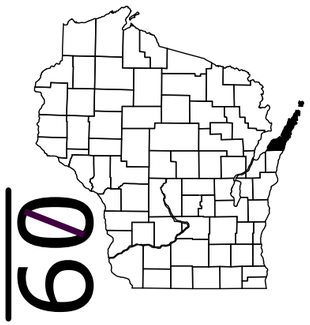
GRE AUG 2015

PROJECT ID: 4430-16-60
WITH: N/A

COUNTY: DOOR

ORDER OF SHEETS

TOTAL SHEETS = 64



60

N

DESIGN DESIGNATION

A.A.D.T.	2011	= 11,970
A.A.D.T.		=
D.H.V.		=
D.D.		=
T.		=
DESIGN SPEED		= 50 MPH
ESALS		=

CONVENTIONAL SYMBOLS

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

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

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

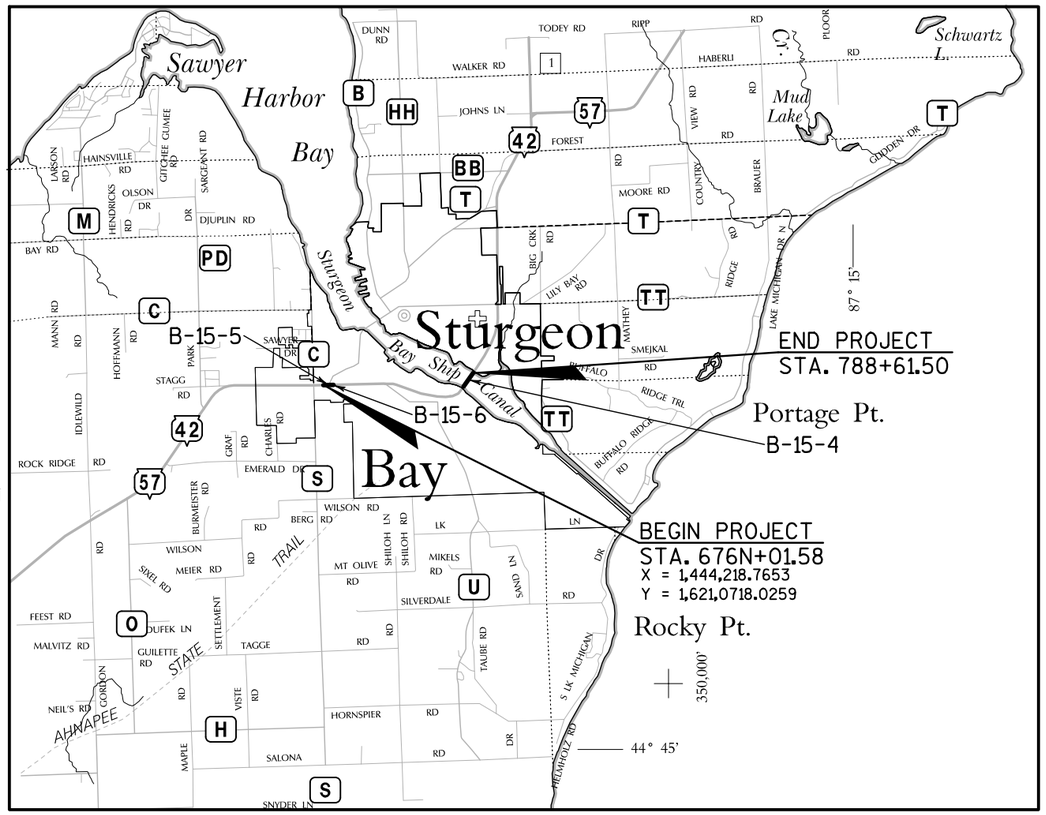
STURGEON BAY BRIDGE
BRIDGE MAINTENANCE

STH 42
DOOR COUNTY

STATE PROJECT NUMBER
4430-16-60

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
4430-16-60	———	———

R-25-E R-26-E



T-27-N T-27-N

LAYOUT
SCALE 0 2 MI.

TOTAL NET LENGTH OF CENTERLINE = 0.369 MI.

ORIGINAL PLANS PREPARED BY

AECOM
342 N Water Street, 7th Floor
Milwaukee, WI 53202
(414) 831-4100

WISCONSIN
WILLIAM R. SCHILLING
E-35841
WAUKESHA, WISCONSIN
PROFESSIONAL ENGINEER

4/29/15 (Date) (Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	WisDOT
Designer	AECOM
Project Manager	JEREMY ASHAUER
Regional Examiner	
Regional Supervisor	JIM THOMPSON
C.O. Examiner	

APPROVED FOR THE DEPARTMENT

DATE: 4/29/2015 (Signature)

E

GENERAL NOTES

THE LOCATION OF EXISTING UTILITY LOCATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJCET AREA THAT ARE NOT SHOWN. THE CONTRACTOR SHALL NOTIFY DIGGERS HOTLINE AND ALL UTILITIES IN THE VICINITY OF THE PROJECT TO LOCATE THEIR FACILITIES AT LEAST THREE WORKING DAYS PRIOR TO BEGINNING WORK.

ORDER OF SECTION 2 SHEETS

CONTACTS

WIS. DEPT. OF TRANSPORTATION
NE REGION
MR. JEREMY ASHAUER, PROJECT MANAGER
944 VANDERPERREN WAY
GREEN BAY, WI 54304-0080
920-492-4165
JEREMY.ASHAUER@DOT.WI.GOV

AECOM
MR. WILLIAM SCHILLING, DESIGN CONTACT
342 NORTH WATER ST, 7TH FLOOR
MILWAUKEE, WI 53202
414-831-4176
414-831-4101 FAX
BILL.SCHILLING@AECOM.COM

WISCONSIN DEPARTMENT
OF NATURAL RESOURCES
MR. MATT SCHAEVE
2984 SHAWANO AVENUE
GREEN BAY, WI 54313-6727
920-662-5472
920-662-5159 FAX
MATTHEW.SCHAEVE@WISCONSIN.GOV

US ARMY CORPS OF ENGINEERS
JOEY SHOEMAKER
OLD FORT SQUARE
211 N. BROADWAY STREET, SUITE 221
GREEN BAY, WI 54303

UTILITIES

AT&T WISCONSIN
COMMUNICATION LINE
MR. JOSEPH KASSAB
221 WEST WASHINGTON STREET
APPLETON, WI 54911-4742
920-735-3206
JK572K@ATT.COM

CHARTER COMMUNICATIONS
COMMUNICATION LINE
NICK FRASE
3315 LINCOLN AVENUE
TWO RIVER, WI 54241
920-793-2216 EXT 30
920-304-6797 MOBILE
NICK.FRASE@CHARTER.COM

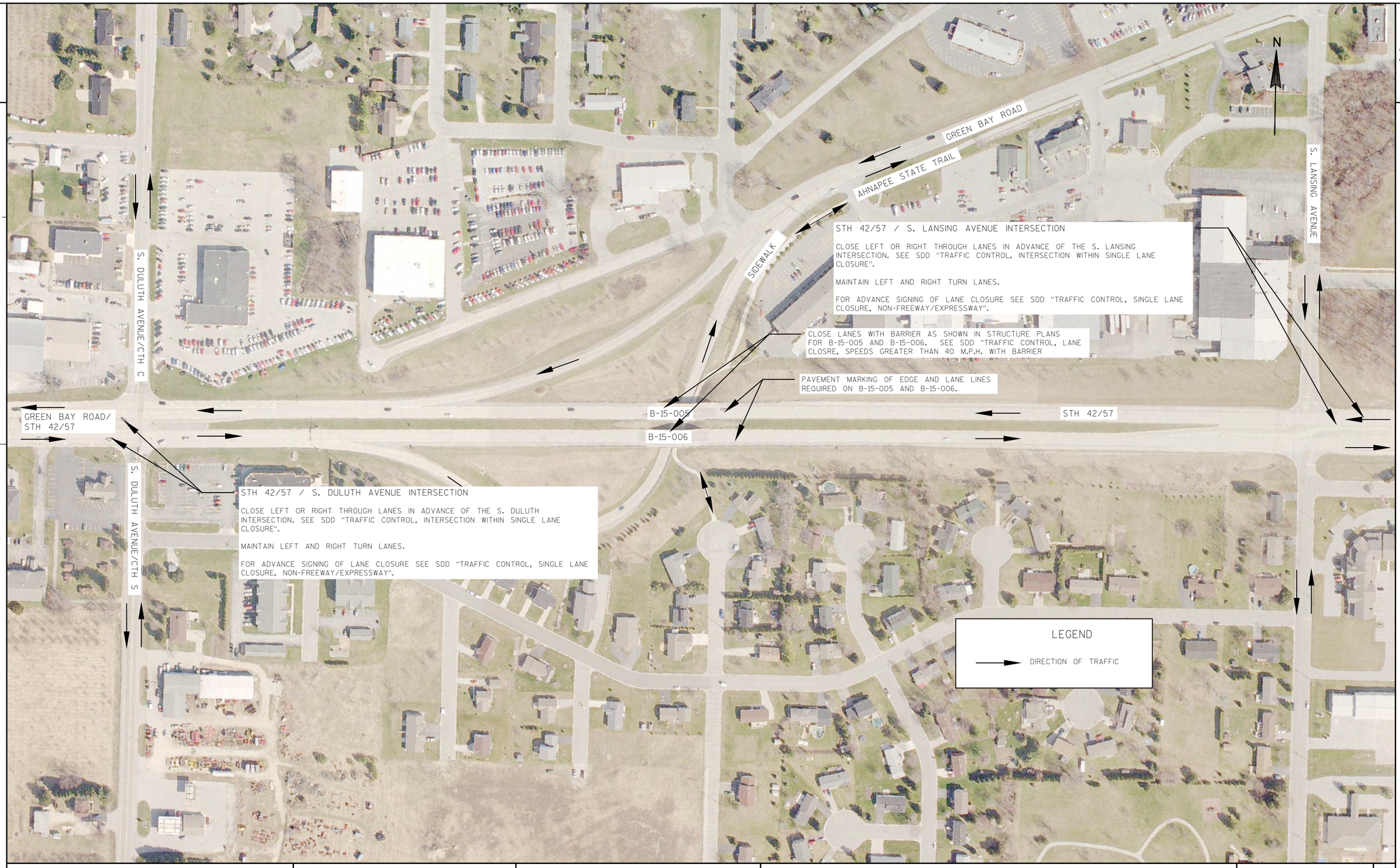
WISCONSIN PUBLIC SERVICE CORP.
GAC/PETROLEUM
MR. JERRY PEOT
800 COLUMBUS ST
TWO RIVERS, WI 54241
920-657-1815
920-655-0522
GPEOT@WPSR.COM

2

PROJECT NO: 4430-16-60	HWY: STH 42	COUNTY: DOOR	PROJECT OVERVIEW	SHEET 3	E

FILE NAME : P:\Transportation\WisDOT_design_MC 2014-16\W03 - Bayview Bridge\CADD\sheets\020200_po.dgn PLOT DATE : 4/30/2015 PLOT BY : james_hannig PLOT NAME : PLOT SCALE : 0.5000 sf / in.

WISDOT/CADDS SHEET 42



PROJECT NO: 4430-16-60	HWY: STH 42/57	COUNTY: DOOR	TRAFFIC CONTROL	SHEET 4	E

NOTES:

1. STATE HIGHWAY 42/57 (GREEN BAY RD.) OVER STRUGEON BAY SHIP CANAL WILL BE CLOSED DURING BRIDGE MAINTENANCE WORK. NORTHBOUND AND SOUTHBOUND TRAFFIC WILL BE DETOURED THROUGH STRUGEON BAY BAY DOWNTOWN AS DESCRIBED BELOW.

2. NORTHBOUND NON-TRUCK TRAFFIC WILL BE DETOURED VIA S. MADISON AVE./MICHIGAN ST./N. 3RD AVE./ JEFFERSON ST./EGG HARBOR RD. TO STH 42/57.

3. NORTHBOUND TRUCK TRAFFIC WILL BE DETOURED VIA S. MADISON AVE./MICHIGAN ST./N. 14TH AVE./ EGG HARBOR RD. TO STH 42/57.

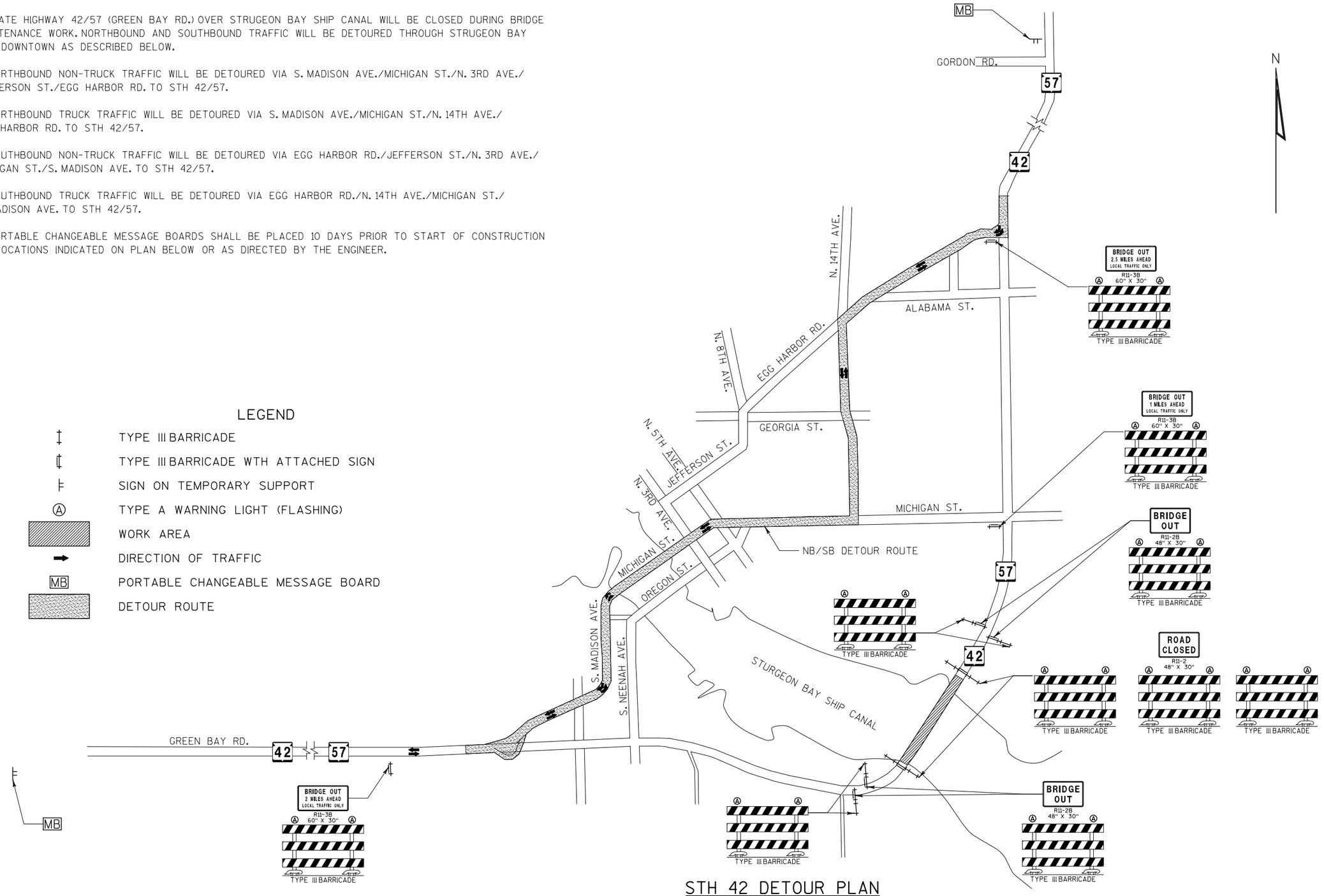
4. SOUTHBOUND NON-TRUCK TRAFFIC WILL BE DETOURED VIA EGG HARBOR RD./JEFFERSON ST./N. 3RD AVE./ MICHIGAN ST./S. MADISON AVE. TO STH 42/57.

5. SOUTHBOUND TRUCK TRAFFIC WILL BE DETOURED VIA EGG HARBOR RD./N. 14TH AVE./MICHIGAN ST./ S. MADISON AVE. TO STH 42/57.

6. PORTABLE CHANGEABLE MESSAGE BOARDS SHALL BE PLACED 10 DAYS PRIOR TO START OF CONSTRUCTION AT LOCATIONS INDICATED ON PLAN BELOW OR AS DIRECTED BY THE ENGINEER.

LEGEND

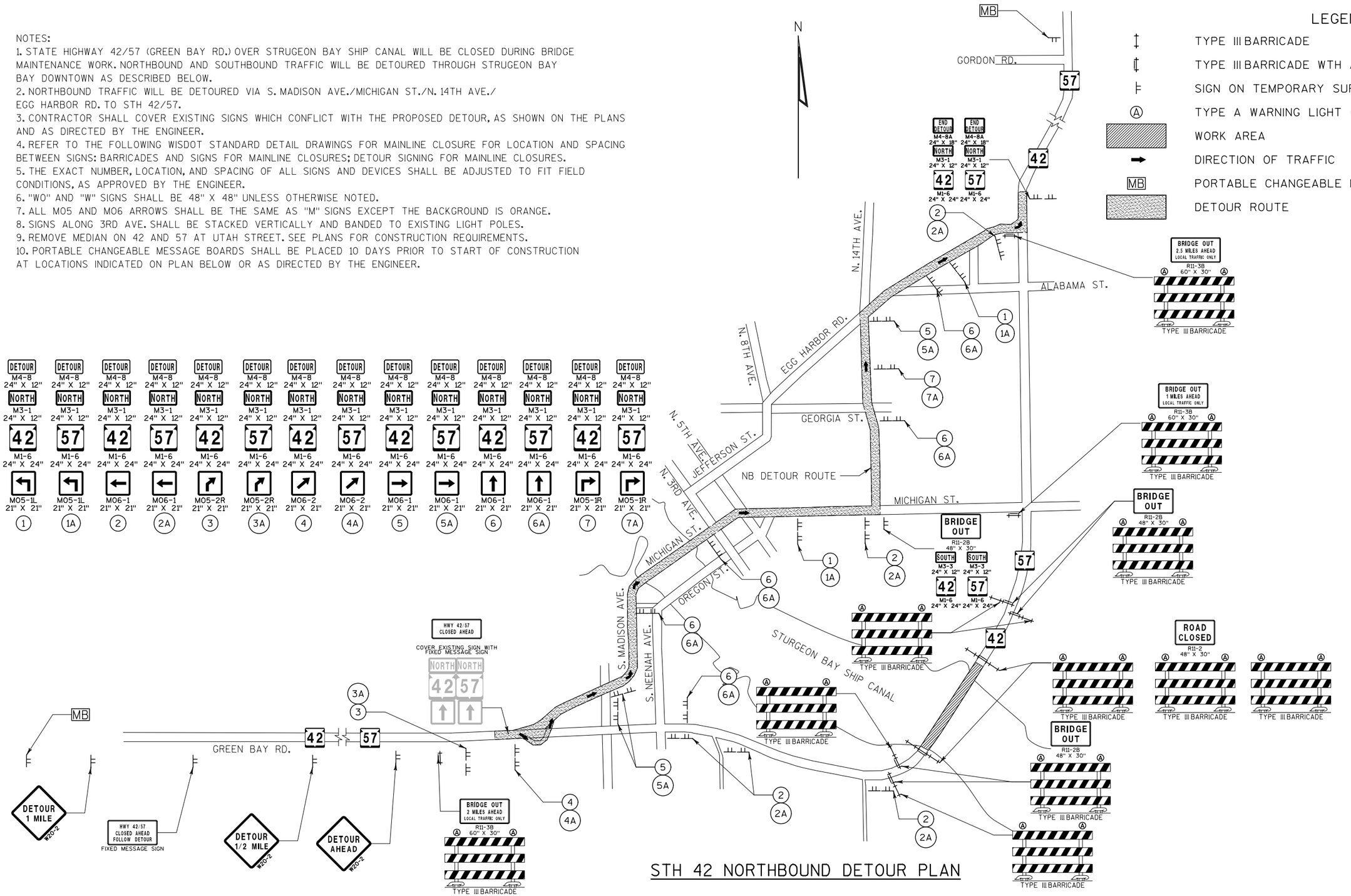
- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- SIGN ON TEMPORARY SUPPORT
- (A) TYPE A WARNING LIGHT (FLASHING)
- WORK AREA
- DIRECTION OF TRAFFIC
- MB PORTABLE CHANGEABLE MESSAGE BOARD
- DETOUR ROUTE



STH 42 DETOUR PLAN

PROJECT NO: 4430-16-60	HWY: STH 42	COUNTY: DOOR	DETOUR PLAN OVERVIEW	SHEET 5	E

NOTES:
1. STATE HIGHWAY 42/57 (GREEN BAY RD.) OVER STRUGEON BAY SHIP CANAL WILL BE CLOSED DURING BRIDGE MAINTENANCE WORK. NORTHBOUND AND SOUTHBOUND TRAFFIC WILL BE DETOURED THROUGH STRUGEON BAY BAY DOWNTOWN AS DESCRIBED BELOW.
2. NORTHBOUND TRAFFIC WILL BE DETOURED VIA S. MADISON AVE./MICHIGAN ST./N. 14TH AVE./ EGG HARBOR RD. TO STH 42/57.
3. CONTRACTOR SHALL COVER EXISTING SIGNS WHICH CONFLICT WITH THE PROPOSED DETOUR, AS SHOWN ON THE PLANS AND AS DIRECTED BY THE ENGINEER.
4. REFER TO THE FOLLOWING WISDOT STANDARD DETAIL DRAWINGS FOR MAINLINE CLOSURE FOR LOCATION AND SPACING BETWEEN SIGNS: BARRICADES AND SIGNS FOR MAINLINE CLOSURES; DETOUR SIGNING FOR MAINLINE CLOSURES.
5. THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS, AS APPROVED BY THE ENGINEER.
6. "WO" AND "W" SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED.
7. ALL M05 AND M06 ARROWS SHALL BE THE SAME AS "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.
8. SIGNS ALONG 3RD AVE. SHALL BE STACKED VERTICALLY AND BANDED TO EXISTING LIGHT POLES.
9. REMOVE MEDIAN ON 42 AND 57 AT UTAH STREET. SEE PLANS FOR CONSTRUCTION REQUIREMENTS.
10. PORTABLE CHANGEABLE MESSAGE BOARDS SHALL BE PLACED 10 DAYS PRIOR TO START OF CONSTRUCTION AT LOCATIONS INDICATED ON PLAN BELOW OR AS DIRECTED BY THE ENGINEER.



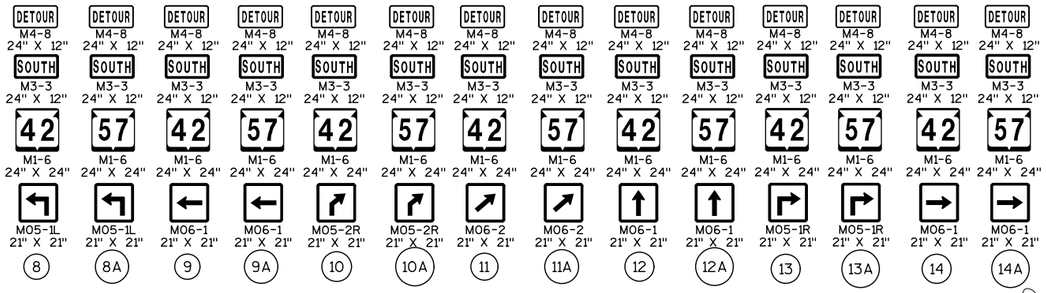
LEGEND

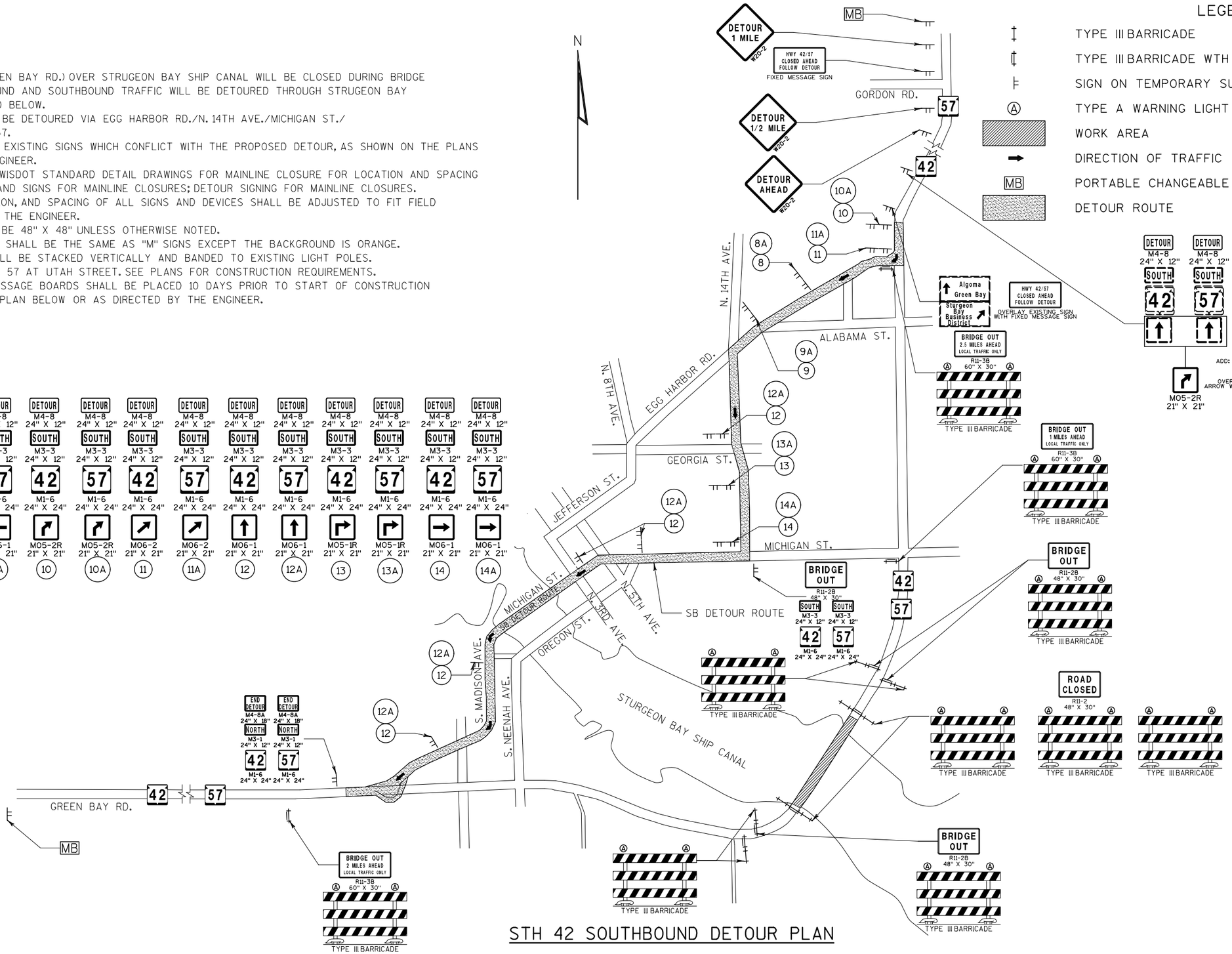
- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- SIGN ON TEMPORARY SUPPORT
- (A) TYPE A WARNING LIGHT (FLASHING)
- WORK AREA
- DIRECTION OF TRAFFIC
- MB PORTABLE CHANGEABLE MESSAGE BOARD
- DETOUR ROUTE

STH 42 NORTHBOUND DETOUR PLAN

PROJECT NO: 4430-16-60	HWY: STH 42	COUNTY: DOOR	NORTHBOUND DETOUR PLAN	SHEET 6	E

NOTES:
1. STATE HIGHWAY 42/57 (GREEN BAY RD.) OVER STRUGEON BAY SHIP CANAL WILL BE CLOSED DURING BRIDGE MAINTENANCE WORK. NORTHBOUND AND SOUTHBOUND TRAFFIC WILL BE DETOURED THROUGH STRUGEON BAY BAY DOWNTOWN AS DESCRIBED BELOW.
2. SOUTHBOUND TRAFFIC WILL BE DETOURED VIA EGG HARBOR RD./N. 14TH AVE./MICHIGAN ST./ S. MADISON AVE. TO STH 42/57.
3. CONTRACTOR SHALL COVER EXISTING SIGNS WHICH CONFLICT WITH THE PROPOSED DETOUR, AS SHOWN ON THE PLANS AND AS DIRECTED BY THE ENGINEER.
4. REFER TO THE FOLLOWING WISDOT STANDARD DETAIL DRAWINGS FOR MAINLINE CLOSURE FOR LOCATION AND SPACING BETWEEN SIGNS: BARRICADES AND SIGNS FOR MAINLINE CLOSURES; DETOUR SIGNING FOR MAINLINE CLOSURES.
5. THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS, AS APPROVED BY THE ENGINEER.
6. "WO" AND "W" SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED.
7. ALL M05 AND M06 ARROWS SHALL BE THE SAME AS "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.
8. SIGNS ALONG 3RD AVE. SHALL BE STACKED VERTICALLY AND BANDED TO EXISTING LIGHT POLES.
9. REMOVE MEDIAN ON 42 AND 57 AT UTAH STREET. SEE PLANS FOR CONSTRUCTION REQUIREMENTS.
10. PORTABLE CHANGEABLE MESSAGE BOARDS SHALL BE PLACED 10 DAYS PRIOR TO START OF CONSTRUCTION AT LOCATIONS INDICATED ON PLAN BELOW OR AS DIRECTED BY THE ENGINEER.



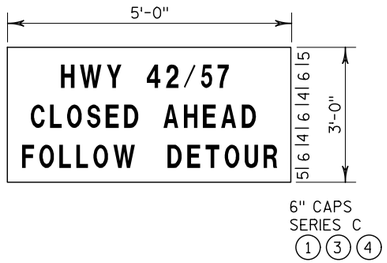


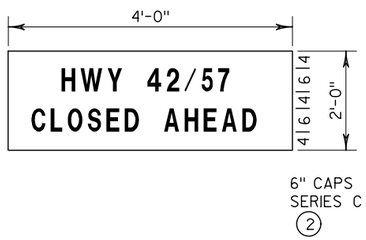
LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- SIGN ON TEMPORARY SUPPORT
- TYPE A WARNING LIGHT (FLASHING)
- WORK AREA
- DIRECTION OF TRAFFIC
- PORTABLE CHANGEABLE MESSAGE BOARD
- DETOUR ROUTE

STH 42 SOUTHBOUND DETOUR PLAN

PROJECT NO: 4430-16-60	HWY: STH 42	COUNTY: DOOR	SOUTHBOUND DETOUR PLAN	SHEET 7	E





FIXED MESSAGE SIGNS

GENERAL NOTES

1) ALL SIGNS TO HAVE STANDARD REFLECTIVE SHEETING - REFERENCE: "WISDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" LATEST EDITION.

2) AFTER SIGNS HAVE BEEN LOCATED IN THE FIELD, BUT BEFORE INSTALLATION, THE SIGNING AND MARKING SUPERVISOR SHALL VERIFY EACH SIGN LOCATION.

3) ALL FIXED MESSAGE SIGNS TO BE MOUNTED ON WOODEN POST SUPPORTS (4" X 6"). THE NUMBER OF POSTS REQUIRED FOR EACH SIGN IS SHOWN. STEEL POSTS (2" X 2") MAY BE USED FOR SIGNS ON SURFACE STREETS.

4) SIGNS ON THIS SHEET TO BE PAID UNDER THE ITEM "FIXED MESSAGE SIGNS".

5) SIGNS SHALL BE BLACK NON-REFLECTIVE MESSAGE ON ORANGE REFLECTIVE BACKGROUND.

6) ALL SIGNS SHALL HAVE CAPITAL LETTERS AND NUMERALS:
   6-IN CAPS SHALL BE SERIES C
   12-IN CAPS SHALL BE SERIES D

7) CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO THE ENGINEER FOR REVIEW PRIOR TO MANUFACTURING.

8) SIGN BASE MATERIAL SHALL BE ACCORDING TO SECTION 637.2.1.2.

9) SIGN NUMBERS SHOWN BY ...(XX)

10) SIGNS TO BE PLACED 10 DAYS PRIOR TO CONSTRUCTION.

DATE 29JUN15 — E S T I M A T E O F Q U A N T I T I E S

LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	4430-16-60 QUANTITY
0010	203.0600.S	Removing Old Structure Over Waterway With Minimal Debris (station) 01. STA 777+50.00	LS	1.000	1.000
0020	312.0115	Select Crushed Material	CY	60.000	60.000
0030	502.3100	Expansion Device (structure) 01. B-15-4	LS	1.000	1.000
0040	502.3200	Protective Surface Treatment	SY	1,039.000	1,039.000
0050	502.3210.S	Pigmented Protective Surface Treatment	SY	1,990.000	1,990.000
0060	502.3215.S	Protective Surface Treatment Reseal	SY	220.000	220.000
0070	502.5005	Masonry Anchors Type L No. 5 Bars	EACH	300.000	300.000
0080	505.0605	Bar Steel Reinforcement HS Coated Bridges	LB	5,380.000	5,380.000
0090	506.0605	Structural Steel HS	LB	21,400.000	21,400.000
0100	506.6000	Bearing Assemblies Expansion (structure) 01. B-15-4	EACH	24.000	24.000
0110	506.7050.S	Removing Bearings (structure) 01. B-15-4	EACH	24.000	24.000
0120	509.0301	Preparation Decks Type 1	SY	119.000	119.000
0130	509.0302	Preparation Decks Type 2	SY	32.000	32.000
0140	509.1000	Joint Repair	SY	18.000	18.000
0150	509.1500	Concrete Surface Repair	SF	2,250.000	2,250.000
0160	509.2500	Concrete Masonry Overlay Decks	CY	80.000	80.000
0170	509.5100.S	Polymer Overlay	SY	161.000	161.000
0180	509.9005.S	Removing Concrete Masonry Deck Overlay (structure) 01. B-15-5	SY	457.000	457.000
0190	509.9005.S	Removing Concrete Masonry Deck Overlay (structure) 02. B-15-6	SY	457.000	457.000
0200	509.9025.S	Epoxy Injection Crack Repair	LF	66.000	66.000
0210	509.9026.S	Cored Holes 2-Inch Diameter	EACH	6.000	6.000
0220	517.0600	Painting Epoxy System (structure) 01. B-15-4	LS	1.000	1.000
0230	517.1000.S	Structure Repainting Organic Zinc Rich System (structure) 01. B-15-4	LS	1.000	1.000
0240	517.3000.S	Structure Overcoating Cleaning and Priming (structure) 01. B-15-4	LS	1.000	1.000
0250	517.4000.S	Containment and Collection of Waste Materials (structure) 01. B-15-4	LS	1.000	1.000
0260	517.4500.S	Negative Pressure Containment and Collection of Waste Materials (structure) 01. B-15-4	LS	1.000	1.000
0270	517.6001.S	Portable Decontamination Facility	EACH	1.000	1.000
0280	603.8000	Concrete Barrier Temporary Precast Delivered	LF	1,600.000	1,600.000
0290	603.8125	Concrete Barrier Temporary Precast Installed	LF	1,600.000	1,600.000
0300	619.1000	Mobilization	EACH	1.000	1.000
0310	628.1905	Mobilizations Erosion Control	EACH	1.000	1.000
0320	628.1910	Mobilizations Emergency Erosion Control	EACH	1.000	1.000
0330	628.7015	Inlet Protection Type C	EACH	10.000	10.000
0340	643.0100	Traffic Control (project) 01. 4330-16-60	EACH	1.000	1.000
0350	643.0300	Traffic Control Drums	DAY	6,040.000	6,040.000
0360	643.0410	Traffic Control Barricades Type II	DAY	10.000	10.000
0370	643.0420	Traffic Control Barricades Type III	DAY	3,391.000	3,391.000
0380	643.0705	Traffic Control Warning Lights Type A	DAY	4,695.000	4,695.000
0390	643.0715	Traffic Control Warning Lights Type C	DAY	880.000	880.000
0400	643.0800	Traffic Control Arrow Boards	DAY	80.000	80.000
0410	643.0900	Traffic Control Signs	DAY	4,388.000	4,388.000
0420	643.0910	Traffic Control Covering Signs Type I	EACH	2.000	2.000

3

DATE 29JUN15 E S T I M A T E O F Q U A N T I T I E S

LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	4430-16-60 QUANTITY
0430	643.0920	Traffic Control Covering Signs Type II	EACH	1.000	1.000
0440	643.1000	Traffic Control Signs Fixed Message	SF	53.000	53.000
0450	643.1050	Traffic Control Signs PCMS	DAY	100.000	100.000
0460	643.2000	Traffic Control Detour (project) 01. 4430-16-60	EACH	1.000	1.000
0470	643.3000	Traffic Control Detour Signs	DAY	64,904.000	64,904.000
0480	646.0106	Pavement Marking Epoxy 4-Inch	LF	1,800.000	1,800.000
0490	646.0600	Removing Pavement Markings	LF	800.000	800.000
0500	649.0400	Temporary Pavement Marking Removable Tape 4-Inch	LF	3,200.000	3,200.000
0510	SPV.0060	Special 01. PPC BEAM END BLOCK REPAIR	EACH	30.000	30.000
0520	SPV.0060	Special 02. CLEAN AND COAT CONCRETE BEAM ENDS	EACH	36.000	36.000
0530	SPV.0060	Special 03. SEAL PARAPET DEFLECTION JOINTS	EACH	123.000	123.000
0540	SPV.0060	Special 04. REMOVE AND RESET BEAM CONNECTION	EACH	5.000	5.000
0550	SPV.0085	Special 01. FURNISH BRIDGE BALANCE PLATES	LB	84,500.000	84,500.000
0560	SPV.0105	Special 01. TRAP DOOR REPLACE HINGES	LS	1.000	1.000
0570	SPV.0105	Special 02. BALANCE BASCULE BRIDGE LEAVES	LS	1.000	1.000
0580	SPV.0105	Special 03. ELECTRICAL WORK	LS	1.000	1.000
0590	SPV.0105	Special 04. MECHANICAL WORK	LS	1.000	1.000
0600	SPV.0165	Special 01. STEEL GRID REMOVE AND REPLACE **P**	SF	6,105.000	6,105.000
0610	SPV.0165	Special 02. PPC BEAM SURFACE REPAIR	SF	40.000	40.000
0620	SPV.0165	Special 03. CONCRETE FILL FOR ROADWAY GRID DECK	SF	890.000	890.000
0630	SPV.0180	Special 01. POLYMER OVERLAY PATCHING	SY	12.000	12.000
0640	SPV.0180	Special 02. REMOVE POLYMER OVERLAY	SY	161.000	161.000

3

TEMPORARY CONCRETE BARRIER

		603.8000 CONCRETE BARRIER TEMPORARY PRECAST DELIVERED LF	603.8125 CONCRETE BARRIER TEMPORARY PRECAST INSTALLED LF
B-15-5	STH 42 SB OUTSIDE LANE	400	400
	STH 42 SB MEDIAN LAN	400	400
B-15-6	STH 42 NB OUTSIDE LANE	400	400
	STH 42 NB MEDIAN LAN	400	400
TOTAL		1600	1600

TRAFFIC CONTROL

	643.0100 TRAFFIC CONTROL 4430-16-60 EACH	643.2000 TRAFFIC CONTROL DETOUR 4430-16-60 EACH	643.0300 TRAFFIC CONTROL DRUMS EACH	643.0300 DAYS	643.0410 TRAFFIC CONTROL BARRICADES TYPE II EACH	643.0410 DAYS	643.0420 TRAFFIC CONTROL BARRICADES TYPE III EACH	643.0420 DAYS	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A EACH	643.0705 DAYS	643.0715 TYPE C EACH	643.0715 DAYS	643.0800 TRAFFIC CONTROL ARROW BOARDS EACH	643.0800 DAYS	643.0900 TRAFFIC CONTROL SIGNS EACH	643.0900 DAYS	643.1050 TRAFFIC CONTROL SIGNS PCMS EACH	643.1050 DAY	NO. OF CLOSURES	DAYS
PROJECT 4430-16-60	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-
NORTHBOUND DETOUR	-	-	-	-	-	-	11	1,342	16	1,952	-	-	-	-	10	1,220	2	14	1	122
SOUTHBOUND DETOUR	-	-	-	-	-	-	11	1,342	16	1,952	-	-	-	-	10	1,220	2	14	1	122
B-15-5: STH 42 SB OUTSIDE LANE	-	-	75	1,125	-	-	2	30	-	-	11	165	1	15	18	270	1	15	1	15
B-15-5: STH 42 SB MEDIAN LANE	-	-	75	1,275	-	-	2	34	-	-	11	187	1	17	18	306	1	17	1	17
B-15-6: STH 42 NB OUTSIDE LANE	-	-	75	1,125	-	-	2	30	-	-	11	165	1	15	18	270	1	15	1	15
B-15-6: STH 42 NB MEDIAN LANE	-	-	75	1,275	-	-	2	34	-	-	11	187	1	17	18	306	1	17	1	17
STH 42 NB EXIT RAMP	-	-	28	28	-	-	4	4	4	4	-	-	-	-	6	6	1	1	1	1
SIDEWALK UNDER BRIDGES	-	-	-	-	8	8	-	-	-	-	-	-	-	-	4	4	-	-	1	1
SUBTOTALS	1	1		4,828		8		2,816		3,908		704		64		3,602		93		
UNDISTRIBUTED	-	-		1,212		2		575		787		176		16		786		7		
TOTALS	1	1		6,040		10		3,391		4,695		880		80		4,388		100		

DETOUR SIGNS

SIGN MESSAGE	SIGN CODE	SIZE	643.3000 TRAFFIC CONTROL DETOUR SIGNS SIZE 2 EACH	643.3000 TRAFFIC CONTROL DETOUR SIGNS SIZE 2 DAY
NORTHBOUND				
DETOUR AHEAD	W20-2A	48" X 48"	1	122
DETOUR 1/2 MILE	W20-2	48" X 48"	1	122
DETOUR 1 MILE	W20-2	48" X 48"	1	122
DETOUR	M4-8	24" X 12"	44	5,368
TRUCK	M4-4	24" X 12"	12	1,464
ARROW TILT RT OR LT	M06-2	21" X 21"	2	244
ARROW AHEAD TILT RT	M06-2	21" X 21"	8	976
ARROW RT OR LT OR AHEAD	M06-1	21" X 21"	28	3,416
AHEAD RIGHT TURN	M05-1R	21" X 21"	2	244
AHEAD LEFT TURN	M05-1L	21" X 21"	4	488
END DETOUR	M4-8A	24" X 18"	2	244
NORTH	M3-1	24" X 12"	46	5,612
SOUTH	M3-3	24" X 12"	2	244
SHIELD 57	M1-6	24" X 24"	24	2,928
SHIELD 42	M1-6	24" X 24"	24	2,928
BRIDGE OUT	R11-2B	48" X 30"	3	366
ROAD CLOSED	R11-2	48" X 30"	2	244
BRIDGE OUT XX MILES AHEAD LOCAL TRAFFIC ONLY	R11-3B	60" X 30"	3	366
POSTS	13		54	6,588
SOUTHBOUND				
DETOUR AHEAD	W20-2A	48" X 48"	1	122
DETOUR 1/2 MILE	W20-2	48" X 48"	1	122
DETOUR 1 MILE	W20-2	48" X 48"	1	122
DETOUR	M4-8	24" X 12"	46	5,612
TRUCK	M4-4	24" X 12"	18	2,196
ARROW TILT RT OR LT	M06-2	30" X 30"	6	732
ARROW AHEAD TILT RT	M06-2	21" X 21"	2	244
ARROW RT OR LT OR AHEAD	M06-1	21" X 21"	30	3,660
AHEAD RIGHT TURN	M05-1R	21" X 21"	4	488
AHEAD LEFT TURN	M05-1L	21" X 21"	4	488
END DETOUR	M4-8A	24" X 18"	2	244
NORTH	M3-1	24" X 12"	0	0
SOUTH	M3-2	24" X 12"	48	5,856
SHIELD 57	M1-6	24" X 24"	24	2,928
SHIELD 42	M1-6	24" X 24"	24	2,928
BRIDGE OUT	R11-2B	48" X 30"	3	366
ROAD CLOSED	R11-2	48" X 30"	2	244
BRIDGE OUT XX MILES AHEAD LOCAL TRAFFIC ONLY	R11-3B	60" X 30"	3	366
POSTS	13		50	6,100
		TOTAL		64,904

TRAFFIC CONTROL SIGNS FIXED MESSAGE

SIGN NO.	SIGN MESSAGE	SIGN SIZE W (FT)	SIGN SIZE H (FT)	643.1000 TRAFFIC CONTROL SIGNS FIXED MESSAGE SF
NORTHBOUND				
1	HWY 42/57 CLOSED AHEAD FOLLOW DETOUR	5	3	15
2	HWY 42/57 CLOSED AHEAD	4	2	8
SOUTHBOUND				
1	HWY 42/57 CLOSED AHEAD FOLLOW DETOUR	5	3	15
2	HWY 42/57 CLOSED AHEAD FOLLOW DETOUR	5	3	15
TOTAL				53

EROSION CONTROL MOBILIZATION

	629.1905 MOBILIZATIONS EROSION CONTROL EACH	629.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH
BRIDGE OVERLAYS	1	1
TOTAL	1	1

TRAFFIC CONTROL COVERING SIGNS

	643.0910 TYPE I EACH	643.0920 TYPE II EACH	EXISTING SIGN	SIGN CODE	CYCLES
NORTHBOUND	-	1	42 ARROW 57	-	1
SOUTHBOUND	1	-	ALGOMA-GREEN BAY AHEAD STURGEON BAY BUSINESS DISTRICT RIGHT	-	1
BRIDGE OVERLAYS	1	-	BUSINESS 42/57 RIGHT	-	1
TOTAL	2	1			

INLET PROTECTION

	628.7015 INLET PROTECTION TYPE C EACH
BRIDGE OVERLAYS	8
UNDISTRIBUTED	2
TOTAL	10

PAVEMENT MARKINGS

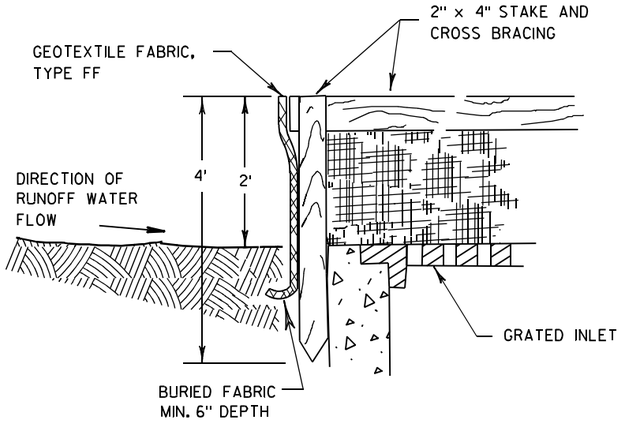
		646.0106 PAVEMENT MARKING EPOXY 4-INCH WHITE LF	646.0106 PAVEMENT MARKING EPOXY 4-INCH YELLOW LF	646.0600 REMOVING PAVEMENT MARKINGS LF	649.0400 TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH WHITE LF	649.0400 TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH YELLOW LF
B-15-5	EDGE LINE	400	400	400	800	800
	LANE LINE	100	-	-	-	-
B-15-6	EDGE LINE	400	400	400	800	800
	LANE LINE	100	-	-	-	-
SUBTOTAL		1000	800	800	1600	1600
TOTAL		1800			3200	

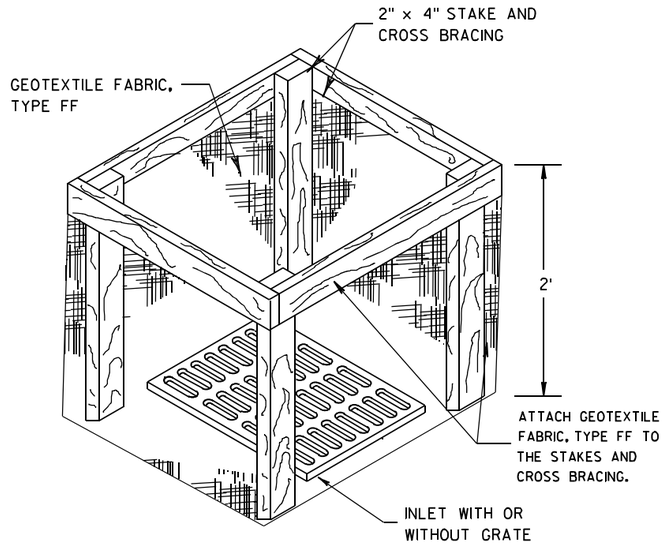
ALL QUANTITIES ARE CATEGORY 0010 UNLESS NOTED

Standard Detail Drawing List

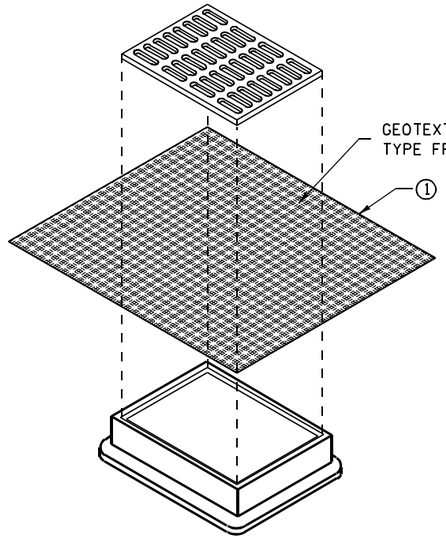
08E10-02	INLET PROTECTION TYPE A, B, C AND D
14B07-14A	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-14B	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-14C	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-14D	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-14E	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-14F	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-14G	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-14H	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B20-11A	STEEL THRIE BEAM STRUCTURE APPROACH
14B20-11B	STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTION TO SQUARE END PARAPETS
15C02-05A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-05B	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-05C	DETOUR SIGNING FOR MAINLINE CLOSURES
15C08-16A	PAVEMENT MARKING (MAINLINE)
15D03-02	TRAFFIC CONTROL, LANE CLOSURE, SPEEDS GREATER THAN 40 M.P.H. WITH BARRIER
15D20-03	TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY
15D21-03	TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE

6



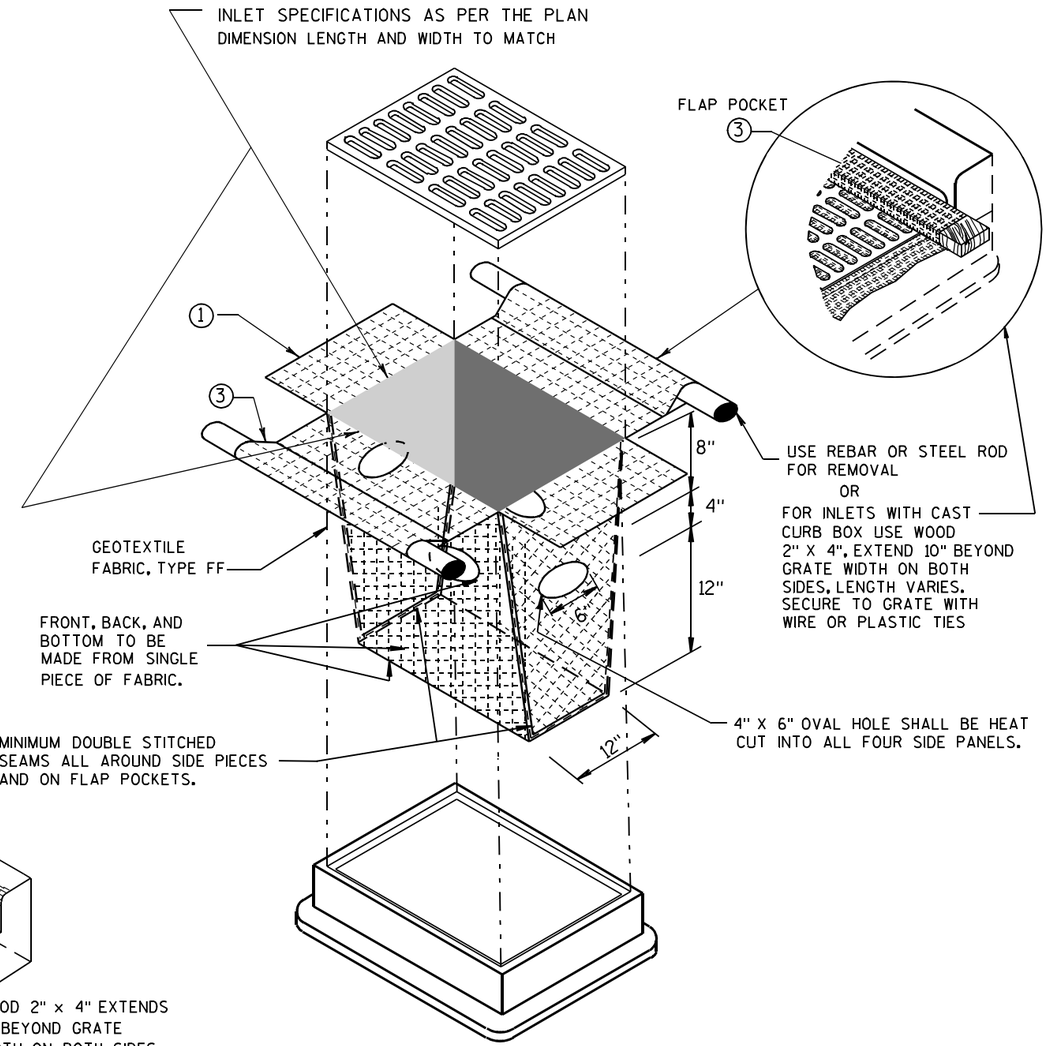


INLET PROTECTION, TYPE A



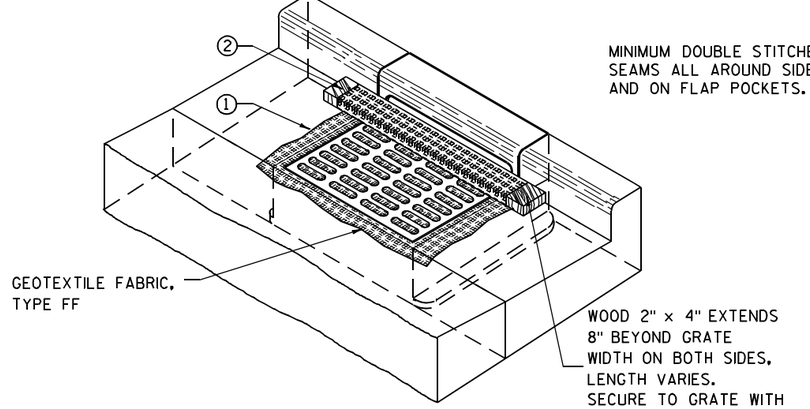
INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)

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



INLET PROTECTION, TYPE D

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



INLET PROTECTION, TYPE C (WITH CURB BOX)

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.

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.

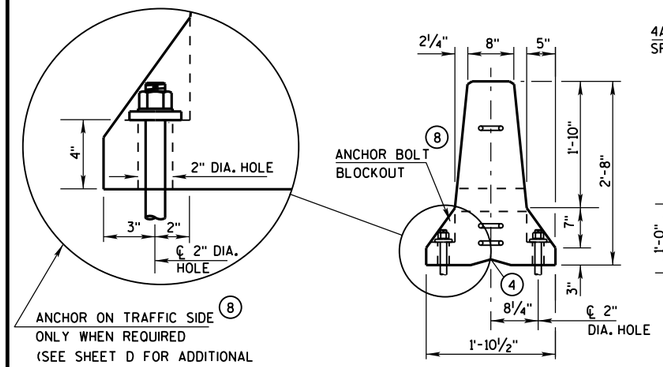
THE INSTALLED BAG SHALL HAVE A MINIMUM SIDE CLEARANCE, BETWEEN THE INLET WALLS AND THE BAG, MEASURED AT THE BOTTOM OF THE OVERFLOW HOLES, OF 3". WHERE NECESSARY THE CONTRACTOR SHALL CINCH THE BAG, USING PLASTIC ZIP TIES, TO ACHIEVE THE 3" CLEARANCE. THE TIES SHALL BE PLACED AT A MAXIMUM OF 4" FROM THE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

INLET PROTECTION
TYPE A, B, C, AND D

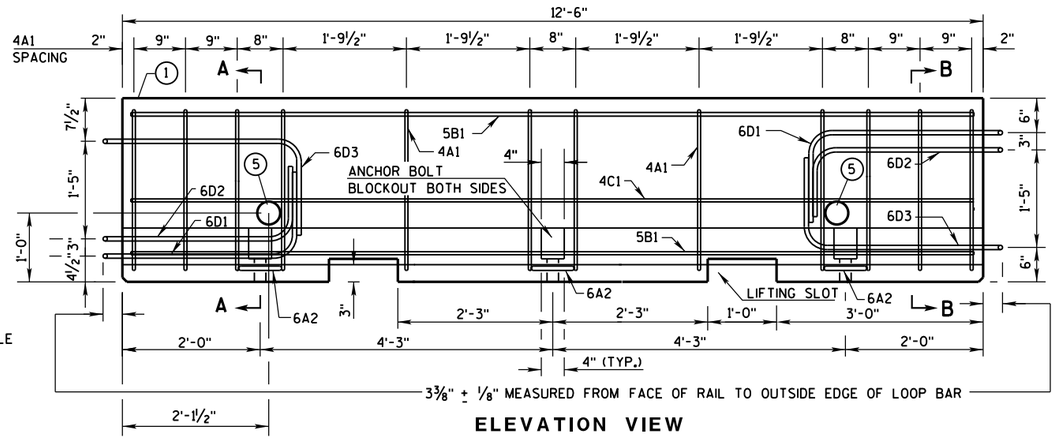
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

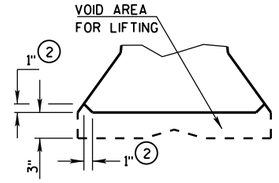
6
S.D.D. 8 E 10-2



END VIEW



ELEVATION VIEW



DETAIL "B"
LIFTING SLOT DETAIL

GENERAL NOTES

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

DO NOT INTERMIX CONCRETE BARRIER TEMPORARY PRCAST, 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 ¾" 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 3-½" PIN BEND DIAMETER FOR BEND TESTS. THE LOOPS SHALL BE INSTALLED WITHIN ⅛" 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 EPOXY ANCHORS PER MANUFACTURER'S RECOMMENDATIONS. PROVIDE MANUFACTURER'S INFORMATION TO PROJECT ENGINEER.

(1) MARK ONE END OF EACH BARRIER PERMANENTLY BY FORMING INTO THE BARRIER THE FOLLOWING INFORMATION:
- a. TYPE: WI CBTP
- b. MANUFACTURER
- c. DATE MANUFACTURED (MONTH AND YEAR)

(2) 1" CHAMFER TO PREVENT SPALLING.

(3) A ⅜" HOLE IN THE CONNECTION PIN, AT THE LOCATION SHOWN, IS ACCEPTABLE, BUT NOT REQUIRED..

(4) "V" NOTCH IS OPTIONAL.

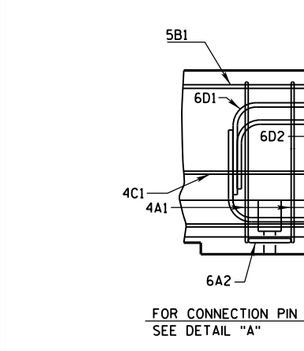
(5) THE 4" DIAMETER, 11 GAUGE STEEL, ROUND MECHANICAL TUBING SLEEVE FOR LIFTING (OPTIONAL).

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

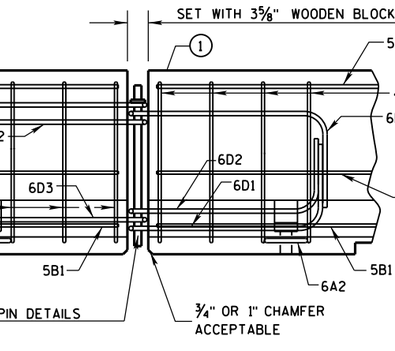
(7) USE DELINEATORS CONFORMING TO SECTION 633 OF THE STANDARD SPECIFICATIONS. CONTRACTOR MAY USE ALTERNATE SHAPES AND HOUSING. INSTALL DELINEATORS ACCORDING TO MANUFACTURES INSTRUCTION. INSTALL YELLOW REFLECTORS WHEN BARRIER IS LOCATED TO THE LEFT OF TRAFFIC AND WHITE REFLECTORS WHEN BARRIER IS LOCATED 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.

(8) SEE SHEET D FOR ANCHORING CRITERIA.

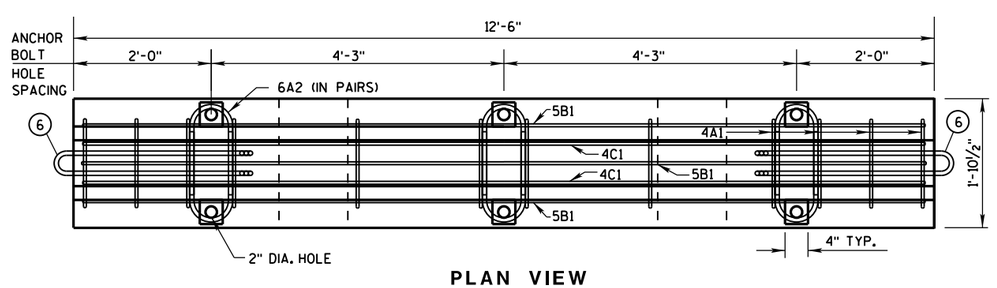
(9) 1" CHAMFER OPTIONAL.



SECTION A-A
(STIRRUP PLACEMENT)



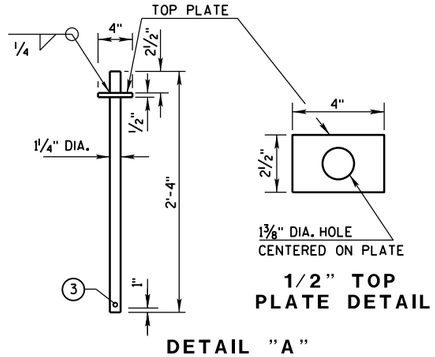
SECTION B-B
(STIRRUP PLACEMENT)



PLAN VIEW

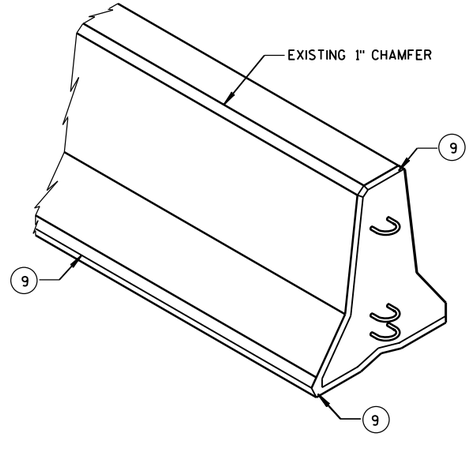
DETAILS OF BARRIER SECTION

DETAILS OF BARRIER CONNECTION



1/2" TOP
PLATE DETAIL

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

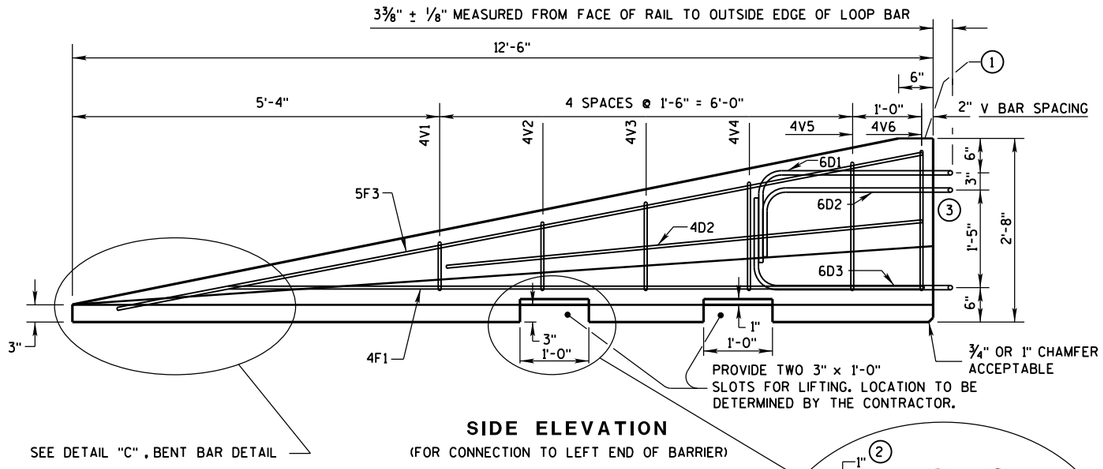


CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

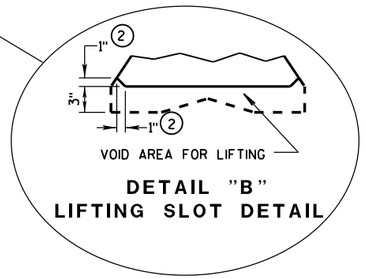
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

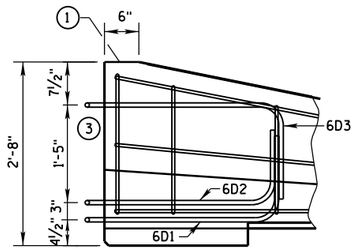
S.D.D. 14 B 7-14a



SIDE ELEVATION
(FOR CONNECTION TO LEFT END OF BARRIER)



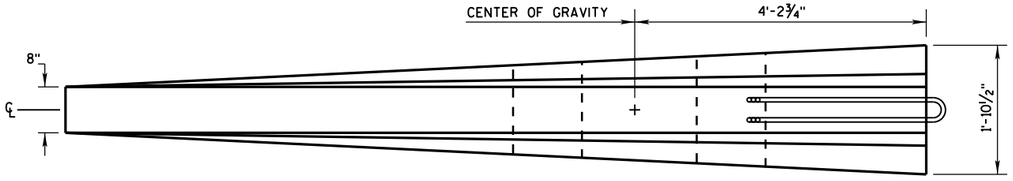
DETAIL "B"
LIFTING SLOT DETAIL



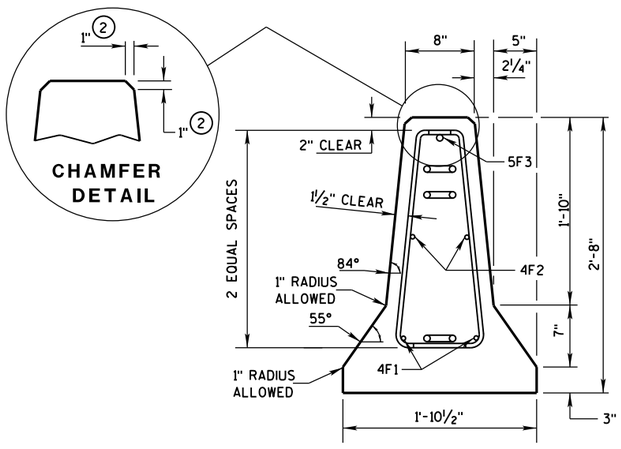
SIDE ELEVATION
LOOP BAR ASSEMBLY INVERTED
FOR OPPOSITE END.
(FOR CONNECTION TO RIGHT END OF BARRIER)

GENERAL NOTES

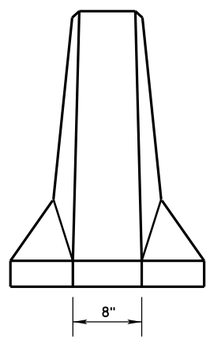
1. MARK ONE END OF EACH BARRIER PERMANENTLY BY FORMING INTO THE BARRIER THE FOLLOWING INFORMATION:
   a. TYPE WICBTP
   b. MANUFACTURER
   c. DATE MANUFACTURED (MONTH AND YEAR)
2. 1" CHAMFER TO PREVENT SPALLING.
3. NEVER USE LOOP BARS (6D1, 6D2 OR 6D3) TO LIFT, MOVE OR REPOSITION THE BARRIER.



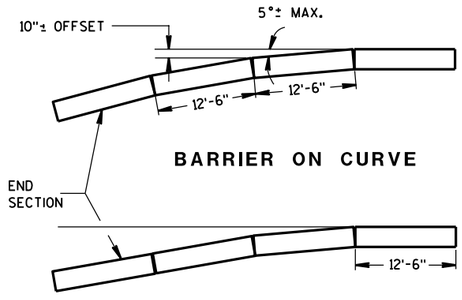
PLAN VIEW



END SECTION



FRONT ELEVATION



BARRIER ON CURVE

FLARE AT BARRIER END

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

DETAILS OF BARRIER TAPER SECTION

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

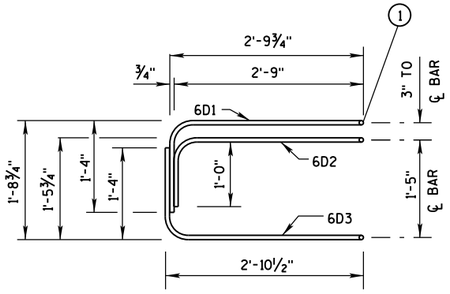
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6
S.D.D. 14 B 7-14b

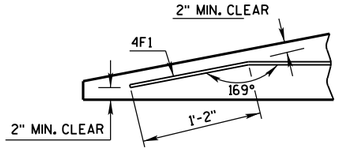
BARRIER TAPER SECTION BILL OF MATERIALS

(PER 12'-6" BARRIER TAPER SECTION)

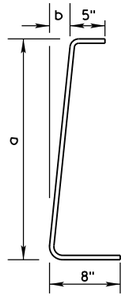
BAR	BAR SIZE	NO. OF BARS	LENGTH FT.
4V1	4	2	1'-11"
4V2	4	2	2'-2"
4V3	4	2	2'-6"
4V4	4	2	2'-9"
4V5	4	2	3'-2"
4V6	4	2	3'-4"
4F1	4	2	12'-0"
4F2	4	2	7'-6"
5F3	5	1	11'-9"
LOOP ASSEMBLY			
6D1	6	1	8'-5"
6D2	6	1	7'-7"
6D3	6	1	8'-6"



ELEVATION
LOOP BAR ASSEMBLY



DETAIL "C"
BENT BAR DETAIL



BAR	a	b
V1	10"	1"
V2	1'-1"	1¼"
V3	1'-5"	1⅝"
V4	1'-8"	1⅞"
V5	2'-0½"	2⅜"
V6	2'-3"	2¾"

4V BARS
2 AT EACH SIZE REQUIRED
FOR STIRRUP ASSEMBLY

TAPER BARRIER SECTION

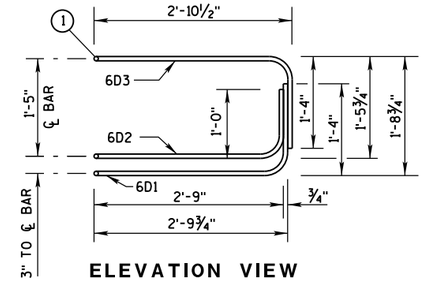
GENERAL NOTES

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

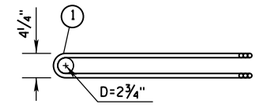
BARRIER SECTION BILL OF MATERIALS

(PER 12'-6" BARRIER SECTION)

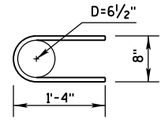
BAR	BAR SIZE	NO. OF BARS	LENGTH FT.
4A1	4	12	6'-0"
6A2	6	6	2'-11"
5B1	5	3	12'-2"
4C1	4	2	12'-2"
LOOP ASSEMBLY			
6D1	6	2	8'-5"
6D2	6	2	7'-7"
6D3	6	2	8'-6"



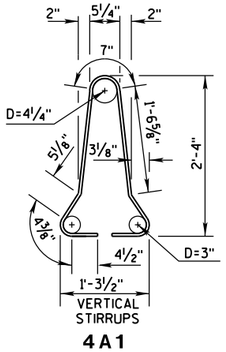
ELEVATION VIEW



PLAN VIEW
LOOP BAR ASSEMBLY
(MARKED END SHOWN, INVERT FOR OTHER END)



6A2



4A1

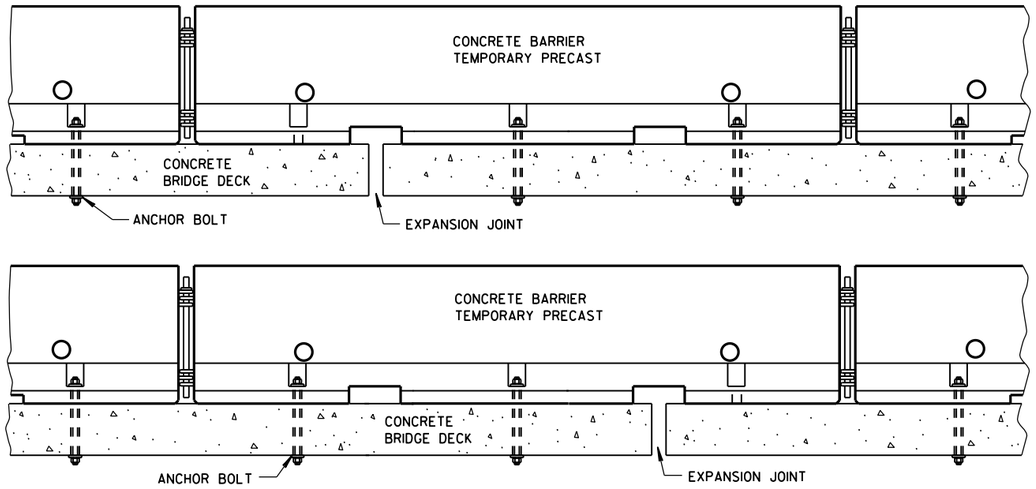
BARRIER SECTION

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

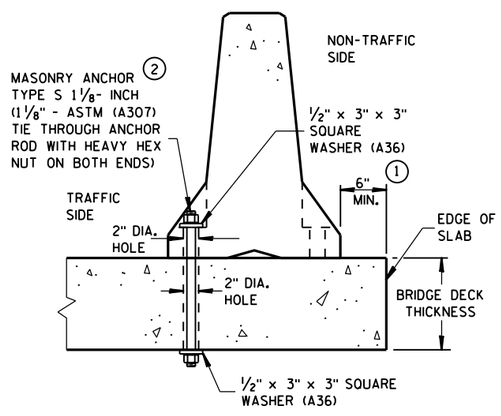
6

S.D.D. 14 B 7-14c



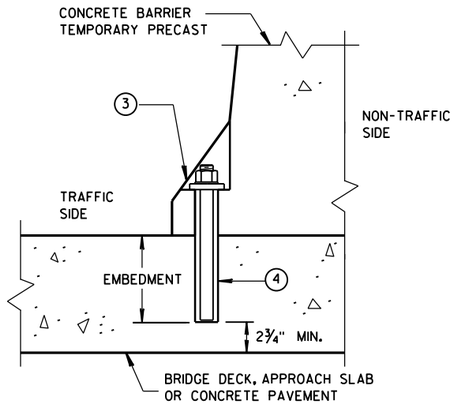
TREATMENT AT BRIDGE DECK EXPANSION JOINTS

(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 NOTUSE ON CONCRETE BRIDGE DECK WITH ASPHALT OVERLAY)



REMOVABLE ADHESIVE BONDED ANCHOR ② INSTALLATION ON CONCRETE BRIDGE DECK, CONCRETE APPROACH SLAB, OR CONCRETE PAVEMENT

(DO NOT USE ON CONCRETE WITH AN ASPHALTIC OVERLAY)

GENERAL NOTES

① CONCRETE BARRIER TEMPORARY PRECAST, 12'-6" SHALL BE ANCHORED IF:
THE DISTANCE TO A 2 FOOT OR GREATER DROPOFF THAT IS STEEPER THAN 3H : 1V, FOR EXAMPLE THE EDGE OF A BRIDGE DECK OR A DROPOFF AT THE EDGE OF PAVEMENT, IS LESS THAN 4 FEET FROM THE SIDE OF THE BARRIER CLOSEST TO THE DROPOFF AND THE POSTED SPEED IS 45 MPH OR GREATER, OR

THE DISTANCE TO A 2 FOOT OR GREATER DROPOFF THAT IS STEEPER THAN 3H : 1V, FOR EXAMPLE THE EDGE OF A BRIDGE DECK OR A DROPOFF AT THE EDGE OF PAVEMENT. IS LESS THAN 2 FEET FROM THE SIDE OF THE BARRIER CLOSEST TO THE DROPOFF AND THE POSTED SPEED IS 40 MPH OR LESS.

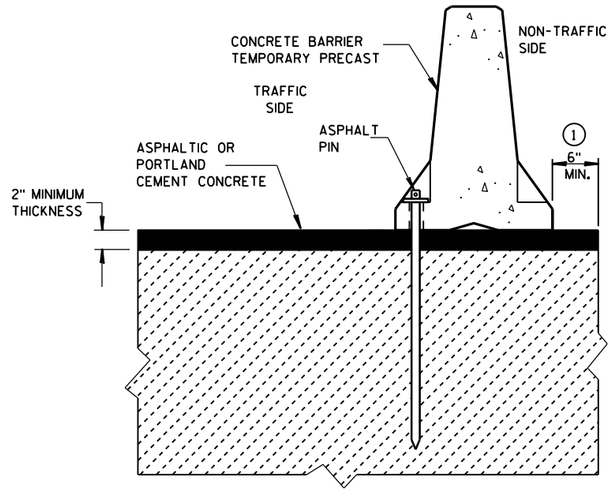
② ANCHORING IS INCIDENTAL TO CONCRETE BARRIER TEMPORARY PRECAST.

WITH THE APPROVAL OF THE ENGINEER, REMOVABLE ADHESIVE BONDED (EPOXY) ANCHOR BOLT INSTALLATION MAY BE USED IN LIEU OF THROUGH BOLTED ANCHOR INSTALLATION. THE ADHESIVE BONDED ANCHOR BOLT MUST BE REMOVABLE. USE ASTM (A307) MASONRY ANCHORS TYPE S 1⅛-INCH, EMBEDDED TO A DEPTH SUFFICIENT TO DEVELOP THE ULTIMATE CAPACITY OF THE ANCHOR BOLT AND PROVIDE DOCUMENTATION TO CONFIRM THIS.

UPON REMOVAL OR RELOCATION OF THE BARRIER UNITS, REMOVE ALLANCHOR BOLTS AND COMPLETELY FILL IN THE REMAINING HOLES IN CONCRETE BRIDGE DECKS, CONCRETE APPROACH SLABS AND CONCRETE PAVEMENTS THAT ARE TO REMAIN, WITH A NON-SHRINK COMMERICAL GROUT OR EPOXY MATERIAL IDENTIFIED ON THE CURRENT WISDOT APPROVED PRODUCTS LIST.

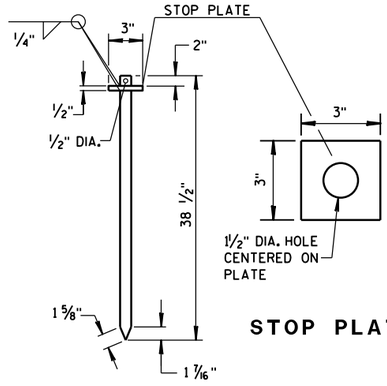
③ 1⅛" DIAMENTER A307 THREADED ROD, ½" X 3" X 3" SQUARE PLATE WASHER WITH ASTM A36 STEEL, ASTM A563A HEAVY HEX NUT.

④ ADHESIVE ANCHORS WITH A MINIMUM BOND STRENGTH OF 1,800 PSI AND 5¼" EMBEDMENT. SEE 603.2 AND 603.3.1.2 OF THE WISCONSIN STANDARD SPECIFICATIONS FOR MORE INFORMATION ON ADHESIVE ANCHORS.



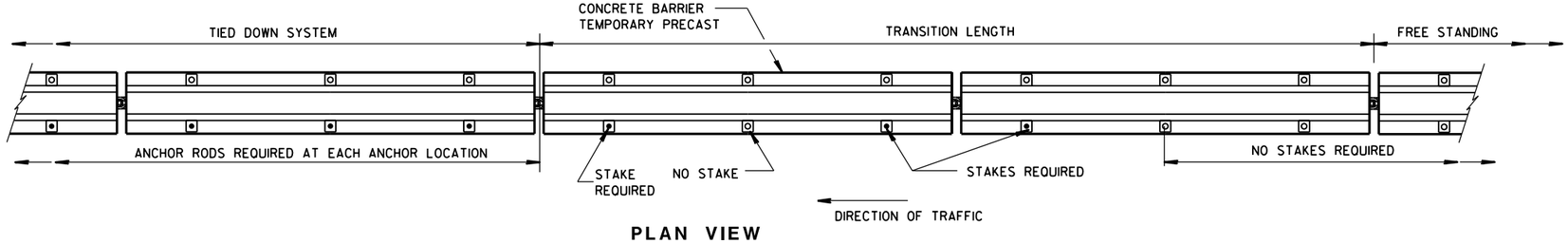
STAKE DOWN INSTALLATION FOR ASPHALTIC OR PORTLAND CEMENT CONCRETE SURFACE

(STAKING IS INCIDENTAL TO CONCRETE BARRIER TEMPORARY PRECAST)



STOP PLATE

ASPHALT PIN
(ASTM A36 STEEL)



PLAN VIEW

FREE STANDING TRANSITION TO TIED-DOWN SYSTEM

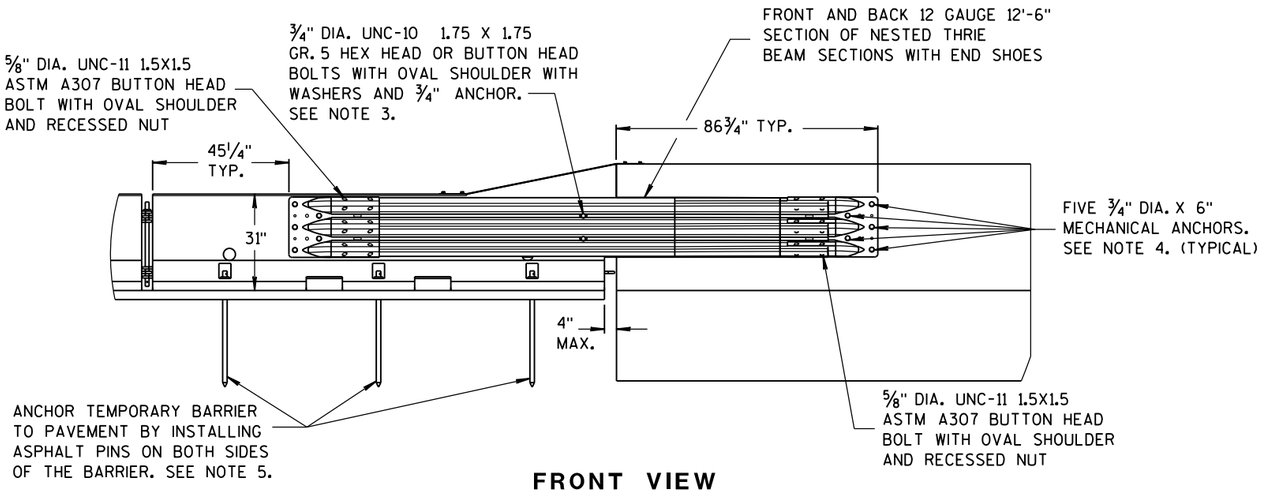
(PLACE TRANSITION IN A TANGENT SECTION OF BARRIER PARALLEL TO THE ROADWAY. IF TRANSITION OCCURS ON STRUCTURAL SLAB, ANCHOR AS SHOWN.)

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

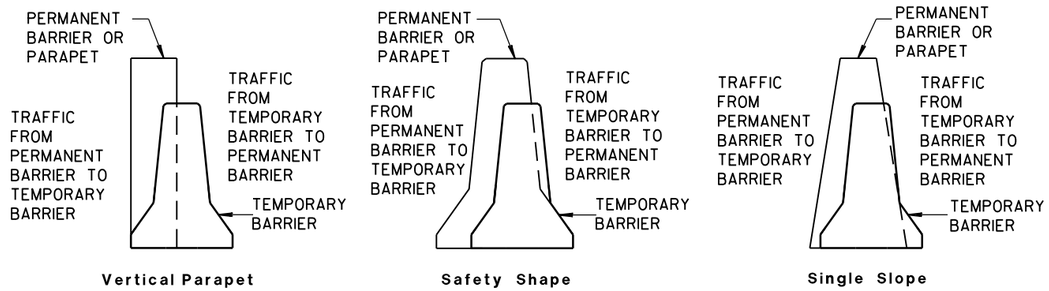
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

S.D.D. 14 B 7-14d



FRONT VIEW

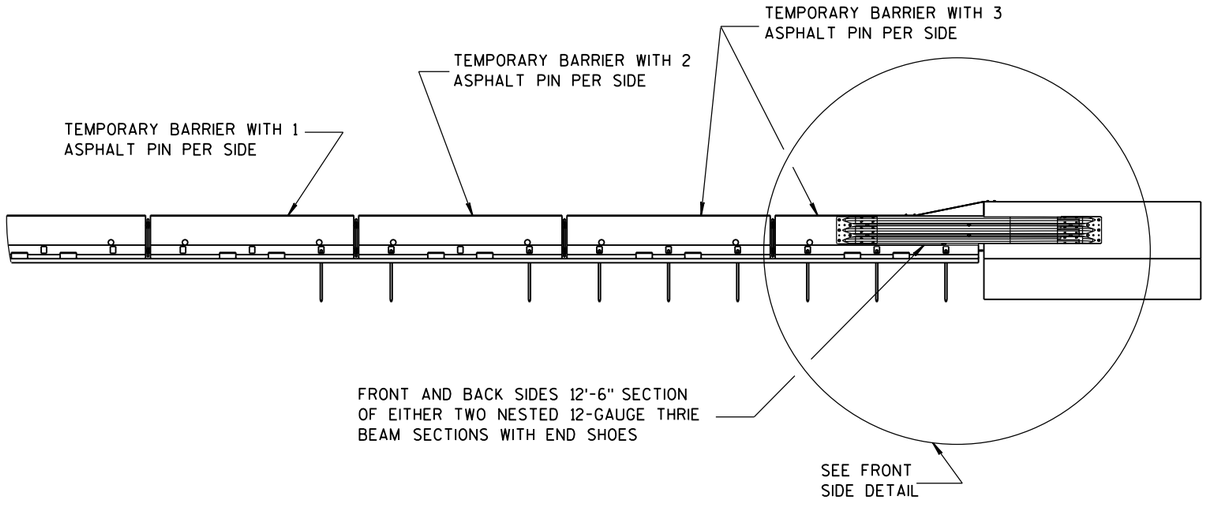


TEMPORARY BARRIER PLACEMENT FOR BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM

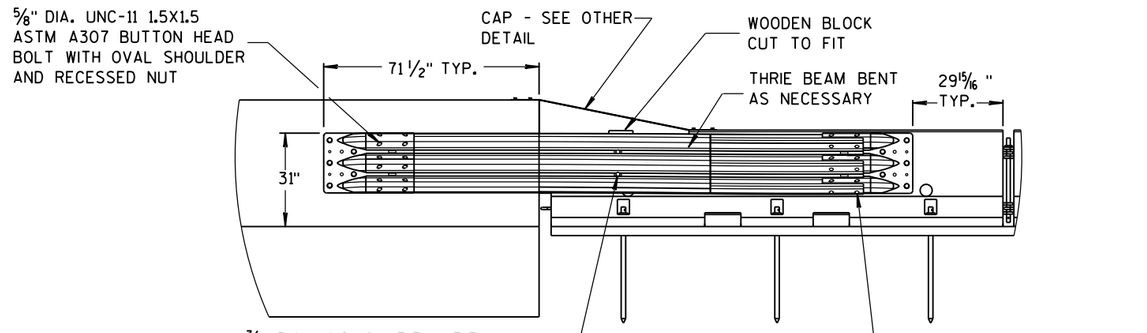
NOTES

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

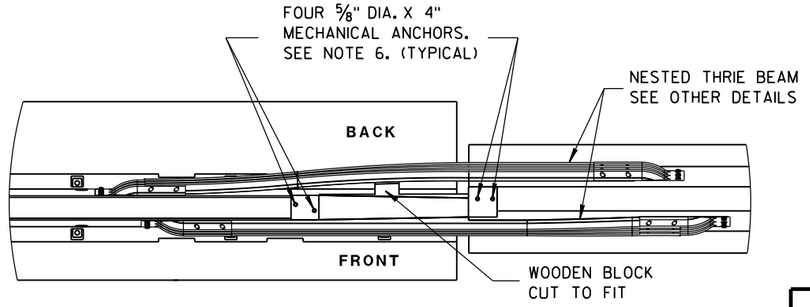
1. CAP END PLATE PLACED FLUSH WITH UPSTREAM END OF PERMANENT BARRIER OR PARAPET.
2. THRIE BEAM PIECES ARE OFFSET 15 1/4" TO PREVENT INTERFERENCE FROM THE ANCHORS ON OPPOSING SIDES.
3. MINIMUM MECHANICAL OR EPOXY ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 9.48 KIPS AND ULTIMATE SHEAR LOAD 10.48 KIPS.
4. MINIMUM MECHANICAL OR EPOXY 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 EPOXY ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 12.14 KIPS AND ULTIMATE SHEAR LOAD 17.5 KIPS.



FRONT VIEW



BACK VIEW



PLAN VIEW

BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

6
S.D.D. 14 B 7-14e

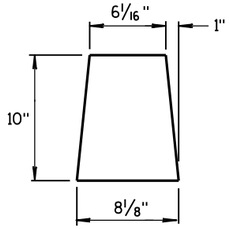
GUSSET 1

GUSSET 2

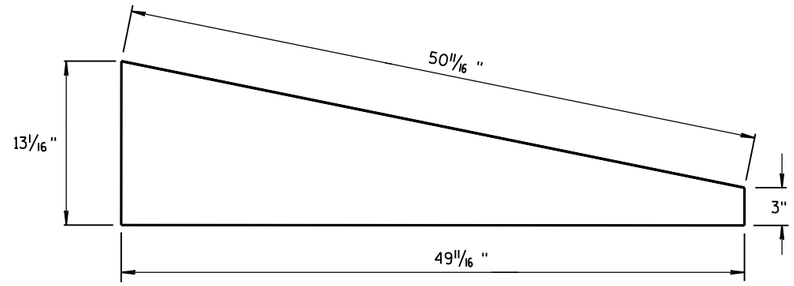
GUSSET 3

GUSSET 4

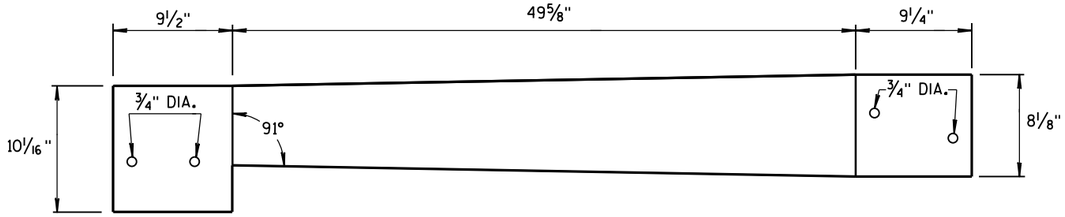
GUSSETS

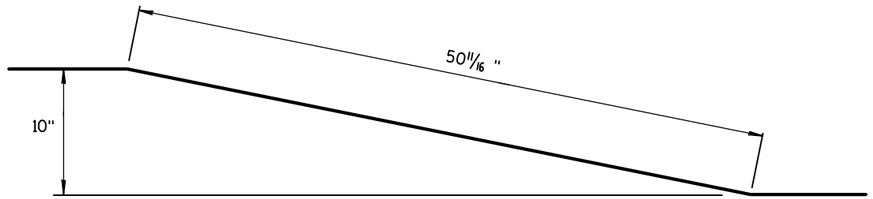


END PLATE

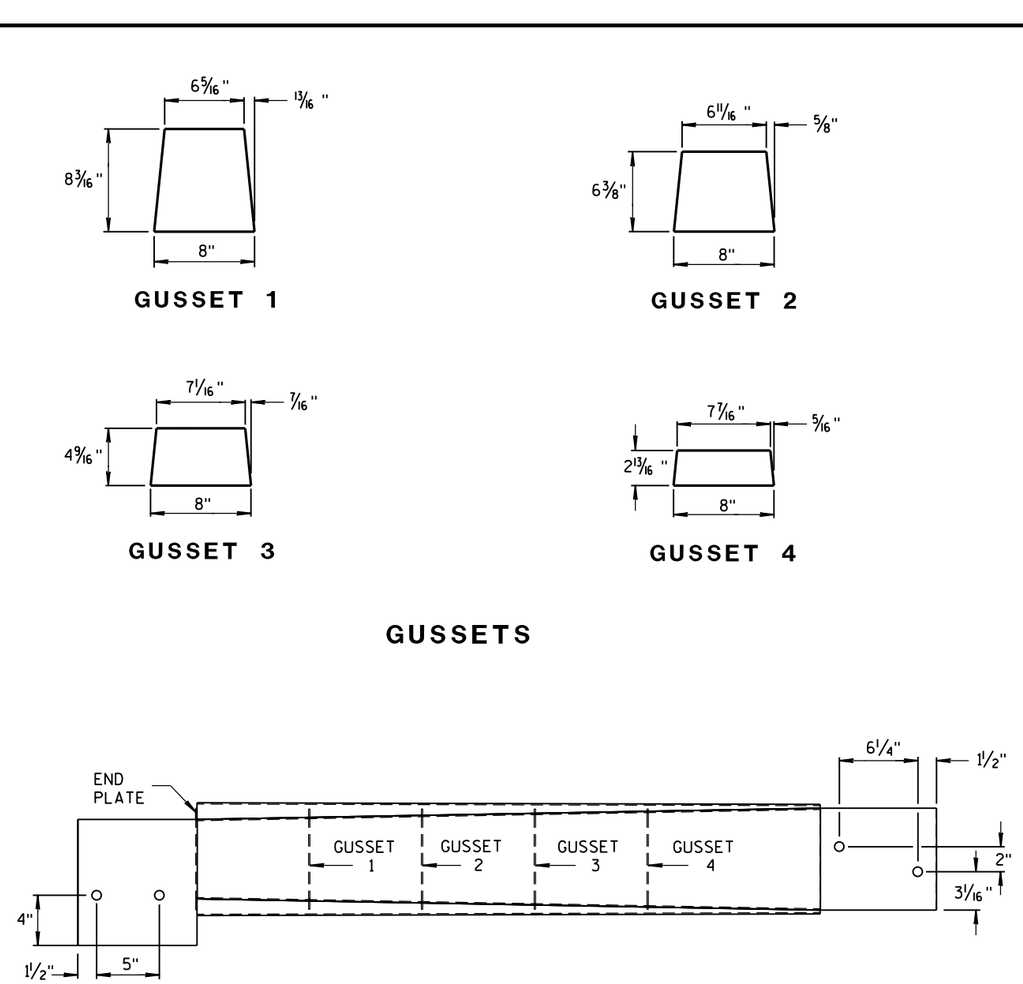


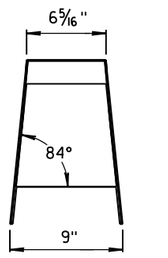
SIDE PLATE





TOP PLATE





SECTION C-C

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.

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.

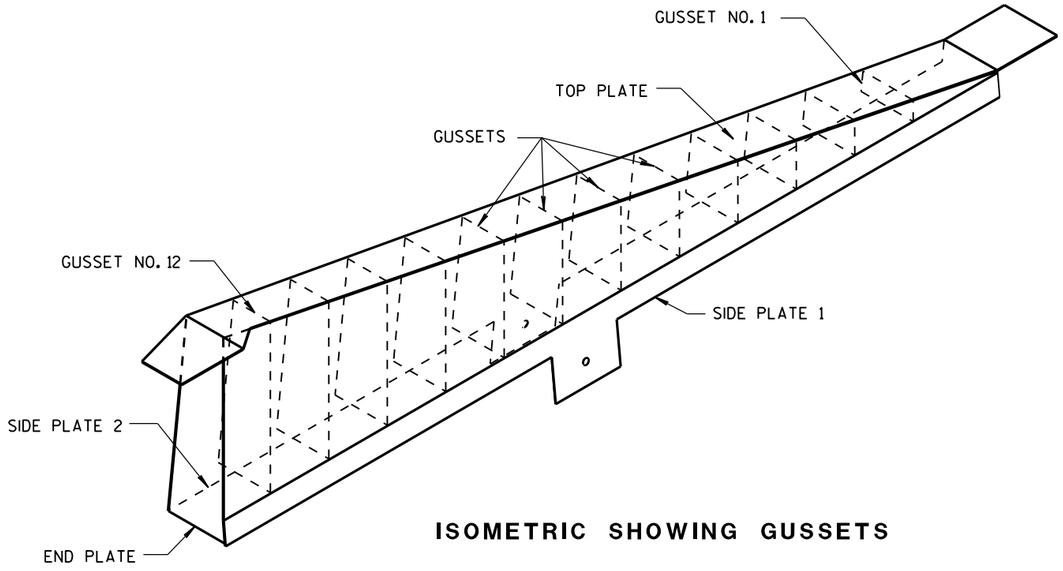
CAP DETAILS FOR TEMPORARY CONCRETE BARRIER TO 42" PERMANENT CONCRETE BARRIER

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

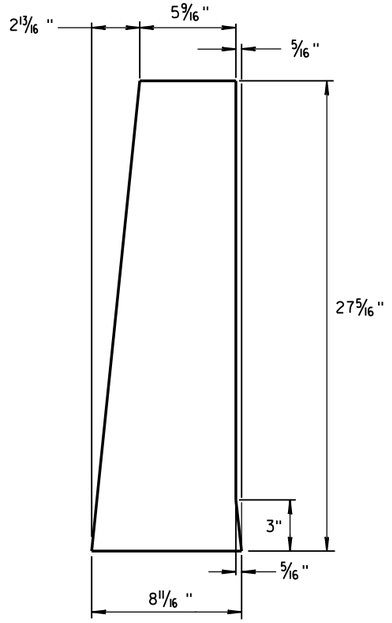
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

S.D.D. 14 B 7-14f

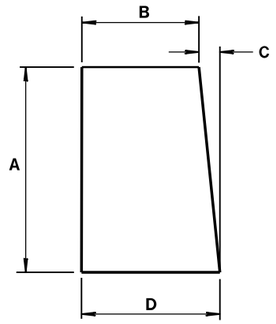


ISOMETRIC SHOWING GUSSETS



END PLATE

1/8" STEEL PLATE



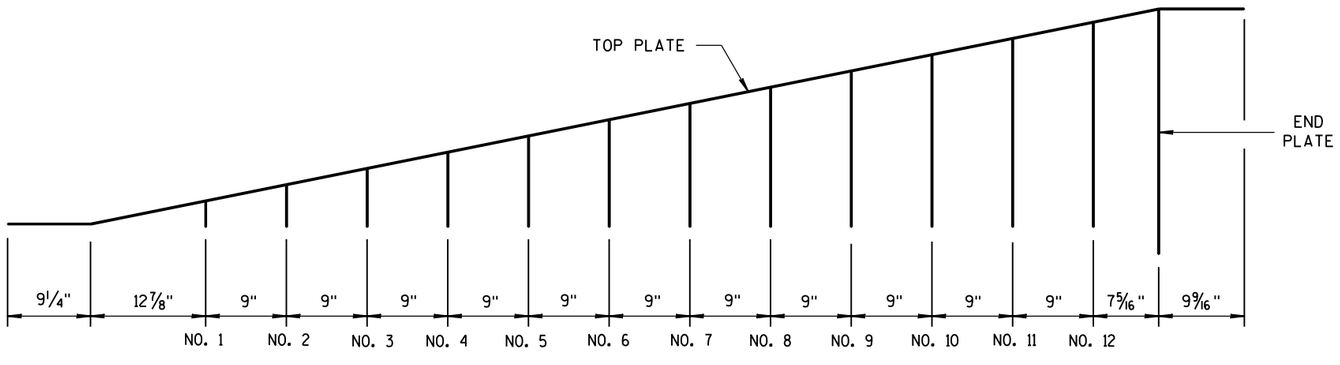
GUSSETS 1 - 12

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 11/16 "	7 9/16 "	1/2"	8
3	6 1/2"	7 3/8"	11/16 "	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 15/16 "	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

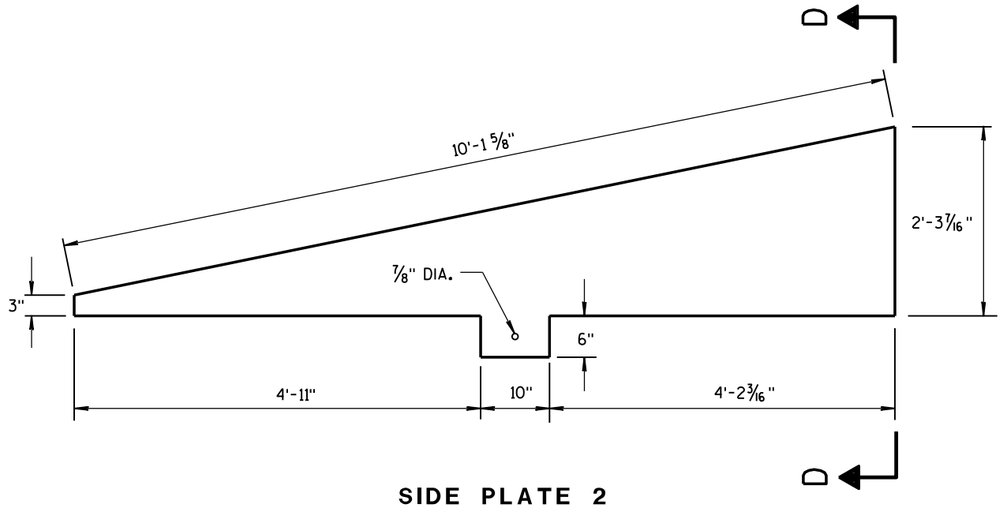
CAP DETAILS FOR TEMPORARY CONCRETE BARRIER TO 56" PERMANENT CONCRETE BARRIER

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

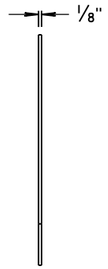
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

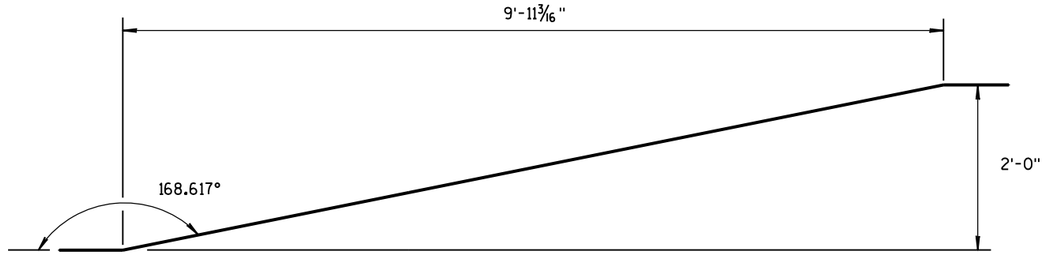
S.D.D. 14 B 7-14g



SIDE PLATE 2

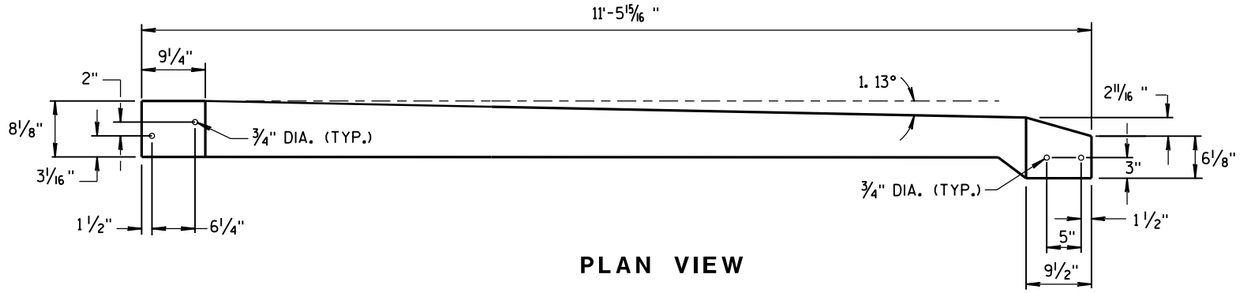


END VIEW



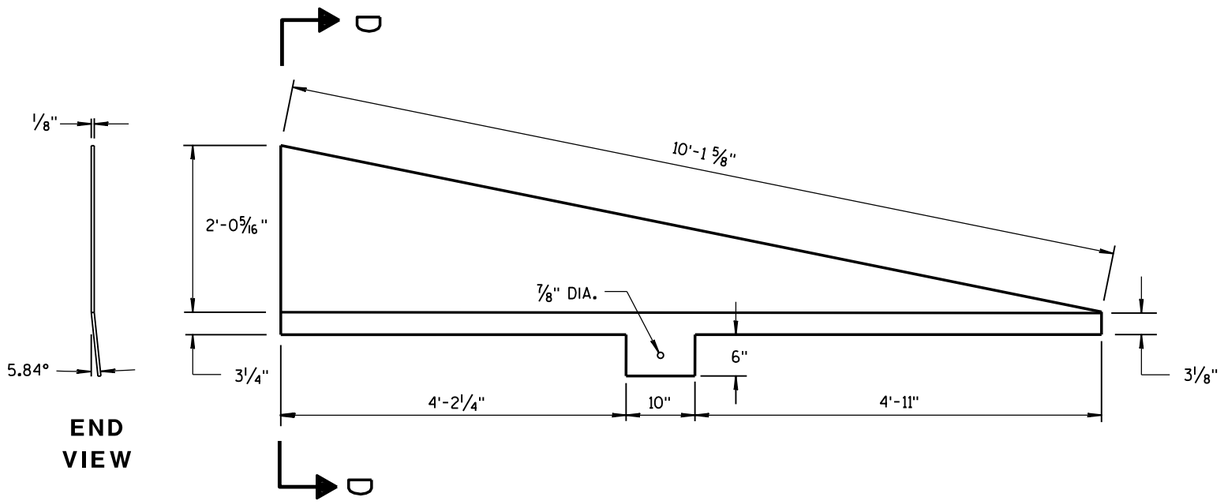
SIDE VIEW

TOP PLATE



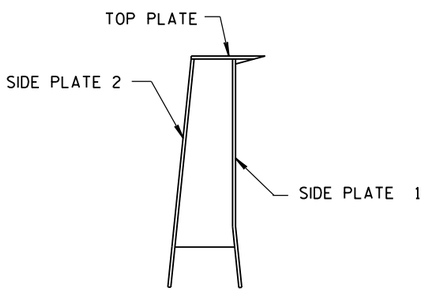
PLAN VIEW

TOP PLATE



END VIEW

SIDE PLATE 1



SECTION D-D

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

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

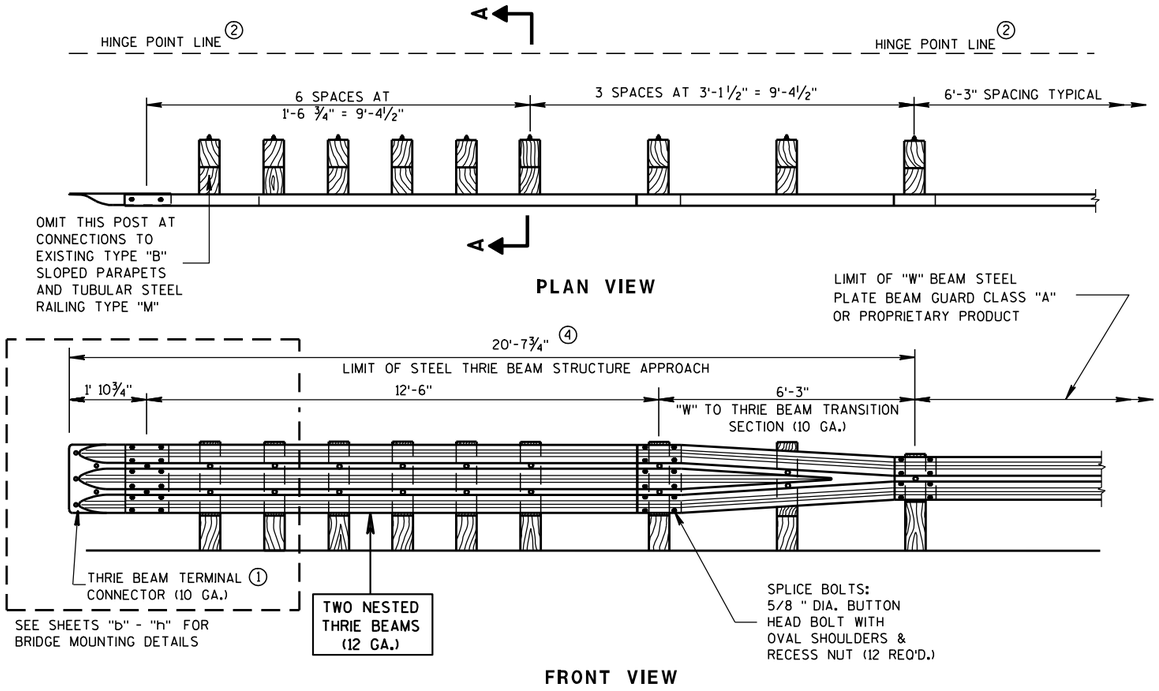
APPROVED
June 2014 — DATE
/S/ Jerry H. Zoaa — ROADWAY STANDARD DEVELOPMENT ENGINEER
FHWA

6

S.D.D. 14 B 7-14h

6

S.D.D. 14 B 7-14h



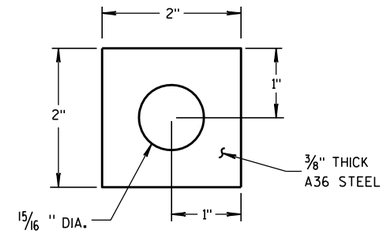


PLATE WASHER DETAIL

GENERAL NOTES

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

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

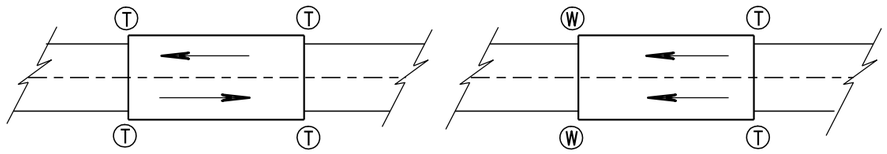
IF ROCK IS ENCOUNTERED, REMOVE ROCK TO FULL DEPTH OF POST PLUS 2 1/2" , AND 12" DIAMETER AROUND POST. SEE 14B15 FOR MORE DETAILS.

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

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

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

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



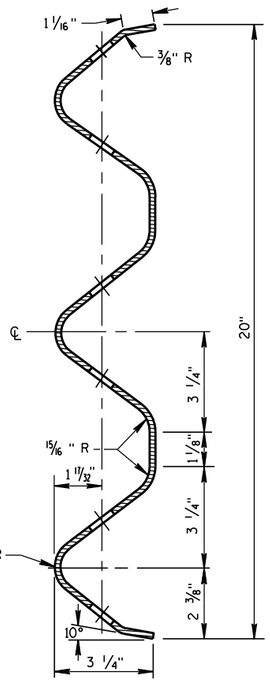
TWO WAY TRAFFIC

ONE WAY TRAFFIC

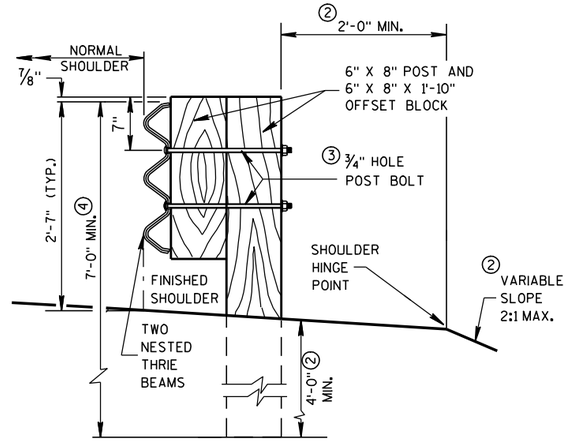
(T) THRIE BEAM CONNECTION

(W) W-BEAM CONNECTION WHEN REQUIRED

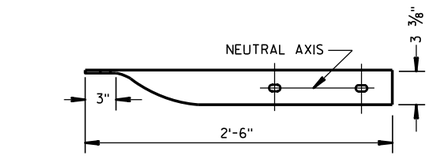
TYPICAL LOCATIONS OF THRIE BEAM AND W-BEAM CONNECTIONS TO BRIDGE

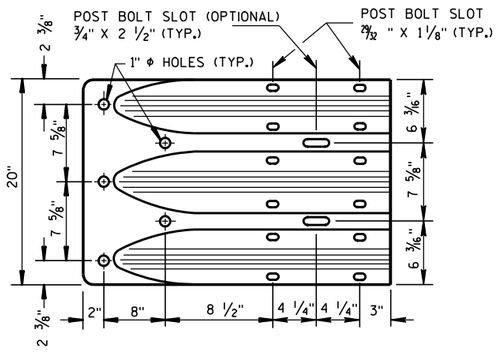


SECTION THRU THRIE BEAM RAIL ELEMENT

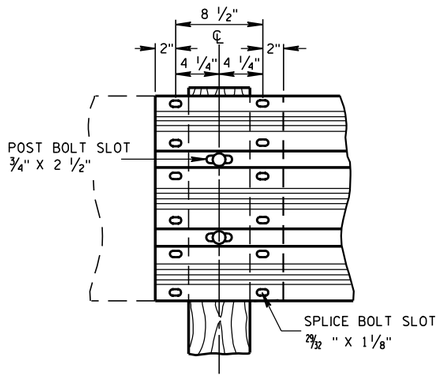


SECTION A-A





THRIE BEAM TERMINAL CONNECTOR



THRIE BEAM SPLICE

STEEL THRIE BEAM STRUCTURE APPROACH

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8/31/2012
DATE

/S/ Jerry H. Zogg
ROADWAY STANDARDS 122
ENGINEER

FHWA

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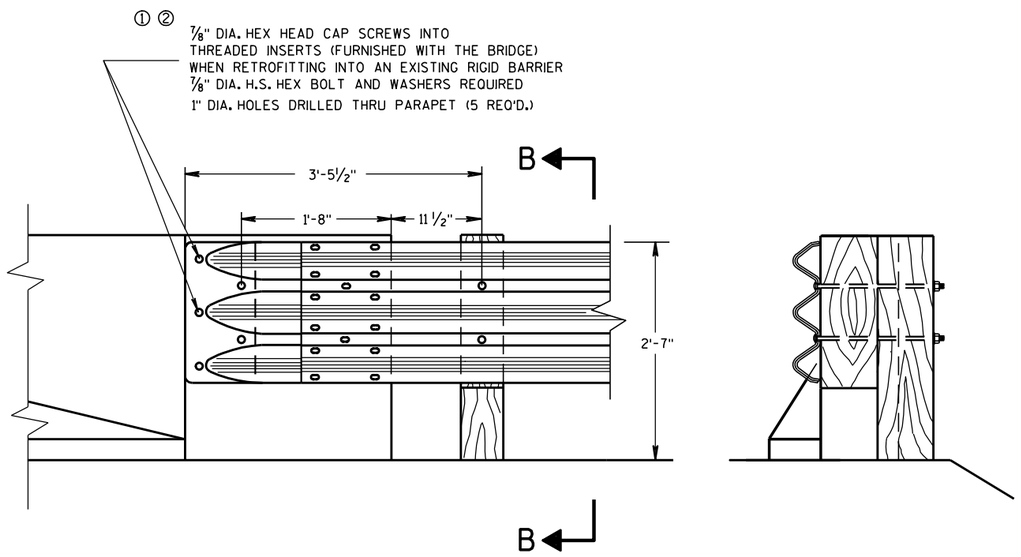
S.D.D. 14 B 20-11a

6

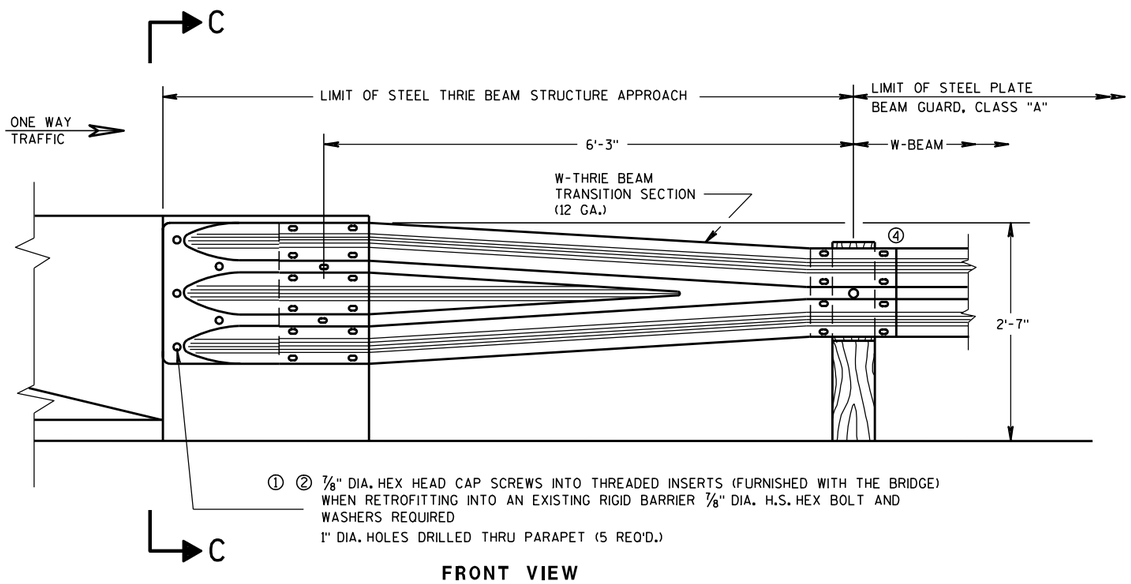
S.D.D. 14 B 20-11a



FRONT VIEW

SECTION B-B

THRIE BEAM CONNECTION TO BRIDGE PARAPET WITH SQUARE ENDS



① ② ⅞" DIA. HEX HEAD CAP SCREWS INTO THREADED INSERTS (FURNISHED WITH THE BRIDGE) WHEN RETROFITTING INTO AN EXISTING RIGID BARRIER ⅞" DIA. H.S. HEX BOLT AND WASHERS REQUIRED
1" DIA. HOLES DRILLED THRU PARAPET (5 REQ'D.)

FRONT VIEW

W BEAM TRANSITION AND CONNECTION TO BRIDGE PARAPETS WITH SQUARE ENDS

(USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)

GENERAL NOTES

THESE ARE TYPICAL CONNECTION DETAILS. ADJUST THE POSTION OF CONNECTIONS TO EXISTING BRIDGES TO FIT THE ACTUAL BRIDGE AND SITE DIMENSIONS.

BOLTS, NUTS AND WASHERS SHALL CONFORM TO ASTM A325, A449 AND GALVANIZED PER STANDARD SPECIFICATIONS 614.

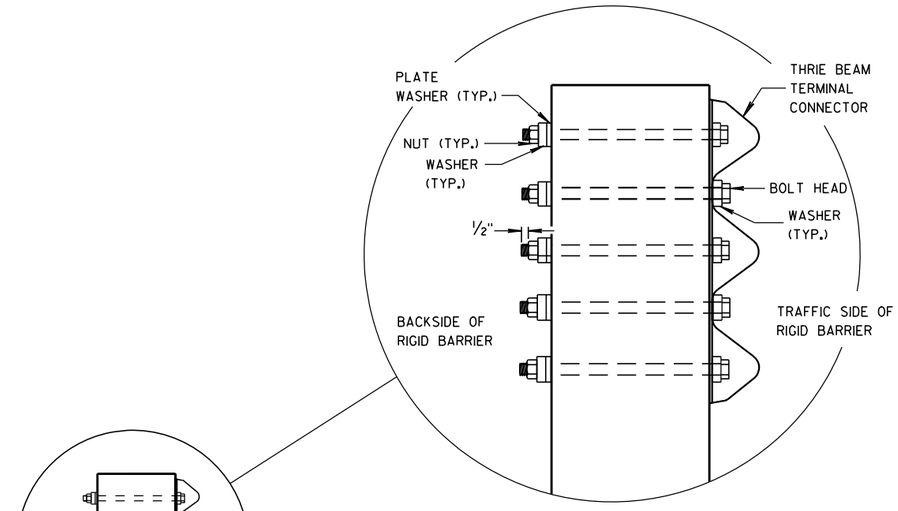
① DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

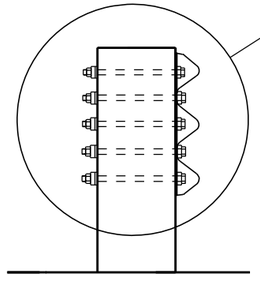
② BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM TERMINAL CONNECTOR. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X ⅝" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.

③ THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3 ½".

④ W6 X 9 OR W6 X 8.5 STEEL POSTS AND NOTCHED PLASTIC BLOCKOUTS ARE ACCEPTABLE ALTERNATIVES FOR 6" X 8" WOOD POST WITH WOOD OR PLASTIC BLOCKOUTS. USE APPROVED NOTCHED PLASTIC BLOCKOUTS WITH STEEL POSTS.

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



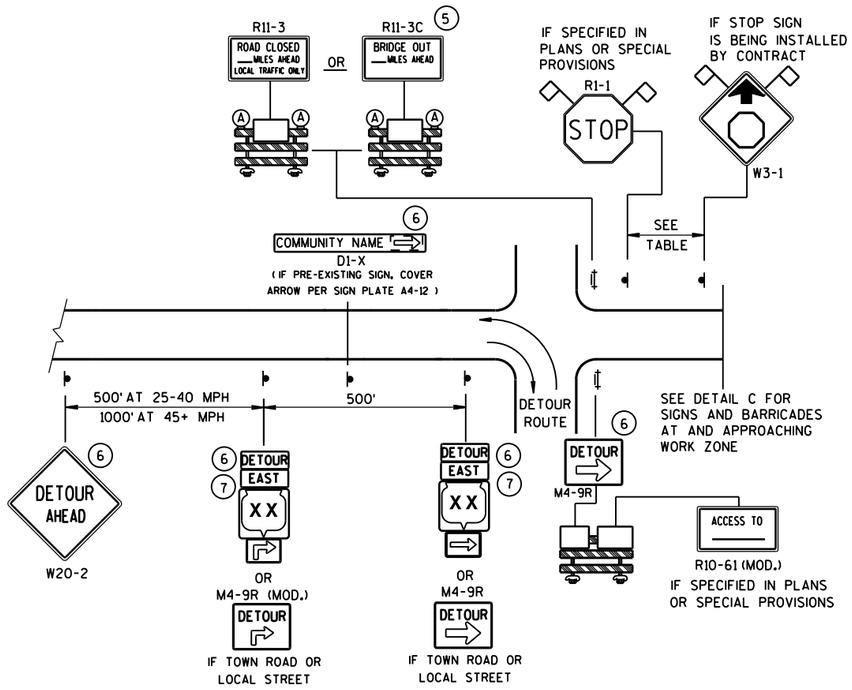


SECTION C-C

STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTION TO SQUARE END PARAPETS

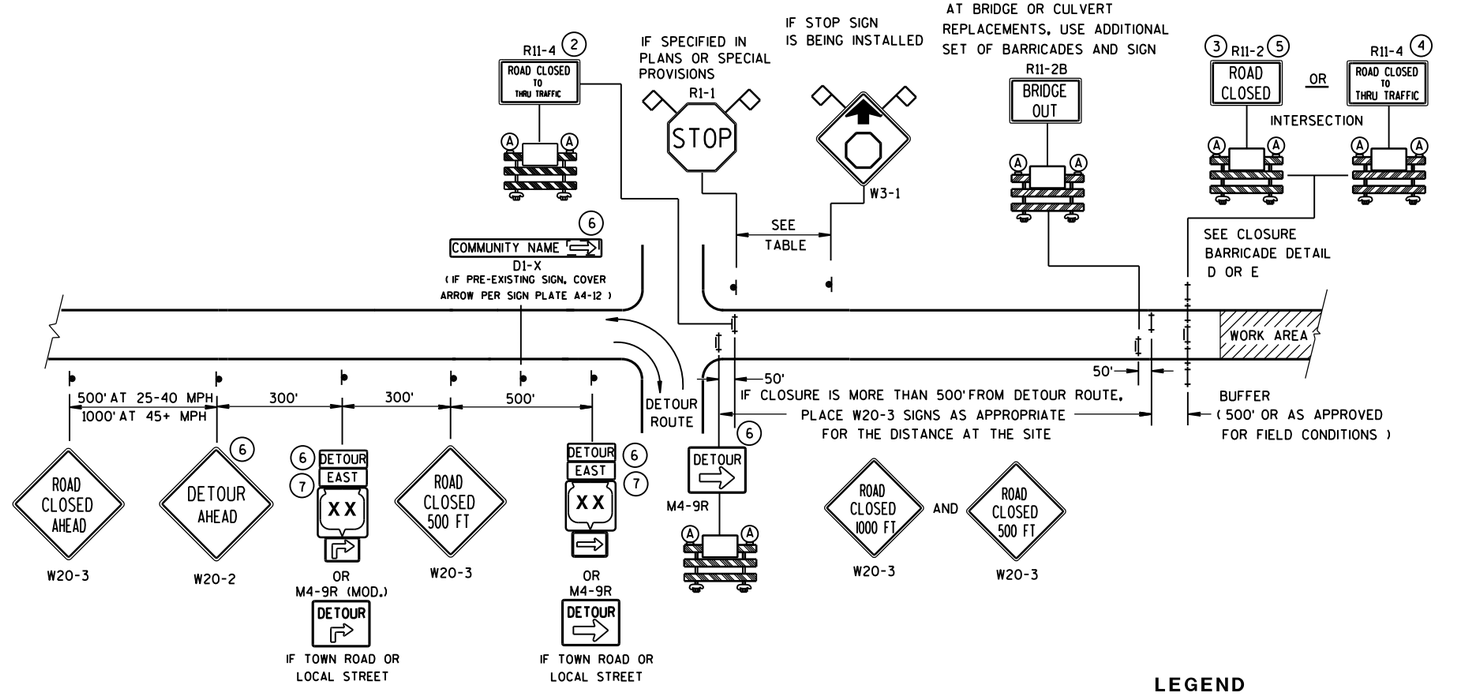
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



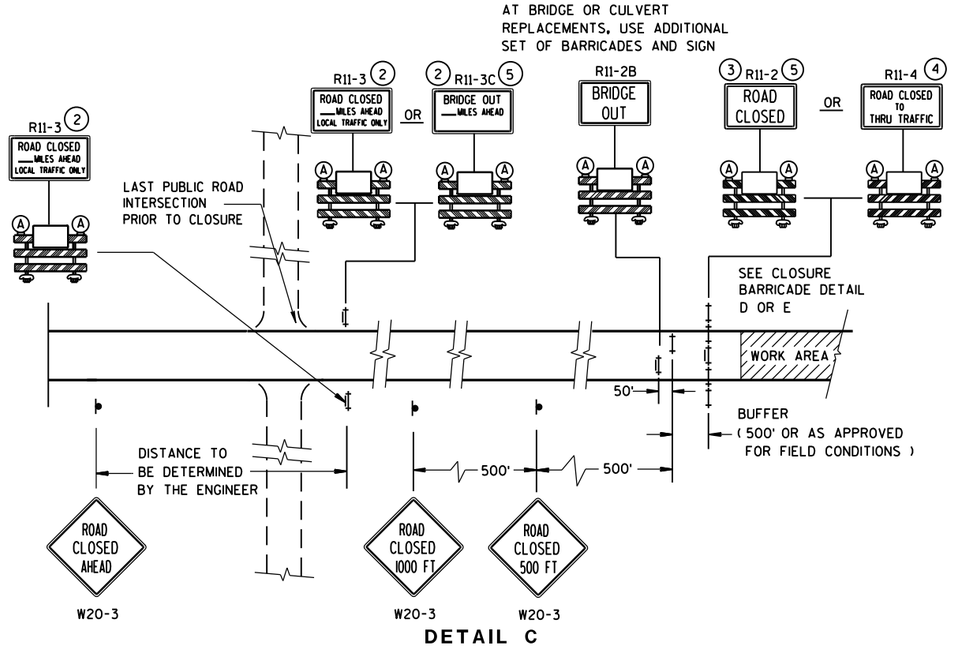
DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR

WORK ZONE GREATER THAN ½ MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)



DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR

WORK ZONE LESS THAN ½ MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)



DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR

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

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

LEGEND

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

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

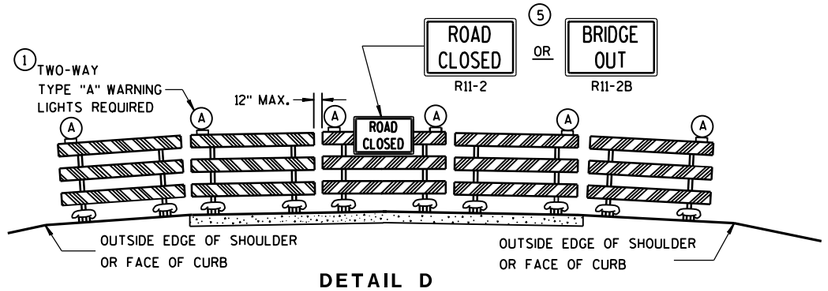
8/2013 DATE

/S/ Travis Feltes
STATE TRAFFIC ENGINEER

FHWA

6

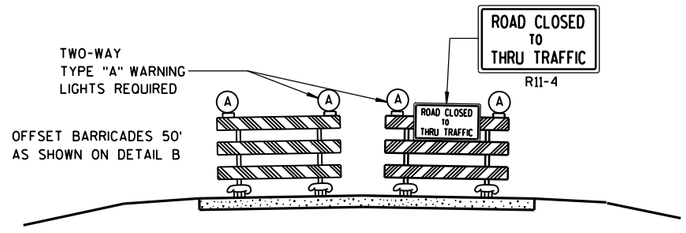
S.D.D. 15 C 2-5a



DETAIL D

ROAD CLOSURE BARRICADE DETAIL

APPROACH VIEW



DETAIL E

LANE CLOSURE BARRICADE DETAIL

APPROACH VIEW

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

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

8/2013 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
FHWA

6

S.D.D. 15 C 2-5b

THIS DRAWING PROVIDES GENERAL GUIDANCE ON TYPICAL DETOUR SIGN LAYOUT AND SPACING. SEE PROJECT DETOUR SIGNING SHEETS FOR SPECIFIC DETAILS FOR EACH PROJECT.

GENERAL NOTES

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

IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. MODIFY EXISTING SIGNS WHERE POSSIBLE.

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

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.

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

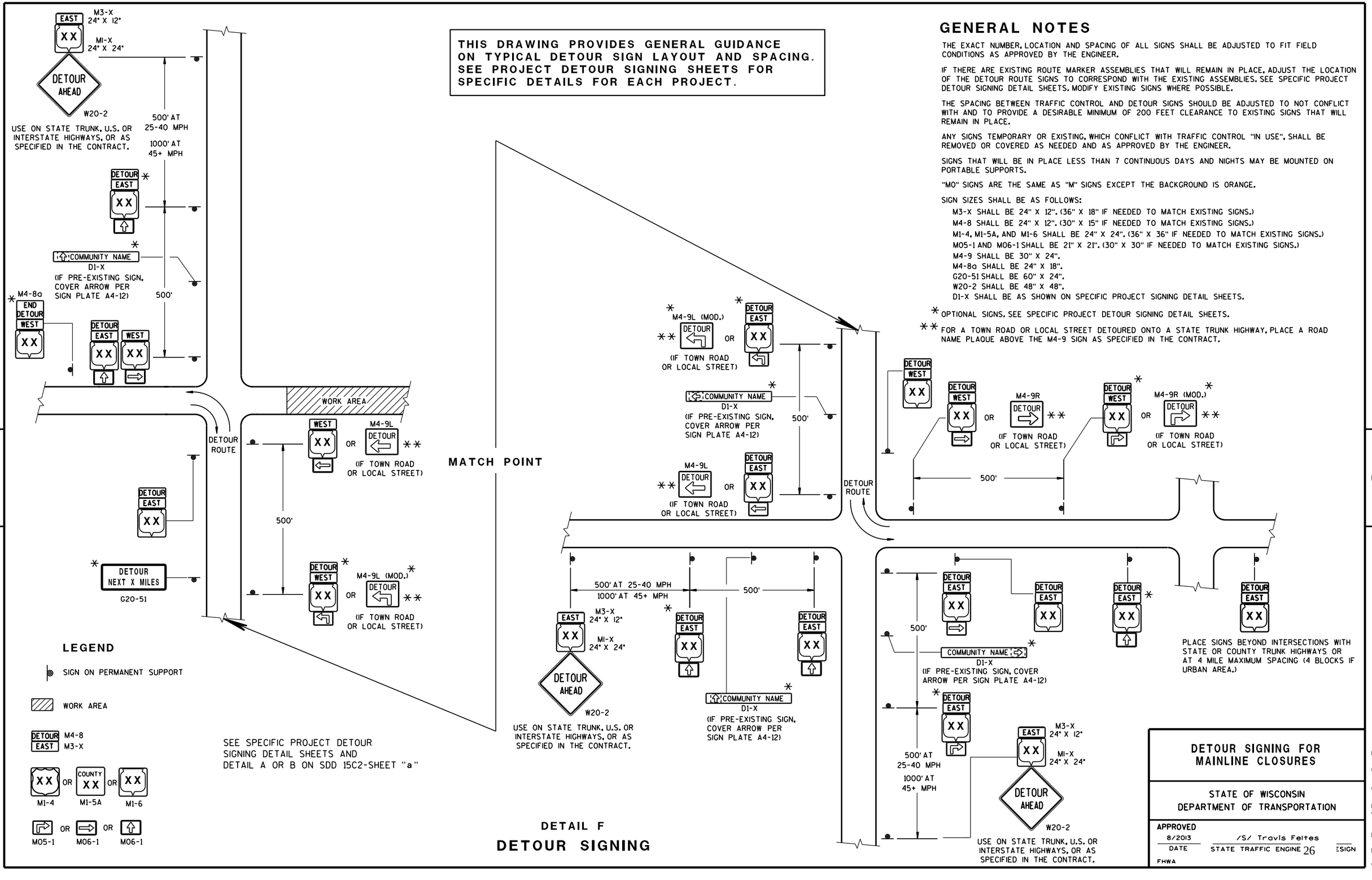
"MO" SIGNS ARE THE SAME AS "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

SIGN SIZES SHALL BE AS FOLLOWS:

- M3-X SHALL BE 24" X 12". (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS.)
- M4-8 SHALL BE 24" X 12". (30" X 15" IF NEEDED TO MATCH EXISTING SIGNS.)
- M1-4, M1-5A, AND M1-6 SHALL BE 24" X 24". (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS.)
- MO5-1 AND MO6-1 SHALL BE 21" X 21". (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS.)
- M4-9 SHALL BE 30" X 24".
- M4-8a SHALL BE 24" X 18".
- G20-51 SHALL BE 60" X 24".
- W20-2 SHALL BE 48" X 48".
- D1-X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.

* OPTIONAL SIGNS. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS.

** FOR A TOWN ROAD OR LOCAL STREET DETOURED ONTO A STATE TRUNK HIGHWAY, PLACE A ROAD NAME PLAQUE ABOVE THE M4-9 SIGN AS SPECIFIED IN THE CONTRACT.



DETAIL F

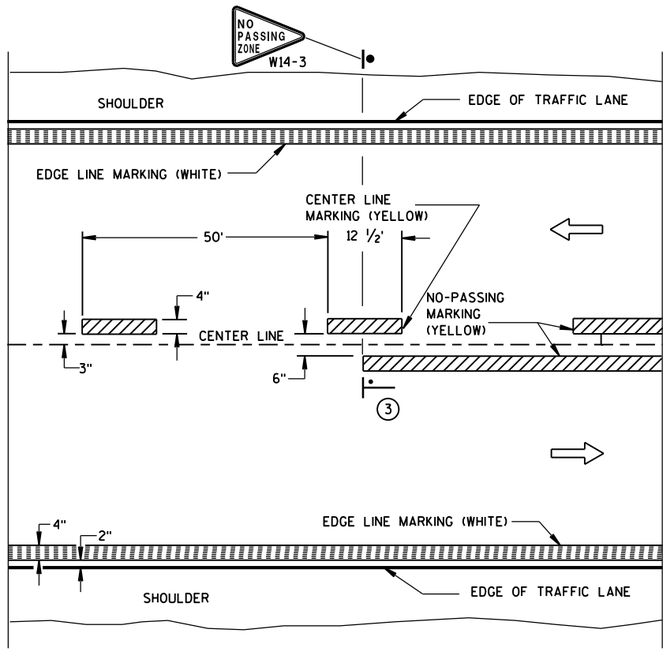
DETOUR SIGNING

DETOUR SIGNING FOR MAINLINE CLOSURES

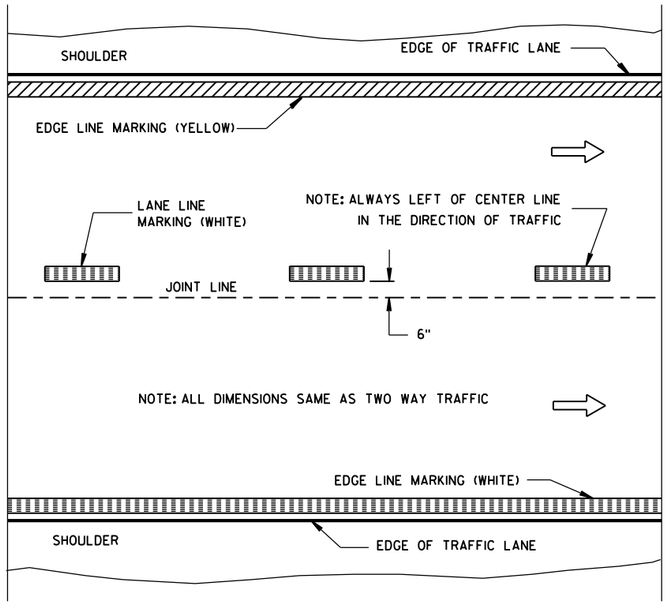
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
8/2013 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
FHWA

6 S.D.D. 15 C 2-5c

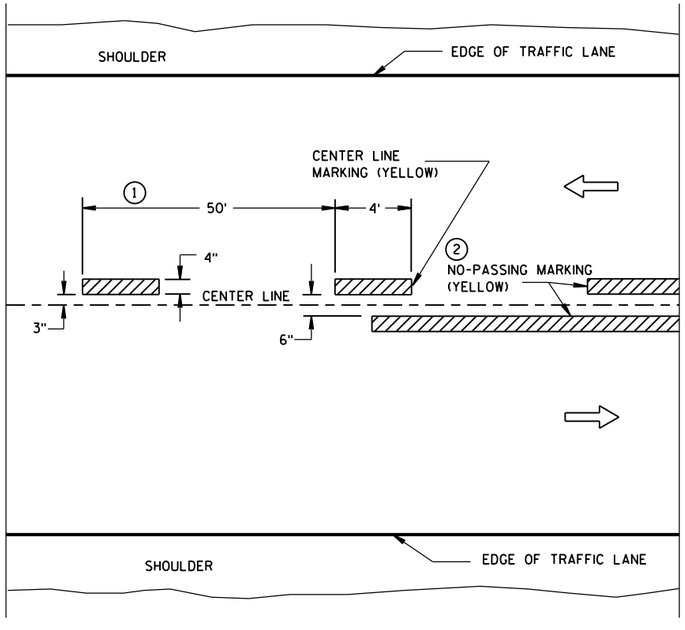


TWO WAY TRAFFIC

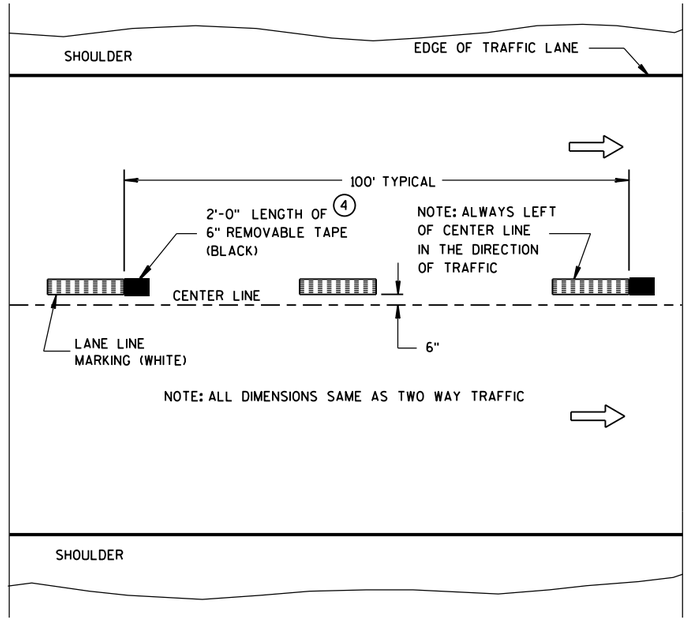


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY (INTERMEDIATE) PAVEMENT MARKING

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

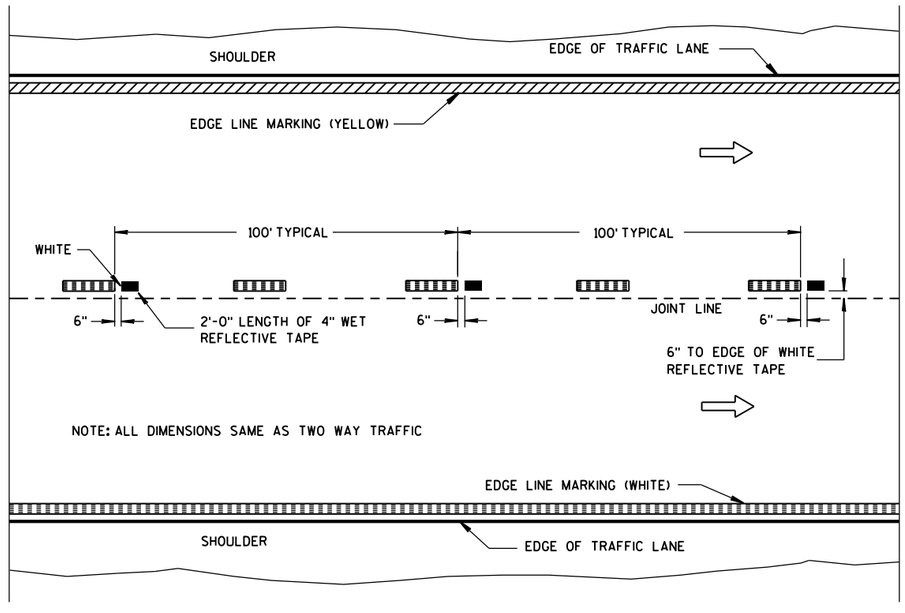
GENERAL NOTES

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

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

NOTE

ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL



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

LEGEND

"T" MARKING

POST MOUNTED SIGN

PAVEMENT MARKING (MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6

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

6

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

LEGEND

- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL DRUM
- FLASHING ARROW BOARD
- REMOVING PAVEMENT MARKING
- CONCRETE BARRIER TEMPORARY PRECAST
- DIRECTION OF TRAFFIC
- WORK AREA

W057-52
36"x24"

INSTALL ON EACH APPROACH AT THE CLOSEST INTERSECTION WITH A STATE OR COUNTY TRUNK HIGHWAY, OR AS DIRECTED BY THE ENGINEER. WIDTH ON SIGN TO BE APPROX. 1 FOOT LESS THAN AVAILABLE WIDTH (OMIT IF AVAILABLE WIDTH IS MORE THAN 16 FEET).

LOCATED 500 FEET IN ADVANCE OF R2-1 SIGN AND 500 FEET BEYOND THE "ROAD WORK 1 MILE" SIGN.

R2-1
48"x60"
(BLACK AND WHITE)

IF THE REGULATORY SPEED HAS BEEN REDUCED, A SPEED LIMIT SIGN SHALL BE LOCATED 1500 FEET BEYOND THE END OF THE ACCELERATION LANE OF EACH ENTRANCE RAMP. THERE SHOULD BE A SPEED LIMIT SIGN INCORPORATED A MINIMUM OF EVERY 2 OR 3 MILES.

* INCLUDE RESUME SPEED LIMIT SIGN A MINIMUM OF 200 FEET (500 FEET DESIRABLE) AFTER END ROAD WORK SIGNS.

GENERAL NOTES

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

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.

ALL SIGNS ARE 48"x48" 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.

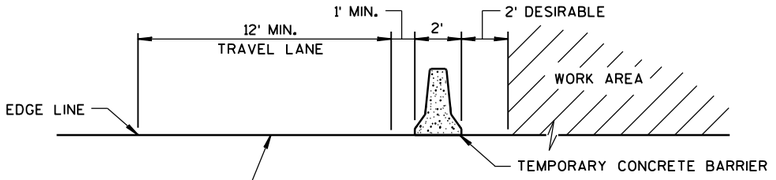
(1) CONSIDER ROADWAY GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARD SO THE DRIVER HAS A CLEAR VIEW OF THE ARROW BOARD AND LANE CLOSURE DRUMS FOR A MINIMUM 1500 FEET IN FRONT OF DRUM TAPER.

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.

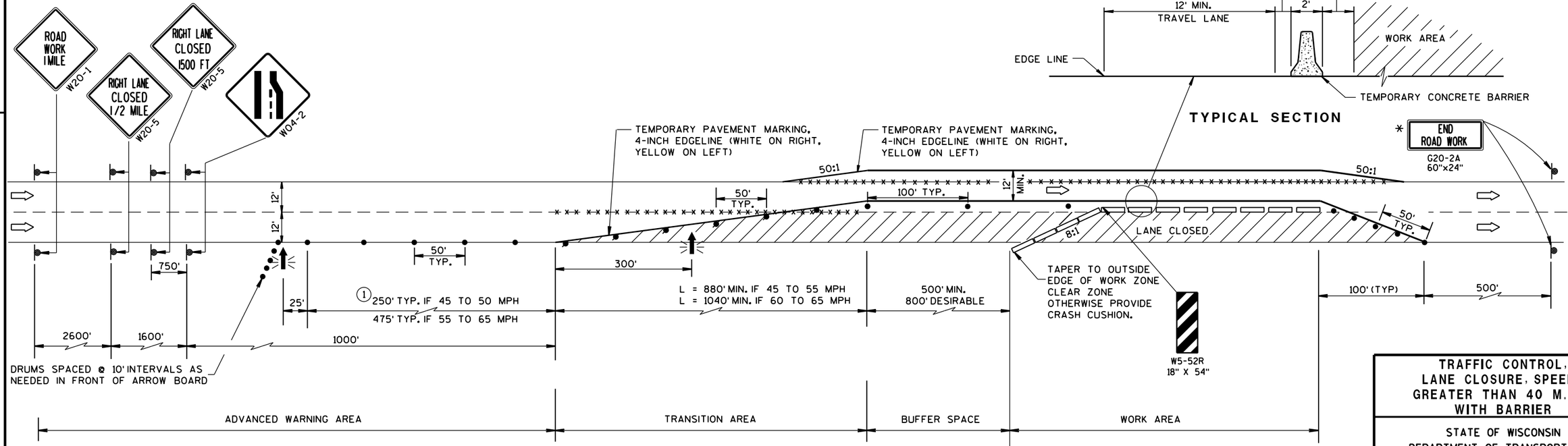
REMOVE PAVEMENT MARKINGS IF LANE CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

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

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 1/2 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.



TYPICAL SECTION



TRAFFIC CONTROL, LANE CLOSURE, SPEEDS GREATER THAN 40 M.P.H. WITH BARRIER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

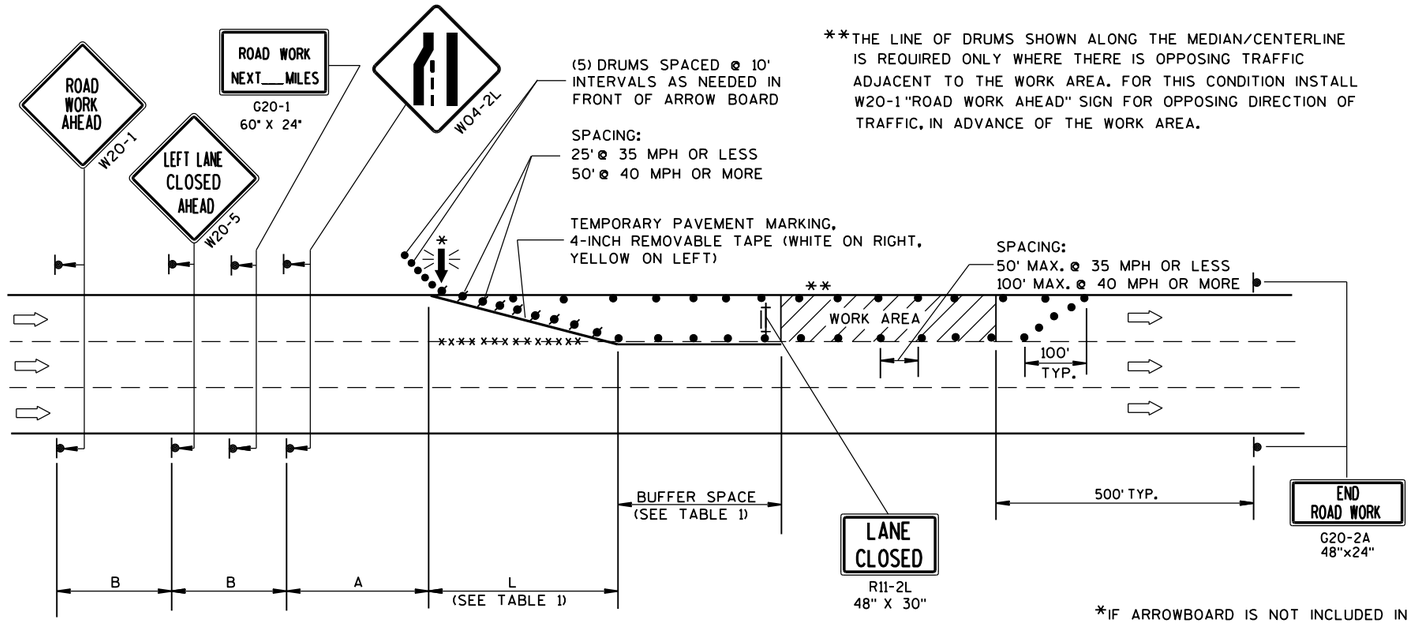
APPROVED
8/2013 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER — SIGN
FHWA

6

S.D.D. 15 D 3-2

6

S.D.D. 15 D 3-2



**THE LINE OF DRUMS SHOWN ALONG THE MEDIAN/CENTERLINE IS REQUIRED ONLY WHERE THERE IS OPPOSING TRAFFIC ADJACENT TO THE WORK AREA. FOR THIS CONDITION INSTALL W20-1 "ROAD WORK AHEAD" SIGN FOR OPPOSING DIRECTION OF TRAFFIC, IN ADVANCE OF THE WORK AREA.

B=400' AT 25-30 MPH
700' AT 35-40 MPH
1000' AT 45-55 MPH

A=200' AT 25-30 MPH
350' AT 35-40 MPH
500' AT 45-55 MPH

(PLACE BARRICADE AND SIGN APPROX. EVERY 1000' ACROSS THE CLOSED LANE)

*IF ARROWBOARD IS NOT INCLUDED IN MISCELLANEOUS QUANTITIES, SUBSTITUTE A TYPE III BARRICADE WITH W01-6 SIGN IN THE LANE CLOSURE TAPER.

W01-6
48"x24"

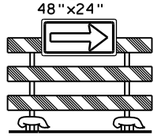


TABLE 1
TAPER AND BUFFER SPACE
FOR 12' LANE WIDTH

S	L	BUFFER SPACE
25	125'	55'
30	180'	85'
35	245'	120'
40	320'	170'
45	540'	220'
50	600'	280'
55	660'	335'

FOR LANE WIDTH OTHER THAN 12':

L = WS AT 45 MPH OR GREATER

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

L = TAPER LENGTH IN FEET

S = NON-CONSTRUCTION SPEED LIMIT (MPH)

W = WIDTH OF LANE CLOSURE

LEGEND

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

GENERAL NOTES

THIS LANE CLOSURE DETAIL IS TYPICAL FOR CLOSING THE LEFT LANE. FOR A RIGHT LANE CLOSURE, REVERSE THE TRAFFIC CONTROL.

THIS DETAIL MAY BE USED FOR ROADWAYS WITH EITHER TWO OR THREE LANES IN EACH DIRECTION.

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

ALL SIGNS ARE 48"x48" 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, OR THAT WILL BE PLACED IN A CLOSED LANE, 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.

REMOVE PAVEMENT MARKINGS AND PLACE TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE IF LANE CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

ON UNDIVIDED ROADWAYS, OMIT THE SIGNS SHOWN ON LEFT SIDE OF ROAD.

W20-1, G20-1 AND G20-2A SIGNS ARE NOT REQUIRED IF THE LANE CLOSURE IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT.

OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS.

CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROWBOARDS SO THE APPROACHING DRIVER HAS A CLEAR VIEW OF THE ARROWBOARDS AND LANE CLOSURE DRUMS.

PLACE THE ARROWBOARD AS CLOSE AS POSSIBLE TO THE BEGINNING OF THE LANE CLOSURE TAPER, PREFERABLY ON THE SHOULDER OR TERRACE.

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

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

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

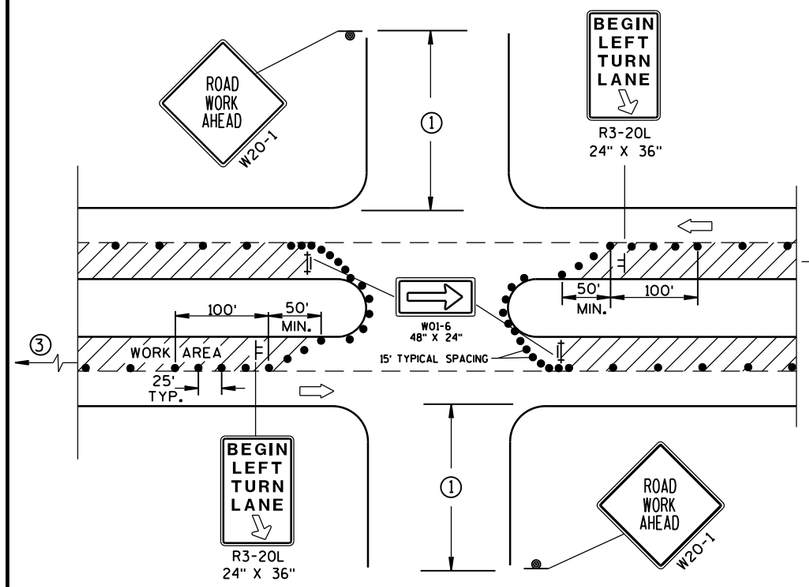
TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Feb. 2015 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
FHWA

6

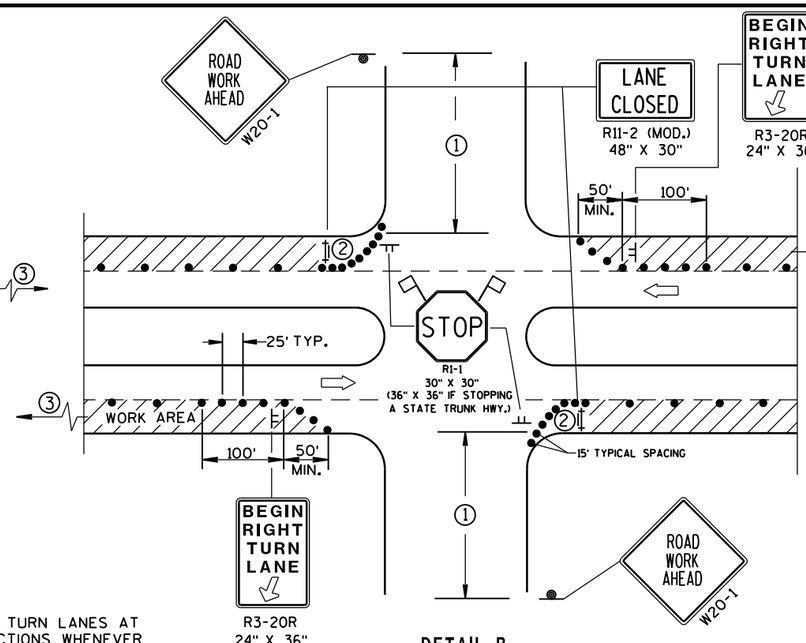
S.D.D. 15 D 20-3



DETAIL A

FOR LEFT LANE CLOSURE AT INTERSECTION OR MEDIAN OPENING

PROVIDE TURN LANES AT INTERSECTIONS WHENEVER STAGING OF WORK ALLOWS. TAPER AND TURN LANE LENGTHS BASED ON FIELD CONDITIONS AS APPROVED BY THE ENGINEER.



DETAIL B

FOR RIGHT LANE CLOSURE AT INTERSECTION

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 SHOULD PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

ALL SIGNS ARE 48"x48" 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.

SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FHWA'S MANUAL OF STANDARD HIGHWAY SIGNS OR THE WISCONSIN STANDARD SIGN PLATES.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, OR THAT WILL BE PLACED IN A CLOSED LANE, 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.

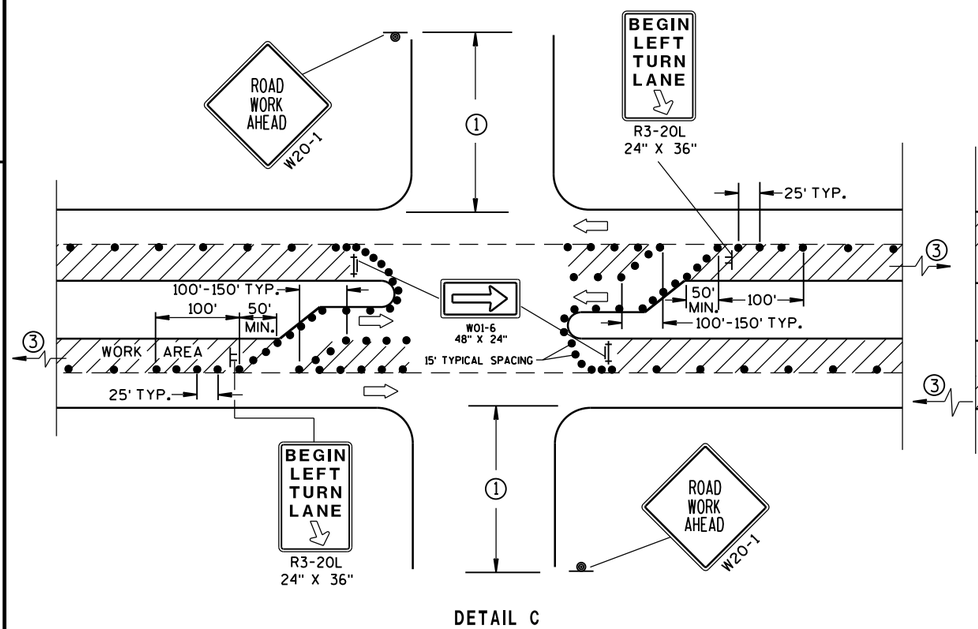
CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

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

① 500' TYPICAL OR AT LAST INTERSECTION, WHICHEVER IS CLOSER.
350' IF 35-40 MPH.
200' IF 25-30 MPH.

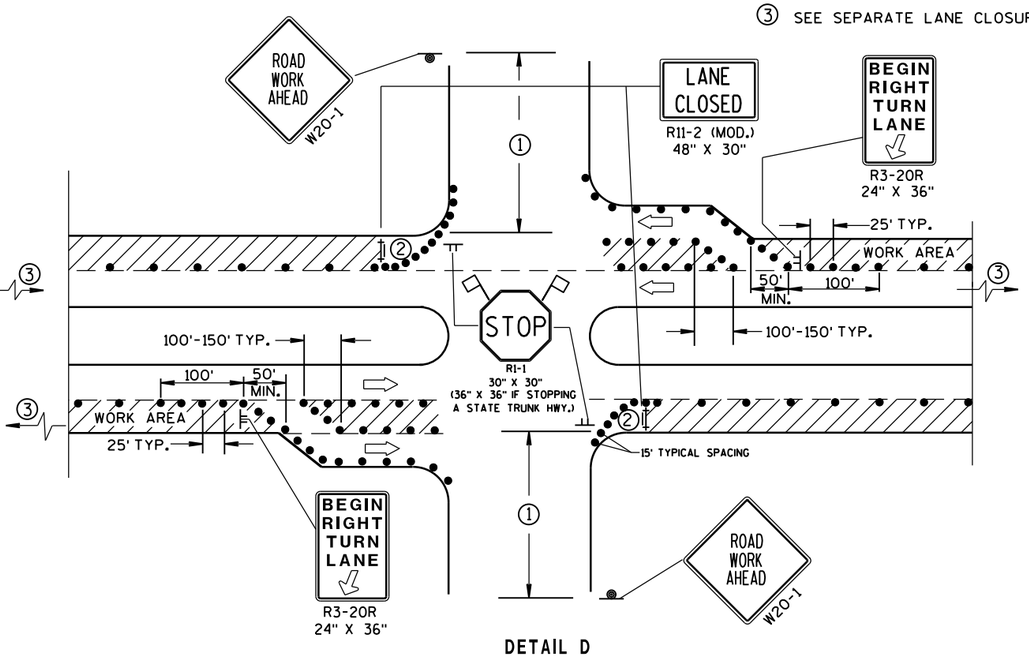
② ALSO USE BARRICADE AND 15-FOOT TYPICAL DRUM SPACING AT COMMERCIAL DRIVEWAYS.

③ SEE SEPARATE LANE CLOSURE DETAIL FOR ADDITIONAL TRAFFIC CONTROL.



DETAIL C

FOR LEFT LANE CLOSURE AT INTERSECTION OR MEDIAN OPENING (WITH LEFT TURN BAY OPEN)



DETAIL D

FOR RIGHT LANE CLOSURE AT INTERSECTION (WITH RIGHT TURN BAY OPEN)

LEGEND

- TRAFFIC CONTROL DRUM
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT (5' MIN. MOUNTING HEIGHT)
- TYPE III BARRICADE WITH ATTACHED SIGN AND TYPE "A" WARNING LIGHT (FLASHING)
- DIRECTION OF TRAFFIC
- FLAGS, 16" X 16" MIN., (ORANGE)
- WORK AREA

TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Nov. 2014 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
FHWA

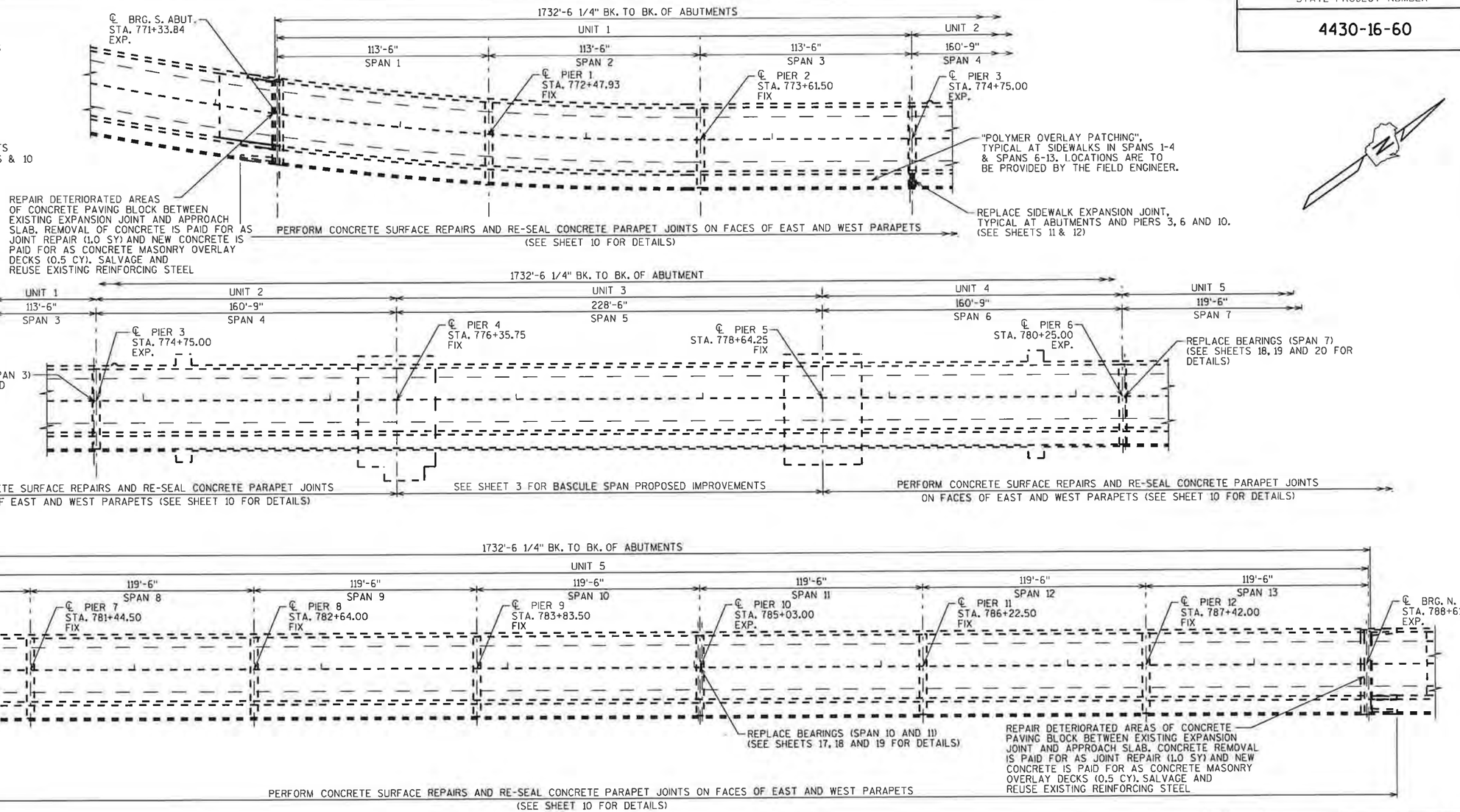
6

S.D.D. 15 D 21-3

STATE PROJECT NUMBER

4430-16-60

LIST OF DRAWINGS



EXISTING PLAN
(SHOWING PROPOSED IMPROVEMENTS)

DESIGN DATA

LIVE LOAD:
INVENTORY RATING = HS17 (TAKEN FROM HSI, 5/12/2015)
OPERATING RATING = HS30 (TAKEN FROM HSI, 5/12/2015)
MAXIMUM STANDARD PERMIT VEHICLE LOAD = 250 KIPS (TAKEN FROM HSI, 5/12/2015)

MATERIAL PROPERTIES:
CONCRETE SUPERSTRUCTURE .....F'C = 4,000 PSI
CONCRETE SUBSTRUCTURE.....F'C = 4,000 PSI
BAR STEEL REINFORCEMENT.....FY = 60,000 PSI
STRUCTURAL STEEL.....FY = 50,000 PSI
ROADWAY GRID.....FY = 50,000 PSI

TRAFFIC DATA:
ADT = 11,500 (2014)
= 16,800 (2024)

RDS = 45 MPH

WISCONSIN
DANIEL A. DUZAN
38846-006
CHICAGO, IL
PROFESSIONAL ENGINEER
5/18/15

WISCONSIN
DANIEL E. MACHAMER
36738
LAKE ZURICH, IL
PROFESSIONAL ENGINEER
5/18/2015

NO.	DATE	REVISION	BY

AECOM
342 North Water Street
7th Floor
Milwaukee, WI 53202
(414) 831-4100

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher NP 06/09/15
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE B-15-4

STH 42-57 OVER STURGEON BAY

COUNTY DOOR | ~~TOWN/CITY/VILLAGE~~ STURGEON BAY

DESIGN SPEC. REHABILITATION N/A

DESIGNED BY	KMP	DESIGN CK'D.	NPP	DRAWN BY	KMP	PLANS CK'D.	NPP

GENERAL PLAN AND LIST OF DRAWINGS

SHEET 1 OF 29

NE REGION CONTACT:	JEREMY ASHAUER	(920) 492-7718
BUREAU OF STRUCTURES CONTACT:	WILLIAM DREHER	(608) 266-8489
CONSULTANT CONTACT:	BILL SCHILLING	(414) 831-4176

STATE PROJECT NUMBER

4430-16-60

GENERAL NOTES

1. ALL BEAMS ON EITHER SIDE OF EXPANSION JOINTS SHALL BE JACKED SIMULTANEOUSLY FOR BEARING REPLACEMENT TO PREVENT DAMAGING CONDUIT EMBEDDED IN PARAPETS AND ROADWAY DECK JOINTS.
2. BEARING REPLACEMENT SHALL BE PERFORMED PRIOR TO PPC BEAM END REPAIR.
3. DRAWINGS SHALL NOT BE SCALED.
4. DIMENSIONS SHOWN ON THE PLANS WERE TAKEN FROM THE ORIGINAL DESIGN PLANS AND SUBSEQUENT REHABILITATION PLANS AND ARE NOT "AS-BUILT" DIMENSIONS.
5. IF THERE IS A CONFLICT BETWEEN THE STANDARD SPECIFICATIONS AND THE PLANS OR SPECIAL PROVISIONS, THE PLANS OR SPECIAL PROVISIONS SHALL GOVERN.
6. IN THE EVENT THAT THERE IS A DISCREPANCY IN THE PLANS AND SPECIAL PROVISIONS, BRING IT TO THE ATTENTION OF THE ENGINEER FOR HIS INTERPRETATION AND HIS DECISION SHALL GOVERN.
7. IF AN ITEM IS LISTED OR DESCRIBED IN THE SPECIAL PROVISIONS AND IS NOT SPECIFICALLY SHOWN ON THE PLANS, CONSIDER IT AS A PART OF THE WORK. NO ADDITIONAL COMPENSATION WILL BE ALLOWED. IF IT IS NOT OBVIOUS AS TO WHICH BID ITEM IT BELONGS, CONSULT THE ENGINEER FOR INTERPRETATION, AND HIS DECISION SHALL GOVERN.
8. CONCRETE SURFACE REPAIR AREAS TO BE COORDINATED WITH THE ENGINEER.
9. LOCATIONS OF "PATCHING PROTECTIVE POLYMER COATING" ARE TO BE COORDINATED WITH THE ENGINEER.
10. CONTRACTOR SHALL LOCATE AND WORK AROUND ALL UTILITIES THAT MAY BE ATTACHED OR EMBEDDED.
11. EXPANSION JOINT ASSEMBLY, INCLUDING ANCHOR STUDS AND HARDWARE SHALL BE PAID FOR AS A PART OF THE LUMP SUM PRICE BID FOR "EXPANSION DEVICE (B-15-4)"

BASCULE SPAN - STRUCTURAL STEEL NOTES

1. STRUCTURAL STEEL SHALL BE AASHTO M270 (GRADE 50) UNLESS NOTED OTHERWISE.
2. SHOP CONNECTIONS TO BE WELDED OR BOLTED AS SHOWN ON THE PLANS. PROVIDE ALL GALVANIZED BOLTED CONNECTIONS WITH 7/8" DIAMETER ASTM A-325 BOLTS, IN SLIP CRITICAL CONNECTIONS, UNLESS NOTED OTHERWISE ON THE PLANS.
3. WELDING NOT SHOWN ON THE PLANS WILL NOT BE PERMITTED, EXCEPT BY WRITTEN PERMISSION FROM THE ENGINEER AND WITH AN APPROVED WELD PROCEDURE PROVIDED BY THE CONTRACTOR.
4. FIELD WELDING WILL NOT BE PERMITTED UNLESS SHOWN ON THE PLANS OR AUTHORIZED IN WRITING BY THE ENGINEER.
5. PROVIDE A MINIMUM RADIUS OF 1" AT ALL INTERIOR AND RE-ENTRANT CUTS, UNLESS NOTED OTHERWISE ON THE PLANS, AND NOTE ON THE SHOP DRAWINGS WHERE THEY OCCUR.
6. PAINT ALL NEW STRUCTURAL STEEL UNLESS OTHERWISE NOTED.
7. GRIND OR PLANE ALL FLAME CUT EDGES OF PLATES THAT WILL BE PAINTED TO REMOVE THE HARDENED SURFACE CAUSED BY THE FLAME. REMOVAL OF THIS SURFACE IS NECESSARY TO OBTAIN A PROPER BLASTED SURFACE FOR THE ADHESION OF THE PAINT.

SCOPE OF STRUCTURAL WORK

(WORK LISTED FOR THE BASCULE LEAF IS APPLICABLE TO BOTH LEAVES)

1. REMOVE AND REPLACE STEEL ROADWAY GRID INCLUDING CONCRETE FILLED PORTION AND PAINT TOP SURFACE OF THE EXISTING STRINGERS.
2. REMOVE AND REPLACE PROTECTIVE POLYMER COATING ON BASCULE SPAN SIDEWALK. REPAIR PROTECTIVE POLYMER COATING ON THE APPROACH SPANS SIDEWALK.
3. REMOVE AND REPLACE ROADWAY STRINGERS B THROUGH K BETWEEN FLOORBEAMS 1 AND 3.
4. PAINT MACHINERY ROOM FLOOR AND REPAIR ACCESS HATCHES (SEE SHEET 4 FOR DETAILS).
5. BALANCE BASCULE LEAVES.
6. REPLACE EXPANSION JOINTS ON APPROACH SPAN SIDEWALKS.
7. REPLACE PPC BEAM BEARINGS AT PIERS 3, 6 AND 10.
8. REPAIR PPC BEAM ENDS AT EXPANSION JOINTS.
9. CLEAN AND COAT PPC BEAM ENDS AT EXPANSION JOINTS.
10. PERFORM LOCALIZED CONCRETE SURFACE REPAIRS ON PPC BEAMS.
11. REPAIR DETERIORATED AREAS OF CONCRETE PAVING BLOCKS.
12. SEAL PARAPET DEFLECTION JOINTS.
13. PERFORM CONCRETE SURFACE REPAIRS ON ROADWAY FACE OF PARAPETS.
14. PERFORM CONCRETE CRACK AND SURFACE REPAIRS ON PIERS 3, 6 AND 10.

TOTAL ESTIMATED QUANTITIES

	BID ITEM NUMBER	BID ITEM	STRUCTURE B-15-4						
			UNIT	UNIT 1	UNIT 2	UNIT 3	UNIT 4	UNIT 5	TOTAL
	203.0600.S	REMOVING OLD STRUCTURE OVER WATERWAY WITH MINIMAL DEBRIS STATION 777+50.00	LS	-	-	-	-	-	1
	502.3100	EXPANSION DEVICE B-15-4	LS	-	-	-	-	-	1
1	502.3200	PROTECTIVE SURFACE TREATMENT	SY	10.0	-	100	-	15	125
2	502.3210.S	PIGMENTED PROTECTIVE SURFACE TREATMENT	SY	450	190	85	190	1,075	1,990
	502.5005	MASONRY ANCHORS TYPE L NO. 5 BARS	EACH	110	-	-	-	190	300
	505.0605	BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB	1,990	-	-	-	3,390	5,380
	506.0605	STRUCTURAL STEEL HS	LB	-	-	21,400	-	-	21,400
	506.6000	BEARING ASSEMBLIES EXPANSION B-15-4	EACH	6	-	-	6	12	24
	506.7050.S	REMOVING BEARINGS B-15-4	EACH	6	-	-	6	12	24
	509.1000	JOINT REPAIR	SY	7.0	-	-	-	11.0	18.0
	509.1500	CONCRETE SURFACE REPAIR	SF	495	530	-	255	505	1,785
3	509.2500	CONCRETE MASONRY OVERLAY DECKS	CY	3.4	-	-	-	4.6	8.0
	509.5100.S	POLYMER OVERLAY	SY	-	-	161	-	-	161
	509.9025.S	EPOXY INJECTION CRACK REPAIR	LF	6	-	-	-	60	66
	509.9026.S	CORED HOLES 2-INCH DIAMETER	EACH	2	-	-	-	4	6
4	517.0600	PAINTING EPOXY SYSTEM B-15-4	LS	-	-	-	-	-	1
5	517.1000.S	STRUCTURE REPAINTING ORGANIC ZINC RICH SYSTEM, B-15-4	LS	-	-	-	-	-	1
5	517.3000.S	STRUCTURE OVERCOATING CLEANING AND PRIMING STRUCTURE, B-15-4	LS	-	-	-	-	-	1
6	517.4000.S	CONTAINMENT AND COLLECTION OF WASTE MATERIALS, B-15-4	LS	-	-	-	-	-	1
7	517.4500.S	NEGATIVE PRESSURE CONTAINMENT AND COLLECTION OF WASTE MATERIALS, B-15-4	LS	-	-	-	-	-	1
	517.6001.S	PORTABLE DECONTAMINATION FACILITY	LS	-	-	-	-	-	1
	SPV.0060.01	PPC BEAM END BLOCK REPAIR	EACH	11	-	-	-	19	30
	SPV.0060.02	CLEAN AND COAT CONCRETE BEAM ENDS	EACH	12	-	-	-	24	36
	SPV.0060.03	SEAL PARAPET DEFLECTION JOINTS	EACH	29	11	-	11	72	123
	SPV.0085.01	FURNISH BRIDGE BALANCE PLATES	LB	-	-	84,500	0	-	84,500
	SPV.0105.01	TRAP DOOR REPLACE HINGES	LS	-	-	-	-	-	1
	SPV.0105.02	BALANCE BASCULE BRIDGE LEAVES	LS	-	-	-	-	-	1
	SPV.0105.03	ELECTRICAL WORK	LS	-	-	-	-	-	1
	SPV.0105.04	MECHANICAL WORK	LS	-	-	-	-	-	1
	SPV.0165.01	STEEL GRID REMOVE AND REPLACE	SF	-	-	6,105	-	-	6,105
	SPV.0165.02	PPC BEAM SURFACE REPAIR	SF	10	-	-	-	30	40
	SPV.0165.03	CONCRETE FILL FOR ROADWAY GRID DECK	SF	-	-	890	-	-	890
	SPV.0180.01	POLYMER OVERLAY PATCHING	SY	3	1	-	1	7	12
	SPV.0180.02	REMOVE POLYMER OVERLAY	SY	-	-	161	-	-	161

1 CONCRETE FILLED GRID DECK SURFACES AND NEW CONCRETE SURFACES AT SIDEWALK JOINT REPLACEMENTS.

2 PROVIDE WHITE COLOR. PROVIDE ON TOP AND ROADWAY SIDE OF WEST PARAPET. PROVIDE ON TOP, ROADWAY SIDE, AND SIDEWALK SIDE OF EAST PARAPET.

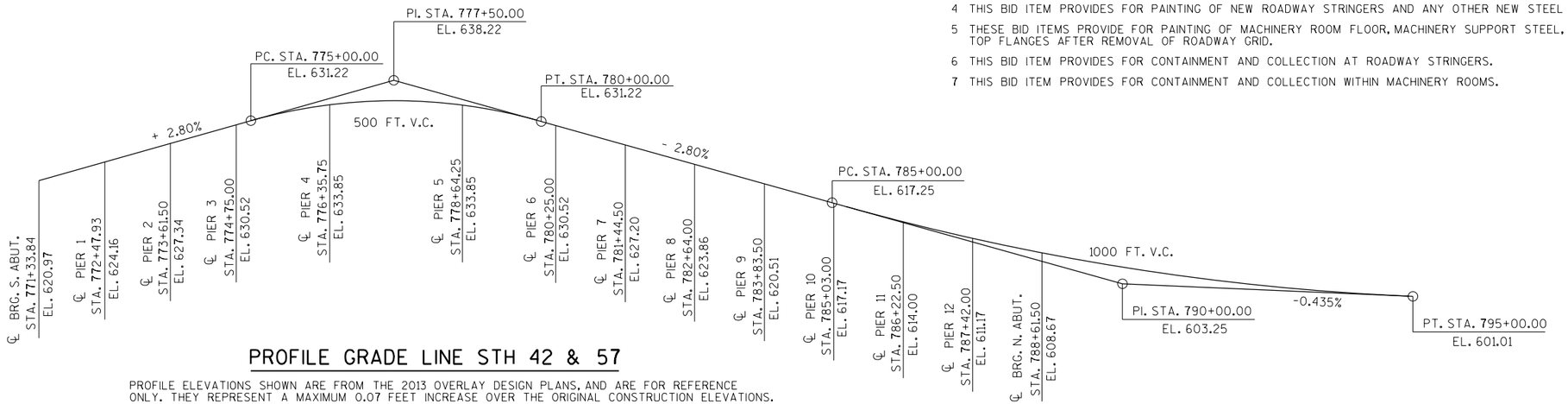
3 THIS BID ITEM PROVIDES FOR CONCRETE USED FOR SIDEWALK JOINT REPLACEMENTS AND CONCRETE FOR ABUTMENT PAVING BLOCK.

4 THIS BID ITEM PROVIDES FOR PAINTING OF NEW ROADWAY STRINGERS AND ANY OTHER NEW STEEL ITEMS.

5 THESE BID ITEMS PROVIDE FOR PAINTING OF MACHINERY ROOM FLOOR, MACHINERY SUPPORT STEEL, MACHINERY STEEL AND EXISTING ROADWAY STRINGER TOP FLANGES AFTER REMOVAL OF ROADWAY GRID.

6 THIS BID ITEM PROVIDES FOR CONTAINMENT AND COLLECTION AT ROADWAY STRINGERS.

7 THIS BID ITEM PROVIDES FOR CONTAINMENT AND COLLECTION WITHIN MACHINERY ROOMS.



PROFILE GRADE LINE STH 42 & 57

PROFILE ELEVATIONS SHOWN ARE FROM THE 2013 OVERLAY DESIGN PLANS, AND ARE FOR REFERENCE ONLY. THEY REPRESENT A MAXIMUM 0.07 FEET INCREASE OVER THE ORIGINAL CONSTRUCTION ELEVATIONS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-15-4

DRAWN BY KMP | PLANS CK'D. NPP

GENERAL NOTES AND ESTIMATED QUANTITIES

SHEET 2 OF 29

32

DATE: 6.2.2015
I.D.

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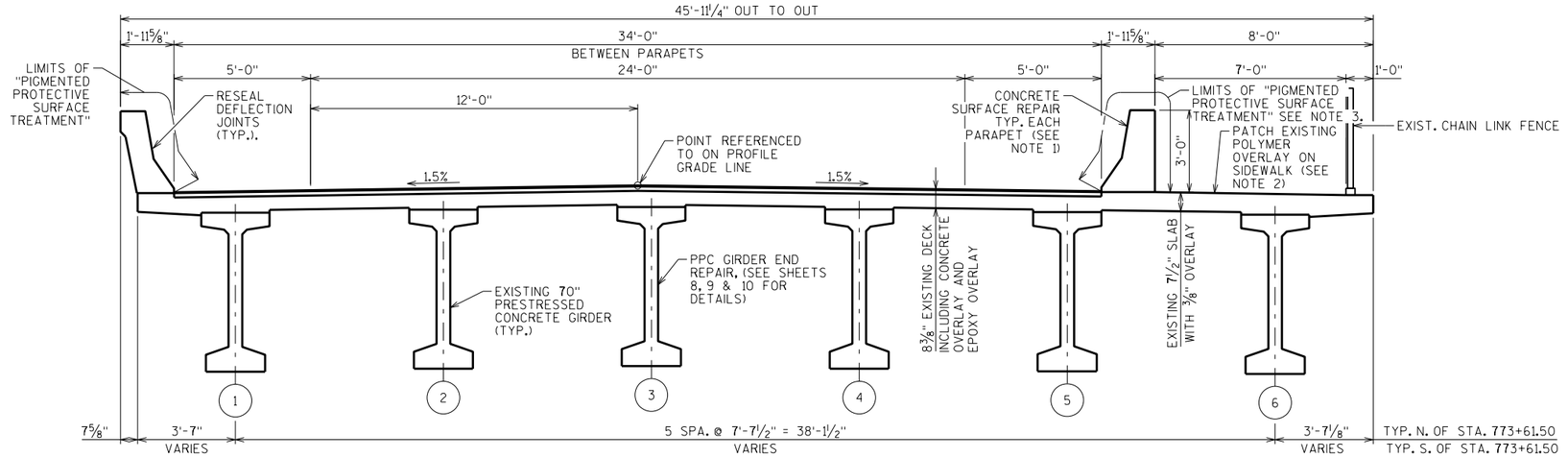
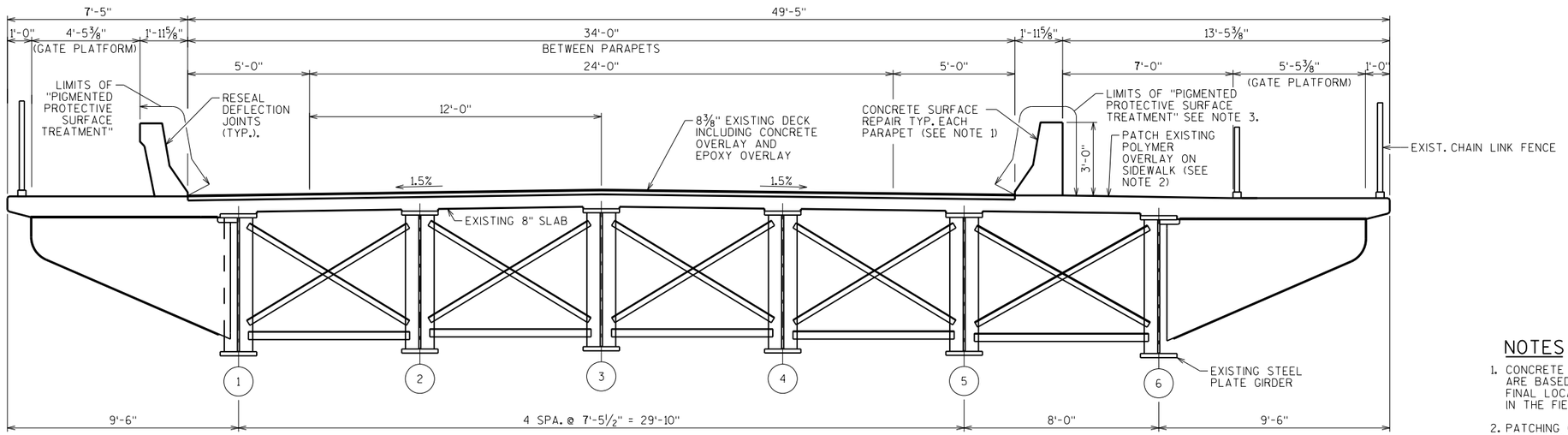
STATE PROJECT NUMBER

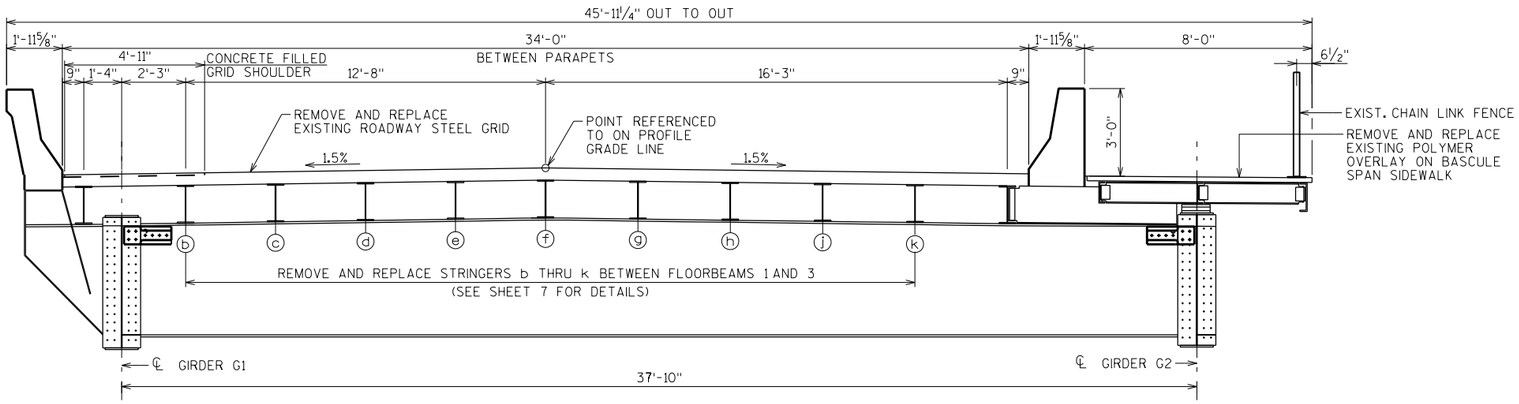
4430-16-60



APPROACH SPAN CROSS SECTION THRU ROADWAY



ANCHOR SPAN CROSS SECTION THRU ROADWAY



BASCULE SPAN CROSS SECTION THRU ROADWAY

NOTES

1. CONCRETE SURFACE REPAIRS ON PARAPETS ARE BASED ON 10% OF ROADWAY FACE AREAS. FINAL LOCATIONS AND AREAS TO BE DETERMINED IN THE FIELD AND COORDINATED WITH THE ENGINEER.
2. PATCHING OF THE EXISTING POLYMER OVERLAY ON APPROACH SPANS IS BASED ON 1.0 SY PER SPAN. FINAL LOCATIONS AND AREAS TO BE DETERMINED IN THE FIELD AND COORDINATED WITH THE ENGINEER.
3. REMOVE EXISTING COATINGS FROM PARAPETS AFTER CONCRETE SURFACE REPAIRS ARE PERFORMED AND PRIOR TO APPLYING NEW PIGMENTED COATING. CLEAN SURFACES PER THE COATING MANUFACTURER'S RECOMMENDATIONS PRIOR TO COATING. COST OF CLEANING AND PREPARING SURFACES IS INCLUDED IN PAY ITEM "PIGMENTED PROTECTIVE SURFACE TREATMENT".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-15-4

DRAWN BY KMP | PLANS CK'D. NPP

CROSS SECTIONS 33

SHEET 3 OF 29

8

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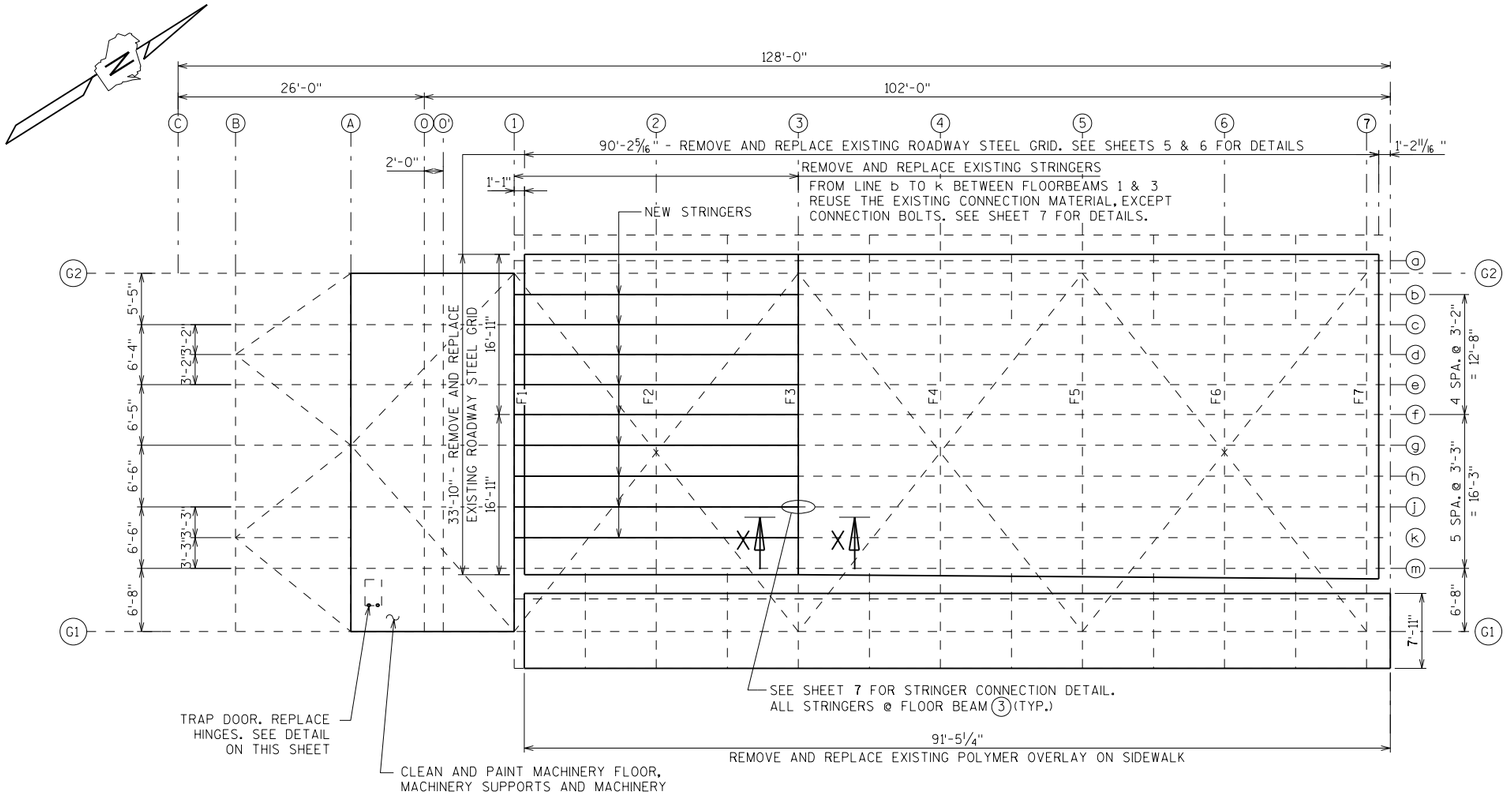
DATE: 5/29/2015

I.D.

STATE PROJECT NUMBER

4430-16-60



EXISTING FRAMING PLAN SPAN 5

(REPAIRS REQUIRED ON BOTH BASCULE LEAVES, SOUTH LEAF SHOWN, NORTH LEAF OPPOSITE HAND)

PAINTING NOTES:

1. BID ITEM "PAINTING EPOXY SYSTEM B-15-4" PROVIDES FOR PAINTING NEW ROADWAY STRINGERS.
2. BID ITEM "STRUCTURE REPAINTING ORGANIC ZINC RICH SYSTEM, B-15-4" PROVIDES PAINTING FOR MACHINERY ROOM FLOOR PLATE, AND REMOVED AND REINSTALLED CONNECTION MATERIAL. VACUUM CLEAN ALL AREAS OF THE MACHINERY ROOM TO COLLECT ALL OF THE SPENT MATERIAL FROM CLEANING.

   THE APPROXIMATE AREA OF THE PAINTING IS AS FOLLOWS:

MACHINERY ROOM FLOOR PLATES	1,300 SF

   DO NOT USE ABRASIVE BLASTING ON AREAS DIRECTLY ADJACENT TO OPEN GEARING, SEALS, BEARINGS, OR ANY OTHER MACHINERY WHERE GRIT MAY ENTER THE OPERATING SURFACES. FOR THESE AREAS, USE SSPC SP2 (HAND TOOL CLEANING).

   COVER AND SEAL ALL MACHINERY, MOTORS, BRAKES, GEARS AND ELECTRICAL EQUIPMENT DURING BLAST CLEANING TO PREVENT GRIT FROM ENTERING THESE SURFACES.
3. BID ITEM "STRUCTURE OVERCOATING CLEANING AND PRIMING STRUCTURE B-15-4" PROVIDES FOR PAINTING OF MACHINERY, SHAFTS, COVERS, MACHINERY SUPPORTS, AND THE TOP SURFACE OF THE TOP FLANGE OF THE EXISTING ROADWAY STRINGERS. ERECT TARPAULINS OR OTHER MATERIALS TO COLLECT ALL OF THE SPENT MATERIAL FROM CLEANING OF THE TOP FLANGES OF THE EXISTING STRINGERS.

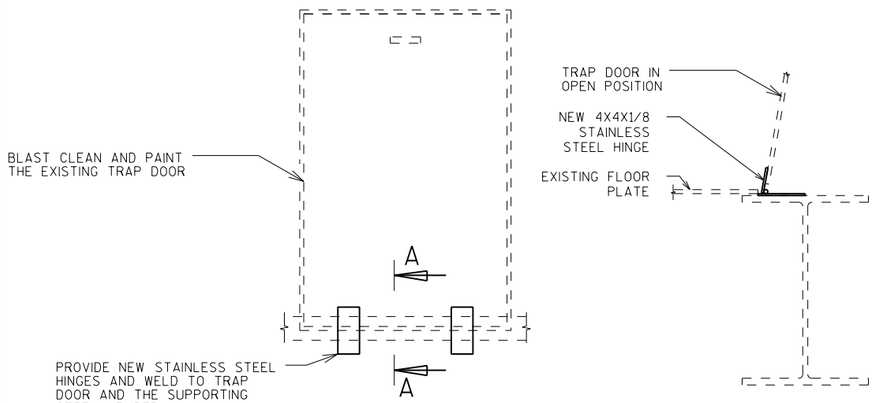
   THE APPROXIMATE AREAS OF THE PAINTING ARE AS FOLLOWS:

MACHINERY, SHAFTS, COVERS AND SUPPORTS (SSPC SP2)	1,720 SF
TOP SURFACE OF THE TOP FLANGE OF THE EXISTING STRINGERS (SP11)	840 SF

   MOVING PARTS SHALL BE PAINTED ORANGE. NON-MOVING PARTS SHALL BE PAINTED THE SAME COLOR AS THE FLOOR.

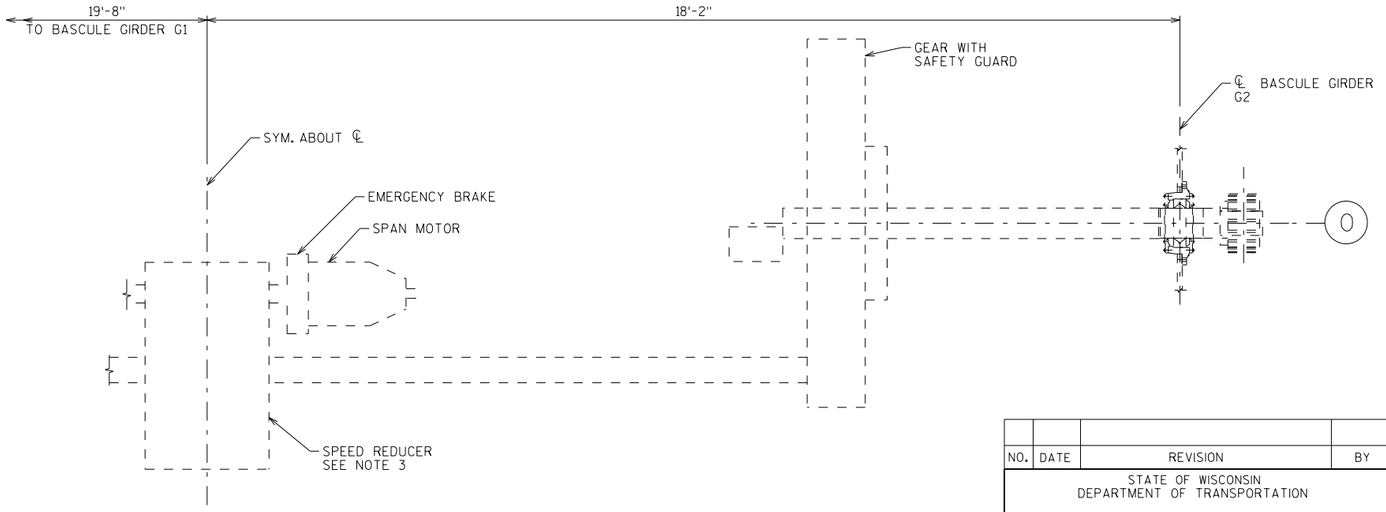
NOTES:

1. USE HOLES IN EXISTING CONNECTION PLATES AT THE STRINGERS AS TEMPLATE TO FIELD DRILL HOLES IN THE NEW STRINGERS.
2. FOR SECTION X-X SEE SHEET 7.
3. SEE MACHINERY PLANS FOR ADDITIONAL DETAILS.



DETAIL FOR TRAP DOOR REPAIR

SECTION A-A



SCHEMATIC PARTIAL PLAN OF EXISTING MACHINERY

(ONE LEAF SHOWN)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-15-4

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BASCULE SPAN FRAMING PLAN

SHEET 4 OF 29

34

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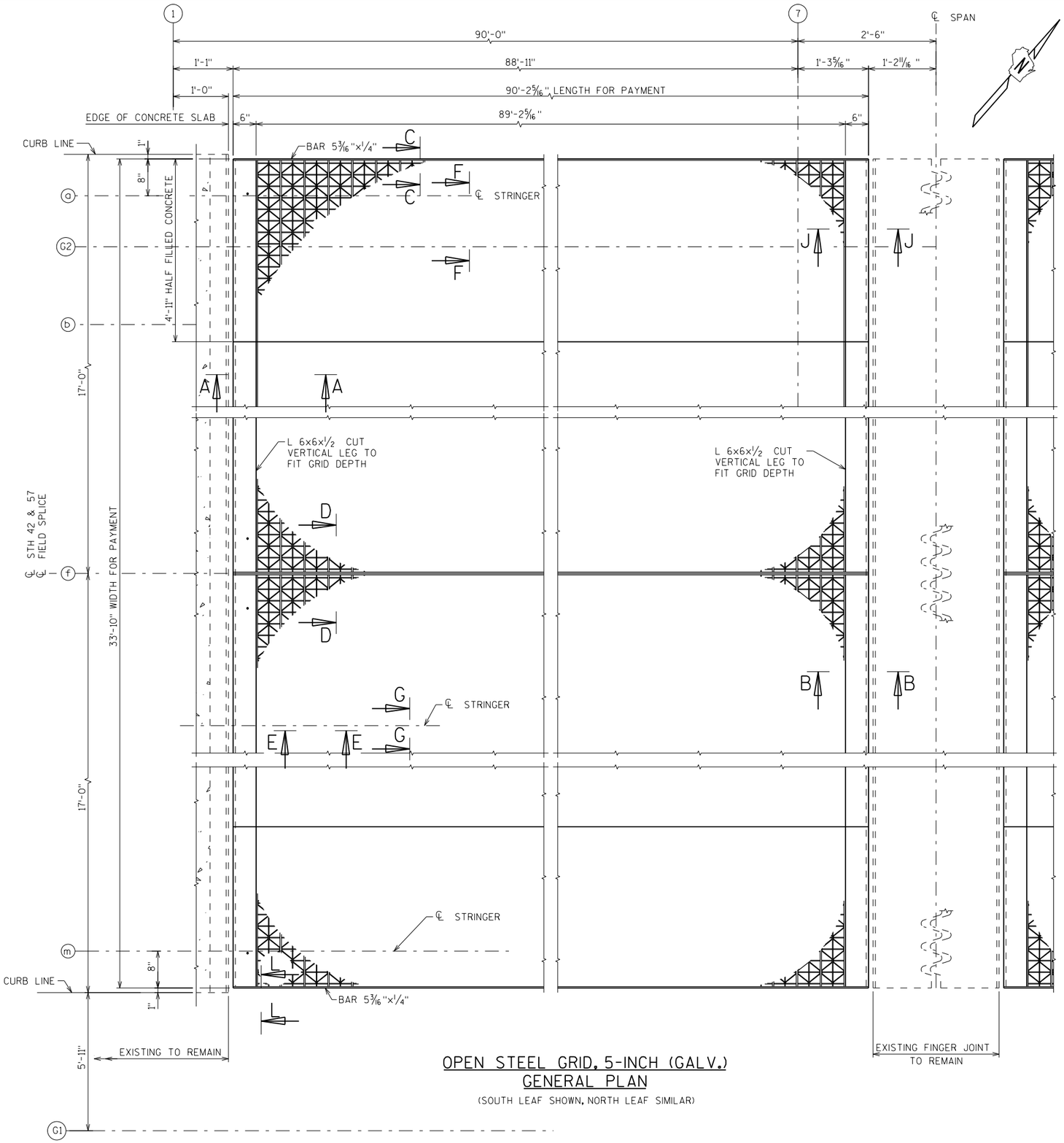

OPEN STEEL GRID, 5-INCH (GALV.)
GENERAL PLAN

(SOUTH LEAF SHOWN, NORTH LEAF SIMILAR)

FABRICATE THE GRID DECK WITHIN THE LIMITS OF THE FOLLOWING TOLERANCES:

1. OVERALL PANEL LENGTH: PLUS ONE-QUARTER (+1/4) TO MINUS ONE-QUARTER (-1/4) INCH MAXIMUM FROM THE APPROVED DRAWINGS.
2. PANEL WIDTH: PLUS ONE-EIGHTH (+1/8) TO MINUS ONE-EIGHTH (-1/8) INCH MAXIMUM FROM THE APPROVED SHOP DRAWINGS. ADDITIONALLY, THE CUMULATIVE WIDTH OF ALL PANELS AFTER INSTALLATION SHALL BE WITHIN ONE-QUARTER (1/4) INCH OF THE OVERALL FLOOR DIMENSION SHOWN ON THE CONTRACT PLANS.
3. PANEL SQUARENESS: DIAGONAL LENGTHS BETWEEN EXTREME CORNERS OF A PANEL; WITHIN ONE-QUARTER (1/4) INCH FROM EACH OTHER.
4. PANEL FLATNESS: THE TRANSVERSE CAMBER (WIDTH) OF PANEL; NO MORE THAN 0.001 TIMES THE WIDTH OF THE PANEL. THE LONGITUDINAL CAMBER; NO MORE THAN 0.003 TIMES THE LENGTH OF THE PANEL.
5. SWEEP: THE SIDE BOW; NO MORE THAN PLUS OR MINUS ONE-QUARTER (1/4) INCH PER 10 LINEAR FEET IN EITHER DIRECTION.
6. MAIN BAR VERTICALITY: NO MORE THAN ONE SIXTEENTH (1/16) INCH OUT OF VERTICAL ON THE FULL HEIGHT.
7. CROSS BAR VERTICALITY: NO MORE THAN ONE SIXTEENTH (1/16) INCH OUT OF VERTICAL ON THE FULL HEIGHT.
8. MAIN BAR SPACING: CENTER TO CENTER SPACING OF THE MAIN BAR; NO MORE THAN PLUS OR MINUS ONE-SIXTEENTH (1/16) INCH FROM THE DETAILED BAR SPACING.
9. CROSS BAR SPACING: CENTER TO CENTER SPACING OF THE CROSS BAR; NO MORE THAN PLUS OR MINUS ONE-SIXTEENTH INCH (1/16) INCH FROM THE DETAILED BAR SPACING.

INSTALL THE GRID PANELS WITHIN THE LIMITS OF THE FOLLOWING TOLERANCES:

1. CROSS BAR ALIGNMENT BETWEEN ADJACENT GRID DECK PANELS; NO MORE THAN PLUS OR MINUS ONE-SIXTEENTH (1/16) INCH.
2. THE OVERALL CROSS BAR ALIGNMENT OF GRID DECK PANELS FROM END TO END OF THE MOVABLE SPAN LEAF; NO MORE THAN PLUS OR MINUS ONE-QUARTER (1/4) INCH.

NOTES:

1. DETAILS OF THE ROADWAY GRID SHOWN ARE BASED ON A WELDED 5-INCH 4-WAY TYPE HAVING DIAGONAL ELEMENTS. PROVIDE A 5 3/16" GRID THAT HAS A MINIMUM SECTION MODULUS OF 4.0 CUBIC INCHES PER FOOT ON THE TOP AND 3.1 CUBIC INCHES PER FOOT ON THE BOTTOM BASED ON 50% OF DIAGONAL BARS BEING ACTIVE. AN EQUIVALENT STRENGTH 5 3/16" RIVETED GRID SYSTEM MAY BE SUBMITTED TO THE ENGINEER FOR REVIEW AND POSSIBLE APPROVAL. SUBMIT ALL REQUIRED CHANGES TO DETAILS THAT ARE NECESSARY. ANY RESULTING INCREASES IN COSTS OF OTHER ITEMS DUE TO THE ALTERNATE GRID WILL NOT BE COMPENSATED. THE COUNTERWEIGHT MATERIAL SHOWN ON THE PLANS TO BE ADDED TO EACH BASCULE LEAF AND PAID FOR IS BASED ON THE GRID HAVING AN UNIT WEIGHT OF 18.5 POUNDS PER SQUARE FOOT PRIOR TO GALVANIZING AND ADDING FOR CONNECTION DETAILS. THE CONTRACTOR IS RESPONSIBLE AT NO ADDITIONAL COMPENSATION FOR DESIGNING, FURNISHING AND INSTALLING ALL ADDITIONAL COUNTERWEIGHT NECESSARY IF AN ALTERNATE HEAVIER RIVETED GRID SYSTEM IS APPROVED AND USED.
2. GALVANIZE ALL PARTS OF STEEL FLOOR GRID (GRID, TRIM BARS, JOINT BARS, EDGE ANGLES, CONNECTION, PLATES, FORM PANS AND FASTENERS)
3. FIELD DRILL HOLES IN BOLT DOWN PLATES AND IN EXISTING AND NEW STRINGER FLANGES AFTER ACCURATE GRID LAYOUT HAS BEEN PERFORMED.
4. SEE SHEET 6 FOR ALL SECTIONS SHOWN ON THIS SHEET.
5. PROVIDE CONCRETE FILL IN THE ROADWAY GRID HAVING A MINIMUM STRENGTH OF 3,250 PSI AT 7 DAYS AND A 28 DAY STRENGTH OF 4,000 PSI. THE CONCRETE FILL IS TO HAVE A MINIMUM STRENGTH OF 3,000 PSI PRIOR TO A BRIDGE OPENING. SEE SPECIAL PROVISIONS.
6. THE CONCRETE FILL SHALL HAVE A MAXIMUM SIZE OF AGGREGATE OF 3/8".
7. THE COST OF GRID CONNECTION PLATES IS INCLUDED IN THE BID ITEM "STEEL GRID REMOVE AND REPLACE".

THE ASSUMED WEIGHT FOR THE NEW GRID IS AS FOLLOWS:

1. 5" STEEL GRID WITH CONCRETE FORM PAN 18.5 PSF (PRIOR TO GALVANIZING)
2. 5" STEEL GRID WITH CONCRETE FORM PAN, CONNECTION PLATES, AND ALL HARDWARE 19.8 PSF (PRIOR TO GALVANIZING)
3. WEIGHT OF CONCRETE IN HALF-FILLED PORTION 27.2 PSF
4. GALVANIZING OF STEEL GRID 6% ADDED.

STATE PROJECT NUMBER

4430-16-60

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-15-4

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OPEN STEEL GRID PLAN

SHEET 5 OF 29

35

8

8

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DATE: 5/29/2015

I.D.

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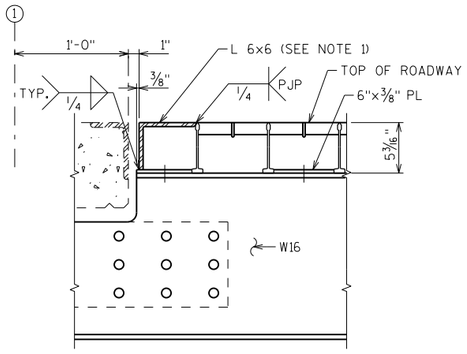
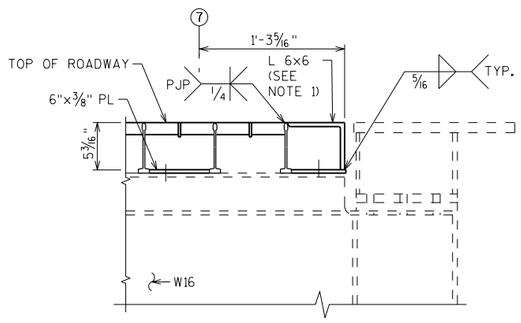
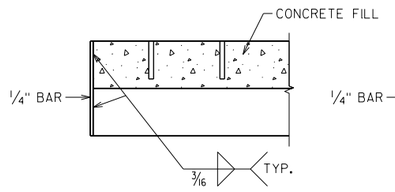
4430-16-60



SECTION A-A



SECTION B-B



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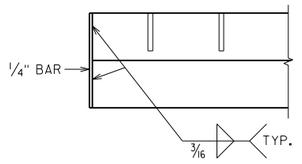
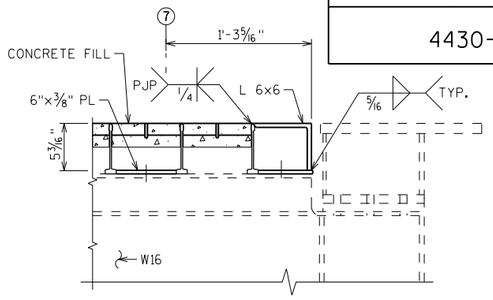
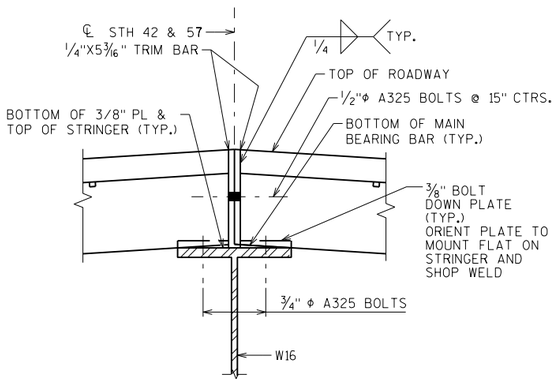


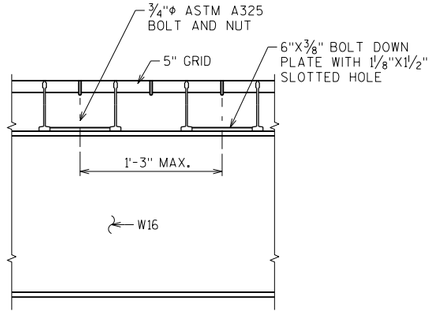
SECTION L-L



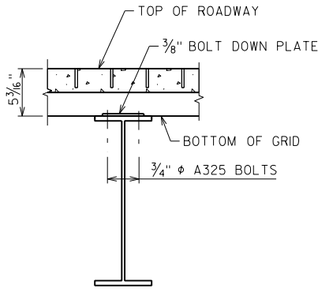
SECTION J-J



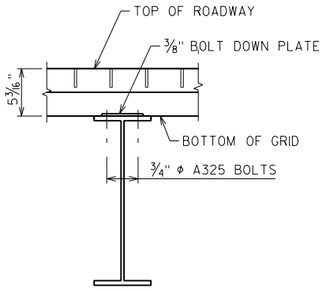
SECTION D-D
(AT LINE ⓕ)



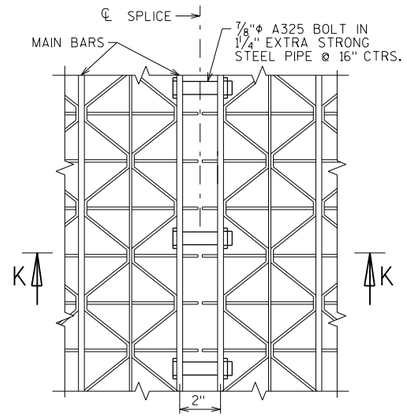
SECTION E-E



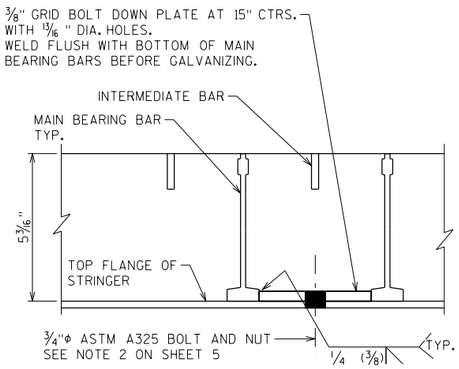
SECTION F-F
FOR HALF-FILLED GRID AT STRINGERS ⓐ & ⓑ



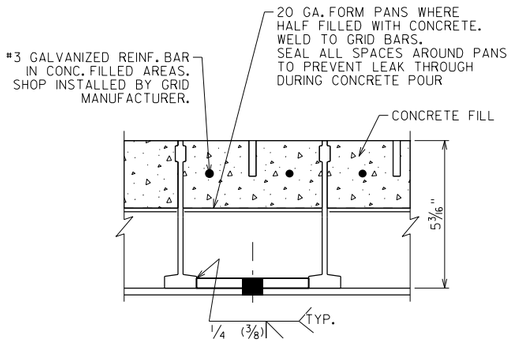
SECTION G-G
FOR OPEN GRID AT STRINGERS ⓒ TO ⓜ



TRANSVERSE GRID SPLICE DETAIL
(TRANSVERSE JOINT BETWEEN GRID PANELS)

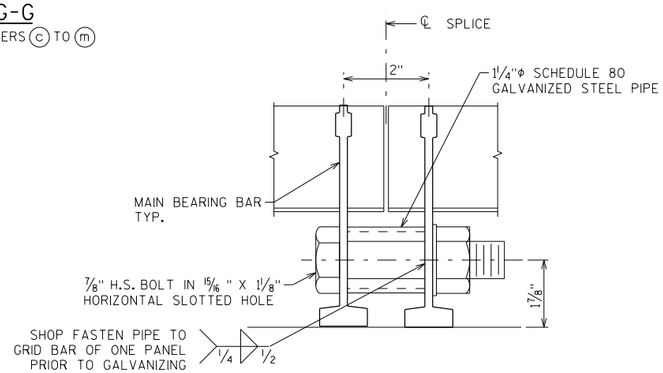


AT OPEN GRID PORTION



AT CONCRETE FILLED GRID PORTION

(TYPICAL CONNECTION PLATE DETAIL)



SECTION K-K

NOTE:

1. TRIM HORIZONTAL LEG TO SUITE SPACING.
2. FIELD DRILL HOLES IN BOLT DOWN PLATES AND IN EXISTING AND NEW STRINGER FLANGES AFTER ACCURATE GRID LAYOUT HAS BEEN PERFORMED.
3. SEE SHEET 5 FOR THE LOCATIONS OF ALL SECTIONS SHOWN EXCEPT SECTION K-K.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-15-4

DRAWN BY NPP | PLANS CK'D. DEM

OPEN STEEL GRID DETAILS

SHEET 6 OF 29

36

8

8

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DATE: 5/29/2015

I.D.

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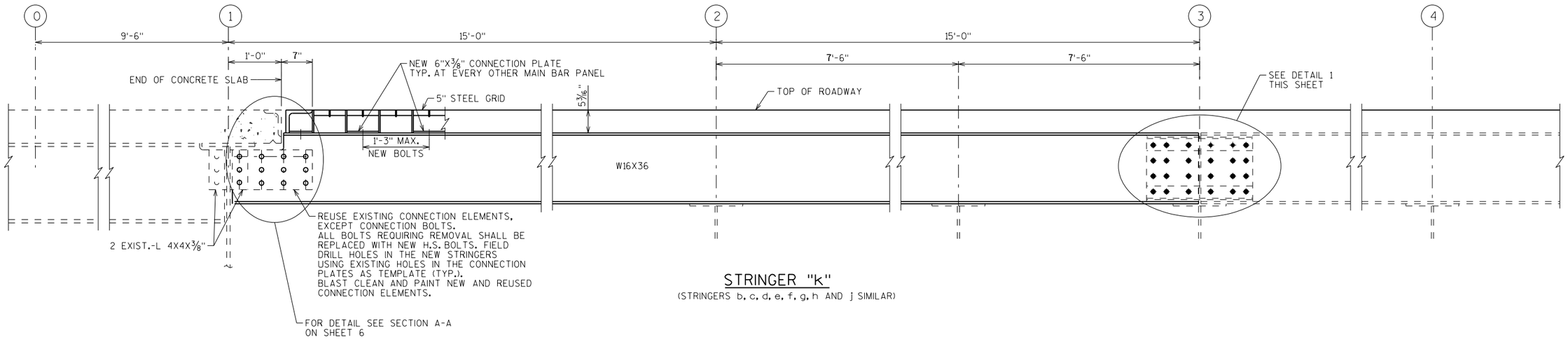
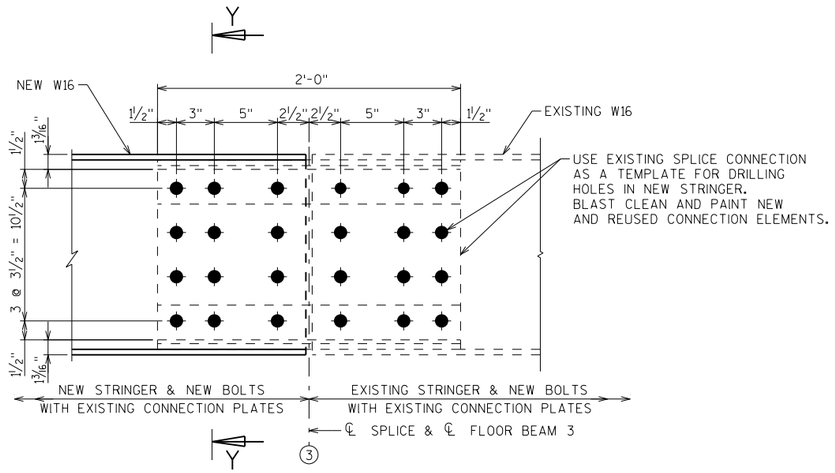
4430-16-60

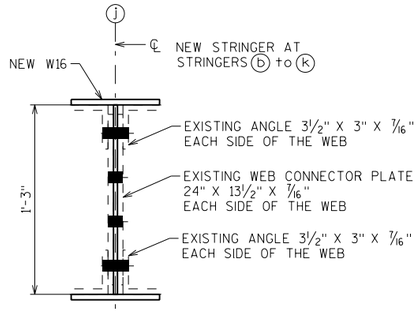


STRINGER "k"

(STRINGERS b, c, d, e, f, g, h AND j SIMILAR)



DETAIL 1



SECTION Y-Y

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-15-4

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LONGITUDINAL STRINGER REPLACEMENT

SHEET 7 OF 29

37

8

8

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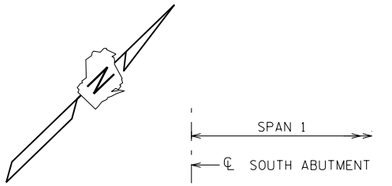
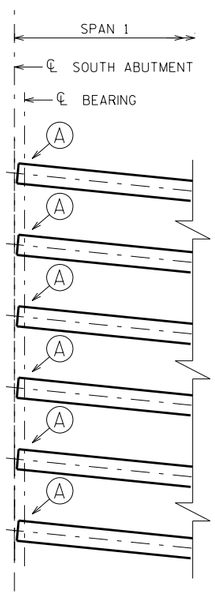
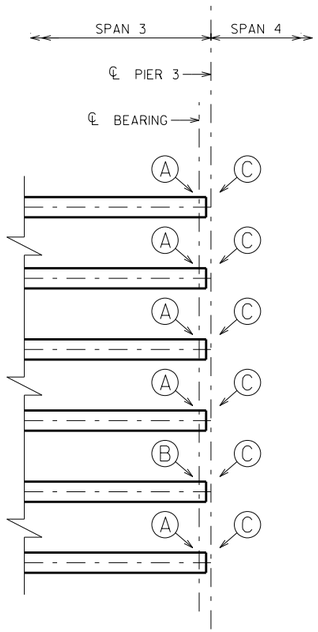




SOUTH ABUTMENT



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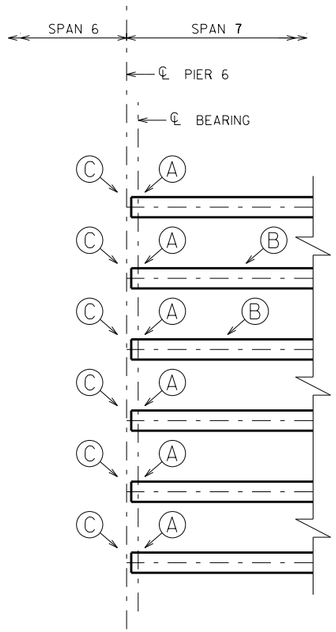

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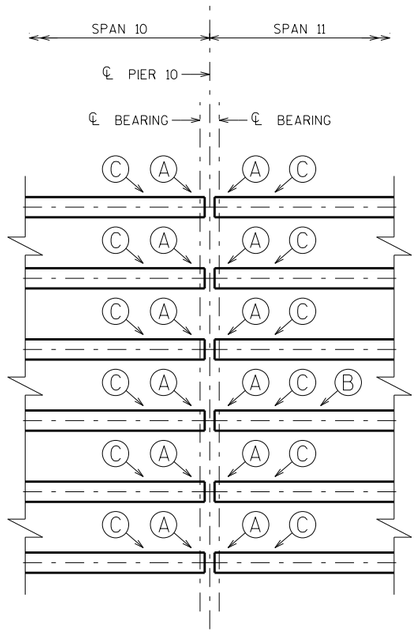

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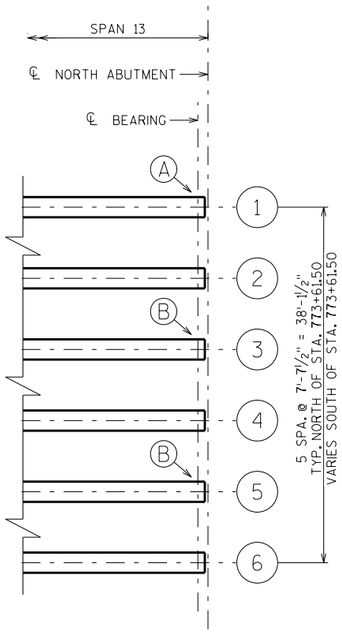

NORTH ABUTMENT

BEAM END REPAIR NOTES:

1. ALL GIRDER ENDS AT EXPANSION JOINTS TO BE CLEANED AND COATED (SEE SHEET 10 FOR LIMITS).
2. LIMITS OF "PPC BEAM SURFACE REPAIR" AT EACH LOCATION ARE TO BE COORDINATED WITH ENGINEER.
3. PERFORM BEARING REPLACEMENT PRIOR TO BEAM END REPAIRS.

LEGEND:

- (A) PPC BEAM END BLOCK REPAIR
- (B) PPC BEAM SURFACE REPAIR
- (C) REPLACE BEARINGS (SEE SHEETS 17, 18 AND 19 FOR DETAILS)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
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STRUCTURE B-15-4

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PPC BEAM END REPAIR DETAILS 1

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DATE: 5/29/2015

I.D.

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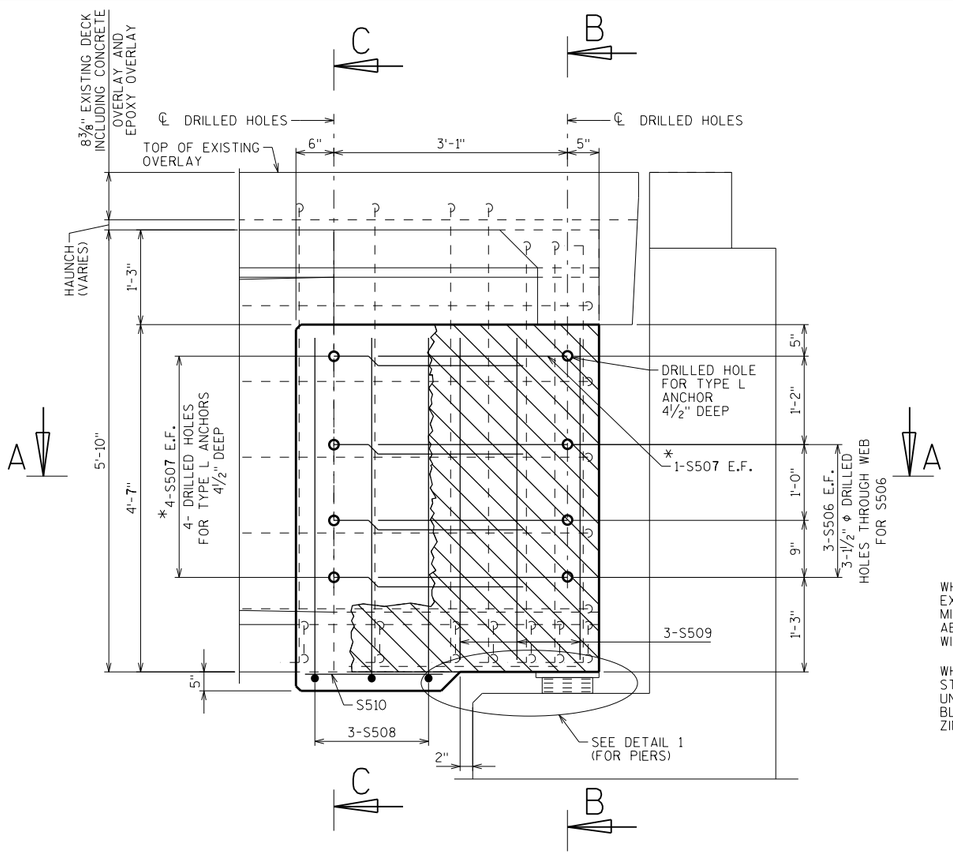
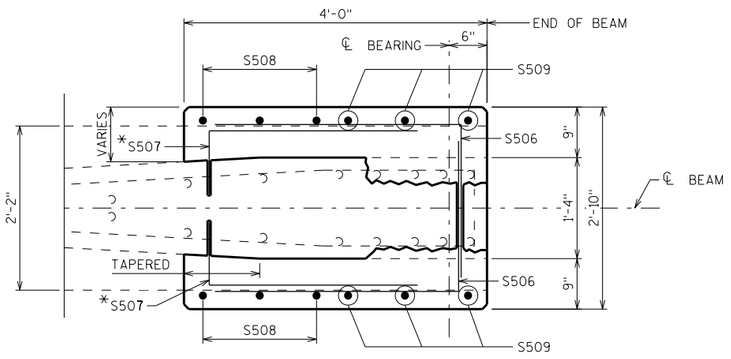
4430-16-60



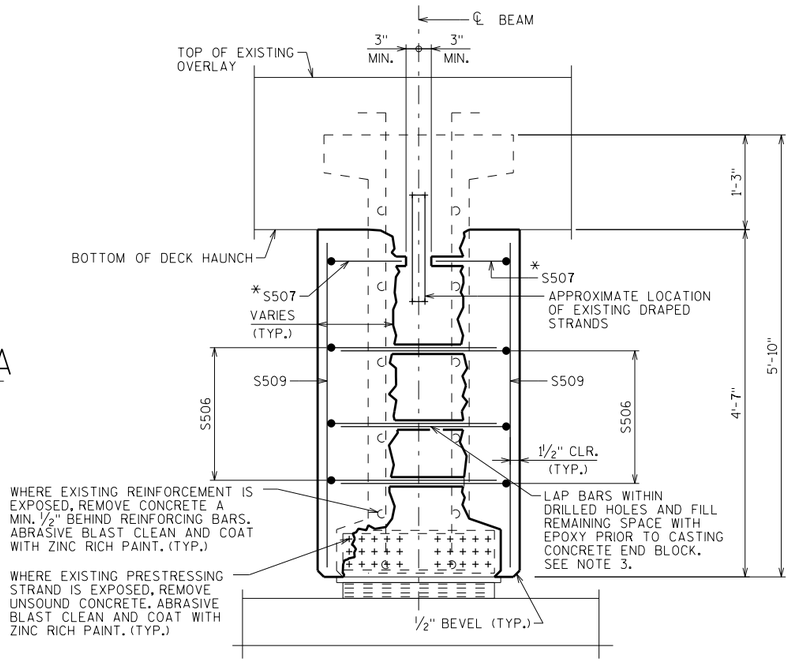
PPC BEAM END BLOCK REPAIR

(BEAM AT ABUTMENT SHOWN, BEAMS AT PIERS SIMILAR)

PARTIAL DEPTH CONCRETE REMOVAL (SEE NOTE 1)



SECTION A-A

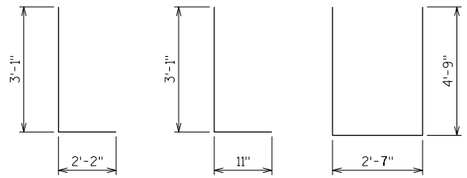


SECTION B-B

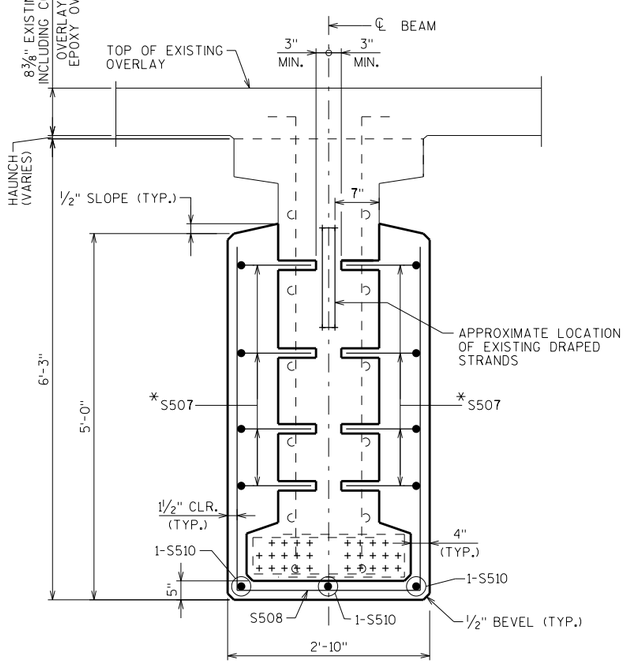
BILL OF BARS - COATED REINFORCEMENT STEEL

BAR MARK	NO. REQ'D	LENGTH	BENT	LOCATION
COATED BARS				TOTAL WEIGHT: 4,270 LB
S506	180	5'-1"	X	LONGITUDINAL BENT BARS THRU WEB
S507	300	3'-10"	X	LONGITUDINAL BENT BARS ANCHORED IN WEB
S508	90	11'-10"	X	TRANSVERSE BARS
S509	180	4'-3"		TRANSVERSE BARS
S510	90	2'-3"		LONGITUDINAL BARS AT BOTTOM OF BEAM

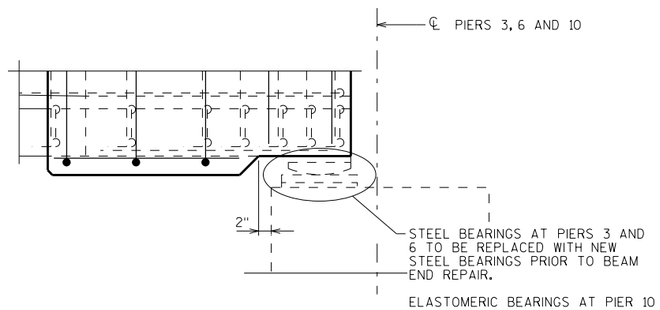
THE FIRST DIGIT OF THE BAR MARK INDICATES THE BAR SIZE



* DENOTES BAR IS MASONRY ANCHOR TYPE L #5 BAR. EMBED 4½" IN CONCRETE. ANCHOR SHALL BE APPROVED FOR USE IN CRACKED CONCRETE.



SECTION C-C



DETAIL 1

NOTES

1. REMOVAL AREA SHOWN IS APPROXIMATE. THE ENTIRE BEAM END SHALL BE SOUNDED BUT ONLY UNSOUND CONCRETE SHALL BE REMOVED EXCEPT WHERE NECESSARY TO GET BEHIND EXPOSED REINFORCING STEEL.
2. EXERCISE PROPER CARE WHEN SAWING/DRILLING OF THE EXISTING GIRDERS TO NOT DAMAGE EMBEDDED REINFORCING STEEL OR PRESTRESSING STRANDS. REPLACE DAMAGED GIRDERS AT NO ADDITIONAL COST TO THE DEPARTMENT.
3. USE EPOXY ADHESIVE PER WISDOT'S APPROVED PRODUCT LIST AND INSTALL USING AN EPOXY DISPENSING GUN TO COMPLETELY FILL VOID SPACE IN DRILLED HOLE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-15-4

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PPC BEAM END REPAIR DETAILS 2

SHEET 9 OF 29

8

8

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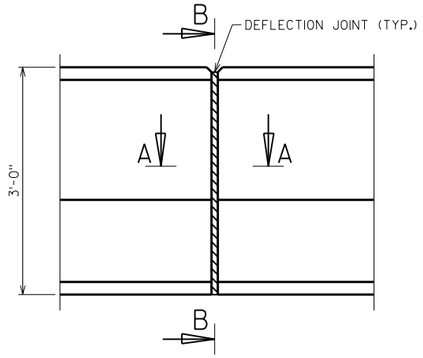
DATE: 5/29/2015

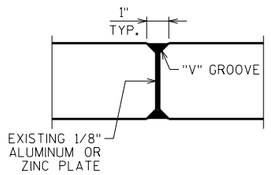
I.D.

STATE PROJECT NUMBER

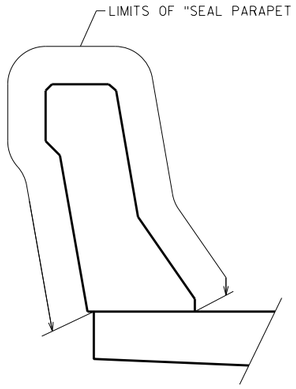
4430-16-60



ELEVATION



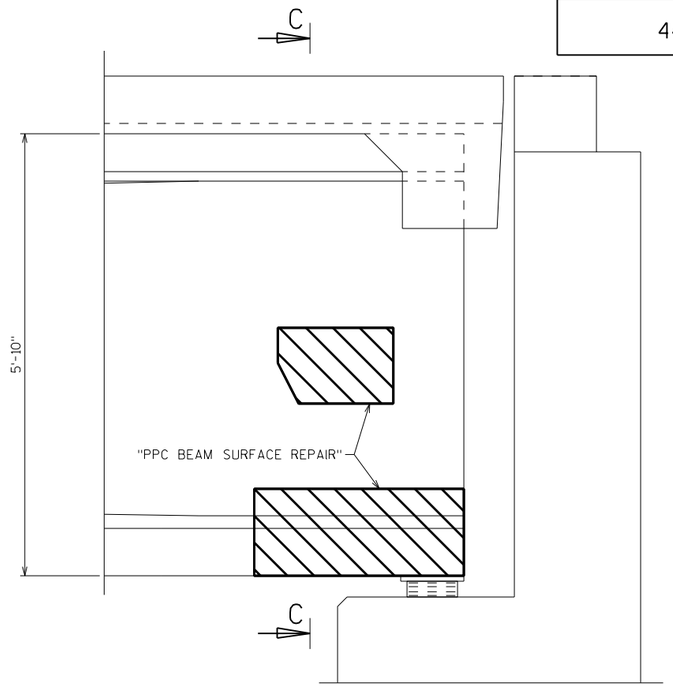
SECTION A



SECTION B

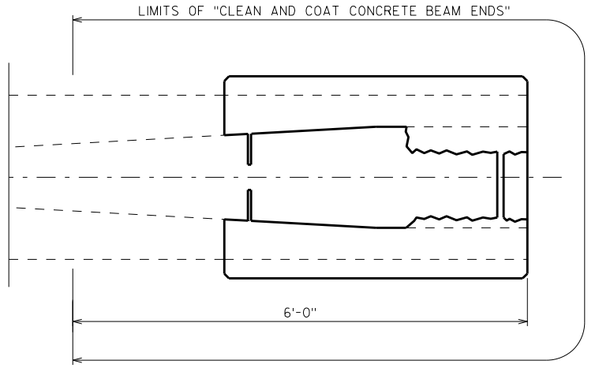
PARAPET DEFLECTION JOINT SEALING

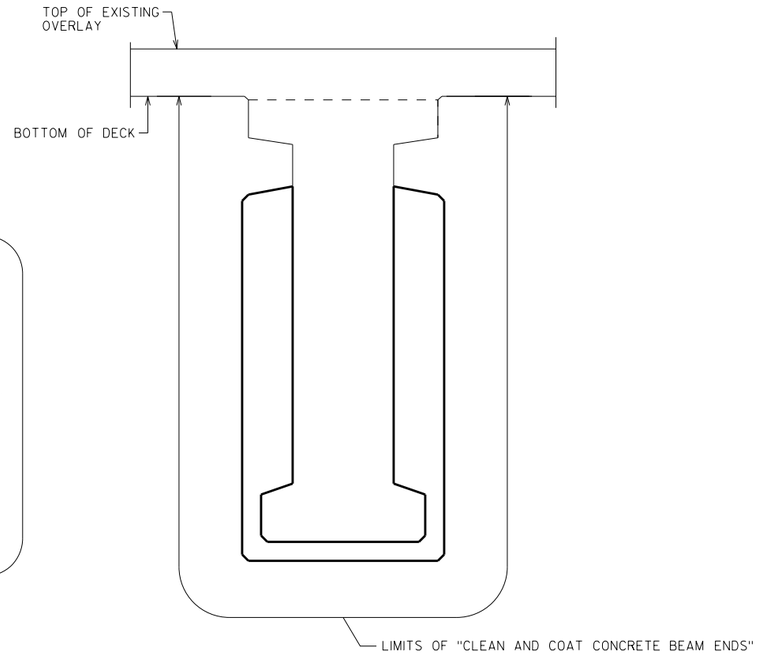
REMOVE AND REPLACE EXISTING JOINT SEALER AT ALL DEFLECTION JOINTS ON NORTH AND SOUTH PARAPETS



PPC BEAM SURFACE REPAIR

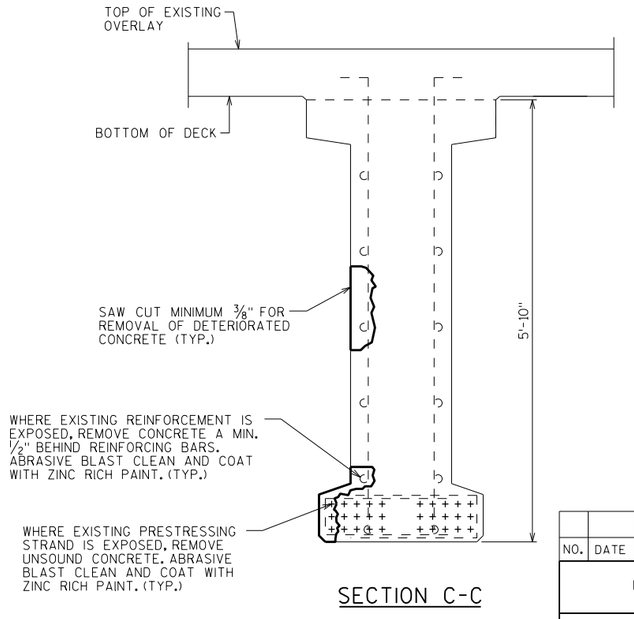
SEE SHEET 8 FOR LOCATIONS





CLEANING AND COATING BEAM ENDS

ALL BEAM ENDS AT THE NORTH AND SOUTH ABUTMENTS, AND PIERS 3, 6 AND 10 TO BE CLEANED AND COATED (REGARDLESS OF REPAIR TYPE)



SECTION C-C

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-15-4

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PPC BEAM END REPAIR AND MISC. DETAILS

SHEET 10 OF 29

40

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8

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DATE: 5/29/2015

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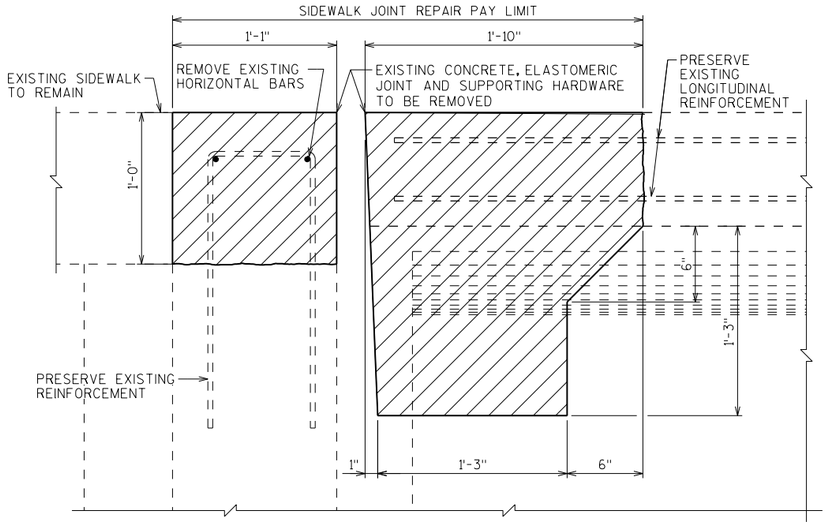
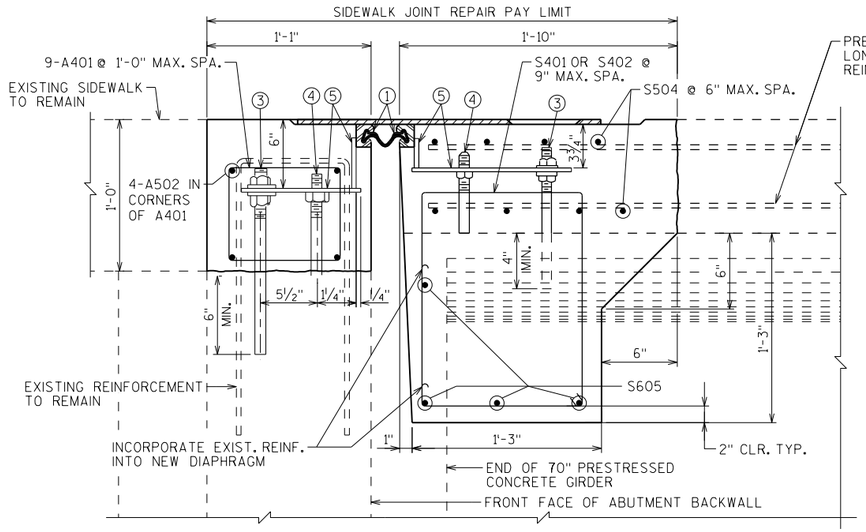
STATE PROJECT NUMBER

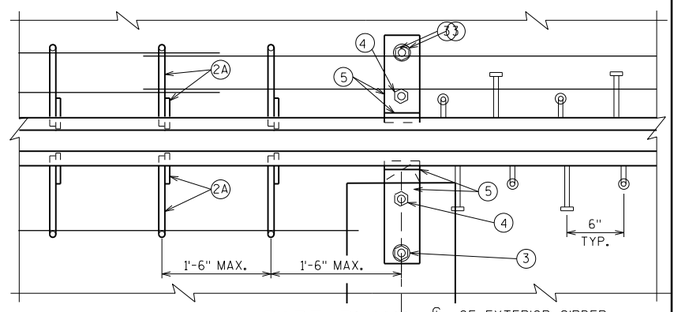
4430-16-60



SIDEWALK JOINT REPAIR - REMOVAL AT ABUTMENTS



TYPICAL SECTION THRU JOINT AT ABUTMENTS



PART PLAN

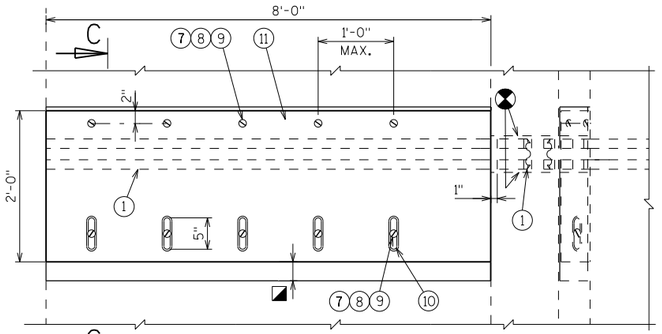
℄ OF EXTERIOR GIRDER.

LEGEND

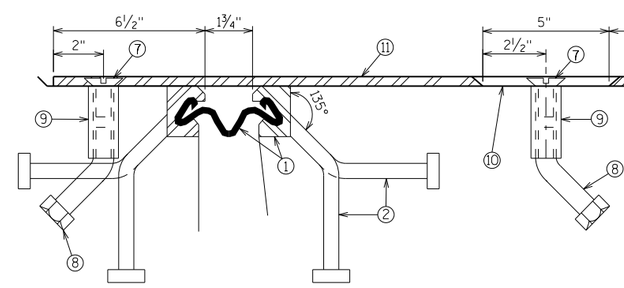
1. NEOPRENE STRIP SEAL (4 - INCH) AND STEEL EXTRUSIONS.
2. STUDS 5/8"Φ X 6 3/8" LONG AT 6" ALTERNATE CENTERS. WELD TO EXTRUSIONS AND BEND AS SHOWN AFTER WELDING.
2A. 1/2" THICK ANCHOR PLATE WITH 5/8" Φ ROD (OR ALTERNATE STRIP SEAL ANCHOR). WELD ROD TO ANCHOR PLATE, WELD ANCHOR PL. TO NO. 1 AT 1'-6" CTRS. BETWEEN GIRDERS.
3. ¾" Φ THREADED ROD WITH 2 NUTS AND PLATE WASHERS. FOR PRESTRESSED GIRDER, GROUT THREADED ROD INTO FIELD DRILLED HOLES ON ℄ OF GIRDER. ON ABUTMENT SIDE, GROUT THREADED ROD INTO FIELD DRILLED HOLES IN ABUTMENT BACKWALL AS SHOWN.
4. ¾" Φ THREADED ROD WITH NUT. TACK WELD NUT TO NO. 5.
5. FABRICATE SUPPORT FROM 3" X ½" BAR AS SHOWN OR EQUIVALENT. ONE PER GIRDER PER SIDE. SHOP OR FIELD WELD TO NO. 1. IF FIELD WELDED, COVER WELDED AREAS WITH EPOXY-COATING MATERIAL. PROVIDE 1½" Φ HOLE FOR NO. 3 & 1" Φ HOLE FOR NO. 4.
7. ¾"Φ X 1½" STAINLESS STEEL SOCKET FLAT HEAD SCREWS WITH ANTI-SEIZE LUBRICANT. PLACE IN COUNTERSUNK HOLE. RECESS " BELOW PLATE SURFACE.
8. ¾"Φ X 4" GALVANIZED HEX HEAD BOLT. BEND 45°.
9. ¾"Φ X 2 " GALVANIZED THREADED COUPLING.
10. 1" X 5" SLOTTED COUNTERSUNK HOLE FOR NO. 7. PLACE SLOT PARALLEL TO DIRECTION OF MOVEMENT.
11. SIDEWALK COVER PLATE ⅜" X 2'-0" WIDE X 8'-0" WITH HOLES FOR NO. 7. GALVANIZE PLATE AFTER SLIP-RESISTANT SURFACE IS APPLIED.

BLOCKOUT CONCRETE 2" ON EACH SIDE OF THE JOINT.

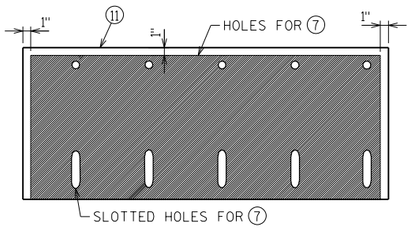
JOINT OPENING DIMENSION ALONG SKEW PLUS ½".



PLAN AT SIDEWALK



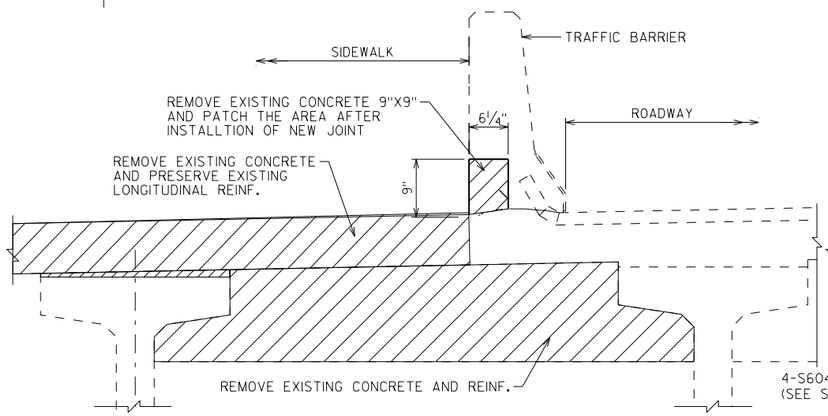
SECTION C-C



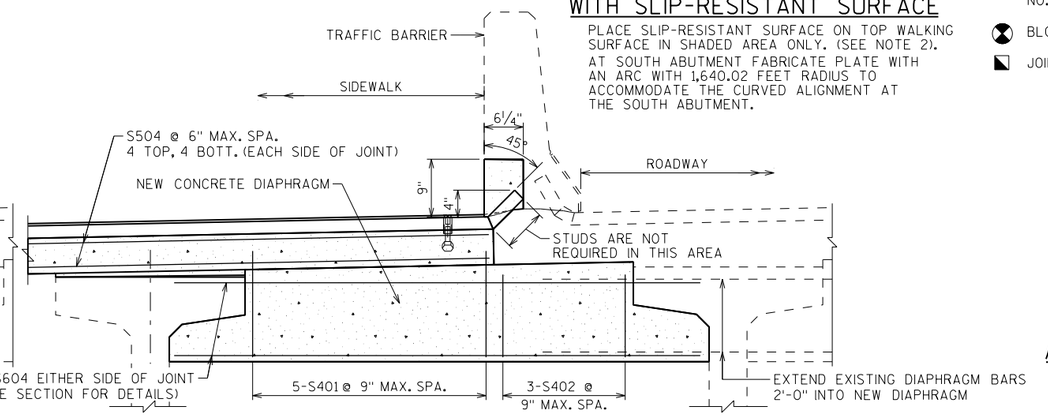
PLAN OF SIDEWALK COVER PLATE WITH SLIP-RESISTANT SURFACE

PLACE SLIP-RESISTANT SURFACE ON TOP WALKING SURFACE IN SHADED AREA ONLY. (SEE NOTE 2).

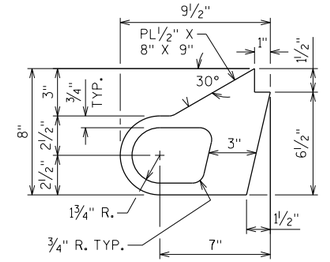
AT SOUTH ABUTMENT FABRICATE PLATE WITH AN ARC WITH 1,640.02 FEET RADIUS TO ACCOMMODATE THE CURVED ALIGNMENT AT THE SOUTH ABUTMENT.



SECTION AT SIDEWALK SHOWING REMOVAL



SECTION AT SIDEWALK SHOWING NEW CONSTRUCTION



ALTERNATE STRIP SEAL ANCHOR

NOTES

1. SEE SHEET 12 FOR BAR BILL AND BAR BENT DETAILS.
2. SLIP RESISTANT SURFACE SHALL BE APPLIED USING PLASMA STREAM DEPOSITION AND HAVE THE FOLLOWING MINIMUM PROPERTIES:
   - BOND STRENGTH 4,000 PSI
   - ROCKWELL "C" HARDNESS 55
   - COEFFICIENT OF FRICTION 0.50 (WET OR DRY)

LEGEND

INDICATES REMOVAL OF EXISTING MATERIALS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-15-4

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SIDEWALK EXP. JOINT DETAILS AT ABUTMENTS

SHEET 11 OF 29

41

DATE: 5/29/2015

I.D.

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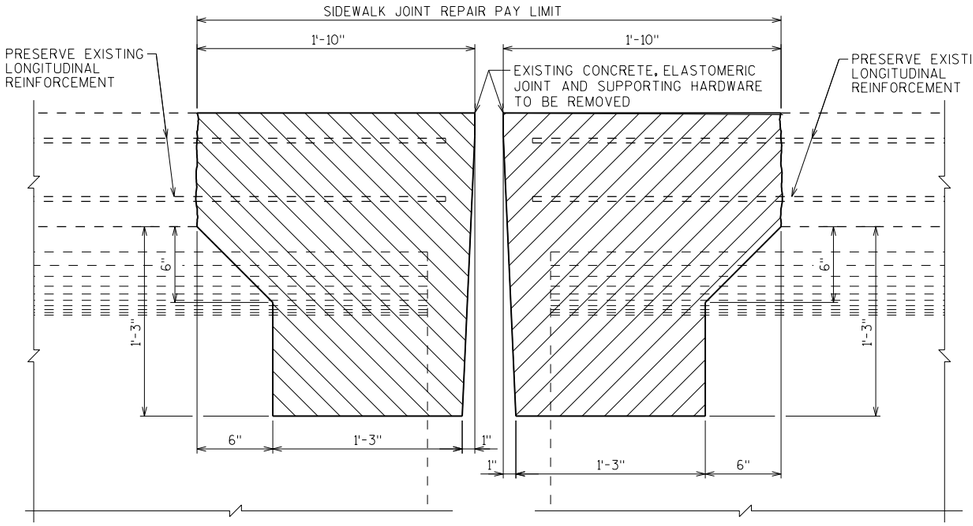
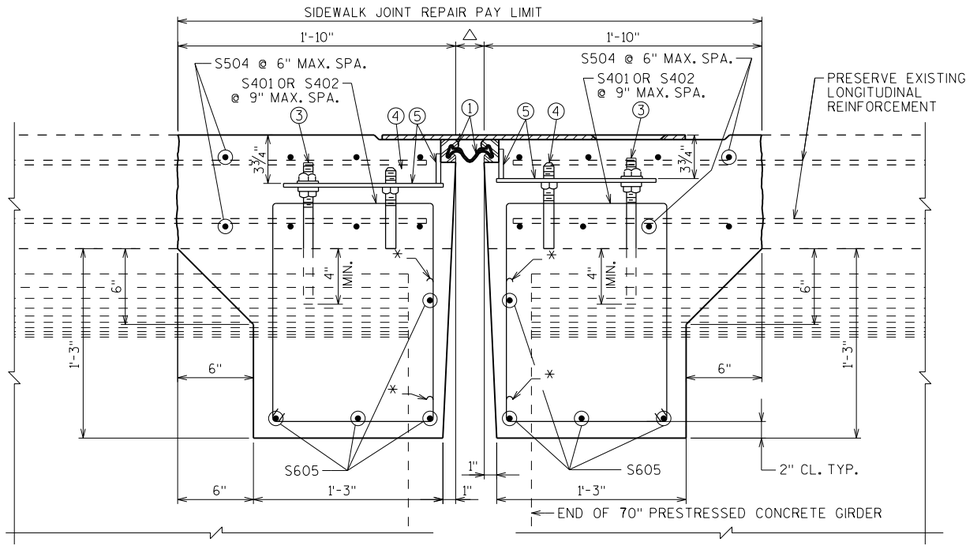


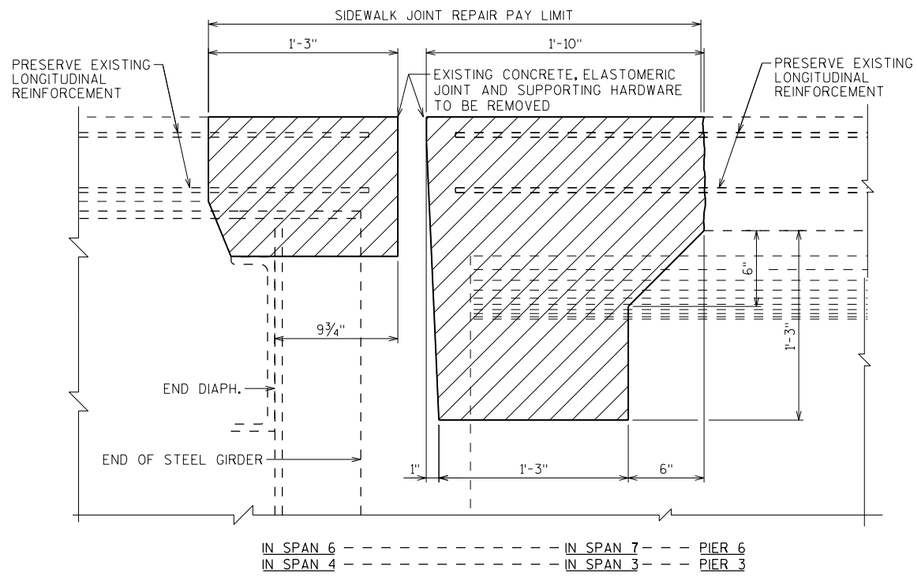
SIDEWALK JOINT REPAIR - REMOVAL AT PIER 10



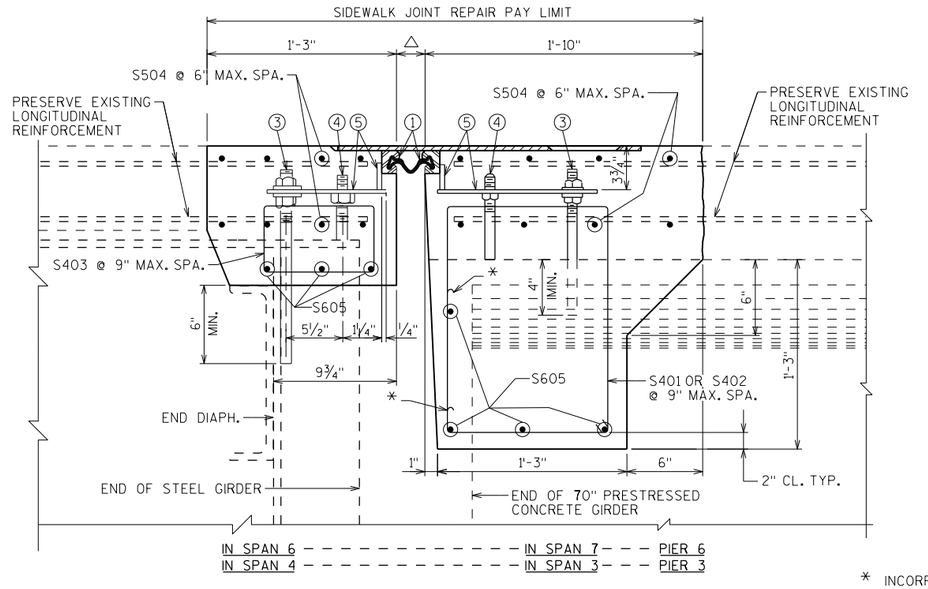
TYPICAL SECTION THRU JOINT AT PIER 10

△-TEMPERATURE TABLE

TEMP.	JOINT OPENING DIM. PIERS 3 & 6	PIER 10
90	2 3/8"	2 1/4"
80	2 11/16"	2 9/16"
70	3"	2 7/8"
60	3 5/16"	3 1/4"
50	3 5/8"	3 9/16"
40	3 7/8"	3 15/16"
30	4 5/16"	4 1/4"



SIDEWALK JOINT REPAIR - REMOVAL AT PIERS 3 AND 6



TYPICAL SECTION THRU JOINT AT PIERS 3 AND 6
NORMAL TO ℄ SUBSTRUCTURE

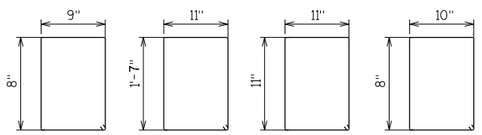
* INCORPORATE EXIST. REINF. INTO NEW DIAPHRAGM

NOTES:

1. NEOPRENE STRIP SEAL (5-INCH) AND STEEL EXTRUSION
2. SEE SHEET 11 FOR DETAILS AND ALL ADDITIONAL NOTES AND LEGEND.

LEGEND

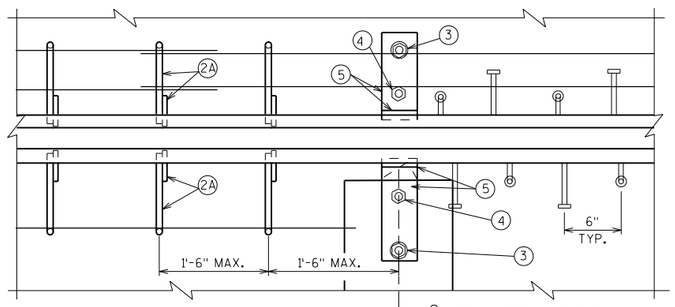
INDICATES REMOVAL OF EXISTING MATERIALS.



BILL OF BARS - COATED REINFORCEMENT STEEL

BAR MARK	NO. REQ'D	LENGTH	BENT	LOCATION
COATED BARS				TOTAL WEIGHT: 1,100 LB
A401	18	3'-4"	X	ABUT. PAVING BLOCK STIRRUPS
A502	8	7'-9"		ABUT. PAVING BLOCK TRANSVERSE BARS
S401	30	5'-6"	X	DIAPHRAGM STIRRUPS AT CONC. BEAMS
S402	18	4'-2"	X	DIAPHRAGM STIRRUPS AT CONC. BEAMS
S403	22	3'-6"	X	DIAPHRAGM STIRRUPS AT STEEL BEAMS
S504	64	7'-9"		SLAB TRANSVERSE BARS
S605	30	5'-11"		DIAPHRAGM TRANSVERSE BARS

THE FIRST DIGIT OF THE BAR MARK INDICATES THE BAR SIZE



PART PLAN ℄ OF EXTERIOR GIRDER.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-15-4

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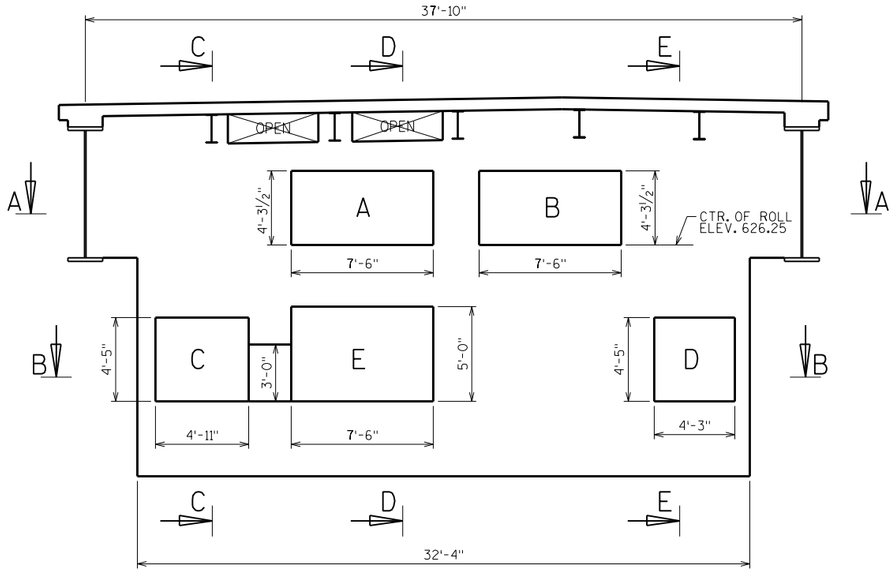
SIDEWALK EXP. JOINT DETAILS AT PIERS 3, 6 & 10

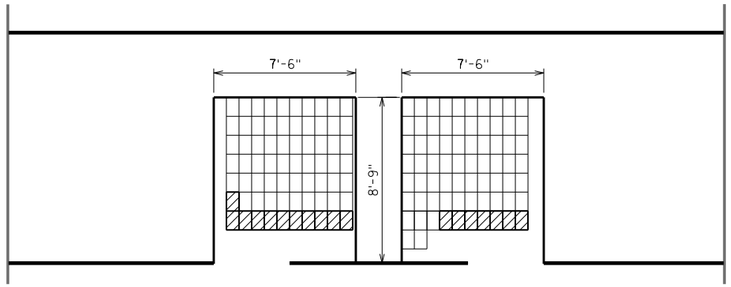
SHEET 12 OF 29

I.D. 42

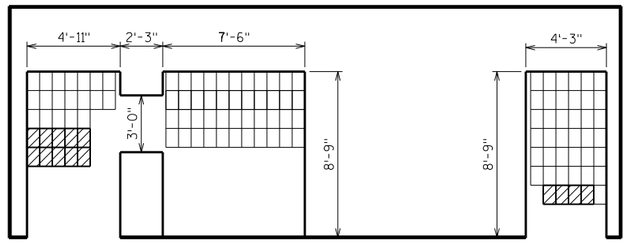
8



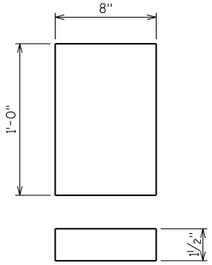
ELEVATION VIEW OF COUNTERWEIGHT POCKETS



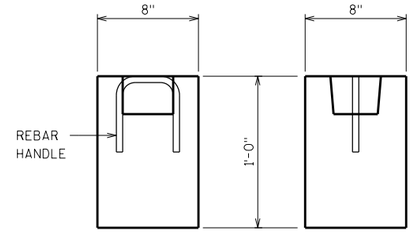
SECTION A–A



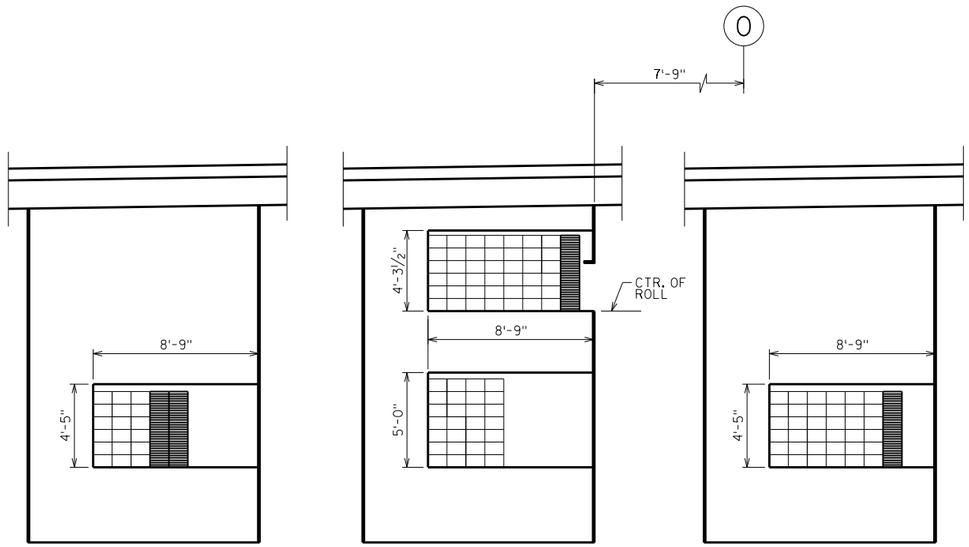
SECTION B–B



COUNTERWEIGHT ADJUSTMENT STEEL PLATES
(APPROX. WEIGHT 40.8# EACH)
(PAINTING NOT REQUIRED)



EXISTING CONCRETE COUNTERWEIGHT ADJUSTMENT BLOCKS
(APPROX. WEIGHT 61# EACH)



SECTION C–C SECTION D–D SECTION E–E

LEGEND

- NEW COUNTERWEIGHT STEEL PLATE (PLAN VIEW)
- NEW COUNTERWEIGHT STEEL PLATES (ELEV. VIEW)
- EXISTING CONCRETE COUNTERWEIGHT BLOCK (PLAN AND ELEV. VIEW)

NOTES:

REMOVE STEEL MESH COUNTERWEIGHT POCKET COVERS FROM POCKETS C AND D AND CLEAN ANY DIRT AND DEBRIS FROM POCKETS C, D, AND E. REINSTALL POCKET COVERS AFTER SPAN BALANCING.

PROVIDE STEEL BALANCE PLATES CONFORMING TO ASTM A709 FOR FINAL SPAN BALANCING.

PROVIDE ALL EQUIPMENT AND LABOR NECESSARY FOR MAKING ADJUSTMENTS TO COUNTERWEIGHT BALANCE BLOCK AND BALANCE PLATE CONFIGURATION TO THE SATISFACTION OF THE ENGINEER. SEE SPECIAL PROVISIONS. THE COST OF FURNISHING STEEL PLATES IS INCLUDED WITH BID ITEM "FURNISH BRIDGE BALANCE PLATES".

THE COST FOR MOVING, REMOVING, AND INSTALLING EXISTING CONCRETE BALANCE BLOCKS AND NEW STEEL BALANCE PLATES IS PAID FOR UNDER THE BID ITEM "BALANCE BASCULE BRIDGE LEAVES".

THE CONCRETE BALANCE BLOCK AND STEEL BALANCE PLATE ARRANGEMENT IS BASED ON THE FOLLOWING ASSUMED WEIGHTS:

- NEW CONCRETE FILL FOR SHOULDER AREA OF NEW GRID DECK = 120 PCF.
- AVERAGE UNIT WEIGHT OF NEW GRID DECK = 21.0 PSF (INCLUDES GALVANIZING, TRIM BARS AND ANGLES, SPLICE MATERIAL, CONNECTION PLATES, CONNECTION BOLTS AND METAL FORM PANS).
- UNIT WEIGHT OF GRID DECK WITHOUT ATTACHMENTS AND PRIOR TO GALVANIZING = 18.5 PSF.
- REMOVED CONCRETE FILL FOR SHOULDER AREA OF EXISTING GRID DECK = 146 PCF.
- STEEL BALANCE BLOCK WEIGHT = 40.8 LBS EACH.
- EXISTING POLYMER OVERLAY ON CONCRETE FILLED SHOULDER OF GRID DECK BEING REMOVED = 3.2 PSF.

DETERMINE ACTUAL WEIGHTS OF COMPONENTS BEING REMOVED AND INSTALLED AND UTILIZE THEM IN AN INDEPENDENT MATHEMATICAL BALANCE CALCULATION TO BE SUBMITTED TO THE ENGINEER FOR REVIEW AS DESCRIBED IN THE SPECIAL PROVISIONS.

MAKE ADJUSTMENTS TO COUNTERWEIGHT BLOCK CONFIGURATION AS DETERMINED BY FINAL CALCULATIONS AND PHYSICAL BALANCE TESTS IN THE FIELD IN COORDINATION WITH THE ENGINEER.

STORE REMOVED AND UN-USED BLOCKS AND PLATES IN THE BASCULE PIERS AT LOCATION DIRECTED BY THE ENGINEER.

COUNTERWEIGHT BLOCKS AND STEEL PLATES

POCKET		NO. OF EXISTING BLOCKS	NO. OF BLOCKS TO REMOVE	NO. OF STEEL PLATES TO ADD
NORTH LEAF	A	365	11	352
	B	408	12	224
	C	115	0	275
	D	220	0	128
	E	251	0	0
SOUTH LEAF	A	372	0	280
	B	394	0	224
	C	84	0	292
	D	199	0	96
	E	277	0	0
SUBTOTAL			23	1,871
ADDITIONAL STEEL PLATES			--	200
TOTAL NO. OF STEEL PLATES REQUIRED			--	2,071

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-15-4

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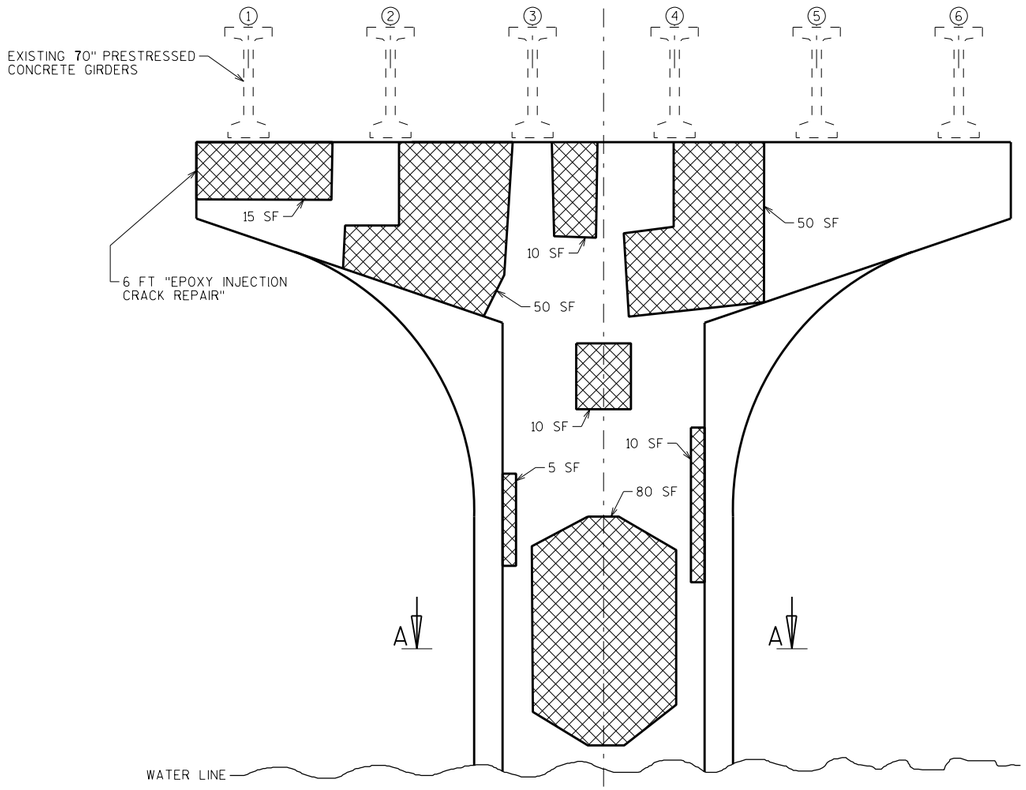
COUNTERWEIGHT ADJUSTMENT DETAILS

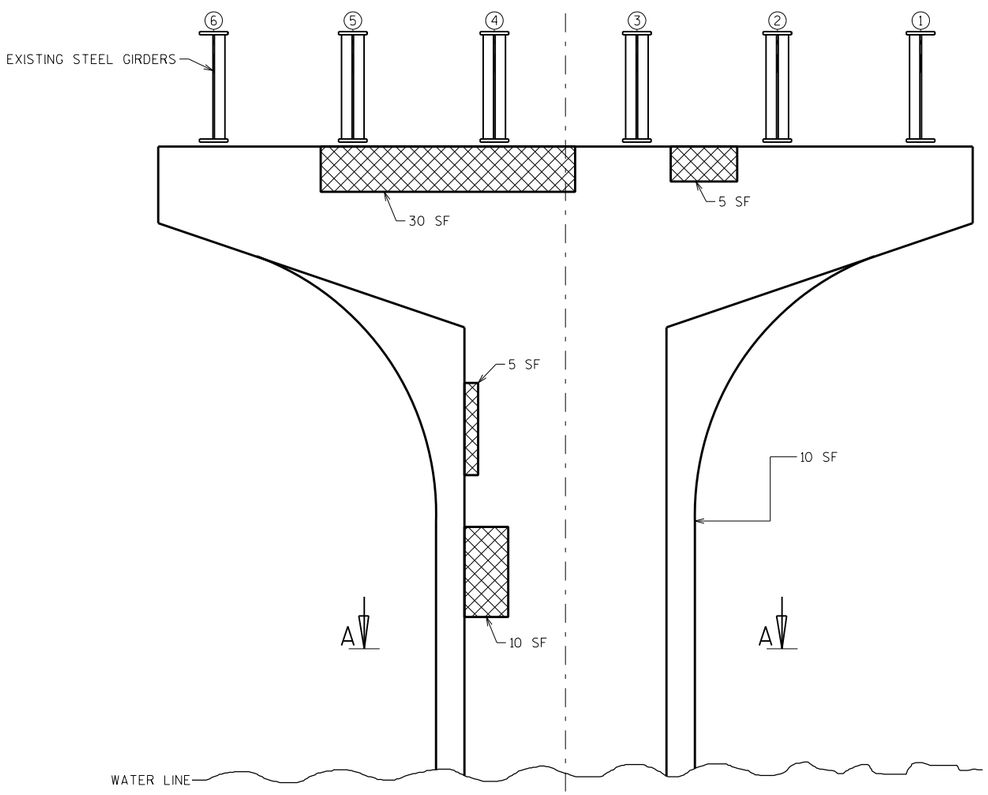
SHEET 13 OF 29
43

8

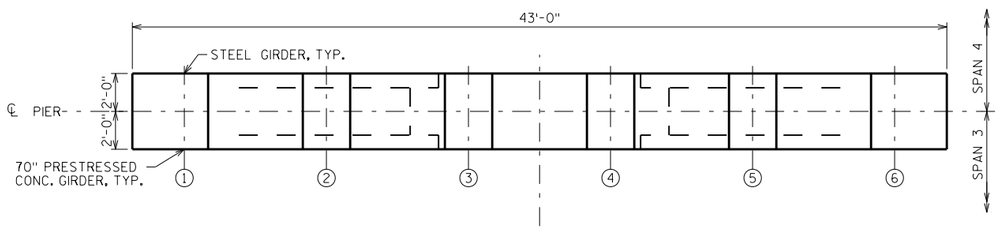
STATE PROJECT NUMBER
4430-16-60



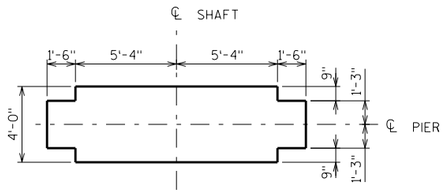
SOUTH ELEVATION
LOOKING NORTH



NORTH ELEVATION
LOOKING SOUTH



PLAN



SECTION A-A

LEGEND

- DENOTES AREAS OF BID ITEM "CONCRETE SURFACE REPAIR".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-15-4

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PIER 3
REPAIR DETAILS

SHEET 14 OF 29
44

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STATE PROJECT NUMBER
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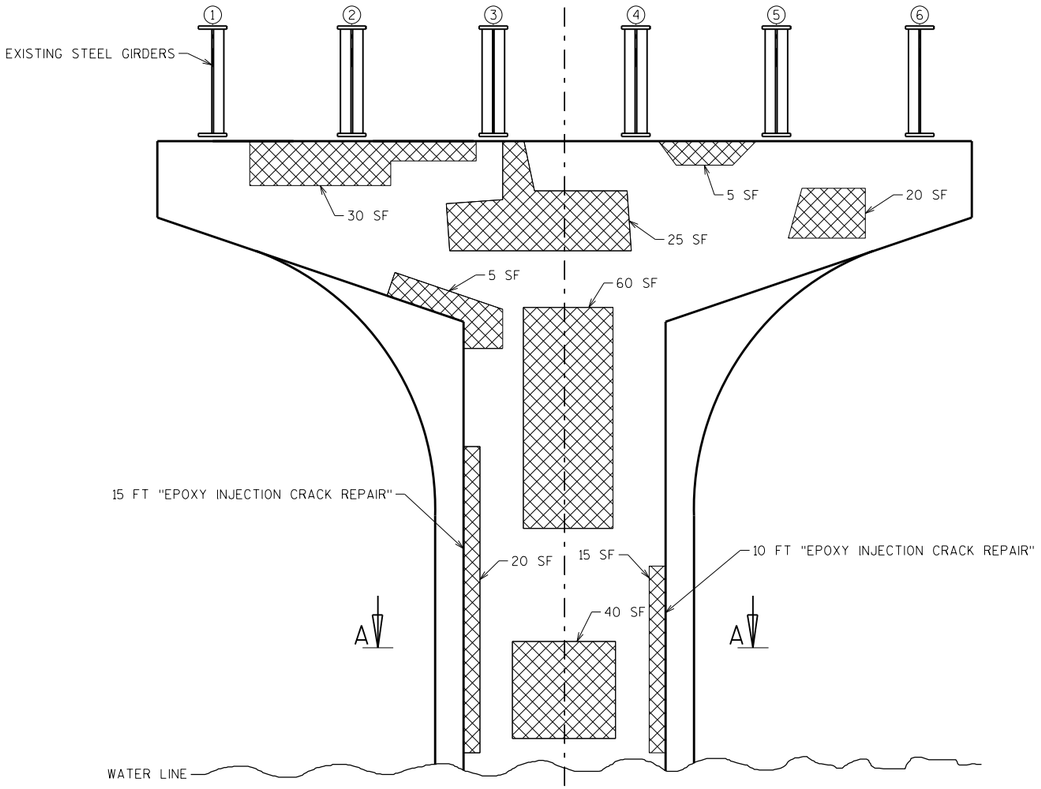
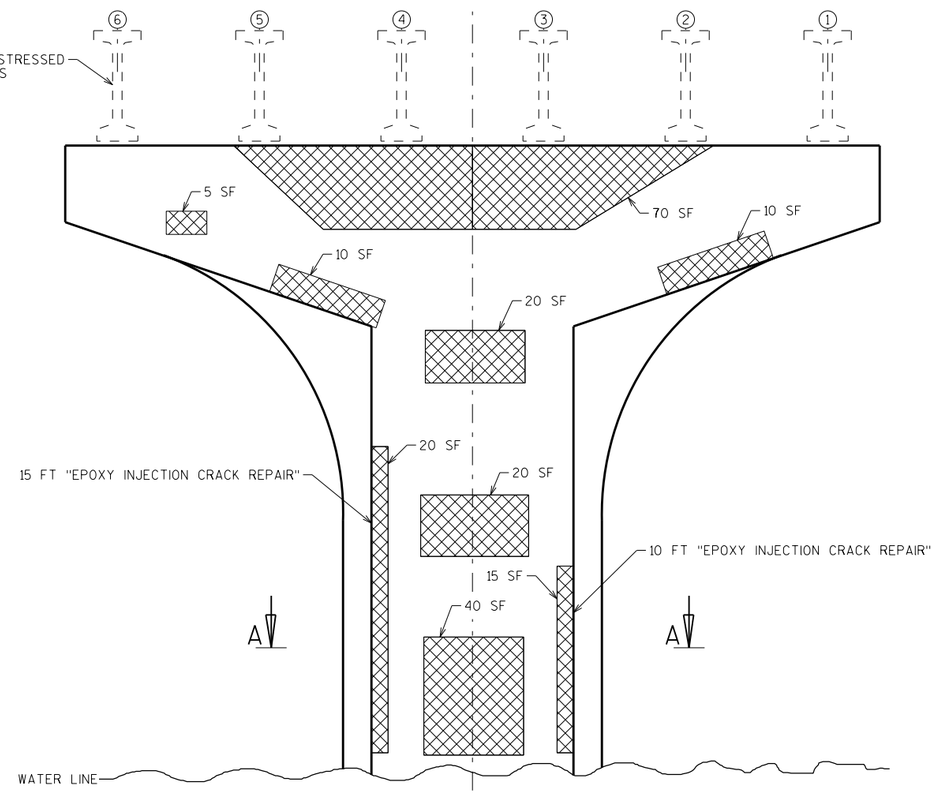
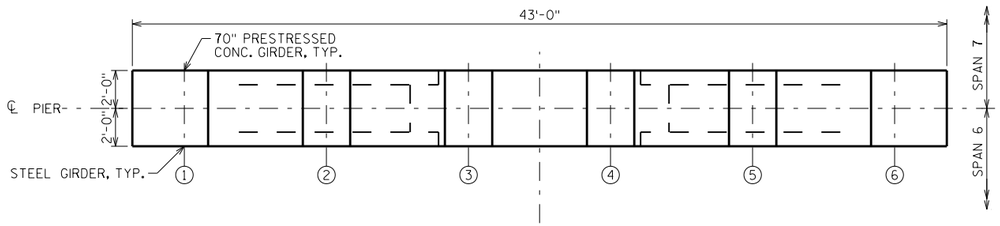


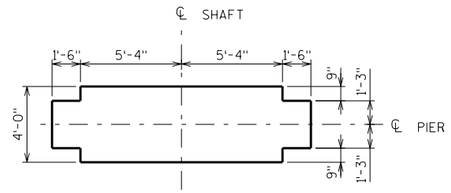
SOUTH ELEVATION
LOOKING NORTH



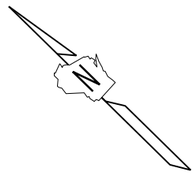
NORTH ELEVATION
LOOKING SOUTH



PLAN



SECTION A-A



LEGEND

- DENOTES AREAS OF BID ITEM "CONCRETE SURFACE REPAIR".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-15-4

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PIER 6
REPAIR DETAILS

SHEET 15 OF 29

45

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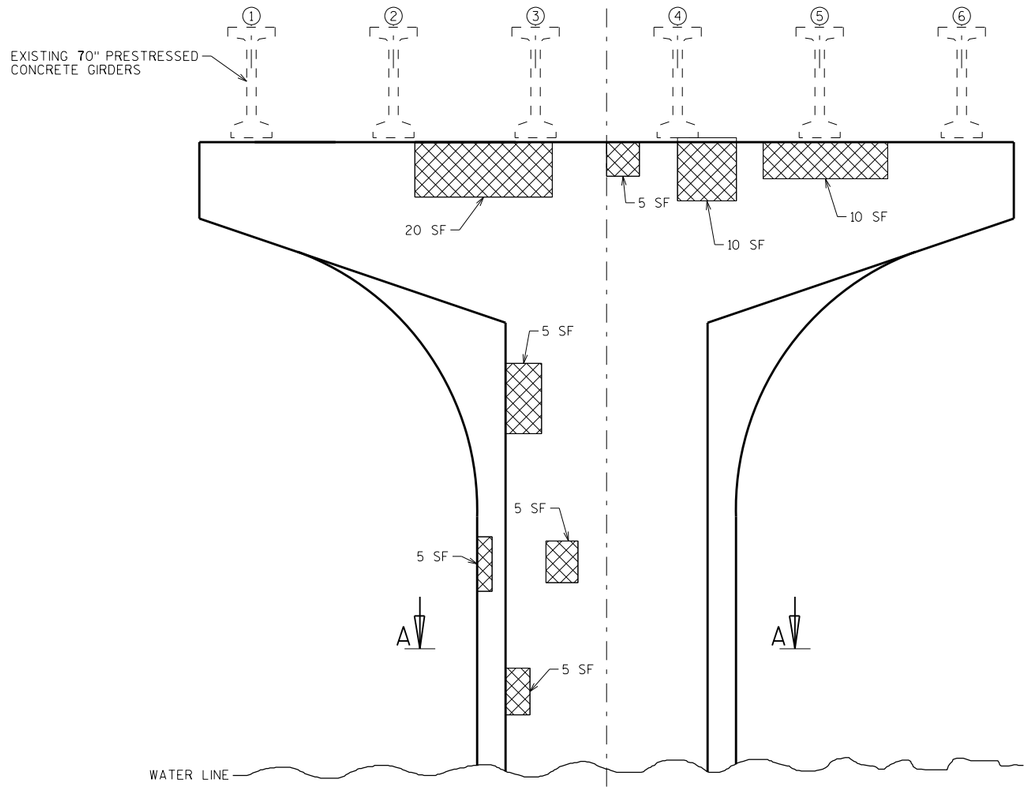
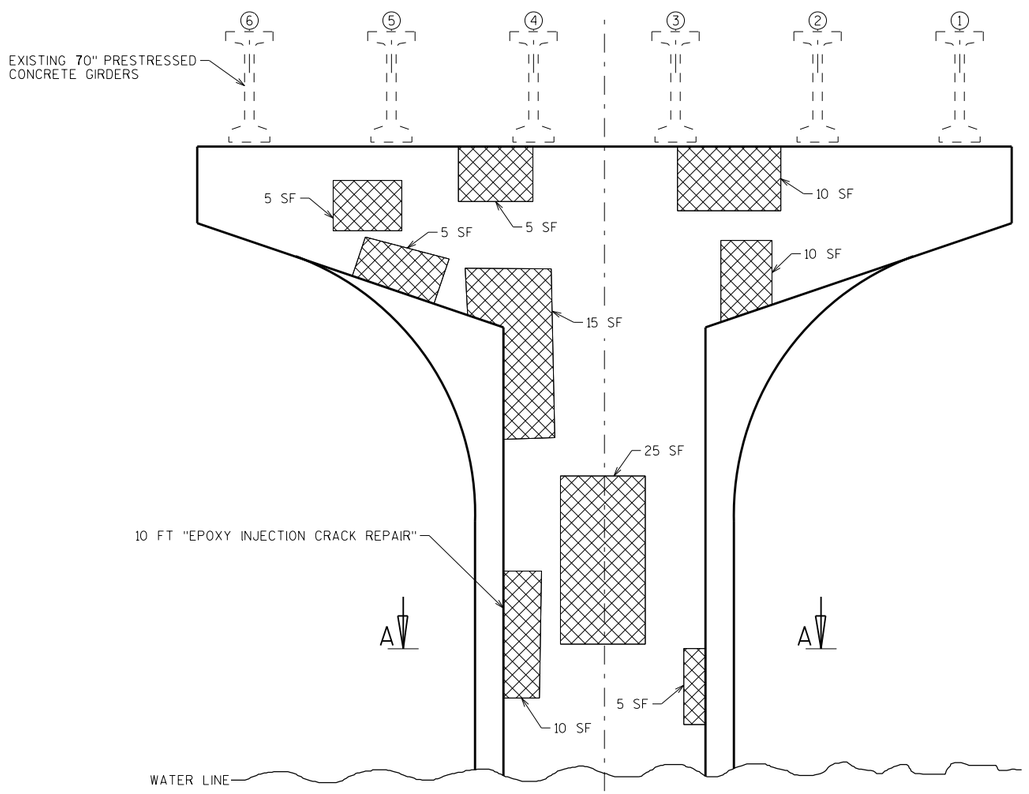
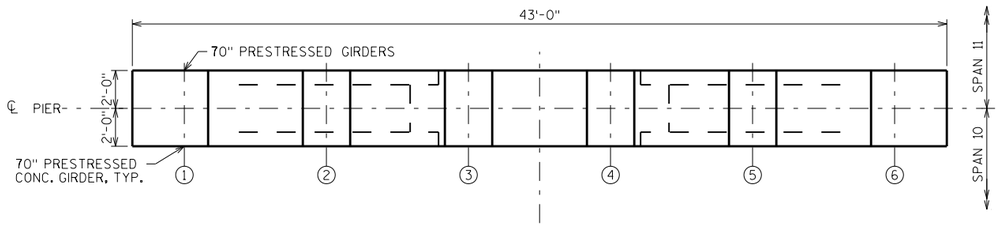


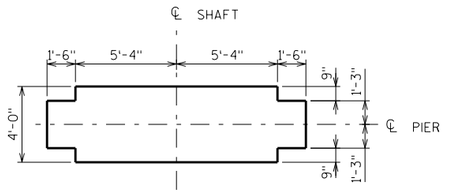
SOUTH ELEVATION
LOOKING NORTH



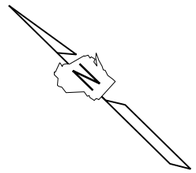
NORTH ELEVATION
LOOKING SOUTH



PLAN



SECTION A-A



LEGEND

- DENOTES AREAS OF BID ITEM "CONCRETE SURFACE REPAIR".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-15-4

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PIER 10 REPAIR DETAILS

SHEET 16 OF 29

46

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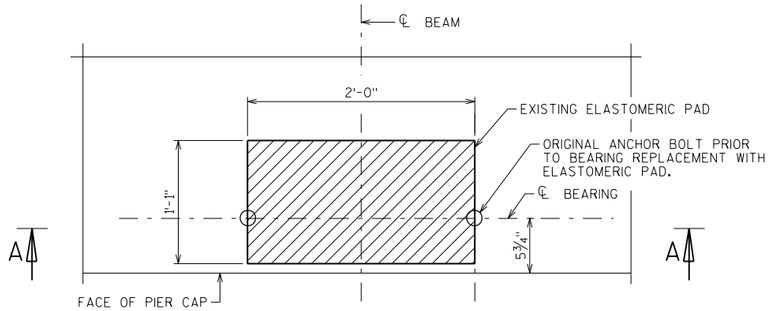
4430-16-60



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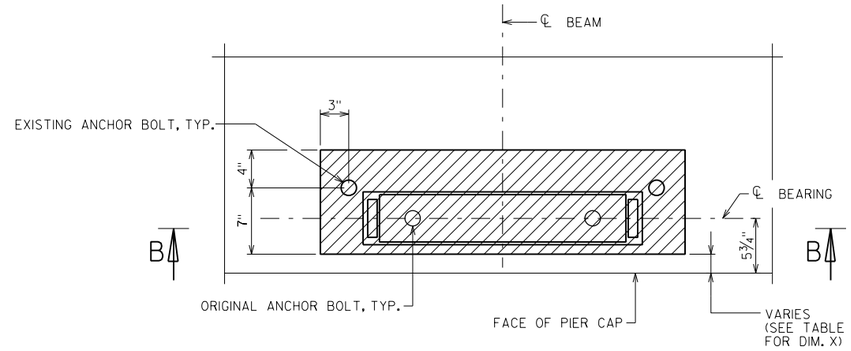
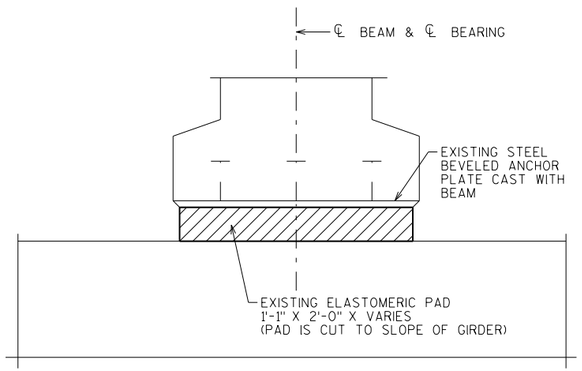


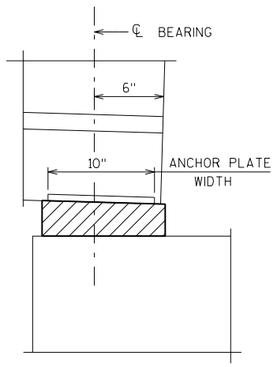
PLAN

PIER 3 BEARINGS	
LOCATION	DIMENSION "X"
BEAM 1	1¼"
BEAM 2	1½"
BEAM 3	1¾"
BEAM 4	2"
BEAM 5	2⅝"
BEAM 6	3¼"

PIER 6 BEARINGS	
LOCATION	DIMENSION "X"
BEAM 1	2½"
BEAM 2	2¼"
BEAM 3	2"
BEAM 4	1¾"
BEAM 5	1⅜"
BEAM 6	1"

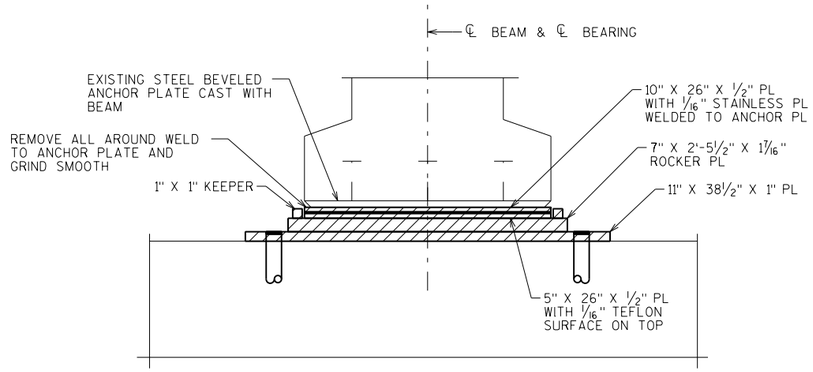


SECTION A-A

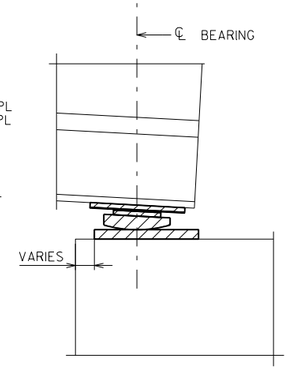


ELEVATION

EXISTING ELASTOMERIC BEARINGS AT PIER 10



SECTION B-B



ELEVATION

EXISTING STEEL BEARINGS AT PIERS 3 AND 6

INDICATES BEARING COMPONENTS TO BE REMOVED

NOTES

1. AFTER REMOVAL OF EXISTING STEEL BEARINGS, CUT REMAINING PORTIONS OF OLD ANCHOR BOLTS FLUSH WITH CONCRETE AND GRIND SMOOTH.
2. ABRASIVE BLAST CLEAN EXISTING STEEL ANCHOR PLATES AFTER BEARING REMOVAL AND PAINT.

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STATE OF WISCONSIN
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STRUCTURE B-15-4

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EXISTING BEARING REMOVAL DETAILS

SHEET 17 OF 29

47

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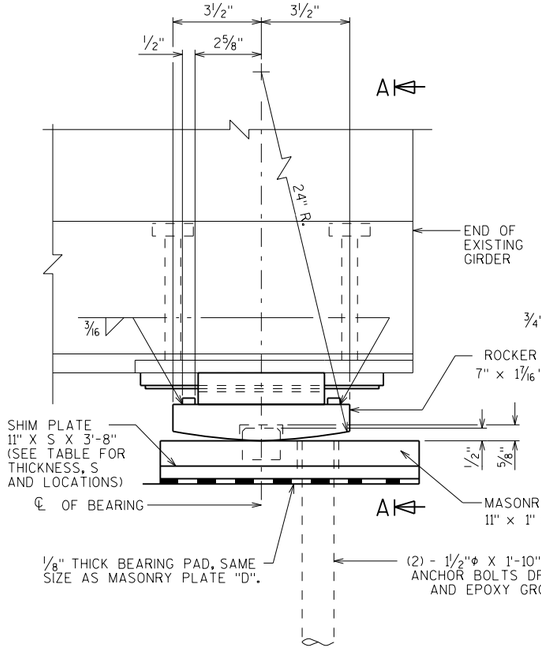
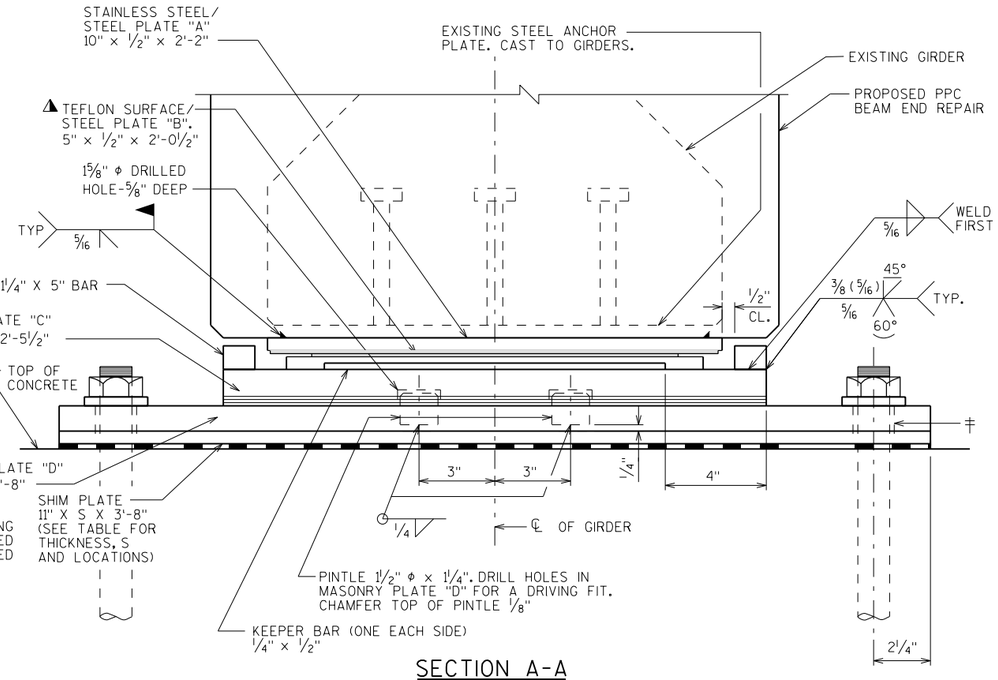


EXPANSION BEARING ASSEMBLY



SECTION A-A

BEARING NOTES

ALL MATERIAL IN BEARINGS, BUT EXCLUDING STAINLESS STEEL PLATE, TEFLON SURFACE, PINTLES, ANCHOR BOLTS, NUTS AND WASHERS SHALL CONFORM TO ASTM A709 GRADE 50W.

STAINLESS STEEL PLATE SHALL CONFORM TO ASTM A240, TYPE 304.

STEEL PINTLES SHALL CONFORM TO ASTM A449 OR MATERIAL OF EQUIVALENT YIELD STRENGTH AND ELONGATION.

ANCHOR BOLTS, NUTS AND WASHERS SHALL CONFORM TO ASTM A709 GRADE 36, OR MATERIAL OF EQUIVALENT YIELD STRENGTH AND ELONGATION.

ALL STRUCTURAL STEEL BEARING PLATES SHALL BE FLAT ROLLED STEEL PLATES WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT, AND VERTICAL.

ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUTS.

ALL FINISHED SURFACES SHALL BE MACHINE FINISHED BY AN AUTOMATIC PROCESS.

ANCHOR BOLTS SHALL BE THREADED 3". PROVIDE ONE STANDARD WROUGHT WASHER AND ONE HEX NUT PER BOLT. PROJECT ANCHOR BOLTS, MASONRY PLATE "D" THICKNESS + SHIM THICKNESS + 2¼", ABOVE TOP OF CONCRETE.

CHAMFER ANCHOR BOLTS PRIOR TO THREADING.

MASONRY PLATE "D", ROCKER PLATE "C", ANCHOR BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153, CLASS "C". STEEL PLATE "B" SHALL BE SHOP PAINTED. DO NOT PAINT TEFLON SURFACE.

ALL MATERIAL FOR STEEL BEARINGS FOR PRESTRESSED CONCRETE GIRDERS, INCLUDING BEARING PADS, SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "BEARING ASSEMBLIES EXPANSION B-15-4", EACH.

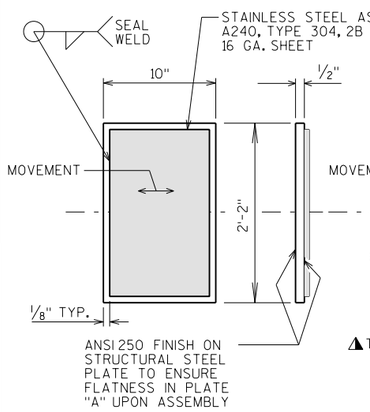
‡ DRILLED HOLES FOR ANCHOR BOLTS IN MASONRY PLATE "D" SHALL HAVE A DIAMETER ⅜" LARGER THAN ANCHOR BOLT. USE NON-DESTRUCTIVE METHODS TO LOCATE EXISTING PIER CAP REINFORCING BARS PRIOR TO DRILLING HOLES IN CONCRETE FOR ANCHOR BOLTS. USE THESE HOLES AS A TEMPLATE TO FIELD DRILL HOLES IN MASONRY PLATES AND BEARING PADS. TOUCH UP PLATES USING COLD GALVANIZING METHODS.

▲ TEFLON SURFACE, USE UNFILLED WITH MINIMUM 1/16" THICKNESS. PLACE WITH SCRIBE MARKS IN DIRECTION OF MOVEMENT. BOND STEEL PLATE "B" AND TEFLON WITH ADHESIVE MATERIAL MEETING FEDERAL SPECIFICATION MMM-A-134, FEP FILM OR EQUAL.

◪ PROVIDE A METHOD FOR HANDLING ROCKER PLATE "C" DURING GALVANIZING.

AT INSTALLATION, ENSURE STAINLESS STEEL SLIDING FACE OF THE UPPER ELEMENT AND THE TFE SLIDING FACE OF THE LOWER ELEMENT HAVE THE SURFACE FINISH SPECIFIED AND ARE CLEAN AND FREE OF ALL DUST, MOISTURE, AND OTHER FOREIGN MATTER.

BEARING REPLACEMENT TO OCCUR PRIOR TO BEAM END REPAIR



TOP PLATE "A"

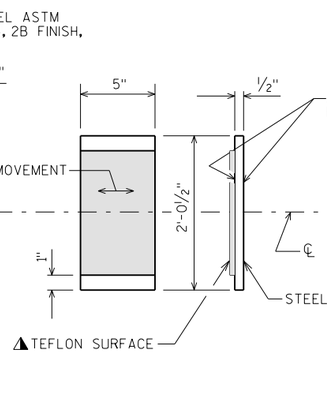
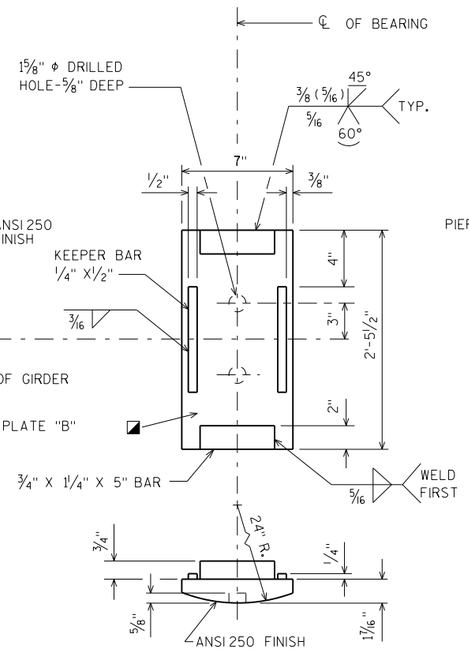
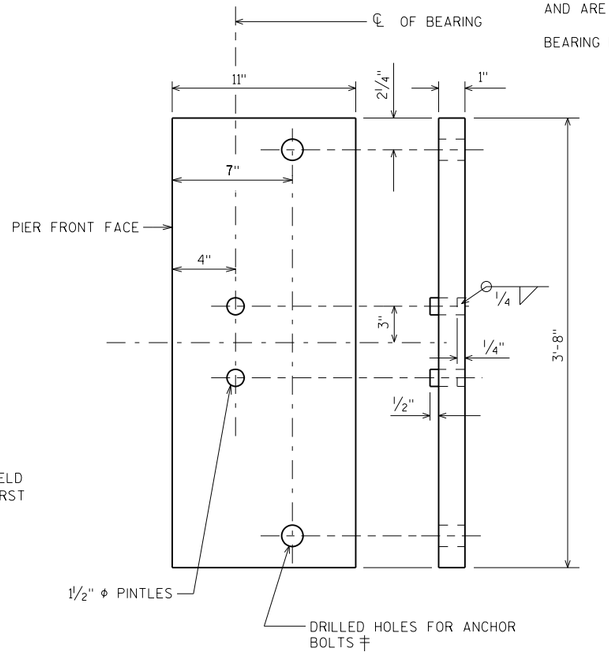


PLATE "B"



ROCKER PLATE "C"



MASONRY PLATE "D"

SHIM PLATE TABLE	
PIER 3	
LOCATION	THICKNESS, S
BEAM 2	2"
BEAM 3	¾"
PIER 6	
LOCATION	THICKNESS, S
BEAM 6	⅝"

EXPANSION BEARING

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-15-4

DRAWN BY KMP | PLANS CK'D. DEM

BEARING DETAILS PIERS 3 AND 6 | SHEET 18 OF 29

48

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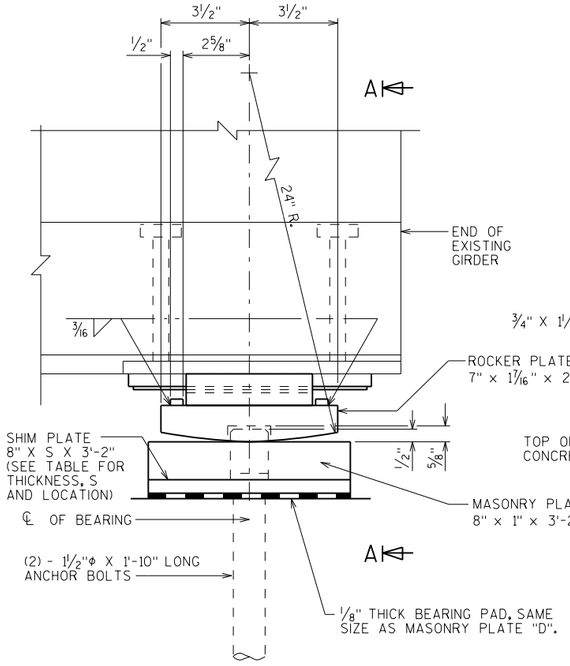
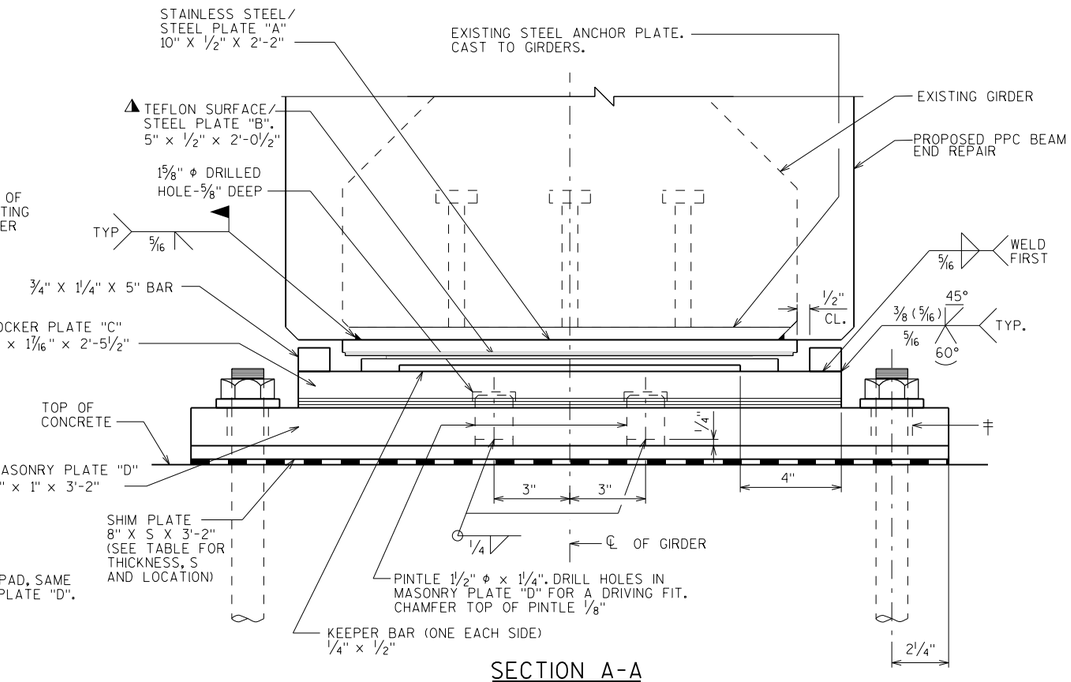


EXPANSION BEARING ASSEMBLY



SECTION A-A

BEARING NOTES

ALL BEARINGS ARE SYMMETRICAL ABOUT ℄ OF GIRDER AND ℄ OF BEARING.

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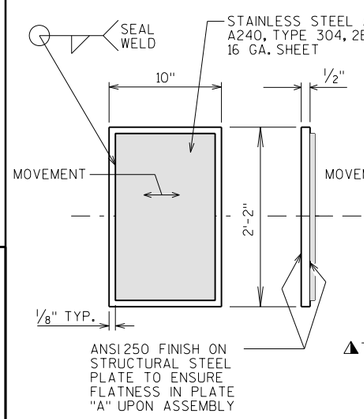
BEARING REPLACEMENT TO OCCUR PRIOR TO BEAM END REPAIR



TOP PLATE "A"

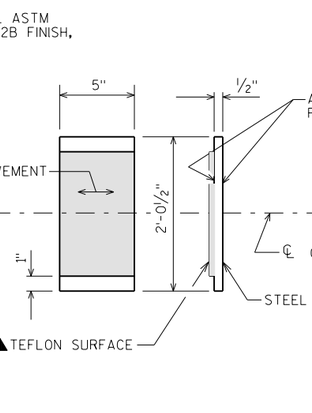
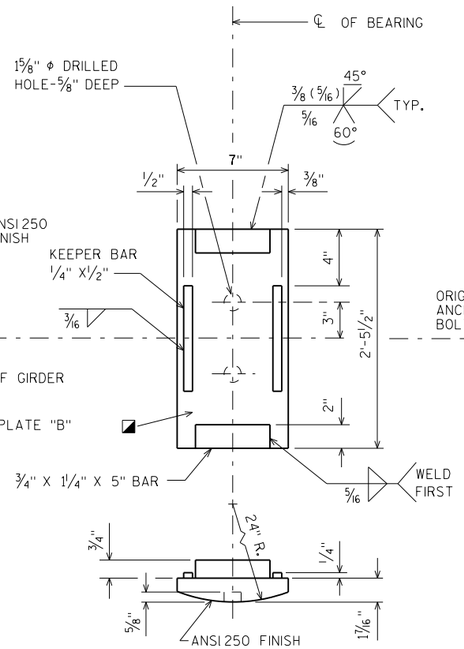
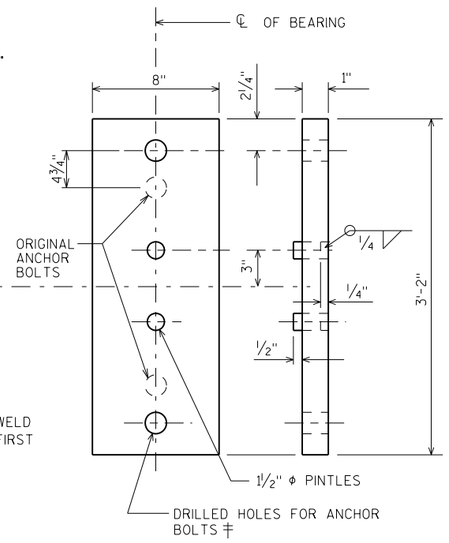


PLATE "B"



ROCKER PLATE "C"



MASONRY PLATE "D"

EXPANSION BEARING

SHIM PLATE TABLE	
PIER 10 - NORTH BEARINGS	
LOCATION	THICKNESS, S
BEAMS 1-3, 6	--
BEAMS 4, 5	¼"
PIER 10 - SOUTH BEARINGS	
LOCATION	THICKNESS, S
BEAMS 1, 5	⅞"
BEAM 2	1"
BEAMS 3, 6	1 ⅛"
BEAM 4	1 ¼"

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-15-4

DRAWN BY KMP | PLANS CK'D. DEM

BEARING DETAILS PIER 10

SHEET 19 OF 29

49

DATE: 5/29/2015

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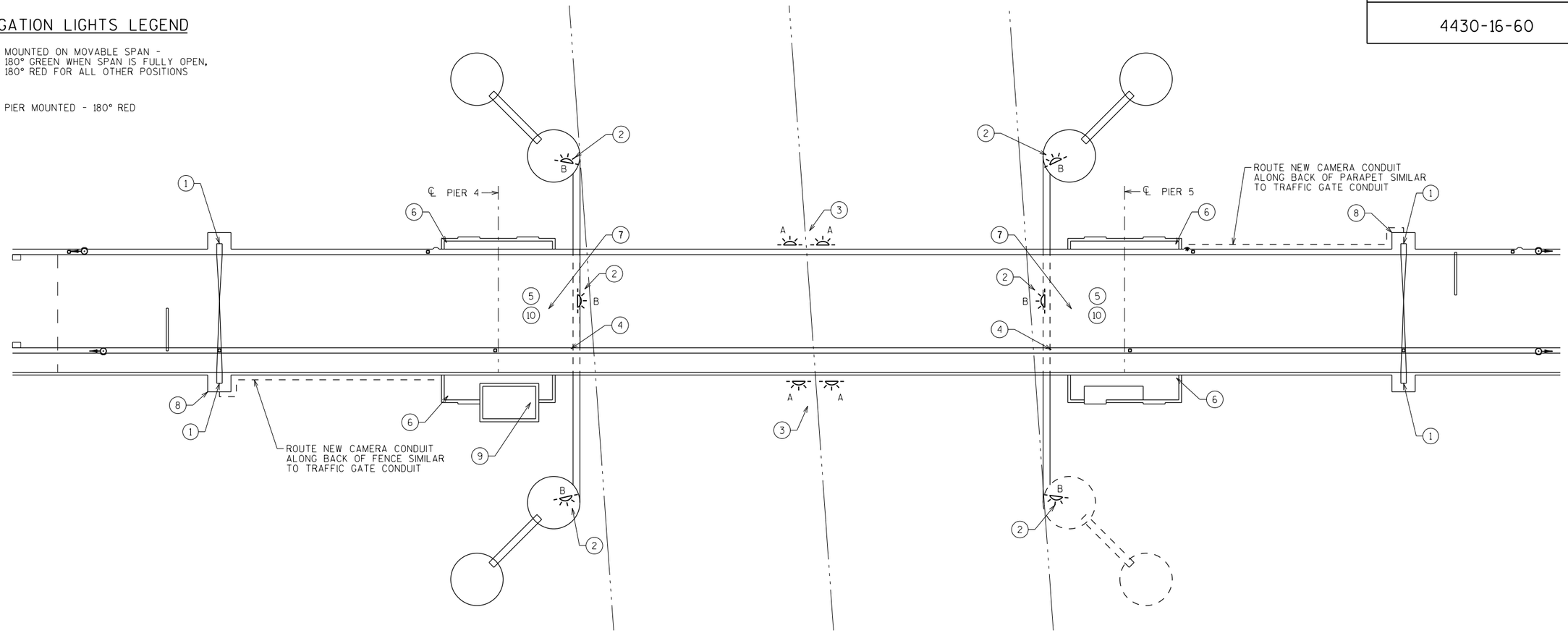
STATE PROJECT NUMBER

4430-16-60

NAVIGATION LIGHTS LEGEND

A — MOUNTED ON MOVABLE SPAN - 180° GREEN WHEN SPAN IS FULLY OPEN, 180° RED FOR ALL OTHER POSITIONS

B — PIER MOUNTED - 180° RED



ELECTRICAL SCOPE

1. REMOVE AND REPLACE TRAFFIC GATES.
2. REMOVE AND REPLACE PIER NAVIGATION LIGHTS.
3. REMOVE AND REPLACE CENTER CHANNEL NAVIGATION LIGHTS.
4. REMOVE AND REPLACE BRIDGE FULLY SEATED PLUNGER SWITCH.
5. REMOVE MERCURY SWITCH CONTROL FOR CENTER CHANNEL NAVIGATION LIGHTS AND CONNECT TO EXISTING SPAN CAM LIMIT SWITCH.
6. FURNISH AND INSTALL NEW REAR LOCK MONITORING CAMERAS AND ALL ASSOCIATED HARDWARE
7. REMOVE EXISTING FLIR CAMERAS
8. INSTALL NEW WATERWAY CAMERAS
9. FURNISH AND INSTALL NEW MOTOR STARTERS FOR BRAKES AND TRAFFIC GATES IN EXISTING MOTOR CONTROL CENTER
10. DISCONNECT, RECONNECT AND REPLACE BRAKE AND SPAN MOTOR CONNECTIONS FOR BRAKE REPLACEMNT.

GENERAL NOTES

1. CONFORM TO ALL NEC, U.L., IEEE, NEMA AND AASHTO CODES, STANDARDS AND PRACTICES.
2. ELECTRICAL DEVICES AND EQUIPMENT ARE SHOWN SYMBOLICALLY ON THE PLANS. THE USE OF SYMBOLS AND NOTATIONS (OR THE OMMISSION THEREOF) DOES NOT RELIEVE THE CONTRACTOR FROM FURNISHING A SAFE, COMPLETE AND FULLY FUNCTIONAL SYSTEM. FIELD LOCATE DEVICES AND EQUIPMENT TO FACILITATE ACCESSIBILITY WITH RESPECT TO OPERATIONS AND MAINTENANCE CONDITIONS.
3. ALL MOUNTING HARDWARE SHALL BE 300 SERIES STAINLESS STEEL. ALL EXPOSED CONDUITS SHALL BE PVC COATED RIGID GALVANIZED STEEL. ALL POWER AND CONTROL CONDUITS SHALL BE RIGID GALVANIZED STEEL. EMT IS ALLOWED FOR LIGHTING AND RECEPTACLES IN INTERIOR WALLS OF OPERATOR AND ENTRY LEVEL.
4. ALL WIRES SHALL BE THHN/MTW UNLESS OTHERWISE NOTED. MINIMUM WIRE SIZE IS #14 AWG FOR CONTROL AND #10 AWG FOR POWER. PROVIDE AND INSTALL SPECIALIZED CABLES AS RECOMMENDED BY EQUIPMENT MANUFACTURERS.
5. PULL BOXES SHALL BE UTILIZED FOR CONTINUOUS PULLING OF WIRES, NO SPLICING ALLOWED. JUNCTION BOXES SHALL BE UTILIZED TO BRING WIRES INTO AND TERMINATE ONTO TERMINAL BLOCKS. WIRE NUTS AND COMPRESSION SPLICES ARE NOT PERMITTED. DO NOT EXCEED 3-90 DEGREE CONDUIT BENDS WITHOUT PROVIDING A PULL BOX.
6. CORE, SLEEVE AND PROPERLY SEAL ALL HOLES REQUIRED IN FLOORS AND/OR WALLS OF OPERATOR HOUSES AS REQUIRED FOR ROUTING OF CONDUITS.
7. FURNISH EQUIPMENT THAT ARE U.L. LISTED AND LABELED, AS APPLICABLE.

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-15-4

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ELECTRICAL GENERAL PLAN AND SCOPE

SHEET 20 OF 29

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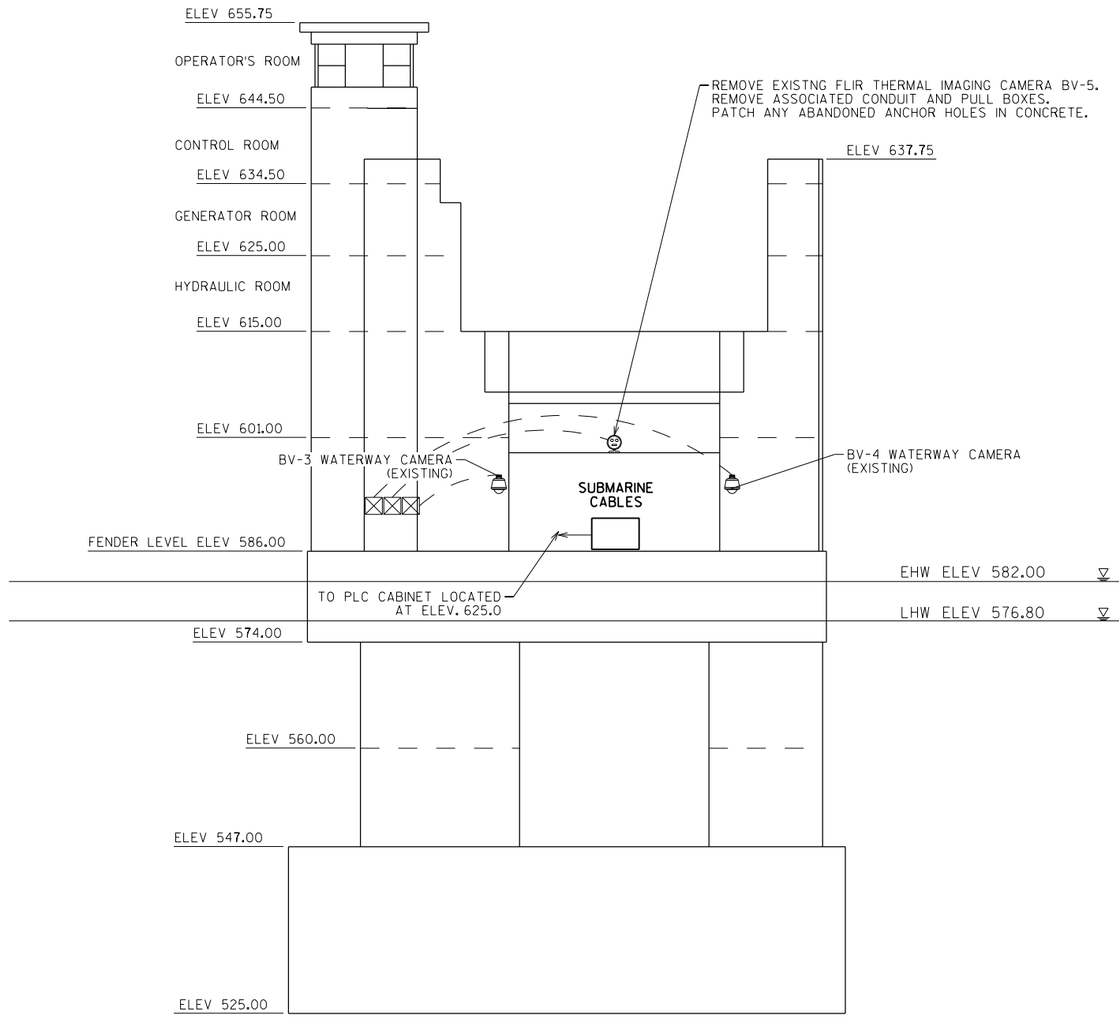
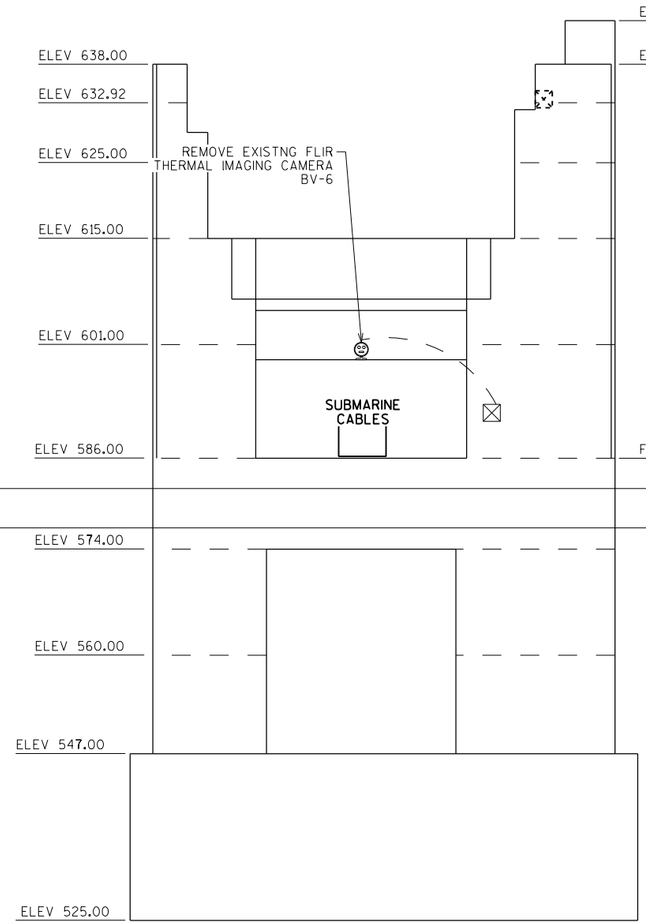


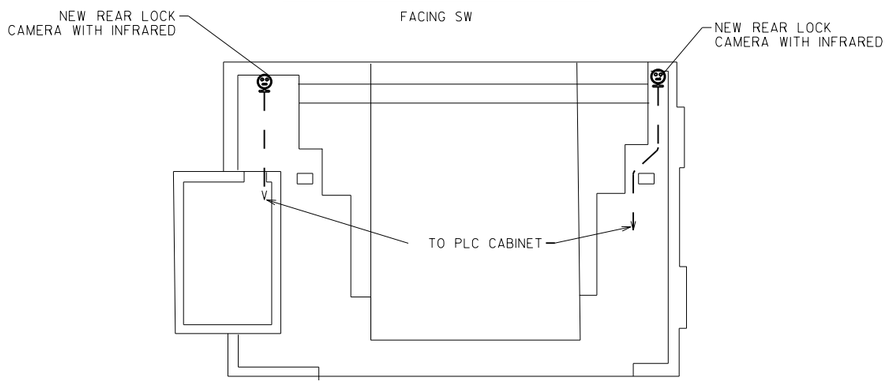
PIER 4 CHANNEL ELEVATION

FACING SW



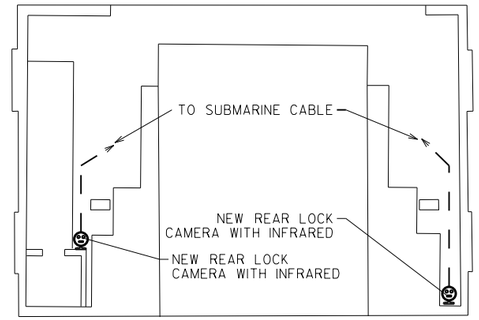
PIER 5 CHANNEL ELEVATION

FACING NE



PLAN AT PIER 4 ELEVATION 615.0

FACING SW



PLAN AT PIER 5 ELEVATION 615.0

FACING NE

GENERAL NOTES

EXIST. NEW

- PTZ DOME CAMERA
- FIXED CAMERA
- VAPOR TIGHT LIGHT FIXTURE
- CAMERA POWER SUPPLY
- EXISTING CONDUIT/CABLE
- PROPOSED CONDUIT/CABLE

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-15-4

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BASCULE PIER ELEVATION

SHEET 21 OF 29

51

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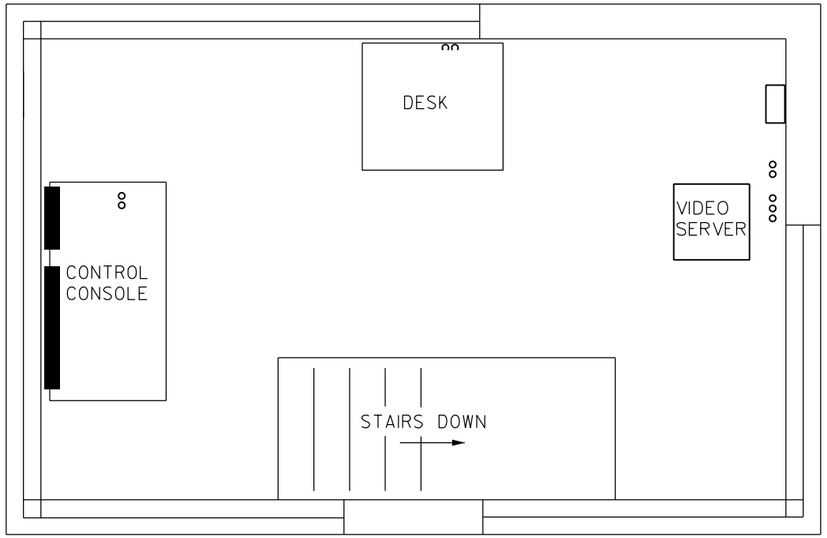
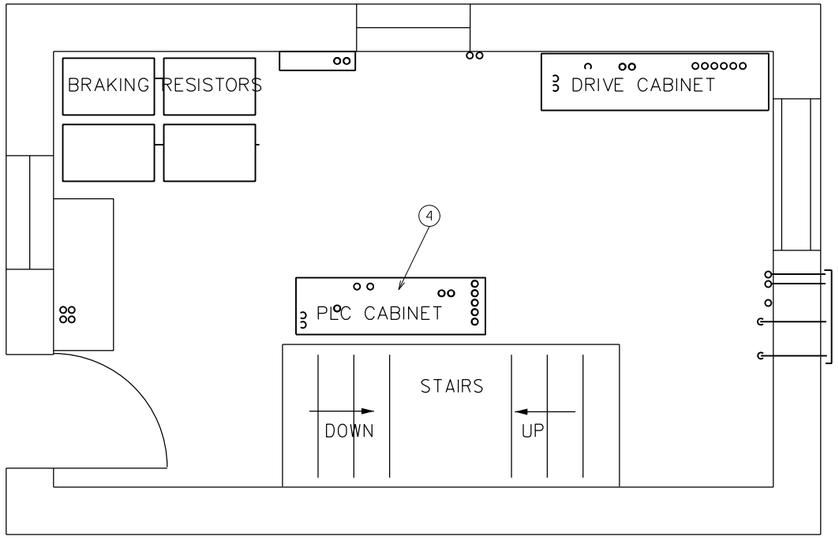
4430-16-60



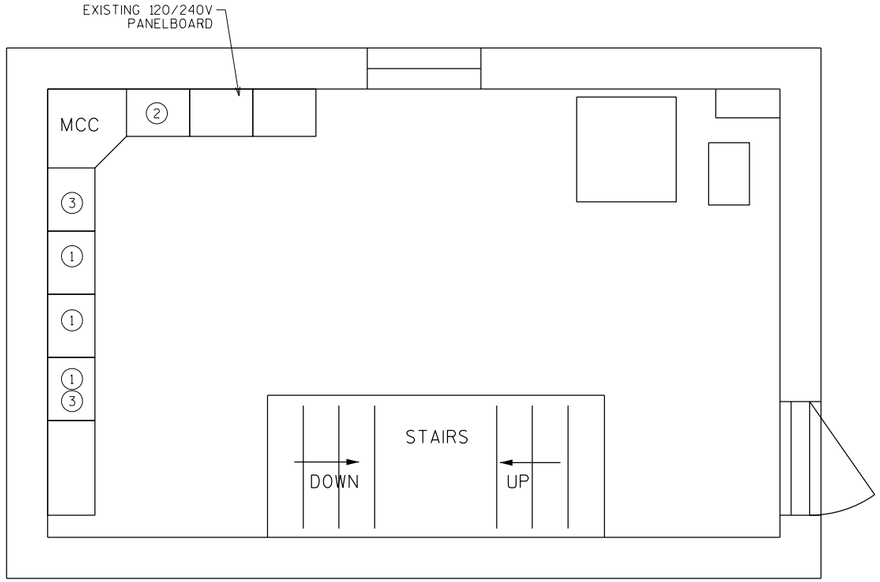
PIER 4 - OPERATOR'S ROOM PLAN - ELEV. 644.50

SCALE: ½" = 1'-0" (FULL SIZE PLOT)



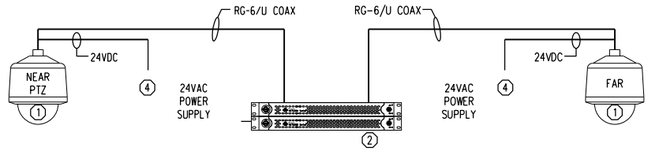
PIER 4 - GENERATOR ROOM PLAN - ELEV. 625.00

SCALE: ½" = 1'-0" (FULL SIZE PLOT)

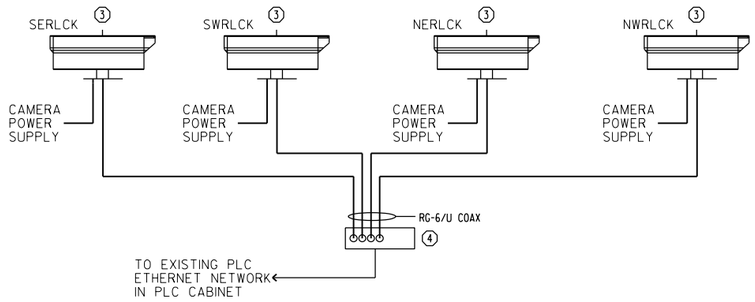


PIER 4 - CONTROL ROOM PLAN - ELEV. 634.50

SCALE: ½" = 1'-0" (FULL SIZE PLOT)



NEW WATERWAY CAMERAS DIAGRAM



REAR LOCK CAMERAS DIAGRAM

PLAN NOTES - THIS SHEET

1. REPLACE EXISTING BRAKE CONTACTORS WITH NEW FVNR NEMA STARTERS
2. REMOVE EXISTING TRAFFIC GATE BREAKERS
3. REPLACE EXISTING TRAFFIC GATE BREAKERS IN EXISTING UNUSED 18" BUCKETS AND INSTALL NEW NEMA FVR STARTERS.
4. FURNISH AND INSTALL A NEW VIDEO ENCODER FOR REAR LOCK CAMERAS. CONNECT VIDEO ENCODER TO PLC I.P. NETWORK.

CAMERA LEGEND

1. NEW PELCO SPECTRA IV PTZ
2. EXISTING PELCO ENDURA CAMERA SYSTEM LOCATED IN VIDEO SERVER CABINET
3. NEW FIXED COLOR CAMERA WITH INFRARED FOR NIGHT VIEWING
4. CAMERA POWER SUPPLY
5. VIDEO ENCODER/DECODER

NOTES

1. ALL EQUIPMENT IS NEW UNLESS NOTED AS EXISTING.
2. FURNISH AND INSTALL ALL POWER SUPPLIES AND POWER, CONTROL AND VIDEO CONDUCTERS FOR PROPER CAMERA OPERATION.
3. CAMERA LOCATION AND VIEWS SHALL BE APPROVED BY THE ENGINEER.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-15-4

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CONTROL HOUSE ELECTRICAL PLANS

SHEET 22 OF 29

52

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DATE: 5/29/2015

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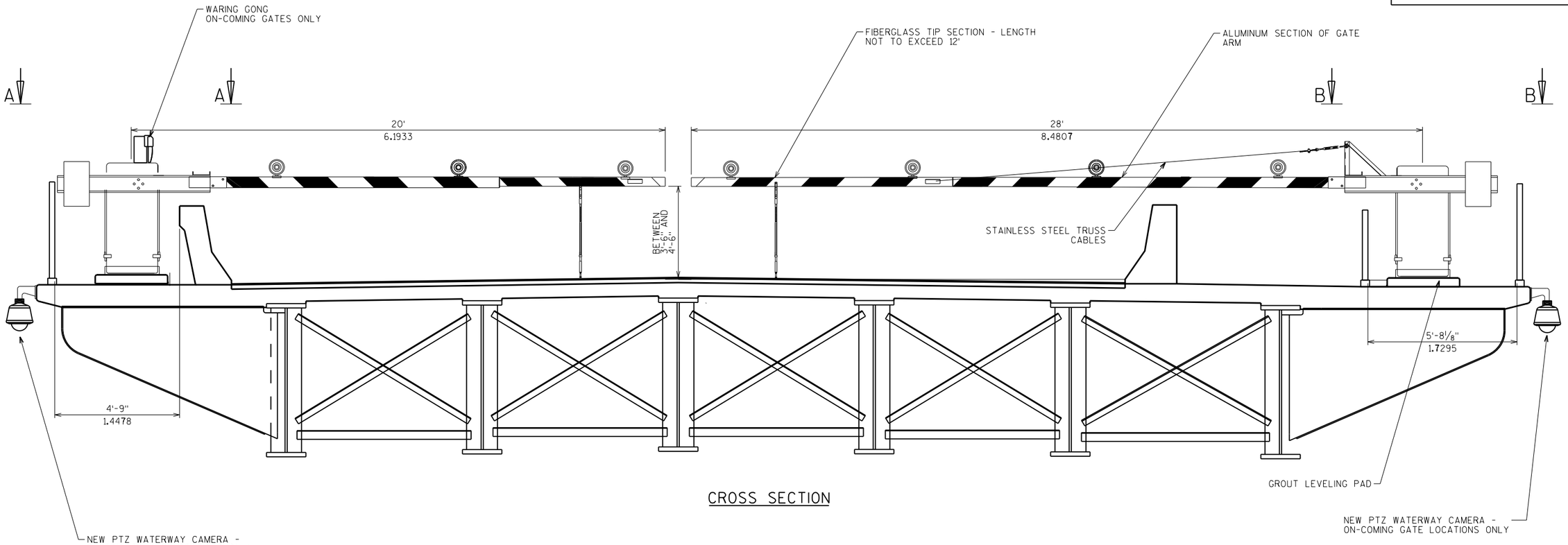
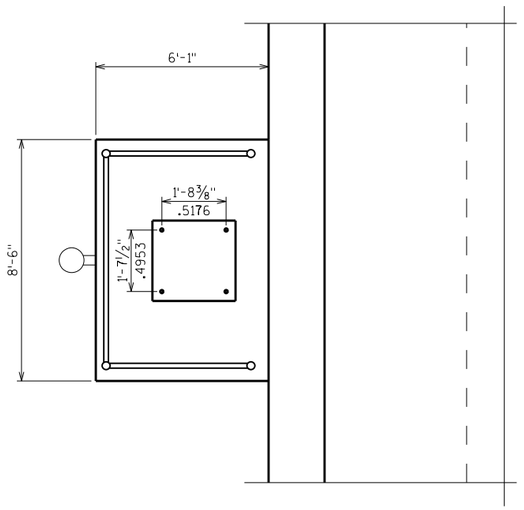
STATE PROJECT NUMBER
4430-16-60



CROSS SECTION

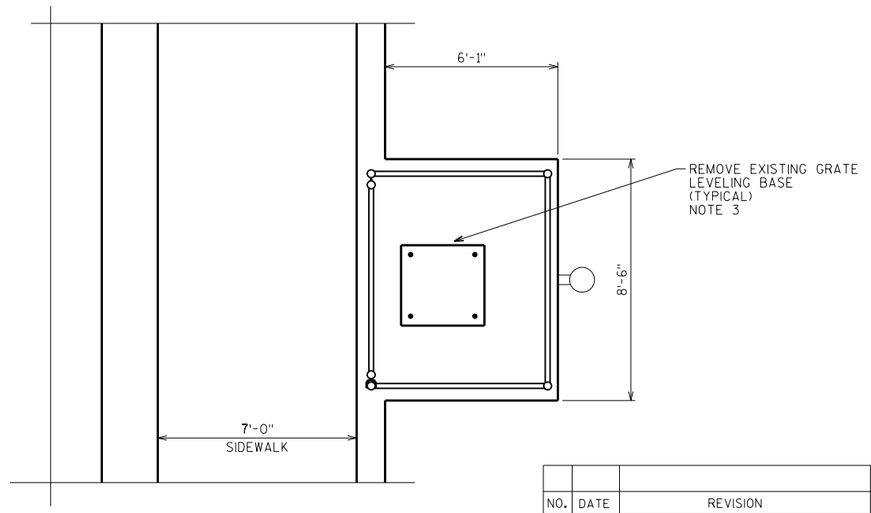
NOTES

1. DIMENSIONS SHOWN ARE APPROXIMATE. VERIFY EXISTING CONDITIONS AND COORDINATE WITH GATE MANUFACTURER.
2. FOR THE TRAFFIC GATE ARM, DO NOT EXCEED 12' FOR FIBERGLASS GATE TIP.
3. RE-USE EXISTING ANCHOR BOLTS. IF PROPOSED GATE MOUNTING HOLES DO NOT ALIGN, INSTALL NEW ANCHORS. SEE SPECIFICATIONS.



SECTION A-A

N.T.S



SECTION B-B

N.T.S

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-15-4

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TRAFFIC GATE DETAILS

SHEET 23 OF 29

53

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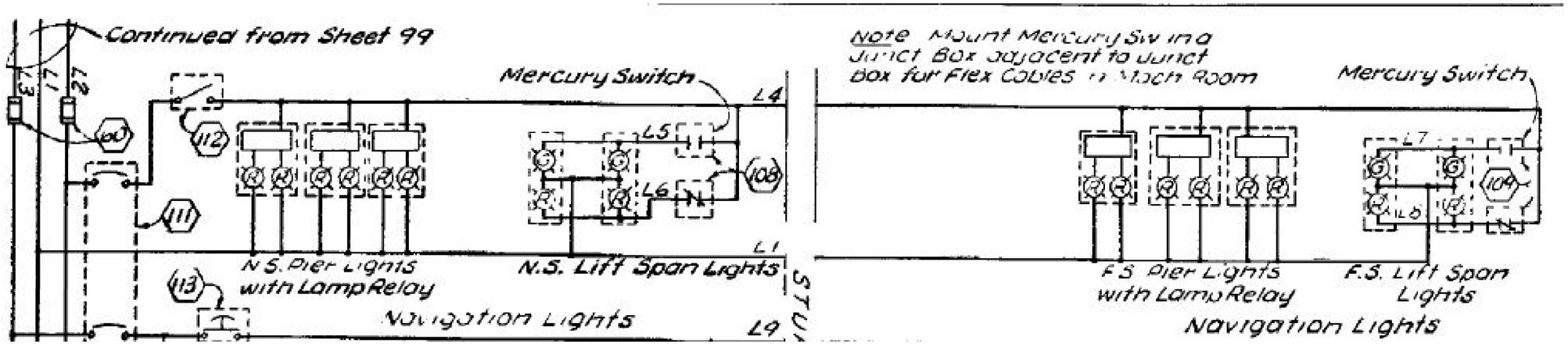
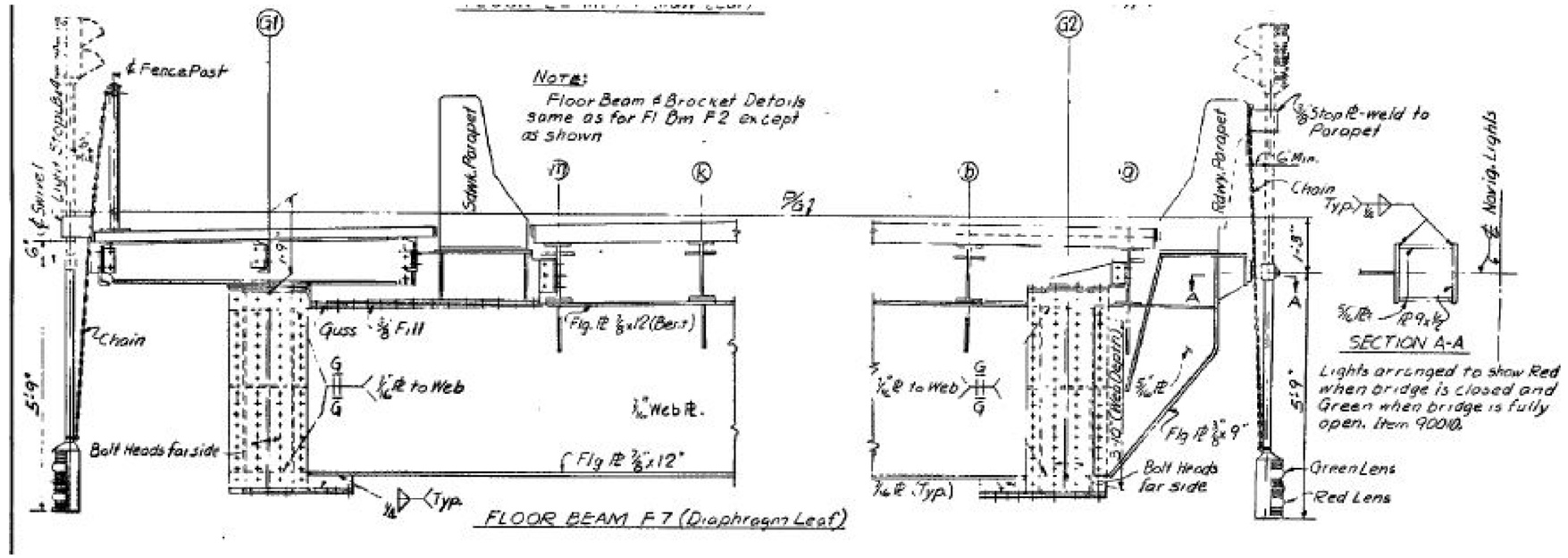
DATE: 5/29/2015
I.D.

STATE PROJECT NUMBER

4430-16-60



EXISTING NAVIGATION LIGHT CIRCUIT



EXISTING CENTER CHANNEL MOUNTING DETAILS

NOTES:

1. MERCURY SWITCHES ARE LOCATED IN MACHINERY ROOM DROOP CABLE BOX REPLACE MERCURY SWITCHES WITH FULL OPEN CAM LIMITS
2. CENTER CHANNEL NAVIGATION LIGHT DETAIL IS FOR INFORMATION ONLY. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS IN FIELD ON EXISTING FIXTURES.
3. DETAILS SHOWN ARE TAKEN FROM ORIGINAL DESIGN PLANS. THESE PLANS ARE AVAILABLE AND CAN BE OBTAINED FROM THE DEPARTMENT.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-15-4

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NAVIGATION LIGHT DETAILS

SHEET 24 OF 29

54

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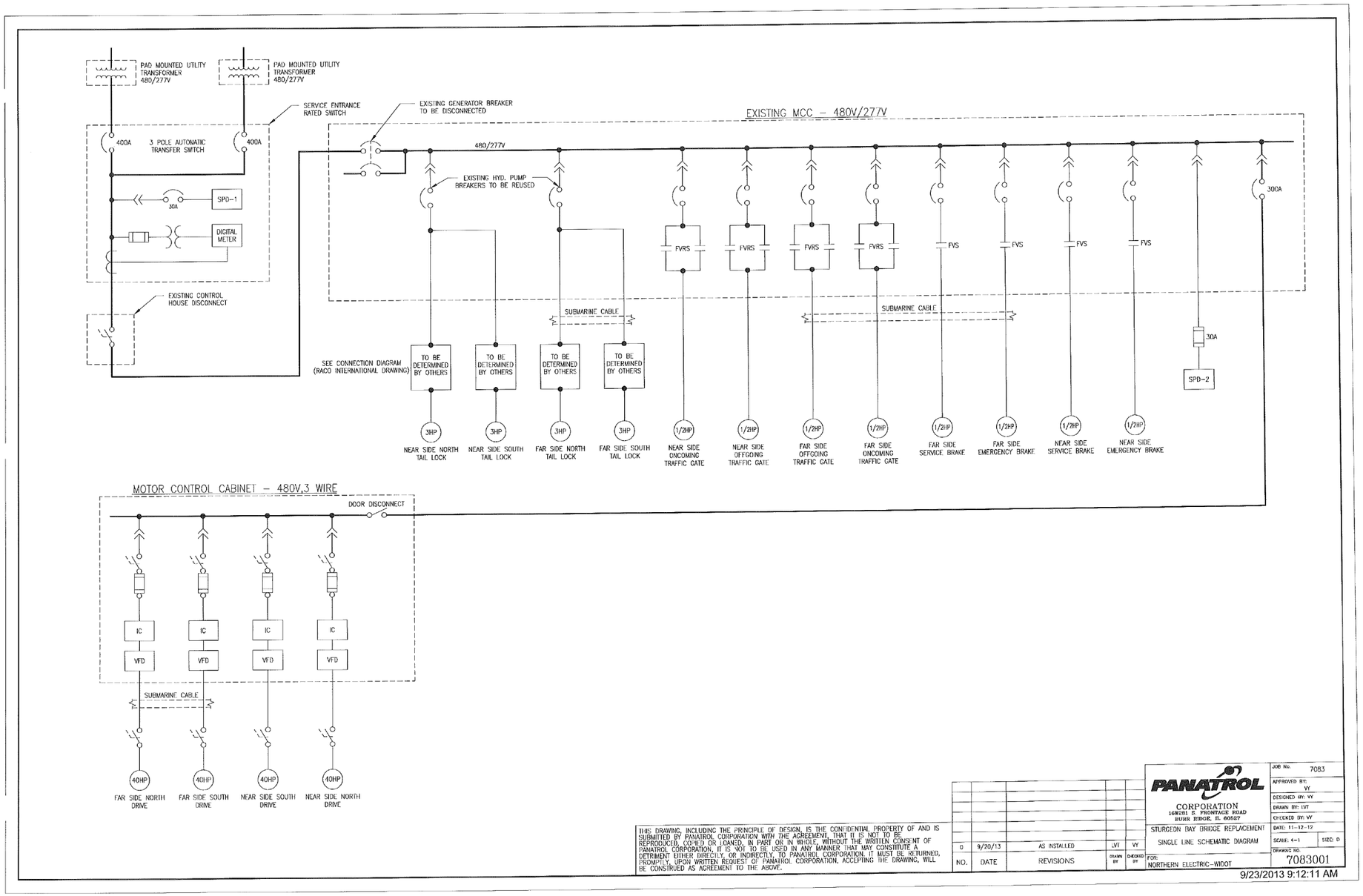
DATE: 5/29/2015

I.D.

STATE PROJECT NUMBER

4430-16-60



NO.	DATE	REVISIONS	DRAWN BY	CHECKED BY
0	9/20/13	AS INSTALLED	LVT	VY

PANATROL CORPORATION
16W081 S. FRONTAGE ROAD
BURR RIDGE, IL 60527

STURGEON BAY BRIDGE REPLACEMENT
SINGLE LINE SCHEMATIC DIAGRAM
FOR: NORTHERN ELECTRIC-WIDOT

JOB No. 7083
APPROVED BY: VY
DESIGNED BY: VY
DRAWN BY: LVT
CHECKED BY: VY
DATE: 11-12-12
SCALE: 4-1 SIZE: D
DRAWING NO. 7083001

9/23/2013 9:12:11 AM

EXISTING SINGLE LINE DRAWING

FOR INFORMATION ONLY

NOTES:

1. DETAILS SHOWN ARE TAKEN FROM AS-BUILT PLANS. THESE PLANS ARE AVAILABLE AND CAN BE OBTAINED FROM THE DEPARTMENT.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-15-4

DRAWN BY DAD | PLANS CK'D. MAE

SINGLE LINE DRAWING

SHEET 25 OF 29

55

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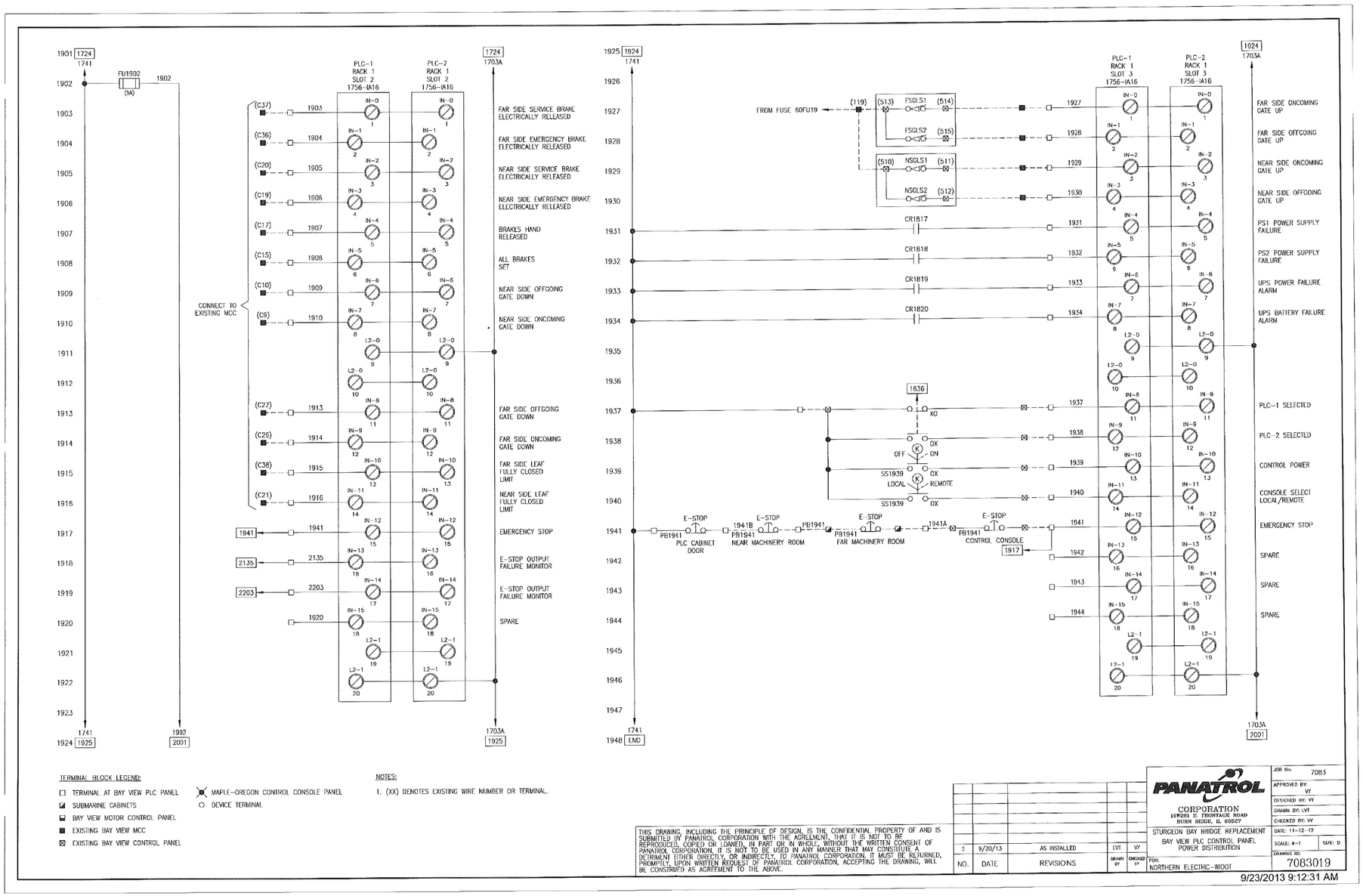
DATE: 5/29/2015

I.D.

STATE PROJECT NUMBER

4430-16-60



TERMINAL BLOCK LEGEND:

- ☐ TERMINAL AT BAY VIEW PLC PANEL
- ◪ SUBMARINE CABINETS
- ▤ BAY VIEW MOTOR CONTROL PANEL
- ■ EXISTING BAY VIEW MCC
- ⊠ EXISTING BAY VIEW CONTROL PANEL
- ⊗ MAPLE-OREGON CONTROL CONSOLE PANEL
- ○ DEVICE TERMINAL

NOTES:

1. (XX) DENOTES EXISTING WIRE NUMBER OR TERMINAL.

NO.	DATE	REVISIONS	DRAWN BY	CHECKED BY
0	9/20/13	AS INSTALLED	LVT	VY

PANATROL CORPORATION
16W281 S. FRONTAGE ROAD
BURR RIDGE, IL 60527

STURGEON BAY BRIDGE REPLACEMENT
BAY VIEW PLC CONTROL PANEL
POWER DISTRIBUTION

FOR: NORTHERN ELECTRIC-WIDOT

JOB No.	7085
APPROVED BY:	VY
DESIGNED BY:	VY
DRAWN BY:	LVT
CHECKED BY:	VY
DATE:	11-12-12
SCALE:	4-1
SIZE:	D
DRAWING NO.	7083019

9/23/2013 9:12:31 AM

PLC INPUTS REFERENCE

FOR INFORMATION ONLY

NOTES:

1. THE CONTRACTOR SHALL VERIFY CONTROL CIRCUIT MODIFICATIONS WITH EXISTING AS-BUILT SCHEMATICS. TRACING OF EXISTING WIRING WILL BE NECESSARY.
2. DETAILS SHOWN ARE TAKEN FROM AS-BUILT PLANS. THESE PLANS ARE AVAILABLE AND CAN BE OBTAINED FROM THE DEPARTMENT.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-15-4

DRAWN BY DAD | PLANS CK'D. MAE

PLC INPUTS FOR LIMITS

SHEET 26 OF 29

56

DATE: 5/29/2015

I.D.

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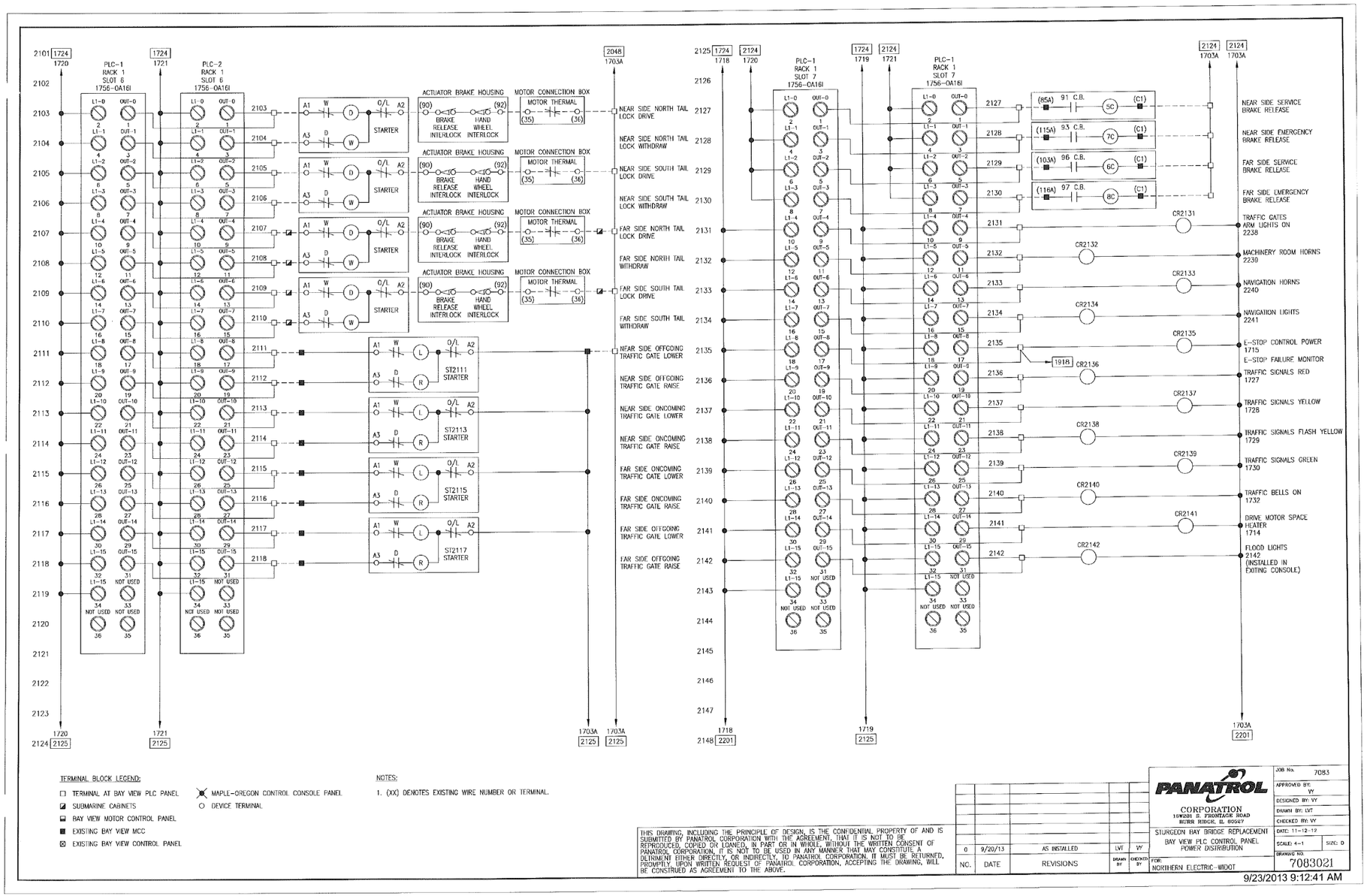
STATE PROJECT NUMBER

4430-16-60



TERMINAL BLOCK LEGEND:

- TERMINAL AT BAY VIEW PLC PANEL
- SUBMARINE CABINETS
- BAY VIEW MOTOR CONTROL PANEL
- EXISTING BAY VIEW MCC
- EXISTING BAY VIEW CONTROL PANEL
- MAPLE-OREGON CONTROL CONSOLE PANEL
- DEVICE TERMINAL

NOTES:

1. (XX) DENOTES EXISTING WIRE NUMBER OR TERMINAL.

NO.	DATE	REVISIONS	DRAWN BY	CHECKED BY
0	9/20/13	AS INSTALLED	LVT	VY

PANATROL CORPORATION
10W201 S. FRONTAGE ROAD
BURR RIDGE, IL 60527

STURGEON BAY BRIDGE REPLACEMENT
BAY VIEW PLC CONTROL PANEL
POWER DISTRIBUTION

FOR: NORTHERN ELECTRIC-WIDOT

JOB No.	7083
APPROVED BY:	VY
DESIGNED BY:	VY
DRAWN BY:	LVT
CHECKED BY:	VY
DATE:	11-12-12
SCALE:	4-1
SIZE:	D
DRAWING NO.	7083021

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PLC STARTER CONTROL REFERENCE

FOR INFORMATION ONLY

NOTES:

1. THE CONTRACTOR SHALL VERIFY CONTROL CIRCUIT MODIFICATIONS WITH EXISTING AS-BUILT SCHEMATICS. TRACING OF EXISTING WIRING WILL BE NECESSARY.
2. DETAILS SHOWN ARE TAKEN FROM AS-BUILT PLANS. THESE PLANS ARE AVAILABLE AND CAN BE OBTAINED FROM THE DEPARTMENT.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-15-4

DRAWN BY DAD | PLANS CK'D. MAE

PLC STARTER SCHEMATIC

SHEET 27 OF 29

57

DATE: 5/29/2015
I.D.

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STATE PROJECT NUMBER

4430-16-60

RELATED DOCUMENTS

DETAIL, FABRICATE, CONSTRUCT, INSTALL AND TEST MACHINERY IN ACCORDANCE WITH THESE PLANS AND THE SPECIFICATIONS.

SCOPE OF WORK

NOT LIMITED TO:
A) REMOVE AND PROPERLY DISPOSE OF (2) EXISTING MOTOR BRAKES AND (2) EXISTING MACHINERY BRAKES.

B) TEMPORARILY REMOVE (4) EXISTING MOTORS TO ALLOW ACCESS FOR MODIFICATION TO EXISTING MOTOR/BRAKE WELDMENTS.

D) MODIFY (4) EXISTING MOTOR/BRAKE WELDMENTS TO ALLOW ROOM FOR (4) NEW BRAKE SUPPORT WELDMENTS.

E) PROVIDE AND INSTALL (4) NEW BRAKE SUPPORT WELDMENTS.

F) PROVIDE AND INSTALL (4) NEW BRAKEWHEEL COUPLINGS. REMOVE EXISTING BRAKEWHEEL COUPLING HUBS FROM RESPECTIVE SHAFTS.

G) PROVIDE (2) NEW MOTOR BRAKES AND (2) NEW MACHINERY BRAKES.

H) INSTALL & ALIGN (2) NEW MOTOR BRAKES, (2) NEW MACHINERY BRAKES AND (4) EXISTING MOTORS

BRAKE OPERATION

THE MOTOR BRAKES SHALL FUNCTION TO PROVIDE TORQUE TO HOLD THE LEAF IN A FIXED POSITION AGAINST WIND AND UNBALANCED LOADS. THE MACHINERY BRAKES SHALL FUNCTION TO STOP THE LEAF DURING AN EMERGENCY STOP OR LOSS OF DRIVE POWER AND TO ASSIST THE MOTOR BRAKES IN HOLDING THE LEAF IN A FIXED POSITION. UNDER NORMAL CONDITIONS, MACHINERY BRAKES SHALL NOT BE USED FOR STOPPING THE LEAF WHILE IN MOTION. MACHINERY BRAKES SHALL ASSIST THE MOTOR BRAKES IN STOPPING THE LEAF IN A HIGH WIND, EMERGENCY STOP CONDITION.

BRAKE DESIGN

THE BRAKES SHALL BE PROVIDED WITH THE FOLLOWING PARAMETERS:

	QTY.	BRAKE TYPE	TIME DELAYED	TORQUE REQUIRED
MOTOR BRAKE:	2	13" DRUM	1-2 SECONDS	225 FT-LBS
MACHINERY BRAKE:	2	13" DRUM	3-4 SECONDS	490 FT-LBS

BRAKEWHEEL COUPLING

PROVIDE (4) NEW BRAKEWHEEL COUPLINGS (FALK 12BW FOR 13.00" X 5.75" BRAKEWHEEL OR APPROVED EQUAL), INCLUDING NEW HUBS FOR REDUCER INPUT SHAFT AND MOTOR SHAFT. COUPLINGS SHALL BE GRID TYPE COUPLINGS WITH MINIMUM TORQUE RATING OF 610 FT-LBS. EXISTING SHAFT SIZE MAY CONTROL THE COUPLING SIZE.

KEYS

ALL NEW BRAKEWHEEL COUPLINGS SHALL BE PROVIDED WITH NEW KEYS. SEE PLANS OR SPECIFICATIONS FOR SIZES, MATERIAL TYPE, FITS, FINISHES AND ETC.

SHIMS

PROVIDE SHIMS FOR LEVELING AND ALIGNING ALL AFFECTED MACHINERY COMPONENTS. SHIM PACKS SHALL BE 1/2" NOMINAL THICKNESS UNLESS OTHERWISE SPECIFIED, WITH ADJUSTMENT VARIATIONS OF 1/64" SHIM. MATERIAL SHALL BE ASTM A36 FOR SHIMS 1/4" THICK AND GREATER, ALL SHIMS LESS THAN 1/4" THICK SHALL BE STAINLESS ASTM A666, TYPE 316.

FASTENERS

ALL H.S. (HIGH-STRENGTH) FASTENERS SHALL BE ASTM A325 MECHANICALLY GALVANIZED PER ASTM F2329, INCLUDING NUTS AND WASHERS.

PAINTING

PAINT NEW BRAKE SUPPORT WELDMENTS AND EXPOSED PORTIONS OF EXISTING MOTOR/BRAKE WELDMENTS IN ACCORDANCE WITH THE SPECIFICATIONS.

BID ITEM NOTES

UNLESS SPECIFIED ELSEWHERE, THE FOLLOWING ITEMS ARE INCIDENTAL TO THE BID ITEM MECHANICAL WORK:

NUTS, WASHERS
DOWEL PINS
TEMPORARY FASTENERS
LIFTING EYE BOLTS
SUPPORT WELDMENTS
SHIM PACKS AND HARDWARE
LUBRICATION
LUBE FITTINGS
TEMPORARY SUPPORTS

SPECIFIC ITEMS ARE SHOWN TO ESTABLISH CONFIGURATION AND RATING REQUIREMENTS. COMPONENTS ARE BASED ON CATALOG DATA CURRENT AT THE TIME THE PLANS WERE PREPARED. ITEMS OF EQUAL OR GREATER QUALITY AND RATING MAY BE SUBSTITUTED WITH APPROVAL OF THE ENGINEER. IF OTHER ITEMS ARE APPROVED FOR USE, MAKE ALL REVISIONS NECESSARY TO ACCOMMODATE THEM AT NO ADDITIONAL COST TO THE DEPARTMENT.

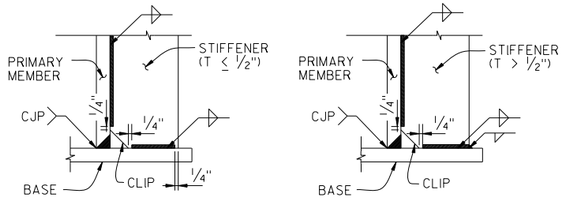
UNLESS OTHERWISE NOTED, QUANTITIES SHOWN ARE FOR TWO BASCULE LEAVES, OR TOTAL FOR THE PROJECT.

ALL DIMENSIONS SHOWN ARE TAKEN FROM THE ORIGINAL DRAWINGS OR FIELD MEASUREMENTS AND ARE FOR REFERENCE AND BIDDING PURPOSE ONLY. CONTRACTOR SHALL VERIFY ALL DIMENSIONS IN THE FIELD BEFORE SUBMITTING SHOP DRAWINGS.

ALL WORK RELATED TO PROVIDING, INSTALLING AND TESTING TWO COMPLETE BASCULE LEAF MECHANICAL DRIVE SYSTEMS, INCLUDING, BUT NOT LIMITED TO: BRAKES, COUPLINGS, SUPPORT WELDMENTS, AND ALL ASSOCIATED MISCELLANEOUS ITEMS, IS INCLUDED IN THE LUMP SUM BID ITEM, MECHANICAL WORK.

MACHINERY WELDMENT NOTES

1. CLIP STIFFENERS AS NECESSARY TO AVOID OVERLAP OF WELDS OR CLEAR FILLET WELDS BY A MINIMUM OF 1/4".
2. WHERE COMPLETE JOINT PENETRATION (CJP) IS NOT SPECIFIED, MILL ALL VERTICAL PLATES TO BEAR ON HORIZONTAL PLATES PRIOR TO WELDING.
3. WHERE MACHINING IS SPECIFIED, STRESS RELIEVE ALL WELDMENTS AFTER WELDING AND BEFORE MACHING. SURFACE WELDS MAY BE PERFORMED AFTER STRESS RELIEF AND MACHINING.
4. PROVIDE ULTRASONIC (UT) AND MAGNETIC PARTICLE (MT) TESTING TO ALL CJP AND FILLET WELDED JOINTS RESPECTIVELY, IN ACCORDANCE WITH AWS D1.5 CONSIDERING EACH TO BE A MAIN MEMBER.



SYMBOL LEGEND

XXX	SIGNIFIES THAT THE ACTUAL OR CERTIFIED DIMENSION OF THE MATING COMPONENT IS TO BE USED TO DETERMINE THE EXACT VALUE.
XX.XX	MAXIMUM SURFACE ROUGHNESS (RA) PER ANSI/ ASME B46.1, IN MICROINCHES. IMPLIES FLATNESS REQUIREMENT AS DEFINED IN THE SPECIFICATIONS.
(XXX)	REFERENCE DIMENSION INDICATING THAT THE DIMENSION IS SHOWN ONLY FOR INFORMATION AND IS DEFINED ELSEWHERE IN THE PLANS OR SPECIFICATIONS.

FIT AND SURFACE FINISHES

SURFACE	FIT	FINISH
MACHINERY BASE ON STEEL	--------	250
MACHINERY PARTS IN FIXED CONTACT	--------	125
SHAFT JOURNALS	RC6	8
JOURNAL BUSHINGS	RC6	16
SOLID BUSHING IN BASE (TO 1/4" WALL)	FN1	63
SOLID BUSHING IN BASE (OVER 1/4" WALL)	FN2	63
SPLIT BUSHING IN BASE	LC1	125
HUBS ON SHAFTS (UP TO 2" DIAMETER)	FN2	32
HUBS ON SHAFTS (OVER 2" DIAMETER)	FN2	63
KEY AND KEYWAYS SIDE-SIDE	LC4	63
KEY AND KEYWAYS TOP-BOTTOM	LC11	63
TEETH OF OPEN SPUR GEARS	--------	125
PERMANENT DOWELS	FN4	32

MACHINERY TOLERANCE UNLESS OTHERWISE SPECIFIED	
X	± 1/16"
X/X, X.X	± 1/32"
X.XX	± 0.020"
X.XXX	± 0.005"
ANGLES	± 1/2°
BREAK ALL EDGES 0.015"	

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-15-4

DRAWN BY BAC | PLANS CK'D. MC

MACHINERY NOTES

SHEET 28 OF 29

58

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DATE: 5/29/2015
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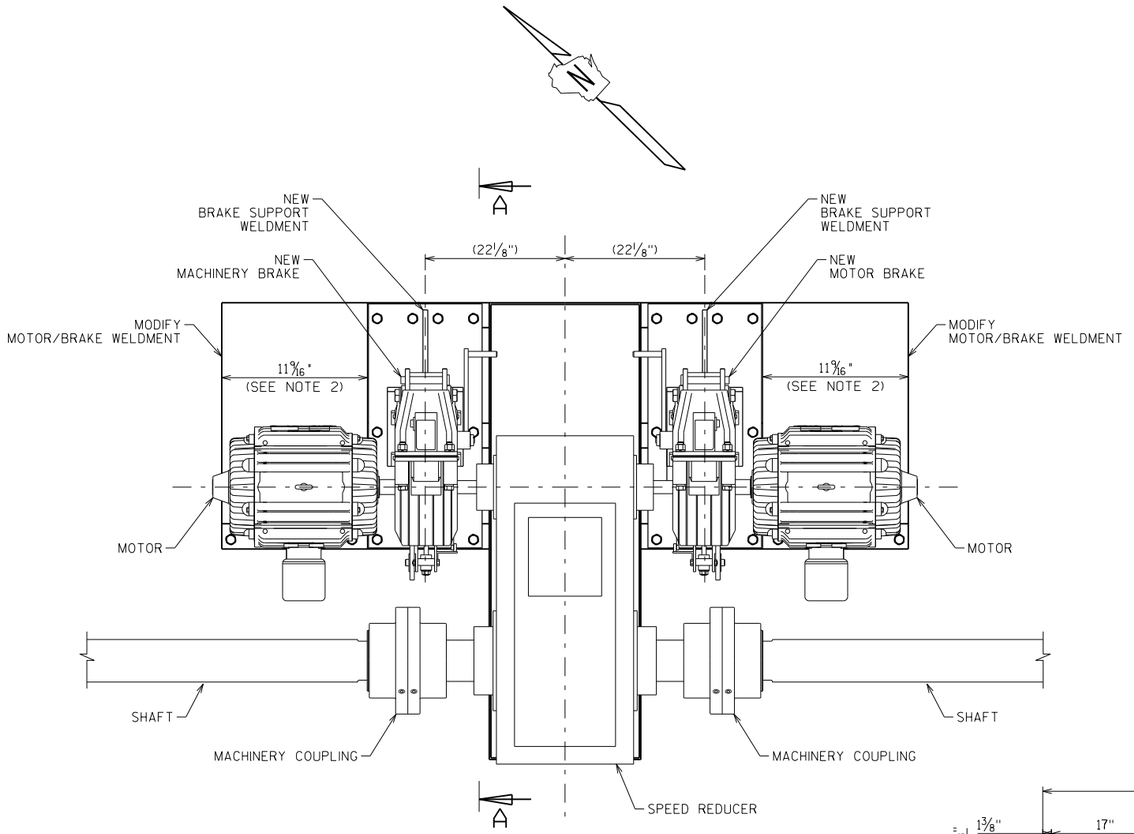
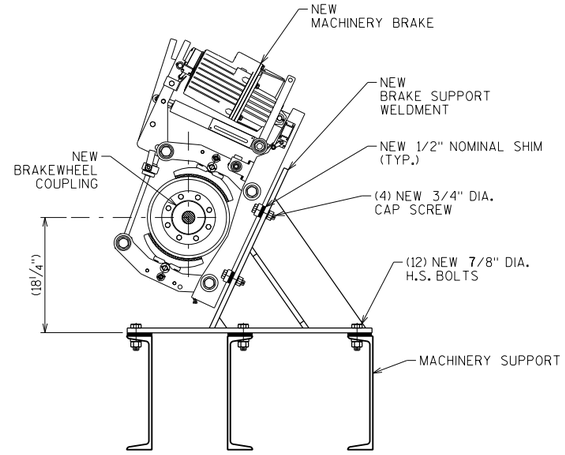


PARTIAL PLAN OF OPERATING MACHINERY

(EXISTING STRUCTURAL STEEL NOT SHOWN FOR CLARITY)
(NORTH ASSEMBLY SHOWN, SOUTH ASSEMBLY SIMILAR)



SECTION A-A

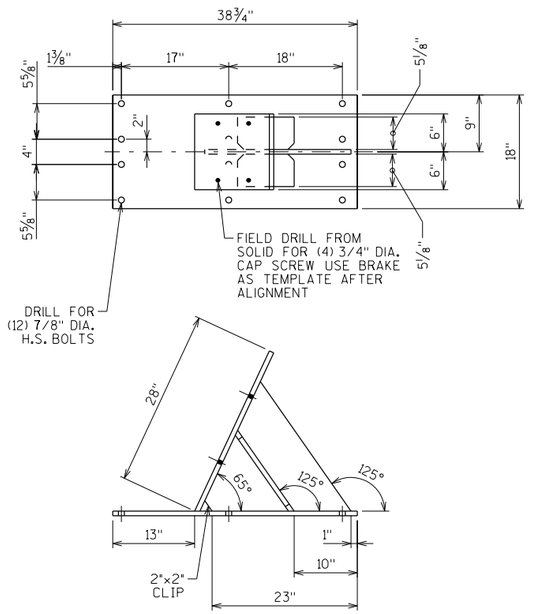
(EXISTING MOTOR/BRAKE SUPPORT NOT SHOWN FOR CLARITY)

EXISTING MOTOR/BRAKE WELDMENT

EXISTING MOTOR/BRAKE WELDMENT IS ONE PIECE
AND MUST BE MODIFIED IN ORDER FOR THE NEW
BRAKE WELDMENT TO BE INSTALLED.
SEE NOTE 2.

NOTES:

1. ALL ITEMS ARE EXISTING UNLESS NOTED OTHERWISE.
2. PRIOR TO INSTALLATION OF THE NEW BRAKE SUPPORT WELDMENT THE EXISTING MOTOR/BRAKE WELDMENT MUST BE MODIFIED BY CUTTING THE EXISTING WELDMENT AT THE NEW DIMENSION SHOWN IN THE PLANS AND REMOVING THE BRAKE PORTION OF THE EXISTING WELDMENT. FLAME CUT AND GRIND SMOOTH AS REQUIRED TO ALLOW MID-STIFFENER TO REMAIN, INCLUDING FILLET WELDS ASSOCIATED WITH MID-STIFFENER. SEE EXISTING MOTOR/BRAKE WELDMENT DETAIL FOR APPROXIMATE LOCATION OF MID-STIFFENER. CLEAN AND PAINT ALL AREAS WHERE THERE IS EXPOSED METAL CAUSED BY THE MODIFICATION PROCESS.
3. ALL H.S. BOLTS THAT ARE REMOVED SHALL NOT BE RE-USED. NEW H.S. BOLTS TO MATCH EXISTING SIZE.
4. PROVIDE NEW KEYS FOR EACH NEW BRAKEWHEEL HUB SIZED TO MATE WITH EXISTING KEYWAY IN MATING SHAFTS. ALL KEY MATERIAL SHALL BE ASTM A668 CLASS D.
5. EXISTING MOTOR AND NEW BRAKES SHALL MAINTAIN THE SAME ALIGNMENT AS EXISTING MACHINERY LAYOUT.
6. THE EXISTING MOTOR AND MACHINERY BRAKES ARE G.E. TYPE BRAKES WITH A 11" DIA. BRAKE DRUM. THE CONTRACTOR SHALL REMOVE THE EXISTING BRAKES, BRAKE DRUM, BRAKEWHEEL HUBS, MOUNTING BOLTS AND SHIMS. PROPERLY DISPOSE OF ALL EXISTING BRAKE COMPONENTS. THE CONTRACTOR SHALL TAKE CARE NOT TO DAMAGE EXISTING MOTOR AND SPEED REDUCER INPUT SHAFTS WHEN REMOVING EXISTING BRAKEWHEEL HUBS.
7. THE NEW MOTOR AND MACHINERY BRAKES SHALL USE THE EXISTING CONTROL WIRING. NEW POWER WIRING SHALL BE PROVIDED BY THE CONTRACTOR FOR THE BRAKES. FLEXIBLE METAL CONDUIT AND WIRE SHALL BE FURNISHED AND INSTALLED TO EACH BRAKE, AS CALLED FOR IN THE SPECIFICATIONS.



NEW BRAKE SUPPORT WELDMENT

MATERIAL: ASTM A709 GRADE 50
ALL PLATES SHALL BE 3/4" THICK
ALL WELDS SHALL BE 5/16" FILLET WELDS
QTY: (4)
SEE ADDITIONAL NOTES ON SHEET 28 OF 29

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-15-4

DRAWN BY BAC | PLANS CK'D. MC

BRAKE DETAILS 59

SHEET 29 OF 29

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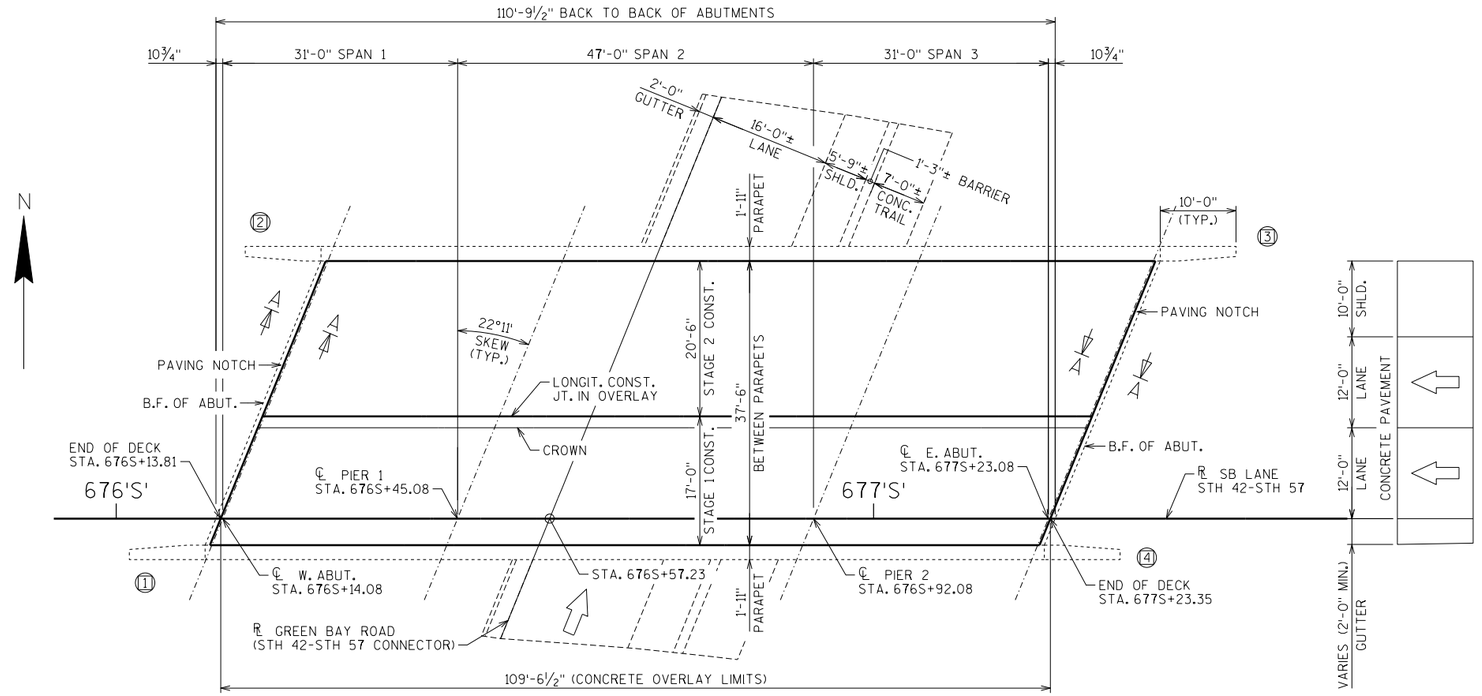
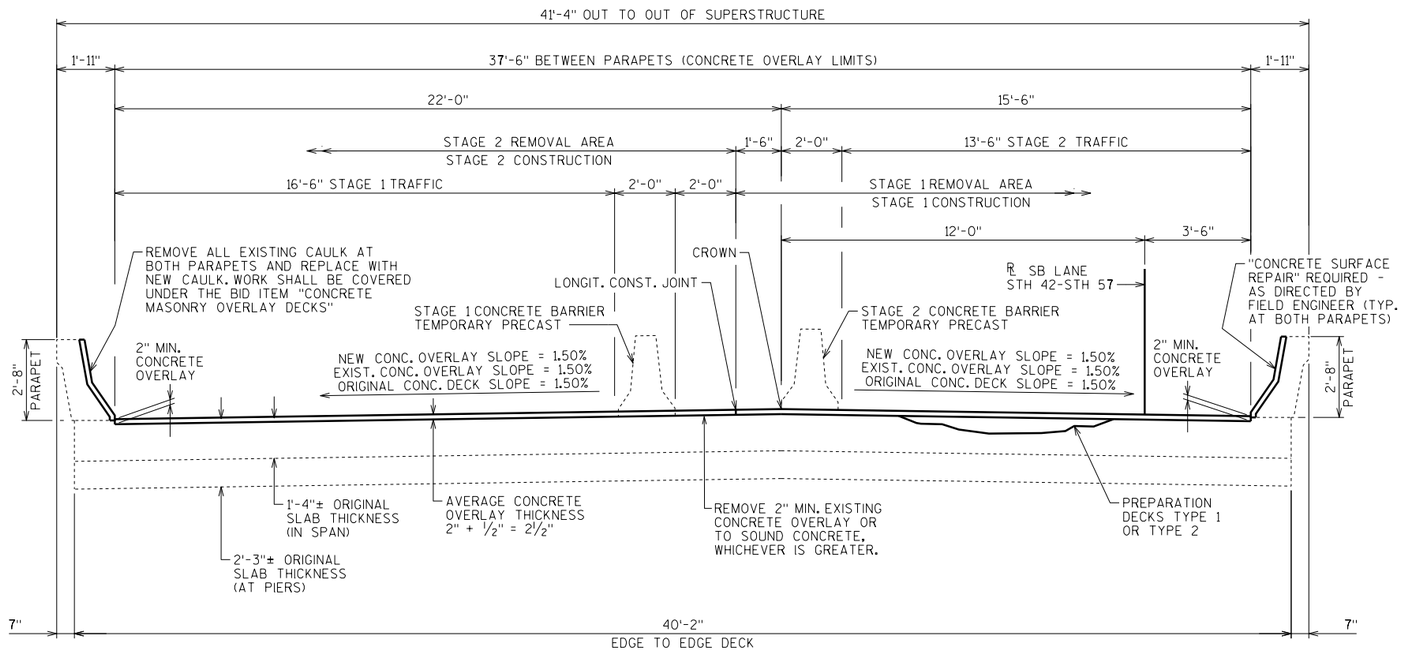


PLAN

(2) INDICATES WING NUMBER



CROSS SECTION THRU DECK - LOOKING EAST

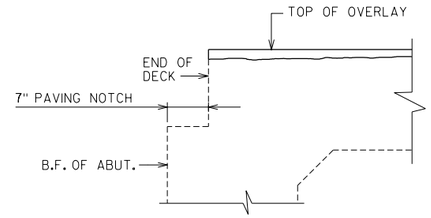
DESIGN DATA

LIVE LOAD
INVENTORY RATING: HS20
OPERATING RATING: HS33
WISCONSIN STANDARD PERMIT VEHICLE (Wis-SPV): 230 KIPS

ULTIMATE DESIGN STRESSES:
CONCRETE MASONRY: OVERLAY DECKS f'c = 4,000 P.S.I.
ALL OTHER f'c = 3,500 P.S.I.

TRAFFIC VOLUME

STH 42-STH 57	GREEN BAY ROAD
A.D.T. = 10,600 (2010)	A.D.T. = 10,560 (2003)
A.D.T. = 15,130 (2023)	A.D.T. = 15,130 (2023)
R.D.S. = 50 MPH	R.D.S. = 25 MPH



SECTION A-A

LIST OF DRAWINGS

1. GENERAL PLAN & CROSS SECTION
2. QUANTITIES & NOTES

STRUCTURE DESIGN CONTACTS

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

CONSULTANT:
YOON MOON CHUN, P.E.
(414) 221-0088

WISCONSIN
YOON-MOON CHUN
E-39076
WHITEFISH BAY
WIS.
PROFESSIONAL ENGINEER
4-27-2015

NO.	DATE	REVISION	BY

exp U.S. Services Inc.
Milwaukee, WI
BUILDINGS · EARTH & ENVIRONMENT · ENERGY
INDUSTRIAL · INFRASTRUCTURE · SUSTAINABILITY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher NK 06/09/15
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE B-15-5

STH 42 SB-STH 57 SB OVER GREEN BAY ROAD

COUNTY: DOOR
~~TOWN~~/CITY/~~VILLAGE~~: STURGEON BAY

DESIGN SPEC.
REHABILITATION N/A

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
YC	VCP	YC	VCP

GENERAL PLAN & CROSS SECTION

SHEET 1 OF 2
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FILENAME

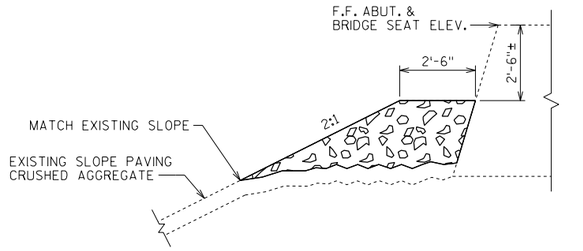
STATE PROJECT NUMBER
4430-16-60

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	WEST ABUT.	EAST ABUT.	PIER 1	PIER 2	SUPER-STRUCT.	TOTAL
312.0115	SELECT CRUSHED MATERIAL	CY	16	12	-	-	-	28
502.3200	PROTECTIVE SURFACE TREATMENT	SY	-	-	-	-	457	457
502.3215.S	PROTECTIVE SURFACE TREATMENT RESEAL	SY	8	8	-	-	94	110
509.0301	PREPARATION DECKS TYPE 1	SY	-	-	-	-	46	46
509.0302	PREPARATION DECKS TYPE 2	SY	-	-	-	-	14	14
509.1500	CONCRETE SURFACE REPAIR	SF	70	40	-	-	170	280
509.2500	CONCRETE MASONRY OVERLAY DECKS	CY	-	-	-	-	35	35
509.9005.S.01	REMOVING CONCRETE MASONRY DECK OVERLAY B-15-5	SY	-	-	-	-	457	457
SPV.0060.04	REMOVE AND RESET BEAM CONNECTION	EACH	2	1	-	-	-	3

BID ITEM "CONCRETE MASONRY OVERLAY DECKS" ALSO INCLUDES CONCRETE FOR PREPARATION DECKS TYPE 1 AND PREPARATION DECKS TYPE 2.

ALL ITEMS ARE CATEGORY 0030.



SECTION AT ABUTMENTS

SLOPE PAVING REPAIR DETAIL

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS.

CONSTRUCTION STAGING SHALL BE DONE AS SHOWN OR AS DIRECTED BY THE FIELD ENGINEER.

PREPARATION DECKS TYPE 1, PREPARATION DECKS TYPE 2, AND CONCRETE SURFACE REPAIR AREAS SHALL BE DETERMINED BY THE FIELD ENGINEER.

A MINIMUM CONCRETE OVERLAY THICKNESS OF 2" SHALL BE PLACED ABOVE THE DECK SURFACE AFTER REMOVING EXISTING OVERLAY. EXPECTED AVERAGE OVERLAY THICKNESS IS AS GIVEN ON THE PLANS. IF EXPECTED AVERAGE CONCRETE OVERLAY THICKNESS IS EXCEEDED BY MORE THAN ½", CONTACT THE STRUCTURES DESIGN SECTION.

NO WORK IS PLANNED ON THE EXISTING ROADWAY APPROACH PAVEMENTS. THE OVERLAY THICKNESS NEAR THE ENDS OF THE BRIDGE DECK SHALL BE ADJUSTED IN THE FIELD TO MATCH THE PROFILE GRADE LINE OF THE EXISTING ROADWAY APPROACH PAVEMENTS.

THE EXISTING CONCRETE OVERLAY SHALL BE REMOVED FROM THE BRIDGE DECK UNDER BID ITEM "REMOVING CONCRETE MASONRY DECK OVERLAY".

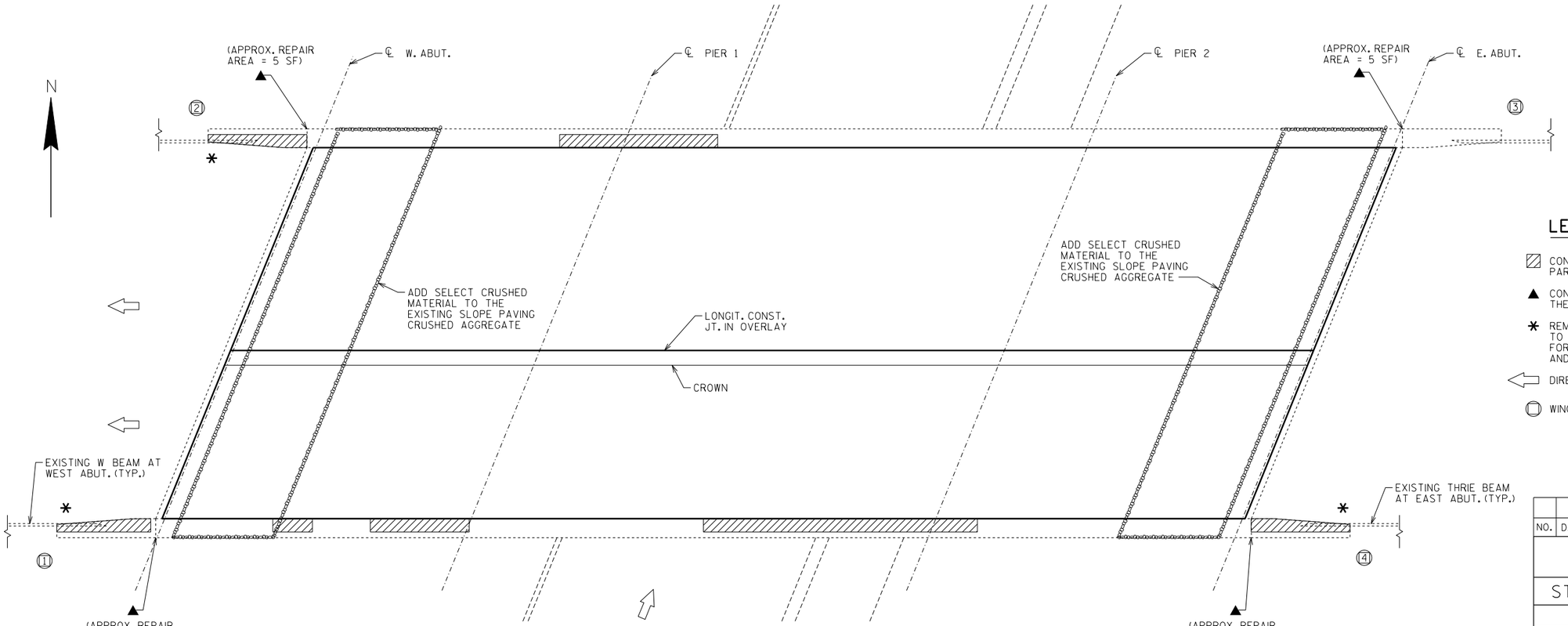
ANY EXCAVATION REQUIRED TO COMPLETE THE OVERLAY AT ABUTMENTS IS INCIDENTAL TO THE BID ITEM "CONCRETE MASONRY OVERLAY DECKS".

ANY EXCAVATION REQUIRED TO COMPLETE THE CONCRETE SURFACE REPAIR OF ABUTMENTS IS INCIDENTAL TO THE BID ITEM "CONCRETE SURFACE REPAIR".

APPLY PROTECTIVE SURFACE TREATMENT TO THE TOP OF NEW CONCRETE OVERLAY.

APPLY PROTECTIVE SURFACE TREATMENT RESEAL ON THE INSIDE AND TOP FACES OF PARAPETS INCLUDING PARAPETS ON ABUTMENT WINGS.

CONCRETE BARRIER TEMPORARY PRECAST IS INCLUDED IN THE ROADWAY QUANTITIES.



PLAN

SHOWING DETERIORATED AREAS

LEGEND

- CONCRETE SURFACE REPAIR OF PARAPET
- ▲ CONCRETE SURFACE REPAIR OF THE FRONT FACE OF WINGWALL.
- * REMOVE BEAM GUARD TEMPORARILY TO MAKE CONCRETE REPAIRS, PAID FOR UNDER THE BID ITEM "REMOVE AND RESET BEAM CONNECTION".
- DIRECTION OF TRAFFIC
- WING NUMBER

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-15-5

DRAWN BY YC | PLANS CK'D. VCP

QUANTITIES & NOTES

SHEET 2 OF 2

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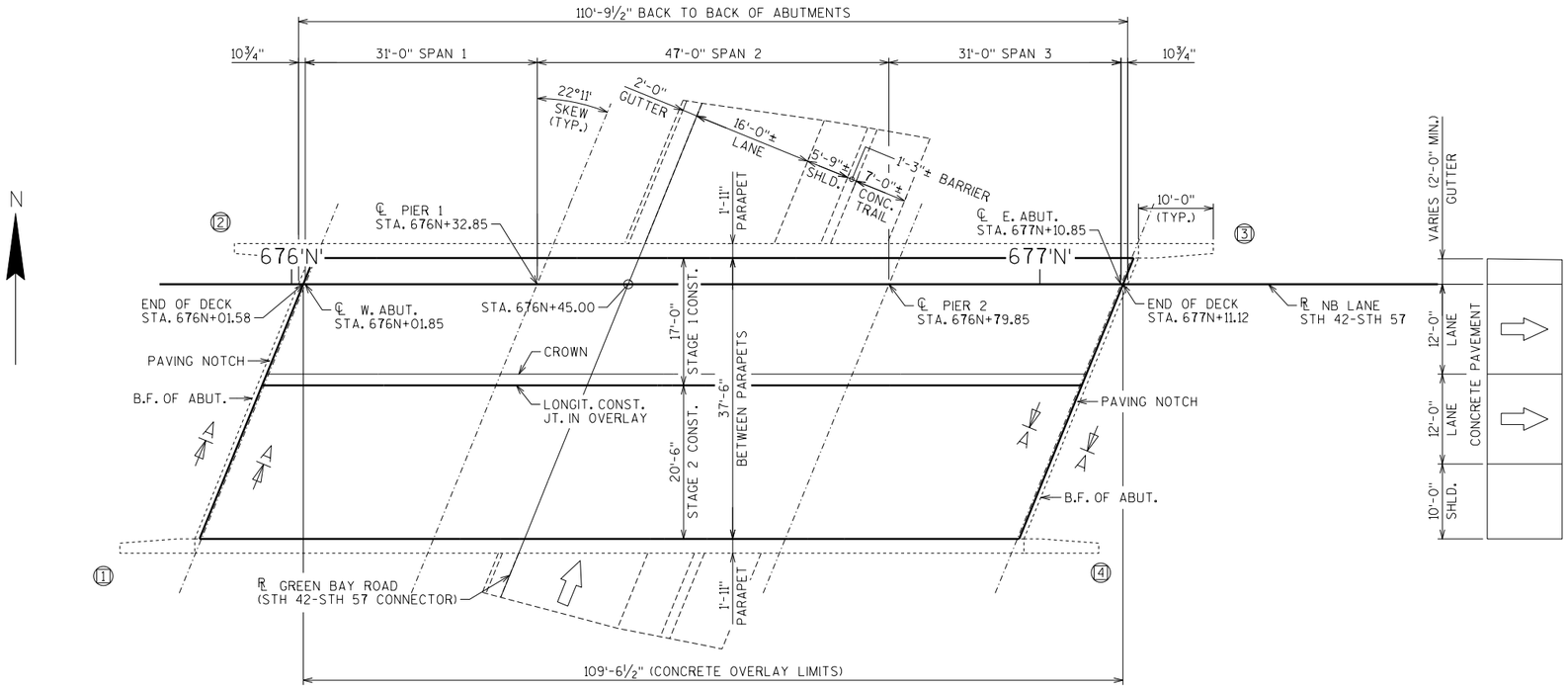
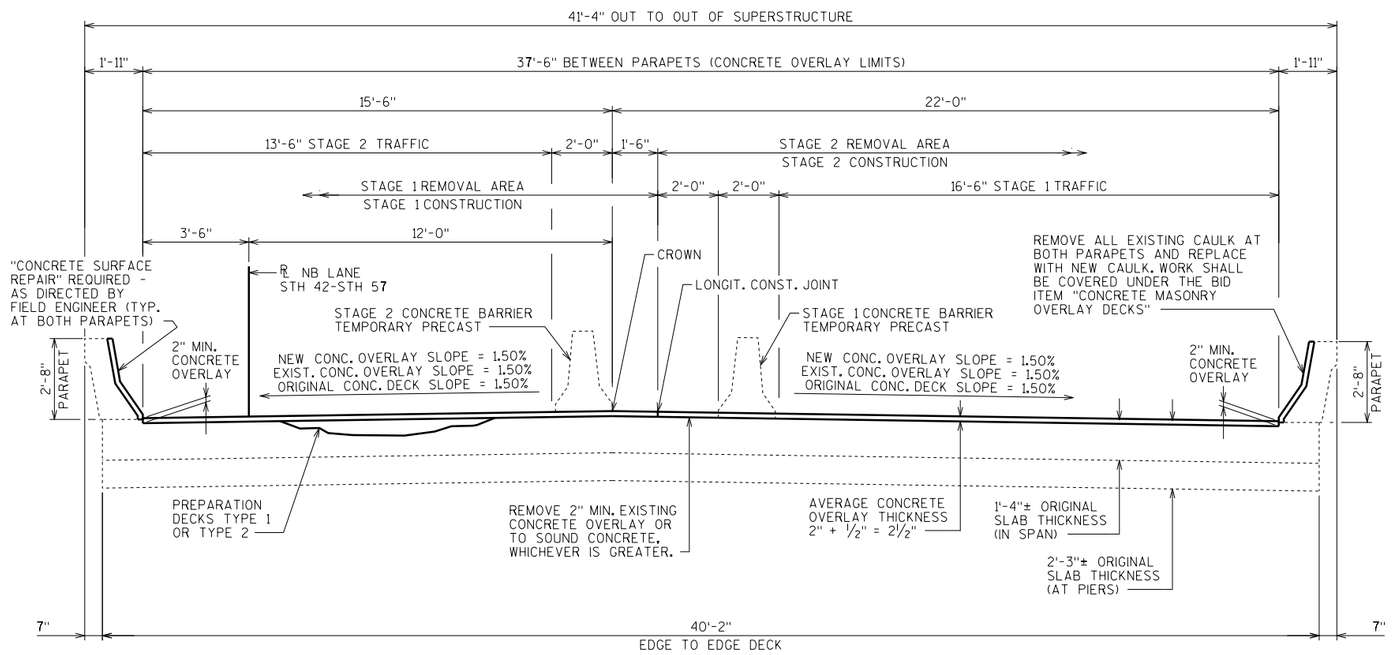
STATE PROJECT NUMBER
4430-16-60



PLAN

INDICATES WING NUMBER



CROSS SECTION THRU DECK - LOOKING EAST

DESIGN DATA

LIVE LOAD
INVENTORY RATING: HS20
OPERATING RATING: HS33
WISCONSIN STANDARD PERMIT VEHICLE (Wis-SPV): 230 KIPS

ULTIMATE DESIGN STRESSES:
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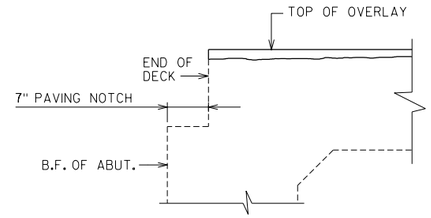

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exp U.S. Services Inc.
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INDUSTRIAL • INFRASTRUCTURE • SUSTAINABILITY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher NK 06/09/15
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE B-15-6

STH 42 NB-STH 57 NB OVER GREEN BAY ROAD

COUNTY	TOWN/CITY/VILLAGE
DOOR	STURGEON BAY

DESIGN SPEC. REHABILITATION N/A

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
YC	VCP	YC	VCP

GENERAL PLAN & CROSS SECTION

SHEET 1 OF 2

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FILENAME

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STATE PROJECT NUMBER

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509.0302	PREPARATION DECKS TYPE 2	SY	-	-	-	-	18	18
509.1500	CONCRETE SURFACE REPAIR	SF	45	40	-	-	100	185
509.2500	CONCRETE MASONRY OVERLAY DECKS	CY	-	-	-	-	37	37
509.9005.S.02	REMOVING CONCRETE MASONRY DECK OVERLAY B-15-6	SY	-	-	-	-	457	457
SPV.0060.04	REMOVE AND RESET BEAM CONNECTION	EACH	1	1	-	-	-	2

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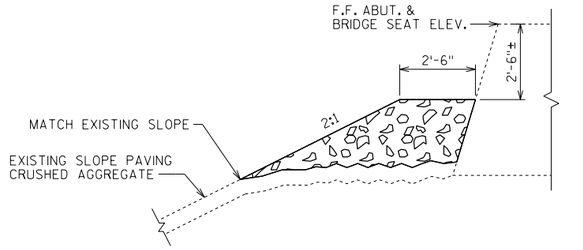

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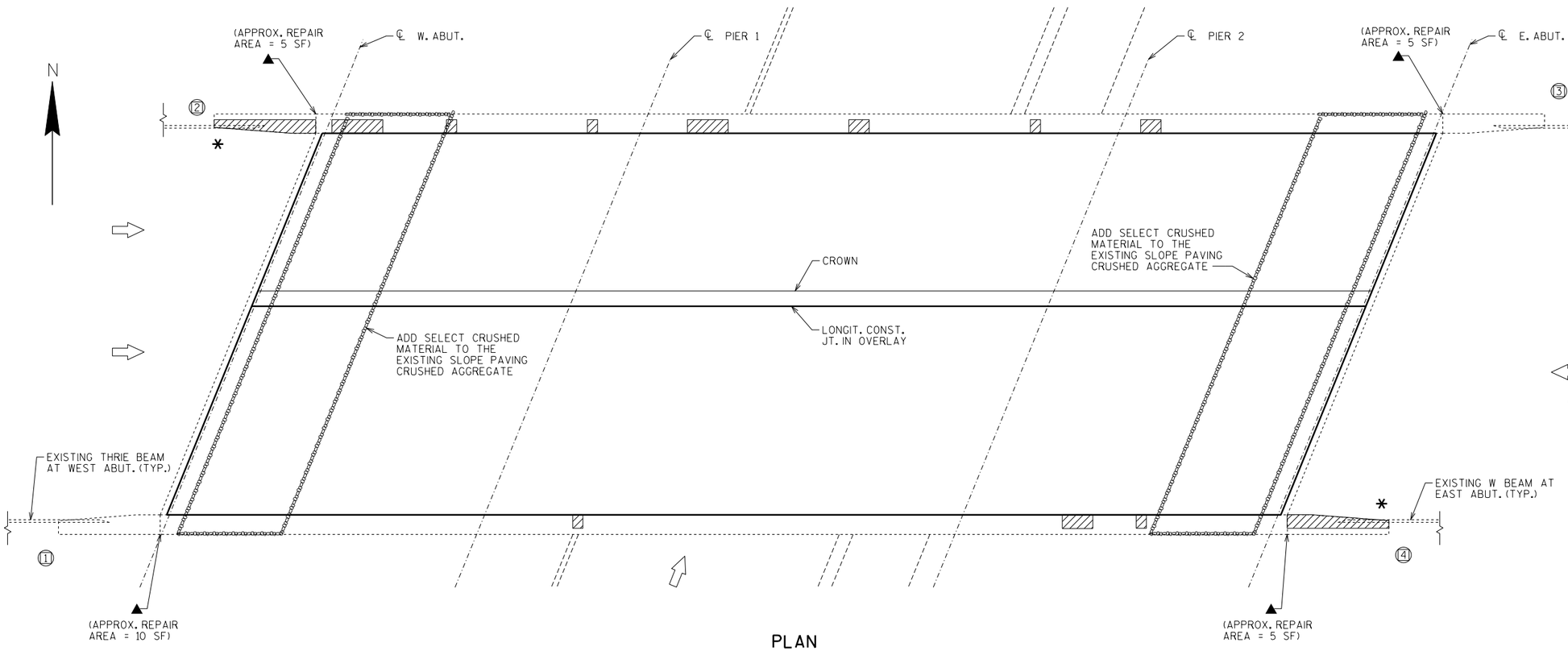

PLAN

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- DIRECTION OF TRAFFIC
- WING NUMBER

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-15-6

DRAWN BY YC | PLANS CK'D. VCP

QUANTITIES & NOTES

SHEET 2 OF 2

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Wisconsin Department of Transportation

Dedicated people creating transportation solutions
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