

RHI

MARCH 2019

PROJECT ID: 1009-44-68  
WITH: NA

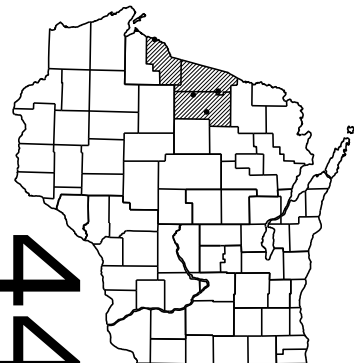
COUNTY:

NC REGION WIDE

ORDER OF SHEETS

Section No. 1	Title
Section No. 2	Typical Sections and Details
Section No. 3	Estimate of Quantities
Section No. 3	Miscellaneous Quantities
Section No. 4	Right of Way Plat
Section No. 5	Plan and Profile
Section No. 6	Standard Detail Drawings
Section No. 7	Sign Plates
Section No. 8	Structure Plans
Section No. 9	Computer Earthwork Data
Section No. 9	Gross Sections

TOTAL SHEETS = 72



DESIGN DESIGNATION

	B-43-23	B-43-41	B-63-17	B-26-671
A.A.D.T.	RHINELANDER	MINOCOQUA	EAGLE RIVER	SAXON
	8000	14,900	5400	200
A.A.D.T.	N/A	N/A	N/A	N/A
D.H.V.	N/A	N/A	N/A	N/A
D.D.	N/A	N/A	N/A	N/A
T.	N/A	N/A	N/A	N/A
DESIGN SPEED	N/A	N/A	N/A	N/A
ESALS	N/A	N/A	N/A	N/A

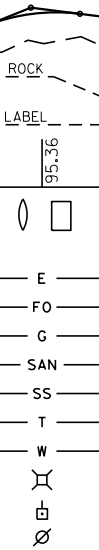
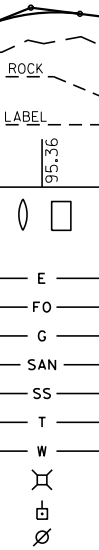
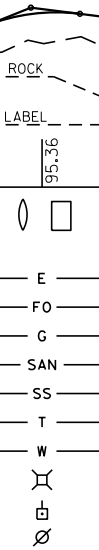
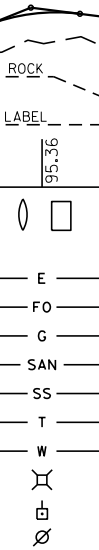
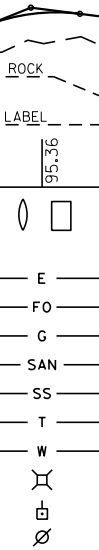
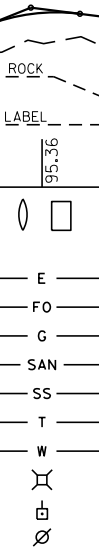
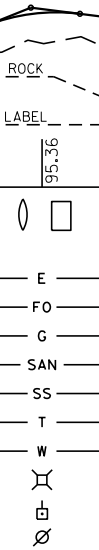
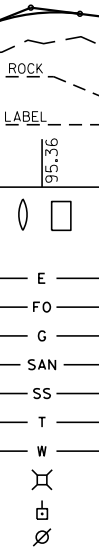
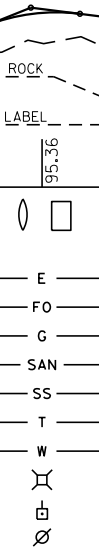
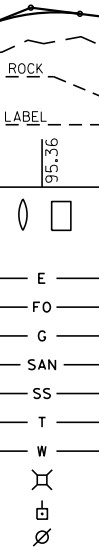
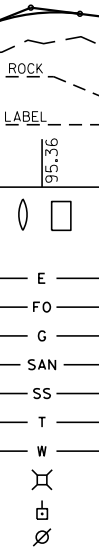
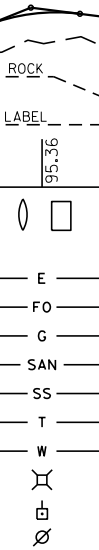
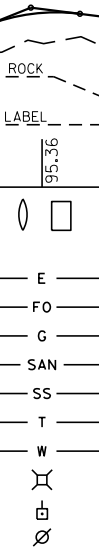
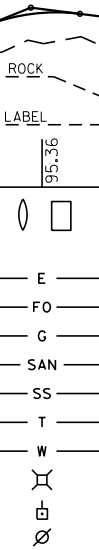
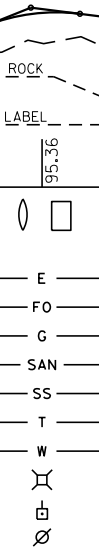
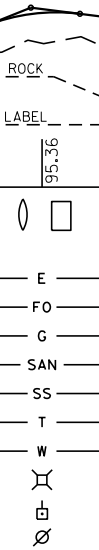
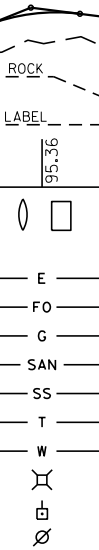
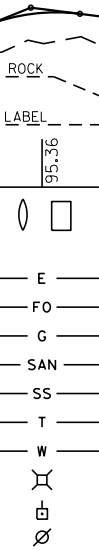
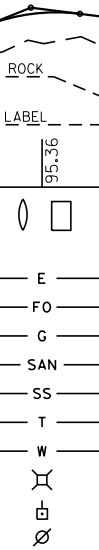
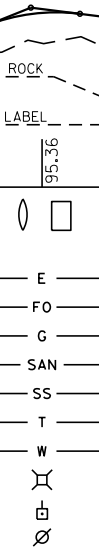
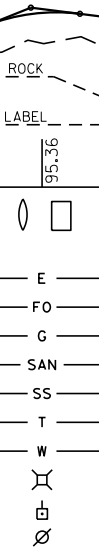
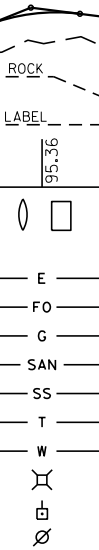
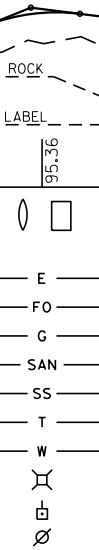
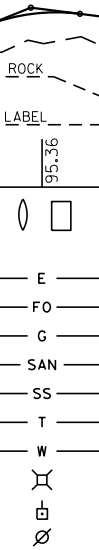
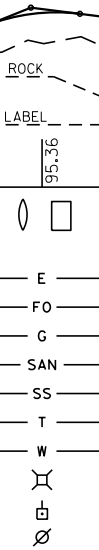
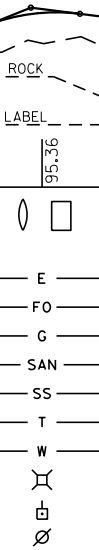
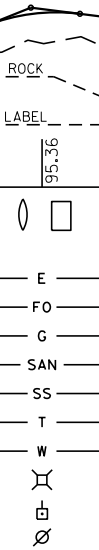
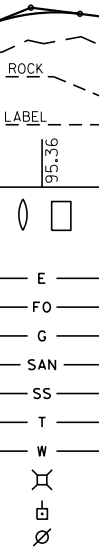
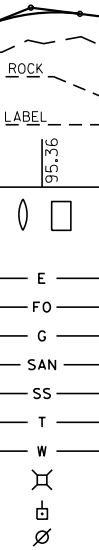
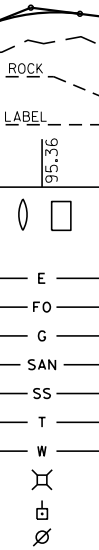
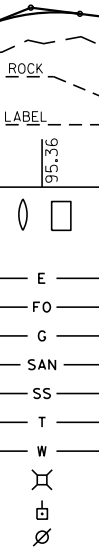
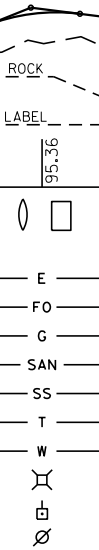
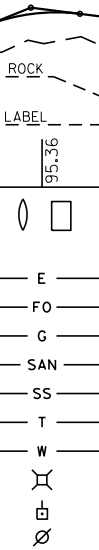
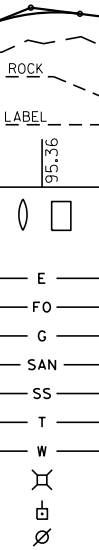
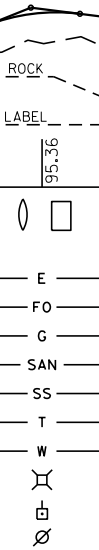
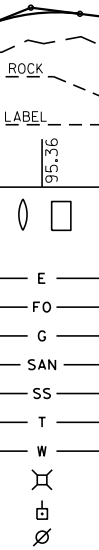
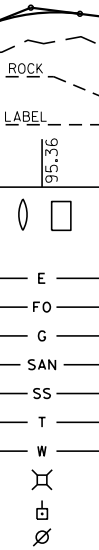
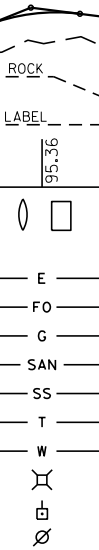
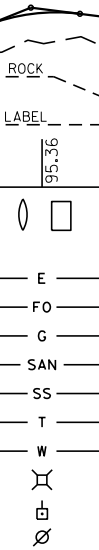
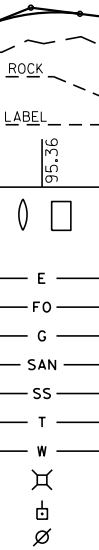
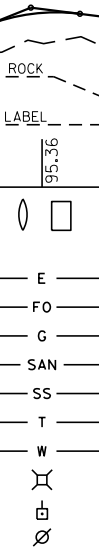
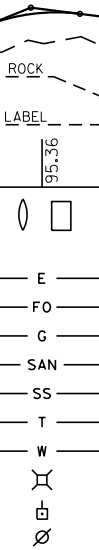
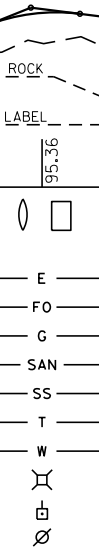
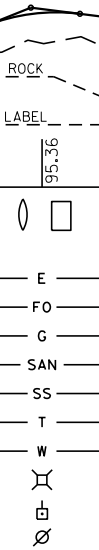
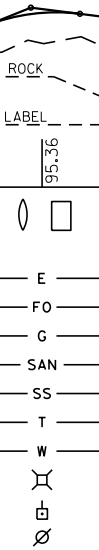
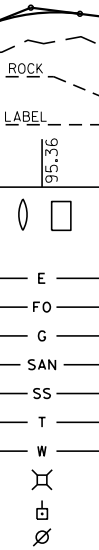
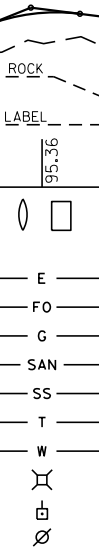
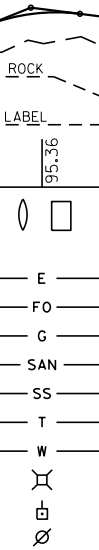
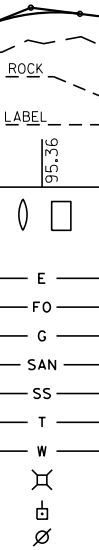
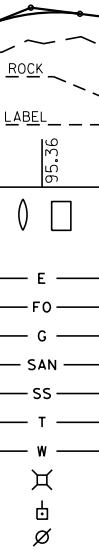
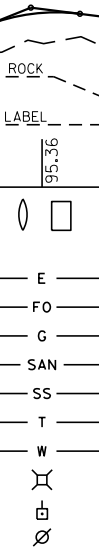
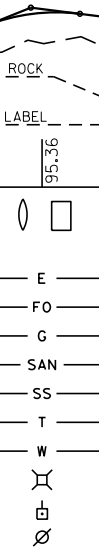
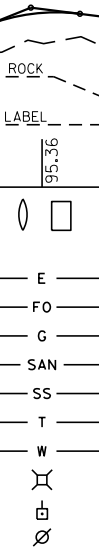
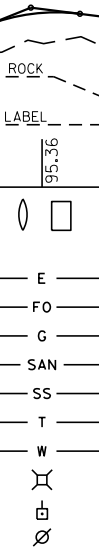
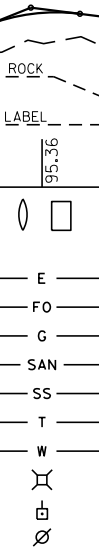
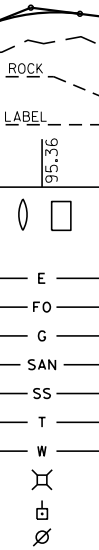
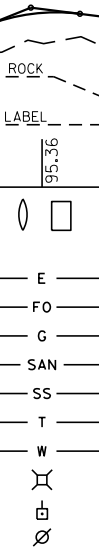
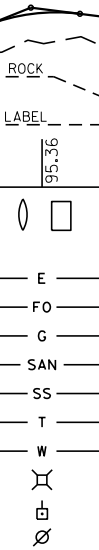
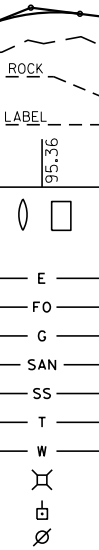
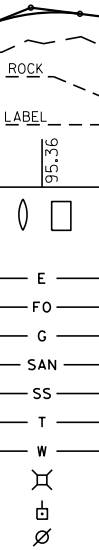
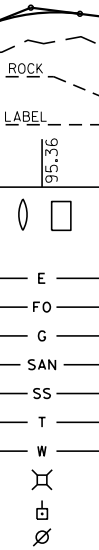
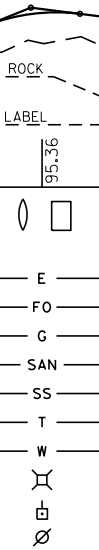
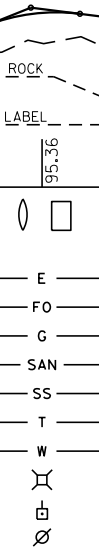
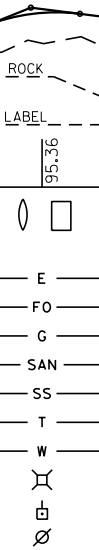
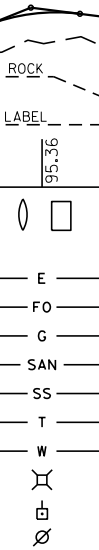
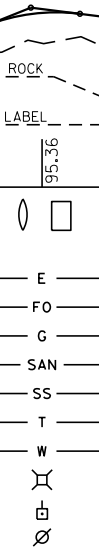
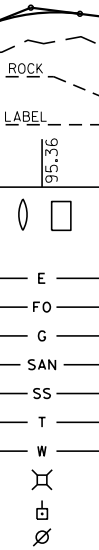
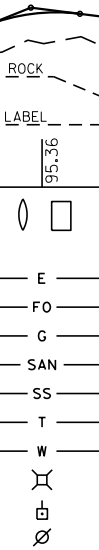
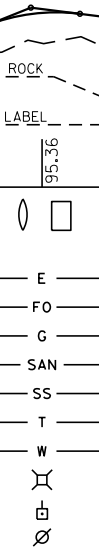
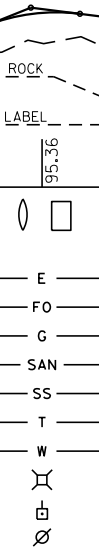
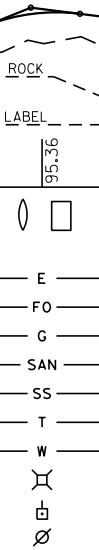
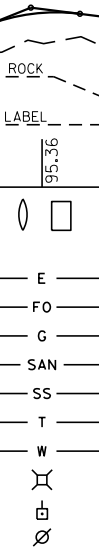
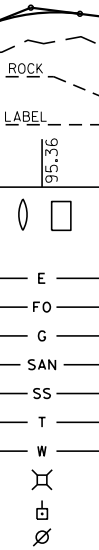
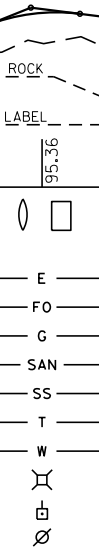
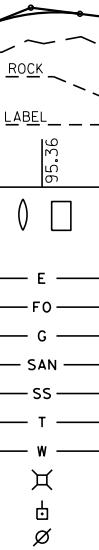
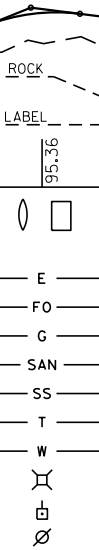
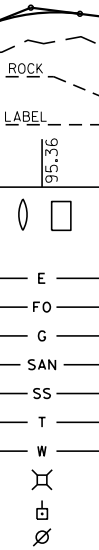
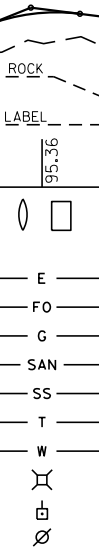
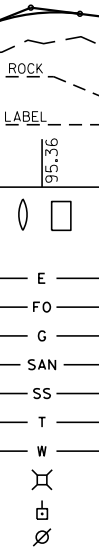
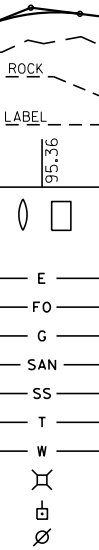
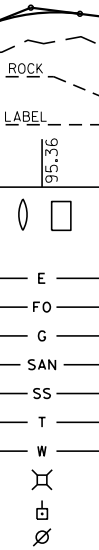
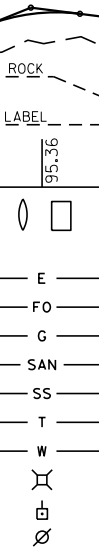
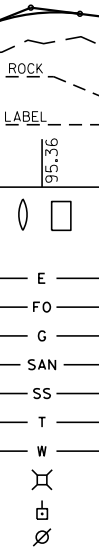
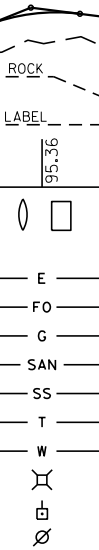
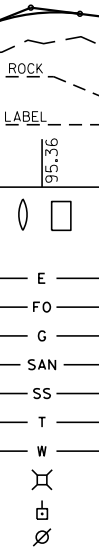
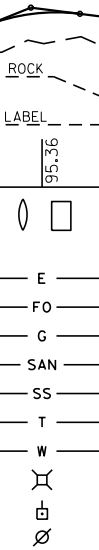
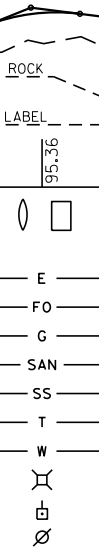
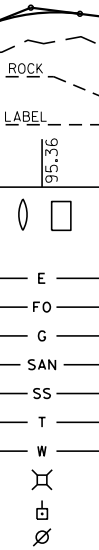
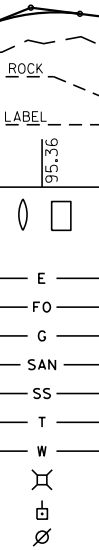
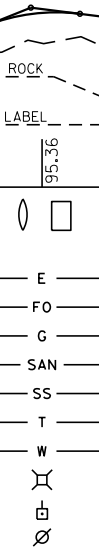
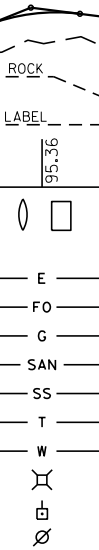
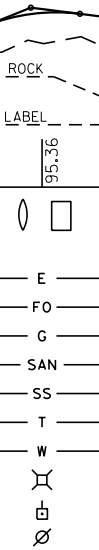
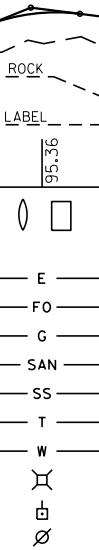
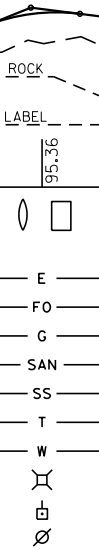
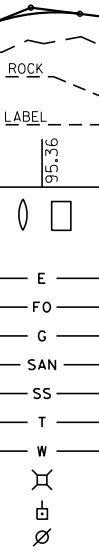
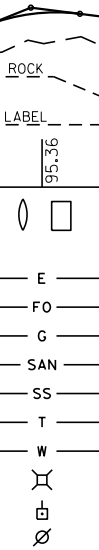
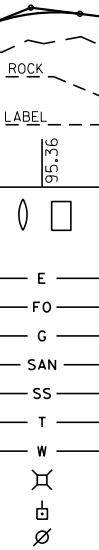
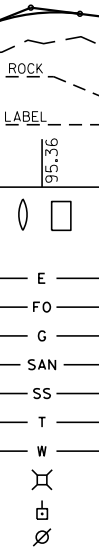
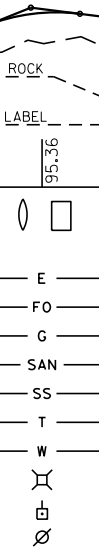
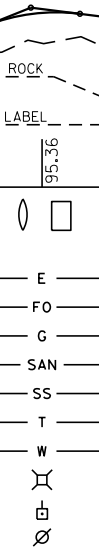
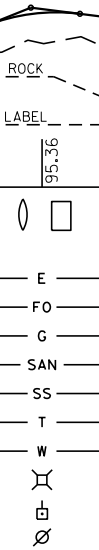
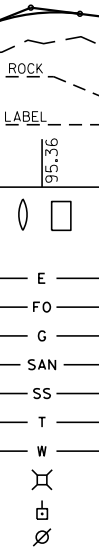
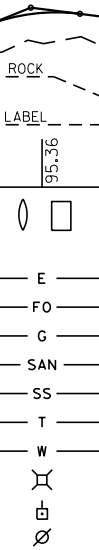
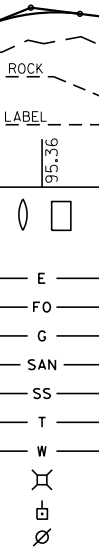
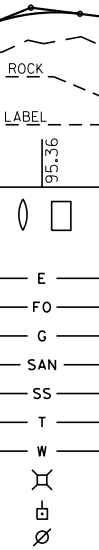
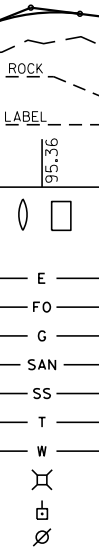
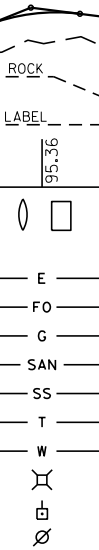
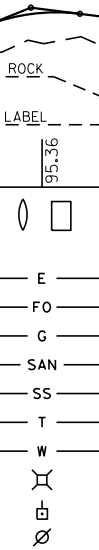
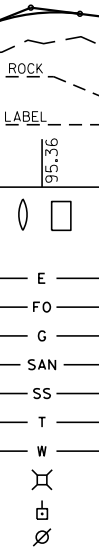
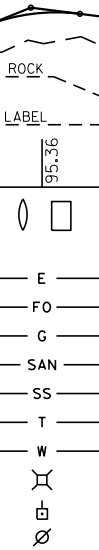
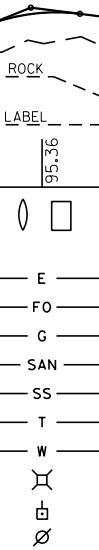
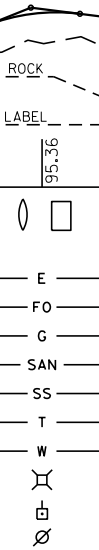
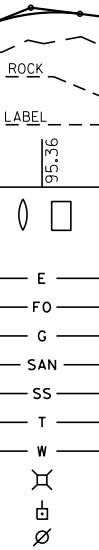
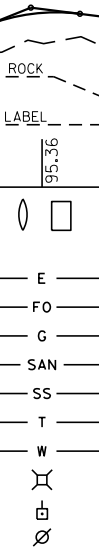
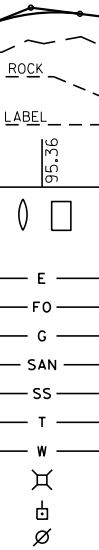
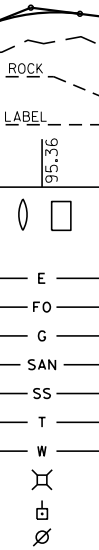
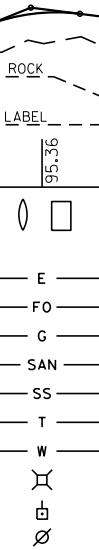
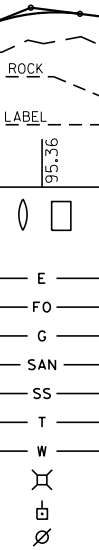
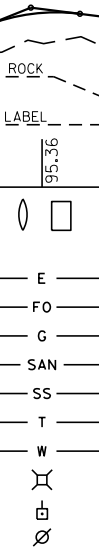
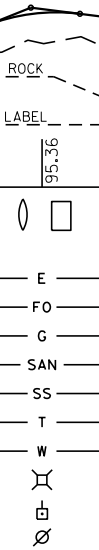
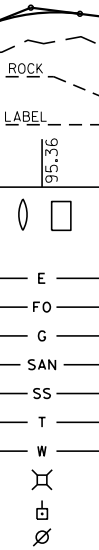
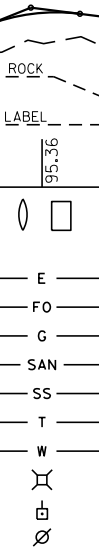
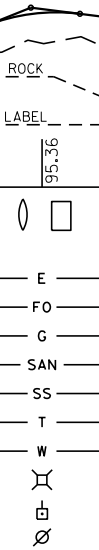
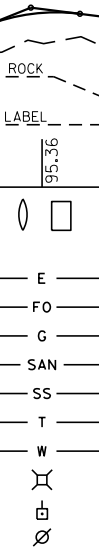
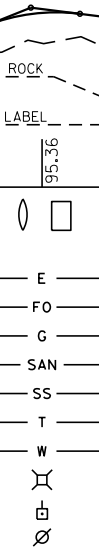
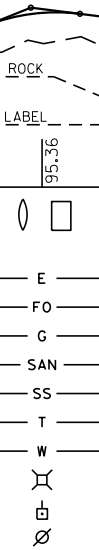
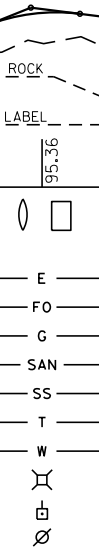
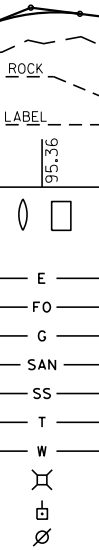
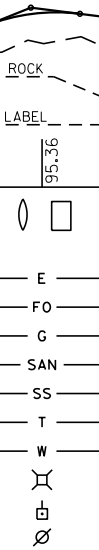
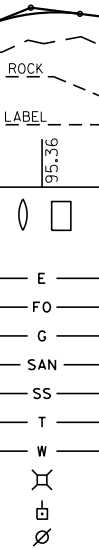
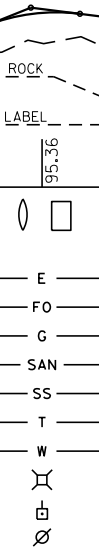
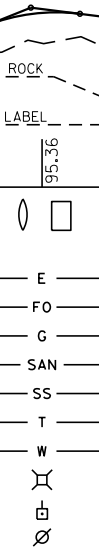
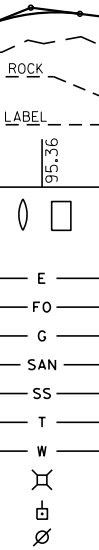
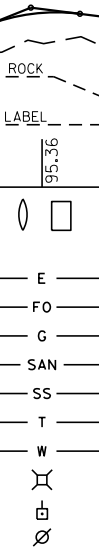
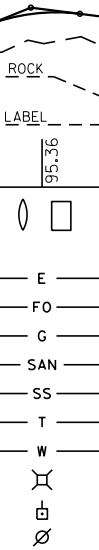
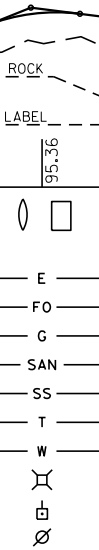
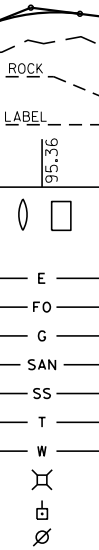
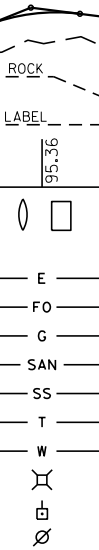
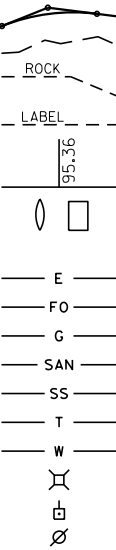
CONVENTIONAL SYMBOLS

PLAN

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

PROFILE

GRADE LINE	=====
ORIGINAL GROUND	=====
MARSH OR ROCK PROFILE (To be noted as such)	=====
SPECIAL DITCH	=====
GRADE ELEVATION	=====
CULVERT (Profile View)	=====
UTILITIES	=====
ELECTRIC	=====
FIBER OPTIC	=====
GAS	=====
SANITARY SEWER	=====
STORM SEWER	=====
TELEPHONE	=====
WATER	=====
UTILITY PEDESTAL	=====
POWER POLE	=====
TELEPHONE POLE	=====



GENERAL NOTES

THE LOCATIONS OF EXISTING UTILITY FACILITIES WERE NOT SURVEYED AND ARE NOT SHOWN ON THE PLANS.

THE CONTRACTOR SHALL NOTIFY DIGGERS HOTLINE AND AFFECTED UTILITIES PRIOR TO THE START OF WORK. ANY UTILITY WHICH IS NOT A MEMBER OF DIGGERS HOTLINE MUST BE CONTACTED SEPERATELY.

CONTRACTOR WILL BE RESPONSIBLE FOR RESHAPING AND SEEDING ANY PREVIOUSLY GRASSED AREAS WHICH ARE DISTURBED BY THEIR OPERATIONS OUTSIDE OF THE NORMAL CONSTRUCTION LIMITS.



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

UTILITY CONTACTS

B-63-0017 EAGLE RIVER

WISCONSIN PUBLIC SERVICE CORPORATION - GAS	WISCONSIN PUBLIC SERVICE CORPORATION - ELECTRIC
CHRIS GILMAN	DON LUTZOW
2027 NAVAJO STREET, PO BOX 160	PO BOX 1166
RHINELANDER, 54501	WAUSAU, WI 54402
PHONE: (715) 369-7133	PHONE: (715) 848-7487
MOBILE: (715) 490-4153	MOBILE: (715) 493-7802
CHRIS.GILMAN@WISCONSINPUBLICSERVICE.COM	DONALD.LUTZOW@wisconsinpublicservice.com

FRONTIER COMMUNICATIONS OF WILLC - COMMUNICATIONS  
CALVIN KLADE  
1851 N 14TH AVE  
WAUSAU, WI 54418  
PHONE: (715) 847-1525  
MOBILE: (715) 573-2110  
CALVIN.KLADE@FTR.COM

B-43-0023 CITY OF RHINELANDER

NO UTILITY CONFLICTS

B-26-0671 TOWN OF SAXON

ECEL ENERGY - ELECTRICITY  
BRUCE ZEMKE  
414 NICOLLET MALL  
MINNEAPOLIS, MN 55401  
PHONE: (612) 330-7815  
BRUCE.M.ZEMKE@XCELENERGY.COM

SAXON SANITARY DISTRICT 1 - SEWER  
STACY OFSTAD  
PO BOX 112  
SAXON, WI 54559  
PHONE: (715) 561-3266  
MOBILE: (715) 562-0165  
SOFSTAD@IRONCOUNTYWI.ORG

B-43-0041 TOWN OF MINOCQUA

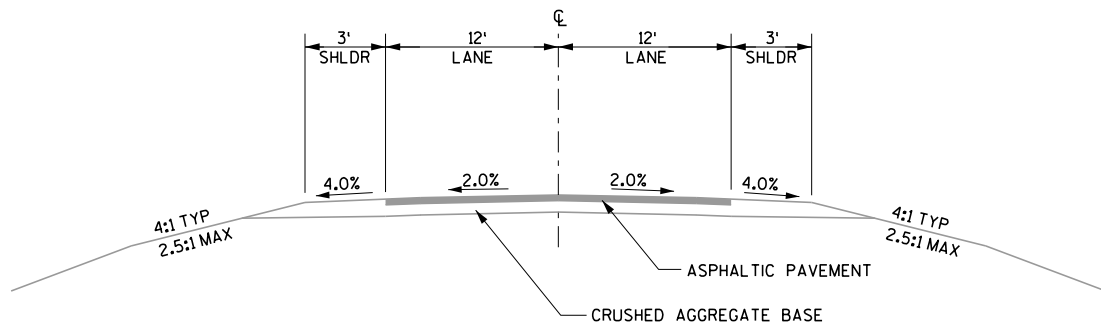
LAKELAND SANITARY DISTRICT #1 - WATER & SEWER	WISCONSIN PUBLIC SERVICE CORPORATION - GAS
CARL "CULLY" AKEY	CHRIS GILMAN
SUPERINTENDENT	2027 NAVAJO STREET, PO BOX 160
8780 MORGAN ROAD	RHINELANDER, 54501
MINOCQUA, WI 54548	PHONE: (715) 369-7133
PHONE: (715) 356-4454	MOBILE: (715) 490-4153
CAKEYSANDIST@GMAIL.COM	CHRIS.GILMAN@WISCONSINPUBLICSERVICE.COM

WISCONSIN PUBLIC SERVICE-ELECTRIC	FRONTIER COMMUNICATIONS
CLAYTON VIRCKS	CALVIN KLADE
P.O. BOX 1166	1851 N 14TH AVE
WAUSAU, WI 54402	WAUSAU, WI 54418
PHONE: 715-848-7317	PHONE: (715) 847-1525
CELL: 715-573-7806	MOBILE: (715) 573-2110
CLAYTON.VIRCKS@WISCONSINPUBLICSERVICE.COM	CALVIN.KLADE@FTR.COM

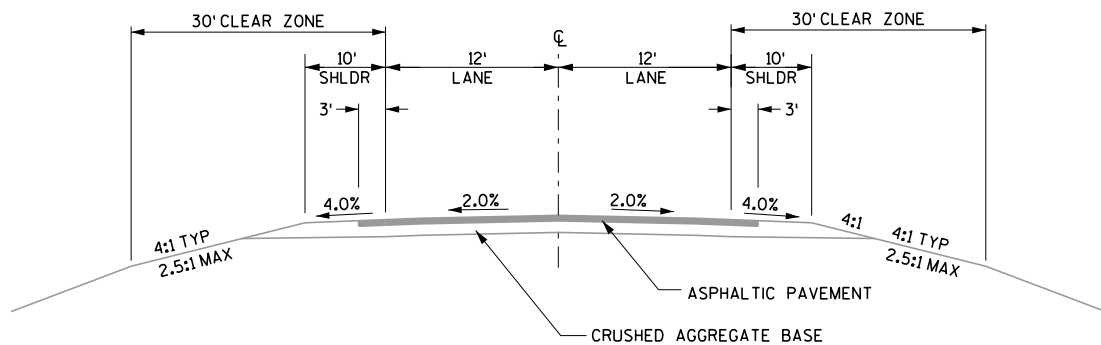
DNR LIASON

IRON & VILAS COUNTIES  
JON SIMONSEN  
JONATHAN.SIMONSEN@WISCONSIN.GOV  
DNR NORTHERN REGION HEADQUARTERS  
107 SUTLIFF  
RHINELANDER, WI 54501  
(715) 367-1936

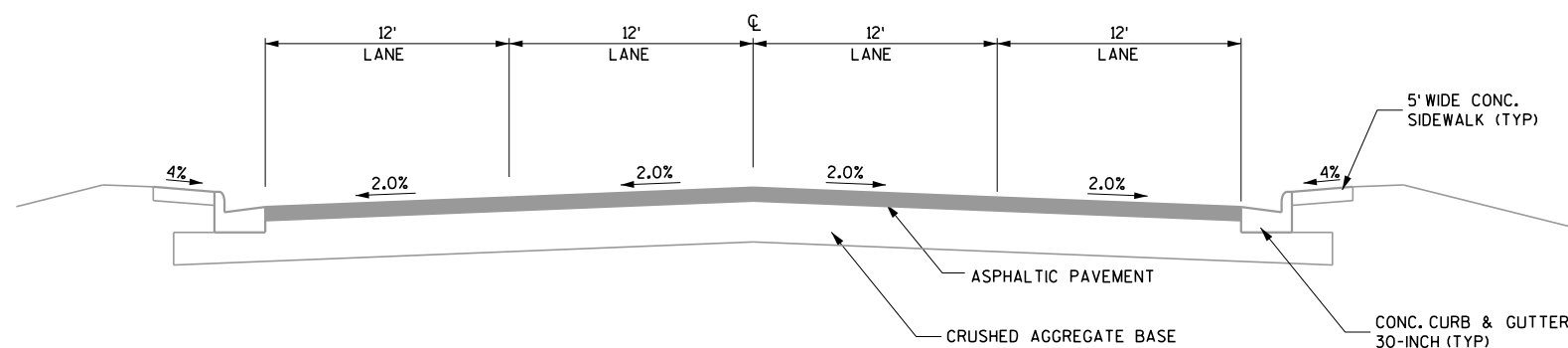
ONEIDA COUNTY  
WENDY HENNIGES  
WENDY.HENNIGES@WISCONSIN.GOV  
DNR NORTHERN REGION HEADQUARTERS  
107 SUTLIFF  
RHINELANDER, WI 54501  
(715) 365-8916



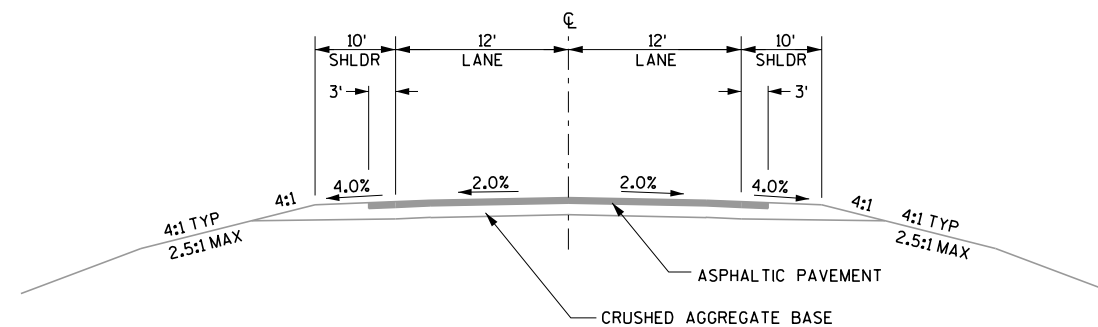
**TYPICAL EXISTING SECTION - STH 122**



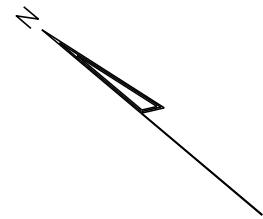
**TYPICAL EXISTING SECTION - USH 8**



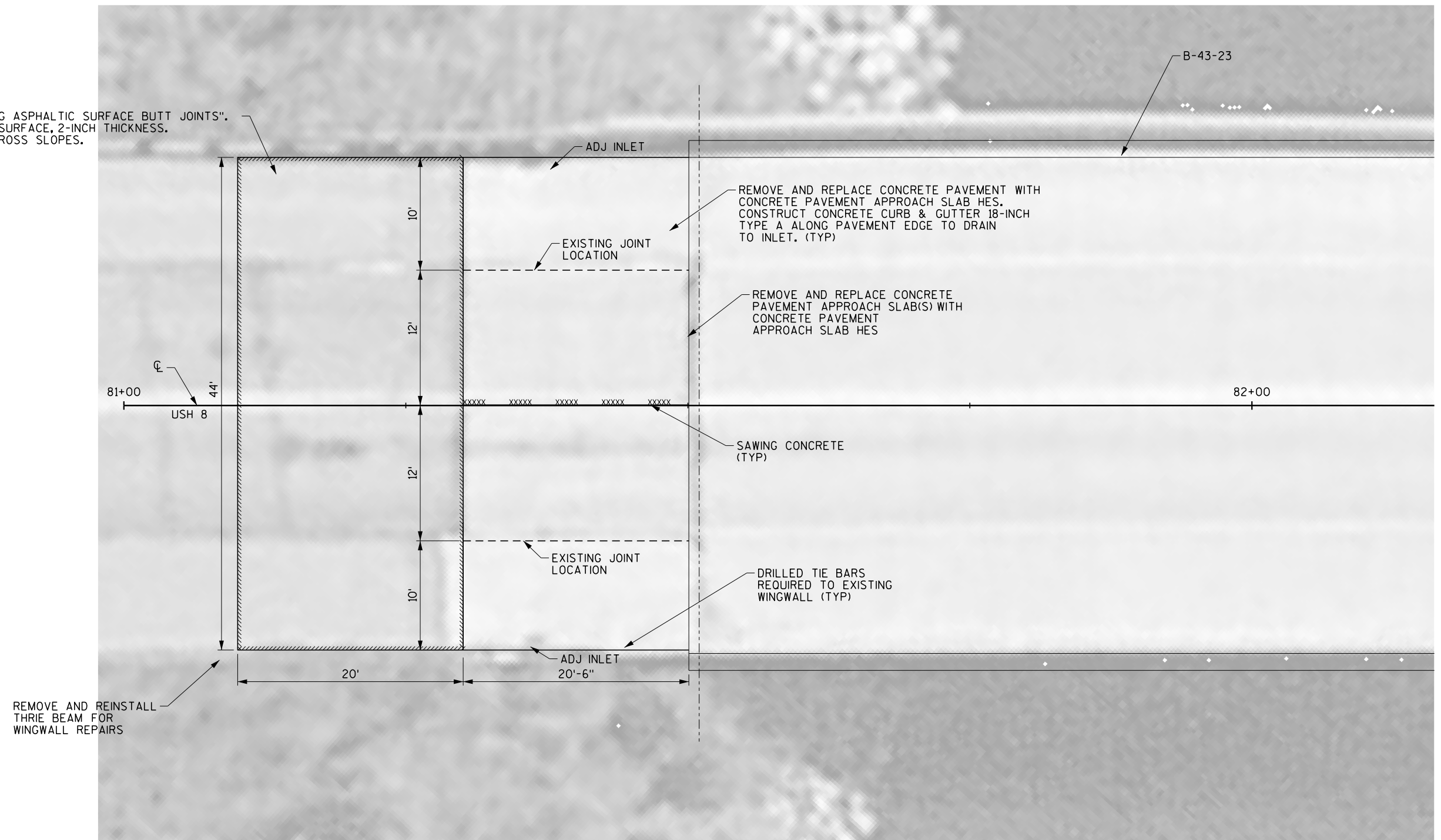
**TYPICAL EXISTING SECTION - USH 51**

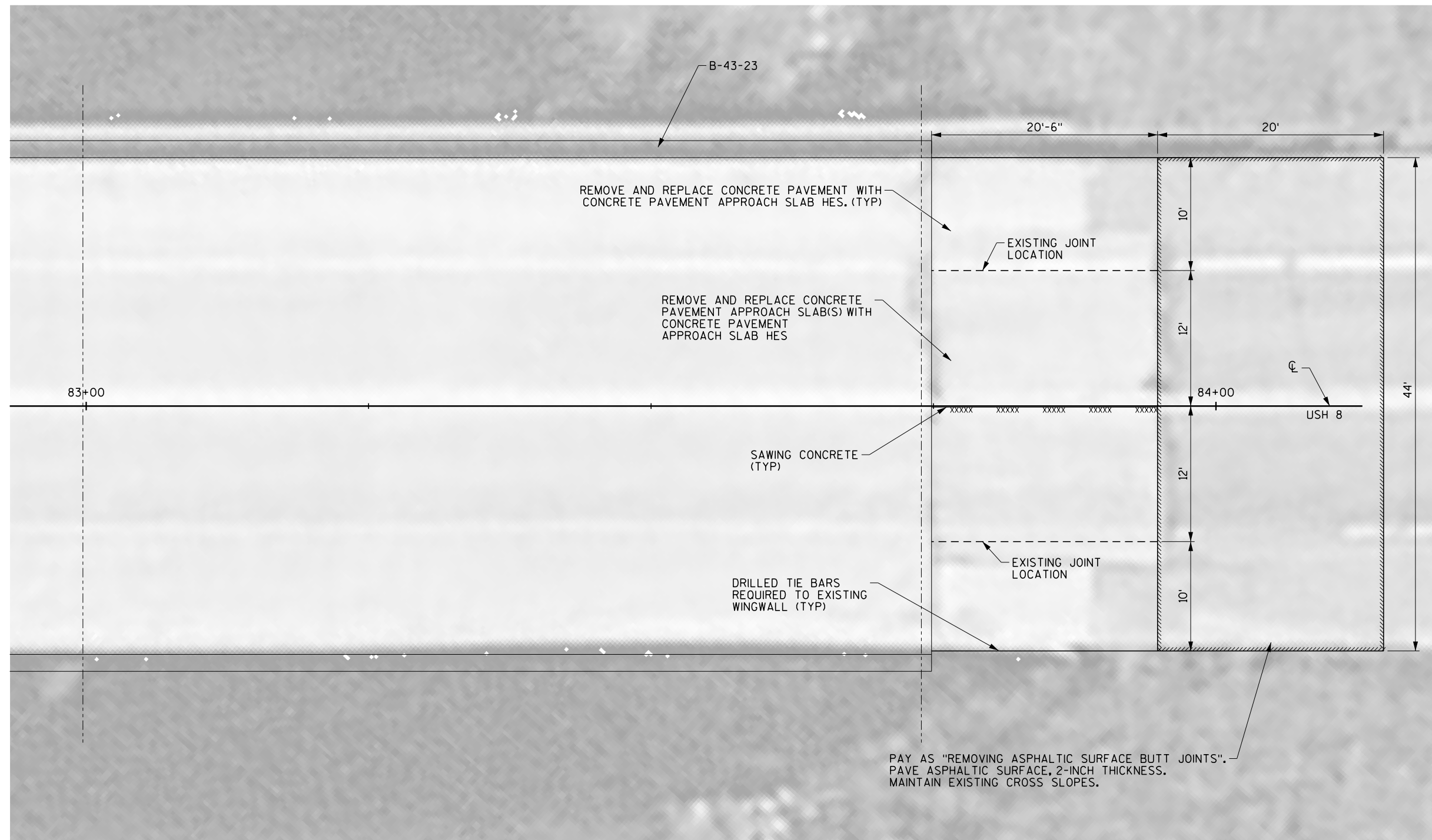


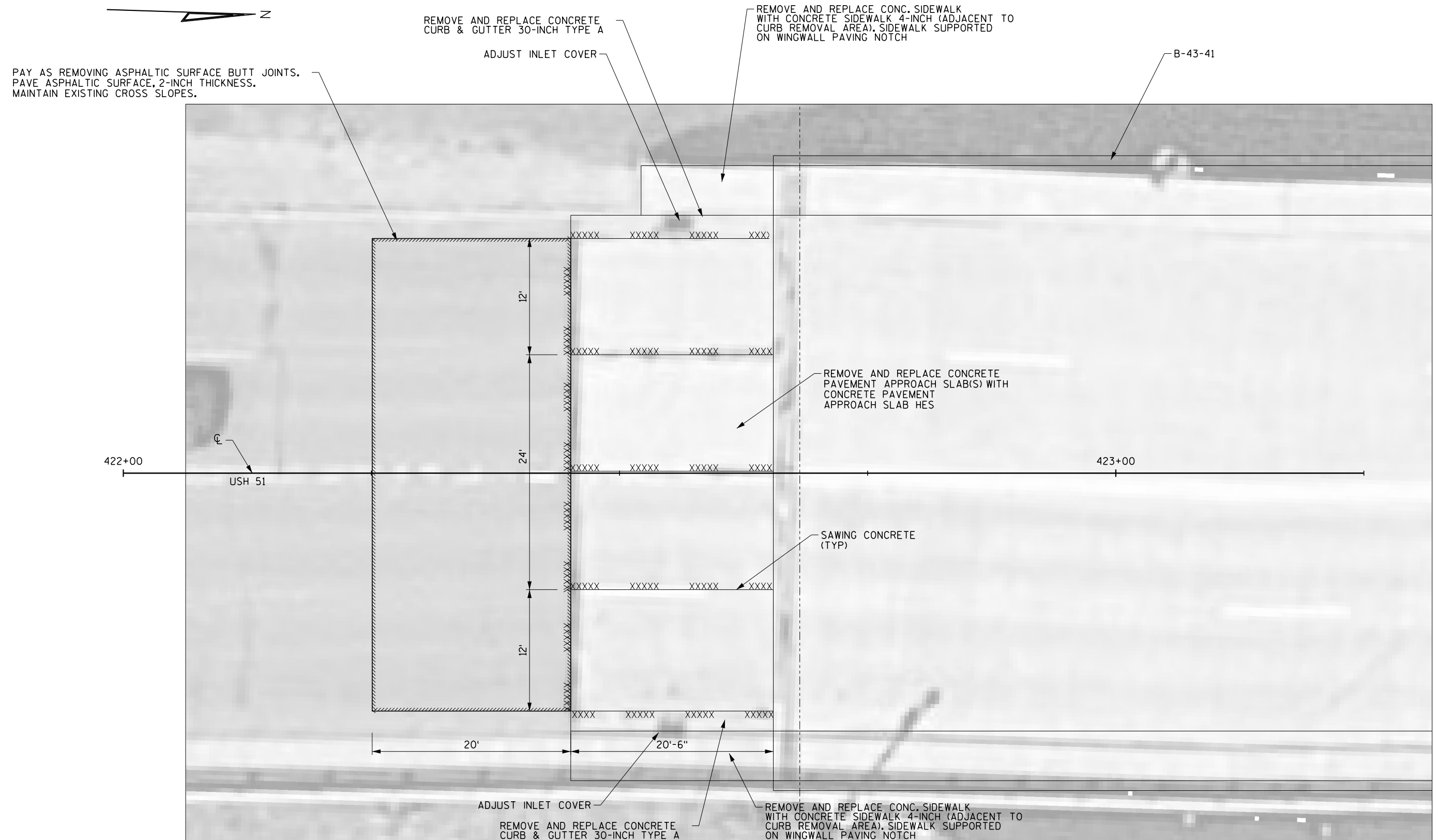
**TYPICAL EXISTING SECTION - STH 70**



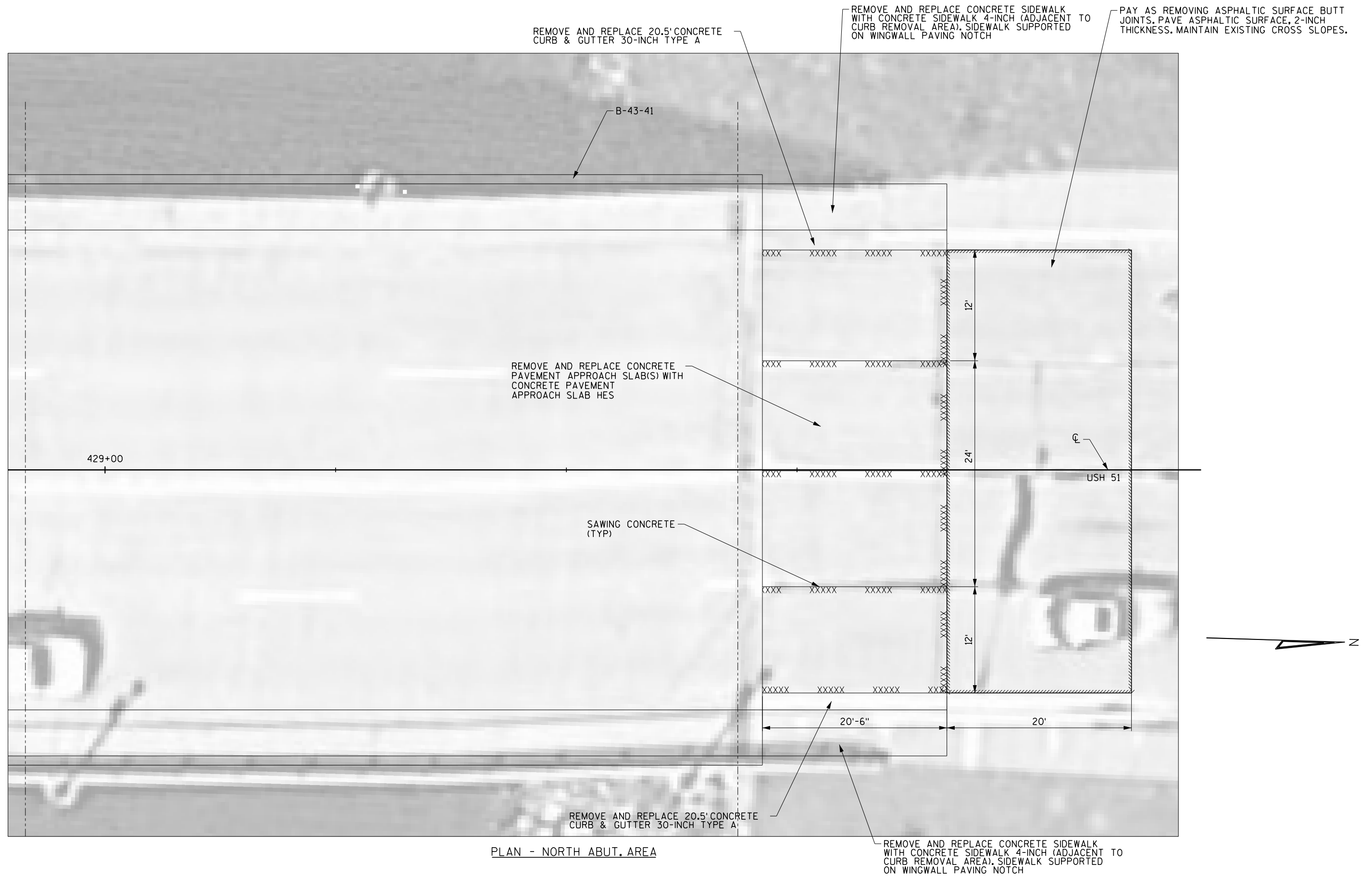
PAY AS "REMOVING ASPHALTIC SURFACE BUTT JOINTS".  
PAVE ASPHALTIC SURFACE, 2-INCH THICKNESS.  
MAINTAIN EXIST CROSS SLOPES.










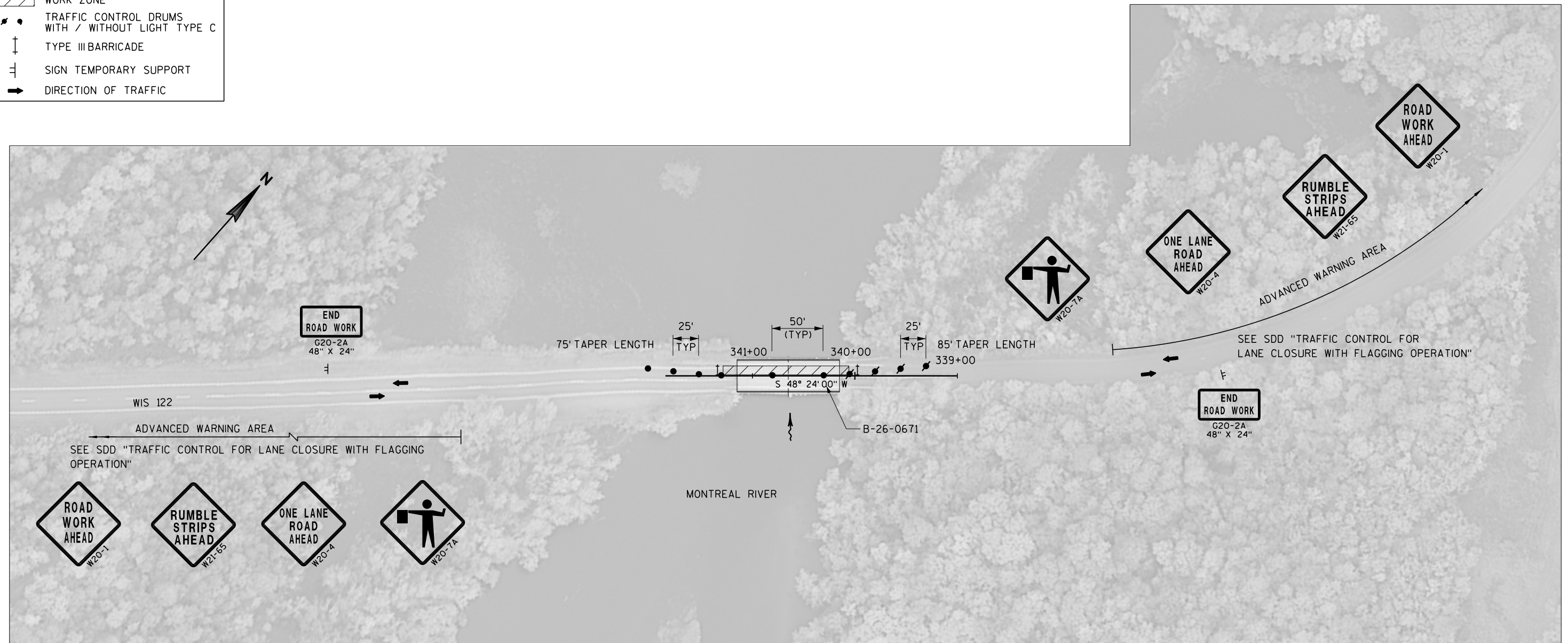


PLAN - SOUTH ABUT. AREA



## LEGEND

-  WORK ZONE
-  TRAFFIC CONTROL DRUMS  
WITH / WITHOUT LIGHT TYPE C
-  TYPE III BARRICADE
-  SIGN TEMPORARY SUPPORT
-  DIRECTION OF TRAFFIC



TRAFFIC CONTROL PLAN

## NOTES

1. SEE SDD DRAWINGS FOR DETAILS NOT SHOWN THIS SHEET.
2. MAINTAIN 12 FT. LANE WIDTH MIN.
3. THE EXACT NUMBER LOCATION AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.
4. ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED.
5. ALL "WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS ORANGE.
6. WESTBOUND LANE CLOSURE SHOWN THIS DRAWING. EASTBOUND LANE CLOSURE (IF USED) IS SIMILAR.
7. TEMPORARY DAYTIME LANE CLOSURES ARE PERMITTED WITH FLAGGING. NIGHTTIME LANE CLOSURES ARE NOT PERMITTED.

PROJECT NO: 1009-44-68

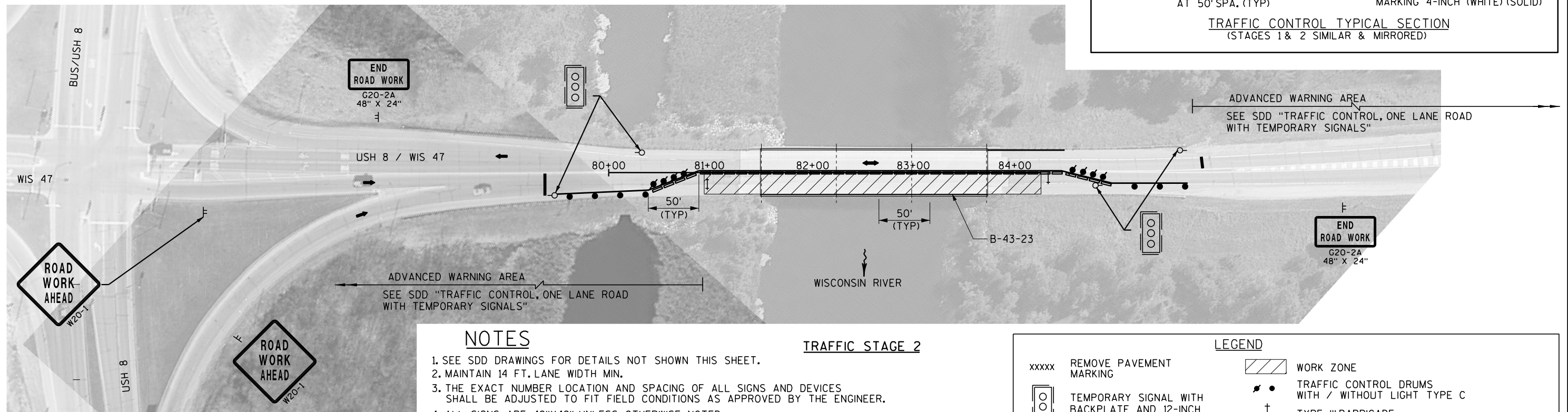
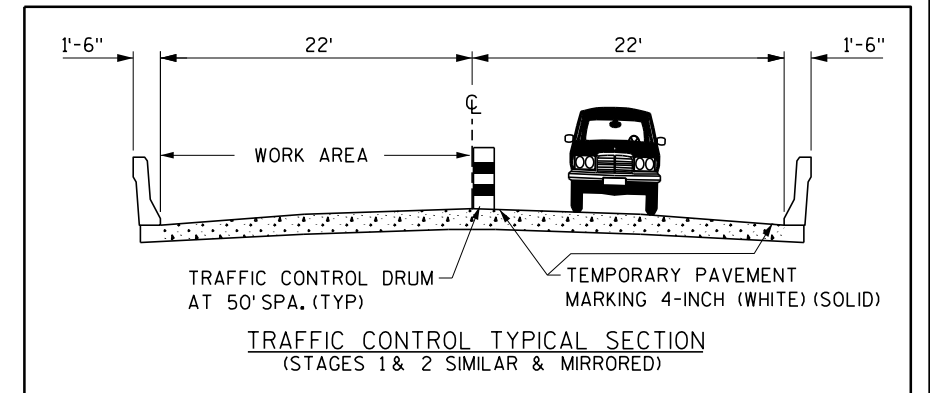
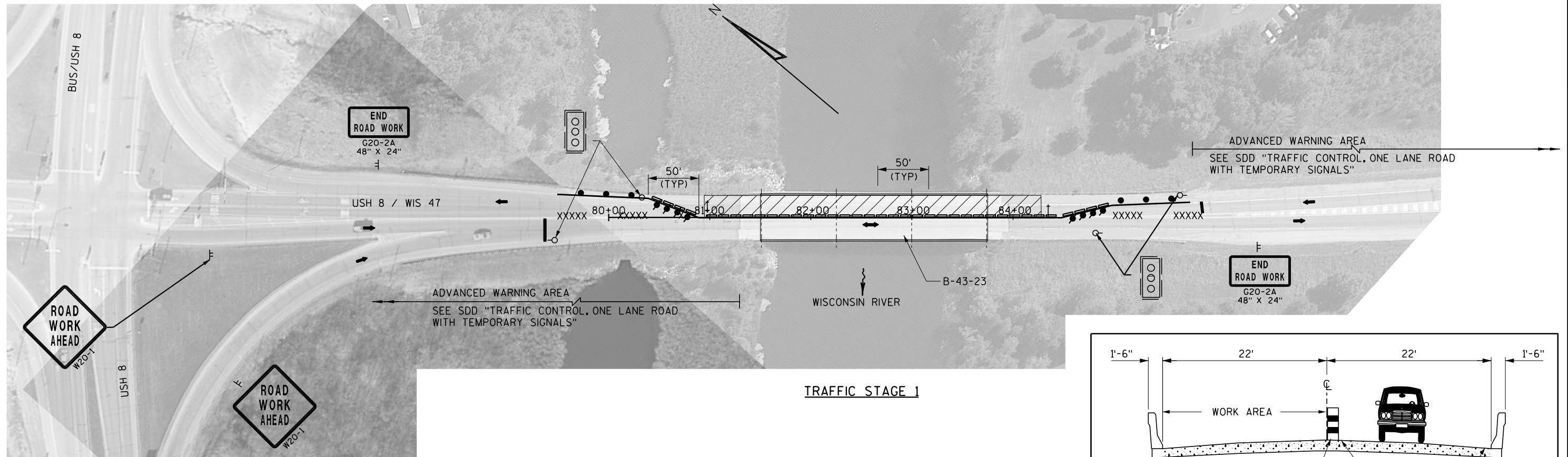
HWY: REGIONWIDE BRIDGE MAINTENANCE

COUNTY: IRON

TRAFFIC CONTROL B-26-067I

SHEET NO:

E



### NOTES

1. SEE SDD DRAWINGS FOR DETAILS NOT SHOWN THIS SHEET.
2. MAINTAIN 14 FT. LANE WIDTH MIN.
3. THE EXACT NUMBER LOCATION AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.
4. ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED.
5. ALL "W0" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS ORANGE.
6. CONCRETE BARRIER TEMPORARY PRECAST TO BE PLACED AT AREAS SHOWN ON THIS DRAWING ONLY

### TRAFFIC STAGE 2

xxxxx	REMOVE PAVEMENT MARKING		WORK ZONE
	TEMPORARY SIGNAL WITH BACKPLATE AND 12-INCH LENSES ON BREAKAWAY POLE		TRAFFIC CONTROL DRUMS WITH / WITHOUT LIGHT TYPE C
	CONCRETE BARRIER TEMP PRECAST		TYPE III BARRICADE
			SIGN TEMPORARY SUPPORT
			DIRECTION OF TRAFFIC

Temporary Signal Timing #1		7:00am to 7:00pm		
EB	WB	Yellow	All Red	Green
RED	RED		21.0 sec	
GREEN	RED			46.0 sec
YELLOW	RED	4.5 sec		
RED	RED		21.0 sec	
RED	GREEN			46.0 sec
RED	YELLOW	4.5 sec		
Total Cycle Length		143.0 sec	=	9.0 sec    42.0 sec    92.0 sec

Temporary Signal Timing #2		7:00pm to 7:00am		
EB	WB	Yellow	All Red	Green
RED	RED		21.0 sec	
GREEN	RED			35.0 sec
YELLOW	RED	4.5 sec		
RED	RED		21.0 sec	
RED	GREEN			35.0 sec
RED	YELLOW	4.5 sec		
Total Cycle Length		121.0 sec	=	9.0 sec    42.0 sec    70.0 sec

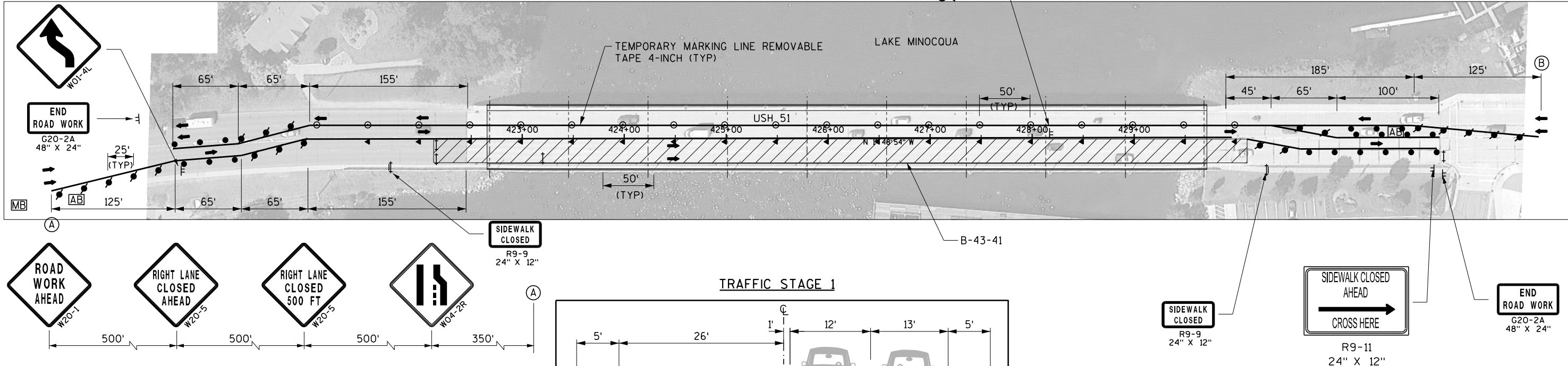
NOTES: Stop bar placement at 650 ft spacing  
1050' west of STH 17 (south)

## LEGEND

- WORK ZONE  
 TRAFFIC CONTROL DRUMS  
 WITH / WITHOUT LIGHT TYPE C  
 MB TRAFFIC CONTROL SIGNS PCMS

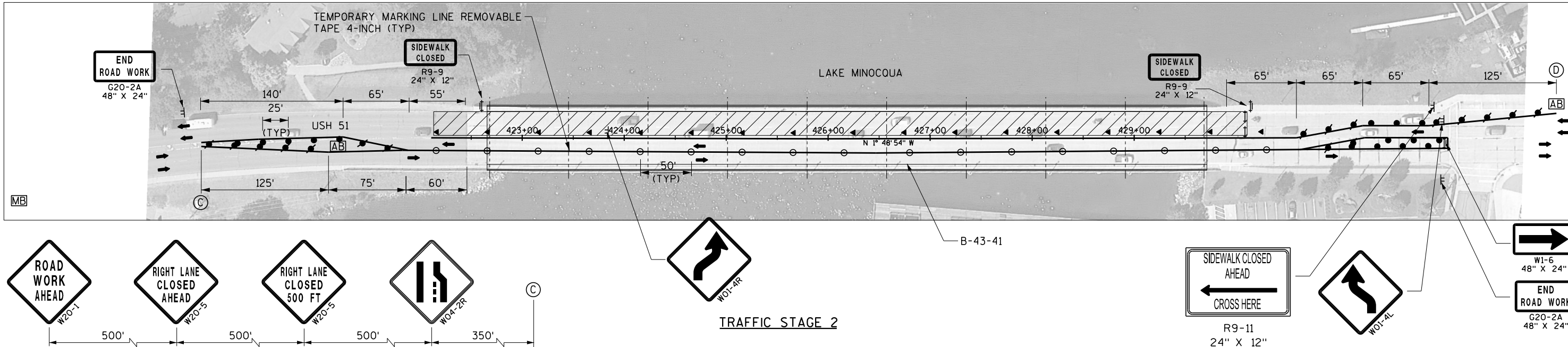
- TYPE III BARRICADE W/ WO SIGN  
 SIGN TEMPORARY SUPPORT  
 DIRECTION OF TRAFFIC  
 TRAFFIC CONTROL ARROW BOARDS

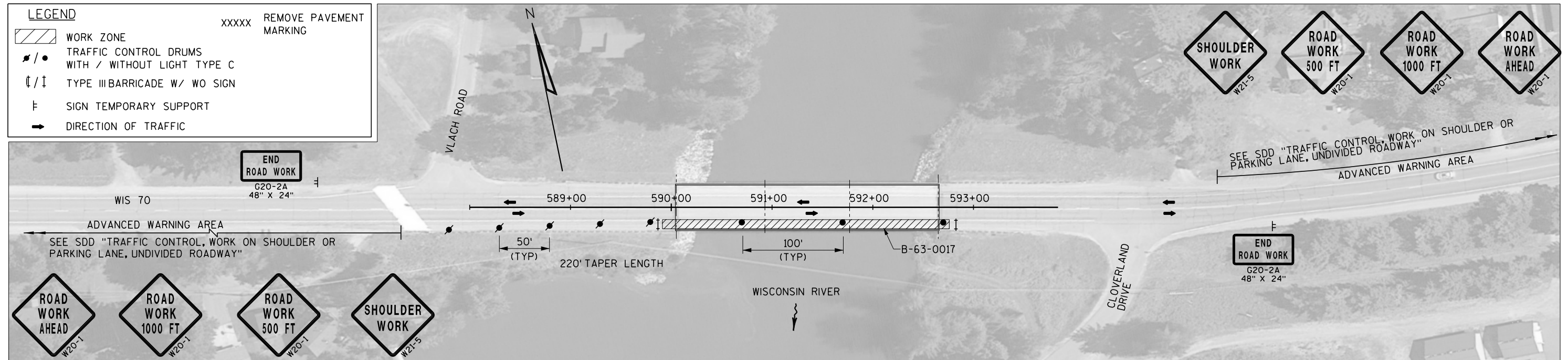
- xxxxx REMOVE PAVEMENT MARKING  
 TRAFFIC CONTROL CONES, 42-INCH  
 TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER POSTS (50' SPA)



## NOTES

- SEE SDD DRAWINGS FOR DETAILS NOT SHOWN THIS SHEET.
- MAINTAIN 12 FT. LANE WIDTH MIN.
- MESSAGE BOARD LOCATION AND MESSAGING TO BE DETERMINED BY THE ENGINEER.
- THE EXACT NUMBER LOCATION AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.
- ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED.
- ALL "WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS ORANGE.





TRAFFIC CONTROL PLAN

## NOTES

1. SEE SDD DRAWINGS FOR DETAILS NOT SHOWN THIS SHEET.
2. MAINTAIN 11 FT LANE WIDTH MIN.
3. THE EXACT NUMBER LOCATION AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.
4. ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED.
5. ALL "WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS ORANGE.
6. EASTBOUND SHOULDER CLOSURE SHOWN THIS DRAWING. WESTBOUND SHOULDER CLOSURE (IF USED) IS SIMILAR.
7. THIS SHOULDER CLOSURE PLAN IS FOR CONTRACTOR CONVENIENCE AS MAY BE DESIRED FOR EQUIPMENT AND MATERIAL ACCESS TO THE RIVER. THIS SHOULDER CLOSURE IS NOT REQUIRED AS PART OF THIS PROJECT.

PROJECT NO: 1009-44-68

HWY: REGIONWIDE BRIDGE MAINTENANCE

COUNTY: VILAS

TRAFFIC CONTROL B-63-0017

SHEET NO:

E

Estimate Of Quantities

1009-44-68

Line	Item	Item Description	Unit	Total	Qty
0002	203.0200	Removing Old Structure (station) 01. STA 81+30	LS	1.000	1.000
0004	204.0100	Removing Pavement	SY	430.000	430.000
0006	204.0115	Removing Asphaltic Surface Butt Joints	SY	392.000	392.000
0008	204.0150	Removing Curb & Gutter	LF	84.000	84.000
0010	204.0155	Removing Concrete Sidewalk	SY	42.000	42.000
0012	206.1000	Excavation for Structures Bridges (structure) 01. B-43-23	LS	1.000	1.000
0014	210.1500	Backfill Structure Type A	TON	30.000	30.000
0016	213.0100	Finishing Roadway (project) 01. 1009-44-68	EACH	1.000	1.000
0018	305.0110	Base Aggregate Dense 3/4-Inch	TON	159.000	159.000
0020	415.1410	Concrete Pavement Approach Slab HES	SY	412.000	412.000
0022	416.0610	Drilled Tie Bars	EACH	12.000	12.000
0024	465.0105	Asphaltic Surface	TON	44.000	44.000
0026	502.0100	Concrete Masonry Bridges	CY	2.000	2.000
0028	502.3210	Pigmented Surface Sealer	SY	4.000	4.000
0030	502.4204	Adhesive Anchors No. 4 Bar	EACH	270.000	270.000
0032	502.4205	Adhesive Anchors No. 5 Bar	EACH	3.000	3.000
0034	505.0400	Bar Steel Reinforcement HS Structures	LB	562.000	562.000
0036	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	200.000	200.000
0038	509.1500	Concrete Surface Repair	SF	95.000	95.000
0040	601.0405	Concrete Curb & Gutter 18-Inch Type A	LF	20.000	20.000
0042	601.0409	Concrete Curb & Gutter 30-Inch Type A	LF	84.000	84.000
0044	602.0405	Concrete Sidewalk 4-Inch	SF	375.000	375.000
0046	603.8000	Concrete Barrier Temporary Precast Delivered	LF	460.000	460.000
0048	603.8125	Concrete Barrier Temporary Precast Installed	LF	920.000	920.000
0050	611.8115	Adjusting Inlet Covers	EACH	4.000	4.000
0052	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	15.000	15.000
0054	614.0150	Anchor Assemblies for Steel Plate Beam Guard	EACH	1.000	1.000
0056	618.0100	Maintenance And Repair of Haul Roads (project) 01. 1009-44-68	EACH	1.000	1.000
0058	619.1000	Mobilization	EACH	1.000	1.000
0060	627.0200	Mulching	SY	300.000	300.000
0062	628.1104	Erosion Bales	EACH	200.000	200.000
0064	628.1504	Silt Fence	LF	60.000	60.000
0066	628.1520	Silt Fence Maintenance	LF	60.000	60.000
0068	628.1905	Mobilizations Erosion Control	EACH	4.000	4.000
0070	628.1910	Mobilizations Emergency Erosion Control	EACH	4.000	4.000
0072	628.2008	Erosion Mat Urban Class I Type B	SY	100.000	100.000
0074	628.6005	Turbidity Barriers	SY	513.000	513.000
0076	628.7015	Inlet Protection Type C	EACH	4.000	4.000

Estimate Of Quantities

1009-44-68

Line	Item	Item Description	Unit	Total	Qty
0078	629.0210	Fertilizer Type B	CWT	0.280	0.280
0080	630.0110	Seeding Mixture No. 10	LB	4.000	4.000
0082	630.0140	Seeding Mixture No. 40	LB	4.000	4.000
0084	642.5201	Field Office Type C	EACH	1.000	1.000
0086	643.0300	Traffic Control Drums	DAY	1,584.000	1,584.000
0088	643.0310.S	Temporary Portable Rumble Strips	LS	1.000	1.000
0090	643.0420	Traffic Control Barricades Type III	DAY	272.000	272.000
0092	643.0500	Traffic Control Flexible Tubular Marker Posts	EACH	36.000	36.000
0094	643.0600	Traffic Control Flexible Tubular Marker Bases	EACH	36.000	36.000
0096	643.0705	Traffic Control Warning Lights Type A	DAY	329.000	329.000
0098	643.0715	Traffic Control Warning Lights Type C	DAY	964.000	964.000
0100	643.0800	Traffic Control Arrow Boards	DAY	56.000	56.000
0102	643.0900	Traffic Control Signs	DAY	926.000	926.000
0104	643.1050	Traffic Control Signs PCMS	DAY	56.000	56.000
0106	643.1070	Traffic Control Cones 42-Inch	DAY	490.000	490.000
0108	643.5000	Traffic Control	EACH	1.000	1.000
0110	646.1020	Marking Line Epoxy 4-Inch	LF	500.000	500.000
0112	646.9000	Marking Removal Line 4-Inch	LF	500.000	500.000
0114	649.0150	Temporary Marking Line Removable Tape 4-Inch	LF	5,000.000	5,000.000
0116	661.0100	Temporary Traffic Signals for Bridges (structure) 01. B-43-23	LS	1.000	1.000
0118	690.0250	Sawing Concrete	LF	346.000	346.000
0120	715.0502	Incentive Strength Concrete Structures	DOL	500.000	500.000
0122	SPV.0035	Special 01. Scour Repair Grout	CY	1.000	1.000
0124	SPV.0035	Special 02. Scour Repair Grout Bags	CY	54.000	54.000
0126	SPV.0035	Special 04. Structural Grout	CY	48.000	48.000
0128	SPV.0060	Special 01. Preparation and Anchorage for Vinyl Sheet Piling	EACH	2.000	2.000
0130	SPV.0060	Special 02. Strip Seal Gland Replacement	EACH	1.000	1.000
0132	SPV.0105	Special 01. Removing and Reinstalling Guardrail	LS	1.000	1.000
0134	SPV.0105	Special 02. Underwater Excavation for Structures (B-63-17)	LS	1.000	1.000
0136	SPV.0105	Special 03. Underwater Excavation for Structures (B-26-671)	LS	1.000	1.000
0138	SPV.0165	Special 01. Underwater Concrete Surface Repair	SF	200.000	200.000
0140	SPV.0165	Special 02. Piling Vinyl Sheet Permanent Delivered and Installed	SF	1,728.000	1,728.000
0142	SPV.0165	Special 03. Preparation of Pier Surfaces	SF	1,728.000	1,728.000
0144	SPV.0165	Special 04. Welded Wire Fabric 6x6 D4/D4 (Grade 60)	SF	1,728.000	1,728.000

REMOVALS						
		204.0100	204.0115	204.0150	204.0155	690.0250
		REMOVING PAVEMENT	REMOVING ASPHALTIC SURFACE BUTT JOINTS	REMOVING CONCRETE CURB & GUTTER	REMOVING CONCRETE SIDEWALK	SAWING CONCRETE
CATEGORY	LOCATION	SY	SY	LF	SF	LF
0010	B-43-0023 WEST APPROACH	103	98	-	-	21
0010	B-43-0023 EAST APPROACH	103	98	-	-	21
0010	B-43-0041 NORTH APPROACH	112	98	42	22	152
0010	B-43-0041 SOUTH APPROACH	112	98	42	20	152
1009-44-68 TOTAL		430	392	84	42	346

CONCRETE BARRIER TEMPORARY PRECAST SUMMARY			
		603.8000	603.8125
		CONCRETE BARRIER TEMPORARY PRECAST DELIVERED	CONCRETE BARRIER TEMPORARY PRECAST INSTALLED
CATEGORY	LOCATION	LF	LF
0010	B-43-0023 STAGE 1	460	460
0010	B-43-0023 STAGE 2	-	460
1009-44-68 TOTAL		460	920

TRAFFIC CONTROL														
		643.0300	643.0310.S	643.0420	643.0500	643.0600	643.0705	643.0715	643.0800	643.0900	643.1050	643.1070	643.5000	661.0100
		TRAFFIC CONTROL DRUMS	TEMPORARY PORTABLE RUMBLE STRIPS	TRAFFIC CONTROL BARRICADES TYPE III	TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER POSTS	TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER BASES	TRAFFIC CONTROL WARNING LIGHTS TYPE A	TRAFFIC CONTROL WARNING LIGHTS TYPE C	TRAFFIC CONTROL ARROW BOARDS	TRAFFIC CONTROL SIGNS	TRAFFIC CONTROL SIGNS PCMS	TRAFFIC CONTROL CONES 42-INCH	TRAFFIC CONTROL EACH	TEMPORARY TRAFFIC SIGNAL FOR BRIDGES LS
CATEGORY	LOCATION	DAY	LS	DAY	EACH	EACH	DAY	DAY	DAY	DAY	DAY	DAY	EACH	LS
0010	B-26-0671	100	1	20	-	-	-	40	-	100	-	-	-	-
0010	B-63-0017	112	-	28	-	-	112	70	-	140	-	-	-	-
0010	B-43-0023 STAGE 1	196	-	56	-	-	112	112	-	126	-	-	-	0.5
0010	B-43-0023 STAGE 2	182	-	56	-	-	-	224	-	196	-	-	-	0.5
0010	B-43-0041 STAGE 1	546	-	42	19	19	105	280	28	182	28	252	-	-
0010	B-43-0041 STAGE 2	448	-	70	17	17	-	238	28	182	28	238	-	-
1009-44-68 TOTAL		1584	1	272	36	36	329	964	56	926	56	490	1	1

LANDSCAPING ITEMS						
		627.0200	628.2008	629.0210	630.0110	630.0140
		MULCHING	EROSION MAT URBAN CLASS I TYPE B	FERTILIZER TYPE B	SEEDING MIXTURE NO. 10	SEEDING MIXTURE NO. 40
CATEGORY	LOCATION	SY	SY	CWT	LB	LB
0010	B-26-0671	100	-	0.07	2	-
0010	B-63-0017	100	-	0.07	-	2
0010	B-43-0023	-	100	0.07	2	-
0010	B-43-0041	100	-	0.07	-	2
1009-44-68 TOTAL		300	100	0.28	4	4

PAVEMENT MARKING				
		646.1020	646.9000	649.0150
		MARKING LINE EPOXY 4-INCH	MARKING REMOVAL LINE 4-INCH	TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH
CATEGORY	LOCATION	LF	LF	LF
0010	B-43-0023 STAGE 1	250	250	900
0010	B-43-0023 STAGE 2	250	250	900
0010	B-43-0041 STAGE 1	-	-	1600
0010	B-43-0041 STAGE 2	-	-	1600
1009-44-68 TOTAL		500	500	5000

PAVEMENT ITEMS							
		415.1410	416.0610	465.0105	601.0405	601.0409	602.0405
		CONCRETE PAVEMENT APPROACH SLAB HES	DRILLED TIE BARS	ASPHALTIC SURFACE	CONCRETE CURB & GUTTER 18-INCH TYPE A	CONCRETE CURB & GUTTER 30-INCH TYPE A	CONCRETE SIDEWALK 4-INCH
CATEGORY	LOCATION	SY	EACH	TON	LF	LF	SF
0010	B-43-0023 WEST APPROACH	103	12	11	20	-	-
0010	B-43-0023 EAST APPROACH	103	-	11	-	-	-
0010	B-43-0041 NORTH APPROACH	103	-	11	-	42	200
0010	B-43-0041 SOUTH APPROACH	103	-	11	-	42	175
1009-44-68 TOTAL		412	12	44	20	84	375

		SPV.0105.01
		REMOVING AND REINSTALLING GUARDRAIL
CATEGORY	LOCATION	LS
0010	B-43-0023 WEST APPROACH	1
1009-44-68 TOTAL		1

		642.5201
		FIELD OFFICE TYPE C*
CATEGORY	LOCATION	EACH
0010	B-26-0671	0.25
0010	B-63-0017	0.25
0010	B-43-0023	0.25
0010	B-43-0041	0.25
1009-44-68 TOTAL		1

\*FIELD OFFICE IS PAID AS 1 EACH FOR CONTRACT LOCATED AT 1 LOCATION IN 2019 AND 1 LOCATION IN 2020 AS APPROVED BY ENGINEER

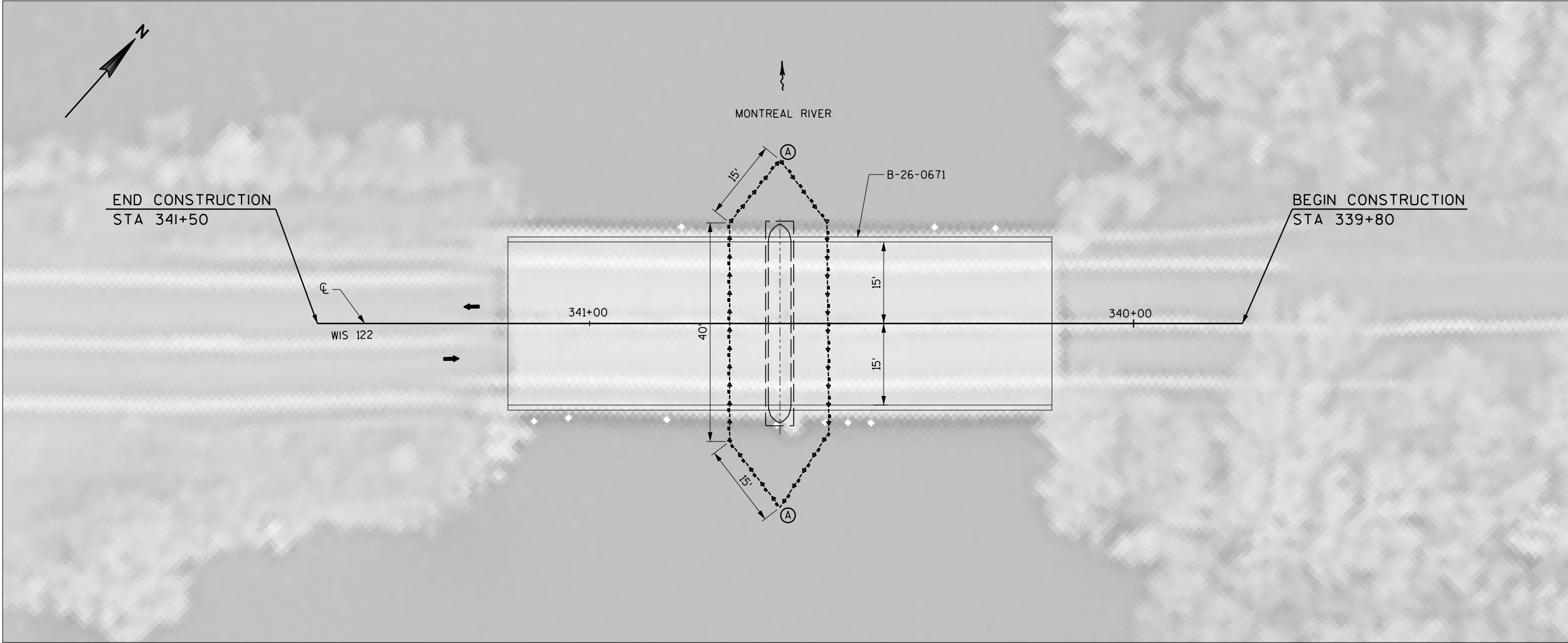
611.8115 ADJUSTING INLET COVERS				
CATEGORY	LOCATION	STA	LOCATION	EACH
0010	B-43-23	81+30.	LT	1
0010	B-43-23	81+30.	RT	1
0010	B-43-41	422+55.	LT	1
0010	B-43-41	422+55.	RT	1
1009-44-68 TOTAL				4

305.0110 BASE AGGREGATE DENSE 3/4-INCH		
CATEGORY	LOCATION	TON
0010	B-43-0023 WEST APPROACH	34
0010	B-43-0023 EAST APPROACH	34
0010	B-43-0041 NORTH APPROACH	46
0010	B-43-0041 SOUTH APPROACH	45
1009-44-68 TOTAL		159

EROSION CONTROL ITEMS								
628.1104 EROSION BALES		628.1504 SILT FENCE	628.1520 SILT FENCE MAINTENANCE	628.1905 MOBILIZATION EROSION CONTROL	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL	628.6005 TURBIDITY BARRIERS	628.7015 INLET PROTECTION TYPE C	
CATEGORY	LOCATION	EACH	LF	LF	EACH	EACH	SY	EACH
0010	B-26-0671	50	-	-	1	1	200	-
0010	B-63-0017	50	-	-	1	1	262	-
0010	B-43-0023	50	60	60	1	1	51	2
0010	B-43-0041	50	-	-	1	1	-	2
1009-44-68 TOTAL		200	60	60	4	4	513	4

5

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### LEGEND

◀-◀-◀-

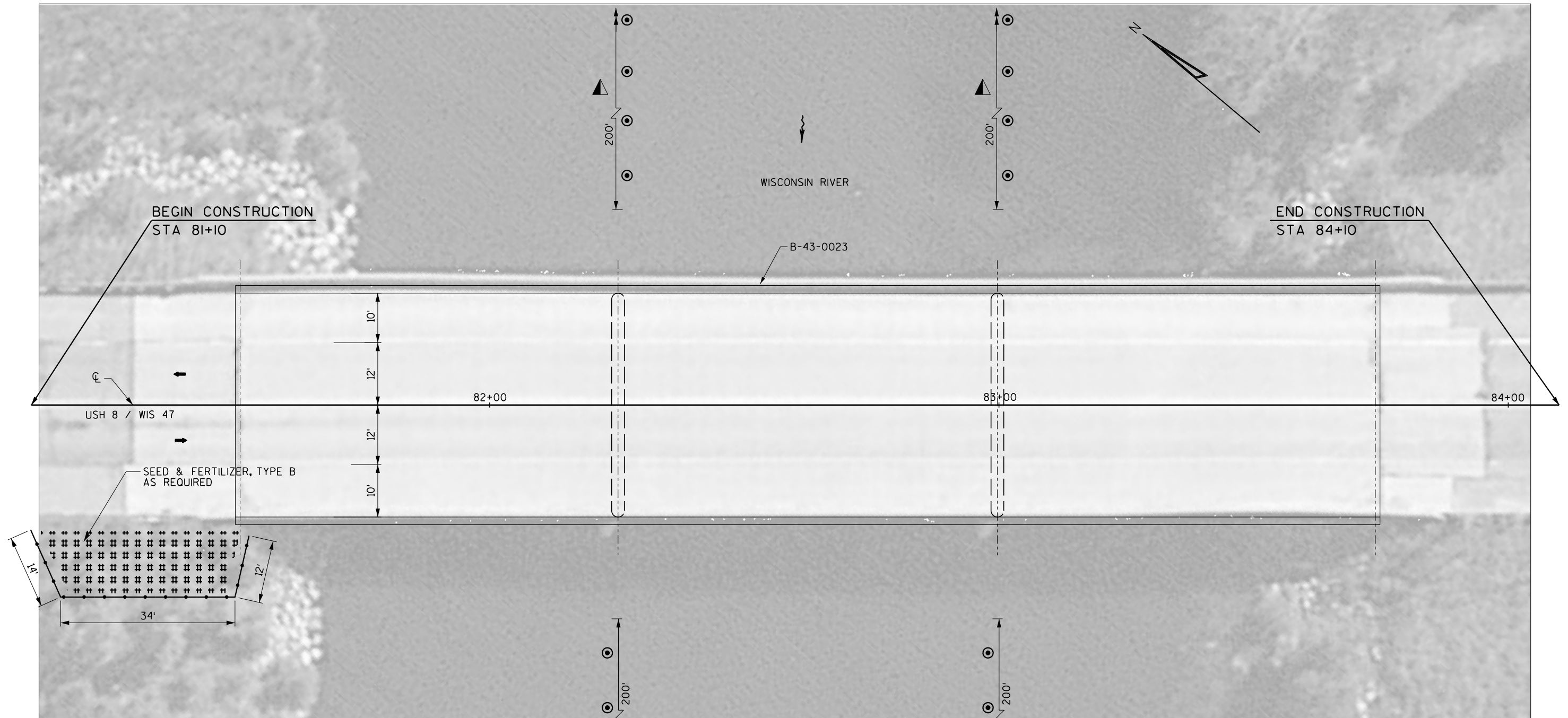
## TURBIDITY BARRIER

Ⓐ





TYPE "A" WARNING  
LIGHT (FLASHING)

5

5



### LEGEND

- |   |   |
|---|---|
|  | NAVIGATIONAL BUOY   |
|  | SILT FENCE  |
|  | EROSION MAT URBAN<br>CLASS I TYPE B                           |
|  | BUOY LOCATIONS SHOWN ARE TYPICAL<br>FOR CONSTRUCTION AT PIERS |

PROJECT NO:	1009-44-68
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HWY: REGIONWIDE BRIDGE MAINTENANCE
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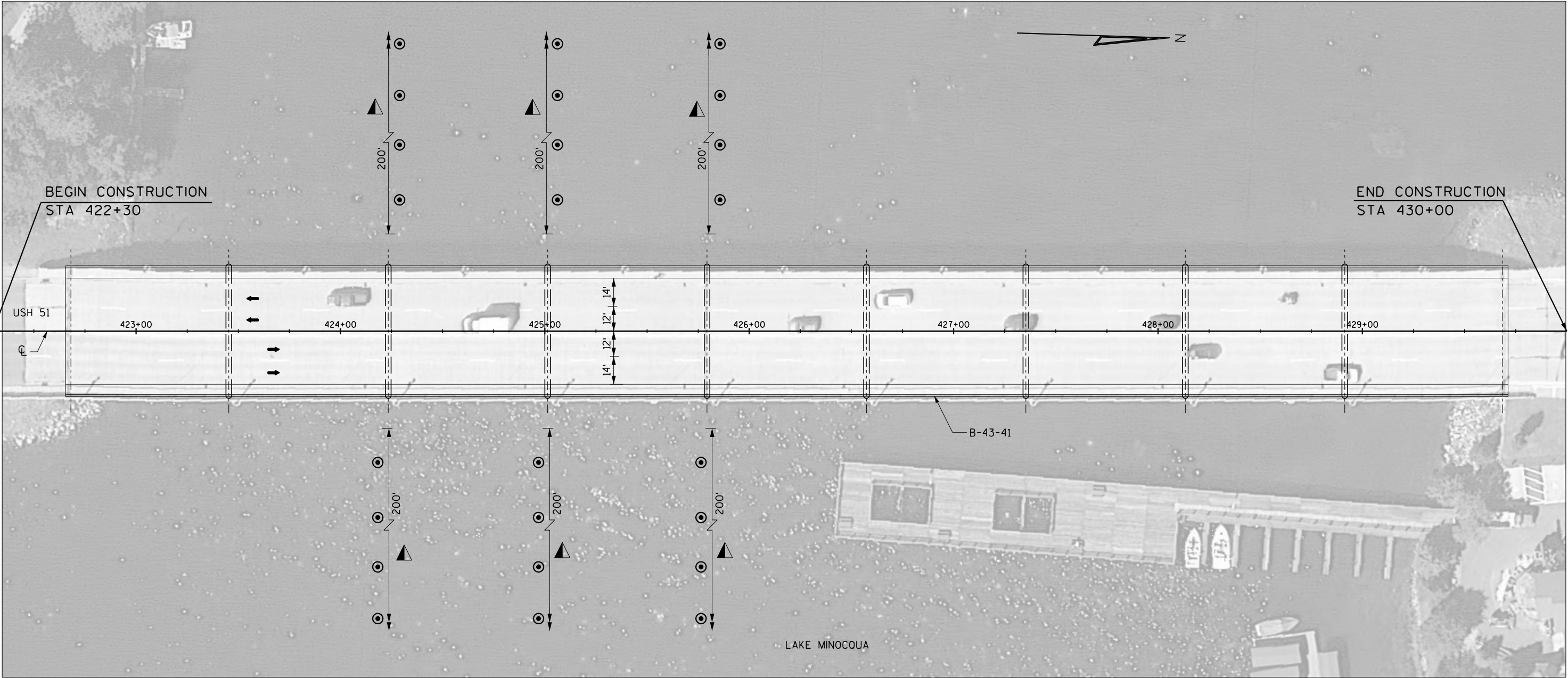
COUNTY: ONEIDA

PLAN (B-43-23)
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SHEET NO:

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**LEGEND**

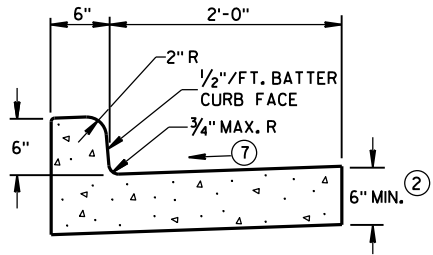
⊙ NAVIGATIONAL BUOY

▲ BUOY LOCATIONS SHOWN ARE TYPICAL FOR CONSTRUCTION AT DESIGNATED PIERS

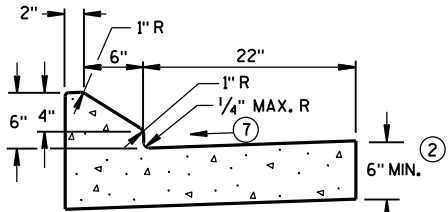


Standard Detail Drawing List

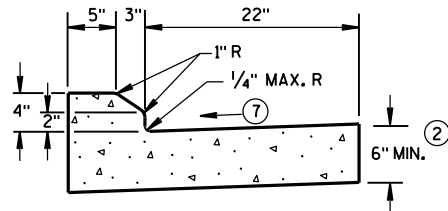
08D01-20A	CONCRETE CURB & GUTTER
08D01-20B	CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
08E11-02	TURBIDITY BARRIER
09G02-05A	BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION
09G02-05B	BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION
09G02-05C	BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION
12A03-10	NAME PLATE (STRUCTURES)
13B02-08A	CONCRETE PAVEMENT APPROACH SLAB
14B07-15A	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-15B	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-15C	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-15D	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-15E	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-15F	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-15G	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-15H	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-15I	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
15C04-05	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC
15C11-07B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15C12-06	TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION
15D12-07A	TRAFFIC CONTROL, LANE CLOSURE
15D28-03	TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY
15D33-04	TRAFFIC CONTROL, ONE LANE ROAD WITH TEMPORARY SIGNALS
15D38-02A	TEMPORARY TRAFFIC CONTROL SIGN MOUNTING
15D38-02B	ATTACHMENT OF SIGNS TO POSTS



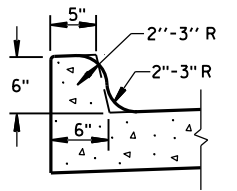
TYPES A<sup>①</sup> & D



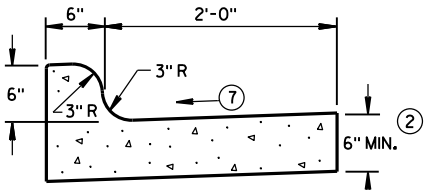
6" SLOPED CURB TYPES G<sup>①</sup> & J



4" SLOPED CURB TYPES G<sup>①</sup> & J

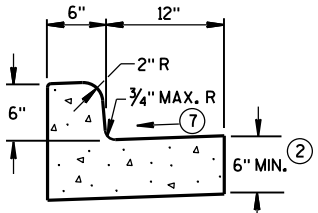


TYPES K<sup>①</sup> & L  
(OPTIONAL CURB SHAPE)



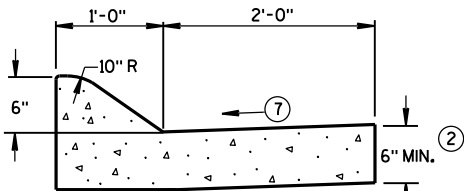
TYPES K<sup>①</sup> & L

CONCRETE CURB & GUTTER 30"

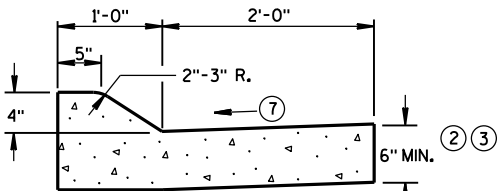


TYPES A<sup>①</sup> & D

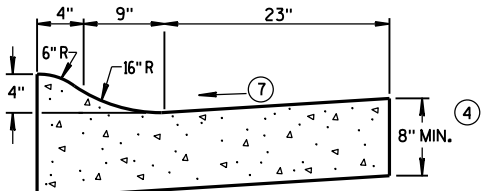
CONCRETE CURB & GUTTER 18"



6" SLOPED CURB TYPES A<sup>①</sup> & D

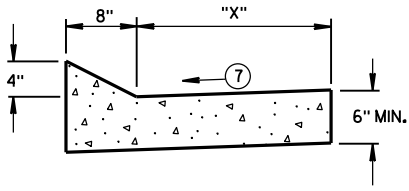


4" SLOPED CURB TYPES A<sup>①</sup> & D



4" SLOPED CURB TYPES R<sup>①</sup> & T<sup>⑤</sup>

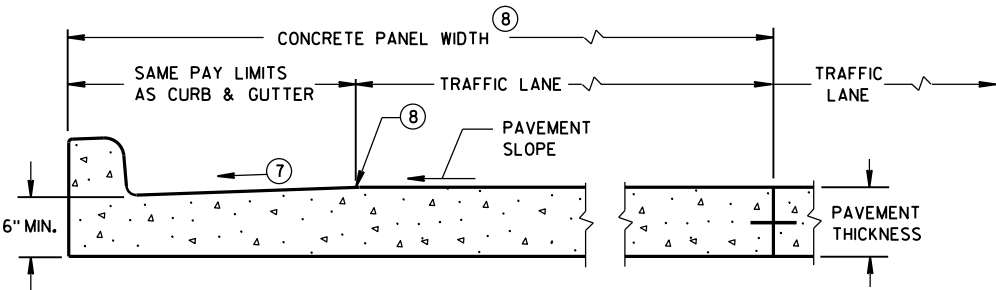
CONCRETE CURB & GUTTER 36"



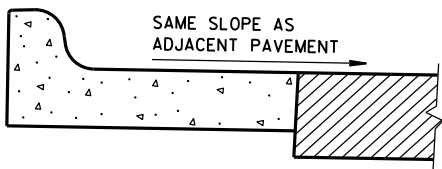
TYPES TBT & TBTT<sup>①</sup>

CONCRETE CURB & GUTTER

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



PARTIAL SECTION OF PAVEMENT  
WITH INTEGRAL CURB & GUTTER



REVERSE SLOPE GUTTER<sup>⑥</sup>  
(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.

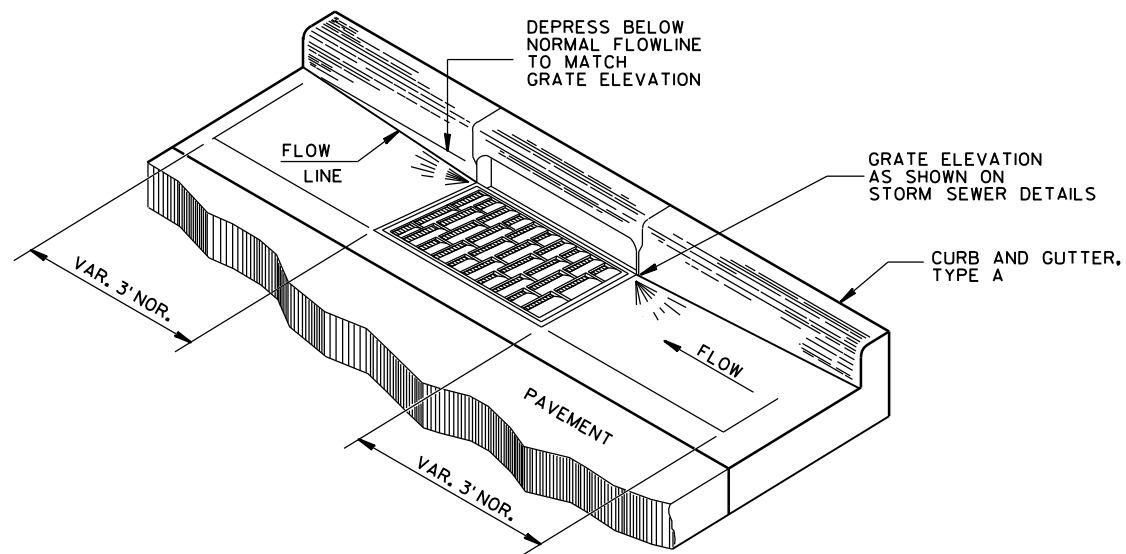
PAVEMENT THICKNESS  
AND MAXIMUM CONCRETE  
PANEL WIDTH TABLE

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

\* BIKE LANE IS NOT SHOWN.

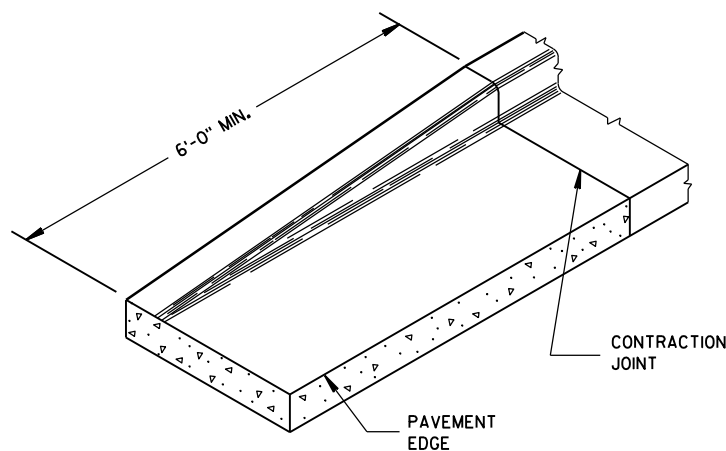
CONCRETE CURB & GUTTER

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

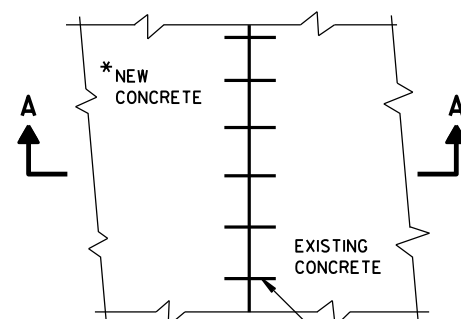


**DETAIL OF CURB AND GUTTER AT INLETS**

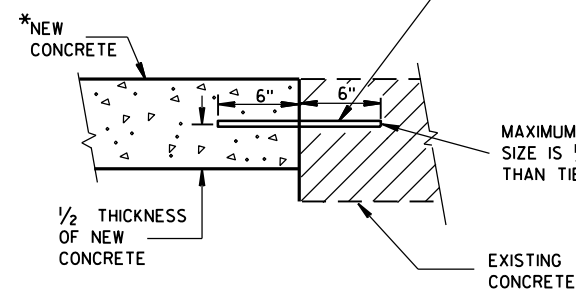
(TYPE H INLET COVER SHOWN)



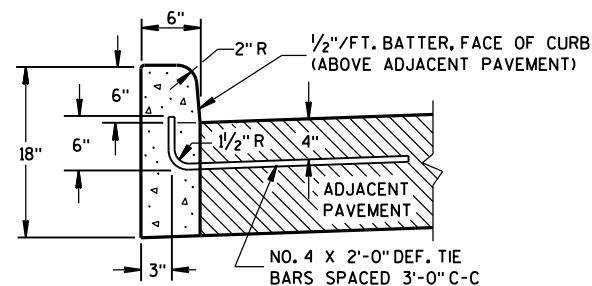
**END SECTION CURB & GUTTER**



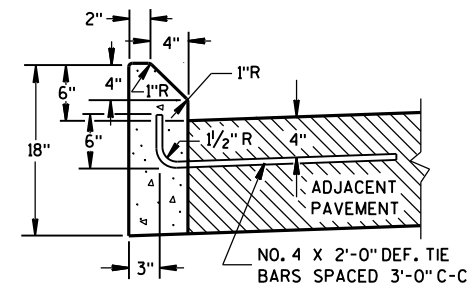
**PLAN VIEW**



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



**TYPES A<sup>①</sup> & D**



**TYPES G<sup>①</sup> & J**

## GENERAL NOTES

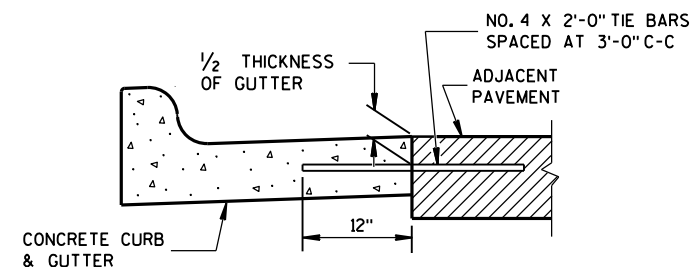
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

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

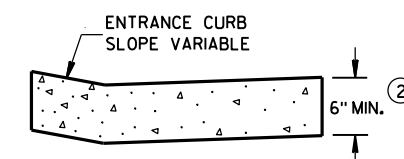
UNLESS OTHERWISE SHOWN ON THE TYPICAL CROSS SECTIONS, THE BASE AGGREGATE AND COMMON EXCAVATION LIMITS ARE 2'-0" BEHIND THE BACK OF CURBS.

- 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.

## CONCRETE CURB



**TYPICAL TIE BAR LOCATION<sup>①</sup>**



**DRIVEWAY ENTRANCE CURB<sup>⑨</sup>**  
(WHEN DIRECTED BY THE ENGINEER)

## CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED

June, 2017

DATE

FHWA

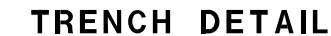
/S/ Rodney Taylor

ROADWAY STANDARDS DEVELOPMENT

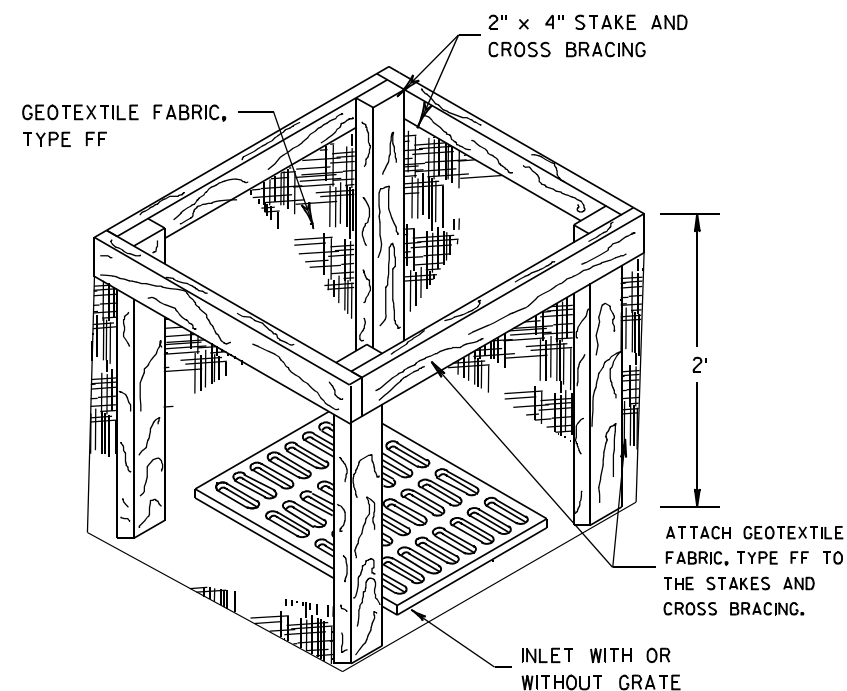
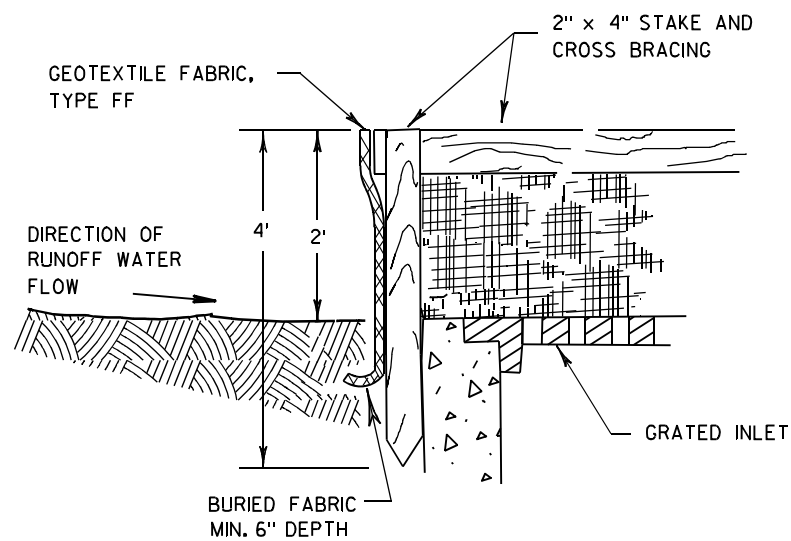
UNIT SUPERVISOR



- 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 1½" X 1½" 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.



<b>SILT FENCE</b>	
<b>STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION</b>	
<b>APPROVED</b> <u>4-29-05</u> DATE	<u>/S/ Beth Canestra</u> CHIEF ROADWAY DEVELOPMENT ENGINEER



**INLET PROTECTION, TYPE A**

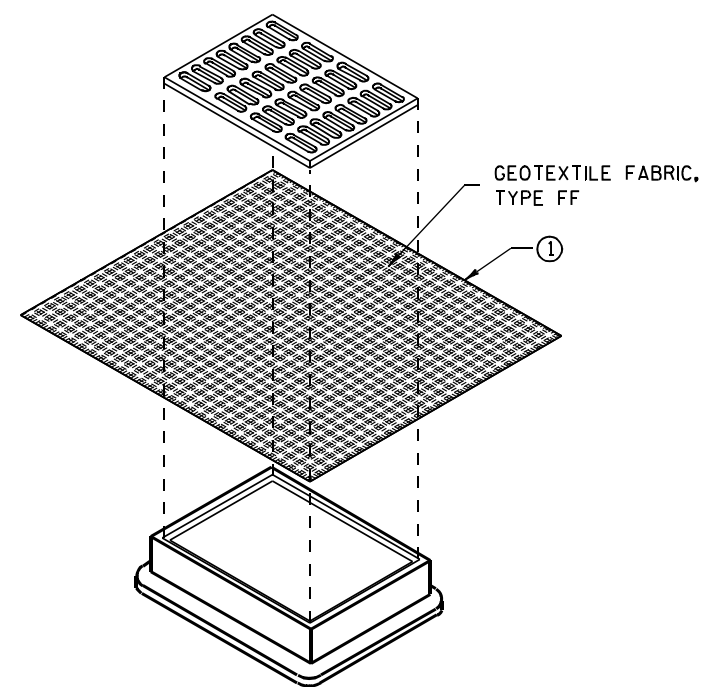
**GENERAL NOTES**

INLET PROTECTION DEVICES SHALL BE MAINTAINED OR REPLACED AT THE DIRECTION OF THE ENGINEER.

MANUFACTURED ALTERNATIVES APPROVED AND LISTED ON THE DEPARTMENT'S EROSION CONTROL PRODUCT ACCEPTABILITY LIST MAY BE SUBSTITUTED.

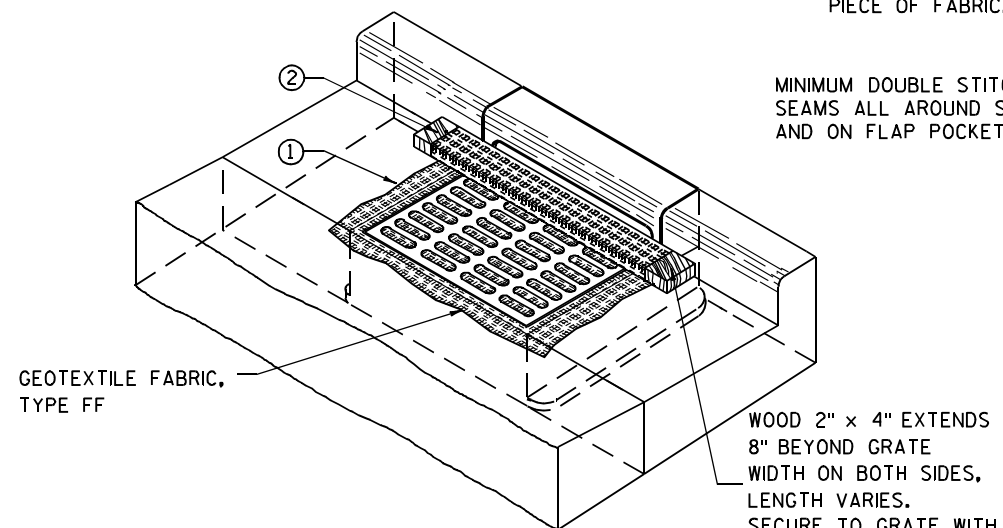
WHEN REMOVING OR MAINTAINING INLET PROTECTION, CARE SHALL BE TAKEN SO THAT THE SEDIMENT TRAPPED ON THE GEOTEXTILE FABRIC DOES NOT FALL INTO THE INLET. ANY MATERIAL FALLING INTO THE INLET SHALL BE REMOVED IMMEDIATELY.

- ① FINISHED SIZE, INCLUDING FLAP POCKETS WHERE REQUIRED, SHALL EXTEND A MINIMUM OF 10" AROUND THE PERIMETER TO FACILITATE MAINTENANCE OR REMOVAL.
- ② FOR INLET PROTECTION, TYPE C (WITH CURB BOX), AN ADDITIONAL 18" OF FABRIC IS WRAPPED AROUND THE WOOD AND SECURED WITH STAPLES. THE WOOD SHALL NOT BLOCK THE ENTIRE HEIGHT OF THE CURB BOX OPENING.
- ③ FLAP POCKETS SHALL BE LARGE ENOUGH TO ACCEPT WOOD 2X4.



**INLET PROTECTION, TYPE B  
(WITHOUT CURB BOX)**

(CAN BE INSTALLED IN ANY INLET WITHOUT A CURB BOX)



**INLET PROTECTION, TYPE C (WITH CURB BOX)**

**INSTALLATION NOTES**

**TYPE B & C**

TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE.

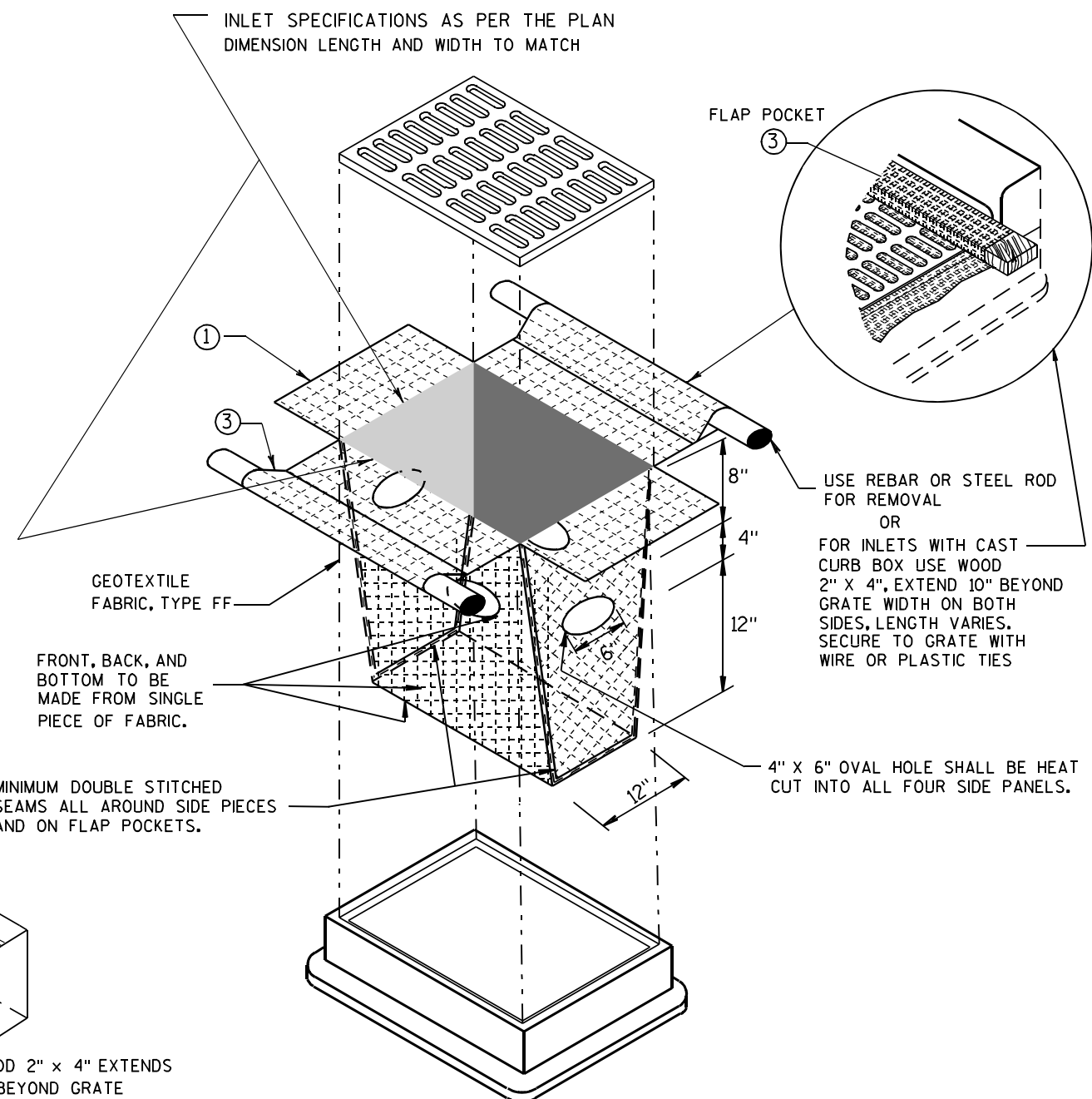
THE CONTRACTOR SHALL DEMONSTRATE A METHOD OF MAINTENANCE, USING A SEWN FLAP, HAND HOLDS OR OTHER METHOD TO PREVENT ACCUMULATED SEDIMENT FROM ENTERING THE INLET.

**TYPE D**

DO NOT INSTALL INLET PROTECTION TYPE D IN INLETS SHALLOWER THAN 30", MEASURED FROM THE BOTTOM OF THE INLET TO THE TOP OF THE GRATE.

TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE.

THE INSTALLED BAG SHALL HAVE A MINIMUM SIDE CLEARANCE, BETWEEN THE INLET WALLS AND THE BAG, MEASURED AT THE BOTTOM OF THE OVERFLOW HOLES, OF 3". WHERE NECESSARY THE CONTRACTOR SHALL CINCH THE BAG, USING PLASTIC ZIP TIES, TO ACHIEVE THE 3" CLEARANCE. THE TIES SHALL BE PLACED AT A MAXIMUM OF 4" FROM THE BOTTOM OF THE BAG.



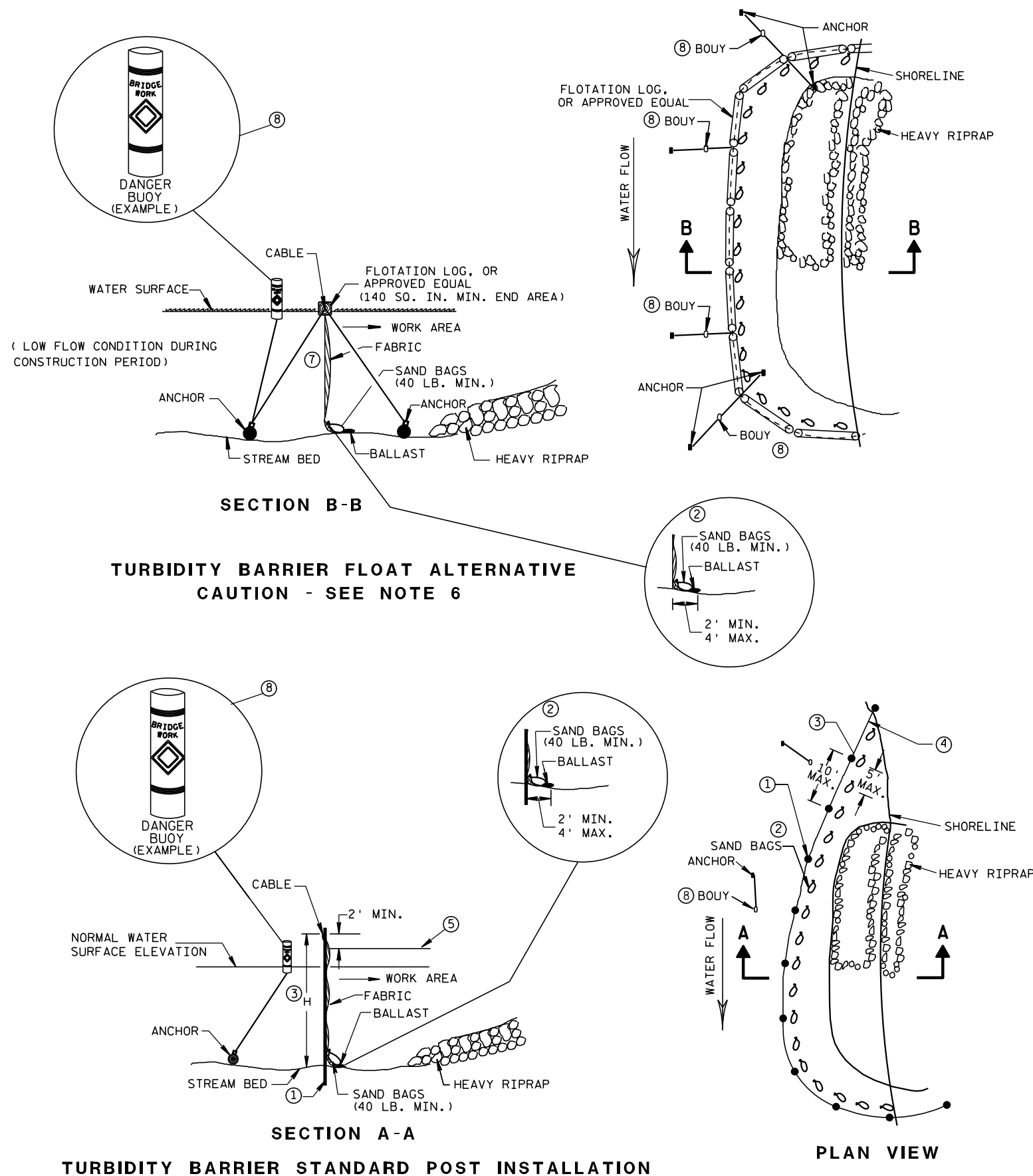
**INLET PROTECTION, TYPE D**

(CAN BE INSTALLED IN ANY INLET TYPE WITH OR WITHOUT A CURB BOX AS PER NOTE ②)

**INLET PROTECTION  
TYPE A, B, C, AND D**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
10/16/02 /S/ Beth Cannestra  
DATE  
FHWA CHIEF ROADWAY DEVELOPMENT ENGINEER

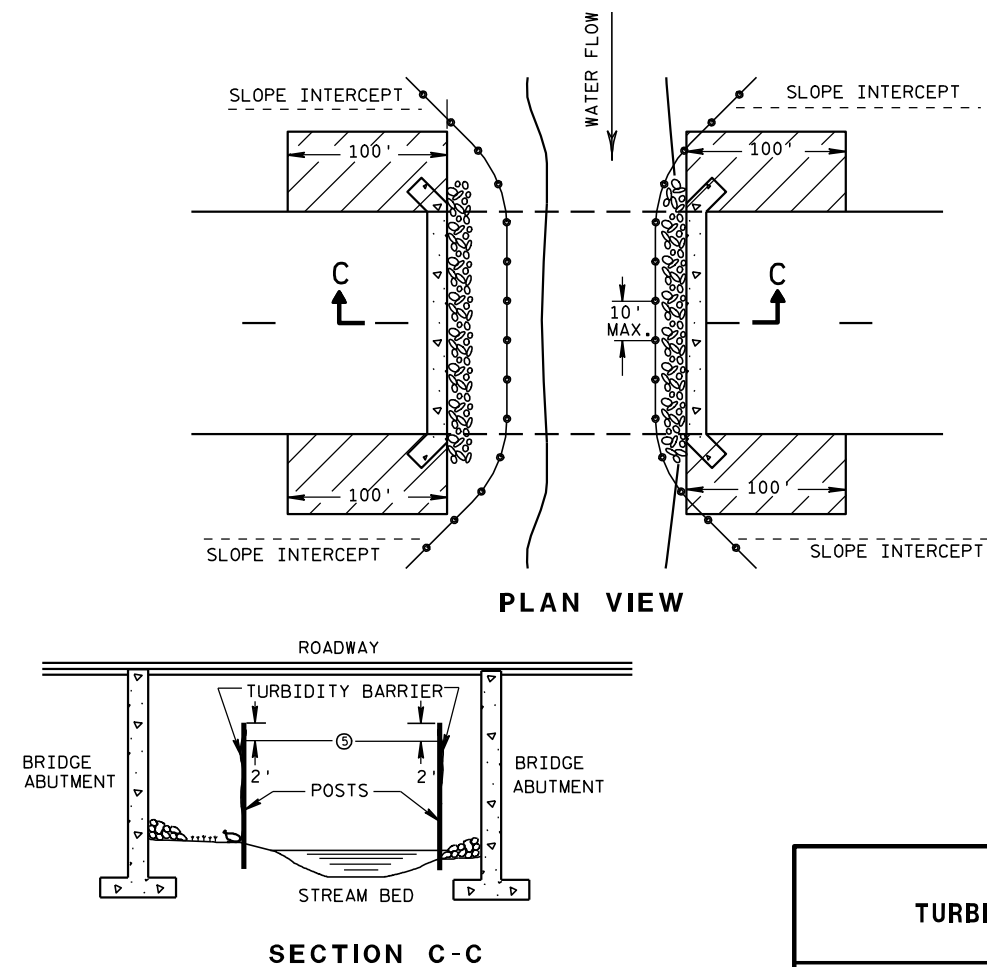


## GENERAL NOTES

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

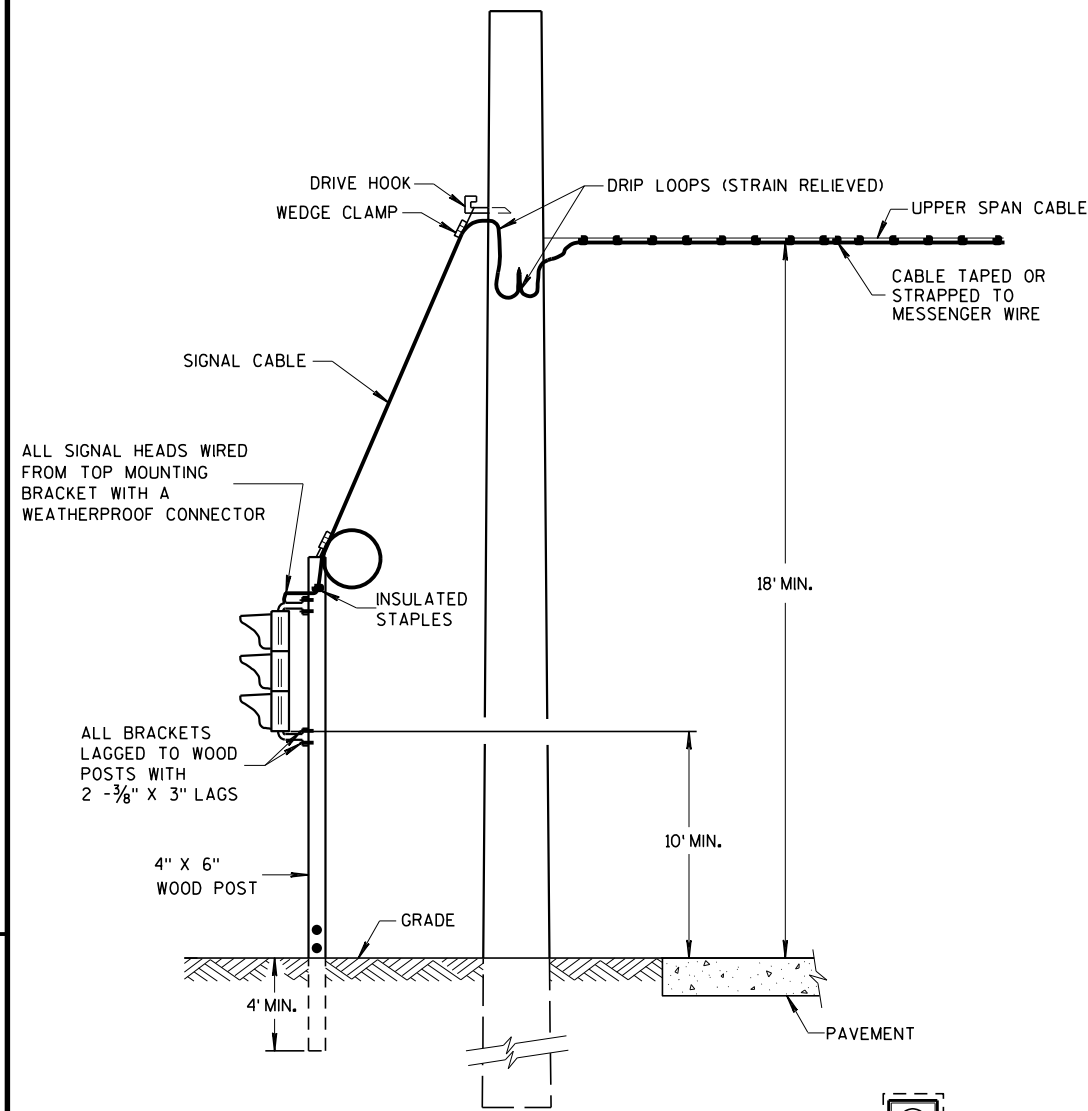
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED

6/04/02  
DATE

FHWA

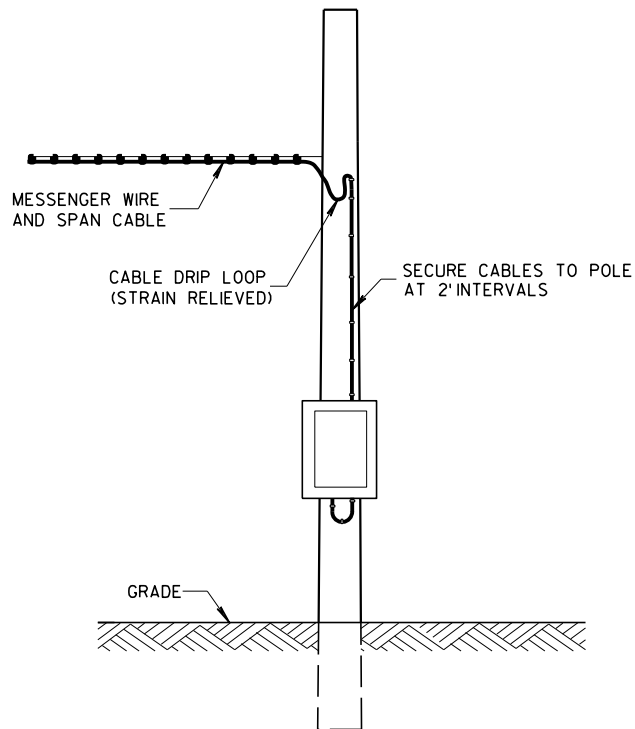
/S/ Beth Connestra  
CHIEF ROADWAY DEVELOPMENT ENGINEER



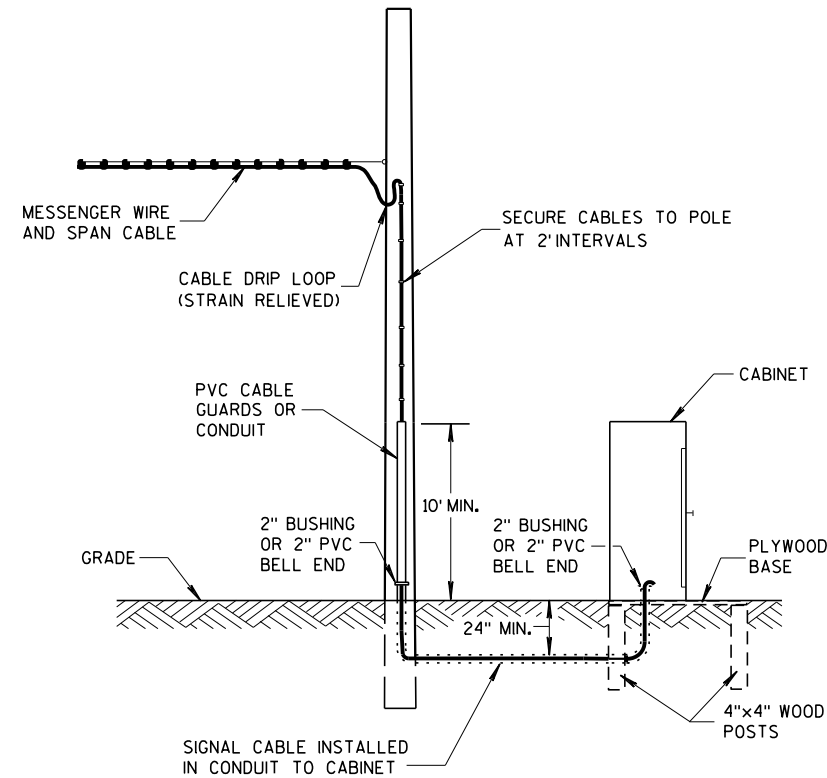
TYPICAL DROP TO TRAFFIC SIGNAL FACE

OFFSET DISTANCES FOR TEMPORARY NON-BREAKAWAY POLES	
SPEED LIMIT	OFFSET DISTANCE**
GREATER THAN 45 MPH	18 FT
45 MPH OR LESS	12 FT
45 MPH OR LESS W/ CURBS	2 FT
**NOTE: OFFSET MEASURED FROM OUTER EDGE OF OUTSIDE THRU LANE.	

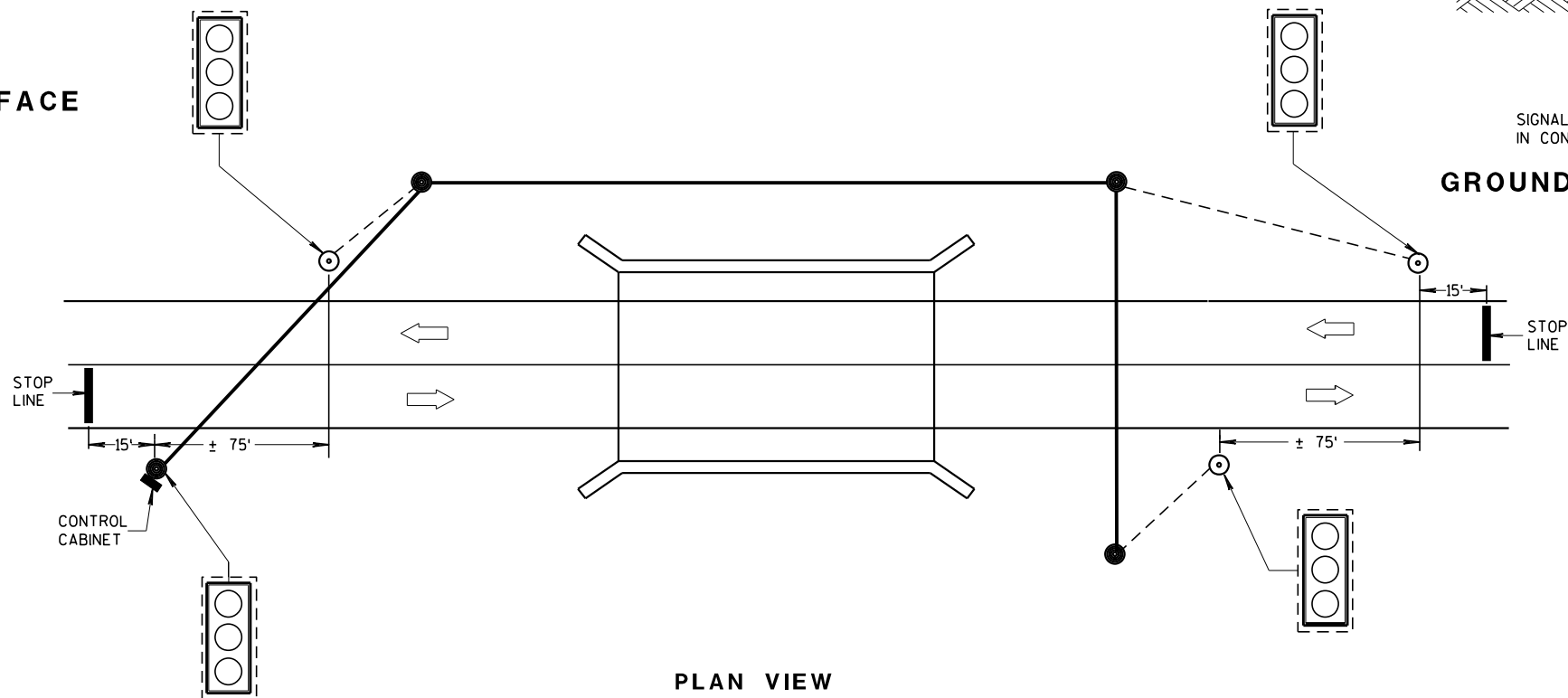
MINIMUM POLE LENGTHS	CLASS	MINIMUM BURIAL DEPTHS
25 FEET	V	5 FEET
30 FEET	V	6 FEET
35 FEET	IV	7 FEET
40 FEET	IV	8 FEET
45 FEET	IV	9 FEET



POLE MOUNT CABINET INSTALLATION



GROUND MOUNT CABINET INSTALLATION



PLAN VIEW  
TYPICAL BRIDGE TEMPORARY TRAFFIC SIGNAL LOCATION

## GENERAL NOTES

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

POLE MOUNTED TRAFFIC SIGNAL CONTROL CABINET MAYBE MOUNTED ON THE SERVICE POLE IF THE ELECTRICAL UTILITY ALLOWS THE INSTALLATION.

WHEN UTILITY POLES ARE USED TO SPAN THE TEMPORARY OVERHEAD CABLE, WRITTEN PERMISSION MUST BE OBTAINED FROM THE OWNER OF THE POLES AND GIVEN TO THE PROJECT MANAGER. ALL PERTINENT UTILITY AND CODE CLEARANCES SHALL BE MAINTAINED.

WOOD POLES (NONBREAKAWAY) SHALL BE NO CLOSER TO EDGE OF PAVEMENT THAN OFFSET DISTANCE CHART ALLOWS OR 4 FEET BEHIND PROTECTIVE BARRIER (BEAM GUARD, ETC.).

WOOD POSTS (BREAKAWAY) SHALL BE NO CLOSER THAN 2 FEET OUTSIDE OF SHOULDER.

VERTICAL CLEARANCE ETC. PER NEC.

TRAFFIC SIGNAL FACES SHALL BE TYPICALLY PLACED 12 FEET FROM EDGE OF PAVEMENT.

EACH TRAFFIC SIGNAL FACE SHALL HAVE A BACKPLATE.

SIGNING, PAVEMENT MARKING AND LANE CONTROL REQUIREMENTS SHALL CONFORM TO STANDARD DETAIL DRAWING 15 D 33.

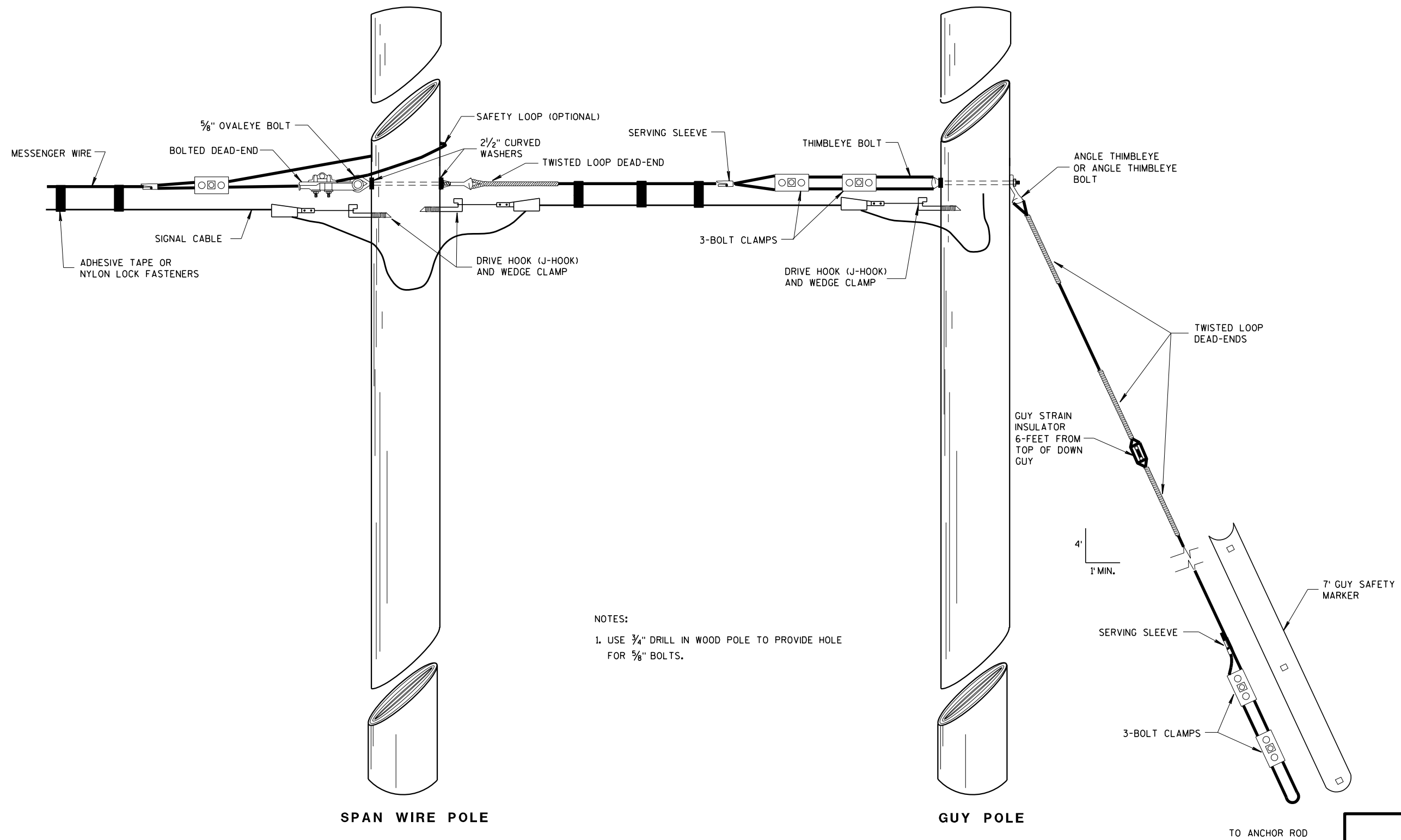
## LEGEND

- WOOD POLE (NON-BREAKAWAY)
- WOOD POST (BREAKAWAY)
- SIGNAL CABLE
- SIGNAL CABLE W/MESSENGER
- LED TRAFFIC SIGNAL FACE WITH BACKPLATE
- 3'-12"
- DIRECTION OF TRAFFIC

## BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
March 2018 /S/ Ahmet Demirbilek  
DATE STATE ELECTRICAL ENGINEER  
FHWA



## NOTES:

1. USE 3/4" DRILL IN WOOD POLE TO PROVIDE HOLE FOR 5/8" BOLTS.

## TYPICAL DEAD-ENDINGS OR GUYING

BRIDGE TEMPORARY  
TRAFFIC SIGNAL INSTALLATIONSTATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

## APPROVED

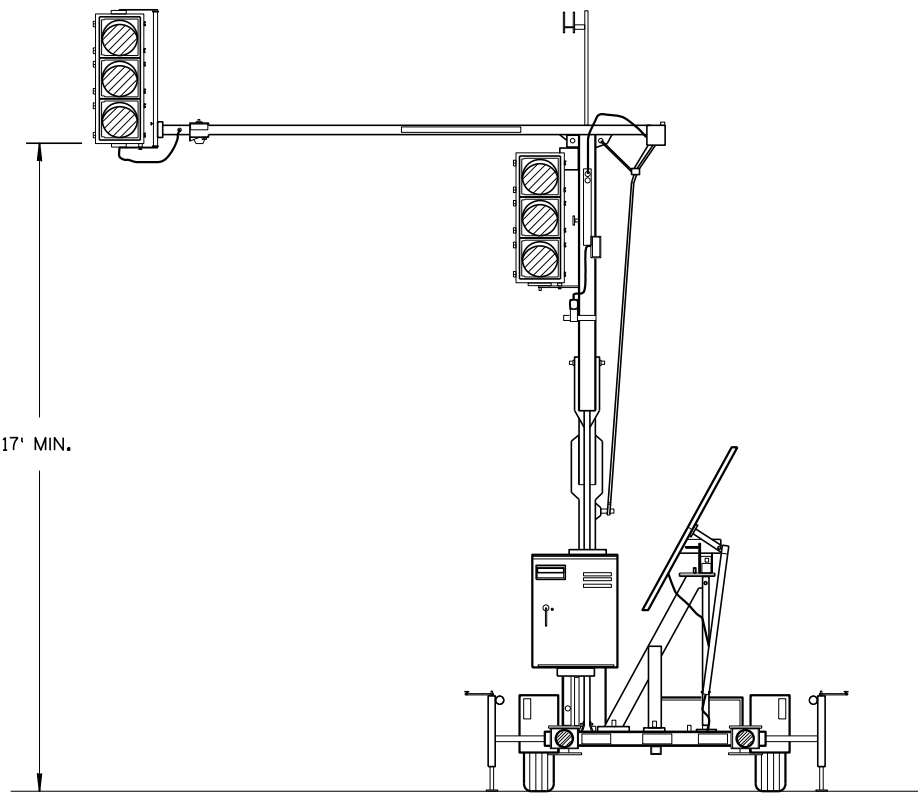
March 2018

DATE

/S/ Ahmet Demirbilek

STATE ELECTRICAL ENGINEER

FHWA

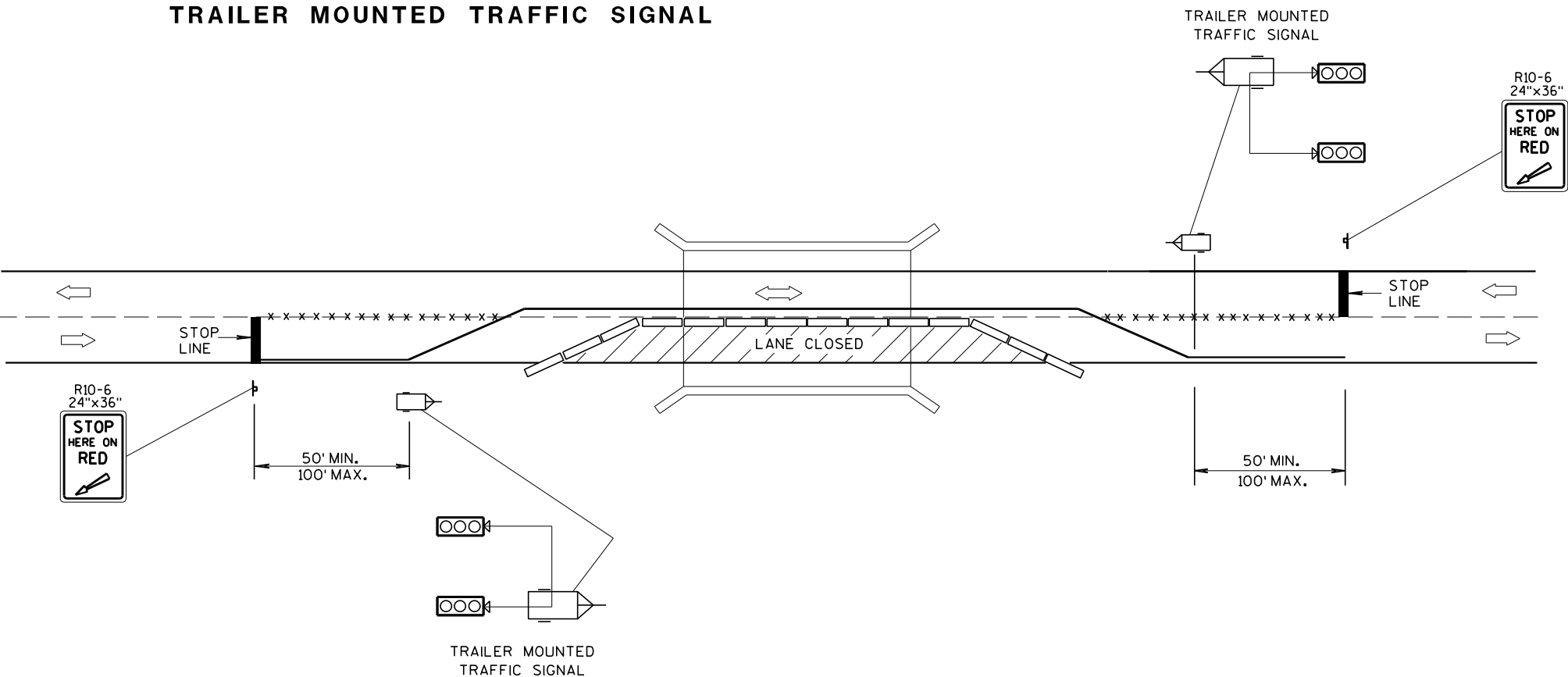


TRAILER MOUNTED TRAFFIC SIGNAL

GENERAL NOTES

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

SIGNING, PAVEMENT MARKING AND LANE CONTROL REQUIREMENTS SHALL CONFORM TO STANDARD DETAIL DRAWING 15 D 33.



TYPICAL TRAILER MOUNTED TRAFFIC SIGNAL LOCATION

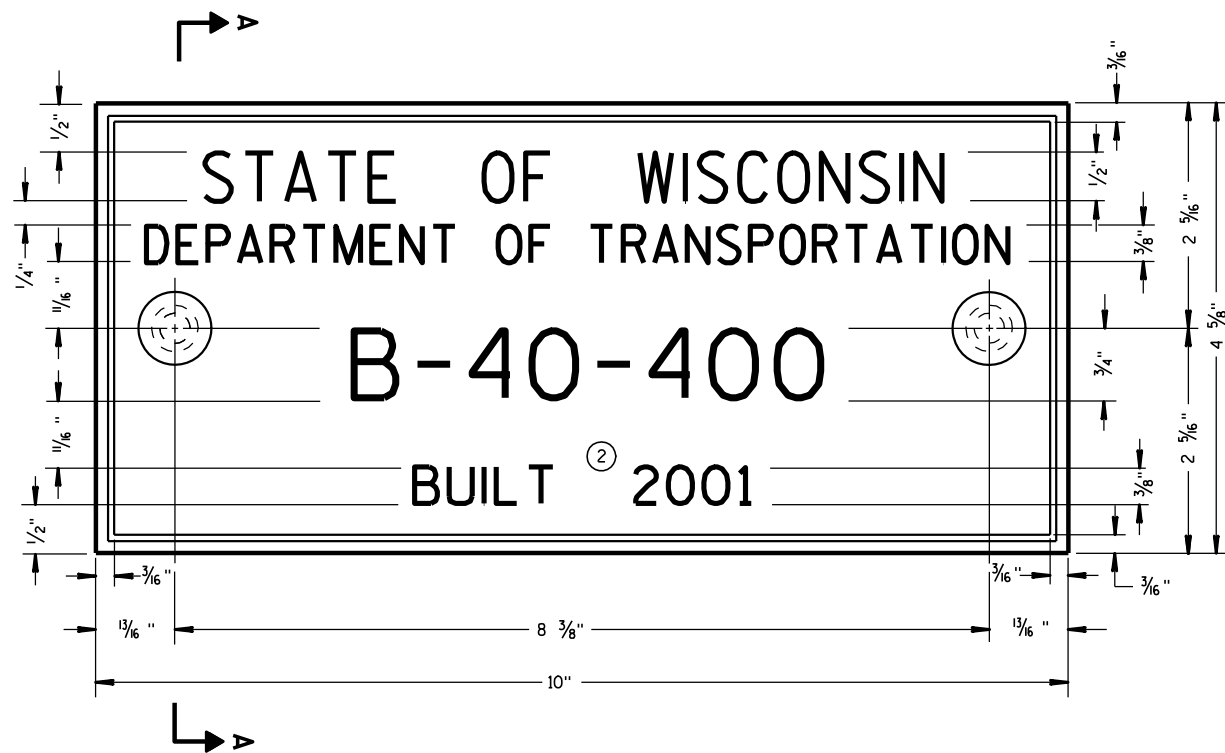
LEGEND

- POST MOUNTED SIGN
- REMOVING PAVEMENT MARKING
- TEMPORARY PRECAST CONCRETE BARRIER
- TRAILER MOUNTED TRAFFIC SIGNAL
- DIRECTION OF TRAFFIC FLOW

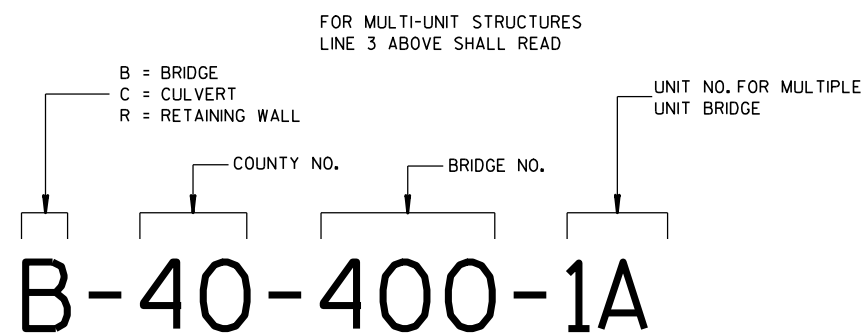
BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
March 2018 /S/ Ahmet Demirbilek  
DATE STATE ELECTRICAL ENGINEER  
FHWA



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



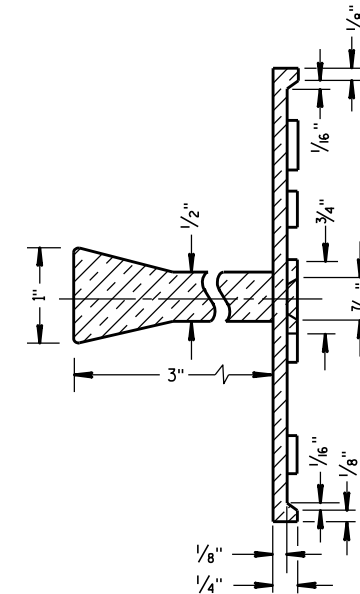
**NUMBERING DESIGNATION  
MULTI-UNIT STRUCTURES**

## GENERAL NOTES

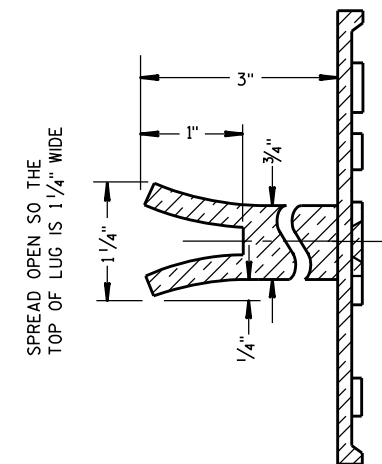
NAME PLATES TO BE INSTALLED ON BRIDGES, CULVERTS, AND RETAINING WALLS SHALL CONFORM TO THE REQUIREMENTS OF SECTION 502.3.11 OF THE STANDARD SPECIFICATIONS.

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.



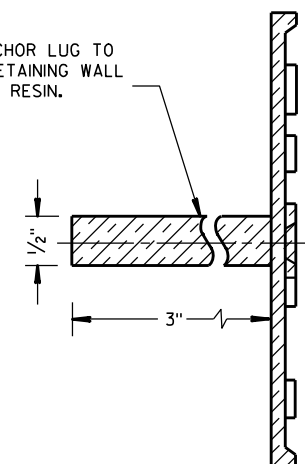
**SECTION A-A**



SPREAD OPEN SO THE  
TOP OF LUG IS 1 1/4" WIDE

**ALTERNATE LUG**

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



**ALTERNATE LUG**  
(FOR ATTACHMENT TO PRECAST STRUCTURES)

**NAME PLATE  
(STRUCTURES)**

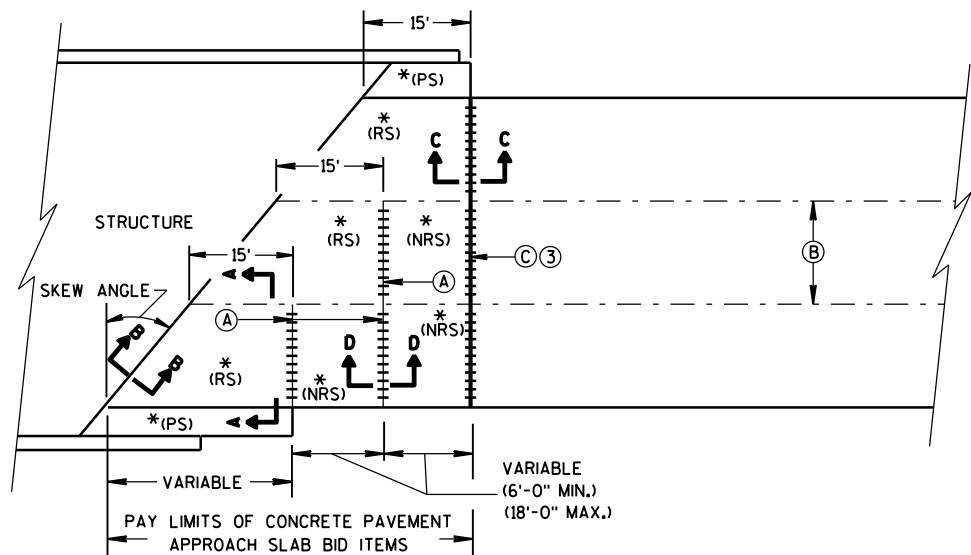
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED

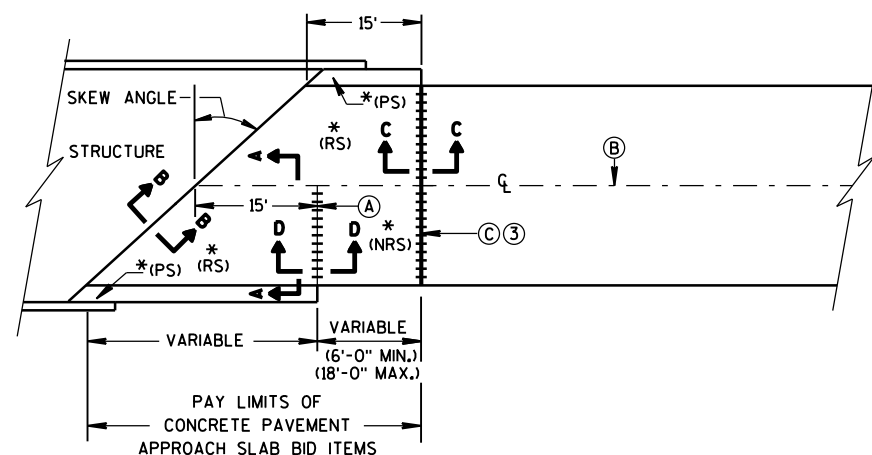
3/26/10  
DATE

FHWA

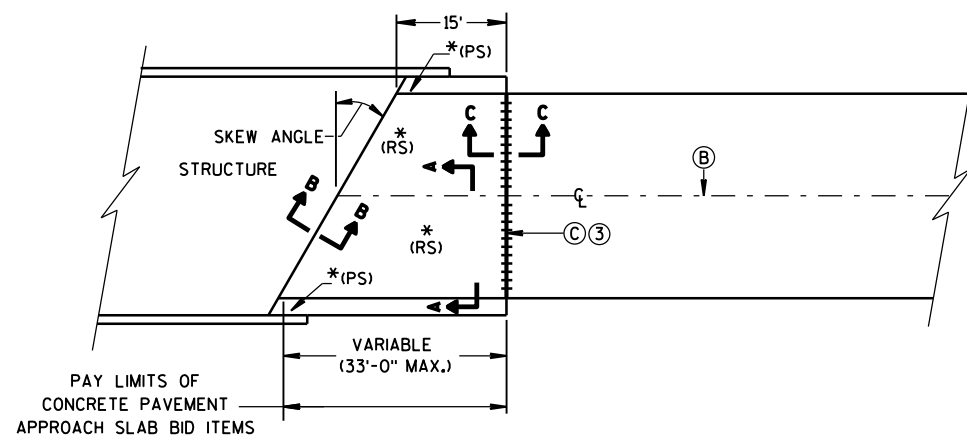
/S/ Scot Becker  
CHIEF STRUCTURAL DEVELOPMENT ENGINEER



**SKewed APPROACH  
(PAVEMENT MORE THAN 2 LANES)**



**SKews > 20°  
(PAVEMENT WIDTH ≤ 30')**

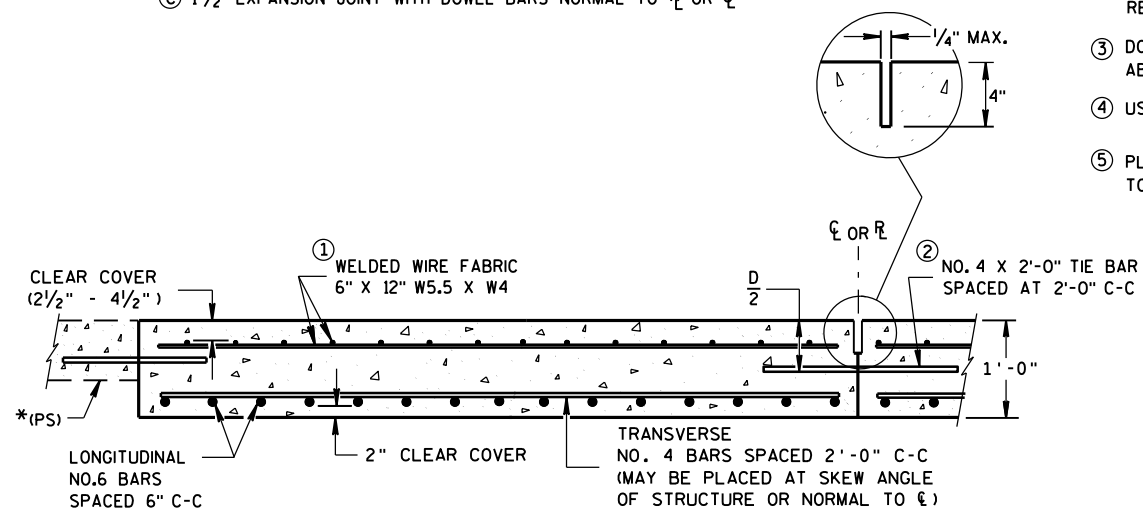


**SKews ≤ 20°  
(PAVEMENT WIDTH ≤ 30')  
APPROACH SLAB AND ADJACENT PAVEMENT**

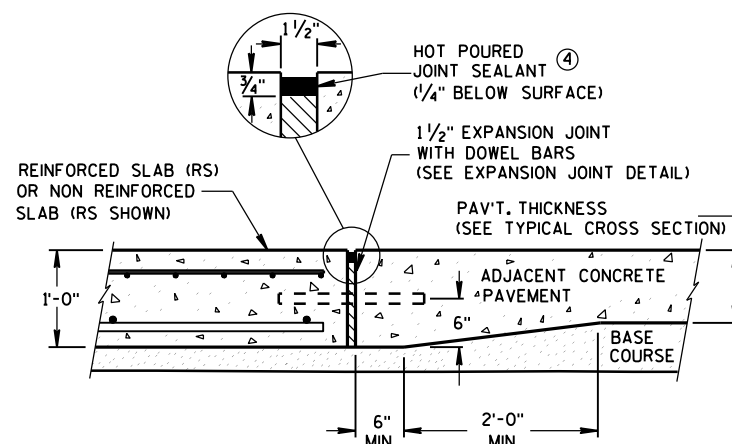
\* (RS) = REINFORCED CONCRETE SLAB  
\* (PS) = PAVED CONCRETE SHOULDER OR CONCRETE DRAINAGE SLAB  
(SEE DETAILS ELSEWHERE IN THE PLAN)  
\* (NRS) = NON-REINFORCED CONCRETE SLAB

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

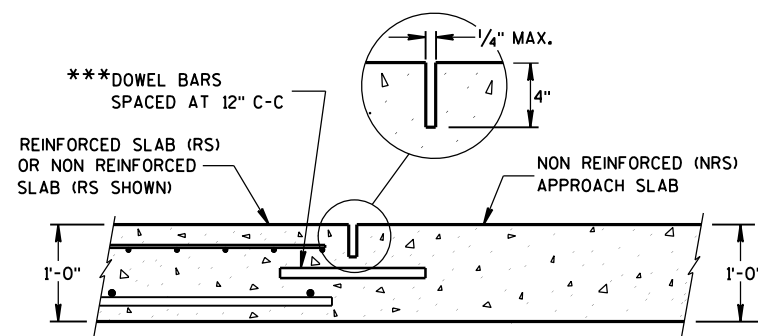
- (A) STANDARD CONTRACTION JOINT NORMAL TO  $\ell$  OR  $\ell_c$   
(B) STANDARD LONGITUDINAL JOINT WITH TIE BARS.  
(C) 1½" EXPANSION JOINT WITH DOWEL BARS NORMAL TO  $\ell$  OR  $\ell_c$



**SECTION A-A  
REINFORCEMENT POSITIONING DETAIL**



**SECTION C-C  
TRANSITION DETAIL  
APPROACH SLAB TO ADJACENT PAVEMENT**



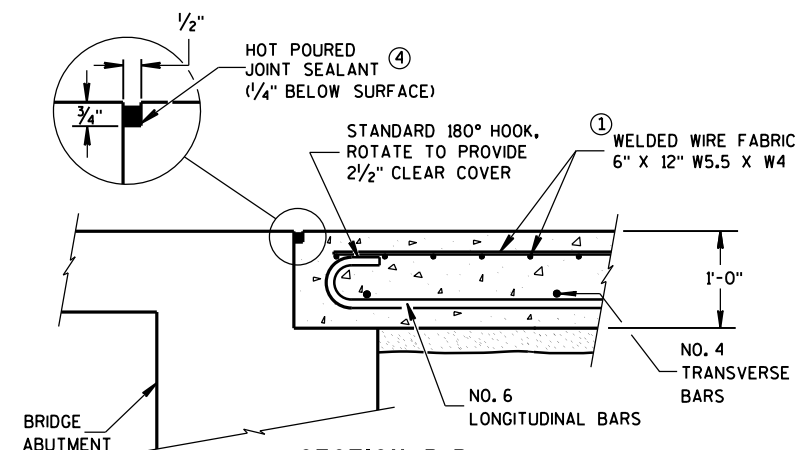
**SECTION D-D  
CONTRACTION JOINT**

## GENERAL NOTES

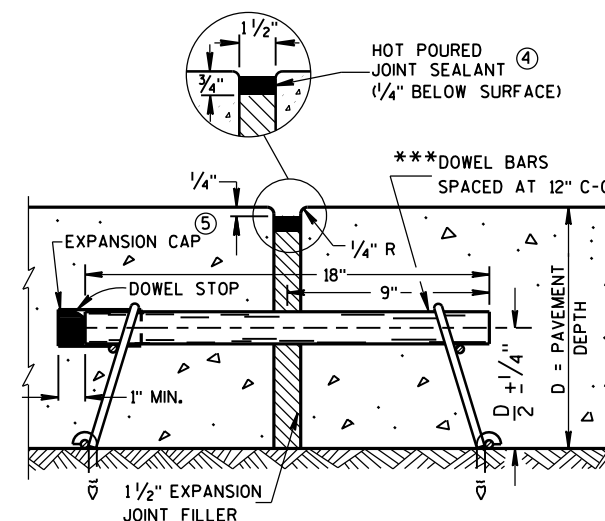
THE CONTRACTOR MAY SPLICE NO. 6 BARS IN THE APPROACH SLAB FOR SKEWED STRUCTURES ONLY. STAGGER SPLICES WITH A MAXIMUM OF ONE SPLICE PER BAR. THE LENGTH OF LAP IS 20 INCHES.

TACK WELD DOWEL BARS TO THE BASKETS ON ALTERNATE ENDS.

- THE CONTRACTOR MAY USE NO. 4 BARS SPACED AT 2'-0" C-C IN BOTH THE LONGITUDINAL AND TRANSVERSE DIRECTIONS FOR TOP REINFORCEMENT AS AN ALTERNATIVE TO THE WELDED WIRE FABRIC.
- THE CONTRACTOR MAY OMIT TIE BARS BETWEEN REINFORCED SLABS WHERE SLAB REINFORCEMENT BARS EXTEND ACROSS THE CENTERLINE OR REFERENCE LINE.
- DO NOT CONSTRUCT AN EXPANSION JOINT OR INSTALL DOWEL BARS WHEN ABUTTING AN HMA PAVEMENT.
- USE A JOINT SEALANT MEETING THE REQUIREMENTS OF ASTM D6690.
- PLACE EXPANSION CAP ON THE END OF THE DOWEL THAT IS NOT TACK WELDED TO THE BASKET. DO NOT FORCE DOWEL BAR PAST THE DOWEL STOP.



**SECTION B-B  
BEND DETAIL  
BOTTOM REINFORCEMENT**



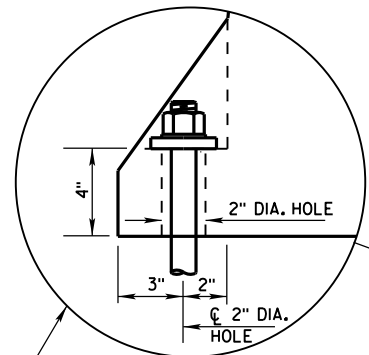
**EXPANSION JOINT DETAIL**

**CONCRETE PAVEMENT  
APPROACH SLAB**

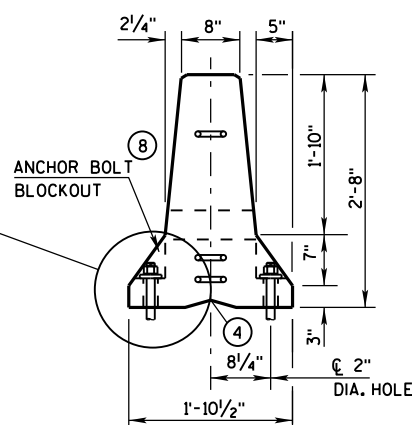
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
June, 2015  
DATE  
FHWA

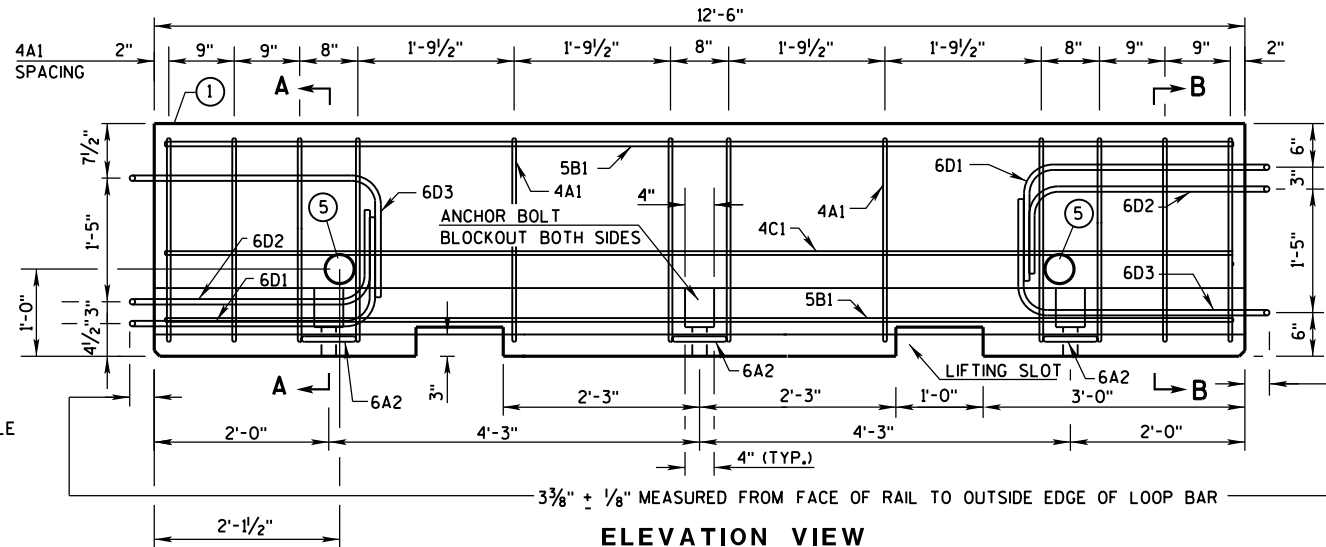
/S/ Peter Kemp, P.E.  
PAVEMENT SUPERVISOR



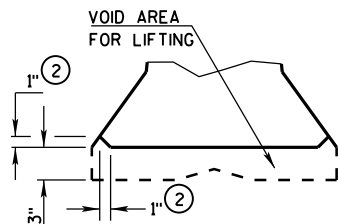
ANCHOR ON TRAFFIC SIDE  
ONLY WHEN REQUIRED  
(SEE SHEET D FOR ADDITIONAL  
ANCHOR DETAIL)



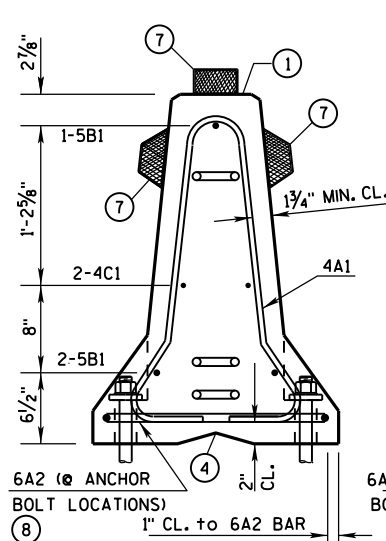
END VIEW



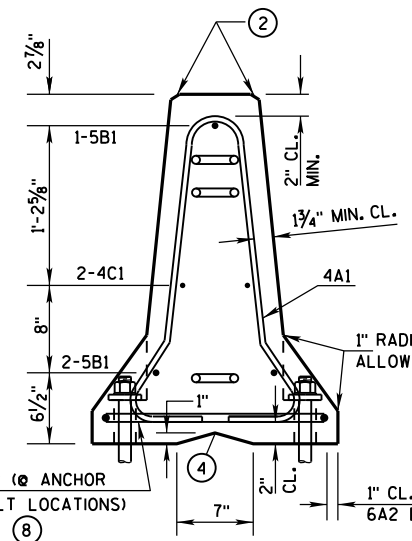
ELEVATION VIEW



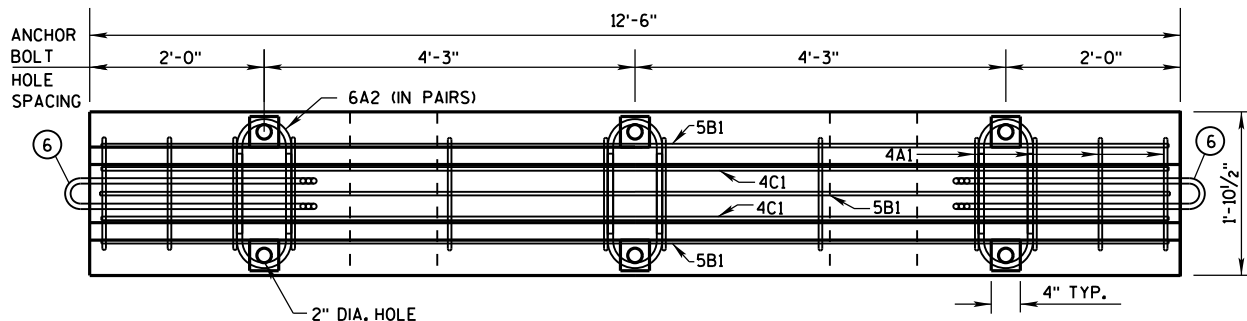
DETAIL "B"  
LIFTING SLOT DETAIL



SECTION A-A  
(STIRRUP PLACEMENT)

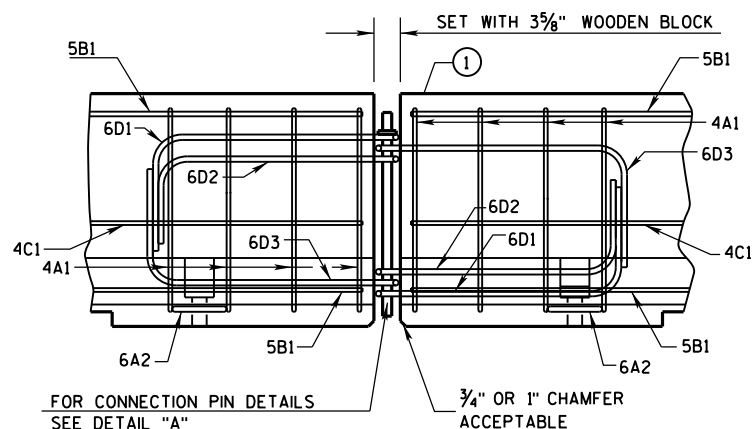


SECTION B-B  
(STIRRUP PLACEMENT)

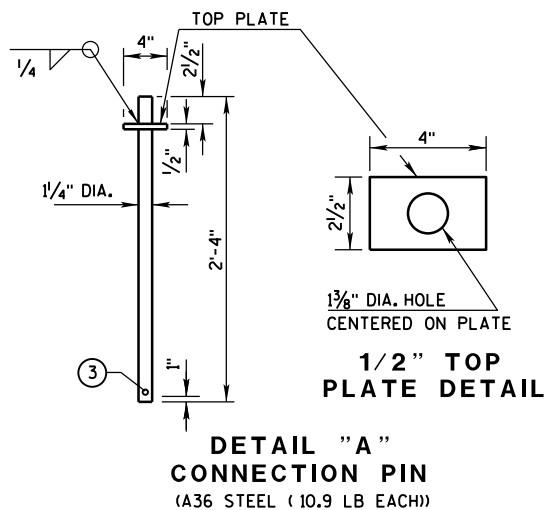


PLAN VIEW

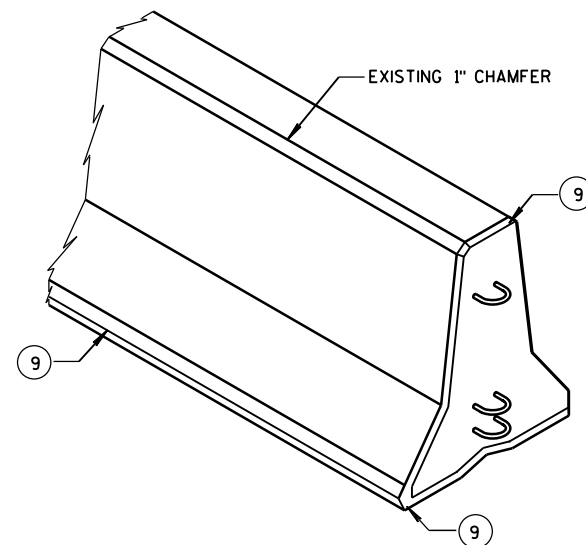
## DETAILS OF BARRIER SECTION



DETAILS OF BARRIER CONNECTION



DETAIL "A"  
CONNECTION PIN  
(A36 STEEL (10.9 LB EACH))



## GENERAL NOTES

THESE GENERAL NOTES APPLY TO SHEETS 14B7-15(a) THRU 14B7-15(i).

DO NOT INTERMIX CONCRETE BARRIER TEMPORARY PRECAST, 12'-6" (CBTP12.5) WITH OTHER TEMPORARY CONCRETE BARRIERS.

USE ASTM A-615, GRADE 60, DEFORMED STEEL BARS FOR BARS 4A1, 6A2, 5B1 AND 4C1 IN THE BARRIER SECTION AND FOR 4V1, 4V2, 4V3, 4V4, 4V5, 4V6, 4F1, 4F2 AND 5F3 IN THE BARRIER TAPER SECTION.

LOOP BARS 6D1, 6D2 AND 6D3 SHALL BE 3/4" SMOOTH STEEL BARS WITH A MINIMUM YIELD STRENGTH OF 60 KSI, A TENSILE STRENGTH OF NOT LESS THAN 1.25 TIMES THE YIELD STRENGTH BUT A MINIMUM OF 80 KSI, A MINIMUM 14% ELONGATION IN 8 INCHES AND PASSING A 180 DEGREE BEND TEST USING A 3-1/2" PIN BEND DIAMETER FOR BEND TESTS. THE LOOPS SHALL BE INSTALLED WITHIN 1/8" OF THE PLAN DIMENSION.

CONSTRUCT LIFTING SLOTS AS SPECIFIED ON THE PLANS TO FACILITATE THE DRAINAGE OF WATER AFTER INSTALLATION.

PLACE BARRIER ON A PAVED SURFACE. REMOVE ALL LOOSE DIRT AND SAND FROM THE ROADWAY SURFACE PRIOR TO PLACEMENT OF THE BARRIER.

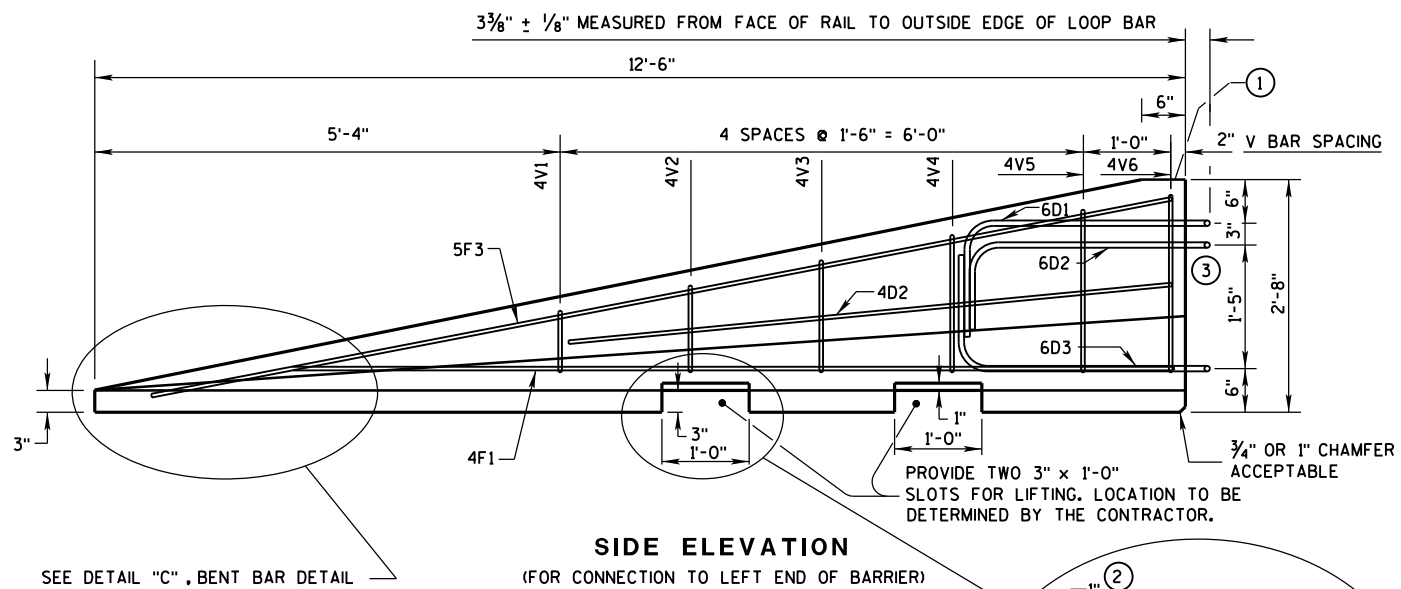
INSTALL MECHANICAL OR ADHESIVE ANCHORS PER MANUFACTURER'S RECOMMENDATIONS. PROVIDE MANUFACTURER'S INFORMATION TO PROJECT ENGINEER.

- MARK ONE END OF EACH BARRIER PERMANENTLY BY FORMING INTO THE BARRIER THE FOLLOWING INFORMATION:
  - TYPE: WICBTP
  - MANUFACTURER
  - DATE MANUFACTURED (MONTH AND YEAR)
- 1" CHAMFER TO PREVENT SPALLING.
- A 3/8" HOLE IN THE CONNECTION PIN, AT THE LOCATION SHOWN, IS ACCEPTABLE, BUT NOT REQUIRED..
- "V" NOTCH IS OPTIONAL.
- THE 4" DIAMETER, 11 GAUGE STEEL, ROUND MECHANICAL TUBING SLEEVE FOR LIFTING (OPTIONAL).
- NEVER USE LOOP BARS (6D1, 6D2 OR 6D3) TO LIFT, MOVE OR REPOSITION THE BARRIER.
- USE DELINEATORS CONFORMING TO SECTION 633 OF THE STANDARD SPECIFICATIONS. CONTRACTOR MAY USE ALTERNATE SHAPES AND HOUSING. INSTALL DELINEATORS ACCORDING TO MANUFACTURES INSTRUCTION. INSTALL YELLOW REFLECTORS WHEN BARRIER IS LOCATED TO THE LEFT OF TRAFFIC AND WHITE REFLECTORS WHEN BARRIER IS LOCATED TO THE RIGHT OF TRAFFIC. SPACE DELINEATORS A MAXIMUM OF 25 FEET APART. PROVIDE TOP MOUNTED DELINEATORS IN ADDITION TO THE SIDE MOUNTED DELINEATORS ON ALL BARRIER INSTALLATIONS LOCATED ON A CURVED ALIGNMENT LONGER THAN 200 FEET AND ON BARRIERS USED TO SEPARATE OPPOSING TRAFFIC.
- SEE SHEET D FOR HOW TO ANCHOR BARRIER. SEE SHEET E FOR WHEN TO ANCHOR BARRIER.
- 1" CHAMFER OPTIONAL.

f'c = 4,000 psi

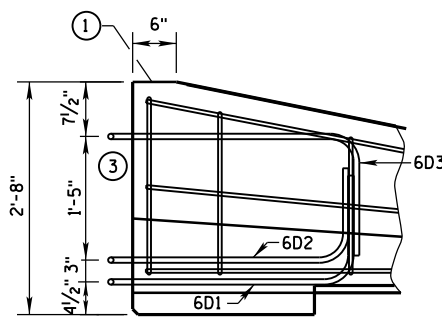
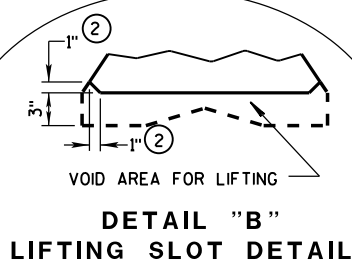
CONCRETE BARRIER  
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION



SIDE ELEVATION

(FOR CONNECTION TO LEFT END OF BARRIER)



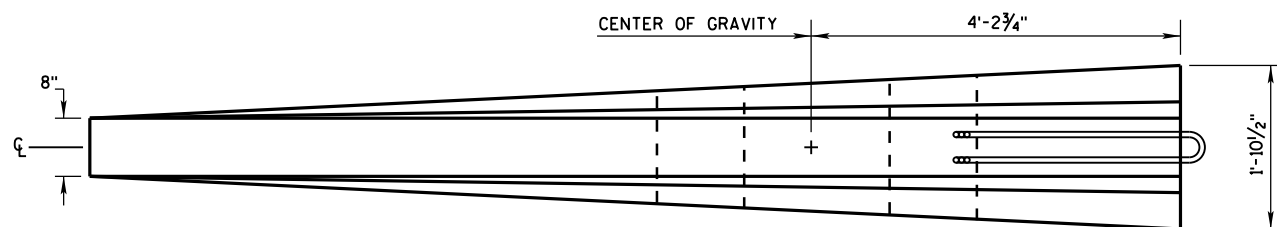
SIDE ELEVATION

LOOP BAR ASSEMBLY INVERTED  
FOR OPPOSITE END.

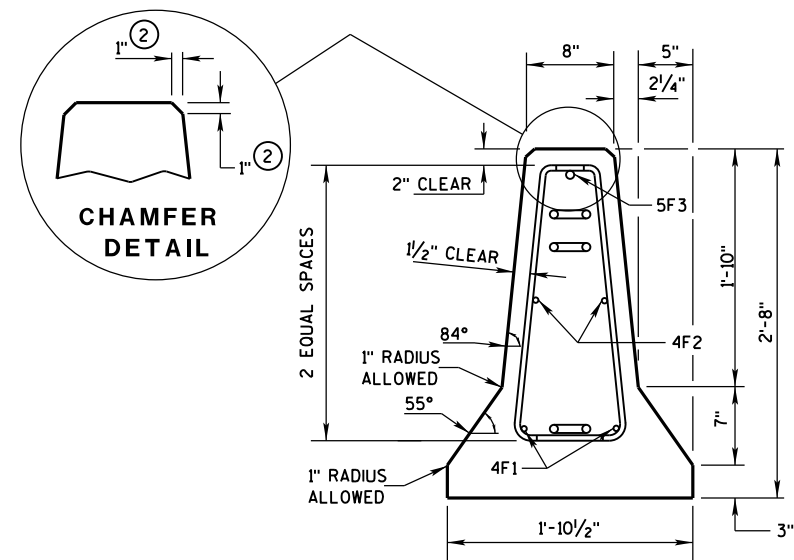
(FOR CONNECTION TO RIGHT END OF BARRIER)

## GENERAL NOTES

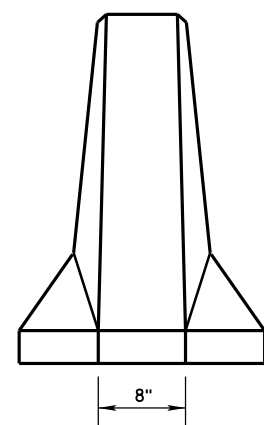
- ① MARK ONE END OF EACH BARRIER PERMANENTLY BY FORMING INTO THE BARRIER THE FOLLOWING INFORMATION:
  - a. TYPE WICBTP
  - b. MANUFACTURER
  - c. DATE MANUFACTURED (MONTH AND YEAR)
- ② 1" CHAMFER TO PREVENT SPALLING.
- ③ NEVER USE LOOP BARS (6D1, 6D2 OR 6D3) TO LIFT, MOVE OR REPOSITION THE BARRIER.



PLAN VIEW

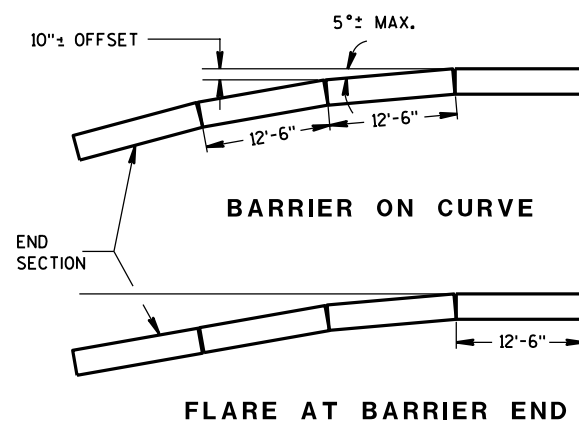


END SECTION



FRONT ELEVATION

## DETAILS OF BARRIER TAPER SECTION



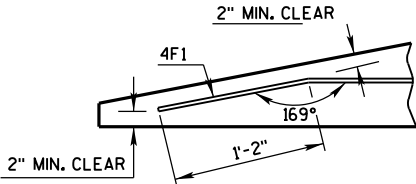
POSTED SPEED, (MPH)	FLARE RATE
40 OR LESS	6:1
45 OR GREATER	8:1

CONCRETE BARRIER  
TEMPORARY PRECAST, 12'-6"STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

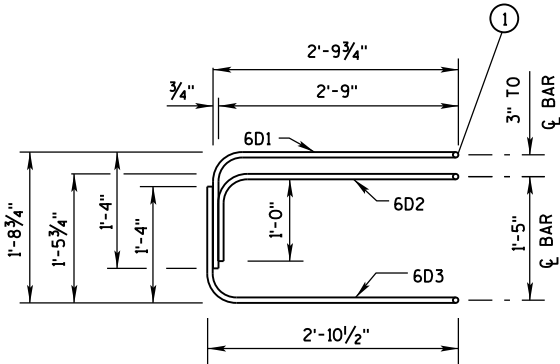
BARRIER TAPER SECTION  
BILL OF MATERIALS

(PER 12'-6" BARRIER TAPER SECTION)

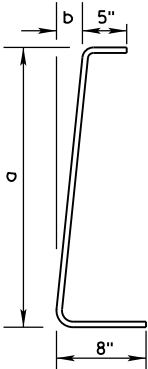
BAR	BAR SIZE	NO. OF BARS	LENGTH FT.
4V1	4	2	1'-11"
4V2	4	2	2'-2"
4V3	4	2	2'-6"
4V4	4	2	2'-9"
4V5	4	2	3'-2"
4V6	4	2	3'-4"
4F1	4	2	12'-0"
4F2	4	2	7'-6"
5F3	5	1	11'-9"
LOOP ASSEMBLY			
6D1	6	1	8'-5"
6D2	6	1	7'-7"
6D3	6	1	8'-6"



DETAIL "C"  
BENT BAR DETAIL



ELEVATION  
LOOP BAR ASSEMBLY



BAR	a	b
V1	10"	1"
V2	1'-1"	1 1/4"
V3	1'-5"	1 5/8"
V4	1'-8"	1 7/8"
V5	2'-0 1/2"	2 3/8"
V6	2'-3"	2 3/4"

4V BARS  
2 AT EACH SIZE REQUIRED  
FOR STIRRUP ASSEMBLY

TAPER BARRIER SECTION

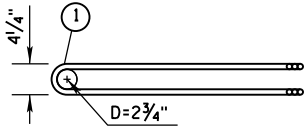
GENERAL NOTES

① NEVER USE LOOP BARS (6D1, 6D2 OR 6D3) TO LIFT, MOVE OR REPOSITION THE BARRIER.

BARRIER SECTION  
BILL OF MATERIALS

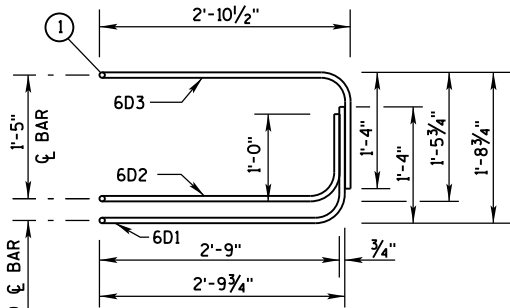
(PER 12'-6" BARRIER SECTION)

BAR	BAR SIZE	NO. OF BARS	LENGTH FT.
4A1	4	12	6'-0"
6A2	6	6	2'-11"
5B1	5	3	12'-2"
4C1	4	2	12'-2"
LOOP ASSEMBLY			
6D1	6	2	8'-5"
6D2	6	2	7'-7"
6D3	6	2	8'-6"

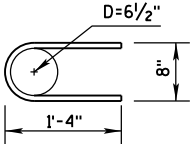


PLAN VIEW  
LOOP BAR ASSEMBLY

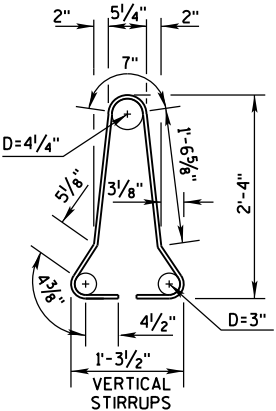
(MARKED END SHOWN, INVERT FOR OTHER END)



ELEVATION VIEW



6A2

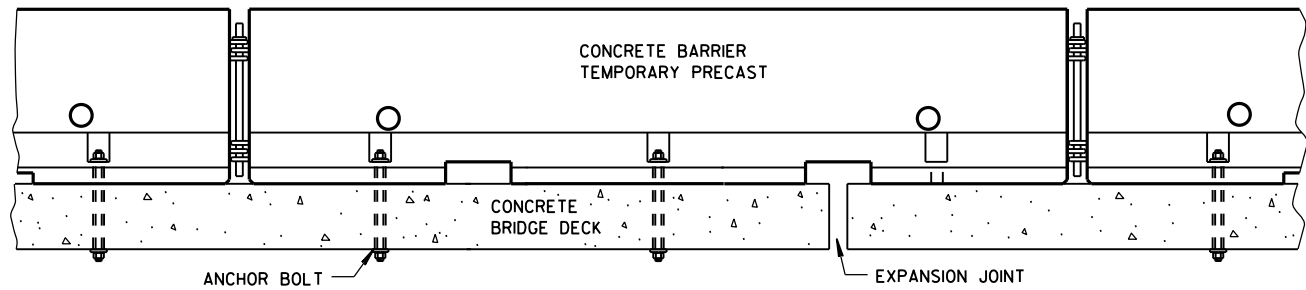
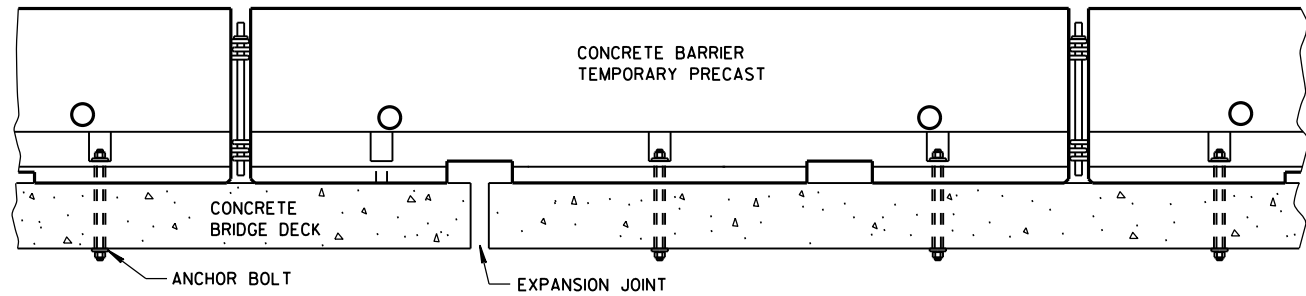


4A1

BARRIER SECTION

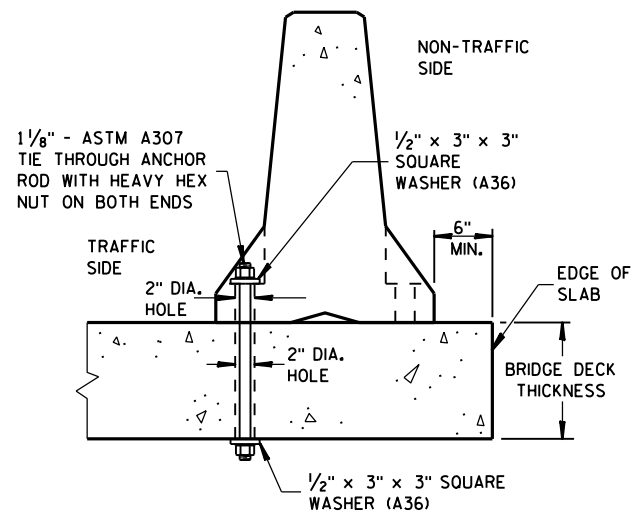
CONCRETE BARRIER  
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION



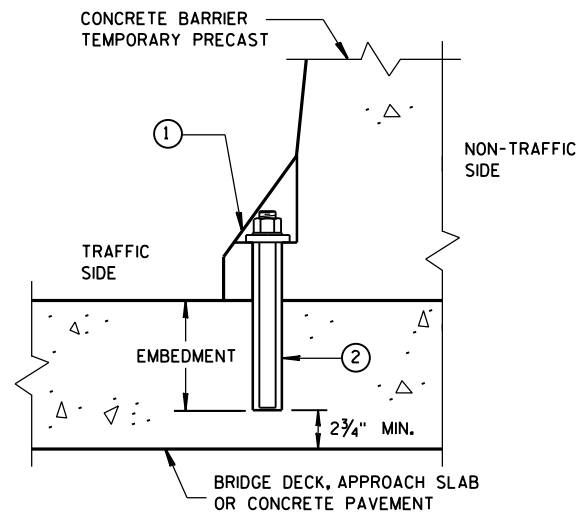
### TREATMENT AT BRIDGE DECK EXPANSION JOINTS

(NO SINGLE CONCRETE BARRIER SECTION SHALL BE ANCHORED TO BOTH THE BRIDGE DECK AND THE APPROACH SLAB. ALL ANCHOR BOLT LOCATIONS SHALL BE ANCHORED TO THE DECK IN ACCORDANCE WITH THE DETAIL. NO MORE THAN ONE ANCHOR BOLT SHALL BE ELIMINATED FROM A BARRIER SECTION WHEN SPANNING AN EXPANSION JOINT.)



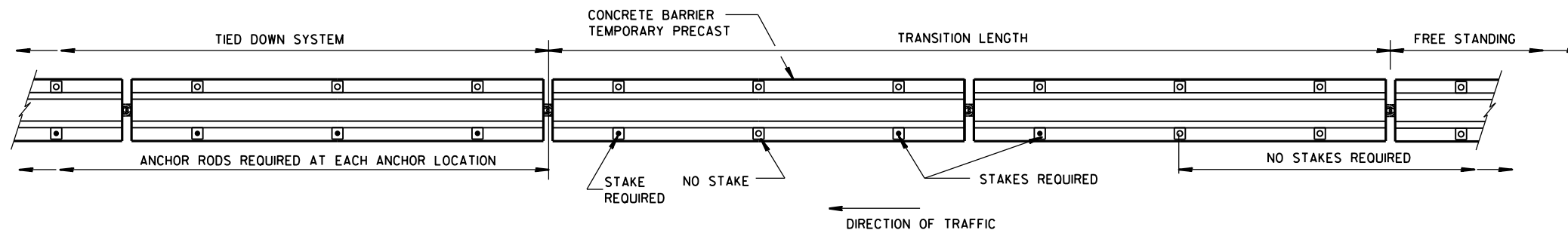
### THROUGH BOLTED ANCHOR INSTALLATION ON BRIDGE DECK

(DO NOT USE ON CONCRETE BRIDGE DECK WITH ASPHALT OVERLAY)



### REMOVABLE ADHESIVE ANCHOR INSTALLATION ON CONCRETE BRIDGE DECK, CONCRETE APPROACH SLAB, OR CONCRETE PAVEMENT

(DO NOT USE ON CONCRETE WITH AN ASPHALTIC OVERLAY)



### PLAN VIEW FREE STANDING TRANSITION TO TIED-DOWN SYSTEM

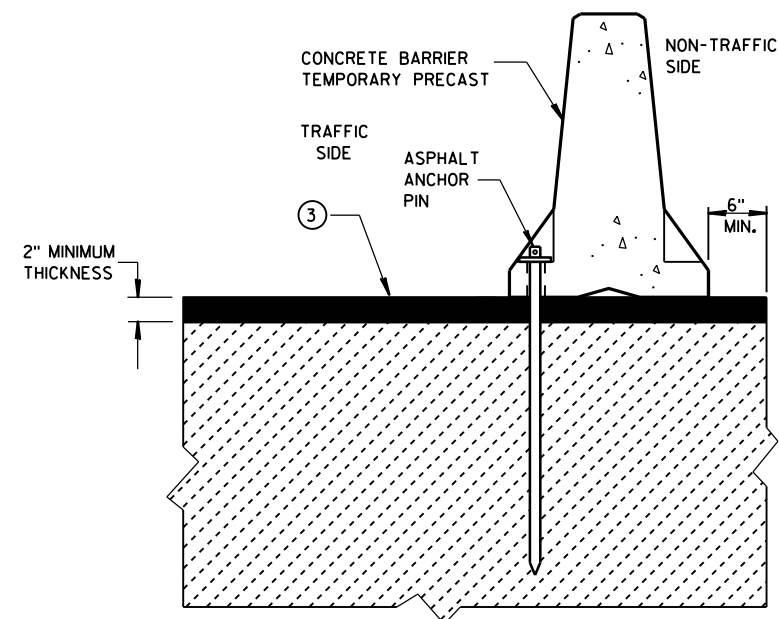
(PLACE TRANSITION IN A TANGENT SECTION OF BARRIER PARALLEL TO THE ROADWAY. IF TRANSITION OCCURS ON STRUCTURAL SLAB, ANCHOR AS SHOWN.)

### GENERAL NOTES

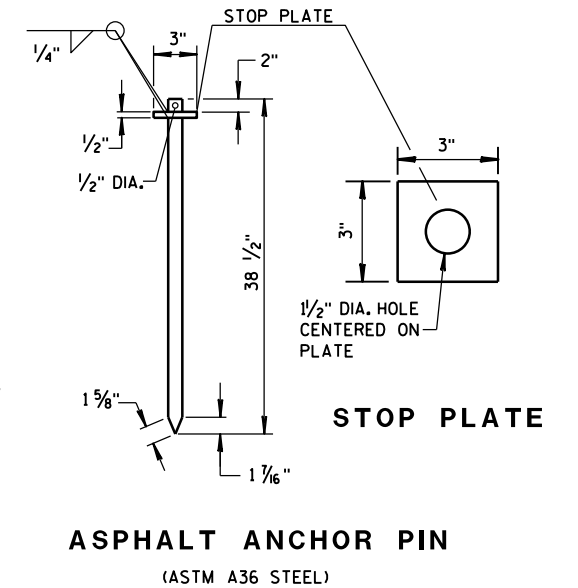
SEE SHEET E FOR WHEN TO ANCHOR. OTHER PARTS OF THE PLAN MAY SHOW ADDITIONAL LOCATIONS REQUIRING ANCHORING.

REMOVE ALL ANCHORS WHEN NO LONGER NEEDED. FILL CONCRETE PAVEMENTS, DECKS AND APPROACH SLABS WITH NON-SHRINK COMMERCIAL GROUT FROM THE APPROVED PRODUCT LIST. FILL ASPHALT PAVEMENTS WITH ASTM D6690 TYPE II RUBBERIZED CRACK FILLER.

- ① 1/8" DIAMETER A307 THREADED ROD, 1/2" X 3" X 3" SQUARE PLATE WASHER WITH ASTM A36 STEEL, ASTM A563A HEAVY HEX NUT.
- ② ADHESIVE ANCHORS WITH A MINIMUM BOND STRENGTH OF 1,800 PSI AND 5/4" EMBEDMENT. SEE 603.2 AND 603.3.12 OF THE WISCONSIN STANDARD SPECIFICATIONS FOR MORE INFORMATION ON ADHESIVE ANCHORS.
- ③ ASPHALT SURFACE SHOWN. CONTRACTOR MAY DRILL THROUGH CONCRETE PAVEMENT AND THEN DRIVE ASPHALT ANCHOR PIN.

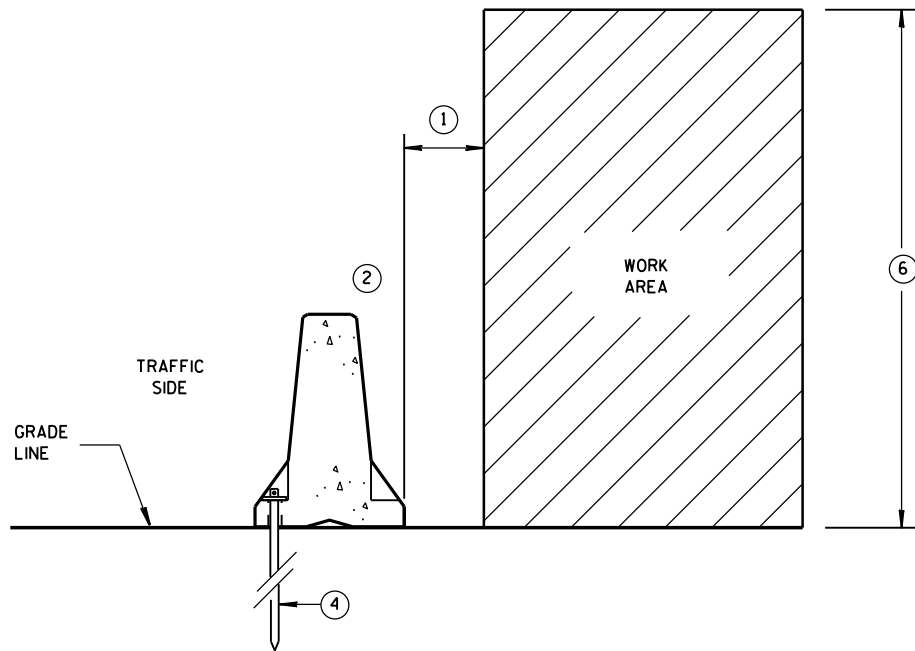


### STAKE DOWN INSTALLATION FOR ASPHALTIC SURFACE

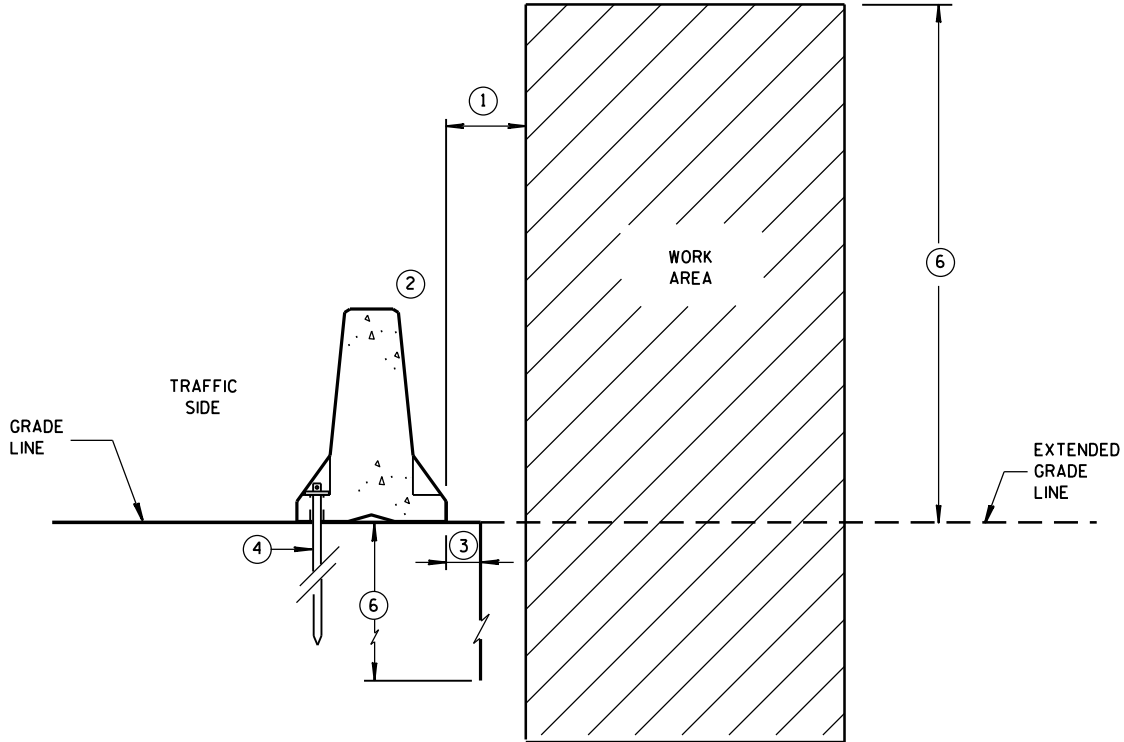


CONCRETE BARRIER  
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION



ANCHORED BARRIER SPACE REQUIREMENTS  
FOR HAZARDS EXTENDED  
ABOVE THE GRADE LINE

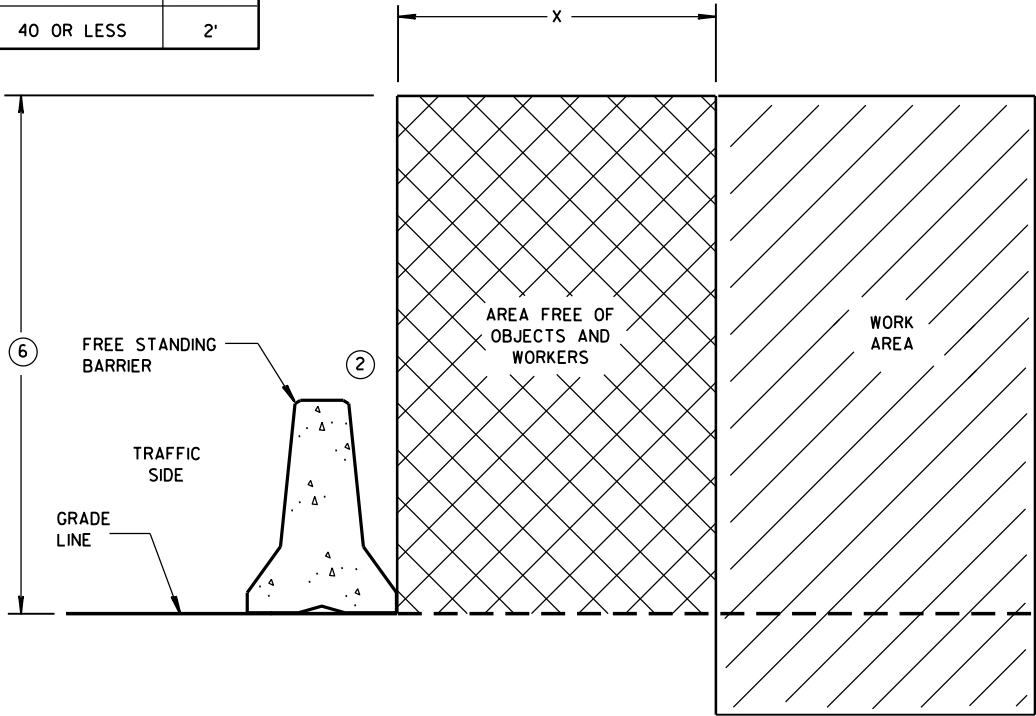


ANCHORED BARRIER SPACE REQUIREMENTS  
ON VERTICAL DROP OFFS

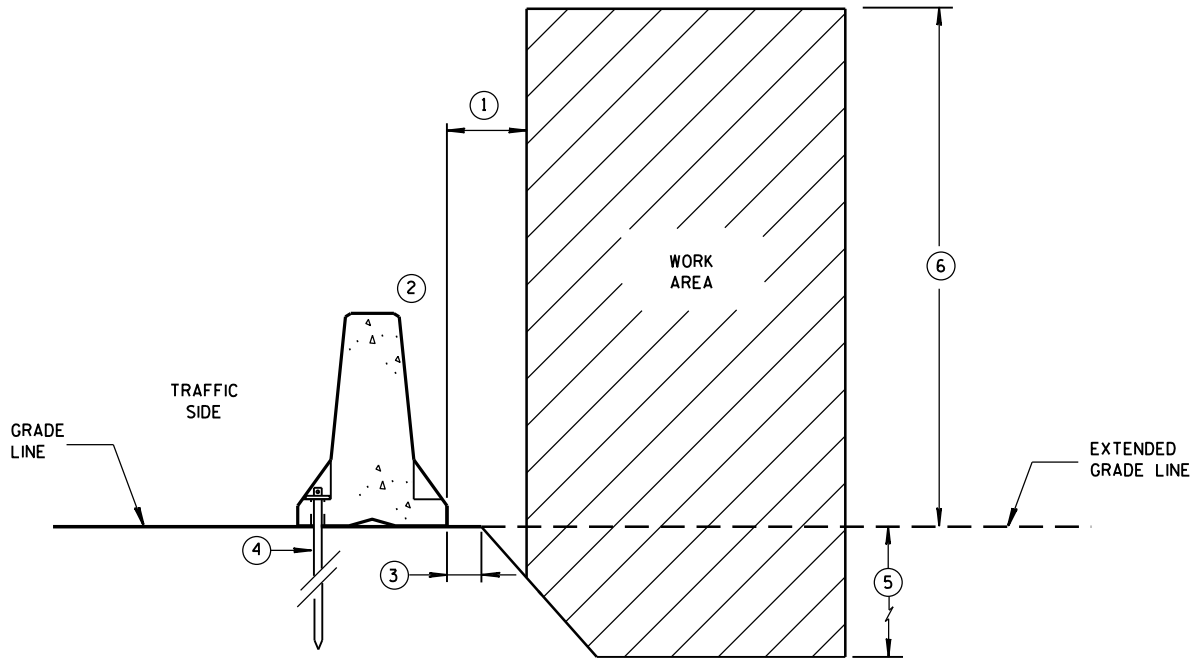
GENERAL NOTES

- ① WHEN OBJECTS EXTEND ABOVE THE GRADE, A MINIMUM OF 1 FOOT IS REQUIRED FROM BACK OF BARRIER TO OBJECT. SEE OTHER DETAILS FOR FOR THE MINIMUM OFFSET FROM BACK OF BARRIER TO SLOPES OR VERTICAL DROPS.
- ② OBJECTS ARE NOT TO BE PLACED ON, MOUNTED TO, OR LEANED AGAINST THE BARRIER WITHOUT PERMISSION OF THE PROJECT ENGINEER.
- ③ SEE OTHER DETAIL ON SHEET "D" FOR SPACE REQUIREMENTS.
- ④ SEE BOLT THROUGH DECK, REMOVABLE ADHESIVE ANCHOR, OR A STAKE DOWN FOR ASPHALTIC SURFACE TREATMENT DETAILS. ASPHALTIC ANCHOR SHOWN.
- ⑤ DEPTH OF 3 FEET OR MORE.
- ⑥ Y = 6'-6".

POSTED SPEED MPH	X
45 OR GREATER	4'
40 OR LESS	2'



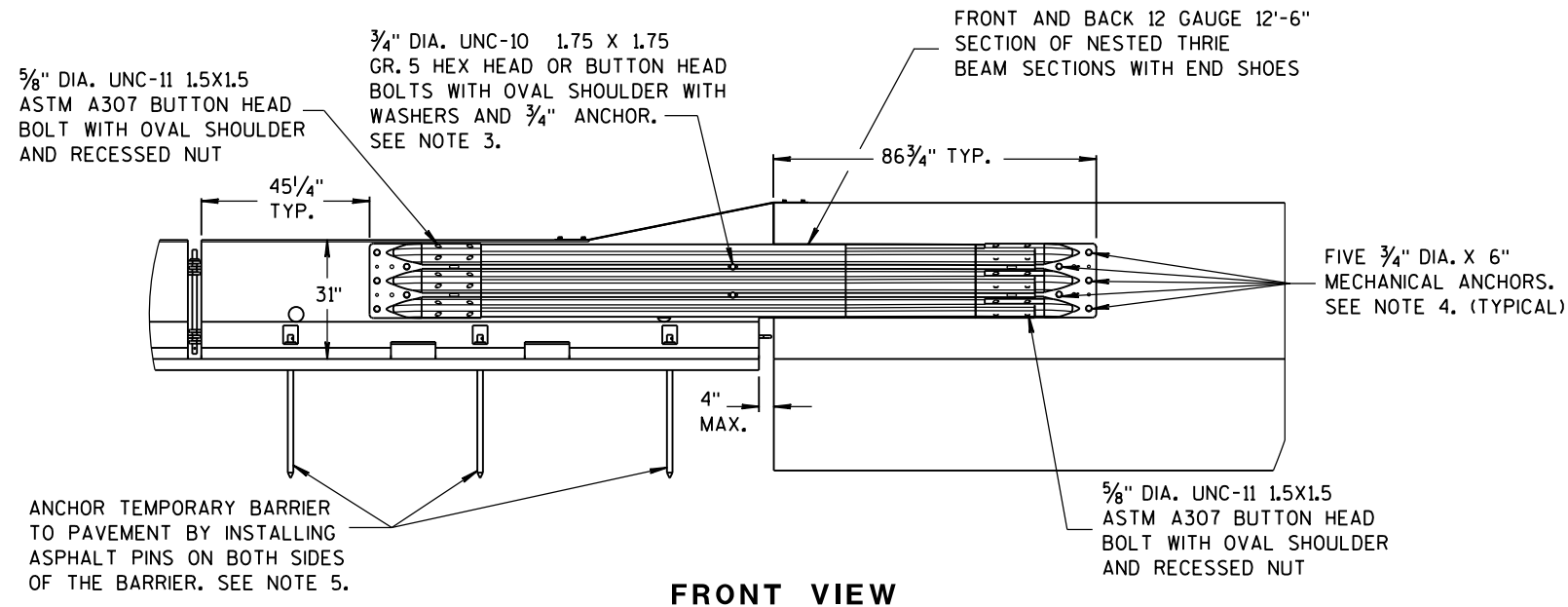
FREE STANDING BARRIER SPACE REQUIREMENTS



ANCHORED BARRIER SPACE REQUIREMENTS  
ON SLOPES

CONCRETE BARRIER  
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION



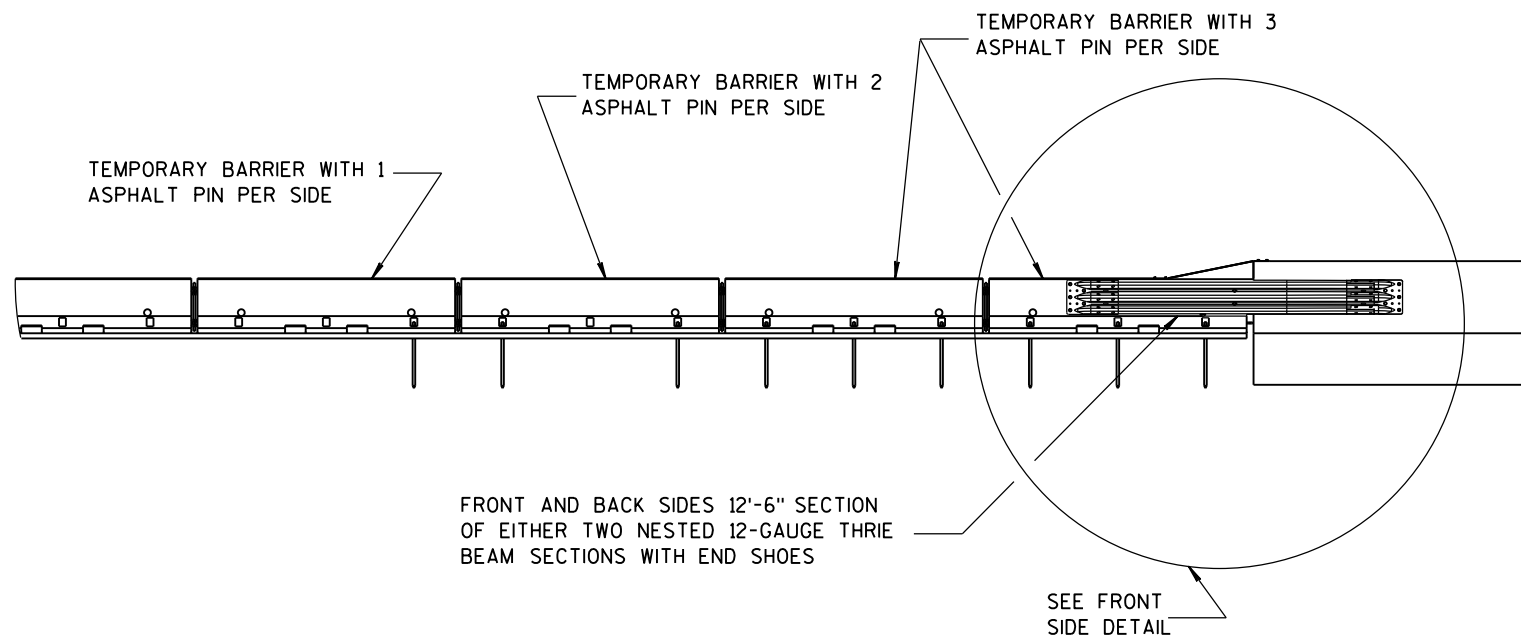
FRONT VIEW

# NOTES

NESTED THRIE BEAM IS REQUIRED ON BOTH SIDES OF THE TEMPORARY BARRIER FOR ALL INSTALLATIONS REGARDLESS OF TRAFFIC.

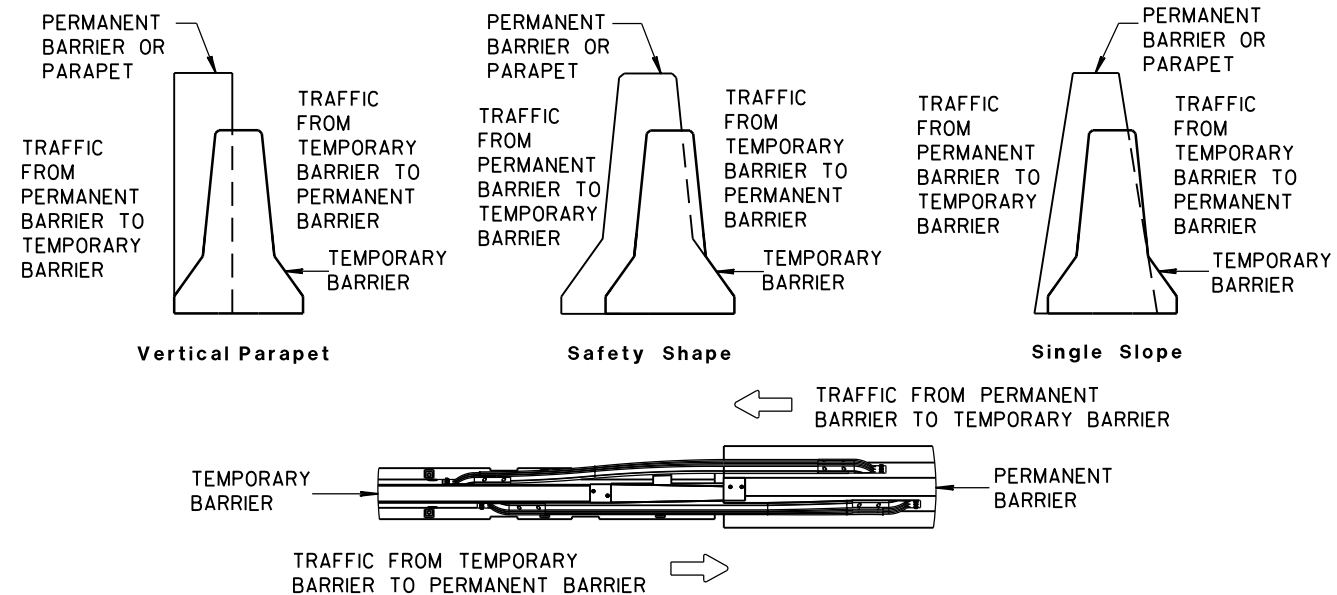
1. CAP END PLATE PLACED FLUSH WITH UPSTREAM END OF PERMANENT BARRIER OR PARAPET.
2. THRIE BEAM PIECES ARE OFFSET 15 1/4" TO PREVENT INTERFERENCE FROM THE ANCHORS ON OPPOSING SIDES.
3. MINIMUM MECHANICAL OR ADHESIVE ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 9.48 KIPS AND ULTIMATE SHEAR LOAD 10.48 KIPS.

4. MINIMUM MECHANICAL OR ADHESIVE ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 17.9 KIPS AND ULTIMATE SHEAR LOAD 21.96 KIPS.
5. MAY BE USED ON CONCRETE OR ASPHALT PAVEMENTS. ASPHALT OPTION SHOWN. FOR CONCRETE OPTION SEE OTHER DETAILS.
6. MINIMUM MECHANICAL OR ADHESIVE ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 12.14 KIPS AND ULTIMATE SHEAR LOAD 17.5 KIPS.

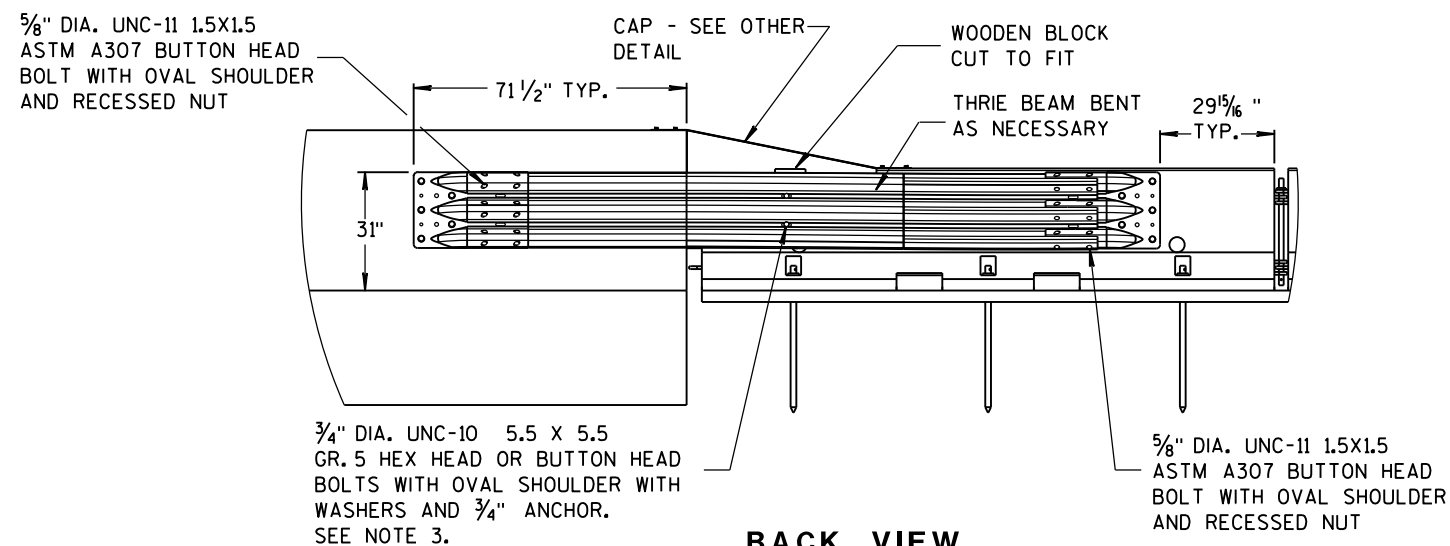


FRONT VIEW

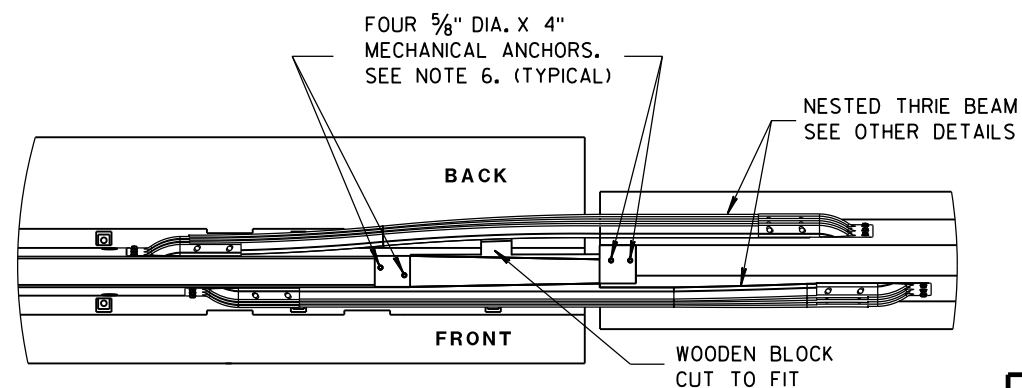
## BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM



## TEMPORARY BARRIER PLACEMENT FOR BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM



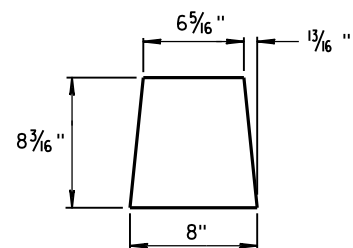
BACK VIEW



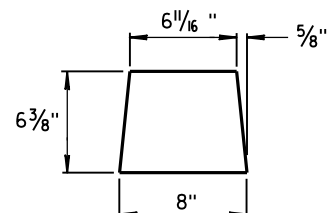
PLAN VIEW

CONCRETE BARRIER  
TEMPORARY PRECAST, 12'-6"

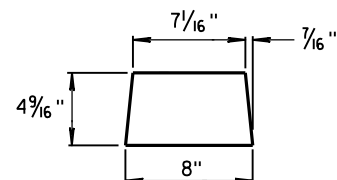
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION



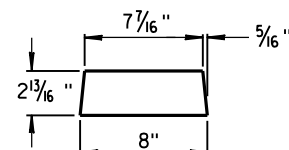
**GUSSET 1**



**GUSSET 2**

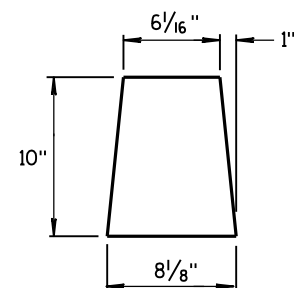


**GUSSET 3**

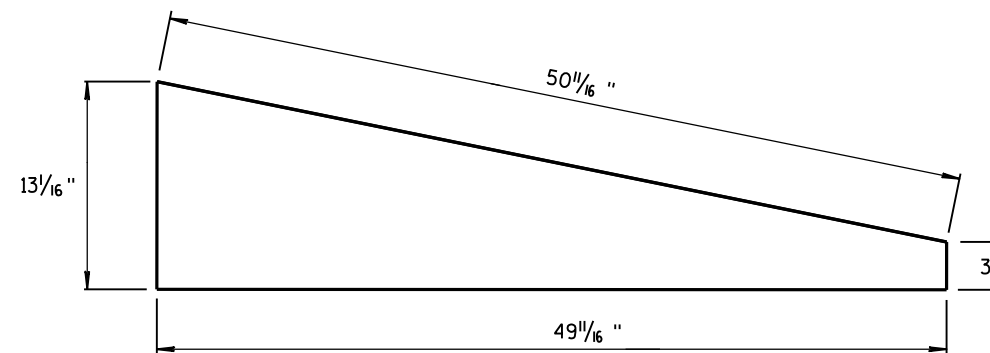


**GUSSET 4**

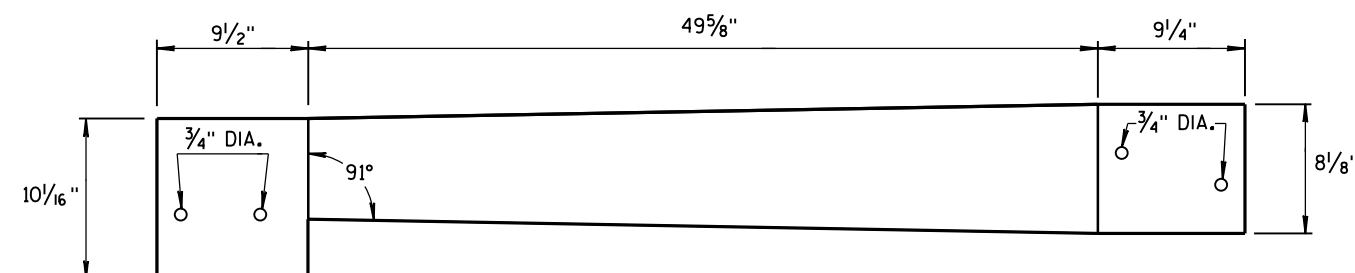
**GUSSETS**



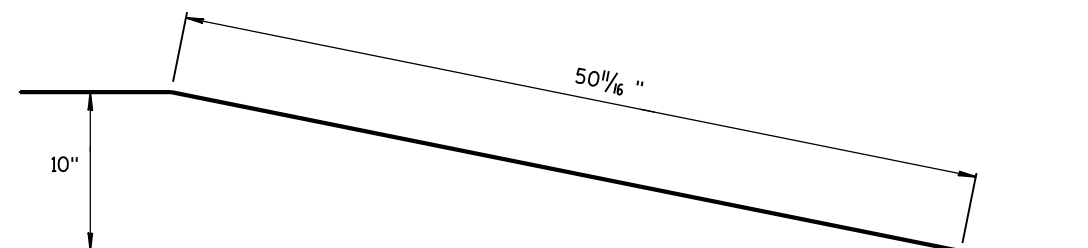
**END PLATE**



**SIDE PLATE**

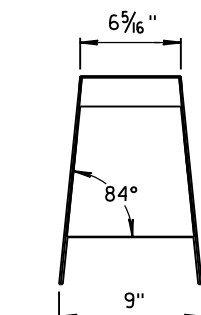
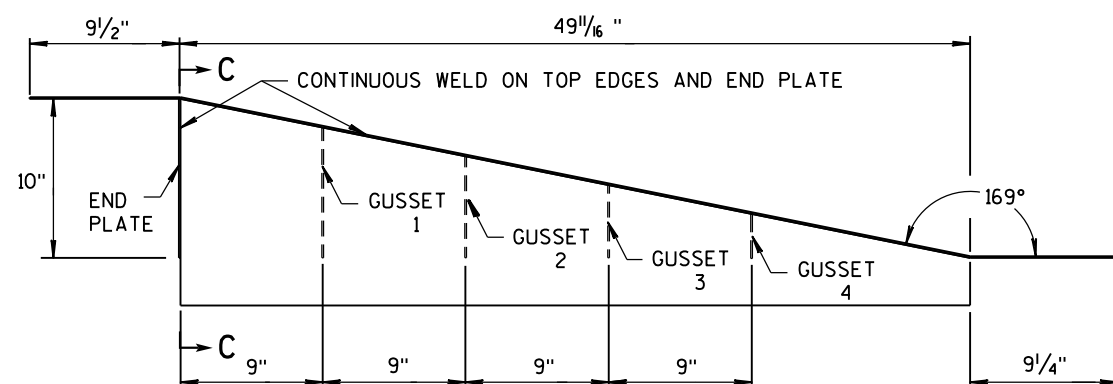
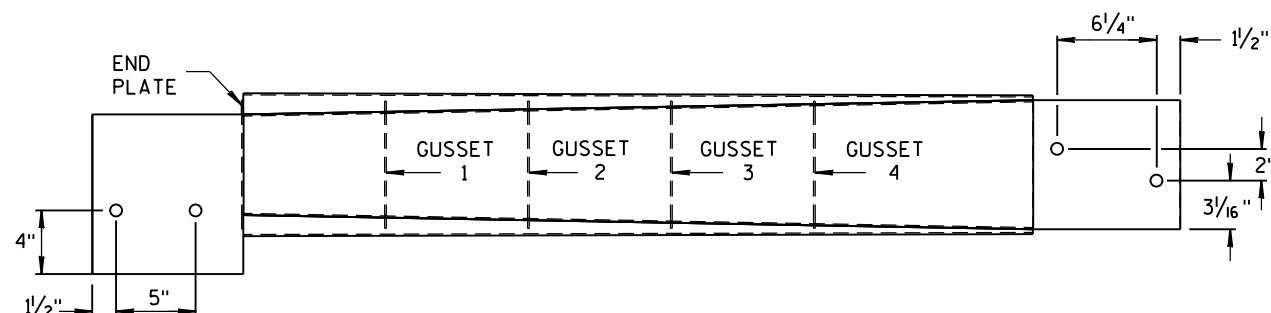


**TOP PLATE**



**SIDE, TOP AND END PLATES FOR CAP  
FROM TEMPORARY CONCRETE BARRIER  
TO 42" PERMANENT CONCRETE BARRIER**

SIDE PLATES, TOP PLATE, END PLATE AND GUSSETS ARE 12 GAUGE ASTM A36 GALVANIZED STEEL.



**SECTION C-C**

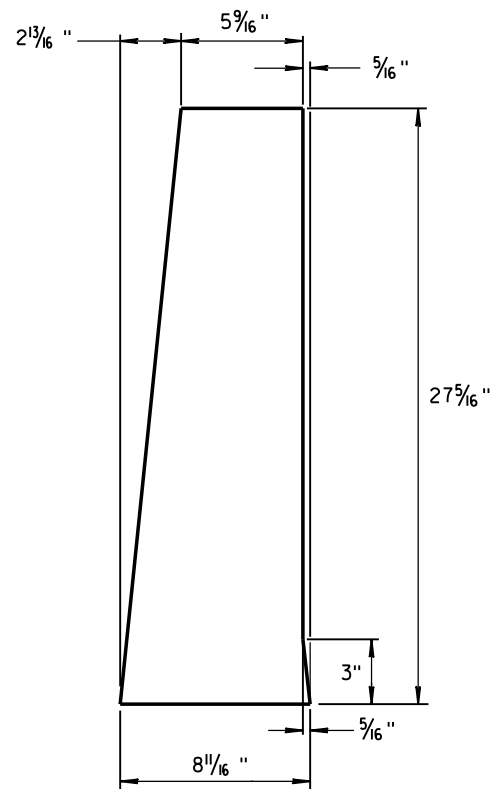
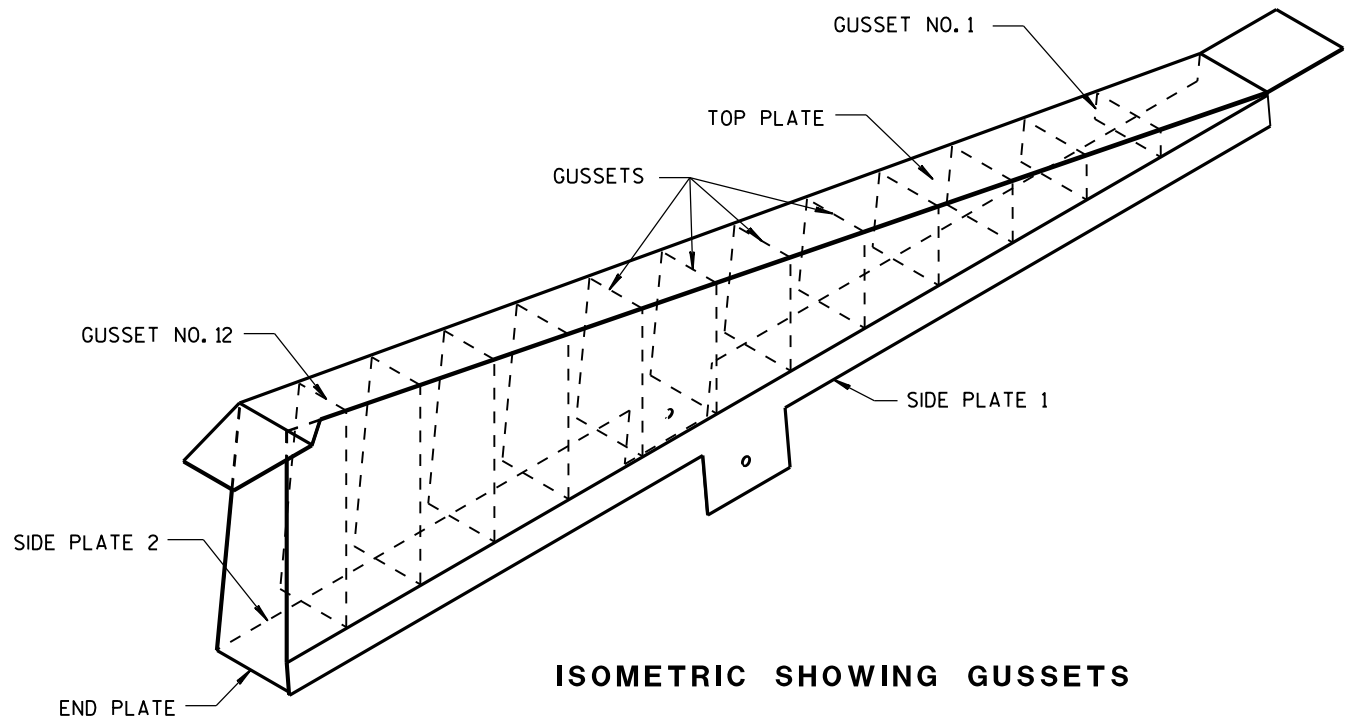
**NOTES**

1. FOUR GUSSETS AND END PLATE ARE STITCH WELDED ON THREE SIDES.
2. TWO TRIANGULAR SIDE PLATES ARE STITCH WELDED TO TOP PLATE, END PLATE, AND GUSSETS.

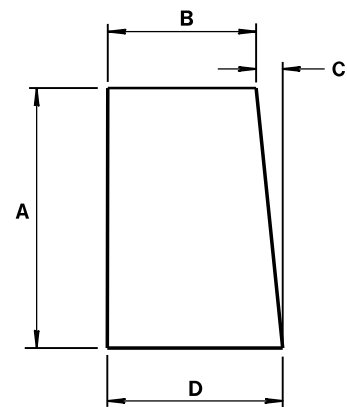
**CAP DETAILS FOR TEMPORARY CONCRETE  
BARRIER TO 42" PERMANENT CONCRETE BARRIER**

**CONCRETE BARRIER  
TEMPORARY PRECAST, 12'-6"**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION



END PLATE  
1/8" STEEL PLATE

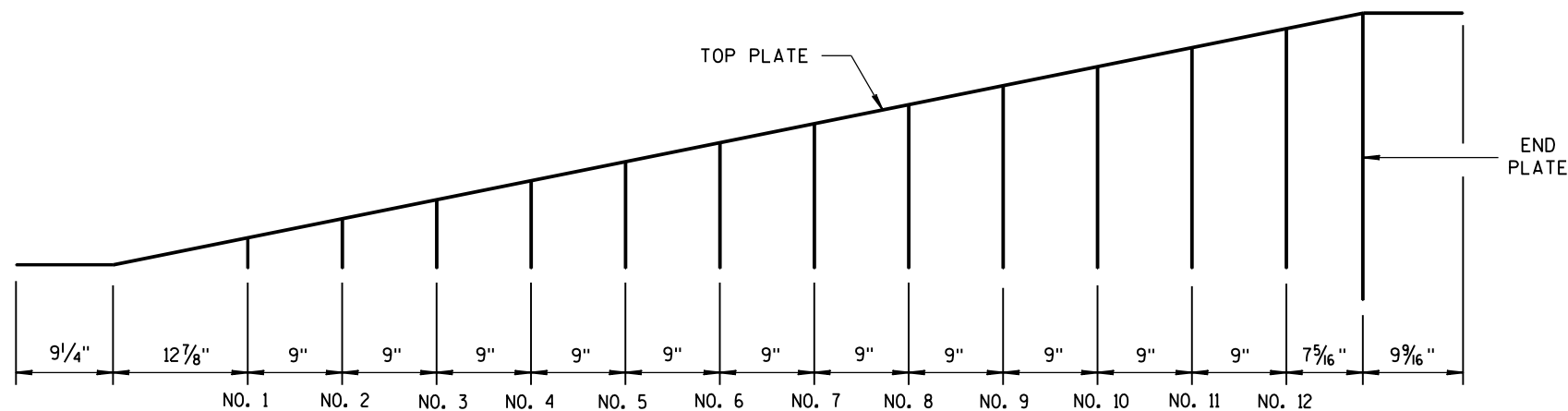


GUSSETS 1 - 12  
ALL GUSSETS 1/8" STEEL PLATE

GUSSET DIMENSIONS				
GUSSET NO.	A	B	C	D
1	2 7/8"	7 3/4"	1/4"	8
2	4 1/16 "	7 9/16 "	1/2"	8
3	6 1/2"	7 3/8 "	1 1/16 "	8 1/16 "
4	8 5/16 "	7 3/16 "	7/8"	8 1/16 "
5	10 1/8 "	7"	1 1/16 "	8 1/16 "
6	11 5/16 "	6 13/16 "	1 1/4"	8 1/16 "
7	13 3/4"	6 5/8 "	1 7/16 "	8 1/16 "
8	15 9/16 "	6 7/16 "	1 9/16 "	8 1/16 "
9	17 3/8"	6 1/4"	1 13/16 "	8 1/16 "
10	19 3/16 "	6 1/16 "	1 15/16 "	8 1/16 "
11	21"	5 7/8 "	2 3/16 "	8 1/16 "
12	22 13/16 "	5 11/16 "	2 5/16 "	8 1/16 "

SIDE PLATES, TOP PLATE, END PLATE AND GUSSETS ARE 12 GAUGE ASTM A36 STEEL AND GALVANIZED.

GUSSETS AND END PLATE ARE STITCH WELDED ON 3 SIDES. TWO TRIANGULAR SIDE PLATES ARE STITCH WELDED TO TOP PLATE, END PLATE AND GUSSETS.

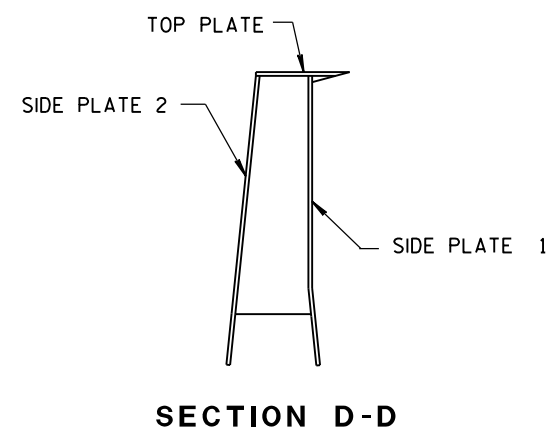
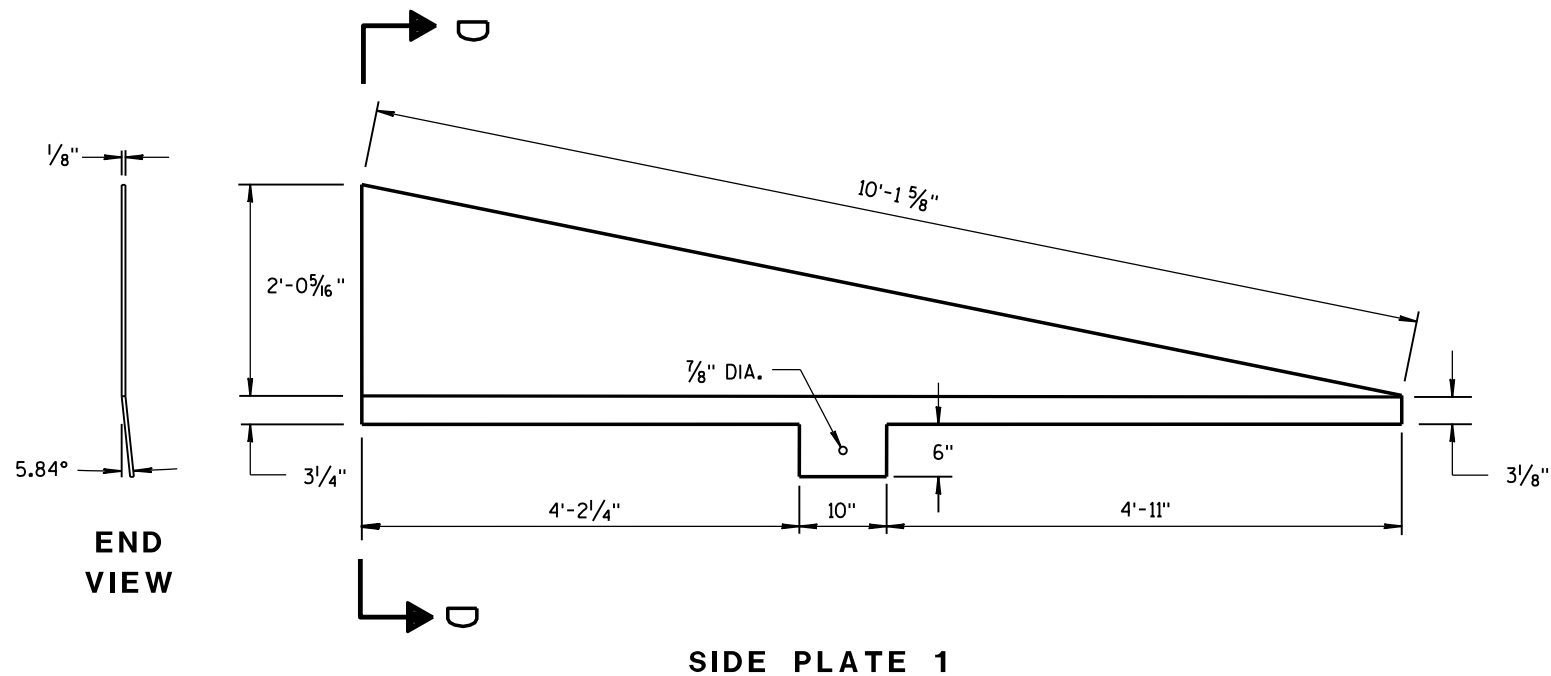
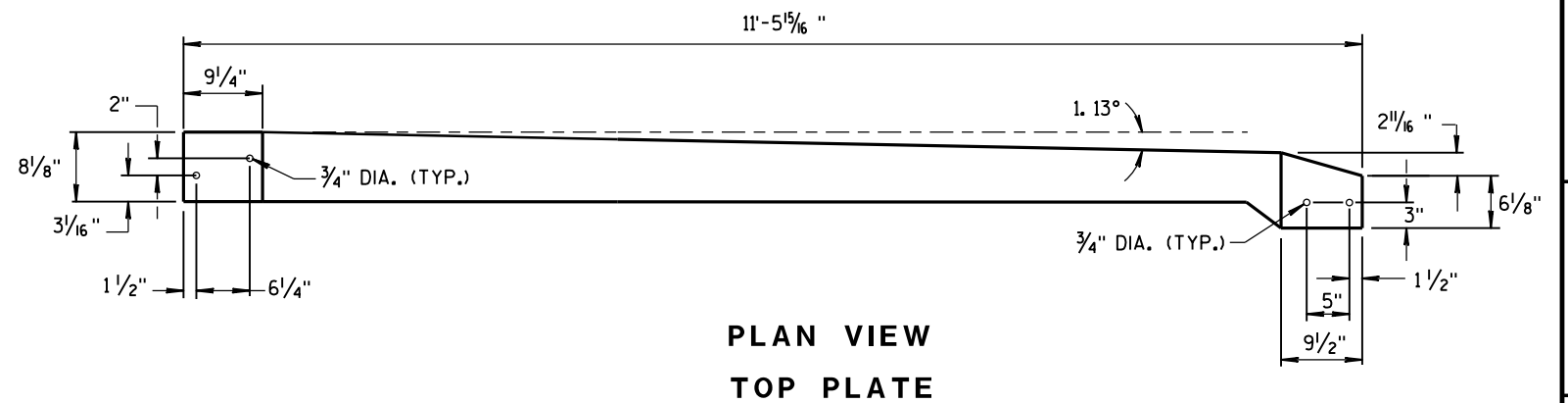
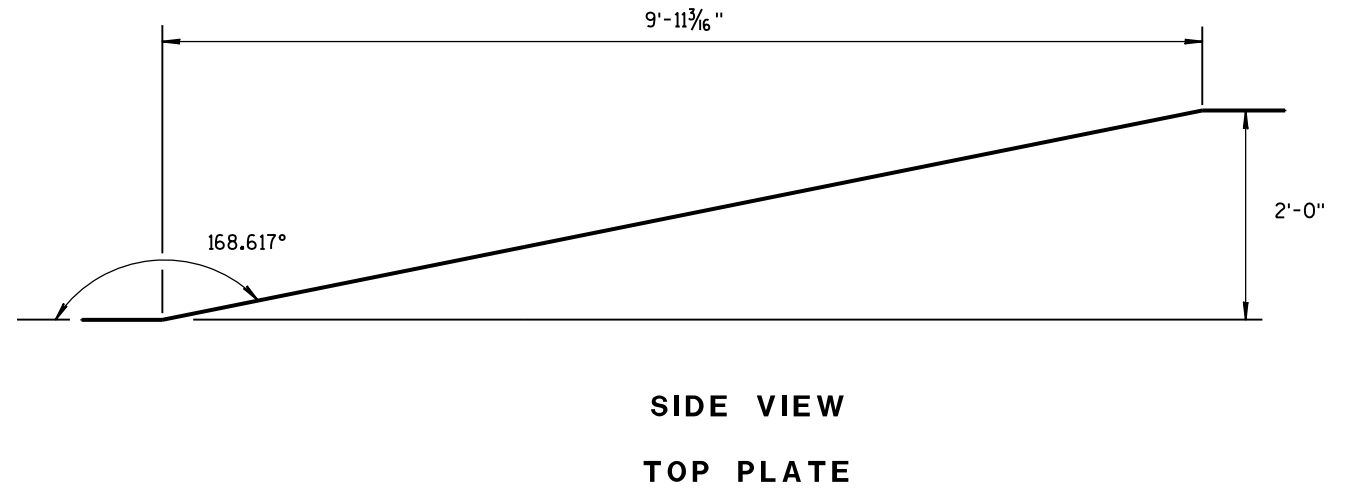
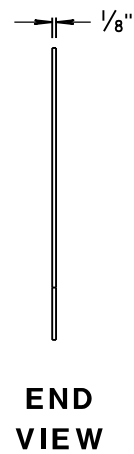
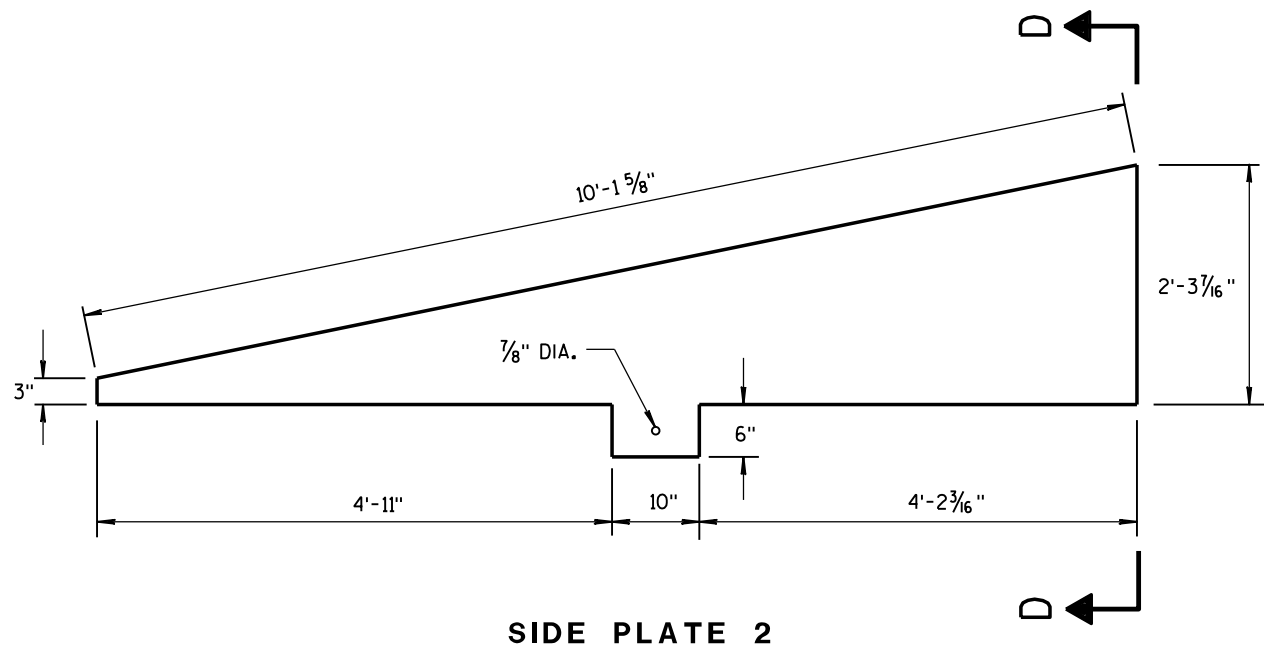


GUSSET LOCATION

CAP DETAILS FOR TEMPORARY CONCRETE BARRIER TO 56" PERMANENT CONCRETE BARRIER

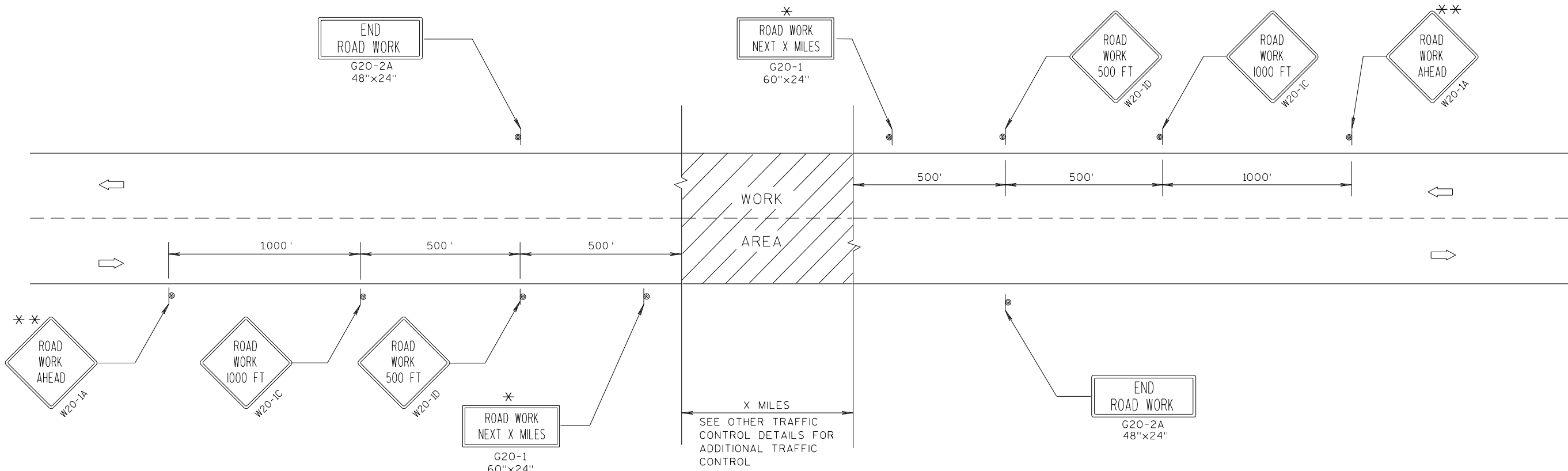
CONCRETE BARRIER  
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION



**CAP DETAILS FOR TEMPORARY CONCRETE  
BARRIER TO 56" PERMANENT CONCRETE BARRIER**

CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED June 2017 DATE	/S/ Rodney Taylor ROADWAY STANDARD DEVELOPMENT UNIT SUPERVISOR
FHWA	



TYPICAL SIDEROAD APPROACH WARNING SIGN DETAIL

GENERAL NOTES

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS.

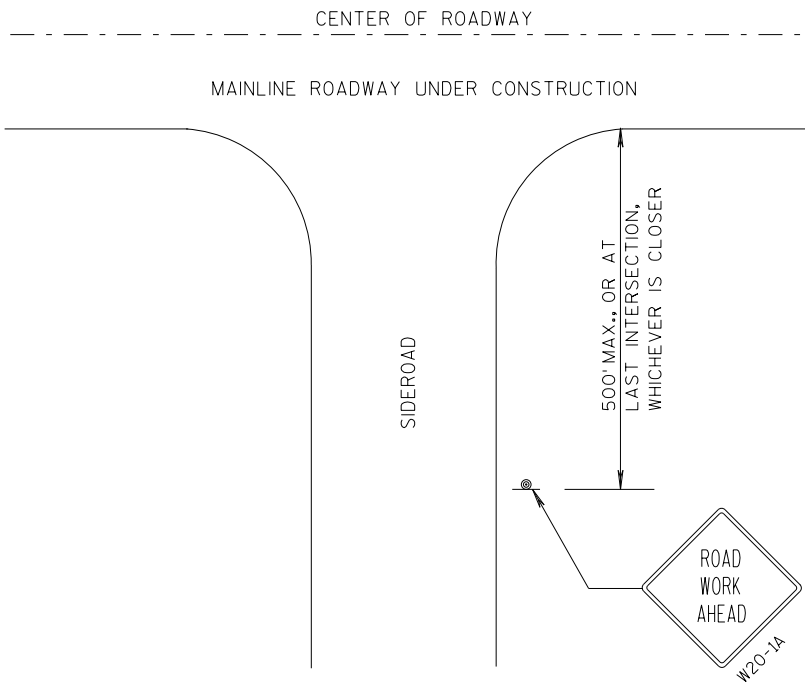
THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

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

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

- \* OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS.
- \*\* PLACE ADDITIONAL W20-1A "ROAD WORK AHEAD" SIGN IF WORK AREA WITHIN THE PROJECT IS SEPARATED BY MORE THAN 2 MILES FROM PREVIOUS WORK AREA.



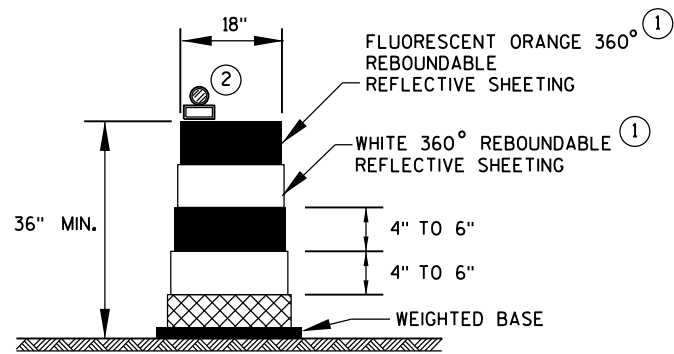
LEGEND

- ⊙ SIGN ON PERMANENT SUPPORT
- ➡ DIRECTION OF TRAFFIC
- ▨ WORK AREA

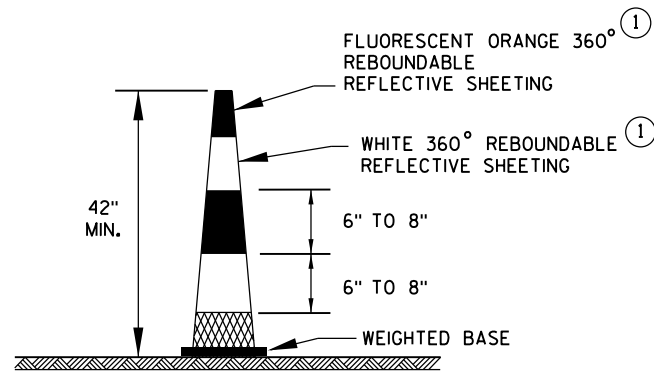
TRAFFIC CONTROL, ADVANCE  
WARNING SIGNS 45 M.P.H.  
OR GREATER TWO-WAY  
UNDIVIDED ROAD OPEN TO TRAFFIC

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
7/2018 /S/ Andrew Heidtke  
DATE WORK ZONE ENGINEER  
FHWA



**DRUM**

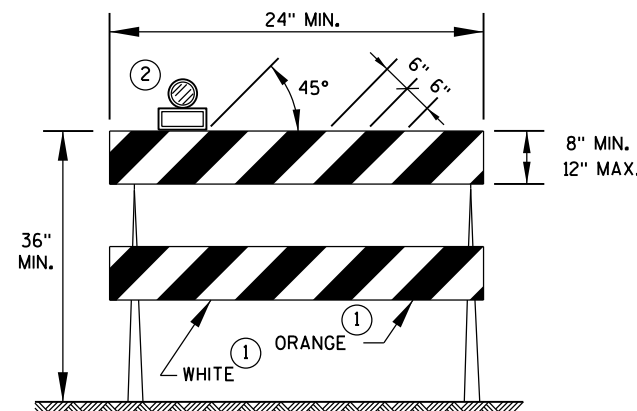


**42" CONE**

DO NOT USE IN TAPERS  
1/2 SPACING OF DRUMS

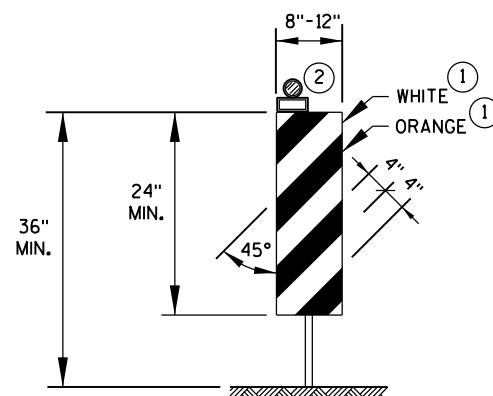
**GENERAL NOTES**

- 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.



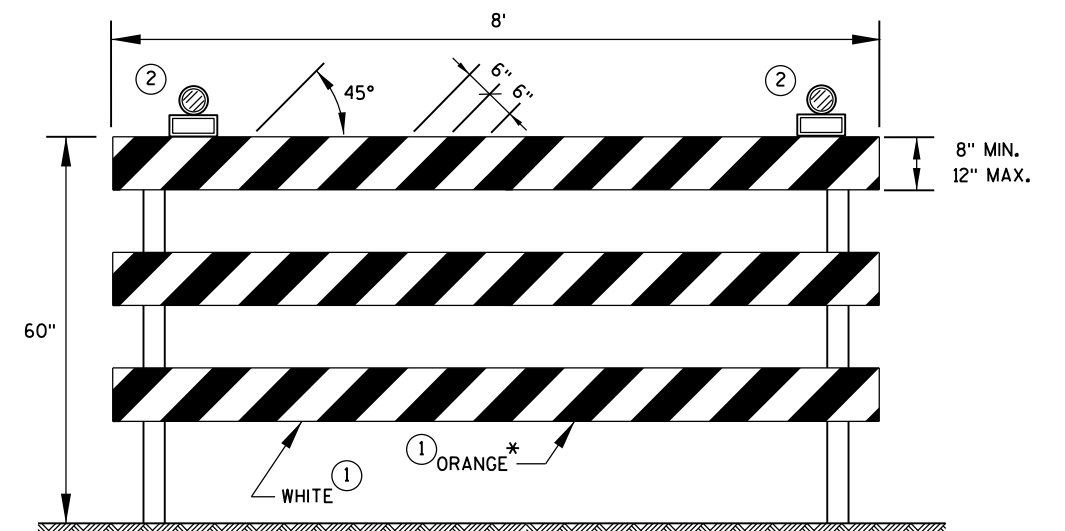
**TYPE 2 BARRICADE**

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

FHWA

/S/ Andrew Heidtke  
WORK ZONE ENGINEER

LEGEND

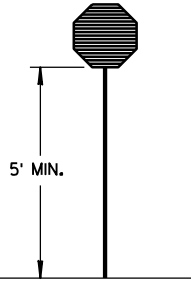
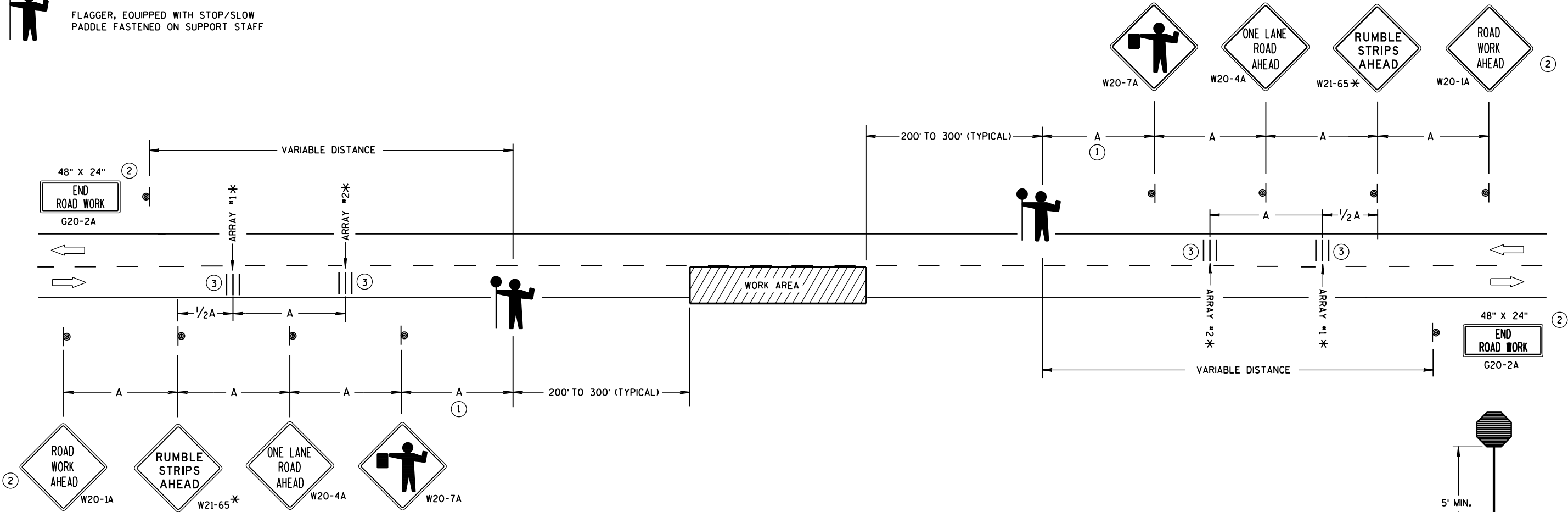
- SIGN ON PORTABLE OR PERMANENT SUPPORT
- DIRECTION OF TRAFFIC
- WORK AREA
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF

SIGN AND TEMPORARY RUMBLE STRIP ARRAY SPACING TABLE

SPEED LIMIT	SPACING A
25-35 MPH	200'
35-40 MPH	350'
45-55 MPH	500'



USE OF THE "BE PREPARED TO STOP" SIGN IS OPTIONAL. WHEN USED, THIS SIGN SHALL BE LOCATED BETWEEN THE W20-7A AND W20-4A SIGNS, USING SPACING A.



STOP/SLOW PADDLE ON SUPPORT STAFF

TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION

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.

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

THE FIRST ADVANCE WARNING SIGN SHOULD TYPICALLY BE LOCATED IN ADVANCE OF THE ANTICIPATED TRAFFIC BACKUP OR QUEUE.

"W0" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

WHEN A SIDE ROAD OR RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, ADDITIONAL TRAFFIC CONTROLS SHALL BE PROVIDED AS SPECIFIED IN THE PLANS AND/OR THE SPECIAL PROVISIONS OR AS APPROVED BY THE ENGINEER.

INSTALL TEMPORARY RUMBLE STRIPS PER MANUFACTURER'S RECOMMENDATIONS. PLACE ADVANCE SIGNING PRIOR TO INSTALLING TEMPORARY RUMBLE STRIPS.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

FLAGGERS SHALL BE IN SIGHT OF EACH OTHER OR IN DIRECT COMMUNICATION AT ALL TIMES. THEY SHALL BE EQUIPPED WITH STOP/SLOW PADDLES FASTENED ON SUPPORT STAFFS. WHEN THE FLAGGING OPERATION IS NOT IN EFFECT, REMOVE TEMPORARY RUMBLE STRIPS PRIOR TO COVERING OR REMOVING ALL ADVANCE SIGNING.

\* UTILIZE TEMPORARY RUMBLE STRIPS WHEN FLAGGING OPERATION IS ANTICIPATED TO BE STATIONARY IN EXCESS OF TWO HOURS.

- FOR A MOVING WORK OPERATION, SIGNING AND TEMPORARY RUMBLE STRIPS (IF USED) SHALL BE REESTABLISHED (AS SIMULTANEOUSLY AS PRACTICAL) AT APPROXIMATELY 3,500 FOOT INTERVALS IN THE MOVING WORK OPERATION OR AS APPROVED BY THE ENGINEER.
- SIGN NOT REQUIRED IF FLAGGING OPERATION OCCURS WITHIN A SIGNED ROAD WORK ZONE AREA.
- EACH TEMPORARY RUMBLE STRIP ARRAY CONSISTS OF THREE RUMBLE STRIPS SPACED ACCORDING TO MANUFACTURER'S RECOMMENDATION, PLACED TRANSVERSE ACROSS THE LANE AT LOCATIONS SHOWN.

TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
June 2017 /S/ Andrew Heldtke  
DATE WORK ZONE ENGINEER  
FHWA

GENERAL NOTES

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

THE SPACING BETWEEN SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS.

THIS LANE CLOSURE IS TYPICAL FOR CLOSING RIGHT LANE - REVERSE FOR CLOSING LEFT LANE.

ALL SIGNS ARE 48" x 48" UNLESS OTHERWISE NOTED.

"WO" IS THE SAME AS "W" EXCEPT THE BACKGROUND IS ORANGE.

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

FOR A LANE CLOSURE THAT IS IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, THE ADVANCED WARNING SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS.

REMOVE PAVEMENT MARKINGS IF LANE CLOSURE IS TO BE IN PLACE 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

IF THE HORIZONTAL ALIGNMENT IS SUCH THAT A CURVE MAY REQUIRE ADDITIONAL DELINEATION, THE DEVICE SPACING MAY BE DECREASED TO 50 FEET.

WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

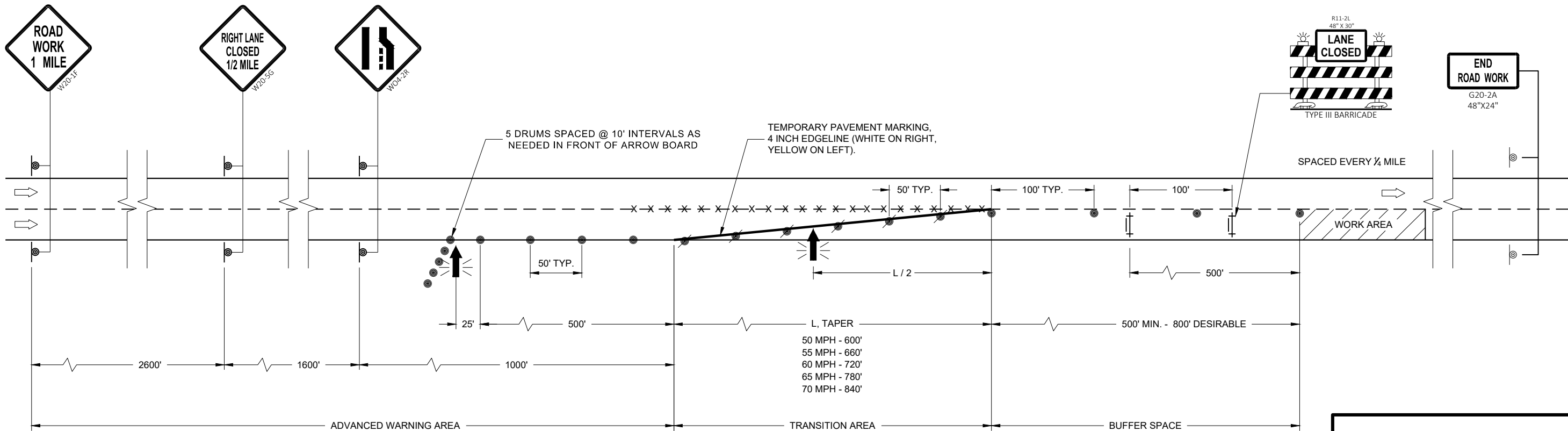
ADJUSTMENTS IN BUFFER SPACE NEED TO BE INCORPORATED WHEN THE LANE CLOSURE OCCURS

NEAR AN INTERCHANGE EXIT OR ENTRANCE RAMP OR INTERSECTION. THE LANE CLOSURE MUST TAKE PLACE FAR ENOUGH IN ADVANCE OF AN EXIT OR ENTRANCE RAMP TO STILL ALLOW FOR ADEQUATE BUFFER SPACE. THE MINIMUM LENGTH OF THE BUFFER SPACE BEFORE AN EXIT RAMP SHOULD BE ONE HALF THE LENGTH OF THE TRANSITION AREA. THE ENTRANCE RAMP SHOULD BE FOLLOWED BY THE ORIGINAL BUFFER SPACE LENGTH OF 800 FEET DESIRABLE PRIOR TO ANOTHER TRAFFIC CONTROL CHANGE SUCH AS A CROSSOVER MANEUVER.

CONSIDER ROADWAY GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARD SO THE DRIVER HAS A CLEAR VIEW OF THE ARROW BOARD AND LANE CLOSURE DRUMS.

LEGEND

- TYPE III BARRICADE WITH ATTACHED SIGN
- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL DRUM
- TYPE "A" WARNING LIGHT (FLASHING)
- REMOVING PAVEMENT MARKING
- DIRECTION OF TRAFFIC
- WORK AREA
- FLASHING ARROW BOARD



TRAFFIC CONTROL  
LANE CLOSURE

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
November 2018  
DATE /S/ Andrew Heidtke  
WORK ZONE ENGINEER

FHWA

GENERAL NOTES

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

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36" X 36" SIGNS MAY BE USED IF APPROVED BY DISTRICT TRAFFIC UNIT.

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

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

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.

W20-1A AND G20-2A SIGNS ARE NOT REQUIRED IF THE WORK AREA IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT. G20-2A SIGNS MAY ALSO BE OMITTED IF DURATION OF WORK IS LESS THAN 7 CONTINUOUS DAYS AND NIGHTS.

CHANNELIZING DEVICES PLACED ADJACENT TO THE WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

TABLE A

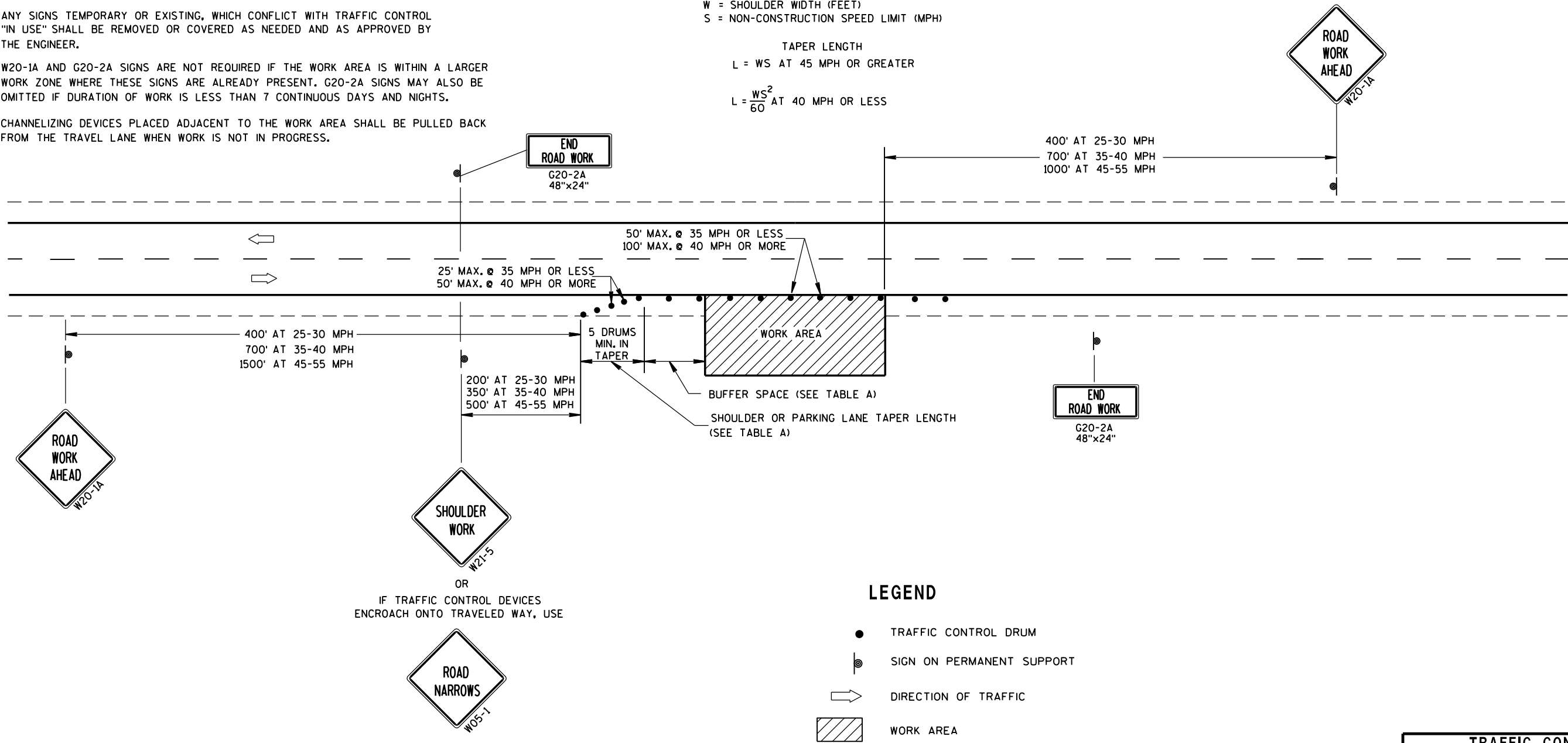
SHOULDER TAPER LENGTH (FEET)					BUFFER SPACE (FEET)
S \ W	4	6	8	10	
30	20	30	40	50	200
35	30	45	55	70	250
40	40	55	75	90	305
45	60	90	120	150	360
50	70	100	135	170	425
55	75	110	150	185	495

W = SHOULDER WIDTH (FEET)  
S = NON-CONSTRUCTION SPEED LIMIT (MPH)

TAPER LENGTH  
L = WS AT 45 MPH OR GREATER

$L = \frac{WS^2}{60}$  AT 40 MPH OR LESS

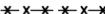
SHOULDER TAPER LENGTH =  $\frac{1}{3}L$




LEGEND

- TRAFFIC CONTROL DRUM
- ⦿ SIGN ON PERMANENT SUPPORT
- ➡ DIRECTION OF TRAFFIC
- ▨ WORK AREA

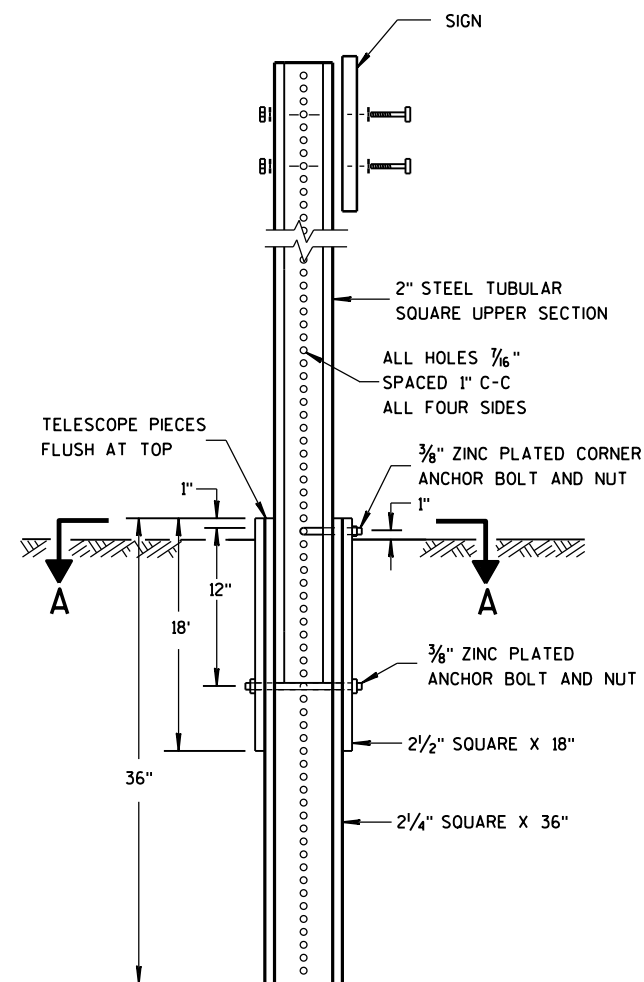
TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED July 14, 2015 DATE	/S/ Peter Amakobe Atepe STATEWIDE WORK ZONE TRAFFIC SAFETY ENGINEER
FHWA	

	SIGN ON PERMANENT SUPPORT
	REMOVING PAVEMENT MARKING
	TYPE III BARRICADE WITH ATTACHED SIGN
	CONCRETE BARRIER TEMPORARY PRECAST
	FLAGS, 16" x 16" MIN., (ORANGE)
	TRAFFIC CONTROL DRUM
	TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
	ASPHALTIC PAVEMENT WIDENING
	DIRECTION OF TRAFFIC
	4" X 6" WOOD POST
	TEMPORARY SIGNAL WITH BACKPLATE AND 12-INCH LENSES ON BREAKAWAY POLE


 W057-52  
 36" x 24"

\*\* USE 300' SPACING IF PRE-CONSTRUCTION REGULATORY SPEED LIMIT IS 35 MPH OR LESS.



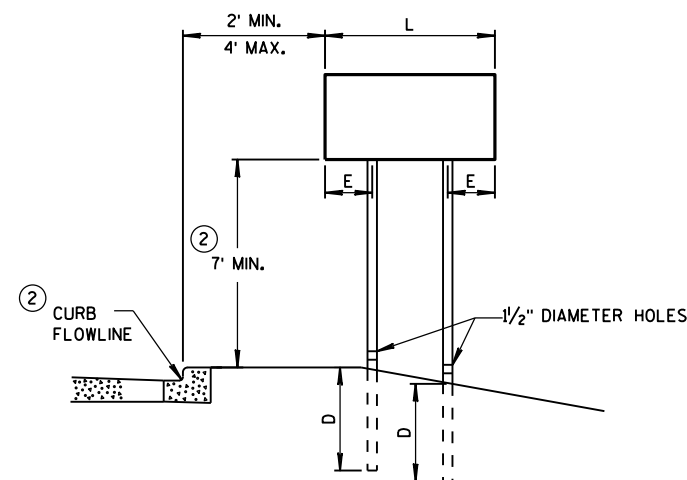
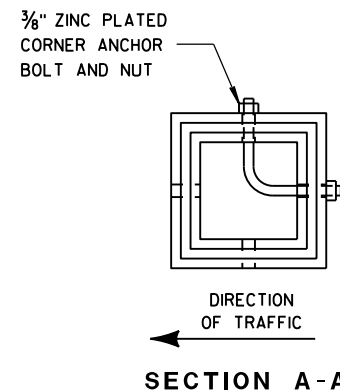


DETAIL OF TUBULAR  
STEEL SIGN POST

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

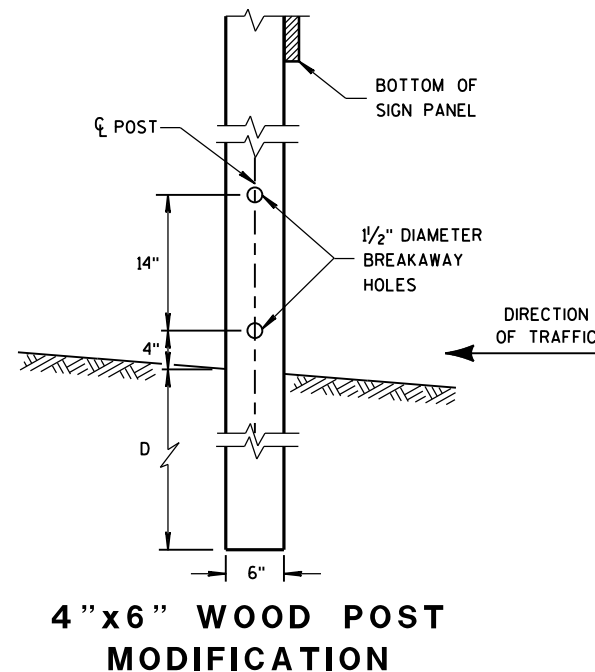
SIGNS WIDER THAN 3 FEET OR LARGER THAN 9 SQ. FT. SHALL  
BE MOUNTED ON MULTIPLE POSTS (SEE ABOVE TABLE).  
SIGNS LARGER THAN 27 SQ. FT. SHALL NOT BE MOUNTED  
ON TUBULAR STEEL POSTS.



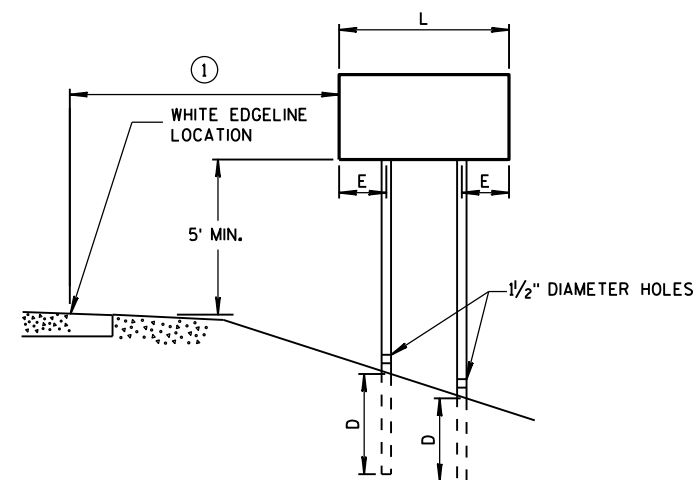
URBAN AREA

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'



4 "x6 " WOOD POST  
MODIFICATION



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

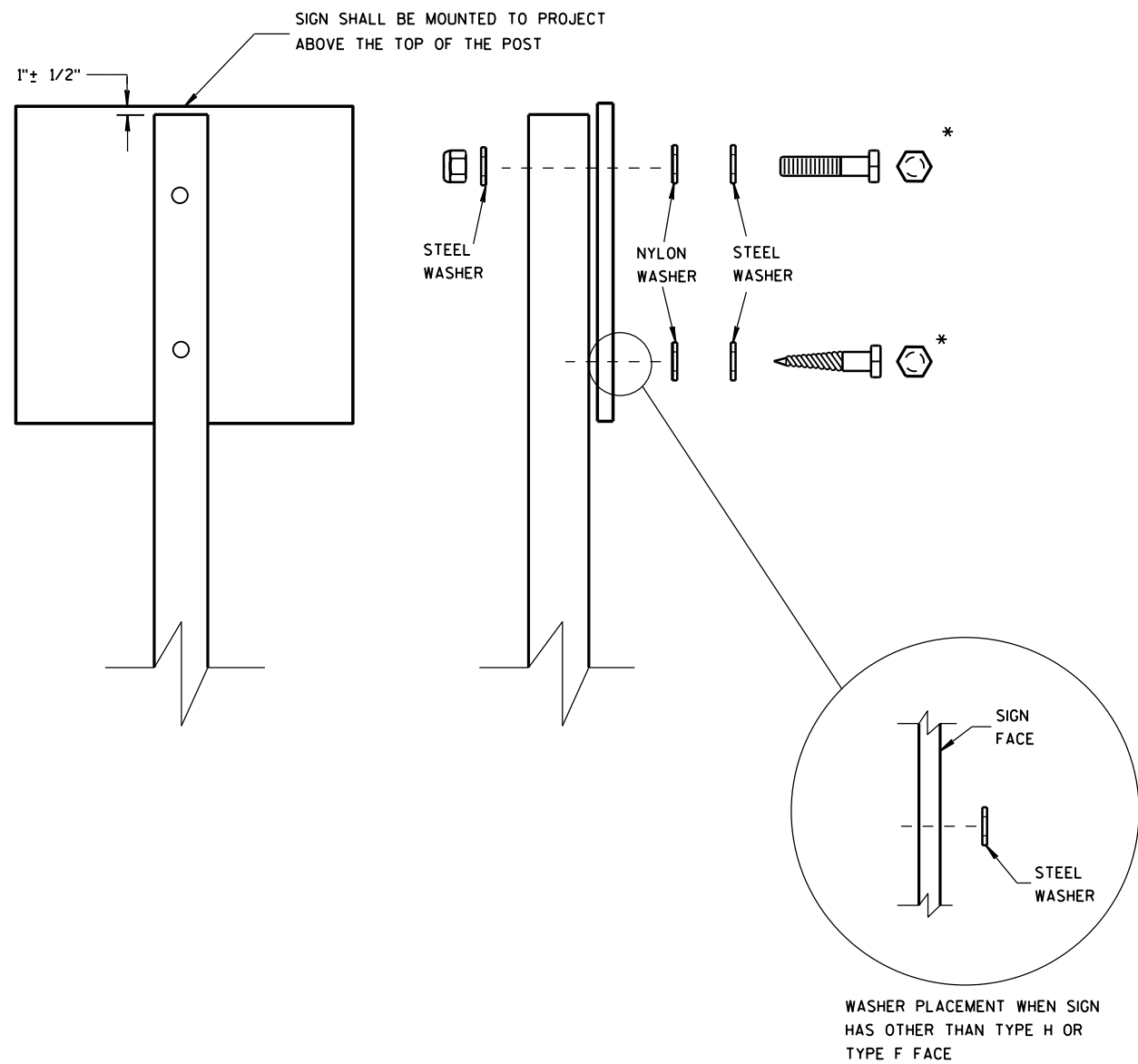
SEE NOTE ③

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.

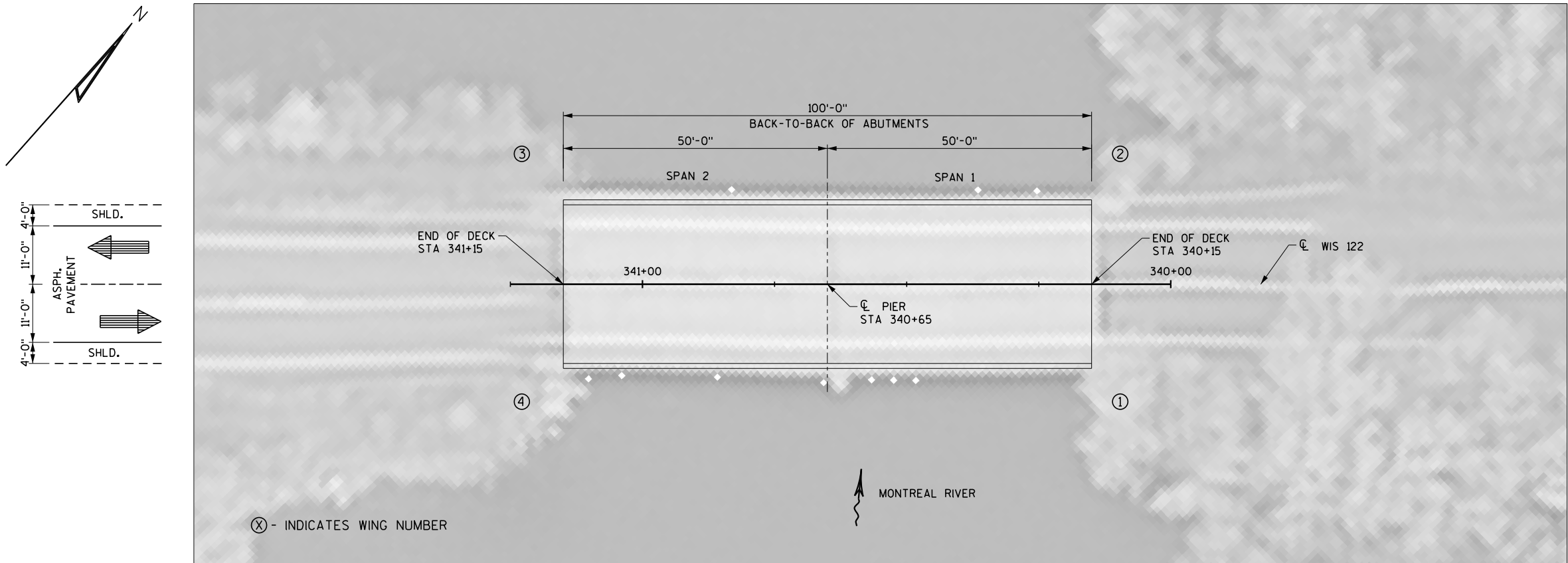
- WOOD POSTS (4" x 4" or 4" x 6")
- LAG SCREWS - 3/8" x 3"
  - MACHINE BOLTS - 5/16" x 6-1/2" OR 7" LENGTH W/ NUTS

- 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

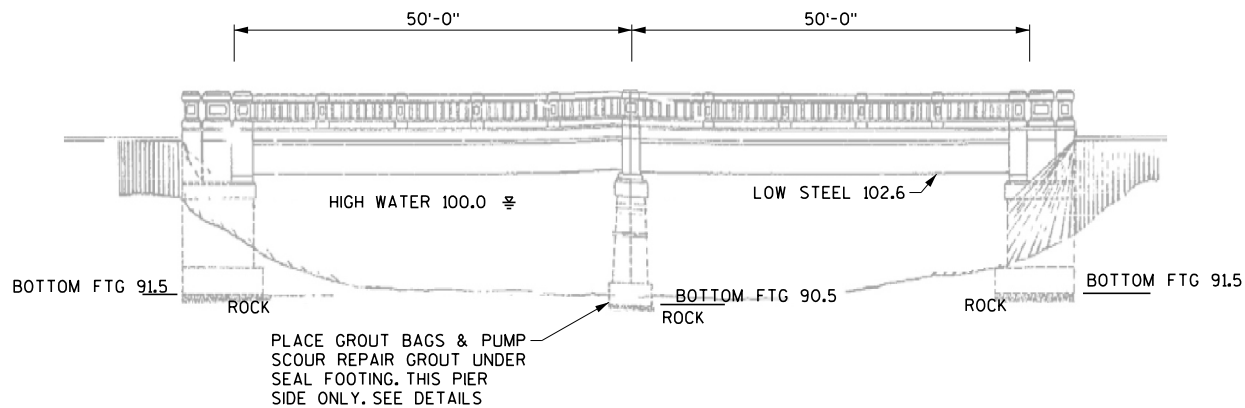
- WASHERS (ALL POSTS) -
- 1-1/4" O.D. x 3/8" I.D. x 1/16" STEEL
  - 1-1/4" O.D. x 3/8" I.D. x .080 NYLON FOR ALL TYPE H SIGNS

\* 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	



PLAN  
2 SPAN - STEEL DECK GIRDER



ELEVATION

NOTE: RAILING SHOWN IS FROM ORIGINAL 1928 PLANS.  
RAILING WAS REPLACED WITH TYPE "W" RAILING IN 1986.

#### LIVE LOAD

DESIGN LOAD RATING: HS20  
INVENTORY LOAD RATING: HS24 (TAKEN FROM HSI, 7-16-18)  
OPERATING LOAD RATING: HS41 (TAKEN FROM HSI, 7-16-18)  
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV) - 250 KIPS (TAKEN FROM HSI, 7-16-18)

#### TRAFFIC DATA

A.A..D.T.=200 (2010)  
A.A..D.T.=370 (2023)  
R.D.S.=55 MPH

#### LIST OF DRAWINGS

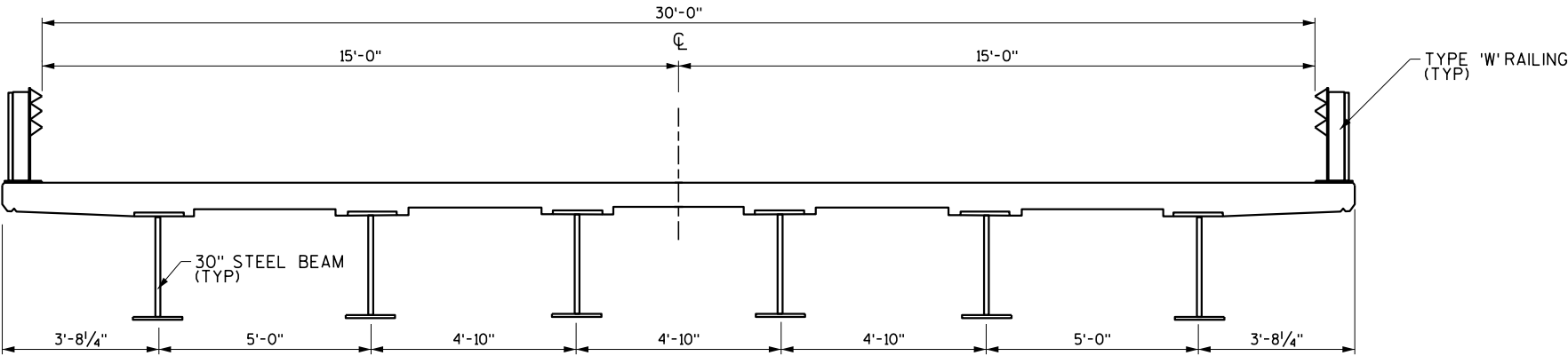
1. GENERAL PLAN
2. CROSS SECTION & QUANTITIES
3. PIER DETAILS
4. PIER PHOTO DETAILS

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

CONSULTANT CONTACT  
DANIEL DURIG  
(608) 241-5481



NO.	DATE	REVISION	BY
<b>BAXTER &amp; WOODMAN</b> 2005 W. Beltline Hwy Ste 201 Consulting Engineers Madison, WI 53713			
ACCEPTED	<i>William C. Dreher</i> SDR	11/07/18	DATE
CHIEF STRUCTURES DESIGN ENGINEER			
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-26-671			
WIS 122 OVER MONTREAL RIVER			
COUNTY	IRON	TOWN/CITY/VILLAGE	SAXON
DESIGN SPEC.	N/A		
REHABILITATION	N/A		
DESIGNED BY	DCD	DESIGN CK'D. BAB	DRAWN BY DCD PLANS CK'D. BAB
GENERAL PLAN			SHEET 1 OF 4



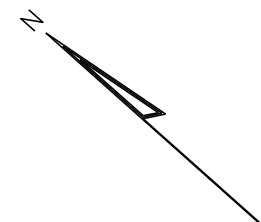
CROSS SECTION THRU EXISTING BRIDGE  
(LOOKING NORTHEAST)

TOTAL ESTIMATED QUANTITIES

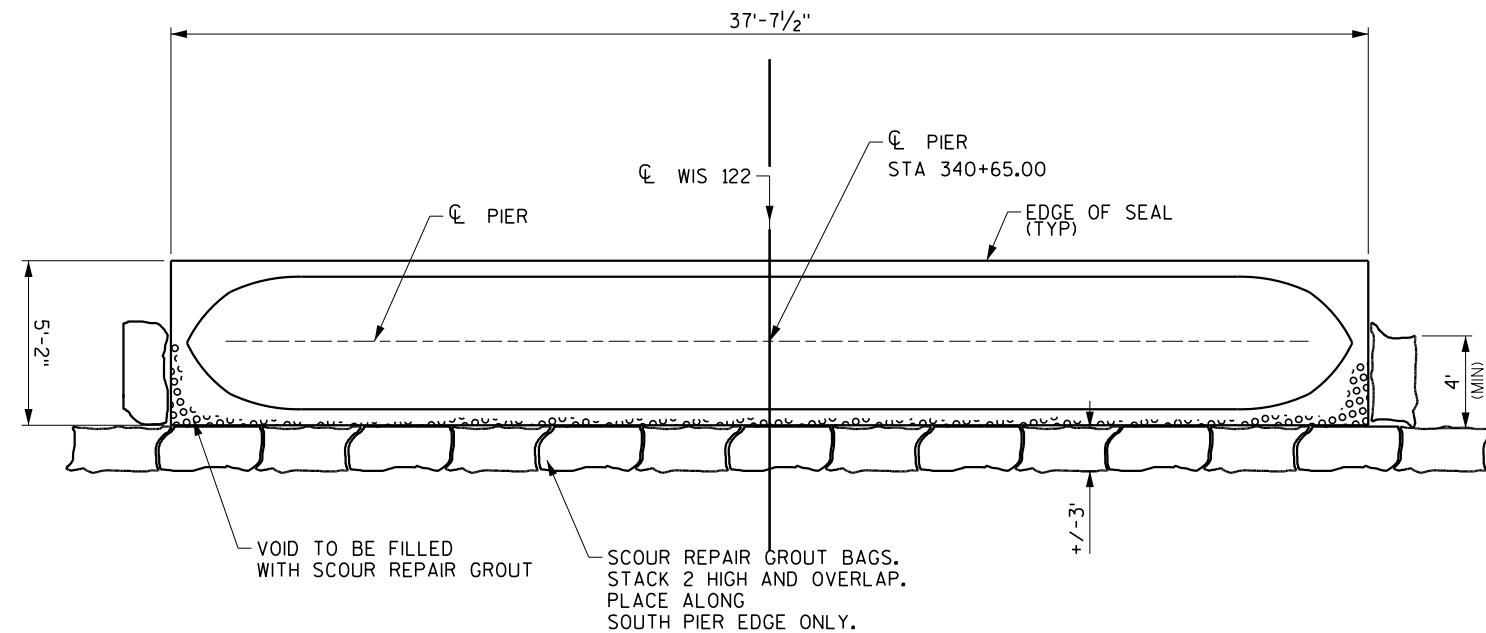
BID ITEM NUMBER	BID ITEM	UNIT	WEST ABUT	PIER 1	EAST ABUT	SUPER	TOTAL	REMARKS
SPV.0035.01	SCOUR REPAIR GROUT	CY	0	1	0	0	1	SEAL FTG REPAIR
SPV.0035.02	SCOUR REPAIR GROUT BAGS	CY	0	10	0	0	10	SEAL FTG REPAIR
SPV.0105.03	UNDERWATER EXCAVATION FOR STRUCTURES (B-26-671)	LS	-	(13 CY)*	-	-	1	SEAL FTG REPAIR

\*ESTIMATED QUANTITIES

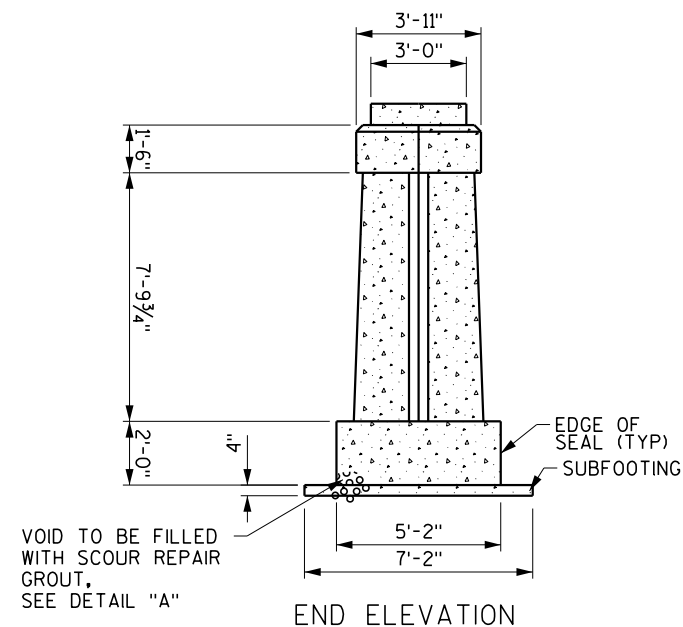
NO.	DATE	REVISION	BY
ORIGINAL PLANS PREPARED BY <b>BAXTER &amp; WOODMAN</b> Consulting Engineers			
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-26-671			
DRAWN BY		DCD	PLANS CK'D. BAB
CROSS SECTION & QUANTITIES		SHEET 2 OF 4	



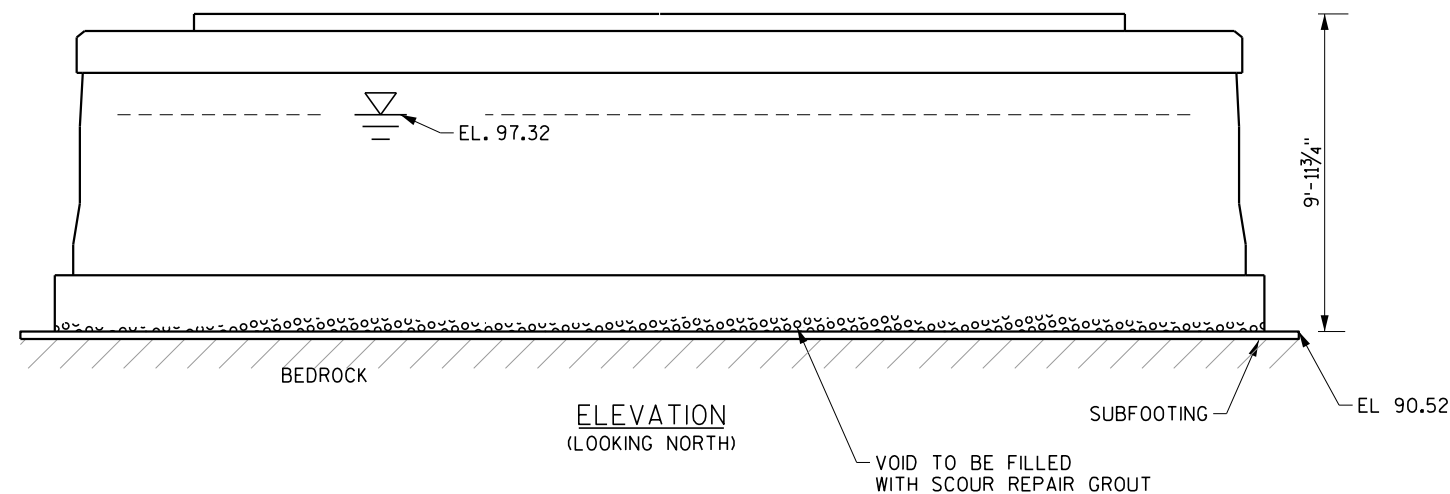
MONTREAL RIVER



PLAN



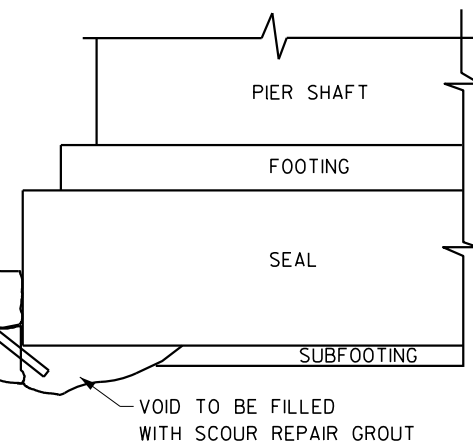
NOTE: BRIDGE PIER SUPPORTED ON SPREAD FOOTING BEARING DIRECTLY ON ROCK.



TEMPORARY 5" DIA. PVC PIPE 4'-0" MAX. SPA. REMOVE EXPOSED PORTION AFTER FILLING

SCOUR REPAIR GROUT BAG

SCOUR REPAIR GROUT BAG



DETAIL A

NO.	DATE	REVISION	BY
ORIGINAL PLANS PREPARED BY			
BAXTER & WOODMAN Consulting Engineers			
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-26-671			
DRAWN BY		DCD	PLANS CK'D. BAB
PIER DETAILS		SHEET 3 OF 4	



PHOTO A

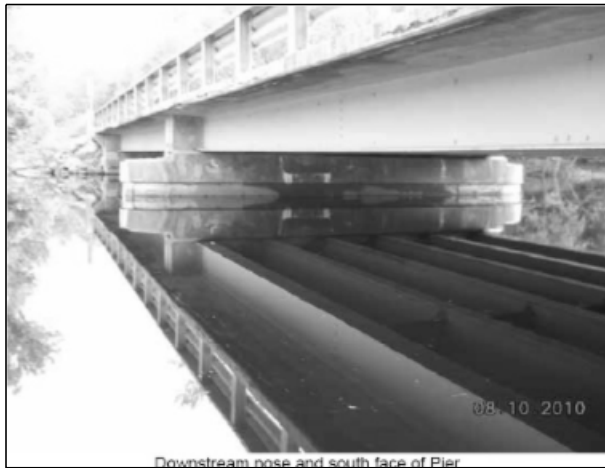
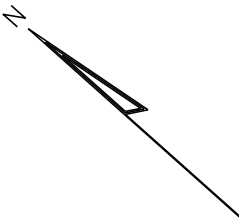


PHOTO B

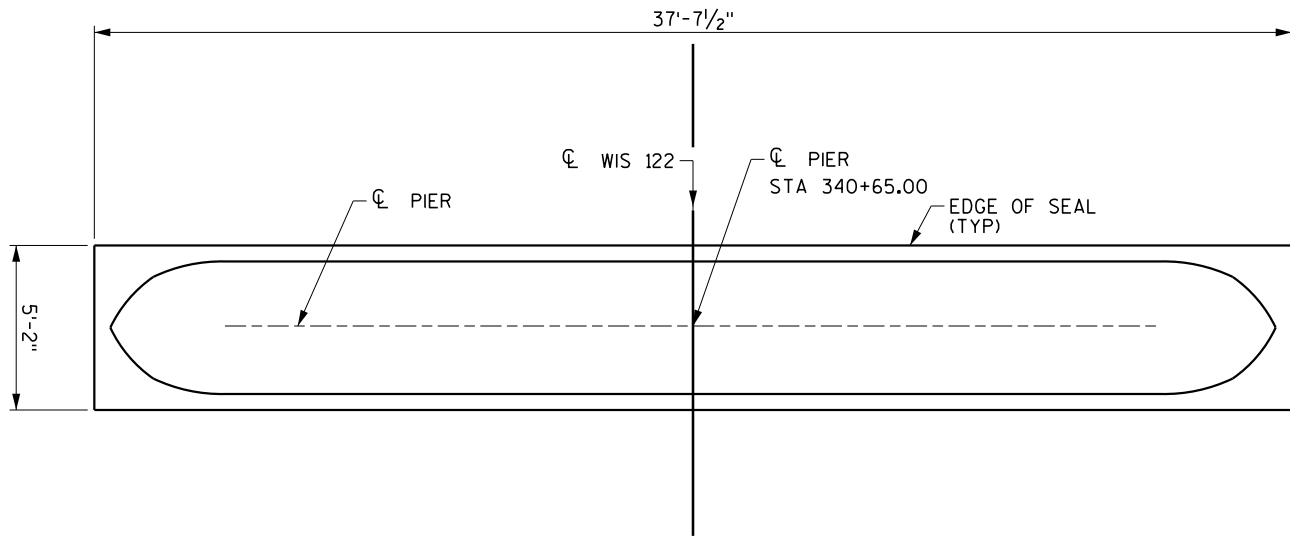


PHOTO C

EDGE DETERIORATION  
WAS REPAIRED IN 2016



MONTREAL RIVER



PLAN



PHOTO D

(TYPICAL PIER CONDITION AT WATERLINE)



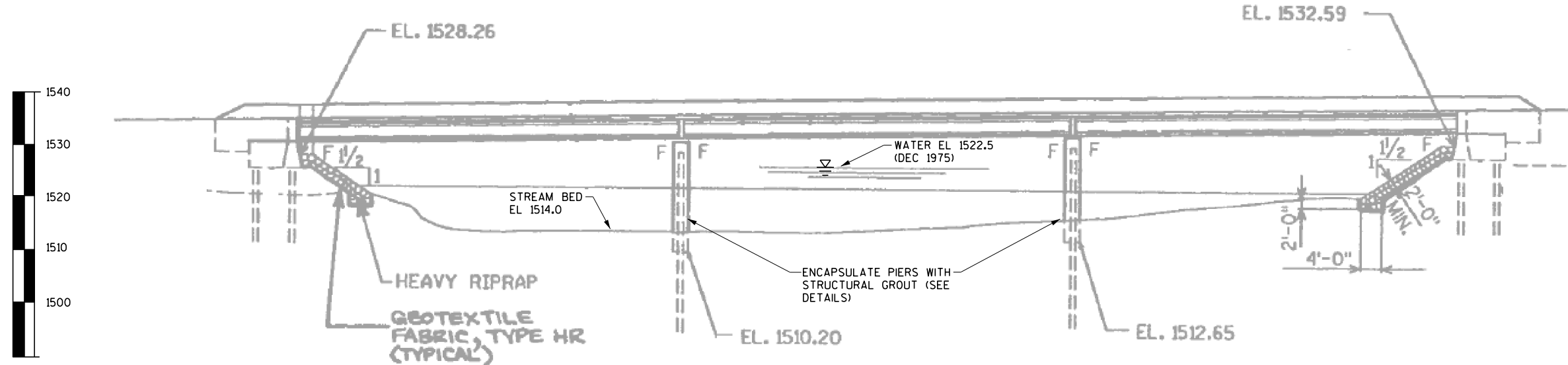
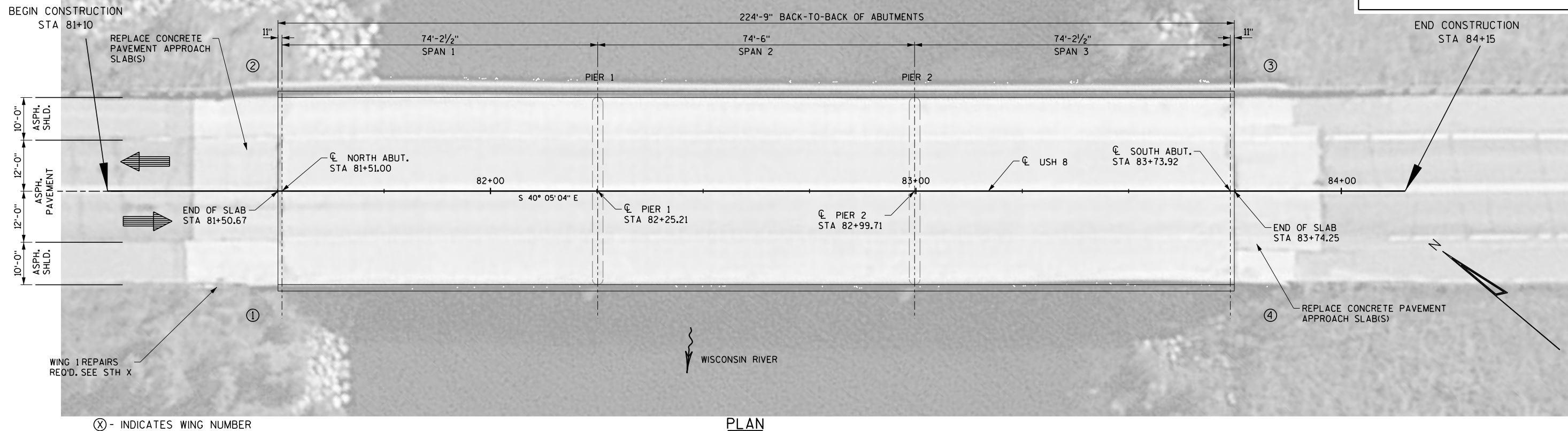
PHOTO E



PHOTO F



NO.	DATE	REVISION	BY
ORIGINAL PLANS PREPARED BY <b>BAXTER &amp; WOODMAN</b> Consulting Engineers			
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-26-671			
DRAWN BY		DCD	PLANS CK'D. BAB
PIER PHOTO DETAILS		SHEET 4 OF 4	

**GENERAL NOTES**

DRAWINGS SHALL NOT BE SCALED.  
DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS.  
SEE TRAFFIC CONTROL PLANS FOR STAGING AND WORK ZONE  
THE CONTRACTOR SHALL SUPPLY A NEW NAME PLATE IN ACCORDANCE WITH SECTION 502.3.11 OF THE STANDARD SPECIFICATIONS AND THE STANDARD DETAIL DRAWING. NAME PLATE TO SHOW ORIGINAL CONSTRUCTION YEAR, 1990.

**DESIGN DATA****MATERIAL PROPERTIES:**

CONCRETE MASONRY	SUPERSTRUCTURE	$f'_c$	= 4,000 PSI
	ALL OTHER	$f'_c$	= 3,500 PSI
HIGH STRENGTH BAR STEEL REINFORCEMENT, GRADE 60		$f_y$	= 60,000 PSI
CONCRETE MASONRY GROUT		$f'_c$	= 3000 PSI

**LIVE LOAD**

DESIGN LOAD RATING: HS20  
INVENTORY LOAD RATING: HS22 (TAKEN FROM HSI, 5-31-18)  
OPERATING LOAD RATING: HS42 (TAKEN FROM HSI, 5-31-18)  
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV) - 250 KIPS (TAKEN FROM HSI, 5-31-18)

**TRAFFIC DATA**

A.A..D.T.=5803 (2015)  
A.A..D.T.=11,850 (2023)  
R.D.S.=45 MPH

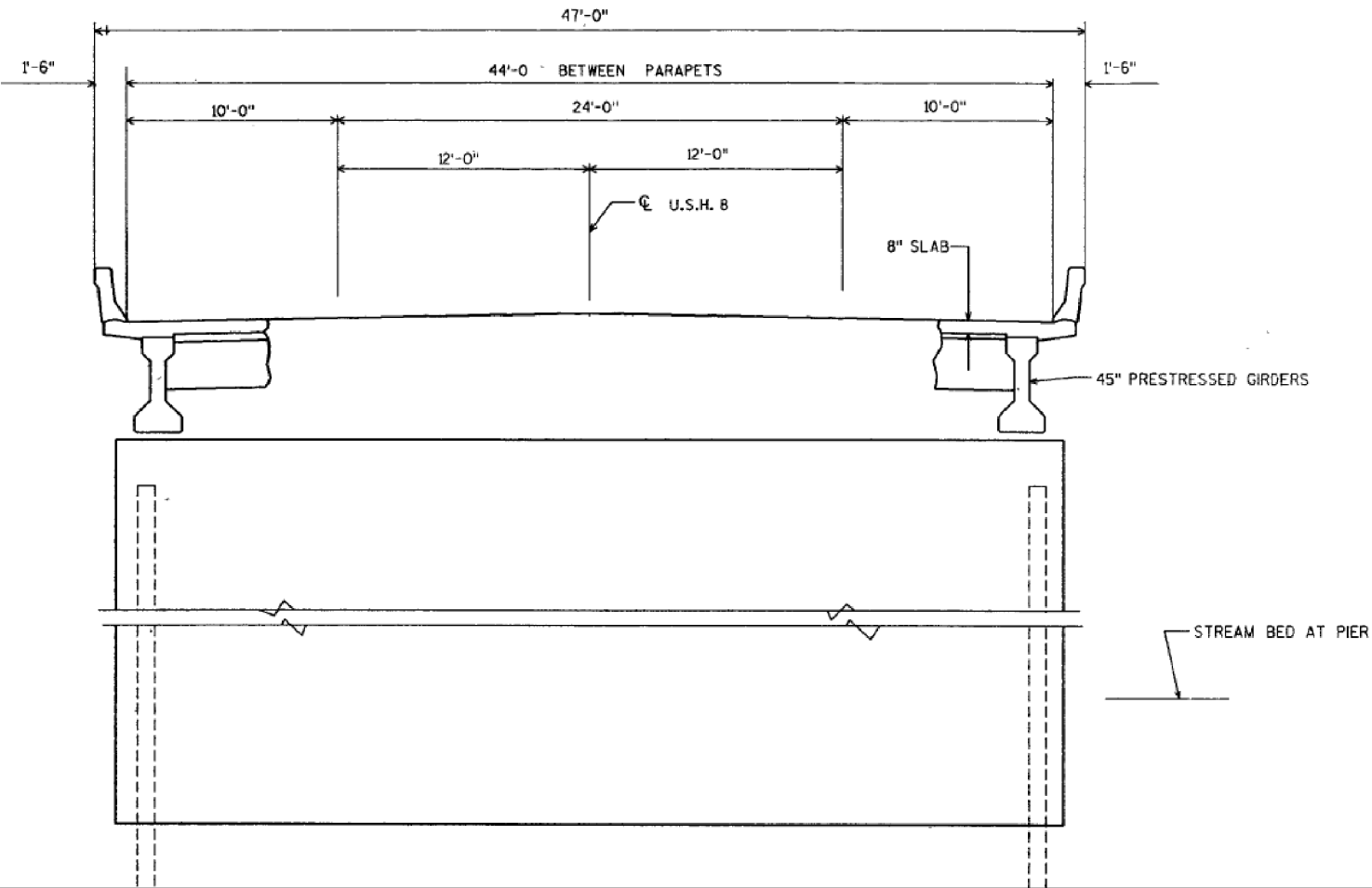
**LIST OF DRAWINGS**

1. GENERAL PLAN
2. CROSS SECTION & QUANTITIES
3. WINGWALL DETAILS
4. PARAPET DETAILS
5. TYPICAL PIER PHOTOS
6. PIER 1&2 REPAIR AREAS

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

CONSULTANT CONTACT  
DANIEL DURIG  
(608) 241-5481

NO.	DATE	REVISION	BY
BAXTER & WOODMAN 2005 W. Beltline Hwy Ste 201 Consulting Engineers Madison, WI 53713			
ACCEPTED	<i>William C. Dreher</i> SDR		11/20/18
CHIEF STRUCTURES DESIGN ENGINEER DATE			
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-43-23			
U.S.H. 8 OVER WISCONSIN RIVER			
COUNTY	ONEIDA	TOWN OF CRESCENT	CITY OF RHINELANDER
DESIGN SPEC. REHABILITATION N/A			
DESIGNED BY	DCD	DESIGN CK'D. BAB	DRAWN BY DCD
		PLANS CK'D. BAB	
GENERAL PLAN			SHEET 1 OF 6



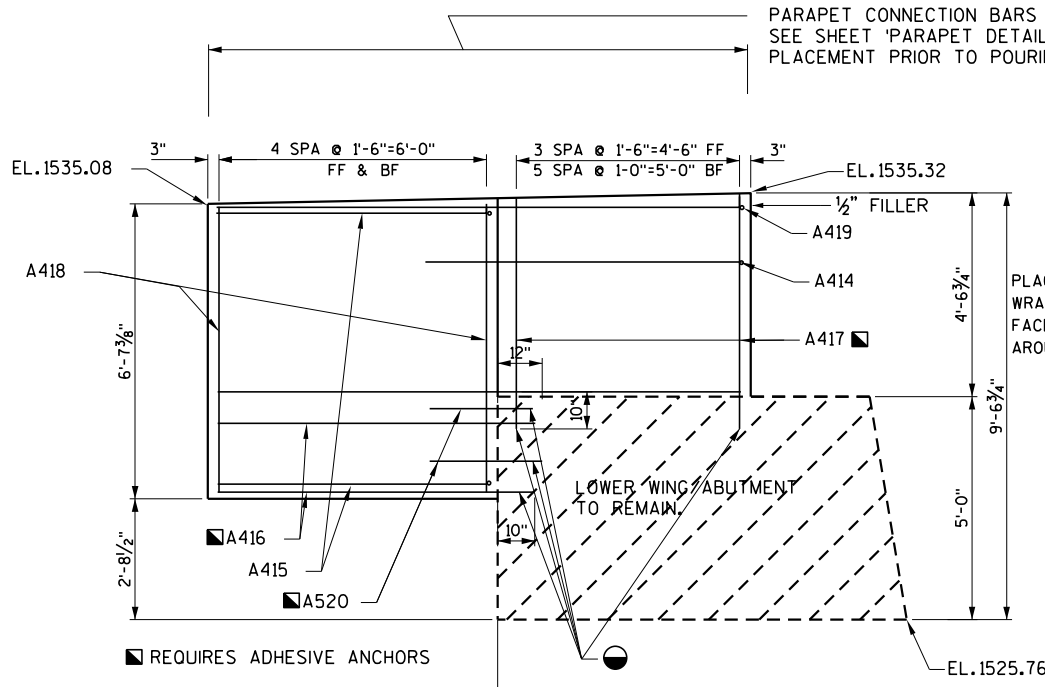
CROSS SECTION THRU EXISTING BRIDGE - LOOKING SOUTH

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEM	UNIT	NORTH ABUT	PIER 1	PIER 2	SOUTH ABUT	SUPER	TOTAL	REMARKS
203.0200	REMOVING OLD STRUCTURE (STA 81+30)	LS	-	-	-	-	-	1	NW WINGWALL
206.1000	EXCAVATION FOR STRUCTURES BRIDGES (B-43-23)	LS	(15 CY)*	-	-	-	-	1	NW WINGWALL
210.1500	BACKFILL STRUCTURE TYPE A	TON	30	0	0	0	0	30	NW WINGWALL
502.0100	CONCRETE MASONRY BRIDGES	CY	2	0	0	0	0	2	NW WINGWALL
502.3210	PIGMENTED SURFACE SEALER	SY	4	0	0	0	0	4	NW WINGWALL PARAPET
502.4204	ADHESIVE ANCHORS NO. 4 BAR	EACH	10	0	0	0	0	10	NW WINGWALL
502.4205	ADHESIVE ANCHORS NO. 5 BAR	EACH	3	0	0	0	0	3	NW WINGWALL
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	200	0	0	0	0	200	NW WINGWALL
509.1500	CONCRETE SURFACE REPAIR	SF	6	0	0	0	0	6	ABUT FACE - NE BRIDGE CORNER
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	15	0	0	0	0	15	NW WINGWALL
614.0150	ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	1	0	0	0	0	1	NW WINGWALL PARAPET
SPV.0165.01	UNDERWATER CONCRETE SURFACE REPAIR	SF	0	21	24	0	0	45	PIERS

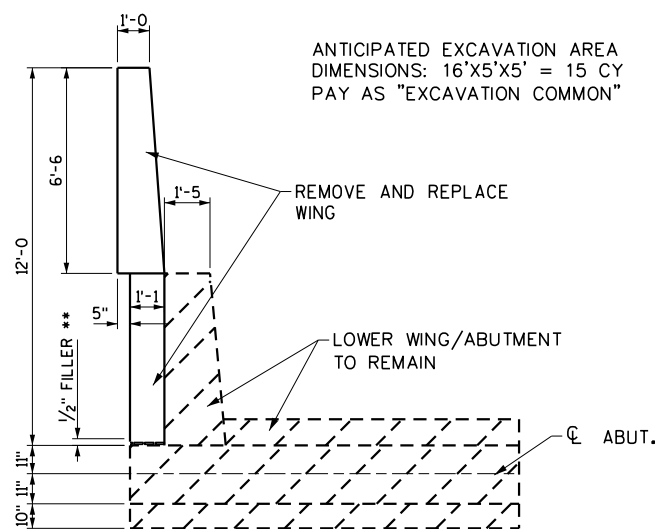
\*ESTIMATED QUANTITY

NO.	DATE	REVISION	BY
ORIGINAL PLANS PREPARED BY <b>BAXTER &amp; WOODMAN</b> Consulting Engineers			
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-43-23			
DRAWN BY		DCD	PLANS CK'D. BAB
CROSS SECTION & QUANTITIES		SHEET 2 OF 6	

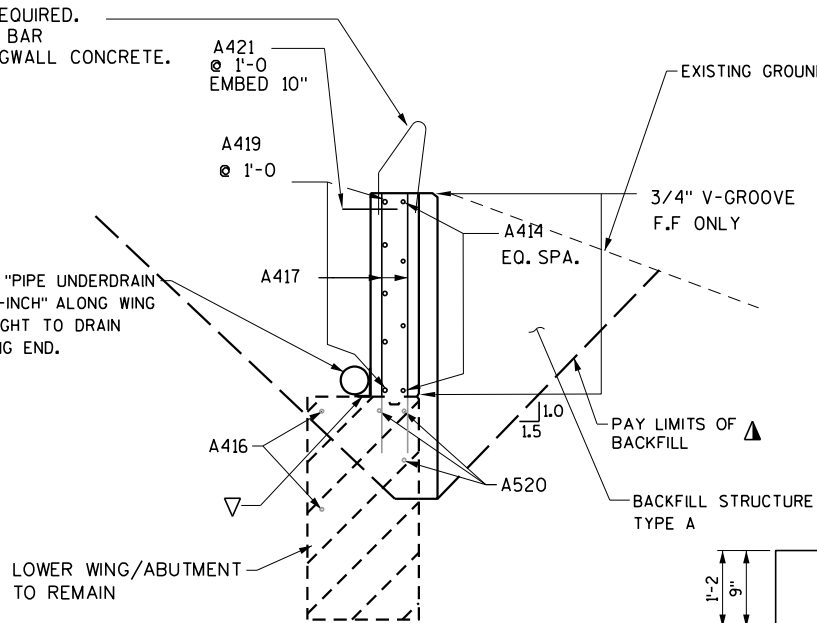


- ADHESIVE ANCHORS 1/2-INCH EMBED 10" IN CONCRETE
- ADHESIVE ANCHORS 5/8-INCH EMBED 12" IN CONCRETE

N. ABUT. WING ELEV.



PARTIAL PLAN

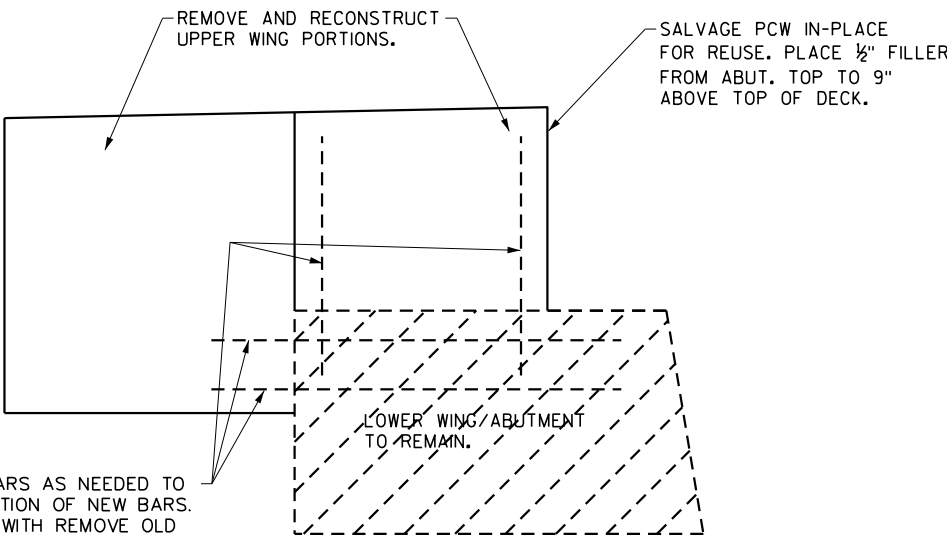


NOTE: THE BACK FILL QUANTITIES ARE BASED ON THE PAY LIMITS SHOWN ON THE PLANS AND MAY NOT REFLECT ACTUAL PLACED QUANTITIES. "BACKFILL STRUCTURE TYPE A" REQUIRED ADJACENT TO WING ON BOTH SIDES AS SHOWN. BACKFILL PLACED BEYOND PAY LIMITS OR EXCEEDING PLAN QUANTITIES SHALL BE INCIDENTAL TO EXCAVATION FOR STRUCTURES.

LEGEND

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

N. ABUT. WING SECT.



CUT EXISTING BARS AS NEEDED TO ALLOW INSTALLATION OF NEW BARS. COST INCLUDED WITH REMOVE OLD STRUCTURE.

WING REMOVAL AREAS

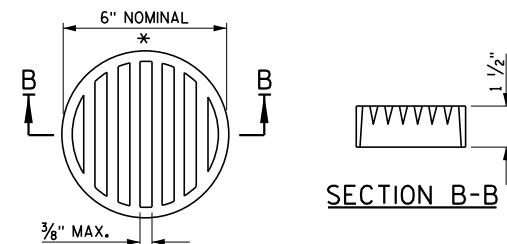
BILL OF BARS

BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	LOCATION
A414	X	4	7-8	X	WING HORIZ FF
A415	X	5	7-3	X	WING HORIZ FF
A416	X	2	7-2		WING HORIZ BF
A417	X	10	5-2		WING VERT FF & BF
A418	X	10	6-3		WING VERT FF & BF
A419	X	5	12-3	X	WING HORIZ BF
A520	X	3	3-10		WING HORIZ
A421	X	12	1-10		WING DOWELS HORIZ. BF.

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

A414 & A415

A419



RODENT SHIELD DETAIL

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

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

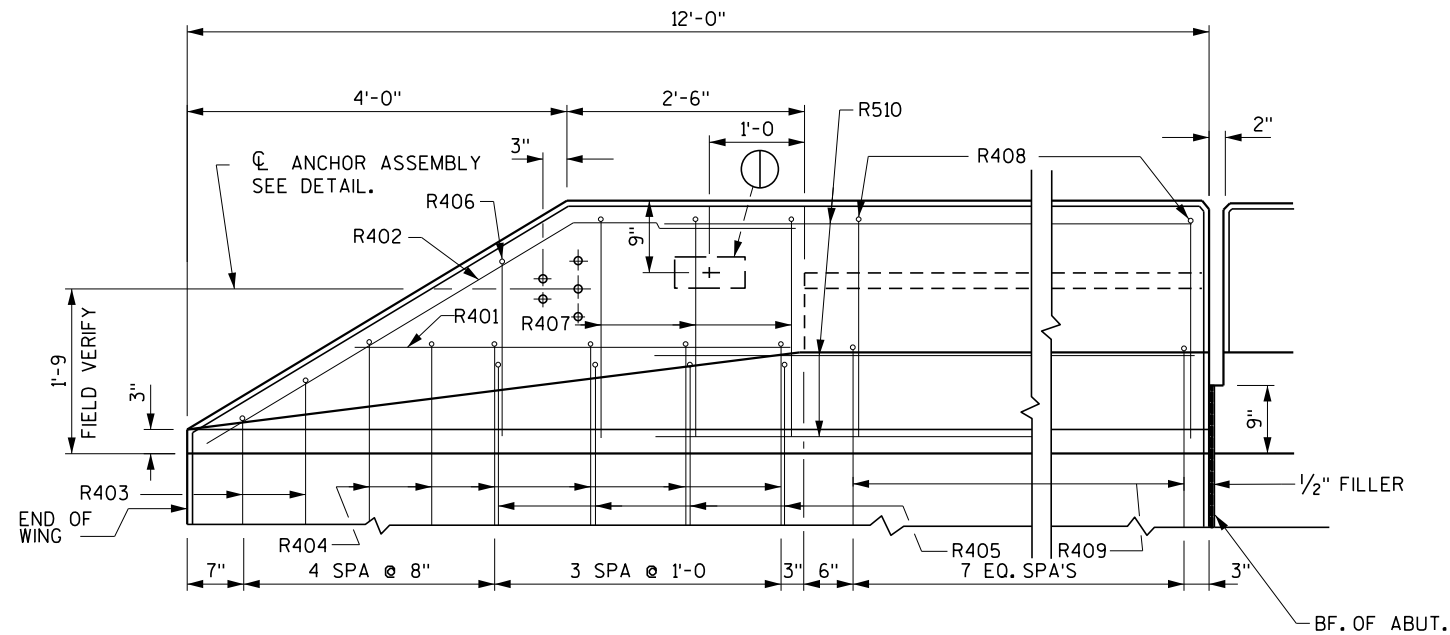
THE RODENT SHIELD SHALL BE A PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALY AVAILABLE AS A FLOOR STRAINER. A PIPE COUPLING IS REQUIRED FOR THE ATTACHMENT OF THIS SHIELD TO THE EXPOSED END OF THE PIPE UNDERDRAIN. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X 1-INCH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

NO.	DATE	REVISION	BY
ORIGINAL PLANS PREPARED BY			
BAXTER & WOODMAN Consulting Engineers			
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-43-23			
DRAWN BY DCD		PLANS CK'D. BAB	
WINGWALL DETAILS		SHEET 3 OF 6	

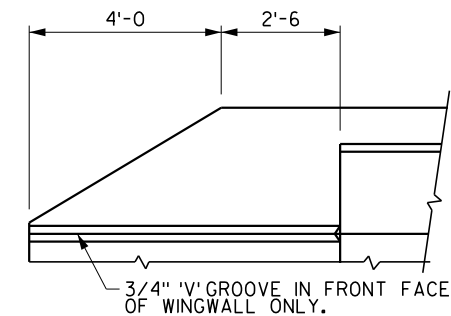
⊕ NAME PLATE LOCATION

STATE PROJECT NUMBER

1009-44-68



ELEVATION OF PARAPET

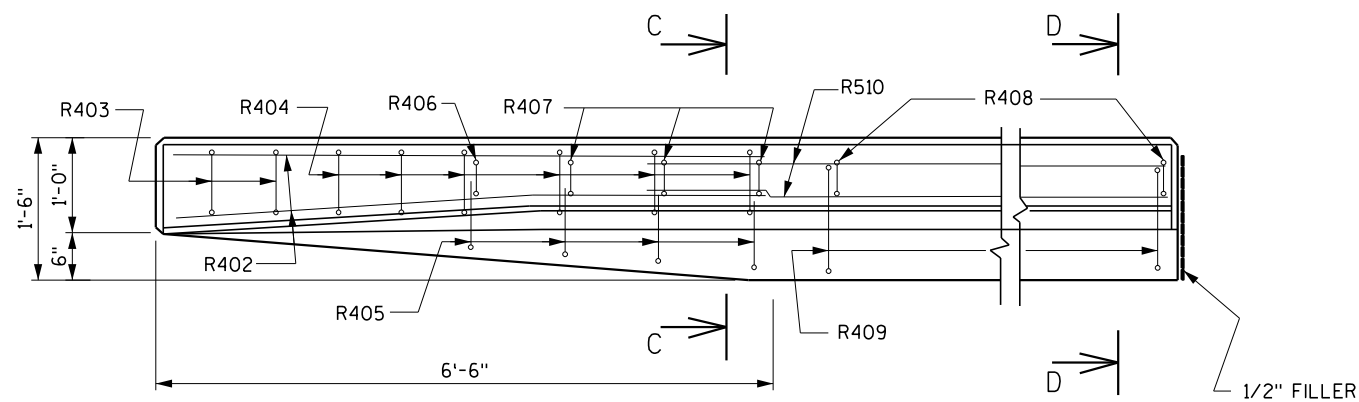


VIEW SHOWING FRONT FACE OF PARAPET

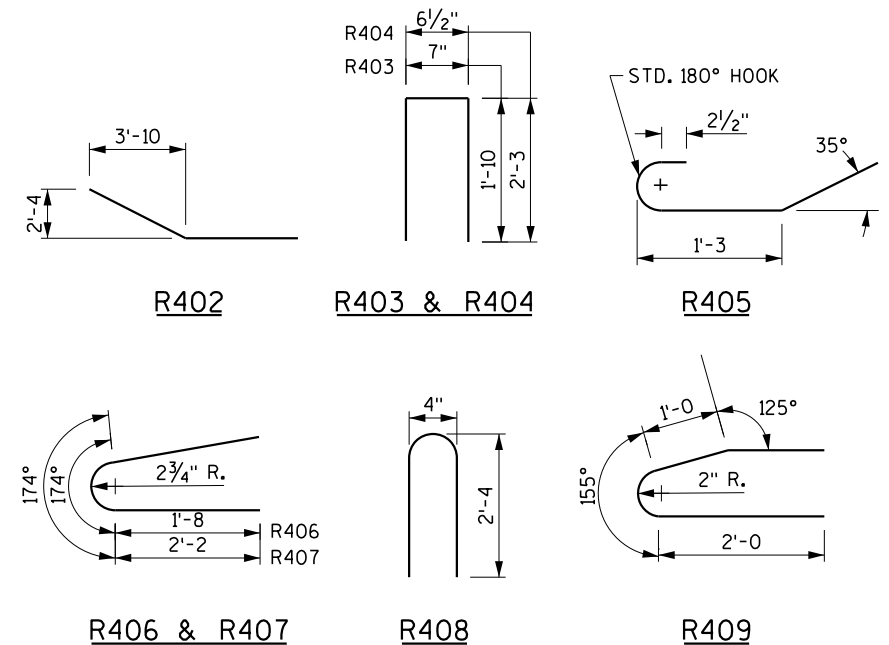
BILL OF BARS

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	LOCATION
R401	X	2	4'-6"		WING
R402	X	2	6'-8"	X	WING
R403	X	2	4'-1"	X	WING
R404	X	6	4'-11"	X	WING
R405	X	4	3'-1"	X	WING
R406	X	1	4'-0"	X	WING
R407	X	3	5'-0"	X	WING
R408	X	8	4'-10"	X	WING
R409	X	8	4'-7"	X	WING
R510	X	5	7'-6"		WING

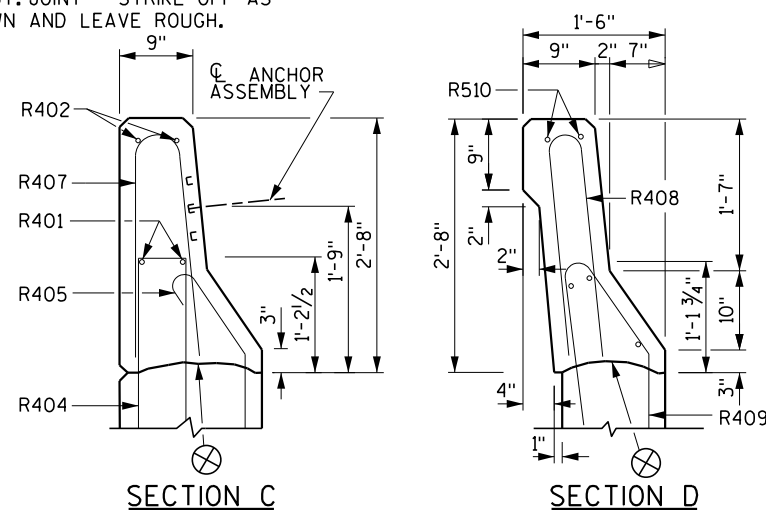
NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE



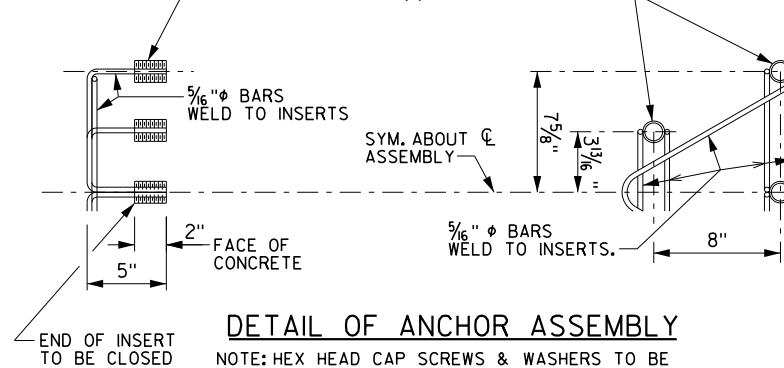
PLAN OF PARAPET



⊗ CONST. JOINT - STRIKE OFF AS SHOWN AND LEAVE ROUGH.



THREADED INSERTS FOR 7/8"  $\phi$  X 2" LONG GALVANIZED HEX HEAD CAP SCREWS. CAP SCREWS TO BE THREADED A MIN. OF 1/8" AND SHALL BE SUPPLIED, INCLUDING WASHERS, WITH ASSEMBLY. INSERTS TO BE THREADED A MINIMUM OF 1 3/4".



NOTE: HEX HEAD CAP SCREWS & WASHERS TO BE GALVANIZED IN ACCORDANCE WITH AASHTO M232 CLASS C.

ASSEMBLY BID ITEM SHALL BE "ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD", EACH.

8

8

NO.	DATE	REVISION	BY
ORIGINAL PLANS PREPARED BY			
<b>BAXTER &amp; WOODMAN</b> Consulting Engineers			
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-43-23			
DRAWN BY		DCD	PLANS CK'D. BAB
PARAPET DETAILS		SHEET 4 OF 6	



west (downstream) profile  
(LOOKING EAST - UPSTREAM)



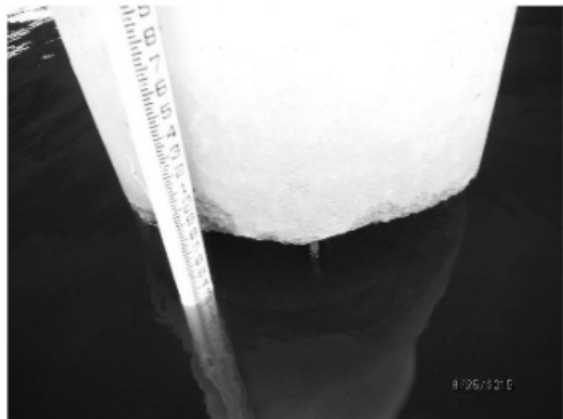
east (upstream) profile  
(LOOKING WEST - DOWNSTREAM)



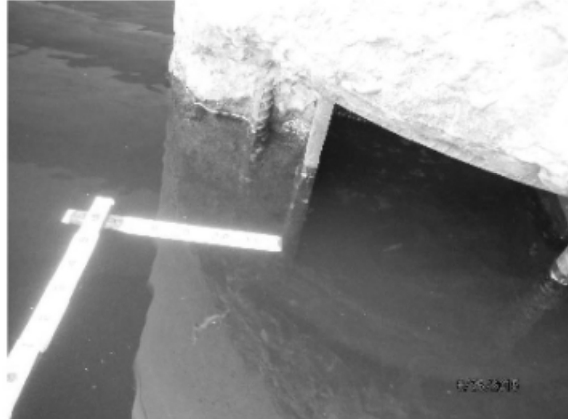
pier 1-south face  
(PIER 1 - SOUTH FACE)



pier 1-north face  
(PIER 1 - NORTH FACE)



typical waterline condition  
(TYPICAL PIER CONDITION AT WATERLINE)





rust nodules on steel bellow water  
(TYPICAL PIER CONDITION AT WATERLINE)


STATE PROJECT NUMBER	
1009-44-68	

NO.	DATE	REVISION	BY
ORIGINAL PLANS PREPARED BY <b>BAXTER &amp; WOODMAN</b> Consulting Engineers			
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-43-23			
DRAWN BY		DCD	PLANS CK'D. BAB
TYPICAL PIER PHOTOS		SHEET 5 OF 6	


LEGEND

 - INDICATES REPAIR AREA


 24 SF(11)

 H

LETTER KEY FOR INSPECTION NOTES

 24 SF(11)

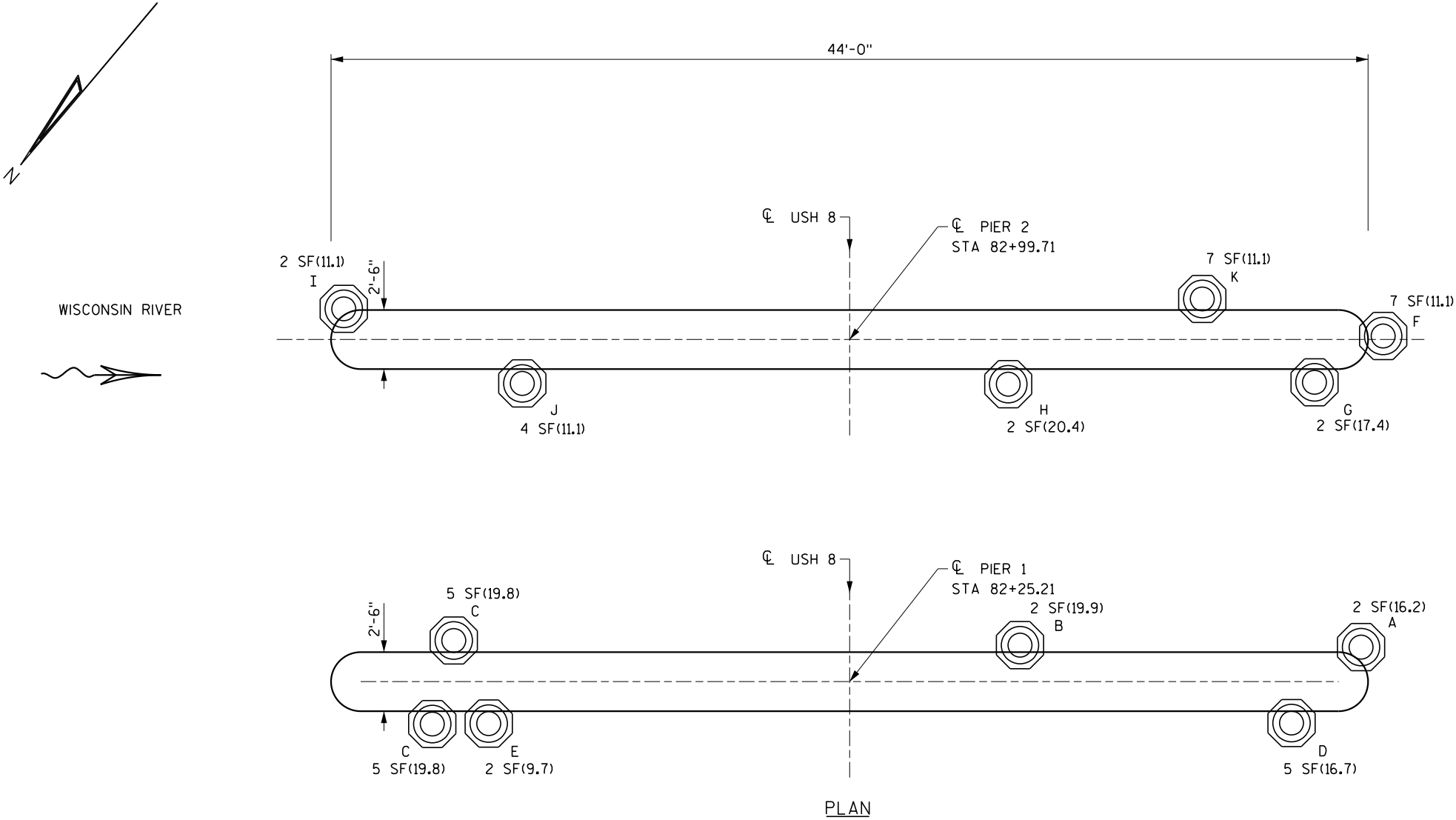
MEASURE DOWN DISTANCE IN FT FROM TOP OF PIER TO REPAIR AREA

 24 SF(11)

APPROX. SURFACE AREA OF REPAIR (SF)

GENERAL NOTES

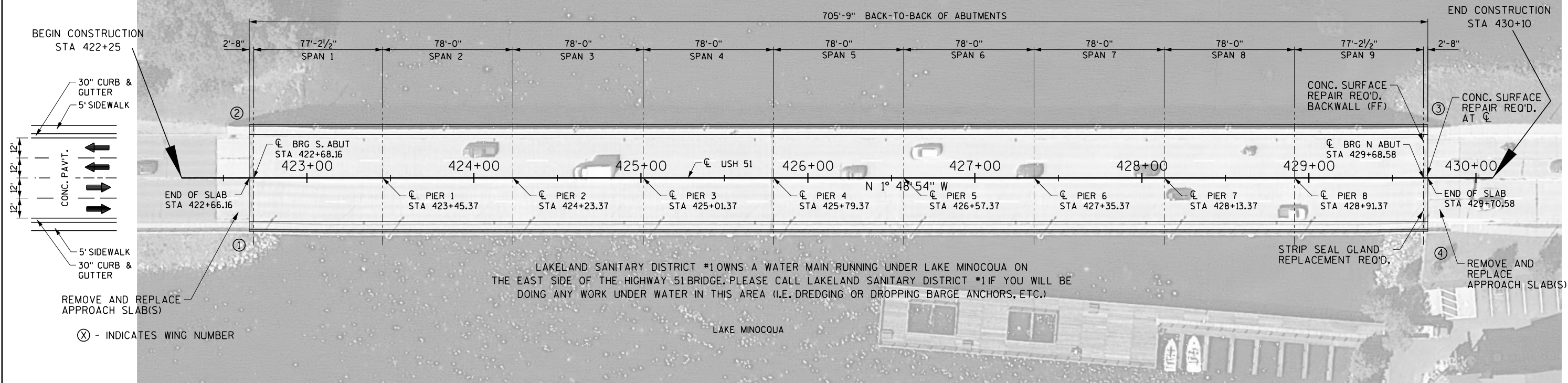
TOP OF WATER IS LOCATED +/- 9.7 FT FROM THE TOP OF PIER 1 AND +/- 11.1 FT FROM THE TOP OF PIER 2.



SUPPLEMENTAL REPAIR AREA NOTES

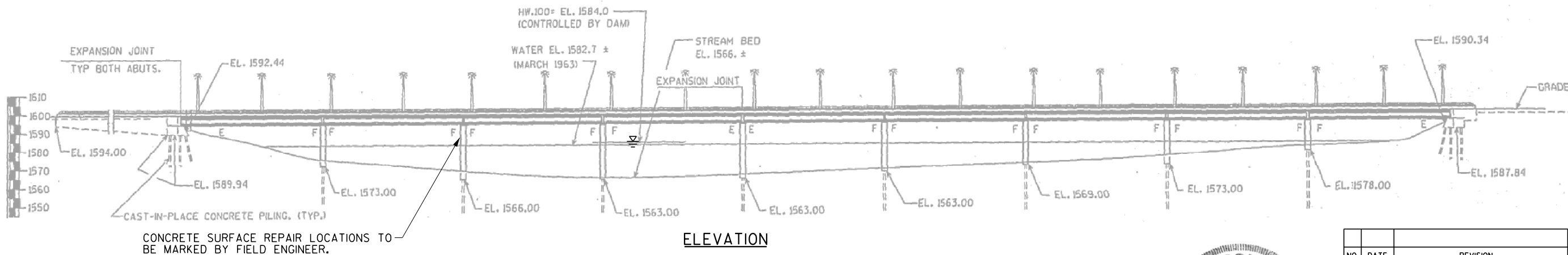
A - VOID 3" H X 2.5'W X 10" D AT 3' ABOVE STREAM BED
B - VOID 6" H X 1.5'W X 1'D AT THE STREAMBED
C - VOID 1'-3" H X 4'W AT THE STREAMBED (SAME ON OPPOSITE SIDE OF PIER)
D - VOID 15" H X 4'W X 4" D AT THE STREAMBED
E - VOID 4" H X 2.5'W X 4" D AT THE WATER SURFACE
F - VOID 2'-3" H X 3'W X 1'D AT THE WATER SURFACE
G - VOID 6" H X 1.5'W X 6" D AT 4' ABOVE THE STREAMBED
H - VOID 1'H X 2'W X 6" D AT 1' ABOVE THE STREAMBED
I - VOID 15" H X 21" W X 4" D AT THE WATER SURFACE
J - VOID 9" H X 3.5'W X 3" D AT THE WATER SURFACE
K - VOID 1'H X 7'W X 6" D AT THE WATER SURFACE

NO.	DATE	REVISION	BY
ORIGINAL PLANS PREPARED BY <b>BAXTER &amp; WOODMAN</b> Consulting Engineers			
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-43-23			
	DRAWN BY	DCD	PLANS CK'D. BAB
PIER 1 & 2 REPAIR AREAS		SHEET 6 OF 6	



## PLAN

9-SPAN 45" PRESTRESSED GIRDERS



## ELEVATION

## GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.  
DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS.  
SEE TRAFFIC CONTROL PLANS FOR STAGING AND WORK ZONE

## DESIGN DATA

## MATERIAL PROPERTIES:

CONCRETE MASONRY SUPERSTRUCTURE  $f'_c = 4,000$  PSI  
ALL OTHER  $f'_c = 3,500$  PSI

HIGH STRENGTH BAR STEEL REINFORCEMENT, GRADE 60  $f_y = 60,000$  PSI

## LIVE LOAD

DESIGN LOAD RATING: HS20  
INVENTORY LOAD RATING: HS23 (TAKEN FROM HSI, 12-08-92)  
OPERATING LOAD RATING: HS44 (TAKEN FROM HSI, 12-08-92)  
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV) - 250 KIPS (TAKEN FROM HSI, 12-08-92)

## TRAFFIC DATA

A.A.D.T.=13,500 (2012)  
A.A.D.T.=18,940 (2023)  
R.D.S.=25 MPH

## LIST OF DRAWINGS

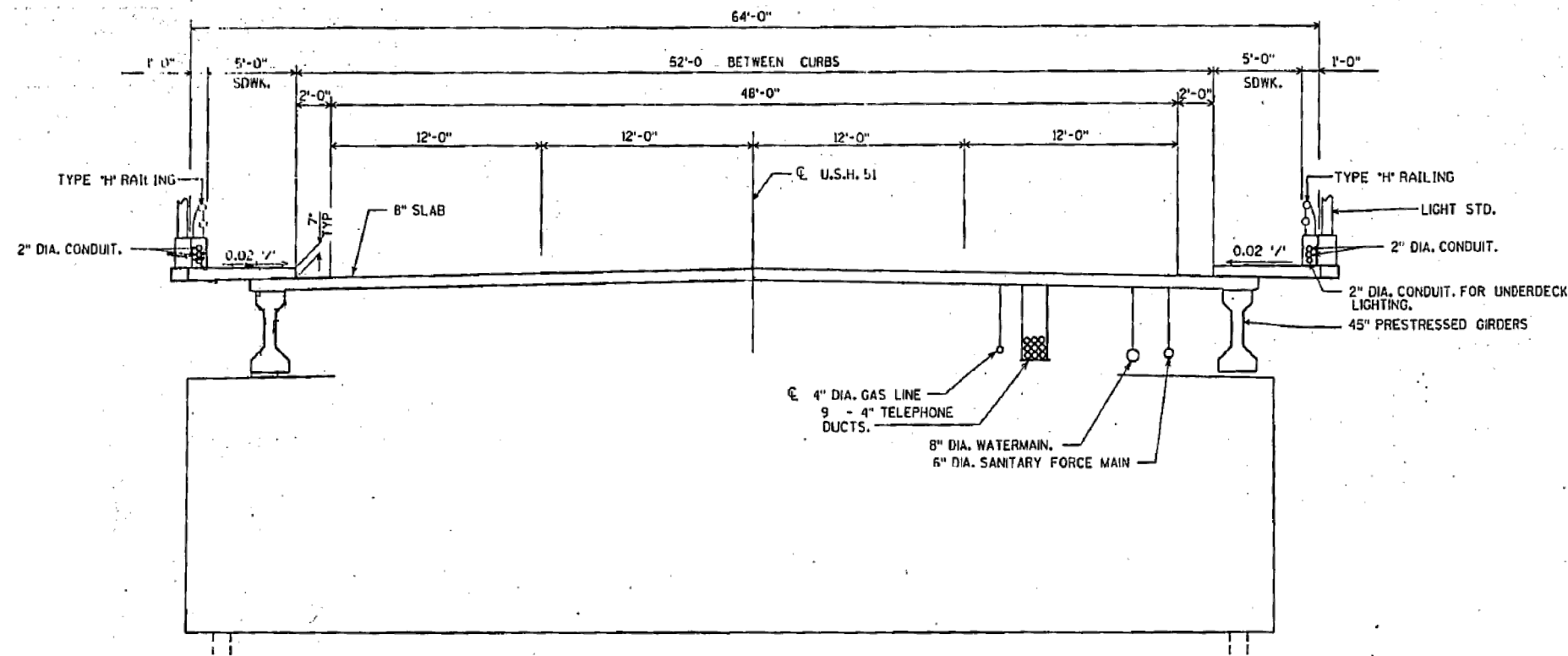
1. GENERAL PLAN
2. CROSS SECTION & QUANTITIES
3. N. ABUTMENT DETAILS
4. PIER PHOTOS
5. PIERS 1-4 REPAIR AREAS
6. PIERS 5-8 REPAIR AREAS

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

CONSULTANT CONTACT  
DANIEL DURIG  
(608) 241-5481



NO.	DATE	REVISION	BY
<b>BAXTER &amp; WOODMAN</b> Consulting Engineers 2005 W. Beltline Hwy Ste 201 Madison, WI 53713			
ACCEPTED	<i>William C. Dreher</i> SR	12/05/18	DATE
CHIEF STRUCTURES DESIGN ENGINEER			
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-43-41			
U.S.H. 51 OVER LAKE MINOCQUA			
COUNTY	ONEIDA	TOWN/CITY/VILLAGE	MINOCQUA
DESIGN SPEC.	N/A		
REHABILITATION	N/A		
DESIGNED BY	DCD	DESIGN CK'D. BAB	DRAWN BY DCD
PLANS CK'D. BAB			
GENERAL PLAN			SHEET 1 OF 6



CROSS SECTION THRU EXISTING BRIDGE - LOOKING NORTH

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEM	UNIT	SOUTH ABUT	PIER 1	PIER 2	PIER 3	PIER 4	PIER 5	PIER 6	PIER 7	PIER 8	NORTH ABUT	SUPER	TOTAL	REMARKS
509.1500	CONCRETE SURFACE REPAIR	SF	0	0	0	2	21	2	9	3	0	52	0	89	PIERS, N ABUT BACKWALL & STRIP SEAL
SPV.0060.02	STRIP SEAL GLAND REPLACEMENT	EACH	0	0	0	0	0	0	0	0	0	1	0	1	N ABUT
SPV.0165.01	UNDERWATER CONCRETE SURFACE REPAIR	SF	0	14	21	42	51	15	0	0	12	0	0	155	PIERS

NO.	DATE	REVISION	BY
ORIGINAL PLANS PREPARED BY			
BAXTER & WOODMAN Consulting Engineers			
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-43-41			
DRAWN BY		DCD	PLANS CK'D. BAB
CROSS SECTION & QUANTITIES		SHEET 2 OF 6	

CONCRETE SURFACE REPAIR  
REQ'D. REPAIR AREAS TO  
BE DESIGNATED  
BY THE ENGINEER.



NORTH ABUT.  
(WEST BRIDGE EDGE)



NORTH ABUT.  
(1ST INTERIOR GIRDER BAY)

REMOVE & REPLACE STRIP SEAL GLAND.



NORTH ABUTMENT  
(STRIP SEAL)

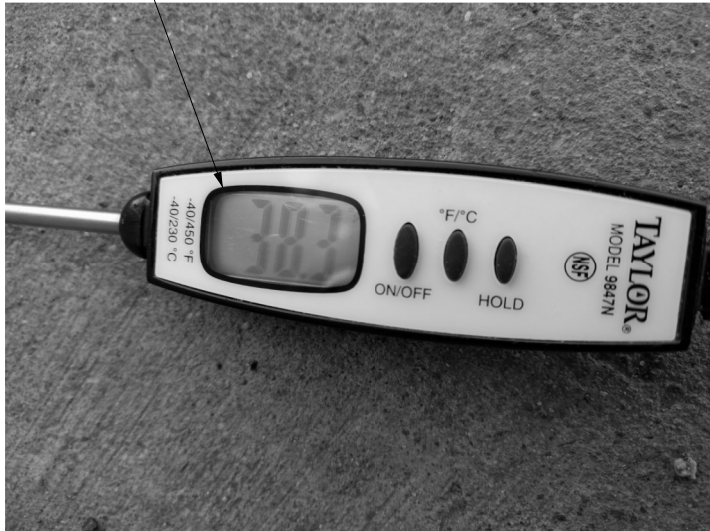


NORTH ABUTMENT  
(STRIP SEAL AT SIDEWALK/GUTTER)

1 1/4" JOINT OPENING  
AT 38° F



NORTH ABUT.  
(STRIP SEAL GAP MEASUREMENT)



NORTH ABUT.  
(STRIP SEAL GAP - TEMPERATURE)

CONCRETE SURFACE REPAIR  
REQ'D. NORTH ABUT STRIP  
SEAL AT C



NORTH ABUTMENT  
(STRIP SEAL AT C)



NORTH ABUTMENT  
(STRIP SEAL AT C)

NO.	DATE	REVISION		BY
ORIGINAL PLANS PREPARED BY <b>BAXTER &amp; WOODMAN</b> Consulting Engineers				
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION				
STRUCTURE B-43-41				
		DRAWN BY	DCD	PLANS CK'D. BAB
N. ABUT. DETAILS			SHEET 3 OF 6	



PIER 1  
(EAST PIER NOSE)



PIER 2  
(EAST PIER NOSE)



PIER 3  
(EAST PIER NOSE)



PIER 4  
(EAST PIER NOSE)



PIER 5  
(EAST PIER NOSE)



PIER 6  
(EAST PIER NOSE)



PIER 7  
(EAST PIER NOSE)



PIER 8  
(EAST PIER NOSE)



PIER  
(NOTE DETERIORATION  
BELOW WATERLINE)

NO.	DATE	REVISION	BY
ORIGINAL PLANS PREPARED BY <b>BAXTER &amp; WOODMAN</b> Consulting Engineers			
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-43-41			
		DRAWN BY	DCD PLANS CK'D. BAB
PIER PHOTOS		SHEET 4 OF 6	

LEGEND



- REPAIR AREA

24 SF(11)

MEASURE DOWN DISTANCE  
IN FT FROM TOP OF PIER  
TO REPAIR AREA

APPROX. SURFACE AREA  
OF REPAIR (SF)

GENERAL NOTES

TOP OF WATER IS LOCATED +/- 10 FT  
FROM TOP OF PIERS.

SUPPLEMENTAL REPAIR AREA NOTES

P-1 NORTH FACE - @ CONSTRUCTION JOINT, EXPOSED  
REBAR

P-1 SOUTH FACE - @ CONSTRUCTION JOINT, EXPOSED  
REBAR

P-2 SOUTH FACE - @ CONSTRUCTION JOINT, EXPOSED  
REBAR

P-3 SOUTH FACE - BEGIN AT WEST NOSE TO EAST,  
15 FT X 2 FT W/ EXPOSED REBAR

P-3 SOUTH FACE - DIVE REPORT 4 FT ABOVE  
STREAMBED

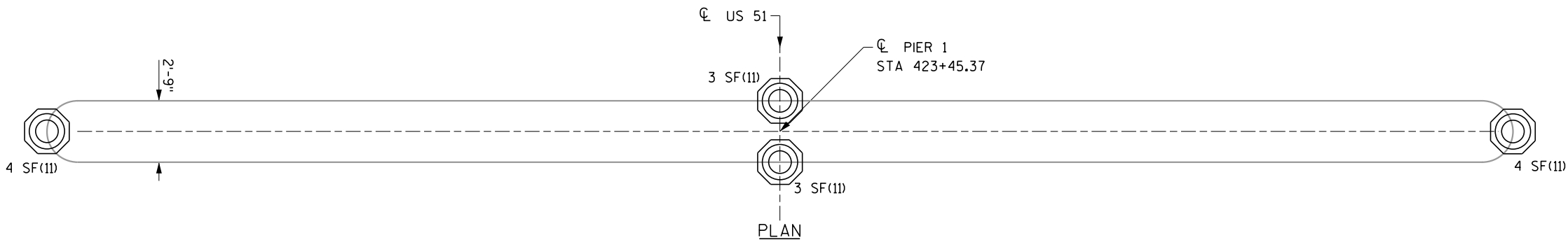
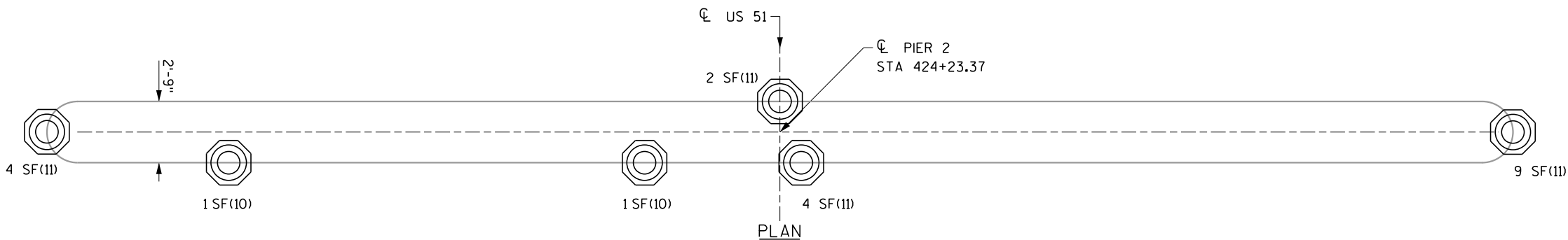
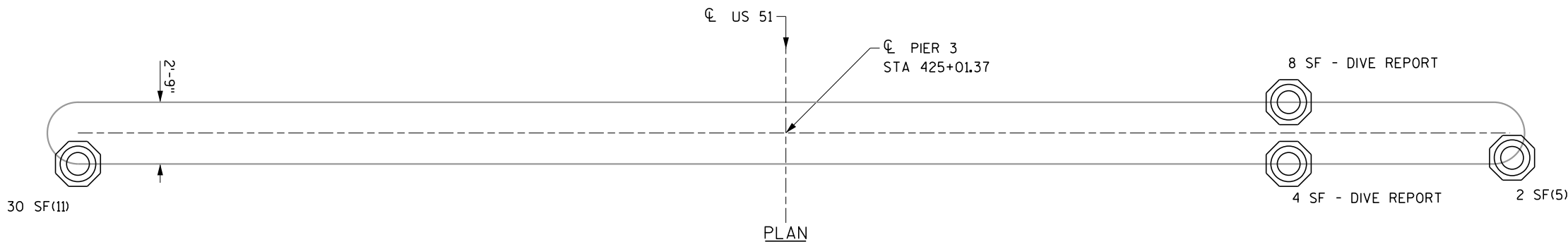
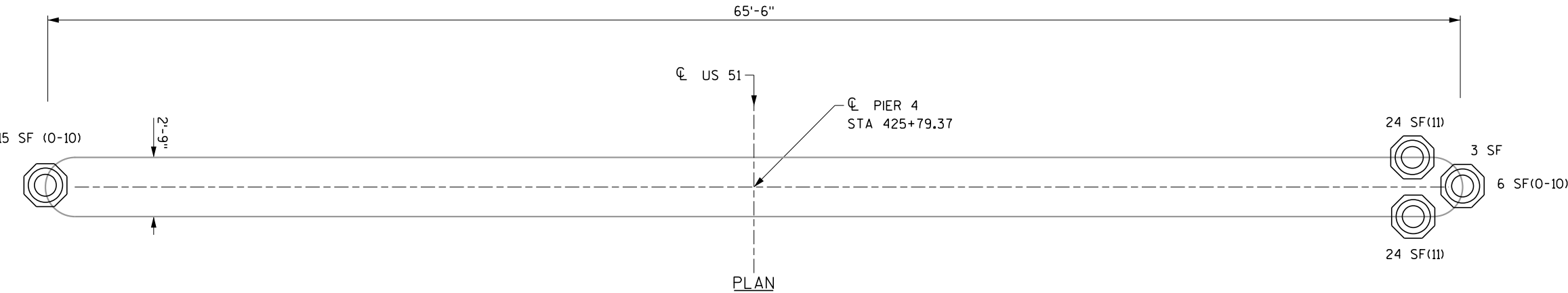
P-3 NORTH FACE - DIVE REPORT 4 FT ABOVE  
STREAMBED

P-4 EAST NOSE - EXPOSED REBAR

P-4 WEST NOSE - EXPOSED REBAR

P-4 NORTH FACE - EXPOSED REBAR  
@ EAST END

P-4 SOUTH FACE - EXPOSED REBAR  
@ EAST END



NO.		DATE	REVISION		BY
ORIGINAL PLANS PREPARED BY					
BAXTER & WOODMAN consulting engineers					
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION					
STRUCTURE B-43-41					
			DRAWN BY	DCD	PLANS CK'D. BAB
PIERS 1-4 REPAIR AREAS				SHEET 5 OF 6	

LEGEND



- REPAIR AREA

24 SF(11)

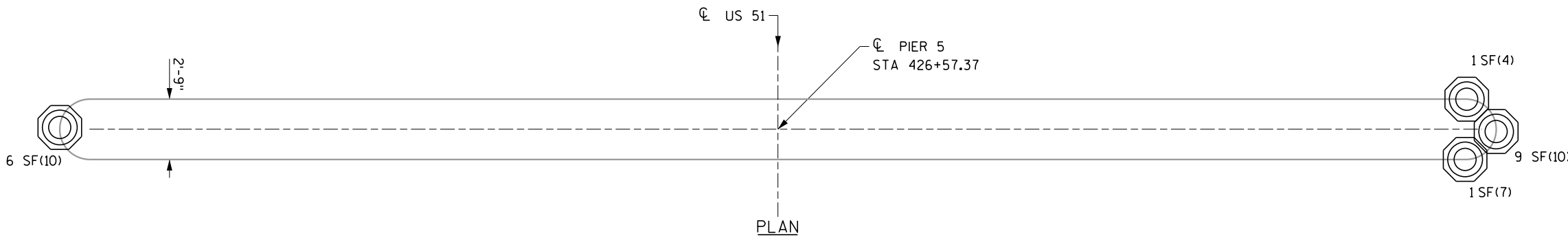
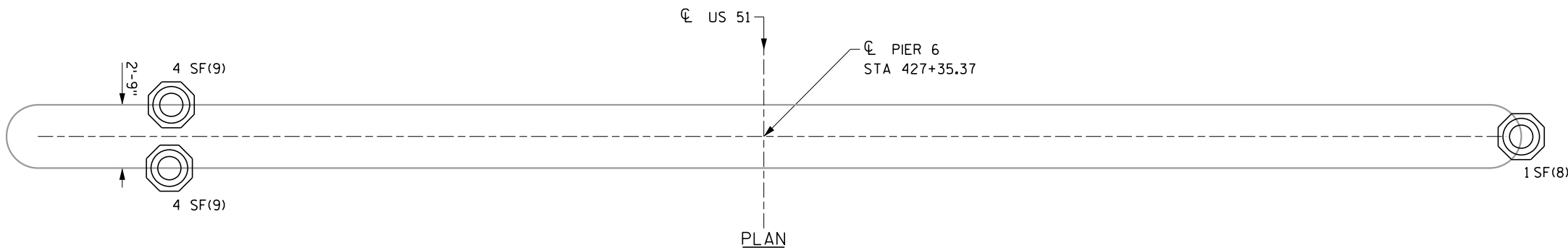
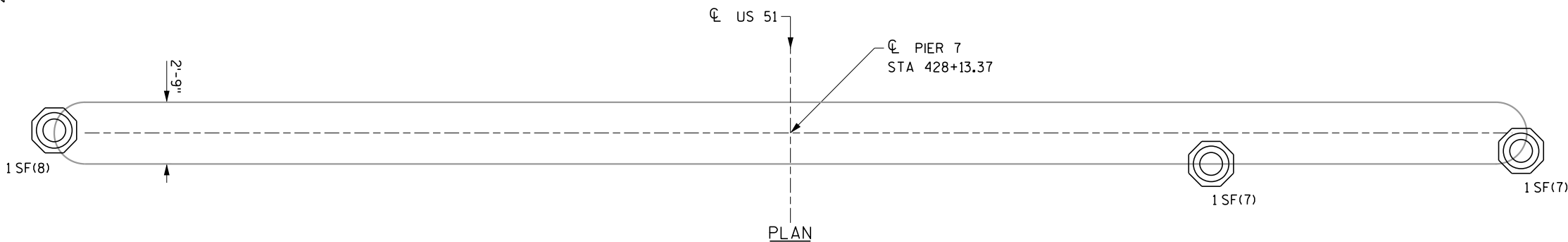
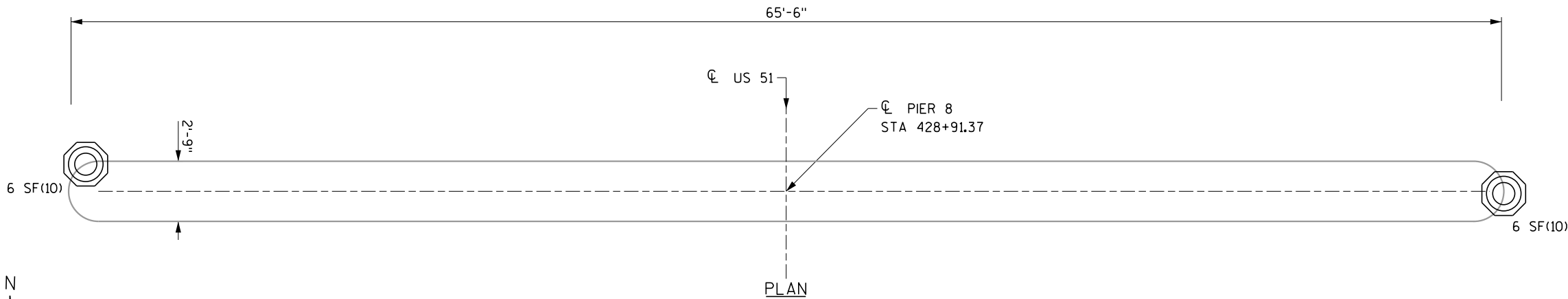
MEASURE DOWN DISTANCE  
IN FT FROM TOP OF PIER  
TO REPAIR AREA  
APPROX. SURFACE AREA  
OF REPAIR (SF)

GENERAL NOTES

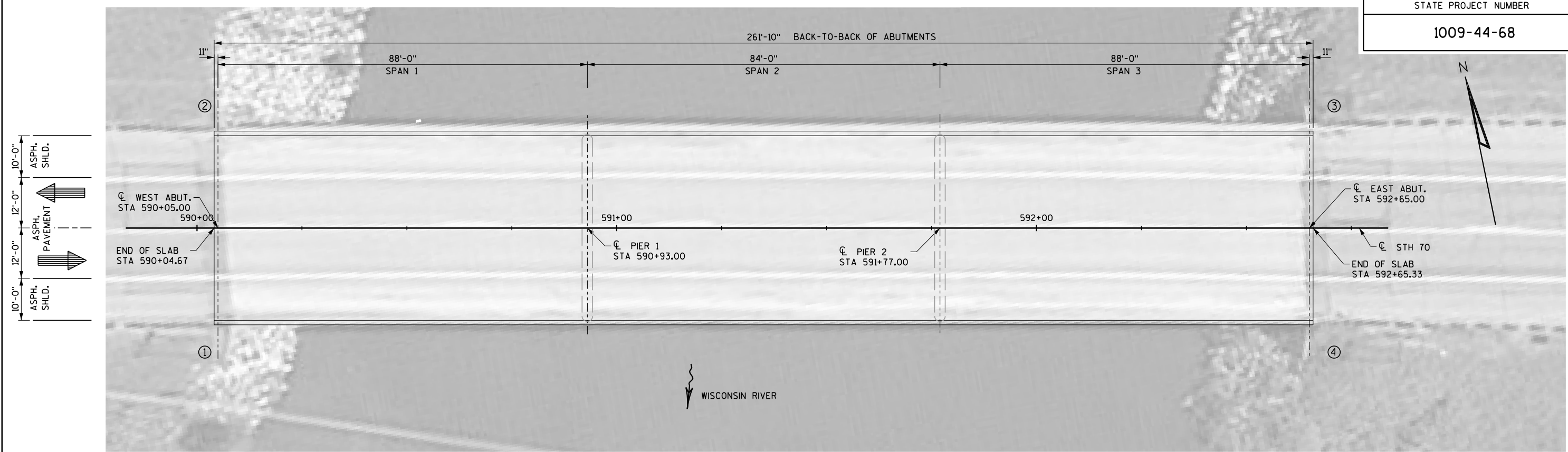
TOP OF WATER IS LOCATED +/- 10 FT  
FROM TOP OF PIERS.

SUPPLEMENTAL REPAIR AREA NOTES

P-5 EAST NOSE - EXPOSED REBAR  
P-8 WEST NOSE - EXPOSED REBAR



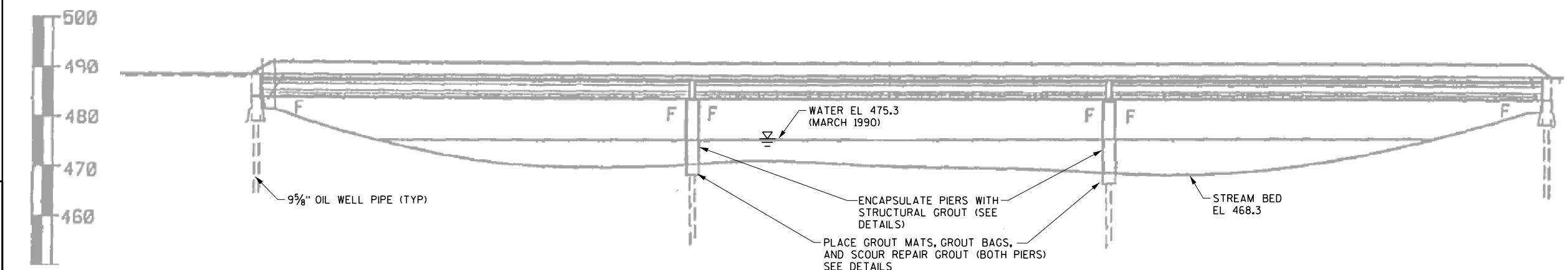
NO.	DATE	REVISION	BY
ORIGINAL PLANS PREPARED BY			
BAXTER & WOODMAN Consulting Engineers			
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-43-41			
DRAWN BY		DCD	PLANS CK'D. BAB
PIERS 5-8 REPAIR AREAS		SHEET 6 OF 6	



⊗ - INDICATES WING NUMBER

**PLAN**

3 SPAN - 45" PRESTRESSED GIRDERS



**GENERAL NOTES**

DRAWINGS SHALL NOT BE SCALED.  
DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS.  
SEE TRAFFIC CONTROL PLANS FOR STAGING AND WORK ZONE

**DESIGN DATA**

MATERIAL PROPERTIES:	
CONCRETE MASONRY	SUPERSTRUCTURE $f'_c = 4,000$ PSI
	ALL OTHER $f'_c = 3,500$ PSI
HIGH STRENGTH BAR STEEL REINFORCEMENT, GRADE 60	$f_y = 60,000$ PSI
CONCRETE MASONRY GROUT	$f'_c = 3000$ PSI

**LIVE LOAD**

DESIGN LOAD RATING: HS20  
INVENTORY LOAD RATING: HS23 (TAKEN FROM HSI, 9-15-92)  
OPERATING LOAD RATING: HS46 (TAKEN FROM HSI, 9-15-92)  
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV) - 250 KIPS (TAKEN FROM HSI, 9-15-92)

**TRAFFIC DATA**

A.A..D.T.=6,500 (2012)  
A.A..D.T.=9,470 (2023)  
R.D.S.=55 MPH

**LIST OF DRAWINGS**

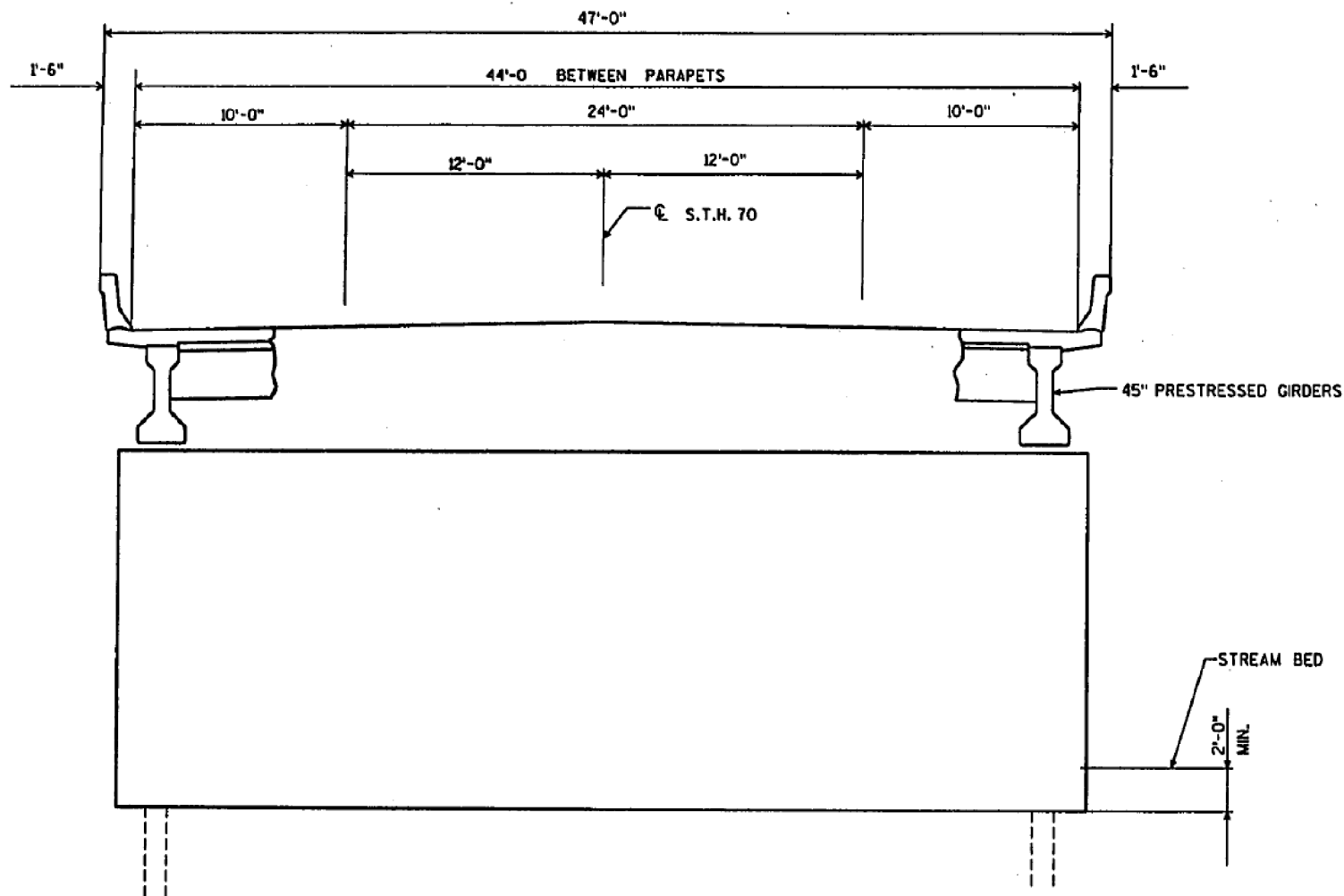
1. GENERAL PLAN
2. CROSS SECTION & QUANTITIES
3. TYPICAL PIER PHOTOS
4. PIER DETAILS
5. PIER DETAILS

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

CONSULTANT CONTACT  
DANIEL DURIG  
(608) 241-5481



NO.	DATE	REVISION	BY
BAXTER & WOODMAN Consulting Engineers 2005 W. Beltline Hwy Ste 201 Madison, WI 53713			
ACCEPTED <i>William C. Dreher</i> SDR 11/20/18		CHIEF STRUCTURES DESIGN ENGINEER	DATE
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-63-17			
STH 70 OVER WISCONSIN RIVER			
COUNTY	VILAS	TOWN/CITY/VILLAGE	CLOVERLAND
DESIGN SPEC.	N/A		
REHABILITATION	N/A		
DESIGNED BY	DCD	DESIGN CK'D.	BAB
DRAWN BY	DCD	PLANS CK'D.	BAB
GENERAL PLAN			SHEET 1 OF 5



CROSS SECTION THRU EXISTING BRIDGE - LOOKING EAST

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEM	UNIT	WEST ABUT	PIER 1	PIER 2	EAST ABUT	SUPER	TOTAL	REMARKS
502.4204	ADHESIVE ANCHORS NO. 4 BAR	EACH	0	130	130	0	0	260	PIER ENCASEMENT
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	0	281	281	0	0	562	PIER ENCASEMENT
SPV.0035.02	SCOUR REPAIR GROUT BAGS	CY	0	22	22	0	0	44	PIER ENCASEMENT
SPV.0035.04	STRUCTURAL GROUT	CY	0	24	24	0	0	48	PIER ENCASEMENT
SPV.0060.01	PREPARATION AND ANCHORAGE FOR VINYL SHEET PILING	EACH	0	1	1	0	0	2	PIER ENCASEMENT
SPV.0105.02	UNDERWATER EXCAVATION FOR STRUCTURES (B-63-17)	LS	0	(4 CY)*	(4 CY)*	0	0	1	PIER ENCASEMENT
SPV.0165.02	PILING VINYL SHEET PERMANENT DELIVERED AND INSTALLED	SF	0	864	864	0	0	1728	PIER ENCASEMENT
SPV.0165.03	PREPARATION OF PIER SURFACES	SF	0	864	864	0	0	1728	PIER ENCASEMENT
SPV.0165.04	WELDED WIRE FABRIC 6X6 D4/D4 (GRADE 60)	SF	0	864	864	0	0	1728	PIER ENCASEMENT

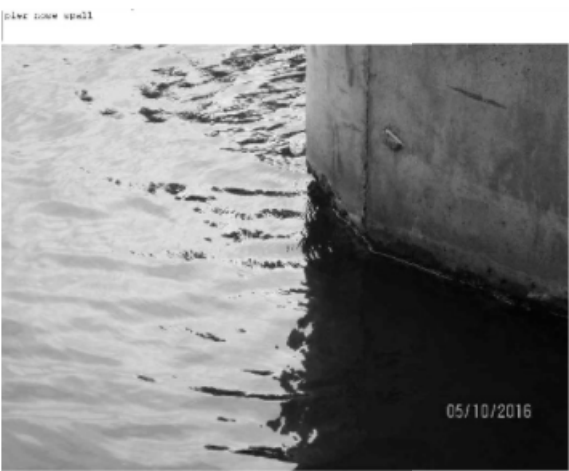
\*ESTIMATED QUANTITIES

NO.	DATE	REVISION	BY
ORIGINAL PLANS PREPARED BY			
BAXTER & WOODMAN Consulting Engineers			
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-63-17			
DRAWN BY		DCD	PLANS CK'D. BAB
CROSS SECTION & QUANTITIES		SHEET 2 OF 5	

B-63-017 ( HONEY BEAR BRIDGE )  
STH 70 over WISCONSIN RIVER 53  
May 10, 2016



(DOWNSTREAM BRIDGE FACE - LOOKING EAST)



(DOWNSTREAM NOSE AND SOUTH PIER FACE)



(UPSTREAM NOSE AND NORTH PIER FACE)



(PIER 2 - LOOKING WEST)

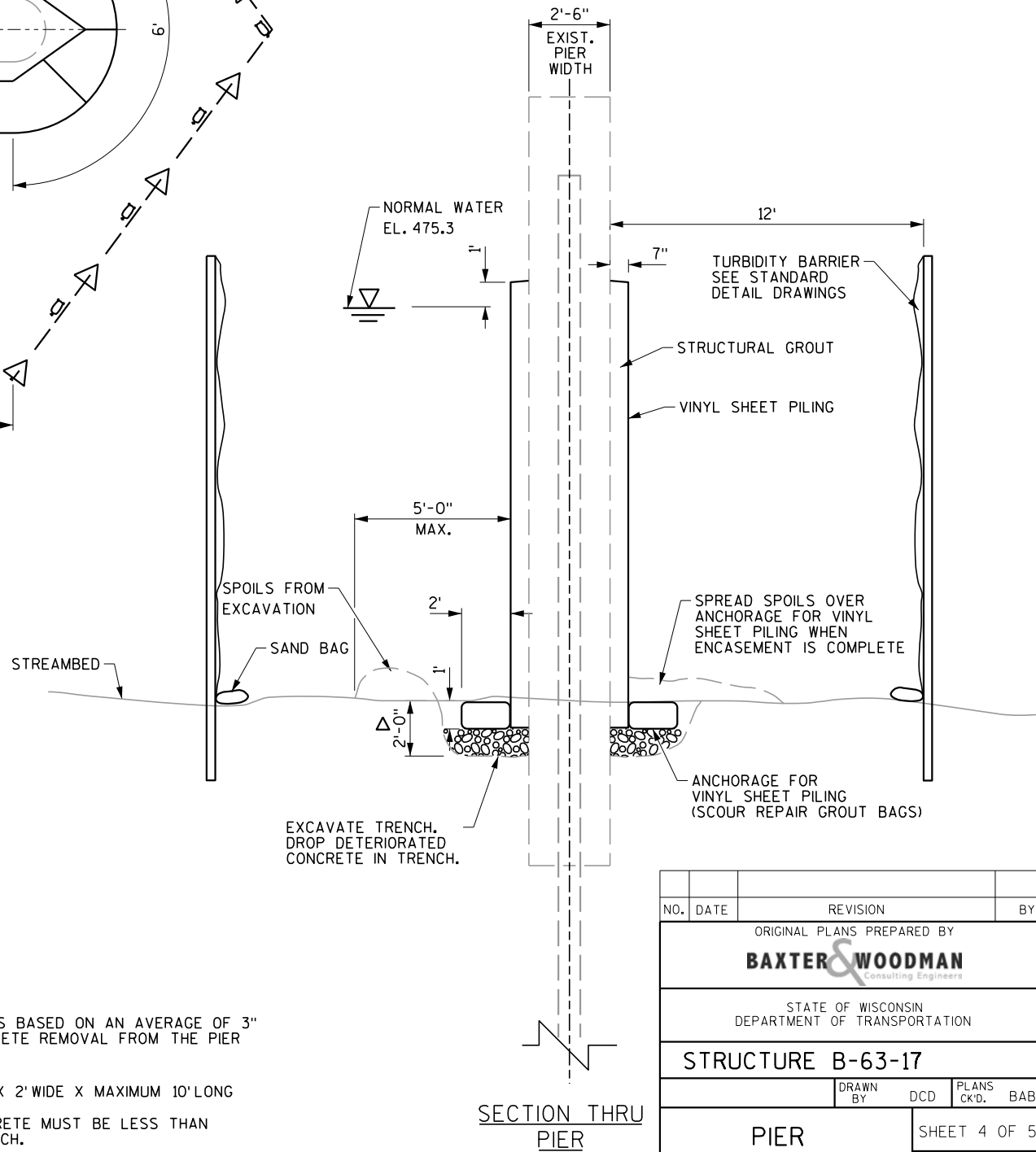
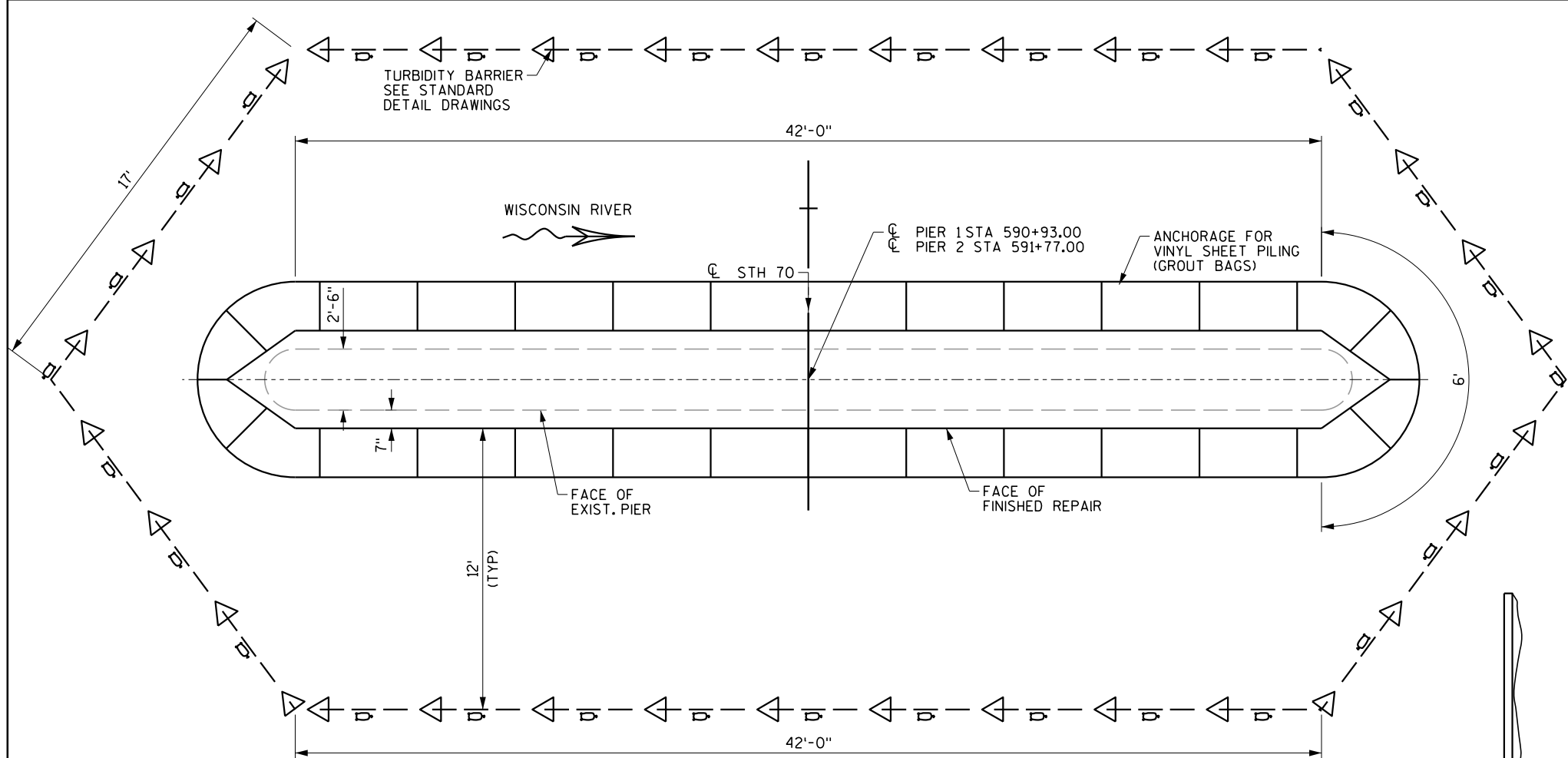


(PIER 1 - LOOKING EAST)



(SOUTEAST BRIDGE QUADRANT)

NO.	DATE	REVISION	BY
ORIGINAL PLANS PREPARED BY <b>BAXTER &amp; WOODMAN</b> Consulting Engineers			
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-63-17			
	DRAWN BY	DCD	PLANS CK'D. BAB
TYPICAL PIER PHOTOS		SHEET 3 OF 5	

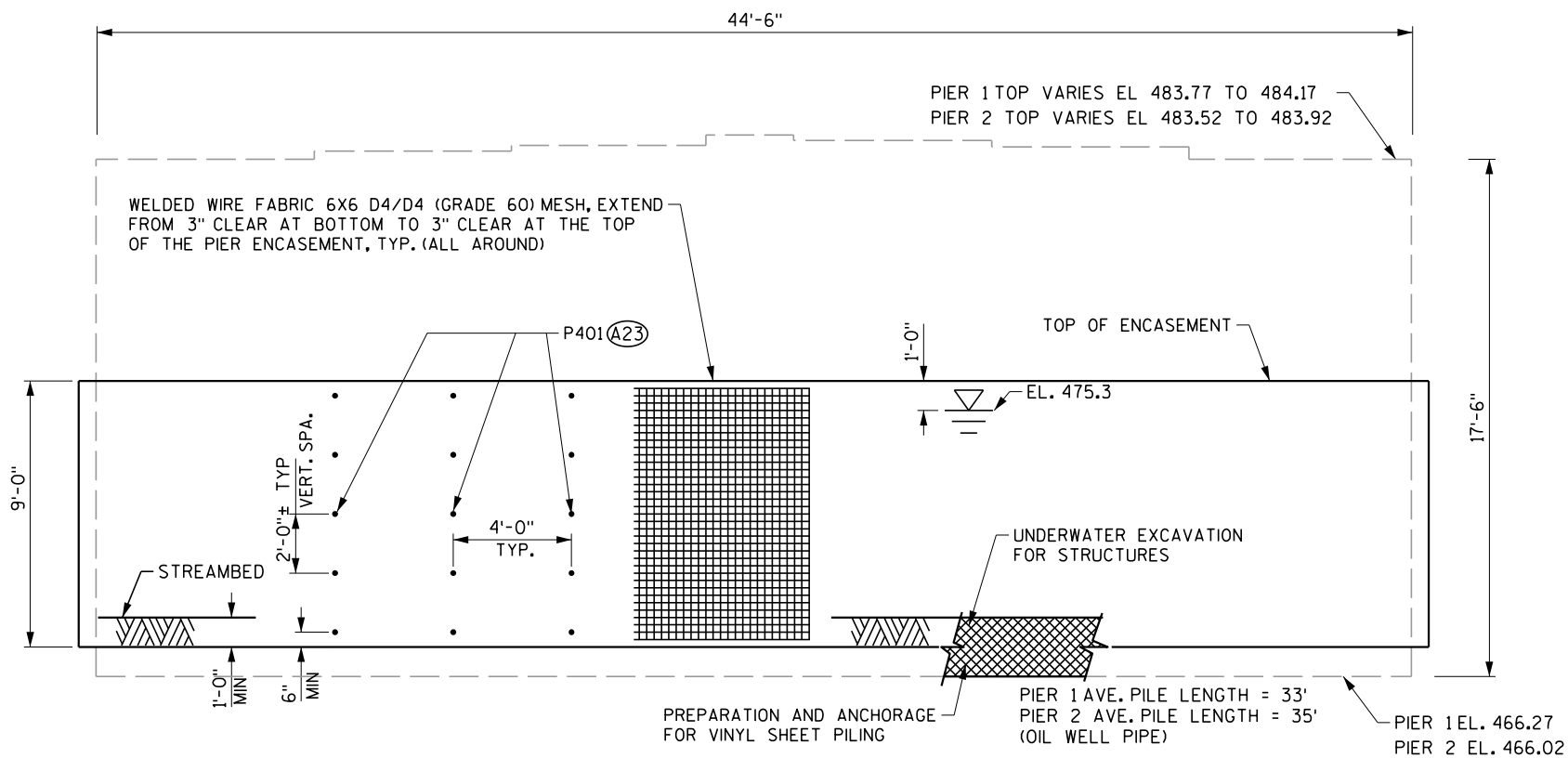


△ EXCAVATION DEPTH IS BASED ON AN AVERAGE OF 3" THICKNESS OF CONCRETE REMOVAL FROM THE PIER SURFACE.

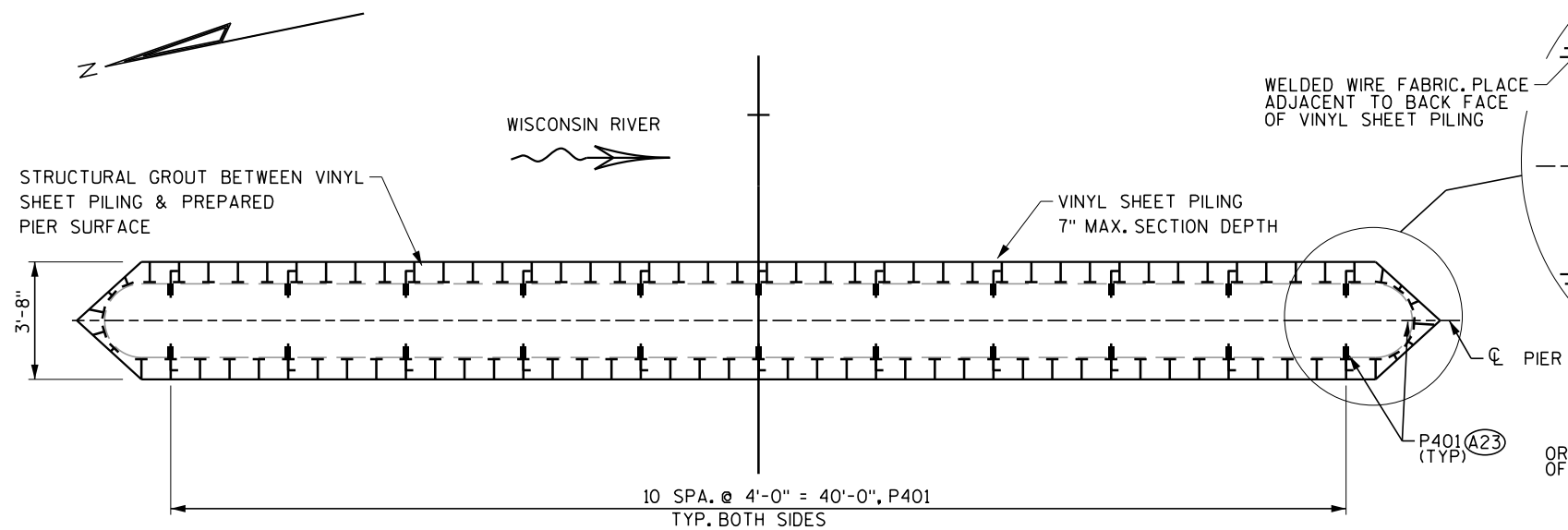
GROUT BAGS 1' HIGH X 2' WIDE X MAXIMUM 10' LONG

DETERIORATED CONCRETE MUST BE LESS THAN 5" DIAMETER IN TRENCH.

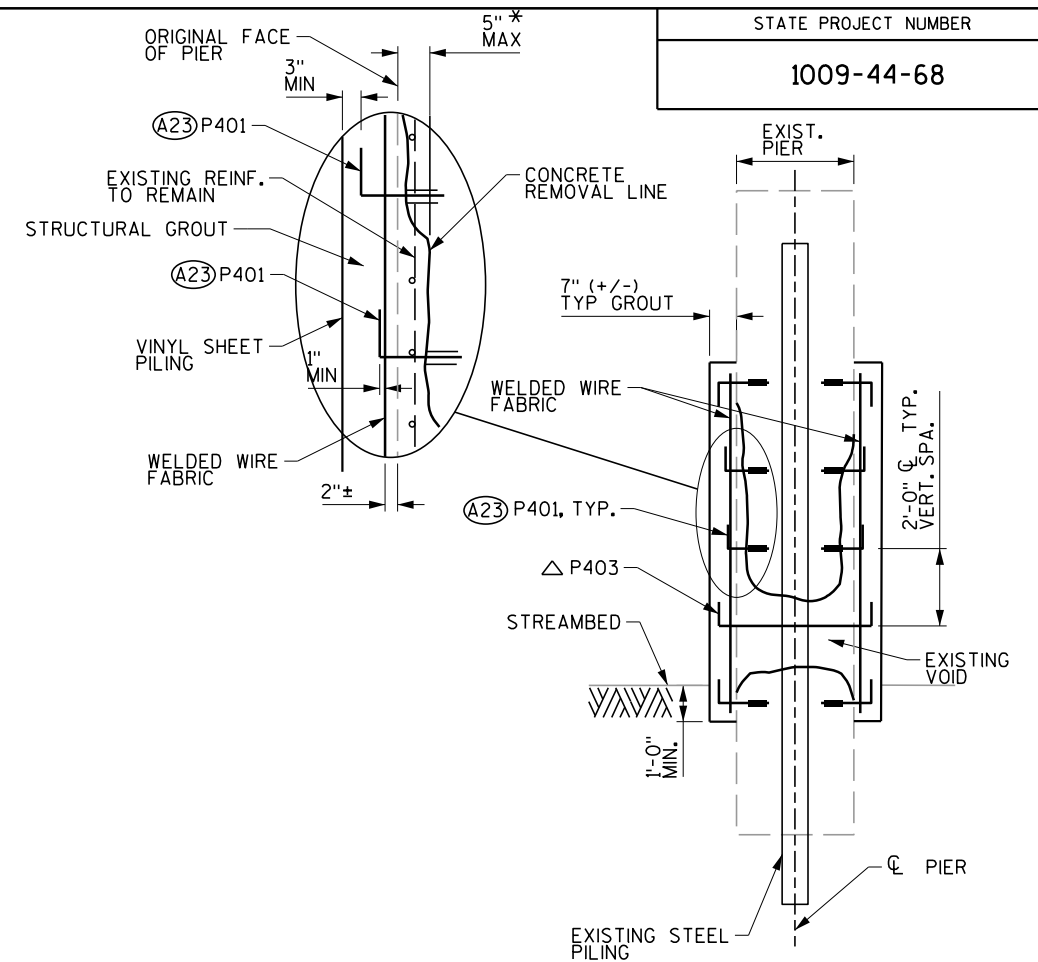
NO.	DATE	REVISION		BY
ORIGINAL PLANS PREPARED BY <b>BAXTER &amp; WOODMAN</b> <i>Consulting Engineers</i>				
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION				
STRUCTURE B-63-17				
DRAWN BY		DCD	PLANS CK'D.	BAB
PIER DETAILS			SHEET 4 OF 5	



ELEVATION



PLAN



END VIEW

- \* DO NOT REMOVE CONCRETE MORE THAN 5" FROM ORIGINAL FACE OF PIER
- △ USE P403 IN PLACE OF P401 WHERE VOIDS EXIST IN THE PIER SHAFT.

BILL OF BARS

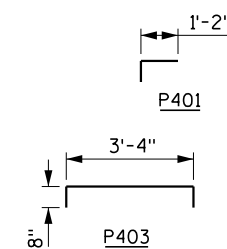
BAR MARK	COAT	NO. REQ'D.		LENGTH	BENT	LOCATION
		PIER 1	PIER 2			
(A23) P401		130	130	1'-9"	X	ANCHORS
P402		5	5	20'-0"		UNDISTRIBUTED
P403		20	20	4'-6"	X	TIES FOR VOIDS

NOTES

- (A23) ADHESIVE ANCHORS NO. 4 BARS. EMBED MIN. 6" INTO EXISTING CONCRETE. TURN 8" LEG AS NECESSARY TO FIT. EMBED ANCHORS DEEPER AS NECESSARY TO MAINTAIN MINIMUM CLEARANCE.

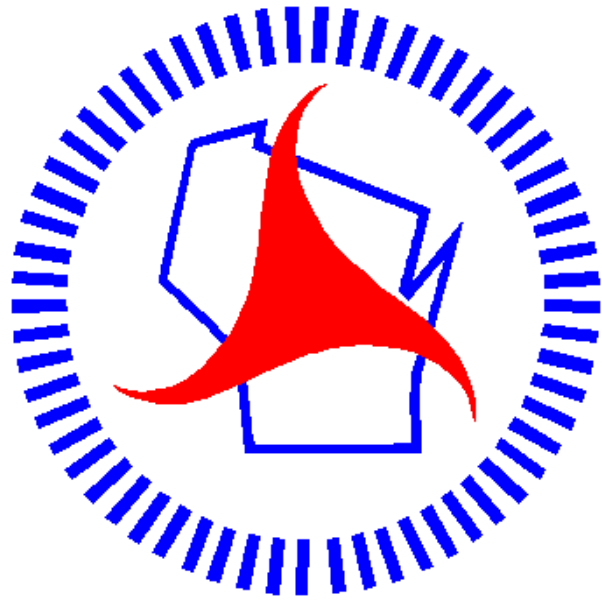
P402 IS AN UNDISTRIBUTED QUANTITY OF 20'-0" LONG NO. 4 BARS TO REPLACE EXISTING BARS IN POOR CONDITION.

BAR BENDING DIAGRAMS



NO.	DATE	REVISION	BY
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<b>BAXTER &amp; WOODMAN</b> Consulting Engineers			
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-63-17			
DRAWN BY		DCD	PLANS CK'D. BAB
PIER DETAILS		SHEET 5 OF 5	

## Notes



## ***Wisconsin Department of Transportation***

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through innovation and exceptional service.

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