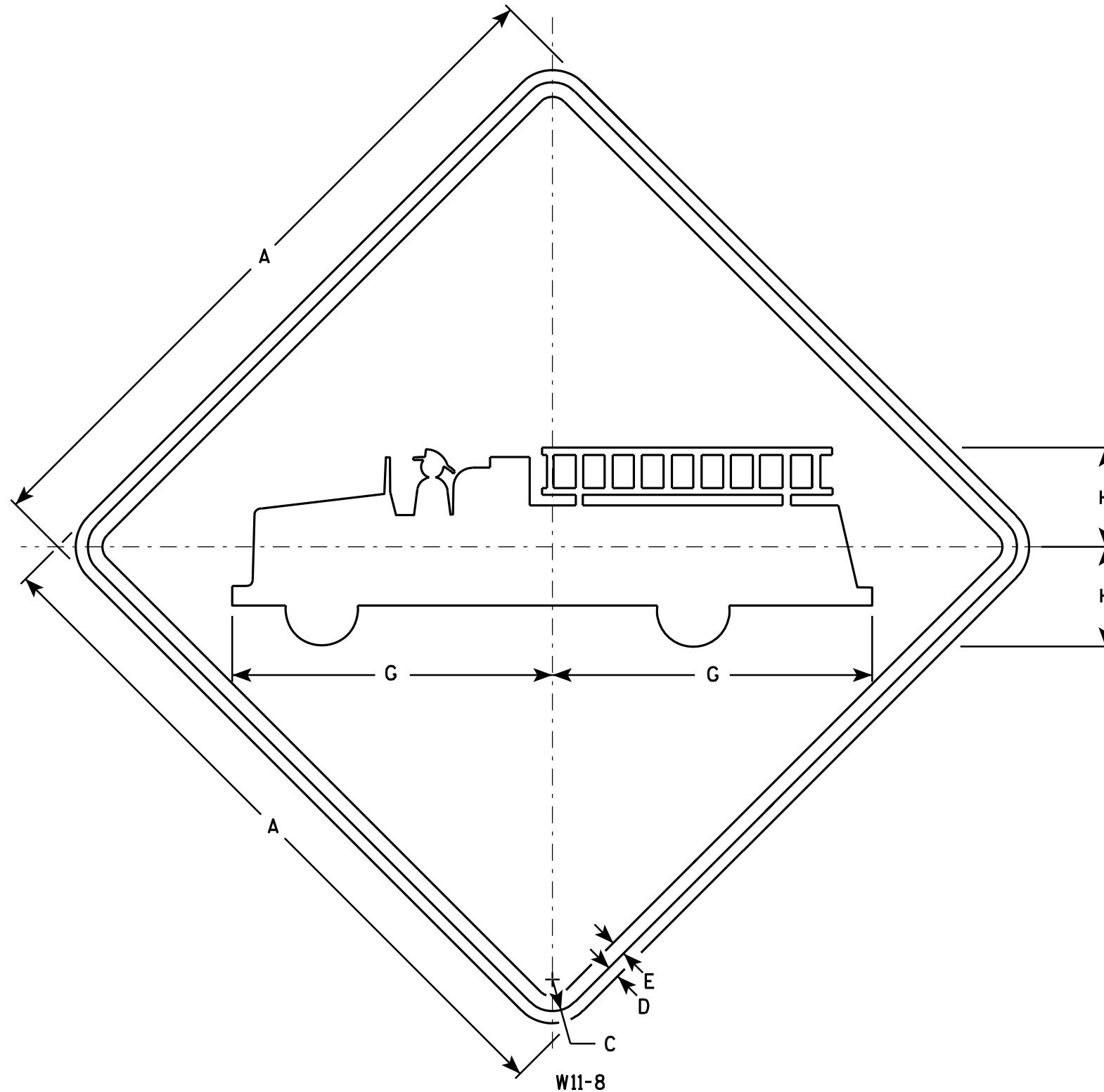
PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E



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.

W11-8

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		11	3 3/8																			4.0
2S	30		1 3/8	1/2	5/8		13 3/4	4 3/8																			6.25
2M	30		1 3/8	1/2	5/8		13 3/4	4 3/8																			6.25
3	36		1 5/8	5/8	3/4		16 1/2	5 1/4																			9.0
4	48		2 1/4	3/4	1		22	7																			16.0
5																											

STANDARD SIGN W11-8

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer
DATE 3/13/13 PLATE NO. W11-8.7

PROJECT NO:

SHEET NO:

E

5386-00-72

BENCHMARKS NAVD 88

NO.	STA./OFFSET	DESCRIPTION	ELEV.
1	10+32.11, 15.0'LT	DISK ON THE NW CORNER OF BRIDGE	641.55
2	6+92.96, 29.5'LT	CHIS X ON TAG BOLT OF HYDRANT	644.29
3	10+78.23, 6.8'RT	CHIS X N SIDE OF MANHOLE RIM	641.97

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HL-93
INVENTORY RATING FACTOR: 1.10
OPERATIONAL RATING FACTOR: 1.59
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV) = 250 KIPS.
STRUCTURE IS DESIGNED FOR A FUTURE WEARING SURFACE OF 20 POUNDS PER SQUARE FOOT.

TRAFFIC DATA:

A.A.D.T. (2019) = 1500
A.A.D.T. (2039) = 1800
R.D.S. = 30 MPH

ULTIMATE DESIGN STRESSES:

CONCRETE MASONRY, SUPERSTRUCTURE $f_c = 4,000$ P.S.I.
ALL OTHER $f_c = 3,500$ P.S.I.

HIGH-STRENGTH BAR STEEL REINFORCEMENT, GRADE 60 $f_y = 60,000$ P.S.I.

36W-INCH PRESTRESSED GIRDERS
CONCRETE MASONRY $f_c = 8,000$ P.S.I.
STRANDS - 0.60" ϕ WITH AN ULTIMATE TENSILE STRENGTH OF $f_y = 270,000$ P.S.I.

FOUNDATION DATA:

ABUTMENTS TO BE SUPPORTED ON PILING STEEL
HP 10-INCH X 42 LB WITH PILE POINTS DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 170 TONS * PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED PILE LENGTHS ARE 40'-0" AT THE SOUTH ABUTMENT AND 60'-0" AT THE NORTH ABUTMENT.

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

HYDRAULIC DATA:

100 YEAR FREQUENCY

DRAINAGE AREA 4.3 SQ. MI.
 Q_{100} 1,490 C.F.S.
VELOCITY 4.95 FT./SEC.
WATERWAY AREA 301 SQ. FT.
SCOUR CRITICAL CODE 8
HIGH WATER 100 ELEVATION 635.42
 Q_2 ELEVATION (170 C.F.S.) 630.49
 Q_2 VELOCITY 2.10 FT./SEC.

ROADWAY OVERFLOW DESIGN FREQUENCY

OVERTOPPING FREQUENCY > 100 YEARS

CONSULTANT DESIGN CONTACT:
JOLIE SNYDER
(608) 355-8912

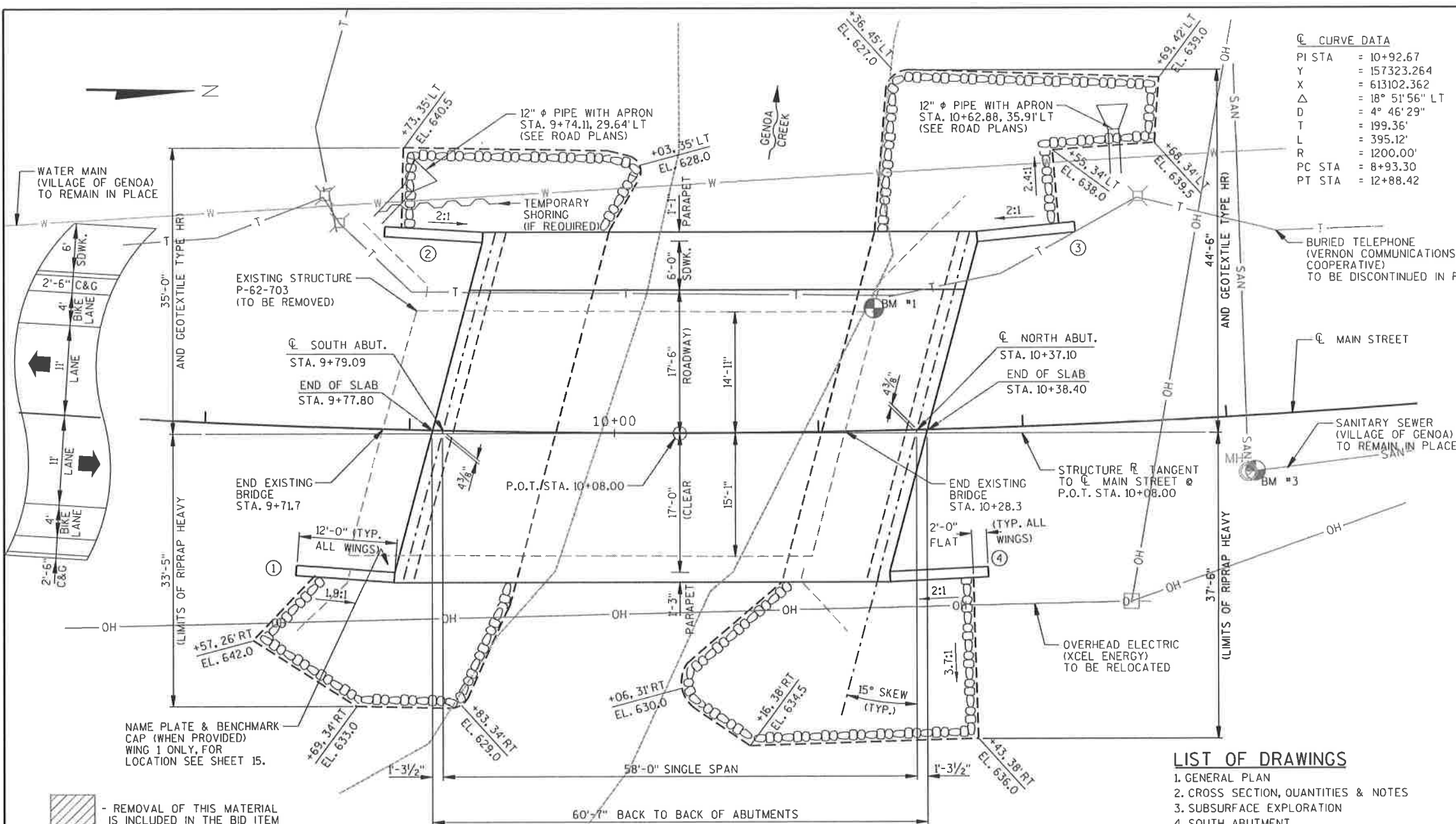
BRIDGE OFFICE CONTACT:
WILLIAM DREHER
(608) 266-8489

LIST OF DRAWINGS

1. GENERAL PLAN
2. CROSS SECTION, QUANTITIES & NOTES
3. SUBSURFACE EXPLORATION
4. SOUTH ABUTMENT
5. SOUTH ABUTMENT DETAILS
6. NORTH ABUTMENT
7. NORTH ABUTMENT DETAILS
8. 36W" PRESTRESSED GIRDER DETAILS
9. STEEL DIAPHRAGM
10. SUPERSTRUCTURE
11. SUPERSTRUCTURE SECTIONS & DETAILS
12. WEST SIDEWALK & SUPERSTRUCTURE DETAILS
13. WEST PARAPET & RAILING
14. WEST RAILING DETAILS
15. EAST SINGLE SLOPE PARAPET 42SS

PLAN

(SINGLE SPAN 36W" PRESTRESSED CONCRETE GIRDER BRIDGE)

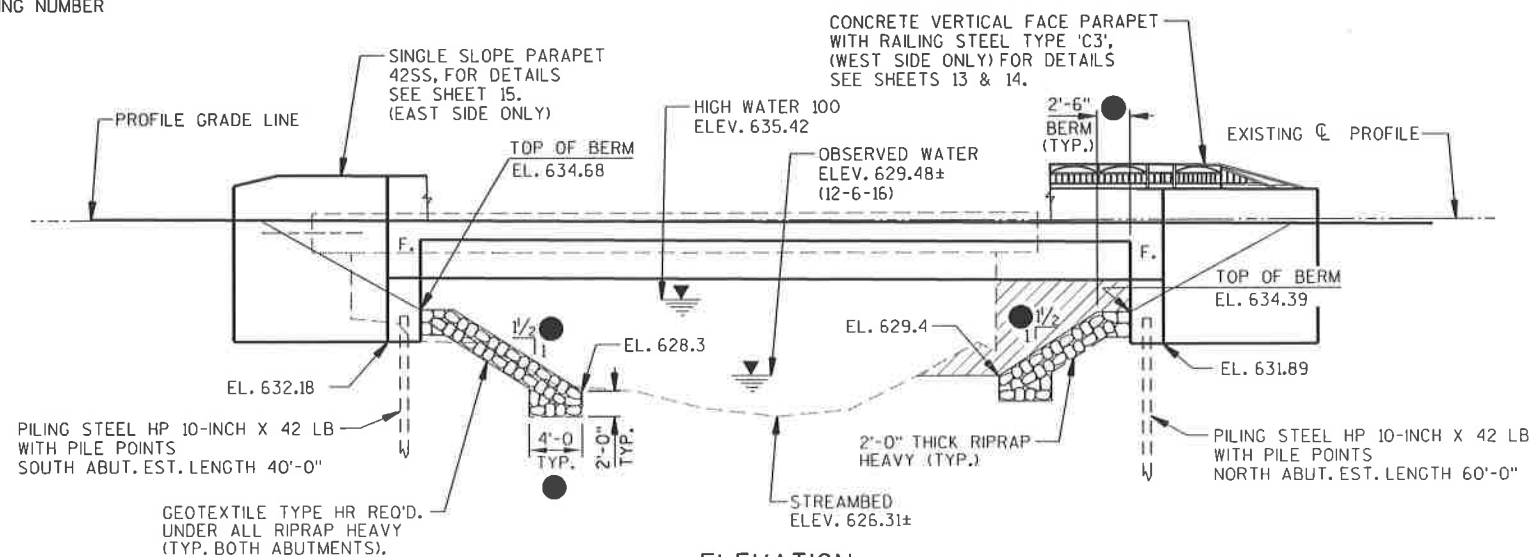
ELEVATION
LOOKING WEST

CURVE DATA
PI STA = 10+92.67
Y = 157323.264
X = 613102.362
 Δ = 18° 51' 56" LT
D = 4° 46' 29"
T = 199.36'
L = 395.12'
R = 1200.00'
PC STA = 8+93.30
PT STA = 12+88.42

NAME PLATE & BENCHMARK
CAP (WHEN PROVIDED)
WING 1 ONLY, FOR
LOCATION SEE SHEET 15.

REMOVAL OF THIS MATERIAL
IS INCLUDED IN THE BID ITEM
"EXCAVATION FOR STRUCTURES
BRIDGES B-62-255".

- DIMENSION GIVEN NORMAL
TO THE ϕ OF ABUTMENTS.
- INDICATES WING NUMBER



NO.	DATE	REVISION	BY
MSA TRANSPORTATION • MUNICIPAL DEVELOPMENT • ENVIRONMENTAL 1230 South Boulevard Baraboo, WI 53913 608-356-2771 1-800-362-4505 Fax: 608-356-2770			
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION ACCEPTED <i>William C. Decker</i> 05/08/18 CHIEF STRUCTURES DESIGN ENGINEER DATE			
STRUCTURE B-62-255			
MAIN STREET OVER GENOA CREEK			
COUNTY	VERNON	TOWN/CITY/VILLAGE	GENOA
DESIGN SPEC. AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS			
DESIGNED BY	JAS	DESIGN CK'D.	JRS
DRAWN BY	RLR	PLANS CK'D.	JAS
GENERAL PLAN			SHEET 1 OF 15

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

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

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

THE EXISTING GROUNDLINE SHALL BE THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES" FOR THE ABUTMENTS.

THIS STRUCTURE WILL REPLACE THE EXISTING STRUCTURE, P-62-703, A 56.6 FT. LONG, SINGLE SPAN STEEL DECK GIRDER BRIDGE ON FULL RETAINING CONCRETE ABUTMENTS WITH 30.0 FT. CLEAR ROAD WIDTH.

②-BACKFILL PAY LIMITS, BACKFILL BEYOND BACKFILL PAY LIMITS SHALL BE INCIDENTAL TO EXCAVATION FOR STRUCTURES. LIMITS OF EXCAVATION SHALL BE DETERMINED BY THE CONTRACTOR.

THE BACKFILL QUANTITIES ARE BASED ON THE PAY LIMITS SHOWN ON THE PLANS AND MAY NOT REFLECT ACTUAL PLACED QUANTITIES. "BACKFILL STRUCTURE TYPE A" REQUIRED DIRECTLY BEHIND ABUTMENTS AND ABUTMENT WINGS FOR 3 FEET. BACKFILL PLACED BEYOND PAY LIMITS OR EXCEEDING PLAN QUANTITIES SHALL BE INCIDENTAL TO EXCAVATION FOR STRUCTURES.

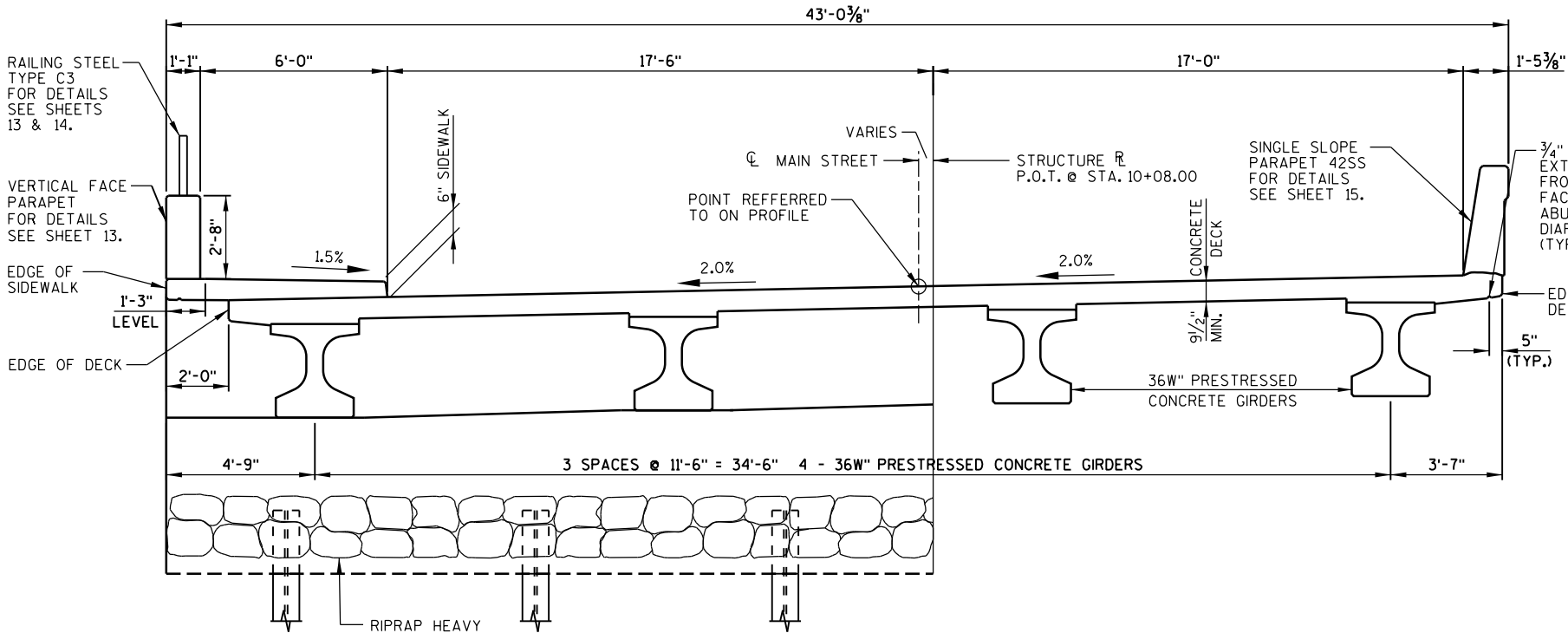
EXCAVATION BELOW THE ABUTMENT AND ABUTMENT BEDDING MATERIALS REQUIRES ENGINEER APPROVAL. GEOTEXTILE SHALL BE SET AT THE BOTTOM OF EXCAVATION AND EXTEND 2'-0" ABOVE BOTTOM OF ABUTMENT.

PROTECTIVE SURFACE TREATMENT SHALL BE APPLIED TO THE TOP OF SLAB, AND TO THE TOP AND INSIDE FACE OF THE SIDEWALK.

PIGMENTED SURFACE SEALER SHALL BE APPLIED TO THE INSIDE FACES, THE TOP FACES, AND THE VERTICAL ENDS OF THE PARAPETS.

ELEVATIONS SHOWN ON THIS PLAN ARE REFERENCED TO USGS NAVD 88 (2012 ADJUSTED). BENCHMARK REFERENCES AT THE PROJECT SITE WERE SET BY THE CONSULTANT USING GPS TECHNOLOGY.

THE AVERAGE CONCRETE QUANTITY IS BASED ON THE AVERAGE HAUNCH SHOWN ON SHEET 10.

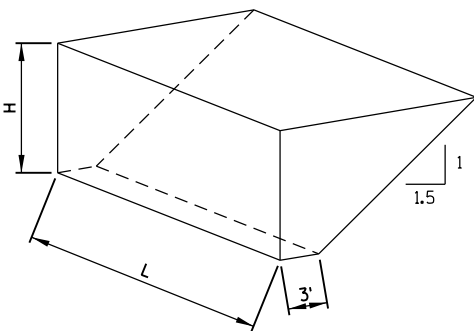


AT ABUTMENTS

CROSS SECTION THRU BRIDGE

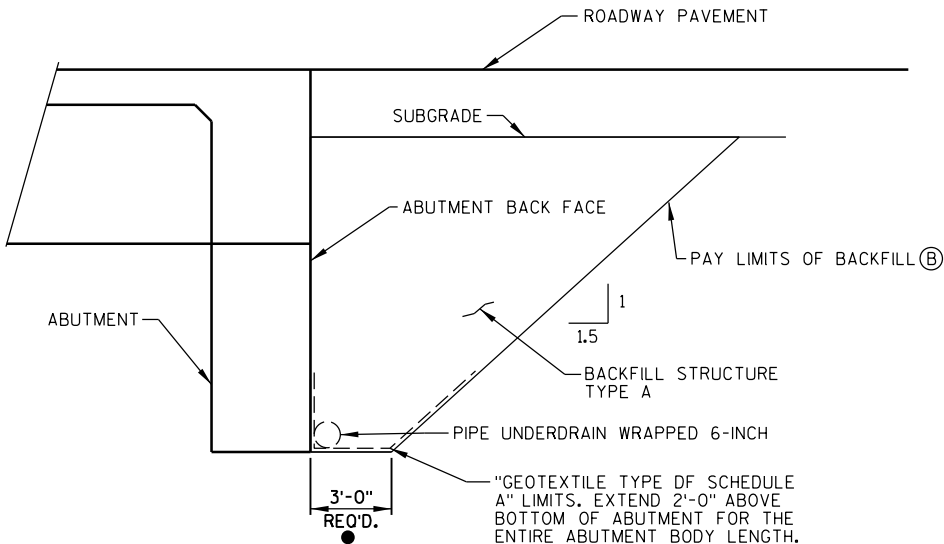
(LOOKING NORTH)

IN SPAN



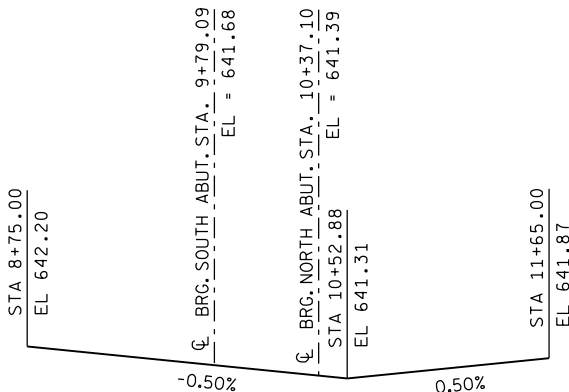
ABUTMENT BACKFILL DIAGRAM

$$L = \text{OUT-TO-OUT OF ABUTMENT}$$
$$H = \text{AVERAGE ABUTMENT FILL HEIGHT}$$
$$V_{CF} = (L)(3.0')(H) + (L)(0.5')(1.5H)(H)$$
$$V_{TON} = V_{CF} (2.0)/27$$



STRUCTURE BACKFILL DETAIL

● - NORMAL TO CL OF ABUTMENTS



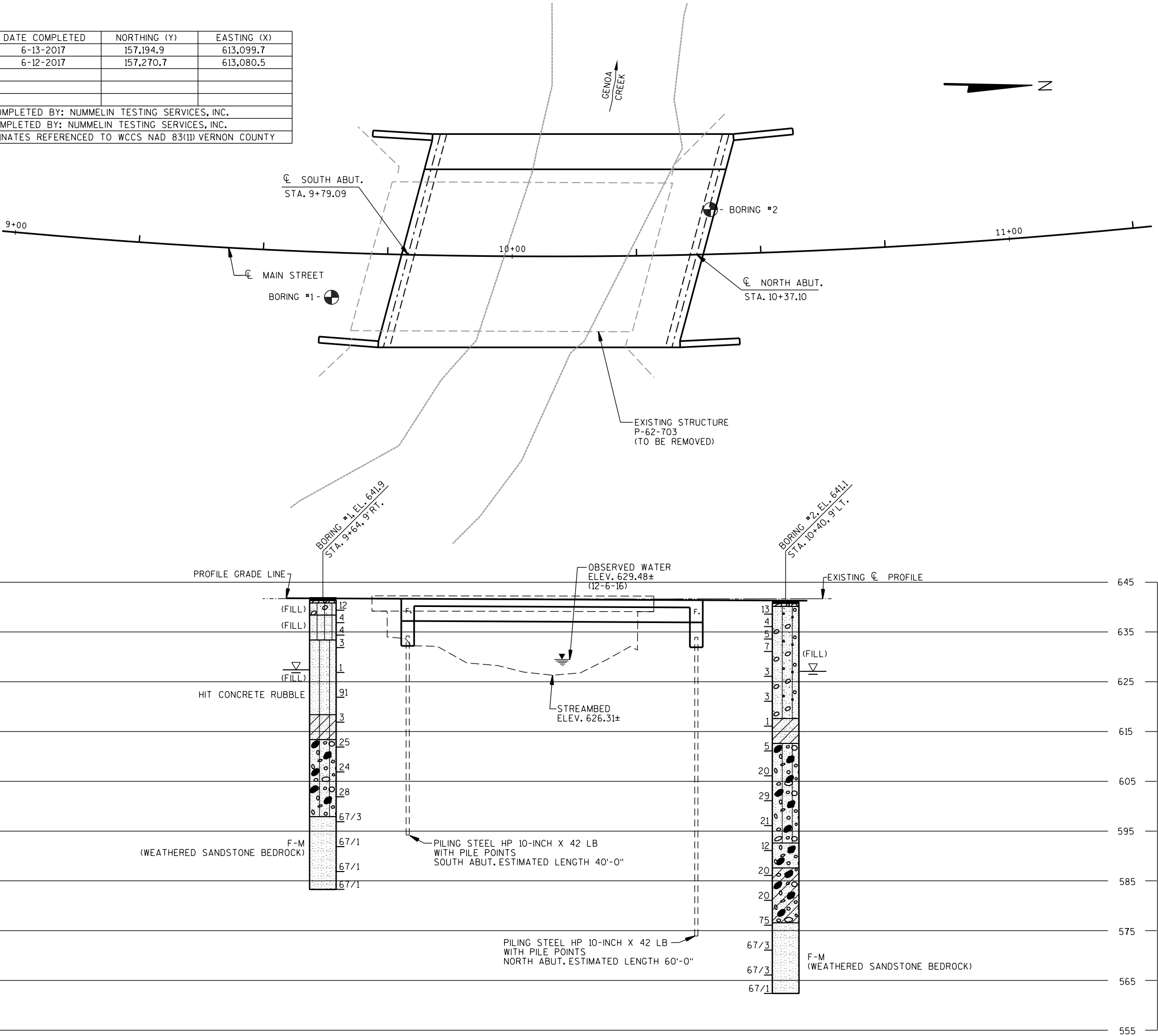
PROFILE GRADE LINE - MAIN STREET

TOTAL ESTIMATED QUANTITIES

ITEM NUMBER	BID ITEM	UNIT	SOUTH ABUT.	NORTH ABUT.	SUPER	TOTAL
203.0600.S.01	REMOVING OLD STRUCTURE OVER WATERWAY WITH MINIMAL DEBRIS STATION 10+00	LS	-	-	-	1
206.1000.01	EXCAVATION FOR STRUCTURES BRIDGES B-62-255	LS	-	-	-	1
210.1500	BACKFILL STRUCTURE TYPE A	TON	190	190	-	380
502.0100	CONCRETE MASONRY BRIDGES	CY	43	43	133	219
502.3200	PROTECTIVE SURFACE TREATMENT	SY	-	-	280	280
502.3210	PIGMENTED SURFACE SEALER	SY	-	-	80	80
503.0137	PRESTRESSED GIRDER TYPE I 36W-INCH	LF	-	-	236	236
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	2615	2615	-	5230
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	2040	2040	21940	26020
506.2605	BEARING PADS ELASTOMERIC NON-LAMINATED	EACH	4	4	-	8
506.4000.01	STEEL DIAPHRAGMS B-62-255	EACH	-	-	3	3
511.1200.01	TEMPORARY SHORING B-62-255	SF	10	-	-	10
513.7016.01	RAILING STEEL TYPE C3 B-62-255	LF	-	-	83	83
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	12.5	12.5	-	25
550.0500	PILE POINTS	EACH	6	6	-	12
550.1100	PIILING STEEL HP 10-INCH X 42 LB	LF	240	360	-	600
606.0300	RIPRAP HEAVY	CY	115	145	-	260
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	110	110	-	220
645.0111	GEOTEXTILE TYPE DF SCHEDULE A	SY	42	42	-	84
645.0120	GEOTEXTILE TYPE HR	SY	210	265	-	475
SPV.0060.01	UTILITY LINE OPENING (ULO)	EACH	1	-	-	1
	NON-BID ITEMS					
	PREFORMED FILLER	SIZE				1/2" & 3/4"

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-62-255			
DRAWN BY RLR		PLANS CK'D. JAS	
CROSS SECTION, QUANTITIES & NOTES			SHEET 2 OF 15

BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
1	6-13-2017	157,194.9	613,099.7
2	6-12-2017	157,270.7	613,080.5
BORINGS COMPLETED BY: NUMMELIN TESTING SERVICES, INC.			
REPORT COMPLETED BY: NUMMELIN TESTING SERVICES, INC.			
ALL COORDINATES REFERENCED TO WCCS NAD 83(11) VERNON COUNTY			



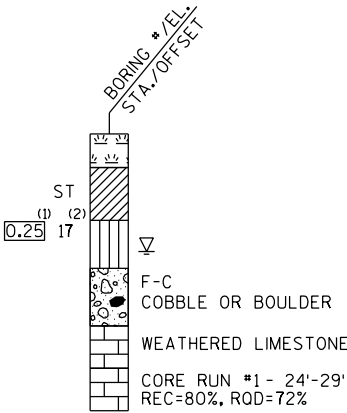
STATE PROJECT NUMBER

5386-00-72

MATERIAL SYMBOLS

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

LEGEND OF BORING



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

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

GROUND WATER ELEVATION

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

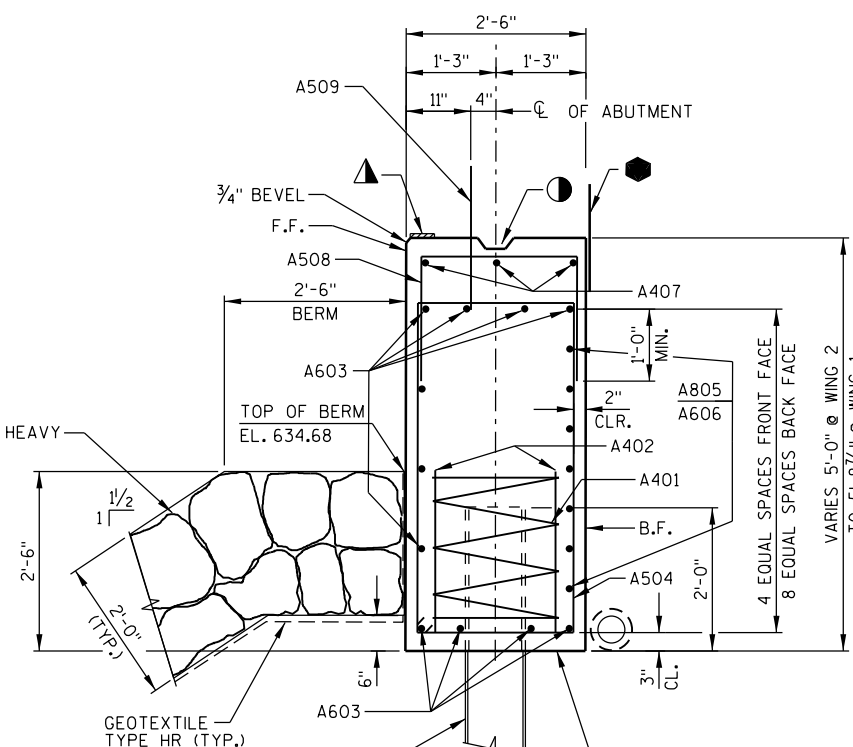
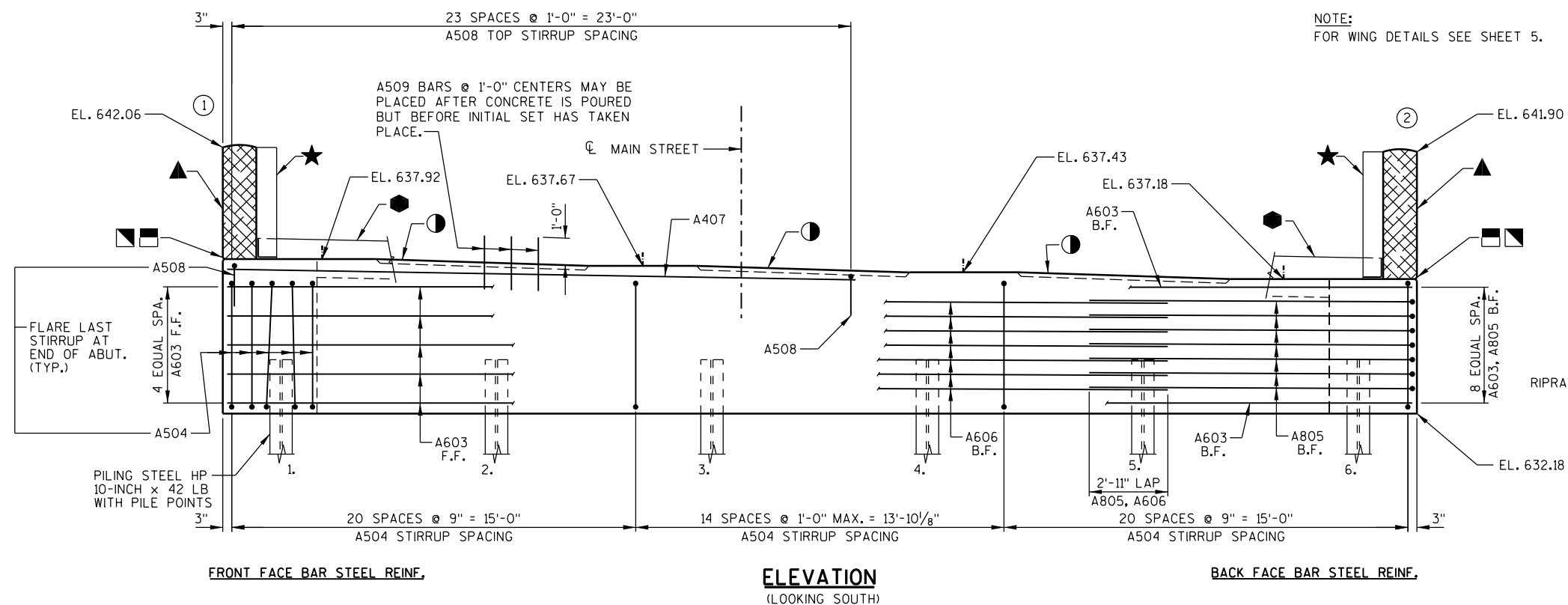
ABBREVIATIONS

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

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

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

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-62-255			
DRAWN BY		RLR	PLANS CK'D. JAS
SUBSURFACE EXPLORATION		SHEET 3 OF 15	

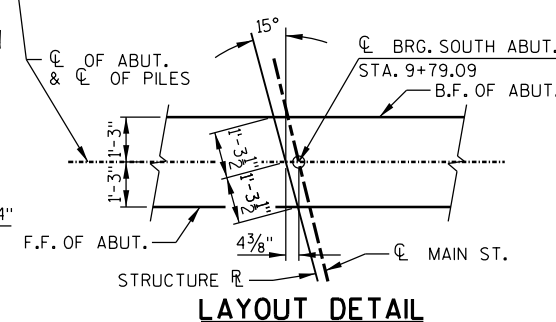
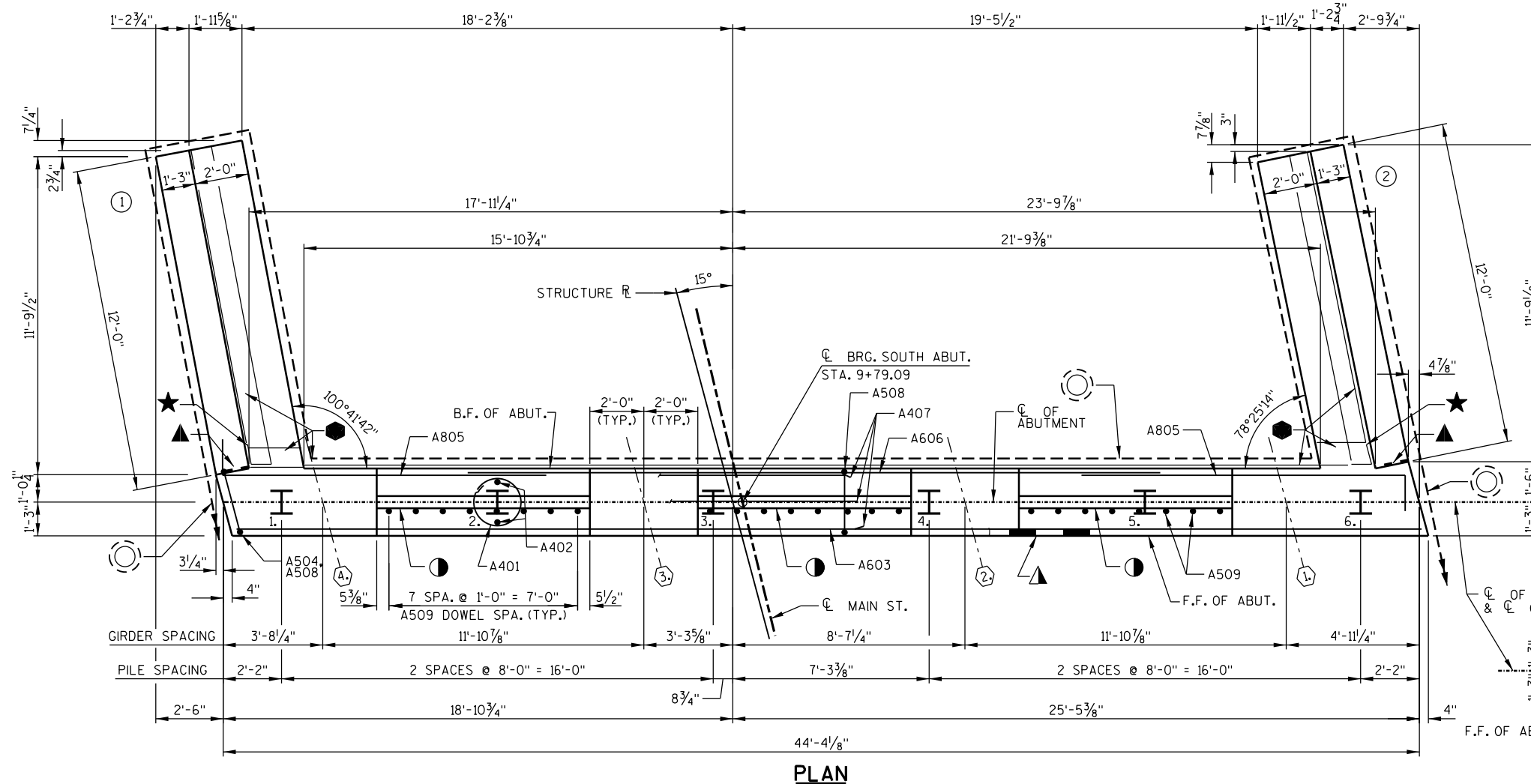


ABUTMENTS TO BE SUPPORTED
ON PILING STEEL HP 10-INCH x 42 LB
WITH PILE POINTS DRIVEN TO A REQUIRED
DRIVING RESISTANCE OF 170 TONS PER PILE
AS DETERMINED BY THE MODIFIED GATES
DYNAMIC FORMULA. ESTIMATED PILE LENGTHS
ARE 40'-0" AT THE SOUTH ABUTMENT.
FOR PILE SPICE DETAILS SEE SHEET 5.

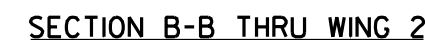
TYPICAL SECTION THRU ABUTMENT

LEGEND

-  - KEYED CONSTRUCTION JOINT ON WING FORMED BY BEVELED 2x6. PLACE  ON B.F. OF WING.
 -  - $\frac{3}{4}$ " "V" GROOVE ON FRONT FACE OF WING WALL, REQ'D. ONLY WHERE CONST. JOINT IS USED.
 -  - KEYED CONSTRUCTION JOINT FORMED BY BEVELED 2x6.
 -  - $\frac{1}{2}$ " FILLER EXTEND AS SHOWN. SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF FILLER WITH NON-STAINING GRAY, NON-BITUMINOUS JOINT SEALER. (1" DEEP & HOLD $\frac{1}{8}$ " BELOW SURFACE OF CONCRETE).
 -  - 4"x $\frac{3}{4}$ " FILLER, EXTEND FULL LENGTH OF ABUTMENT BETWEEN EDGES OF DECK.
 -  - VERTICAL 18" WIDE RUBBERIZED MEMBRANE WATERPROOFING. EXTEND FROM BRIDGE SEAT TO TOP OF WINGS.
 -  - HORIZONTAL 18" WIDE RUBBERIZED MEMBRANE WATERPROOFING. EXTEND BETWEEN WINGS. PLACE BOTTOM HALF HORIZONTAL AT HAUNCHED AREA OF WINGS AT CONSTRUCTION JOINT.
 -  - PIPE UNDERDRAIN WRAPPED 6-INCH. EXTEND THRU GEOTEXTILE TYPE HR AT FACE OF RIPRAP HEAVY. SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. PROVIDE RODENT PROTECTION AT ENDS OF PIPE. FOR RODENT SHIELD DETAILS SEE SHEET 7.
 -  - INDICATES WING NUMBER  - INDICATES GIRDER NUMBER
- F.F. - FRONT FACE B.F. - BACK FACE CL. - CLEAR



NO.	DATE	REVISION	B
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE		B-62-255	
	DRAWN BY	RLR	PLANS CK'D. JA
SOUTH ABUTMENT		SHEET 4 OF	

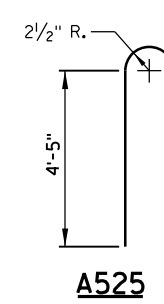
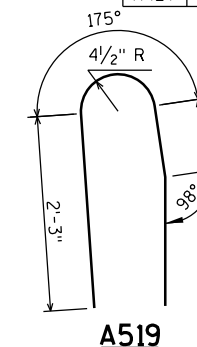
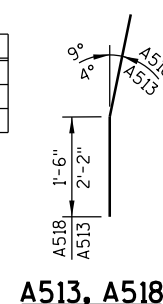
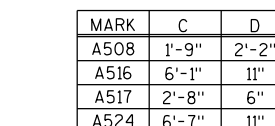
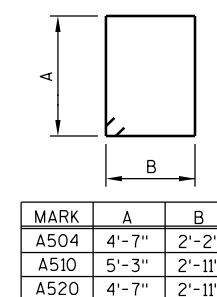
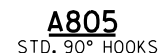


COATED 2040 LBS.
UNCOATED 2615 LBS.

BILL OF BARS

MARK	NUMBER COATED	REQUIRED UNCOATED	LENGTH	BENT	LOCATION
A401	-	6	28'-0"	X	ABUT. BODY - 1 SPIRAL WRAP @ EACH PILE
A402	-	12	2'-3"		ABUT. BODY - 2 @ EACH PILE - VERT.
A603	-	11	44'-0"		ABUT. BODY - F.F., TOP & BOTTOM - HORIZ.
A504	-	55	14'-2"	X	ABUT. BODY - STIRRUPS - VERT.
A805	-	14	13'-2"	X	ABUT. BODY - B.F. - HORIZ.
A606	-	7	25'-8"		ABUT. BODY - B.F. - CENTER - HORIZ.
A407	-	3	23'-4"		ABUT. BODY - TOP - HORIZ.
A508	-	24	5'-5"	X	ABUT. BODY - TOP - STIRRUP - VERT.
A509	24	-	2'-0"		ABUT. BODY - TOP - DOWEL - VERT.
A510	12	-	17'-0"	X	WING 1 - BASE - STIRRUP - VERT.
A611	7	-	14'-3"		WING 1 - BASE - B.F. - HORIZ.
A612	2	-	14'-1"		WING 1 - BASE - TOP CENTER - HORIZ.
A513	6	-	14'-0"	X	WING 1 - BASE - F.F. - HORIZ.
A414	18	-	11'-7"		WINGS - TOP - F.F. & B.F. - HORIZ.
A615	4	-	11'-7"		WINGS - TOP - F.F. & B.F. - HORIZ.
A516	16	-	12'-10"	X	WING 1 - TOP - STIRRUP - VERT.
A517	17	-	5'-7"	X	WING 1 - TOP - PARAPET STIRRUP - VERT.
A518	11	-	3'-0"	X	WING 1 - TOP - PARAPET STIRRUP - VERT.
A519	5	-	5'-10"	X	WING 1 - TOP - PARAPET STIRRUP - VERT.
A520	12	-	15'-8"	X	WING 2 - BASE - STIRRUP - VERT.
A621	7	-	13'-7"		WING 2 - BASE - B.F. - HORIZ.
A622	2	-	14'-0"		WING 2 - BASE - TOP CENTER - HORIZ.
A523	6	-	14'-4"		WING 2 - BASE - F.F. - HORIZ.
A524	16	-	13'-10"	X	WING 2 - TOP - STIRRUP - VERT.
A525	19	-	9'-6"	X	WING 2 - TOP - PARAPET STIRRUP - VERT.
A426	3	-	5'-3"		ABUT. BODY - END @ WING 1 - VERT.
A427	4	-	4'-7"		ABUT. BODY - END @ WING 2 - VERT.

DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.

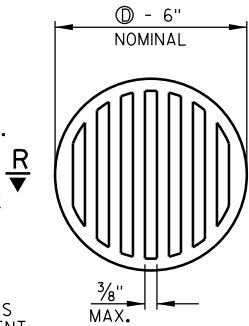


NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE		B-62-255	
DRAWN BY		RLR	PLANS CK'D. JAS
SOUTH ABUTMENT DETAILS		SHEET 5 OF	

RODENT SHIELD NOTES:

ORIENT SHIELD SO SLOTS ARE VERTICAL.

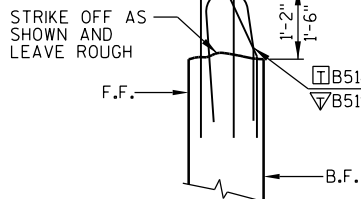
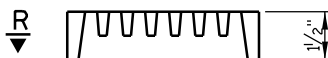
THE RODENT SHIELD SHALL BE A PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALY AVAILABLE AS A FLOOR STRAINER. A PIPE COUPLING IS REQUIRED FOR THE ATTACHMENT OF THIS SHIELD TO THE PIPE UNDERDRAIN. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 x 1-INCH STAINLESS STEEL SHEET METAL SCREWS. THE RODENT SHIELD, PIPE COUPLING AND SCREWS SHALL BE INCLUDED IN THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".



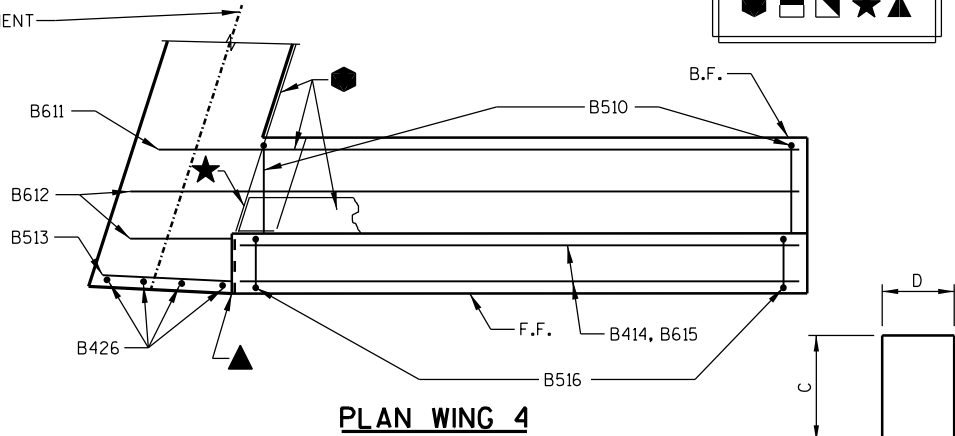
RODENT SHIELD

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

SECTION R-R



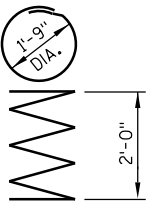
PARAPET STIRRUP
PROJECTION DETAIL
(WING 4)



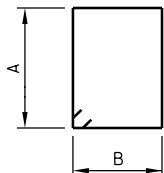
PLAN WING 4

MARK	C	D
B504	4'-7"	2'-2"
B510	5'-3"	2'-11"
B517	2'-8"	6"
B524	6'-7"	11"

MARK	A	B
B504	4'-7"	2'-2"
B510	5'-3"	2'-11"
B520	4'-7"	2'-11"



B401
5 WRAPS

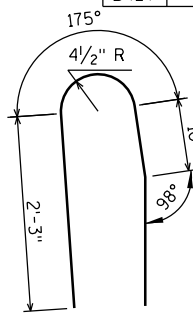


B805

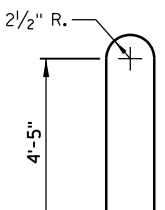
STD. 90° HOOKS



B513, B518



B519



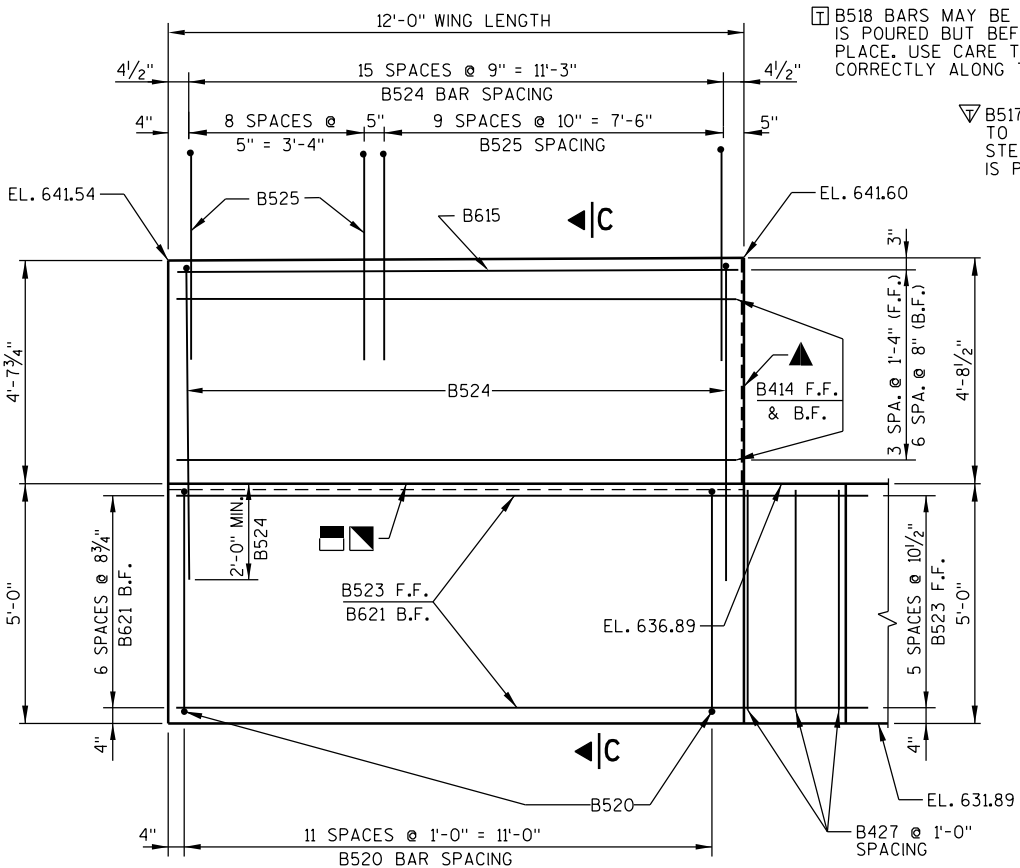
B525

BILL OF BARS

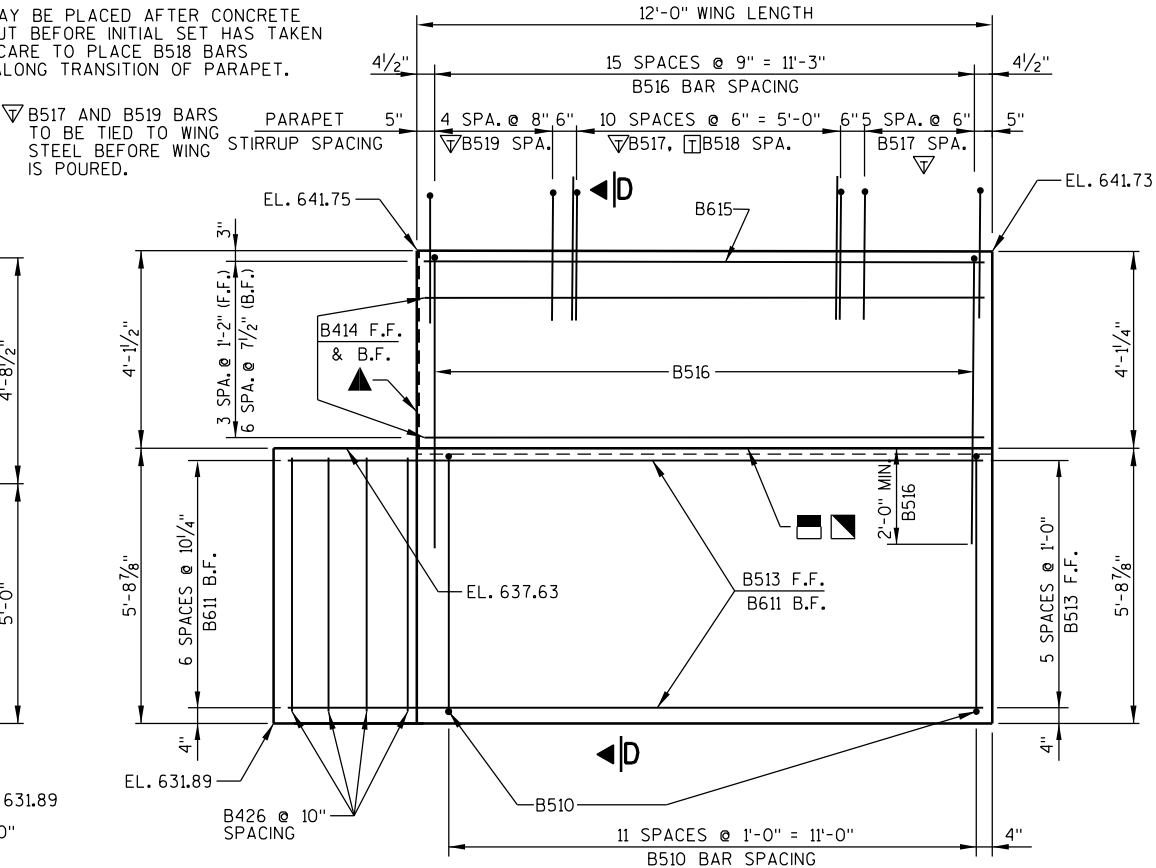
MARK	NUMBER REQUIRED		LENGTH	BENT	LOCATION
	COATED	UNCOATED			
B401	-	6	28'-0"	X	ABUT. BODY - 1 SPIRAL WRAP @ EACH PILE
B402	-	12	2'-3"		ABUT. BODY - 2 @ EACH PILE - VERT.
B603	-	11	44'-0"		ABUT. BODY - F.F., TOP & BOTTOM - HORIZ.
B504	-	55	14'-2"	X	ABUT. BODY - STIRRUPS - VERT.
B805	-	14	13'-2"	X	ABUT. BODY - B.F. - HORIZ.
B606	-	7	25'-8"		ABUT. BODY - B.F. - CENTER - HORIZ.
B407	-	3	23'-4"		ABUT. BODY - TOP - HORIZ.
B508	-	24	5'-5"	X	ABUT. BODY - TOP - STIRRUP - VERT.
B509	24	-	2'-0"		ABUT. BODY - TOP - DOWEL - VERT.
B510	12	-	17'-0"	X	WING 4 - BASE - STIRRUP - VERT.
B611	7	-	13'-4"		WING 4 - BASE - B.F. - HORIZ.
B612	2	-	13'-11"		WING 4 - BASE - TOP CENTER - HORIZ.
B513	6	-	14'-6"	X	WING 4 - BASE - F.F. - HORIZ.
B414	18	-	11'-7"		WINGS - TOP - F.F. & B.F. - HORIZ.
B615	4	-	11'-7"		WINGS - TOP - F.F. & B.F. - HORIZ.
B516	16	-	12'-8"	X	WING 4 - TOP - STIRRUP - VERT.
B517	17	-	5'-7"	X	WING 4 - TOP - PARAPET STIRRUP - VERT.
B518	11	-	3'-0"	X	WING 4 - TOP - PARAPET STIRRUP - VERT.
B519	5	-	5'-10"	X	WING 4 - TOP - PARAPET STIRRUP - VERT.
B520	12	-	15'-8"	X	WING 3 - BASE - STIRRUP - VERT.
B621	7	-	14'-7"		WING 3 - BASE - B.F. - HORIZ.
B622	2	-	14'-3"		WING 3 - BASE - TOP CENTER - HORIZ.
B523	6	-	13'-11"		WING 3 - BASE - F.F. - HORIZ.
B524	16	-	13'-10"	X	WING 3 - TOP - STIRRUP - VERT.
B525	19	-	9'-6"	X	WING 3 - TOP - PARAPET STIRRUP - VERT.
B426	4	-	5'-3"		ABUT. BODY - END @ WING 4 - VERT.
B427	3	-	4'-7"		ABUT. BODY - END @ WING 3 - VERT.

DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.

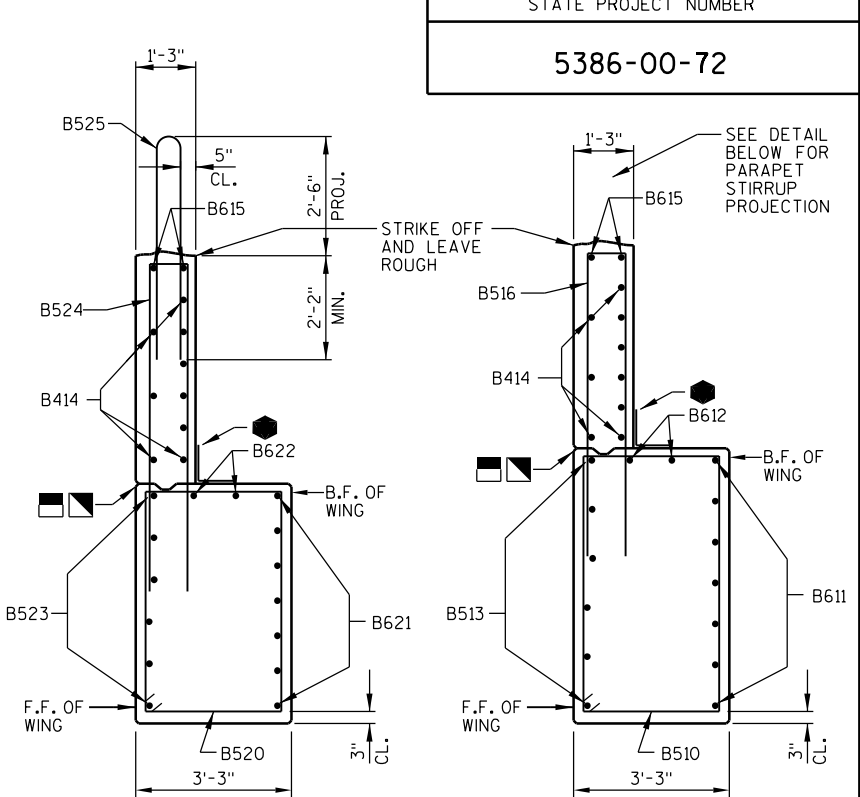
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE		B-62-255	
DRAWN BY		RLR	PLANS CK'D. JAS
NORTH ABUTMENT DETAILS		SHEET 7 OF 15	



ELEVATION WING 3



ELEVATION WING 4



SECTION C-C THRU WING 3

SECTION D-D THRU WING 4

COATED 2040 LBS.
UNCOATED 2615 LBS.

SEE SHEET 6 LEGEND
FOR DESCRIPTION OF



NOTES

TOP OF GIRDER TO BE ROUGH FLOATED AND BROOMED TRANSVERSELY, EXCEPT THE OUTSIDE 8" OF GIRDER, WHICH SHALL RECEIVE A SMOOTH FINISH. AN APPROVED CONCRETE SEALER SHALL BE APPLIED TO ALL SMOOTH SURFACES INCLUDING THE OUTSIDE 8" OF THE TOP FLANGE.

THE GIRDERS SHALL BE PROVIDED WITH A SUITABLE LIFTING DEVICE FOR HANDLING AND ERECTING THE GIRDERS. SEE SECTION 503.3.3 OF STANDARD SPECIFICATIONS FOR GUIDANCE.

PRESTRESSING STRANDS SHALL BE 0.6" ϕ - 7 WIRE LOW-RELAXATION STRANDS WITH AN ULTIMATE STRENGTH OF 270,000 PSI.

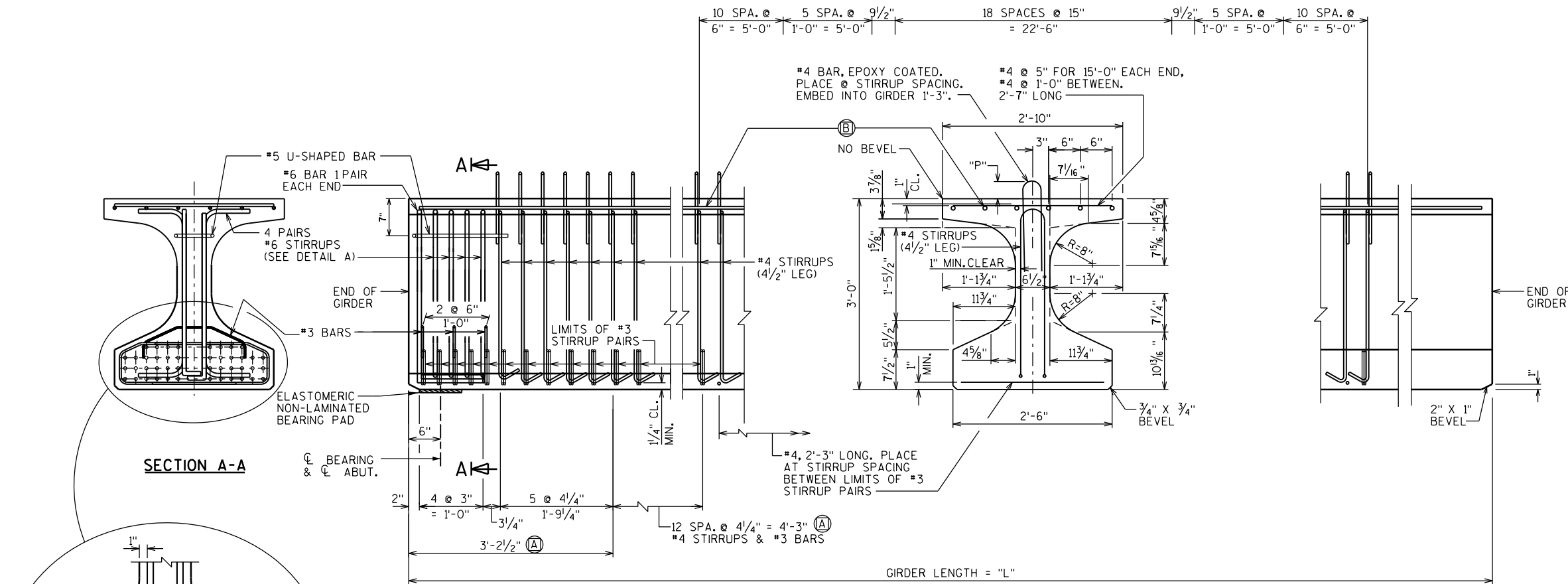
STRANDS SHALL BE FLUSH WITH THE END OF GIRDER. FOR GIRDER ENDS EMBEDDED COMPLETELY IN CONCRETE, ENDS OF STRANDS SHALL BE COATED WITH NON-BITUMINOUS JOINT SEALER.

FOR DIAPHRAGM INSERT & CONNECTION DETAILS SEE SHEET 9.

ALL GIRDERS SHALL BE CAST FULL LENGTH AS SHOWN.

SPACING SHOWN FOR #4 STIRRUPS IS FOR GRADE 60 REINFORCEMENT.

AN ALTERNATE EQUIVALENT OF WELDED WIRE FABRIC (WWF) ASTM A1064 MAY BE SUBSTITUTED FOR THE STIRRUP REINFORCEMENT SHOWN, UPON APPROVAL OF THE STRUCTURES DEVELOPMENT SECTION.



SIDE VIEW & TYP. SECTION

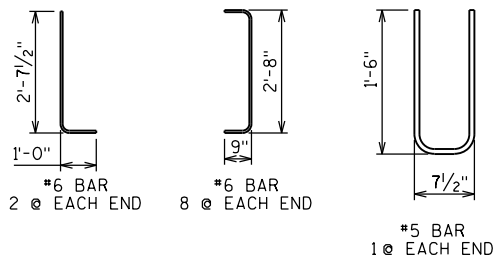
(A) DETAIL TYP. AT EACH END

(B) 6 #4 BARS, FULL LENGTH, MIN. LAP = 1'-11"

THE THEORETICAL INITIAL CAMBER VALUE AT THE TIME OF STRAND RELEASE AT MIDSPAN. VALUES INCLUDE A MAGNIFICATION FACTOR OF 1.4 TO ACCOUNT FOR CREEP BETWEEN RELEASE AND INSTALLATION.

SPAN	CAMBER (IN.)
1	1 1/8

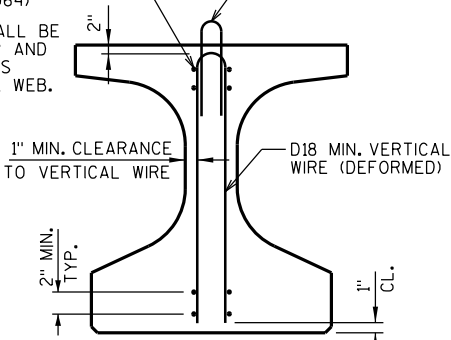
THESE VALUES ARE NOT TO BE USED IN DETERMINING 'T', USE ACTUAL GIRDER SHOTS. THESE VALUES ARE FOR INFORMATIONAL PURPOSES ONLY.



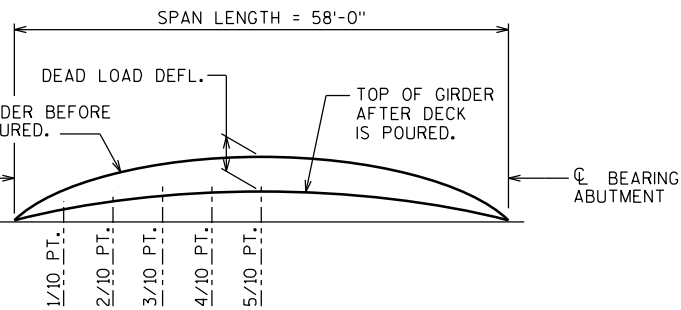
NO. 4 BAR, EPOXY COATED. PLACE AT STIRRUP SPACING REQUIRED FOR NON WWF STIRRUPS. EMBED INTO GIRDER 1'-3".

AREA OF HORIZ. WIRE SHALL BE > 40% OF VERT. WIRE AREA (ASTM A1064)

HORIZ. WIRES SHALL BE LOCATED IN TOP AND BOTTOM FLANGES AND NOT IN THE WEB.



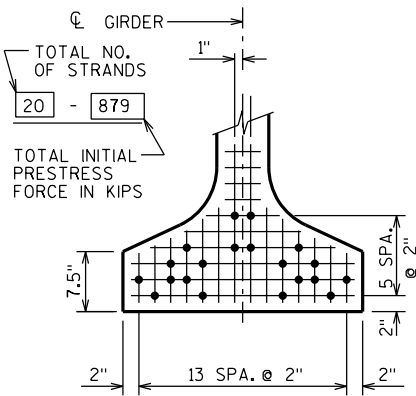
SHOWING WELDED WIRE FABRIC (WWF) STIRRUPS
ASTM A1064 (Fy = 70 KSI)



DEAD LOAD DEFLECTION DIAGRAM

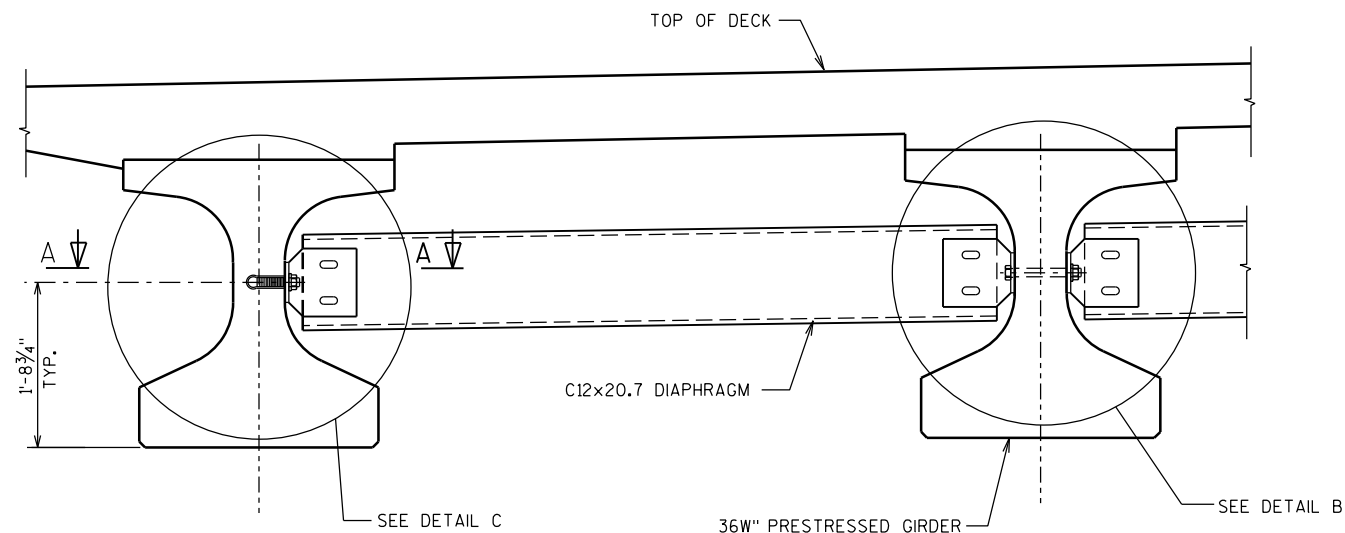
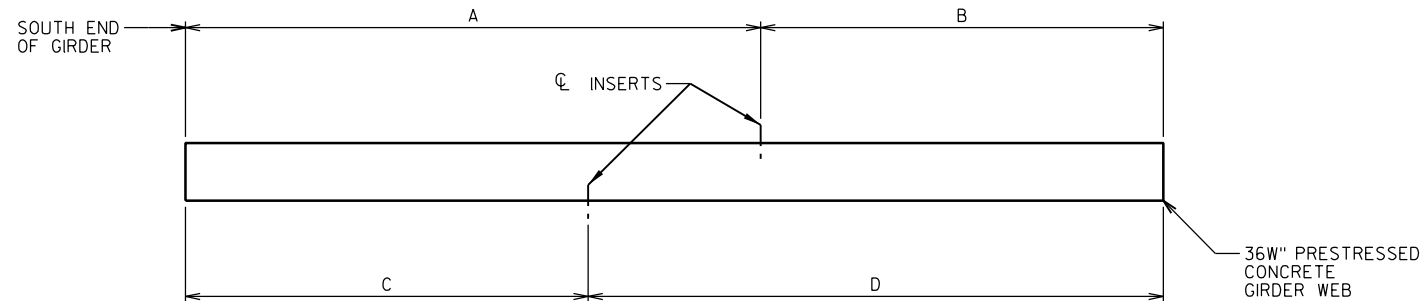
* MINIMUM CYLINDER STRENGTH OF CONCRETE @ TIME OF TRANSFER OF PRESTRESS FORCE.

GIRDER DATA																								
SPAN	GIRDER	GIRDER LENGTH "L"	DEAD LOAD DEFL. (IN.)									CONC. STRGTH. f'c (p.s.i.)	"P" 1ST 1/3 OF GIRDER	"P" MID 1/3 OF GIRDER	"P" END 1/3 OF GIRDER	DIA. OF STRAND (IN.)	DRAPED PATTERN					UNDRAPED PATTERN		
			1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10						TOTAL NO. OF STRANDS	f'ci (P.S.I.) *	(IN.)				TOTAL NO. OF STRANDS	f'ci (P.S.I.) *
																			"A"	"B" MIN.	"B" MAX.	"C"		
1	1-4	59'-0"	0.2	0.4	0.5	0.6	0.6	0.5	0.4	0.2	8000	7"	7"	7"	0.6	-	-	-	-	-	-	20	6800	



TYP. STRAND PATTERN

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-62-255			
DRAWN BY RLR		PLANS CK'D. JAS	
36W" PRESTRESSED GIRDER DETAILS		SHEET 8 OF 15	

**EXTERIOR GIRDER****INTERIOR GIRDER****PART TRANSVERSE SECTION AT DIAPHRAGM****DIAPHRAGM INSERT LOCATION PLAN**

SEE PLAN, SHEET 10

DIAPHRAGM INSERT LOCATION TABLE

GIRDER NUMBER	A	B	C	D	INSERT TYPE
1	-	-	27'-11 1/2"	31'-0 1/2"	FERRULE LOOPS
2	31'-0 1/2"	27'-11 1/2"	27'-11 1/2"	31'-0 1/2"	PIPE SLEEVES
3	31'-0 1/2"	27'-11 1/2"	27'-11 1/2"	31'-0 1/2"	PIPE SLEEVES
4	31'-0 1/2"	27'-11 1/2"	-	-	FERRULE LOOPS

NOTES

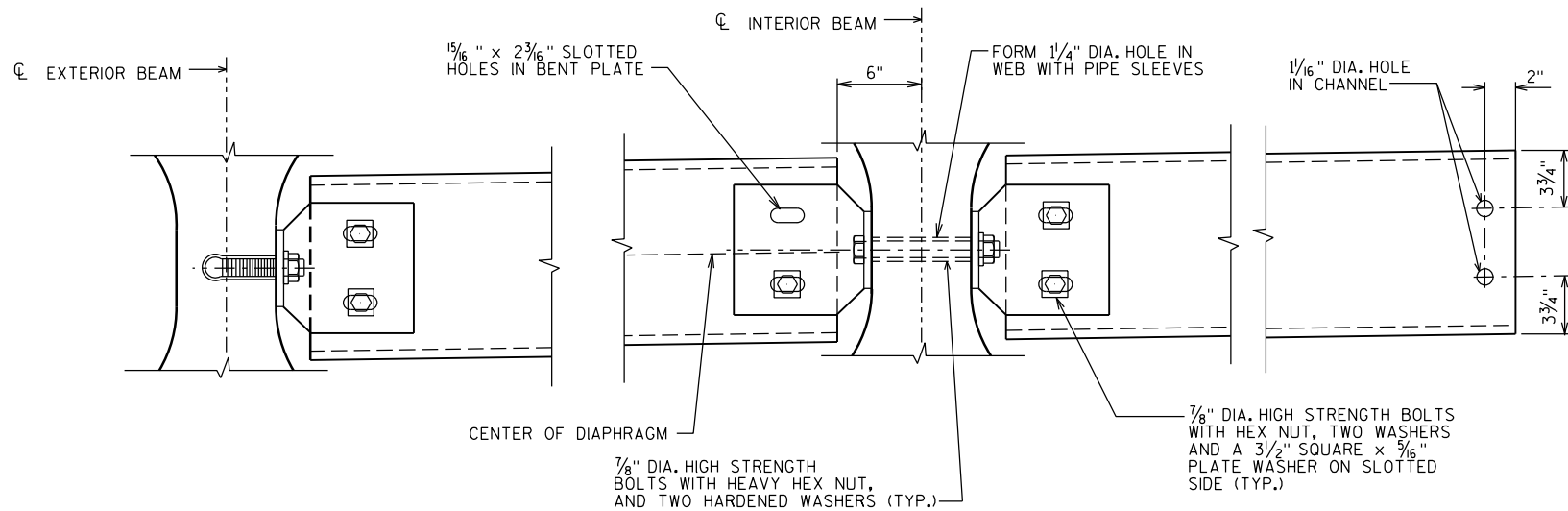
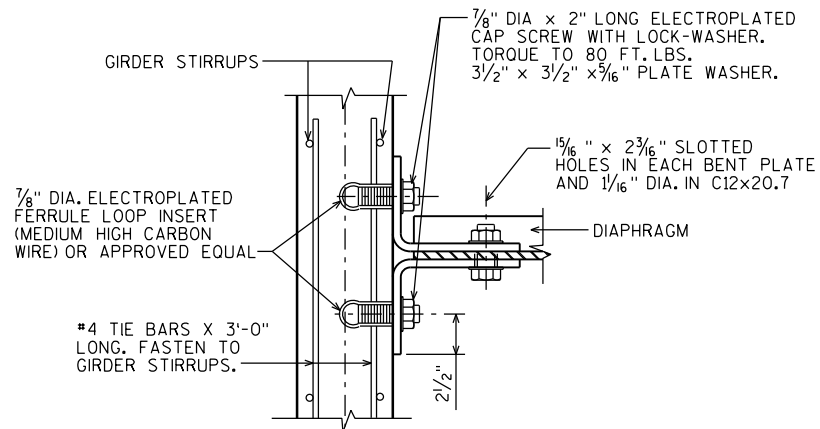
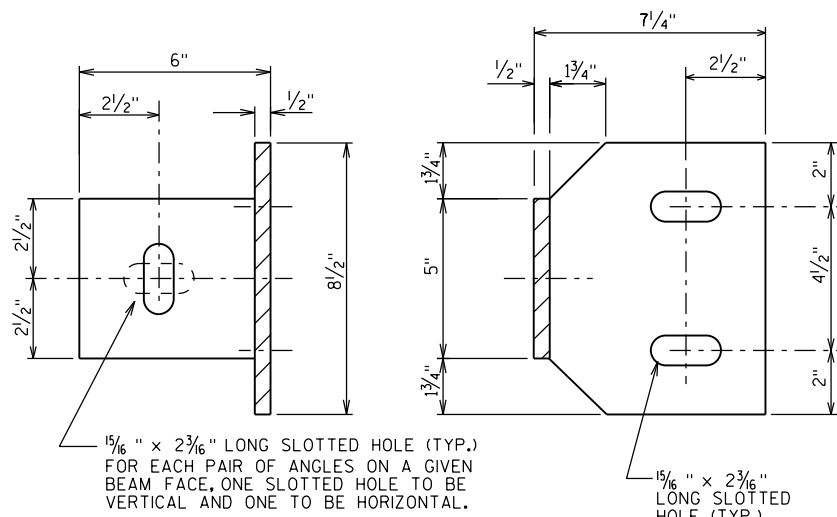
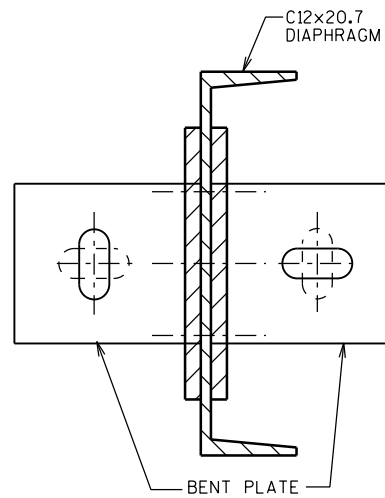
ALL DIAPHRAGM MATERIAL NOT EMBEDDED IN THE CONCRETE GIRDER SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "STEEL DIAPHRAGMS B-62-255", EACH.

EACH DIAPHRAGM BETWEEN GIRDERS SHALL CONSTITUTE ONE UNIT.

ALL DIAPHRAGM STRUCTURAL STEEL SHALL BE ASTM A709 GRADE 36.

ALL DIAPHRAGM MATERIAL INCLUDING BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED AFTER FABRICATOIN.

STEEL DIAPHRAGM TO CONCRETE CONNECTION SHALL BE SNUG-TIGHT PLUS 1/4 TURN, UNLESS NOTED OTHERWISE. HIGH STRENGTH BOLTS FOR WEB CONNECTION SHALL MEET THE REQUIREMENTS FOR ASTM A325 OR ASTM A449.

**DETAIL C****DETAIL B****SECTION A-A**
(FOR EXTERIOR ATTACHMENT)**BEAM FACE****DIAPHRAGM FACE****ATTACHMENT TO CHANNEL**

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-62-255			
DRAWN BY RLR		PLANS CK'D. JAS	
STEEL DIAPHRAGM			SHEET 9 OF 15

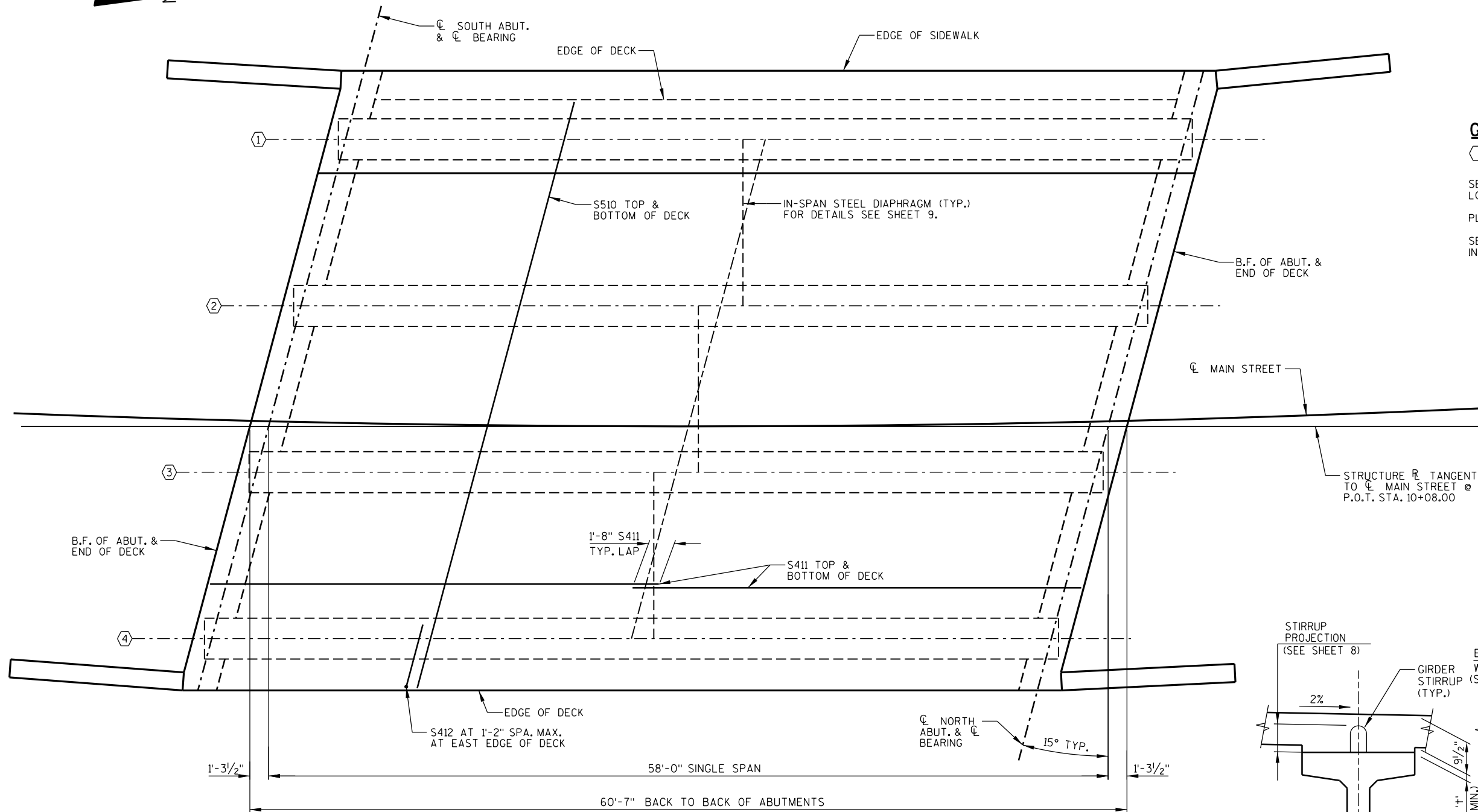
GENERAL NOTES

① - INDICATES GIRDER NUMBER

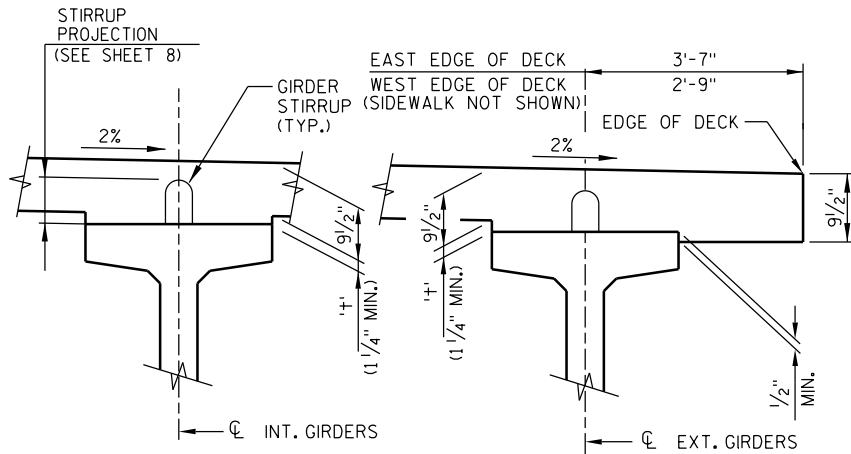
SEE SHEET 11 FOR TRANSVERSE AND LONGITUDINAL BAR SPACING.

PLACE TRANSVERSE BARSTEEL ON THE SKEW.

SEE SHEET 9 FOR LOCATION OF DIAPHRAGM INSERTS ON GIRDERS.



PLAN



DECK HAUNCH DETAIL

TOP OF DECK ELEVATIONS

LOCATION	SPAN POINT	EAST EDGE OF SLAB	GIRDER 4	GIRDER 3	MAIN ST. C/L	GIRDER 2	GIRDER 1	WEST EDGE OF SLAB
S. ABUT	1	642.05	642.00	641.75	641.68	641.51	641.26	641.20
	1.1	642.02	641.97	641.72	641.65	641.48	641.23	641.17
	1.2	641.99	641.94	641.69	641.62	641.45	641.20	641.14
	1.3	641.96	641.91	641.66	641.59	641.42	641.17	641.11
	1.4	641.93	641.88	641.63	641.56	641.39	641.14	641.08
	1.5	641.90	641.85	641.60	641.53	641.36	641.11	641.05
	1.6	641.87	641.82	641.57	641.51	641.33	641.08	641.02
	1.7	641.84	641.79	641.55	641.48	641.30	641.05	641.00
	1.8	641.81	641.76	641.52	641.45	641.27	641.03	640.97
	1.9	641.79	641.74	641.49	641.42	641.25	641.00	640.94
N. ABUT	2	641.76	641.71	641.46	641.39	641.22	640.97	640.91

TO DETERMINE '+', ELEV. OF TOP OF GIRDERS AT CL OF SUBSTRUCTURE UNITS & AT 1/10 POINTS OF EACH SPAN SHALL BE TAKEN. TO DETERMINE THE TOP OF DECK ELEVATION FOR POINT REFERRED USE TABLE ON THIS SHEET AND ADJUST FOR CROSS SLOPE OVER GIRDER. THEN FOLLOW THIS PROCESS:

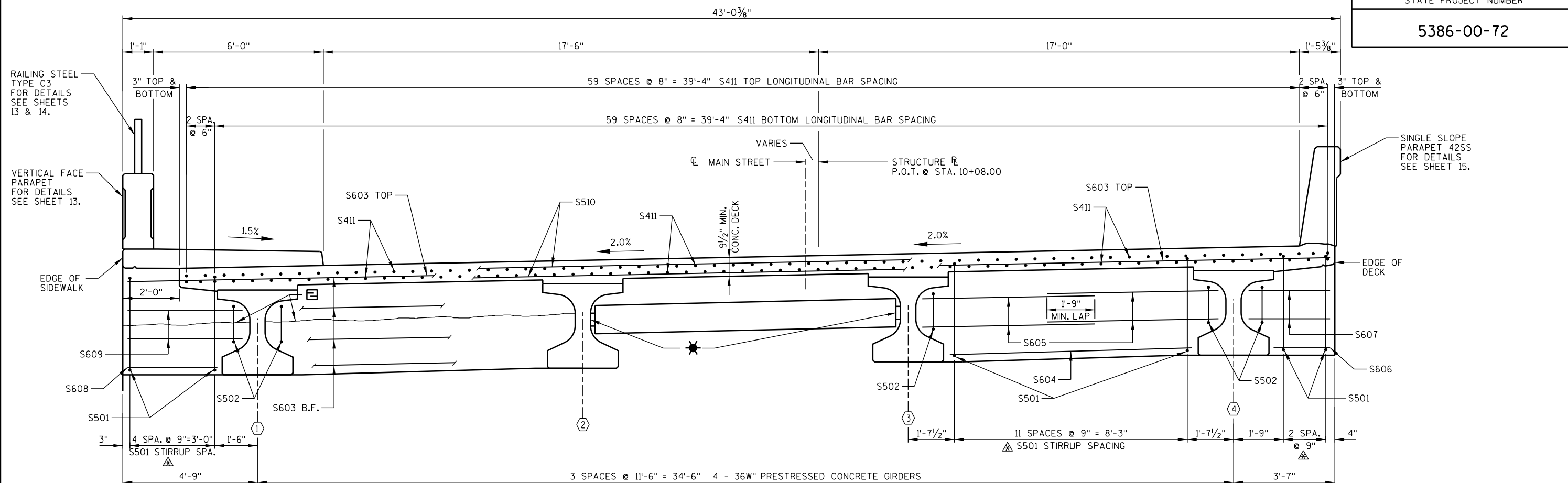
NOTE: AN AVERAGE HAUNCH ("+") OF 2 5/8" WAS USED IN THE QUANTITY "CONCRETE MASONRY BRIDGES."

TOP OF DECK ELEV. AT FINAL GRADE
- TOP OF GIRDER ELEVATION
+ DEADLOAD DEFLECTION (SEE SHEET 8)
- DECK THICKNESS

= HAUNCH HEIGHT '+'

IF 1 1/4" MINIMUM HAUNCH HEIGHT '+' CANNOT BE MAINTAINED, THE GRADE LINE MAY BE REVISED BY THE ENGINEER AT THE OPTION OF THE CONTRACTOR. THE PLAN DECK THICKNESS SHALL BE HELD. MAX. HAUNCH HEIGHT EQUALS "STIRRUP PROJECTION" MINUS 3".

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-62-255			
DRAWN BY RLR		PLANS CK'D. JAS	
SUPERSTRUCTURE			SHEET 10 OF 15



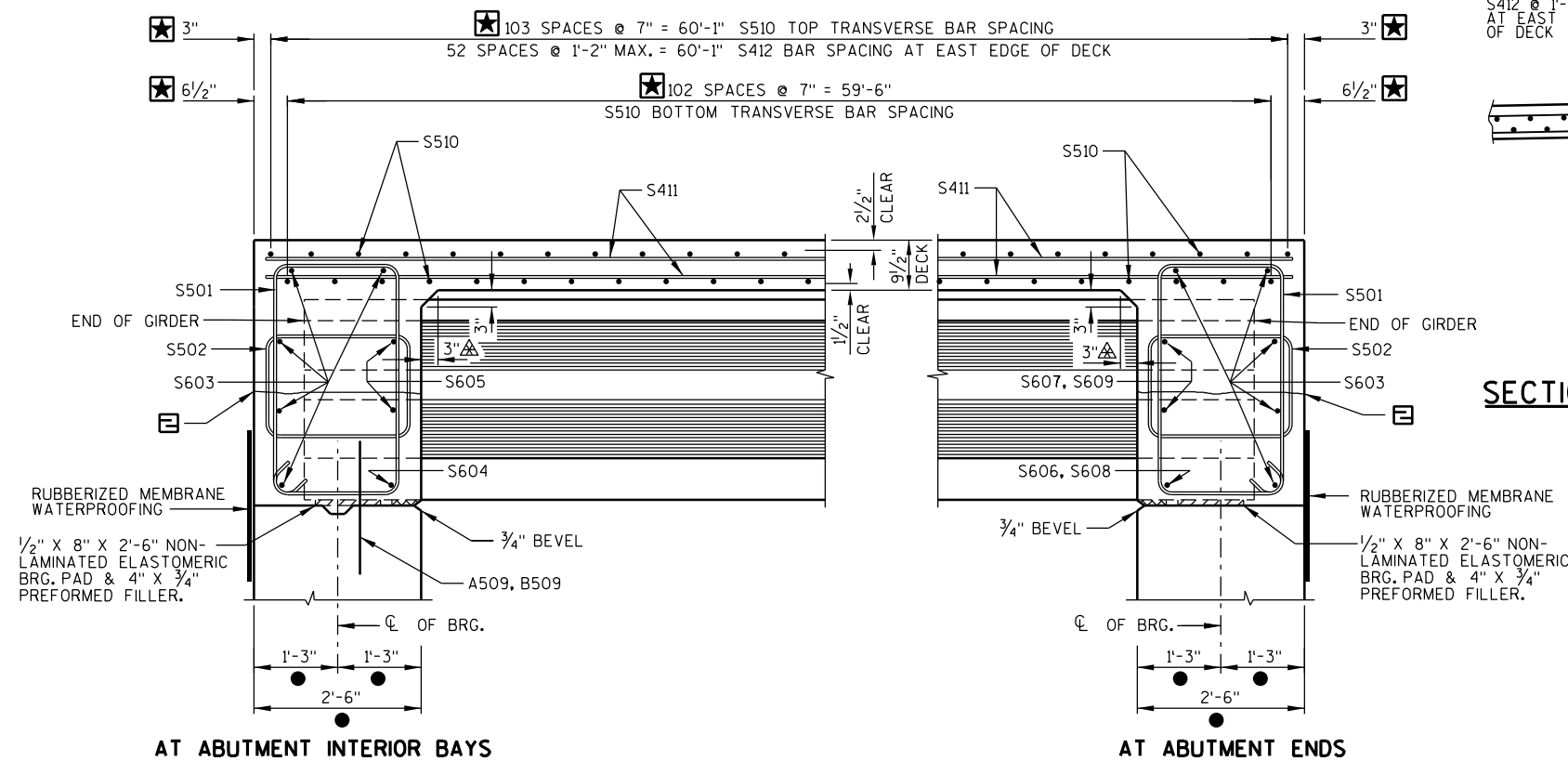
AT ABUTMENTS

IN SPAN

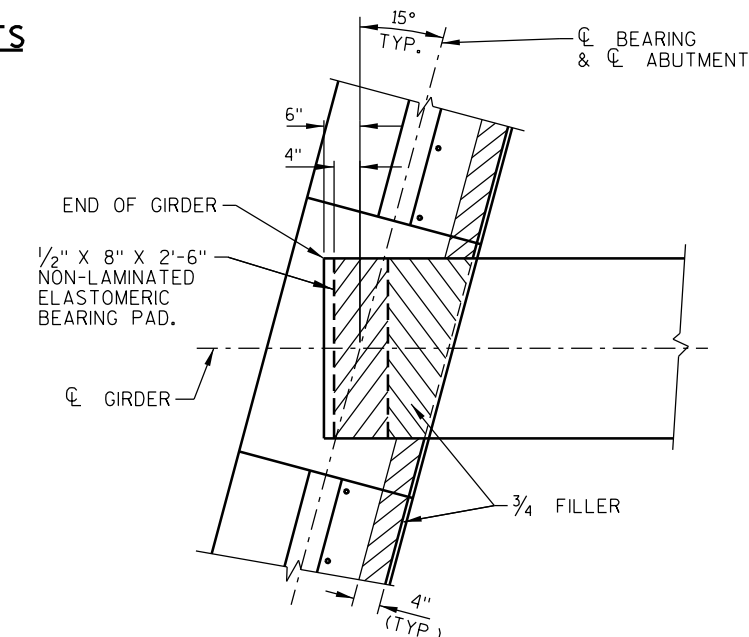
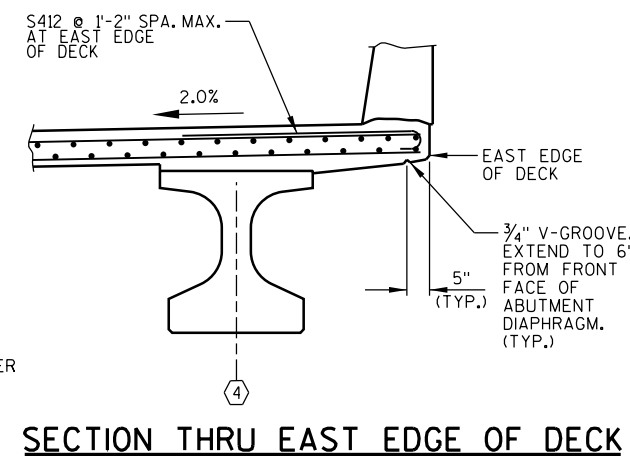
CROSS SECTION THRU BRIDGE

(LOOKING NORTH)

AT ABUTMENTS



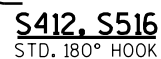
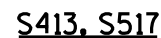
PART LONGITUDINAL SECTION



LEGEND

- - INDICATES GIRDER NUMBER
- - OPTIONAL CONSTRUCTION JOINT 1'-2" BELOW TOP OF GIRDERS. IF USED DECK POUR MUST BE WITHIN 2 WEEKS FROM THE TIME OF THE DIAPHRAGM POUR.
- ★ - FOR DETAILS OF STEEL DIAPHRAGMS, DIAPHRAGM INSERTS, AND INSERT LOCATIONS SEE SHEET 9. FOR LAYOUT OF STEEL DIAPHRAGMS, SEE PLAN SHEET 10.
- - DIMENSION IS TAKEN NORMAL TO CL SUBSTRUCTURE UNITS.
- △ - DIMENSION IS TAKEN NORMAL TO CL GIRDER, PLACE BARS PARALLEL TO GIRDERS.
- F.F. - FRONT FACE
- B.F. - BACK FACE
- ★ - DIMENSION IS GIVEN PARALLEL TO THE STRUCTURE R P.O.T. @ STATION 10+08.00

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-62-255			
DRAWN BY RLR		PLANS CK'D. JAS	
SUPERSTRUCTURE SECTIONS & DETAILS			SHEET 11 OF 15



MARK	NO. REQD.	LENGTH
S528	2 SERIES OF 6	4'-9" TO 6'-

BILL OF BARS (COATED) 21,940 LBS.

MARK	NUMBER REQUIRED	LENGTH	BENT	BAR SERIES	LOCATION
S501	88	11'-8"	X		DIAPHRAGM @ ABUTS. - STIRRUP - VERT.
S502	16	7'-8"	X		DIAPHRAGM @ ABUTS. - STIRRUP - VERT.
S603	10	44'-0"			DIAPHRAGM @ ABUT. - B.F. & TOP - TRANS.
S604	6	8'-10"			DIAPHRAGM @ ABUT. - F.F. - INT. BAYS - TRANS.
S605	24	6'-4"			DIAPHRAGM @ ABUT. - F.F. - INT. BAYS - TRANS.
S606	2	2'-0"			DIAPHRAGM @ ABUT. - F.F. - EAST END - TRANS.
S607	4	2'-11"			DIAPHRAGM @ ABUT. - F.F. - EAST END - TRANS.
S608	2	3'-3"			DIAPHRAGM @ ABUT. - F.F. - WEST END - TRANS.
S609	4	4'-2"			DIAPHRAGM @ ABUT. - F.F. - WEST END - TRANS.
S510	207	41'-11"			DECK - TOP & BOTTOM - TRANS.
S411	248	31'-0"			DECK - TOP & BOTTOM - LONGIT.
S412	53	5'-1"	X		DECK - EAST EDGE - TRANS.
S413	242	2'-7"	X		DECK & INTO SIDEWALK - TRANS.
S414	41	3'-0"			SIDEWALK BOTTOM - TRANS.
S415	26	31'-0"			SIDEWALK - LONGIT.
S516	121	7'-5"	X		SIDEWALK TOP - TRANS.
S517	14	6'-6"	X		SIDEWALK - OVER ABUTMENT - VERT.
S518	73	6'-9"	X		WEST PARAPET - STIRRUP - VERT.
S519	16	31'-7"			WEST PARAPET ON DECK - LONGIT.
S520	16	11'-7"			WEST PARAPET ON WINGS - LONGIT.
S521	91	4'-5"	X		EAST PARAPET ON DECK - STIRRUP - VERT.
S522	16	30'-10"			EAST PARAPET ON DECK - LONGIT.
S523	101	6'-8"	X		EAST PARAPET - STIRRUP - VERT.
S524	2	11'-7"	X		EAST PARAPET ON WING - BOTTOM - LONGIT.
S525	10	11'-7"			EAST PARAPET ON WING - LONGIT.
S526	12	6'-6"	X		EAST PARAPET ON WING - STIRRUP - VERT.
S527	10	6'-5"	X		EAST PARAPET ON WING - STIRRUP - VERT.
S528	12	5'-5"	X		EAST PARAPET ON WING - END - STIRRUP - VERT.
S529	4	11'-8"	X		EAST PARAPET ON WING - TOP - LONGIT.

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



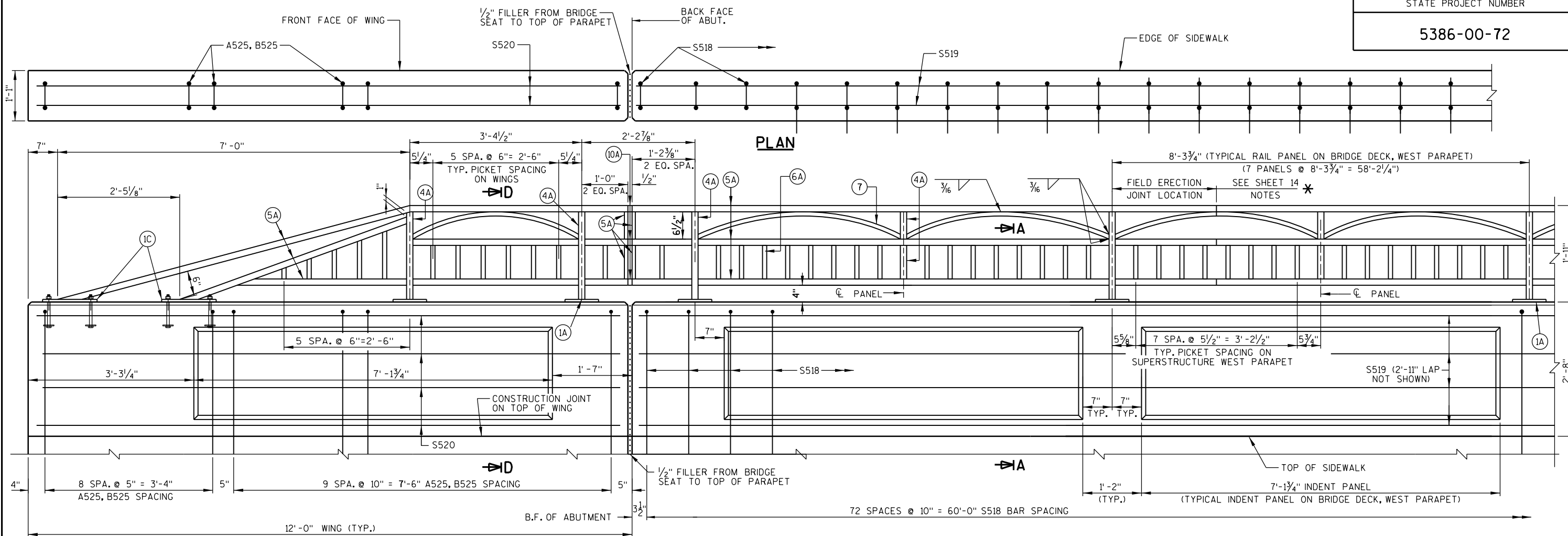
SIDEWALK AND DECK BAR STEEL NOT SHOWN



(LOOKING NORTH)

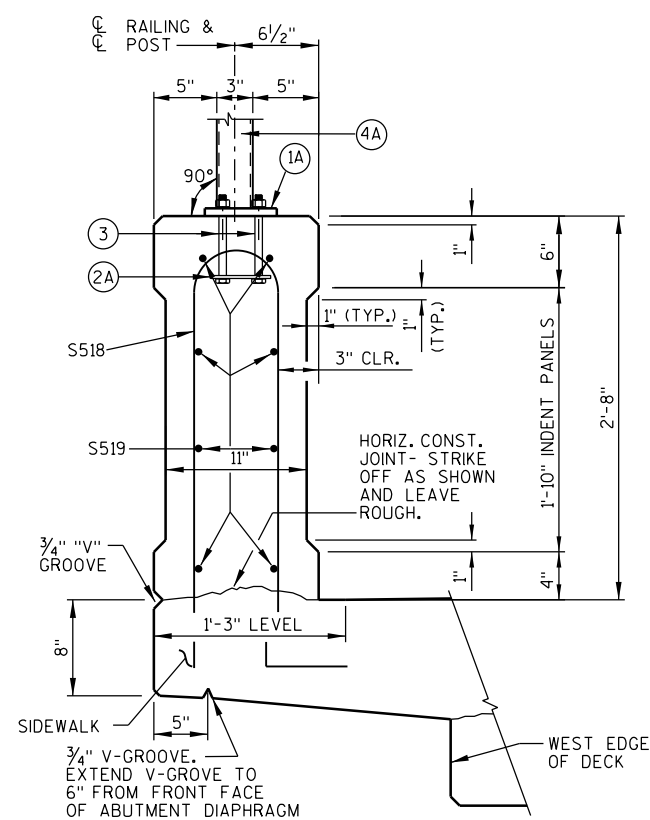
☒ - CONSTRUCTION JOINT
STRIKE OFF AS SHOWN
AND LEAVE ROUGH.
FOR DECK POUR, MATCH
BRIDGE CROSS SLOPE.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE		B-62-255	
DRAWN BY		RLR	PLANS CK'D. JAS
WEST SIDEWALK & SUPERSTRUCTURE DETAILS		SHEET 12 OF	

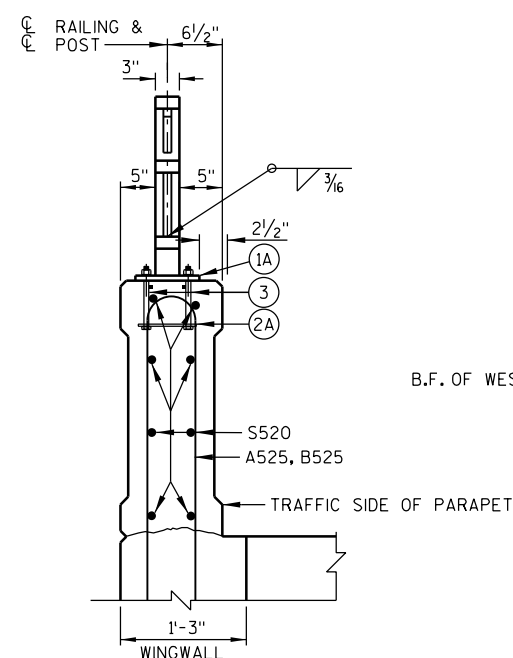


PART ELEVATION OF WEST PARAPET
LOOKING AT TRAFFIC FACE

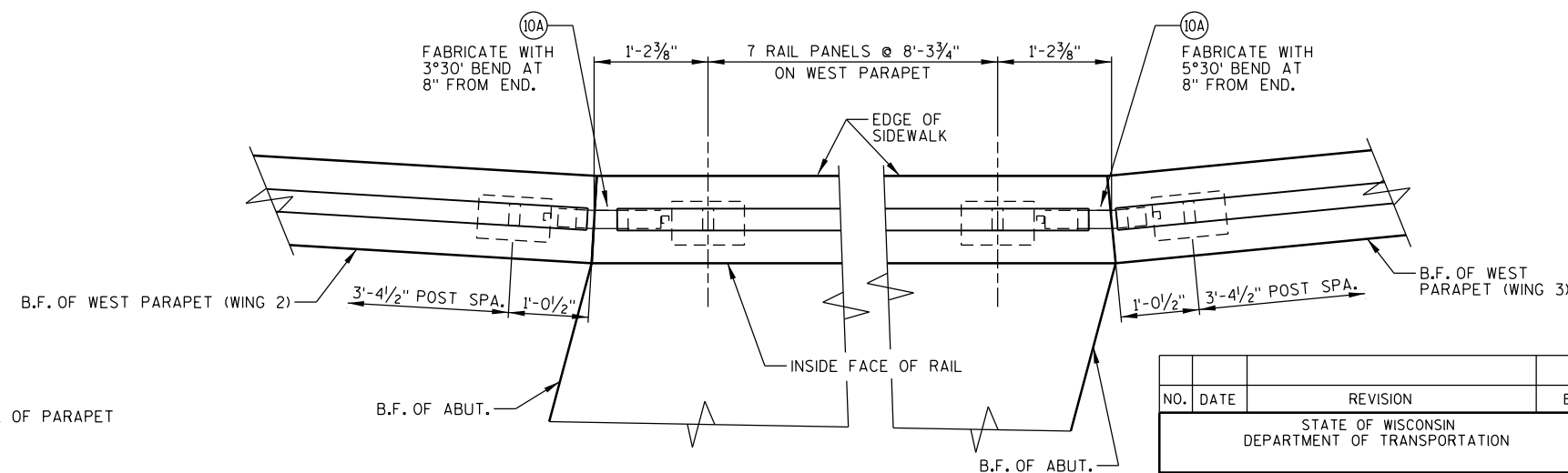
NOTE: FOR LEGEND AND RAILING DETAILS, SEE SHEET 14.



SECTION A-A THRU WEST PARAPET ON BRIDGE



SECTION D-D



RAIL JOINT DETAIL - WINGS 2 & 3

RAIL POST SPACING GIVEN AT C/L OF RAIL

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE		B-62-255	
DRAWN BY		RLR	PLANS CK'D. JAS
WEST PARAPET & RAILING		SHEET 13 OF 15	

LEGEND

- (1A) PLATE $\frac{5}{8}$ " X 6" X 8" WITH $\frac{3}{4}$ " X $\frac{1}{2}$ " SLOTTED HOLES.
- (1C) PLATE $\frac{5}{8}$ " X 8" X 1'-1" WITH $\frac{3}{4}$ " X $\frac{1}{2}$ " SLOTTED HOLES.
- (2A) $\frac{1}{4}$ " X 5" X 7" ANCHOR PLATE WITH $\frac{1}{16}$ " ϕ HOLES FOR THREADED RODS NO. 3.
- (2C) $\frac{1}{4}$ " X $2\frac{1}{2}$ " X $7\frac{1}{4}$ " ANCHOR PLATE WITH $\frac{1}{16}$ " ϕ HOLES FOR THREADED RODS NO. 3.
- (3) $\frac{5}{8}$ " DIA. X 9" LONG, TYPE 316 STAINLESS STEEL THREADED RODS (MIN. TENSILE STRENGTH = 70 KSI) WITH NUT AND WASHERS OF SAME ALLOY GROUP. (ALTERNATE ANCHORAGE: CONCRETE ADHESIVE ANCHORS $\frac{3}{4}$ ", EMBED 7" IN CONCRETE FOR RAIL POSTS, EMBED 5" IN CONCRETE FOR END RAILS.) ADHESIVE ANCHORS SHALL CONFORM TO SECTION 502.2.12 OF THE STANDARD SPECIFICATIONS.
- (4A) STRUCTURAL TUBING 3" X $1\frac{1}{2}$ " X $\frac{3}{16}$ ". PLACE VERTICAL. WELD TO NO.1 & 5.
- (5A) STRUCTURAL TUBING 3" X $1\frac{1}{2}$ " X $\frac{3}{16}$ " RAILS. WELD TO NO.1 & NO.4. INSIDE OF TUBE TO BE PAINTED AT ALL FIELD ERECTION JOINTS.
- (6A) BAR 1" X 1" PICKETS. WELD TO NO.5. PLACE VERTICAL.
- (7) BAR 1" X 1". BEND TO REQUIRED RADIUS. WELD TO NO.4 & 5.
- (9A) RECTANGULAR SLEEVE FABRICATED FROM $\frac{3}{16}$ " PLATES. PROVIDE "SLIDING FIT".
- (10A) RECTANGULAR SLEEVE FABRICATED FROM $\frac{3}{16}$ " PLATES. (1'-4" @ FIELD ERECTION JTS.) (1'-4" @ ABUTMENT JOINTS).

NOTES

BID ITEM SHALL BE "RAILING STEEL TYPE C3 B-62-255", WHICH SHALL INCLUDE ALL STEEL ITEMS SHOWN.

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

ALL PLATES, BARS AND RECTANGULAR SLEEVES SHALL CONFORM TO ASTM A709 GRADE 36. ALL STRUCTURAL TUBING SHALL CONFORM TO THE REQUIREMENTS OF ASTM A500 GRADE B.

ANCHORAGES SHALL BE ACCURATELY PLACED TO PROVIDE CORRECT ALIGNMENT OF RAILING. SET NORMAL TO GRADE.

CUT BOTTOM OF POST TO MAKE POST VERTICAL IN BOTH TRANSVERSE AND LONGITUDINAL DIRECTION.

STEEL SHIMS SHALL BE PROVIDED & USED UNDER BASE PLATES WHERE REQUIRED FOR ALIGNMENT AND SHALL BE GALVANIZED.

ALL JOINTS AND RECESSES IN CONCRETE PARAPET ARE TO BE VERTICAL.

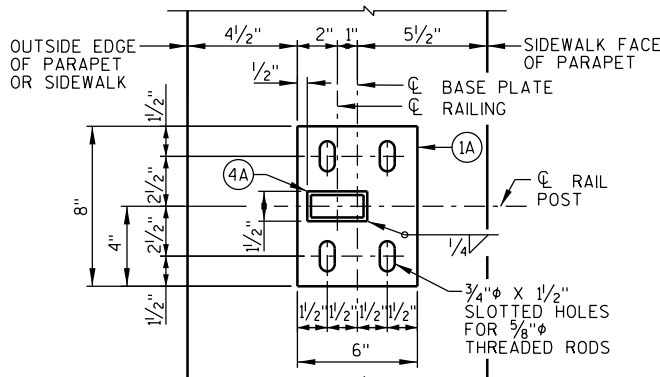
VENT HOLES SHALL BE DRILLED IN POST AND RAIL MEMBERS AS REQUIRED TO FACILITATE GALVANIZING AND DRAINAGE.

RAILING SHALL BE FABRICATED IN LENGTHS THAT INCLUDE 3 OR 4 POSTS.

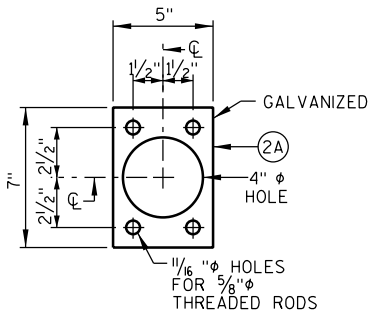
ALL MATERIAL EXCEPT NO.3 SHALL BE GALVANIZED AFTER FABRICATION. PRIOR TO GALVANIZING, THE STEEL RAILING SHALL BE GIVEN A NO.6 BLAST CLEANING PER SSPC SPECIFICATIONS.

PAINT OVER GALVANIZING WITH AN APPROVED TIE COAT AND TOP COAT AS SPECIFIED IN THE CONTRACT DOCUMENTS. THE RAILING SHALL BE PAINTED BLACK FEDERAL STANDARD COLOR NO. 27038. AT COMPLETION OF STEEL RAILING INSTALLATION, PAINT THE TOPS OF ANCHOR BOLTS AND NUTS WITH THE TIE COAT. TOUCH-UP PAINT WITH THE TOP COAT ALL DAMAGED AREAS AND THE ANCHOR BOLTS TO THE SATISFACTION OF THE ENGINEER AT NO EXTRA COST. DO NOT PAINT ANCHORAGE (NO.2 & 3) & SHIMS.

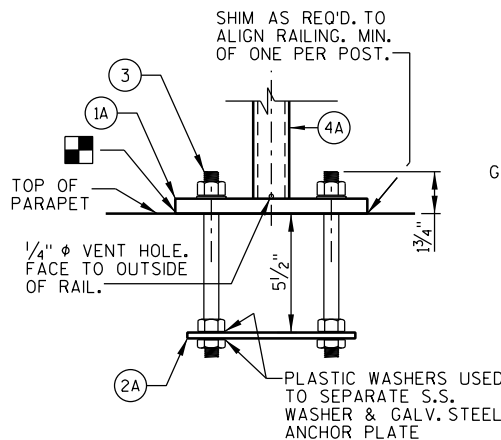
CAULK AROUND PERIMETER OF BASE PLATES, NO.1, AND FILL BOLT SLOT OPENINGS IN SHIMS AND BASE PLATES WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER.



TYPICAL RAIL POST BASE PLATE

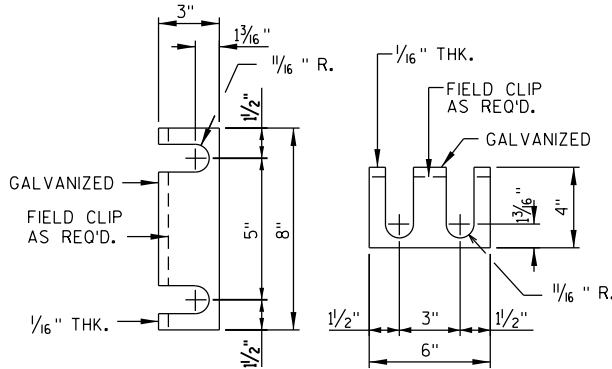


ANCHOR PLATE



ANCHORAGE FOR RAIL POSTS

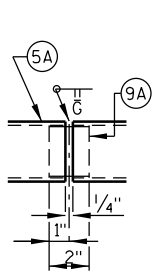
NOTE: ANCHOR PLATE NOT REQUIRED WHEN ADHESIVE ANCHORS ARE USED.



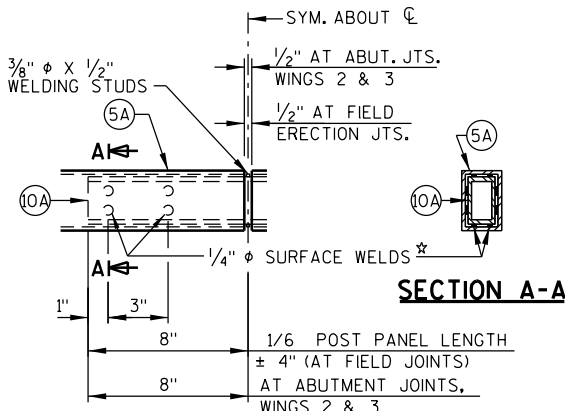
RAIL POST SHIM DETAIL

(2 SETS PER POST)

RAIL POST DETAILS

SHOP RAIL
SPLICE DETAIL

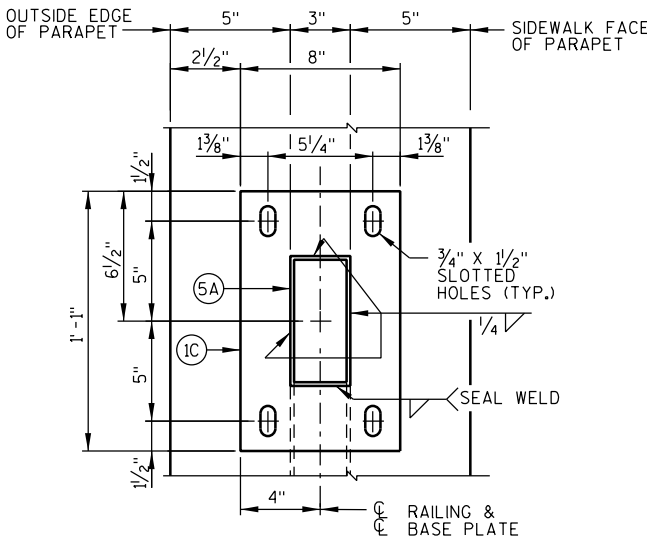
(LOCATION MUST BE SHOWN ON SHOP DRAWINGS)



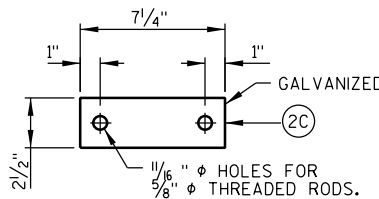
FIELD ERECTION JOINT DETAIL

*MIN. $\frac{5}{16}$ " FLAT SURFACE DIA. PUNCHINGS OR STUDS MAY BE USED AS AN ALTERNATE.

JOINT DETAILS

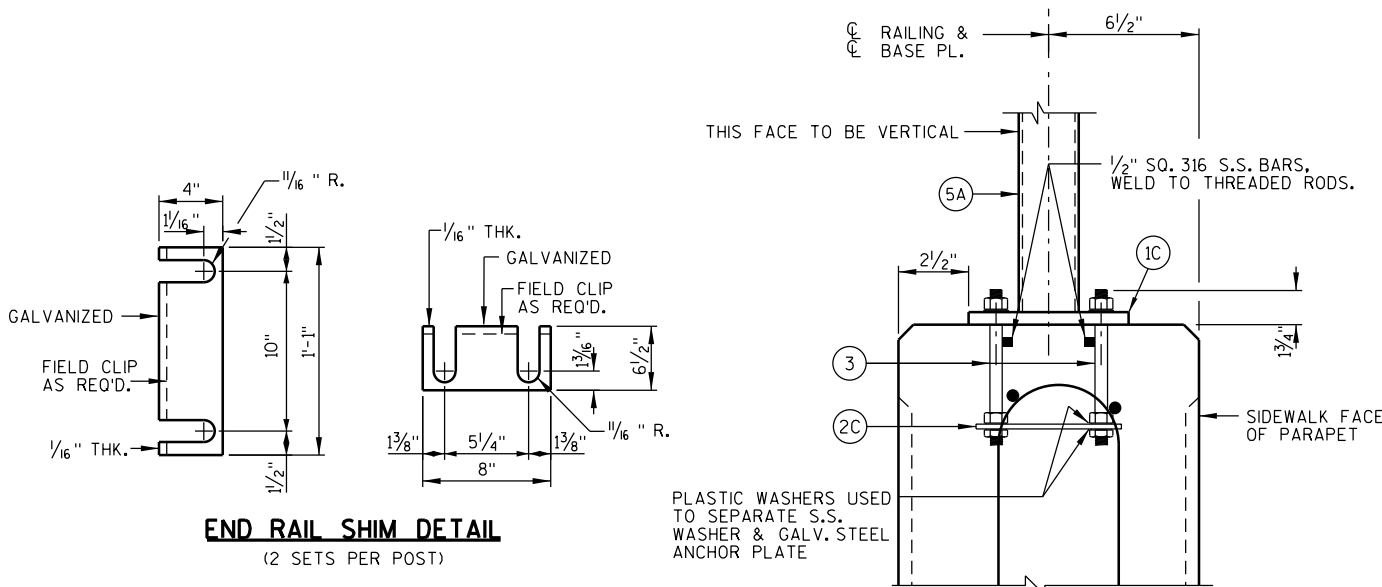


END RAIL BASE PLATE



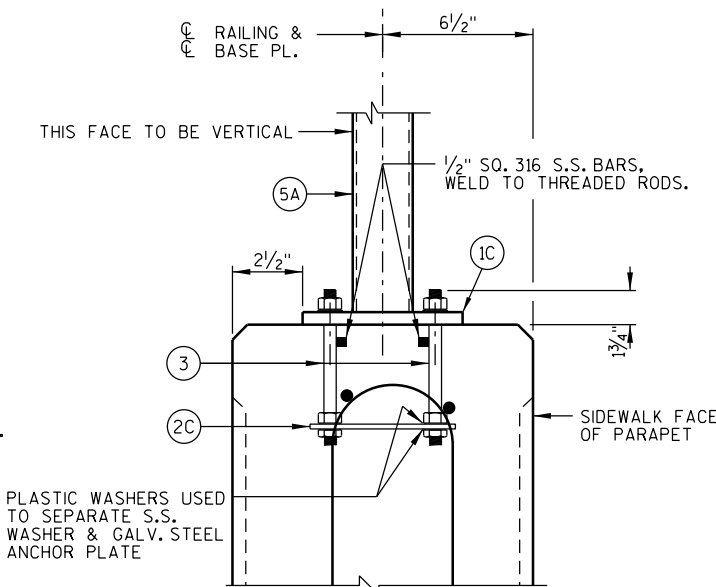
END RAIL ANCHOR PLATE

FOR END RAIL BASE PLATES
2 REQ'D. PER END RAIL BASE PLATE



END RAIL SHIM DETAIL

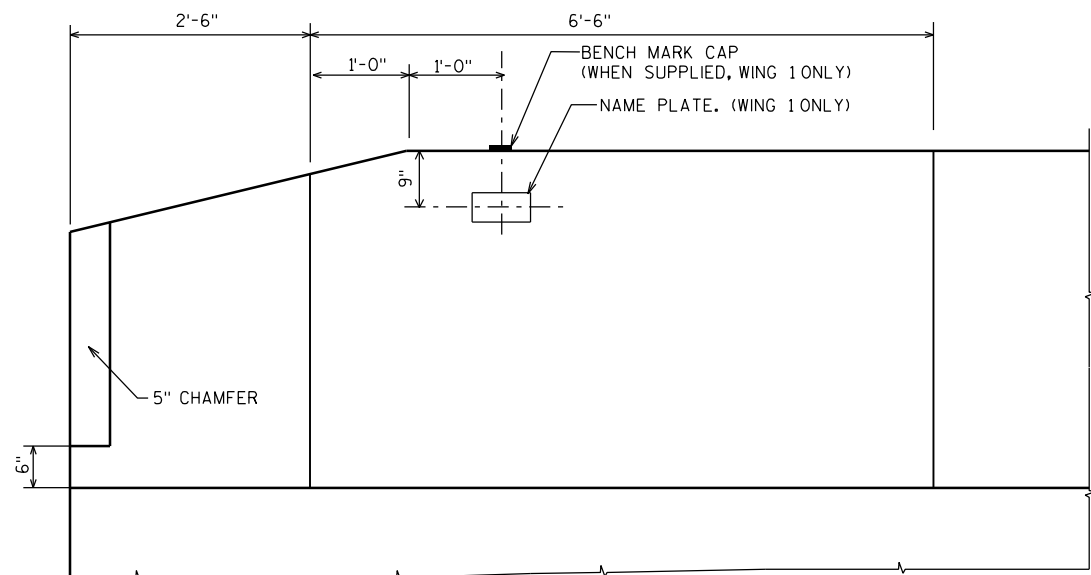
(2 SETS PER POST)



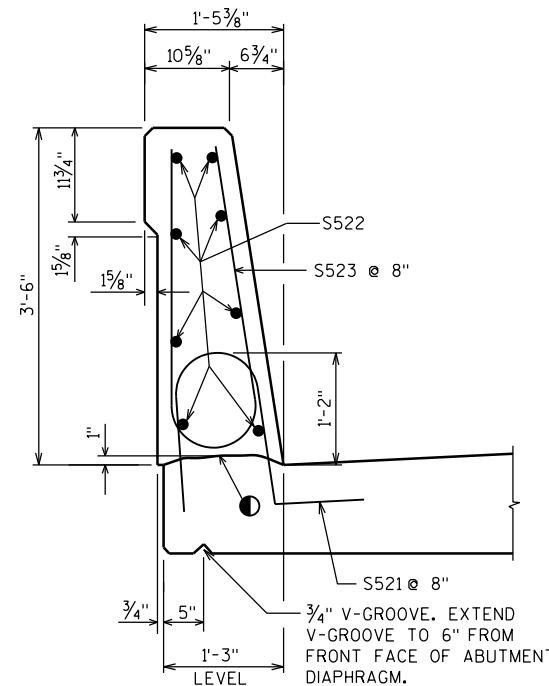
ANCHORAGE FOR END RAIL

END RAIL DETAILS

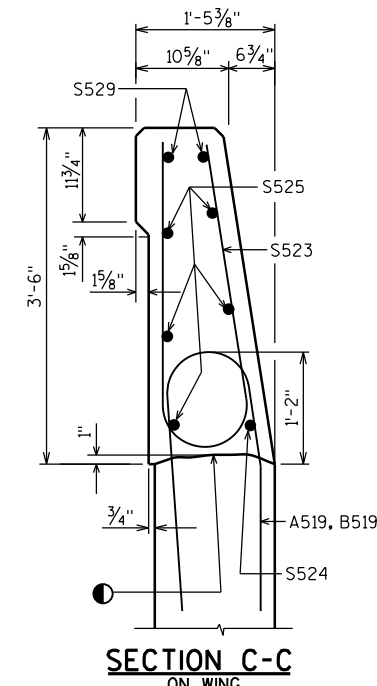
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE		B-62-255	
DRAWN BY		RLR	PLANS CK'D. JAS
WEST RAILING DETAILS		SHEET 14 OF 15	



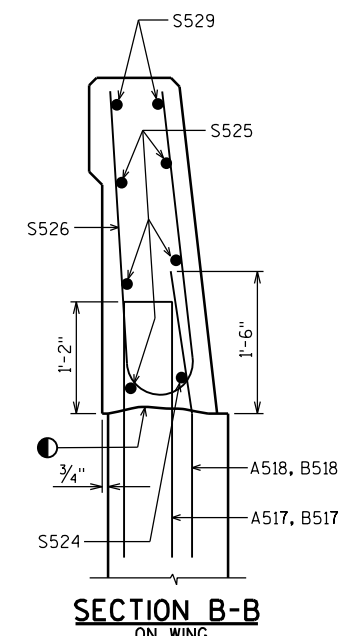
INSIDE ELEVATION



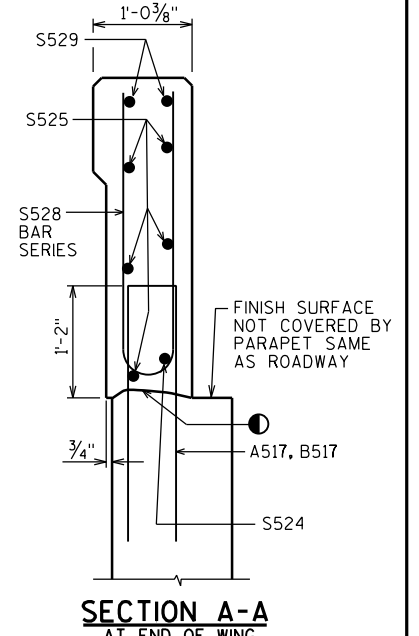
**SECTION D-D
ON EAST EDGE OF DECK**



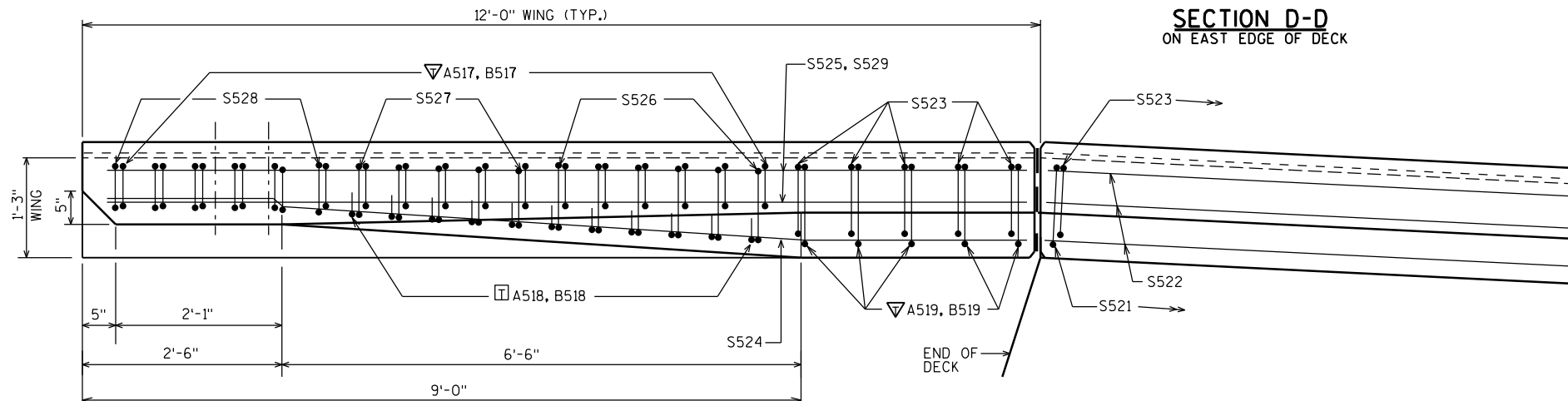
**SECTION C-C
ON WING**



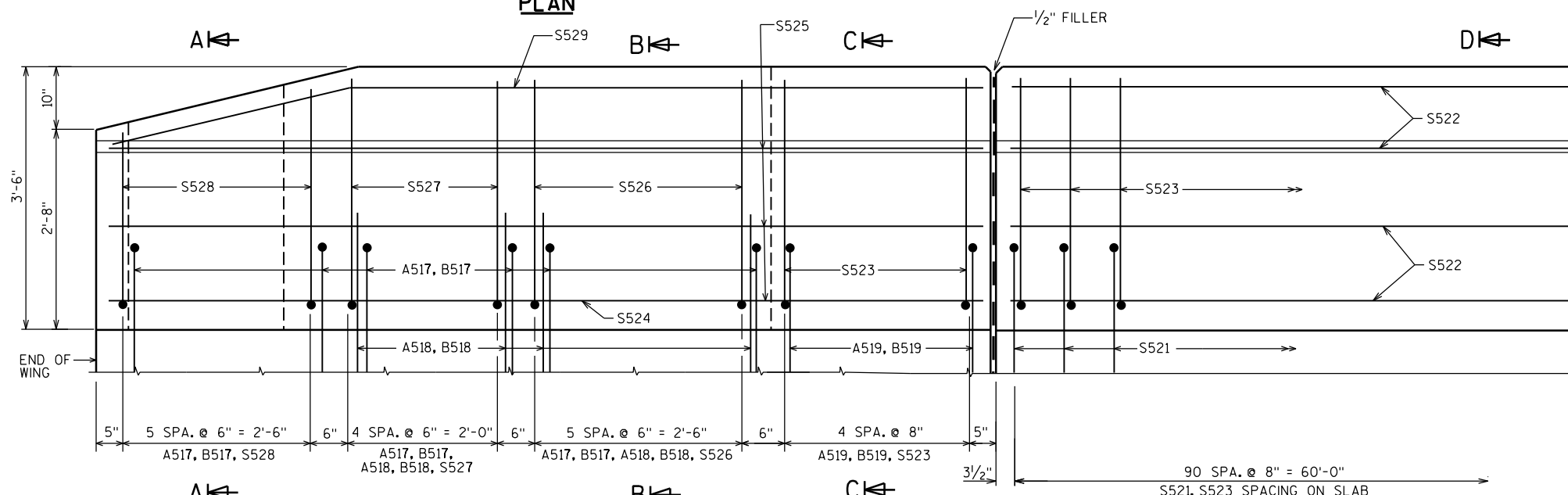
**SECTION B-B
ON WING**



**SECTION A-A
AT END OF WING**



PLAN



OUTSIDE ELEVATION

LEGEND

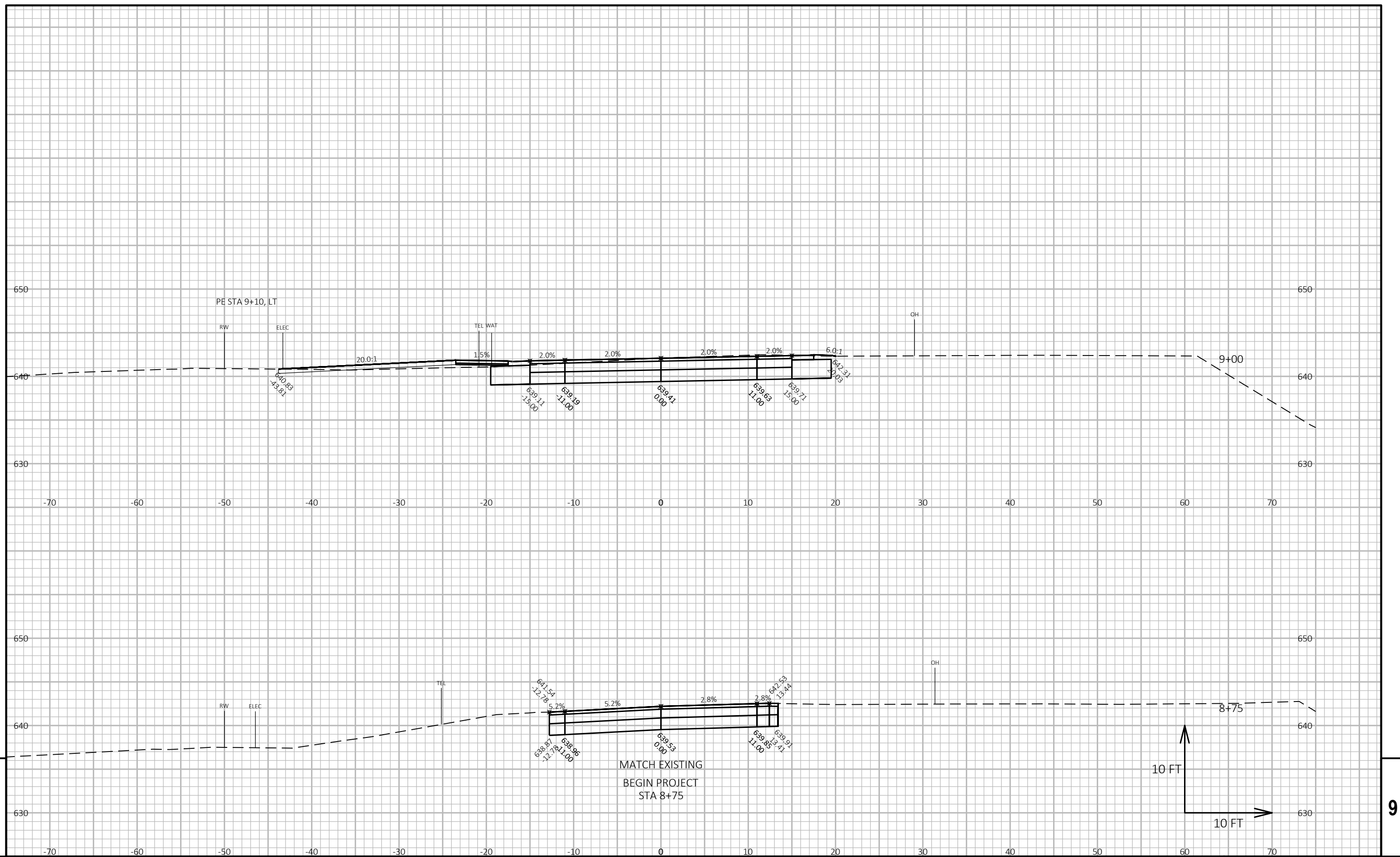
- CONSTRUCTION JOINT STRIKE OFF AS SHOWN.
- A518, B518 BARS MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. USE CARE TO PLACE A518, B518 BARS CORRECTLY ALONG TRANSITION OF PARAPET.
- ▽ A517, B517 AND A519, B519 BARS TO BE TIED TO WING STEEL BEFORE WING IS POURED.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE		B-62-255	
DRAWN BY RLR		PLANS CK'D. JAS	
EAST SINGLE SLOPE PARAPET 42SS		SHEET 15 OF 15	

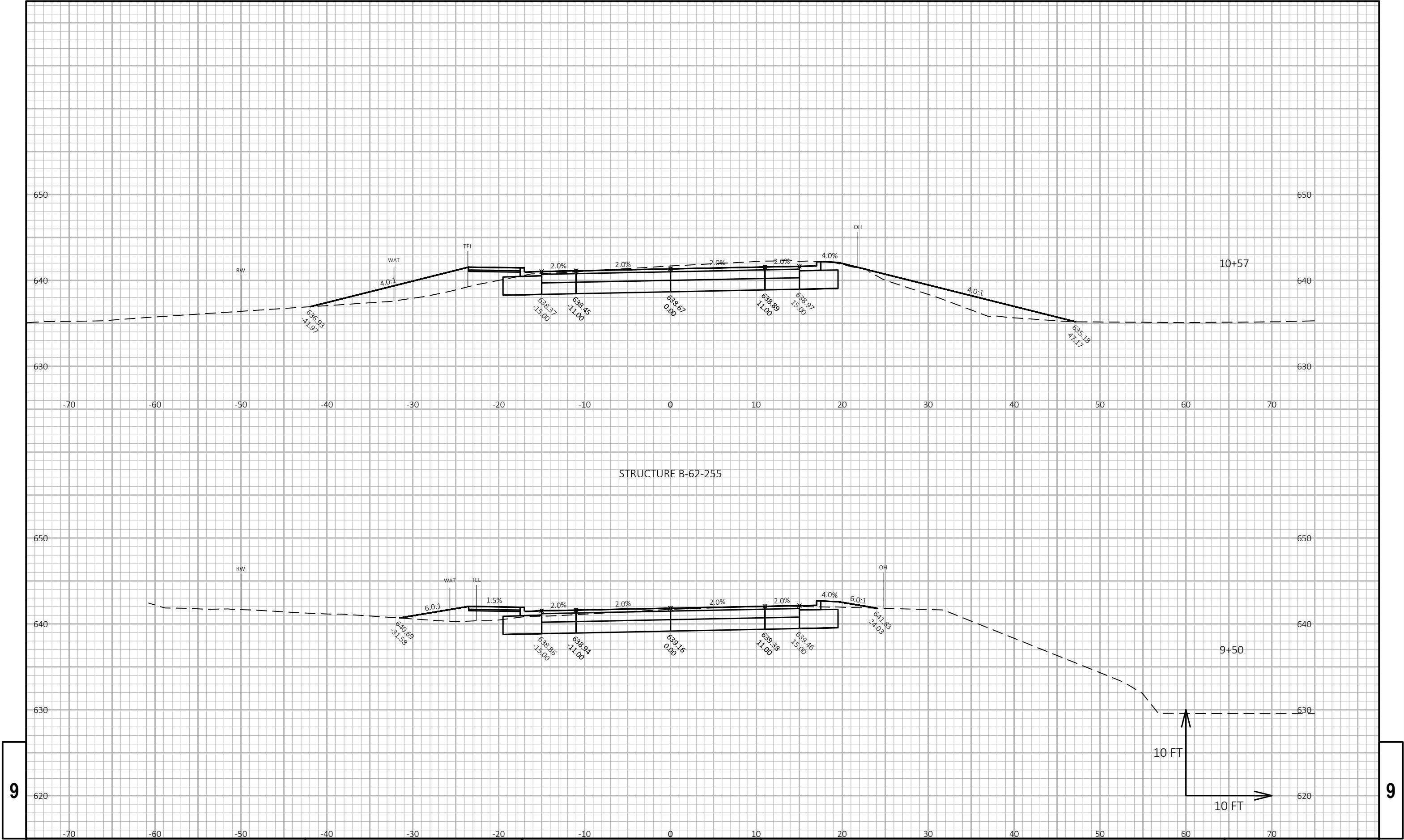
PROJECT I.D. 5386-00-72 EARTHWORK SUMMARY

Main Street

STA	EXCAVATION COMMON CY	EXCAVATION ROCK CY	FILL (1) CY	EXPANDED FILL (2) CY	WASTE CY
8+75.00	78	0	5	7	71
9+00.00	178	0	23	30	148
9+50.00	96	0	14	18	78
9+77.80					
STRUCTURE B-62-255					
10+38.40	80	0	41	53	27
10+57.48	176	0	90	117	59
11+00.00	197	0	98	127	70
11+50.00	54	0	14	18	36
11+65.00					
SUBTOTALS					
SOUTH APPROACH	352	0	42	55	297
NORTH APPROACH	507	0	243	315	192
TOTALS	859	0	285	370	489
(1) - NOT A BID ITEM - FOR INFORMATIONAL PURPOSES ONLY. (2) - FILL EXPANSION 30%					

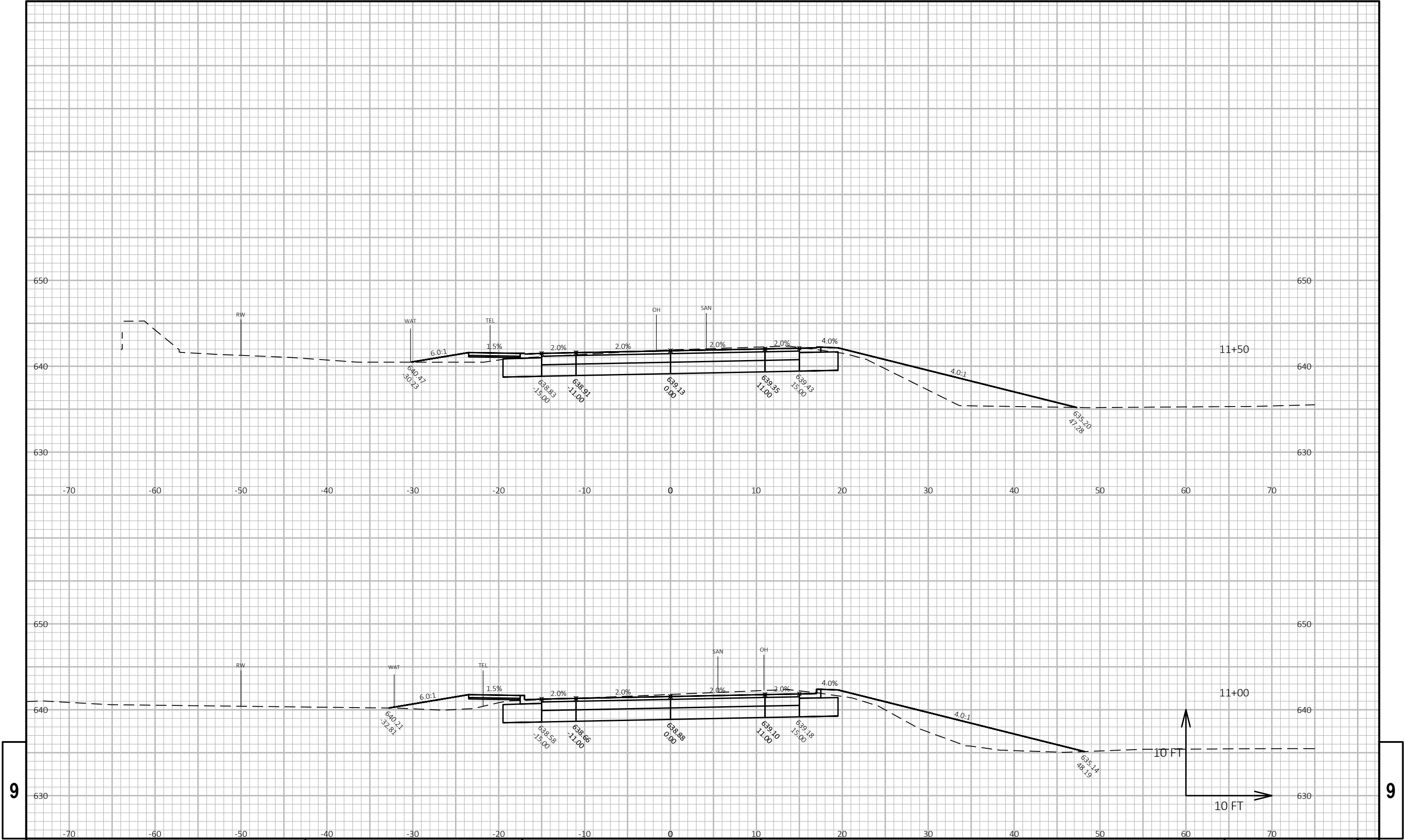


FILE NAME :	P:\73005\73305\7339\07339022\CADD\DESIGN\CORRIDORS\07339022_CORRIDOR_MAIN.DWG	PLOT DATE :	5/1/2018 2:33 PM	PLOT BY :	BRAD LEE	PLOT NAME :	
LAYOUT NAME :	090201_xs					PLOT SCALE :	1 IN:10 FT HORZ. / 1 IN:10 FT VERT.
WISDOT/CADDs SHEET 49							



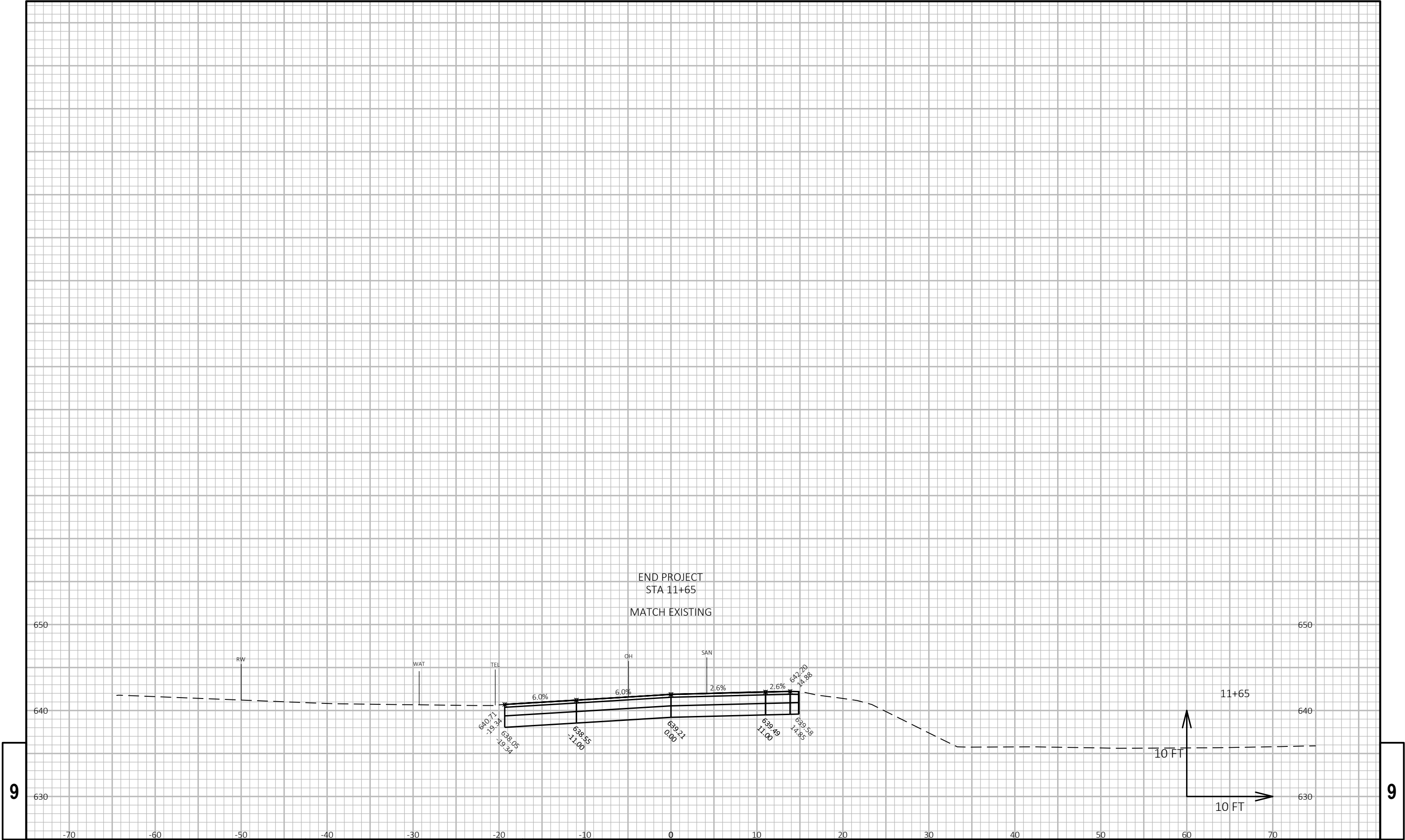
9

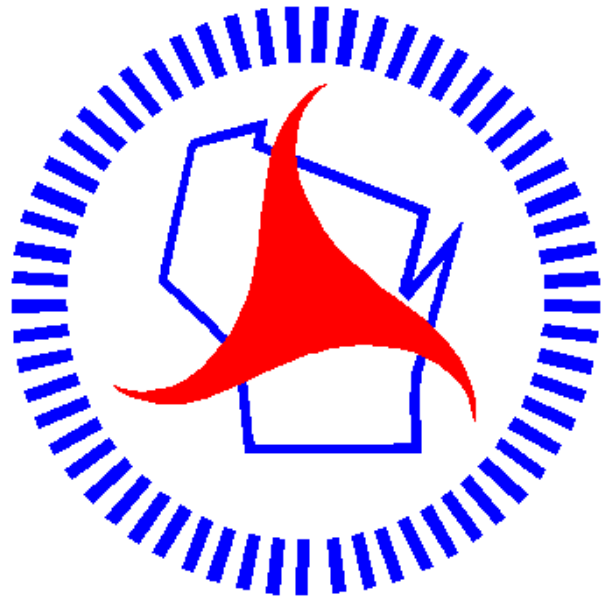
9



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